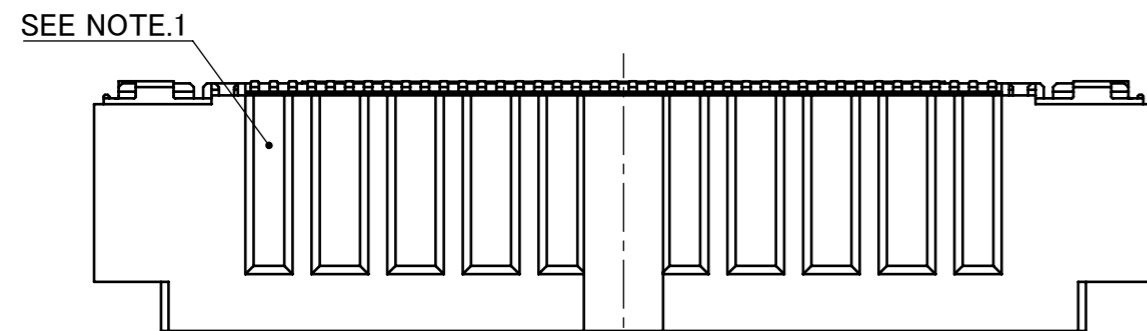
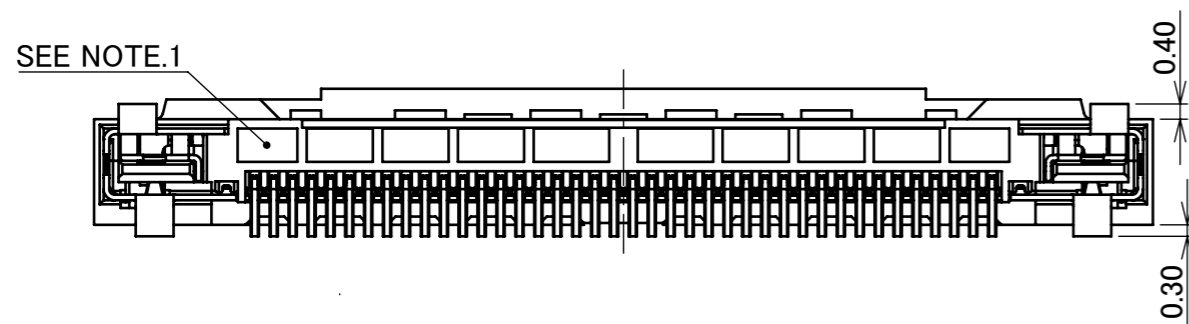
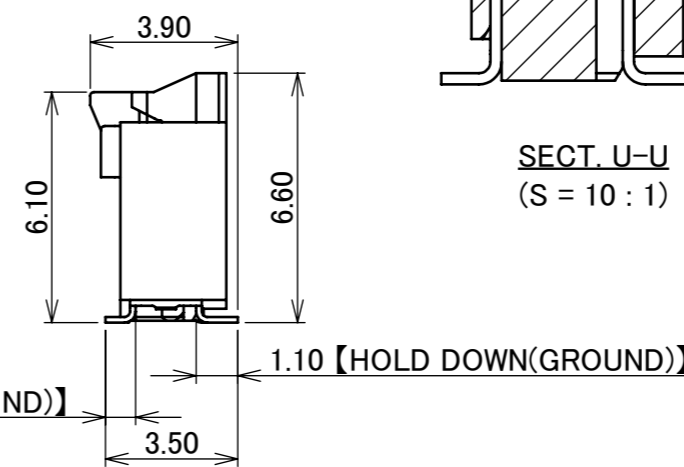
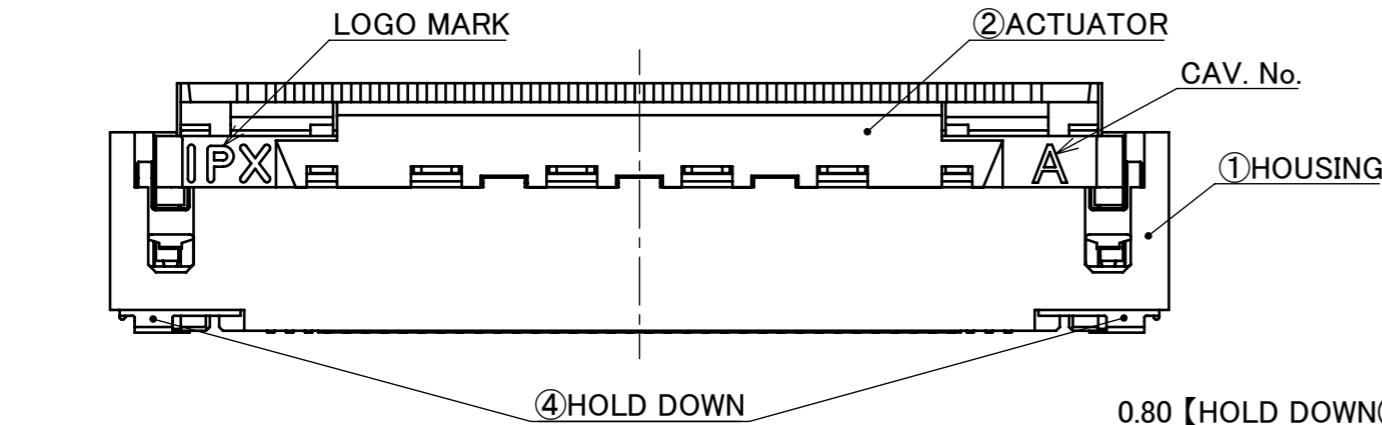


Halogen Free



RoHS Compliant

| PART No.      | A     | B     | C     | D     | E     | J     |
|---------------|-------|-------|-------|-------|-------|-------|
| 20799-020E-01 | 18.00 | 14.80 | 13.56 | 9.50  | 6.00  | 15.70 |
| 20799-030E-01 | 23.00 | 19.80 | 18.56 | 14.50 | 11.00 | 20.70 |
| 20799-040E-01 | 28.00 | 24.80 | 23.56 | 19.50 | 16.00 | 25.70 |
| 20799-050E-01 | 33.00 | 29.80 | 28.56 | 24.50 | 21.00 | 30.70 |
| 20799-060E-01 | 38.00 | 34.80 | 33.56 | 29.50 | 26.00 | 35.70 |



NOTES.

- DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE.  
DENT SHAPE AND QUANTITY MIGHT CHANGE FROM DIFFERENT PIN COUNT AND DIFFERENT TOOLING.

| NO. | DISCRIPTION | MATERIAL     | FINISH , REMARKS   |
|-----|-------------|--------------|--|
| 4   | HOLD DOWN   | CORSON ALLOY | SOLDERING AREA : Au 0.03μm MIN. OVER Ni 1.00μm MIN.                  |
| 3   | CONTACT     | CORSON ALLOY | CONTACT AREA AND SOLDERING AREA : Au 0.03μm MIN. OVER Ni 1.00μm MIN. |
| 2   | ACTUATOR    | LCP          | UL94V-0, BEIGE   |
| 1   | HOUSING     | LCP          | UL94V-0, BEIGE   |

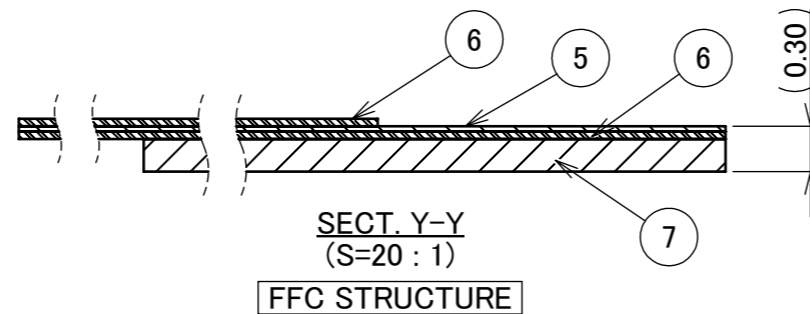
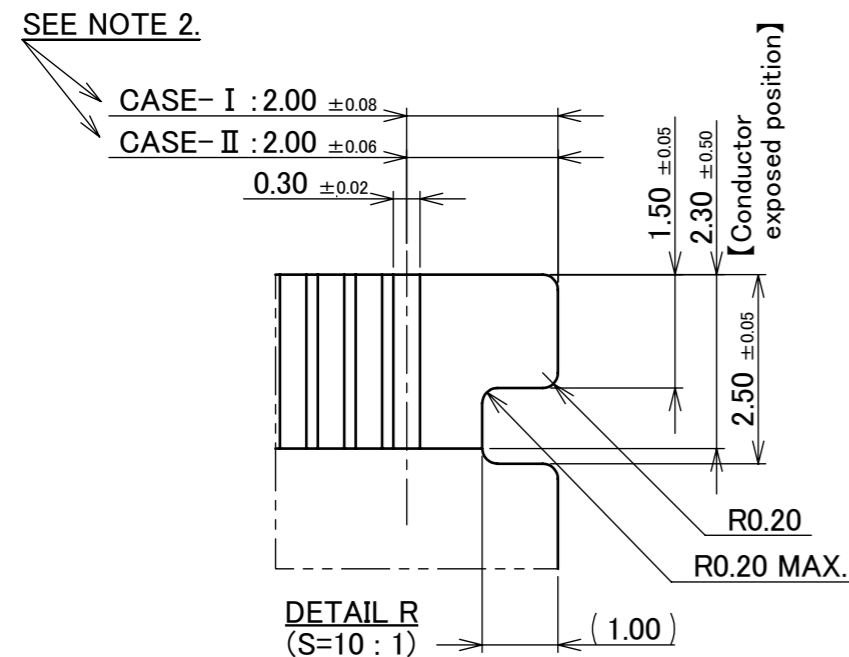
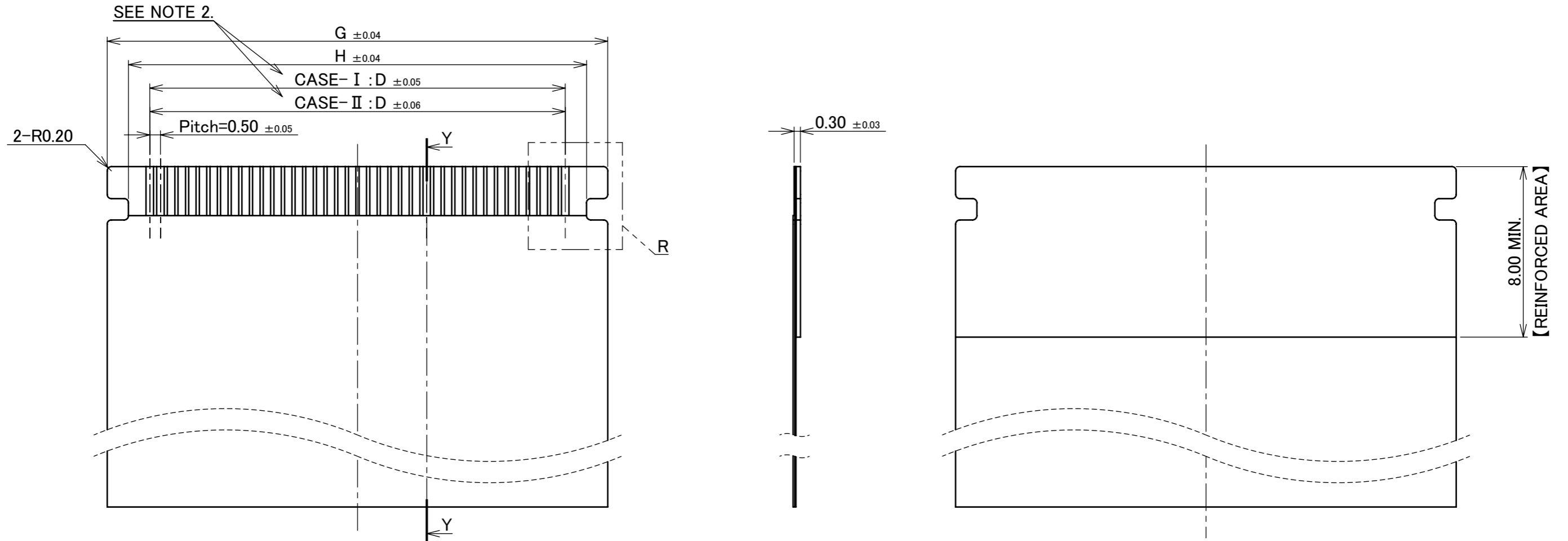
| REV.            | ECN     | BY  | DATE        | APP. | APP.               | CHK.      | DATE             | PROJECTION | SERIES No.        | TITLE | SCALE | SHEET | REV. |
|-----------------|---------|-----|-------------|------|--------------------|-----------|------------------|------------|-------------------|-------|-------|-------|------|
| 10              | Z230342 | Y.I | Mar./23/'23 | M.T  | ANGLE              | ±2°       | 6 OVER 30 MAX.   | ±0.3       |                   | R9    | 5:1   | A3    | 10   |
| 9               | Z220209 | K.H | Feb./28/'22 | H.I  | 6 MAX.             | ±0.2      | 30 OVER 120 MAX. | ±0.5       |                   |       |       |       |      |
| 8               | Z191644 | A.K | Dec./17/'19 | H.I  | GENERAL TOLERANCE. |           |                  |            | EVAFLEX® 5-SE-GVT |       |       |       |      |
| 7               | Z191612 | A.K | Dec./11/'19 | Y.S  | DWG.               | M.Muro    | DATE             | 2016/10/25 |                   |       |       |       |      |
| 6               | Z190872 | T.T | July/02/'19 | H.I  | CHK.               | -         |                  |            |                   |       |       |       |      |
| 5               | Z190273 | T.O | Feb./28/'19 | H.I  | APP.               | Y.Shimada |                  |            | DWG. No.          | 20799 | SIZE  | 1/6   |      |
| REVISION RECORD |         |     |             |      |                    |           |                  |            |                   |       |       |       |      |

| ITEMS  | SPECIFICATION  |
|--|--|
| RATING VOLTAGE                                 | 50V AC/DC (PER CONTACT PIN)  |
| RATING AMPERAGE                                | 0.35A AC/DC (PER CONTACT PIN) AVAILABLE FOR ALL CONTACTS<br>0.5A AC/DC (PER CONTACT PIN) AVAILABLE UP TO 15 CONTACTS |
| OPERATING TEMPERATURE                          | 233~398K(-40°C~+125°C)   |
| OPERATING HUMIDITY                             | 85% MAX.(NON-CONDENSING)   |
| CONTACT RESISTANCE                             | INITIAL : 60mohm MAX. / AFTER TEST : $\leq$ 40mohm MAX.  |
| INSULATION RESISTANCE                          | 500Mohm MIN.   |
| DIELECTRIC WITHSTANDING VOLTAGE                | AC250V 1min  |
| DURABILITY                                     | 50TH CYCLES  |
| FPC/FFC MATING FORCE (INITIAL / 50TH CYCLES)   | 20P : 15.00 N MAX.<br>30P : 22.00 N MAX.<br>40P : 29.00 N MAX.<br>50P : 36.00 N MAX.<br>60P : 43.00 N MAX.           |
| FPC/FFC UNMATING FORCE (INITIAL / 50TH CYCLES) | 20P : 2.00 N MIN.<br>30P : 2.70 N MIN.<br>40P : 3.40 N MIN.<br>50P : 4.10 N MIN.<br>60P : 4.80 N MIN.                |
| FPC/FFC RETENTION FORCE (INITIAL / AFTER TEST) | 20P : 11.00 N MIN.<br>30P : 11.70 N MIN.<br>40P : 12.40 N MIN.<br>50P : 13.10 N MIN.<br>60P : 13.80 N MIN.           |
| COPLANARITY                                    | 0.10 MAX.  |
| PRODUCT SPECIFICATION                          | PRS-2305   |
| TEST REPORT                                    | TR-17100   |
| PACKING STANDARD                               | PST-18002  |
| INSTRUCTION MANUAL                             | HIM-16039  |
| APPEARANCE CRITERIA No.                        | QLS-A***   |

|                    |               |                  |           |                   |                  |                            |              |              |            |  |
|--------------------|---------------|------------------|-----------|-------------------|------------------|----------------------------|--------------|--------------|------------|--|
| ANGLE              | $\pm 2^\circ$ | 6 OVER 30 MAX.   | $\pm 0.3$ | PROJECTION<br>    | SERIES No.<br>R9 | CUSTOMER COPY              |              |              |            |  |
| 6 MAX.             | $\pm 0.2$     | 30 OVER 120 MAX. | $\pm 0.5$ |                   |                  | TITLE<br>EVAFLEX® 5-SE-GVT | SCALE        | <b>I-PEX</b> |            |  |
| GENERAL TOLERANCE. |               |                  |           | DWG. No.<br>20799 | UNIT<br>mm       | SIZE<br>A3                 | SHEET<br>2/6 |              | REV.<br>10 |  |
| DWG.               | DATE          |                  |           |                   |                  |                            |              |              |            |  |
| CHK.               |               |                  |           |                   |                  |                            |              |              |            |  |
| APP.               |               |                  |           |                   |                  |                            |              |              |            |  |

| PART No.      | D     | G     | H     |
|---------------|-------|-------|-------|
| 20799-020E-01 | 9.50  | 13.50 | 11.50 |
| 20799-030E-01 | 14.50 | 18.50 | 16.50 |
| 20799-040E-01 | 19.50 | 23.50 | 21.50 |
| 20799-050E-01 | 24.50 | 28.50 | 26.50 |
| 20799-060E-01 | 29.50 | 33.50 | 31.50 |

# RECOMMENDED FFC LAYOUT 【NON SHIELDED TYPE】



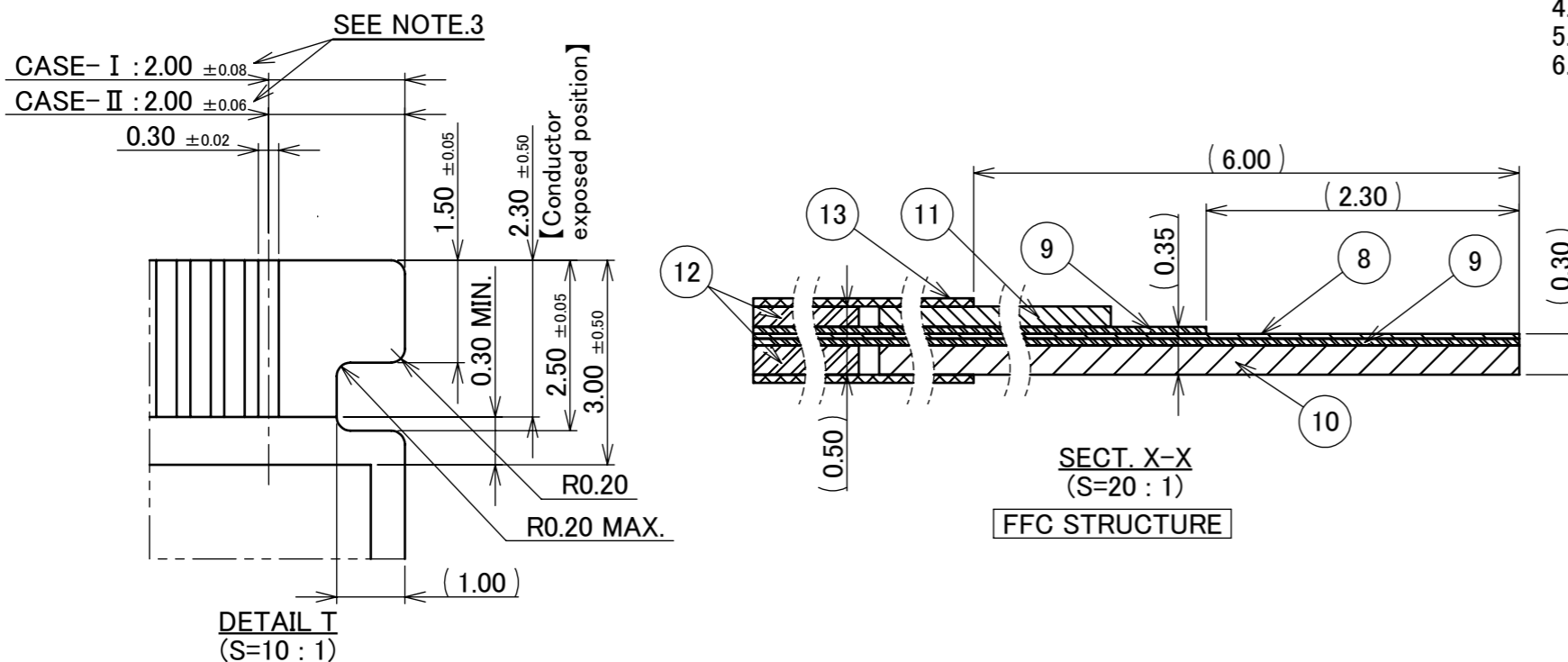
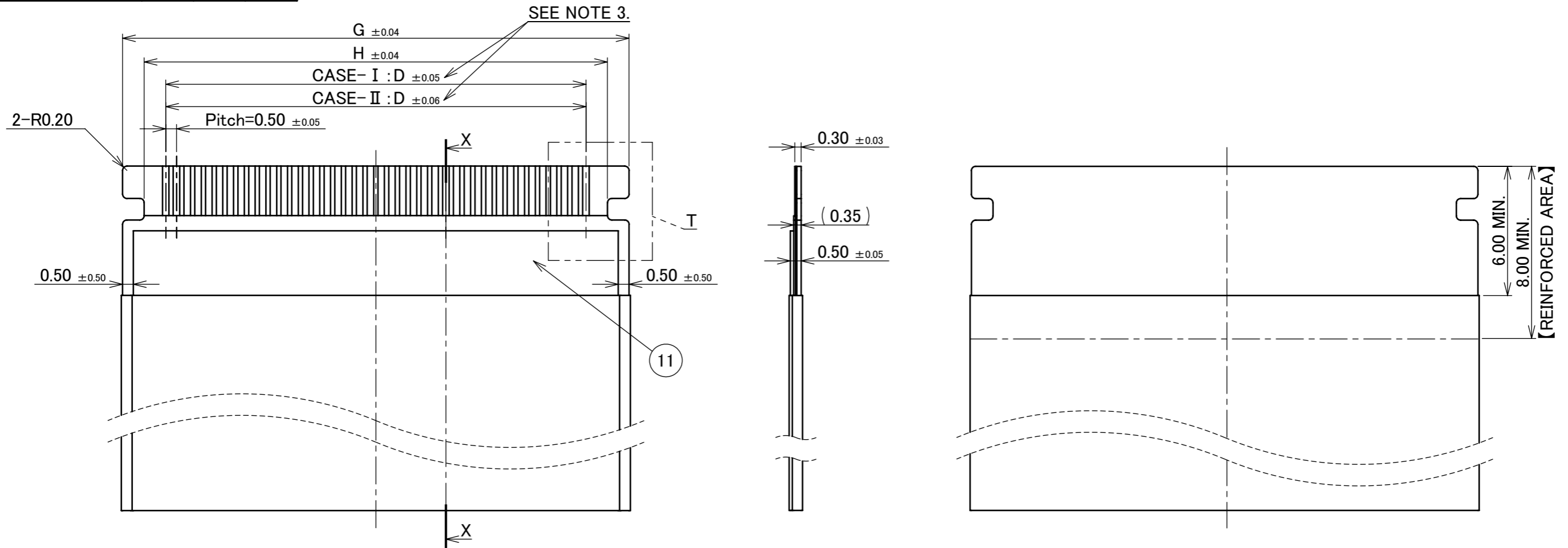
- NOTES.  
2. MANUFACTURE CASE- I or II  
3. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

| NO. | COMPONENTS      | MATERIAL     | FINISH   |
|-----|-----------------|--------------|--|
| 7   | REINFORCED TAPE | ARBITRARY    |  |
| 6   | INSULATION FILM | ARBITRARY    |  |
| 5   | CONDUCTOR       | COPPER ALLOY | CONTACT AREA : Au 0.05 $\mu$ m MIN. OVER Ni 0.5 $\mu$ m MIN. |

| 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. | $\pm 0.5$ |            | R9                |               |       |      |  |
| GENERAL TOLERANCE. |               |                  |           | TITLE      | EVAFLEX® 5-SE-GVT |               | SCALE |      |  |
| DWG.               | DATE          |                  |           |            |                   | UNIT          | I-PEX |      |  |
| CHK.               |               |                  |           |            |                   | mm            |       |      |  |
| APP.               |               |                  |           | DWG. No.   | 20799             | SIZE          | SHEET | REV. |  |
|                    |               |                  |           |            |                   | A3            | 3/6   | 10   |  |

| PART No.      | D     | G     | H     |
|---------------|-------|-------|-------|
| 20799-020E-01 | 9.50  | 13.50 | 11.50 |
| 20799-030E-01 | 14.50 | 18.50 | 16.50 |
| 20799-040E-01 | 19.50 | 23.50 | 21.50 |
| 20799-050E-01 | 24.50 | 28.50 | 26.50 |
| 20799-060E-01 | 29.50 | 33.50 | 31.50 |

# RECOMMENDED FFC LAYOUT 【SHIELDED TYPE】



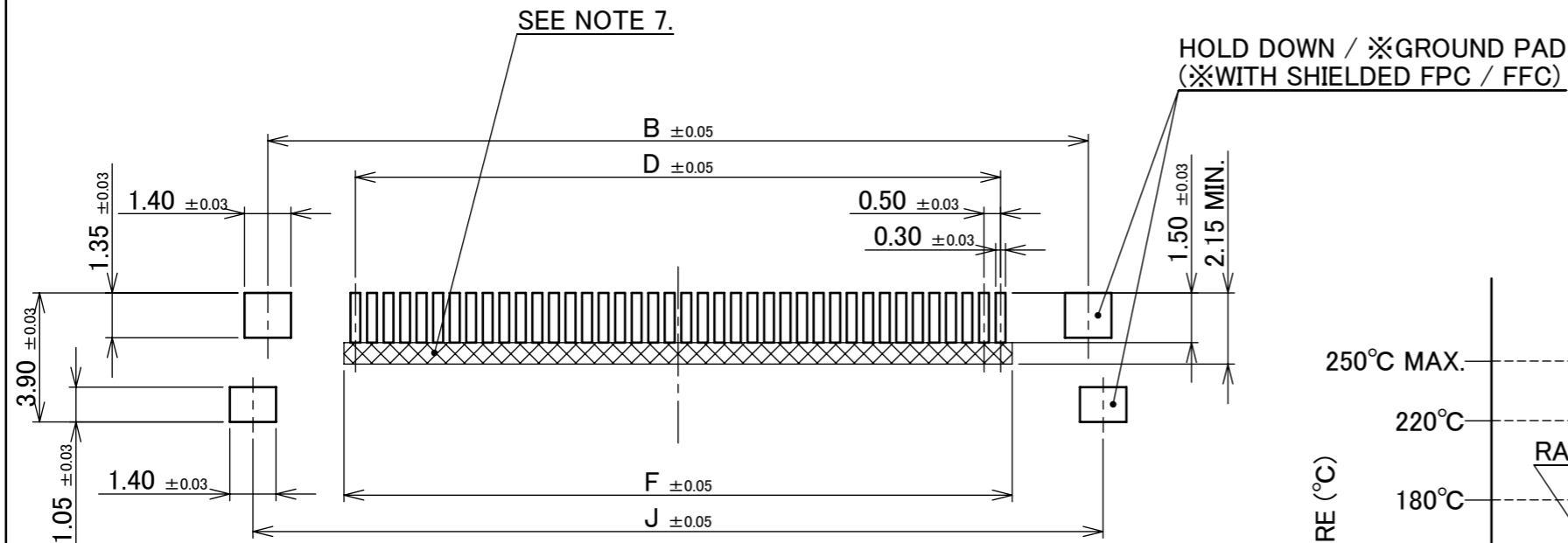
NOTES.

- MANUFACTURE CASE- I or II
- DIFFERENTIAL IMPEDANCE :  $100 \pm 10 \Omega$
- SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF  $85^\circ\text{C}$  OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

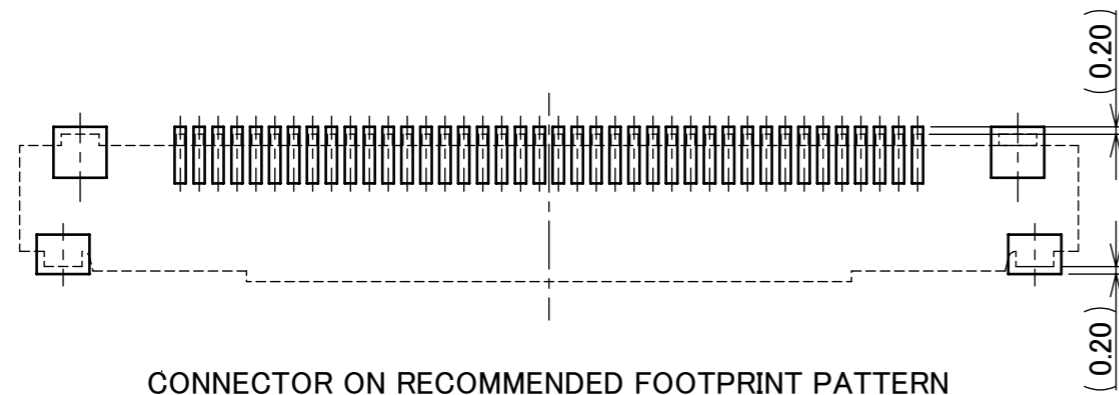
|     |                 |               |  |
|-----|-----------------|---------------|--|
| 13  | SHIELD TAPE     | METALLIC FILM |  |
| 12  | INTERLAYER      | ARBITRARY     |  |
| 11  | GROUND PLATE    | METALLIC FILM | POLISH or HALF POLISH Sn PLATING   |
| 10  | REINFORCED TAPE | ARBITRARY     |  |
| 9   | INSULATION FILM | ARBITRARY     |  |
| 8   | CONDUCTOR       | COPPER ALLOY  | CONTACT AREA : Au $0.05 \mu\text{m}$ MIN. OVER Ni $0.5 \mu\text{m}$ MIN. |
| NO. | COMPONENTS      | MATERIAL      | FINISH   |

|                    |               |                |                  |            |                   |               |              |      |
|--------------------|---------------|----------------|------------------|------------|-------------------|---------------|--------------|------|
| 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. | $\pm 0.5$  | R9                | SCALE         | <b>I-PEX</b> |      |
| GENERAL TOLERANCE. |               |                |                  | TITLE      | EVAFLEX® 5-SE-GVT |               |              | 5:1  |
| DWG.               | DATE          |                |                  |            |                   | UNIT          |              | mm   |
| CHK.               |               |                |                  |            |                   | SIZE          | SHEET        | REV. |
| APP.               |               |                |                  | DWG. No.   | 20799             | A3            | 4/6          | 10   |

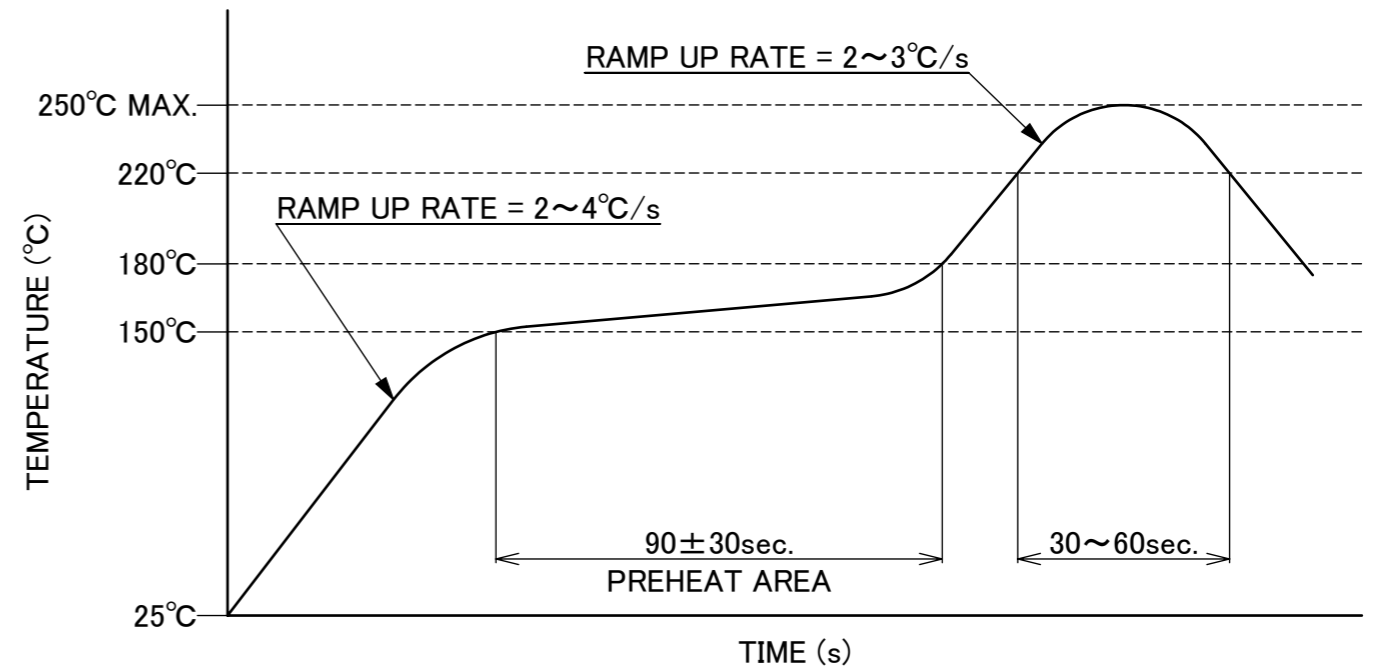
| PART No.      | B     | D     | F     | J     |
|---------------|-------|-------|-------|-------|
| 20799-020E-01 | 14.80 | 9.50  | 10.20 | 15.70 |
| 20799-030E-01 | 19.80 | 14.50 | 15.20 | 20.70 |
| 20799-040E-01 | 24.80 | 19.50 | 20.20 | 25.70 |
| 20799-050E-01 | 29.80 | 24.50 | 25.20 | 30.70 |
| 20799-060E-01 | 34.80 | 29.50 | 30.20 | 35.70 |



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



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN

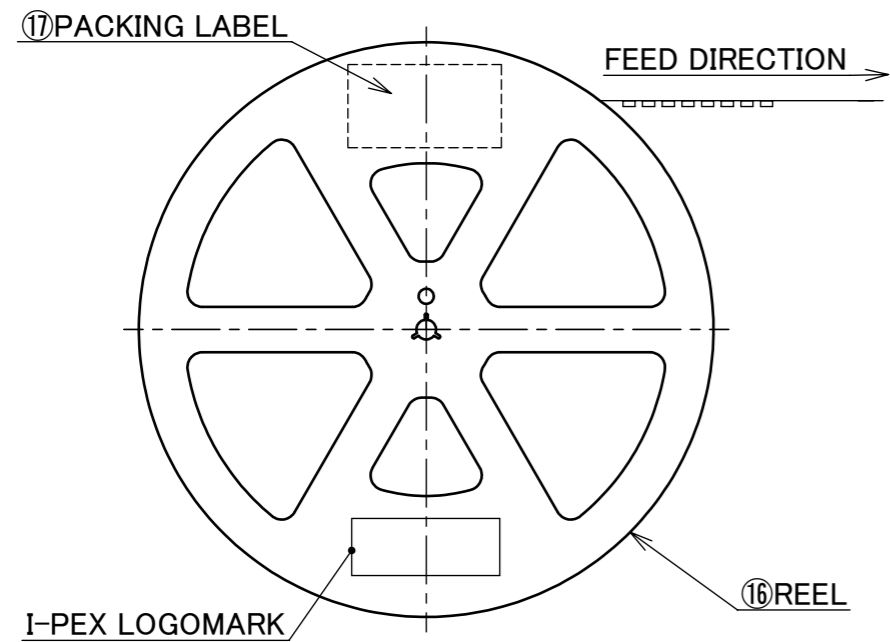


REFLOW TEMPERATURE PROFILE  
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

NOTES

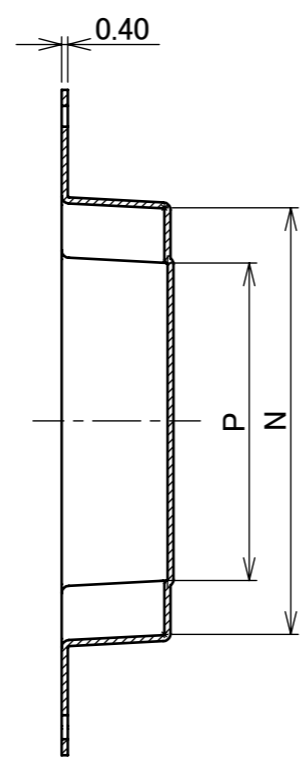
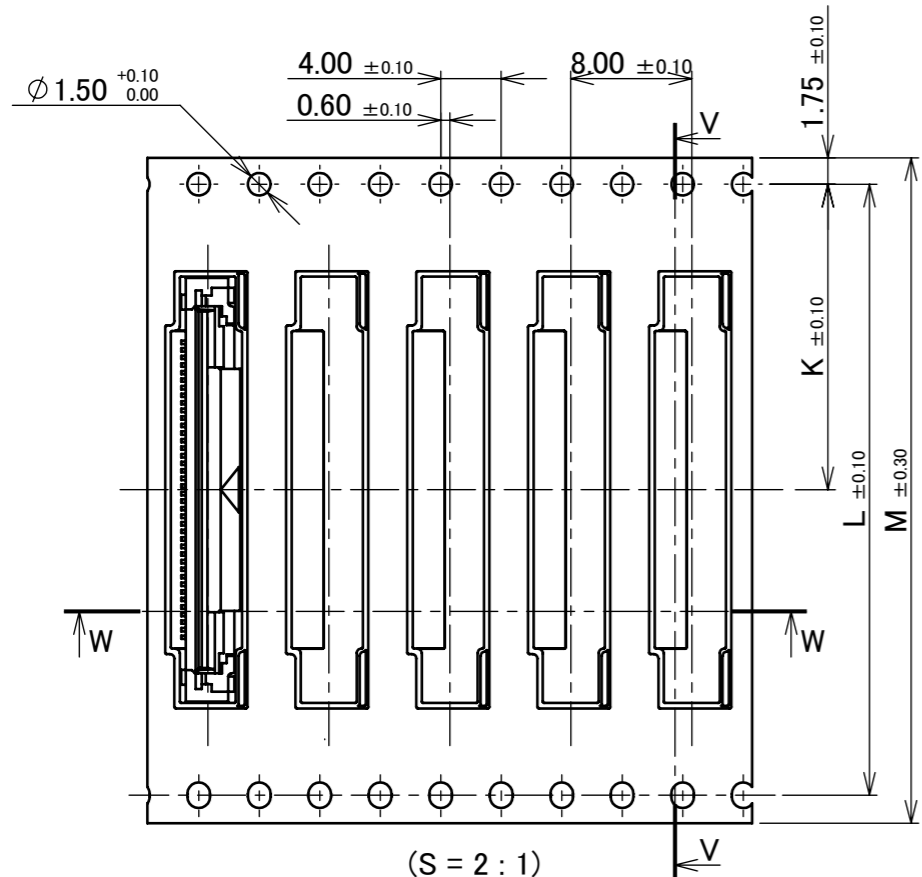
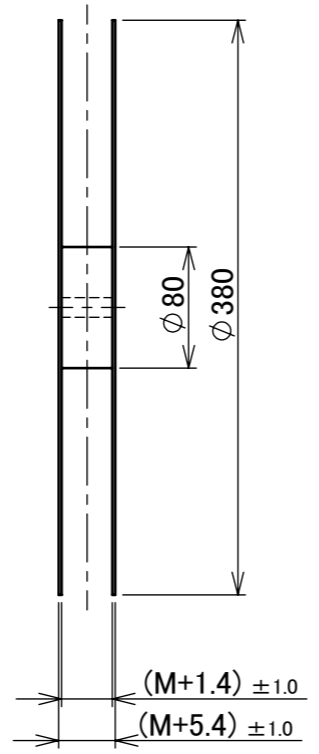
7. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

|                    |      |                  |      |                   |                  |               |       |      |  |
|--------------------|------|------------------|------|-------------------|------------------|---------------|-------|------|--|
| ANGLE              | ±2°  | 6 OVER 30 MAX.   | ±0.3 | PROJECTION<br>⊕   | SERIES No.<br>R9 | CUSTOMER COPY |       |      |  |
| 6 MAX.             | ±0.2 | 30 OVER 120 MAX. | ±0.5 |                   |                  |               |       |      |  |
| GENERAL TOLERANCE. |      |                  |      | TITLE             |                  | SCALE         | I-PEX |      |  |
| DWG.               | DATE |                  |      | EVAFLEX® 5-SE-GVT |                  | 5:1           |       |      |  |
| CHK.               |      |                  |      |                   |                  | UNIT          |       |      |  |
| APP.               |      |                  |      |                   |                  | mm            |       |      |  |
|                    |      |                  |      | DWG. No.          | 20799            | SIZE          | SHEET | REV. |  |
|                    |      |                  |      |                   |                  | A3            | 5/6   | 10   |  |

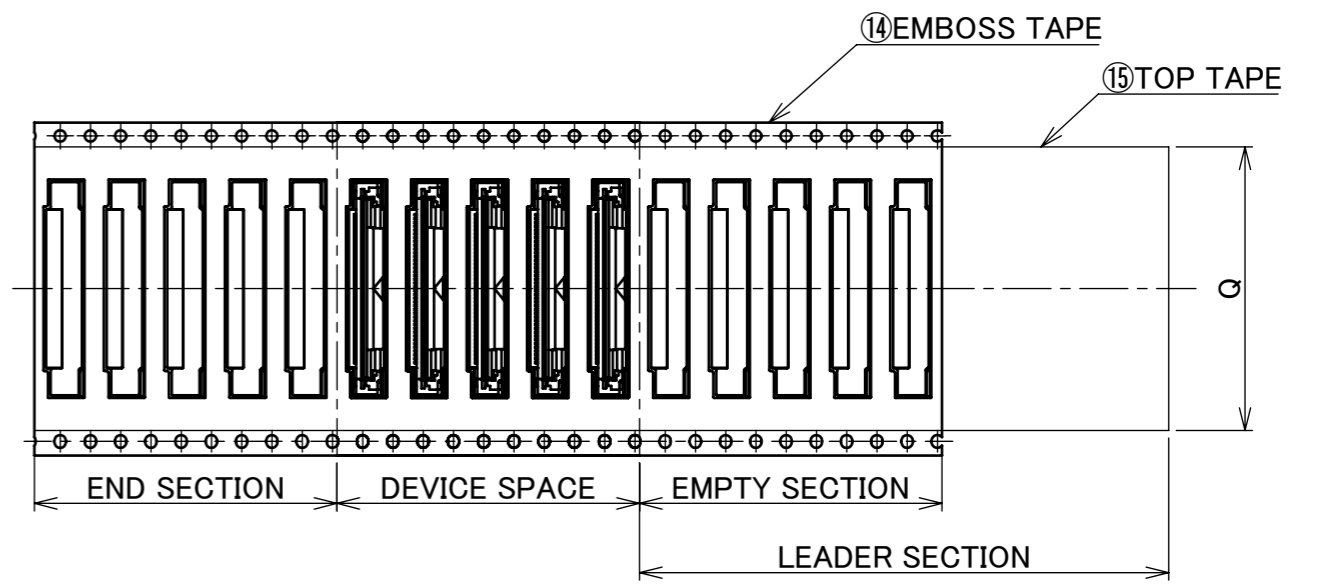


| PART NO.      | K     | L     | M     | N     | P     | Q     | QTY. PER EMOSS REEL (PIECES / REEL) | QTY. PER PACKING CARTON (REELS / CARTON) |
|---------------|-------|-------|-------|-------|-------|-------|-------------------------------------|--|
| 20799-020E-01 | 14.20 | 28.40 | 32.00 | 18.20 | 11.00 | 26.00 | 1500 / REEL                         | 4 / CARTON = 6000                        |
| 20799-030E-01 | 20.20 | 40.40 | 44.00 | 23.20 | 16.00 | 37.50 |                                     |  |
| 20799-040E-01 | 20.20 | 40.40 | 44.00 | 28.20 | 21.00 | 37.50 |                                     |  |
| 20799-050E-01 | 20.20 | 40.40 | 44.00 | 33.20 | 26.00 | 37.50 |                                     |  |
| 20799-060E-01 | 26.20 | 52.40 | 56.00 | 38.20 | 31.00 | 49.00 |                                     | 3 / CARTON = 4500                        |

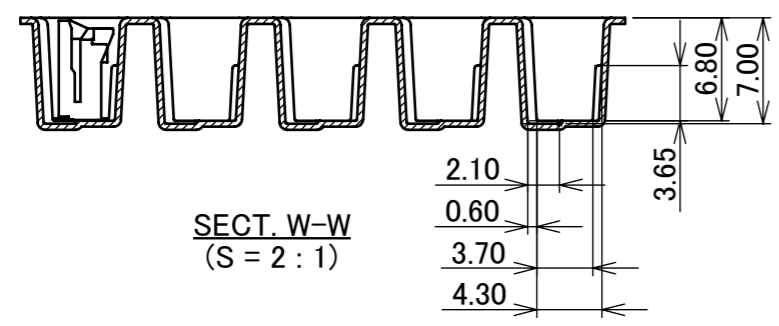
- NOTES.
- TAPING SPECIFICATION FOLLOWS JIS C 0806 (IEC 60286-3).
  - MAKE EMPTY SECTION OF LEADER AND END ON EACH END OF THE TAPE.
  - TOP TAPE SHALL NOT STICK OUT FROM EMOSS TAPE.
  - TOP TAPE SHALL NOT COVER FEED HOLE.
  - DRAFT ANGLE OF EMOSS TAPE 3° MAX. AND DON'T BECOME A REVERSE SLOPE.



SECT. V-V  
(S = 2 : 1)



| NO. | DISCRIPTION   | MATERIAL                    | FINISH , REMARKS                      |
|-----|---------------|-----------------------------|---------------------------------------|
| 17  | PACKING LABEL | -                           | -                                     |
| 16  | REEL          | PS                          | WHITE                                 |
| 15  | TOP TAPE      | PET t=0.062<br>TRANSPARENCY | ANTI-STATIC TYPE<br>HEAT WELDING TYPE |
| 14  | EMBOSS TAPE   | PS t=0.4<br>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 | ⊕          | R9                |               |
| GENERAL TOLERANCE. |      |                  |      | TITLE      | EVAFLEX® 5-SE-GVT |               |
| DWG.               | DATE |                  |      | SCALE      |                   | I-PEX         |
| CHK.               |      |                  |      | UNIT       |                   |               |
| APP.               |      |                  |      | mm         |                   |               |
|                    |      |                  |      | DWG. No.   | 20799             | SIZE          |
|                    |      |                  |      |            |                   | A3            |
|                    |      |                  |      |            |                   | SHEET         |
|                    |      |                  |      |            |                   | 6/6           |
|                    |      |                  |      |            |                   | REV.          |
|                    |      |                  |      |            |                   | 10            |