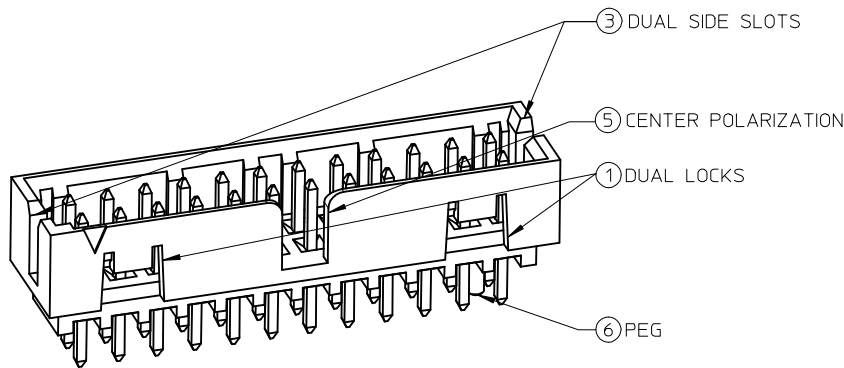
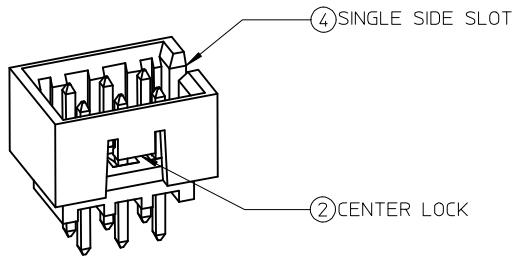


FEATURES SELECTION GUIDE



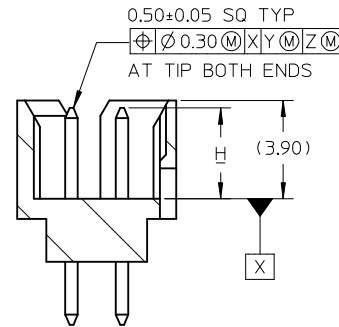
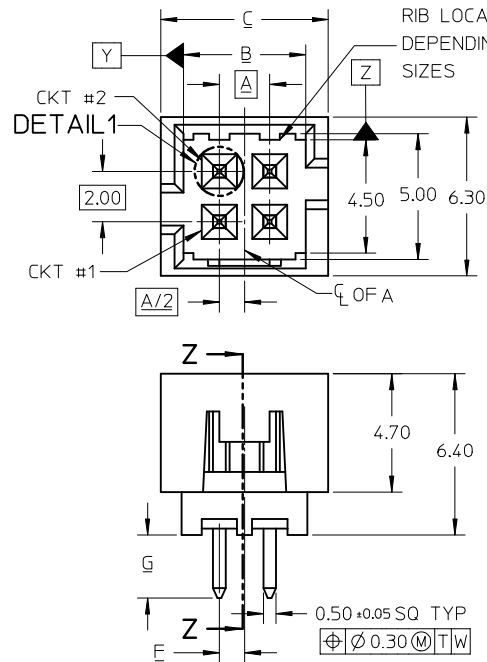
CIRCUIT SIZE	FEATURES						SHEET NO
	FRICTION LOCKS		SIDE SLOTS		⑤ CENTER POLARIZATION	⑥ PEG	
	① DUAL	② CENTER	③ DUAL	④ SINGLE			
4	N.A	N.A	YES	N.A	N.A	N.A	2 - 3
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	YES	N.A	YES	N.A	N.A	
6	N.A	N.A	YES	N.A	N.A	N.A	4 - 5
	N.A	N.A	YES	N.A	N.A	YES	
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	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	

PACKAGING SPECIFICATION TABLE

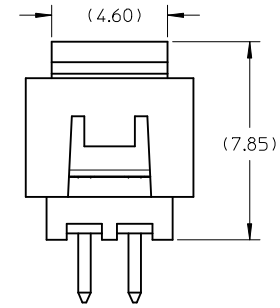
TAPE AND REEL PACKAGING	PK-87831-300
TUBE STANDARD PACKAGING	PK-87831-001
TUBE NON-STANDARD PACKAGING FOR:	PK-87831-002
87831-0419	
87831-5141	
87831-0443	
87831-5241	
87831-5242	
87831-0643	

SEE SHEET 8 EC NO: S2017-0675 DRAWN: MENARLY CHKD: SCHEONG APPR: KHLIM A9	DESCRIPTION REV	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 CGOH	DATE 2015/06/29					
			3 PLACES	± ---	± ---	APPROVED BY KHLIM	DATE 2015/06/29					
			2 PLACES	± 0.20	± ---	MATERIAL NO.				DOCUMENT NO.	SHEET NO.	
			1 PLACE	± ---	± ---	SEE TABLE				SD-87831-0001		1 OF 13
			0 PLACE		± ---	± ---	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		

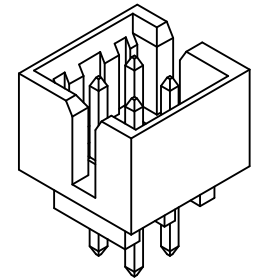
4 CIRCUITS



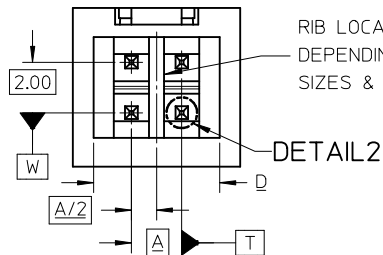
SECTION Z-Z



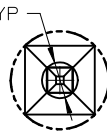
VIEW FOR
HEADER WITH CAP



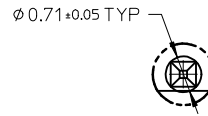
VIEW FOR HEADER
WITH ONLY DUAL SLOTS



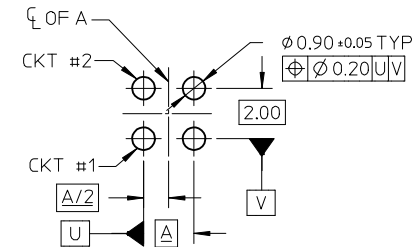
DETAIL2



DETAIL1



DETAIL2



RECOMMENDED PCB LAYOUT

NOTES:

1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK
PIN: 0.50MM SQ PHOSPHOR BRONZE

2. FINISHES: REFER TO PLATING OPTIONS

3. PRODUCT SPECIFICATION: PS-87831-027

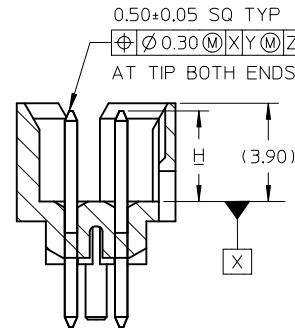
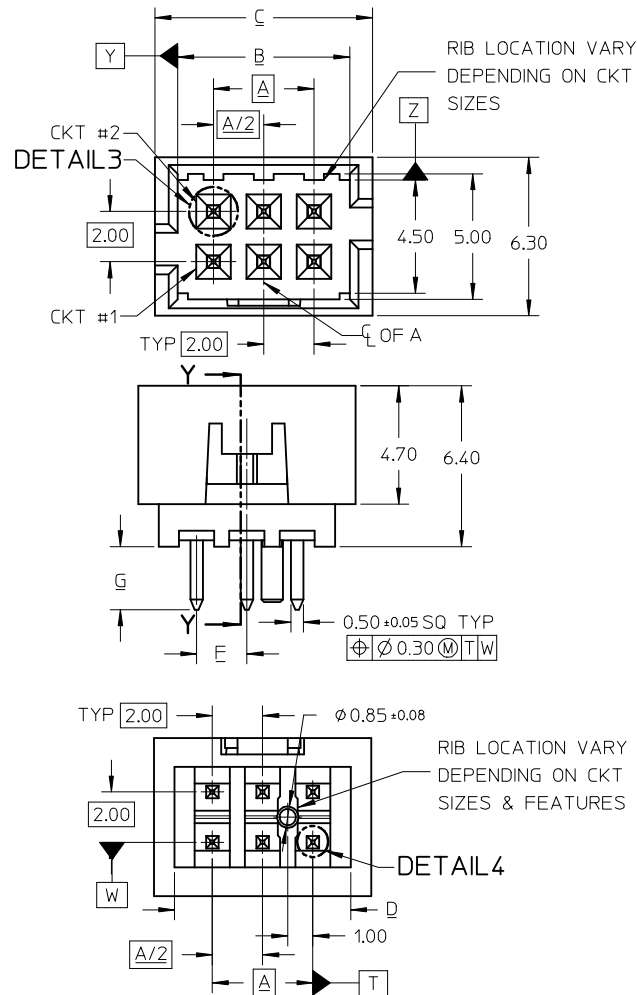
4. PACKAGING SPECIFICATION: SEE PACKAGING SPECS TABLE ON SHEET 1

5. 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)

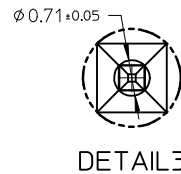
SEE SHEET 8 EC NO: S2017-0675 DRAWN:GMENARLY CHKD:SCHEONG APPR:KHL IM	2017/06/08 2017/06/30 2017/07/05	DESCRIPTION	QUALITY SYMBOLS F_A=0 F_E=0 F_P=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION			
					mm	INCH	DRAWN BY GMENARLY	DATE 2015/04/15	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER molex				
				4 PLACES	± ---	± ---	CHECKED BY	DATE					
				3 PLACES	± ---	± ---	CGOH	2015/06/29					
				2 PLACES	± 0.20	± ---	APPROVED BY	DATE	DOCUMENT NO. SD-87831-0001				
				1 PLACE	± ---	± ---	KHL IM	2015/06/29					
				0 PLACE	± ---	± ---	MATERIAL NO.						
				ANGULAR ± 3 °		SEE TABLE		SD-87831-0001		SHEET NO. 2 OF 13			
				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			
4 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								F	
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H		
E	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	E	
		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																
		87831-5141	N.A	N.A	2																
		87831-5142	N.A	N.A	3																
		87831-6141	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						2.80				
		87831-6142	N.A	N.A	3																
87831-0443	N.A	N.A	2																		
87831-0444	N.A	N.A	3	N.A	YES							N.A	YES	N.A	N.A	2.50		3.60 ^{+0.15} _{-0.10}			
D																					
C																					
B																					
A																					
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.						SEE SHEET 8 EC NO: S2017-0675 DRWN:GMENARLY 2017/06/08 CHKD:SCHEONG 2017/06/30 APPR:KHLIM 2017/07/05 A9		DESCRIPTION REV	QUALITY SYMBOLS F=0 F=0 F=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 DRAWN BY DATE GMENARLY 2015/04/15 CHECKED BY DATE CGOH 2015/06/29 APPROVED BY DATE KHLIM 2015/06/29		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER molex		DOCUMENT NO. SD-87831-0001 SHEET NO. 3 OF 13	
SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																			
tb_frame_A3_P_AM_T Rev. G 2012/01/11		9		8		7		6		5		4		3		2		1			

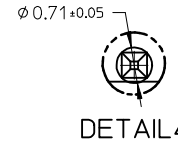
6 CIRCUITS



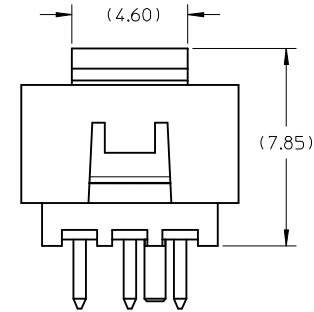
SECTION Y-Y



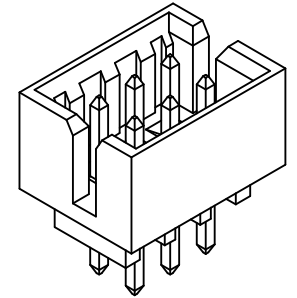
DETAIL3



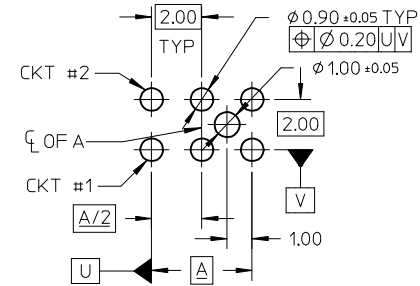
DETAIL4



VIEW FOR
HEADER WITH CAP



VIEW FOR HEADER WITH
ONLY DUAL SLOTS



RECOMMENDED PCB LAYOUT

NOTES:

1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK
PIN: 0.50MM SQ PHOSPHOR BRONZE

2. FINISHES: REFER TO PLATING OPTIONS

3. PRODUCT SPECIFICATION: PS-87831-027

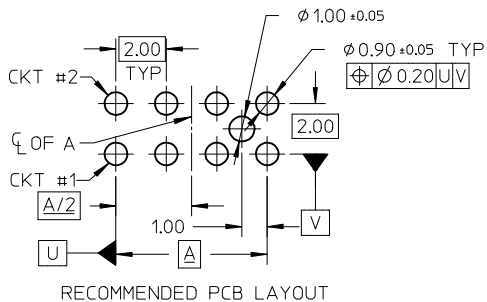
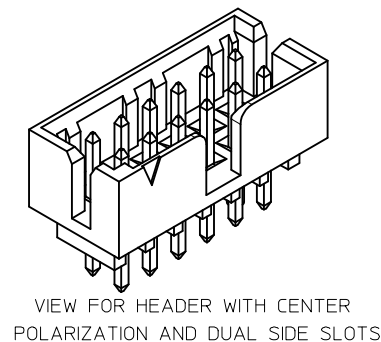
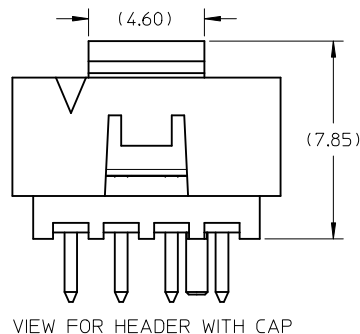
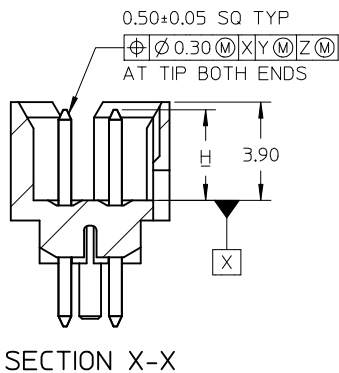
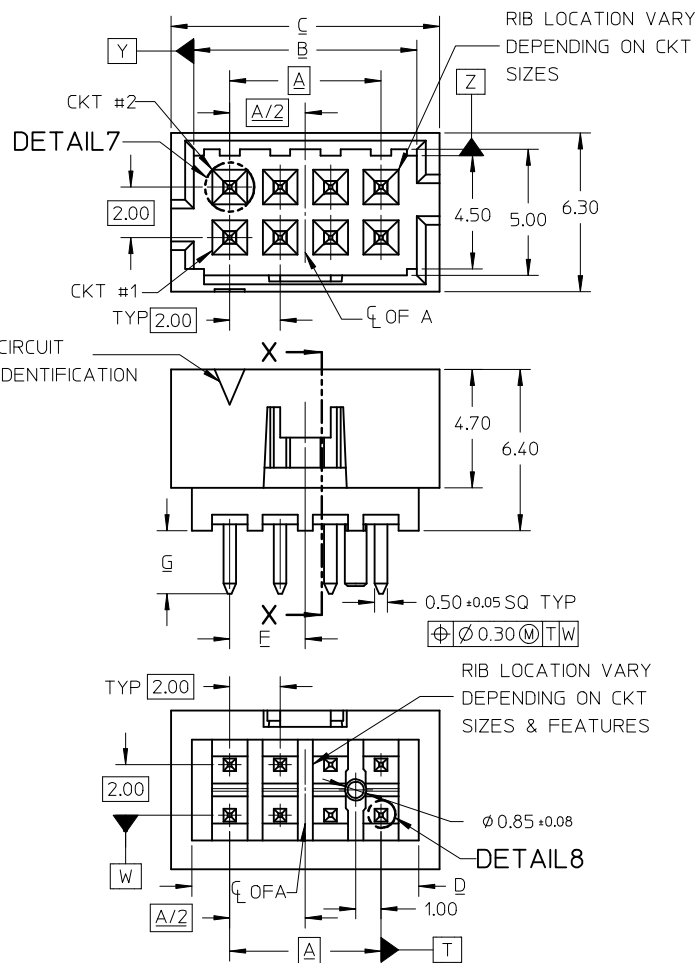
4. PACKAGING SPECIFICATION: SEE PACKAGING SPECS TABLE ON SHEET 1

5. 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)

SEE SHEET 8 EC NO: S2017-0675 DRAWN BY: GMEARLY CHKD: SCHEONG APPR: KHLIM 2017/06/08 2017/06/30 2017/07/05	DESCRIPTION	QUALITY SYMBOLS 	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
				mm	INCH	DRAWN BY GMEARLY	DATE 2015/04/15	TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER				
						CHECKED BY CGOH	DATE 2015/06/29					
						APPROVED BY KHLIM	DATE 2015/06/29	molex DOCUMENT NO. SD-87831-0001 SHEET NO. 4 OF 13				
			ANGULAR ± 3 °		MATERIAL NO.							
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE							
REV	A9	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													
6 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								F											
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H												
E	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	E											
		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			2.00	2.50	3.60 ^{+0.15} _{-0.10}	D							
		87831-0629	N.A	N.A	3																										
		87831-0641	N.A	N.A	2																										
		87831-0642	N.A	87831-5552	3																										
		87831-5241	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						2.50	2.50			2.80	2.50	3.60±0.20	D							
		87831-5242	N.A	N.A	3																										
87831-6241	N.A	N.A	2																												
87831-6242	N.A	N.A	3																												
D		87831-0643	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A	4.00	6.85	8.65	7.00	N.A	2.00	2.50	3.60±0.20	D											
		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			2.50	3.60±0.20	D								
		87831-5119	N.A	N.A	1													N.A						N.A	YES	N.A	YES	N.A	2.50	3.60±0.20	

8 TO 12 CIRCUITS



NOTES:

1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK
PIN: 0.50MM SQ PHOSPHOR BRONZE

2. FINISHES: REFER TO PLATING OPTIONS

3. PRODUCT SPECIFICATION: PS-87831-027

4. PACKAGING SPECIFICATION: SEE PACKAGING SPECS TABLE ON SHEET 1

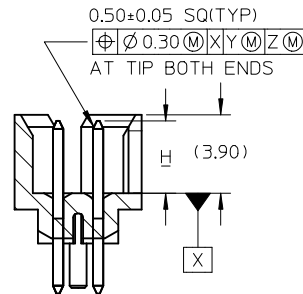
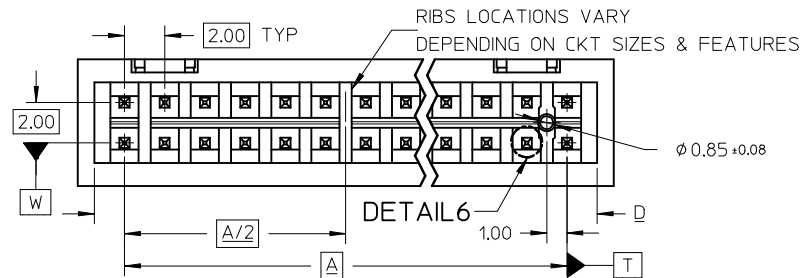
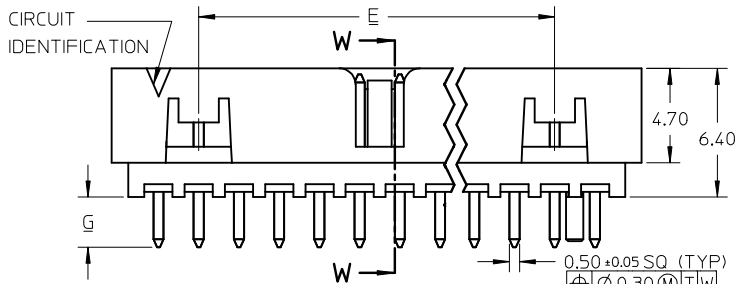
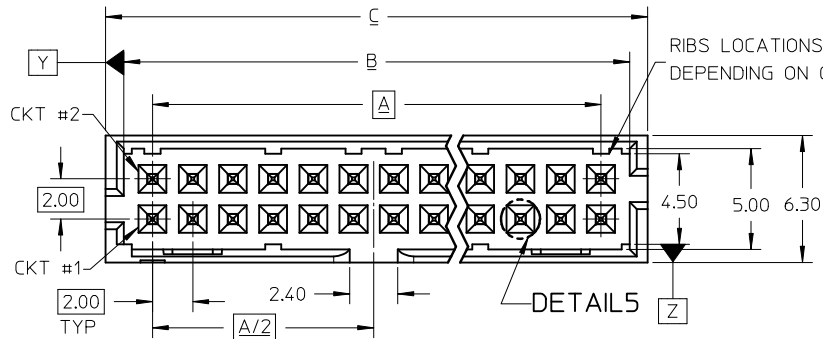
5. MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP TERMINAL: 50394 SERIES B. MOLEX 2MM MILLIGRID DUAL ROW IDT: 87568 SERIES C. MOLEX 2MM MILLIGRID DUAL ROW RECEPTACLE: 79107 (GOLD PLATED), 78787 (TIN PLATED)

SEE SHEET 8 EC NO: S2017-0675 DRAWN:GMENARLY CHKD:SCHEONG APPR:KHLIM	2017/06/08 2017/06/30 2017/07/05	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
						MM ONLY		NTS	METRIC			
						DRAWN BY DATE		TITLE				
						GMENARLY 2015/04/15		MILLIGRID				
						CHECKED BY DATE		2MM PITCH, THROUGH HOLE				
						CGOH 2015/06/29		VERTICAL SHROUDED HEADER				
						APPROVED BY DATE		molex				
						KHLIM 2015/06/29						
						MATERIAL NO.						
						ANGULAR ± 3 °		SEE TABLE		SD-87831-0001		6 OF 13
		DRAFT WHERE APPLICABLE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								
		MUST REMAIN WITHIN DIMENSIONS										
A9	REV					SIZE A3						

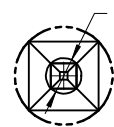
	10	9	8	7	6	5	4	3	2	1																																												
	8 CIRCUITS																																																					
F	CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION						F																																				
						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																																																	
		87831-0828	N.A	N.A	2	N.A	N.A	YES	N.A	YES	YES						N.A	N.A		YES	N.A	3.00	2.50																															
		87831-0829	N.A	N.A	3																																																	
		87831-0841	N.A	87831-5551	2																																																	
		87831-0842	N.A	N.A	3																																																	
		87831-5841	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES						N.A	N.A		N.A	N.A	3.00	2.50																															
		87831-5441	N.A	N.A	2																																																	
87831-5442	N.A	N.A	3																																																			
87831-5541	N.A	N.A	2																																																			
D		87831-5542	N.A	N.A	3	N.A	YES	YES	N.A	N.A	N.A						6.00	8.85		10.65	9.00	N.A	3.00	2.80	3.60 ^{+0.15} _{-0.10}																													
		87831-5741	N.A	N.A	2																																																	
		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	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																																																	
C													6.00	8.85	10.65	9.00	N.A	3.00	2.50	3.60 ^{+0.15} _{-0.10}																																		
B													6.00	8.85	10.65	9.00	N.A	3.00	2.50	3.60 ^{+0.15} _{-0.10}																																		
A													6.00	8.85	10.65	9.00	N.A	3.00	2.50	3.60 ^{+0.15} _{-0.10}																																		
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.											SEE SHEET 8 EC NO: S2017-0675 DRWN:GMENARLY 2017/06/08 CHKD:SCHONG 2017/06/30 APPR:KHL IM 2017/07/05 A9	QUALITY SYMBOLS ▽=0 ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) <table><tr><td></td><td>mm</td><td>INCH</td></tr><tr><td>4 PLACES</td><td>± ---</td><td>± ---</td></tr><tr><td>3 PLACES</td><td>± ---</td><td>± ---</td></tr><tr><td>2 PLACES</td><td>± 0.20</td><td>± ---</td></tr><tr><td>1 PLACE</td><td>± ---</td><td>± ---</td></tr><tr><td>0 PLACE</td><td>± ---</td><td>± ---</td></tr><tr><td colspan="3">ANGULAR ± 3 °</td></tr><tr><td colspan="3">DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td></tr></table>		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 <table><tr><td>DRAWN BY</td><td>DATE</td></tr><tr><td>GMENARLY</td><td>2015/04/15</td></tr><tr><td>CHECKED BY</td><td>DATE</td></tr><tr><td>CGOH</td><td>2015/06/29</td></tr><tr><td>APPROVED BY</td><td>DATE</td></tr><tr><td>KHL IM</td><td>2015/06/29</td></tr><tr><td>MATERIAL NO.</td><td></td></tr></table>	DRAWN BY	DATE	GMENARLY	2015/04/15	CHECKED BY	DATE	CGOH	2015/06/29	APPROVED BY	DATE	KHL IM	2015/06/29	MATERIAL NO.		SCALE NTS TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER molex SD-87831-0001 SHEET NO. 7 OF 13	DESIGN UNITS METRIC THIRD ANGLE PROJECTION
	mm	INCH																																																				
4 PLACES	± ---	± ---																																																				
3 PLACES	± ---	± ---																																																				
2 PLACES	± 0.20	± ---																																																				
1 PLACE	± ---	± ---																																																				
0 PLACE	± ---	± ---																																																				
ANGULAR ± 3 °																																																						
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS																																																						
DRAWN BY	DATE																																																					
GMENARLY	2015/04/15																																																					
CHECKED BY	DATE																																																					
CGOH	2015/06/29																																																					
APPROVED BY	DATE																																																					
KHL IM	2015/06/29																																																					
MATERIAL NO.																																																						
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																																																						
fb_frame_A3_P_AM_T Rev. G 2012/01/11	9	8	7	6	5	4	3	2	1																																													

10		9		8		7		6		5		4		3		2		1								
10 TO 12 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								F						
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H		E					
E	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	E						
		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	87831-5561	2	N.A	N.A	YES	N.A	YES	N.A							3.50								
		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	87831-5557	3													N.A			N.A	YES	N.A	YES	YES	3.50
		87831-1035	N.A	N.A	3	N.A	N.A	YES	N.A	YES	YES						2.50									
		87831-1041	N.A	N.A	2													N.A			YES	YES	N.A	N.A	N.A	4.00
87831-1042	N.A	87831-5553	3	N.A	YES	YES	N.A	N.A	N.A	2.50																
87831-1032	N.A	N.A	2								N.A	YES	YES	N.A	N.A	YES	3.60 ^{+0.15} _{-0.10}									
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								N.A	YES	N.A	YES	N.A	N.A	2.50									
87831-1045	N.A	N.A	2	N.A	YES	N.A	YES	N.A	YES	2.50																
87831-1046	N.A	N.A	3								N.A	YES	N.A	YES	N.A	YES	2.50									
C	12	87831-1219	N.A	N.A	1	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
		87831-1220	N.A	87831-5556	2																					
		87831-1221	N.A	N.A	3																					
		87831-1236	N.A	N.A	4																					
		87831-1228	N.A	N.A	2	N.A	N.A	YES	N.A	YES	YES	3.50														
		87831-1229	N.A	87831-5558	3																					
		87831-1258	N.A	N.A	2								N.A	YES	YES	N.A	N.A	N.A						2.50		
		87831-1241	N.A	N.A	2																				N.A	
		87831-1242	N.A	N.A	3	N.A	YES	YES	N.A	N.A	YES	2.50														
		87831-1255	87831-1256	N.A	2								N.A	YES	YES	N.A	N.A	N.A						5.00	2.50	
		87831-1232	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A	2.50														
		87831-1243	N.A	N.A	2								N.A	YES	N.A	YES	N.A	N.A						2.50		
		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								N.A	YES	N.A	YES	N.A	YES						2.50		
		87831-1246	N.A	N.A	3	N.A	YES	N.A	YES	N.A	YES	2.50														
A	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.																			B						
	A	ADD 87831-5561 EC NO: S2017-06/75 DRWN:GEMARLY 2017/06/08 CHKD:SCHEONG 2017/06/30 APPR:KHL IM 2017/07/05 A9	DESCRIPTION REV	QUALITY SYMBOLS F _A =0 F _G =0 F _P =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 DRAWN BY DATE GMEARLY 2015/04/15 CHECKED BY DATE CGOH 2015/06/29 APPROVED BY DATE KHL IM 2015/06/29 MATERIAL NO. SEE TABLE	SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER molex	DOCUMENT NO. SD-87831-0001	SHEET NO. 8 OF 13	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	A												

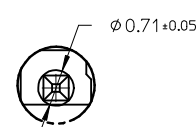
14 TO 50 CIRCUITS



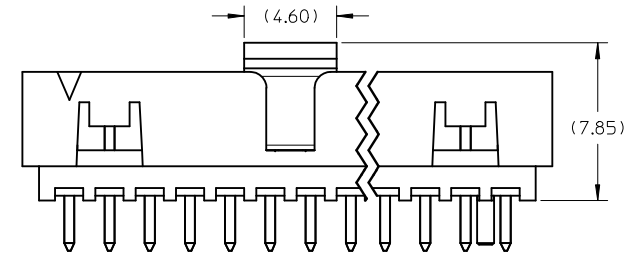
SECTION W-W



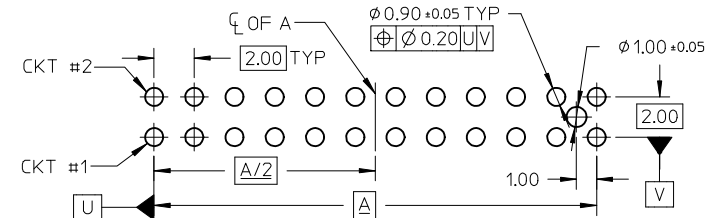
DETAIL 5



DETAIL 6



VIEW FOR HEADER WITH CAP



RECOMMENDED PCB LAYOUT

NOTES:

1. MATERIALS:

HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK
PIN: 0.50MM SQ PHOSPHOR BRONZE

2. FINISHES: REFER TO PLATING OPTIONS

3. PRODUCT SPECIFICATION: PS-87831-027

4. PACKAGING SPECIFICATION: SEE PACKAGING SPECS TABLE ON SHEET 1

5. 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)

SEE SHEET 8 EC NO: S2017-0675 DRWN:GMENARLY 2017/06/08 CHKD:SCHEONG 2017/06/30 APPR:KHL IM 2017/07/05	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				
						DRAWN BY GMENARLY		DATE 2015/04/15		TITLE MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER				
						CHECKED BY CGOH		DATE 2015/06/29						
						APPROVED BY KHL IM		DATE 2015/06/29						
						MATERIAL NO.		DOCUMENT NO.			SHEET NO.			
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE TABLE		SD-87831-0001			9 OF 13			
						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	
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								F	
						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	E	
		87831-1420	87831-1430	87831-5554	2																
		87831-1421	N.A	87831-5560	3																
		87831-1436	N.A	N.A	4																
		87831-1428	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-1429	N.A	N.A	3																
		87831-1435	N.A	N.A	3																
		87831-1410	N.A	N.A	2																
87831-1411	N.A	N.A	3	YES	N.A	YES	N.A	YES	N.A	3.50											
D	16	87831-1619	N.A	N.A	1	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	D	
		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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-1629	N.A	87831-5559	3																
		87831-1635	N.A	N.A	3																
C	18	87831-1819	N.A	N.A	1	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	C	
		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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-1829	N.A	N.A	3																
A	20	87831-2019	N.A	N.A	1	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	A	
		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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-2029	N.A	N.A	3																
		87831-2035	N.A	N.A	3																
		87831-2010	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A							3.50			
		87831-2011	N.A	N.A	3																
B																					
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.																					
SEE SHEET 8 EC NO: S2017-0675 DRWN:GMEARLY 2017/06/08 CHKD:SCHEONG 2017/06/30 APPR:KHL IM 2017/07/05		REV	DESCRIPTION	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± --- ANGULAR ± 3 °		DIMENSION STYLE MM ONLY DRAWN BY DATE GMEARLY 2015/04/15 CHECKED BY DATE CGOH 2015/06/29 APPROVED BY DATE KHL IM 2015/06/29		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER molex		DOCUMENT NO. SD-87831-0001		SHEET NO. 10 OF 13				
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															
fb_frame_A3_P_AM.T Rev. G 2012/01/11		9		8		7		6		5		4		3		2		1			

		10	9		8		7		6		5		4		3		2		1				
		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								F			
						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	YES	N.A	YES	N.A	YES	YES							2.50					
		87831-2228	N.A	N.A	2																		
E	24	87831-2229	N.A	N.A	3	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				
		87831-2419	N.A	N.A	1																		
		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																		
D	26	87831-2435	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES	24.00	26.85	28.65	27.00	20.00	N.A	2.50	3.60±0.20				
		87831-2410	N.A	N.A	2																		
		87831-2619	N.A	N.A	1																		
		87831-2620	87831-2630	87831-5555	2																		
		87831-2621	N.A	N.A	3																		
		87831-2636	N.A	N.A	4																		
		87831-2628	N.A	N.A	2																		
C	28	87831-2629	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES	26.00	28.85	30.65	29.00	22.00	N.A	2.50	3.60±0.20				
		87831-2610	N.A	N.A	2																		
		87831-2819	N.A	N.A	1																		
		87831-2820	N.A	N.A	2																		
		87831-2821	N.A	N.A	3																		
B	30	87831-2836	N.A	N.A	4	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				
		87831-2828	N.A	N.A	2																		
		87831-2829	N.A	N.A	3																		
		87831-3019	N.A	N.A	1																		
		87831-3020	N.A	N.A	2																		
		87831-3021	N.A	N.A	3																		
		87831-3036	N.A	N.A	4																		
A		87831-3028	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES	28.00	30.85	32.65	31.00	24.00	N.A	2.50	3.60±0.20				
		87831-3029	N.A	N.A	3																		
		87831-3035	N.A	N.A	3																		
		87831-3010	87831-3030	87831-3050	2																		
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.																							
SEE SHEET 8 EC NO: S2017-0675 DRAWN:GMENARLY 2017/06/08 CHKD:SCHEONG 2017/06/30 APPR:KHL IM 2017/07/05 A9 DESCRIPTION REV QUALITY SYMBOLS F_A=0 F_B=0 F_C=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 DRAWN BY DATE GMENARLY 2015/04/15 CHECKED BY DATE CGOH 2015/06/29 APPROVED BY DATE KHL IM 2015/06/29 MATERIAL NO. SD-87831-0001 DOCUMENT NO. SHEET NO. 11 OF 13 SCALE NTS DESIGN UNITS METRIC THIRD ANGLE PROJECTION 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																							
fb_frame_A3_P_AM.T Rev. G 2012/01/11		9	8		7		6		5		4		3		2		1						

		10	9		8		7		6		5		4		3		2		1							
		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								F						
						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	YES	N.A	YES	N.A	YES	YES							2.50								
		87831-3228	N.A	N.A	2																					
		87831-3229	N.A	N.A	3																					
E	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	YES	N.A	YES	N.A	YES	YES							2.50								
		87831-3428	N.A	N.A	2																					
		87831-3429	N.A	N.A	3																					
				87831-3435	N.A	N.A	3	YES	N.A	YES	N.A							YES			YES	3.50				
D	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	YES	N.A	YES	N.A	YES	YES							2.50								
		87831-3628	N.A	N.A	2																					
		87831-3629	N.A	N.A	3																					
C	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	YES	N.A	YES	N.A	YES	YES							2.50								
		87831-3828	N.A	N.A	2																					
		87831-3829	N.A	N.A	3																					
	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	YES	N.A	YES	N.A	YES	YES							2.50								
		87831-4028	N.A	N.A	2																					
		87831-4029	N.A	N.A	3																					
				87831-4010	N.A	N.A	2	YES	N.A	YES	N.A							YES			N.A	3.50				
B																				B						
A	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.																			A						
		SEE SHEET 8 EC NO: S2017-0675 DRW:GEMARLY 2017/06/08 CHK:DSCHEONG 2017/06/30 APPR:KHLIM 2017/07/05		QUALITY SYMBOLS F=0 F=0 F=0		GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- 0 PLACE ± --- ± --- ANGULAR ± 3 °		DIMENSION STYLE MM ONLY DRAWN BY DATE GMEARLY 2015/04/15 CHECKED BY DATE CGOH 2015/06/29 APPROVED BY DATE KHLIM 2015/06/29		SCALE NTS		DESIGN UNITS METRIC		THIRD ANGLE PROJECTION		MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER molex		MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87831-0001		SHEET NO. 12 OF 13		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
tb_frame_A3_P_AM_T Rev. G 2012/01/11		9	8	7	6	5	4	3	2	1																

		10	9	8	7	6	5	4	3	2	1										
		42 TO 50 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								F	
						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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-4228	N.A	N.A	2																
		87831-4229	N.A	N.A	3																
E	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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-4428	N.A	N.A	2																
		87831-4429	N.A	N.A	3																
				87831-4435	N.A	N.A	3	YES	N.A	YES	N.A							YES			YES
D	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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-4628	N.A	N.A	2																
		87831-4629	N.A	N.A	3																
C	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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-4828	N.A	N.A	2																
		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	YES	N.A	YES	N.A	YES	YES							2.50			
		87831-5028	N.A	N.A	2																
		87831-5029	N.A	N.A	3																
		87831-5035	N.A	N.A	3																
B																					B
A																					A