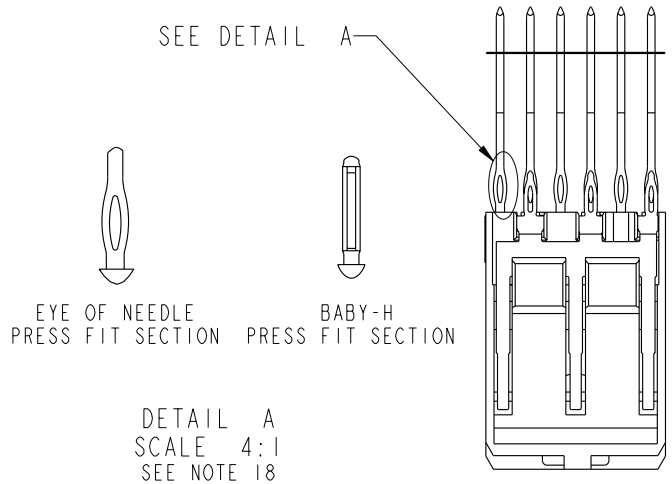
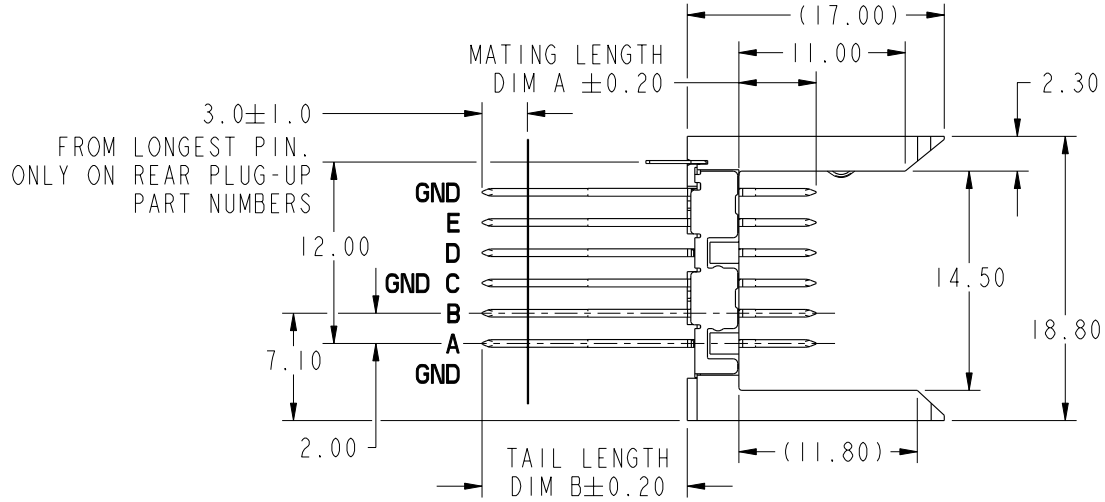
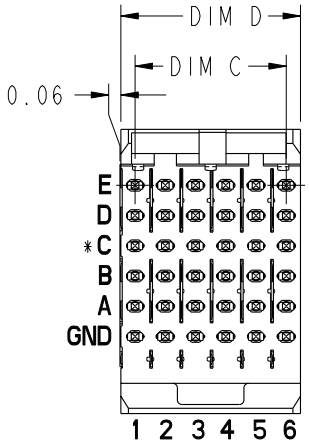
PRODUCT NUMBER	PLATING PERFORMANCE LEVEL	DIM C	DIM D	PRESS FIT TAIL PLATING	SHROUD P/N FOR REAR PLUG UP APPLICATIONS
84809-101ZZZ	TELCORDIA CO	10.00	11.88	STANDARD	84811-101
84809-101ZZZLF				LEAD-FREE	84811-101LF
84809-102ZZZ		22.00	23.88	STANDARD	84811-102
84809-102ZZZLF				LEAD-FREE	84811-102LF
84809-103ZZZ		34.00	35.88	STANDARD	84811-103
84809-103ZZZLF				LEAD-FREE	84811-103LF
84809-104ZZZ		46.00	47.88	STANDARD	84811-104
84809-104ZZZLF				LEAD-FREE	84811-104LF
84809-501ZZZ	TELCORDIA UE	10.00	11.88	STANDARD	84811-501
84809-501ZZZLF				LEAD-FREE	84811-501LF
84809-502ZZZ		22.00	23.88	STANDARD	84811-502
84809-502ZZZLF				LEAD-FREE	84811-502LF
84809-503ZZZ		34.00	35.88	STANDARD	84811-503
84809-503ZZZLF				LEAD-FREE	84811-503LF
84809-504ZZZ		46.00	47.88	STANDARD	84811-504
84809-504ZZZLF				LEAD-FREE	84811-504LF



DETAIL A
SCALE 4:1
SEE NOTE 18





*ROW C INFORMATION

ODD NUMBER COLUMNS WITHIN ROW C ARE COMMONED TO GROUND INTERNALLY WITHIN THE HOUSING. THE EVEN NUMBER COLUMNS WITHIN ROW C ARE NOT. FOR MAXIMUM PERFORMANCE IT IS RECOMMENDED THESE EVEN COLUMNS BE GROUND COMMONED WITHIN PCB. SEE NOTE 15

ltr	ecn no.	dr	date
P	V06-0569	DCH	2006-06-12
R	V07-0501	DCH	2007-07-31
S	V08-0057	HTB	2008-02-04
T	V08-0065	LP	2008-03-19
-	-	-	-
M	V03-1156	TAB	2003-11-03
N	V05-0814	VS	2005-09-21

sheet index	revision sheet						
		T 1	T 2	T 3	T 4	T 5	T 6

mat'l code SEE NOTE 5

tolerances unless otherwise specified

linear	0.X ±0.3	
	0.XX ±0.13	
	.XXX ±.051	
angles	0° ±2°	
dr	E. KROPER.	2001-06-20
engr	J. VOLSTORF	2001-06-20
chr	J. VOLSTORF	2001-06-20
appd	J. VOLSTORF	2001-06-20

CUSTOMER COPY

projection

MM

scale 1:1

FCI www.fciconnect.com

title VERTICAL SIGNAL HDR. 5 ROW P.F. SPECIAL LOAD EXT.

product family METRAL 2000 code 213

size A dwg no 84809 sheet 1 of 6

cage code 22526

REV E - 2006-04-18

PDM: Rev:T STATUS: Released Printed: May 13, 2011

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN'S TAIL LENGTH				
			WHEN MATING TO A 73981 OR 84688 SERIES RECEPTACLE		WHEN MATING TO A 52057 SERIES METRAL 4000 RECEPTACLE		
			ROWS: A, B, C, D, AND E	GROUND ROW	ROWS: A, B, D, AND E	ROW C	GROUND ROW
01*	5.00	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
22		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
30		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
05		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
35		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
48		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
40		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
65		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
09		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
02*	5.75	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
44		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
31		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
06		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
36		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
49		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
25		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
66		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
10		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
03*	6.50	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
45		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
32		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
07		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
37		14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
50		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
41		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
24		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
11		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10

* STUB PINS - NO REAR PLUG-UP

** THE GREATEST RANGE OCCURS WHEN THE B DIMENSION OF PIN 'GND' IS ONE SIZE SHORTER THEN THE OTHER PINS.

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER COPY	FCI www.fciconnect.com
ltr	ecn no.	dr	date	linear	0.X ±0.3			
T					0.XX ±0.13		projection	title VERTICAL SIGNAL HDR. 5 ROW P.F. SPECIAL LOAD EXT.
					.XXX ±.051			
				angles	0° ±2°			
				dr	E. KROPER.	2001-06-20	MM	product family METRAL 2000 code 213
				engr	J. VOLSTORF	2001-06-20		
				chr	J. VOLSTORF	2001-06-20	scale 1:1	size A dwg no 84809 sheet 2
				appd	J. VOLSTORF	2001-06-20		
sheet index	revision sheet							cage code 22526

REV E - 2006-04-18

Pro/E

PDM: Rev:T STATUS: Released Printed: May 13, 2011

PIN NO.	DIM A MATING LENGTH	DIM B TAIL LENGTH	PCB THICKNESS RANGE ACCOMMODATED BY PIN LENGTH				
			WHEN MATING TO A 73981 OR 84688 SERIES RECEPTACLE		WHEN MATING TO A 52057 SERIES METRAL 4000 RECEPTACLE		
			ROWS: A, B, C, D, AND E	GROUND ROW	ROWS: A, B, D, AND E	ROW C	GROUND ROW
04*		4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
46		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
33		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
08		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
38	7.25	14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
51		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
42		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
67		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
12		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
19*		4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
47		12.20	2.95 - 3.80	2.95 - 4.20	2.95 - 3.80	2.95 - 3.80	2.95 - 4.20
34		12.95	2.95 - 4.55	3.25 - 4.95	2.95 - 4.55	2.95 - 4.55	3.25 - 4.95
20		13.70	2.95 - 5.30	4.00 - 5.70	3.30 - 5.30	2.95 - 5.30	4.00 - 5.70
39	8.00	14.45	3.05 - 6.05	4.75 - 6.45	4.05 - 6.05	3.05 - 6.05	4.75 - 6.45
52		15.20	3.80 - 6.80	5.50 - 7.20	4.80 - 6.80	3.80 - 6.80	5.50 - 7.20
43		15.70	4.30 - 7.30	6.00 - 7.70	5.30 - 7.30	4.30 - 7.30	6.00 - 7.70
68		16.40	5.00 - 8.00	6.70 - 8.40	6.00 - 8.00	5.00 - 8.00	6.70 - 8.40
21		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10

* STUB PINS - NO REAR PLUG-UP

** THE GREATEST RANGE OCCURS WHEN THE B DIMENSION OF PIN 'GND' IS ONE SIZE SHORTER THEN THE OTHER PINS.

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER	FCI www.fciconnect.com
ltr	ecn no.	dr	date				COPY	
T				linear	0.X ±0.3		projection	title VERTICAL SIGNAL HDR. 5 ROW P.F. SPECIAL LOAD EXT.
					0.XX ±0.13			
					.XXX ±.051			
				angles	0° ±2°			
				dr	E. KROPER.	2001-06-20	MM	product family METRAL 2000 code 213
				engr	J. VOLSTORF	2001-06-20		
				chr	J. VOLSTORF	2001-06-20	scale	size A dwg no 84809 sheet 3
				appd	J. VOLSTORF	2001-06-20	1:1	
sheet index	revision sheet							cage code 22526

REV E - 2006-04-18

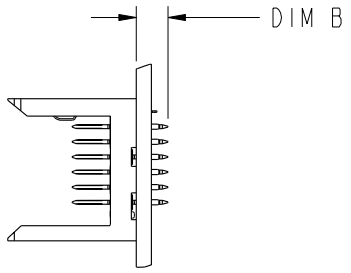
Pro/E

PDM: Rev:T STATUS: Released Printed: May 13, 2011

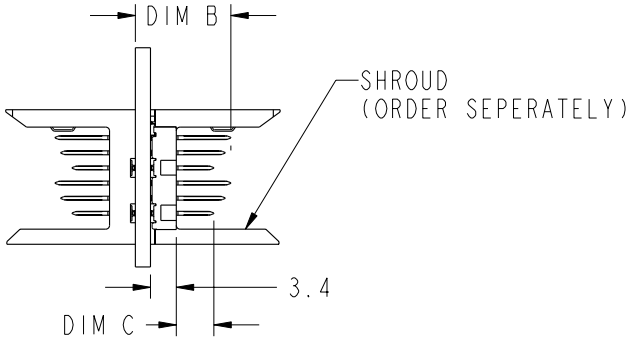
PRODUCT NUMBER
SEE SHEET 1

PRESS-FIT HOLES	OPTION 1
HOLE DIAMETER AFTER PLATING	∅0.65-0.80
DRILLED HOLE	∅0.81-0.86 (∅0.85 DRILL)
COPPER PLATING	0.025 MIN
SnPb PLATING	0.005-0.015

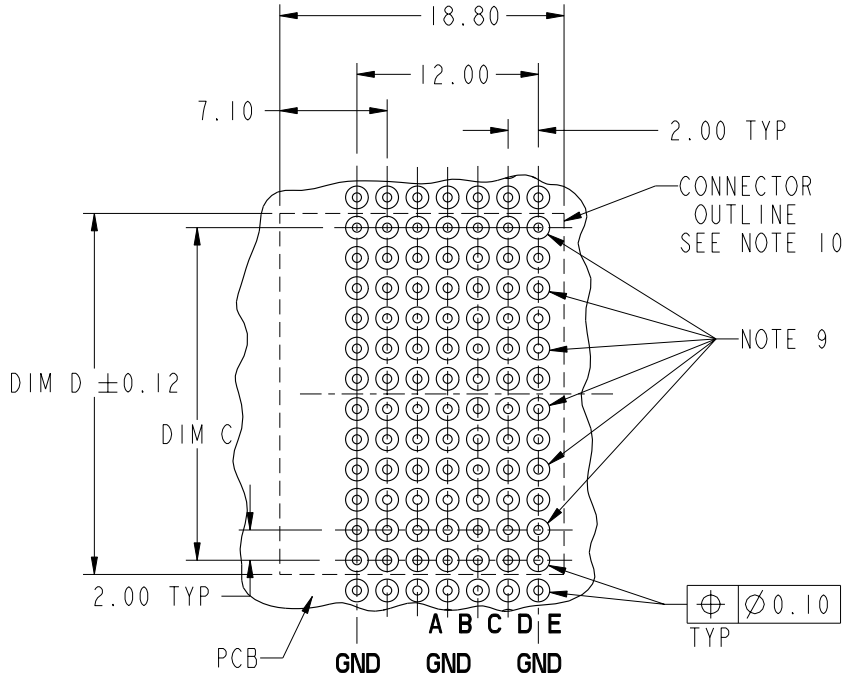
SEE PRINT 58351 FOR ADDITIONAL PCB INFORMATION.



STUB MOUNT



REAR PLUG-UP



SHOWN FROM HEADER SIDE OF CIRCUIT BOARD

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER	FCI www.fciconnect.com
ltr	ecn no.	dr	date				COPY	
T				linear	0.X ±0.3		projection	title VERTICAL SIGNAL HDR. 5 ROW P.F. SPECIAL LOAD EXT.
					0.XX ±0.13			
					.XXX ±.051			
				angles	0° ±2°			
				dr	E. KROPER.	2001-06-20	MM	product family METRAL 2000 code 213
				engr	J. VOLSTORF	2001-06-20		
				chr	J. VOLSTORF	2001-06-20	scale 1:1	size A dwg no 84809 sheet 4
				appd	J. VOLSTORF	2001-06-20		
sheet index	revision sheet							cage code 22526

REV E - 2006-04-18

Pro/E

PDM: Rev:T STATUS: Released Printed: May 13, 2011

PRODUCT NUMBER
SEE SHEET 1

NOTES:

1. SEE APPLICATION SPECIFICATION GS-20-010 FOR INFORMATION ON AVAILABLE TOOLING, CIRCUIT BOARD DESIGN CONSIDERATIONS, REPAIR PROCEDURES AND PRODUCT OFFERINGS.

2. SEE FCI PUBLICATION 95051I-028 FOR "ELECTRICAL PERFORMANCE DATA FOR DIFFERENTIAL APPLICATIONS."

3. SEE FCI PUBLICATION 95051I-029 FOR "ELECTRICAL PERFORMANCE DATA FOR SINGLE-ENDED APPLICATION."

4. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5M, 1994

(5.) HOUSING MATERIAL: LIQUID CRYSTAL POLYMER, 30% GLASS FILLED, FLAME RETARDANT PER UL 94-V0.
PIN MATERIAL: PHOSPHER BRONZE
GROUND SPRING MATERIAL: PHOSPHER BRONZE
STRIPLINE SHIELD MATERIAL: PHOSPHER BRONZE

6. PLATING INFORMATION: PLATING ON CONTACT AREA MEETS THE PERFORMANCE LEVELS SHOWN IN TABLE ON SHEET 1. PLATING ON "LF'TAILS IS Sn. PLATING ON ALL OTHER TAILS IS SnPb.

7. DIMENSIONAL RESTRICTIONS OF PINS IN HEADERS.
FOR MATING WITH METRAL 1000 RECEPTACLES
DIM A : 5.00mm MIN, 8.00mm MAX FOR ROWS A-E
DIM A : 5.00mm MIN, 5.75mm MAX FOR ROW GND NEXT TO ROW A
DIM C : 5.00mm MIN, 8.00mm MAX FOR ROWS A-E
DIM C : 4.60mm MIN, 6.30mm MAX FOR ROW GND NEXT TO ROW A
FOR MATING WITH METRAL 4000 RECEPTACLES
DIM A : 5.00mm MIN, 6.50mm MAX FOR ROWS A, B, D & E
DIM A : 5.00mm MIN, 8.00mm MAX FOR ROW C
DIM A : 5.00mm MIN, 5.75mm MAX FOR ROW GND NEXT TO ROW A
DIM C : 5.00mm MIN, 7.00mm MAX FOR ROWS A, B, D 0.000
DIM C : 5.00mm MIN, 8.00mm MAX FOR ROW C
DIM C : 4.60mm MIN, 6.30mm MAX FOR ROW GND NEXT TO ROW A

8. THE MIN PCB THICKNESS FOR REAR PLUG-UP APPLICATIONS IS 2.9mm SINCE THE COMPLIANT SECTIONS OF THE GROUND SPRING OF THE HEADER DIRECTLY OPPOSE THE GROUND SPRING OF THE SHROUD. THE MIN PCB THICKNESS FOR FRONT PLUG-UP ONLY APPLICATIONS IS 1.6mm.

(9.) THESE HOLES ARE NEEDED FOR REAR PLUG-UP DESIGNS USING A SHROUD AND MAY BE OMITTED FOR FRONT PLUG-UP ONLY DESIGNS.

(10.) THE 'CONNECTOR OUTLINE' IS THE MIN OUTLINE REQUIRED. TO DETERMINE THE OUTLINE NECESSARY TO PERMIT THE VARIOUS TYPES OF REPAIR OPERATIONS, SEE APPLICATION SPECIFICATION GS-20-010.

11. CURRENT RATING : 1 AMP PER PIN

12. TEMPERATURE RANGE : -55°C TO +105°C

13. P/N 84809-XYYZZZLF

14. P/N 84809-XYYZZZ SHOWN.

(15.) FOR FRONT PLUG-UP APPLICATIONS, THE EVEN NUMBERED PINS IN ROW 'C' CAN BE USED FOR POWER AS WELL AS FOR GROUND. IF THE SURROUNDING PINS ARE NOT USED FOR POWER, THEN EACH PIN CAN CARRY 3 AMPS. IF THE SURROUNDING PINS ARE USED FOR POWER, THEN EACH PIN CAN CARRY 1 AMP. WHEN THE SURROUNDING PINS ARE USED ONLY FOR LOW SPEED SIGNALS, THEN THE EVEN NUMBERED 'C' ROW PINS CAN ALSO BE USED FOR LOW SPEED SIGNALS. THIS IS NOT TRUE FOR REAR PLUG-UP APPLICATIONS USING METRAL 2000 SHROUD AS IN THIS CASE ALL 'C' ROW PINS ARE COMMON TO GROUND.

16. PRODUCTS WHERE THE PART NUMBERS ENDS IN LF MEET EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.

ALL PRODUCTS WILL WITHSTAND EXPOSURE TO 260°C FOR 60 SECONDS IN A CONVECTION, INFRA-RED OR VAPOR PHASE REFLOW OVEN

(17.) FOR LEAD FREE PART NUMBERS ADD 'LF' SUFFIX.
EXAMPLE: 84809-XYYYLF

(18.) PIN TYPE IS AT THE MANUFACTURE'S OPTION AND CAN EITHER BABY-H OR EYE OF THE NEEDLE STYLE.

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER	FCI www.fciconnect.com
ltr	ecn no.	dr	date				COPY	
T				linear	0.X ±0.3		projection	title VERTICAL SIGNAL HDR. 5 ROW P.F. SPECIAL LOAD EXT.
					0.XX ±0.13			
					.XXX ±.051			
				angles	0° ±2°			
				dr	E. KROPER.	2001-06-20	MM	product family METRAL 2000 code 213
				engr	J. VOLSTORF	2001-06-20		
				chr	J. VOLSTORF	2001-06-20	scale	size A dwg no 84809 sheet 5
				appd	J. VOLSTORF	2001-06-20	1:1	
sheet index	revision sheet							cage code 22526

REV E - 2006-04-18

Pro/E

PDM: Rev:T STATUS: Released Printed: May 13, 2011

SPECIAL LOAD PATTERNS

PRODUCT #	ROW	PIN CODES
84809-XYY001 SEE NOTE 17 LEAD FREE OPTION	E	01
	D	
	C	
	B	
	A	
	GND	
84809-XYY007 *RPU SEE NOTE 17 LEAD FREE OPTION	E	40
	D	
	C	
	B	
	A	
	GND	
84809-XYY011 SEE NOTE 17 LEAD FREE OPTION	E	02
	D	
	C	
	B	
	A	
	GND	01
84809-XYY050 SEE NOTE 17 LEAD FREE OPTION	E	01
	D	
	C	02
	B	01
	A	
	GND	
84809-XYY051 *RPU SEE NOTE 17 LEAD FREE OPTION	E	31
	D	
	C	
	B	
	A	
	GND	22
84809-XYY052 SEE NOTE 17 LEAD FREE OPTION	E	03
	D	
	C	
	B	
	A	
	GND	02

*REAR PLUG-UP PART NUMBER

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 6.00mm - 7.30 mm

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 2.95mm - 4.20mm

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER COPY
ltr	ecn no.	dr	date	linear	0.X ±0.3		
T					0.XX ±0.13		projection
					.XXX ±.051		
				angles	0° ±2°		MM
				dr	E. KROPER.	2001-06-20	
				engr	J. VOLSTORF	2001-06-20	
				chr	J. VOLSTORF	2001-06-20	scale 1:1
				appd	J. VOLSTORF	2001-06-20	
sheet index	revision sheet						

www.fciconnect.com

title: VERTICAL SIGNAL HDR. 5 ROW P.F. SPECIAL LOAD EXT.

product family: METRAL 2000 | code: 213

size: A | dwg no: 84809 | sheet: 6

cage code: 22526

REV E - 2006-04-18

Pro/E

PDM: Rev:T STATUS: Released Printed: May 13, 2011