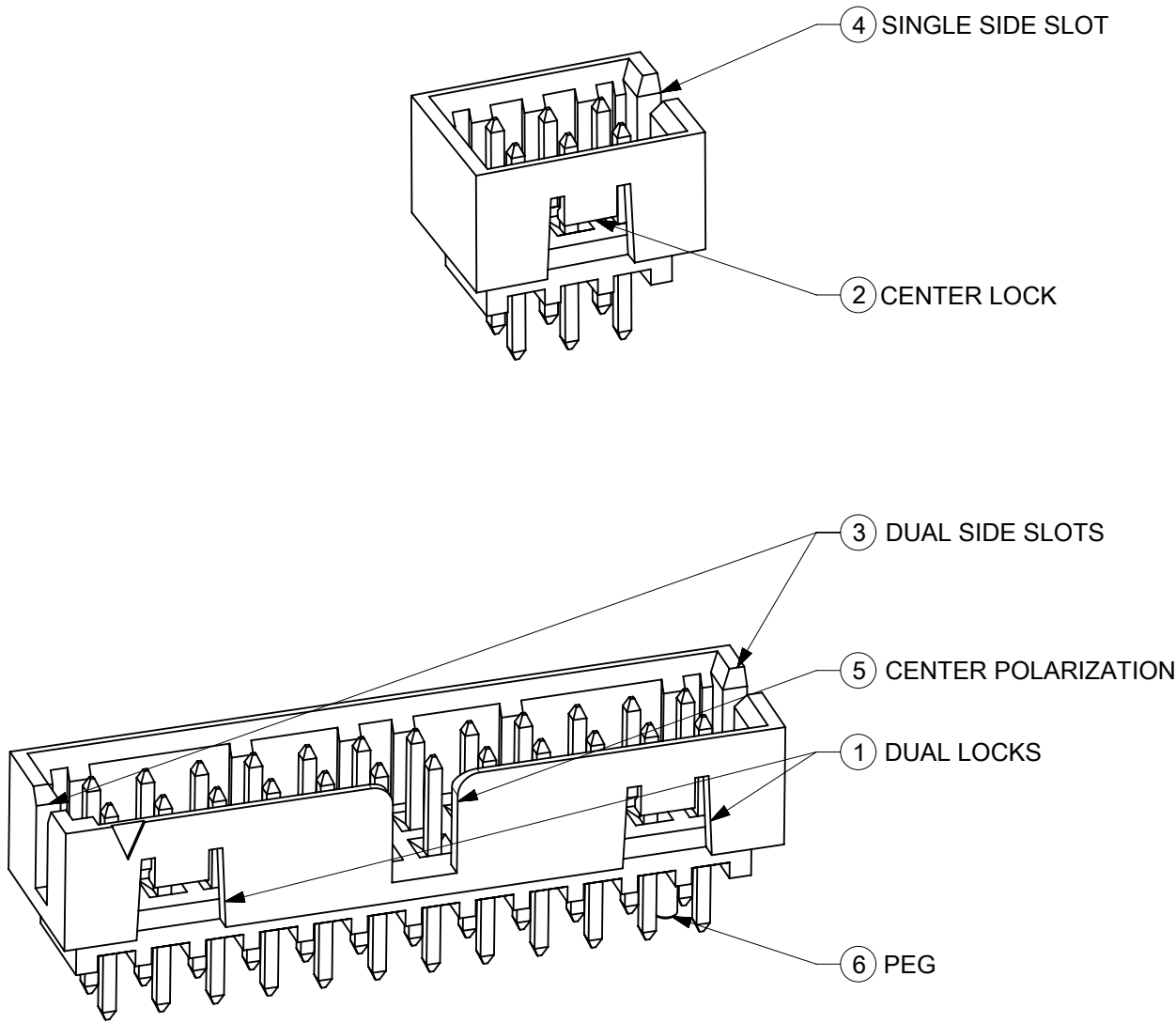


FEATURES SELECTION GUIDE



FEATURES							
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	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	87831-0645	
87831-5141	87831-5119	
87831-0443	87831-1011	
87831-5241	87831-1420	
87831-5242		
87831-0643		

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS	SCALE
mm	NTS
GENERAL TOLERANCES (UNLESS SPECIFIED)	
	MMINCH
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

CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.

EC NO: 761863
DRWN: SUAIFR
CHK'D: GGA
APPR: GGA

2023/08/14
2023/09/11
2023/09/11

INITIAL REVISION:
DRWN: GMENARLY
APPR: KHLIM

2015/04/15
2015/06/29

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED
HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A24

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	1 OF 14

DOCUMENT STATUS	P1	RELEASE DATE	2023/09/11	04:36:51
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9

8

7

6

5

4

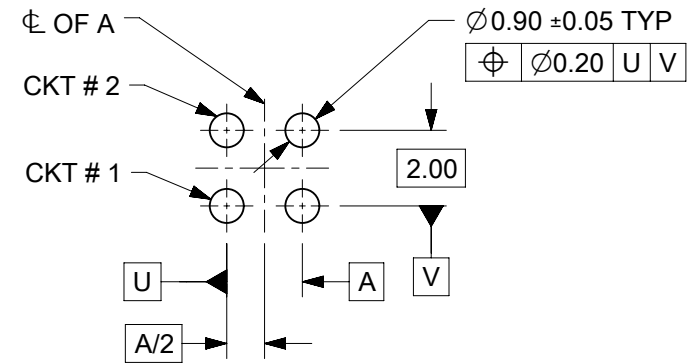
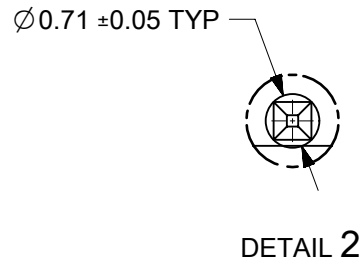
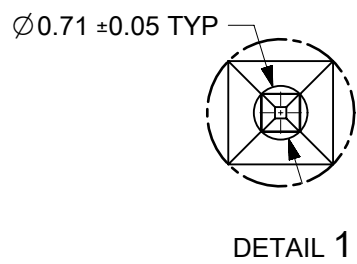
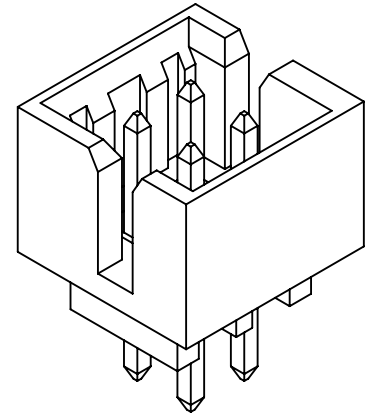
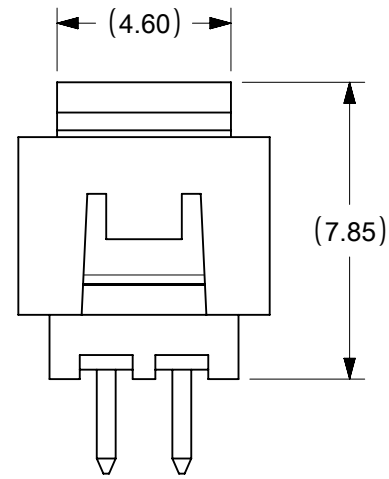
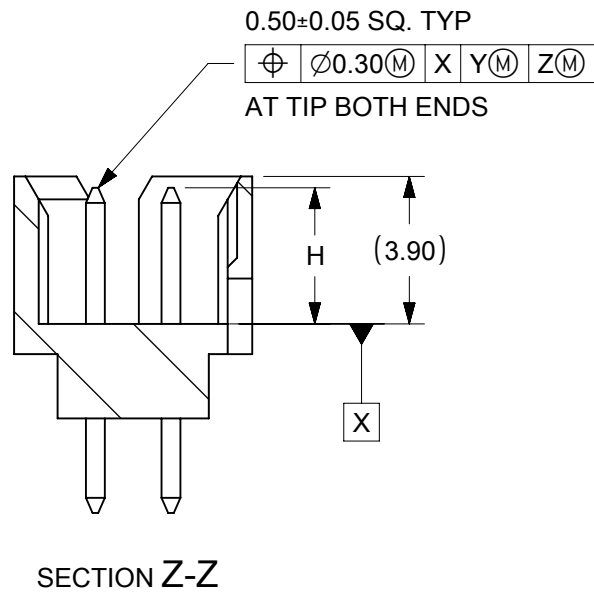
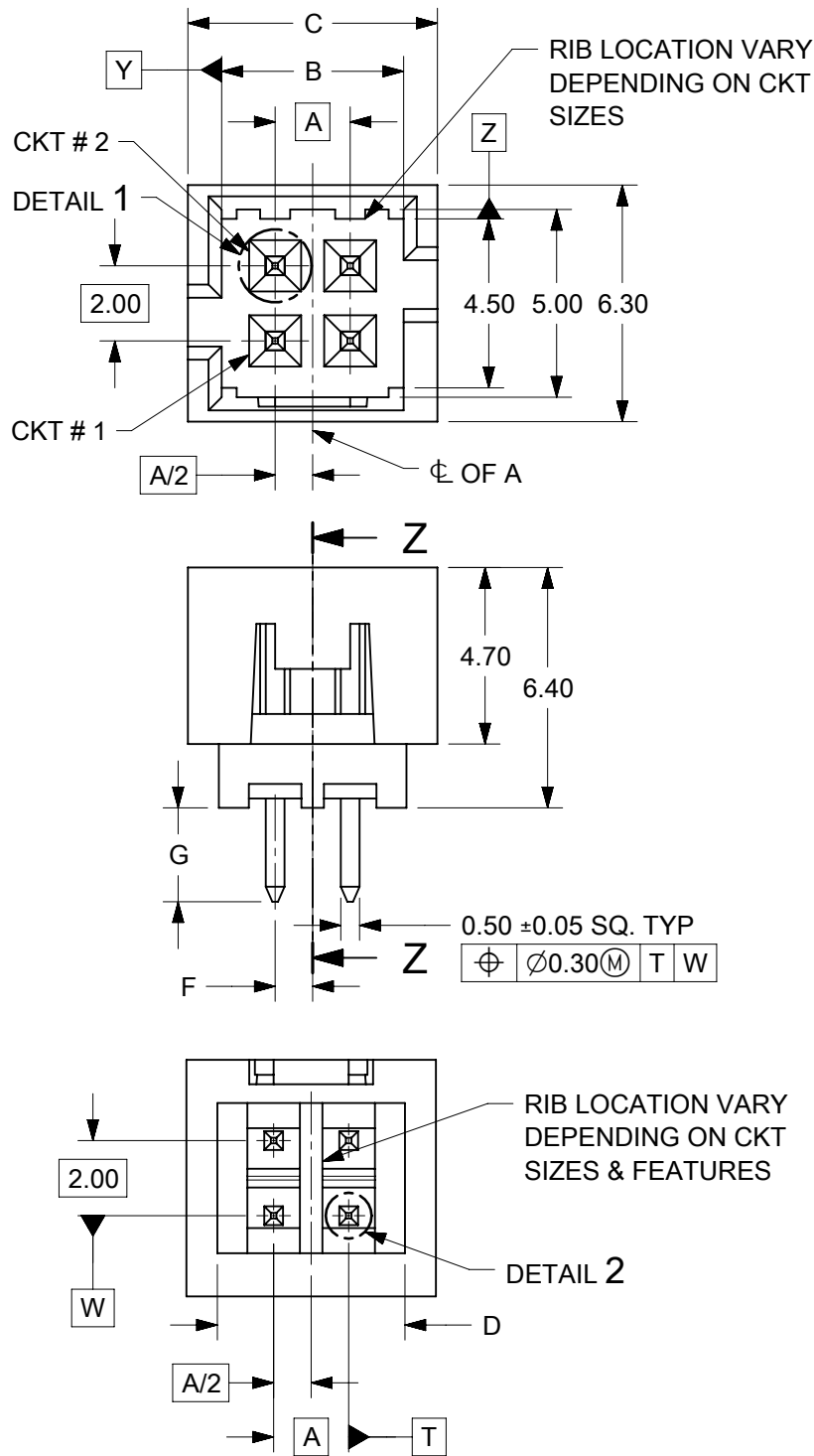
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2

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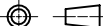
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REVISION: E1
DATE: 2021/05/01

4 CIRCUITS



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)

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: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.			molex MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER					
mm		NTS										
GENERAL TOLERANCES (UNLESS SPECIFIED)				EC NO: 761863 DRWN: SUAIFR 2023/08/14 CHK'D: GGA 2023/09/11 APPR: GGA 2023/09/11								
							PRODUCT CUSTOMER DRAWING					
		MM	INCH	INITIAL REVISION: DRWN: GMENARLY 2015/04/15 APPR: KHLIM 2015/06/29			DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION		
4 PLACES	±		±				SD-87831-0001		PSD	001	A24	
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	SERIES	MATERIAL NUMBER		CUSTOMER		SHEET NUMBER
						A3-SIZE	87831	SEE TABLE		GENERAL MARKET		2 OF 14

DOCUMENT STATUS	P1	RELEASE DATE	2023/09/11	04:36:51
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10	9	8	7	6	5	4	3	2	1										
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	87831-5565	3															
	87831-5141	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A									3.50
	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	N.A	YES	N.A	YES	N.A	N.A									2.50
	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. MATTETIN IN SOLDER TAIL AREA OVER
1.27µm/50µin MIN. NICKEL OVERALL.

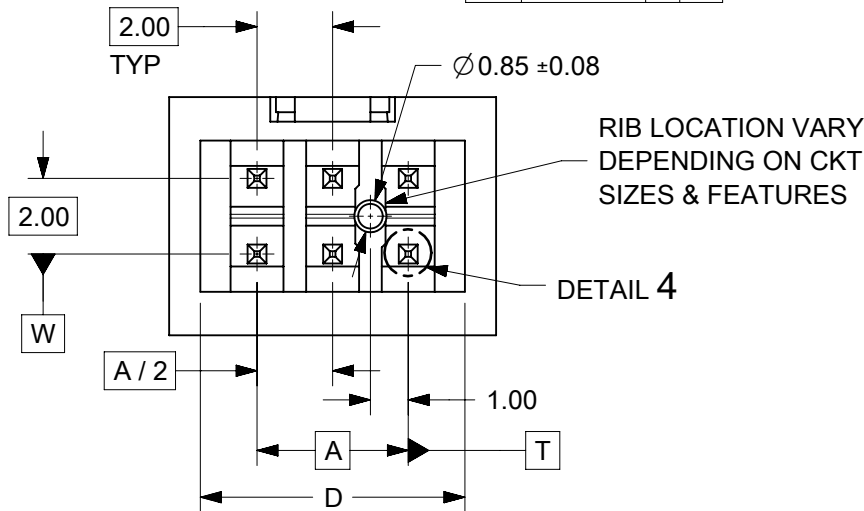
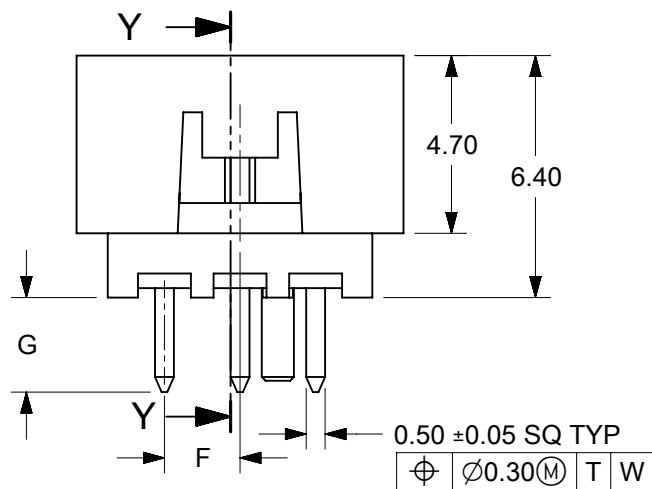
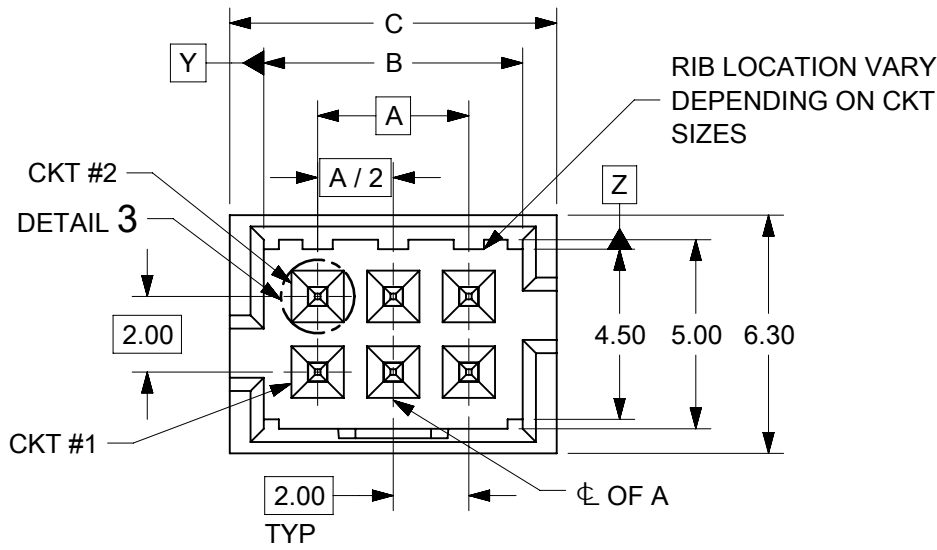
4 - 2.50µm/100µin MIN. MATTE TIN OVER 1.25µm/50µin MIN. NICKEL OVERALL.

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DIMENSION UNITS		SCALE		CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.				molex							
mm		NTS													
GENERAL TOLERANCES (UNLESS SPECIFIED)															
	MM	INCH													
4 PLACES	±		±	EC NO: 761863 DRWN: SUAIFR CHK'D: GGA APPR: GGA 2023/08/14 2023/09/11 2023/09/11				MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER							
3 PLACES	±		±												
2 PLACES	±	0.2	±												
1 PLACE	±		±												
0 PLACES	±		±	INITIAL REVISION:				DOCUMENT NUMBER							
ANGULAR TOL ± 3.0 °				DRWN: GMENARLY APPR: KHLIM 2015/04/15 2015/06/29				SD-87831-0001							
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING		SERIES		MATERIAL NUMBER		CUSTOMER		SHEET NUMBER	
						A3-SIZE		87831		SEE TABLE		GENERAL MARKET		3 OF 14	

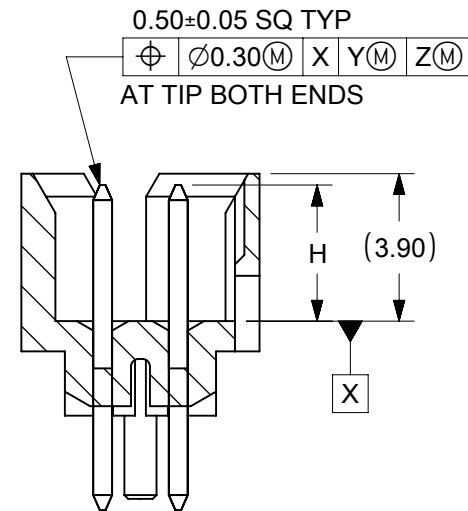
DOCUMENT STATUS	P1	RELEASE DATE	2023/09/11	04:36:51
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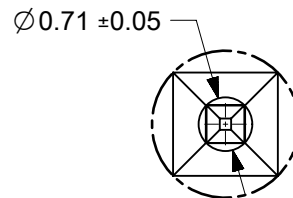
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REVISION: E1
DATE: 2021/05/01



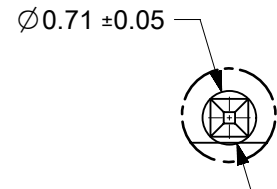
6 CIRCUITS



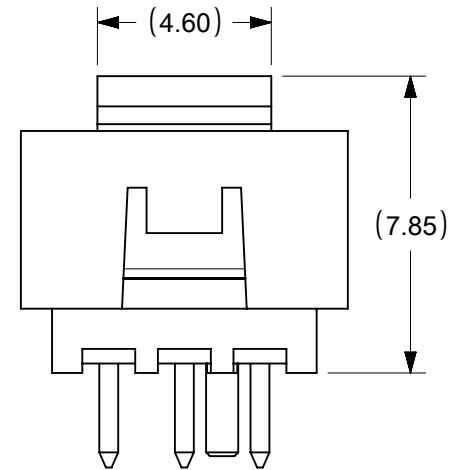
SECTION Y-Y



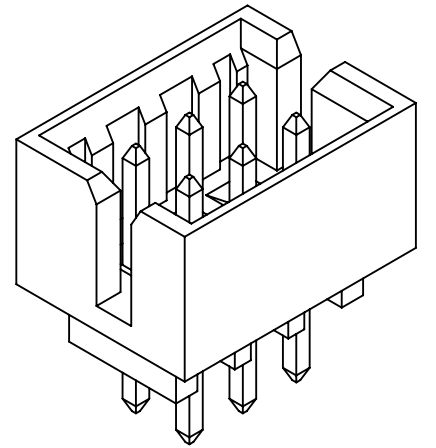
DETAIL 3



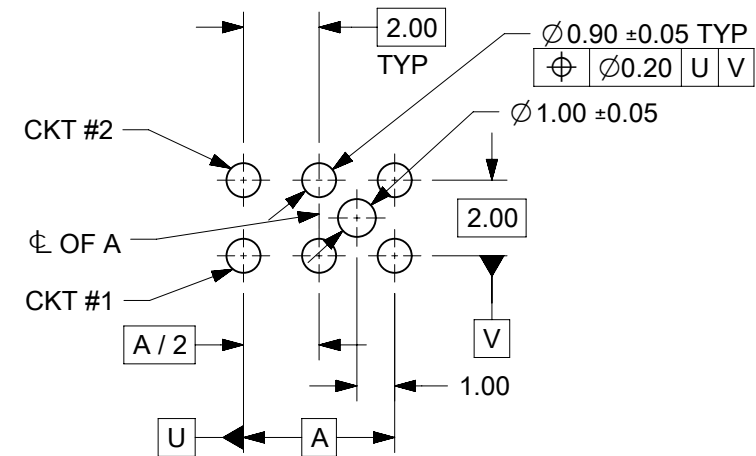
DETAIL 4



VIEW FOR
HEADER WITH CAP



VIEW FOR HEADER WITH
ONLY DUAL SLOTS



RECOMMENDED PCB LAYOUT

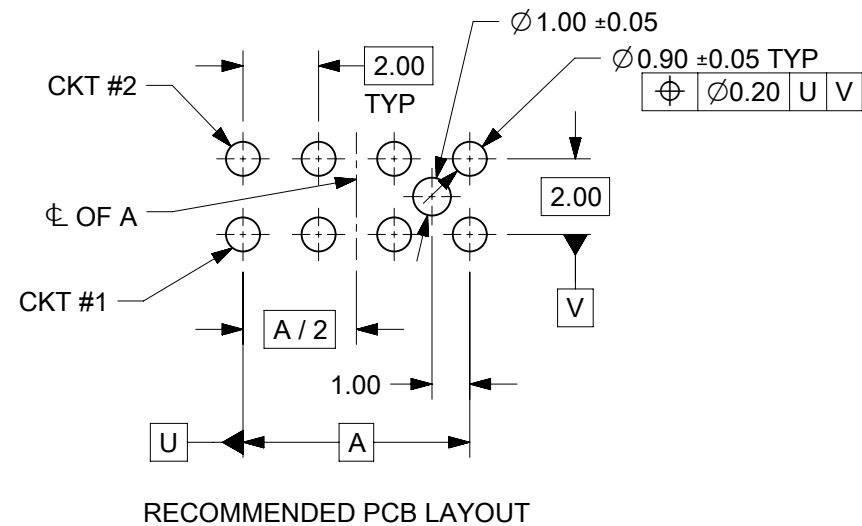
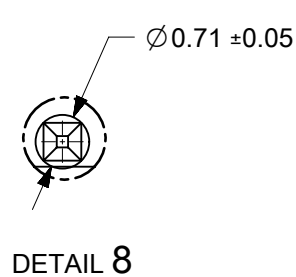
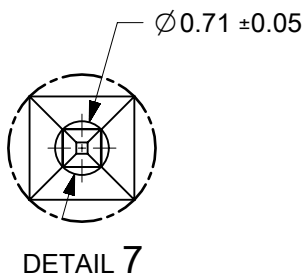
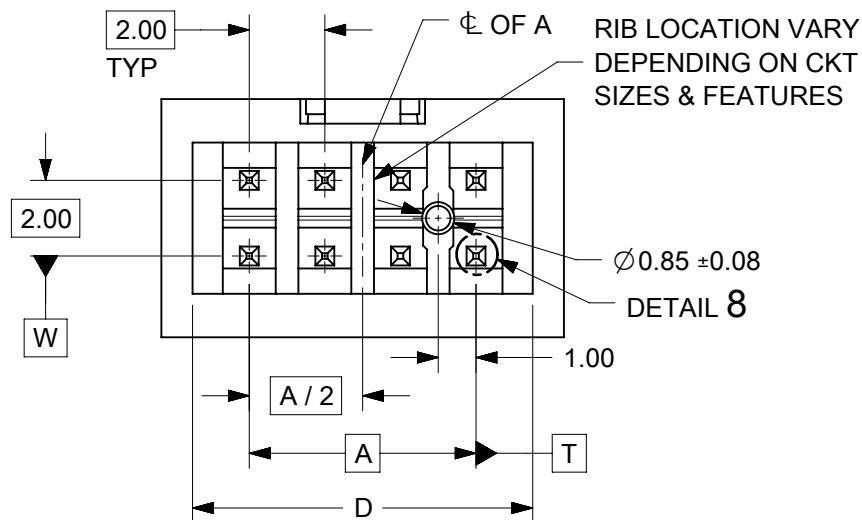
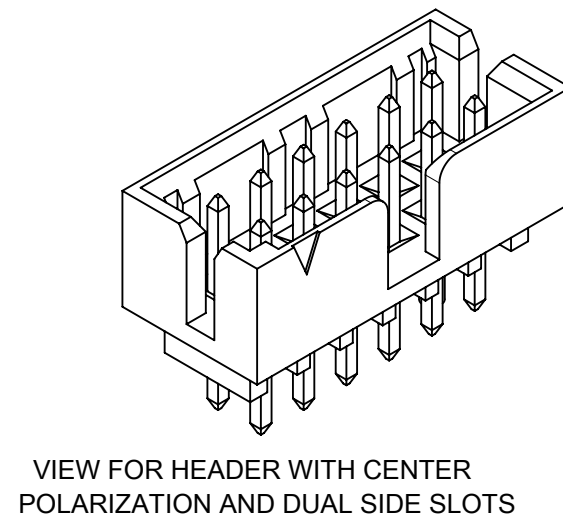
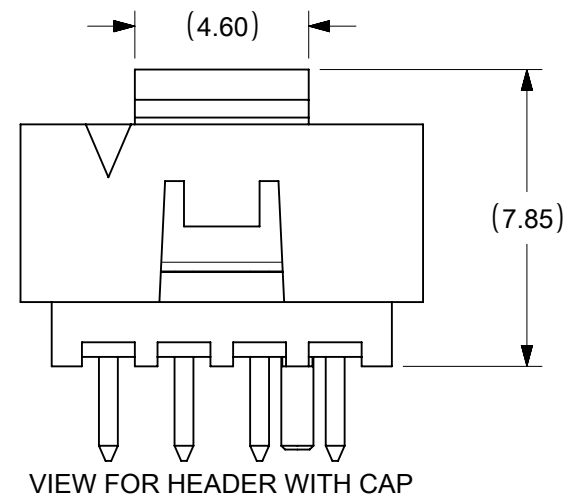
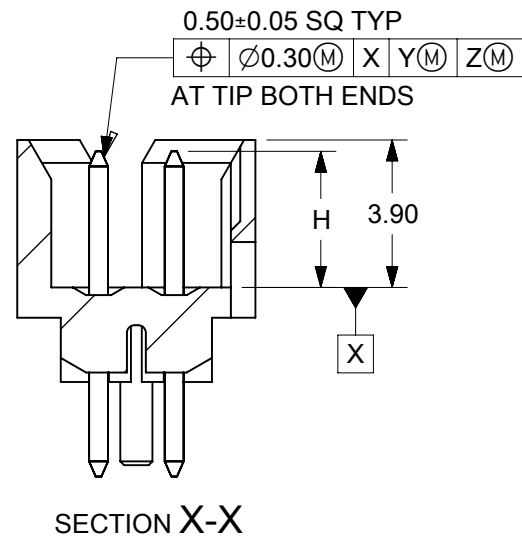
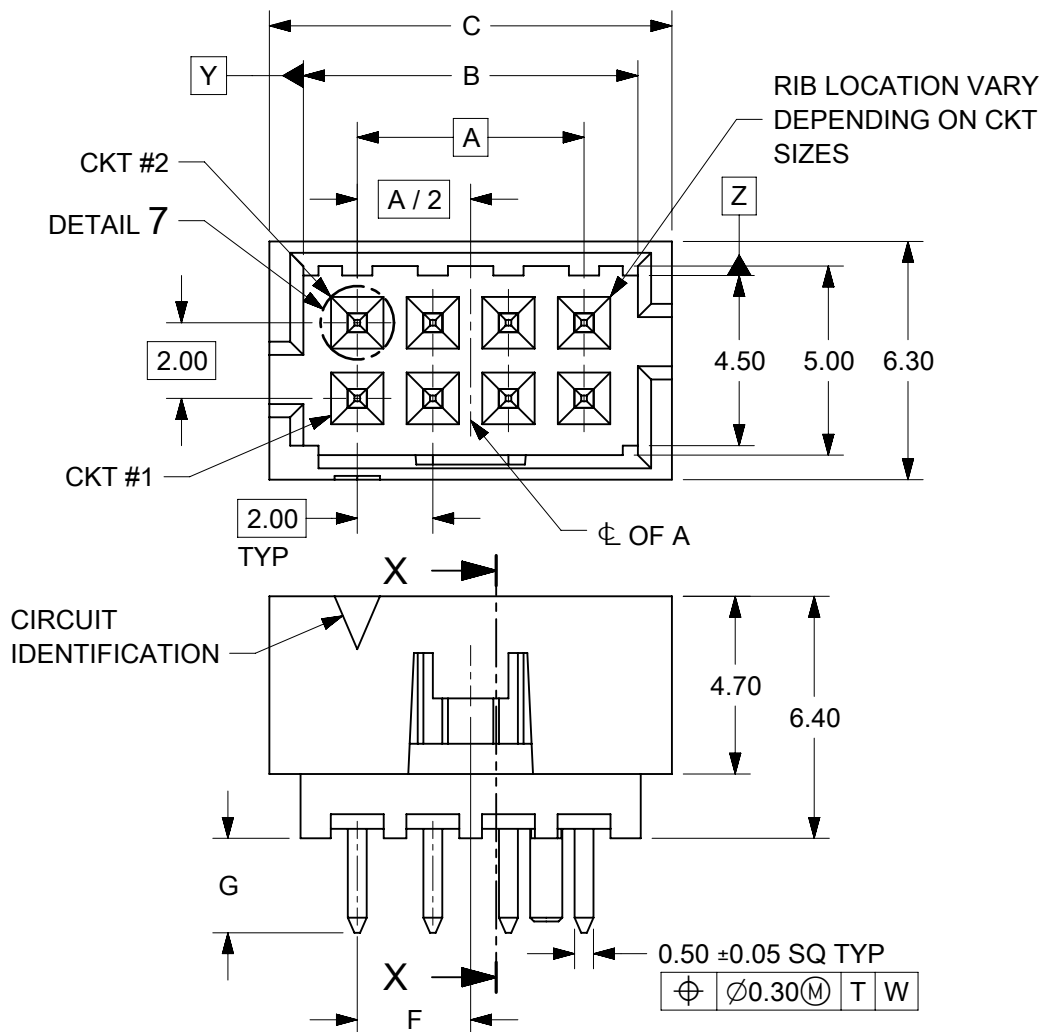
NOTES:

- 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: 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)

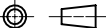
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DIMENSION UNITS		SCALE		CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.				molex MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER			
mm		NTS									
GENERAL TOLERANCES (UNLESS SPECIFIED)				EC NO: 761863 DRWN: SUAIFR CHK'D: GGA APPR: GGA 2023/08/14 2023/09/11 2023/09/11							
	MM	INCH									
4 PLACES	±	±									
3 PLACES	±	±									
2 PLACES	± 0.2	±									
1 PLACE	±	±	INITIAL REVISION:				PRODUCT CUSTOMER DRAWING				
0 PLACES	±	±					DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION
ANGULAR TOL		± 3.0 °		2015/04/15		SD-87831-0001		PSD	001	A24	
APPR: KHLIM		2015/06/29									
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING	SERIES	MATERIAL NUMBER		CUSTOMER	
						A3-SIZE	87831	SEE TABLE		GENERAL MARKET	
										SHEET NUMBER	
										4 OF 14	

10	9	8	7	6	5	4	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E	D	C	B	A	F	E

8 TO 12 CIRCUITS

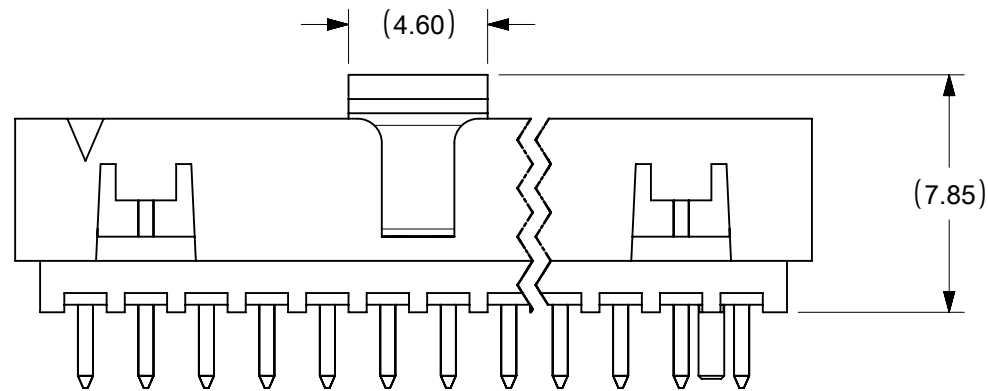
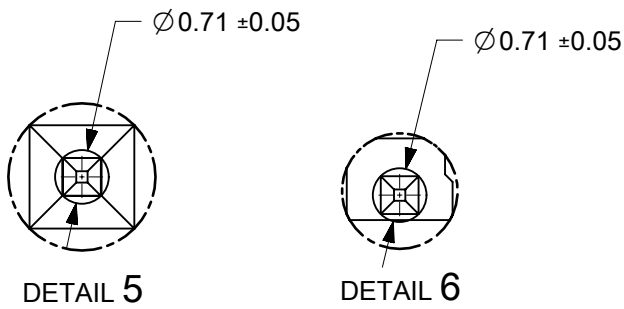
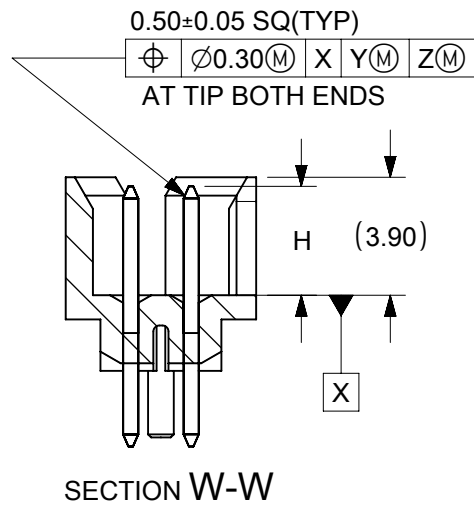
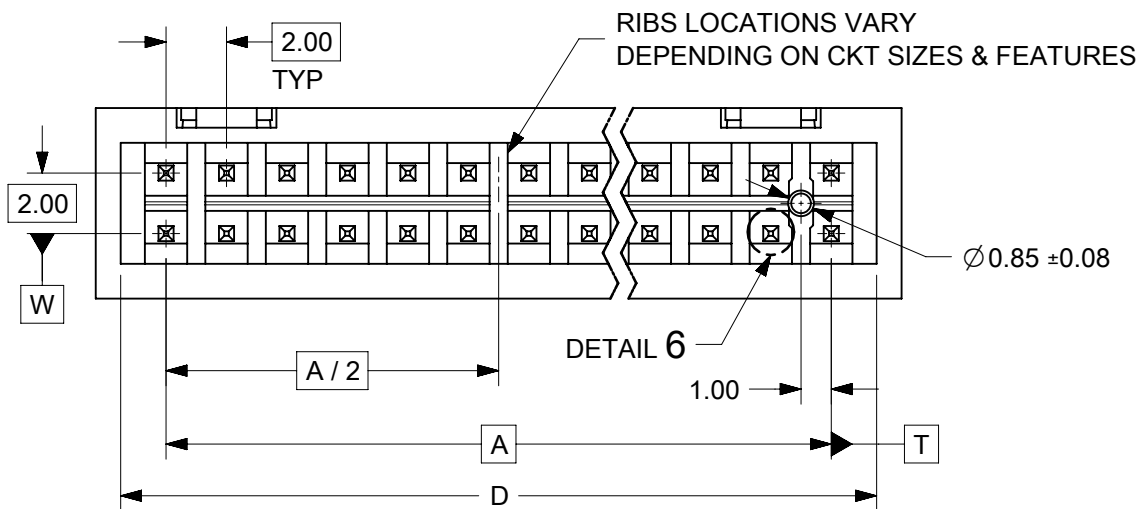
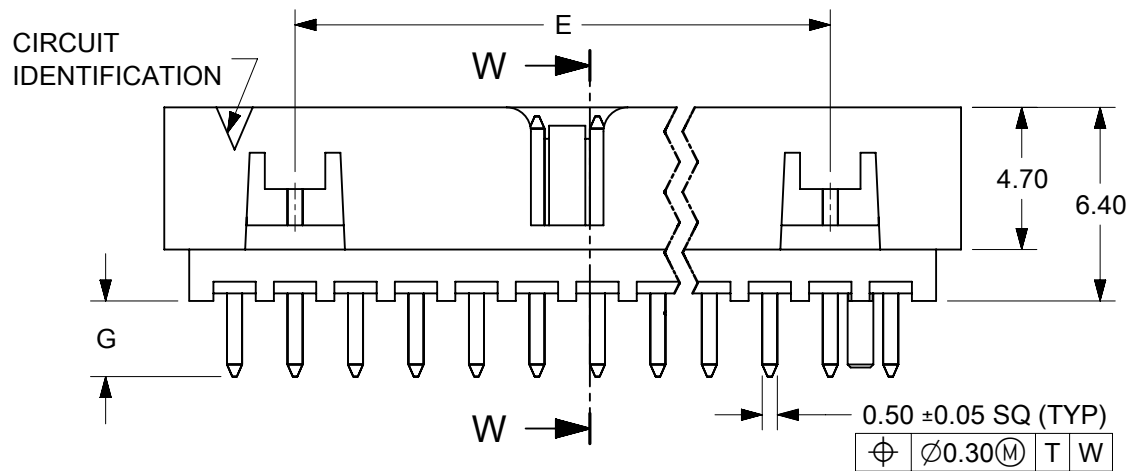
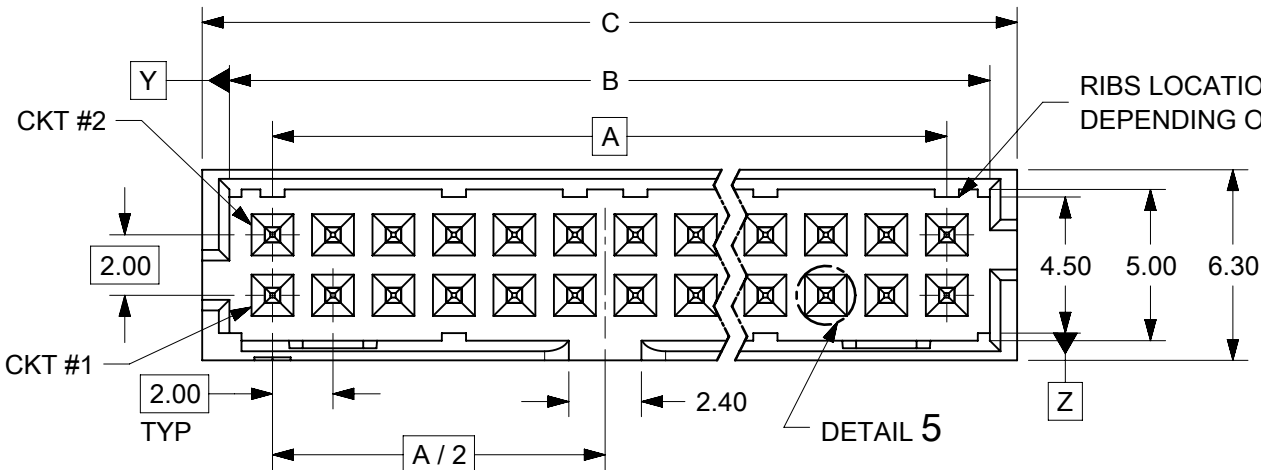


- NOTES:
- MATERIALS:
HOUSING: 30% GF, NYLON, UL94V-0, COLOR: BLACK
PIN: 0.50mm SQ PHOSPHOR BRONZE
 - FINISHES: REFER TO PLATING OPTIONS
 - PRODUCT SPECIFICATION: PS-87831-027
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 - MATES WITH: A. MOLEX CRIMP RECEPTACLE HOUSING: 51110 SERIES AND CRIMP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

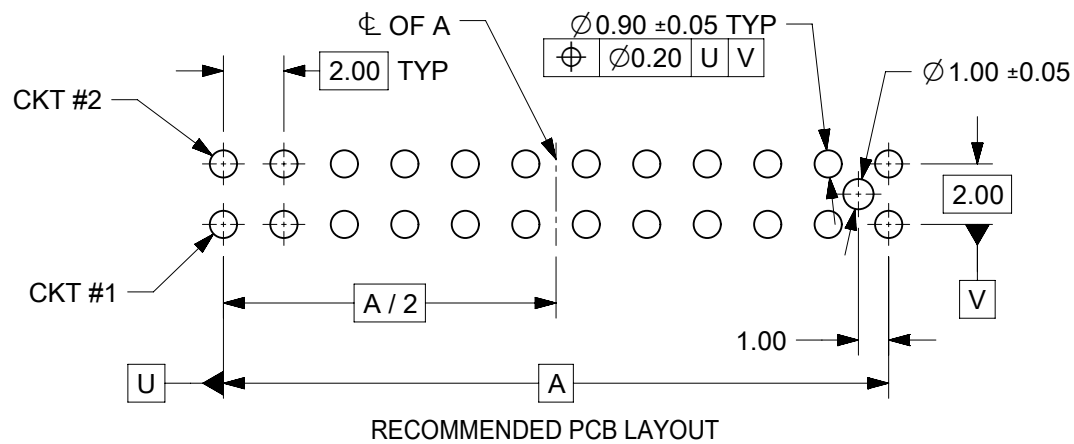
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION														
DIMENSION UNITS		SCALE		CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.				molex						
mm		NTS												
GENERAL TOLERANCES (UNLESS SPECIFIED)				MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER										
	MM	INCH	PRODUCT CUSTOMER DRAWING											
4 PLACES	±	±								DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION
3 PLACES	±	±	SD-87831-0001		PSD	001	A24							
2 PLACES	±	0.2	±	MATERIAL NUMBER				CUSTOMER						
1 PLACE	±	±	SEE TABLE							GENERAL MARKET				
0 PLACES	±	±	SHEET NUMBER		6 OF 14									
ANGULAR TOL		± 3.0 °												
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING		SERIES						
						A3-SIZE		87831						

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	ASSY P/N WITHOUT CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTE R POLARI ZATION	PEG	DIMENSION							F										
							DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G		H									
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										
		87831-1020	N.A	87831-1070		2																								
		87831-1021	N.A	87831-5562		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							4.00		3.50									
		87831-1011	N.A	N.A		3																								
		87831-1028	N.A	N.A		2																								
		87831-1029	N.A	87831-5557		3	N.A	N.A	YES	N.A	YES	YES									2.50									
		87831-1035	N.A	N.A		3																								
		87831-1041	N.A	N.A		2																								
		87831-1042	N.A	87831-5553		3	N.A	YES	YES	N.A	N.A	YES						2.50												
		87831-1032	N.A	N.A		2																								
		87831-1043	N.A	N.A		2																								
		D		87831-1044	N.A	N.A		3	N.A	YES	N.A	YES							N.A	N.A	10.00	12.85	14.65	13.00	N.A	5.00	2.50	3.60 ^{+0.15} _{-0.10}		
				87831-1045	N.A	N.A		2																						
87831-1046	N.A			N.A		3																								
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	2.50																	
		87831-1229	N.A	87831-5558		3																								
		87831-1258	N.A	87831-5567		2																								
		87831-1241	N.A	N.A		2																								
		87831-1242	N.A	N.A		3	N.A	YES	YES	N.A	N.A	N.A	2.50																	
		87831-1255	87831-1256	N.A		2																								
		87831-1232	N.A	N.A		2																								
		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																								
		87831-1245	N.A	N.A		2																								
		A		87831-1246	N.A	N.A		3	N.A	YES	N.A	YES	N.A							YES	10.00	12.85	14.65	13.00	N.A	5.00	2.50	3.60 ^{+0.15} _{-0.10}		
<u>PLATING OPTIONS:</u> 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.																														
DOCUMENT STATUS		P1	RELEASE DATE	2023/09/11	04:36:51	9		8		7		6		5		4		3		2									1	
FORMAT: Met-lega-master-ib-prod-A3 REVISION: E1 DATE: 2021/05/01		9		8		7		6		5		4		3		2		1												

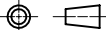
14 TO 50 CIRCUITS



VIEW FOR HEADER WITH CAP



- 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)

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: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.			molex				
mm		NTS									
GENERAL TOLERANCES (UNLESS SPECIFIED)											
		MM	INCH	EC NO: 761863 DRWN: SUAIFR 2023/08/14 CHK'D: GGA 2023/09/11 APPR: GGA 2023/09/11			MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER				
4 PLACES	±	±									
3 PLACES	±	±									
2 PLACES	±	0.2	±				PRODUCT CUSTOMER DRAWING				
1 PLACE	±	±									
0 PLACES	±	±	INITIAL REVISION: DRWN: GMENARLY 2015/04/15 APPR: KHLIM 2015/06/29			DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION	
ANGULAR TOL ± 3.0 °						SD-87831-0001			PSD	001	A24
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING	SERIES	MATERIAL NUMBER		CUSTOMER	SHEET NUMBER
						A3-SIZE	87831	SEE TABLE		GENERAL MARKET	9 OF 14

10	9	8	7	6	5	4	3	2	1										
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	YES	N.A	YES	N.A	YES	YES							2.50	
	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	YES	N.A	YES	N.A	YES	YES							2.50	
	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													YES	
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	YES	N.A	YES	N.A	YES	YES							2.50	
	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	YES	N.A	YES	N.A	YES	YES							2.50	
	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	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-3029	N.A	N.A	N.A	3														
	87831-3035	N.A	N.A	N.A	3														
	87831-3037	N.A	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							3.50	
	87831-3010	87831-3030	87831-3050	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.																			
DOCUMENT STATUS	P1	RELEASE DATE	2023/09/11	04:36:51															
FORMAT: Met-lega-master-ib-prod-A3 REVISION: E1 DATE: 2021/05/01										9	8	7	6	5	4	3	2	1	

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DIMENSION UNITS

mm

SCALE

NTS

GENERAL TOLERANCES (UNLESS SPECIFIED)

	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

THIRD ANGLE PROJECTION

DRAWING

A3-SIZE

SERIES

87831

CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.

EC NO: 761863
DRWN: SUAIFR
CHK'D: GGA
APPR: GGA

2023/08/14
2023/09/11
2023/09/11

INITIAL REVISION:
DRWN: GMENARLY
APPR: KHLIM

2015/04/15
2015/06/29

DOCUMENT NUMBER

SD-87831-0001

DOC TYPE

PSD

DOC PART

001

REVISION

A24

PRODUCT CUSTOMER DRAWING

SEE TABLE

GENERAL MARKET

SHEET NUMBER

11 OF 14

molex

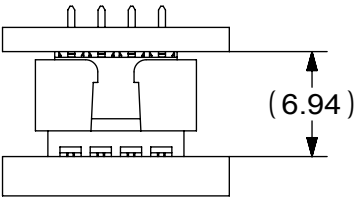
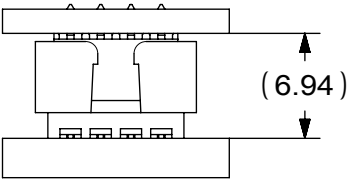
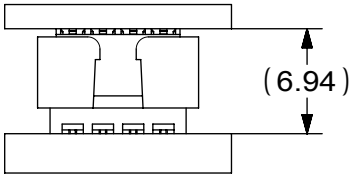
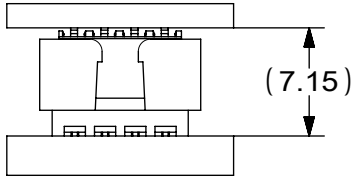
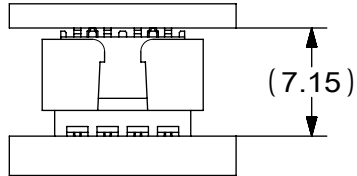
MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED
HEADER

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							
						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									
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														
		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	
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	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	
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								
C	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
		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	
<u>PLATING OPTIONS:</u> 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.																			
DOCUMENT STATUS		P1	RELEASE DATE	2023/09/11	04:36:51	7		6		5		4		3		2		1	
FORMAT: Met-lega-master-ib-prod-A3 REVISION: E1 DATE: 2021/05/01		9		8		7		6		5		4		3		2		1	

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DIMENSION UNITS		SCALE		CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.				molex						
mm		NTS												
GENERAL TOLERANCES (UNLESS SPECIFIED)														
		MM		INCH		EC NO: 761863 DRWN: SUAIFR CHK'D: GGA APPR: GGA 2023/08/14 2023/09/11 2023/09/11				MILLIGRID 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER				
4 PLACES		±		±										
3 PLACES		±		±										
2 PLACES		± 0.2		±										
1 PLACE		±		±										
0 PLACES		±		±		INITIAL REVISION: DRWN: GMENARLY APPR: KHLIM 2015/04/15 2015/06/29				DOCUMENT NUMBER		DOC TYPE	DOC PART	REVISION
ANGULAR TOL		± 3.0 °								SD-87831-0001		PSD	001	A24
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIRD ANGLE PROJECTION		DRAWING		SERIES	MATERIAL NUMBER		CUSTOMER		SHEET NUMBER	
						A3-SIZE		87831	SEE TABLE		GENERAL MARKET		12 OF 14	

10		9		8		7		6		5		4		3		2		1	
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	ASSY P/N WITHOUT CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATI ON	PEG	DIMENSION							
						DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
42	87831-4219	N.A	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	87831-4230	2														
	87831-4221	N.A	N.A	N.A	3														
	87831-4236	N.A	N.A	N.A	4														
	87831-4228	N.A	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4229	N.A	N.A	N.A	3														
44	87831-4419	N.A	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	N.A	2														
	87831-4421	N.A	N.A	N.A	3														
	87831-4436	N.A	N.A	N.A	4														
	87831-4428	N.A	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4429	N.A	N.A	N.A	3														
	87831-4435	N.A	N.A	N.A	3														
46	87831-4619	N.A	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	N.A	2														
	87831-4621	N.A	N.A	N.A	3														
	87831-4636	N.A	N.A	N.A	4														
	87831-4628	N.A	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4629	N.A	N.A	N.A	3														
48	87831-4819	N.A	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	N.A	2														
	87831-4821	N.A	N.A	N.A	3														
	87831-4836	N.A	N.A	N.A	4														
	87831-4828	N.A	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4829	N.A	N.A	N.A	3														
50	87831-5019	N.A	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	N.A	2														
	87831-5021	N.A	N.A	N.A	3														
	87831-5036	N.A	N.A	N.A	4														
	87831-5028	N.A	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-5029	N.A	N.A	N.A	3														
	87831-5035	N.A	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.																			
DOCUMENT STATUS		P1	RELEASE DATE	2023/09/11	04:36:51														
		9		8		7		6		5		4		3		2		1	

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	

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DIMENSION UNITS		SCALE	
mm		NTS	
GENERAL TOLERANCES (UNLESS SPECIFIED)			
	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		THIRD ANGLE PROJECTION	

CURRENT REV DESC: REMOVED OBSOLETE PART NUMBERS AS PER PCN#512581.

EC NO: 761863
DRWN: SUAIFR
CHK'D: GGA
APPR: GGA

2023/08/14
2023/09/11
2023/09/11

INITIAL REVISION:
DRWN: DRWN BY
APPR: APPR BY

XXXX/XX/XX
XXXX/XX/XX

DOCUMENT NUMBER
SD-87831-0001

DOC TYPE
PSD

DOC PART
001

REVISION
A24

MATERIAL NUMBER

CUSTOMER
GENERAL MARKET

SHEET NUMBER
14 OF 14

A3-SIZE

87831