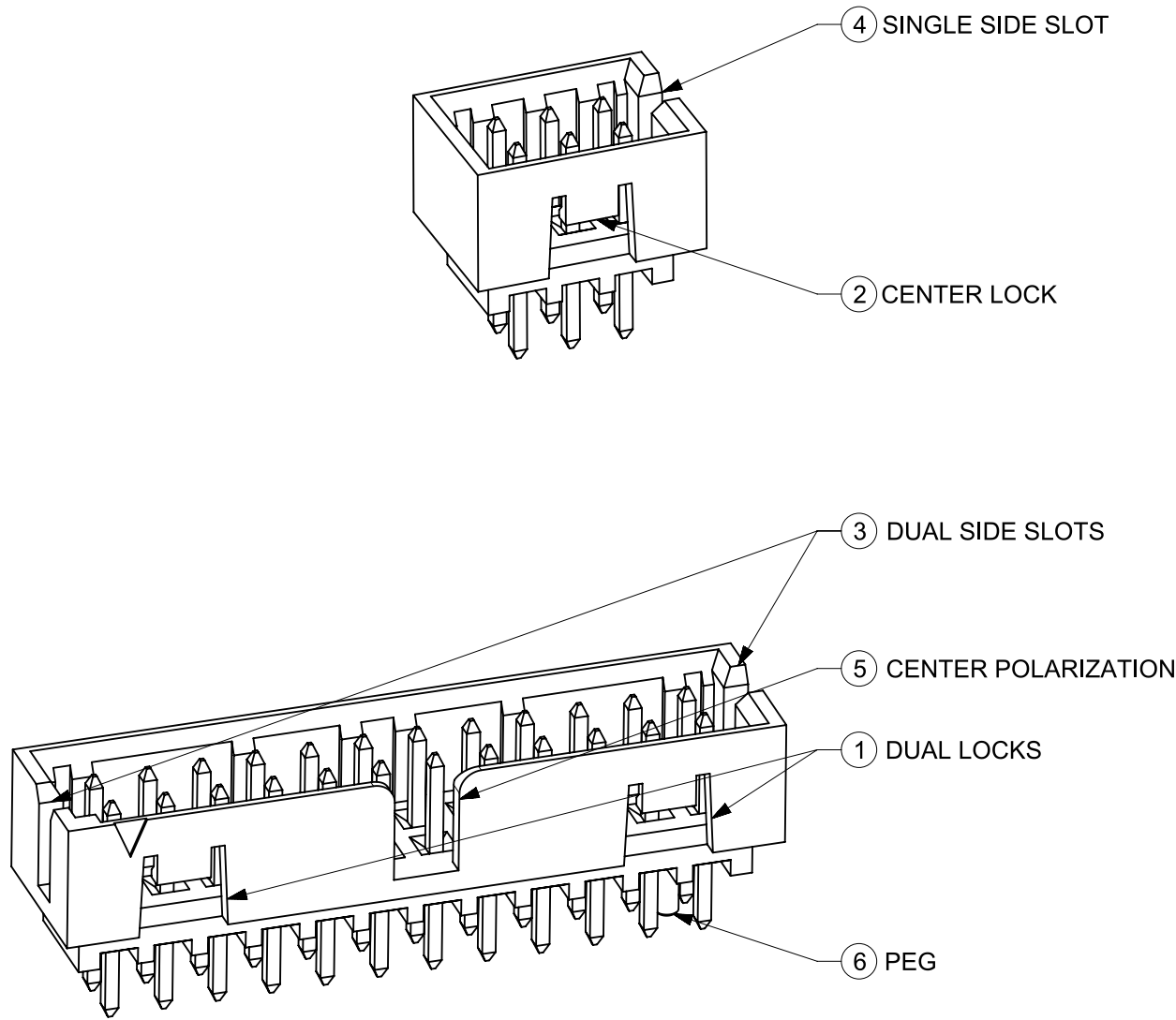


FEATURES SELECTION GUIDE



| 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                                             | ± 0 ± 0                |
| 3 PLACES                                             | ± 0 ± 0                |
| 2 PLACES                                             | ± 0.2 ± 0              |
| 1 PLACE                                              | ± 0 ± 0                |
| 0 PLACES                                             | ± 0 ± 0                |
| ANGULAR TOL                                          | ± 3 °                  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | THIRD ANGLE PROJECTION |

CURRENT REV DESC: Adding New Part Numbers

EC NO: CO-000042098  
DRWN: Meghraj Boodagatti  
CHK'D: Meghraj Boodagatti  
APPR: Saravanakumar Murugesan

22-Apr-2026  
08-Jun-2026  
08-Jun-2026

INITIAL REVISION:  
DRWN: GMENARLY  
APPR: KHLIM

2015/04/15  
2015/06/29

DOCUMENT NUMBER  
**SD-87831-0001**

DOC TYPE  
PSD

DOC PART  
001

REVISION  
A25

PRODUCT CUSTOMER DRAWING

MATERIAL NUMBER  
SEE TABLE

CUSTOMER  
GENERAL MARKET

SHEET NUMBER  
1 OF 14

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DOCUMENT STATUS

Production

RELEASE DATE

08-Jun-2026

04:36:51

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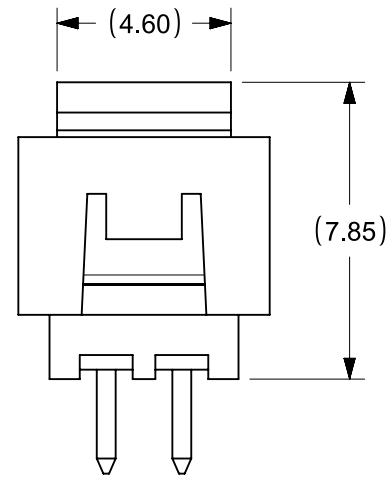
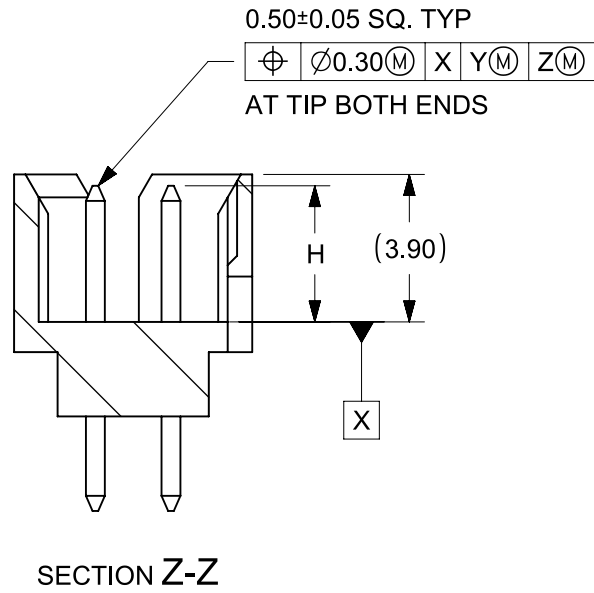
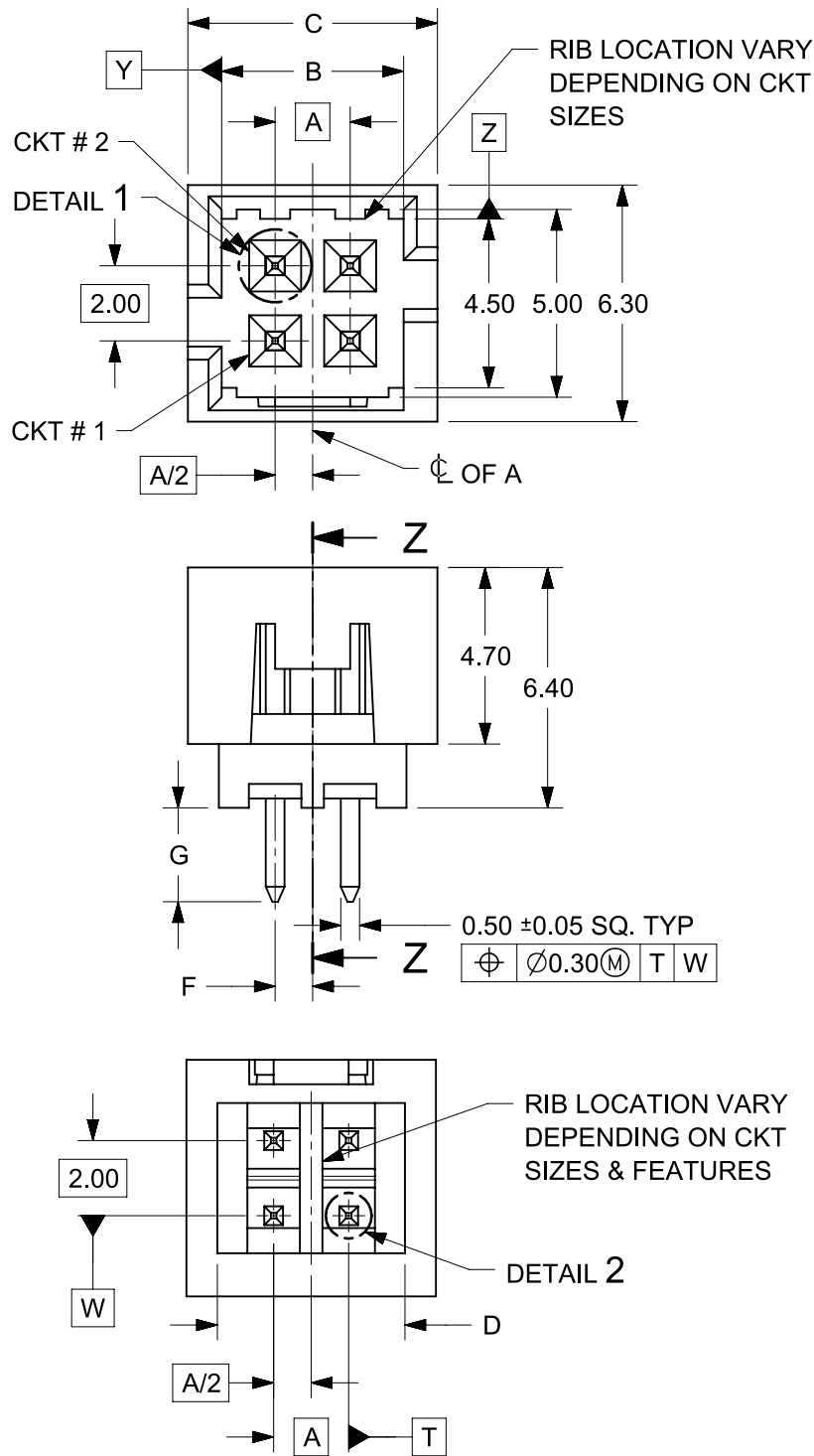
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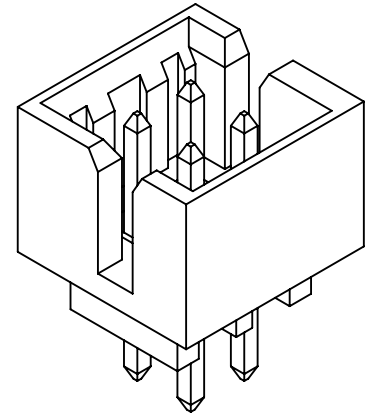
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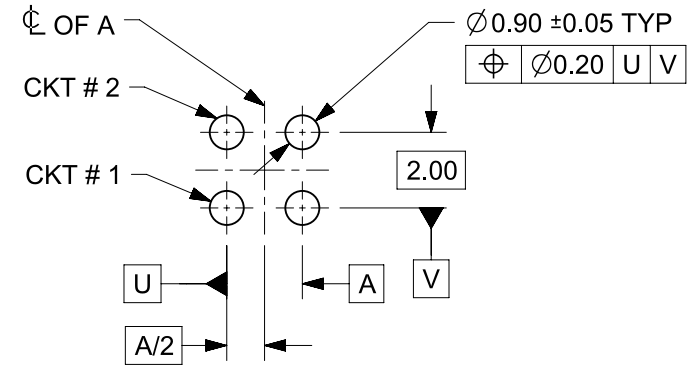
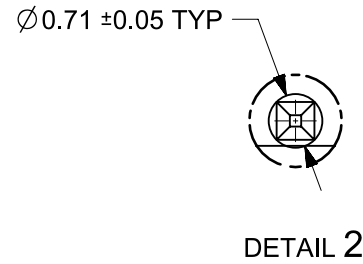
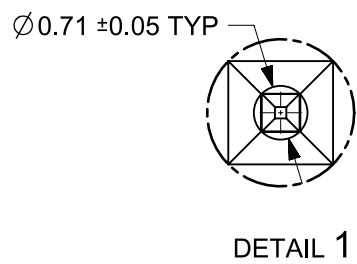
4 CIRCUITS



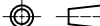
VIEW FOR  
HEADER WITH CAP



VIEW FOR HEADER  
WITH ONLY DUAL SLOTS



- 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: Adding New Part Numbers                                             |                          |          |   | <div>molex</div>                     |  |                     |                     |                     |  |              |  |
| mm                                                                                                                                                |    | NTS   |   |                                                                                       |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| GENERAL TOLERANCES (UNLESS SPECIFIED)                                                                                                             |    |       |   | MILLIGRID<br>2MM PITCH, THROUGH HOLE VERTICAL SHROUDED<br>HEADER                      |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
|                                                                                                                                                   | MM | INCH  |   |                                                                                       |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| 4 PLACES                                                                                                                                          | ±  | 0     | ± |                                                                                       |                          |          | 0 |                                      |  |                     |                     |                     |  |              |  |
| 3 PLACES                                                                                                                                          | ±  | 0     | ± | 0                                                                                     |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| 2 PLACES                                                                                                                                          | ±  | 0.2   | ± | 0                                                                                     |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| 1 PLACE                                                                                                                                           | ±  | 0     | ± | 0                                                                                     |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| 0 PLACES                                                                                                                                          | ±  | 0     | ± | 0                                                                                     |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| ANGULAR TOL                                                                                                                                       |    | ±     |   | 3 °                                                                                   | PRODUCT CUSTOMER DRAWING |          |   | DOCUMENT NUMBER<br><br>SD-87831-0001 |  | DOC TYPE<br><br>PSD | DOC PART<br><br>001 | REVISION<br><br>A25 |  |              |  |
| EC NO: CO-000042098<br>DRWN: Meghraj Boodagatti 22-Apr-2026<br>CHK'D: Meghraj Boodagatti 08-Jun-2026<br>APPR: Saravanakumar Murugesan 08-Jun-2026 |    |       |   |                                                                                       |                          |          |   |                                      |  |                     |                     |                     |  |              |  |
| INITIAL REVISION:<br>DRWN: GMENARLY 2015/04/15<br>APPR: KHLIM 2015/06/29                                                                          |    |       |   | DOCUMENT NUMBER                                                                       |                          | DOC TYPE |   | DOC PART                             |  | REVISION            |                     |                     |  |              |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                        |    |       |   | THIRD ANGLE PROJECTION                                                                |                          | DRAWING  |   | SERIES                               |  | MATERIAL NUMBER     |                     | CUSTOMER            |  | SHEET NUMBER |  |
|                                                                                                                                                   |    |       |   |  |                          | A3-SIZE  |   | 87831                                |  | SEE TABLE           |                     | GENERAL MARKET      |  | 2 OF 14      |  |
|                                                                                                                                                   |    |       |   |                                                                                       |                          |          |   |                                      |  |                     |                     |                     |  |              |  |

|             |                                    |                                 |                                |                    |                |        |            |        |                        |      |           |      |      |      |     |      |      |           |
|-------------|------------------------------------|---------------------------------|--------------------------------|--------------------|----------------|--------|------------|--------|------------------------|------|-----------|------|------|------|-----|------|------|-----------|
| 10          | 9                                  | 8                               | 7                              | 6                  | 5              | 4      | 3          | 2      | 1                      |      |           |      |      |      |     |      |      |           |
| 4 CIRCUITS  |                                    |                                 |                                |                    |                |        |            |        |                        |      |           |      |      |      |     |      |      |           |
| CKT<br>SIZE | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>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                    | 3.50 |           |      |      |      |     |      |      |           |
|             | 87831-5142                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |      |           |      |      |      |     |      |      |           |
|             | 87831-6141                         | N.A                             | N.A                            | 2                  | N.A            | YES    | YES        | 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  |           |      |      |      |     |      |      |           |
|             | 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.

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

DIMENSION UNITS

mm

SCALE

NTS

GENERAL TOLERANCES  
(UNLESS SPECIFIED)

MM

INCH

4 PLACES

± 0

± 0

3 PLACES

± 0

± 0

2 PLACES

± 0.2

± 0

1 PLACE

± 0

± 0

0 PLACES

± 0

± 0

ANGULAR TOL

± 3 °

DRAFT WHERE APPLICABLE  
MUST REMAIN  
WITHIN DIMENSIONS

CURRENT REV DESC: Adding New Part Numbers

EC NO: CO-000042098

DRWN: Meghraj Boodagatti22-Apr-2026

CHK'D: Meghraj Boodagatti08-Jun-2026

APPR: Saravanakumar Murugesan08-Jun-2026

INITIAL REVISION:

DRWN: GMENARLY2015/04/15

APPR: KHLIM2015/06/29

THIRD ANGLE PROJECTION

DRAWING

A3-SIZE

SERIES

87831

DOCUMENT NUMBER

SD-87831-0001

DOC TYPE

PSD

DOC PART

001

REVISION

A25

MATERIAL NUMBER

SEE TABLE

CUSTOMER

GENERAL MARKET

SHEET NUMBER

3 OF 14

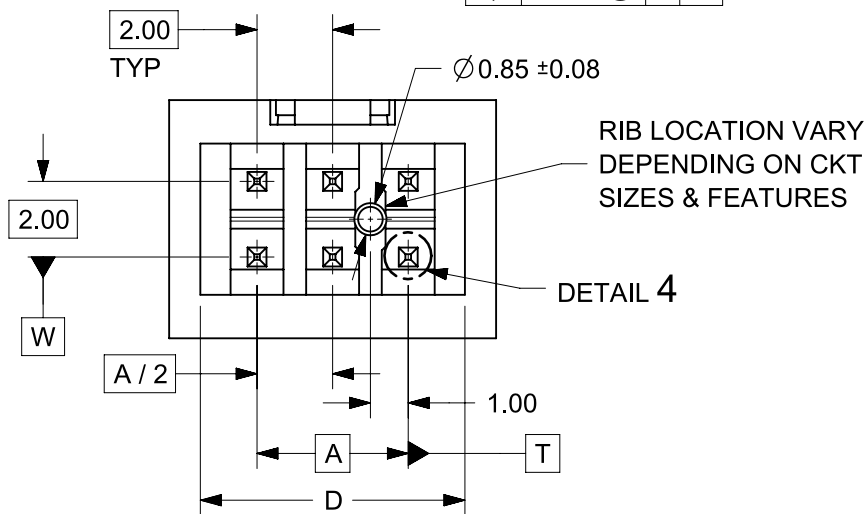
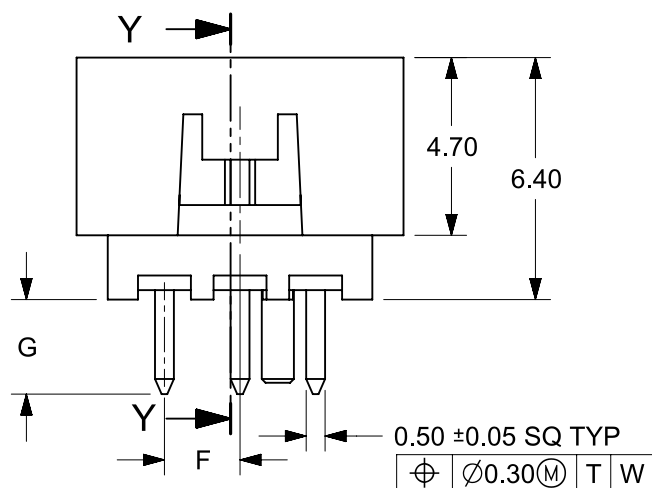
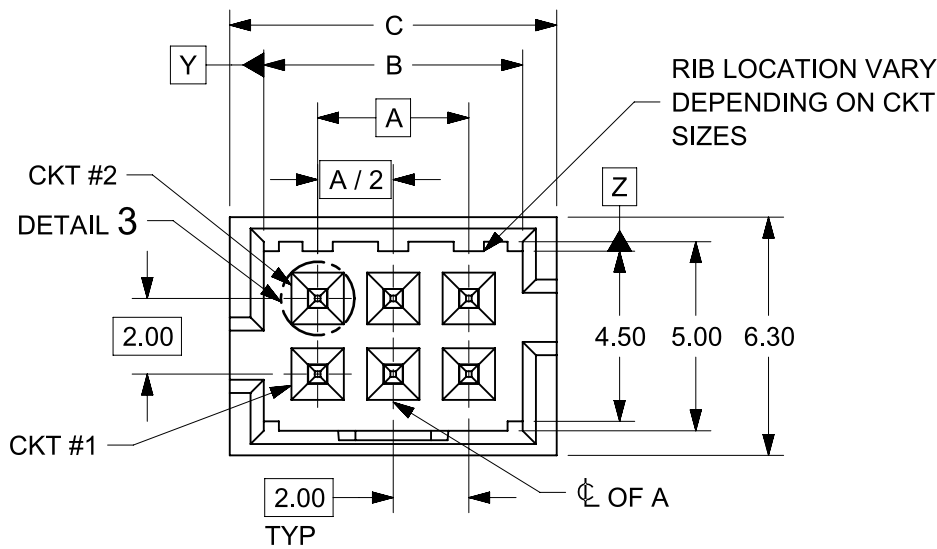
DOCUMENT STATUS

Production

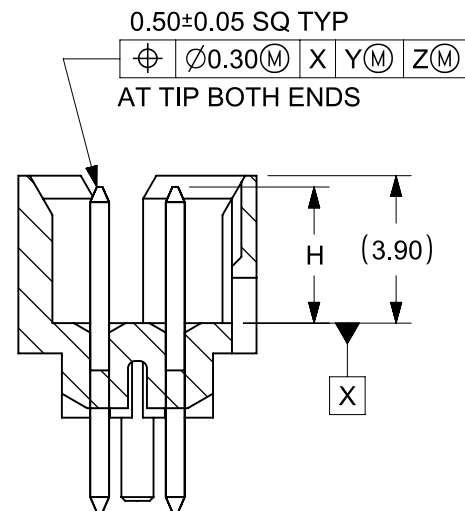
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08-Jun-202604:36:51

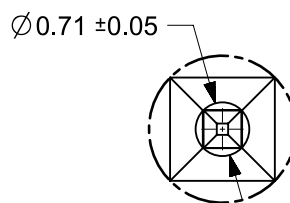
| 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |



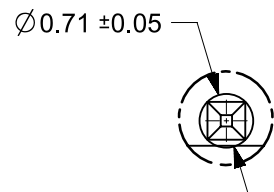
## 6 CIRCUITS



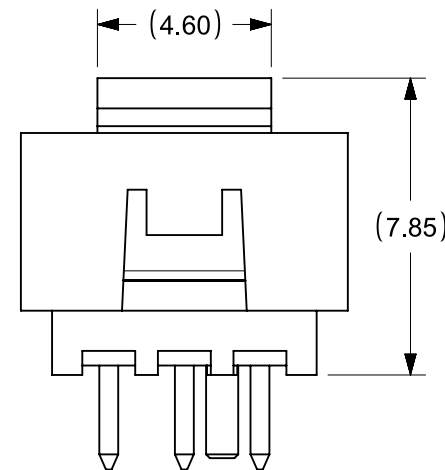
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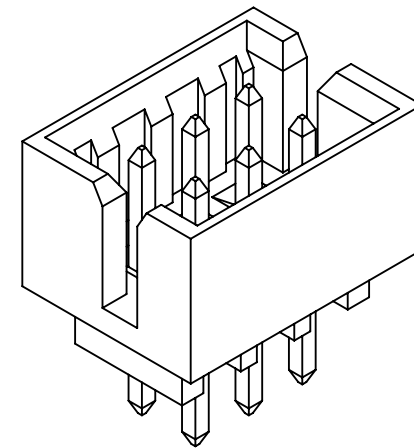
DETAIL 3



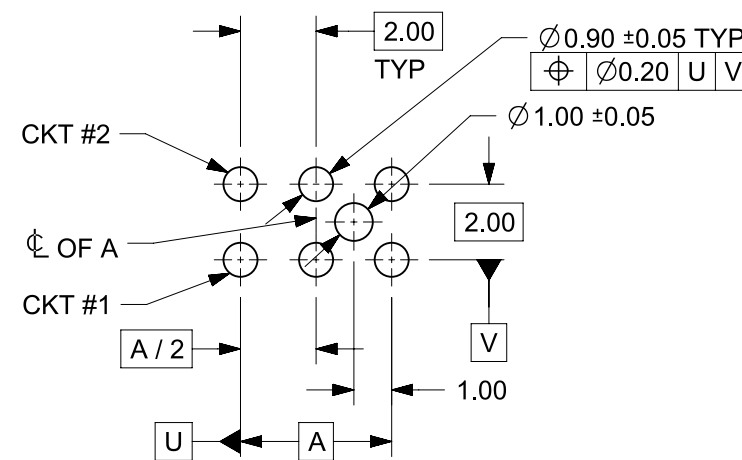
DETAIL 4



VIEW FOR  
HEADER WITH CAP



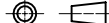
VIEW FOR HEADER WITH  
ONLY DUAL SLOTS



RECOMMENDED PCB LAYOUT

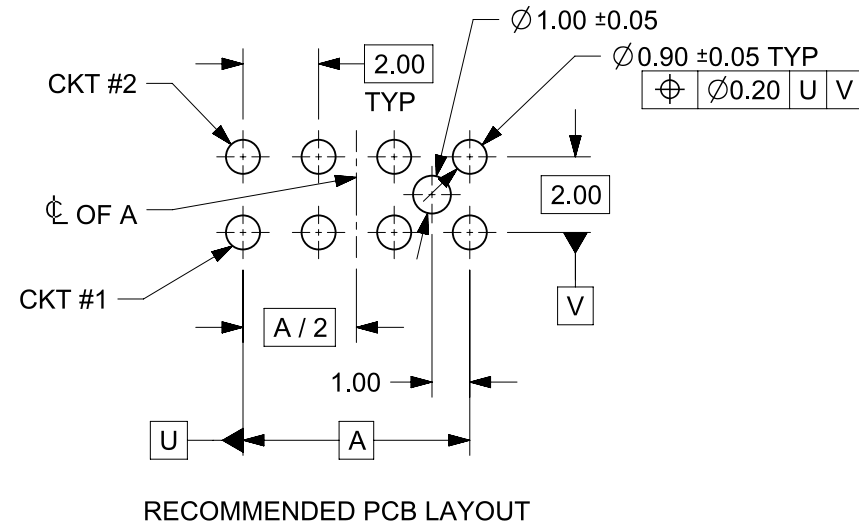
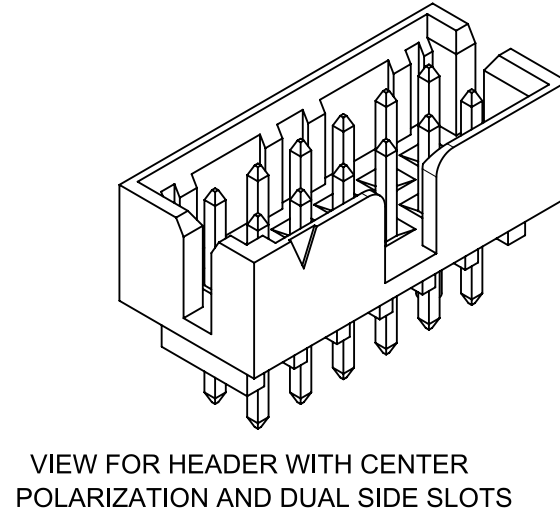
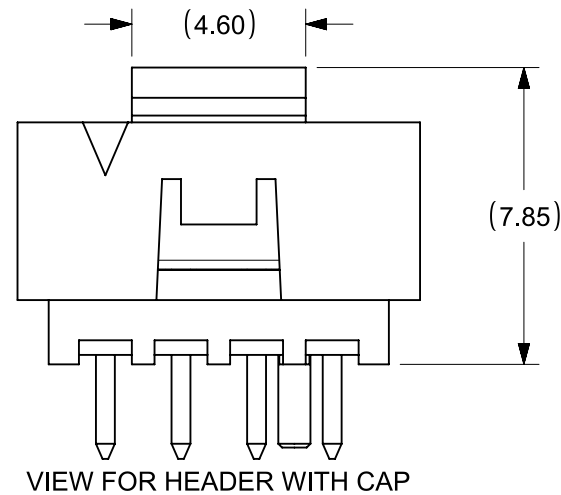
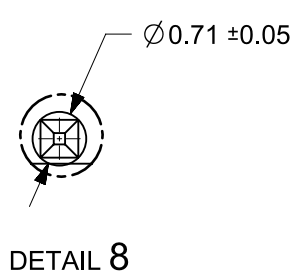
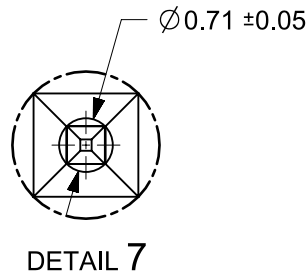
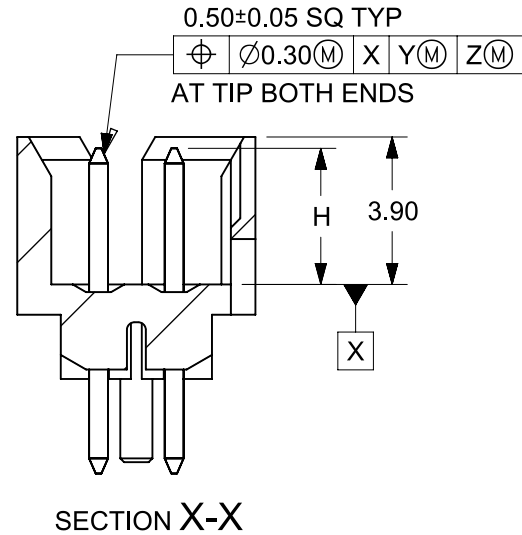
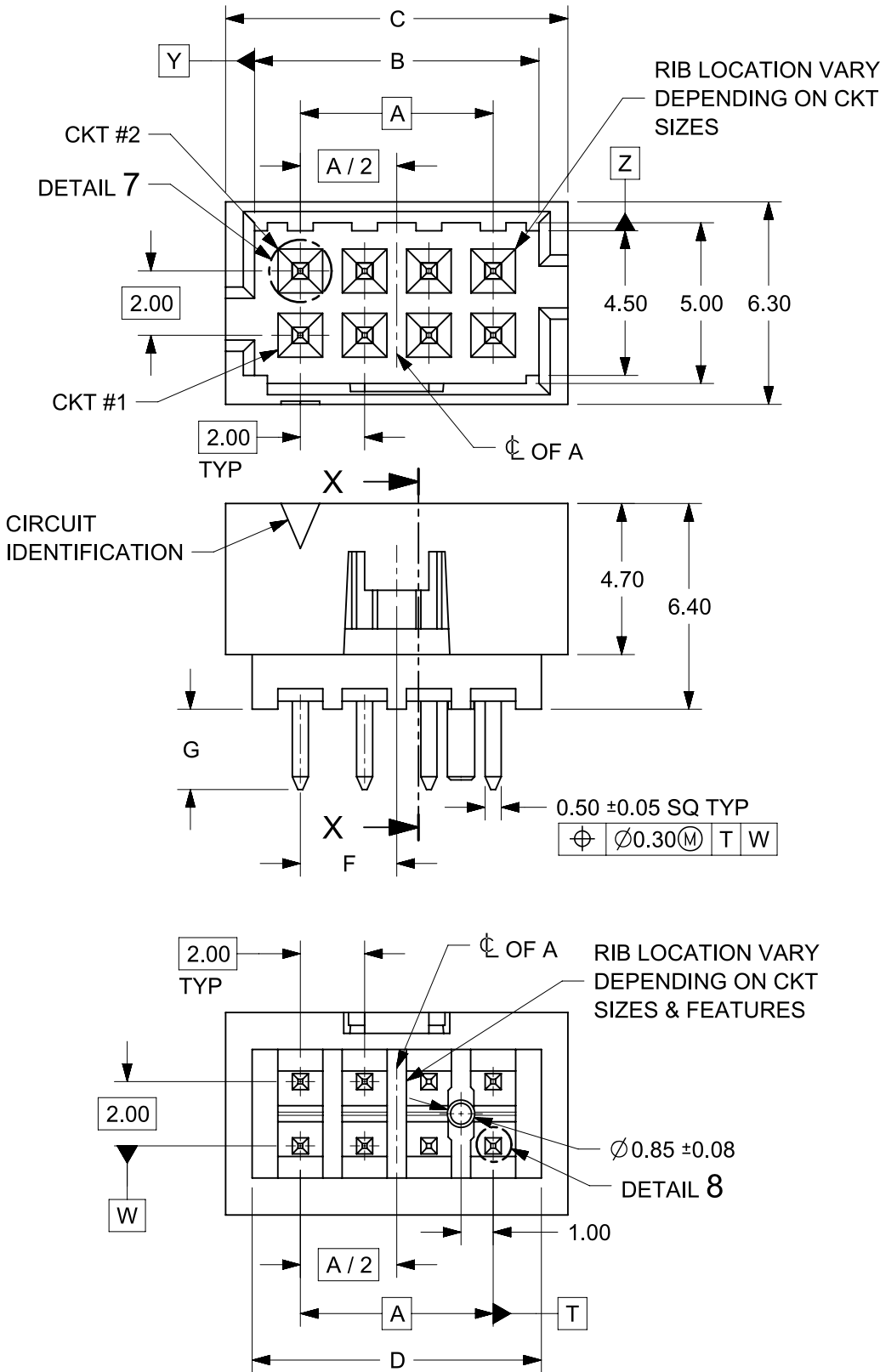
### NOTES:

- 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)

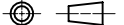
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |       |                                                                                       |  |                                                                                                                                                                                                                               |        |                 |                |                                                  |          |          |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------|----------------|--------------------------------------------------|----------|----------|----------|
| DIMENSION UNITS                                                                                                                               |       | SCALE                                                                                 |  | CURRENT REV DESC: Adding New Part Numbers                                                                                                                                                                                     |        |                 |                | <div>molex</div>                                 |          |          |          |
| mm                                                                                                                                            |       | NTS                                                                                   |  |                                                                                                                                                                                                                               |        |                 |                |                                                  |          |          |          |
| GENERAL TOLERANCES (UNLESS SPECIFIED)                                                                                                         |       |                                                                                       |  | EC NO: CO-000042098<br>DRWN: Meghraj Boodagatti 22-Apr-2026<br>CHK'D: Meghraj Boodagatti 08-Jun-2026<br>APPR: Saravanakumar Murugesan 08-Jun-2026<br>INITIAL REVISION:<br>DRWN: GMENARLY 2015/04/15<br>APPR: KHLIM 2015/06/29 |        |                 |                | MILLIGRID                                        |          |          |          |
|                                                                                                                                               | MM    | INCH                                                                                  |  |                                                                                                                                                                                                                               |        |                 |                | 2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER |          |          |          |
| 4 PLACES                                                                                                                                      | ± 0   | ± 0                                                                                   |  |                                                                                                                                                                                                                               |        |                 |                |                                                  |          |          |          |
| 3 PLACES                                                                                                                                      | ± 0   | ± 0                                                                                   |  |                                                                                                                                                                                                                               |        |                 |                |                                                  |          |          |          |
| 2 PLACES                                                                                                                                      | ± 0.2 | ± 0                                                                                   |  |                                                                                                                                                                                                                               |        |                 |                |                                                  |          |          |          |
| 1 PLACE                                                                                                                                       | ± 0   | ± 0                                                                                   |  |                                                                                                                                                                                                                               |        |                 |                |                                                  |          |          |          |
| 0 PLACES                                                                                                                                      | ± 0   | ± 0                                                                                   |  | PRODUCT CUSTOMER DRAWING                                                                                                                                                                                                      |        |                 |                | DOCUMENT NUMBER                                  | DOC TYPE | DOC PART | REVISION |
| ANGULAR TOL                                                                                                                                   |       | ± 3 °                                                                                 |  |                                                                                                                                                                                                                               |        |                 |                | SD-87831-0001                                    | PSD      | 001      | A25      |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                    |       | THIRD ANGLE PROJECTION                                                                |  | DRAWING                                                                                                                                                                                                                       | SERIES | MATERIAL NUMBER | CUSTOMER       | SHEET NUMBER                                     |          |          |          |
|                                                                                                                                               |       |  |  | A3-SIZE                                                                                                                                                                                                                       | 87831  | SEE TABLE       | GENERAL MARKET | 4 OF 14                                          |          |          |          |

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

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)

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|-----------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|--|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--|
| DIMENSION UNITS                                                                                                                               |       | SCALE |  | CURRENT REV DESC: Adding New Part Numbers                                                                                                         |                    |                 |                              | <div>molex</div> <div>MILLIGRID<br/>2MM PITCH, THROUGH HOLE VERTICAL SHROUDED<br/>HEADER</div> <div>PRODUCT CUSTOMER DRAWING</div> |  |
| mm                                                                                                                                            |       | NTS   |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                                                                                                      |       |       |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
|                                                                                                                                               | MM    | INCH  |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
| 4 PLACES                                                                                                                                      | ± 0   | ± 0   |  | EC NO: CO-000042098<br>DRWN: Meghraj Boodagatti 22-Apr-2026<br>CHK'D: Meghraj Boodagatti 08-Jun-2026<br>APPR: Saravanakumar Murugesan 08-Jun-2026 |                    |                 |                              | DOCUMENT NUMBER<br>SD-87831-0001<br>DOC TYPE<br>PSD<br>DOC PART<br>001<br>REVISION<br>A25                                          |  |
| 3 PLACES                                                                                                                                      | ± 0   | ± 0   |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
| 2 PLACES                                                                                                                                      | ± 0.2 | ± 0   |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
| 1 PLACE                                                                                                                                       | ± 0   | ± 0   |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
| 0 PLACES                                                                                                                                      | ± 0   | ± 0   |  | INITIAL REVISION:<br>DRWN: GMENARLY 2015/04/15<br>APPR: KHLIM 2015/06/29                                                                          |                    |                 |                              | SHEET NUMBER<br>6 OF 14                                                                                                            |  |
| ANGULAR TOL ± 3°                                                                                                                              |       |       |  |                                                                                                                                                   |                    |                 |                              |                                                                                                                                    |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                    |       |       |  | THIRD ANGLE PROJECTION<br>                                   | DRAWING<br>A3-SIZE | SERIES<br>87831 | MATERIAL NUMBER<br>SEE TABLE | CUSTOMER<br>GENERAL MARKET                                                                                                         |  |

|             |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|-------------|------------------------------------|---------------------------------|--------------------------------|--------------------|----------------|--------|------------|--------|------------------------|-----|-----------|------|-------|------|-----|-----|------|-----------|-----|-----|------|-----|------|------|
| 10          | 9                                  | 8                               | 7                              | 6                  | 5              | 4      | 3          | 2      | 1                      |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
| 8 CIRCUITS  |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
| CKT<br>SIZE | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>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 | YES  |           | N.A | YES | N.A  | N.A | 2.50 |      |
|             | 87831-0829                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-0841                         | N.A                             | 87831-5551                     | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-0842                         | N.A                             | N.A                            | 3                  | N.A            | YES    | YES        | N.A    | N.A                    | YES |           |      |       |      |     | N.A | N.A  |           | YES | N.A | 3.00 |     |      | 2.50 |
|             | 87831-5841                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-5441                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-5442                         | N.A                             | N.A                            | 3                  | N.A            | YES    | YES        | N.A    | N.A                    | N.A |           |      |       |      |     | N.A | YES  |           | N.A | N.A |      | YES | N.A  |      |
|             | 87831-5541                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-5542                         | N.A                             | N.A                            | 3                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-5741                         | N.A                             | N.A                            | 2                  | N.A            | YES    | YES        | N.A    | N.A                    | N.A |           |      |       |      |     | N.A | YES  |           | N.A | N.A | YES  | N.A | N.A  | 2.80 |
|             | 87831-0832                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-0843                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
|             | 87831-0844                         | N.A                             | N.A                            | 3                  | N.A            | YES    | N.A        | YES    | N.A                    | N.A |           |      |       |      |     | N.A | YES  |           | N.A | N.A | YES  | N.A | N.A  | 2.50 |
|             | 87831-0845                         | N.A                             | N.A                            | 2                  |                |        |            |        |                        |     |           |      |       |      |     |     |      |           |     |     |      |     |      |      |
| 87831-0846  | N.A                                | N.A                             | 3                              | N.A                |                |        |            |        |                        |     | YES       | N.A  | YES   | N.A  | N.A |     |      | N.A       |     |     |      |     |      |      |

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 |       |       |      |                                           |  |         |        |                                                                                                |  |                |  |              |          |          |
| DIMENSION UNITS                                                                                                                               |       | SCALE |      | CURRENT REV DESC: Adding New Part Numbers |  |         |        | <div>moLEX</div> <div>MILLIGRID<br/>2MM PITCH, THROUGH HOLE VERTICAL SHROUDED<br/>HEADER</div> |  |                |  |              |          |          |
| mm                                                                                                                                            |       | NTS   |      |                                           |  |         |        |                                                                                                |  |                |  |              |          |          |
| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                                                                                                      |       |       |      | PRODUCT CUSTOMER DRAWING                  |  |         |        |                                                                                                |  |                |  |              |          |          |
|                                                                                                                                               |       | MM    | INCH | EC NO: CO-000042098                       |  |         |        | DOCUMENT NUMBER                                                                                |  |                |  | DOC TYPE     | DOC PART | REVISION |
| 4 PLACES                                                                                                                                      | ± 0   | ± 0   | ± 0  | DRWN: Meghraj Boodagatti 22-Apr-2026      |  |         |        | SD-87831-0001                                                                                  |  |                |  | PSD          | 001      | A25      |
| 3 PLACES                                                                                                                                      | ± 0   | ± 0   | ± 0  | CHK'D: Meghraj Boodagatti 08-Jun-2026     |  |         |        |                                                                                                |  |                |  |              |          |          |
| 2 PLACES                                                                                                                                      | ± 0.2 | ± 0   | ± 0  | APPR: Saravanakumar Murugesan 08-Jun-2026 |  |         |        |                                                                                                |  |                |  |              |          |          |
| 1 PLACE                                                                                                                                       | ± 0   | ± 0   | ± 0  | INITIAL REVISION:                         |  |         |        |                                                                                                |  |                |  |              |          |          |
| 0 PLACES                                                                                                                                      | ± 0   | ± 0   | ± 0  | DRWN: GMENARLY 2015/04/15                 |  |         |        |                                                                                                |  |                |  |              |          |          |
| ANGULAR TOL                                                                                                                                   |       | ± 3 ° |      | APPR: KHLIM 2015/06/29                    |  |         |        |                                                                                                |  |                |  |              |          |          |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                    |       |       |      | THIRD ANGLE PROJECTION                    |  | DRAWING | SERIES | MATERIAL NUMBER                                                                                |  | CUSTOMER       |  | SHEET NUMBER |          |          |
|                                                                                                                                               |       |       |      |                                           |  | A3-SIZE | 87831  | SEE TABLE                                                                                      |  | GENERAL MARKET |  | 7 OF 14      |          |          |

DOCUMENT STATUS

Production

RELEASE DATE

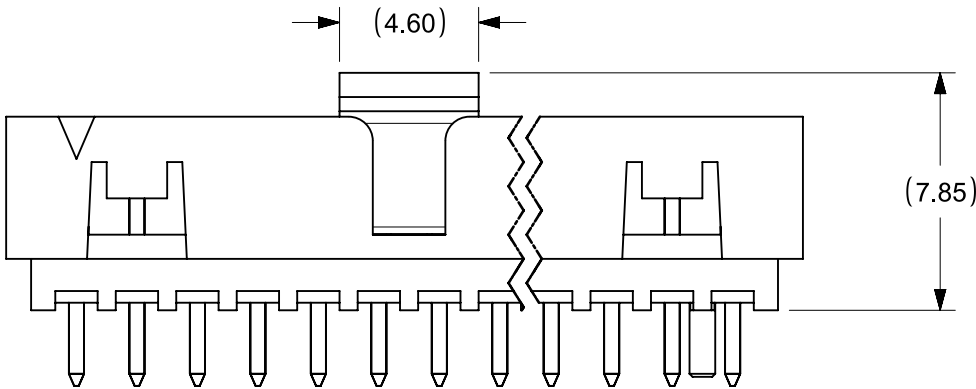
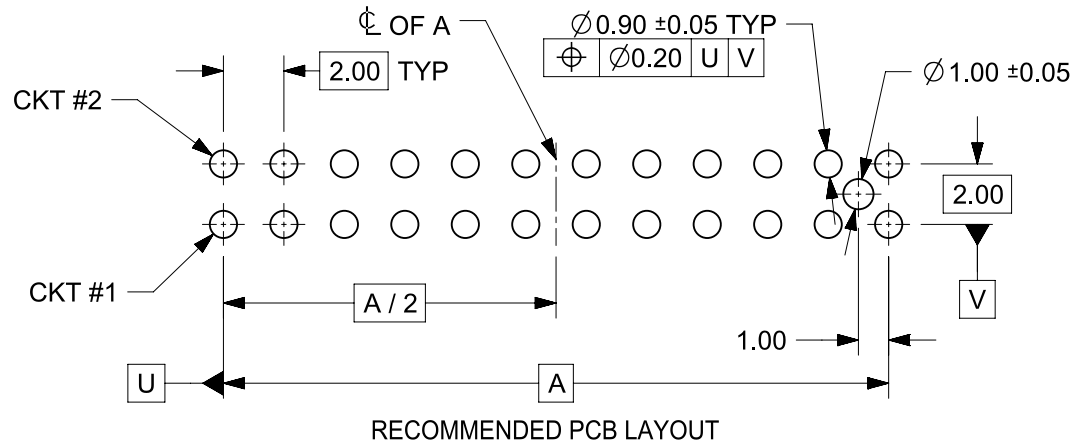
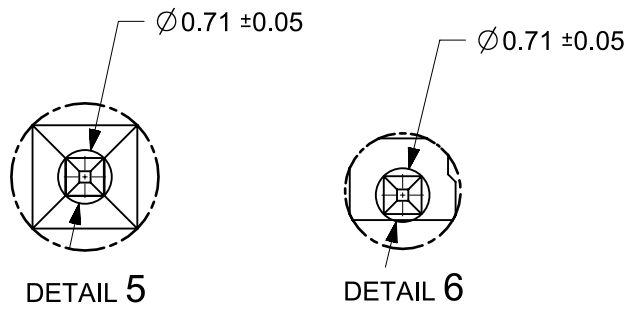
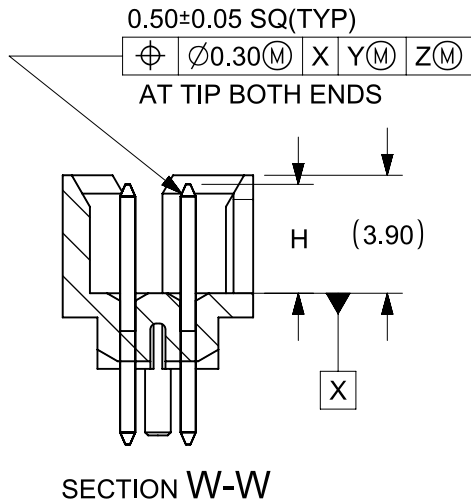
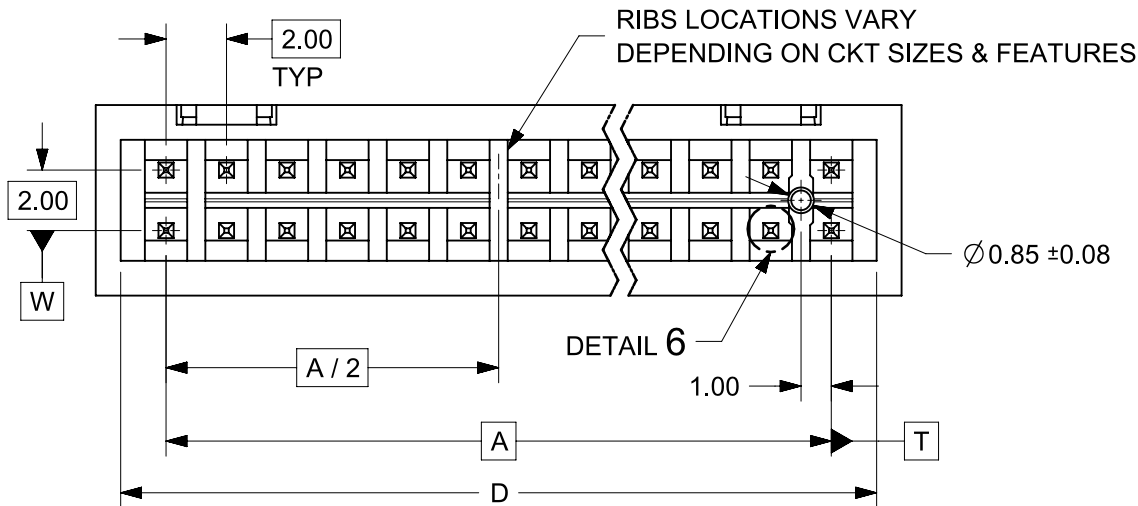
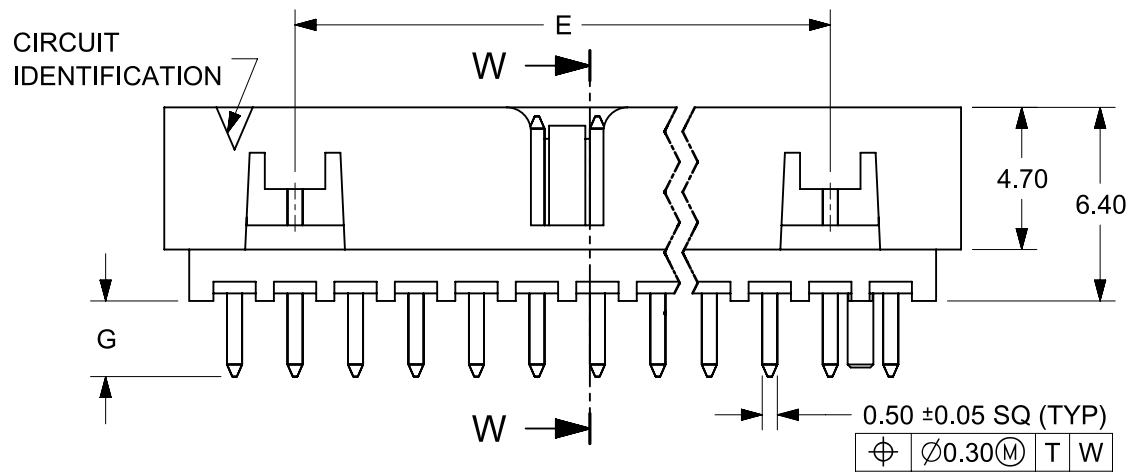
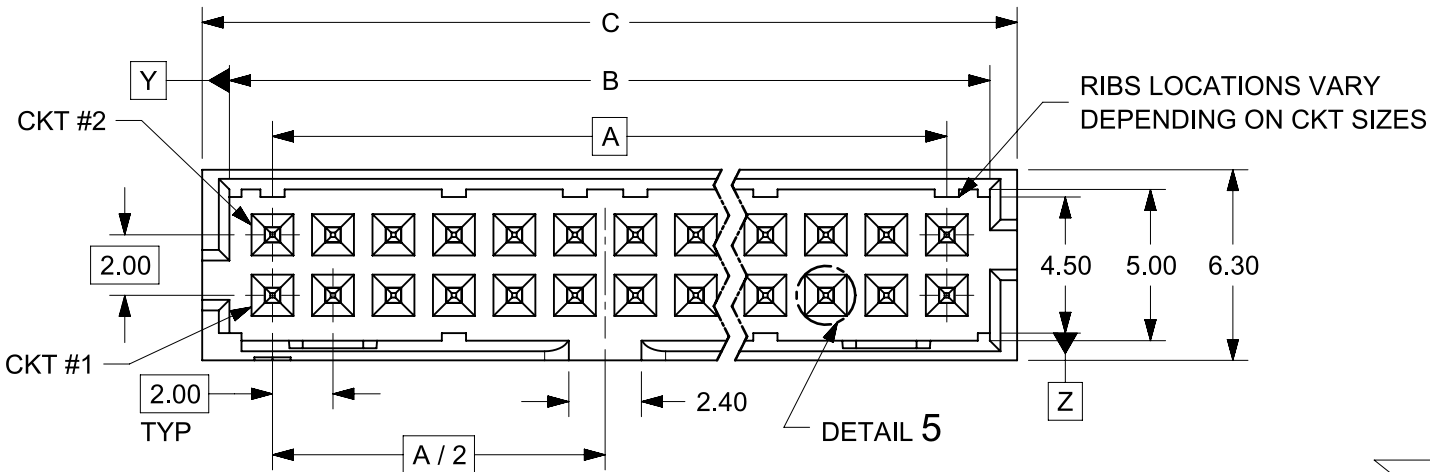
08-Jun-2026

04:36:51

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|

| 10                                                                                                                                            | 9                                  | 8                               | 7                              | 6                                                                                                                                                 | 5                  | 4              | 3      | 2                            | 1      |                |     |              |       |          |       |     |      |      |           |           |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|--------|------------------------------|--------|----------------|-----|--------------|-------|----------|-------|-----|------|------|-----------|-----------|------|
| 10 TO 12 CIRCUITS                                                                                                                             |                                    |                                 |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| CKT<br>SIZE                                                                                                                                   | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | ASSY P/N<br>WITHOUT CAP<br>IN T&R                                                                                                                 | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS                   |        | #####          | 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                             | 87831-1070                     |                                                                                                                                                   | 2                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 87831-1021                         | N.A                             | 87831-5562                     |                                                                                                                                                   | 3                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 87831-1036                         | N.A                             | N.A                            |                                                                                                                                                   | 4                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 87831-1010                         | 87831-1030                      | 87831-5561                     |                                                                                                                                                   | 2                  | N.A            | N.A    | YES                          | N.A    | YES            | N.A |              |       |          |       |     |      | 2.50 |           |           |      |
|                                                                                                                                               | 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                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 87831-1042                         | N.A                             | 87831-5553                     |                                                                                                                                                   | 3                  | N.A            | YES    | YES                          | N.A    | N.A            | N.A |              |       |          |       |     |      | 2.50 |           |           |      |
|                                                                                                                                               | 87831-1032                         | N.A                             | N.A                            |                                                                                                                                                   | 2                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 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                             | 87831-5567                     |                                                                                                                                                   | 2                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 87831-1241                         | N.A                             | N.A                            |                                                                                                                                                   | 2                  | N.A            | YES    | YES                          | N.A    | N.A            | N.A |              |       |          |       |     |      |      | 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                  |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 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<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL.  |                                    |                                 |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 2 - 0.38µm/15µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL.        |                                    |                                 |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 3 - 0.76µm/30µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>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 |                                    |                                 |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| DIMENSION UNITS                                                                                                                               |                                    | SCALE                           |                                | CURRENT REV DESC: Adding New Part Numbers                                                                                                         |                    |                |        | <div>mo</div> <div>lex</div> |        |                |     |              |       |          |       |     |      |      |           |           |      |
| mm                                                                                                                                            |                                    | NTS                             |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| GENERAL TOLERANCES (UNLESS SPECIFIED)                                                                                                         |                                    |                                 |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               |                                    |                                 |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 4 PLACES                                                                                                                                      |                                    | ± 0 ± 0                         |                                | EC NO: CO-000042098<br>DRWN: Meghraj Boodagatti 22-Apr-2026<br>CHK'D: Meghraj Boodagatti 08-Jun-2026<br>APPR: Saravanakumar Murugesan 08-Jun-2026 |                    |                |        | PRODUCT CUSTOMER DRAWING     |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 3 PLACES                                                                                                                                      |                                    | ± 0 ± 0                         |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 2 PLACES                                                                                                                                      |                                    | ± 0.2 ± 0                       |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 1 PLACE                                                                                                                                       |                                    | ± 0 ± 0                         |                                |                                                                                                                                                   |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
| 0 PLACES                                                                                                                                      |                                    | ± 0 ± 0                         |                                | INITIAL REVISION:                                                                                                                                 |                    |                |        | DOCUMENT NUMBER              |        | DOC TYPE       |     | DOC PART     |       | REVISION |       |     |      |      |           |           |      |
| ANGULAR TOL                                                                                                                                   |                                    | ± 3 °                           |                                | DRWN: GMENARLY 2015/04/15<br>APPR: KHLIM 2015/06/29                                                                                               |                    |                |        | SD-87831-0001                |        | PSD            |     | 001          |       | A25      |       |     |      |      |           |           |      |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                    |                                    | THIRD ANGLE PROJECTION          |                                | DRAWING                                                                                                                                           |                    | SERIES         |        | MATERIAL NUMBER              |        | CUSTOMER       |     | SHEET NUMBER |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               |                                    |                                 |                                | A3-SIZE                                                                                                                                           |                    | 87831          |        | SEE TABLE                    |        | GENERAL MARKET |     | 8 OF 14      |       |          |       |     |      |      |           |           |      |
| DOCUMENT STATUS                                                                                                                               | Production                         | RELEASE DATE                    | 08-Jun-2026                    | 04:36:51                                                                                                                                          |                    |                |        |                              |        |                |     |              |       |          |       |     |      |      |           |           |      |
|                                                                                                                                               | 9                                  | 8                               | 7                              | 6                                                                                                                                                 | 5                  | 4              | 3      | 2                            | 1      |                |     |              |       |          |       |     |      |      |           |           |      |

14 TO 50 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)

| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  | CURRENT REV DESC: Adding New Part Numbers |  | molex                                                            |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------|--|------------------------------------------------------------------|--|--|--|
| DIMENSION UNITS                                                                                                                               |  | SCALE                                     |  | MILLIGRID<br>2MM PITCH, THROUGH HOLE VERTICAL SHROUDED<br>HEADER |  |  |  |
| mm                                                                                                                                            |  | NTS                                       |  | PRODUCT CUSTOMER DRAWING                                         |  |  |  |
| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                                                                                                      |  | MM                                        |  | DOCUMENT NUMBER                                                  |  |  |  |
|                                                                                                                                               |  | INCH                                      |  | SD-87831-0001                                                    |  |  |  |
| 4 PLACES                                                                                                                                      |  | ± 0                                       |  | PSD                                                              |  |  |  |
| 3 PLACES                                                                                                                                      |  | ± 0                                       |  | 001                                                              |  |  |  |
| 2 PLACES                                                                                                                                      |  | ± 0.2                                     |  | A25                                                              |  |  |  |
| 1 PLACE                                                                                                                                       |  | ± 0                                       |  |                                                                  |  |  |  |
| 0 PLACES                                                                                                                                      |  | ± 0                                       |  |                                                                  |  |  |  |
| ANGULAR TOL                                                                                                                                   |  | ± 3°                                      |  |                                                                  |  |  |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                    |  | THIRD ANGLE PROJECTION                    |  | SHEET NUMBER                                                     |  |  |  |
|                                                                                                                                               |  | A3-SIZE                                   |  | 9 OF 14                                                          |  |  |  |
|                                                                                                                                               |  | SERIES                                    |  |                                                                  |  |  |  |
|                                                                                                                                               |  | 87831                                     |  |                                                                  |  |  |  |
|                                                                                                                                               |  | MATERIAL NUMBER                           |  |                                                                  |  |  |  |
|                                                                                                                                               |  | SEE TABLE                                 |  |                                                                  |  |  |  |
|                                                                                                                                               |  | CUSTOMER                                  |  |                                                                  |  |  |  |
|                                                                                                                                               |  | GENERAL MARKET                            |  |                                                                  |  |  |  |



|                                                                                                                                              |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------|-----------------------------------|--------------------|----------------|----------|------------|--------|------------------------|-----|-----------|-------|-------|-------|-------|-----|------|-----------|-----|
| 10                                                                                                                                           |                                    | 9                               |                                | 8                                 |                    | 7              |          | 6          |        | 5                      |     | 4         |       | 3     |       | 2     |     | 1    |           |     |
| 22 TO 30 CIRCUITS                                                                                                                            |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
| CKT<br>SIZE                                                                                                                                  | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | ASSY P/N<br>WITHOUT CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |          | SIDE SLOTS |        | CENTER<br>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  |           | N.A |
| 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 |
| 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                  |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
|                                                                                                                                              | 87831-3010                         | 87831-3030                      | 87831-3050                     | N.A                               | 2                  |                |          |            |        |                        |     |           |       |       |       |       |     | YES  |           | N.A |
| PLATING OPTIONS:                                                                                                                             |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
| 1 - 0.05-0.13µm/2-5µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL. |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
| 2 - 0.38µm/15µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL.       |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
| 3 - 0.76µm/30µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL.       |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
| 4 - 2.50µm/100µin MIN. MATTE TIN OVER 1.25µm/50µin MIN. NICKEL OVERALL.                                                                      |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |
| DOCUMENT STATUS                                                                                                                              |                                    | Production                      | RELEASE DATE                   |                                   | 08-Jun-2026        |                | 04:36:51 |            |        |                        |     |           |       |       |       |       |     |      |           |     |
|                                                                                                                                              |                                    | 9                               |                                | 8                                 |                    | 7              |          | 6          |        | 5                      |     | 4         |       | 3     |       | 2     |     | 1    |           |     |
| FORMAT: Molex-kgis-master-db-prod-A3<br>REVISION: E1<br>DATE: 2021/05/01                                                                     |                                    |                                 |                                |                                   |                    |                |          |            |        |                        |     |           |       |       |       |       |     |      |           |     |

|                                                                                                                                        |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |  |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------|--------------------|----------------|--------|------------|--------|------------------------|-----|-----------|-------|-------|-------|-------|-----|------|-----------|--|
| 10                                                                                                                                     | 9                                  | 8                               | 7                              | 6                  | 5              | 4      | 3          | 2      | 1                      |     |           |       |       |       |       |     |      |           |  |
| 32 TO 40 CIRCUITS                                                                                                                      |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |  |
| CKT<br>SIZE                                                                                                                            | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>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.                                                                |                                    |                                 |                                |                    |                |        |            |        |                        |     |           |       |       |       |       |     |      |           |  |
| DOCUMENT STATUS                                                                                                                        |                                    | Production                      | RELEASE DATE                   | 08-Jun-2026        | 04:36:51       |        |            |        |                        |     |           |       |       |       |       |     |      |           |  |
| FORMAT: Molex-aga-master-ib-prod-A3<br>REVISION: E1<br>DATE: 2021/05/01                                                                |                                    | 9                               | 8                              | 7                  | 6              | 5      | 4          | 3      | 2                      | 1   |           |       |       |       |       |     |      |           |  |

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

DIMENSION UNITS

mm

SCALE

NTS

GENERAL TOLERANCES  
(UNLESS SPECIFIED)

|          |       |      |
|----------|-------|------|
|          | MM    | INCH |
| 4 PLACES | ± 0   | ± 0  |
| 3 PLACES | ± 0   | ± 0  |
| 2 PLACES | ± 0.2 | ± 0  |
| 1 PLACE  | ± 0   | ± 0  |
| 0 PLACES | ± 0   | ± 0  |

ANGULAR TOL

± 3 °

DRAFT WHERE APPLICABLE  
MUST REMAIN  
WITHIN DIMENSIONS

CURRENT REV DESC: Adding New Part Numbers

EC NO: CO-000042098

DRWN: Meghraj Boodagatti

CHK'D: Meghraj Boodagatti

APPR: Saravanakumar Murugesan

22-Apr-2026

08-Jun-2026

08-Jun-2026

INITIAL REVISION:

DRWN: GMENARLY

APPR: KHLIM

2015/04/15

2015/06/29

THIRD ANGLE PROJECTION

DRAWING

A3-SIZE

SERIES

87831

DOCUMENT NUMBER

SD-87831-0001

DOC TYPE

PSD

DOC PART

001

REVISION

A25

PRODUCT CUSTOMER DRAWING

MATERIAL NUMBER

SEE TABLE

CUSTOMER

GENERAL MARKET

SHEET NUMBER

12 OF 14

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

DIMENSION UNITS

mm

SCALE

NTS

GENERAL TOLERANCES (UNLESS SPECIFIED)

|             | MM    | INCH |
|-------------|-------|------|
| 4 PLACES    | ± 0   | ± 0  |
| 3 PLACES    | ± 0   | ± 0  |
| 2 PLACES    | ± 0.2 | ± 0  |
| 1 PLACE     | ± 0   | ± 0  |
| 0 PLACES    | ± 0   | ± 0  |
| ANGULAR TOL | ± 3 ° |      |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

THIRD ANGLE PROJECTION

CURRENT REV DESC: Adding New Part Numbers

EC NO: CO-000042098

DRWN: Meghraj Boodagatti

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APPR: Saravanakumar Murugesan

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PRODUCT CUSTOMER DRAWING

MATERIAL NUMBER

SEE TABLE

CUSTOMER

GENERAL MARKET

SHEET NUMBER

12 OF 14

molex

MILLIGRID

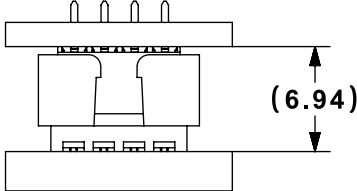
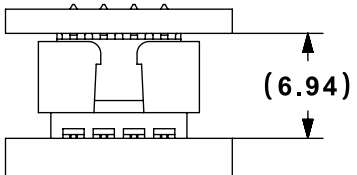
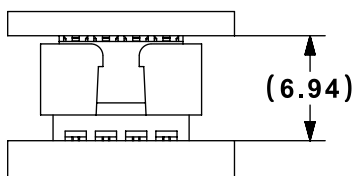
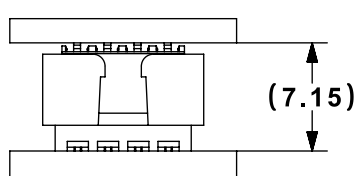
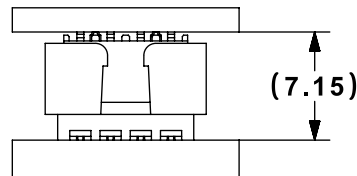
2MM PITCH, THROUGH HOLE VERTICAL SHROUDED HEADER

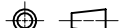
A3-SIZE

87831

|                                                                                                                                              |                                    |                                 |                                |                                   |                    |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------|-----------------------------------|--------------------|----------------|--------|------------|--------|----------------------------|-----|-----------|-------|-------|-------|-------|-----|------|-----------|
| 10                                                                                                                                           |                                    | 9                               |                                | 8                                 |                    | 7              |        | 6          |        | 5                          |     | 4         |       | 3     |       | 2     |     | 1    |           |
| 42 TO 50 CIRCUITS                                                                                                                            |                                    |                                 |                                |                                   |                    |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
| CKT<br>SIZE                                                                                                                                  | ASSY P/N<br>WITHOUT CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN TUBE | ASSY P/N<br>WITH CAP<br>IN T&R | ASSY P/N<br>WITHOUT CAP<br>IN T&R | PLATING<br>OPTIONS | FRICTION LOCKS |        | SIDE SLOTS |        | CENTER<br>POLARIZATI<br>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<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL. |                                    |                                 |                                |                                   |                    |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
| 2 - 0.38µm/15µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL.       |                                    |                                 |                                |                                   |                    |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
| 3 - 0.76µm/30µin GOLD IN CONTACT AREA AND<br>1.88µm/75µin MIN. MATTE TIN IN SOLDER TAIL AREA OVER<br>1.27µm/50µin MIN. NICKEL OVERALL.       |                                    |                                 |                                |                                   |                    |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
| 4 - 2.50µm/100µin MIN. MATTE TIN OVER 1.25µm/50µin MIN. NICKEL OVERALL.                                                                      |                                    |                                 |                                |                                   |                    |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
| DOCUMENT STATUS                                                                                                                              |                                    | Production                      | RELEASE DATE                   | 08-Jun-2026                       | 04:36:51           |                |        |            |        |                            |     |           |       |       |       |       |     |      |           |
| FORMAT: Msl-Ipqa-master-4b-prod-A3<br>REVISION: E1<br>DATE: 20210501                                                                         |                                    | 9                               |                                | 8                                 |                    | 7              |        | 6          |        | 5                          |     | 4         |       | 3     |       | 2     |     | 1    |           |

### BOARD TO BOARD (BTB) DISTANCE

| HEADER | MATES WITH<br>(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 |      | CURRENT REV DESC: Adding New Part Numbers                                                                                                         |                                                                           |         |  | <div>molex</div> |                 |                 |          |                |          |              |  |
| mm                                                                                                                                            |   | NTS   |      |                                                                                                                                                   |                                                                           |         |  |                  |                 |                 |          |                |          |              |  |
| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                                                                                                      |   |       |      | MILLIGRID<br>2MM PITCH, THROUGH HOLE VERTICAL SHROUDED<br>HEADER                                                                                  |                                                                           |         |  |                  |                 |                 |          |                |          |              |  |
|                                                                                                                                               |   |       |      |                                                                                                                                                   |                                                                           |         |  |                  |                 |                 |          |                |          |              |  |
|                                                                                                                                               |   | MM    | INCH | EC NO: CO-000042098<br>DRWN: Meghraj Boodagatti 22-Apr-2026<br>CHK'D: Meghraj Boodagatti 08-Jun-2026<br>APPR: Saravanakumar Murugesan 08-Jun-2026 |                                                                           |         |  |                  |                 |                 |          |                |          |              |  |
| 4 PLACES                                                                                                                                      | ± | 0     | ±    |                                                                                                                                                   |                                                                           |         |  |                  |                 |                 |          |                | 0        |              |  |
| 3 PLACES                                                                                                                                      | ± | 0     | ±    |                                                                                                                                                   |                                                                           |         |  |                  |                 |                 |          |                | 0        |              |  |
| 2 PLACES                                                                                                                                      | ± | 0.2   | ±    |                                                                                                                                                   |                                                                           |         |  |                  |                 |                 |          |                | 0        |              |  |
| 1 PLACE                                                                                                                                       | ± | 0     | ±    |                                                                                                                                                   |                                                                           |         |  |                  |                 |                 |          |                | 0        |              |  |
| 0 PLACES                                                                                                                                      | ± | 0     | ±    | 0                                                                                                                                                 | INITIAL REVISION:<br>DRWN: DRWN BY XXXX/XX/XX<br>APPR: APPR BY XXXX/XX/XX |         |  |                  | DOCUMENT NUMBER |                 | DOC TYPE |                | DOC PART | REVISION     |  |
| ANGULAR TOL ± 3 °                                                                                                                             |   |       |      | SD-87831-0001                                                                                                                                     |                                                                           |         |  |                  | PSD             |                 | 001      | A25            |          |              |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                                                                    |   |       |      | THIRD ANGLE PROJECTION                                                                                                                            |                                                                           | DRAWING |  | SERIES           |                 | MATERIAL NUMBER |          | CUSTOMER       |          | SHEET NUMBER |  |
|                                                                                                                                               |   |       |      |                                                              |                                                                           | A3-SIZE |  | 87831            |                 |                 |          | GENERAL MARKET |          | 14 OF 14     |  |