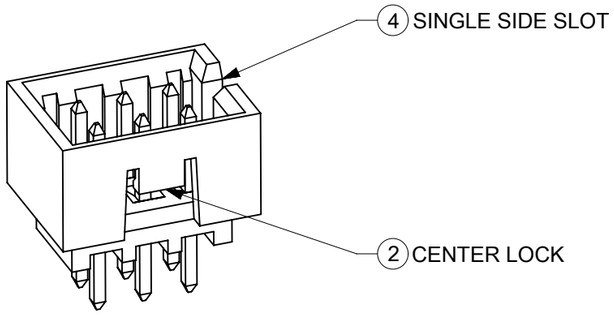
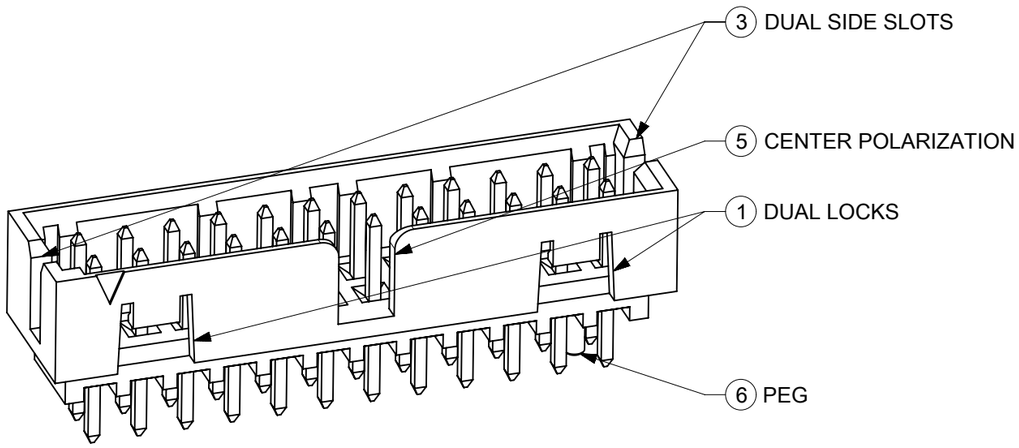
FEATURES SELECTION GUIDE





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: 87831-0419 87831-0645 87831-5141 87831-5119 87831-0443 87831-1011 87831-5241 87831-1420 87831-5242 87831-0643	PK-87831-002

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

SYMBOLS: E/A = 0; E/B = 0; E/C = 0; E/D = 0; 5 = 0; ▼ = 0; E/F = 0; ☒ = 0; ■ = 0; V = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION

DRAWING: A3-SIZE
SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

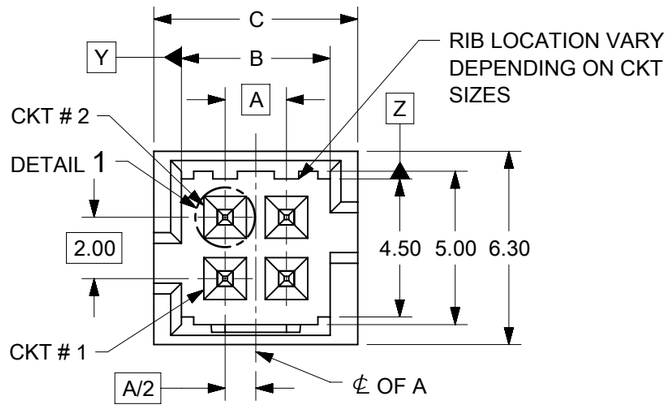
DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

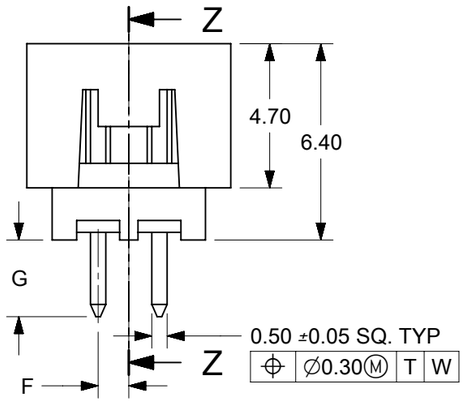
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	1 OF 14

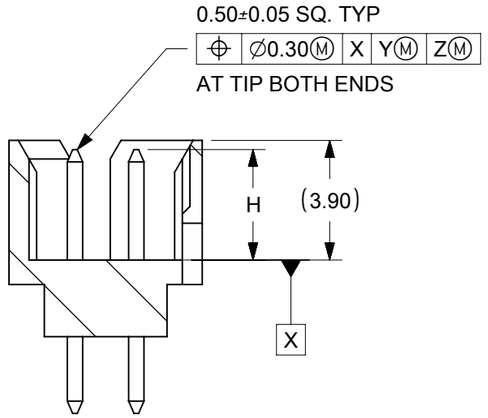
DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

FORMAT: Met-lega-master-tb-prod-A3
REVISION: D
DATE: 2018/01/18

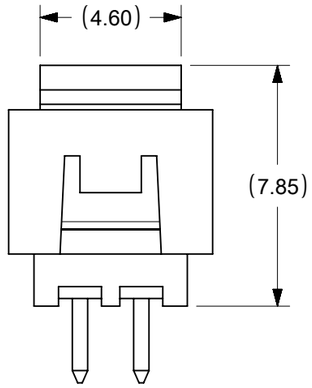
4 CIRCUITS



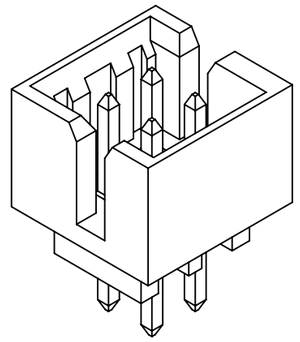




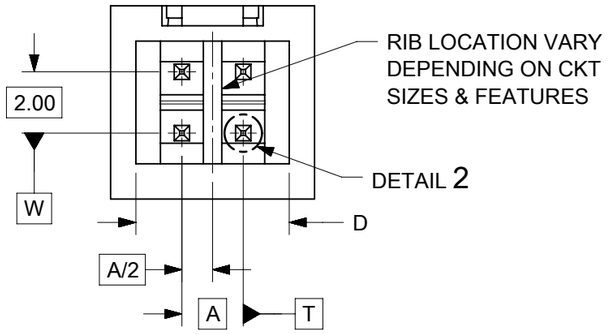
SECTION Z-Z

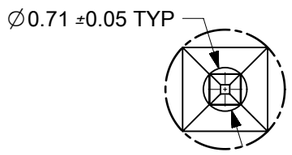


VIEW FOR HEADER WITH CAP

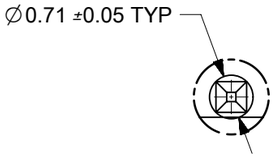


VIEW FOR HEADER WITH ONLY DUAL SLOTS

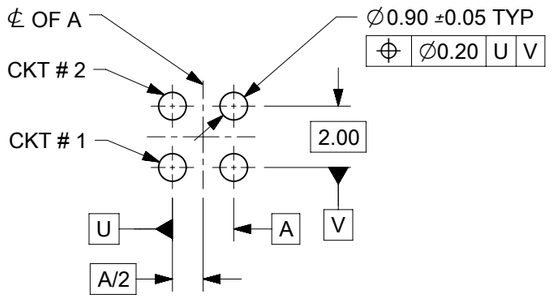




DETAIL 1



DETAIL 2



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)

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

SYMBOLS: A = 0, E = 0, B = 0, S = 0, ▼ = 0, F = 0, ⊠ = 0, ■ = 0, ▽ = 0

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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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	2 OF 14

FORMAT: Met-lega-master-tb-prod-A3
REVISION: D
DATE: 2018/01/18

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	$3.60^{+0.15}_{-0.10}$
	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.

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

FORMAT: Molex-letter-lb-prod-A3
REVISION: D
DATE: 2018/01/11

SYMBOLS: E/A = 0; E/C = 0; E/D = 0; E/B = 0; ▼ = 0; E/C = 0; ☒ = 0; ■ = 0; = 0

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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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

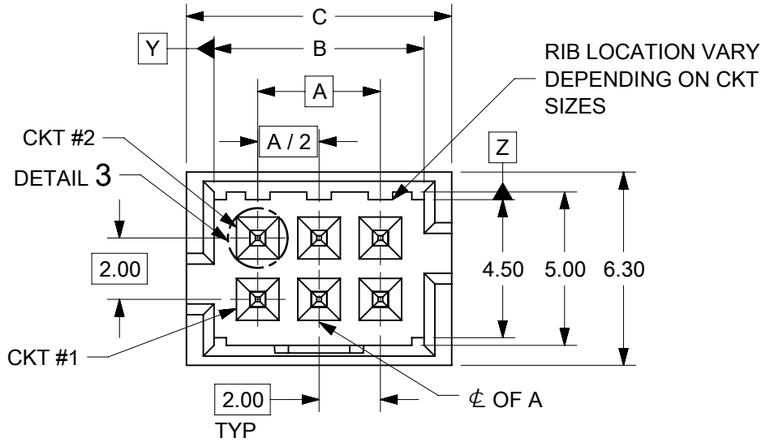
MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

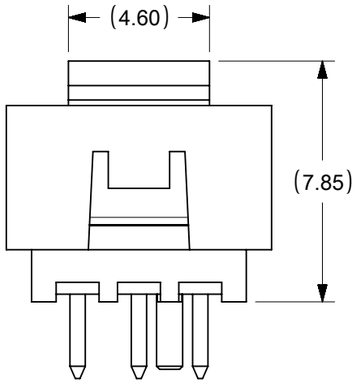
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

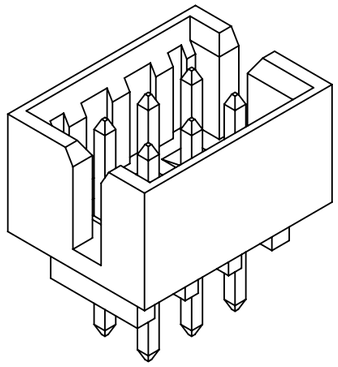
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	3 OF 14

6 CIRCUITS

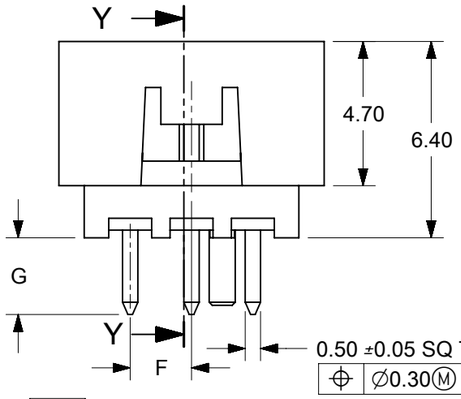


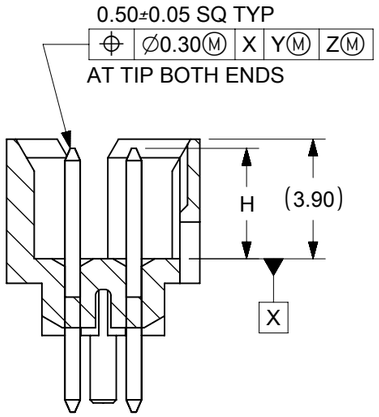


VIEW FOR HEADER WITH CAP

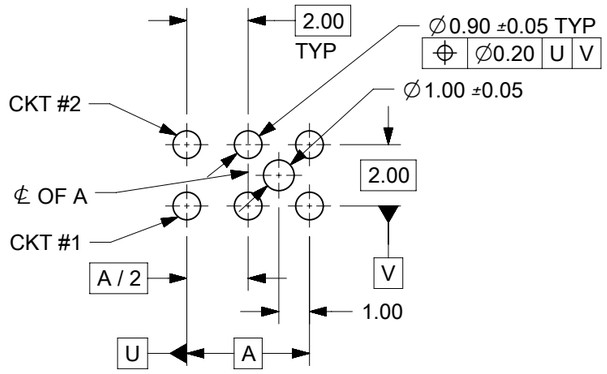


VIEW FOR HEADER WITH ONLY DUAL SLOTS

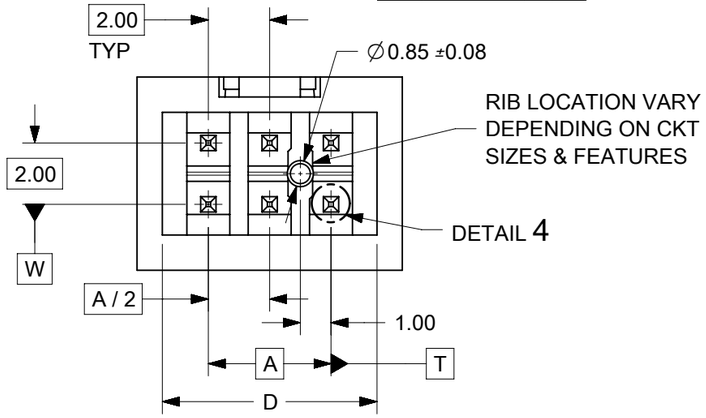


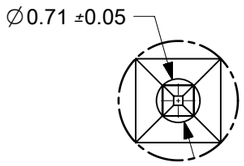


SECTION Y-Y

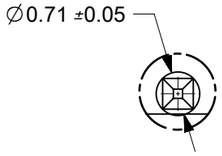


RECOMMENDED PCB LAYOUT





DETAIL 3



DETAIL 4

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)

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

SYMBOLS: = 0 (A) = 0 (E) = 0 (P) = 0 (S) = 0 = 0 (C) = 0 = 0 = 0 = 0

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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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 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	A16

THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	A3-SIZE	87831	SEE TABLE	GENERAL MARKET	4 OF 14

FORMAT: Molex-Header-tb-prod-A3
REVISION: D
DATE: 2018/01/11

6 CIRCUITS

CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
6	87831-0619	N.A	N.A	1	N.A	N.A	YES	N.A	N.A	N.A	4.00	6.85	8.65	7.00	N.A	N.A	2.50	3.60±0.20
	87831-0620	N.A	N.A	2														
	87831-0621	N.A	N.A	3														
	87831-0636	N.A	N.A	4														
	87831-0628	N.A	N.A	2	N.A	N.A	YES	N.A	N.A	YES						N.A	2.50	
	87831-0629	N.A	N.A	3														
	87831-0641	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						2.00	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							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							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							2.50	3.60 +0.15 -0.10
	87831-0644	N.A	N.A	3														
	87831-0645	N.A	N.A	2	N.A	YES	N.A	YES	N.A	YES							2.50	
	87831-0646	N.A	N.A	3														
	87831-0632	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES							2.50	
	87831-5119	N.A	N.A	1	N.A	N.A	YES	N.A	YES	N.A						N.A	2.50	3.60±0.20
	87831-5121	N.A	N.A	3														
	87831-5136	N.A	N.A	4														

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

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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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
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DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

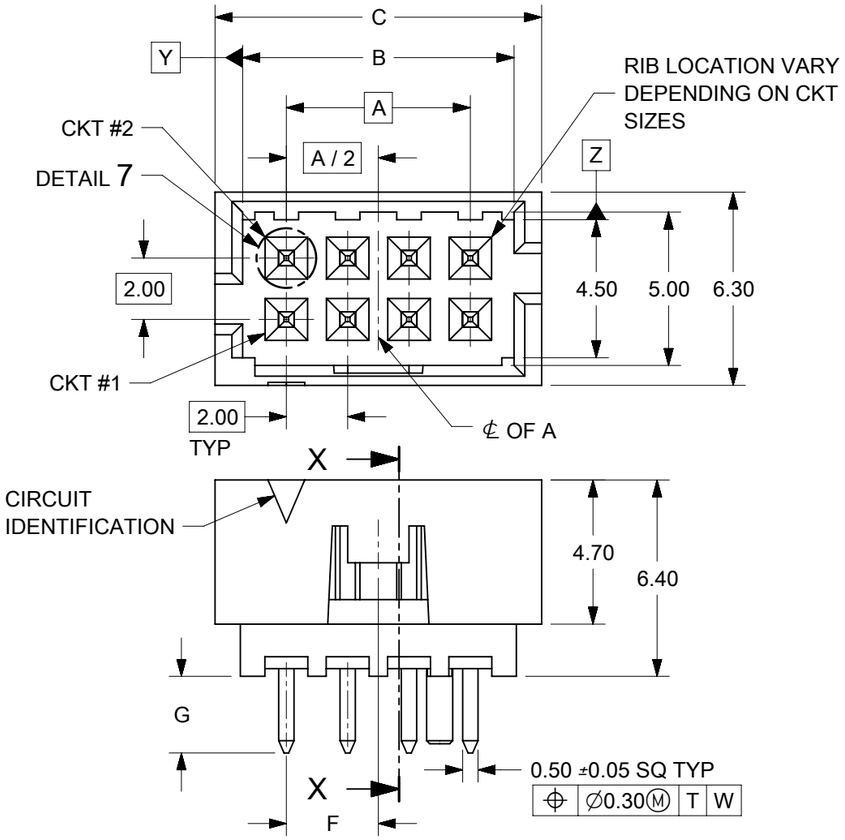
DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

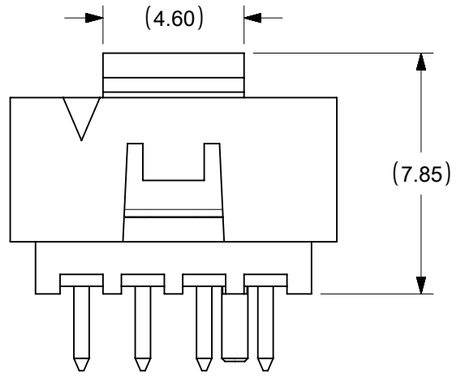
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	5 OF 14

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

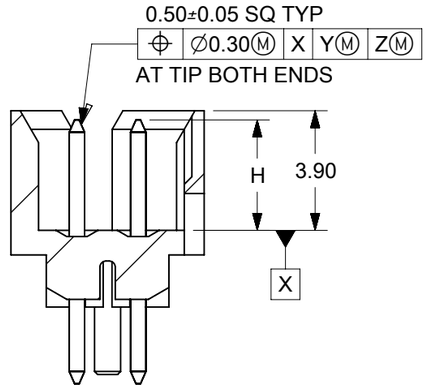
FORMAT: Mel-jam-mller-tb-prod-A3
REVISION: D
DATE: 2018/01/16

8 TO 12 CIRCUITS

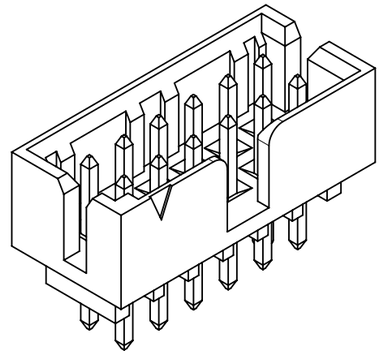




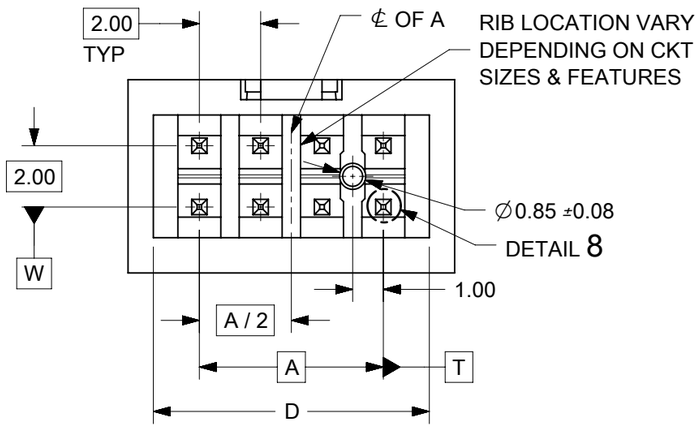
VIEW FOR HEADER WITH CAP

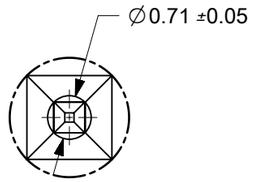


SECTION X-X

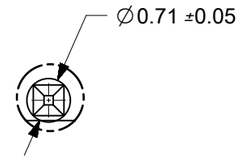


VIEW FOR HEADER WITH CENTER POLARIZATION AND DUAL SIDE SLOTS

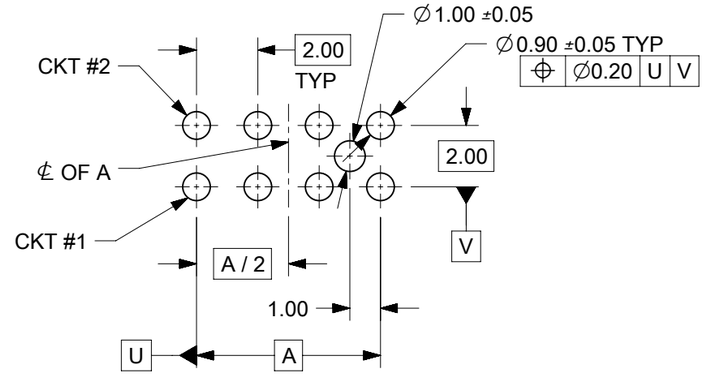




DETAIL 7



DETAIL 8



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)

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

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SYMBOLS: A = 0, E = 0, F = 0, S = 0, ▼ = 0, V = 0, ⊠ = 0, ■ = 0, ▽ = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO:	619055	
DRWN:	NMANE02	2019/03/25
CHK'D:	NMANE02	2019/07/09
APPR:	MRAMAKRISHNA	2019/07/09
INITIAL REVISION:		
DRWN:	GMENARLY	2015/04/15
APPR:	KHLIM	2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	6 OF 14

8 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
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	2.50	
	87831-0829	N.A	N.A	3														
	87831-0841	N.A	87831-5551	2	N.A	YES	YES	N.A	N.A	N.A						3.00	2.50	
	87831-0842	N.A	N.A	3														
	87831-5841	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES							3.50	
	87831-5441	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A								
	87831-5442	N.A	N.A	3														
	87831-5541	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A							2.80	
	87831-5542	N.A	N.A	3														
	87831-5741	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A							4.70	
	87831-5742	N.A	N.A	3														
	87831-0832	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES							2.50	$3.60^{+0.15}_{-0.10}$
	87831-0843	N.A	N.A	2	N.A	YES	N.A	YES	N.A	N.A							2.50	
	87831-0844	N.A	N.A	3														
	87831-0845	N.A	N.A	2	N.A	YES	N.A	YES	N.A	YES							2.50	
	87831-0846	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	2019/07/09 06:47:12

FORMAT: Molex-letter-lb-prod-A3
REVISION: D
DATE: 2018/01/15

SYMBOLS: = 0

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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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09
INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	7 OF 14

10 TO 12 CIRCUITS

CKT SIZE	ASSY P/N WITHOUT CAP IN TUBE	ASSY P/N WITH CAP IN TUBE	ASSY P/N WITH CAP IN T&R	PLATING OPTIONS	FRICTION LOCKS		SIDE SLOTS		CENTER POLARIZATION	PEG	DIMENSION							
					DUAL	CENTER	DUAL	SINGLE			A	B	C	D	E	F	G	H
10	87831-1019	N.A	N.A	1	N.A	N.A	YES	N.A	YES	N.A	8.00	10.85	12.65	11.00	N.A	N.A	2.50	3.60±0.20
	87831-1020	N.A	N.A	2														
	87831-1021	N.A	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							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														
	87831-1035	N.A	N.A	3	N.A	N.A	YES	N.A	YES	YES							3.50	
	87831-1041	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						4.00	2.50	
	87831-1042	N.A	87831-5553	3														
	87831-1032	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES							2.50	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														
	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														
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	(A13) 87831-5567	2													3.50	
	87831-1241	N.A	N.A	2	N.A	YES	YES	N.A	N.A	N.A						5.00	2.50	
	87831-1242	N.A	N.A	3														
	87831-1255	87831-1256	N.A	2	N.A	YES	YES	N.A	N.A	N.A							3.50	
	87831-1232	N.A	N.A	2	N.A	YES	YES	N.A	N.A	YES							2.50	3.60 +0.15 -0.10
	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	N.A	YES	N.A	YES	N.A	YES							2.50	
	87831-1246	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.
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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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

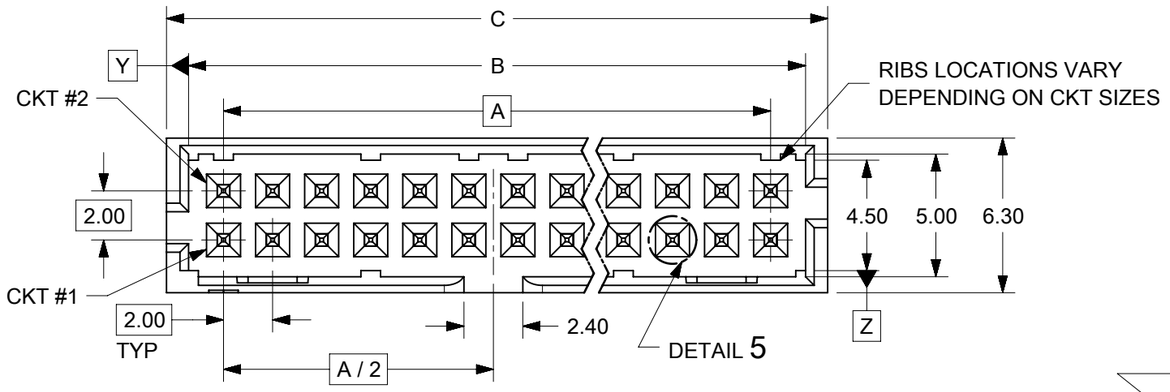
DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

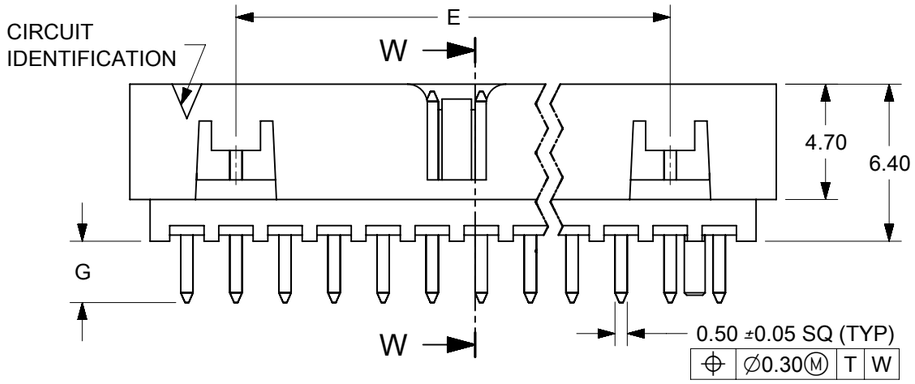
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	8 OF 14

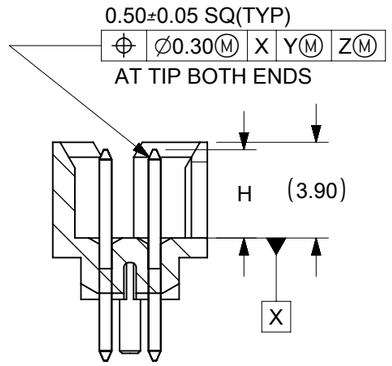
DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

FORMAT: Metric-Molex-tb-prod-A3
REVISION: D
DATE: 2018/01/16

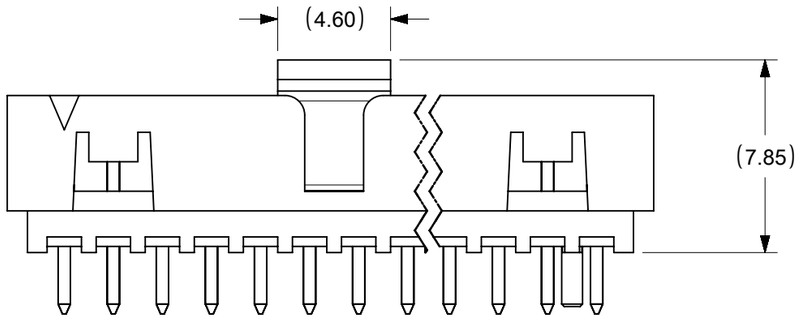
14 TO 50 CIRCUITS



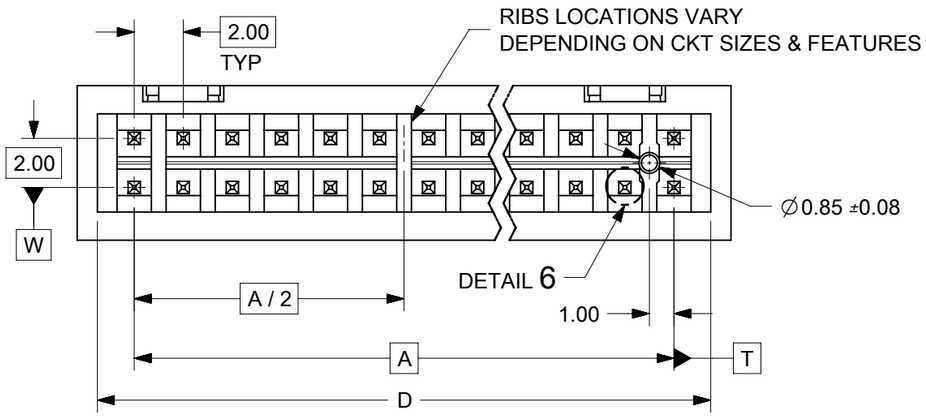


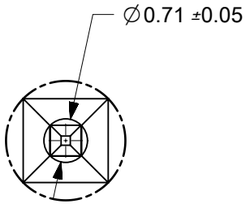


SECTION W-W

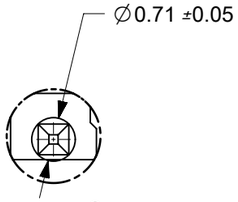


VIEW FOR HEADER WITH CAP

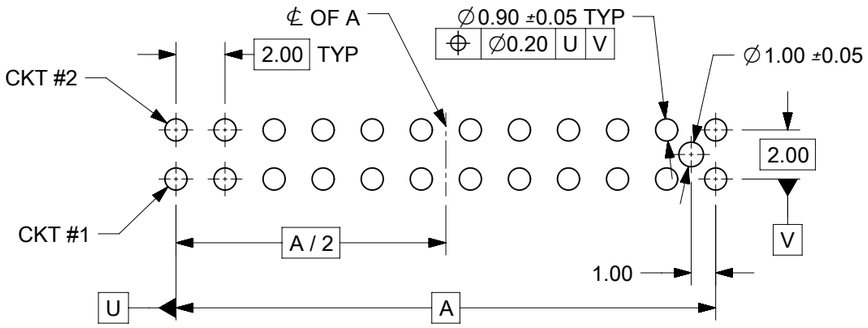




DETAIL 5



DETAIL 6



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:
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DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

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SYMBOLS: = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO:	619055	
DRWN:	NMANE02	2019/03/25
CHK'D:	NMANE02	2019/07/09
APPR:	MRAMAKRISHNA	2019/07/09

INITIAL REVISION:

DRWN:	GMENARLY	2015/04/15
APPR:	KHLIM	2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	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							2.50	
	87831-1429	N.A	87831-5563	3														
	87831-1435	N.A	N.A	3	YES	N.A	YES	N.A	YES	YES							3.50	
	87831-1410	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A							3.50	
	87831-1411	N.A	N.A	3														
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														
	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	YES	N.A	YES	N.A	YES	YES							3.50	
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														
	87831-1828	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	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														
	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	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							3.50	
	87831-2011	N.A	A13 87831-2041	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	2019/07/09 06:47:12

FORMAT: Molex-generic-tb-prod-A3
REVISION: D
DATE: 2018/01/15

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

SYMBOLS: = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
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	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													3.50	
	87831-2445	N.A	N.A	N.A	3													2.80	
	(A18) 87831-2410	N.A	N.A	N.A	2	YES	N.A	YES	N.A	YES	N.A							3.50	
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	YES	N.A	YES	N.A	YES	N.A							3.50	
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	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	2019/07/09 06:47:12

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SYMBOLS: E/A = 0; E/B = 0; E/C = 0; E/D = 0; E/F = 0; ▼ = 0; E/G = 0; ☒ = 0; ■ = 0; E/H = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	11 OF 14

FORMAT: Molex-Holder-tb-prod-A3
REVISION: D
DATE: 2018/01/11

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	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-3229	N.A	N.A	3														
34	87831-3419	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	32.00	34.85	36.65	35.00	28.00	N.A	2.50	3.60±0.20
	87831-3420	N.A	N.A	2														
	87831-3421	N.A	N.A	3														
	87831-3436	N.A	N.A	4														
	87831-3428	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-3429	N.A	N.A	3														
	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	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-3629	N.A	N.A	3														
38	87831-3819	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	36.00	38.85	40.65	39.00	32.00	N.A	2.50	3.60±0.20
	87831-3820	N.A	N.A	2														
	87831-3821	N.A	N.A	3														
	87831-3836	N.A	N.A	4														
	87831-3828	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-3829	N.A	N.A	3														
40	87831-4019	N.A	N.A	1	YES	N.A	YES	N.A	YES	N.A	38.00	40.85	42.65	41.00	34.00	N.A	2.50	3.60±0.20
	87831-4020	N.A	N.A	2														
	87831-4021	N.A	N.A	3														
	87831-4036	N.A	N.A	4														
	87831-4028	N.A	N.A	2	YES	N.A	YES	N.A	YES	YES							2.50	
	87831-4029	N.A	N.A	3														
	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.

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

SYMBOLS: = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	12 OF 14

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

FORMAT: Met-lega-master-tb-prod-A3
REVISION: D
DATE: 2018/01/18

42 TO 50 CIRCUITS

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

PLATING OPTIONS:

1 - 0.05-0.13µm/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	2019/07/09 06:47:12

FORMAT: Mat-tmpl-per-lb-prod-A3
REVISION: D
DATE: 2018/01/15

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SYMBOLS: E/A = 0; E/C = 0; E/B = 0; S/A = 0; ▼ = 0; E/C = 0; ☒ = 0; ■ = 0; S/A = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: GMENARLY 2015/04/15
APPR: KHLIM 2015/06/29

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

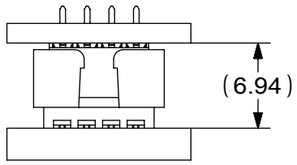
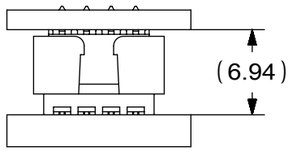
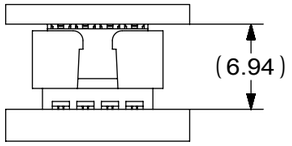
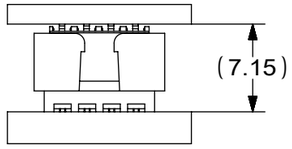
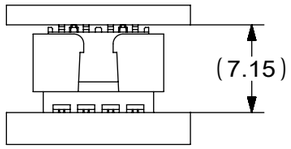
MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE	GENERAL MARKET	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	

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SYMBOLS: E/A = 0; E/E = 0; E/P = 0; S = 0; ▼ = 0; C = 0; ☒ = 0; ■ = 0; V = 0

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

CURRENT REV DESC: ADDED BTB DIST.

EC NO: 619055
DRWN: NMANE02 2019/03/25
CHK'D: NMANE02 2019/07/09
APPR: MRAMAKRISHNA 2019/07/09

INITIAL REVISION:
DRWN: DRWN BY XXXX/XX/XX
APPR: APPR BY XXXX/XX/XX

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 87831

molex

MILLIGRID
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
SD-87831-0001	PSD	001	A16

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	GENERAL MARKET	14 OF 14

DOCUMENT STATUS	P1	RELEASE DATE	2019/07/09 06:47:12

FORMAT: Molex-tmpl-tbr-tb-prod-A3
REVISION: D
DATE: 2018/01/15

Mouser Electronics

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87831-1032