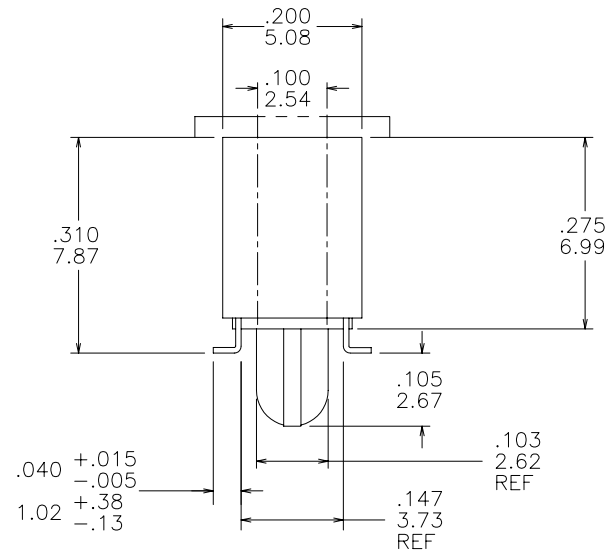
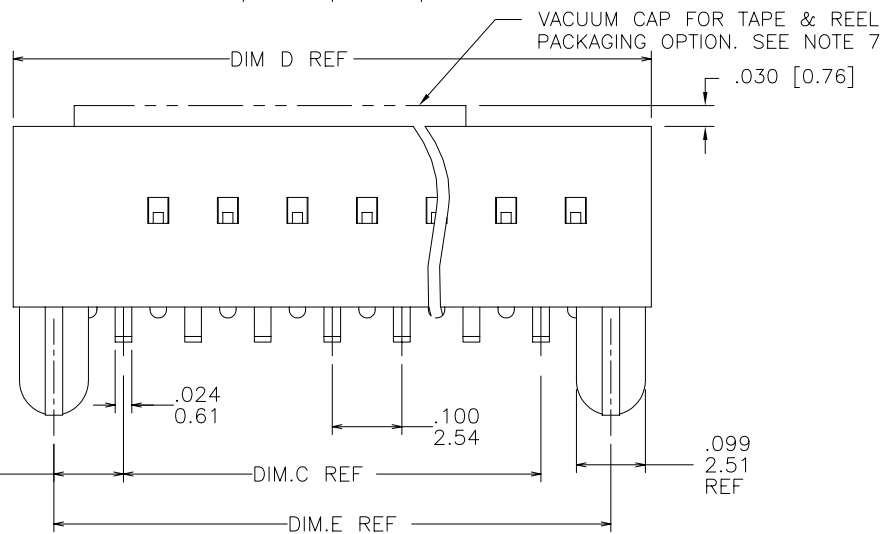
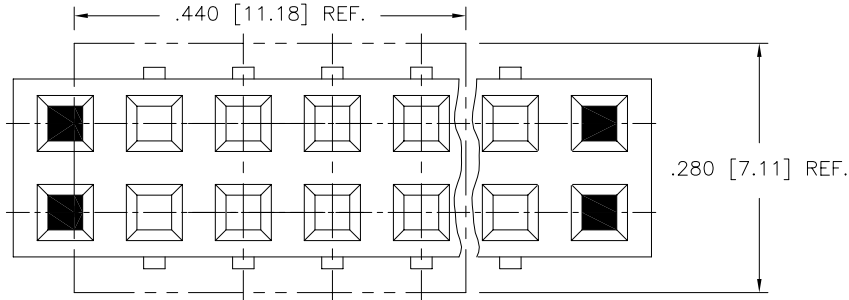


PRODUCT NO.

SEE TABLE

69154 - XXX - LF

- LEAD FREE OPTION
- PACKAGING OPTION NOTE 10, OMIT IF NOT REQUIRED.
- NO. OF POSITIONS PER ROW
- PLATING CODE
- BASE PART NUMBER



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|                   |          |            |          |                     |   |                                       |   |                                |  |
|-------------------|----------|------------|----------|---------------------|---|---------------------------------------|---|--------------------------------|--|
| mat'l. code       |          | surface    |          | tolerance           |   | projection                            |   | product family                 |  |
| NOTES 1,3,10 & 14 |          | ISO 1302 ✓ |          | ISO 406<br>ISO 1101 |   | INCH/MM                               |   | DUBOX                          |  |
| ltr               | ecp      | no         | dr       | date                |   | tolerances unless otherwise specified |   | title                          |  |
| M                 | V20155   | GIP        | 02/04/02 | 10/15/05            |   | .XX±.01/.X±.3                         |   | SMT DOUBLE ROW<br>VCC ASSEMBLY |  |
| N                 | V21654   | GIP        | 10/15/05 | 0±2°                |   | .XXX±.0.005/.XX±.13                   |   | scale 1:1                      |  |
| P                 | V03-0310 | HTB        | 05/02/03 | J. SHREINER         |   | .000X±.0020/.XXX±.051                 |   | sheet 1 of 6 size              |  |
| R                 | V03-1246 | PJ         | 12/04/03 | 12/31/90            |   | M. HAHN                               |   | 69154 A3                       |  |
| S                 | V05-0463 | DPU        | 06/27/05 | 12/31/90            |   | M. HAHN                               |   | type Product Customer Drawing  |  |
| T                 | M07-0143 | ERE        | 03/03/07 | 12/31/90            |   | M. HAHN                               |   |                                |  |
| U                 | M07-0203 | AGS        | 05/02/07 | 12/31/90            |   | M. HAHN                               |   |                                |  |
| sheet             | revision | U          | U        | U                   | U | U                                     | U |                                |  |
| index             | sheet    | 1          | 2        | 3                   | 4 | 5                                     | 6 |                                |  |

form: A3

PRODUCT NUMBER  
SEE TABLE

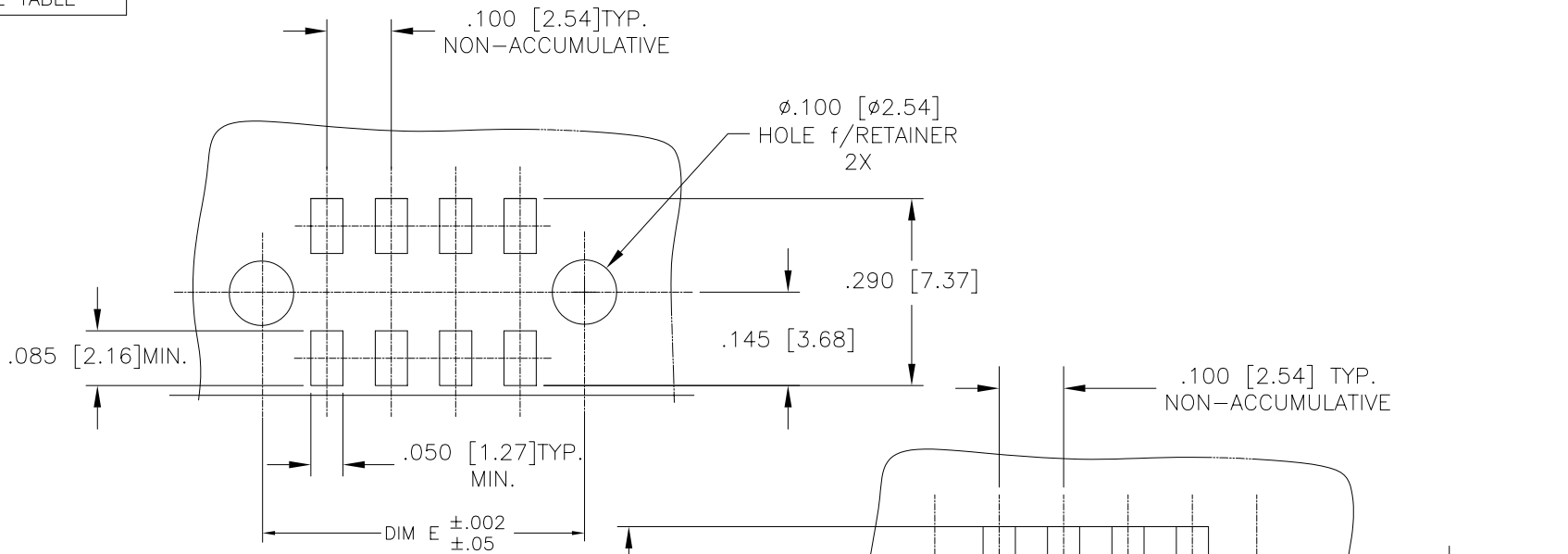


FIGURE A  
TOP ENTRY  
.025/.64 SQUARE PIN

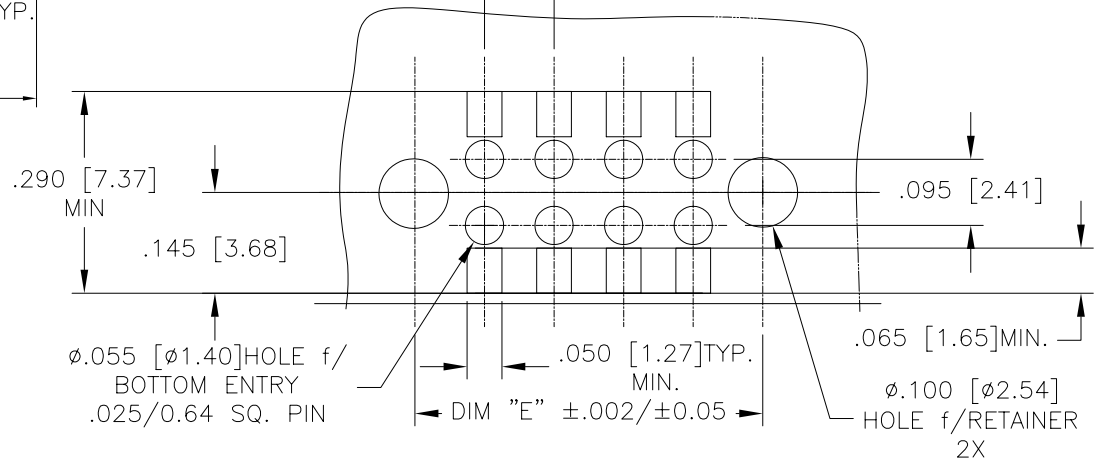


FIGURE B  
BOTTOM ENTRY (THROUGH PWB)  
.025/.64 SQUARE PIN

|             |     |                       |    |                                  |  |                                       |   |                                |              |
|-------------|-----|-----------------------|----|----------------------------------|--|---------------------------------------|---|--------------------------------|--------------|
| mat'l. code |     | surface<br>ISO 1302 ✓ |    | tolerance<br>ISO 406<br>ISO 1101 |  | projection<br>FIRST ANGLE             |   | product family<br>DUBOX        |              |
| ltr         | ecn | no                    | dr | date                             |  | tolerances unless otherwise specified |   | title                          |              |
| U           |     |                       |    |                                  |  | angles                                | linear  | SMT DOUBLE ROW<br>VCC ASSEMBLY |              |
|             |     |                       |    |                                  |  | 0°±2'                                 | XXX±.01/XX±.3<br>XXX±.005/XX±.13<br>XXXX±.0020/XXX±.051 | INCH/MM                        |              |
|             |     |                       |    |                                  |  | dr                                    | J. SHREINER   | 12/31/90                       | scale 1:1    |
|             |     |                       |    |                                  |  | enr                                   | M. HAHN   | 12/31/90                       | dwg no       |
|             |     |                       |    |                                  |  | chr                                   | M. HAHN   | 12/31/90                       | sheet 2 of 6 |
|             |     |                       |    |                                  |  | appd                                  | M. HAHN   | 12/31/90                       | size         |
|             |     |                       |    |                                  |  |                                       |   |                                | A3           |
| sheet index |     | revision sheet        |    |                                  |  |                                       |   | type Product Customer Drawing  |              |



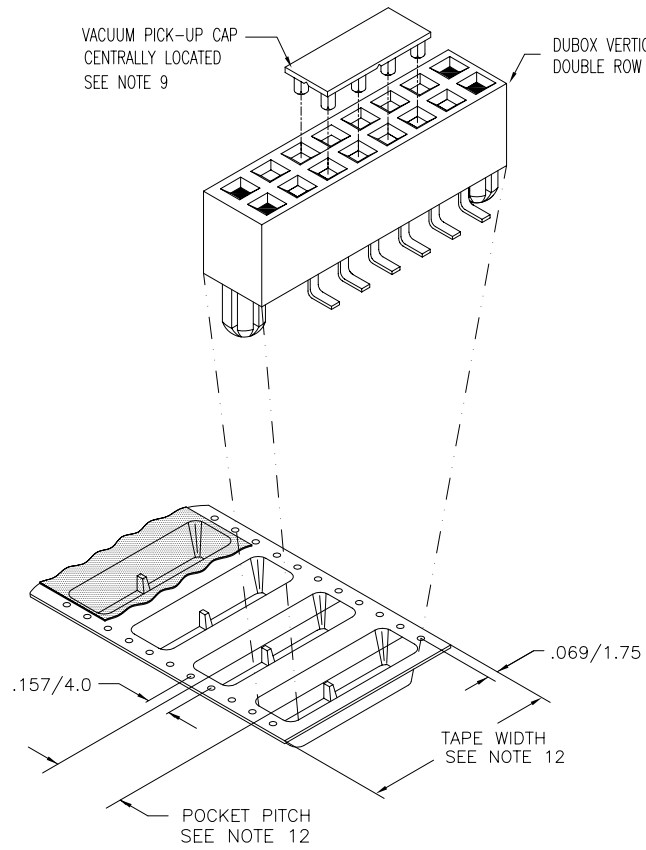
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PRODUCT NO.

SEE TABLE

VACUUM PICK-UP CAP  
CENTRALLY LOCATED  
SEE NOTE 9

DUBOX VERTICAL RECEPTACLE  
DOUBLE ROW



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|             |  |                       |  |                                  |  |                |  |                                |  |
|-------------|--|-----------------------|--|----------------------------------|--|----------------|--|--------------------------------|--|
| mat'l. code |  | surface<br>ISO 1302 ✓ |  | tolerance<br>ISO 406<br>ISO 1101 |  | projection<br> |  | product family<br>DUBOX        |  |
| ltr         |  | ecn no                |  | dr                               |  | date           |  | title                          |  |
| U           |  |                       |  |                                  |  |                |  | SMT DOUBLE ROW<br>VCC ASSEMBLY |  |
|             |  |                       |  | angles                           |  | linear         |  | INCH/MM                        |  |
|             |  |                       |  | 0°±2°                            |  |                |  | scale 1:1                      |  |
|             |  |                       |  | dr                               |  | J. SHREINER    |  | 12/31/90                       |  |
|             |  |                       |  | enr                              |  | M. HAHN        |  | 12/31/90                       |  |
|             |  |                       |  | chr                              |  | M. HAHN        |  | 12/31/90                       |  |
|             |  |                       |  | appd                             |  | M. HAHN        |  | 12/31/90                       |  |
| sheet index |  | revision sheet        |  |                                  |  |                |  | dwg no<br>69154                |  |
|             |  |                       |  |                                  |  |                |  | sheet 3 of 6<br>A3             |  |
|             |  |                       |  |                                  |  |                |  | type Product Customer Drawing  |  |

form: A3

1

2

3

4

5

6

| PRODUCT NO<br>NOTE 13 | PLATING CONTACT AREA                                   | PLATING SOLDER TAIL           | MATERIAL REF |
|-----------------------|--|-------------------------------|--------------|
| 69154-2XX             | 15u"/.38u Au MIN OVER 50u"/1.27u Ni MIN<br>SEE NOTE 16 | 100u"/160u"<br>2.54u/4.06u SN | NOTE 3 & 4   |
| 69154-3XX             | 30u"/.76u Au MIN OVER 50u"/1.27u Ni MIN<br>SEE NOTE 16 | 100u"/160u"<br>2.54u/4.06u SN | NOTE 3 & 4   |
| 69154-6XX             | 30u"/.76u Au MIN OVER 50u"/1.27u Ni MIN<br>SEE NOTE 16 | 100u"/160u"<br>2.54u/4.06u SN | NOTE 3 & 4   |
| 69154-8XX             | 30u"/.76u Au MIN OVER 50u"/1.27u Ni MIN                | 100u"/160u"<br>2.54u/4.06u SN | NOTE 3 & 4   |

OBSOLETE

NOTES:

- ① MATERIAL TERMINAL: PHOSPHOR BRONZE,
2. RECOMMENDED APPLICATION DATA:
  - A. RECOMMENDED SOLDER PAD PATTERN IS SHOWN IN FIGURE A & B.
  - B. ALL MATING PINS TO BE .025/.64. SQUARE ON TRUE CENTER OF GIVEN TERMINAL SPACING WITHIN .015/.38. DIA.
  - C. SUGGESTED MATING PIN LENGTH .210 ±.020/5.33 ±.51.
- ③ MATERIAL HOUSING: P.P.S. FILLED,COLOR BLACK  
FLAME RETARDANT PER UL 94V-0.  
COMPATIBLE WITH INFRA-RED SOLDERING.  
THIS PART WILL WITHSTAND EXPOSURES TO 260°C  
PEAK TEMPERATURE FOR 20 SECONDS IN WAVE SOLDER,  
INFRA-RED OR VAPOR PHASE SOLDER PROCESS.
- ④ PRESTAMPED POST PLATED TERMINALS.
5. FCI, FCI FINAL PART NUMBER AND DATE CODE TO BE MARKED ON TUBE LABEL.
6. STANDARD PACKAGING PER BUS-14-097.
7. TAPE AND REEL PACKAGING PER GES-14-334.
8. CARRIER TAPE WIDTH 24 MIN. & BELOW TO HAVE PILOT HOLES ON ONE SIDE OF TAPE ONLY.  
SIZES ABOVE 24mm TO HAVE PILOT HOLES ON BOTH SIDES OF TAPE.
- ⑨ VACUUM CAP MATERIAL FOR TAPE & REEL PACKAGING:  
L.C.P., FLAME RETARDANT PER UL 94V-0.  
COLOR: BLACK
- ⑩ ADD SUFFIX "P" TO PART DASH NUMBER FOR TAPE AND REEL PACKAGING.  
EXAMPLE: 69154-XXXP
11. MAXIMUM LENGTH OF CONNECTOR FOR TAPE AND REEL PACKAGING IS 2.50 INCHES LONG/63.5 MM.
- ⑫ TAPE & REEL PACKAGING 72mm WIDE TAPE WITH 16mm POCKET PITCH.
- ⑬ ADD LF SUFFIX AT THE END OF PART NUMBER FOR LEAD FREE OPTION.
14. THESE PRODUCTS MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATION AS DESCRIBED IN GS-22-008.
- ⑮ "THIS PRODUCT HAS 100% TIN PLATING IN THE INTERFACE AND HAS NOT BEEN TESTED FOR WHISKER GROWTH IN ALL INTERCONNECT ENVIRONMENTS."
- ⑯ PLATING OPTIONS:  
MAY BE EITHER GOLD OR GXT PLATED AT MANUFACTURER'S OPTION.

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|             |        |                       |  |                                |                               |
|-------------|--------|-----------------------|--|--------------------------------|-------------------------------|
| mat'l. code |        | surface<br>ISO 1302 ✓ | tolerance<br>ISO 406<br>ISO 1101                                 | projection<br>                 | product family<br>DUBOX       |
| ltr         | ecn no | dr                    | date   | title                          |                               |
| U           |        |                       |  | SMT DOUBLE ROW<br>VCC ASSEMBLY |                               |
|             |        | angles                | linear   | INCH/MM                        |                               |
|             |        | 0°±2'                 | .xxx±.01/.xx±.3<br>.xxxx±.0.005/.xx±.13<br>.xxxx±.0020/.xxx±.051 | scale 1:1                      |                               |
|             |        | dr                    | J. SHREINER  | 12/31/90                       | dwg no                        |
|             |        | enr                   | M. HAHN  | 12/31/90                       | sheet 4 of 6                  |
|             |        | chr                   | M. HAHN  | 12/31/90                       | 69154                         |
|             |        | appd                  | M. HAHN  | 12/31/90                       | A3                            |
| sheet index |        | revision sheet        |  |                                | type Product Customer Drawing |

| PRODUCT NO | NO OF POS | DIM C       | DIM D       | DIM E       | TAPE & REEL PACKAGING | LF OPTION |
|------------|-----------|-------------|-------------|-------------|-----------------------|-----------|
| 69154-Y02  | 2 X 2     | .100/2.54   | .417/10.59  | .300/7.62   | NO                    | NOTE 13   |
| 69154-Y03  | 2 X 3     | .200/5.08   | .517/13.13  | .400/10.16  | NO                    |           |
| 69154-Y04  | 2 X 4     | .300/7.62   | .617/15.67  | .500/12.70  | NO                    |           |
| 69154-Y05  | 2 X 5     | .400/10.16  | .717/18.21  | .600/15.24  | NO                    |           |
| 69154-Y06  | 2 X 6     | .500/12.70  | .817/20.75  | .700/17.78  | NO                    |           |
| 69154-Y07  | 2 X 7     | .600/15.24  | .917/23.29  | .800/20.32  | NO                    |           |
| 69154-Y08  | 2 X 8     | .700/17.78  | 1.017/25.83 | .900/22.86  | NO                    |           |
| 69154-Y09  | 2 X 9     | .800/20.32  | 1.117/28.37 | 1.000/25.40 | NO                    |           |
| 69154-Y10  | 2 X 10    | .900/22.86  | 1.217/30.91 | 1.100/27.94 | NO                    |           |
| 69154-Y11  | 2 X 11    | 1.000/25.40 | 1.317/33.45 | 1.200/30.48 | NO                    |           |
| 69154-Y12  | 2 X 12    | 1.100/27.94 | 1.417/35.99 | 1.300/33.02 | NO                    |           |
| 69154-Y13  | 2 X 13    | 1.200/30.48 | 1.517/38.53 | 1.400/35.56 | NO                    |           |
| 69154-Y14  | 2 X 14    | 1.300/33.02 | 1.617/41.07 | 1.500/38.10 | NO                    |           |
| 69154-Y15  | 2 X 15    | 1.400/35.56 | 1.717/43.61 | 1.600/40.64 | NO                    |           |
| 69154-Y16  | 2 X 16    | 1.500/38.10 | 1.817/46.15 | 1.700/43.18 | NO                    |           |
| 69154-Y17  | 2 X 17    | 1.600/40.64 | 1.917/48.69 | 1.800/45.72 | NO                    |           |
| 69154-Y18  | 2 X 18    | 1.700/43.18 | 2.017/51.23 | 1.900/48.26 | NO                    |           |
| 69154-Y19  | 2 X 19    | 1.800/45.72 | 2.117/53.77 | 2.000/50.80 | NO                    |           |
| 69154-Y20  | 2 X 20    | 1.900/48.26 | 2.217/56.31 | 2.100/53.34 | NO                    |           |
| 69154-Y21  | 2 X 21    | 2.000/50.80 | 2.317/58.85 | 2.200/55.08 | NO                    |           |
| 69154-Y22  | 2 X 22    | 2.100/53.34 | 2.417/61.39 | 2.300/58.42 | NO                    |           |
| 69154-Y23  | 2 X 23    | 2.200/55.88 | 2.517/63.93 | 2.400/60.96 | NO                    |           |
| 69154-Y24  | 2 X 24    | 2.300/58.42 | 2.617/66.47 | 2.500/63.50 | NO                    |           |
| 69154-Y25  | 2 X 25    | 2.400/60.96 | 2.717/69.01 | 2.000/66.04 | NO                    |           |



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|             |                |   |    |                                  |  |                                       |             |                         |  |
|-------------|----------------|---|----|----------------------------------|--|---------------------------------------|-------------|-------------------------|--|
| mat'l. code |                | surface<br>ISO 1302 <input checked="" type="checkbox"/> |    | tolerance<br>ISO 406<br>ISO 1101 |  | projection<br>                        |             | product family<br>DUBOX |  |
| ltr         | ecn            | no  | dr | date                             |  | tolerances unless otherwise specified |             | title                   |  |
| U           |                |   |    |                                  |  | angles                                | linear      | INCH/MM                 |  |
|             |                |   |    |                                  |  | 0°±2'                                 |             | scale 1:1               |  |
|             |                |   |    |                                  |  | dr                                    | J. SHREINER | 12/31/90                |  |
|             |                |   |    |                                  |  | enr                                   | M. HAHN     | 12/31/90                |  |
|             |                |   |    |                                  |  | chr                                   | M. HAHN     | 12/31/90                |  |
|             |                |   |    |                                  |  | appd                                  | M. HAHN     | 12/31/90                |  |
| sheet index | revision sheet |   |    |                                  |  |                                       |             |                         | dwg no 69154<br>sheet 5 of 6<br>size A3<br>type Product Customer Drawing |

form: A3

| PRODUCT NO | NO OF POS | DIM C        | DIM D        | DIM E        | TAPE & REEL PACKAGING | LF OPTION |
|------------|-----------|--------------|--------------|--------------|-----------------------|-----------|
| 69154-Y26  | 2 X 26    | 2.500/63.50  | 2.817/71.55  | 2.700/68.58  | NO                    | NOTE 13   |
| 69154-Y27  | 2 X 27    | 2.600/66.04  | 2.917/74.09  | 2.800/71.12  | NO                    |           |
| 69154-Y28  | 2 X 28    | 2.700/68.58  | 3.017/76.63  | 2.900/73.66  | NO                    |           |
| 69154-Y29  | 2 X 29    | 2.800/71.12  | 3.117/79.17  | 3.000/76.20  | NO                    |           |
| 69154-Y30  | 2 X 30    | 2.900/73.66  | 3.217/81.71  | 3.100/78.74  | NO                    |           |
| 69154-Y31  | 2 X 31    | 3.000/76.20  | 3.317/84.25  | 3.200/81.28  | NO                    |           |
| 69154-Y32  | 2 X 32    | 3.100/78.74  | 3.417/86.79  | 3.300/83.32  | NO                    |           |
| 69154-Y33  | 2 X 33    | 3.200/81.28  | 3.517/89.33  | 3.400/86.36  | NO                    |           |
| 69154-Y34  | 2 X 34    | 3.300/83.32  | 3.617/91.87  | 3.500/88.90  | NO                    |           |
| 69154-Y35  | 2 X 35    | 3.400/86.36  | 3.717/94.41  | 3.600/91.44  | NO                    |           |
| 69154-Y36  | 2 X 36    | 3.500/88.90  | 3.817/96.95  | 3.700/93.98  | NO                    |           |
| 69154-Y37  | 2 X 37    | 3.600/91.44  | 3.917/99.49  | 3.800/96.52  | NO                    |           |
| 69154-Y38  | 2 X 38    | 3.700/93.98  | 4.017/102.03 | 3.900/99.06  | NO                    |           |
| 69154-Y39  | 2 X 39    | 3.800/96.52  | 4.117/104.57 | 4.000/101.60 | NO                    |           |
| 69154-Y40  | 2 X 40    | 3.900/99.06  | 4.217/107.11 | 4.100/104.14 | NO                    |           |
| 69154-Y41  | 2 X 41    | 4.000/101.60 | 4.317/109.65 | 4.200/106.68 | NO                    |           |
| 69154-Y42  | 2 X 42    | 4.100/104.14 | 4.417/112.19 | 4.300/109.22 | NO                    |           |
| 69154-Y43  | 2 X 43    | 4.200/106.68 | 4.517/114.73 | 4.400/111.76 | NO                    |           |
| 69154-Y44  | 2 X 44    | 4.300/109.22 | 4.617/117.27 | 4.500/114.30 | NO                    |           |
| 69154-Y45  | 2 X 45    | 4.400/111.76 | 4.717/119.81 | 4.600/116.84 | NO                    |           |
| 69154-Y46  | 2 X 46    | 4.500/114.30 | 4.817/122.35 | 4.700/119.38 | NO                    |           |
| 69154-Y47  | 2 X 47    | 4.600/116.84 | 4.917/124.89 | 4.800/121.92 | NO                    |           |
| 69154-Y48  | 2 X 48    | 4.700/119.38 | 5.017/127.43 | 4.900/124.46 | NO                    |           |
| 69154-Y49  | 2 X 49    | 4.800/121.92 | 5.117/129.97 | 5.000/127.00 | NO                    |           |
| 69154-Y50  | 2 X 50    | 4.900/124.46 | 5.217/132.51 | 5.100/129.54 | NO                    |           |
| 69154-Y16P | 2 X 16    | 1.500/38.10  | 1.817/46.15  | 1.700/43.18  | YES - NOTE 10 & 12    |           |



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|-------------|-----|-----------------------|----|----------------------------------|-------------|---------------------------------------|--------|--------------------------------|--|
| mat'l. code |     | surface<br>ISO 1302 ✓ |    | tolerance<br>ISO 406<br>ISO 1101 |             | projection<br>                        |        | product family<br>DUBOX        |  |
| ltr         | ecn | no                    | dr | date                             |             | tolerances unless otherwise specified |        | title                          |  |
| U           |     |                       |    |                                  |             | angles                                | linear | SMT DOUBLE ROW<br>VCC ASSEMBLY |  |
|             |     |                       |    |                                  |             | 0°±2'                                 |        | INCH/MM                        |  |
|             |     |                       |    |                                  |             |                                       |        | scale 1:1                      |  |
|             |     |                       |    | dr                               | J. SHREINER | 12/31/90                              |        | dwg no                         |  |
|             |     |                       |    | enr                              | M. HAHN     | 12/31/90                              |        | sheet 6 of 6                   |  |
|             |     |                       |    | chr                              | M. HAHN     | 12/31/90                              |        | size                           |  |
|             |     |                       |    | appd                             | M. HAHN     | 12/31/90                              |        | A3                             |  |
| sheet index |     | revision sheet        |    |                                  |             |                                       |        | type Product Customer Drawing  |  |

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