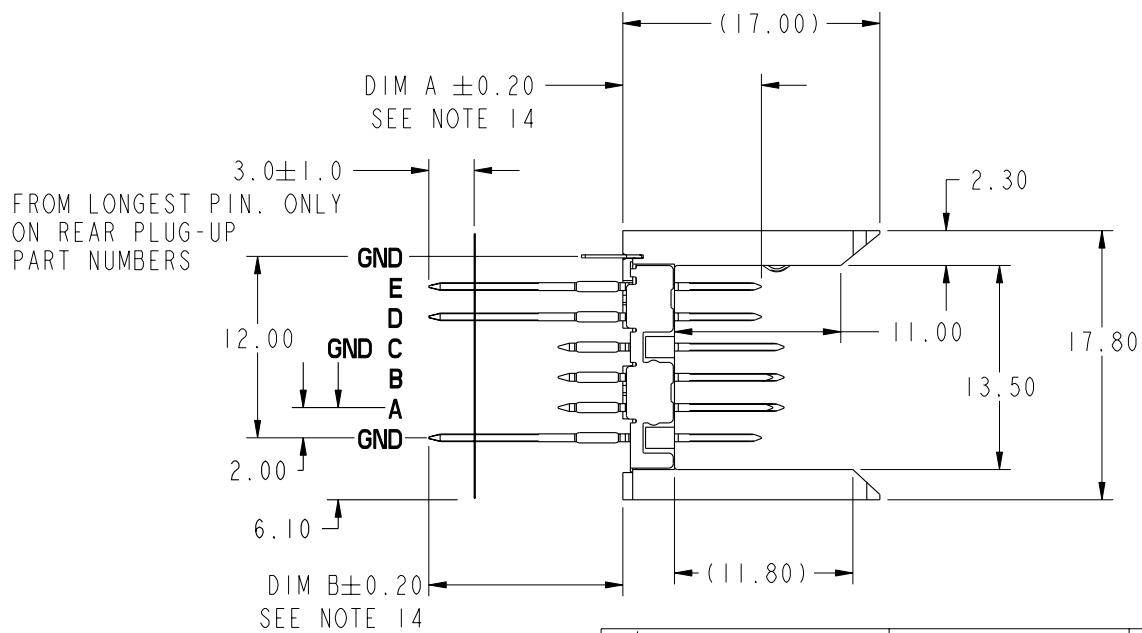
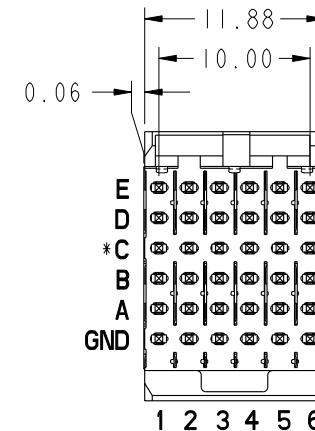
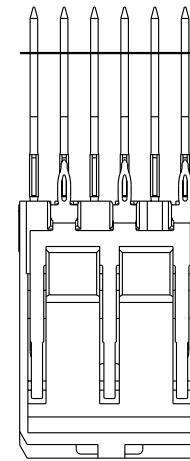




PRODUCT NUMBER	CONTACT PLATING PERFORMANCE LEVEL	PRESS-FIT TAIL PLATING
10043968-1YYY	TELCORDIA CO	STANDARD (SnPb)
10043968-1YYLF	TELCORDIA CO	LEAD FREE (Sn)
10043968-5YYY	TELCORDIA UE	STANDARD (SnPb)
10043968-5YYLF	TELCORDIA UE	LEAD FREE (Sn)



\*ROW C INFORMATION  
ODD NUMBER COLUMNS WITHIN ROW C ARE COMMONED  
TO GROUND INTERNALLY WITHIN THE HOUSING  
WHEN A U-SHAPED STRIPLINE SHIELD IS PRESENT.



mfg't code				SEE NOTE 5				tolerances unless otherwise specified				CUSTOMER COPY	projection	title	www.fciconnect.com
ltr	ecn no.	dr	date												
A	V04-0815	TAB	2004-08-12	linear				0. X ± 0.3				projection		VERTICAL SIGNAL HDR 5 ROW	
B	V04-0879	TAB	2004-11-02					0. XX ± 0.10						P. F. 30 POS. SELECT LOAD STD.	
C	V05-0535	DAI	2005-06-02	angles				0. XXX ± .050							
D	V06-0573	DCH	2006-06-15	dr				0° ± 2°				MM		product family METRAL 1000/4000	code
E	V06-0868	DCH	2006-08-29	engr				T. BRUNGARD							213
F	V07-0541	DCH	2007-08-14	chr				J. VOLSTORF				scale			sheet
G	V08-0118	HTB	2008-03-10	appd				2004-08-12							A
				J. VOLSTORF				2004-08-12							1 of 7
sheet		revision		G	G	G	G	G	G	G	G				
index		sheet		1	2	3	4	5	6	7					



This document is the property of and embodies CONFIDENTIAL and PROPRIETARY information of FCI. No part of the information shown on this document may be used in any way or disclosed to others without the written consent of FCI.  
Copyright FCI.

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,E	GROUND ROW	ROWS:A,B,D, 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
54*		11.55	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
55*		11.55	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
56*		11.55	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 THAN THE OTHER PINS.

mat'l code SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER		www.fciconnect.com				
ltr	ecn no.	dr	date	linear	0. X ± 0.3				COPY			
G					0. XX ± 0.10	projection	title VERTICAL SIGNAL HDR 5 ROW					
					0. XXX ± 050			P.F. 30 POS. SELECT LOAD STD.				
				angles	0° ± 2°	 scale						
					dr		T. BRUNGARD 2004-08-12	product family METRAL 1000/4000			code	
					engr		J. VOLSTORF 2004-08-12				size dwg no	213
					chr		J. VOLSTORF 2004-08-12					
				oppd	J. VOLSTORF 2004-08-12				sheet	2		
sheet	revision											
index	sheet											

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,E	GROUND ROW	ROWS:A,B,D, E	ROW C	GROUND ROW
04*	7.25	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
57*		11.55	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		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*	8.00	4.30	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN	1.60 MIN
58*		11.55	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		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

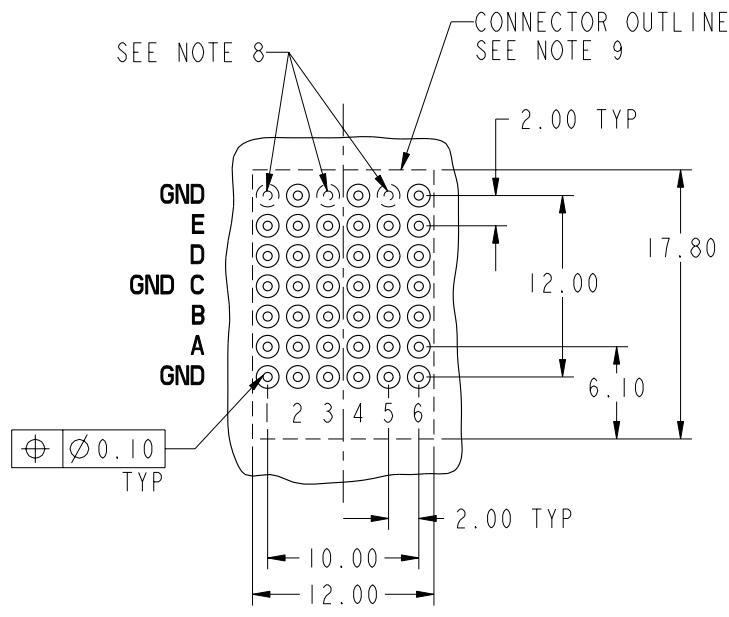
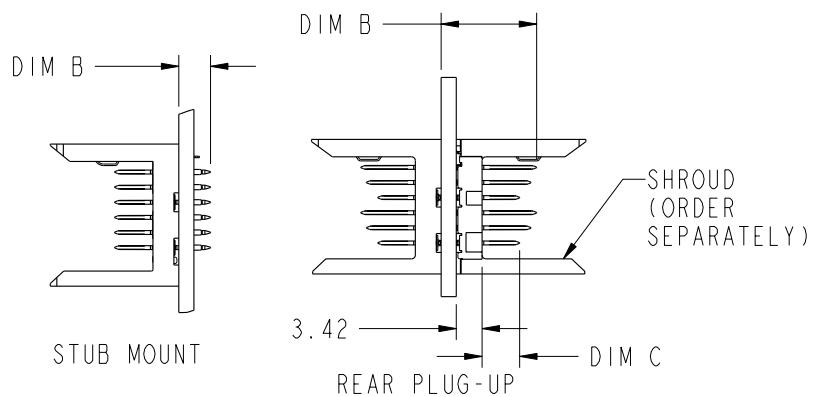
\* STUB PINS - NO REAR PLUG-UP

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

mat'l code				SEE NOTE 5		tolerances unless otherwise specified		CUSTOMER COPY	 www.fciconnect.com	
ltr	ecn no.	dr	date	linear		0.X ±0.3	projection			
G						0.XX ±0.10	MM	product family METRAL 1000/4000	code	
						0.XXX ±.050				
				angles		0° ±2°	scale	size dwg no	213	
				dr	T. BRUNGARD	2004-08-12				
				engr	J. VOLSTORF	2004-08-12	A	dwg no	sheet	
				chr	J. VOLSTORF	2004-08-12				
				oppd	J. VOLSTORF	2004-08-12	1:1	A	10043968	3
sheet	revision									
index	sheet									

PRODUCT NUMBER  
SEE SHEET 1

PRESS-FIT HOLES	TYPE 1	TYPE 2
HOLE DIAMETER AFTER PLATING	0.65-0.80	0.45-0.55
DRILLED HOLE	0.81-0.86 (0.85 DRILL)	0.58-0.62 (0.60 DRILL)
COPPER PLATING	0.025 MIN	0.025 MIN-0.050 MAX
SnPb PLATING	0.005-0.015	0.005-0.015



## RECOMMENDED PCB HOLE PATTERN (COMPONENT SIDE)

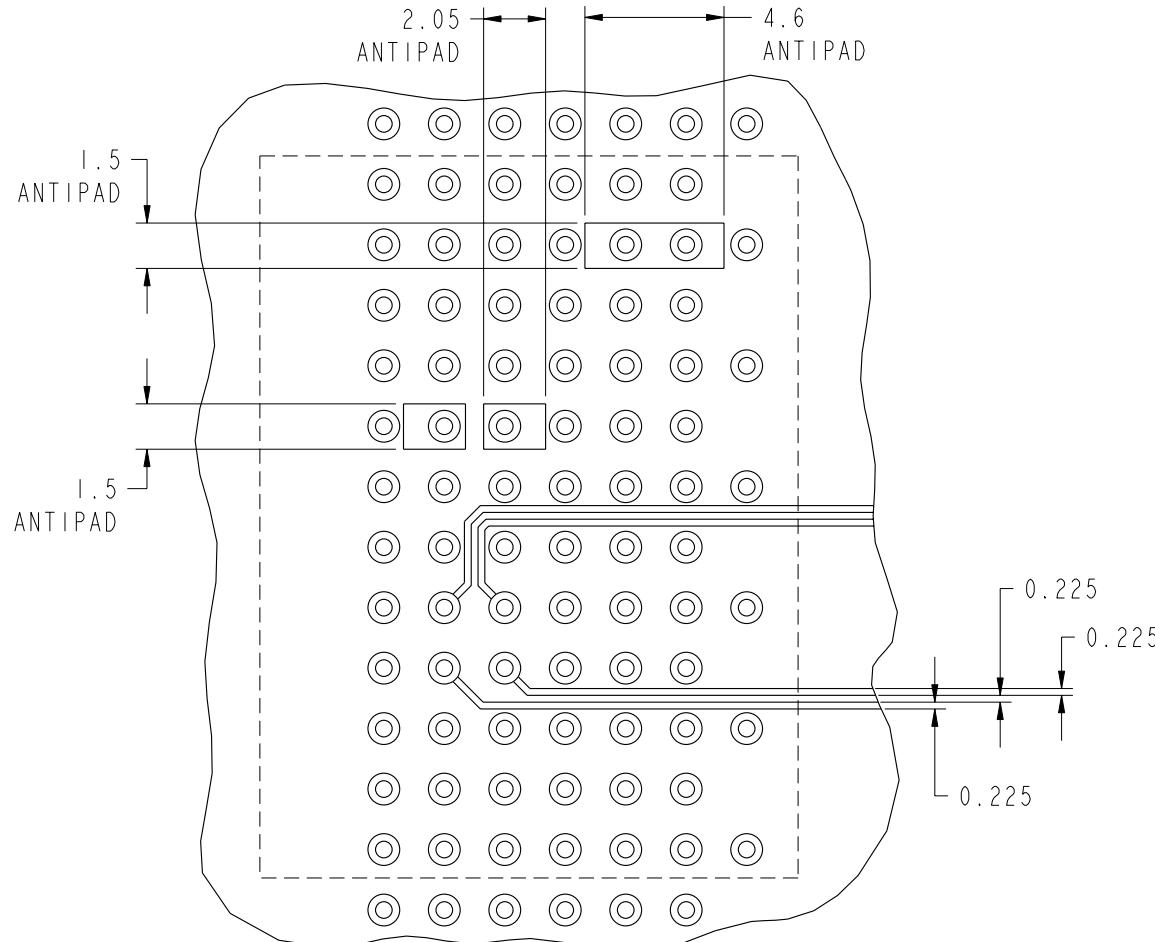
This document is the property of and embodies CONFIDENTIAL and PROPRIETARY information of FCI. No part of the information shown on this document may be used in any way or disclosed to others without the written consent of FCI. Copyright FCI.

mat'l code SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER		www.fciconnect.com		
ltr	ecn no.	dr	date	linear	0, X $\pm$ 0,3				COPY	
G					0, XX $\pm$ 0,10	projection		title		
					0, XXX $\pm$ 0,050					
				angles	0° $\pm$ 2°		product family	METRAL 1000/4000	code	
					dr					T. BRUNGARD 2004-08-12
					engr					J. VOLSTORF 2004-08-12
					chr					J. VOLSTORF 2004-08-12
				appd	J. VOLSTORF 2004-08-12	scale	A	dwg no	213	
sheet		revision								
index		sheet								

This document is the property of and embodies  
CONFIDENTIAL and PROPRIETARY information of FCI.  
No part of the information shown on this  
document may be used in any way or disclosed  
to others without the written consent of FCI.  
Copyright FCI.



PRODUCT NUMBER  
SEE SHEET 1



RECOMMENDED TRACK AND ANTIPAD DIMENSIONS FOR 4000 PINS  
SCALE 4:1

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	0. XX ± 0. 10	0. XXX ± .050				
6				angles		0° ± 2°		projection	title VERTICAL SIGNAL HDR 5 ROW P. F. 30 POS. SELECT LOAD STD.		
				dr	T. BRUNGARD	2004-08-12		MM	product family METRAL 1000/4000		
				engr	J. VOLSTORF	2004-08-12			code	213	
				chr	J. VOLSTORF	2004-08-12		scale	size	dwg no	
				appd	J. VOLSTORF	2004-08-12		1:1	A	10043968	
				sheet	revision						
				index	sheet						

PRODUCT NUMBER	ROW	SELECT LOAD PATTERN					
		1	2	3	4	5	6
10043968-X001 *** SEE NOTE 16 LEAD FREE OPTION	GND	GND	GND	GND	GND	GND	GND
	E	02	02	02	02	55	55
	D	02	02	02	02	55	55
	C	02	02	02	02	55	55
	B	02	02	02	02	55	55
	A	02	02	02	02	55	55
	GND	02	02	02	02	55	55
	STRIPLINE SHIELD	YES	NO	YES	NO	NO	NO

PIN CODE	PIN TYPE	VIA HOLE TYPE REQUIRED SEE SHEET 4
02	METRAL 4000	TYPE 2
55	METRAL 1000/2000	TYPE 1
GND	N/A	TYPE 2

PRODUCT NUMBER	ROW	SELECT LOAD PATTERN					
		1	2	3	4	5	6
10043968-X002 *** SEE NOTE 16 LEAD FREE OPTION	GND	GND	GND	GND	GND	GND	GND
	E	55	55	02	02	02	02
	D	55	55	02	02	02	02
	C	55	55	02	02	02	02
	B	55	55	02	02	02	02
	A	55	55	02	02	02	02
	GND	55	55	02	02	02	02
	STRIPLINE SHIELD	NO	NO	YES	NO	YES	NO

PRODUCT NUMBER	ROW	SELECT LOAD PATTERN					
		1	2	3	4	5	6
10043968-X003 *** SEE NOTE 16 LEAD FREE OPTION	GND	GND	GND	GND	GND	GND	GND
	E	55	02	02	02	02	55
	D	55	02	02	02	02	55
	C	55	02	02	02	02	55
	B	55	02	02	02	02	55
	A	55	02	02	02	02	55
	GND	55	02	02	02	02	55
	STRIPLINE SHIELD	YES	NO	YES	NO	YES	NO

\*\*\* REAR PLUG-UP PART NUMBERS  
WITHOUT PIN ALIGNER.

mat'l code SEE NOTE 5				tolerances unless otherwise specified			CUSTOMER		www.fciconnect.com		
Itr	ecn no.	dr	date	linear	0. X ± 0.3					COPY	
G					0. XX ± 0.10		projection	title VERTICAL SIGNAL HDR 5 ROW P.F. 30 POS. SELECT LOAD STD.			
					0. XXX ± .050						
				angles	0° ± 2°						
					dr	T. BRUNGARD		2004-08-12	MM	product family METRAL 1000/4000	code
					engr	J. VOLSTORF		2004-08-12			
					chr	J. VOLSTORF		2004-08-12			
				appd	J. VOLSTORF	2004-08-12	scale	A	10043968	sheet	
sheet		revision									
index		sheet									

PRODUCT NUMBER
SEE SHEET 1

## NOTES:

1. SEE APPLICATION SPECIFICATIONS GS-20-010 AND GS-20-014 FOR INFORMATION ON AVAILABLE TOOLING, CIRCUIT BOARD DESIGN CONSIDERATIONS, REPAIR PROCEDURES AND PRODUCT OFFERINGS. SEE PRODUCT SPECIFICATION: GS-12-110  
GS-12-184
2. SEE FCI PUBLICATION 95011-028 FOR "ELECTRICAL PERFORMANCE DATA FOR DIFFERENTIAL APPLICATIONS."
3. SEE FCI PUBLICATION 95011-029 FOR "ELECTRICAL PERFORMANCE DATA FOR SINGLE-ENDED APPLICATION."
4. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5, 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
6. 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 & E  
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
7. 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.

This document is the property of and embodies  
CONFIDENTIAL and PROPRIETARY information of FCI.  
No part of the information shown on this  
document may be used in any way or disclosed  
to others without the written consent of FCI.  
Copyright FCI.

REV E - 2006-04-18

8. THESE HOLES ARE NEEDED FOR REAR PLUG-UP DESIGNS USING A SHROUD AND MAY BE OMITTED FOR FRONT PLUG-UP ONLY DESIGNS.
9. 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.
10. CURRENT RATING: 1 AMP PER PIN
11. TEMPERATURE RANGE: -55°C TO +105°C
12. P/N 10043968-XXXXLF
 



LEAD FREE (OPTIONAL)  
 SELECT LOAD PATTERN  
 PLATING CODE
13. WE CURRENTLY HAVE NO INSPECTION METHOD TO CHECK TP OF CONTACT PIN TIP ON BOTTOM SIDE OF HEADER.
14. AFTER INSERTION INTO CIRCUIT BOARD WITH QUALIFIED TOOL.
15. PRODUCTS WHERE THE PART NUMBER ENDS IN LF MEET EUROPEAN 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.
16. FOR LEAD FREE PART NUMBERS, ADD AN "LF" SUFFIX.  
EXAMPLE: 10043968-X001LF
17. EQUIVALENT PRECIOUS METAL PLATINGS MAY BE SUBSTITUTED.

mat'l code				SEE NOTE 5				tolerances unless otherwise specified		CUSTOMER COPY	projection	title
ltr	ecn no.	dr	date					0.X ±0.3	0.XX ±0.10	0.XXX ±.050	0° ±2°	
G					linear							
					angles							
					dr	T. BRUNGARD	2004-08-12					
					engr	J. VOLSTORF	2004-08-12					
					chr	J. VOLSTORF	2004-08-12					
					appd	J. VOLSTORF	2004-08-12					
					sheet	revision						
					index	sheet						

MM	product family	METRAL 1000/4000	code	213
scale	size	dwg no		
1:1	A	10043968		

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

FCI:

[10043968-5002LF](#) [10043968-5001LF](#)