

PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION

**Part Number:** [0009483025](#)  
**Status:** **Active**  
**Description:** 3.96mm (.156") Pitch KK® PC Board Connector, Right Angle, Polyester Connector, Gold (Au) Selective, 2 Circuits

**Documents:**

|                                    |                                                      |
|------------------------------------|------------------------------------------------------|
| <a href="#">3D Model</a>           | <a href="#">Product Specification PS-08-50 (PDF)</a> |
| <a href="#">Drawing (PDF)</a>      | <a href="#">RoHS Certificate of Compliance (PDF)</a> |
| <a href="#">Test Summary (PDF)</a> |                                                      |

**Agency Certification**

|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

**General**

|                |                       |
|----------------|-----------------------|
| Product Family | PCB Receptacles       |
| Series         | <a href="#">41815</a> |
| Application    | Board-to-Board        |
| Product Name   | KK®                   |

**Physical**

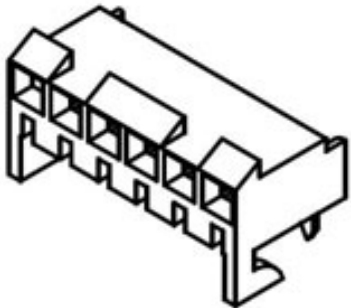
|                                |              |
|--------------------------------|--------------|
| Circuits (Loaded)              | 2            |
| Color - Resin                  | Natural      |
| Flammability                   | 94V-0        |
| Glow-Wire Compliant            | No           |
| Lock to Mating Part            | Yes          |
| Material - Plating Mating      | Gold         |
| Material - Plating Termination | Tin          |
| Material - Resin               | Polyester    |
| Number of Rows                 | 1            |
| Orientation                    | Right Angle  |
| PC Tail Length (in)            | 0.145 In     |
| PC Tail Length (mm)            | 3.68 mm      |
| PCB Locator                    | No           |
| PCB Retention                  | Yes          |
| PCB Thickness Recommended (in) | 0.062 In     |
| PCB Thickness Recommended (mm) | 1.60 mm      |
| Packaging Type                 | Bag          |
| Pitch - Mating Interface (in)  | 0.156 In     |
| Pitch - Mating Interface (mm)  | 3.96 mm      |
| Plating min: Mating (µin)      | 15           |
| Plating min: Mating (µm)       | 0.375        |
| Plating min: Termination (µin) | 100          |
| Plating min: Termination (µm)  | 2.5          |
| Polarized to PCB               | Yes          |
| Temperature Range - Operating  | 0°C to +75°C |
| Termination Interface: Style   | Through Hole |

**Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 5A   |
| Voltage - Maximum             | 250V |

**Solder Process Data**

|                                                |                        |
|------------------------------------------------|------------------------|
| Duration at Max. Process Temperature (seconds) | 5                      |
| Lead-free Process Capability                   | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 1                      |
| Process Temperature max. C                     | 235                    |



Series

image - Reference only

**EU RoHS**

**ELV and RoHS  
Compliant**  
**REACH SVHC**  
**Contains SVHC: No**  
**Halogen-Free**  
**Status**

**Not Reviewed**

**China RoHS**



**Need more information on product  
environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
For a multiple part number RoHS Certificate of  
Compliance, [click here](#)

Please visit the [Contact Us](#) section for any  
non-product compliance questions.

**Search Parts in this Series**  
[41815Series](#)

## Material Info

Old Part Number

A-41815-0425

### Reference - Drawing Numbers

## Product Specification

PS-08-50

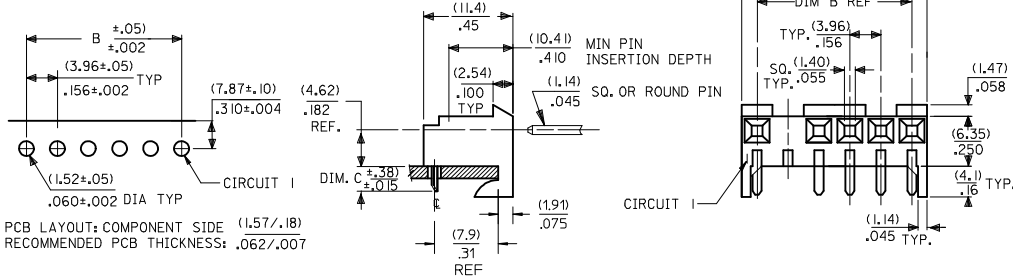
Sales Drawing

SDA-41815

This document was generated on 04/14/2010

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ASSEMBLY PROCEDURE A  
HOUSING: 41815-N-AN-\*\* (WITH RAMP)  
HOUSING: 41815-N-DN-\*\* (WITHOUT RAMP)

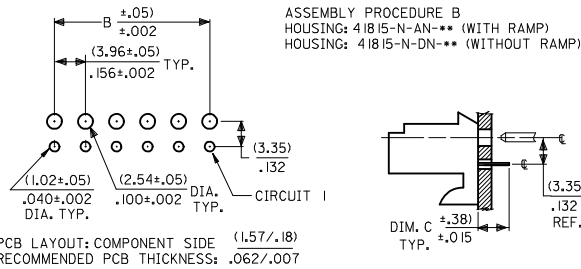


PCB LAYOUT: COMPONENT SIDE (1.57±.18)  
RECOMMENDED PCB THICKNESS: .062±.007

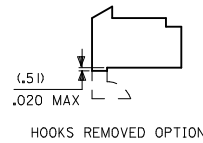
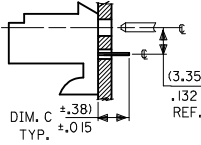
CIRCUIT 1

CIRCUIT 1

ASSEMBLY PROCEDURE B  
HOUSING: 41815-N-AN-\*\* (WITH RAMP)  
HOUSING: 41815-N-DN-\*\* (WITHOUT RAMP)

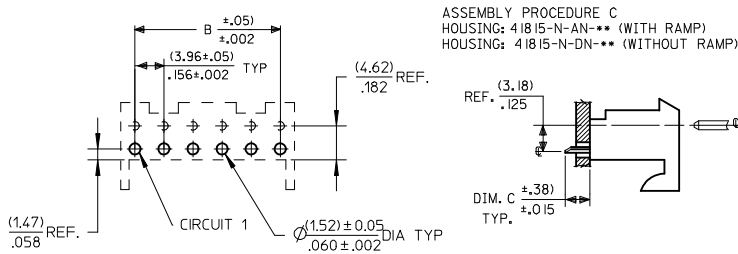


PCB LAYOUT: COMPONENT SIDE (1.57±.18)  
RECOMMENDED PCB THICKNESS: .062±.007



HOOKS REMOVED OPTION

ASSEMBLY PROCEDURE C  
HOUSING: 41815-N-AN-\*\* (WITH RAMP)  
HOUSING: 41815-N-DN-\*\* (WITHOUT RAMP)



PCB LAYOUT: COMPONENT SIDE (1.57±.18)  
RECOMMENDED PCB THICKNESS: .062±.007

CIRCUIT 1

CIRCUIT 1

| DIM. B        | DIM. A                 | NO. OF CKTS |
|---------------|------------------------|-------------|
| (3.96) .156   | (7.82±.25) .308±.010   | 2           |
| (7.92) .312   | (11.79±.25) .464±.010  | 3           |
| (11.89) .468  | (15.75±.25) .620±.010  | 4           |
| (15.85) .624  | (19.71±.25) .776±.010  | 5           |
| (19.81) .780  | (23.67±.25) .932±.010  | 6           |
| (23.77) .936  | (27.64±.30) 1.088±.012 | 7           |
| (27.74) 1.092 | (31.60±.25) 1.244±.012 | 8           |
| (31.70) 1.248 | (35.56±.30) 1.400±.012 | 9           |
| (35.66) 1.404 | (39.52±.30) 1.556±.012 | 10          |
| (39.62) 1.560 | (43.48±.30) 1.712±.012 | 11          |
| (43.59) 1.716 | (47.45±.30) 1.868±.012 | 12          |
| (47.55) 1.872 | (51.41±.30) 2.024±.012 | 13          |
| (51.51) 2.028 | (55.37±.36) 2.180±.014 | 14          |
| (55.47) 2.184 | (59.33±.36) 2.336±.014 | 15          |

NOTES:

- MATERIAL: HOUSING: POLYESTER, 94V-0 COLOR: NATURAL (WHITE)
- FINISH:
  - (102) OVERALL TIN: 0.00508/.000200 MIN OVER 0.00254/.000100 MIN COPPER.
  - (208) SELECT GOLD: 0.00038/.000015 MIN,
    - \* SELECT TIN: 0.00254/.000100 MIN,
  - OVERALL NICKEL UNDERPLATE: 0.00127/.000050 MIN.
  - (228) SELECT GOLD: 0.00076/.000030 MIN,
    - \* SELECT TIN: 0.00254/.000100 MIN,
  - OVERALL NICKEL UNDERPLATE: 0.00127/.000050 MIN.
  - (505) OVERALL GOLD: 0.00127/.000050 MIN OVER 0.00127/.000050 MIN NICKEL.
  - (909) OVERALL TIN: 0.00254/.000100 MIN.

\*THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO ROHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2002/53/EC". CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH TIN-LEAD PLATING.

- PRODUCT SPECIFICATION: PS-08-50
- PACKAGING: SEE CHARTS
- FOR TOP ENTRY AND RIGHT ANGLE ASSEMBLIES WITH LOWER INSERTION FORCE USE SINGLE BEAM CONTACT. (TERMINAL NO. 4244)
- SOLDERABILITY: WHEN PARTS ARE SOLDERED AT A TEMPERATURE OF 230°C OR 446°F FOR 5 SECONDS EACH SOLDERED SURFACE SHALL BE A MINIMUM OF 95% COVERED WITH A SMOOTH CONTINUOUS ADHERENT COATING. FOR ADDITIONAL INFORMATION SEE ES-152.
- PARTS ARE STACKABLE END TO END ON (3.96) .156
- THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPEC PS-45499-002.

| GENERAL TOLERANCES (UNLESS SPECIFIED) |       | DIMENSION STYLE                                      |      | SCALE                                                                                                                         | DESIGN UNITS | THIRD ANGLE PROJECTION |  |
|---------------------------------------|-------|------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------|--|
|                                       |       | MM/IN                                                |      |                                                                                                                               | INCH         |                        |  |
|                                       |       | mm                                                   | INCH | DRAWN BY                                                                                                                      | DATE         |                        |  |
| 4 PLACES                              | ± --- | ± ---                                                |      | SAMIEC                                                                                                                        | 01/28/87     |                        |  |
| 3 PLACES                              | ± --- | ± .010                                               |      | CHECKED BY                                                                                                                    | DATE         |                        |  |
| 2 PLACES                              | ± --- | ± .015                                               |      | SAMIEC                                                                                                                        | 01/28/87     |                        |  |
| 1 PLACE                               | ± --- | ± ---                                                |      | APPROVED BY                                                                                                                   | DATE         |                        |  |
|                                       |       | ANGULAR ±1/2°                                        |      | LENZ                                                                                                                          | 01/28/87     |                        |  |
|                                       |       | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |      | MATERIAL NO.                                                                                                                  |              |                        |  |
|                                       |       | SEE CHART                                            |      | DOCUMENT NO.                                                                                                                  |              |                        |  |
|                                       |       | SIZE B                                               |      | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |              |                        |  |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|      |              |                   |              |                   |              |                   |              |                   |
|------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|
|      | Assy. Proc:  | RIGHT ANGLE       | Assy. Proc:  | RIGHT ANGLE       | Assy. Proc:  | BOTTOM ENTRY      | Assy. Proc:  | BOTTOM ENTRY      |
|      | Housing No:  | 41815-N-AN        | Housing No:  | 41815-N-AN        | Housing No:  | 41815-N-AN        | Housing No:  | 41815-N-AN        |
|      | Options      | WITH RAMP         | Options      | WITH RAMP         | Options      | WITH RAMP         | Options      | WITH RAMP         |
|      | Terminal No: | 2144-BA-A1AA-102B | Terminal No: | 2144-BA-A1AA-208B | Terminal No: | 6298-1-102        | Terminal No: | 6298-1-208        |
|      | Term Matl:   | PHOS BRONZE       | Term Matl:   | PHOS BRONZE       | Term Matl:   | PHOS BRONZE       | Term Matl:   | PHOS BRONZE       |
|      | Plating:     | 102 TIN           | Plating:     | 208 – 15 GOLD     | Plating:     | 102 – TIN         | Plating:     | 208 – 15 GOLD     |
|      | Dim C:       | (3.68) / .145     | Dim C:       | (3.68) / .145     | Dim C:       | (3.18)/. 125      | Dim C:       | (3.18)/. 125      |
|      | Voids:       | NONE              | Voids:       | NONE              | Voids:       | NONE              | Voids:       | NONE              |
|      | Hooks Cut:   | NO                | Hooks Cut:   | NO                | Hooks Cut:   | NO                | Hooks Cut:   | NO                |
|      | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY |
| Ckts | Material No  | Engineer Number   | Material No  | Engineer Number   | Material No  | Engineer Number   | Material No  | Engineer Number   |
| 2    | 09-48-1024   | A-41815-0002      | 09-48-5024   | A-41815-0016      | 09-48-4029   | A-41815-0030      | 09-48-5026   | A-41815-0044      |
| 3    | 09-48-1034   | A-41815-0003      | 09-48-5034   | A-41815-0017      | 09-48-4039   | A-41815-0031      | 09-48-5036   | A-41815-0045      |
| 4    | 09-48-1044   | A-41815-0004      | 09-48-5044   | A-41815-0018      | 09-48-4049   | A-41815-0032      | 09-48-5046   | A-41815-0046      |
| 5    | 09-48-1054   | A-41815-0005      | 09-48-5054   | A-41815-0019      | 09-48-4059   | A-41815-0033      | 09-48-5056   | A-41815-0047      |
| 6    | 09-48-1064   | A-41815-0006      | 09-48-5064   | A-41815-0020      | 09-48-4069   | A-41815-0034      | 09-48-5066   | A-41815-0048      |
| 7    | 09-48-1074   | A-41815-0007      | 09-48-5074   | A-41815-0021      | 09-48-4079   | A-41815-0035      | 09-48-5076   | A-41815-0049      |
| 8    | 09-48-1084   | A-41815-0008      | 09-48-5084   | A-41815-0022      | 09-48-4089   | A-41815-0036      | 09-48-5086   | A-41815-0050      |
| 9    | 09-48-1094   | A-41815-0009      | 09-48-5094   | A-41815-0023      | 09-48-4099   | A-41815-0037      | 09-48-5096   | A-41815-0051      |
| 10   | 09-48-1104   | A-41815-0010      | 09-48-5104   | A-41815-0024      | 09-48-4109   | A-41815-0038      | 09-48-5106   | A-41815-0052      |
| 11   | 09-48-1114   | A-41815-0011      | 09-48-5114   | A-41815-0025      | 09-48-4119   | A-41815-0039      | 09-48-5116   | A-41815-0053      |
| 12   | 09-48-1124   | A-41815-0012      | 09-48-5124   | A-41815-0026      | 09-48-4129   | A-41815-0040      | 09-48-5126   | A-41815-0054      |
| 13   | 09-48-1134   | A-41815-0013      | 09-48-5134   | A-41815-0027      | 09-48-4139   | A-41815-0041      | 09-48-5136   | A-41815-0055      |
| 14   | 09-48-1144   | A-41815-0014      | 09-48-5144   | A-41815-0028      | 09-48-4149   | A-41815-0042      | 09-48-5146   | A-41815-0056      |
| 15   | 09-48-1154   | A-41815-0015      | 09-48-5154   | A-41815-0029      | 09-48-4159   | A-41815-0043      | 09-48-5156   | A-41815-0057      |

|                                      |                      |                     |                                                               |                             |
|--------------------------------------|----------------------|---------------------|---------------------------------------------------------------|-----------------------------|
| REV:<br><b>AL6</b>                   | ECR/ECN INFORMATION: |                     | TITLE:<br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><b>- 2 -</b>   |
|                                      | EC NO.               | <b>UCP2009-0167</b> |                                                               |                             |
|                                      | DATE:                | <b>10/30/2008</b>   |                                                               |                             |
| DOCUMENT NUMBER:<br><b>SDA-41815</b> |                      |                     | CREATED / REVISED BY:<br><b>MKIPPER</b>                       | CHECKED BY:<br><b>JBELL</b> |
|                                      |                      |                     | APPROVED BY:<br><b>FSMITH</b>                                 |                             |

TEMPLATE FILENAME: PRODUCT\_SPEC[SIZE\_A](V.1).DOC



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|              |                   |
|--------------|-------------------|
| Assy. Proc:  | TOP ENTRY         |
| Housing No:  | 41815-N-AN        |
| Options      | WITH RAMP         |
| Terminal No: | 2144-BA-A1AA-102B |
| Term Matl:   | PHOS BRONZE       |
| Plating:     | 102 – TIN         |
| Dim C:       | (3.05) / .120     |
| Voids:       | NONE              |
| Hooks Cut:   | NO                |
| Packaging:   | PK-41815-001 TRAY |

|              |                   |
|--------------|-------------------|
| Assy. Proc:  | TOP ENTRY         |
| Housing No:  | 41815-N-AN        |
| Options      | WITH RAMP         |
| Terminal No: | 2144-BA-A1AA-208B |
| Term Matl:   | PHOS BRONZE       |
| Plating:     | 208 – 15 GOLD     |
| Dim C:       | (3.05) / .120     |
| Voids:       | NONE              |
| Hooks Cut:   | NO                |
| Packaging:   | PK-41815-001 TRAY |

| Ckts | Material No | Engineer Number |
|------|-------------|-----------------|
| 2    | 09-48-4028  | A-41815-0058    |
| 3    | 09-48-4038  | A-41815-0059    |
| 4    | 09-48-4048  | A-41815-0060    |
| 5    | 09-48-4058  | A-41815-0061    |
| 6    | 09-48-4068  | A-41815-0062    |
| 7    | 09-48-4078  | A-41815-0063    |
| 8    | 09-48-4088  | A-41815-0064    |
| 9    | 09-48-4098  | A-41815-0065    |
| 10   | 09-48-4108  | A-41815-0066    |
| 11   | 09-48-4118  | A-41815-0067    |
| 12   | 09-48-4128  | A-41815-0068    |
| 13   | 09-48-4138  | A-41815-0069    |
| 14   | 09-48-4148  | A-41815-0070    |
| 15   | 09-48-4158  | A-41815-0071    |

| Material No | Engineer Number |
|-------------|-----------------|
| 09-48-5025  | A-41815-0072    |
| 09-48-5035  | A-41815-0073    |
| 09-48-5045  | A-41815-0074    |
| 09-48-5055  | A-41815-0075    |
| 09-48-5065  | A-41815-0076    |
| 09-48-5075  | A-41815-0077    |
| 09-48-5085  | A-41815-0078    |
| 09-48-5095  | A-41815-0079    |
| 09-48-5105  | A-41815-0080    |
| 09-48-5115  | A-41815-0081    |
| 09-48-5125  | A-41815-0082    |
| 09-48-5135  | A-41815-0083    |
| 09-48-5145  | A-41815-0084    |
| 09-48-5155  | A-41815-0085    |

|                                      |                      |                     |                                                               |                             |
|--------------------------------------|----------------------|---------------------|---------------------------------------------------------------|-----------------------------|
| REV:<br><b>AL6</b>                   | ECR/ECN INFORMATION: |                     | TITLE:<br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><b>- 3 -</b>   |
|                                      | EC NO.               | <b>UCP2009-0167</b> |                                                               |                             |
|                                      | DATE:                | <b>10/30/2008</b>   |                                                               |                             |
| DOCUMENT NUMBER:<br><b>SDA-41815</b> |                      |                     | CREATED / REVISED BY:<br><b>MKIPPER</b>                       | CHECKED BY:<br><b>JBELL</b> |
|                                      |                      |                     | APPROVED BY:<br><b>FSMITH</b>                                 |                             |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|                              |             |                 |                                 |                 |             |                                |             |                 |                              |                 |  |
|------------------------------|-------------|-----------------|---------------------------------|-----------------|-------------|--------------------------------|-------------|-----------------|------------------------------|-----------------|--|
| Assy. Proc: BOTTOM ENTRY     |             |                 | Assy. Proc: TOP ENTRY           |                 |             | Assy. Proc: RIGHT ANGLE        |             |                 | Assy. Proc: BOTTOM ENTRY     |                 |  |
| Housing No: 41815-N-AN       |             |                 | Housing No: 41815-N-AN          |                 |             | Housing No: 41815-N-AN         |             |                 | Housing No: 41815-N-AN       |                 |  |
| Options WITH RAMP            |             |                 | Options WITH RAMP               |                 |             | Options WITH RAMP              |             |                 | Options WITH RAMP            |                 |  |
| Terminal No: 2188-1-P909     |             |                 | Terminal No: 2144-AA-A1AA-P909B |                 |             | Terminal No: 2144-AA-A1AA-122B |             |                 | Terminal No: 2188-1-102      |                 |  |
| Term Matl: BRASS             |             |                 | Term Matl: BRASS                |                 |             | Term Matl: BRASS               |             |                 | Term Matl: BRASS             |                 |  |
| Plating: P909 – TIN          |             |                 | Plating: P909 – TIN             |                 |             | Plating: 122 – TIN             |             |                 | Plating: 102 – TIN           |                 |  |
| Dim C: (3.18) / .125         |             |                 | Dim C: (3.05) / .120            |                 |             | Dim C: (3.68) / .145           |             |                 | Dim C: (3.18) / .125         |                 |  |
| Voids: NONE                  |             |                 | Voids: NONE                     |                 |             | Voids: NONE                    |             |                 | Voids: NONE                  |                 |  |
| Hooks Cut: NO                |             |                 | Hooks Cut: YES                  |                 |             | Hooks Cut: NO                  |             |                 | Hooks Cut: NO                |                 |  |
| Packaging: PK-41815-001 TRAY |             |                 | Packaging: PK-41815-001 TRAY    |                 |             | Packaging: PK-41815-001 TRAY   |             |                 | Packaging: PK-41815-001 TRAY |                 |  |
|                              |             |                 |                                 |                 |             |                                |             |                 |                              |                 |  |
| Ckts                         | Material No | Engineer Number | Material No                     | Engineer Number | Material No | Engineer Number                | Material No | Engineer Number | Material No                  | Engineer Number |  |
| 2                            | 09-48-2022  | A-41815-0100    | 09-48-2025                      | A-41815-0114    | 41815-0128  | A-41815-0128                   | 41815-0128  | A-41815-0128    | 09-48-4022                   | A-41815-0142    |  |
| 3                            | 09-48-2032  | A-41815-0101    | 09-48-2035                      | A-41815-0115    | 41815-0129  | A-41815-0129                   | 41815-0129  | A-41815-0129    | 09-48-4032                   | A-41815-0143    |  |
| 4                            | 09-48-2042  | A-41815-0102    | 09-48-2045                      | A-41815-0116    | 41815-0130  | A-41815-0130                   | 41815-0130  | A-41815-0130    | 09-48-4042                   | A-41815-0144    |  |
| 5                            | 09-48-2052  | A-41815-0103    | 09-48-2055                      | A-41815-0117    | 41815-0131  | A-41815-0131                   | 41815-0131  | A-41815-0131    | 09-48-4052                   | A-41815-0145    |  |
| 6                            | 09-48-2062  | A-41815-0104    | 09-48-2065                      | A-41815-0118    | 41815-0132  | A-41815-0132                   | 41815-0132  | A-41815-0132    | 09-48-4062                   | A-41815-0146    |  |
| 7                            | 09-48-2072  | A-41815-0105    | 09-48-2075                      | A-41815-0119    | 41815-0133  | A-41815-0133                   | 41815-0133  | A-41815-0133    | 09-48-4072                   | A-41815-0147    |  |
| 8                            | 09-48-2082  | A-41815-0106    | 09-48-2085                      | A-41815-0120    | 41815-0134  | A-41815-0134                   | 41815-0134  | A-41815-0134    | 09-48-4082                   | A-41815-0148    |  |
| 9                            | 09-48-2092  | A-41815-0107    | 09-48-2095                      | A-41815-0121    | 41815-0135  | A-41815-0135                   | 41815-0135  | A-41815-0135    | 09-48-4092                   | A-41815-0149    |  |
| 10                           | 09-48-2102  | A-41815-0108    | 09-48-2105                      | A-41815-0122    | 41815-0136  | A-41815-0136                   | 41815-0136  | A-41815-0136    | 09-48-4102                   | A-41815-0150    |  |
| 11                           | 09-48-2112  | A-41815-0109    | 09-48-2115                      | A-41815-0123    | 41815-0137  | A-41815-0137                   | 41815-0137  | A-41815-0137    | 09-48-4112                   | A-41815-0151    |  |
| 12                           | 09-48-2122  | A-41815-0110    | 09-48-2125                      | A-41815-0124    | 09-48-1122  | A-41815-0138                   | 09-48-1122  | A-41815-0138    | 09-48-4122                   | A-41815-0152    |  |
| 13                           | 09-48-2132  | A-41815-0111    | 09-48-2135                      | A-41815-0125    | 41815-0139  | A-41815-0139                   | 41815-0139  | A-41815-0139    | 09-48-4132                   | A-41815-0153    |  |
| 14                           | 09-48-2142  | A-41815-0112    | 09-48-2145                      | A-41815-0126    | 41815-0140  | A-41815-0140                   | 41815-0140  | A-41815-0140    | 09-48-4142                   | A-41815-0154    |  |
| 15                           | 09-48-2152  | A-41815-0113    | 09-48-2155                      | A-41815-0127    | 41815-0141  | A-41815-0141                   | 41815-0141  | A-41815-0141    | 09-48-4152                   | A-41815-0155    |  |

|                                                  |                      |                     |                                                                          |                                        |                                          |
|--------------------------------------------------|----------------------|---------------------|--------------------------------------------------------------------------|----------------------------------------|------------------------------------------|
| REV:<br><br><b>AL6</b>                           | ECR/ECN INFORMATION: |                     | <u>TITLE:</u><br><br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | <u>SHEET No.</u><br><br><b>- 4 -</b>   |                                          |
|                                                  | EC NO.               | <b>UCP2009-0167</b> |                                                                          |                                        |                                          |
|                                                  | DATE:                | <b>10/30/2008</b>   |                                                                          |                                        |                                          |
| <u>DOCUMENT NUMBER:</u><br><br><b>SDA-41815</b>  |                      |                     | <u>CREATED / REVISED BY:</u><br><br><b>MKIPPER</b>                       | <u>CHECKED BY:</u><br><br><b>JBELL</b> | <u>APPROVED BY:</u><br><br><b>FSMITH</b> |
| TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A](V.1).DOC |                      |                     |                                                                          |                                        |                                          |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|      |              |                 |              |                   |              |                   |              |                    |
|------|--------------|-----------------|--------------|-------------------|--------------|-------------------|--------------|--------------------|
|      | Assy. Proc:  |                 | Assy. Proc:  | BOTTOM ENTRY      | Assy. Proc:  | BOTTOM ENTRY      | Assy. Proc:  | RIGHT ANGLE        |
|      | Housing No:  |                 | Housing No:  | 41815-N-AN        | Housing No:  | 41815-N-AN        | Housing No:  | 41815-N-AN         |
|      | Options      |                 | Options      | WITH RAMP         | Options      | WITH RAMP         | Options      | WITH RAMP          |
|      | Terminal No: |                 | Terminal No: | 6298-1-102        | Terminal No: | 2188-1-228        | Terminal No: | 2144-AA-A1AA-P909B |
|      | Term Matl:   |                 | Term Matl:   | PHOS BRONZE       | Term Matl:   | BRASS             | Term Matl:   | BRASS              |
|      | Plating:     |                 | Plating:     | 102 – TIN         | Plating:     | 228 – GOLD        | Plating:     | P909 – TIN         |
|      | Dim C:       |                 | Dim C:       | (4.60) / .160     | Dim C:       | (3.18) / .125     | Dim C:       | (3.68) / .145      |
|      | Voids:       |                 | Voids:       | NONE              | Voids:       | NONE              | Voids:       | NONE               |
|      | Hooks Cut:   |                 | Hooks Cut:   | NO                | Hooks Cut:   | NO                | Hooks Cut:   | NO                 |
|      | Packaging:   |                 | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY  |
| Ckts | Material No  | Engineer Number | Material No  | Engineer Number   | Material No  | Engineer Number   | Material No  | Engineer Number    |
| 2    |              |                 | 09-48-4021   | A-41815-0170      | 41815-0184   | A-41815-0184      | 09-48-2021   | A-41815-0198       |
| 3    |              |                 | 09-48-4031   | A-41815-0171      | 09-48-5030   | A-41815-0185      | 09-48-2031   | A-41815-0199       |
| 4    |              |                 | 09-48-4041   | A-41815-0172      | 09-48-5040   | A-41815-0186      | 09-48-2041   | A-41815-0200       |
| 5    |              |                 | 09-48-4051   | A-41815-0173      | 09-48-5050   | A-41815-0187      | 09-48-2051   | A-41815-0201       |
| 6    |              |                 | 09-48-4061   | A-41815-0174      | 41815-0188   | A-41815-0188      | 09-48-2061   | A-41815-0202       |
| 7    |              |                 | 09-48-4071   | A-41815-0175      | 41815-0189   | A-41815-0189      | 09-48-2071   | A-41815-0203       |
| 8    |              |                 | 09-48-4081   | A-41815-0176      | 09-48-5090   | A-41815-0190      | 09-48-2081   | A-41815-0204       |
| 9    |              |                 | 09-48-4091   | A-41815-0177      | 41815-0191   | A-41815-0191      | 09-48-2091   | A-41815-0205       |
| 10   |              |                 | 09-48-4101   | A-41815-0178      | 09-48-5100   | A-41815-0192      | 09-48-2101   | A-41815-0206       |
| 11   |              |                 | 09-48-4111   | A-41815-0179      | 41815-0193   | A-41815-0193      | 09-48-2111   | A-41815-0207       |
| 12   |              |                 | 09-48-4121   | A-41815-0180      | 41815-0194   | A-41815-0194      | 09-48-2121   | A-41815-0208       |
| 13   |              |                 | 09-48-4131   | A-41815-0181      | 41815-0195   | A-41815-0195      | 09-48-2131   | A-41815-0209       |
| 14   |              |                 | 09-48-4141   | A-41815-0182      | 41815-0196   | A-41815-0196      | 09-48-2141   | A-41815-0210       |
| 15   |              |                 | 09-48-4151   | A-41815-0183      | 41815-0197   | A-41815-0197      | 09-48-2151   | A-41815-0211       |

|                                      |                      |                     |                                                               |                             |
|--------------------------------------|----------------------|---------------------|---------------------------------------------------------------|-----------------------------|
| REV:<br><b>AL6</b>                   | ECR/ECN INFORMATION: |                     | TITLE:<br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><b>- 5 -</b>   |
|                                      | EC NO.               | <b>UCP2009-0167</b> |                                                               |                             |
|                                      | DATE:                | <b>10/30/2008</b>   |                                                               |                             |
| DOCUMENT NUMBER:<br><b>SDA-41815</b> |                      |                     | CREATED / REVISED BY:<br><b>MKIPPER</b>                       | CHECKED BY:<br><b>JBELL</b> |
|                                      |                      |                     | APPROVED BY:<br><b>FSMITH</b>                                 |                             |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|                                |             |                 |                              |                 |             |                                |             |                 |                                 |                 |  |
|--------------------------------|-------------|-----------------|------------------------------|-----------------|-------------|--------------------------------|-------------|-----------------|---------------------------------|-----------------|--|
| Assy. Proc: RIGHT ANGLE        |             |                 | Assy. Proc: BOTTOM ENTRY     |                 |             | Assy. Proc: RIGHT ANGLE        |             |                 | Assy. Proc: TOP ENTRY           |                 |  |
| Housing No: 41815-N-AN         |             |                 | Housing No: 41815-N-DN       |                 |             | Housing No: 41815-N-AN         |             |                 | Housing No: 41815-N-DN          |                 |  |
| Options WITH RAMP              |             |                 | Options NO RAMPS             |                 |             | Options WITH RAMP              |             |                 | Options NO RAMPS                |                 |  |
| Terminal No: 2144-AA-A1AA-228B |             |                 | Terminal No: 2188-P909       |                 |             | Terminal No: 2144-AA-A1AA-505B |             |                 | Terminal No: 2144-AA-A1AA-P909B |                 |  |
| Term Matl: BRASS               |             |                 | Term Matl: BRASS             |                 |             | Term Matl: BRASS               |             |                 | Term Matl: BRASS                |                 |  |
| Plating: 228 – GOLD            |             |                 | Plating: P909 – TIN          |                 |             | Plating: 505 – GOLD            |             |                 | Plating: P909 – TIN             |                 |  |
| Dim C: (3.68) / .145           |             |                 | Dim C: (4.06) / .160         |                 |             | Dim C: (3.68) / .145           |             |                 | Dim C: (3.05) / .120            |                 |  |
| Voids: NONE                    |             |                 | Voids: NONE                  |                 |             | Voids: NONE                    |             |                 | Voids: NONE                     |                 |  |
| Hooks Cut: NO                  |             |                 | Hooks Cut: YES               |                 |             | Hooks Cut: NO                  |             |                 | Hooks Cut: NO                   |                 |  |
| Packaging: PK-41815-001 TRAY   |             |                 | Packaging: PK-41815-001 TRAY |                 |             | Packaging: PK-41815-001 TRAY   |             |                 | Packaging: PK-41815-001 TRAY    |                 |  |
|                                |             |                 |                              |                 |             |                                |             |                 |                                 |                 |  |
| Ckts                           | Material No | Engineer Number | Material No                  | Engineer Number | Material No | Engineer Number                | Material No | Engineer Number | Material No                     | Engineer Number |  |
| 2                              | 09-48-5023  | A-41815-0313    | 41815-0327                   | A-41815-0327    | 41815-0341  | A-41815-0341                   | 41815-0355  | A-41815-0355    | 41815-0355                      | A-41815-0355    |  |
| 3                              | 09-48-5033  | A-41815-0314    | 41815-0328                   | A-41815-0328    | 09-48-3037  | A-41815-0342                   | 41815-0356  | A-41815-0356    | 41815-0356                      | A-41815-0356    |  |
| 4                              | 09-48-5043  | A-41815-0315    | 41815-0329                   | A-41815-0329    | 41815-0343  | A-41815-0343                   | 09-48-2047  | A-41815-0357    | 09-48-2047                      | A-41815-0357    |  |
| 5                              | 09-48-5053  | A-41815-0316    | 09-48-2056                   | A-41815-0330    | 41815-0344  | A-41815-0344                   | 41815-0358  | A-41815-0358    | 41815-0358                      | A-41815-0358    |  |
| 6                              | 09-48-5063  | A-41815-0317    | 41815-0331                   | A-41815-0331    | 41815-0345  | A-41815-0345                   | 41815-0359  | A-41815-0359    | 41815-0359                      | A-41815-0359    |  |
| 7                              | 09-48-5073  | A-41815-0318    | 41815-0332                   | A-41815-0332    | 41815-0346  | A-41815-0346                   | 41815-0360  | A-41815-0360    | 41815-0360                      | A-41815-0360    |  |
| 8                              | 09-48-5083  | A-41815-0319    | 09-48-2086                   | A-41815-0333    | 41815-0347  | A-41815-0347                   | 41815-0361  | A-41815-0361    | 41815-0361                      | A-41815-0361    |  |
| 9                              | 09-48-5093  | A-41815-0320    | 41815-0334                   | A-41815-0334    | 41815-0348  | A-41815-0348                   | 41815-0362  | A-41815-0362    | 41815-0362                      | A-41815-0362    |  |
| 10                             | 09-48-5103  | A-41815-0321    | 09-48-2106                   | A-41815-0335    | 41815-0349  | A-41815-0349                   | 09-48-2107  | A-41815-0363    | 09-48-2107                      | A-41815-0363    |  |
| 11                             | 09-48-5113  | A-41815-0322    | 41815-0336                   | A-41815-0336    | 41815-0350  | A-41815-0350                   | 41815-0364  | A-41815-0364    | 41815-0364                      | A-41815-0364    |  |
| 12                             | 09-48-5123  | A-41815-0323    | 41815-0337                   | A-41815-0337    | 41815-0351  | A-41815-0351                   | 41815-0365  | A-41815-0365    | 41815-0365                      | A-41815-0365    |  |
| 13                             | 09-48-5133  | A-41815-0324    | 41815-0338                   | A-41815-0338    | 41815-0352  | A-41815-0352                   | 41815-0366  | A-41815-0366    | 41815-0366                      | A-41815-0366    |  |
| 14                             | 09-48-5143  | A-41815-0325    | 41815-0339                   | A-41815-0339    | 41815-0353  | A-41815-0353                   | 41815-0367  | A-41815-0367    | 41815-0367                      | A-41815-0367    |  |
| 15                             | 09-48-5153  | A-41815-0326    | 41815-0340                   | A-41815-0340    | 41815-0354  | A-41815-0354                   | 41815-0368  | A-41815-0368    | 41815-0368                      | A-41815-0368    |  |

|                                          |                      |                     |                                                                   |                                 |                                   |
|------------------------------------------|----------------------|---------------------|-------------------------------------------------------------------|---------------------------------|-----------------------------------|
| REV:<br><br><b>AL6</b>                   | ECR/ECN INFORMATION: |                     | TITLE:<br><br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><br><b>- 6 -</b>   |                                   |
|                                          | EC NO.               | <b>UCP2009-0167</b> |                                                                   |                                 |                                   |
|                                          | DATE:                | <b>10/30/2008</b>   |                                                                   |                                 |                                   |
| DOCUMENT NUMBER:<br><br><b>SDA-41815</b> |                      |                     | CREATED / REVISED BY:<br><br><b>MKIPPER</b>                       | CHECKED BY:<br><br><b>JBELL</b> | APPROVED BY:<br><br><b>FSMITH</b> |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|                              |             |                 |                              |                 |             |                                |             |                 |                              |                 |  |
|------------------------------|-------------|-----------------|------------------------------|-----------------|-------------|--------------------------------|-------------|-----------------|------------------------------|-----------------|--|
| Assy. Proc: RIGHT ANGLE      |             |                 | Assy. Proc: BOTTOM ENTRY     |                 |             | Assy. Proc: RIGHT ANGLE        |             |                 | Assy. Proc: BOTTOM ENTRY     |                 |  |
| Housing No: 41815-N-AN       |             |                 | Housing No: 41815-N-AN       |                 |             | Housing No: 41815-N-AN         |             |                 | Housing No: 41815-N-AN       |                 |  |
| Options WITH RAMP            |             |                 | Options WITH RAMP            |                 |             | Options WITH RAMP              |             |                 | Options WITH RAMP            |                 |  |
| Terminal No: 4244-A-102A     |             |                 | Terminal No: 2188-1-122      |                 |             | Terminal No: 2144-AA-A1AA-208B |             |                 | Terminal No: 2188-1-208      |                 |  |
| Term Matl: PHOS BRONZE       |             |                 | Term Matl: BRASS             |                 |             | Term Matl: BRASS               |             |                 | Term Matl: BRASS             |                 |  |
| Plating: 102 – TIN           |             |                 | Plating: TIN – 122           |                 |             | Plating: 208 – 15 GOLD         |             |                 | Plating: 208 – 15 GOLD       |                 |  |
| Dim C: (3.68) / .145         |             |                 | Dim C: (3.18) / .125         |                 |             | Dim C: (3.68) / .145           |             |                 | Dim C: (3.18) / .125         |                 |  |
| Voids: NONE                  |             |                 | Voids: NONE                  |                 |             | Voids: NONE                    |             |                 | Voids: NONE                  |                 |  |
| Hooks Cut: NO                |             |                 | Hooks Cut: NO                |                 |             | Hooks Cut: NO                  |             |                 | Hooks Cut: NO                |                 |  |
| Packaging: PK-41815-001 TRAY |             |                 | Packaging: PK-41815-001 TRAY |                 |             | Packaging: PK-41815-001 TRAY   |             |                 | Packaging: PK-41815-001 TRAY |                 |  |
|                              |             |                 |                              |                 |             |                                |             |                 |                              |                 |  |
| Ckts                         | Material No | Engineer Number | Material No                  | Engineer Number | Material No | Engineer Number                | Material No | Engineer Number | Material No                  | Engineer Number |  |
| 2                            | 09-48-1023  | A-41815-0369    | 09-48-4025                   | A-41815-0383    | 09-48-3025  | A-41815-0425                   | 09-48-3024  | A-41815-0439    | 09-48-3024                   | A-41815-0439    |  |
| 3                            | 09-48-1033  | A-41815-0370    | 09-48-4035                   | A-41815-0384    | 09-48-3035  | A-41815-0426                   | 09-48-3034  | A-41815-0440    | 09-48-3034                   | A-41815-0440    |  |
| 4                            | 09-48-1043  | A-41815-0371    | 09-48-4045                   | A-41815-0385    | 09-48-3045  | A-41815-0427                   | 09-48-3044  | A-41815-0441    | 09-48-3044                   | A-41815-0441    |  |
| 5                            | 09-48-1053  | A-41815-0372    | 09-48-4055                   | A-41815-0386    | 09-48-3055  | A-41815-0428                   | 09-48-3054  | A-41815-0442    | 09-48-3054                   | A-41815-0442    |  |
| 6                            | 09-48-1063  | A-41815-0373    | 09-48-4065                   | A-41815-0387    | 09-48-3065  | A-41815-0429                   | 09-48-3064  | A-41815-0443    | 09-48-3064                   | A-41815-0443    |  |
| 7                            | 09-48-1073  | A-41815-0374    | 09-48-4075                   | A-41815-0388    | 09-48-3075  | A-41815-0430                   | 09-48-3074  | A-41815-0444    | 09-48-3074                   | A-41815-0444    |  |
| 8                            | 09-48-1083  | A-41815-0375    | 09-48-4085                   | A-41815-0389    | 09-48-3085  | A-41815-0431                   | 09-48-3084  | A-41815-0445    | 09-48-3084                   | A-41815-0445    |  |
| 9                            | 09-48-1093  | A-41815-0376    | 09-48-4095                   | A-41815-0390    | 09-48-3095  | A-41815-0432                   | 09-48-3094  | A-41815-0446    | 09-48-3094                   | A-41815-0446    |  |
| 10                           | 09-48-1103  | A-41815-0377    | 09-48-4105                   | A-41815-0391    | 09-48-3105  | A-41815-0433                   | 09-48-3104  | A-41815-0447    | 09-48-3104                   | A-41815-0447    |  |
| 11                           | 09-48-1113  | A-41815-0378    | 09-48-4115                   | A-41815-0392    | 09-48-3115  | A-41815-0434                   | 09-48-3114  | A-41815-0448    | 09-48-3114                   | A-41815-0448    |  |
| 12                           | 09-48-1123  | A-41815-0379    | 09-48-4125                   | A-41815-0393    | 09-48-3125  | A-41815-0435                   | 09-48-3124  | A-41815-0449    | 09-48-3124                   | A-41815-0449    |  |
| 13                           | 09-48-1133  | A-41815-0380    | 09-48-4135                   | A-41815-0394    | 09-48-3135  | A-41815-0436                   | 09-48-3134  | A-41815-0450    | 09-48-3134                   | A-41815-0450    |  |
| 14                           | 09-48-1143  | A-41815-0381    | 09-48-4145                   | A-41815-0395    | 09-48-3145  | A-41815-0437                   | 09-48-3144  | A-41815-0451    | 09-48-3144                   | A-41815-0451    |  |
| 15                           | 09-48-1153  | A-41815-0382    | 09-48-4155                   | A-41815-0396    | 09-48-3155  | A-41815-0438                   | 09-48-3154  | A-41815-0452    | 09-48-3154                   | A-41815-0452    |  |

|                                                 |                      |                     |                                                                          |                                        |                                          |
|-------------------------------------------------|----------------------|---------------------|--------------------------------------------------------------------------|----------------------------------------|------------------------------------------|
| REV:<br><br><b>AL6</b>                          | ECR/ECN INFORMATION: |                     | <u>TITLE:</u><br><br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | <u>SHEET No.</u><br><br><b>- 7 -</b>   |                                          |
|                                                 | EC NO.               | <b>UCP2009-0167</b> |                                                                          |                                        |                                          |
|                                                 | DATE:                | <b>10/30/2008</b>   |                                                                          |                                        |                                          |
| <u>DOCUMENT NUMBER:</u><br><br><b>SDA-41815</b> |                      |                     | <u>CREATED / REVISED BY:</u><br><br><b>MKIPPER</b>                       | <u>CHECKED BY:</u><br><br><b>JBELL</b> | <u>APPROVED BY:</u><br><br><b>FSMITH</b> |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|                                 |             |                 |                                |                 |             |                                 |             |                 |                              |                 |  |
|---------------------------------|-------------|-----------------|--------------------------------|-----------------|-------------|---------------------------------|-------------|-----------------|------------------------------|-----------------|--|
| Assy. Proc: TOP ENTRY           |             |                 | Assy. Proc: TOP ENTRY          |                 |             | Assy. Proc: RIGHT ANGLE         |             |                 | Assy. Proc: BOTTOM ENTRY     |                 |  |
| Housing No: 41815-N-AN          |             |                 | Housing No: 41815-N-AN         |                 |             | Housing No: 41815-N-AN          |             |                 | Housing No: 41815-N-AN       |                 |  |
| Options WITH RAMP               |             |                 | Options WITH RAMP              |                 |             | Options WITH RAMP               |             |                 | Options WITH RAMP            |                 |  |
| Terminal No: 2144-AA-A1AA-P909B |             |                 | Terminal No: 2144-AA-A1AA-208B |                 |             | Terminal No: 2144-BA-A1AA-P909B |             |                 | Terminal No: 6298-1-P909     |                 |  |
| Term Matl: BRASS                |             |                 | Term Matl: BRASS               |                 |             | Term Matl: PHOS BRONZE          |             |                 | Term Matl: PHOS BRONZE       |                 |  |
| Plating: P909 – TIN             |             |                 | Plating: 208 – 15 GOLD         |                 |             | Plating: P909 – TIN             |             |                 | Plating: P909 – TIN          |                 |  |
| Dim C: (3.05) / .120            |             |                 | Dim C: (3.05) / .120           |                 |             | Dim C: (3.68) / .145            |             |                 | Dim C: (3.18) / .125         |                 |  |
| Voids: NONE                     |             |                 | Voids: NONE                    |                 |             | Voids: NONE                     |             |                 | Voids: NONE                  |                 |  |
| Hooks Cut: NO                   |             |                 | Hooks Cut: NO                  |                 |             | Hooks Cut: NO                   |             |                 | Hooks Cut: NO                |                 |  |
| Packaging: PK-41815-001 TRAY    |             |                 | Packaging: PK-41815-001 TRAY   |                 |             | Packaging: PK-41815-001 TRAY    |             |                 | Packaging: PK-41815-001 TRAY |                 |  |
|                                 |             |                 |                                |                 |             |                                 |             |                 |                              |                 |  |
| Ckts                            | Material No | Engineer Number | Material No                    | Engineer Number | Material No | Engineer Number                 | Material No | Engineer Number | Material No                  | Engineer Number |  |
| 2                               | 09-48-2023  | A-41815-0453    | 09-48-3026                     | A-41815-0467    | 09-48-2020  | A-41815-0481                    | 09-48-2029  | A-41815-0495    | 09-48-2029                   | A-41815-0495    |  |
| 3                               | 09-48-2033  | A-41815-0454    | 09-48-3036                     | A-41815-0468    | 09-48-2030  | A-41815-0482                    | 09-48-2039  | A-41815-0496    | 09-48-2039                   | A-41815-0496    |  |
| 4                               | 09-48-2043  | A-41815-0455    | 09-48-3046                     | A-41815-0469    | 09-48-2040  | A-41815-0483                    | 09-48-2049  | A-41815-0497    | 09-48-2049                   | A-41815-0497    |  |
| 5                               | 09-48-2053  | A-41815-0456    | 09-48-3056                     | A-41815-0470    | 09-48-2050  | A-41815-0484                    | 09-48-2059  | A-41815-0498    | 09-48-2059                   | A-41815-0498    |  |
| 6                               | 09-48-2063  | A-41815-0457    | 09-48-3066                     | A-41815-0471    | 09-48-2060  | A-41815-0485                    | 09-48-2069  | A-41815-0499    | 09-48-2069                   | A-41815-0499    |  |
| 7                               | 09-48-2073  | A-41815-0458    | 09-48-3076                     | A-41815-0472    | 09-48-2070  | A-41815-0486                    | 09-48-2079  | A-41815-0500    | 09-48-2079                   | A-41815-0500    |  |
| 8                               | 09-48-2083  | A-41815-0459    | 09-48-3086                     | A-41815-0473    | 09-48-2080  | A-41815-0487                    | 09-48-2089  | A-41815-0501    | 09-48-2089                   | A-41815-0501    |  |
| 9                               | 09-48-2093  | A-41815-0460    | 09-48-3096                     | A-41815-0474    | 09-48-2090  | A-41815-0488                    | 09-48-2099  | A-41815-0502    | 09-48-2099                   | A-41815-0502    |  |
| 10                              | 09-48-2103  | A-41815-0461    | 09-48-3106                     | A-41815-0475    | 09-48-2100  | A-41815-0489                    | 09-48-2109  | A-41815-0503    | 09-48-2109                   | A-41815-0503    |  |
| 11                              | 09-48-2113  | A-41815-0462    | 09-48-3116                     | A-41815-0476    | 09-48-2110  | A-41815-0490                    | 09-48-2119  | A-41815-0504    | 09-48-2119                   | A-41815-0504    |  |
| 12                              | 09-48-2123  | A-41815-0463    | 09-48-3126                     | A-41815-0477    | 09-48-2120  | A-41815-0491                    | 09-48-2129  | A-41815-0505    | 09-48-2129                   | A-41815-0505    |  |
| 13                              | 09-48-2133  | A-41815-0464    | 09-48-3136                     | A-41815-0478    | 09-48-2130  | A-41815-0492                    | 09-48-2139  | A-41815-0506    | 09-48-2139                   | A-41815-0506    |  |
| 14                              | 09-48-2143  | A-41815-0465    | 09-48-3146                     | A-41815-0479    | 09-48-2140  | A-41815-0493                    | 09-48-2149  | A-41815-0507    | 09-48-2149                   | A-41815-0507    |  |
| 15                              | 09-48-2153  | A-41815-0466    | 09-48-3156                     | A-41815-0480    | 09-48-2150  | A-41815-0494                    | 09-48-2159  | A-41815-0508    | 09-48-2159                   | A-41815-0508    |  |

|                                                  |                      |                     |                                                                   |                               |                               |
|--------------------------------------------------|----------------------|---------------------|-------------------------------------------------------------------|-------------------------------|-------------------------------|
| REV:<br><br><b>AL6</b>                           | ECR/ECN INFORMATION: |                     | TITLE:<br><br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><br><b>- 8 -</b> |                               |
|                                                  | EC NO.               | <b>UCP2009-0167</b> |                                                                   |                               |                               |
|                                                  | DATE:                | <b>10/30/2008</b>   |                                                                   |                               |                               |
| DOCUMENT NUMBER:<br><b>SDA-41815</b>             |                      |                     | CREATED / REVISED BY:<br><b>MKIPPER</b>                           | CHECKED BY:<br><b>JBELL</b>   | APPROVED BY:<br><b>FSMITH</b> |
| TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A](V.1).DOC |                      |                     |                                                                   |                               |                               |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|                                 |             |                 |                                |                 |             |                                |             |                 |                              |                 |  |
|---------------------------------|-------------|-----------------|--------------------------------|-----------------|-------------|--------------------------------|-------------|-----------------|------------------------------|-----------------|--|
| Assy. Proc: TOP ENTRY           |             |                 | Assy. Proc: TOP ENTRY          |                 |             | Assy. Proc: TOP ENTRY          |             |                 | Assy. Proc: BOTTOM ENTRY     |                 |  |
| Housing No: 41815-N-AN          |             |                 | Housing No: 41815-N-AN         |                 |             | Housing No: 41815-N-AN         |             |                 | Housing No: 41815-N-AN       |                 |  |
| Options WITH RAMP               |             |                 | Options WITH RAMP              |                 |             | Options WITH RAMP              |             |                 | Options WITH RAMP            |                 |  |
| Terminal No: 2144-BA-A1AA-P909B |             |                 | Terminal No: 2144-BA-A1AA-102B |                 |             | Terminal No: 2144-BA-A1AA-208B |             |                 | Terminal No: 2188-1-208      |                 |  |
| Term Matl: PHOS BRONZE          |             |                 | Term Matl: PHOS BRONZE         |                 |             | Term Matl: PHOS BRONZE         |             |                 | Term Matl: BRASS             |                 |  |
| Plating: P909 – TIN             |             |                 | Plating: 102 – TIN             |                 |             | Plating: 208 – 15 GOLD         |             |                 | Plating: 208 – 15 GOLD       |                 |  |
| Dim C: (3.05) / .120            |             |                 | Dim C: (3.05) / .120           |                 |             | Dim C: (3.05) / .120           |             |                 | Dim C: (3.18) / .125         |                 |  |
| Voids: NONE                     |             |                 | Voids: NONE                    |                 |             | Voids: NONE                    |             |                 | Voids: TERMINAL VOID 2       |                 |  |
| Hooks Cut: NO                   |             |                 | Hooks Cut: YES                 |                 |             | Hooks Cut: YES                 |             |                 | Hooks Cut: NO                |                 |  |
| Packaging: PK-41815-001 TRAY    |             |                 | Packaging: PK-41815-001 TRAY   |                 |             | Packaging: PK-41815-001 TRAY   |             |                 | Packaging: PK-41815-001 TRAY |                 |  |
|                                 |             |                 |                                |                 |             |                                |             |                 |                              |                 |  |
| Ckts                            | Material No | Engineer Number | Material No                    | Engineer Number | Material No | Engineer Number                | Material No | Engineer Number | Material No                  | Engineer Number |  |
| 2                               | 09-48-2028  | A-41815-0509    | 09-48-5028                     | A-41815-0523    | 09-48-1025  | A-41815-0537                   |             |                 |                              |                 |  |
| 3                               | 09-48-2038  | A-41815-0510    | 09-48-5038                     | A-41815-0524    | 09-48-1035  | A-41815-0538                   |             |                 | 41815-0551                   | 41815-0551      |  |
| 4                               | 09-48-2048  | A-41815-0511    | 09-48-5048                     | A-41815-0525    | 09-48-1045  | A-41815-0539                   |             |                 | 41815-0552                   | 41815-0552      |  |
| 5                               | 09-48-2058  | A-41815-0512    | 09-48-5058                     | A-41815-0526    | 09-48-1055  | A-41815-0540                   |             |                 | 41815-0553                   | 41815-0553      |  |
| 6                               | 09-48-2068  | A-41815-0513    | 09-48-5068                     | A-41815-0527    | 09-48-1065  | A-41815-0541                   |             |                 | 41815-0554                   | 41815-0554      |  |
| 7                               | 09-48-2078  | A-41815-0514    | 09-48-5078                     | A-41815-0528    | 09-48-1075  | A-41815-0542                   |             |                 | 41815-0555                   | 41815-0555      |  |
| 8                               | 09-48-2088  | A-41815-0515    | 09-48-5088                     | A-41815-0529    | 09-48-1085  | A-41815-0543                   |             |                 | 41815-0556                   | 41815-0556      |  |
| 9                               | 09-48-2098  | A-41815-0516    | 09-48-5098                     | A-41815-0530    | 09-48-1095  | A-41815-0544                   |             |                 | 41815-0557                   | 41815-0557      |  |
| 10                              | 09-48-2108  | A-41815-0517    | 09-48-5108                     | A-41815-0531    | 09-48-1105  | A-41815-0545                   |             |                 | 41815-0558                   | 41815-0558      |  |
| 11                              | 09-48-2118  | A-41815-0518    | 09-48-5118                     | A-41815-0532    | 09-48-1115  | A-41815-0546                   |             |                 | 41815-0559                   | 41815-0559      |  |
| 12                              | 09-48-2128  | A-41815-0519    | 09-48-5128                     | A-41815-0533    | 09-48-1125  | A-41815-0547                   |             |                 | 41815-0560                   | 41815-0560      |  |
| 13                              | 09-48-2138  | A-41815-0520    | 09-48-5138                     | A-41815-0534    | 09-48-1135  | A-41815-0548                   |             |                 | 41815-0561                   | 41815-0561      |  |
| 14                              | 09-48-2148  | A-41815-0521    | 09-48-5148                     | A-41815-0535    | 09-48-1145  | A-41815-0549                   |             |                 | 41815-0562                   | 41815-0562      |  |
| 15                              | 09-48-2158  | A-41815-0522    | 09-48-5158                     | A-41815-0536    | 09-48-1155  | A-41815-0550                   |             |                 | 41815-0563                   | 41815-0563      |  |

|                                                  |                      |                     |                                                                          |                                        |                                          |
|--------------------------------------------------|----------------------|---------------------|--------------------------------------------------------------------------|----------------------------------------|------------------------------------------|
| REV:<br><br><b>AL6</b>                           | ECR/ECN INFORMATION: |                     | <u>TITLE:</u><br><br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | <u>SHEET No.</u><br><br><b>- 9 -</b>   |                                          |
|                                                  | EC NO.               | <b>UCP2009-0167</b> |                                                                          |                                        |                                          |
|                                                  | DATE:                | <b>10/30/2008</b>   |                                                                          |                                        |                                          |
| <u>DOCUMENT NUMBER:</u><br><br><b>SDA-41815</b>  |                      |                     | <u>CREATED / REVISED BY:</u><br><br><b>MKIPPER</b>                       | <u>CHECKED BY:</u><br><br><b>JBELL</b> | <u>APPROVED BY:</u><br><br><b>FSMITH</b> |
| TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A](V.1).DOC |                      |                     |                                                                          |                                        |                                          |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|      |              |                   |              |                   |              |                   |              |                   |
|------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|
|      | Assy. Proc:  | BOTTOM ENTRY      | Assy. Proc:  | BOTTOM ENTRY      | Assy. Proc:  | RIGHT ANGLE       | Assy. Proc:  | TOP ENTRY         |
|      | Housing No:  | 41815-N-DN        | Housing No:  | 41815-N-DN        | Housing No:  | 41815-N-A15-7     | Housing No:  | 41815-N-DN        |
|      | Options      | WITHOUT RAMPS     | Options      | WITHOUT RAMPS     | Options      | WITH RAMP         | Options      | WITHOUT RAMP      |
|      | Terminal No: | 6298-1-102        | Terminal No: | 6298-1-102        | Terminal No: | 2144-BA-A1AA-102B | Terminal No: | 2144-BA-A1AA-102B |
|      | Term Matl:   | PHOS BRONZE       | Term Matl:   | PHOS BRONZE       | Term Matl:   | PHOS BRONZE       | Term Matl:   | PHOS BRONZE       |
|      | Plating:     | 102               | Plating:     | 102               | Plating:     | 102 TIN           | Plating:     | 102 TIN           |
|      | Dim C:       | 3.18 / .125       | Dim C:       | 3.18 / .125       | Dim C:       | (3.68) / .145     | Dim C:       | (3.05)/.120       |
|      | Voids:       | NONE              | Voids:       | TERMINAL VOID 2   | Voids:       | TERMINAL VOID 7   | Voids:       | NONE              |
|      | Hooks Cut:   | NO                | Hooks Cut:   | NO                | Hooks Cut:   | NO                | Hooks Cut:   | YES               |
|      | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY | Packaging:   | PK-41815-001 TRAY |
| Ckts | Material No  | Engineer Number   | Material No  | Engineer Number   | Material No  | Engineer Number   | Material No  | Engineer Number   |
| 2    | 41815-0564   | A-41815-0564      |              |                   |              |                   | 41815-0601   | A-41815-0601      |
| 3    | 41815-0565   | A-41815-0565      | 41815-0579   | A-41815-0579      |              |                   | 41815-0602   | A-41815-0602      |
| 4    | 41815-0566   | A-41815-0566      | 41815-0580   | A-41815-0580      |              |                   |              |                   |
| 5    | 41815-0567   | A-41815-0567      | 41815-0581   | A-41815-0581      |              |                   |              |                   |
| 6    | 41815-0568   | A-41815-0568      | 41815-0582   | A-41815-0582      |              |                   | 41815-0605   | A-41815-0605      |
| 7    | 41815-0569   | A-41815-0569      | 41815-0583   | A-41815-0583      |              |                   |              |                   |
| 8    | 41815-0570   | A-41815-0570      | 41815-0584   | A-41815-0584      |              |                   |              |                   |
| 9    | 41815-0571   | A-41815-0571      | 41815-0585   | A-41815-0585      |              |                   |              |                   |
| 10   | 41815-0572   | A-41815-0572      | 41815-0586   | A-41815-0586      |              |                   |              |                   |
| 11   | 41815-0573   | A-41815-0573      | 41815-0587   | A-41815-0587      |              |                   |              |                   |
| 12   | 41815-0574   | A-41815-0574      | 41815-0588   | A-41815-0588      |              |                   |              |                   |
| 13   | 41815-0575   | A-41815-0575      | 41815-0589   | A-41815-0589      |              |                   |              |                   |
| 14   | 41815-0576   | A-41815-0576      | 41815-0590   | A-41815-0590      |              |                   |              |                   |
| 15   | 41815-0577   | A-41815-0577      | 41815-0591   | A-41815-0591      | 41815-0600   | A-41815-0600      |              |                   |

|                                      |                      |                     |                                                               |                             |
|--------------------------------------|----------------------|---------------------|---------------------------------------------------------------|-----------------------------|
| REV:<br><b>AL6</b>                   | ECR/ECN INFORMATION: |                     | TITLE:<br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><b>- 10 -</b>  |
|                                      | EC NO.               | <b>UCP2009-0167</b> |                                                               |                             |
|                                      | DATE:                | <b>10/30/2008</b>   |                                                               |                             |
| DOCUMENT NUMBER:<br><b>SDA-41815</b> |                      |                     | CREATED / REVISED BY:<br><b>MKIPPER</b>                       | CHECKED BY:<br><b>JBELL</b> |
|                                      |                      |                     | APPROVED BY:<br><b>FSMITH</b>                                 |                             |



# KK 156 PCB ASSY 2-15 CKT

## 41815 SERIES

|              |                   |
|--------------|-------------------|
| Assy. Proc:  | RIGHT ANGLE       |
| Housing No:  | 41815-N-DN        |
| Options      | WITHOUT RAMP      |
| Terminal No: | 2144-BA-A1AA-102B |
| Term Matl:   | PHOS BRONZE       |
| Plating:     | 102 TIN           |
| Dim C:       | (3.68) / .145     |
| Voids:       | NONE              |
| Hooks Cut:   | NO                |
| Packaging:   | PK-41815-001 TRAY |

|              |                    |
|--------------|--------------------|
| Assy. Proc:  | TOP ENTRY          |
| Housing No:  | 41815-N-DN         |
| Options      | WITHOUT RAMP       |
| Terminal No: | 2144-AA-A1AA-P909B |
| Term Matl:   | BRASS              |
| Plating:     | P909 – TIN         |
| Dim C:       | (3.05) / .120      |
| Voids:       | NONE               |
| Hooks Cut:   | YES                |
| Packaging:   | PK-41815-001 TRAY  |

| Ckts | Material No | Engineer Number |
|------|-------------|-----------------|
| 2    | 41815-0630  | A-41815-0630    |
| 3    | 41815-0631  | A-41815-0631    |
| 4    | 41815-0632  | A-41815-0632    |
| 5    | 41815-0633  | A-41815-0633    |
| 6    | 41815-0634  | A-41815-0634    |
| 7    | 41815-0635  | A-41815-0635    |
| 8    | 41815-0636  | A-41815-0636    |
| 9    | 41815-0637  | A-41815-0637    |
| 10   | 41815-0638  | A-41815-0638    |
| 11   | 41815-0639  | A-41815-0639    |
| 12   | 41815-0640  | A-41815-0640    |
| 13   | 41815-0641  | A-41815-0641    |
| 14   | 41815-0642  | A-41815-0642    |
| 15   | 41815-0643  | A-41815-0643    |

| Material No | Engineer Number |
|-------------|-----------------|
|             |                 |
|             |                 |
| 41815-0646  | A-41815-0646    |
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|                                      |                      |                     |                                                               |                             |
|--------------------------------------|----------------------|---------------------|---------------------------------------------------------------|-----------------------------|
| REV:<br><b>AL6</b>                   | ECR/ECN INFORMATION: |                     | TITLE:<br><b>KK 156 HOUSING ASSY PCB<br/>41815 SERIES DWG</b> | SHEET No.<br><b>- 11 -</b>  |
|                                      | EC NO.               | <b>UCP2009-0167</b> |                                                               |                             |
|                                      | DATE:                | <b>10/30/2008</b>   |                                                               |                             |
| DOCUMENT NUMBER:<br><b>SDA-41815</b> |                      |                     | CREATED / REVISED BY:<br><b>MKIPPER</b>                       | CHECKED BY:<br><b>JBELL</b> |
|                                      |                      |                     | APPROVED BY:<br><b>FSMITH</b>                                 |                             |