

| PART No. | Pos. | A | B | C | D | E |
|----------------|------|-------|-------|-------|-------|-------|
| 20613-007E-02 | 7P | 3.60 | 1.20 | 1.80 | 2.45 | 2.80 |
| 20613-009E-02 | 9P | 4.20 | 1.80 | 2.40 | 3.05 | 3.40 |
| 20613-011E-02 | 11P | 4.80 | 2.40 | 3.00 | 3.65 | 4.00 |
| ◆20613-013E-02 | 13P | 5.40 | 3.00 | 3.60 | 4.25 | 4.60 |
| ◆20613-015E-02 | 15P | 6.00 | 3.60 | 4.20 | 4.85 | 5.20 |
| ◆20613-017E-02 | 17P | 6.60 | 4.20 | 4.80 | 5.45 | 5.80 |
| ◆20613-019E-02 | 19P | 7.20 | 4.80 | 5.40 | 6.05 | 6.40 |
| 20613-021E-02 | 21P | 7.80 | 5.40 | 6.00 | 6.65 | 7.00 |
| 20613-023E-02 | 23P | 8.40 | 6.00 | 6.60 | 7.25 | 7.60 |
| ◆20613-025E-02 | 25P | 9.00 | 6.60 | 7.20 | 7.85 | 8.20 |
| ◆20613-027E-02 | 27P | 9.60 | 7.20 | 7.80 | 8.45 | 8.80 |
| ◆20613-029E-02 | 29P | 10.20 | 7.80 | 8.40 | 9.05 | 9.40 |
| 20613-031E-02 | 31P | 10.80 | 8.40 | 9.00 | 9.65 | 10.00 |
| ◆20613-033E-02 | 33P | 11.40 | 9.00 | 9.60 | 10.25 | 10.60 |
| 20613-035E-02 | 35P | 12.00 | 9.60 | 10.20 | 10.85 | 11.20 |
| ◆20613-037E-02 | 37P | 12.60 | 10.20 | 10.80 | 11.45 | 11.80 |
| 20613-039E-02 | 39P | 13.20 | 10.80 | 11.40 | 12.05 | 12.40 |
| 20613-041E-02 | 41P | 13.80 | 11.40 | 12.00 | 12.65 | 13.00 |
| ◆20613-043E-02 | 43P | 14.40 | 12.00 | 12.60 | 13.25 | 13.60 |
| 20613-045E-02 | 45P | 15.00 | 12.60 | 13.20 | 13.85 | 14.20 |
| ◆20613-047E-02 | 47P | 15.60 | 13.20 | 13.80 | 14.45 | 14.80 |
| ◆20613-049E-02 | 49P | 16.20 | 13.80 | 14.40 | 15.05 | 15.40 |
| ◆20613-051E-02 | 51P | 16.80 | 14.40 | 15.00 | 15.65 | 16.00 |
| ◆20613-053E-02 | 53P | 17.40 | 15.00 | 15.60 | 16.25 | 16.60 |
| ◆20613-055E-02 | 55P | 18.00 | 15.60 | 16.20 | 16.85 | 17.20 |
| ◆20613-057E-02 | 57P | 18.60 | 16.20 | 16.80 | 17.45 | 17.80 |
| ◆20613-059E-02 | 59P | 19.20 | 16.80 | 17.40 | 18.05 | 18.40 |
| ◆20613-061E-02 | 61P | 19.80 | 17.40 | 18.00 | 18.65 | 19.00 |
| ◆20613-071E-02 | 71P | 22.80 | 20.40 | 21.00 | 21.65 | 22.00 |

◆MARK MEANS NOT AVAILABLE.

NOTES.

1. CONTACT POINT: TOP AND BOTTOM CONTACT



VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-14004 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.

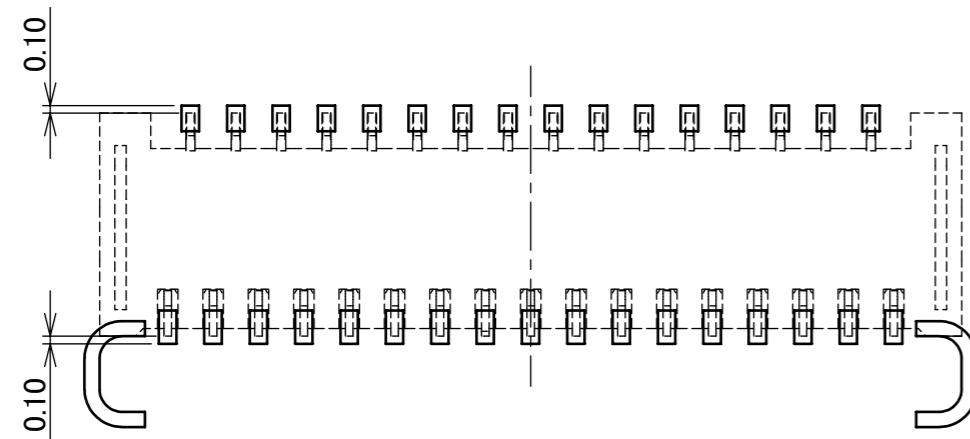
| NO. | DISCRIPTION | MATERIAL | REMARKS |
|-----|-----------------|-----------------|---|
| 5 | ACTUATOR HOLDER | NICKEL SILVER | |
| 4 | CONTACT(B) | PHOSPHOR BRONZE | CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.0 μm MIN. SOLDERING AREA : Au 0.03 μm MIN. OVER Ni 1.0 μm MIN. |
| 3 | CONTACT(A) | PHOSPHOR BRONZE | CONTACT AREA : Au 0.1 μm MIN. OVER Ni 1.0 μm MIN. 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 |

| REV. | ECN | BY | DATE | APP. | DESCRIPTION | APPROVAL | DATE | PROJECTION | SERIES No. | TITLE | SCALE | SHEET | REV. |
|-----------------|---------|------|--------------|------|--------------------|------------|------------------|------------|------------|------------------|-------|-------|------|
| 13 | Z211218 | S.Sh | Oct./06/'21 | H.I | ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | R6 | MINIFLEX® 3-BFNH | 10:1 | A3 | 13 |
| 12 | Z200554 | M.M | May/29/'20 | Y.S | 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | | | | |
| 11 | Z191249 | S.Sh | Sept./18/'19 | H.I | GENERAL TOLERANCE. | | | | | | | | |
| 10 | Z181441 | M.M | Nov./05/'18 | Y.S | DWG. | M.Muro | DATE | 2013/11/19 | | | | | |
| 9 | Z180998 | M.M | Aug./21/'18 | Y.S | CHK. | J.Tateishi | | | | | | | |
| 8 | Z161218 | H.A | Oct./06/'16 | Y.S | APP. | E.Kawabe | | | | | | | |
| REVISION RECORD | | | | | | | | | DWG. No. | 20613 | | | |

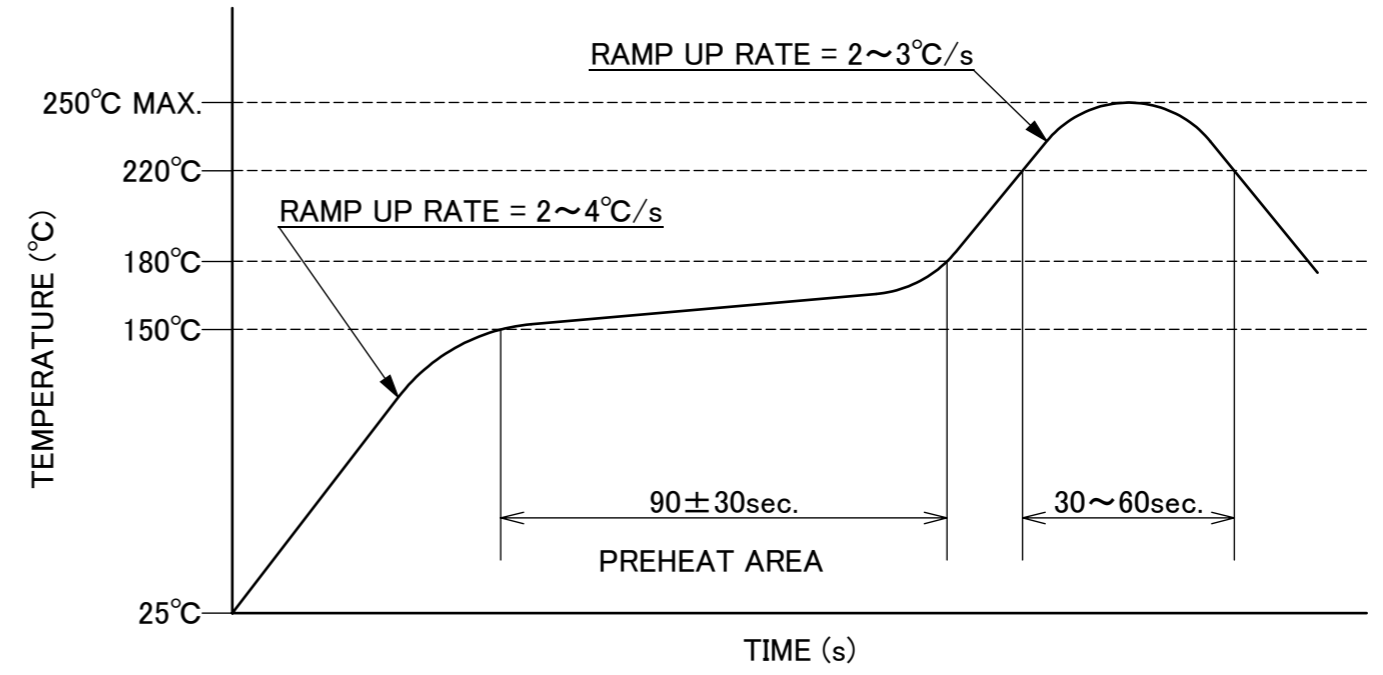
| ITEMS | SPECIFICATION |
|--|---|
| RATING VOLTAGE | 50V AC/DC (PER CONTACT) |
| RATING AMPERAGE | 0.3A DC (PER CONTACT) |
| OPERATING TEMPERATURE | 233~358K(-40°C~+85°C) |
| OPERATING HUMIDITY | 85% MAX.(NON-CONDENSING) |
| CONTACT RESISTANCE | INITIAL : 60mohm MAX. / AFTER TEST : \triangleleft 40mohm MAX. |
| INSULATION RESISTANCE | 100Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC250V 1min |
| DURABILITY | 20TH CYCLES |
| ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES) | INITIAL : 0.35N(31gf) \times n MAX. / 20TH CYCLES : 0.35N(31gf) \times n MAX. |
| ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES) | INITIAL : 0.02N(2gf) \times n MIN. / 20TH CYCLES : 0.02N(2gf) \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-1846 |
| TEST REPORT | TR-13104 |
| PACKING STANDARD | PST-13054 |
| INSTRUCTION MANUAL | HIM-14004 |
| APPEARANCE CRITERIA No. | QLS-A*** |

※ "n" IS THE NUMBER OF PIN

| | | | | | | | | |
|--------------------|---------------|------------------|-----------|---------------------------|------------------|---------------|--------------|------------|
| ANGLE | $\pm 2^\circ$ | 6 OVER 30 MAX. | ± 0.3 | PROJECTION | SERIES No. R6 | CUSTOMER COPY | | |
| 6 MAX. | ± 0.2 | 30 OVER 120 MAX. | ± 0.5 | | | | | |
| GENERAL TOLERANCE. | | | | TITLE MINIFLEX® 3-BFNH | SCALE | I-PEX | | |
| DWG. | DATE | | | | | | | |
| CHK. | | | | | | | | |
| APP. | | | | | | | | |
| | | | | DWG. No. | 20613 | SIZE A3 | SHEET 2/5 | REV. 13 |



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

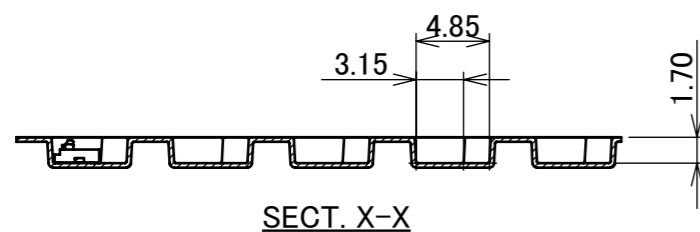
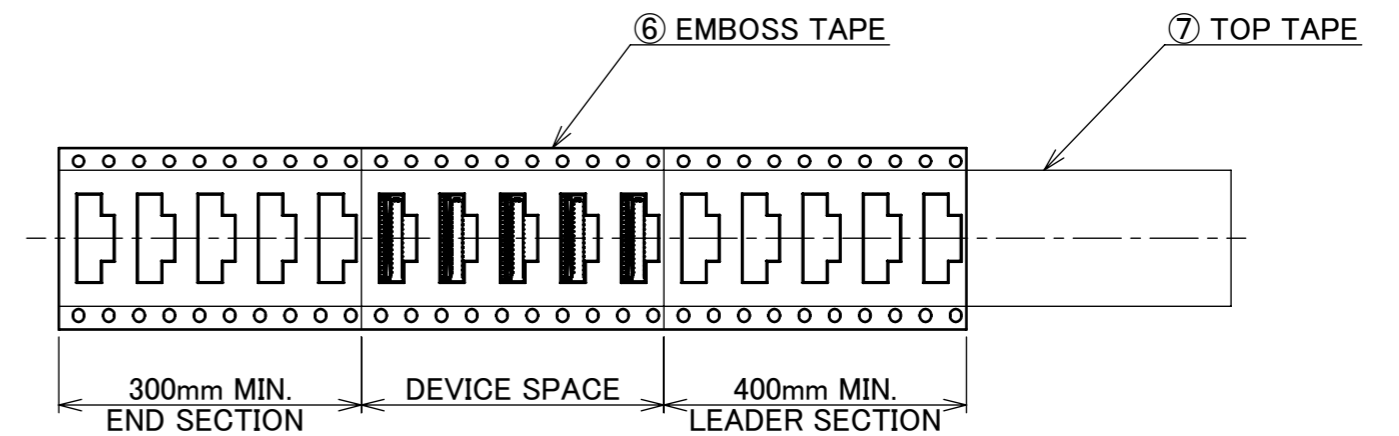
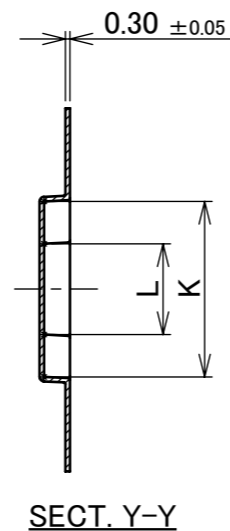
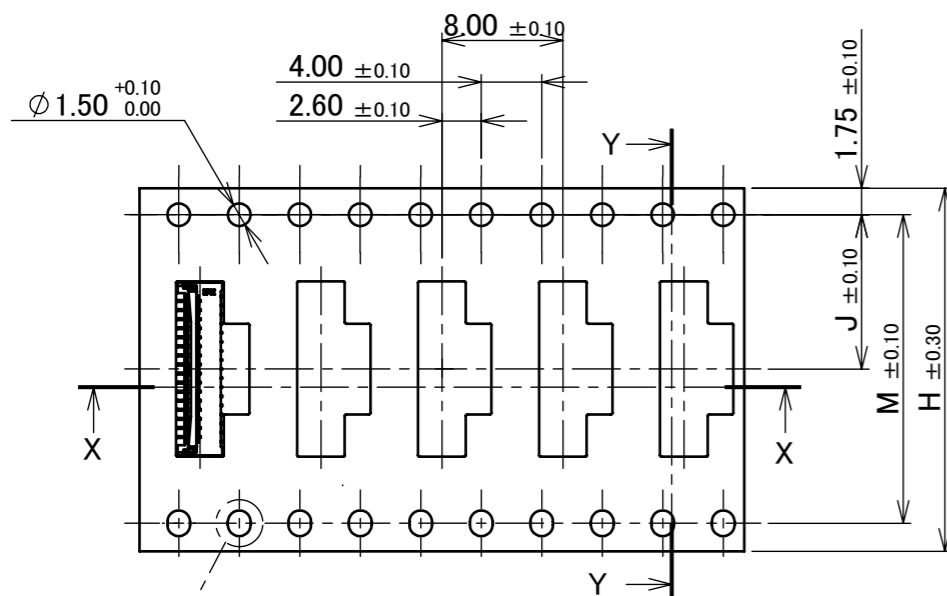
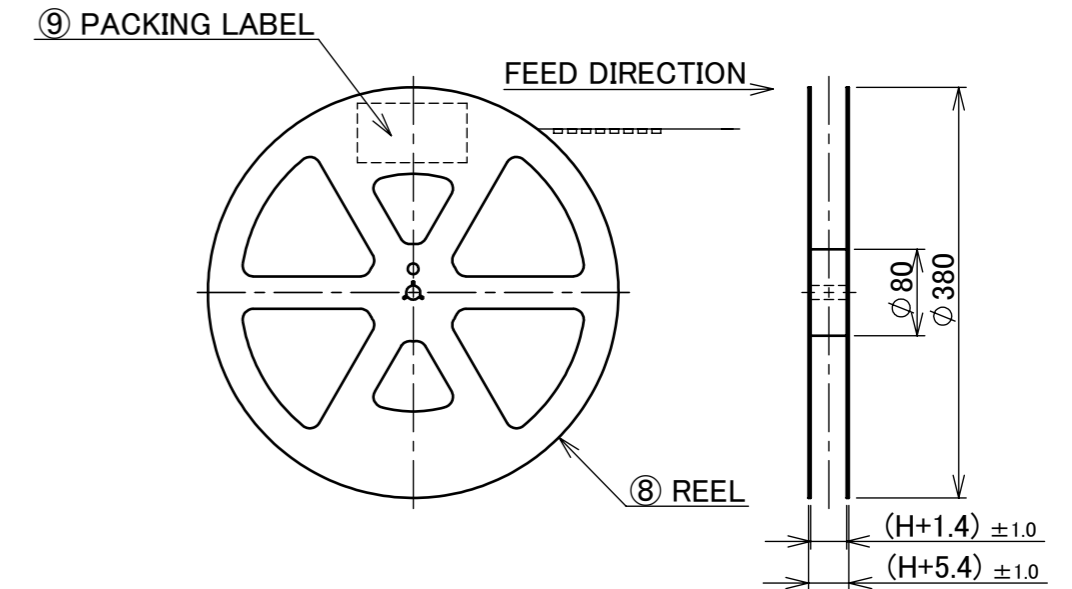
| | | | | | | | | |
|--------------------|------|------------------|------|---------------------------|------------------|----------------------|--------------|------------|
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION | SERIES No. R6 | CUSTOMER COPY | | |
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | | | | |
| GENERAL TOLERANCE. | | | | TITLE MINIFLEX® 3-BFNH | SCALE 10:1 | UNIT I-PEX | | |
| DWG. | DATE | | | | | | | |
| CHK. | | | | | | | | |
| APP. | | | | | | | | |
| | | | | DWG. No. | 20613 | SIZE A3 | SHEET 4/5 | REV. 13 |

| PART No. | H | J | K | L | M | QTY. PER EMBOSS REEL (PIECES / REEL) | QTY. PER PACKING CARTON (REELS / CARTON) |
|----------------|-------|-------|-------|-------|--------------------|---|---|
| 20613-007E-02 | 16.00 | 7.50 | 3.80 | 1.50 | - | 5000 PIECES / REEL | 7 REELS / CARTON (35000 PIECES / CARTON) |
| 20613-009E-02 | | | 4.40 | | | | |
| 20613-011E-02 | | | 5.00 | | | | |
| ◆20613-013E-02 | | | 5.60 | 3.00 | | | |
| ◆20613-015E-02 | | | 6.20 | | | | |
| ◆20613-017E-02 | | | 6.80 | | | | |
| ◆20613-019E-02 | | | 7.40 | | | | |
| 20613-021E-02 | 8.00 | 24.00 | 11.50 | 6.00 | - | 5000 PIECES / REEL | 5 REELS / CARTON (25000 PIECES / CARTON) |
| 20613-023E-02 | 8.60 | | | | | | |
| ◆20613-025E-02 | 9.20 | | | | | | |
| ◆20613-027E-02 | 9.80 | | | | | | |
| ◆20613-029E-02 | 10.40 | | | | | | |
| 20613-031E-02 | 11.00 | | | | | | |
| ◆20613-033E-02 | 11.60 | | | | | | |
| 20613-035E-02 | 12.20 | 32.00 | 14.20 | 8.00 | 28.40 | 5000 PIECES / REEL | 4 REELS / CARTON (20000 PIECES / CARTON) |
| ◆20613-037E-02 | 12.80 | | | | | | |
| 20613-039E-02 | 13.40 | | | | | | |
| 20613-041E-02 | 14.00 | | | | | | |
| ◆20613-043E-02 | 14.60 | | | | | | |
| 20613-045E-02 | 15.20 | | | | | | |
| ◆20613-047E-02 | 15.80 | | | | | | |
| ◆20613-049E-02 | 16.40 | 10.00 | 20.00 | 40.40 | 5000 PIECES / REEL | 3 REELS / CARTON (15000 PIECES / CARTON) | |
| ◆20613-051E-02 | 17.00 | | | | | | |
| ◆20613-053E-02 | 17.60 | | | | | | |
| ◆20613-055E-02 | 18.20 | | | | | | |
| ◆20613-057E-02 | 18.80 | | | | | | |
| ◆20613-059E-02 | 19.40 | | | | | | |
| ◆20613-061E-02 | 20.00 | | | | | | |
| ◆20613-071E-02 | 44.00 | 20.20 | 23.00 | | | | |

◆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 EMBOSS 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 TRANSPARENCY | ANTI-STATIC TYPE |
| 6 | EMBOSS TAPE | PS t=0.3 TRANSPARENCY | ANTI-STATIC TYPE |

| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION | SERIES No. | CUSTOMER COPY |
|--------------------|------|------------------|------|------------------|------------|---------------|
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | R6 | |
| GENERAL TOLERANCE. | | | | TITLE | I-PEX | |
| DWG. | DATE | | | MINIFLEX® 3-BFNH | | SCALE |
| CHK. | | | | | | UNIT |
| APP. | | | | DWG. No. 20613 | | mm |
| | | | | SIZE | SHEET | REV. |
| | | | | A3 | 5/5 | 13 |