

TIBPAL22VP10-20C, TIBPAL22VP10-25M
HIGH-PERFORMANCE *IMPACT-X*™ PROGRAMMABLE ARRAY LOGIC CIRCUITS

SRPS013 – D2943, FEBRUARY 1987 – REVISED JUNE 1991

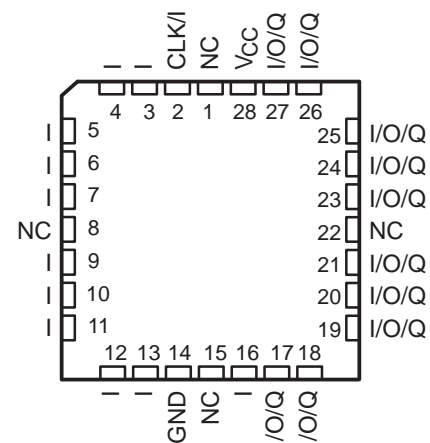
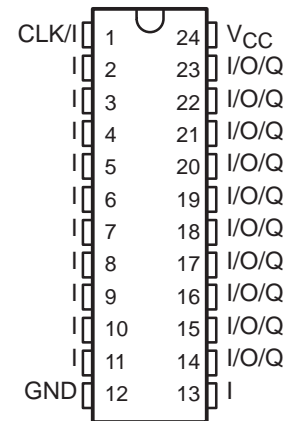
- **Functionally Equivalent to the TIBPAL22V10/10A, with Additional Feedback Paths in the Output Logic Macrocell**
- **Choice of Operating Speeds:**
TIBPAL22VP10-20C . . . 20 ns Max
TIBPAL22VP10-25M . . . 25 ns Max
- **Variable Product Term Distribution Allows More Complex Functions to Be Implemented**
- **Each Output Is User Programmable for Registered or Combinational Operation, Polarity, and Output Enable Control**
- **TTL-Level Preload for Improved Testability**
- **Extra Terms Provide Logical Synchronous Set and Asynchronous Reset Capability**
- **Fast Programming, High Programming Yield, and Unsurpassed Reliability Ensured Using Ti-W Fuses**
- **AC and DC Testing Done at the Factory Utilizing Special Designed-In Test Features**
- **Dependable Texas Instruments Quality and Reliability**
- **Package Options Include Plastic Dual-In-Line and Chip Carrier Packages**

description

The TIBPAL22VP10' is equivalent to the TIBPAL22V10A but offers additional flexibility in the output structure. The improved output macrocell uses the registered outputs as inputs when in a high-impedance condition. This provides two additional output configurations for a total of six possible macrocell configurations all of which are shown in Figure 1.

These devices contain up to 22 inputs and 10 outputs. They incorporate the unique capability of defining and programming the architecture of each output on an individual basis. Outputs may be registered or nonregistered and inverting or noninverting. In addition, the data may be fed back into the array from either the register or the I/O port. The ten potential outputs are enabled through the use of individual product terms.

Further advantages can be seen in the introduction of variable product term distribution. This technique allocates from 8 to 16 logical product terms to each output for an average of 12 product terms per output. This variable allocation of terms allows far more complex functions to be implemented than in previously available devices.



NC – No internal connection
Pin assignments in operating mode

These devices are covered by U.S. Patent 4,410,987.
IMPACT-X is a trademark of Texas Instruments Incorporated.

PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

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TEXAS
INSTRUMENTS

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description (continued)

Circuit design is enhanced by the addition of a synchronous set and an asynchronous reset product term. These functions are common to all registers. When the synchronous set product term is a logic 1, the output registers are loaded with a logic 1 on the next low-to-high clock transition. When the asynchronous reset product term is a logic 1, the output registers are loaded with a logic 0. The output logic level after set or reset depends on the polarity selected during programming. Output registers can be preloaded to any desired state during testing. Preloading permits full logical verification during product testing.

With features such as programmable output logic macrocells and variable product term distribution, the TIBPAL22VP10' offers quick design and development of custom LSI functions with complexities of 500 to 800 equivalent gates. Since each of the ten output pins may be individually configured as inputs on either a temporary or permanent basis, functions requiring up to 21 inputs and a single output or down to 12 inputs and 10 outputs are possible.

A power-up clear function is supplied that forces all registered outputs to a predetermined state after power is applied to the device. Registered outputs selected as active-low power-up with their outputs high. Registered outputs selected as active-high power-up with their outputs low.

A single security fuse is provided on each device to discourage unauthorized copying of fuse patterns. Once blown, the verification circuitry is disabled and all other fuses will appear to be open.

The TIBPAL22V10-20C is characterized for operation from 0°C to 75°C. The TIBPAL22V10-25M is characterized for operation over the full military temperature range of –55°C to 125°C.

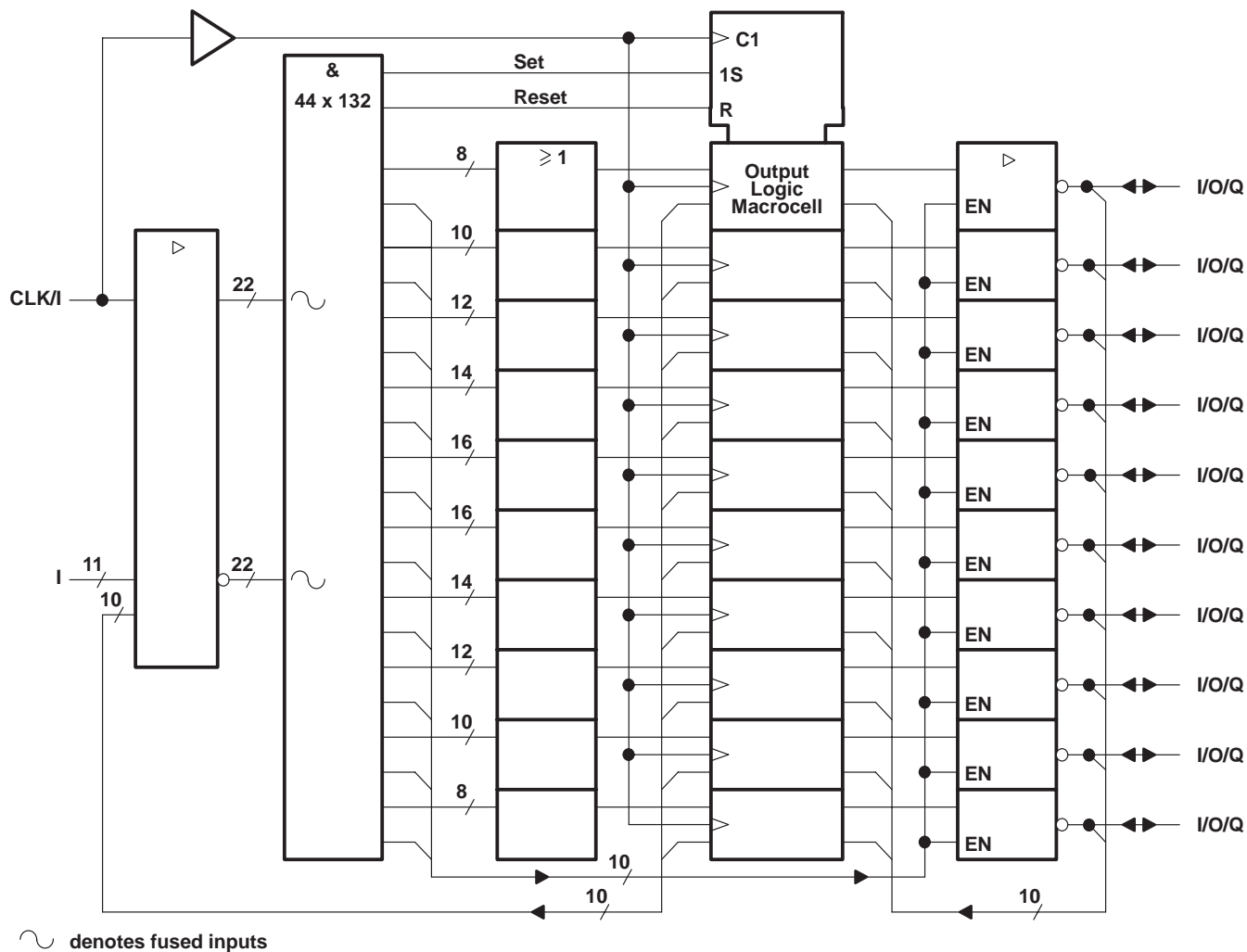


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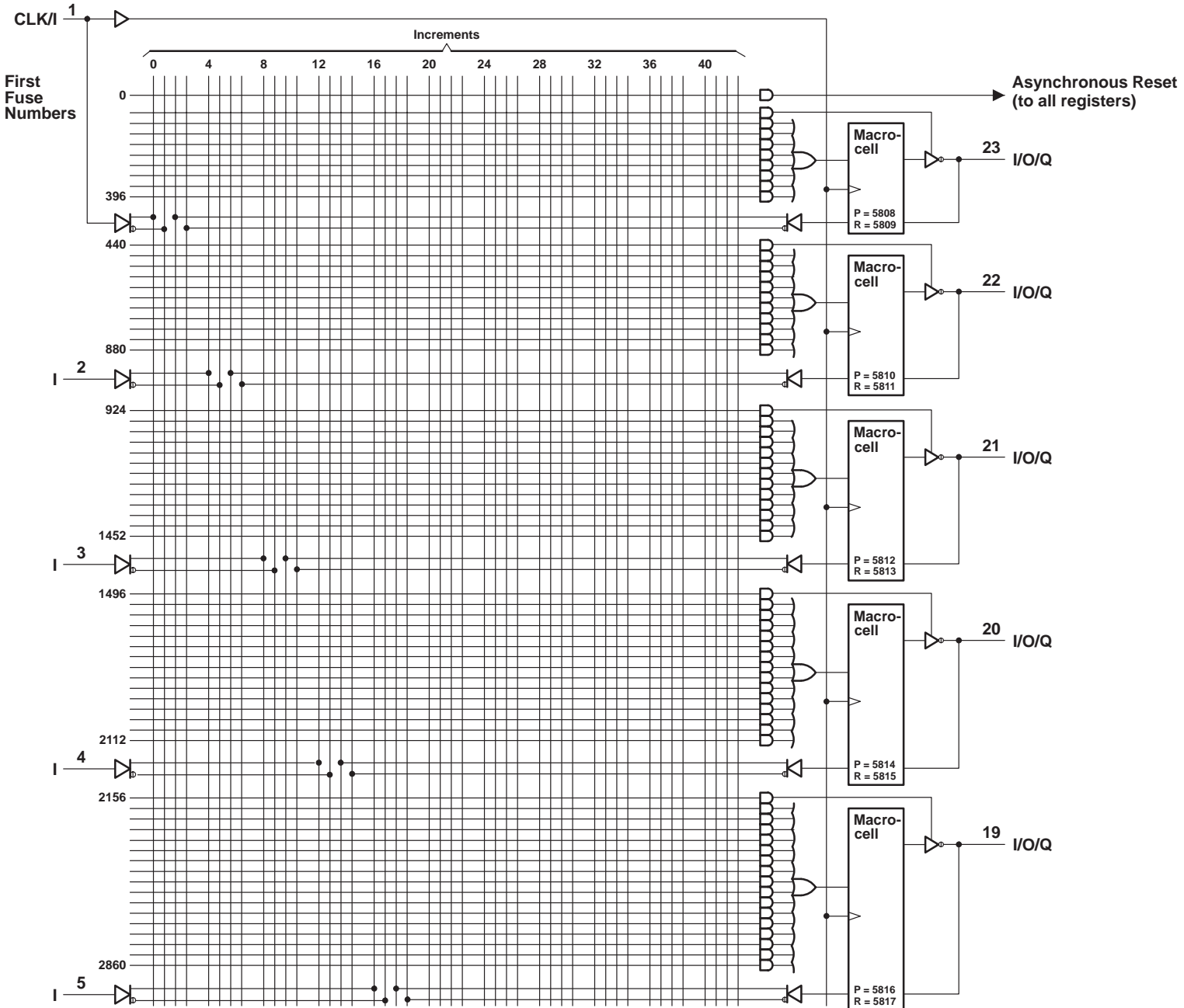
functional block diagram (positive logic)



TIBPAL22VP10-20C, TIBPAL22VP10-25M HIGH-PERFORMANCE IMPACT-X™ PROGRAMMABLE ARRAY LOGIC CIRCUITS

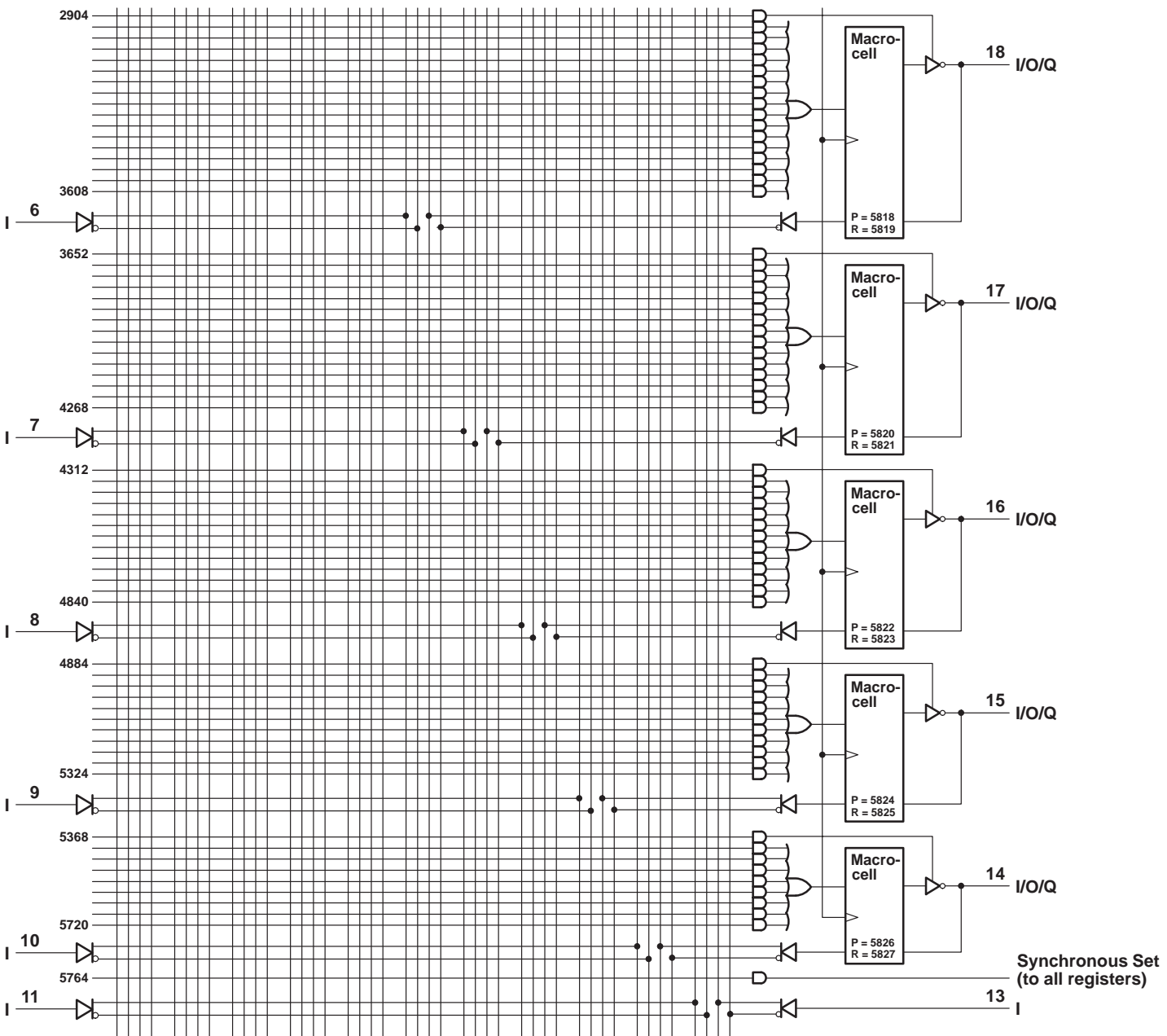
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logic symbol (positive logic)



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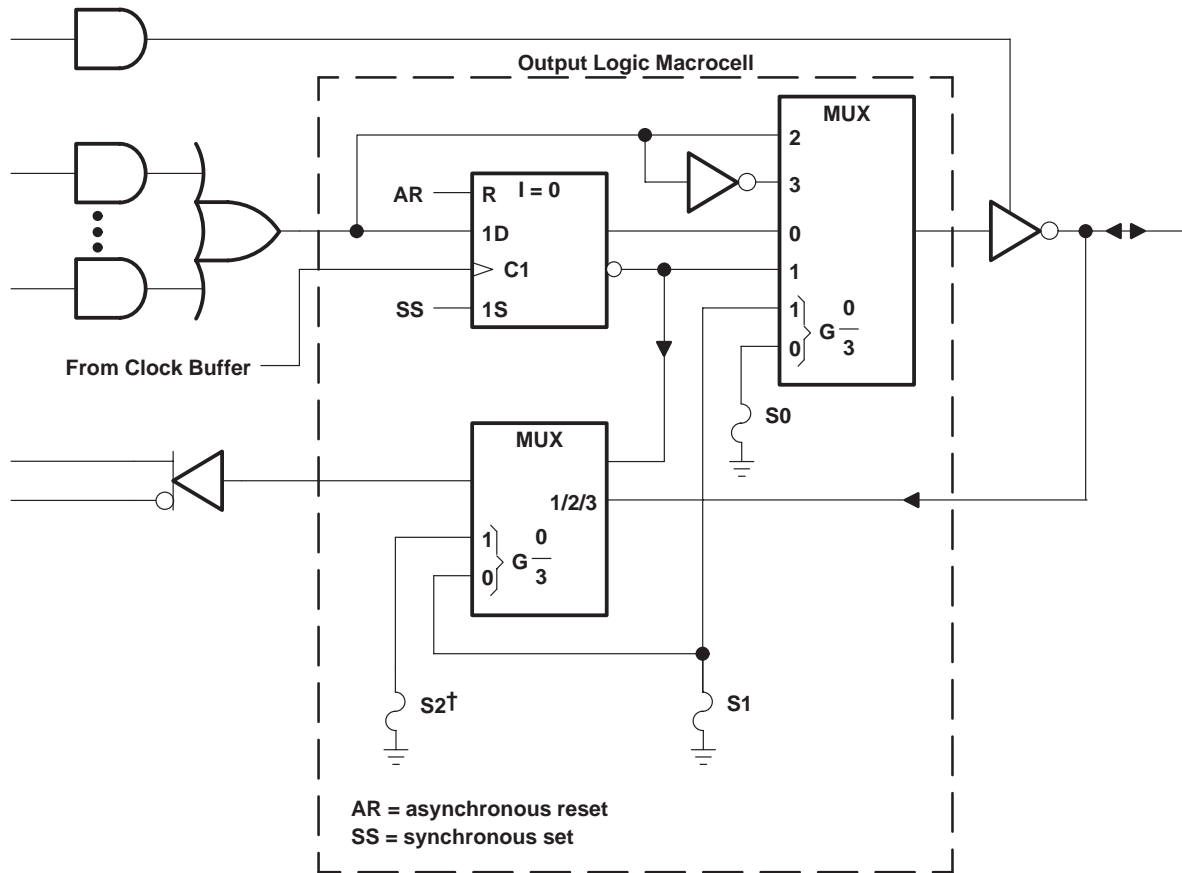


Fuse number = First fuse number + Increment
Inside each MACROCELL the "P" fuse is the polarity fuse and the "R" fuse is the register fuse.

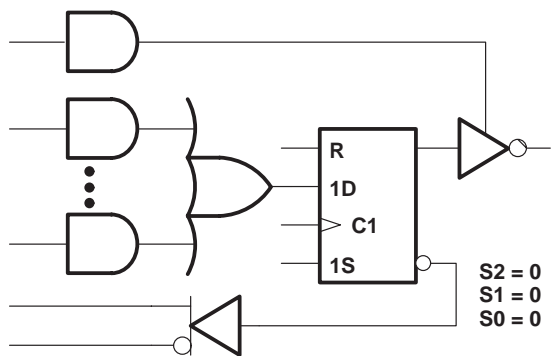
TIBPAL22VP10-20C, TIBPAL22VP10-25M HIGH-PERFORMANCE *IMPACT-X*™ PROGRAMMABLE ARRAY LOGIC CIRCUITS

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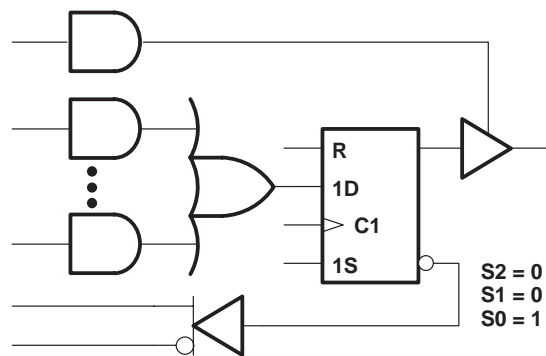
output logic macrocell diagram



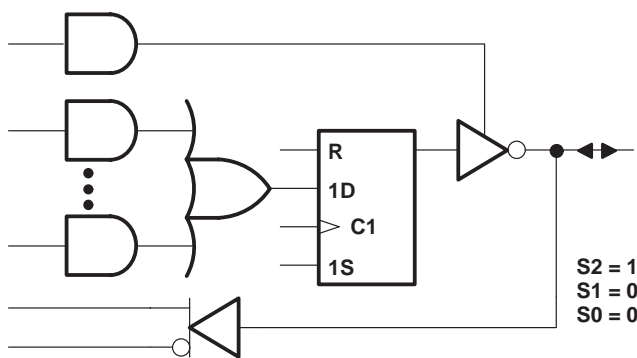
† This fuse is unique to the Texas Instruments TIBPAL22VP10¹. It allows feedback from the I/O port using registered outputs as shown in the macrocell fusing logic function table.



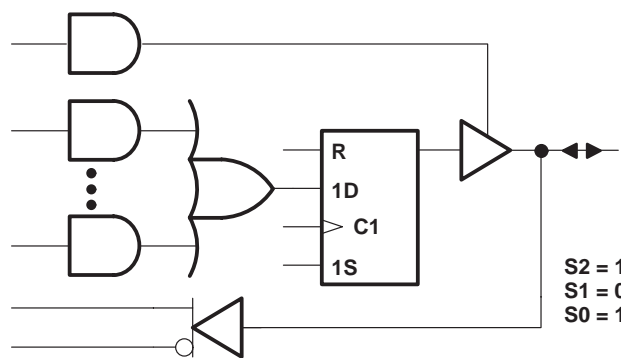
REGISTER FEEDBACK, REGISTERED, ACTIVE-LOW OUTPUT



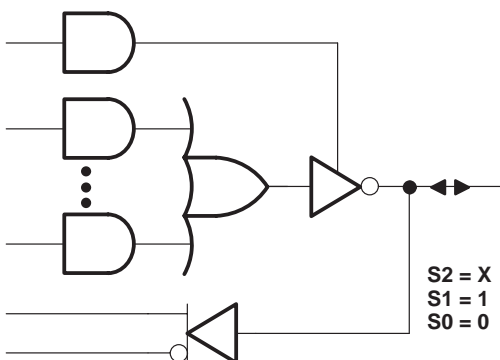
REGISTER FEEDBACK, REGISTERED, ACTIVE-HIGH OUTPUT



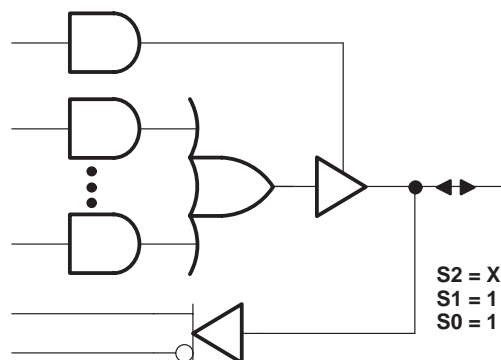
I/O FEEDBACK, REGISTERED, ACTIVE-LOW OUTPUT†



I/O FEEDBACK, REGISTERED, ACTIVE-HIGH OUTPUT†



I/O FEEDBACK, COMBINATIONAL, ACTIVE-LOW OUTPUT



I/O FEEDBACK, COMBINATIONAL, ACTIVE-HIGH OUTPUT

† These configurations are unique to the TIBPAL22VP10† and provide added flexibility when comparing it to the TIBPAL22V10 or TIBPAL22V10A.

Figure 1. Resultant Macrocell Feedback and Output Logic After Programming

TIBPAL22VP10-20C, TIBPAL22VP10-25M

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MACROCELL FEEDBACK AND OUTPUT FUNCTION TABLE

FUSE SELECT			FEEDBACK AND OUTPUT CONFIGURATION		
S2	S1	S0			
0	0	0	Register feedback	Registered	Active low
0	0	1	Register feedback	Registered	Active high
1	0	0	I/O feedback	Registered	Active low
1	0	1	I/O feedback	Registered	Active high
X	1	0	I/O feedback	Combinational	Active low
X	1	1	I/O feedback	Combinational	Active high

0 = unblown fuse, 1 = blown fuse, X = unblown or blown fuse

S2, S1 and S0 are select-function fuses as shown in the output logic macrocell diagram.

absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

Supply voltage, V_{CC} (see Note 1)	7 V
Input voltage (see Note 1)	5.5 V
Voltage applied to disabled output (see Note 1)	5.5 V
Operating free-air temperature range: TIBPAL22VP10-20C	0°C to 75°C
TIBPAL22VP10-25M	–55°C to 125°C
Storage temperature range	–65°C to 150°C

NOTE 1: These ratings apply except for programming pins during a programming cycle or during a preload cycle.

recommended operating conditions

			TIBPAL22VP10-20C			TIBPAL22VP10-25M			UNIT		
			MIN	NOM	MAX	MIN	NOM	MAX			
V _{CC}	Supply voltage		4.75	5	5.25	4.5	5	5.5	V		
V _{IH}	High-level input voltage		2		5.5	2		5.5	V		
V _{IL}	Low-level input voltage				0.8			0.8	V		
I _{OH}	High-level output current				−3.2			−2	mA		
I _{OL}	Low-level output current				16			12	mA		
f _{clock}	Clock frequency†				37			25	MHz		
t _w	Pulse duration	Clock high or low	10			20			ns		
		Asynchronous Reset high or low	20			30					
t _{su}	Setup time before clock↑	Input	15			20			ns		
		Feedback	15			20					
		Synchronous Preset (active)	15			20					
		Asynchronous Reset (inactive)	20			25					
t _h	Hold time, input, preset, or feedback after clock↑		0			0			ns		
T _A	Operating free-air temperature		0			75			−55	125	°C

† f_{clock} (with feedback) = $\frac{1}{t_{su} + t_{pd}(\text{CLK to Q})}$, f_{clock} without feedback can be calculated as

$$f_{clock} \text{ (without feedback)} = \frac{1}{t_{w \text{ high}} + t_{w \text{ low}}}$$

TIBPAL22VP10-20C

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electrical characteristics over recommended operating free-air temperature range

PARAMETER		TEST CONDITIONS		MIN	TYP†	MAX	UNIT
V _{IK}		V _{CC} = 4.75 V,	I _I = –18 mA			–1.2	V
V _{OH}		V _{CC} = 4.75 V,	I _{OH} = –3.2 mA	2.4	3.5		V
V _{OL}		V _{CC} = 4.75 V,	I _{OL} = 16 mA		0.35	0.5	V
I _{OZH}		V _{CC} = 5.25 V,	V _O = 2.7 V			0.1	mA
I _{OZL}	Any output	V _{CC} = 5.25 V,	V _O = 0.4 V			–100	μA
	Any I/O					–250	
I _I		V _{CC} = 5.25 V,	V _I = 5.5 V			1	mA
I _{IH}		V _{CC} = 5.25 V,	V _I = 2.7 V			25	μA
I _{IL}		V _{CC} = 5.25 V,	V _I = 0.4 V			–0.25	mA
I _{OS} ‡		V _{CC} = 5.25 V,	V _O = 0.5 V	–30		–90	mA
I _{CC}		V _{CC} = 5.25 V,	V _I = GND, Outputs open		140	180	mA

switching characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITION	MIN	TYP†	MAX	UNIT
f _{max} §			C _L = 50 pF, R1 = 300 Ω, R2 = 390 Ω, See Figure 4	37	50		MHz
t _{pd}	I, I/O	I/O			12	20	ns
t _{pd}	I, I/O (reset)	Q			12	20	ns
t _{pd}	CLK	Q			8	12	ns
t _{en}	I, I/O	I/O, Q			12	20	ns
t _{dis}	I, I/O	I/O, Q			12	20	ns

† All typical values are at V_{CC} = 5 V, T_A = 25°C.

‡ Not more than one output should be shorted at a time, and the duration of the short circuit should not exceed one second. V_O is set at 0.5 V to avoid test problems caused by test equipment ground degradation.

§ f_{max} (with feedback) = $\frac{1}{t_{su} + t_{pd} \text{ (CLK to Q)}}$, f_{max} without feedback can be calculated as

$$f_{\text{max}} \text{ (without feedback)} = \frac{1}{t_{w \text{ high}} + t_{w \text{ low}}}$$

TIBPAL22VP10-25M

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electrical characteristics over recommended operating free-air temperature range

PARAMETER	TEST CONDITIONS		MIN	TYP†	MAX	UNIT
V _{IK}	V _{CC} = 4.5 V,	I _I = –18 mA			–1.2	V
V _{OH}	V _{CC} = 4.5 V,	I _{OH} = –2 mA	2.4	3.5		V
V _{OL}	V _{CC} = 4.5 V,	I _{OL} = 12 mA		0.25	0.5	V
I _{OZH}	V _{CC} = 5.5 V,	V _O = 2.7 V			0.1	mA
I _{OZL}	V _{CC} = 5.5 V,	V _O = 0.4 V			–0.1	mA
I _I	V _{CC} = 5.5 V,	V _I = 5.5 V			1	mA
I _{IH}	V _{CC} = 5.5 V,	V _I = 2.7 V			25	μA
I _{IL}	V _{CC} = 5.5 V,	V _I = 0.4 V			–0.25	mA
I _{OS} ‡	V _{CC} = 5.5 V,	V _O = 0.5 V	–30		–90	mA
I _{CC}	V _{CC} = 5.5 V,	V _I = GND, Outputs open		140	200	mA

switching characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted)

PARAMETER	FROM (INPUT)	TO (OUTPUT)	TEST CONDITION	MIN	TYP†	MAX	UNIT
f _{max} §			C _L = 50 pF, R1 = 390 Ω, R2 = 750 Ω, See Figure 4	25	50		MHz
t _{pd}	I, I/O	I/O			12	25	ns
t _{pd}	I, I/O (reset)	Q			12	25	ns
t _{pd}	CLK	Q			8	15	ns
t _{en}	I, I/O	I/O, Q			12	25	ns
t _{dis}	I, I/O	I/O, Q			12	25	ns

† All typical values are at V_{CC} = 5 V, T_A = 25°C.

‡ Not more than one output should be shorted at a time, and the duration of the short circuit should not exceed one second. V_O is set at 0.5 V to avoid test problems caused by test equipment ground degradation.

§ f_{max} (with feedback) = $\frac{1}{t_{su} + t_{pd} \text{ (CLK to Q)}}$, f_{max} without feedback can be calculated as

$$f_{\text{max}} \text{ (without feedback)} = \frac{1}{t_{w \text{ high}} + t_{w \text{ low}}}$$

preload procedure for registered outputs (see Notes 2 and 3)

The output registers can be preloaded to any desired state during device testing. This permits any state to be tested without having to step through the entire state-machine sequence. Each register is preloaded individually by following the steps given below:

- Step 1. With V_{CC} at 5 V and pin 1 at V_{IL} , raise pin 13 to V_{IHH} .
- Step 2. Apply either V_{IL} or V_{IH} to the output corresponding to the register to be preloaded.
- Step 3. Pulse pin 1, clocking in preload data.
- Step 4. Remove output voltage, then lower pin 13 to V_{IL} . Preload can be verified by observing the voltage level at the output pin.

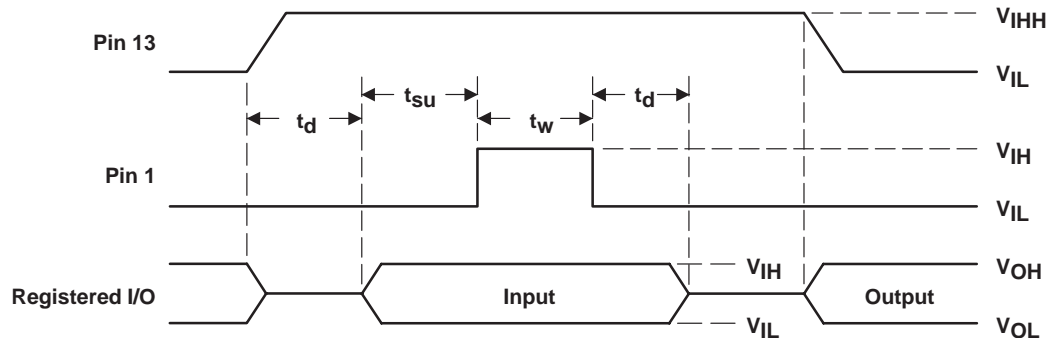


Figure 2. Preload Waveforms

NOTES: 2. Pin numbers shown are for JT and NT packages only. If chip-carrier socket adapter is not used, pin numbers must be changed accordingly.

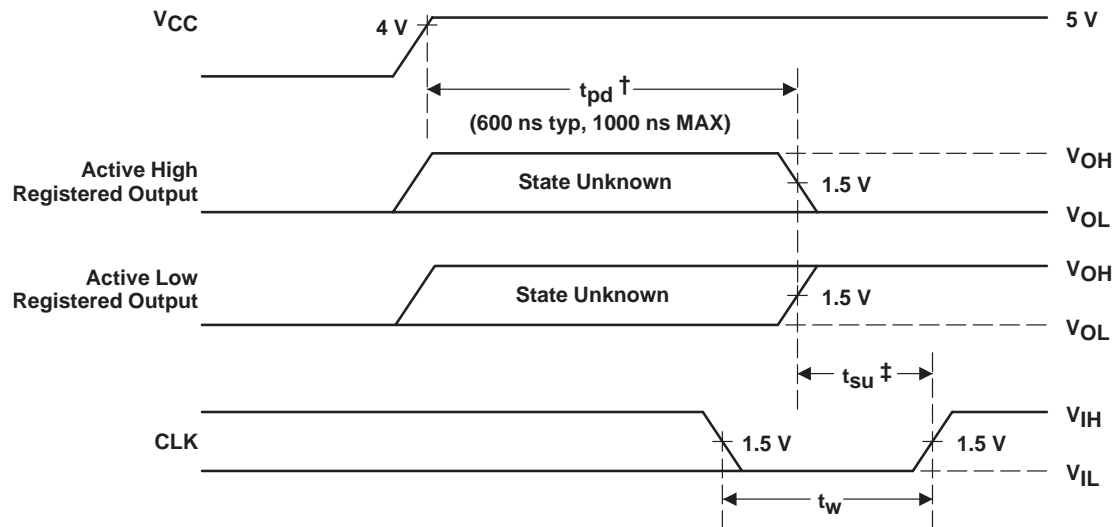
3. $t_d = t_{su} = t_w = 100$ ns to 1000 ns. $V_{IHH} = 10.25$ V to 10.75 V.

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power-up reset

Following power up, all registers are reset to zero. The output level depends on the polarity selected during programming. This feature provides extra flexibility to the system designer and is especially valuable in simplifying state-machine initialization. To ensure a valid power-up reset, it is important that the rise of V_{CC} be monotonic. Following power-up reset, a low-to-high clock transition must not occur until all applicable input and feedback setup times are met.



† This is the power-up reset time and applies to registered outputs only. The values shown are from characterization data.

‡ This is the setup time for input or feedback.

Figure 3. Power-Up Reset Waveforms

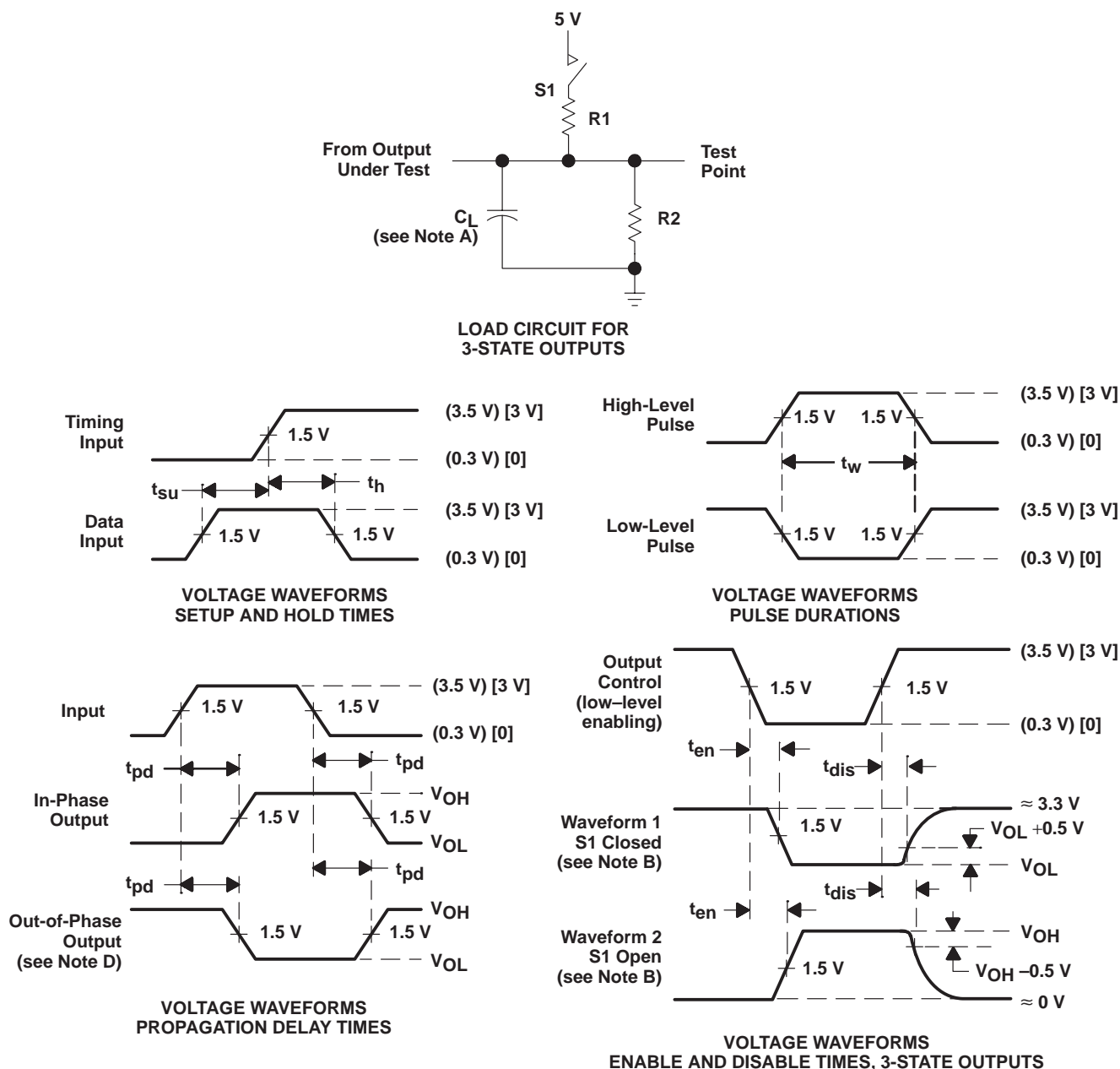
programming information

Texas Instruments programmable logic devices can be programmed using widely available software and inexpensive device programmers.

When the additional fuses are not being used, the TIBPAL22VP10 can be programmed using the TIBPAL22V10/10A programming algorithm. The fuse configuration data can either be from a JEDEC file (format per JEDEC Standard No. 3-A) or a TIBPAL22V10/10A master.

Complete programming specifications, algorithms, and the latest information on hardware, software, and firmware are available upon request. Information on programmers capable of programming Texas Instruments programmable logic is also available, upon request, from the nearest TI field sales office, local authorized TI distributor, or by calling Texas Instruments at (214) 997-5666.

PARAMETER MEASUREMENT INFORMATION



- NOTES: A. C_L includes probe and jig capacitance and is 50 pF for t_{pd} and t_{en} , 5 pF for t_{dis} .
 B. Waveform 1 is for an output with internal conditions such that the output is low except when disabled by the output control. Waveform 2 is for an output with internal conditions such that the output is high except when disabled by the output control.
 C. All input pulses have the following characteristics: For C suffix, use the voltage levels indicated in parentheses (). $PRR \leq 1$ MHz, $t_r = t_f \leq 2$ ns, duty cycle = 50%. For M suffix, use the voltage levels indicated in brackets []. $PRR \leq 10$ MHz, t_r and $t_f \leq 2$ ns, duty cycle = 50%.
 D. When measuring propagation delay times of 3-state outputs, switch S1 is closed.
 E. Equivalent loads may be used for testing.

Figure 4. Load Circuit and Voltage Waveforms

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D0892

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-86053033A	ACTIVE	LCCC	FK	28		TBD	Call TI	N / A for Pkg Type
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	Call TI	N / A for Pkg Type
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	Call TI	N / A for Pkg Type
5962-8605303LA	ACTIVE	CDIP	JT	24		TBD	Call TI	N / A for Pkg Type
5962-8605303LA	ACTIVE	CDIP	JT	24		TBD	Call TI	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	OBSOLETE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	OBSOLETE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	OBSOLETE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	OBSOLETE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	Call TI	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	Call TI	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

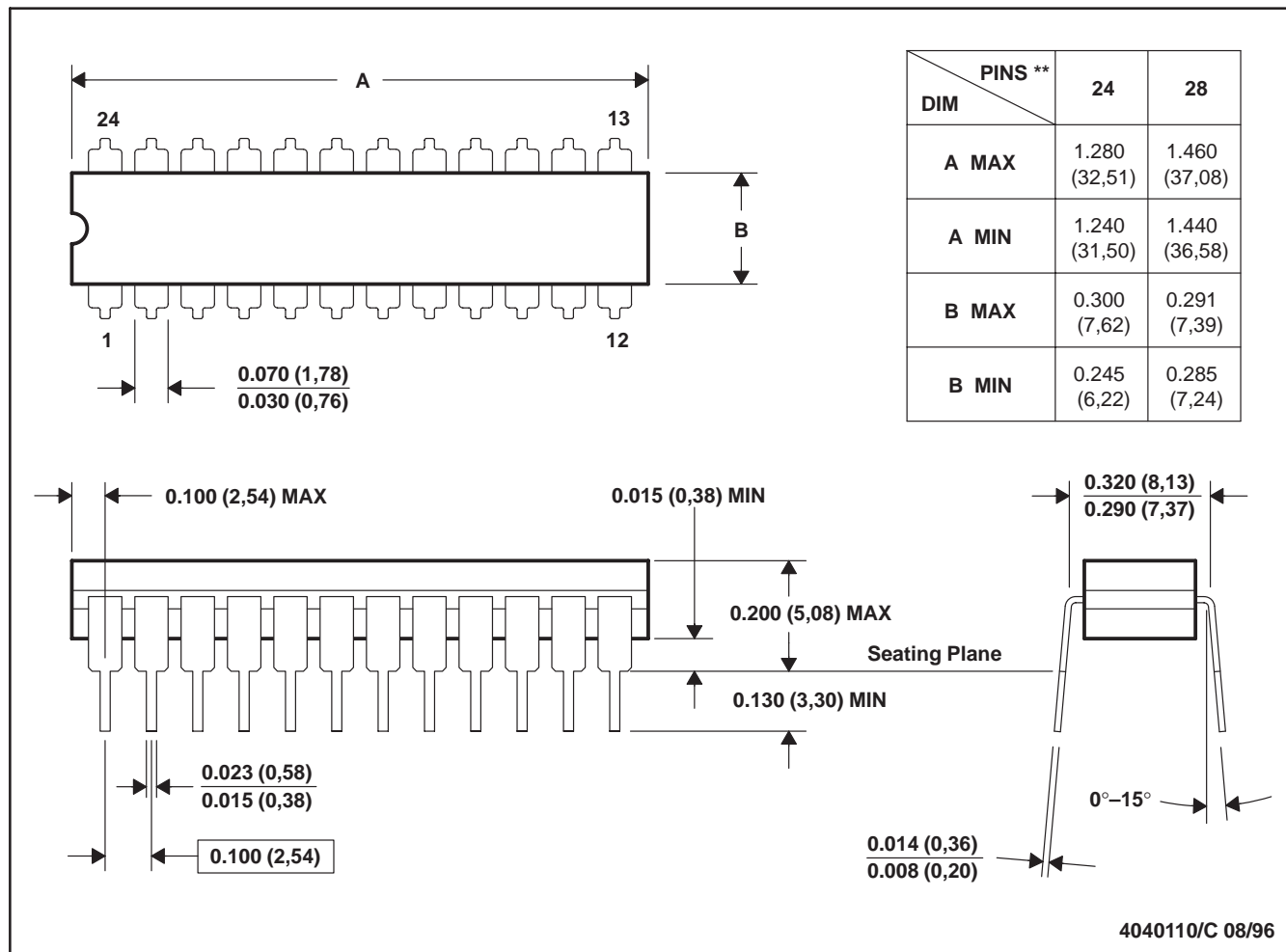
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JT (R-GDIP-T**)

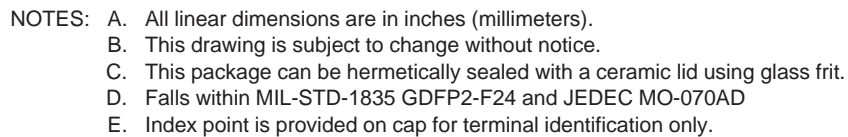
CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

CERAMIC DUAL FLATPACK



FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN

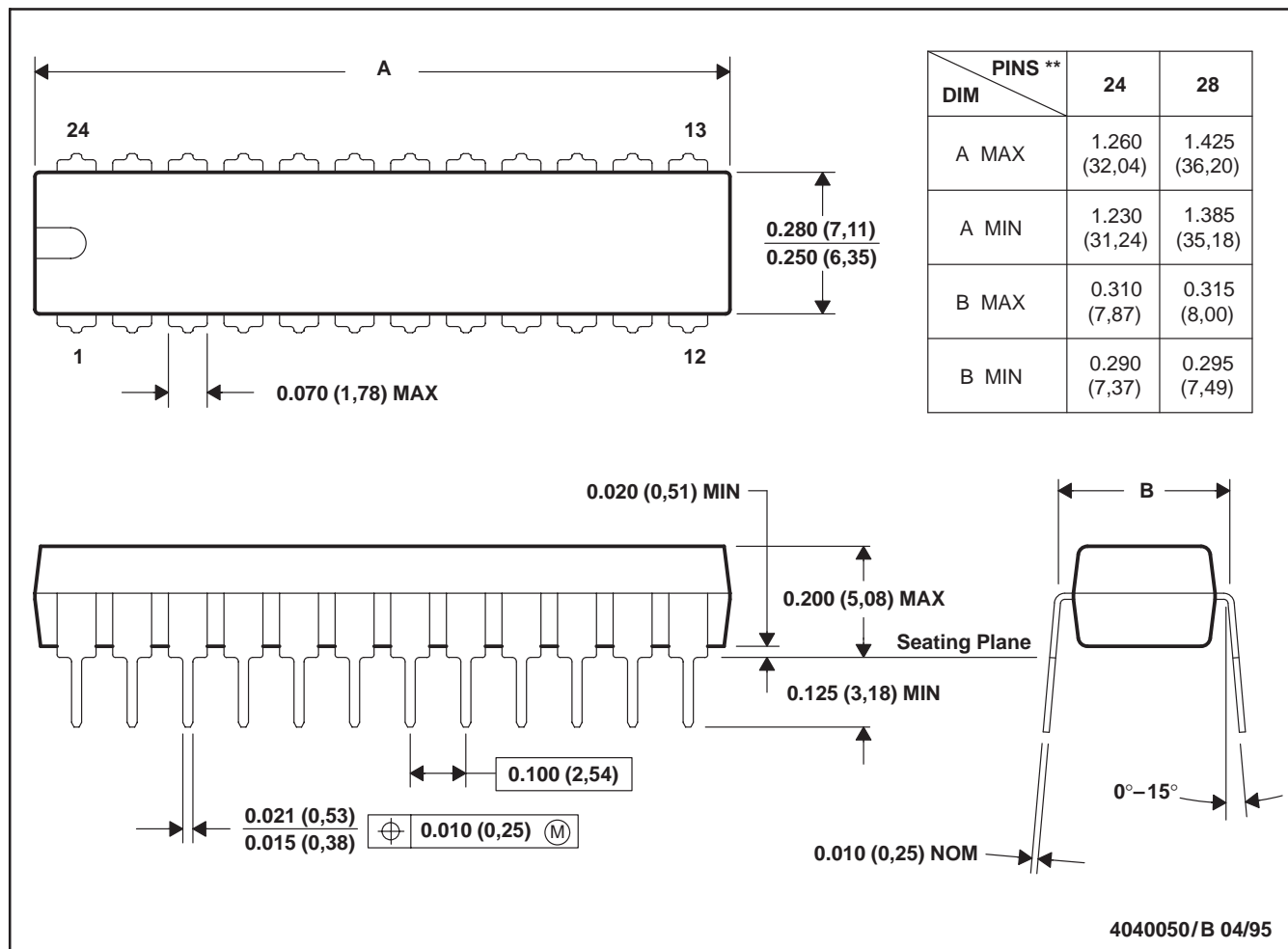


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

NT (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

24 PINS SHOWN

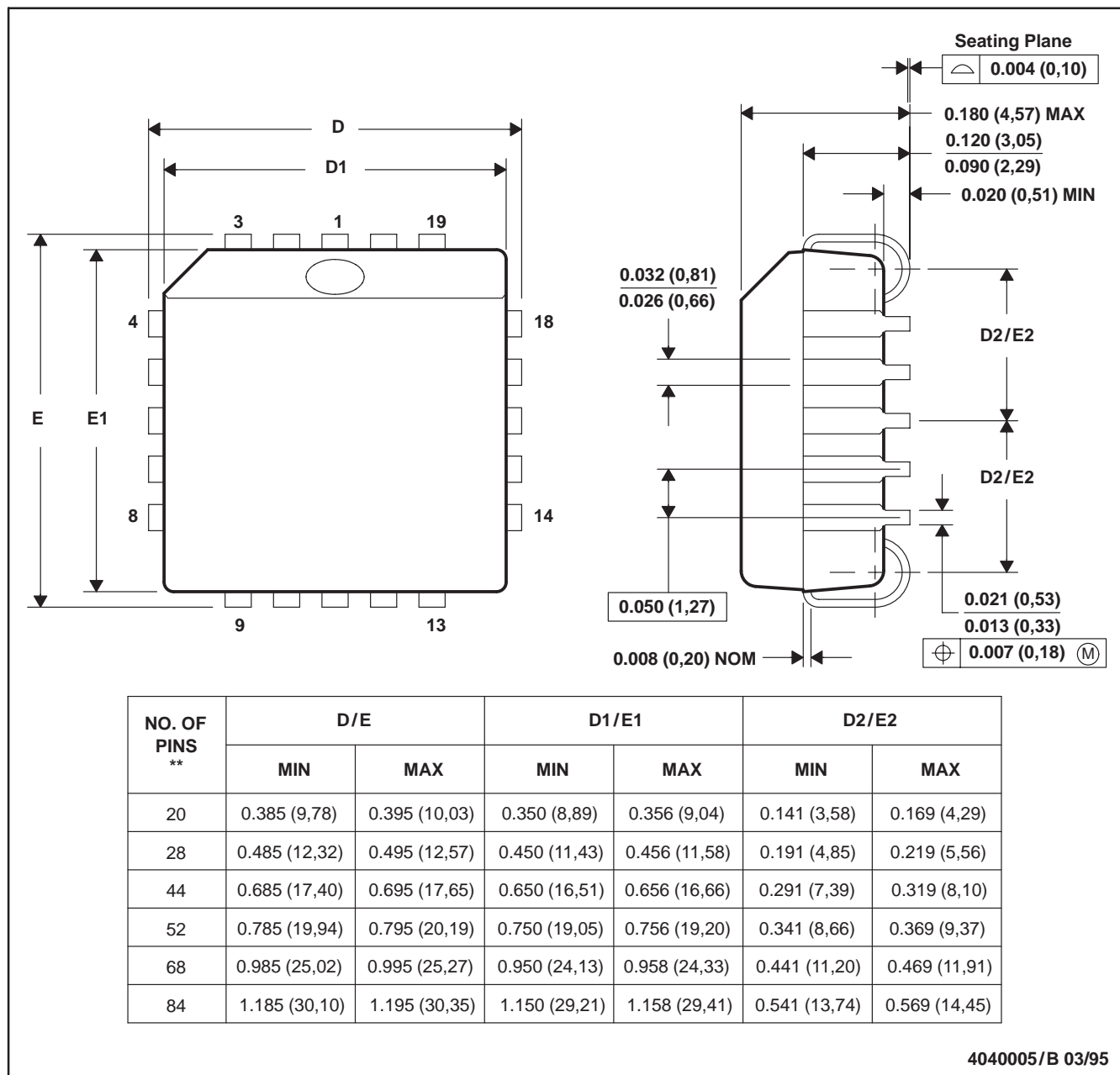


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

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PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

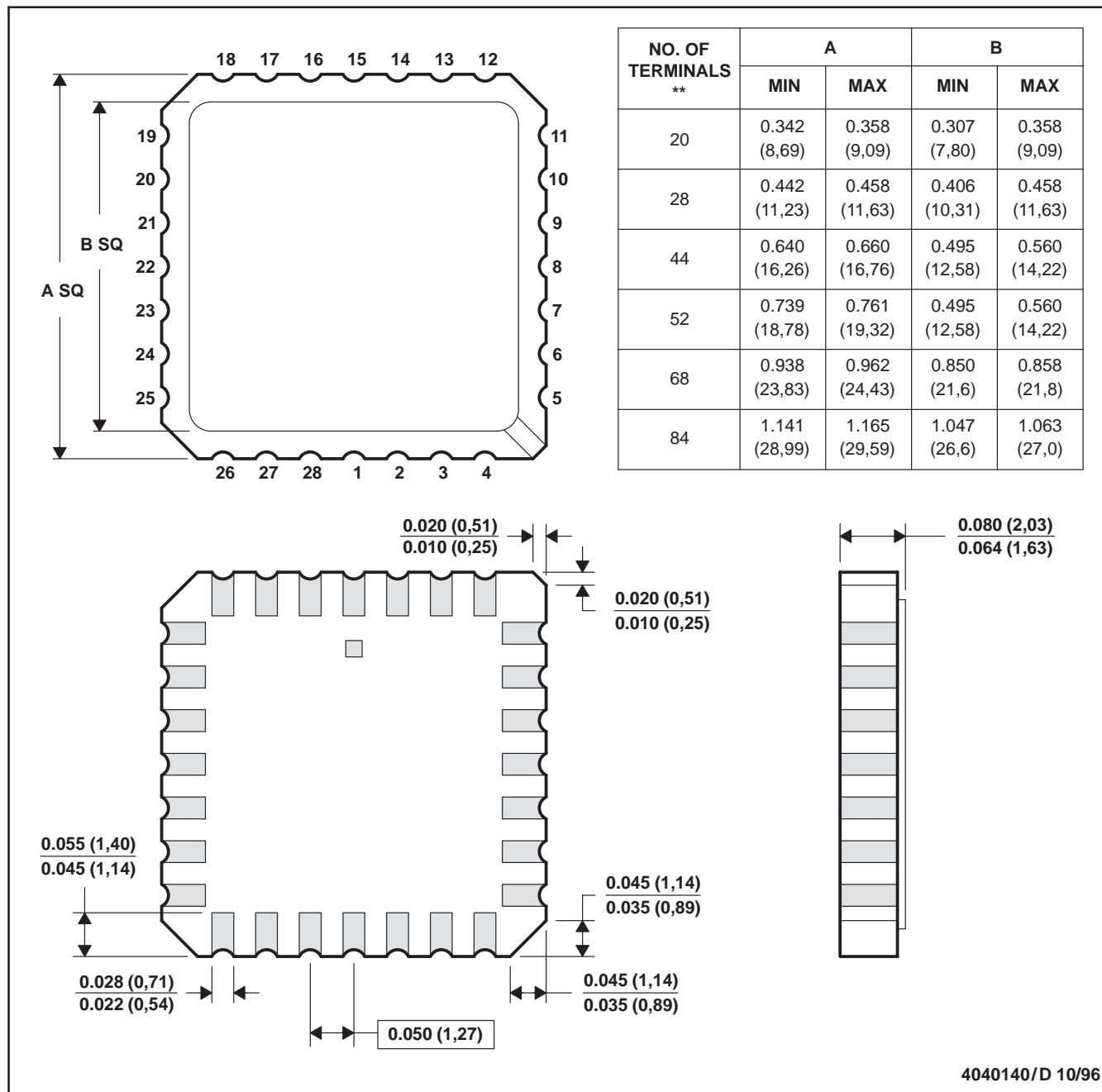
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



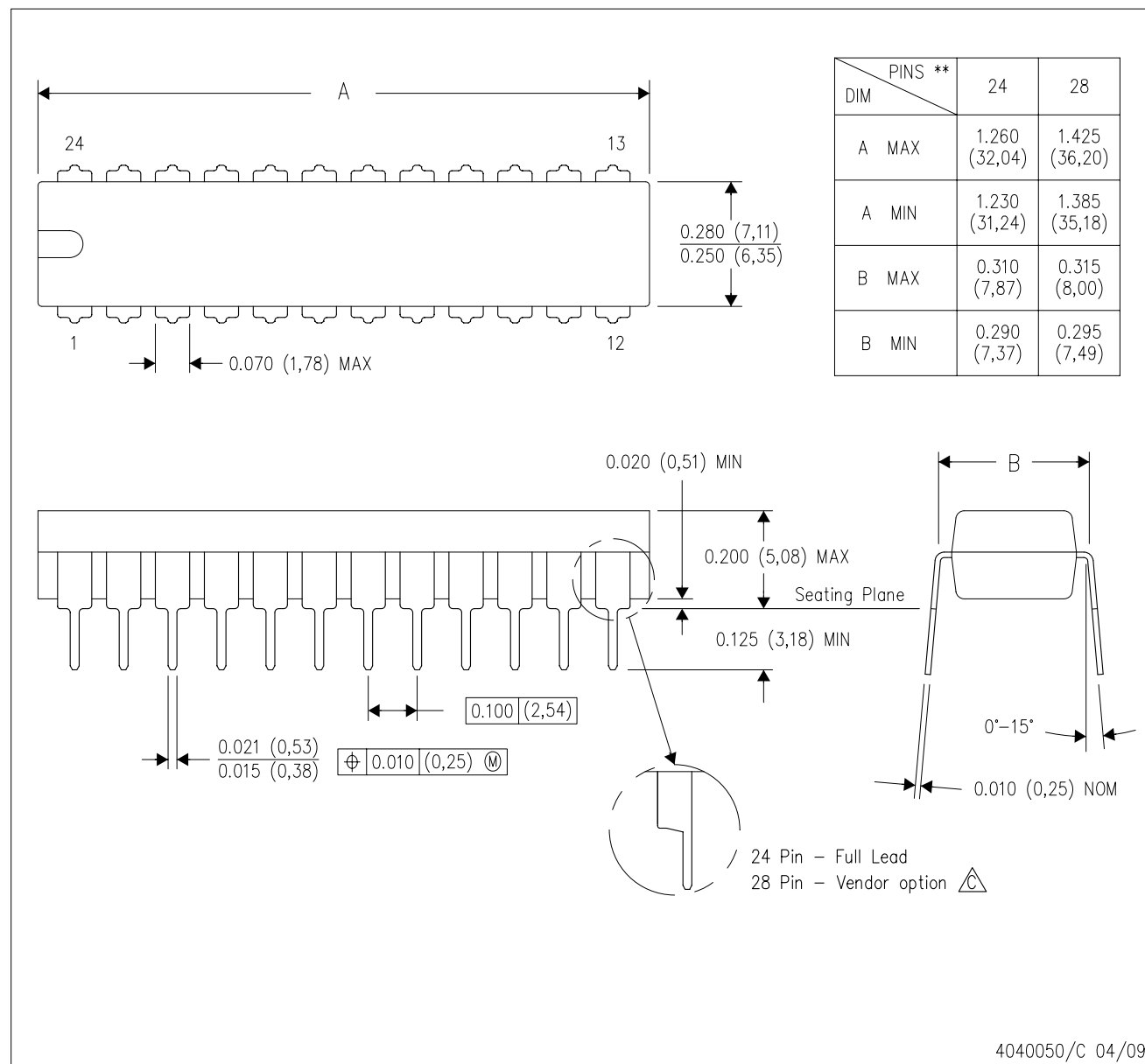
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

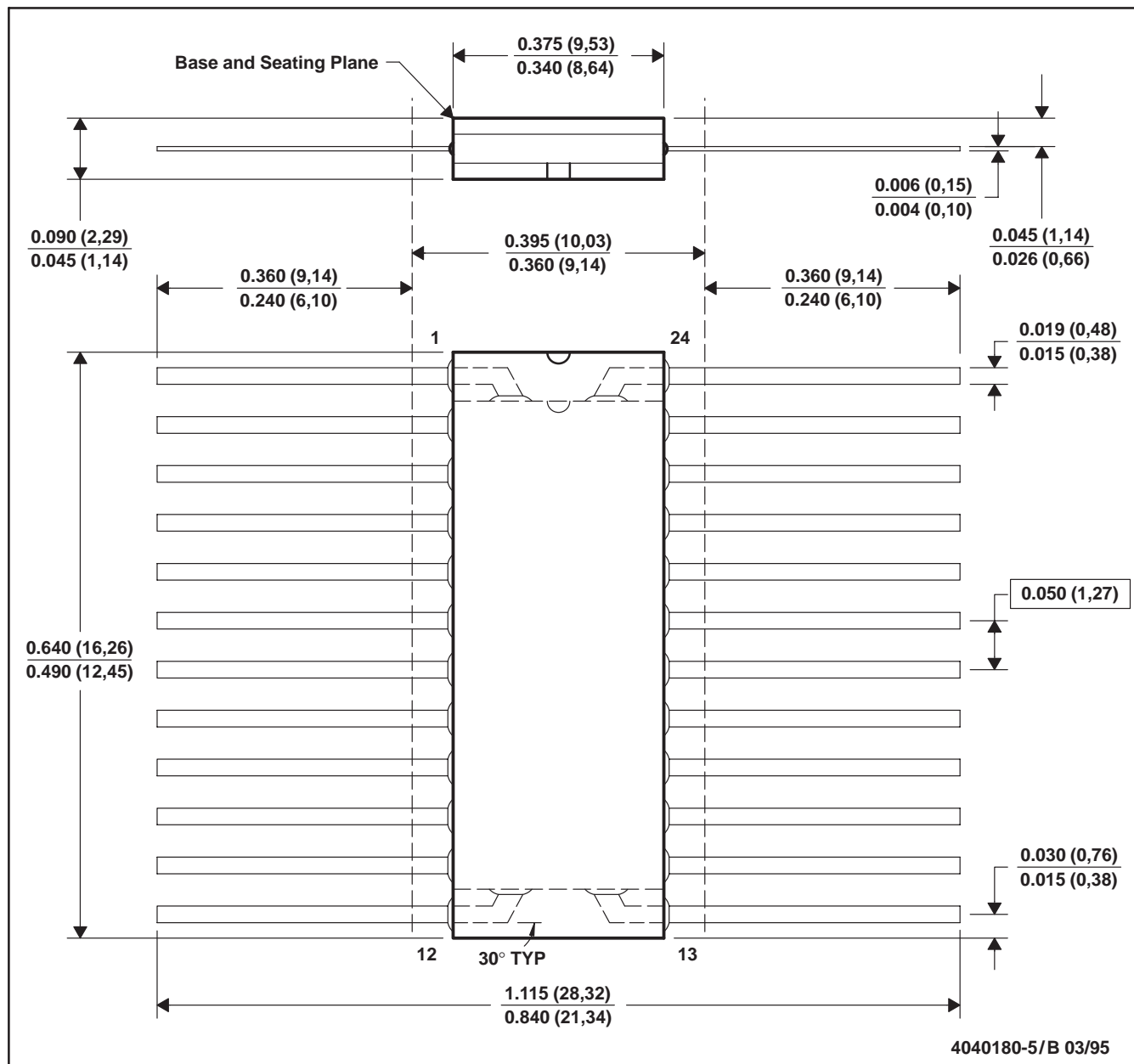
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

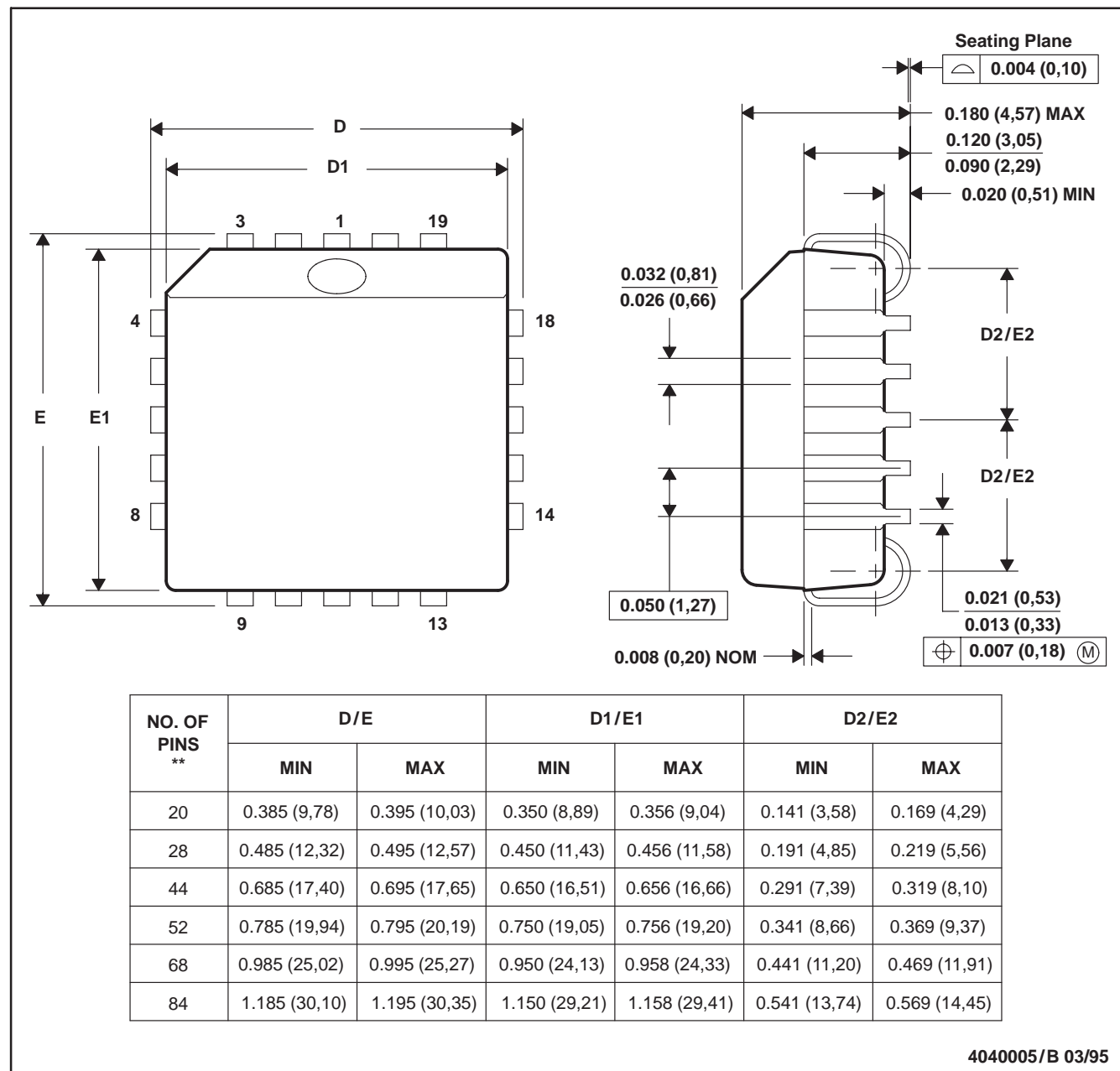


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

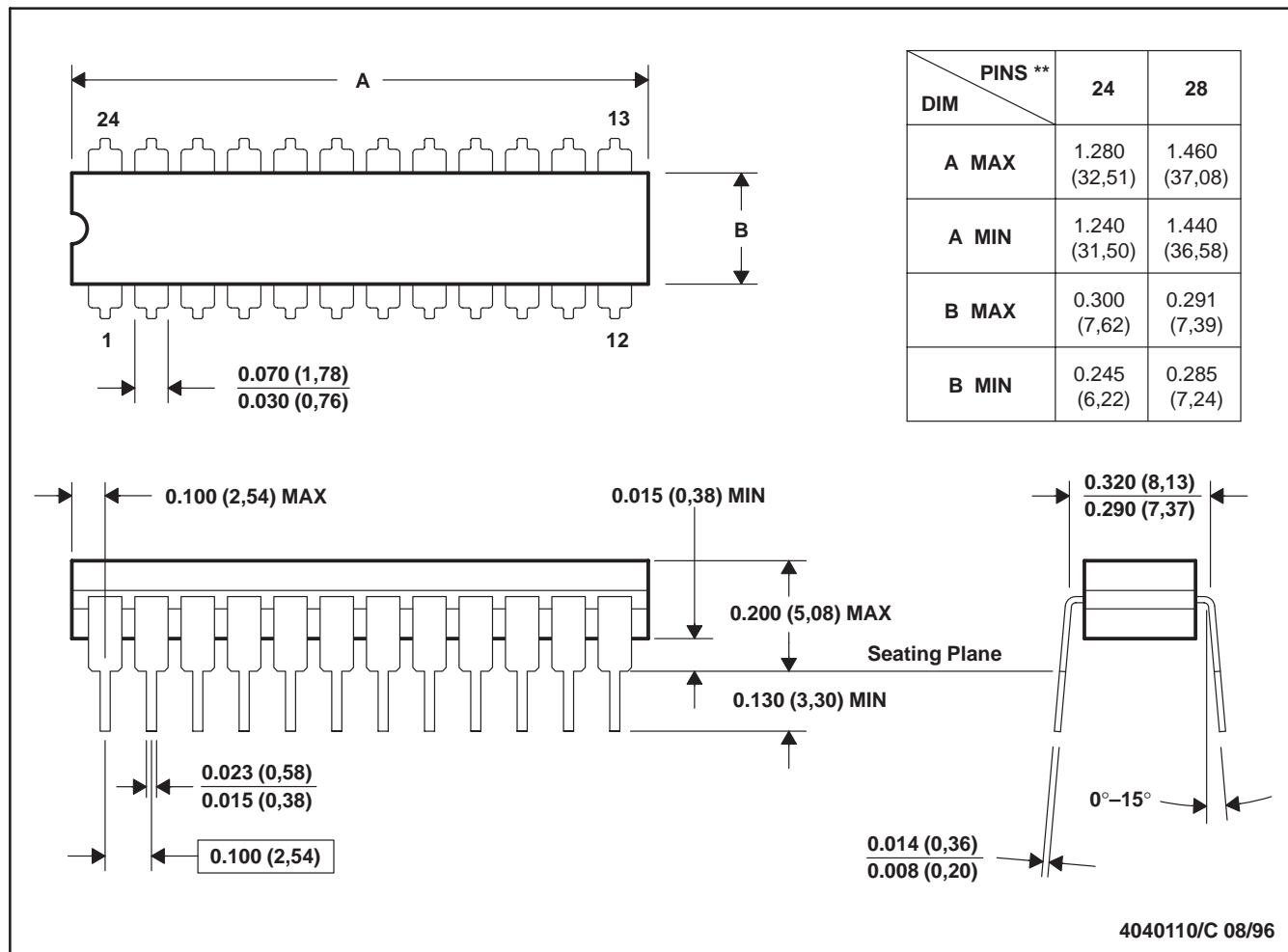


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



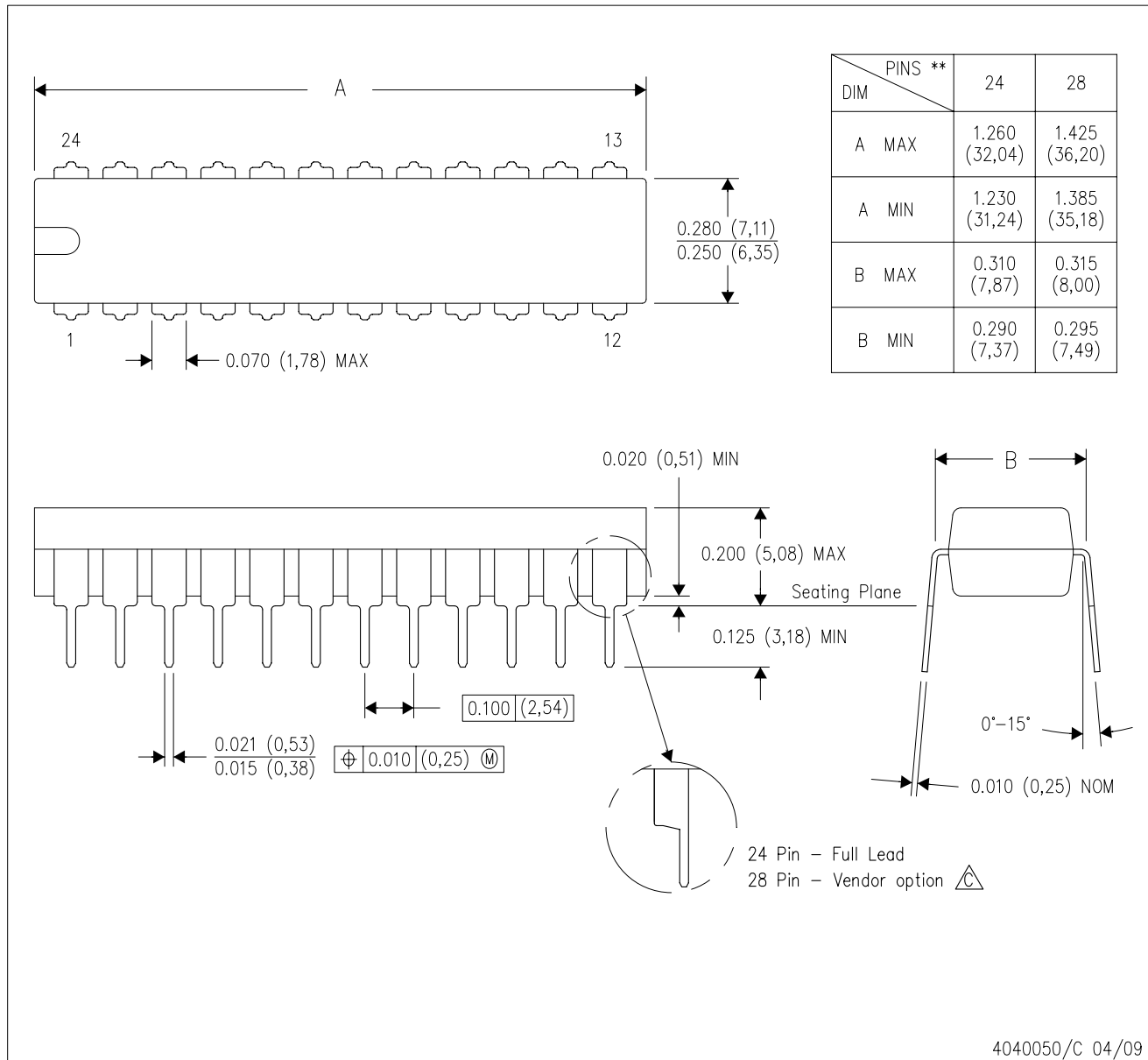
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

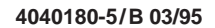
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

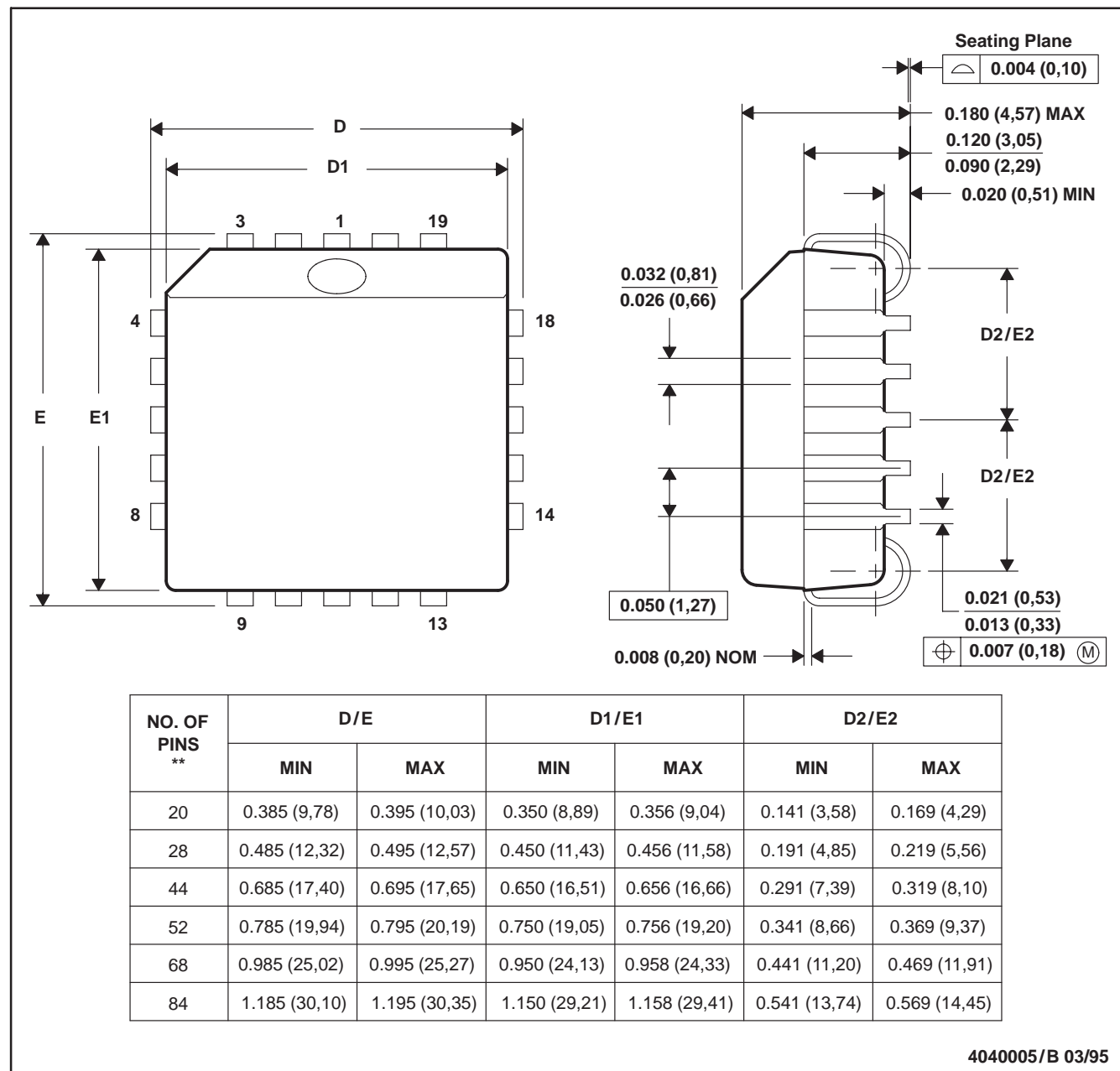


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

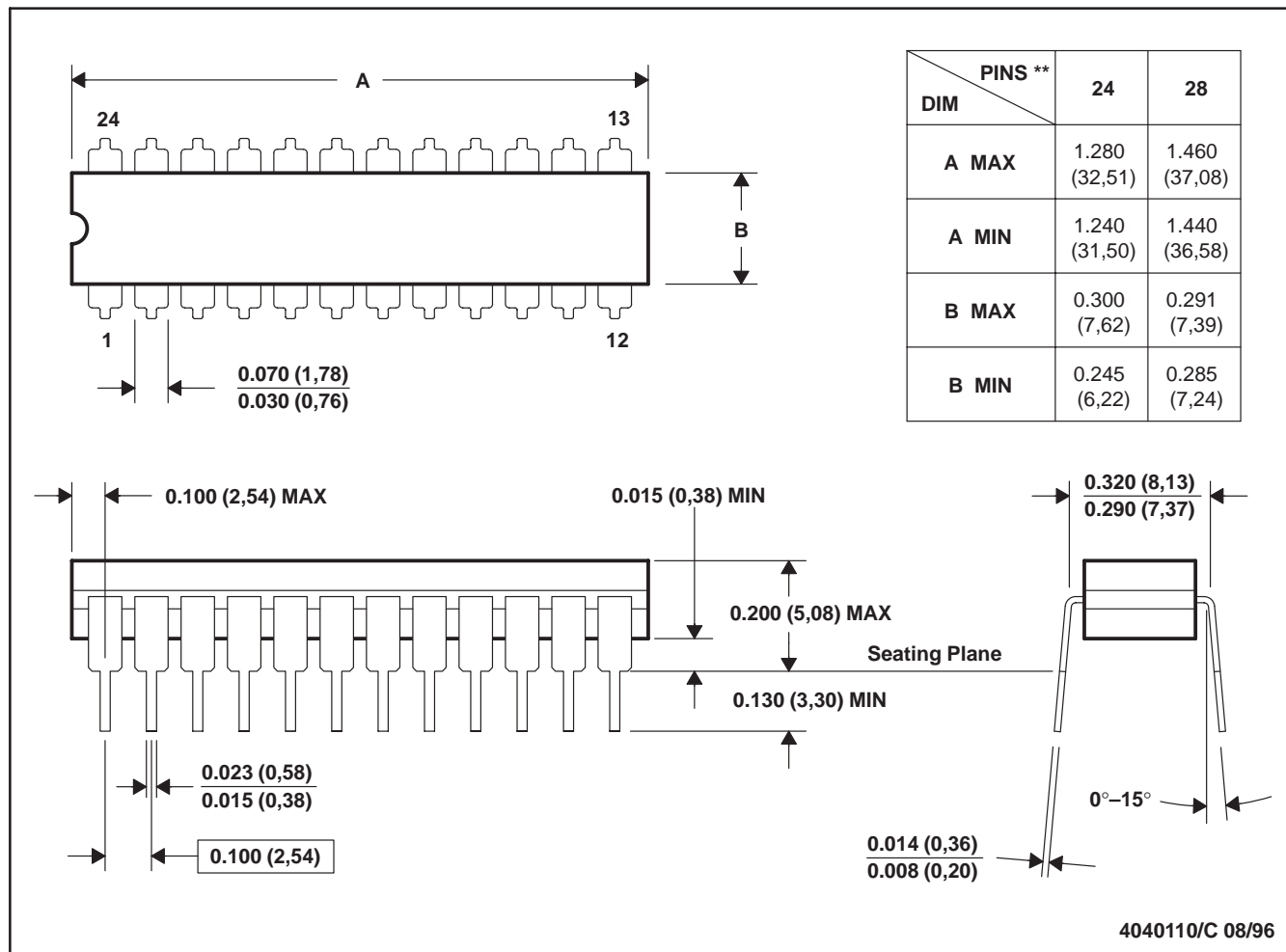


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

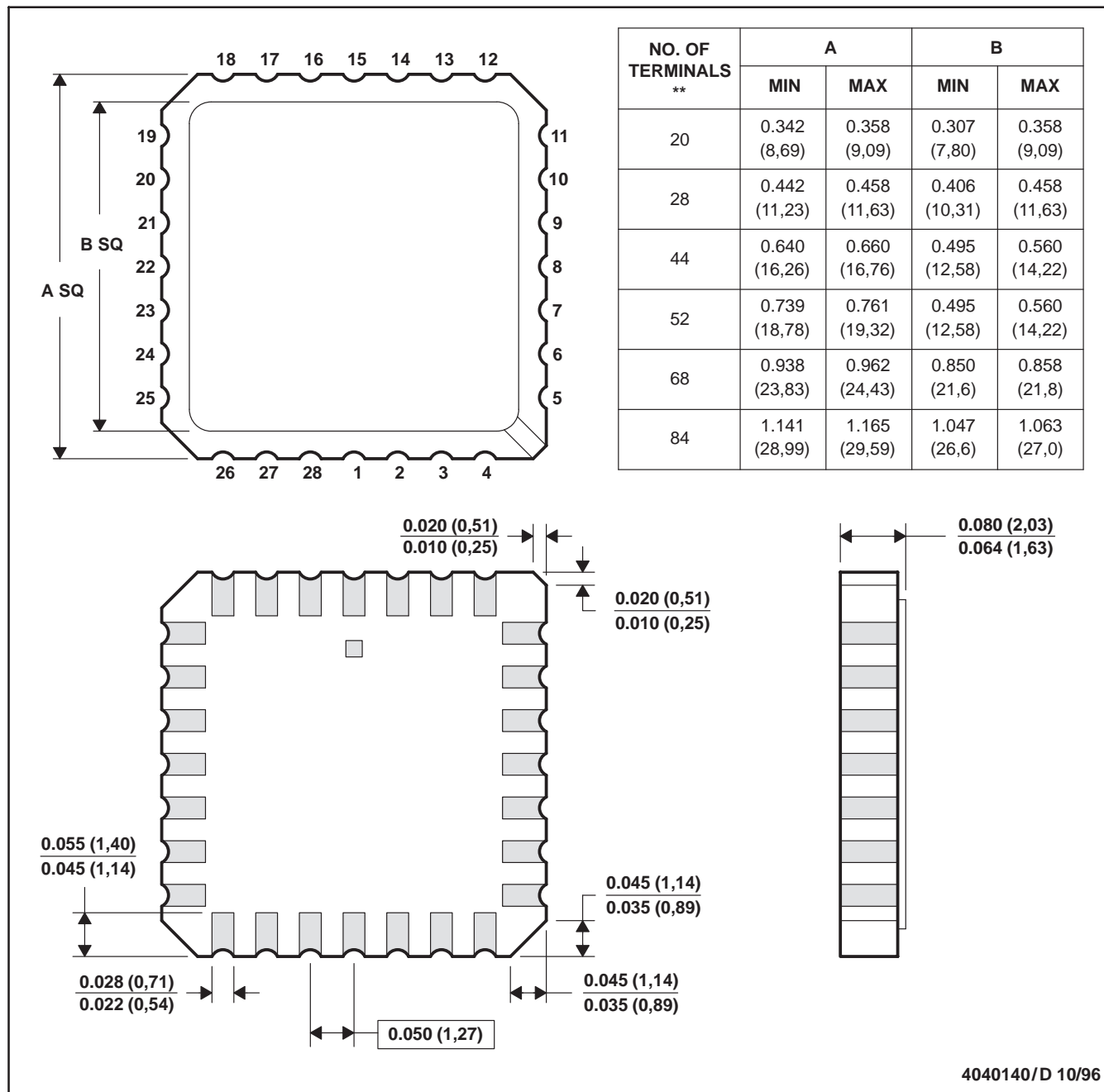
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



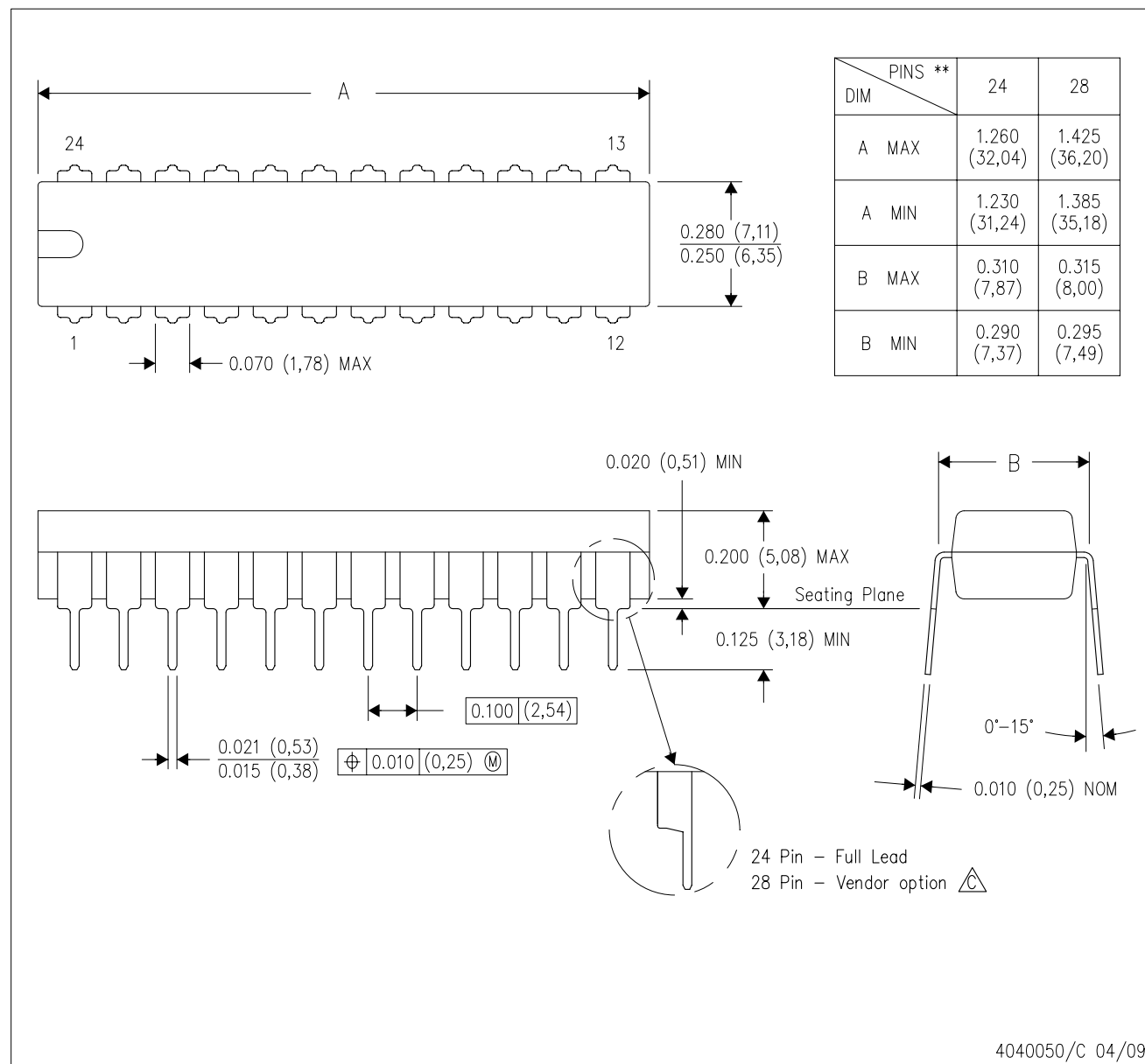
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

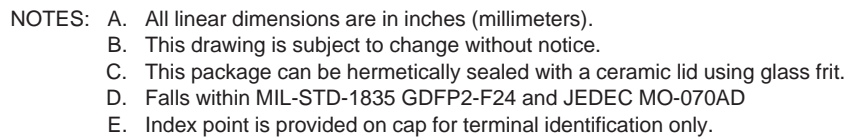
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

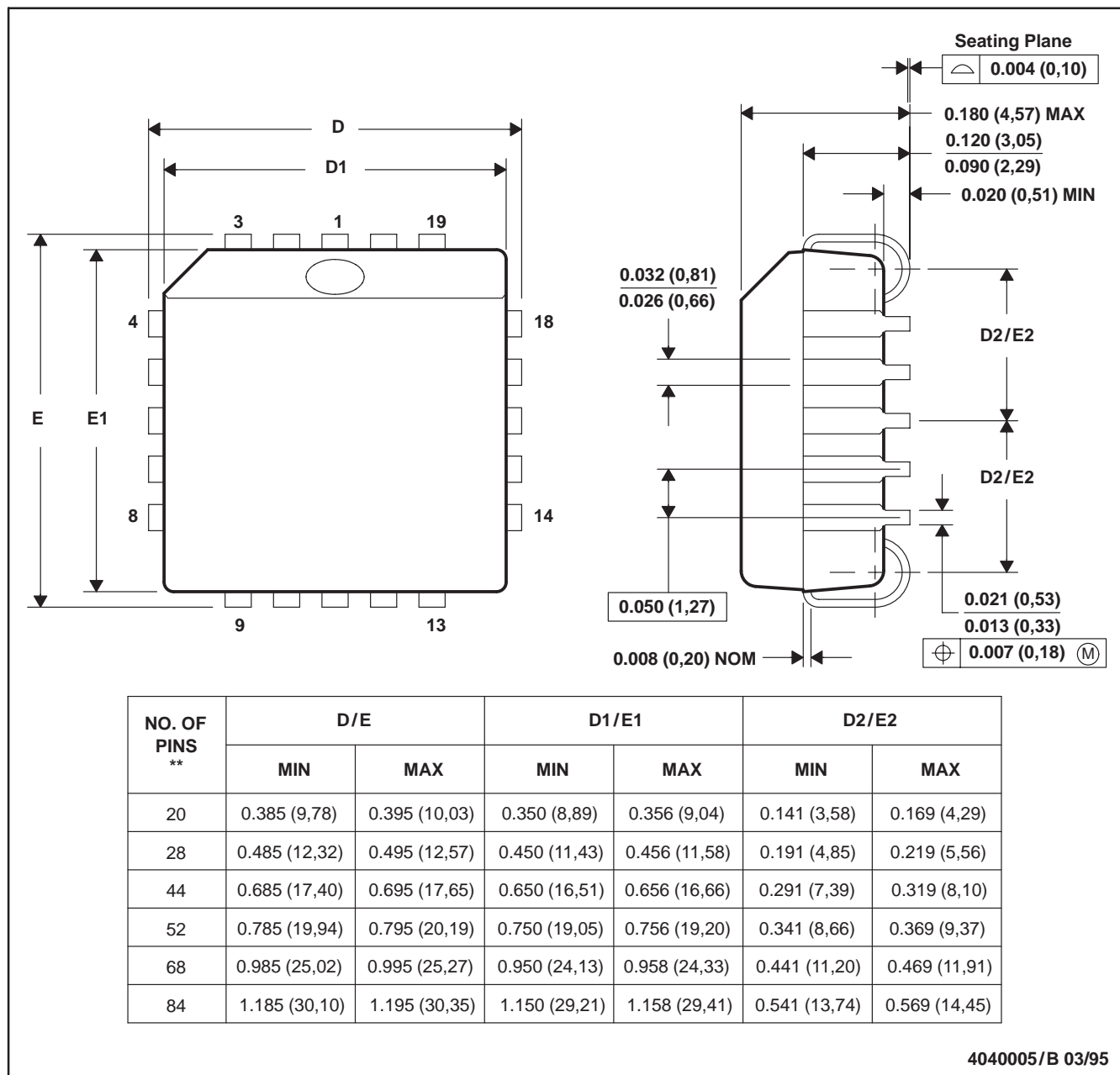
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

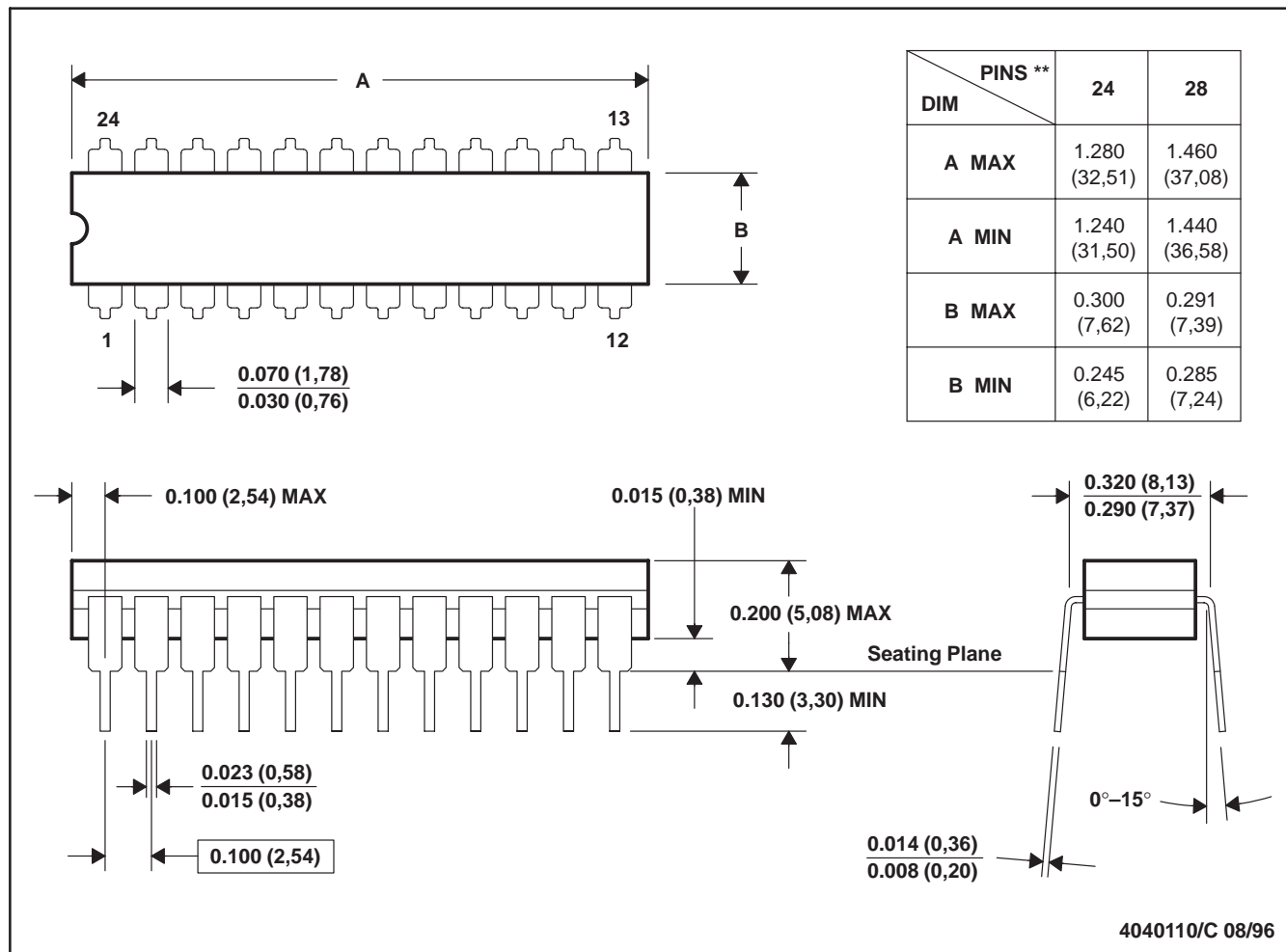


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

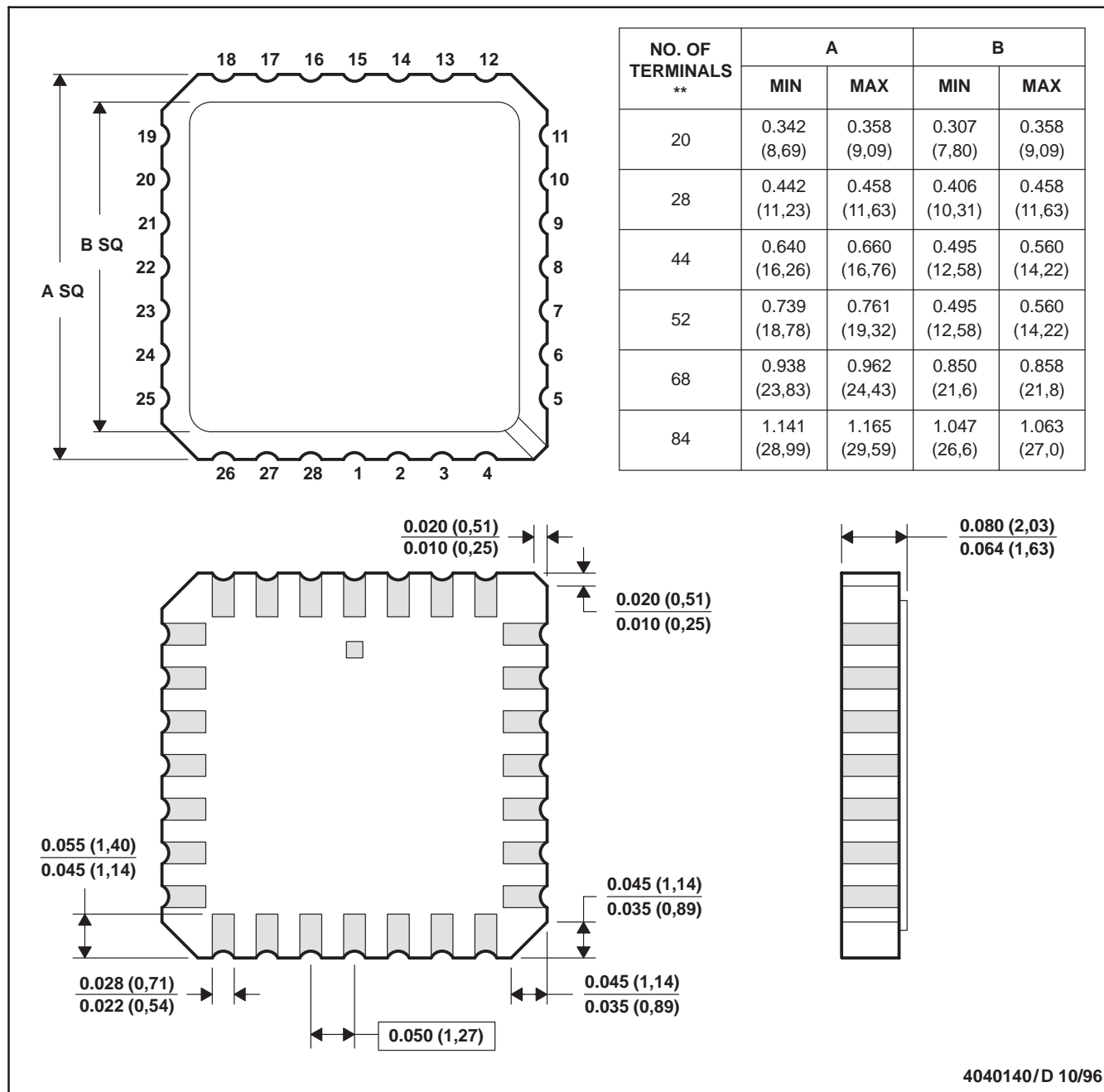
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



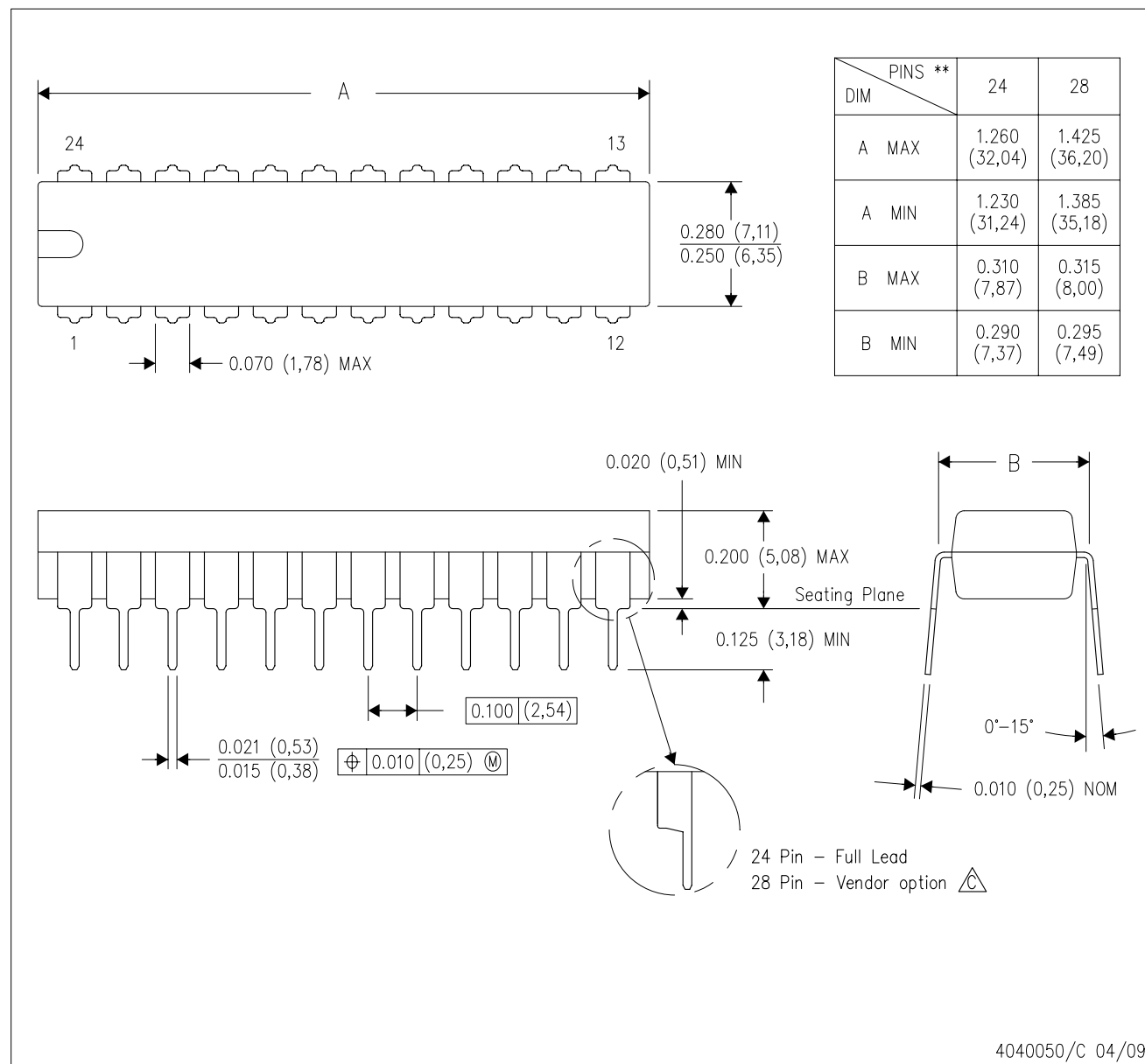
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

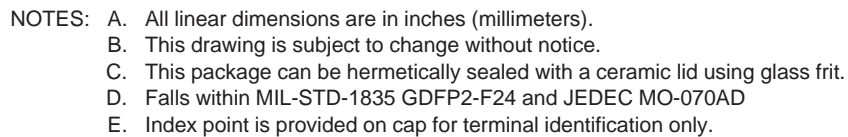
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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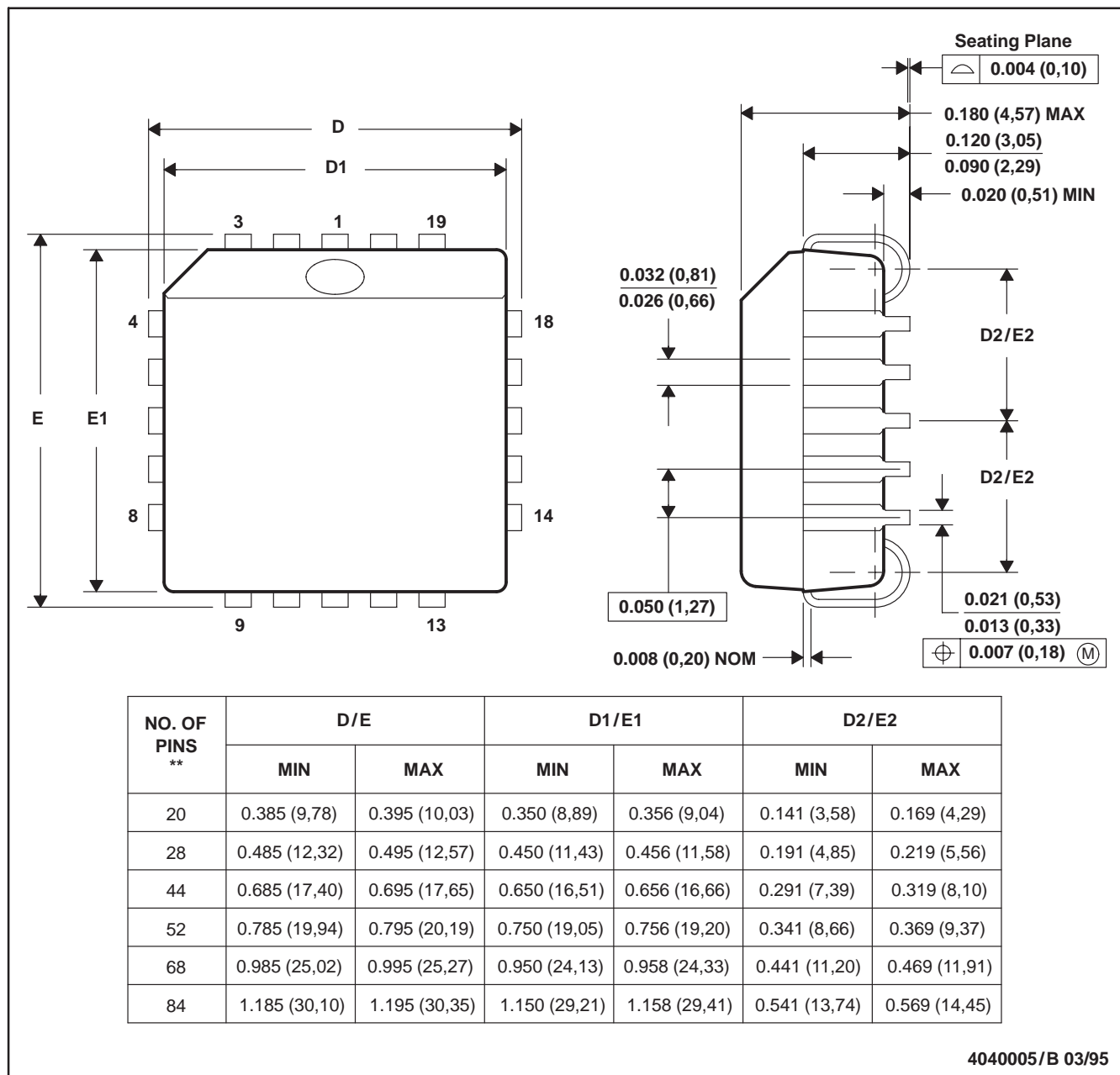
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

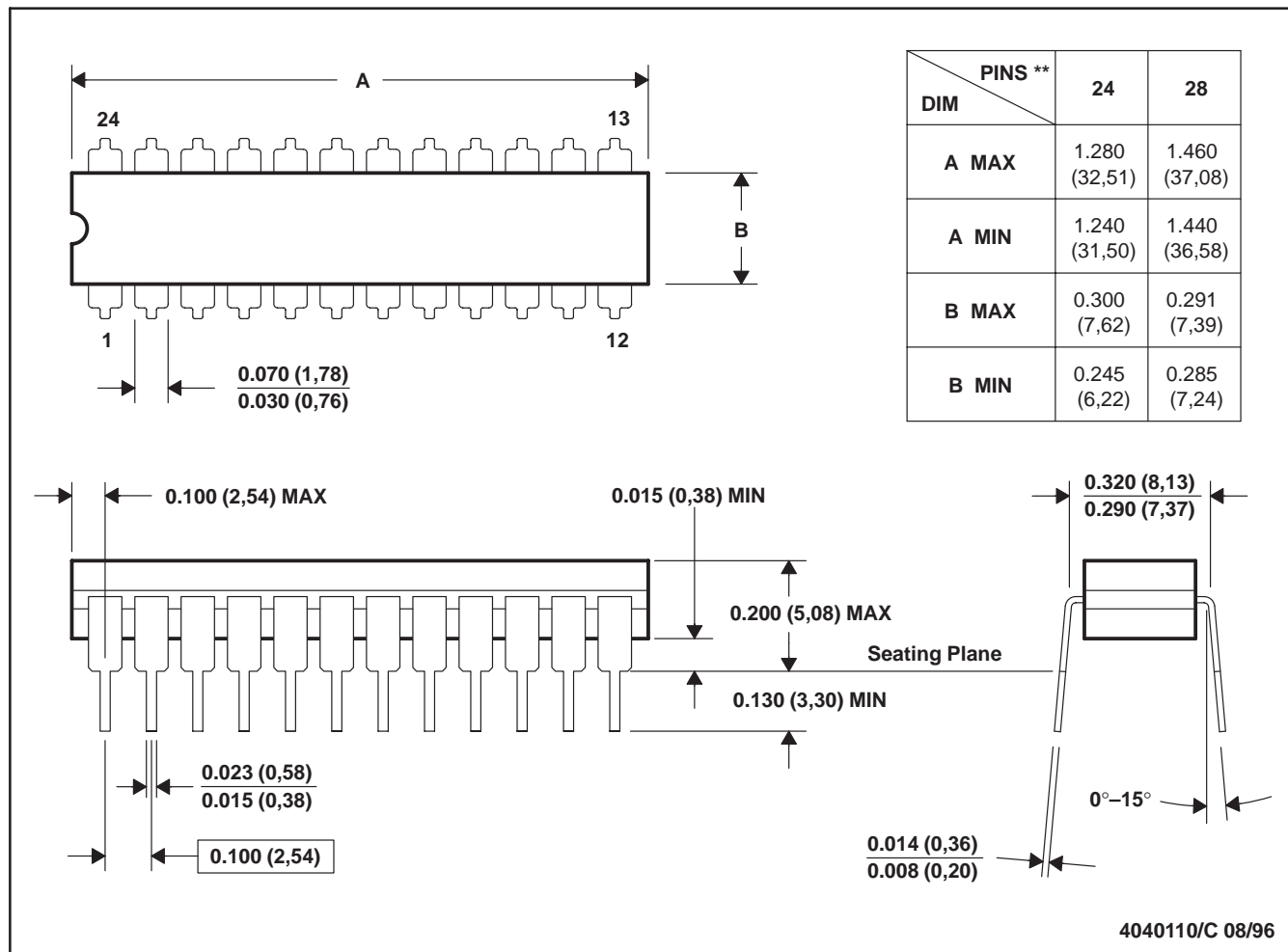


- NOTES: A. All linear dimensions are in inches (millimeters).
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JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



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 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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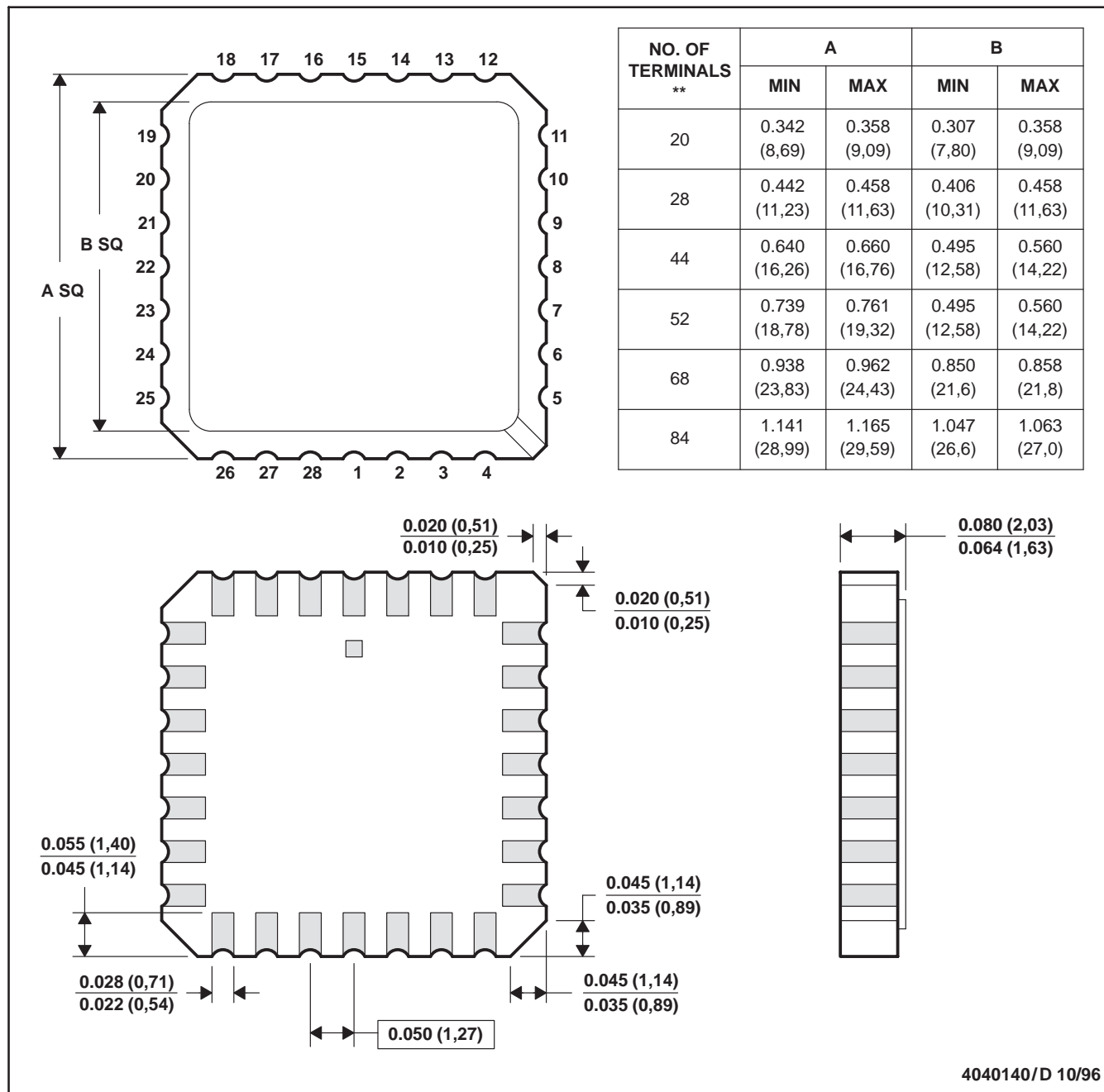
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



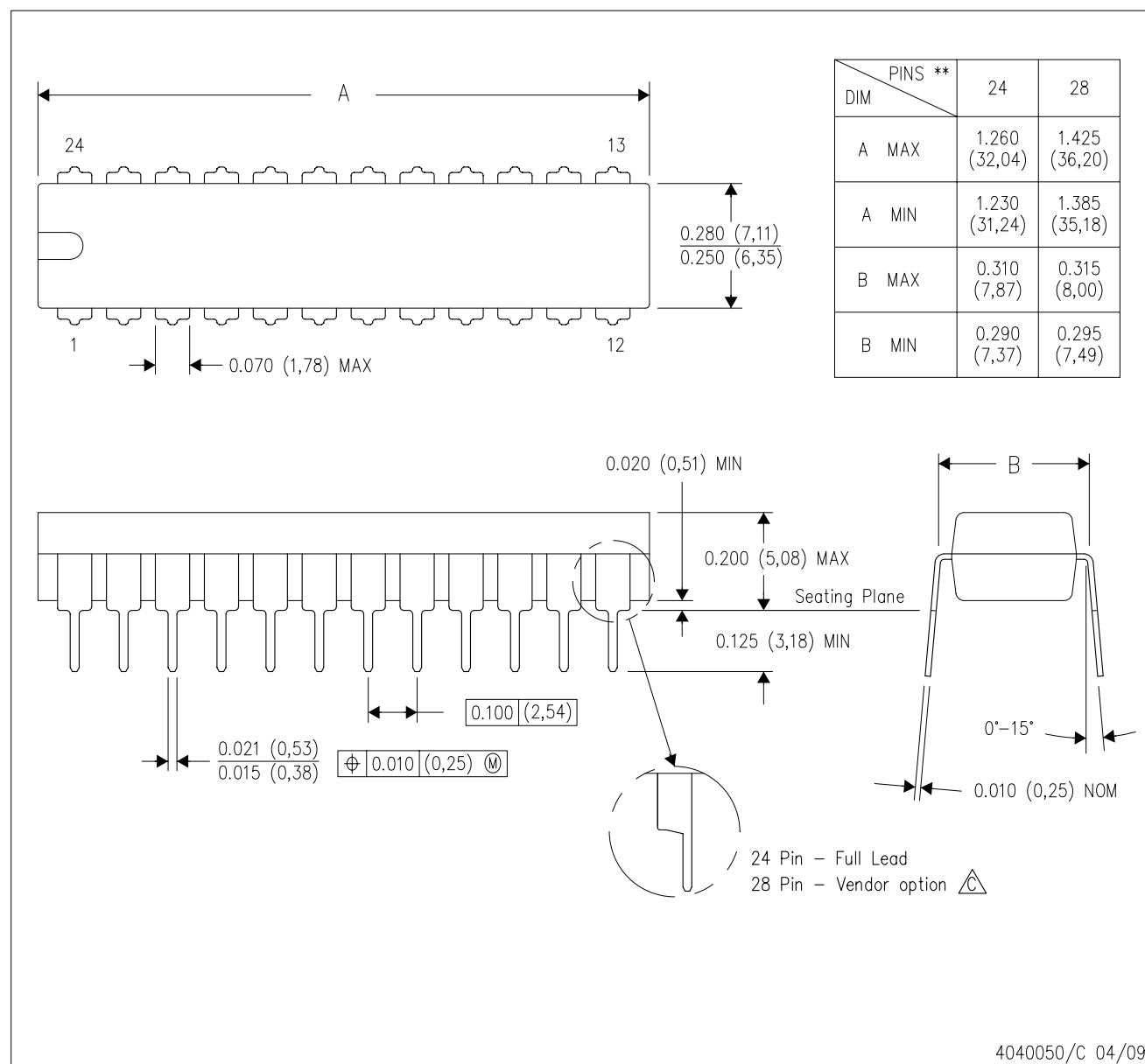
- NOTES:
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

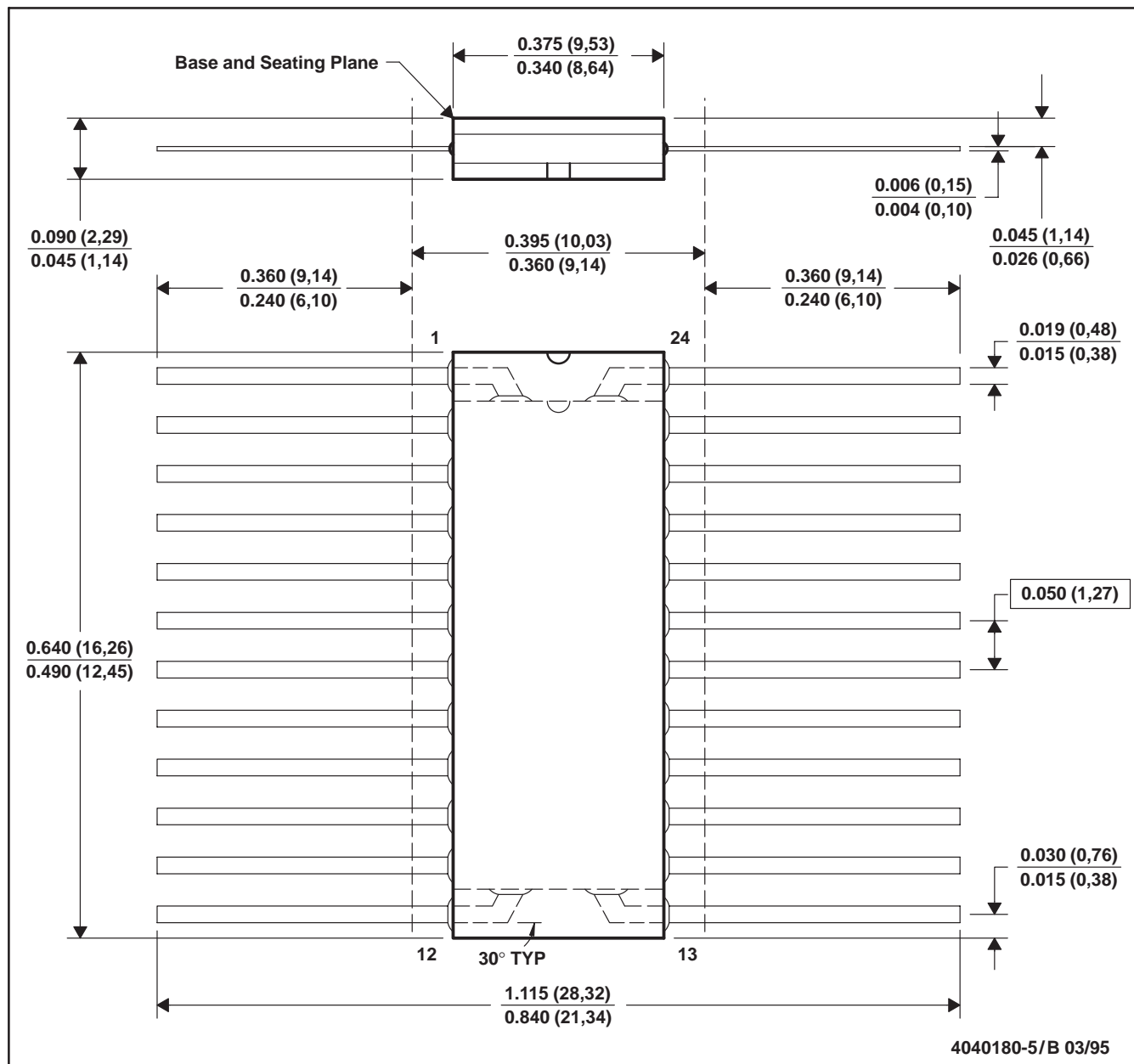
PLASTIC DUAL-IN-LINE PACKAGE



NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
B. This drawing is subject to change without notice.
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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

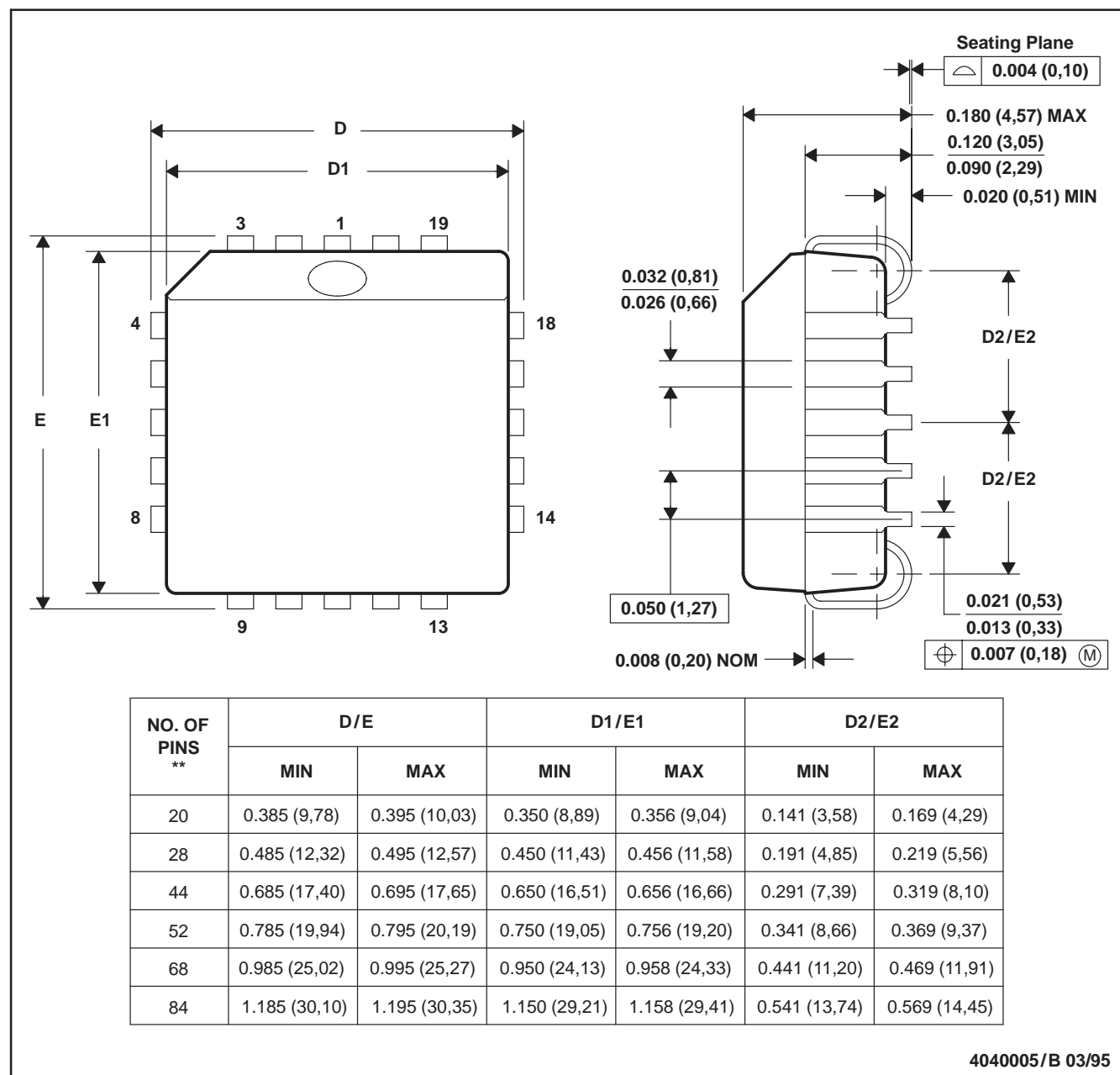


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

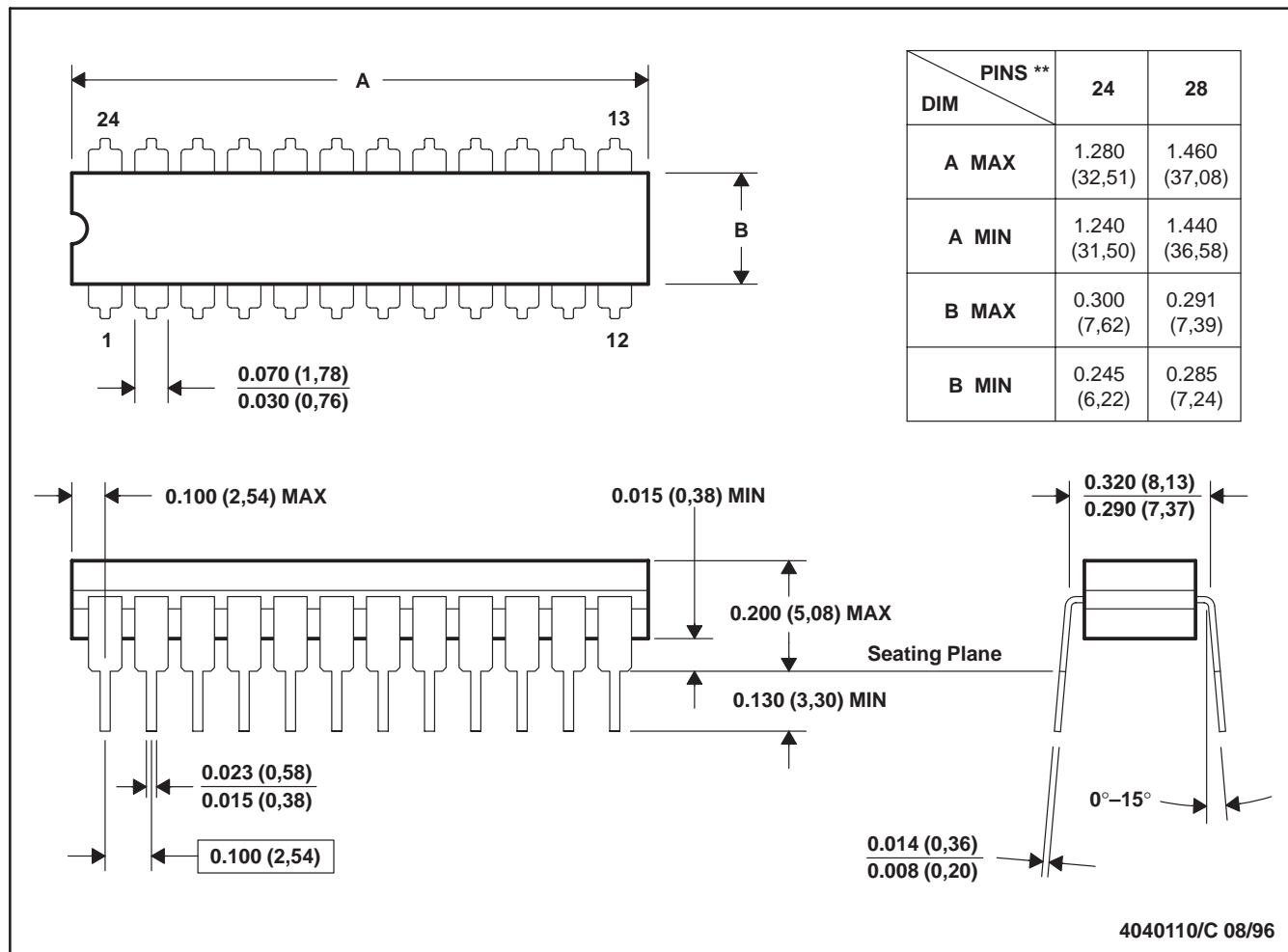


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



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 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



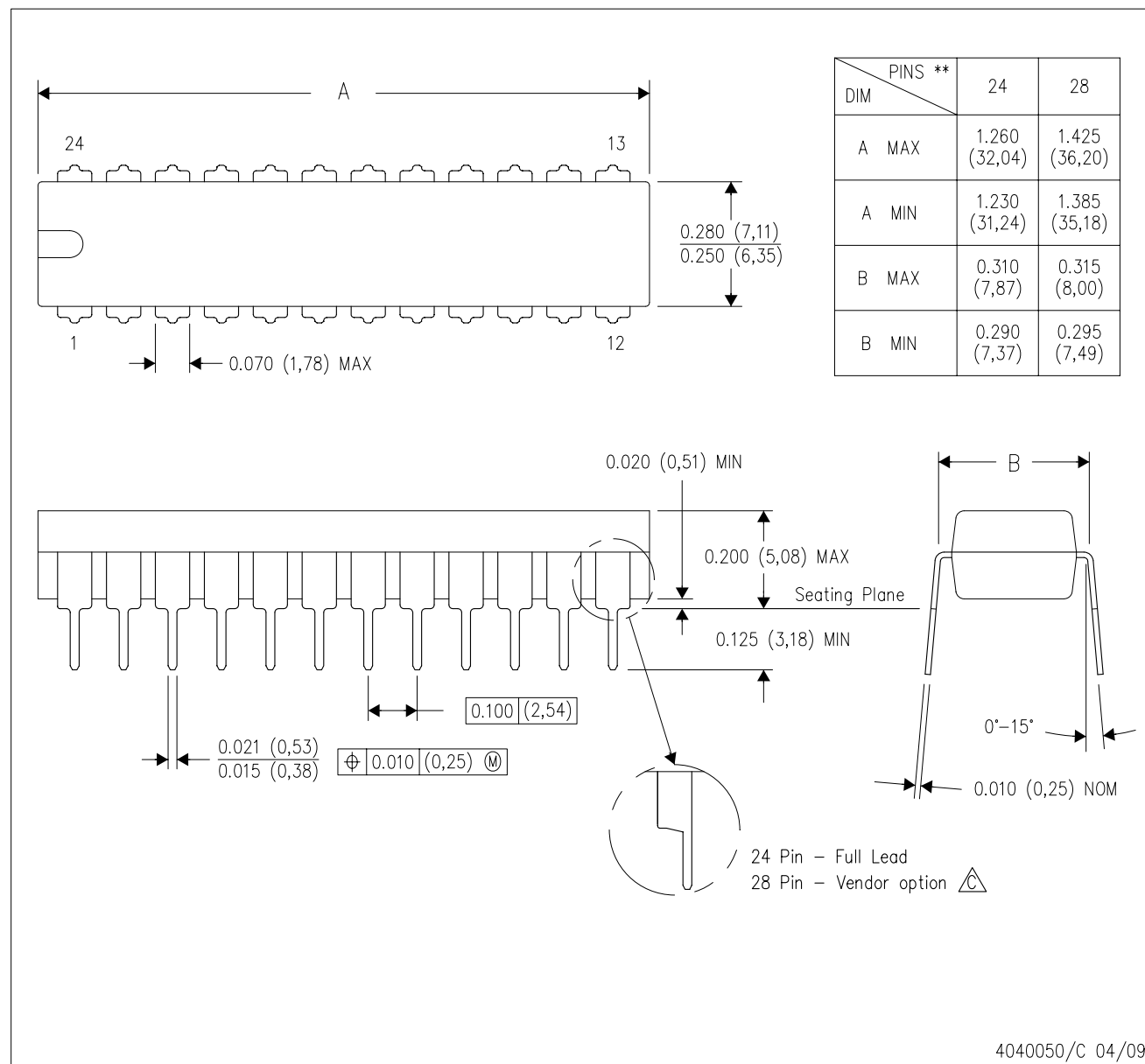
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

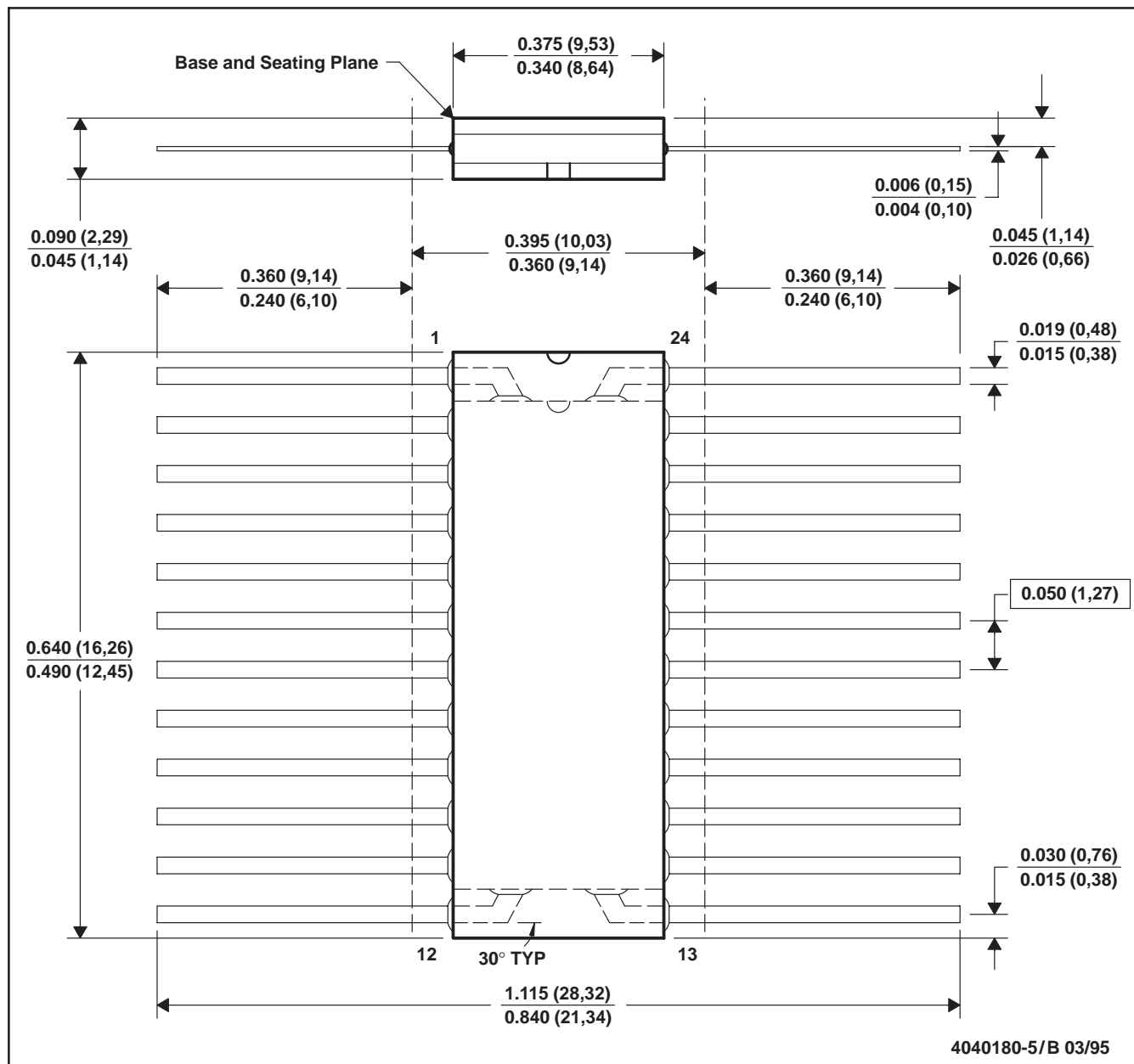
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

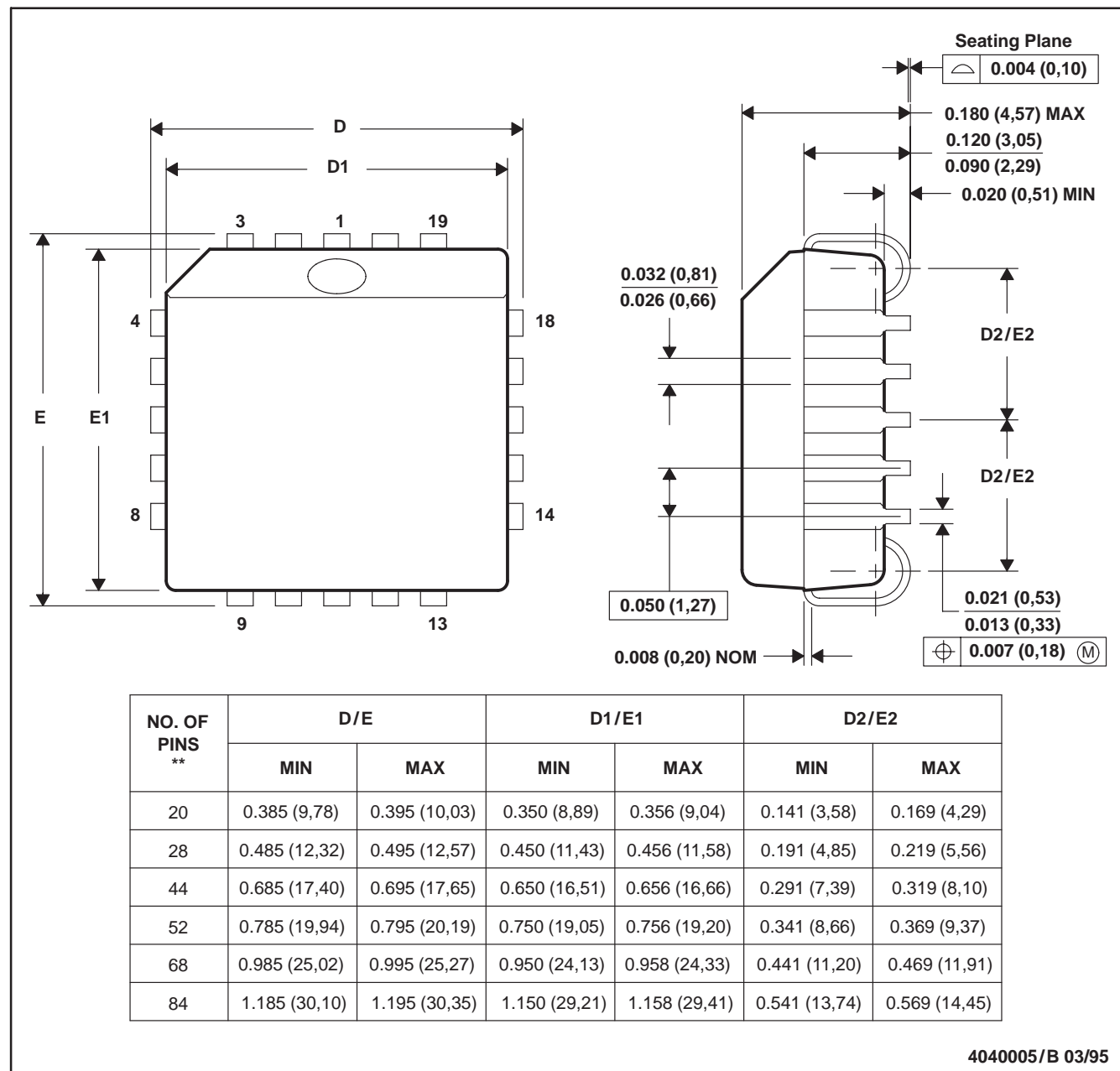


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

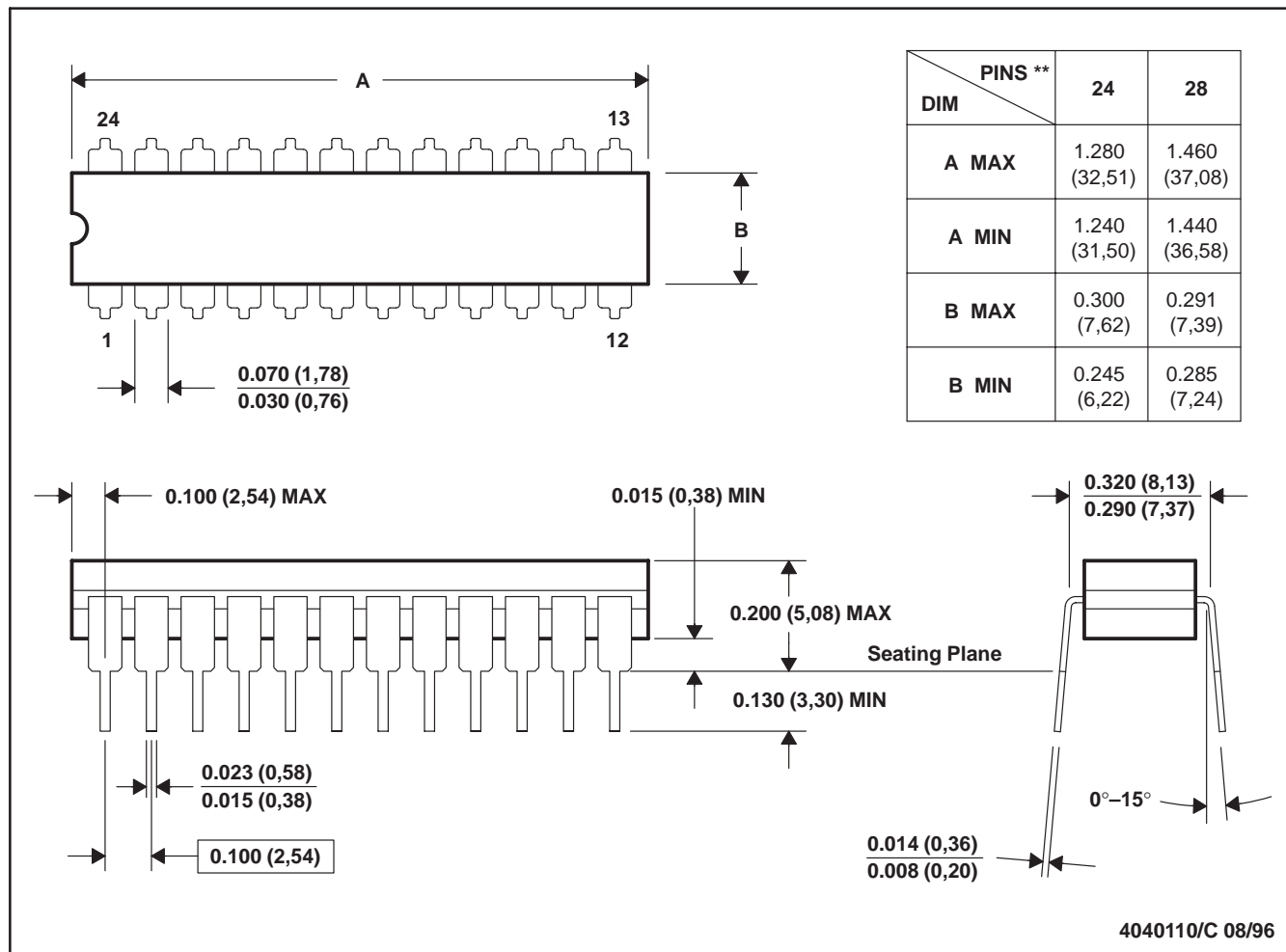


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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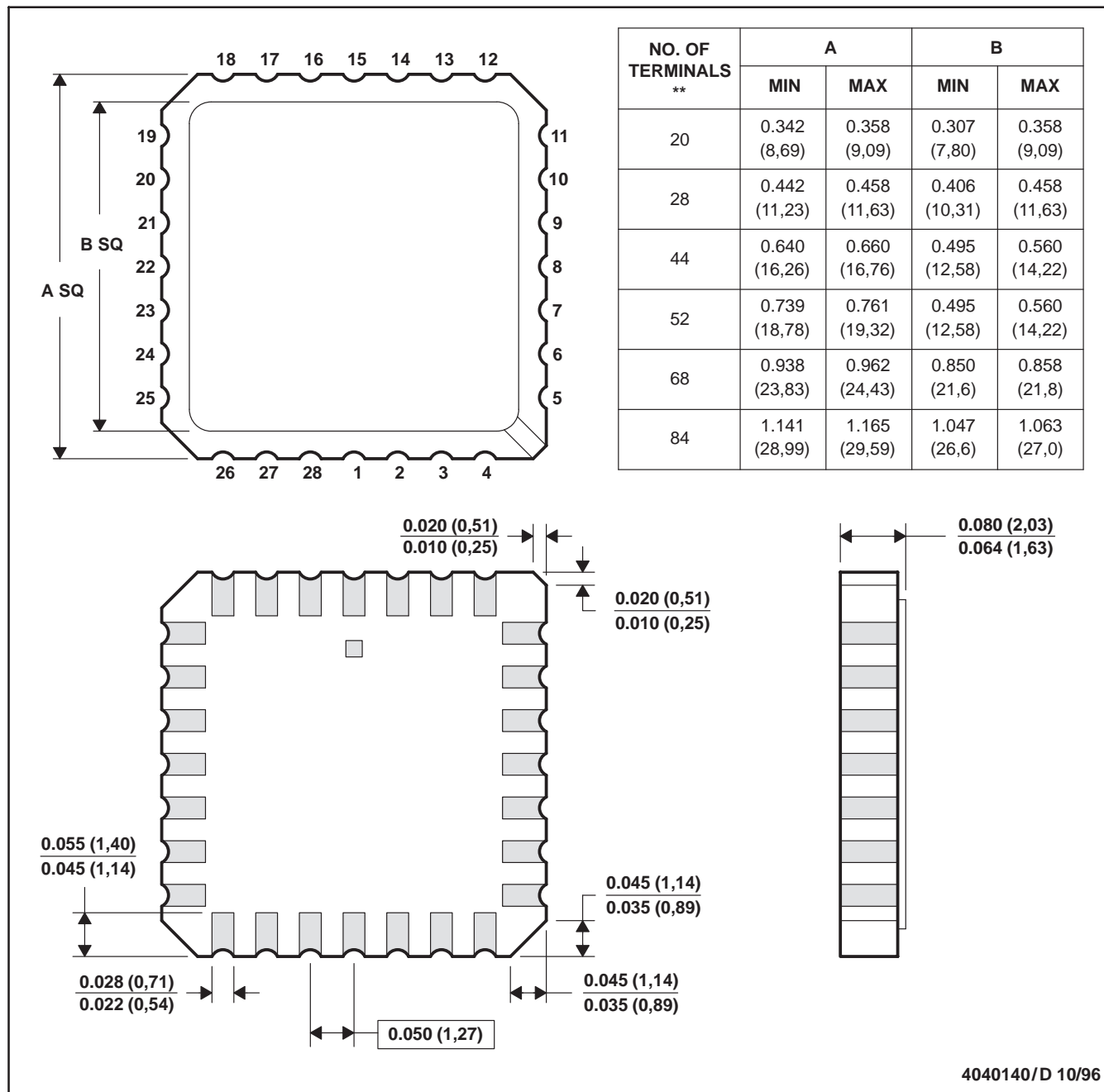
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



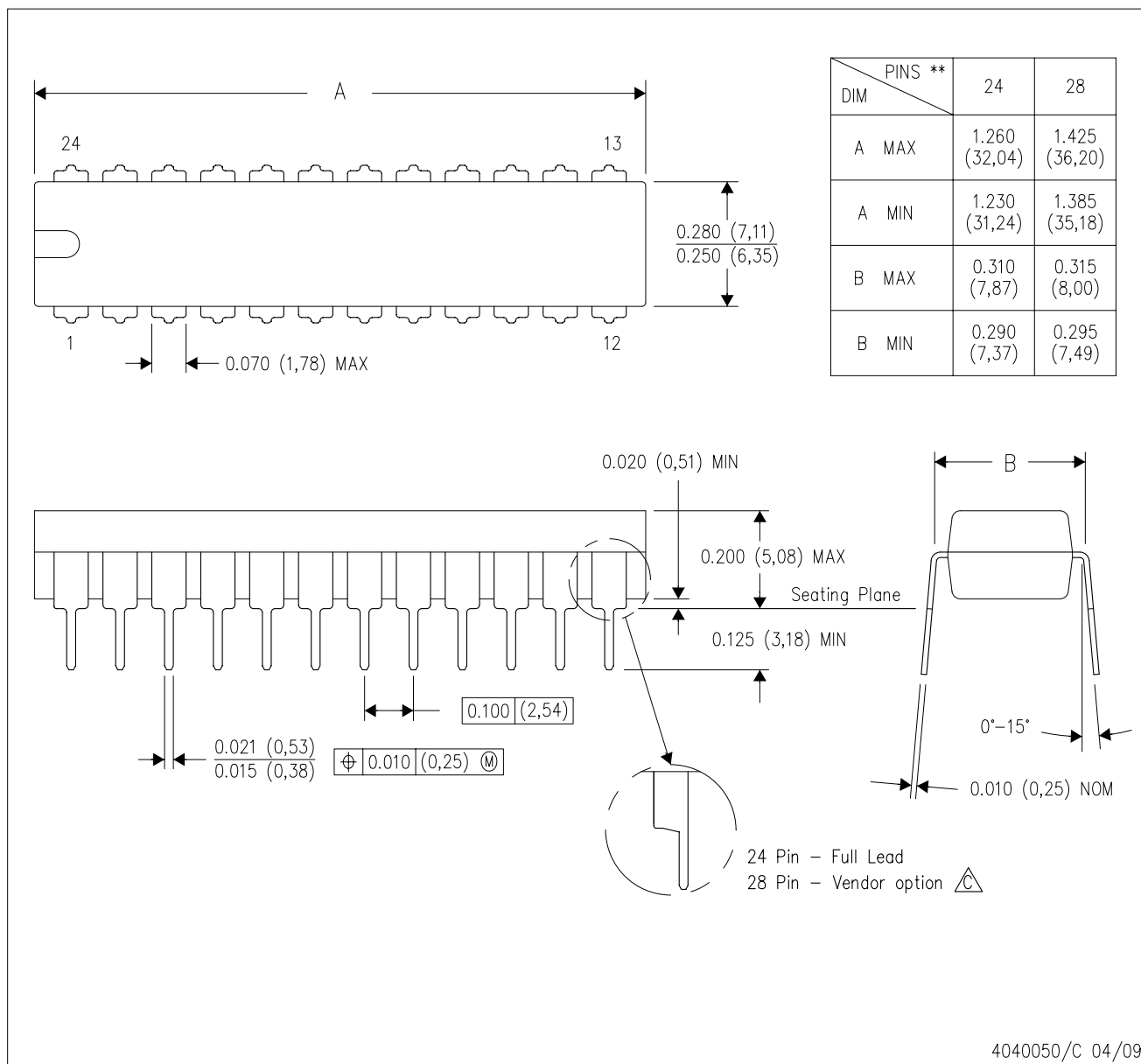
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

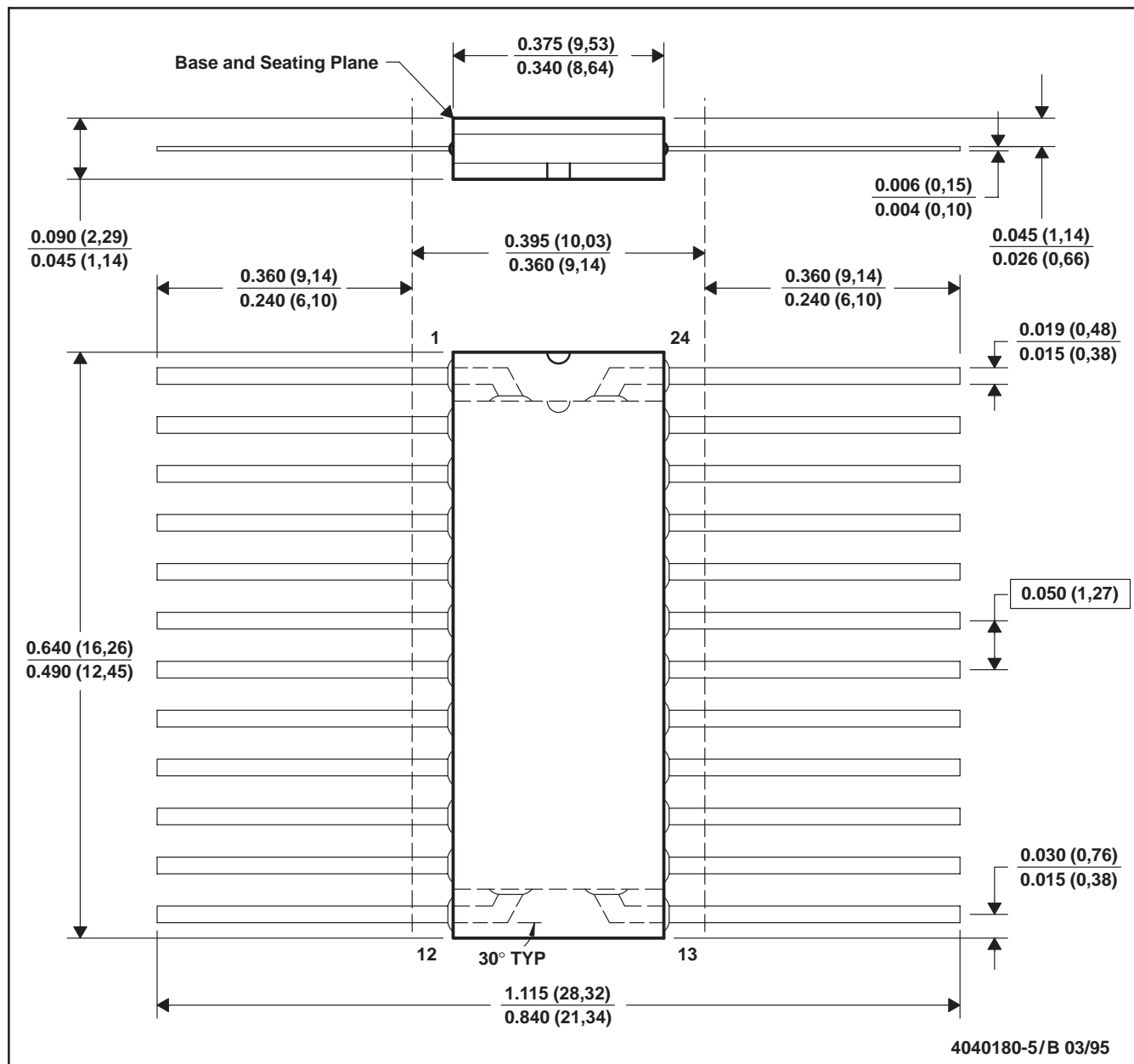
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

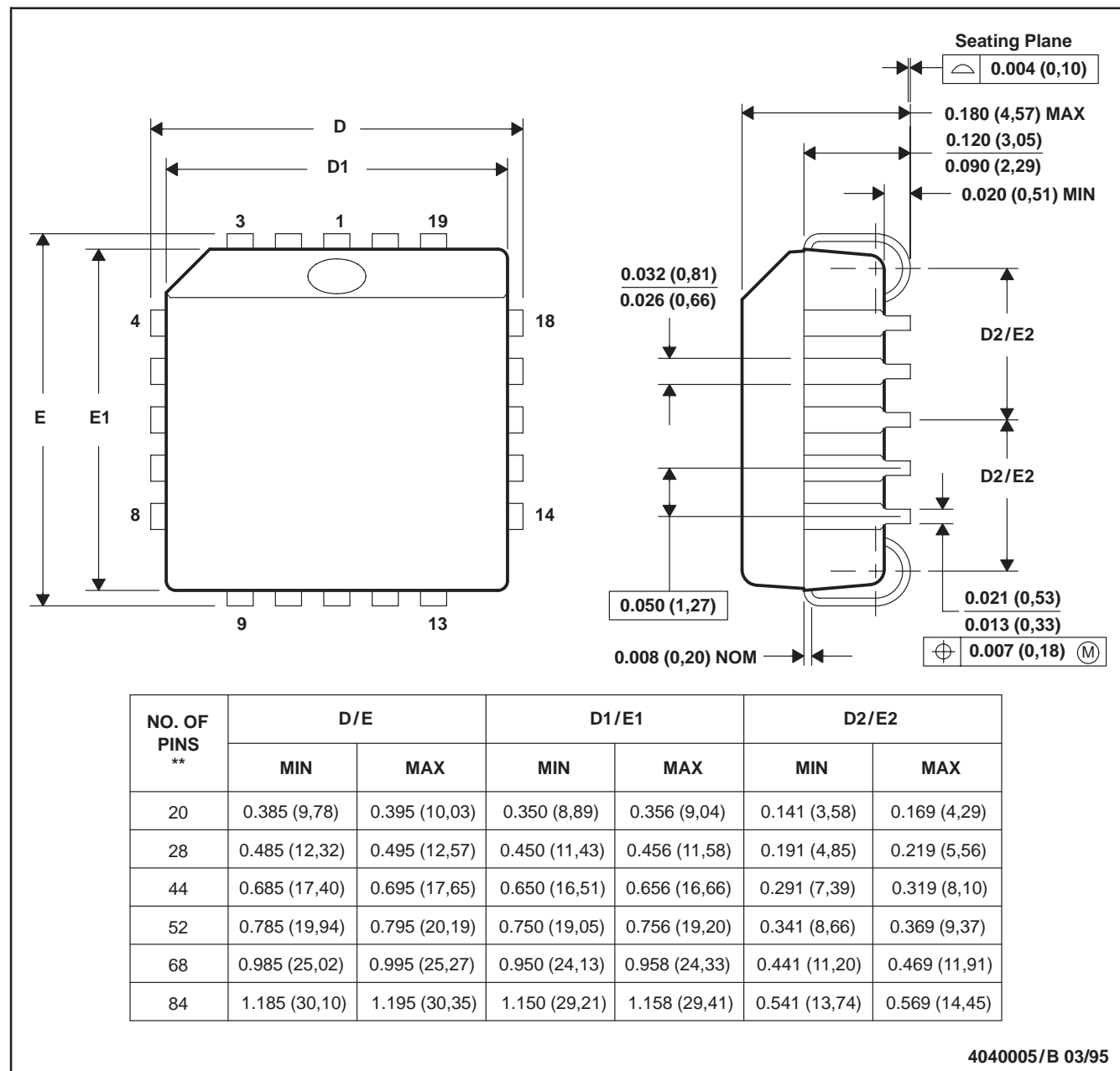


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 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

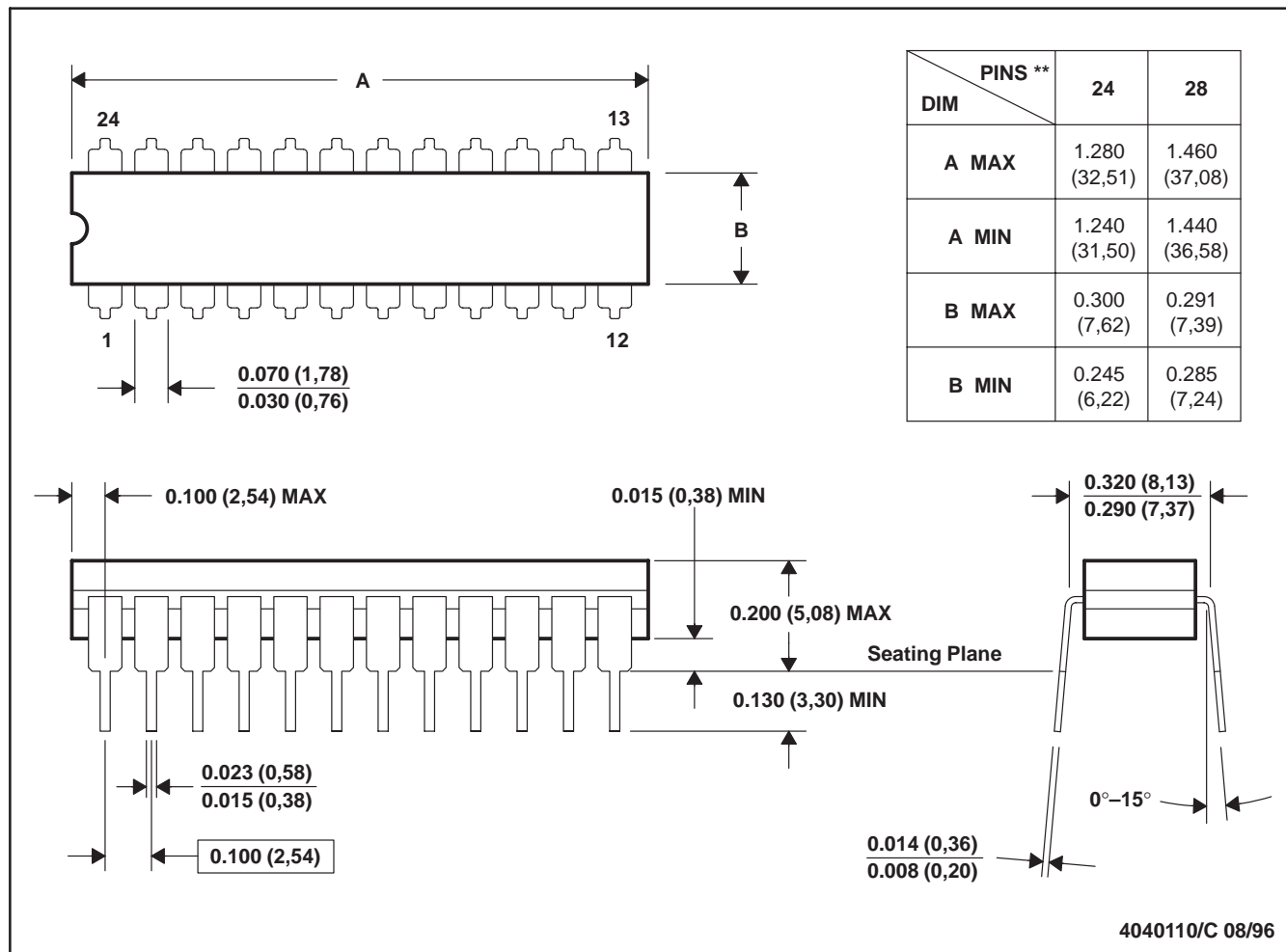


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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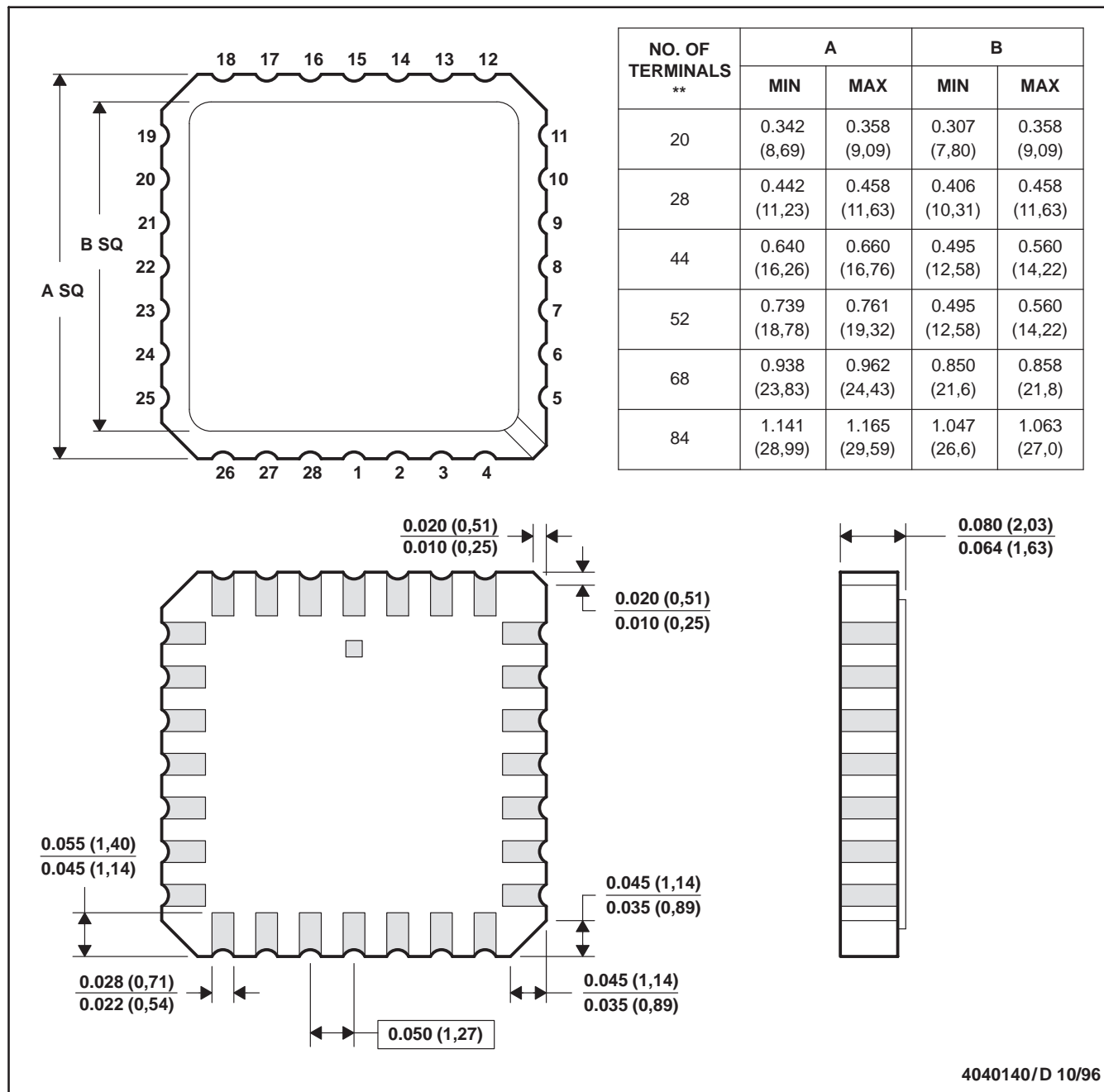
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



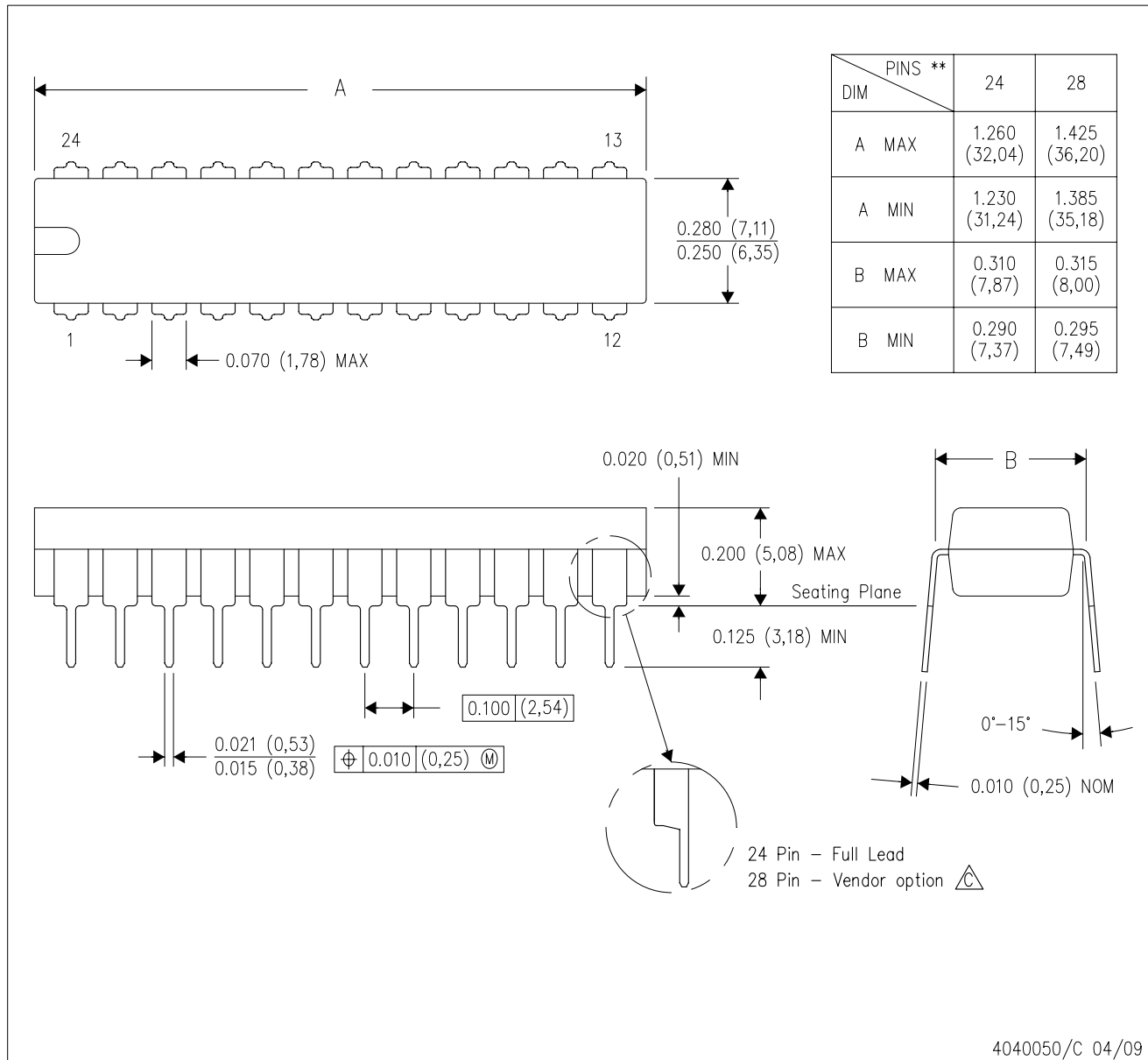
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MECHANICAL DATA

NT (R-PDIP-T**)

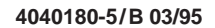
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

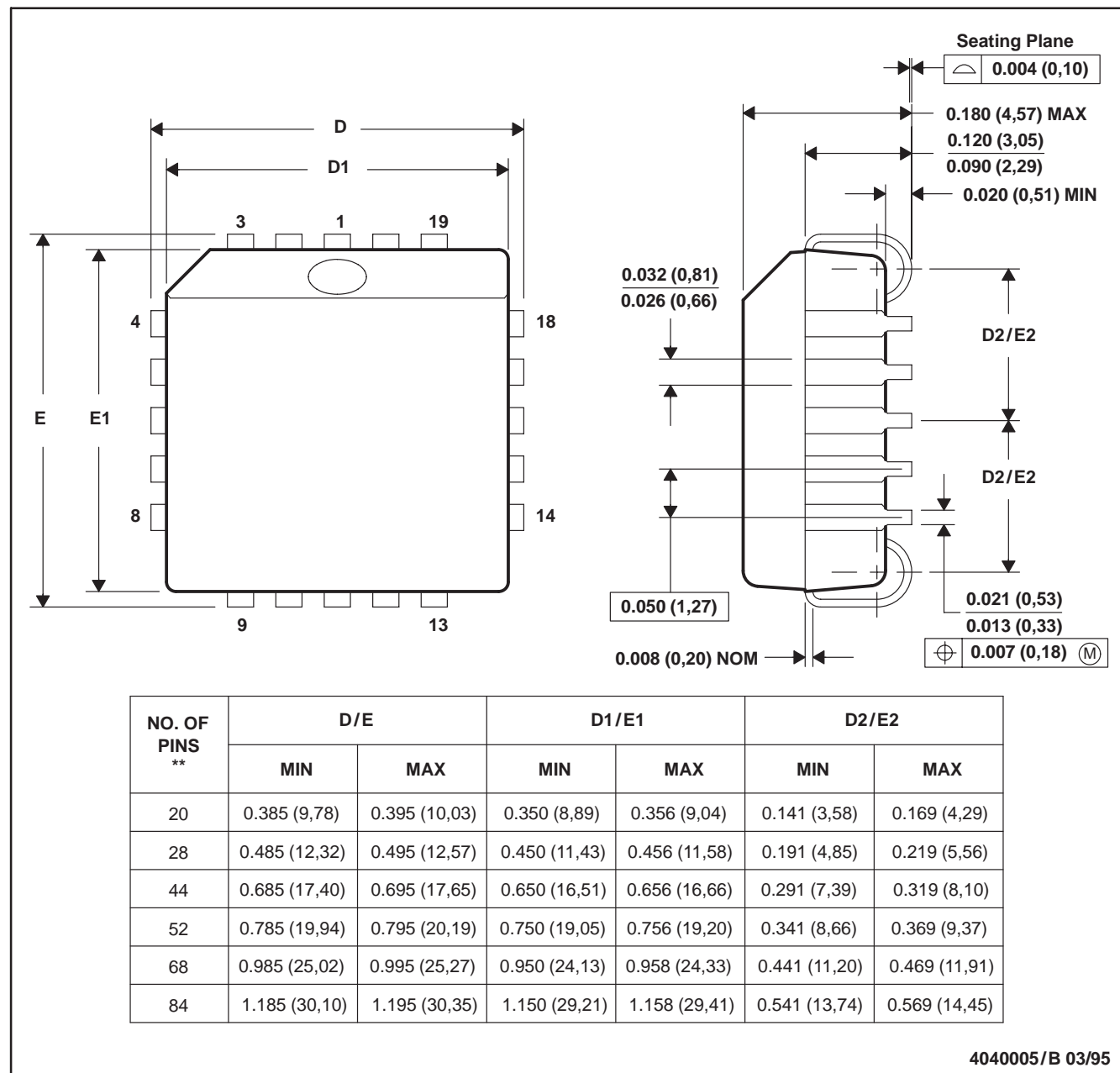


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

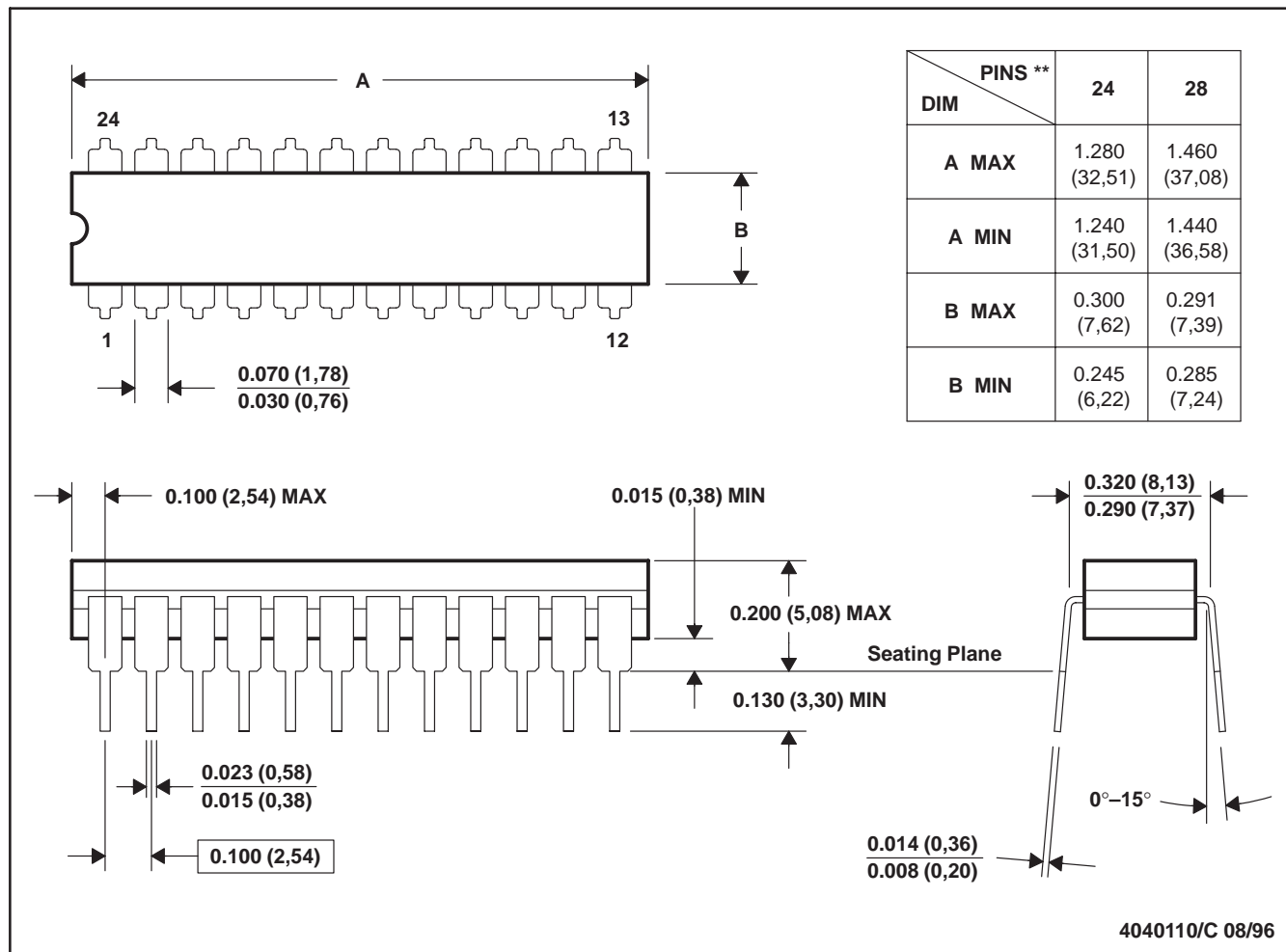


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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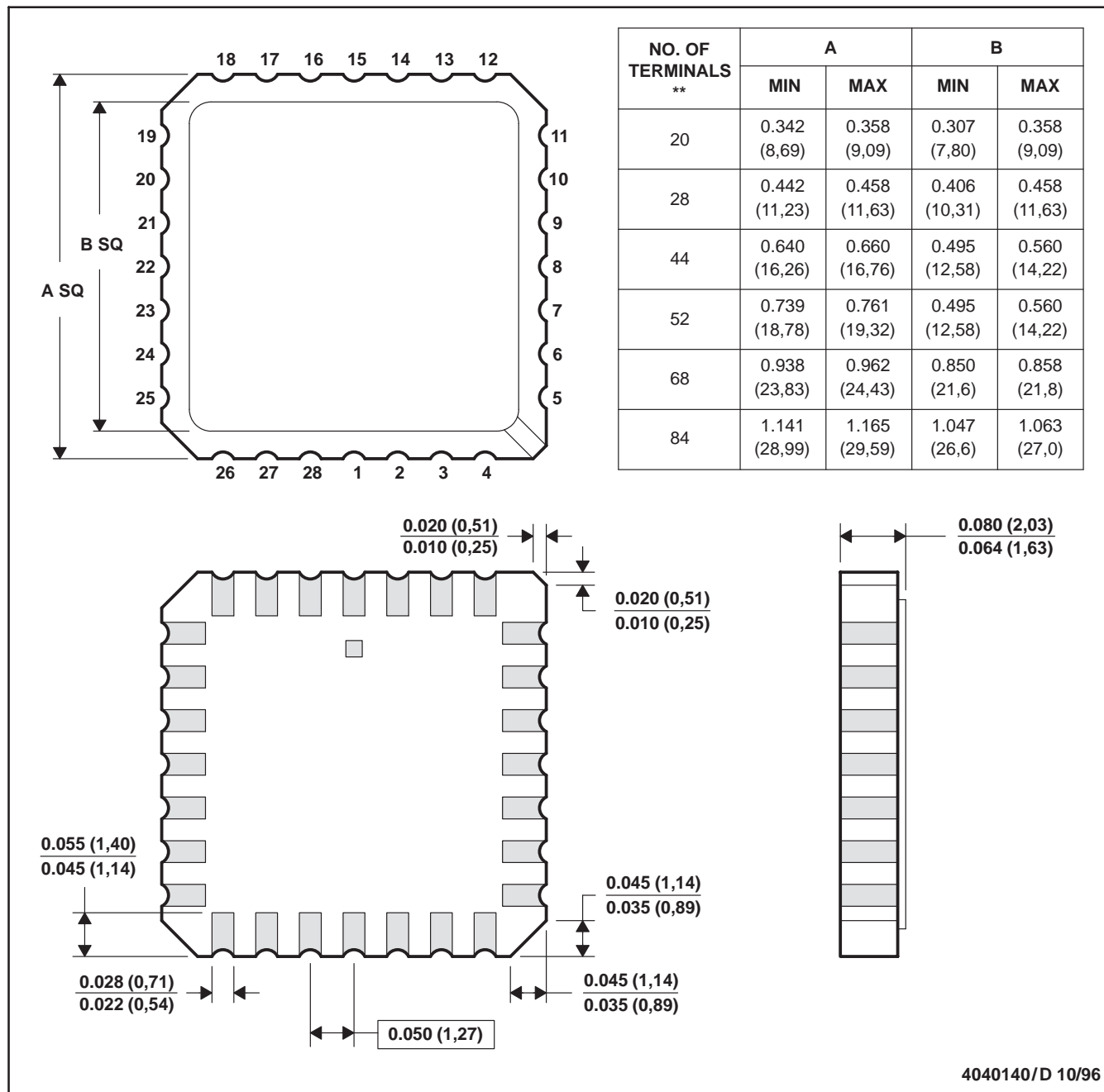
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



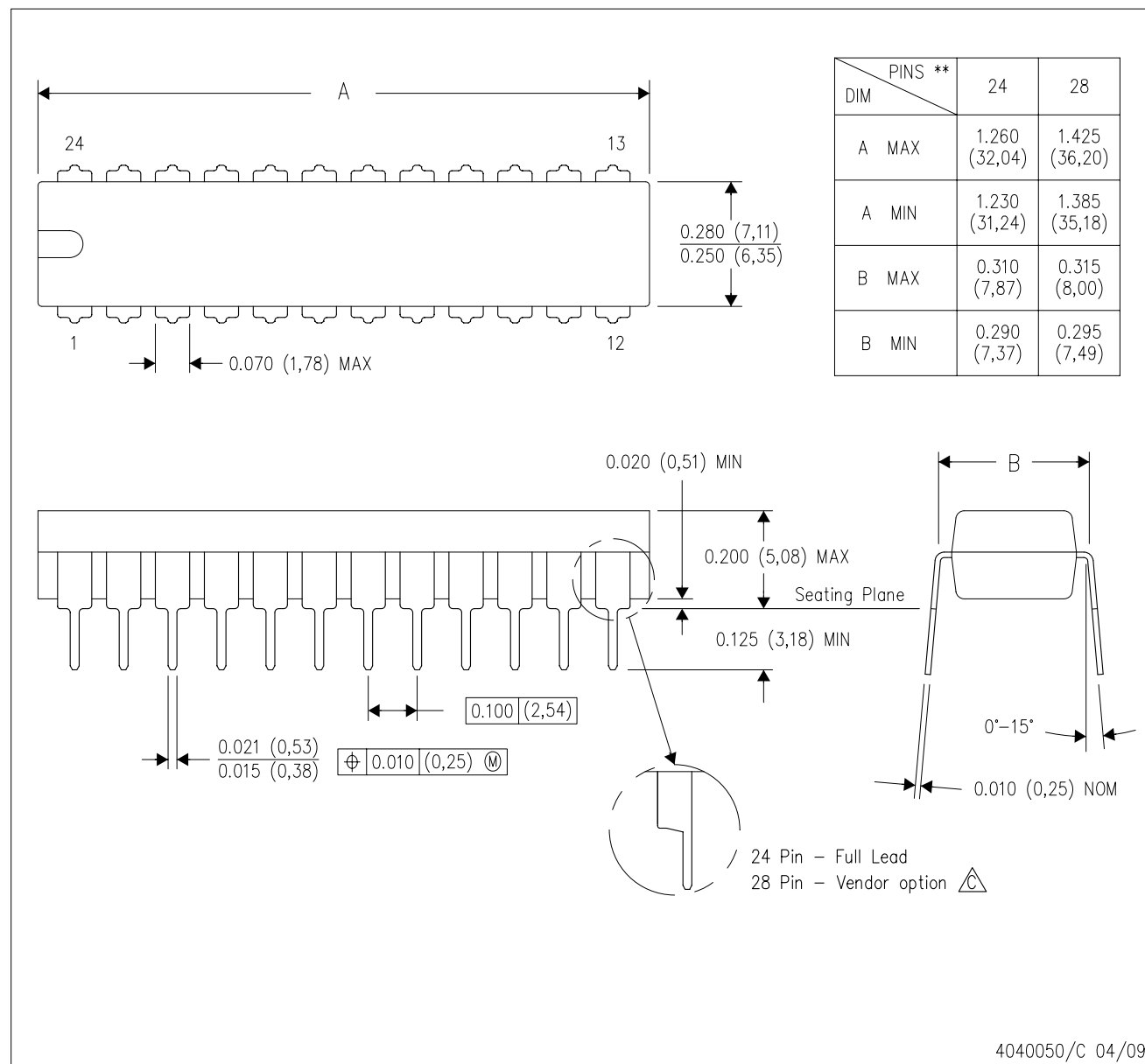
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MECHANICAL DATA

NT (R-PDIP-T**)

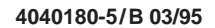
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

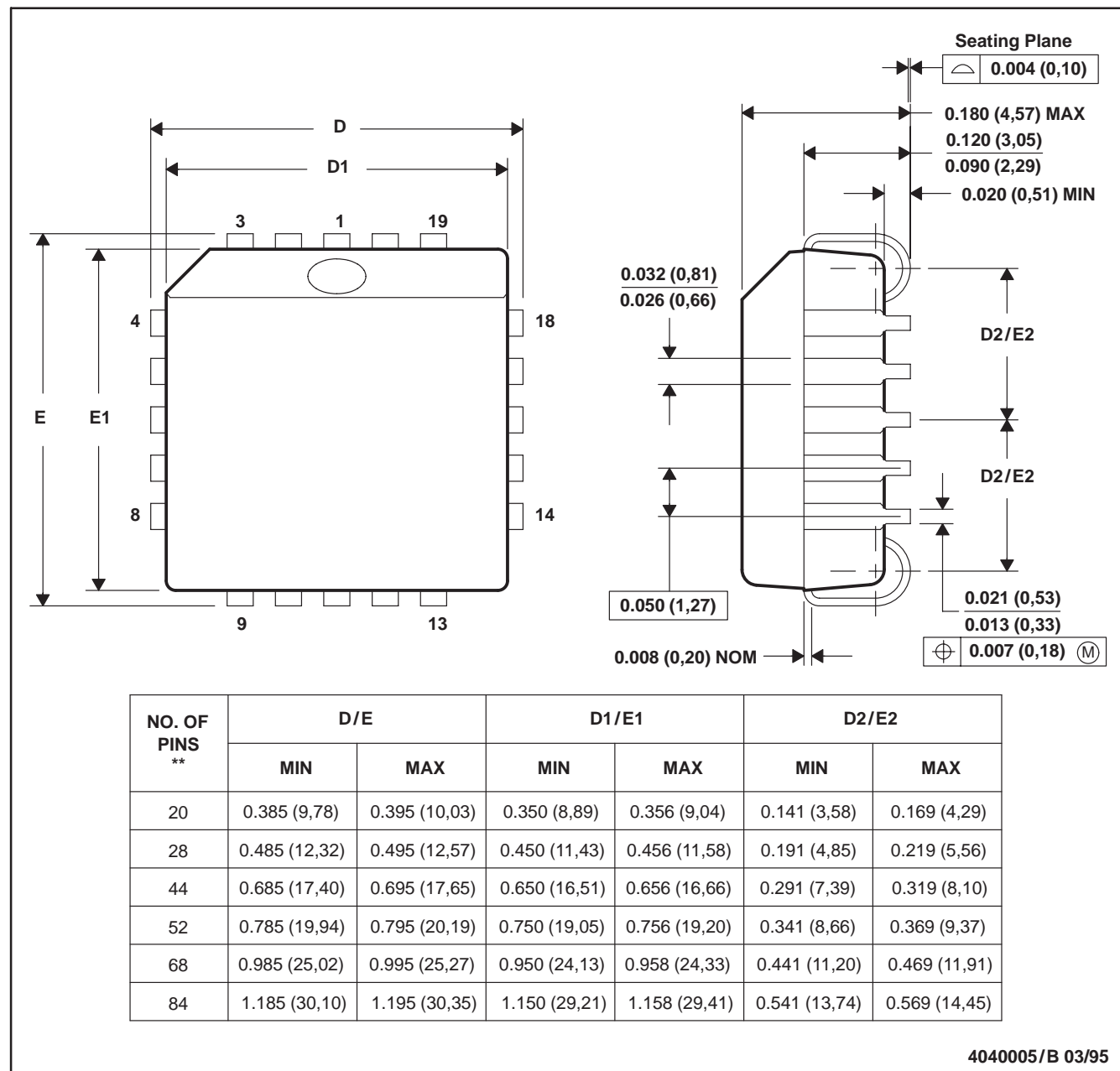


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

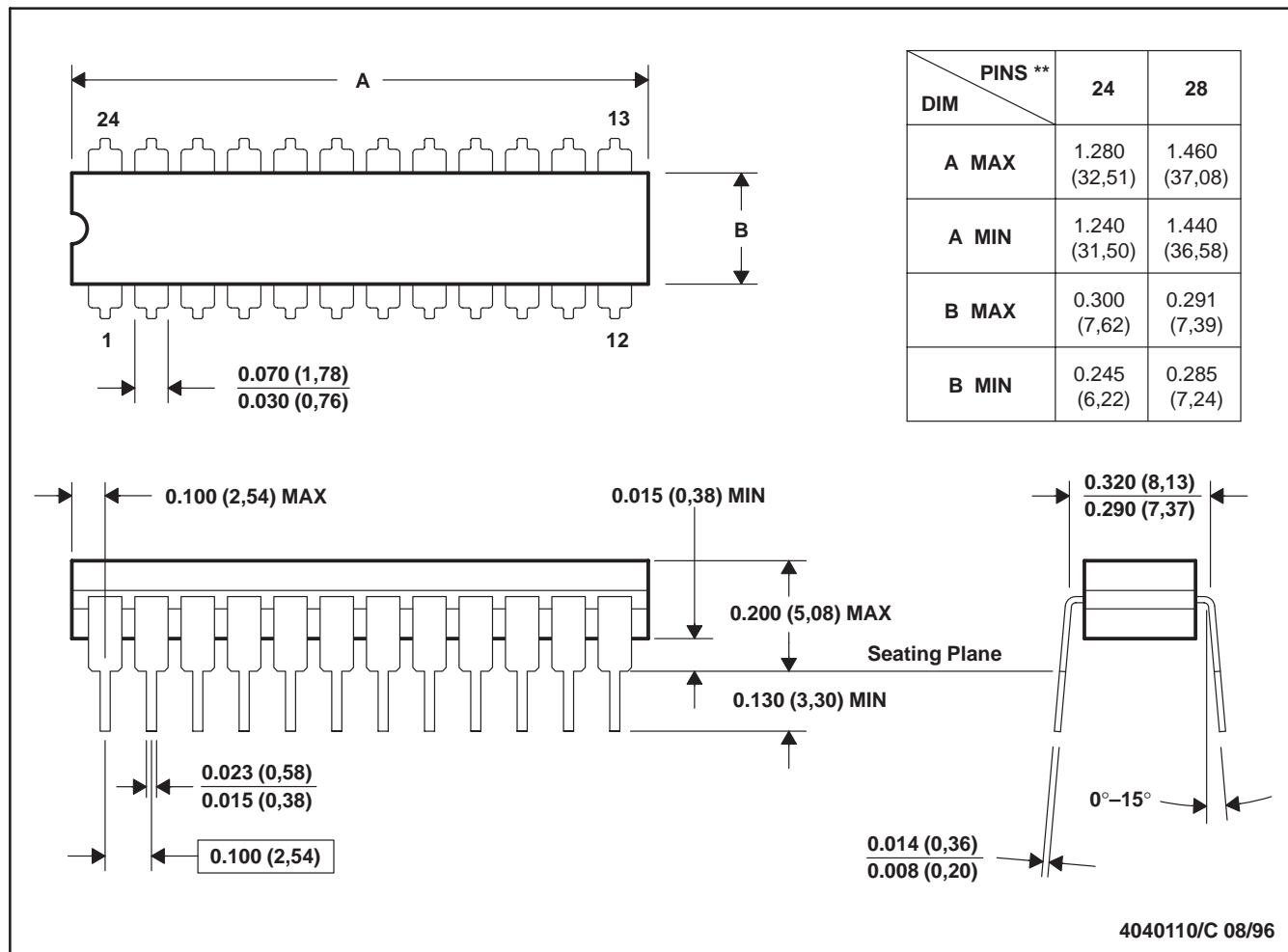


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

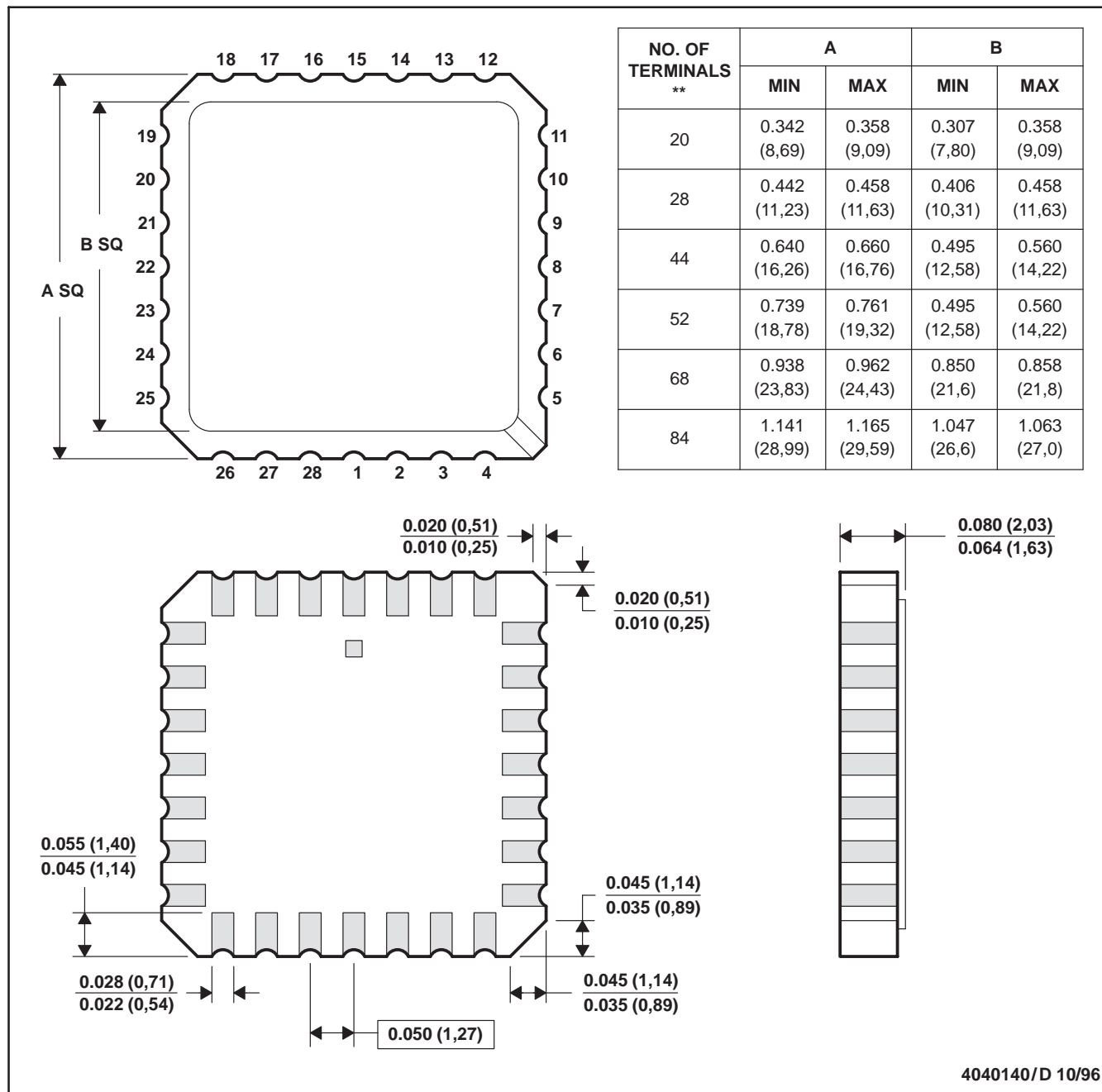
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



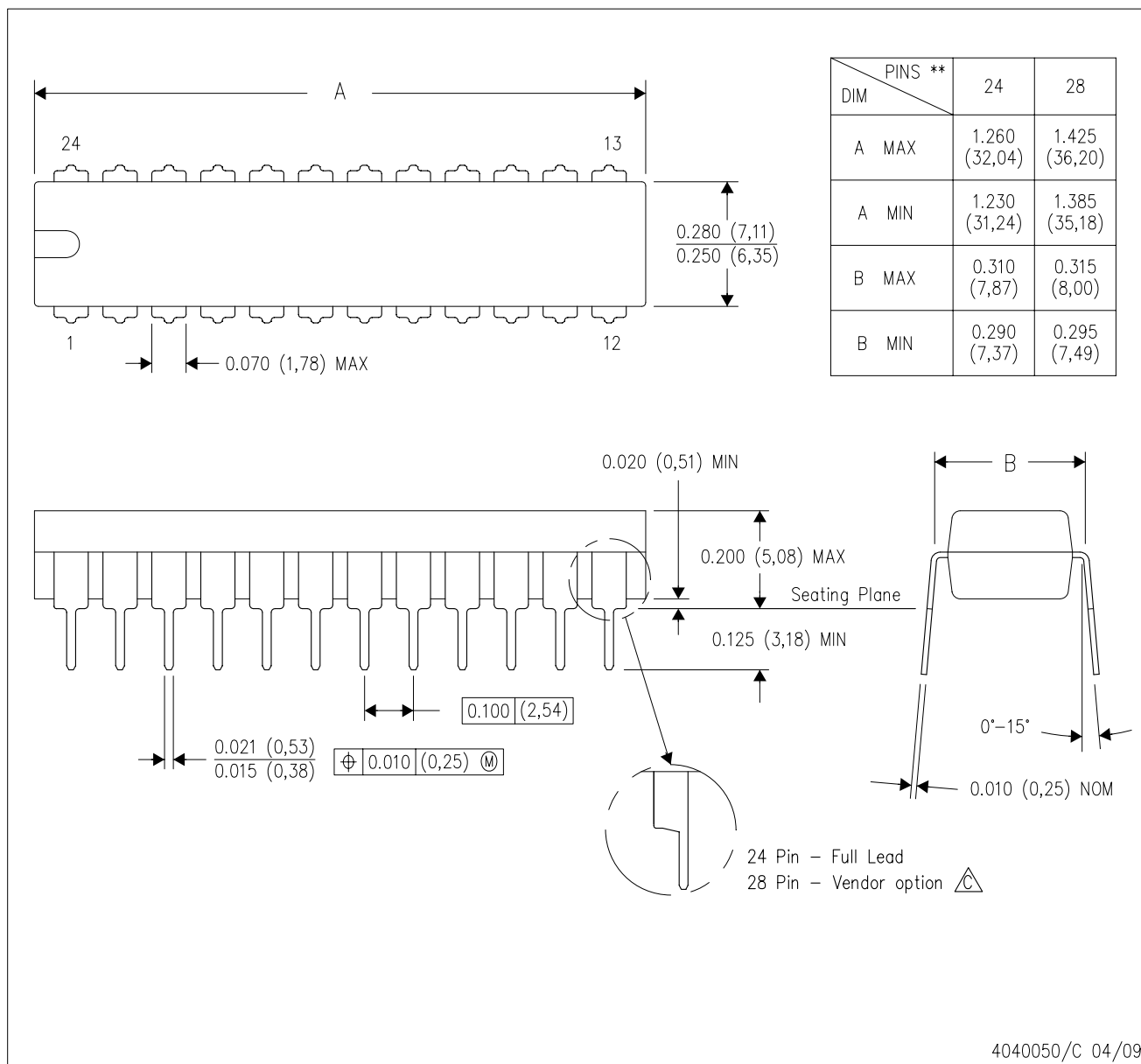
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

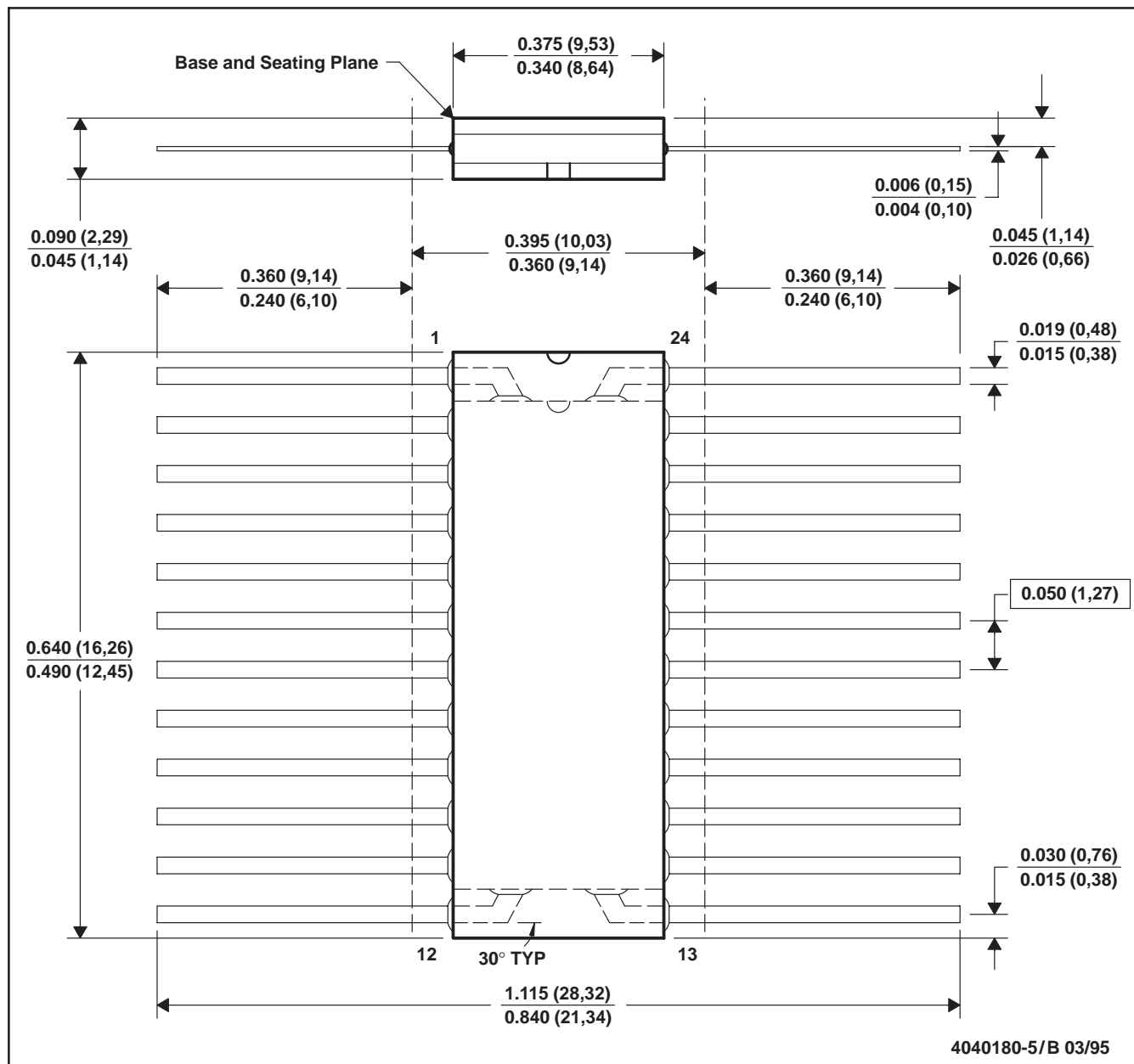
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

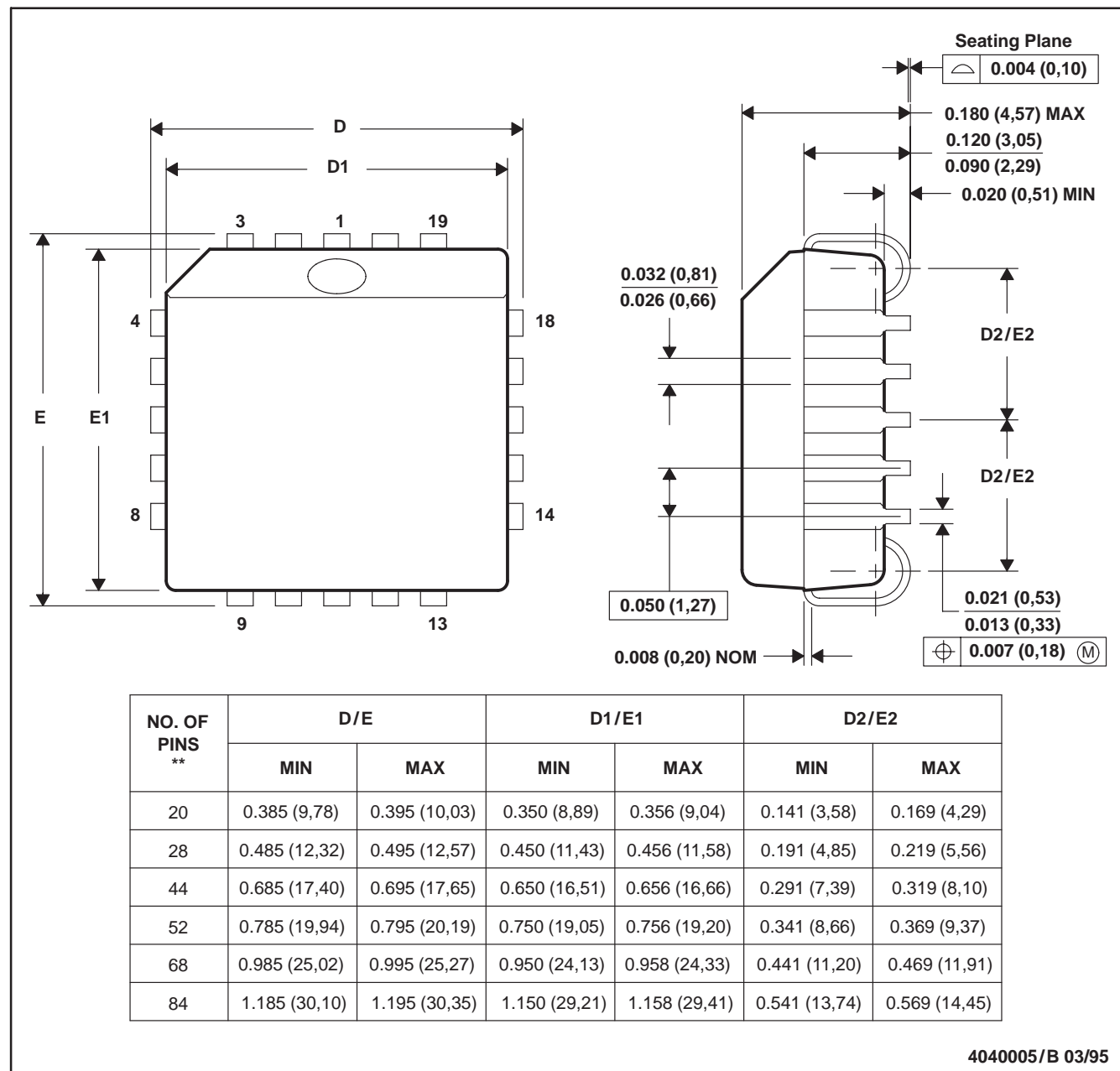


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

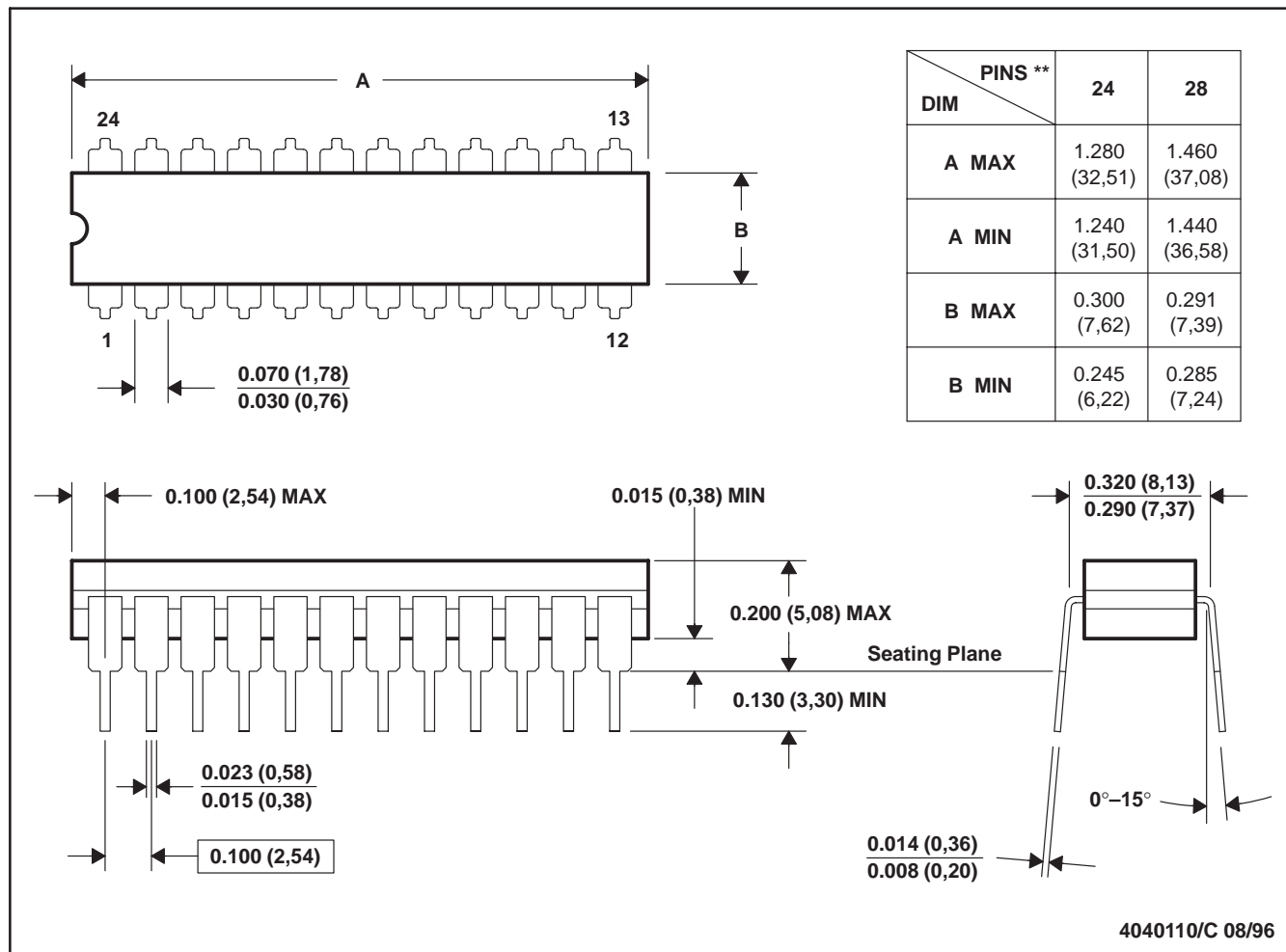


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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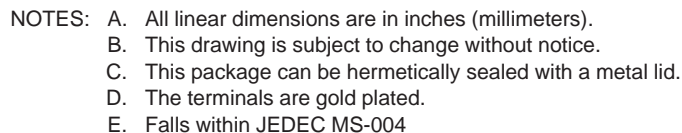
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28 TERMINAL SHOWN

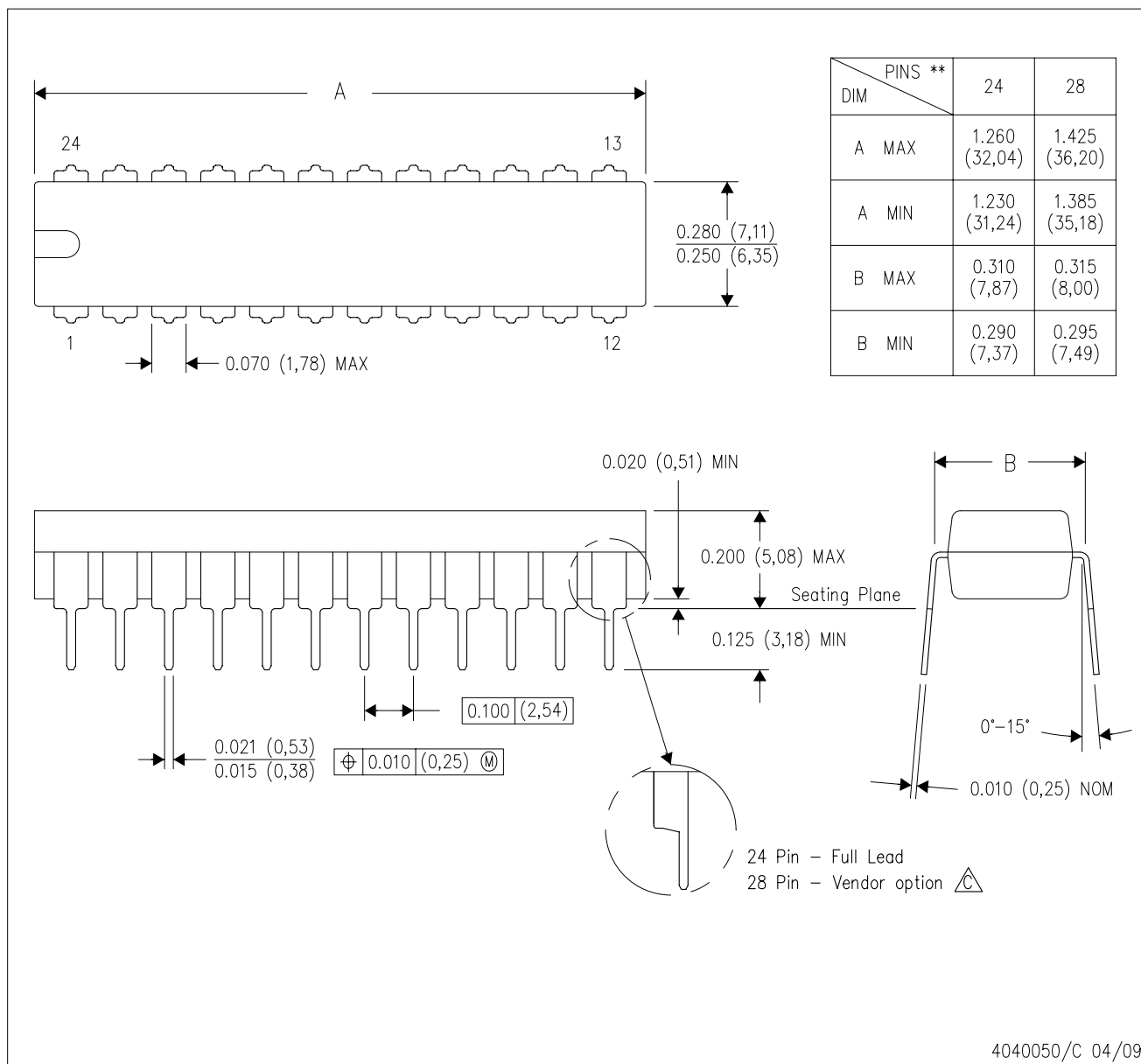


MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

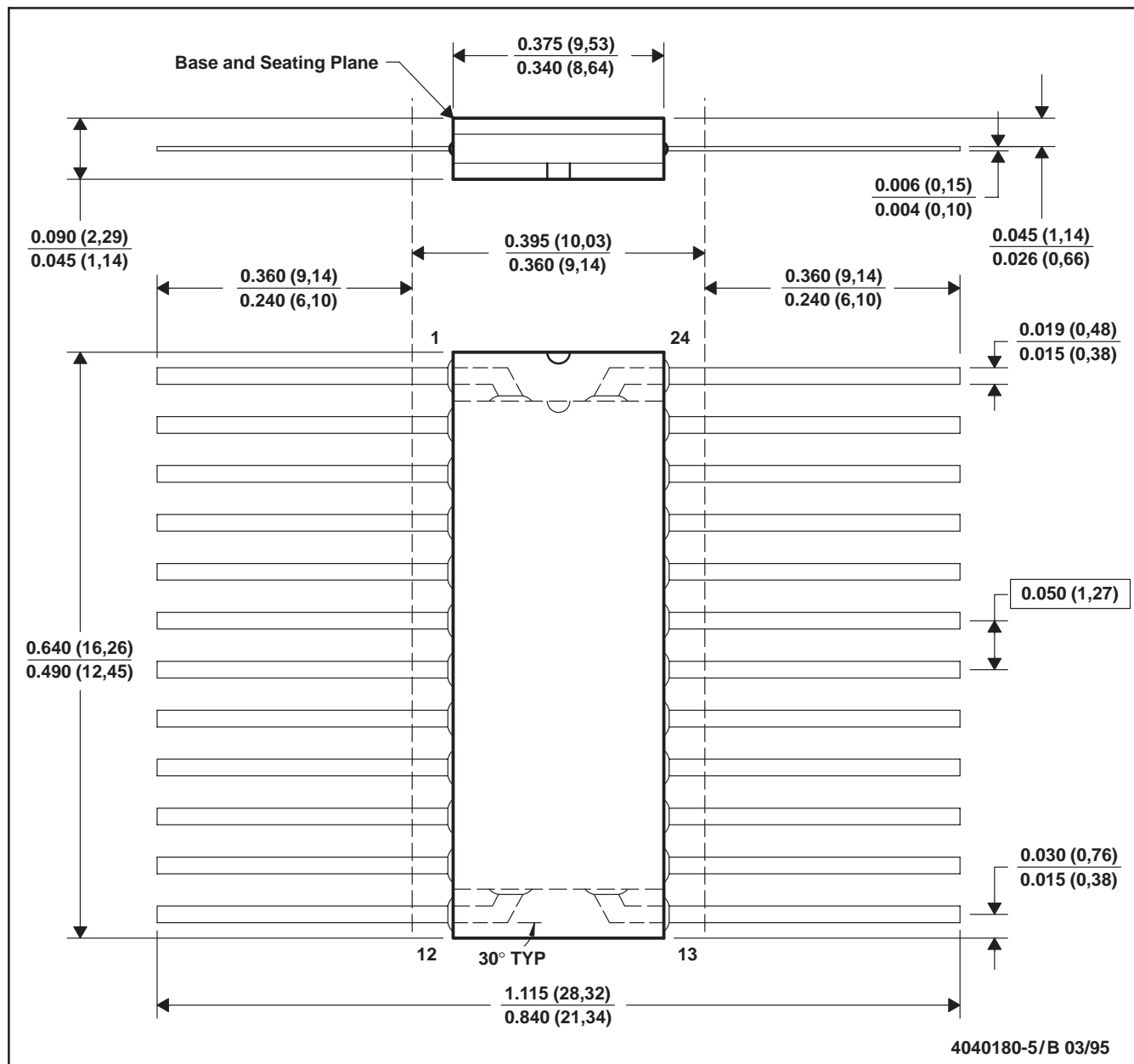
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

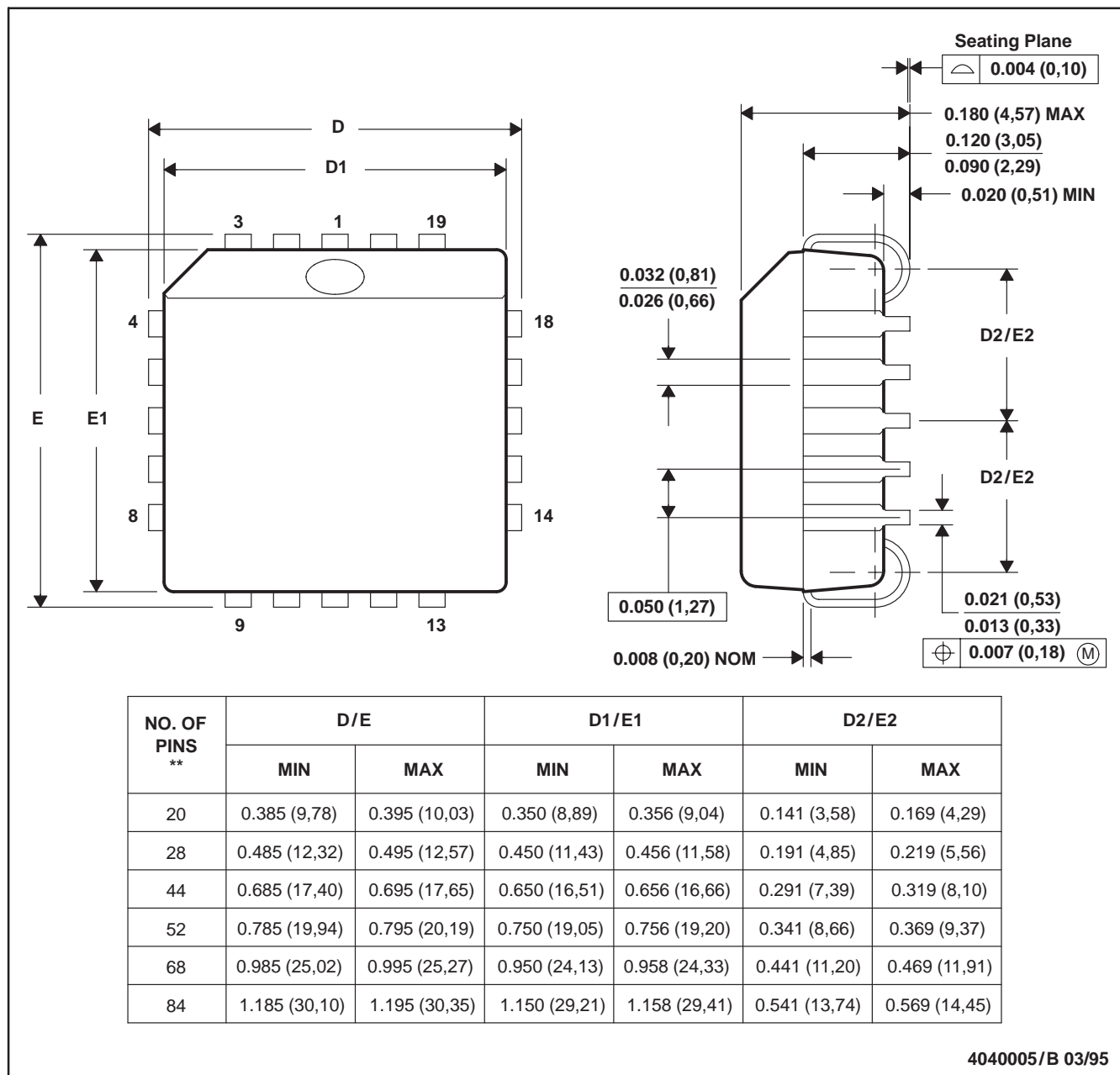


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

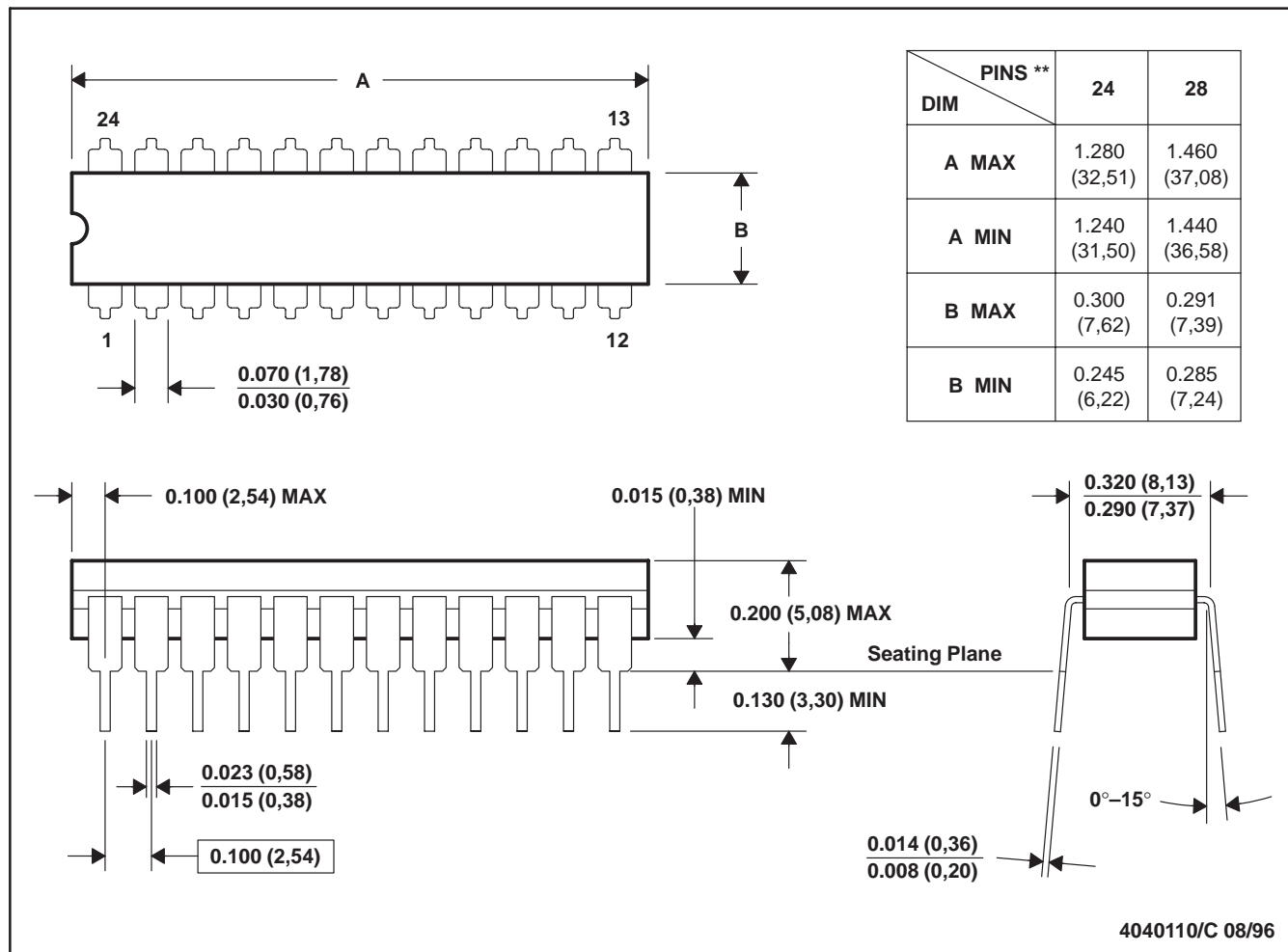


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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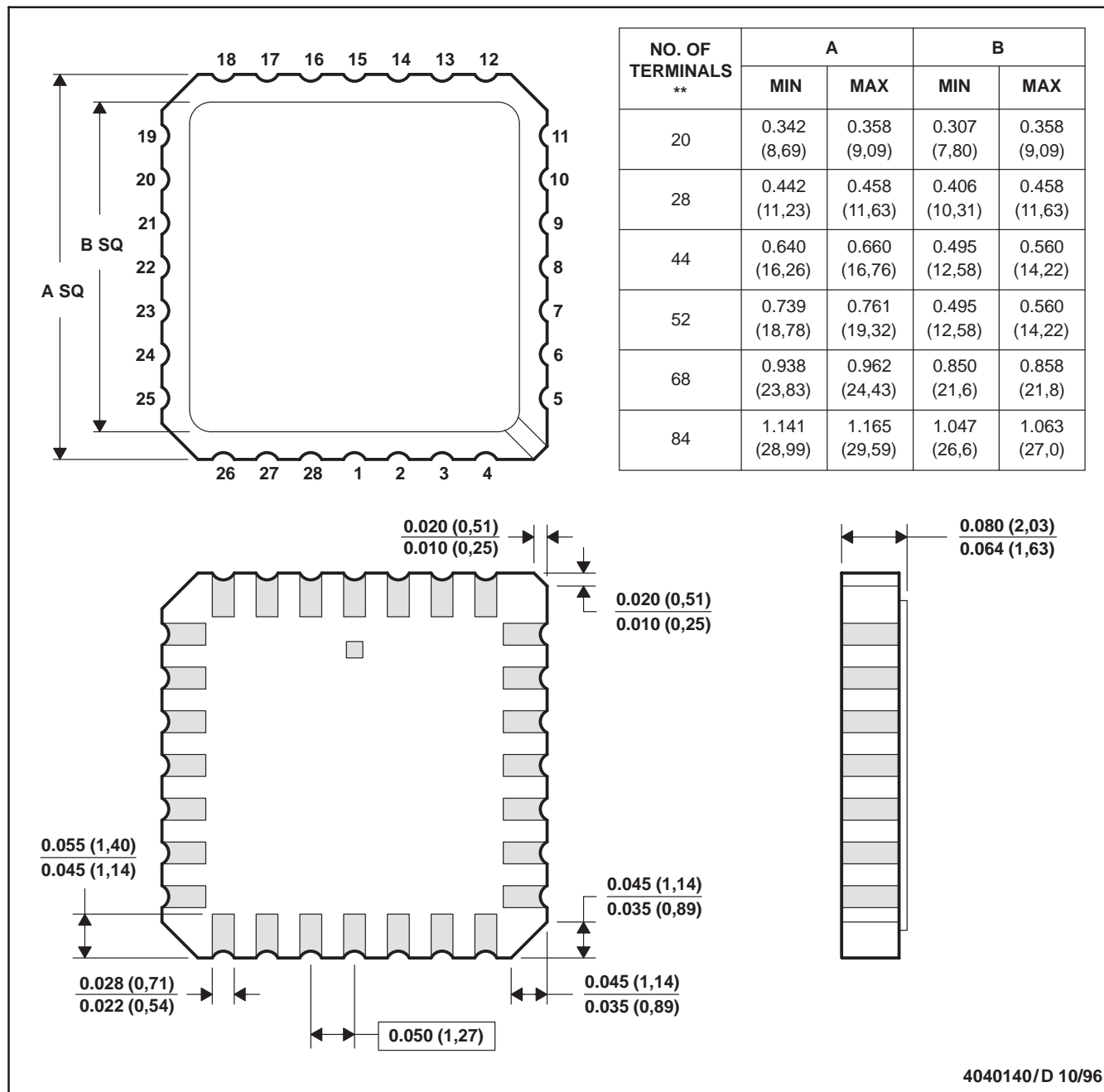
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



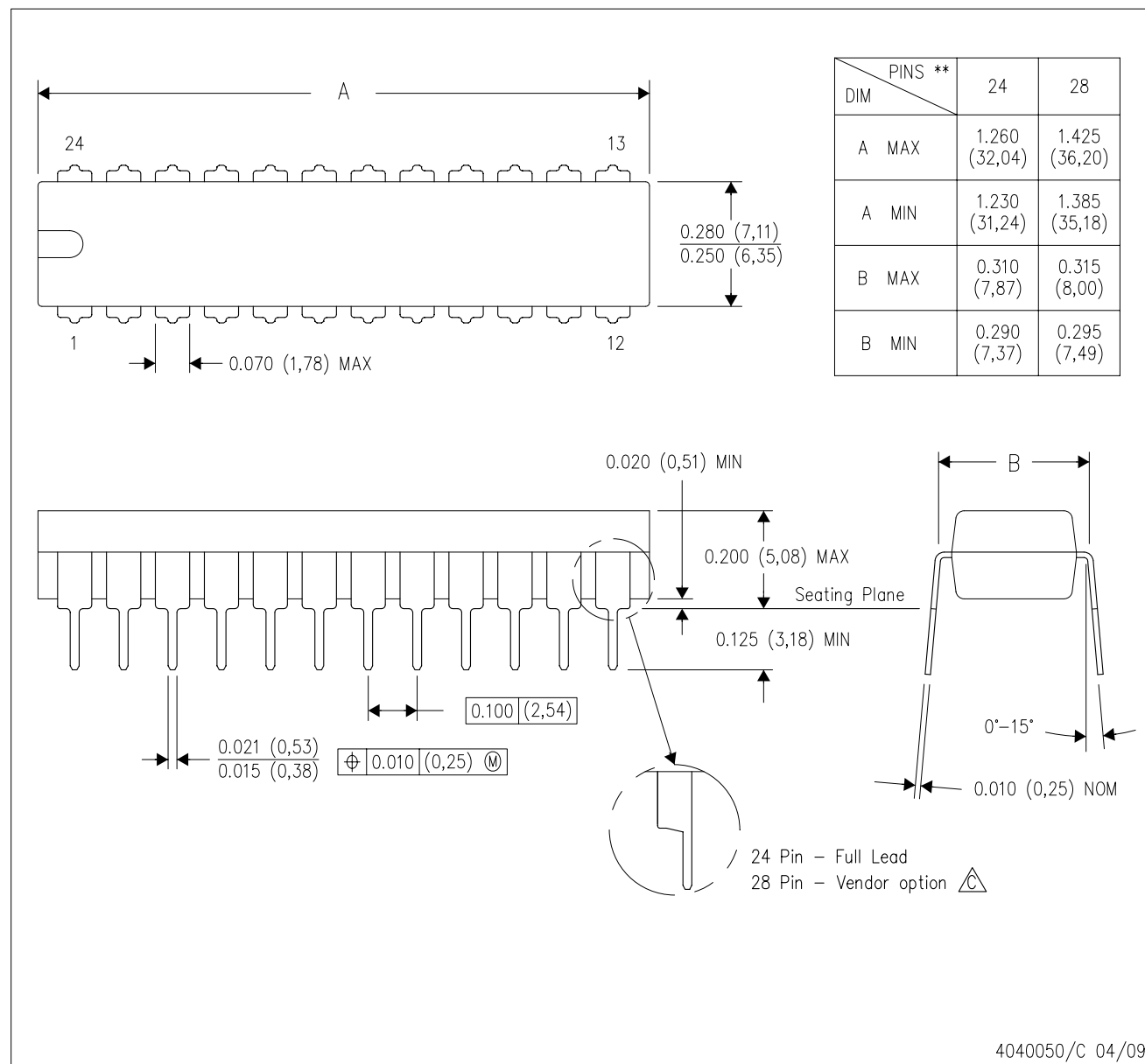
- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

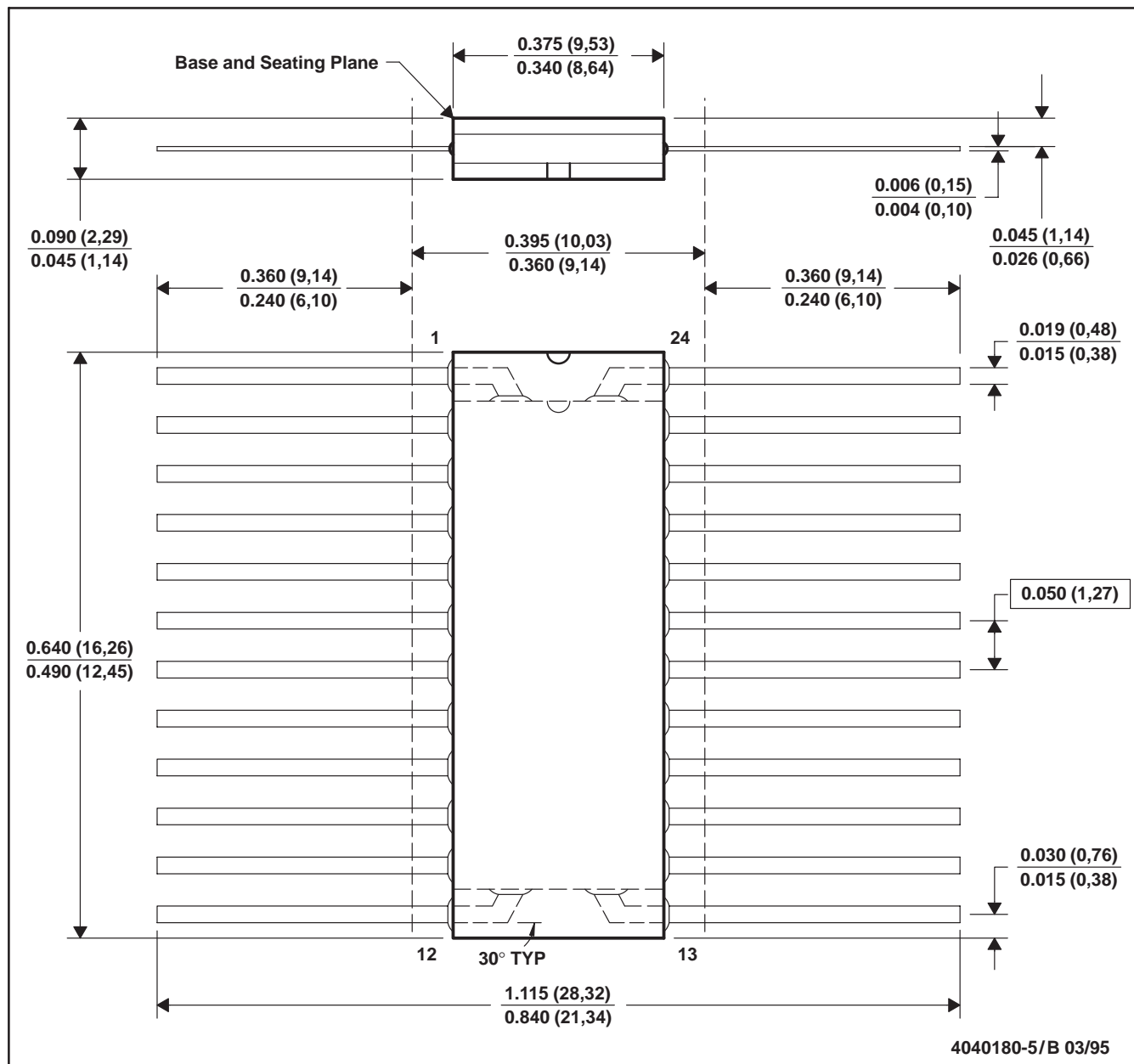
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

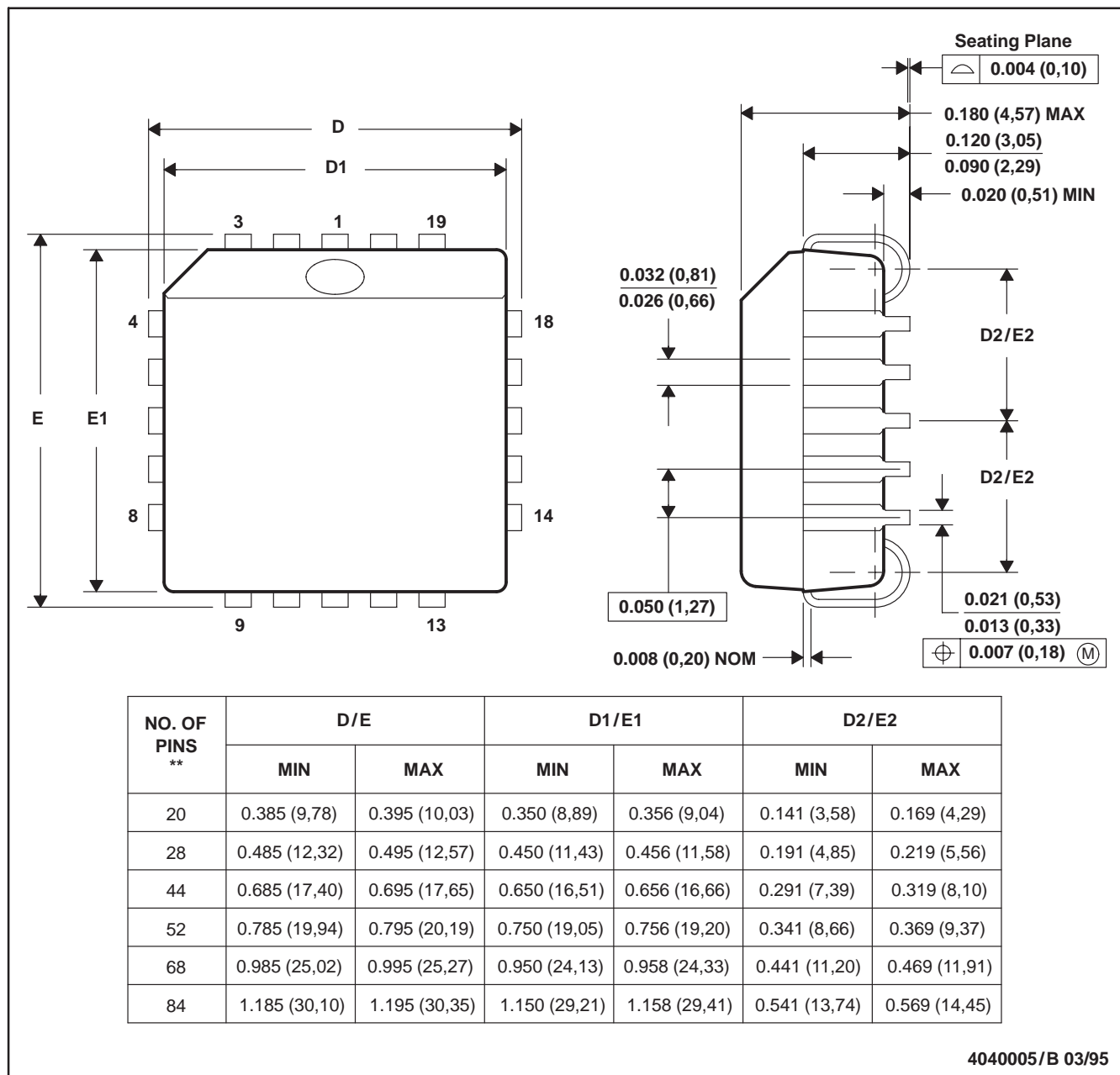


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 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

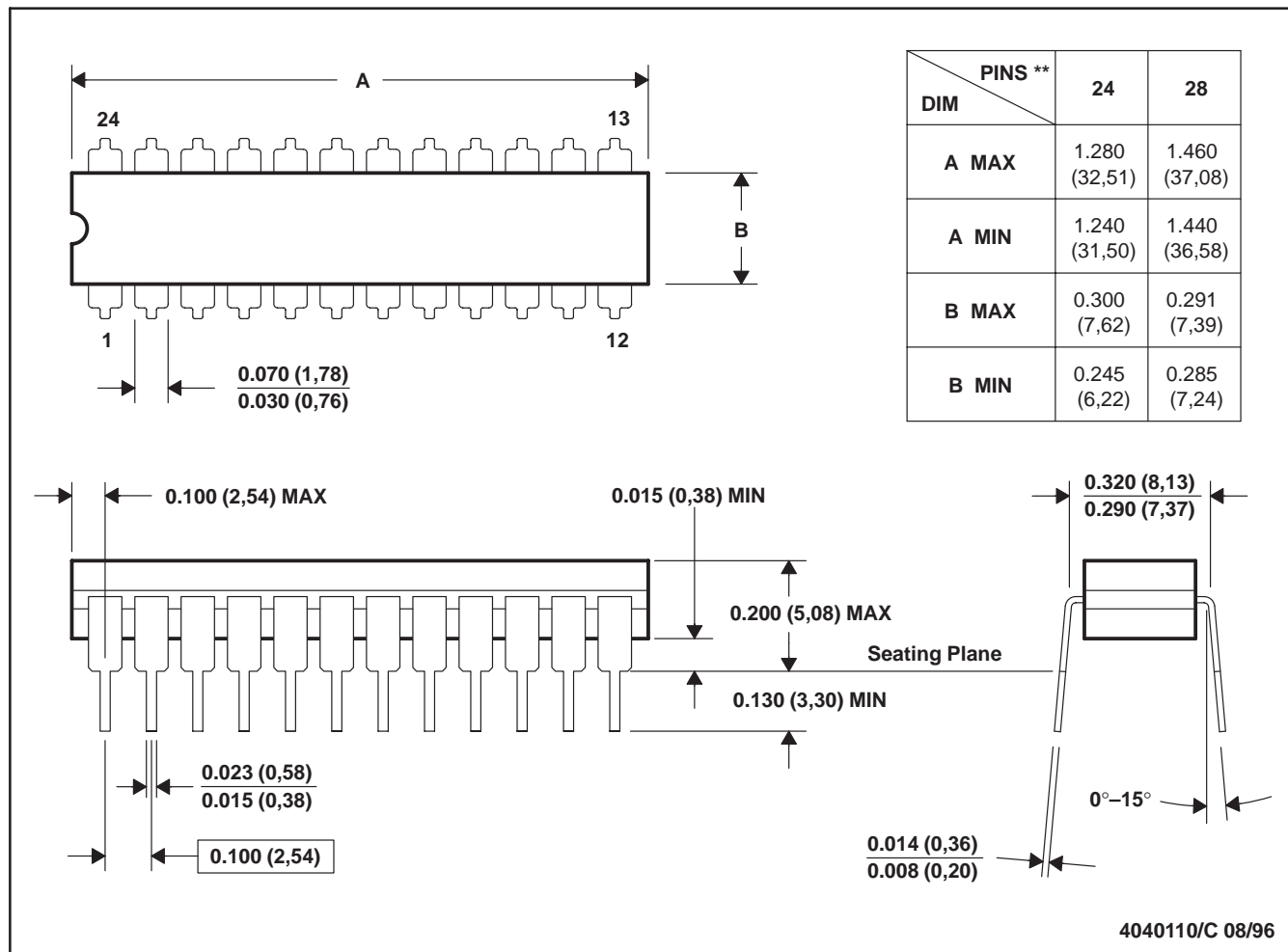


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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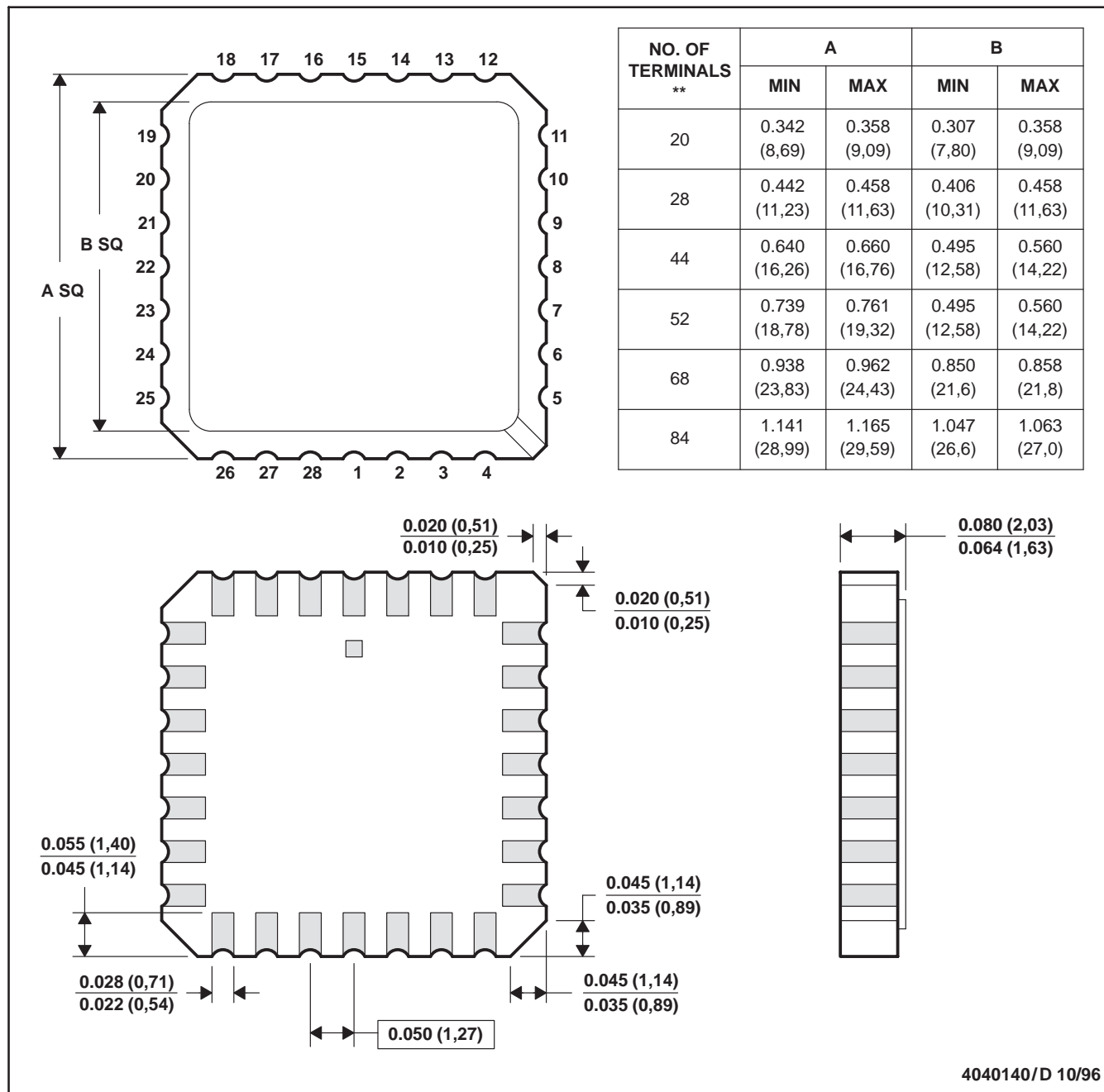
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



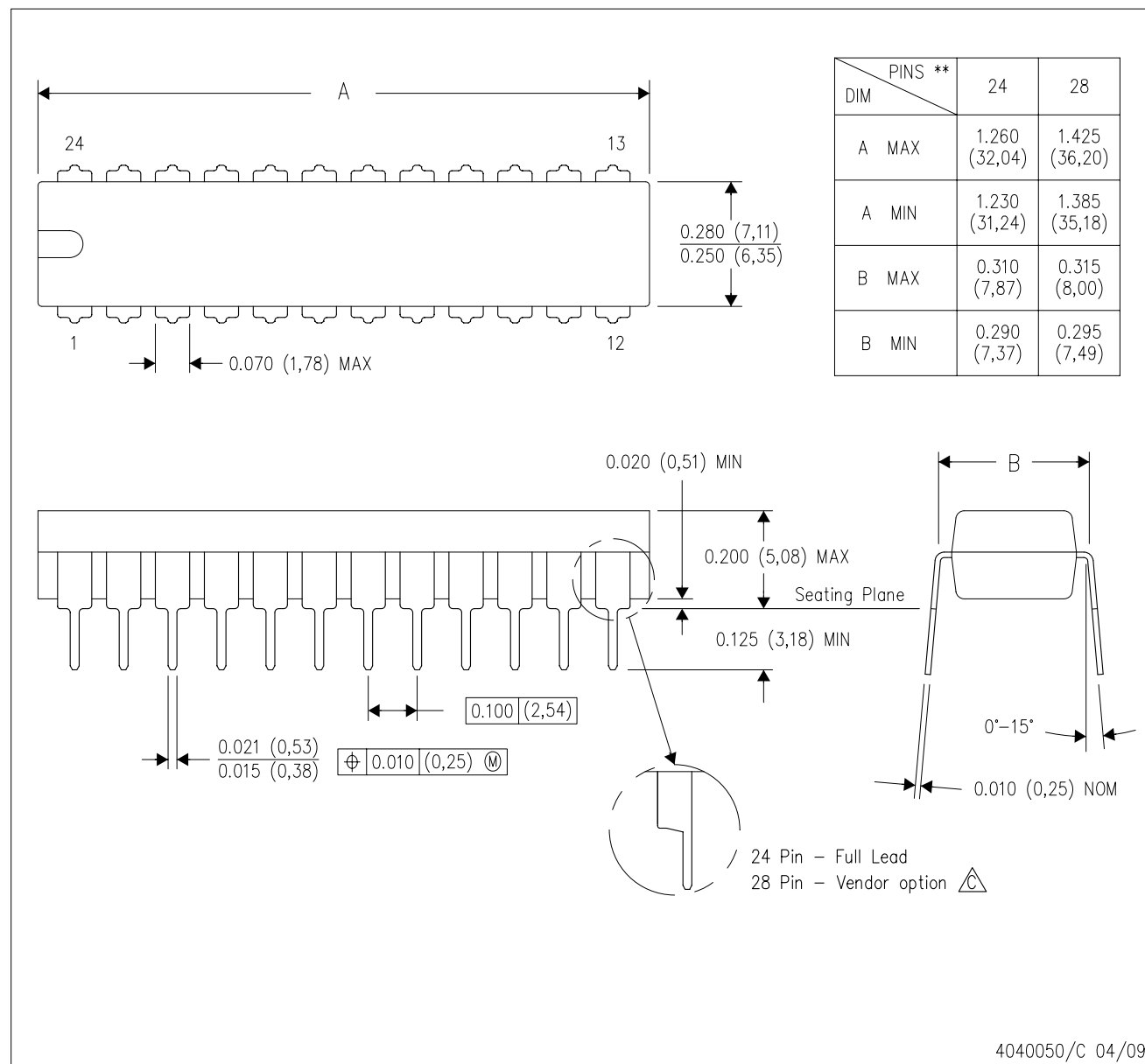
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MECHANICAL DATA

NT (R-PDIP-T**)

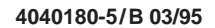
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

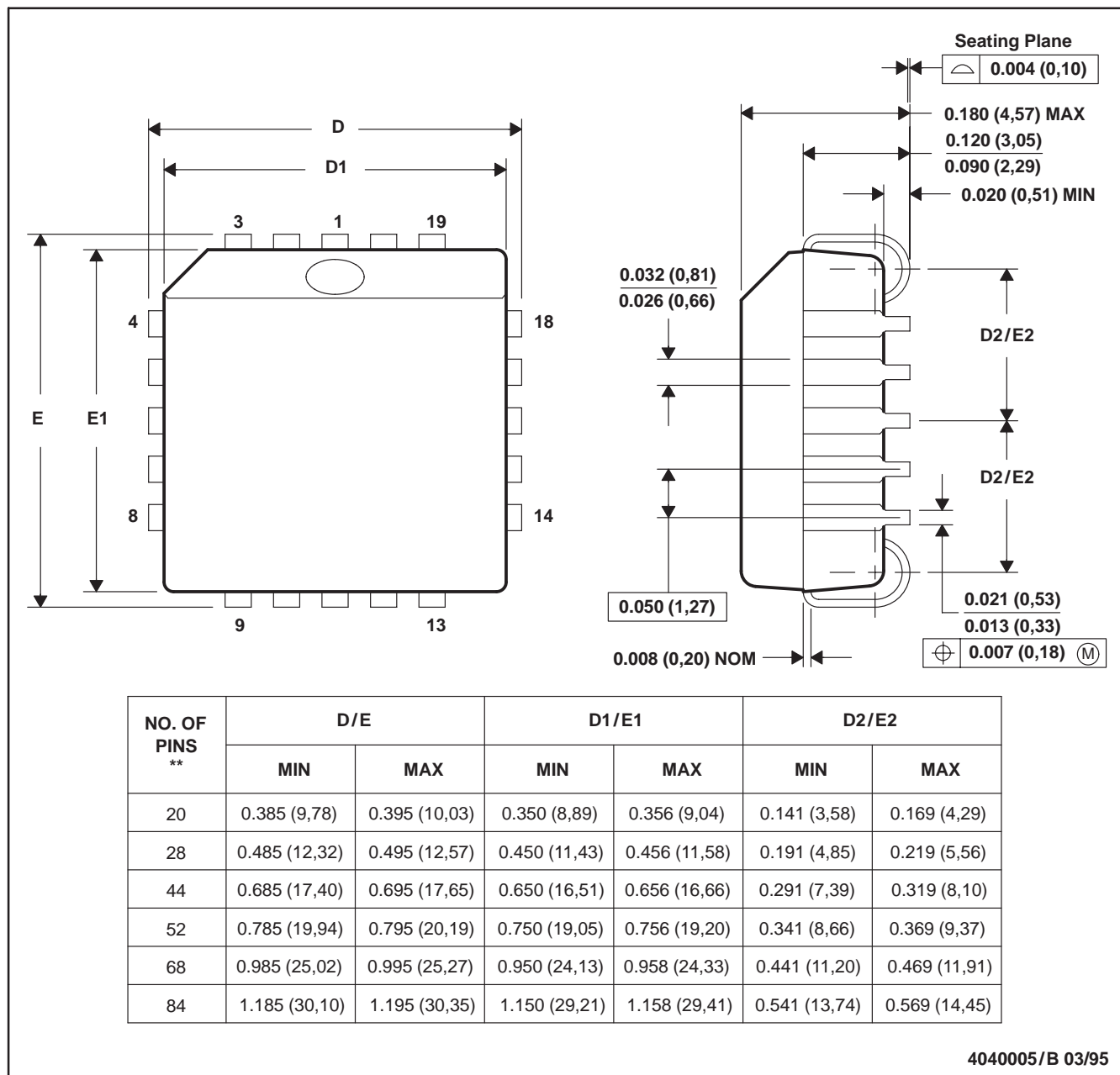


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

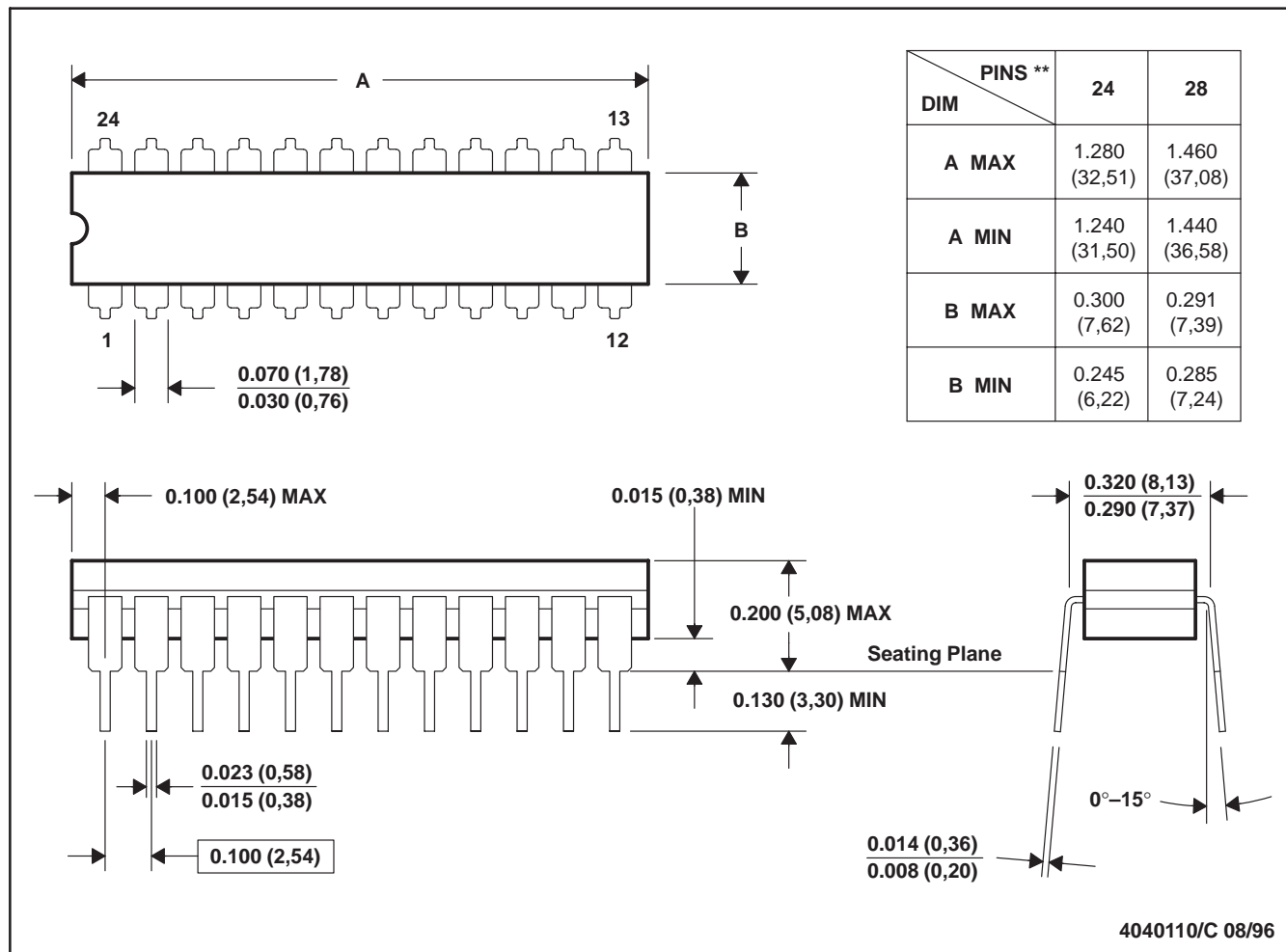


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

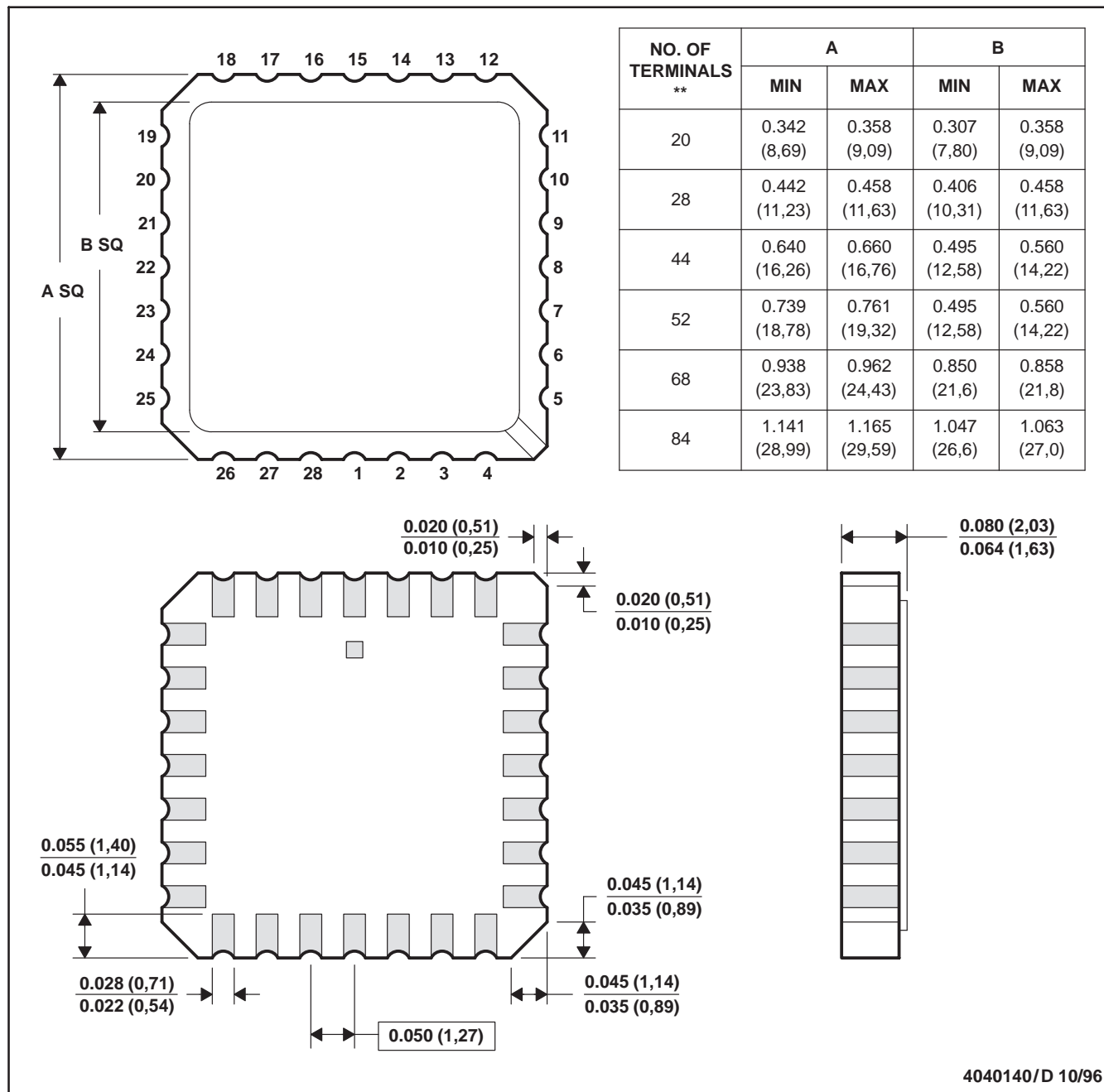
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



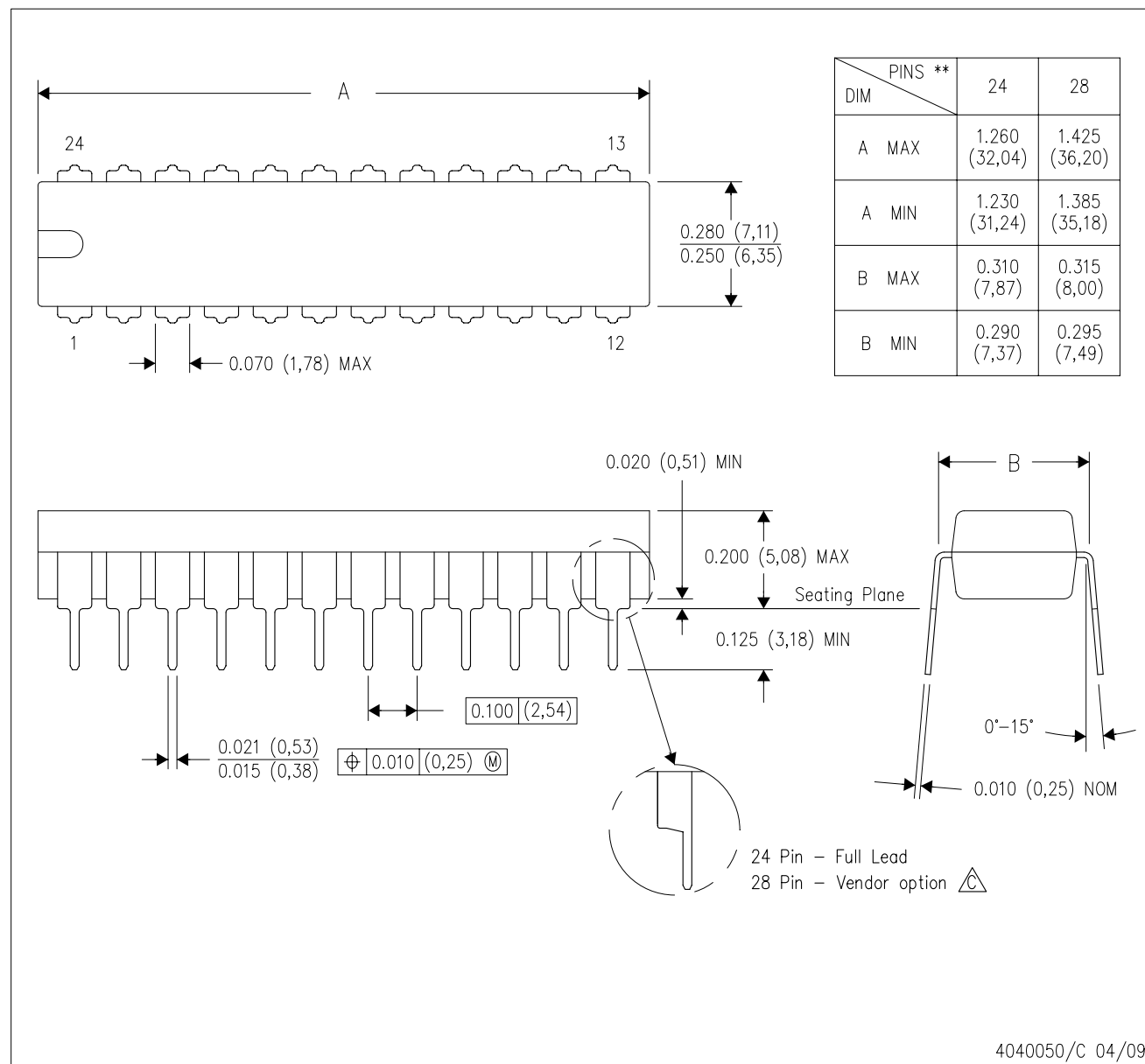
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

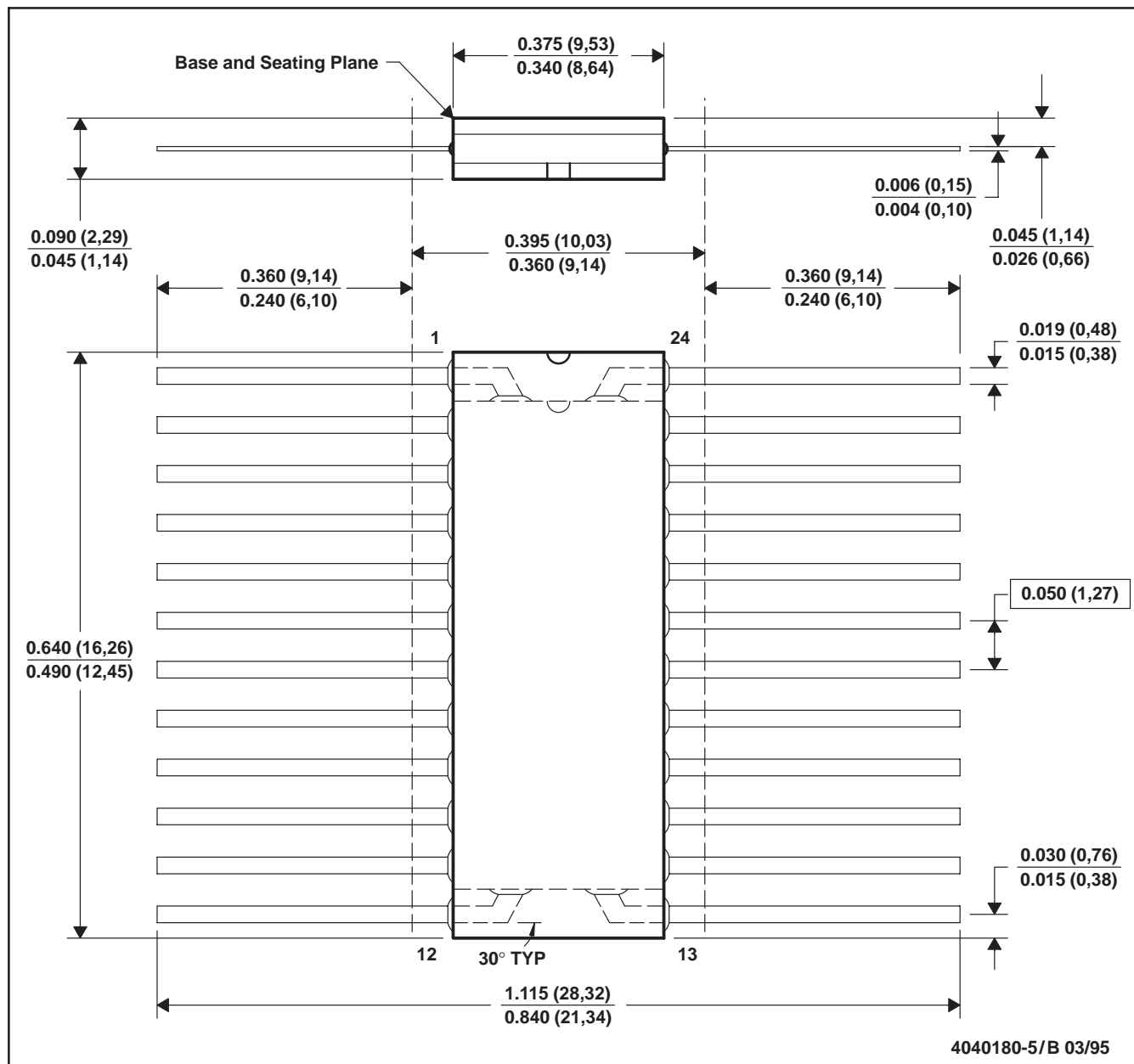
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

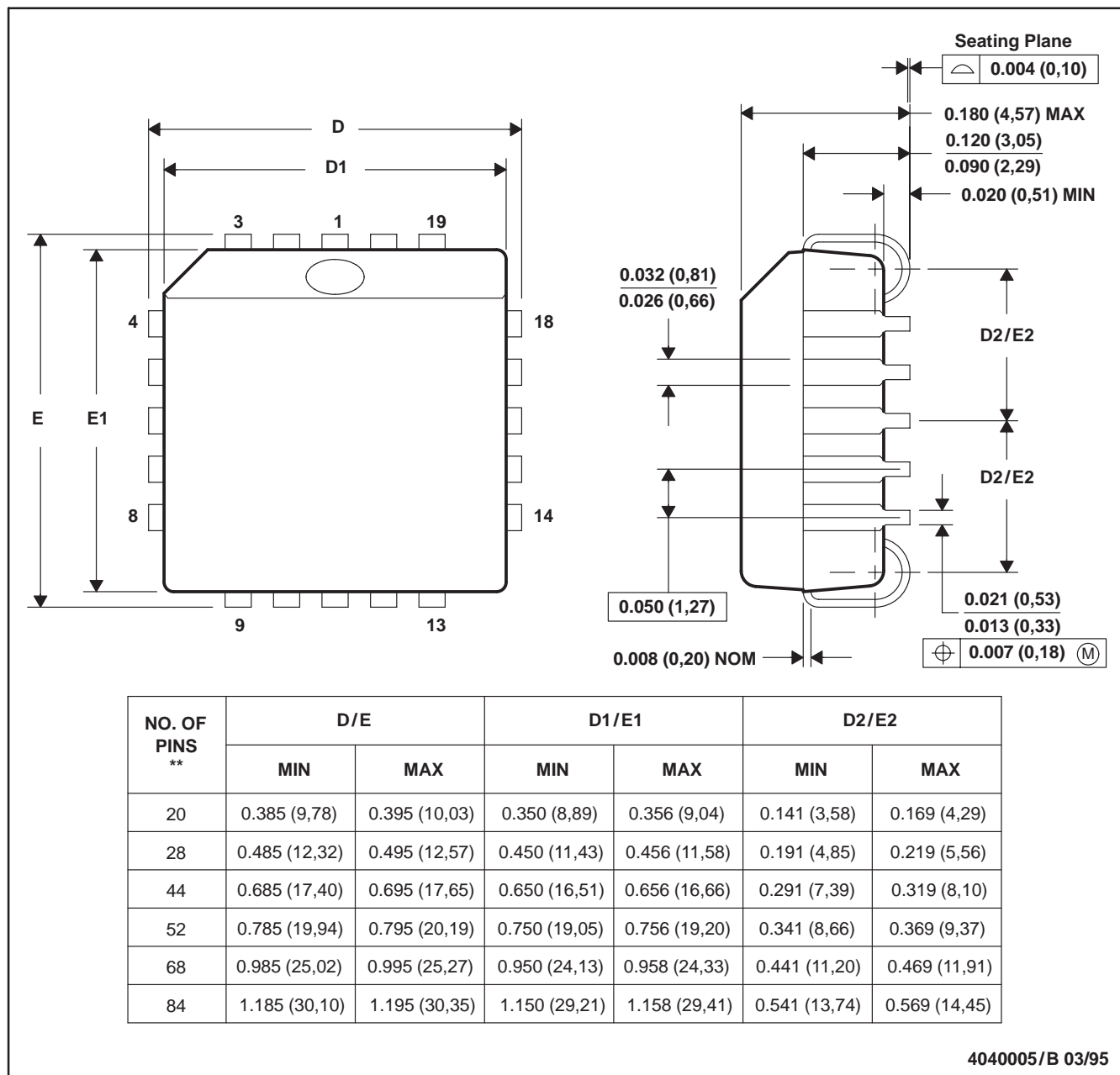


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

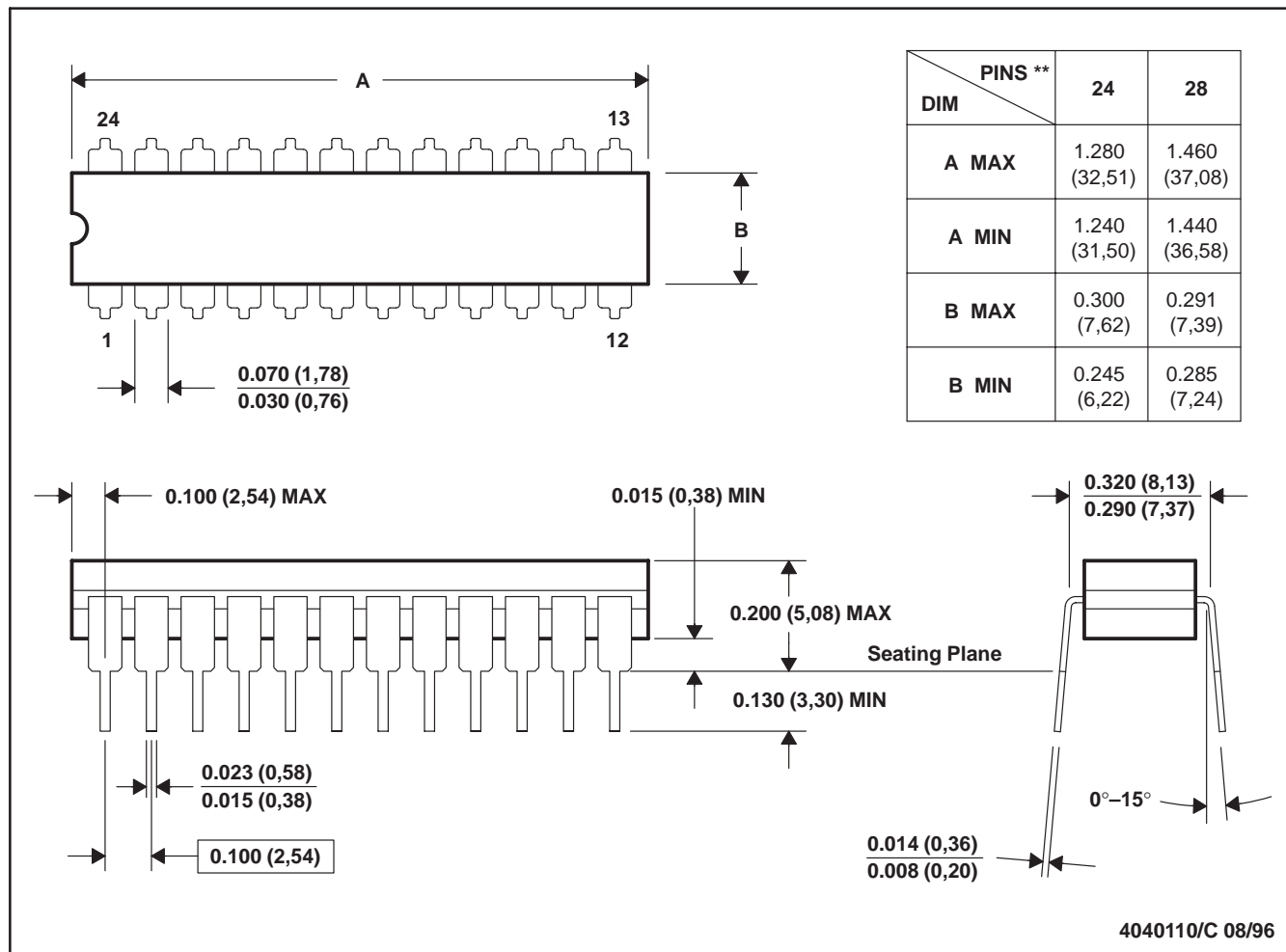


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

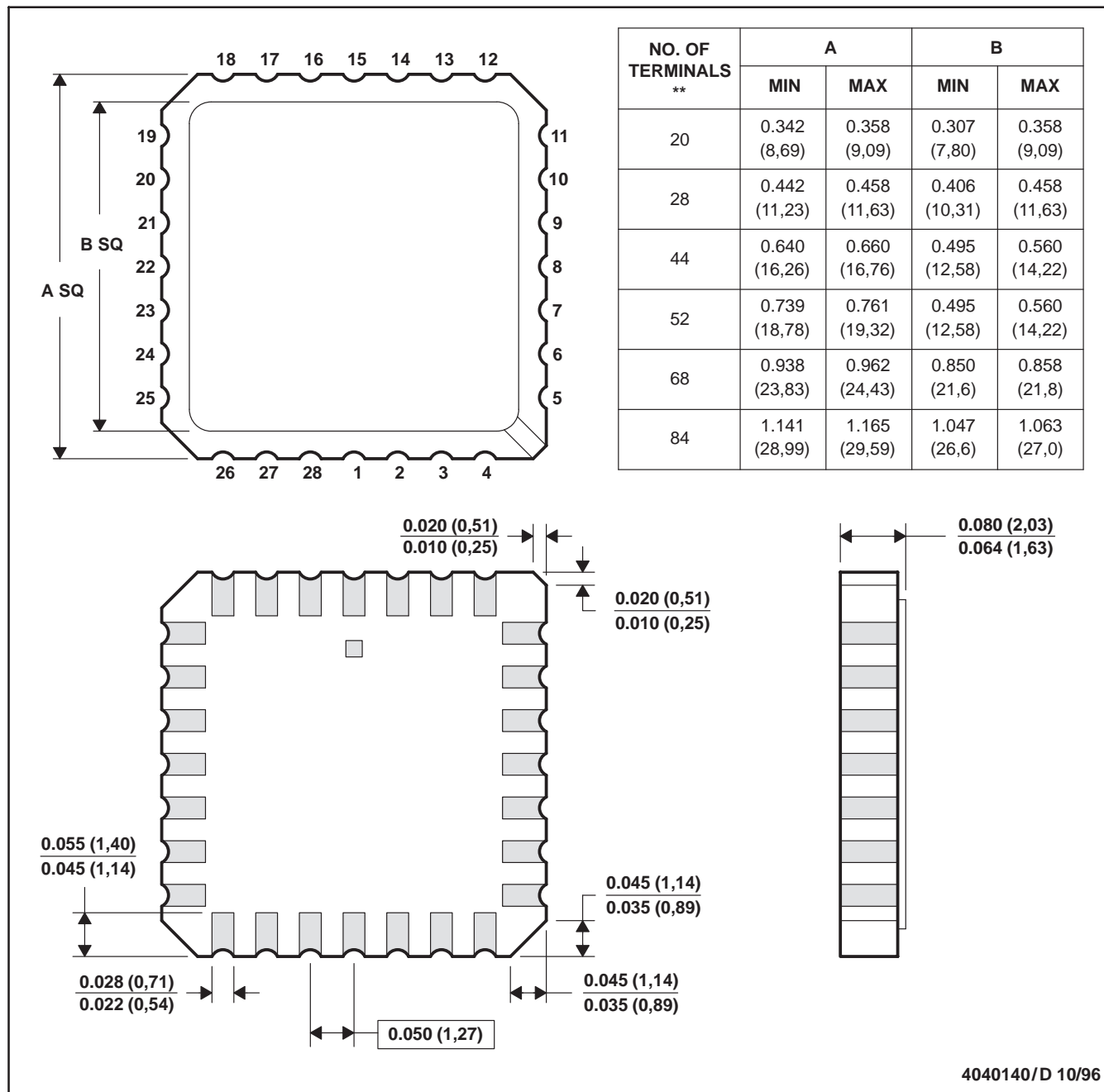
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



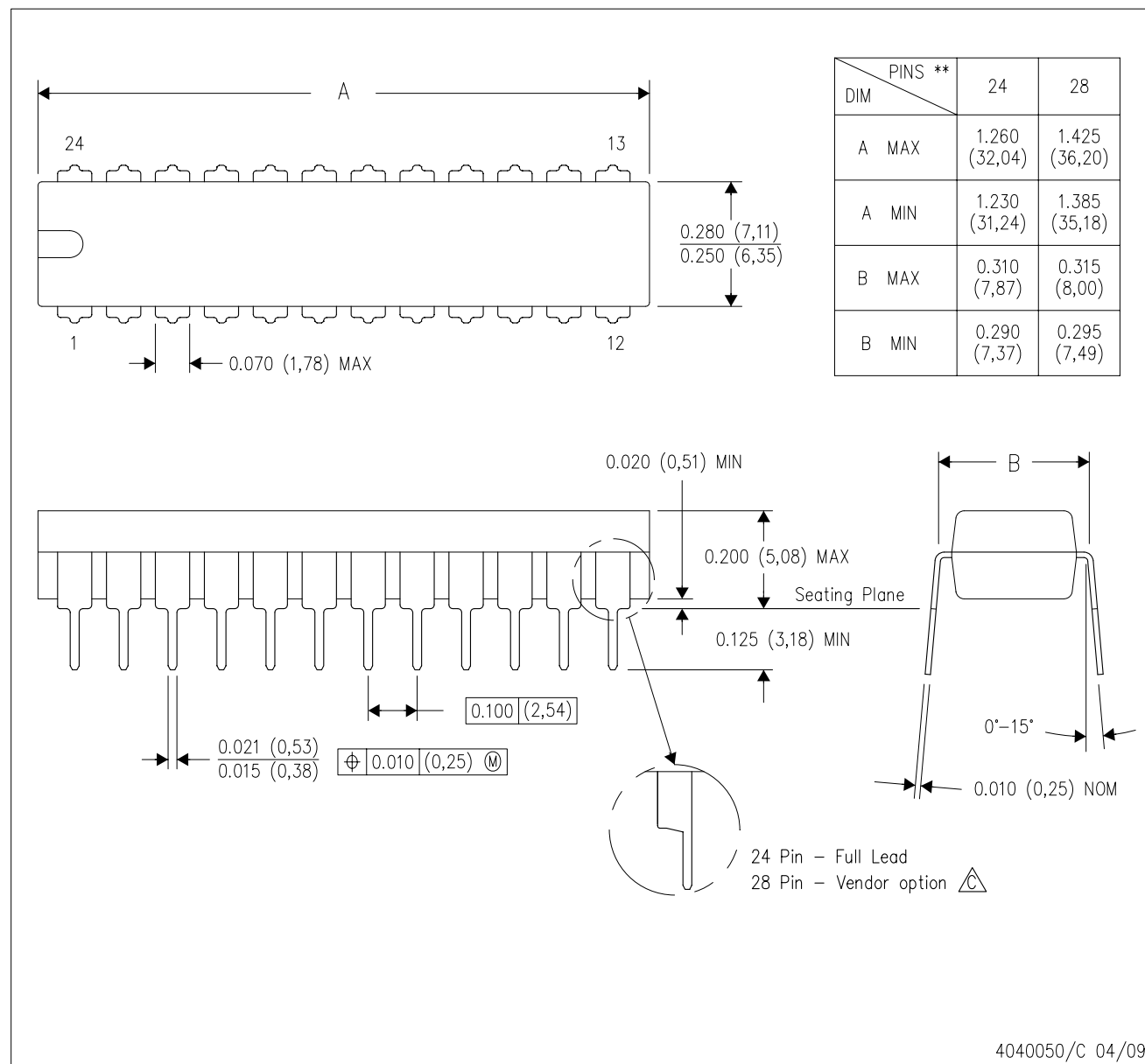
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

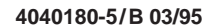
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - \triangle The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

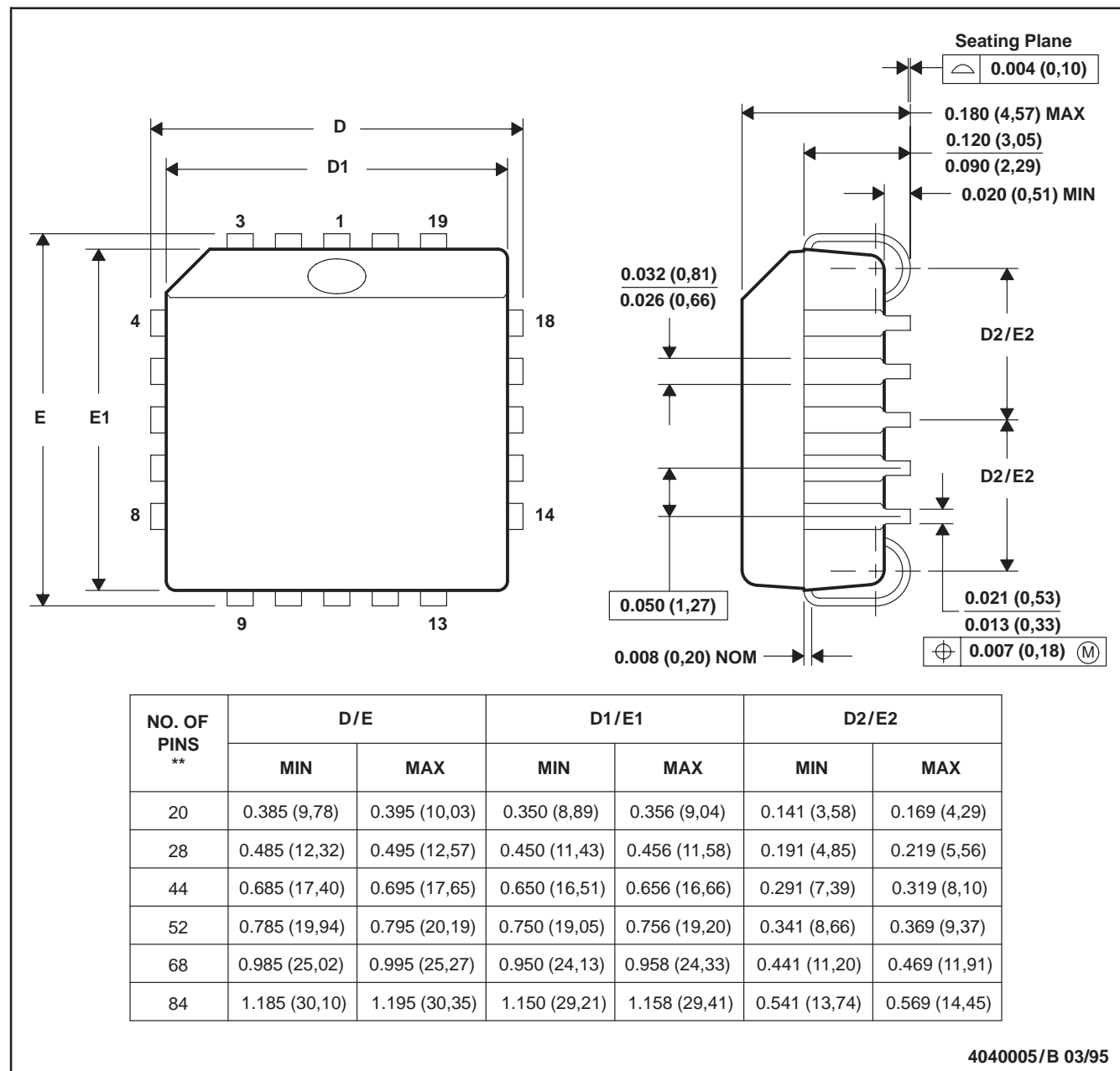


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

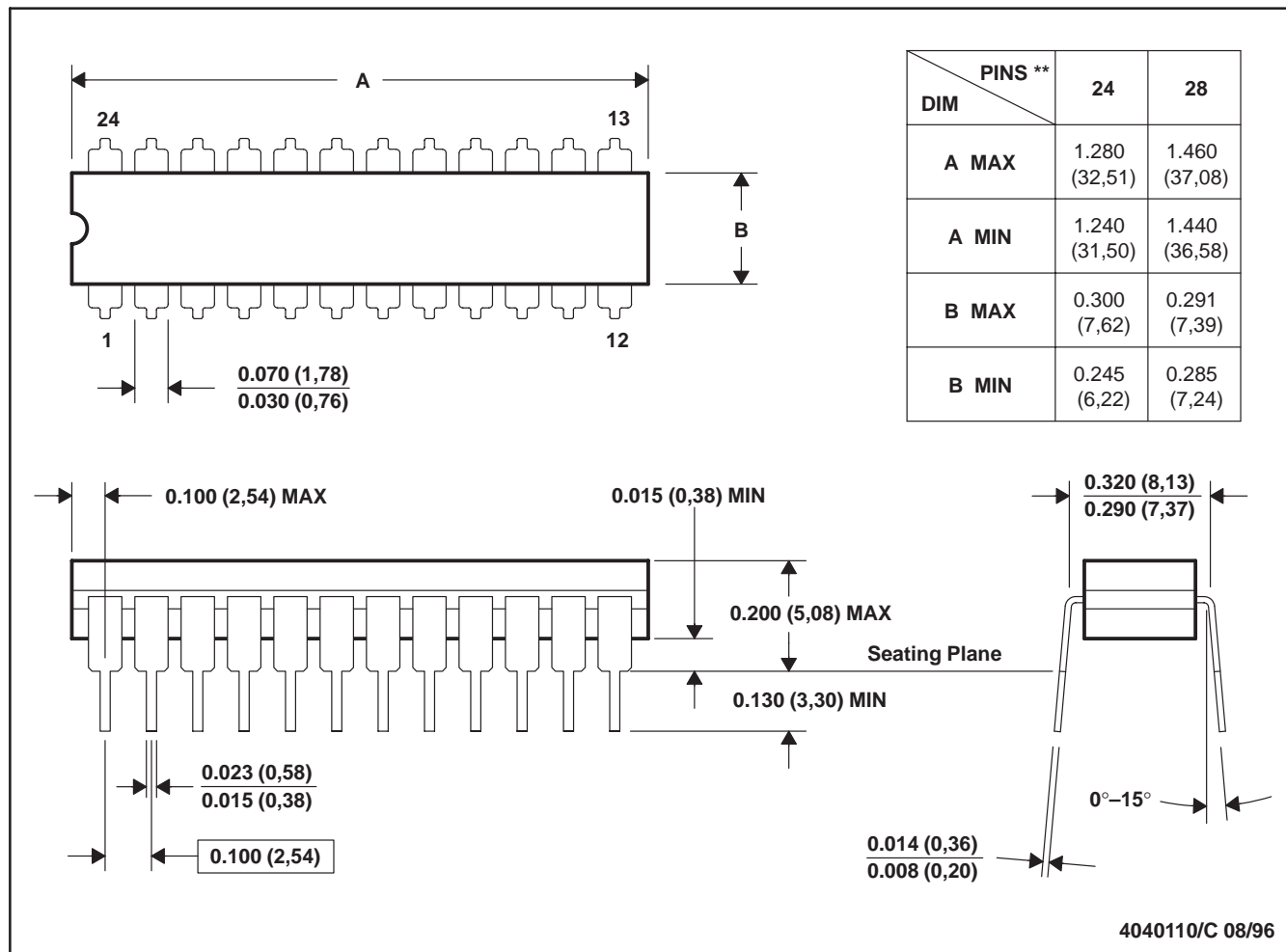


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

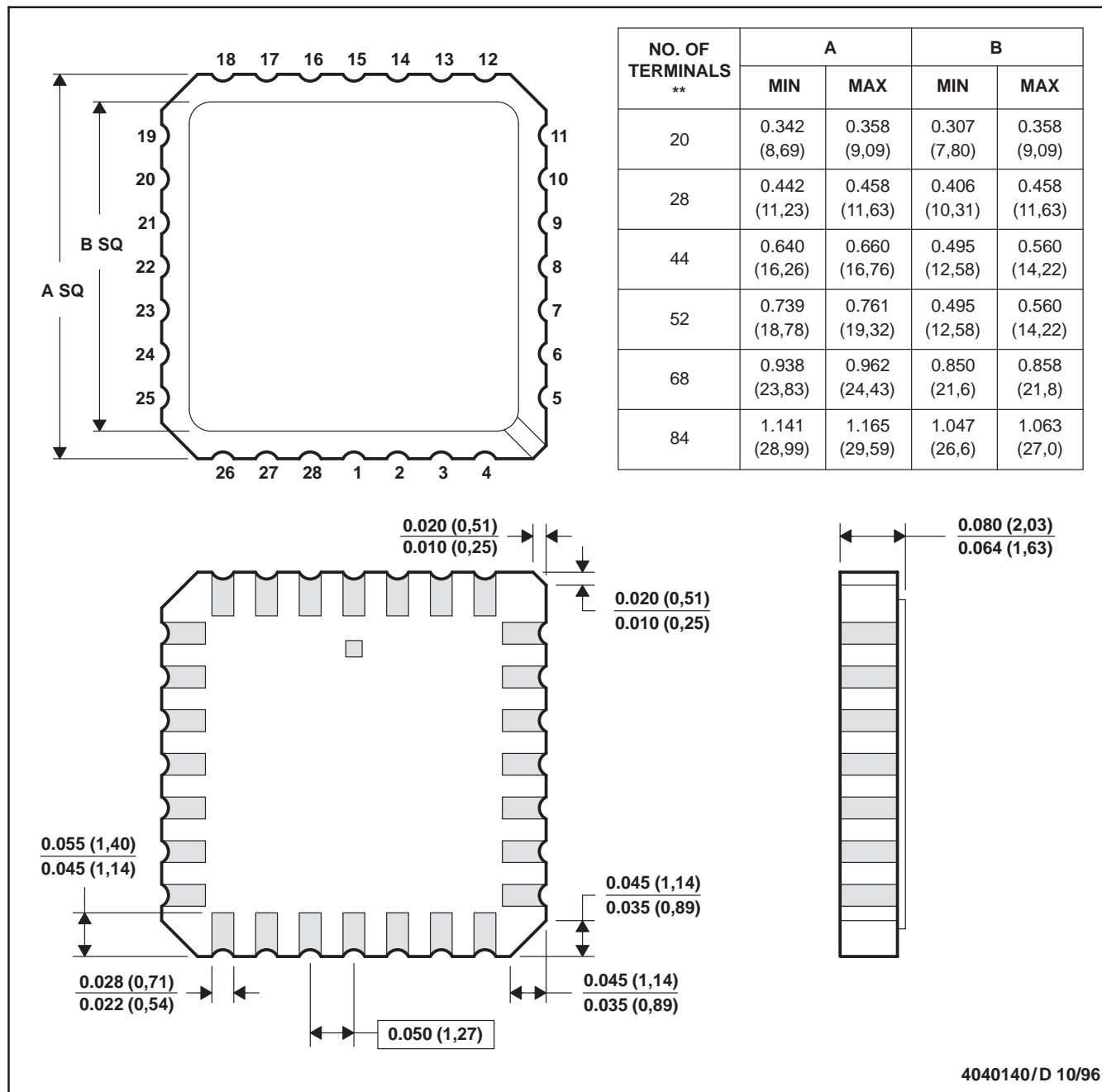
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



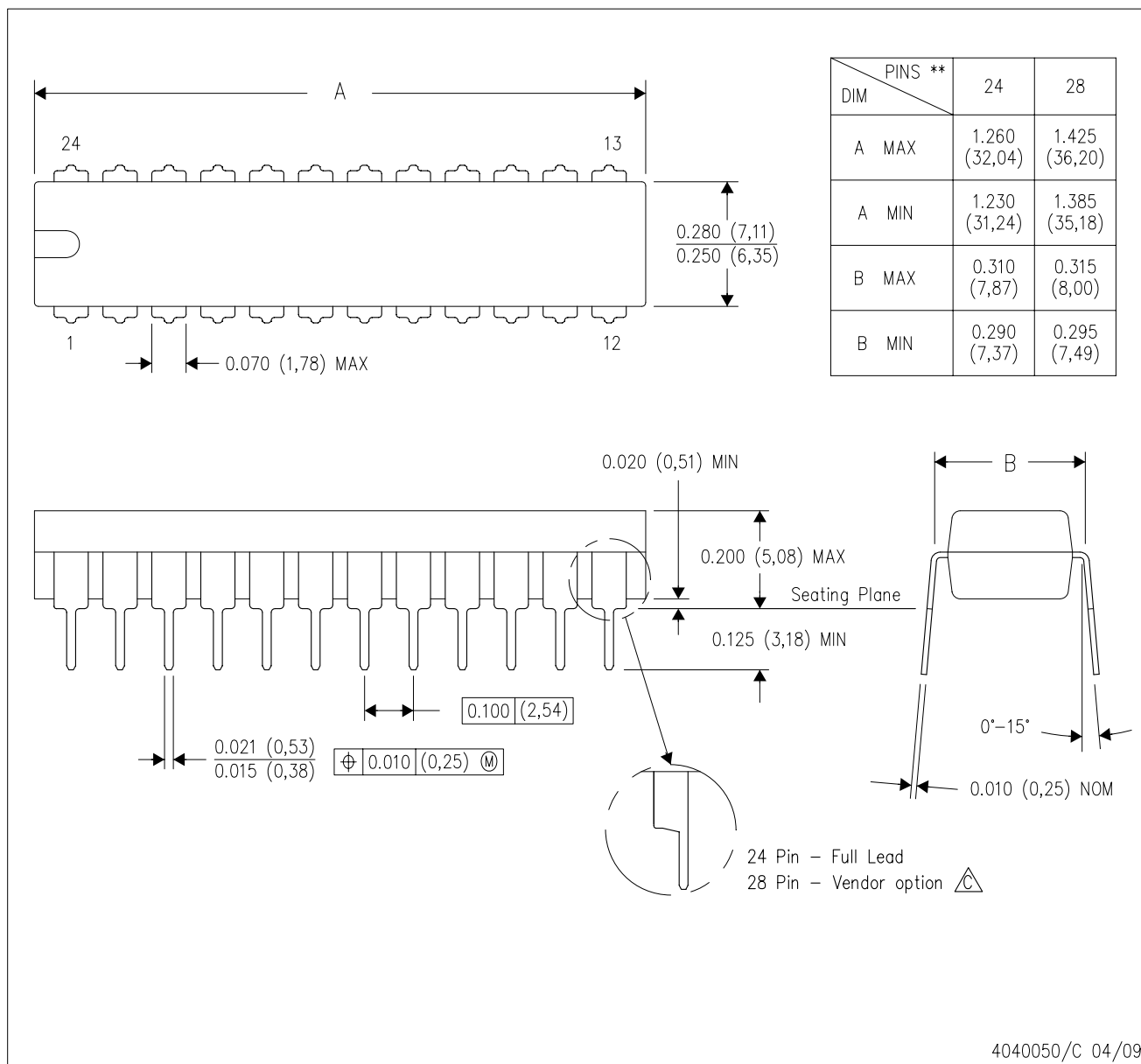
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

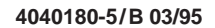
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

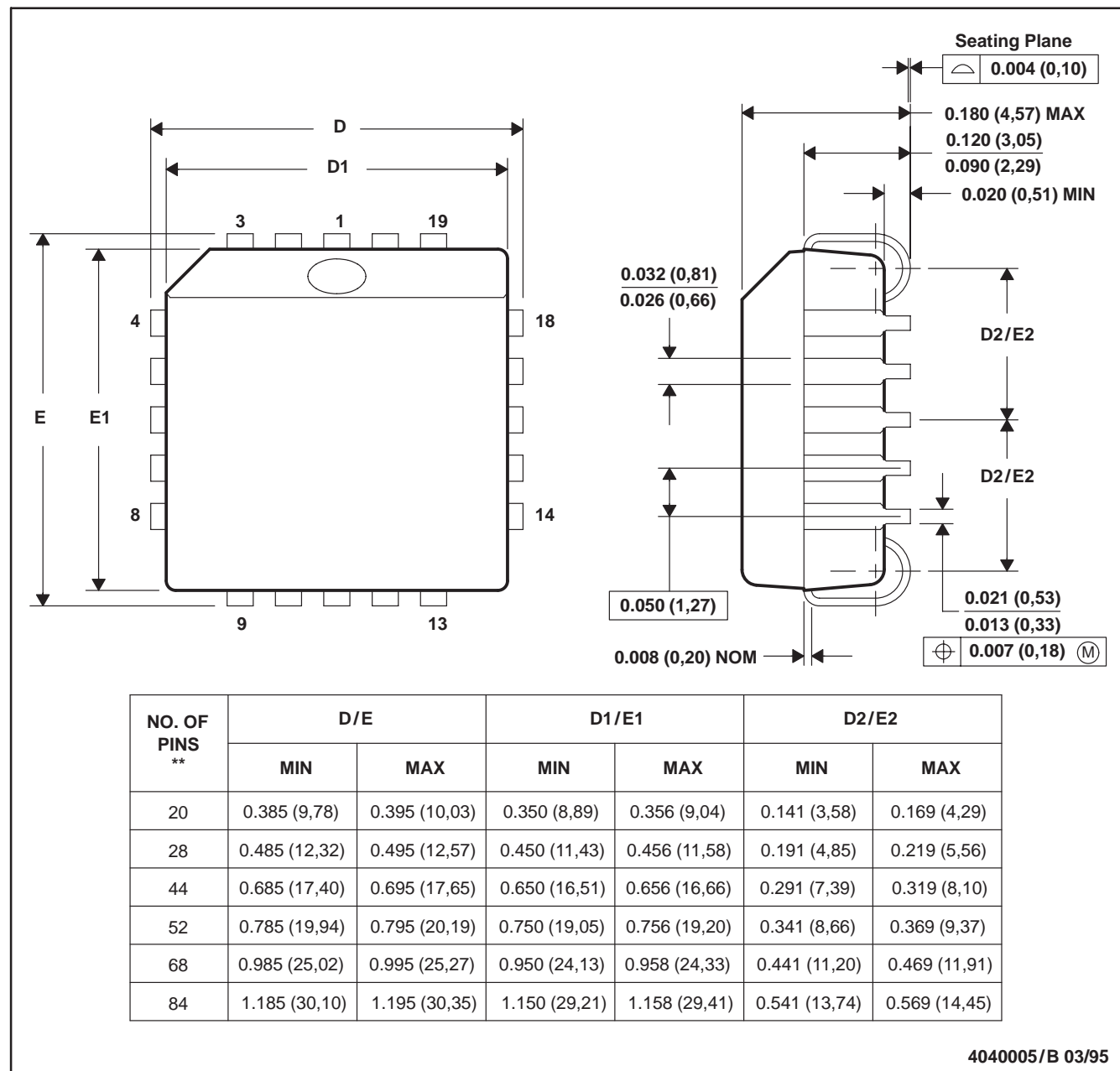


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

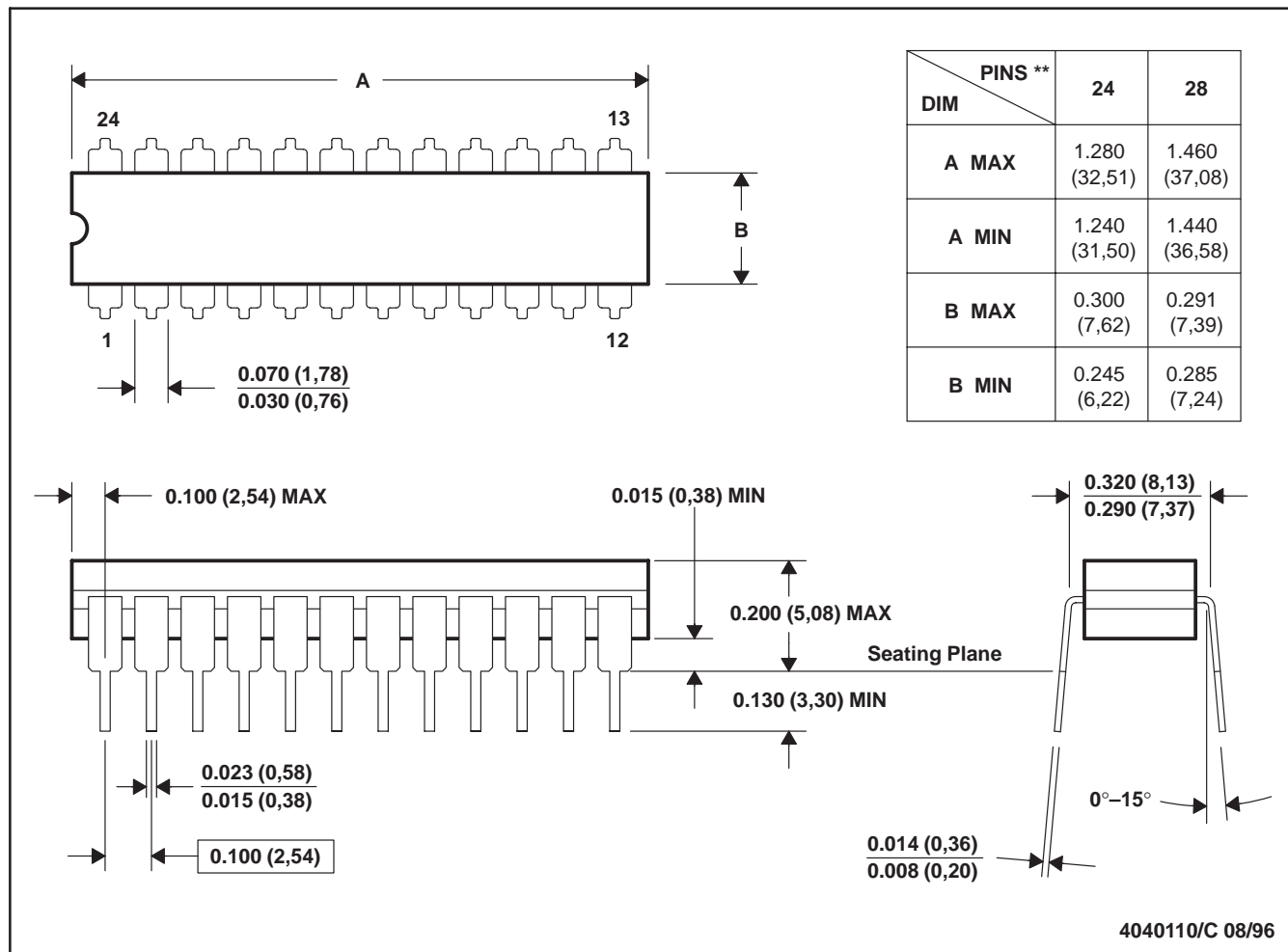


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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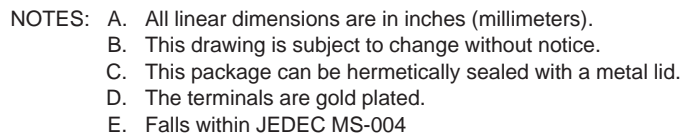
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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28 TERMINAL SHOWN

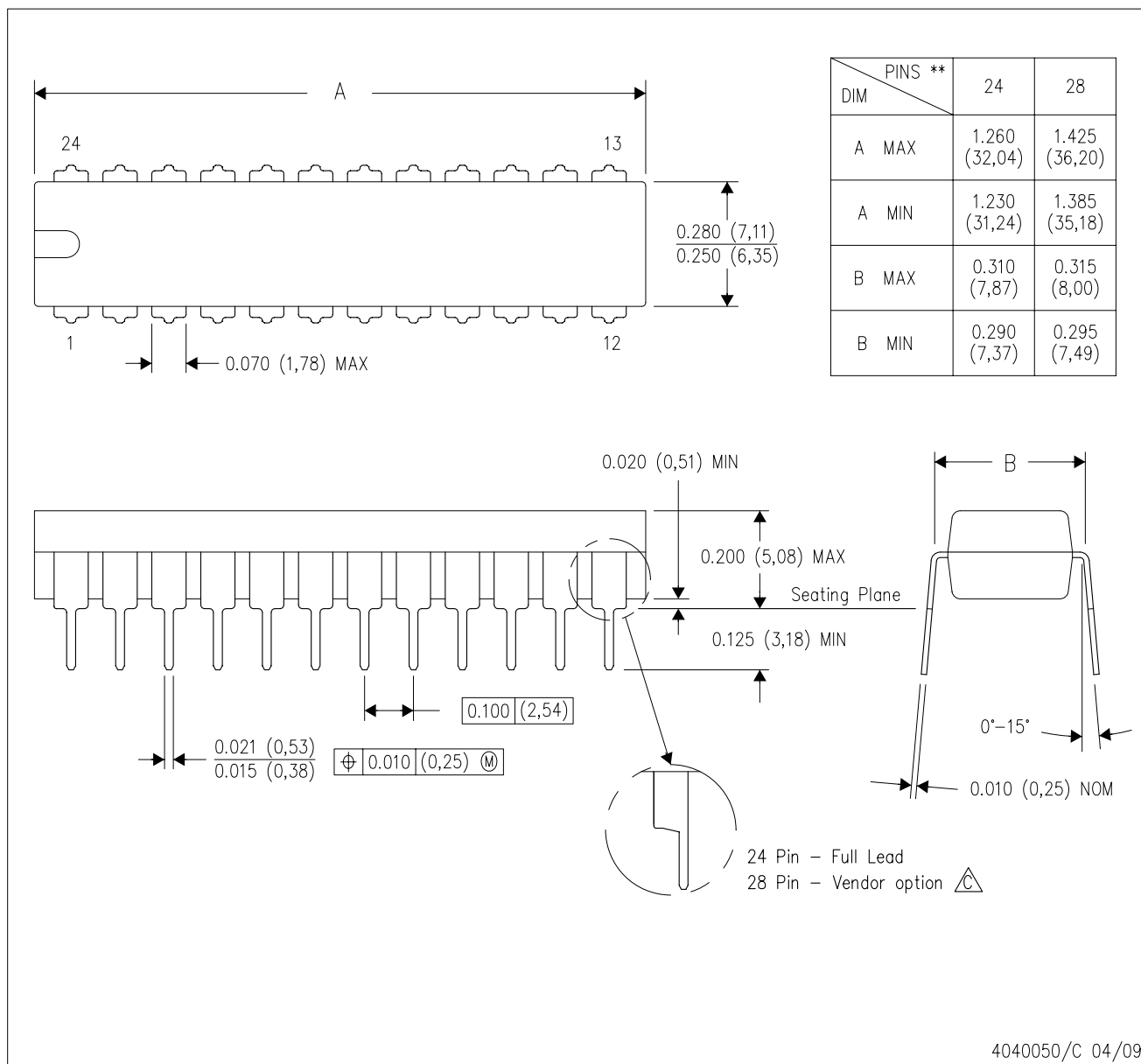


MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

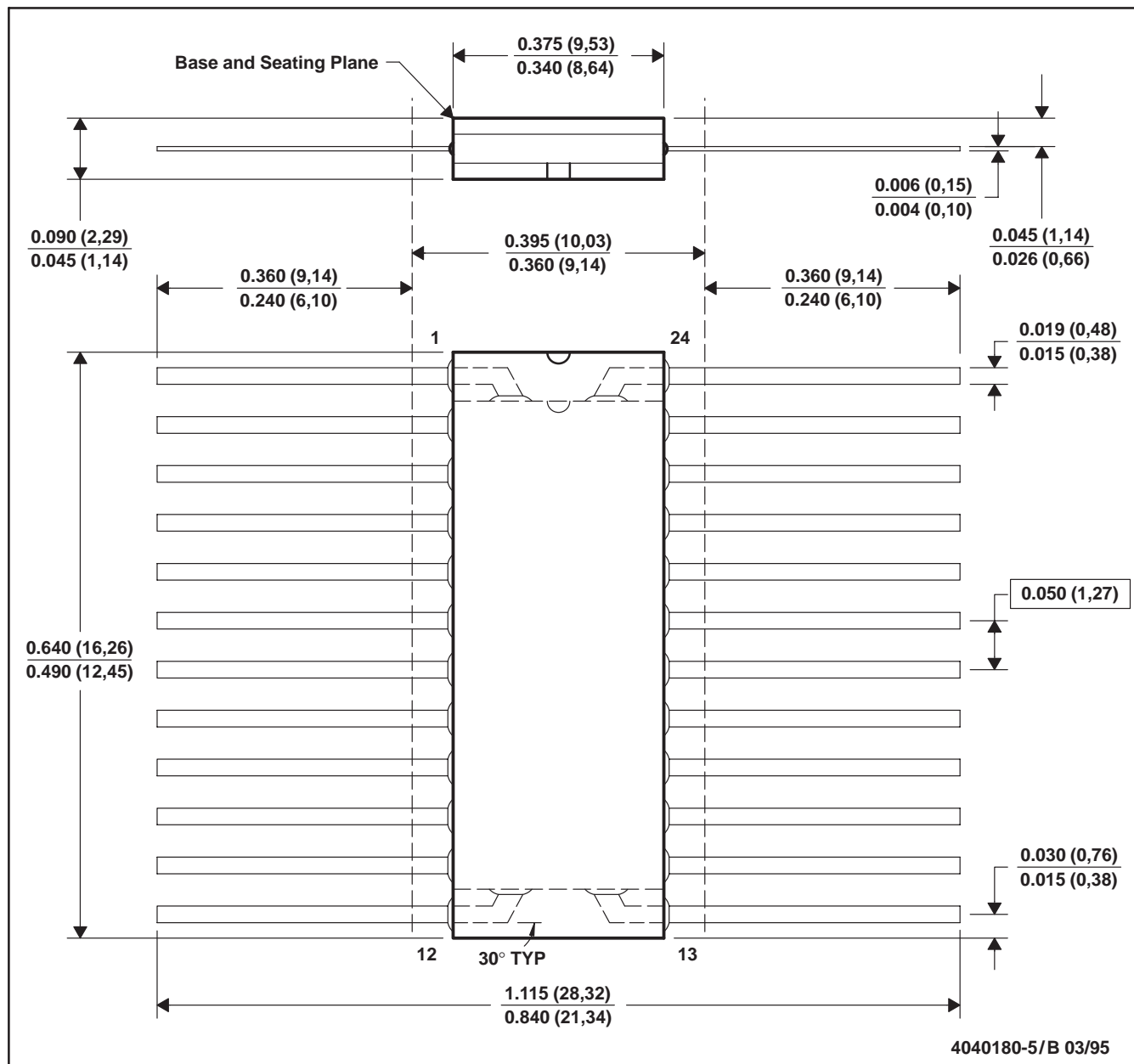
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

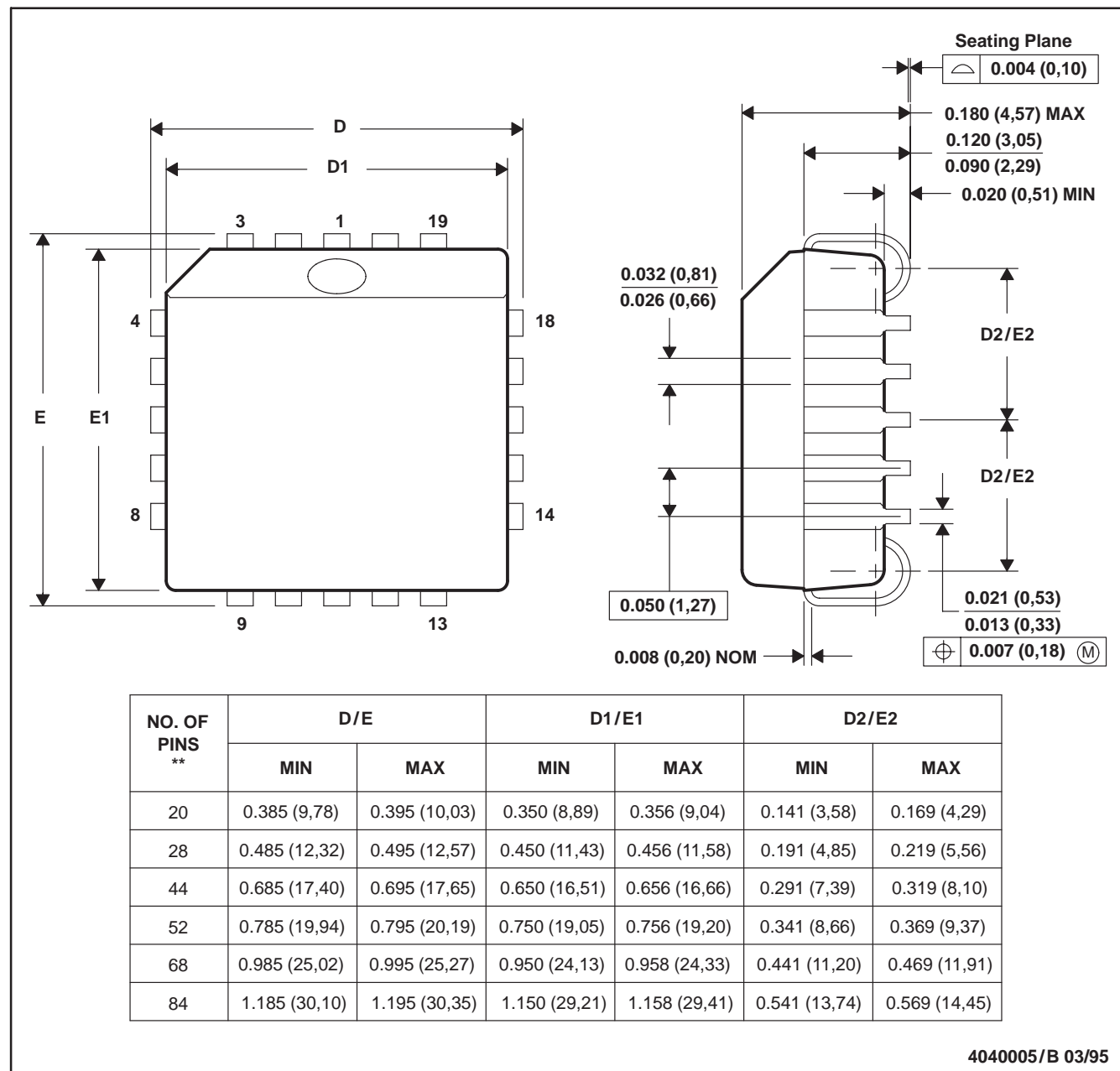


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

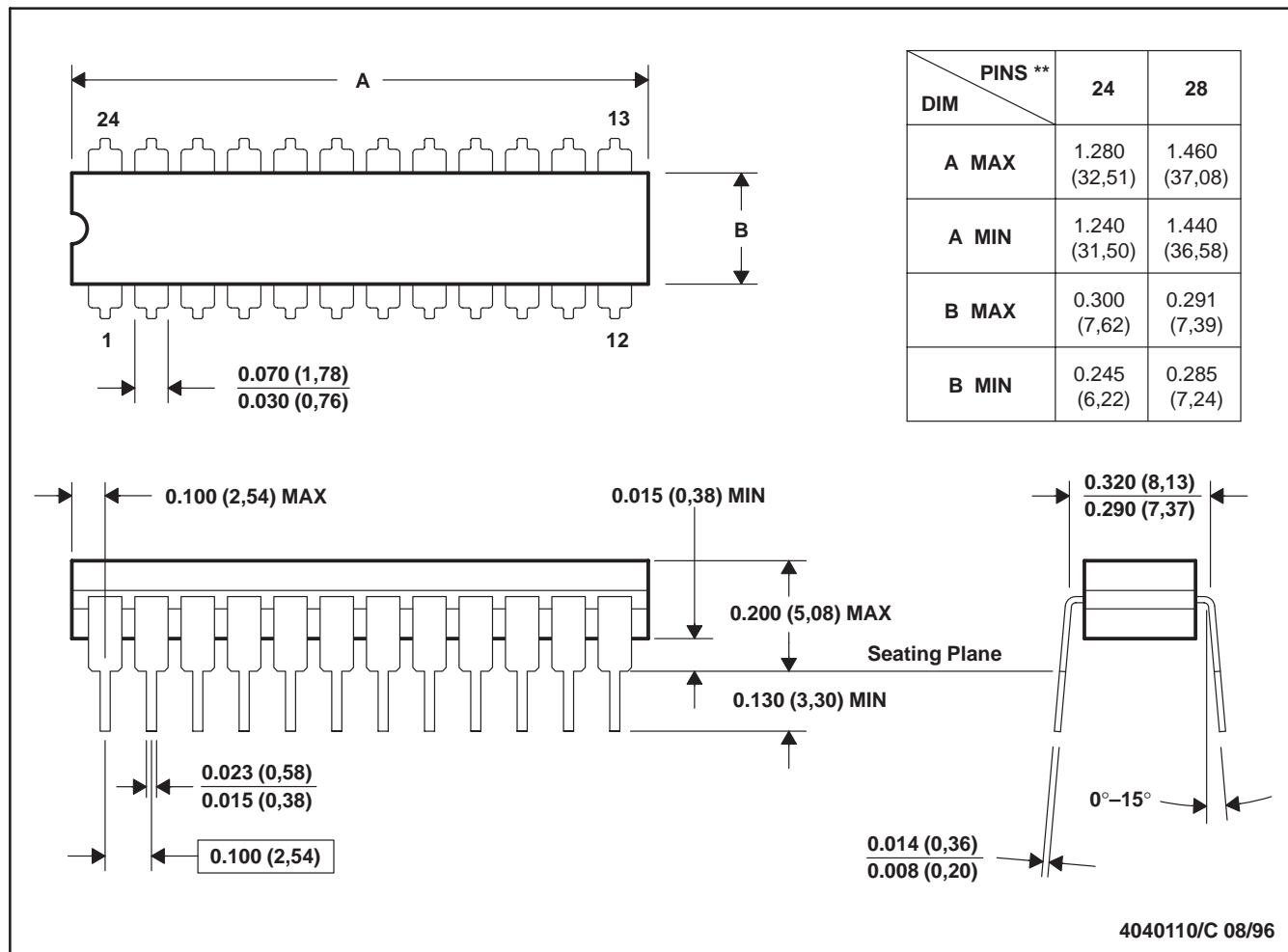


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



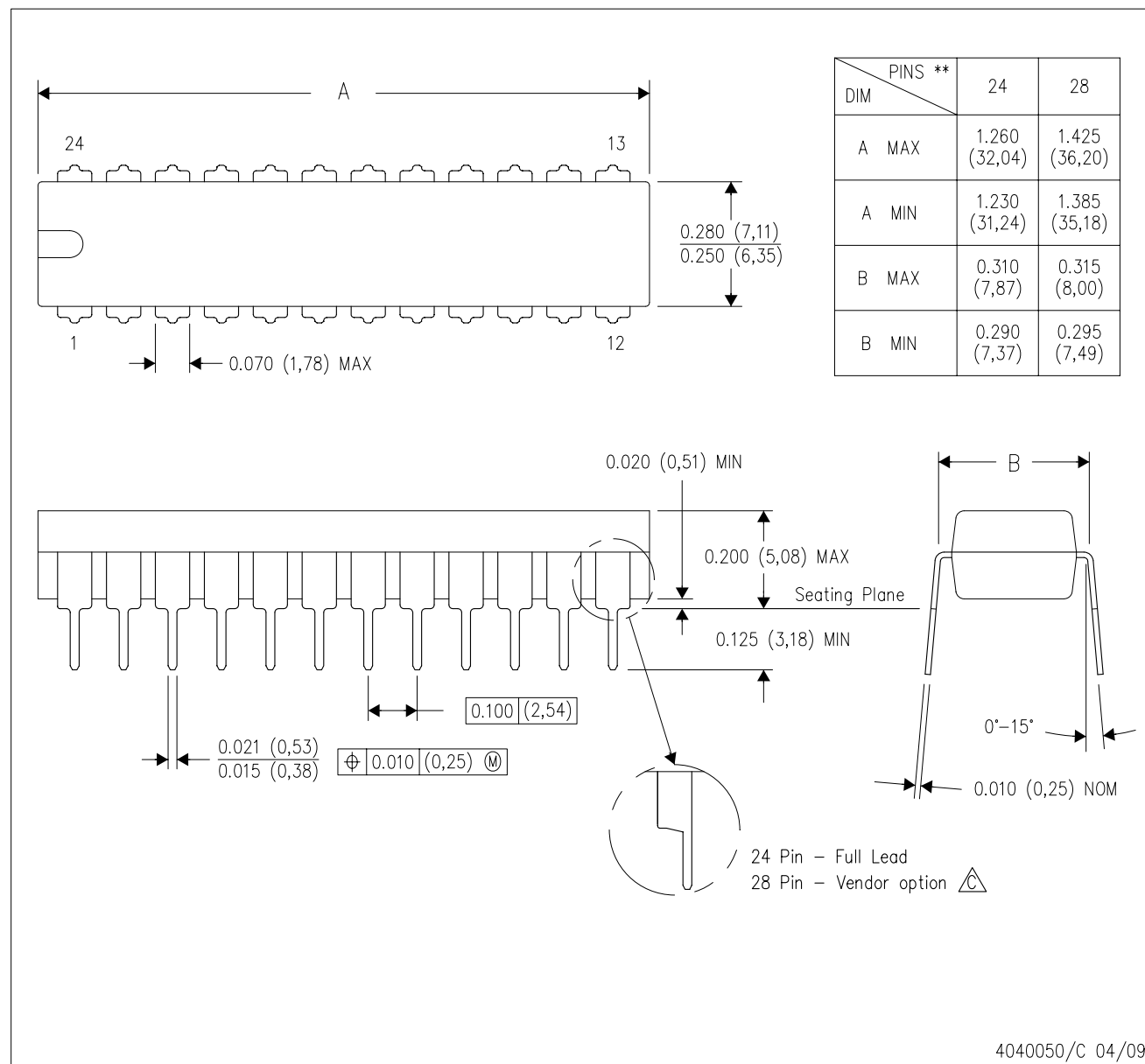
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

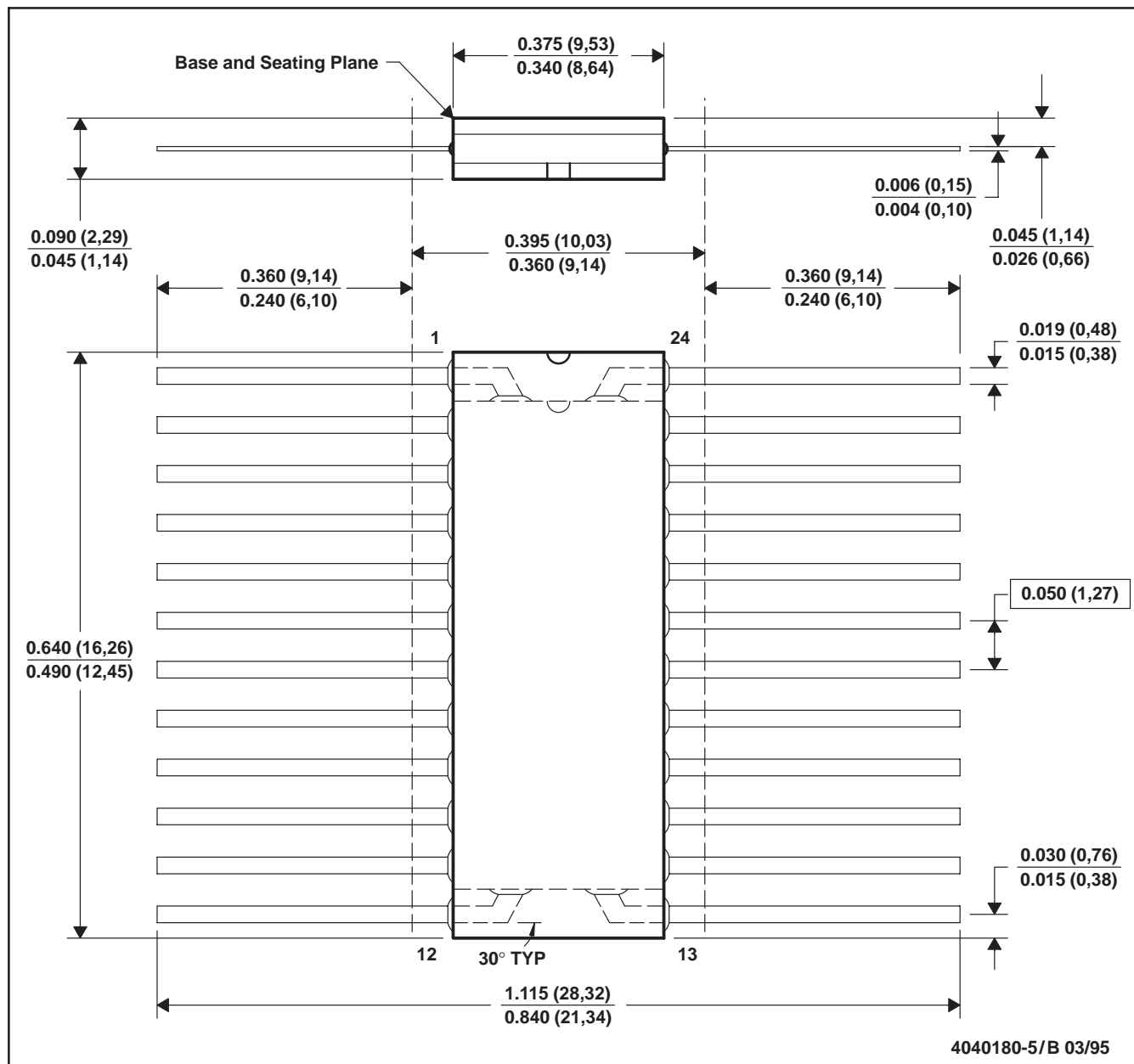
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

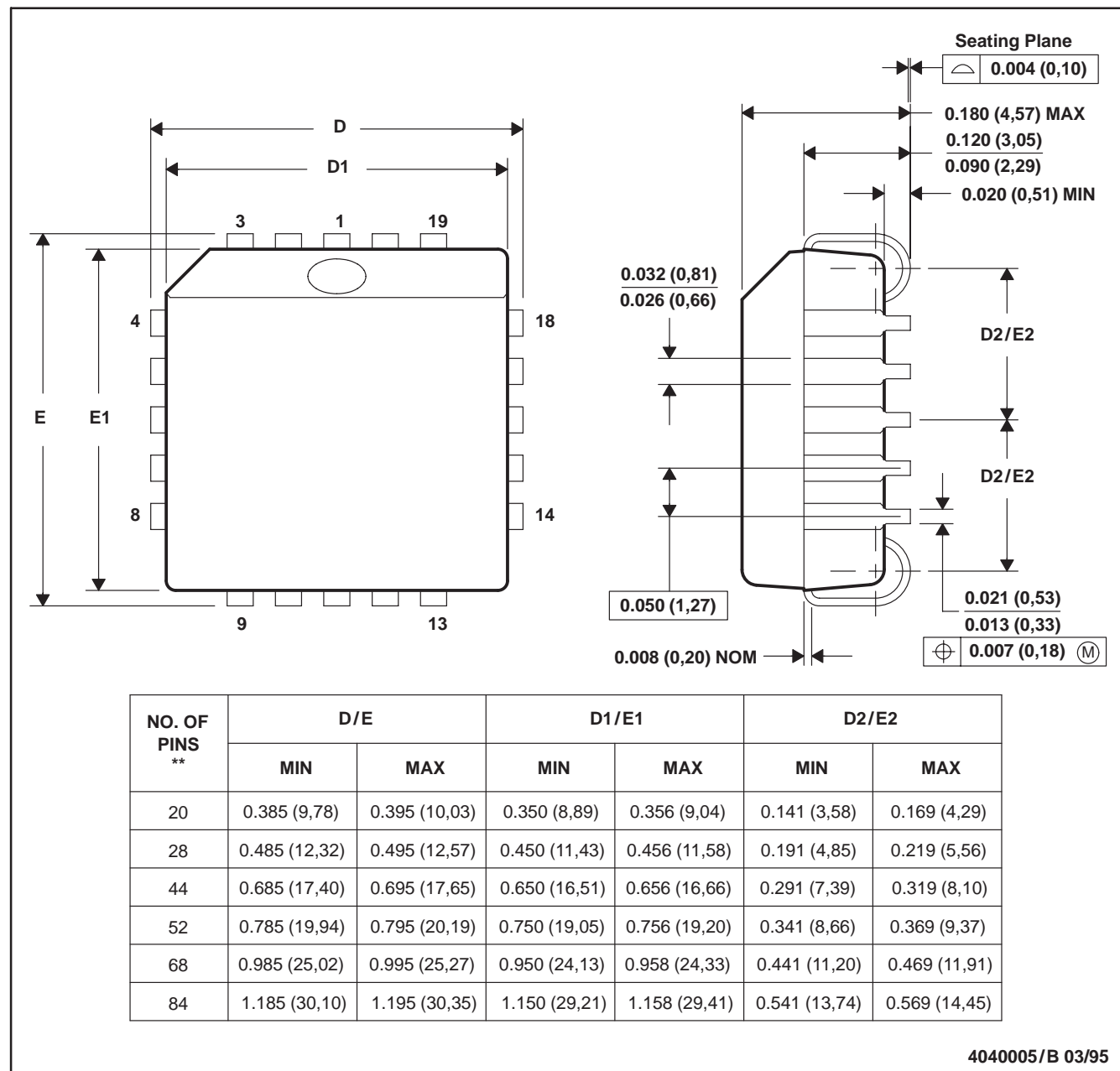


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

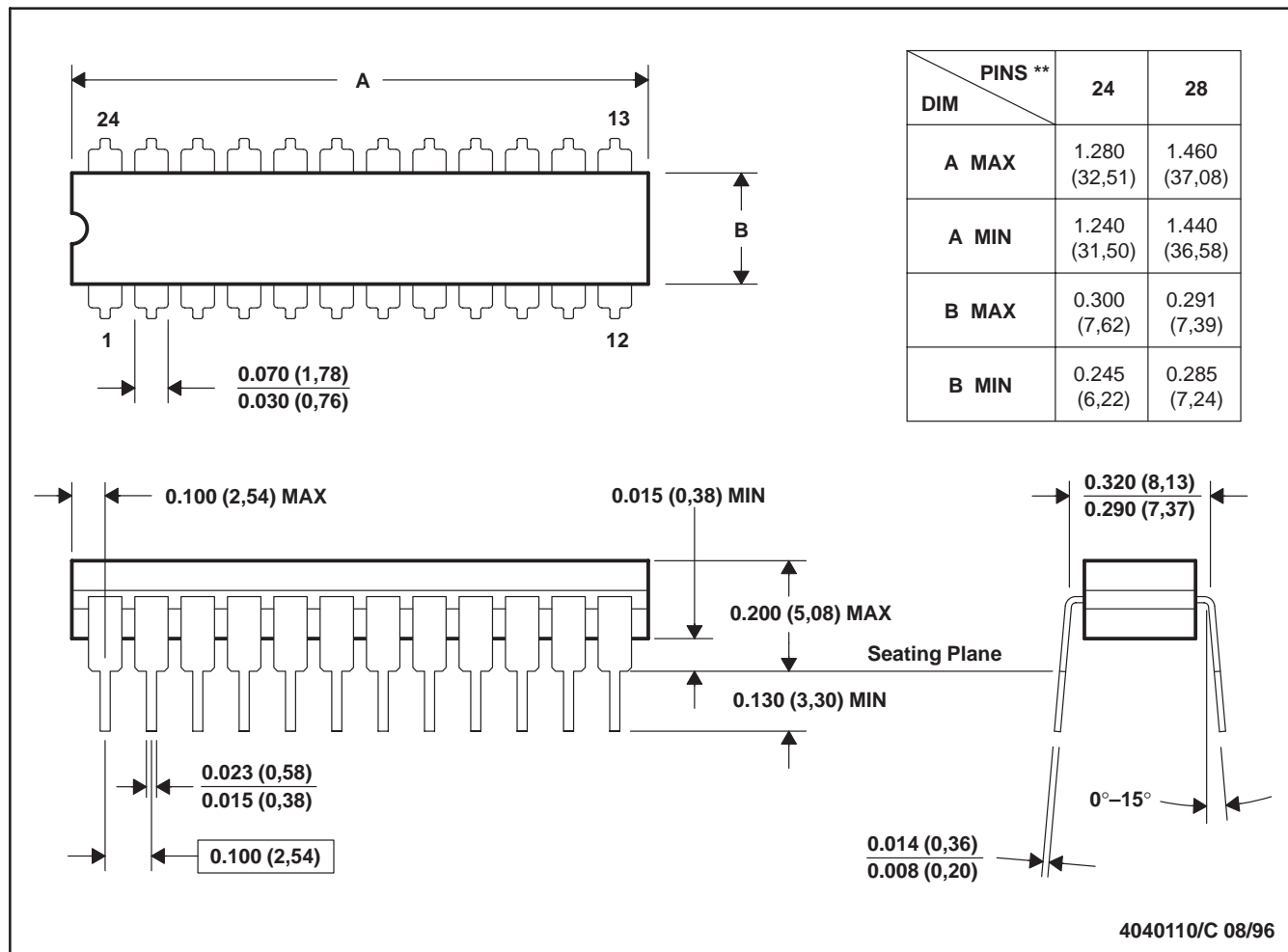


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

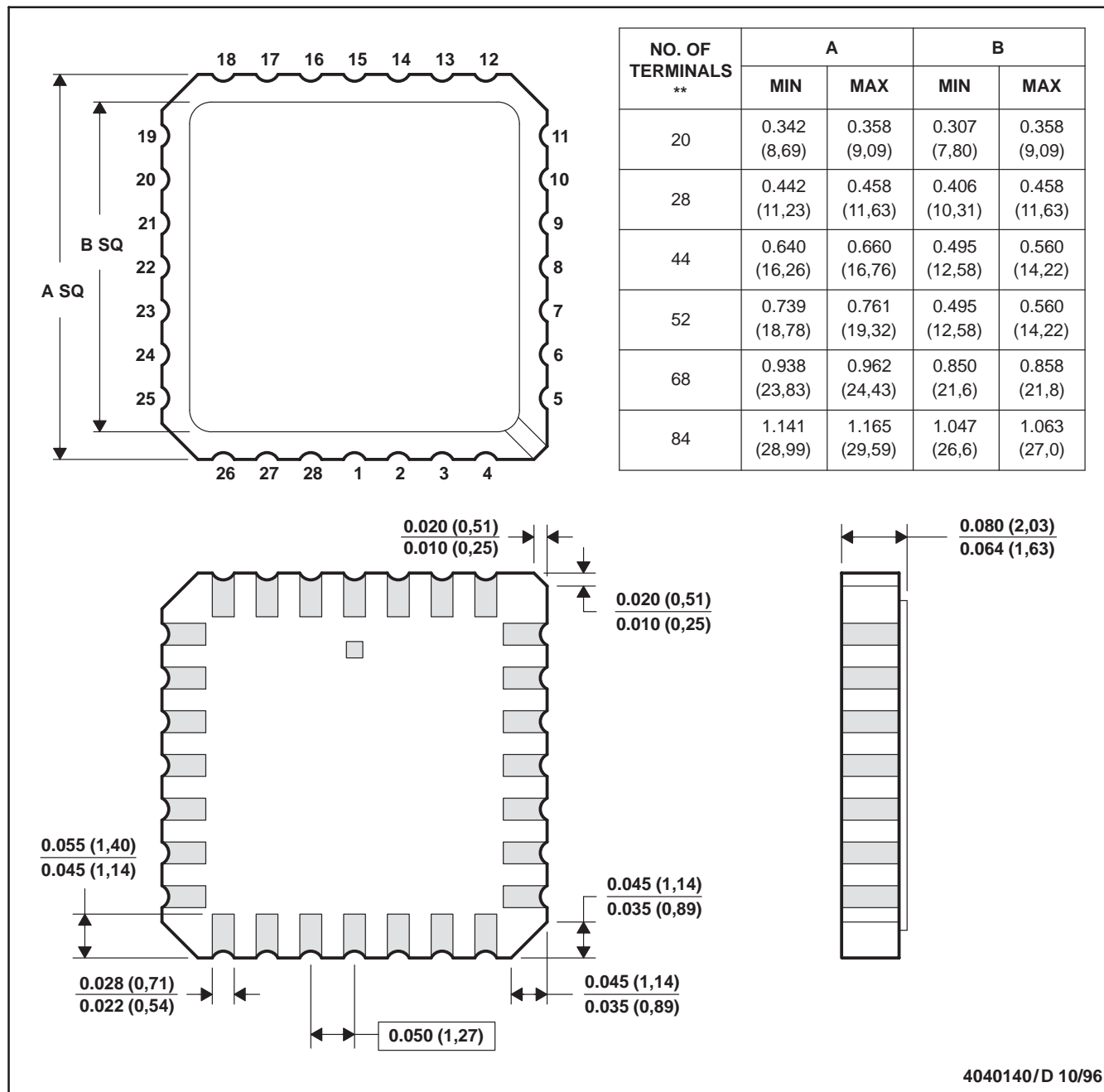
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



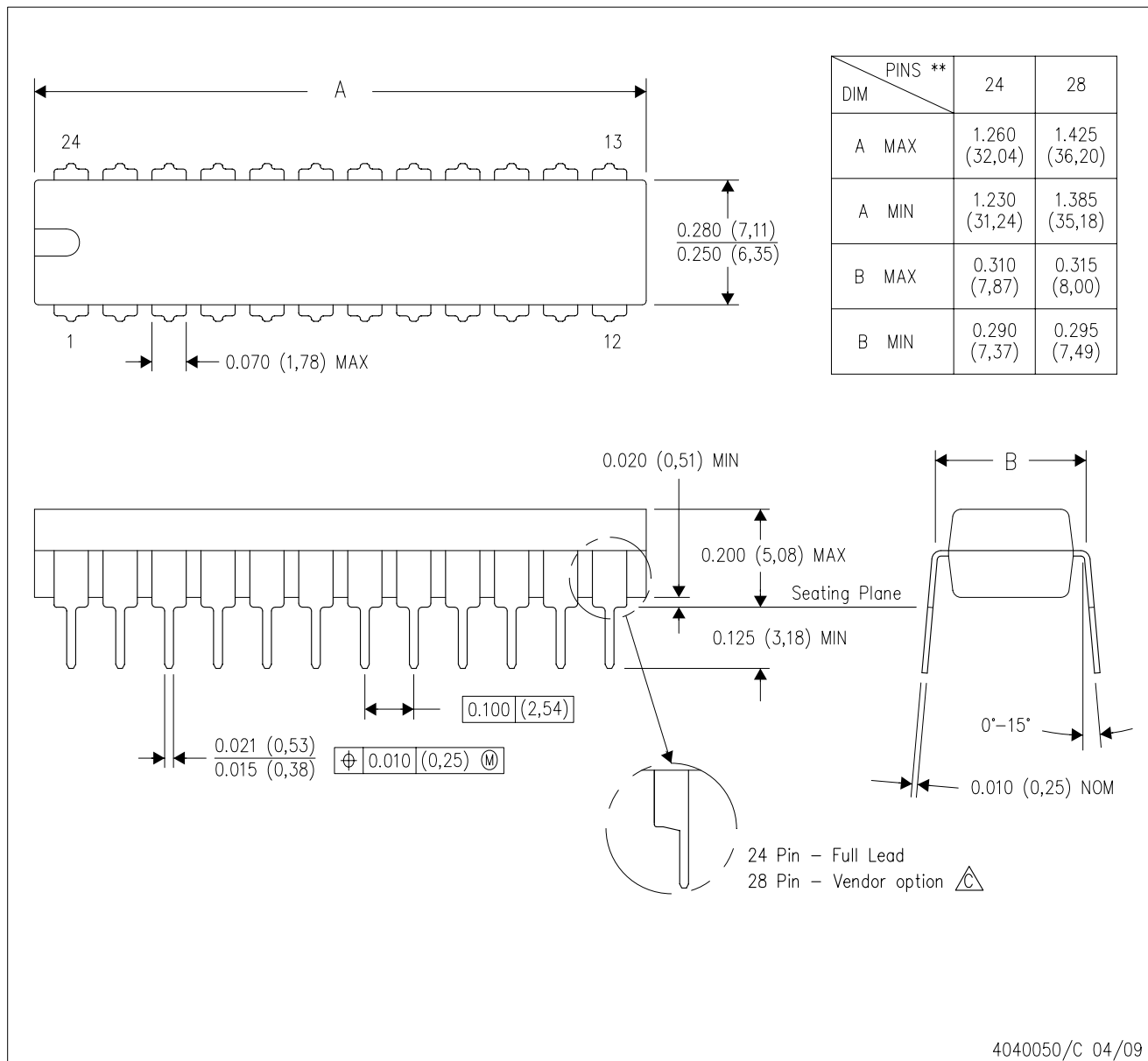
- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE

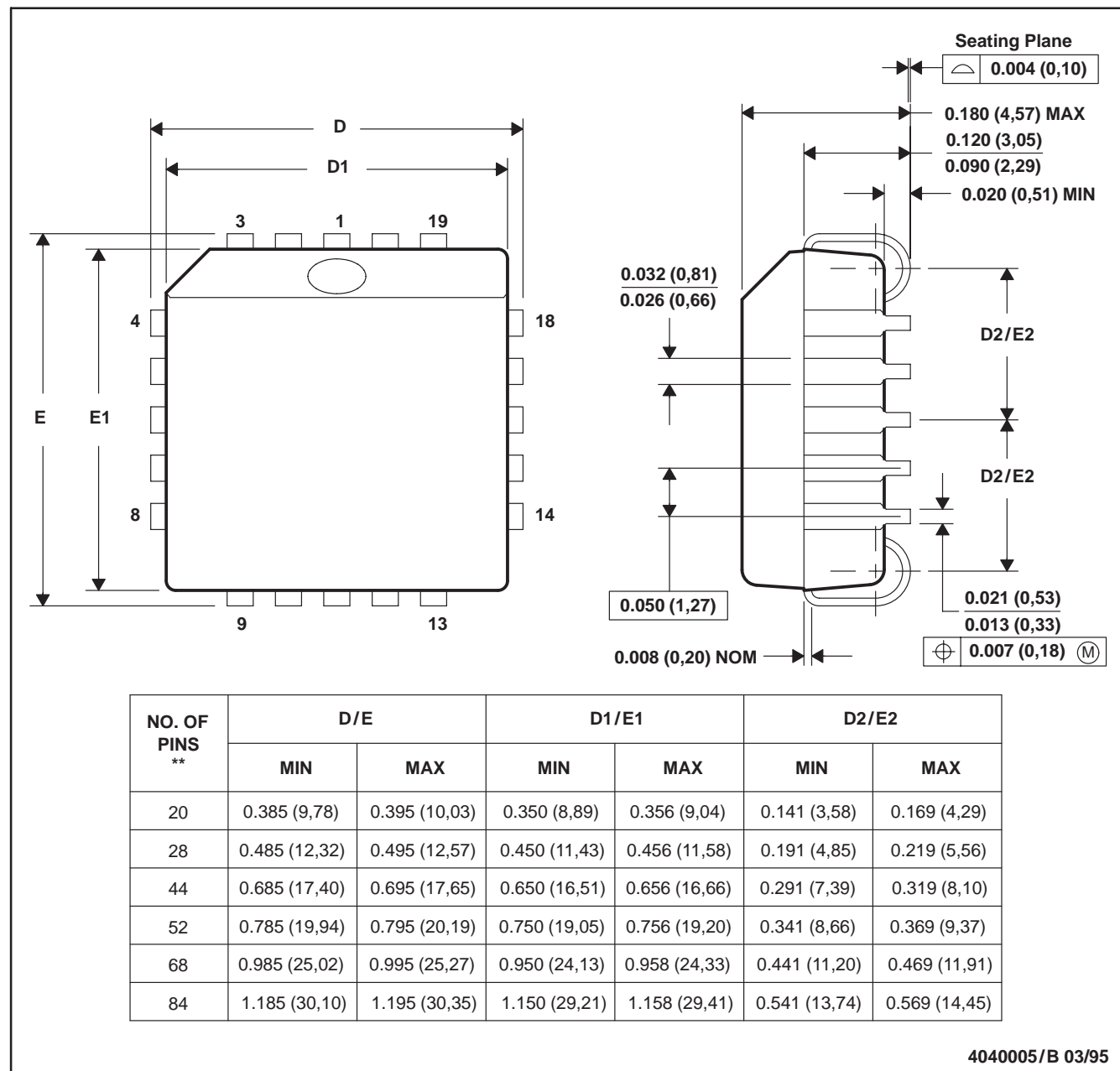


NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
B. This drawing is subject to change without notice.
C. The 28 pin end lead shoulder width is a vendor option, either half or full width.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

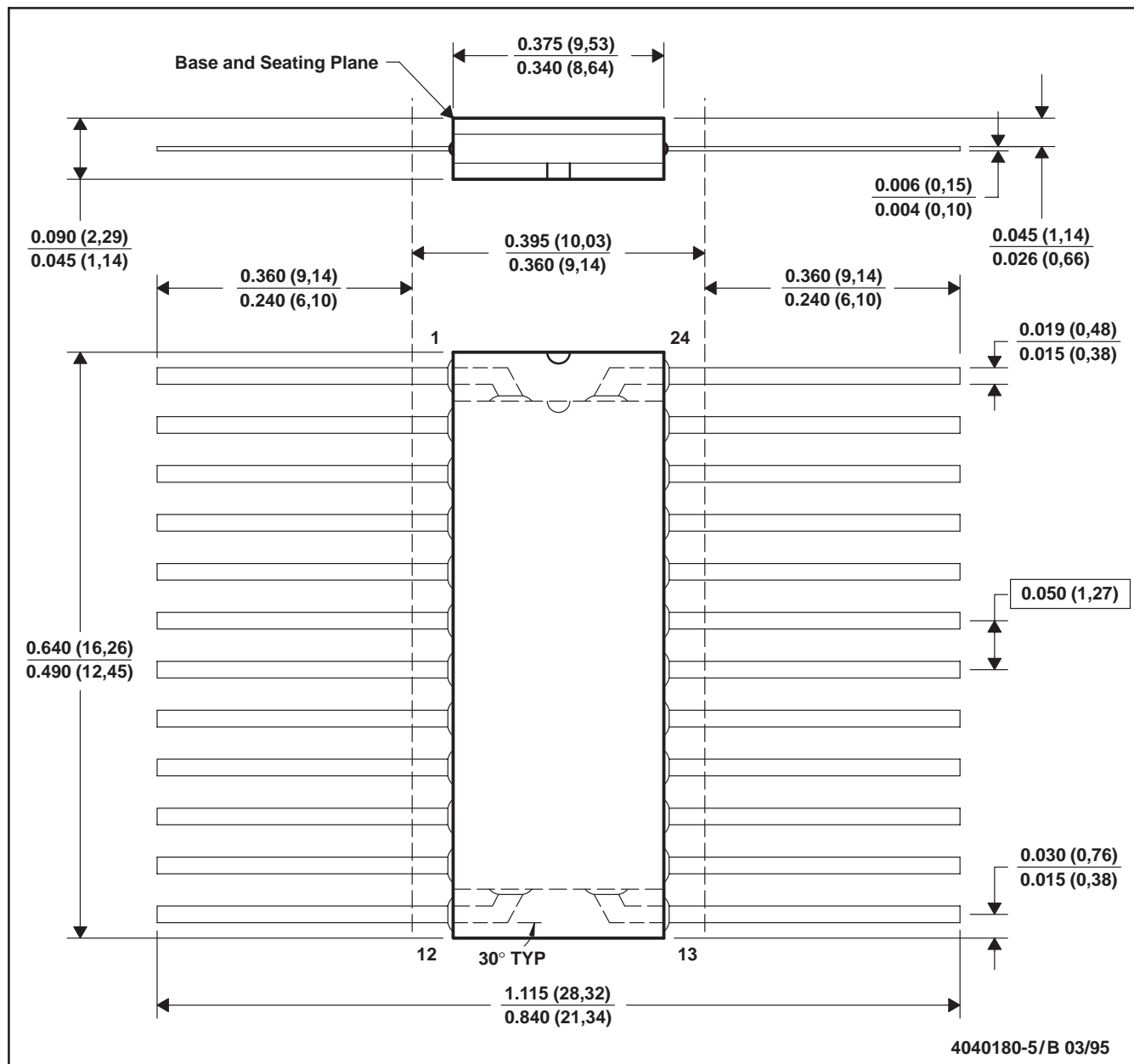
20 PIN SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

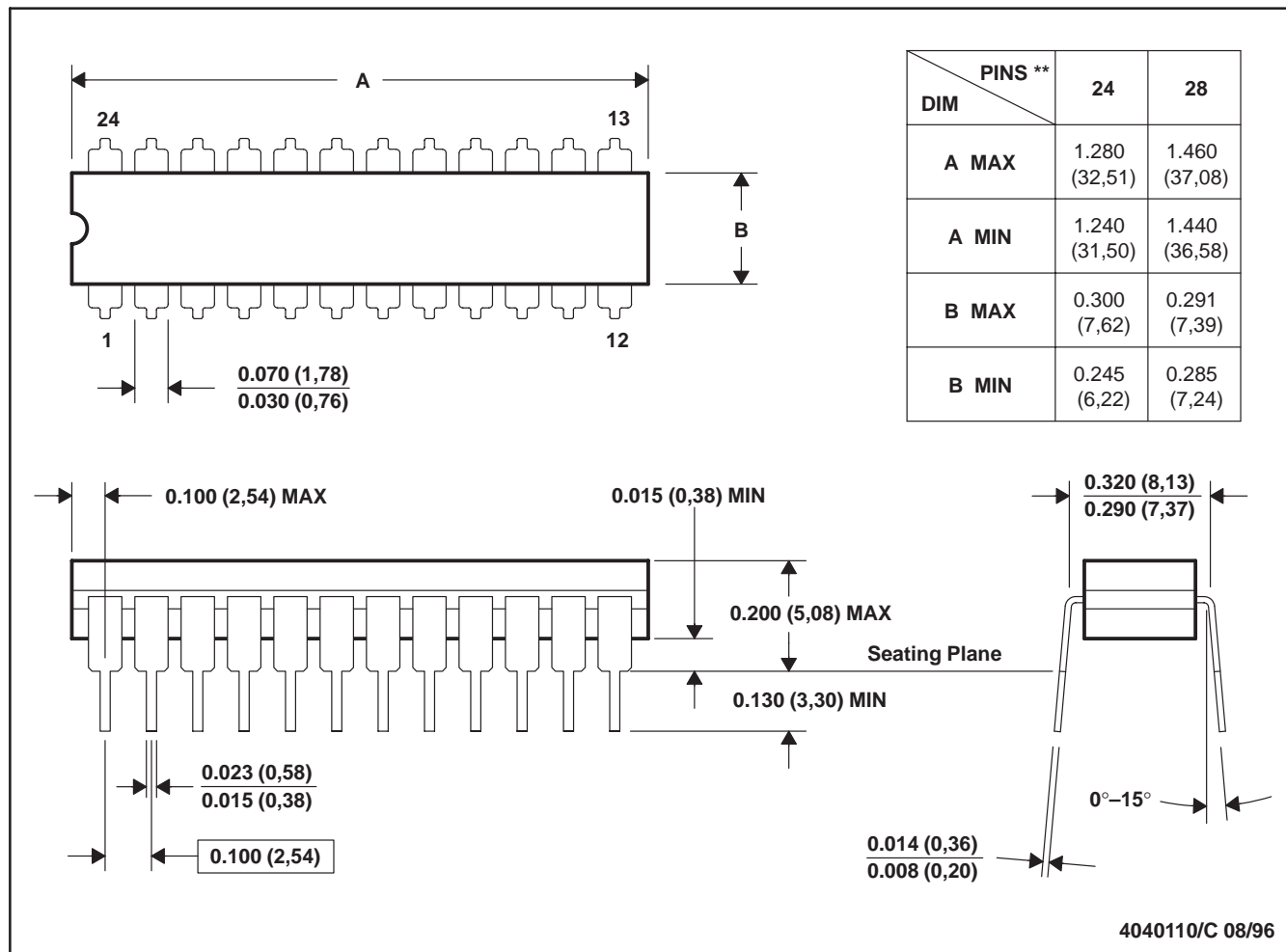


- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

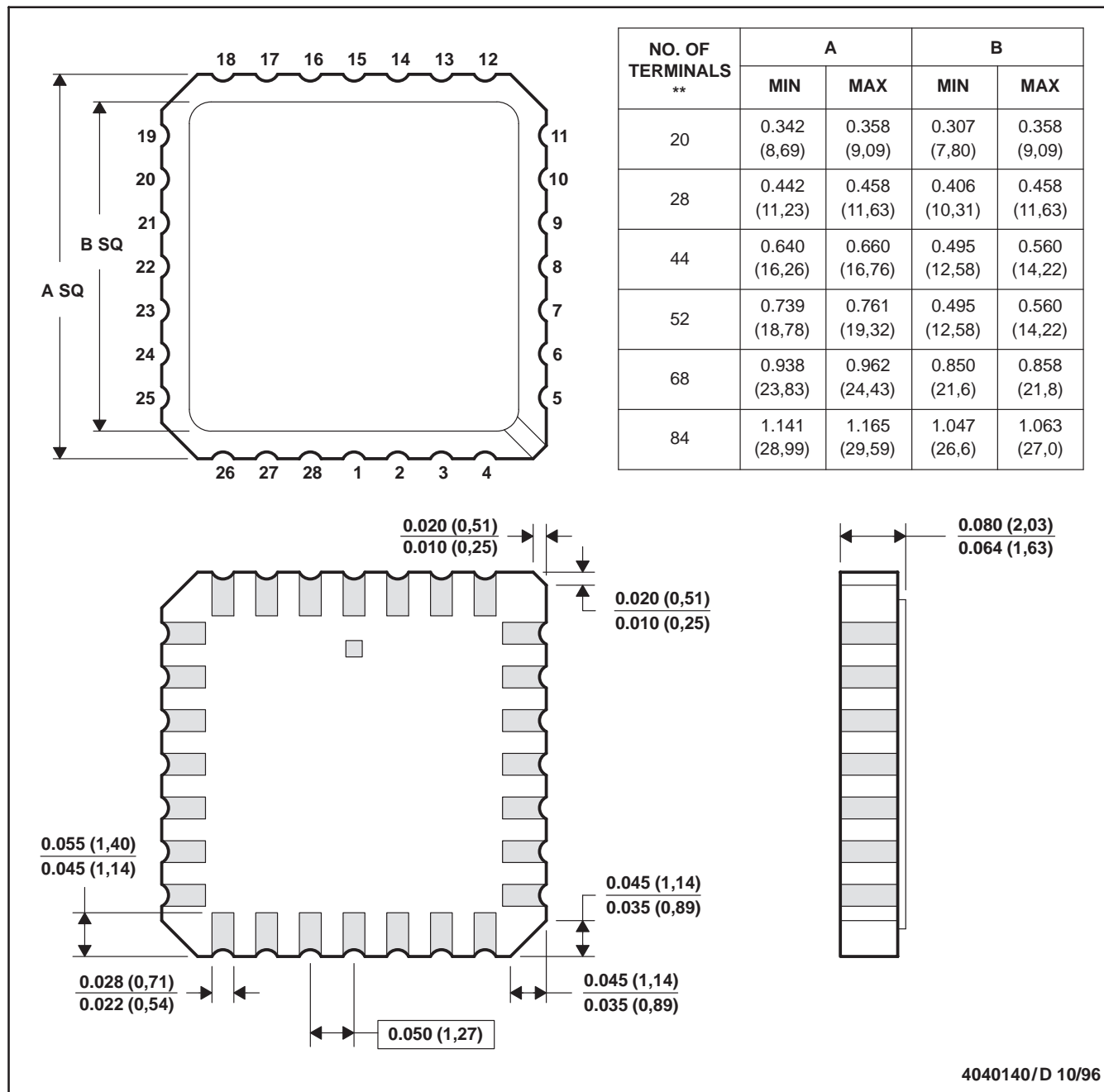
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



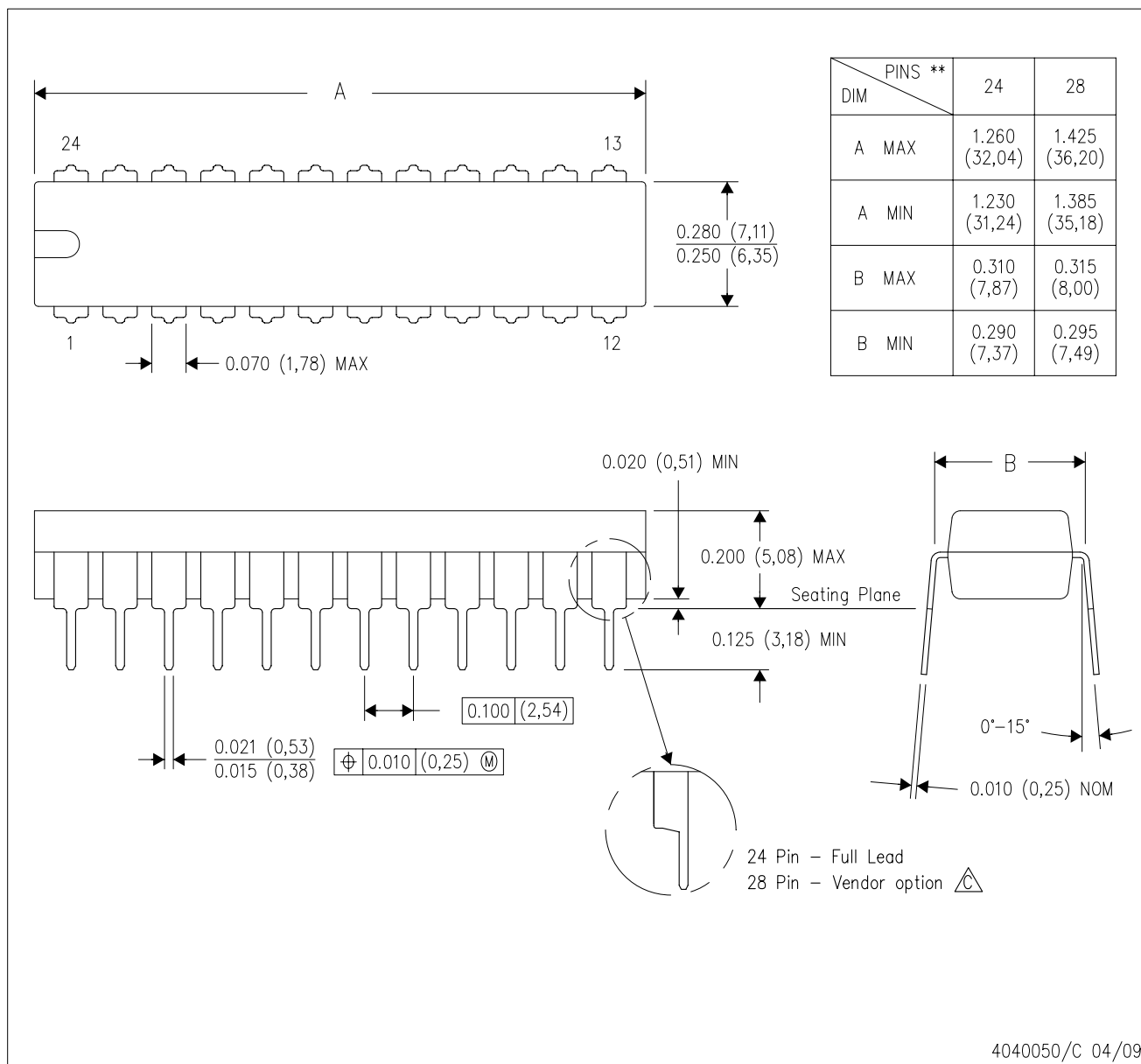
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

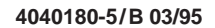
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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CERAMIC DUAL FLATPACK

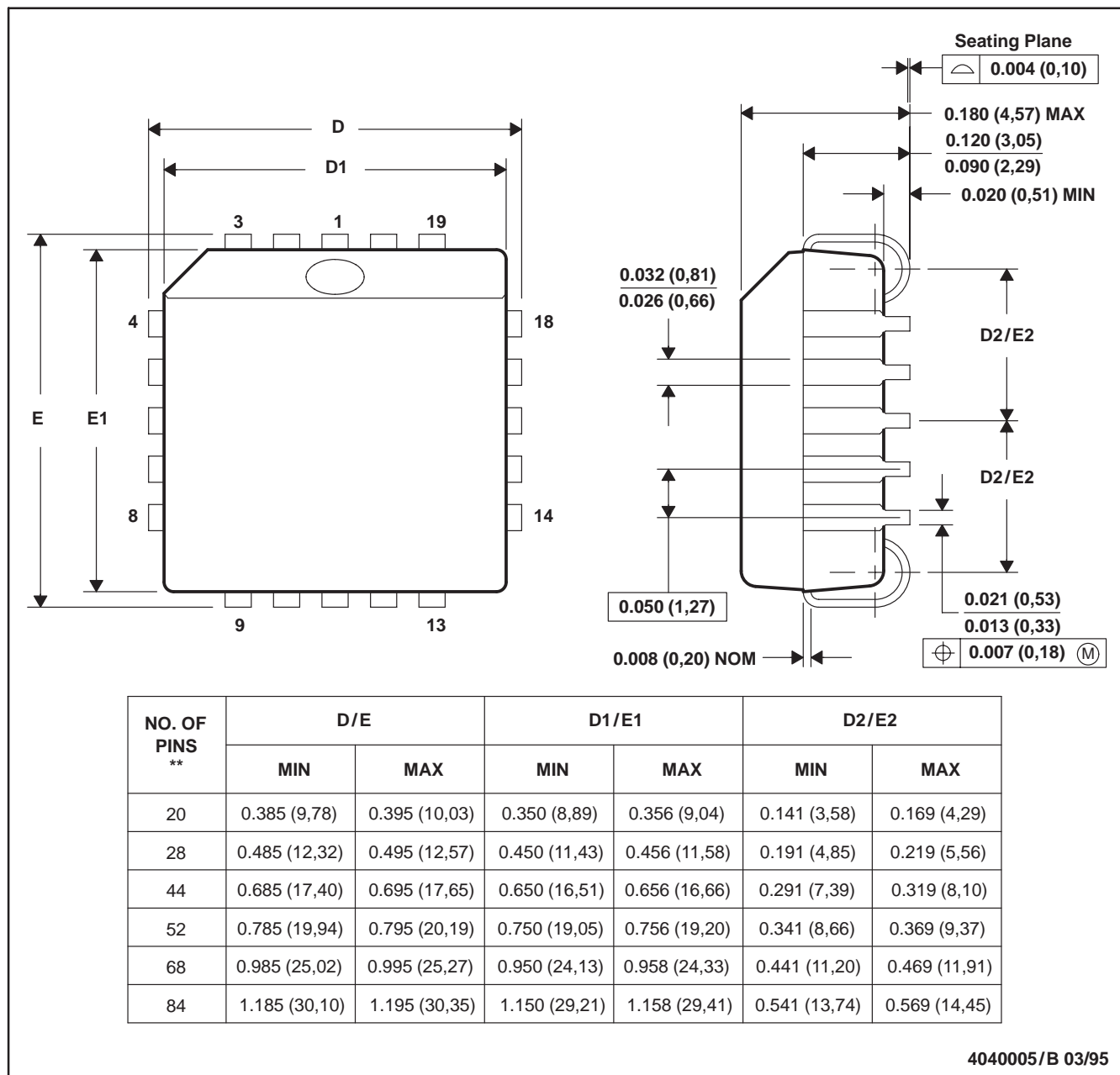


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

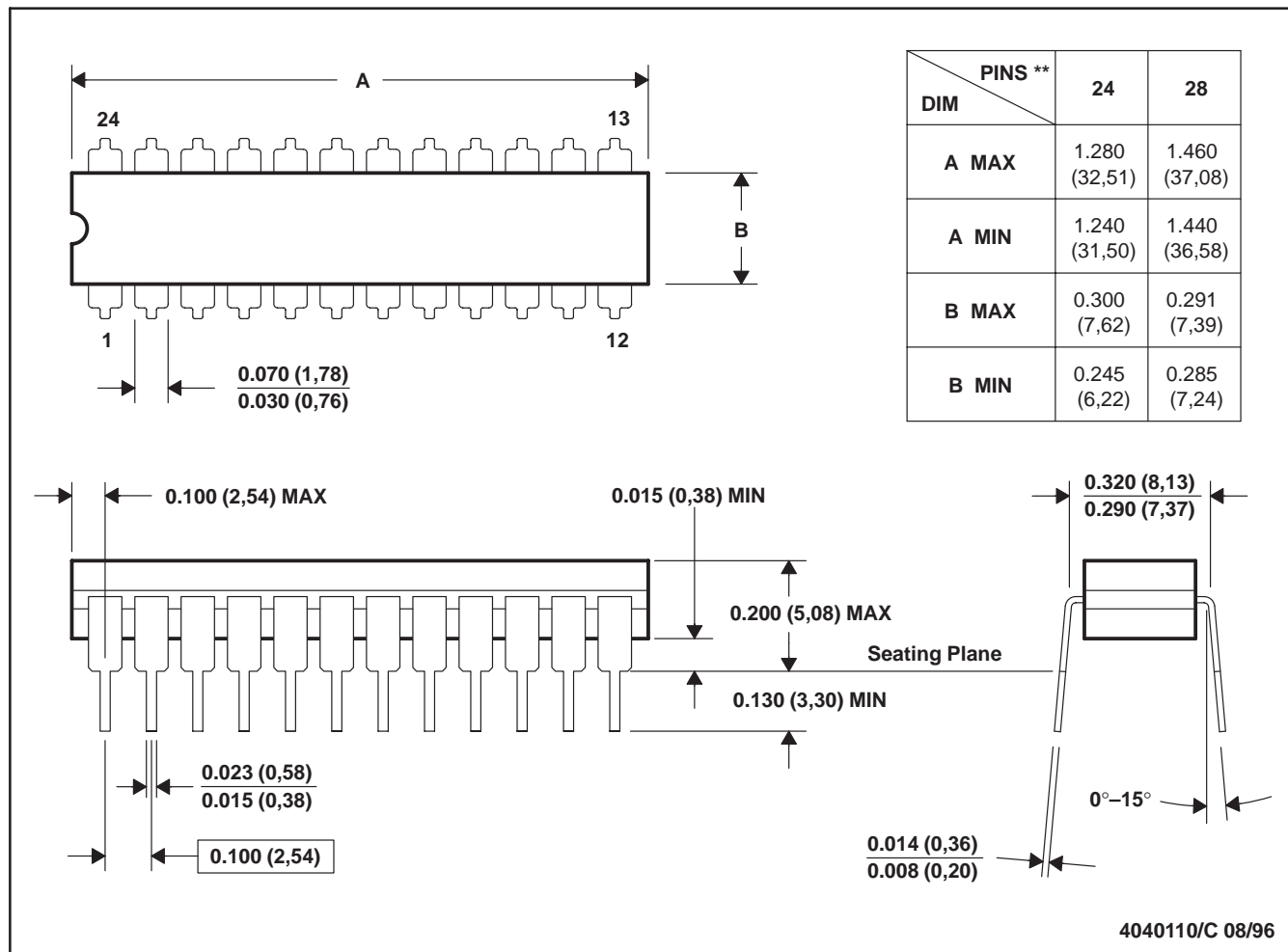


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 - This package can be hermetically sealed with a ceramic lid using glass frit.
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 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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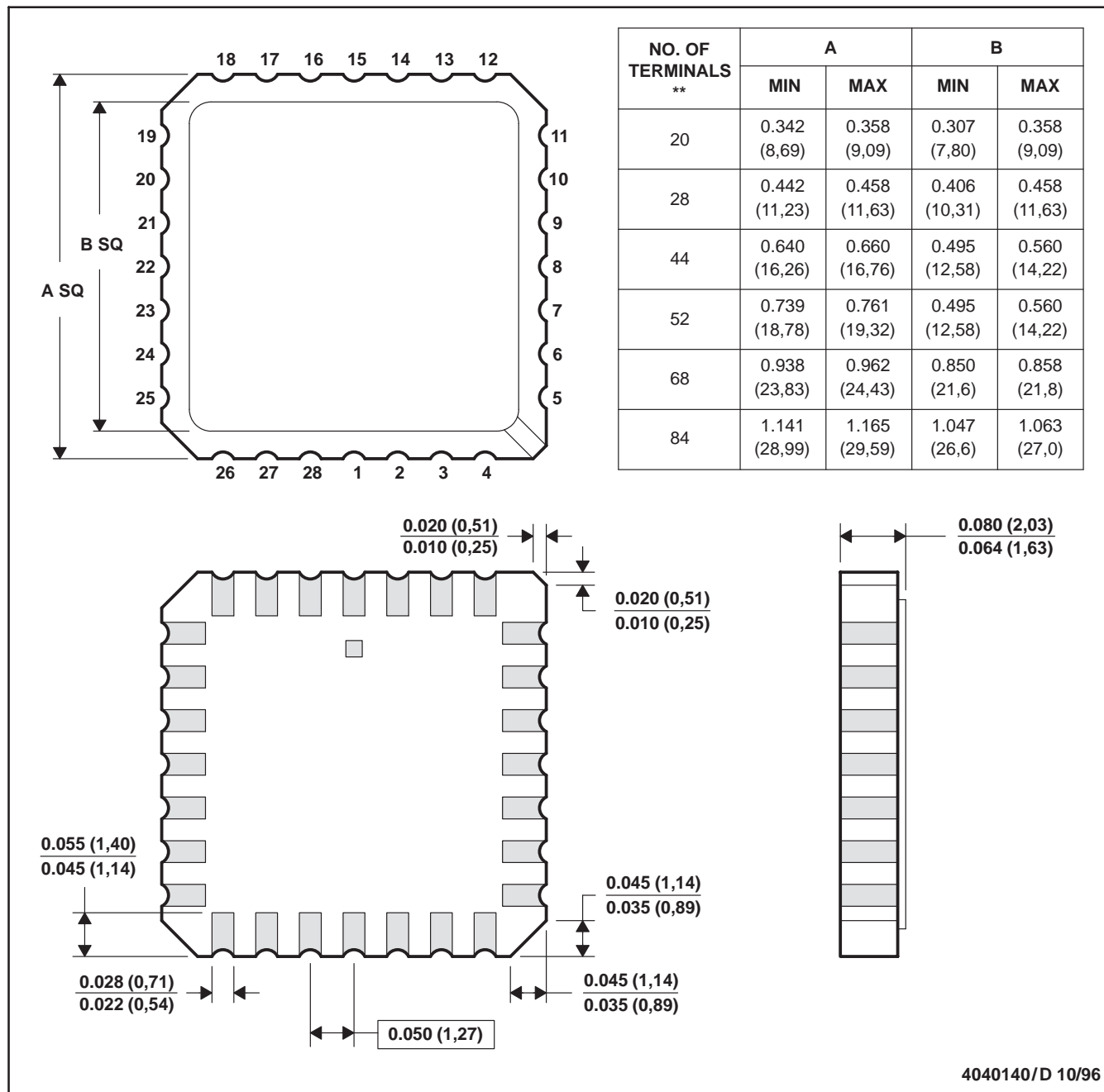
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



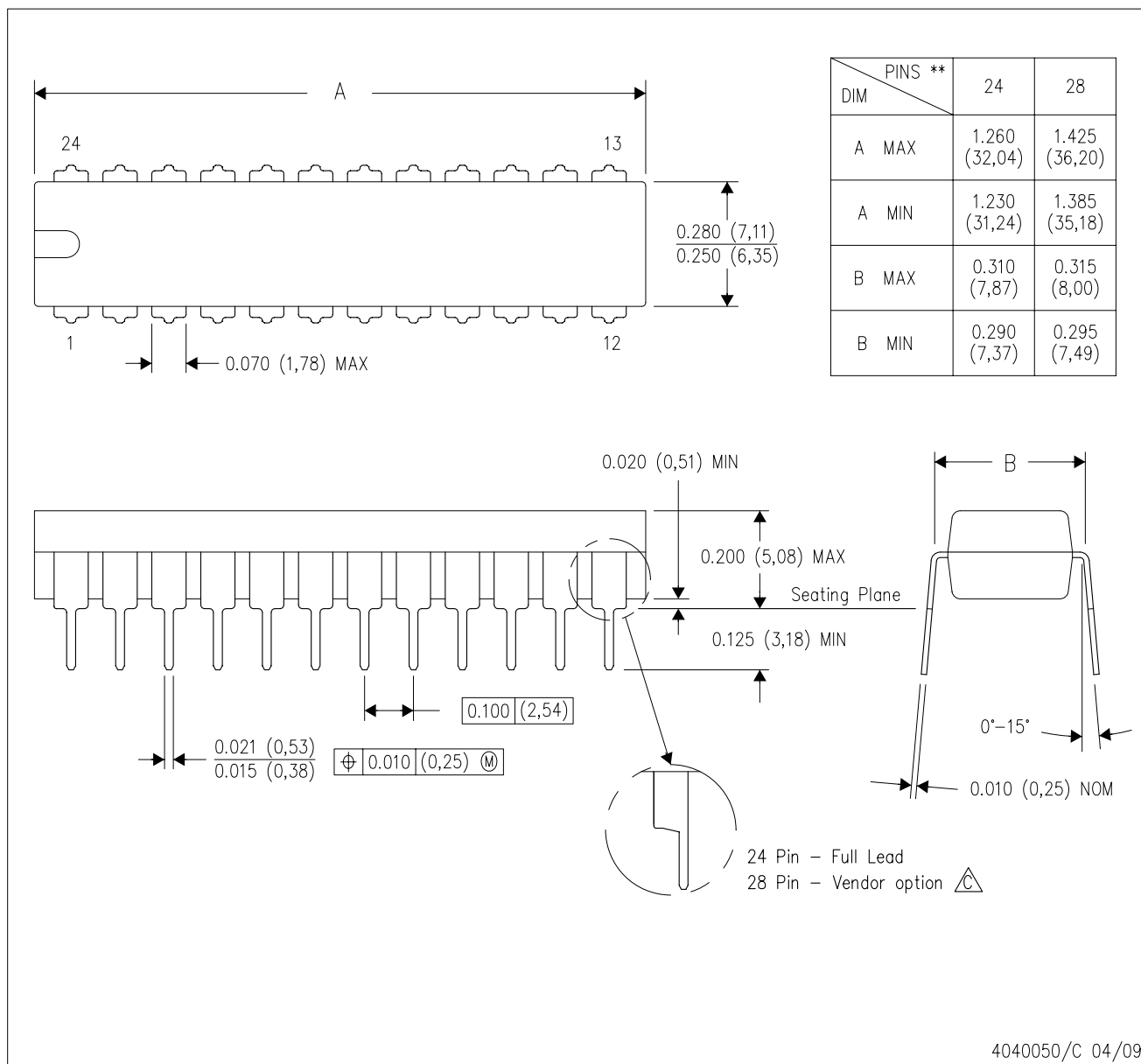
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

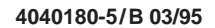
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

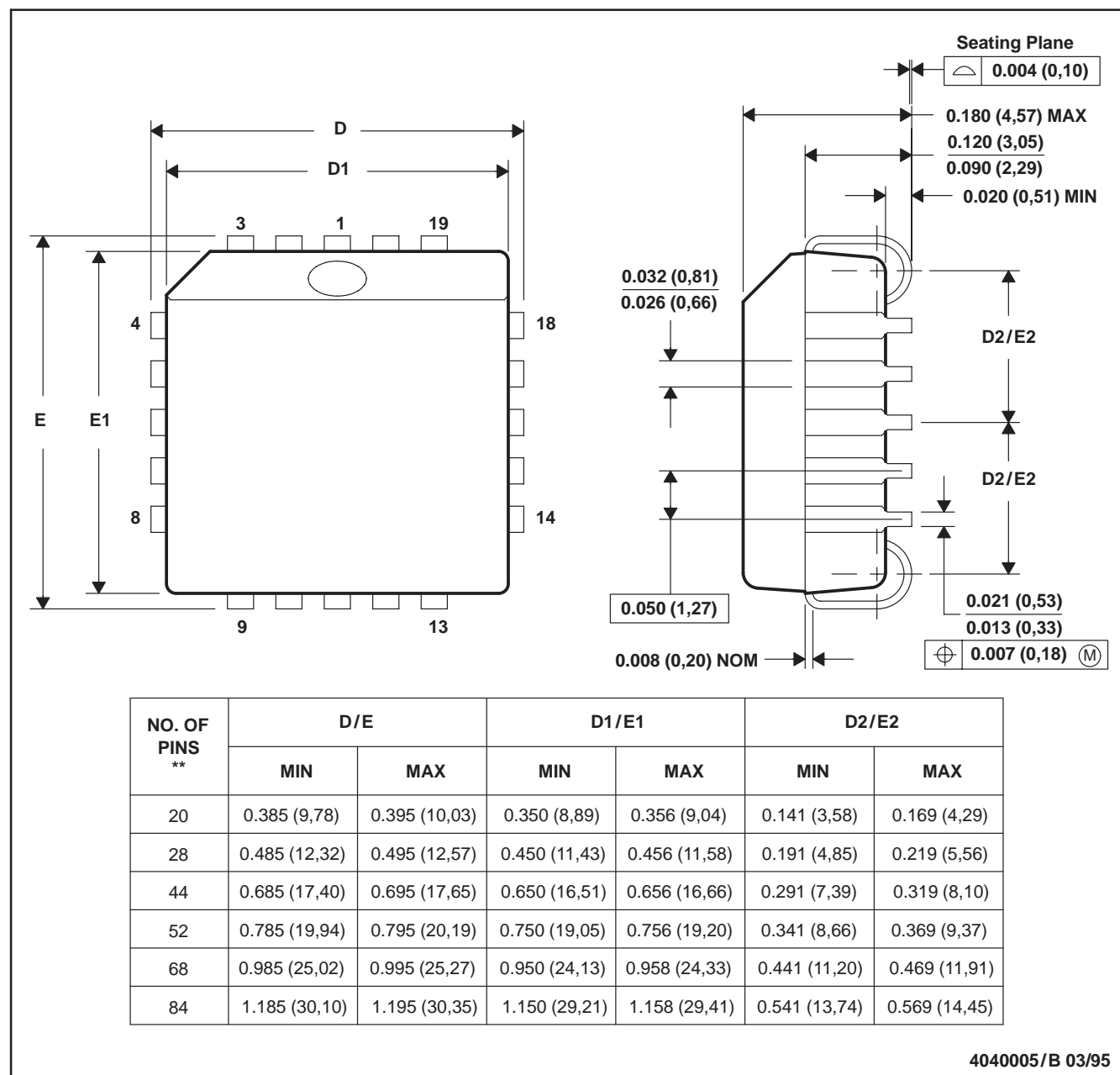


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

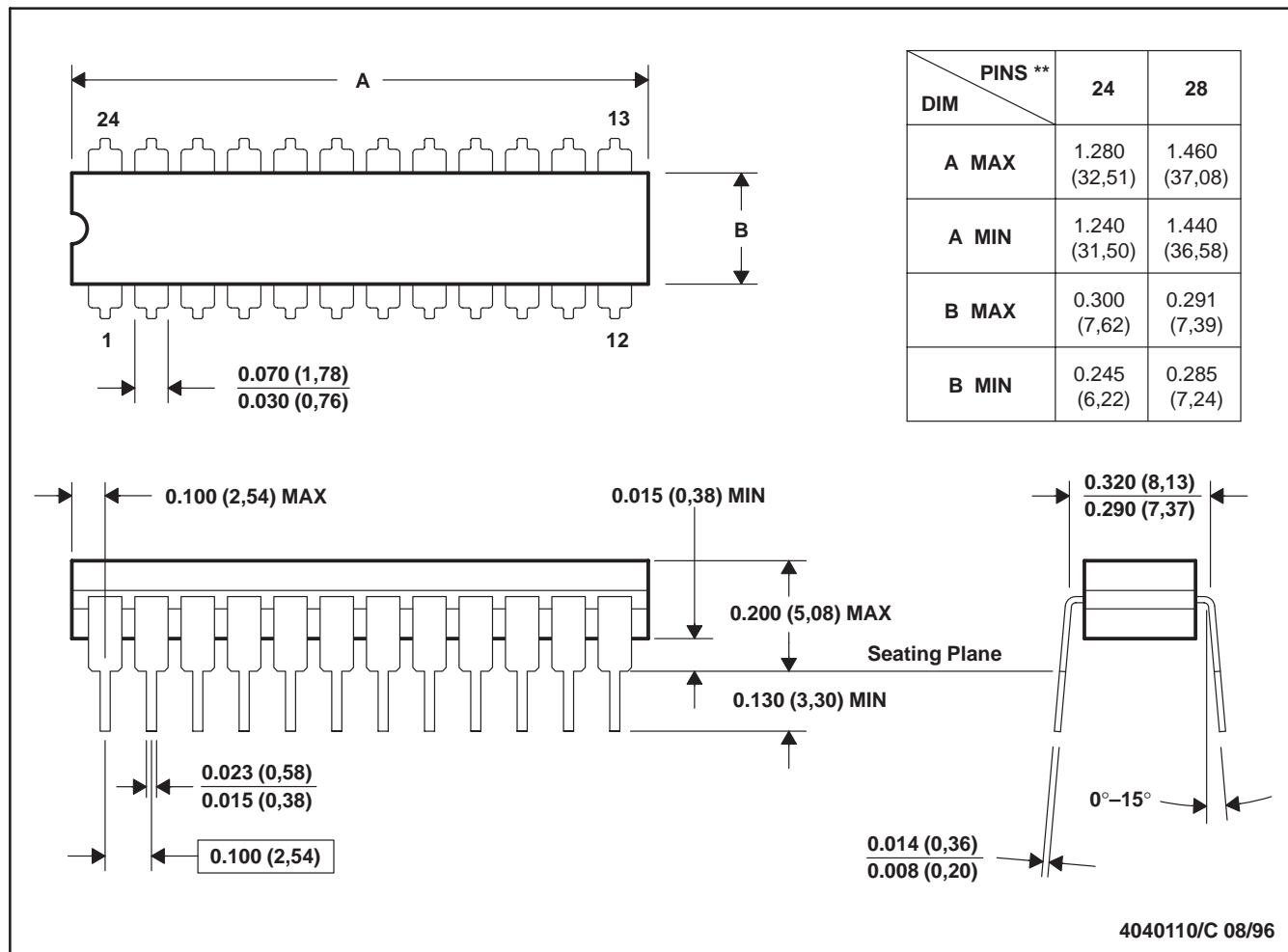


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



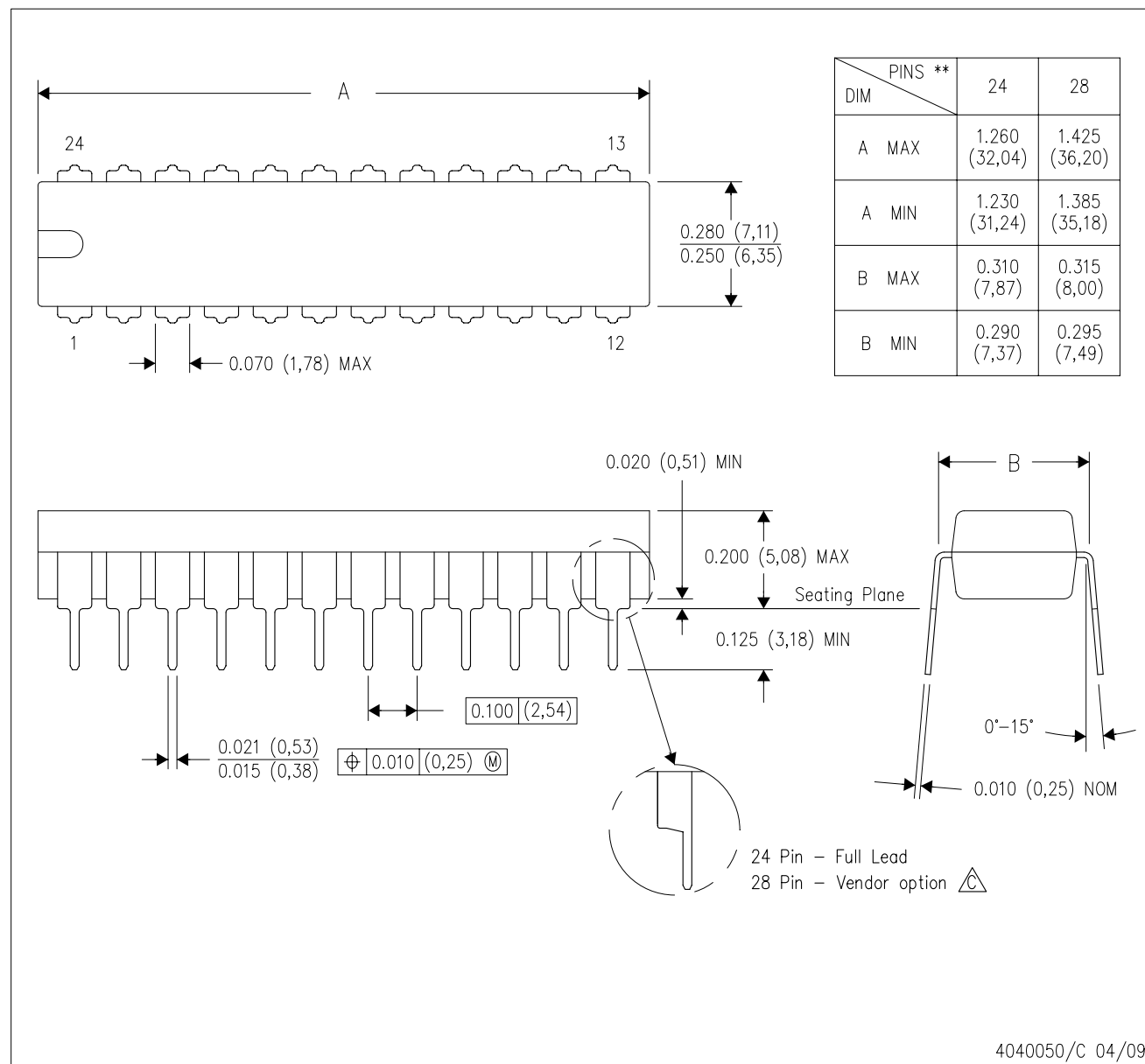
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

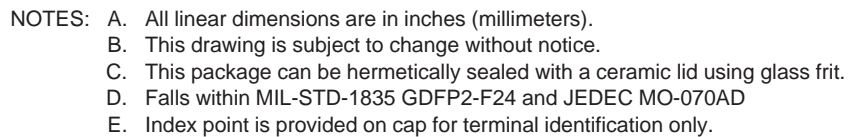
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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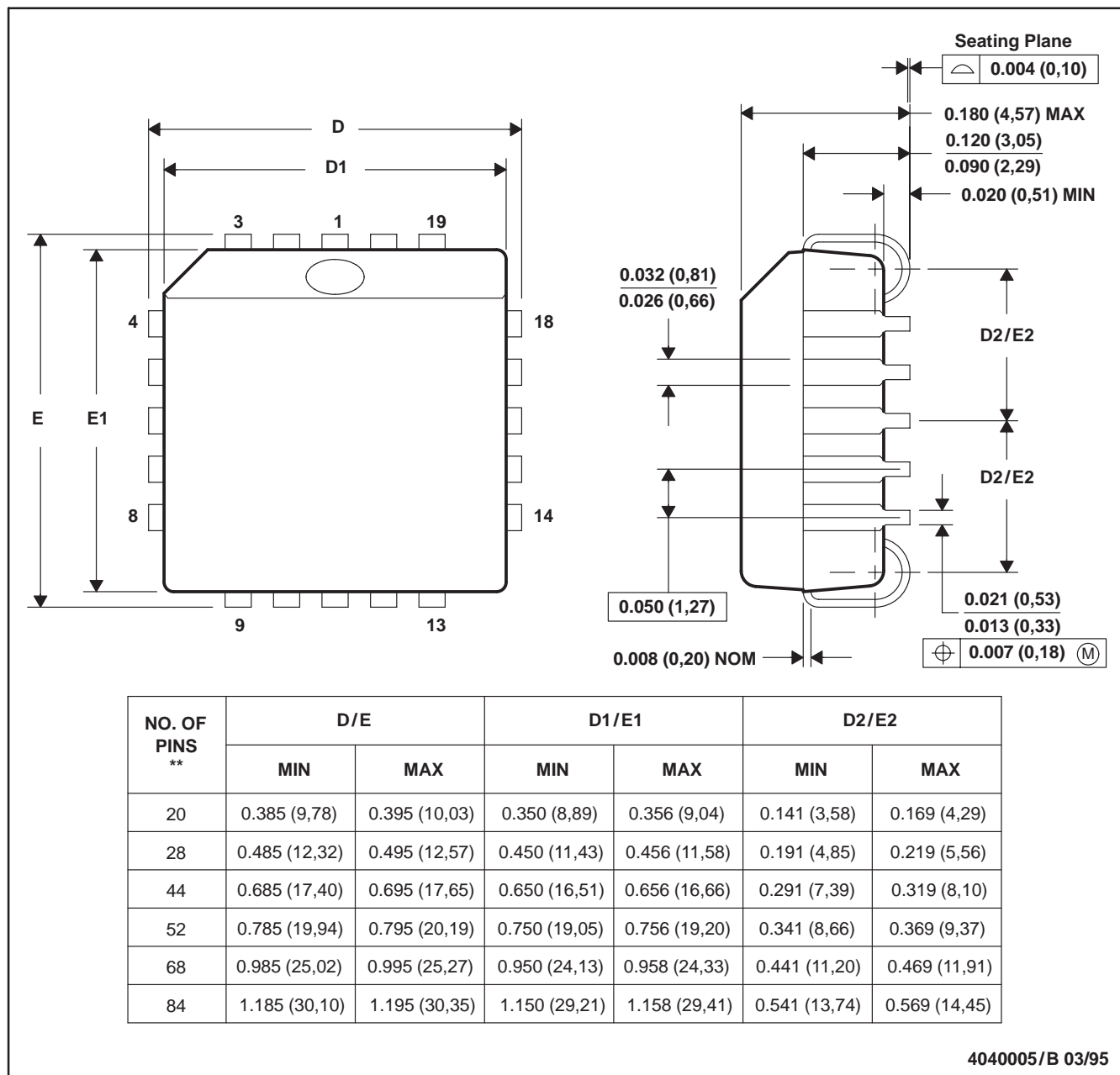
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

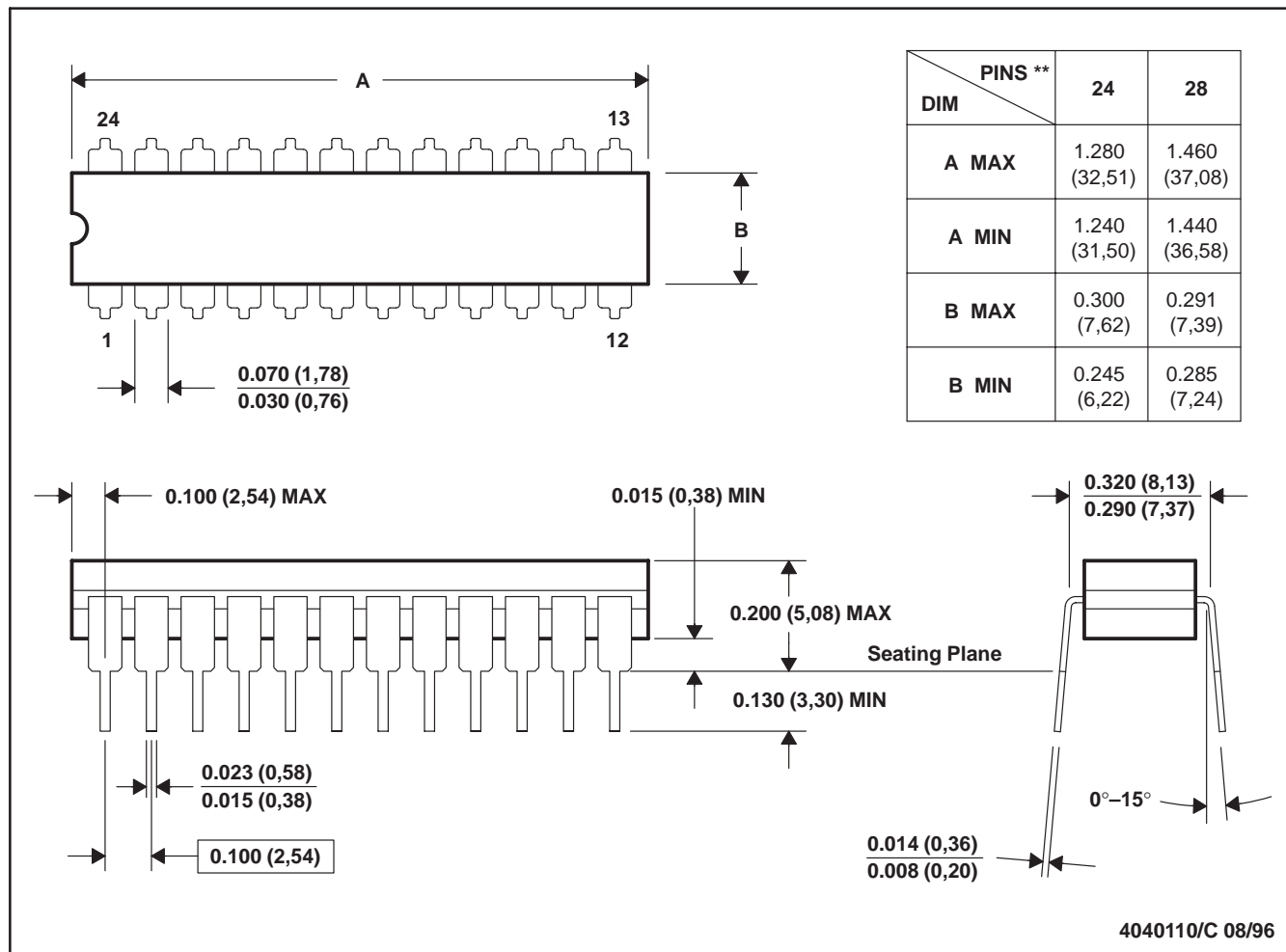


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

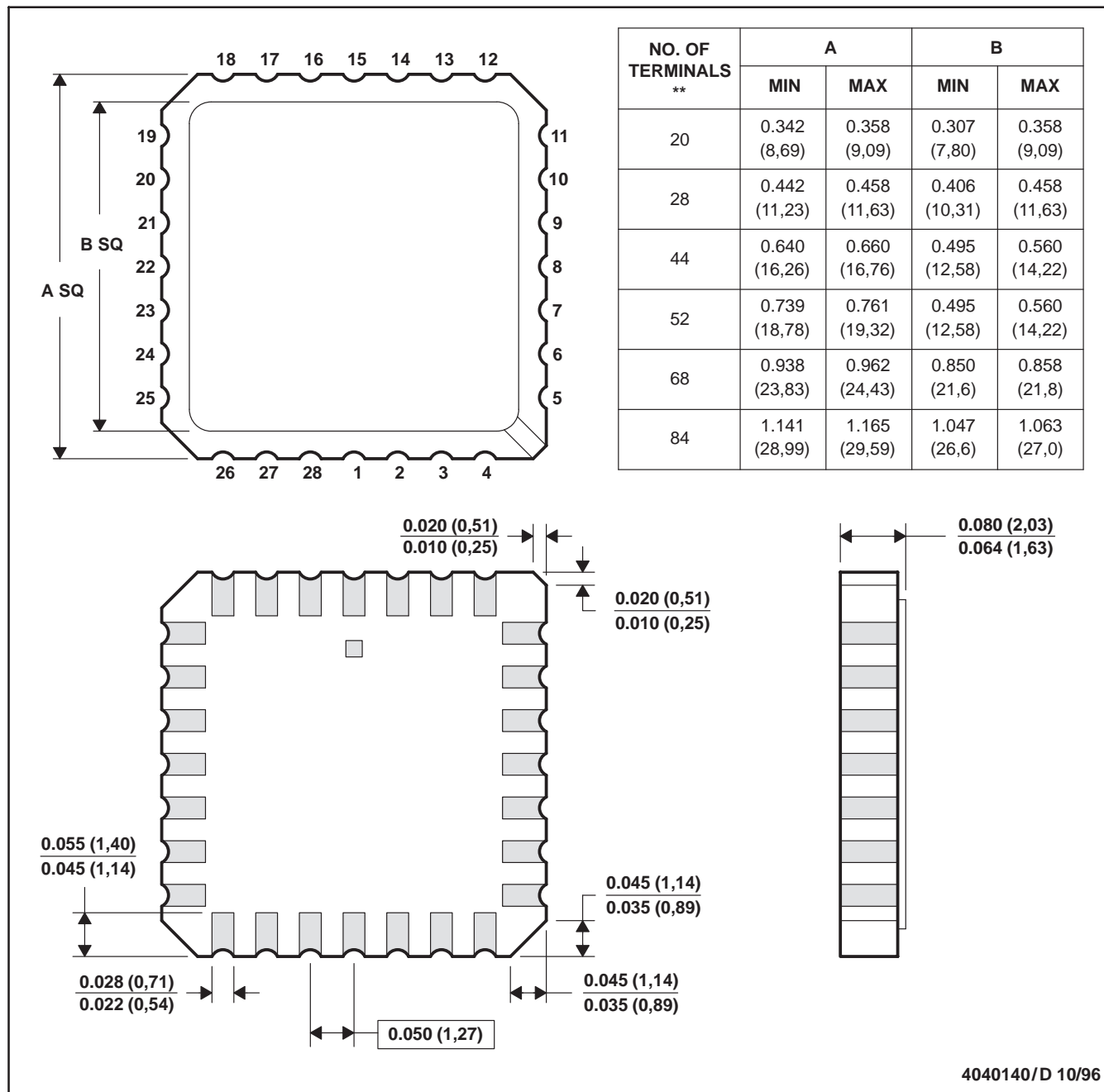
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



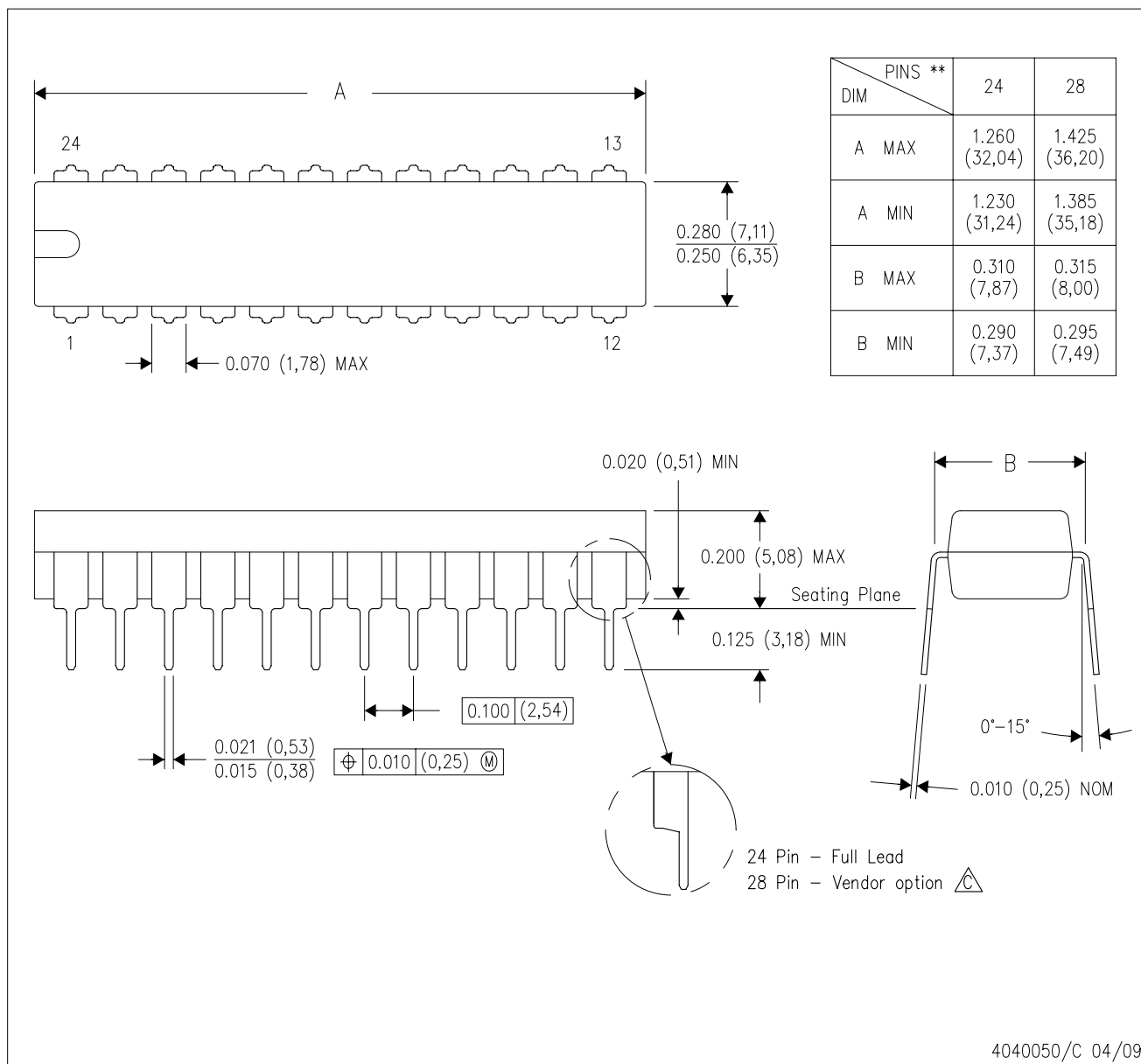
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004


MECHANICAL DATA

NT (R-PDIP-T**)

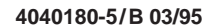
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - B. This drawing is subject to change without notice.
 -  The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

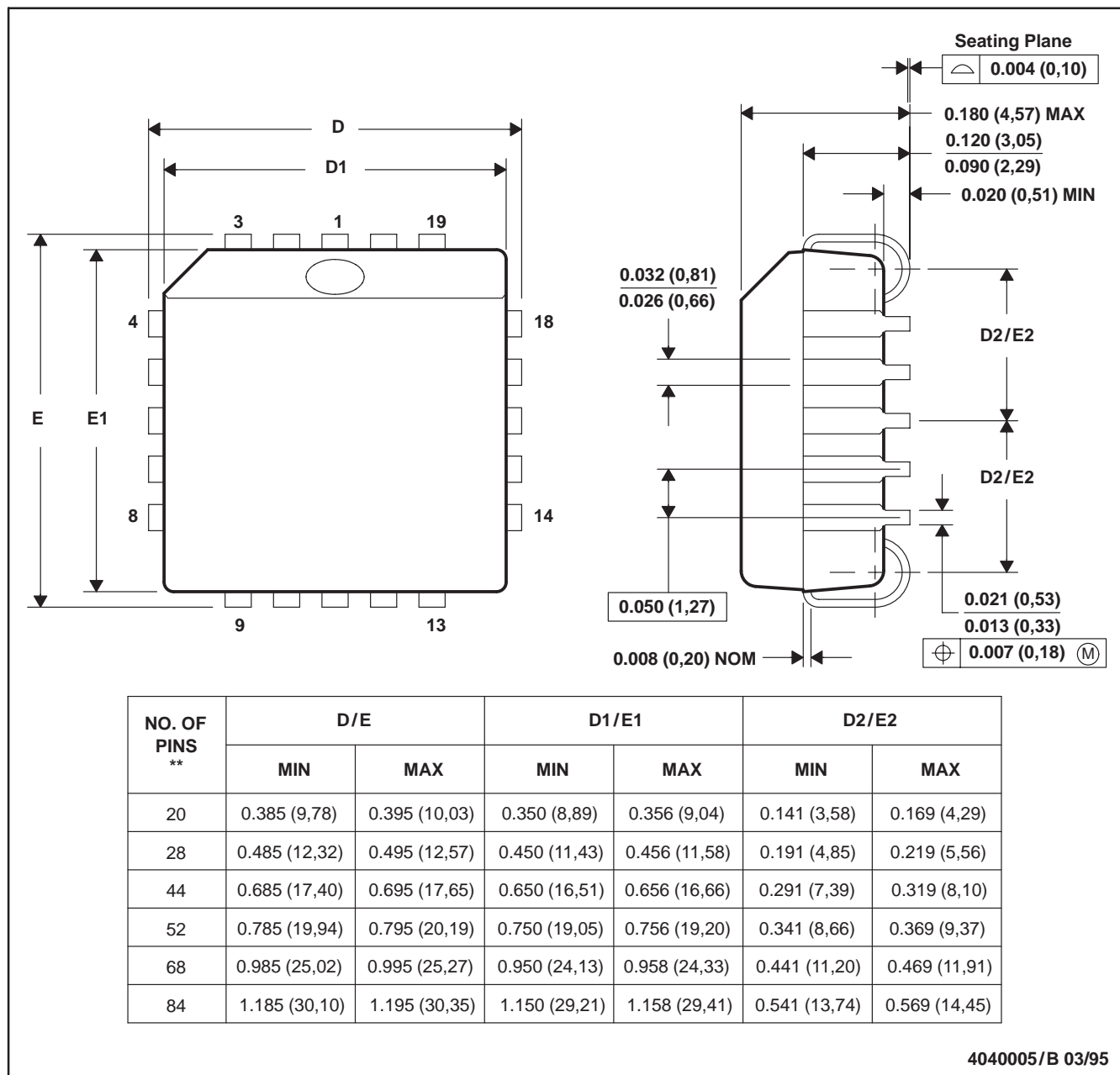


- 
- TEXAS
INSTRUMENTS**
POST OFFICE BOX 655303 • DALLAS, TEXAS 75265

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

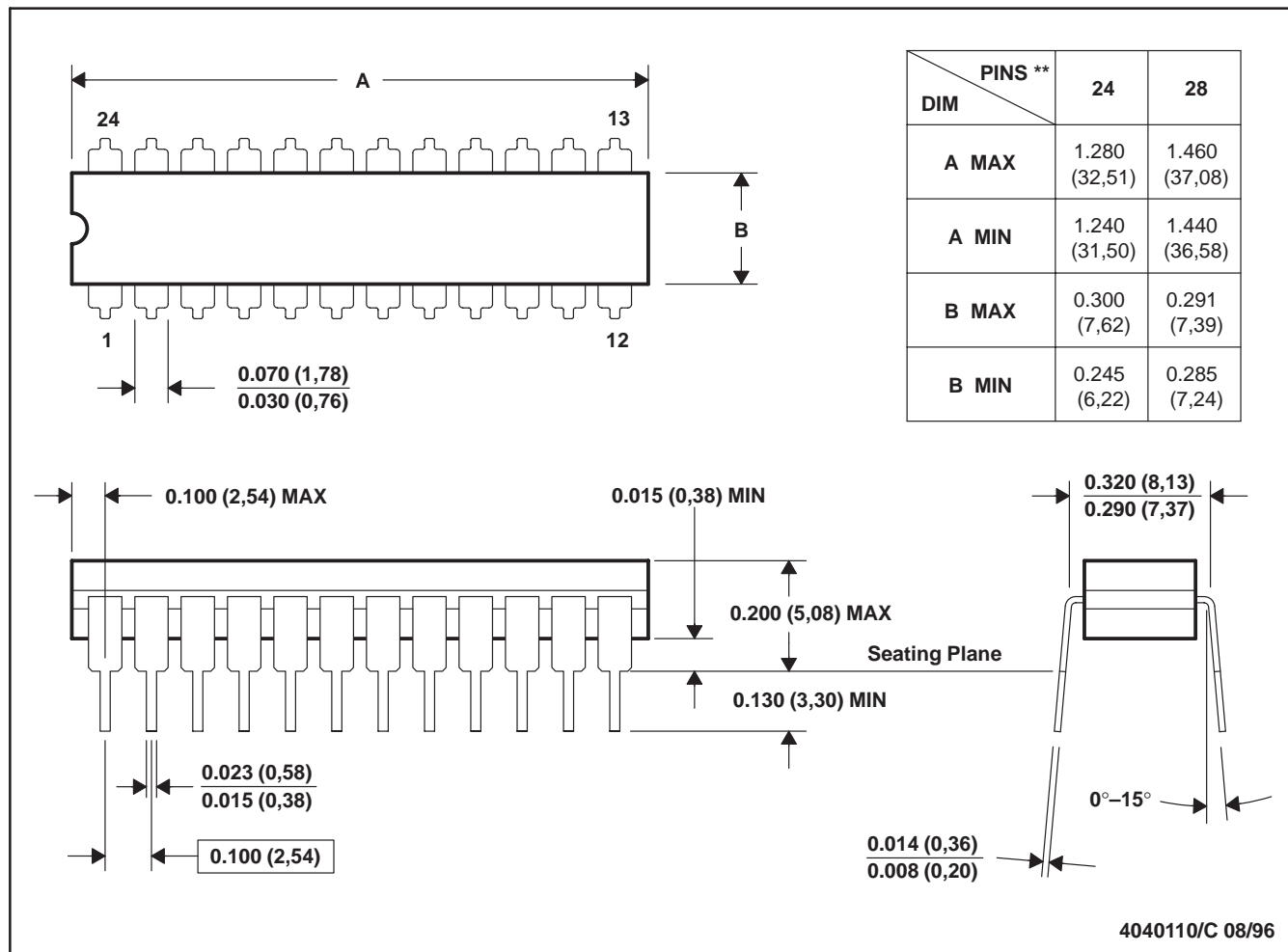


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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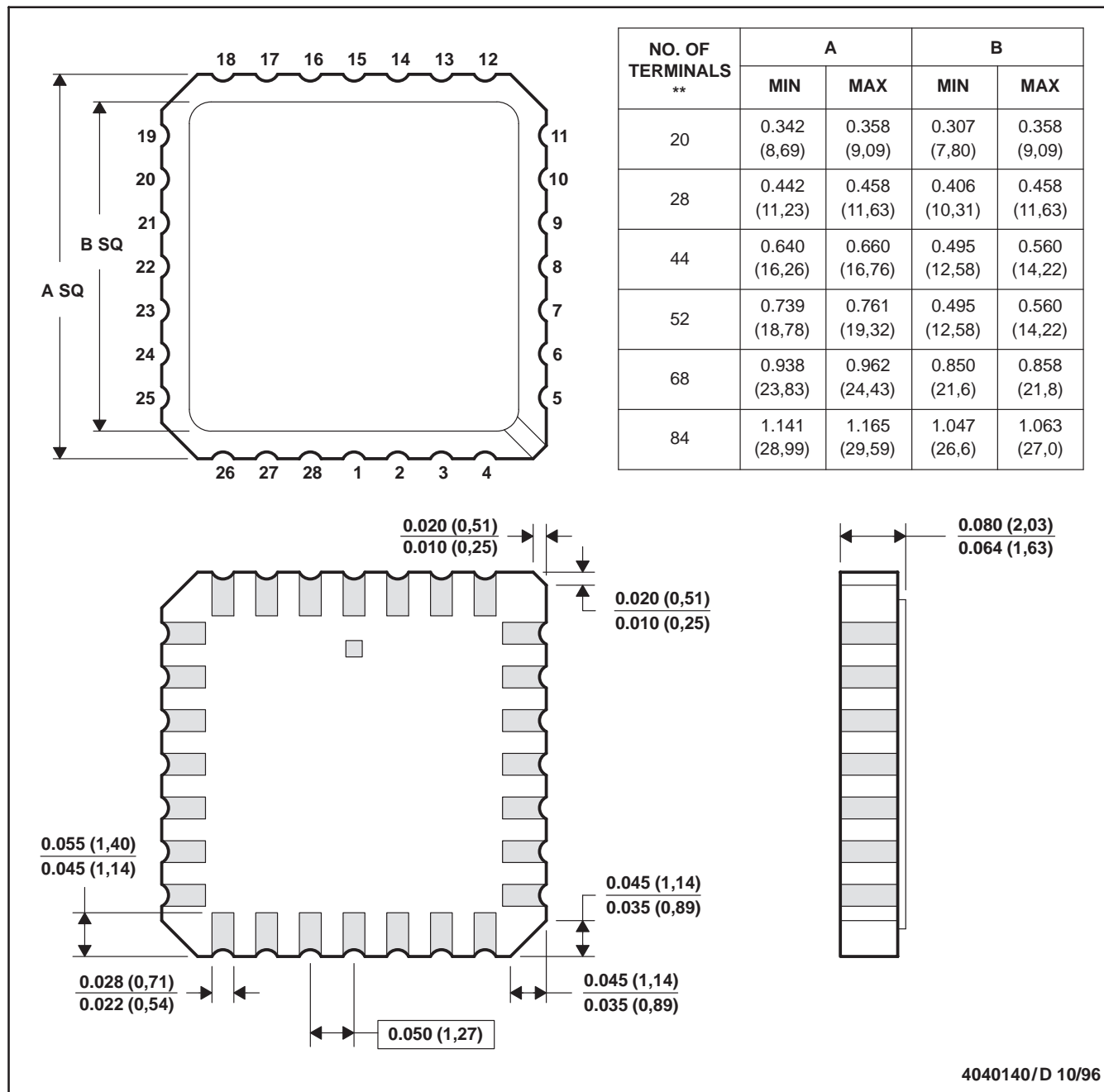
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



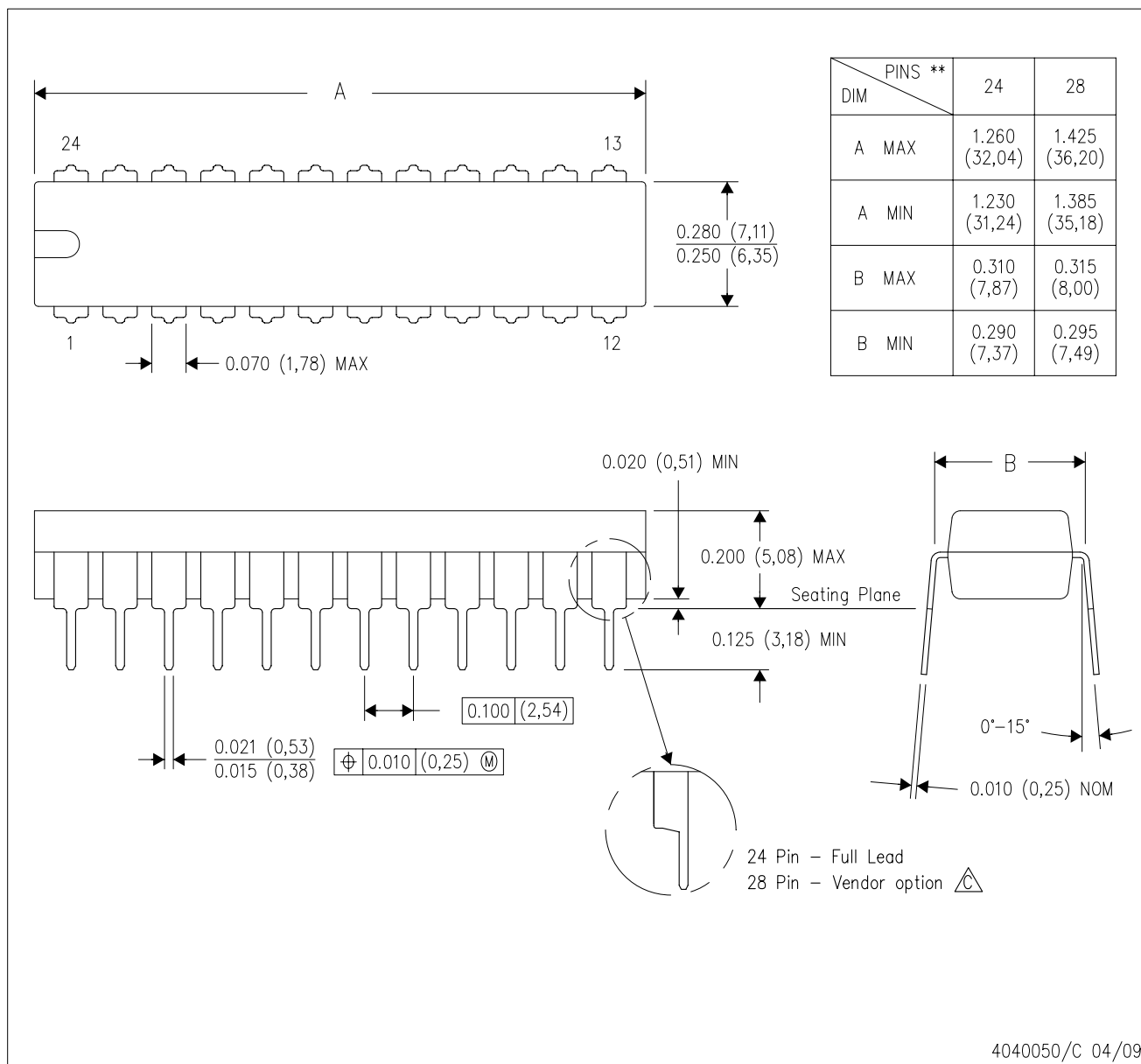
- NOTES:
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 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

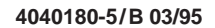
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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CERAMIC DUAL FLATPACK

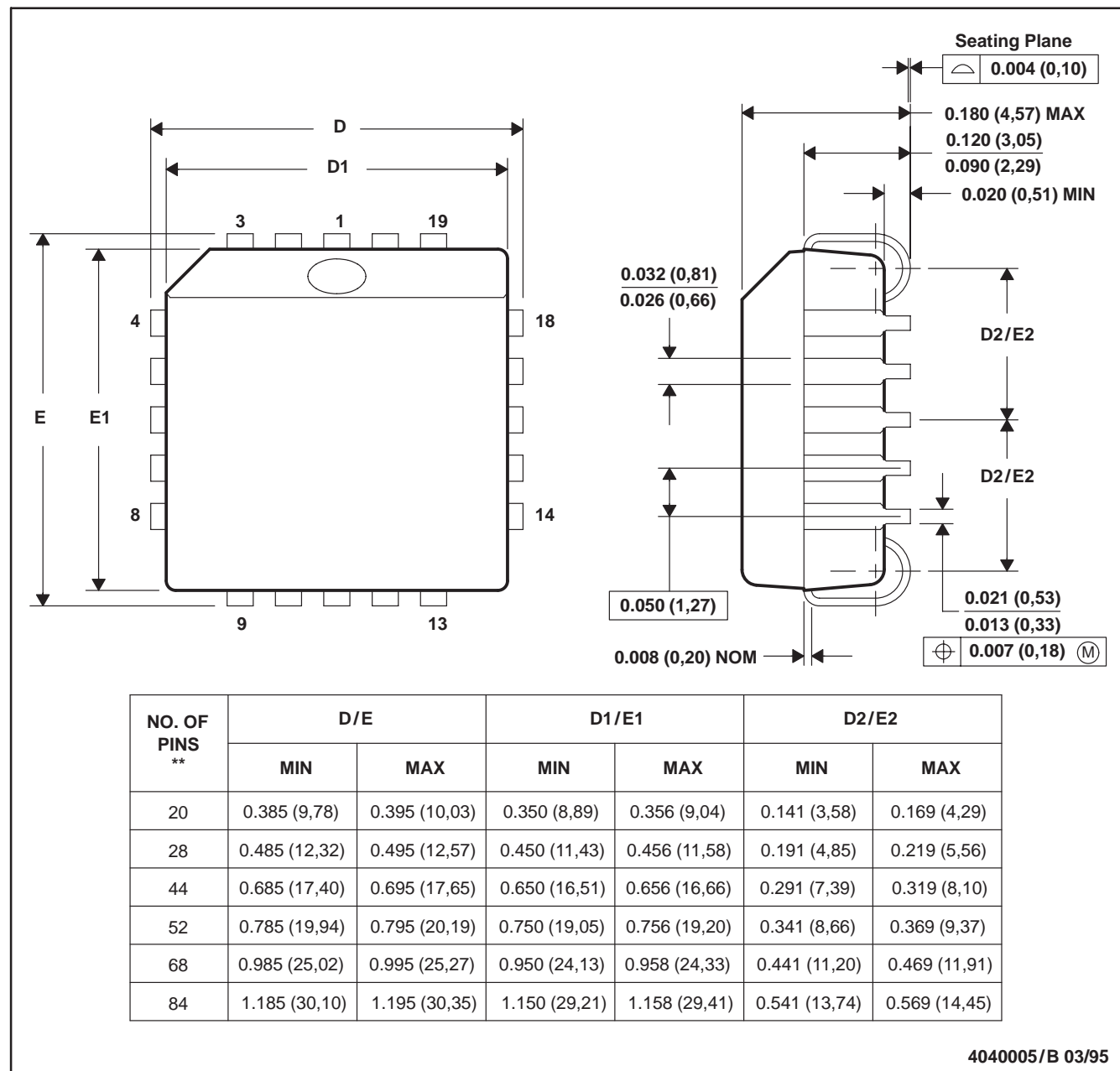


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

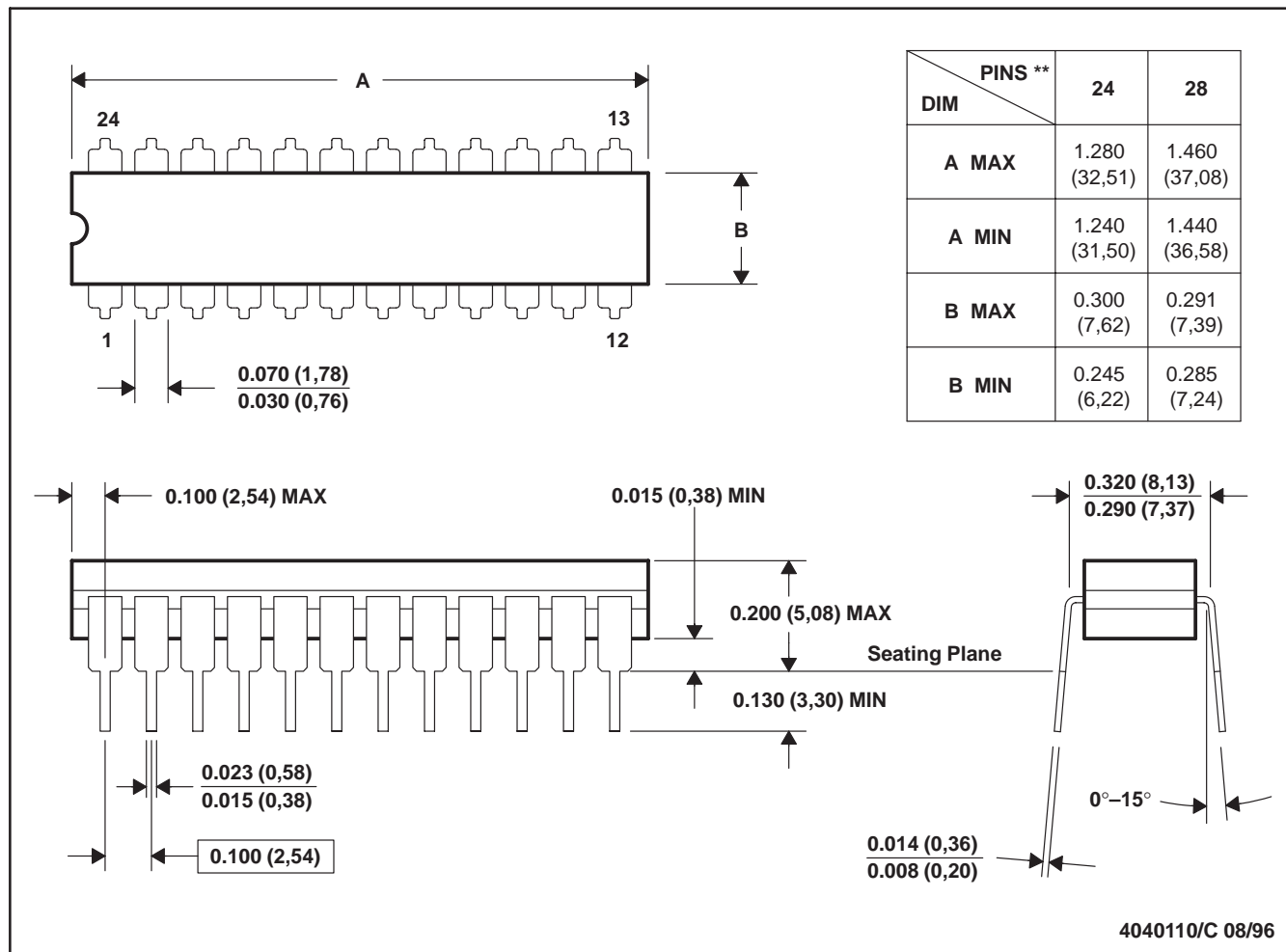


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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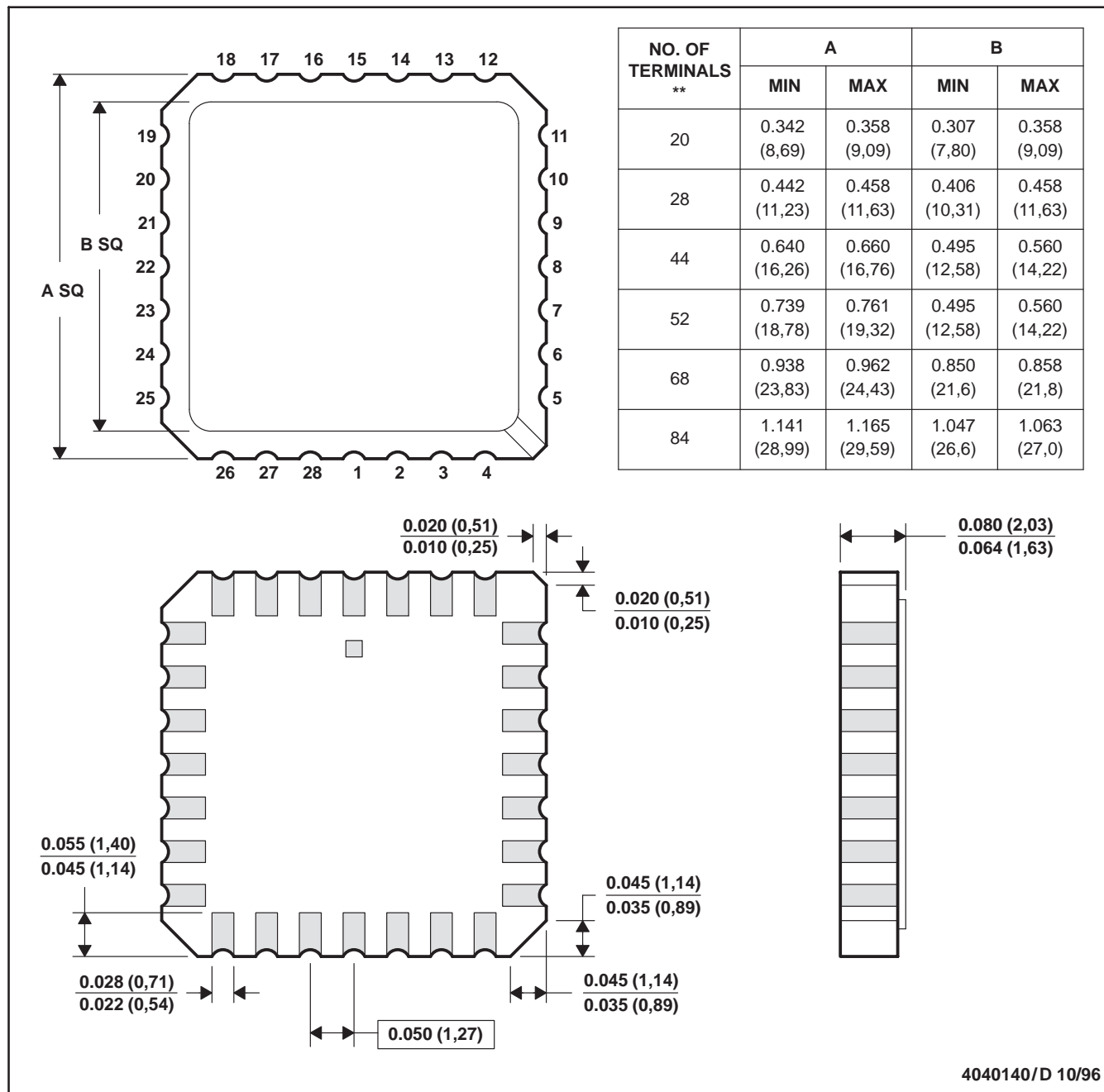
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



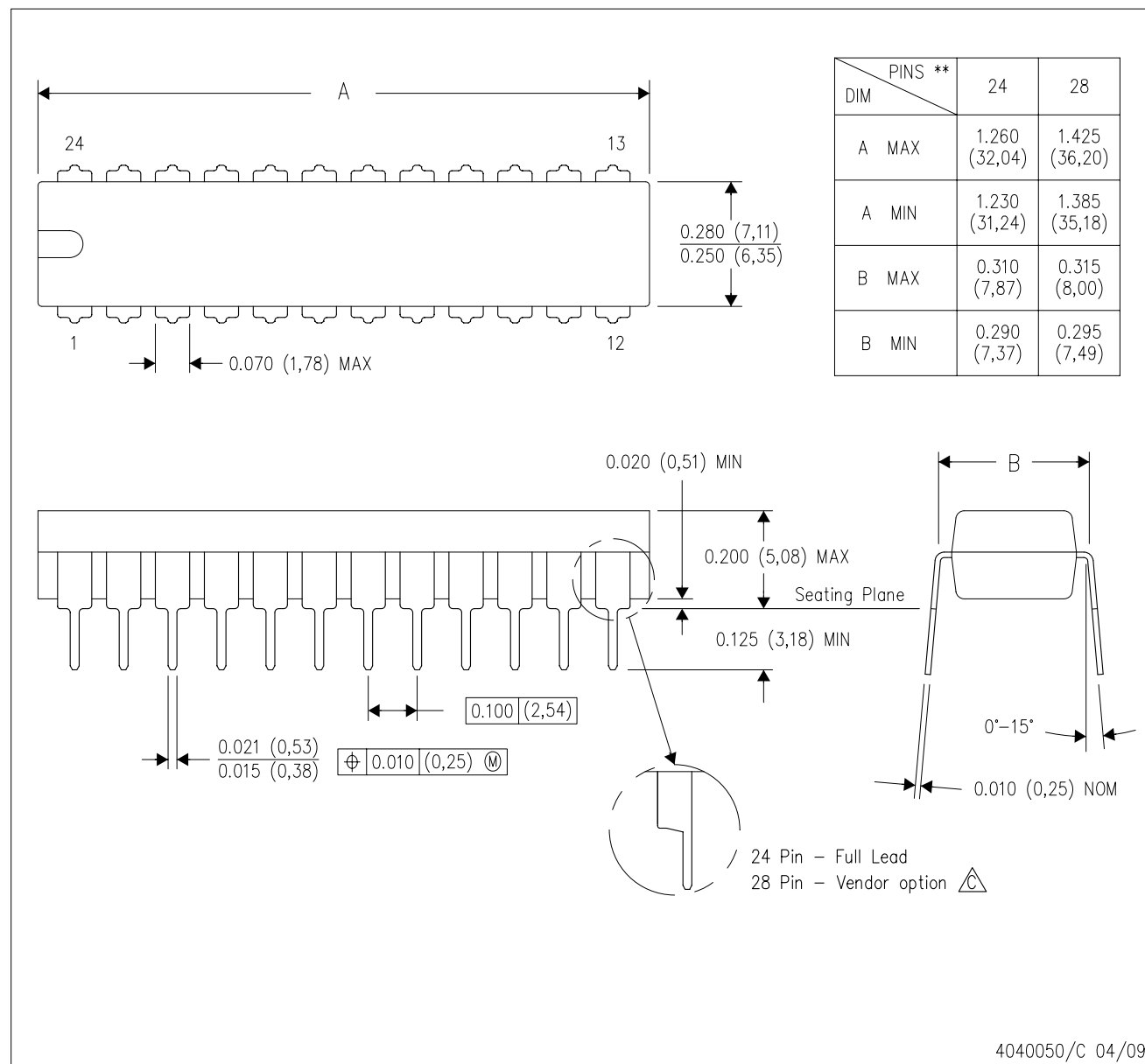
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

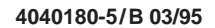
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

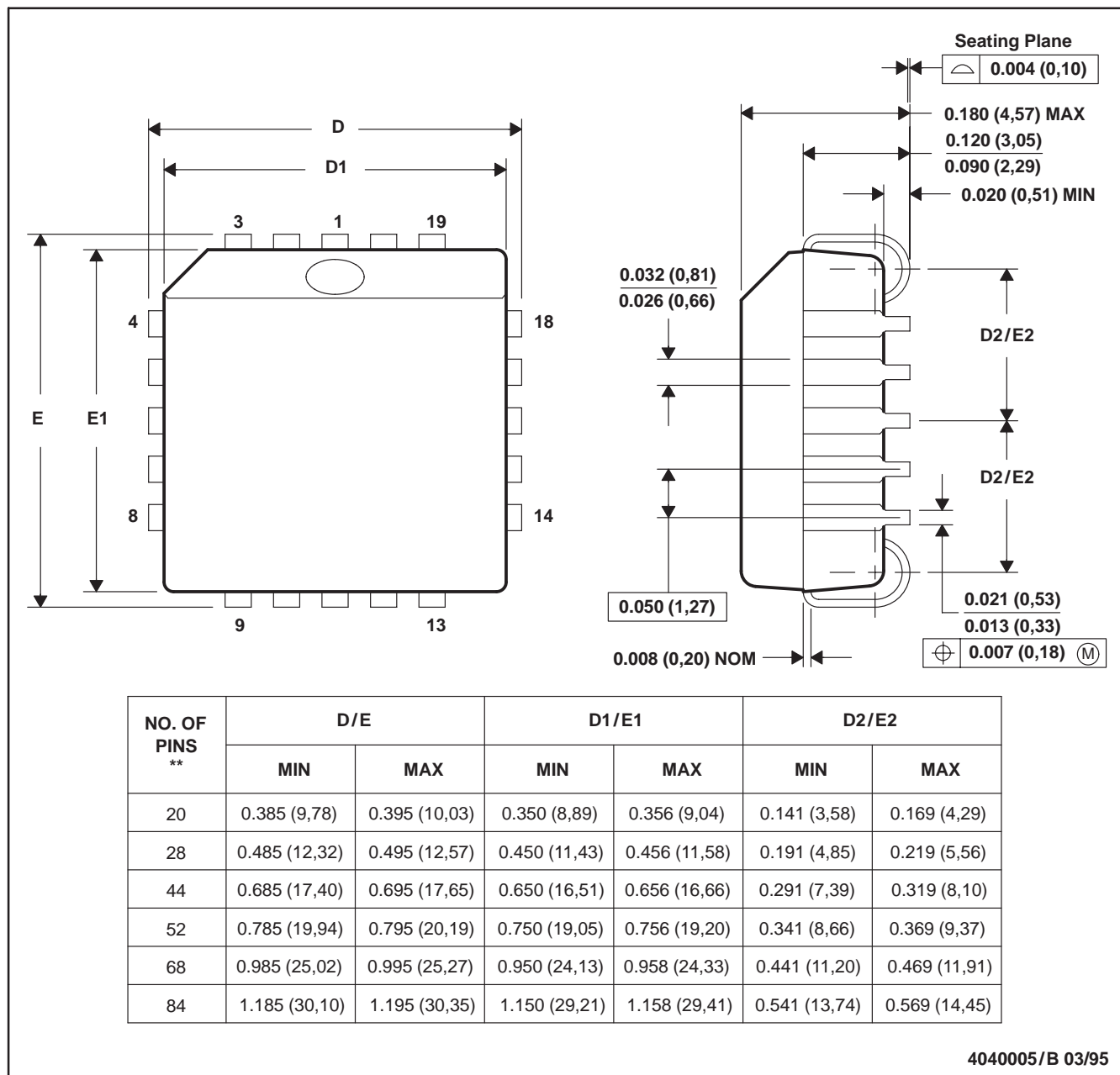


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

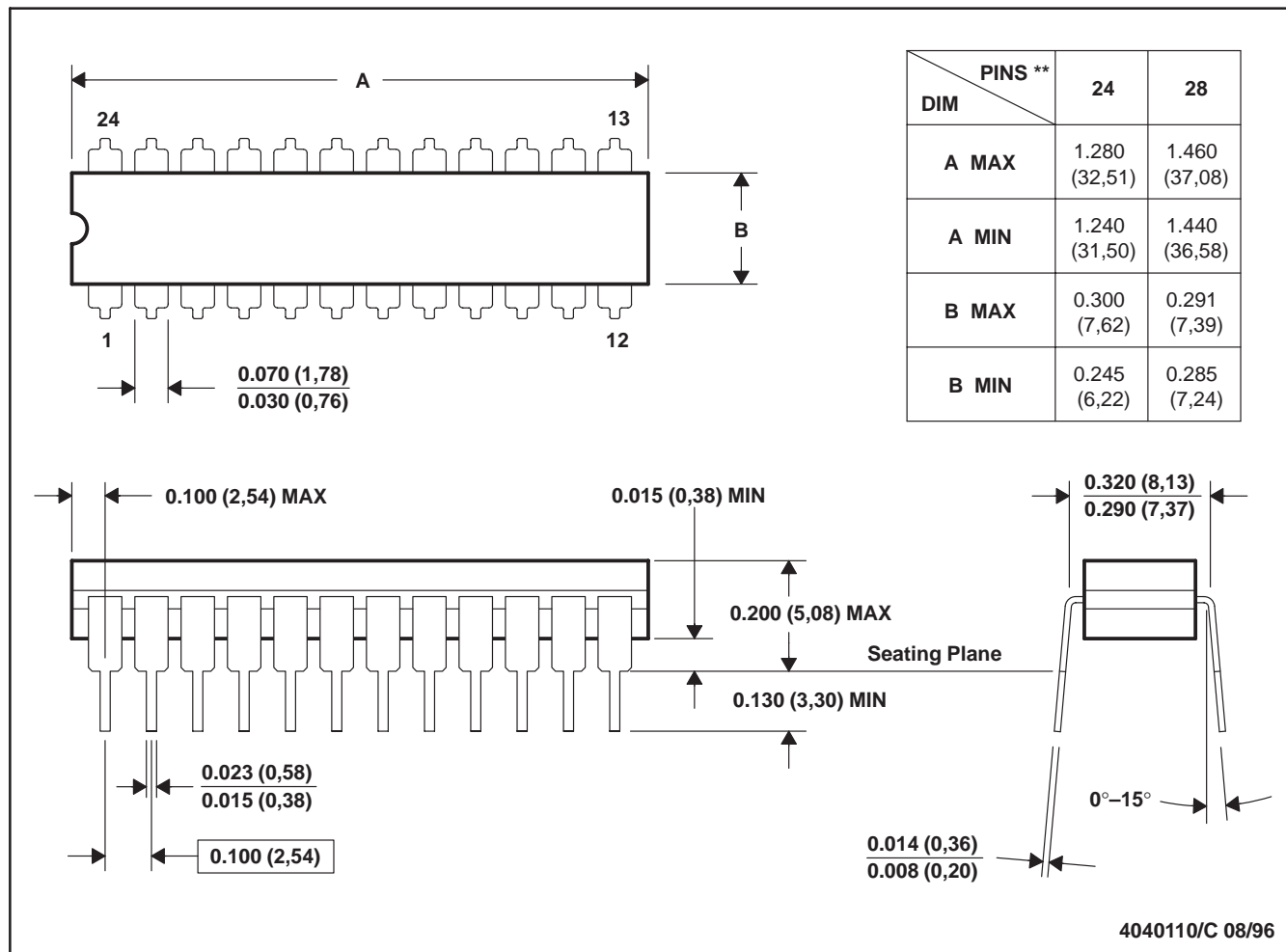


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



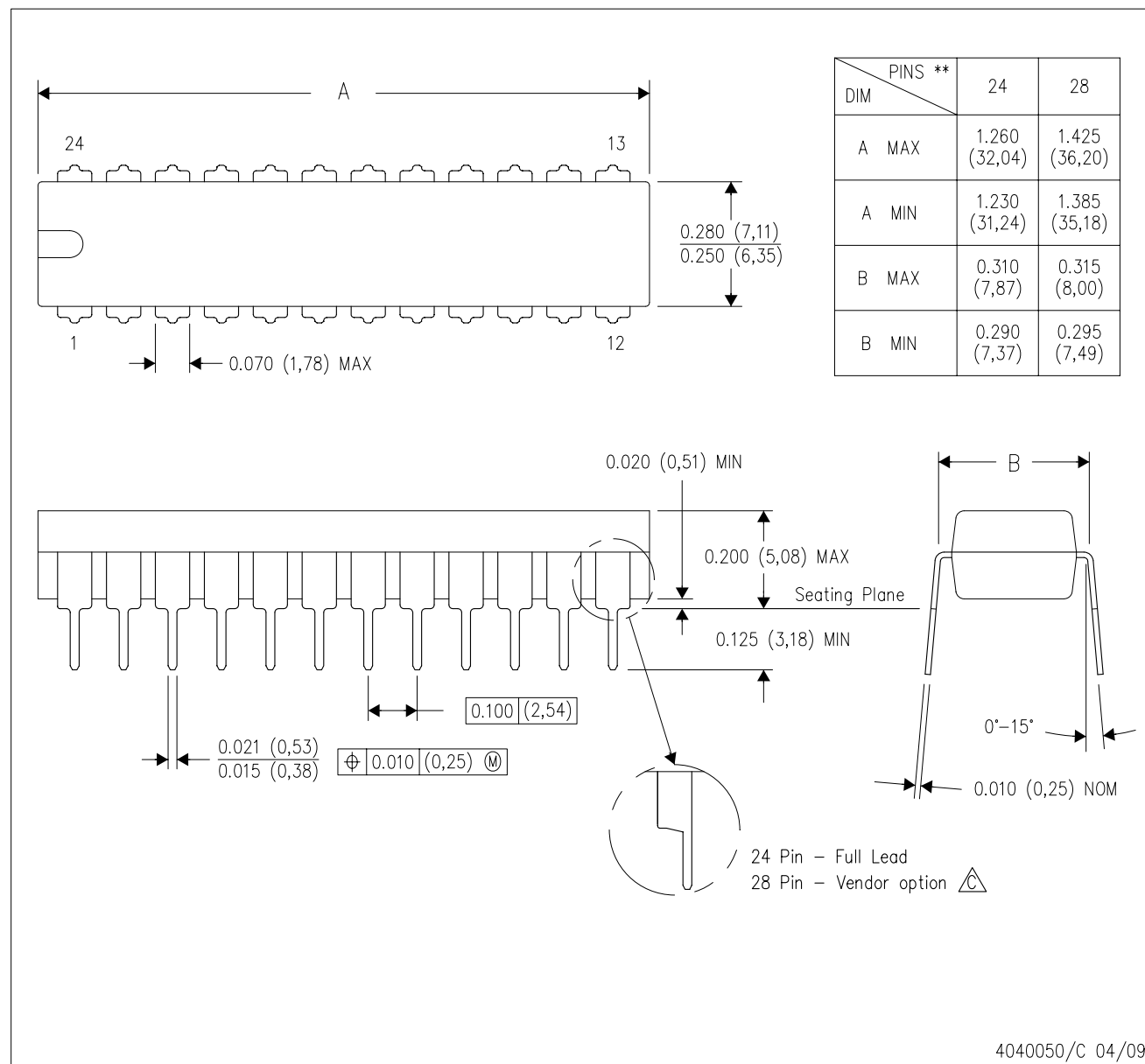
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MECHANICAL DATA

NT (R-PDIP-T**)

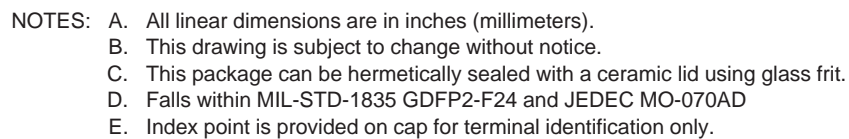
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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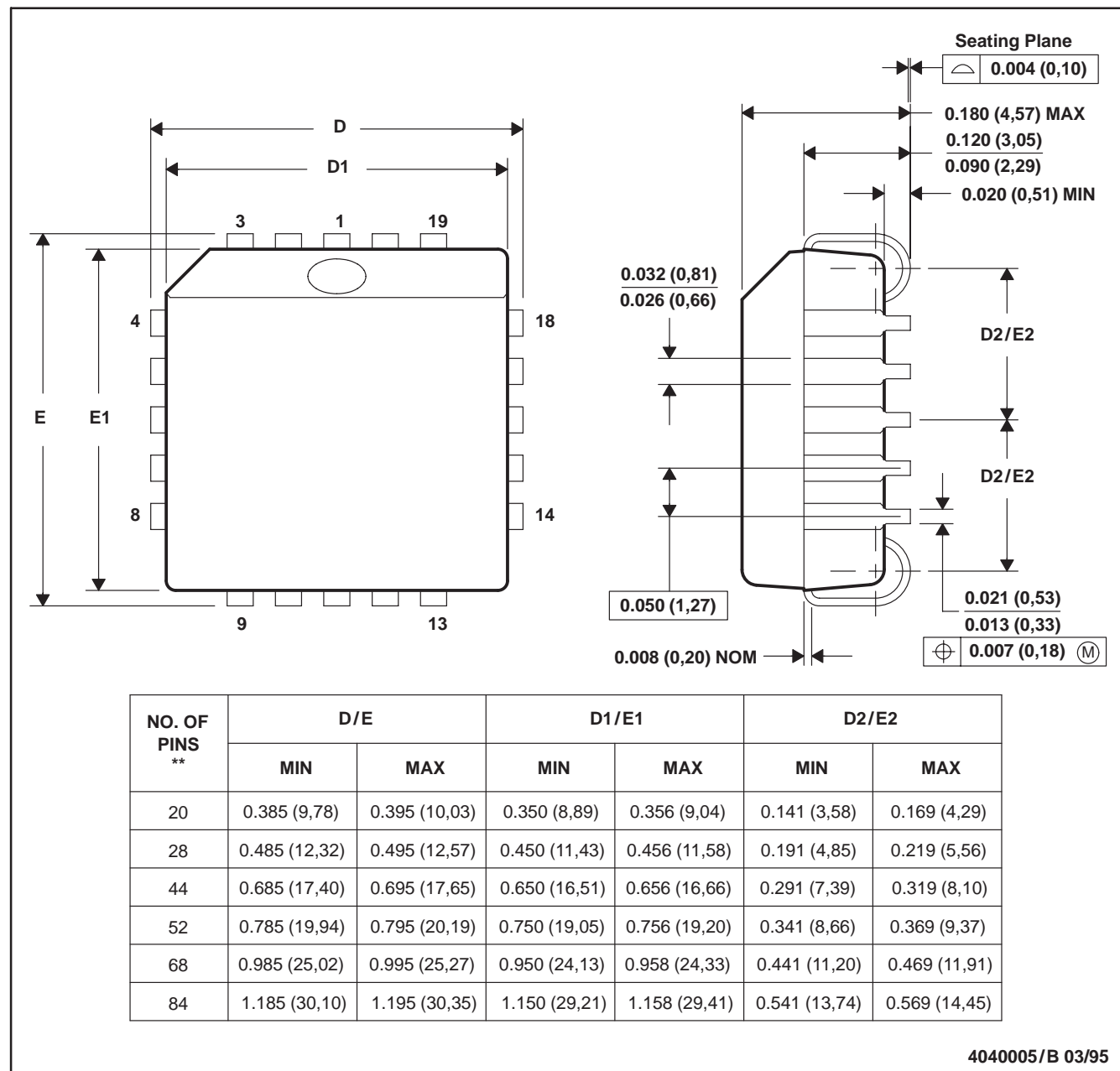
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

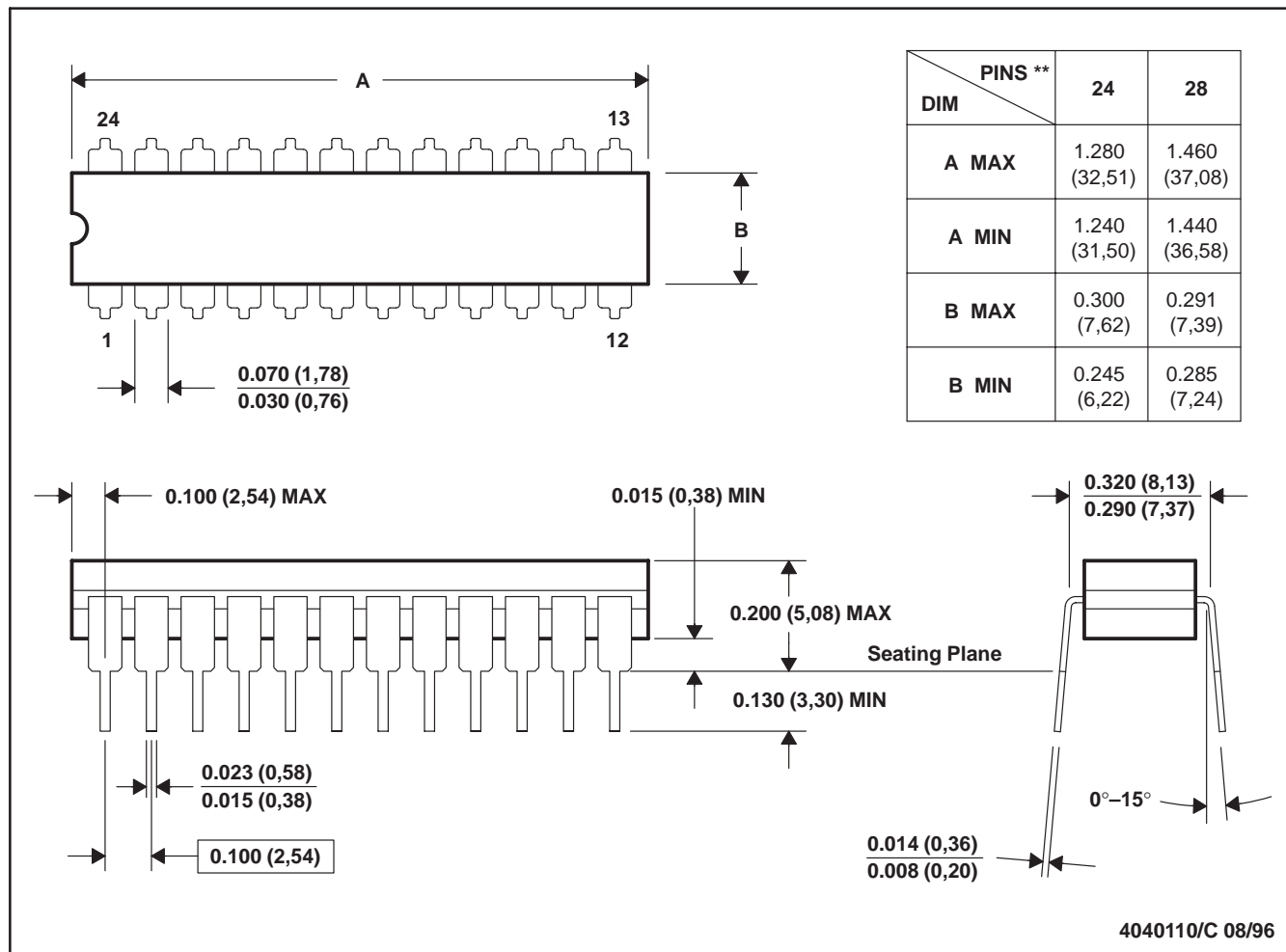


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

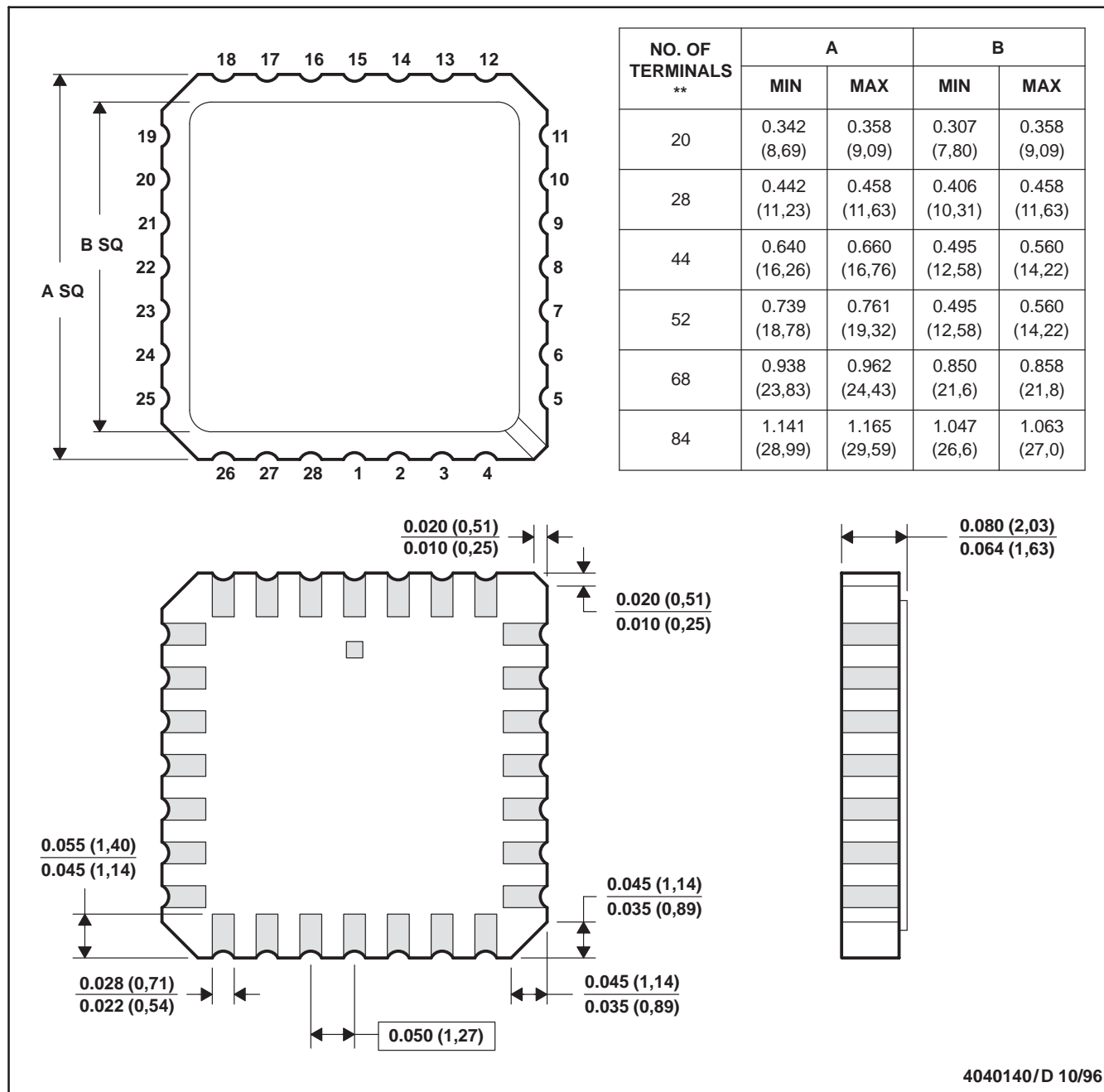
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



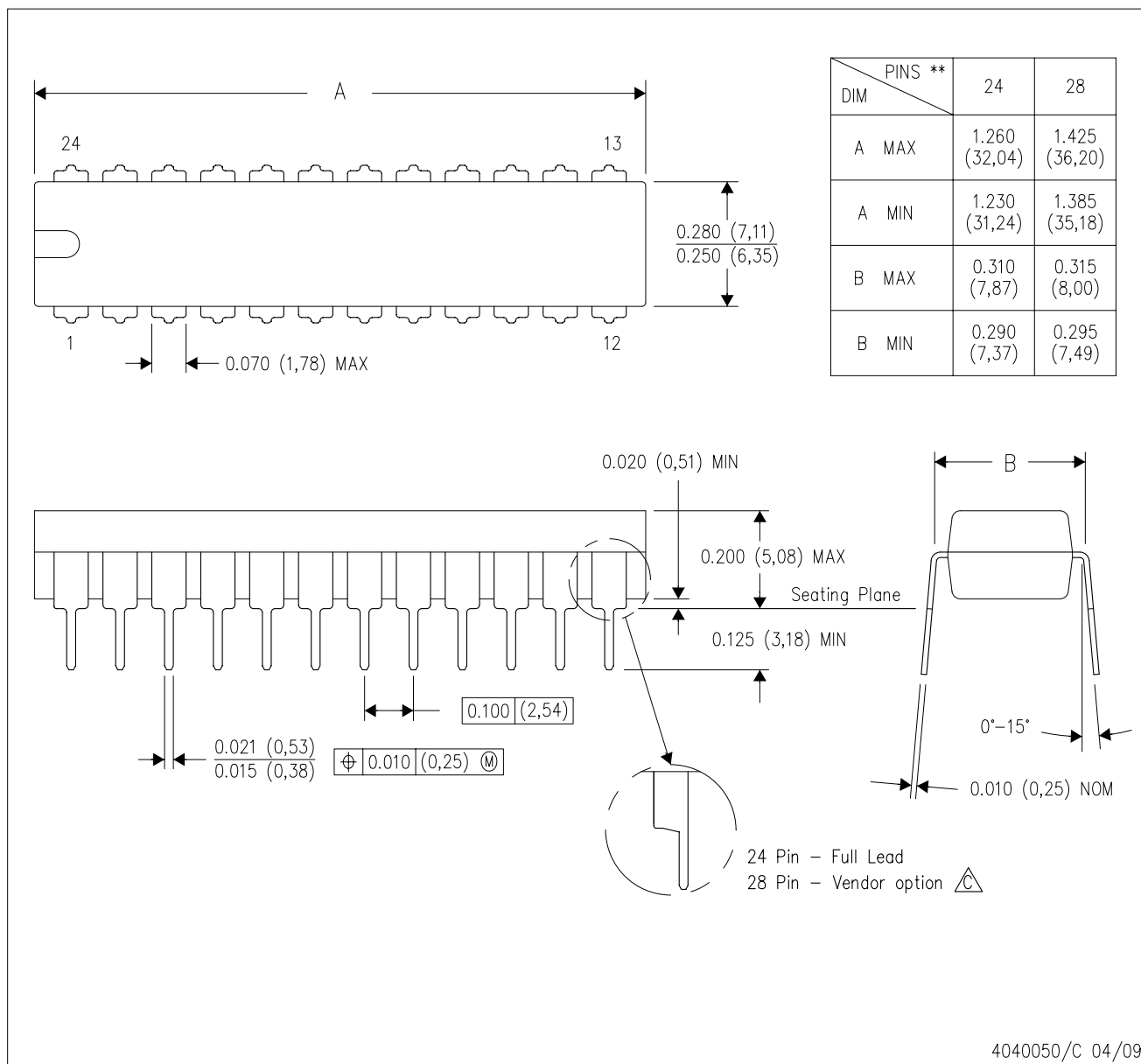
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

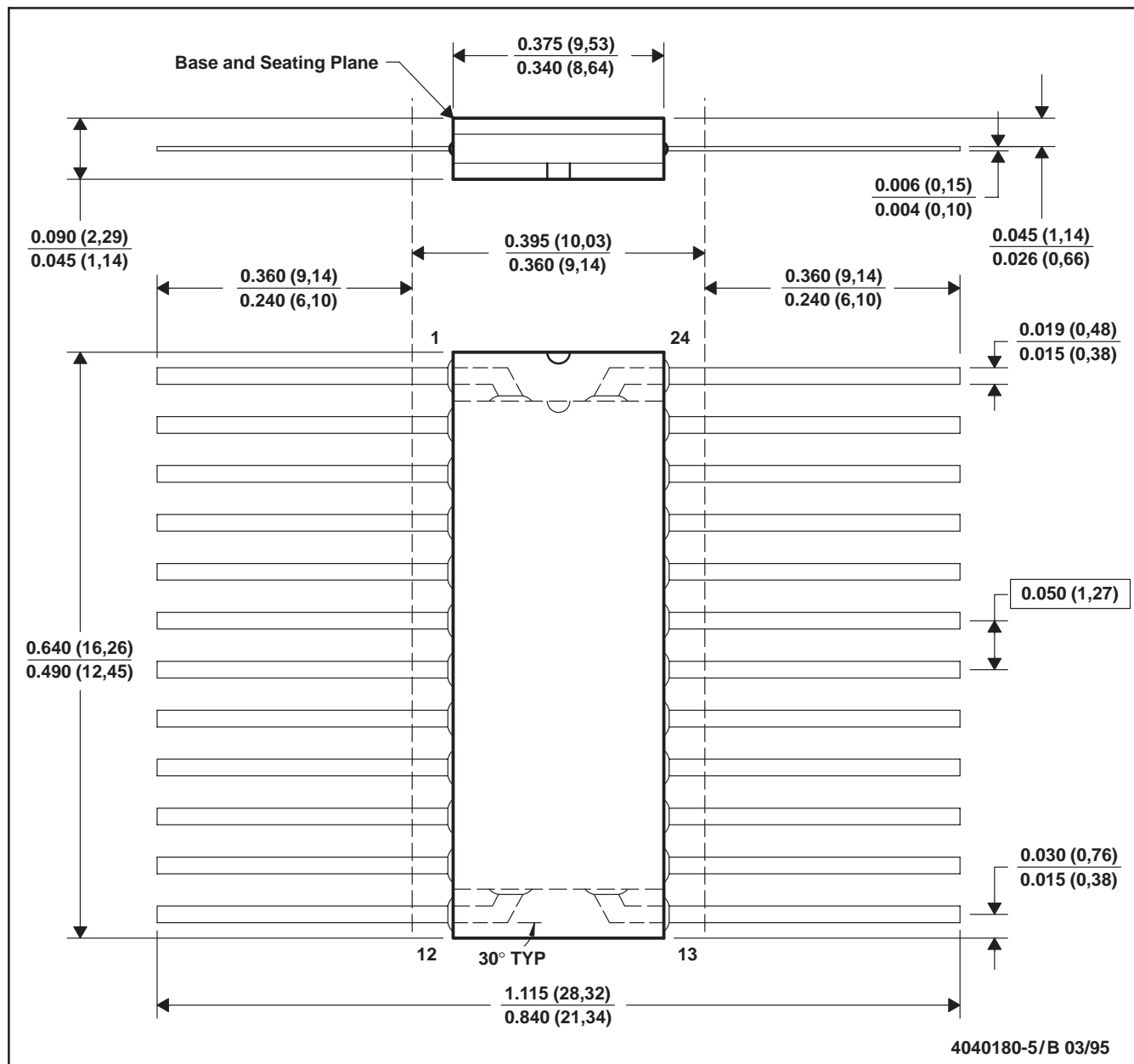
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

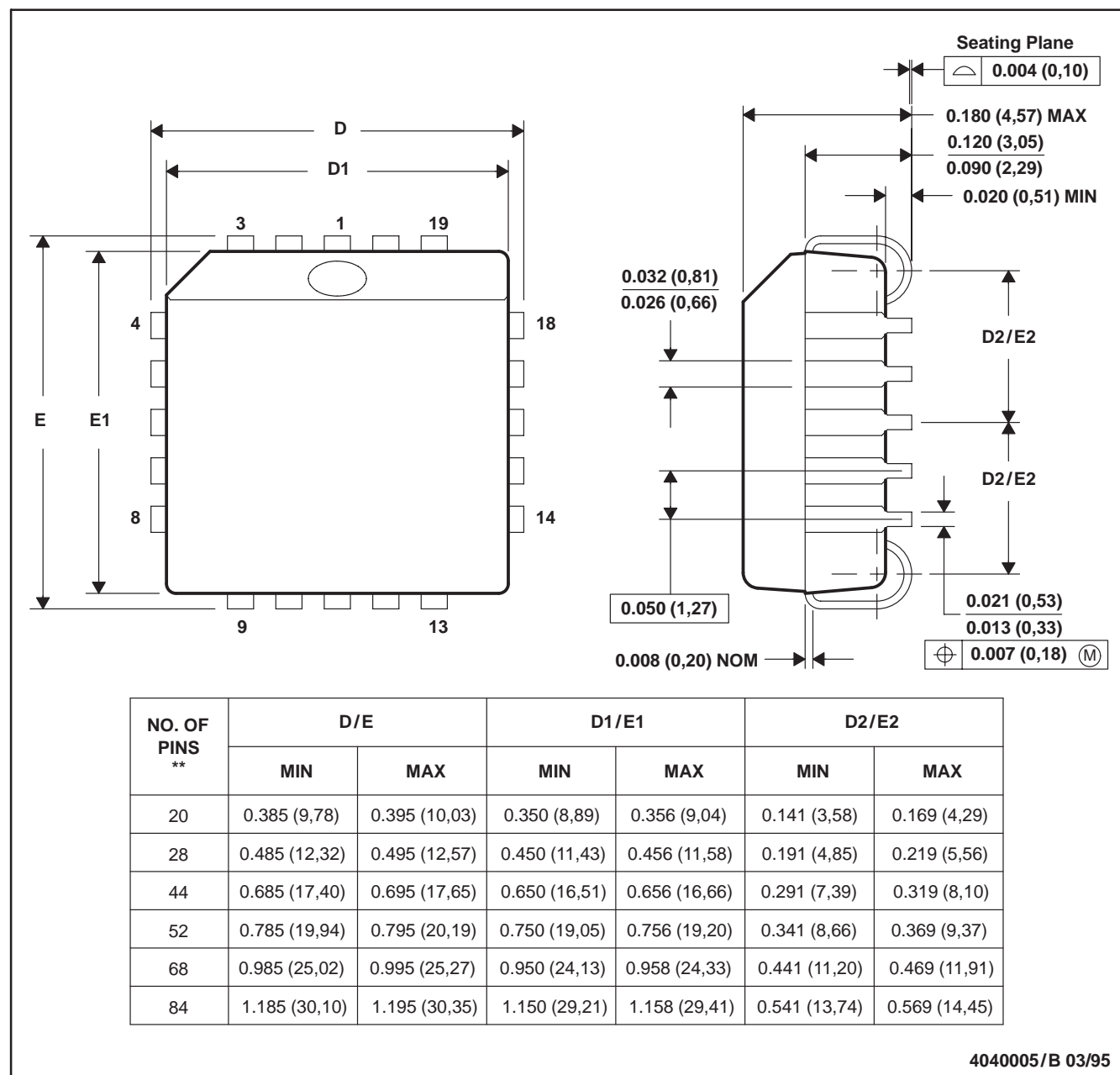


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

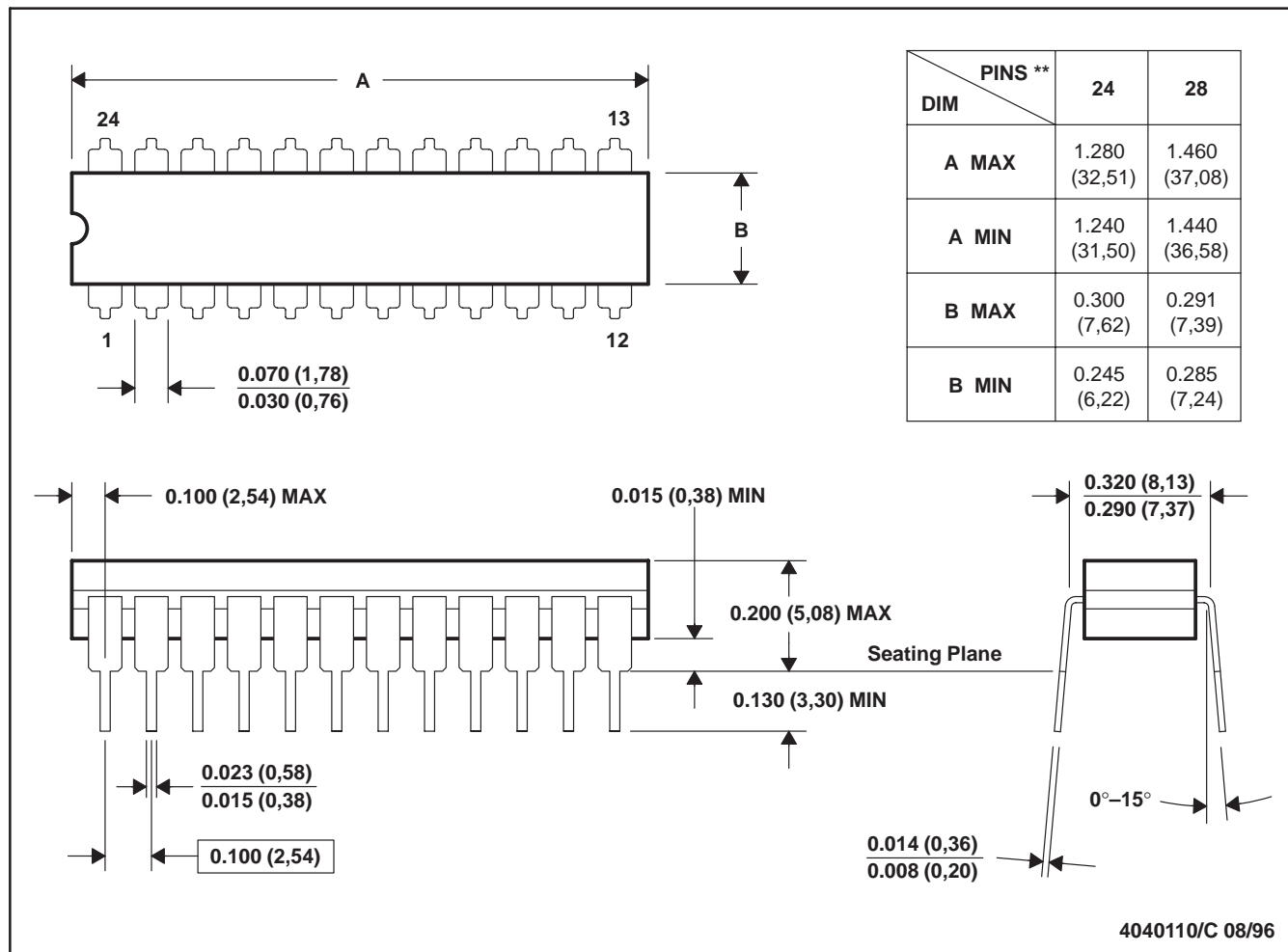


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

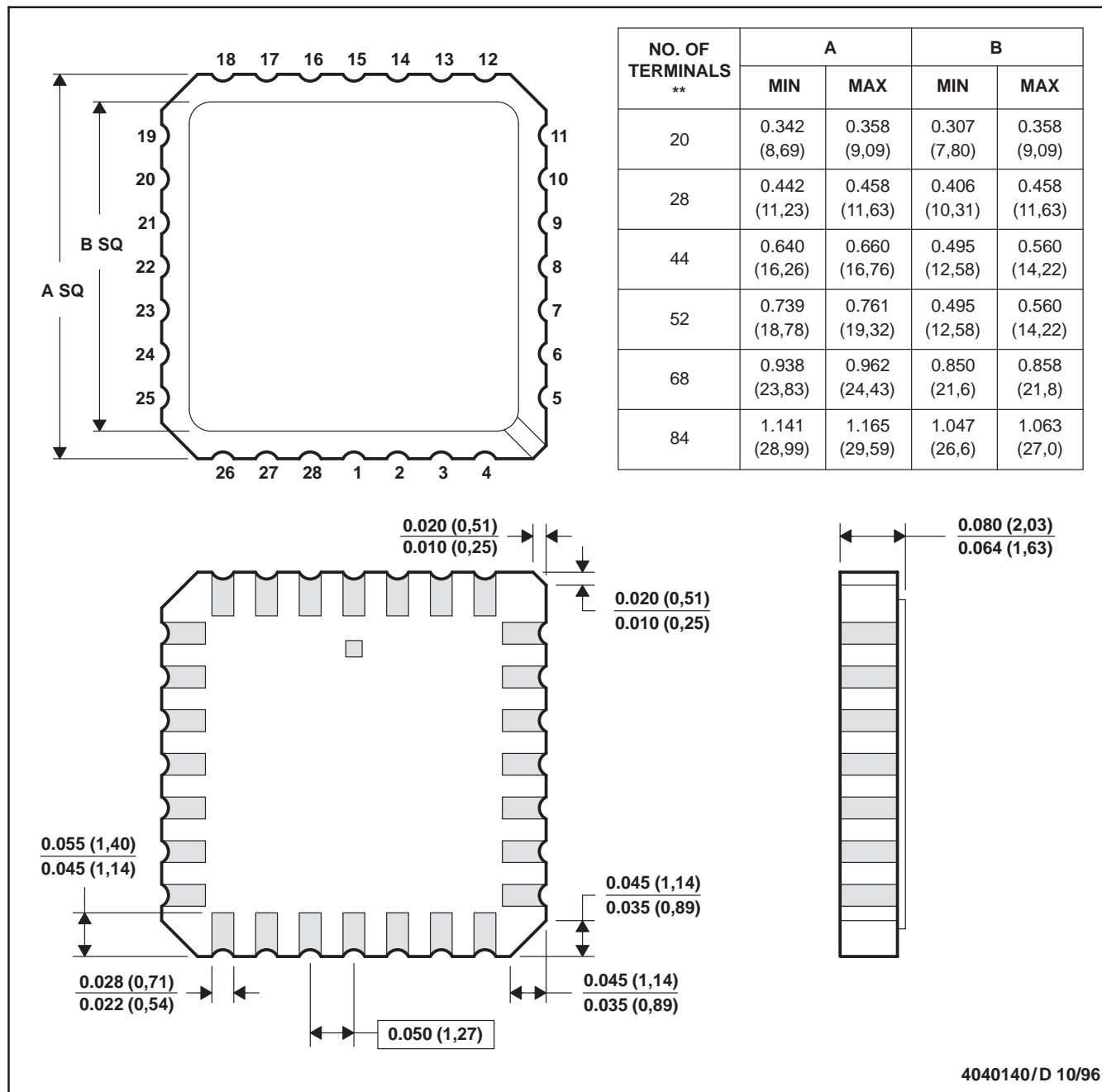
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



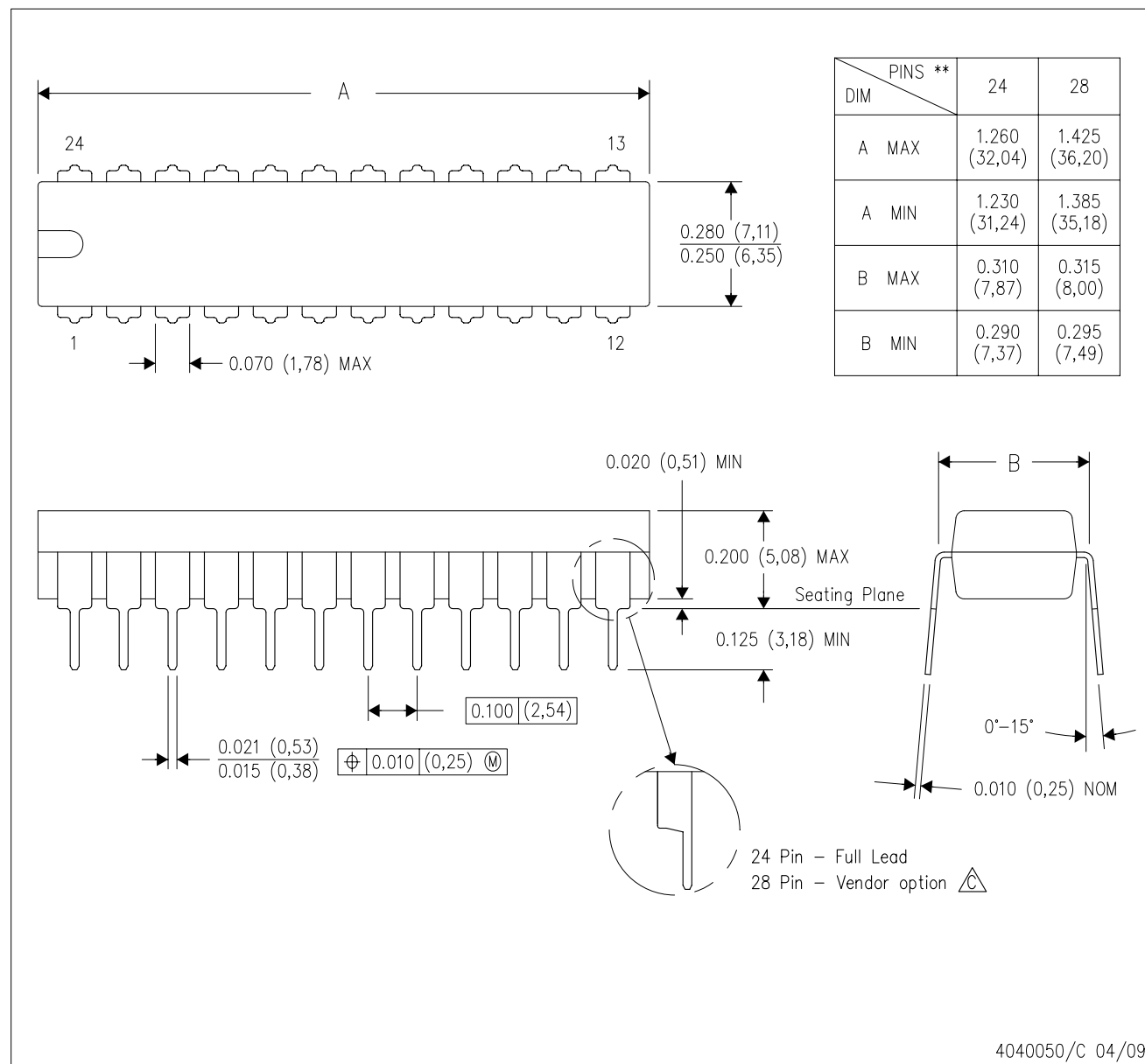
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

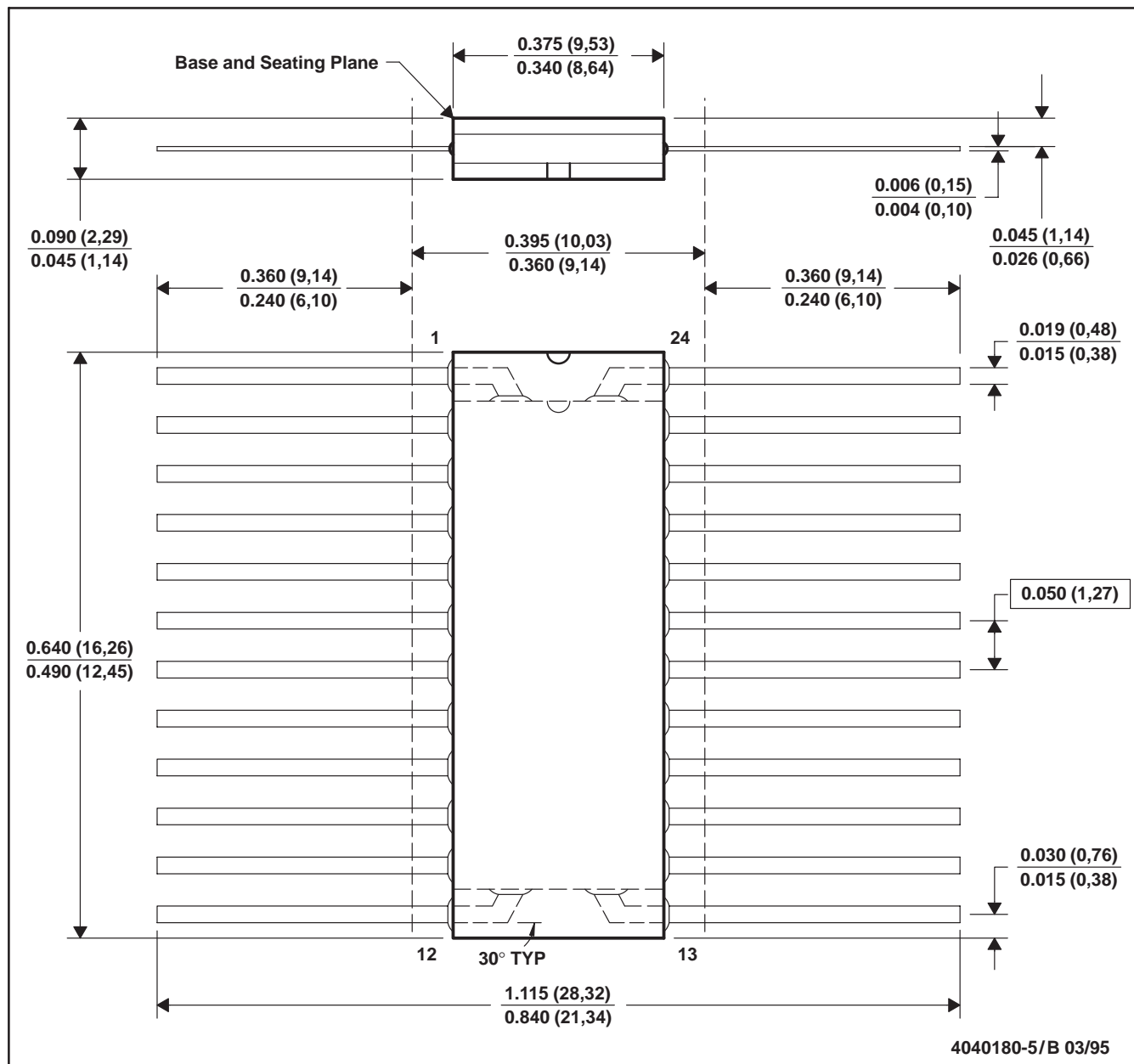
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

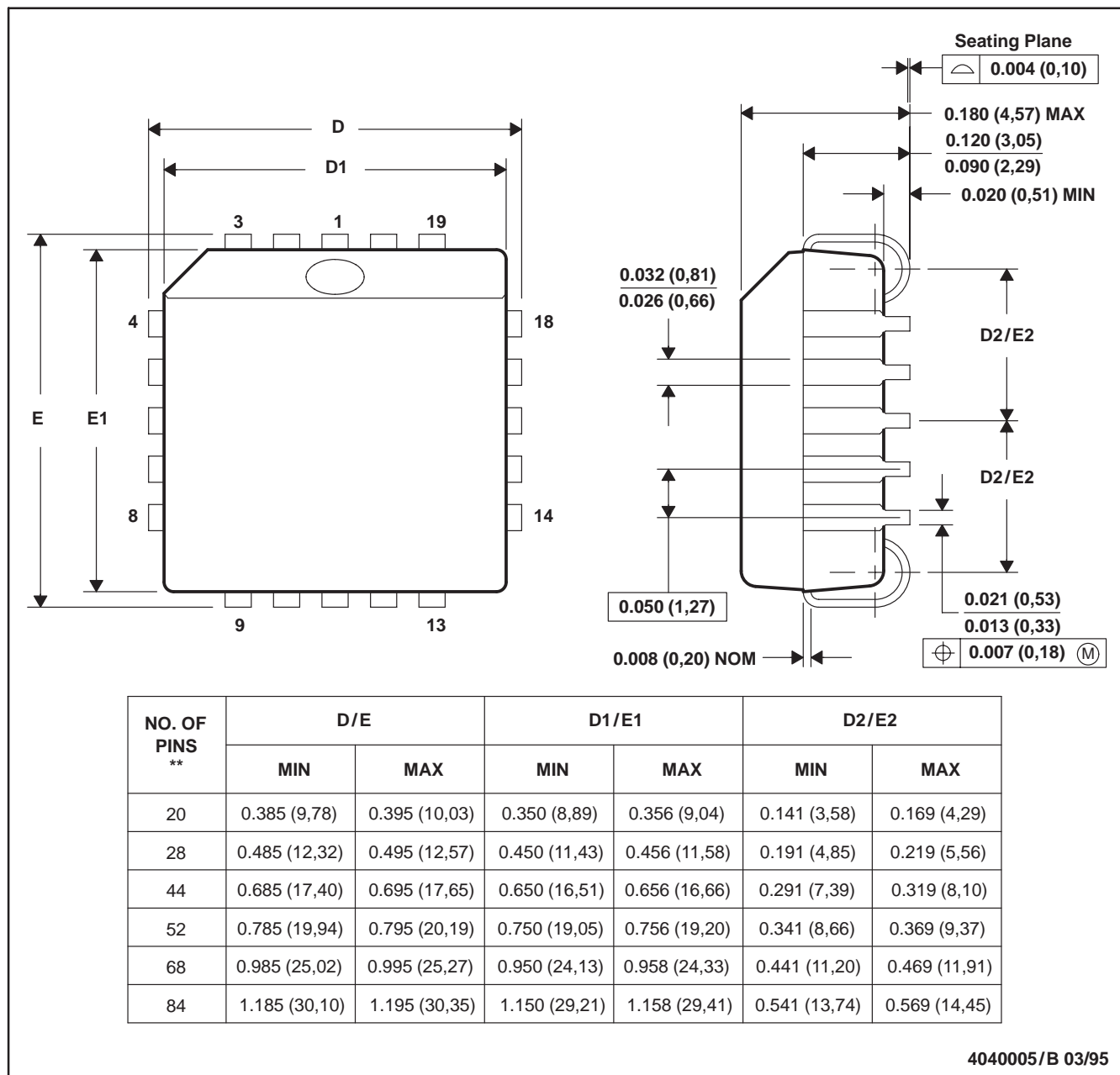


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

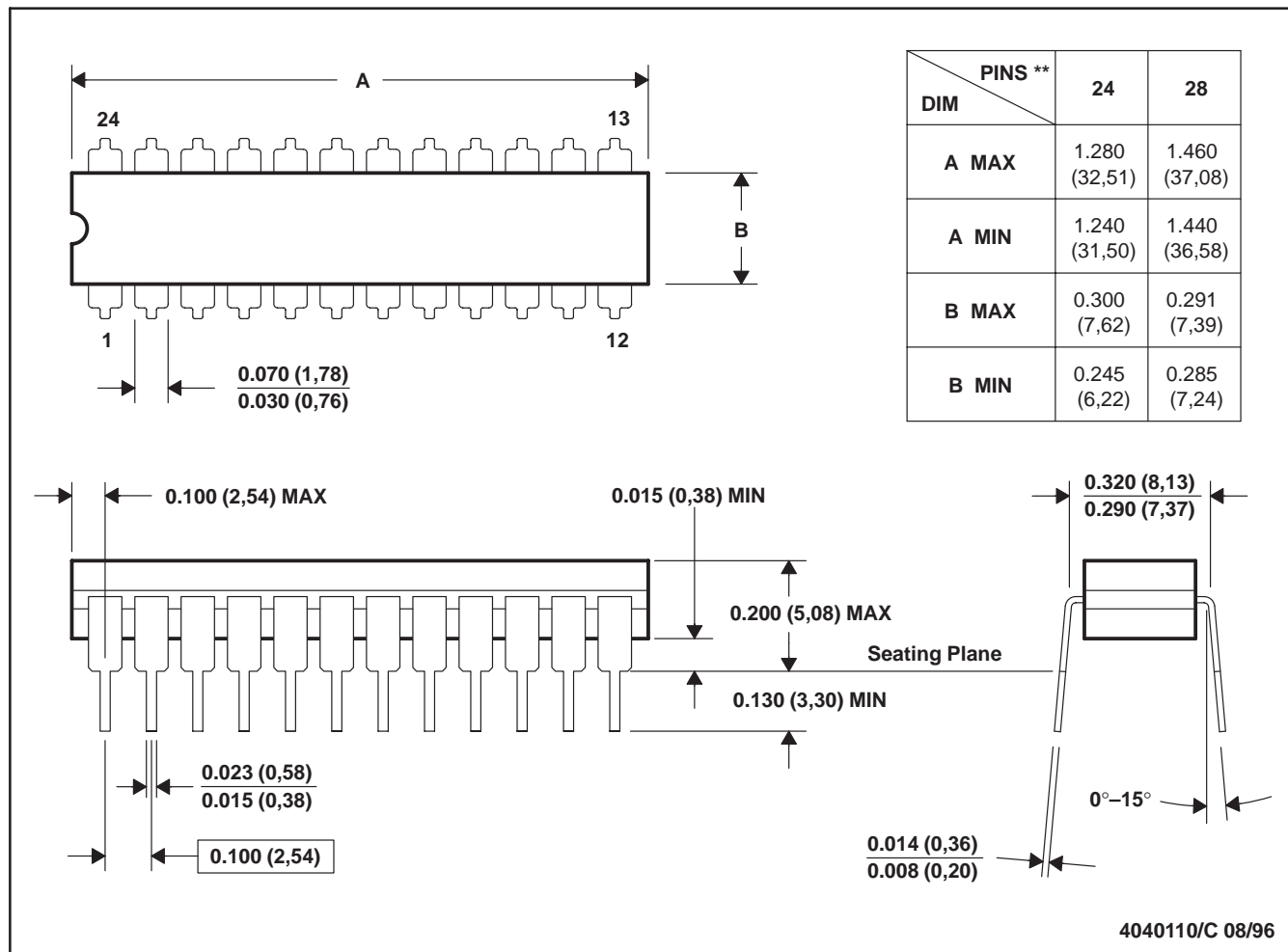


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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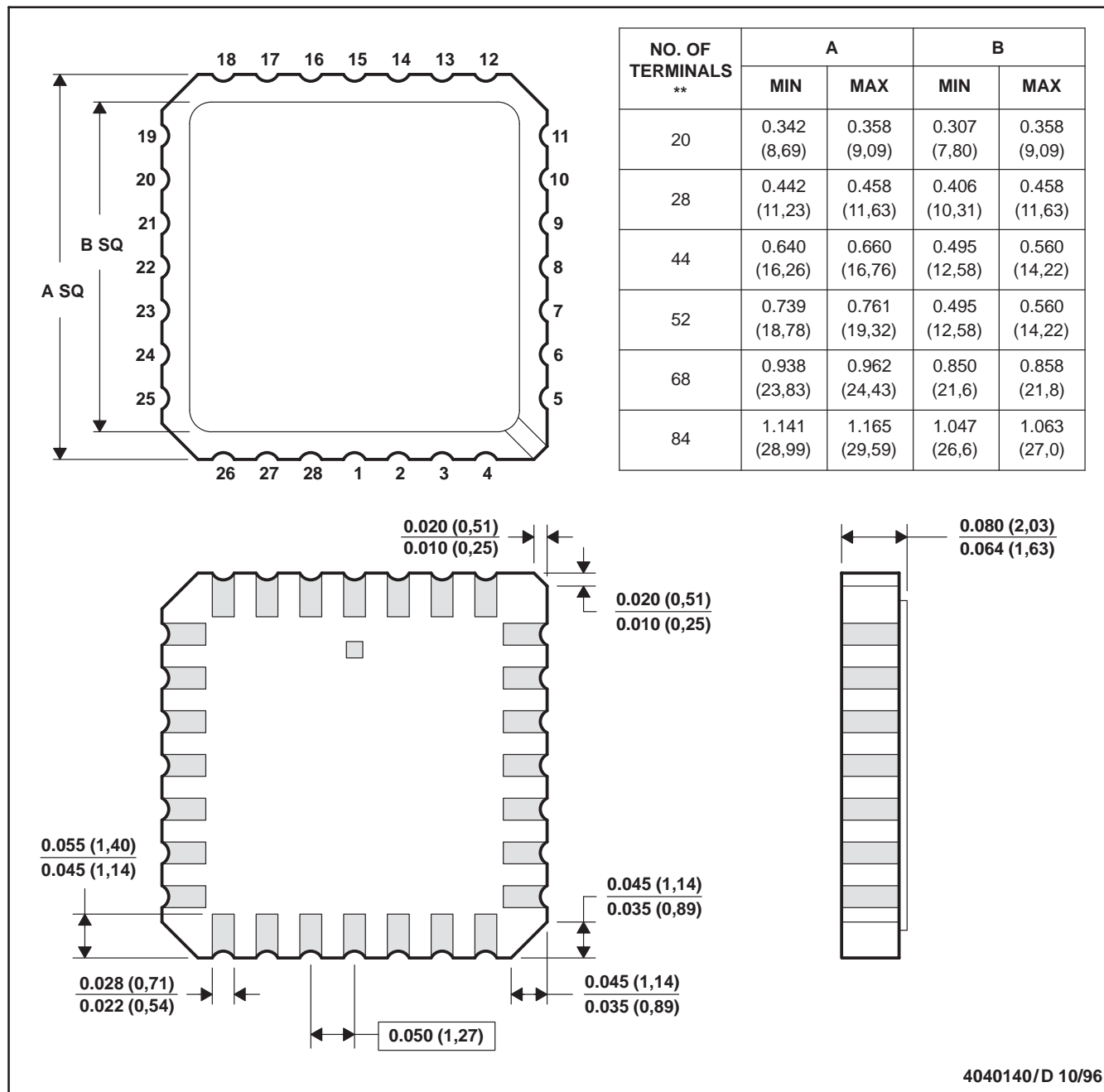
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



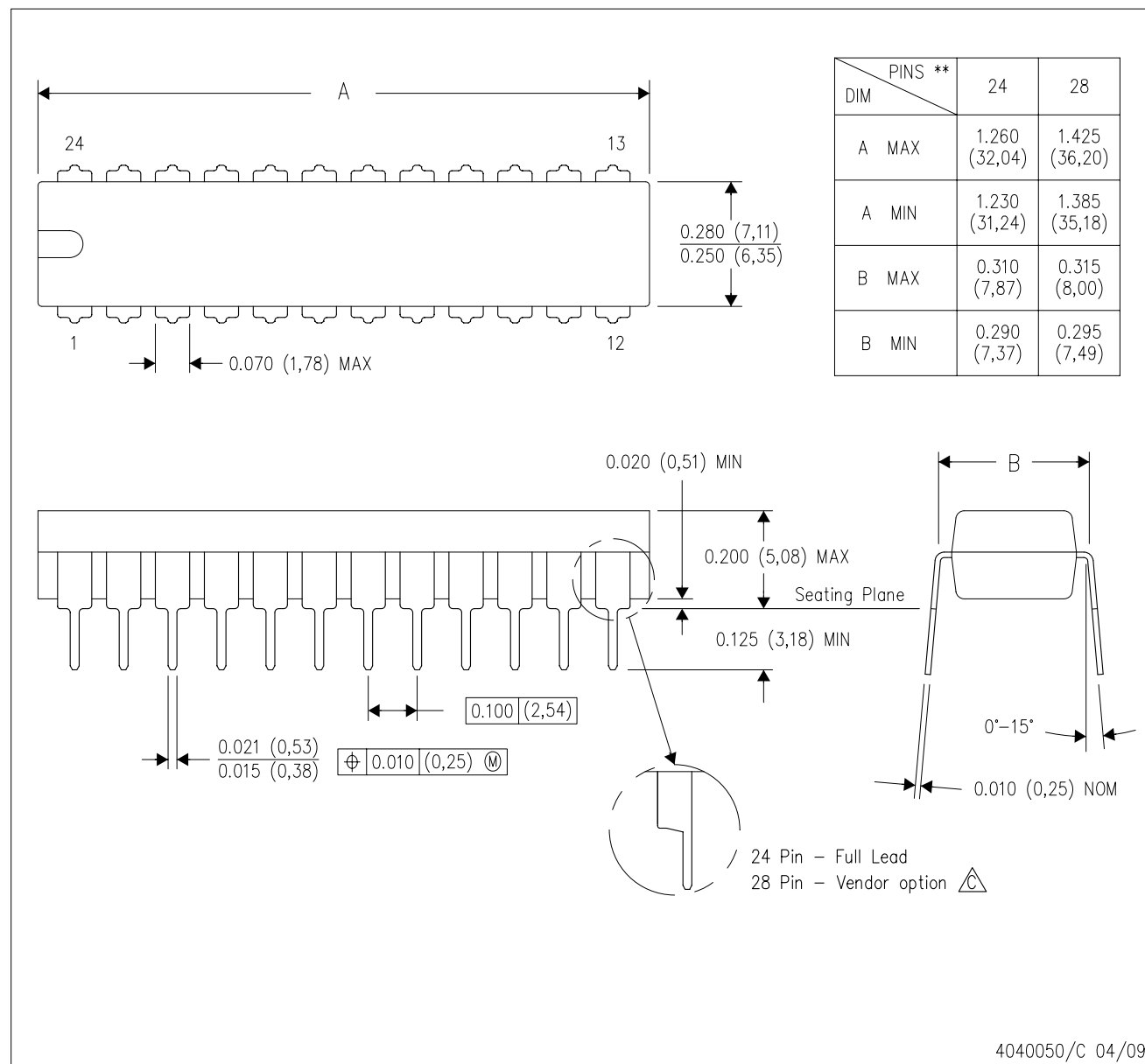
- NOTES:
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

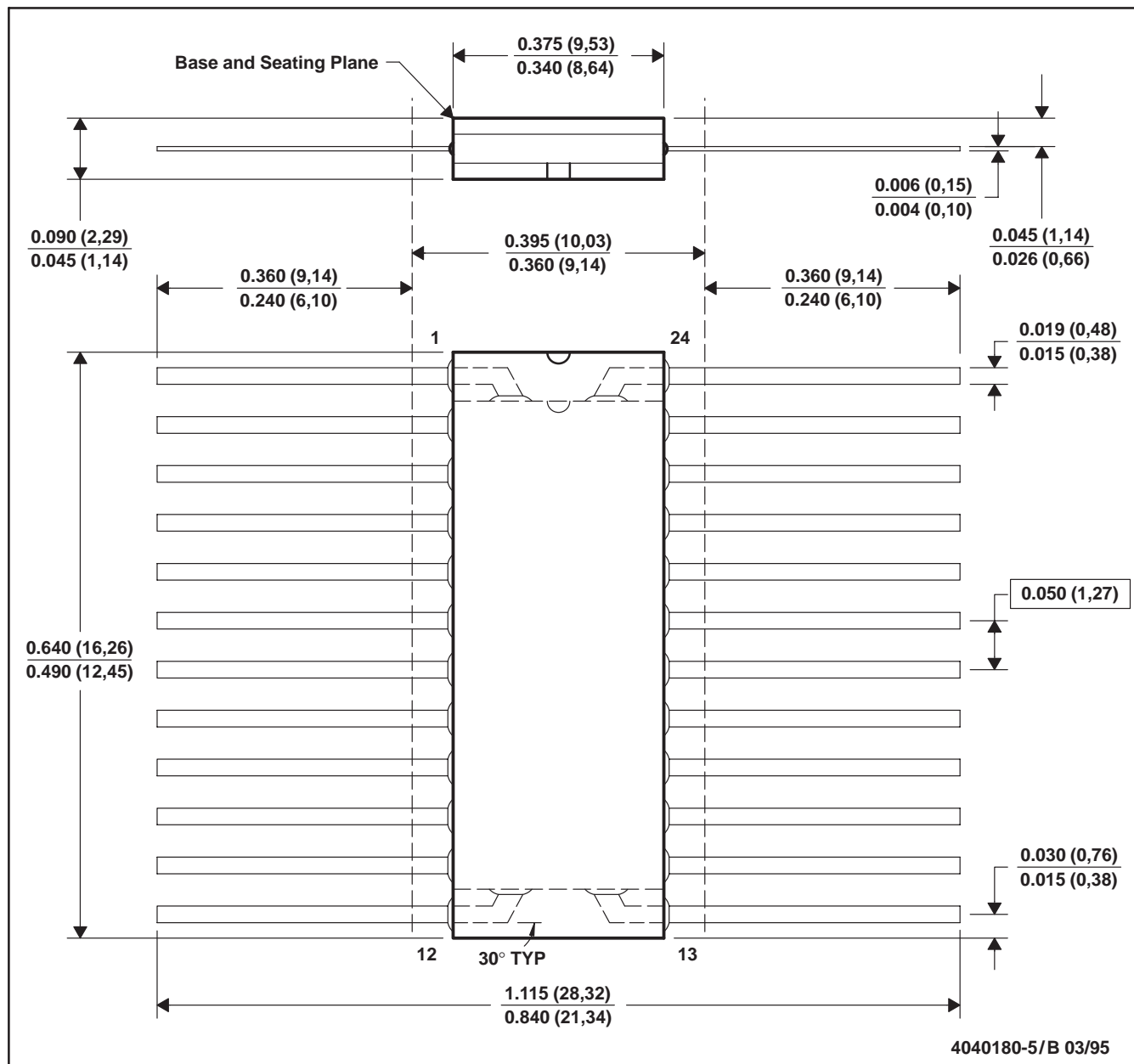
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

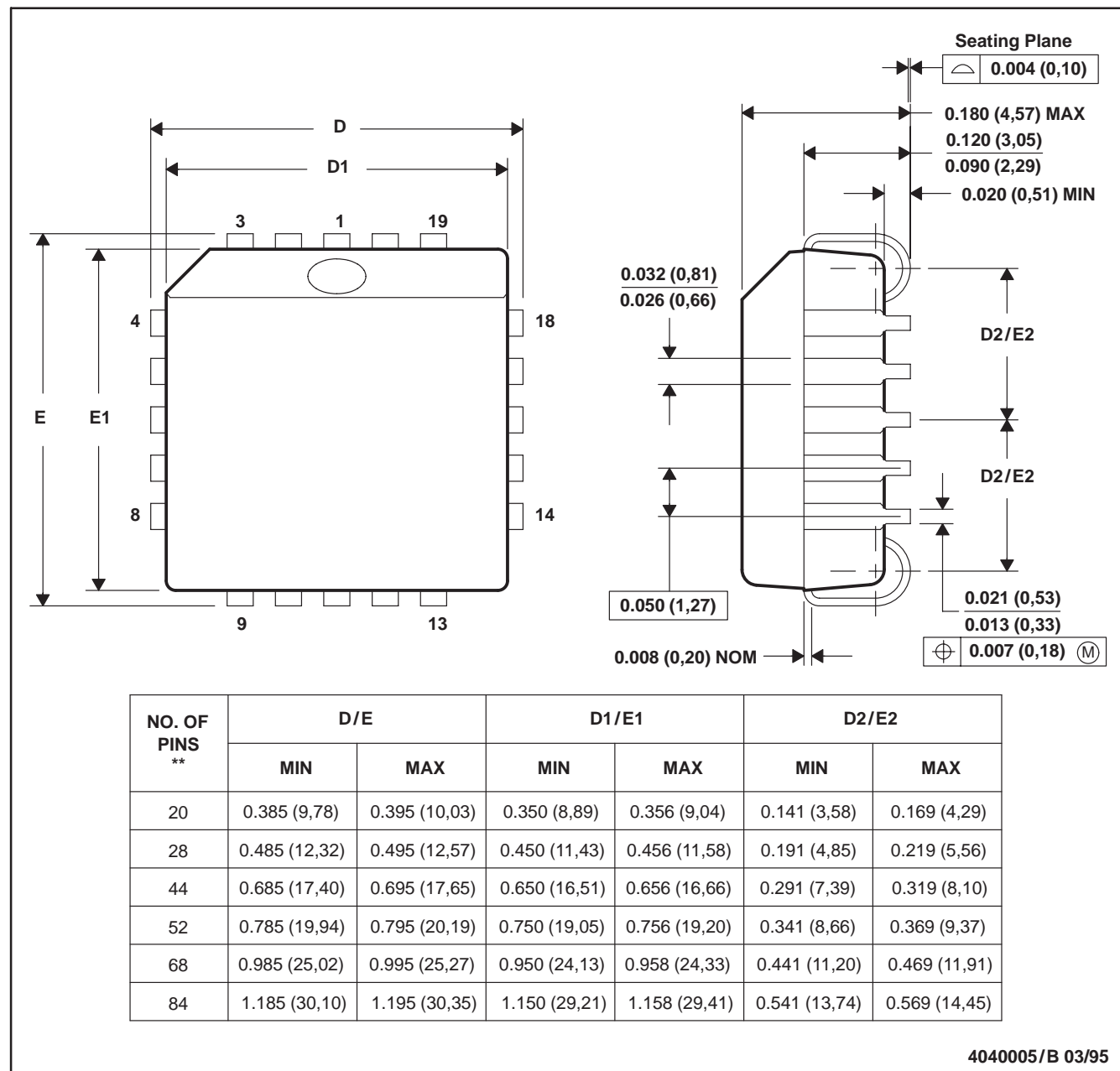


- NOTES:
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 - B. This drawing is subject to change without notice.
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 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

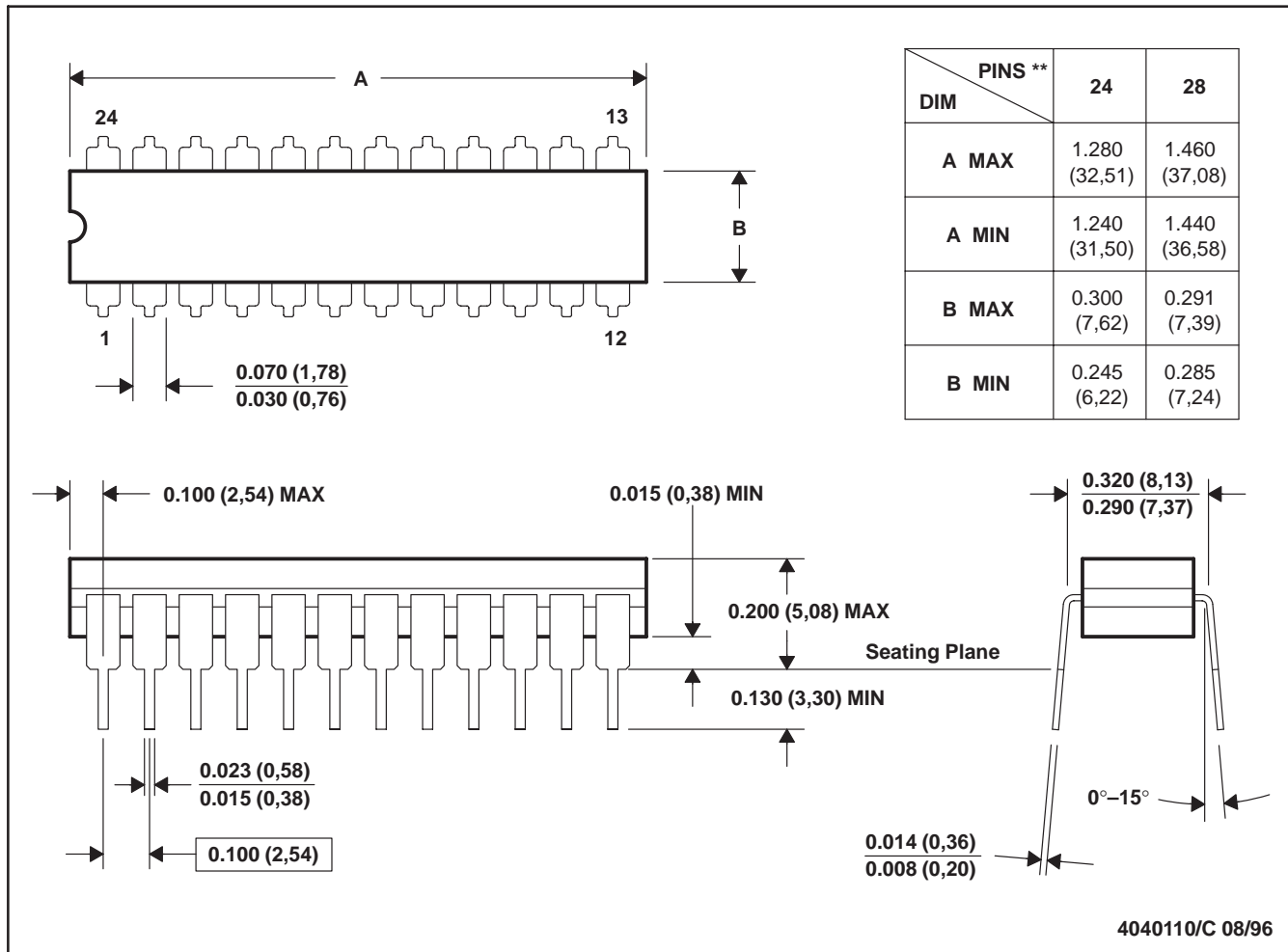


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



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 - D. Index point is provided on cap for terminal identification.
 - E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



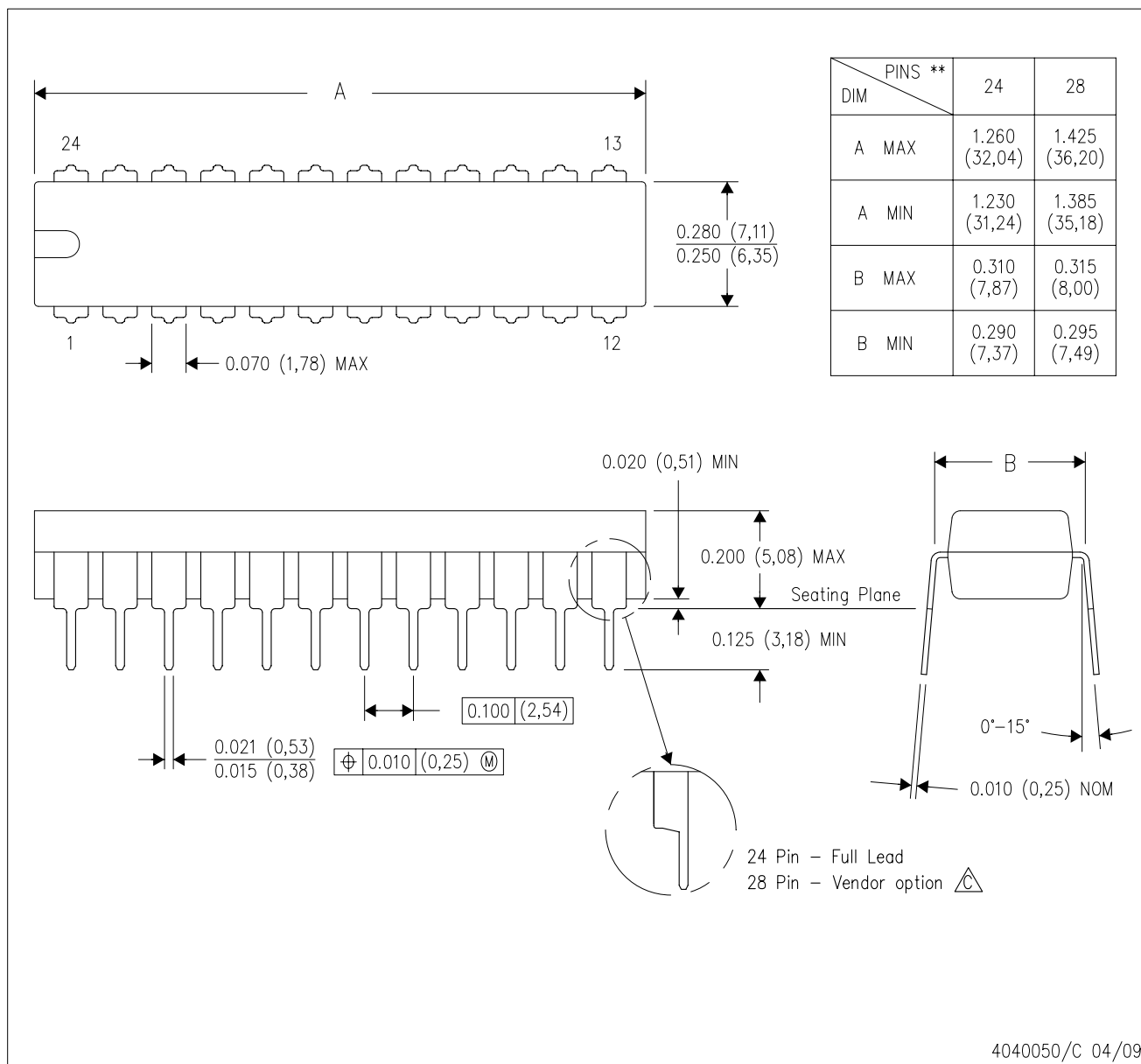
- NOTES:
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

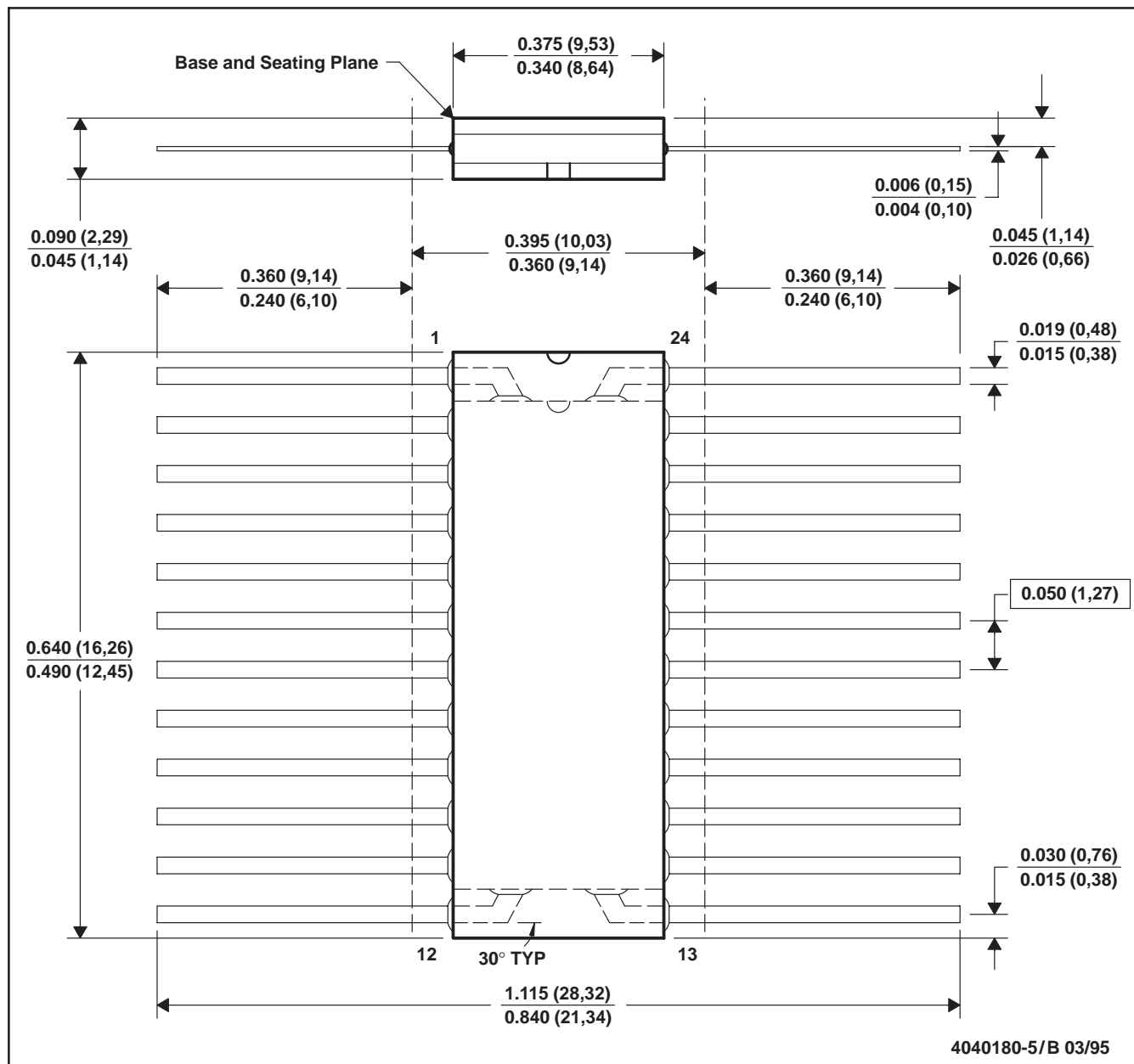
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

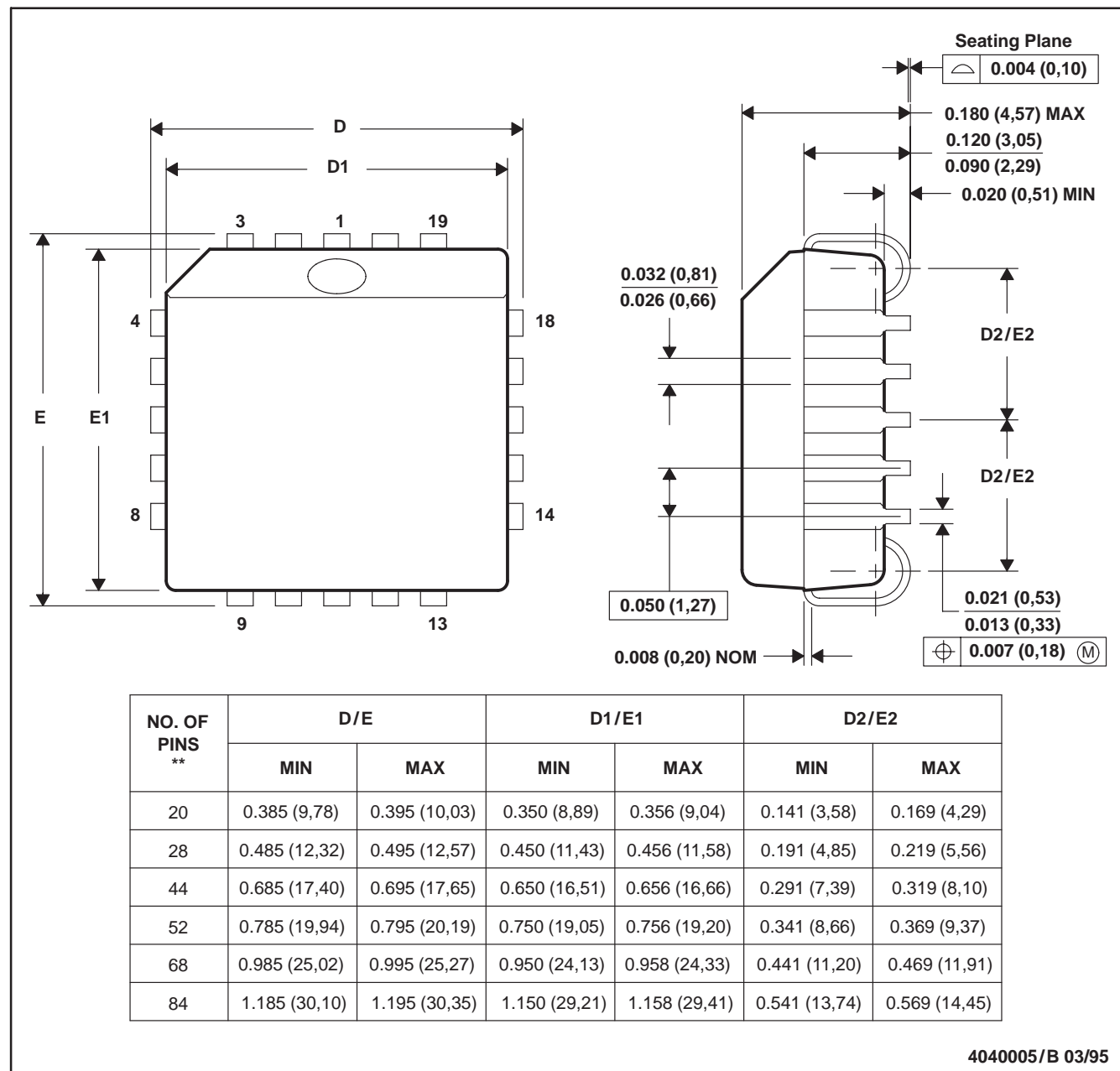


- NOTES:
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 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

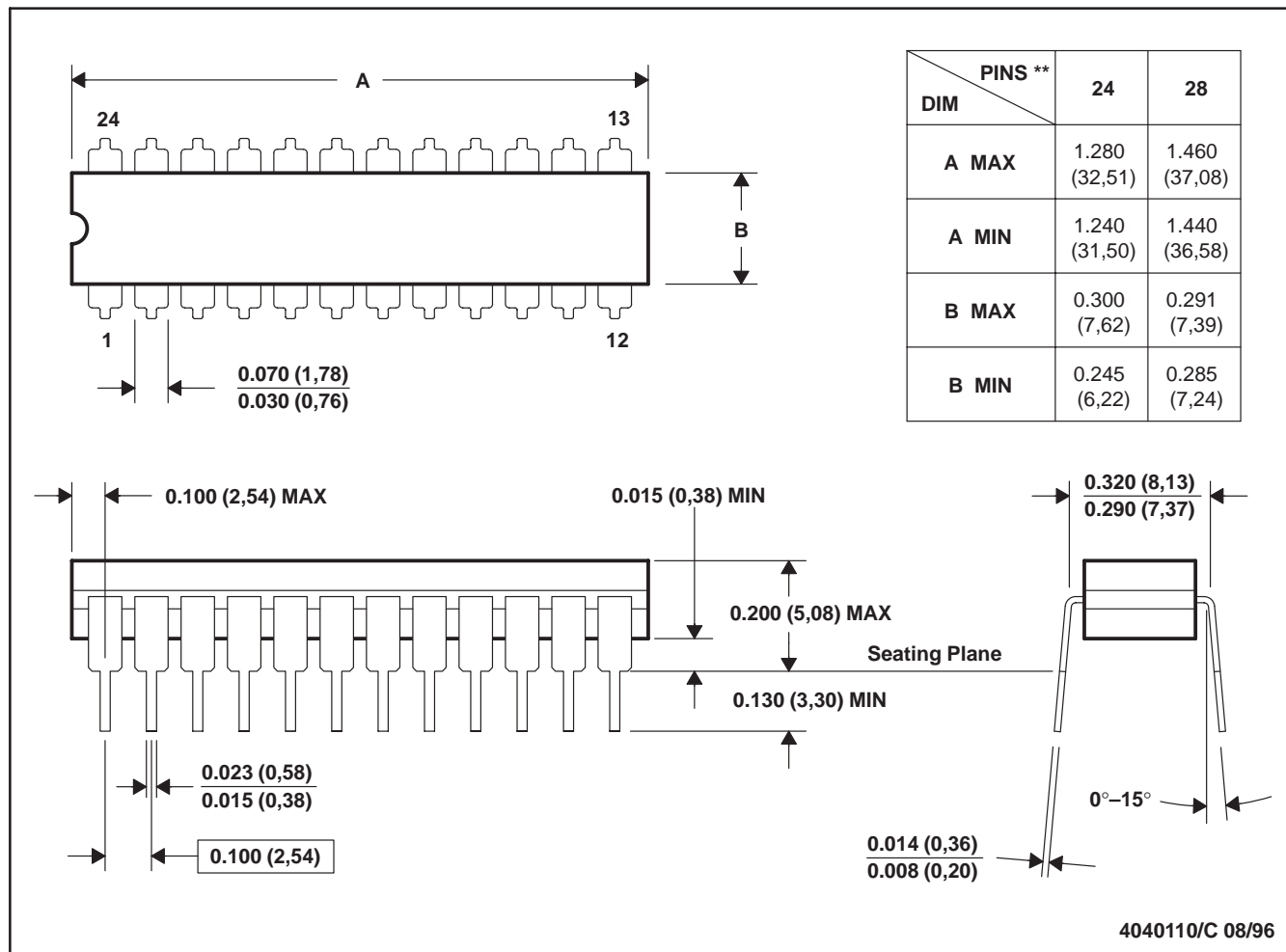


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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ACTIVE: Product device recommended for new designs.

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

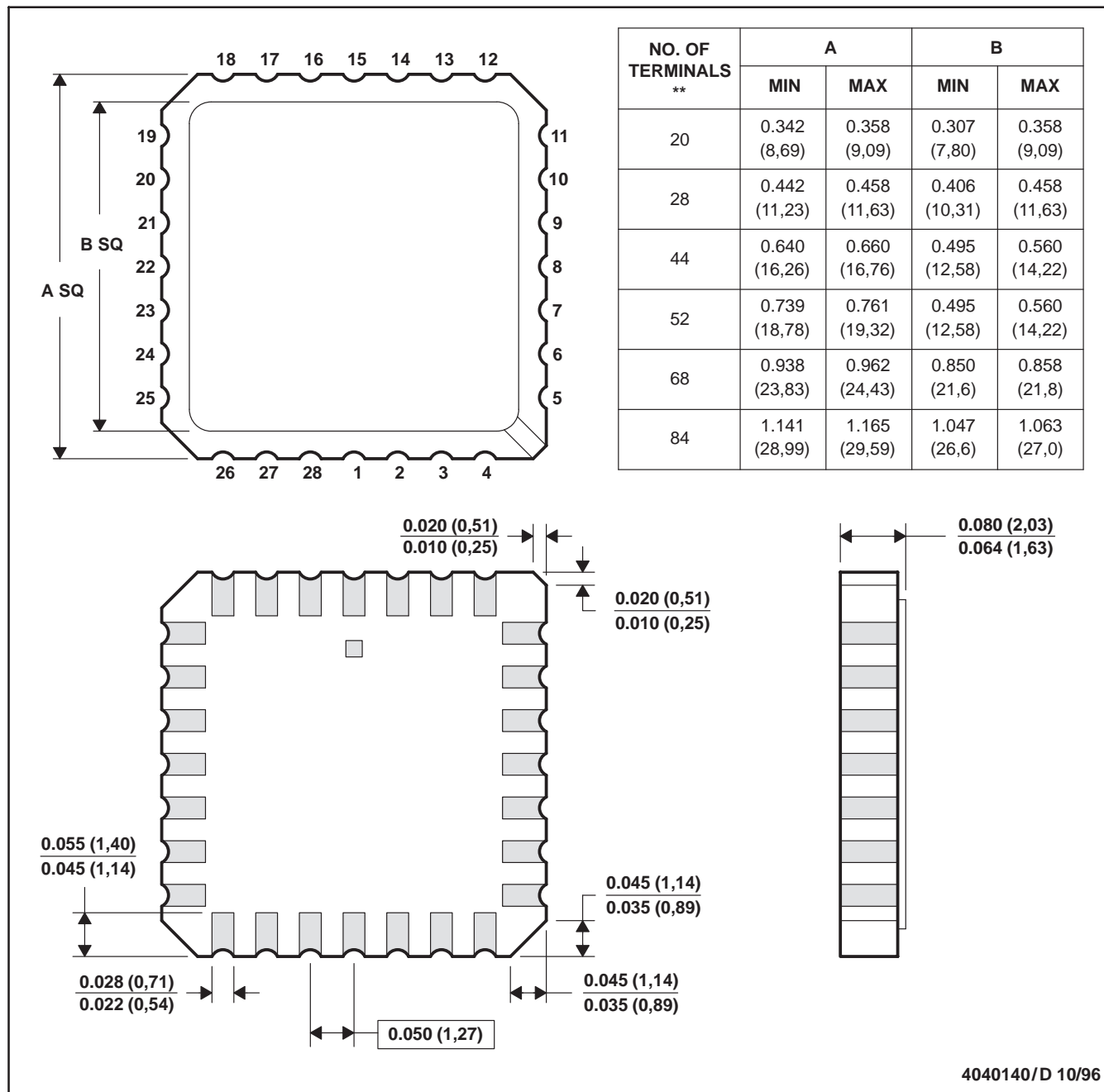
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



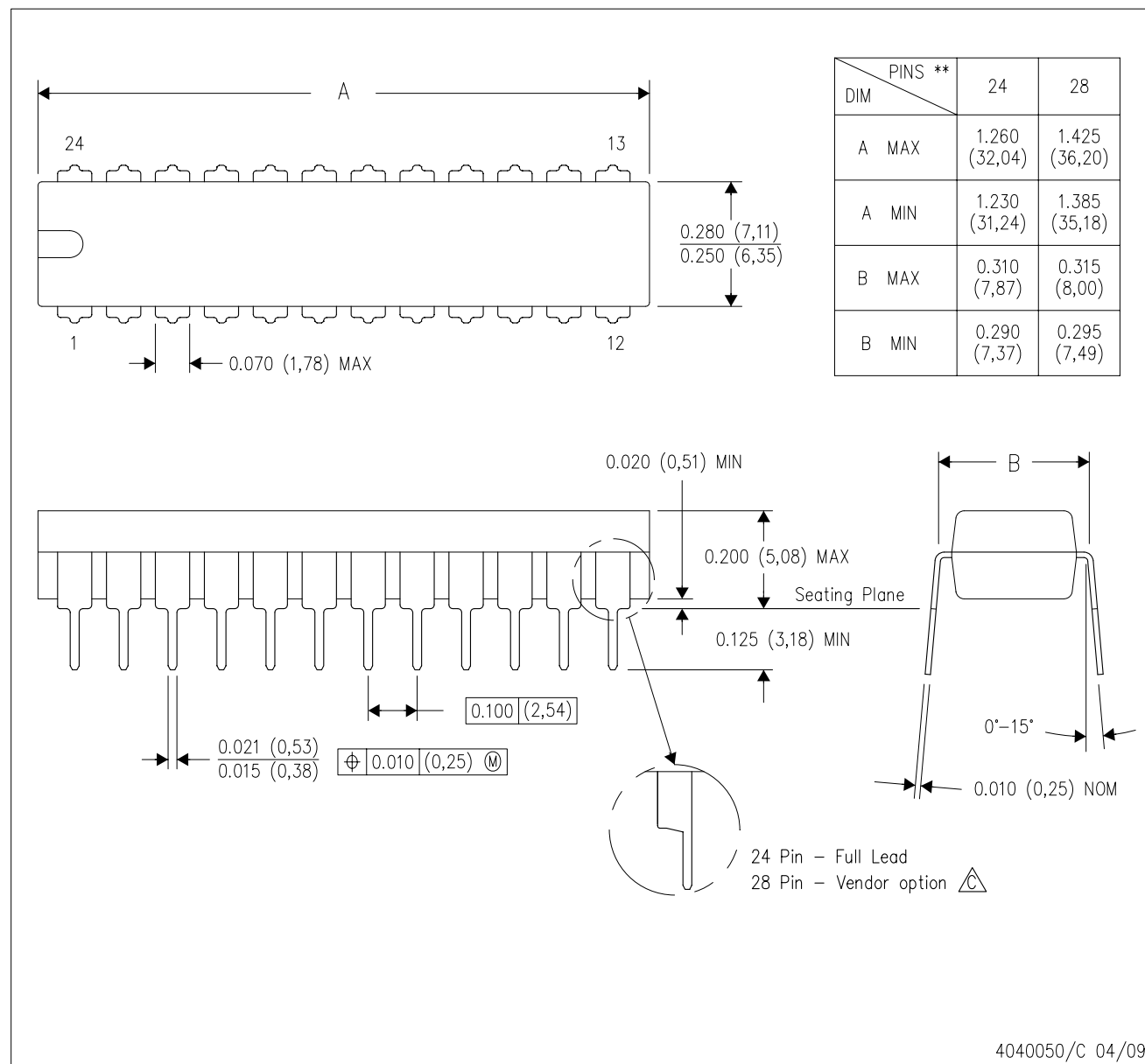
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

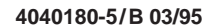
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

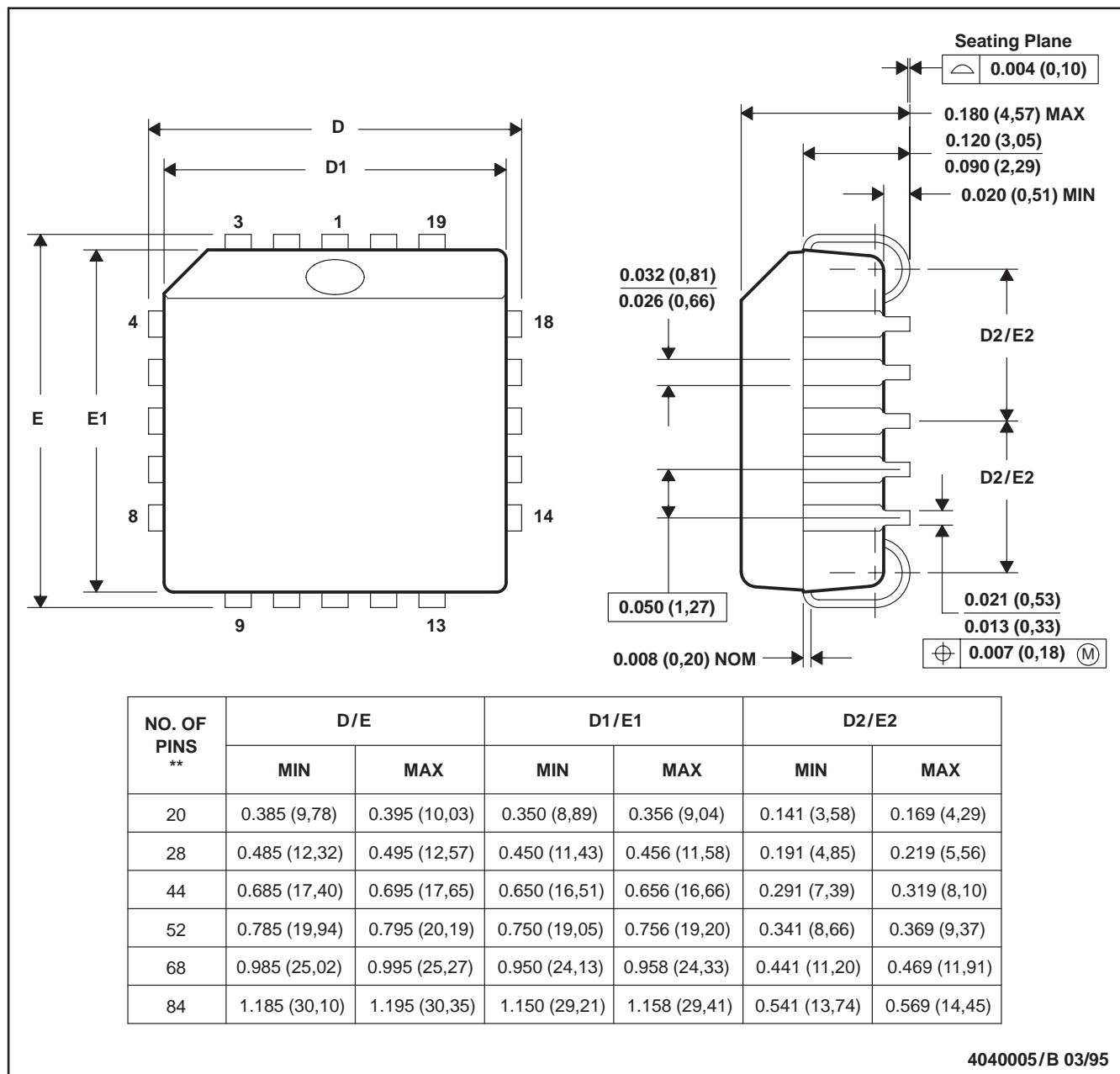


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

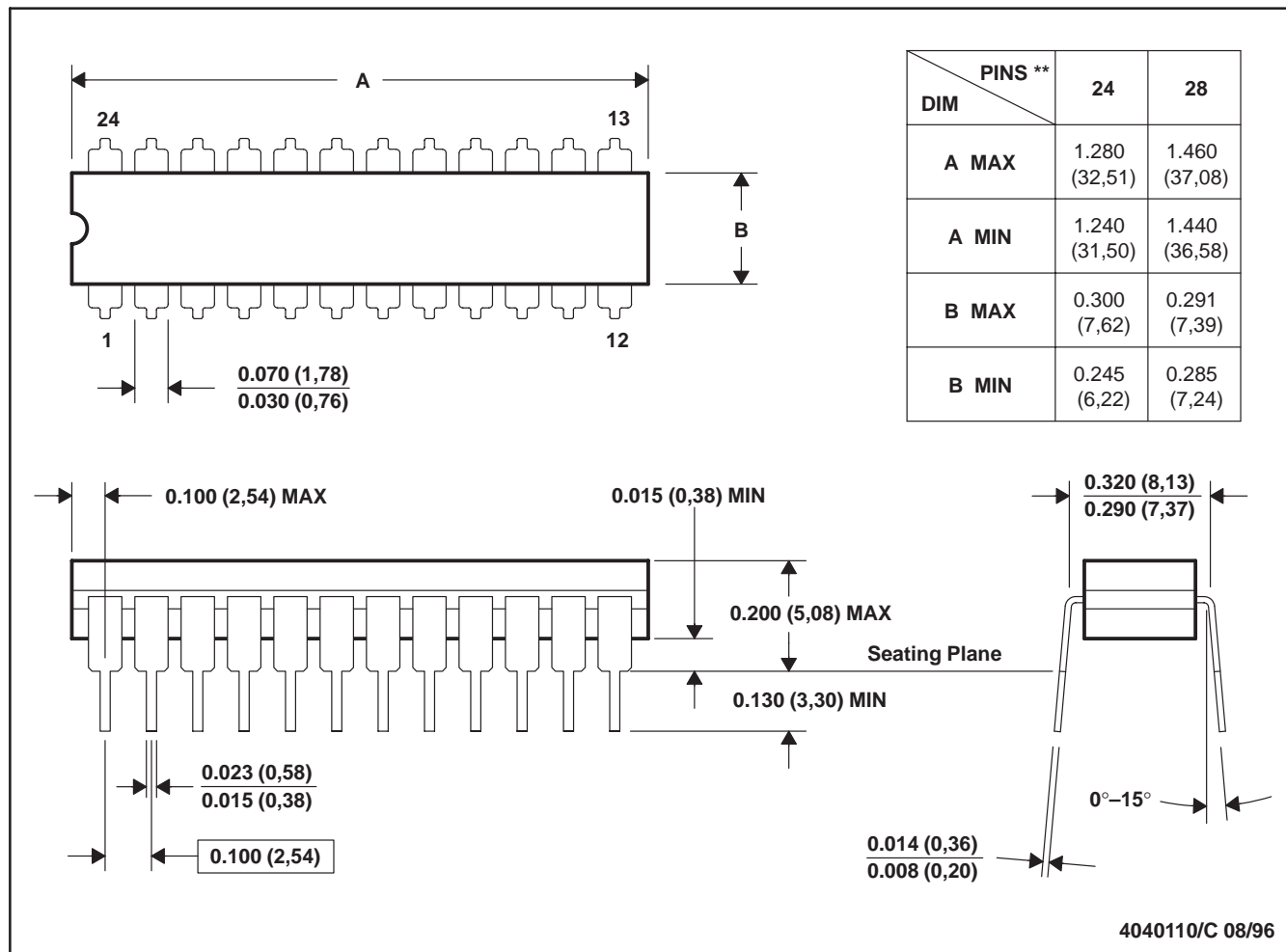


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

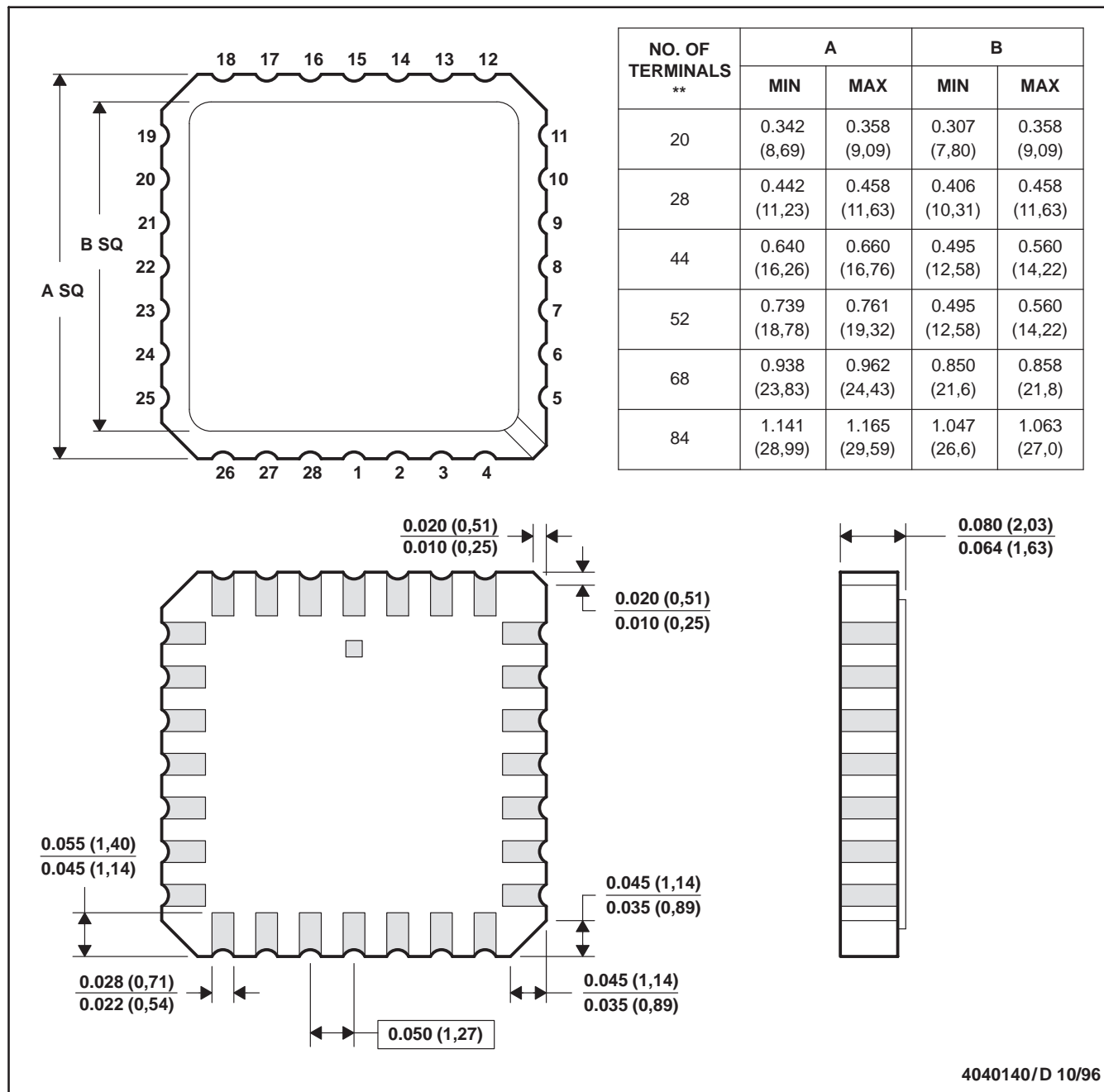
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



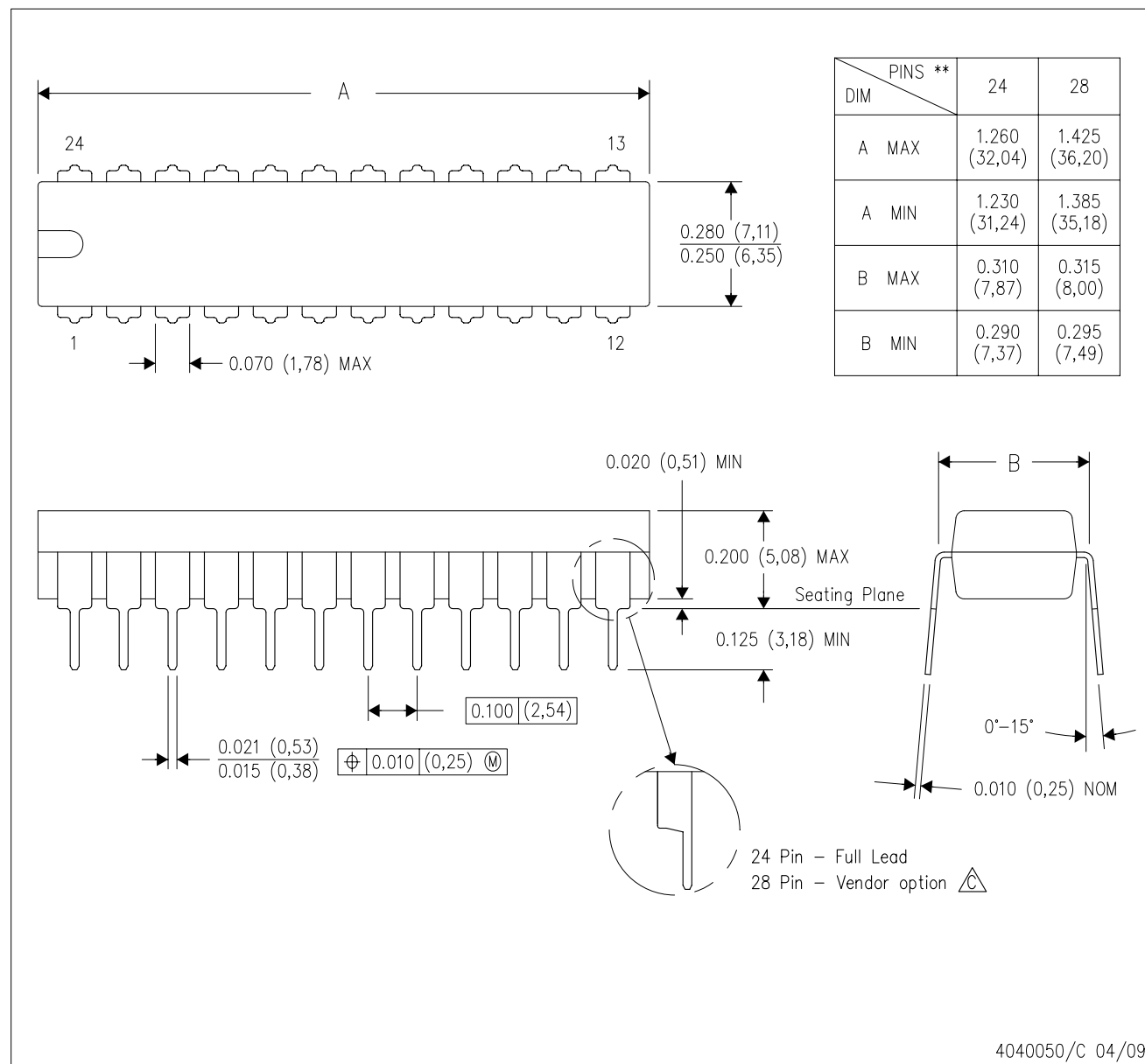
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

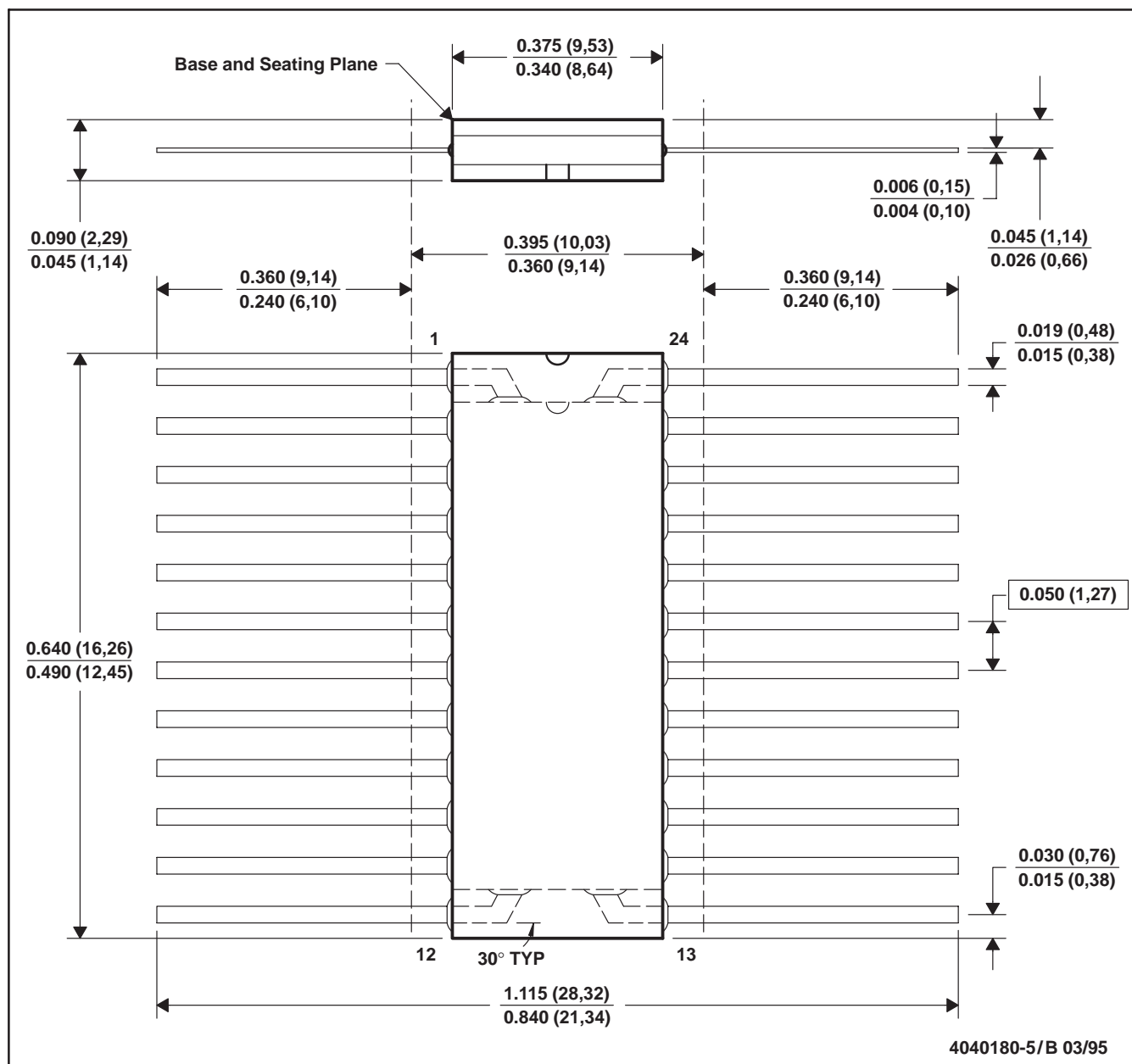
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

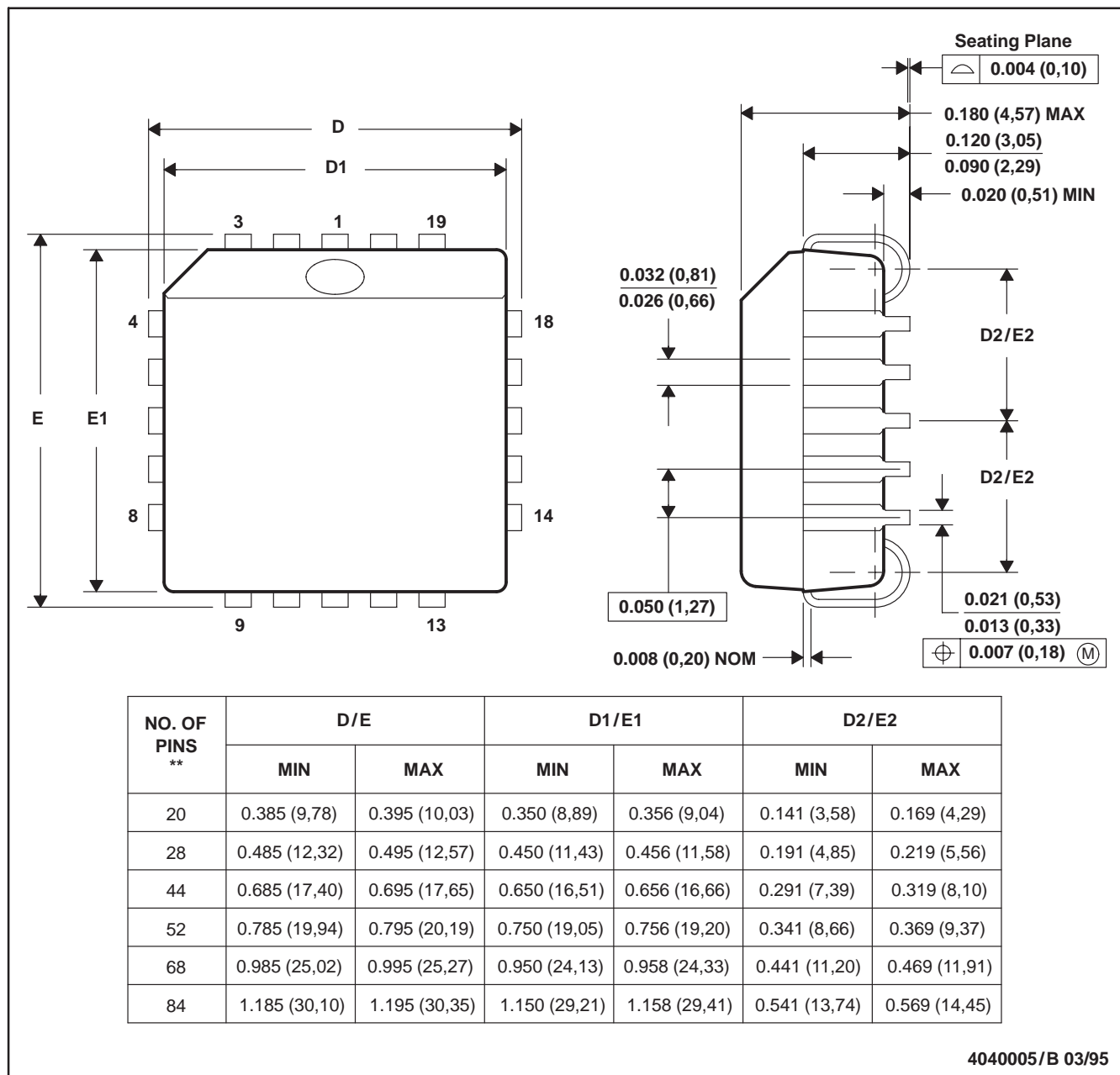


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

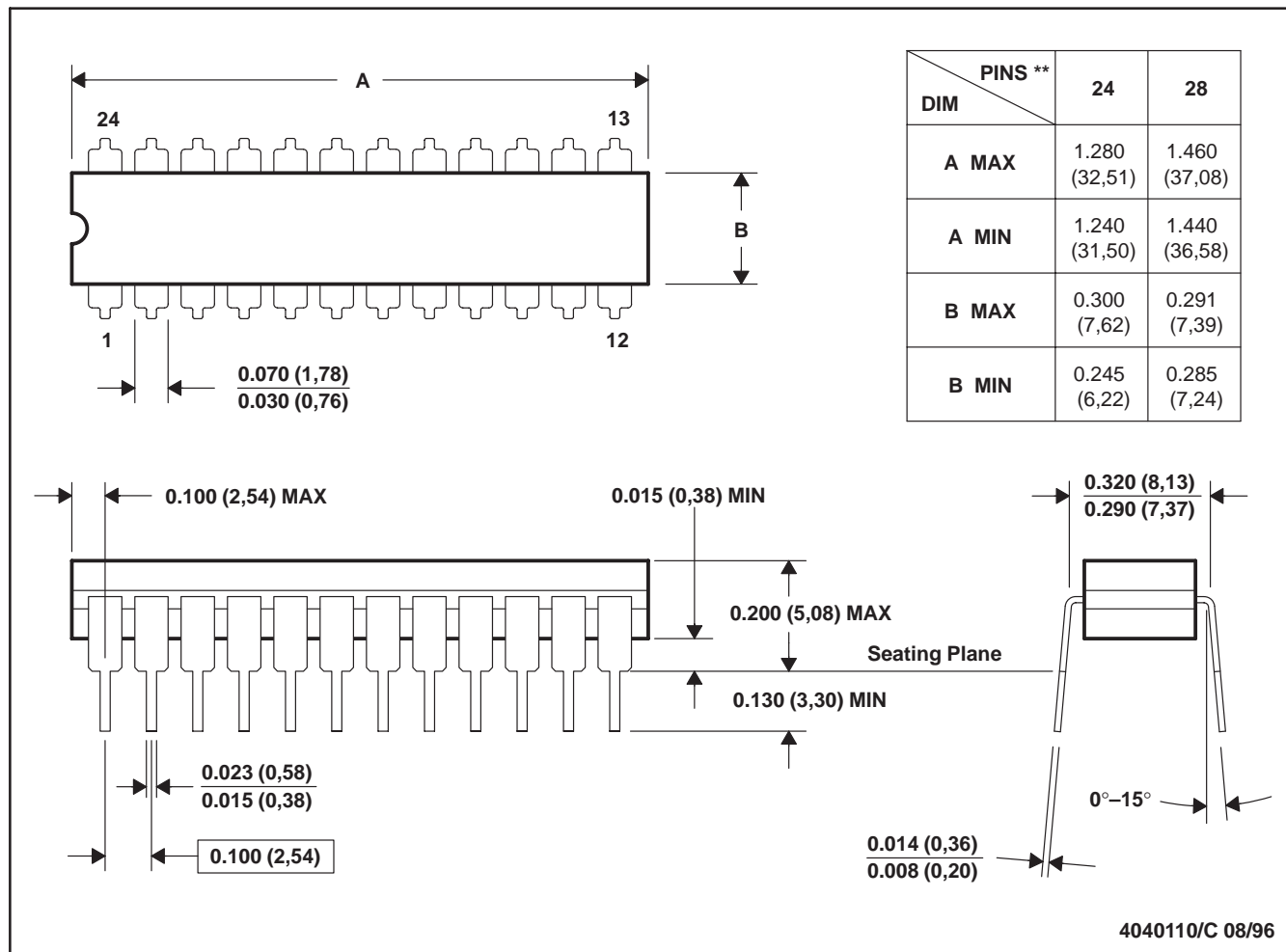


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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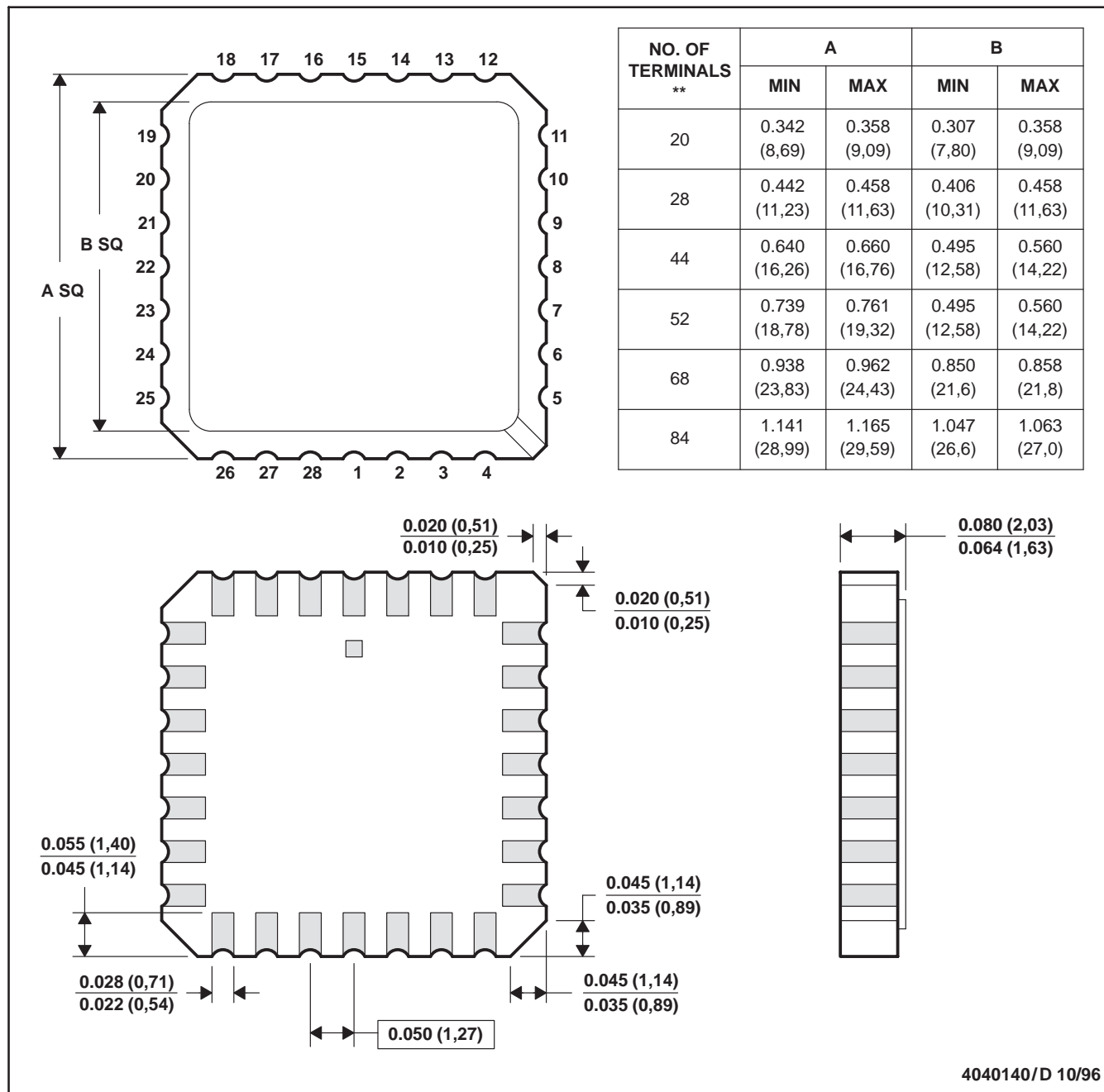
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



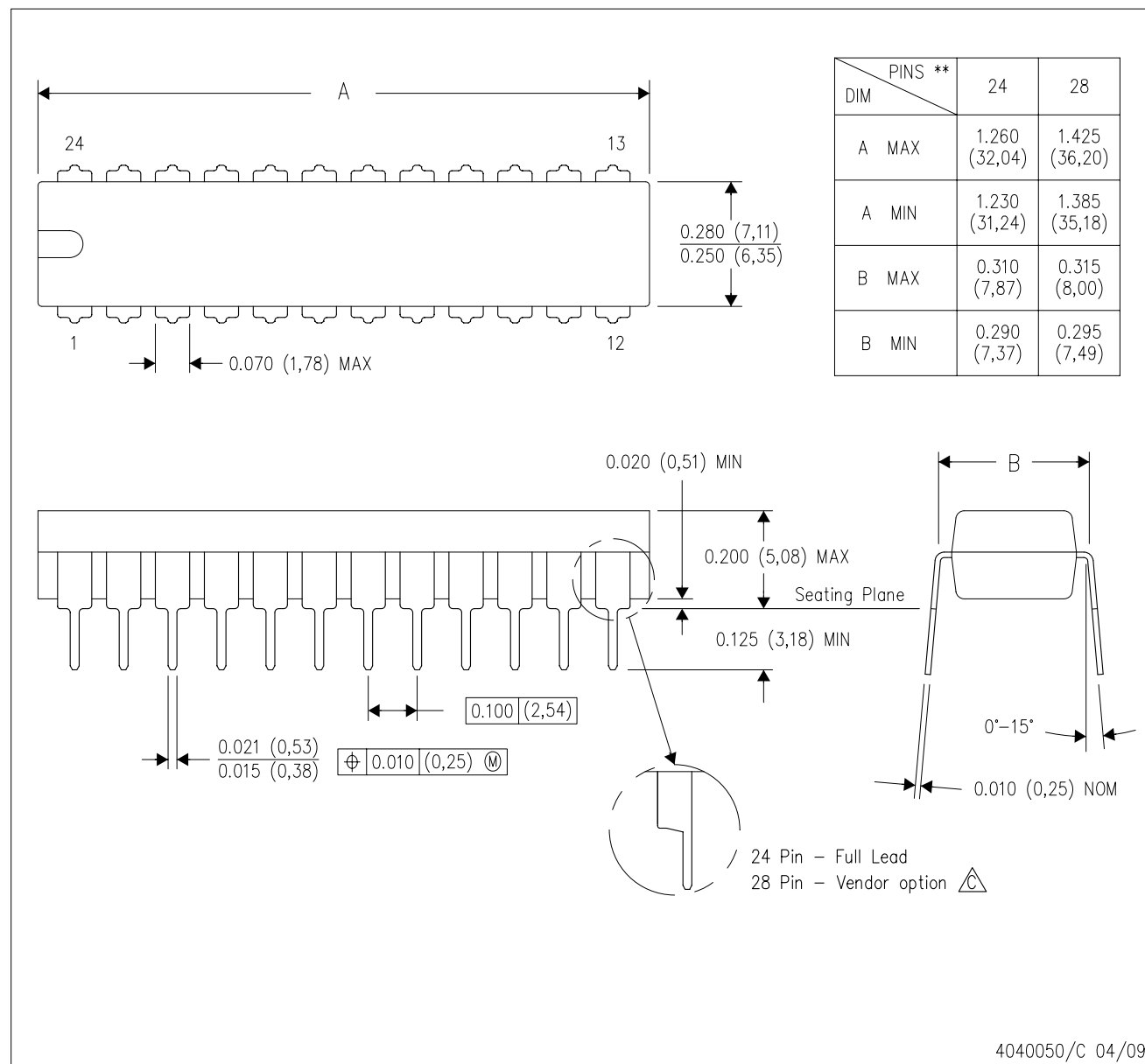
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 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

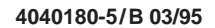
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

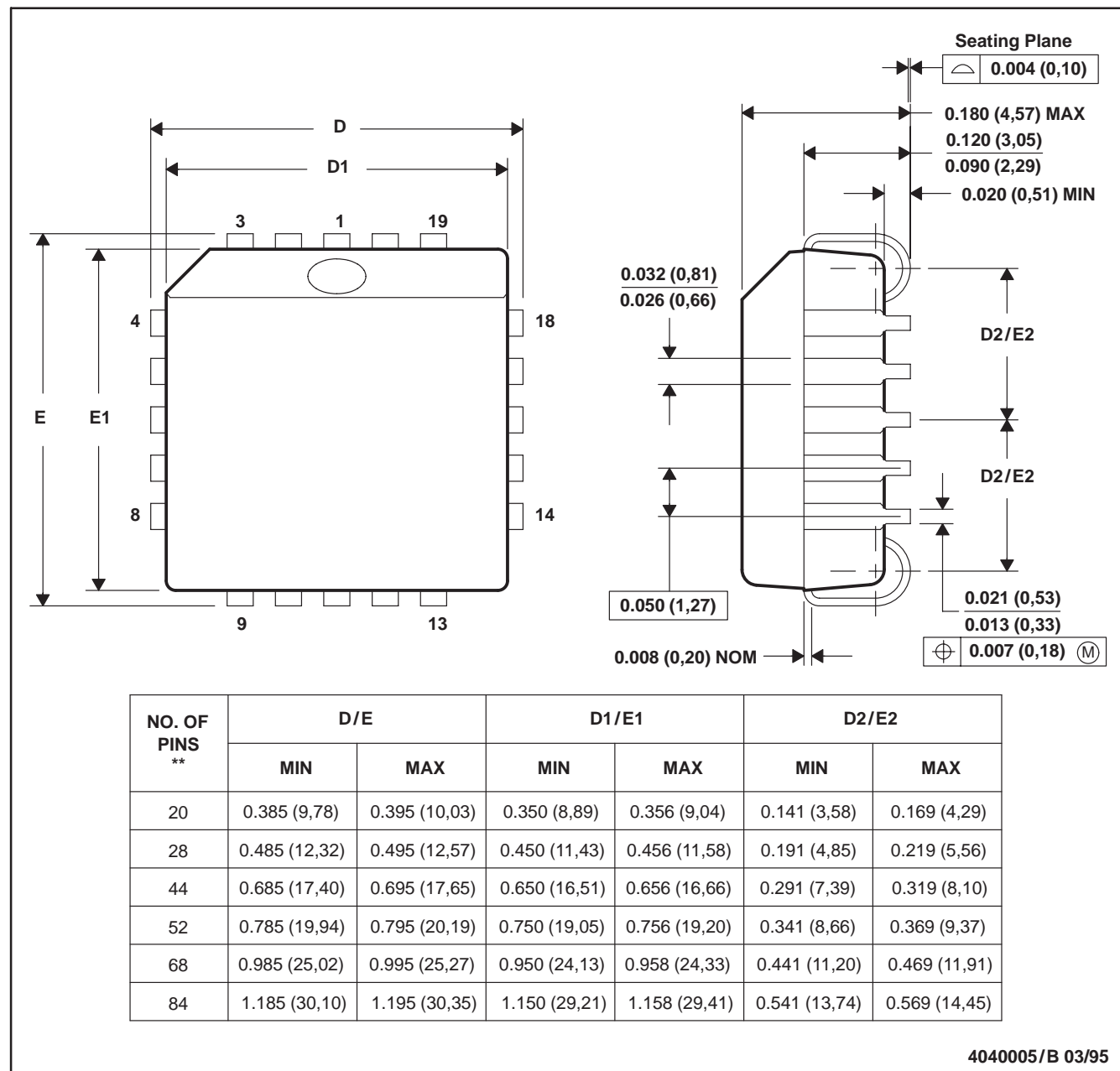


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

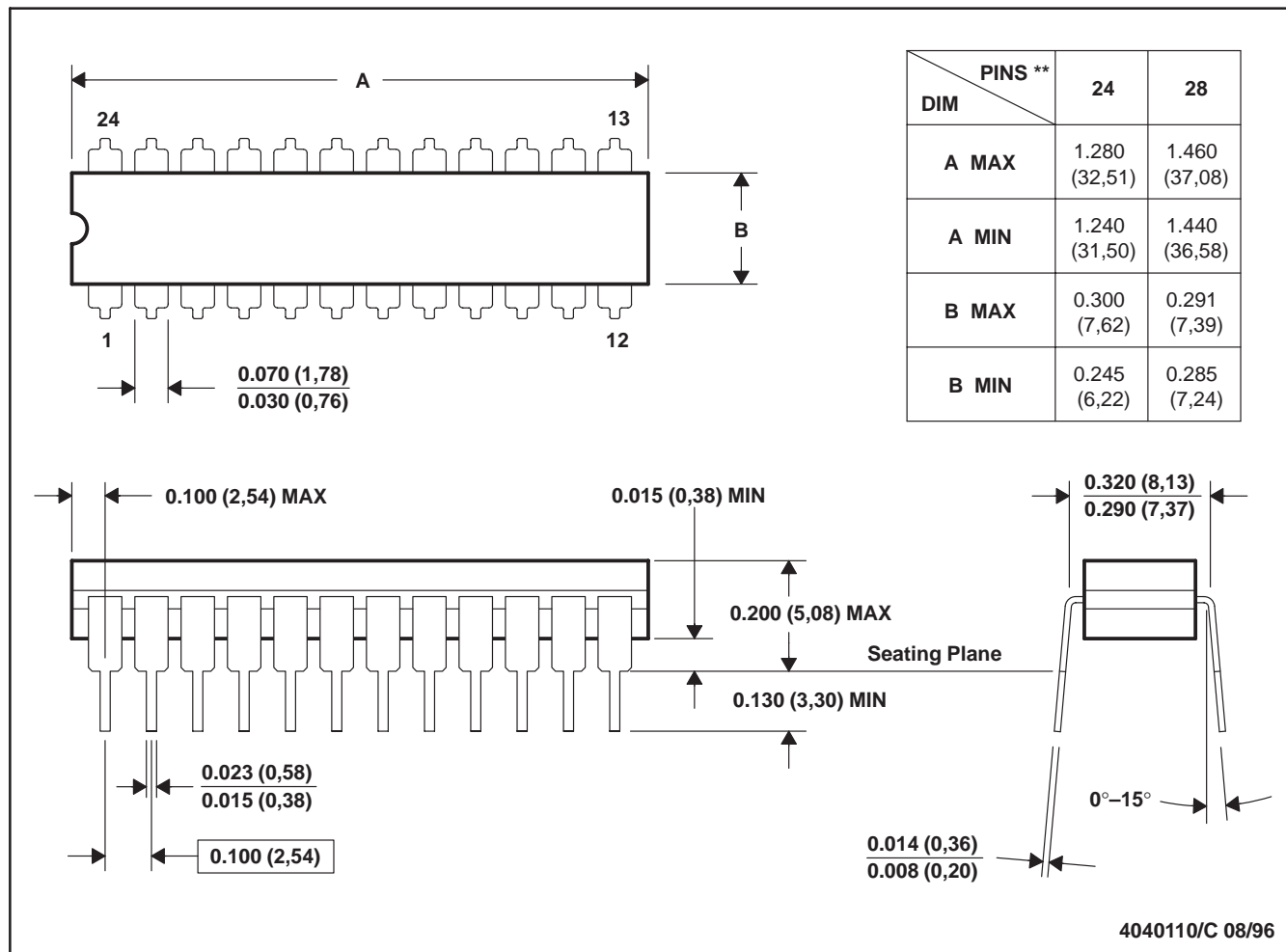


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



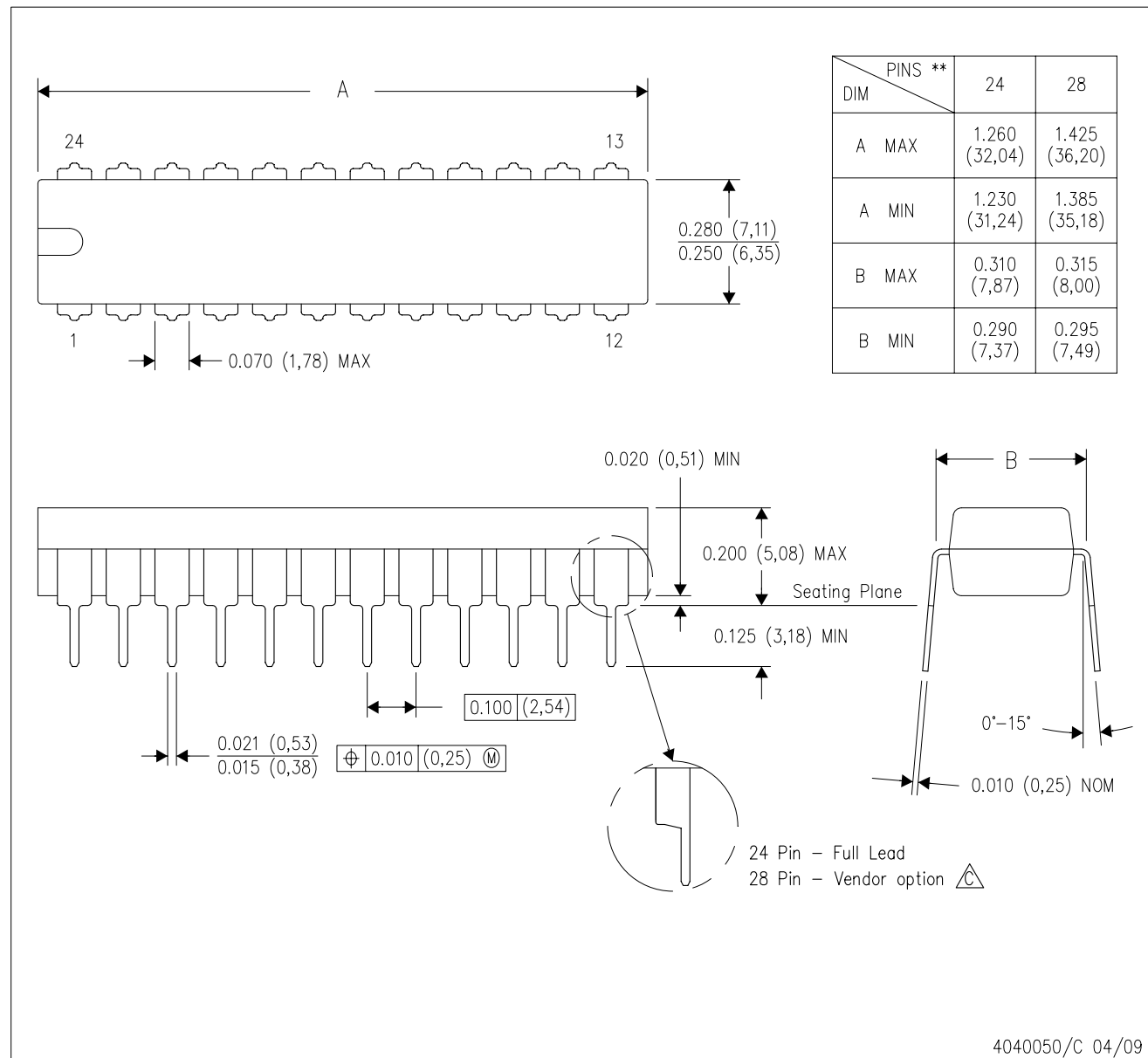
- NOTES:
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 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

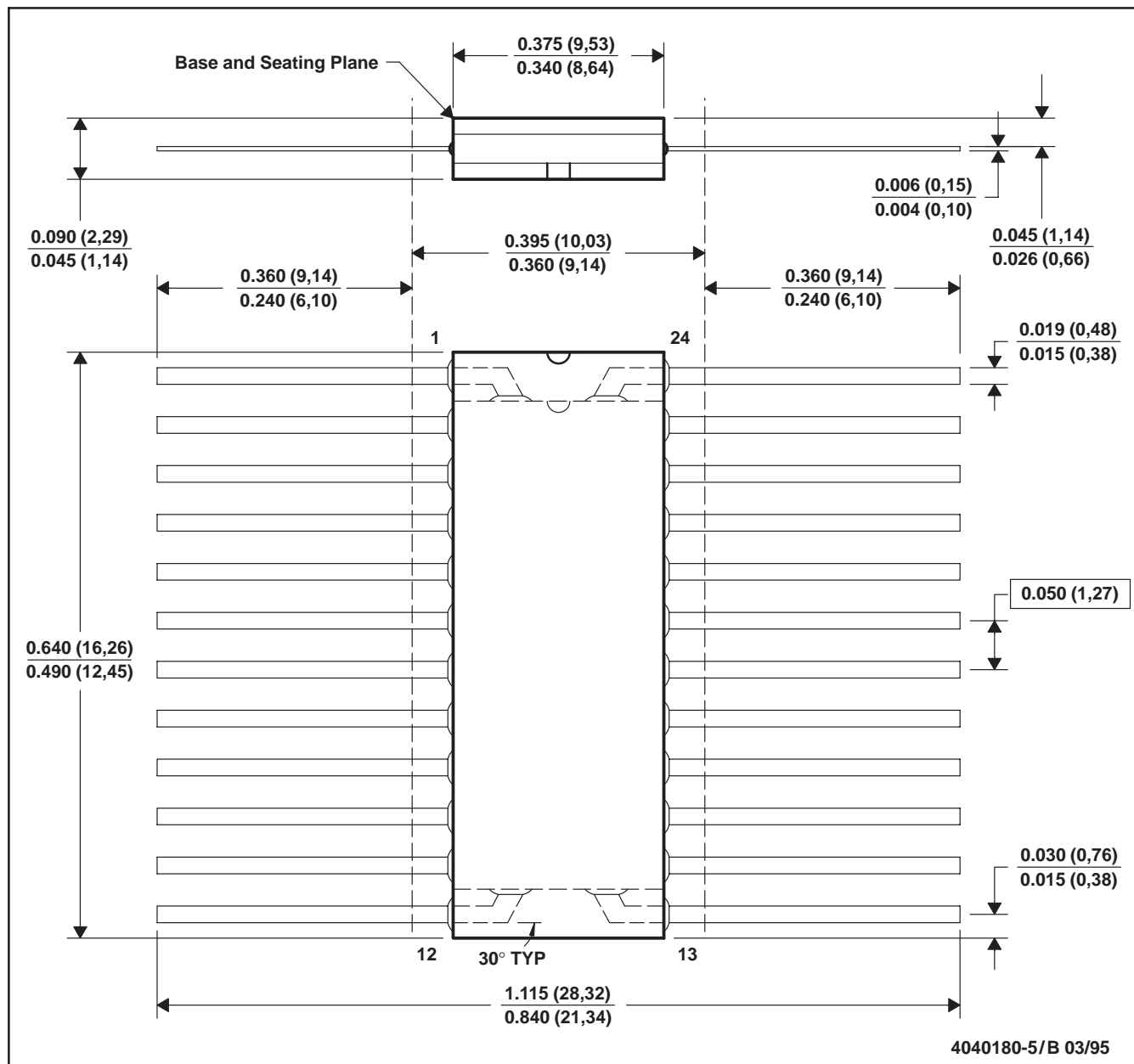
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

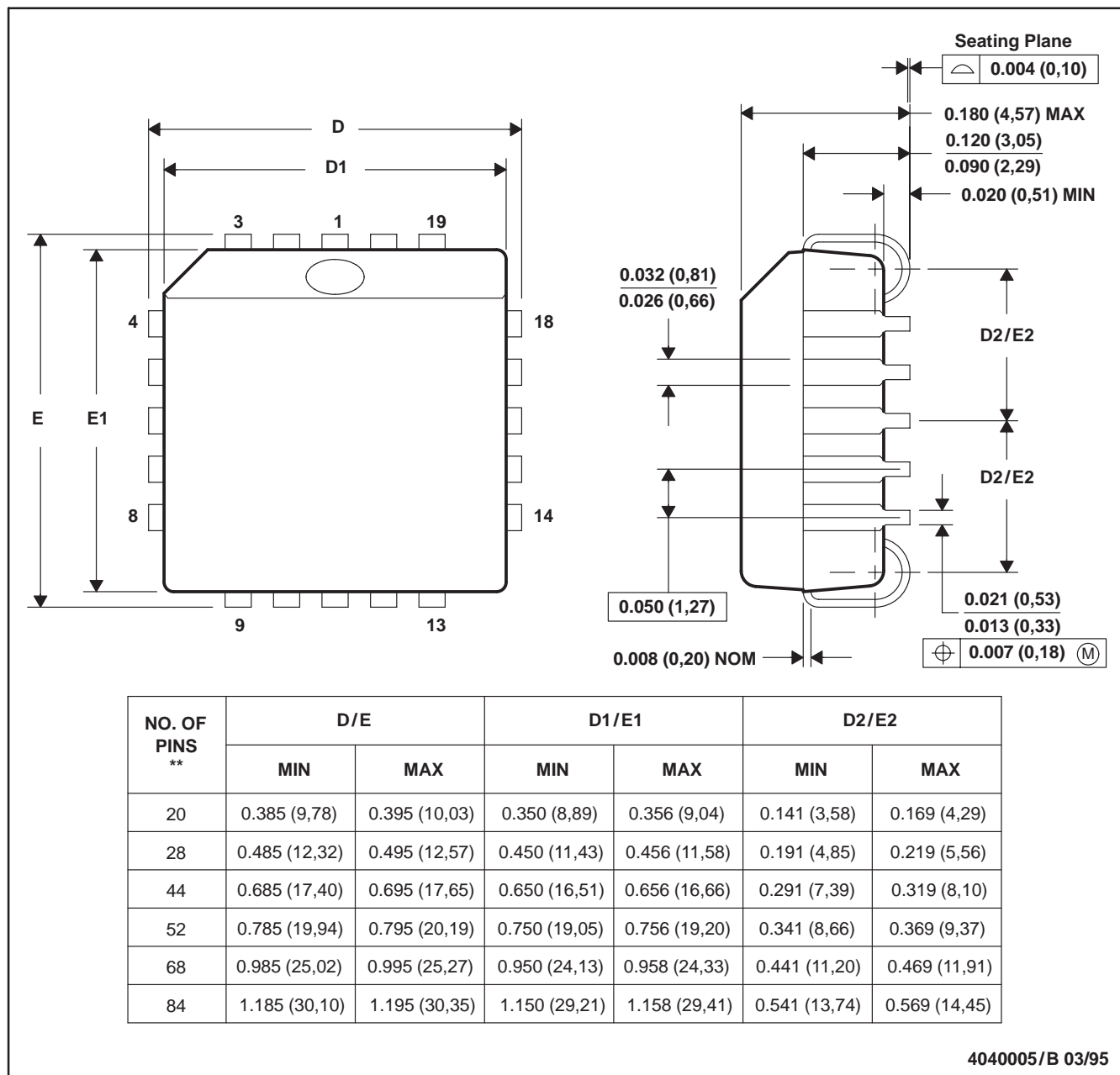


- NOTES:
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 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

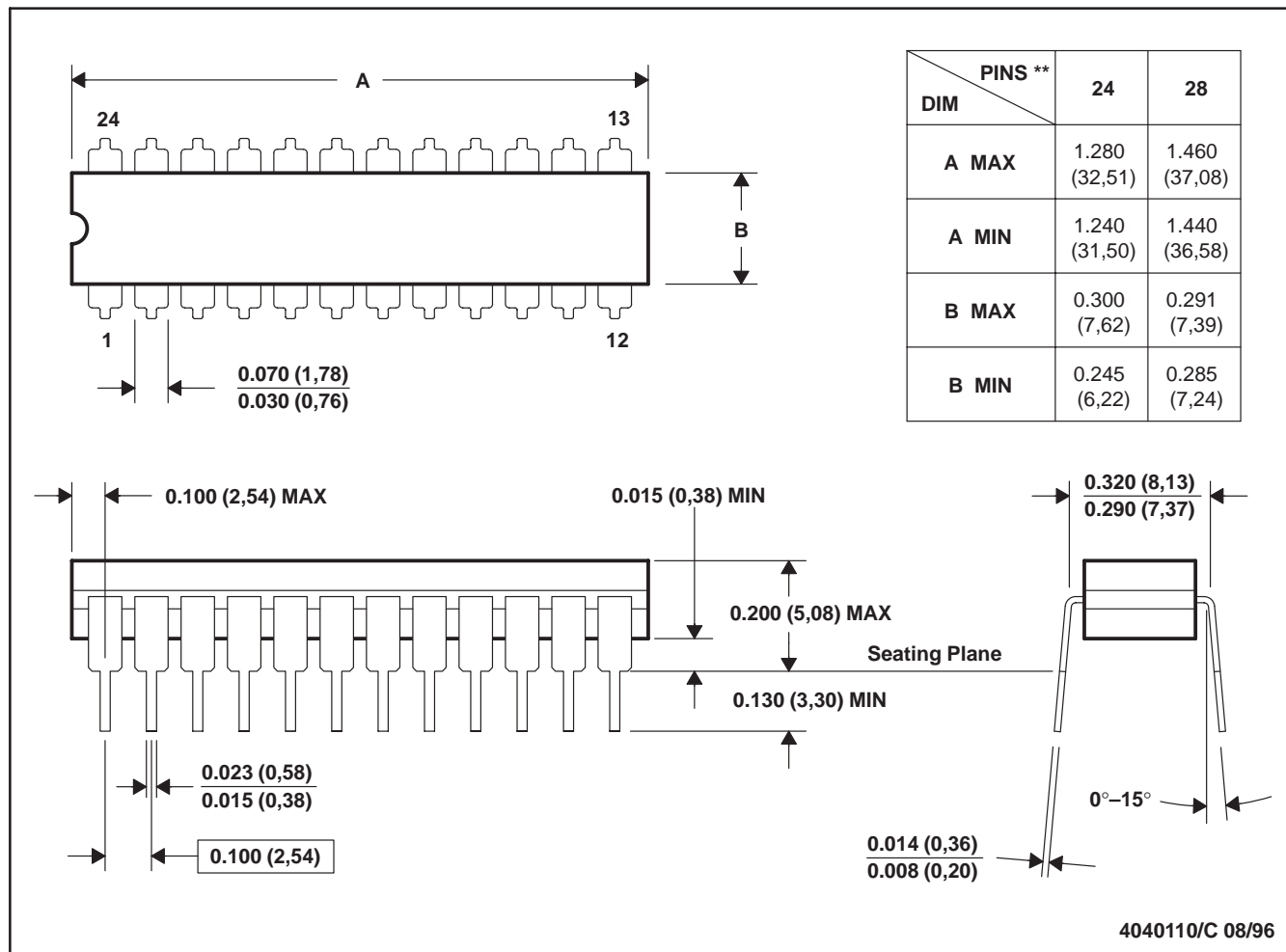


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

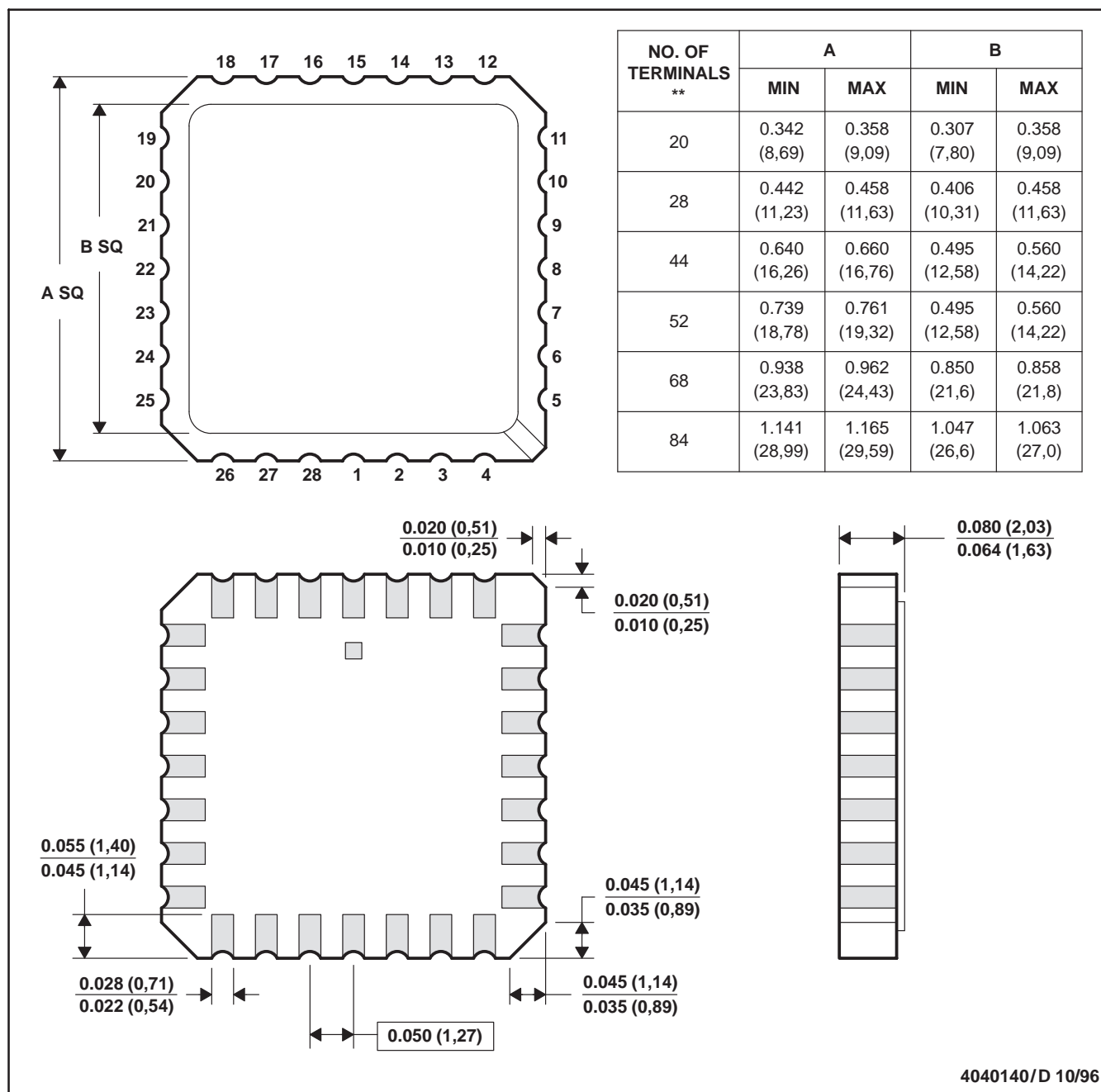
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



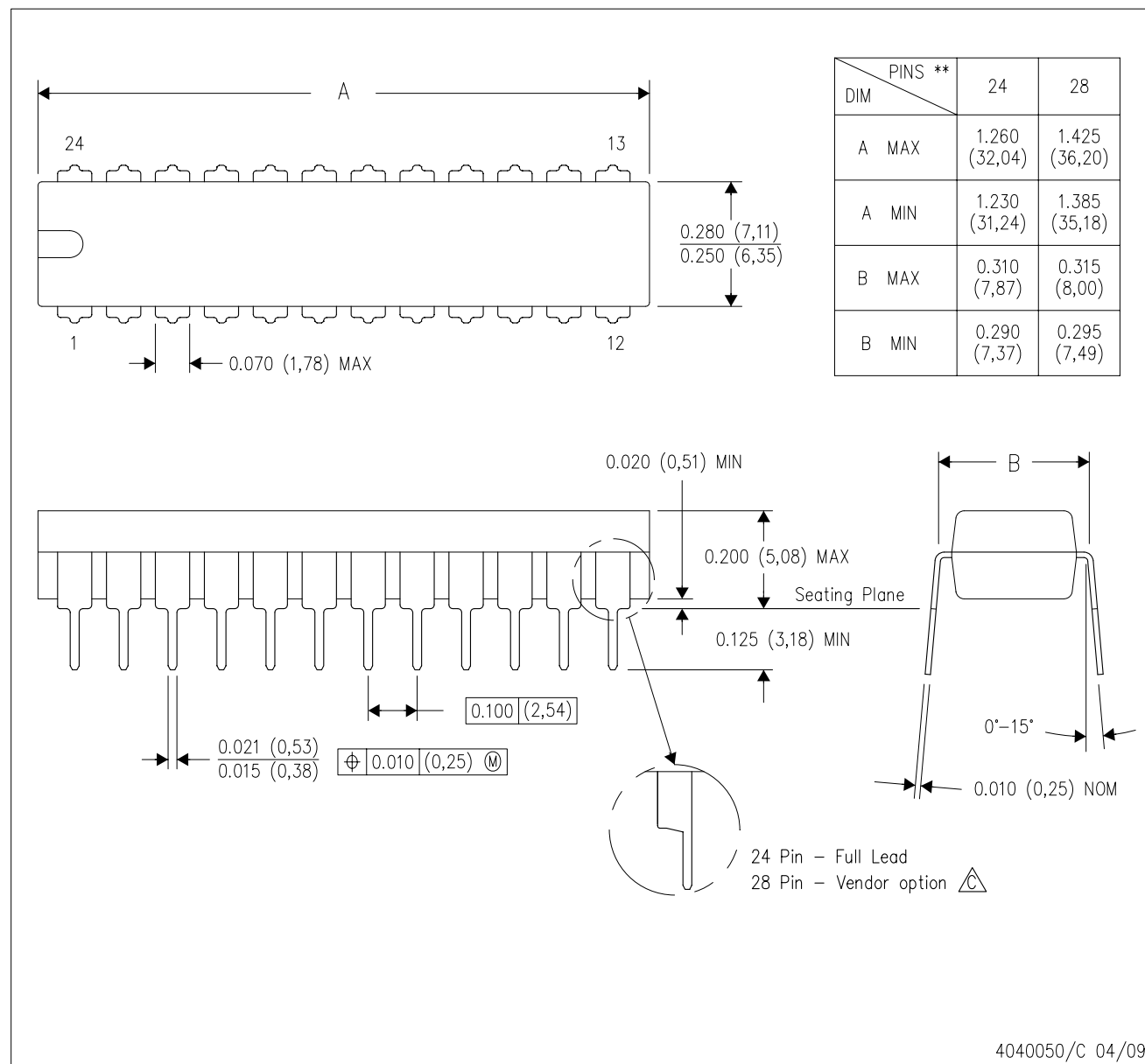
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

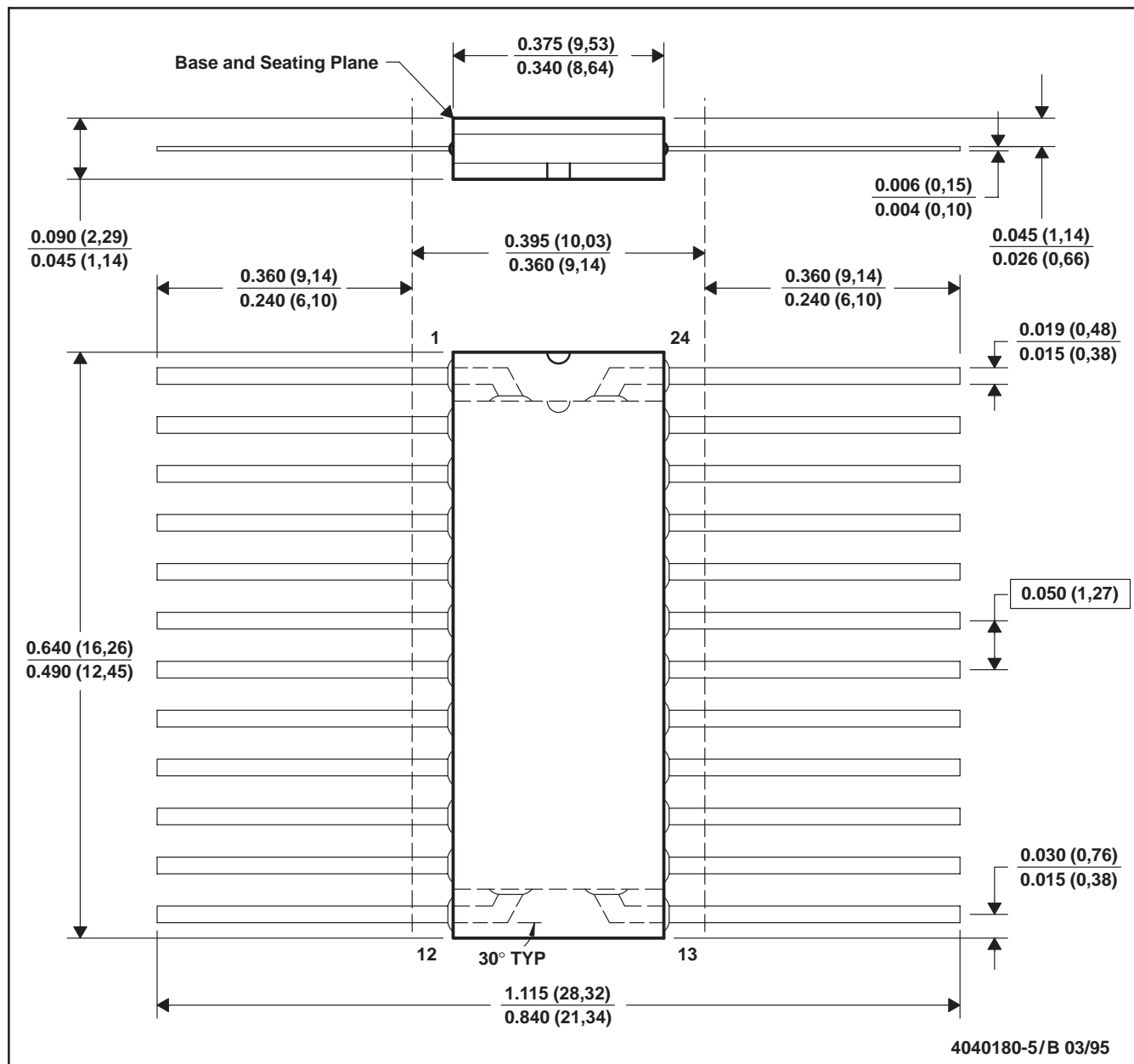
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

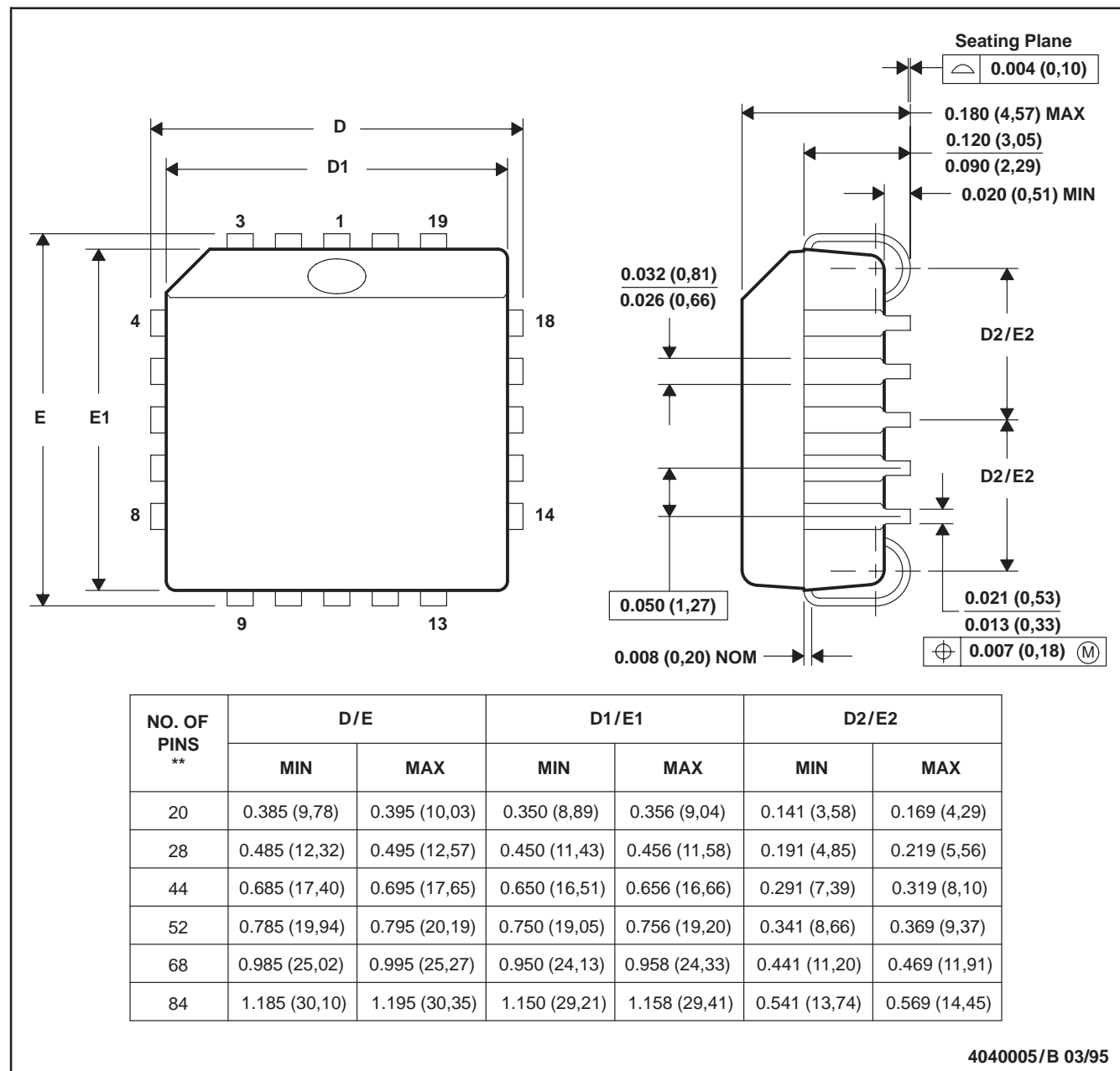


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

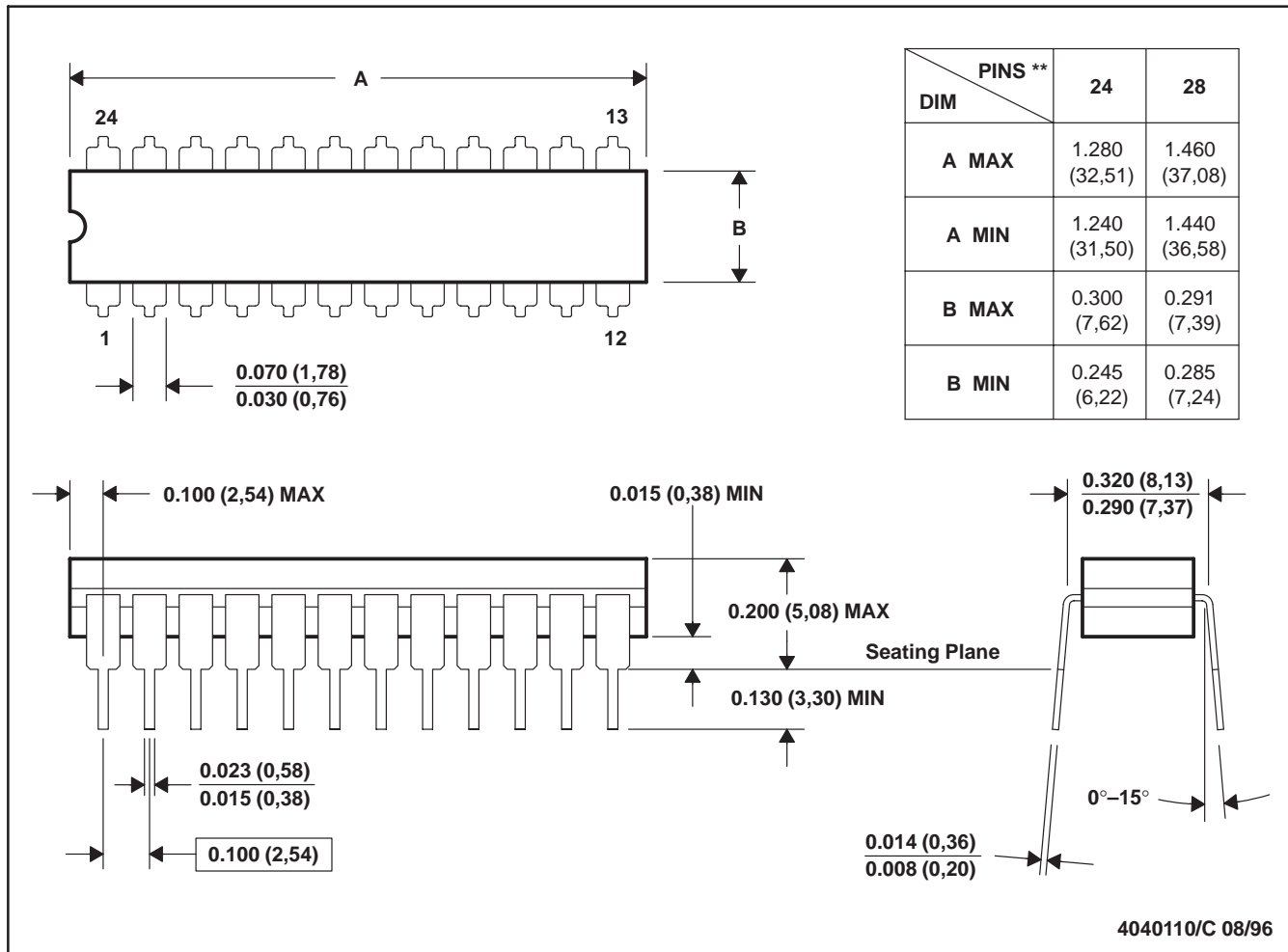


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Index point is provided on cap for terminal identification.
 - E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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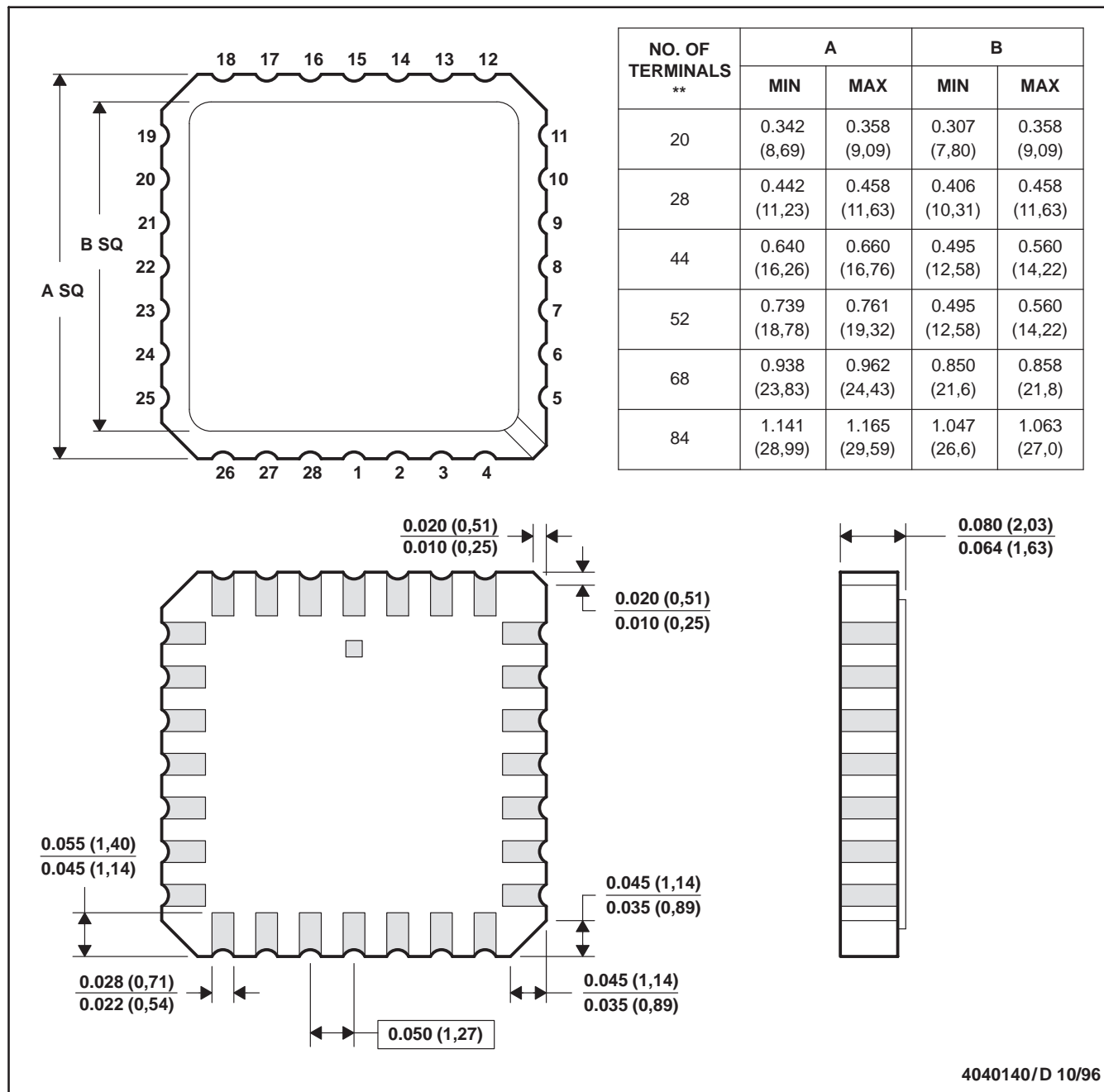
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



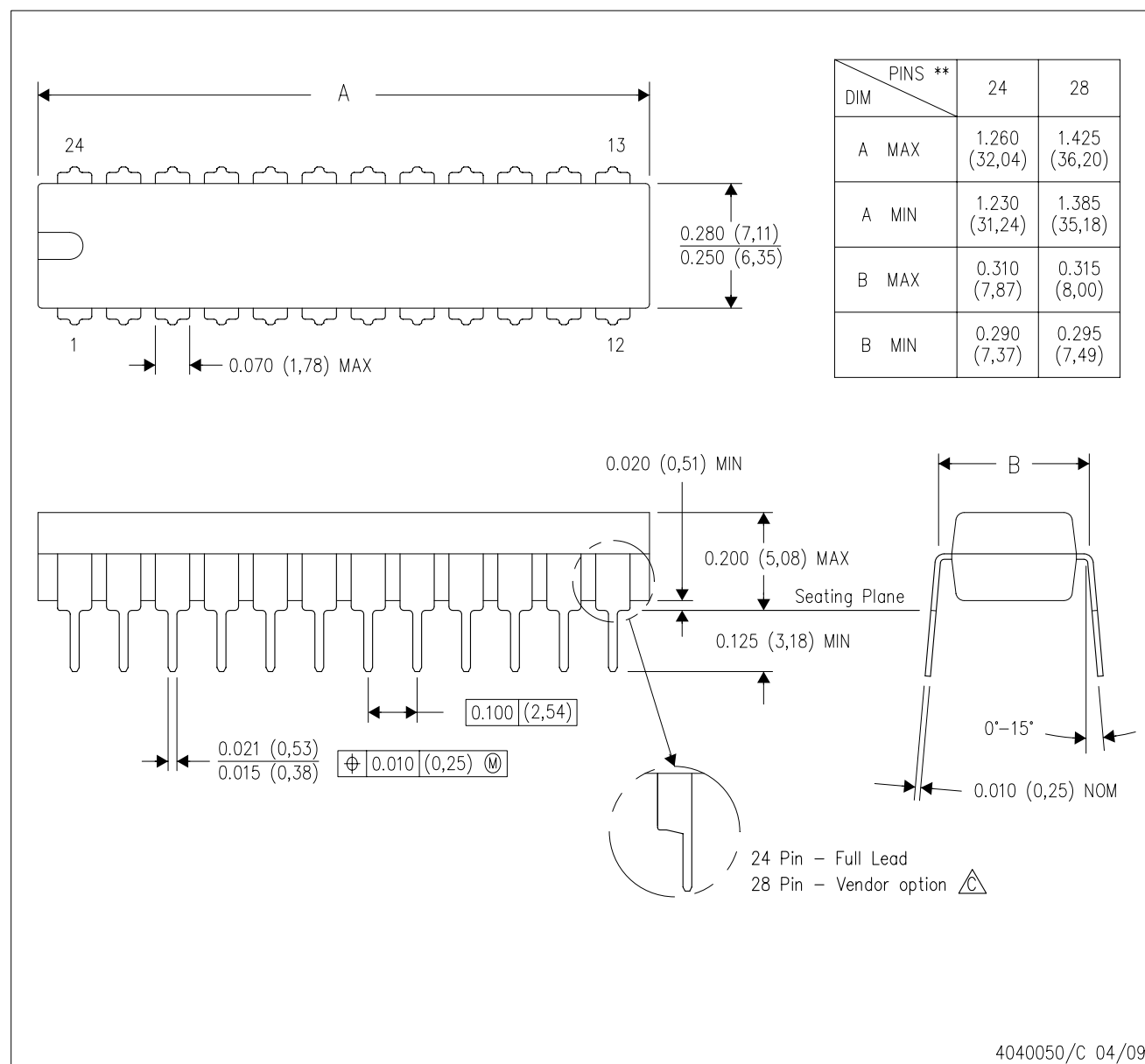
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

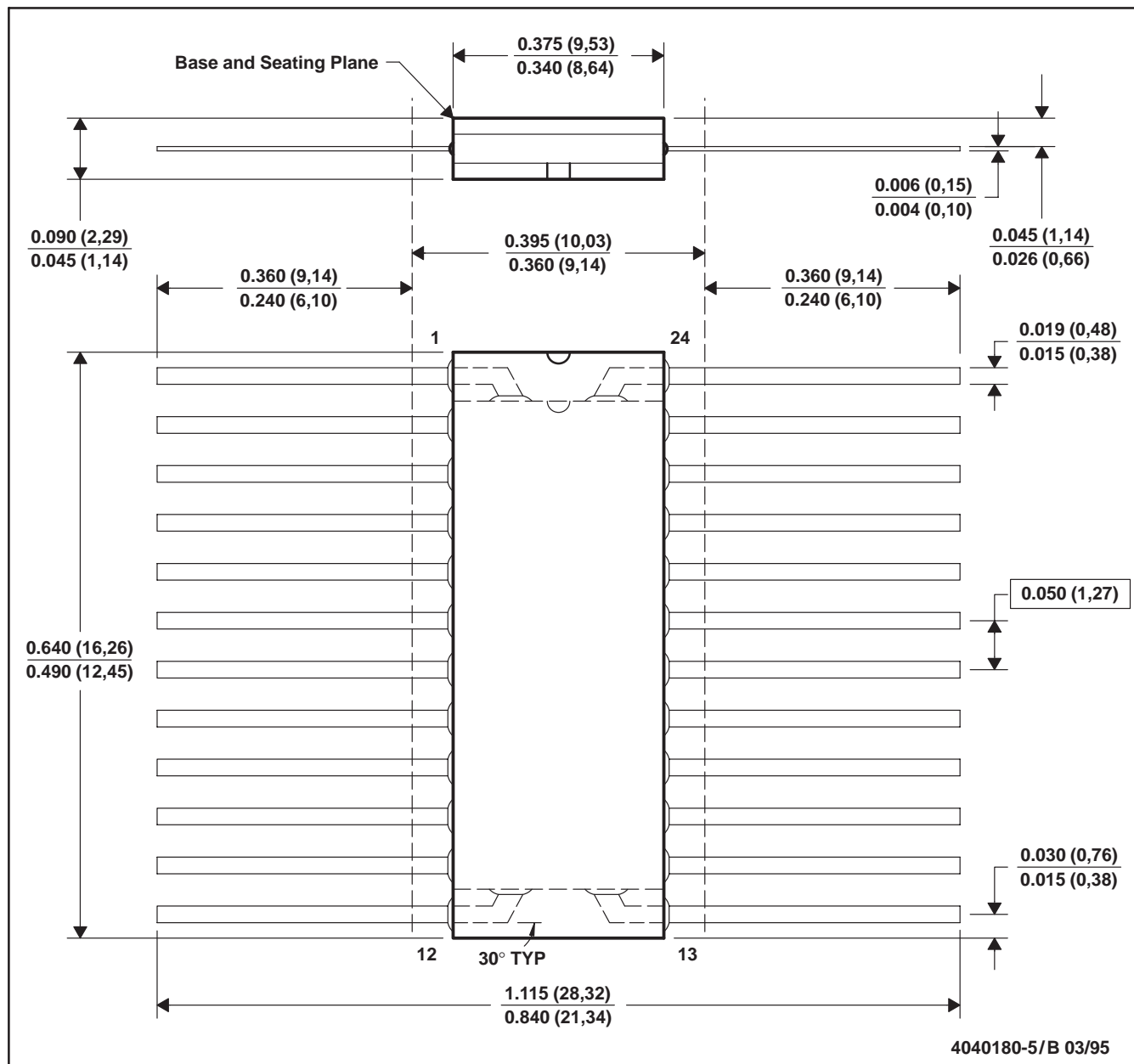
PLASTIC DUAL-IN-LINE PACKAGE



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B. This drawing is subject to change without notice.
C. The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

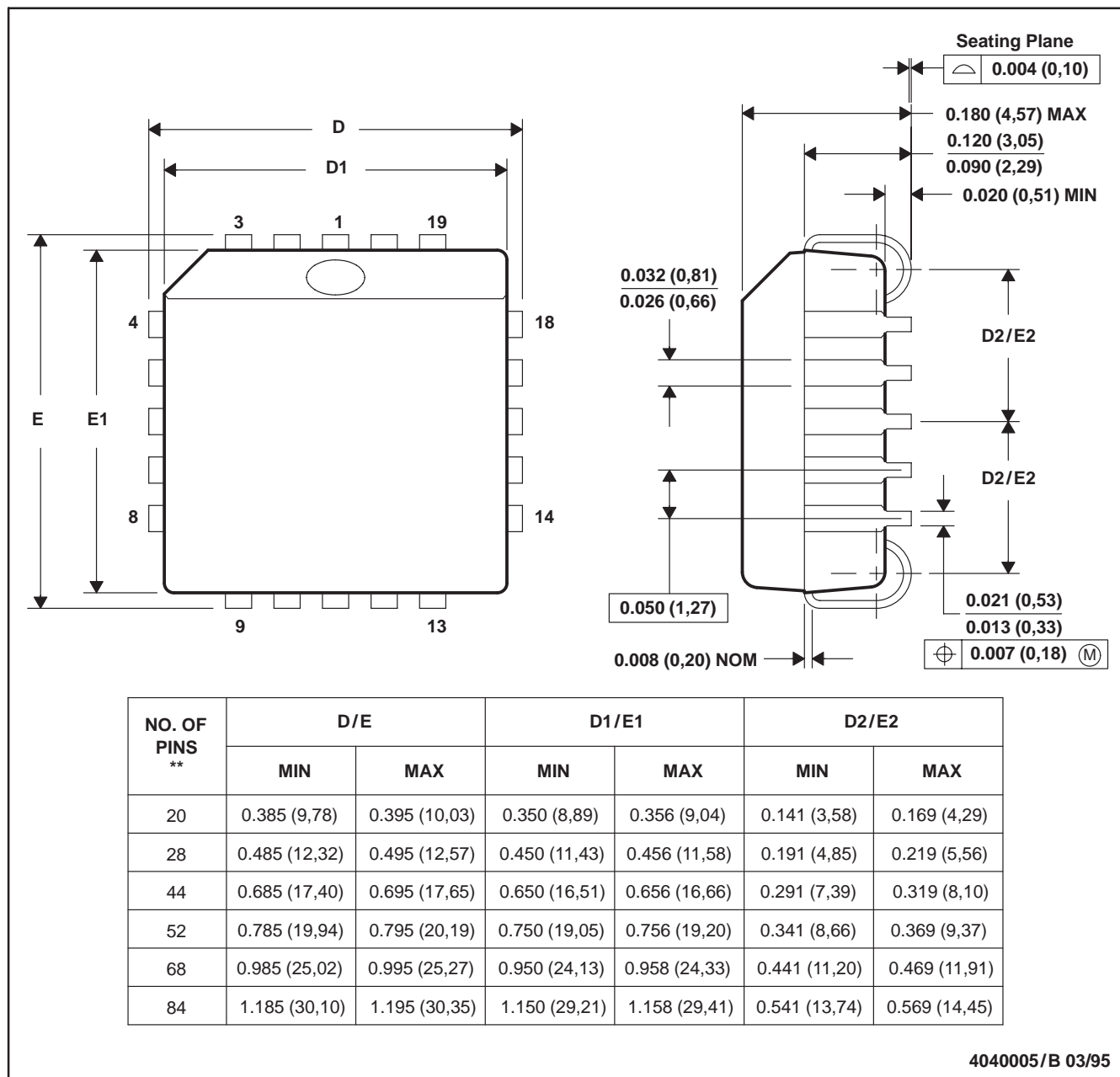


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

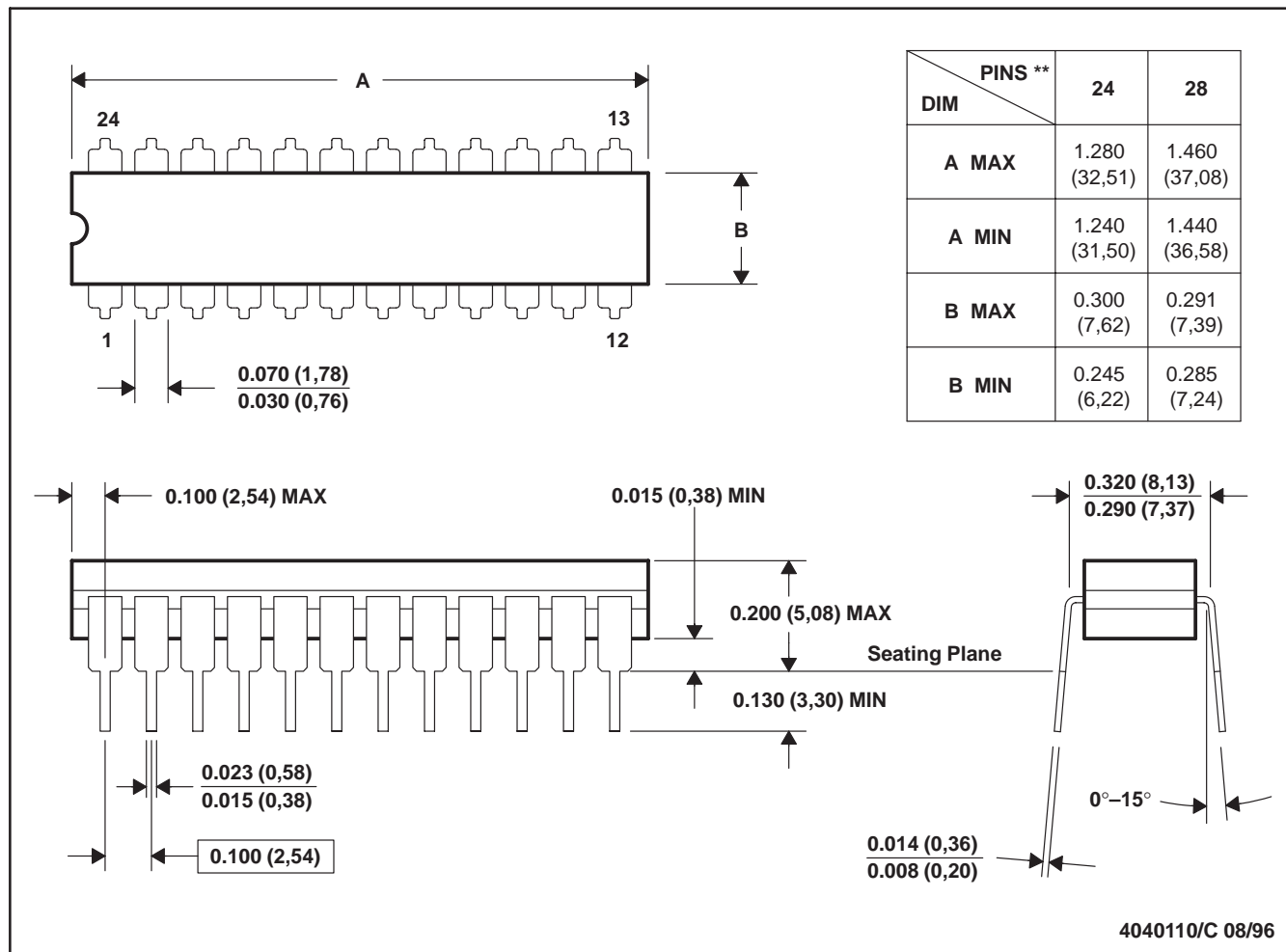


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

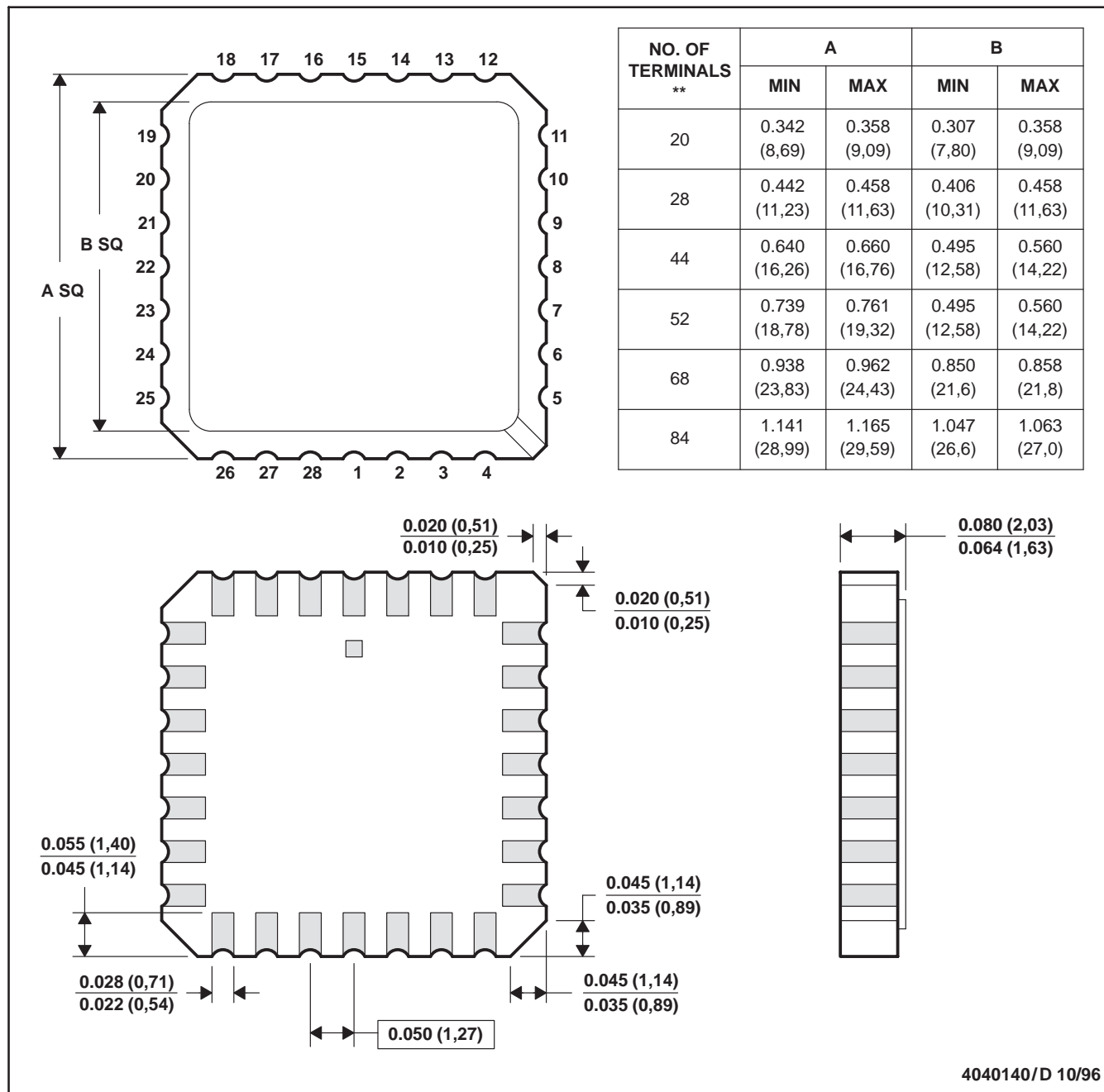
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



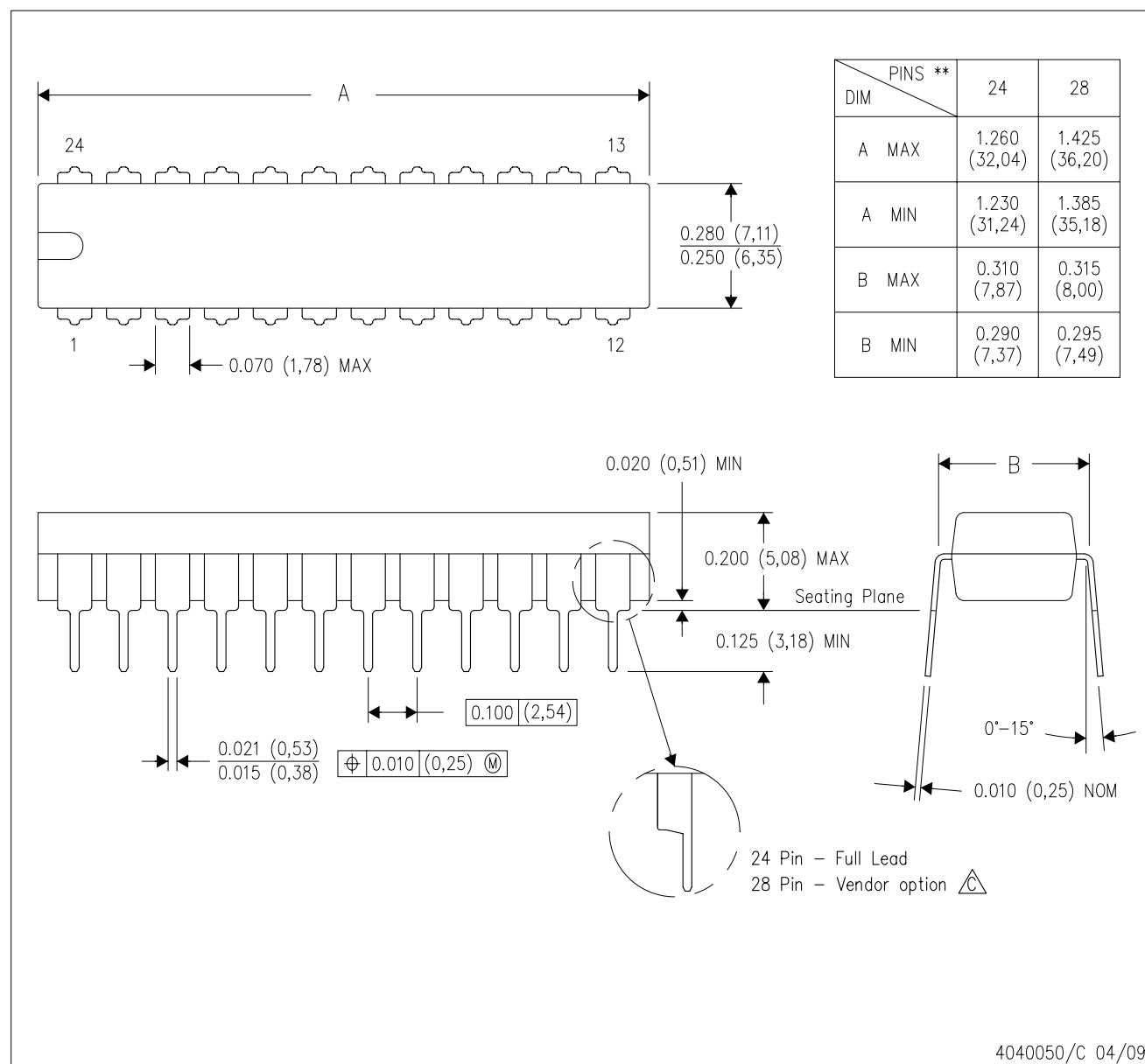
- NOTES:
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

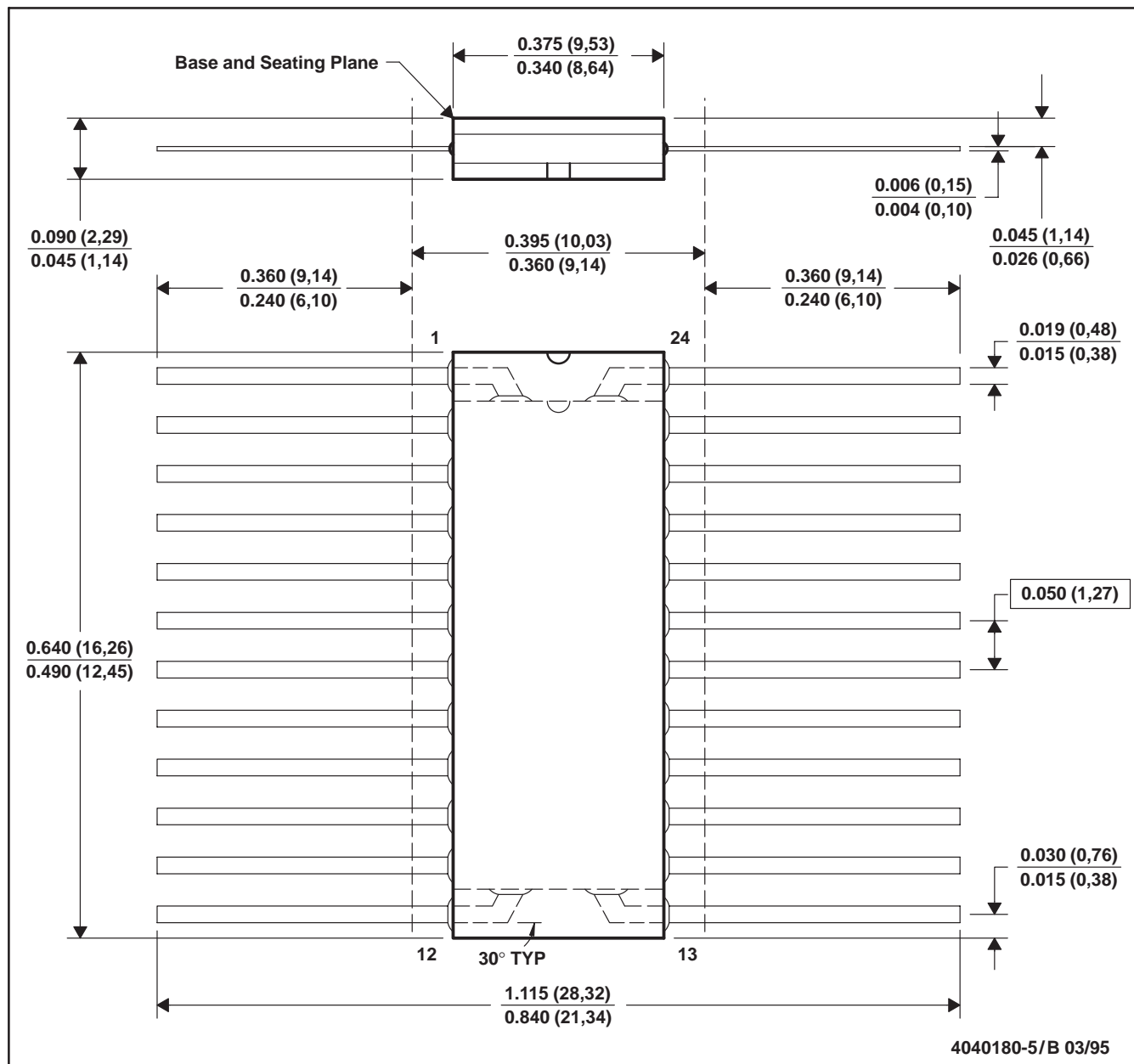
PLASTIC DUAL-IN-LINE PACKAGE



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C. The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

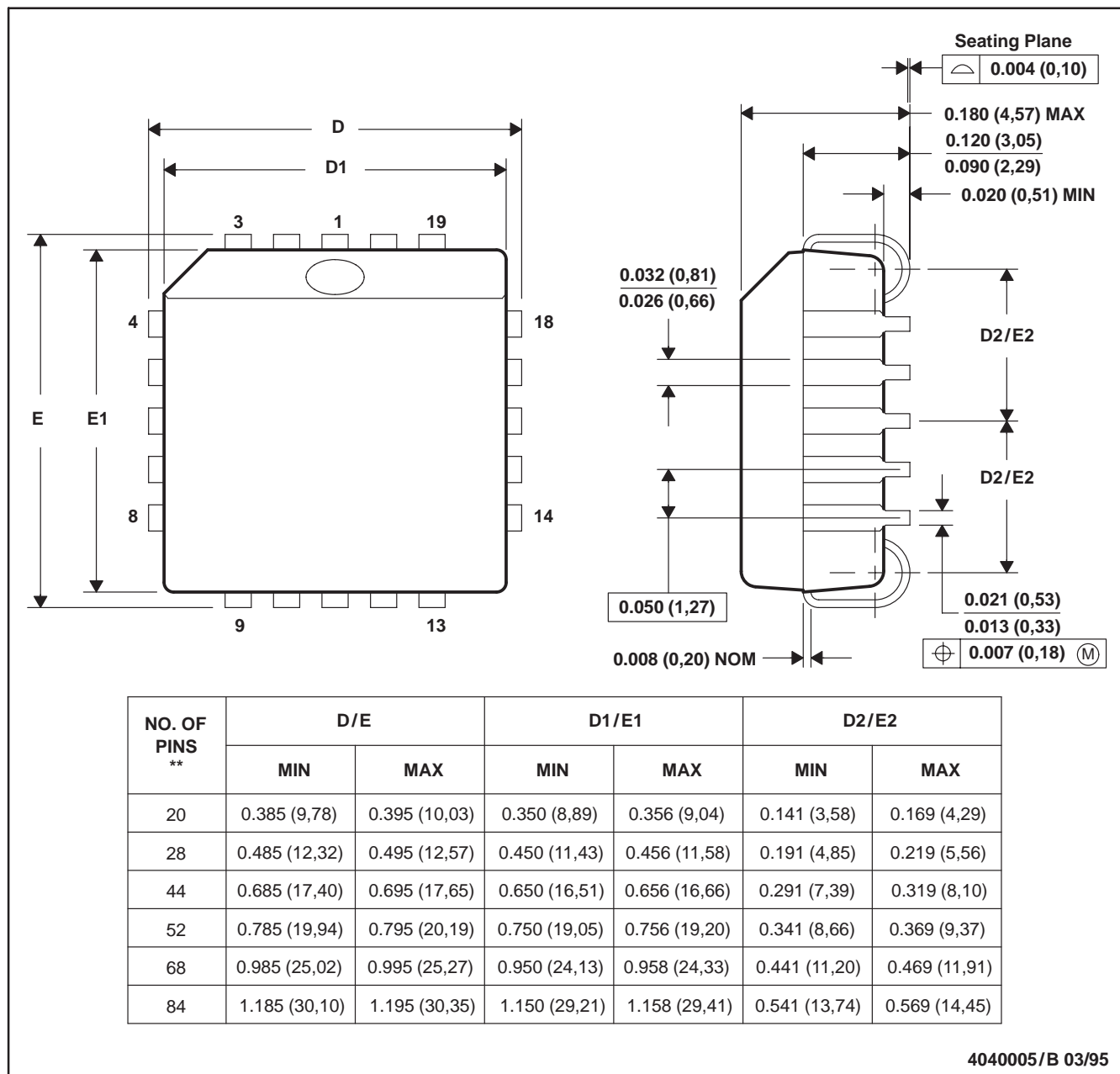


- NOTES:
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 - This drawing is subject to change without notice.
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 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

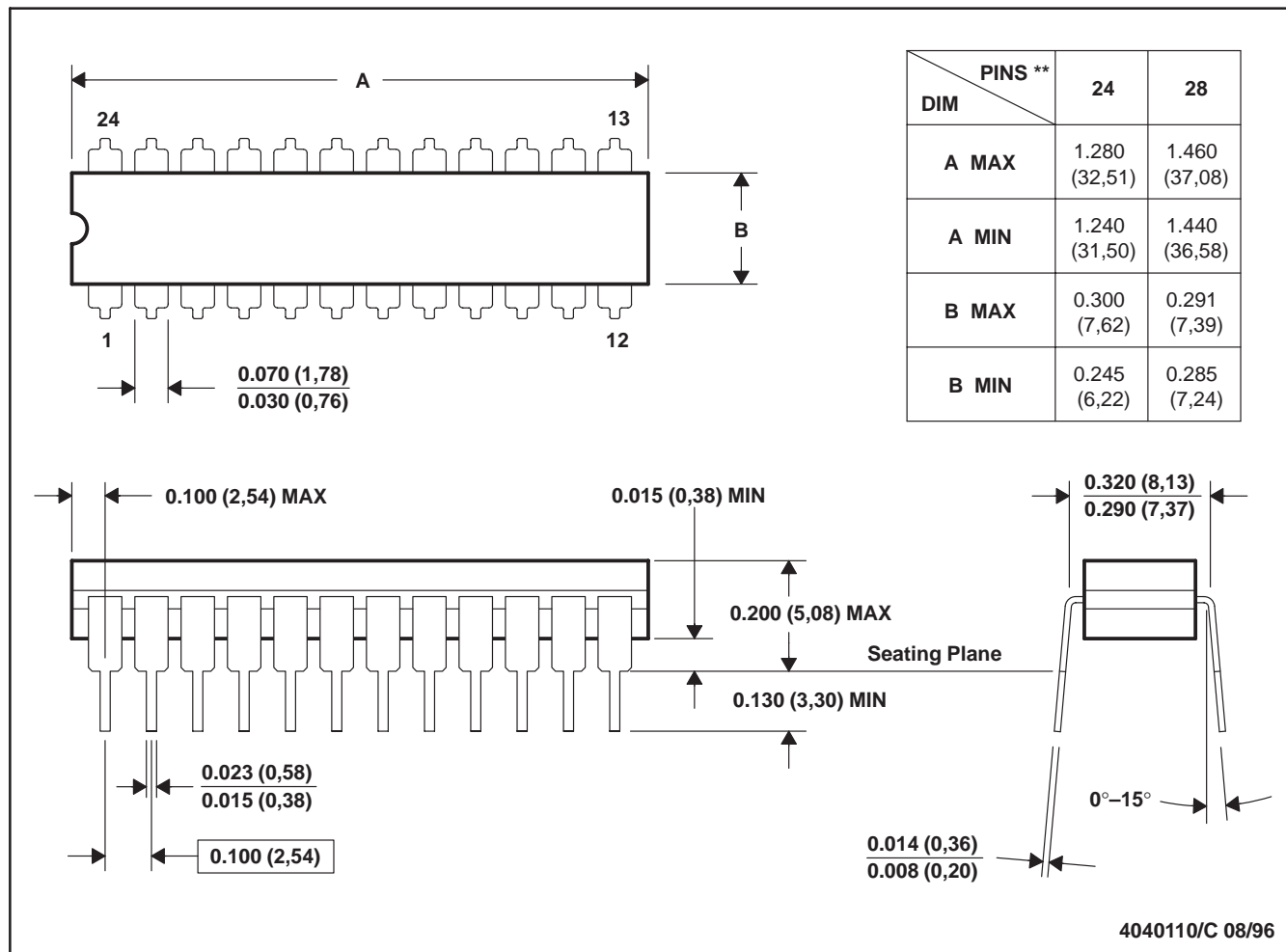


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



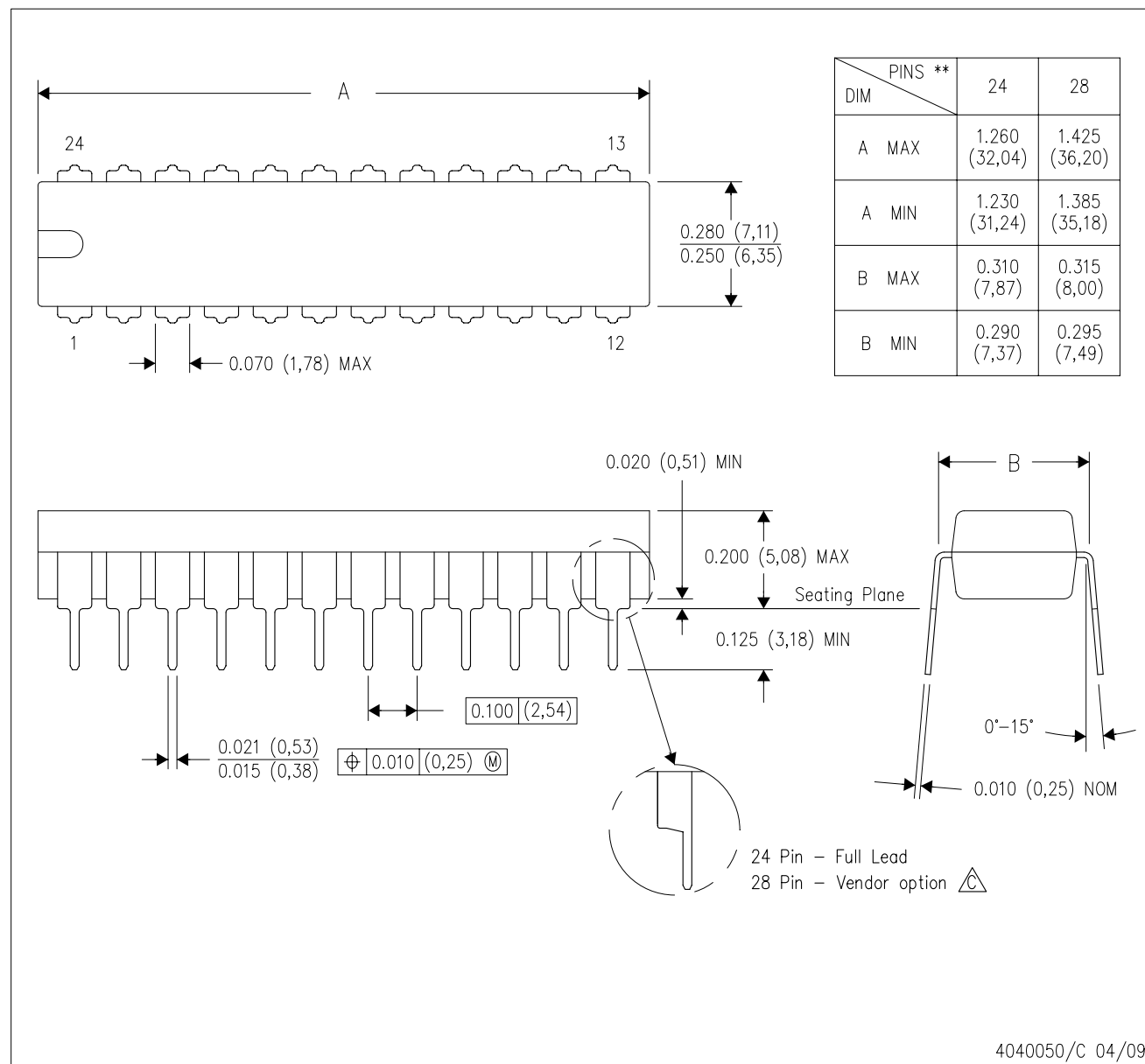
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MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

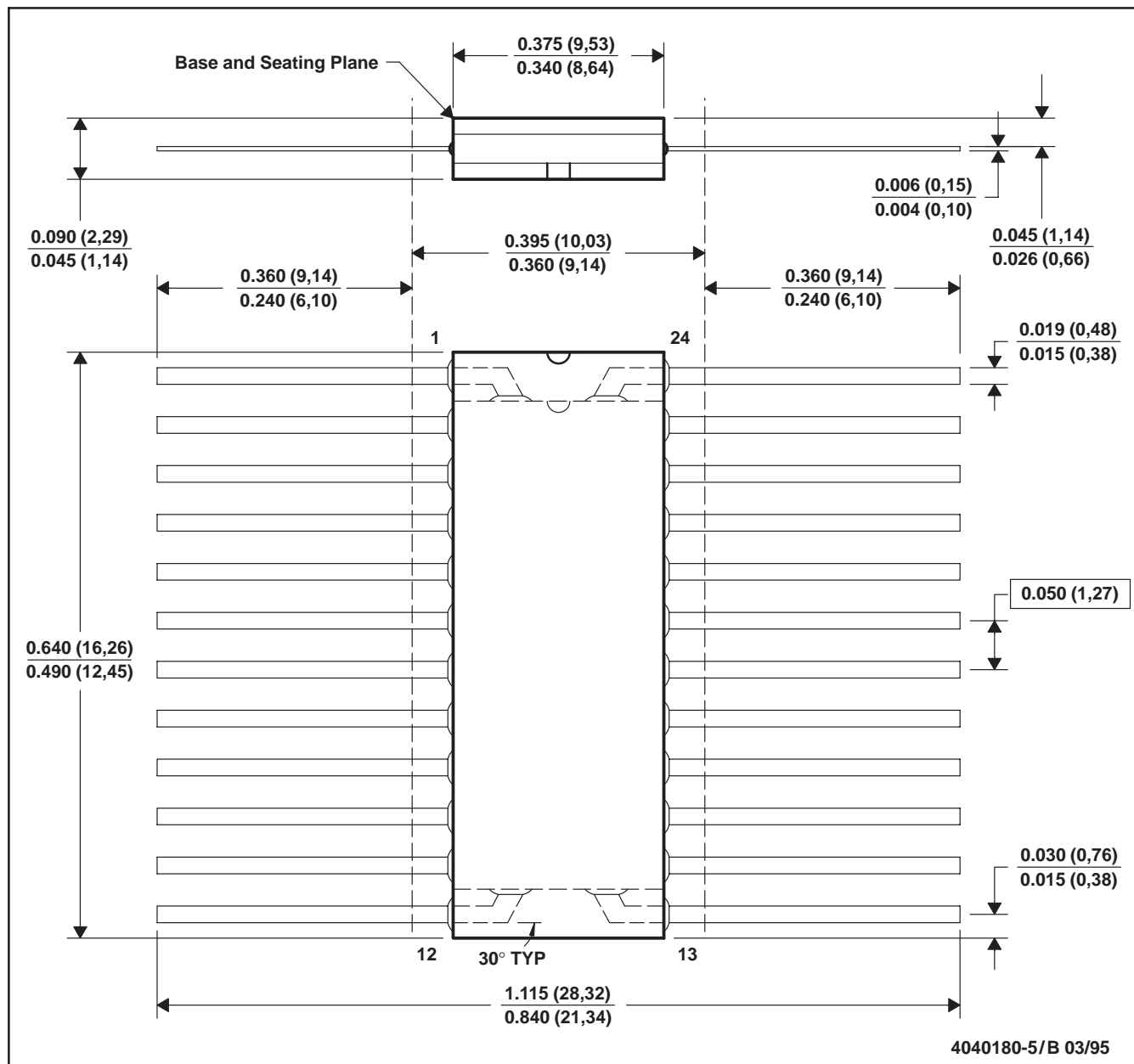
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

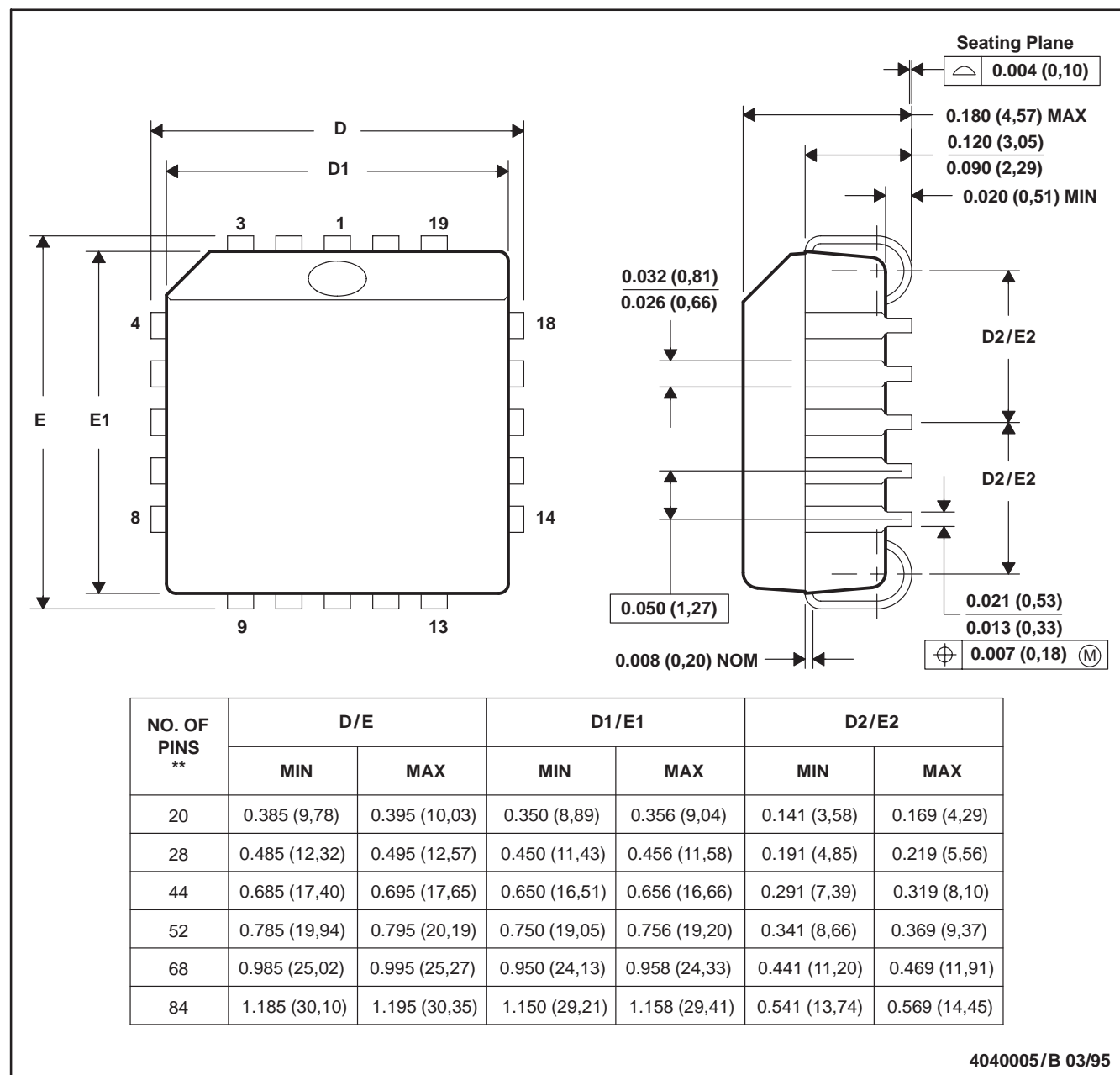


- NOTES:
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 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

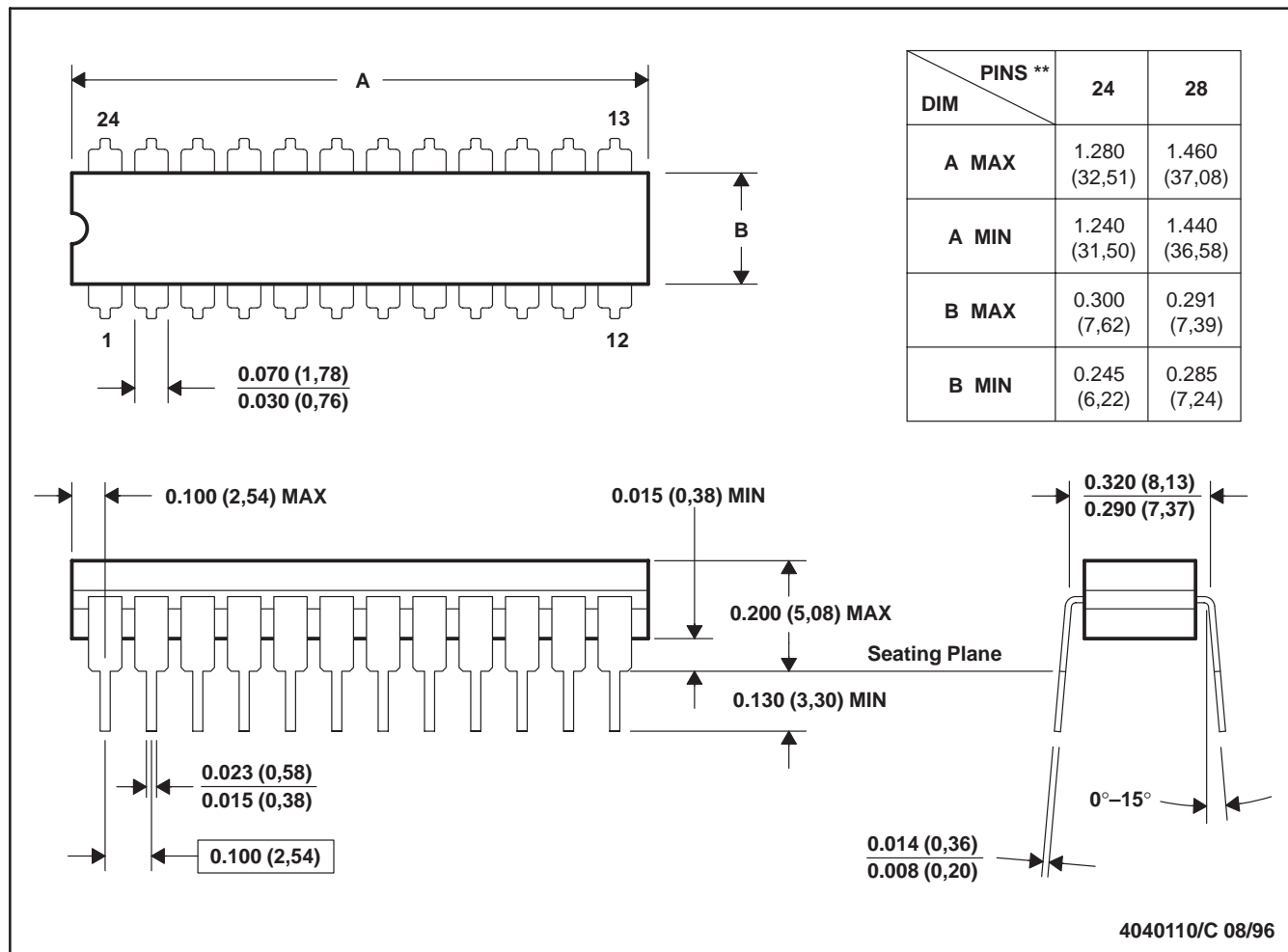


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

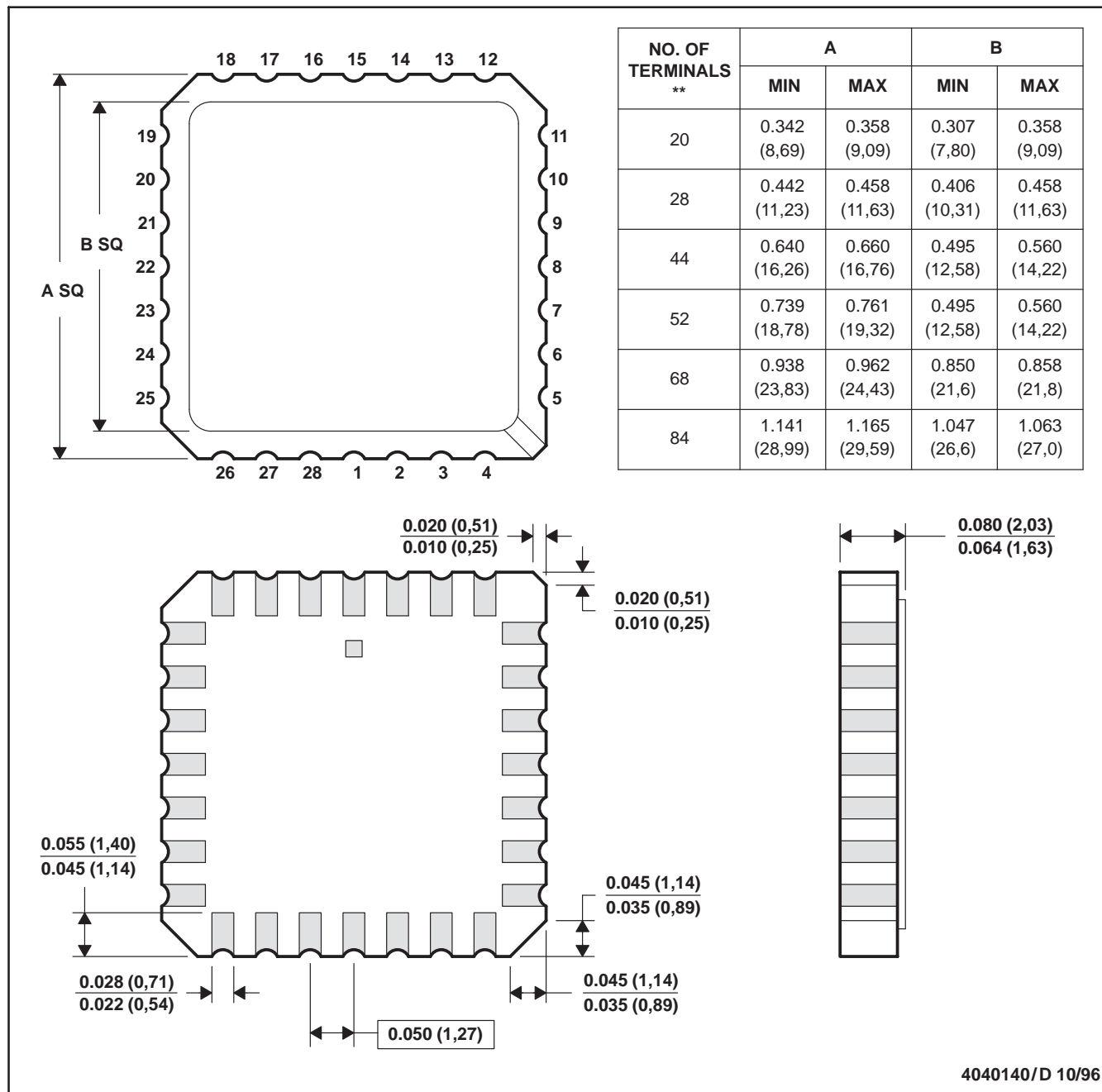
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



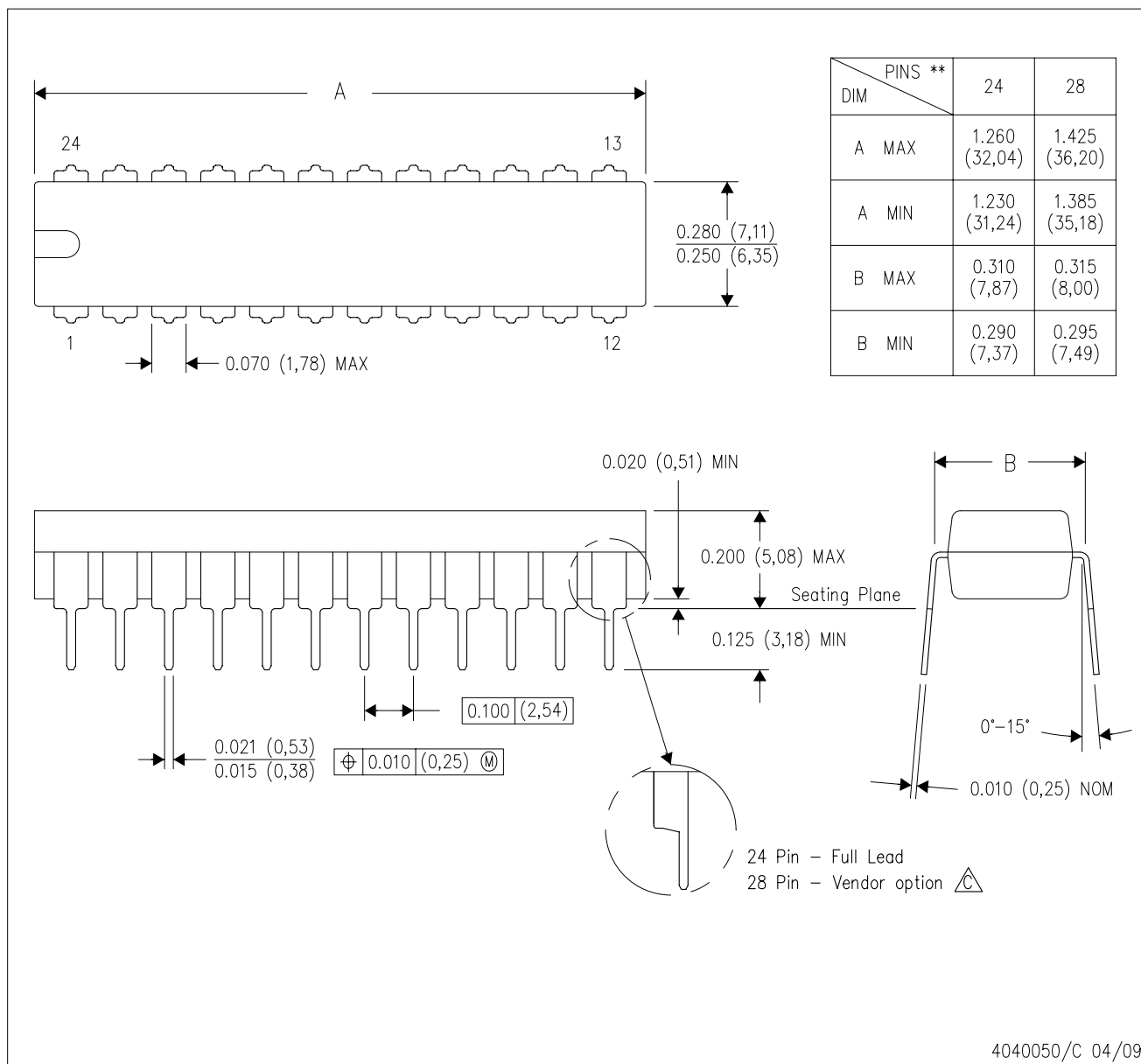
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

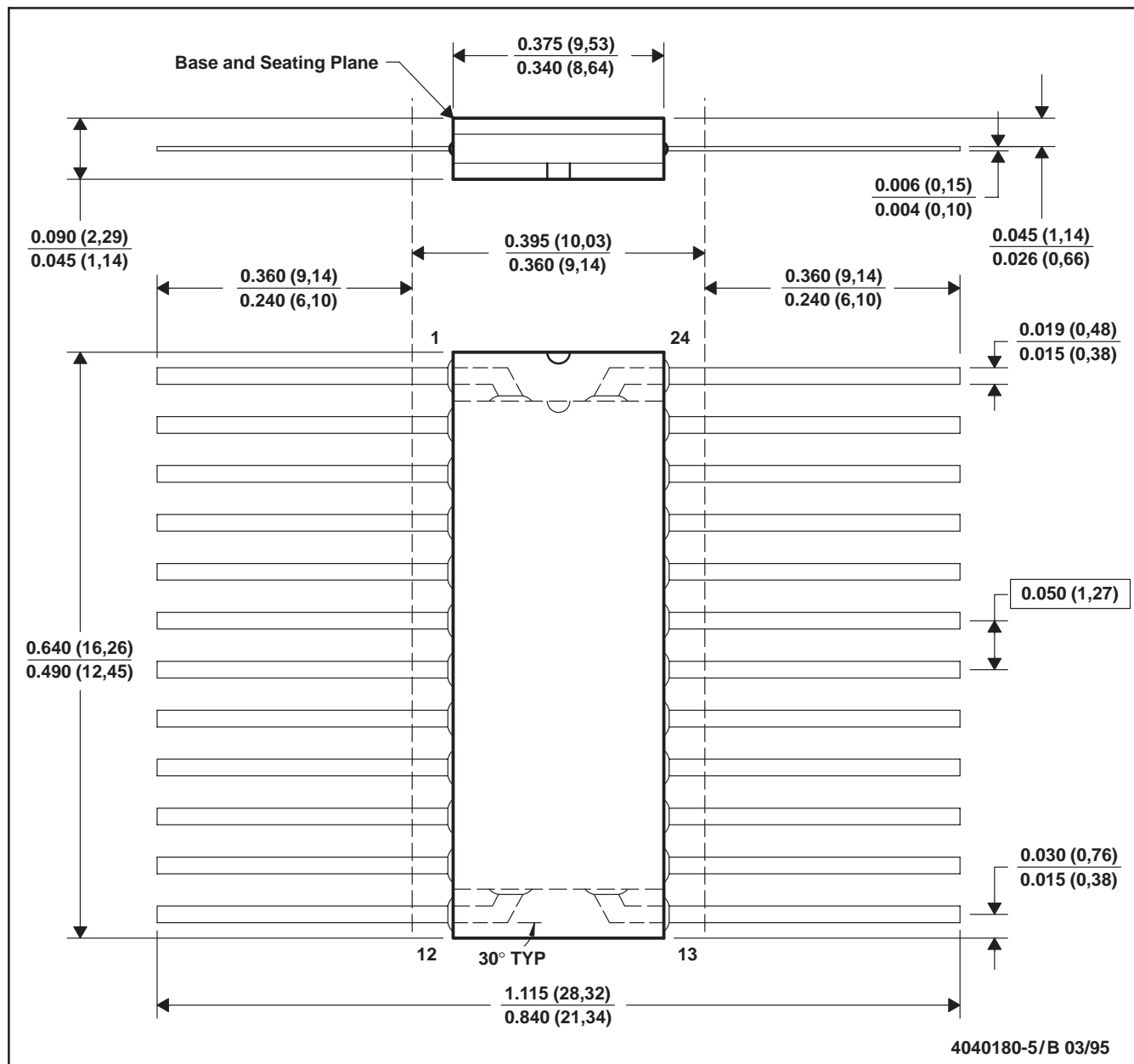
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

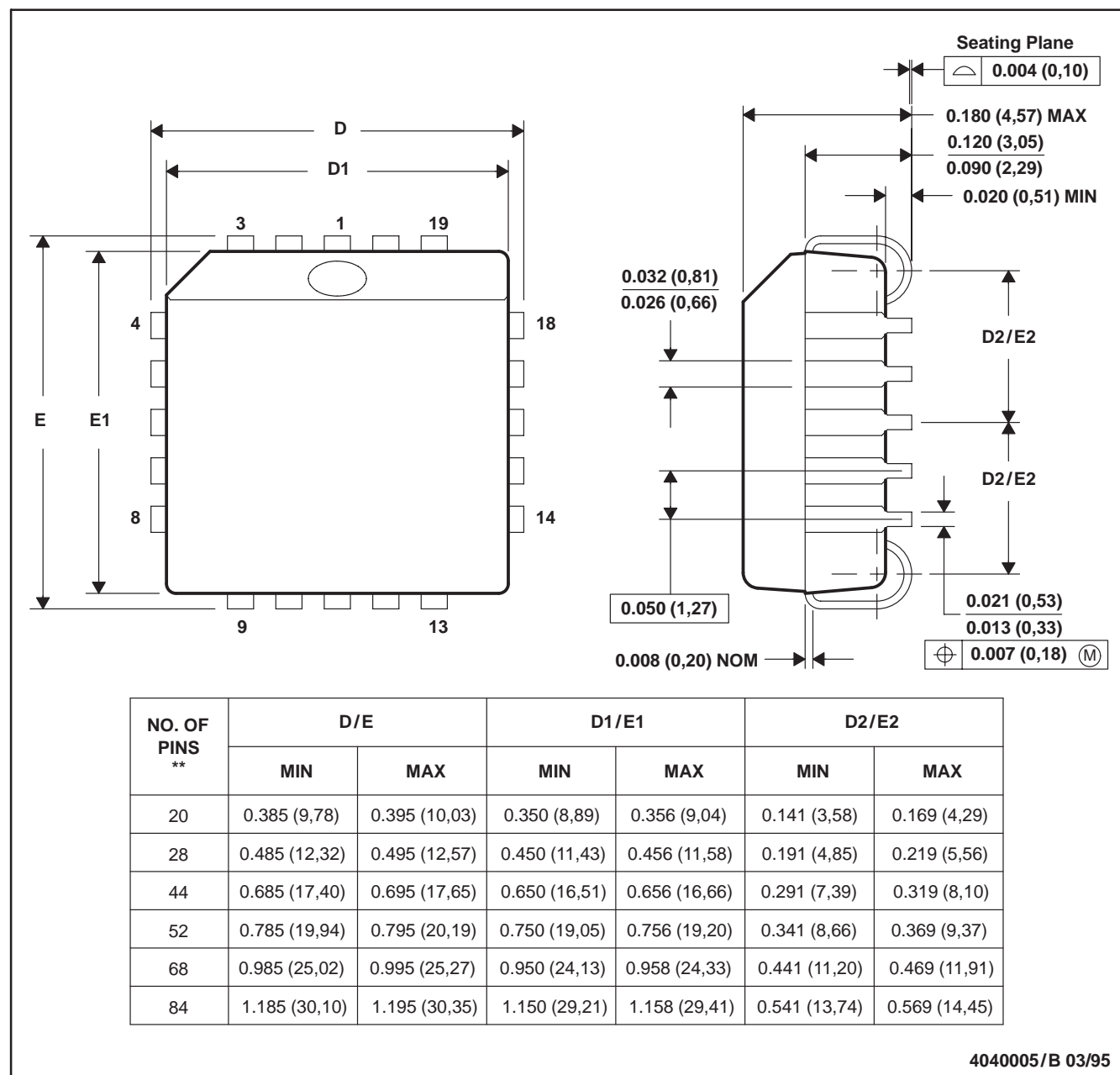


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

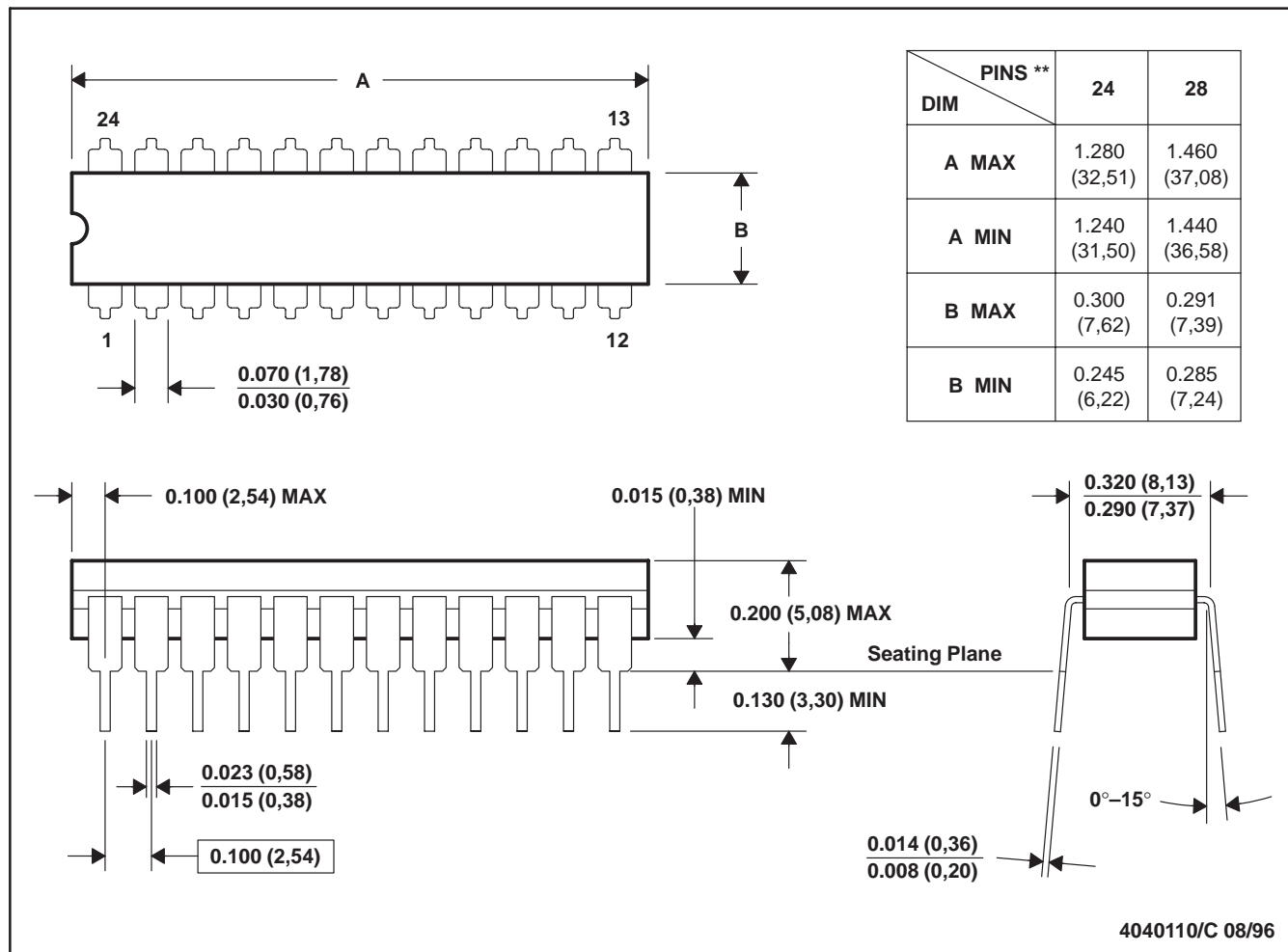


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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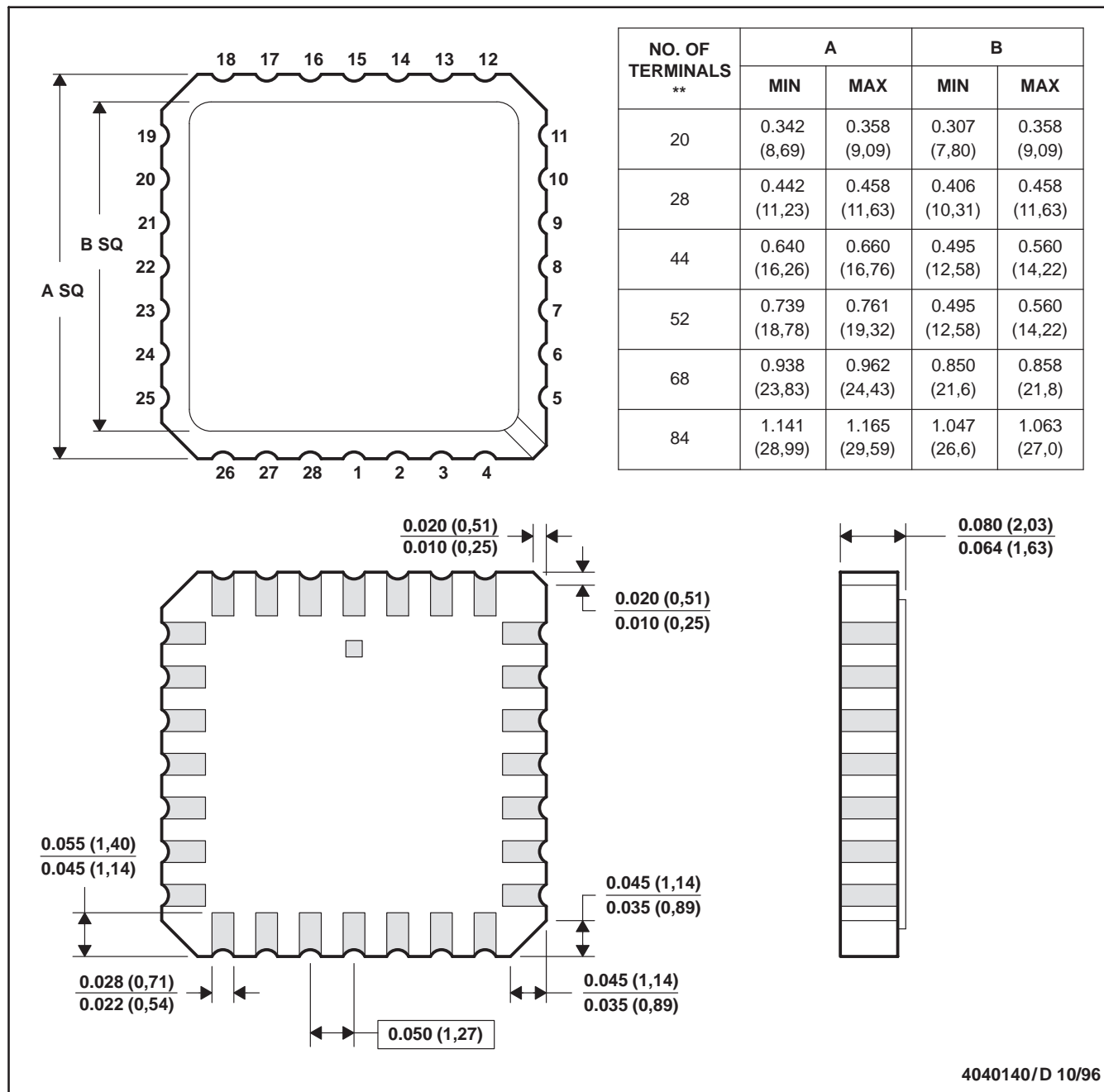
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



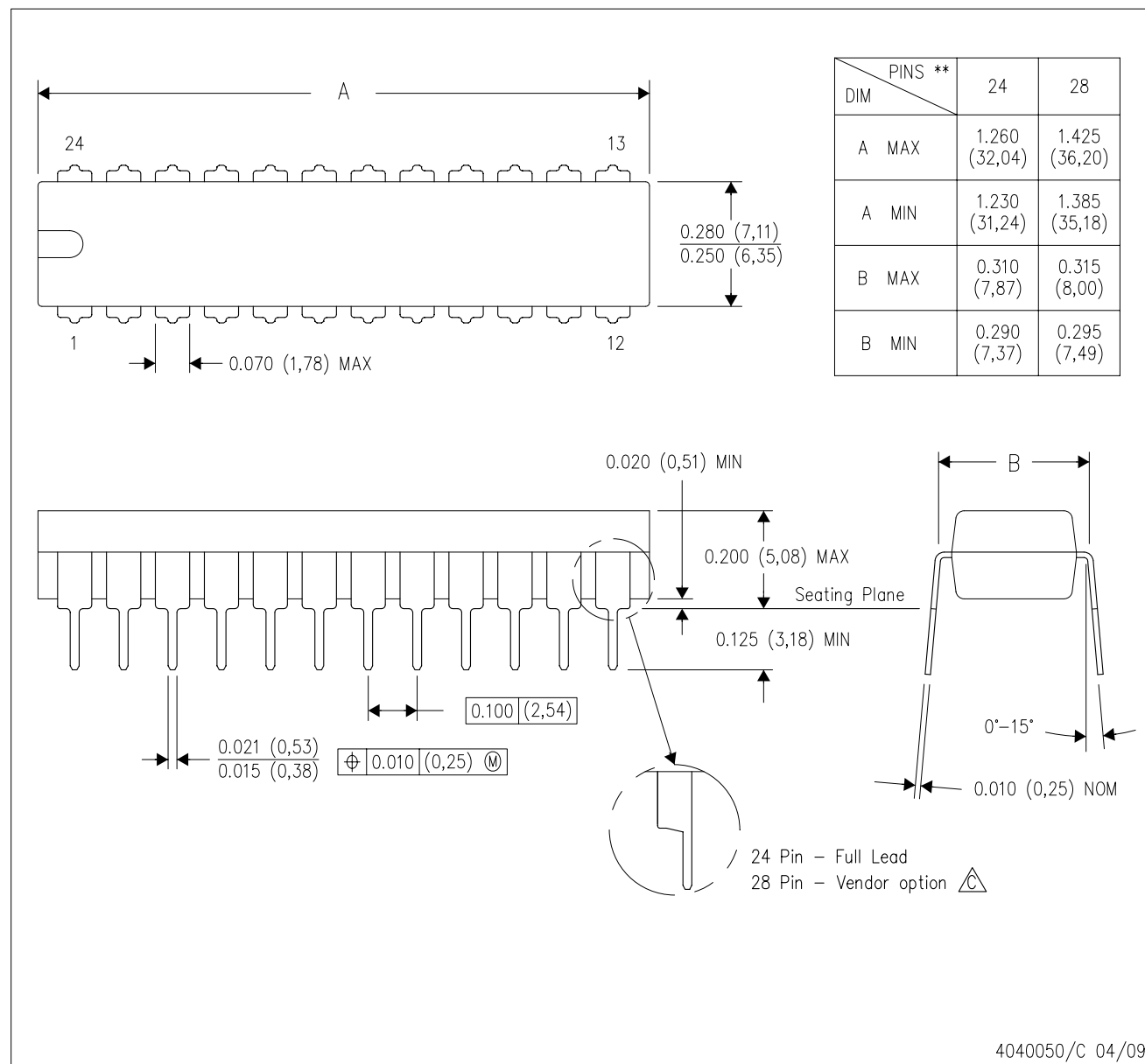
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

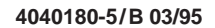
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

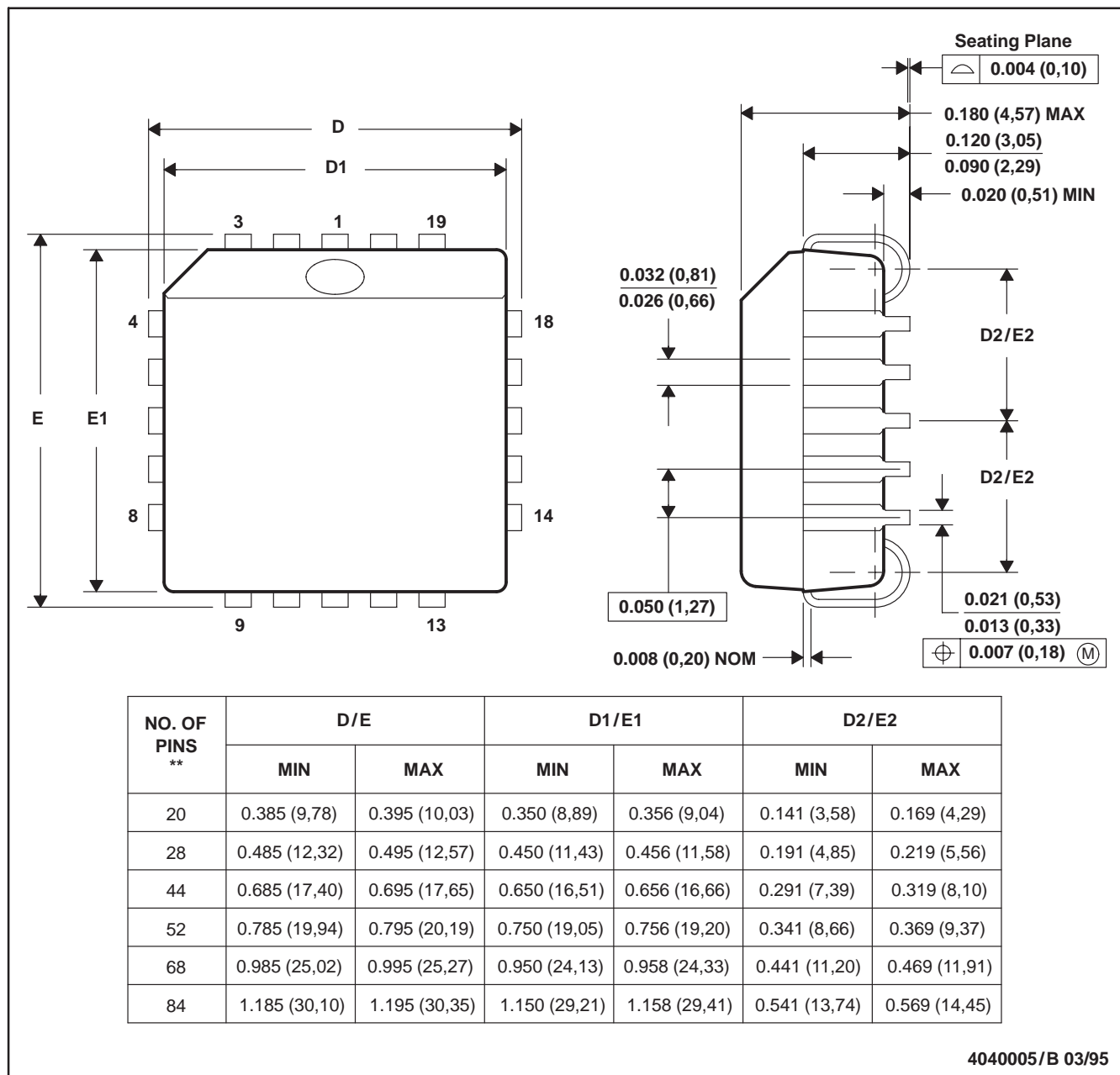


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

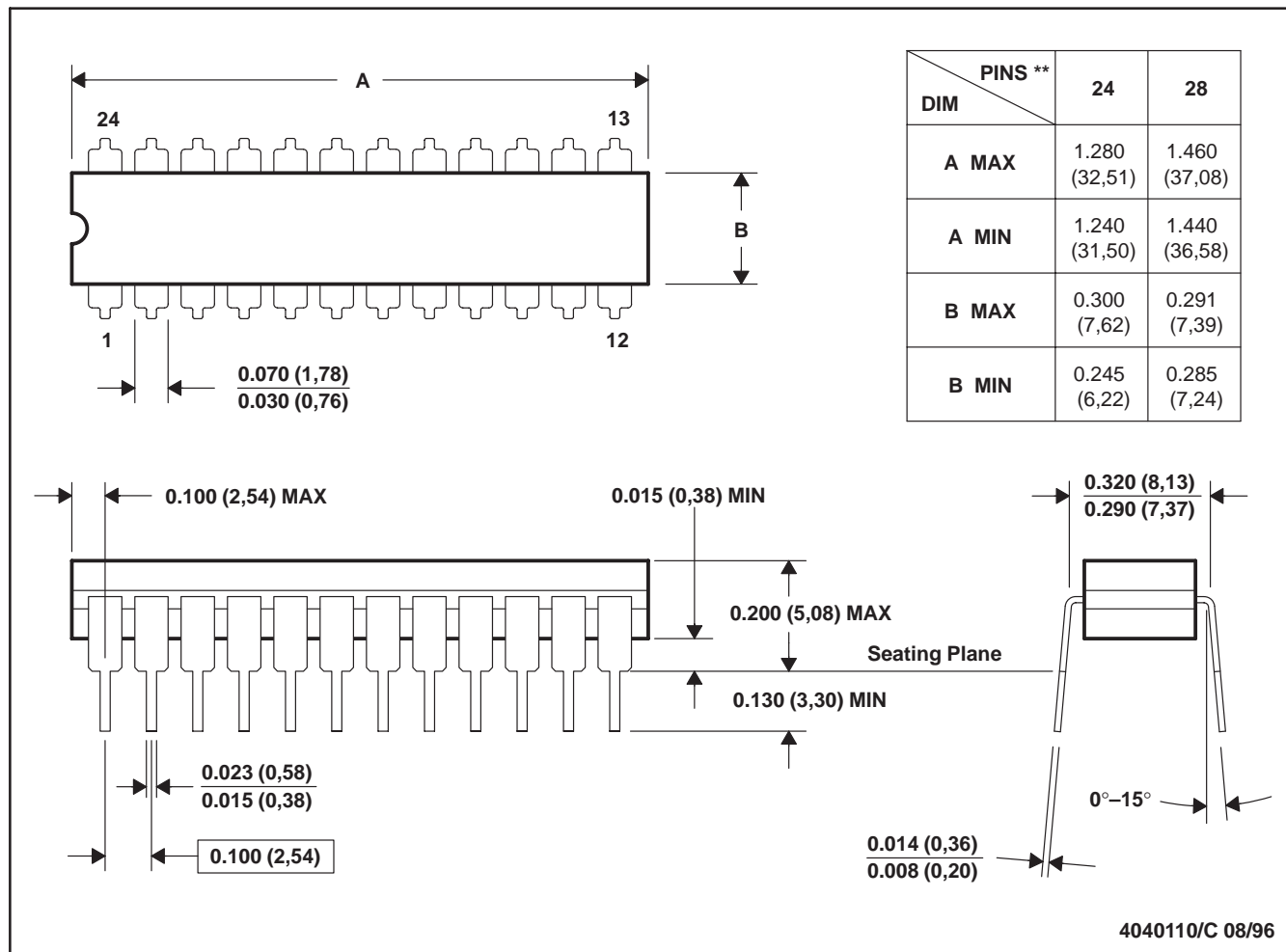


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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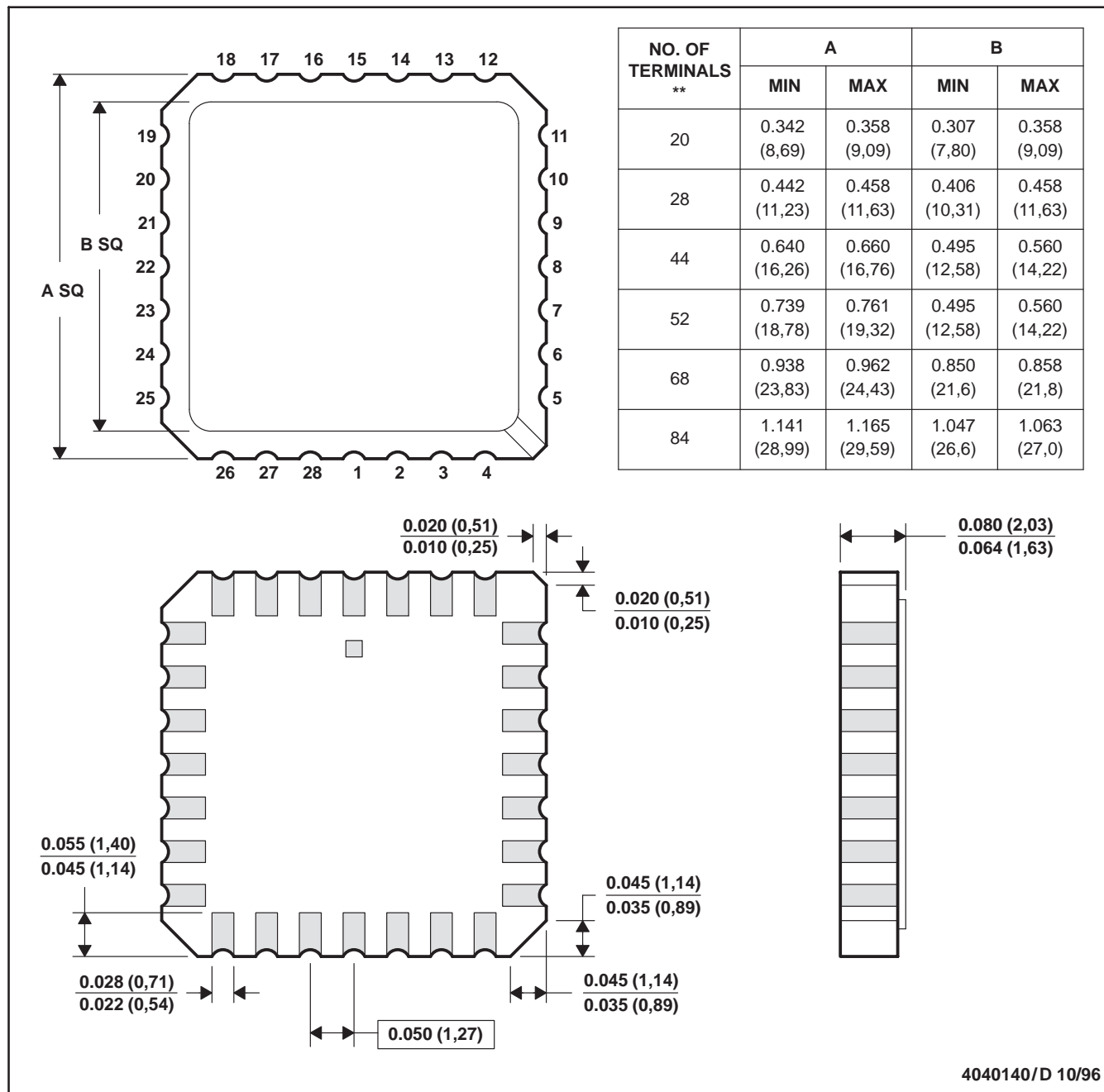
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



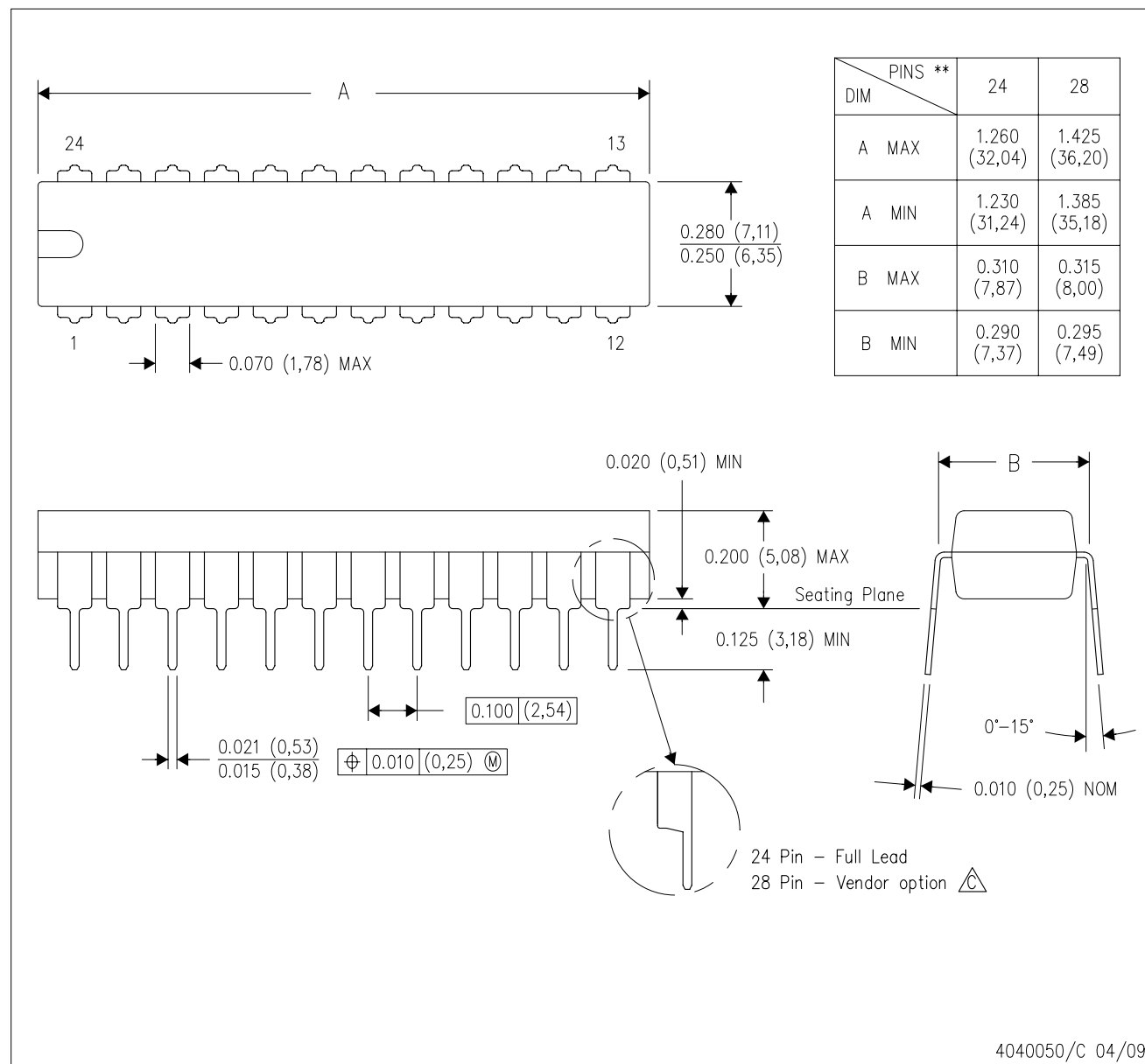
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MECHANICAL DATA

NT (R-PDIP-T**)

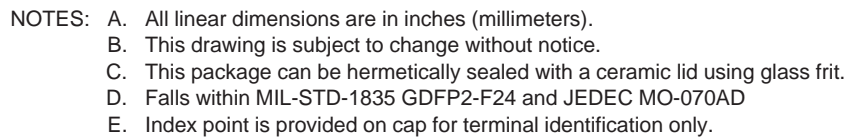
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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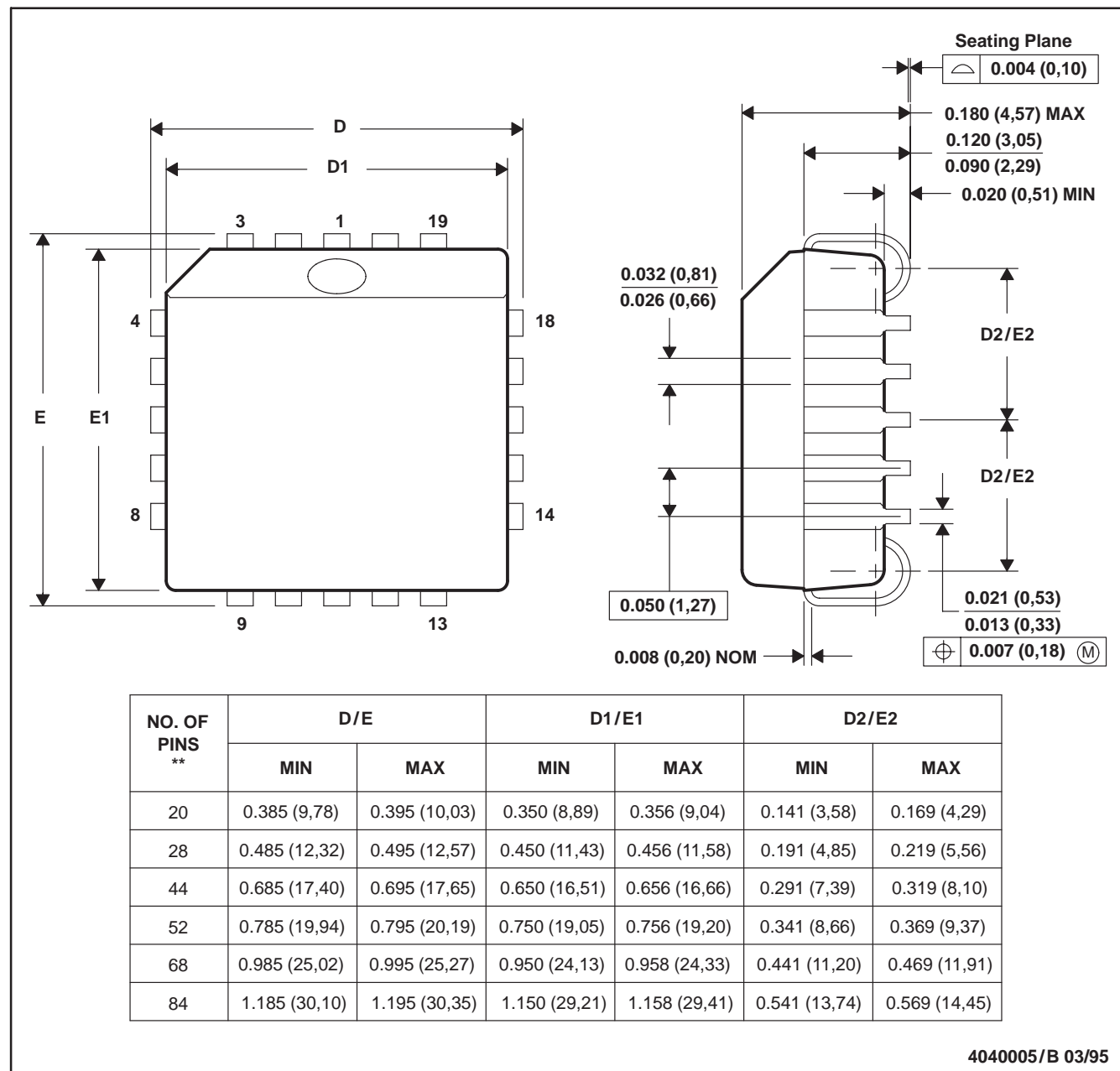
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

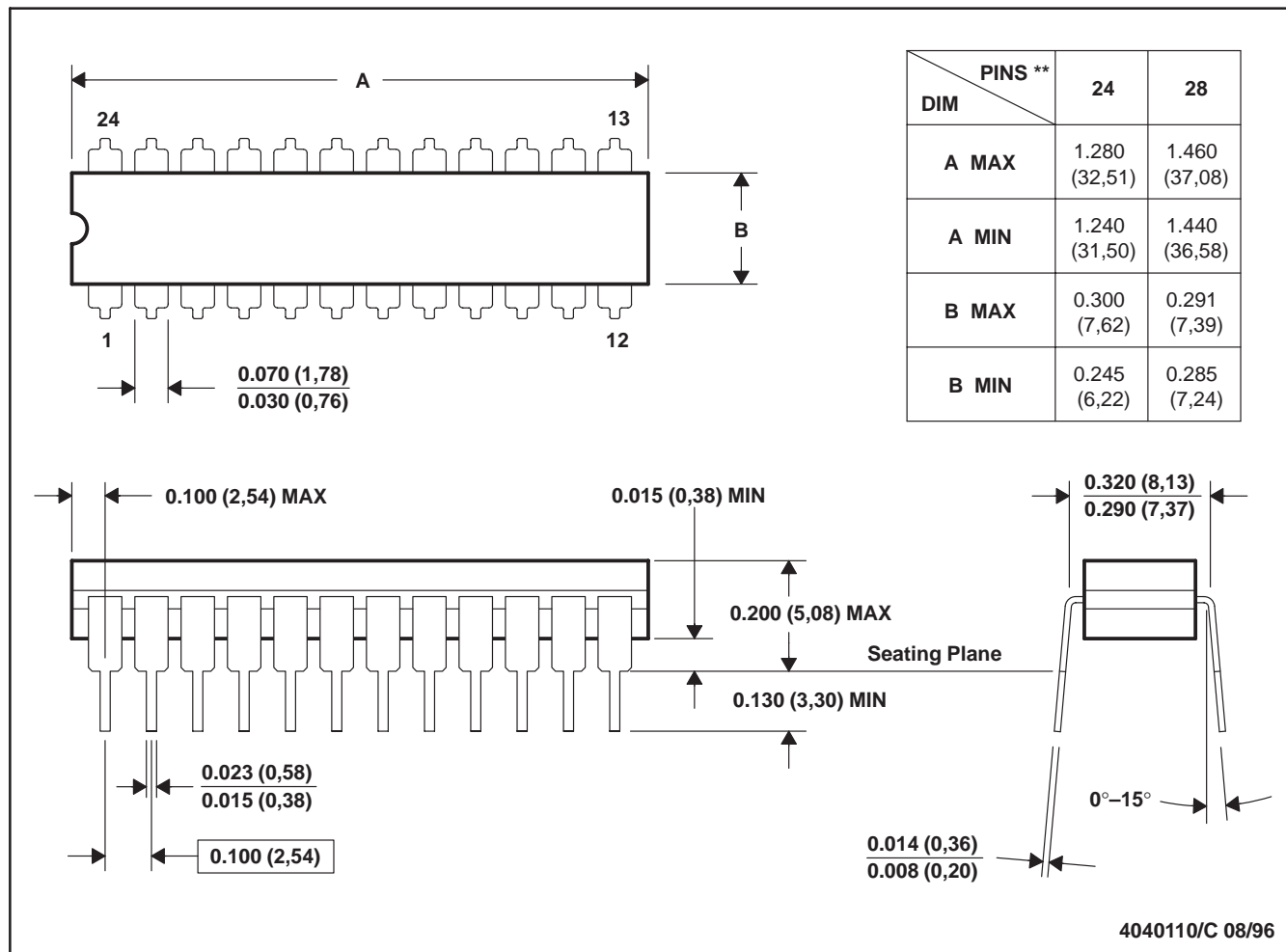


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



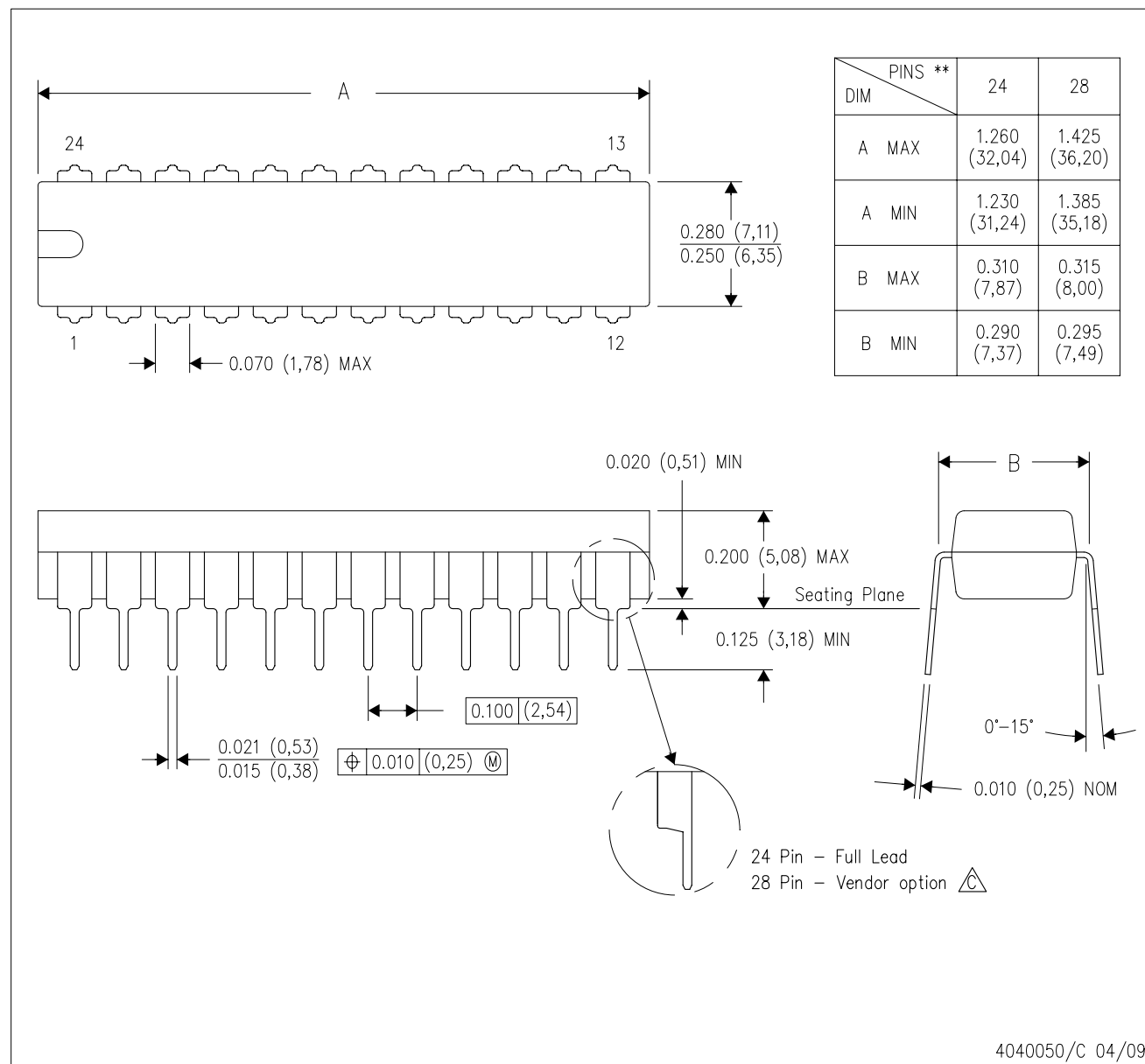
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MECHANICAL DATA

NT (R-PDIP-T**)

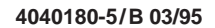
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PLASTIC DUAL-IN-LINE PACKAGE



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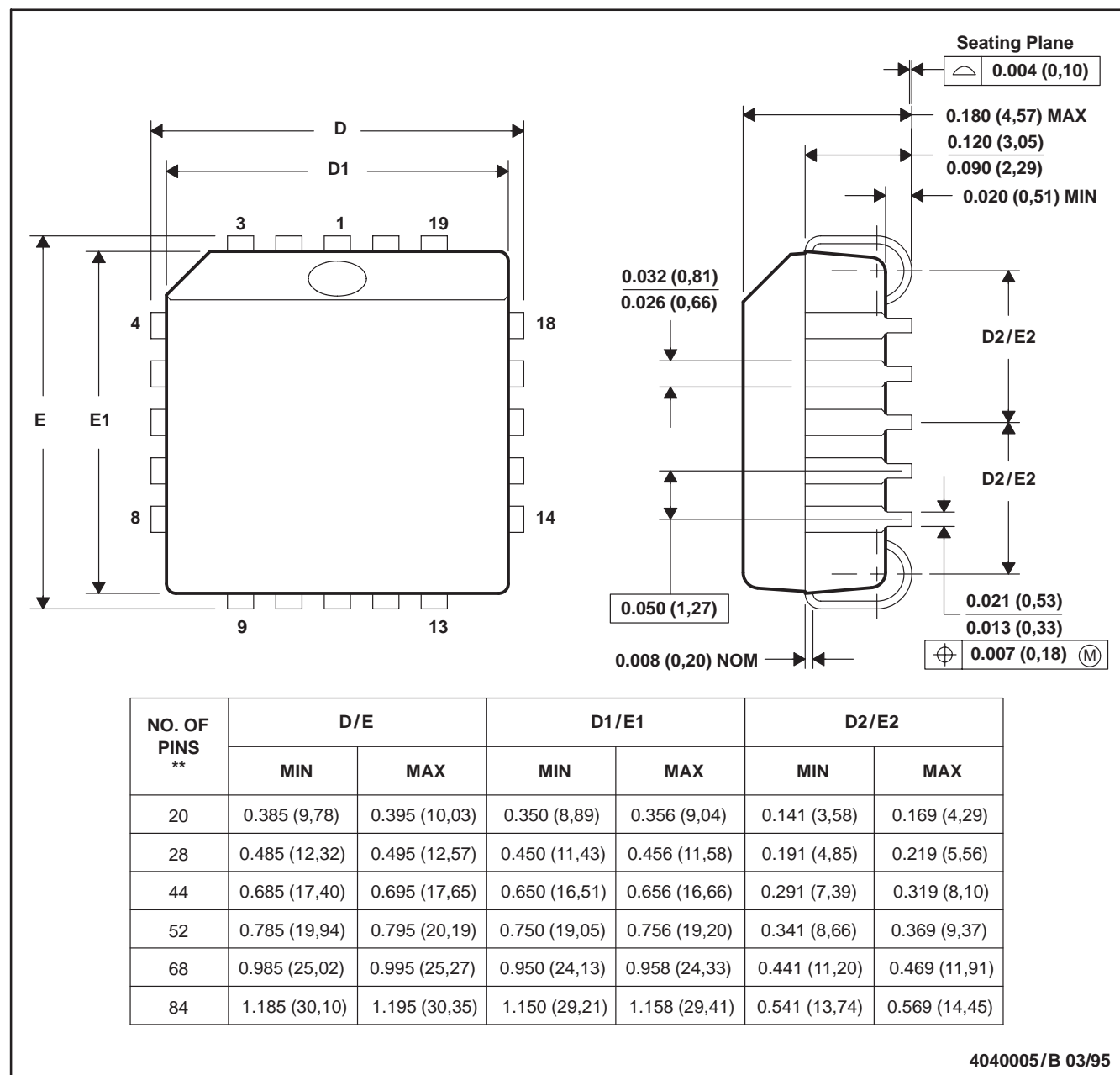


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

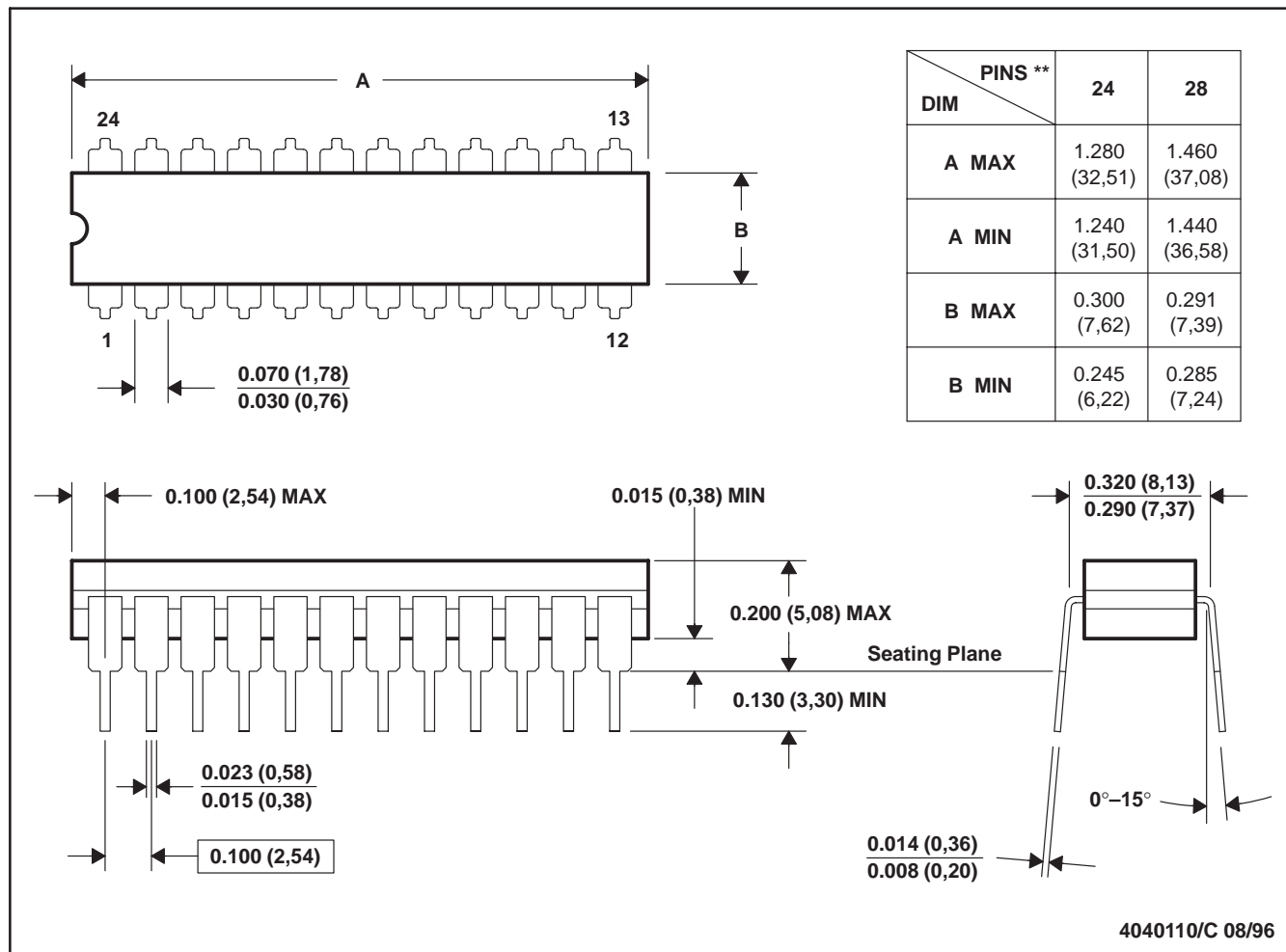


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

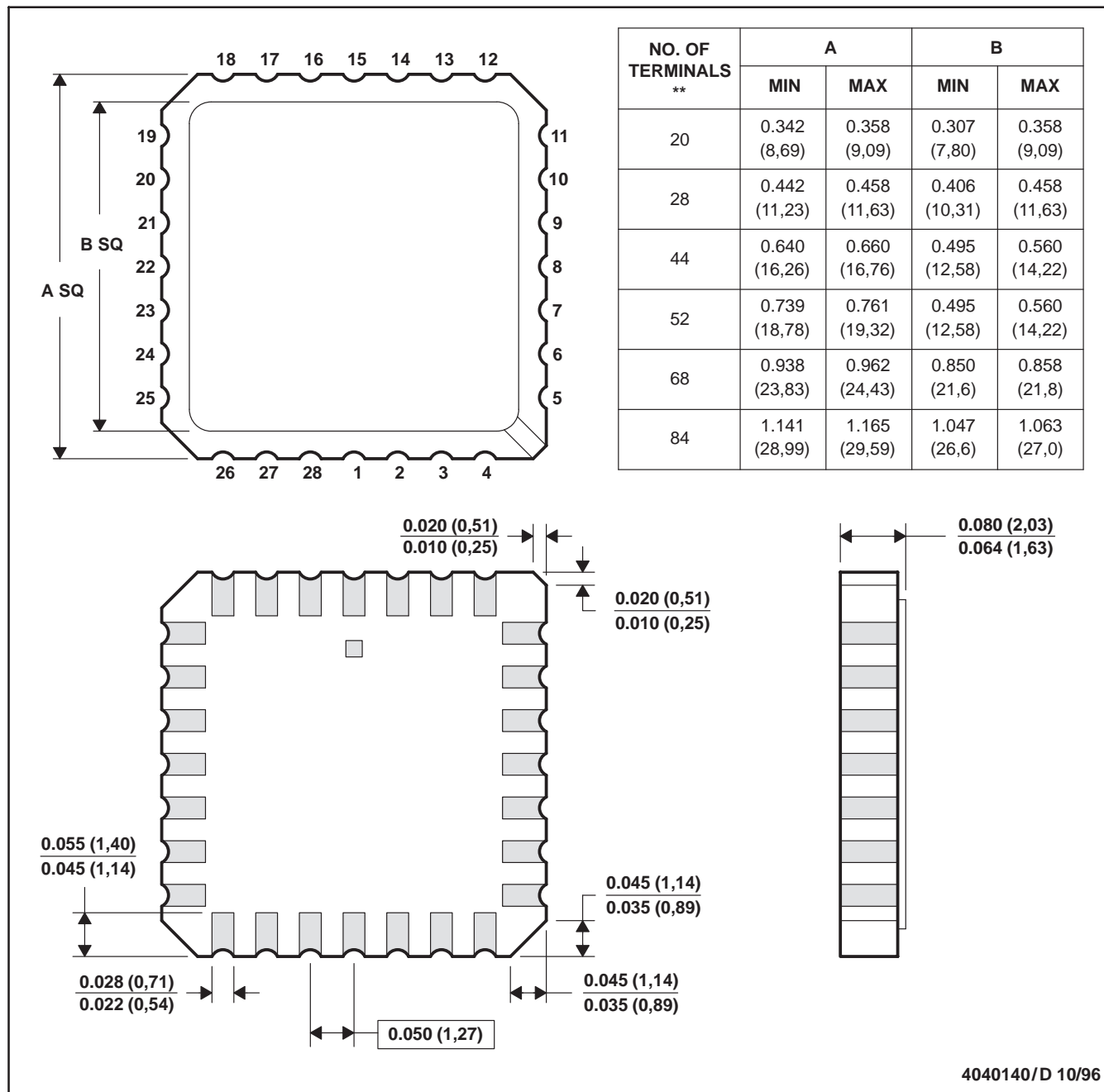
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



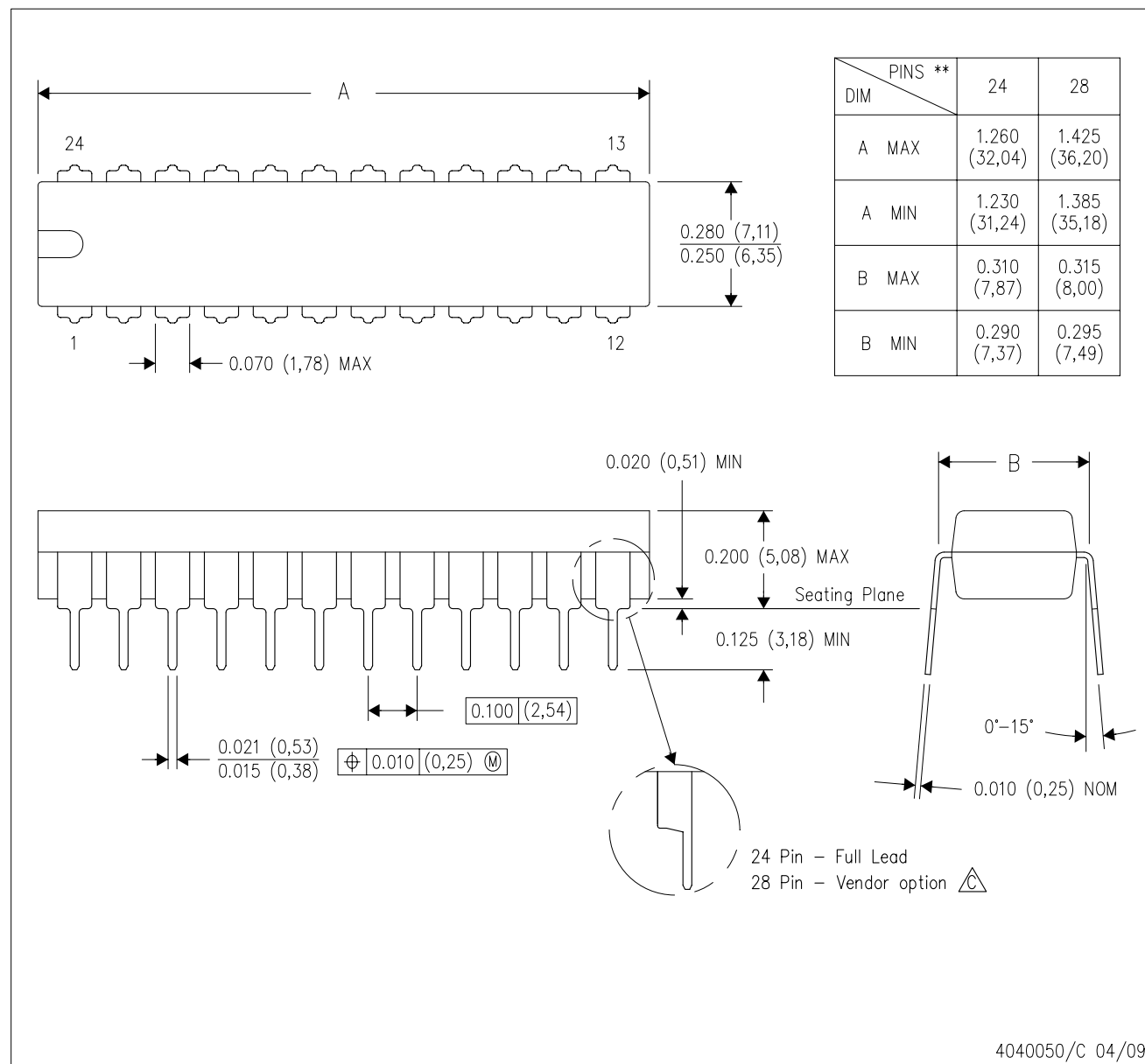
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE

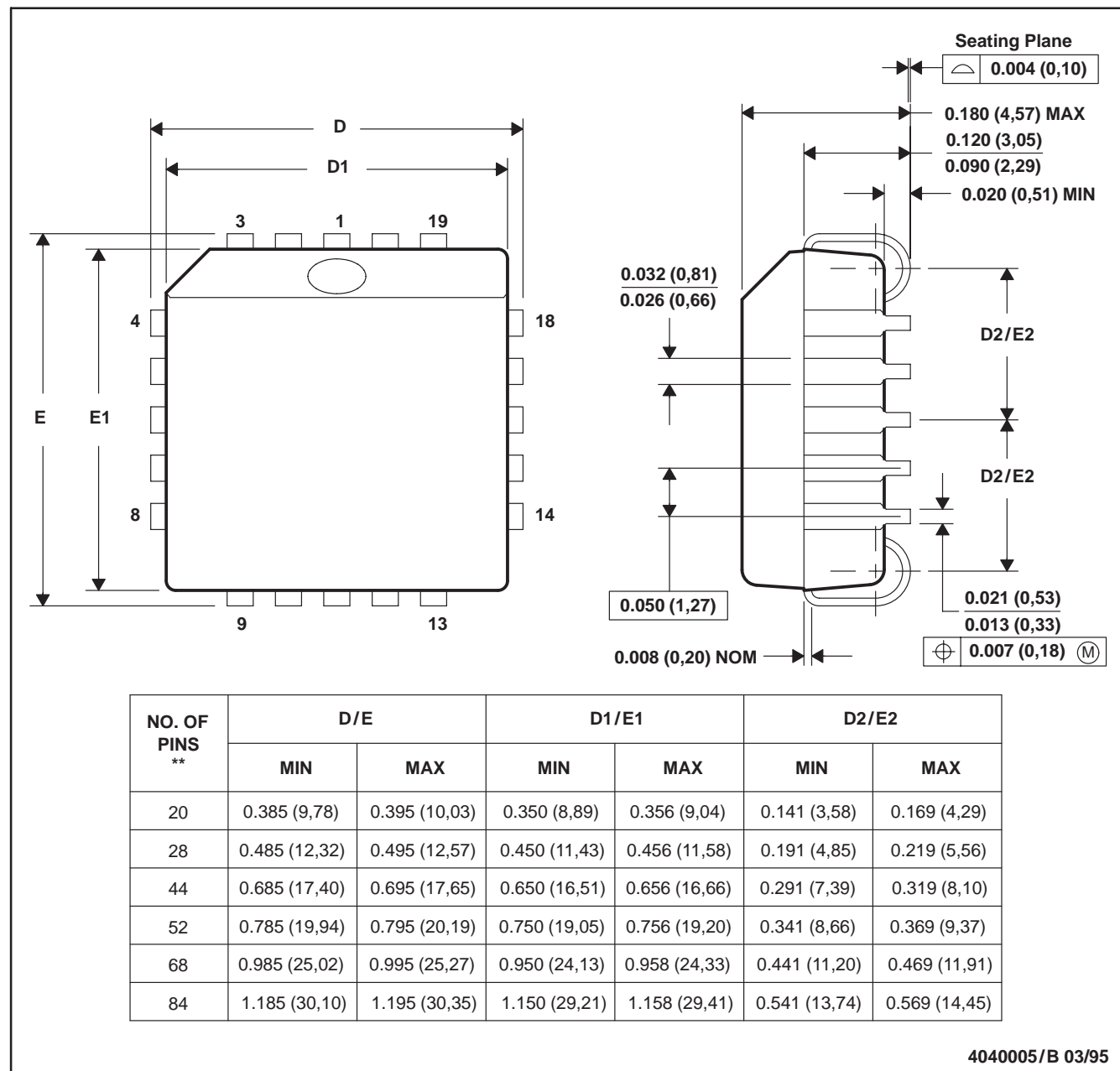


- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

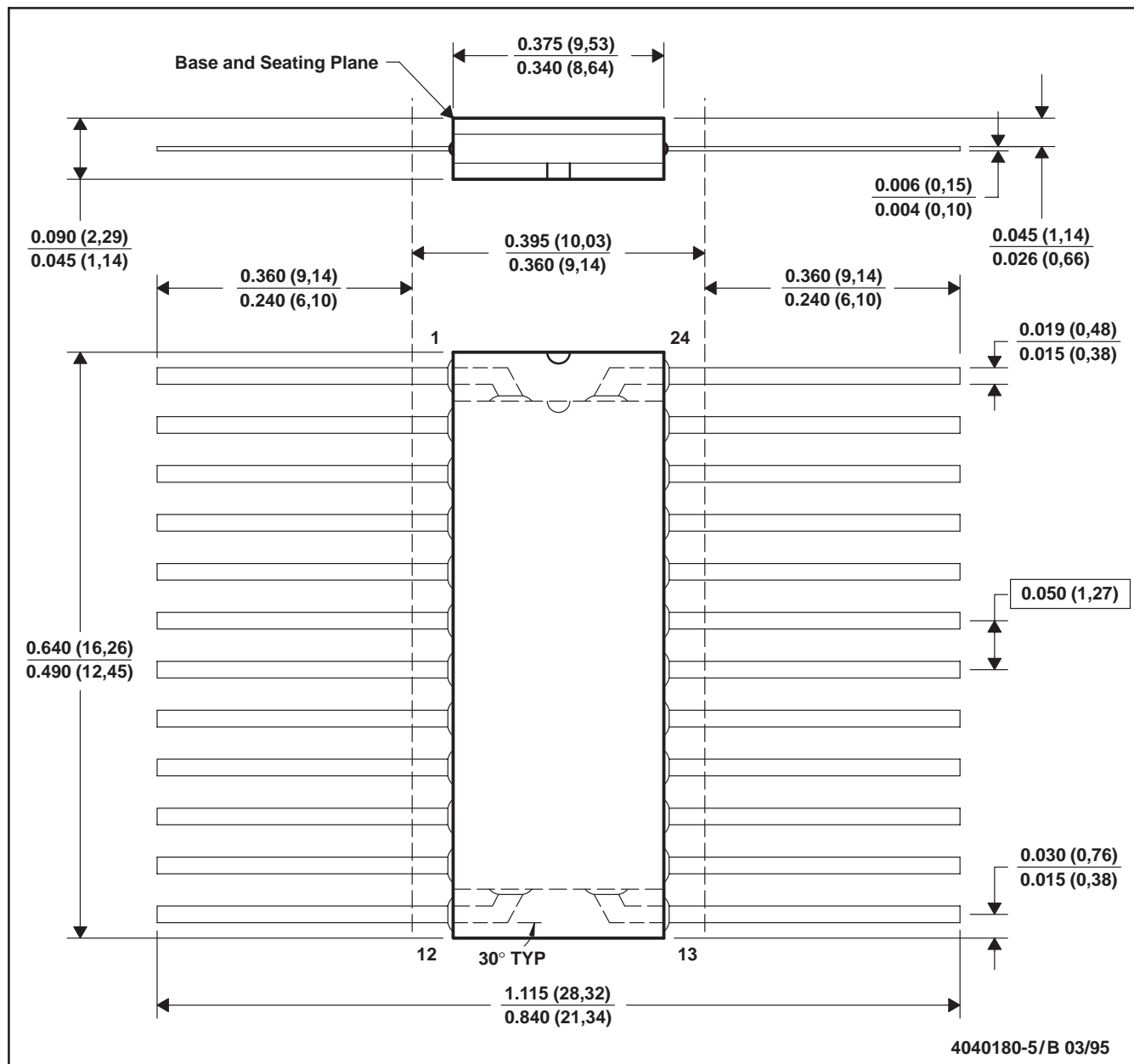
20 PIN SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

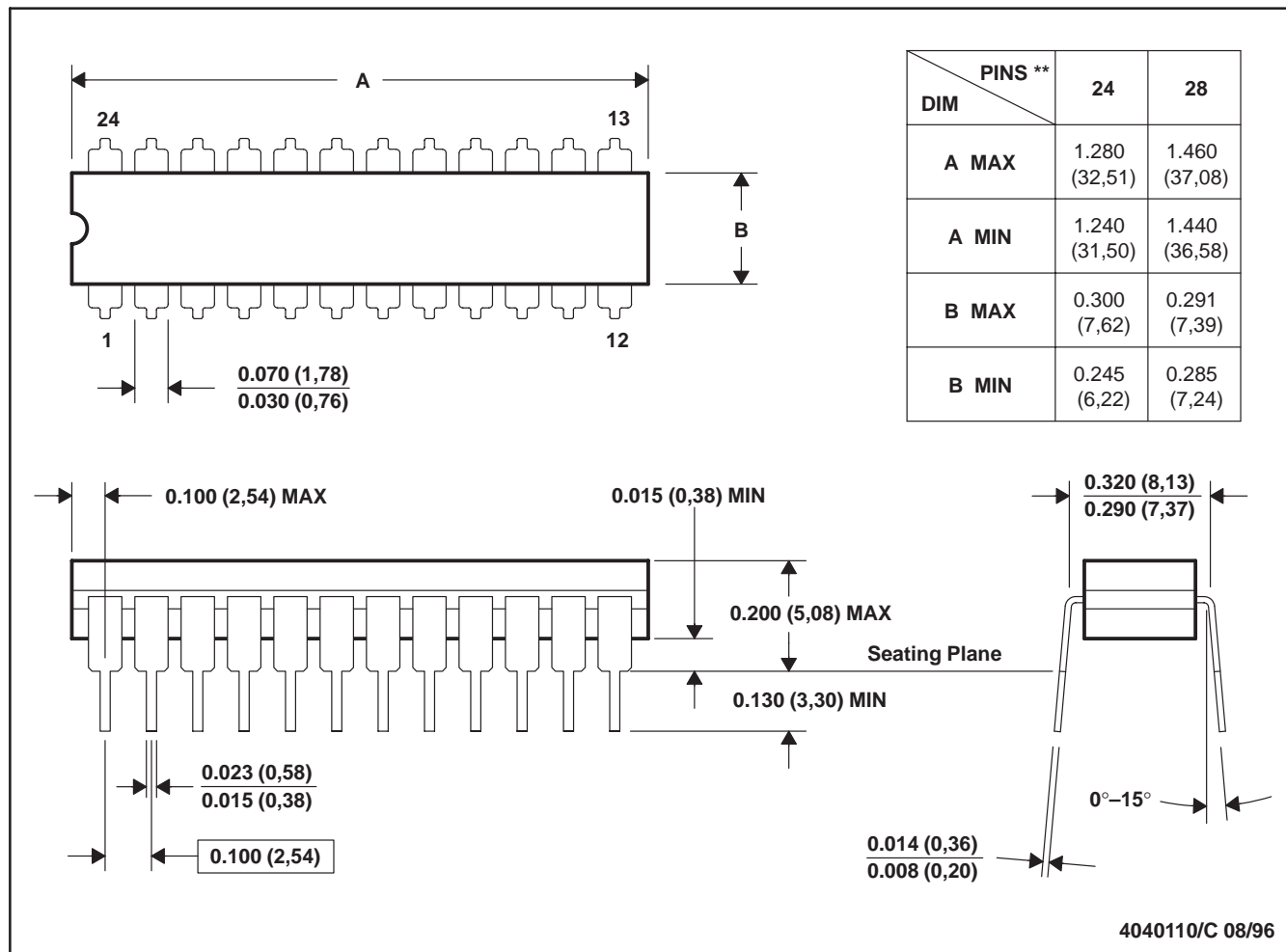


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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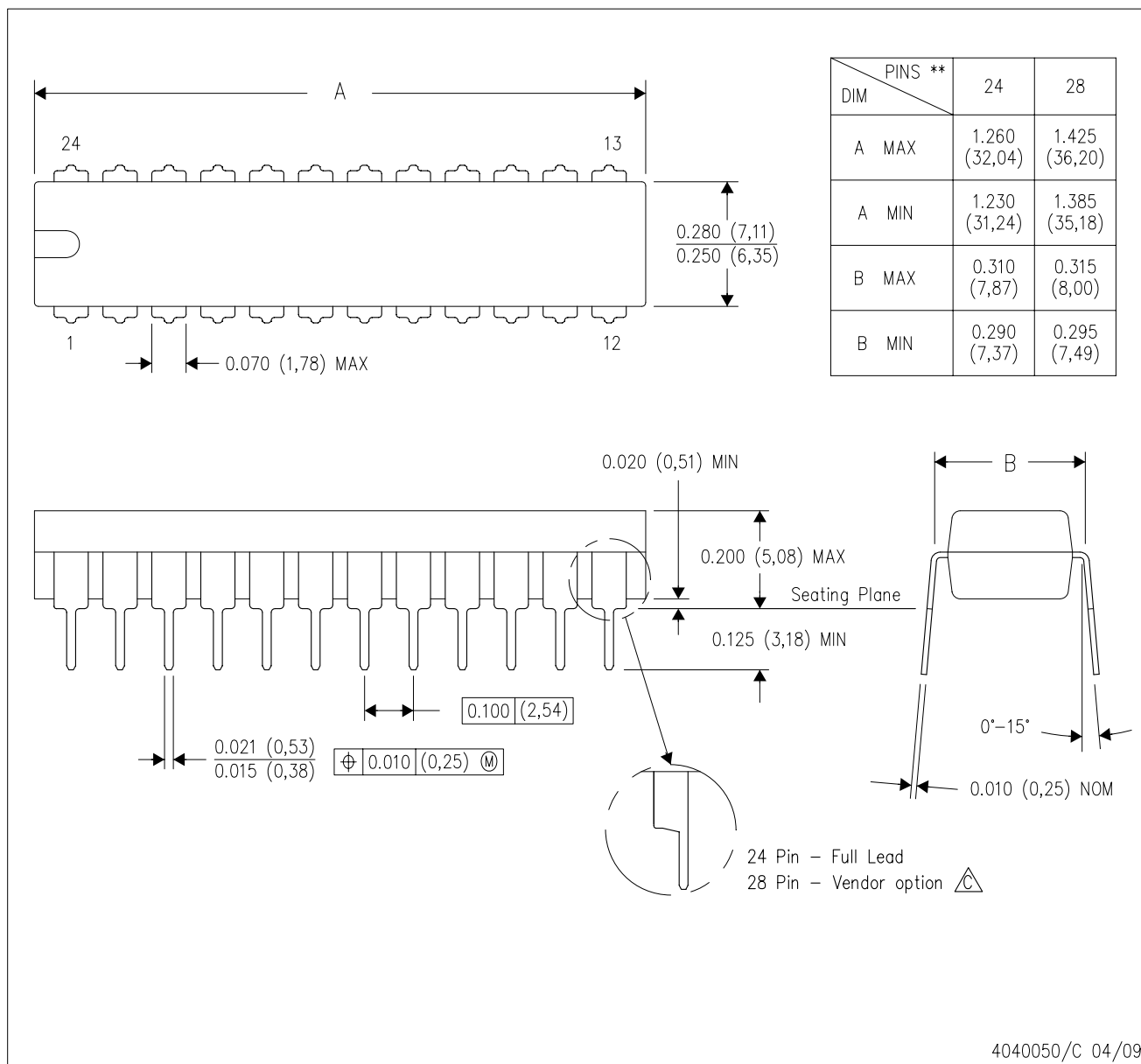
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MECHANICAL DATA

NT (R-PDIP-T**)

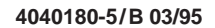
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

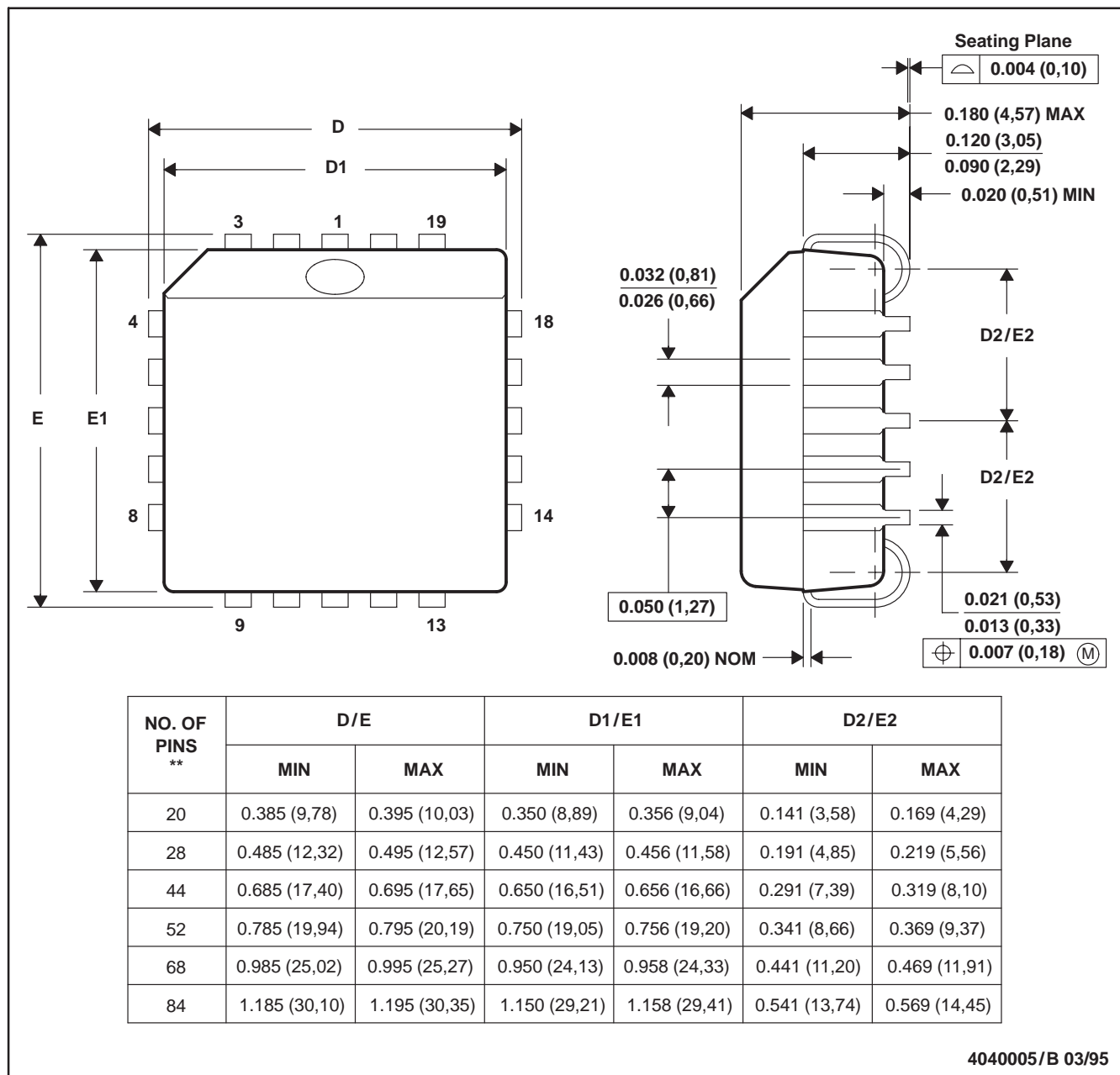


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

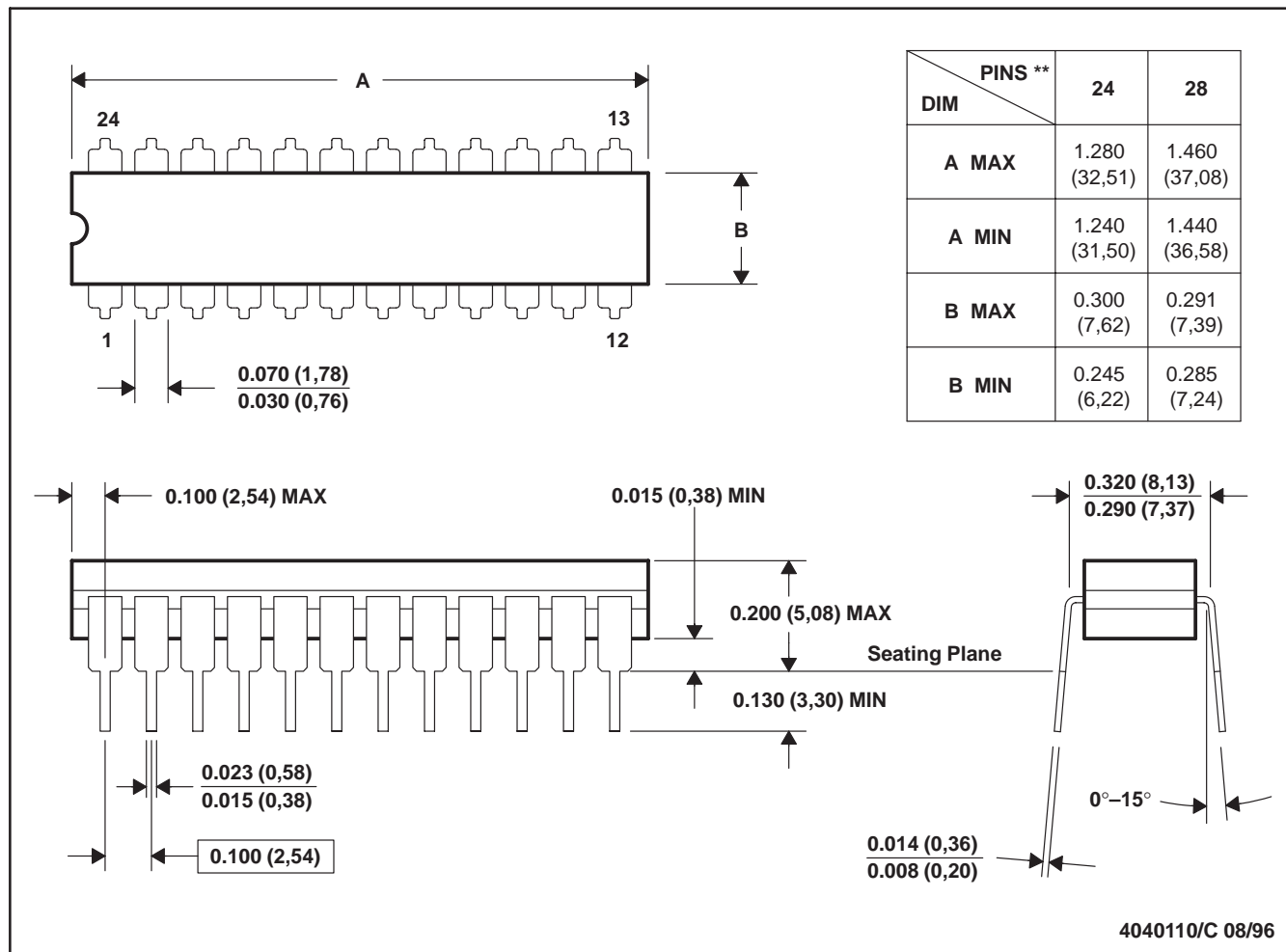


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

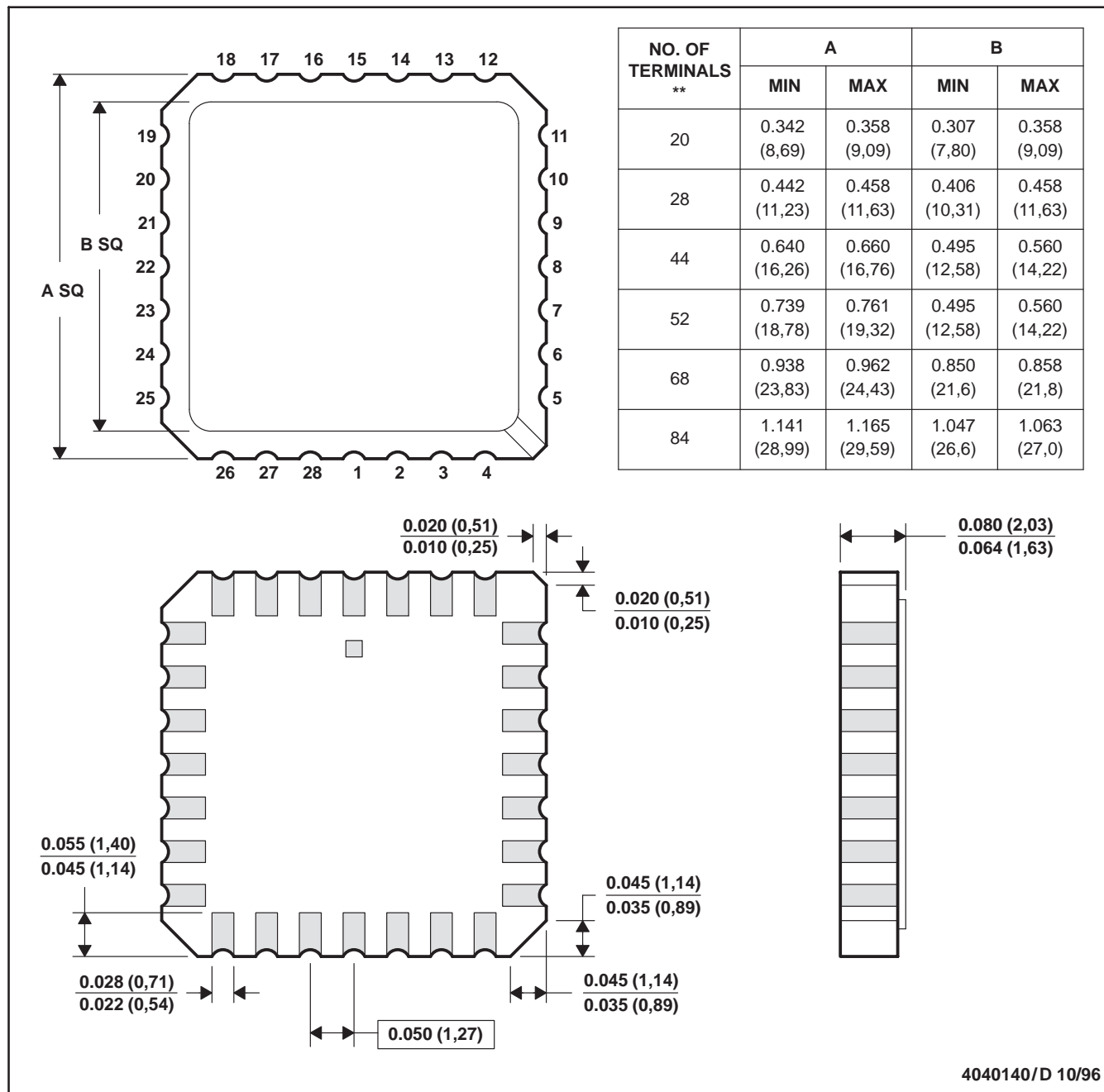
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



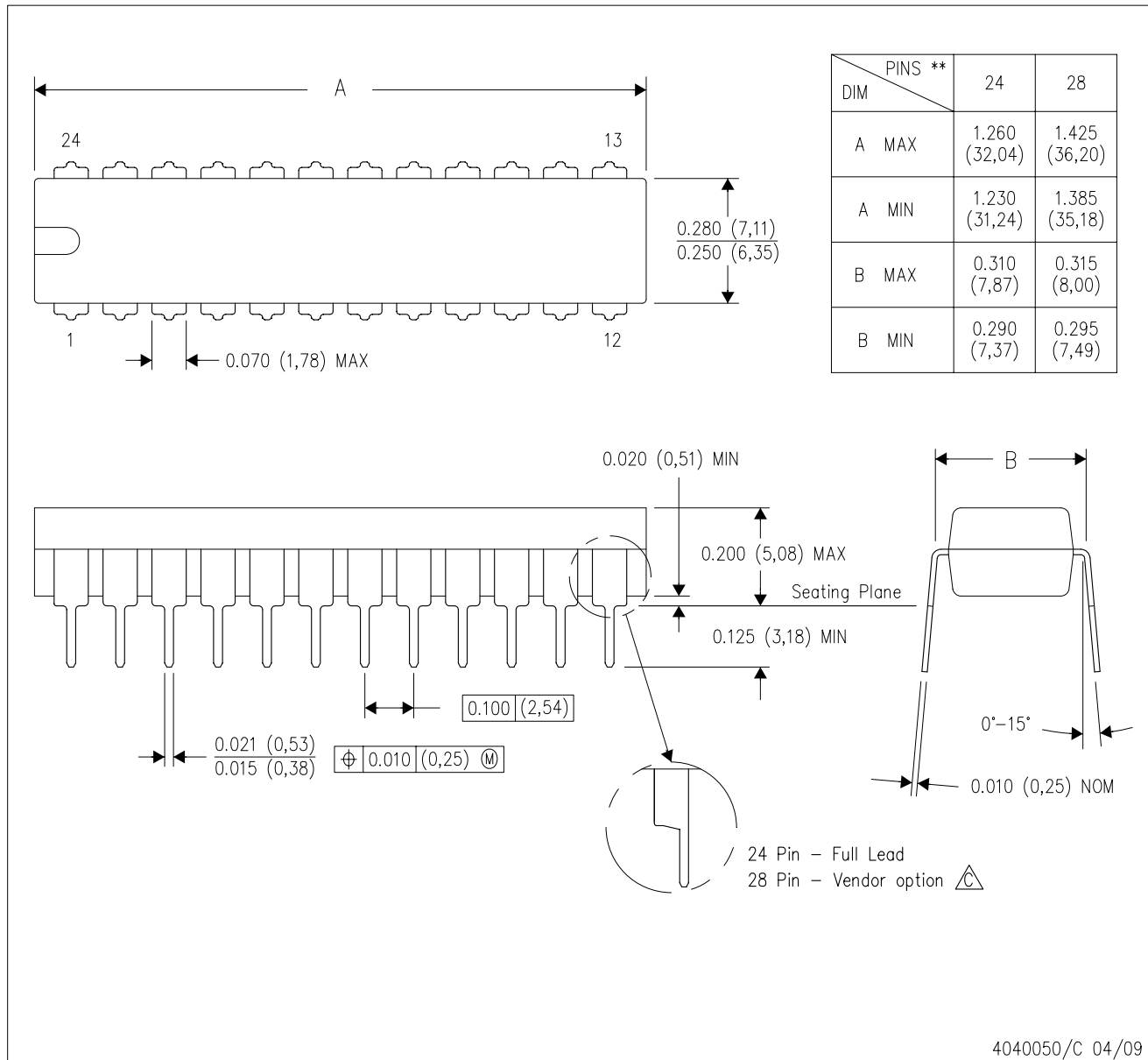
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE

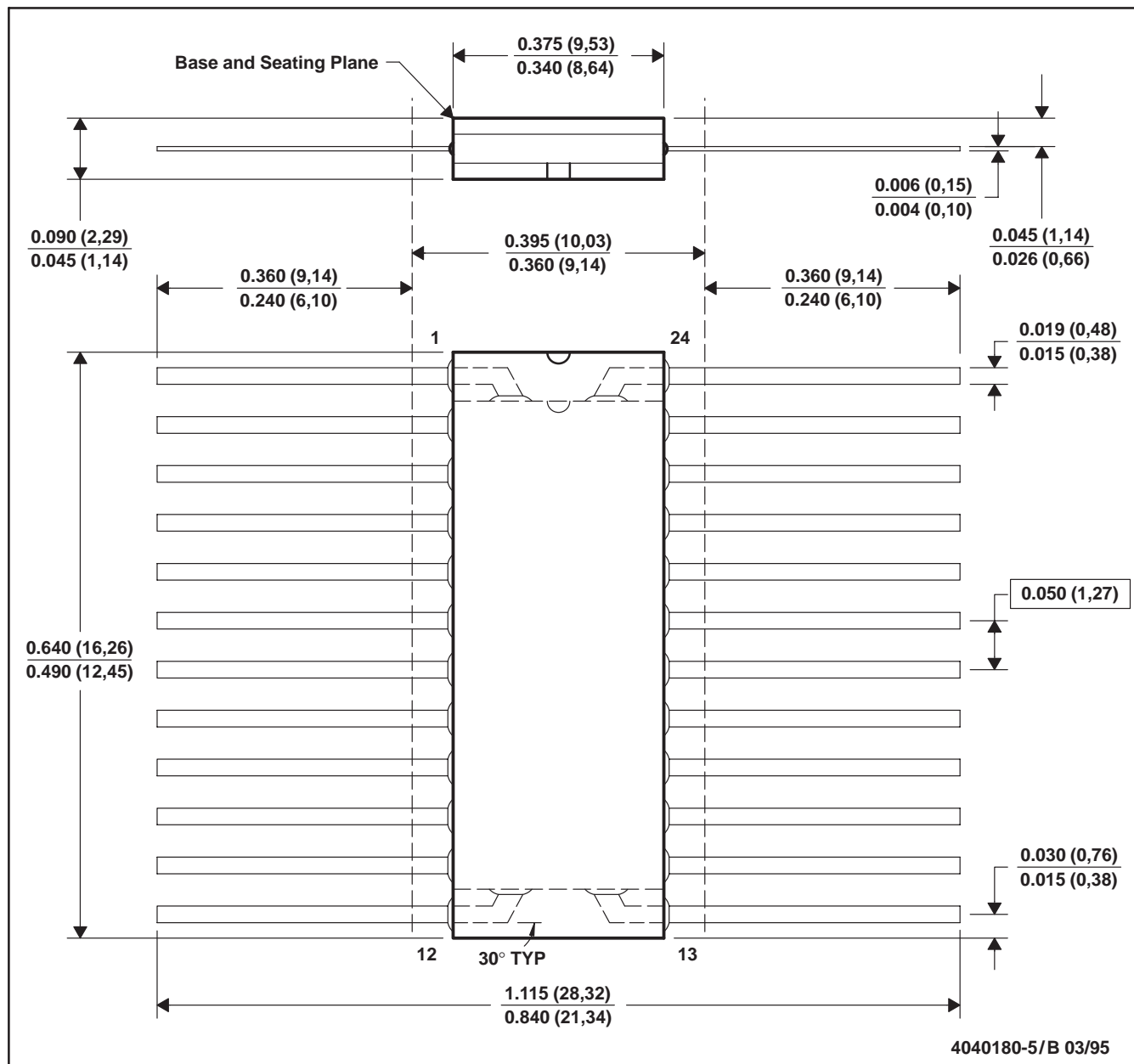


4040050/C 04/09

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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

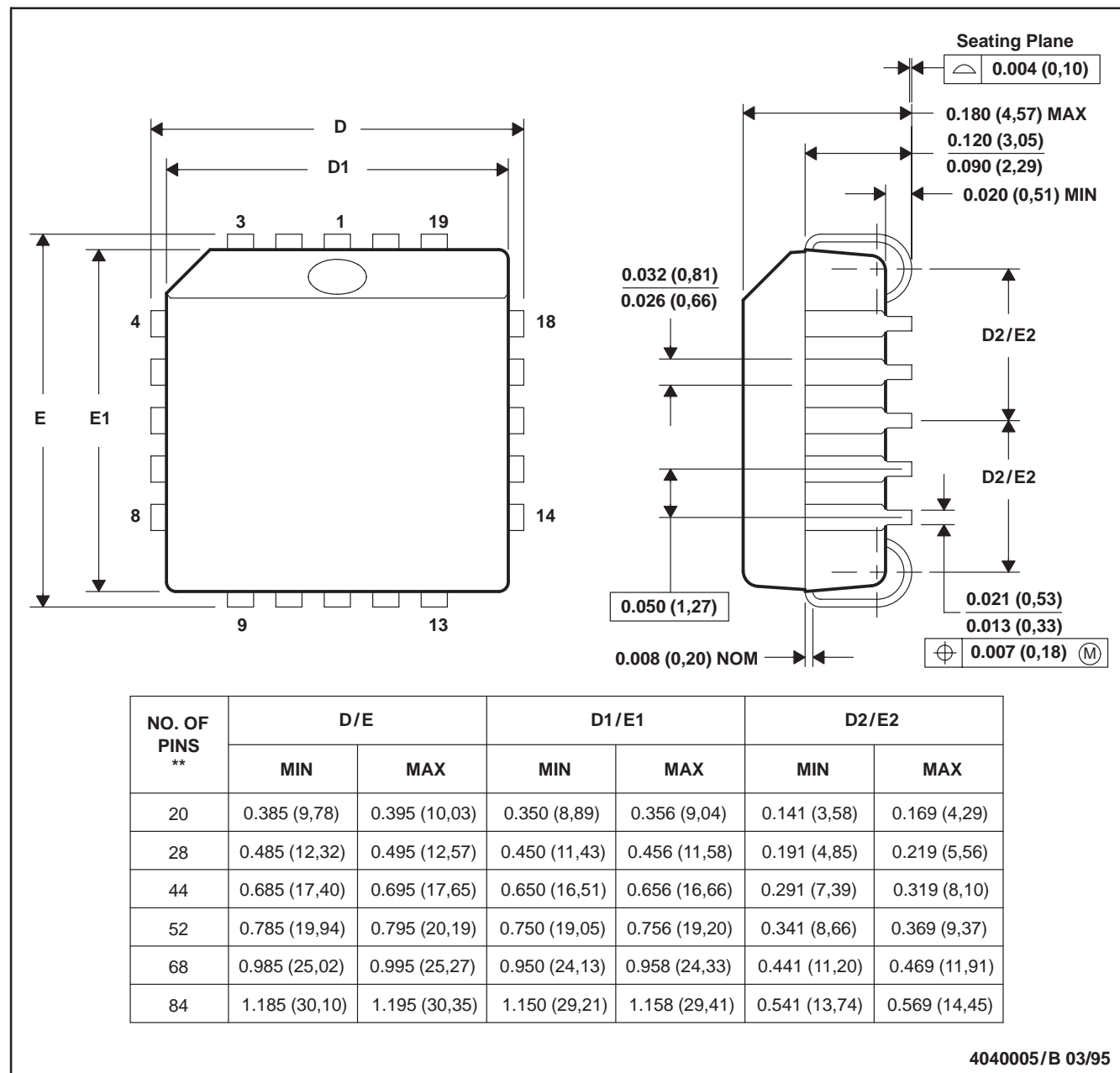


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

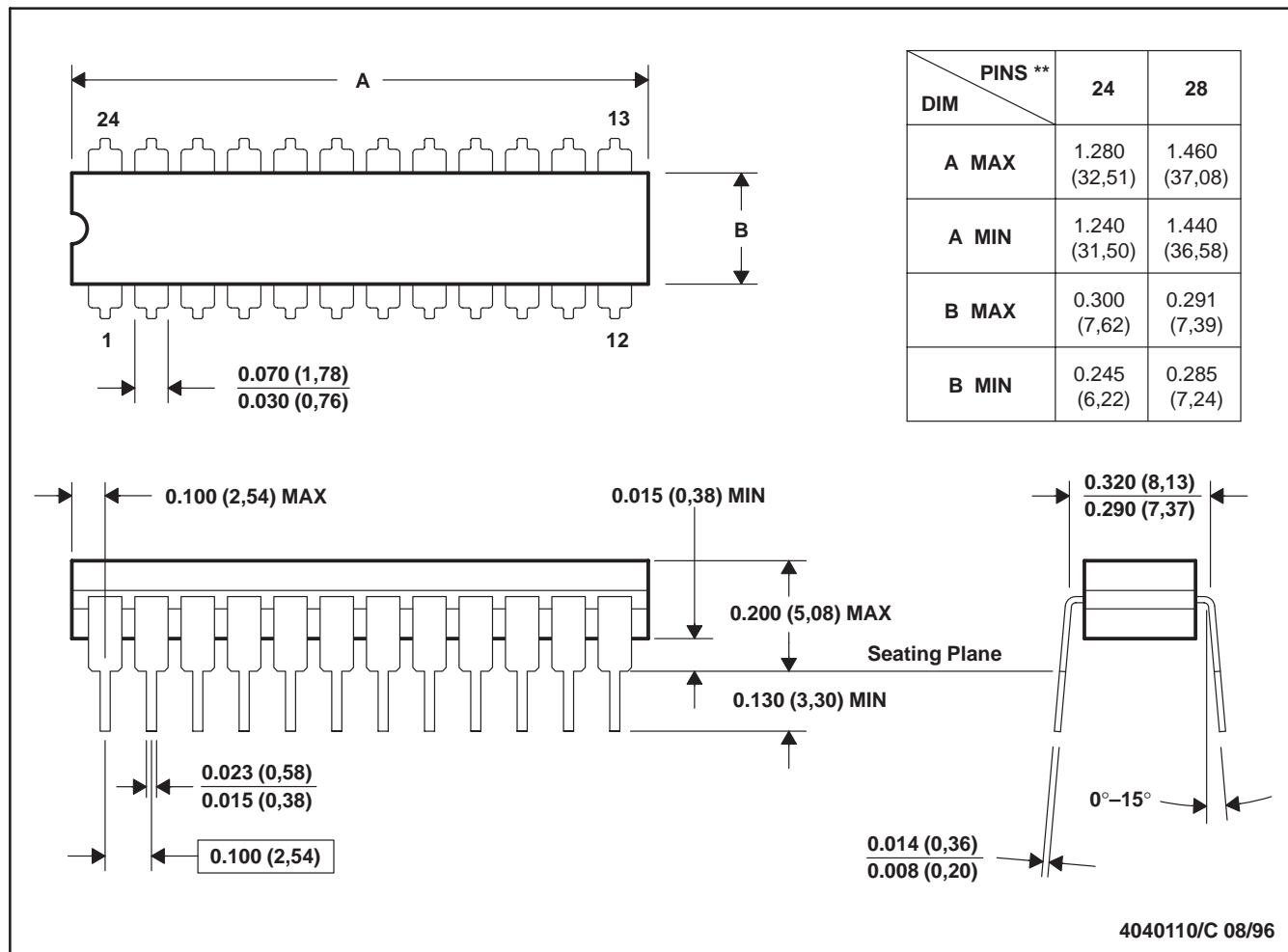


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



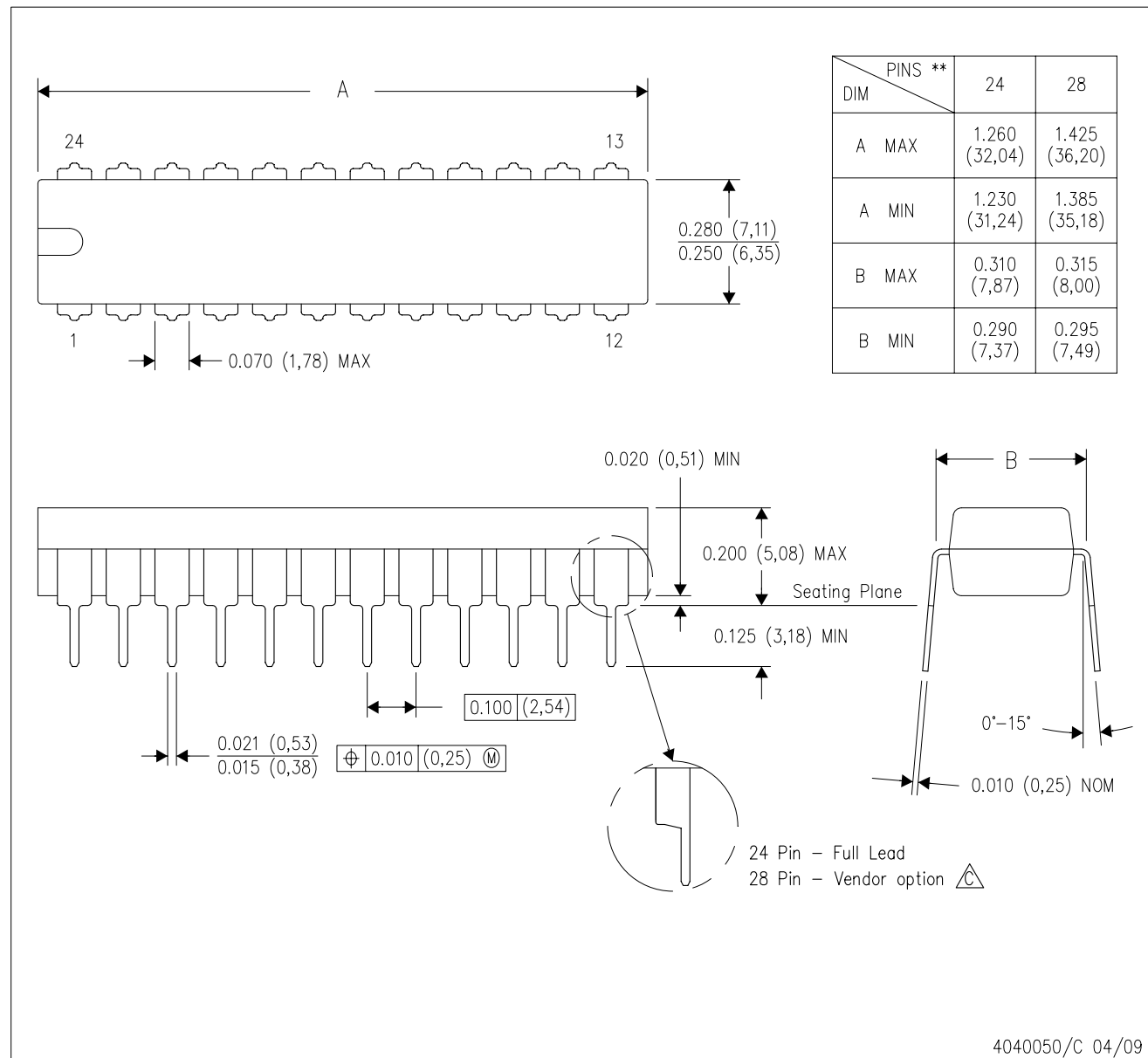
- NOTES:
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MECHANICAL DATA

NT (R-PDIP-T**)

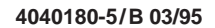
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

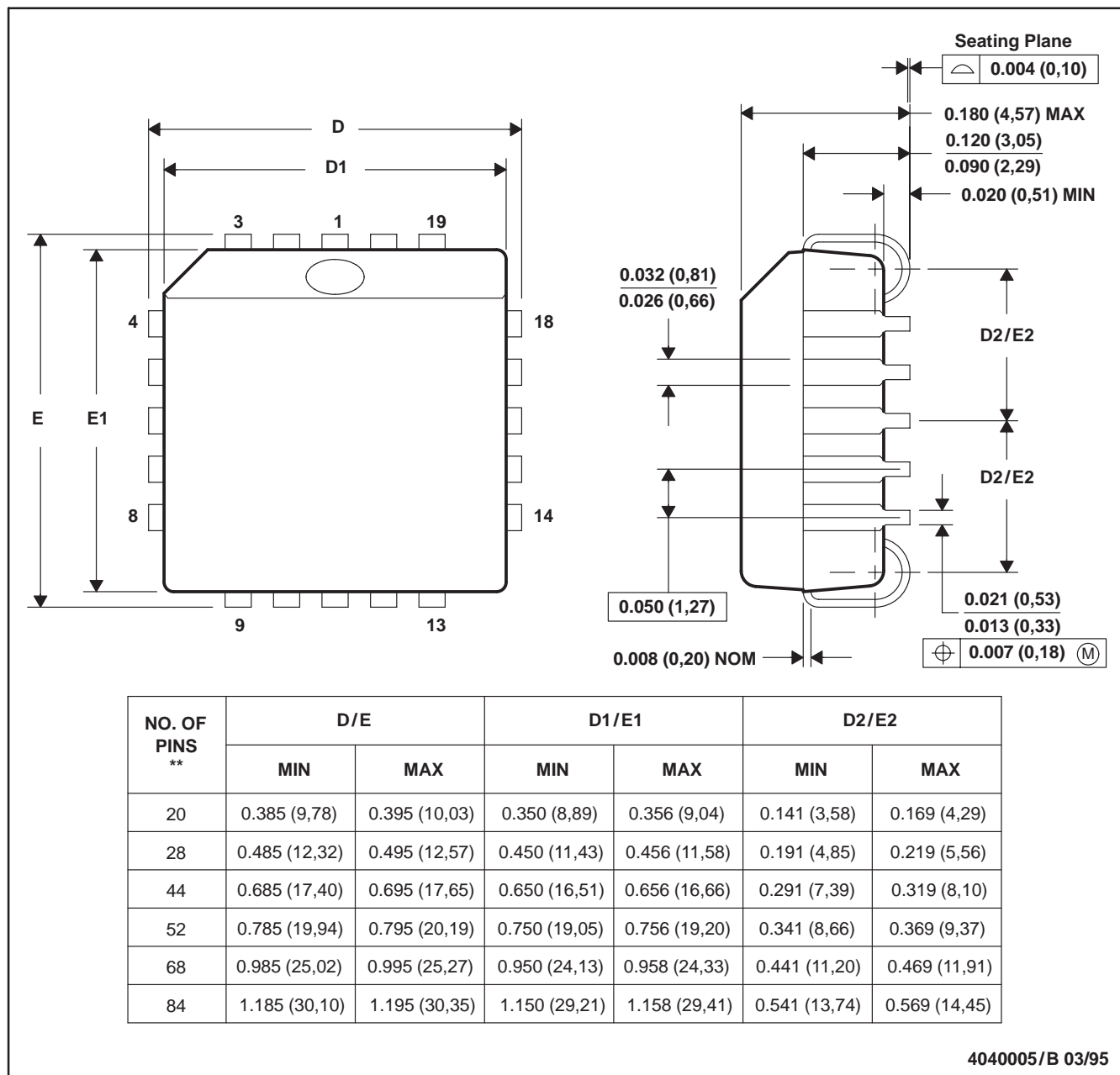


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

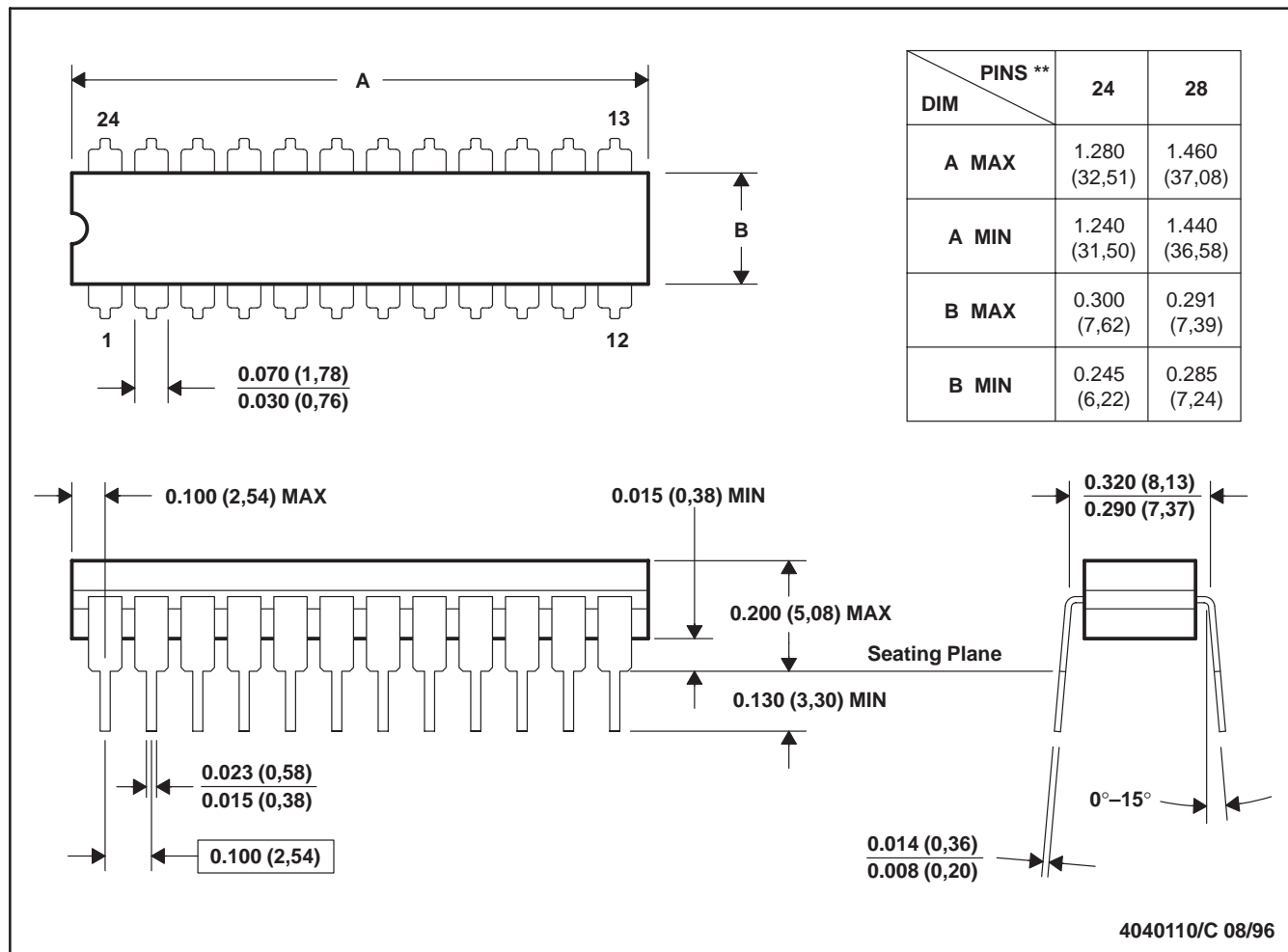


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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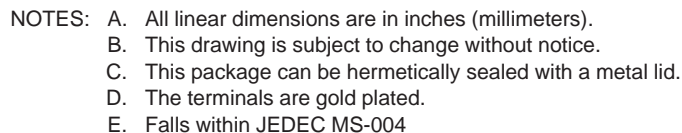
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28 TERMINAL SHOWN

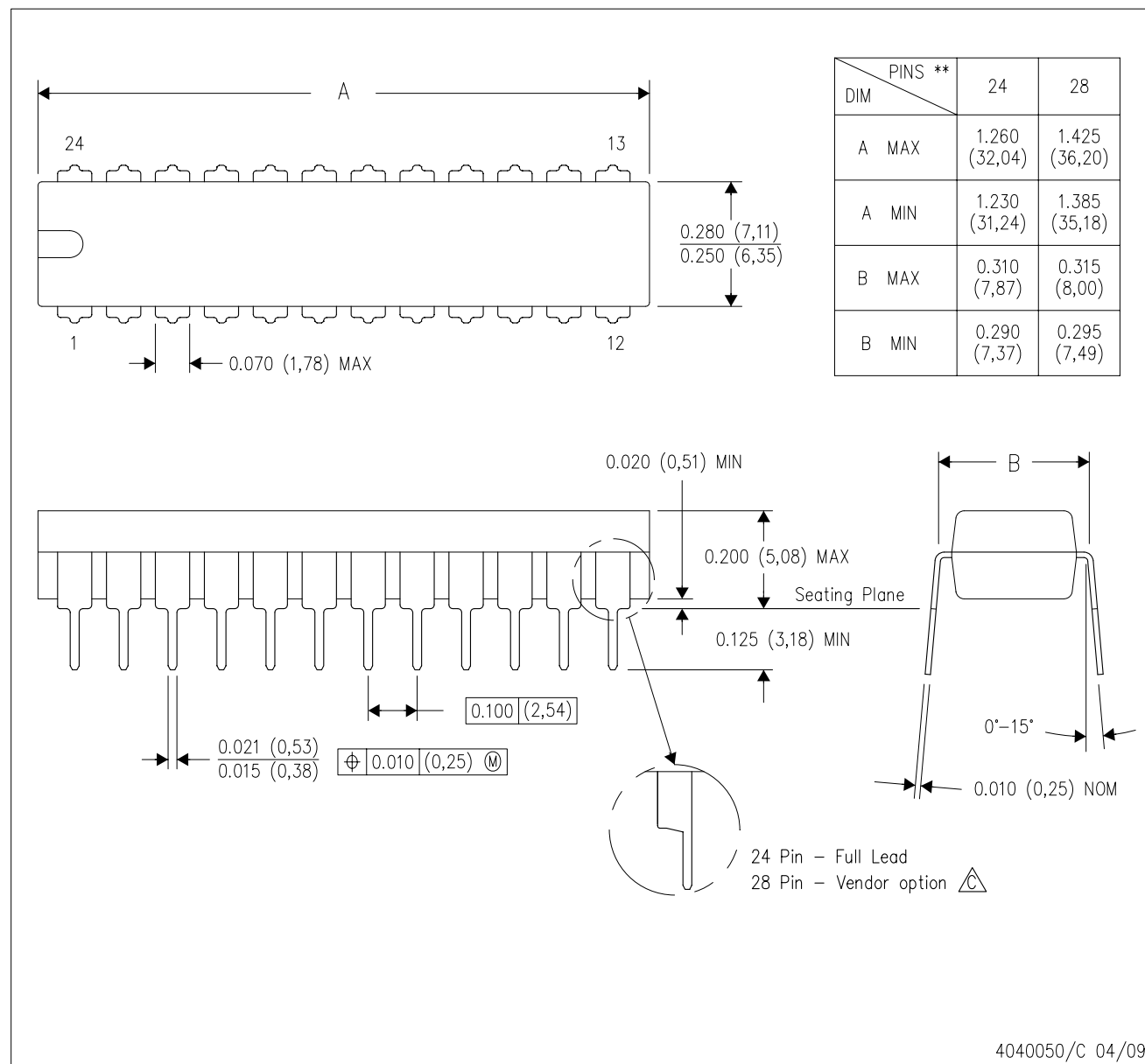


MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

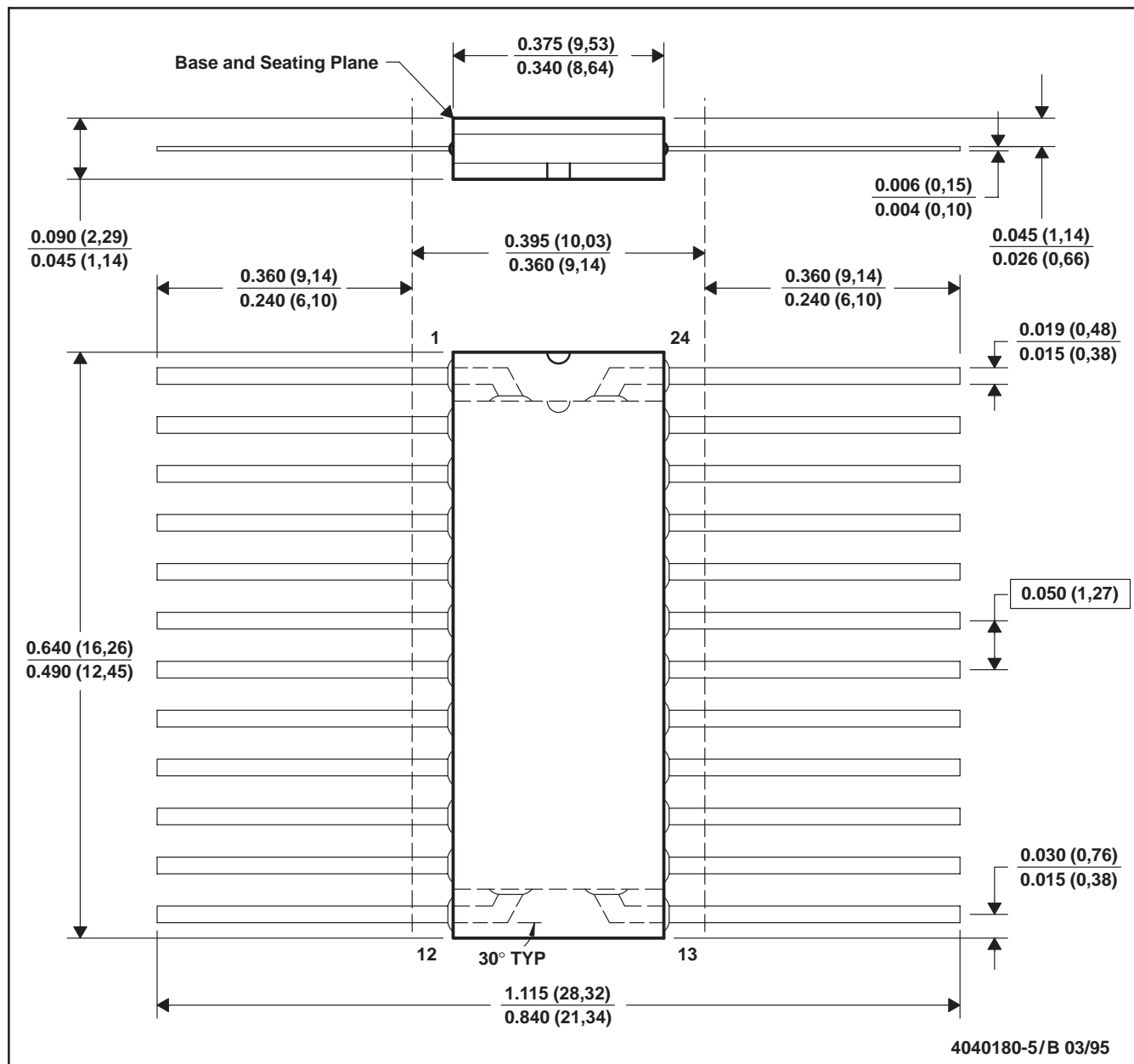
PLASTIC DUAL-IN-LINE PACKAGE



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 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

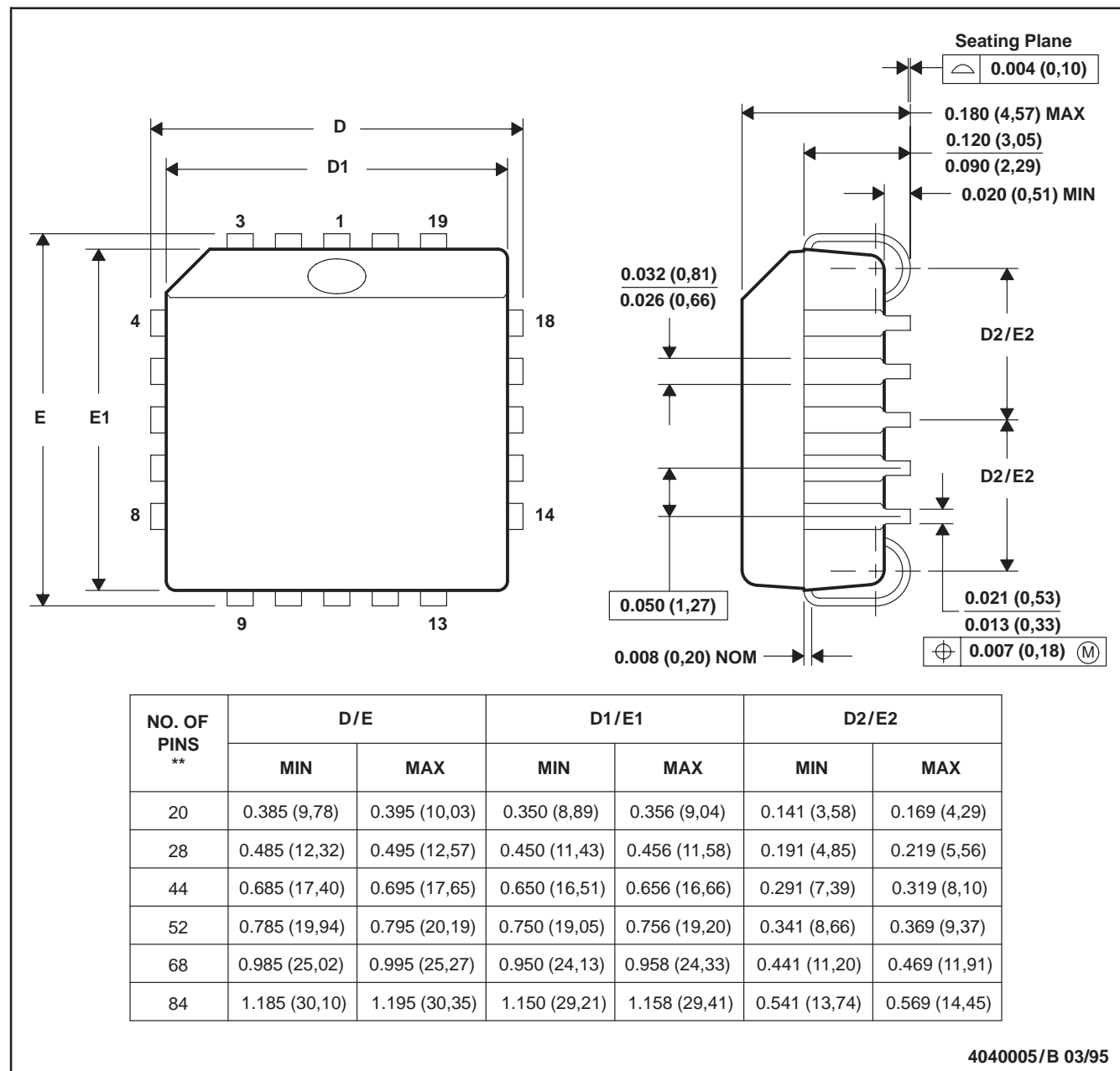


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

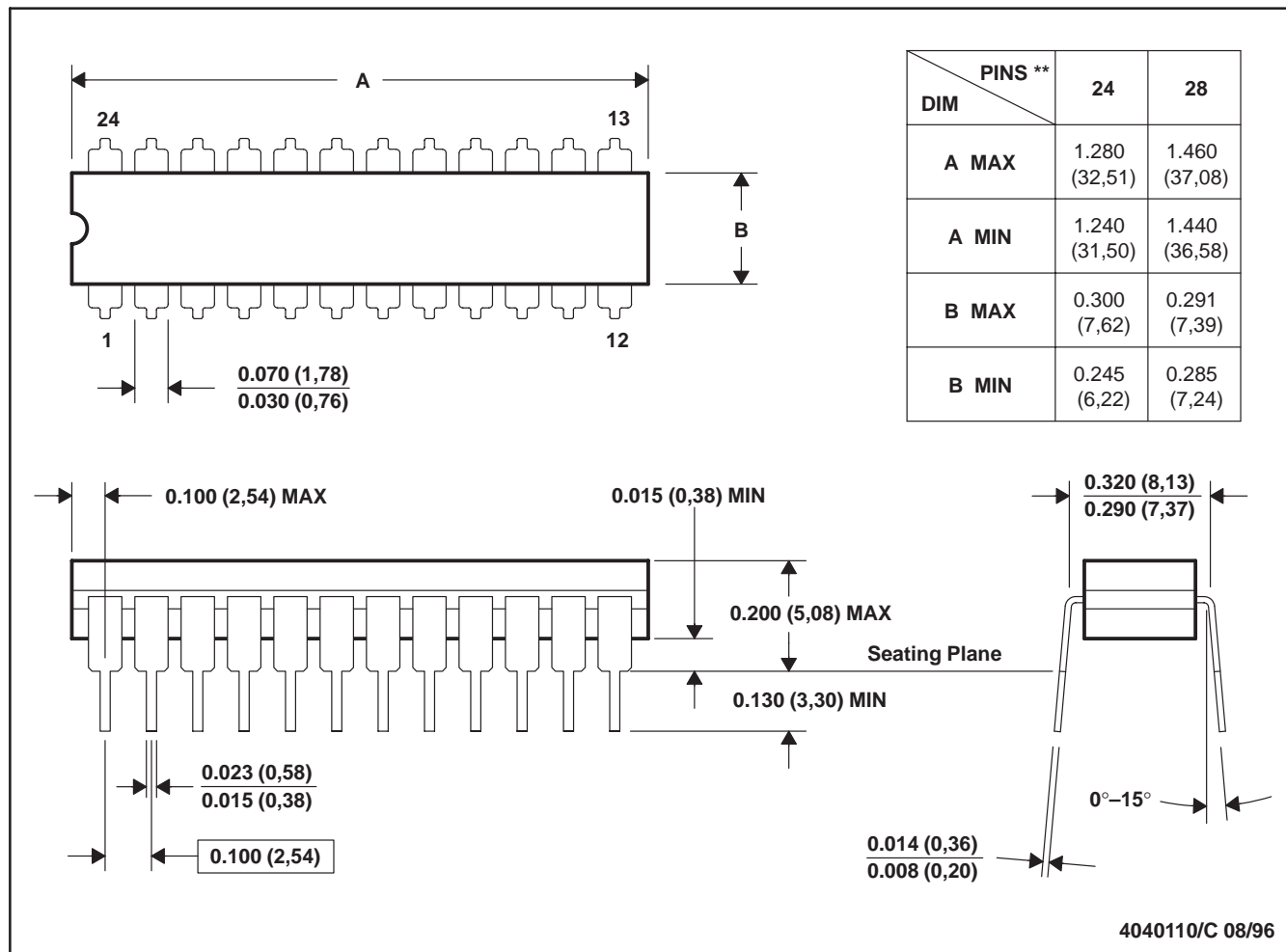


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

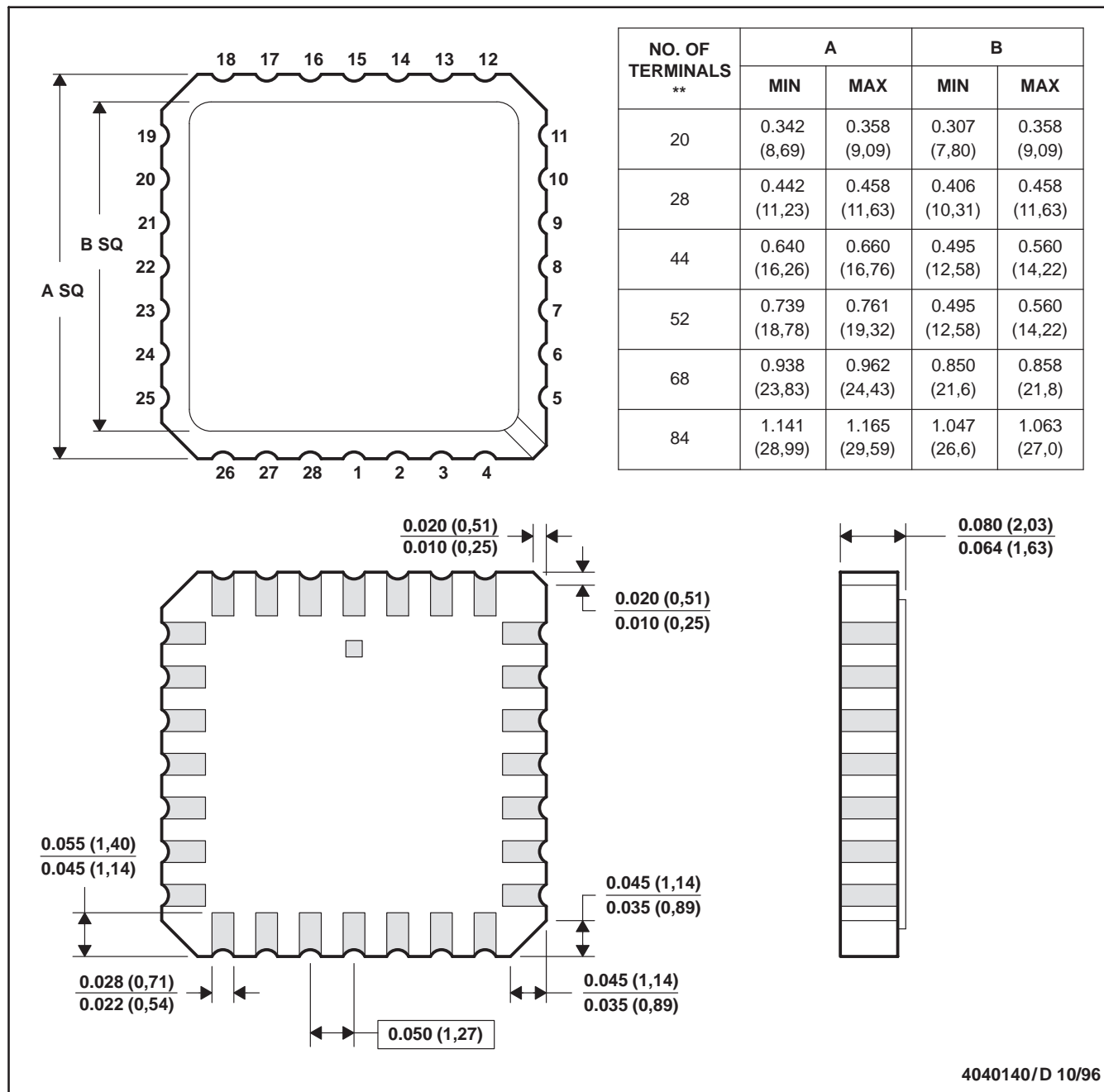
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



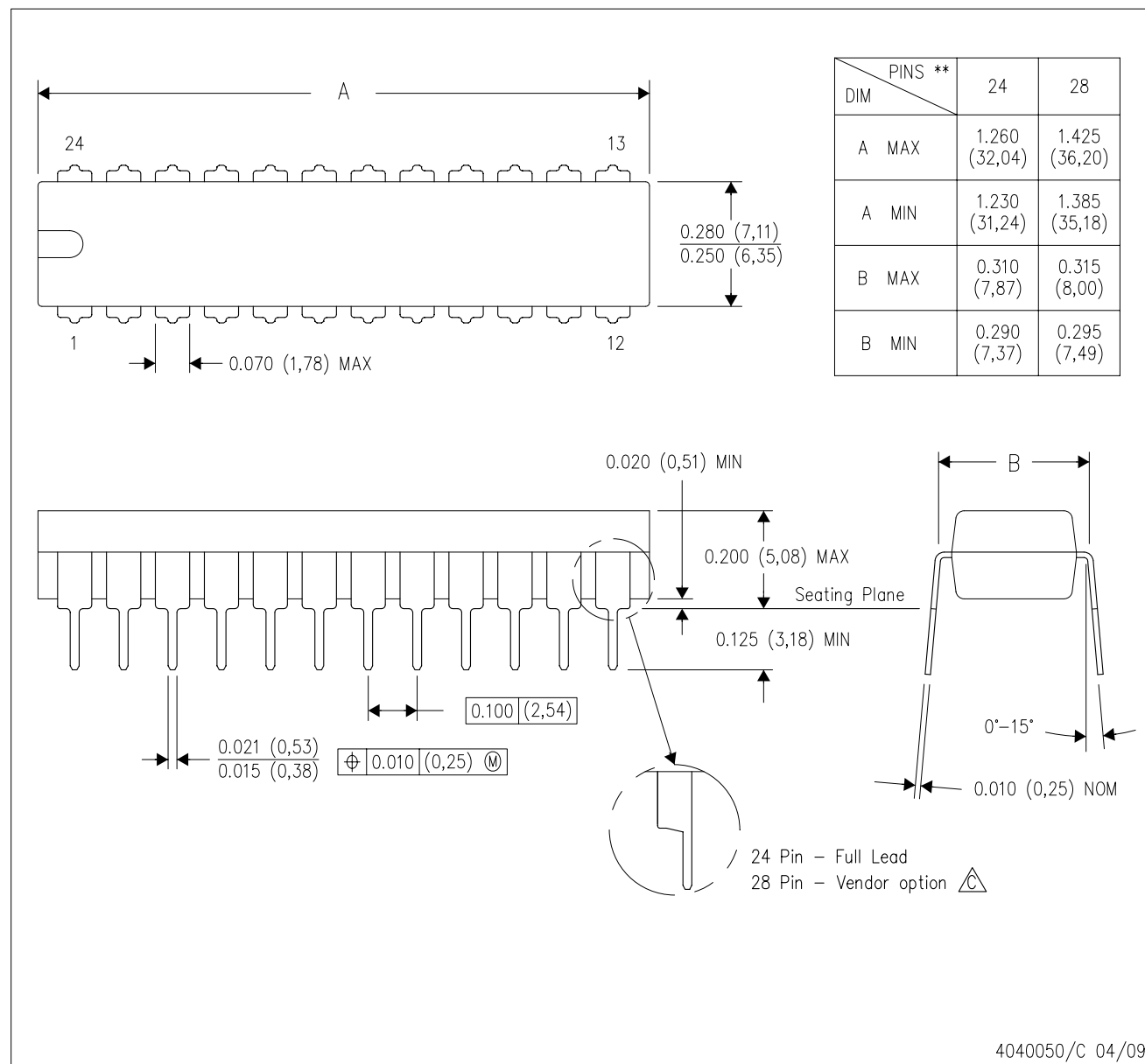
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

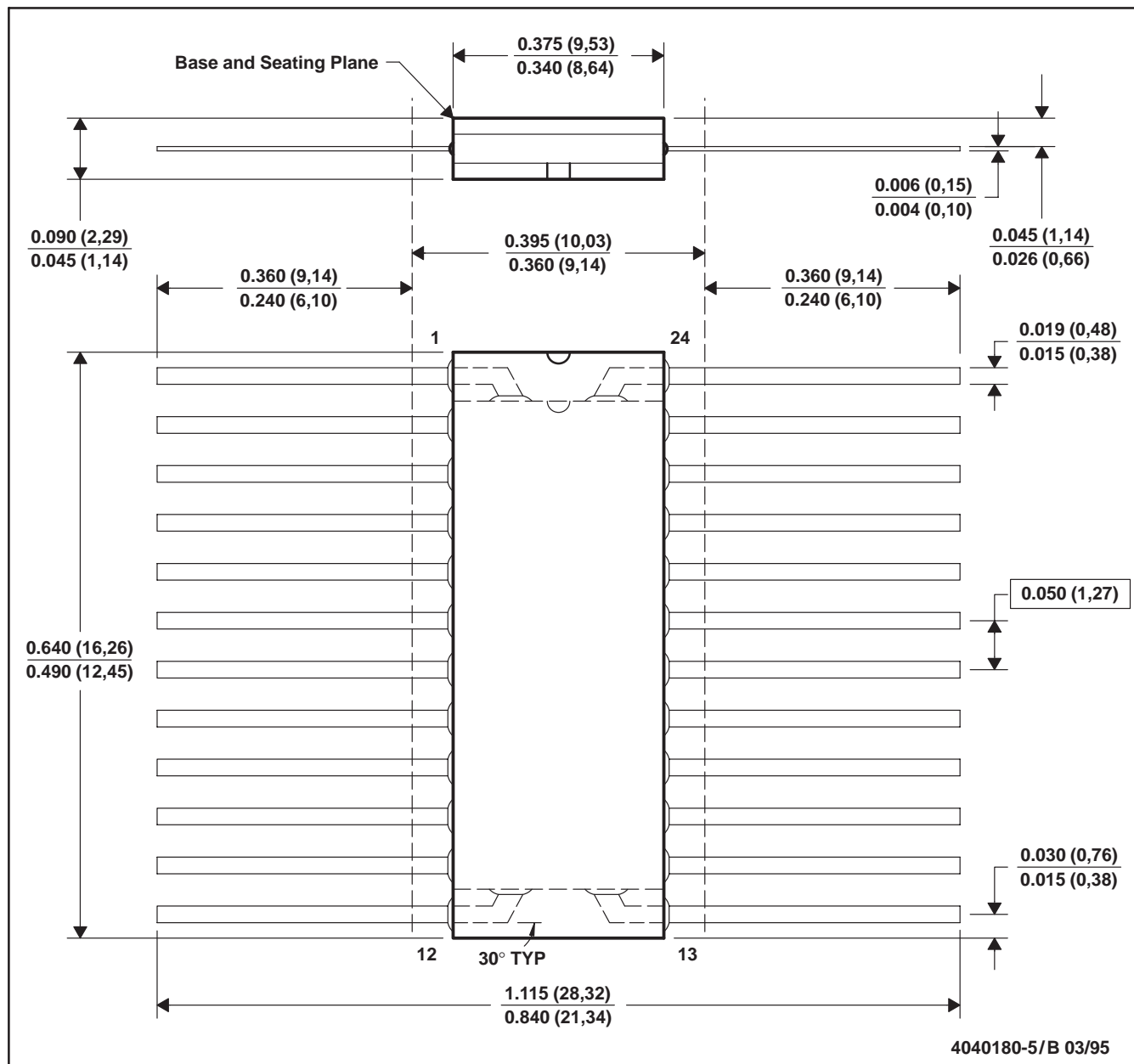
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

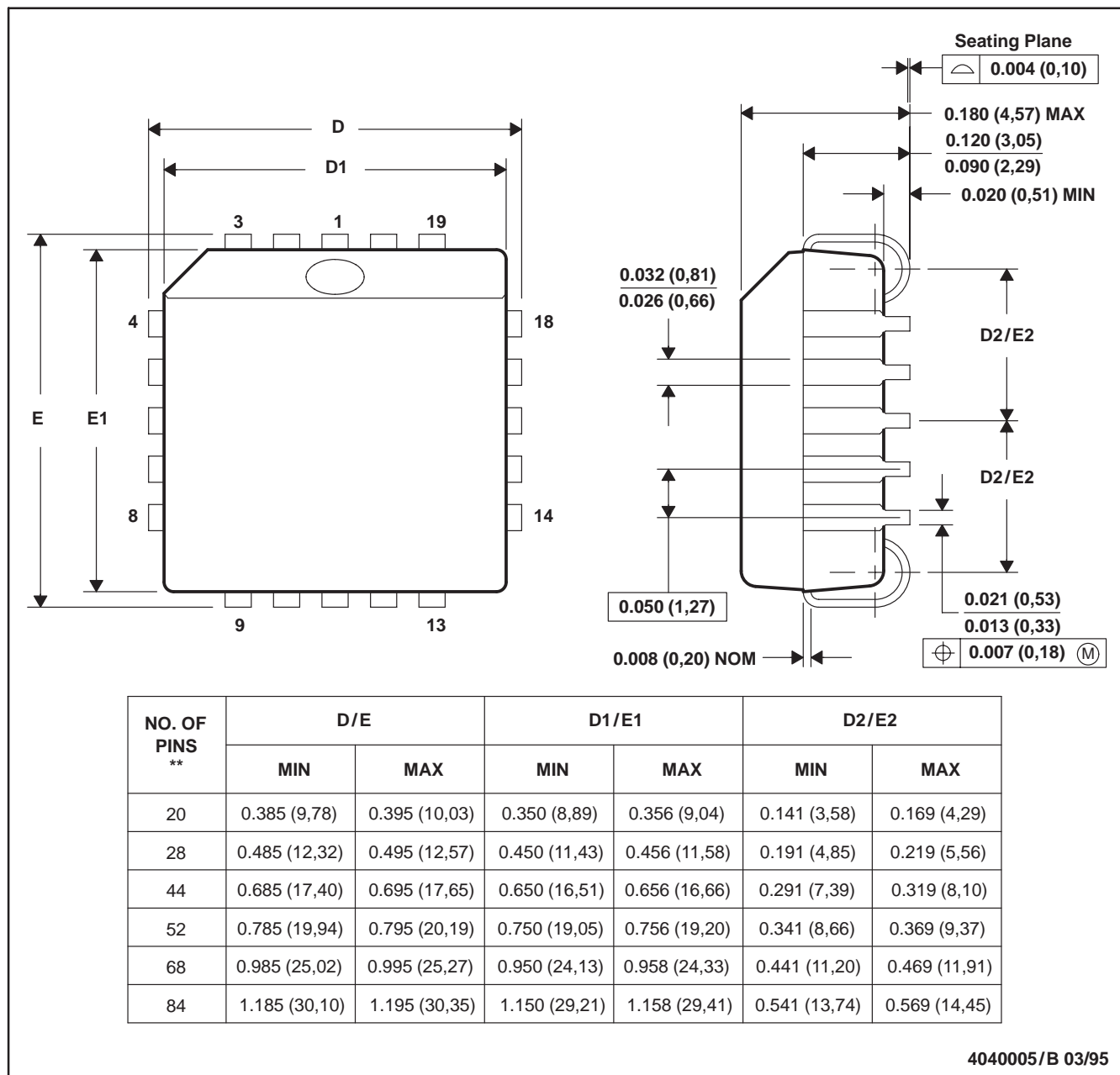


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

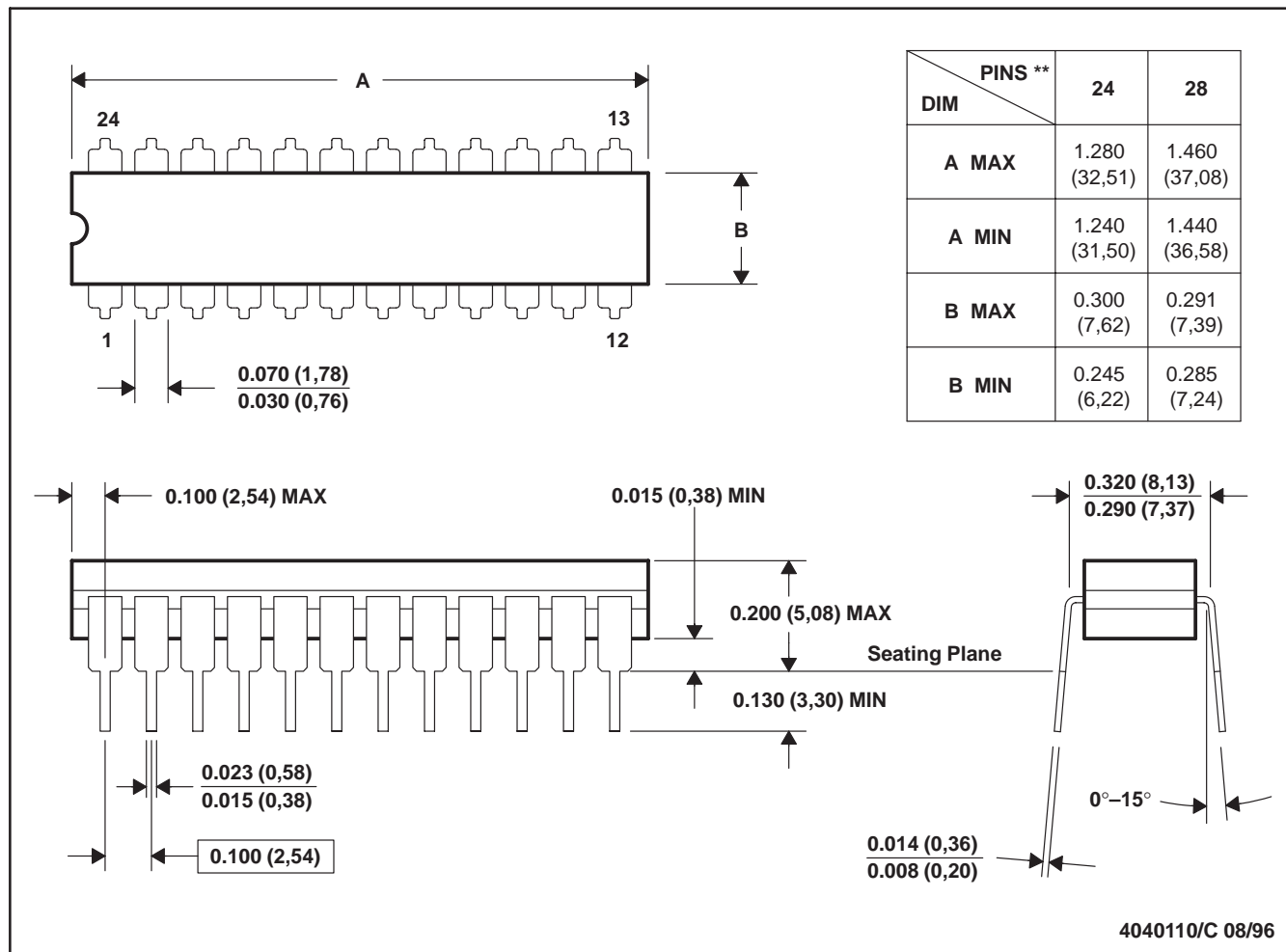


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

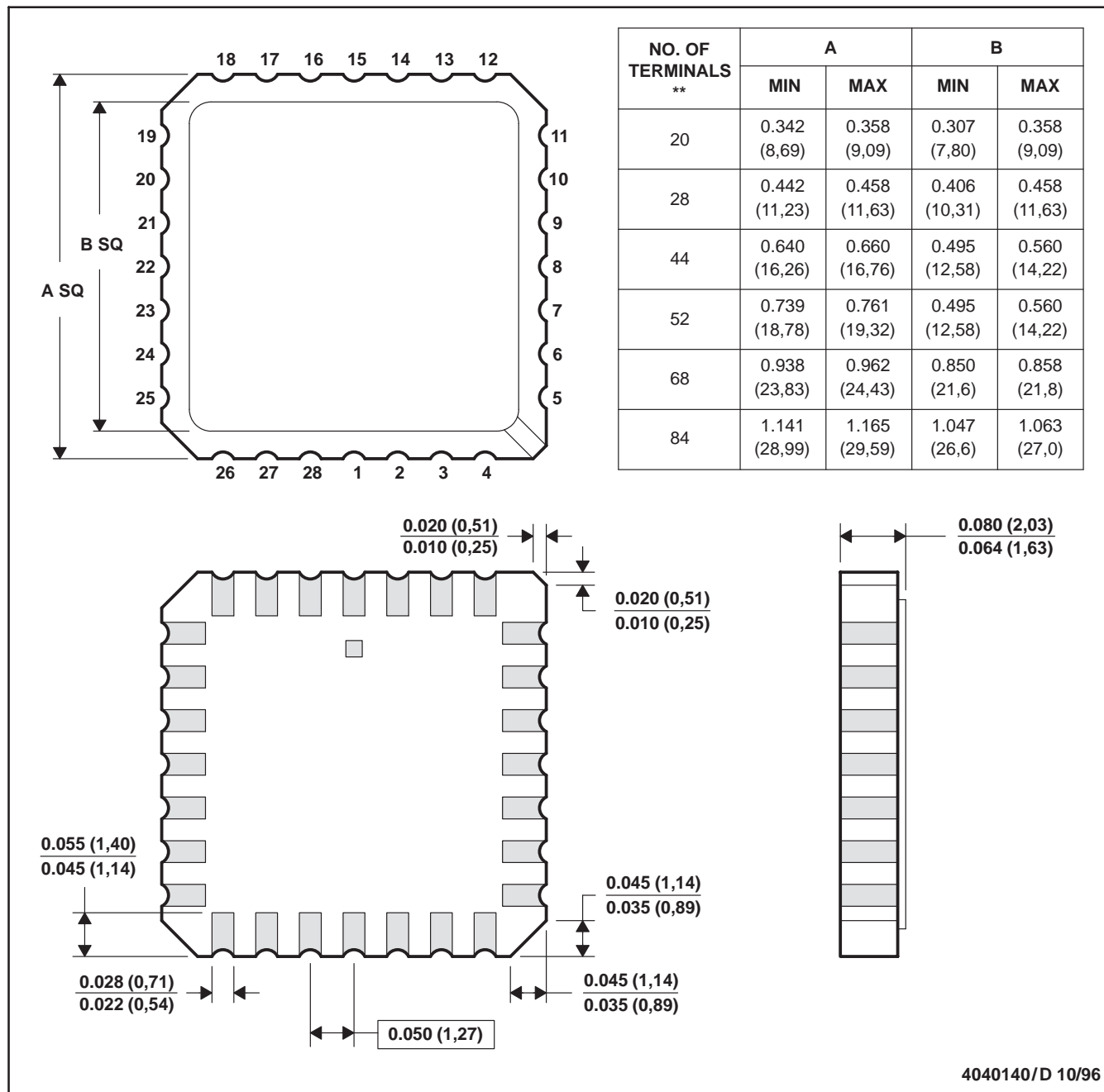
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



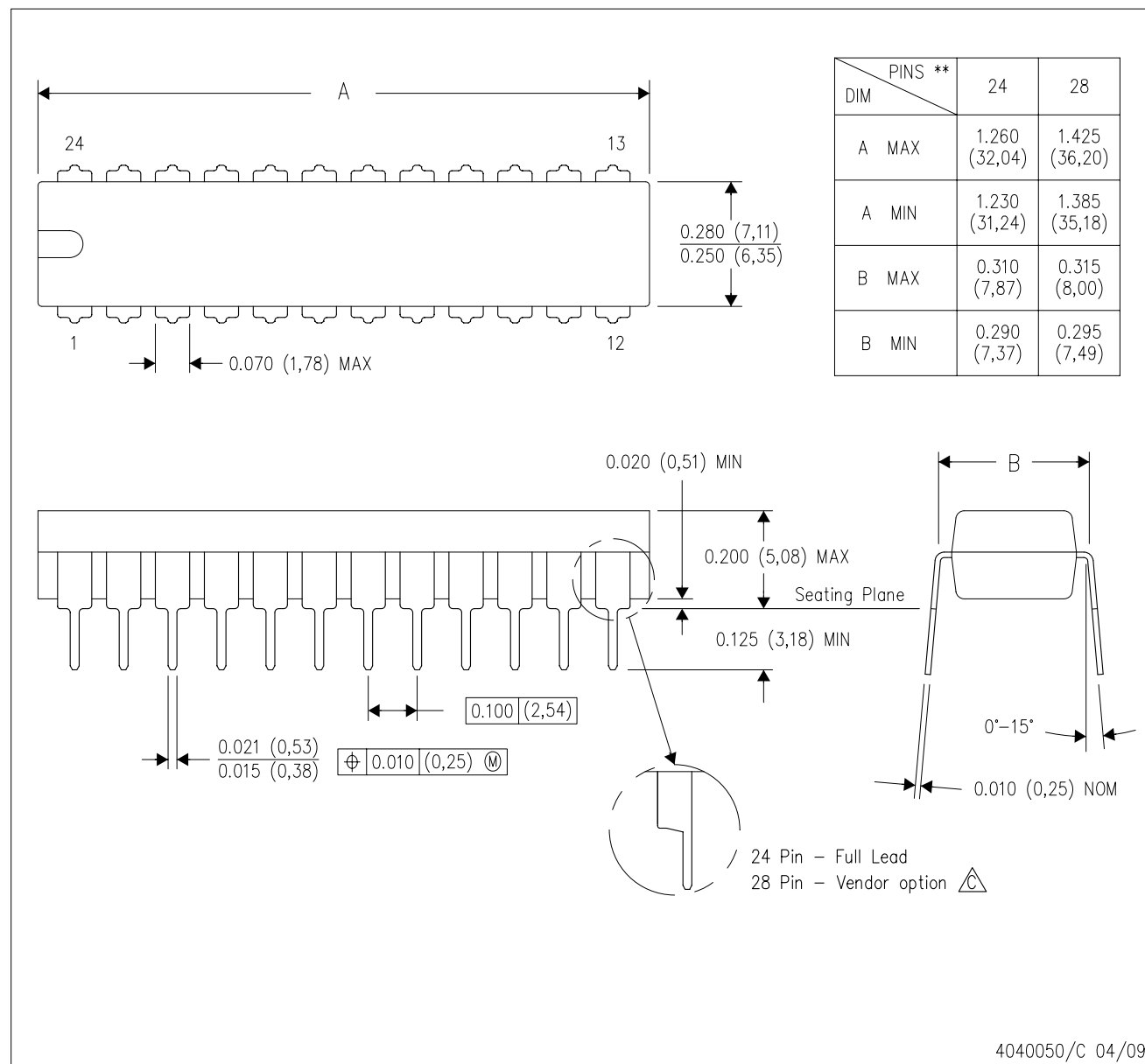
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

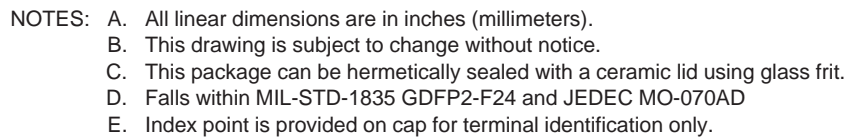
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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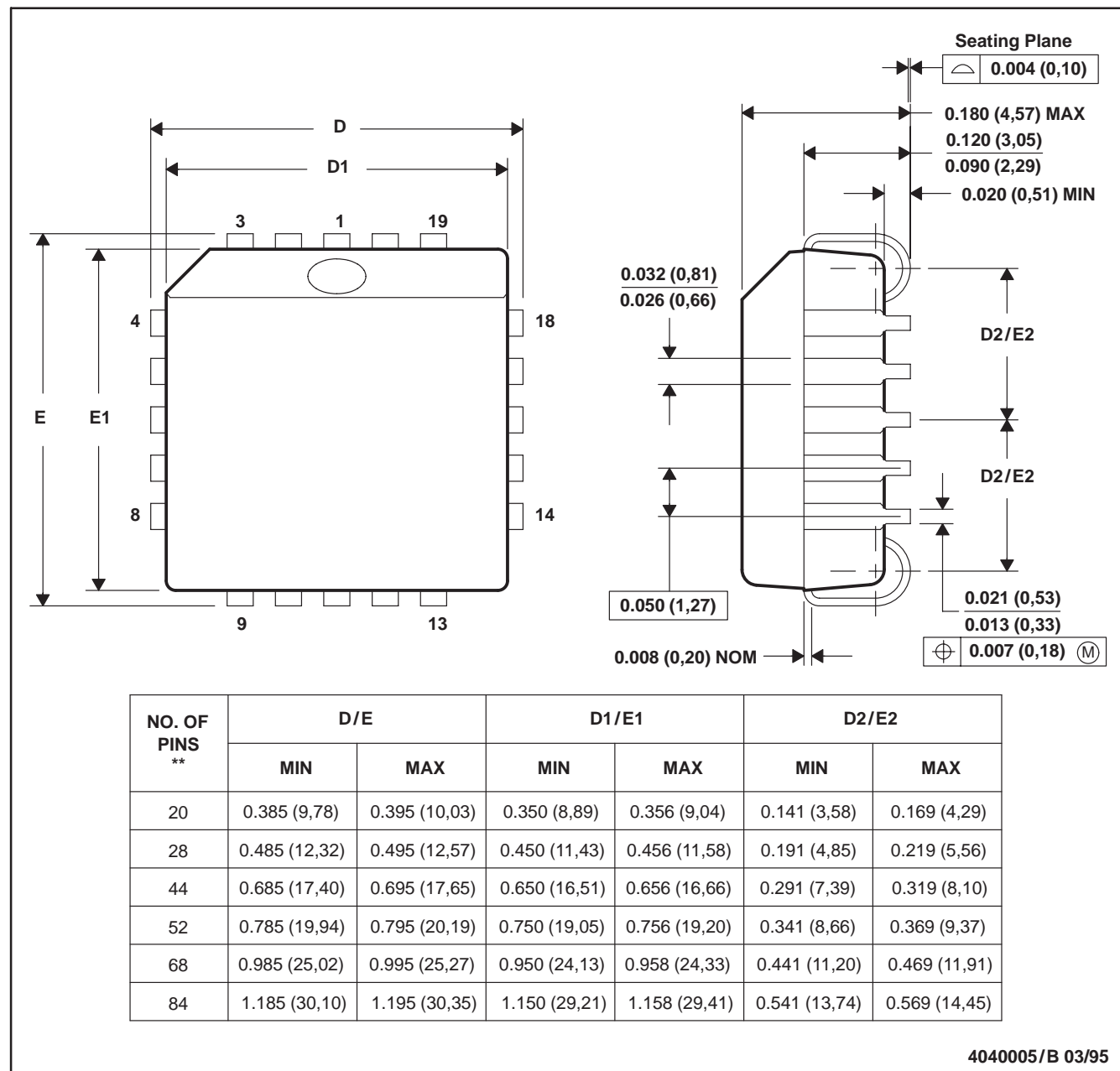
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

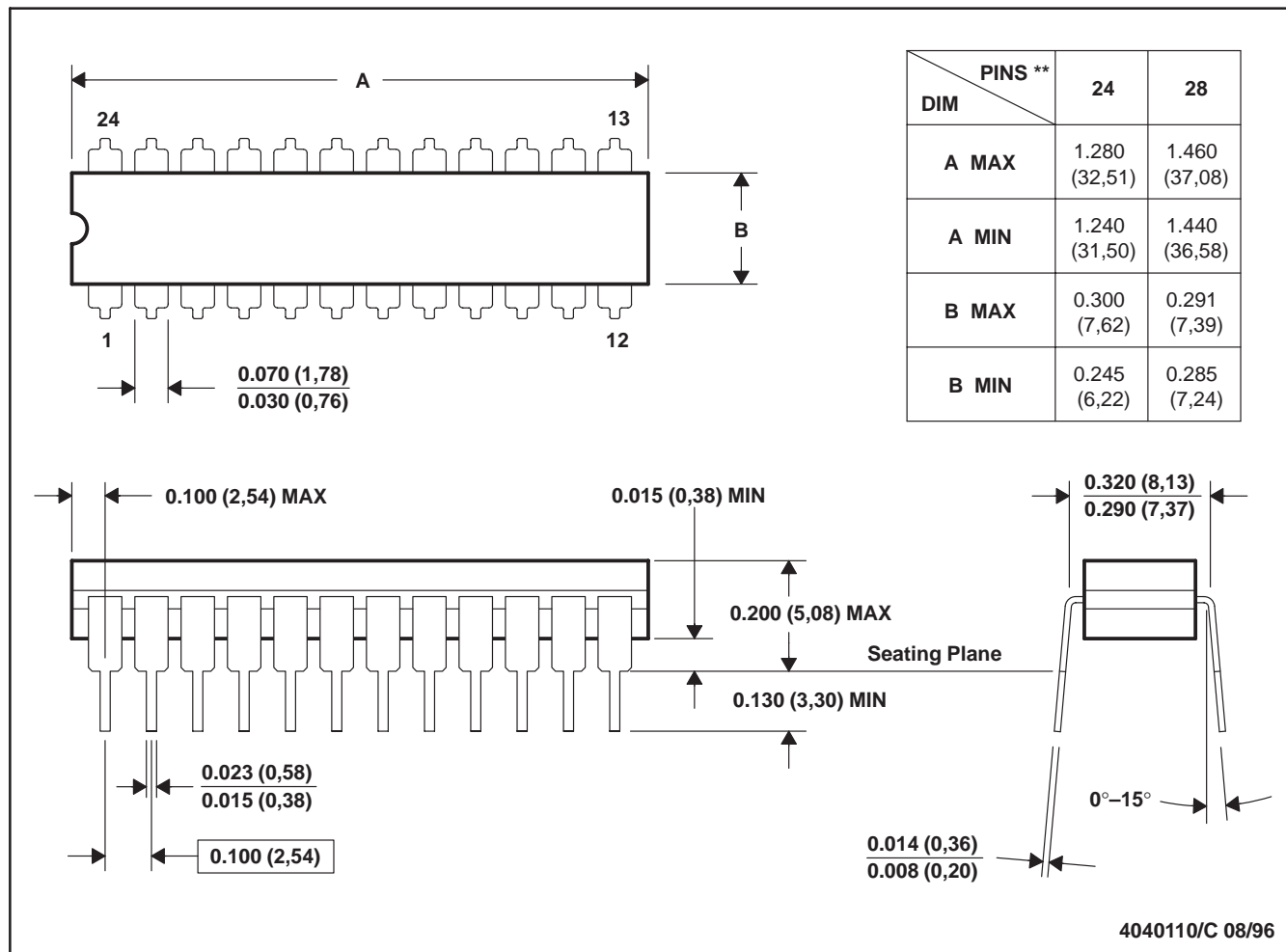


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



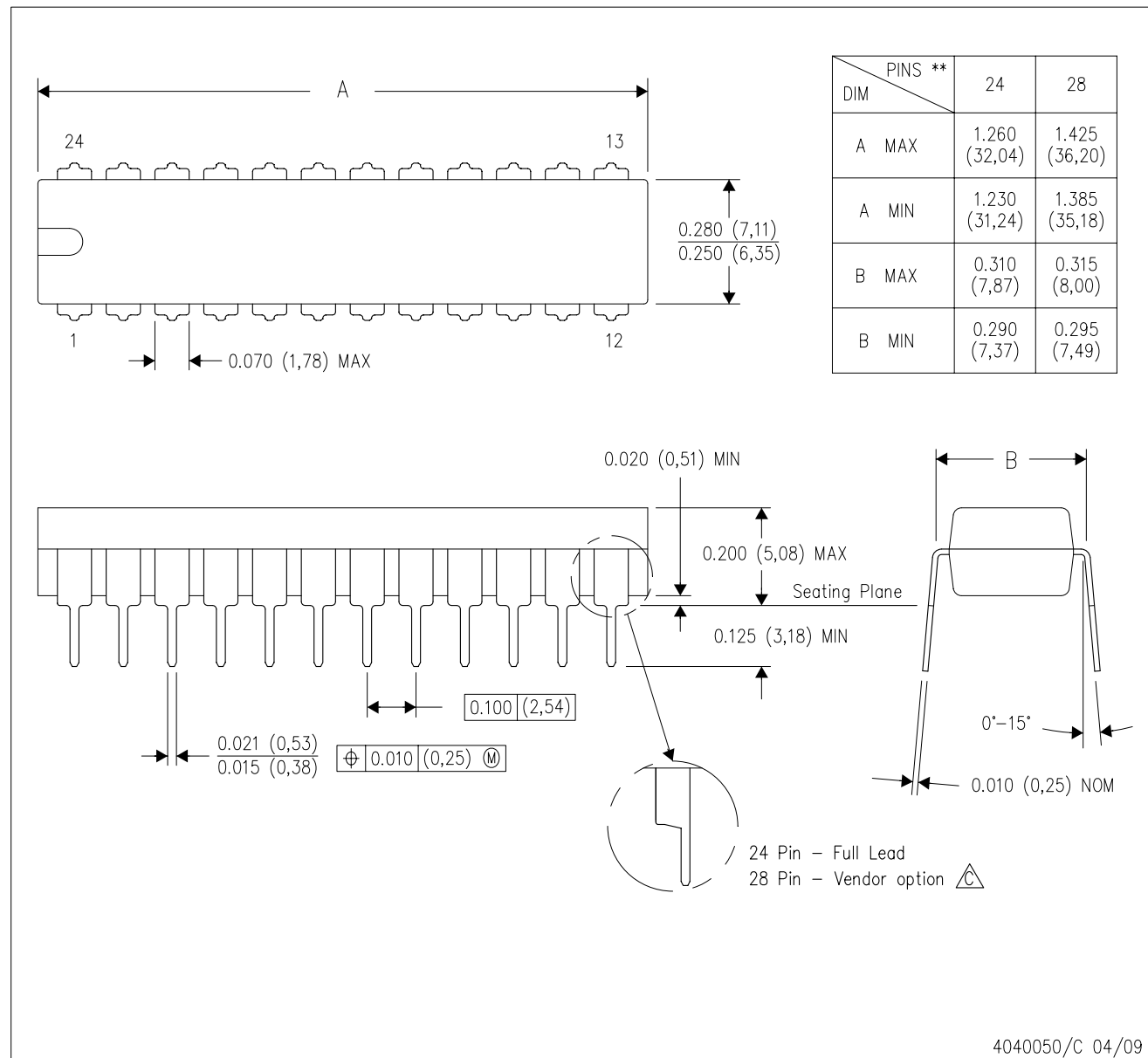
- NOTES:
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE

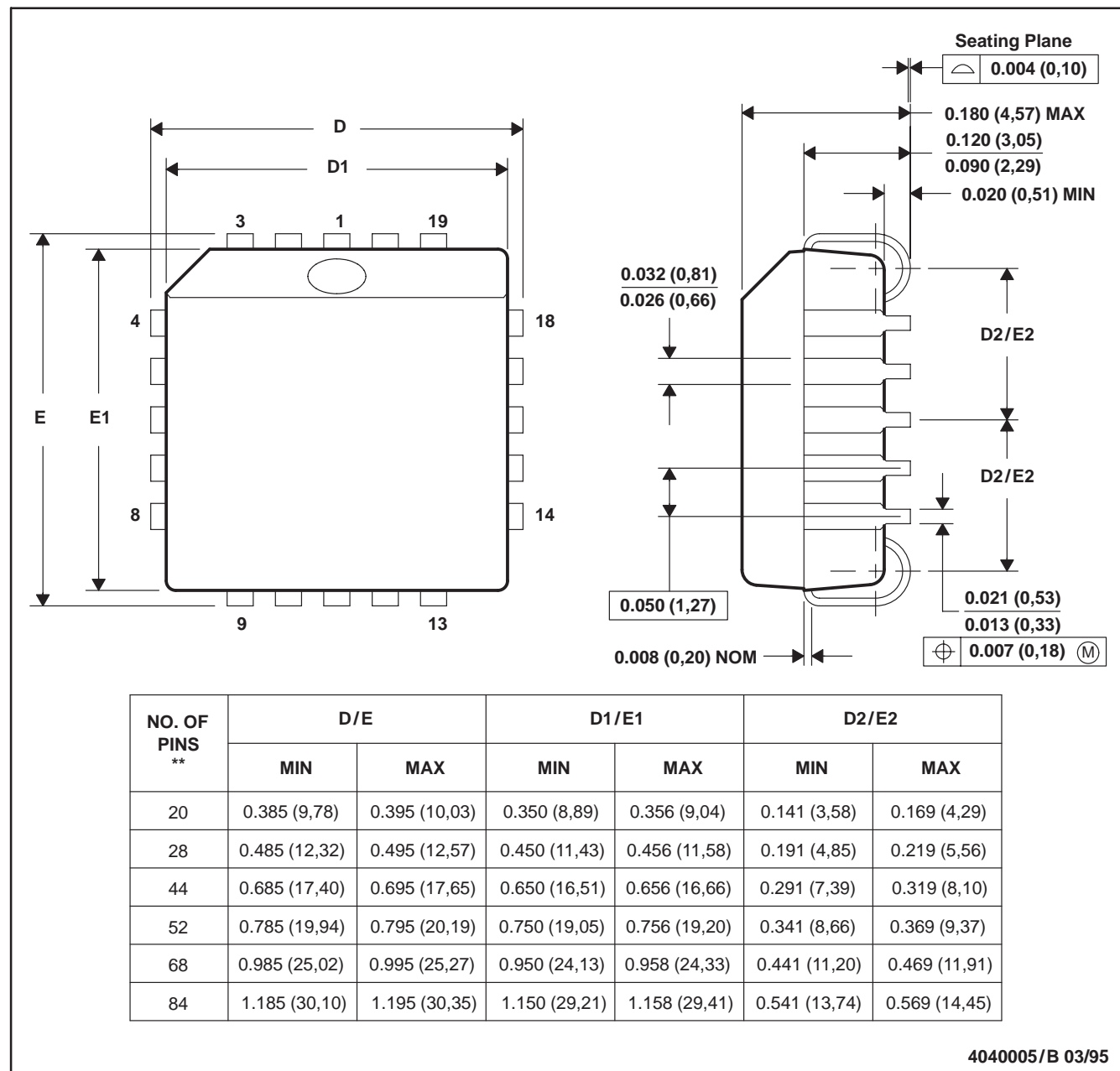


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FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

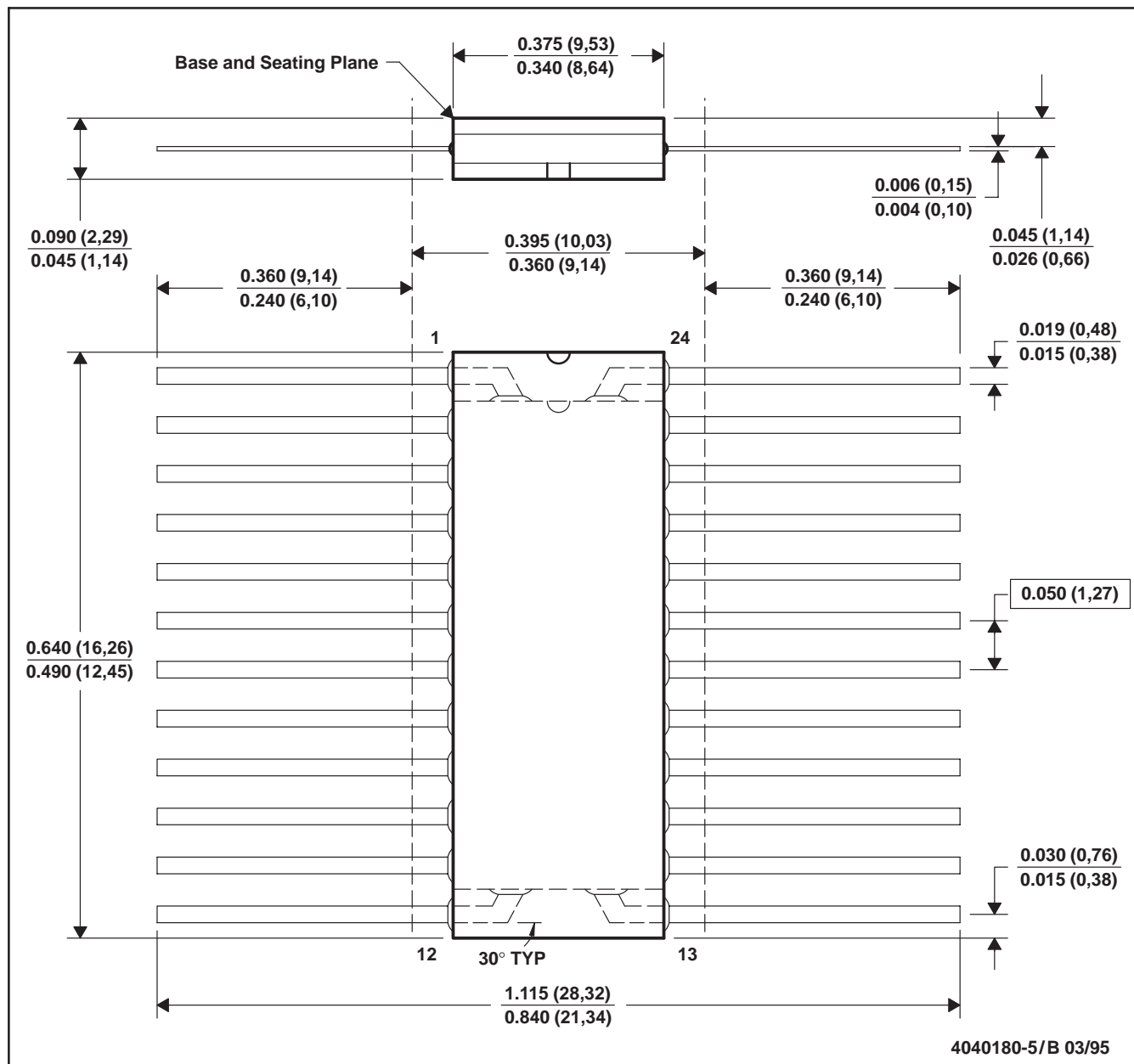
20 PIN SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

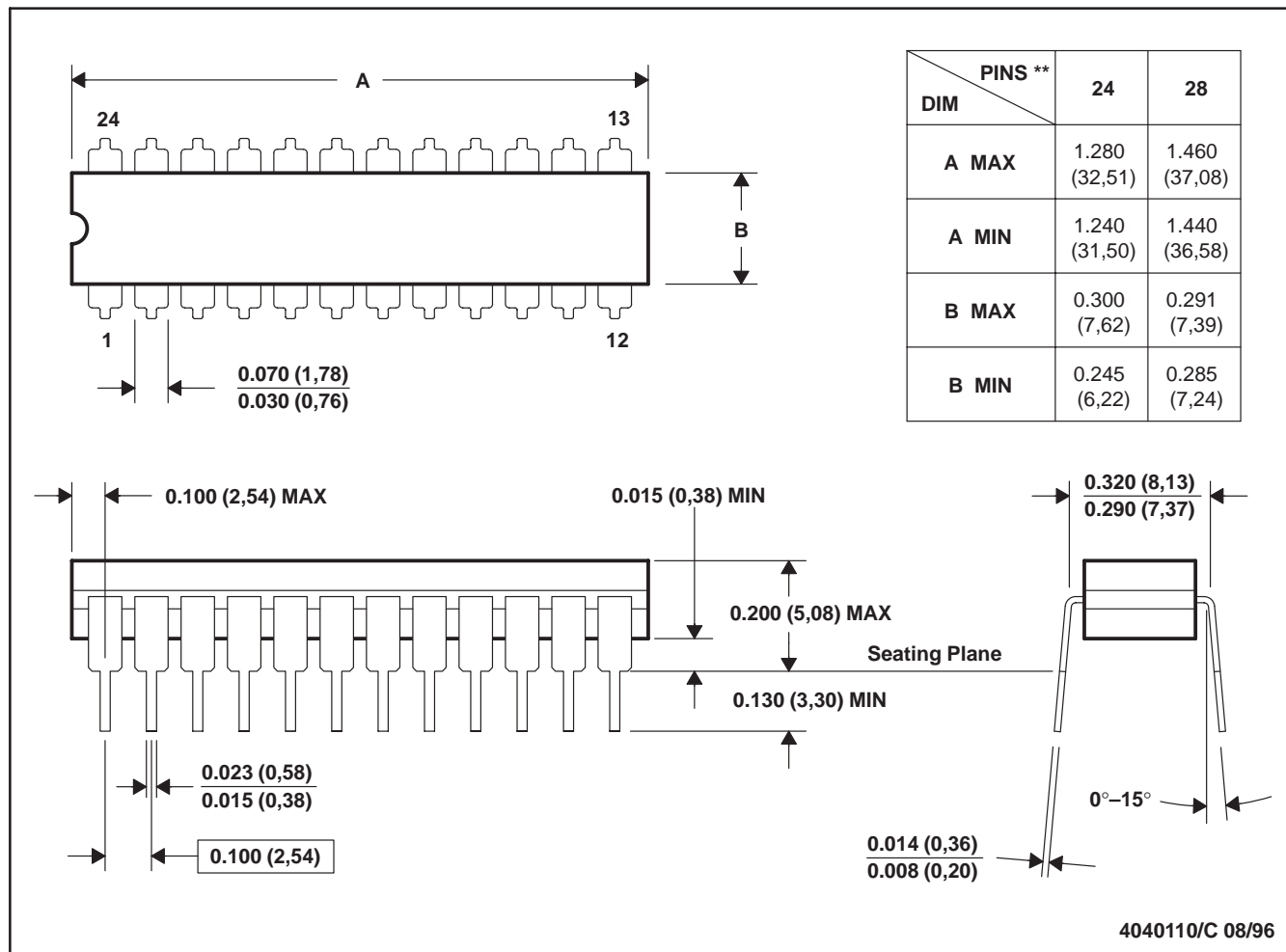


- NOTES:
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 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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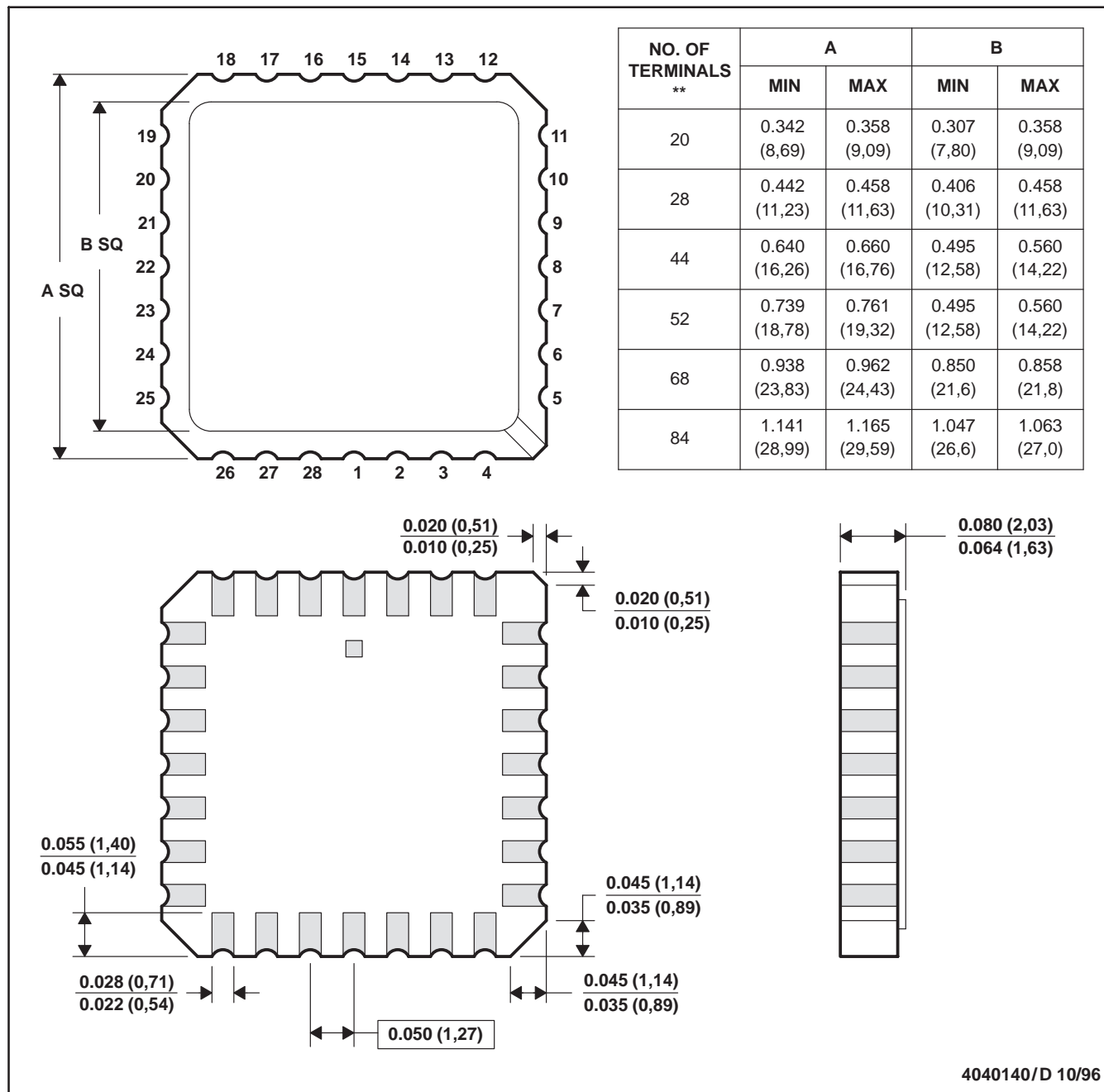
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



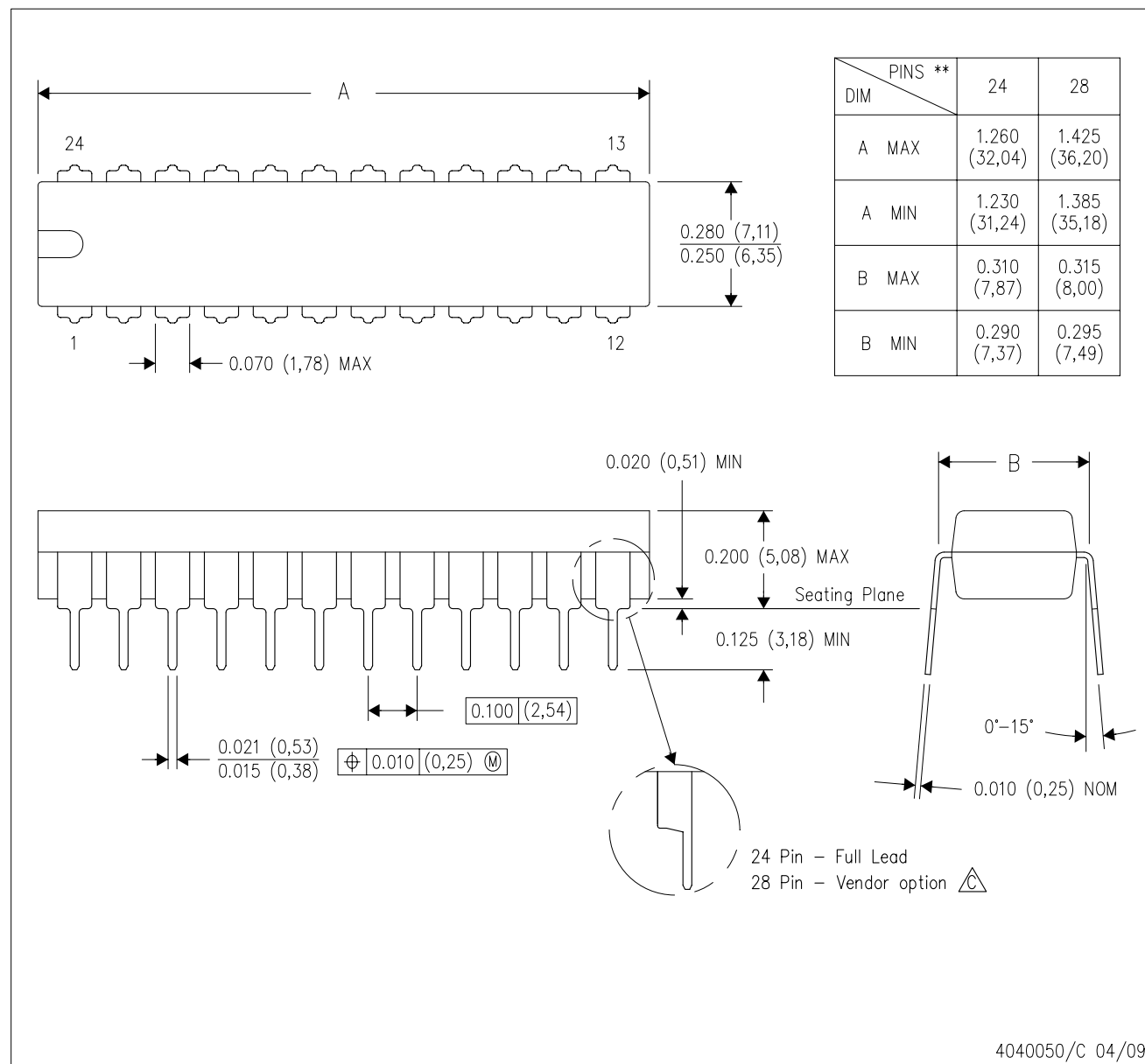
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

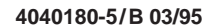
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - B. This drawing is subject to change without notice.
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CERAMIC DUAL FLATPACK

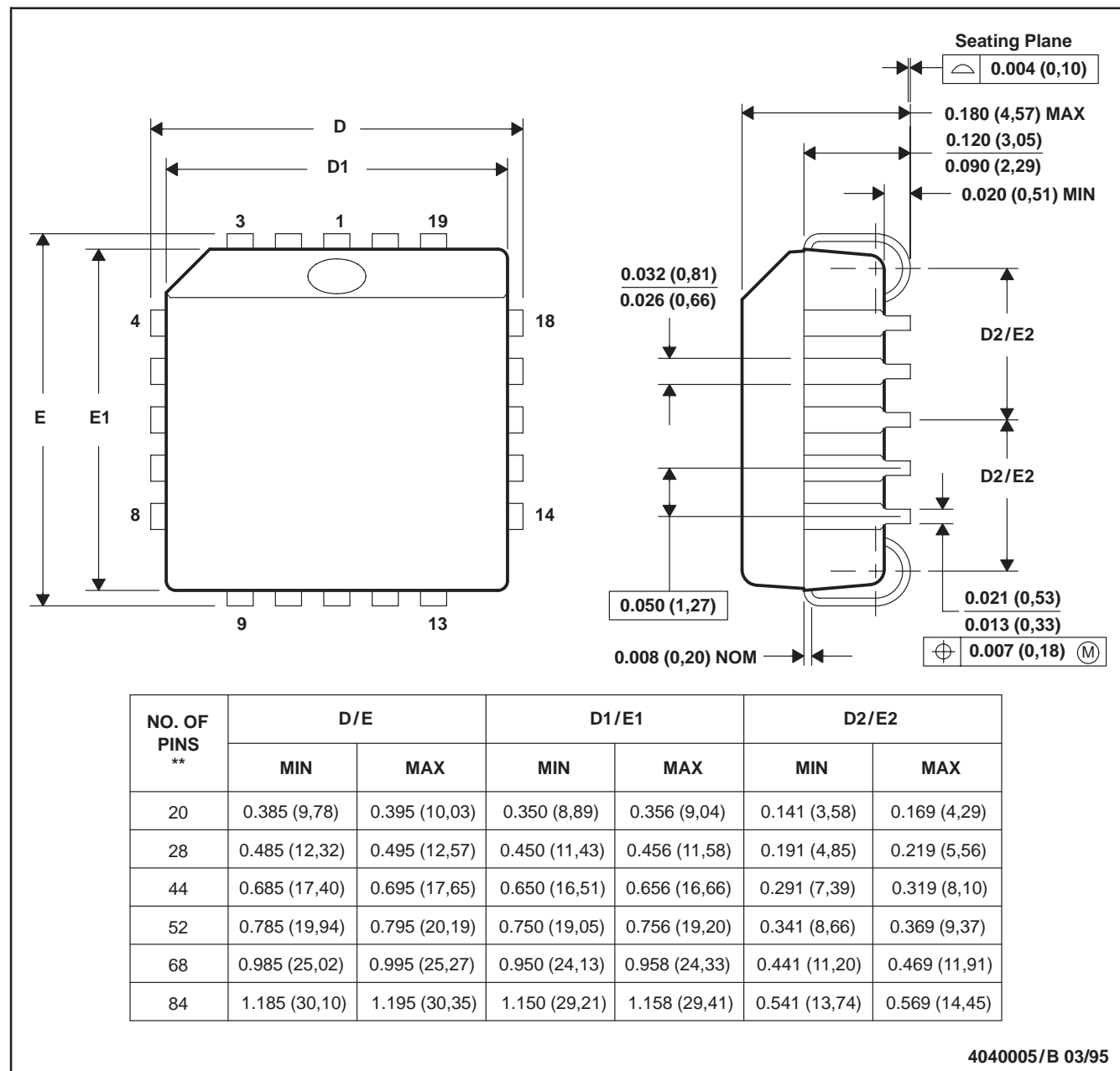


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

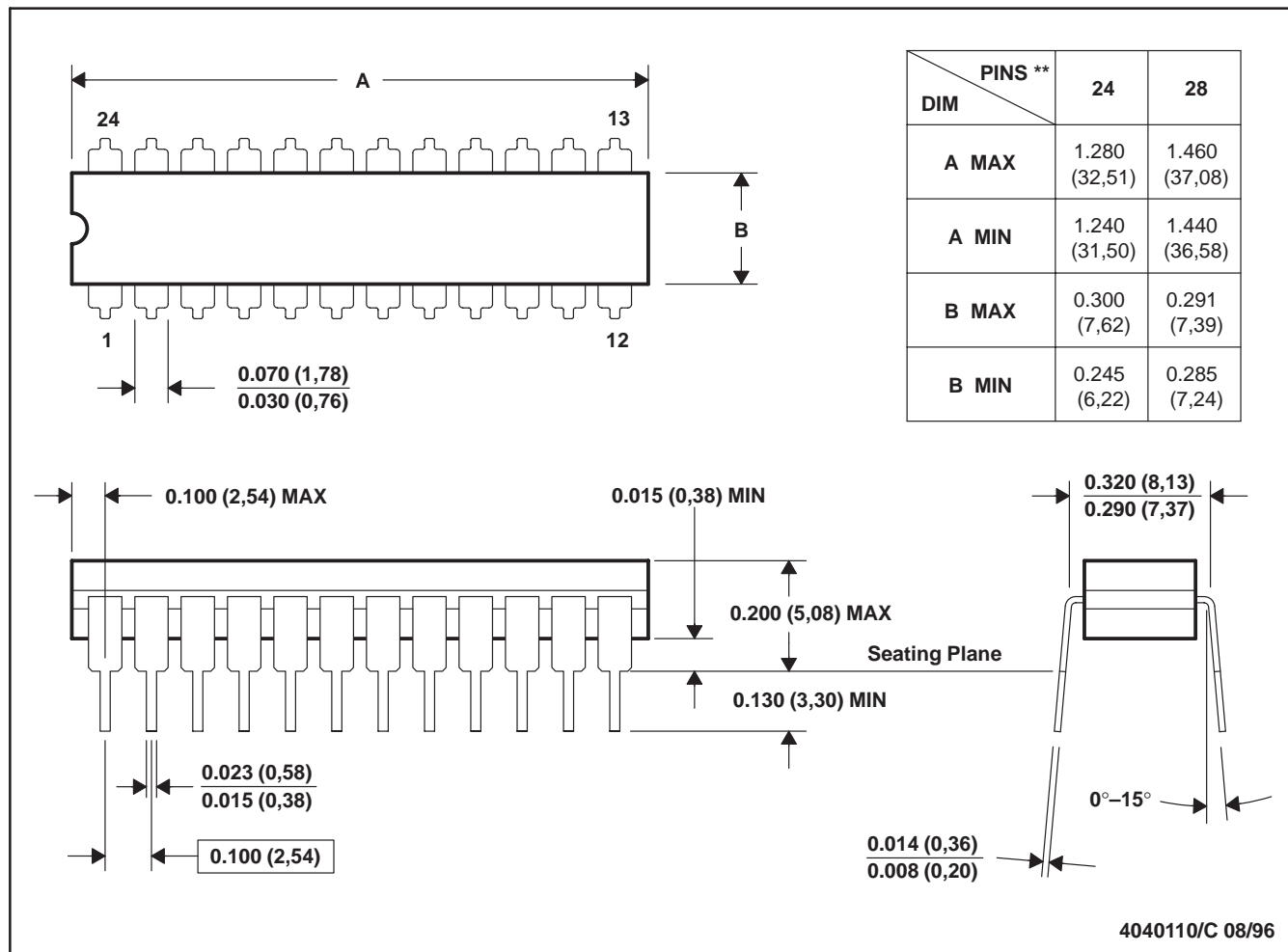


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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ACTIVE: Product device recommended for new designs.

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

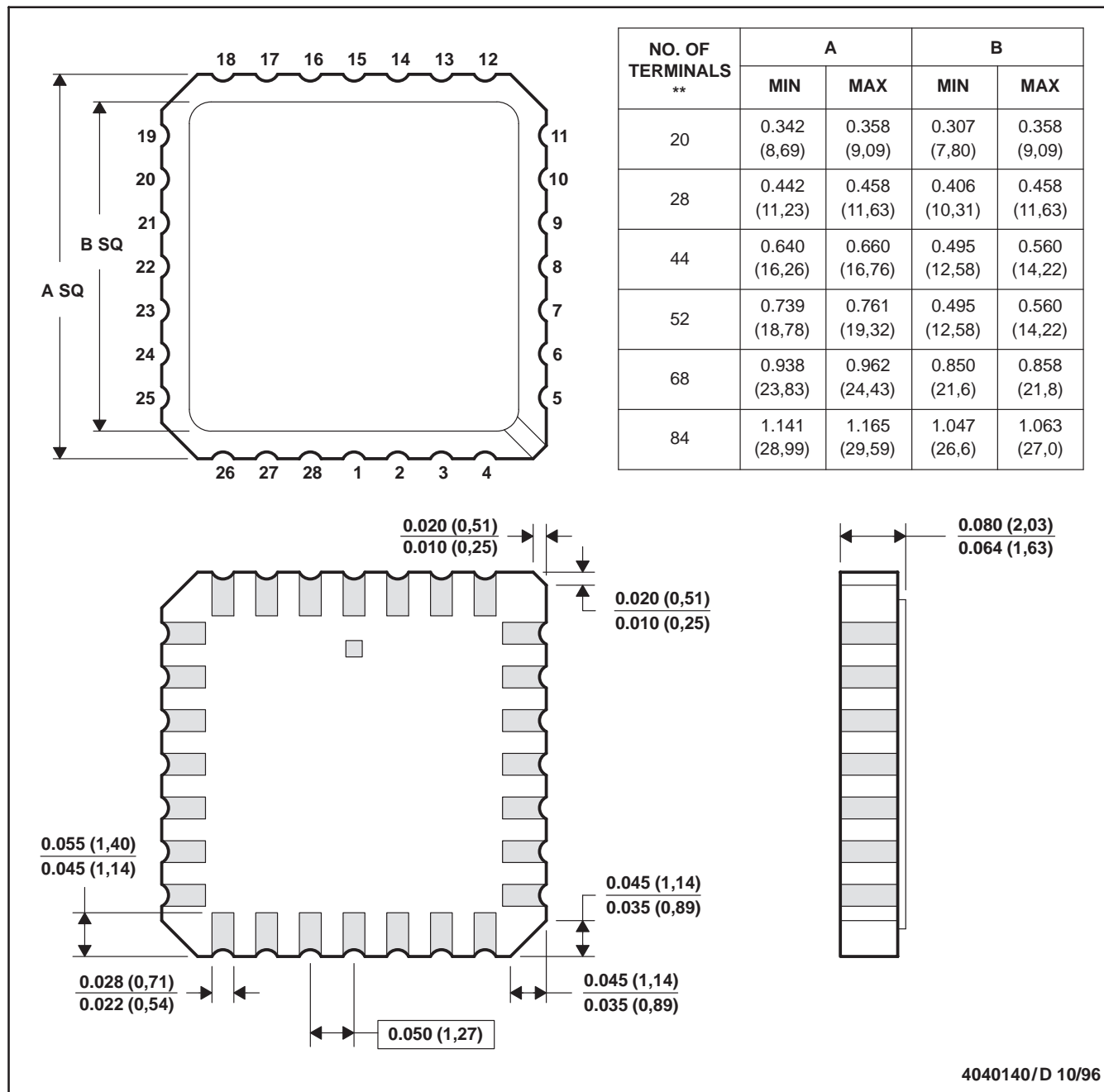
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



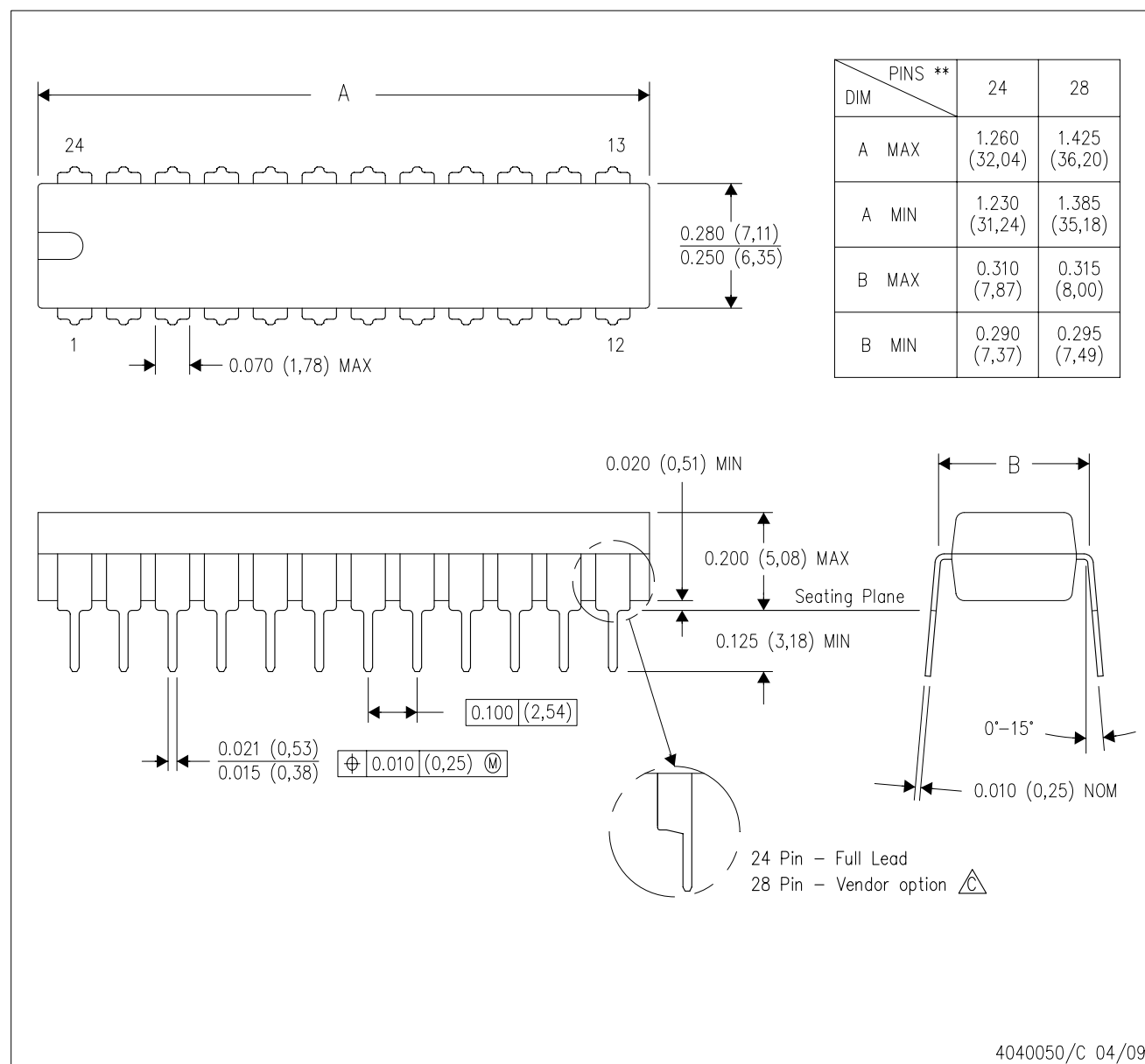
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

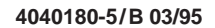
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
B. This drawing is subject to change without notice.
C. The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

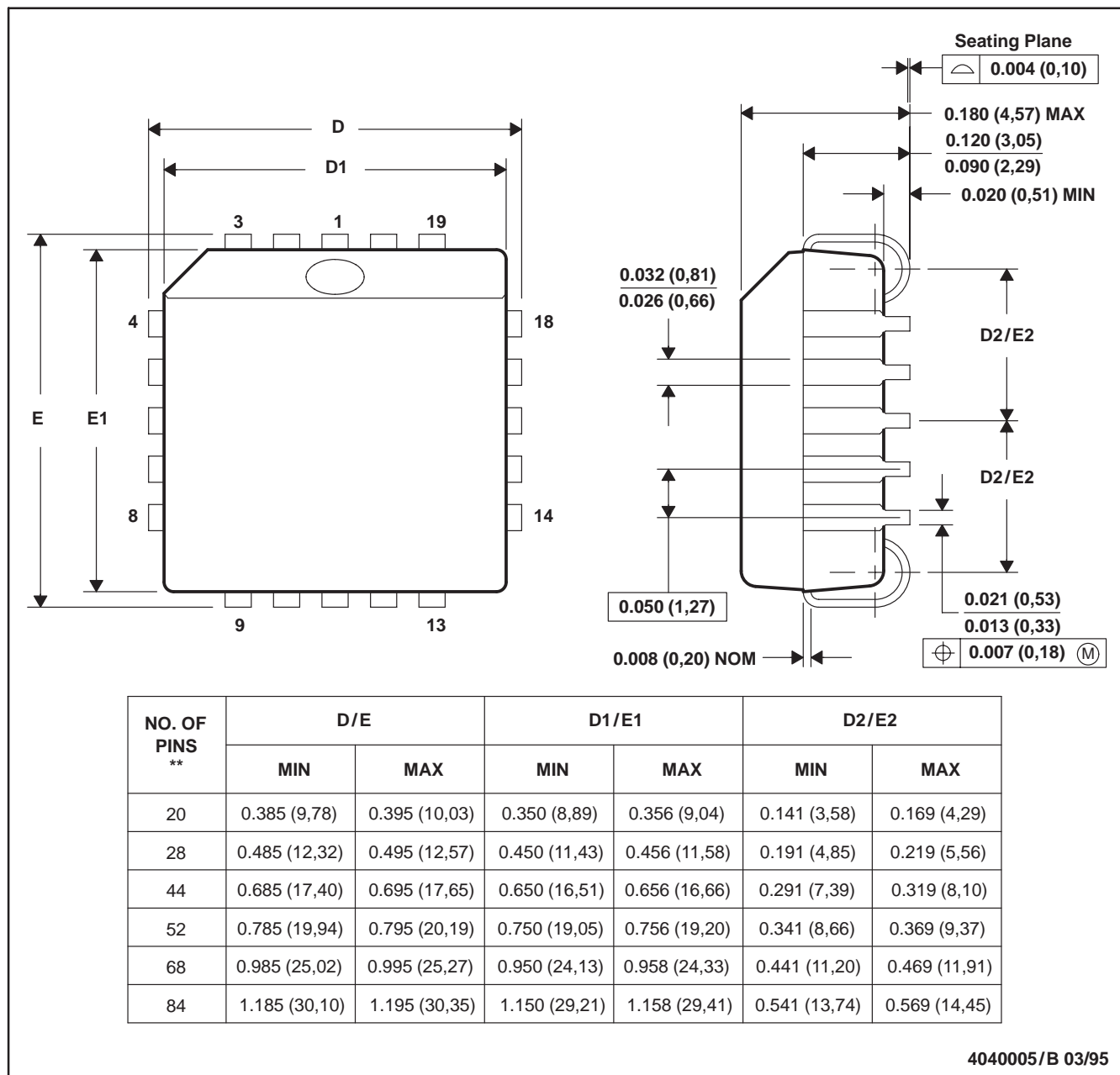


- 
- TEXAS
INSTRUMENTS**
POST OFFICE BOX 655303 • DALLAS, TEXAS 75265

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

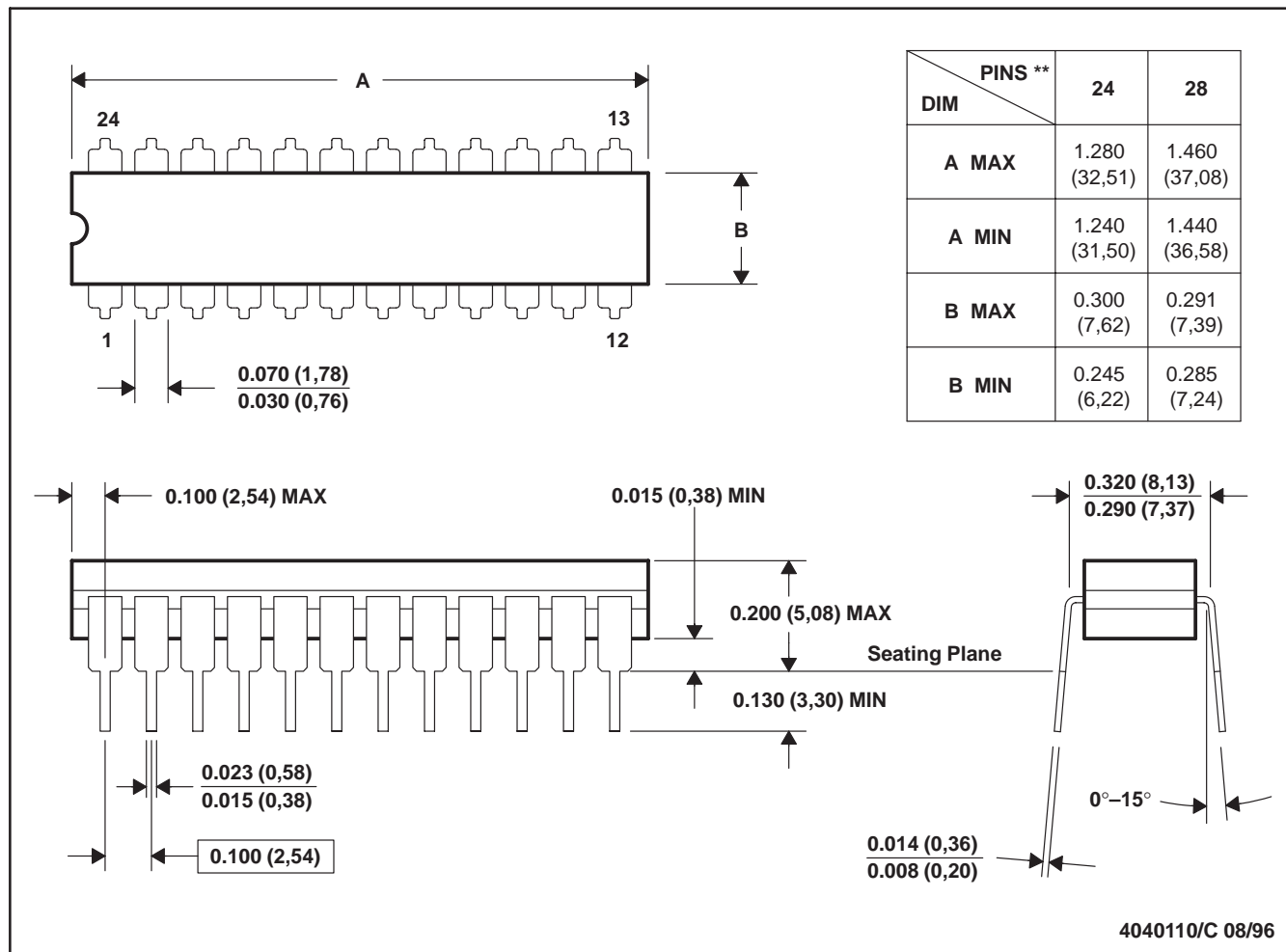


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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TBD: The Pb-Free/Green conversion plan has not been defined.

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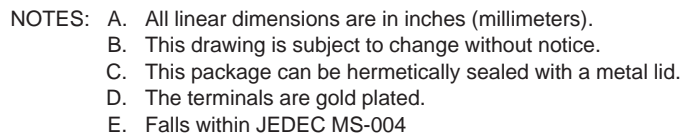
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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28 TERMINAL SHOWN

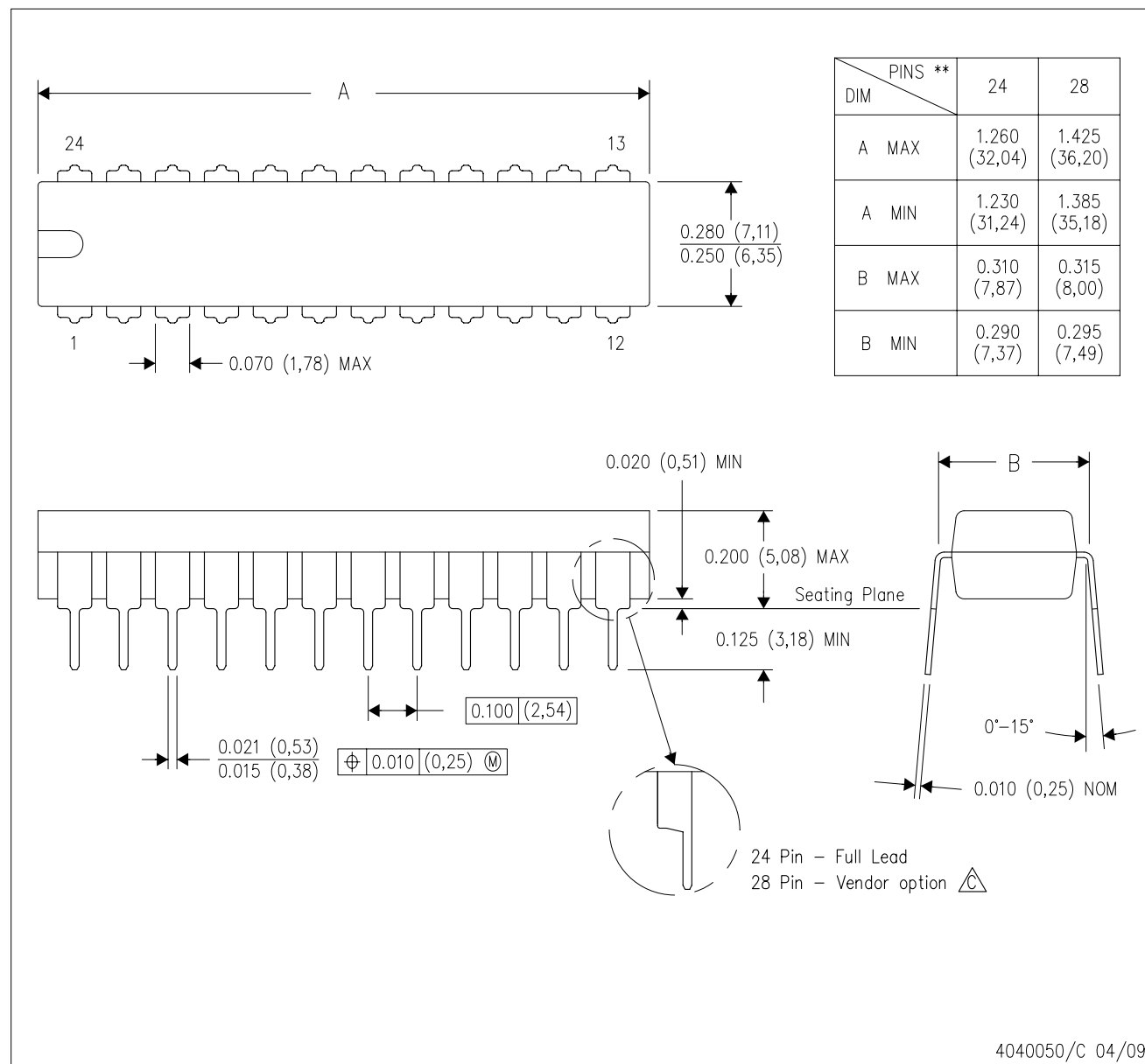


MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

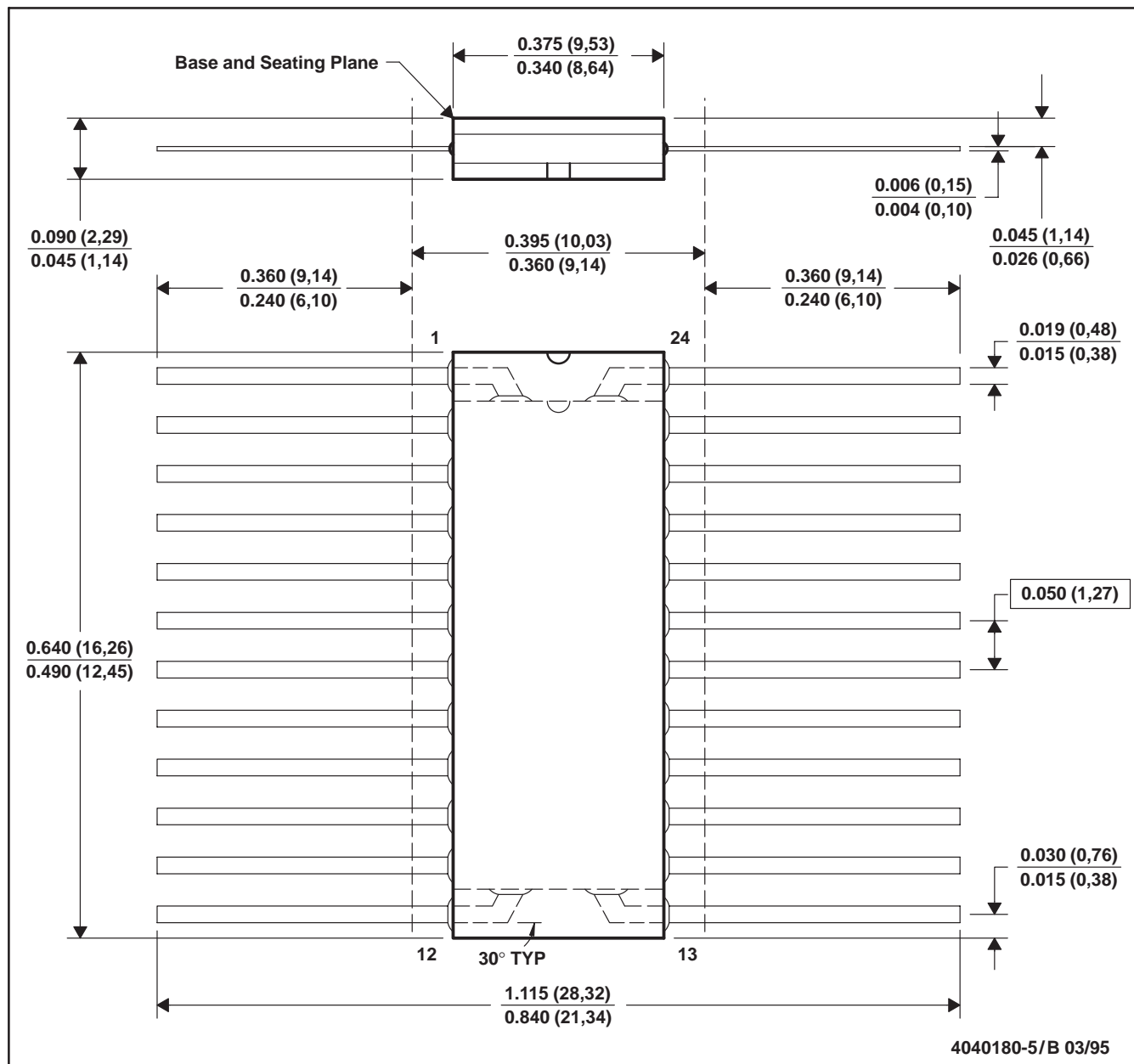
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

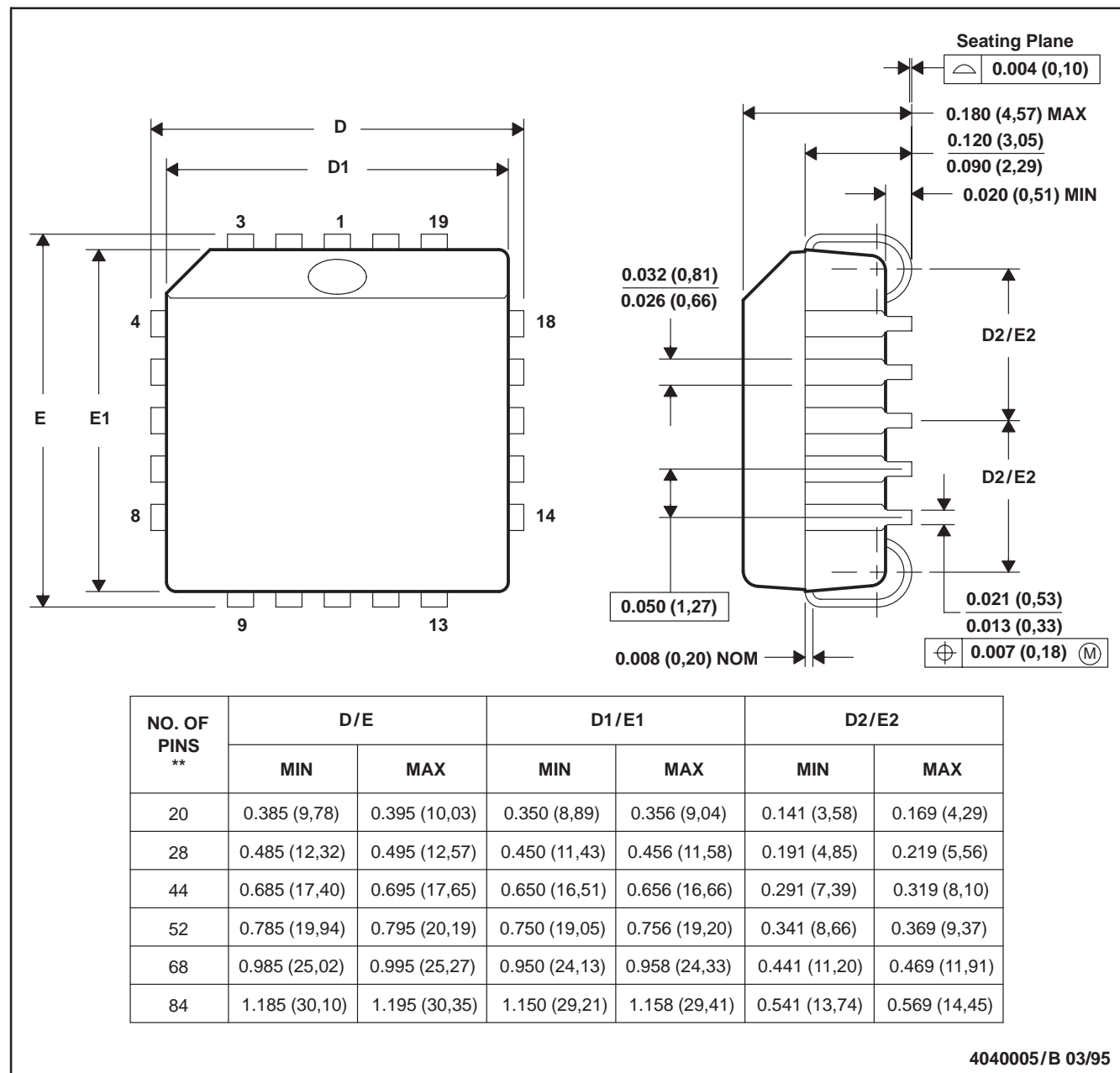


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

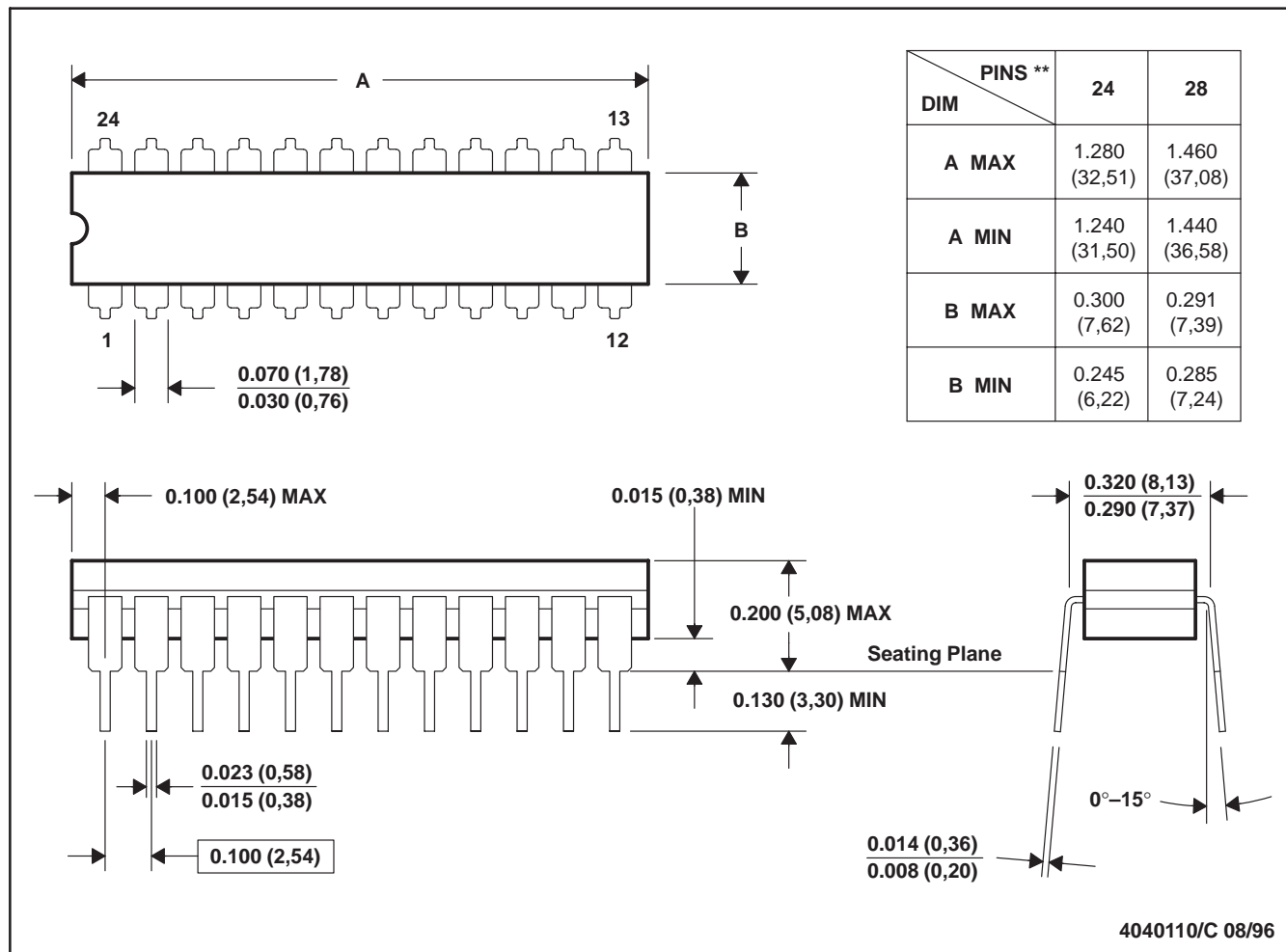


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



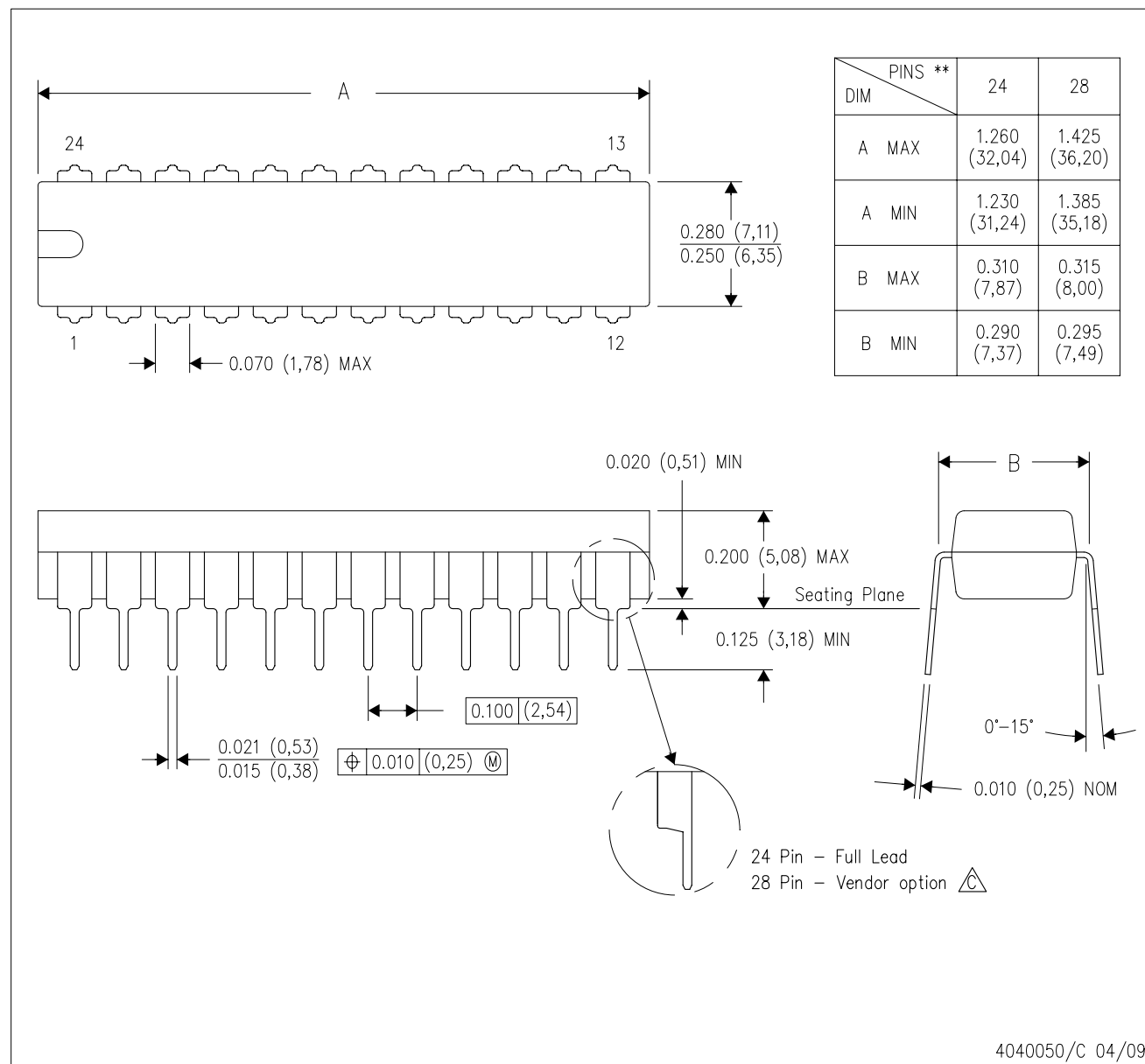
- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE

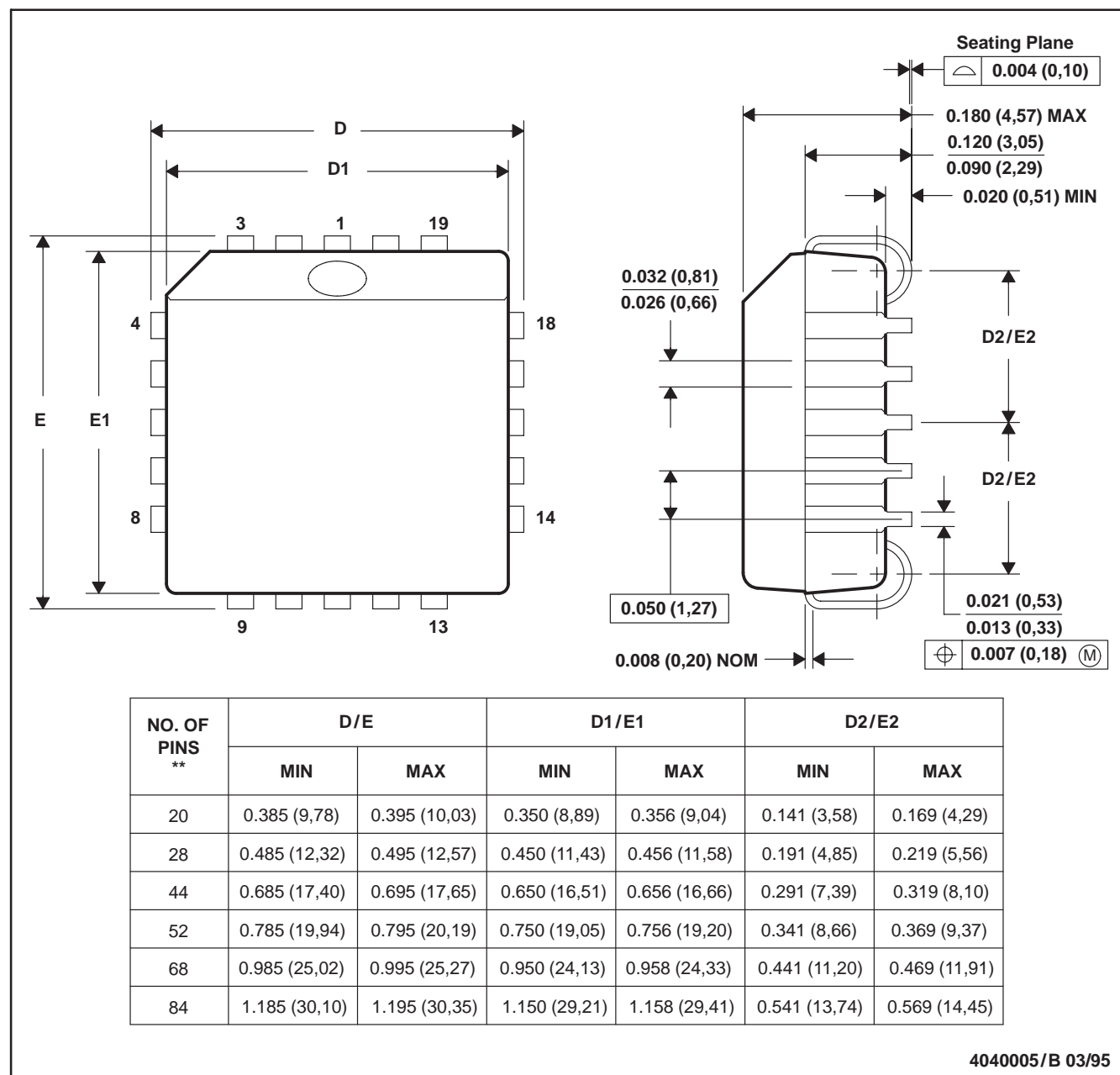


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FN (S-PQCC-J**)

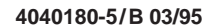
PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

CERAMIC DUAL FLATPACK

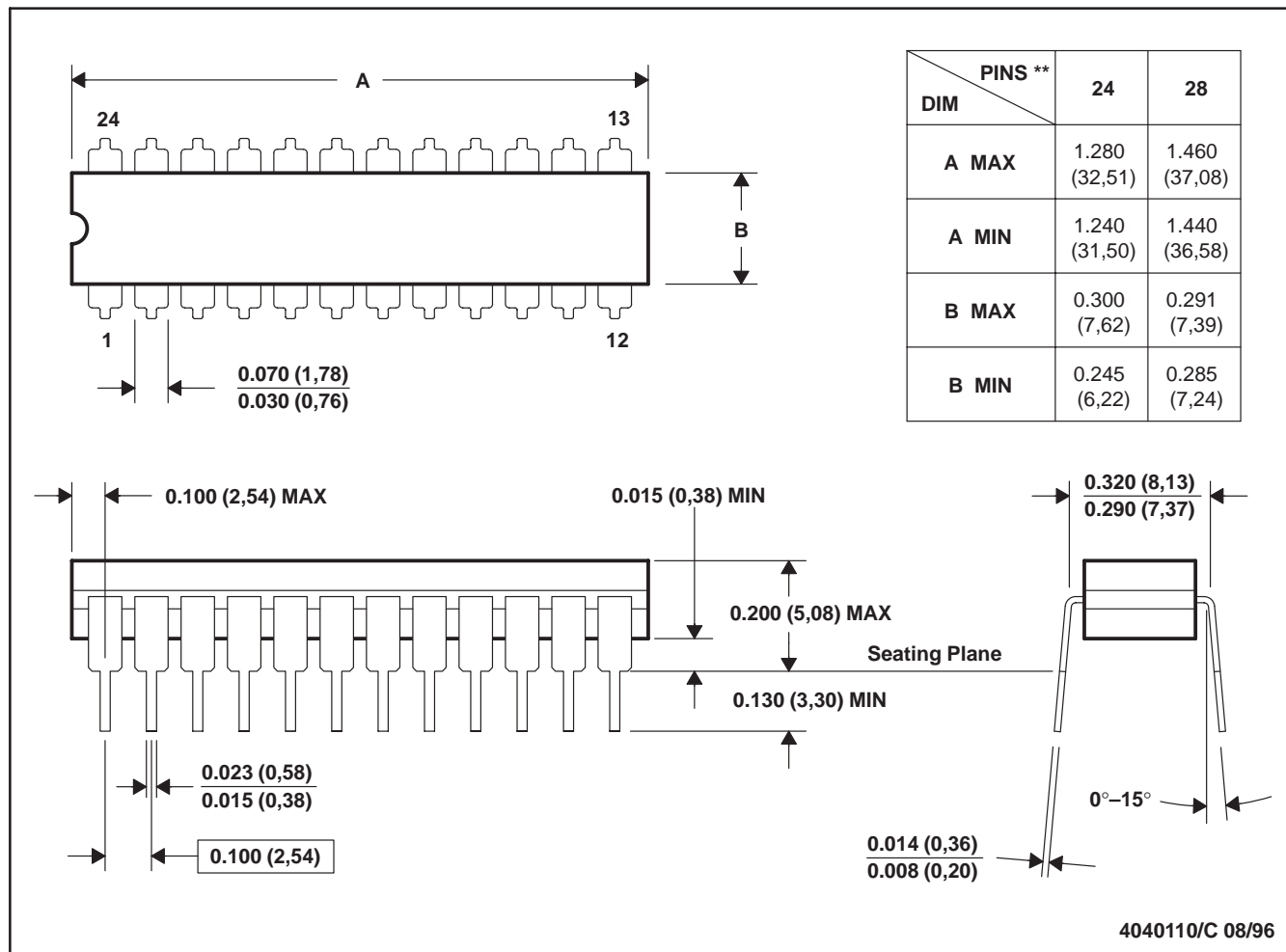


- 

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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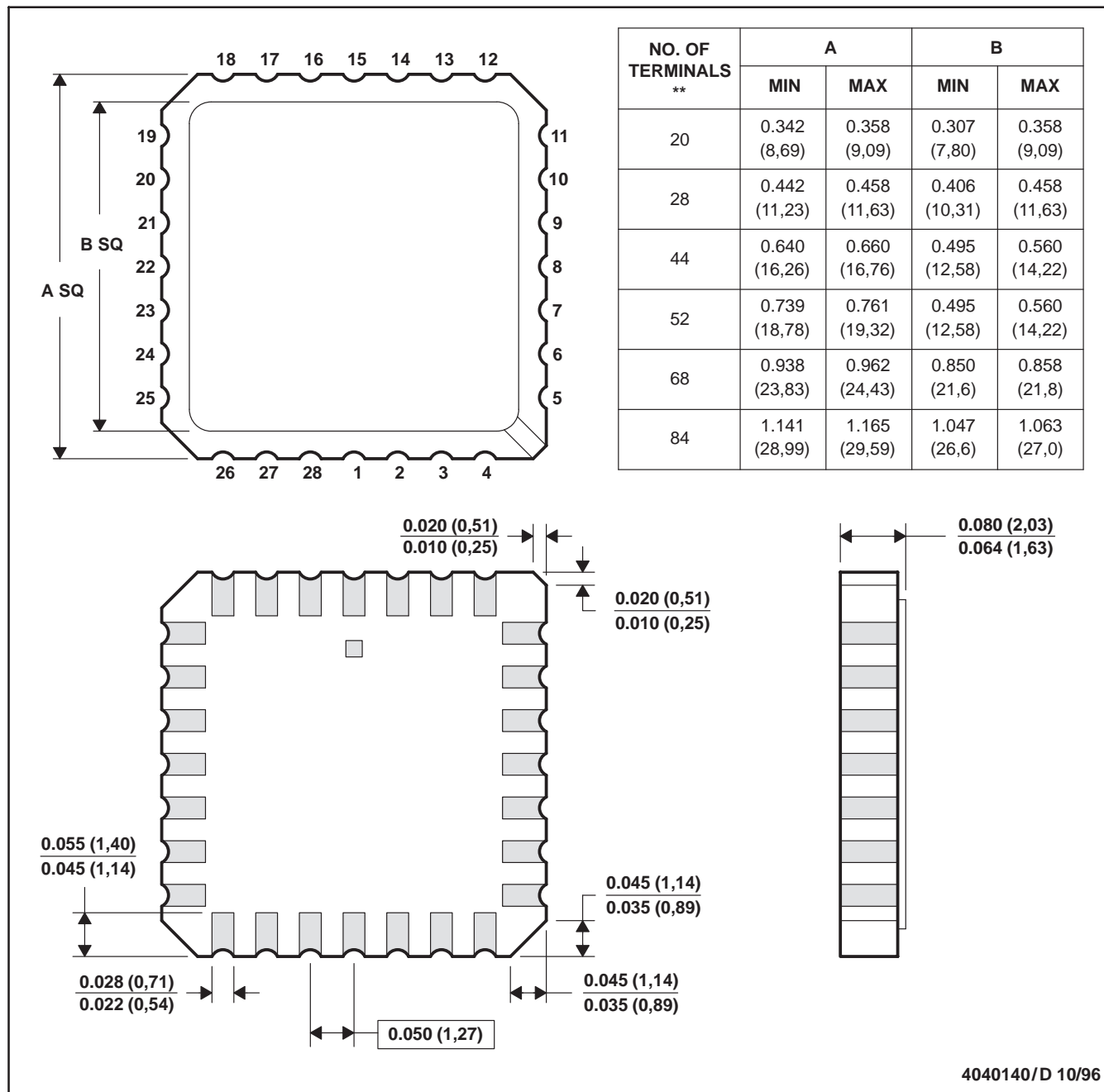
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



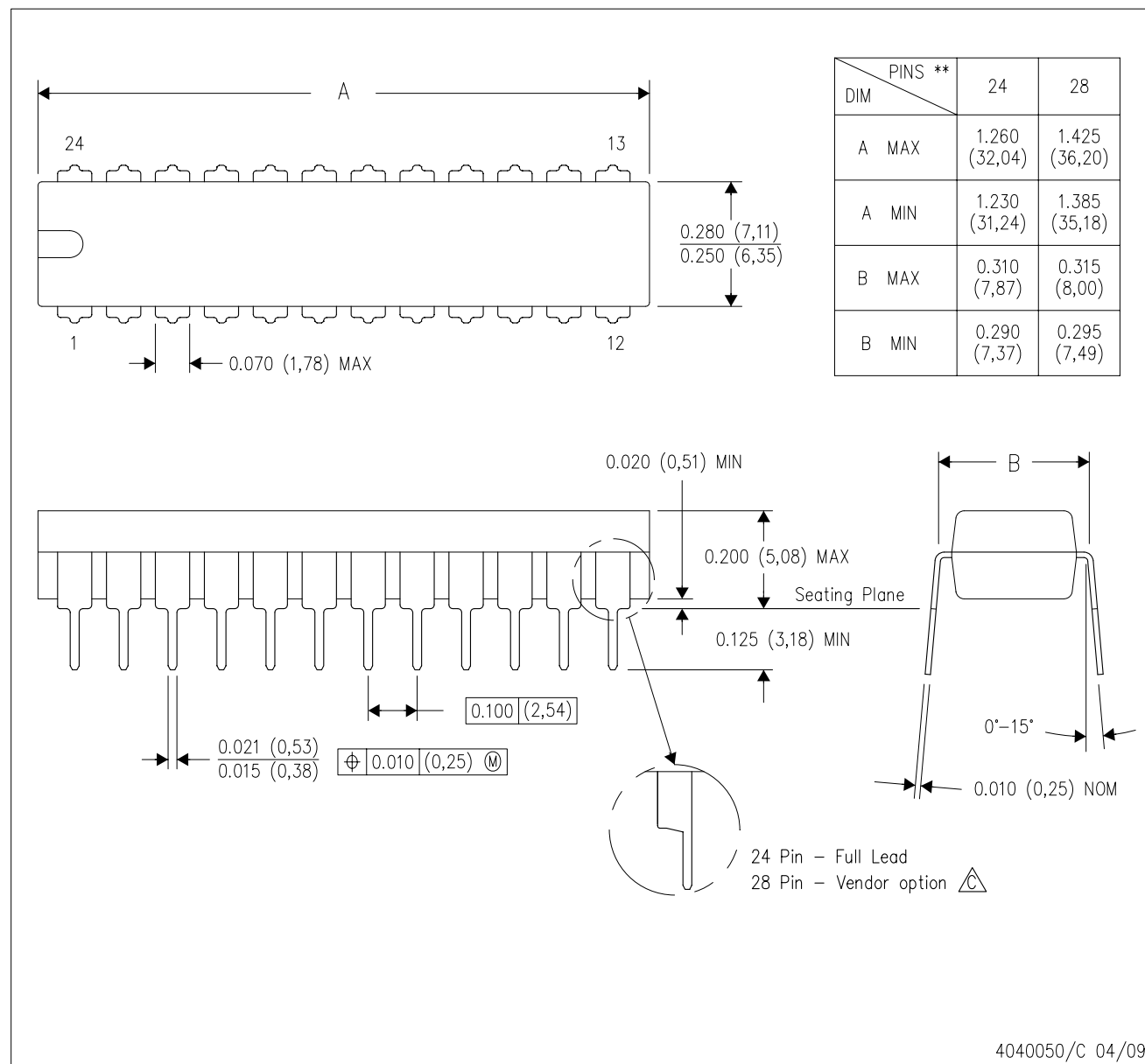
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MECHANICAL DATA

NT (R-PDIP-T**)

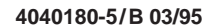
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

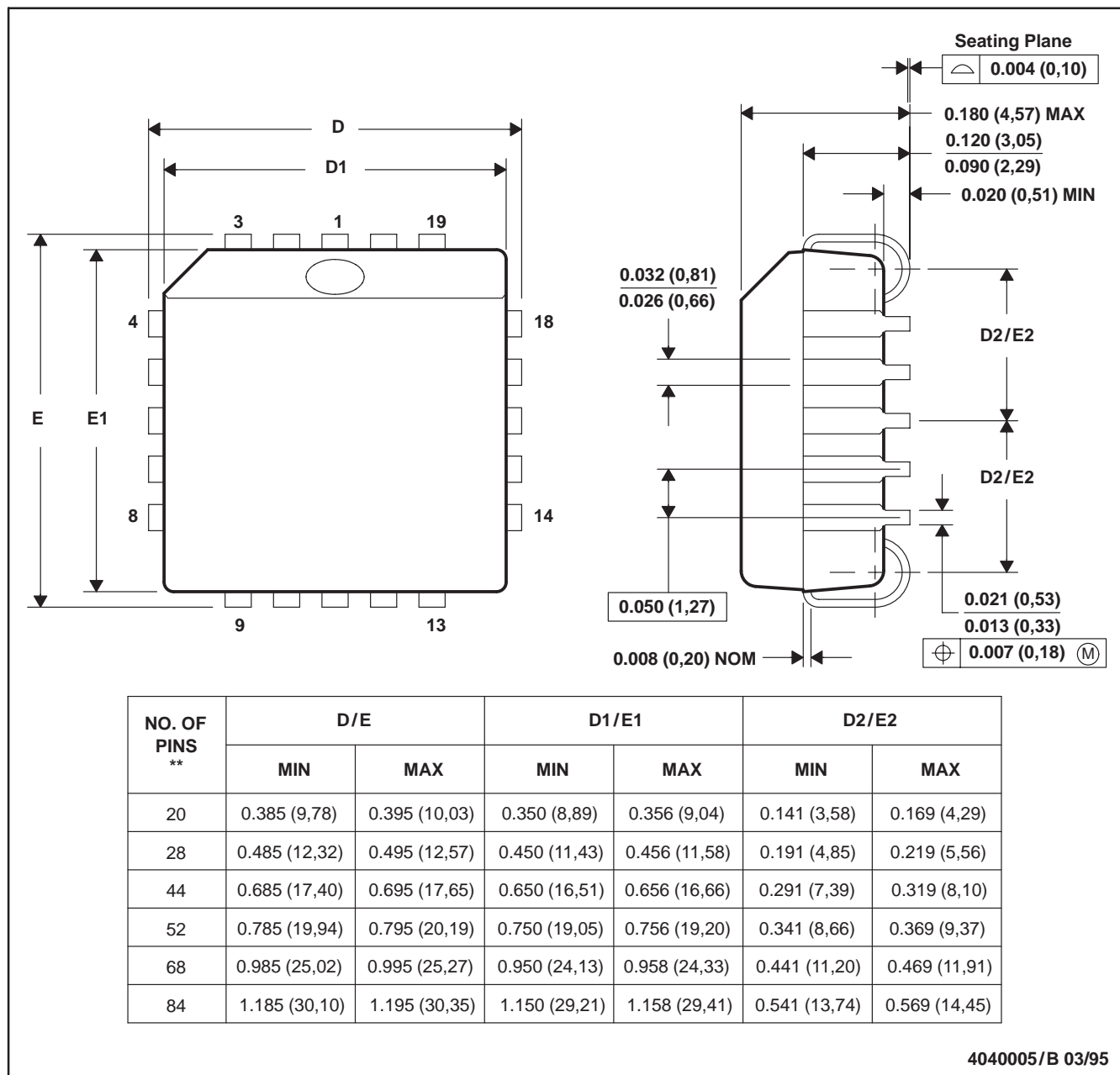


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

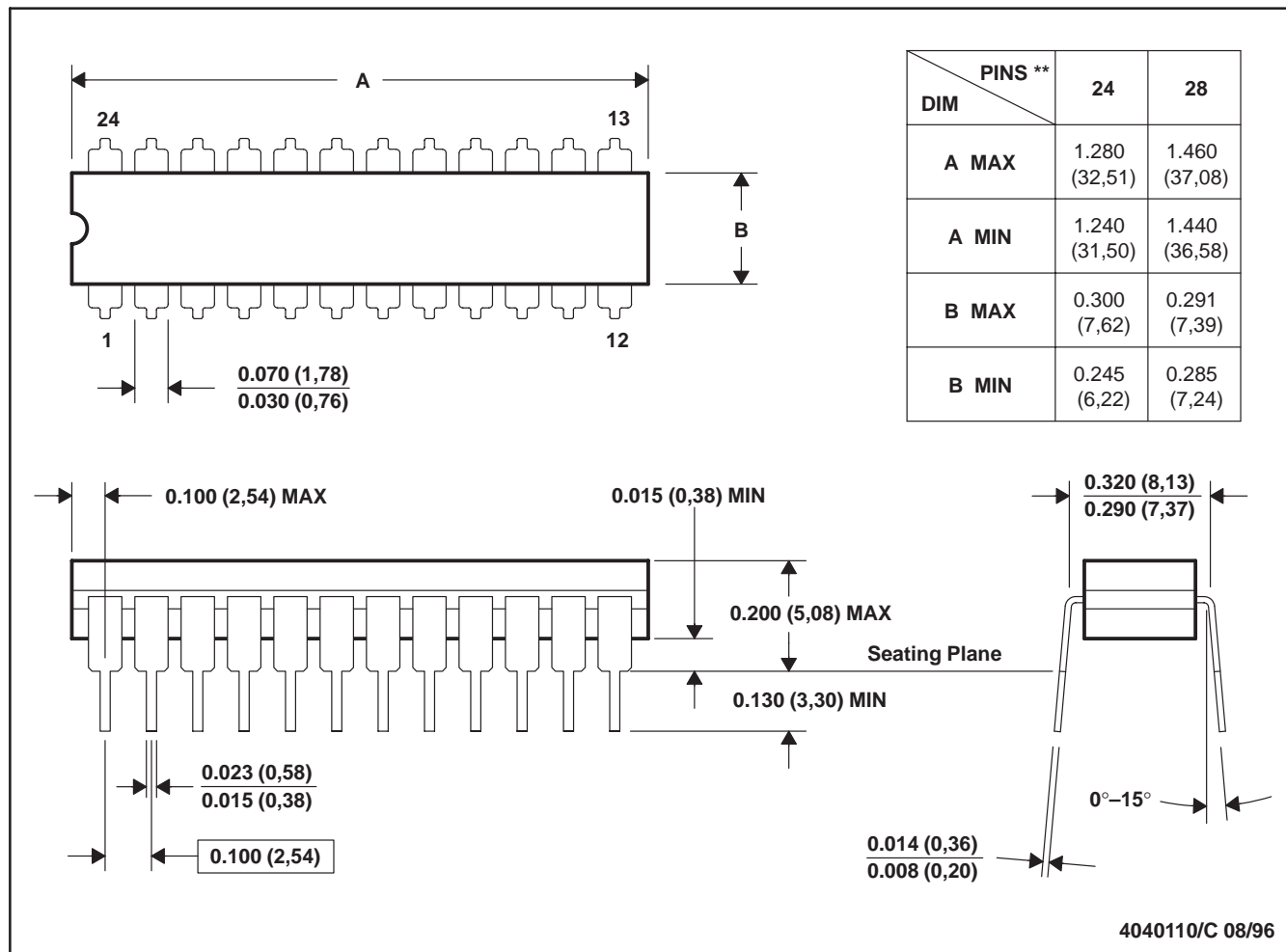


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

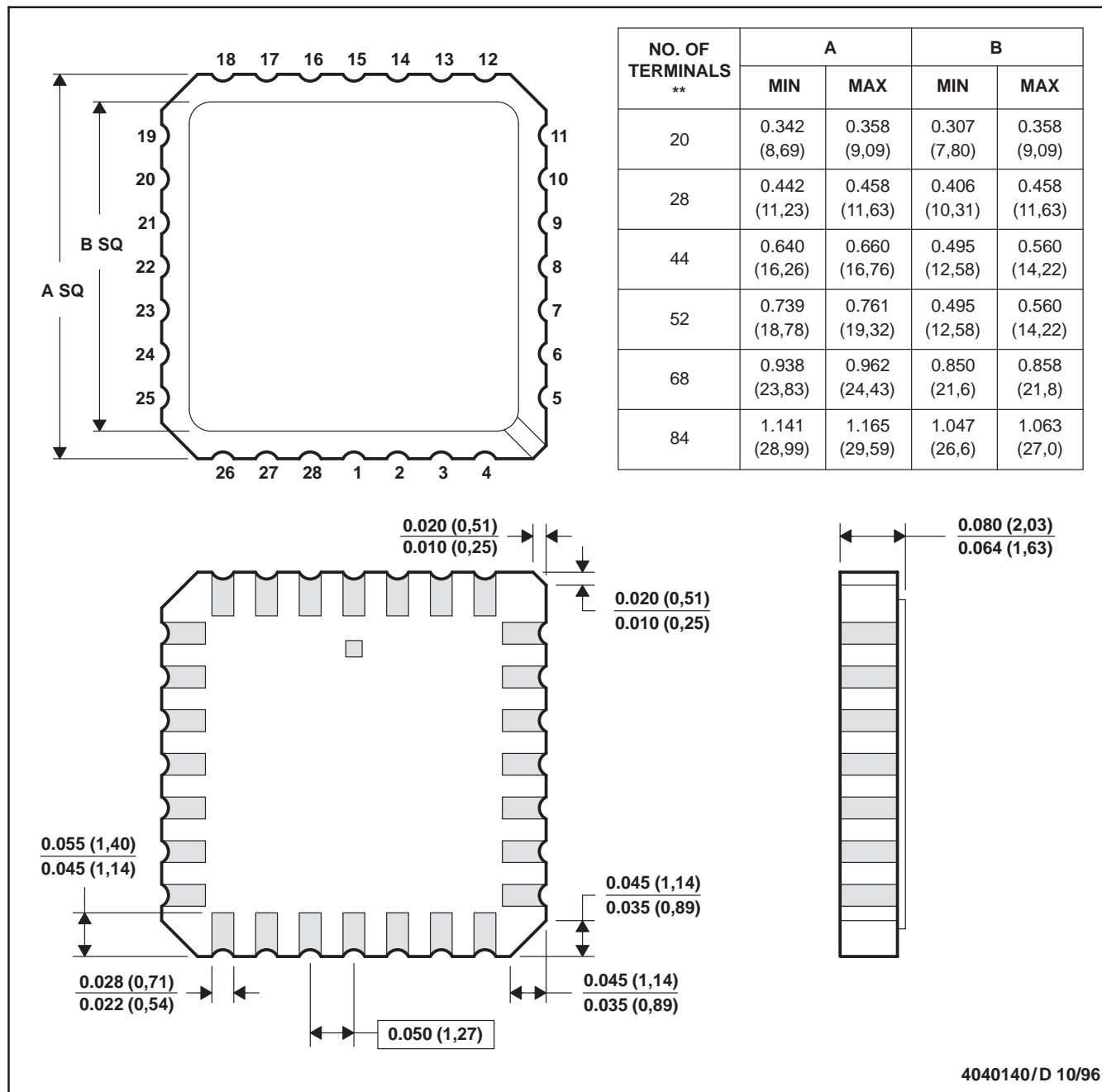
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



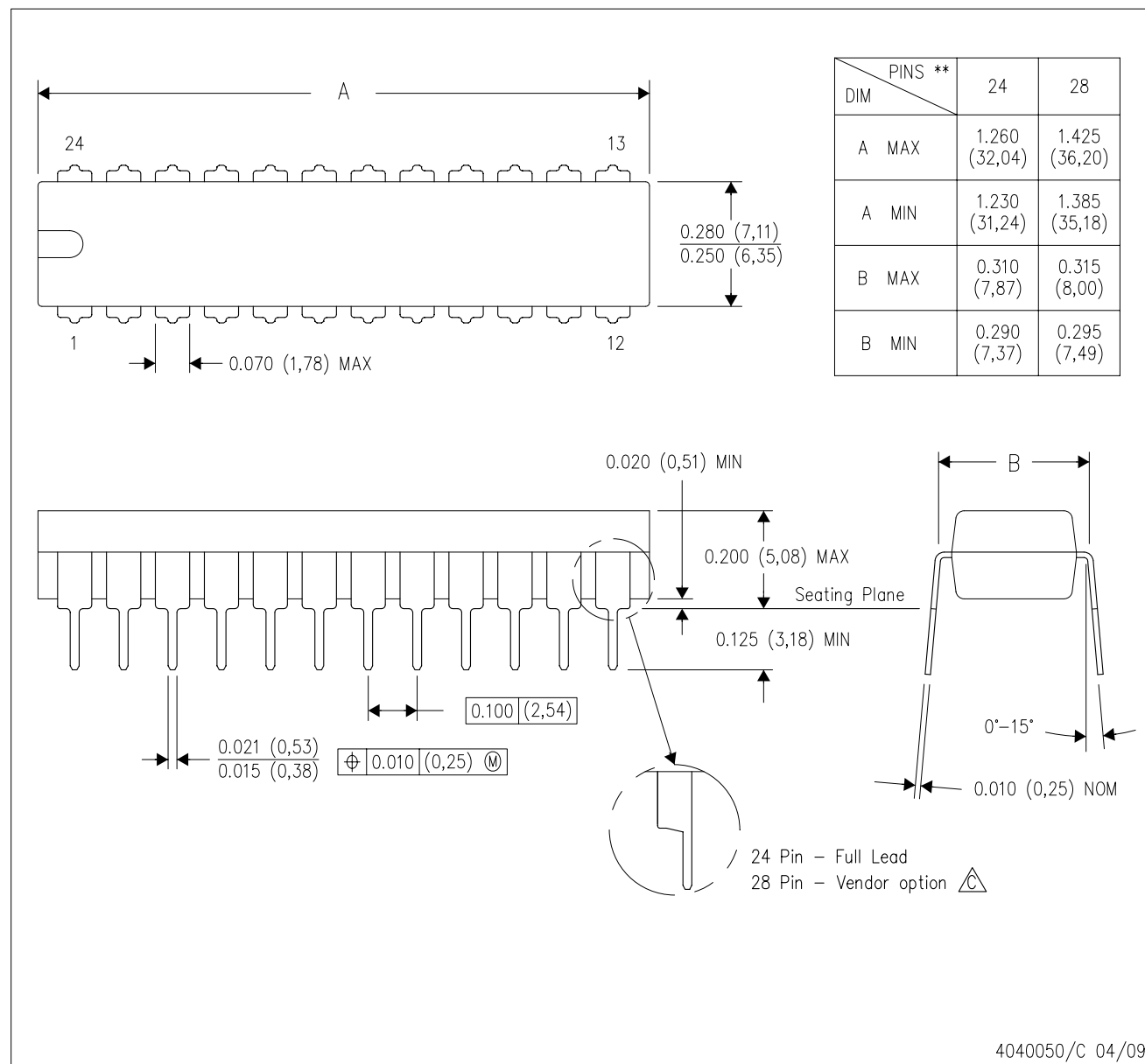
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

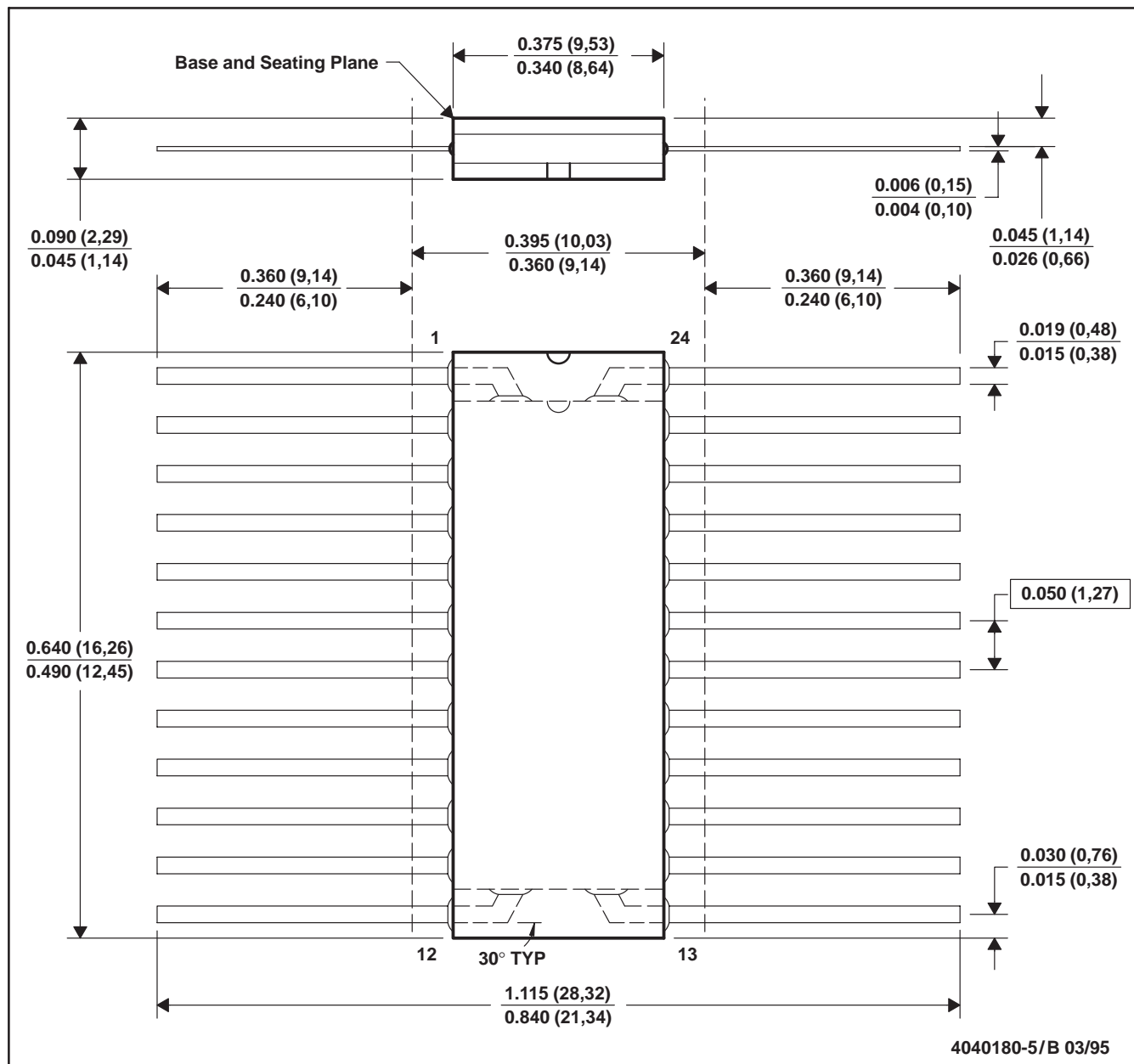
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

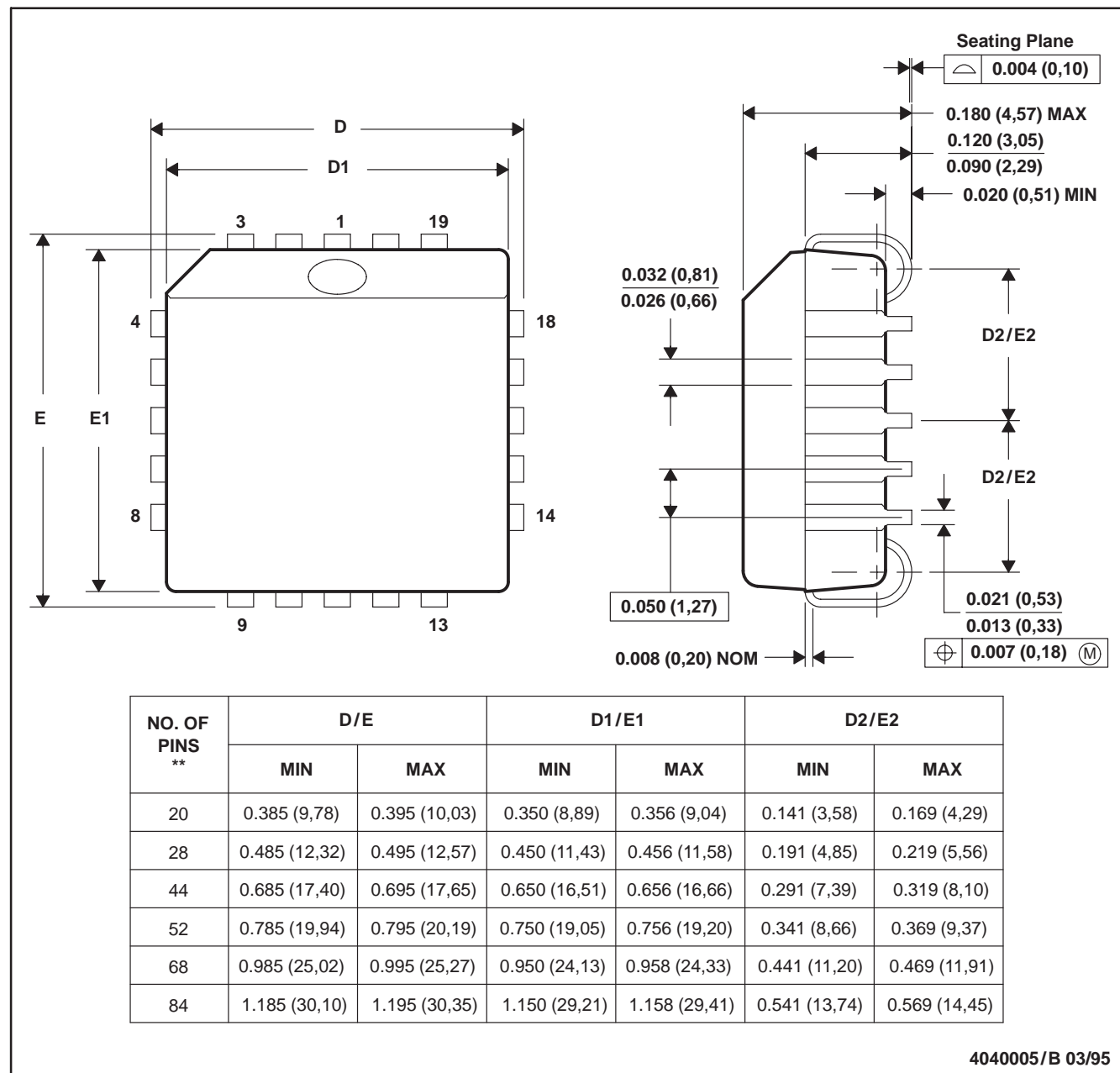


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

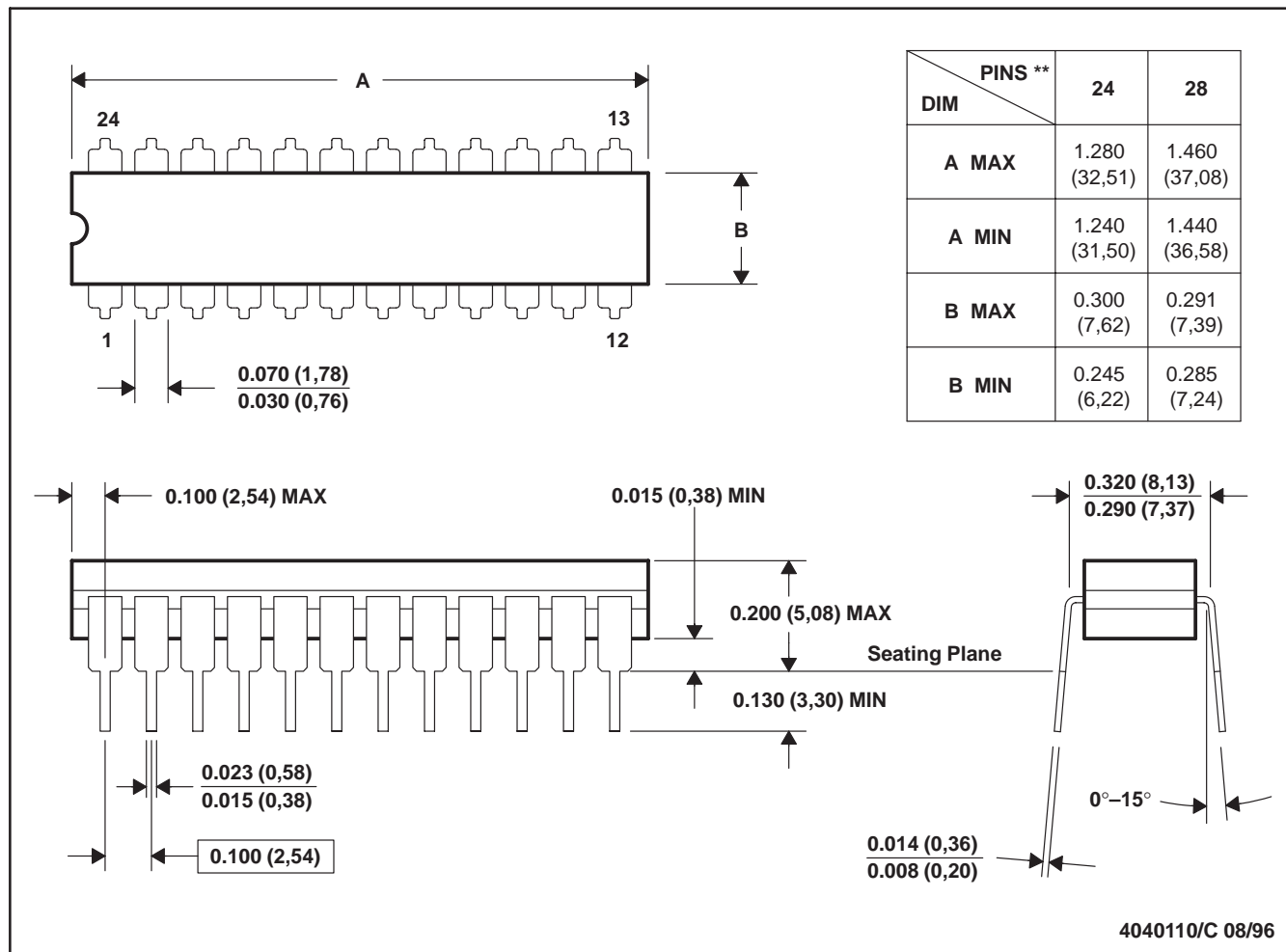


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

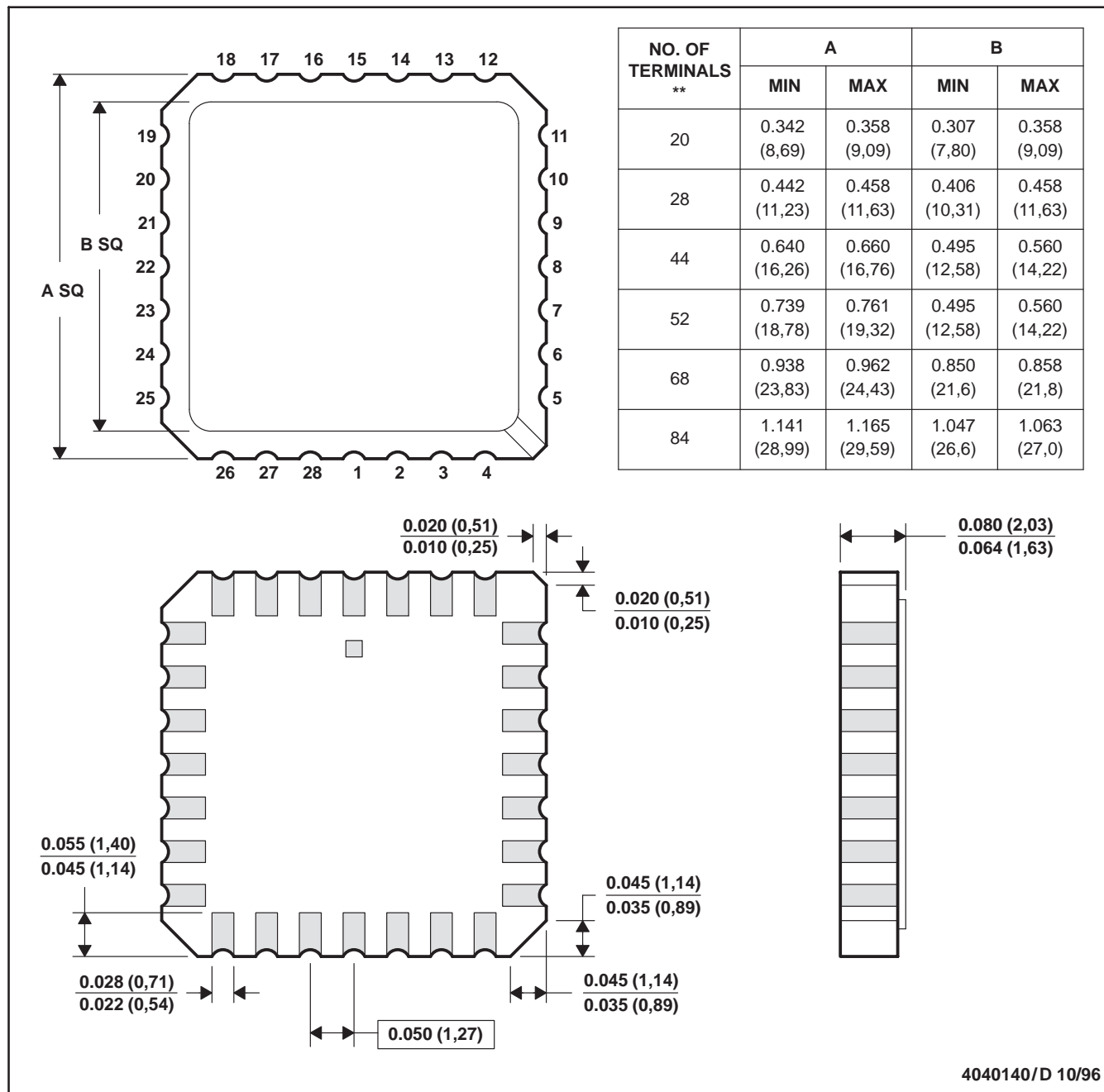
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



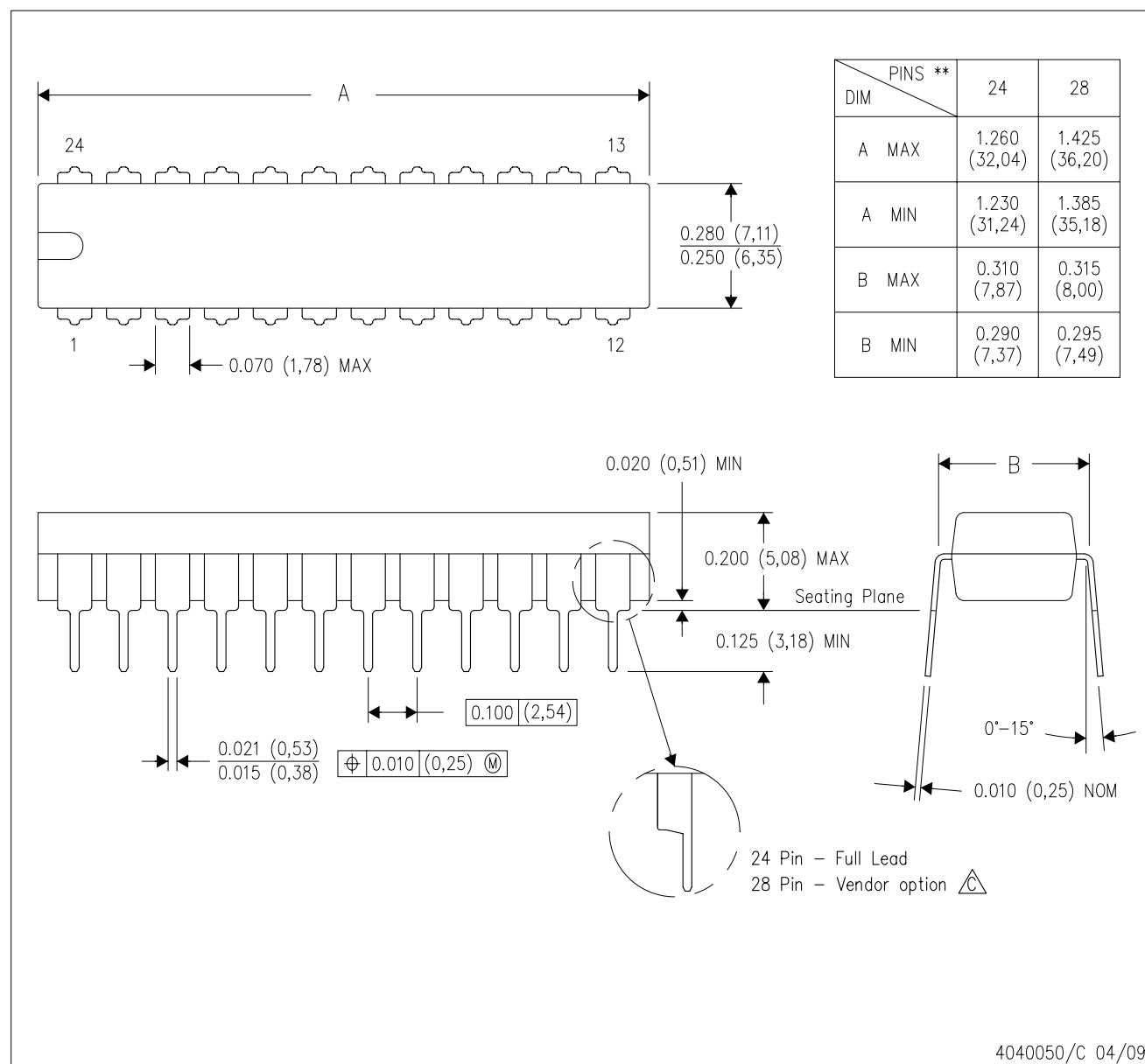
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

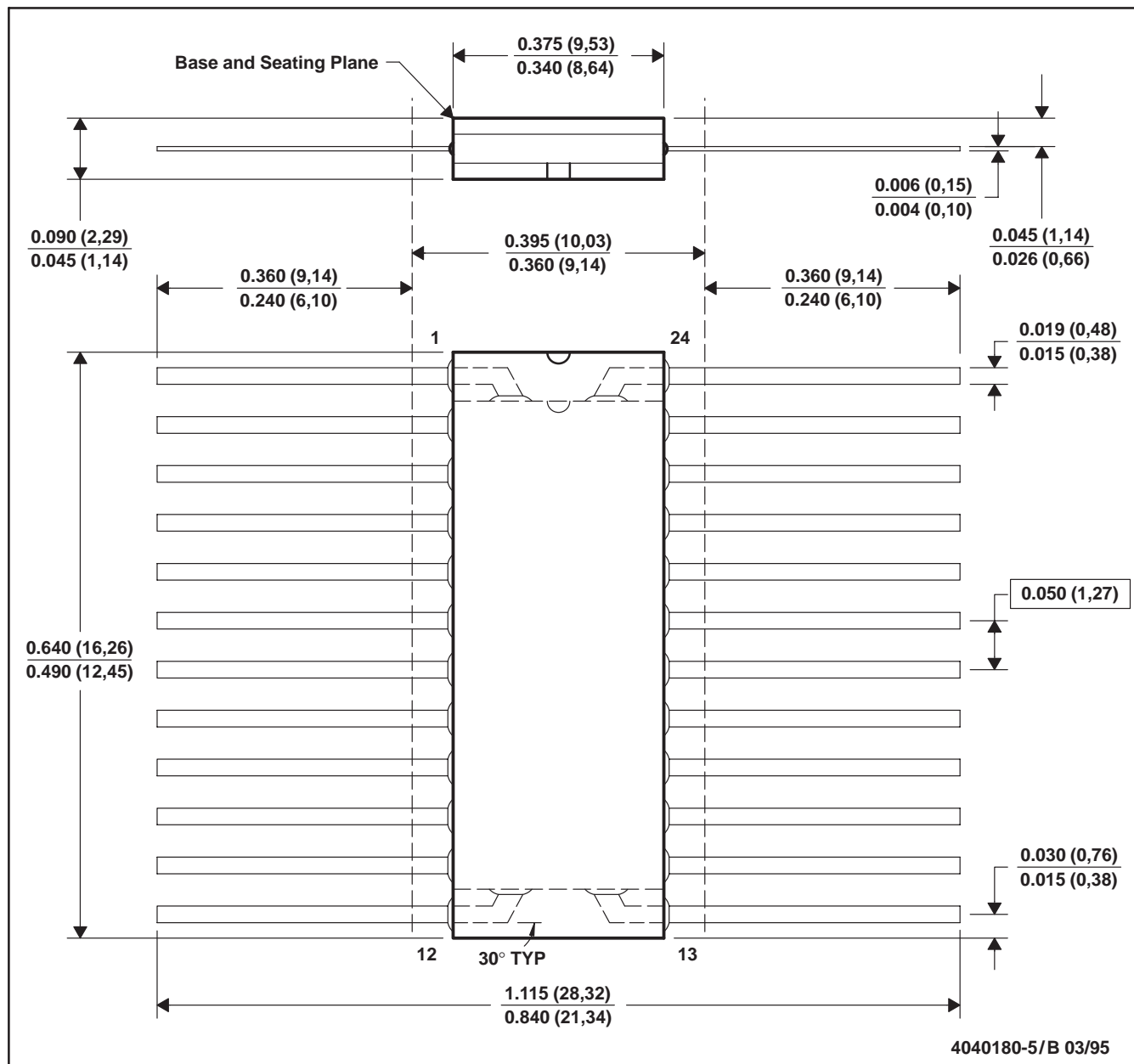
PLASTIC DUAL-IN-LINE PACKAGE



NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
B. This drawing is subject to change without notice.
C. The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

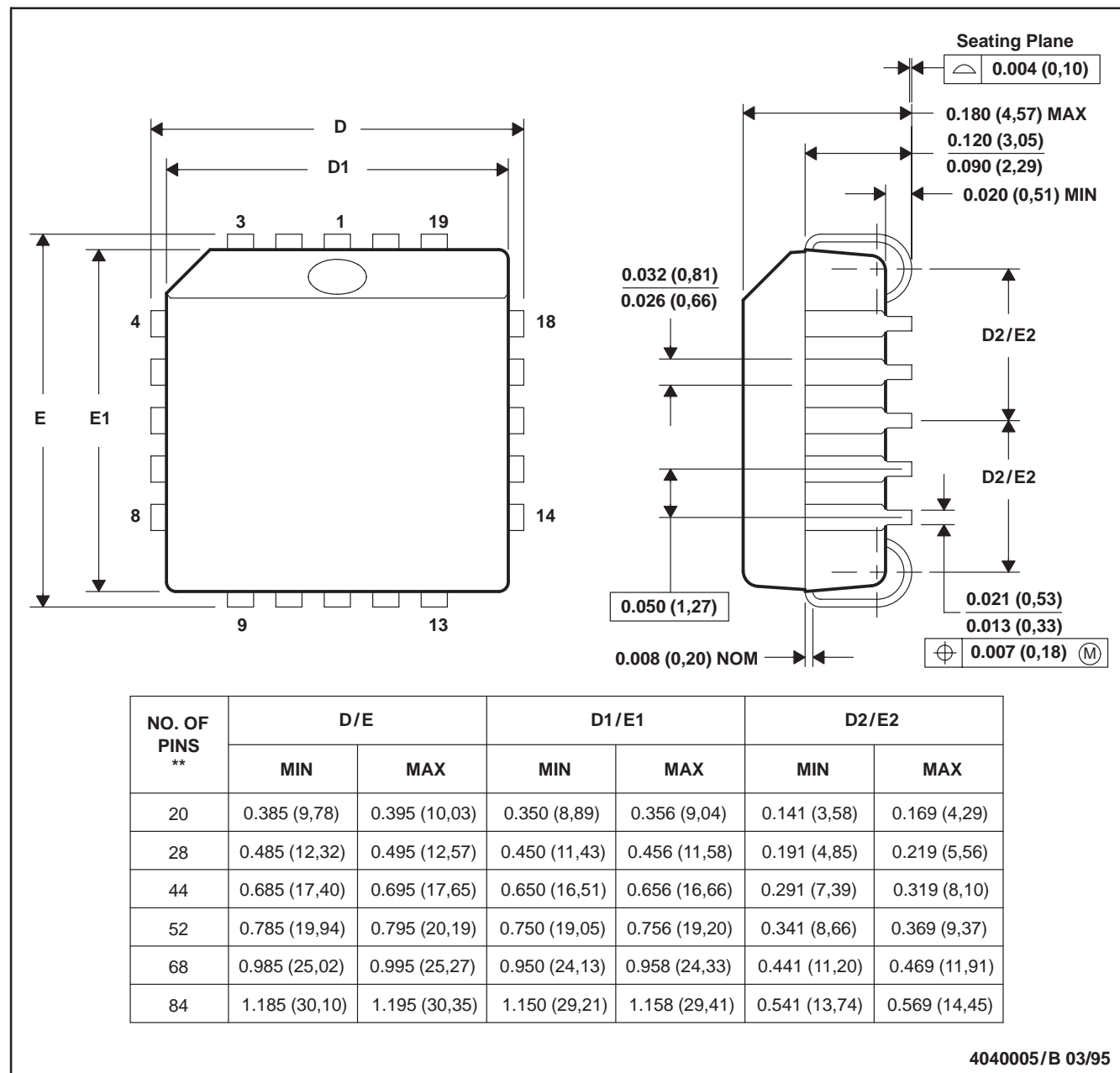


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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

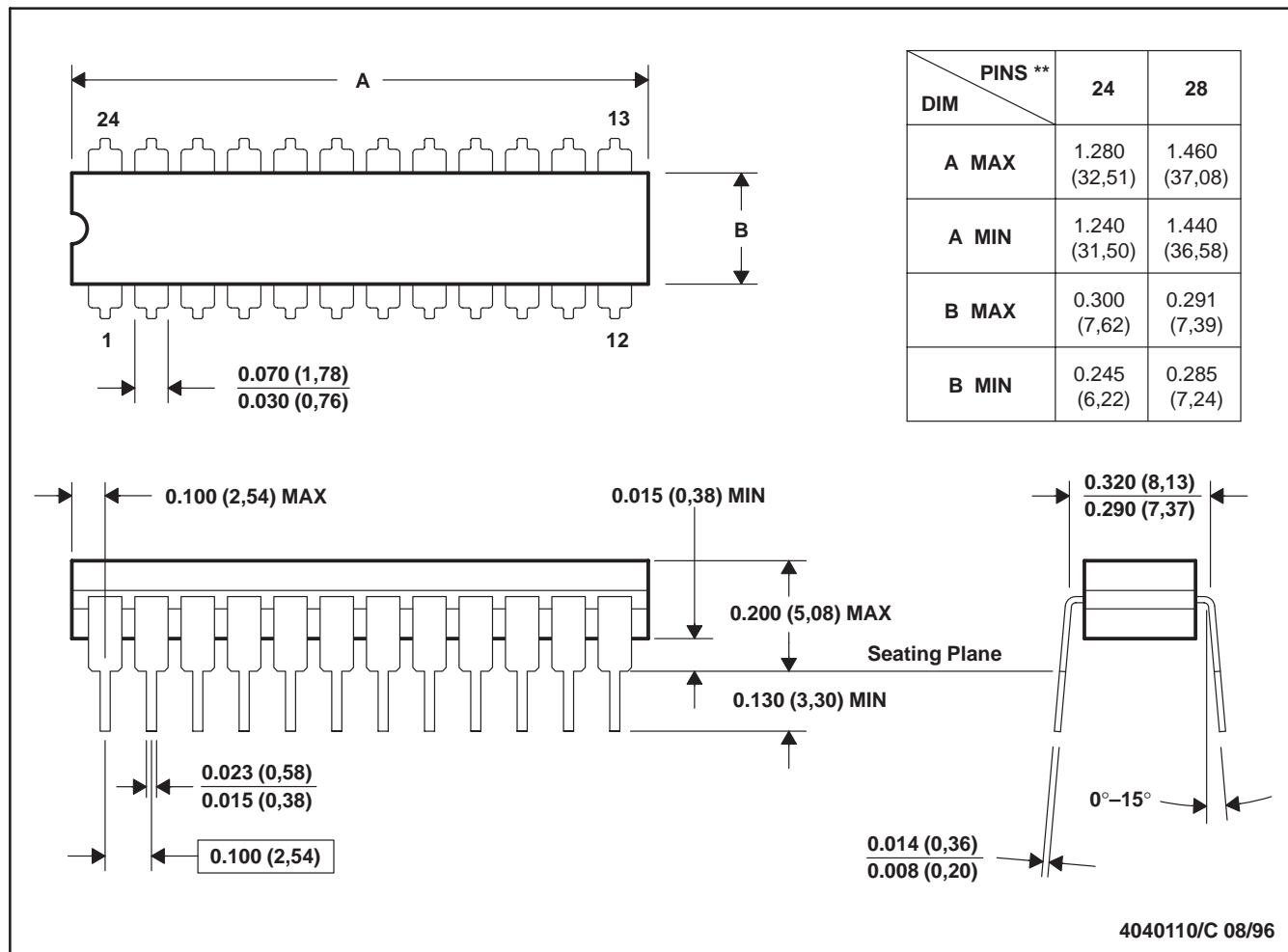


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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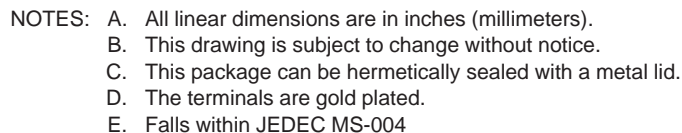
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28 TERMINAL SHOWN

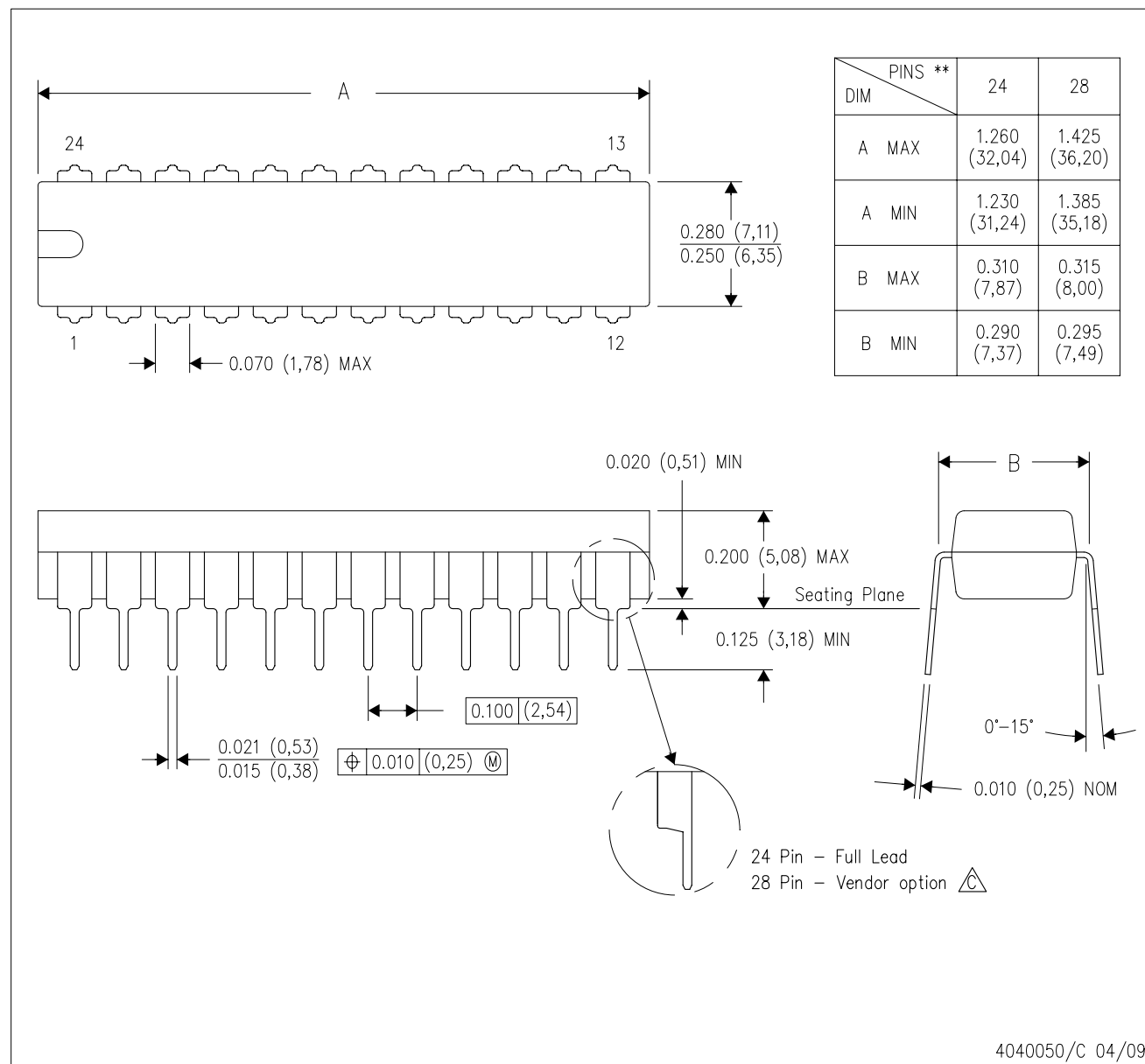


MECHANICAL DATA

NT (R-PDIP-T**)

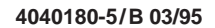
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

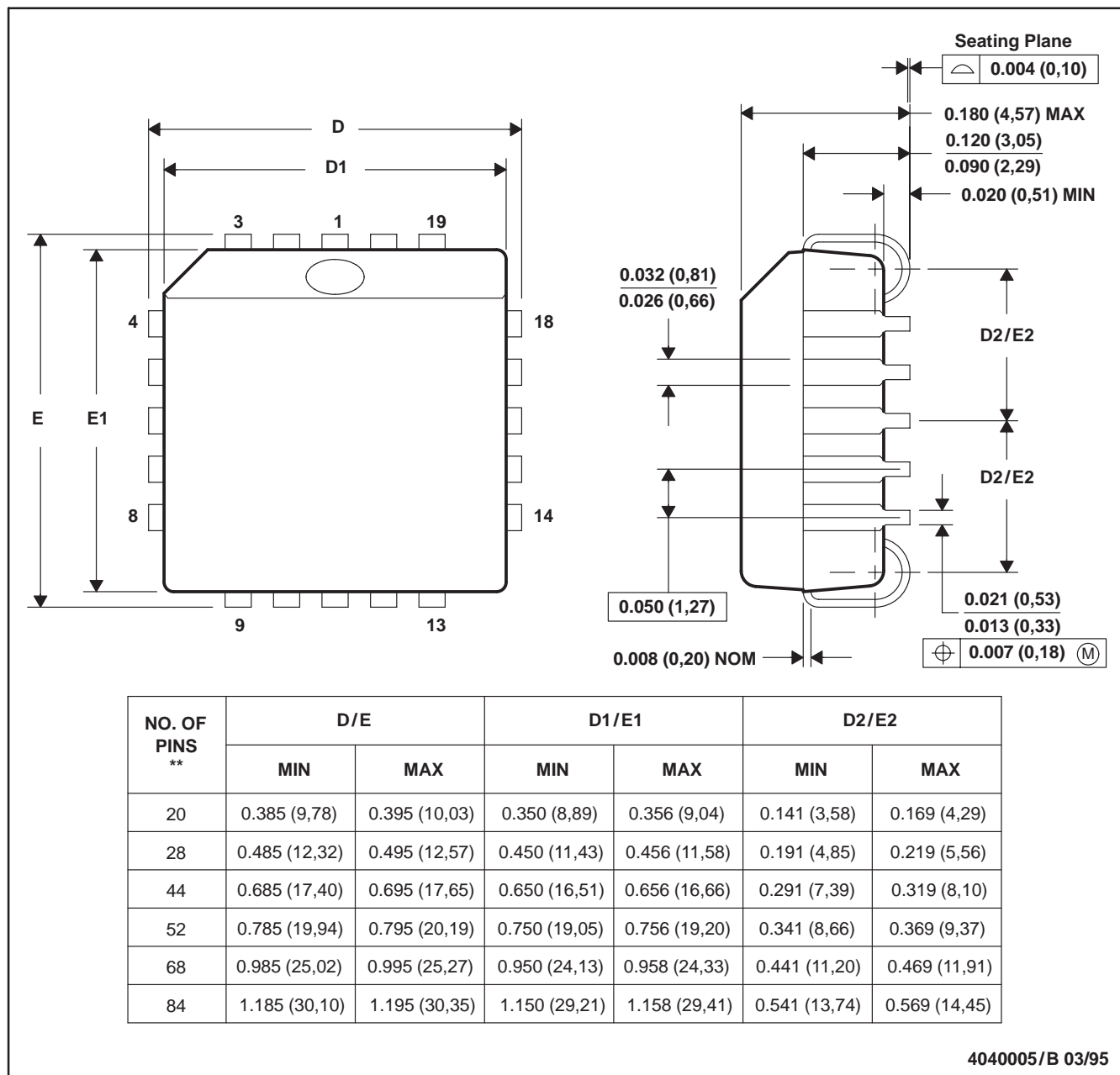


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FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

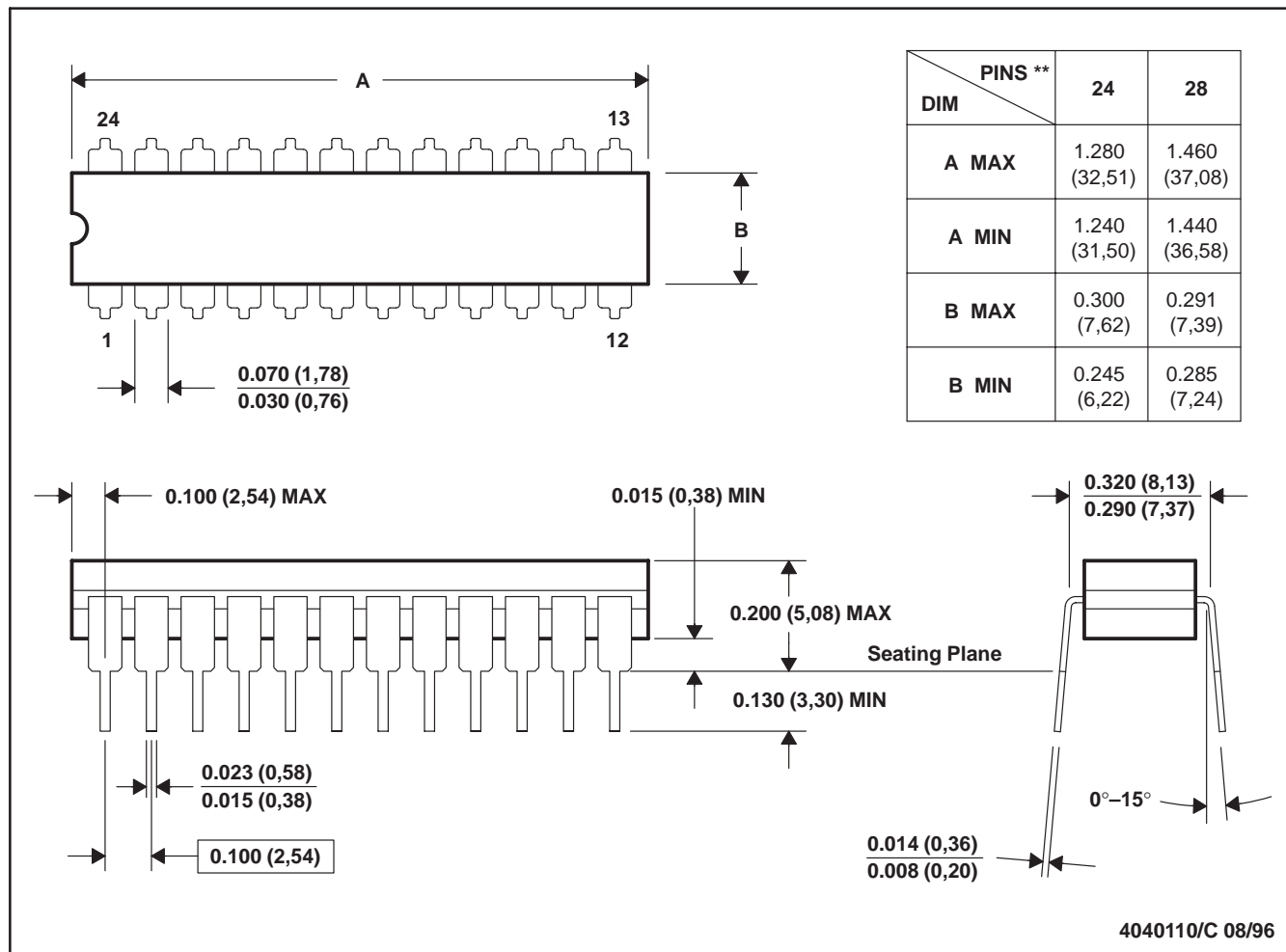


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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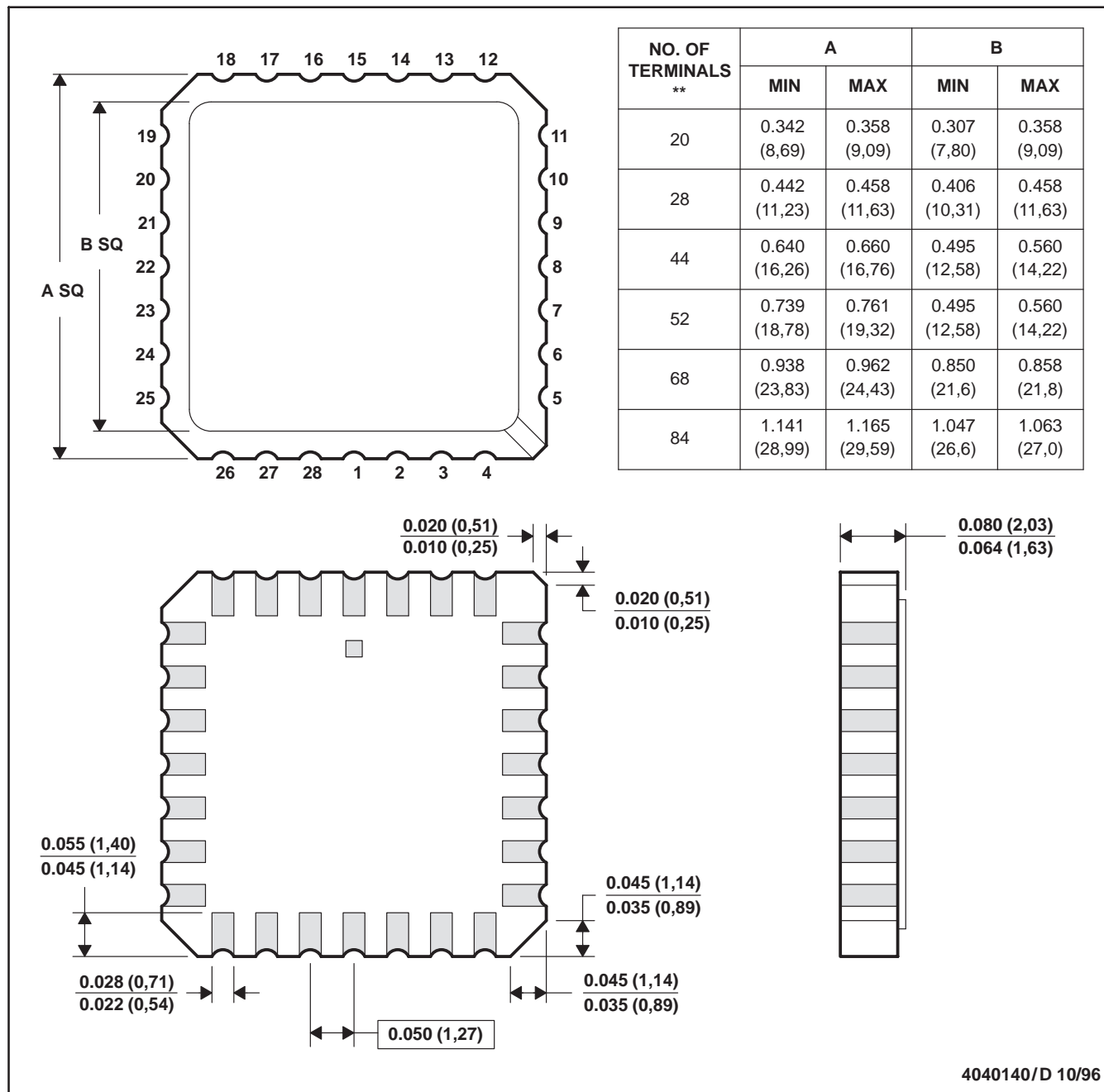
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



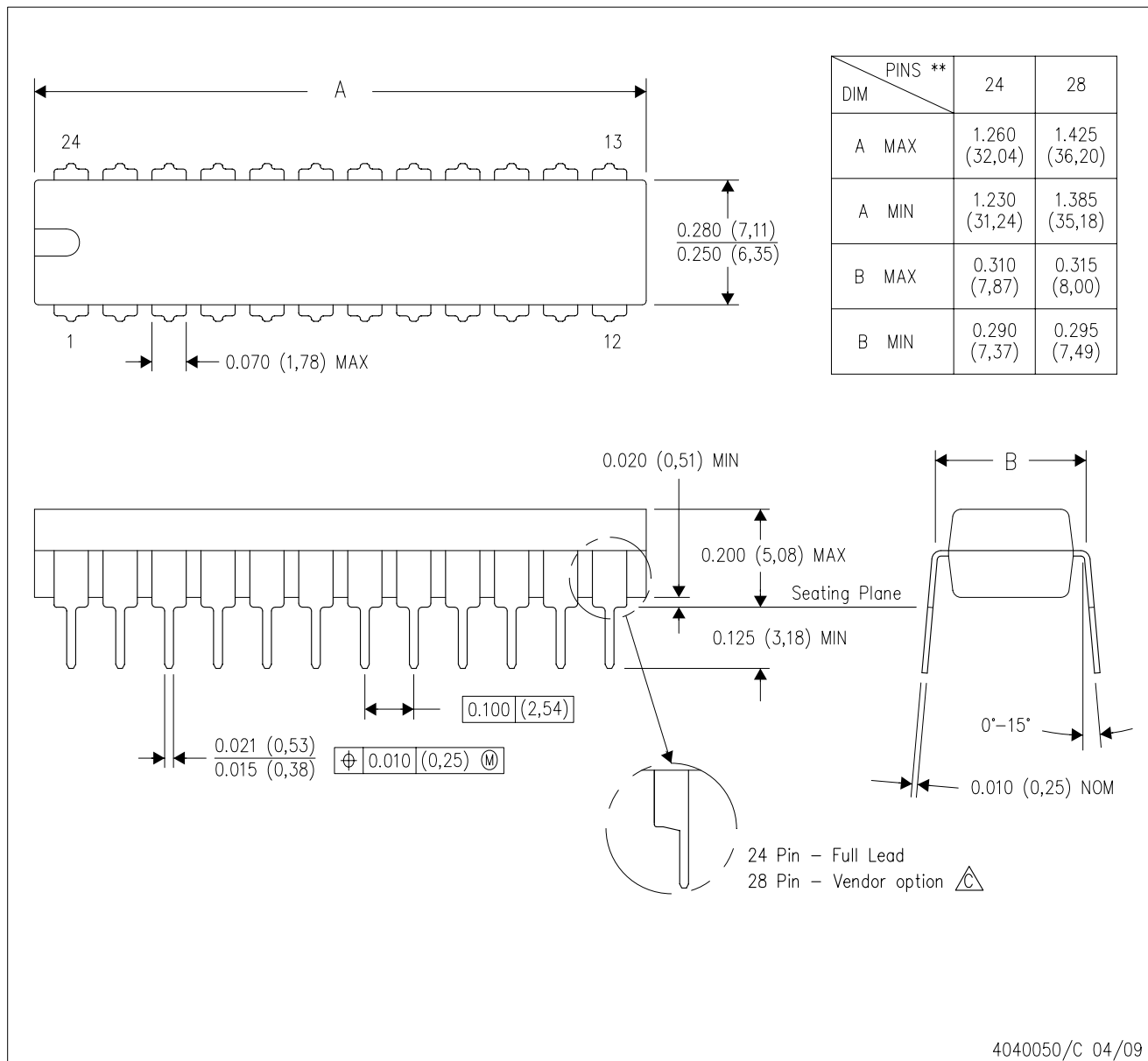
- NOTES:
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE

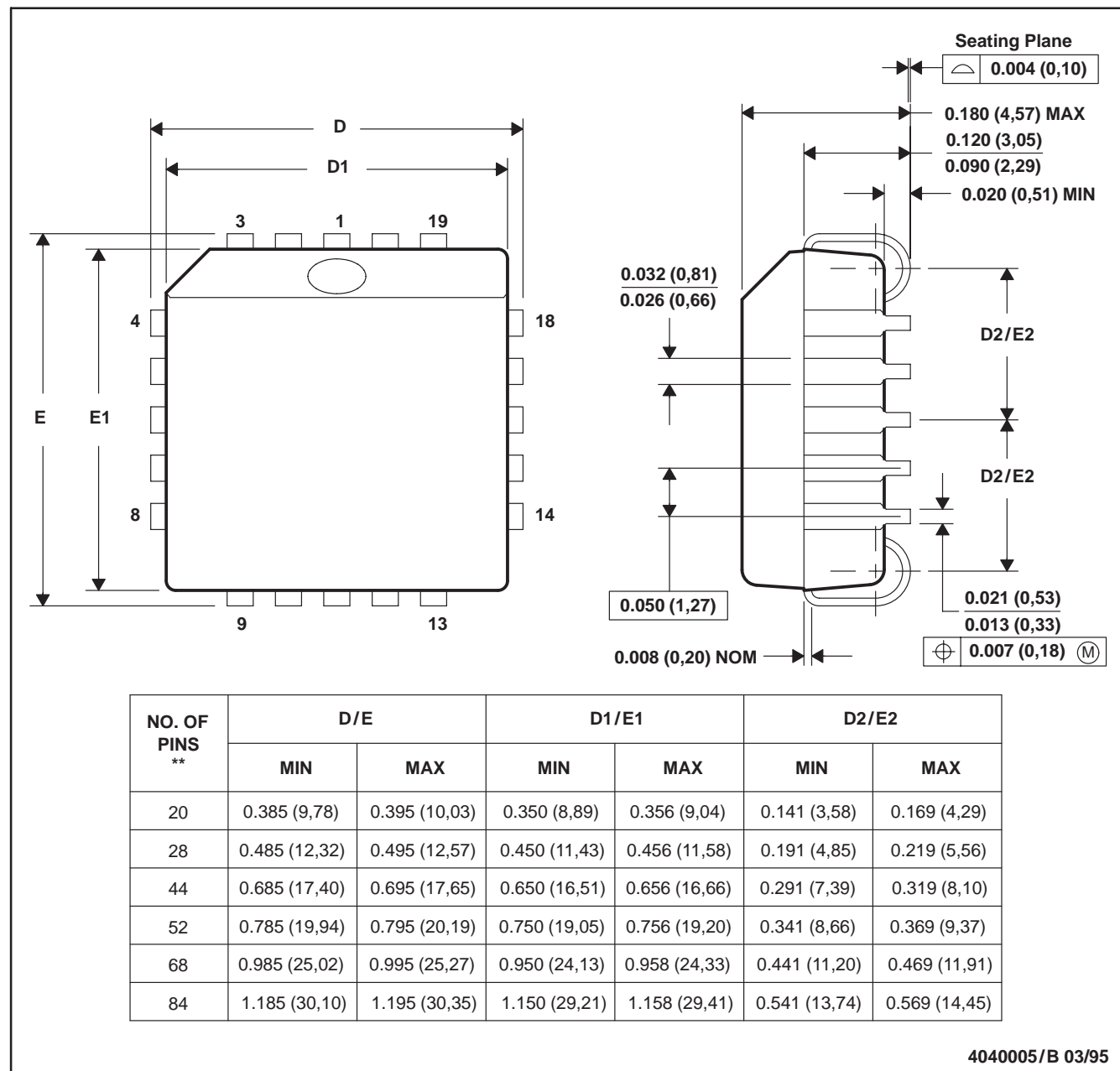


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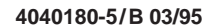
PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN



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 C. Falls within JEDEC MS-018

CERAMIC DUAL FLATPACK

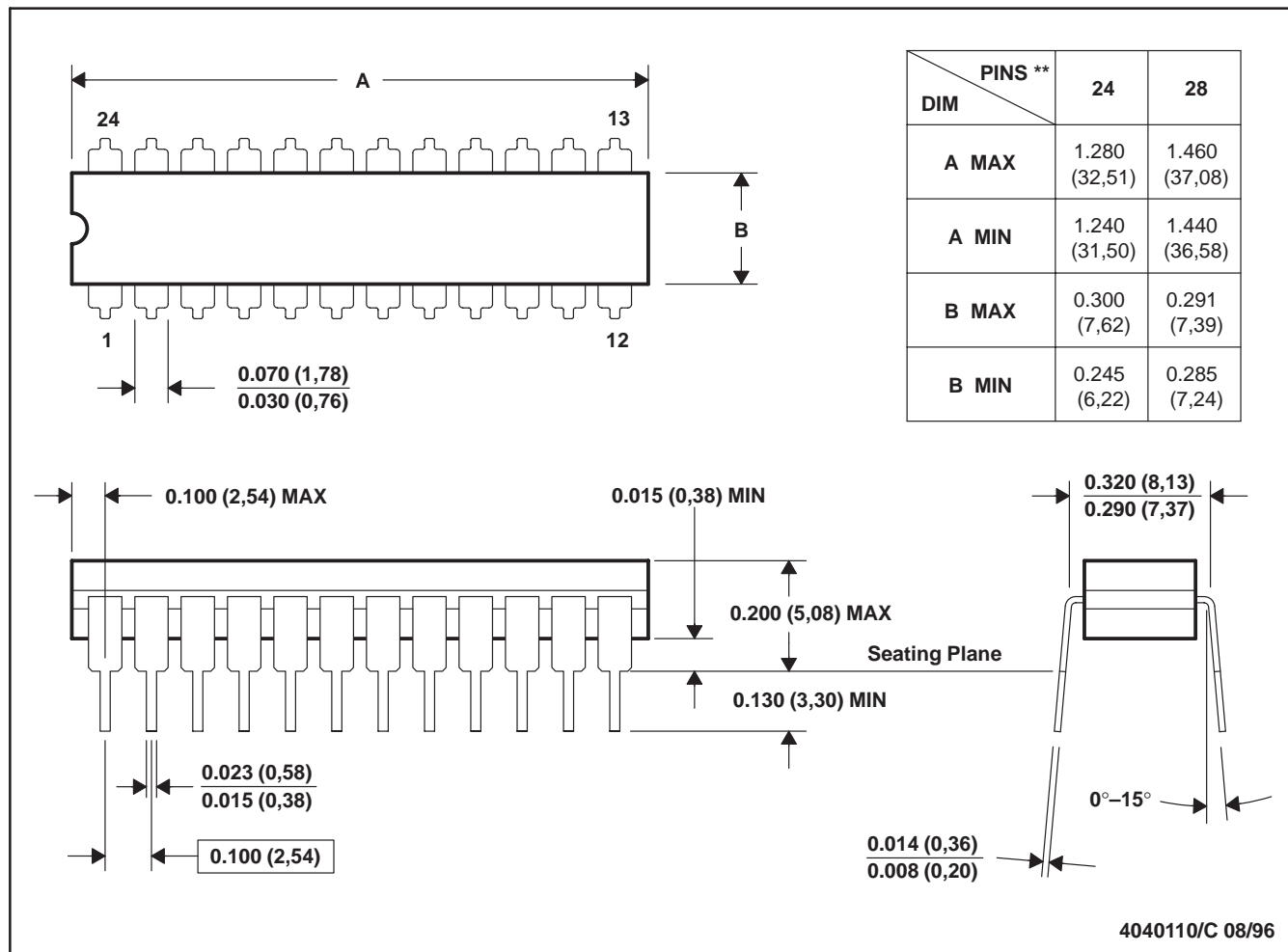


- 

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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TBD: The Pb-Free/Green conversion plan has not been defined.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

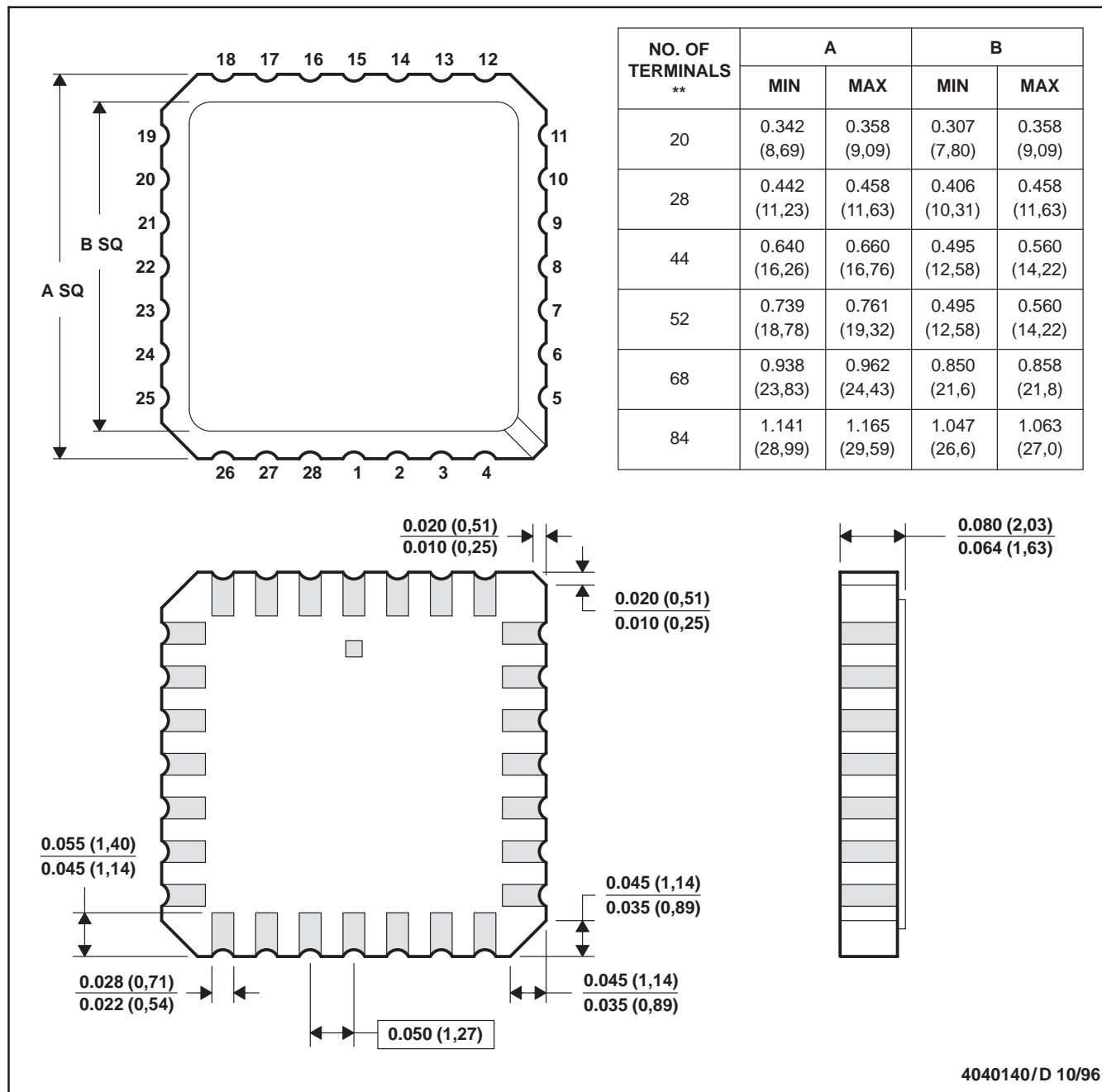
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



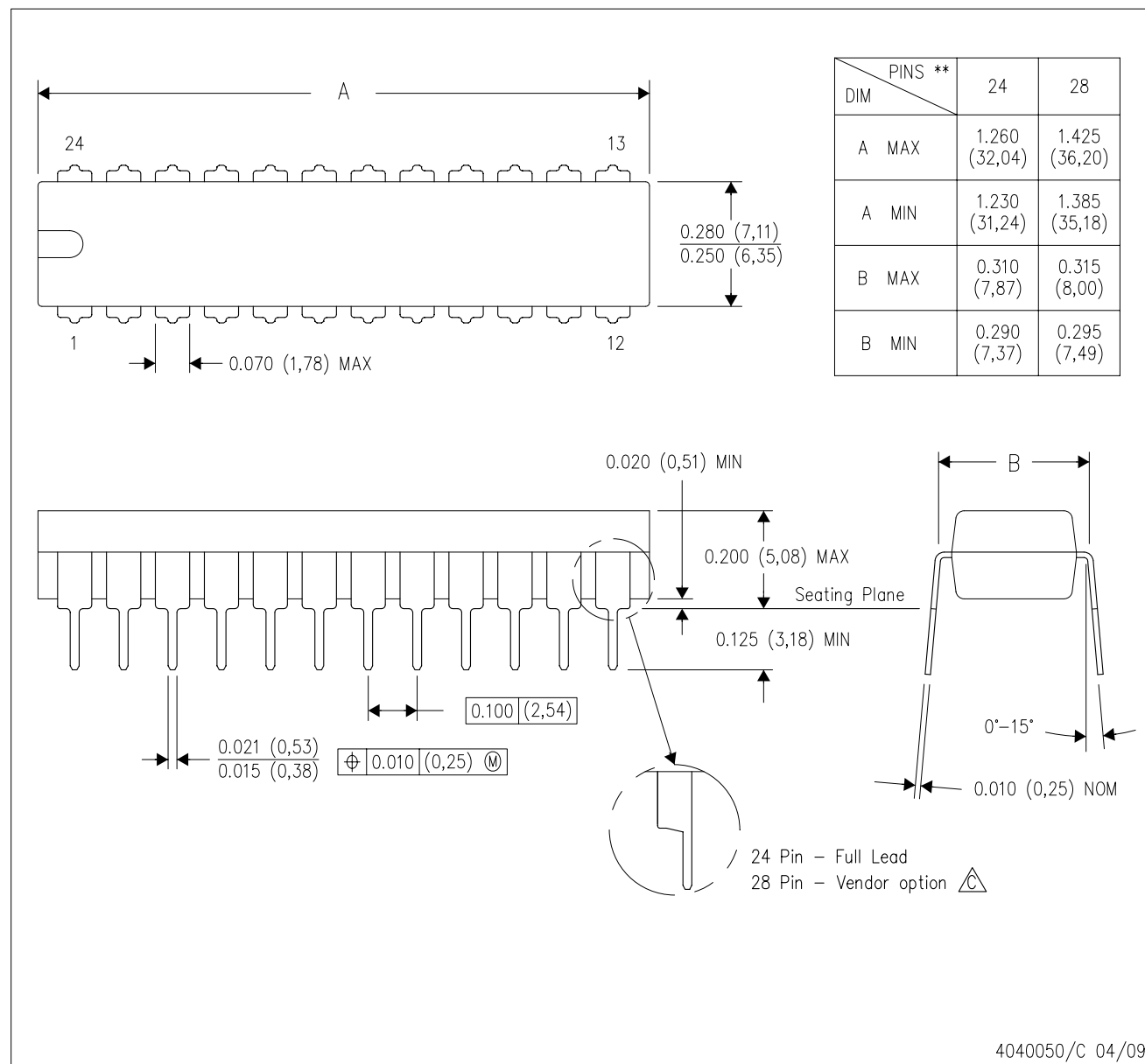
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

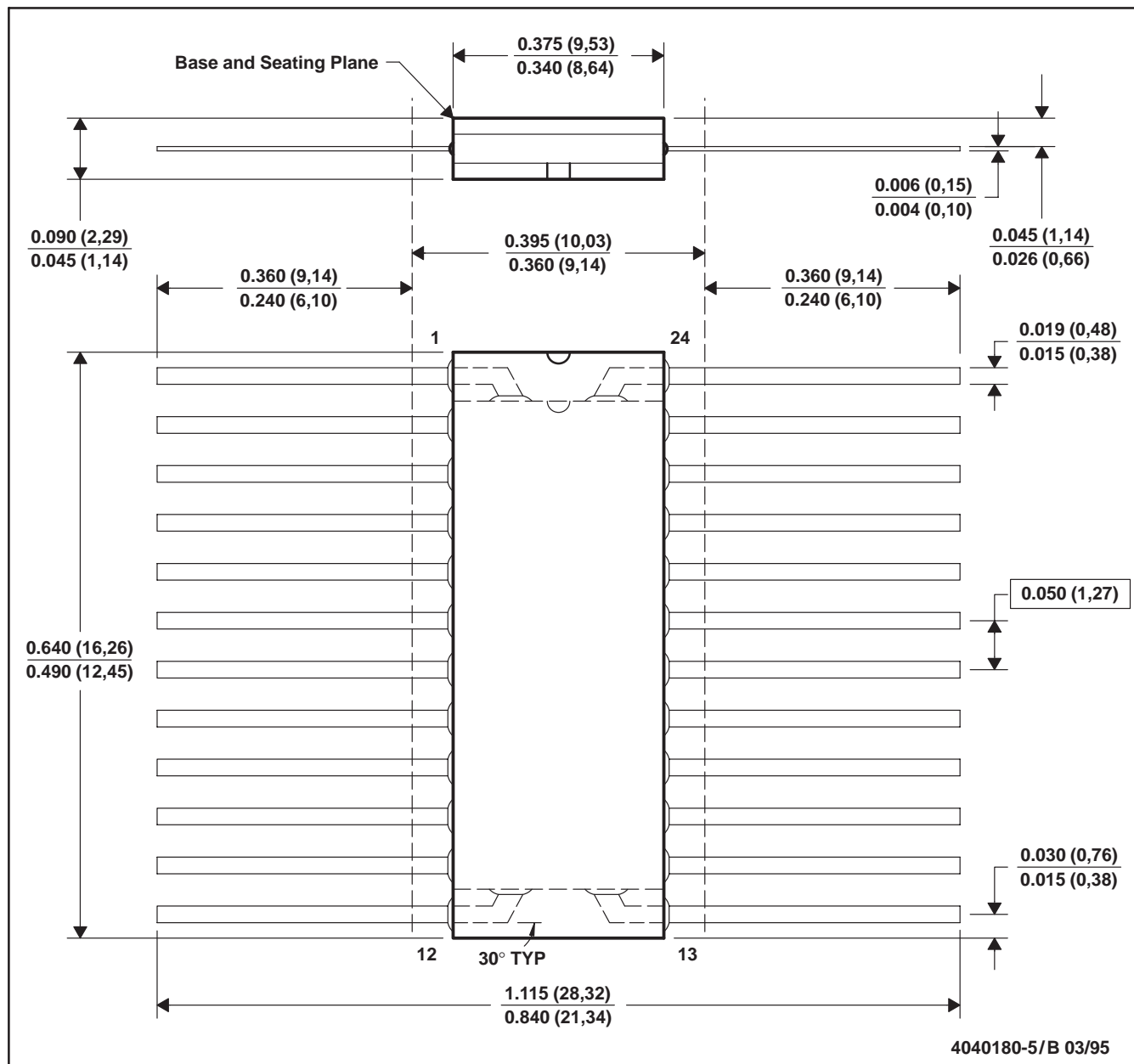
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

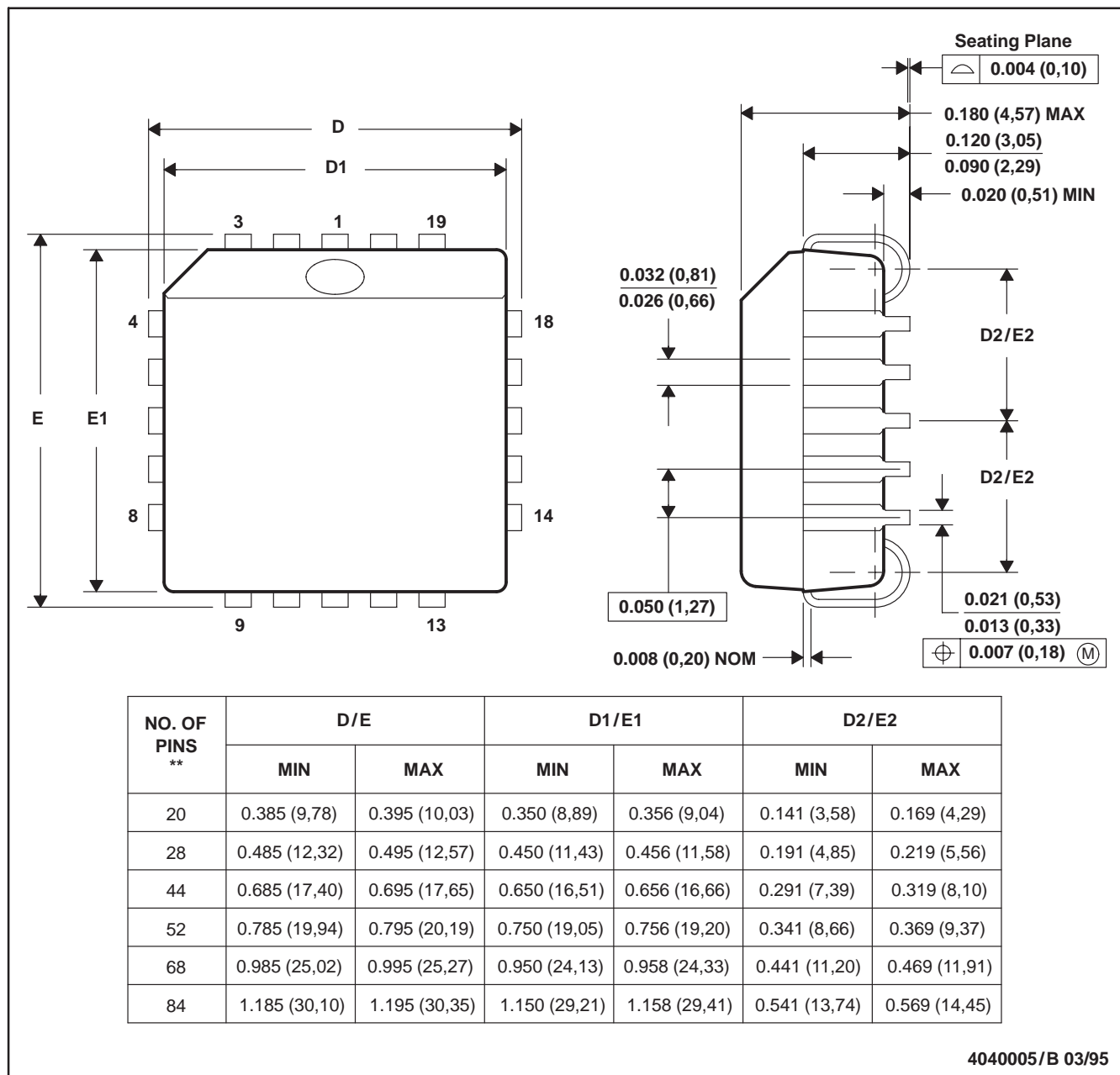


- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

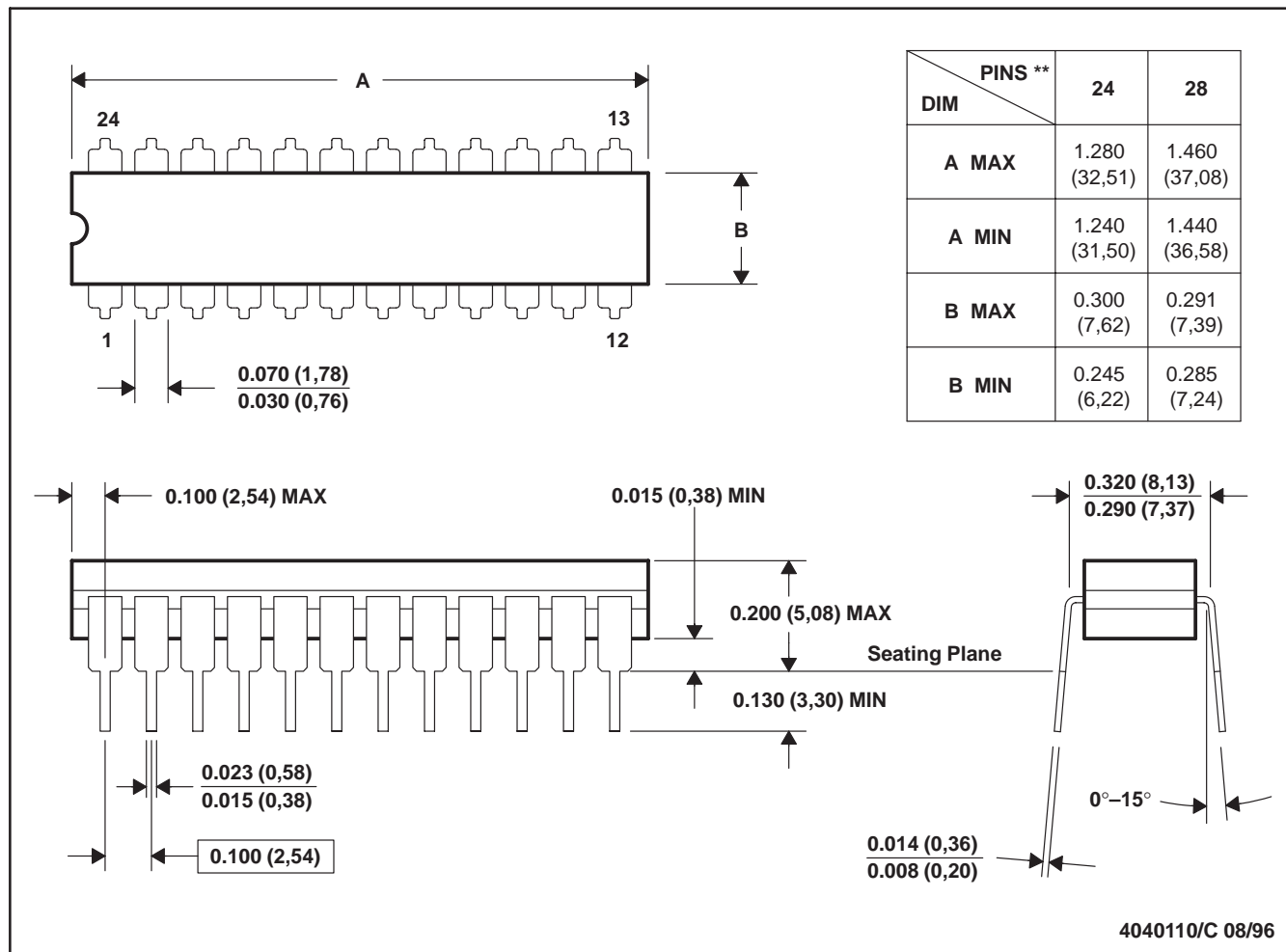


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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TBD: The Pb-Free/Green conversion plan has not been defined.

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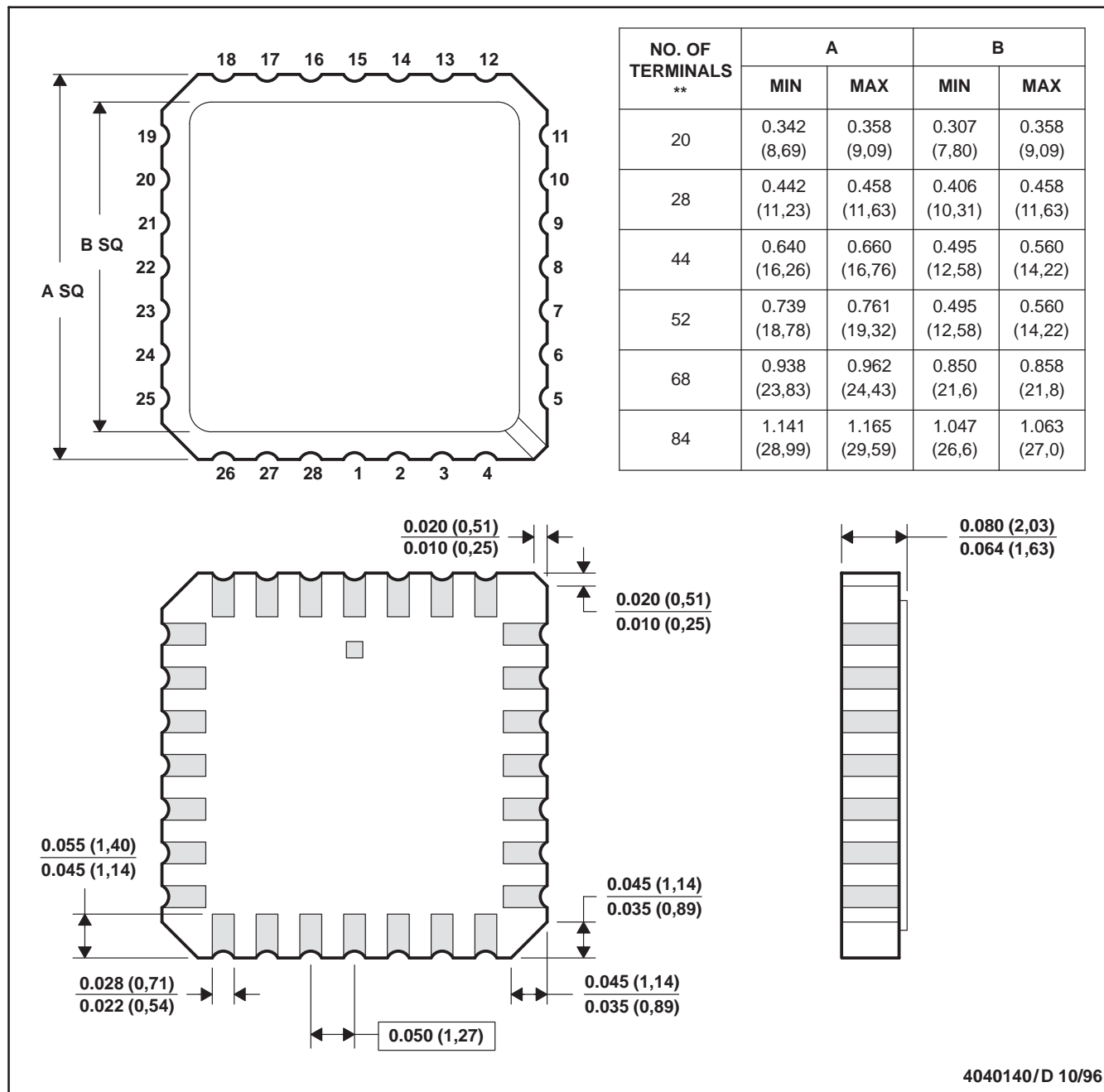
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



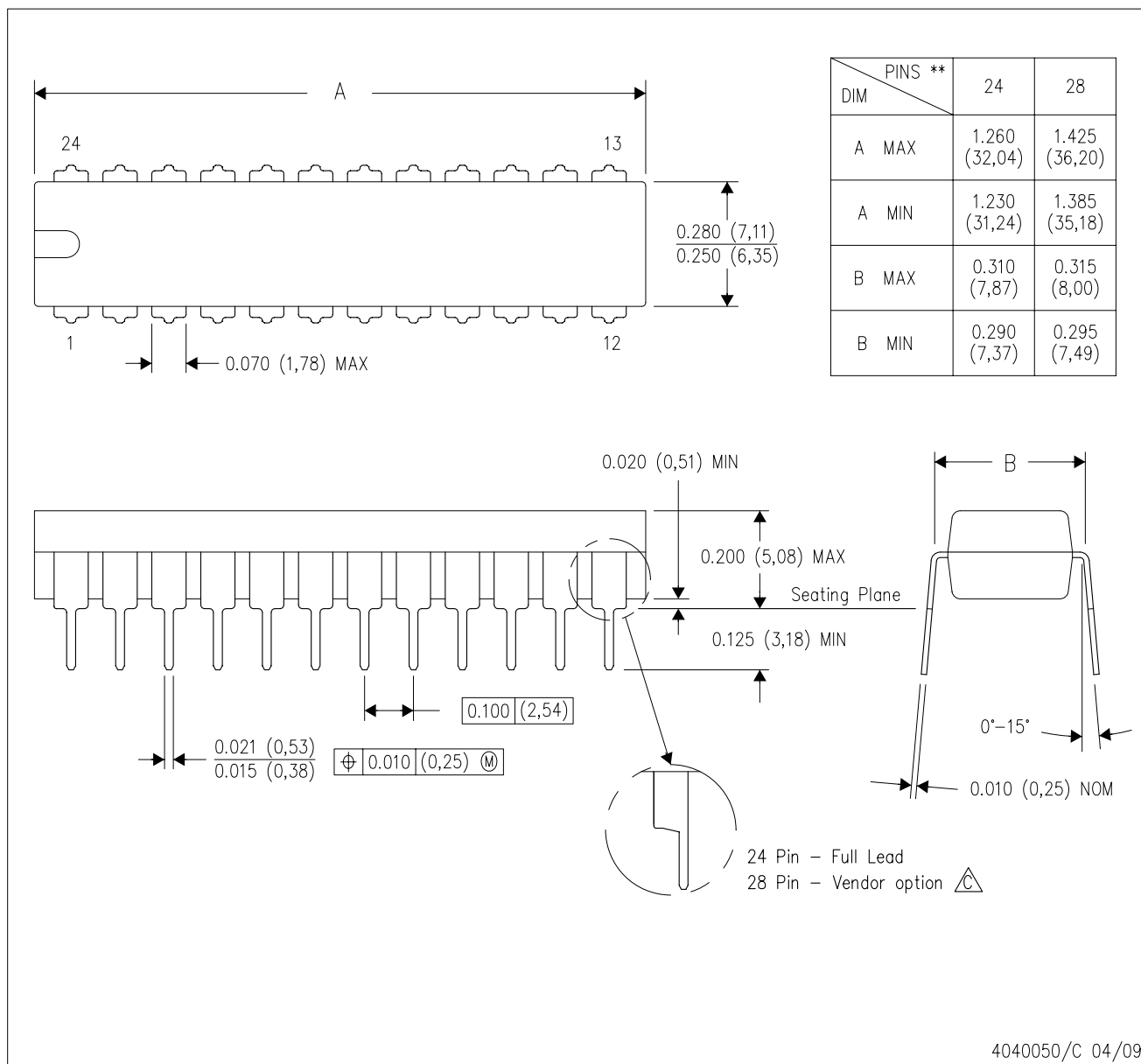
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

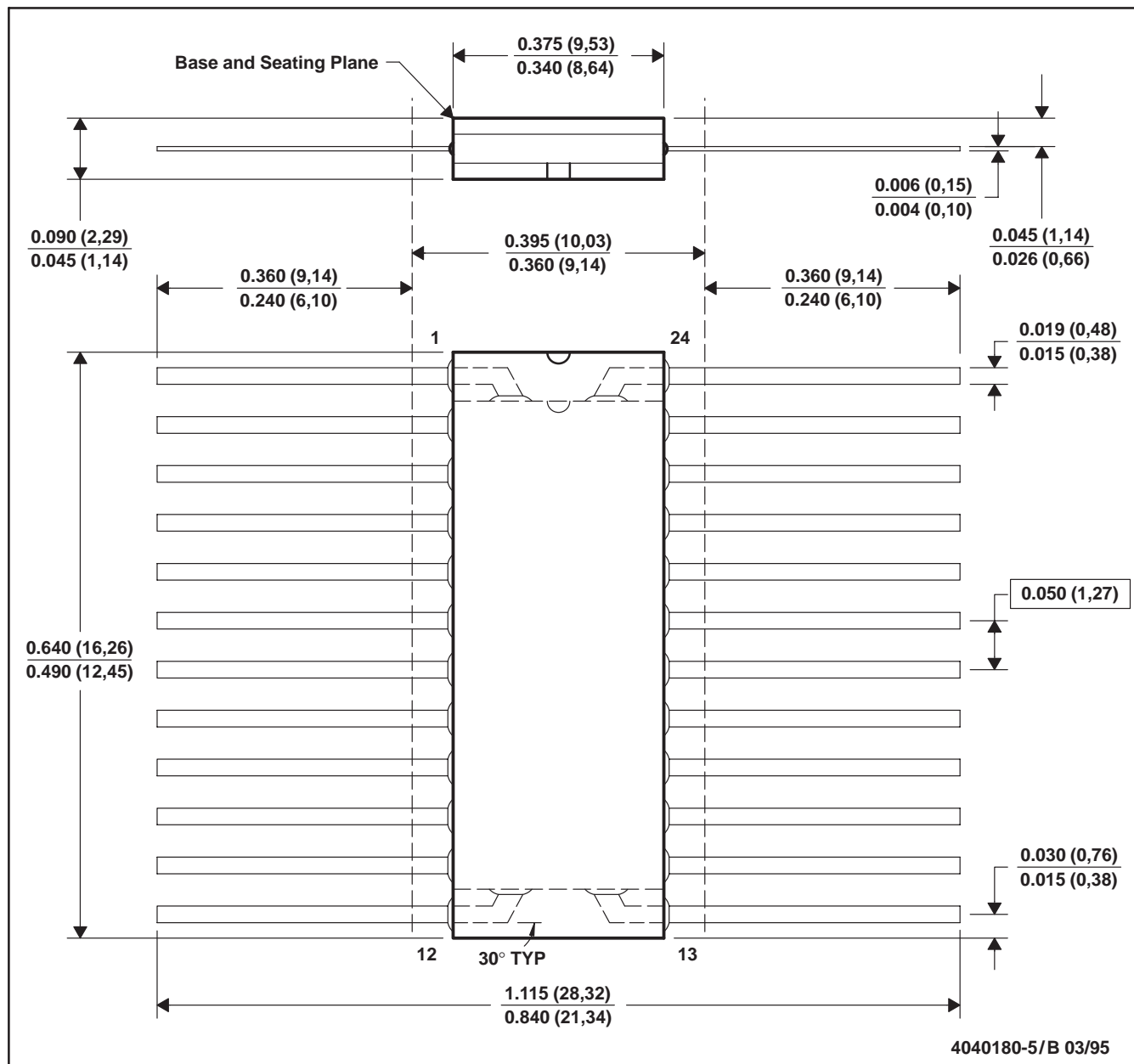
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

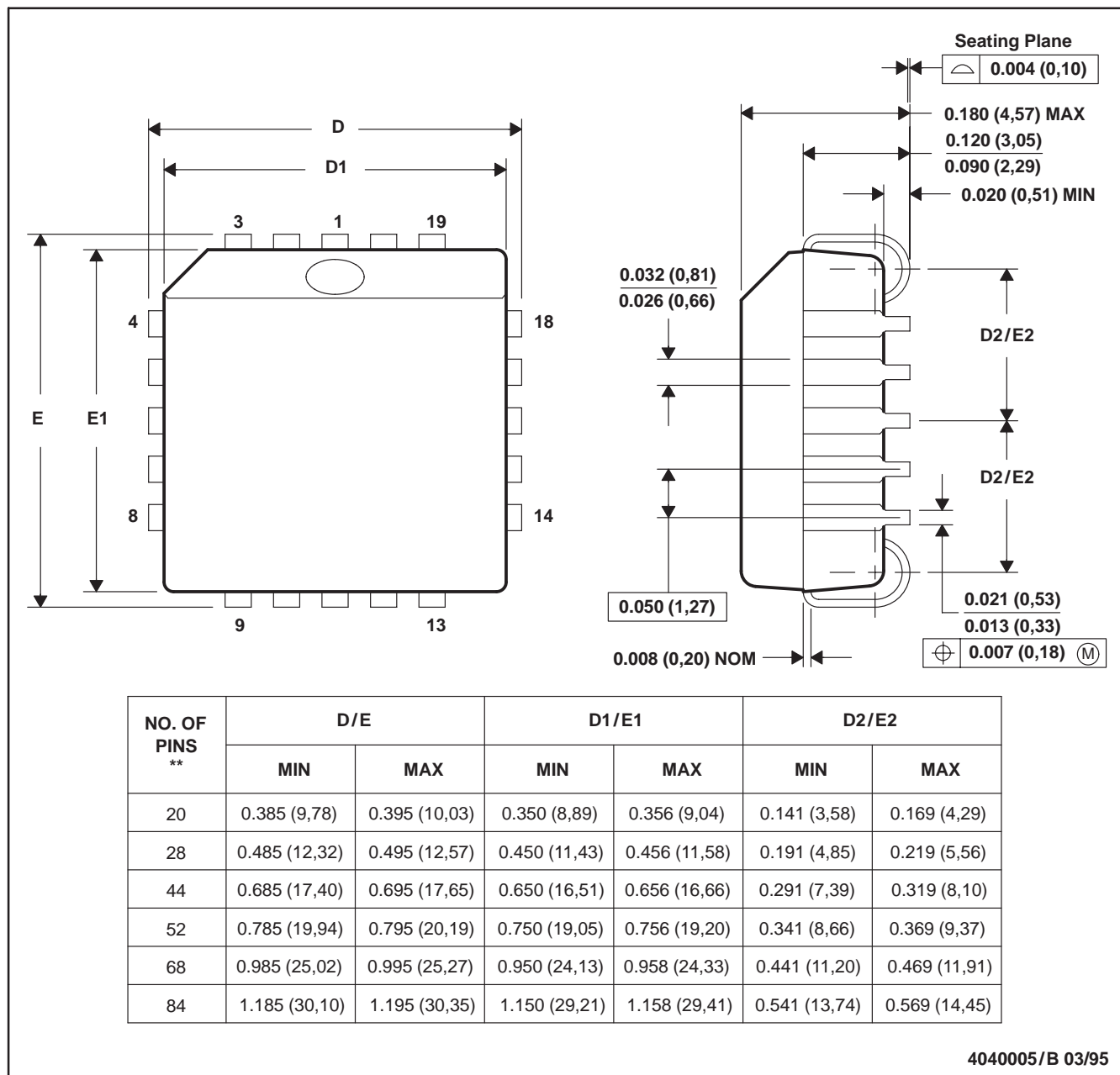


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

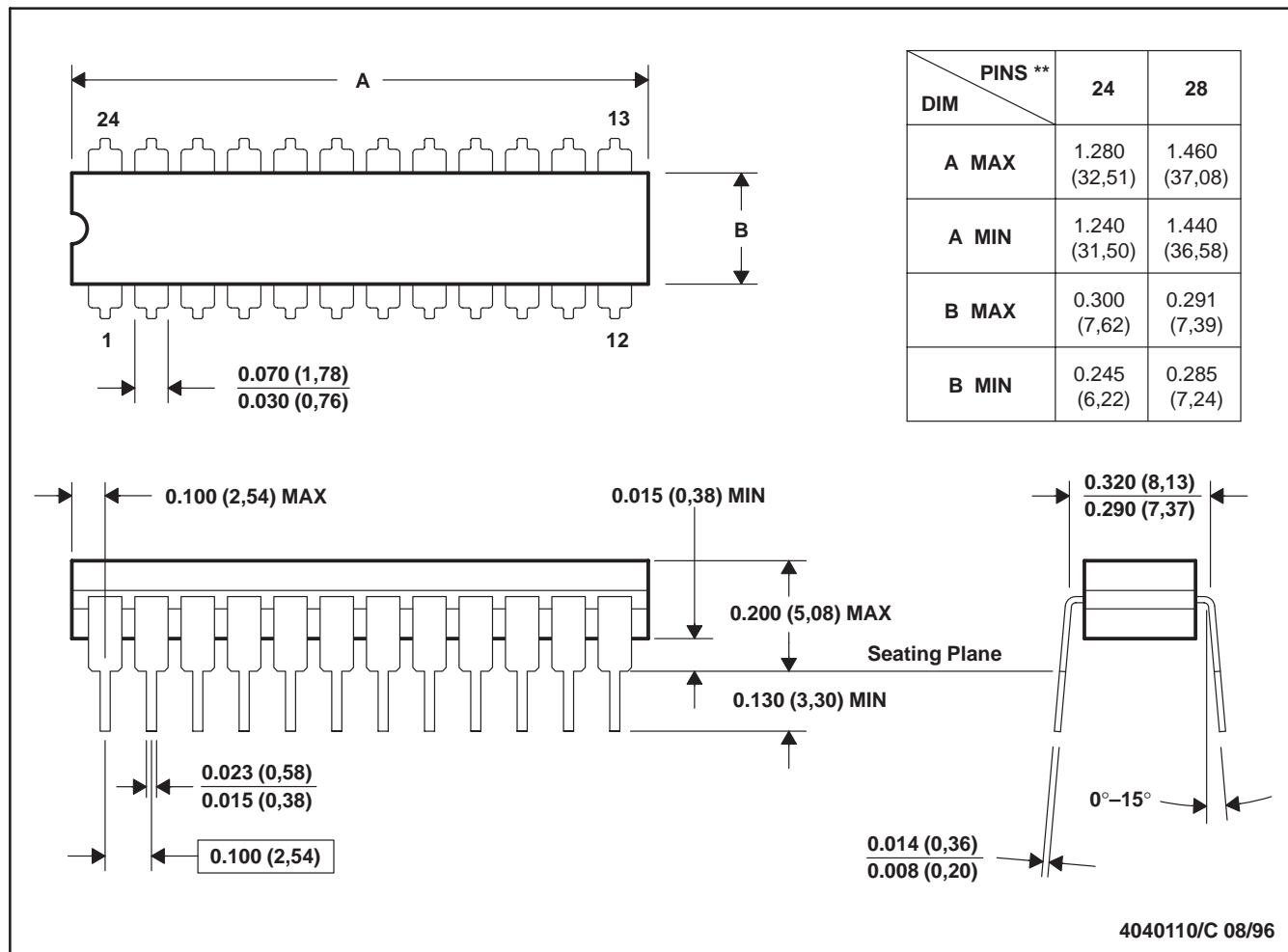


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



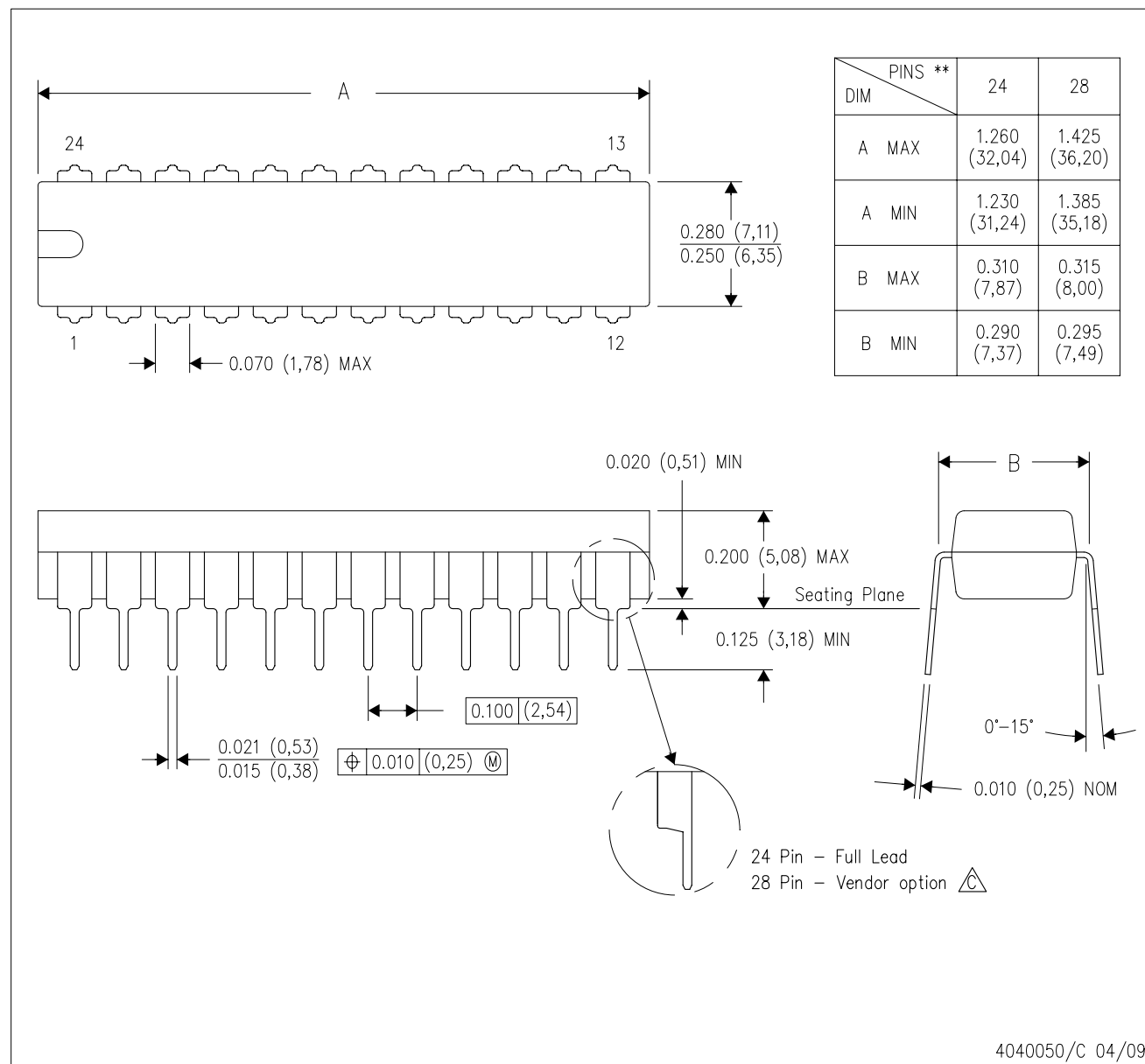
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

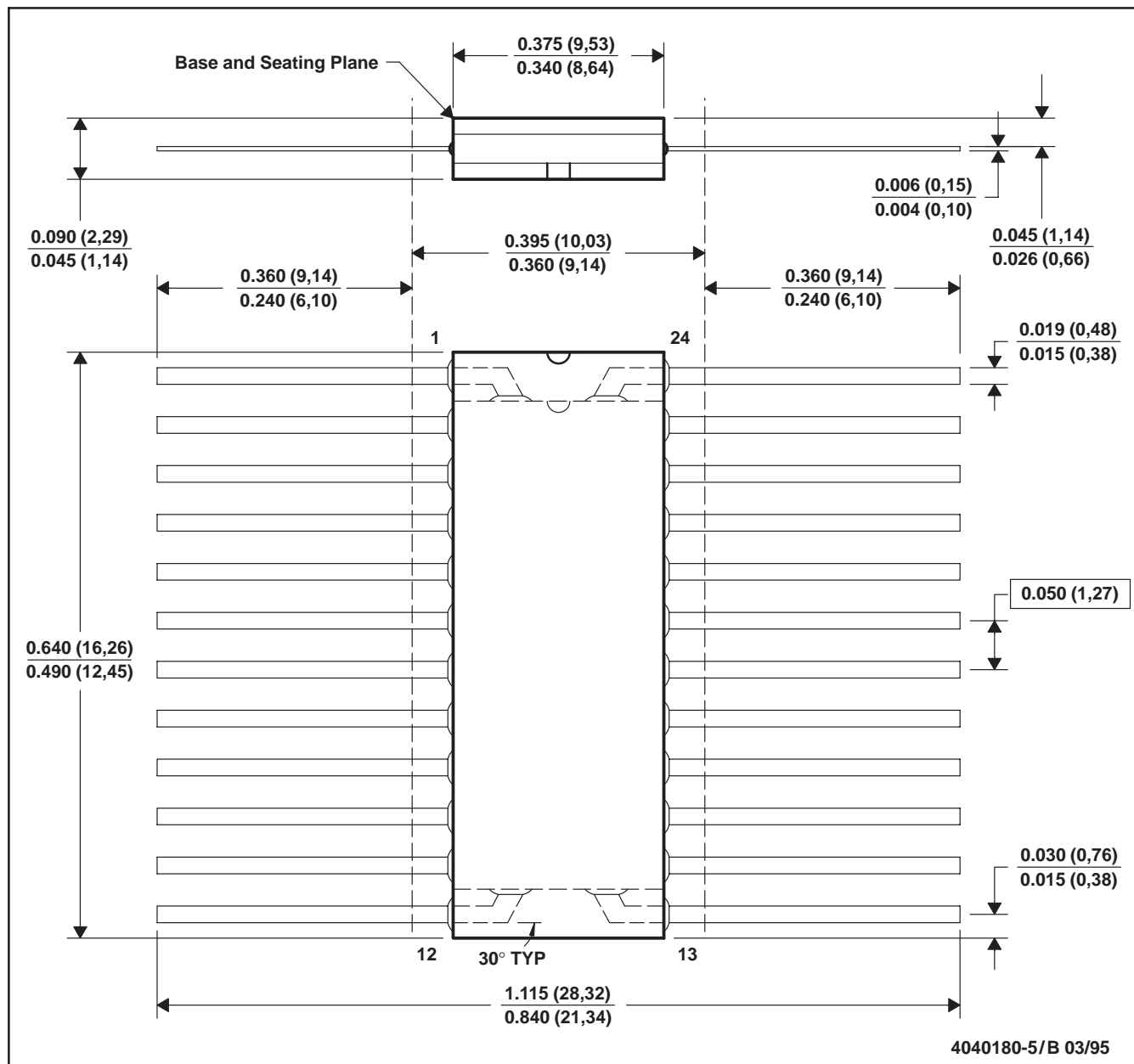
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

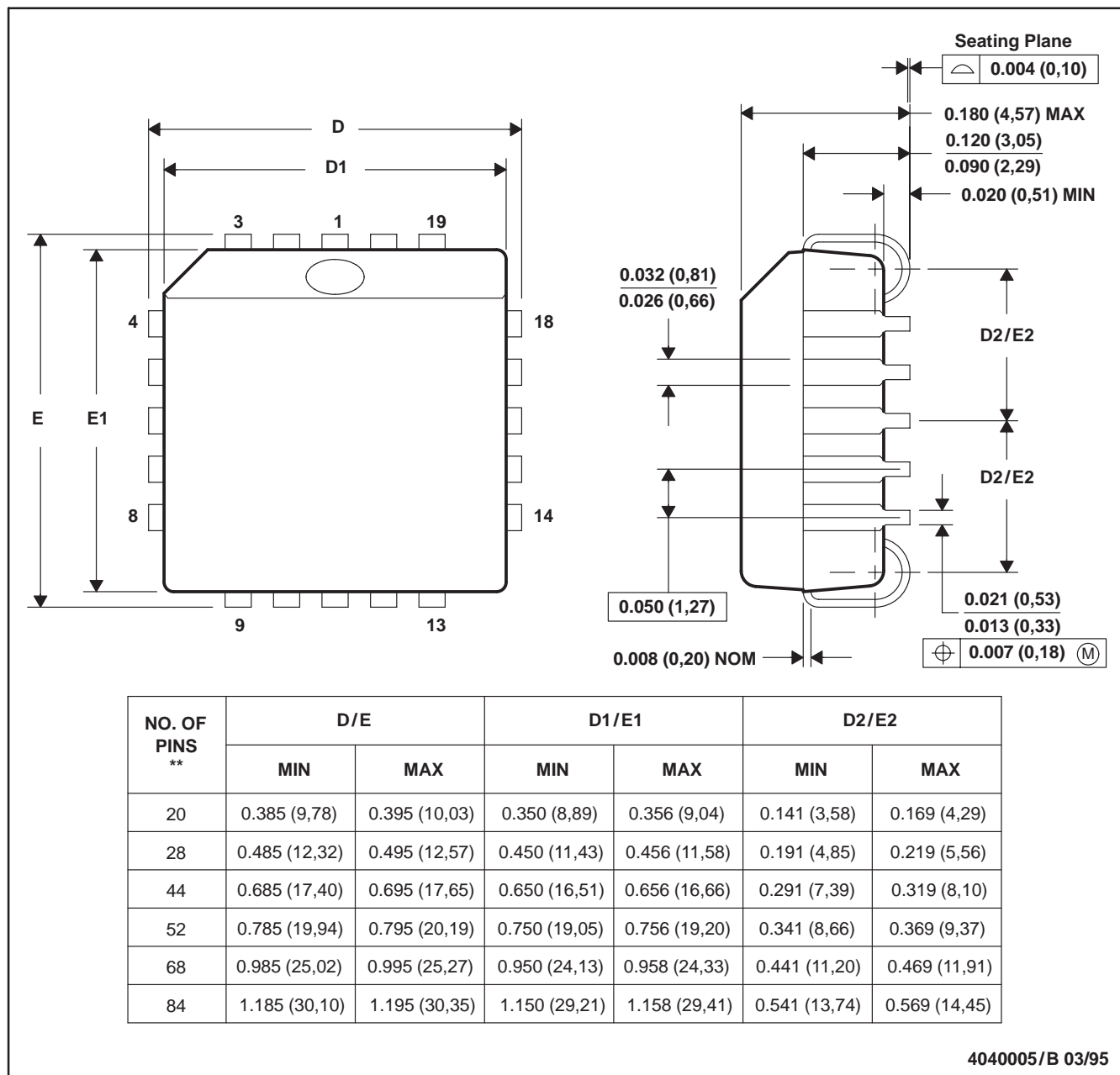


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 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

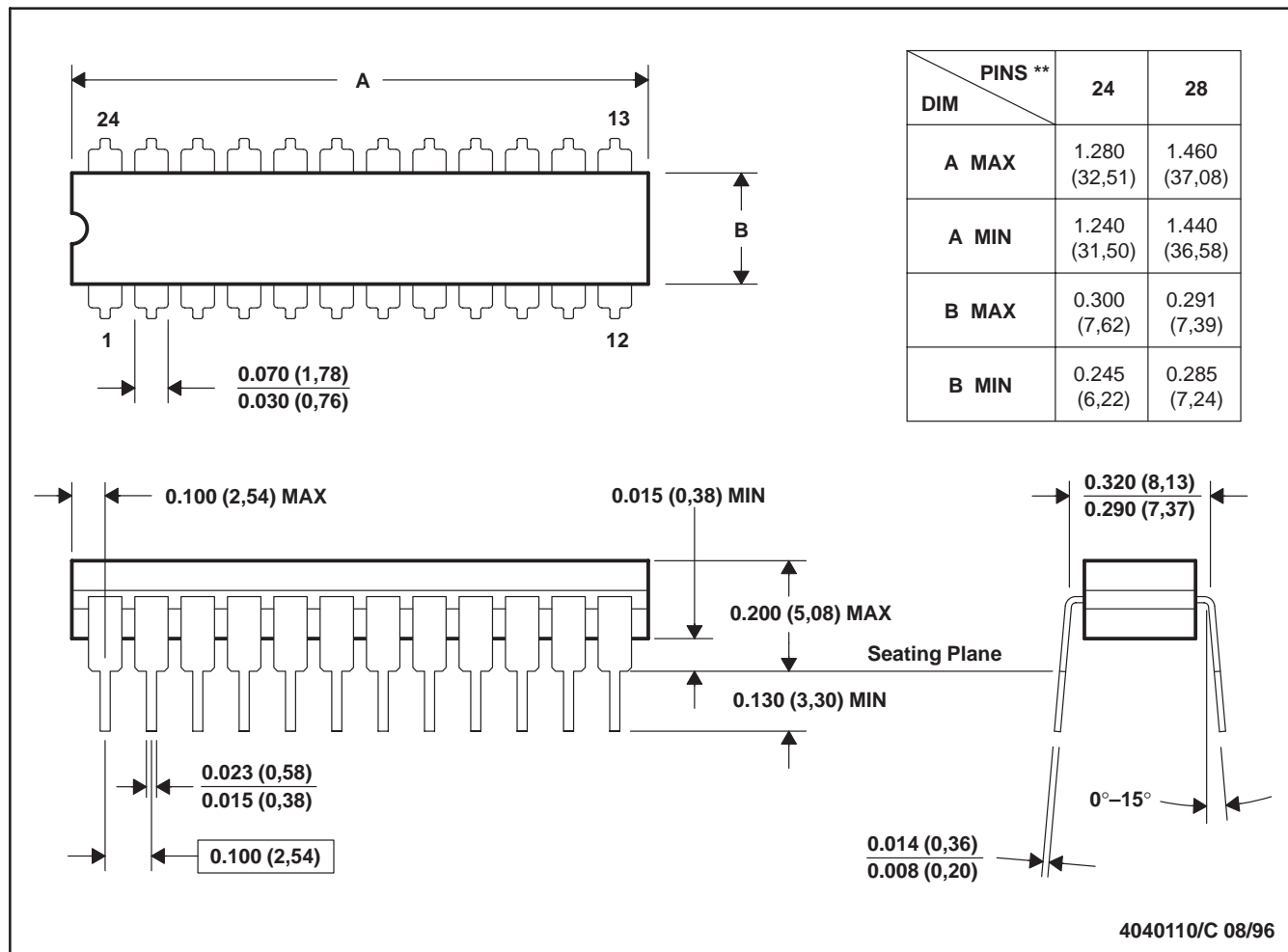


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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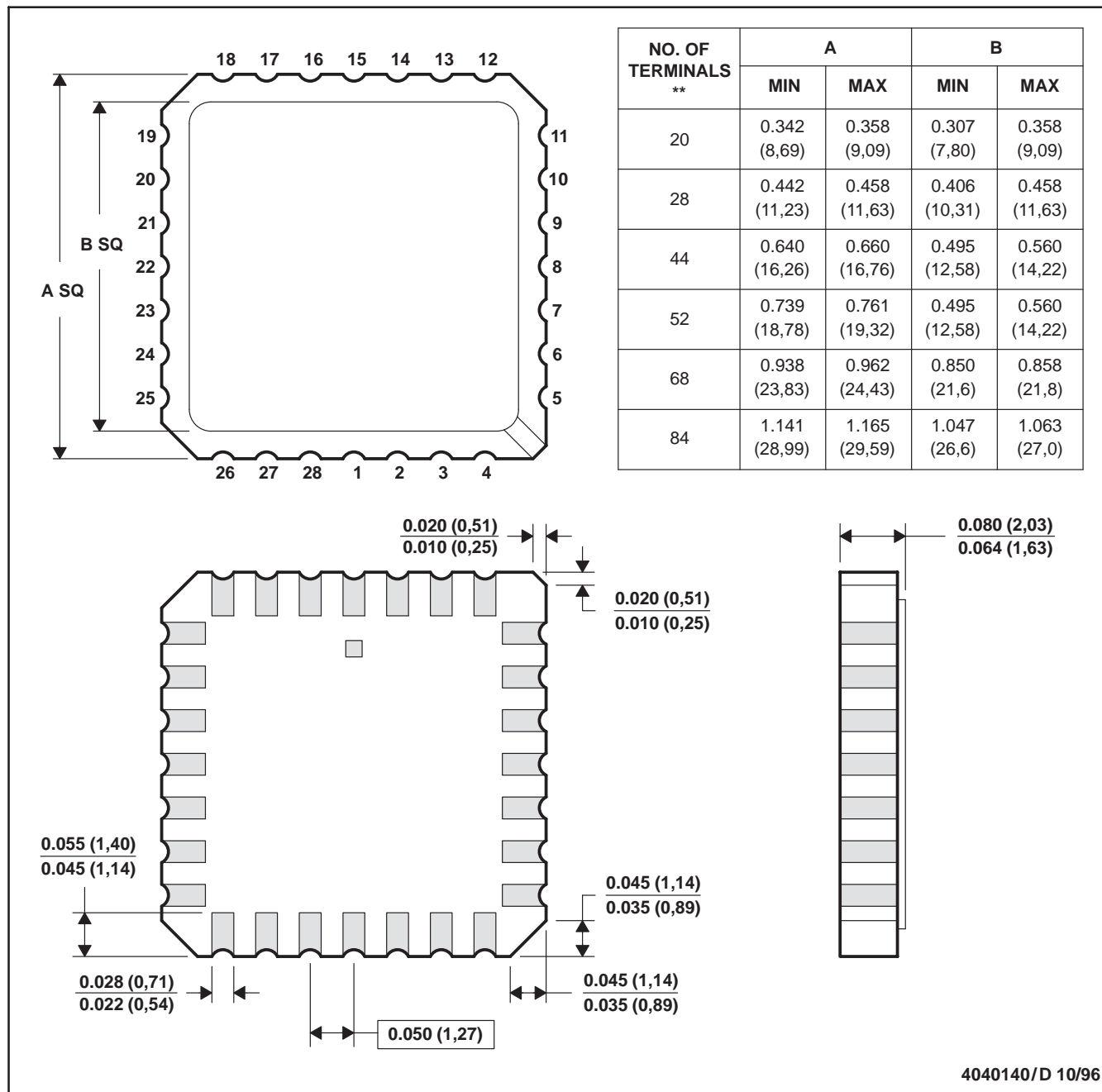
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



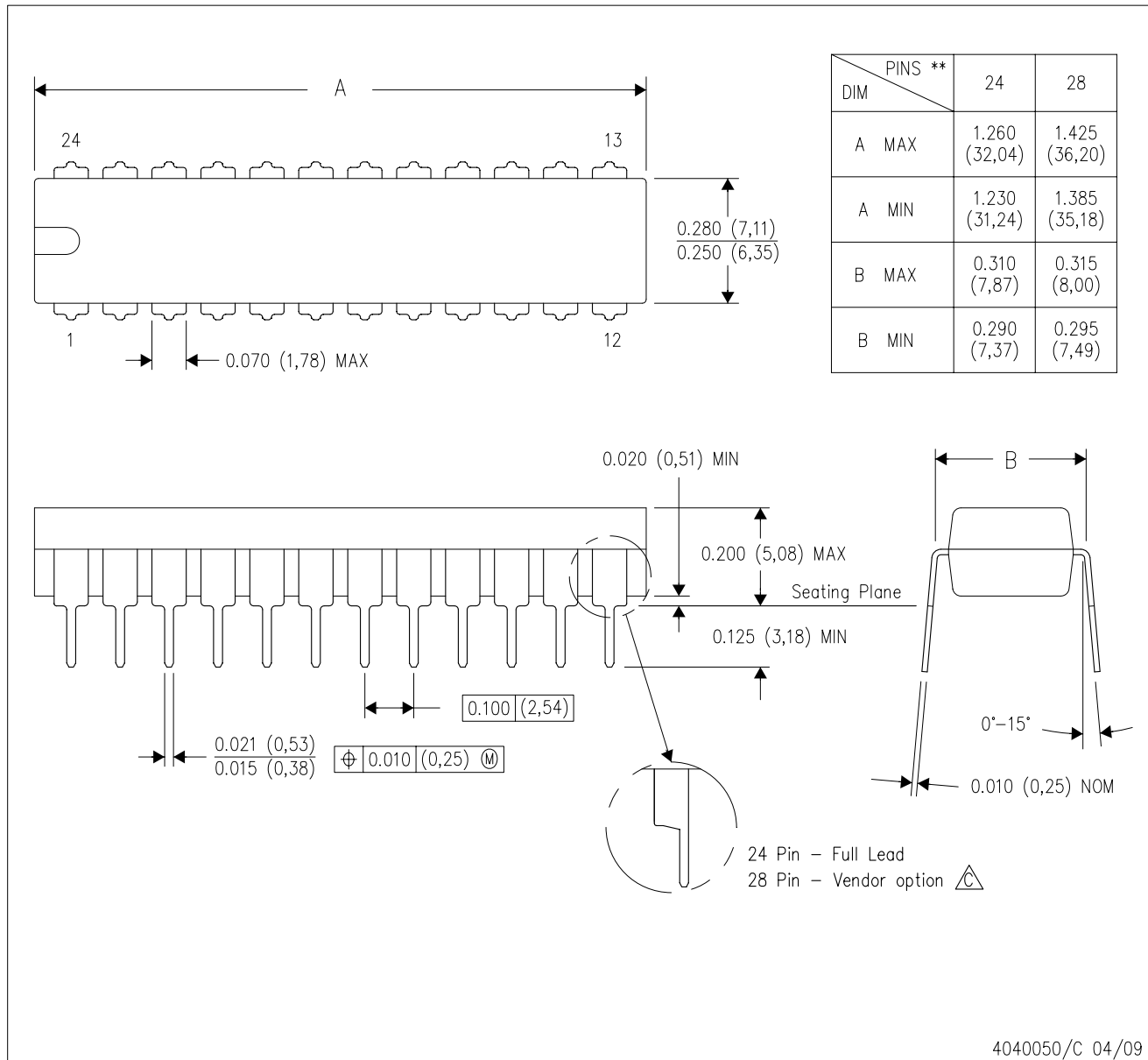
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 - D. The terminals are gold plated.
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MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

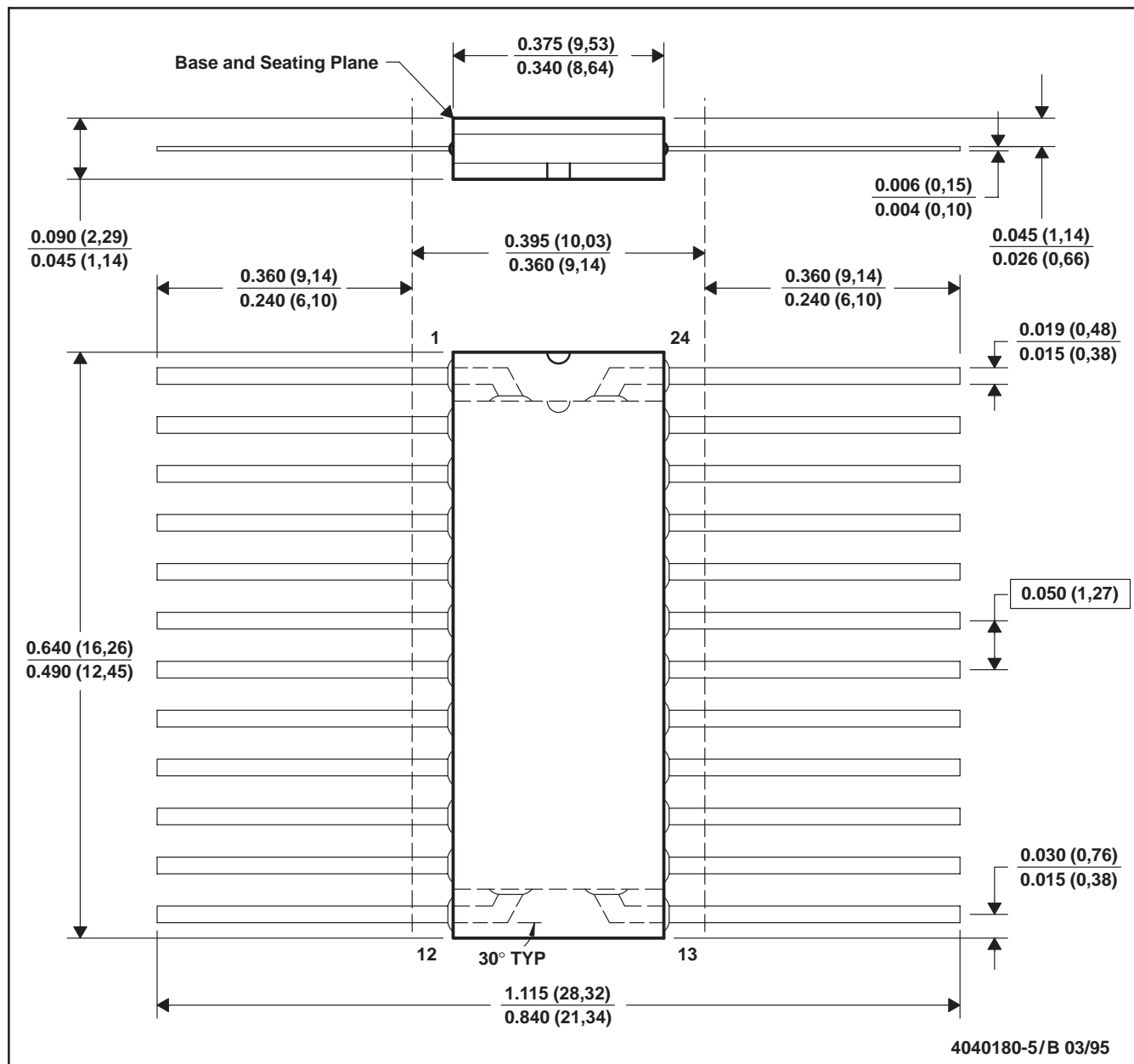
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

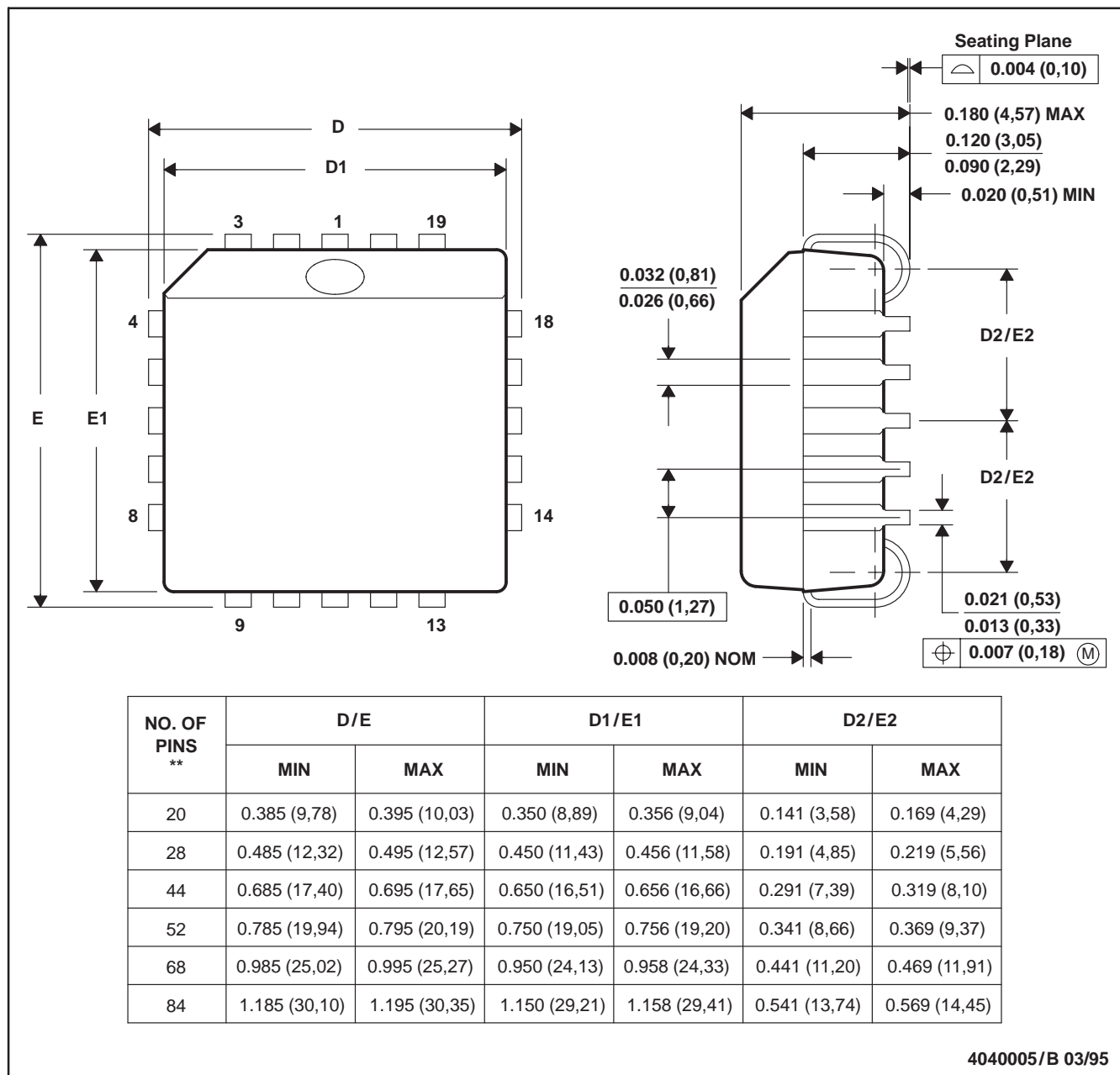


- NOTES:
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 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

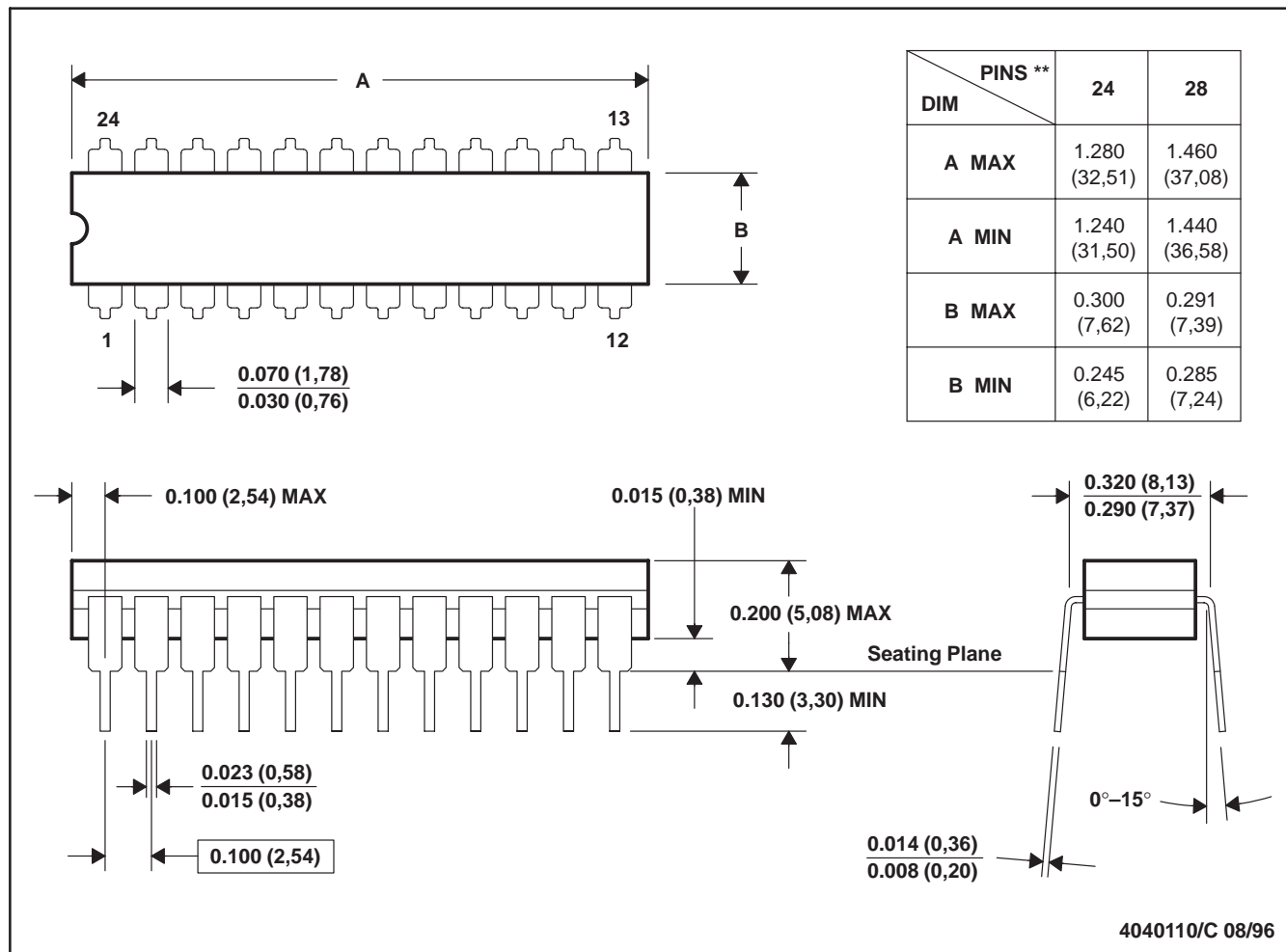


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
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 D. Index point is provided on cap for terminal identification.
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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

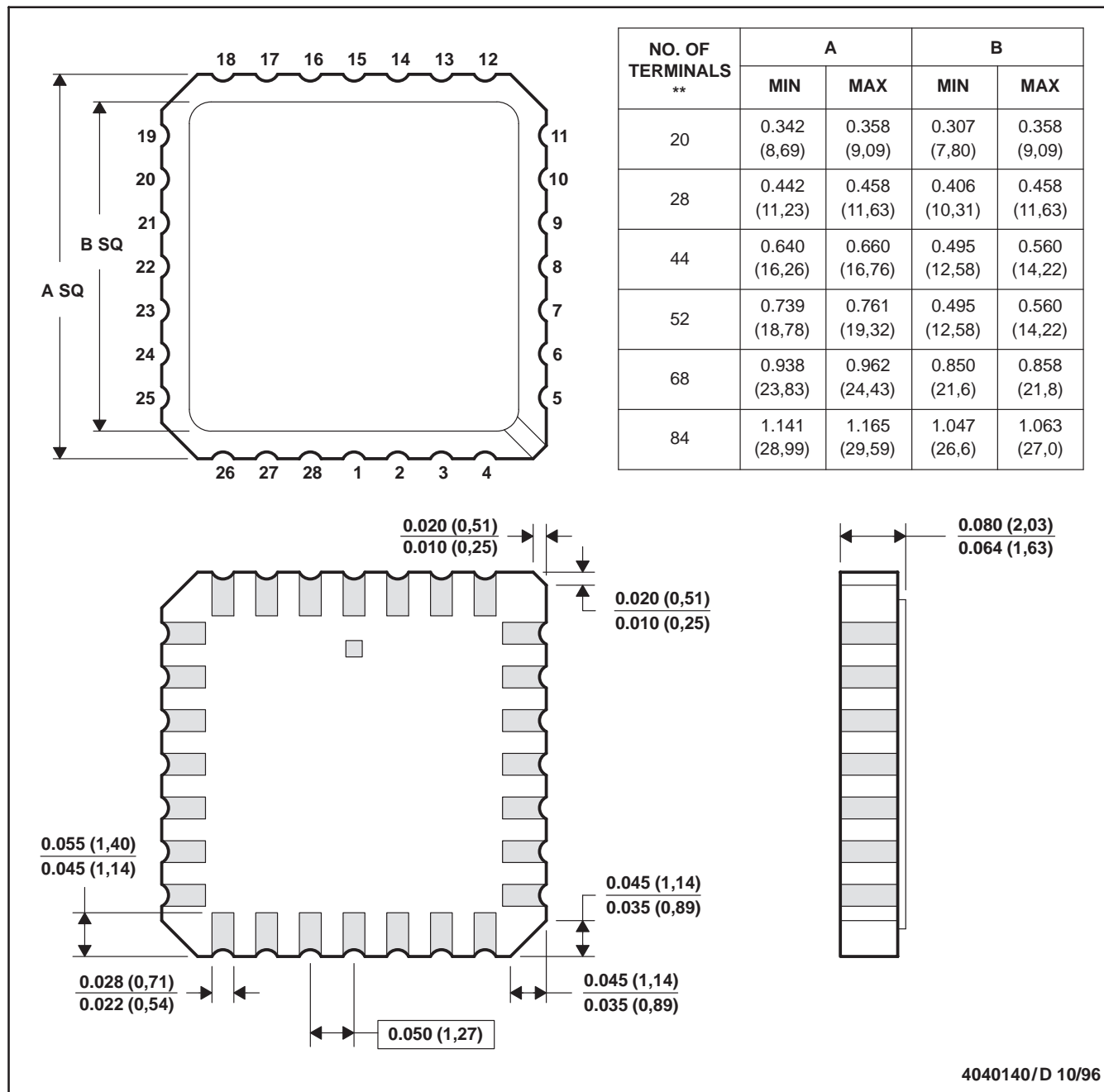
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



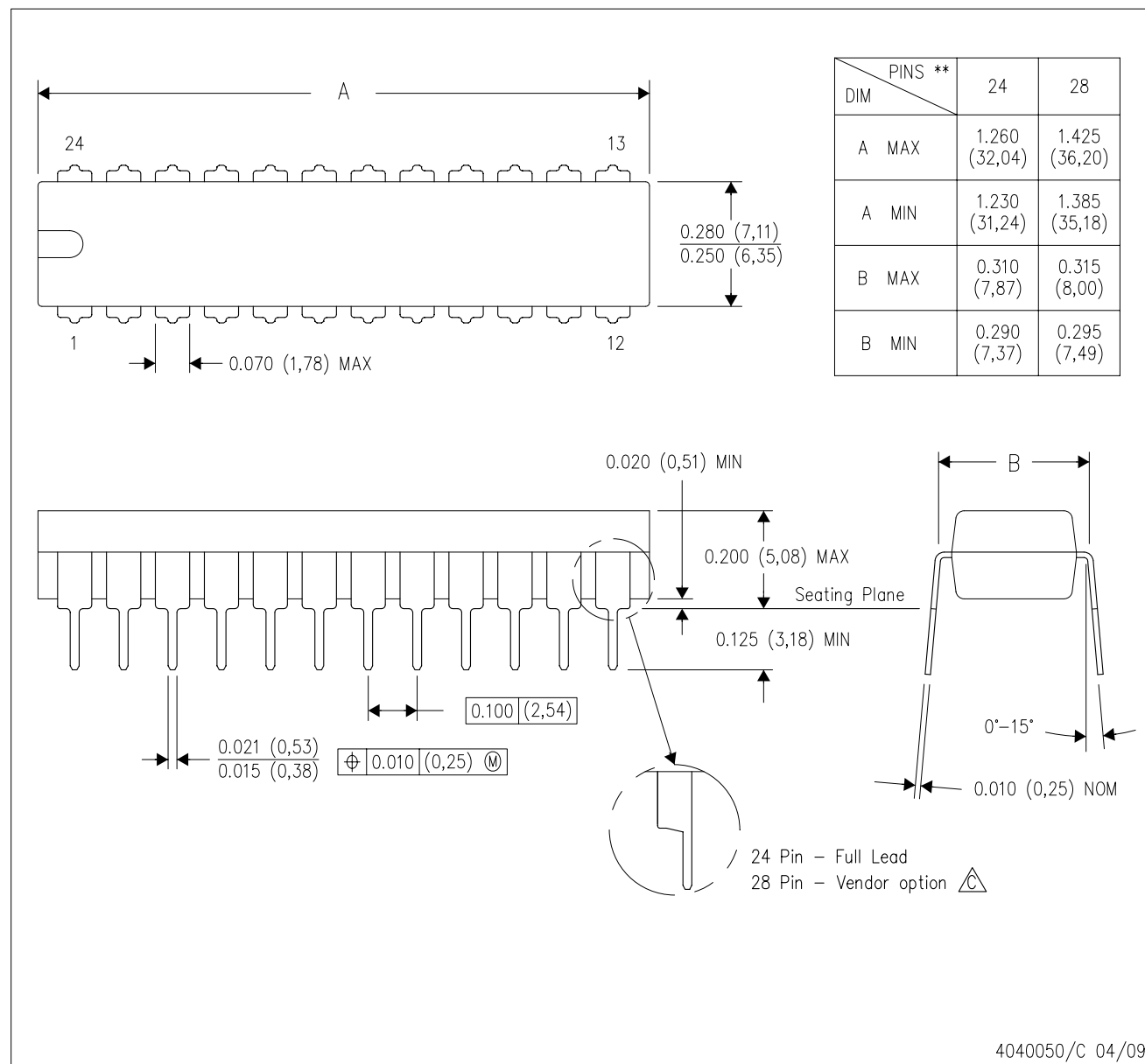
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

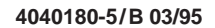
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

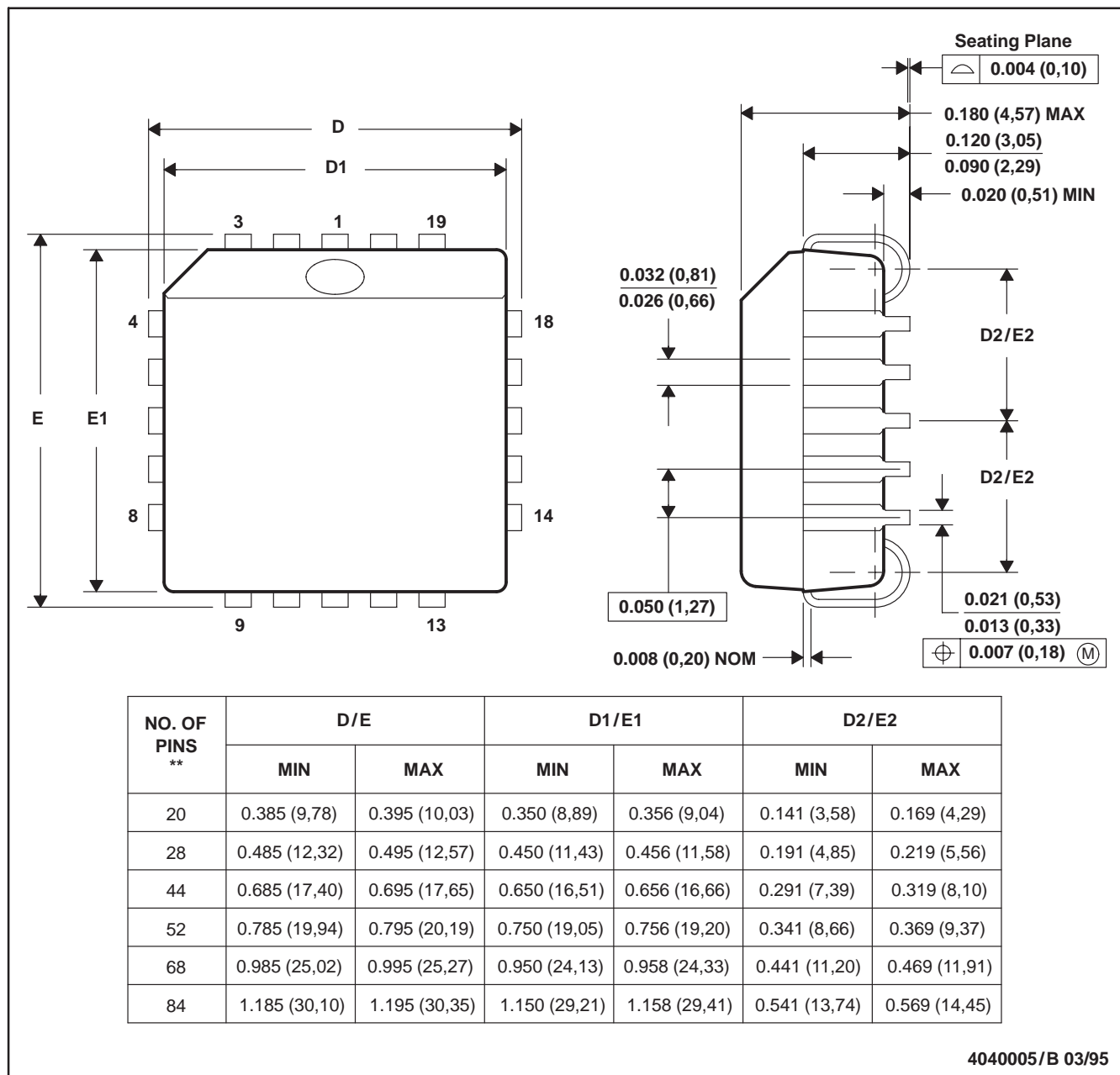


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

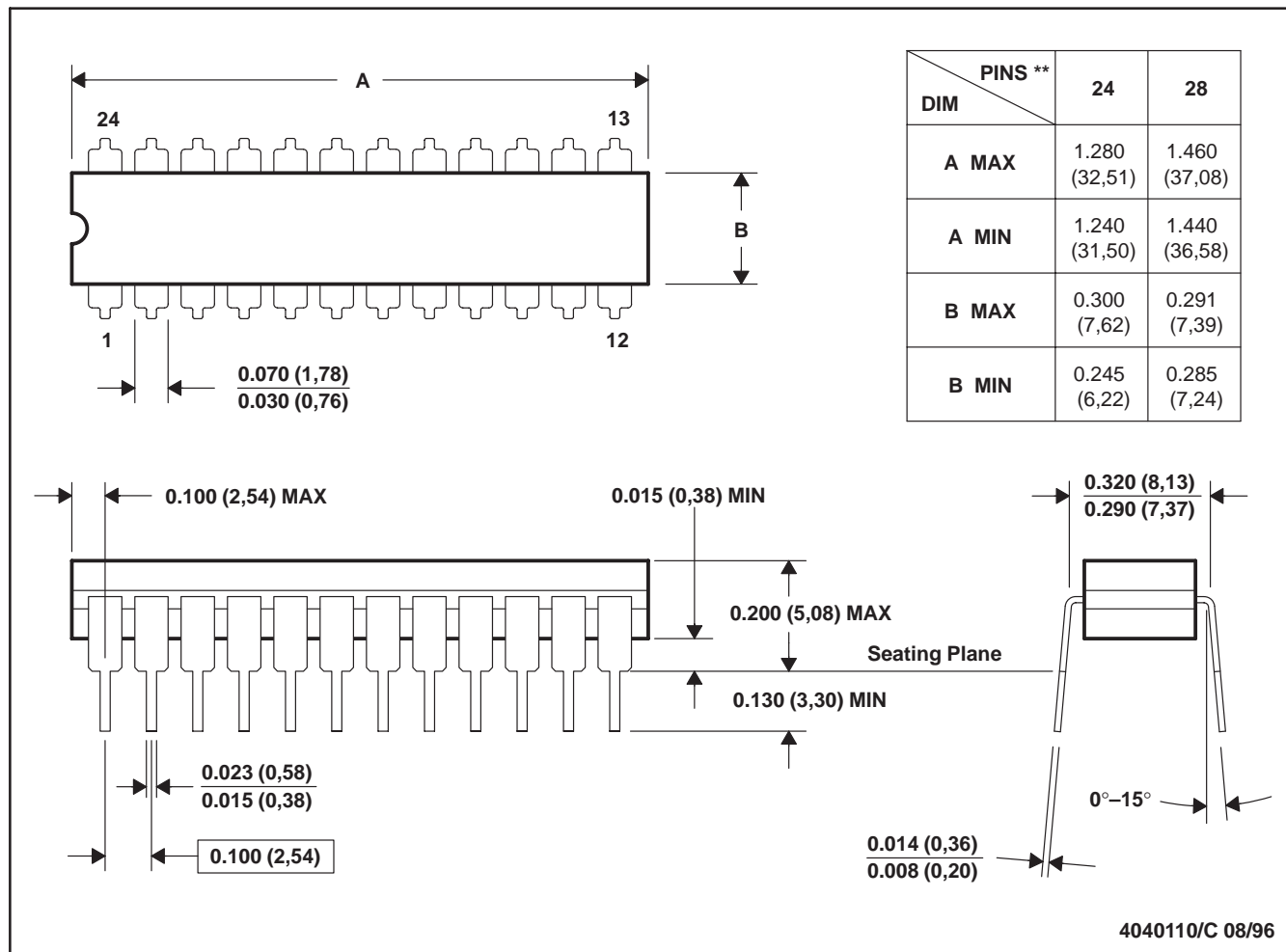


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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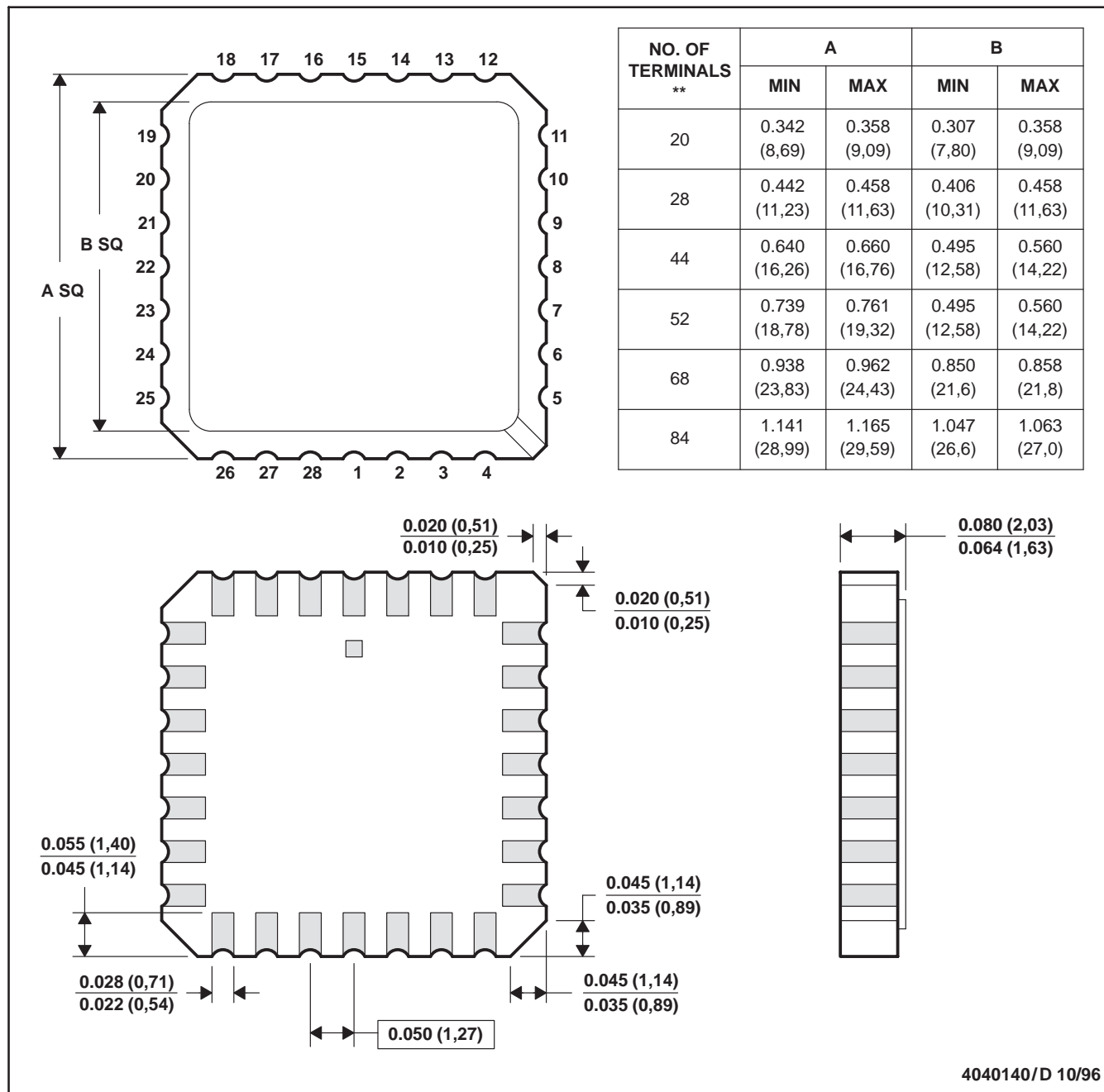
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



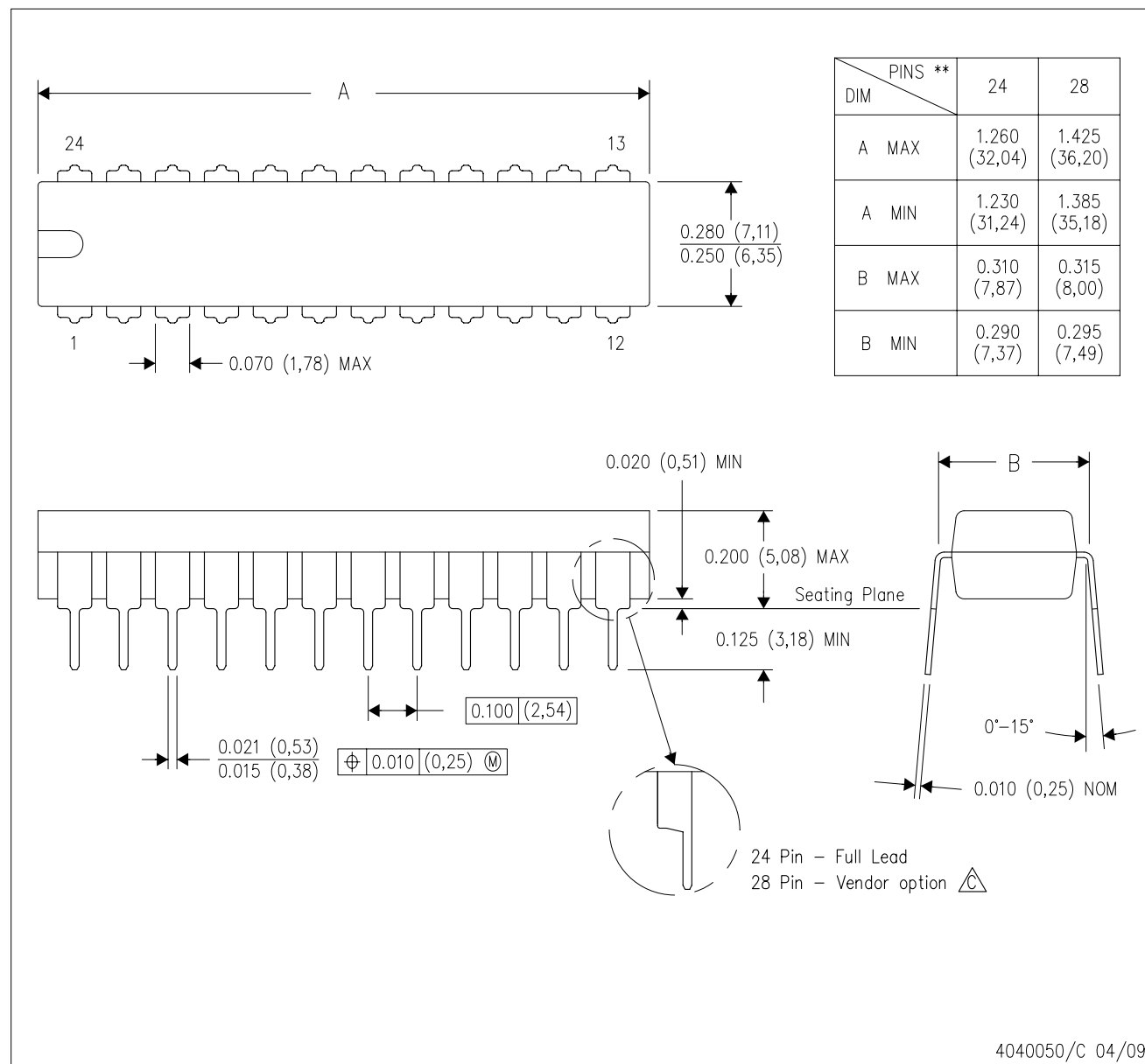
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

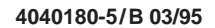
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

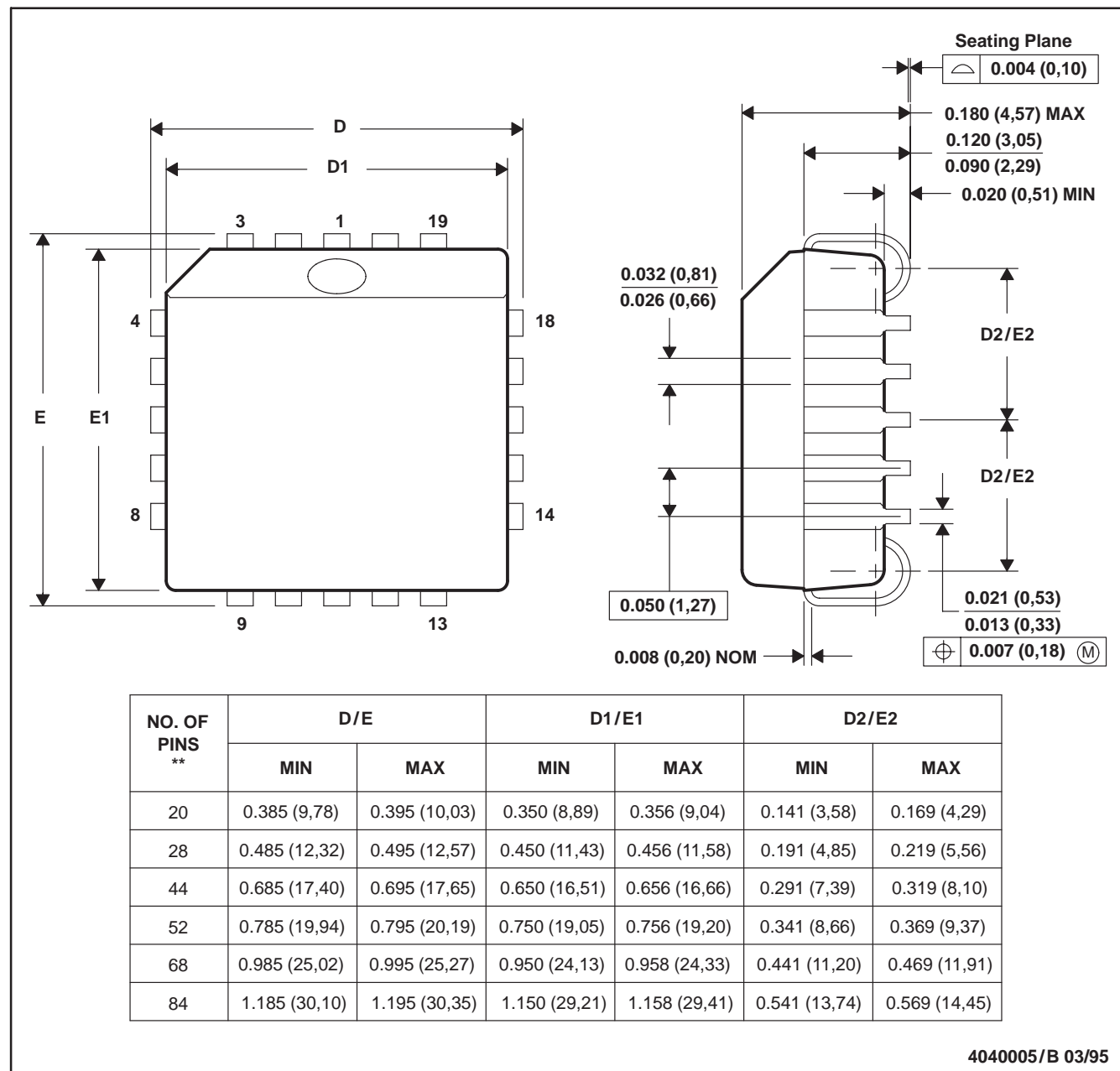


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

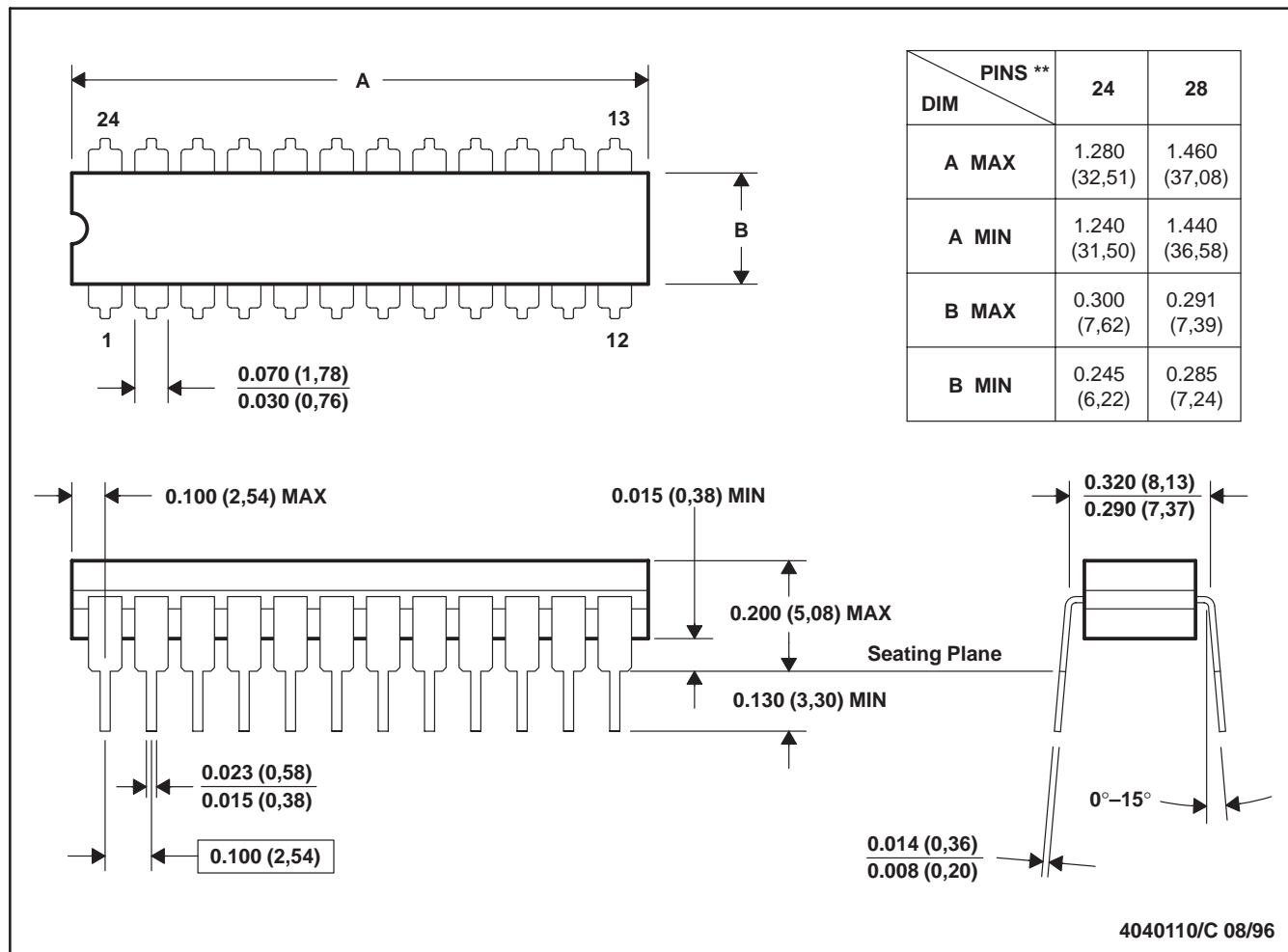


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
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PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



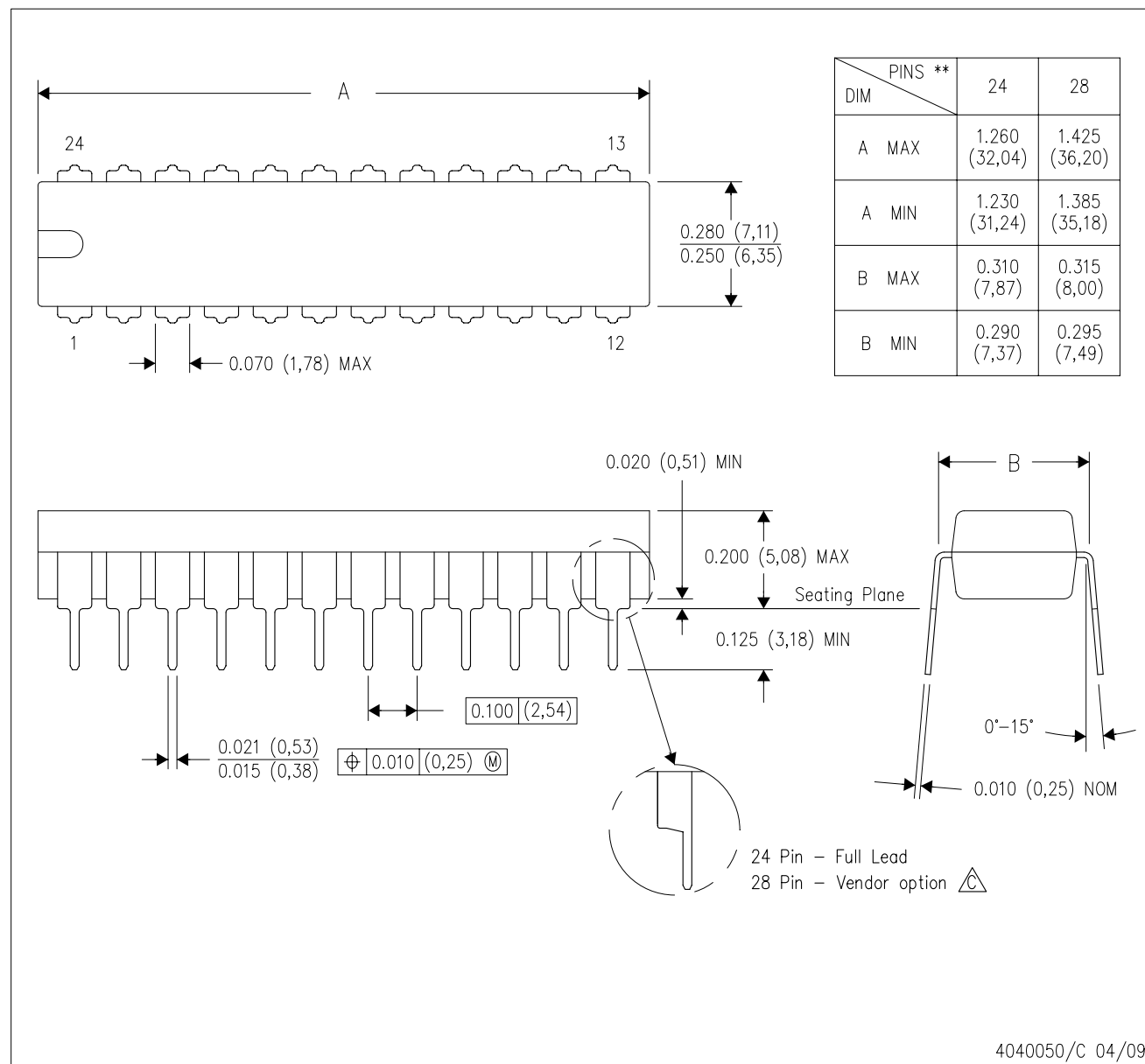
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

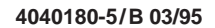
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

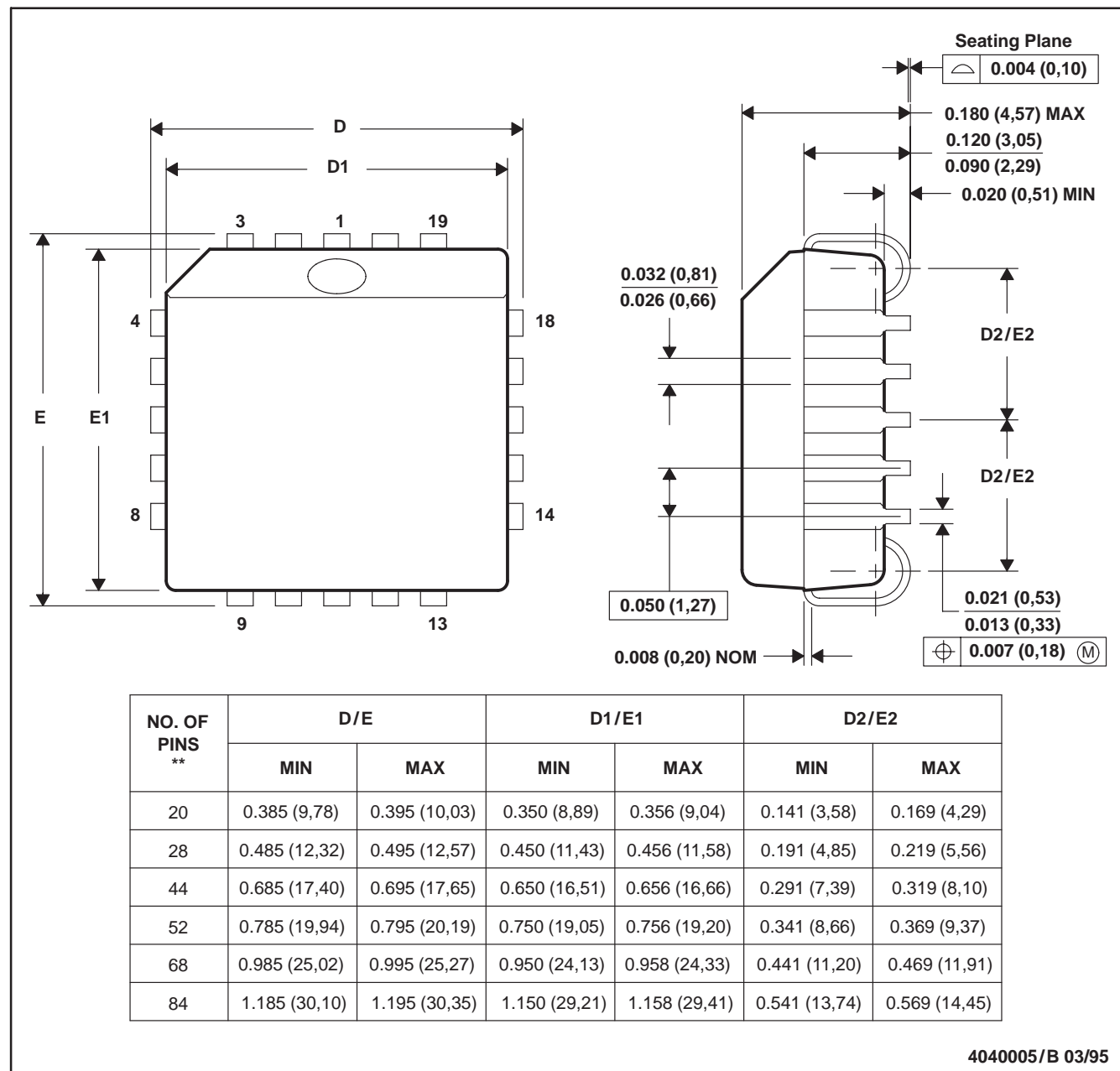


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

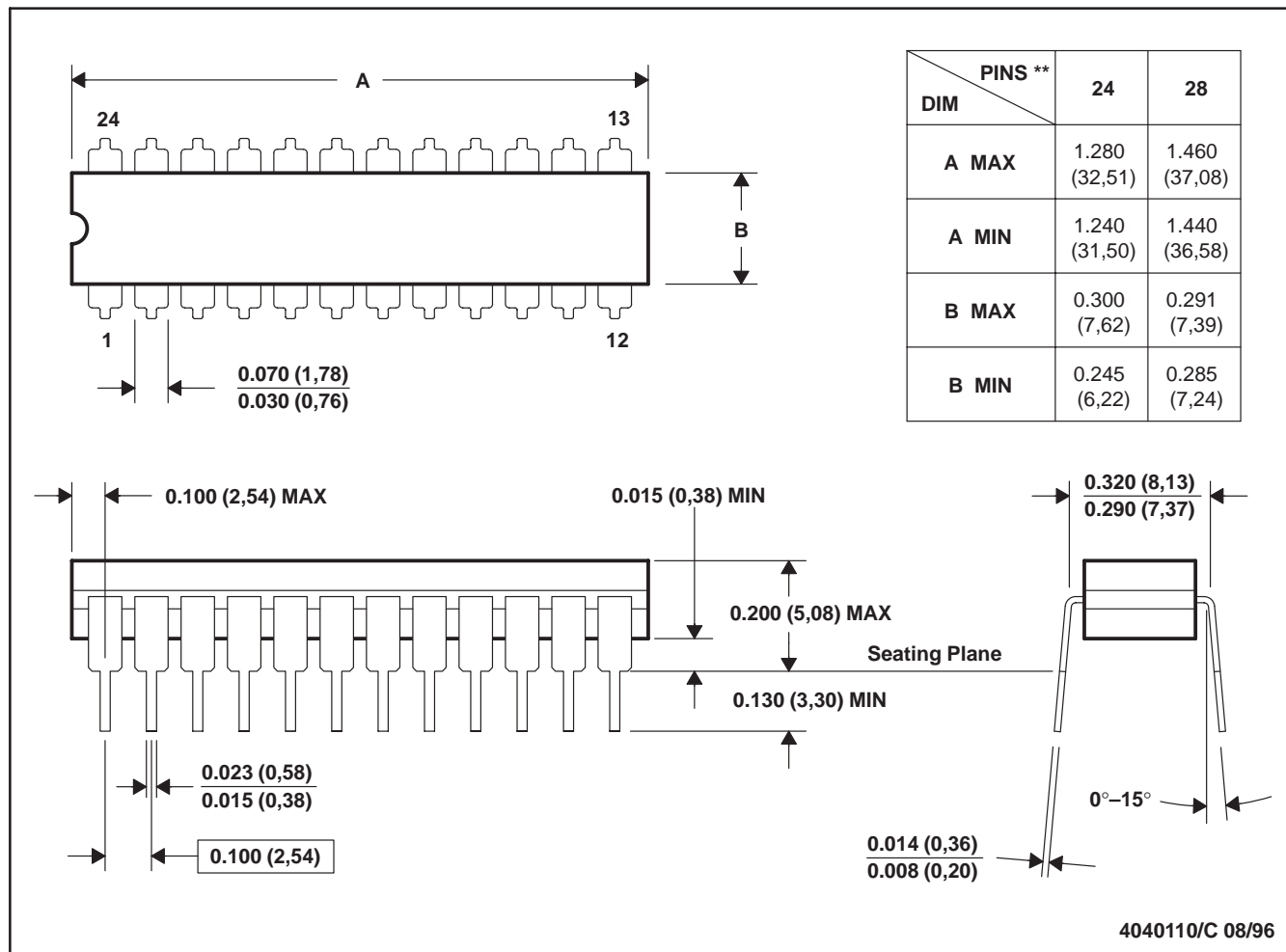


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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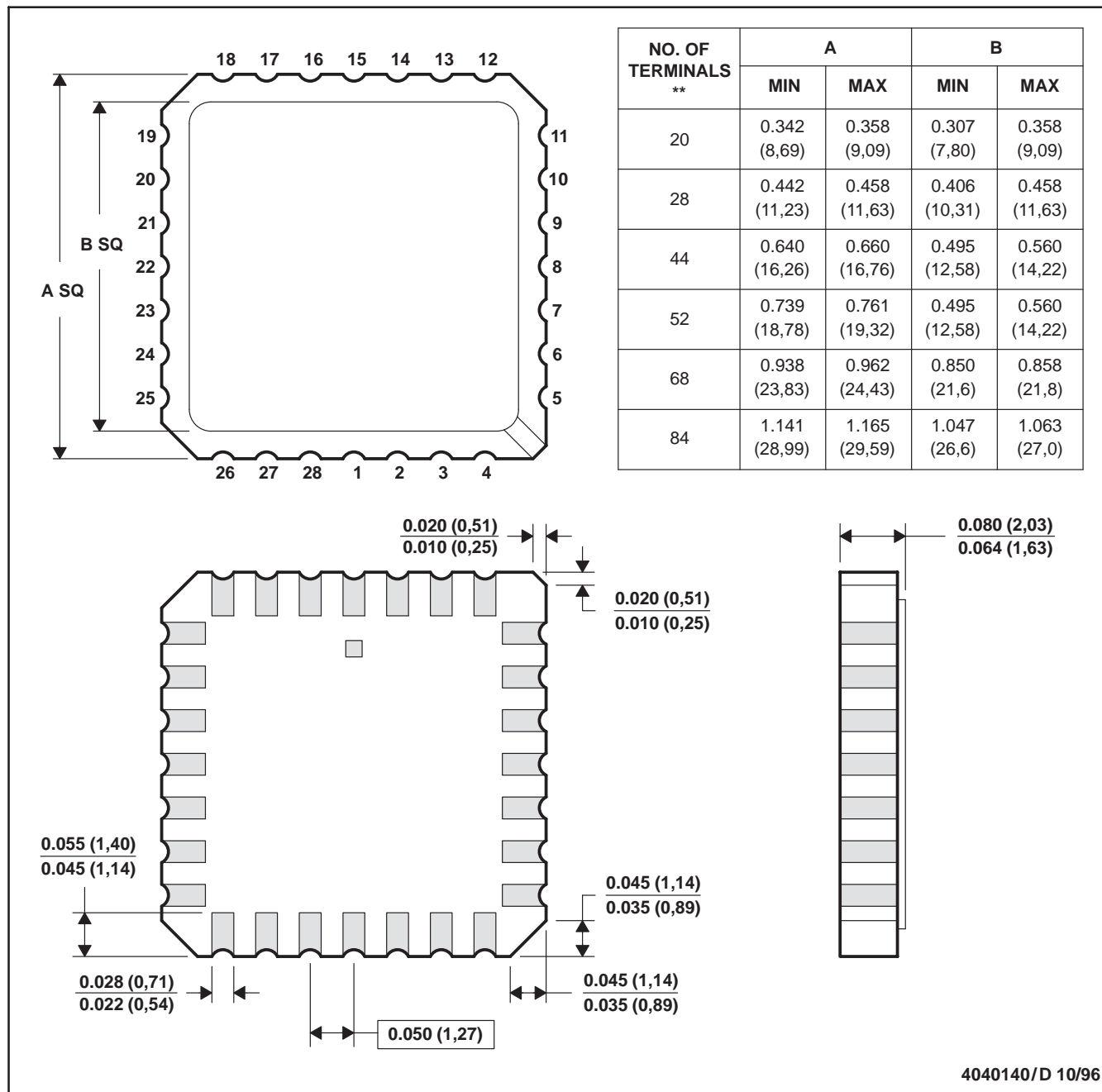
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



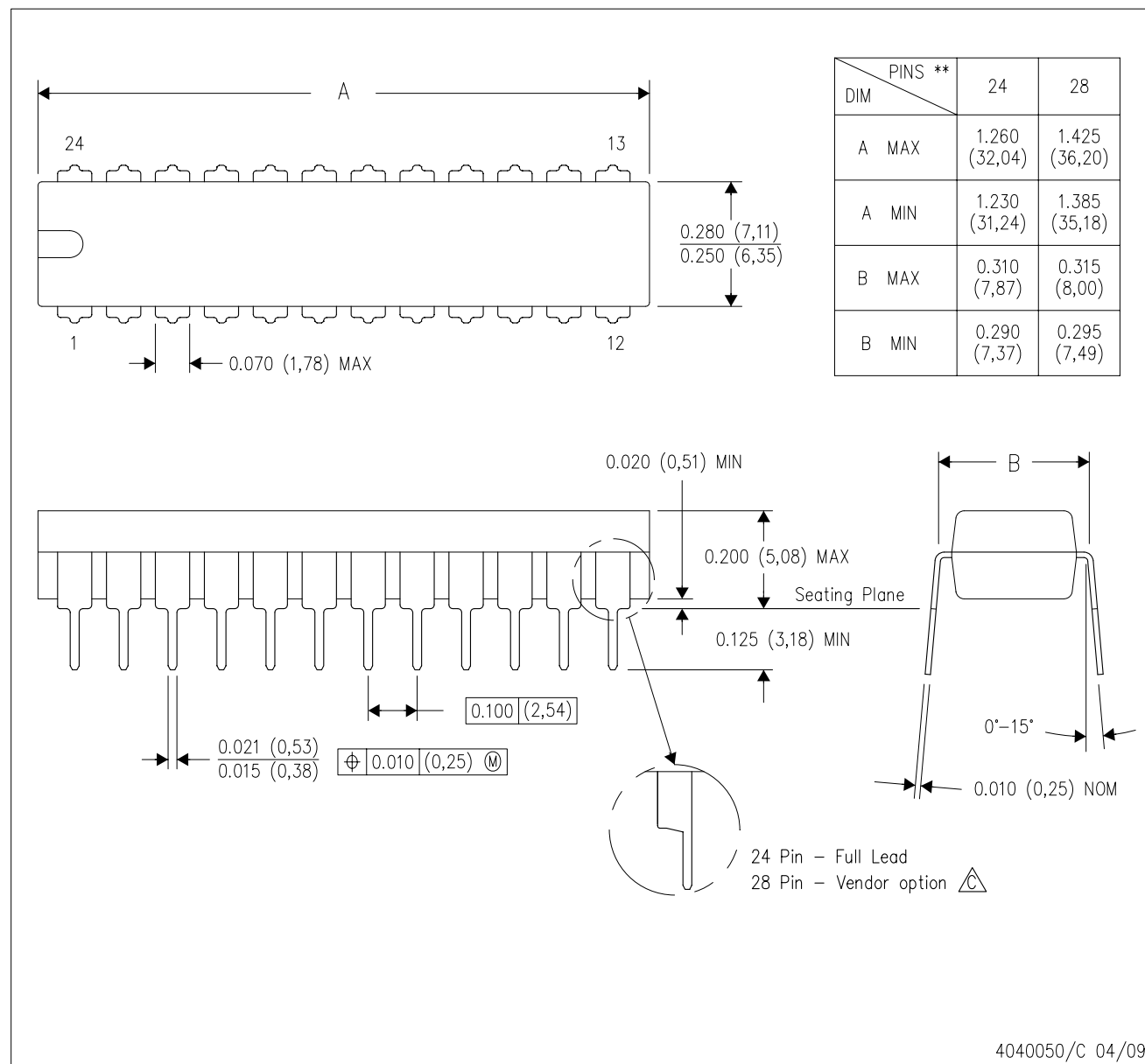
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

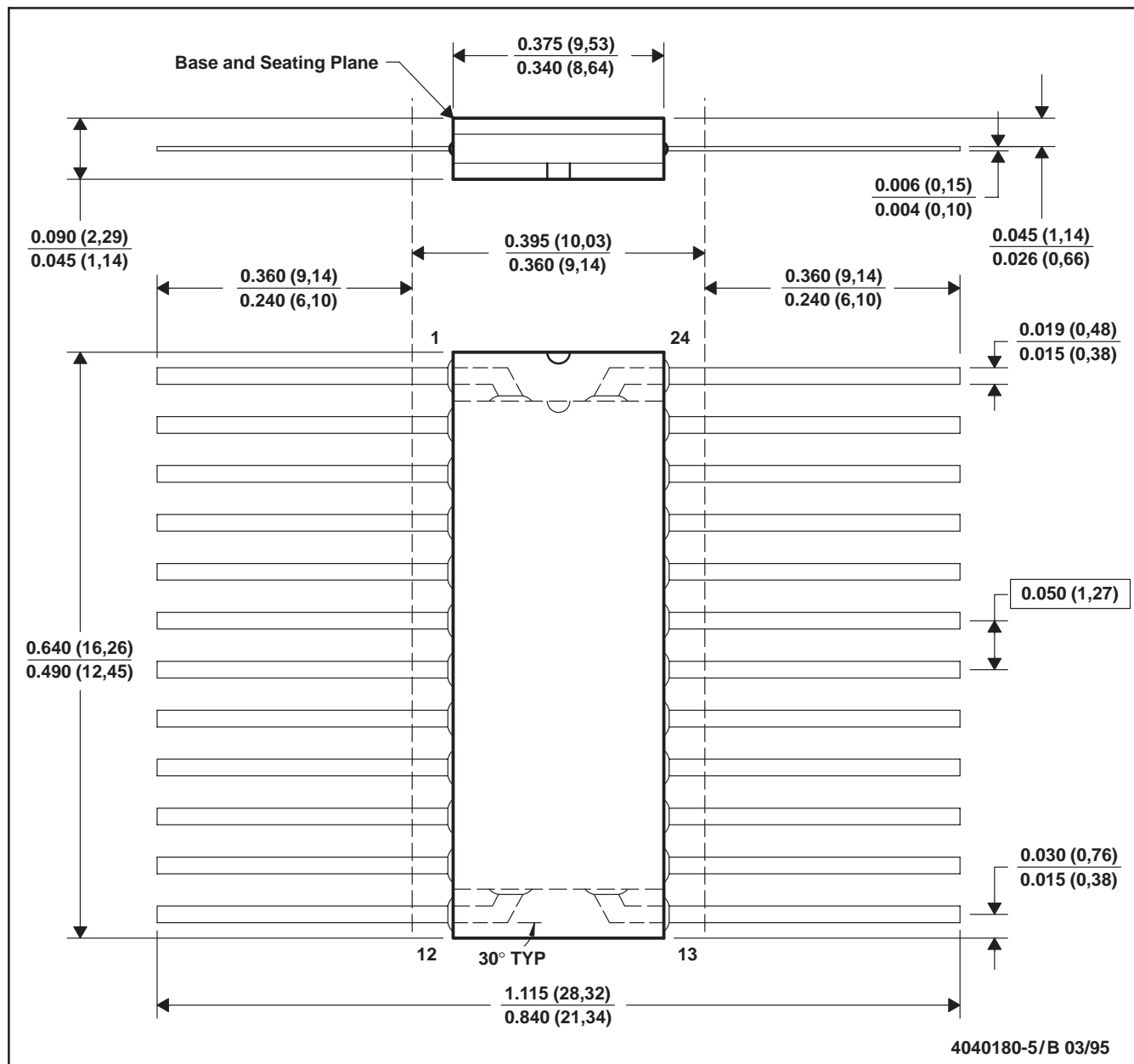
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

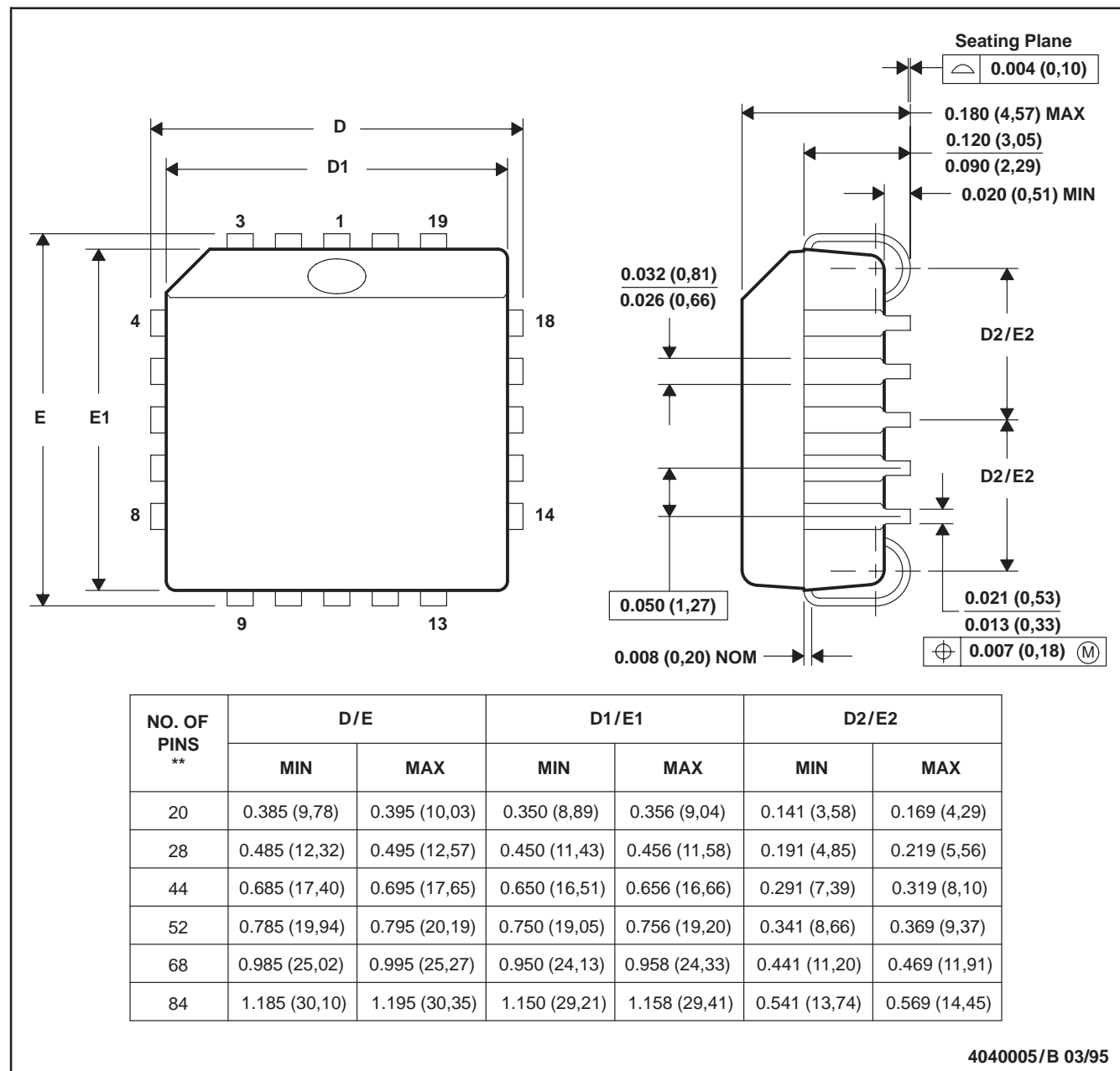


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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

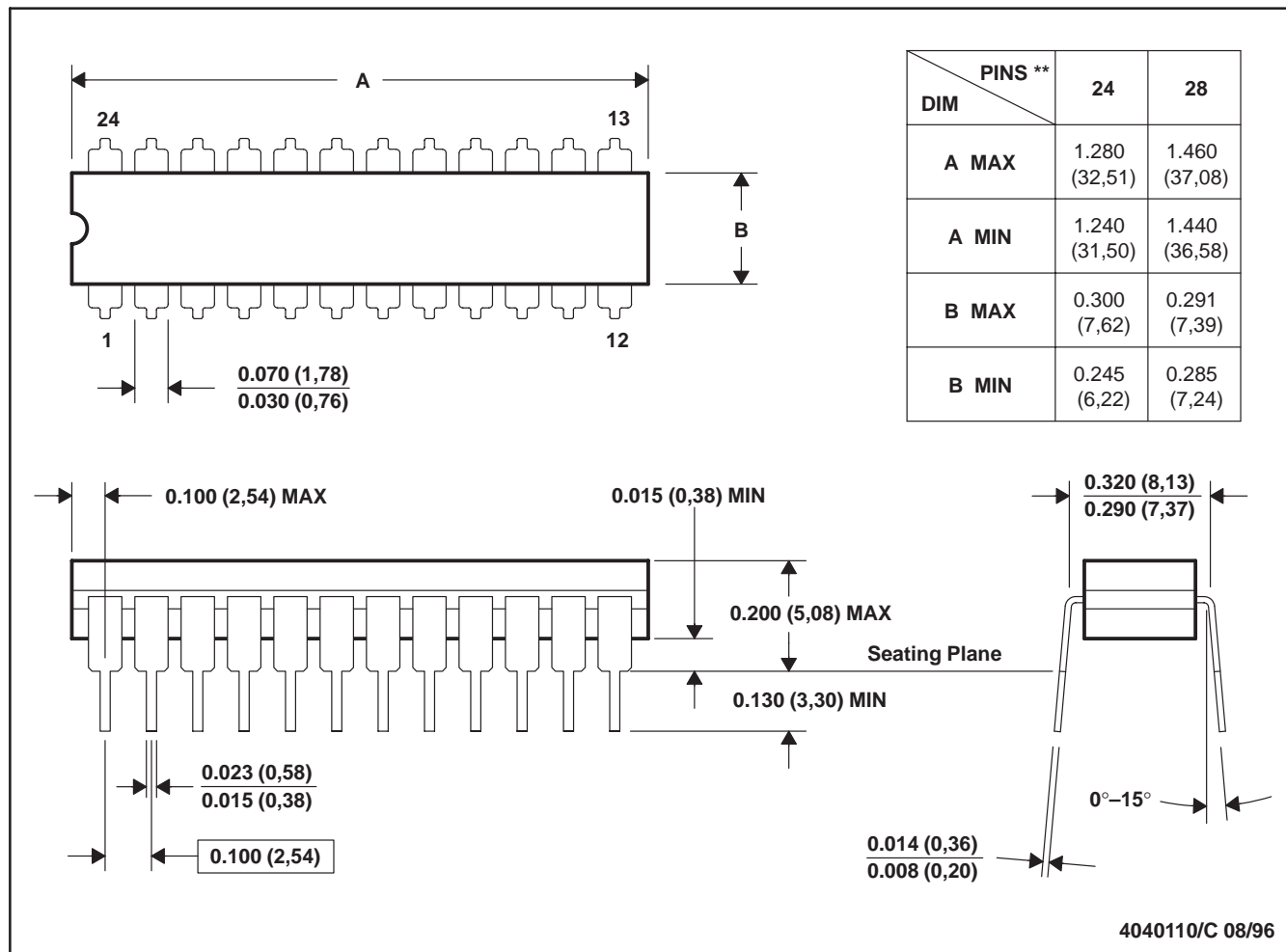


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

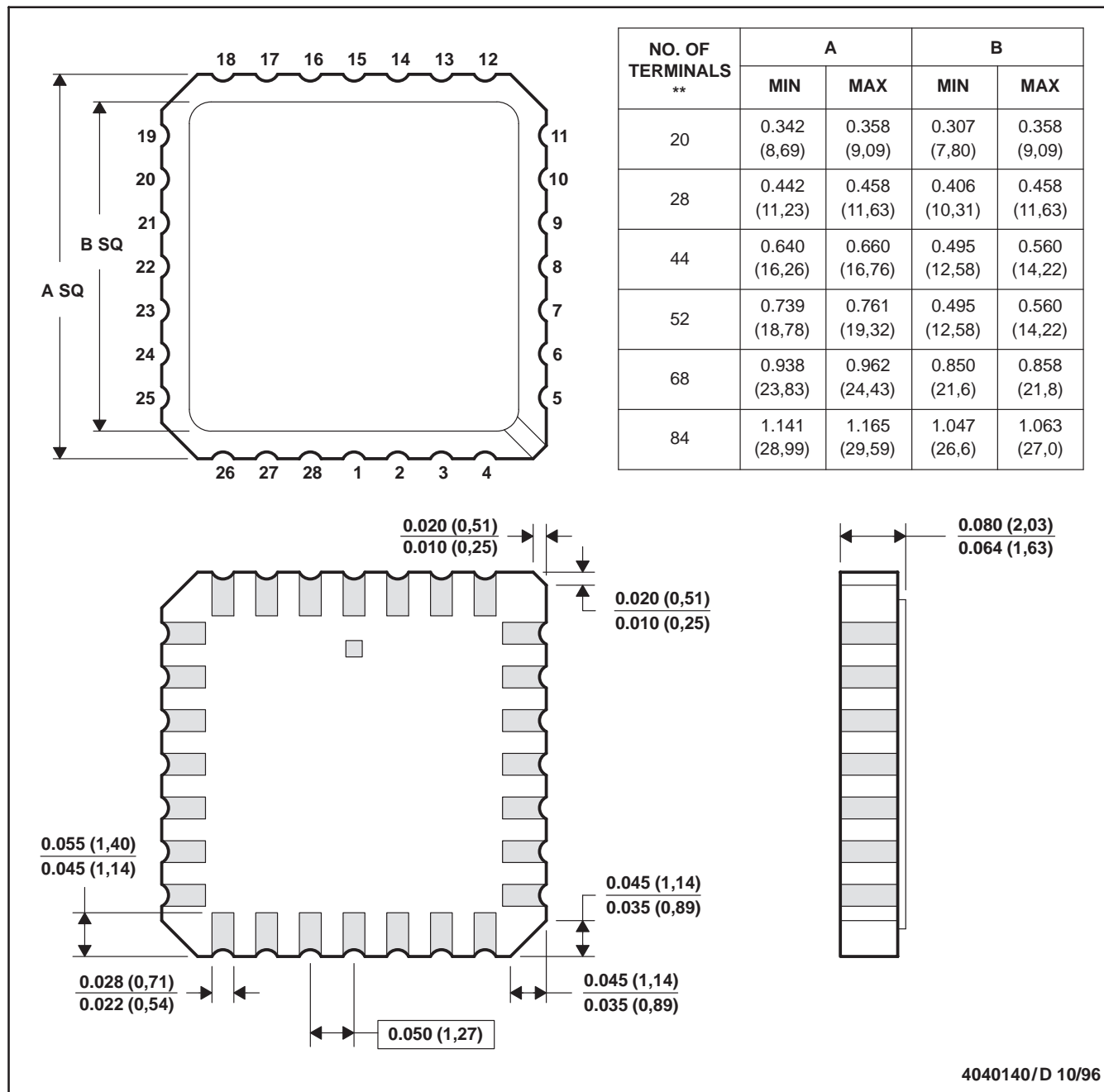
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



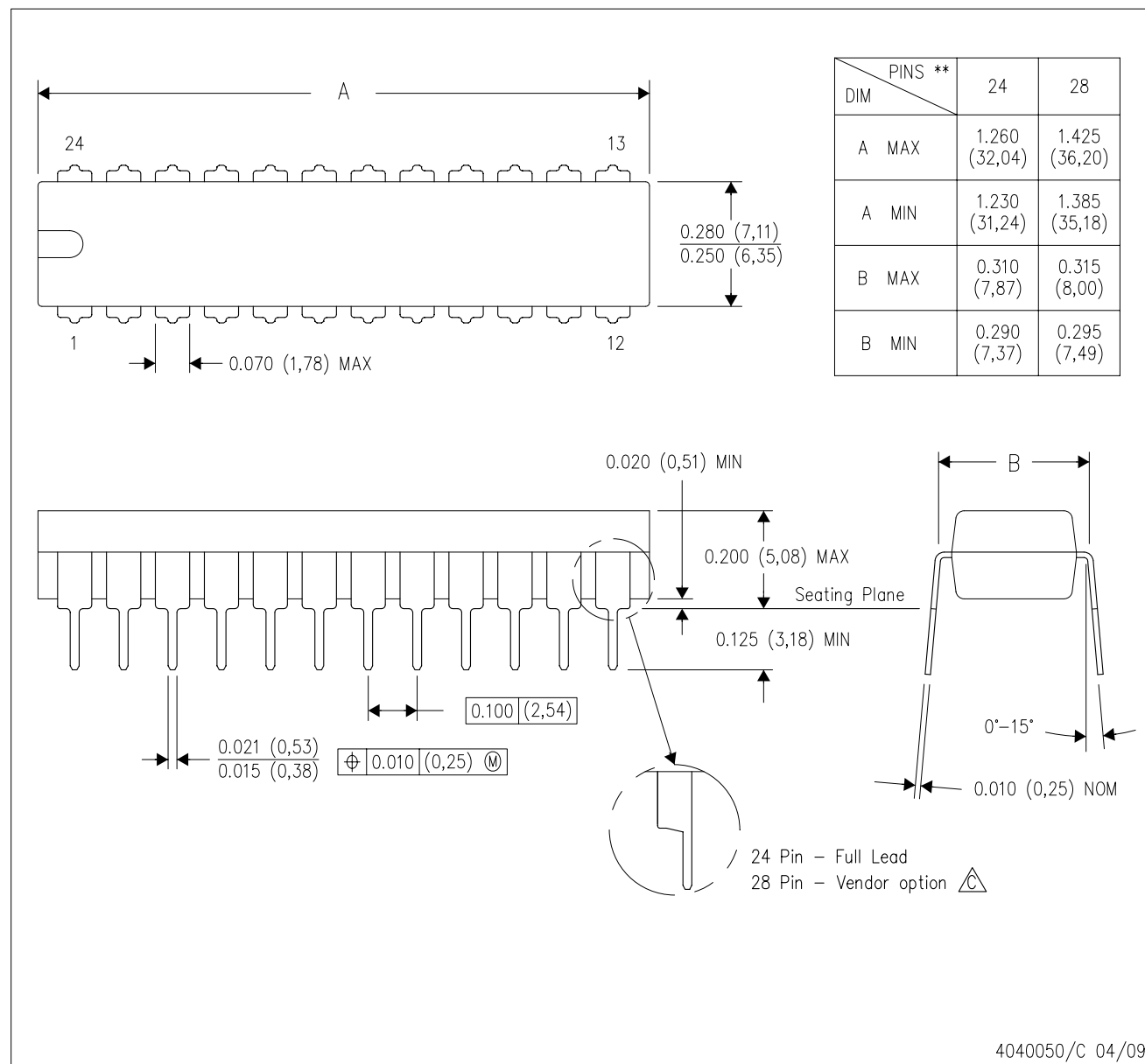
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

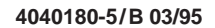
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

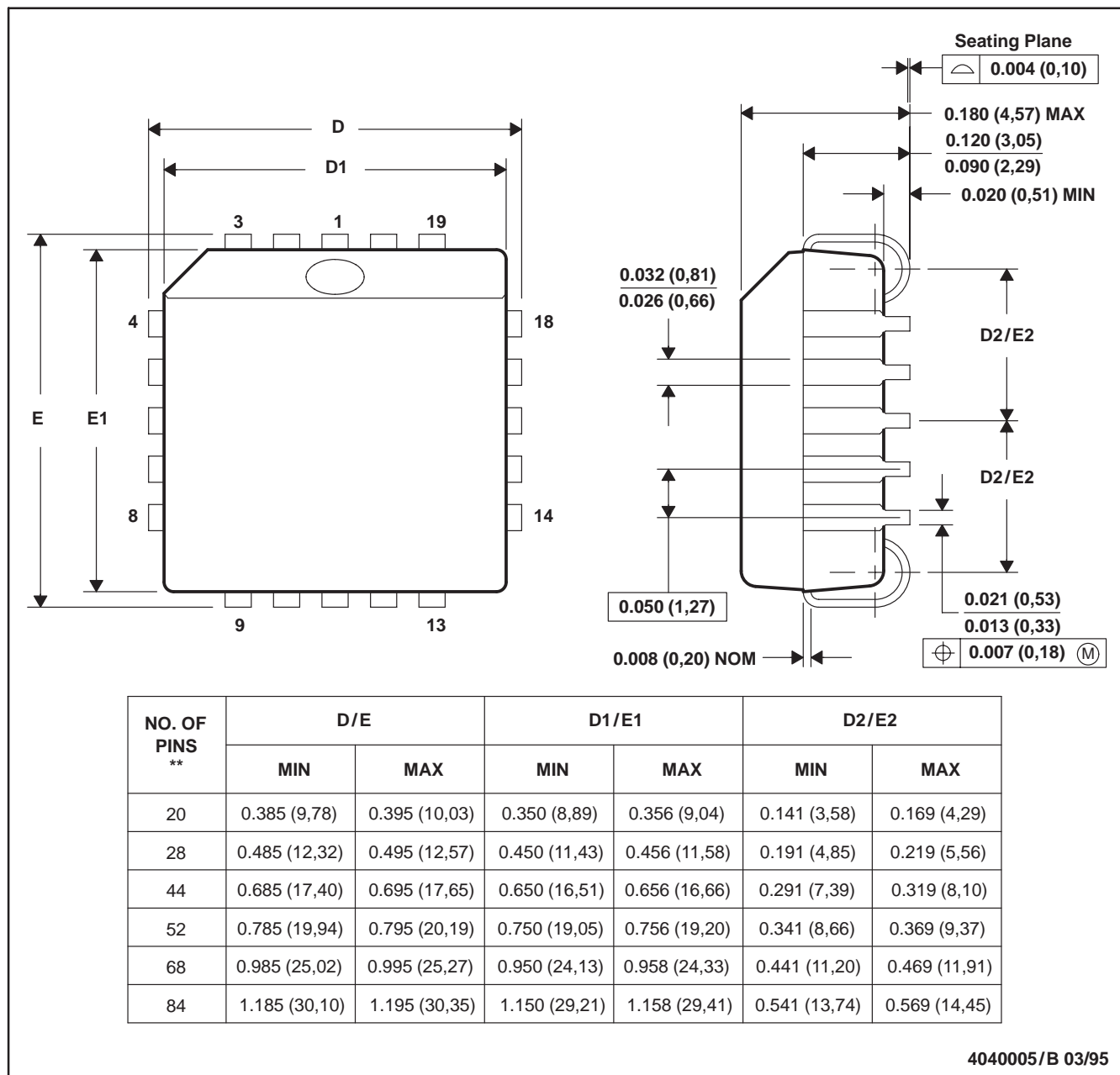


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- POST OFFICE BOX 655303 • DALLAS, TEXAS 75265

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

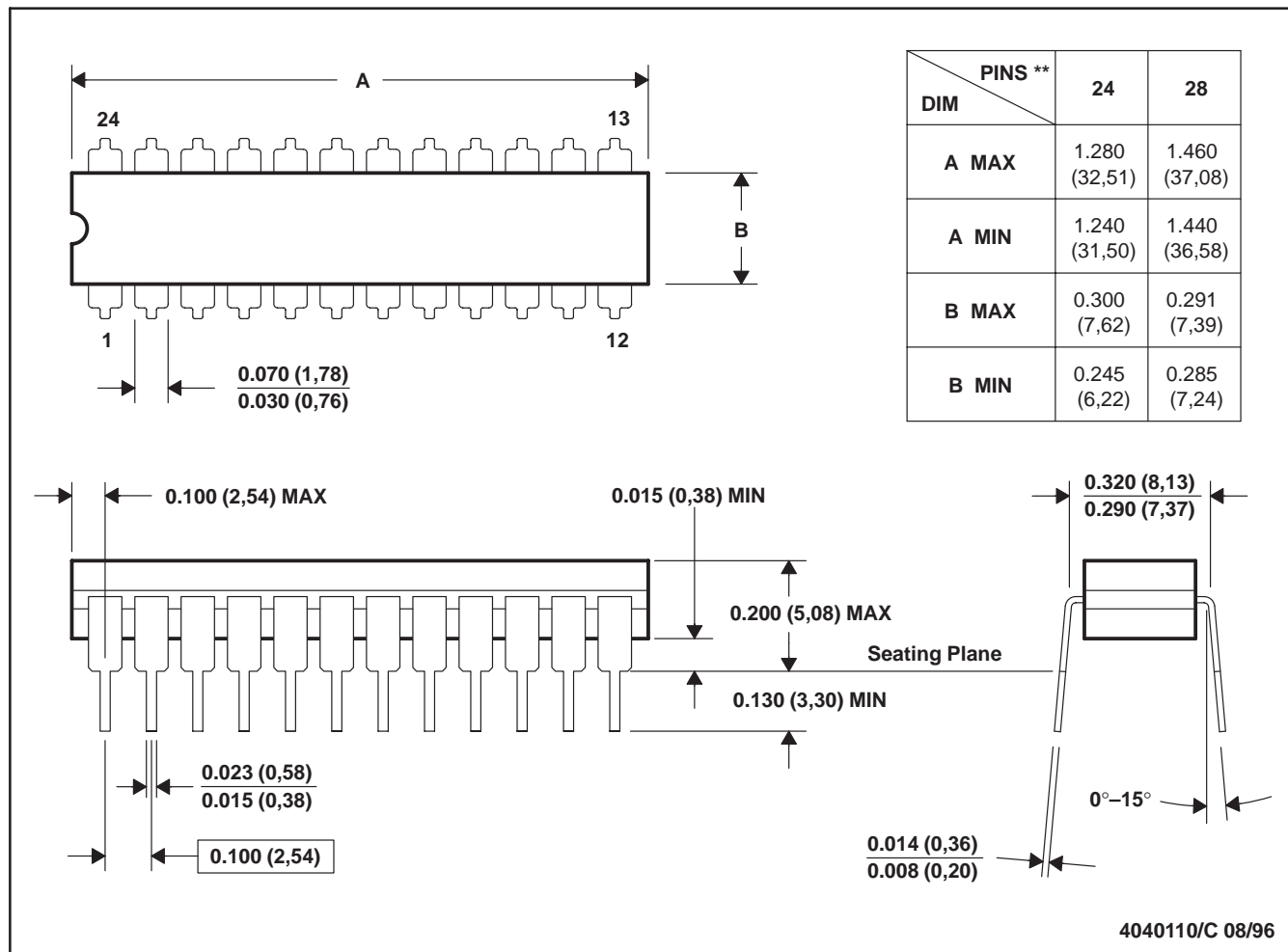


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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TBD: The Pb-Free/Green conversion plan has not been defined.

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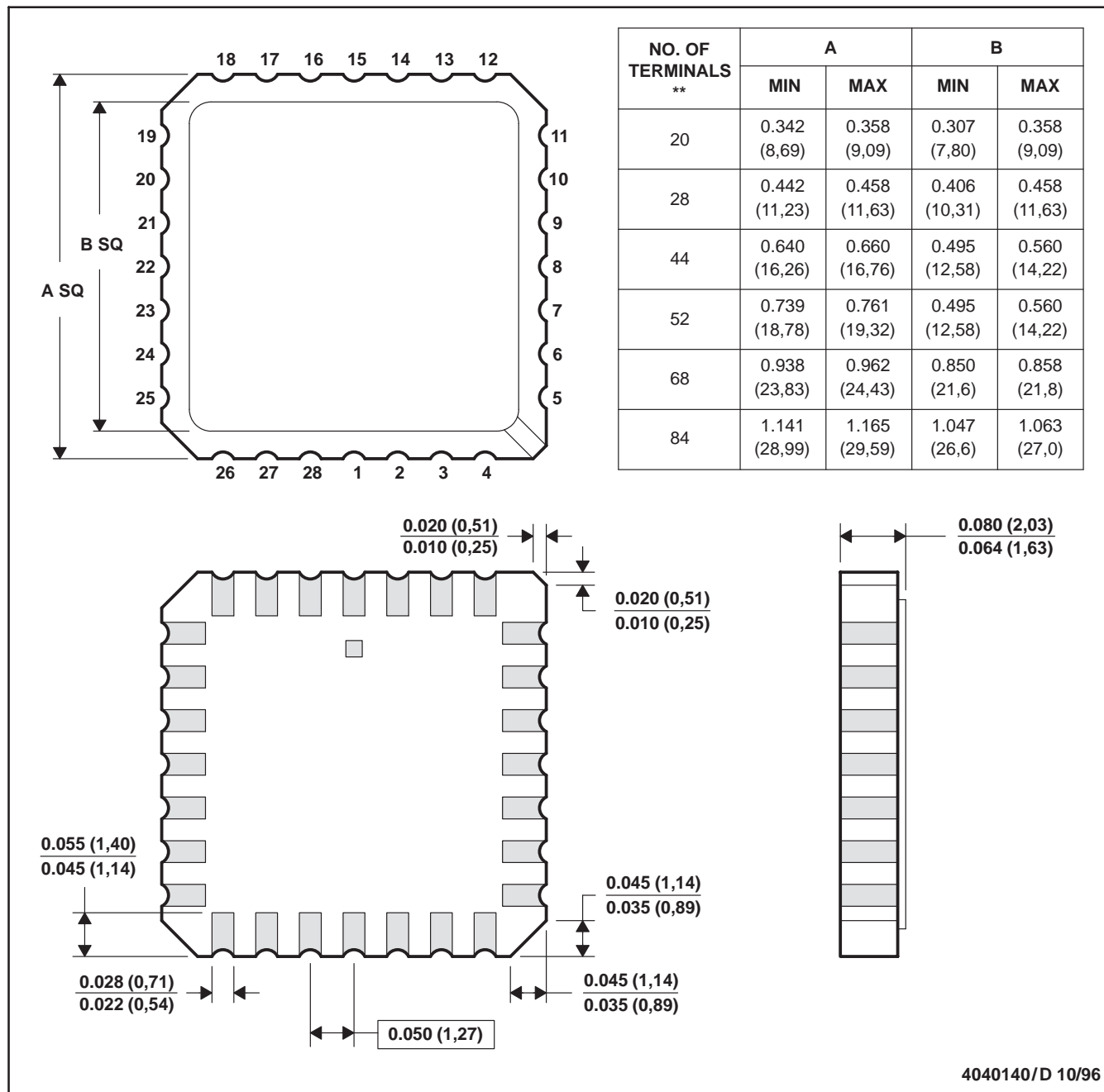
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



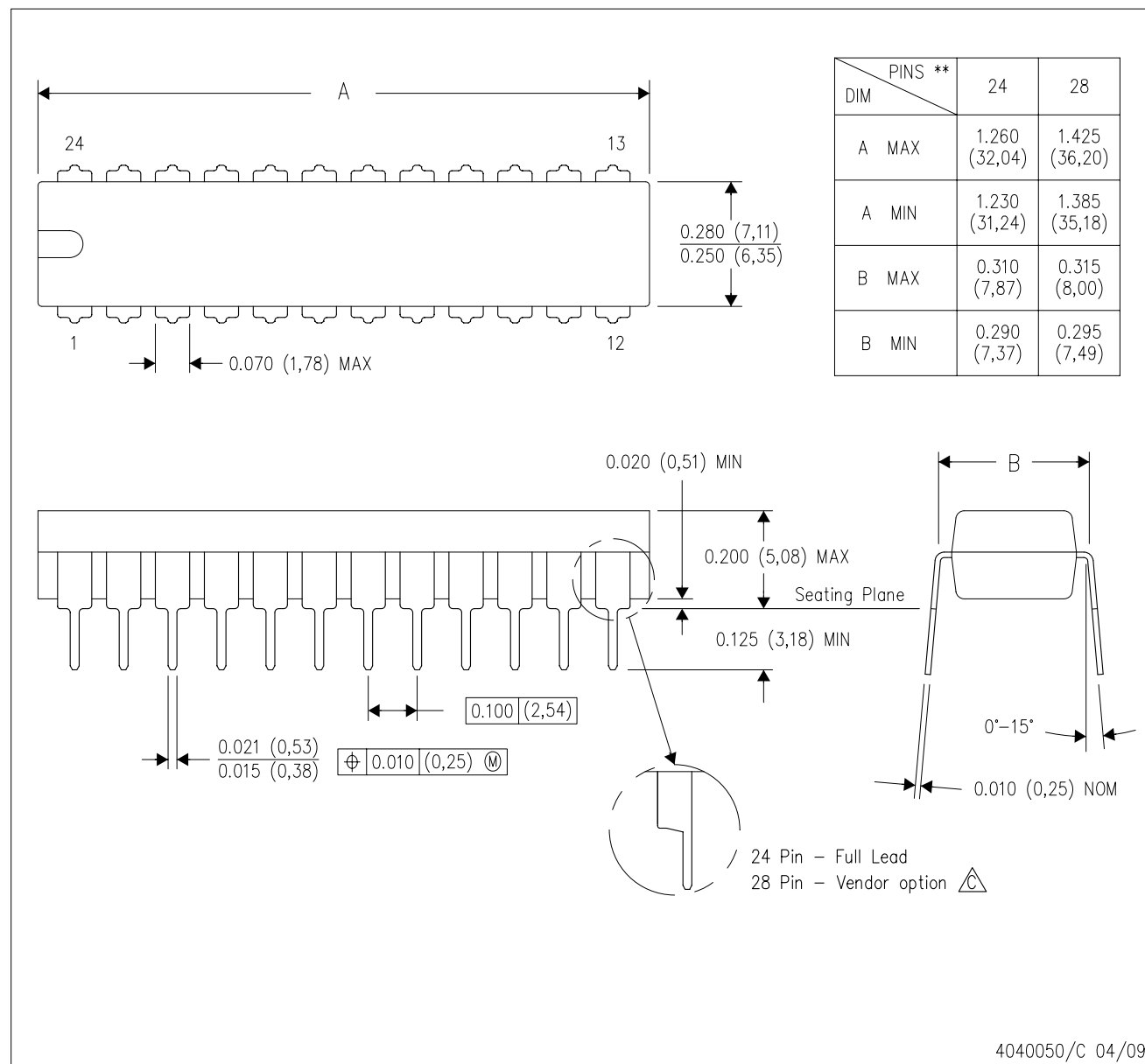
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 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

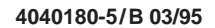
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - B. This drawing is subject to change without notice.
 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

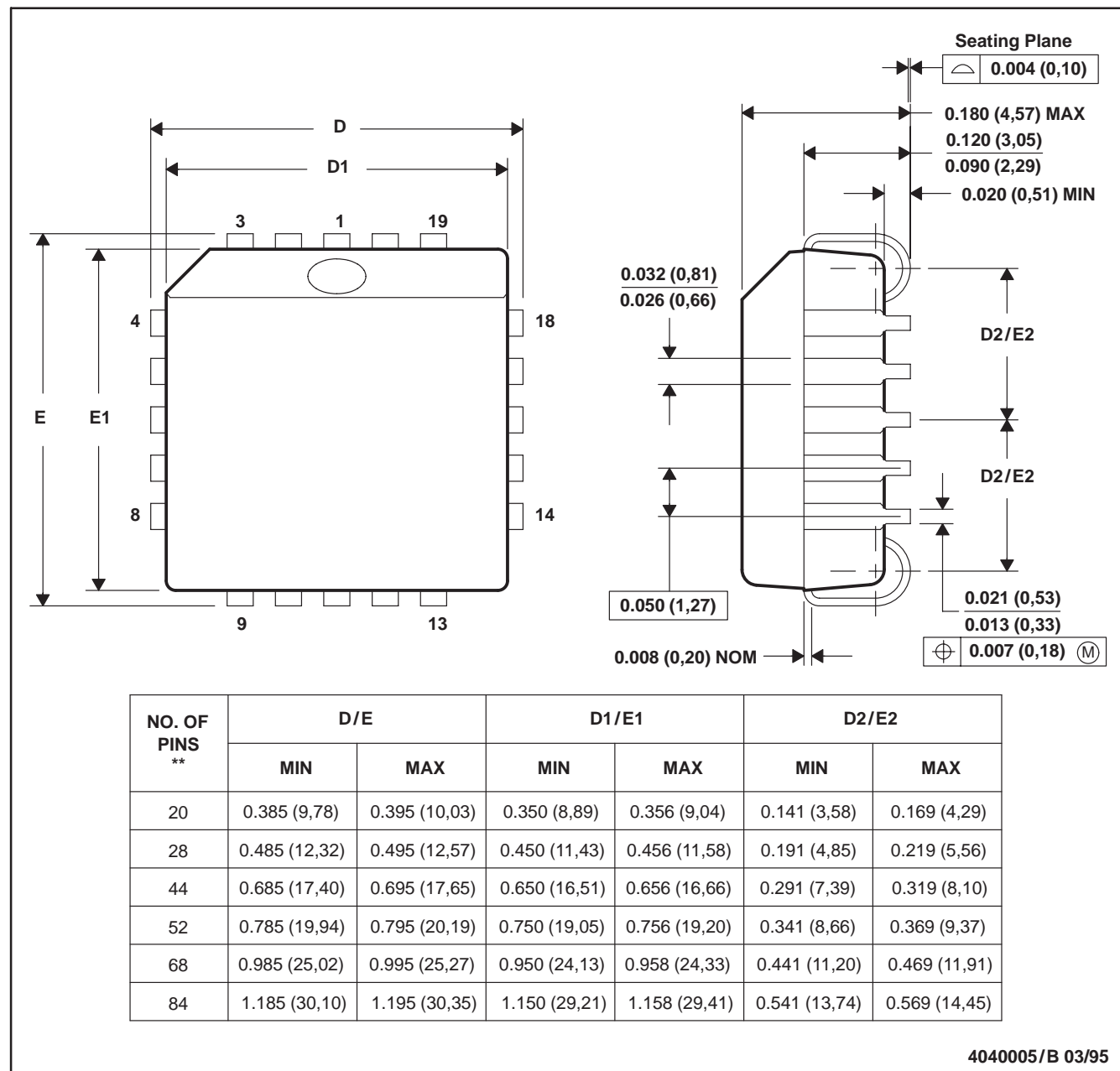


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

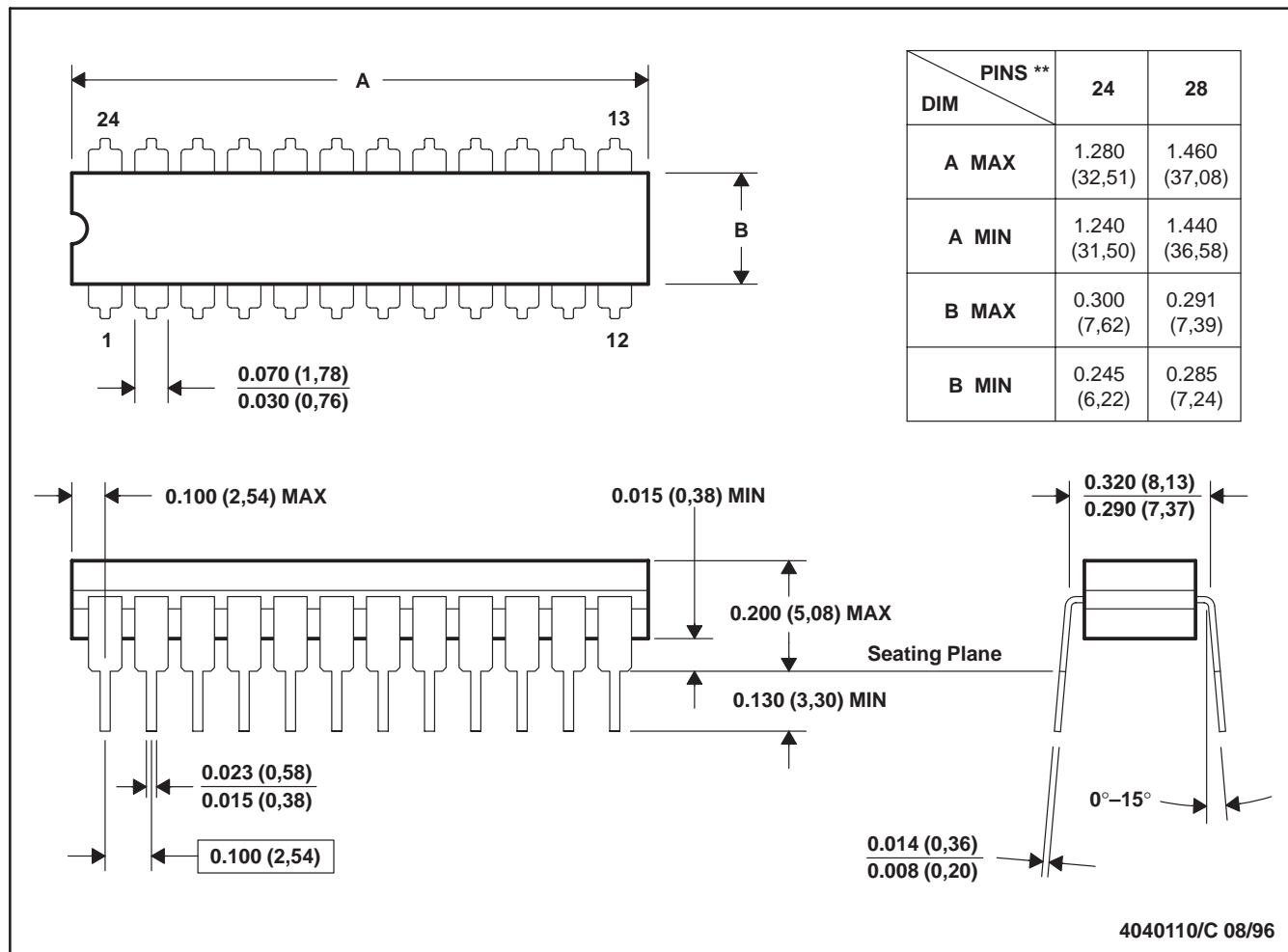


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



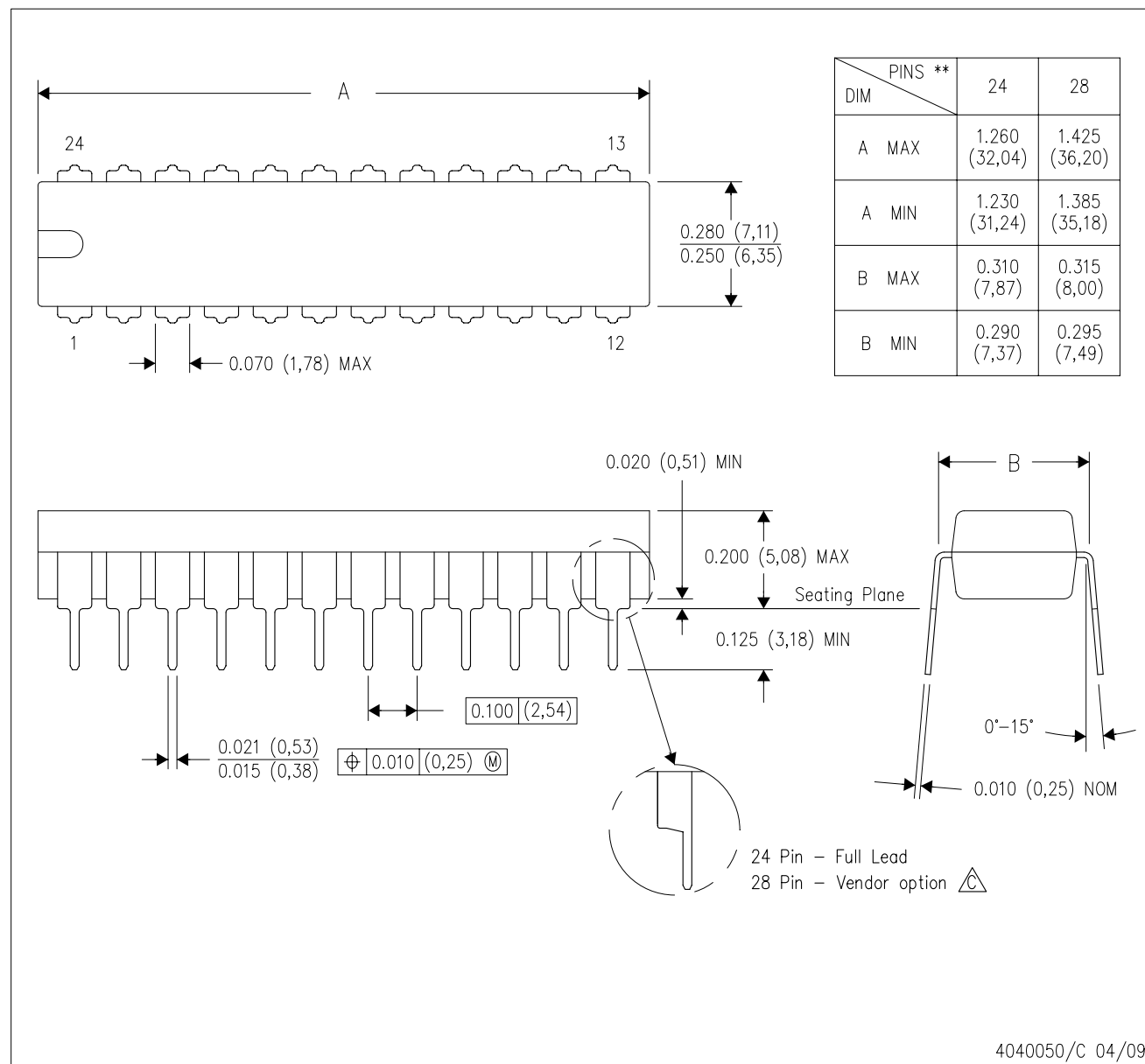
- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

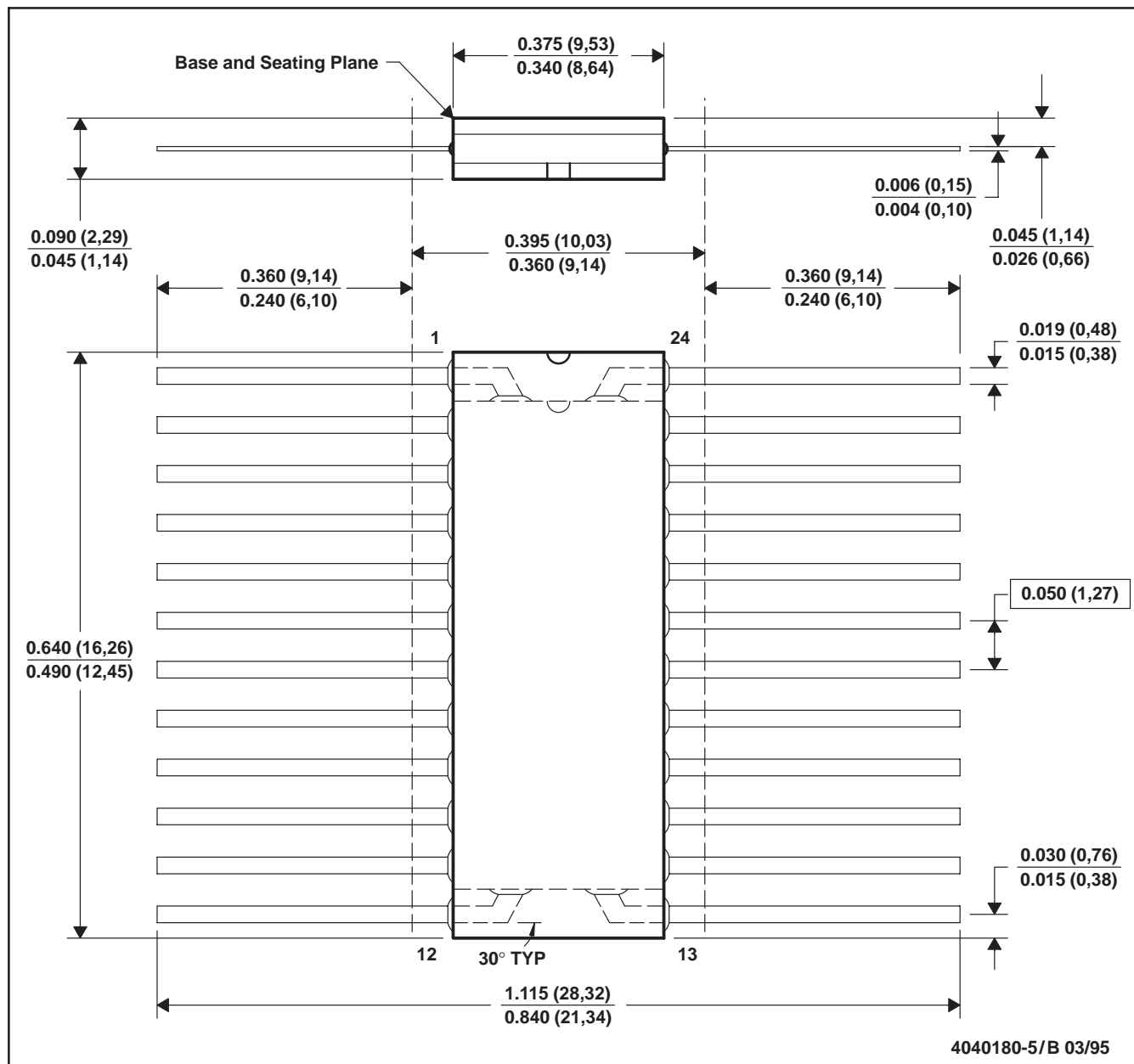
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

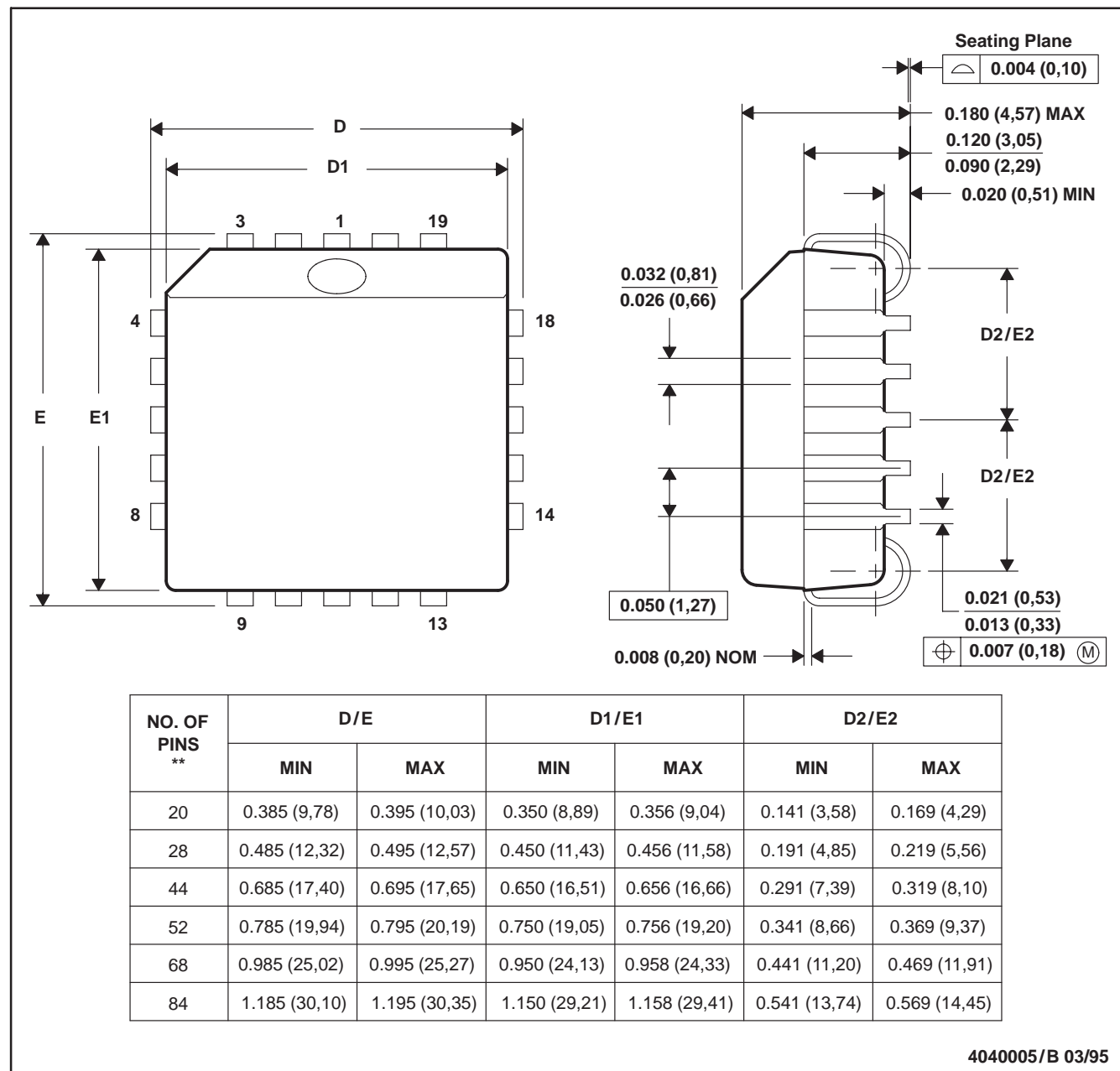


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

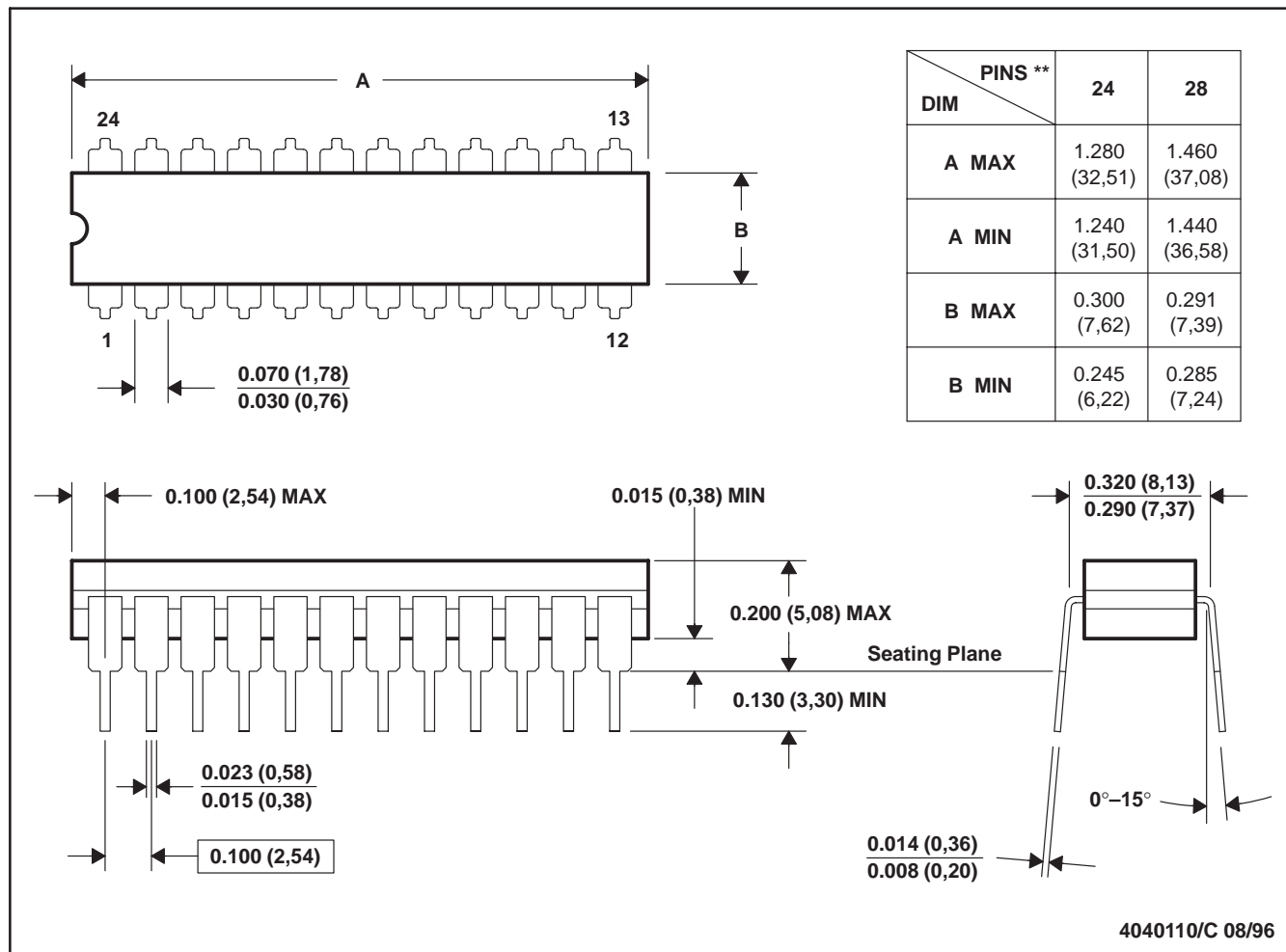


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES:
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 - This package can be hermetically sealed with a ceramic lid using glass frit.
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 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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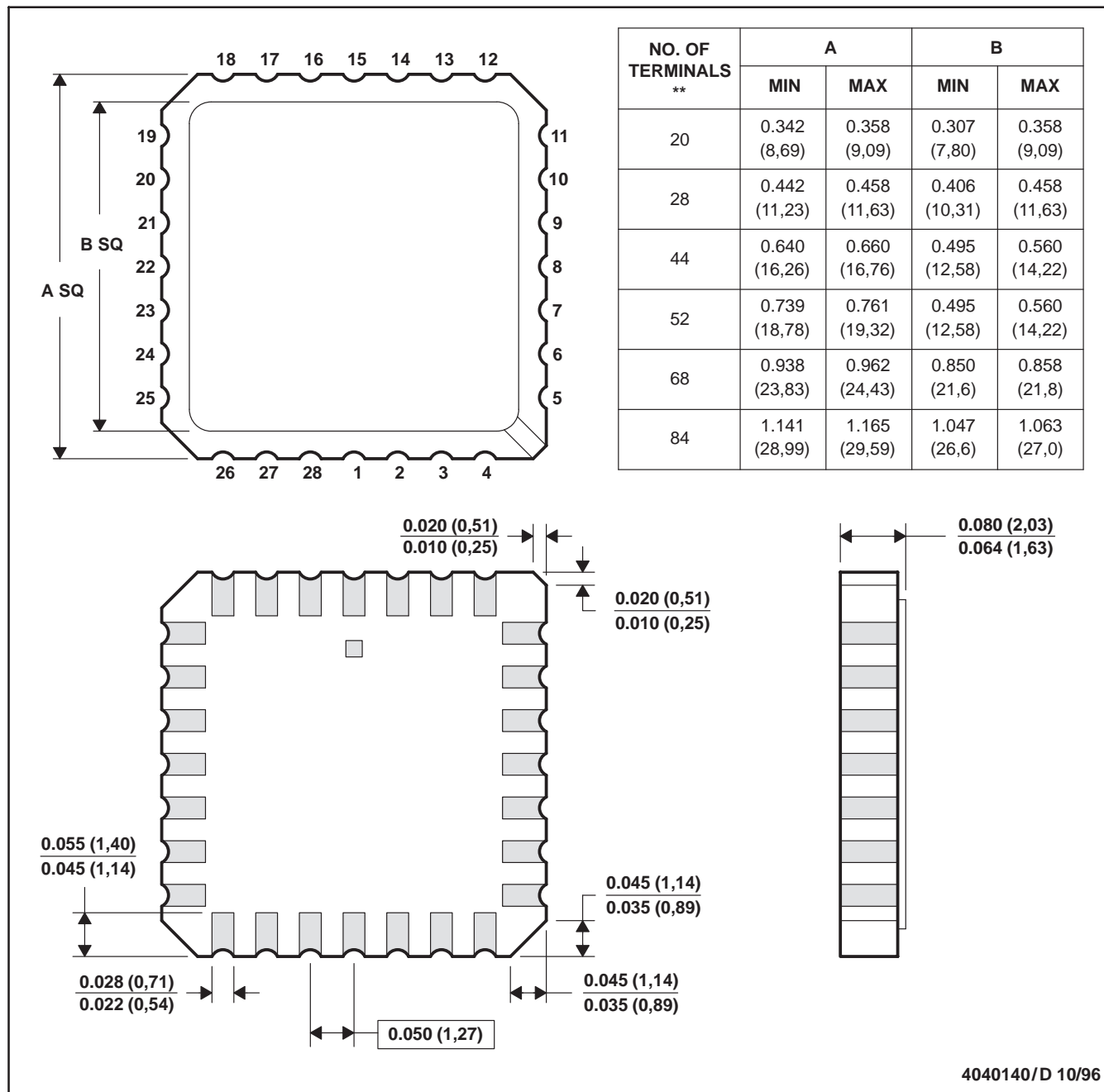
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



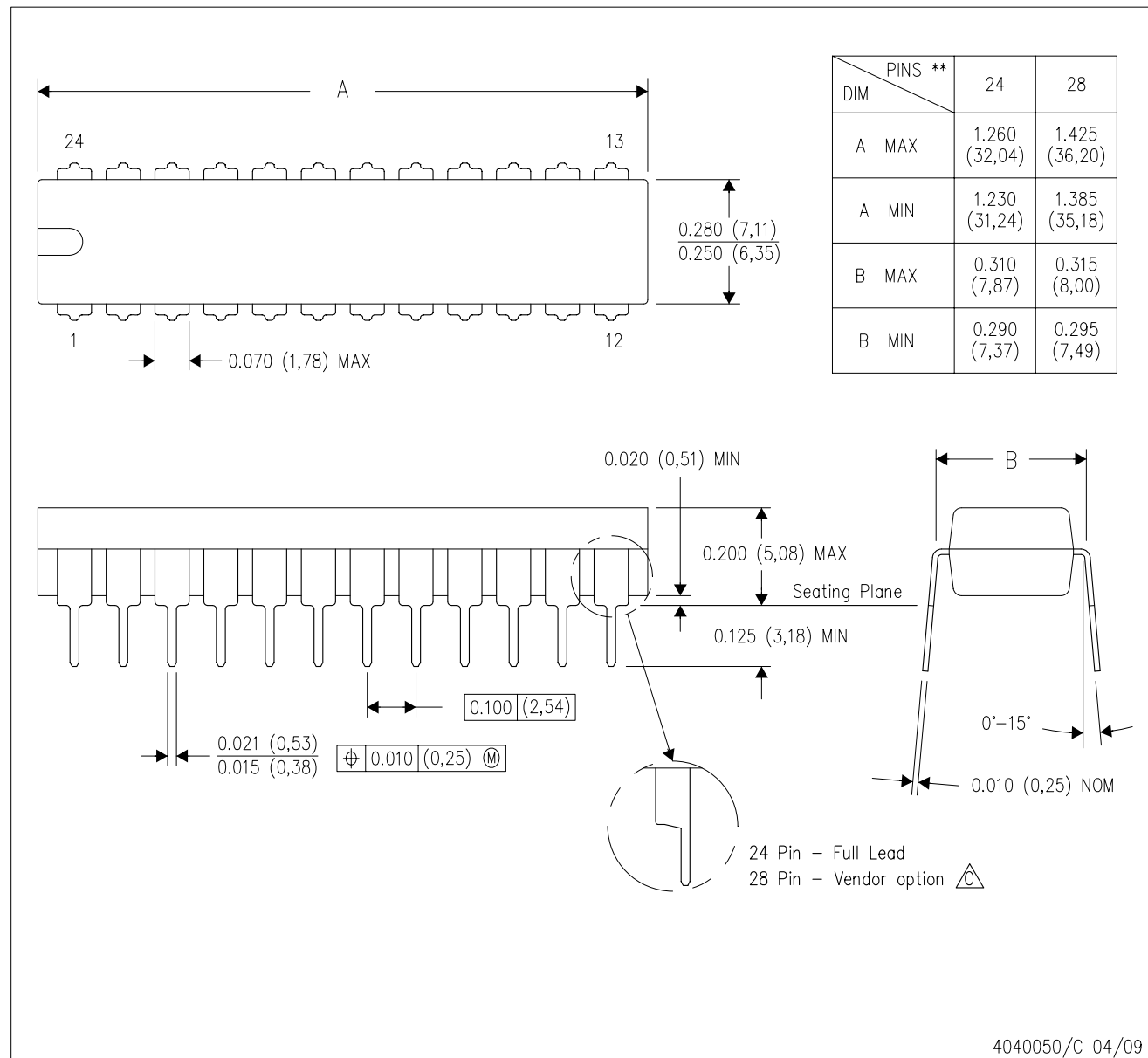
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 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

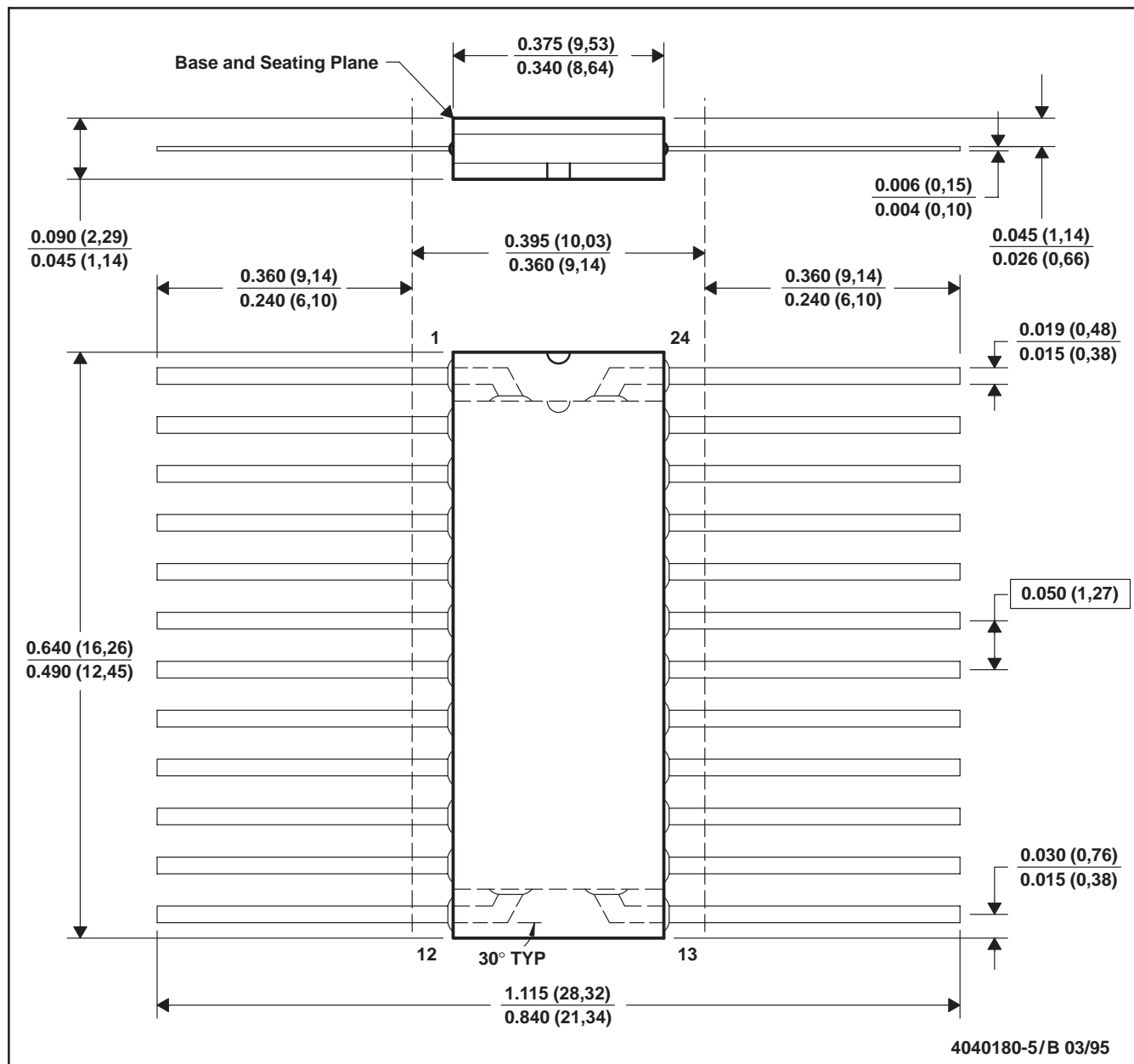
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

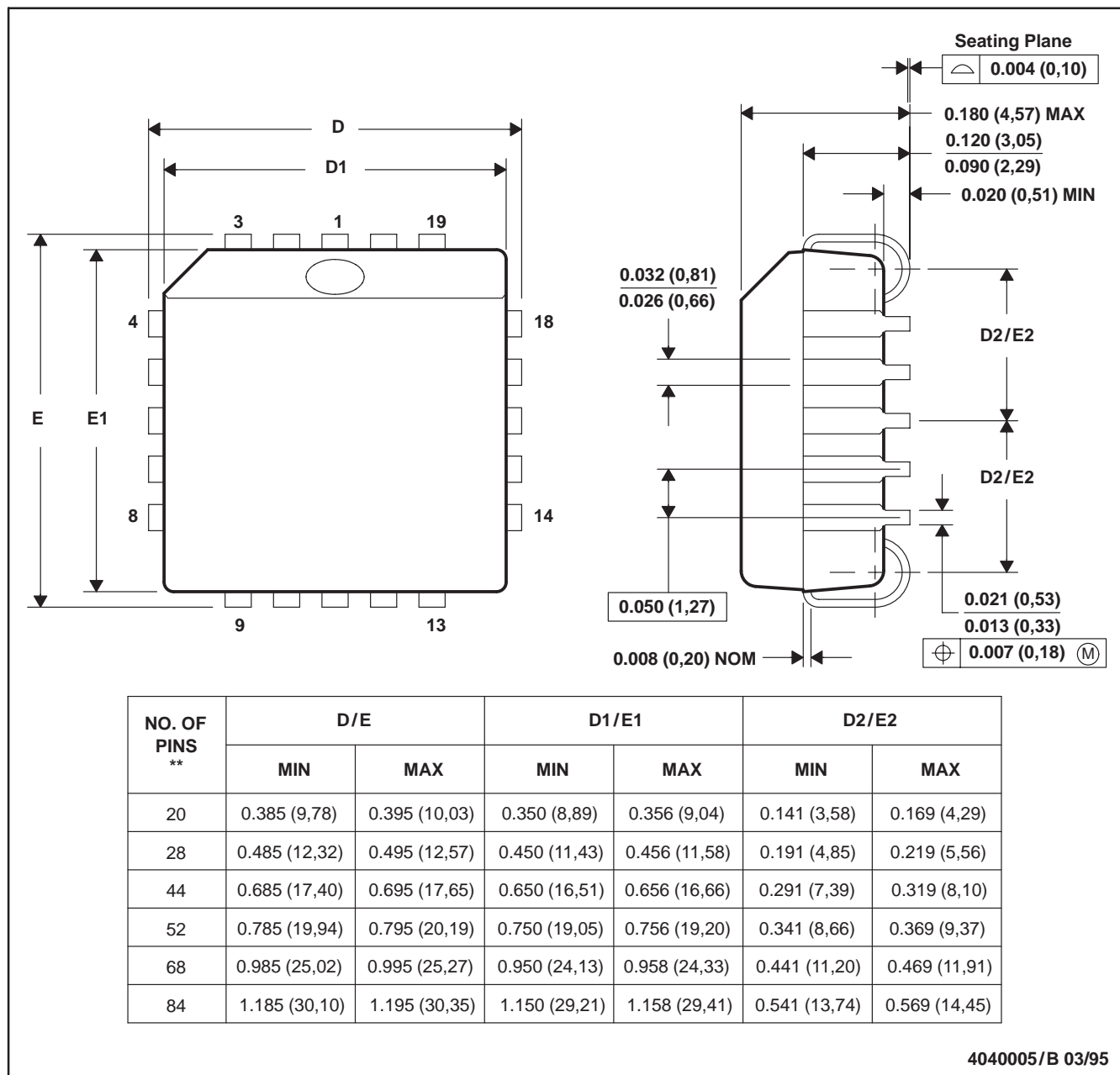


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 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - E. Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

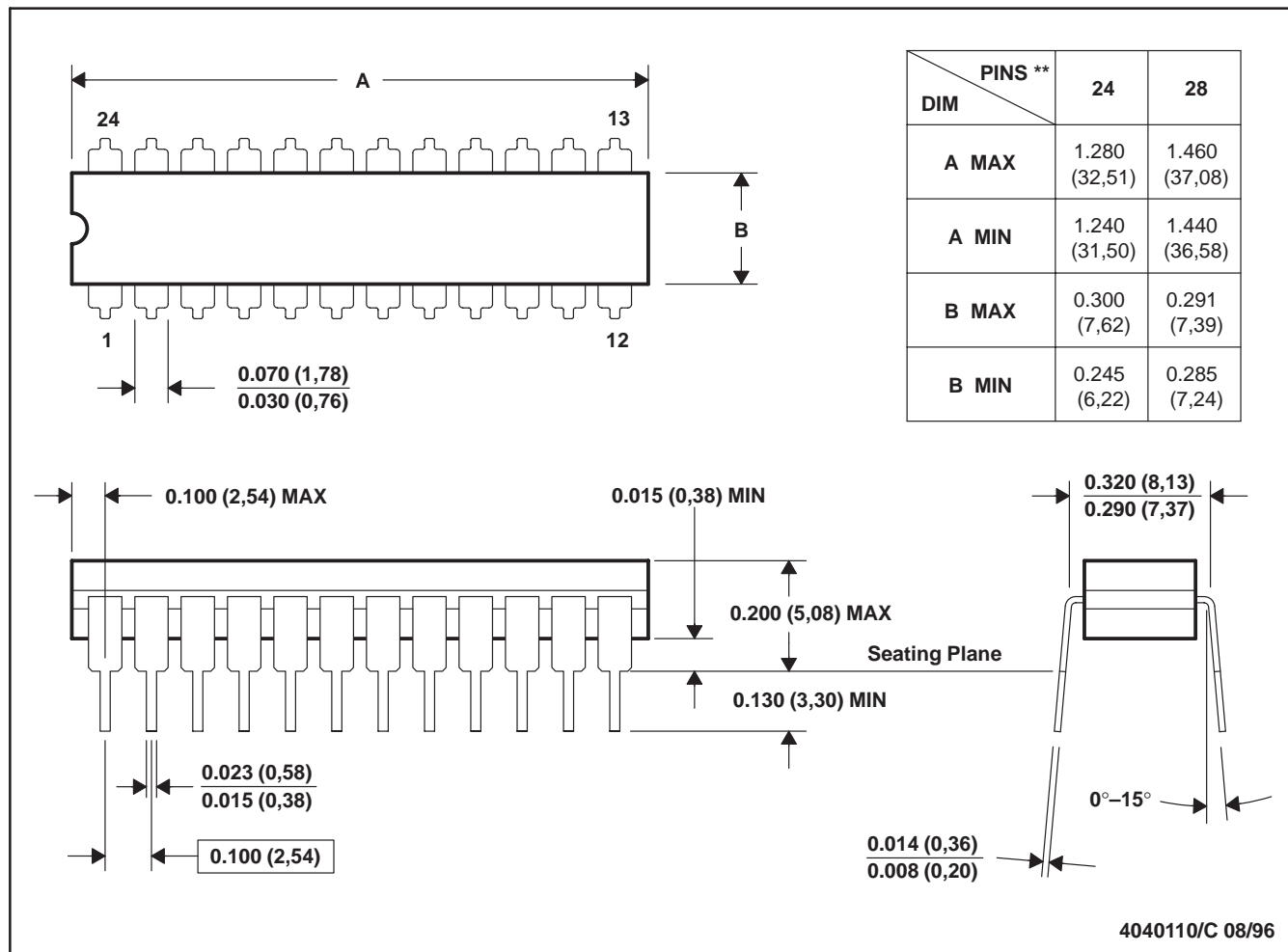


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
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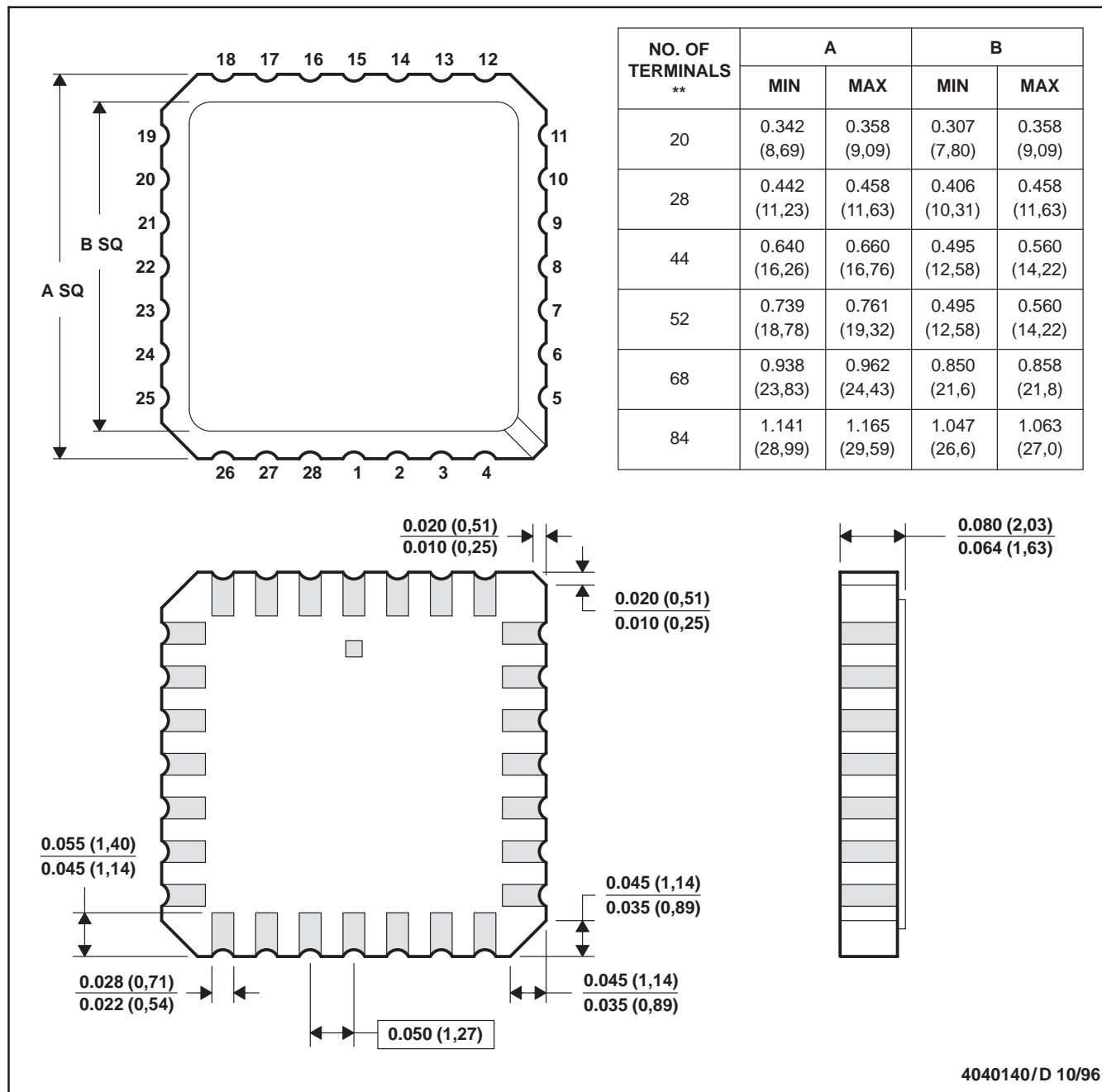
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



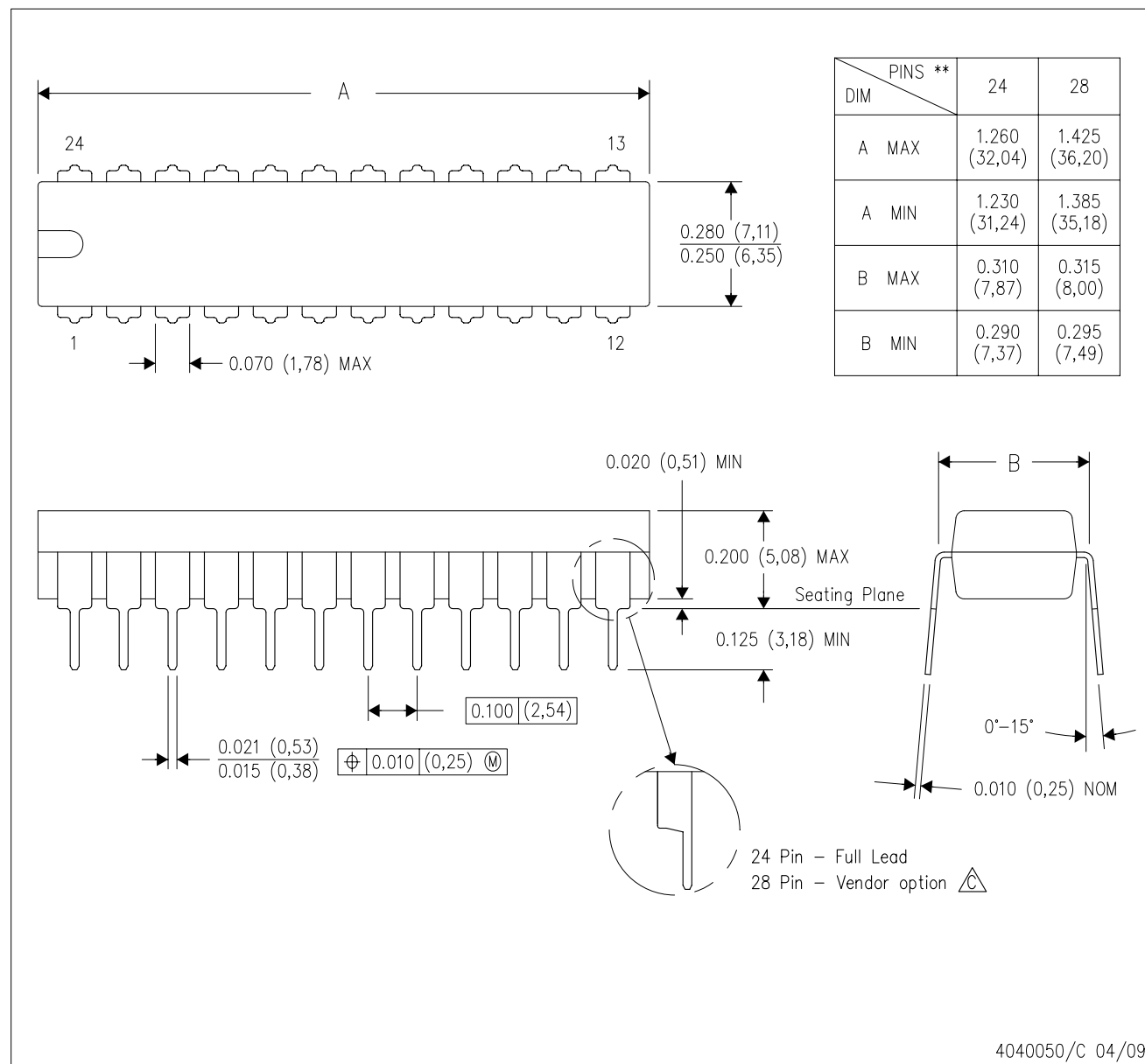
- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

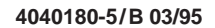
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

CERAMIC DUAL FLATPACK

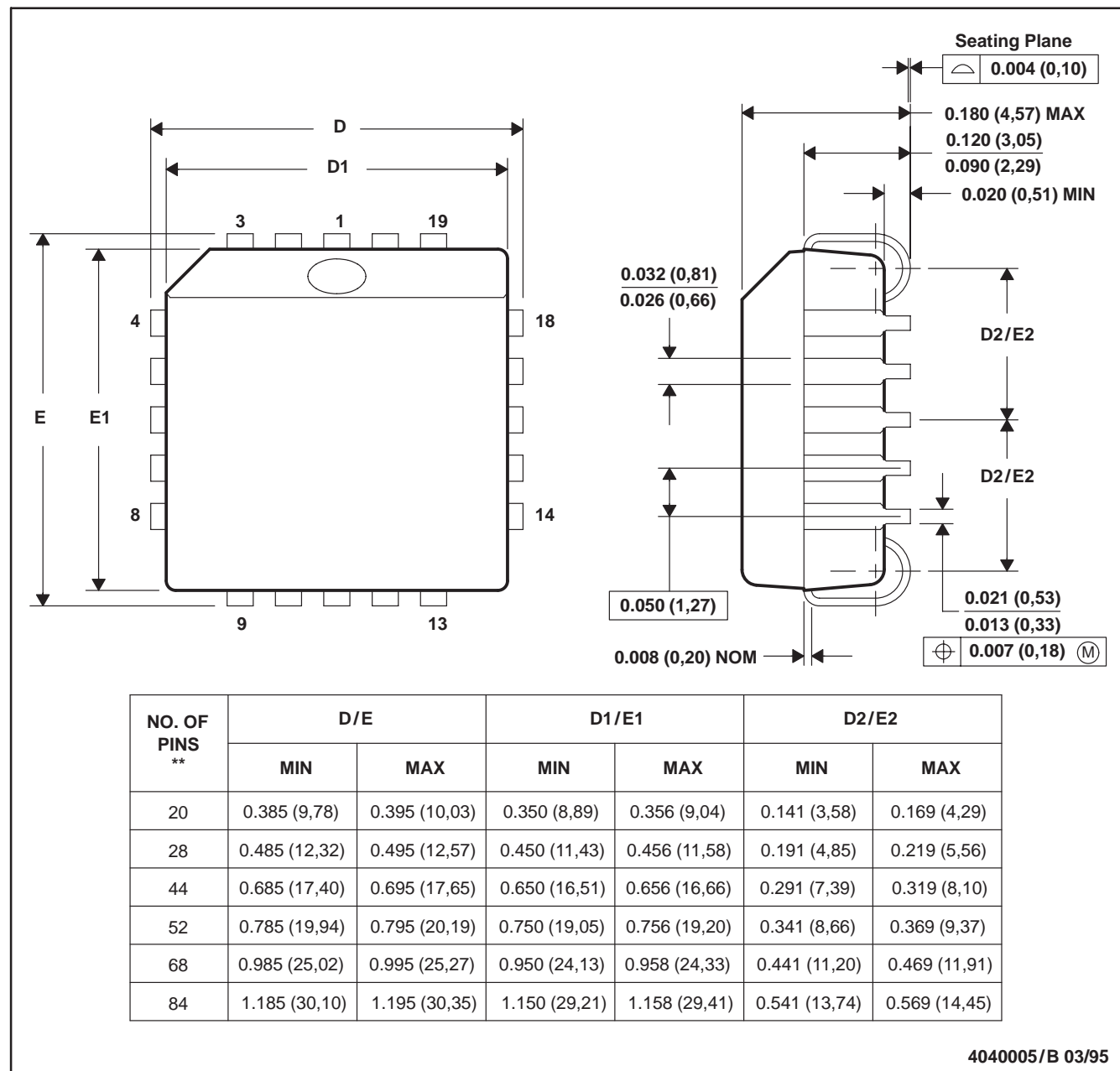


- 
- TEXAS
INSTRUMENTS**

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

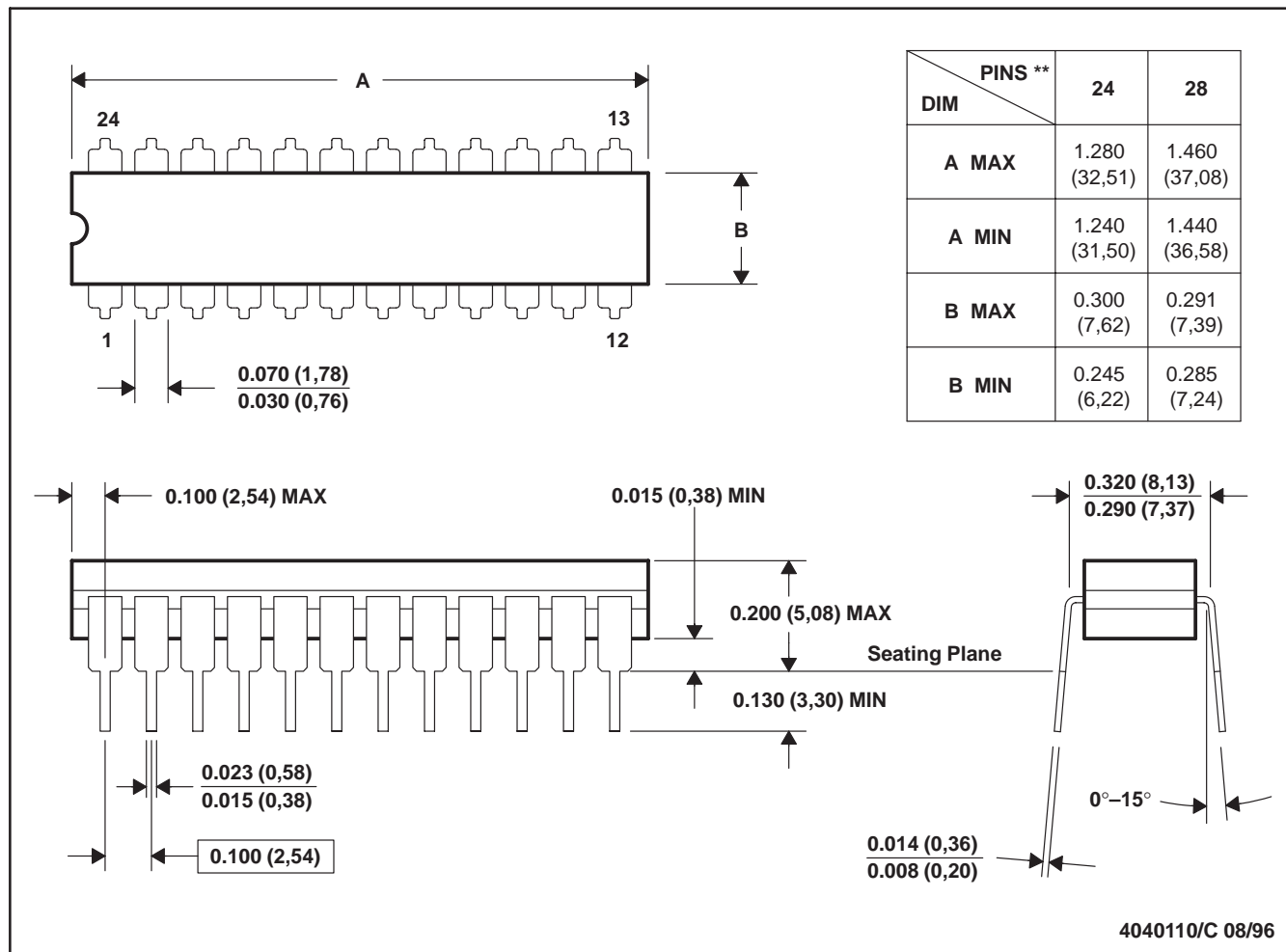


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

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PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

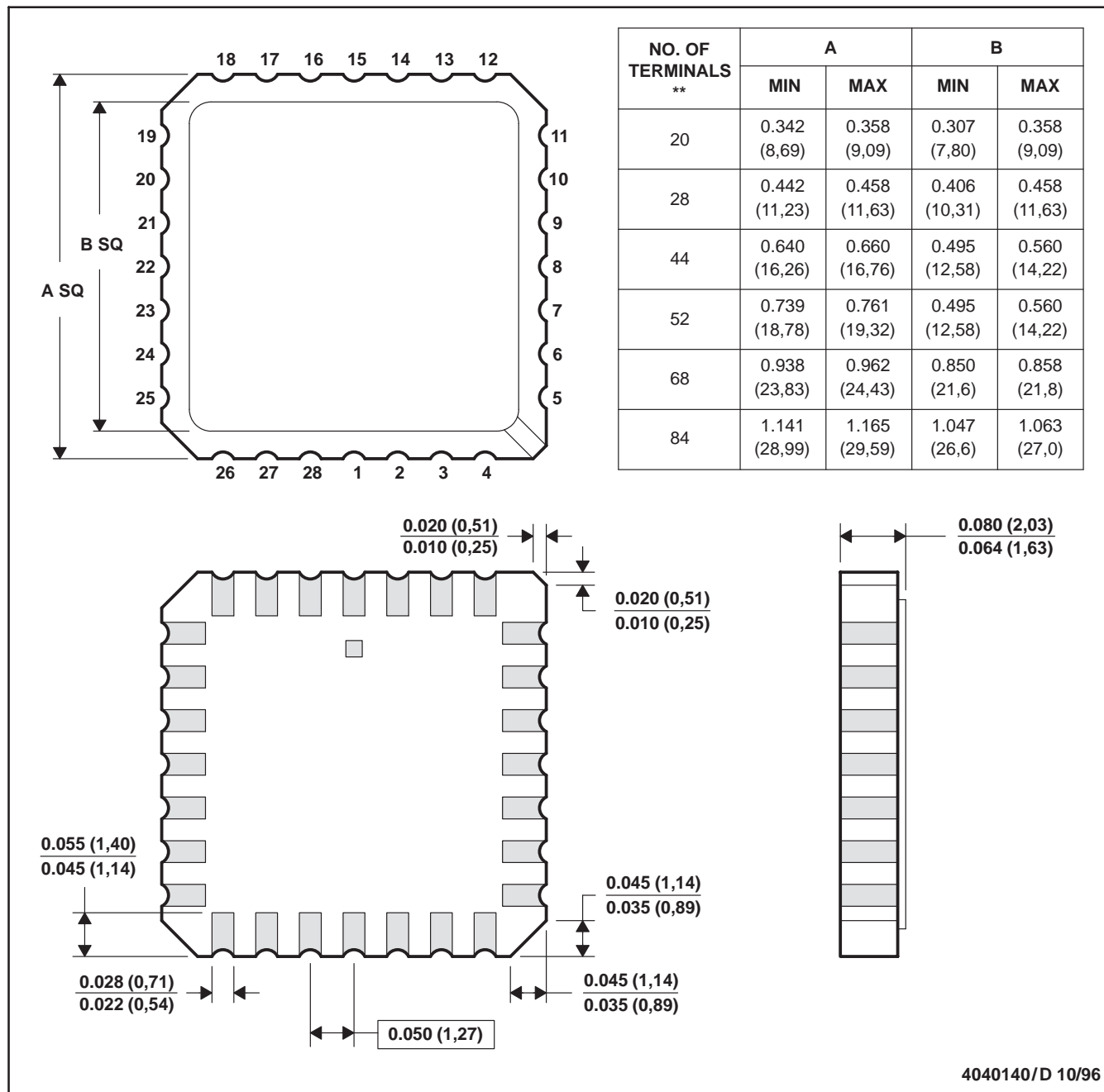
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



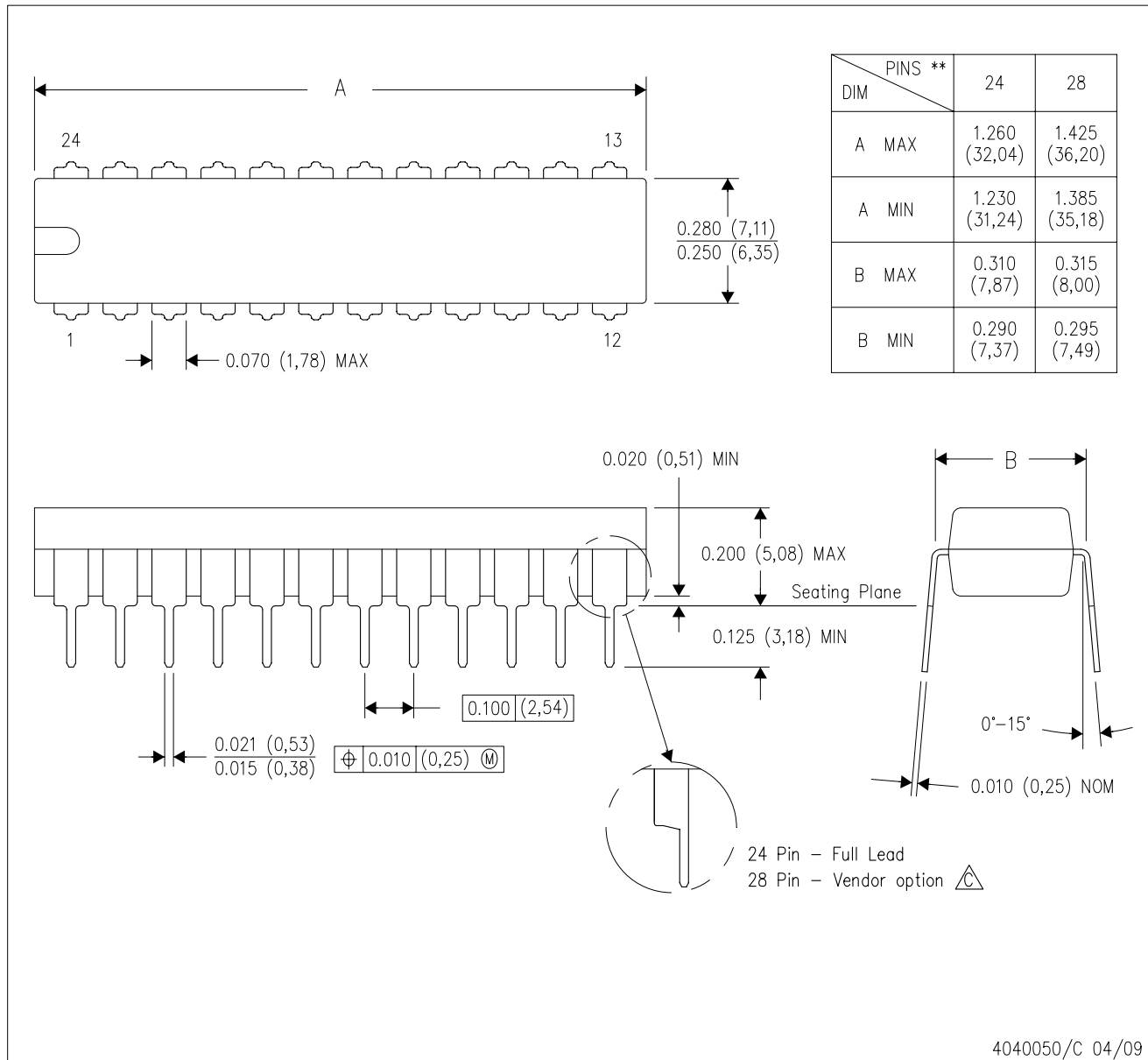
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

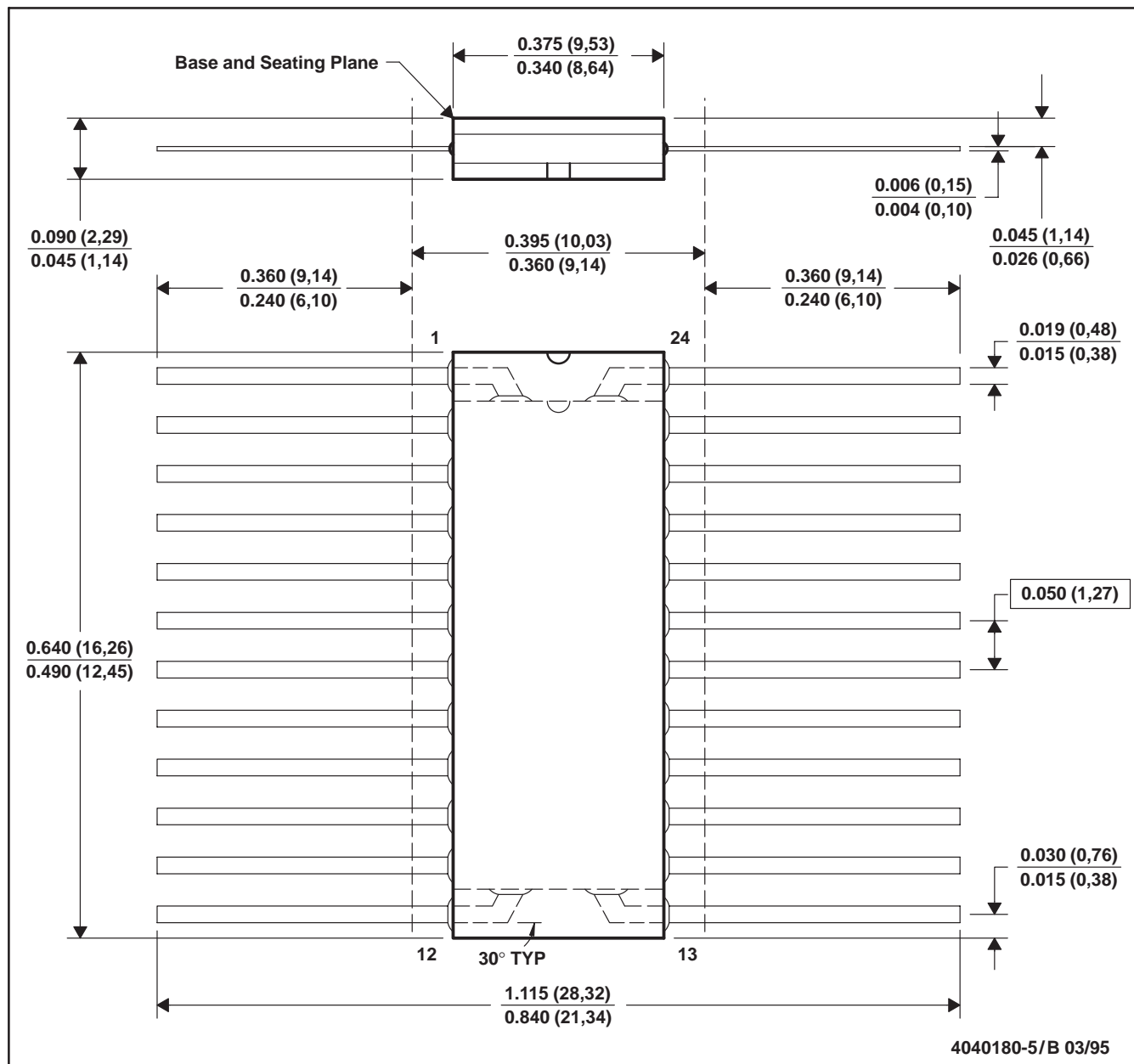
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

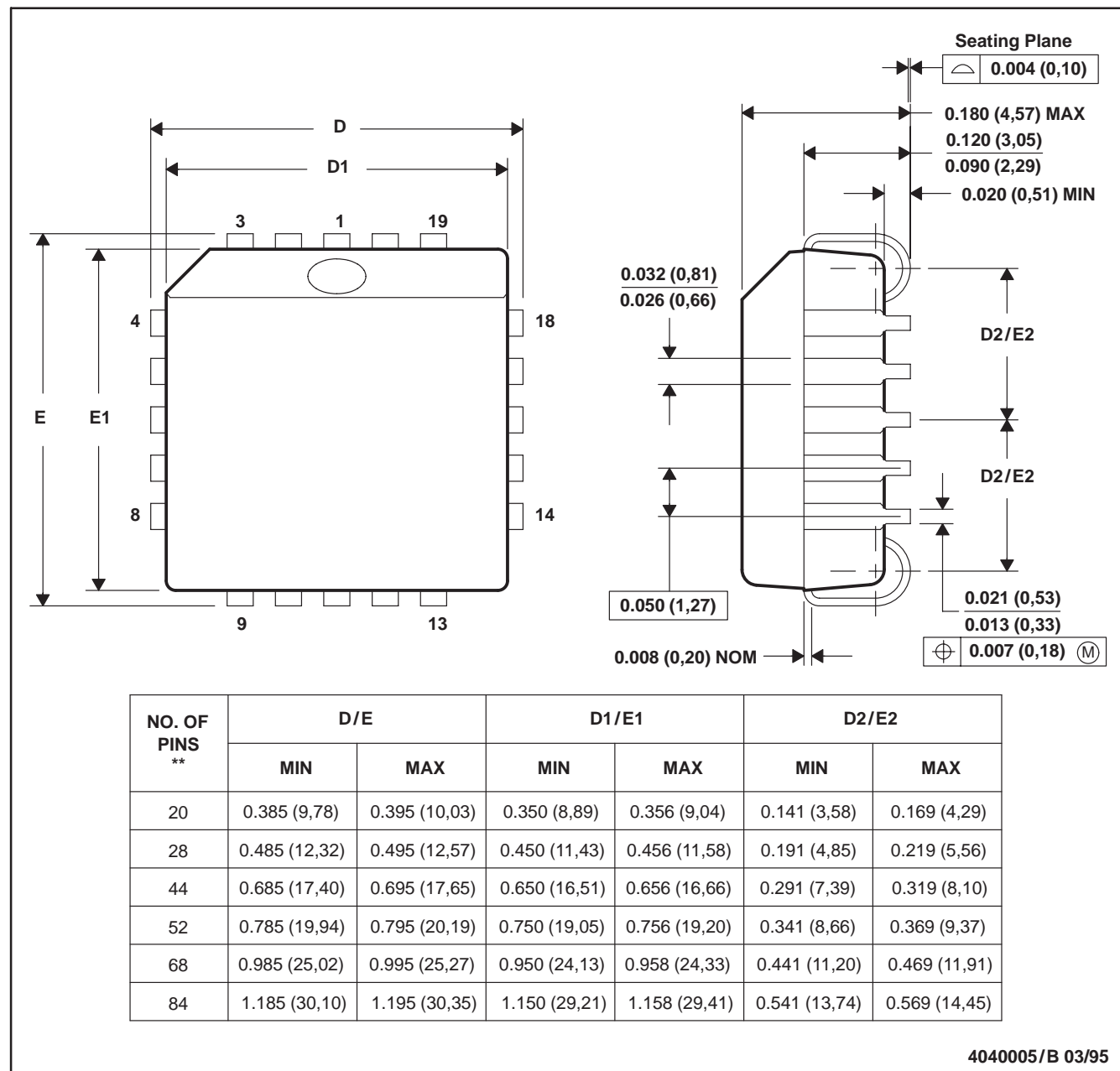


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

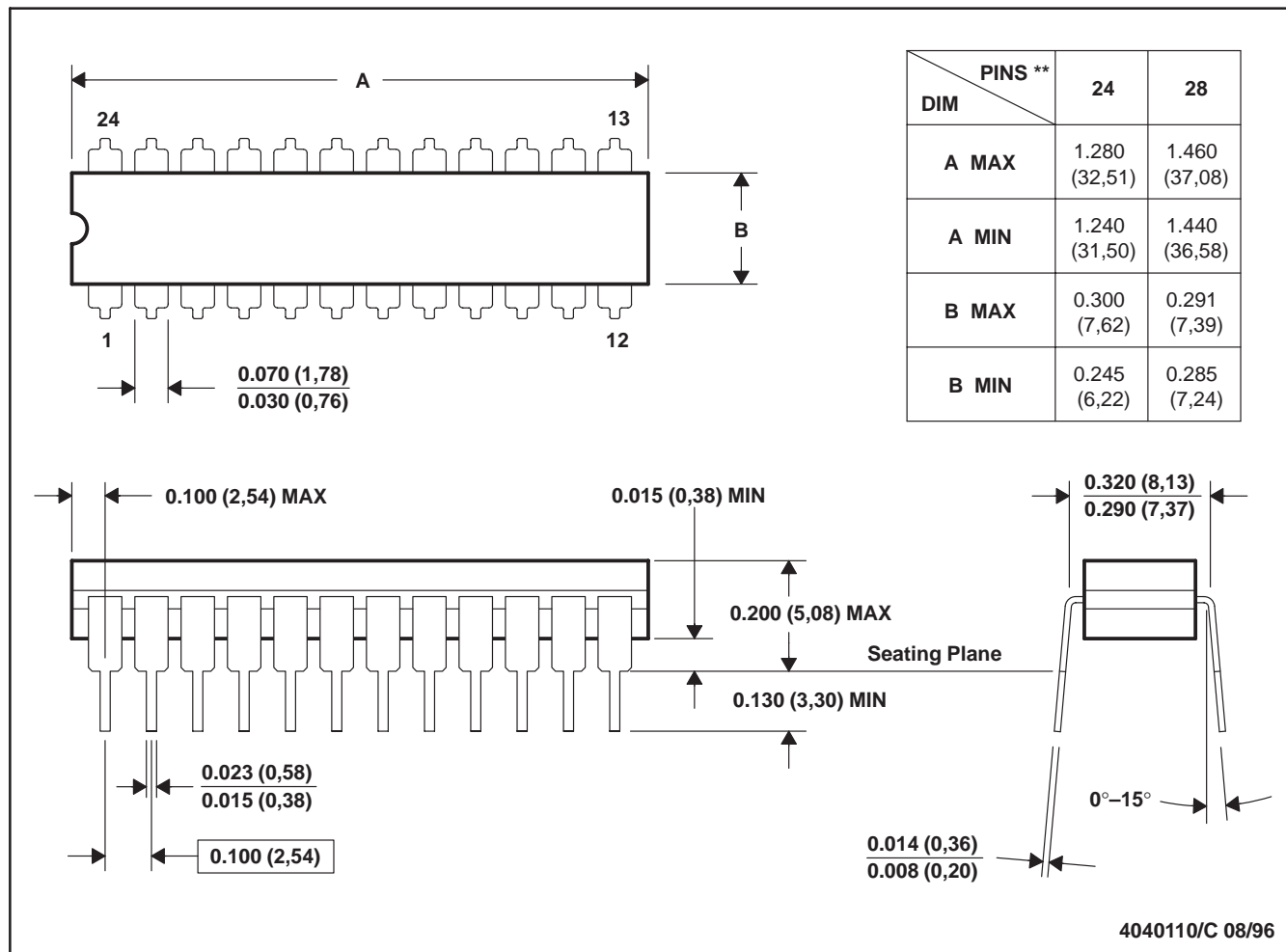


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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
 D. Index point is provided on cap for terminal identification.
 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



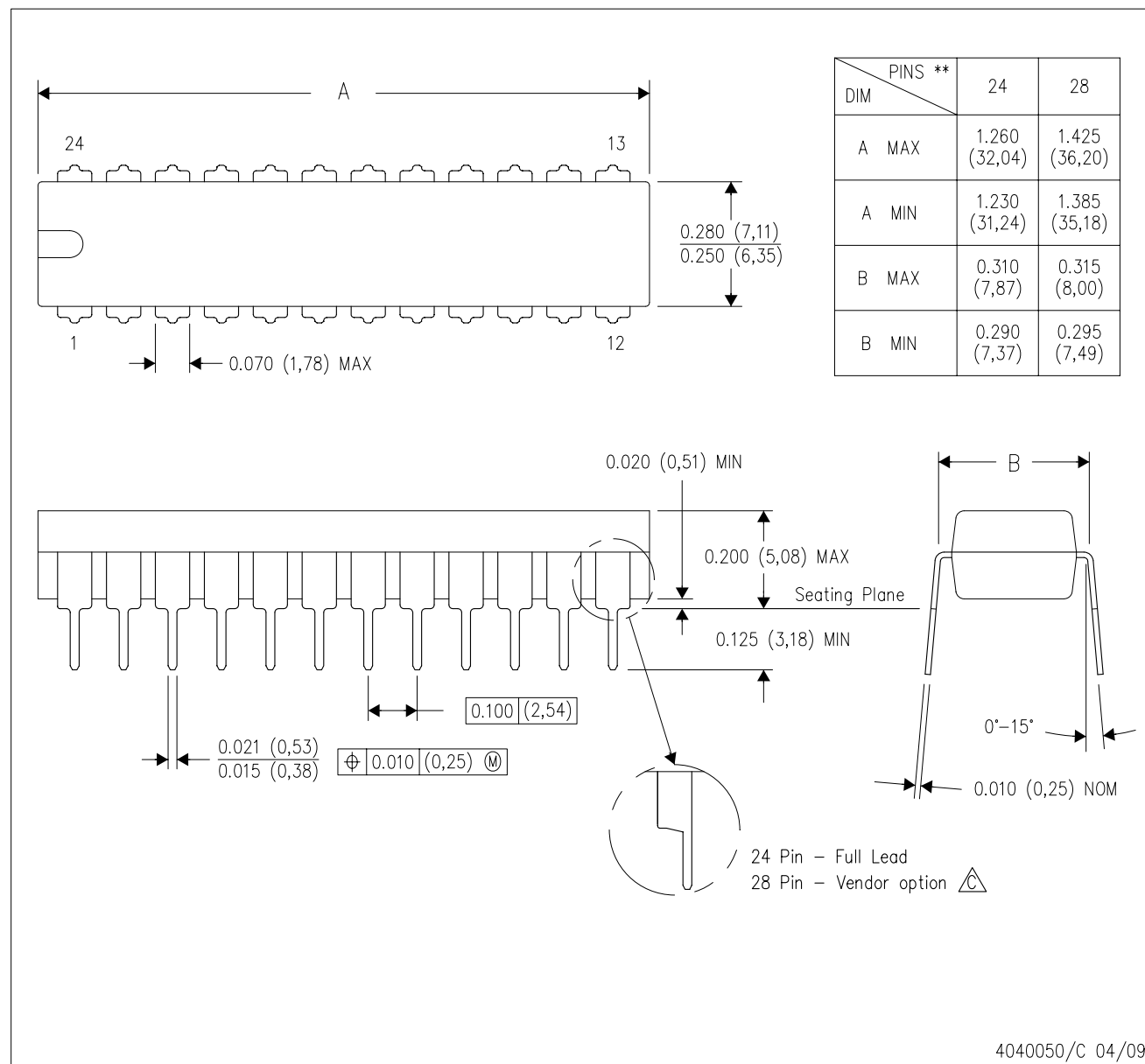
- NOTES:
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 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

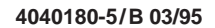
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

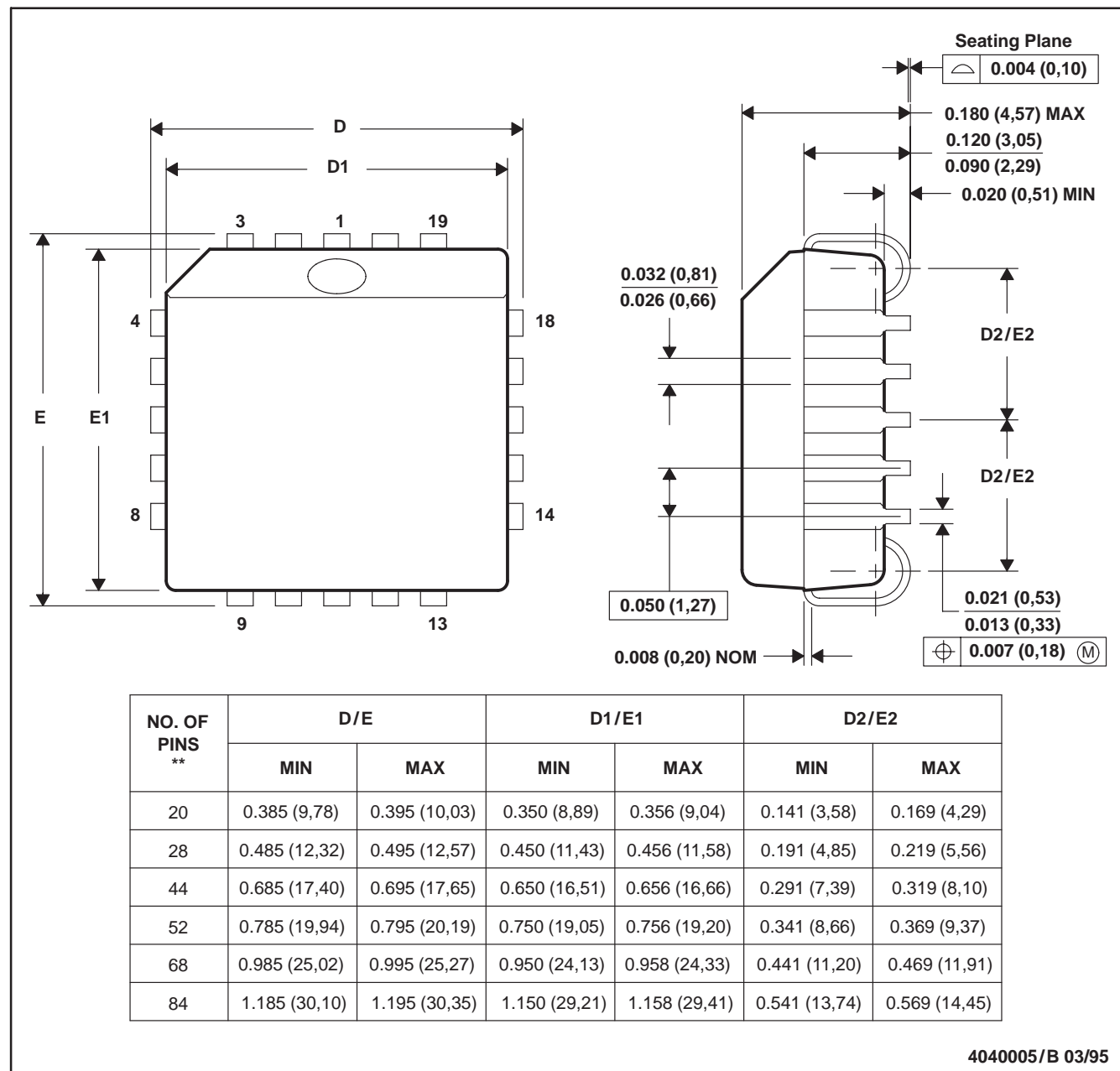


- 
- TEXAS
INSTRUMENTS**

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

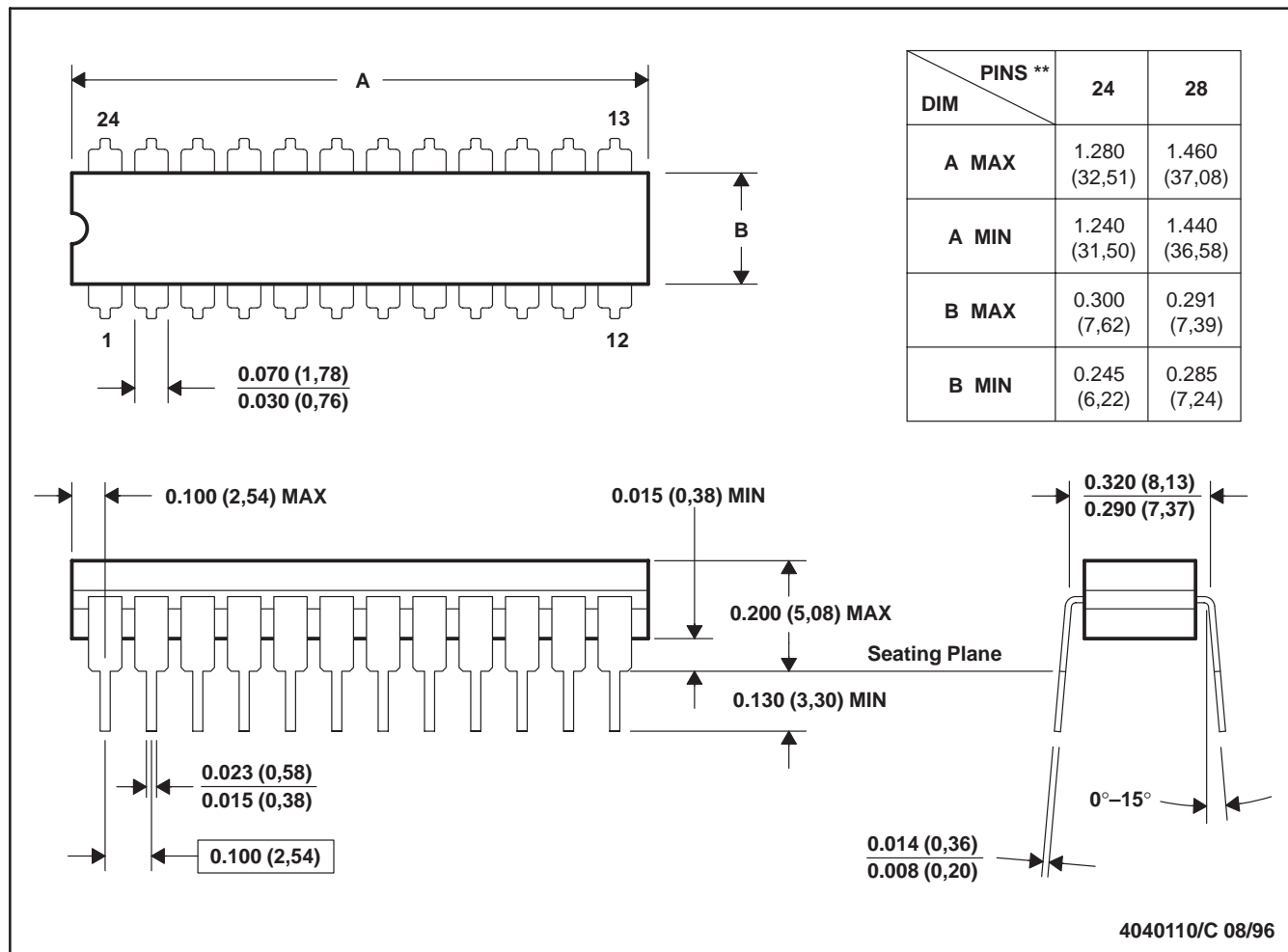


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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PACKAGING INFORMATION

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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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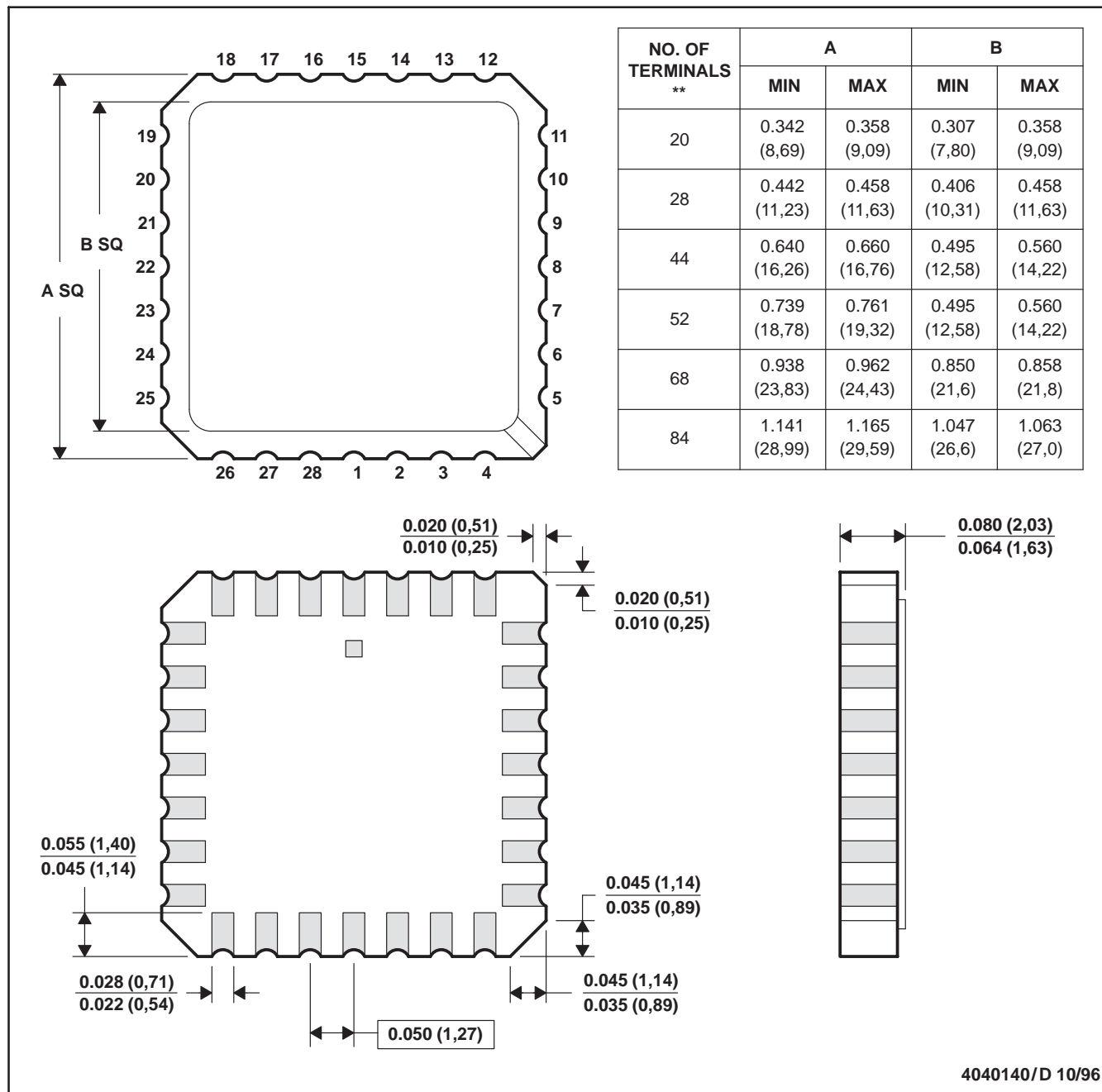
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



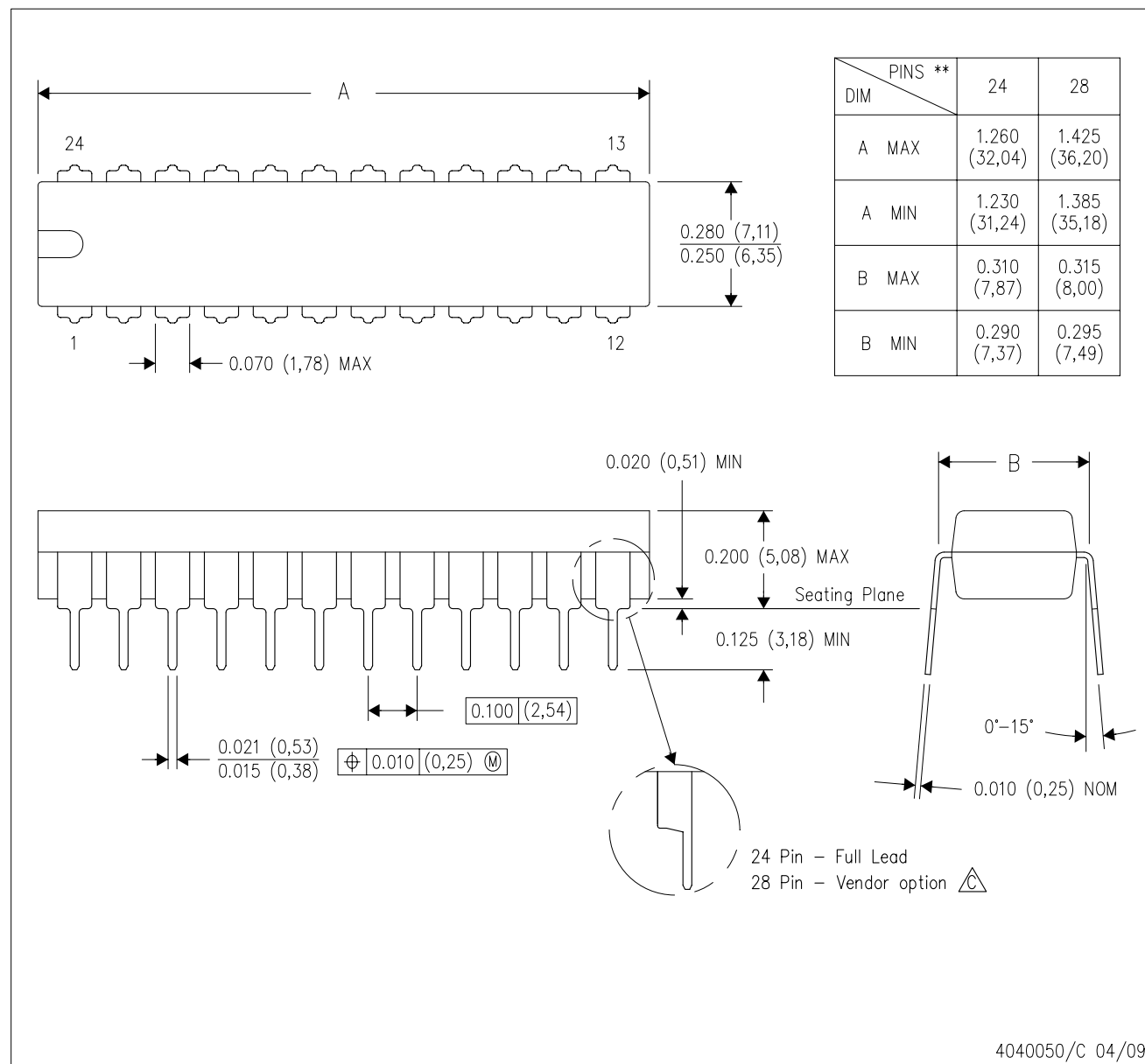
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

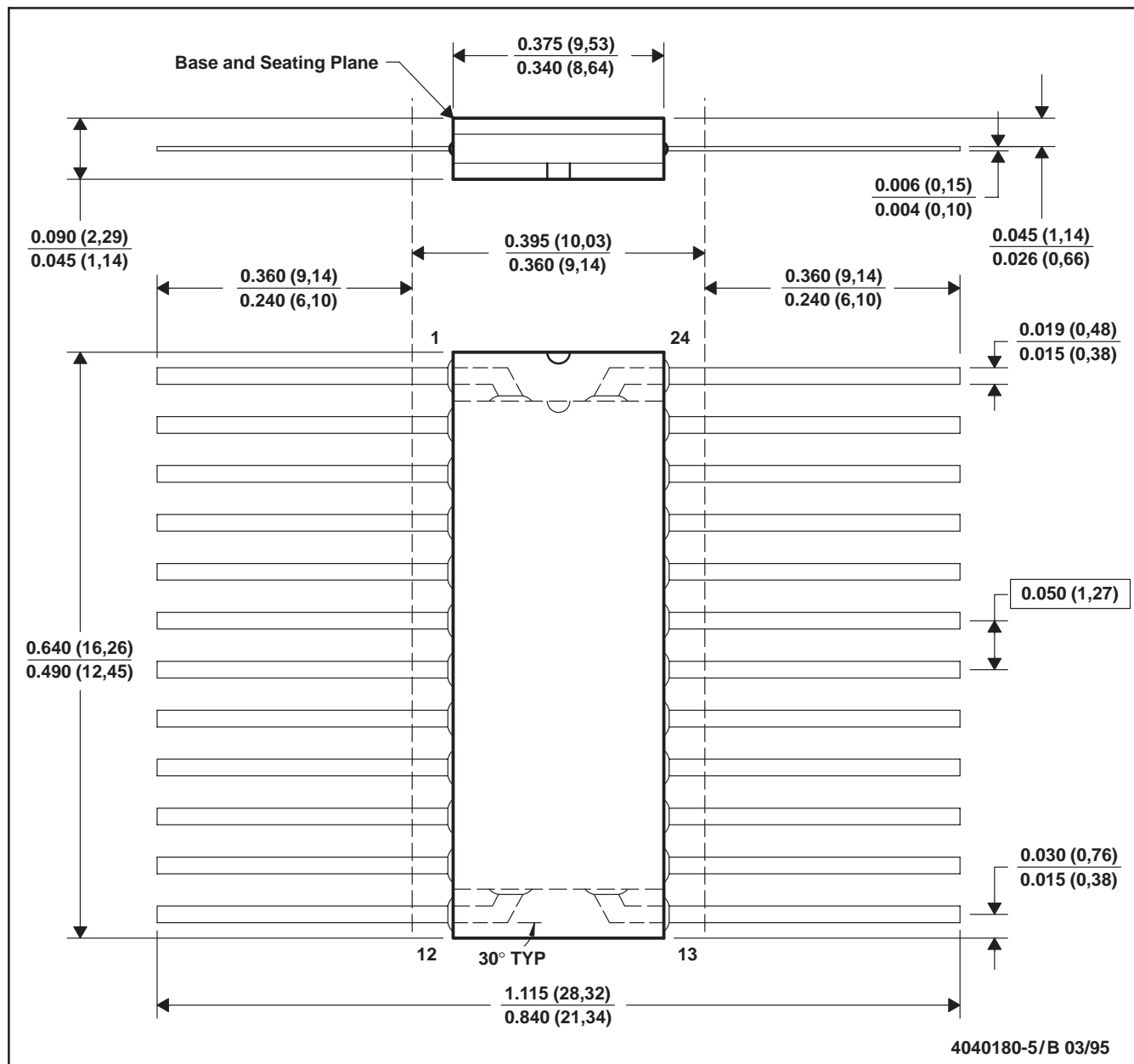
PLASTIC DUAL-IN-LINE PACKAGE



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W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

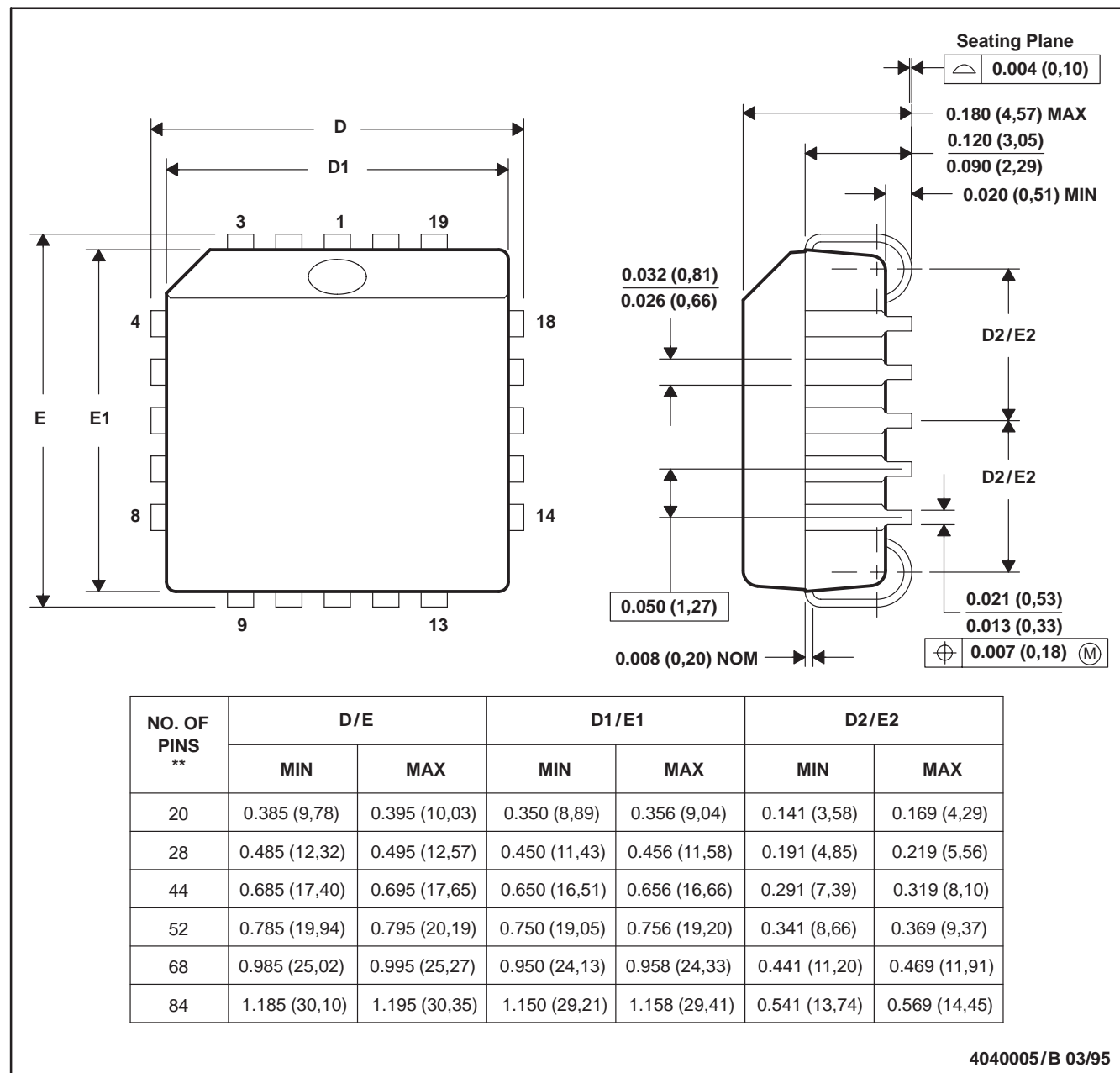


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 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

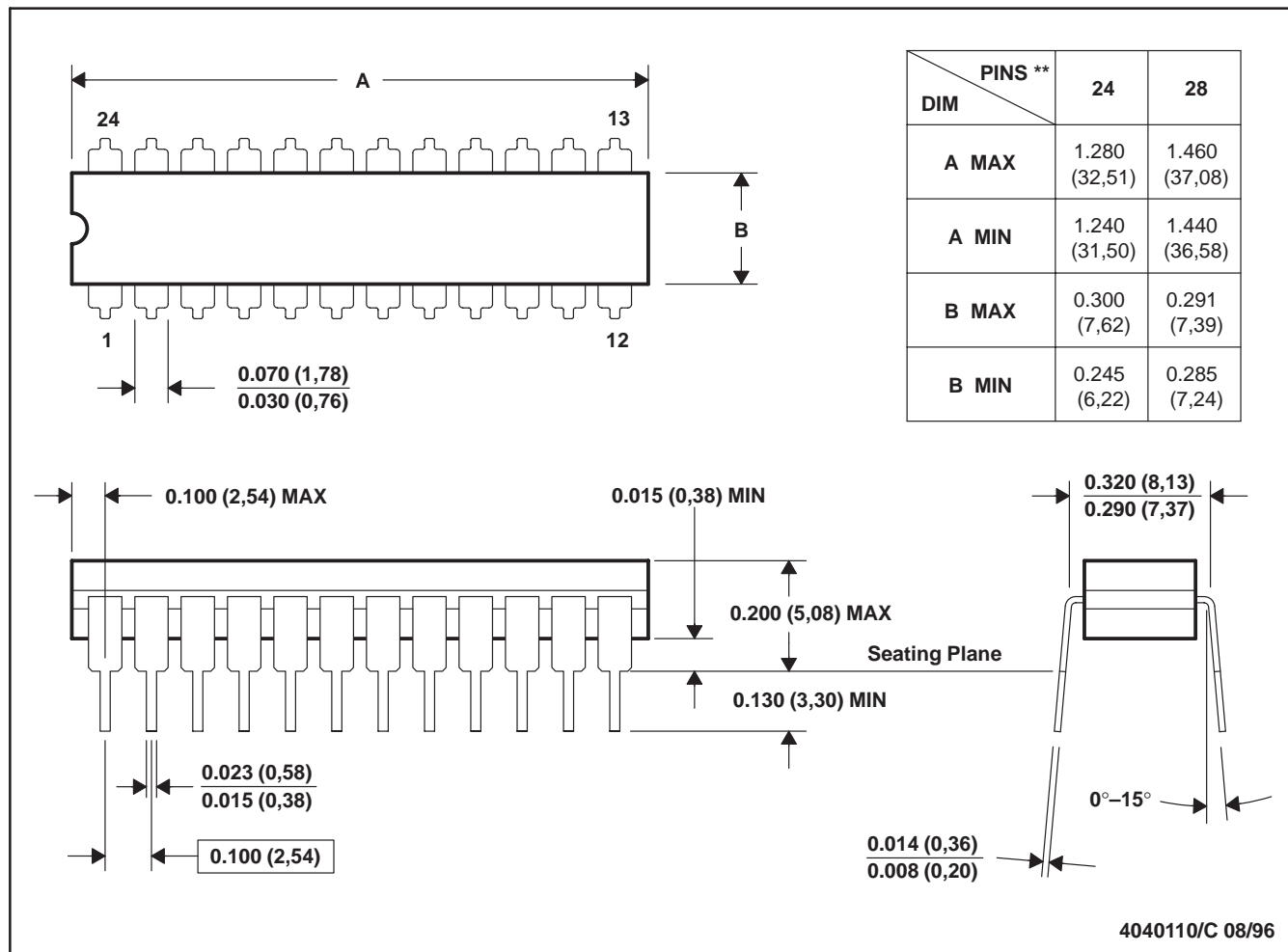


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JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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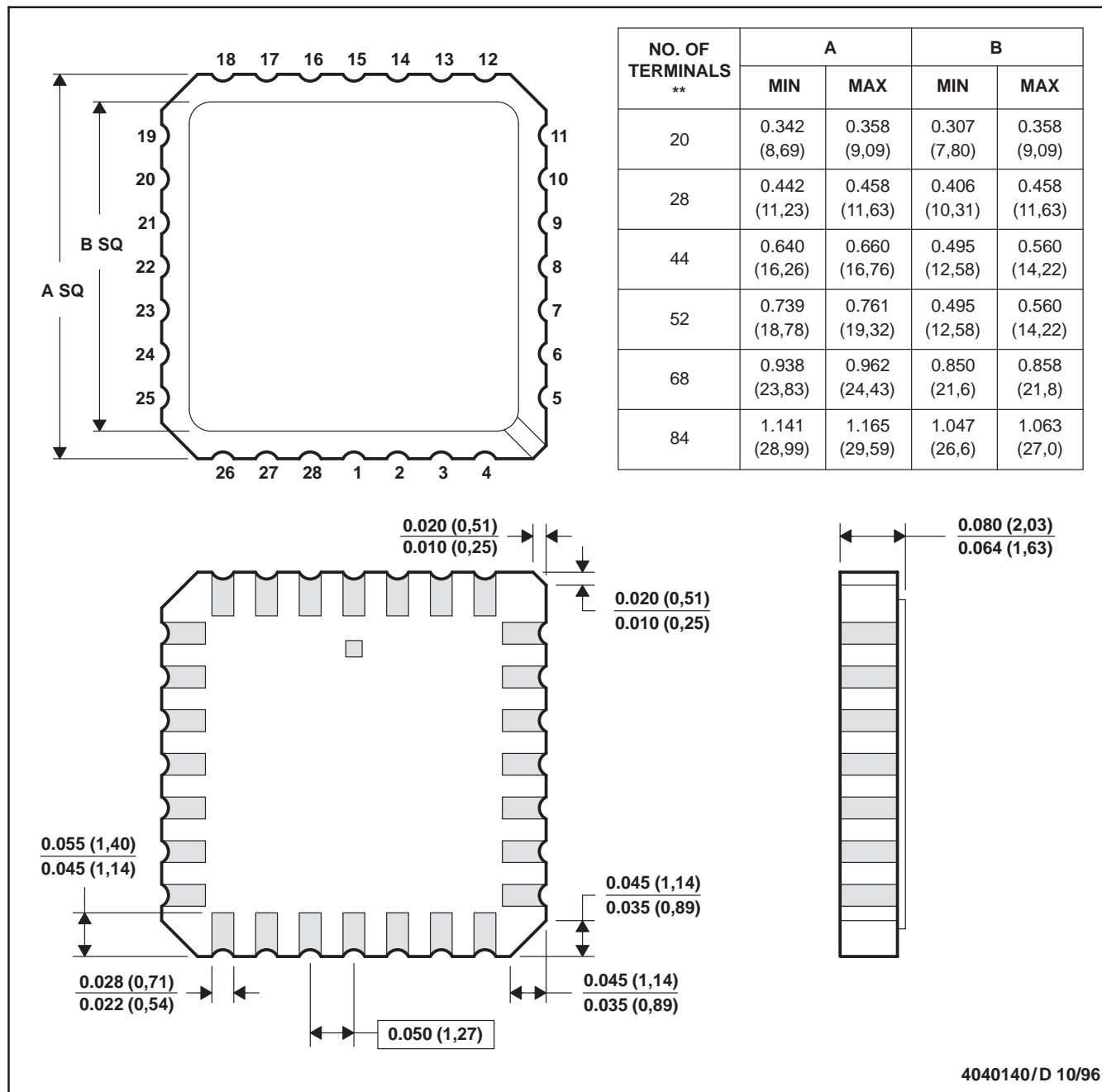
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FK (S-CQCC-N**)

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28 TERMINAL SHOWN



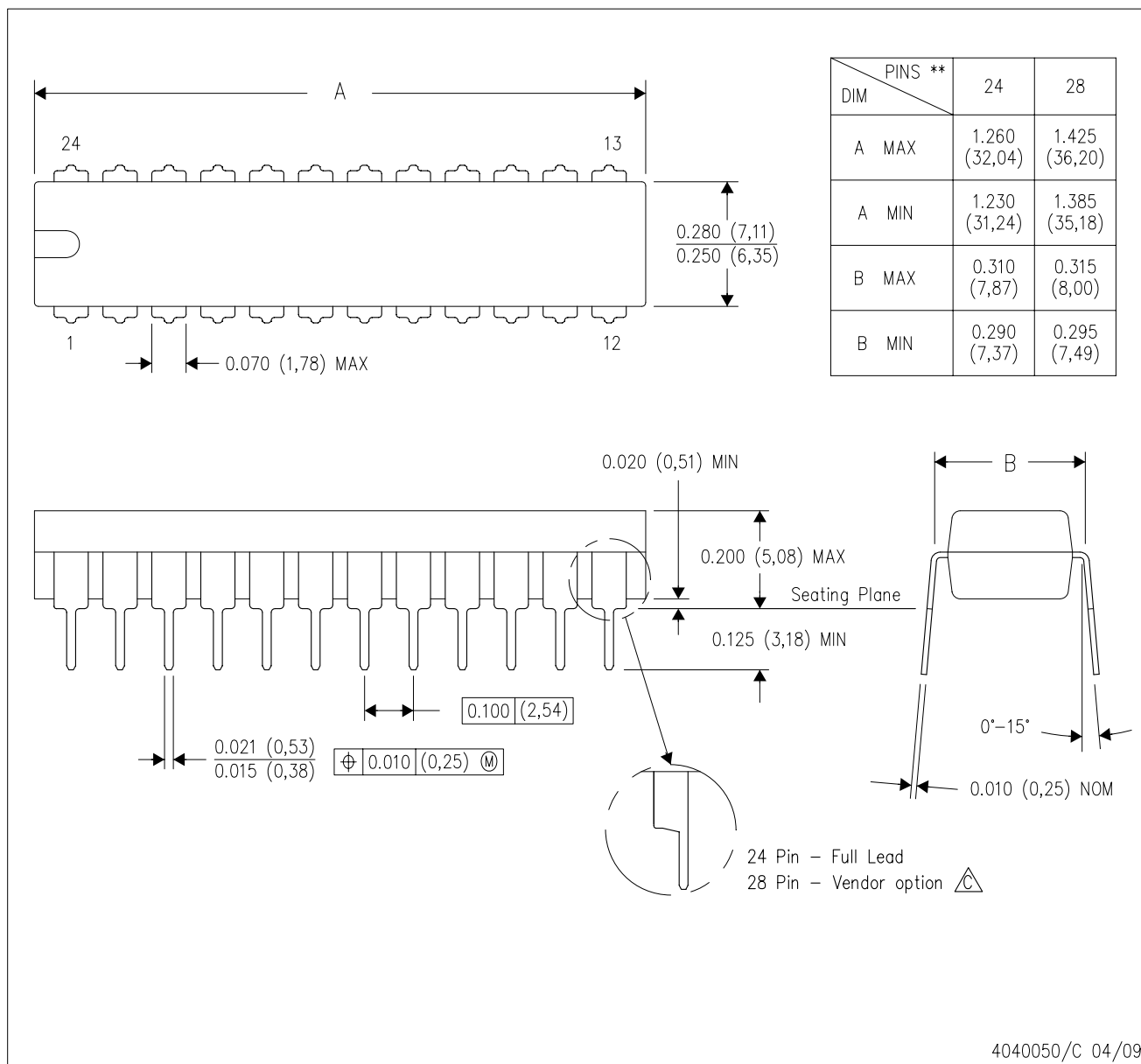
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MECHANICAL DATA

NT (R-PDIP-T**)

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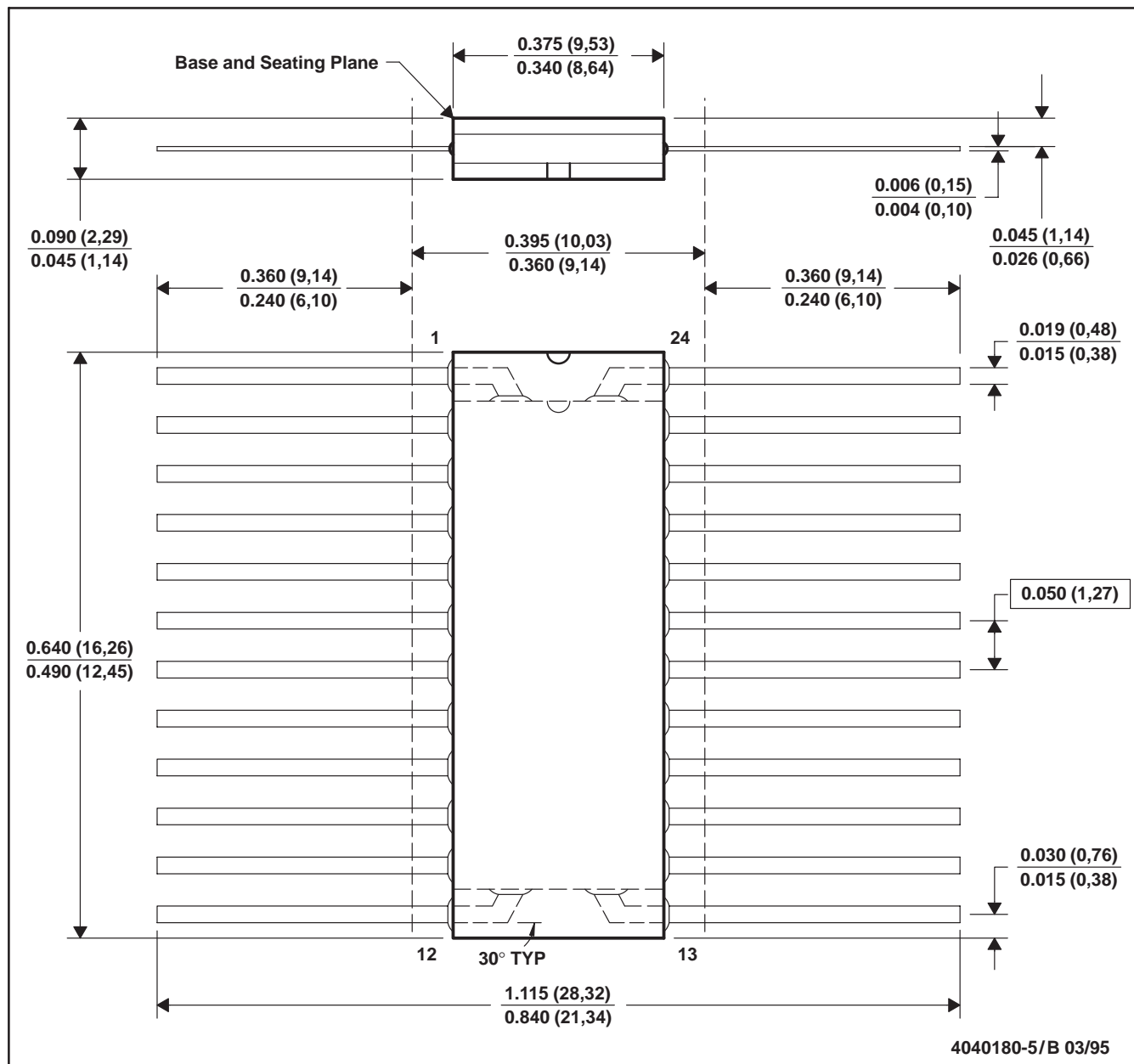
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 - $\triangle C$ The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

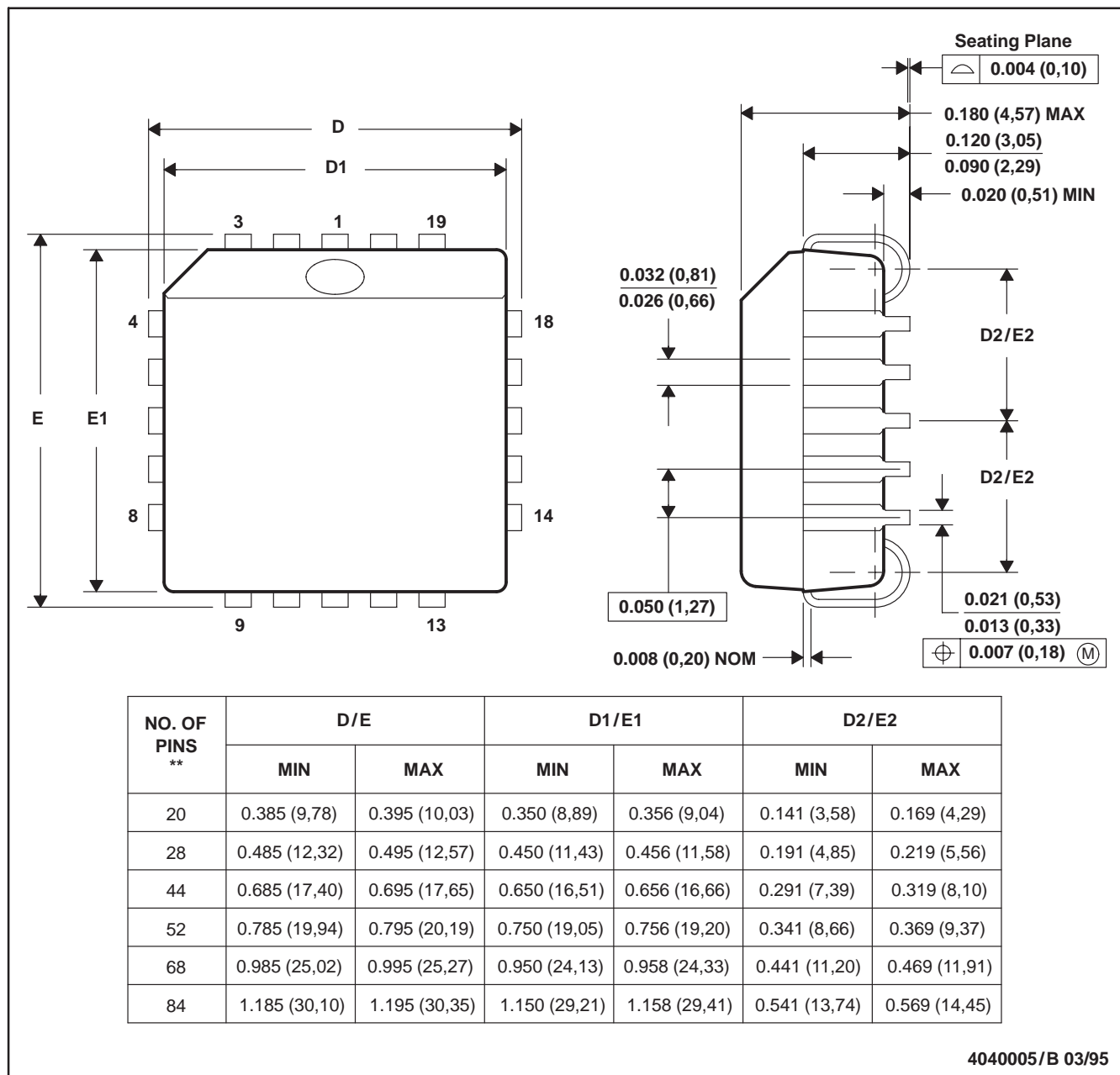


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

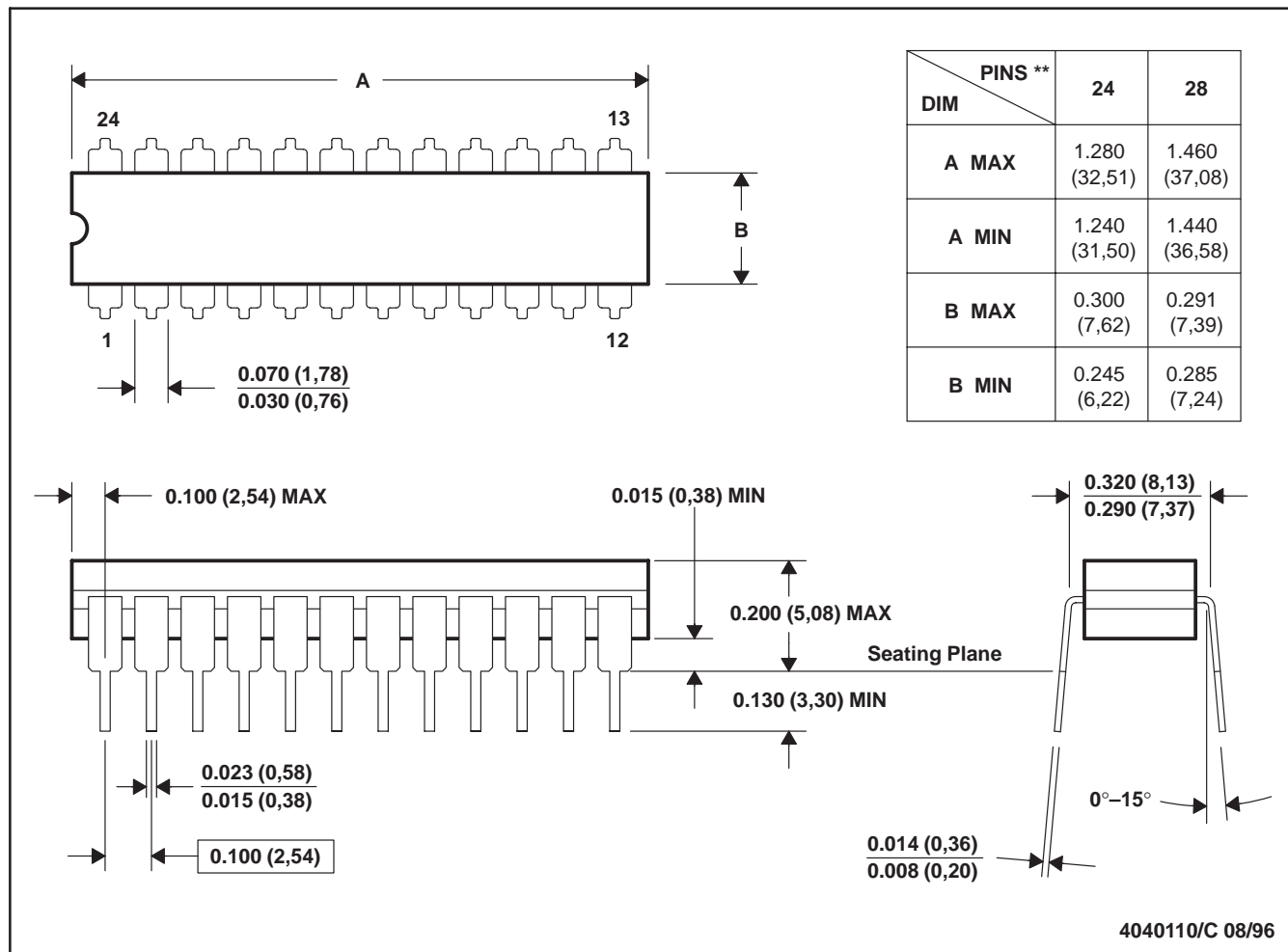


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification.
 - Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8605303KA	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

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PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

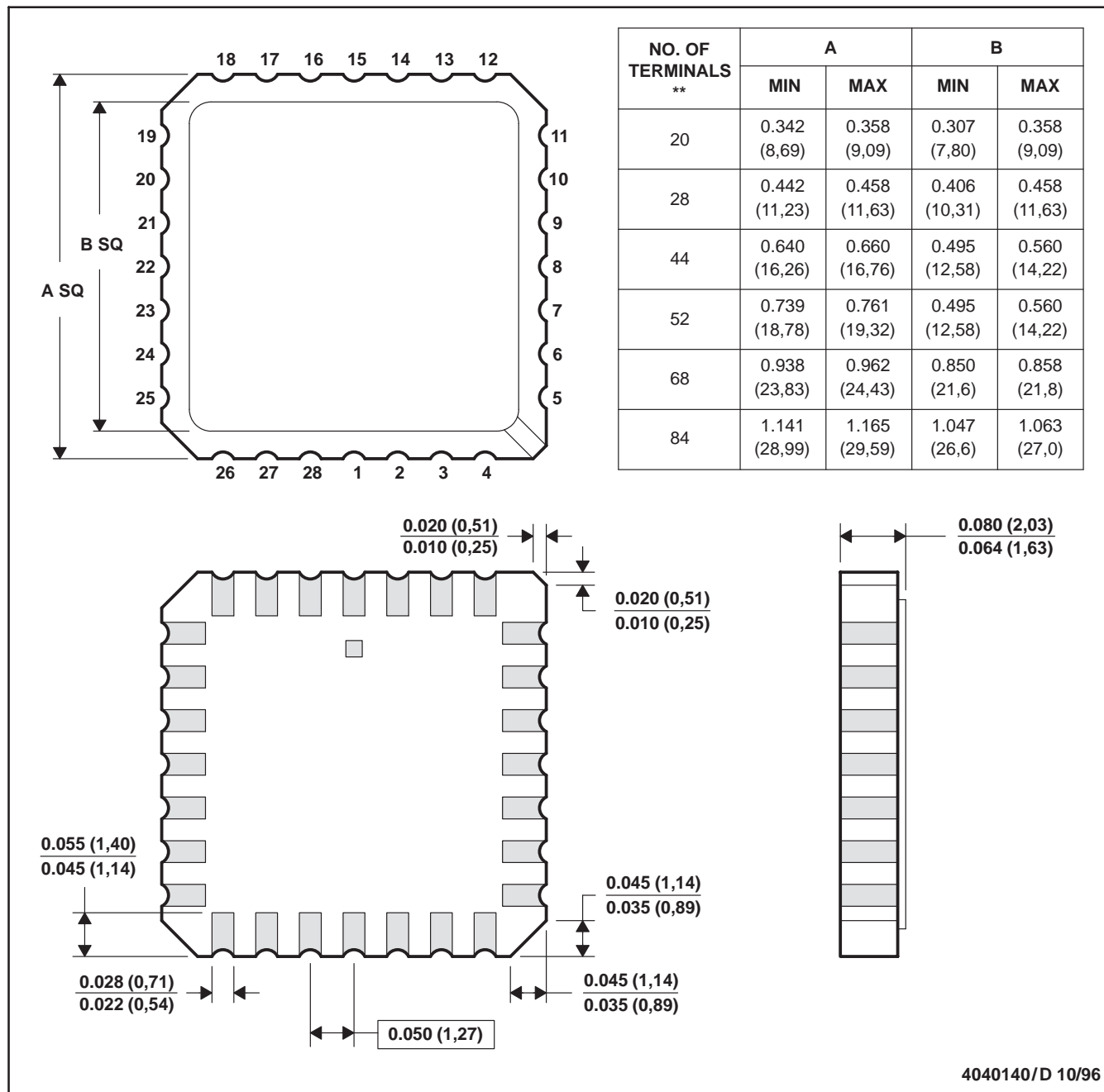
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



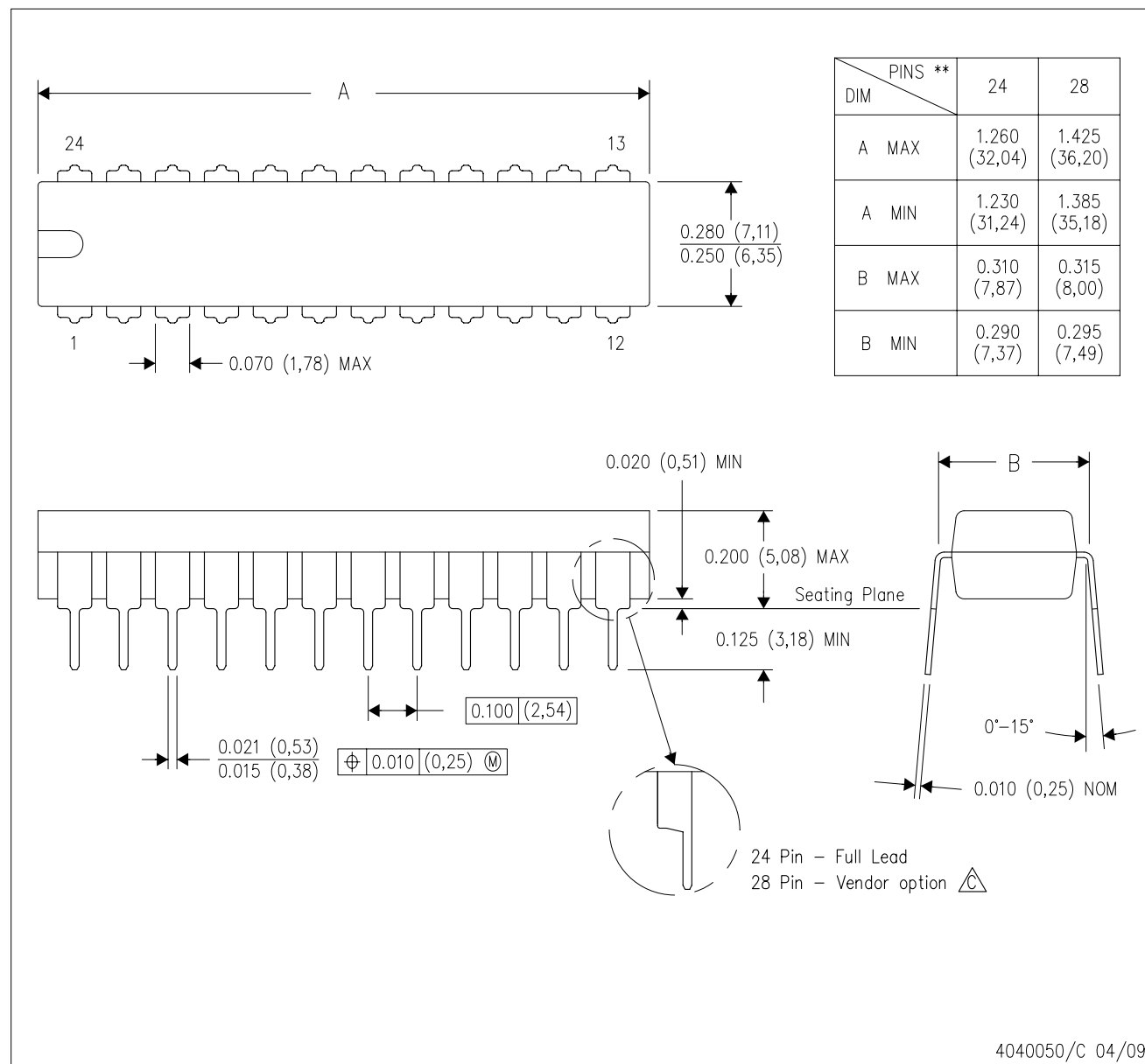
- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a metal lid.
 - The terminals are gold plated.
 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

24 PINS SHOWN

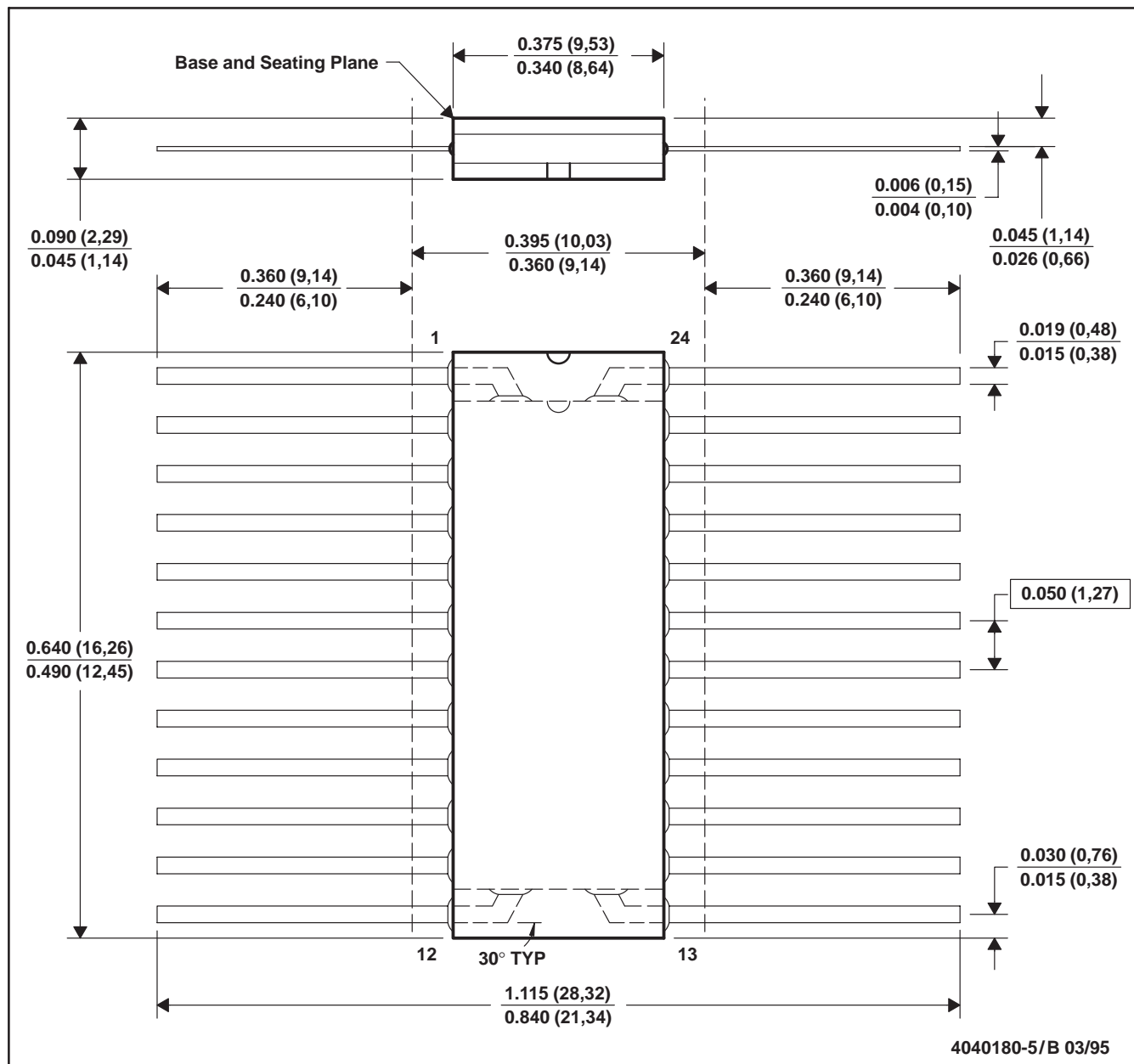
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
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 - The 28 pin end lead shoulder width is a vendor option, either half or full width.

W (R-GDFP-F24)

CERAMIC DUAL FLATPACK

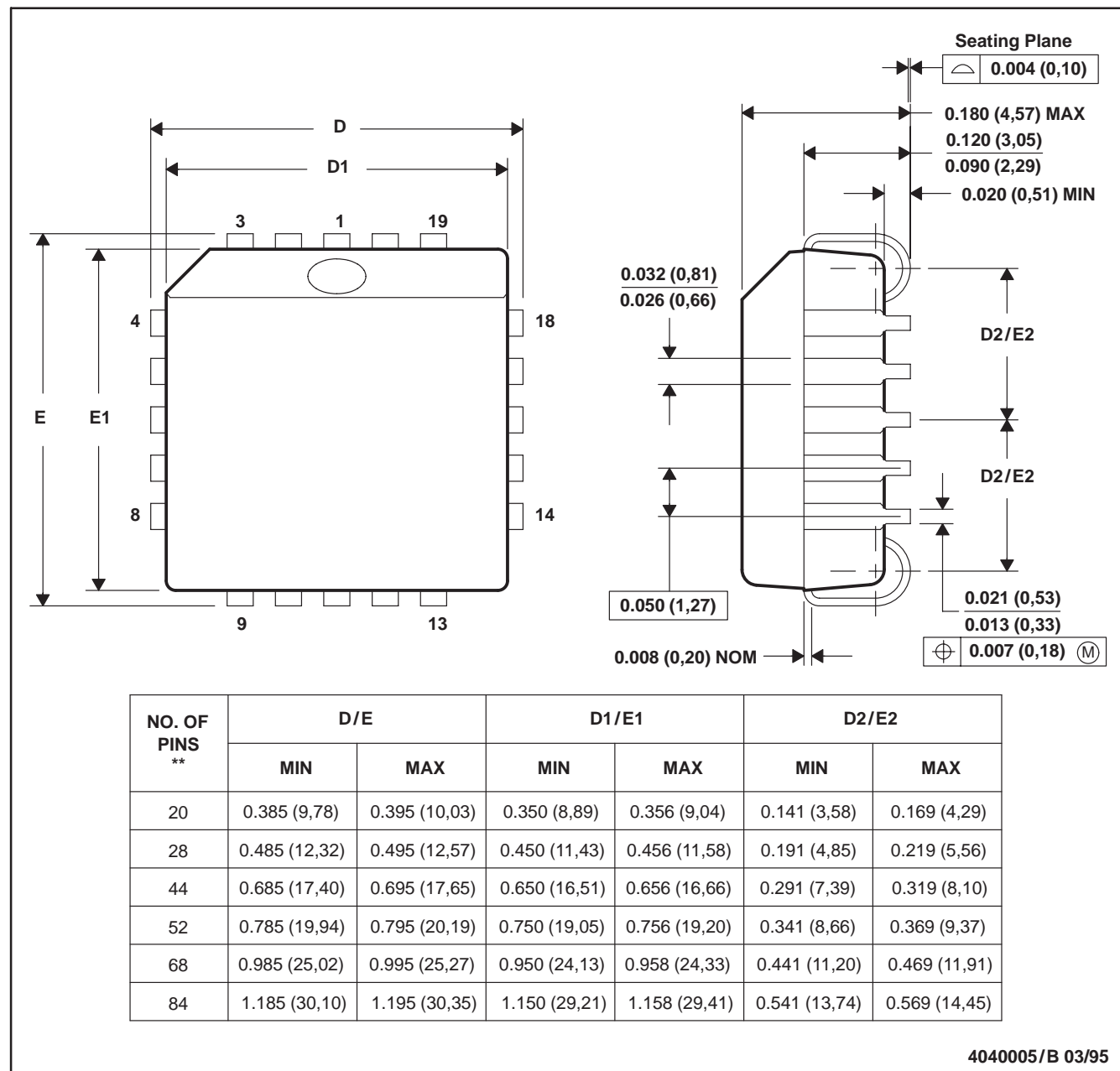


- NOTES:
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 - This drawing is subject to change without notice.
 - This package can be hermetically sealed with a ceramic lid using glass frit.
 - Falls within MIL-STD-1835 GDFP2-F24 and JEDEC MO-070AD
 - Index point is provided on cap for terminal identification only.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

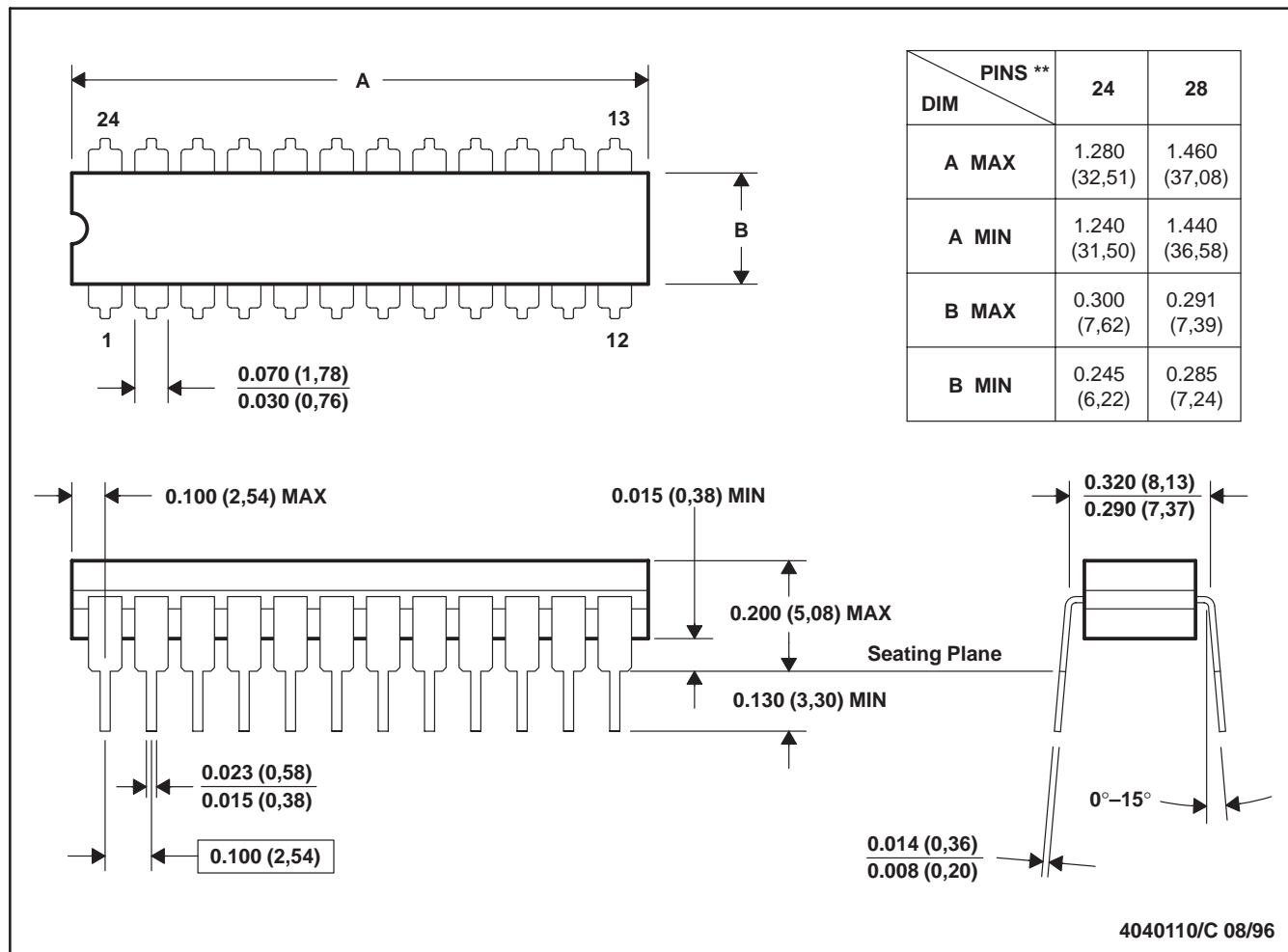


- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



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 C. This package can be hermetically sealed with a ceramic lid using glass frit.
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 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

PACKAGING INFORMATION

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TIBPAL22VP10-20CFN	OBSOLETE	PLCC	FN	28		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-20CNT	OBSOLETE	PDIP	NT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



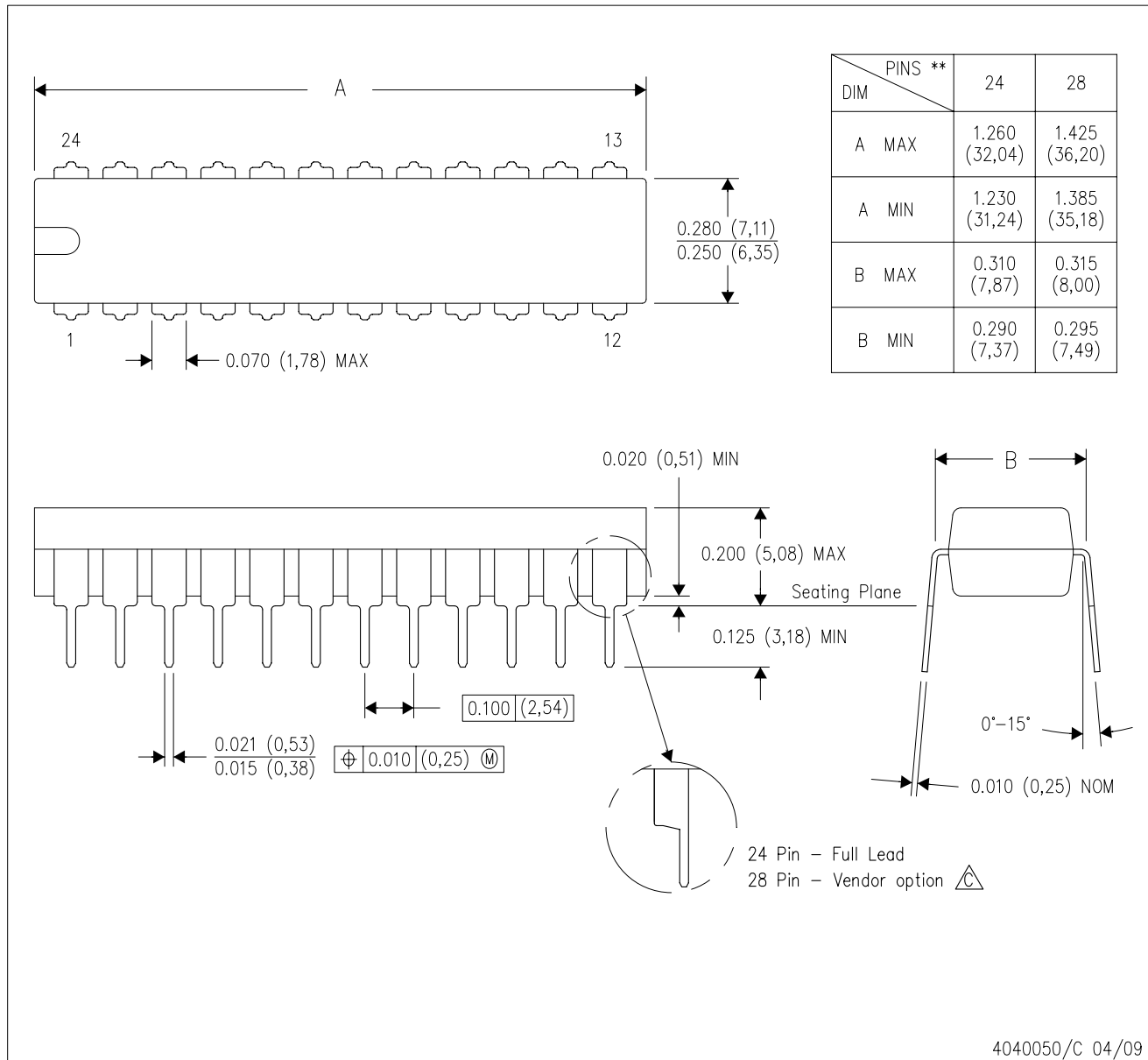
- NOTES:
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

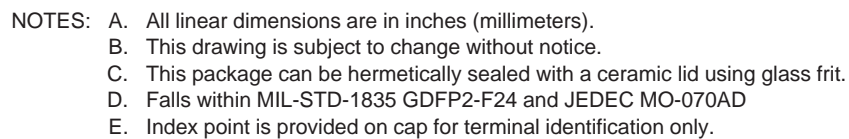
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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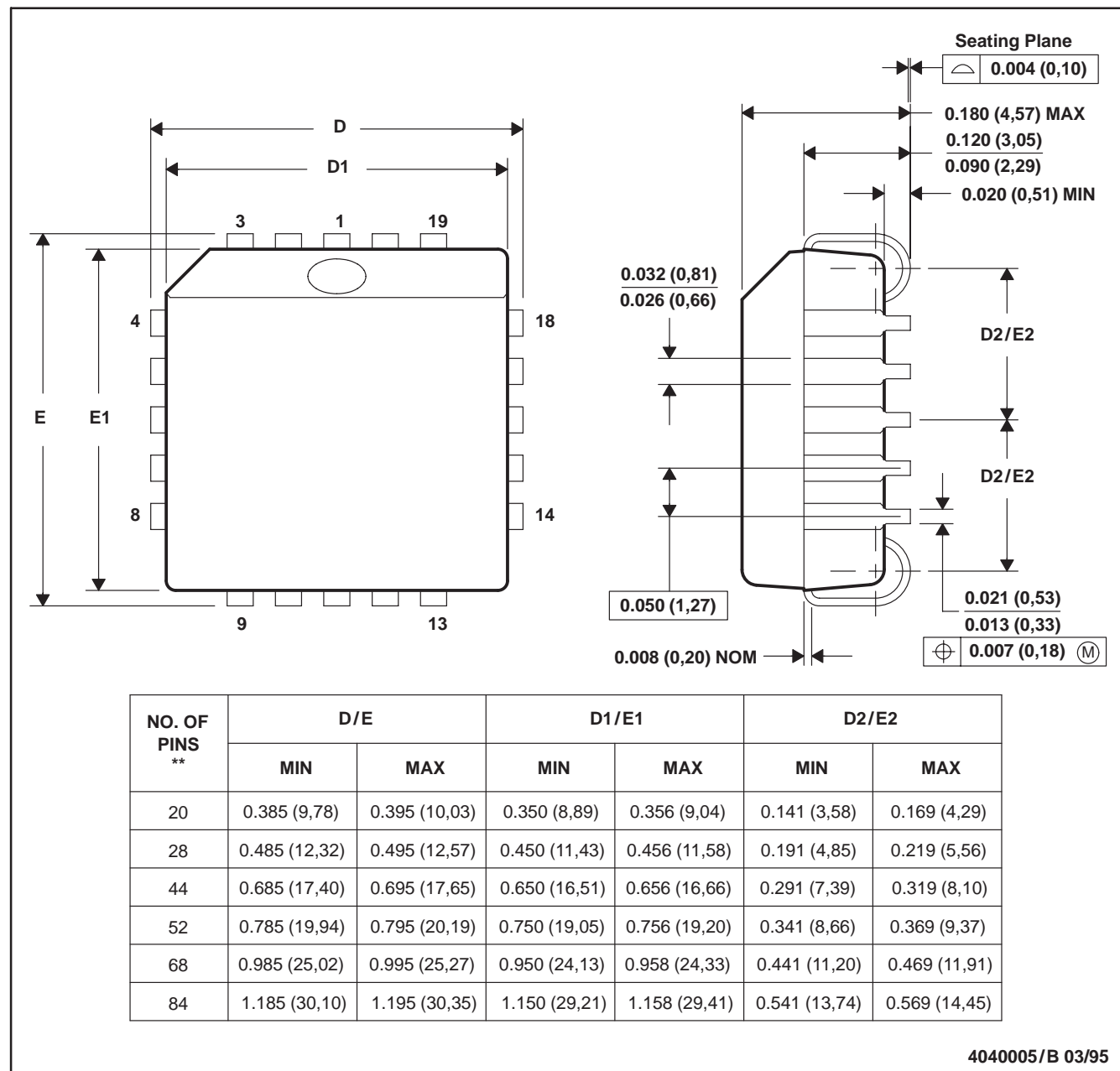
CERAMIC DUAL FLATPACK



FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

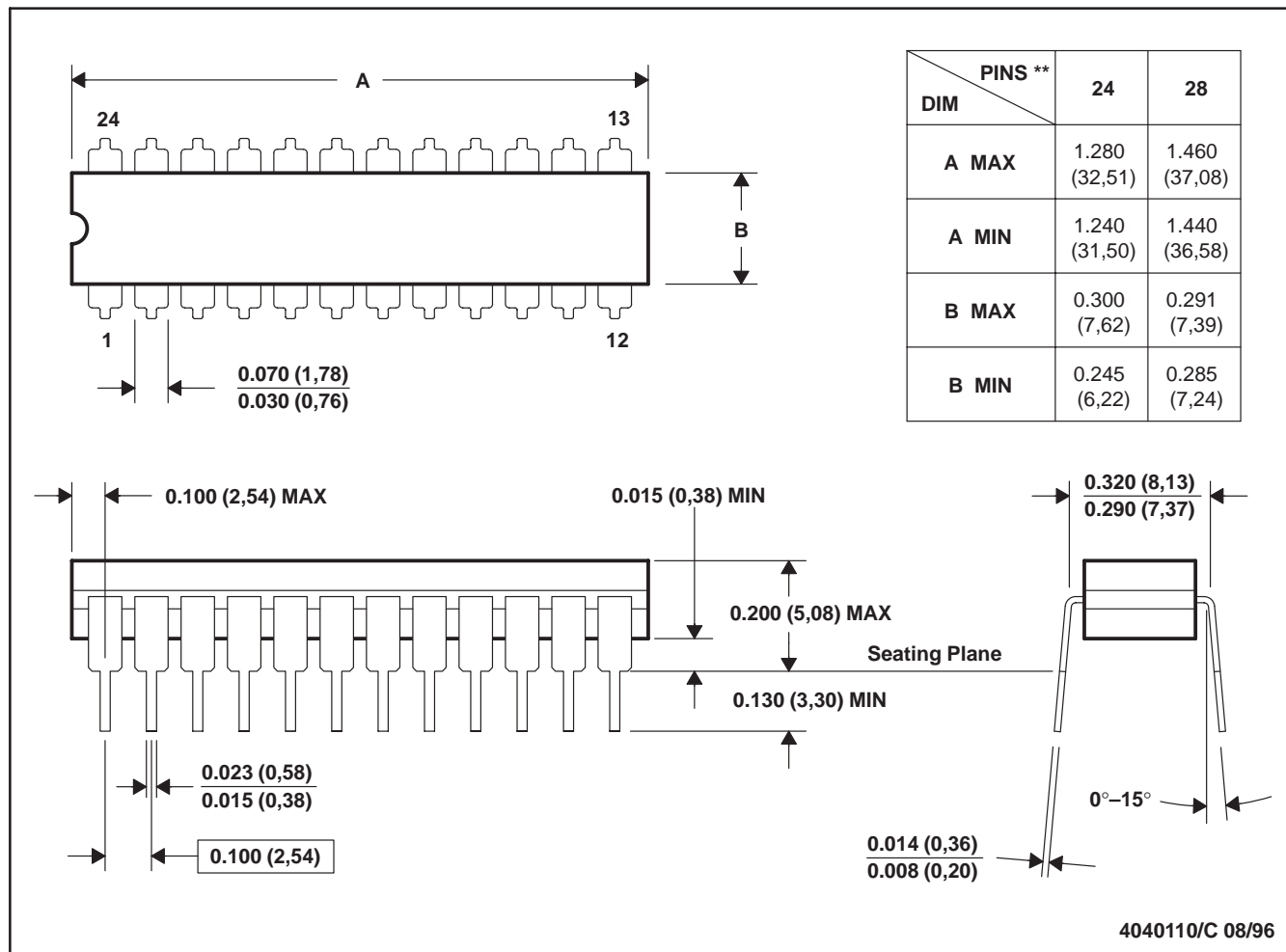


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

CERAMIC DUAL-IN-LINE

24 LEADS SHOWN



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TIBPAL22VP10-25MFKB	ACTIVE	LCCC	FK	28		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MJTB	ACTIVE	CDIP	JT	24		TBD	Call TI	Call TI
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type
TIBPAL22VP10-25MWB	ACTIVE	CFP	W	24	1	TBD	A42	N / A for Pkg Type

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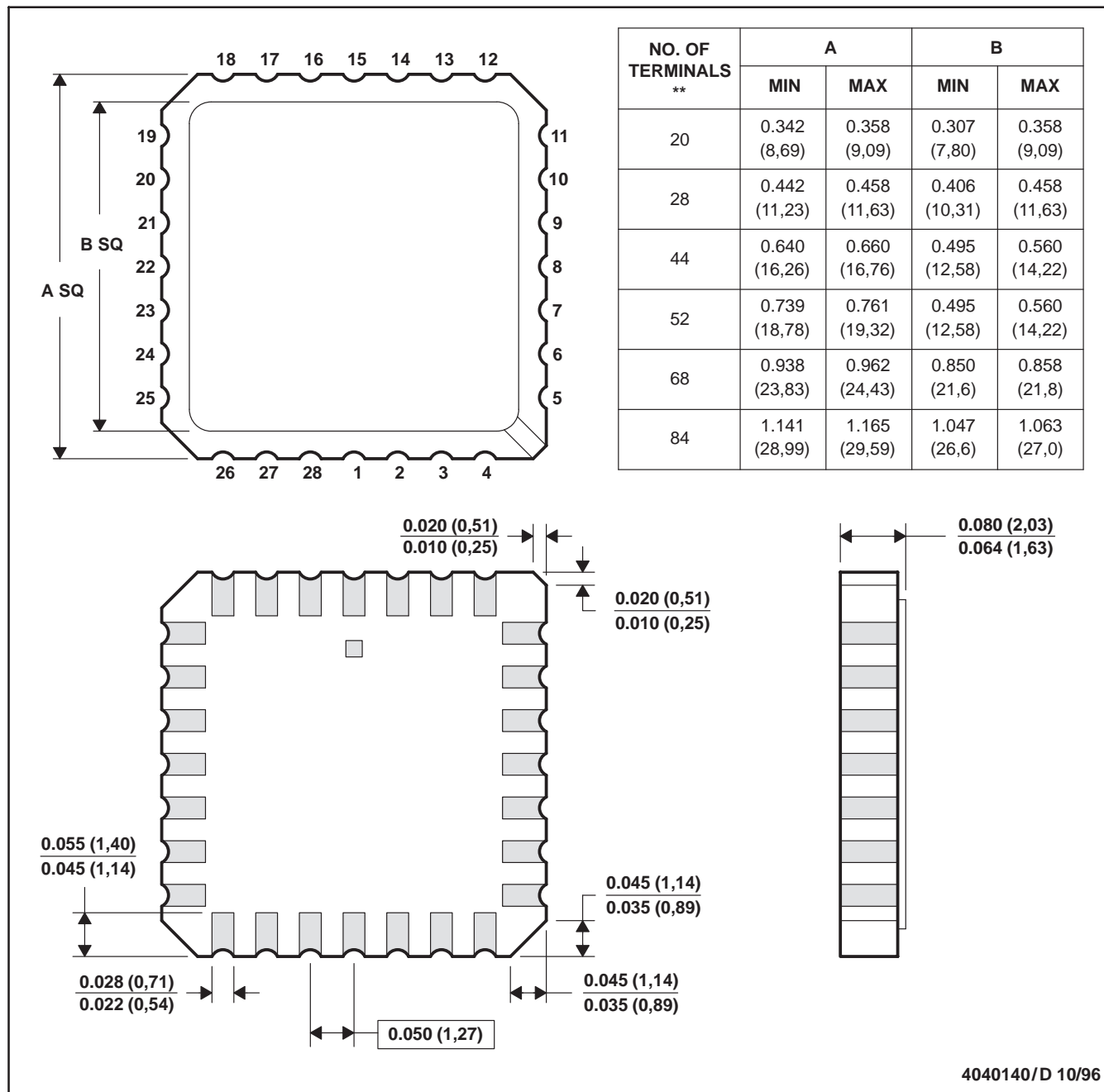
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FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



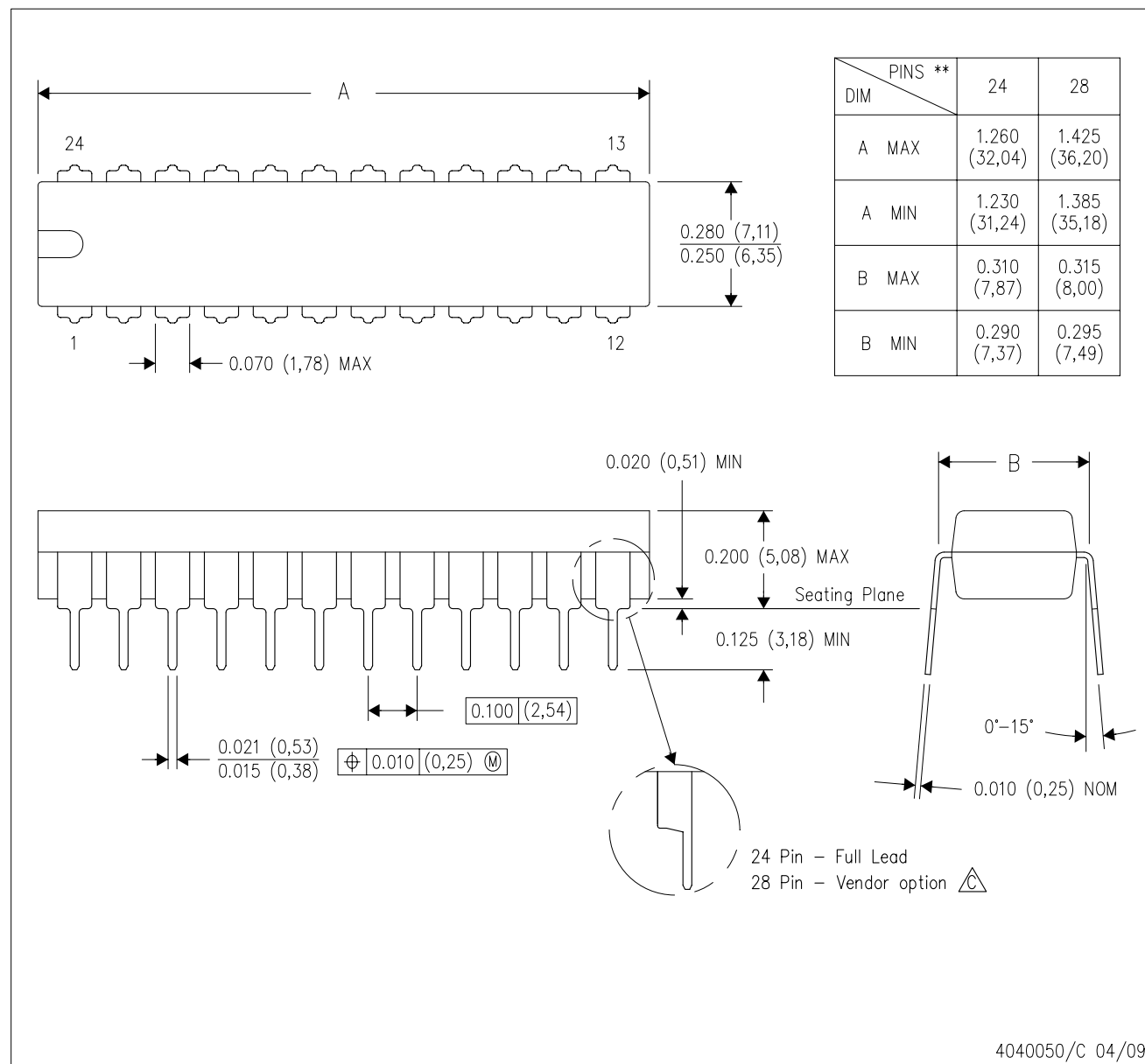
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 - Falls within JEDEC MS-004

MECHANICAL DATA

NT (R-PDIP-T**)

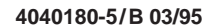
24 PINS SHOWN

PLASTIC DUAL-IN-LINE PACKAGE



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CERAMIC DUAL FLATPACK

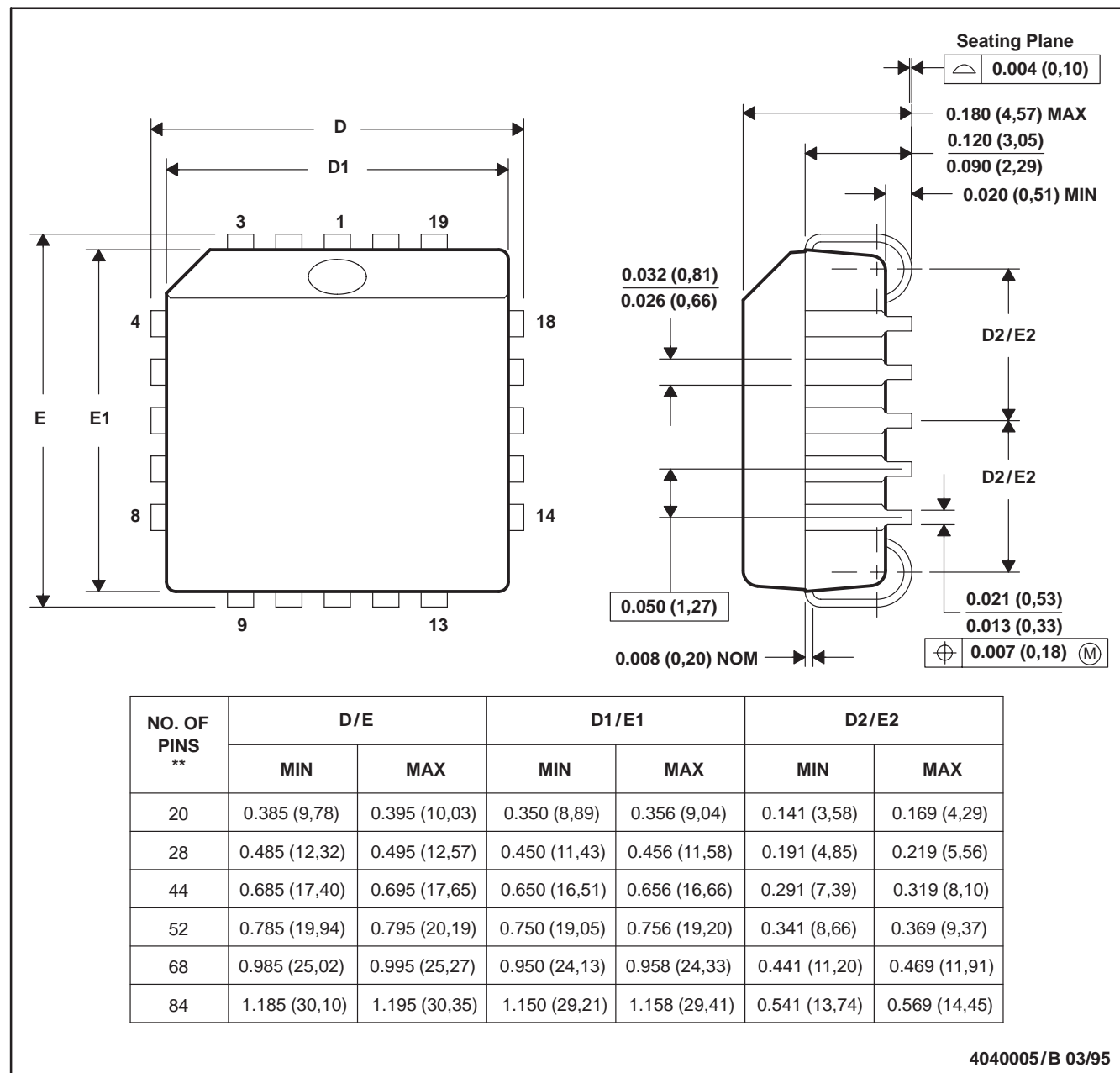


- 

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

20 PIN SHOWN

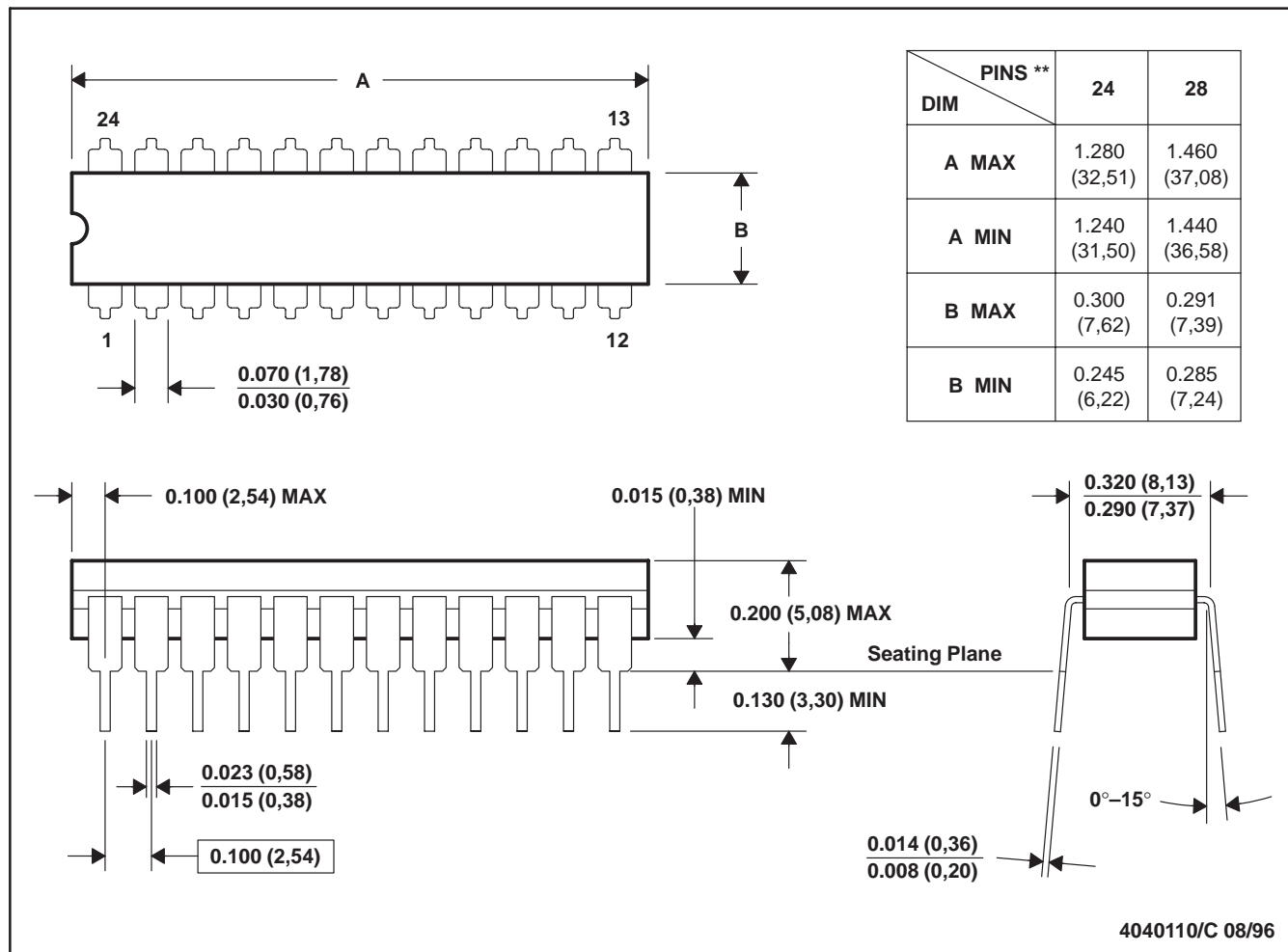


- NOTES: A. All linear dimensions are in inches (millimeters).
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 C. Falls within JEDEC MS-018

JT (R-GDIP-T**)

24 LEADS SHOWN

CERAMIC DUAL-IN-LINE



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 E. Falls within MIL STD 1835 GDIP3-T24, GDIP4-T28, and JEDEC MO-058 AA, MO-058 AB

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		Wireless	www.ti.com/wireless-apps