

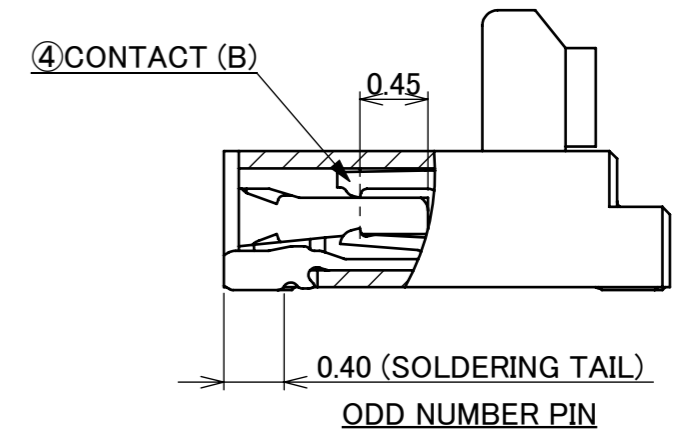
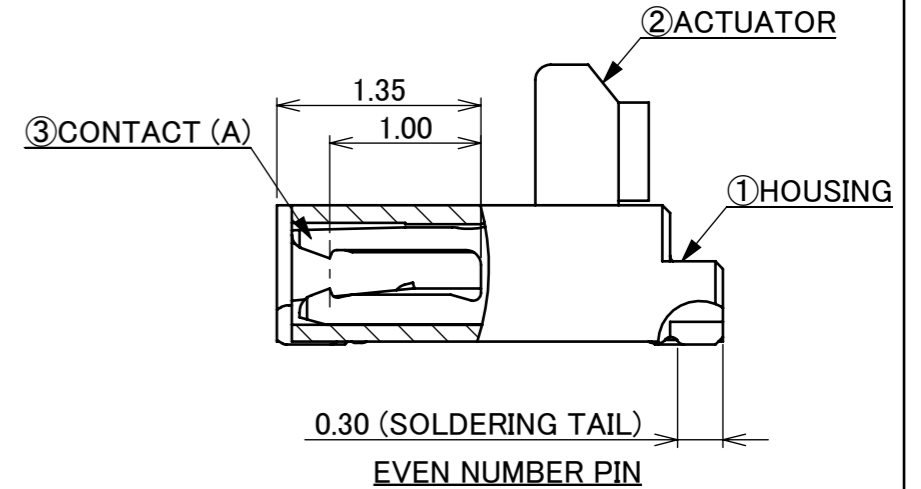
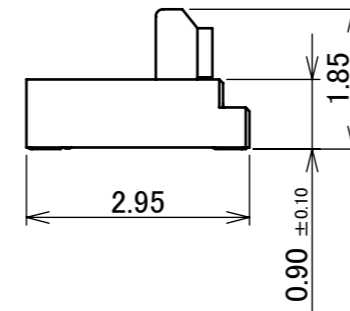
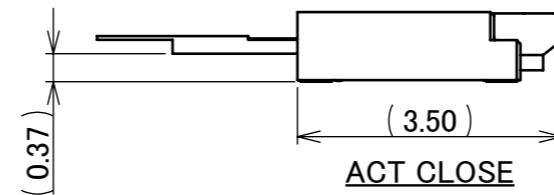
Halogen Free



RoHS Compliant

| PART No.       | Pos. | A     | B     | C     | D     | E     | F     |
|----------------|------|-------|-------|-------|-------|-------|-------|
| ◆20660-031E-01 | 31P  | 11.40 | 8.40  | 9.00  | 9.65  | 10.00 | 10.25 |
| 20660-039E-01  | 39P  | 13.80 | 10.80 | 11.40 | 12.05 | 12.40 | 12.65 |
| 20660-061E-01  | 61P  | 20.40 | 17.40 | 18.00 | 18.65 | 19.00 | 19.25 |
| ◆20660-071E-01 | 71P  | 23.40 | 20.40 | 21.00 | 21.65 | 22.00 | 22.25 |

◆MARK MEANS NOT AVAILABLE.



NOTE  
1. CONTACT POINT: TOP AND BOTTOM CONTACT

| 5   | HOLD DOWN   | BRASS           |   |
|-----|-------------|-----------------|---|
| 4   | CONTACT(B)  | PHOSPHOR BRONZE | CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.0 μm MIN.<br>SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.0 μm MIN. |
| 3   | CONTACT(A)  | PHOSPHOR BRONZE | CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.0 μm MIN.<br>SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.0 μm MIN. |
| 2   | ACTUATOR    | LCP             | UL94V-0, BEIGE  |
| 1   | HOUSING     | LCP             | UL94V-0, BEIGE  |
| NO. | DISCRIPTION | MATERIAL        | REMARKS   |

|                 |         |      |              |      |                    |           |                  |      |                                   |                  |               |            |
|-----------------|---------|------|--------------|------|--------------------|-----------|------------------|------|-----------------------------------|------------------|---------------|------------|
| 10              | Z240681 | S.Sh | July/01/'24  | T.M  | ANGLE              | ±2°       | 6 OVER 30 MAX.   | ±0.3 | PROJECTION<br>⊕                   | SERIES No.<br>R3 | CUSTOMER COPY |            |
| 9               | Z240276 | S.Sh | Mar./01/'24  | T.M  | 6 MAX.             | ±0.2      | 30 OVER 120 MAX. | ±0.5 |                                   |                  |               |            |
| 8               | Z230456 | M.M  | Apr./20/23   | H.I  | GENERAL TOLERANCE. |           |                  |      | TITLE<br>MINIFLEX® 3-BFNH<br>L-HD | SCALE<br>10:1    | UNIT<br>mm    |            |
| 7               | Z230318 | K.W  | Mar./20/23   | M.T  | DWG.               | DATE      |                  |      |                                   |                  |               |            |
| 6               | Z200554 | M.M  | May/29/'20   | Y.S  | M.Muro             |           | 2015/11/30       |      |                                   |                  |               |            |
| 5               | Z191249 | S.Sh | Sept./18/'19 | H.I  | CHK.               |           |                  |      | DWG. No.<br>20660                 | SIZE<br>A3       | SHEET<br>1/5  | REV.<br>10 |
| REV.            | ECN     | BY   | DATE         | APP. | APP.               | Y.Shimada |                  |      |                                   |                  |               |            |
| REVISION RECORD |         |      |              |      |                    |           |                  |      |                                   |                  |               |            |

| ITEMS  | SPECIFICATION   |
|--|---|
| RATING VOLTAGE                                   | 50V AC/DC (PER CONTACT PIN)   |
| RATING AMPERAGE                                  | 0.3A DC (PER CONTACT PIN)   |
| OPERATING TEMPERATURE                            | 233~358K(-40°C~+85°C)   |
| OPERATING HUMIDITY                               | 85% MAX.  |
| CONTACT RESISTANCE                               | INITIAL : 60mohm MAX. / AFTER TEST : $\triangleleft$ 40mohm MAX.                        |
| INSULATION RESISTANCE                            | 100Mohm MIN.  |
| DIELECTRIC WITHSTANDING VOLTAGE                  | AC250V 1min   |
| DURABILITY                                       | 20TH CYCLES   |
| ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)   | INITIAL : 0.245N(24.5gf) $\times$ n MAX. / 20TH CYCLES : 0.245N(24.5gf) $\times$ n MAX. |
| ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES) | INITIAL : 0.014N(1.4gf) $\times$ n MIN. / 20TH CYCLES : 0.014N(1.4gf) $\times$ n MIN.   |
| FPC RETENTION FORCE (INITIAL / AFTER TEST)       | INITIAL : 0.13N(13gf) $\times$ n MIN. / AFTER TEST : 0.10N(10gf) $\times$ n MIN.        |
| COPLANARITY                                      | 0.10 MAX.   |
| PRODUCT SPECIFICATION                            | PRS-2073  |
| TEST REPORT                                      | TR-15025  |
| PACKING STANDARD                                 | PST-15042   |
| INSTRUCTION MANUAL                               | HIM-14004   |
| APPEARANCE CRITERIA No.                          | QLS-A***  |

※ "n" IS THE NUMBER OF PIN

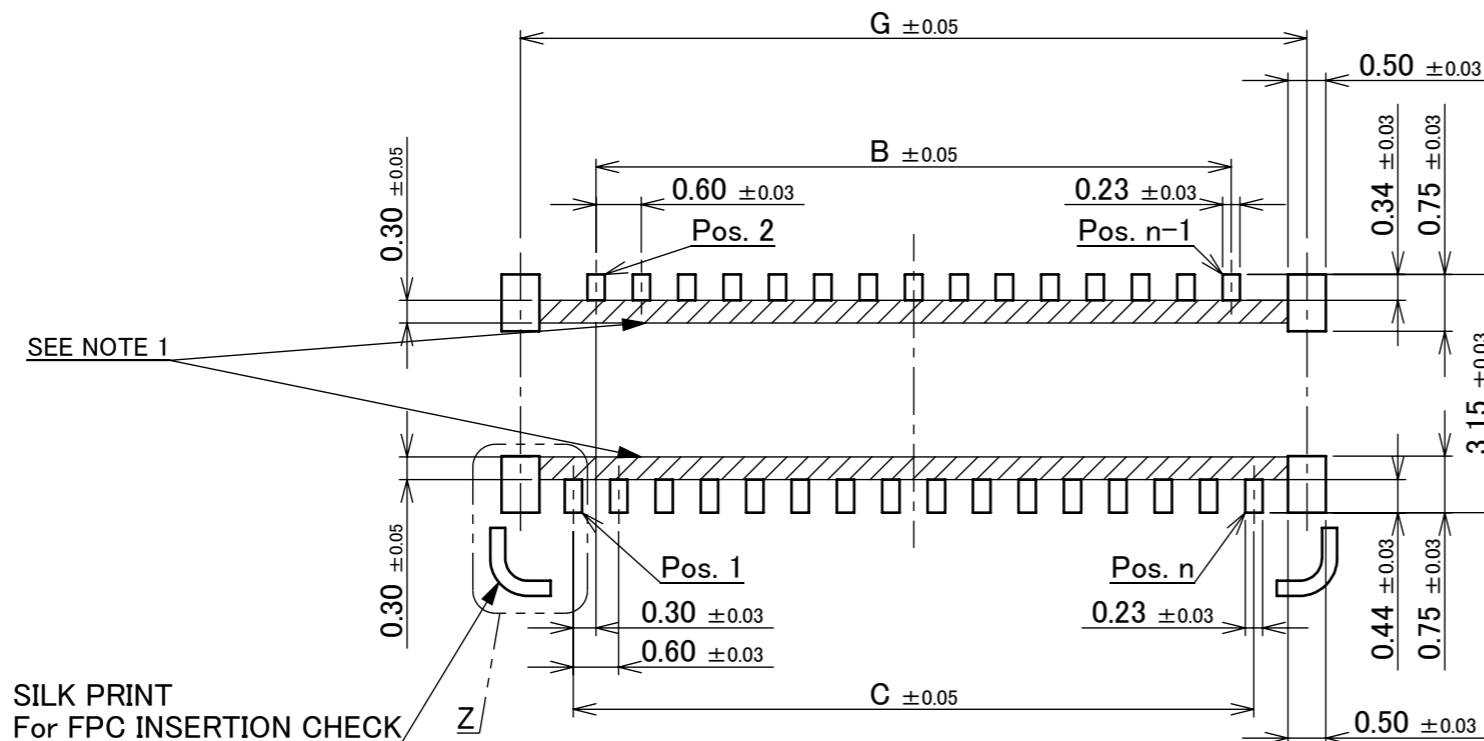


PLEASE BE SURE TO READ AND UNDERSTAND "INSTRUCTION MANUAL" BEFORE YOU USE OUR PRODUCTS.

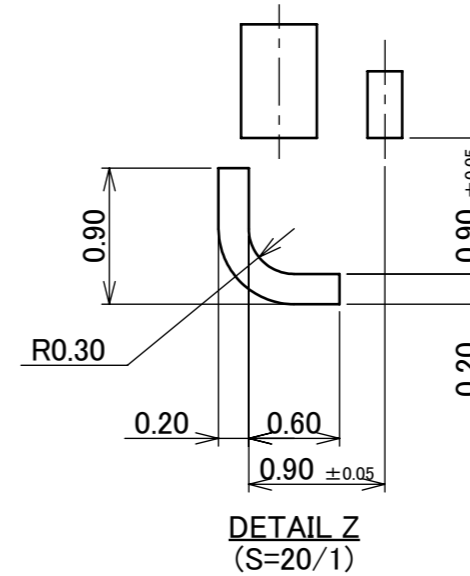
|                    |               |                |                  |   |                  |               |            |
|--------------------|---------------|----------------|------------------|---|------------------|---------------|------------|
| ANGLE              | $\pm 2^\circ$ | 6 OVER 30 MAX. | $\pm 0.3$        | PROJECTION<br>                                | SERIES No.<br>R3 | CUSTOMER COPY |            |
|                    | 6 MAX.        | $\pm 0.2$      | 30 OVER 120 MAX. |   |                  | $\pm 0.5$     | SCALE<br>- |
| GENERAL TOLERANCE. |               |                |                  | TITLE<br>MINIFLEX <sup>®</sup> 3-BFNH<br>L-HD | UNIT<br>mm       |               |            |
| DWG.               | DATE          |                |                  | DWG. No.<br>20660                             | SIZE<br>A3       | SHEET<br>2/5  | REV.<br>10 |
| CHK.               |               |                |                  |   |                  |               |            |
| APP.               |               |                |                  |   |                  |               |            |

| PART No.       | Pos. | B     | C     | G     | H     |
|----------------|------|-------|-------|-------|-------|
| ◆20660-031E-01 | 31P  | 8.40  | 9.00  | 10.40 | 9.60  |
| 20660-039E-01  | 39P  | 10.80 | 11.40 | 12.80 | 12.00 |
| 20660-061E-01  | 61P  | 17.40 | 18.00 | 19.40 | 18.60 |
| ◆20660-071E-01 | 71P  | 20.40 | 21.00 | 22.40 | 21.60 |

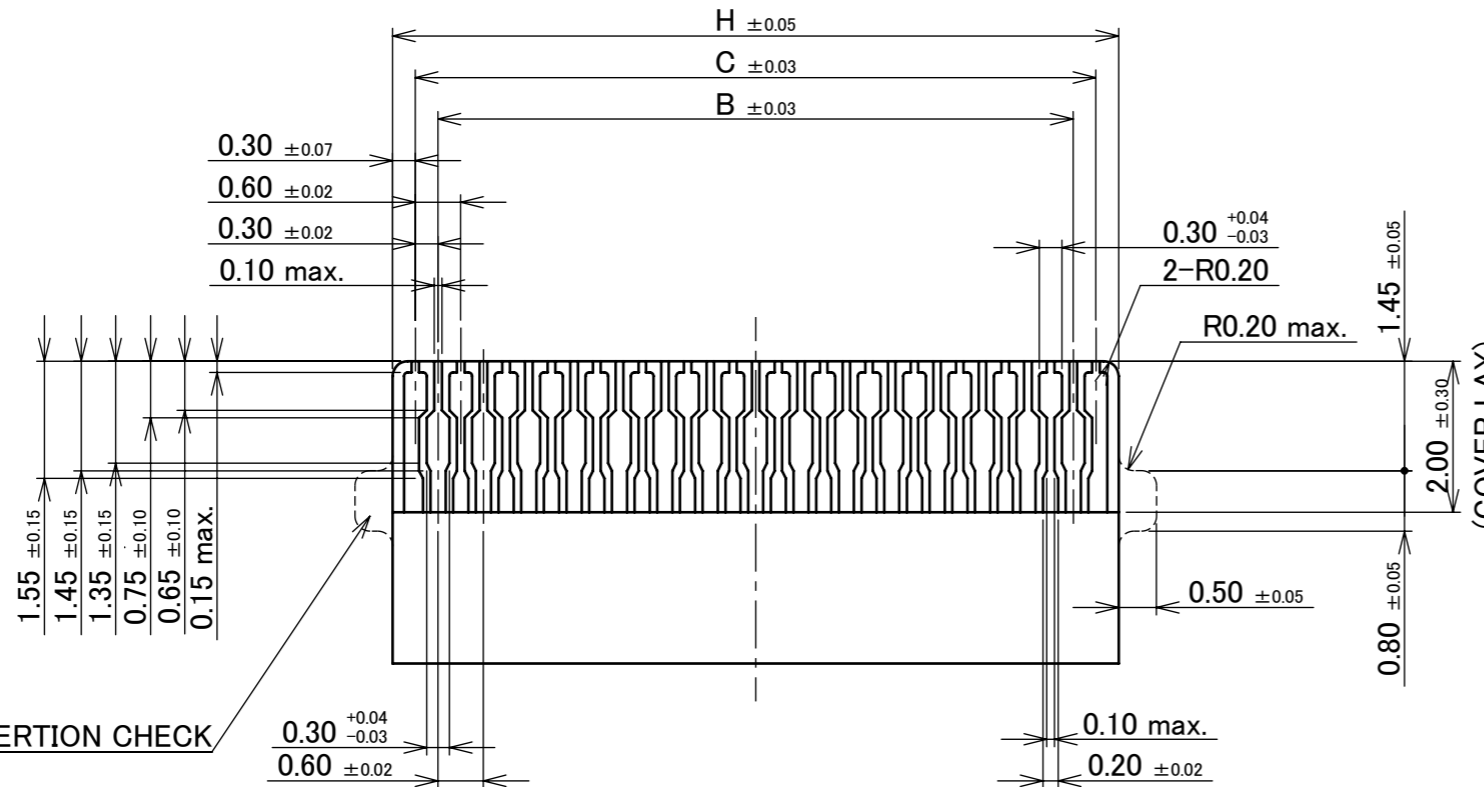
◆MARK MEANS NOT AVAILABLE.



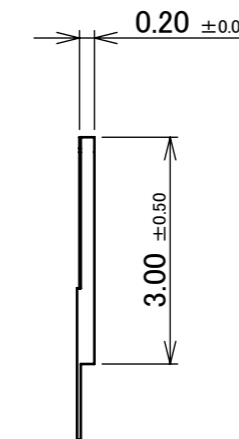
**RECOMMENDED PCB LAYOUT & METAL MASK LAYOUT**  
METAL MASK THICKNESS : t=0.12mm



SILK PRINT  
For FPC INSERTION CHECK



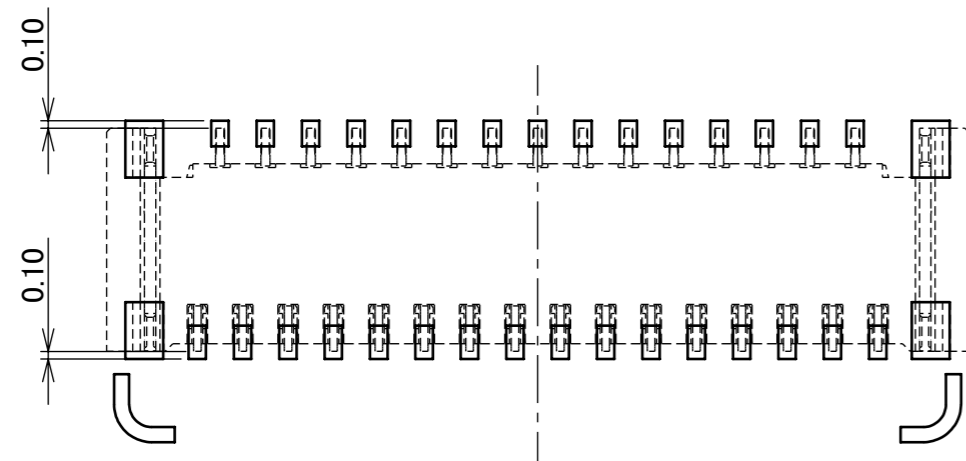
**RECOMMENDED FPC LAYOUT**



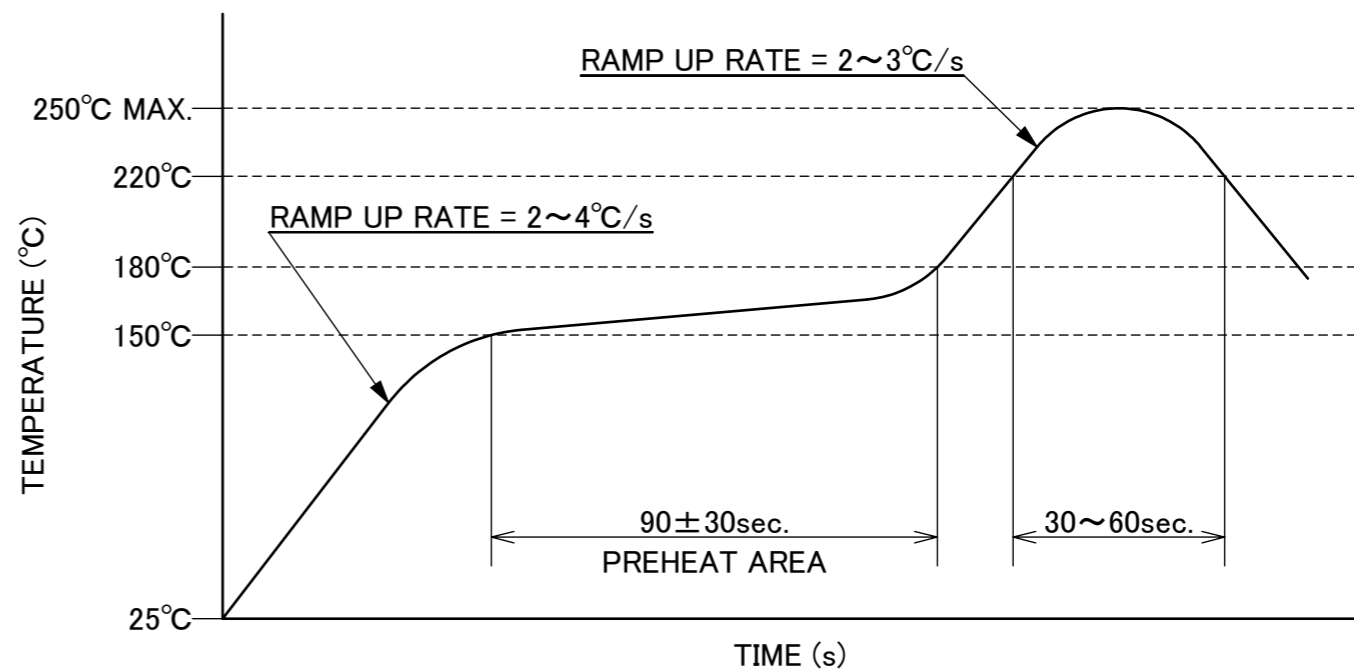
For FPC INSERTION CHECK

NOTE  
1. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

|                    |      |                  |      |                  |            |               |              |      |
|--------------------|------|------------------|------|------------------|------------|---------------|--------------|------|
| ANGLE              | ±2°  | 6 OVER 30 MAX.   | ±0.3 | PROJECTION       | SERIES No. | CUSTOMER COPY |              |      |
| 6 MAX.             | ±0.2 | 30 OVER 120 MAX. | ±0.5 | ⊕                | R3         |               |              |      |
| GENERAL TOLERANCE. |      |                  |      | TITLE            |            | SCALE         | <b>I-PEX</b> |      |
| DWG.               | DATE |                  |      | MINIFLEX® 3-BFNH |            | 10:1          |              |      |
| CHK.               |      |                  |      | L-HD             |            | UNIT          |              |      |
| APP.               |      |                  |      | DWG. No.         |            | SIZE          | SHEET        | REV. |
|                    |      |                  |      | 20660            |            | A3            | 3/5          | 10   |



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN

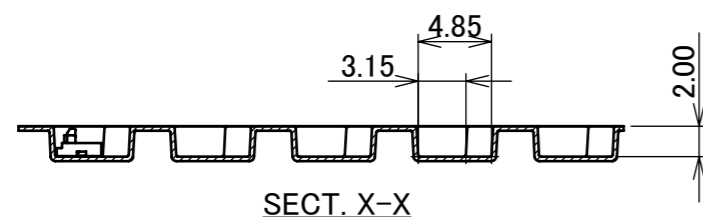
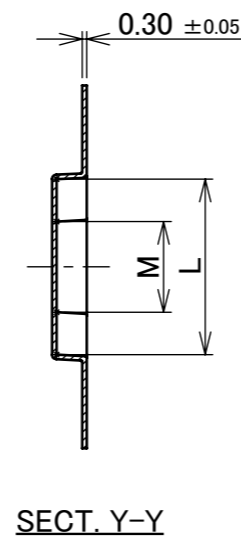
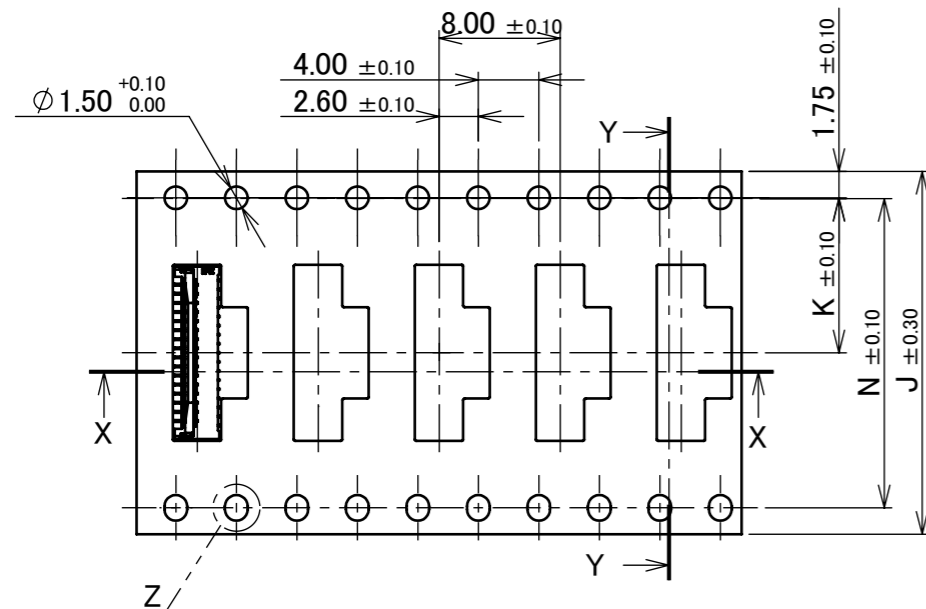
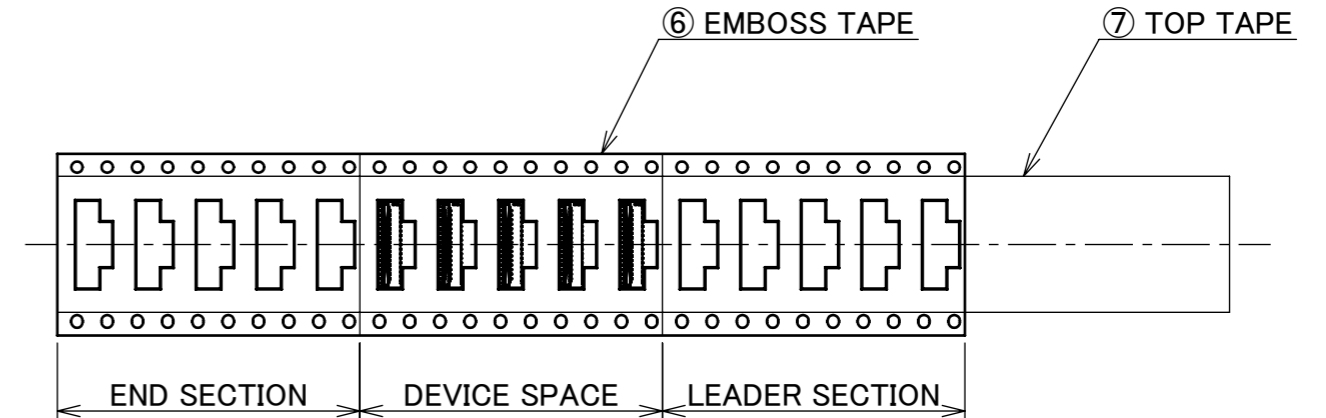
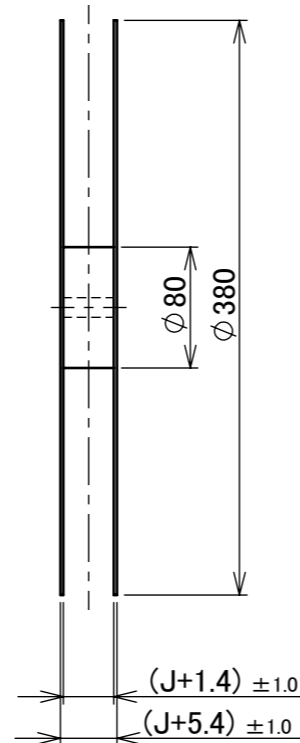
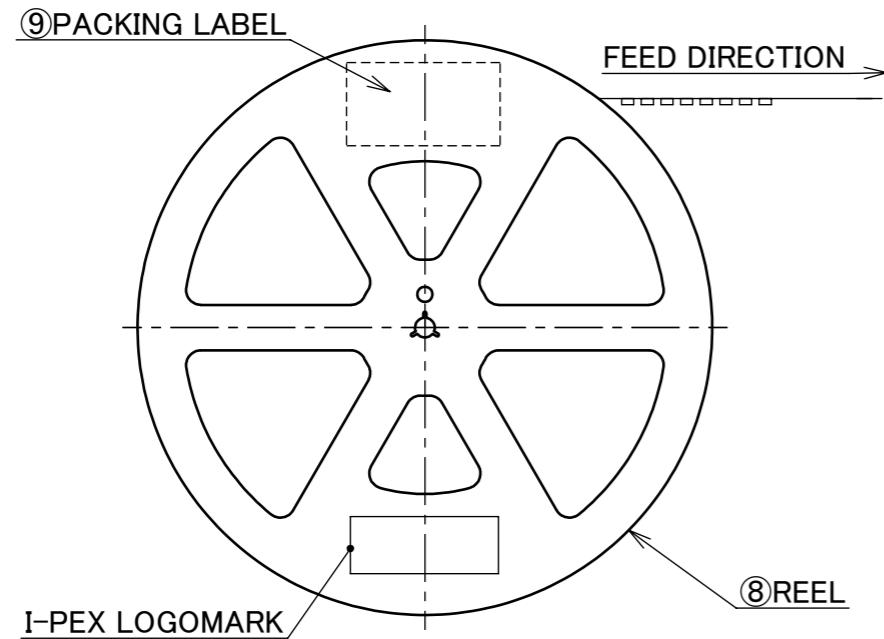


REFLOW TEMPERATURE PROFILE  
 SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

|                    |      |                  |      |                                   |                  |                      |              |            |
|--------------------|------|------------------|------|-----------------------------------|------------------|----------------------|--------------|------------|
| ANGLE              | ±2°  | 6 OVER 30 MAX.   | ±0.3 | PROJECTION<br>                    | SERIES No.<br>R3 | CUSTOMER COPY        |              |            |
| 6 MAX.             | ±0.2 | 30 OVER 120 MAX. | ±0.5 |                                   |                  |                      |              |            |
| GENERAL TOLERANCE. |      |                  |      | TITLE<br>MINIFLEX® 3-BFNH<br>L-HD | SCALE<br>10:1    | UNIT<br><b>I-PEX</b> |              |            |
| DWG.               | DATE |                  |      |                                   |                  |                      |              |            |
| CHK.               |      |                  |      |                                   |                  |                      |              |            |
| APP.               |      |                  |      |                                   |                  |                      |              |            |
|                    |      |                  |      | DWG. No.                          | 20660            | SIZE<br>A3           | SHEET<br>4/5 | REV.<br>10 |

| PART No.       | J     | K     | L     | M     | N     | QTY. PER EMOSS REEL<br>(PIECES / REEL) | QTY. PER PACKING CARTON<br>(REELS / CARTON)   |
|----------------|-------|-------|-------|-------|-------|--|---|
| ◆20660-031E-01 | 24.00 | 11.50 | 11.60 | 6.00  | -     | 4000 PIECES / REEL                     | 5 REELS / CARTON<br>( 20000 PIECES / CARTON ) |
| 20660-039E-01  |       |       | 14.00 | 8.00  |       |  | ( 20000 PIECES / CARTON )                     |
| 20660-061E-01  | 44.00 | 20.20 | 20.60 | 10.00 | 40.40 |  | 3 REELS / CARTON<br>( 12000 PIECES / CARTON ) |
| ◆20660-071E-01 |       |       | 23.60 |       |       |  |   |

◆ MARK MEANS NOT AVAILABLE.



NOTES

- TAPING SPECIFICATION FOLLOWS JIS C 0806 (IEC 60286-3).
- MAKE EMPTY SECTION OF LEADER AND END ON EACH END OF THE TAPE.
- TOP TAPE SHALL NOT STICK OUT FROM EMOSS TAPE.
- TOP TAPE SHALL NOT COVER FEED HOLE.

| NO. | DISCRIPTION   | MATERIAL                      | FINISH , REMARKS |
|-----|---------------|-------------------------------|------------------|
| 9   | PACKING LABEL | -                             | -                |
| 8   | REEL          | PS                            | BLACK            |
| 7   | TOP TAPE      | PET $t=0.062$<br>TRANSPARENCY | ANTI-STATIC TYPE |
| 6   | EMOSS TAPE    | PS $t=0.3$<br>TRANSPARENCY    | ANTI-STATIC TYPE |

| ANGLE              | $\pm 2^\circ$ | 6 OVER 30 MAX.   | $\pm 0.3$ | PROJECTION | SERIES No.       | CUSTOMER COPY |       |       |  |
|--------------------|---------------|------------------|-----------|------------|------------------|---------------|-------|-------|--|
| 6 MAX.             | $\pm 0.2$     | 30 OVER 120 MAX. | $\pm 0.5$ |            | R3               |               |       |       |  |
| GENERAL TOLERANCE. |               |                  |           | TITLE      | MINIFLEX® 3-BFNH |               | SCALE | I-PEX |  |
| DWG.               | DATE          |                  |           | L-HD       |                  | UNIT          |       |       |  |
| CHK.               |               |                  |           |            |                  | mm            |       |       |  |
| APP.               |               |                  |           | DWG. No.   | 20660            | SIZE          | SHEET | REV.  |  |
|                    |               |                  |           |            |                  | A3            | 5/5   | 10    |  |