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**Part Number:** [0416810003](#)  
**Status:** **Active**  
**Description:** 3.96mm (.156") Pitch KK® Header, Breakaway, Vertical, Polarizing Wall, 4 Circuits, 0.38µm (15µ") Gold (Au) Selective Plating

**Documents:**

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

**Agency Certification**

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

**General**

|                |                       |
|----------------|-----------------------|
| Product Family | PCB Headers           |
| Series         | <a href="#">41681</a> |
| Application    | Wire-to-Board         |
| Product Name   | KK®                   |

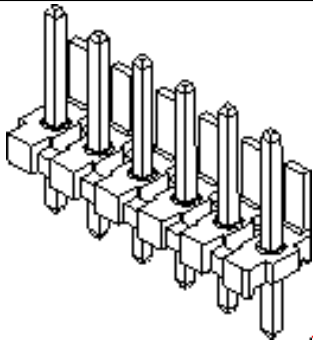
**Physical**

|                                |              |
|--------------------------------|--------------|
| Breakaway                      | Yes          |
| Circuits (Loaded)              | 4            |
| Circuits (maximum)             | 4            |
| Color - Resin                  | Black        |
| Durability (mating cycles max) | 50           |
| Flammability                   | 94V-0        |
| Glow-Wire Compliant            | No           |
| Lock to Mating Part            | None         |
| Material - Metal               | Brass        |
| Material - Plating Mating      | Gold         |
| Material - Resin               | Polyester    |
| Number of Rows                 | 1            |
| Orientation                    | Vertical     |
| PC Tail Length (in)            | 0.172 In     |
| PC Tail Length (mm)            | 4.37 mm      |
| PCB Locator                    | No           |
| PCB Retention                  | None         |
| 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)       | 0.38         |
| Polarized to Mating Part       | No           |
| Polarized to PCB               | No           |
| Shrouded                       | No           |
| Stackable                      | No           |
| Temperature Range - Operating  | 0°C to +75°C |
| Termination Interface: Style   | Through Hole |

**Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 7A   |
| Voltage - Maximum             | 250V |

**Solder Process Data**



*.Series  
image - Reference only*

**EU RoHS**

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

**Not Reviewed**

**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.

**China RoHS**



**Search Parts in this Series**

[41681Series](#)

**Mates With**

[3069](#) , [2139](#) , [2145](#) , [6442](#) , [7674](#) , [7675](#) ,  
[41695](#) , L ink:41815

|                                                |                        |
|------------------------------------------------|------------------------|
| 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                    |

**Material Info**

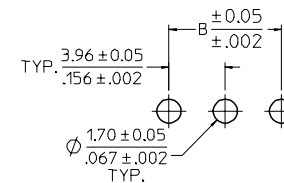
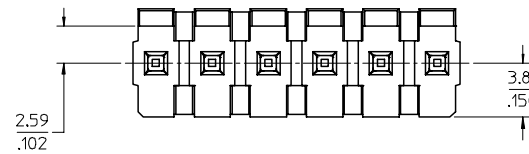
|                 |                 |
|-----------------|-----------------|
| Old Part Number | A-41681-B04A208 |
|-----------------|-----------------|

**Reference - Drawing Numbers**

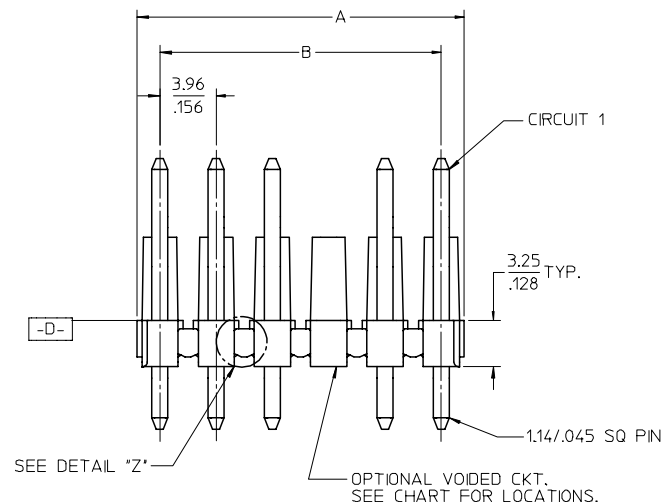
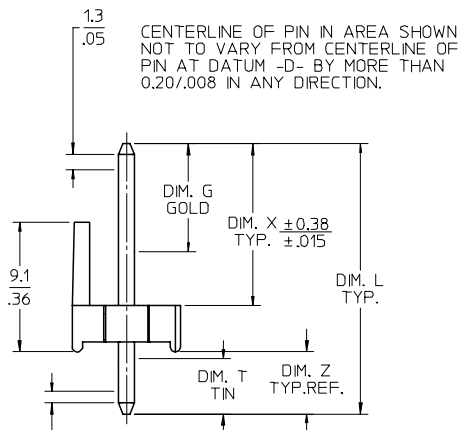
|                       |              |
|-----------------------|--------------|
| Product Specification | PS-08-50     |
| Sales Drawing         | SD-41681-001 |

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PCB LAYOUT:COMPONENT SIDE  
RECOMMENDED PCB THICKNESS:  
1.57±0.18/.062±.007



-1.3  
0.05 CENTERLINE OF PIN IN AREA SHOWN  
NOT TO VARY FROM CENTERLINE OF  
PIN AT DATUM -D- BY MORE THAN  
0.13/0.05 IN ANY DIRECTION.

NOTES:  
1. MATERIAL: HEADER: GLASS FILLED POLYESTER, 94V-0, MOLDED BLACK  
PINS- BRASS

2. FINISH:  
(102) = OVERALL TIN: (0.00508)/.000200 MIN.  
OVERALL COPPER UNDERCOAT: (0.00254)/.000100 MIN.  
(208) = SELECT GOLD: (0.000361)/.000015 MIN. OVER  
SELECT TIN: (0.00254)/.000100 MIN. OVER  
NICKEL OVERALL: (0.000127)/.000050 MIN.  
(228) = SELECT GOLD: (0.000761)/.000030 MIN.  
SELECT TIN: (0.00254)/.000100 MIN.  
OVER NICKEL OVERALL: (0.00127)/.000050 MIN.  
(501) = OVERALL GOLD: (0.00051)/.000020 MIN.  
OVER NICKEL OVERALL: (0.000761)/.000030 MIN.  
(503) = OVERALL GOLD: (0.000761)/.000030 MIN.  
OVER NICKEL OVERALL: (0.00127)/.000050 MIN.

\* THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC". CARTONS WITHOUT MAY CONTAIN PRODUCT WITH TIN/LEAD PLATINGS.

3. PRODUCT SPECIFICATION: PS-08-50.

4. PACKAGING: SEE CHART

5. SOLDERABILITY: PER SMES-152.

6. PIN PUSH-OUT FORCE: PRIOR TO SOLDERING, A 3 LB. MINIMUM FORCE IN EITHER DIRECTION SHALL BE REQUIRED TO PUSH THE PIN OUT OF THE HEADER.

7. PARTS ARE STACKABLE END TO END ON 3.96/156 CENTERS. (SPACING TABS MUST BE REMOVED ON CIRCUIT SIZES 1-23 BEFORE PARTS ARE STACKABLE.)

A-41681- \* N \* \* \*

PACKAGING OPTIONS \_\_\_\_\_

NO. OF CKTS \_\_\_\_\_

PIN DIMENSIONS \_\_\_\_\_

PLATING \_\_\_\_\_

VOID LOCATIONS  
BLANK=NO VOIDS  
NO.=CKT NO. VOIDED  
MULT=VOIDS=51 UP

— VOID LOCATIONS  
BLANK=NO VOIDS  
NO.=CKT NO. VOIDED  
MULT-VOIDS=51 UP

|      |      |
|------|------|
| 2-*  | S2   |
| 1    | S2   |
| SHT. | REV. |

| REV                 | DESCRIPTION |
|---------------------|-------------|
| REVISED / REDRAWN   |             |
| EC NO: UCP2006-2983 |             |
| DRWN:PRI DDER       | 2006/08/02  |
| CHKD:ADERR          | 2006/08/03  |
| APPR:FSM1 TH        | 2006/08/04  |

| QUALITY SYMBOLS                                                                       |    |
|---------------------------------------------------------------------------------------|----|
|  | =0 |
|  | =0 |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED) |        |        |
|------------------------------------------|--------|--------|
|                                          | mm     | INCH   |
| 4 PLACES                                 | ± ---  | ± ---  |
| 3 PLACES                                 | ± ---  | ± .006 |
| 2 PLACES                                 | ± 0.15 | ± .010 |
| 1 PLACE                                  | ± 0.25 | ± ---  |
| ANGULAR ±1/2°                            |        |        |

DRAFT WHERE APPLICABLE  
MUST REMAIN  
WITHIN DIMENSIONS

| DIMENSION STYLE |          |
|-----------------|----------|
| MM/IN           |          |
| DRAWN BY        | DATE     |
| SAMIEC          | 08/09/85 |
| CHECKED BY      | DATE     |
| PATEL           | 08/09/85 |
| APPROVED BY     | DATE     |
| LENZ            | 08/09/85 |

|              |  |
|--------------|--|
| MATERIAL NO. |  |
|--------------|--|

E SEE CHART

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

|       |              |
|-------|--------------|
| SCALE | DESIGN UNITS |
| 4:1   | INCH         |

THIRD ANGLE  
PROJECTION

KK .156 HEADER ASSEMBLY  
POLARIZING STRAIGHT  
2-24 CKTS.

|   |       |
|---|-------|
| 5 | molex |
|---|-------|

MOLEX INCORPORATED

DOCUMENT NO.  
SD-41681-001

CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX  
SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

| CIRCUIT | A                          | B              |
|---------|----------------------------|----------------|
| 2       | 6.78/7.87<br>.267/.310     | 3.96<br>.156   |
| 3       | 10.74/11.84<br>.423/.466   | 7.92<br>.312   |
| 4       | 14.71/15.80<br>.579/.622   | 11.89<br>.468  |
| 5       | 18.67/19.76<br>.735/.778   | 15.85<br>.624  |
| 6       | 22.63/23.72<br>.891/.934   | 19.81<br>.780  |
| 7       | 26.59/27.69<br>1.047/1.090 | 23.77<br>.936  |
| 8       | 30.56/31.65<br>1.203/1.246 | 27.74<br>1.092 |
| 9       | 34.52/35.61<br>1.359/1.402 | 31.70<br>1.248 |
| 10      | 38.48/39.57<br>1.515/1.558 | 35.66<br>1.404 |
| 11      | 42.44/43.54<br>1.671/1.714 | 39.62<br>1.560 |
| 12      | 46.41/47.50<br>1.827/1.870 | 43.59<br>1.716 |
| 13      | 50.37/51.46<br>1.983/2.026 | 47.55<br>1.872 |
| 14      | 54.33/55.42<br>2.139/2.182 | 51.51<br>2.028 |
| 15      | 58.29/59.39<br>2.295/2.338 | 55.47<br>2.184 |
| 16      | 62.26/63.35<br>2.451/2.494 | 59.44<br>2.340 |
| 17      | 66.22/67.31<br>2.607/2.650 | 63.40<br>2.496 |
| 18      | 70.18/71.27<br>2.763/2.806 | 67.36<br>2.652 |
| 19      | 74.14/75.23<br>2.919/2.962 | 71.32<br>2.808 |
| 20      | 78.11/79.20<br>3.075/3.118 | 75.29<br>2.964 |
| 21      | 82.07/83.16<br>3.231/3.274 | 79.25<br>3.120 |
| 22      | 86.03/87.12<br>3.387/3.430 | 83.21<br>3.276 |
| 23      | 89.94/91.08<br>3.541/3.586 | 87.17<br>3.432 |
| 24      | 93.85/95.00<br>3.695/3.740 | 91.14<br>3.588 |

| ENG. NO: A-41681-ANA102-* |            |                     |       | ENG. NO: A-41681-ANA501-* |            |                     |       | ENG. NO: A-41681-ANC102-* |            |                     |       |
|---------------------------|------------|---------------------|-------|---------------------------|------------|---------------------|-------|---------------------------|------------|---------------------|-------|
| PIN NUMBER                |            | 2161-1(102)         |       | PIN NUMBER                |            | 2161-1(501)         |       | PIN NUMBER                |            | 2161-56(102)        |       |
| PLATING                   |            | 102                 |       | PLATING                   |            | 501                 |       | PLATING                   |            | 102                 |       |
| DIM. L                    |            | (19.05)/.750        |       | DIM. L                    |            | (19.05)/.750        |       | DIM. L                    |            | (17.86)/.703        |       |
| DIM. X                    |            | (11.43)/.450        |       | DIM. X                    |            | (11.43)/.450        |       | DIM. X                    |            | (11.43)/.450        |       |
| DIM. G (GOLD)             |            | N/A                 |       | DIM. G (GOLD)             |            | OVERALL             |       | DIM. G (GOLD)             |            | N/A                 |       |
| DIM. Z                    |            | (4.37)/.172         |       | DIM. Z                    |            | (4.37)/.172         |       | DIM. Z                    |            | (3.18)/.125         |       |
| DIM. T (TIN)              |            | OVERALL             |       | DIM. T (TIN)              |            | N/A                 |       | DIM. T (TIN)              |            | OVERALL             |       |
| PACKAGING                 |            | PK-41681-001 (BULK) |       | PACKAGING                 |            | PK-41681-001 (BULK) |       | PACKAGING                 |            | PK-41681-001 (BULK) |       |
| CKTS                      | EDP NO.    | ENG. NO.            | VOIDS | CKTS                      | EDP NO.    | ENG. NO.            | VOIDS | CKTS                      | EDP NO.    | ENG. NO.            | VOIDS |
| 02                        | 26-48-1023 | A-41681-A2A102      |       | 02                        | 26-48-2023 | A-41681-A2A501      |       | 02                        | 26-48-7025 | A-41681-A2C102      |       |
| 03                        | 26-48-1033 | A-41681-A3A102      |       | 03                        | 26-48-2033 | A-41681-A3A501      |       | 03                        | 26-48-7035 | A-41681-A3C102      |       |
| 04                        | 26-48-1043 | A-41681-A4A102      |       | 04                        | 26-48-2043 | A-41681-A4A501      |       | 04                        | 26-48-7045 | A-41681-A4C102      |       |
| 05                        | 26-48-1053 | A-41681-A5A102      |       | 05                        | 26-48-2053 | A-41681-A5A501      |       | 05                        | 26-48-7055 | A-41681-A5C102      |       |
| 06                        | 26-48-1063 | A-41681-A6A102      |       | 06                        | 26-48-2063 | A-41681-A6A501      |       | 06                        | 26-48-7065 | A-41681-A6C102      |       |
| 07                        | 26-48-1073 | A-41681-A7A102      |       | 07                        | 26-48-2073 | A-41681-A7A501      |       | 07                        | 26-48-7075 | A-41681-A7C102      |       |
| 08                        | 26-48-1083 | A-41681-A8A102      |       | 08                        | 26-48-2083 | A-41681-A8A501      |       | 08                        | 26-48-7085 | A-41681-A8C102      |       |
| 09                        | 26-48-1093 | A-41681-A9A102      |       | 09                        | 26-48-2093 | A-41681-A9A501      |       | 09                        | 26-48-7095 | A-41681-A9C102      |       |
| 10                        | 26-48-1103 | A-41681-A10A102     |       | 10                        | 26-48-2103 | A-41681-A10A501     |       | 10                        | 26-48-7105 | A-41681-A10C102     |       |
| 11                        | 26-48-1113 | A-41681-A11A102     |       | 11                        | 26-48-2113 | A-41681-A11A501     |       | 11                        | 26-48-7115 | A-41681-A11C102     |       |
| 12                        | 26-48-1123 | A-41681-A12A102     |       | 12                        | 26-48-2123 | A-41681-A12A501     |       | 12                        | 26-48-7125 | A-41681-A12C102     |       |
| 13                        | 26-48-1133 | A-41681-A13A102     |       | 13                        | 26-48-2133 | A-41681-A13A501     |       | 13                        | 26-48-7135 | A-41681-A13C102     |       |
| 14                        | 26-48-1143 | A-41681-A14A102     |       | 14                        | 26-48-2143 | A-41681-A14A501     |       | 14                        | 26-48-7145 | A-41681-A14C102     |       |
| 15                        | 26-48-1153 | A-41681-A15A102     |       | 15                        | 26-48-2153 | A-41681-A15A501     |       | 15                        | 26-48-7155 | A-41681-A15C102     |       |
| 16                        | 26-48-1163 | A-41681-A16A102     |       | 16                        | 26-48-2163 | A-41681-A16A501     |       | 16                        | 26-48-7165 | A-41681-A16C102     |       |
| 17                        | 26-48-1173 | A-41681-A17A102     |       | 17                        | 26-48-2173 | A-41681-A17A501     |       | 17                        | 26-48-7175 | A-41681-A17C102     |       |
| 18                        | 26-48-1183 | A-41681-A18A102     |       | 18                        | 26-48-2183 | A-41681-A18A501     |       | 18                        | 26-48-7185 | A-41681-A18C102     |       |
| 19                        | 26-48-1193 | A-41681-A19A102     |       | 19                        | 26-48-2193 | A-41681-A19A501     |       | 19                        | 26-48-7195 | A-41681-A19C102     |       |
| 20                        | 26-48-1203 | A-41681-A20A102     |       | 20                        | 26-48-2203 | A-41681-A20A501     |       | 20                        | 26-48-7205 | A-41681-A20C102     |       |
| 21                        | 26-48-1213 | A-41681-A21A102     |       | 21                        | 26-48-2213 | A-41681-A21A501     |       | 21                        | 26-48-7215 | A-41681-A21C102     |       |
| 22                        | 26-48-1223 | A-41681-A22A102     |       | 22                        | 26-48-2223 | A-41681-A22A501     |       | 22                        | 26-48-7225 | A-41681-A22C102     |       |
| 23                        | 26-48-1233 | A-41681-A23A102     |       | 23                        | 26-48-2233 | A-41681-A23A501     |       | 23                        | 26-48-7235 | A-41681-A23C102     |       |
| 24                        | 26-48-1243 | A-41681-A24A102     |       | 24                        | 26-48-2243 | A-41681-A24A501     |       | 24                        | 26-48-7245 | A-41681-A24C102     |       |
| 13                        | 26-49-6137 | A-41681-A13A102-12  | 12    |                           |            |                     |       |                           |            |                     |       |
| 17                        | 26-49-6177 | A-41681-A17A102-2   | 2     |                           |            |                     |       |                           |            |                     |       |
| 20                        | 26-49-6207 | A-41681-A20A102-17  | 17    |                           |            |                     |       |                           |            |                     |       |

|                                                    |                                   |                                                    |                                                                                  |                                          |
|----------------------------------------------------|-----------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------|
| REV:<br><br><b>S2</b>                              | <u>ECR/ECN INFORMATION</u>        |                                                    | <u>TITLE:</u><br><br>KK .156 HEADER ASSEMBLY<br>POLARIZING STRAIGHT<br>2-24 CKTS | <u>SHEET No.</u><br><br>- 2 -            |
|                                                    | <u>EC No:</u> <b>UCP2006-2983</b> |                                                    |                                                                                  |                                          |
|                                                    | <u>DATE:</u> <b>2006-06-13</b>    |                                                    |                                                                                  |                                          |
| <u>DOCUMENT NUMBER:</u><br><br><b>SD-41681-001</b> |                                   | <u>CREATED / REVISED BY:</u><br><br><b>PRIDDER</b> | <u>CHECKED BY:</u><br><br><b>ADERR</b>                                           | <u>APPROVED BY:</u><br><br><b>FSMITH</b> |

| ENG. NO: A-41681-ANC503* |            |                     |       | ENG. NO: A-41681-BNA208* |            |                     |       | ENG. NO: A-41681-BNA228* |            |                     |       |
|--------------------------|------------|---------------------|-------|--------------------------|------------|---------------------|-------|--------------------------|------------|---------------------|-------|
| PIN NUMBER               |            | 2161-56(503)        |       | PIN NUMBER               |            | 43294-0236          |       | PIN NUMBER               |            | 43294-0237          |       |
| PLATING                  |            | 503                 |       | PLATING                  |            | 208                 |       | PLATING                  |            | 228                 |       |
| DIM. L                   |            | (17.86)/.703        |       | DIM. L                   |            | (19.05)/.750        |       | DIM. L                   |            | (19.05)/.750        |       |
| DIM. X                   |            | (11.43)/.450        |       | DIM. X                   |            | (11.43)/.450        |       | DIM. X                   |            | (11.43)/.450        |       |
| DIM. G (GOLD)            |            | OVERALL             |       | DIM. G (GOLD)            |            | (6.86)/.270         |       | DIM. G (GOLD)            |            | (6.86)/.270         |       |
| DIM. Z                   |            | (3.18)/.125         |       | DIM. Z                   |            | (4.37)/.172         |       | DIM. Z                   |            | (4.37)/.172         |       |
| DIM. T (TIN)             |            | N/A                 |       | DIM. T (TIN)             |            | (4.06)/.160         |       | DIM. T (TIN)             |            | (4.06)/.160         |       |
| PACKAGING                |            | PK-41681-001 (BULK) |       | PACKAGING                |            | PK-41681-001 (BULK) |       | PACKAGING                |            | PK-41681-001 (BULK) |       |
| CKTS                     | EDP NO.    | ENG. NO.            | VOIDS | CKTS                     | EDP NO.    | ENG. NO.            | VOIDS | CKTS                     | EDP NO.    | ENG. NO.            | VOIDS |
| 02                       | 26-48-7028 | A-41681-A2C503      |       | 02                       | 41681-0001 | A-41681-B02A208     |       | 02                       | 41681-0024 | A-41681-B02A228     |       |
| 03                       | 26-48-7038 | A-41681-A3C503      |       | 03                       | 41681-0002 | A-41681-B03A208     |       | 03                       | 41681-0025 | A-41681-B03A228     |       |
| 04                       | 26-48-7048 | A-41681-A4C503      |       | 04                       | 41681-0003 | A-41681-B04A208     |       | 04                       | 41681-0026 | A-41681-B04A228     |       |
| 05                       | 26-48-7058 | A-41681-A5C503      |       | 05                       | 41681-0004 | A-41681-B05A208     |       | 05                       | 41681-0027 | A-41681-B05A228     |       |
| 06                       | 26-48-7068 | A-41681-A6C503      |       | 06                       | 41681-0005 | A-41681-B06A208     |       | 06                       | 41681-0028 | A-41681-B06A228     |       |
| 07                       | 26-48-7078 | A-41681-A7C503      |       | 07                       | 41681-0006 | A-41681-B07A208     |       | 07                       | 41681-0029 | A-41681-B07A228     |       |
| 08                       | 26-48-7088 | A-41681-A8C503      |       | 08                       | 41681-0007 | A-41681-B08A208     |       | 08                       | 41681-0030 | A-41681-B08A228     |       |
| 09                       | 26-48-7098 | A-41681-A9C503      |       | 09                       | 41681-0008 | A-41681-B09A208     |       | 09                       | 41681-0031 | A-41681-B09A228     |       |
| 10                       | 26-48-7108 | A-41681-A10C503     |       | 10                       | 41681-0009 | A-41681-B10A208     |       | 10                       | 41681-0032 | A-41681-B10A228     |       |
| 11                       | 26-48-7118 | A-41681-A11C503     |       | 11                       | 41681-0010 | A-41681-B11A208     |       | 11                       | 41681-0033 | A-41681-B11A228     |       |
| 12                       | 26-48-7128 | A-41681-A12C503     |       | 12                       | 41681-0011 | A-41681-B12A208     |       | 12                       | 41681-0034 | A-41681-B12A228     |       |
| 13                       | 26-48-7138 | A-41681-A13C503     |       | 13                       | 41681-0012 | A-41681-B13A208     |       | 13                       | 41681-0035 | A-41681-B13A228     |       |
| 14                       | 26-48-7148 | A-41681-A14C503     |       | 14                       | 41681-0013 | A-41681-B14A208     |       | 14                       | 41681-0036 | A-41681-B14A228     |       |
| 15                       | 26-48-7158 | A-41681-A15C503     |       | 15                       | 41681-0014 | A-41681-B15A208     |       | 15                       | 41681-0037 | A-41681-B15A228     |       |
| 16                       | 26-48-7168 | A-41681-A16C503     |       | 16                       | 41681-0015 | A-41681-B16A208     |       | 16                       | 41681-0038 | A-41681-B16A228     |       |
| 17                       | 26-48-7178 | A-41681-A17C503     |       | 17                       | 41681-0016 | A-41681-B17A208     |       | 17                       | 41681-0039 | A-41681-B17A228     |       |
| 18                       | 26-48-7188 | A-41681-A18C503     |       | 18                       | 41681-0017 | A-41681-B18A208     |       | 18                       | 41681-0040 | A-41681-B18A228     |       |
| 19                       | 26-48-7198 | A-41681-A19C503     |       | 19                       | 41681-0018 | A-41681-B19A208     |       | 19                       | 41681-0041 | A-41681-B19A228     |       |
| 20                       | 26-48-7208 | A-41681-A20C503     |       | 20                       | 41681-0019 | A-41681-B20A208     |       | 20                       | 41681-0042 | A-41681-B20A228     |       |
| 21                       | 26-48-7218 | A-41681-A21C503     |       | 21                       | 41681-0020 | A-41681-B21A208     |       | 21                       | 41681-0043 | A-41681-B21A228     |       |
| 22                       | 26-48-7228 | A-41681-A22C503     |       | 22                       | 41681-0021 | A-41681-B22A208     |       | 22                       | 41681-0044 | A-41681-B22A228     |       |
| 23                       | 26-48-7238 | A-41681-A23C503     |       | 23                       | 41681-0022 | A-41681-B23A208     |       | 23                       | 41681-0045 | A-41681-B23A228     |       |
| 24                       | 26-48-7248 | A-41681-A24C503     |       | 24                       | 41681-0023 | A-41681-B24A208     |       | 24                       | 41681-0046 | A-41681-B24A228     |       |
|                          |            |                     |       |                          |            |                     |       |                          |            |                     |       |
|                          |            |                     |       |                          |            |                     |       |                          |            |                     |       |
|                          |            |                     |       |                          |            |                     |       |                          |            |                     |       |
|                          |            |                     |       |                          |            |                     |       |                          |            |                     |       |

|                                                    |                                   |  |                                                                                  |                                        |                                          |
|----------------------------------------------------|-----------------------------------|--|----------------------------------------------------------------------------------|----------------------------------------|------------------------------------------|
| REV:<br><br><b>S2</b>                              | <u>ECR/ECN INFORMATION</u>        |  | <u>TITLE:</u><br><br>KK .156 HEADER ASSEMBLY<br>POLARIZING STRAIGHT<br>2-24 CKTS | <u>SHEET No.</u><br><br>- 3 -          |                                          |
|                                                    | <u>EC No:</u> <b>UCP2006-2983</b> |  |                                                                                  |                                        |                                          |
|                                                    | <u>DATE:</u> <b>2006-06-13</b>    |  |                                                                                  |                                        |                                          |
| <u>DOCUMENT NUMBER:</u><br><br><b>SD-41681-001</b> |                                   |  | <u>CREATED / REVISED BY:</u><br><br><b>PRIDDER</b>                               | <u>CHECKED BY:</u><br><br><b>ADERR</b> | <u>APPROVED BY:</u><br><br><b>FSMITH</b> |

41681

| ENG. NO: A-41681-ANB102* |            |                     |       | ENG. NO       |         |                     |       | ENG. NO       |         |                     |       |
|--------------------------|------------|---------------------|-------|---------------|---------|---------------------|-------|---------------|---------|---------------------|-------|
| PIN NUMBER               |            | 2161-1(102)         |       | PIN NUMBER    |         |                     |       | PIN NUMBER    |         |                     |       |
| PLATING                  |            | 102                 |       | PLATING       |         |                     |       | PLATING       |         |                     |       |
| DIM. L                   |            | (19.05)/.750        |       | DIM. L        |         |                     |       | DIM. L        |         |                     |       |
| DIM. X                   |            | (12.62)/.497        |       | DIM. X        |         |                     |       | DIM. X        |         |                     |       |
| DIM. G (GOLD)            |            | N/A                 |       | DIM. G (GOLD) |         |                     |       | DIM. G (GOLD) |         |                     |       |
| DIM. Z                   |            | (3.18)/.125         |       | DIM. Z        |         |                     |       | DIM. Z        |         |                     |       |
| DIM. T (TIN)             |            | OVERALL             |       | DIM. T (TIN)  |         |                     |       | DIM. T (TIN)  |         |                     |       |
| PACKAGING                |            | PK-41681-001 (BULK) |       | PACKAGING     |         | PK-41681-001 (BULK) |       | PACKAGING     |         | PK-41681-001 (BULK) |       |
| CKTS                     | EDP NO.    | ENG. NO.            | VOIDS | CKTS          | EDP NO. | ENG. NO.            | VOIDS | CKTS          | EDP NO. | ENG. NO.            | VOIDS |
| 02                       | 41681-0047 | A-41681-A2B102      |       | 02            |         |                     |       | 02            |         |                     |       |
| 03                       | 41681-0048 | A-41681-A3B102      |       | 03            |         |                     |       | 03            |         |                     |       |
| 04                       | 41681-0049 | A-41681-A4B102      |       | 04            |         |                     |       | 04            |         |                     |       |
| 05                       | 41681-0050 | A-41681-A5B102      |       | 05            |         |                     |       | 05            |         |                     |       |
| 06                       | 41681-0051 | A-41681-A6B102      |       | 06            |         |                     |       | 06            |         |                     |       |
| 07                       | 41681-0052 | A-41681-A7B102      |       | 07            |         |                     |       | 07            |         |                     |       |
| 08                       | 41681-0053 | A-41681-A8B102      |       | 08            |         |                     |       | 08            |         |                     |       |
| 09                       | 41681-0054 | A-41681-A9B102      |       | 09            |         |                     |       | 09            |         |                     |       |
| 10                       | 41681-0055 | A-41681-A10B102     |       | 10            |         |                     |       | 10            |         |                     |       |
| 11                       | 41681-0056 | A-41681-A11B102     |       | 11            |         |                     |       | 11            |         |                     |       |
| 12                       | 41681-0057 | A-41681-A12B102     |       | 12            |         |                     |       | 12            |         |                     |       |
| 13                       | 41681-0058 | A-41681-A13B102     |       | 13            |         |                     |       | 13            |         |                     |       |
| 14                       | 41681-0059 | A-41681-A14B102     |       | 14            |         |                     |       | 14            |         |                     |       |
| 15                       | 41681-0060 | A-41681-A15B102     |       | 15            |         |                     |       | 15            |         |                     |       |
| 16                       | 41681-0061 | A-41681-A16B102     |       | 16            |         |                     |       | 16            |         |                     |       |
| 17                       | 41681-0062 | A-41681-A17B102     |       | 17            |         |                     |       | 17            |         |                     |       |
| 18                       | 41681-0063 | A-41681-A18B102     |       | 18            |         |                     |       | 18            |         |                     |       |
| 19                       | 41681-0064 | A-41681-A19B102     |       | 19            |         |                     |       | 19            |         |                     |       |
| 20                       | 41681-0065 | A-41681-A20B102     |       | 20            |         |                     |       | 20            |         |                     |       |
| 21                       | 41681-0066 | A-41681-A21B102     |       | 21            |         |                     |       | 21            |         |                     |       |
| 22                       | 41681-0067 | A-41681-A22B102     |       | 22            |         |                     |       | 22            |         |                     |       |
| 23                       | 41681-0068 | A-41681-A23B102     |       | 23            |         |                     |       | 23            |         |                     |       |
| 24                       | 26-48-6248 | A-41681-A24B102     |       | 24            |         |                     |       | 24            |         |                     |       |
|                          |            |                     |       |               |         |                     |       |               |         |                     |       |
|                          |            |                     |       |               |         |                     |       |               |         |                     |       |

|                                                    |                                   |  |                                                                                  |                                        |                                          |
|----------------------------------------------------|-----------------------------------|--|----------------------------------------------------------------------------------|----------------------------------------|------------------------------------------|
| REV:<br><br><b>S2</b>                              | <u>ECR/ECN INFORMATION</u>        |  | <u>TITLE:</u><br><br>KK .156 HEADER ASSEMBLY<br>POLARIZING STRAIGHT<br>2-24 CKTS | <u>SHEET No.</u><br><br>- 4 -          |                                          |
|                                                    | <u>EC No:</u> <b>UCP2006-2983</b> |  |                                                                                  |                                        |                                          |
|                                                    | <u>DATE:</u> <b>2006-06-13</b>    |  |                                                                                  |                                        |                                          |
| <u>DOCUMENT NUMBER:</u><br><br><b>SD-41681-001</b> |                                   |  | <u>CREATED / REVISED BY:</u><br><br><b>PRIDDER</b>                               | <u>CHECKED BY:</u><br><br><b>ADERR</b> | <u>APPROVED BY:</u><br><br><b>FSMITH</b> |