

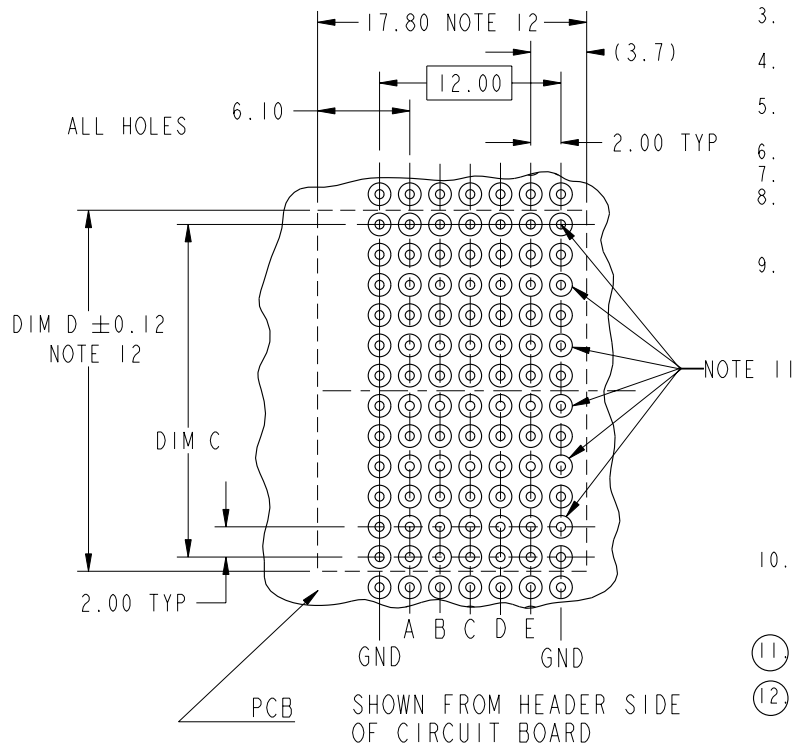
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1 2						3						4
PRODUCT NO.	PLATING PERFORMANCE LEVEL	SHROUD TO USE FOR REAR-PLUG-UP APPLICATIONS	LENGTH DIM D	PIN FIELD DIM C	CONNECTOR SIZE	PRODUCT NO.	PLATING PERFORMANCE LEVEL	SHROUD TO USE FOR REAR-PLUG-UP APPLICATIONS	LENGTH DIM D	PIN FIELD DIM C	CONNECTOR SIZE	
84817-101ZZZ	TELCORDIA CO	84818-101	11.88	10.00	1 MOD	84817-901ZZZ	TELCORDIA CO	84818-101	11.88	10.00	1 MOD	
84817-101ZZZLF		84818-101LF				84817-901ZZZLF		84818-101LF				
84817-102ZZZ		84818-102	23.88	22.00	2 MOD	84817-902ZZZ		84818-102	23.88	22.00	2 MOD	
84817-102ZZZLF		84818-102LF				84817-902ZZZLF		84818-102LF				
84817-103ZZZ		84818-103	35.88	34.00	3 MOD	84817-903ZZZ		84818-103	35.88	34.00	3 MOD	
84817-103ZZZLF		84818-103LF				84817-903ZZZLF		84818-103LF				
84817-104ZZZ		84818-104	47.88	46.00	4 MOD	84817-904ZZZ		84818-104	47.88	46.00	4 MOD	
84817-104ZZZLF		84818-104LF				84817-904ZZZLF		84818-104LF				
84817-301ZZZ	CUSTOMER SPECIAL	84818-301	11.88	10.00	1 MOD							
84817-301ZZZLF		84818-301LF										
84817-302ZZZ		84818-302	23.88	22.00	2 MOD							
84817-302ZZZLF		84818-302LF										
84817-303ZZZ		84818-303	35.88	34.00	3 MOD							
84817-303ZZZLF		84818-303LF										
84817-304ZZZ		84818-304	47.88	46.00	4 MOD							
84817-304ZZZLF		84818-304LF										
84817-501ZZZ	TELCORDIA UE	84818-501	11.88	10.00	1 MOD							
84817-501ZZZLF		84818-501LF										
84817-502ZZZ		84818-502	23.88	22.00	2 MOD							
84817-502ZZZLF		84818-502LF										
84817-503ZZZ		84818-503	35.88	34.00	3 MOD							
84817-503ZZZLF		84818-503LF										
84817-504ZZZ		84818-504	47.88	46.00	4 MOD							
84817-504ZZZLF		84818-504LF										

mat'l code				--		tolerances unless otherwise specified		CUSTOMER		www.fciconnect.com	
ltr	ecn no.	dr	date	linear		projection		COPY		title	
AE				angles						HEADER ASS'Y STR. P.F. STD. 5-ROW	
				dr	K. BELL	3/29/00	MM		product family		code
				enrg	M. HAHN	3/29/00			METRAL 1000		213
				chr	M. HAHN	3/29/00	1:1		size		sheet
				appd	M. HAHN	3/29/00			A		2
sheet index		revision sheet									

RECOMMENDED PCB LAYOUT



NOTES:

- SEE APPLICATION SPECIFICATION GS-20-010 FOR INFORMATION ON AVAILABLE TOOLING, CIRCUIT BOARD DESIGN CONSIDERATIONS, REPAIR PROCEDURES AND PRODUCT OFFERINGS.
- SEE FCI PUBLICATION 950511-028 FOR "ELECTRICAL PERFORMANCE DATA FOR DIFFERENTIAL APPLICATIONS."
- SEE FCI PUBLICATION 950511-029 FOR "ELECTRICAL PERFORMANCE DATA FOR SINGLE-ENDED APPLICATION."
- UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5, 1994
- HOUSING MATERIAL: LCP, 30% GLASS FILLED, FLAME RETARDANT PER UL 94-V0.
- PIN MATERIAL: PHOSPHER BRONZE
- GROUND SPRING MATERIAL: PHOSPHER BRONZE
- PLATING INFORMATION: PLATING ON CONTACT AREAS, PER PERFORMANCE LEVELS SHOWN IN TABLES ON SHEET 2. PLATING ON "LF" TAILS IS Sn ONLY, ON ALL OTHERS IS SnPb.
- 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
- THE MIN PCB THICKNESS FOR REAR PLUG-UP APPLICATIONS IS 2.9mm SINCE THE COMPLAINT 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.
- THESE HOLES ARE NEEDED FOR REAR PLUG-UP DESIGNS USING A SHROUD AND MAY BE OMITTED FOR FRONT PLUG-UP ONLY DESIGNS.
- THE 'CONNECTOR OUTLINE' IS THE MIN OUTLINE REQUIRED. TO DETERMINE THE OUTLINE NECESSARY TO PERMIT THE VARIOUS TYPES OF REPAIR OPERATIONS, SEE APPLICATION SPECIFICATION GES-20-010.
- CURRENT RATING : 1 AMP PER PIN
- TEMPERATURE RANGE : -55°C TO +105°C
- P/N 84817-X01ZZZ SHOWN ON SHEET 1.
- THE PRODUCTS WHERE THE PART NUMBERS END 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.
- FOR LEAD FREE PART NUMBERS, ADD "LF" SUFFIX. EXAMPLE: 84817-XXXXLF.
- SEE PRODUCT SPEC GS-12-110 FOR PERFORMANCE, TEST, AND SIGNAL INTEGRITY INFORMATION.

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 58315 FOR ADDITIONAL PCB INFORMATION

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ltr	ecr no.	dr	date	linear	COPY	title	
AE	-	-	-	.XX ±.01	projection	HEADER ASS'Y	
				.XXX ±.005		STR. P.F. STD. 5-ROW	
				.XXXX ±.0020		product family METRAL 1000 code	
				angles		size	
				0° ±2°		dwg no	
				dr	scale	A	
				K.BELL 3/29/00		84817	
				M.HAHN 3/29/00		213	
				M.HAHN 3/29/00		sheet	
				chr	1:1	3	
				M.HAHN 3/29/00		sheet	
				appd			
sheet index	revision sheet						

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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,DE	ROW C	GROUND ROW
1*	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
5		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
9		17.10	5.70 - 8.70	7.40 - 9.10	6.70 - 8.70	5.70 - 8.70	7.40 - 9.10
2*	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
6		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
3*	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
7		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



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ltr	ecn no.	dr	date	linear	projection		title HEADER ASS'Y STR. P.F. STD. 5-ROW		
AE					angles			product family METRAL 1000 code size dwg no 213 84817 sheet 4	
				dr	K. BELL	3/29/00	MM 		scale 1:1 A
				engr	M. HAHN	3/29/00	sheet index revision sheet		
				chr	M. HAHN	3/29/00	sheet index revision sheet		
				appd	M. HAHN	3/29/00	cage code 22526		4

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,DE	ROW C	GROUND ROW
4*	7.25	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
8		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
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

A

A



* 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.

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B

B

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ltr	ecn no.	dr	date	linear	projection		COPY		title			
AE									HEADER ASS'Y			
					angles				STR. P.F. STD. 5-ROW			
					dr	K. BELL	3/29/00			product family		code
					enrg	M. HAHN	3/29/00	size		METRAL 1000		213
				chr	M. HAHN	3/29/00	scale		dwg no		sheet	
				appd	M. HAHN	3/29/00	1:1		A		5	
sheet index		revision sheet										

SPECIAL LOAD PATTERNS		
PRODUCT #	ROW	PIN CODES
84817-XY001 SEE NOTE 17 LEAD FREE OPTION	E	1
	D	
	C	
	B	
	A	
	GND	
84817-XY002 *RPU SEE NOTE 17 LEAD FREE OPTION	E	22
	D	
	C	
	B	
	A	
	GND	
84817-XY011 SEE NOTE 17 LEAD FREE OPTION	E	2
	D	
	C	
	B	
	A	
	GND	
84817-XY021 SEE NOTE 17 LEAD FREE OPTION	E	2
	D	
	C	
	B	
	A	
	GND	
84817-XY022 SEE NOTE 17 LEAD FREE OPTION	E	2
	D	
	C	
	B	
	A	
	GND	
84817-XY023 SEE NOTE 17 LEAD FREE OPTION	E	2
	D	
	C	
	B	
	A	
	GND	
84817-XY024 *RPU SEE NOTE 17 LEAD FREE OPTION	E	6
	D	
	C	
	B	
	A	
	GND	
84817-XY025 *RPU SEE NOTE 17 LEAD FREE OPTION	E	6
	D	
	C	
	B	
	A	
	GND	

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
2.95 TO 3.80mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
4.00 TO 5.30mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
*2.30-3.30 TO 5.30mm

SPECIAL LOAD PATTERNS			
PRODUCT #	ROW	PIN CODES	
84817-XY026 *RPU SEE NOTE 17 LEAD FREE OPTION	E	22	
	D		
	C		
	B		
	A		
	GND		
84817-XY027 *RPU SEE NOTE 17 LEAD FREE OPTION	E	44	
	D		
	C		
	B		
	A		
	GND		
84817-XY028 SEE NOTE 17 LEAD FREE OPTION	E	1	
	D		
	C		
	84817-XY029 SEE NOTE 17 LEAD FREE OPTION	B	3
		A	
		GND	
84817-XY030 *RPU SEE NOTE 17 LEAD FREE OPTION		E	2
		D	
		C	
	84817-XY031 *RPU SEE NOTE 17 LEAD FREE OPTION	B	2
		A	
		GND	

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
2.95 TO 3.80mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
2.95 TO 3.80mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
2.95 TO 3.80mm

PCB THICKNESS
RANGE FOR REAR
PLUG UP
APPLICATIONS:
2.95 TO 3.80mm

mat'l code		--		tolerances unless otherwise specified		CUSTOMER		FCj www.fciconnect.com			
ltr	ecn no.	dr	date	linear	.XX ± .01	COPY		projection	title HEADER ASS'Y STR. P.F. STD. 5-ROW		
AE	-	-	-		.XXX ± .005	MM					
					.XXX ± .0020	1:1					
				angles	0° ± 2°	scale		product family METRAL 1000	code 213		
				dr	K. BELL 3/29/00	A				size 84817	sheet 6
				engr	M. HAHN 3/29/00						
				chr	M. HAHN 3/29/00						
				appd	M. HAHN 3/29/00						
sheet	revision										
index	sheet										

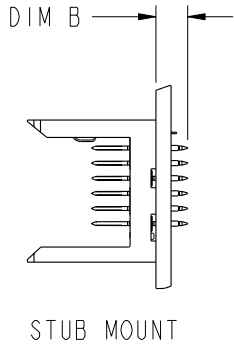
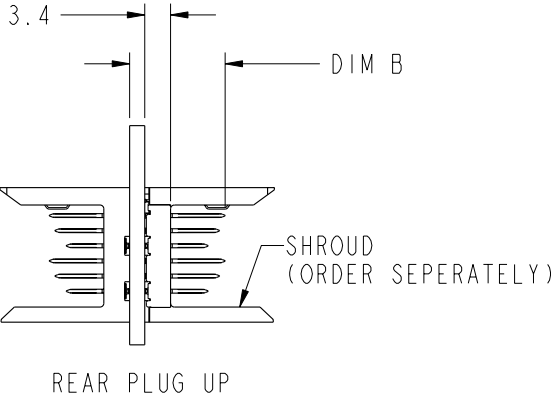


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SPECIAL LOAD PATTERNS		
PRODUCT #	ROW	PIN CODES
84817-XY032 SEE NOTE 17 LEAD FREE OPTION	E	22
	D	
	C	45
	B	
	A	22
GND		
84817-XY033 *RPU SEE NOTE 17 LEAD FREE OPTION	E	6
	D	
	C	
	B	
	A	
GND	30	
84817-XY034 SEE NOTE 17 LEAD FREE OPTION	E	3
	D	
	C	
	B	
	A	
GND	2	
84817-XY035 SEE NOTE 17 LEAD FREE OPTION	E	1
	D	
	C	
	B	
	A	
GND	1	
84817-XY036 *RPU SEE NOTE 17 LEAD FREE OPTION	E	22
	D	
	C	
	B	1
	A	
GND	22	
84817-XY037 SEE NOTE 17 LEAD FREE OPTION	E	1
	D	
	C	
	B	
	A	
GND	2	
84817-XY038 *RPU SEE NOTE 17 LEAD FREE OPTION	E	49
	D	
	C	
	B	
	A	
GND		
84817-XY039 *RPU SEE NOTE 17 LEAD FREE OPTION	E	36
	D	
	C	
	B	
	A	
GND	6	

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 2.95 TO 3.80mm

PCB THICKNESS RANGE FOR REAR PLUG UP APPLICATIONS: 4.80 TO 6.80mm



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ltr	ecn no.	dr	date	linear	.XX ±.01	COPY		projection		title	
AE	-	-	-	angles	.XXX ±.005	MM		STR. P.F. STD. 5-ROW		product family	
				dr	.XXXX ±.0020	1:1		METRAL 1000		code	
				engr	0° ±2°	A		size		213	
				chr	K.BELL 3/29/00	A		dwg no		7	
				appd	M.HAHN 3/29/00	A		84817		sheet	
					M.HAHN 3/29/00	A		7		cage code	
sheet index	revision sheet										