

MHF[®] 7S

改良的EMI性能，是5G mmWave應用的理想選擇，在15GHz頻率，2.0 x 2.0 mm 小尺寸封裝的情況下，最大駐波比為1.5

Product Specifications:

| | | |
|--------------------------|-------------|-----------|
| Mated Height (mm max.) | 1.4 | |
| Rece. SMT Size (mm) | 2.0 x 2.0 | |
| Applicable Frequency | DC ~ 15 GHz | |
| Characteristic Impedance | 50 ohm | |
| VSWR (L=100 mm) | DC~3 GHz | 1.30 max. |
| | 3~6 GHz | 1.35 max. |
| | 6~9 GHz | 1.40 max. |
| | 9~12 GHz | 1.45 max. |
| | 12~15 GHz | 1.50 max. |

Applicable Cable Size:

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

Applicable Standards (Reference Only):c

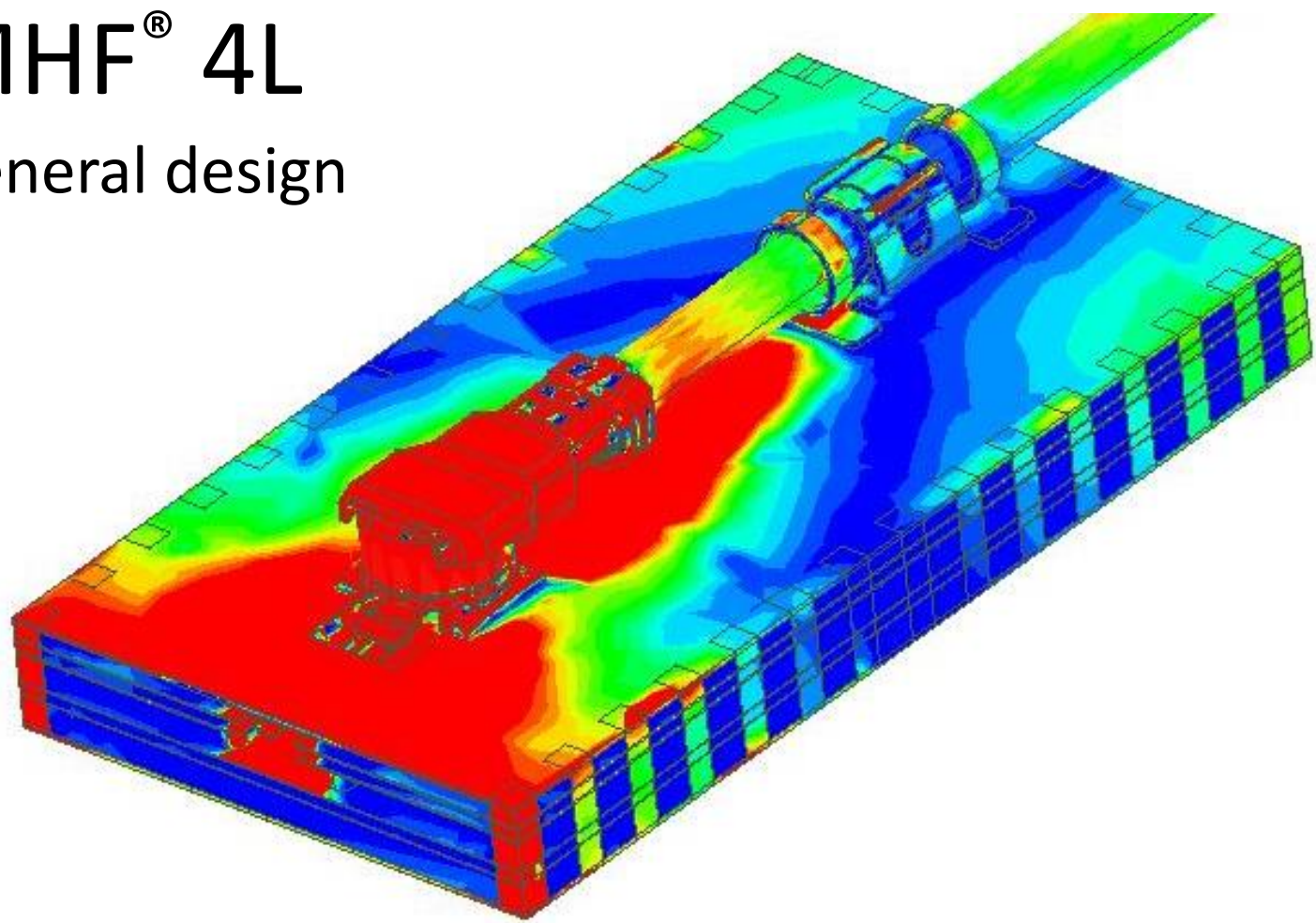
5G mmWave(~15GHz), 5G sub-6, Wi-Fi 6E, WiGig, LTE/LTE-Advanced, LPWA, Bluetooth, GPS



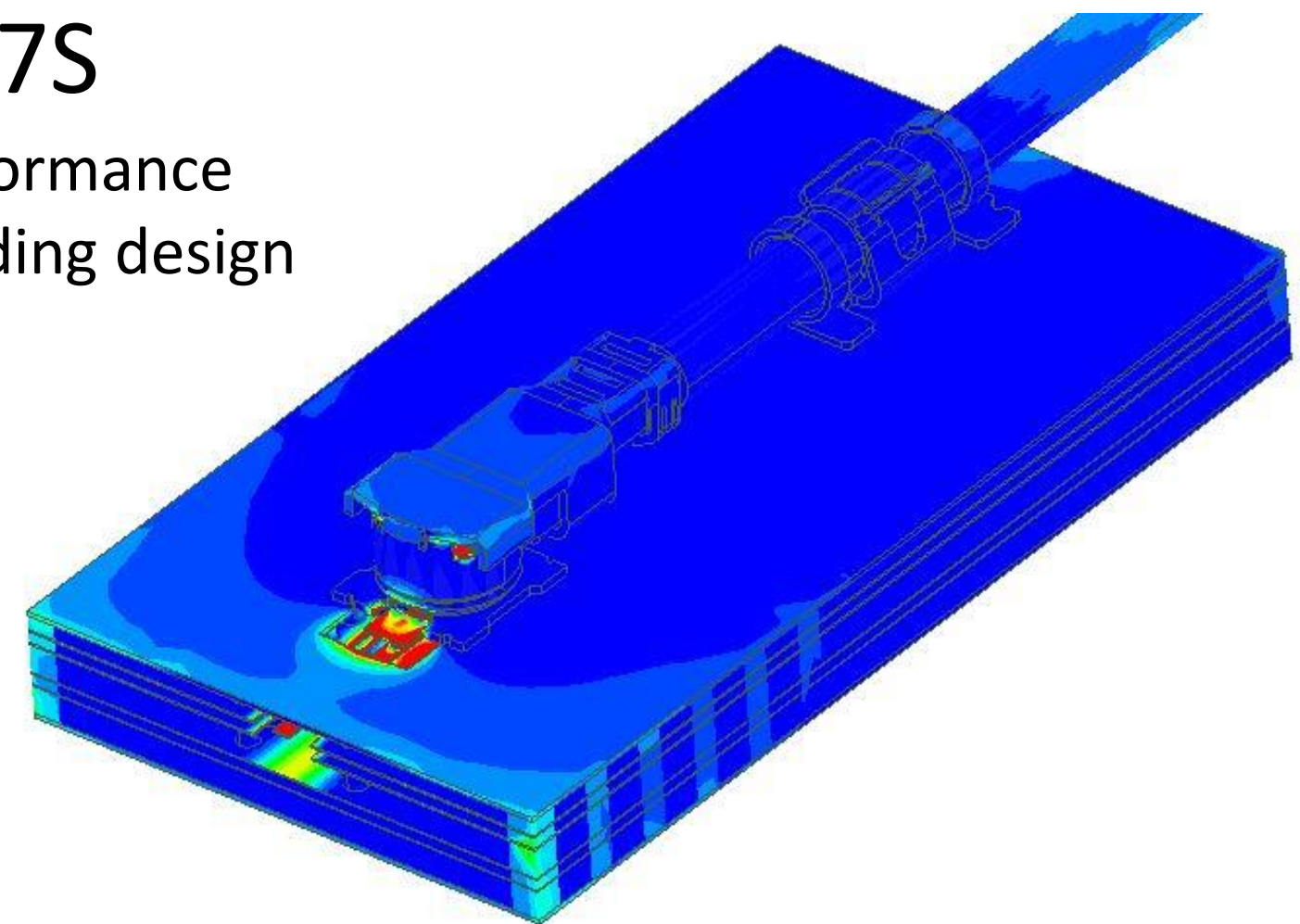
► 獨特的屏蔽設計 (ZenShield[®]) 減少5G mmWave應用中不必要的電磁乾擾

電場強度分佈(模擬)

MHF[®] 4L
General design

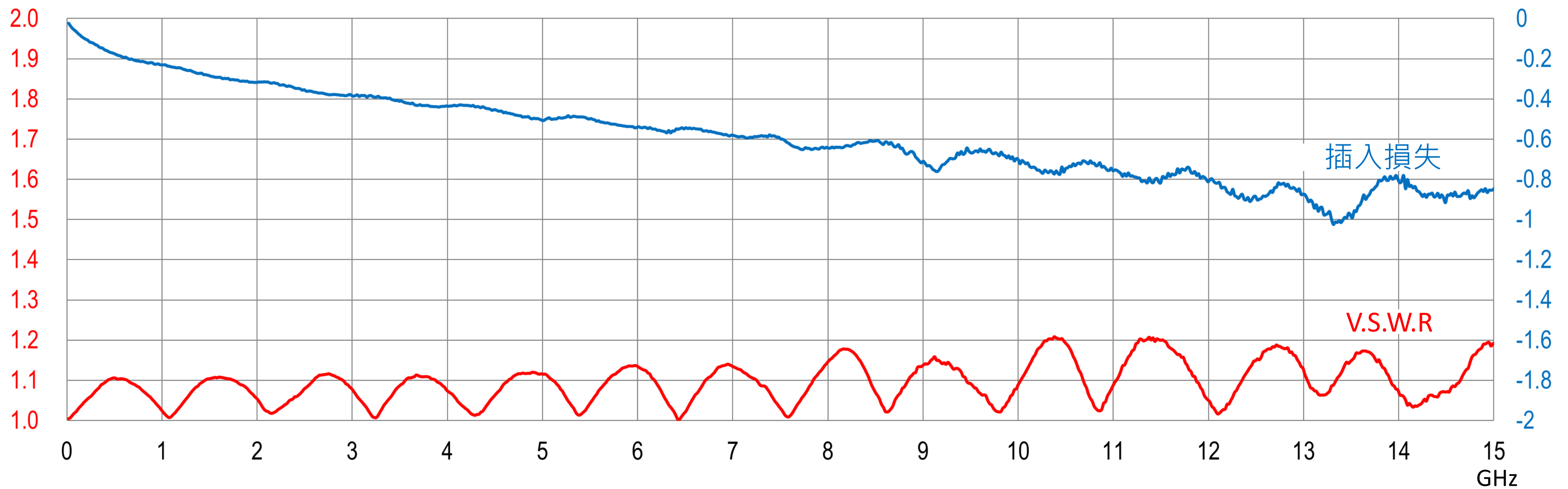


MHF[®] 7S
High-performance
EMI shielding design

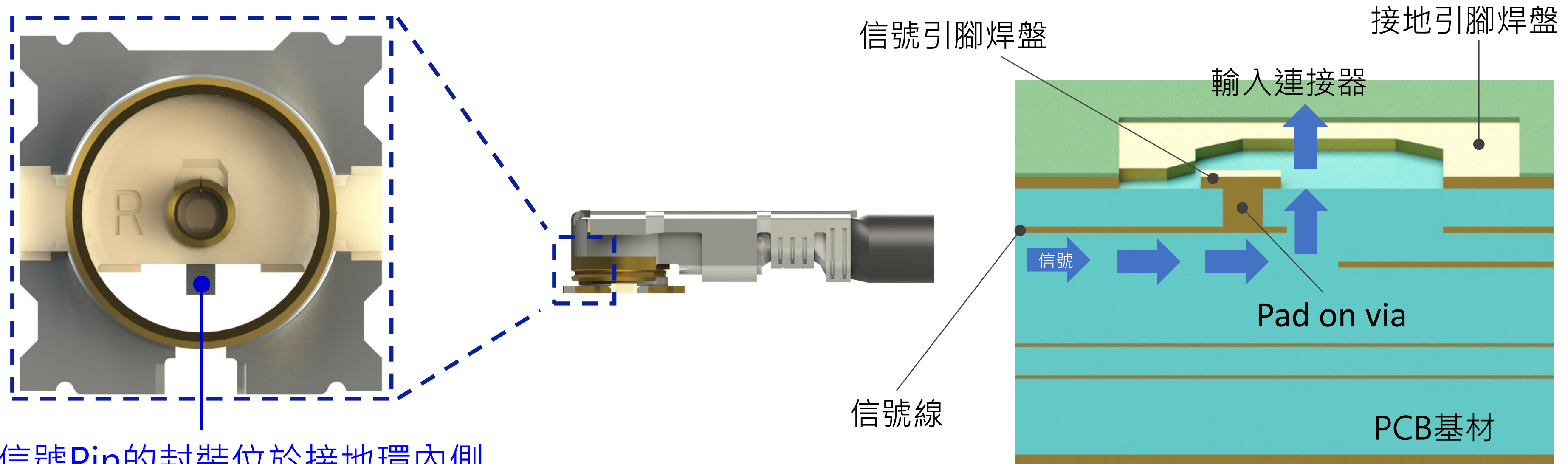


► 超小體積, 最大駐波比為1.5

公母座嵌合情況下
RF線束長度：100 mm



► 業內首創：將母座的信號Pin的封裝位於接地環內側



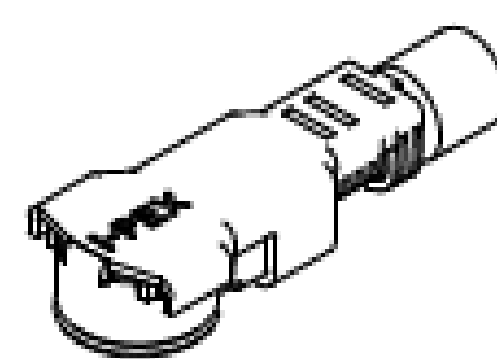
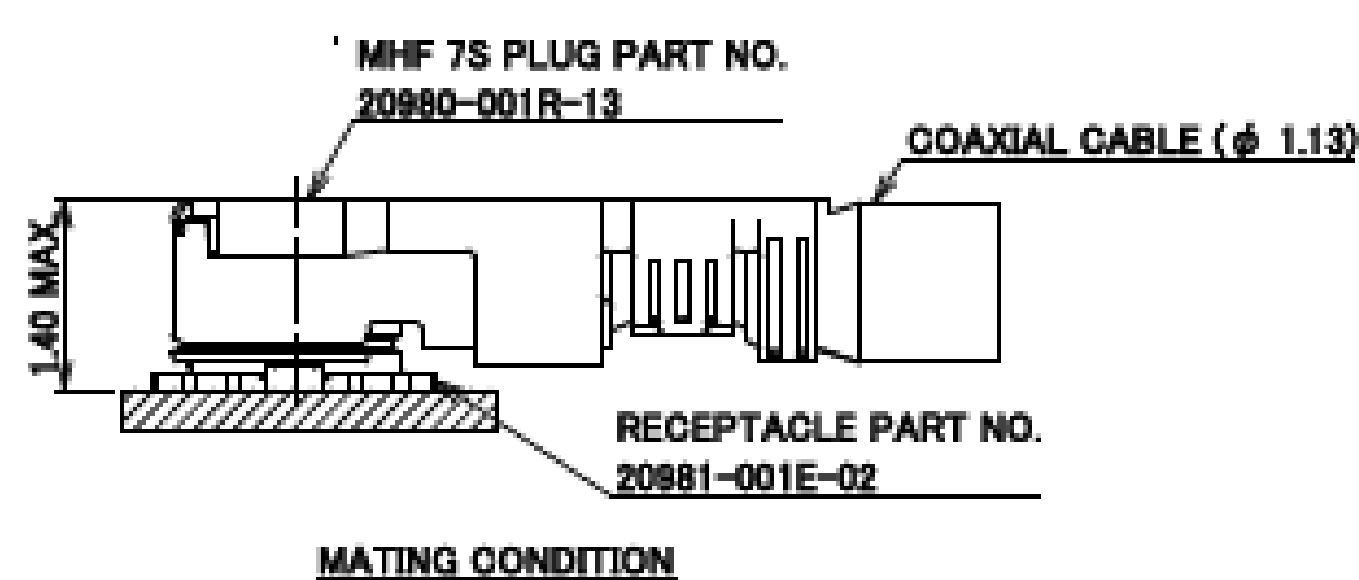
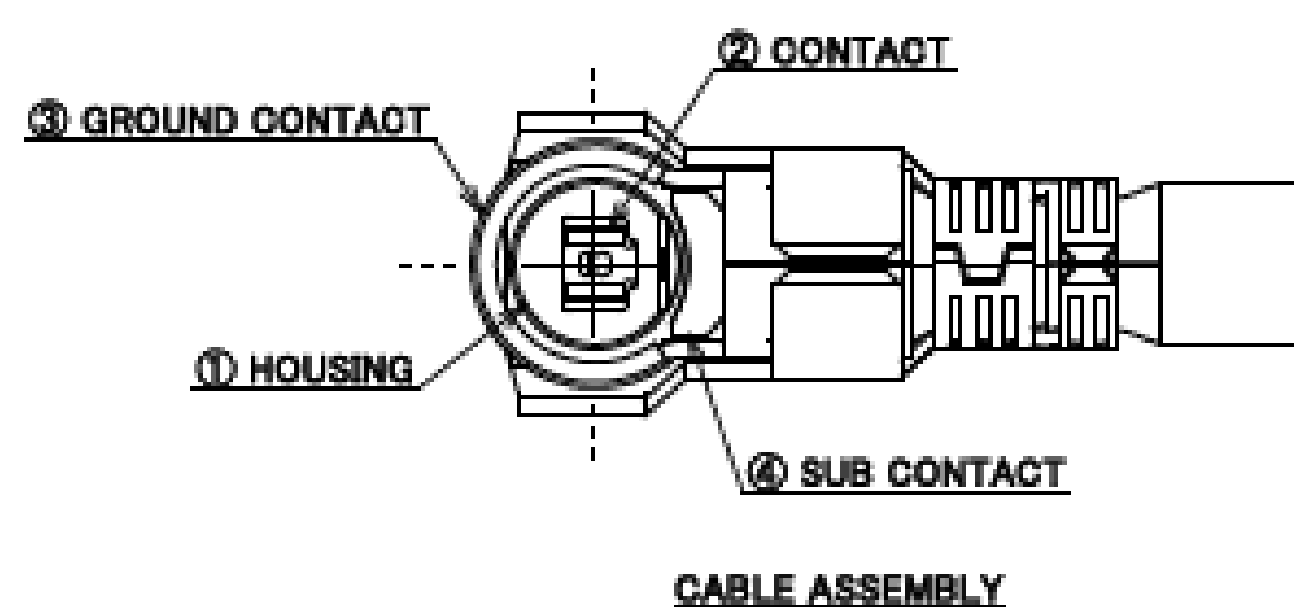
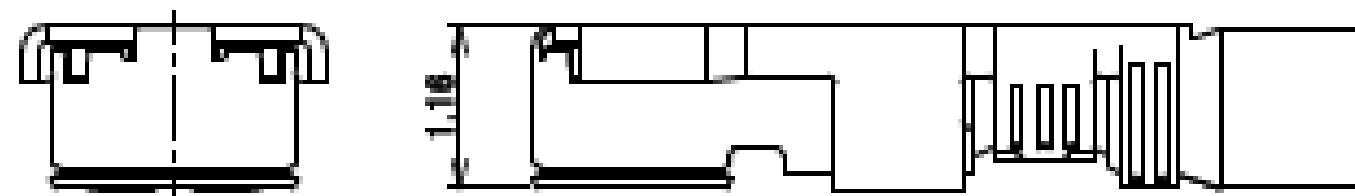
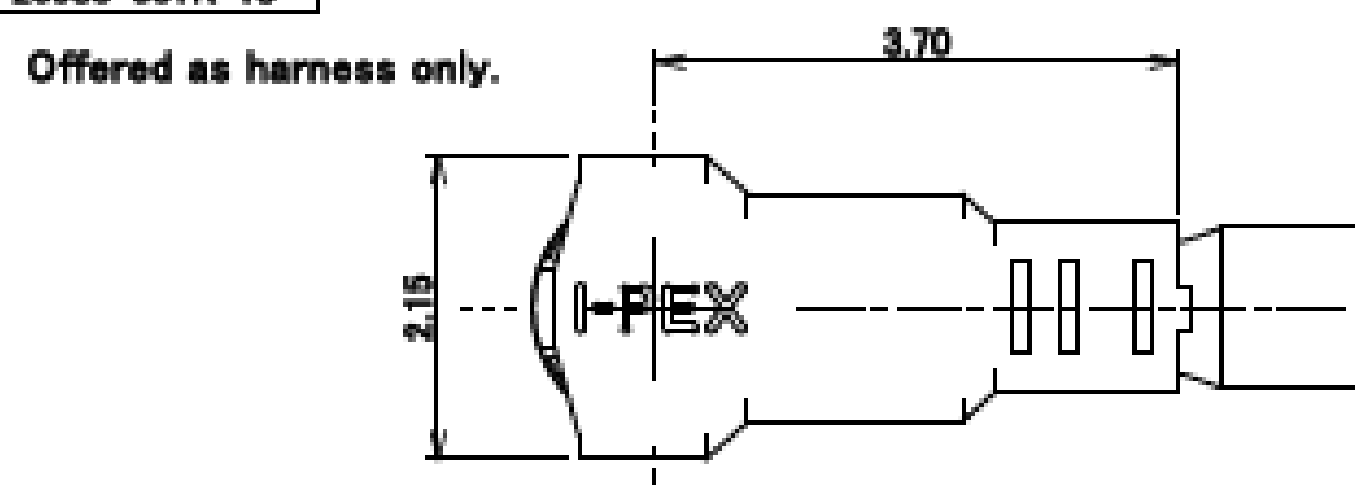
信號Pin的封裝位於接地環內側

Component Parts Details

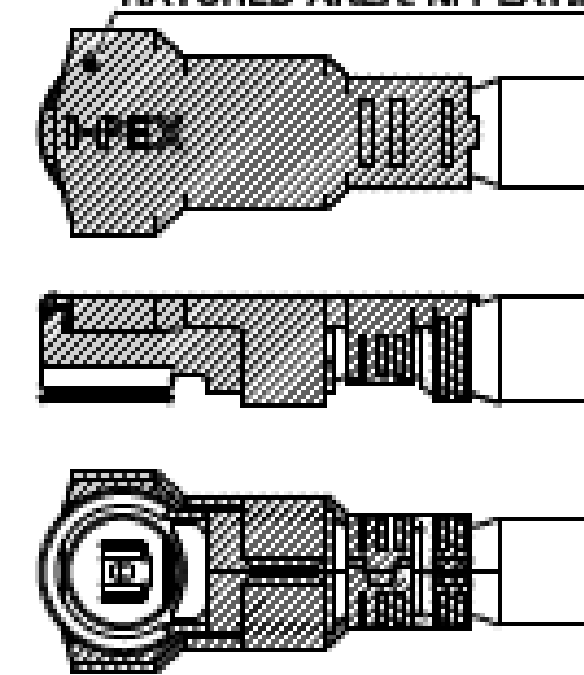
MHF[®] 7S plug

| | |
|-----------------|---------------|
| Recommended P/N | 20980-001R-13 |
| PART NO. | 20980-001R-13 |

Offered as harness only.

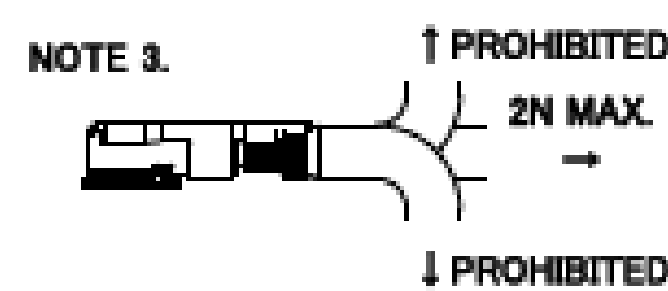
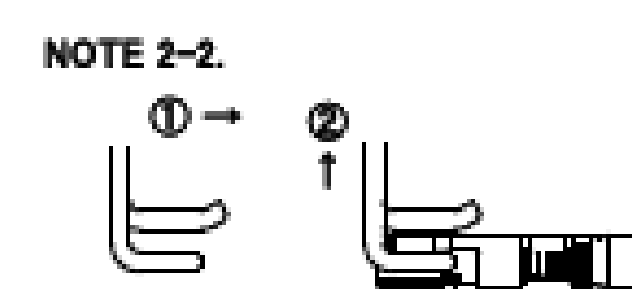
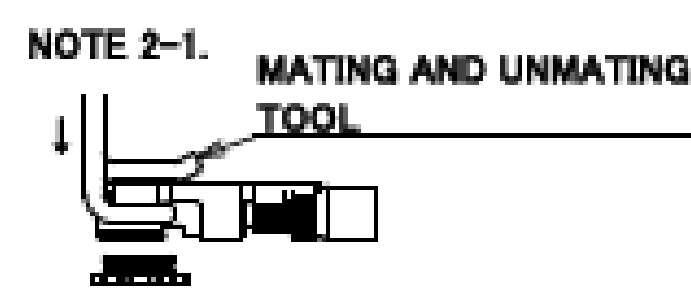


HATCHED AREA: NI PLATING AREA



NOTES

1. APPLICABLE CONNECTOR: 20981-001E-02
2. 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
USE THE MATING AND UNMATING TOOL (PART NO. 91186-0001) AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
3. PERMISSIBLE LOAD OF CABLE AT MATING.
4. CHARACTERISTIC IMPEDANCE: 50 Ω (NOMINAL VALUE)



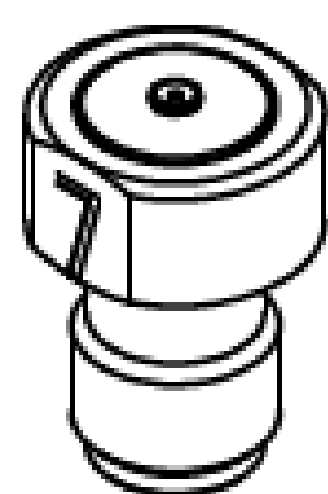
| NO. | DESCRIPTION | MATERIAL | FINISH, REMARKS |
|-----|----------------|-----------------|---|
| 4 | SUB CONTACT | PHOSPHOR BRONZE | ALL OVER: Ni 1.00 μm MIN. CONTACT PART: Au 0.1 μm MIN. |
| 3 | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER: Ni 0.7 μm MIN. CONTACT PART: Au 0.1 μm MIN. (Ni PLATING AREA) Ni ONLY |
| 2 | CONTACT | CORSON ALLOY | ALL OVER: Ni 1.00 μm MIN. CONTACT PART: Au 0.1 μm MIN. |
| 1 | HOUSING | LGP | UL94V-0, WHITE |

MHF® 7S plug

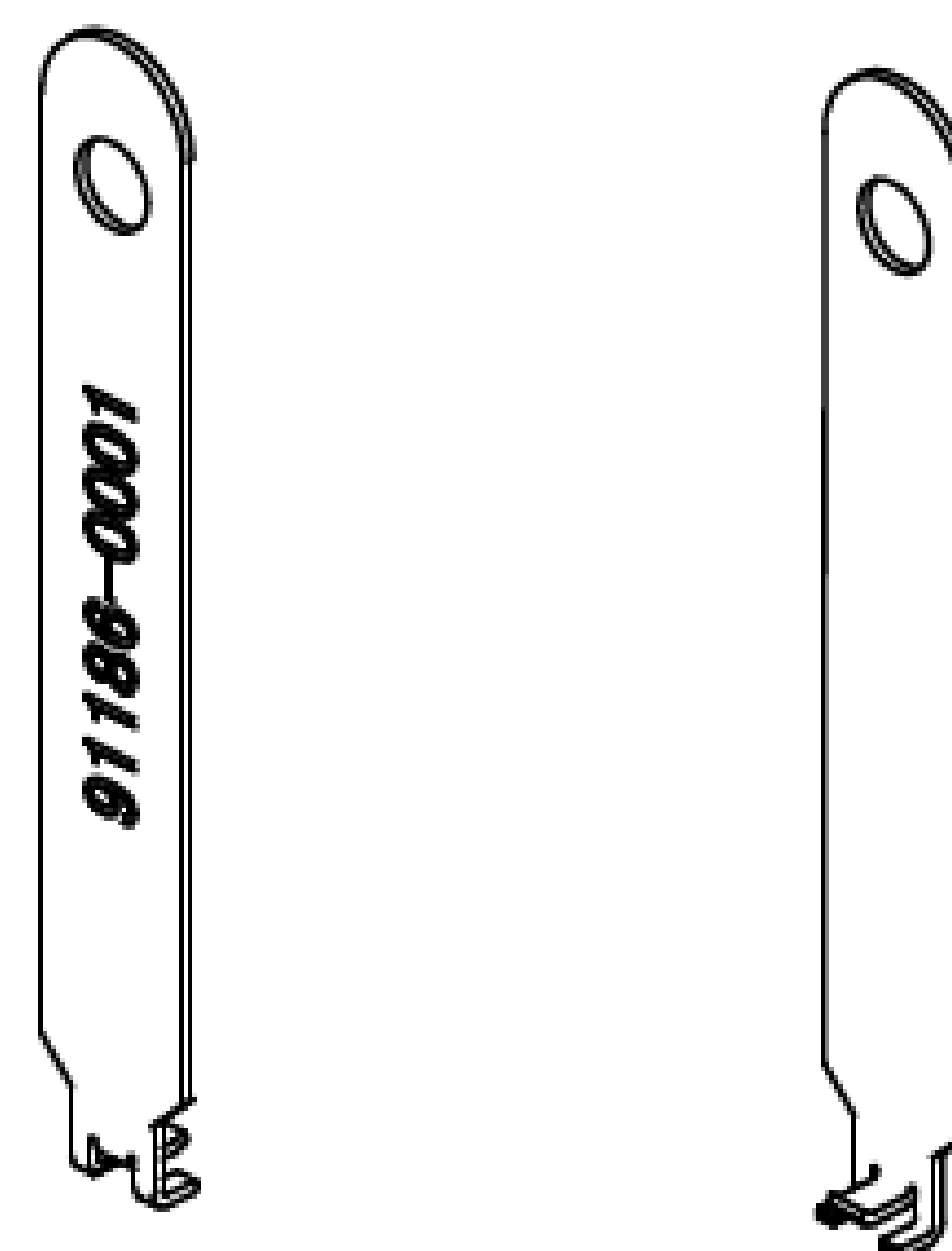
| ITEMS | SPECIFICATION |
|---------------------------------------|---|
| APPLICABLE CONNECTOR PART No. | 20981-001E-02 |
| RATING VOLTAGE | 60 V AC (R.M.S)/DC |
| RATING FREQUENCY | DC~15 GHz |
| OPERATING TEMPERATURE | 233~363 K (-40°C~+90°C) |
| OPERATING HUMIDITY | 90% MAX. (NON-CONDENSING) |
| CHARACTERISTIC IMPEDANCE | 50 ohm (NOMINAL VALUE) |
| VSWR | 1.30 MAX. AT 0.1 ~ 3 GHz, 1.35 MAX. AT 3 ~ 6 GHz, 1.40 MAX. AT 6 ~ 9 GHz, 1.45 MAX. AT 9 ~ 12 GHz, 1.50 MAX. AT 12 ~ 15 GHz |
| MAIN CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : Δ R 20 mohm MAX. |
| GROUND CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : Δ R 20 mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC200V 1min |
| DURABILITY | 30 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | INITIAL: 30N MAX. (VERTICAL DIRECTION) AFTER TEST: 30N MAX. (VERTICAL DIRECTION) |
| UNMATING FORCE (INITIAL / AFTER TEST) | INITIAL: 20N MAX., 5N MIN. (VERTICAL DIRECTION) AFTER TEST: 20N MAX., 3N MIN. (VERTICAL DIRECTION) |
| CRIMP STRENGTH | 10N MIN. |
| PRODUCT SPECIFICATION | PRS-2676 |
| TEST REPORT | TR-20043 |
| INSTRUCTION MANUAL | HIM-19009 |
| APPEARANCE CRITERIA No. | QLS-A*** |

Rev.4

Accessories for MHF® 7S plug



MHF 7 (S) PLUG SMA ADAPTER
PART NO. 91255-0001

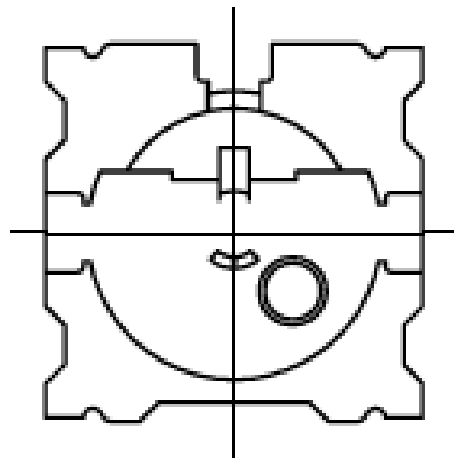
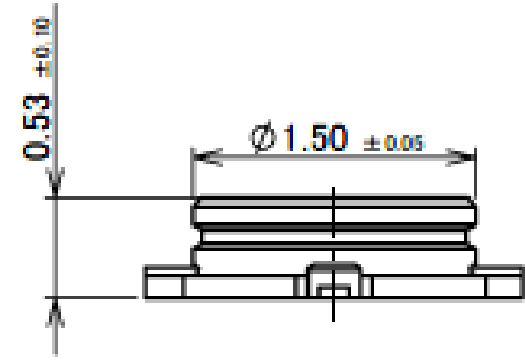
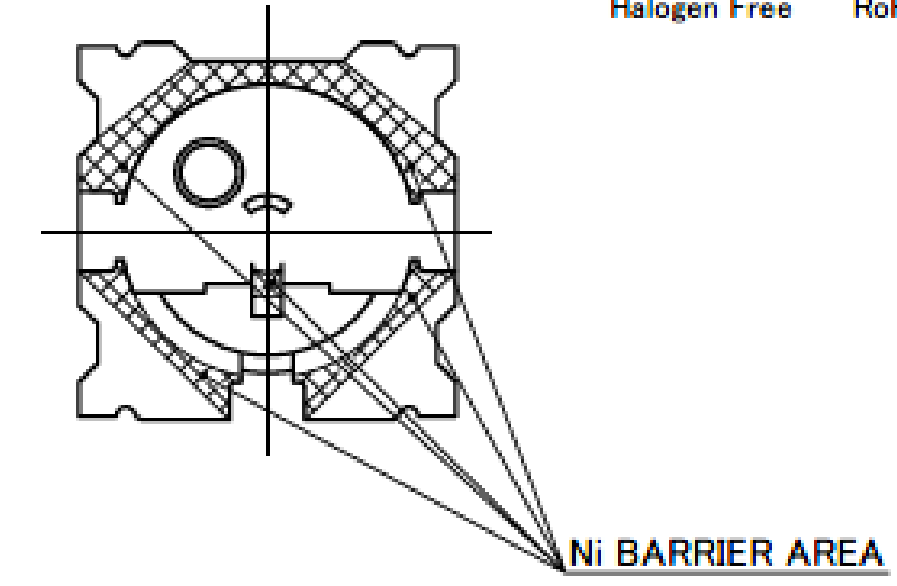
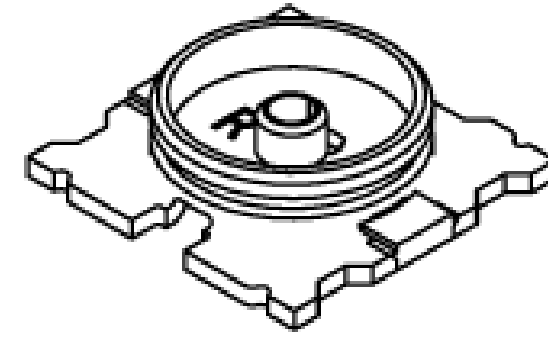
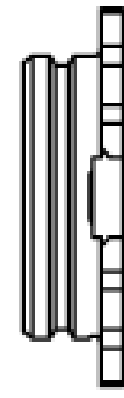
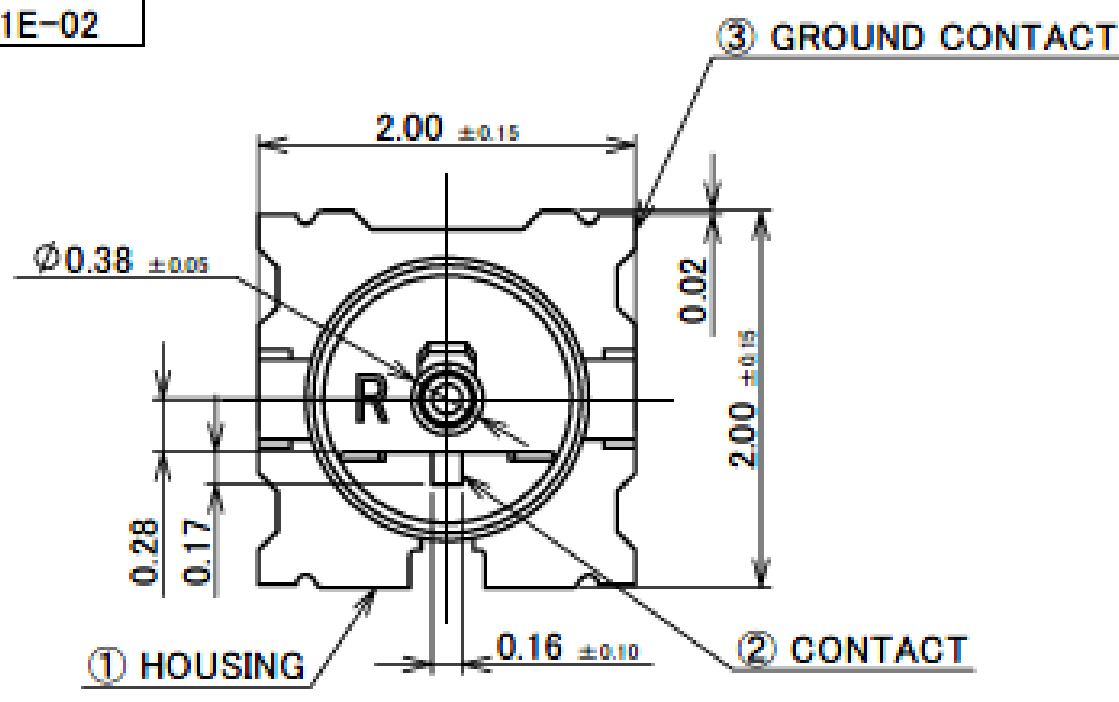
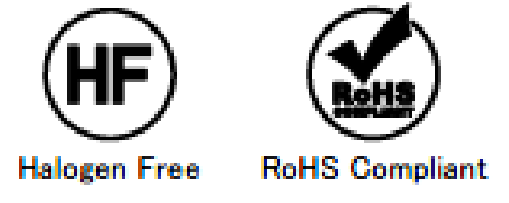


MHF 7S MATING AND UNMATING TOOL
PART NO. 91186-0001

Rev.4

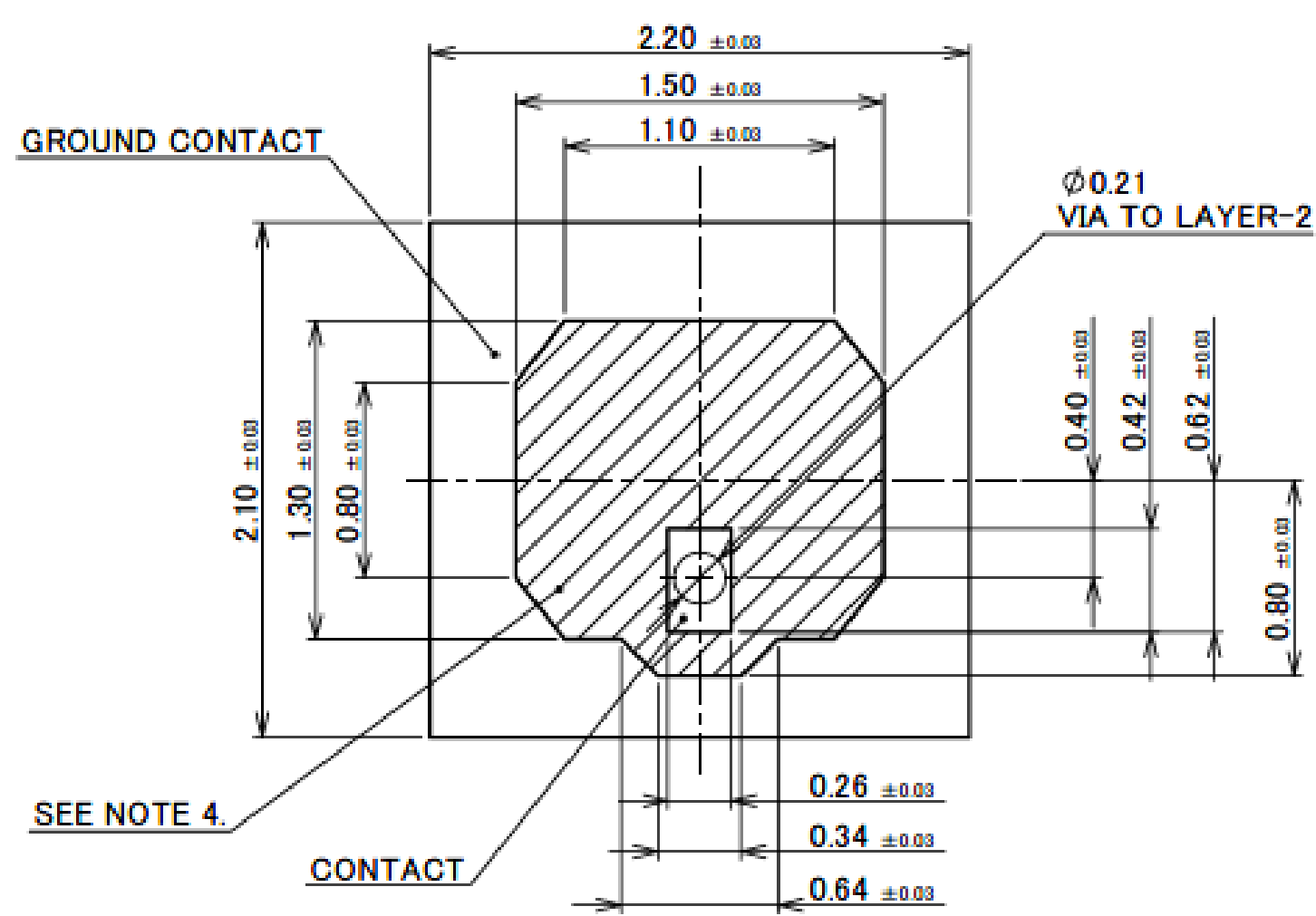
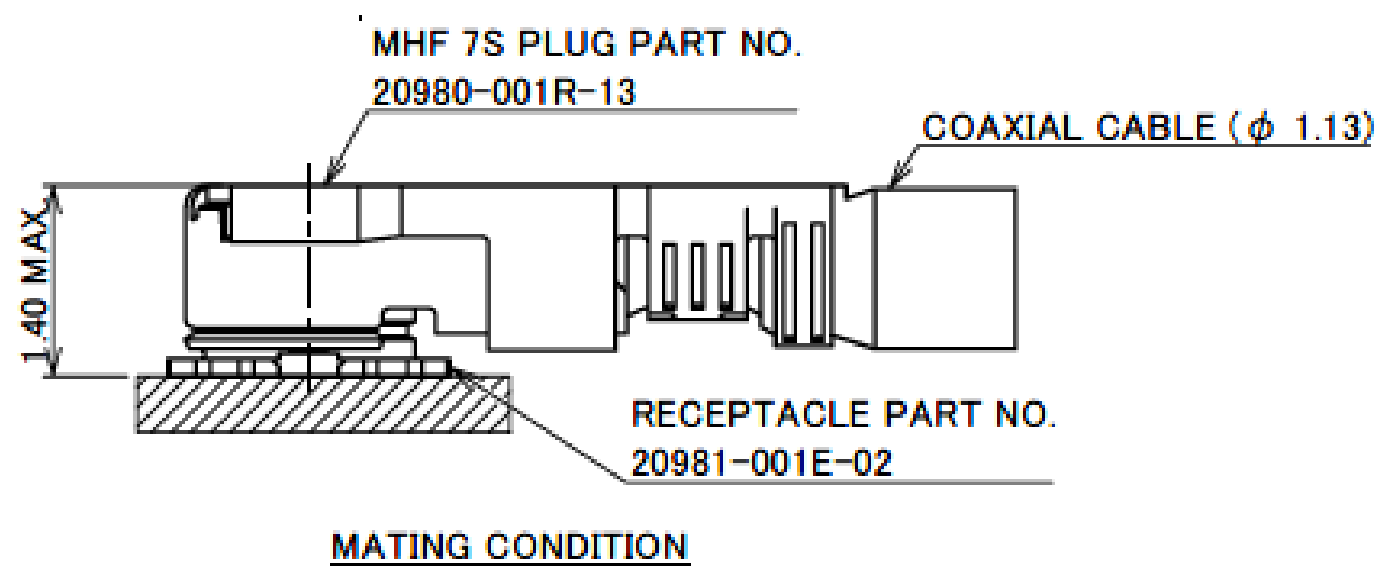
MHF[®] 7S Receptacle

| | |
|-----------------|---------------|
| Recommended P/N | 20981-001E-02 |
| PART NO. | 20981-001E-02 |

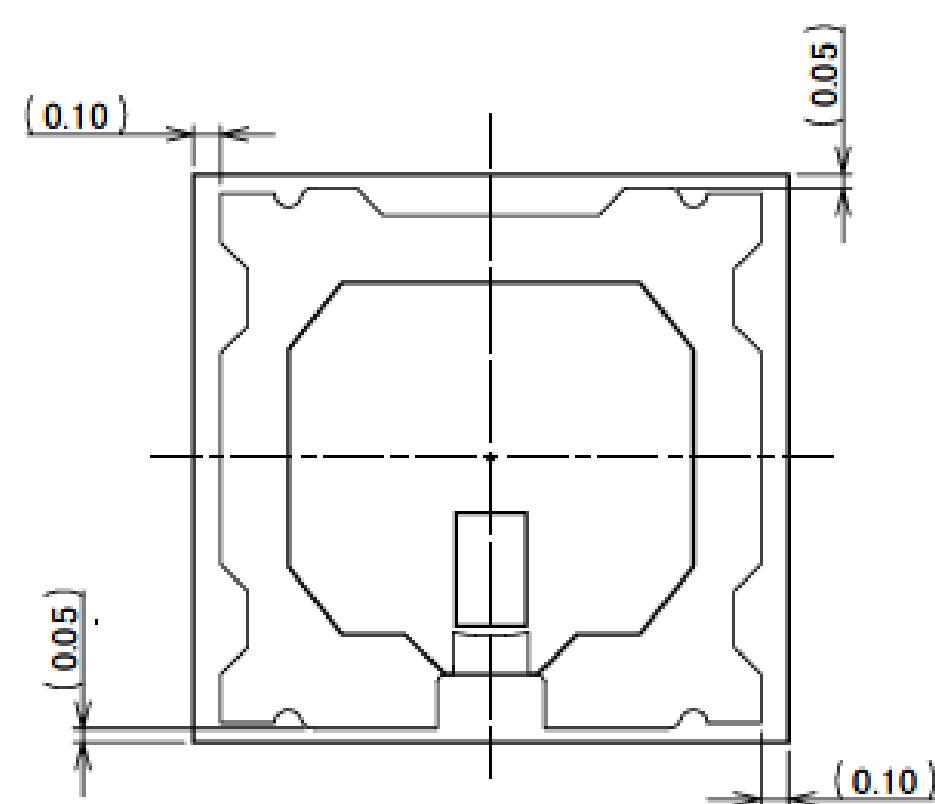


- NOTES
1. APPLICABLE CONNECTOR
20980-001R-13
 2. COPLANARITY: 0.08mm MAX.
 3. CHARACTERISTIC IMPEDANCE: 50Ω (NOMINAL VALUE)

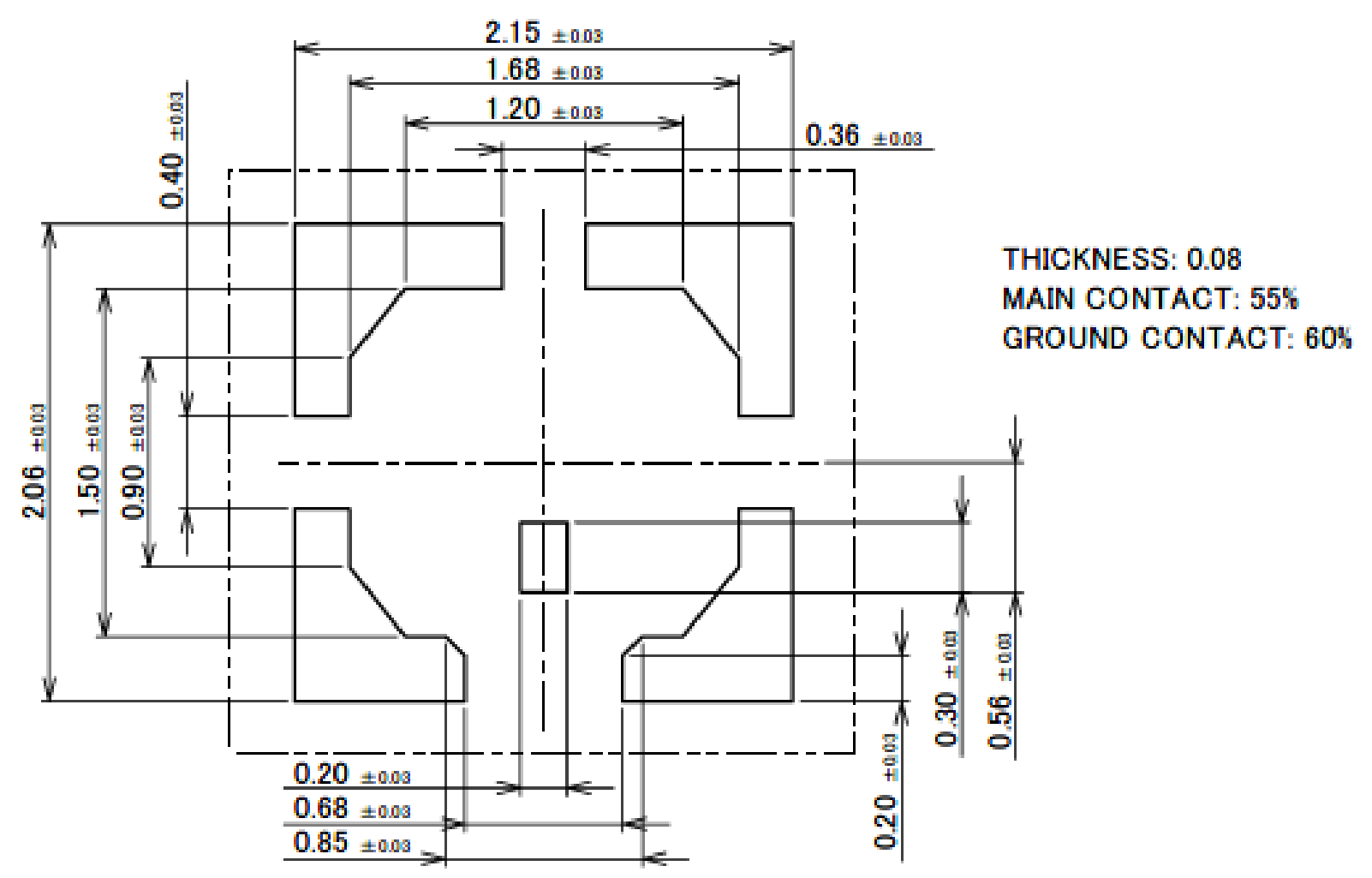
| NO. | DESCRIPTION | MATERIAL | FINISH, REMARKS |
|-----|----------------|-----------------|--|
| 3 | GROUND CONTACT | PHOSPHOR BRONZE | ALL OVER: Ni 1.00 μm MIN. CONTACT PART: 0.05 μm MIN. SOLDERING PART Au AREA: 0.02 μm MIN. |
| 2 | CONTACT | CORSON ALLOY | ALL OVER: Ni 1.00 μm MIN. CONTACT PART: 0.1 μm MIN. SOLDERING PART Au AREA: 0.02 μm MIN. |
| 1 | HOUSING | LCP | UL94V-0, WHITE |



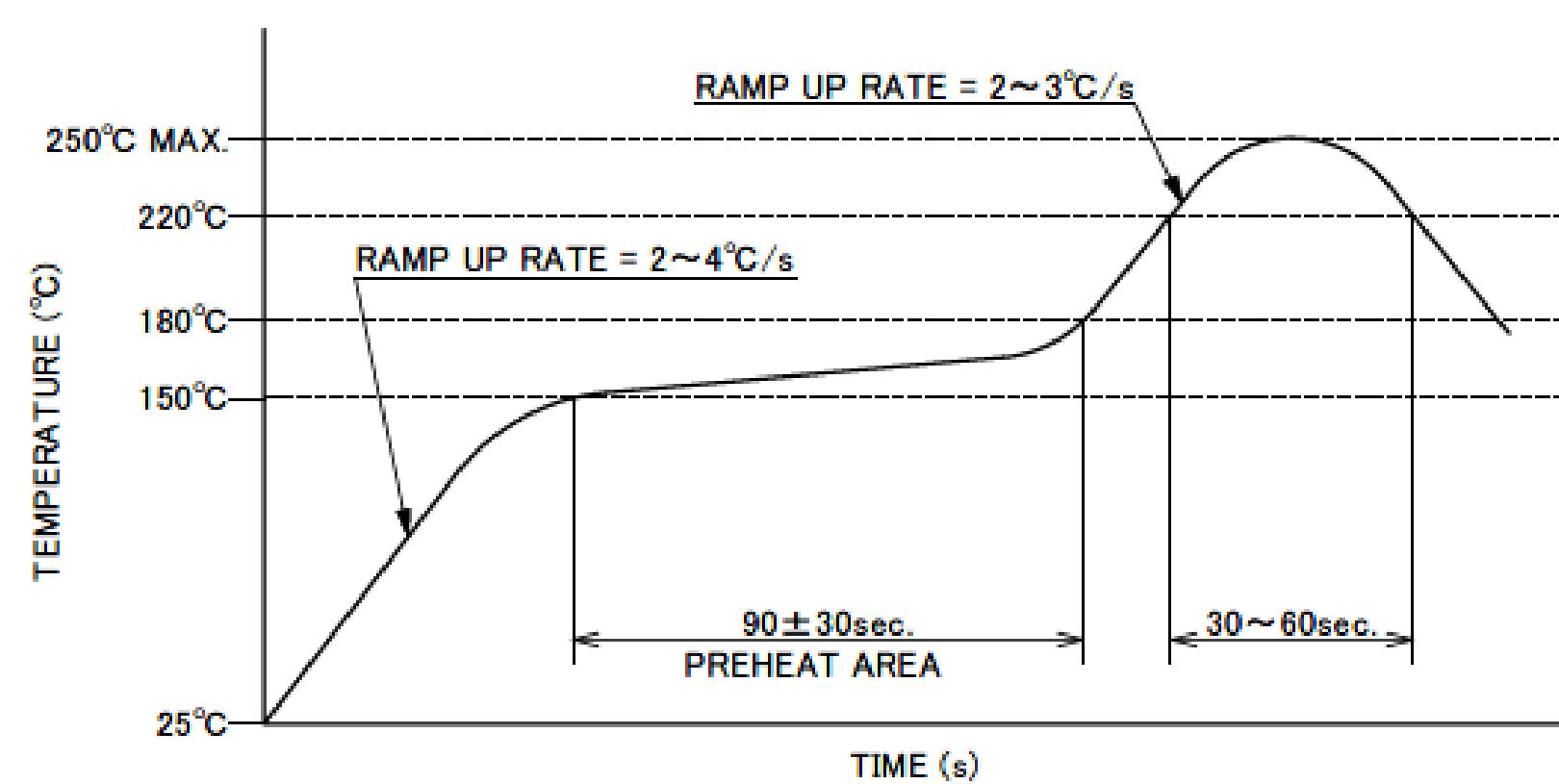
RECOMMENDED FOOTPRINT PATTERN



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



METAL MASK



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

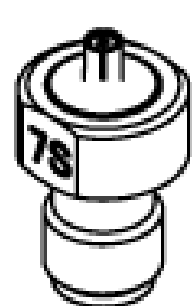
- NOTES
4. NO GROUND, SIGNAL, AND RESIST IN THIS AREA.

MHF® 7S Receptacle

| ITEMS | SPECIFICATION |
|---------------------------------------|---|
| APPLICABLE CONNECTOR PART No. | 20980-001R-13 |
| RATING VOLTAGE | 60 V AC (R.M.S)/DC |
| RATING FREQUENCY | DC~15 GHz |
| OPERATING TEMPERATURE | 233~363 K (-40°C~+90°C) |
| OPERATING HUMIDITY | 90% MAX. (NON-CONDENSING) |
| CHARACTERISTIC IMPEDANCE | 50 ohm (NOMINAL VALUE) |
| VSWR | 1.30 MAX. AT 0.1 ~ 3 GHz, 1.35 MAX. AT 3 ~ 6 GHz, 1.40 MAX. AT 6 ~ 9 GHz, 1.45 MAX. AT 9 ~ 12 GHz, 1.50 MAX. AT 12 ~ 15 GHz |
| MAIN CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : \leq 20 mohm MAX. |
| GROUND CONTACT RESISTANCE | INITIAL : 20 mohm MAX. / AFTER TEST : \leq 20 mohm MAX. |
| INSULATION RESISTANCE | INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN. |
| DIELECTRIC WITHSTANDING VOLTAGE | AC200V 1min |
| DURABILITY | 30 CYCLES |
| MATING FORCE (INITIAL / AFTER TEST) | INITIAL: 30N MAX. (VERTICAL DIRECTION) AFTER TEST: 30N MAX. (VERTICAL DIRECTION) |
| UNMATING FORCE (INITIAL / AFTER TEST) | INITIAL: 20N MAX., 5N MIN. (VERTICAL DIRECTION) AFTER TEST: 20N MAX., 3N MIN. (VERTICAL DIRECTION) |
| CRIMP STRENGTH | 10N MIN. |
| PRODUCT SPECIFICATION | PRS-2676 |
| TEST REPORT | TR-20043 |
| PACKING STANDARD | PST-19094 |
| INSTRUCTION MANUAL | HIM-19009 |
| APPEARANCE CRITERIA No. | QLS-A*** |

Rev.5

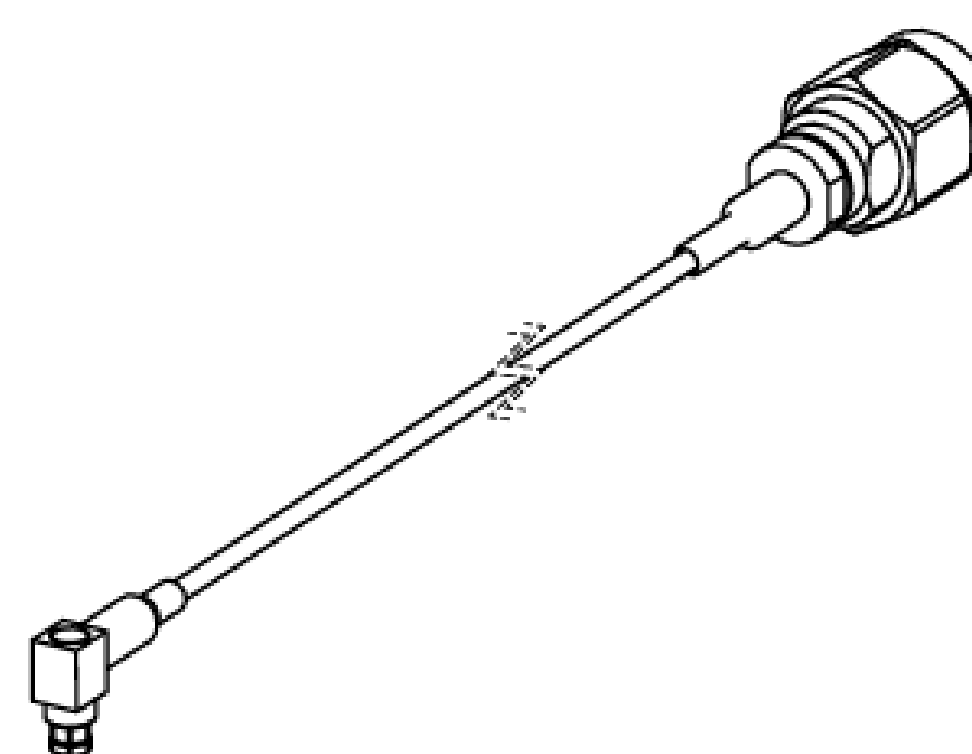
Accessories for MHF® 7S Receptacle



MHF 7S RECEPTACLE SMA ADAPTER
PART NO. 91256-0001



MHF 7S RECEPTACLE HIGH CYCLE N30 SMPM ADAPTER
PART NO. 91145-0001



MHF SERIES N30 SMPM TO SMA ADAPTER CABLE
PART NO. 91197-300*

* 91145-0001 AND 91197-300* SHOULD BE USED TOGETHER.

Rev.5

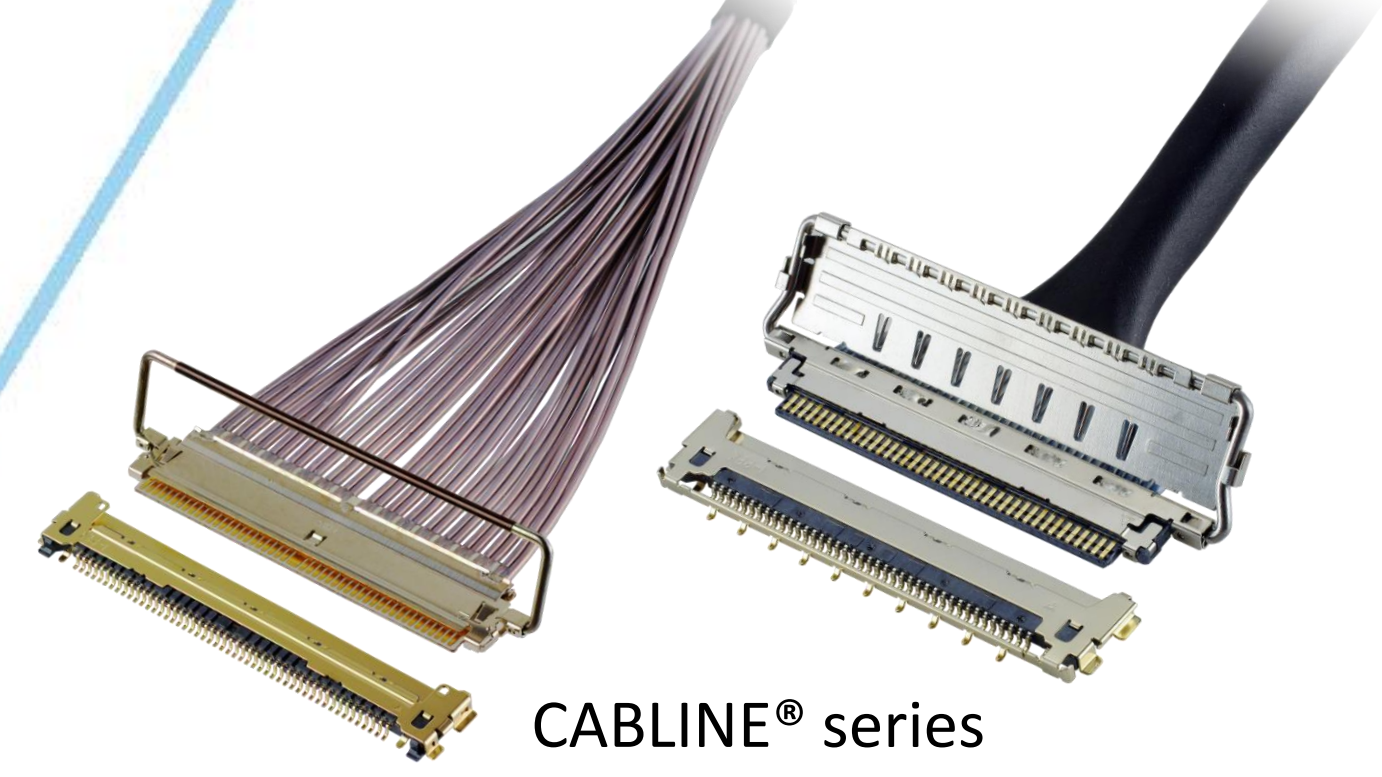
Custom Products Available

RF Connector

MHF® series



Micro-coaxial/Twinax/ Discrete Wire Connector



CABLINE® series

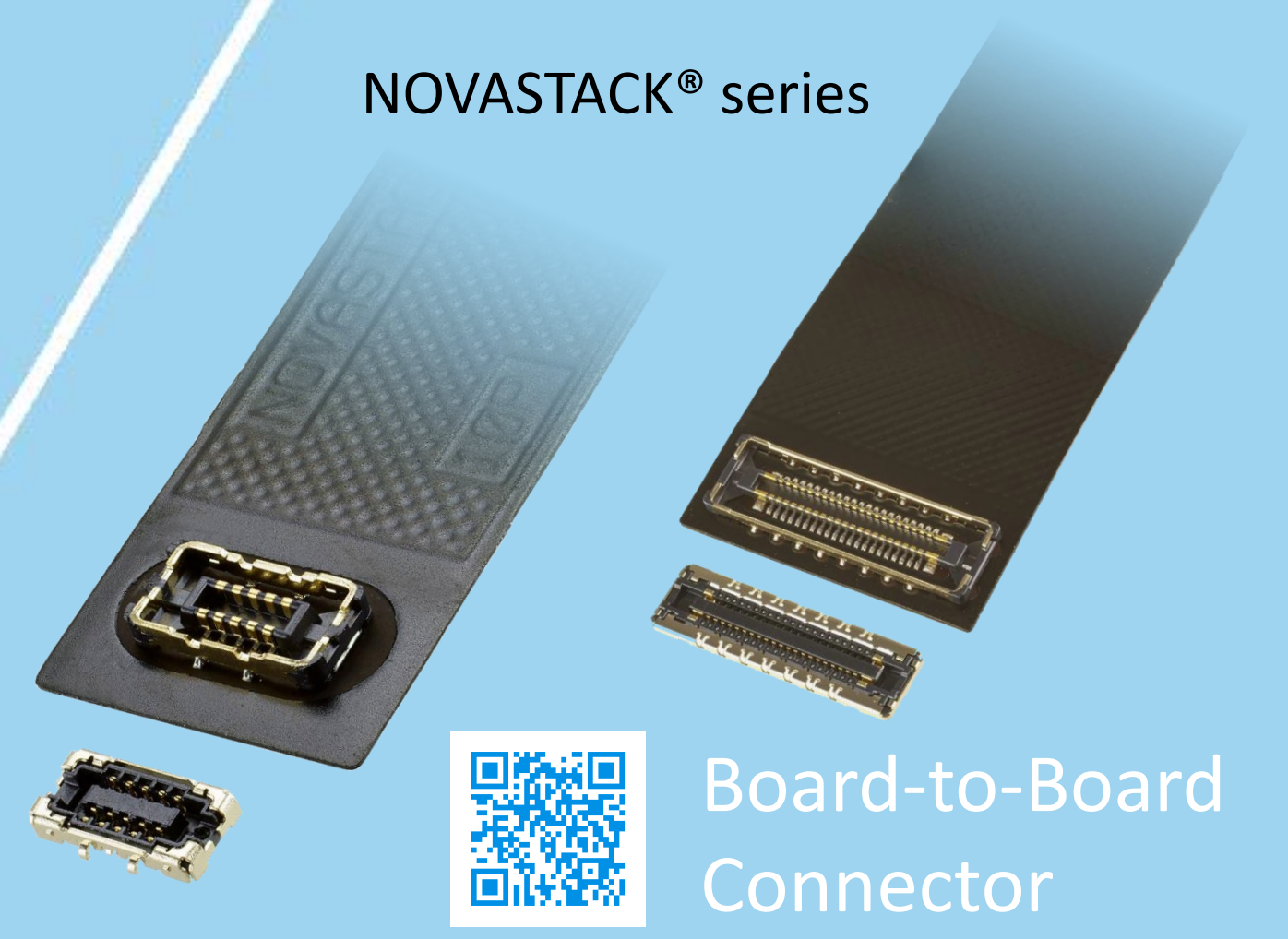


Optical Module

LIGHTPASS® series



NOVASTACK® series



Board-to-Board Connector



Power Connector/ Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



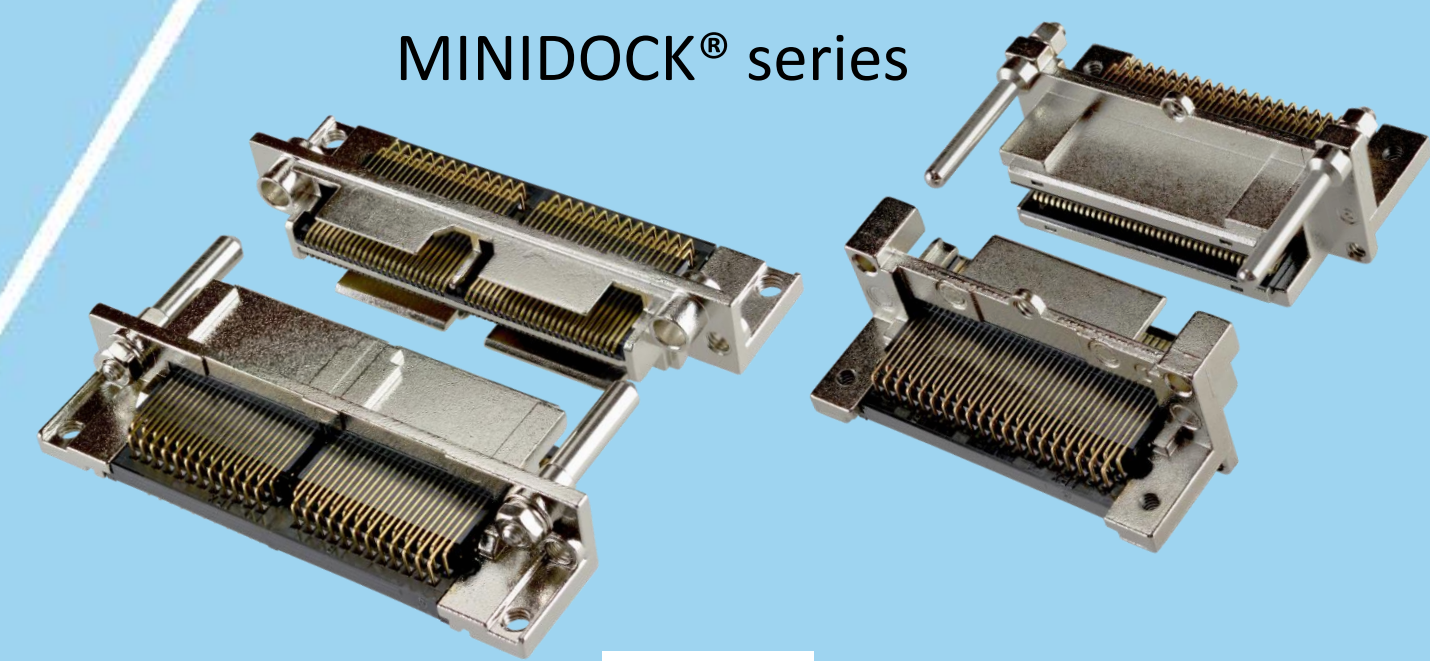
FPC FFC Connector



Inquiry



MINIDOCK® series



I/O Connector

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