

Distributed by:



www.Jameco.com ♦ 1-800-831-4242

The content and copyrights of the attached
material are the property of its owner.

Jameco Part Number 803727



PRODUCT SPECIFICATION

1.0 SCOPE

This specification covers the performance requirements for Milli-Grid 2mm Dual Row Shrouded Headers.

2.0 PRODUCT DESCRIPTION

2.1 Product covered by this specification are for series number

Product Name	Part Number
MGrid Headers (Vertical)	87831 Series
MGrid Headers (SMT)	87832 Series
MGrid Headers (R/A)	87833 Series

These series mate with Molex :

1. Milli-Grid 2mm Grid Wire to Board Connector,
Crimp Receptacle Housing, 51110 series and Crimp Terminal, 50394 series.
2. 2mm Milli-Grid Dual Row IDT, 87568 series.

2.2 For dimensions, materials & plating, refer to the appropriate product drawings.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

The following documents are part of this specification to the extent specified herewith.
In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence.

In the event of conflict between the requirements of this specification and reference documents, this specification shall take the precedence.

MIL-STD-202 Test Methods for Electrical and Electronic Component Parts.

MIL-STD-1344 Test Methods of Electrical Connector

Reference Product Specifications

PS-51110-001 Milli-Grid 2mm Grid Wire to Board Connector

PS-87568-004 2mm Milli-Grid Dual Row IDT Receptacle

<u>REVISION:</u> 2	<u>ECR/ECN INFORMATION:</u> EC No: S2005-0213 <u>DATE:</u> 2004/09/02	<u>TITLE:</u> MILLIGRID 2MM DUAL ROW SHROUDED HEADERS	<u>SHEET No.</u> 1 of 3
<u>DOCUMENT NUMBER:</u> PS-87831-027	<u>CREATED / REVISED BY:</u> AI TING 2004/09/21	<u>CHECKED BY:</u> KC LING 2004/09/21	<u>APPROVED BY:</u> SK TOH 2004/09/21
<i>TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A4](V.1).DOC</i>			



PRODUCT SPECIFICATION

4.0 RATINGS

4.1 Voltage : 125
4.2 Current : 2.00 Amp MAXIMUM
4.3 Operating Temperature : -55°C to +105°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Insulation Resistance	Apply 500 VDC for 1 minute per MIL-STD-1344A, METHOD 3003.1	1000 Megaohms minimum
2	Dielectric Strength	1000 Vrms for 1 minute between adjacent terminals.	No breakdown

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
3	Pin/ Terminal Retention Force (in Housing)	Apply an axial load on the terminal in the housing to dislodge the terminals from the connector at a rate of 0.50 inch per minute	Retention Force : 850 g Min per pin. (Before heat soldering)

REVISION: 2	ECR/ECN INFORMATION: <u>EC No:</u> S2005-0213 <u>DATE:</u> 2004/09/02	TITLE: MILLIGRID 2MM DUAL ROW SHROUDED HEADERS	SHEET No. 2 of 3
DOCUMENT NUMBER: PS-87831-027	CREATED / REVISED BY: AI TING 2004/09/21	CHECKED BY: KC LING 2004/09/21	APPROVED BY: SK TOH 2004/09/21
TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A4](V.1).DOC			



PRODUCT SPECIFICATION

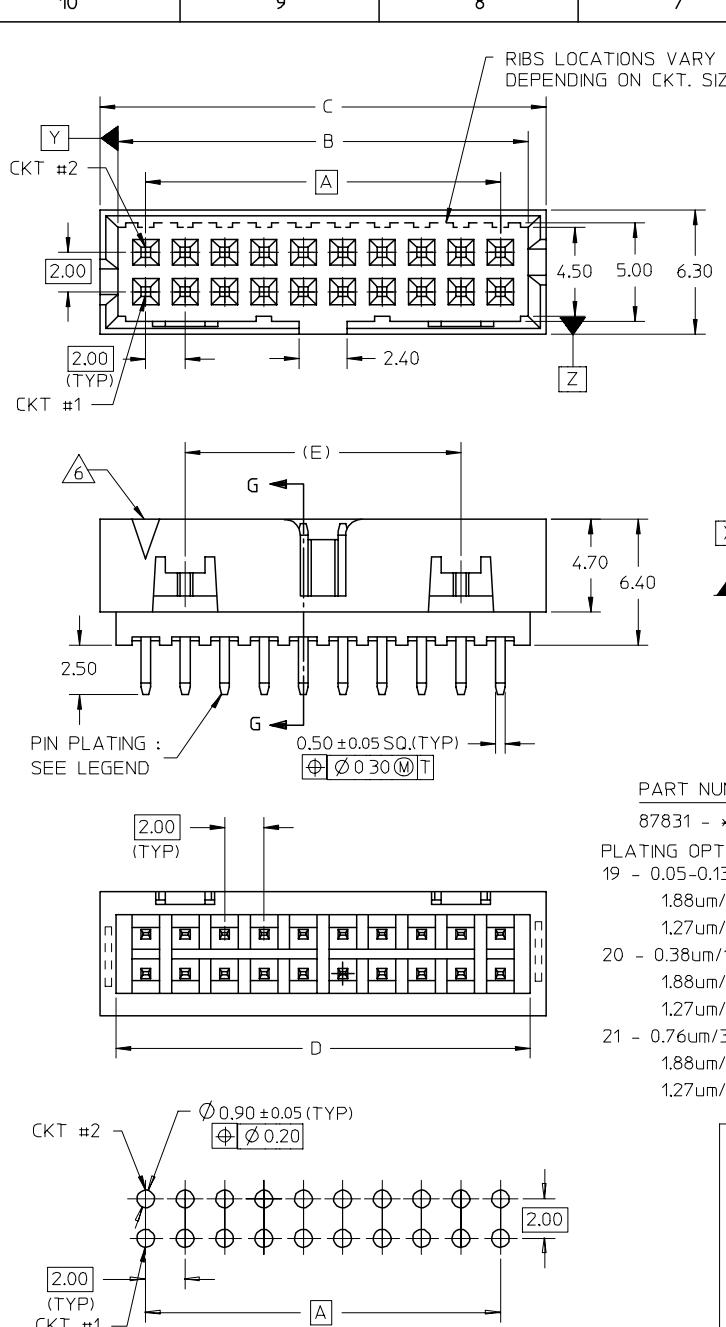
5.3 ENVIRONMENT REQUIREMENTS

4.	Solderability	Solder Time: 5 +/-0.5 secs . Solder Temperature : 260+/- 5°C	95% of the immersed area must show no voids ,pin holes.
5.	Resistance to Soldering Heat (Through Hole)	Solder tail to be dipped in flux as per MIL-STD-202F method 210 condition B.	No damage in appearance of the connector
6.	Resistance to Infra-Red Heat (SMT)	Subject connector to the IR Reflow temp. of 260 +/-5 C for 12 +/-2 sec.	No damage in appearance of the connector

6.0 Packaging

Product shall be packed in either Tube or Tape & Reel and protected against damage during handling, transportation and storage.

<u>REVISION:</u> 2	<u>ECR/ECN INFORMATION:</u> <u>EC No:</u> S2005-0213 <u>DATE:</u> 2004/09/02	<u>TITLE:</u> MILLIGRID 2MM DUAL ROW SHROUDED HEADERS	<u>SHEET No.</u> 3 of 3
<u>DOCUMENT NUMBER:</u> PS-87831-027	<u>CREATED / REVISED BY:</u> AI TING 2004/09/21	<u>CHECKED BY:</u> KC LING 2004/09/21	<u>APPROVED BY:</u> SK TOH 2004/09/21
<i>TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A4](V.1).DOC</i>			



PART NUMBER LEGEND :

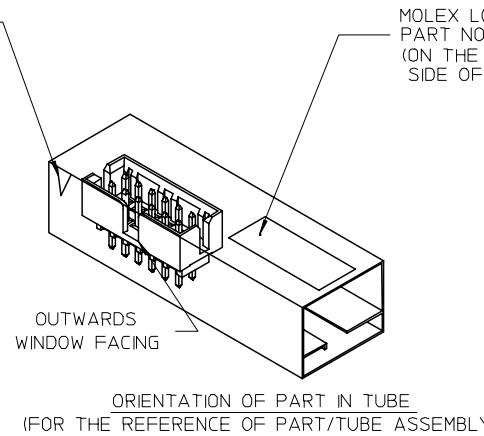
87831 = * * * *

PLATING OPTION
19 - 0.05-0.13μm/2-5uin GOLD IN CONTACT AREA AND
1.88μm/75uin MIN,TIN IN SOLDER TAIL AREA OVER
1.27μm/50uin MIN, NICKEL OVERALL.

20 - 0.38um/15uin GOLD IN CONTACT AREA AND
1.88um/75uin MIN,TIN IN SOLDER TAIL AREA OVER
1.27um/50uin MIN. NICKEL OVERALL.

21 - 0.76um/30uin GOLD IN CONTACT AREA AND
1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER
1.27um/50uin MIN. NICKEL OVERALL.

RED ARROW INDICATION



ORIENTATION OF PART IN TUBE
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY)

SECTION G-G

NOTES.

NOTE:

1. FOR ILLUSTRATION PURPOSES, 20 CIRCUIT SIZE WAFER IS SHOWN.
2. MATERIAL :
HOUSING : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
3. PRODUCT SPECIFICATION PS-87831-027 APPLIES.
4. NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6.
5. NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
6. CKT 4 & 6 HAS NO IDENTIFICATION TAG.
 REFER TO PART 87831-**4* FOR CENTRE LOCKING SLOT OPTION FOR 4 TO 12 CKT.
8. THIS HEADER MATES WITH MOLEX :
 - a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
 - b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.

PDR#S-001354-00-00		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
ECC NO: S2007-0117		mm	INCH	DRAWN BY ATSEE	DATE 2003/10/03	MGRID, SHROUDED HEADER VERTICAL W/SLOT & STANDOFF molex MOLEX INCORPORATED		
DRAWN/MATERIAL CHKD/M:LONG		4 PLACES	\pm ---	\pm ---	CHECKED BY KCL ING			
APPR:SKTOH		3 PLACES	\pm ---	\pm ---	APPROVED BY SKTOH			
REV: A8		2 PLACES	\pm 0.2	\pm ---	DATE 2003/11/07			
REV: A8		1 PLACE	\pm ---	\pm ---	DATE 2003/11/07			
REV: A8		ANGULAR \pm 3 °			MATERIAL NO. SEE TABLE			
REV: A8		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

10 9 8 7 6 5 4 3 2 1

P/N IN TUBE	CKT SIZE	VOID POSITION	DIMENSION				
			A	B	C	D	E
87831-04**	4	-----	2.00	4.85	6.65	5.00	-----
87831-06**	6	-----	4.00	6.85	8.65	7.00	-----
87831-08**	8	-----	6.00	8.85	10.65	9.00	-----
87831-10**	10	-----	8.00	10.85	12.65	11.00	-----
87831-12**	12	-----	10.00	12.85	14.65	13.00	-----
87831-14**	14	-----	12.00	14.85	16.65	15.00	8.00
87831-16**	16	-----	14.00	16.85	18.65	17.00	10.00
87831-18**	18	-----	16.00	18.85	20.65	19.00	12.00
87831-20**	20	-----	18.00	20.85	22.65	21.00	14.00
87831-22**	22	-----	20.00	22.85	24.65	23.00	16.00
87831-24**	24	-----	22.00	24.85	26.65	25.00	18.00
87831-26**	26	-----	24.00	26.85	28.65	27.00	20.00
87831-28**	28	-----	26.00	28.85	30.65	29.00	22.00
87831-30**	30	-----	28.00	30.85	32.65	31.00	24.00
87831-32**	32	-----	30.00	32.85	34.65	33.00	26.00
87831-34**	34	-----	32.00	34.85	36.65	35.00	28.00
87831-36**	36	-----	34.00	36.85	38.65	37.00	30.00
87831-38**	38	-----	36.00	38.85	40.65	39.00	32.00
87831-40**	40	-----	38.00	40.85	42.65	41.00	34.00
87831-42**	42	-----	40.00	42.85	44.65	43.00	36.00
87831-44**	44	-----	42.00	44.85	46.65	45.00	38.00
87831-46**	46	-----	44.00	46.85	48.65	47.00	40.00
87831-48**	48	-----	46.00	48.85	50.65	49.00	42.00
87831-50**	50	-----	48.00	50.85	52.65	51.00	44.00
87831-5120	12	1	10.00	12.85	14.65	13.00	-----
87831-5220	44	20	42.00	44.85	46.65	45.00	38.00
87831-5320	24	13	22.00	24.85	26.65	25.00	18.00
87831-5420	34	3	32.00	34.85	36.65	35.00	28.00
87831-5520	20	20	18.00	20.85	22.65	21.00	14.00
87831-5620	28	13	26.00	28.85	30.65	29.00	22.00

FDR# S-001354-00-00			GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
			mm	INCH	DRAWN BY	DATE	NTS	METRIC	
			4 PLACES	± ---	ATSEE	2003/10/03			
			3 PLACES	± ---	CHECKED BY	DATE			
			2 PLACES	± 0.2	KCLING	2003/11/07			
			1 PLACE	± ---	APPROVED BY	DATE			
			ANGULAR ± 3 °		SKTOH	2003/11/07	molex	MOLEX INCORPORATED	
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		DOCUMENT NO.		SHEET NO.
							SD-87831-011		2 OF 2
					SIZE	A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
					REV				
					APP'R: SKTOH				
					CH'K'D:MLONG				
					DRAWING: M/NARLY				
					EC NO: S2007-0117				
					2006/08/14				
					2006/08/14				
					REV				
					A8				