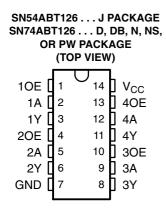
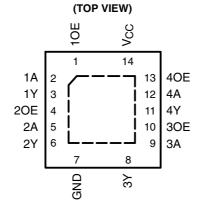
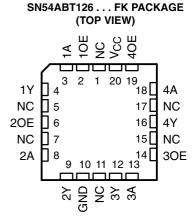
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- Typical V<sub>OLP</sub> (Output Ground Bounce)
   1 V at V<sub>CC</sub> = 5 V, T<sub>A</sub> = 25°C
- High-Impedance State During Power Up and Power Down
- High-Drive Outputs (-32-mA I<sub>OH</sub>, 64-mA I<sub>OL</sub>)
- I<sub>off</sub> and Power-Up 3-State Support Hot Insertion
- Latch-Up Performance Exceeds 500 mA Per JESD 17
- ESD Protection Exceeds JESD 22
  - 2000-V Human-Body Model (A114-A)
  - 200-V Machine Model (A115-A)





SN74ABT126 . . . RGY PACKAGE



NC - No internal connection

#### description/ordering information

The 'ABT126 bus buffer gates feature independent line drivers with 3-state outputs. Each output is disabled when the associated output-enable (OE) input is low.

When  $V_{CC}$  is between 0 and 2.1 V, the device is in the high-impedance state during power up or power down. However, to ensure the high-impedance state above 2.1 V, OE should be tied to GND through a pulldown resistor; the minimum value of the resistor is determined by the current-sourcing capability of the driver.

#### **ORDERING INFORMATION**

T <sub>A</sub>	PACKA	GE†	ORDERABLE PART NUMBER	TOP-SIDE MARKING	
	QFN – RGY	Tape and reel	SN74ABT126RGYR	AB126	
	PDIP – N	Tube	SN74ABT126N	SN74ABT126N	
	COIC D	Tube	SN74ABT126D	ADT400	
4000 to 0500	SOIC - D	Tape and reel	SN74ABT126DR	ABT126	
-40°C to 85°C	SOP - NS	Tape and reel	SN74ABT126NSR	ABT126	
	SSOP – DB	Tape and reel	SN74ABT126DBR	AB126	
	TOOOD DW	Tube	SN74ABT126PW	15/22	
	TSSOP – PW	Tape and reel	SN74ABT126PWR	AB126	
55°C to 105°C	CDIP – J	Tube	SNJ54ABT126J	SNJ54ABT126J	
–55°C to 125°C	LCCC - FK	Tube	SNJ54ABT126FK	SNJ54ABT126FK	

<sup>&</sup>lt;sup>†</sup> Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.



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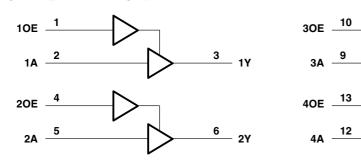


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#### **FUNCTION TABLE** (each buffer)

INP	JTS	OUTPUT				
OE	Α	Y				
Н	Н	Н				
Н	L	L				
L	Χ	Z				

### logic diagram (positive logic)



Pin numbers shown are for the D, DB, J, N, NS, PW, and RGY packages.

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

Supply voltage range, V <sub>CC</sub>	$\dots$ $-0.5\ V$ to 7 $V$
Input voltage range, V <sub>I</sub> (see Note 1)	$\dots$ -0.5 V to 7 V
Voltage range applied to any output in the high or power-off state, V <sub>O</sub>	0.5 V to 5.5 V
Current into any output in the low state, Io: SN54ABT126	96 mA
SN74ABT126	128 mA
Input clamp current, I <sub>IK</sub> (V <sub>I</sub> < 0)	–18 mA
Output clamp current, I <sub>OK</sub> (V <sub>O</sub> < 0)	–50 mA
Package thermal impedance, θ <sub>JA</sub> (see Note 2): D package	86°C/W
(see Note 2): DB package	96°C/W
(see Note 2): N package	80°C/W
(see Note 2): NS package	76°C/W
(see Note 2): PW package	113°C/W
(see Note 3): RGY package	47°C/W
Storage temperature range, T <sub>stg</sub>	65°C to 150°C

<sup>†</sup> Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "recommended operating conditions" is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

- NOTES: 1. The input and output negative-voltage ratings may be exceeded if the input and output clamp-current ratings are observed.
  - 2. The package thermal impedance is calculated in accordance with JESD 51-7.
  - 3. The package thermal impedance is calculated in accordance with JESD 51-5.



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## recommended operating conditions (see Note 4)

		SN54ABT126		SN74A	BT126	UNIT
		MIN	MAX	MIN	MAX	UNII
$V_{CC}$	Supply voltage	4.5	5.5	4.5	5.5	V
V <sub>IH</sub>	High-level input voltage	2	7	2		V
V <sub>IL</sub>	Low-level input voltage		0.8		8.0	V
VI	Input voltage	0	V <sub>CC</sub>	0	$V_{CC}$	٧
I <sub>OH</sub>	High-level output current	7	-24		-32	mA
l <sub>OL</sub>	Low-level output current	2	48		64	mA
Δt/Δν	Input transition rise or fall rate	30/	10		10	ns/V
$\Delta t/\Delta V_{CC}$	Power-up ramp rate	200		200		μs/V
T <sub>A</sub>	Operating free-air temperature	-55	125	-40	85	°C

NOTE 4: All unused inputs of the device must be held at V<sub>CC</sub> or GND to ensure proper device operation. Refer to the TI application report, *Implications of Slow or Floating CMOS Inputs*, literature number SCBA004.

# electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

			1	Γ <sub>A</sub> = 25°C	;	SN54A	BT126	SN74ABT126			
PARAMETER	TEST CONDIT	TIONS	MIN	TYP†	MAX	MIN	MAX	MIN	MAX	UNIT	
V <sub>IK</sub>	$V_{CC} = 4.5 \text{ V},$	I <sub>I</sub> = -18 mA			-1.2		-1.2		-1.2	V	
	$V_{CC} = 4.5 \text{ V},$	$I_{OH} = -3 \text{ mA}$	2.5			2.5		2.5			
.,	$V_{CC} = 5 V$ ,	$I_{OH} = -3 \text{ mA}$	3			3		3			
V <sub>OH</sub>	V <sub>CC</sub> = 4.5 V	$I_{OH} = -24 \text{ mA}$	2			2				V	
	V <sub>CC</sub> = 4.5 V	$I_{OH} = -32 \text{ mA}$	2*					2		1	
W	V 45V	$I_{OL} = 48 \text{ mA}$			0.55		0.55				
V <sub>OL</sub>	V <sub>CC</sub> = 4.5 V	$I_{OL} = 64 \text{ mA}$			0.55*				0.55	V	
V <sub>hys</sub>				100			4			mV	
II	$V_{CC} = 0 \text{ to } 5.5 \text{ V},$	$V_I = V_{CC}$ or GND			±1		±1		±1	μΑ	
I <sub>OZPU</sub>	$V_{CC} = 0 \text{ to } 2.1 \text{ V}, V_{O} = 0.5 \text{ V t}$			±50		±50		±50	μΑ		
I <sub>OZPD</sub>	$V_{CC} = 2.1 \text{ V to } 0, V_{O} = 0.5 \text{ V t}$			±50	4	±50		±50	μΑ		
I <sub>OZH</sub>	$V_{CC} = 2.1 \text{ V to } 5.5 \text{ V}, V_{O} = 2.7 \text{ V}$	7 V, OE ≤ 0.8 V			10	37	10		10	μΑ	
I <sub>OZL</sub>	$V_{CC} = 2.1 \text{ V to } 5.5 \text{ V}, V_{O} = 0.5 \text{ V}$	5 V, OE ≤ 0.8 V			-10	90	-10		-10	μΑ	
l <sub>off</sub>	$V_{CC} = 0$ ,	$V_I$ or $V_O \le 4.5 \text{ V}$			±100	PA			±100	μΑ	
I <sub>CEX</sub>	$V_{CC} = 5.5 \text{ V}, V_{O} = 5.5 \text{ V}$	Outputs high			50		50		50	μΑ	
I <sub>O</sub> §	$V_{CC} = 5.5 \text{ V},$	V <sub>O</sub> = 2.5 V	-50	-100	-200	-50	-200	-50	-200	mA	
	.,	Outputs high		1	250		250		250	μΑ	
I <sub>CC</sub>	$V_{CC} = 5.5 \text{ V, } I_{O} = 0,$ $V_{I} = V_{CC} \text{ or GND}$	Outputs low		24	30		30		30	mA	
	V1 = V00 or GIVE	Outputs disabled		0.5	250		250		250	μΑ	
Δl <sub>CC</sub> ¶	V <sub>CC</sub> = 5.5 V, One input at 3.4 V,	Outputs enabled			1.5		1.5		1.5	mA	
ΔICC	Other inputs at V <sub>CC</sub> or GND	Outputs disabled			50		50		50	μΑ	
C <sub>i</sub>	V <sub>I</sub> = 2.5 V or 0.5 V			3						pF	
C <sub>o</sub>	$V_0 = 2.5 \text{ V or } 0.5 \text{ V}$			7						pF	

<sup>\*</sup> On products compliant to MIL-PRF-38535, this parameter does not apply.

 $<sup>\</sup>P$  This is the increase in supply current for each input that is at the specified TTL voltage level, rather than  $V_{CC}$  or GND.



 $<sup>^{\</sup>dagger}$  All typical values are at  $V_{CC}$  = 5 V.

 $<sup>^{\</sup>ddagger}$  For  $V_{CC}$  between 2.1 V and 4 V, OE should be less than or equal to 0.5 V to ensure a low state.

<sup>§</sup> Not more than one output should be tested at a time, and the duration of the test should not exceed one second.

## SN54ABT126, SN74ABT126 QUADRUPLE BUS BUFFER GATES WITH 3-STATE OUTPUTS

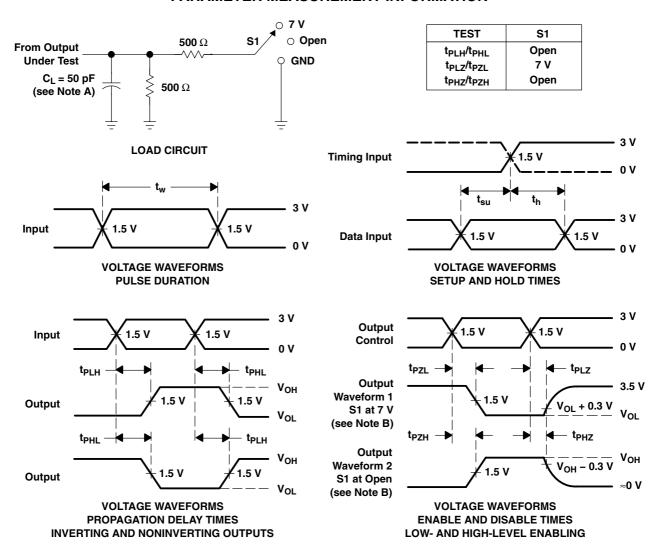
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# switching characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Note 5 and Figure 1)

PARAMETER	FROM	TO (OUTPUT)	V <sub>0</sub>	V <sub>CC</sub> = 5 V, T <sub>A</sub> = 25°C			BT126	SN74ABT126		UNIT
	(INPUT)		MIN	TYP	MAX	MIN	MAX	MIN	MAX	
t <sub>PLH</sub>		<b>&gt;</b>	1	2.9	4.9	1	7.3	1	6.3	ns
t <sub>PHL</sub>	Α	Y	1	2.5	5.1	1	5.9	1	5.7	
t <sub>PZH</sub>	05	V	1	4.4	5.8	1/	5.3	1	6.5	
t <sub>PZL</sub>	OE	Υ	1	4.4	5.9	37)	6.4	1	6.5	ns
t <sub>PHZ</sub>	٥٢	V	1	3	3 5.7 01		6.9	1	6.8	
t <sub>PLZ</sub>	OE	Y	1	3	5.8	Q 1	7.2	1	6.7	ns

NOTE 5: Limits may vary among suppliers.

#### PARAMETER MEASUREMENT INFORMATION



NOTES: A. C<sub>L</sub> includes probe and jig capacitance.

- 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 are supplied by generators having the following characteristics: PRR  $\leq$  10 MHz,  $Z_{O}$  = 50  $\Omega$ ,  $t_{r} \leq$  2.5 ns.  $t_{f} \leq$  2.5 ns.
- D. The outputs are measured one at a time with one transition per measurement.
- E. All parameters and waveforms are not applicable to all devices.

Figure 1. Load Circuit and Voltage Waveforms





17-May-2014

#### **PACKAGING INFORMATION**

Orderable Device	Status	Package Type	Package Drawing	Pins	Package Qty	Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking (4/5)	Samples
SN74ABT126D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	ABT126	Samples
SN74ABT126DBLE	OBSOLETE	SSOP	DB	14		TBD	Call TI	Call TI	-40 to 85		
SN74ABT126DBR	ACTIVE	SSOP	DB	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AB126	Samples
SN74ABT126DBRE4	ACTIVE	SSOP	DB	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126DBRG4	ACTIVE	SSOP	DB	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126DE4	ACTIVE	SOIC	D	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	ABT126	Samples
SN74ABT126DR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	ABT126	Samples
SN74ABT126DRE4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	ABT126	Samples
SN74ABT126DRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	ABT126	Samples
SN74ABT126N	ACTIVE	PDIP	N	14	25	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	-40 to 85	SN74ABT126N	Samples
SN74ABT126NE4	ACTIVE	PDIP	N	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126NSR	ACTIVE	SO	NS	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	ABT126	Samples
SN74ABT126NSRE4	ACTIVE	SO	NS	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126NSRG4	ACTIVE	SO	NS	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126PW	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AB126	Samples
SN74ABT126PWE4	ACTIVE	TSSOP	PW	14	90	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AB126	Samples
SN74ABT126PWG4	ACTIVE	TSSOP	PW	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126PWLE	OBSOLETE	TSSOP	PW	14		TBD	Call TI	Call TI	-40 to 85		



## **PACKAGE OPTION ADDENDUM**

17-May-2014

Orderable Device	Status	Package Type	Package Drawing	Pins	Package Qty		Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Samples
	(1)		Drawing		Qty	(2)	(6)	(3)		(4/5)	
SN74ABT126PWR	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AB126	Samples
SN74ABT126PWRE4	ACTIVE	TSSOP	PW	14		TBD	Call TI	Call TI	-40 to 85		Samples
SN74ABT126PWRG4	ACTIVE	TSSOP	PW	14	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AB126	Samples
SN74ABT126RGYR	ACTIVE	VQFN	RGY	14	3000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR	-40 to 85	AB126	Samples
SN74ABT126RGYRG4	ACTIVE	VQFN	RGY	14		TBD	Call TI	Call TI	-40 to 85		Samples

(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.
- (4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.
- (5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.
- (6) Lead/Ball Finish Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.



## **PACKAGE OPTION ADDENDUM**

17-May-2014

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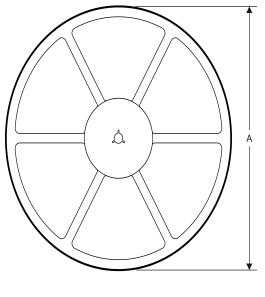
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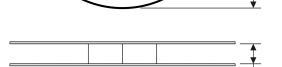
# PACKAGE MATERIALS INFORMATION

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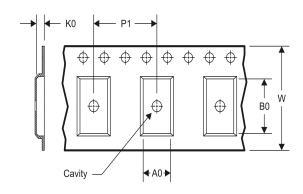
## TAPE AND REEL INFORMATION

#### **REEL DIMENSIONS**





#### **TAPE DIMENSIONS**



A0	Dimension designed to accommodate the component width
В0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

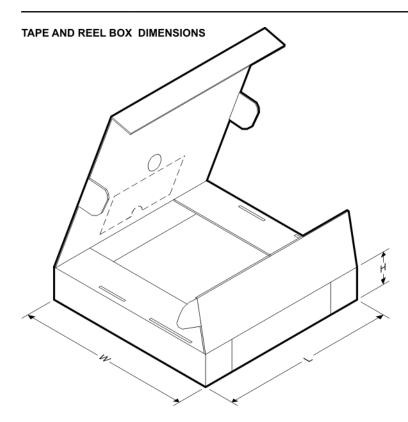
#### TAPE AND REEL INFORMATION

#### \*All dimensions are nominal

All diffiensions are nominal												
Device	Package Type	Package Drawing		SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74ABT126DBR	SSOP	DB	14	2000	330.0	16.4	8.2	6.6	2.5	12.0	16.0	Q1
SN74ABT126DR	SOIC	D	14	2500	330.0	16.4	6.5	9.0	2.1	8.0	16.0	Q1
SN74ABT126NSR	so	NS	14	2000	330.0	16.4	8.2	10.5	2.5	12.0	16.0	Q1
SN74ABT126PWR	TSSOP	PW	14	2000	330.0	12.4	6.9	5.6	1.6	8.0	12.0	Q1
SN74ABT126RGYR	VQFN	RGY	14	3000	330.0	12.4	3.75	3.75	1.15	8.0	12.0	Q1

**PACKAGE MATERIALS INFORMATION** 

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\*All dimensions are nominal

7 til diffictioiono are nominal							
Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74ABT126DBR	SSOP	DB	14	2000	367.0	367.0	38.0
SN74ABT126DR	SOIC	D	14	2500	367.0	367.0	38.0
SN74ABT126NSR	SO	NS	14	2000	367.0	367.0	38.0
SN74ABT126PWR	TSSOP	PW	14	2000	367.0	367.0	35.0
SN74ABT126RGYR	VQFN	RGY	14	3000	367.0	367.0	35.0

# N (R-PDIP-T\*\*)

## PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN

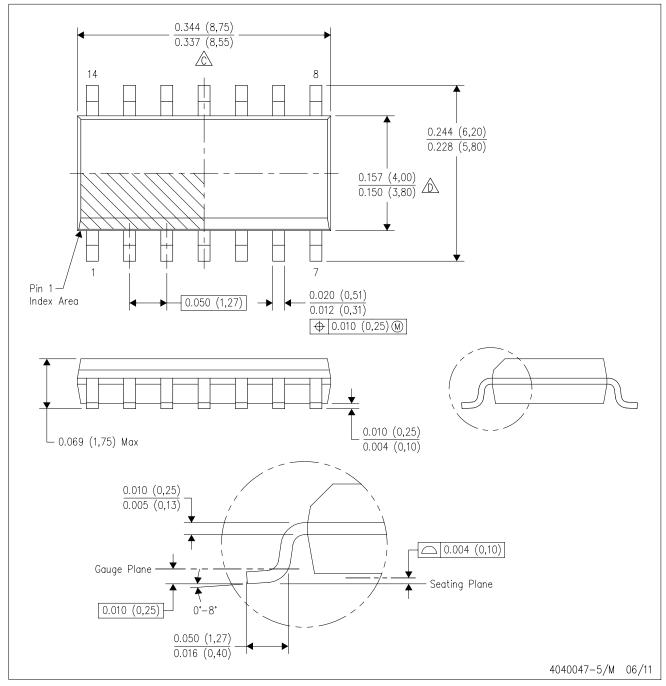


- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
- The 20 pin end lead shoulder width is a vendor option, either half or full width.



# D (R-PDSO-G14)

## PLASTIC SMALL OUTLINE

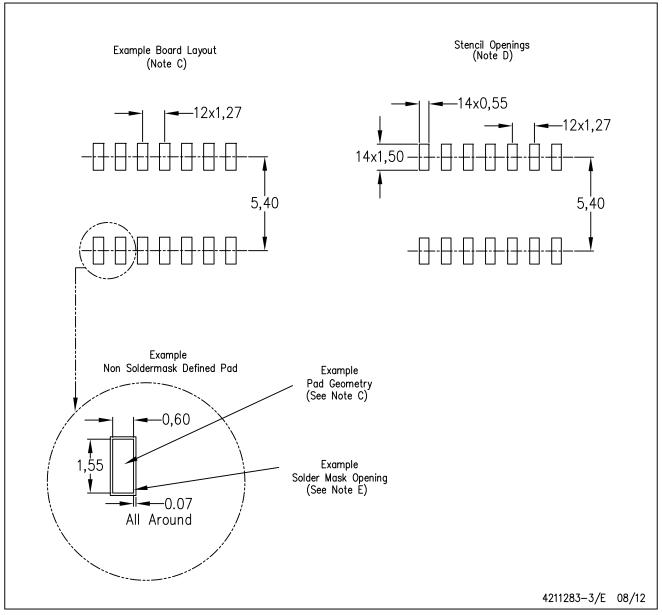


- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.006 (0,15) each side.
- Body width does not include interlead flash. Interlead flash shall not exceed 0.017 (0,43) each side.
- E. Reference JEDEC MS-012 variation AB.



# D (R-PDSO-G14)

# PLASTIC SMALL OUTLINE

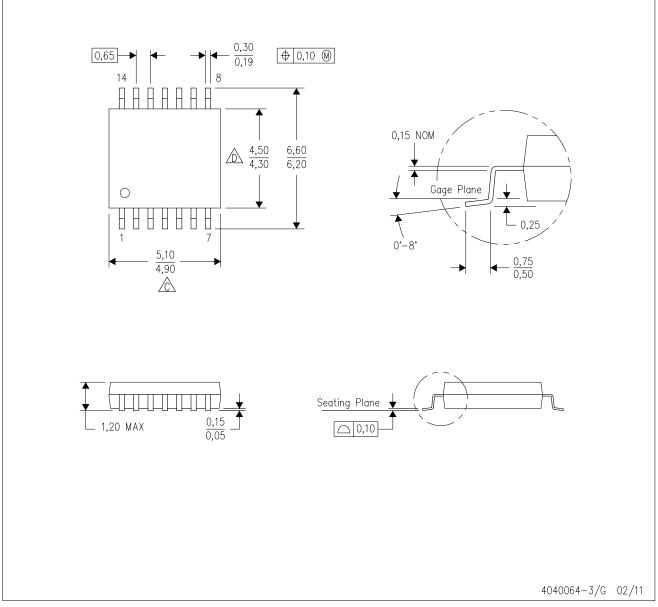


- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Publication IPC-7351 is recommended for alternate designs.
- D. Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC-7525 for other stencil recommendations.
- E. Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.



PW (R-PDSO-G14)

## PLASTIC SMALL OUTLINE

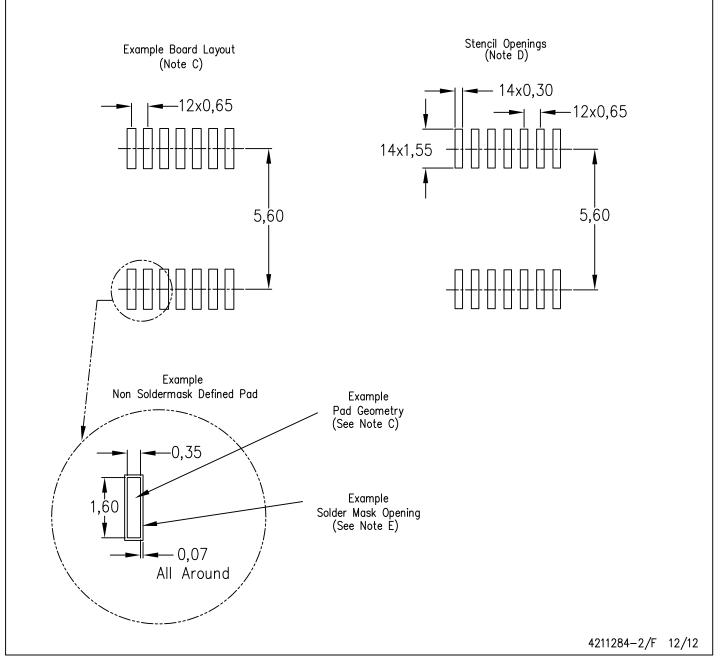


- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M—1994.
- B. This drawing is subject to change without notice.
- Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0,15 each side.
- Body width does not include interlead flash. Interlead flash shall not exceed 0,25 each side.
- E. Falls within JEDEC MO-153



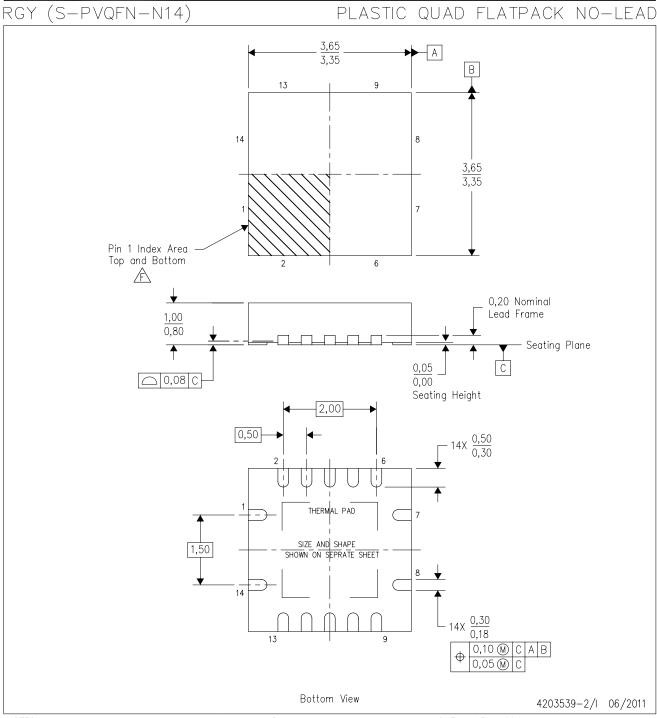
# PW (R-PDSO-G14)

# PLASTIC SMALL OUTLINE



- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Publication IPC-7351 is recommended for alternate designs.
- D. Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC-7525 for other stencil recommendations.
- E. Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.





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. QFN (Quad Flatpack No-Lead) package configuration.
- D. The package thermal pad must be soldered to the board for thermal and mechanical performance.
- E. See the additional figure in the Product Data Sheet for details regarding the exposed thermal pad features and dimensions.
- Pin 1 identifiers are located on both top and bottom of the package and within the zone indicated. The Pin 1 identifiers are either a molded, marked, or metal feature.
- G. Package complies to JEDEC MO-241 variation BA.



# RGY (S-PVQFN-N14)

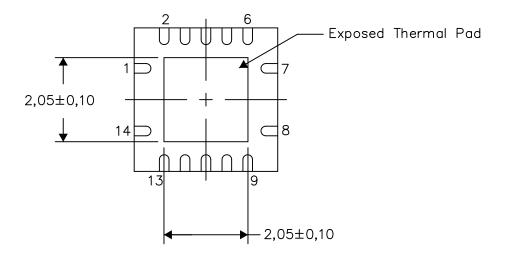
### PLASTIC QUAD FLATPACK NO-LEAD

#### THERMAL INFORMATION

This package incorporates an exposed thermal pad that is designed to be attached directly to an external heatsink. The thermal pad must be soldered directly to the printed circuit board (PCB). After soldering, the PCB can be used as a heatsink. In addition, through the use of thermal vias, the thermal pad can be attached directly to the appropriate copper plane shown in the electrical schematic for the device, or alternatively, can be attached to a special heatsink structure designed into the PCB. This design optimizes the heat transfer from the integrated circuit (IC).

For information on the Quad Flatpack No—Lead (QFN) package and its advantages, refer to Application Report, QFN/SON PCB Attachment, Texas Instruments Literature No. SLUA271. This document is available at www.ti.com.

The exposed thermal pad dimensions for this package are shown in the following illustration.



Bottom View

Exposed Thermal Pad Dimensions

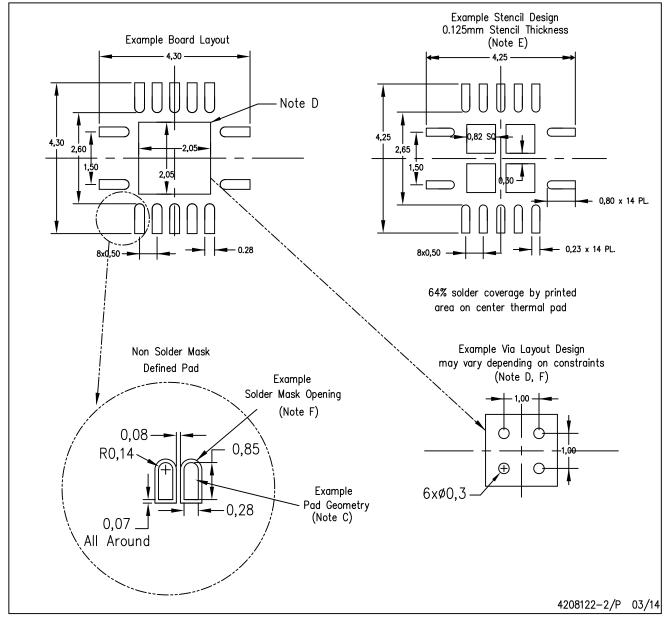
4206353-2/P 03/14

NOTE: All linear dimensions are in millimeters



# RGY (S-PVQFN-N14)

# PLASTIC QUAD FLATPACK NO-LEAD



- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Publication IPC-7351 is recommended for alternate designs.
- D. This package is designed to be soldered to a thermal pad on the board. Refer to Application Note, Quad Flat—Pack QFN/SON PCB Attachment, Texas Instruments Literature No. SLUA271, and also the Product Data Sheets for specific thermal information, via requirements, and recommended board layout. These documents are available at www.ti.com <a href="https://www.ti.com">http://www.ti.com</a>.
- E. Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC 7525 for stencil design considerations.
- F. Customers should contact their board fabrication site for minimum solder mask web tolerances between signal pads.



## **MECHANICAL DATA**

## NS (R-PDSO-G\*\*)

# 14-PINS SHOWN

#### PLASTIC SMALL-OUTLINE PACKAGE



- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.



## DB (R-PDSO-G\*\*)

## PLASTIC SMALL-OUTLINE

#### **28 PINS SHOWN**



NOTES: A. All linear dimensions are in millimeters.

B. This drawing is subject to change without notice.

C. Body dimensions do not include mold flash or protrusion not to exceed 0,15.

D. Falls within JEDEC MO-150

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