

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

**Part Number:** [0022283212](#)  
**Status:** **Active**  
**Description:** 2.54mm (.100") Pitch KK® Header, Breakaway, Vertical, with Polarizing Wall, 21 Circuits, 0.76µm (30µ") Gold (Au) Selective Plating

**Documents:**

[3D Model](#) [Product Specification PS-10-07 \(PDF\)](#)  
[Packaging Specification \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)  
[Drawing \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

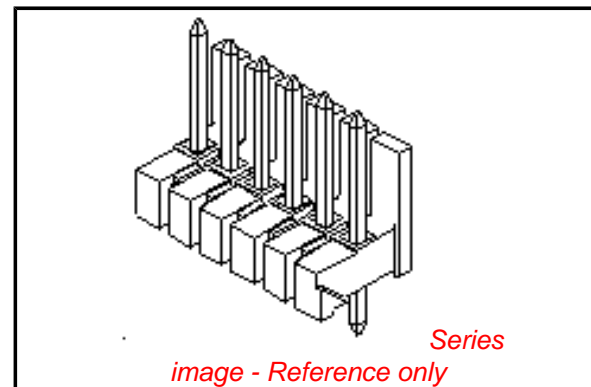
**General**

Product Family PCB Headers  
 Series [42225](#)  
 Application Wire-to-Board  
 Product Name KK®

**Physical**

Breakaway Yes  
 Circuits (Loaded) 21  
 Circuits (maximum) 21  
 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) 0.135 In  
 PC Tail Length (mm) 3.43 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) 0.100 In  
 Pitch - Mating Interface (mm) 2.54 mm  
 Plating min: Mating (µin) 30  
 Plating min: Mating (µm) 0.75  
 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**



**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**

[42225Series](#)

**Mates With**

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

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 4A   |
| 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 | 42225-0091 |
|-----------------|------------|

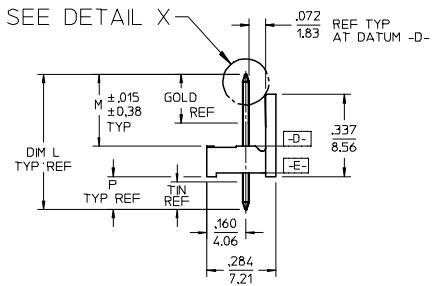
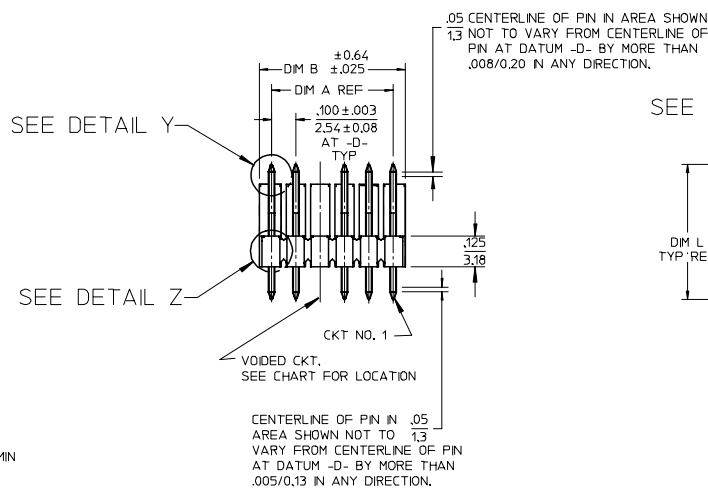
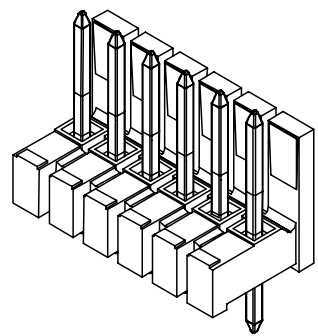
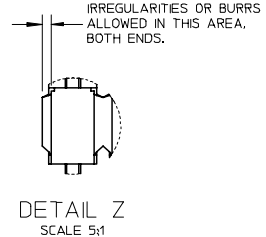
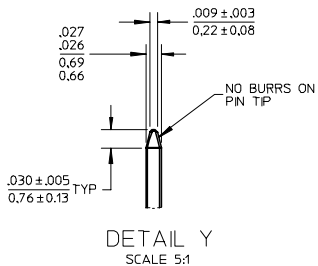
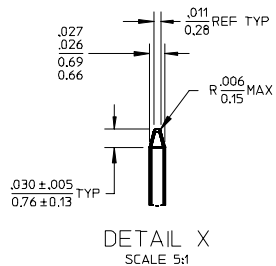
**Reference - Drawing Numbers**

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

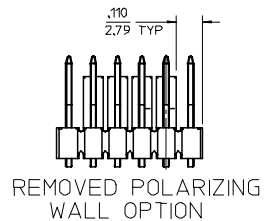
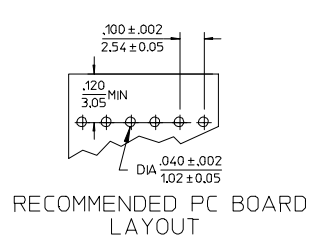
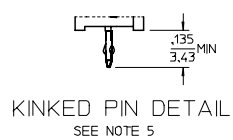
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| NO. OF CKTS. | DM. A       | DM. B       |
|--------------|-------------|-------------|
| 2            | .100/2.54   | .200/5.08   |
| 3            | .200/5.08   | .300/7.62   |
| 4            | .300/7.62   | .400/10.16  |
| 5            | .400/10.16  | .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 |



- 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.



| ADD DETAIL VIEWS    | DESCRIPTION |
|---------------------|-------------|
| EC NO: UCP2005-0488 |             |
| DRW: JLOME          | 2005/08/04  |
| CHKD: ADERR         | 2005/08/04  |
| APPR: FSWJH         | 2005/08/05  |
| K3                  |             |

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

|          | GENERAL TOLERANCES (UNLESS SPECIFIED) |        |
|----------|---------------------------------------|--------|
|          | MM                                    | INCH   |
| 4 PLACES | ± ---                                 | ± ---  |
| 3 PLACES | ± ---                                 | ± .010 |
| 2 PLACES | ± 0.25                                | ± .014 |
| 1 PLACE  | ± 0.36                                | ± ---  |
| ANGULAR  |                                       | ± 1/2° |

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

| SCALE  | DESIGN UNITS | THIRD ANGLE PROJECTION |
|--|--------------|------------------------|
| 1:1  | INCH         | ☉                      |
| TITLE  |              |                        |
| .100 POLARIZING BREAKAWAY HEADER ASSY                |              |                        |
| MATERIAL NO. DOCUMENT NO.                            |              |                        |
| MOLEX INCORPORATED                                   |              |                        |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |              | SHEET NO.              |
| SEE CHART  |              | 1 OF 6                 |

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

|                       |  |                              |   |                               |              |
|-----------------------|--|------------------------------|---|-------------------------------|--------------|
| 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> |              |