

# MHF® I (4 pads receptacle)

帶有額外第 4 個焊盤的 MHF® I 母座在透過回流焊安裝在電路板上時可改善中心對齊，並增加焊料剪切力

**Product Specifications:**

|                          |                     |                                 |            |
|--------------------------|---------------------|---------------------------------|------------|
| Mated Height (mm max.)   | (1) (2) 2.5 (3) 3.0 |                                 |            |
| Rece. SMT Size (mm)      | 3.1 x 3.0           |                                 |            |
| Applicable Frequency     | DC ~ 9 GHz          |                                 |            |
| Characteristic Impedance | 50 ohm              |                                 |            |
| VSWR<br>(L=100 mm)       | Connector           | PLUG                            | RECEPTACLE |
|                          | DC ~ 3 GHz          | 1.3 max.                        | 1.3 max.   |
|                          | 3 ~ 6 GHz           | 1.5 max.                        | 1.4 max.   |
|                          | 6 ~ 9 GHz           | (1) 1.9 max.<br>(2)(3) 1.6 max. | 1.8 max.   |

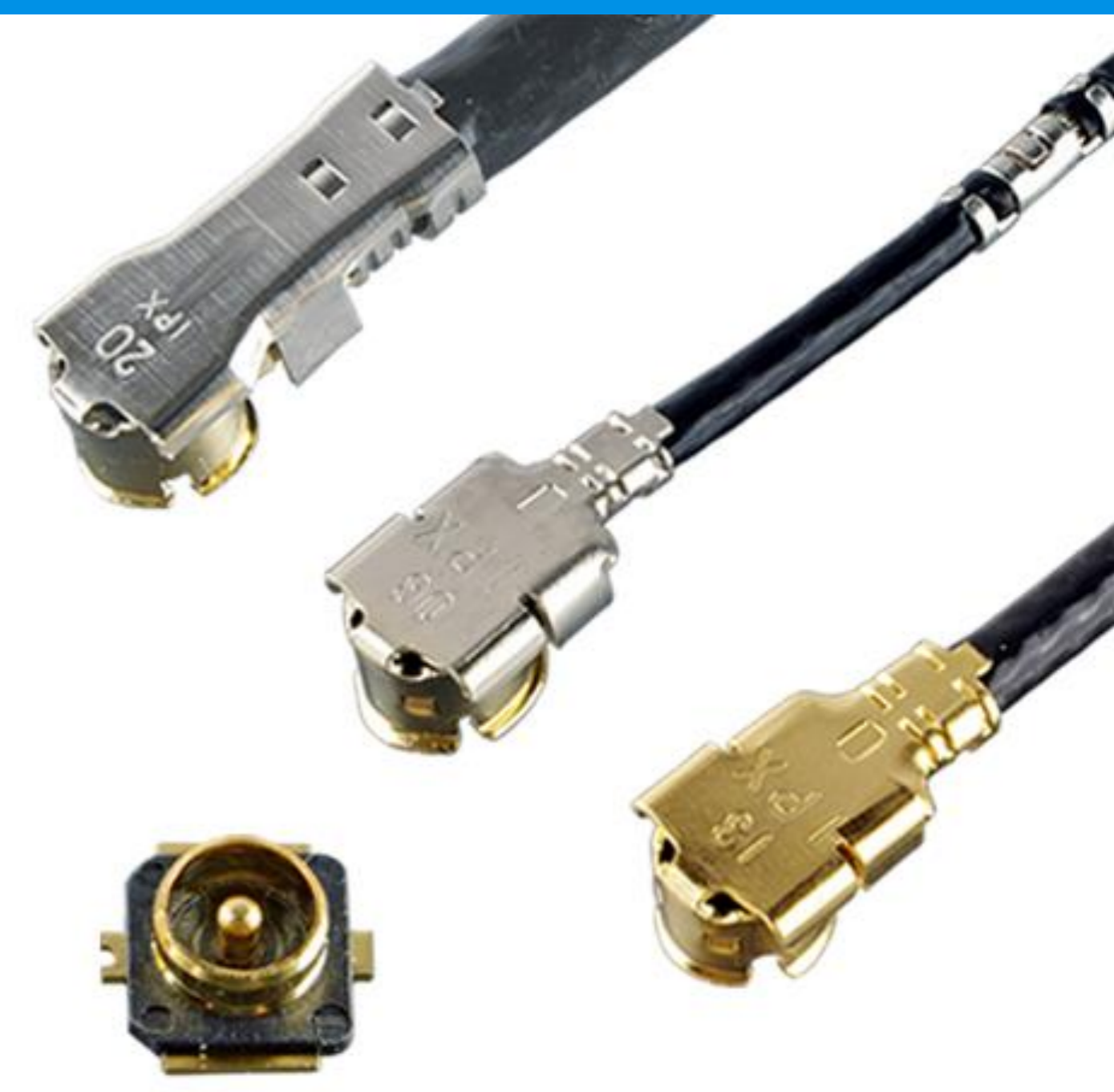
\* Cable size O.D. (1) 0.81 mm, 1.13mm, 1.37 mm, 1.80 mm (2) 1.32 mm (3) 2.0 mm

**Applicable Cable Size:**

|                                     |
|-------------------------------------|
| <b>20278-112R-**, 20670-001R-**</b> |
| O.D. 1.80 mm / AWG 30               |
| O.D. 1.32 mm, 1.13 mm / AWG 32      |
| O.D. 0.81 mm / AWG 36               |
| <b>20351-112R-37</b>                |
| O.D. 1.37 mm / AWG 30               |
| <b>20767-001R-20</b>                |
| O.D. 2.0 mm / AWG 26                |

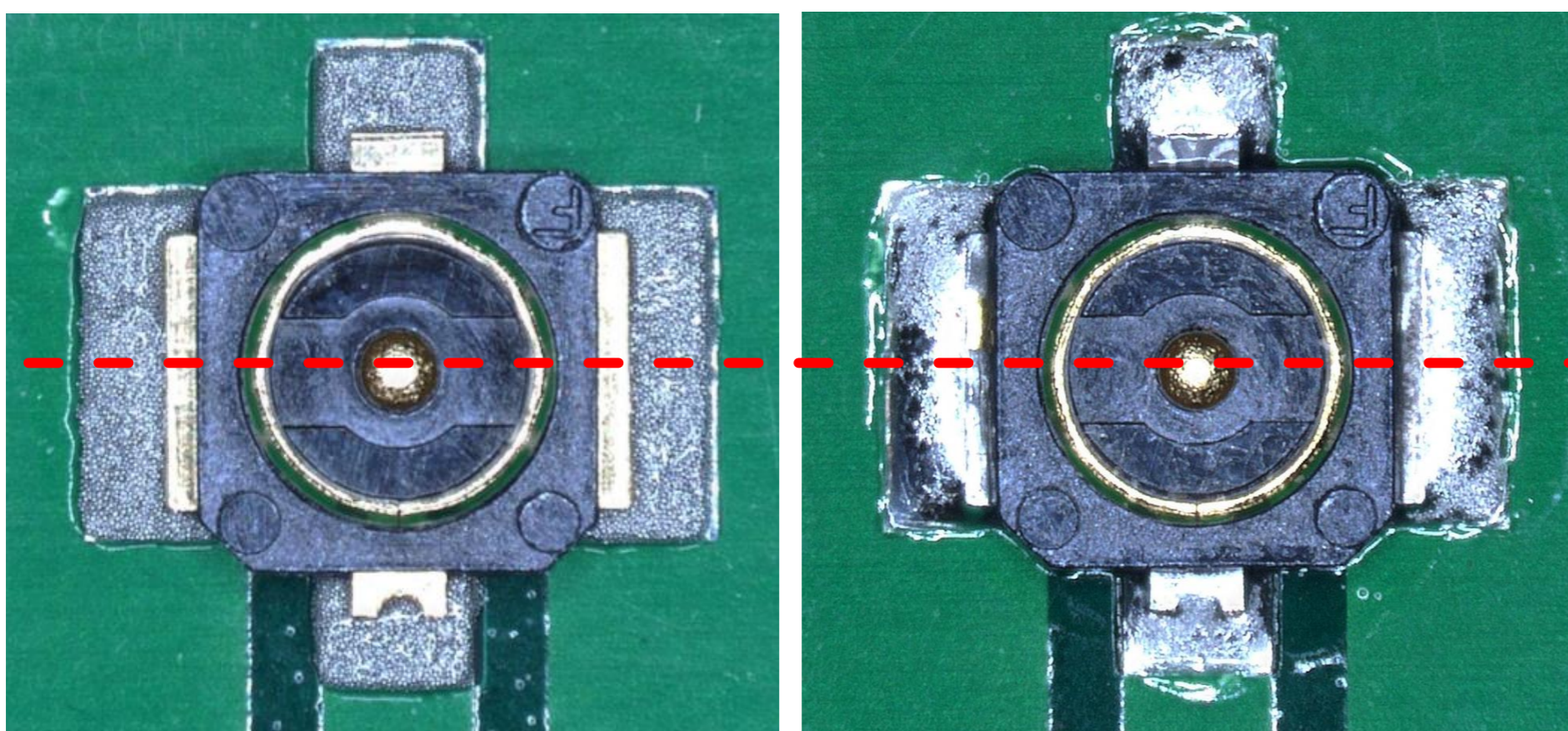
**Applicable Standards (Reference Only):**

5G sub-6, Wi-Fi 6E, LTE/LTE-Advanced, LPWA, Bluetooth, GPS



## 透過增加焊盤改善中心校準

4個焊盤的母座



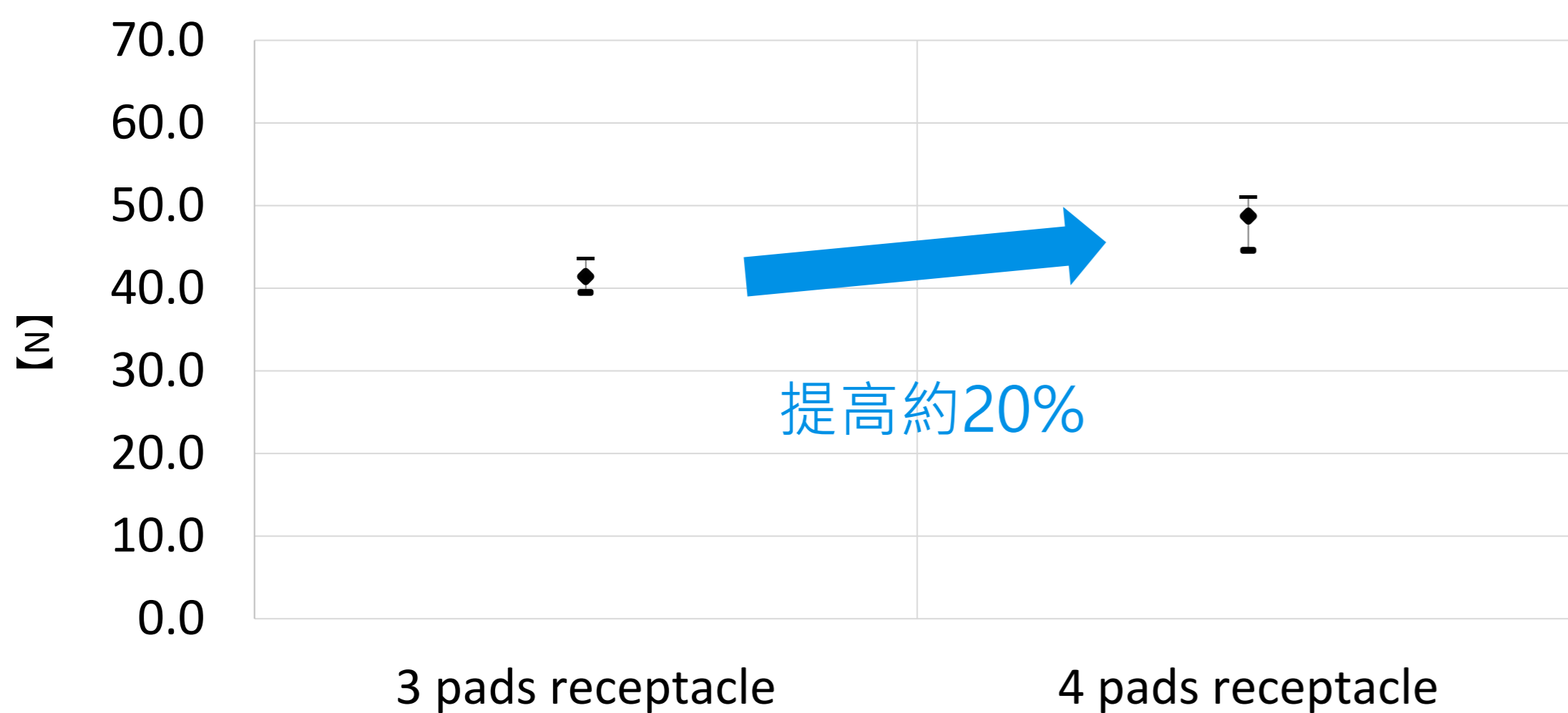
回流焊前

▶ 回流焊接後

- ✓ 提高實施過程的品質
- ✓ 實現接近理想中的射頻電路設計
- ✓ 允許使用射頻線束進行精確定位

## 透過增加焊盤提高焊錫剪切力

MHF® I Receptacle Solder Shear Strength



與帶鎖扣的連接器完美結合  
適用於連續衝擊和振動應用！

MHF® I  
4個焊盤母座



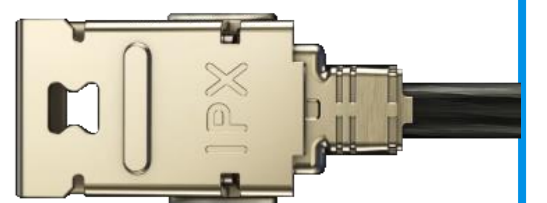
MHF® I LK  
線束



上鎖狀態



解鎖狀態



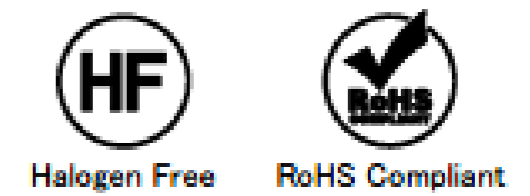
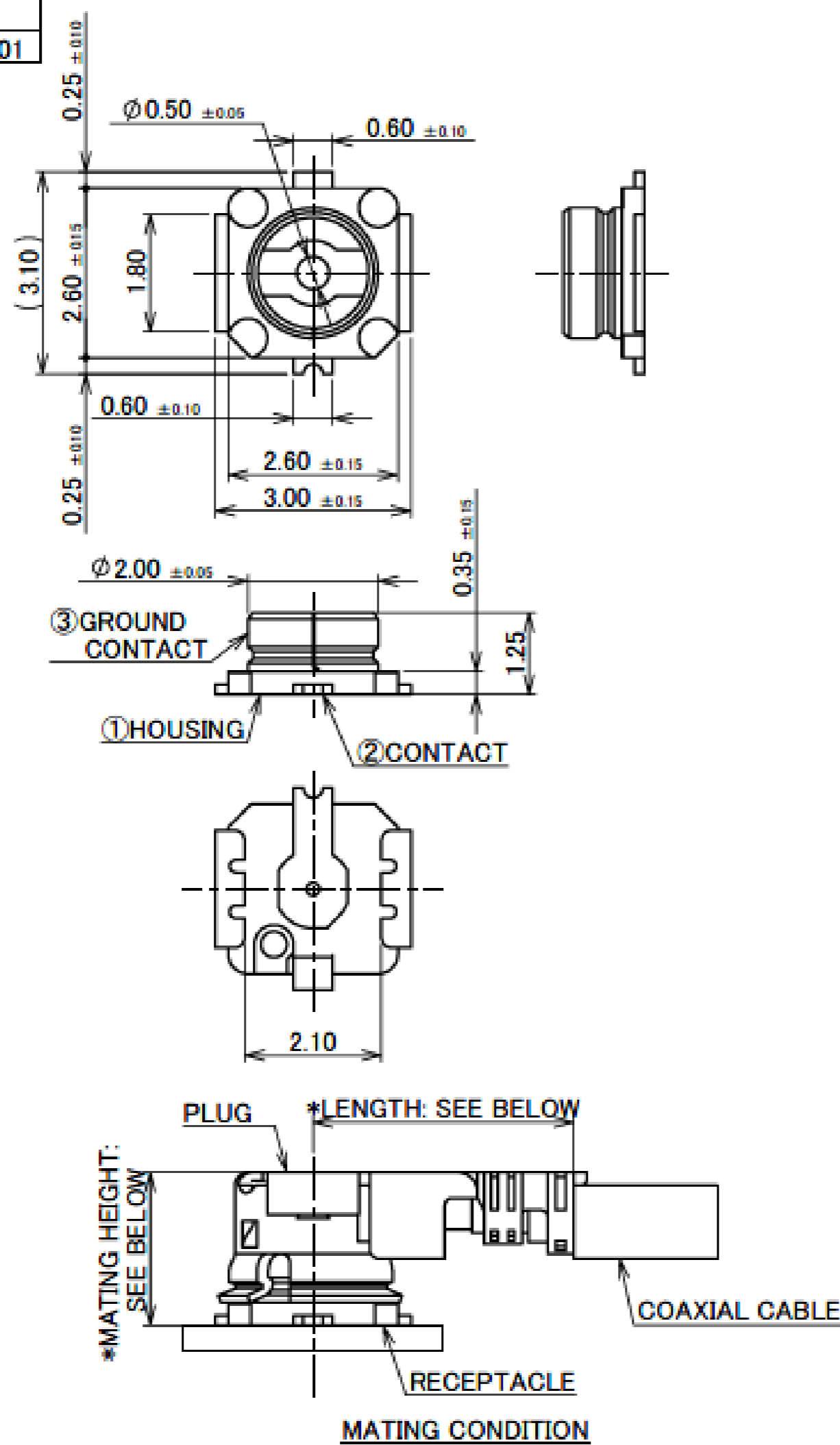
## 可搭配 MHF® I 系列各種電纜外徑和附加機械鎖扣選項

| Product name                        | MHF® I LK   | MHF® I       | MHF® I       |
|-------------------------------------|---|--------------|--------------|
| Lock                                | With Lock   | Without Lock | Without Lock |
| Mating Height                       | 2.9 mm max.   | 2.5 mm max.  | 3.0 mm max.  |
| Coax O.D.<br>(Center Conductor AWG) | 2.00 mm (AWG#26)  |              | ●            |
|                                     | 1.80 mm (AWG#30)  | ●            | ●            |
|                                     | 1.37 mm (AWG#30)  | ●            | ●            |
|                                     | 1.32 mm (AWG#32)  | ●            | ●            |
|                                     | 1.13 mm (AWG#32)  | ●            | ●            |
|                                     | 0.81 mm (AWG#36)  | ●            | ●            |
| Receptacle                          | MHF® I receptacle 20279-001E-** (3 pads) / 20441-001E-01 (4 pads) |              |              |

# Component Parts Details

## MHF® I Receptacle (4pads/Black color HSG)

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20441-001E-01 |
| PART No.        | 20441-001E-01 |

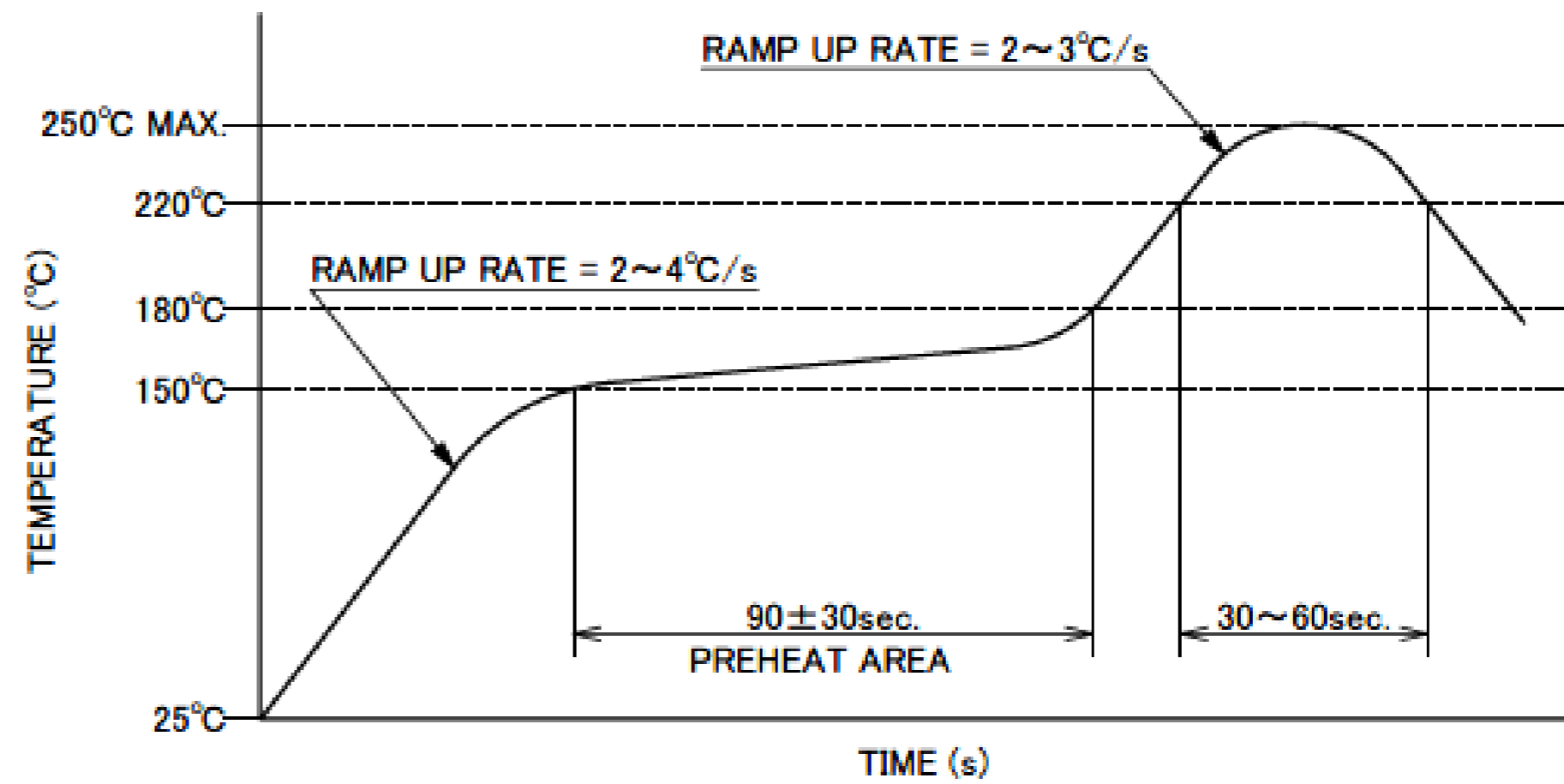
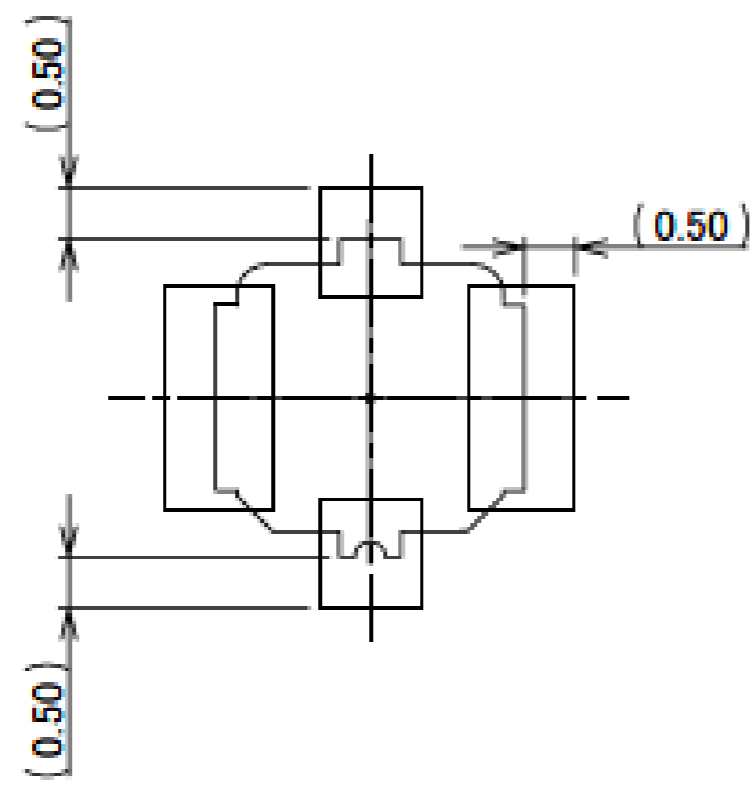
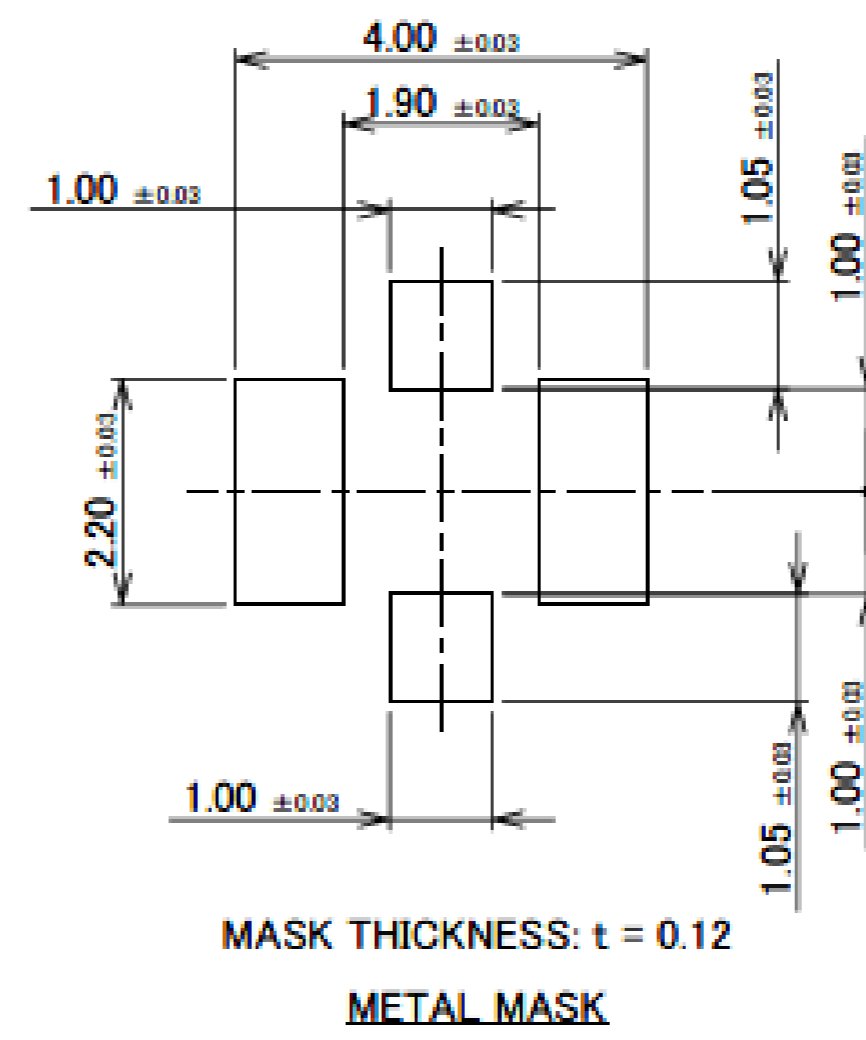
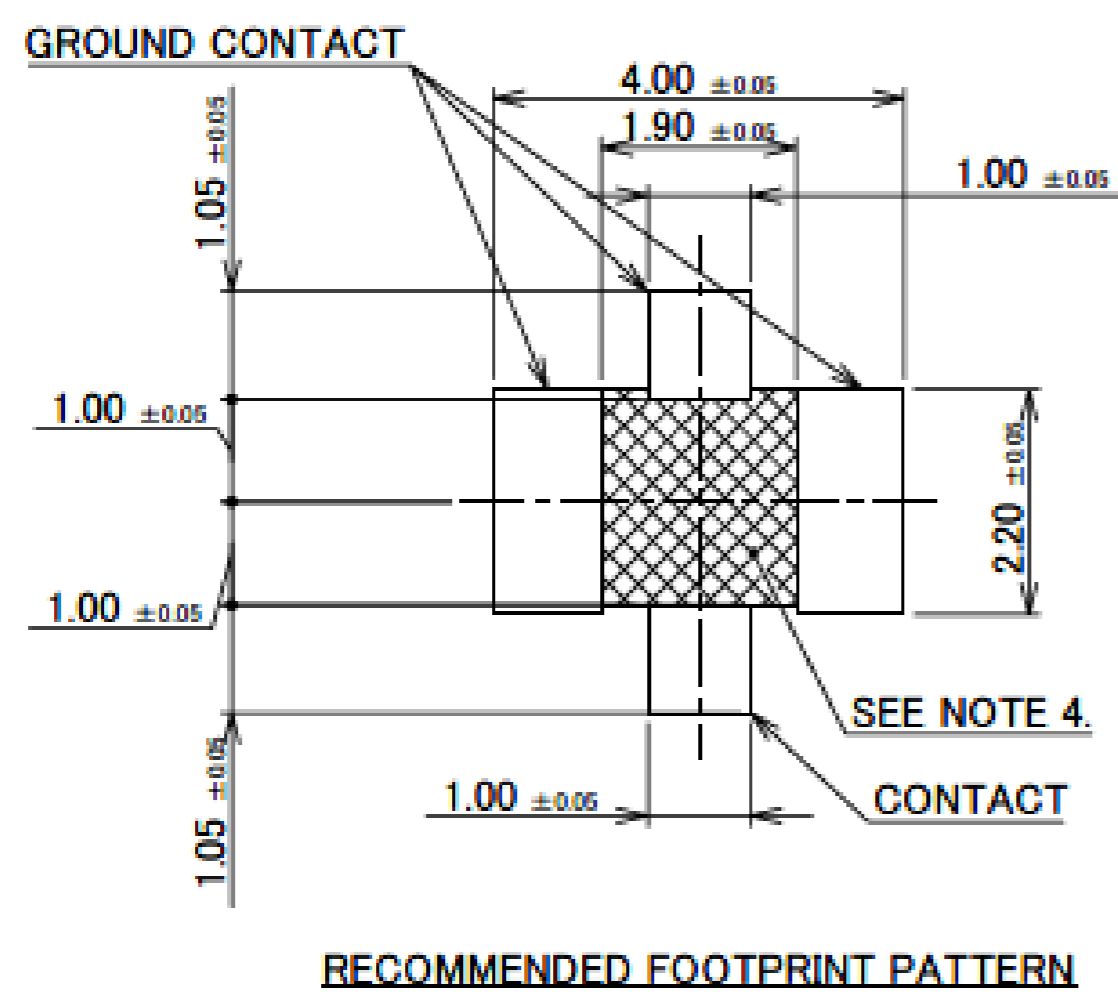


- NOTES.
1. APPLICABLE CONNECTOR PART NUMBER:  
20278-112R-\*\*-\*\*  
20351-1\*\*R-37  
20670-001R-\*\*-\*\*  
20767-001R-20
  2. COPLANARITY: 0.1mm MAX.
  3. THIS IS "Pb-FREE" CONNECTOR.

| NO. | DISCRIPTION    | MATERIAL        | FINISH , REMARKS  |
|-----|----------------|-----------------|---|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.03 $\mu$ m MIN.<br>SOLDERING PART Au 0.03 $\mu$ m MIN. |
| 2   | CONTACT        | BRASS           | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.10 $\mu$ m MIN.<br>SOLDERING PART Au 0.03 $\mu$ m MIN. |
| 1   | HOUSING        | LCP             | UL94V-0, BLACK  |

- \*LENGTH: 4.0 $\pm$ 0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32  
4.7 $\pm$ 0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37  
5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)  
\*MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-\*\*-\*\*  
(2.9 MAX. AT MHF I LK LOCKED CONDITION)  
3.0 MAX. AT PLUG PART NO. 20767-001R-20

# MHF® I Receptacle (4pads/Black color HSG)

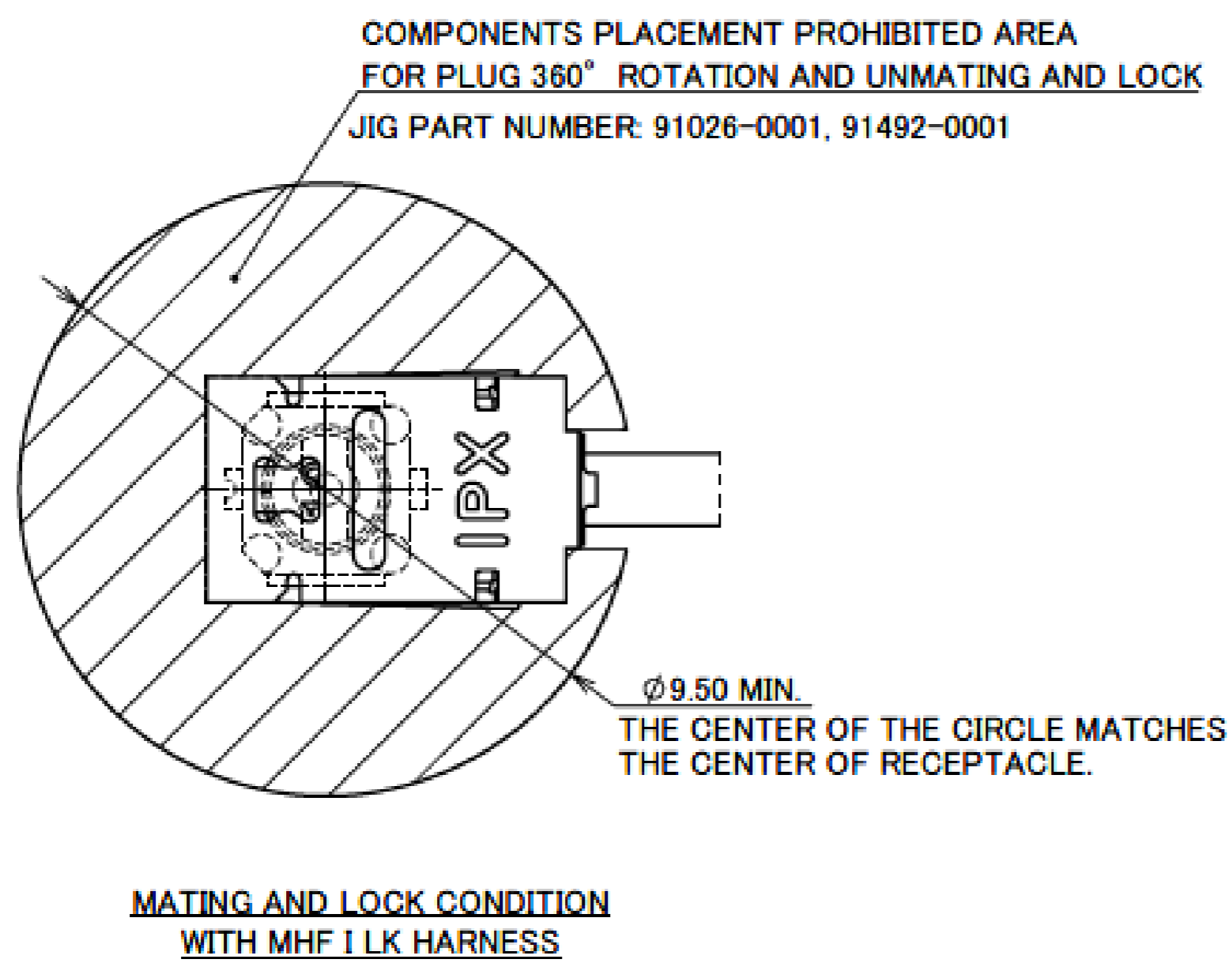


NOTE  
4. NO GROUND, SIGNAL, RESIST IN THIS AREA.

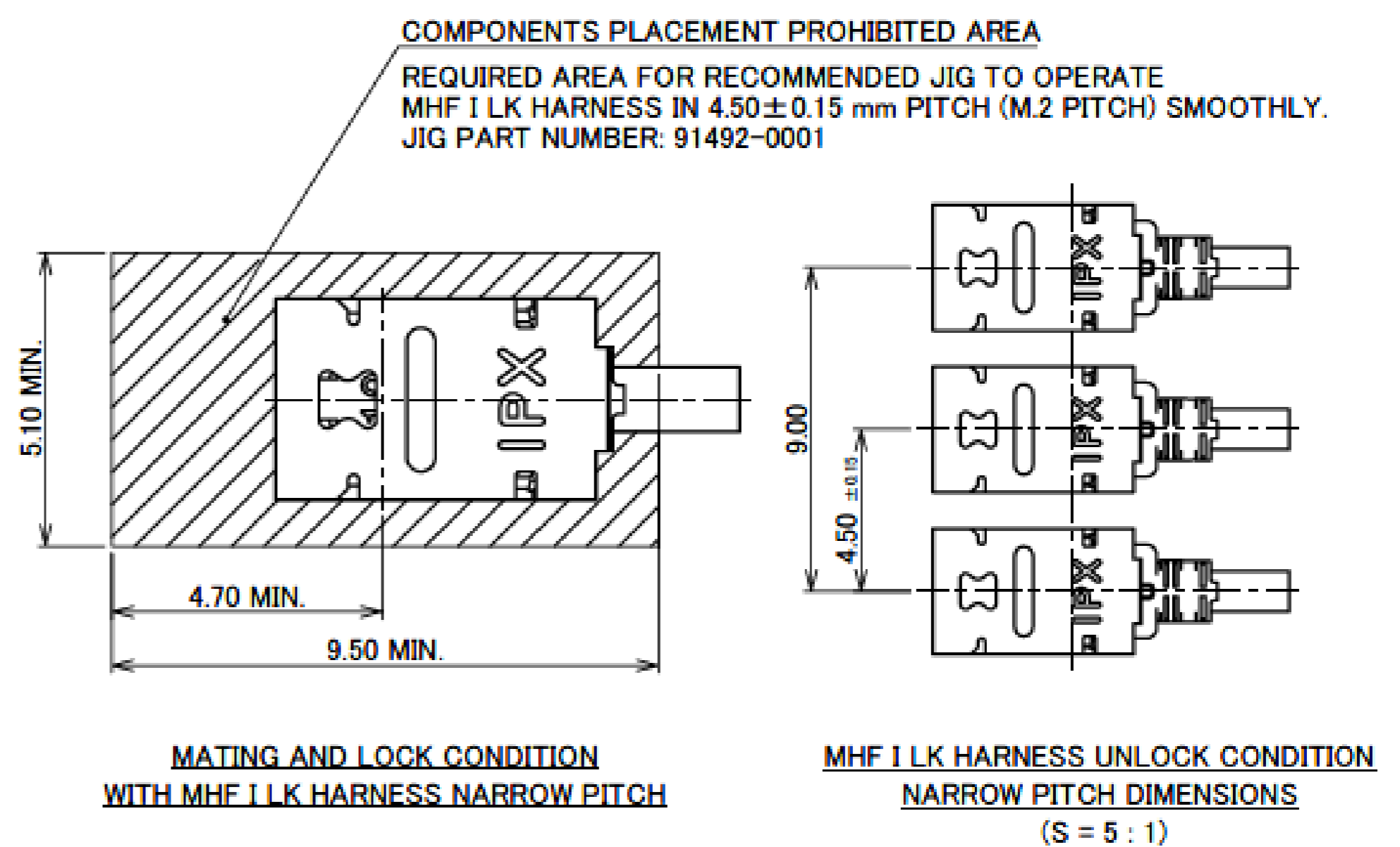
Rev.8

## COMPONENT PLACEMENT PROHIBITED AREA FOR MHF I RECEPTACLE MATED WITH MHF I LK HARNESS REQUIRED AREA FOR RECOMMENDED JIG TO OPERATE

### SINGLE CONNECTOR LAYOUT



### MULTIPLE CONNECTORS LAYOUT



Rev.8

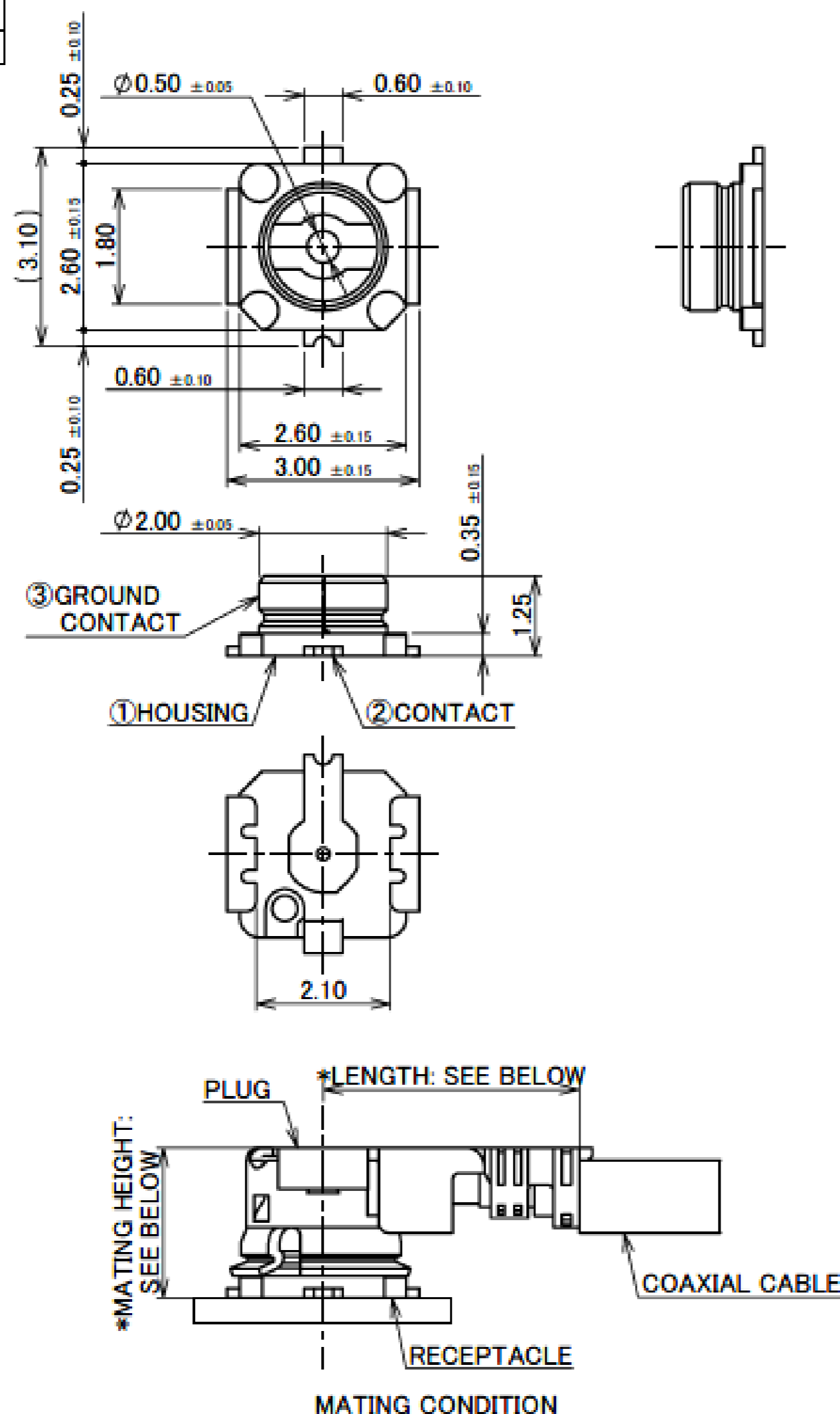
# MHF® I Receptacle (4pads/Black color HSG)

| ITEMS  | SPECIFICATION  |                                       |  |                                    |
|--|--|---------------------------------------|--|------------------------------------|
|  | 20278-001R-**-**<br>(MHF I PLUG 1.80, 1.32, 1.13, 0.81)                        | 20351-001R-**-**<br>(MHF I PLUG 1.37) | 20670-001R-**-**<br>(MHF I PLUG Ni TOP 1.80, 1.37, 1.32, 1.13, 0.81) | 20767-001R-20<br>(MHF I PLUG 2.00) |
| RECOMMENDED APPLICABLE CONNECTOR PART NO.          |  |                                       |  |                                    |
| RATING VOLTAGE                                     | 60 V AC (R.M.S)  |                                       |  |                                    |
| RATING FREQUENCY                                   | DC~9GHz  |                                       |  |                                    |
| OPERATING TEMPERATURE                              | 233~363K (-40°C~+90°C)   |                                       |  |                                    |
| VSWR<br>(MATED WITH SMA ADAPTER PART No.90193-002) | RECEPTACLE: 1.30 MAX. AT 0.1~3 GHz, 1.40 MAX. AT 3~6 GHz, 1.80 MAX. AT 6~9 GHz |                                       |  |                                    |
| MAIN CONTACT RESISTANCE                            | INITIAL : 20 mohm MAX.<br>AFTER TEST : 25 mohm MAX.                            |                                       | INITIAL : 20 mohm MAX.<br>AFTER TEST : $\Delta$ R 20 mohm MAX.       |                                    |
| GROUND CONTACT RESISTANCE                          | INITIAL : 10 mohm MAX.<br>AFTER TEST : 15 mohm MAX.                            |                                       | INITIAL : 20 mohm MAX.<br>AFTER TEST : $\Delta$ R 100 mohm MAX.      |                                    |
| INSULATION RESISTANCE                              | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.                             |                                       |  |                                    |
| DIELECTRIC WITHSTANDING VOLTAGE                    | 200 V AC, 1 MINUTE   |                                       |  |                                    |
| DURABILITY   | 30 CYCLES  |                                       |  |                                    |
| UNMATING FORCE (INITIAL / AFTER TEST)              | INITIAL: 5 N MIN.<br>AFTER TEST: 3 N MIN.                                      |                                       |  |                                    |
| PRODUCT SPECIFICATION                              | PRS-1676   | PRS-1726                              | PRS-2105   | PRS-2490                           |
| TEST REPORT  | TR-12044   | TR-12096                              | TR-15059   | TR-18041                           |
| PACKING STANDARD                                   | 300-596  |                                       |  |                                    |
| INSTRUCTION MANUAL                                 | HIM-10002  |                                       |  | HIM-17017                          |
| APPEARANCE CRITERIA No.                            | QLS-A***   |                                       |  |                                    |

Rev.8

# MHF® I Receptacle (4pads/Natural color HSG)

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20431-001E-01 |
| PART No.        | 20431-001E-01 |



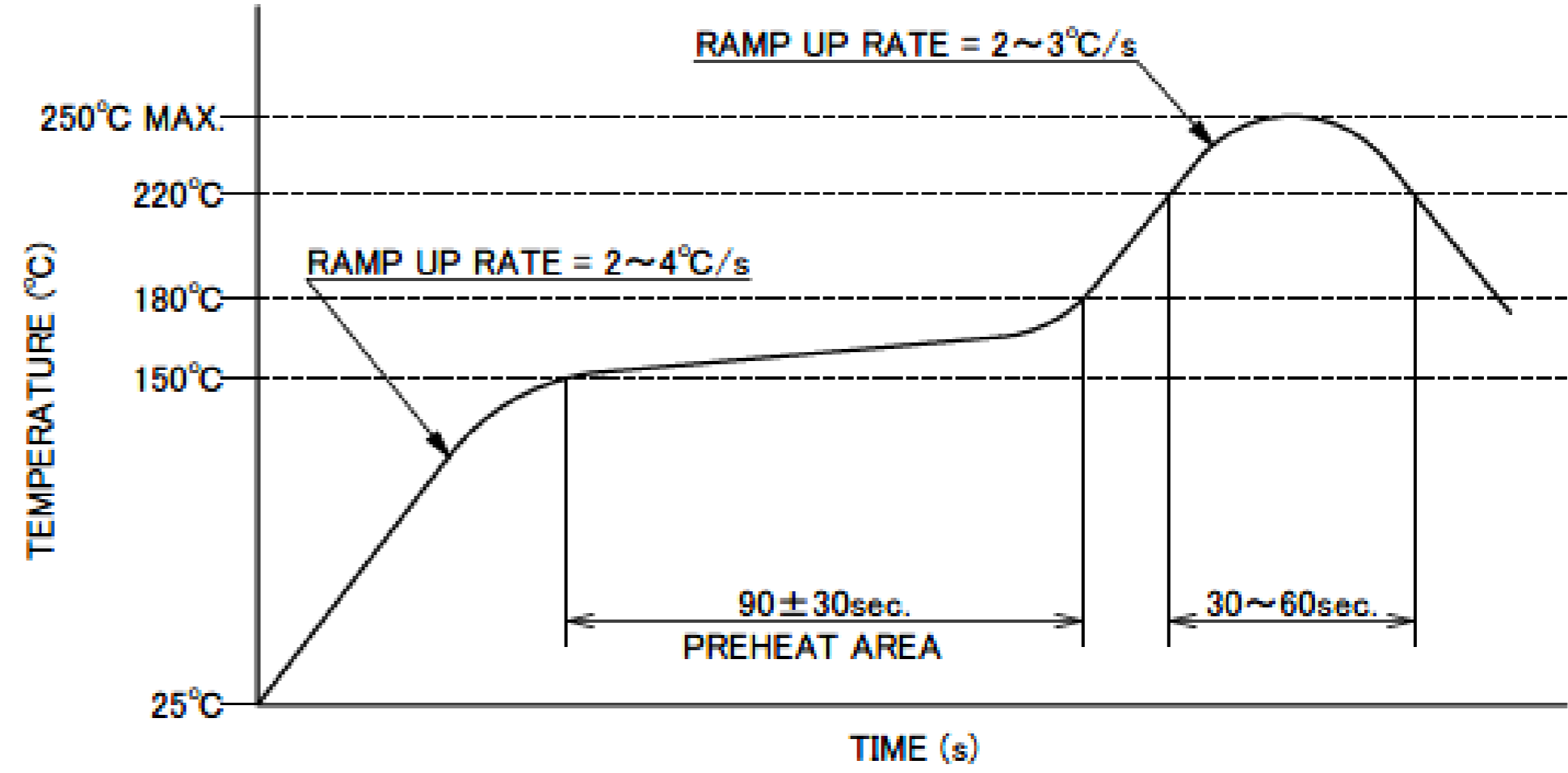
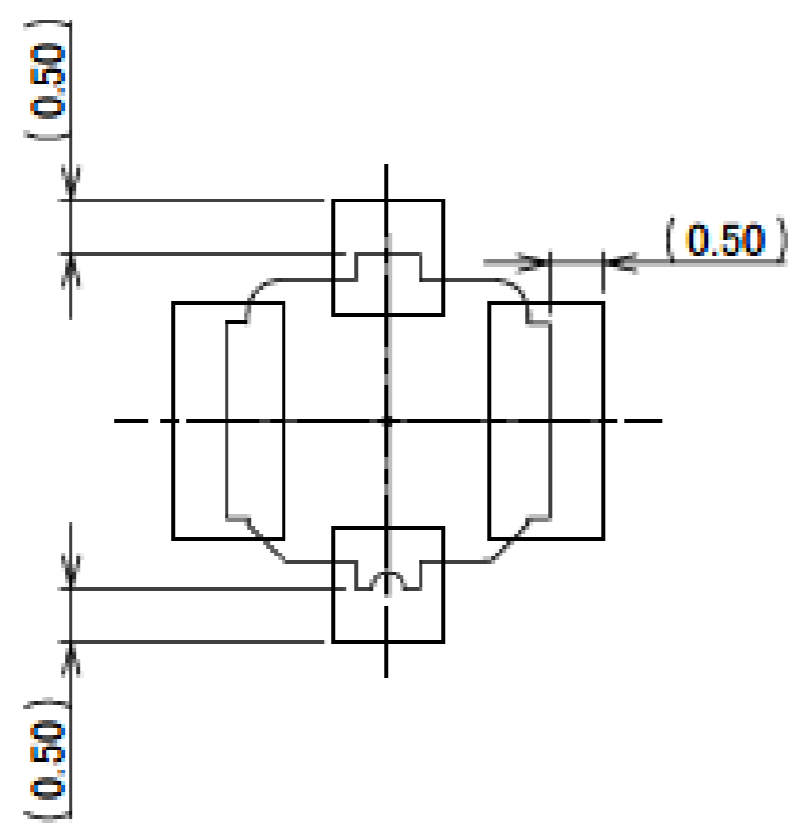
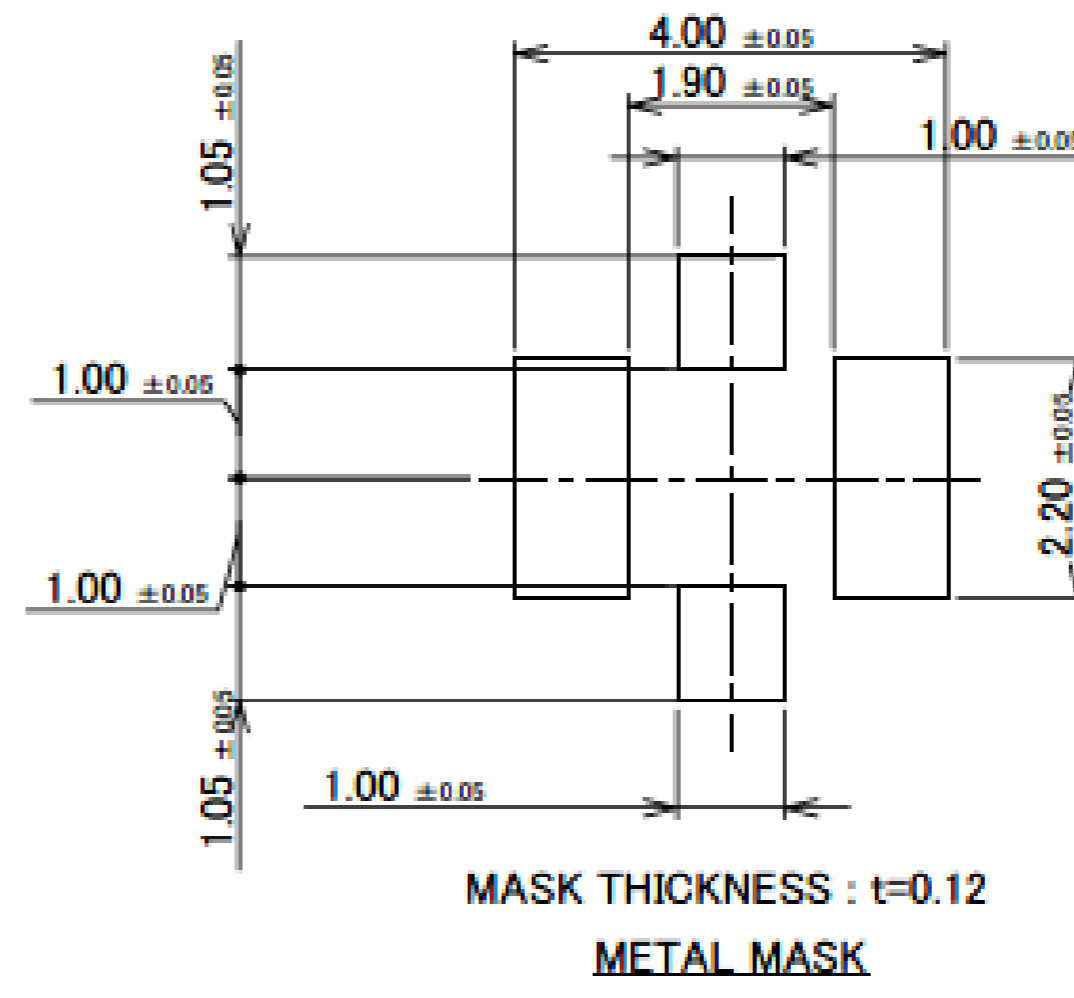
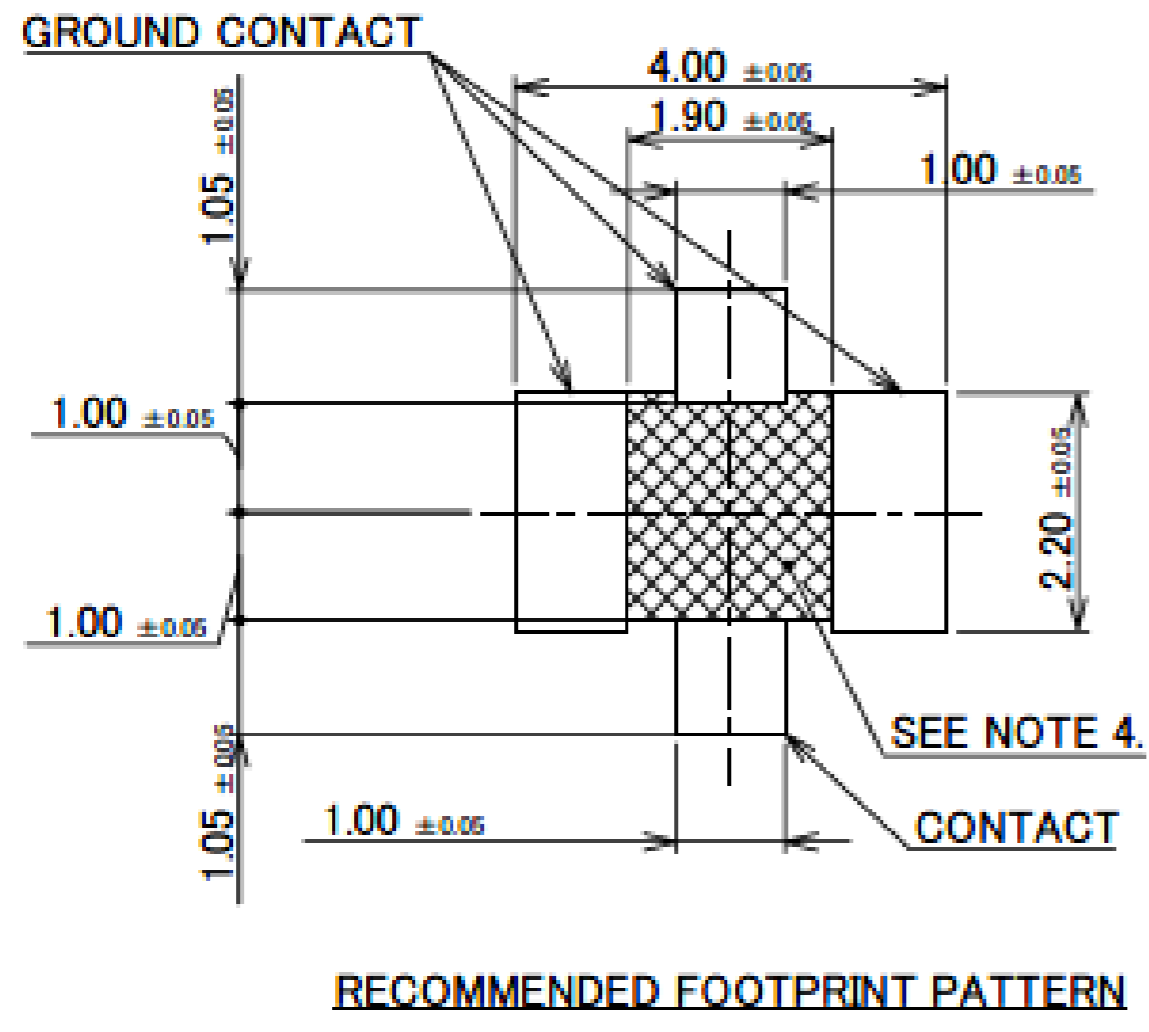
- NOTES.
- APPLICABLE CONNECTOR PART NUMBER:  
20278-112R-\*\*-\*\*  
20351-1\*\*R-37  
20670-001R-\*\*-\*\*  
20767-001R-20
  - COPLANARITY: 0.1mm MAX.
  - THIS IS "Pb-FREE" CONNECTOR.

| NO. | DISCRIPTION    | MATERIAL        | FINISH . REMARKS  |
|-----|----------------|-----------------|---|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.03 $\mu$ m MIN.<br>SOLDERING PART Au 0.03 $\mu$ m MIN. |
| 2   | CONTACT        | BRASS           | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.10 $\mu$ m MIN.<br>SOLDERING PART Au 0.03 $\mu$ m MIN. |
| 1   | HOUSING        | LCP             | UL94V-0, NATURAL  |

- \*LENGTH: 4.0±0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32  
4.7±0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37  
5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)  
\*MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-\*\*-\*\*  
(2.9 MAX. AT MHF I LK LOCKED CONDITION)  
3.0 MAX. AT PLUG PART NO. 20767-001R-20

Rev.6

# MHF® I Receptacle (4pads/Natural color HSG)

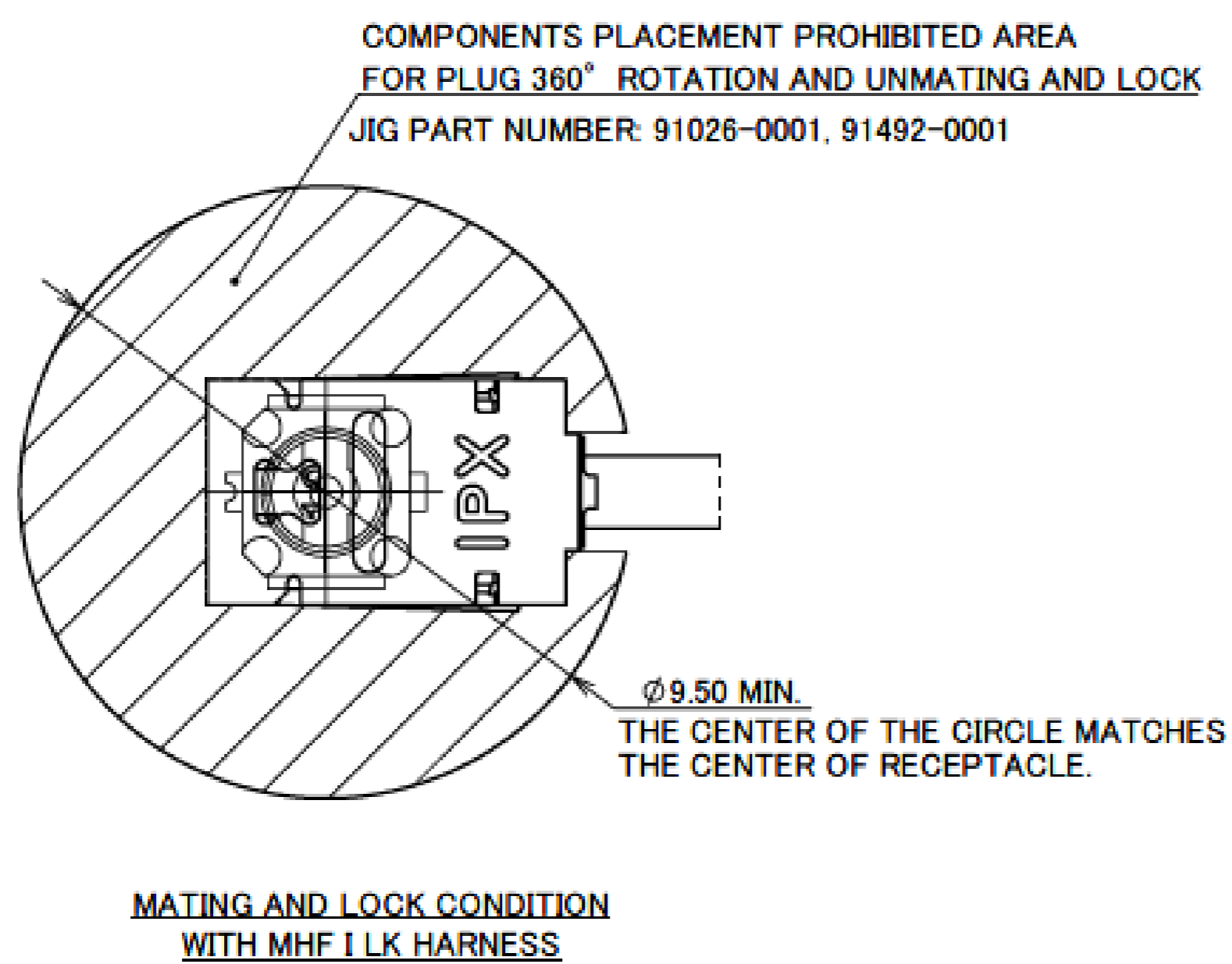


NOTES.  
4. NO GROUND, SIGNAL, RESIST IN THIS AREA.

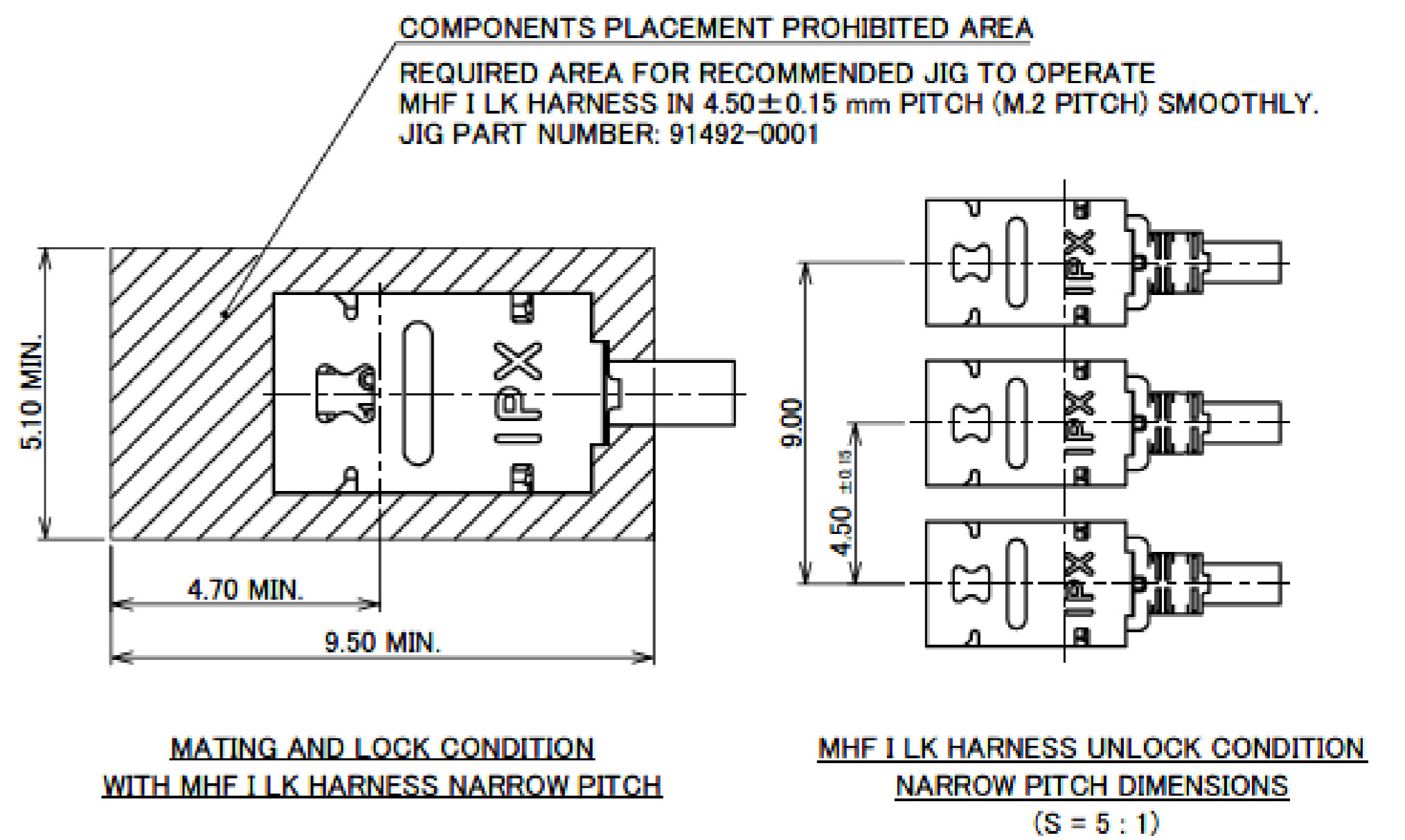
Rev.6

## COMPONENT PLACEMENT PROHIBITED AREA FOR MHF I RECEPTACLE MATED WITH MHF I LK HARNESS REQUIRED AREA FOR RECOMMENDED JIG TO OPERATE

### SINGLE CONNECTOR LAYOUT



### MULTIPLE CONNECTORS LAYOUT



Rev.6

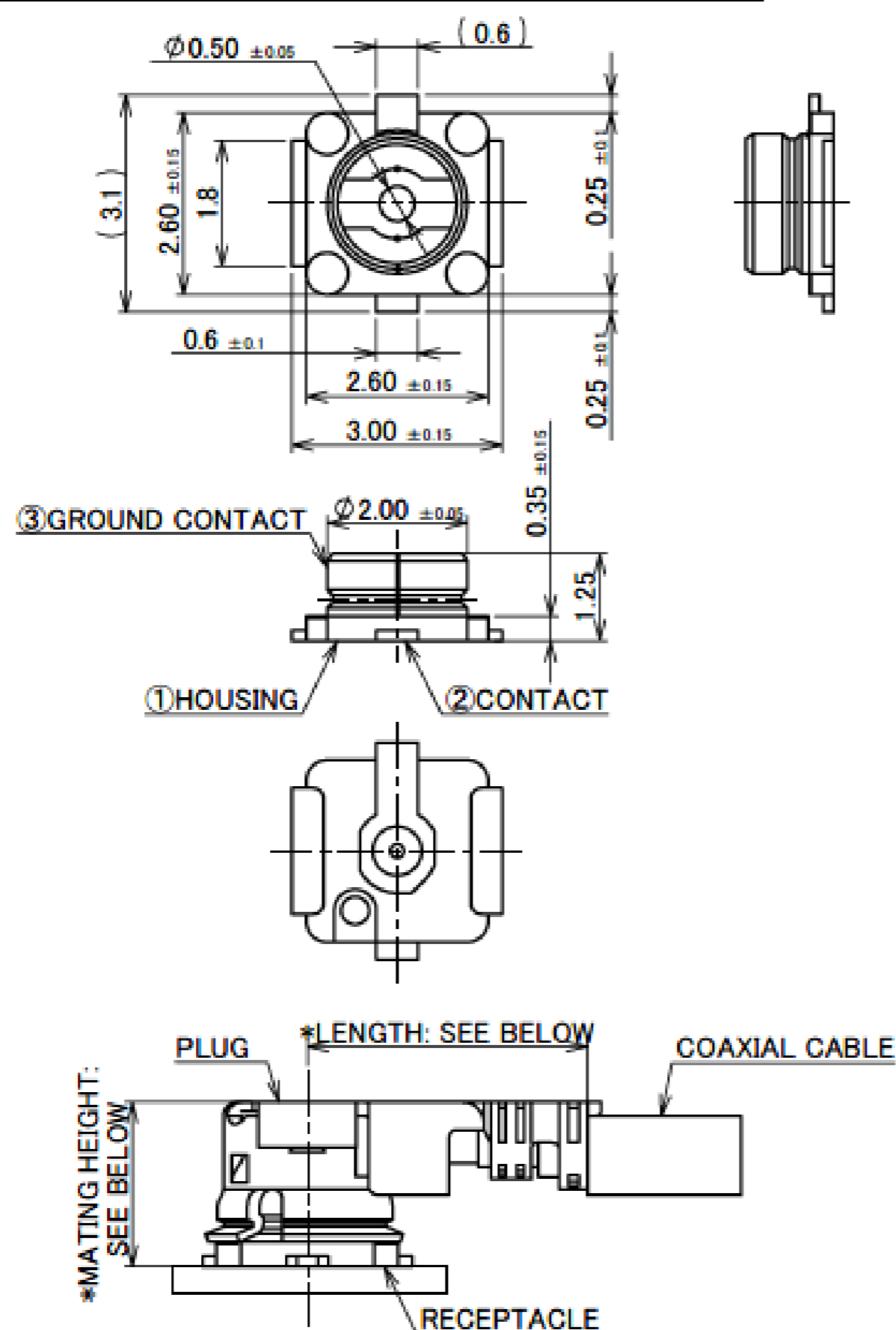
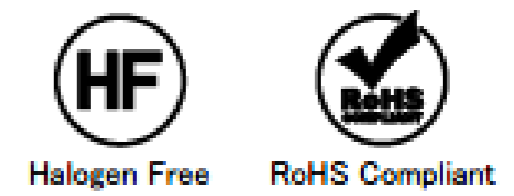
# MHF® I Receptacle (4pads/Natural color HSG)

| ITEMS  | SPECIFICATION   |                                     |  |                                    |
|--|---|-------------------------------------|--|------------------------------------|
|  | 20278-001R-***<br>(MHF I PLUG 1.80, 1.32, 1.13, 0.81)                     | 20351-001R-***<br>(MHF I PLUG 1.37) | 20670-001R-***<br>(MHF I PLUG Ni TOP 1.80, 1.37, 1.32, 1.13, 0.81) | 20767-001R-20<br>(MHF I PLUG 2.00) |
| RECOMMENDED APPLICABLE CONNECTOR PART NO.          |   |                                     |  |                                    |
| RATING VOLTAGE                                     | 60 V AC (R.M.S)   |                                     |  |                                    |
| RATING FREQUENCY                                   | DC~9GHz   |                                     |  |                                    |
| OPERATING TEMPERATURE                              | 233~363K (-40°C~+90°C)  |                                     |  |                                    |
| VSWR<br>(MATED WITH SMA ADAPTER PART No.90193-002) | RECEPTACLE: 1.3 MAX AT 0.1~3 GHz, 1.4 MAX AT 3~6 GHz, 1.8 MAX. AT 6~9 GHz |                                     |  |                                    |
| MAIN CONTACT RESISTANCE                            | INITIAL: 20 mohm MAX.<br>AFTER TEST: 25 mohm MAX.                         |                                     | INITIAL: 20 mohm MAX.<br>AFTER TEST: $\angle$ R 20 mohm MAX.       |                                    |
| GROUND CONTACT RESISTANCE                          | INITIAL: 10 mohm MAX.<br>AFTER TEST: 15 mohm MAX.                         |                                     | INITIAL: 20 mohm MAX.<br>AFTER TEST: $\angle$ R 100 mohm MAX.      |                                    |
| INSULATION RESISTANCE                              | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.                        |                                     |  |                                    |
| DIELECTRIC WITHSTANDING VOLTAGE                    | 200 V AC, 1 MINUTE  |                                     |  |                                    |
| DURABILITY   | 30 CYCLES   |                                     |  |                                    |
| UNMATING FORCE<br>(INITIAL / AFTER TEST)           | INITIAL: 5 N MIN.<br>AFTER TEST: 3 N MIN.                                 |                                     |  |                                    |
| PRODUCT SPECIFICATION                              | PRS-1676  | PRS-1726                            | PRS-2105   | PRS-2490                           |
| TEST REPORT  | TR-12044  | TR-12096                            | TR-15059   | TR-18041                           |
| PACKING STANDARD                                   | PST-17011   |                                     |  |                                    |
| INSTRUCTION MANUAL                                 | HIM-10002   |                                     |  | HIM-17017                          |
| APPEARANCE CRITERIA No.                            | QLS-A***  |                                     |  |                                    |

Rev.6

# MHF® I Receptacle (3pads)

| Recommended P/N | 20279-001E-03         |                    |
|-----------------|-----------------------|--------------------|
| PART NO.        | PACKING REEL          | QUANTITY IN 1 REEL |
| 20279-001E-01   | PLASTIC REEL          | 2,500              |
|                 | CORRUGATED PAPER REEL | 2,500              |
| 20279-001E-03   | PLASTIC REEL          | 5,000              |
| 20279-001E-05   | PLASTIC REEL          | 10,000             |



- NOTES
- APPLICABLE CONNECTOR PART NO.  
20278-11\*R-\*\*\*  
20351-\*\*\*R-37  
20631-\*\*\*R-\*\*\*  
20670-001R-\*\*\*  
20767-001R-20
  - COPLANARITY: 0.1mm MAX.
  - THIS IS "Pb-FREE" CONNECTOR.

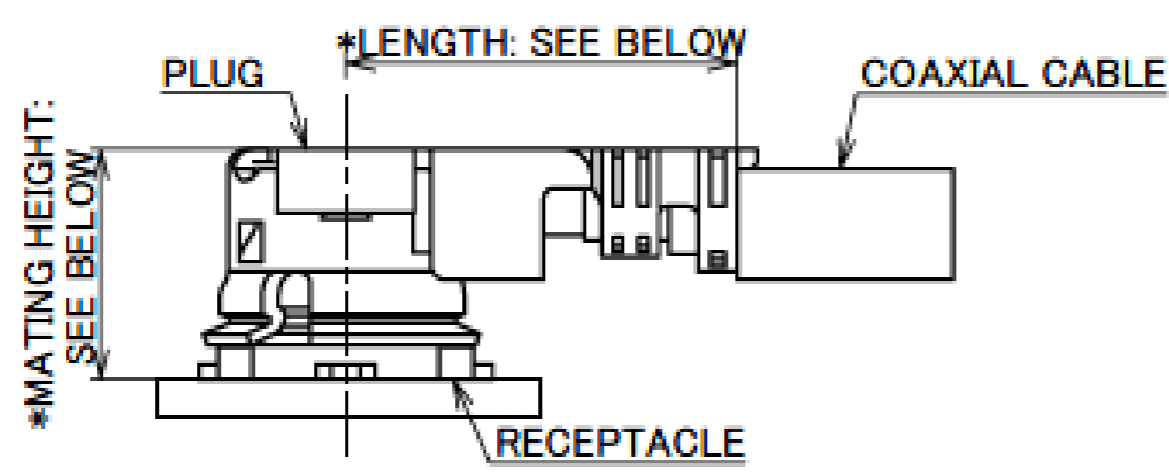
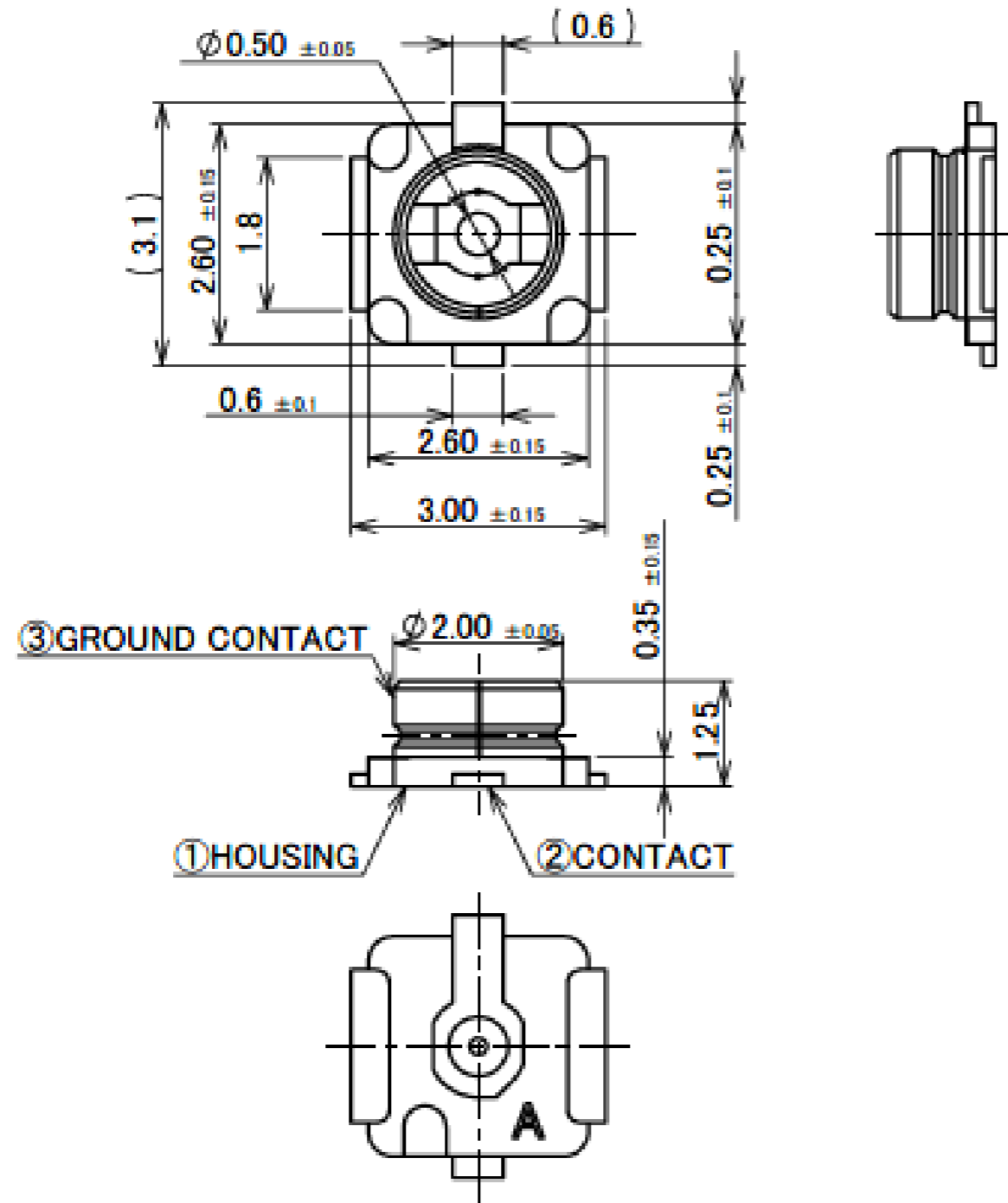
| NO. | DISCRIPTION    | MATERIAL        | FINISH, REMARKS   |
|-----|----------------|-----------------|---|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.05 $\mu$ m MIN.<br>SOLDERING PART Au 0.05 $\mu$ m MIN. |
| 2   | CONTACT        | BRASS           | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.10 $\mu$ m MIN.<br>SOLDERING PART Au 0.03 $\mu$ m MIN. |
| 1   | HOUSING        | LCP             | UL94V-0, WHITE  |

\*LENGTH: 4.0 $\pm$ 0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32  
4.7 $\pm$ 0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37  
5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)  
\*MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-\*\*\*  
(2.9 MAX. AT MHF I LK LOCKED CONDITION)  
3.0 MAX. AT PLUG PART NO. 20767-001R-20  
**MATING CONDITION**

Rev.33

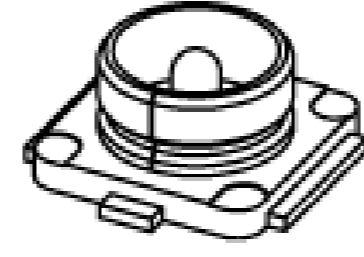
# MHF® I Receptacle (3pads)

|                 |               |                    |
|-----------------|---------------|--------------------|
| Recommended P/N | 20279-001E-03 |                    |
| PART NO.        | PACKING REEL  | QUANTITY IN 1 REEL |
| 20279-001E-06   | PLASTIC REEL  | 10,000             |



\*LENGTH: 4.0±0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32  
 4.7±0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37  
 5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)  
 \*MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-\*\*  
 (2.9 MAX. AT MHF I LK LOCKED CONDITION)  
 3.0 MAX. AT PLUG PART NO. 20767-001R-20

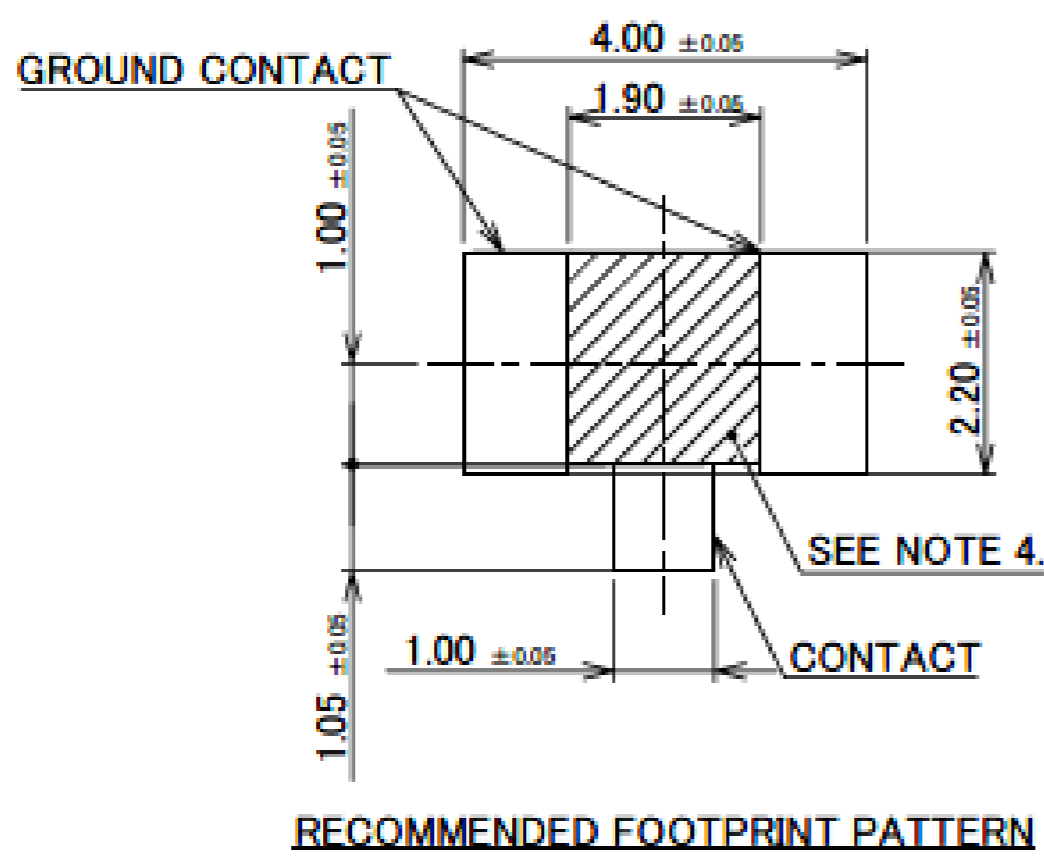
**MATING CONDITION**



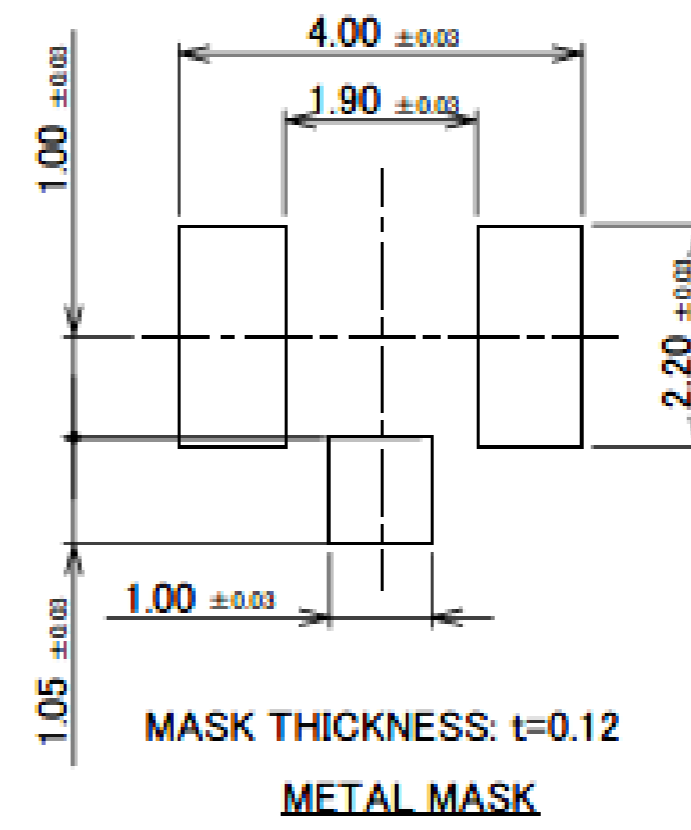
- NOTES
1. APPLICABLE CONNECTOR PART NO.  
 20278-11R-\*\*  
 20351-\*\*\*R-37  
 20631-\*\*\*R-\*\*  
 20670-001R-\*\*  
 20767-001R-20
  2. COPLANARITY: 0.1mm MAX.
  3. THIS IS "Pb-FREE" CONNECTOR.

| NO. | DISCRIPTION    | MATERIAL        | FINISH . REMARKS  |
|-----|----------------|-----------------|---|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.05 $\mu$ m MIN.<br>SOLDERING PART Au 0.05 $\mu$ m MIN. |
| 2   | CONTACT        | BRASS           | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.10 $\mu$ m MIN.<br>SOLDERING PART Au 0.03 $\mu$ m MIN. |
| 1   | HOUSING        | LCP             | UL94V-0, WHITE  |

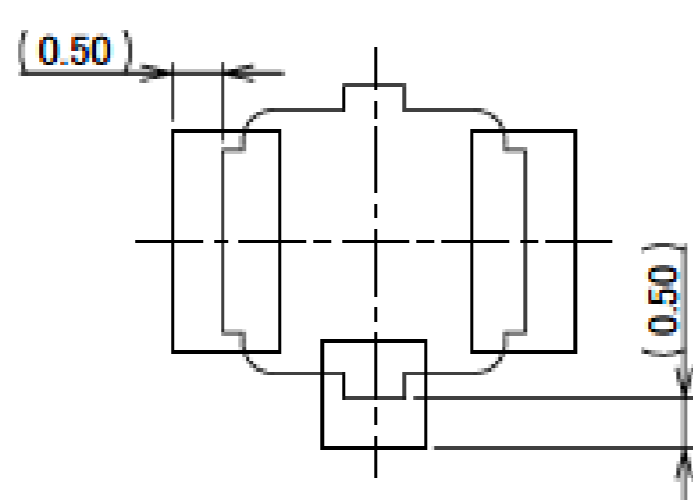
Rev.33



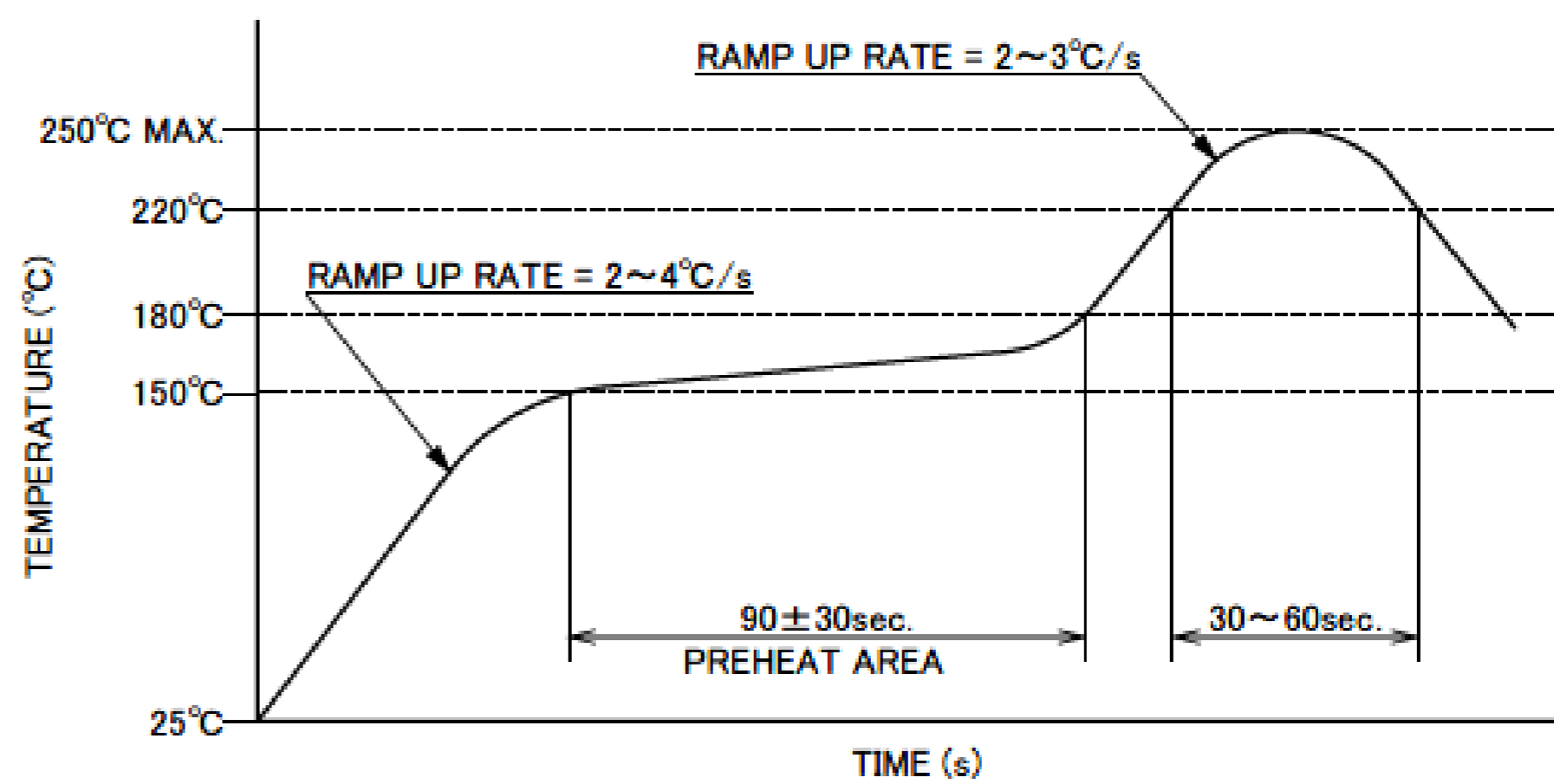
**RECOMMENDED FOOTPRINT PATTERN**



**METAL MASK**



**CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN**



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

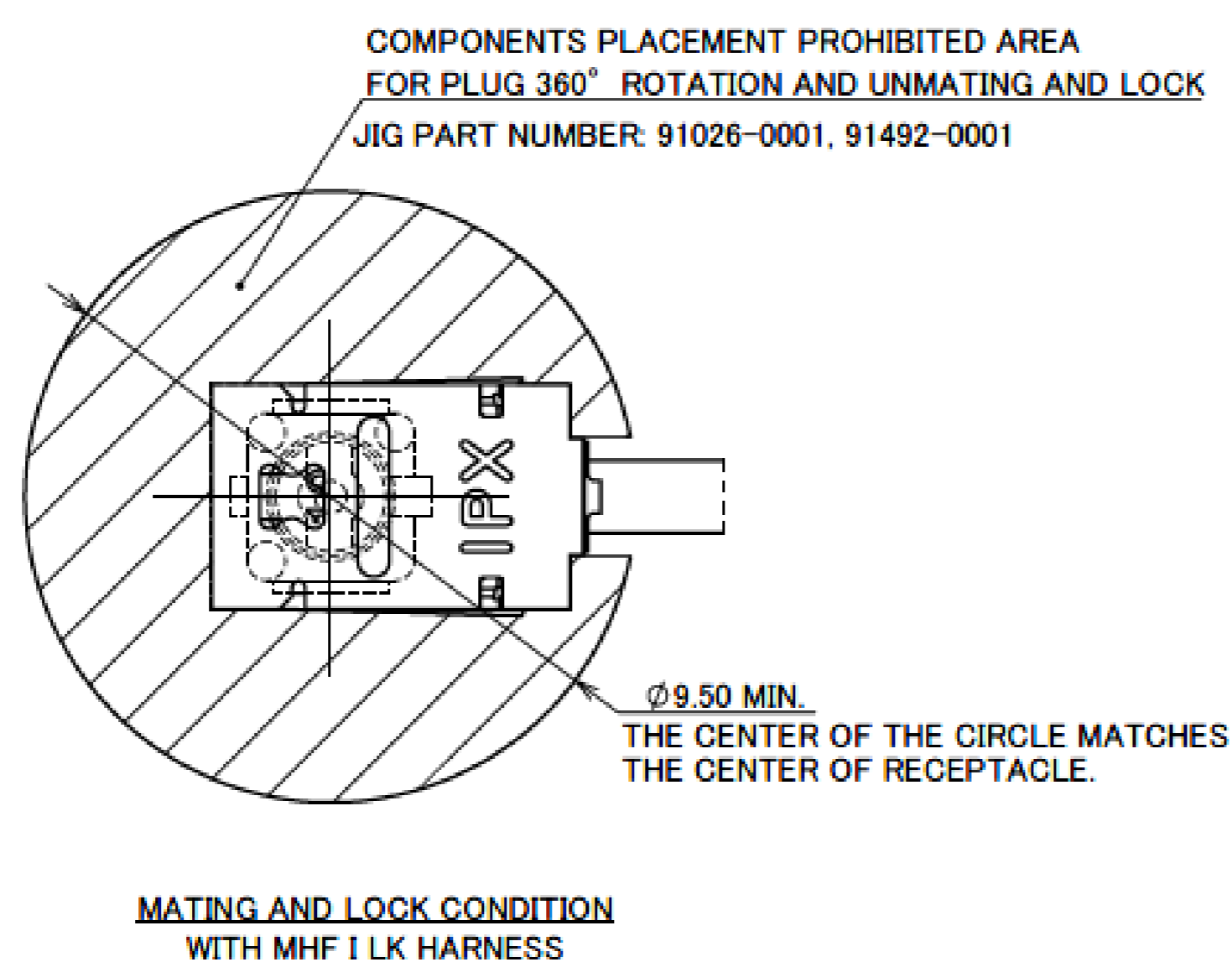
- NOTES.
4. NO GROUND, SIGNAL, AND RESIST IN THIS AREA.

Rev.33

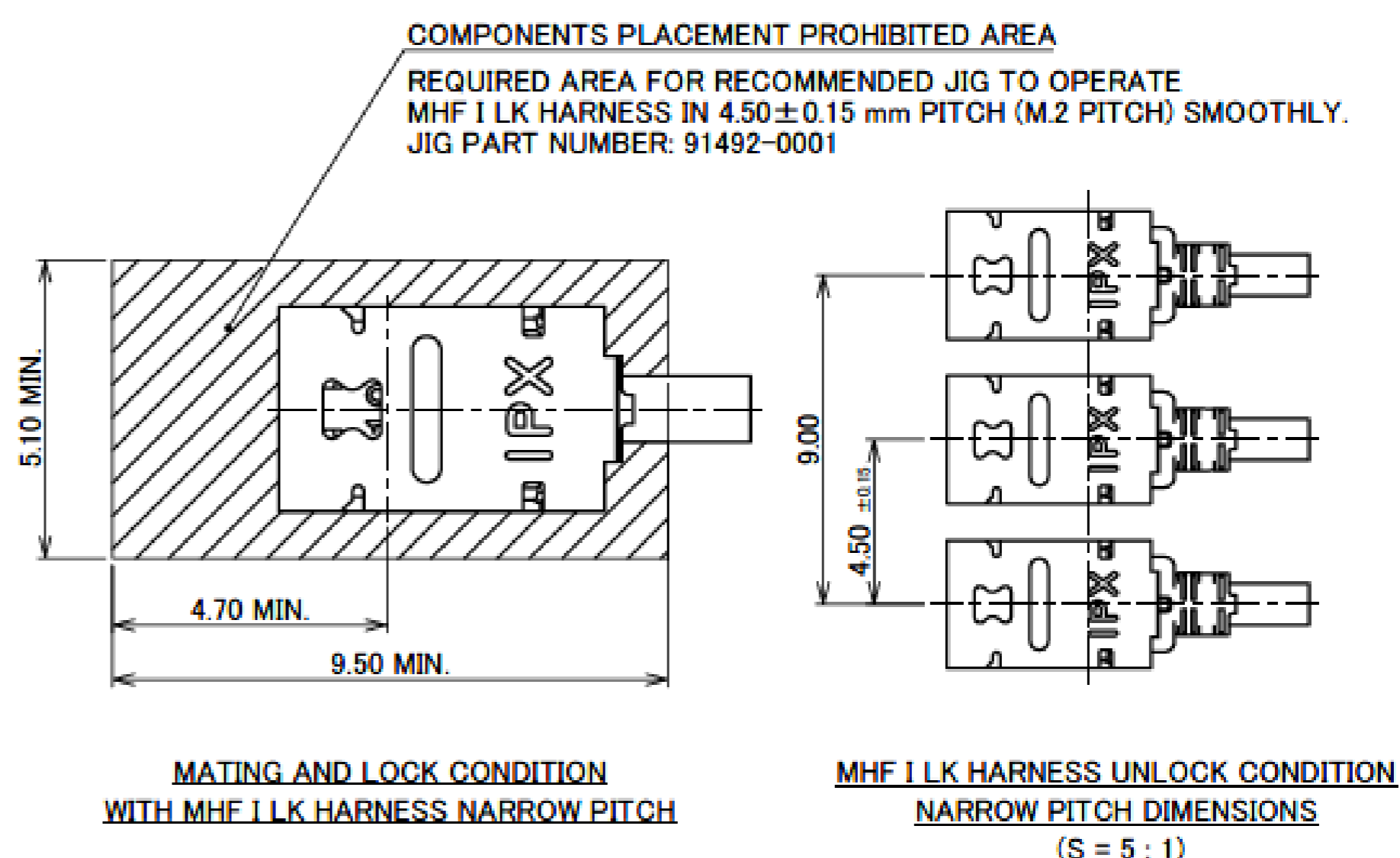
# MHF® I Receptacle (3pads)

## COMPONENT PLACEMENT PROHIBITED AREA FOR MHF I RECEPTACLE MATED WITH MHF I LK HARNESS REQUIRED AREA FOR RECOMMENDED JIG TO OPERATE

SINGLE CONNECTOR LAYOUT



MULTIPLE CONNECTORS LAYOUT



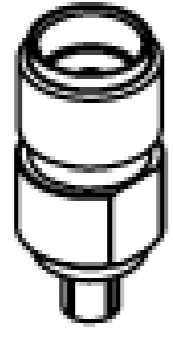
Rev.33

| ITEMS  | SPECIFICATION  |                                    |   |                                    |
|--|--|------------------------------------|---|------------------------------------|
| RECOMMENDED APPLICABLE CONNECTOR PART NO.          | 20278-001R-**<br>(MHF I PLUG 1.80, 1.32, 1.13, 0.81)   | 20351-001R-**<br>(MHF I PLUG 1.37) | 20670-001R-**<br>(MHF I PLUG Ni TOP 1.80, 1.37, 1.32, 1.13, 0.81) | 20767-001R-20<br>(MHF I PLUG 2.00) |
| RATING VOLTAGE                                     | 60 V AC (R.M.S)  |                                    |   |                                    |
| RATING FREQUENCY                                   | DC~9GHz  |                                    |   |                                    |
| OPERATING TEMPERATURE                              | 233~363K (-40°C~+90°C)   |                                    |   |                                    |
| VSWR<br>(MATED WITH SMA ADAPTER PART No.90193-002) | RECEPTACLE: 1.30 MAX. AT 0.1~3 GHz, 1.40 MAX. AT 3~6 GHz, 1.80 MAX. AT 6~9 GHz   |                                    |   |                                    |
| MAIN CONTACT RESISTANCE                            | INITIAL : 20 mohm MAX.<br>AFTER TEST : 25 mohm MAX.  |                                    | INITIAL : 20 mohm MAX.<br>AFTER TEST : $\angle$ R 20 mohm MAX.    |                                    |
| GROUND CONTACT RESISTANCE                          | INITIAL : 10 mohm MAX.<br>AFTER TEST : 15 mohm MAX.  |                                    | INITIAL : 20 mohm MAX.<br>AFTER TEST : $\angle$ R 100 mohm MAX.   |                                    |
| INSULATION RESISTANCE                              | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.   |                                    |   |                                    |
| DIELECTRIC WITHSTANDING VOLTAGE                    | 200 V AC, 1 MINUTE   |                                    |   |                                    |
| DURABILITY   | 30 CYCLES  |                                    |   |                                    |
| UNMATING FORCE (INITIAL / AFTER TEST)              | INITIAL: 5 N MIN.<br>AFTER TEST: 3 N MIN.  |                                    |   |                                    |
| PRODUCT SPECIFICATION                              | PRS-1676   | PRS-1726                           | PRS-2105  | PRS-2490                           |
| TEST REPORT  | TR-12044   | TR-12096                           | TR-15059  | TR-18041                           |
| PACKING STANDARD                                   | 20279-001E-01: 300-232 (CORRUGATED PAPER REEL)<br>PST-12002 (ANTI-STATIC PLASTIC REEL)<br>20279-001E-03: 300-850<br>20279-001E-05: PST-13040<br>20279-001E-06: PST-13040 |                                    |   |                                    |
| INSTRUCTION MANUAL                                 | HIM-10002  |                                    |   | HIM-17017                          |
| APPEARANCE CRITERIA No.                            | QLS-A***   |                                    |   |                                    |

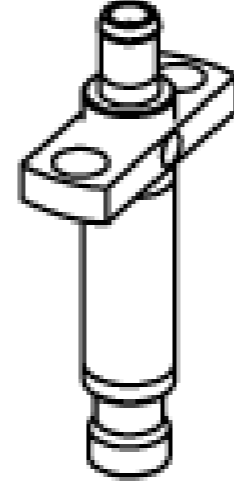
※UNLESS OTHERWISE SPECIFIED, 20279-001E-01 WILL BE DELIVERED IN CORRUGATED PAPER REELS.  
CONTACT YOUR I-PEX SALES IF YOU WISH FOR PLASTIC REELS.



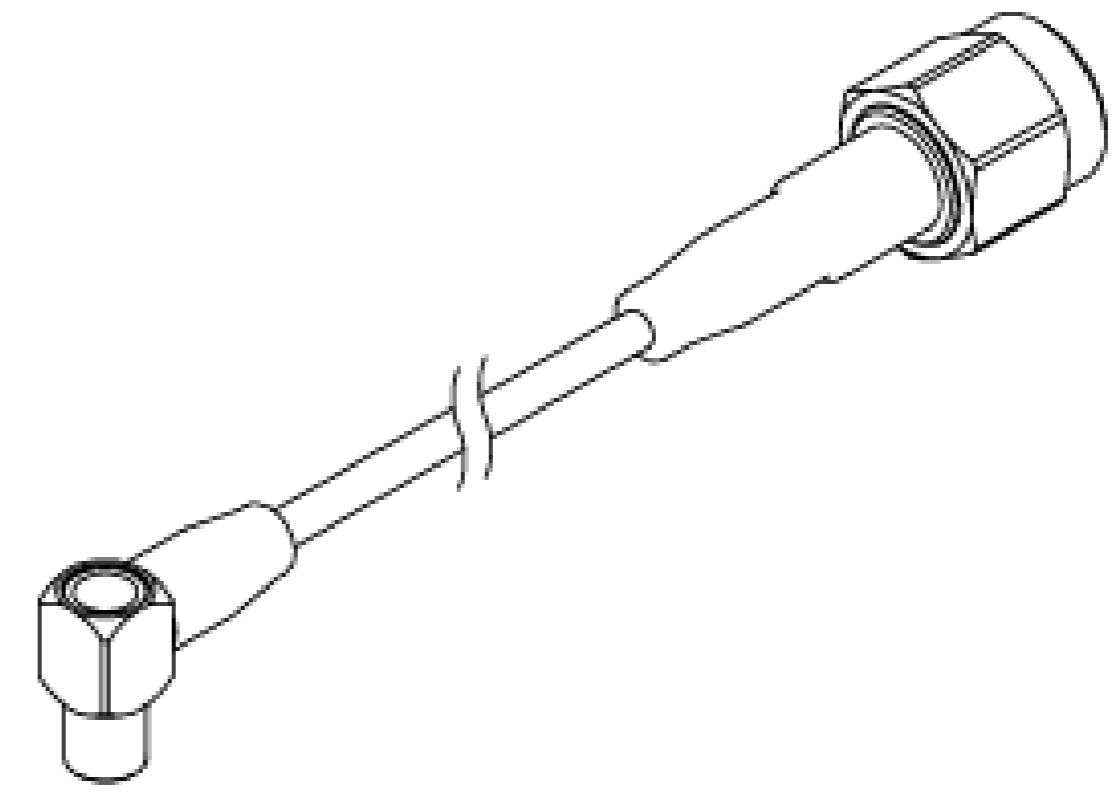
# Accessories for MHF® I Receptacle



MHF I SMA ADAPTER  
PART NO. 90193-002



MHF I RECEPTACLE HIGH CYCLE N45 C ADAPTER  
PART NO. 90575-0001



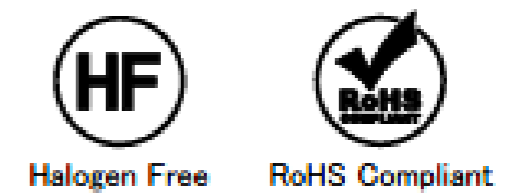
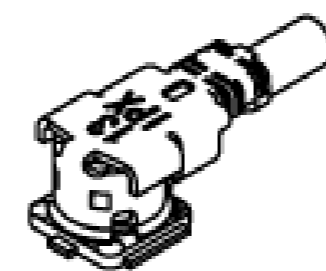
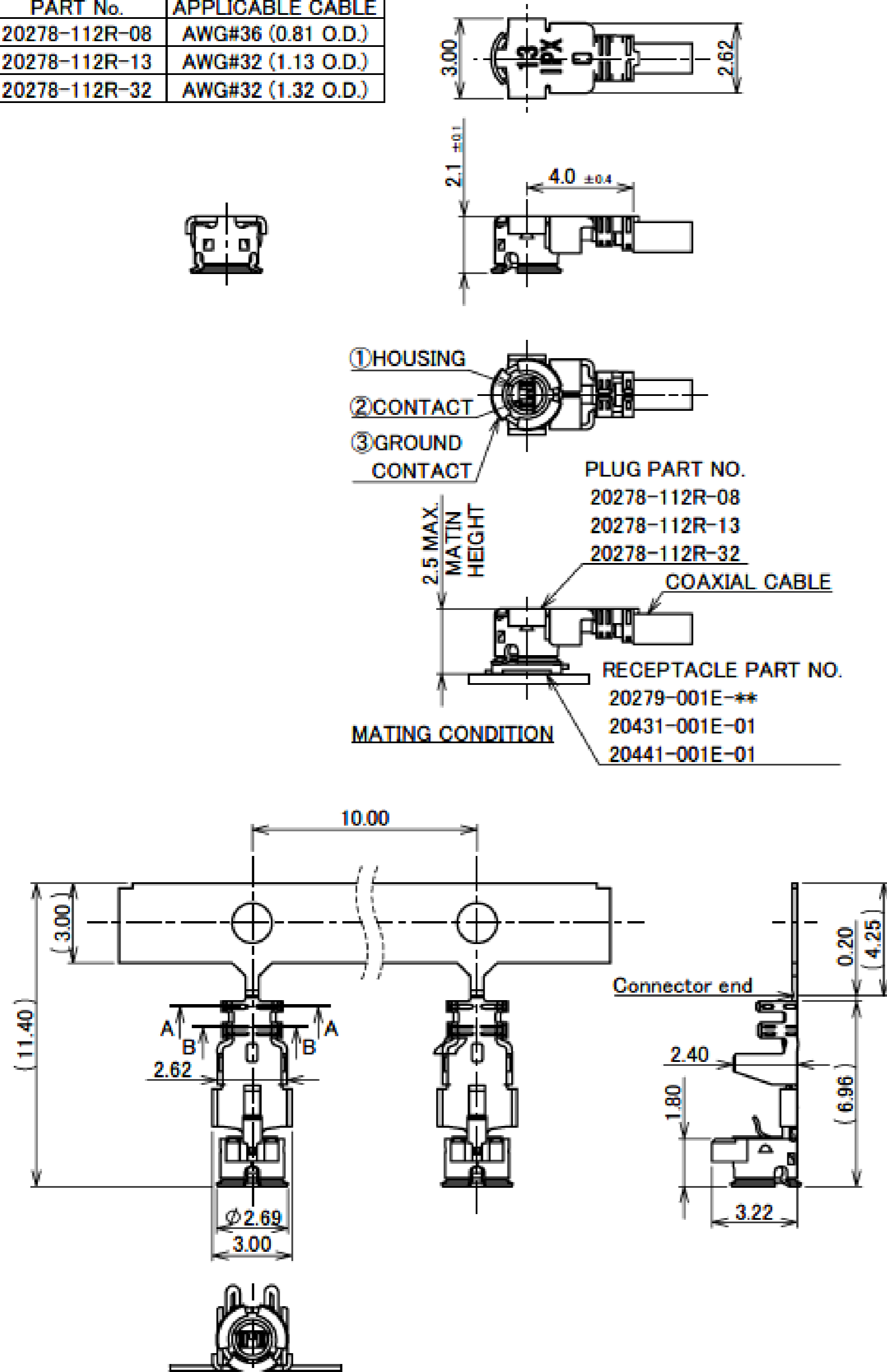
MHF SERIES N45 C TO SMA ADAPTER CABLE  
PART NO. 90577-\*\*\*\*

\* 90575-0001 AND 90577-\*\*\*\* SHOULD BE USED TOGETHER.

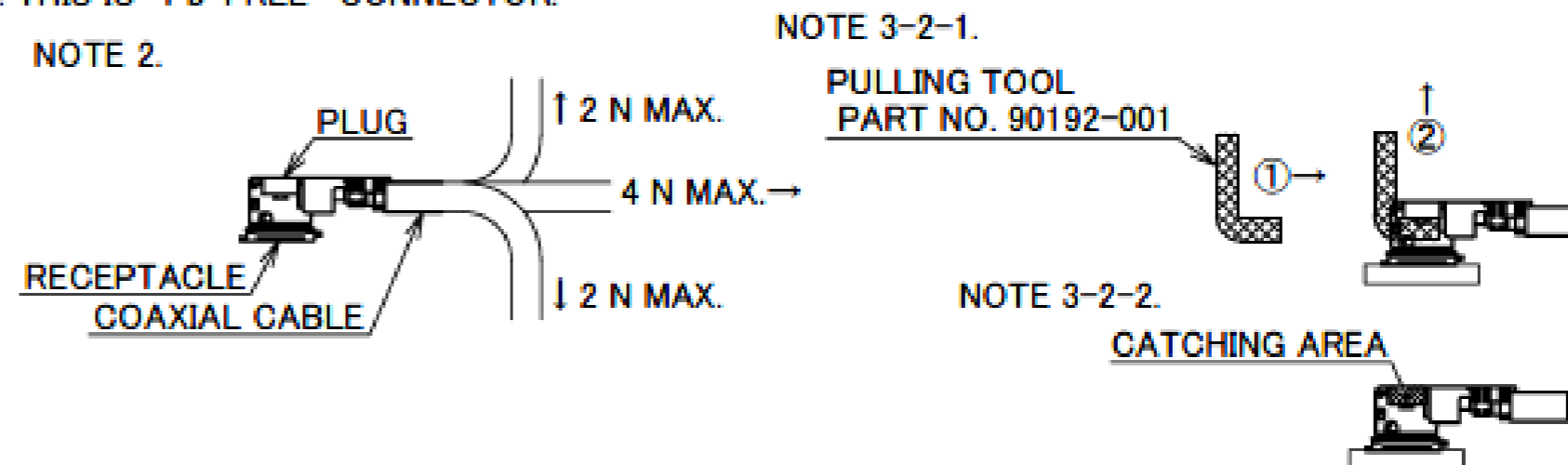
Rev.33

## MHF® I plug Au (0.81,1.13,1.32,1.80)

| Recommended P/N | 20278-112R-**      |
|-----------------|--------------------|
| PART No.        | APPLICABLE CABLE   |
| 20278-112R-08   | AWG#36 (0.81 O.D.) |
| 20278-112R-13   | AWG#32 (1.13 O.D.) |
| 20278-112R-32   | AWG#32 (1.32 O.D.) |



- NOTES
- APPLICABLE CONNECTOR:  
20279-001E-\*\*, 20431-001E-01, 20441-001E-01
  - PERMISSIBLE LOAD OF CABLE AT MATING
  - SUGGESTIONS FOR MATING & UNMATING OPERATION.
  - MATING
    - PLEASE MATE THE CONNECTOR STRAIGHTLY TO VERTICAL DIRECTION AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. AS EXCESSIVE SLANT ANGLE MATING MAY BREAK THE CONNECTOR, PLEASE DON'T DO IT.
  - UNMATING
    - IN CASE OF UNMATING BY PULLING TOOL  
PLEASE USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND please PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
    - IN CASE OF UNMATING DIRECTLY BY HAND  
PLEASE CATCH THE CATCHING AREA OF PLUG, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
  - CRIMP OVER STANDARDS OF OUTER CONDUCTOR  
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.  
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
  - CAUTION ABOUT HEAT SHRINKAGE TUBES  
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES. IT WILL BECOME CAUSE OPEN CIRCUIT.
  - THIS IS "Pb-FREE" CONNECTOR.

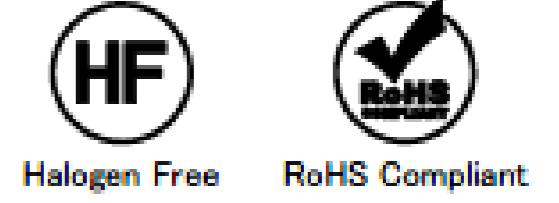
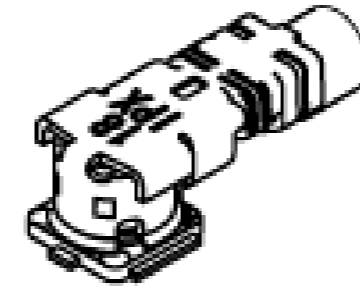
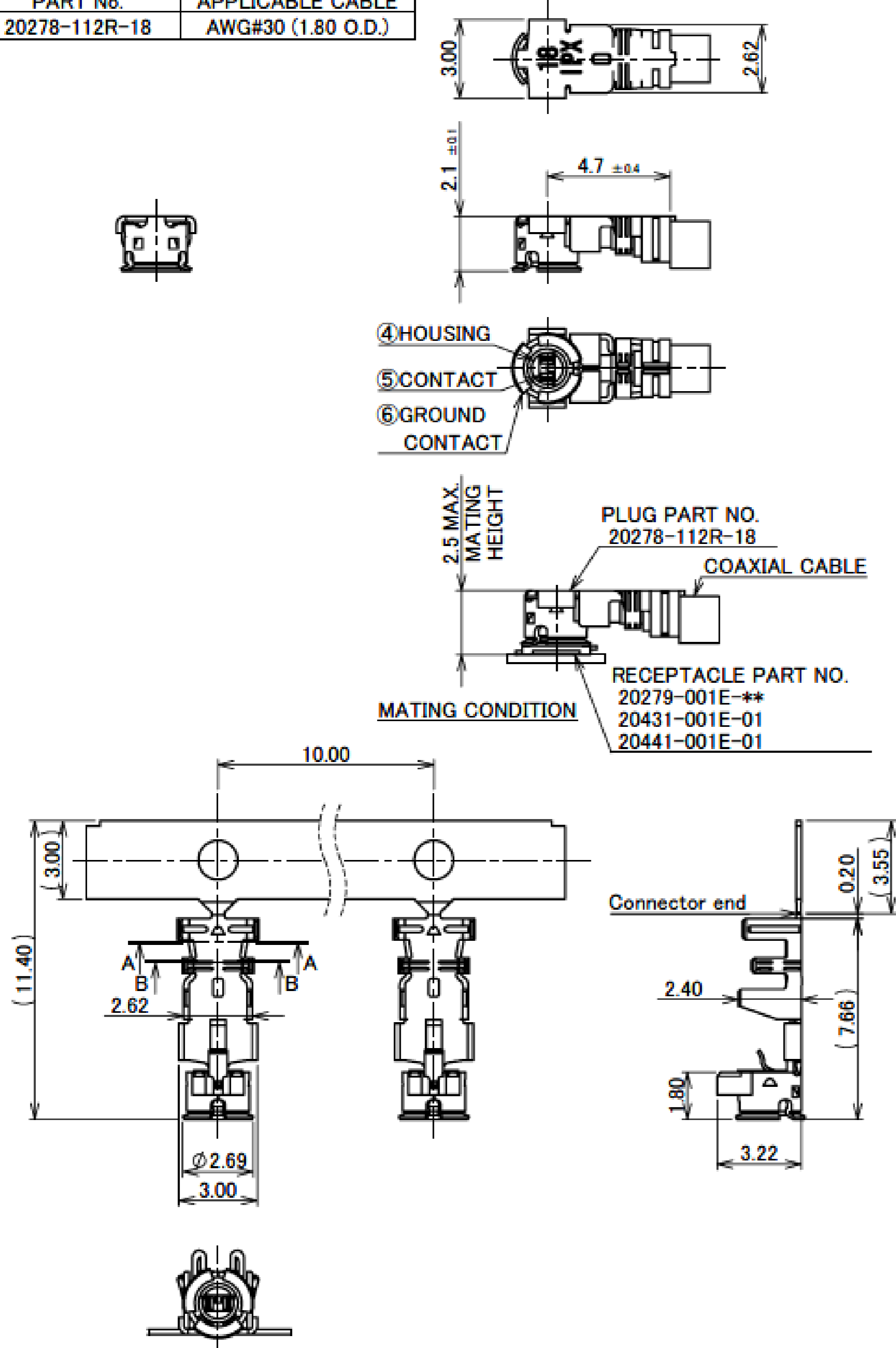


| NO. | DESCRIPTION    | MATERIAL        | FINISH, REMARKS  |
|-----|----------------|-----------------|--|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.05 μm MIN.   |
| 2   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.10 μm MIN.   |
| 1   | HOUSING        | PBT             | UL94V-0, 20278-112R-08: WHITE<br>20278-112R-13, -32: BLACK |

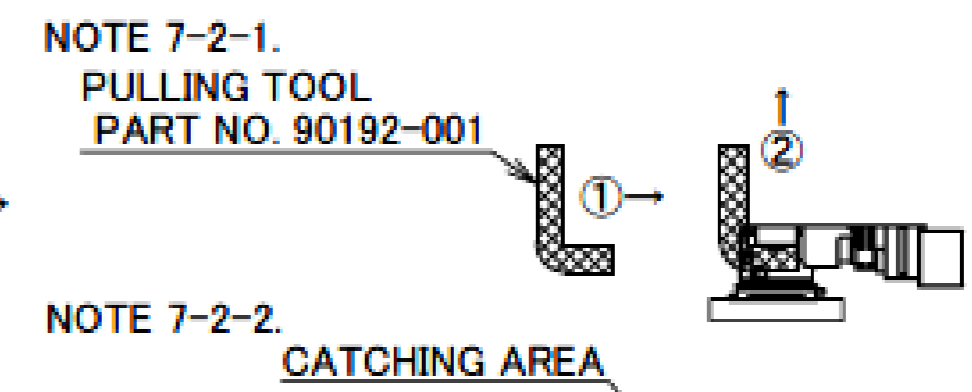
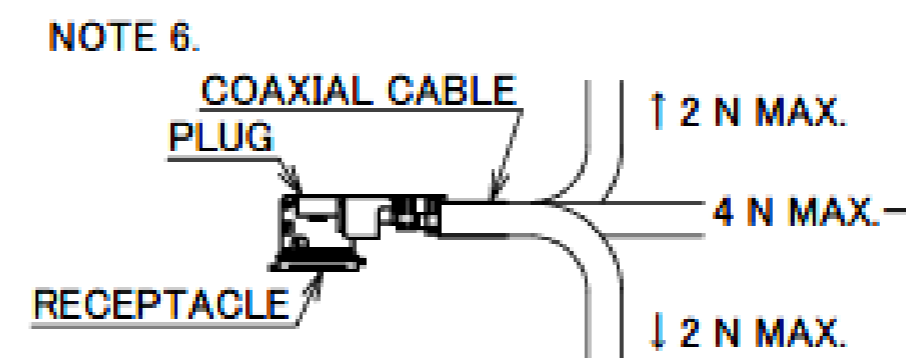
Rev.33

# MHF® I plug Au (0.81,1.13,1.32,1.80)

|                 |                    |                |
|-----------------|--------------------|----------------|
| Recommended P/N |                    | 20278-112R-**- |
| PART No.        | APPLICABLE CABLE   |                |
| 20278-112R-18   | AWG#30 (1.80 O.D.) |                |



- NOTES**
- APPLICABLE CONNECTOR:  
20279-001E-\*\*, 20431-001E-01, 20441-001E-01
  - PERMISSIBLE LOAD OF CABLE AT MATING
  - SUGGESTIONS FOR MATING & UNMATING OPERATION.
  - MATING  
PLEASE MATE THE CONNECTOR STRAIGHTLY TO VERTICAL DIRECTION AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. AS EXCESSIVE SLANT ANGLE MATING MAY BREAK THE CONNECTOR, PLEASE DON'T DO IT.
  - UNMATING
  - IN CASE OF UNMATING BY PULLING TOOL  
PLEASE USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND please PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
  - IN CASE OF UNMATING DIRECTLY BY HAND  
PLEASE CATCH THE CATCHING AREA OF PLUG, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
  - CRIMP OVER STANDARDS OF OUTER CONDUCTOR  
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.  
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
  - CAUTION ABOUT HEAT SHRINKAGE TUBES  
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES. IT WILL BECOME CAUSE OPEN CIRCUIT.
  - THIS IS "Pb-FREE" CONNECTOR.



| NO. | DESCRIPTION    | MATERIAL        | FINISH . REMARKS   |
|-----|----------------|-----------------|--|
| 6   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.05 μm MIN. |
| 5   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.10 μm MIN. |
| 4   | HOUSING        | PBT             | UL94V-0, WHITE   |

Rev.33

|                 |  |                |
|-----------------|--|----------------|
| Recommended P/N |  | 20278-112R-**- |
|-----------------|--|----------------|

| PART NO.                                  | 20278-112R-08   | 20278-112R-13   | 20278-112R-32   | 20278-112R-18  | CABLE CUT LENGTH  |
|---|---|---|---|--|---|
| APPLICABLE CABLE NOMINAL DIMENSION        | <br>2.09 ±0.1<br>1.25 ±0.1<br>1.16 ±0.1<br>AWG #36(7/0.05)<br>φ0.40 NOMINAL<br>(φ0.65)<br>φ0.81 NOMINAL<br>*SEE NOTE 9. | <br>2.09 ±0.1<br>1.25 ±0.1<br>1.16 ±0.1<br>AWG #32(7/0.08)<br>φ0.68 NOMINAL<br>(φ0.93)<br>φ1.13 NOMINAL | <br>2.09 ±0.1<br>1.25 ±0.1<br>1.16 ±0.1<br>AWG #32(7/0.08)<br>φ0.66 NOMINAL<br>(φ1.12)<br>φ1.32 NOMINAL | <br>2.09 ±0.1<br>1.25 ±0.1<br>1.16 ±0.1<br>AWG #30(7/0.102)<br>φ0.84 NOMINAL<br>(φ1.35)<br>φ1.80 NOMINAL | <br>L   |
| BRAIDED SHIELD OF OUTER CONDUCTOR         | SINGLE  | SINGLE  | DOUBLE  | SINGLE   | CRIMP HEIGHT  |
| PART NO. OF SEMI AUTO TERMINATION MACHINE | 90213-008C  | 90213-013C  | 90213-032C  | 90232-018  | <br>BLADE MICROMETER<br>CH-1<br>0.40<br>i-Fit® PART<br>0.40 |
| SECT. B-B                                 | <br>1.68<br>1.12<br>1.48  | <br>2.24<br>1.48  | <br>2.29<br>1.56  | <br>2.71<br>1.90   | <br>CH-2<br>0.40<br>0.40<br>OUTER CONDUCTOR PART            |
| SECT. A-A                                 | <br>1.72<br>1.19<br>1.55  | <br>2.28<br>1.55  | <br>2.37<br>1.71  | <br>3.10<br>2.26   | <br>CH-3<br>0.40<br>0.40<br>JACKET PART                     |
| CRIMP HEIGHT                              | CH-1: 1.34~1.40<br>CH-2: 0.76~0.84<br>CH-3: 0.85~0.97   | CH-1: 1.34~1.40<br>CH-2: 1.06~1.14<br>CH-3: 1.15~1.35   | CH-1: 1.34~1.40<br>CH-2: 1.20~1.30<br>CH-3: 1.26~1.46   | CH-1: 1.34~1.40<br>CH-2: 1.41~1.49<br>CH-3: 1.70~1.80  |   |

NOTE 9. DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLE.

Rev.33

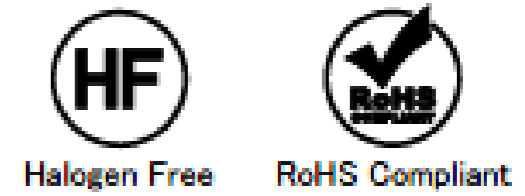
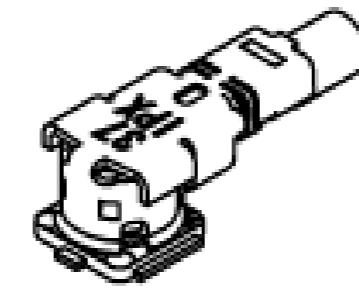
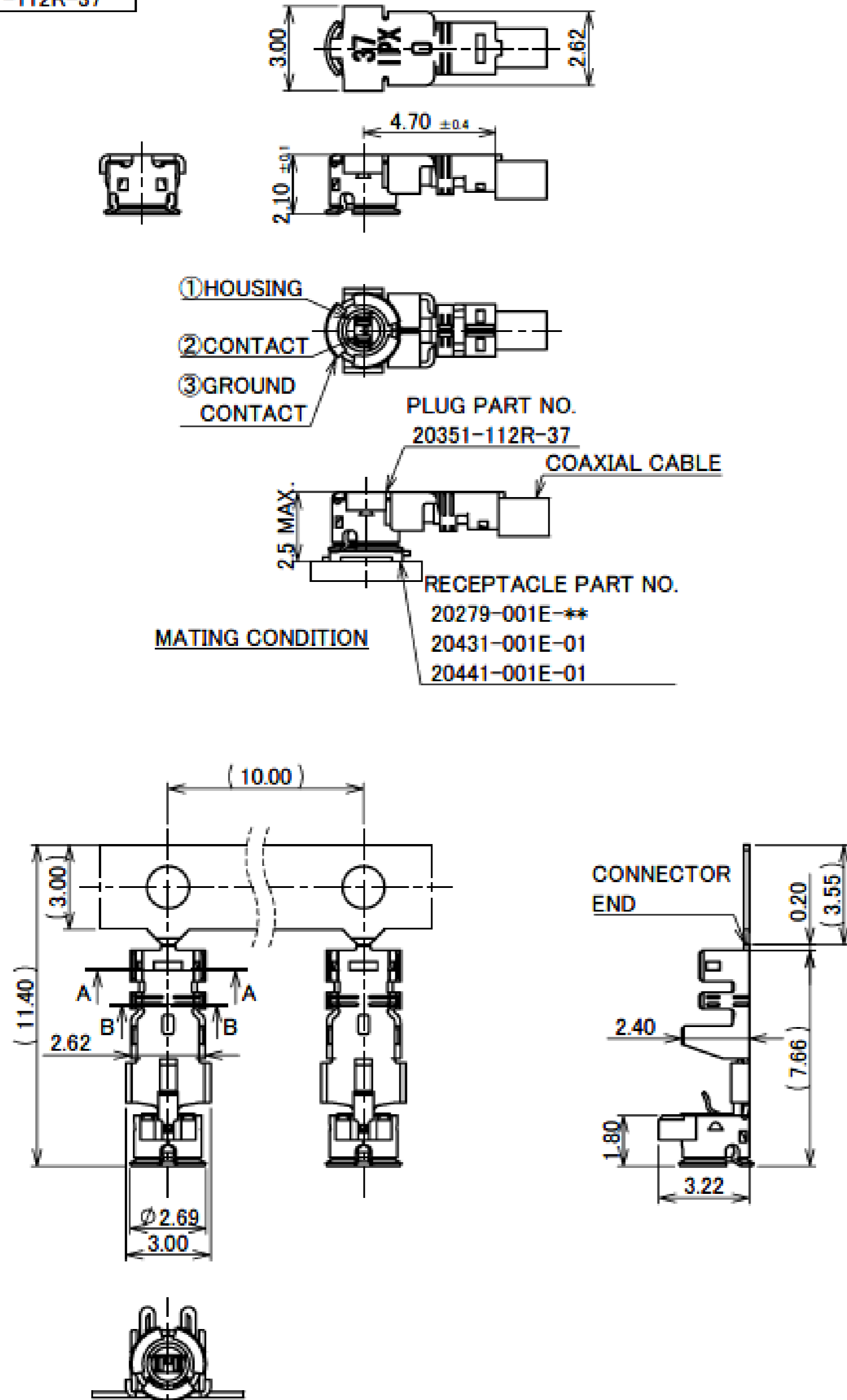
# MHF® I plug Au (0.81,1.13,1.32,1.80)

| ITEMS  | SPECIFICATION   |               |
|--|---|---------------|
| RECOMMENDED APPLICABLE CONNECTOR PART No.          | 20279-001E-**-  | 20441-001E-01 |
| RATING VOLTAGE                                     | 60 V AC (R.M.S)   |               |
| RATING FREQUENCY                                   | DC~9GHz   |               |
| OPERATING TEMPERATURE                              | 233~363 K (-40°C~+90°C)   |               |
| VSWR<br>(MATED WITH SMA ADAPTER PART No.90193-001) | 1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.90 MAX. AT 6~9 GHz<br>(0.81 O.D. / 1.13 O.D. / 1.80 O.D.)<br>1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.60 MAX. AT 6~9 GHz (1.32 O.D.) |               |
| MAIN CONTACT RESISTANCE                            | INITIAL: 20 mohm MAX. / AFTER TEST: 25 mohm MAX.  |               |
| GROUND CONTACT RESISTANCE                          | INITIAL: 10 mohm MAX. / AFTER TEST: 15 mohm MAX.  |               |
| INSULATION RESISTANCE                              | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.  |               |
| DIELECTRIC WITHSTANDING VOLTAGE                    | 200 V AC, 1 MINUTE  |               |
| DURABILITY   | 30 CYCLES   |               |
| UNMATING FORCE (INITIAL / AFTER TEST)              | 5 N MIN. / 3 N MIN.   |               |
| CRIMP STRENGTH                                     | 20278-112R-08, 20278-112R-13, 20278-112R-32: 10 N MIN.<br>20278-112R-18: 15 N MIN.  |               |
| PRODUCT SPECIFICATION                              | PRS-1676  |               |
| TEST REPORT  | TR-12044  |               |
| PACKING STANDARD                                   | 300-233   |               |
| INSTRUCTION MANUAL                                 | HIM-10002   |               |
| APPEARANCE CRITERIA No.                            | QLS-A***  |               |

Rev.33

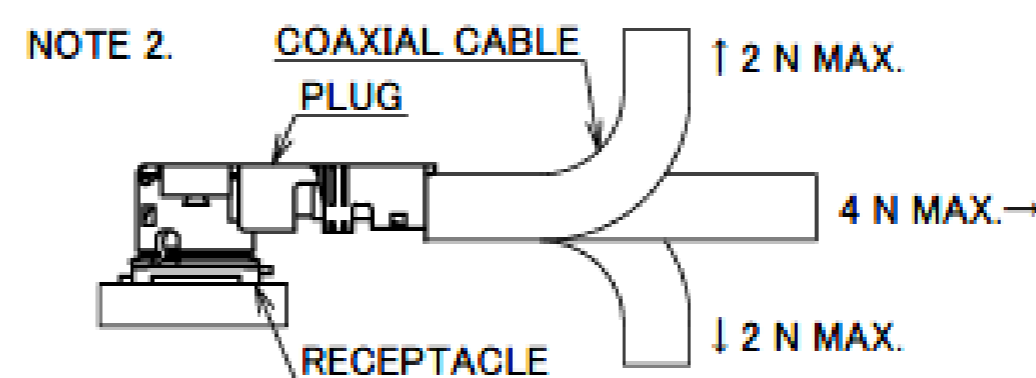
# MHF® I plug Au (1.37)

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20351-112R-37 |
| PART No.        | 20351-112R-37 |

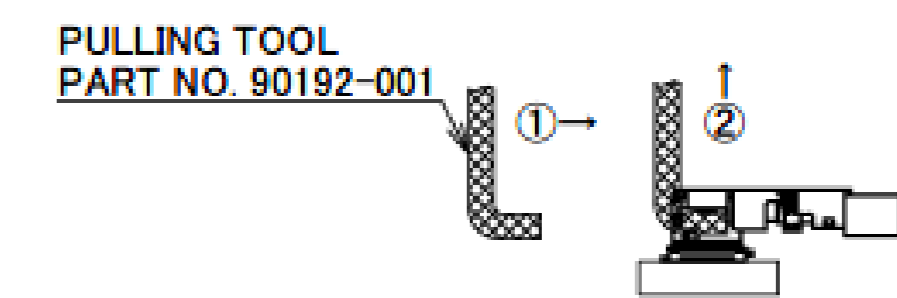


### NOTES

- APPLICABLE CONNECTOR:  
20279-001E-\*\*, 20431-001E-01, 20441-001E-01
- PERMISSIBLE LOAD OF CABLE AT MATING
- SUGGESTIONS FOR MATING & UNMATING OPERATION
  - MATING  
PLEASE MATE THE CONNECTOR STRAIGHTLY TO VERTICAL DIRECTION AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. AS EXCESSIVE SLANT ANGLE MATING MAY BREAK THE CONNECTOR, PLEASE DON'T DO IT.
  - UNMATING
    - IN CASE OF UNMATING BY PULLING TOOL  
PLEASE USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
    - IN CASE OF UNMATING DIRECTLY BY HAND  
PLEASE CATCH THE CATCHING AREA OF PLUG, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
    - CRIMP OVER STANDARDS OF OUTER CONDUCTOR  
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.  
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
    - CAUTION ABOUT HEAT SHRINKAGE TUBES  
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES. IT WILL BECOME CAUSE OPEN CIRCUIT.
    - TIP OF CONTACT SHOULD BE RECESSED OF HOUSING AFTER CRIMPED ABOUT MATING AREA.
    - THIS IS "Pb-FREE" CONNECTOR.



### NOTE 3-2-1.



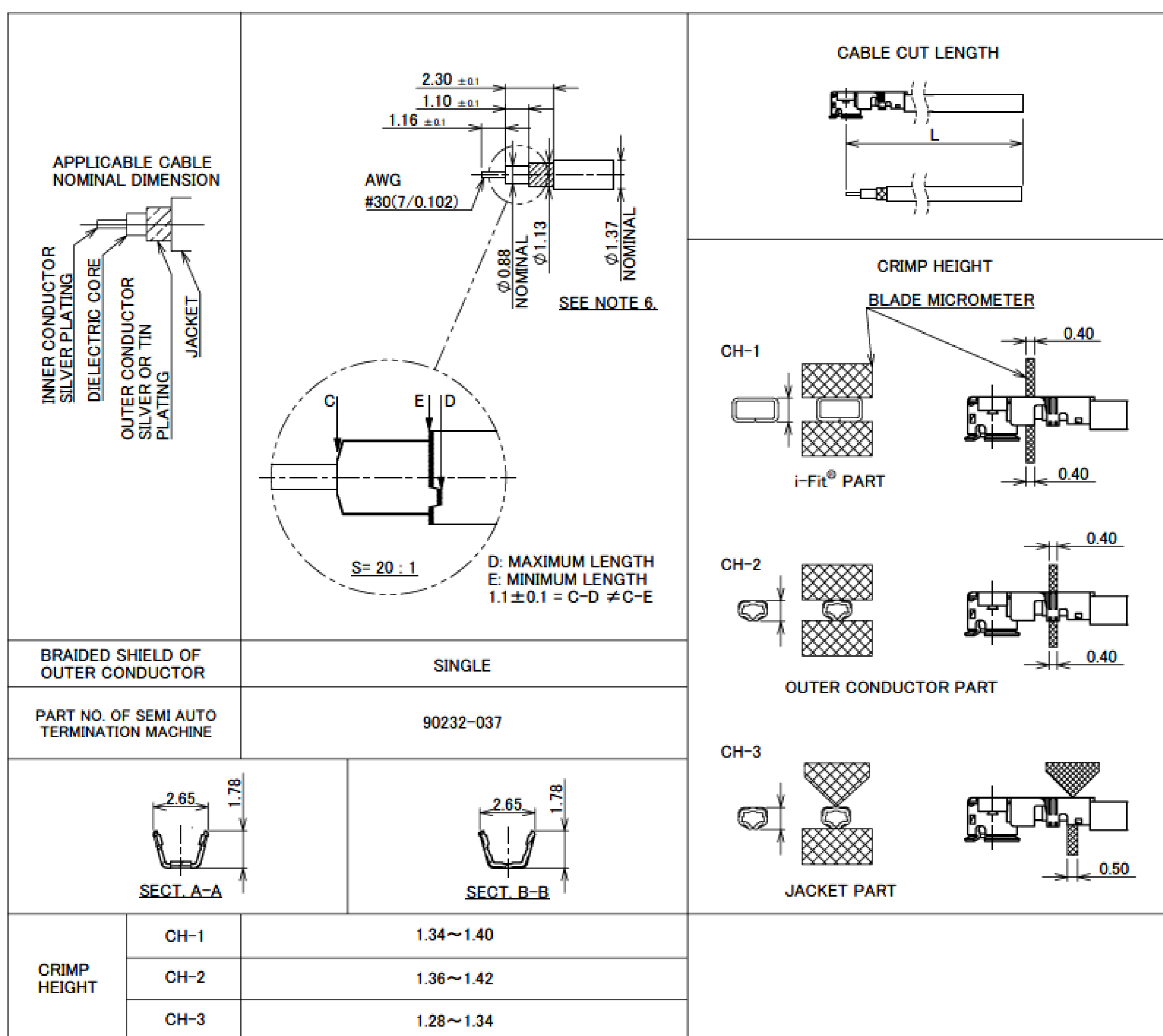
### NOTE 3-2-2. CATCHING AREA



| NO. | DESCRIPTION    | MATERIAL        | FINISH, REMARKS  |
|-----|----------------|-----------------|--|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.05 μm MIN. |
| 2   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.10 μm MIN. |
| 1   | HOUSING        | PBT             | UL94V-0, WHITE   |

Rev.21

# MHF® I plug Au (1.37)



NOTE 6. DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLE.

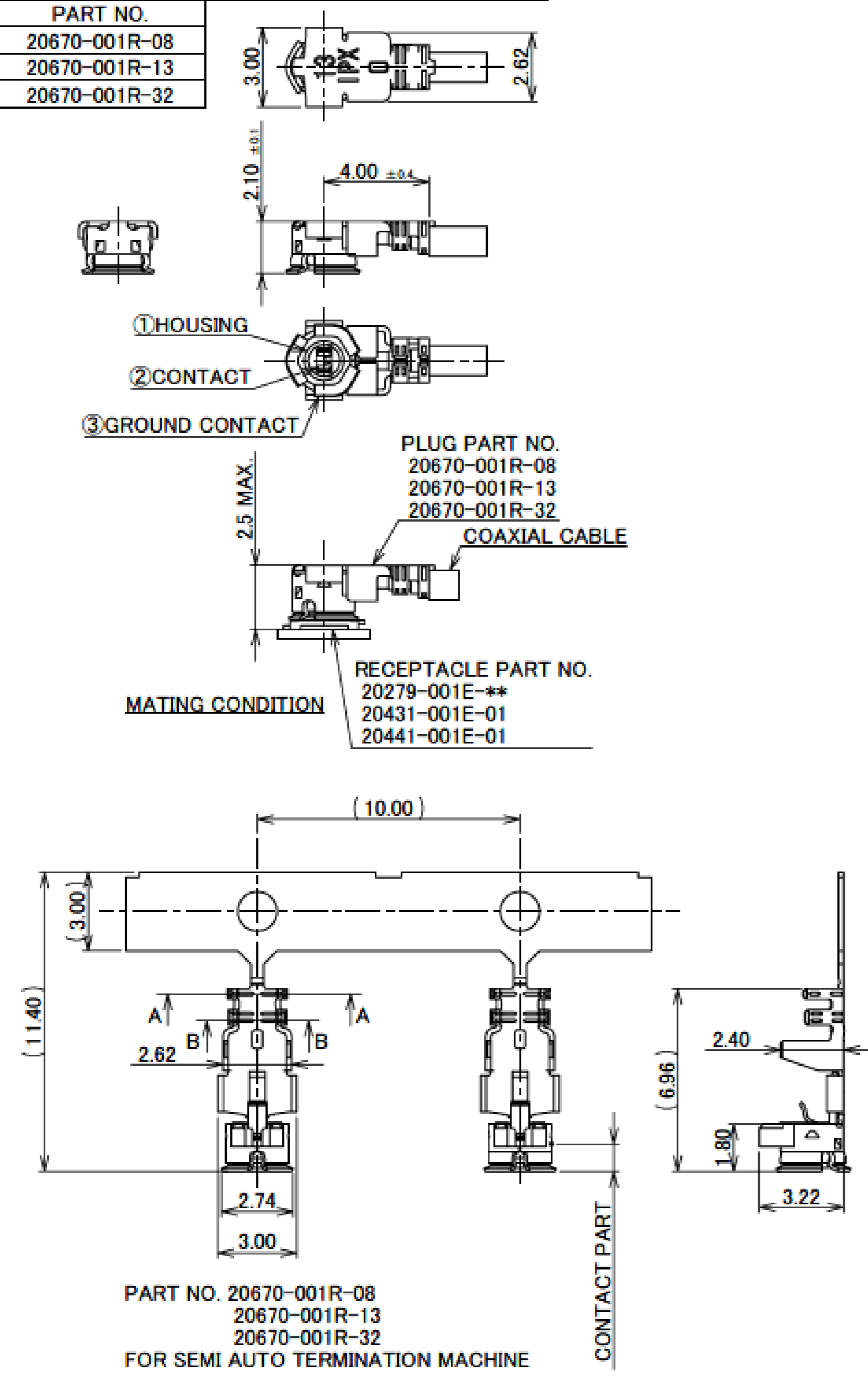
Rev.21

| ITEMS                                     | SPECIFICATION   |               |
|---|---|---------------|
| RECOMMENDED APPLICABLE CONNECTOR PART No. | 20279-001E-**-  | 20441-001E-01 |
| RATING VOLTAGE                            | 60 V AC (R.M.S)   |               |
| RATING FREQUENCY                          | DC~9GHz   |               |
| OPERATING TEMPERATURE                     | 233~363 K (-40°C~+90°C)   |               |
| VSWR                                      | 1.3 MAX. AT 0.1~3 GHz, 1.5 MAX. AT 3~6 GHz, 1.9 MAX. AT 6~9 GHz |               |
| MAIN CONTACT RESISTANCE                   | INITIAL: 20 mohm MAX. / AFTER TEST: 25 mohm MAX.                |               |
| GROUND CONTACT RESISTANCE                 | INITIAL: 10 mohm MAX. / AFTER TEST: 15 mohm MAX.                |               |
| INSULATION RESISTANCE                     | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.              |               |
| DIELECTRIC WITHSTANDING VOLTAGE           | 200 V AC, 1 MINUTE  |               |
| DURABILITY                                | 30 CYCLES   |               |
| UNMATING FORCE (INITIAL / AFTER TEST)     | 5 N MIN. / 3 N MIN.   |               |
| CRIMP STRENGTH                            | 15 N MIN.   |               |
| PRODUCT SPECIFICATION                     | PRS-1726  |               |
| TEST REPORT                               | TR-12096  |               |
| PACKING STANDARD                          | 300-233   |               |
| INSTRUCTION MANUAL                        | HIM-10002   |               |
| APPEARANCE CRITERIA No.                   | QLS-A***  |               |

Rev.21

# MHF® I plug Ni top (0.81,1.13,1.32,1.37,1.80)

|                 |                  |
|-----------------|------------------|
| Recommended P/N | 20670-001R-**-** |
| PART NO.        |                  |
| 20670-001R-08   |                  |
| 20670-001R-13   |                  |
| 20670-001R-32   |                  |



HATCHED AREA: Ni PLATING AREA

HF Halogen Free RoHS Compliant

NOTES

1. APPLICABLE CONNECTOR:  
20279-001E-\*\*-\*\*  
20431-001E-01  
20441-001E-01
2. PERMISSIBLE LOAD OF CABLE AT MATING
3. MATING AND UNMATING INSTRUCTION
- 3-1. MATING  
MAKE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE.
- 3-2. UNMATING  
3-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90192-001): USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.  
3-2-2. IN CASE OF UNMATING DIRECTLY BY HAND: CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
- 3-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR  
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.  
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
- 3-4. CAUTION ABOUT HEAT SHRINKAGE TUBES  
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES.
4. THIS IS "Pb-FREE" CONNECTOR.

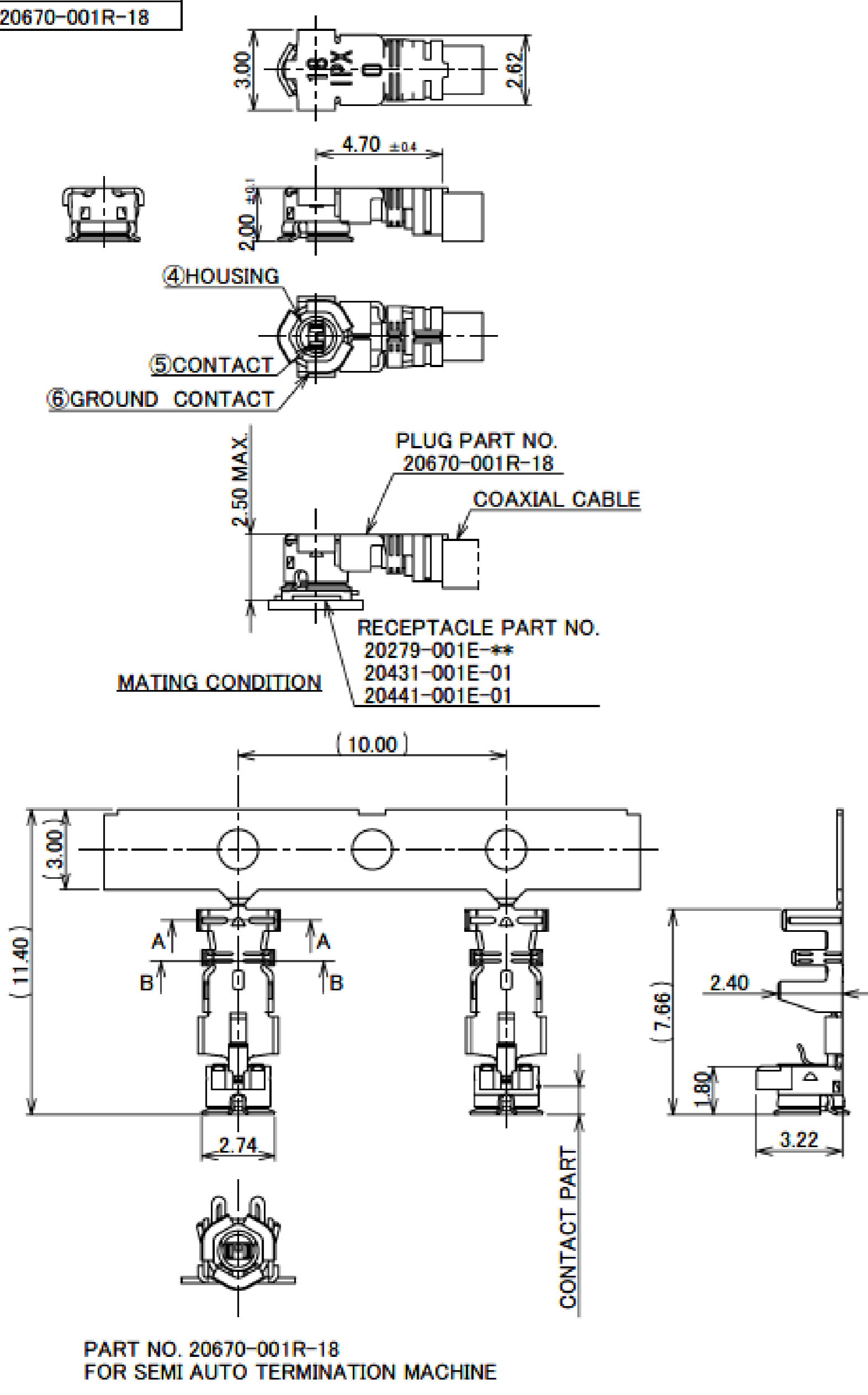
NOTE 2.

NOTE 3-2-1.

NOTE 3-2-2. CATCHING AREA

| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.02 μm MIN.<br>[Ni PLATING AREA] Ni ONLY |
|-----|----------------|-----------------|---|
| 2   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.03 μm MIN.                              |
| 1   | HOUSING        | PBT             | UL94V-0, BLACK  |
| NO. | DESCRIPTION    | MATERIAL        | FINISH, REMARKS   |

|                 |                  |
|-----------------|------------------|
| Recommended P/N | 20670-001R-**-** |
| PART No.        |                  |
| 20670-001R-18   |                  |



HATCHED AREA: Ni PLATING AREA

HF Halogen Free RoHS Compliant

NOTES

5. APPLICABLE CONNECTOR:  
20279-001E-\*\*-\*\*  
20431-001E-01  
20441-001E-01
6. PERMISSIBLE LOAD OF CABLE AT MATING
7. MATING AND UNMATING INSTRUCTION
- 7-1. MATING  
MAKE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE.
- 7-2. UNMATING  
7-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90192-001): USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.  
7-2-2. IN CASE OF UNMATING DIRECTLY BY HAND: CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
- 7-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR  
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.  
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
- 7-4. CAUTION ABOUT HEAT SHRINKAGE TUBES  
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES.
8. THIS IS "Pb-FREE" CONNECTOR.

NOTE 6.

NOTE 7-2-1.

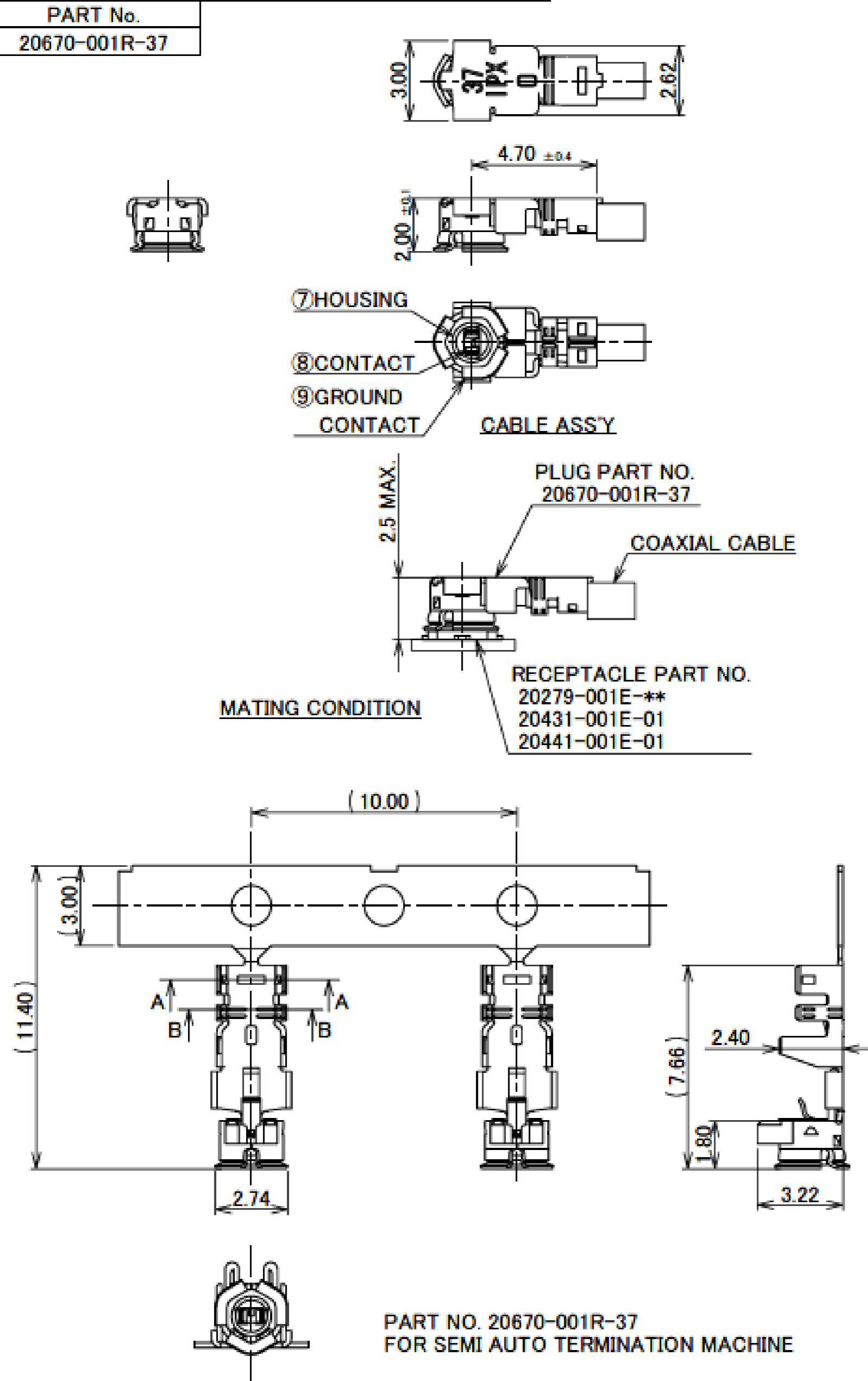
NOTE 7-2-2. CATCHING AREA

| 6   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.02 μm MIN.<br>[Ni PLATING AREA] Ni ONLY |
|-----|----------------|-----------------|---|
| 5   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.03 μm MIN.                              |
| 4   | HOUSING        | PBT             | UL94V-0, BLACK  |
| NO. | DESCRIPTION    | MATERIAL        | FINISH, REMARKS   |

# MHF® I plug Ni top (0.81,1.13,1.32,1.37,1.80)

Recommended P/N 20670-001R-\*\*-\*\*

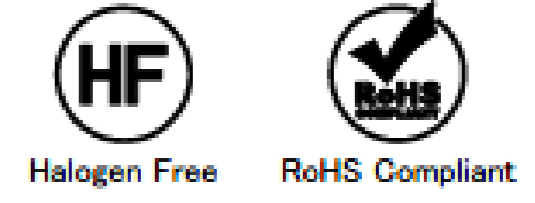
PART No.  
20670-001R-37



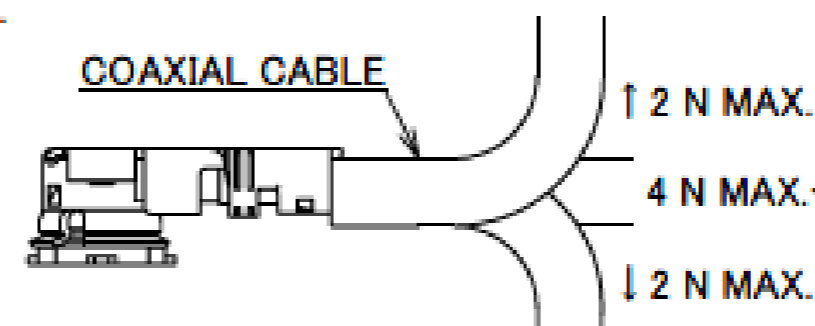
NOTES

9. APPLICABLE CONNECTOR:  
20279-001E-01  
20431-001E-01  
20441-001E-01
10. PERMISSIBLE LOAD OF CABLE AT MATING
11. MATING AND UNMATING INSTRUCTION
- 11-1. MATING  
MAKE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE.
- 11-2. UNMATING  
11-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90192-001): USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.  
11-2-2. IN CASE OF UNMATING DIRECTLY BY HAND: CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
- 11-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR  
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.  
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
- 11-4. CAUTION ABOUT HEAT SHRINKAGE TUBES  
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES.
12. THIS IS "Pb-FREE" CONNECTOR.

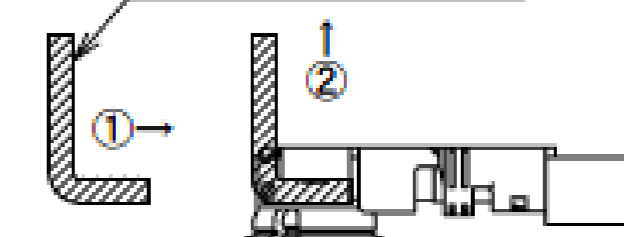
HATCHED AREA: Ni PLATING AREA



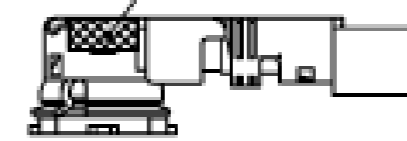
NOTE 10.



NOTE 11-2-1. PULLING TOOL PART NO. 90192-001



NOTE 11-2-2. CATCHING AREA



| NO. | DESCRIPTION    | MATERIAL        | FINISH, REMARKS   |
|-----|----------------|-----------------|---|
| 9   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.02 μm MIN.<br>[Ni PLATING AREA] Ni ONLY |
| 8   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 μm MIN.<br>CONTACT PART Au 0.03 μm MIN.                              |
| 7   | HOUSING        | PBT             | UL94V-0, BLACK  |

Rev.8

Recommended P/N 20670-001R-\*\*-\*\*

| PART NO.                                       | 20670-001R-08 | 20670-001R-13 | 20670-001R-32 | 20670-001R-18 | CABLE CUT LENGTH |
|--|---------------|---------------|---------------|---------------|------------------|
| APPLICABLE CABLE NOMINAL DIMENSION             |               |               |               |               |                  |
| INNER CONDUCTOR SILVER PLATING DIELECTRIC CORE | *SEE NOTE 14. |               |               |               |                  |
| BRAIDED SHIELD OF OUTER CONDUCTOR              | SINGLE        | SINGLE        | DOUBLE        | SINGLE        |                  |
| PART NO. OF SEMI AUTO TERMINATION MACHINE      | 90213-008C    | 90213-013C    | 90213-032C    | 90232-018     |                  |
| SECT. B-B                                      |               |               |               |               |                  |
| SECT. A-A                                      |               |               |               |               |                  |
| CRIMP HEIGHT                                   | CH-1          | 1.34~1.40     | 1.34~1.40     | 1.34~1.40     |                  |
|  | CH-2          | 0.76~0.84     | 1.06~1.14     | 1.20~1.30     |                  |
|  | CH-3          | 0.85~0.97     | 1.15~1.35     | 1.26~1.46     |                  |

NOTE 13. MUST NOT USE SOLDER COATED INNER CONDUCTOR AND OUTER CONDUCTOR.

Rev.8

# MHF® I plug Ni top (0.81,1.13,1.32,1.37,1.80)

Recommended P/N 20670-001R-\*\*-\*\*

|  |               |   |
|--|---------------|---|
| PART NO.                                       | 20670-001R-37 | CABLE CUT LENGTH  |
| APPLICABLE CABLE NOMINAL DIMENSION             |               |   |
| INNER CONDUCTOR SILVER PLATING DIELECTRIC CORE |               | <p>CRIMP HEIGHT</p> <p>BLADE MICROMETER</p> <p>CH-1</p> <p>i-Fit® PART</p> <p>CH-2</p> <p>OUTER CONDUCTOR PART</p> <p>CH-3</p> <p>JACKET PART</p> |
| BRAIDED SHIELD OF OUTER CONDUCTOR              | SINGLE        |   |
| PART NO. OF SEMI AUTO TERMINATION MACHINE      | 90232-037     |   |
| SECT. B-B                                      |               |   |
| SECT. A-A                                      |               |   |
| CRIMP HEIGHT                                   |               |   |
|  | CH-1          | 1.34~1.40   |
|  | CH-2          | 1.36~1.42   |
|  | CH-3          | 1.28~1.34   |

NOTE  
14. MUST NOT USE SOLDER COATED INNER CONDUCTOR AND OUTER CONDUCTOR.

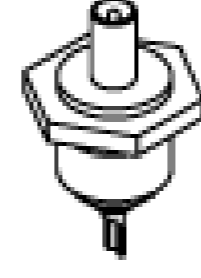
Rev.8

| ITEMS  | SPECIFICATION   |
|--|---|
| RECOMMENDED APPLICABLE CONNECTOR PART No.          | 20279-001E-**-**  |
| RATING VOLTAGE                                     | 60 V AC (R.M.S)   |
| RATING FREQUENCY                                   | DC~9GHz   |
| OPERATING TEMPERATURE                              | 233~363 K (-40°C~+90°C)   |
| VSWR<br>(MATED WITH SMA ADAPTER PART No:90193-001) | 1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.90 MAX. AT 6~9 GHz<br>(0.81 O.D. / 1.13 O.D. / 1.37 O.D. / 1.80 O.D.)<br>1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.60 MAX. AT 6~9 GHz (1.32 O.D.) |
| MAIN CONTACT RESISTANCE                            | INITIAL: 20 mohm MAX. / AFTER TEST: $\Delta$ R 20 mohm MAX.   |
| GROUND CONTACT RESISTANCE                          | INITIAL: 20mohm MAX. / AFTER TEST: $\Delta$ R 100 mohm MAX.   |
| INSULATION RESISTANCE                              | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.  |
| DIELECTRIC WITHSTANDING VOLTAGE                    | 200 V AC, 1 MINUTE  |
| DURABILITY   | 30 CYCLES   |
| UNMATING FORCE (INITIAL / AFTER TEST)              | 5 N MIN. / 3 N MIN.   |
| CRIMP STRENGTH                                     | 20670-001R-08, 20670-001R-13, 20670-001R-32: 10 N MIN.<br>20670-001R-18, 20670-001R-37: 15 N MIN.   |
| PRODUCT SPECIFICATION                              | PRS-2105  |
| TEST REPORT  | TR-15059  |
| PACKING STANDARD                                   | 300-233   |
| INSTRUCTION MANUAL                                 | HIM-10002   |
| APPEARANCE CRITERIA No.                            | QLS-A***  |

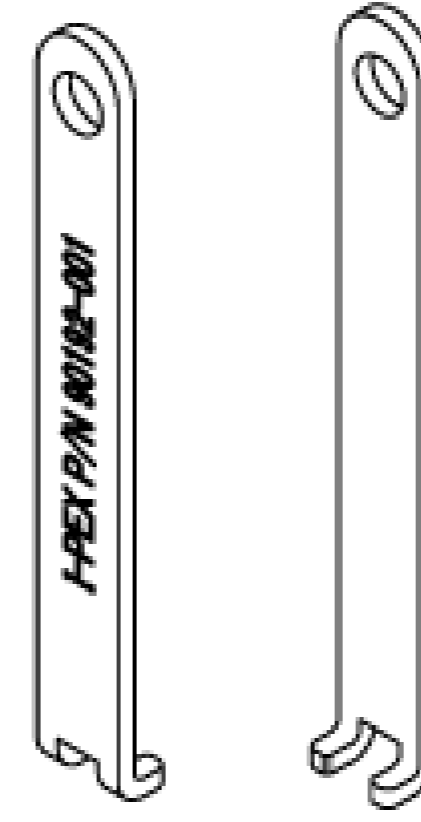
# Accessories for MHF® I plug



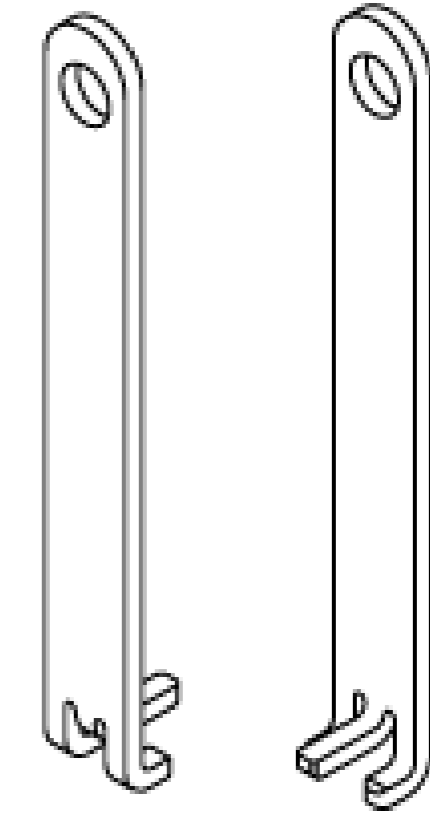
MHF I SMA ADAPTOR  
PART NO. 90193-001



MHF I PLUG INSPECTION CONNECTOR  
PART NO. 90194-001



FRONT SIDE BACK SIDE  
MHF I UNMATING TOOL  
PART NO. 90192-001

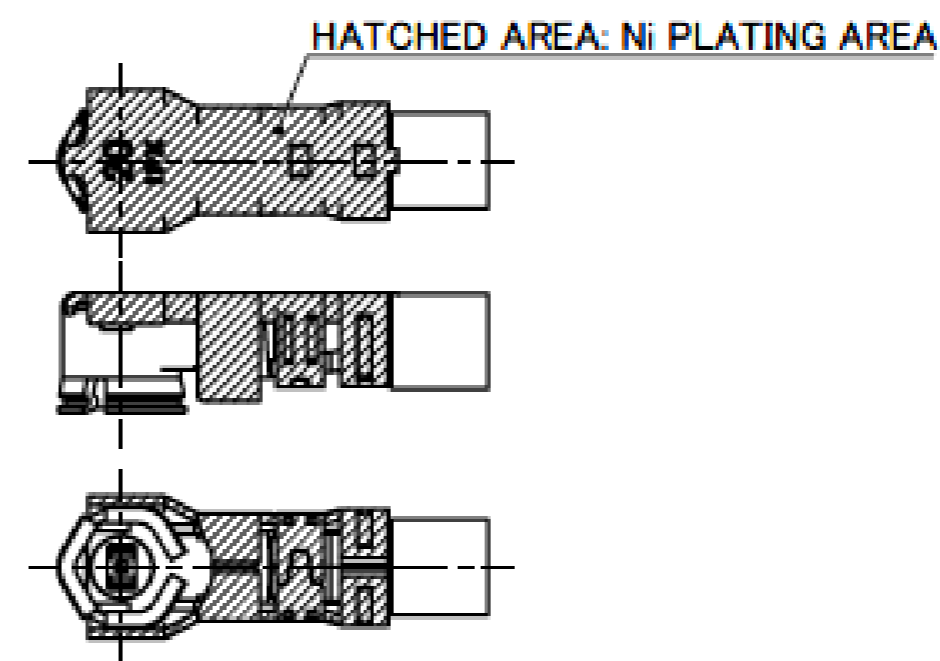
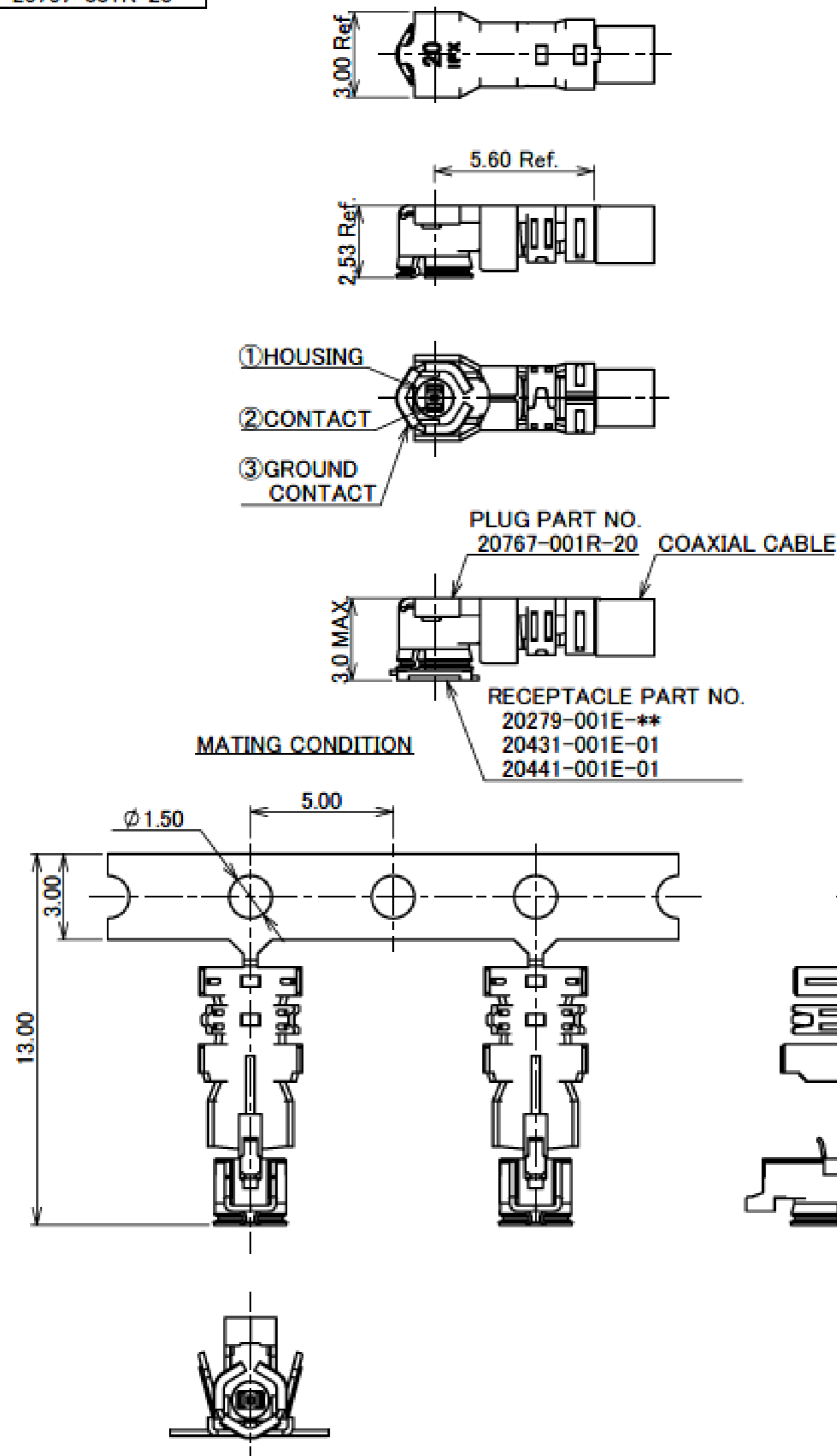


FRONT SIDE BACK SIDE  
MHF I MATING AND UNMATING TOOL  
PART NO. 90224-001

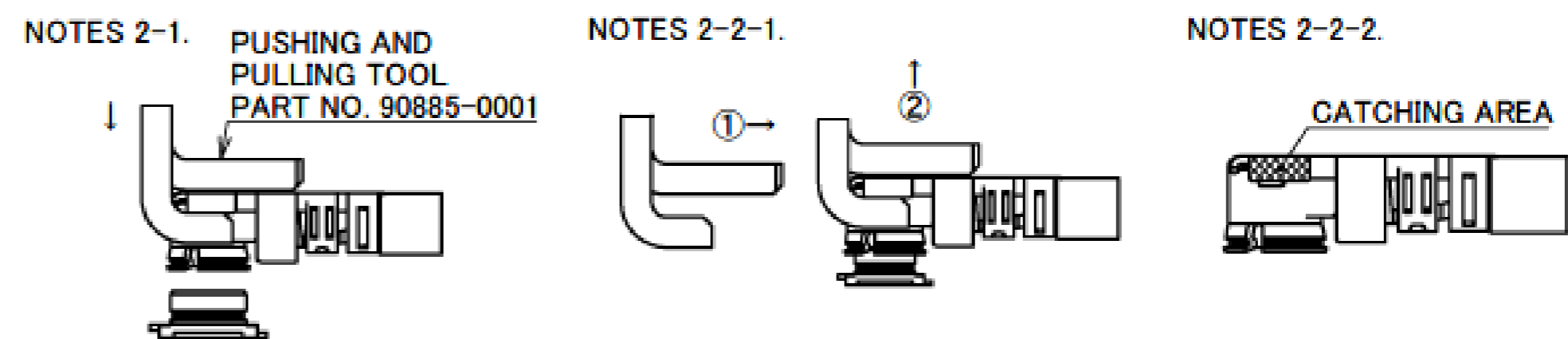
Rev.8

## MHF® I plug (2.0 mm Cable O.D.)

|                 |               |
|-----------------|---------------|
| Recommended P/N | 20767-001R-20 |
| PART No.        | 20767-001R-20 |



- NOTES
- APPLICABLE CONNECTOR:  
20279-001E-\*\*, 20431-001E-01, 20441-001E-01
  - MATING AND UNMATING INSTRUCTION
- 2-1. MATING  
MATE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. DO NOT SLANT MATE.
- 2-2. UNMATING
- 2-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90885-0001)  
USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
- 2-2-2. IN CASE OF UNMATING DIRECTLY BY HAND  
CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.



| NO. | DESCRIPTION    | MATERIAL        | FINISH . REMARKS   |
|-----|----------------|-----------------|--|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.05 $\mu$ m MIN. |
| 2   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.10 $\mu$ m MIN. |
| 1   | HOUSING        | PBT             | UL94V-0, BLACK   |

Rev.6



## MHF® I plug (2.0 mm Cable O.D.)

|   |                  |                  |                  |
|---|------------------|------------------|------------------|
| PART NO.                                  | 20767-001R-20    |                  |                  |
| APPLICABLE CABLE NOMINAL DIMENSION        |                  |                  |                  |
| BRAIDED SHIELD OF OUTER CONDUCTOR         | SINGLE           |                  |                  |
| PART NO. OF SEMI AUTO TERMINATION MACHINE | 90876-020        |                  |                  |
| CRIMP HEIGHT                              | CH-1 i-Fit® PART | CH-2 SHIELD PART | CH-3 JACKET PART |
|   | <br>2.28~2.36    | <br>1.81~1.87    | <br>1.95~2.01    |

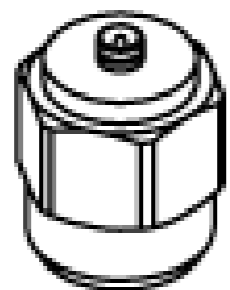
Rev.6

## MHF® I plug (2.0 mm Cable O.D.)

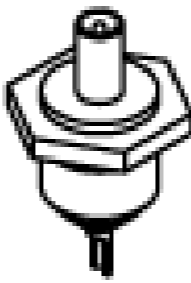
| ITEMS  | SPECIFICATION  |               |
|--|--|---------------|
| RECOMMENDED APPLICABLE CONNECTOR PART No.          | 20279-001E-**  | 20441-001E-01 |
| RATING VOLTAGE                                     | 60 V AC (R.M.S)  |               |
| RATING FREQUENCY                                   | DC~9GHz  |               |
| OPERATING TEMPERATURE                              | 233~363 K (-40°C~+90°C)  |               |
| VSWR<br>(MATED WITH SMA ADAPTER PART No.90193-001) | 1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.60 MAX. AT 6~9 GHz |               |
| MAIN CONTACT RESISTANCE                            | INITIAL: 20 mohm MAX. / AFTER TEST: $\surd$ R 20 mohm MAX.         |               |
| GROUND CONTACT RESISTANCE                          | INITIAL: 20 mohm MAX. / AFTER TEST: $\surd$ R 100 mohm MAX.        |               |
| INSULATION RESISTANCE                              | INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.                 |               |
| DIELECTRIC WITHSTANDING VOLTAGE                    | 200 V AC, 1 MINUTE   |               |
| DURABILITY   | 30 CYCLES  |               |
| UNMATING FORCE (INITIAL / AFTER TEST)              | 5 N MIN. / 3 N MIN.  |               |
| CRIMP STRENGTH                                     | 15 N MIN.  |               |
| PRODUCT SPECIFICATION                              | PRS-2490   |               |
| TEST REPORT  | TR-18041   |               |
| PACKING STANDARD                                   | PST-16007  |               |
| INSTRUCTION MANUAL                                 | HIM-17017  |               |
| APPEARANCE CRITERIA No.                            | QLS-A***   |               |

Rev.6

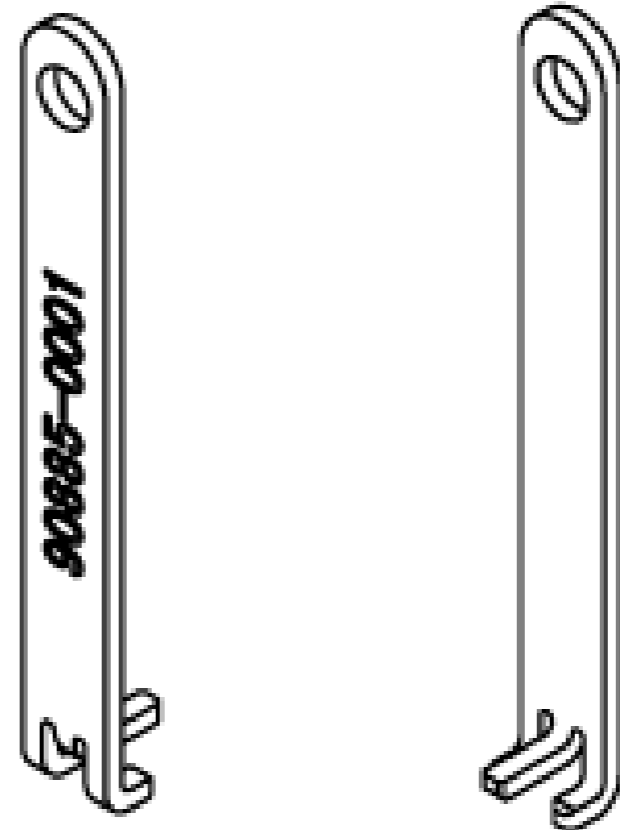
**Accessories for MHF® I plug (2.0 mm Cable O.D.)**



MHF I SMA ADAPTOR  
PART NO. 90193-001



MHF I PLUG INSPECTION CONNECTOR  
PART NO. 90194-001



FRONT SIDE      BACK SIDE  
MHF I 20 TYPE MATING AND UNMATING TOOL  
PART NO. 90885-0001

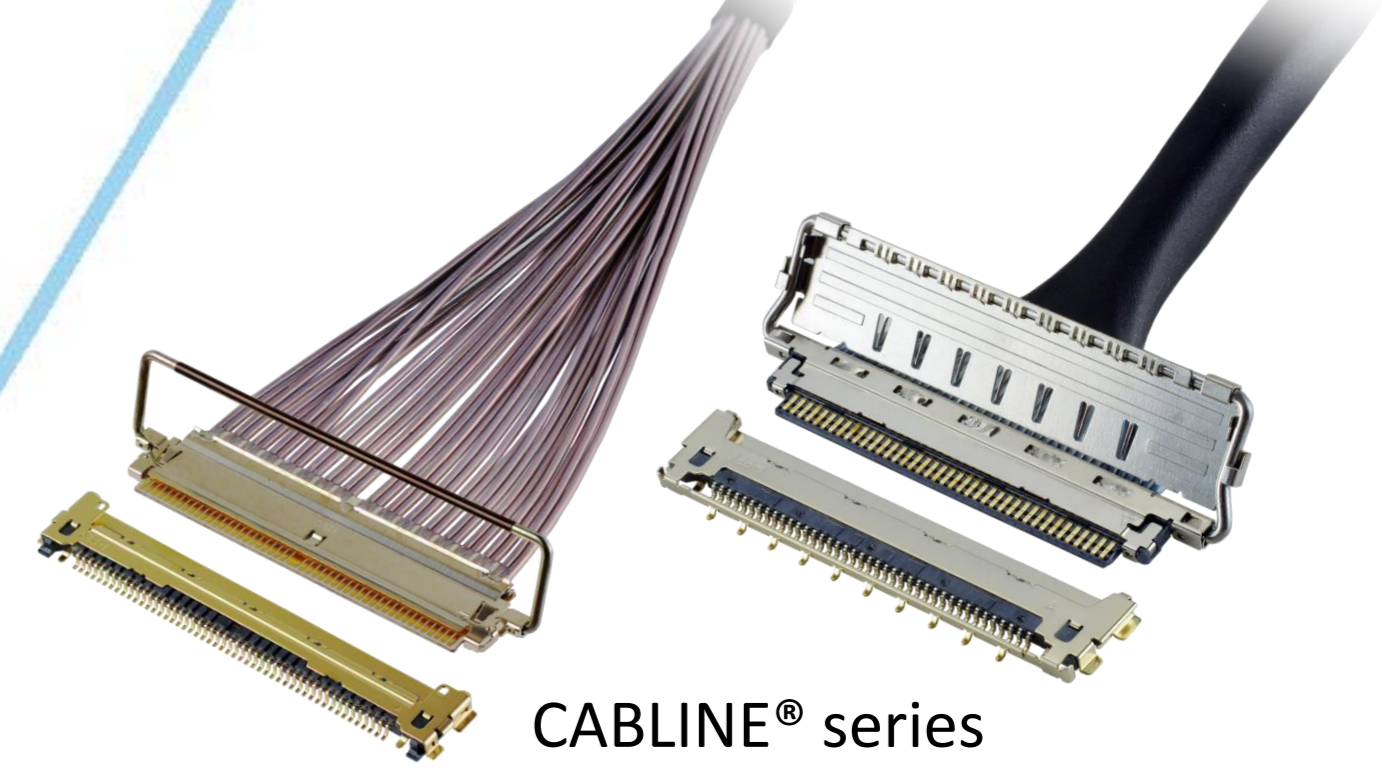
# Custom Products Available

## RF Connector

MHF® series



## Micro-coaxial/Twinax/ Discrete Wire Connector



CABLINA® series

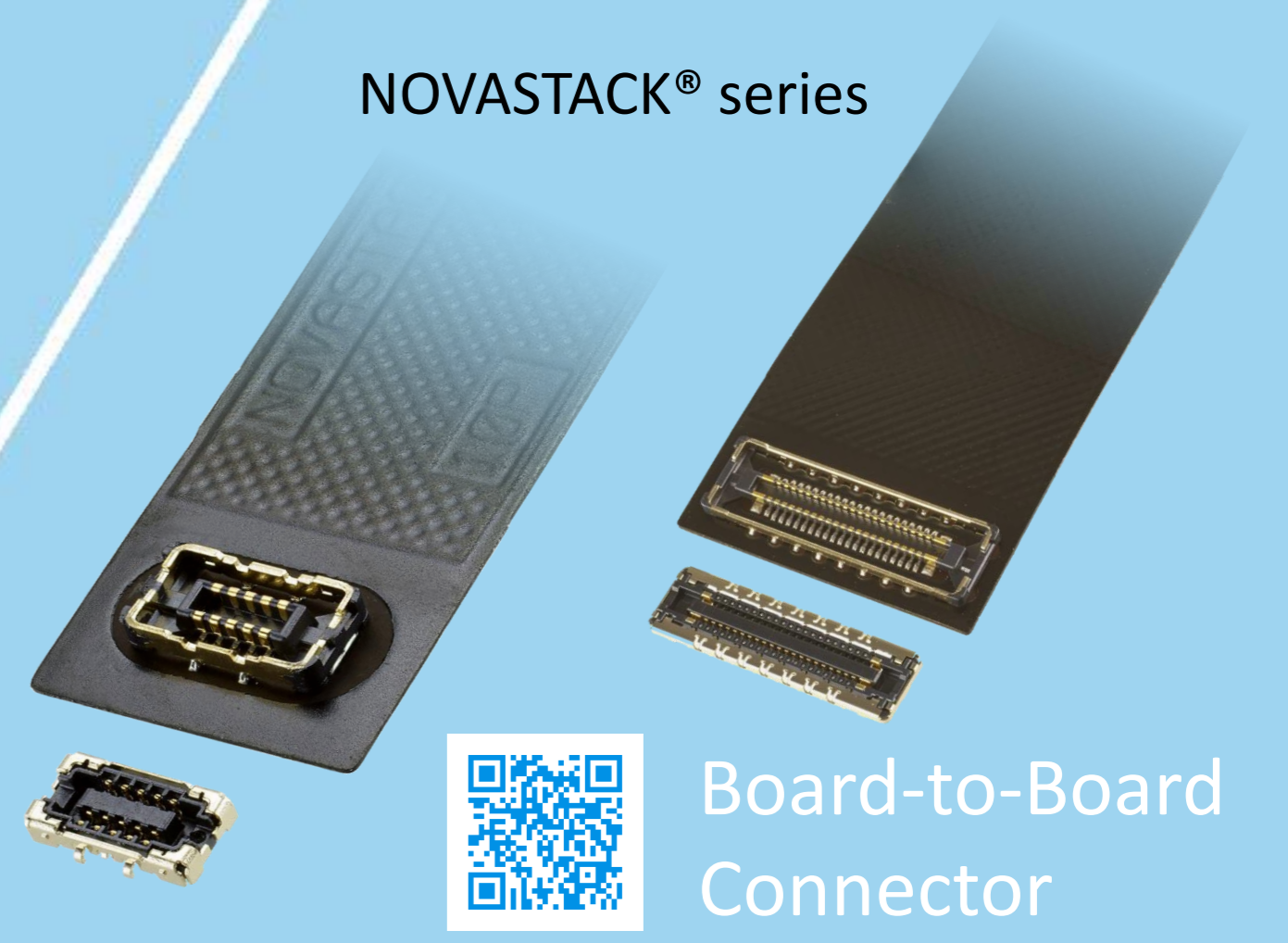


## Optical Module

LIGHTPASS® series



NOVASTACK® series



## Board-to-Board Connector



## Power Connector/ Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



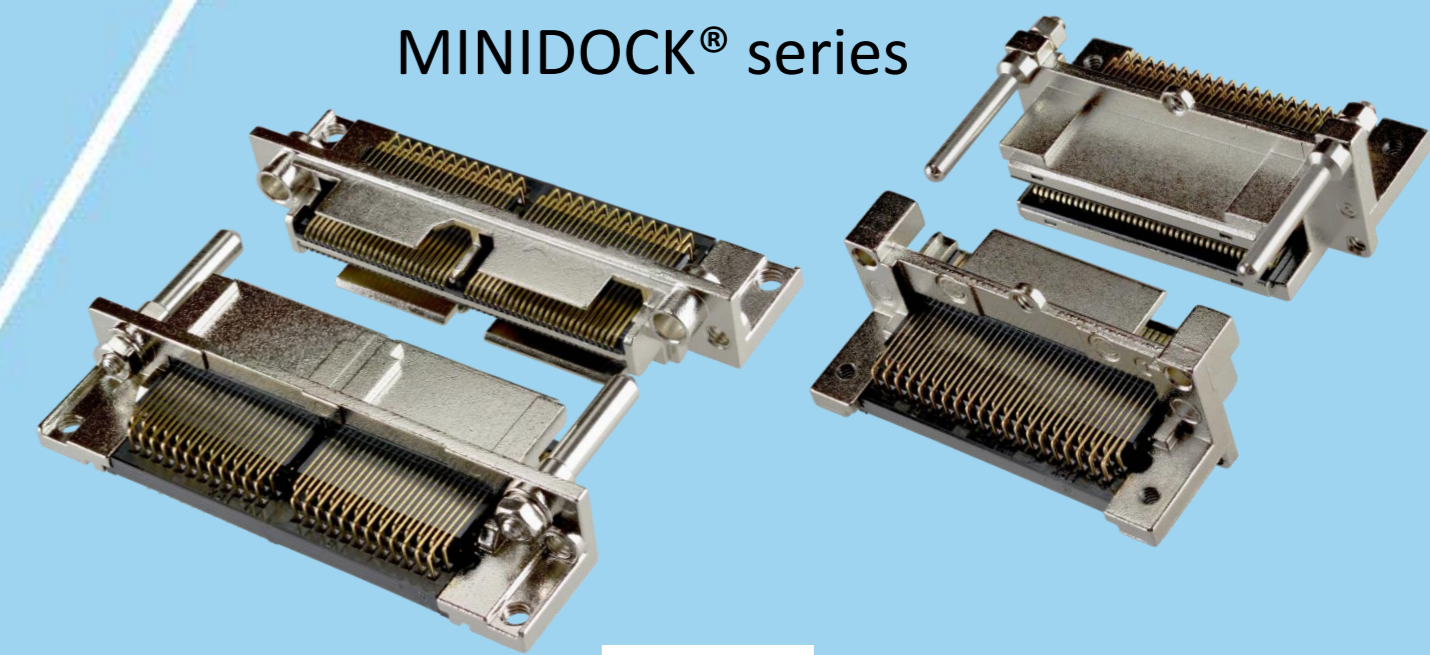
## FPC FFC Connector



Inquiry



MINIDOCK® series



## I/O Connector

I-PEX, MHF, CABLINE, LIGHTPASS, NOVASTACK, ISH, IARPB, MINIFLEX, EVAFLEX, MINIDOCKS and ZenShield are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative or more detailed information.

[www.i-pex.com](http://www.i-pex.com)



# I-PEX

© I-PEX Inc. 2024  
All rights reserved