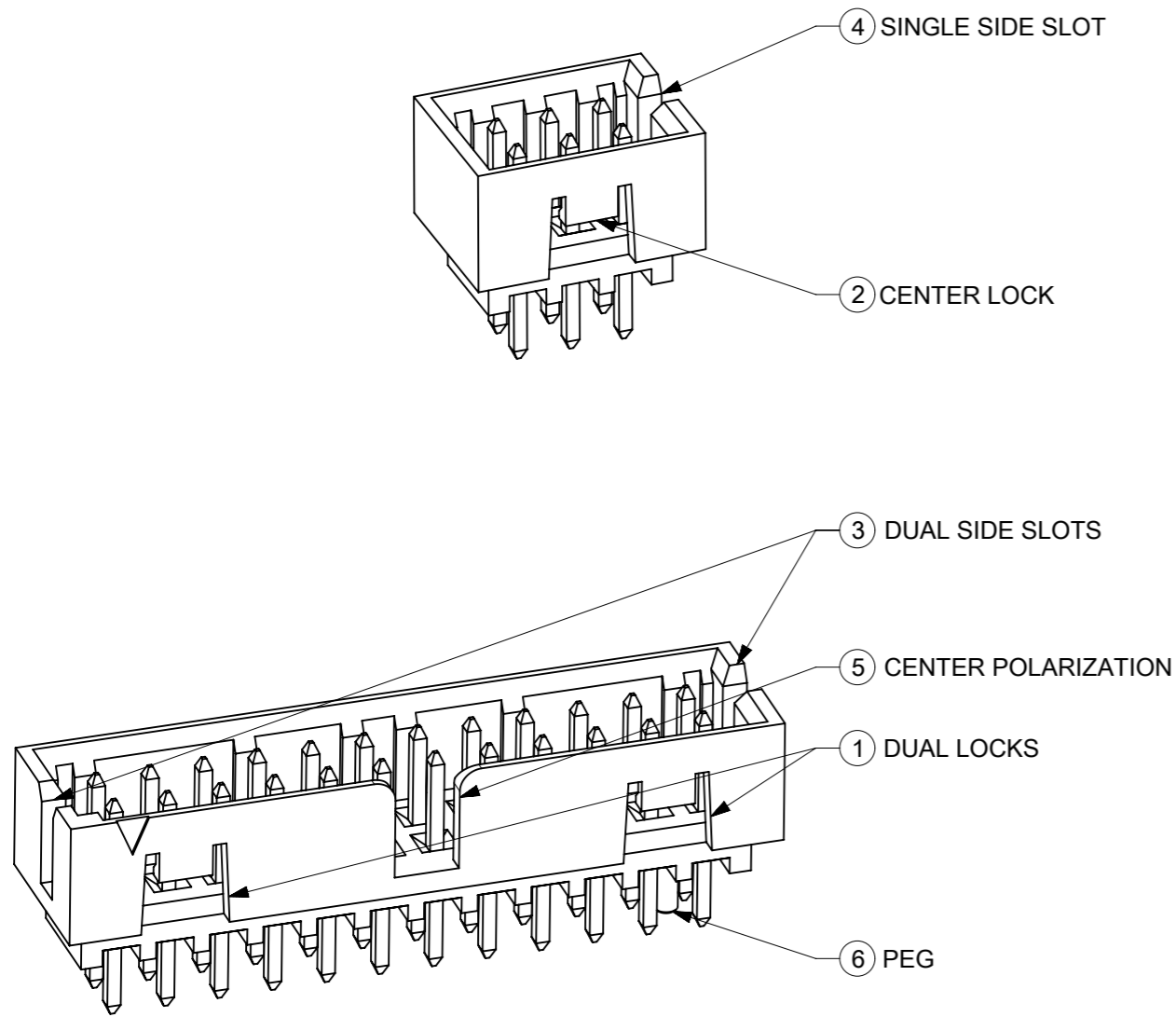




**THE DATASHEET OF**  
**87831-4020**



# FEATURES SELECTION GUIDE



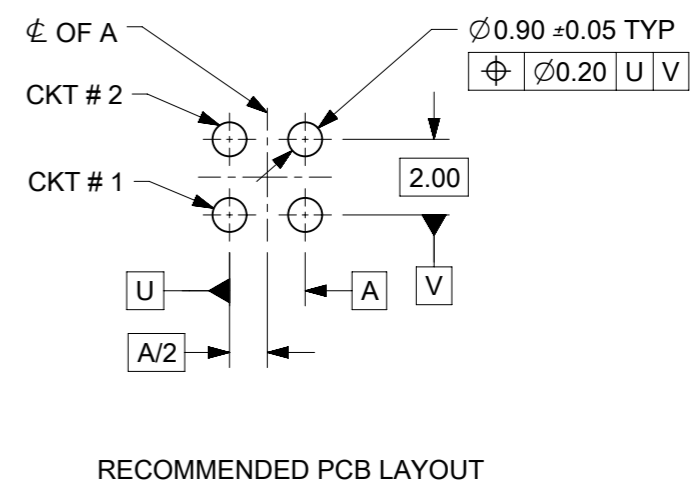
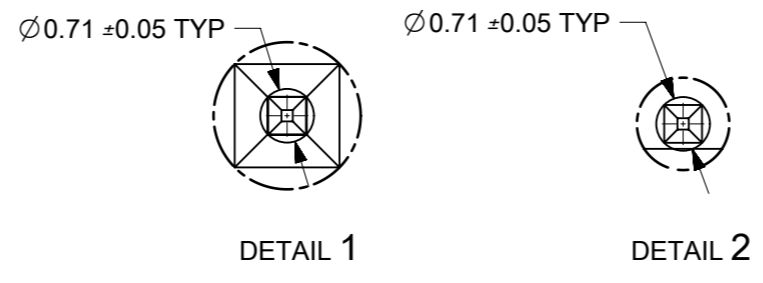
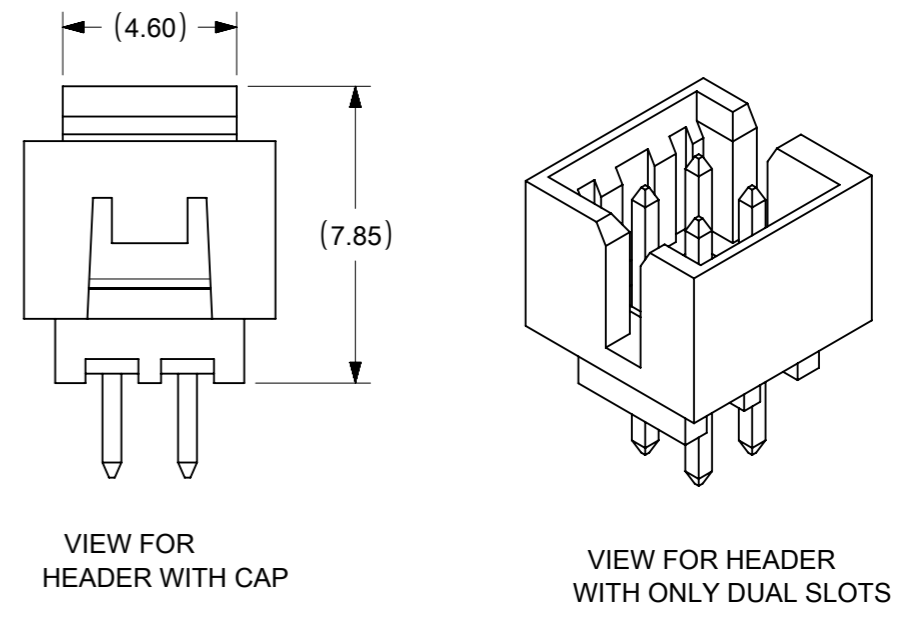
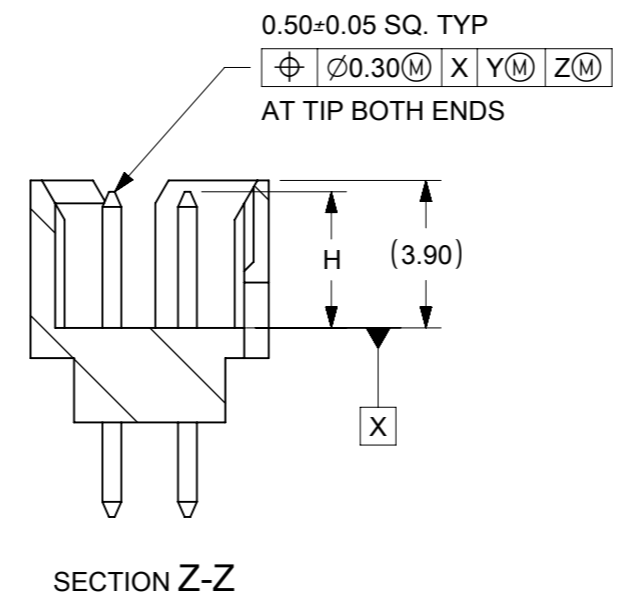
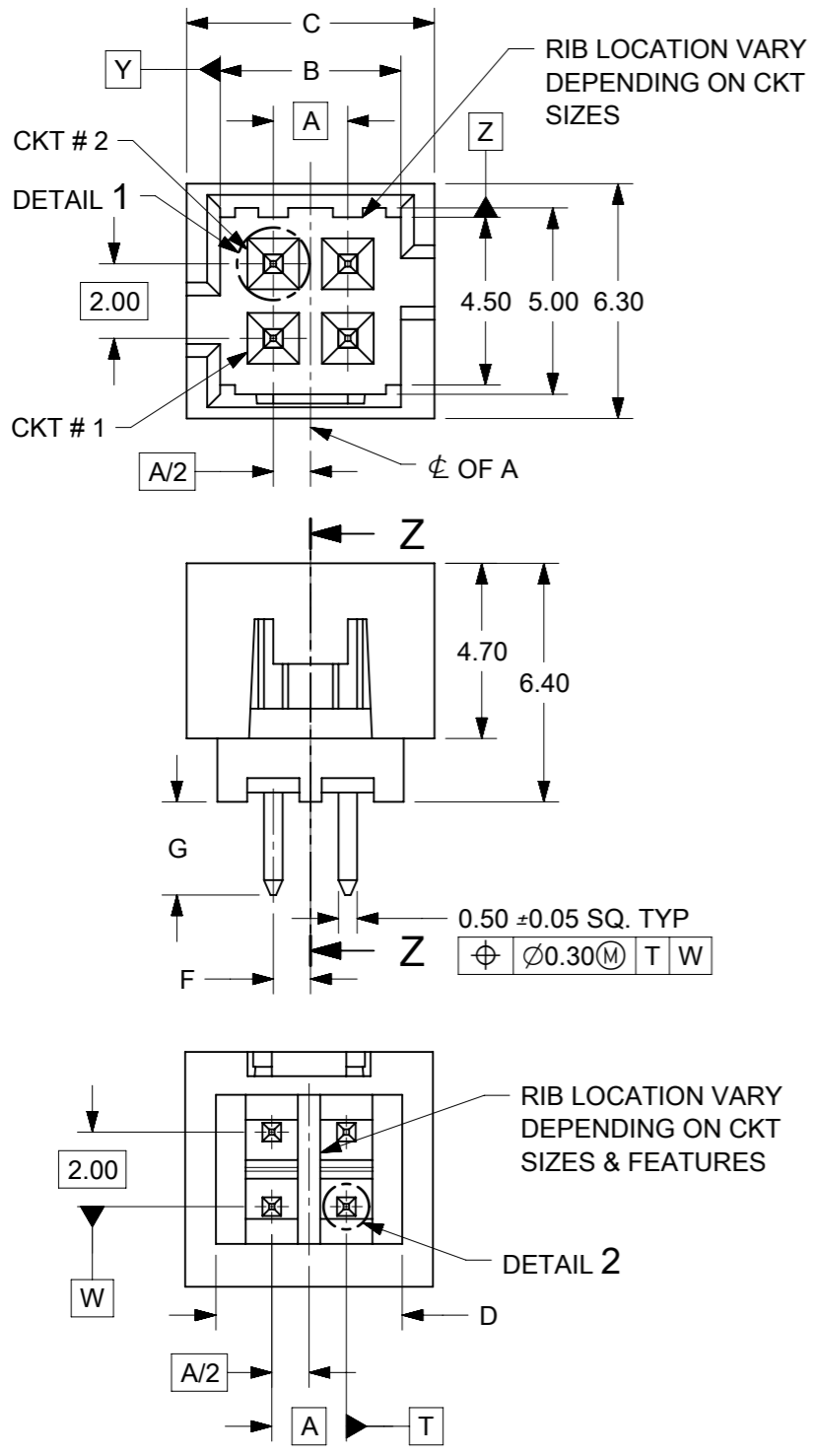
CIRCUIT SIZE	FRICTION LOCKS		SIDE SLOTS		⑤ CENTER POLARIZATION	⑥ PEG	SHEET NO
	① DUAL	② CENTER	③ DUAL	④ SINGLE			
4	N.A	N.A	YES	N.A	N.A	N.A	2 - 3
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	YES	N.A	YES	N.A	N.A	
6	N.A	N.A	YES	N.A	N.A	N.A	4 - 5
	N.A	N.A	YES	N.A	N.A	YES	
	N.A	YES	YES	N.A	N.A	N.A	
	N.A	YES	YES	N.A	N.A	YES	
	N.A	YES	N.A	YES	N.A	N.A	
	N.A	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		87831-0645
87831-5141		87831-5119
87831-0443		87831-1011
87831-5241		87831-1420
87831-5242		
87831-0643		

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		CURRENT REV DESC: ADDED BTB DIST.		
	DIMENSION UNITS SCALE GENERAL TOLERANCES (UNLESS SPECIFIED)	mm NTS			
4 PLACES ± 3 PLACES ± 2 PLACES ± 0.2 ± 1 PLACE ± ± 0 PLACES ± ± ANGULAR TOL ± 3.0°	MM INCH	EC NO: 619055 DRWN: NMANE02 2019/03/25 CHK'D: NMANE02 2019/07/09 APPR: MRAMAKRISHNA 2019/07/09			PRODUCT CUSTOMER DRAWING
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION	DRAWING A3-SIZE	SERIES 87831	MATERIAL NUMBER SEE TABLE	CUSTOMER GENERAL MARKET
		INITIAL REVISION: DRWN: GMENARLY 2015/04/15 APPR: KHLIM 2015/06/29	DOCUMENT NUMBER SD-87831-0001	DOC TYPE PSD	DOC PART 001
			REVISION A16	SHEET NUMBER 1 OF 14	

# 4 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: SEE PACKAGING SPECS TABLE ON SHEET 1
  - 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)


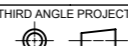
SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		CURRENT REV DESC: ADDED BTB DIST.			
	DIMENSION UNITS	SCALE				
▽ = 0	mm	NTS			MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER	
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)					
▽ = 0		MM	INCH			PRODUCT CUSTOMER DRAWING
▽ = 0	4 PLACES ±					
▽ = 0	3 PLACES ±					DOCUMENT NUMBER <b>SD-87831-0001</b>
▽ = 0	2 PLACES ±	0.2				
▽ = 0	1 PLACE ±					DOC TYPE PSD
▽ = 0	0 PLACES ±					
▽ = 0	ANGULAR TOL ±	3.0°			DOC PART 001	
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION	DRAWING	SERIES	REVISION A16
▽ = 0				A3-SIZE	87831	
DOCUMENT STATUS		P1	RELEASE DATE	2019/07/09	06:47:12	SHEET NUMBER 2 OF 14

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						N.A	N.A		N.A	N.A	N.A	1.00	2.50	3.60±0.20
	87831-0442	N.A	87831-5565	3																				
	87831-5141	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						N.A	N.A		N.A	N.A	N.A	1.00	3.50	3.60±0.20
	87831-5142	N.A	N.A	3																				
	87831-6141	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						N.A	N.A		N.A	N.A	N.A	1.00	2.80	3.60±0.20
	87831-6142	N.A	N.A	3																				
	87831-0443	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A						N.A	N.A		N.A	N.A	N.A	1.00	2.50	3.60±0.20
	87831-0444	N.A	N.A	3																				

PLATING OPTIONS:

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

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION												
	DIMENSION UNITS		SCALE		CURRENT REV DESC: ADDED BTB DIST.								
▽ = 0	mm	NTS		 MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER									
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)												
▽ = 0			MM	INCH	EC NO: 619055 DRWN: NMANE02 2019/03/25 CHK'D: NMANE02 2019/07/09 APPR: MRAMAKRISHNA 2019/07/09								
▽ = 0	4 PLACES	±											
▽ = 0	3 PLACES	±			INITIAL REVISION: DRWN: GMENARLY 2015/04/15 APPR: KHLIM 2015/06/29								
▽ = 0	2 PLACES	±	0.2										
▽ = 0	1 PLACE	±			DOCUMENT NUMBER		DOC TYPE		DOC PART		REVISION		
▽ = 0	0 PLACES	±			SD-87831-0001		PSD		001		A16		
▽ = 0	ANGULAR TOL ± 3.0°			THIRD ANGLE PROJECTION		DRAWING		SERIES		MATERIAL NUMBER		CUSTOMER	
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					A3-SIZE		87831		SEE TABLE		GENERAL MARKET	
▽ = 0										SHEET NUMBER		3 OF 14	



6 CIRCUITS

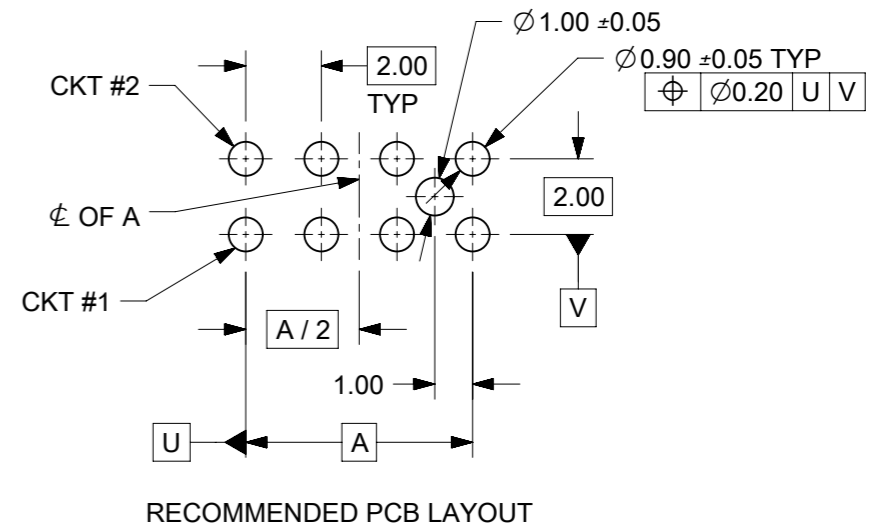
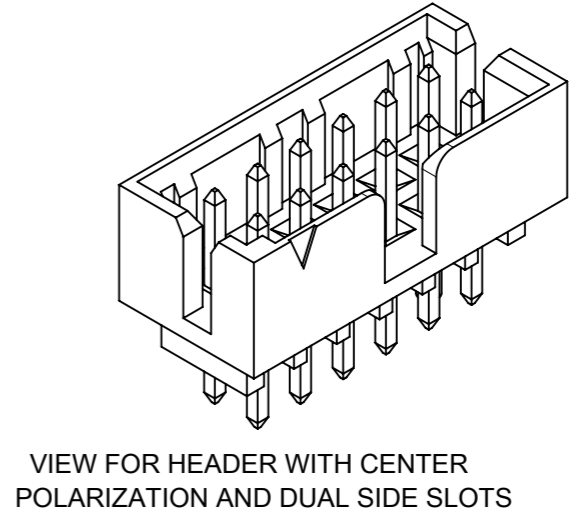
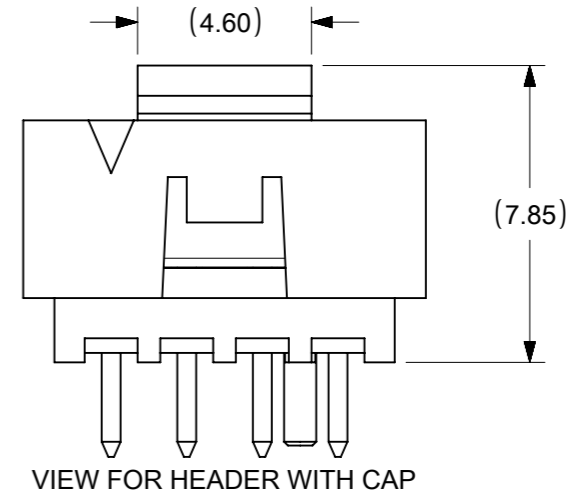
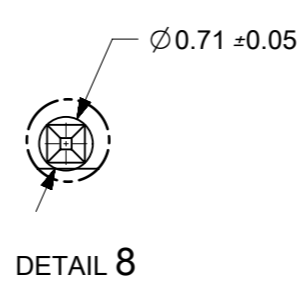
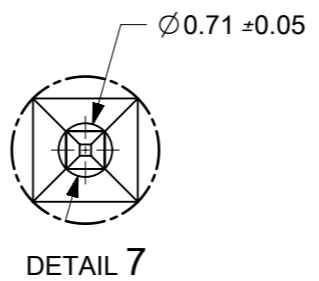
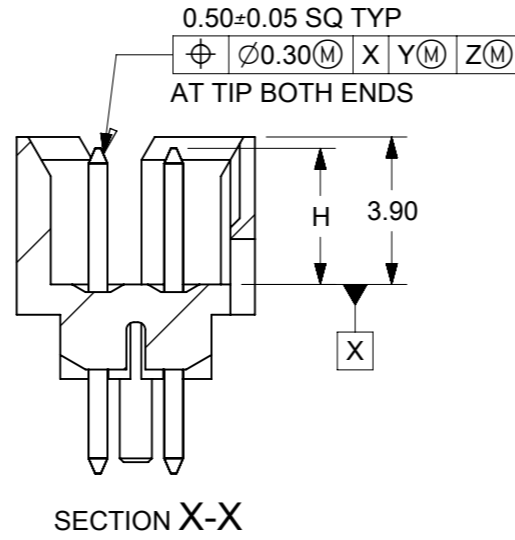
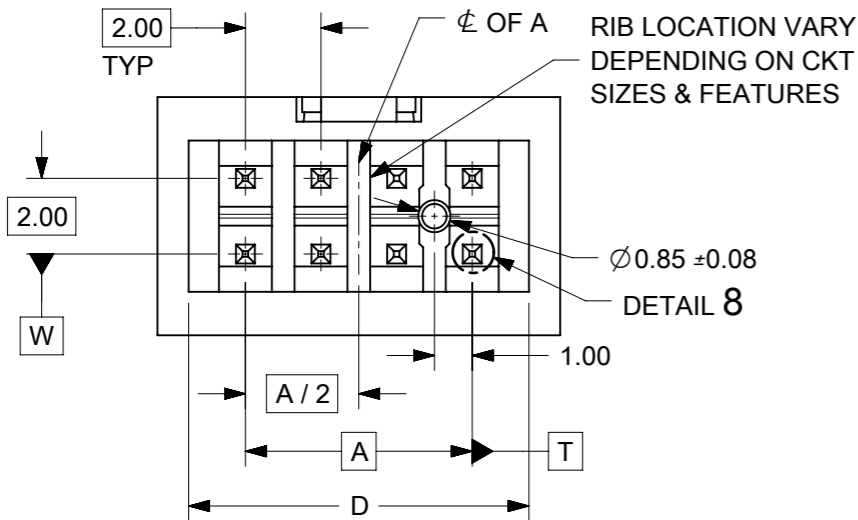
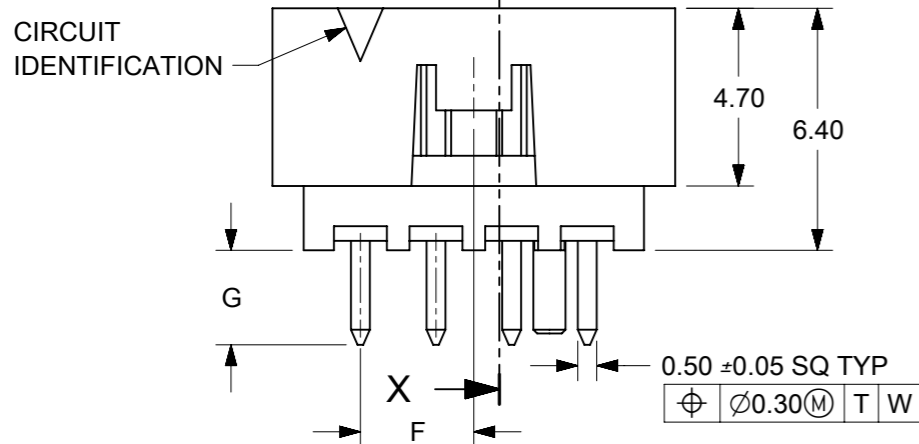
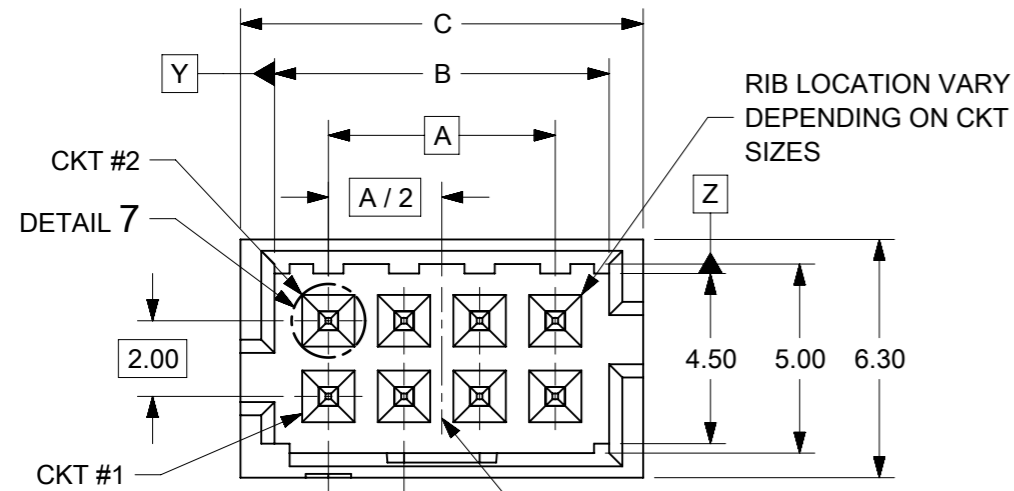
CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION												
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H					
6	87831-0619	N.A	N.A	1	N.A	N.A	YES	N.A	N.A	N.A	4.00	6.85	8.65	7.00	N.A	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	N.A		N.A	N.A	N.A	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						N.A	N.A		N.A	N.A	N.A	N.A	2.50
	87831-0642	N.A	87831-5552	3																			
	87831-5241	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						N.A	N.A		N.A	N.A	N.A	N.A	3.50
	87831-5242	N.A	N.A	3																			
	87831-6241	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						N.A	N.A		N.A	N.A	N.A	N.A	2.80
	87831-6242	N.A	N.A	3																			
	87831-0643	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A						N.A	N.A		N.A	N.A	N.A	N.A	2.50
	87831-0644	N.A	N.A	3																			
	87831-0645	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A						YES	N.A		N.A	N.A	N.A	N.A	2.50
	87831-0646	N.A	N.A	3																			
	87831-0632	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						YES	N.A		N.A	N.A	N.A	N.A	2.50
	87831-5119	N.A	N.A	1																			
87831-5121	N.A	N.A	3	N.A	N.A	YES	N.A	YES	N.A	N.A	N.A	N.A	N.A	N.A	N.A	2.50							
87831-5136	N.A	N.A	4																				

PLATING OPTIONS:

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

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION													
SYMBOLS		DIMENSION UNITS		SCALE		CURRENT REV DESC: ADDED BTB DIST.							
▽ = 0	mm	NTS				<b>molex</b> MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER PRODUCT CUSTOMER DRAWING							
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)												
▽ = 0			MM	INCH			EC NO: 619055 DRWN: NMANE02 2019/03/25 CHK'D: NMANE02 2019/07/09 APPR: MRAMAKRISHNA 2019/07/09						
▽ = 0	4 PLACES	±		±		INITIAL REVISION: DRWN: GMENARLY 2015/04/15 APPR: KHLIM 2015/06/29							
▽ = 0	3 PLACES	±		±		DOCUMENT NUMBER		DOC TYPE		DOC PART		REVISION	
▽ = 0	2 PLACES	±	0.2	±		SD-87831-0001		PSD		001		A16	
▽ = 0	1 PLACE	±		±		MATERIAL NUMBER		CUSTOMER		SHEET NUMBER			
▽ = 0	0 PLACES	±		±		SEE TABLE		GENERAL MARKET		5 OF 14			
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			THIRD ANGLE PROJECTION		DRAWING		SERIES		MATERIAL NUMBER		CUSTOMER	
▽ = 0						A3-SIZE		87831		SEE TABLE		GENERAL MARKET	

# 8 TO 12 CIRCUITS



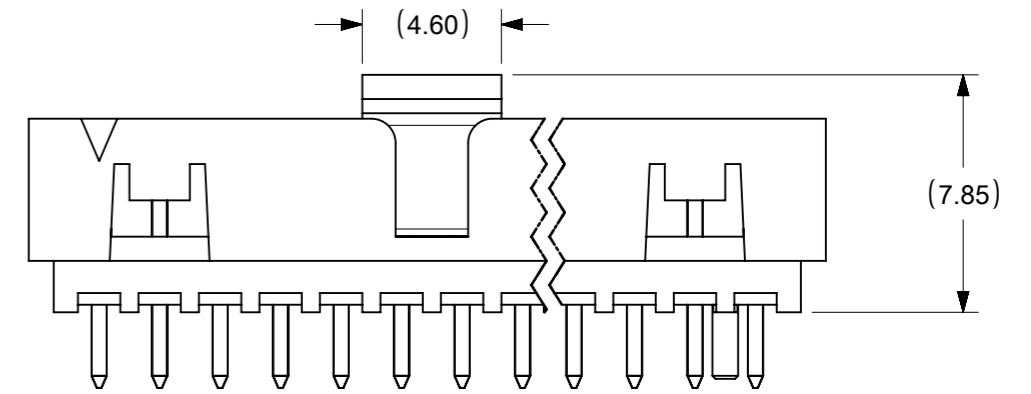
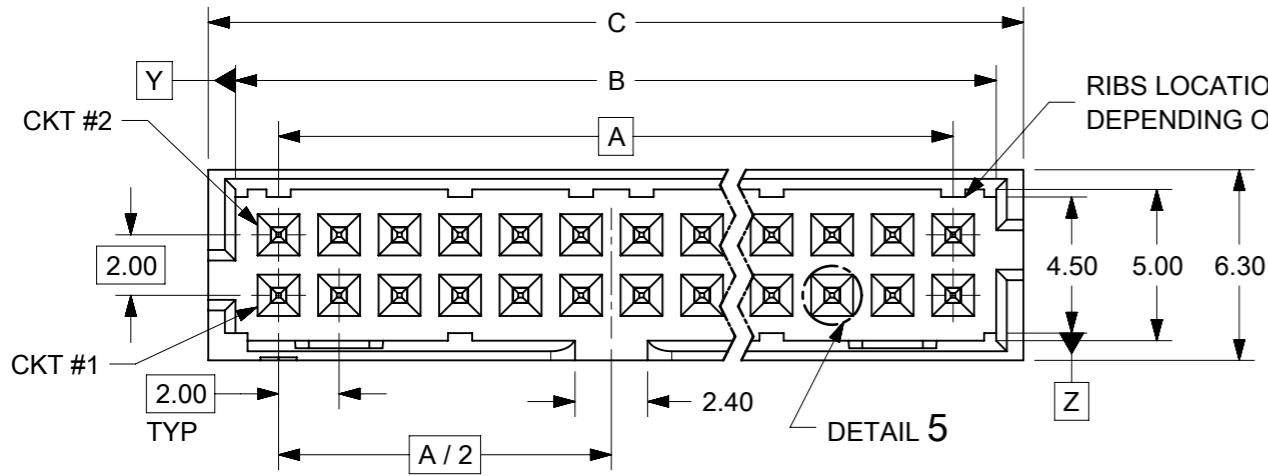
- NOTES:
- MATERIALS:  
HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK  
PIN: 0.50mm SQ PHOSPHOR BRONZE
  - FINISHES: REFER TO PLATING OPTIONS
  - PRODUCT SPECIFICATION: PS-87831-027
  - PACKAGING SPECIFICATION: SEE PACKAGING SPECS TABLE ON SHEET 1
  - MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 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)

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		CURRENT REV DESC: ADDED BTB DIST.		
	DIMENSION UNITS	SCALE			
▽ = 0	mm	NTS			PRODUCT CUSTOMER DRAWING
▽ = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)				DOCUMENT NUMBER
▽ = 0		MM	INCH		SD-87831-0001
▽ = 0	4 PLACES ±				DOC TYPE
▽ = 0	3 PLACES ±				PSD
▽ = 0	2 PLACES ±	0.2			DOC PART
▽ = 0	1 PLACE ±				001
▽ = 0	0 PLACES ±				REVISION
▽ = 0	ANGULAR TOL ±	3.0°			A16
■ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION	DRAWING	SERIES
▽ = 0				A3-SIZE	87831
DOCUMENT STATUS		P1	RELEASE DATE	2019/07/09	06:47:12
MATERIAL NUMBER		CUSTOMER		SHEET NUMBER	
SEE TABLE		GENERAL MARKET		6 OF 14	

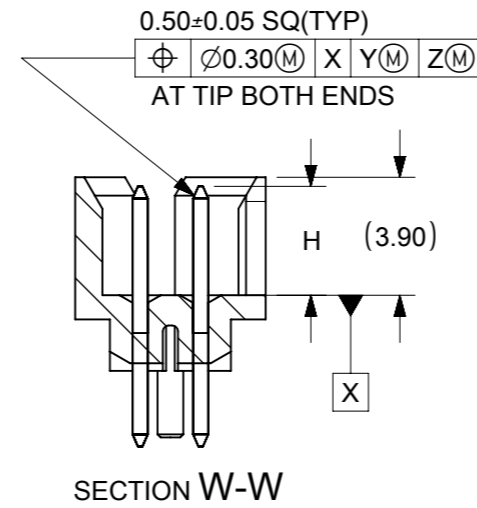
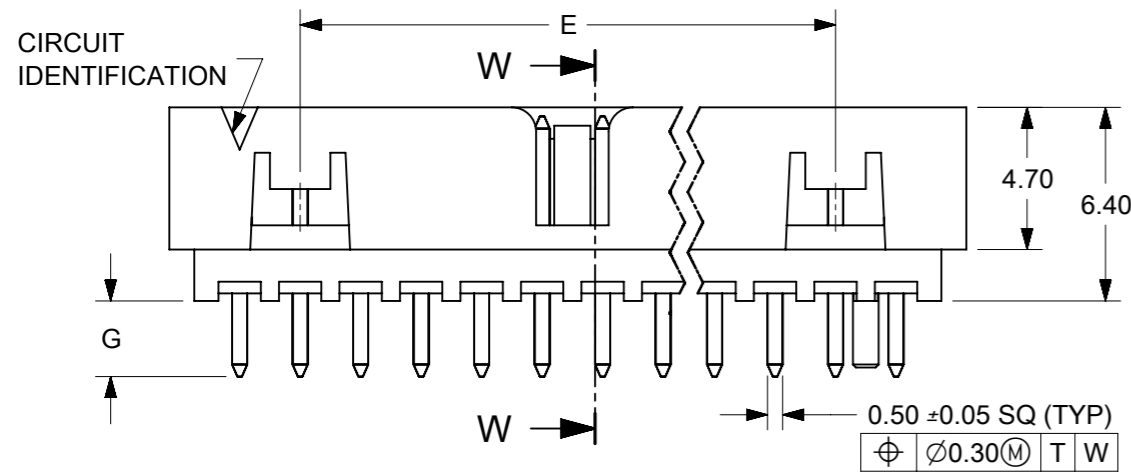




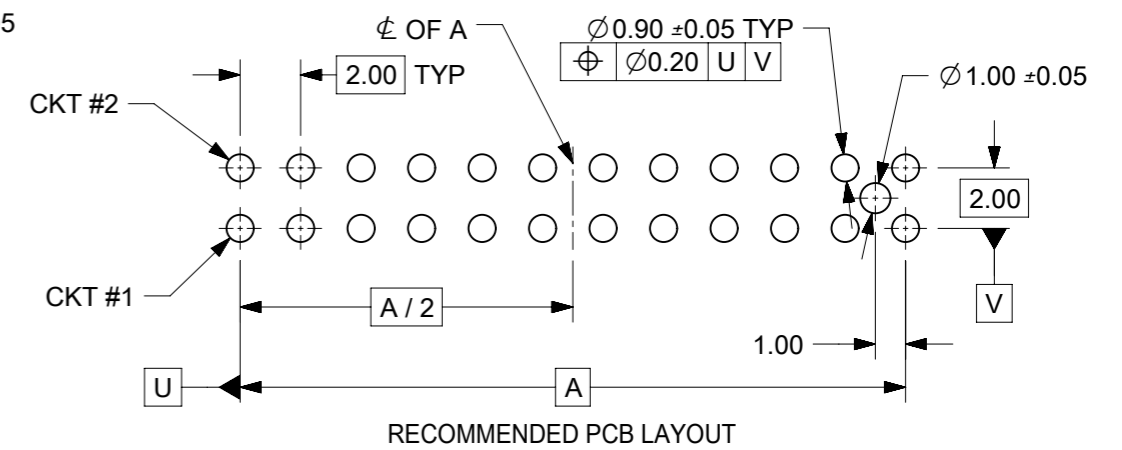
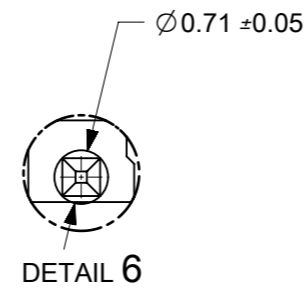
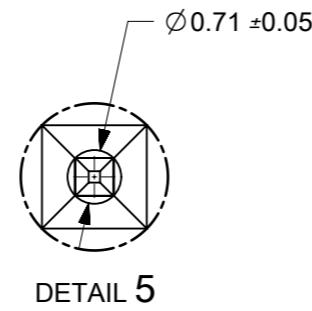
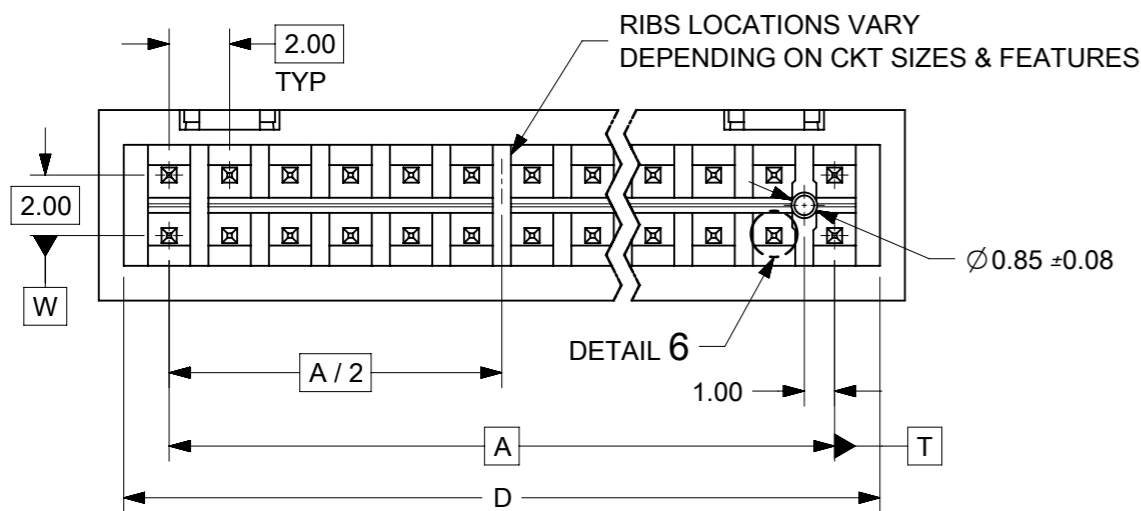
# 14 TO 50 CIRCUITS



VIEW FOR HEADER WITH CAP



SECTION W-W



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:** SEE PACKAGING SPECS TABLE ON SHEET 1
- 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)

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		CURRENT REV DESC: ADDED BTB DIST.		
	DIMENSION UNITS mm NTS GENERAL TOLERANCES (UNLESS SPECIFIED)	SCALE MM INCH	EC NO: 619055 DRWN: NMANE02 2019/03/25 CHK'D: NMANE02 2019/07/09 APPR: MRAMAKRISHNA 2019/07/09		
▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0	4 PLACES ± 3 PLACES ± 2 PLACES ± 0.2 ± 1 PLACE ± 0 PLACES ± ANGULAR TOL ± 3.0°	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION	DRAWING A3-SIZE SERIES 87831	PRODUCT CUSTOMER DRAWING DOCUMENT NUMBER SD-87831-0001 DOC TYPE PSD DOC PART 001 REVISION A16
				MATERIAL NUMBER SEE TABLE CUSTOMER GENERAL MARKET	SHEET NUMBER 9 OF 14

# 14 TO 20 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
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	87831-1430	87831-5554	2														
	87831-1421	N.A	87831-5560	3														
	87831-1436	N.A	N.A	4														
	87831-1428	N.A	(A14) 87831-5564	2	YES	N.A	YES	N.A	YES	YES								
	87831-1429	N.A	87831-5563	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								
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
	87831-1620	N.A	N.A	2														
	87831-1621	N.A	N.A	3														
	87831-1636	N.A	N.A	4	YES	N.A	YES	N.A	YES	YES								
	87831-1628	N.A	N.A	2														
	87831-1629	N.A	87831-5559	3														
	87831-1635	N.A	N.A	3														
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
	87831-1820	N.A	87831-5566	2														
	87831-1821	N.A	N.A	3														
	87831-1836	N.A	N.A	4	YES	N.A	YES	N.A	YES	YES								
	87831-1828	N.A	N.A	2														
	87831-1829	N.A	N.A	3														
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
	87831-2020	N.A	N.A	2														
	87831-2021	N.A	N.A	3														
	87831-2036	N.A	N.A	4	YES	N.A	YES	N.A	YES	YES								
	87831-2028	N.A	N.A	2														
	87831-2029	N.A	N.A	3														
	87831-2035	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							3.50	
	87831-2010	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A								
	87831-2011	N.A	(A13) 87831-2041	3														

**PLATING OPTIONS:**

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


<b>SYMBOLS</b> ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	SCALE <b>mm NTS</b>	CURRENT REV DESC: ADDED BTB DIST.	<p><b>molex</b></p> MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER																																	
	GENERAL TOLERANCES (UNLESS SPECIFIED)				EC NO: 619055 DRWN: NMANE02 2019/03/25 CHK'D: NMANE02 2019/07/09 APPR: MRAMAKRISHNA 2019/07/09																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">DIMENSION UNITS</th> <th colspan="2">SCALE</th> </tr> <tr> <td>MM</td> <td>INCH</td> <td>MM</td> <td>INCH</td> </tr> <tr> <td>4 PLACES</td> <td>±</td> <td>±</td> <td>±</td> </tr> <tr> <td>3 PLACES</td> <td>±</td> <td>±</td> <td>±</td> </tr> <tr> <td>2 PLACES</td> <td>±</td> <td>0.2</td> <td>±</td> </tr> <tr> <td>1 PLACE</td> <td>±</td> <td>±</td> <td>±</td> </tr> <tr> <td>0 PLACES</td> <td>±</td> <td>±</td> <td>±</td> </tr> <tr> <td colspan="2">ANGULAR TOL</td> <td colspan="2">± 3.0°</td> </tr> </table>					DIMENSION UNITS		SCALE		MM	INCH	MM	INCH	4 PLACES	±	±	±	3 PLACES	±	±	±	2 PLACES	±	0.2	±	1 PLACE	±	±	±	0 PLACES	±	±	±	ANGULAR TOL		± 3.0°	
	DIMENSION UNITS		SCALE																																		
MM	INCH	MM	INCH																																		
4 PLACES	±	±	±																																		
3 PLACES	±	±	±																																		
2 PLACES	±	0.2	±																																		
1 PLACE	±	±	±																																		
0 PLACES	±	±	±																																		
ANGULAR TOL		± 3.0°																																			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			INITIAL REVISION: DRWN: GMENARLY 2015/04/15 APPR: KHLIM 2015/06/29																																		
DOCUMENT STATUS   P1   RELEASE DATE   2019/07/09 06:47:12		THIRD ANGLE PROJECTION 		DRAWING   SERIES   MATERIAL NUMBER   CUSTOMER   SHEET NUMBER <b>A3-SIZE</b>   <b>87831</b>   SEE TABLE   GENERAL MARKET   10 OF 14																																	

22 TO 30 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	ASSY P/N WITHOUT 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	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	N.A	2														
	87831-2221	N.A	N.A	N.A	3														
	87831-2236	N.A	N.A	N.A	4														
	87831-2228	N.A	N.A	N.A	2														
	87831-2229	N.A	N.A	N.A	3														
24	87831-2419	N.A	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	87831-7420	2														
	87831-2421	N.A	N.A	N.A	3														
	87831-2436	N.A	N.A	N.A	4														
	87831-2428	N.A	N.A	N.A	2														
	87831-2429	N.A	N.A	N.A	3														
	87831-2435	N.A	N.A	N.A	3														
	87831-2445	N.A	N.A	N.A	3														
87831-2410	N.A	N.A	N.A	2															
26	87831-2619	N.A	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	87831-2630	87831-5555	N.A	2														
	87831-2621	N.A	N.A	N.A	3														
	87831-2636	N.A	N.A	N.A	4														
	87831-2628	N.A	N.A	N.A	2														
	87831-2629	N.A	N.A	N.A	3														
	87831-2610	N.A	N.A	N.A	2														
28	87831-2819	N.A	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	N.A	2														
	87831-2821	N.A	N.A	N.A	3														
	87831-2836	N.A	N.A	N.A	4														
	87831-2828	N.A	N.A	N.A	2														
	87831-2829	N.A	N.A	N.A	3														
30	87831-3019	N.A	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	N.A	2														
	87831-3021	N.A	N.A	N.A	3														
	87831-3036	N.A	N.A	N.A	4														
	87831-3028	N.A	N.A	N.A	2														
	87831-3029	N.A	N.A	N.A	3														
	87831-3035	N.A	N.A	N.A	3														
	87831-3010	87831-3030	87831-3050	N.A	2														

PLATING OPTIONS:

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


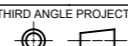
SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION									
	DIMENSION UNITS		SCALE		CURRENT REV DESC: ADDED BTB DIST.					
	mm		NTS		 MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER PRODUCT CUSTOMER DRAWING					
	GENERAL TOLERANCES (UNLESS SPECIFIED)									
▽ = 0	4 PLACES ±	MM	INCH	EC NO: 619055		DRWN: NMANE02 2019/03/25				
▽ = 0	3 PLACES ±			DRWN: NMANE02 2019/07/09		CHK'D: NMANE02 2019/07/09				
▽ = 0	2 PLACES ± 0.2			APPR: MRAMAKRISHNA 2019/07/09		INITIAL REVISION:				
▽ = 0	1 PLACE ±			DRWN: GMENARLY 2015/04/15		DOCUMENT NUMBER				
☒ = 0	ANGULAR TOL ± 3.0°			APPR: KHLIM 2015/06/29		SD-87831-0001		DOC TYPE	DOC PART	REVISION
■ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION		DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER		
▽ = 0				A3-SIZE	87831	SEE TABLE	GENERAL MARKET	11 OF 14		

32 TO 40 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
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														
	87831-3429	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-3435	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	87831-5564	2														
	87831-3621	N.A	N.A	3														
	87831-3636	N.A	N.A	4														
	87831-3628	N.A	N.A	2														
	87831-3629	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							2.50	
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														
	87831-3829	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							2.50	
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														
	87831-4029	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4010	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A							3.50	

PLATING OPTIONS:

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

SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION									
	DIMENSION UNITS		SCALE		CURRENT REV DESC: ADDED BTB DIST.					
	mm		NTS		 MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER					
	GENERAL TOLERANCES (UNLESS SPECIFIED)									
▽ = 0	4 PLACES	±	±	MM		INCH		EC NO: 619055		
▽ = 0	3 PLACES	±	±					DRWN: NMANE02 2019/03/25		
▽ = 0	2 PLACES	±	0.2					CHK'D: NMANE02 2019/07/09		
▽ = 0	1 PLACE	±	±					APPR: MRAMAKRISHNA 2019/07/09		
☒ = 0	0 PLACES	±	±					INITIAL REVISION:		
■ = 0	ANGULAR TOL		± 3.0°		THIRD ANGLE PROJECTION		DRAWING		SERIES	
▽ = 0	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS						A3-SIZE		87831	
DOCUMENT STATUS		P1	RELEASE DATE	2019/07/09	06:47:12		MATERIAL NUMBER		CUSTOMER	
							SEE TABLE		GENERAL MARKET	
							DOCUMENT NUMBER		DOC TYPE DOC PART REVISION	
							SD-87831-0001		PSD 001 A16	
							SHEET NUMBER		12 OF 14	

# 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														
	87831-4229	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							2.50	
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 - 0.05-0.13µm/2-5µin GOLD IN CONTACT AREA AND 1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27µm/50µin MIN. NICKEL OVERALL.
- 2 - 0.38µm/15µin GOLD IN CONTACT AREA AND 1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27µm/50µin MIN. NICKEL OVERALL.
- 3 - 0.76µm/30µin GOLD IN CONTACT AREA AND 1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27µm/50µin MIN. NICKEL OVERALL.
- 4 - 2.50µm/100µin MIN. MATTE TIN OVER 1.25µm/50µin MIN. NICKEL OVERALL.

<b>SYMBOLS</b> ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	SCALE CURRENT REV DESC: ADDED BTB DIST.	molex			
	DIMENSION UNITS <b>mm</b> <b>NTS</b>	GENERAL TOLERANCES (UNLESS SPECIFIED)		MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER		
	4 PLACES ±    ± 3 PLACES ±    ± 2 PLACES ± 0.2 ± 1 PLACE ±    ± 0 PLACES ±    ±	MM    INCH	EC NO: 619055 DRWN: NMANE02    2019/03/25 CHK'D: NMANE02    2019/07/09 APPR: MRAMAKRISHNA    2019/07/09	PRODUCT CUSTOMER DRAWING		
	ANGULAR TOL ± 3.0°	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION 	DRAWING <b>A3-SIZE</b>	SERIES <b>87831</b>	MATERIAL NUMBER SEE TABLE
		DOCUMENT NUMBER <b>SD-87831-0001</b>	DOC TYPE PSD	DOC PART 001	REVISION <b>A16</b>	
		CUSTOMER GENERAL MARKET	SHEET NUMBER 13 OF 14			

# BOARD TO BOARD (BTB) DISTANCE

HEADER	MATES WITH (RECEPTACLE)	BTB DIST.	PICTORIAL VIEW
87831	79107	6.94	
	78787	6.94	
	79108	6.94	
	79109	7.15	
	78788	7.15	

<b>SYMBOLS</b> ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0	DIMENSION UNITS: <b>mm</b> <b>NTS</b> SCALE:		CURRENT REV DESC: ADDED BTB DIST.		 MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER PRODUCT CUSTOMER DRAWING	
	GENERAL TOLERANCES (UNLESS SPECIFIED)		EC NO: 619055 DRWN: NMANE02    2019/03/25 CHK'D: NMANE02    2019/07/09 APPR: MRAMAKRISHNA    2019/07/09			DOCUMENT NUMBER: <b>SD-87831-0001</b>
	4 PLACES ±    ± 3 PLACES ±    ± 2 PLACES ± 0.2 ± 1 PLACE ±    ± 0 PLACES ±    ±		INITIAL REVISION: DRWN: DRWN BY    XXXX/XX/XX APPR: APPR BY    XXXX/XX/XX			DOC TYPE: PSD    DOC PART: 001    REVISION: A16
	ANGULAR TOL ± 3.0°		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NUMBER:    CUSTOMER: GENERAL MARKET    SHEET NUMBER: 14 OF 14
	THIRD ANGLE PROJECTION		DRAWING: <b>A3-SIZE</b> SERIES: <b>87831</b>			

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View 87831-4020 on WIN SOURCE](#)

 [Molex, LLC Information](#)

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-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management