

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0022283334](#)  
**Status:** **Active**  
**Description:** 2.54mm (.100") Pitch KK® Header, Breakaway, Vertical, with Polarizing Wall, 33 Circuits, 0.38µm (15µ") Gold (Au) Selective Plating, with Kinked PC Tails

**Documents:**

|   |  |
|---|--|
| <a href="#">3D Model</a>                      | <a href="#">Product Specification PS-10-07 (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

**General**

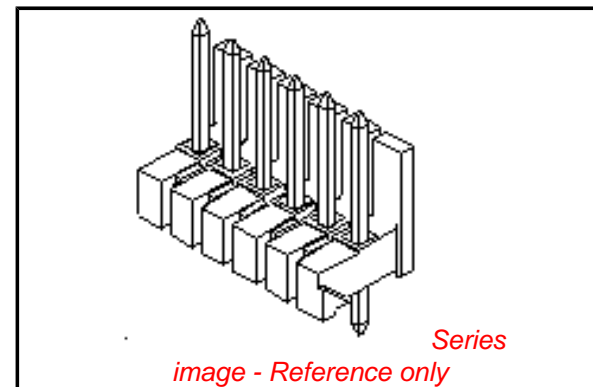
|                |                       |
|----------------|-----------------------|
| Product Family | PCB Headers           |
| Series         | <a href="#">42225</a> |
| Application    | Wire-to-Board         |
| Product Name   | KK®                   |

**Physical**

|                                |              |
|--------------------------------|--------------|
| Breakaway                      | Yes          |
| Circuits (Loaded)              | 33           |
| Circuits (maximum)             | 33           |
| Color - Resin                  | Black        |
| Durability (mating cycles max) | 100          |
| Flammability                   | 94V-0        |
| Glow-Wire Compliant            | No           |
| Lock to Mating Part            | None         |
| Material - Metal               | Brass        |
| Material - Plating Mating      | Gold         |
| Material - Plating Termination | Tin          |
| Material - Resin               | Nylon        |
| Number of Rows                 | 1            |
| Orientation                    | Vertical     |
| PC Tail Length (in)            | 0.120 In     |
| PC Tail Length (mm)            | 3.05 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)  | 0.100 In     |
| Pitch - Mating Interface (mm)  | 2.54 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 Mating Part       | Yes          |
| Polarized to PCB               | No           |
| Shrouded                       | Partial      |
| Stackable                      | No           |
| Temperature Range - Operating  | 0°C to +75°C |
| Termination Interface: Style   | Through Hole |

**Electrical**

Current - Maximum per Contact 4A



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
 Not Reviewed  
**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**

[42225Series](#)

**Mates With**

[2695](#) , [6471](#) , [7880](#) , [4455](#) , [7720](#)

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

**Material Info**

Old Part Number 42225-0173

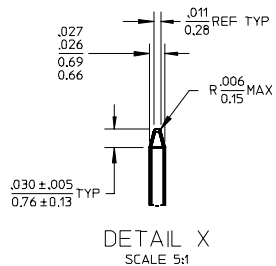
**Reference - Drawing Numbers**

Product Specification PS-10-07  
Sales Drawing SD-42225-001

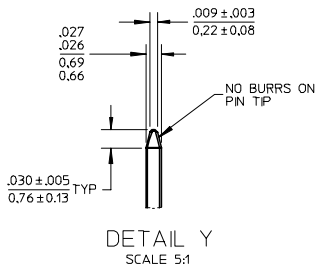
This document was generated on 04/20/2010

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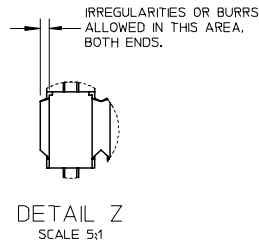
| NO. OF CKTS. | DM. A       | DM. B       |
|--------------|-------------|-------------|
| 2            | .100/2.54   | .200/5.08   |
| 3            | .200/5.08   | .300/7.62   |
| 4            | .300/7.62   | .400/10.16  |
| 5            | .400/10.16  | .500/12.70  |
| 6            | .500/10.16  | .600/15.24  |
| 7            | .600/15.24  | .700/17.78  |
| 8            | .700/17.78  | .800/20.32  |
| 9            | .800/20.32  | .900/22.86  |
| 10           | .900/22.86  | 1.000/25.40 |
| 11           | 1.000/25.40 | 1.100/27.94 |
| 12           | 1.100/27.94 | 1.200/30.48 |
| 13           | 1.200/30.48 | 1.300/33.02 |
| 14           | 1.300/33.02 | 1.400/35.56 |
| 15           | 1.400/35.56 | 1.500/38.10 |
| 16           | 1.500/38.10 | 1.600/40.64 |
| 17           | 1.600/40.64 | 1.700/43.18 |
| 18           | 1.700/43.18 | 1.800/45.72 |
| 19           | 1.800/45.72 | 1.900/48.26 |
| 20           | 1.900/48.26 | 2.000/50.80 |
| 21           | 2.000/50.80 | 2.100/53.34 |
| 22           | 2.100/53.34 | 2.200/55.88 |
| 23           | 2.200/55.88 | 2.300/58.42 |
| 24           | 2.300/58.42 | 2.400/60.96 |
| 25           | 2.400/60.96 | 2.500/63.50 |
| 26           | 2.500/63.50 | 2.600/66.04 |
| 27           | 2.600/66.04 | 2.700/68.58 |
| 28           | 2.700/68.58 | 2.800/71.12 |
| 29           | 2.800/71.12 | 2.900/73.66 |
| 30           | 2.900/73.66 | 3.000/76.20 |
| 31           | 3.000/76.20 | 3.100/78.74 |
| 32           | 3.100/78.74 | 3.200/81.28 |
| 33           | 3.200/81.28 | 3.300/83.82 |
| 34           | 3.300/83.82 | 3.400/86.36 |
| 35           | 3.400/86.36 | 3.500/88.90 |
| 36           | 3.500/88.90 | 3.600/91.44 |



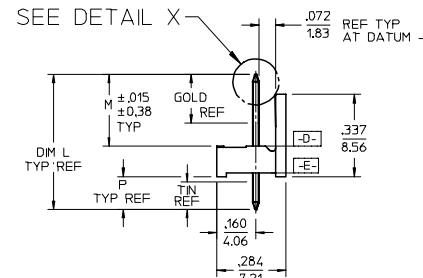
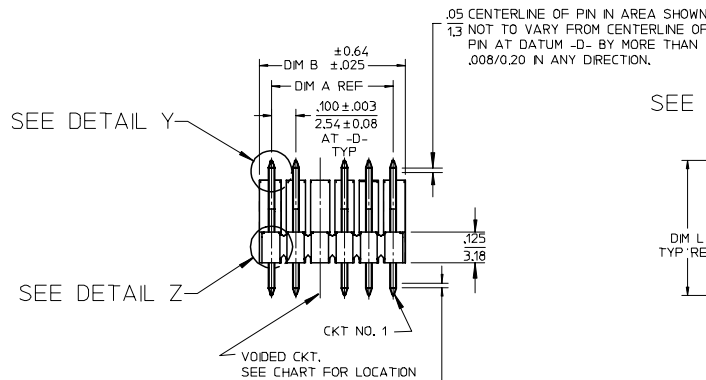
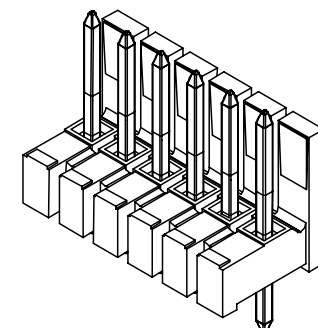
DETAIL X  
SCALE 5:1



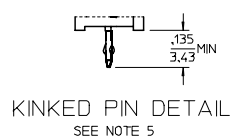
DETAIL Y  
SCALE 5:1



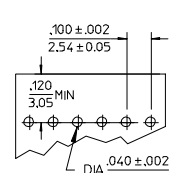
DETAIL Z  
SCALE 5:1



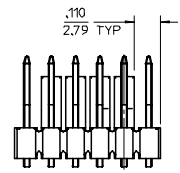
- NOTES:
- MATERIAL: GLASS FILLED NYLON, 94V-0, COLOR: BLACK
  - FINISH:
    - (154) \*OVERALL TIN: .000100/0.00254 MIN. OVER .000050/0.00127 MIN NICKEL.
    - (208) SELECT GOLD: .000015/0.00038 MIN. \*SELECT TIN: .000100/0.00254 MIN. OVERALL NICKEL UNDERPLATE: .000050/0.00127 MIN.
    - (228) SELECT GOLD: .000030/0.00076 MIN. \*SELECT TIN: .000100/0.00254 MIN. OVERALL NICKEL UNDERPLATE: .000050/0.00127 MIN.
  - PRODUCT SPECIFICATION PS 10-07.
  - PACKAGING INFORMATION: SEE TABLES
  - KINK PIN SPECIFICATION: SEE SMES-42003
  - HEADERS ARE NOT STACKABLE ON .100/2.54 CENTERS.
  - SOLDERABILITY PER SMES-152.
  - PIN PUSH OUT FORCE: 3 LBS. MIN.



KINKED PIN DETAIL  
SEE NOTE 5



RECOMMENDED PC BOARD LAYOUT



REMOVED POLARIZING WALL OPTION

ADD DETAIL VIEWS  
EC NO: UCP2005-0488  
DRW: JLOME 2005/08/04  
CHKD: ADERR 2005/08/04  
APPR: FSWJH 2005/08/05

| REV | DESCRIPTION     |
|-----|-----------------|
| 1   | INITIAL RELEASE |
| 2   | REVISION        |
| 3   | REVISION        |

|          | GENERAL TOLERANCES (UNLESS SPECIFIED) |         |
|----------|---------------------------------------|---------|
|          | MM                                    | INCH    |
| 4 PLACES | ± .010                                | ± .0004 |
| 3 PLACES | ± .015                                | ± .0005 |
| 2 PLACES | ± 0.25                                | ± .010  |
| 1 PLACE  | ± 0.36                                | ± .015  |
| ANGULAR  |                                       | ± 1/2°  |

| DRAWN BY     |            | DATE         |  |
|--------------|------------|--------------|--|
| JSCHAFFER    | 2004/03/20 | TITLE        |  |
| CHECKED BY   |            | DATE         |  |
| KSAMIEC      | 2004/03/20 | APPROVED BY  |  |
| MARGULIS     |            | 2004/03/20   |  |
| MATERIAL NO. |            | DOCUMENT NO. |  |
| SEE CHART    |            | SD-4225-001  |  |

| SCALE                                 | DESIGN UNITS | THIRD ANGLE PROJECTION |
|---------------------------------------|--------------|------------------------|
| 1:1                                   | INCH         | ☉                      |
| .100 POLARIZING BREAKAWAY HEADER ASSY |              |                        |
| MOLEX INCORPORATED                    |              |                        |
| SHEET NO.                             |              | REV                    |
| 1 OF 6                                |              | K3                     |

|  |  |  |  |  |  |
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| A-42225-0002/0036  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXA154    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | N/A             |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | OVERALL         |      |                 |              |
| CKTS:              |                 | 2-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 | 22-28-3020      | A-42225-0002    | 20   | 22-28-3200      | A-42225-0020 |
| 03                 | 22-28-3030      | A-42225-0003    | 21   | 22-28-3210      | A-42225-0021 |
| 04                 | 22-28-3040      | A-42225-0004    | 22   | 22-28-3220      | A-42225-0022 |
| 05                 | 22-28-3050      | A-42225-0005    | 23   | 22-28-3230      | A-42225-0023 |
| 06                 | 22-28-3060      | A-42225-0006    | 24   | 22-28-3240      | A-42225-0024 |
| 07                 | 22-28-3070      | A-42225-0007    | 25   | 22-28-3250      | A-42225-0025 |
| 08                 | 22-28-3080      | A-42225-0008    | 26   | 22-28-3260      | A-42225-0026 |
| 09                 | 22-28-3090      | A-42225-0009    | 27   | 22-28-3270      | A-42225-0027 |
| 10                 | 22-28-3100      | A-42225-0010    | 28   | 22-28-3280      | A-42225-0028 |
| 11                 | 22-28-3110      | A-42225-0011    | 29   | 22-28-3290      | A-42225-0029 |
| 12                 | 22-28-3120      | A-42225-0012    | 30   | 22-28-3300      | A-42225-0030 |
| 13                 | 22-28-3130      | A-42225-0013    | 31   | 22-28-3310      | A-42225-0031 |
| 14                 | 22-28-3140      | A-42225-0014    | 32   | 22-28-3320      | A-42225-0032 |
| 15                 | 22-28-3150      | A-42225-0015    | 33   | 22-28-3330      | A-42225-0033 |
| 16                 | 22-28-3160      | A-42225-0016    | 34   | 22-28-3340      | A-42225-0034 |
| 17                 | 22-28-3170      | A-42225-0017    | 35   | 22-28-3350      | A-42225-0035 |
| 18                 | 22-28-3180      | A-42225-0018    | 36   | 22-28-3360      | A-42225-0036 |
| 19                 | 22-28-3190      | A-42225-0019    |      |                 |              |

| A-42225-0037/0071  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXB208    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | .140/3.56       |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | .100/2.54       |      |                 |              |
| CKTS:              |                 | 2-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 | 22-28-3021      | A-42225-0037    | 20   | 22-28-3201      | A-42225-0055 |
| 03                 | 22-28-3031      | A-42225-0038    | 21   | 22-28-3211      | A-42225-0056 |
| 04                 | 22-28-3041      | A-42225-0039    | 22   | 22-28-3221      | A-42225-0057 |
| 05                 | 22-28-3051      | A-42225-0040    | 23   | 22-28-3231      | A-42225-0058 |
| 06                 | 22-28-3061      | A-42225-0041    | 24   | 22-28-3241      | A-42225-0059 |
| 07                 | 22-28-3071      | A-42225-0042    | 25   | 22-28-3251      | A-42225-0060 |
| 08                 | 22-28-3081      | A-42225-0043    | 26   | 22-28-3261      | A-42225-0061 |
| 09                 | 22-28-3091      | A-42225-0044    | 27   | 22-28-3271      | A-42225-0062 |
| 10                 | 22-28-3101      | A-42225-0045    | 28   | 22-28-3281      | A-42225-0063 |
| 11                 | 22-28-3111      | A-42225-0046    | 29   | 22-28-3291      | A-42225-0064 |
| 12                 | 22-28-3121      | A-42225-0047    | 30   | 22-28-3301      | A-42225-0065 |
| 13                 | 22-28-3131      | A-42225-0048    | 31   | 22-28-3311      | A-42225-0066 |
| 14                 | 22-28-3141      | A-42225-0049    | 32   | 22-28-3321      | A-42225-0067 |
| 15                 | 22-28-3151      | A-42225-0050    | 33   | 22-28-3331      | A-42225-0068 |
| 16                 | 22-28-3161      | A-42225-0051    | 34   | 22-28-3341      | A-42225-0069 |
| 17                 | 22-28-3171      | A-42225-0052    | 35   | 22-28-3351      | A-42225-0070 |
| 18                 | 22-28-3181      | A-42225-0053    | 36   | 22-28-3361      | A-42225-0071 |
| 19                 | 22-28-3191      | A-42225-0054    |      |                 |              |

|      |          |        |   |           |              |
|------|----------|--------|---|-----------|--------------|
| REV: | <b>K</b> | TITLE: | <b>.100 POLARIZING<br/>BREAKAWAY HEADER ASSY.</b> | SHEET No. | <b>- 2 -</b> |
|------|----------|--------|---|-----------|--------------|

|                       |                              |                            |                               |
|-----------------------|------------------------------|----------------------------|-------------------------------|
| DOCUMENT NUMBER:      | CREATED / REVISED BY:        | CHECKED BY:                | APPROVED BY:                  |
| <b>SD- 42225 -001</b> | <b>S. LINEHAN 03/04/2004</b> | <b>K.SAMIEC 03/04/2004</b> | <b>Y. MARGULIS 03/04/2004</b> |

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| A-42225-0072/0106  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXB228    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | .140/3.56       |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | .100/2.54       |      |                 |              |
| CKTS:              |                 | 2-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 | 22-28-3022      | A-42225-0072    | 20   | 22-28-3202      | A-42225-0090 |
| 03                 | 22-28-3032      | A-42225-0073    | 21   | 22-28-3212      | A-42225-0091 |
| 04                 | 22-28-3042      | A-42225-0074    | 22   | 22-28-3222      | A-42225-0092 |
| 05                 | 22-28-3052      | A-42225-0075    | 23   | 22-28-3232      | A-42225-0093 |
| 06                 | 22-28-3062      | A-42225-0076    | 24   | 22-28-3242      | A-42225-0094 |
| 07                 | 22-28-3072      | A-42225-0077    | 25   | 22-28-3252      | A-42225-0095 |
| 08                 | 22-28-3082      | A-42225-0078    | 26   | 22-28-3262      | A-42225-0096 |
| 09                 | 22-28-3092      | A-42225-0079    | 27   | 22-28-3272      | A-42225-0097 |
| 10                 | 22-28-3102      | A-42225-0080    | 28   | 22-28-3282      | A-42225-0098 |
| 11                 | 22-28-3112      | A-42225-0081    | 29   | 22-28-3292      | A-42225-0099 |
| 12                 | 22-28-3122      | A-42225-0082    | 30   | 22-28-3302      | A-42225-0100 |
| 13                 | 22-28-3132      | A-42225-0083    | 31   | 22-28-3312      | A-42225-0101 |
| 14                 | 22-28-3142      | A-42225-0084    | 32   | 22-28-3322      | A-42225-0102 |
| 15                 | 22-28-3152      | A-42225-0085    | 33   | 22-28-3332      | A-42225-0103 |
| 16                 | 22-28-3162      | A-42225-0086    | 34   | 22-28-3342      | A-42225-0104 |
| 17                 | 22-28-3172      | A-42225-0087    | 35   | 22-28-3352      | A-42225-0105 |
| 18                 | 22-28-3182      | A-42225-0088    | 36   | 22-28-3362      | A-42225-0106 |
| 19                 | 22-28-3192      | A-42225-0089    |      |                 |              |

| A-42225-0107/0141  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-BAA154    |      |                 |              |
| PIN LENGTH: L      |                 | .555/14.10      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | N/A             |      |                 |              |
| PC TAIL LENGTH: P  |                 | .135/3.43       |      |                 |              |
| TIN: T             |                 | OVERALL         |      |                 |              |
| CKTS:              |                 | 2-36            |      |                 |              |
| KINKS:             |                 | YES             |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 | 22-28-3023      | A-42225-0107    | 20   | 22-28-3203      | A-42225-0125 |
| 03                 | 22-28-3033      | A-42225-0108    | 21   | 22-28-3213      | A-42225-0126 |
| 04                 | 22-28-3043      | A-42225-0109    | 22   | 22-28-3223      | A-42225-0127 |
| 05                 | 22-28-3053      | A-42225-0110    | 23   | 22-28-3233      | A-42225-0128 |
| 06                 | 22-28-3063      | A-42225-0111    | 24   | 22-28-3243      | A-42225-0129 |
| 07                 | 22-28-3073      | A-42225-0112    | 25   | 22-28-3253      | A-42225-0130 |
| 08                 | 22-28-3083      | A-42225-0113    | 26   | 22-28-3263      | A-42225-0131 |
| 09                 | 22-28-3093      | A-42225-0114    | 27   | 22-28-3273      | A-42225-0132 |
| 10                 | 22-28-3103      | A-42225-0115    | 28   | 22-28-3283      | A-42225-0133 |
| 11                 | 22-28-3113      | A-42225-0116    | 29   | 22-28-3293      | A-42225-0134 |
| 12                 | 22-28-3123      | A-42225-0117    | 30   | 22-28-3303      | A-42225-0135 |
| 13                 | 22-28-3133      | A-42225-0118    | 31   | 22-28-3313      | A-42225-0136 |
| 14                 | 22-28-3143      | A-42225-0119    | 32   | 22-28-3323      | A-42225-0137 |
| 15                 | 22-28-3153      | A-42225-0120    | 33   | 22-28-3333      | A-42225-0138 |
| 16                 | 22-28-3163      | A-42225-0121    | 34   | 22-28-3343      | A-42225-0139 |
| 17                 | 22-28-3173      | A-42225-0122    | 35   | 22-28-3353      | A-42225-0140 |
| 18                 | 22-28-3183      | A-42225-0123    | 36   | 22-28-3363      | A-42225-0141 |
| 19                 | 22-28-3193      | A-42225-0124    |      |                 |              |

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|------|----------|--------|---|-----------|--------------|
| REV: | <b>K</b> | TITLE: | <b>.100 POLARIZING<br/>BREAKAWAY HEADER ASSY.</b> | SHEET No. | <b>- 3 -</b> |
|------|----------|--------|---|-----------|--------------|

|                       |                              |                            |                               |
|-----------------------|------------------------------|----------------------------|-------------------------------|
| DOCUMENT NUMBER:      | CREATED / REVISED BY:        | CHECKED BY:                | APPROVED BY:                  |
| <b>SD- 42225 -001</b> | <b>S. LINEHAN 03/04/2004</b> | <b>K.SAMIEC 03/04/2004</b> | <b>Y. MARGULIS 03/04/2004</b> |

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| A-42225-0142/0176  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-BAB208    |      |                 |              |
| PIN LENGTH: L      |                 | .555/14.10      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | .140/3.56       |      |                 |              |
| PC TAIL LENGTH: P  |                 | .135/3.43       |      |                 |              |
| TIN: T             |                 | .100/2.54       |      |                 |              |
| CKTS:              |                 | 2-36            |      |                 |              |
| KINKS:             |                 | YES             |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 | 22-28-3024      | A-42225-0142    | 20   | 22-28-3204      | A-42225-0160 |
| 03                 | 22-28-3034      | A-42225-0143    | 21   | 22-28-3214      | A-42225-0161 |
| 04                 | 22-28-3044      | A-42225-0144    | 22   | 22-28-3224      | A-42225-0162 |
| 05                 | 22-28-3054      | A-42225-0145    | 23   | 22-28-3234      | A-42225-0163 |
| 06                 | 22-28-3064      | A-42225-0146    | 24   | 22-28-3244      | A-42225-0164 |
| 07                 | 22-28-3074      | A-42225-0147    | 25   | 22-28-3254      | A-42225-0165 |
| 08                 | 22-28-3084      | A-42225-0148    | 26   | 22-28-3264      | A-42225-0166 |
| 09                 | 22-28-3094      | A-42225-0149    | 27   | 22-28-3274      | A-42225-0167 |
| 10                 | 22-28-3104      | A-42225-0150    | 28   | 22-28-3284      | A-42225-0168 |
| 11                 | 22-28-3114      | A-42225-0151    | 29   | 22-28-3294      | A-42225-0169 |
| 12                 | 22-28-3124      | A-42225-0152    | 30   | 22-28-3304      | A-42225-0170 |
| 13                 | 22-28-3134      | A-42225-0153    | 31   | 22-28-3314      | A-42225-0171 |
| 14                 | 22-28-3144      | A-42225-0154    | 32   | 22-28-3324      | A-42225-0172 |
| 15                 | 22-28-3154      | A-42225-0155    | 33   | 22-28-3334      | A-42225-0173 |
| 16                 | 22-28-3164      | A-42225-0156    | 34   | 22-28-3344      | A-42225-0174 |
| 17                 | 22-28-3174      | A-42225-0157    | 35   | 22-28-3354      | A-42225-0175 |
| 18                 | 22-28-3184      | A-42225-0158    | 36   | 22-28-3364      | A-42225-0176 |
| 19                 | 22-28-3194      | A-42225-0159    |      |                 |              |

| A-42225-0177/0211  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-BAB228    |      |                 |              |
| PIN LENGTH: L      |                 | .555/14.10      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | .140/3.56       |      |                 |              |
| PC TAIL LENGTH: P  |                 | .135/3.43       |      |                 |              |
| TIN: T             |                 | .100/2.54       |      |                 |              |
| CKTS:              |                 | 2-36            |      |                 |              |
| KINKS:             |                 | YES             |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 | 22-28-3025      | A-42225-0177    | 20   | 22-28-3205      | A-42225-0195 |
| 03                 | 22-28-3035      | A-42225-0178    | 21   | 22-28-3215      | A-42225-0196 |
| 04                 | 22-28-3045      | A-42225-0179    | 22   | 22-28-3225      | A-42225-0197 |
| 05                 | 22-28-3055      | A-42225-0180    | 23   | 22-28-3235      | A-42225-0198 |
| 06                 | 22-28-3065      | A-42225-0181    | 24   | 22-28-3245      | A-42225-0199 |
| 07                 | 22-28-3075      | A-42225-0182    | 25   | 22-28-3255      | A-42225-0200 |
| 08                 | 22-28-3085      | A-42225-0183    | 26   | 22-28-3265      | A-42225-0201 |
| 09                 | 22-28-3095      | A-42225-0184    | 27   | 22-28-3275      | A-42225-0202 |
| 10                 | 22-28-3105      | A-42225-0185    | 28   | 22-28-3285      | A-42225-0203 |
| 11                 | 22-28-3115      | A-42225-0186    | 29   | 22-28-3295      | A-42225-0204 |
| 12                 | 22-28-3125      | A-42225-0187    | 30   | 22-28-3305      | A-42225-0205 |
| 13                 | 22-28-3135      | A-42225-0188    | 31   | 22-28-3315      | A-42225-0206 |
| 14                 | 22-28-3145      | A-42225-0189    | 32   | 22-28-3325      | A-42225-0207 |
| 15                 | 22-28-3155      | A-42225-0190    | 33   | 22-28-3335      | A-42225-0208 |
| 16                 | 22-28-3165      | A-42225-0191    | 34   | 22-28-3345      | A-42225-0209 |
| 17                 | 22-28-3175      | A-42225-0192    | 35   | 22-28-3355      | A-42225-0210 |
| 18                 | 22-28-3185      | A-42225-0193    | 36   | 22-28-3365      | A-42225-0211 |
| 19                 | 22-28-3195      | A-42225-0194    |      |                 |              |

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| REV:     |  | TITLE: | <b>.100 POLARIZING<br/>BREAKAWAY HEADER ASSY.</b> |  | SHEET No.    |
| <b>K</b> |  |        |   |  | <b>- 4 -</b> |

|                       |                              |                            |                               |
|-----------------------|------------------------------|----------------------------|-------------------------------|
| DOCUMENT NUMBER:      | CREATED / REVISED BY:        | CHECKED BY:                | APPROVED BY:                  |
| <b>SD- 42225 -001</b> | <b>S. LINEHAN 03/04/2004</b> | <b>K.SAMIEC 03/04/2004</b> | <b>Y. MARGULIS 03/04/2004</b> |

| A-42225-0213/0246  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXA154    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | N/A             |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | OVERALL         |      |                 |              |
| CKTS:              |                 | 3-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | YES             |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 |                 |                 | 20   | 22-28-3206      | A-42225-0230 |
| 03                 | 22-28-3036      | A-42225-0213    | 21   | 22-28-3216      | A-42225-0231 |
| 04                 | 22-28-3046      | A-42225-0214    | 22   | 22-28-3226      | A-42225-0232 |
| 05                 | 22-28-3056      | A-42225-0215    | 23   | 22-28-3236      | A-42225-0233 |
| 06                 | 22-28-3066      | A-42225-0216    | 24   | 22-28-3246      | A-42225-0234 |
| 07                 | 22-28-3076      | A-42225-0217    | 25   | 22-28-3256      | A-42225-0235 |
| 08                 | 22-28-3086      | A-42225-0218    | 26   | 22-28-3266      | A-42225-0236 |
| 09                 | 22-28-3096      | A-42225-0219    | 27   | 22-28-3276      | A-42225-0237 |
| 10                 | 22-28-3106      | A-42225-0220    | 28   | 22-28-3286      | A-42225-0238 |
| 11                 | 22-28-3116      | A-42225-0221    | 29   | 22-28-3296      | A-42225-0239 |
| 12                 | 22-28-3126      | A-42225-0222    | 30   | 22-28-3306      | A-42225-0240 |
| 13                 | 22-28-3136      | A-42225-0223    | 31   | 22-28-3316      | A-42225-0241 |
| 14                 | 22-28-3146      | A-42225-0224    | 32   | 22-28-3326      | A-42225-0242 |
| 15                 | 22-28-3156      | A-42225-0225    | 33   | 22-28-3336      | A-42225-0243 |
| 16                 | 22-28-3166      | A-42225-0226    | 34   | 22-28-3346      | A-42225-0244 |
| 17                 | 22-28-3176      | A-42225-0227    | 35   | 22-28-3356      | A-42225-0245 |
| 18                 | 22-28-3186      | A-42225-0228    | 36   | 22-28-3366      | A-42225-0246 |
| 19                 | 22-28-3196      | A-42225-0229    |      |                 |              |

| A-42225-0248/0281  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXB208    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | .140/3.56       |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | .135/3.43       |      |                 |              |
| CKTS:              |                 | 3-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | YES             |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 |                 |                 | 20   | 22-28-3207      | A-42225-0265 |
| 03                 | 22-28-3037      | A-42225-0248    | 21   | 22-28-3217      | A-42225-0266 |
| 04                 | 22-28-3047      | A-42225-0249    | 22   | 22-28-3227      | A-42225-0267 |
| 05                 | 22-28-3057      | A-42225-0250    | 23   | 22-28-3237      | A-42225-0268 |
| 06                 | 22-28-3067      | A-42225-0251    | 24   | 22-28-3247      | A-42225-0269 |
| 07                 | 22-28-3077      | A-42225-0252    | 25   | 22-28-3257      | A-42225-0270 |
| 08                 | 22-28-3087      | A-42225-0253    | 26   | 22-28-3267      | A-42225-0271 |
| 09                 | 22-28-3097      | A-42225-0254    | 27   | 22-28-3277      | A-42225-0272 |
| 10                 | 22-28-3107      | A-42225-0255    | 28   | 22-28-3287      | A-42225-0273 |
| 11                 | 22-28-3117      | A-42225-0256    | 29   | 22-28-3297      | A-42225-0274 |
| 12                 | 22-28-3127      | A-42225-0257    | 30   | 22-28-3307      | A-42225-0275 |
| 13                 | 22-28-3137      | A-42225-0258    | 31   | 22-28-3317      | A-42225-0276 |
| 14                 | 22-28-3147      | A-42225-0259    | 32   | 22-28-3327      | A-42225-0277 |
| 15                 | 22-28-3157      | A-42225-0260    | 33   | 22-28-3337      | A-42225-0278 |
| 16                 | 22-28-3167      | A-42225-0261    | 34   | 22-28-3347      | A-42225-0279 |
| 17                 | 22-28-3177      | A-42225-0262    | 35   | 22-28-3357      | A-42225-0280 |
| 18                 | 22-28-3187      | A-42225-0263    | 36   | 22-28-3367      | A-42225-0281 |
| 19                 | 22-28-3197      | A-42225-0264    |      |                 |              |

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| REV:                  |  | TITLE:                       | <b>.100 POLARIZING<br/>BREAKAWAY HEADER ASSY.</b> |                               | SHEET No.    |
| <b>K</b>              |  |                              |   |                               | <b>- 5 -</b> |
| DOCUMENT NUMBER:      |  | CREATED / REVISED BY:        | CHECKED BY:                                       | APPROVED BY:                  |              |
| <b>SD- 42225 -001</b> |  | <b>S. LINEHAN 03/04/2004</b> | <b>K.SAMIEC 03/04/2004</b>                        | <b>Y. MARGULIS 03/04/2004</b> |              |

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| A-42225-0282/0316  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXB228    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | .140/3.56       |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | .135/3.43       |      |                 |              |
| CKTS:              |                 | 3-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | YES             |      |                 |              |
| VOIDED CKTS:       |                 | NONE            |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 |                 |                 | 20   | 22-28-3208      | A-42225-0300 |
| 03                 | 22-28-3038      | A-42225-0283    | 21   | 22-28-3218      | A-42225-0301 |
| 04                 | 22-28-3048      | A-42225-0284    | 22   | 22-28-3228      | A-42225-0302 |
| 05                 | 22-28-3058      | A-42225-0285    | 23   | 22-28-3238      | A-42225-0303 |
| 06                 | 22-28-3068      | A-42225-0286    | 24   | 22-28-3248      | A-42225-0304 |
| 07                 | 22-28-3078      | A-42225-0287    | 25   | 22-28-3258      | A-42225-0305 |
| 08                 | 22-28-3088      | A-42225-0288    | 26   | 22-28-3268      | A-42225-0306 |
| 09                 | 22-28-3098      | A-42225-0289    | 27   | 22-28-3278      | A-42225-0307 |
| 10                 | 22-28-3108      | A-42225-0290    | 28   | 22-28-3288      | A-42225-0308 |
| 11                 | 22-28-3118      | A-42225-0291    | 29   | 22-28-3298      | A-42225-0309 |
| 12                 | 22-28-3128      | A-42225-0292    | 30   | 22-28-3308      | A-42225-0310 |
| 13                 | 22-28-3138      | A-42225-0293    | 31   | 22-28-3318      | A-42225-0311 |
| 14                 | 22-28-3148      | A-42225-0294    | 32   | 22-28-3328      | A-42225-0312 |
| 15                 | 22-28-3158      | A-42225-0295    | 33   | 22-28-3338      | A-42225-0313 |
| 16                 | 22-28-3168      | A-42225-0296    | 34   | 22-28-3348      | A-42225-0314 |
| 17                 | 22-28-3178      | A-42225-0297    | 35   | 22-28-3358      | A-42225-0315 |
| 18                 | 22-28-3188      | A-42225-0298    | 36   | 22-28-3368      | A-42225-0316 |
| 19                 | 22-28-3198      | A-42225-0299    |      |                 |              |

| A-42225-0488/0518  |                 |                 |      |                 |              |
|--------------------|-----------------|-----------------|------|-----------------|--------------|
| HEADER NUMBER:     |                 | 41410           |      |                 |              |
| PIN NUMBER:        |                 | 42663-AXA154    |      |                 |              |
| PIN LENGTH: L      |                 | .540/13.72      |      |                 |              |
| MATING LENGTH: M   |                 | .295/7.49       |      |                 |              |
| GOLD POINT: G      |                 | N/A             |      |                 |              |
| PC TAIL LENGTH: P  |                 | .120/3.05       |      |                 |              |
| TIN: T             |                 | OVERALL         |      |                 |              |
| CKTS:              |                 | 6-36            |      |                 |              |
| KINKS:             |                 | NO              |      |                 |              |
| REMOVED BACKWALLS: |                 | NO              |      |                 |              |
| VOIDED CKTS:       |                 | 6               |      |                 |              |
| PACKAGING:         |                 | BULK 40873-0056 |      |                 |              |
| CKTS               | MATERIAL NUMBER | ENG NUMBER      | CKTS | MATERIAL NUMBER | ENG NUMBER   |
| 02                 |                 |                 | 20   | 42225-0502      | A-42225-0502 |
| 03                 |                 |                 | 21   | 42225-0503      | A-42225-0503 |
| 04                 |                 |                 | 22   | 42225-0504      | A-42225-0504 |
| 05                 |                 |                 | 23   | 42225-0505      | A-42225-0505 |
| 06                 | 42225-0488      | A-42225-0488    | 24   | 42225-0506      | A-42225-0506 |
| 07                 | 42225-0489      | A-42225-0489    | 25   | 42225-0507      | A-42225-0507 |
| 08                 | 42225-0490      | A-42225-0490    | 26   | 42225-0508      | A-42225-0508 |
| 09                 | 42225-0491      | A-42225-0491    | 27   | 42225-0509      | A-42225-0509 |
| 10                 | 42225-0492      | A-42225-0492    | 28   | 42225-0510      | A-42225-0510 |
| 11                 | 42225-0493      | A-42225-0493    | 29   | 42225-0511      | A-42225-0511 |
| 12                 | 42225-0494      | A-42225-0494    | 30   | 42225-0512      | A-42225-0512 |
| 13                 | 42225-0495      | A-42225-0495    | 31   | 42225-0513      | A-42225-0513 |
| 14                 | 42225-0496      | A-42225-0496    | 32   | 42225-0514      | A-42225-0514 |
| 15                 | 42225-0497      | A-42225-0497    | 33   | 42225-0515      | A-42225-0515 |
| 16                 | 42225-0498      | A-42225-0498    | 34   | 42225-0516      | A-42225-0516 |
| 17                 | 42225-0499      | A-42225-0499    | 35   | 42225-0517      | A-42225-0517 |
| 18                 | 42225-0500      | A-42225-0500    | 36   | 42225-0518      | A-42225-0518 |
| 19                 | 42225-0501      | A-42225-0501    |      |                 |              |

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| REV:     |  | TITLE: | <b>.100 POLARIZING<br/>BREAKAWAY HEADER ASSY.</b> |  | SHEET No.    |
| <b>K</b> |  |        |   |  | <b>- 6 -</b> |

|                       |                              |                            |                               |
|-----------------------|------------------------------|----------------------------|-------------------------------|
| DOCUMENT NUMBER:      | CREATED / REVISED BY:        | CHECKED BY:                | APPROVED BY:                  |
| <b>SD- 42225 -001</b> | <b>S. LINEHAN 03/04/2004</b> | <b>K.SAMIEC 03/04/2004</b> | <b>Y. MARGULIS 03/04/2004</b> |