

PRODUCT NUMBER

XXXXX-YYYH TLF

LEAD FREE OPTION  
SEE NOTE 1,11TUBE PACKAGING OPTION  
SEE NOTE 1HIGH TEMPERATURE PLASTIC  
SEE NOTE 1NO. OF POSITIONS  
SEE NOTE 1PIN PLATING  
SEE SHEET 2

BASE PART NO.

PRODUCT NUMBER

69190-XXXXX HALF

LEAD FREE OPTION  
SEE NOTE 1,11PACKAGING OPTION  
SEE NOTE 1HIGH TEMPERATURE PLASTIC  
SEE NOTE 1INDICATE DIFFERENT MATING LENGTH  
AND TAIL LENGTHNO. OF POSITIONS  
SEE NOTE 1PIN PLATING  
SEE SHEET 2

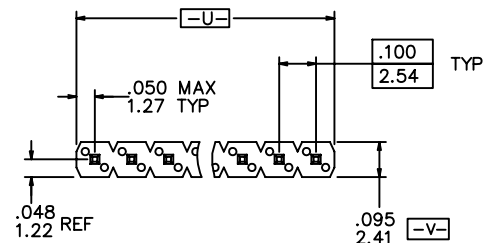
BASE PART NO.

|   |   |          |   |   |   |   |   |
|---|---|----------|---|---|---|---|---|
| ⊕ | ∅ | .020/.51 | M | U | M | V | Ⓢ |
|---|---|----------|---|---|---|---|---|

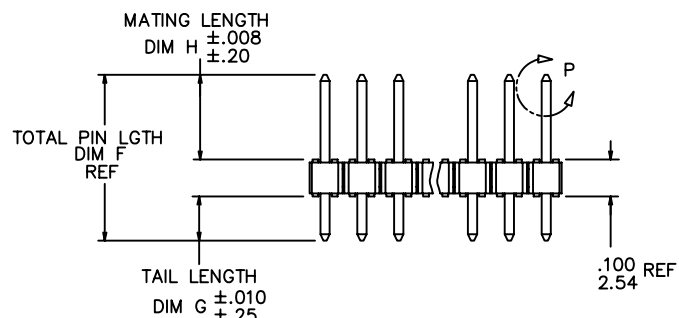
NOTE 4

|   |              |
|---|--------------|
| □ | .025±.001    |
| □ | 0.64±.03 TYP |

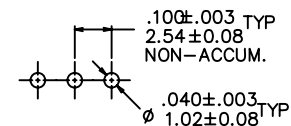
|   |              |
|---|--------------|
| □ | .013         |
| □ | 0.33 MAX TYP |

25°±5° TYP  
4 SIDESDETAIL P  
TYP BOTH ENDS

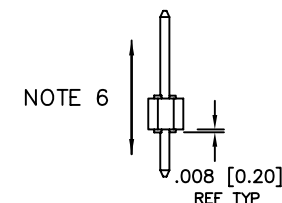
TOP VIEW



SIDE VIEW



RECOMMENDED HOLE PATTERN



END VIEW

|                            |             |          |    |                       |                                       |                                  |                          |                                                                                       |                                                                                       |                     |             |      |
|----------------------------|-------------|----------|----|-----------------------|---------------------------------------|----------------------------------|--------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------|-------------|------|
| mat'l. code<br>NOTES 2 & 3 |             |          |    | surface<br>ISO 1302 ✓ |                                       | tolerance<br>ISO 406<br>ISO 1101 |                          |  | product family<br>BERGSTIK                                                            |                     |             |      |
| ltr                        | ecn         | no       | dr | date                  | tolerances unless otherwise specified |                                  |                          |                                                                                       |  | title               |             |      |
| AM                         | ELX-N-13674 | DCS      |    | 2012-12-12            | angles                                | linear                           | .XXX±.01 / .XXX±.3       | INCH/MM                                                                               |                                                                                       | BERGSTIK® II HEADER |             |      |
| AN                         | ELX-N-16105 | ZK       |    | 2013-10-22            |                                       |                                  | .XXX±.005 / .XXX±.0.13   |                                                                                       | .100/2.54 SR SELF-RET                                                                 |                     |             |      |
| AP                         | ELX-N-19414 | HJ       |    | 2014-11-13            |                                       |                                  | .XXX±.0020 / .XXX±.0.051 |                                                                                       | scale 1:1                                                                             |                     |             |      |
|                            |             |          |    |                       | dr                                    | D. WHITING                       | 4/19/93                  |  | dwg no                                                                                |                     | sheet1 of 4 | size |
| AJ                         | M06-0346    | MHT      |    | 9/04/06               | engr                                  | T.HANNA                          | 4/19/93                  |                                                                                       | 69190                                                                                 |                     | A3          |      |
| AK                         | M08-0291    | MHT      |    | 10/06/08              | chr                                   | T. BREWBAKER                     | 4/19/93                  |                                                                                       |                                                                                       |                     |             |      |
| AL                         | N11-0118    | J.Z      |    | 2011-04-11            | appd                                  | T.HANNA                          | 4/19/93                  |                                                                                       | type Product Customer Drawing                                                         |                     |             |      |
| sheet                      |             | revision |    | AP                    |                                       |                                  |                          |                                                                                       |                                                                                       |                     |             |      |
| index                      |             | sheet    |    | 1-4                   |                                       |                                  |                          |                                                                                       |                                                                                       |                     |             |      |

## PIN PLATING CODES:

|             |                                                         |
|-------------|---------------------------------------------------------|
| XXXX-1YY    | 30u"/0.76u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-2YY    | 15u"/0.38u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-3YY    | 50u"/1.27u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-4YY    | 100u"/2.54u MIN Sn OVER 50u"/1.27u MIN Ni (SEE NOTE 13) |
| XXXX-4YYHLF |                                                         |
| XXXX-5YY    | 15u"/0.38u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-6YY    | 30u"/0.76u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-7YY    | 30u"/0.76u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-8YY    | 15u"/0.38u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-9YY    | 15u"/0.38u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |
| XXXX-0YY    | 30u"/0.76u MIN (SEE NOTE 12) OVER 50u"/1.27u MIN Ni     |

## NOTES

## 1. PART NUMBER OPTIONS:

PIN PLATING CODES (SEE ABOVE)

## HIGH TEMP. MATERIAL:

FOR HIGH-TEMPERATURE APPLICATIONS, SPECIFY AN "H" AT THE END OF THE PART NUMBER, AND PCT WILL BE SUPPLIED.

## NUMBER OF POSITION:

ANY NUMBER OF POSITIONS FROM 2 THRU 36.

## PACKAGING:

PACKAGED IN POLY BAGS.

EIGHT DIGIT PART NUMBERS FOLLOWED BY A "T" ARE PACKAGED IN TUBES. SEE SPECIFIC PART NUMBERS FOR AVAILABILITY.

EIGHT DIGIT PART NUMBERS FOLLOWED BY A "A" ARE PACKAGED IN TAPE AND REEL WITH PICKUP CAPS.

## LEAD FREE:

ADD "HLF" SUFFIX AT THE END OF PART NUMBER FOR LEAD FREE OPTION, NOT AVAILABLE FOR -5YY,-5YYH,-6YY &amp; -6YYH.

## 2. BODY MATERIAL:

MANUFACTURER'S OPTION OF NYLON OR PCT, GLASS FIBER REINFORCED, FLAME RETARDENT PER UL-94V-0.

COLOR: BLACK. OR  
MINERAL FILLED LCP, COLOR BLACK  
FLAME RETARDENT PER UL-94V-0.

PART NUMBERS WITH "H" SUFFIX WILL WITHSTAND EXPOSURE TO 260° PEAK TEMPERATURE FOR 20 SECONDS IN WAVE SOLDER, INFRA-RED OR VAPOR PHASE SOLDER PROCESS.

PART NUMBERS WITHOUT "H" SUFFIX WILL WITHSTAND EXPOSURE TO 260° PEAK TEMPERATURE FOR WAVE SOLDER PROCESS.

3. PIN MATERIAL: PHOS-BRONZE.

4. MEASURED WITH PART IN RESTRAINED CONDITION.

5. TWO SIDES OF PIN TIPS NOT PLATED. TYPICAL BOTH ENDS.

6. 2LBS/0.9KG MIN PIN RETENTION IN EITHER DIRECTION.

7. ±.010/0.25 TOL APPLIES TO ALL 'G' TAILS EXCEPT INDICATED PARTS ON TABLE WHERE +.010/0.25 -.000/0.00 APPLIES.

8. DETAIL N DIMENSIONS APPLY TO 2 POSITION PARTS ONLY

9. SECTION R-R DIMENSIONS ONLY APPLY TO RETENTION.

PIN POSITIONS FOR 3 POSITION PARTS AND LARGER. RETENTION PIN POSITIONS LOCATED AT MANUFACTURER'S OPTION.

10. 5LB/2.3KG MAX INSERTION FORCE AND .25LB/.1KG MIN RETENTION FORCE PER RETENTIVE PIN USING .062/1.57 THICK CIRCUIT BOARDS AND RECOMMENDED HOLE PATTERN.

11. THESE PRODUCTS MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATION AS DESCRIBED IN GS-22-008.

## 12. PLATING OPTIONS:

PERFORMANCE PLATING WILL BE EITHER GOLD OR GXT ON POST OR TAIL, OPTIONALLY (78~295u")/2~7.5u) TIN ON TAIL.

13."THIS PRODUCT HAS 100% TIN PLATING IN THE INTERFACE AND HAS NOT BEEN TESTED FOR WHISKER GROWTH IN ALL INTERCONNECT ENVIRONMENTS."

|             |                |    |      |                       |                                  |                                                                                                     |                                                      |  |  |
|-------------|----------------|----|------|-----------------------|----------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------|--|--|
| mat'l. code |                |    |      | surface<br>ISO 1302 ✓ | tolerance<br>ISO 406<br>ISO 1101 | projection<br> | product family<br>BERGSTIK                           |  |  |
| ltr         | ecn no         | dr | date | angles                | linear                           | INCH/MM<br>scale 1:1                                                                                | title<br>BERGSTIK II HEADER<br>.100/2.54 SR SELF-RET |  |  |
| AP          |                |    |      |                       |                                  |                                                                                                     |                                                      |  |  |
|             |                |    |      | 0±2°                  |                                  |                                                                                                     |                                                      |  |  |
|             |                |    |      | dr                    | D. WHITING                       | 4/19/93                                                                                             | FCI                                                  |  |  |
|             |                |    |      | enr                   | T.HANNA                          | 4/19/93                                                                                             |                                                      |  |  |
|             |                |    |      | chr                   | T. BREWBAKER                     | 4/19/93                                                                                             |                                                      |  |  |
|             |                |    |      | app                   | T.HANNA                          | 4/19/93                                                                                             |                                                      |  |  |
| sheet index | revision sheet |    |      |                       |                                  |                                                                                                     | dwg no 69190                                         |  |  |
|             |                |    |      |                       |                                  |                                                                                                     | sheet2 of 4 size A3                                  |  |  |
|             |                |    |      |                       |                                  |                                                                                                     | type Product Customer Drawing                        |  |  |

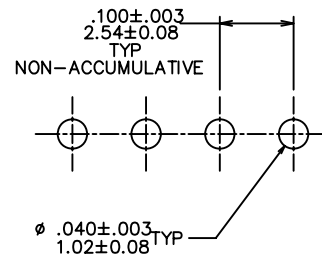
1

2 3

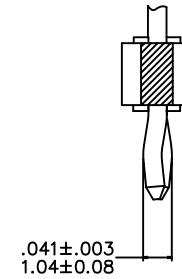
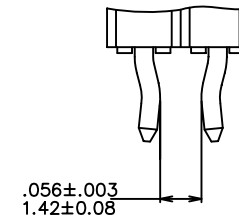
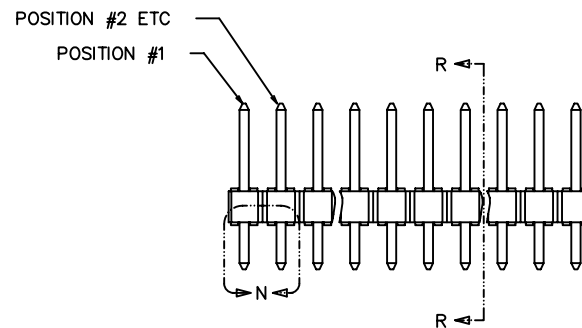
4

5

6



RECOMMENDED HOLE PATTERN

SECTION R-R  
NOTE 9TWO POSITION  
DETAIL N  
NOTE 8

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D

|             |                |    |      |                                       |                                  |                       |                                             |  |  |  |
|-------------|----------------|----|------|---------------------------------------|----------------------------------|-----------------------|---------------------------------------------|--|--|--|
| mat'l. code |                |    |      | surface<br>ISO 1302 ✓                 | tolerance<br>ISO 406<br>ISO 1101 | projection<br>INCH/MM | product family<br>BERGSTIK                  |  |  |  |
| ltr         | ecn no         | dr | date | tolerances unless otherwise specified |                                  |                       | title                                       |  |  |  |
| AP          |                |    |      | angles                                | linear                           | scale 1:1             | BERGSTIK II HEADER<br>.100/2.54 SR SELF-RET |  |  |  |
|             |                |    |      | 0°±2°                                 |                                  |                       |                                             |  |  |  |
|             |                |    |      | dr                                    | D. WHITING                       |                       |                                             |  |  |  |
|             |                |    |      | enr                                   | T.HANNA                          | 4/19/93               | FCI                                         |  |  |  |
|             |                |    |      | chr                                   | T. BREWBAKER                     | 4/19/93               |                                             |  |  |  |
|             |                |    |      | app                                   | T.HANNA                          | 4/19/93               |                                             |  |  |  |
| sheet index | revision sheet |    |      |                                       |                                  |                       | type Product Customer Drawing               |  |  |  |



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| PRODUCT NUMBER        | TOTAL PIN LENGTH      |                  | TAIL LENGTH      |                 | MATING LENGTH    |                  | PACKAGING                  | NOTE         | LF<br>OPTION         |
|-----------------------|-----------------------|------------------|------------------|-----------------|------------------|------------------|----------------------------|--------------|----------------------|
|                       | DIM F                 | DIM F            | DIM G            | DIM G           | DIM H            | DIM H            |                            |              |                      |
|                       | ENGLISH               | METRIC           | ENGLISH          | METRIC          | ENGLISH          | METRIC           |                            |              |                      |
| 69190-YYY             | 0.450                 | 11.43            | 0.120            | 3.05            | 0.230            | 5.84             | POLY BAGS/TUBES            | -            | NOTE 1,11<br>OB<br>↓ |
| <del>72348-YYYH</del> | <del>0.515</del>      | <del>13.08</del> | <del>0.120</del> | <del>3.05</del> | <del>0.295</del> | <del>7.49</del>  | <del>POLY BAGS</del>       | <del>-</del> |                      |
| 78229-YYY             | 0.538                 | 13.67            | 0.120            | 3.05            | 0.318            | 8.08             | POLY BAGS/TUBES            | -            |                      |
| 78250-YYY             | U N A V A I L A B L E |                  |                  |                 |                  |                  |                            | -            |                      |
| <del>78538-YYY</del>  | <del>0.620</del>      | <del>15.75</del> | <del>0.120</del> | <del>3.05</del> | <del>0.400</del> | <del>10.16</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>78594-YYY</del>  | <del>0.760</del>      | <del>19.30</del> | <del>0.120</del> | <del>3.05</del> | <del>0.540</del> | <del>13.72</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>79429-YYY</del>  | <del>0.695</del>      | <del>17.65</del> | <del>0.120</del> | <del>3.05</del> | <del>0.475</del> | <del>12.07</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>79978-YYY</del>  | <del>0.450</del>      | <del>11.43</del> | <del>0.120</del> | <del>3.05</del> | <del>0.230</del> | <del>5.84</del>  | <del>POLY BAGS/TUBES</del> | <del>7</del> |                      |
| <del>86505-YYY</del>  | <del>0.440</del>      | <del>11.18</del> | <del>0.120</del> | <del>3.05</del> | <del>0.220</del> | <del>5.59</del>  | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>87036-YYY</del>  | <del>0.830</del>      | <del>21.08</del> | <del>0.120</del> | <del>3.05</del> | <del>0.610</del> | <del>15.49</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>87068-YYY</del>  | <del>0.530</del>      | <del>13.46</del> | <del>0.115</del> | <del>2.92</del> | <del>0.315</del> | <del>8.00</del>  | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>87280-YYY</del>  | <del>1.000</del>      | <del>25.40</del> | <del>0.120</del> | <del>3.05</del> | <del>0.780</del> | <del>19.81</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| 87452-YYY             | 0.840                 | 21.34            | 0.120            | 3.05            | 0.620            | 15.75            | POLY BAGS                  | -            |                      |
| <del>87453-YYY</del>  | <del>0.990</del>      | <del>25.15</del> | <del>0.120</del> | <del>3.05</del> | <del>0.770</del> | <del>19.56</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>87918-YYY</del>  | <del>0.730</del>      | <del>18.54</del> | <del>0.120</del> | <del>3.05</del> | <del>0.510</del> | <del>12.95</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>90603-YYY</del>  | <del>0.430</del>      | <del>10.92</del> | <del>0.100</del> | <del>2.54</del> | <del>0.230</del> | <del>5.84</del>  | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>90610-YYY</del>  | <del>0.927</del>      | <del>23.55</del> | <del>0.100</del> | <del>2.54</del> | <del>0.727</del> | <del>18.47</del> | <del>POLY BAGS</del>       | <del>-</del> |                      |
| <del>94549-YYYH</del> | <del>0.415</del>      | <del>10.54</del> | <del>0.085</del> | <del>2.16</del> | <del>0.230</del> | <del>5.84</del>  | <del>POLY BAGS</del>       | <del>-</del> |                      |
| 69190-YYY001HLF       | 0.425                 | 10.80            | 0.095            | 2.41            | 0.230            | 5.84             | POLY BAGS                  | -            |                      |
| 69190-YYY002HLF       | 0.378                 | 9.59             | 0.120            | 3.05            | 0.157            | 4.00             | POLY BAGS/TUBES            | -            | NOTE 1,11            |

|             |                |    |      |                                       |                                  |                      |                                                      |  |  |
|-------------|----------------|----|------|---------------------------------------|----------------------------------|----------------------|------------------------------------------------------|--|--|
| mat'l. code |                |    |      | surface<br>ISO 1302 ✓                 | tolerance<br>ISO 406<br>ISO 1101 | projection<br>       | product family<br>BERGSTIK                           |  |  |
| ltr         | ecn no         | dr | date | tolerances unless otherwise specified |                                  | INCH/MM<br>scale 1:1 | title<br>BERGSTIK II HEADER<br>.100/2.54 SR SELF-RET |  |  |
| AP          |                |    |      | angles                                | linear                           |                      |                                                      |  |  |
|             |                |    |      | 0±2°                                  |                                  |                      |                                                      |  |  |
|             |                |    |      | dr                                    | D. WHITING                       | 4/19/93              | FCI                                                  |  |  |
|             |                |    |      | enr                                   | T.HANNA                          | 4/19/93              |                                                      |  |  |
|             |                |    |      | chr                                   | T. BREWBAKER                     | 4/19/93              |                                                      |  |  |
|             |                |    |      | app                                   | T.HANNA                          | 4/19/93              |                                                      |  |  |
| sheet index | revision sheet |    |      |                                       |                                  |                      | type Product Customer Drawing                        |  |  |

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