

# MHF®-A

1.13 mm OD，低高度設計，支持 6 可達GHz

Product Specifications:

|                          |           |            |
|--------------------------|-----------|------------|
| Mated Height (mm max.)   |           | 1.45       |
| Rece. SMT Size (mm)      |           | 3.0 x 3.0  |
| Applicable Frequency     |           | DC ~ 6 GHz |
| Characteristic Impedance |           | 50 ohm     |
| VSWR<br>(L=100 mm)       | DC~3 GHz  | 1.3 max.   |
|                          | 3 ~ 6 GHz | 1.5 max.   |

\*若有規格外 Pin 數需求,請與當地負責業務窗口聯繫。

Applicable Cable Size:

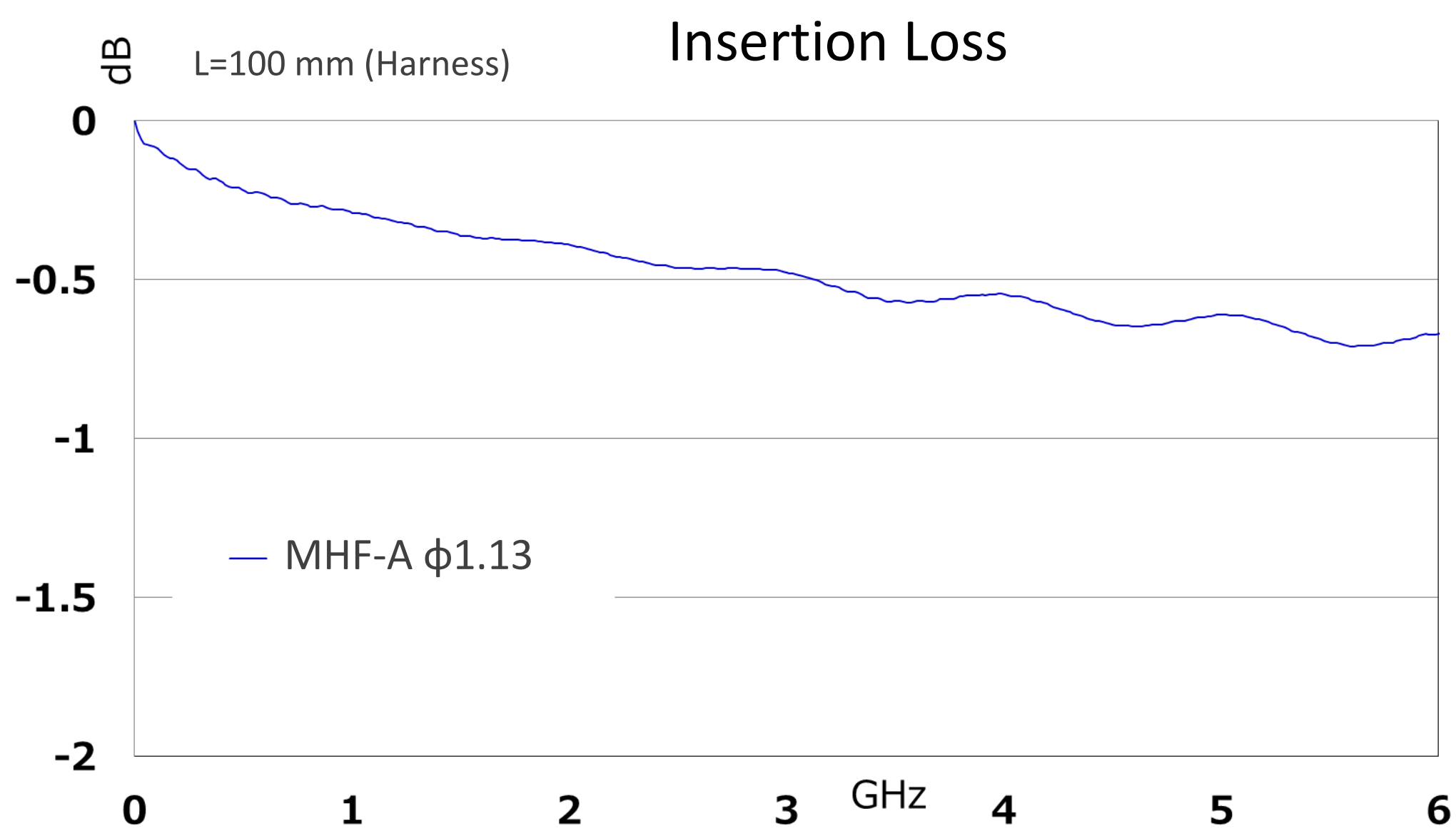
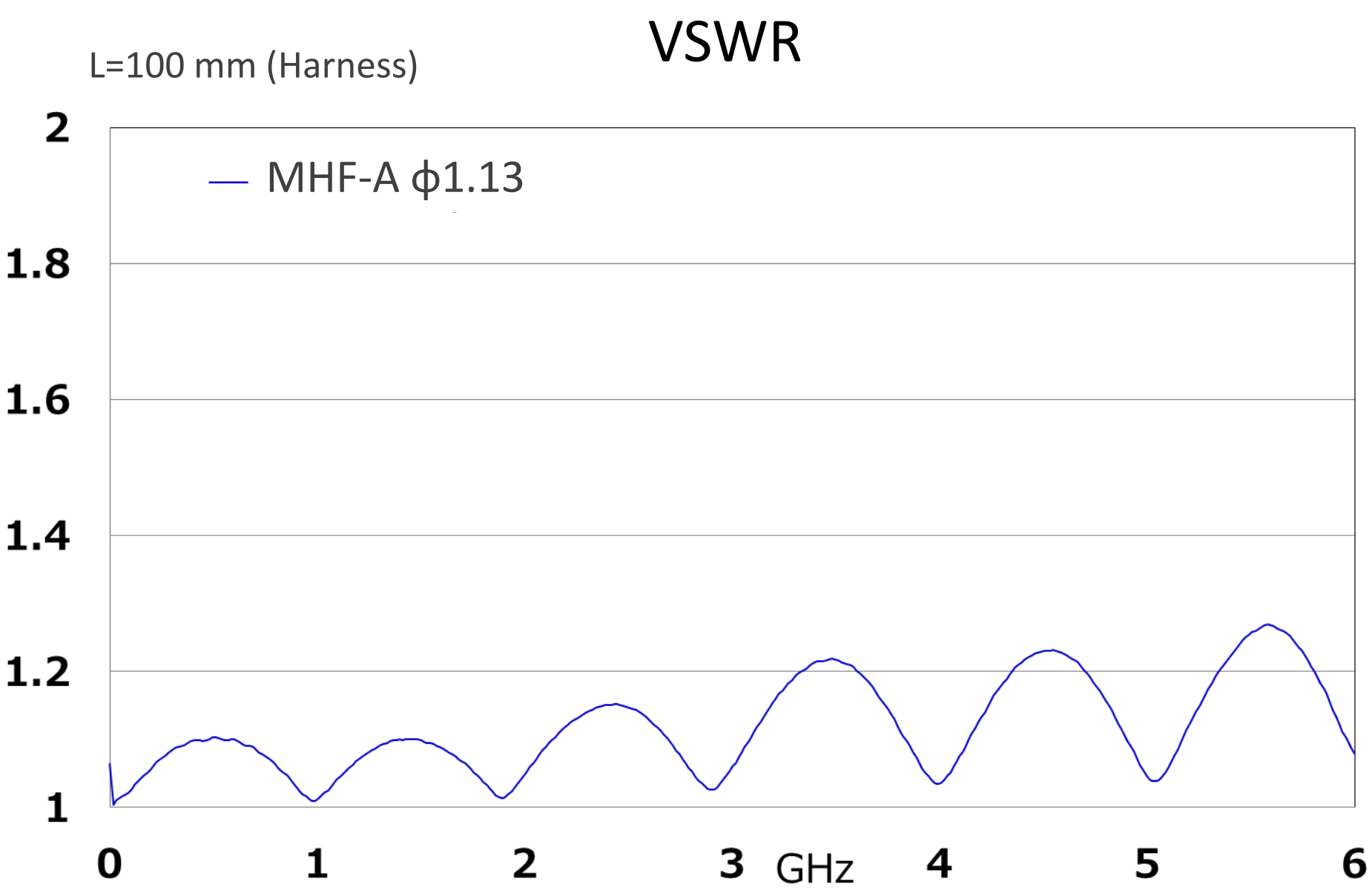
|                       |
|-----------------------|
| O.D. 1.13 mm / AWG 32 |
|-----------------------|

Applicable Standards (Reference Only):

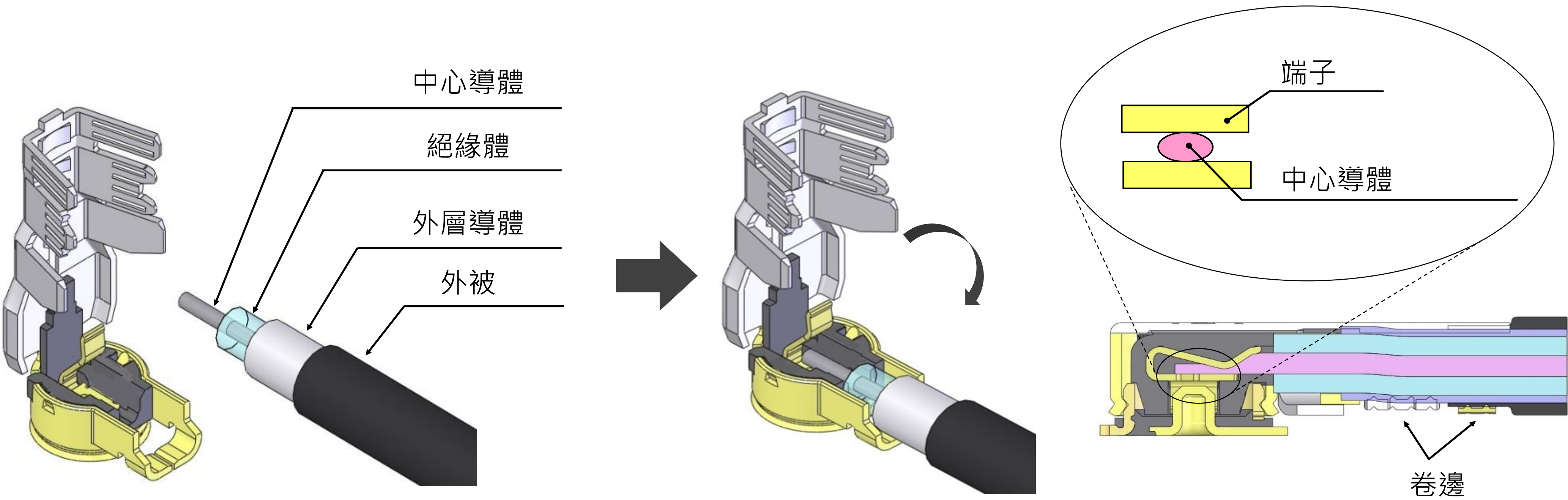
|                                                           |
|-----------------------------------------------------------|
| 5G sub-6, Wi-Fi 6, LTE/LTE-Advanced, LPWA, Bluetooth, GPS |
|-----------------------------------------------------------|



## ► 對應6 GHz 的高性能小型連接器



## ► 使用 “i-Fit®” 技術的無焊料極細同軸線終端



## ► MHF® -A 公座適用的極細同軸線外徑 (AWG):1.13 mm (32)

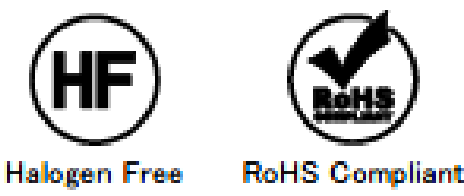
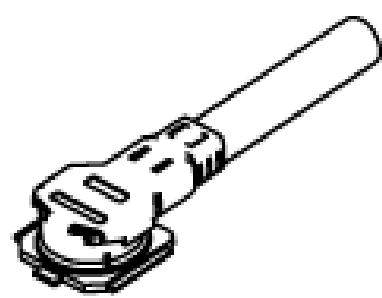
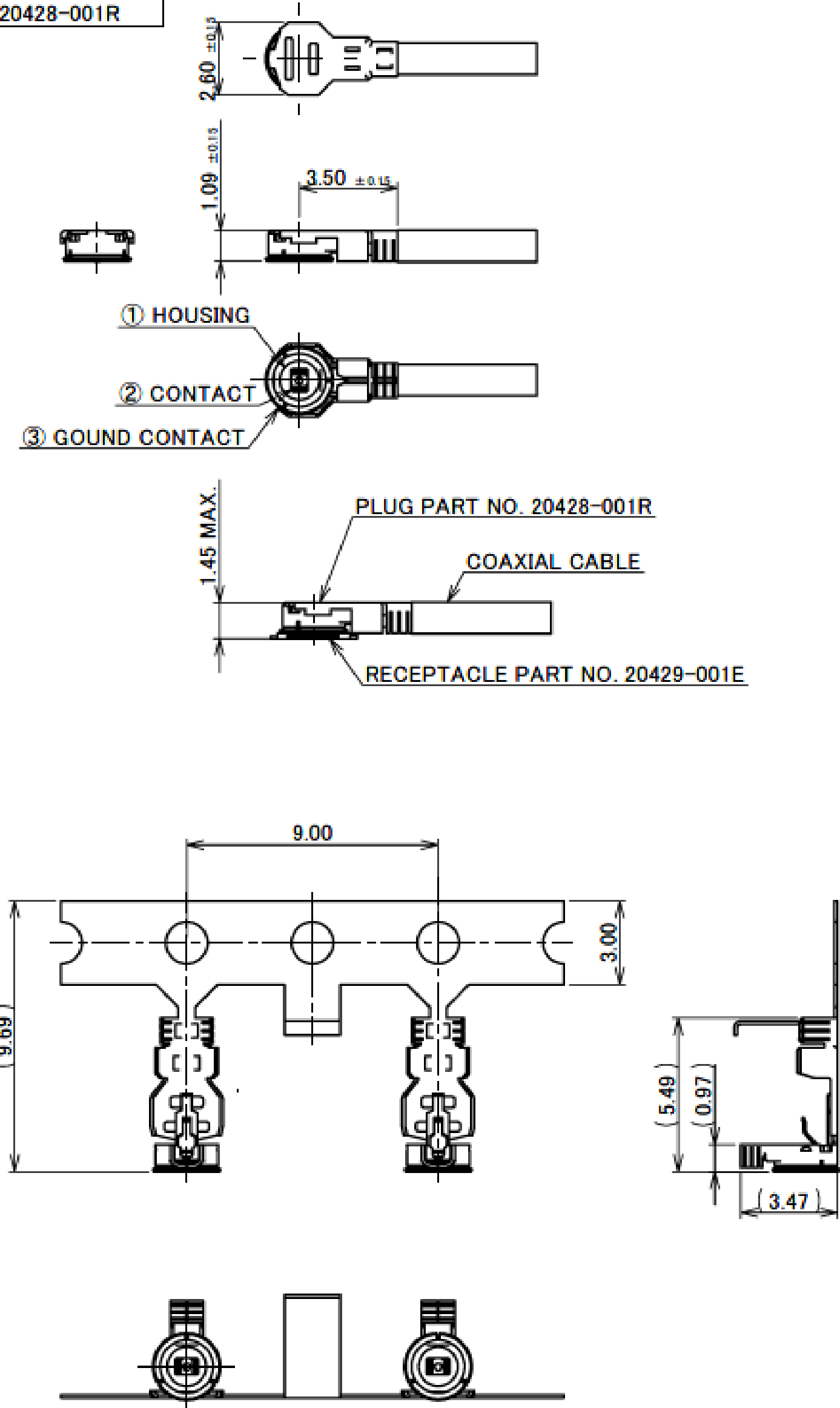
| Product name                        |                  | MHF®-A           | MHF® 4L                              |             |             |
|-------------------------------------|------------------|------------------|--------------------------------------|-------------|-------------|
| Frequency                           |                  | DC – 6 GHz       | DC – 12 GHz                          |             |             |
| Mating Height                       |                  | 1.45 mm max.     | 1.7 mm max.                          | 1.4 mm max. | 1.2 mm max. |
| Coax O.D.<br>(Center Conductor AWG) | 1.37 mm (AWG#30) |                  | ●                                    |             |             |
|                                     | 1.13 mm (AWG#32) | ●                |                                      | ●           |             |
|                                     | 0.95 mm (AWG#33) |                  |                                      | ●           |             |
|                                     | 0.81 mm (AWG#36) |                  |                                      |             | ●           |
|                                     | 0.64 mm (AWG#36) |                  |                                      |             | ●           |
| Receptacle                          |                  | MHF-A receptacle | MHF 4 receptacle , MHF 4L receptacle |             |             |



# Component Parts Details

## Plug for Cable Assembly

|                 |            |
|-----------------|------------|
| Recommended P/N | 20428-001R |
| PART NO.        |            |
| 20428-001R      |            |



NOTES

1. APPLICABLE CONNECTOR: 20429-001E

2. PERMISSIBLE LOAD OF CABLE AT MATING.

3. SUGGESTIONS FOR MATING & UNMATING OPERATION.

3-1. 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.

3-2. UNMATING

3-2-1.

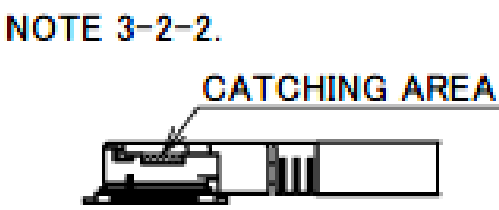
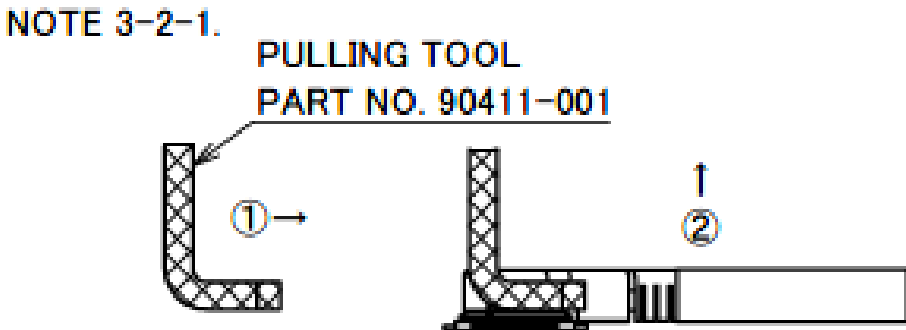
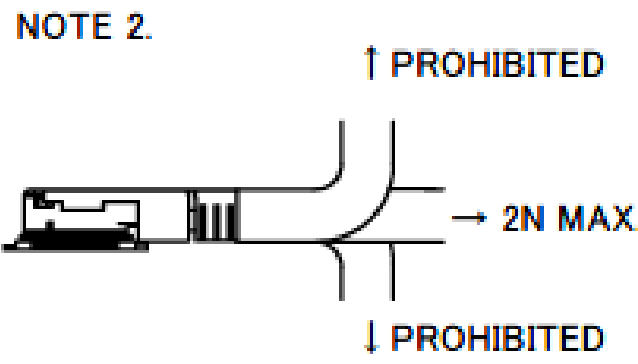
IN CASE OF UNMATING BY PULLING TOOL.

PLEASE USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

3-2-2.

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.



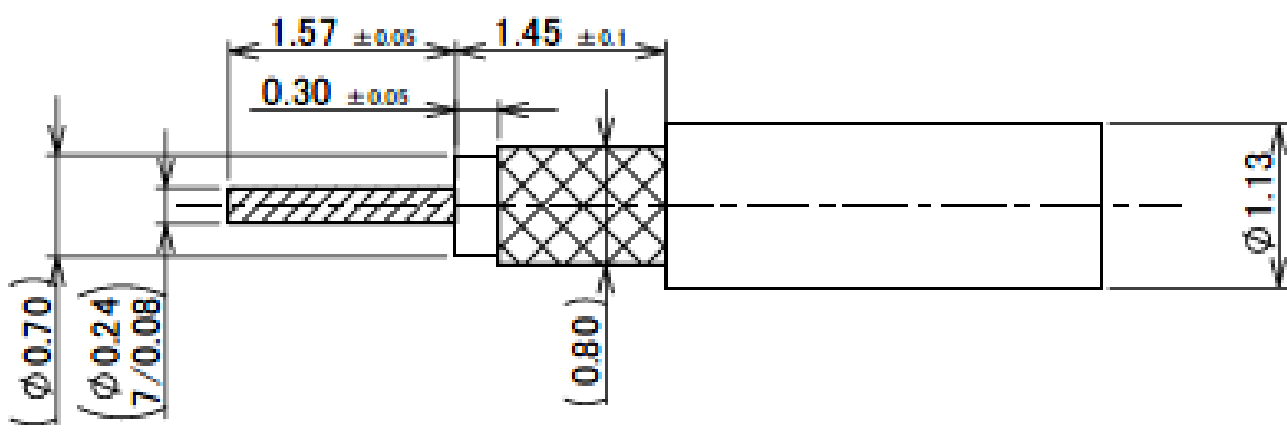
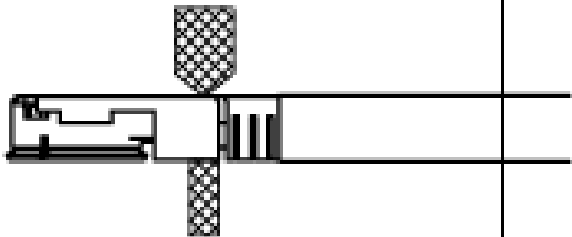
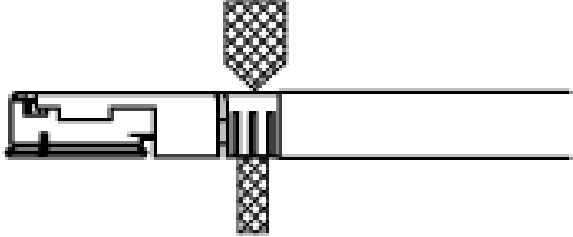
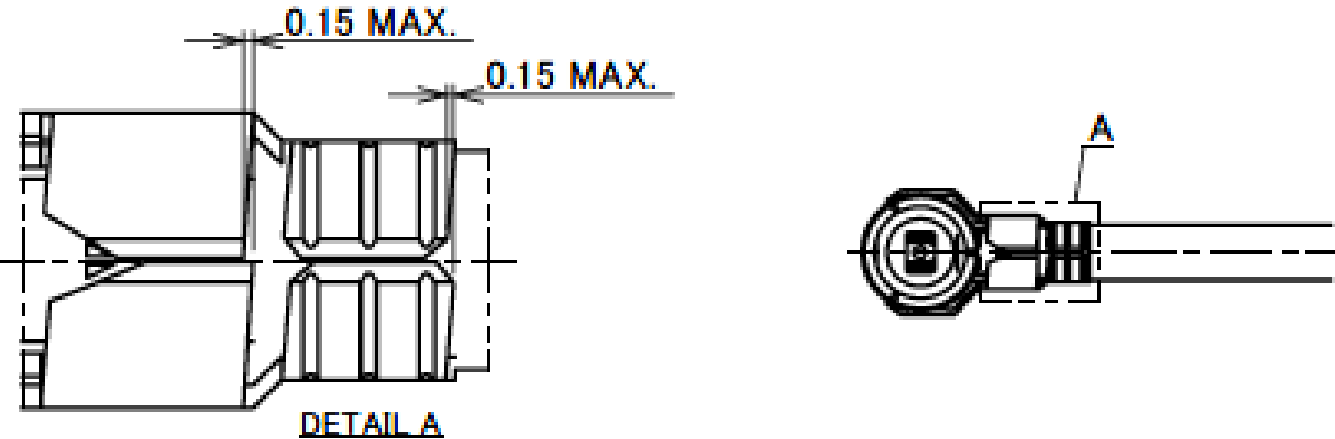
|     |                |                 |                                                                    |
|-----|----------------|-----------------|--------------------------------------------------------------------|
| 3   | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.05 $\mu$ m MIN. |
| 2   | CONTACT        | PHOSPHOR BRONZE | ALL OVER Ni 1.00 $\mu$ m MIN.<br>CONTACT PART Au 0.1 $\mu$ m MIN.  |
| 1   | HOUSING        | PBT             | UL94V-0, BLACK                                                     |
| NO. | DESCRIPTION    | MATERIAL        | FINISH , REMARKS                                                   |



Plug for Cable Assembly

| ITEMS                                               | SPECIFICATION                                                      |
|-----------------------------------------------------|--------------------------------------------------------------------|
| APPLICABLE CONNECTOR PART No.                       | 20429-001R                                                         |
| RATING VOLTAGE                                      | 60 V AC (R.M.S)                                                    |
| RATING FREQUENCY                                    | DC~9 GHz                                                           |
| OPERATING TEMPERATURE                               | 233~363 K (-40°C~+90°C)                                            |
| VSWR<br>(MATED WITH SMA ADAPTER PART No. 90413-001) | 1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.90 MAX. AT 6~9 GHz |
| 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                     | AC 200 V 1min                                                      |
| DURABILITY                                          | 30 CYCLES                                                          |
| TOTAL MATING FORCE (INITIAL / AFTER TEST)           | 15 N MAX. / 15 N MAX.                                              |
| TOTAL UNMATING FORCE (INITIAL / AFTER TEST)         | 4 N MIN. / 2 N MIN.                                                |
| CRIMP STRENGTH                                      | 8 N MIN.                                                           |
| PRODUCT SPECIFICATION                               | PRS-1350                                                           |
| TEST REPORT                                         | TR-07031                                                           |
| PACKING STANDARD                                    | 300-587                                                            |
| INSTRUCTION MANUAL                                  | HIM-11001                                                          |
| APPEARANCE CRITERIA No.                             | QLS-A***                                                           |

Rev.6

|                                           |                                                                                      |                                                                                       |
|-------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| PART NO.                                  | 20428-001R                                                                           |                                                                                       |
| APPLICABLE CABLE NOMINAL DIMENSION        |  |                                                                                       |
|                                           | MUST NOT USE SOLDER COATED INNER CONDUCTOR AND OUTER CONDUCTOR.                      |                                                                                       |
| BRAID SHIELD OF OUTER CONDUCTOR           | SINGLE                                                                               |                                                                                       |
| PART NO. OF SEMI AUTO TERMINATION MACHINE | 90420-013 (SEMI-AUTO)                                                                |                                                                                       |
| CRIMP HEIGHT                              |   |  |
|                                           | USE FOR POINT MICROMETER.<br>CH-1 (i-Fit® PART) : 1.055~1.105                        | USE FOR POINT MICROMETER.<br>CH-2 (JACKET PART) : 1.06~1.13                           |
| BARREL GAP                                |  |                                                                                       |

NOTES

4. APPLICABLE CABLE

4-1. DISCRPTION

INNER CONDUCTOR: AWG#32 (7/0.08)

SILVER PLATING ANNEALED COPPER WIRE OR SILVER PLATING TIN-COPPER ALLOY.

\* MUST NOT USE SOLDER COATED INNER CONDUCTOR.

DIELECTRIC CORE: FLUORO-PLASTICS

DIAMETER 0.68 (+0.04/-0.02)MM.

NOMINAL THICKNESS 0.22MM.

OUTER CONDUCTOR: 16/4/0.05

NOMINAL DIAMATER 0.93MM, SILVER PLATING ANNEALED COPPER WIRE.

\* MUST NOT USE SOLDER COATED OUTER CONDUCTOR.

JACKET: FLUORO-PLASTICS

DIAMETER 1.13 (+0.08/-0.05)MM. NOMINAL THICKNESS 0.1MM.

4-2. REQUIREMENTS

CHARACTERISTIC IMPEDANCE: 50 (+2/-2)OHM BY TDR METHOD

NOMINAL CAPACITANCE (REFER VALUE): 97 PF/M

CONDUCTOR RESISTANCE OF INNER CONDUCTOR AT 293K (REFERENCEVALU) : 520 OHM/KM

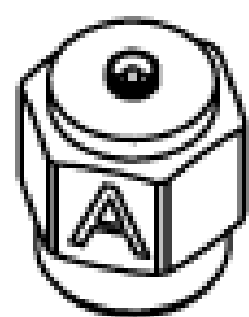
INSULATION RESISTANCE: 1500 MEGA-OHM/KM MIN.

DILECTRIC WITHSTANCE VOLTAGE: NO BREAKDOWN AT AC100V FOR 1 MINUTES.

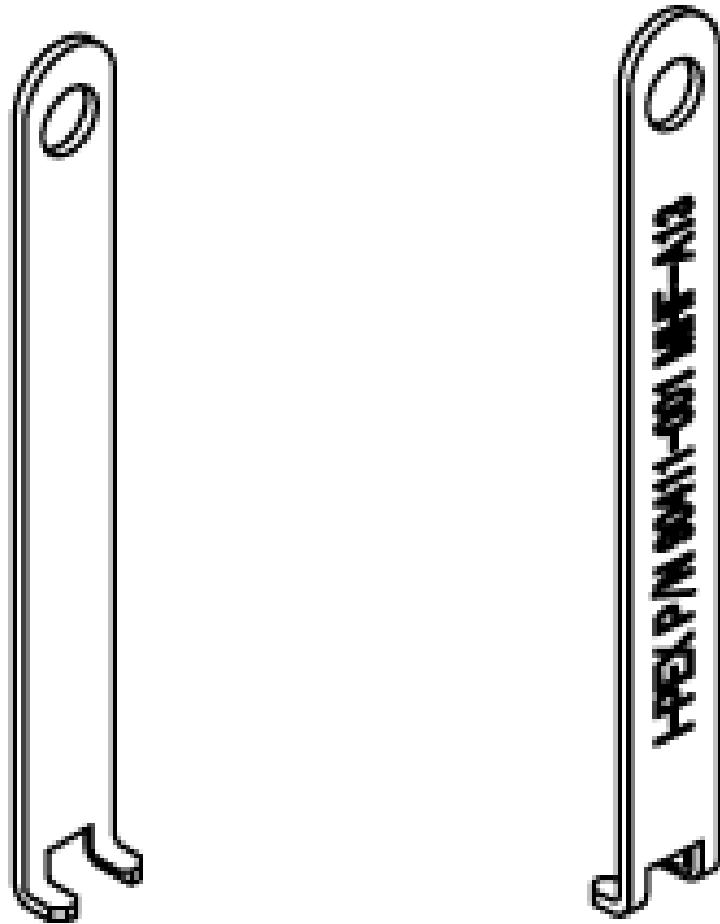
Rev.6



Accessories for MHF®-A plug



MHF-A13 SMA ADAPTER  
PART NO. 90413-001



MHF-A13 PULLING TOOL  
PART NO. 90411-001

Rev.6

Receptacle for Cable Assembly

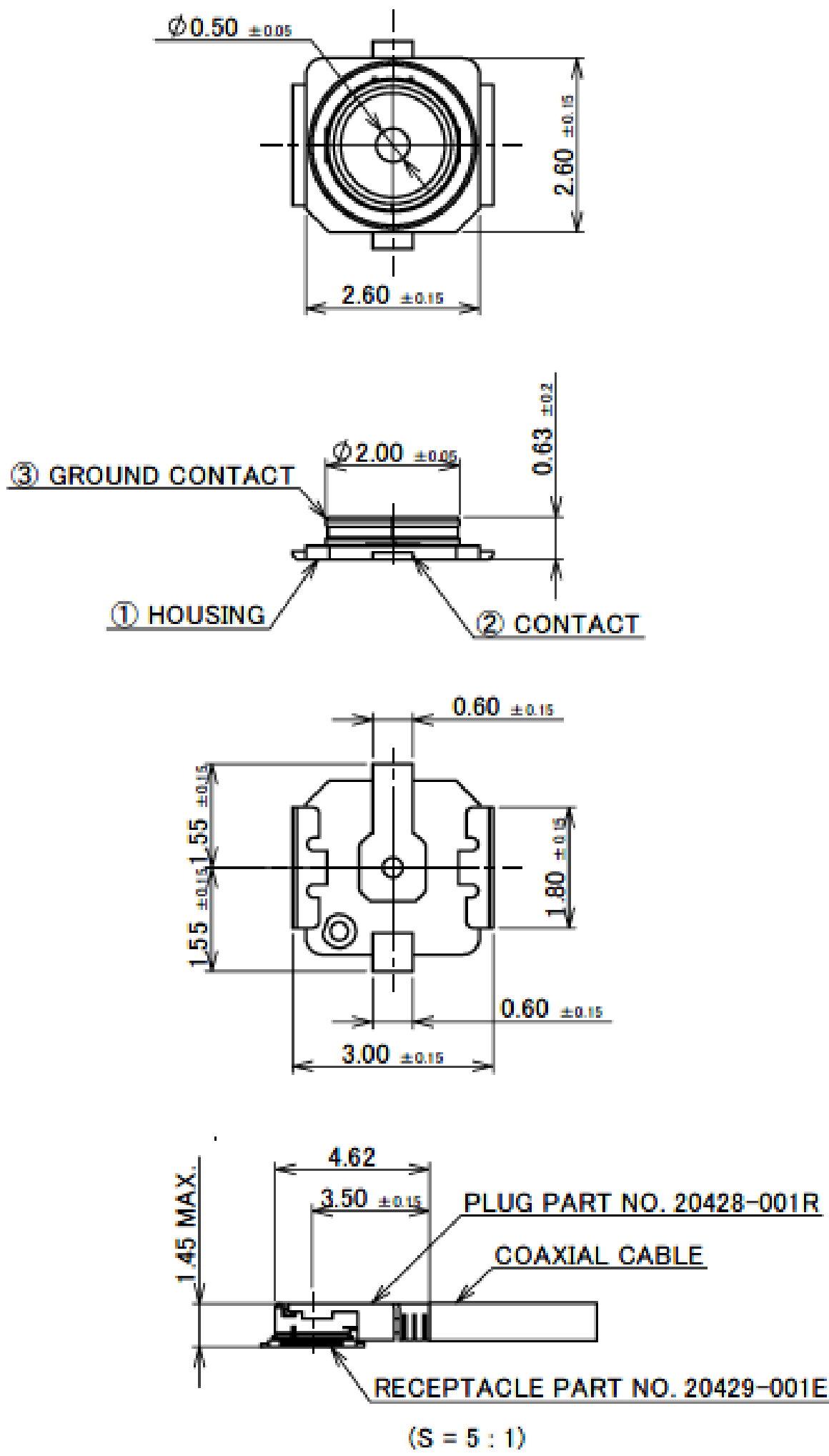
|                 |            |
|-----------------|------------|
| Recommended P/N | 20429-001E |
| PART NO.        |            |
| 20429-001E      |            |



Halogen Free



RoHS Compliant



|     |                |                 |                                                                                                           |
|-----|----------------|-----------------|-----------------------------------------------------------------------------------------------------------|
| 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 0.05 $\mu$ m MIN.<br>SOLDERING PART Au 0.05 $\mu$ m MIN. |
| 1   | HOUSING        | LCP             | UL94V-0, BLACK                                                                                            |
| NO. | DESCRIPTION    | MATERIAL        | FINISH , REMARKS                                                                                          |

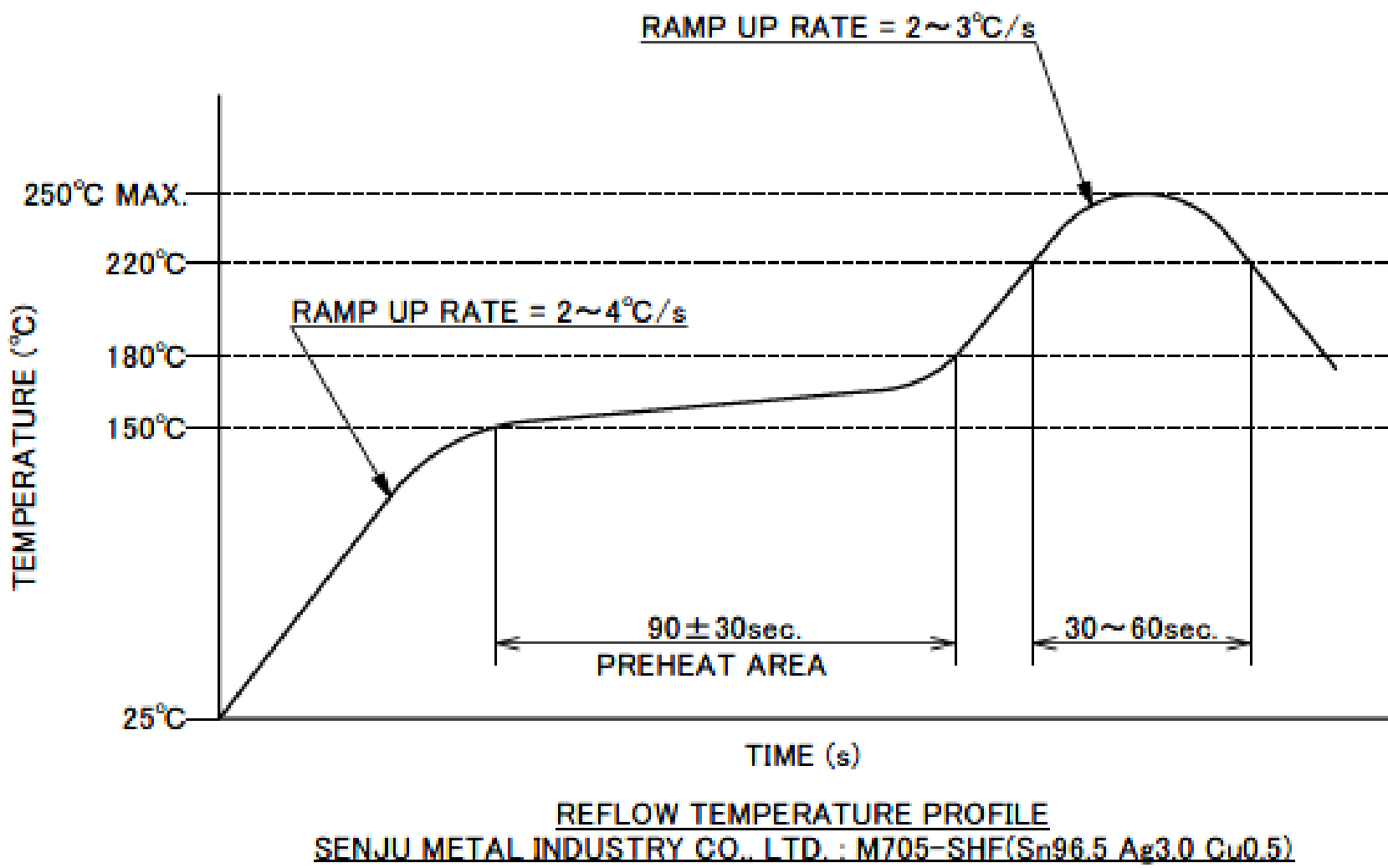
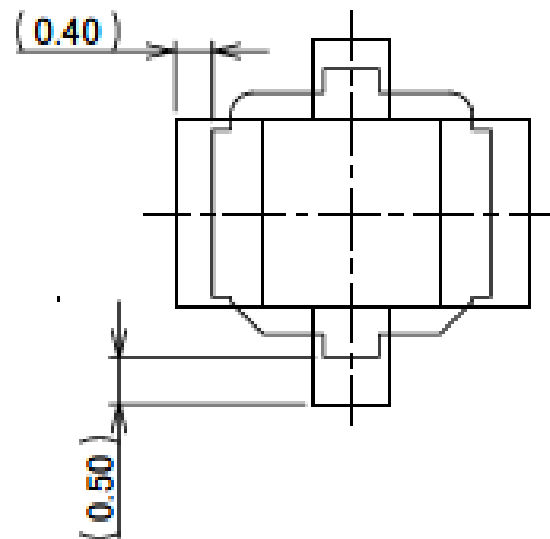
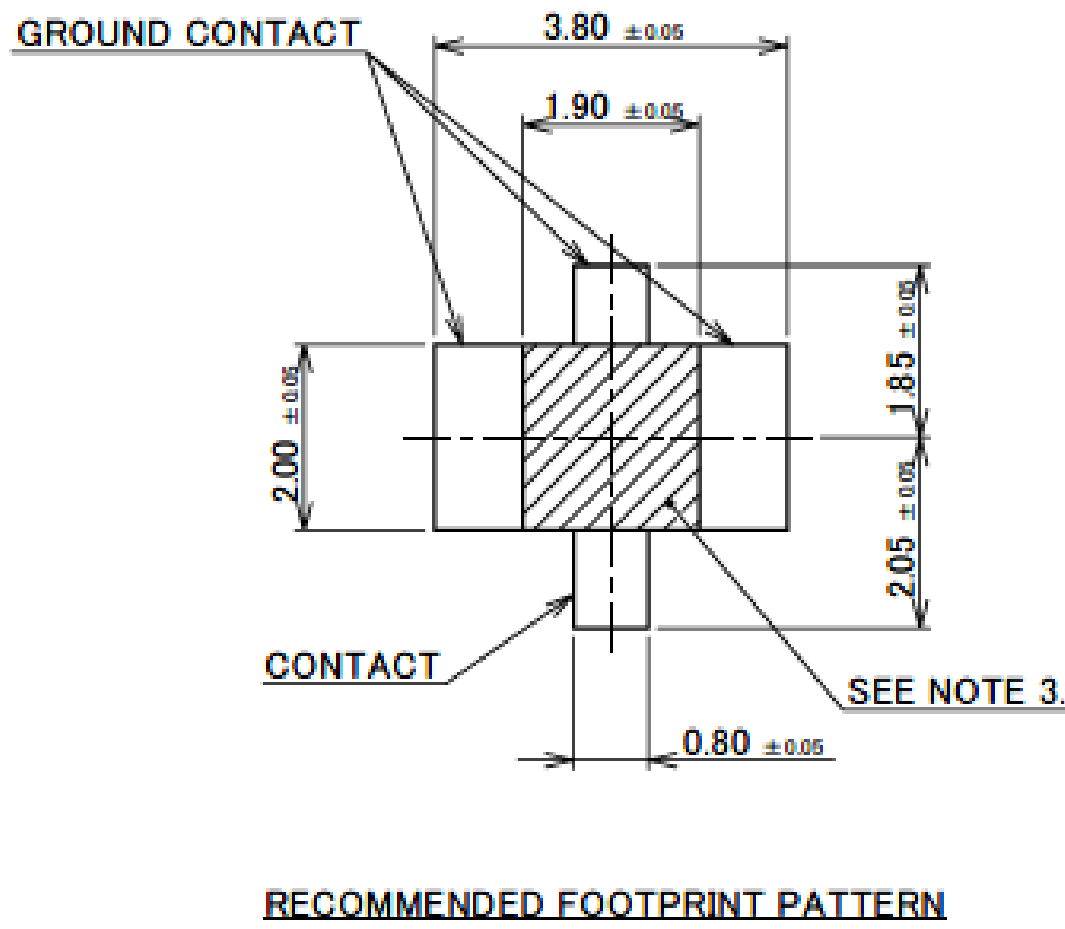
Rev.10



Receptacle for Cable Assembly

| ITEMS                                               | SPECIFICATION                                                      |
|-----------------------------------------------------|--------------------------------------------------------------------|
| APPLICABLE CONNECTOR PART NO.                       | 20428-001R                                                         |
| RATING VOLTAGE                                      | 60 V AC (R.M.S)                                                    |
| RATING FREQUENCY                                    | DC~9 GHz                                                           |
| OPERATING TEMPERATURE                               | 233~363 K (-40°C~+90°C)                                            |
| VSWR<br>(MATED WITH SMA ADAPTER PART No. 90413-002) | 1.30 MAX. AT 0.1~3 GHz, 1.40 MAX. AT 3~6 GHz, 1.50 MAX. AT 6~9 GHz |
| MAIN CONTACT RESISTANCE                             | INITIAL : 20 mohm MAX. / AFTER TEST : $\Delta$ R 20 mohm MAX.      |
| GROUND CONTACT RESISTANCE                           | INITIAL : 20 mohm MAX. / AFTER TEST : $\Delta$ R 20 mohm MAX.      |
| INSULATION RESISTANCE                               | INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN.               |
| DIELECTRIC WITHSTANDING VOLTAGE                     | AC 200 V 1min                                                      |
| DURABILITY                                          | 30 CYCLES                                                          |
| TOTAL MATING FORCE (INITIAL / AFTER TEST)           | 15 N MAX. / 15 N MAX.                                              |
| TOTAL UNMATING FORCE (INITIAL / AFTER TEST)         | 4 N MIN. / 2 N MIN.                                                |
| PRODUCT SPECIFICATION                               | PRS-1350                                                           |
| TEST REPORT                                         | TR-07031                                                           |
| PACKING STANDARD                                    | 300-532                                                            |
| INSTRUCTION MANUAL                                  | HIM-11001                                                          |
| APPEARANCE CRITERIA NO.                             | QLS-A***                                                           |

Rev.10



NOTES  
3. NO GROUND, SIGNAL, AND RESIST IN THIS AREA.

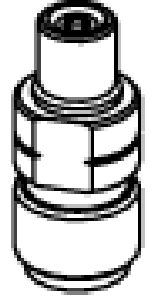
Rev.10



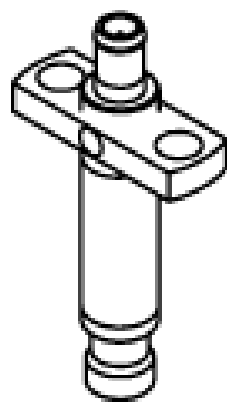
# Accessories for MHF®-A Receptacle



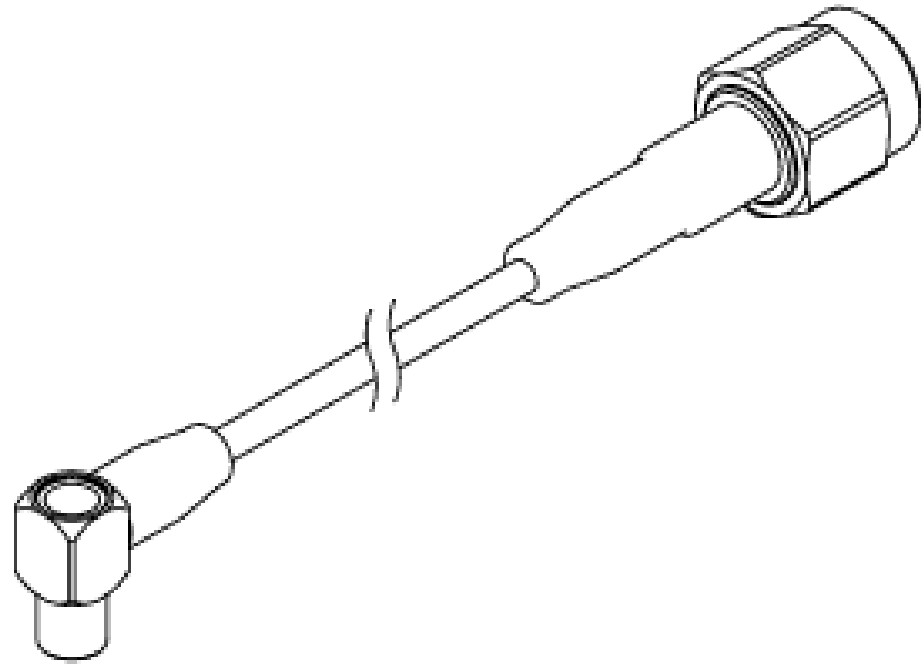
MHF-A13 SMA ADAPTER  
PART NO. 90413-002



MHF-A13 RECEPTACLE HIGH CYCLE TYPE  
PART NO. 90416-001



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



MHF SERIES N45 C TO SMA ADAPTER CABLE  
PART NO. 90577-\*\*\*\*  
(S = 5 : 1)

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



Board to  
Board



High-Density



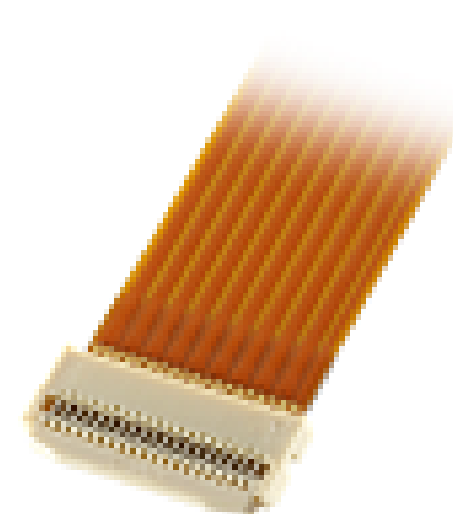
Autolocking  
FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial  
/ Discrete Cable



High-Speed



RF



High-Frequency



Optical  
Module



High-Speed



Power



High-Power



I/O  
(Input/Output)



Quick charge



Effector



Custom  
Connectors  
Available

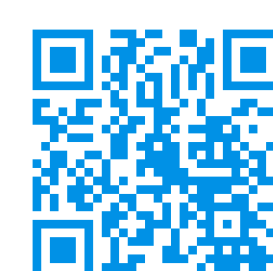
Inquiry



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