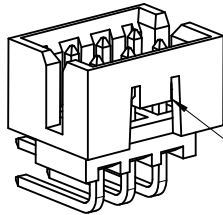
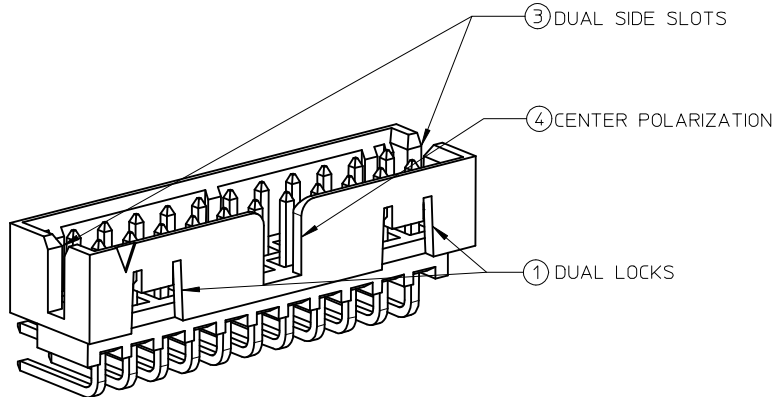


# FEATURES SELECTION GUIDE



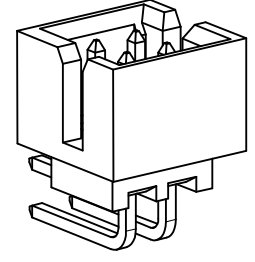
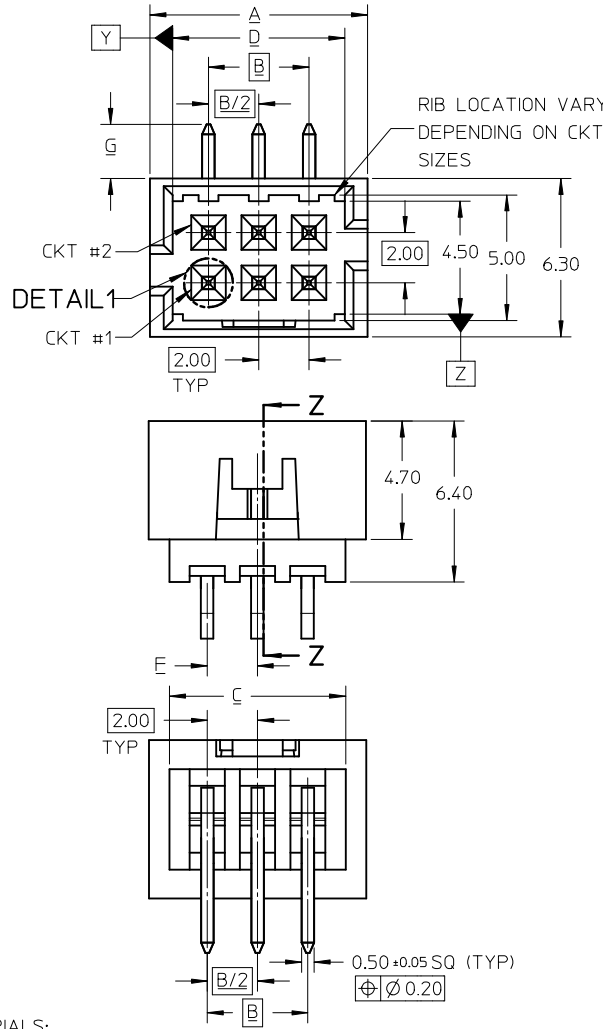
② CENTER LOCK



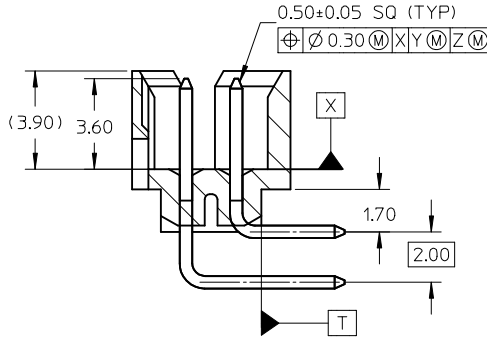
| CIRCUIT SIZE | FEATURES       |          |                   |                       |          |
|--------------|----------------|----------|-------------------|-----------------------|----------|
|              | FRICTION LOCKS |          | ③ DUAL SIDE SLOTS | ④ CENTER POLARIZATION | SHEET NO |
|              | ① DUAL         | ② CENTER |                   |                       |          |
| 4 - 6        | N.A            | N.A      | YES               | N.A                   | 2 - 3    |
|              | N.A            | YES      | YES               | N.A                   |          |
| 8 TO 12      | N.A            | N.A      | YES               | YES                   | 4 - 5    |
|              | N.A            | YES      | YES               | N.A                   |          |
| 14 TO 50     | YES            | N.A      | YES               | YES                   | 6 - 9    |
|              | N.A            | N.A      | YES               | YES                   |          |

|   |                   |  |                      |                 |               |  |                        |  |
|---|-------------------|--|----------------------|-----------------|---------------|--|------------------------|--|
| SEE SHEET 2,4,6,7<br>EC NO: S2016-0454<br>DRWG:GMENARLY 2015/11/05<br>CHK'D:CGOH 2015/11/17<br>APPR:KHL JM 2015/11/18 | QUALITY SYMBOLS   | GENERAL TOLERANCES (UNLESS SPECIFIED)                |                      | DIMENSION STYLE | SCALE         | DESIGN UNITS   | THIRD ANGLE PROJECTION |  |
|   | $F_{\Delta} = 0$  | mm   | INCH                 | MM ONLY         | NTS           | METRIC   |                        |  |
|   | $F_{\square} = 0$ | 4 PLACES ± --- ± ---                                 | 3 PLACES ± --- ± --- | DRAWN BY        | DATE          | TITLE  |                        |  |
|   | $F_{\nabla} = 0$  | 2 PLACES ± 0.20 ± ---                                | 1 PLACE ± --- ± ---  | CHECKED BY      | DATE          | MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER<br><b>molex</b> |                        |  |
|   | $F_{\circ} = 0$   | 0 PLACE ± --- ± ---                                  | ANGULAR ± 3 °        | APPROVED BY     | DATE          |  |                        |  |
| A1  | DESCRIPTION       | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                      | SEE TABLE       | SD-87833-0001 |  | 1 OF 9                 |  |

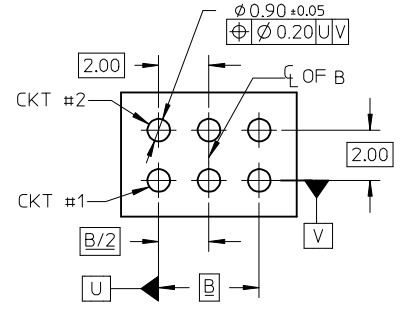
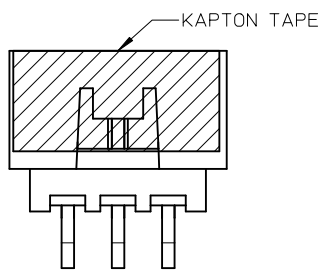
4 TO 6 CIRCUITS



ISO VIEW OF HEADER DUAL SIDE SLOTS



SECTION Z-Z



RECOMMENDED PCB LAYOUT

- NOTES:
1. MATERIALS:  
HOUSING: 30% GF, NYLON, UL94V-0. COLOR: BLACK  
PIN: 0.50MM SQ PHOSPHOR BRONZE
  2. FINISHES: REFER TO PLATING OPTIONS
  3. PRODUCT SPECIFICATION: PS-87831-027
  4. PACKAGING SPECIFICATION:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
  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)
  6. FOR ILLUSTRATION PURPOSE, 6 CIRCUITS HEADER IS SHOWN

|  |   |                                       |  |                            |   |                    |   |                        |  |  |
|--|---|---------------------------------------|--|----------------------------|---|--------------------|---|------------------------|--|--|
| ADD NOTE 6<br>IEC NO: S2016-0454<br>DRWNG: GMENARLY 2015/11/05<br>CHK'D: CGOH 2015/11/17<br>APPR: KHLIM 2015/11/18 | QUALITY SYMBOLS<br>$\nabla_F = 0$<br>$\nabla_F = 0$<br>$\nabla_F = 0$ | GENERAL TOLERANCES (UNLESS SPECIFIED) |  | DIMENSION STYLE<br>MM ONLY |   | SCALE<br>NTS       | DESIGN UNITS<br>METRIC                                      | THIRD ANGLE PROJECTION |  |  |
|  |   |                                       | mm   | INCH                       | DRAWN BY<br>GMENARLY  | DATE<br>2015/09/29 | TITLE<br>MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER |                        |  |  |
|  |   | 4 PLACES                              | ± ---  | ± ---                      | CHECKED BY<br>CGOH  | DATE<br>2015/10/30 |   |                        |  |  |
|  |   | 3 PLACES                              | ± ---  | ± ---                      | APPROVED BY<br>KHLIM  | DATE<br>2015/11/03 |   |                        |  |  |
| 2 PLACES   | ± 0.20  | ± ---                                 | MATERIAL NO.   |                            | DOCUMENT NO.  |                    | SHEET NO.   |                        |  |  |
| 1 PLACE  | ± ---   | ± ---                                 | SEE TABLE  |                            | SD-87833-0001   |                    | 2 OF 9  |                        |  |  |
| 0 PLACE  | ± ---   | ± ---                                 | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                    |   |                        |  |  |
|  | ANGULAR ± 3°  |                                       | SIZE<br>A3   |                            |   |                    |   |                        |  |  |

4 TO 6 CIRCUITS

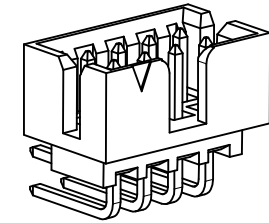
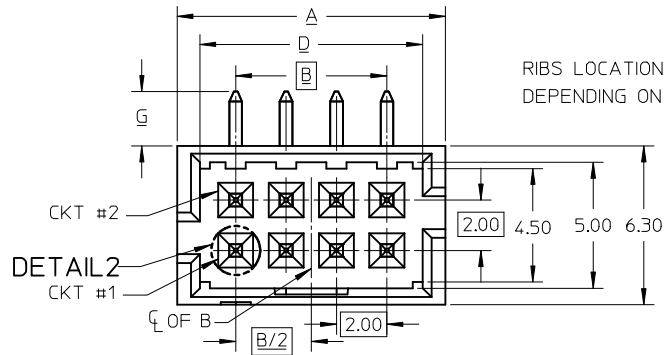
| CKT SIZE   | ASSY P/N WITHOUT KAPTON IN TUBE | ASSY P/N WITH KAPTON IN TUBE | ASSY P/N WITH KAPTON IN T&R | PLATING OPTIONS | FRICTION LOCKS |        | DUAL SIDE SLOTS | CENTER POLARIZATION | DIMENSION |      |      |      |     |      |                 |      |
|------------|---------------------------------|------------------------------|-----------------------------|-----------------|----------------|--------|-----------------|---------------------|-----------|------|------|------|-----|------|-----------------|------|
|            |                                 |                              |                             |                 | DUAL           | CENTER |                 |                     | A         | B    | C    | D    | E   | F    | G (SOLDER TAIL) |      |
| 4          | 87833-0419                      | N.A                          | N.A                         | 1               | N.A            | N.A    | YES             | N.A                 | 6.65      | 2.00 | 5.00 | 4.85 | N.A | N.A  | 2.16            |      |
|            | 87833-0420                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
|            | 87833-0421                      | N.A                          | N.A                         | 3               | N.A            | N.A    | YES             | N.A                 |           |      |      |      |     | N.A  | 1.00            | 2.16 |
|            | 87833-5920                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
|            | 87833-0431                      | 87833-0441                   | 87833-0451                  | 2               | N.A            | YES    | YES             | N.A                 |           |      |      |      |     | 1.00 | 3.18            |      |
|            | 87833-0432                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
| 87833-0461 | N.A                             | N.A                          | 2                           | N.A             | YES            | YES    | N.A             | 1.00                | 3.18      |      |      |      |     |      |                 |      |
| 6          | 87833-0619                      | N.A                          | N.A                         | 1               | N.A            | N.A    | YES             | N.A                 | 8.65      | 4.00 | 7.00 | 6.85 | N.A | N.A  | 2.16            |      |
|            | 87833-0620                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
|            | 87833-0621                      | N.A                          | N.A                         | 3               | N.A            | N.A    | YES             | N.A                 |           |      |      |      |     | N.A  | 3.18            |      |
|            | 87833-6420                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
|            | 87833-0631                      | 87833-0641                   | 87833-0651                  | 2               | N.A            | YES    | YES             | N.A                 |           |      |      |      |     | 2.00 | 2.16            |      |
|            | 87833-0632                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
|            | 87833-0661                      | N.A                          | N.A                         | 2               | N.A            | YES    | YES             | N.A                 |           |      |      |      |     | 2.00 | 3.18            |      |
|            | 87833-0624                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |      |      |      |     |      |                 |      |
| 87833-0625 | N.A                             | N.A                          | 3                           | N.A             | N.A            | YES    | N.A             | N.A                 | 2.92      |      |      |      |     |      |                 |      |

PLATING OPTIONS:

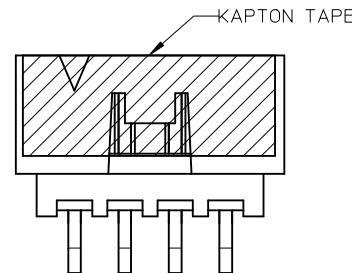
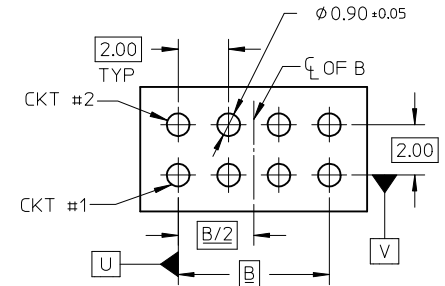
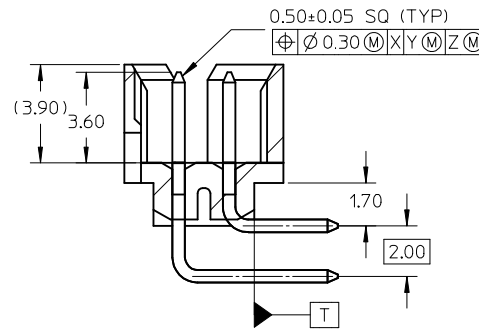
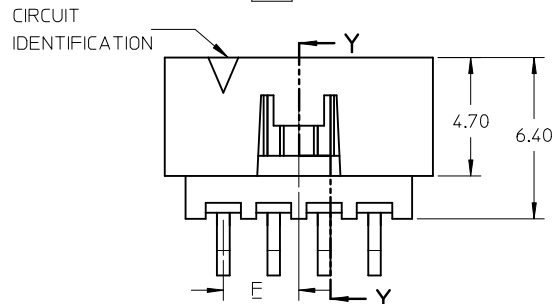
- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin MIN. GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin MIN. GOLD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

|  |  |  |             |                 |   |  |                        |
|--|--|--|-------------|-----------------|---|--|------------------------|
| SEE SHEET 2,4,6,7<br>EC NO: S2016-0454<br>DRWN:GMENARLY 2015/11/05<br>CHKD:CGOH 2015/11/17<br>APPR:KHL IM 2015/11/18 | QUALITY SYMBOLS                                    | GENERAL TOLERANCES (UNLESS SPECIFIED)                |             | DIMENSION STYLE | SCALE   | DESIGN UNITS   | THIRD ANGLE PROJECTION |
|  | $\nabla_A = 0$<br>$\nabla_C = 0$<br>$\nabla_P = 0$ | mm   | INCH        | MM ONLY         | NTS   | METRIC   |                        |
|  |  | 4 PLACES ± --- ± ---                                 |             | DRAWN BY        | DATE  | TITLE  |                        |
|  |  | 3 PLACES ± --- ± ---                                 |             | GMENARLY        | 2015/09/29  | MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER<br><b>molex</b> |                        |
|  | 2 PLACES ± 0.20 ± ---                              |  | CHECKED BY  | DATE            |   |  |                        |
|  | 1 PLACE ± --- ± ---                                |  | CGOH        | 2015/10/30      |   |  |                        |
|  | 0 PLACE ± --- ± ---                                |  | APPROVED BY | DATE            |   |  |                        |
|  |  | ANGULAR ± 3 °  |             | KHL IM          | 2015/11/03  |  |                        |
|  |  | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |             | MATERIAL NO.    | DOCUMENT NO.  | SHEET NO.  |                        |
| A1   |  |  |             | SEE TABLE       | SD-87833-0001   | 3 OF 9   |                        |
|  |  |  |             | SIZE A3         | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                        |

8 TO 12 CIRCUITS



ISO VIEW OF HEADER WITH CENTER POLARIZATION AND DUAL SIDE 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:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
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)
6. FOR ILLUSTRATION PURPOSE, 8 CIRCUIT HEADER IS SHOWN

|  |  |                                       |                       |                            |   |   |                        |                        |  |  |  |
|--|--|---------------------------------------|-----------------------|----------------------------|---|---|------------------------|------------------------|--|--|--|
| ADD NOTE 6<br>EC NO: S2016-0454<br>DRWN:GMENARLY 2015/11/05<br>CHKD:CGOH 2015/11/17<br>APPR:KHLIM 2015/11/18 | DESCRIPTION<br>QUALITY SYMBOLS<br>$\nabla_A = 0$<br>$\nabla_E = 0$<br>$\nabla_F = 0$ | GENERAL TOLERANCES (UNLESS SPECIFIED) |                       | DIMENSION STYLE<br>MM ONLY |   | SCALE<br>NTS  | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |  |  |
|  |  | mm                                    | INCH                  | DRAWN BY<br>GMENARLY       | DATE<br>2015/09/29  | TITLE<br>MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER |                        |                        |  |  |  |
|  |  | 4 PLACES                              | $\pm \text{---}$      | $\pm \text{---}$           | CHECKED BY<br>CGOH  | DATE<br>2015/10/30  |                        |                        |  |  |  |
|  |  | 3 PLACES                              | $\pm \text{---}$      | $\pm \text{---}$           | APPROVED BY<br>KHLIM  | DATE<br>2015/11/03  |                        |                        |  |  |  |
| 2 PLACES   | $\pm 0.20$   | $\pm \text{---}$                      | MATERIAL NO.          |                            | DOCUMENT NO.  |   | SHEET NO.              |                        |  |  |  |
| 1 PLACE  | $\pm \text{---}$   | $\pm \text{---}$                      | SEE TABLE             |                            | SD-87833-0001   |   | 4 OF 9                 |                        |  |  |  |
| 0 PLACE  | $\pm \text{---}$   | $\pm \text{---}$                      | ANGULAR $\pm 3^\circ$ |                            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |   |                        |                        |  |  |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS   |  | SIZE<br>A3                            |                       |                            |   |   |                        |                        |  |  |  |

8 TO 12 CIRCUITS

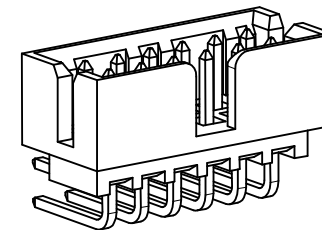
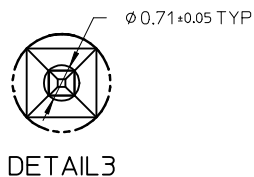
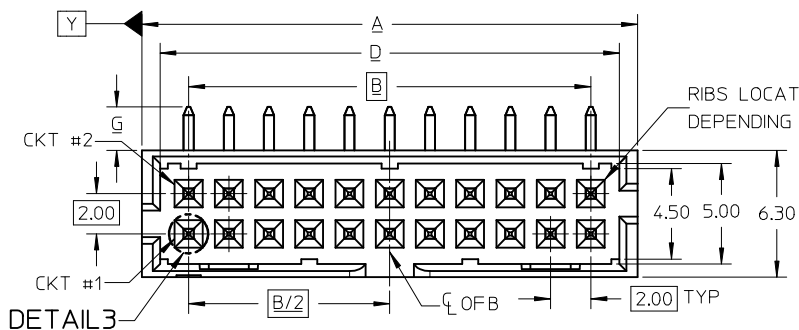
| CKT SIZE   | ASSY P/N WITHOUT KAPTON IN TUBE | ASSY P/N WITH KAPTON IN TUBE | ASSY P/N WITH KAPTON IN T&R | PLATING OPTIONS | FRICTION LOCKS |        | DUAL SIDE SLOTS | CENTER POLARIZATION | DIMENSION |       |       |       |     |      |                 |      |
|------------|---------------------------------|------------------------------|-----------------------------|-----------------|----------------|--------|-----------------|---------------------|-----------|-------|-------|-------|-----|------|-----------------|------|
|            |                                 |                              |                             |                 | DUAL           | CENTER |                 |                     | A         | B     | C     | D     | E   | F    | G (SOLDER TAIL) |      |
| 8          | 87833-0819                      | N.A                          | N.A                         | 1               | N.A            | N.A    | YES             | YES                 | 10.65     | 6.00  | 9.00  | 8.85  | N.A | N.A  | 2.16            |      |
|            | 87833-0820                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-0821                      | N.A                          | N.A                         | 3               | N.A            | N.A    | YES             | YES                 |           |       |       |       |     | N.A  | 3.00            | 2.16 |
|            | 87833-6320                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-6321                      | N.A                          | N.A                         | 3               | N.A            | YES    | YES             | N.A                 |           |       |       |       |     | 3.00 | 3.18            |      |
|            | 87833-0831                      | 87833-0841                   | 87833-0851                  | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-0832                      | N.A                          | N.A                         | 3               | N.A            | YES    | YES             | N.A                 |           |       |       |       |     | N.A  | 2.92            |      |
|            | 87833-0861                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
| 87833-0824 | N.A                             | N.A                          | 2                           | N.A             | N.A            | YES    | YES             | N.A                 | 2.92      |       |       |       |     |      |                 |      |
| 87833-0825 | N.A                             | N.A                          | 3                           |                 |                |        |                 |                     |           |       |       |       |     |      |                 |      |
| 10         | 87832-1019                      | N.A                          | N.A                         | 1               | N.A            | N.A    | YES             | YES                 | 12.65     | 8.00  | 11.00 | 10.85 | N.A | N.A  | 2.16            |      |
|            | 87833-1020                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-1021                      | N.A                          | N.A                         | 3               | N.A            | YES    | YES             | N.A                 |           |       |       |       |     | 4.00 | 2.16            |      |
|            | 87833-1031                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-1032                      | N.A                          | N.A                         | 3               | N.A            | YES    | YES             | N.A                 |           |       |       |       |     | 4.00 | 1.70            |      |
|            | N.A                             | 87833-1041                   | 87833-1051                  | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
| 87833-1024 | N.A                             | N.A                          | 2                           | N.A             | N.A            | YES    | YES             | N.A                 | 2.92      |       |       |       |     |      |                 |      |
| 87833-1025 | N.A                             | N.A                          | 3                           |                 |                |        |                 |                     |           |       |       |       |     |      |                 |      |
| 12         | 87833-1219                      | N.A                          | N.A                         | 1               | N.A            | N.A    | YES             | YES                 | 14.65     | 10.00 | 13.00 | 12.85 | N.A | N.A  | 2.16            |      |
|            | 87833-1220                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-1221                      | N.A                          | N.A                         | 3               | N.A            | N.A    | YES             | YES                 |           |       |       |       |     | N.A  | 3.18            |      |
|            | 87833-6020                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-1231                      | N.A                          | N.A                         | 2               | N.A            | YES    | YES             | N.A                 |           |       |       |       |     | 5.00 | 2.16            |      |
|            | 87833-1232                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |     |      |                 |      |
|            | 87833-1224                      | N.A                          | N.A                         | 2               | N.A            | N.A    | YES             | YES                 |           |       |       |       |     | N.A  | 2.92            |      |
| 87833-1225 | N.A                             | N.A                          | 3                           |                 |                |        |                 |                     |           |       |       |       |     |      |                 |      |

PLATING OPTIONS:

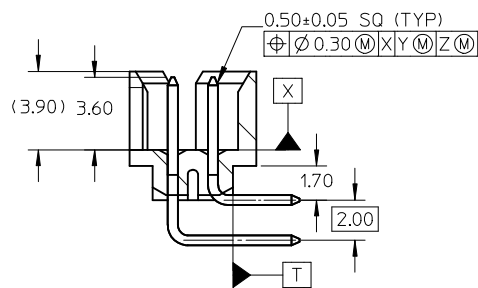
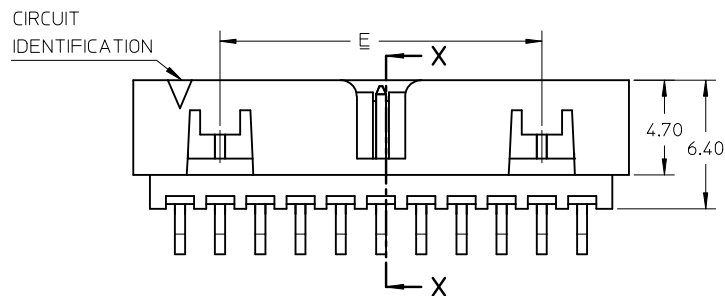
- 1 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 0.38um/15uin MIN. GOLD IN CONTACT AREA AND 1.88um/75uin MIN. MATTE TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 3 - 0.76um/30uin MIN. GOLD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

|  |           |             |  |   |  |   |              |  |  |  |  |
|--|-----------|-------------|--|---|--|---|--------------|--|--|--|--|
| SEE SHEET 2,4,6,7<br>EC NO: S2016-0454<br>DRWNG: GEMARLY 2015/11/05<br>CHK'D: CGOH 2015/11/17<br>APPR: KHL IM 2015/11/18 | REV<br>A1 | DESCRIPTION | QUALITY SYMBOLS  | GENERAL TOLERANCES (UNLESS SPECIFIED)   | DIMENSION STYLE  | SCALE   | DESIGN UNITS | THIRD ANGLE PROJECTION   |  |  |  |
|  |           |             | $\nabla_A = 0$<br>$\nabla_C = 0$<br>$\nabla_P = 0$                       | mm    INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.20 ± ---<br>1 PLACE ± --- ± ---<br>0 PLACE ± --- ± --- | MM ONLY  | NTS   | METRIC       | DRAWN BY: GEMARLY    DATE: 2015/09/29<br>CHECKED BY: CGOH    DATE: 2015/10/30<br>APPROVED BY: KHL IM    DATE: 2015/11/03 | MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER<br><b>molex</b> |  |  |
|  |           |             | ANGULAR ± 3 °<br>DRAFT WHERE APPLICABLE<br>MUST REMAIN WITHIN DIMENSIONS | SEE TABLE   | MATERIAL NO.<br>DOCUMENT NO. SD-87833-0001<br>SHEET NO. 5 OF 9 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |              |  |  |  |  |
|  |           |             |  |   |  |   |              |  |  |  |  |

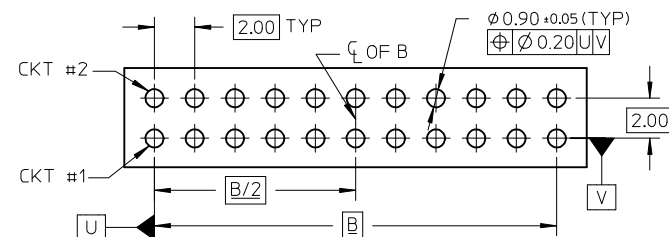
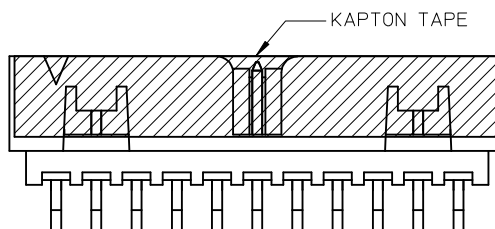
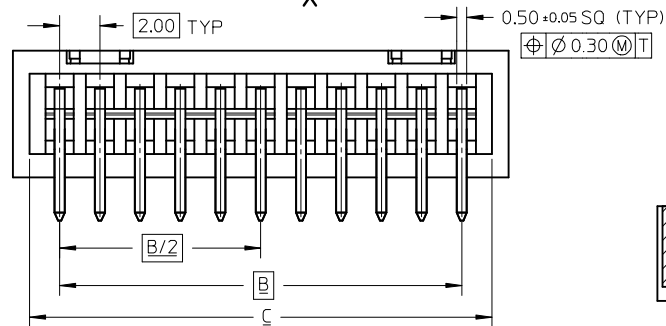
14 TO 50 CIRCUITS



ISO VIEW OF HEADER WITH CENTER POLARIZATION AND DUAL SIDE SLOTS



SECTION X-X



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:  
TUBE: PK-87831-001, TAPE AND REEL: PK-87831-300
- 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)
- FOR ILLUSTRATION PURPOSE, 22 CIRCUITS HEADER IS SHOWN

|   |  |                                       |  |                            |   |   |                        |                        |  |  |  |
|---|--|---------------------------------------|--|----------------------------|---|---|------------------------|------------------------|--|--|--|
| ADD NOTE 6<br>EC NO: S2016-0454<br>DRWN:GMENARLY 2015/11/05<br>CHKD:CGOH 2015/11/17<br>APPR:KHL IM 2015/11/18 | DESCRIPTION<br>QUALITY SYMBOLS<br>$\nabla_A = 0$<br>$\nabla_C = 0$<br>$\nabla_F = 0$ | GENERAL TOLERANCES (UNLESS SPECIFIED) |  | DIMENSION STYLE<br>MM ONLY |   | SCALE<br>NTS  | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |  |  |
|   |  | mm                                    | INCH   | DRAWN BY<br>GMENARLY       | DATE<br>2015/09/29  | TITLE<br>MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER |                        |                        |  |  |  |
|   |  | 4 PLACES                              | ± ---  | ± ---                      | CHECKED BY<br>CGOH  | DATE<br>2015/10/30  |                        |                        |  |  |  |
|   |  | 3 PLACES                              | ± ---  | ± ---                      | APPROVED BY<br>KHL IM   | DATE<br>2015/11/03  |                        |                        |  |  |  |
| 2 PLACES  | ± 0.20   | ± ---                                 | MATERIAL NO.   |                            | DOCUMENT NO.  |   | SHEET NO.              |                        |  |  |  |
| 1 PLACE   | ± ---  | ± ---                                 | SEE TABLE  |                            | SD-87833-0001   |   | 6 OF 9                 |                        |  |  |  |
| 0 PLACE   | ± ---  | ± ---                                 | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |   |                        |                        |  |  |  |

14 TO 24 CIRCUITS

| CKT SIZE | ASSY P/N WITHOUT KAPTON IN TUBE | ASSY P/N WITH KAPTON IN TUBE | ASSY P/N WITH KAPTON IN T&R | PLATING OPTIONS | FRICTION LOCKS |        | DUAL SIDE SLOTS | CENTER POLARIZATION | DIMENSION |       |       |       |       |     |                 |
|----------|---------------------------------|------------------------------|-----------------------------|-----------------|----------------|--------|-----------------|---------------------|-----------|-------|-------|-------|-------|-----|-----------------|
|          |                                 |                              |                             |                 | DUAL           | CENTER |                 |                     | A         | B     | C     | D     | E     | F   | G (SOLDER TAIL) |
| 14       | 87833-1419                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 16.65     | 12.00 | 15.00 | 14.85 | 8.00  | N.A | 2.16            |
|          | 87833-1420                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-1421                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-5320                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-5321                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-1436                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     | 3.50            |
| 16       | 87833-1619                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 18.65     | 14.00 | 17.00 | 16.85 | 10.00 | N.A | 2.16            |
|          | 87833-1620                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-1621                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-6120                      | N.A                          | 87833-7120                  | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
| 18       | 87833-1819                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 20.65     | 16.00 | 19.00 | 18.85 | 12.00 | N.A | 2.16            |
|          | 87833-1820                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-1821                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-6220                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
| 20       | 87833-2019                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 22.65     | 18.00 | 21.00 | 20.85 | 14.00 | N.A | 2.16            |
|          | 87833-2020                      | N.A                          | 87833-7220                  | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-2021                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-6520                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-6521                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-2036                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
| 22       | 87833-2219                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 24.65     | 20.00 | 23.00 | 22.85 | 16.00 | N.A | 2.16            |
|          | 87833-2220                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-2221                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
| 24       | 87833-2419                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 26.65     | 22.00 | 25.00 | 24.85 | 18.00 | N.A | 2.16            |
|          | 87833-2420                      | N.A                          | (A1) 87833-7020             | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-2421                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |
|          | 87833-2436                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |
|          | 87833-6920                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |

PLATING OPTIONS:

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

ADD P/N 87833-7020  
 EC NO: S2016-0454  
 DRWN:GMENARLY 2015/11/05  
 CHKD:CGOH 2015/11/17  
 APPR:KHLIM 2015/11/18

QUALITY SYMBOLS  
 $F_A=0$   
 $F_G=0$   
 $F_P=0$

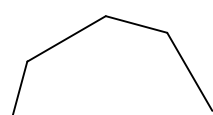
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |       |
|--|-------|
| mm   | INCH  |
| 4 PLACES ± ---                                       | ± --- |
| 3 PLACES ± ---                                       | ± --- |
| 2 PLACES ± 0.20                                      | ± --- |
| 1 PLACE ± ---  | ± --- |
| 0 PLACE ± ---  | ± --- |
| ANGULAR ± 3 °  |       |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |       |

| DIMENSION STYLE |            |
|-----------------|------------|
| MM ONLY         |            |
| DRAWN BY        | DATE       |
| GMENARLY        | 2015/09/29 |
| CHECKED BY      | DATE       |
| CGOH            | 2015/10/30 |
| APPROVED BY     | DATE       |
| KHLIM           | 2015/11/03 |
| MATERIAL NO.    |            |
| SEE TABLE       |            |
| SIZE            | A3         |

| SCALE   | DESIGN UNITS | THIRD ANGLE PROJECTION |
|---|--------------|------------------------|
| NTS   | METRIC       |                        |
| MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER<br>  |              |                        |
| DOCUMENT NO.  |              | SHEET NO.              |
| SD-87833-0001   |              | 7 OF 9                 |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |              |                        |

26 TO 38 CIRCUITS

| F | CKT SIZE | ASSY P/N WITHOUT KAPTON IN TUBE | ASSY P/N WITH KAPTON IN TUBE | ASSY P/N WITH KAPTON IN T&R | PLATING OPTIONS | FRICTION LOCKS |        | DUAL SIDE SLOTS | CENTER POLARIZATION | DIMENSION |       |       |       |       |     |                 |      |
|---|----------|---------------------------------|------------------------------|-----------------------------|-----------------|----------------|--------|-----------------|---------------------|-----------|-------|-------|-------|-------|-----|-----------------|------|
|   |          |                                 |                              |                             |                 | DUAL           | CENTER |                 |                     | A         | B     | C     | D     | E     | F   | G (SOLDER TAIL) |      |
| F | 26       | 87833-2619                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 28.65     | 24.00 | 27.00 | 26.85 | 20.00 | N.A | 2.16            |      |
|   |          | 87833-2620                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-2621                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|   |          | 87833-2636                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 | 3.50 |
| E | 28       | 87833-2819                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 30.65     | 26.00 | 29.00 | 28.85 | 22.00 | N.A | 2.16            |      |
|   |          | 87833-2820                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-2821                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|   |          | 87833-6620                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 | 3.18 |
| D | 30       | 87832-3019                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 32.65     | 28.00 | 31.00 | 30.85 | 24.00 | N.A | 2.16            |      |
|   |          | 87833-3020                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|   |          | 87833-3021                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-6720                      | N.A                          | N.A                         | 2               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|   |          | 87833-6721                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 | 3.18 |
|   |          | 87833-3036                      | N.A                          | N.A                         | 3               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 | 3.50 |
| D | 32       | 87833-3219                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 34.65     | 30.00 | 33.00 | 32.85 | 26.00 | N.A | 2.16            |      |
|   |          | 87833-3220                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-3221                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
| C | 34       | 87833-3419                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 36.65     | 32.00 | 35.00 | 34.85 | 28.00 | N.A | 2.16            |      |
|   |          | 87833-3420                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-3421                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|   |          | 87833-5420                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 | 3.18 |
|   |          | 87833-3424                      | N.A                          | N.A                         | 2               | N.A            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 | 2.92 |
| C | 36       | 87833-3619                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 38.65     | 34.00 | 37.00 | 36.85 | 30.00 | N.A | 2.16            |      |
|   |          | 87833-3620                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-3621                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
| A | 38       | 87833-3819                      | N.A                          | N.A                         | 1               |                |        |                 |                     | 40.65     | 36.00 | 39.00 | 38.85 | 32.00 | N.A | 2.16            |      |
|   |          | 87833-3820                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|   |          | 87833-3821                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |



PLATING OPTIONS:

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

|   |  |  |            |  |            |  |                        |  |
|---|--|--|------------|--|------------|--|------------------------|--|
| SEE SHEET 24.6.7<br>IEC NO: S2016-0454<br>DRWN:GMENARLY 2015/11/05<br>CH'KD:CGOH 2015/11/17<br>APPR:KHL IM 2015/11/18 | QUALITY SYMBOLS<br>$F_A=0$<br>$F_B=0$<br>$F_C=0$ | GENERAL TOLERANCES (UNLESS SPECIFIED)                |            | DIMENSION STYLE  | SCALE      | DESIGN UNITS                                       | THIRD ANGLE PROJECTION |  |
|   |  |  |            | MM ONLY  | NTS        | METRIC   |                        |  |
|   |  |  |            | DRAWN BY   | DATE       | TITLE  |                        |  |
|   |  |  |            | GMENARLY   | 2015/09/29 | MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER |                        |  |
|   |  | CHECKED BY   | DATE       | <div style="text-align: center; font-weight: bold; font-size: 1.2em;">molex</div> SD-87833-0001                                  |            |  |                        |  |
|   |  | CGOH   | 2015/10/30 |  |            |  |                        |  |
|   |  | APPROVED BY  | DATE       | MATERIAL NO. SEE TABLE<br>DOCUMENT NO. SD-87833-0001<br>SHEET NO. 8 OF 9   |            |  |                        |  |
|   |  | KHL IM   | 2015/11/03 |  |            |  |                        |  |
|   |  | ANGULAR $\pm 3^\circ$                                |            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |            |  |                        |  |
|   |  | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |            |  |            |  |                        |  |



40 TO 50 CIRCUITS

| CKT SIZE | ASSY P/N WITHOUT KAPTON IN TUBE | ASSY P/N WITH KAPTON IN TUBE | ASSY P/N WITH KAPTON IN T&R | PLATING OPTIONS | FRICTION LOCKS |        | DUAL SIDE SLOTS | CENTER POLARIZATION | DIMENSION |       |       |       |       |     |                 |      |
|----------|---------------------------------|------------------------------|-----------------------------|-----------------|----------------|--------|-----------------|---------------------|-----------|-------|-------|-------|-------|-----|-----------------|------|
|          |                                 |                              |                             |                 | DUAL           | CENTER |                 |                     | A         | B     | C     | D     | E     | F   | G (SOLDER TAIL) |      |
| 40       | 87833-4019                      | N.A                          | N.A                         | 1               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-4020                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 | 42.65     | 38.00 | 41.00 | 40.85 | 34.00 | N.A | 2.16            |      |
|          | 87833-4021                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
| 42       | 87833-4219                      | N.A                          | N.A                         | 1               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-4220                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 | 44.65     | 40.00 | 43.00 | 42.85 | 36.00 | N.A | 2.16            |      |
|          | 87833-4221                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
| 44       | 87833-4419                      | N.A                          | N.A                         | 1               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-4420                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 | 46.65     | 42.00 | 45.00 | 44.85 | 38.00 | N.A | 2.16            |      |
|          | 87833-4421                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-4424                      | N.A                          | N.A                         | 2               | N.A            | N.A    | YES             | YES                 |           |       |       |       |       |     |                 |      |
|          | 87832-4425                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 | 2.92 |
| 46       | 87833-4619                      | N.A                          | N.A                         | 1               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-4620                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 | 48.65     | 44.00 | 47.00 | 46.85 | 40.00 | N.A | 2.16            |      |
|          | 87833-4621                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
| 48       | 87833-4819                      | N.A                          | N.A                         | 1               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-4820                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 | 50.65     | 46.00 | 49.00 | 48.85 | 42.00 | N.A | 2.16            |      |
|          | 87833-4821                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
| 50       | 87833-5019                      | N.A                          | N.A                         | 1               |                |        |                 |                     |           |       |       |       |       |     |                 |      |
|          | 87833-5020                      | N.A                          | N.A                         | 2               | YES            | N.A    | YES             | YES                 | 52.65     | 48.00 | 51.00 | 50.85 | 44.00 | N.A | 0.15            |      |
|          | 87833-5021                      | N.A                          | N.A                         | 3               |                |        |                 |                     |           |       |       |       |       |     |                 |      |

PLATING OPTIONS:

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

|   |  |                                       |  |                            |                       |                    |   |                        |  |  |
|---|--|---------------------------------------|--|----------------------------|-----------------------|--------------------|---|------------------------|--|--|
| SEE SHEET 24.6.7<br>EC NO: S2016-0454<br>DRWN:GMENARLY 2015/11/05<br>CHKD:CGOH 2015/11/17<br>APPR:KHL IM 2015/11/18 | DESCRIPTION<br>QUALITY SYMBOLS<br>$\nabla_A=0$<br>$\nabla_C=0$<br>$\nabla_P=0$ | GENERAL TOLERANCES (UNLESS SPECIFIED) |  | DIMENSION STYLE<br>MM ONLY |                       | SCALE<br>NTS       | DESIGN UNITS<br>METRIC  | THIRD ANGLE PROJECTION |  |  |
|   |  |                                       | mm   | INCH                       | DRAWN BY<br>GMENARLY  | DATE<br>2015/09/29 | MILLIGRID<br>2MM PITCH, SMT<br>R/A SHROUDED HEADER<br><b>molex</b><br>DOCUMENT NO. SD-87833-0001<br>SHEET NO. 9 OF 9          |                        |  |  |
|   |  |                                       | 4 PLACES   | ± --- ± ---                | CHECKED BY<br>CGOH    | DATE<br>2015/10/30 |   |                        |  |  |
|   |  |                                       | 3 PLACES   | ± --- ± ---                | APPROVED BY<br>KHL IM | DATE<br>2015/11/03 |   |                        |  |  |
|   | 2 PLACES   | ± 0.20 ± ---                          | MATERIAL NO.   | SEE TABLE                  |                       |                    |   |                        |  |  |
|   | 1 PLACE  | ± --- ± ---                           | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                            | SIZE<br>A3            |                    | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |  |  |
|   | 0 PLACE  | ± --- ± ---                           |  |                            |                       |                    |   |                        |  |  |