

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** **0878580002**  
**Status:** **Active**  
**Overview:** milligrd  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Breakaway Header, Surface Mount, Single Row, Vertical, with Peg, without Kapton Tape, Tray Packaging, Mating Pin Length 3.20mm (.126"), 2 Circuits, Lead-free

**Documents:**

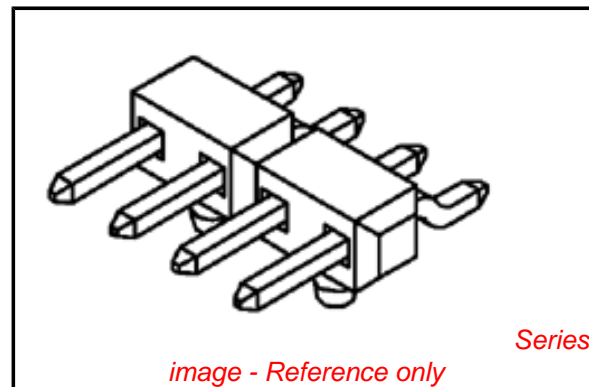
[3D Model](#) [Product Specification PS-87761-100 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

Product Family	PCB Headers
Series	87858
Application	Wire-to-Board
Overview	<u>milligrd</u>
Product Name	Milli-Grid™

**Physical**

Breakaway	Yes
Circuits (Loaded)	2
Circuits (maximum)	2
Color - Resin	Black
First Mate / Last Break	No
Glow-Wire Compliant	No
Guide to Mating Part	No
Keying to Mating Part	None
Lock to Mating Part	None
Mated Height (in)	0.125 In
Mated Height (mm)	3.20 mm
Material - Metal	Copper Alloy
Material - Plating Mating	Tin
Material - Plating Termination	Nickel
Material - Resin	High Temperature Thermoplastic
Number of Rows	1
Orientation	Parallel
PC Tail Length (in)	0.110 In
PC Tail Length (mm)	2.80 mm
PCB Locator	Yes
PCB Retention	None
PCB Thickness Recommended (in)	0.063 In
PCB Thickness Recommended (mm)	1.60 mm
Packaging Type	Tray
Pitch - Mating Interface (in)	0.079 In
Pitch - Mating Interface (mm)	2.00 mm
Pitch - Term. Interface (in)	0.079 In
Pitch - Term. Interface (mm)	2.00 mm
Plating min: Mating (µin)	100
Plating min: Mating (µm)	2.54
Polarized to Mating Part	No
Polarized to PCB	Yes
Shrouded	No
Stackable	No
Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Surface Mount



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free Status**

**China RoHS**



**Not Reviewed**

**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

87858Series

**Mates With**

2.00 mm (.079") single row receptacles

**Electrical**

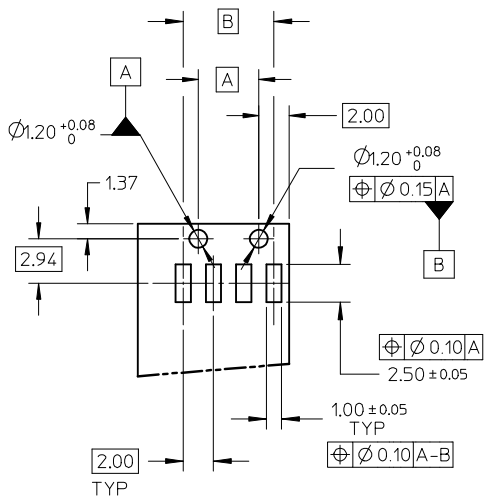
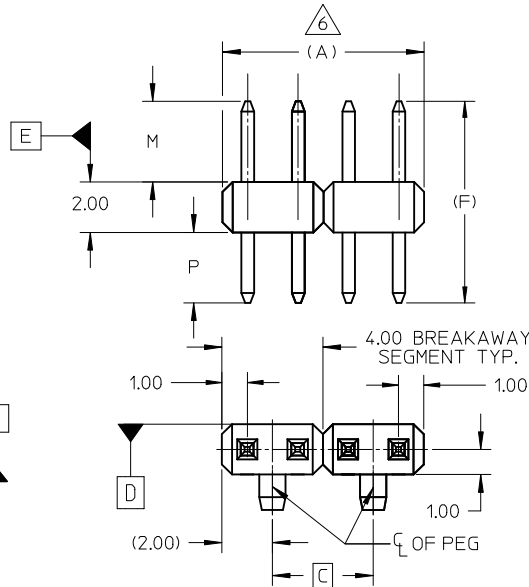
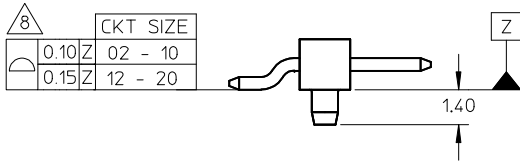
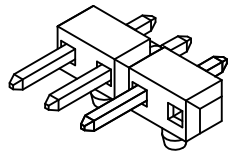
Current - Maximum per Contact	2A
Voltage - Maximum	125V

**Material Info****Reference - Drawing Numbers**

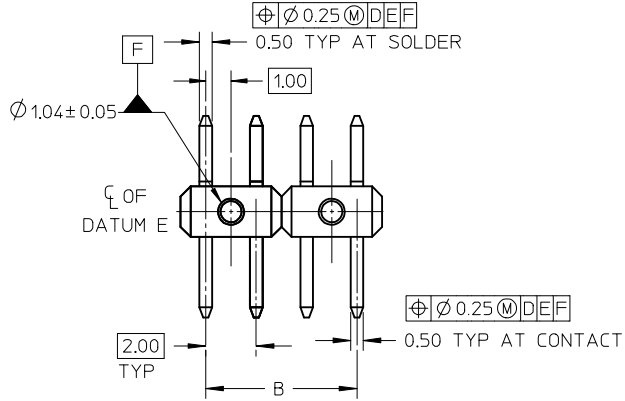
Packaging Specification	PK-89990-487
Product Specification	PS-87761-100
Sales Drawing	SD-87858-001

This document was generated on 05/25/2010

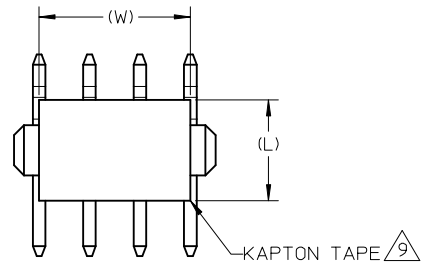
**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**



RECOMMENDED PCB LAYOUT



- NOTES:
- MATERIAL:  
HSG: LCP, GLASS-FILLED, UL94V-0, COLOR:BLACK  
PIN: 0.50mm SQ, COPPER ALLOY
  - PLATING:  
(1) 2.540µm TIN OVERALL PLATING OVER NICKEL OVERALL  
(2) 5.080µm TIN OVERALL PLATING OVER NICKEL OVERALL
  - PACKAGING TYPE: SEE TABLE
  - PACKAGING SPECIFICATION:  
TRAY: PK-89990-487  
TAPE & REEL: PK-89990-484
  - PRODUCT SPEC PS-87761-100 APPLIES
  - IRREGULAR CIRCUIT CUTOFF WITHIN BREAKAWAY SECTION IS PERMISSIBLE. MEASUREMENT AT BOTH ENDS, FROM CUT END TO THE CENTRELINE OF THE HOUSING CORE HOLE OF THE FIRST PIN REMAINS AT 1.00±0.20MM. CUTTING AND CHIPPING OF THE MAIN BODY IS NOT ACCEPTABLE.
  - THE ABOVE CKT 4 IS FOR ILLUSTRATION PURPOSE ONLY
  - COPLANARITY IS TO BE MEASURED BY RESTING THE SOLDER TAIL ON A GAUGE SURFACE
  - KAPTON TAPE LOCATION IS CENTERED ALONG THE PART AS SHOWN.
  - RECOMMENDED PCB BOARD THICKNESS: 1.60±0.10mm



ADD DIMENSIONS EC NO: S2009-0295 DRW: N/AT/SEE CHKD: SKANG APPR: M/LONG 2009/02/09 2009/02/10 2009/02/11	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	DIMENSION STYLE MM ONLY DRAWN BY DATE KSEE 2003/11/14 CHECKED BY DATE KCL ING 2003/12/15 APPROVED BY DATE PTL IM 2003/12/15	SCALE NTS DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. SEE TABLE	TITLE CUSTOM HEADER 2MM SINGLE ROW HDR IN SMT WITH PEG, BREAKAWAY	MOLEX INCORPORATED	SHEET NO. 1 OF 3
	SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	DOCUMENT NO. SD-87858-001		

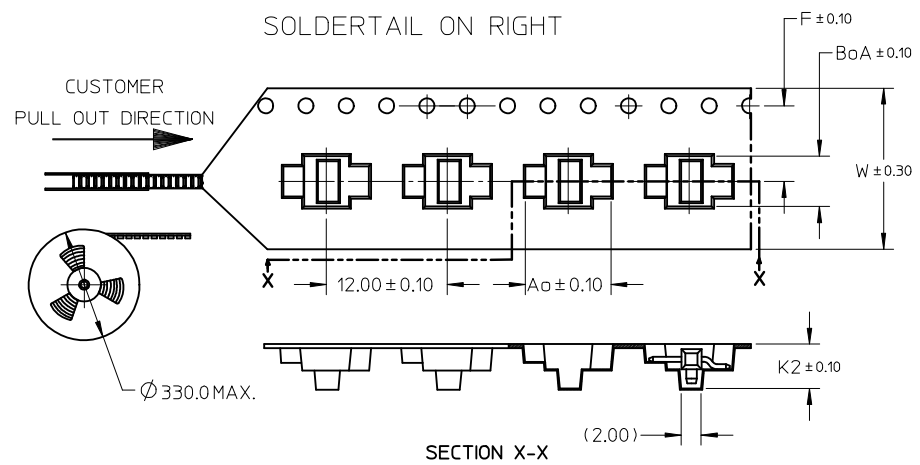
	10	9	8	7	6	5	4	3	2	1							
F	CKT SIZE	DIMENSION			PART NO. IN TAPE & REEL PACKAGING	PART NO. IN TRAY PACKAGING	CKT SIZE	PEG	PLATE OPT.	VOID POSITION	KAPTON TAPE	DIMENSION				PACKAGING TYPE	
		A	B	C								F	MATING END	SOLDER TAIL	KAPTON TAPE		
	02	4.00	2.00	-													
	04	8.00	6.00	4.00													
	06	12.00	10.00	8.00													
	08	16.00	14.00	12.00													
	10	20.00	18.00	16.00													
	12	24.00	22.00	20.00													
	14	28.00	26.00	24.00													
	16	32.00	30.00	28.00													
E	18	36.00	34.00	32.00													
	20	40.00	38.00	36.00													
					-	87858-0002	2	Y	1	----	N	8.00	3.20	2.80	-	-	-
					87858-0250	-	2	N	1	----	Y	8.00	3.20	2.80	4.00	3.00	T1
					87858-0003	-	2	Y	1	----	N	10.80	6.00	2.80	-	-	T2
					-	87858-0004	4	Y	1	----	N	8.00	3.20	2.80	-	-	-
					87858-0450	-	4	N	1	----	Y	8.00	3.20	2.80	4.00	4.00	T1
					87858-0460	-	4	N	1	----	Y	8.97	4.17	2.80	4.00	4.00	T1



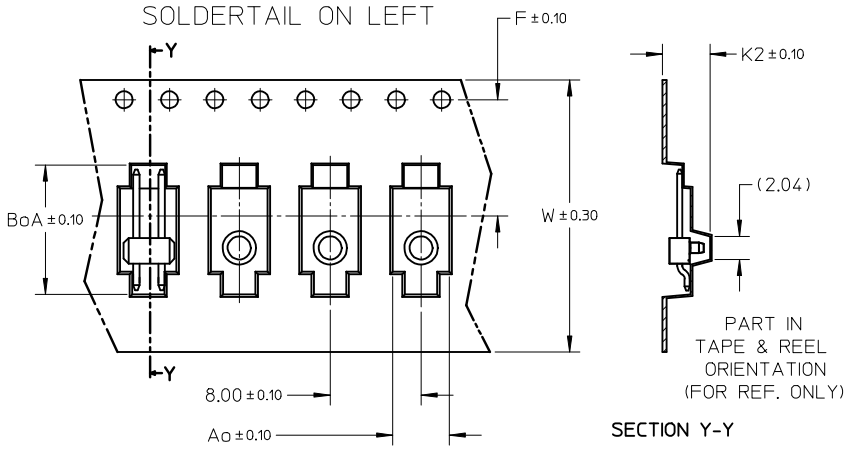
A	ADD DIMENSIONS EC NO: S2009-0295 DRWN:ATSEE 2009/02/09 CHKD:SKANG 2009/02/10 APPR:MLONG 2009/02/11	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
			▽=0 ◻=0		MM ONLY	NTS	METRIC			
					DRAWN BY	DATE	TITLE			
					CHECKED BY	DATE	CUSTOM HEADER 2MM SINGLE ROW HDR IN SMT WITH PEG, BREAKAWAY			
			4 PLACES ± --- ± ---	KSEE	2003/11/14	MOLEX INCORPORATED				
			3 PLACES ± --- ± ---	KCLING	2003/12/15	DOCUMENT NO.				
			2 PLACES ± 0.2 ± ---	APPROVED BY	DATE	SHEET NO.				
			1 PLACE ± --- ± ---	PTLIM	2003/12/15	2 OF 3				
			ANGULAR ± 3 °	MATERIAL NO.		SD-87858-001				
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

PACKAGING TYPE	CKT	DIMENSION					PACKABLE QTY
		BoA	Ao	K2	F	W	
T1	2	5.00	8.50	4.40	7.50	16.00	1200
	4	9.00	8.50	4.40	11.50	16.00	1200
T2	2	11.40	5.00	4.20	11.50	24.00	2000

TYPE T1 PACKAGING  
SOLDERTAIL ON RIGHT



TYPE T2 PACKAGING  
SOLDERTAIL ON LEFT



NOTES:

- LEADER AND TRAILER TAPE
- PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.  
 (PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)
- MATERIAL: BLACK P.S CONDUCTIVE, THICKNESS 0.40±0.10.
- PACKAGING STANDARD IS AS PER EIA-481.
- THE TAPE IS TREATED FOR ANTI-STATIC.

ADD DIMENSIONS EC NO: S2009-0295 DRWN:ATSEE CHKD:SKANG APPR:MLONG 2009/02/09 2009/02/10 2009/02/11	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$\nabla=0$ $\square=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3°	MM ONLY	NTS	METRIC	
	DESCRIPTION	DRAWN BY	DATE	TITLE	CUSTOM HEADER 2MM SINGLE ROW HDR IN SMT WITH PEG, BREAKAWAY	
	REV	CHECKED BY	DATE	APPROVED BY	DATE	MOLEX INCORPORATED
			PTL IM	2003/12/15	MATERIAL NO.	DOCUMENT NO.
					SEE TABLE	SD-87858-001
					SIZE	SHEET NO.
					A3	3 OF 3
					THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	