

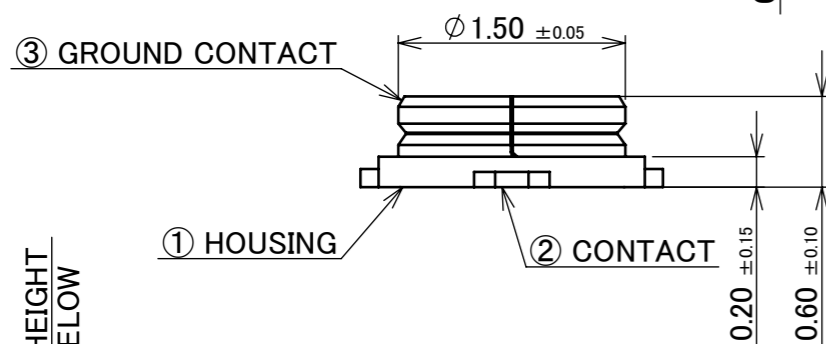
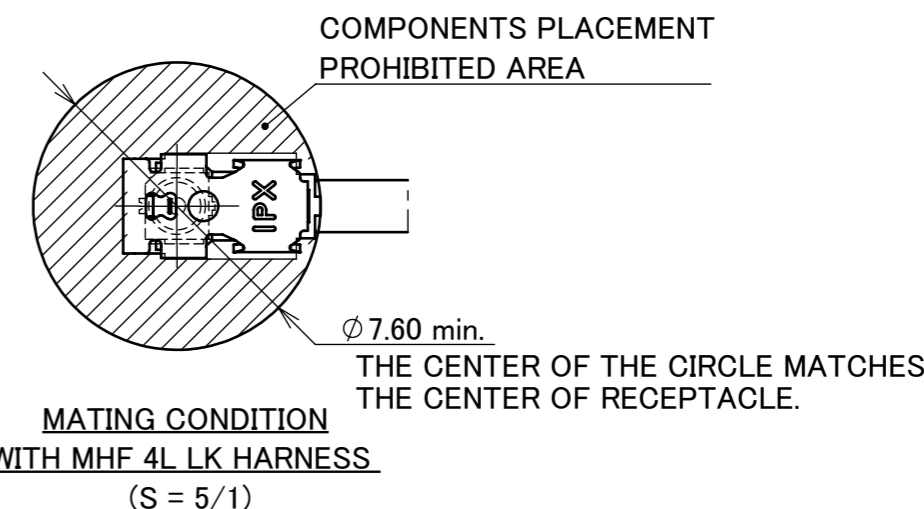
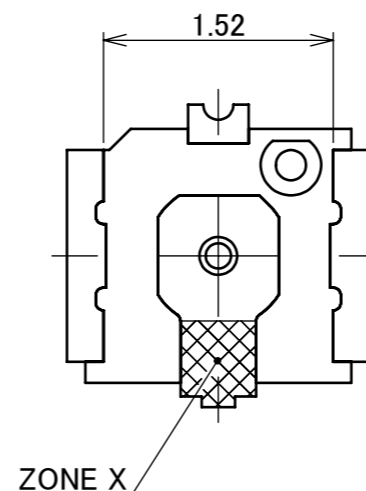
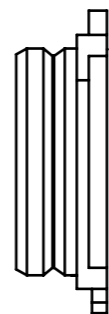
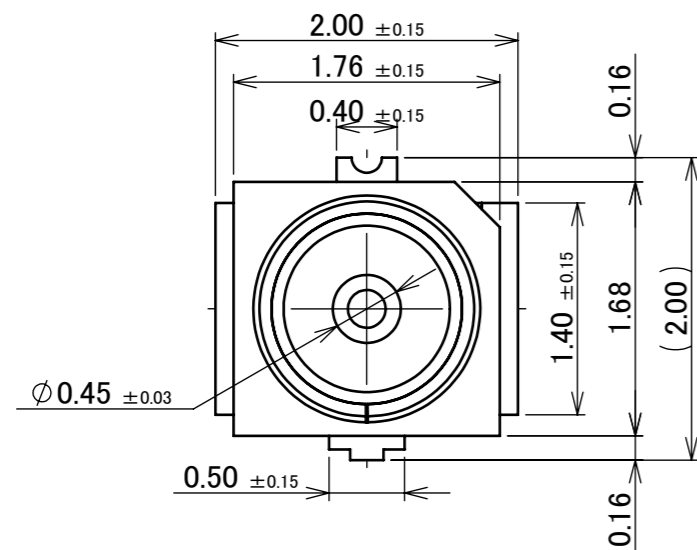
| PART NO. | PACKING QUANTITY / REEL | CONTACT PLATING | | | GROUND CONTACT PLATING | | |
|---------------|-------------------------|--|--|-----------------|--|--|-----------------|
| | | CONTACT PART | SOLDERING PART | ALL OVER | CONTACT PART | SOLDERING PART | ALL OVER |
| 20449-001E | 10,000 PCS. | TOP: Au 0.05 μm MIN. | TOP OTHER: Au 0.01 μm MIN. ZONE X: Au 0.03 μm MIN. | Ni 1.00 μm MIN. | TOP: Au 0.03 μm MIN. | TOP: Au 0.01 μm MIN. | Ni 1.00 μm MIN. |
| 20449-001E-01 | | TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN. | TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN. | | TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN. | TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN. | |
| 20449-001E-03 | | | | | | | |



Halogen Free

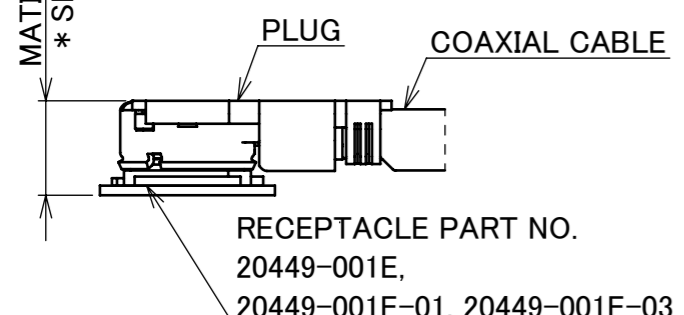


RoHS Compliant



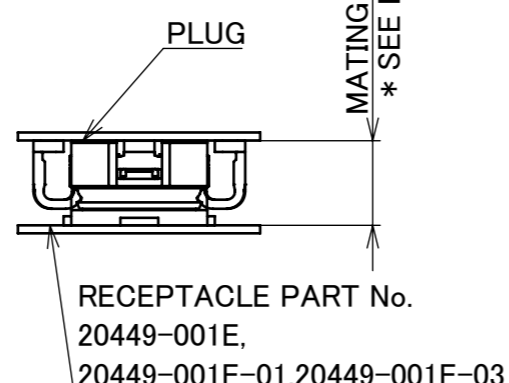
MATING HEIGHT * SEE BELOW

MATING HEIGHT * SEE BELOW



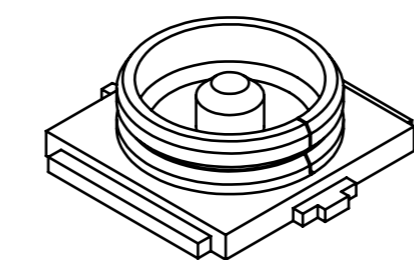
* MATING HEIGHT
1.2 MAX. WITH 20611-001R, 20572-001R-08,
20448-00*R-081, 20448-001R-081E
1.4 MAX. WITH 20565-001R-**
1.7 MAX. WITH 20632-001R-37
(2.0 MAX. WITH MHF 4L LK LOCKED CONDITION)

MATING CONDITION
WITH MHF 4/MHF 4L PLUG
(S = 10/1)



* MATING HEIGHT
1.2 MAX. WITH 20462-001E

MATING CONDITION
WITH MHF 4 SMT
(S = 10/1)



- NOTES.
- APPLICABLE CONNECTOR (CABLE SIZE)
MHF 4 PLUG: 20611-001R (Φ0.81)
20448-00*R-081 (Φ0.81)
20448-001R-081E (Φ0.81)
MHF 4L PLUG: 20572-001R-08 (Φ0.64, Φ0.81)
20565-001R-** (Φ0.83, Φ0.95, Φ1.13)
20632-001R-37 (Φ1.37)
MHF 4 SMT PLUG: 20462-001E
 - COPLANARITY: 0.1 mm MAX.
 - THIS IS "Pb-FREE" CONNECTOR.
 - CHARACTERISTIC IMPEDANCE: 50 Ω (NOMINAL VALUE)

| NO. | DESCRIPTION | MATERIAL | FINISH, REMARKS |
|-----|----------------|-----------------|-----------------|
| 3 | GROUND CONTACT | PHOSPHOR BRONZE | SEE TABLE |
| 2 | CONTACT | BRASS | SEE TABLE |
| 1 | HOUSING | LCP | UL94V-0, BLACK |

| NO. | DESCRIPTION | MATERIAL | FINISH, REMARKS |
|-----------------|-------------|----------|-----------------|
| 18 | Z230201 | TOI | 2023/02/20 Y.H |
| 17 | Z221366 | M.H | 2022/12/19 Y.H |
| 16 | Z220591 | Y.I | 2022/05/27 Y.H |
| 15 | Z201077 | TOI | 2020/10/16 M.T |
| 14 | Z200094 | SEI | 2020/01/22 Y.S |
| 13 | Z191575 | SEI | 2019/12/05 Y.S |
| REV. | ECN | BY | DATE |
| REVISION RECORD | | | |

| | | | |
|--------------------|-------------|------------------|-----------------|
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 |
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 |
| GENERAL TOLERANCE. | | | |
| DWG. | K.Oobayashi | | DATE 2007/11/12 |
| CHK. | | | |
| APP. | E.Kawabe | | |

| | | |
|-------------------------|---------------|---------------|
| PROJECTION | SERIES No. R5 | CUSTOMER COPY |
| TITLE MHF® 4 RECEPTACLE | SCALE 20:1 | I-PEX |
| DWG. No. 20449 | UNIT mm | |
| SIZE A3 | SHEET 1/7 | REV. 18 |

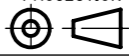
FOR MHF 4 PLUG

| ITEMS | SPECIFICATION | |
|---|---|---|
| | 20611-001R (CABLE Φ0.81 TYPE) | 20448-001R (CABLE Φ0.81 TYPE) |
| APPLICABLE CONNECTOR PART No. | | |
| RATING VOLTAGE | 60 V AC (R.M.S)/DC | |
| RATING FREQUENCY | DC~9GHz | |
| OPERATING TEMPERATURE | 233~363 K (-40°C~+90°C) | |
| CHARACTERISTIC IMPEDANCE | 50 ohm (NOMINAL VALUE) | |
| VSWR (MATED WITH SMA ADAPTER PART No. 90449-002) | 1.30 MAX. AT 0.1~3GHz, 1.40 MAX. AT 3~6GHz, 1.55 MAX. AT 6~9GHz | |
| MAIN CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 20 mohm MAX. | |
| GROUND CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 100 mohm MAX. | INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 20 mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN. | |
| DIELECTRIC WITHSTANDING VOLTAGE | 200 V AC 1 MINUTE | |
| DURABILITY | 30 CYCLES | |
| MATING FORCE (INITIAL / AFTER TEST) | - | |
| UNMATING FORCE (INITIAL / AFTER TEST) | INITIAL : 4 N MIN. / AFTER TEST : 2 N MIN. | |
| PRODUCT SPECIFICATION | PRS-2530 | PRS-1745 |
| TEST REPORT | TR-18086 | TR-12118 |
| PACKING STANDARD | 20449-001E-03: 300-604 | |
| INSTRUCTION MANUAL | HIM-10003 | |
| APPEARANCE CRITERIA No. | QLS-A*** | |

| | | | | | | | | |
|--------------------|------|------------------|------|-------------------------------|------------------|---------------|-------|------|
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION | SERIES No. R5 | CUSTOMER COPY | | |
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | | | | |
| GENERAL TOLERANCE. | | | | TITLE MHF® 4 RECEPTACLE | SCALE | I-PEX | | |
| DWG. | DATE | | | | - | | | |
| CHK. | | | | | UNIT | | | |
| APP. | | | | | mm | | | |
| | | | | DWG. No. | 20449 | SIZE | SHEET | REV. |
| | | | | | | A3 | 2/7 | 18 |

FOR MHF 4L PLUG

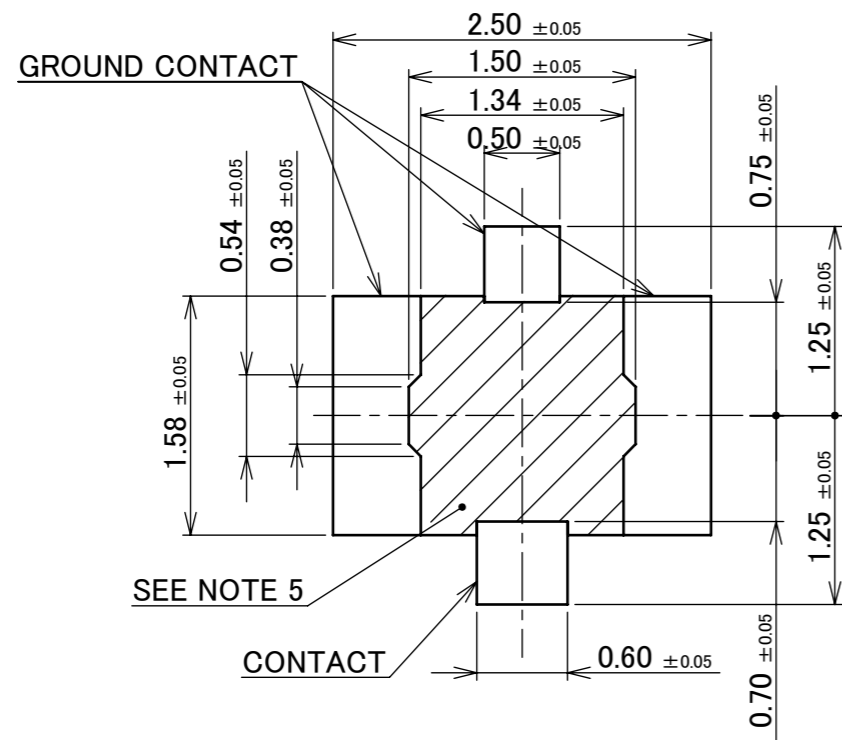
| ITEMS | SPECIFICATION | | | |
|---|---|--|-------------------------------------|-------------------------------------|
| | 20572-001R-08 (CABLE Φ0.64 TYPE) (CABLE Φ0.81 TYPE) | 20565-001E-13 (CABLE Φ0.95 TYPE) (CABLE Φ1.13 TYPE) | 20565-001R-83 (CABLE Φ0.83 TYPE) | 20632-001R-37 (CABLE Φ1.37 TYPE) |
| APPLICABLE CONNECTOR PART No. | | | | |
| RATING VOLTAGE | 60 V AC (R.M.S)/DC | | | |
| RATING FREQUENCY | DC ~ 9GHz | | | |
| OPERATING TEMPERATURE | 233~363 K(-40°C~+90°C) | | | |
| CHARACTERISTIC IMPEDANCE | 50 ohm (NOMINAL VALUE) | | | |
| VSWR (MATED WITH SMA ADAPTER PART No. 90449-002) | 1.30 MAX. AT 0.1~3GHz, 1.40 MAX. AT 3~6GHz, 1.55 MAX. AT 6~9GHz | | | |
| MAIN CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 20 mohm MAX. | | | |
| GROUND CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 20 mohm MAX. | | | |
| INSULATION RESISTANCE | INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN. | | | |
| DIELECTRIC WITHSTANDING VOLTAGE | 200 V AC 1 MINUTE | | | |
| DURABILITY | 30 CYCLES | | | |
| MATING FORCE (INITIAL / AFTER TEST) | INITIAL : 30 N MAX. / AFTER TEST : 30 N MAX. | | | |
| UNMATING FORCE (INITIAL / AFTER TEST) | INITIAL : 20 N MAX. 5 N MIN. / AFTER TEST : 20 N MAX. 3 N MIN. | | | |
| PRODUCT SPECIFICATION | PRS-1944 (CABLE Φ0.64 TYPE) PRS-1772 (CABLE Φ0.81 TYPE) | PRS-2051 (CABLE Φ0.95 TYPE) PRS-1772 (CABLE Φ1.13 TYPE) | PRS-2062 (CABLE Φ0.83 TYPE) | PRS-2008 (CABLE Φ1.37 TYPE) |
| TEST REPORT | TR-14078 (CABLE Φ0.64 TYPE) TR-13011 (CABLE Φ0.81 TYPE) | TR-14142 (CABLE Φ0.95 TYPE) TR-13011 (CABLE Φ1.13 TYPE) | TR-15011 (CABLE Φ0.83 TYPE) | TR-14100 (CABLE Φ1.37 TYPE) |
| PACKING STANDARD | 20449-001E-03: 300-604 | | | |
| INSTRUCTION MANUAL | HIM-12011 | HIM-12012 | | HIM-16011 |
| APPEARANCE CRITERIA No. | QLS-A*** | | | |

| | | | | | | | | |
|--------------------|------|------------------|------|---|------------------|---------------|-------|------|
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION  | SERIES No. R5 | CUSTOMER COPY | | |
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | | | | |
| GENERAL TOLERANCE. | | | | TITLE MHF® 4 RECEPTACLE | SCALE | I-PEX | | |
| DWG. | DATE | | | | - | | | |
| CHK. | | | | | UNIT | | | |
| APP. | | | | | mm | | | |
| | | | | DWG. No. | 20449 | SIZE | SHEET | REV. |
| | | | | | | A3 | 3/7 | 18 |

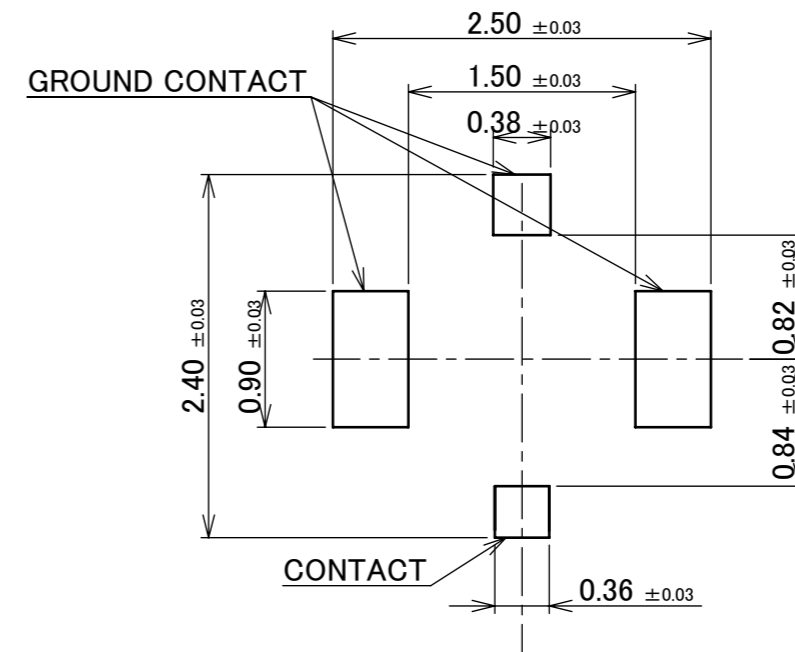
FOR MHF 4 SMT PLUG

| ITEMS | SPECIFICATION |
|---|--|
| APPLICABLE CONNECTOR PART No. | 20462-001E (MHF 4 SMT PLUG) |
| RATING VOLTAGE | 60 V AC (R.M.S)/DC |
| RATING FREQUENCY | DC~9GHz |
| OPERATING TEMPERATURE | 233~363 K(-40°C~+90°C) |
| CHARACTERISTIC IMPEDANCE | 50 ohm (NOMINAL VALUE) |
| VSWR (MATED WITH SMA ADAPTER PART No. 90449-002) | 1.30 MAX. AT 0.1~3GHz, 1.40 MAX. AT 3~6GHz, 1.55 MAX. AT 6~9GHz |
| MAIN CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : \triangle R 20 mohm MAX. |
| GROUND CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : \triangle R 20 mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | 200 V AC 1 MINUTE |
| DURABILITY | 30 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | INITIAL : 30 N MAX. / AFTER TEST : 15 N MAX. |
| UNMATING FORCE (INITIAL / AFTER TEST) | INITIAL : 4 N MIN. / AFTER TEST : 2 N MIN. |
| PRODUCT SPECIFICATION | PRS-1404 |
| TEST REPORT | TR-08022 |
| PACKING STANDARD | 20449-001E-03: 300-604 |
| INSTRUCTION MANUAL | HIM-15005 |
| APPEARANCE CRITERIA No. | QLS-A*** |

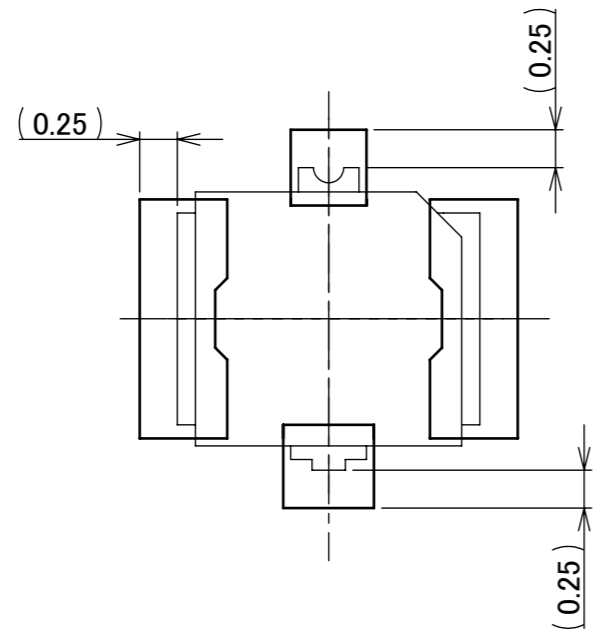
| | | | | | | | | |
|--------------------|---------------|------------------|-----------|---|------------------|---------------|-------|------|
| ANGLE | $\pm 2^\circ$ | 6 OVER 30 MAX. | ± 0.3 | PROJECTION | SERIES No. R5 | CUSTOMER COPY | | |
| 6 MAX. | ± 0.2 | 30 OVER 120 MAX. | ± 0.5 | | | | | |
| GENERAL TOLERANCE. | | | | TITLE MHF [®] 4 RECEPTACLE | SCALE | I-PEX | | |
| DWG. | DATE | | | | - | | | |
| CHK. | | | | | UNIT | | | |
| APP. | | | | | mm | | | |
| | | | | DWG. No. | 20449 | SIZE | SHEET | REV. |
| | | | | | | A3 | 4/7 | 18 |



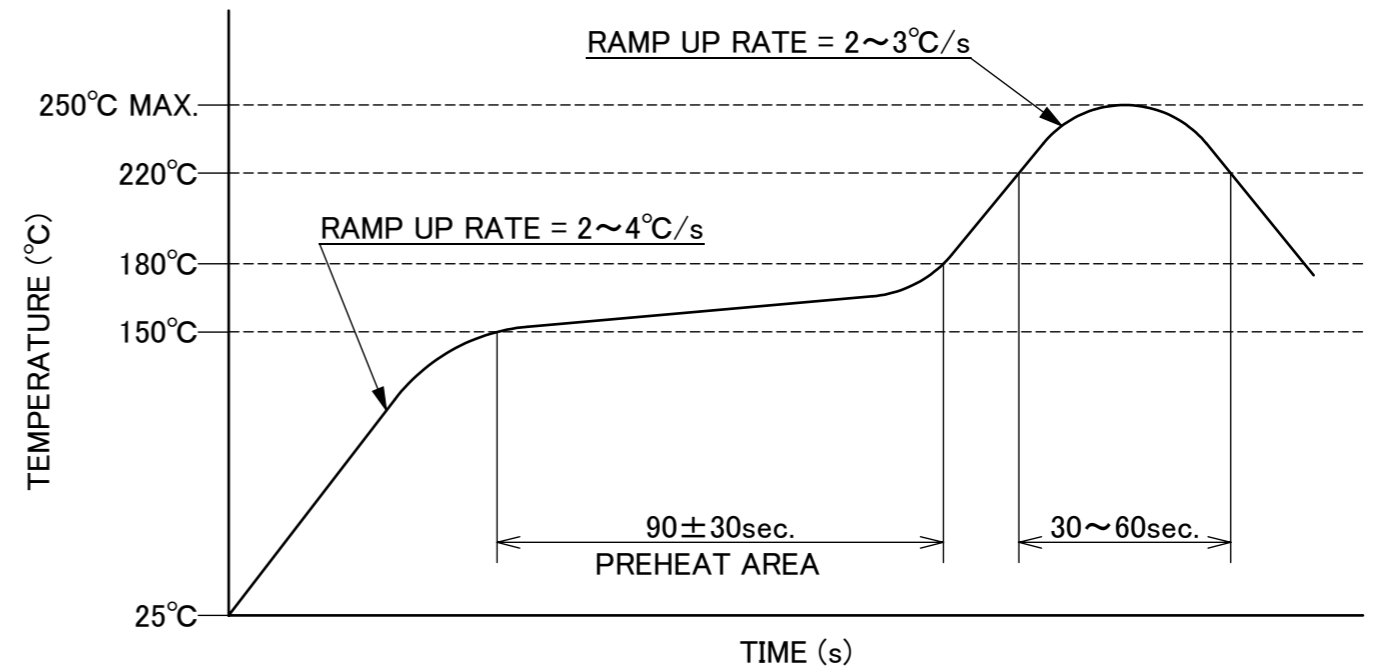
RECOMMENDED FOOTPRINT PATTERN



MASK THICKNESS: 0.12 mm
RECOMMENDED METAL MASK LAYOUT



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN

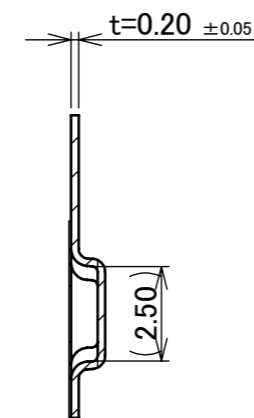
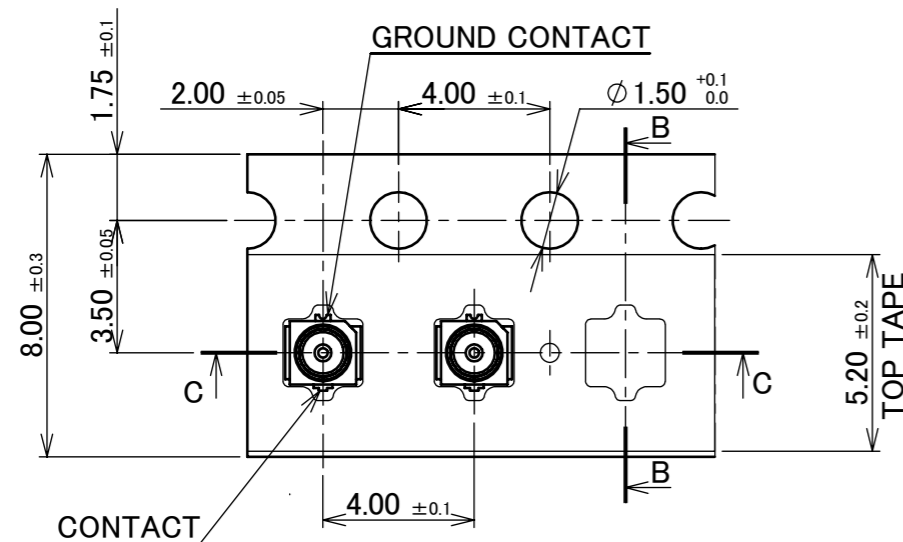
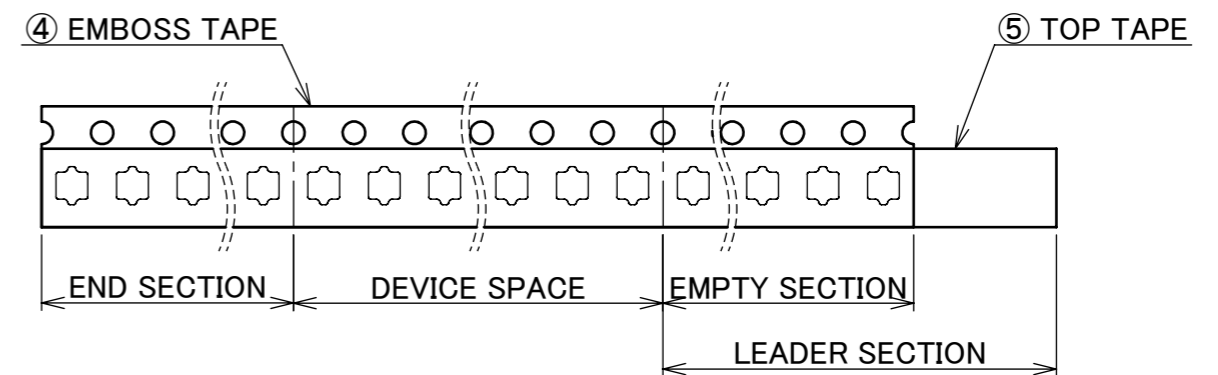
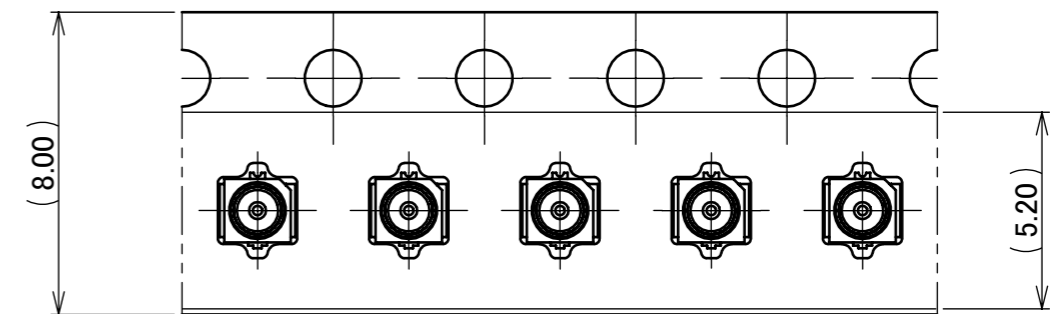
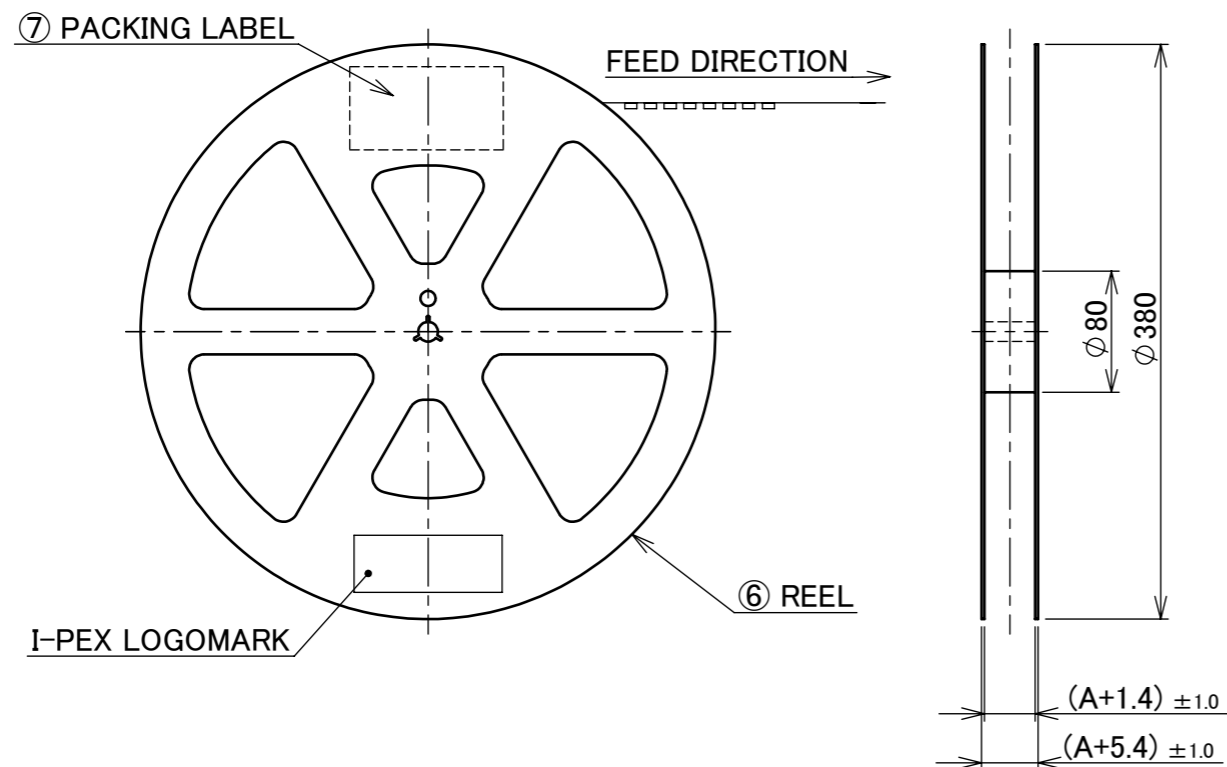


REFLOW TEMPERATURE PROFILE
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

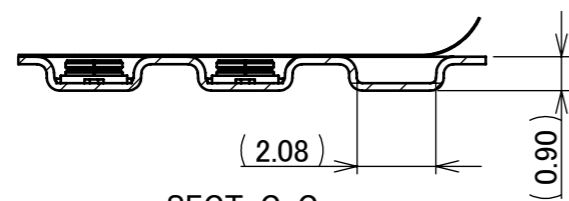
NOTE 5. CUT OUT PROHIBITION AREA.

| | | | | | | | | | |
|--------------------|------|------------------|------|----------------------|------------------|---------------|--------------|------|--|
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION ⊕ | SERIES No. R5 | CUSTOMER COPY | | | |
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | | | | | |
| GENERAL TOLERANCE. | | | | TITLE | | SCALE | I-PEX | | |
| DWG. | DATE | | | MHF® 4 RECEPTACLE | | 20:1 | | | |
| CHK. | | | | | | UNIT | | | |
| APP. | | | | DWG. No. 20449 | | mm | | | |
| | | | | | | SIZE | SHEET | REV. | |
| | | | | | | A3 | 5/7 | 18 | |

| PART NO. | A | QTY. PER EMBOSS REEL (PIECES / REEL) | QTY. PER PACKING CARTON (REELS / CARTON) |
|---------------|---|---|---|
| 20449-001E | 8 | 10,000 / REEL | 9 REELS/ CARTON = 90,000 PIECES |
| 20449-001E-01 | | | |
| 20449-001E-03 | | | |



SECT. B-B
(S = 5:1)



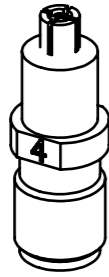
SECT. C-C
(S = 5:1)

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. | DESCRIPTION | MATERIAL | FINISH, REMARKS |
|-----|---------------|----------|--------------------------------|
| 7 | PACKING LABEL | - | - |
| 6 | REEL | PS | ANTI-STATIC TYPE |
| 5 | TOP TAPE | PET | ANTI-STATIC TYPE |
| 4 | EMBOSS TAPE | PS t=0.2 | ANTI-STATIC TYPE OR CONDUCTIVE |

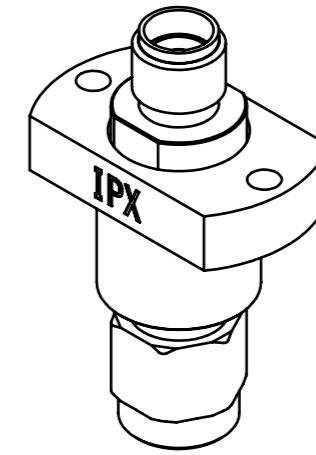
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION | SERIES No. | CUSTOMER COPY | | |
|--------------------|------|------------------|------|------------|------------|---------------|-------|------|
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | R5 | | | |
| GENERAL TOLERANCE. | | | | TITLE | SCALE | | I-PEX | |
| DWG. | DATE | | | MHF® 4 | - | | | |
| CHK. | | | | RECEPTACLE | mm | | | |
| APP. | | | | DWG. No. | 20449 | SIZE | SHEET | REV. |
| | | | | | | A3 | 6/7 | 18 |



MHF 4 (4L) SMA ADAPTOR
PART NO. 90449-002

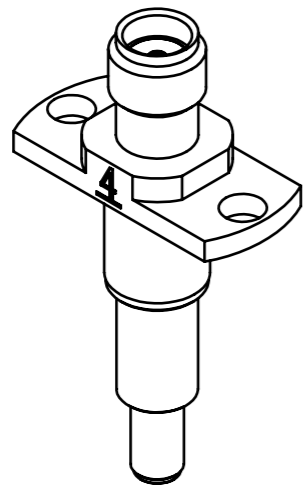


MHF 4 RECEPTACLE HIGH CYCLE ATTACHMENT
PART NO. 90683-0001

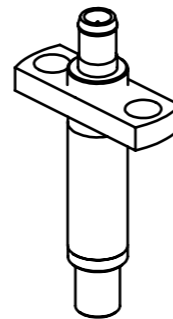


MHF SERIES HIGH CYCLE SMA ADAPTER BASE UNIT
PART NO. 90684-0001

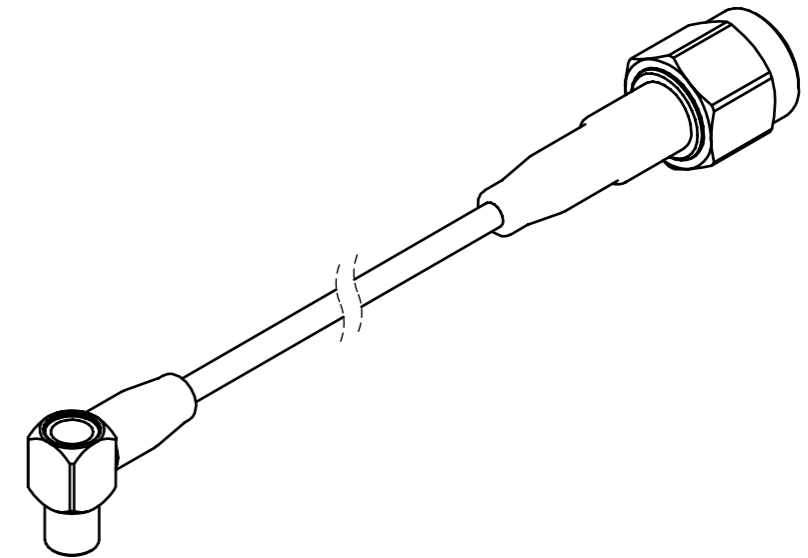
* 90683-0001 AND 90684-0001 SHOULD BE USED TOGETHER.



MHF 4 SMA ADAPTOR HIGH CYCLE TYPE
PART NO. 90698-0001



MHF 4 RECEPTACLE NARROW PITCH
SMA ADAPTOR HIGH CYCLE TYPE
PART NO. 90576-0001



4.5MM HIGH CYCLE TEST PROBE CABLE ASS'Y
PART NO. 90577-****

* 90576-0001 AND 90577-**** SHOULD BE USED TOGETHER.

| | | | | | | | | | |
|--------------------|------|------------------|------|-------------------|------------------|---------------|--------------|------|--|
| ANGLE | ±2° | 6 OVER 30 MAX. | ±0.3 | PROJECTION ⊕ | SERIES No. R5 | CUSTOMER COPY | | | |
| 6 MAX. | ±0.2 | 30 OVER 120 MAX. | ±0.5 | | | | | | |
| GENERAL TOLERANCE. | | | | TITLE | | SCALE | I-PEX | | |
| DWG. | DATE | | | MHF® 4 RECEPTACLE | | 2:1 | | | |
| CHK. | | | | | | UNIT | | | |
| APP. | | | | | | mm | | | |
| | | | | DWG. No. | 20449 | SIZE | SHEET | REV. | |
| | | | | | | A3 | 7/7 | 18 | |