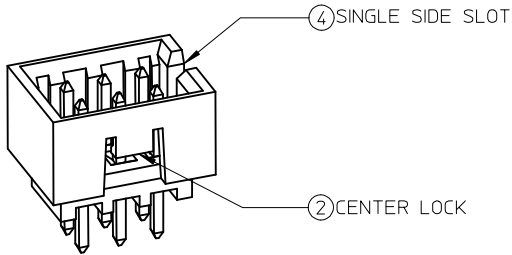


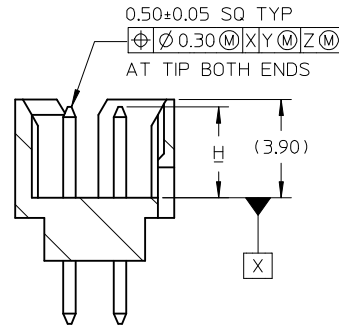
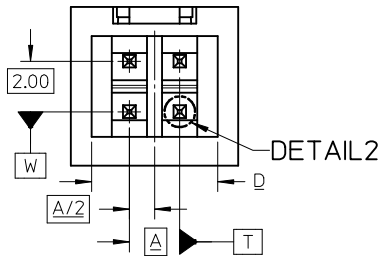
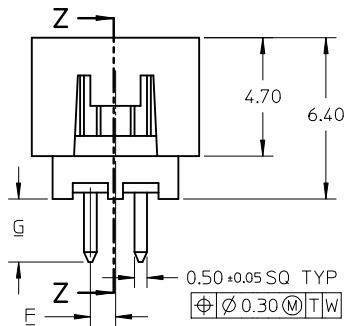
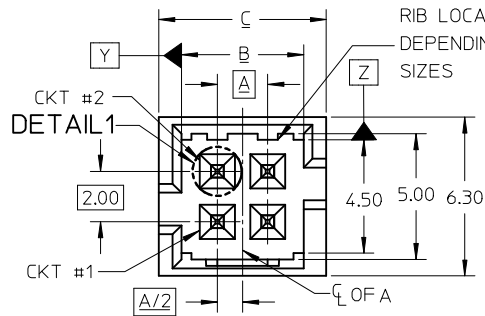
# FEATURES SELECTION GUIDE



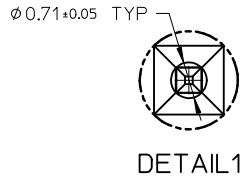
CIRCUIT SIZE	FEATURES						SHEET NO
	FRICTION LOCKS		SIDE SLOTS		5 CENTER POLARIZATION	6 PEG	
	1 DUAL	2 CENTER	3 DUAL	4 SINGLE			
4	N.A	N.A	YES	N.A	N.A	N.A	2 - 3
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	YES	N.A	YES	N.A	N.A	
6	N.A	N.A	YES	N.A	N.A	N.A	4 - 5
	N.A	N.A	YES	N.A	N.A	YES	
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	YES	YES	N.A	N.A	YES	
	N.A	YES	N.A	YES	N.A	N.A	
	N.A	YES	N.A	YES	N.A	YES	
	N.A	N.A	YES	N.A	YES	N.A	
8 TO 12	N.A	N.A	YES	N.A	YES	N.A	6 - 8
	N.A	N.A	YES	N.A	YES	YES	
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	YES	YES	N.A	N.A	YES	
	N.A	YES	N.A	YES	N.A	N.A	
	N.A	YES	N.A	YES	N.A	YES	
14 TO 50	YES	N.A	YES	N.A	YES	N.A	9 - 13
	YES	N.A	YES	N.A	YES	YES	

<b>RELEASED</b> EC NO: S2015-1188 DRWG: GMENARLY 2015/04/15 CHK'D: CGOH 2015/06/29 APPR: KHL IM 2015/06/29	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$\nabla_{\sqrt{A}} = 0$ $\nabla_{\sqrt{C}} = 0$ $\nabla_{\sqrt{P}} = 0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	MM ONLY	NTS	METRIC	
		ANGULAR ± 3 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY: GMENARLY    DATE: 2015/04/15 CHECKED BY:    DATE: APPROVED BY: KHL IM    DATE: 2015/06/29	TITLE: MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER <b>molex</b>		
	A		MATERIAL NO.    DOCUMENT NO.    SHEET NO. SEE TABLE    SD-87831-0001    1 OF 13	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

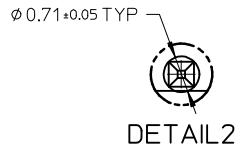
4 CIRCUITS



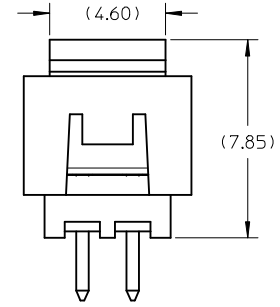
SECTION Z-Z



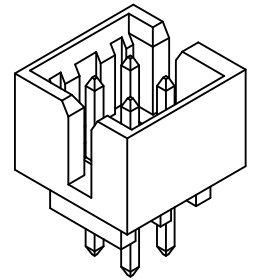
DETAIL1



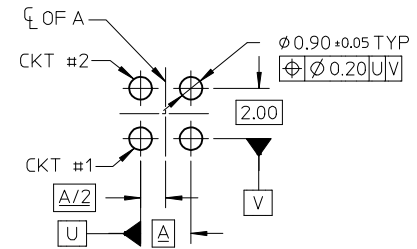
DETAIL2



VIEW FOR HEADER WITH CAP



VIEW FOR HEADER WITH ONLY DUAL SLOTS



RECOMMENDED PCB LAYOUT

NOTES:

- MATERIALS:  
HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK  
PIN: 0.50MM SQ PHOSPHOR BRONZE
- FINISHES: REFER TO PLATING OPTIONS
- PRODUCT SPECIFICATION: PS-87831-027
- PACKAGING SPECIFICATION:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
- MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES  
B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES  
C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE: 79107 (GOLD PLATED), 78787 (TIN PLATED)

RELEASED EC NO: S2015-1188 DRWNG:GMENARLY CHKD:CGOH APPR:KHLIM 2015/04/15 2015/06/29 2015/06/29	QUALITY SYMBOLS $F_A=0$ $F_G=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	mm INCH	DRAWN BY GMENARLY	DATE 2015/04/15	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER			
		ANGULAR ± 3°		CHECKED BY	DATE	APPROVED BY KHLIM			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		MATERIAL NO.	DATE 2015/06/29	DOCUMENT NO. SD-87831-0001	
A	REV	SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				SHEET NO. 2 OF 13	

4 CIRCUITS

CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
4	87831-0419	N.A	N.A	1	N.A	N.A	YES	N.A	N.A	N.A	2.00	4.85	6.65	5.00	N.A	N.A	2.50	3.60±0.20
	87831-0420	N.A	N.A	2														
	87831-0421	N.A	N.A	3														
	87831-0436	N.A	N.A	4														
	87831-0441	87831-0456	N.A	2	N.A	YES	YES	N.A	N.A	N.A						1.00	2.50	
	87831-0442	N.A	N.A	3													3.50	
	87831-5141	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						1.00	2.80	
	87831-5142	N.A	N.A	3													2.50	
	87831-6141	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						1.00	3.60 <sup>+0.15</sup> <sub>-0.10</sub>	
	87831-6142	N.A	N.A	3														
87831-0443	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A	1.00	2.50							
87831-0444	N.A	N.A	3															

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTETIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED EC NO: S2015-1188 DRW:GMENARLY 2015/04/15 CHKD:CGOH 2015/06/29 APPR:KHLIM 2015/06/29	DESCRIPTION REV A	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
		$F_A=0$ $F_G=0$ $F_P=0$	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	MM ONLY	NTS	METRIC	DRAWN BY GMENARLY DATE 2015/04/15 CHECKED BY DATE APPROVED BY KHLIM DATE 2015/06/29	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER	
		ANGULAR ± 3 °	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE	DOCUMENT NO. SD-87831-0001	SHEET NO. 3 OF 13			
		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							




6 CIRCUITS

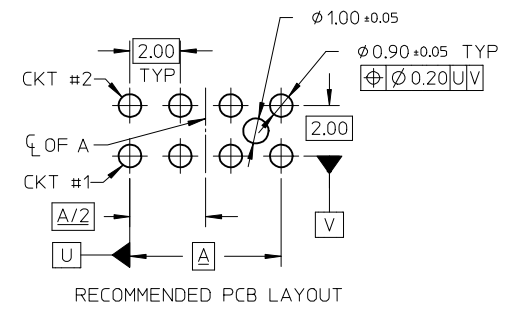
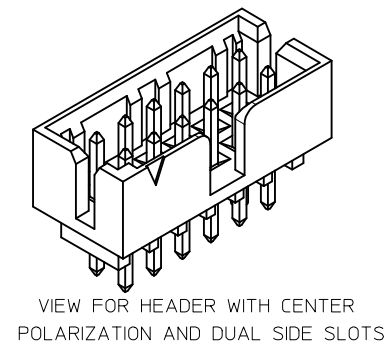
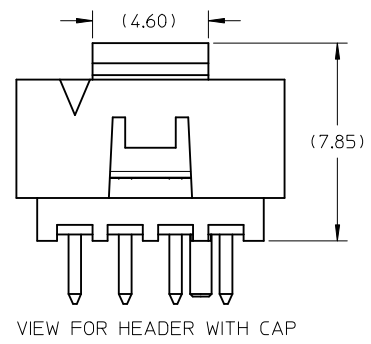
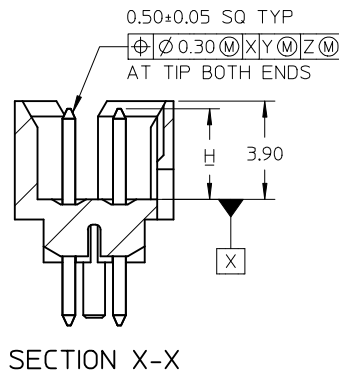
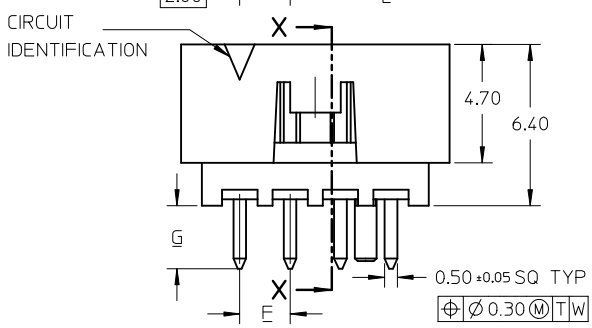
CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
6	87831-0619	N.A	N.A	1	N.A	N.A	YES	N.A	N.A	N.A	4.00	6.85	8.65	7.00	N.A	N.A	2.50	3.60±0.20
	87831-0620	N.A	N.A	2														
	87831-0621	N.A	N.A	3														
	87831-0636	N.A	N.A	4														
	87831-0628	N.A	N.A	2	N.A	N.A	YES	N.A	N.A	YES						N.A	2.50	
	87831-0629	N.A	N.A	3														
	87831-0641	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						2.50		
	87831-0642	N.A	87831-5552	3														
	87831-5241	N.A	N.A	2														
	87831-5242	N.A	N.A	3	N.A	YES	YES	N.A	N.A	N.A						3.50		
	87831-6241	N.A	N.A	2														
	87831-6242	N.A	N.A	3														
	87831-0643	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A						2.80		
	87831-0644	N.A	N.A	3														
	87831-0645	N.A	N.A	2														
	87831-0646	N.A	N.A	3														
87831-0632	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES	2.50								
87831-5119	N.A	N.A	1															
					N.A	N.A	YES	N.A	YES	N.A	N.A	2.50	N.A	2.50	3.60±0.20			

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED EC NO: S2015-1188 DRW:GMENARLY 2015/04/15 CHKD:CGOH 2015/06/29 APPR:KHL IM 2015/06/29	DESCRIPTION QUALITY SYMBOLS $F_A=0$ $F_G=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY GMENARLY	DATE 2015/04/15	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER			
		4 PLACES	± ---	± ---	CHECKED BY	DATE	 DOCUMENT NO. SD-87831-0001 SHEET NO. 5 OF 13			
		3 PLACES	± ---	± ---	APPROVED BY KHL IM	DATE 2015/06/29				
2 PLACES	± 0.20	± ---	MATERIAL NO.		SEE TABLE					
1 PLACE	± ---	± ---	ANGULAR ± 3 °		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
0 PLACE	± ---	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS							

8 TO 12 CIRCUITS



- NOTES:
- MATERIALS:  
HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK  
PIN: 0.50MM SQ PHOSPHOR BRONZE
  - FINISHES: REFER TO PLATING OPTIONS
  - PRODUCT SPECIFICATION: PS-87831-027
  - PACKAGING SPECIFICATION:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
  - MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES  
B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES  
C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE: 79107 (GOLD PLATED), 78787 (TIN PLATED)

RELEASED EC NO: S2015-1188 DRWN:GMENARLY 2015/04/15 CHKD:CGOH 2015/06/29 APPR:KHLIM 2015/06/29	DESCRIPTION QUALITY SYMBOLS $\nabla_A=0$ $\nabla_E=0$ $\nabla_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		mm	INCH	DRAWN BY GMENARLY	DATE 2015/04/15	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER				
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	CHECKED BY	DATE	APPROVED BY KHLIM 2015/06/29 MATERIAL NO. SEE TABLE DOCUMENT NO. SD-87831-0001 SHEET NO. 6 OF 13				
		2 PLACES ± 0.20 ± ---	1 PLACE ± --- ± ---	APPROVED BY	DATE					
ANGULAR ± 3 °		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				

8 CIRCUITS

F	CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION															
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H								
E	8	87831-0819	N.A	N.A	1	N.A	N.A	YES	N.A	YES	N.A	6.00	8.85	10.65	9.00	N.A	N.A	2.50	3.60±0.20								
		87831-0820	N.A	N.A	2																						
		87831-0821	N.A	N.A	3																						
		87831-0836	N.A	N.A	4	N.A	N.A	YES	N.A	YES	YES						N.A	N.A		2.50							
		87831-0828	N.A	N.A	2																						
		87831-0829	N.A	N.A	3																						
		87831-0841	N.A	87831-5551	2	N.A	YES	YES	N.A	N.A	N.A						N.A	3.00		2.50							
		87831-0842	N.A	N.A	3																						
		87831-5441	N.A	N.A	2																						
		87831-5442	N.A	N.A	3	N.A	YES	YES	N.A	N.A	N.A						N.A	3.00		3.50							
		N.A	87831-5541	N.A	2																						
		N.A	87831-5542	N.A	3																						
		D		87831-5741	N.A	N.A	2	N.A	YES	YES	N.A						N.A	N.A		6.00	8.85	10.65	9.00	N.A	3.00	2.50	3.60 <sup>+0.15</sup> <sub>-0.10</sub>
				87831-5742	N.A	N.A	3																				
				87831-0832	N.A	N.A	2																				
87831-0843	N.A			N.A	2	N.A	YES	N.A	YES	N.A	N.A	N.A	3.00	2.50													
87831-0844	N.A			N.A	3																						
87831-0845	N.A			N.A	2																						
87831-0846	N.A			N.A	3	N.A	YES	N.A	YES	N.A	YES	N.A	3.00	2.50													

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED EC NO: S2015-1188 DRWNG: GEMEARLY 2015/04/15 CHK'D: CGOH 2015/06/29 APPR: KHL IM 2015/06/29	REV DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
		$F_A=0$ $F_G=0$ $F_P=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	MM ONLY	NTS	METRIC	DRAWN BY: GMENARLY DATE: 2015/04/15 CHECKED BY: _____ DATE: _____ APPROVED BY: KHL IM DATE: 2015/06/29	MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER
		ANGULAR ± 3 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE	MATERIAL NO. DOCUMENT NO. SD-87831-0001 SHEET NO. 7 OF 13				
		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

10 TO 12 CIRCUITS

CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
10	87831-1019	N.A	N.A	1	N.A	N.A	YES	N.A	YES	N.A	8.00	10.85	12.65	11.00	N.A	N.A	2.50	3.60±0.20
	87831-1020	N.A	N.A	2														
	87831-1021	N.A	N.A	3														
	87831-1036	N.A	N.A	4														
	87831-1010	N.A	N.A	2														
	87831-1011	N.A	N.A	3														
	87831-1028	N.A	N.A	2	N.A	N.A	YES	N.A	YES	YES						2.50		
	87831-1029	N.A	N.A	3														
	87831-1035	N.A	N.A	3														
	87831-1041	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						2.50		
	87831-1042	N.A	87831-5553	3														
	87831-1032	N.A	N.A	2														
87831-1043	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A	2.50								
87831-1044	N.A	N.A	3															
87831-1045	N.A	N.A	2															
87831-1046	N.A	N.A	3	N.A	YES	N.A	YES	N.A	YES	2.50								
87831-1219	N.A	N.A	1															
87831-1220	N.A	N.A	2															
12	87831-1221	N.A	N.A	3	N.A	N.A	YES	N.A	YES	N.A	10.00	12.85	14.65	13.00	N.A	N.A	2.50	3.60±0.20
	87831-1236	N.A	N.A	4														
	87831-1228	N.A	N.A	2														
	87831-1229	N.A	N.A	3														
	87831-1241	N.A	N.A	2														
	87831-1242	N.A	N.A	3														
	87831-1255	87831-1256	N.A	2	N.A	YES	YES	N.A	N.A	N.A						3.50		
	87831-1232	N.A	N.A	2														
	87831-1243	N.A	N.A	2														
	87831-1244	N.A	N.A	3	N.A	YES	N.A	YES	N.A	N.A						2.50		
	87831-1245	N.A	N.A	2														
	87831-1246	N.A	N.A	3														

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED EC NO: S2015-1188 DRWG:GMENARLY CHKD:CGOH APPR:KHL IM	2015/04/15 2015/06/29 2015/06/29	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION			
			$F_A=0$ $F_G=0$ $F_P=0$	mm INCH	MM ONLY	NTS	METRIC	DRAWN BY: GMENARLY DATE: 2015/04/15 CHECKED BY: _____ DATE: _____	TITLE: MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER		
			4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	ANGULAR ± 3°	SEE TABLE	APPROVED BY: KHL IM DATE: 2015/06/29	DOCUMENT NO.: SD-87831-0001 SHEET NO.: 8 OF 13				
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						



14 TO 50 CIRCUITS



SECTION W-W



DETAIL5



DETAIL6



RECOMMENDED PCB LAYOUT

NOTES:

- MATERIALS:  
HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK  
PIN: 0.50MM SQ PHOSPHOR BRONZE
- FINISHES: REFER TO PLATING OPTIONS
- PRODUCT SPECIFICATION: PS-87831-027
- PACKAGING SPECIFICATION:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
- MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES  
B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES  
C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE: 79107 (GOLD PLATED), 78787 (TIN PLATED)

RELEASED EC NO: S2015-1188 DRWN:GMENARLY CHKD:CGOH APPR:KHL IM	2015/04/15 2015/06/29 2015/06/29	DESCRIPTION QUALITY SYMBOLS $F_a=0$ $F_b=0$ $F_p=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION				
			mm	INCH	MM ONLY	NTS	METRIC					
			4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE				
			3 PLACES	± ---	± ---	GMENARLY	2015/04/15	MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER <b>molex</b>				
2 PLACES	± 0.20	± ---	CHECKED BY	DATE								
1 PLACE	± ---	± ---	APPROVED BY	DATE	DOCUMENT NO. SD-87831-0001 SHEET NO. 9 OF 13							
0 PLACE	± ---	± ---	KHL IM	2015/06/29								
ANGULAR ± 3°			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
SEE TABLE					A3							

14 TO 20 CIRCUITS

F	CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
E	14	87831-1419	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	12.00	14.85	16.65	15.00	8.00	N.A	2.50	3.60±0.20
		87831-1420	N.A	87831-5554	2														
		87831-1421	N.A	N.A	3														
		87831-1436	N.A	N.A	4														
		87831-1428	N.A	N.A	2														
		87831-1429	N.A	N.A	3														
		87831-1435	N.A	N.A	3														
D	16	87831-1410	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A	14.00	16.85	18.65	17.00	10.00	N.A	2.50	3.60±0.20
		87831-1411	N.A	N.A	3														
		87831-1619	N.A	N.A	1														
		87831-1620	N.A	N.A	2														
		87831-1621	N.A	N.A	3														
		87831-1636	N.A	N.A	4														
		87831-1628	N.A	N.A	2														
C	18	87831-1629	N.A	N.A	3	YES	N.A	YES	N.A	YES	N.A	16.00	18.85	20.65	19.00	12.00	N.A	2.50	3.60±0.20
		87831-1819	N.A	N.A	1														
		87831-1820	N.A	N.A	2														
		87831-1821	N.A	N.A	3														
		87831-1836	N.A	N.A	4														
		87831-1828	N.A	N.A	2														
A	20	87831-1829	N.A	N.A	3	YES	N.A	YES	N.A	YES	N.A	18.00	20.85	22.65	21.00	14.00	N.A	2.50	3.60±0.20
		87831-2019	N.A	N.A	1														
		87831-2020	N.A	N.A	2														
		87831-2021	N.A	N.A	3														
		87831-2036	N.A	N.A	4														
		87831-2028	N.A	N.A	2														
		87831-2029	N.A	N.A	3														
		87831-2035	N.A	N.A	3														
87831-2010	N.A	N.A	2																
87831-2011	N.A	N.A	3																

**PLATING OPTIONS:**

- 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED EC NO: S2015-1188 DRW:GMENARLY 2015/04/15 CHKD:CGOH 2015/06/29 APPR:KHLIM 2015/06/29	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
		$F_A=0$ $F_G=0$ $F_P=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	MM ONLY	NTS	METRIC	DRAWN BY: GMENARLY DATE: 2015/04/15 CHECKED BY: _____ DATE: _____ APPROVED BY: KHLIM DATE: 2015/06/29	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER	
		ANGULAR ± 3 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-87831-0001	SHEET NO. 10 OF 13				
		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							

22 TO 30 CIRCUITS

F	CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION													
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H						
22	87831-2219	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	20.00	22.85	24.65	23.00	16.00	N.A	2.50	3.60±0.20							
	87831-2220	N.A	N.A	2																					
	87831-2221	N.A	N.A	3																					
	87831-2236	N.A	N.A	4																					
	87831-2228	N.A	N.A	2																					
87831-2229	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES	2.50															
24	87831-2419	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	22.00	24.85	26.65	25.00	18.00	N.A	2.50	3.60±0.20							
	87831-2420	N.A	N.A	2																					
	87831-2421	N.A	N.A	3																					
	87831-2436	N.A	N.A	4																					
	87831-2428	N.A	N.A	2																					
	87831-2429	N.A	N.A	3																					
	87831-2435	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	3.50
87831-2410	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A	3.50															
26	87831-2619	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	24.00	26.85	28.65	27.00	20.00	N.A	2.50	3.60±0.20							
	87831-2620	N.A	N.A	2																					
	87831-2621	N.A	N.A	3																					
	87831-2636	N.A	N.A	4																					
	87831-2628	N.A	N.A	2																					
	87831-2629	N.A	N.A	3																					
	87831-2610	N.A	N.A	2															YES	N.A	YES	N.A	YES	N.A	3.50
28	87831-2819	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	26.00	28.85	30.65	29.00	22.00	N.A	2.50	3.60±0.20							
	87831-2820	N.A	N.A	2																					
	87831-2821	N.A	N.A	3																					
	87831-2836	N.A	N.A	4																					
	87831-2828	N.A	N.A	2																					
	87831-2829	N.A	N.A	3																					
30	87831-3019	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	28.00	30.85	32.65	31.00	24.00	N.A	2.50	3.60±0.20							
	87831-3020	N.A	N.A	2																					
	87831-3021	N.A	N.A	3																					
	87831-3036	N.A	N.A	4																					
	87831-3028	N.A	N.A	2																					
	87831-3029	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	2.50
	87831-3035	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	3.50
87831-3010	87831-3030	87831-3050	2	YES	N.A	YES	N.A	YES	N.A	3.50															

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED  
 IEC NO: S2015-1188  
 DRW:GMENARLY 2015/04/15  
 CH:KD:G0H 2015/06/29  
 APPR:KHL IM 2015/06/29

DESCRIPTION

QUALITY SYMBOLS  
 F<sub>A</sub>=0  
 F<sub>C</sub>=0  
 F<sub>B</sub>=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.20	± ---
1 PLACE	± ---	± ---
0 PLACE	± ---	± ---

ANGULAR ± 3 °

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE  
**MM ONLY**

SCALE  
**NTS**

DESIGN UNITS  
**METRIC**

THIRD ANGLE PROJECTION

DRAWN BY  
 GMENARLY

DATE  
 2015/04/15

CHECKED BY

DATE

APPROVED BY  
 KHL IM

DATE  
 2015/06/29

MATERIAL NO.

DOCUMENT NO.  
**SD-87831-0001**

SHEET NO.  
 11 OF 13

MILLIGRID  
 2MM PITCH, THROUGH HOLE  
 VERTICAL SHROUDED HEADER

**molex**

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

32 TO 40 CIRCUITS

F	CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION													
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H						
32	87831-3219	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	30.00	32.85	34.65	33.00	26.00	N.A	2.50	3.60±0.20							
	87831-3220	N.A	N.A	2																					
	87831-3221	N.A	N.A	3																					
	87831-3236	N.A	N.A	4																					
	87831-3228	N.A	N.A	2																					
87831-3229	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES	2.50															
34	87831-3419	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	32.00	34.85	36.65	35.00	28.00	N.A	2.50	3.60±0.20							
	87831-3420	N.A	N.A	2																					
	87831-3421	N.A	N.A	3																					
	87831-3436	N.A	N.A	4																					
	87831-3428	N.A	N.A	2															YES	N.A	YES	N.A	YES	YES	2.50
	87831-3429	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	3.50
36	87831-3619	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	34.00	36.85	38.65	37.00	30.00	N.A	2.50	3.60±0.20							
	87831-3620	N.A	N.A	2																					
	87831-3621	N.A	N.A	3																					
	87831-3636	N.A	N.A	4																					
	87831-3628	N.A	N.A	2															YES	N.A	YES	N.A	YES	YES	2.50
	87831-3629	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	3.50
38	87831-3819	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	36.00	38.85	40.65	39.00	32.00	N.A	2.50	3.60±0.20							
	87831-3820	N.A	N.A	2																					
	87831-3821	N.A	N.A	3																					
	87831-3836	N.A	N.A	4																					
	87831-3828	N.A	N.A	2															YES	N.A	YES	N.A	YES	YES	2.50
	87831-3829	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	3.50
40	87831-4019	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	38.00	40.85	42.65	41.00	34.00	N.A	2.50	3.60±0.20							
	87831-4020	N.A	N.A	2																					
	87831-4021	N.A	N.A	3																					
	87831-4036	N.A	N.A	4																					
	87831-4028	N.A	N.A	2															YES	N.A	YES	N.A	YES	YES	2.50
	87831-4029	N.A	N.A	3															YES	N.A	YES	N.A	YES	YES	3.50
	87831-4010	N.A	N.A	2															YES	N.A	YES	N.A	YES	N.A	3.50

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED EC NO: S2015-1188 DRWING:GMENARLY 2015/04/15 CHKD:CGOH 2015/06/29 APPR:KHLIM 2015/06/29	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION			
		$F_A=0$ $F_G=0$ $F_P=0$	mm	INCH	MM ONLY	NTS	METRIC	DRAWN BY: GMENARLY DATE: 2015/04/15 CHECKED BY: _____ DATE: _____		TITLE: MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER		
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± ---	ANGULAR ± 3 °		APPROVED BY: KHLIM DATE: 2015/06/29		MATERIAL NO.		DOCUMENT NO.		SHEET NO.	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-87831-0001		12 OF 13		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

42 TO 50 CIRCUITS

CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
42	87831-4219	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	40.00	42.85	44.65	43.00	36.00	N.A	2.50	3.60±0.20
	87831-4220	N.A	N.A	2														
	87831-4221	N.A	N.A	3														
	87831-4236	N.A	N.A	4														
	87831-4228	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
87831-4229	N.A	N.A	3															
44	87831-4419	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	42.00	44.85	46.65	45.00	38.00	N.A	2.50	3.60±0.20
	87831-4420	N.A	N.A	2														
	87831-4421	N.A	N.A	3														
	87831-4436	N.A	N.A	4														
	87831-4428	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4429	N.A	N.A	3														
87831-4435	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES	3.50								
46	87831-4619	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	44.00	46.85	48.65	47.00	40.00	N.A	2.50	3.60±0.20
	87831-4620	N.A	N.A	2														
	87831-4621	N.A	N.A	3														
	87831-4636	N.A	N.A	4														
	87831-4628	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4629	N.A	N.A	3														
48	87831-4819	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	46.00	48.85	50.65	49.00	42.00	N.A	2.50	3.60±0.20
	87831-4820	N.A	N.A	2														
	87831-4821	N.A	N.A	3														
	87831-4836	N.A	N.A	4														
	87831-4828	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4829	N.A	N.A	3														
50	87831-5019	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	48.00	50.85	52.65	51.00	44.00	N.A	2.50	3.60±0.20
	87831-5020	N.A	N.A	2														
	87831-5021	N.A	N.A	3														
	87831-5036	N.A	N.A	4														
	87831-5028	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-5029	N.A	N.A	3														
	87831-5035	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							3.50	

PLATING OPTIONS:

- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 4 - 2.50um/100uin MIN. MATTE TIN OVER 1.25um/50uin MIN. NICKEL OVERALL.

RELEASED IEC NO: S2015-1188 DRWNG:GMENARLY 2015/04/15 CHK'D:CGOH 2015/06/29 APPR:KHLIM 2015/06/29	QUALITY SYMBOLS $\nabla_F = 0$ $\nabla_E = 0$ $\nabla_D = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION			
				MM ONLY		NTS	METRIC				
				mm	INCH	DRAWN BY		DATE		TITLE	
						GMENARLY		2015/04/15		MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER	
				3 PLACES ± --- ± ---		CHECKED BY		DATE			
				2 PLACES ± 0.20 ± ---		APPROVED BY		DATE			
				1 PLACE ± --- ± ---		KHLIM		2015/06/29			
				0 PLACE ± --- ± ---		MATERIAL NO.		DOCUMENT NO.			
				ANGULAR ± 3 °		SEE TABLE		SD-87831-0001			
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE A3		SHEET NO. 13 OF 13			
						THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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