

MHF[®] 7S

シールド性能に優れ、5 Gミリ波でのEMI対策に適したコネクタ、フットパターン
2.0 x 2.0 mm、周波数15 GHz対応、VSWR 1.5 max @ 15 GHz

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

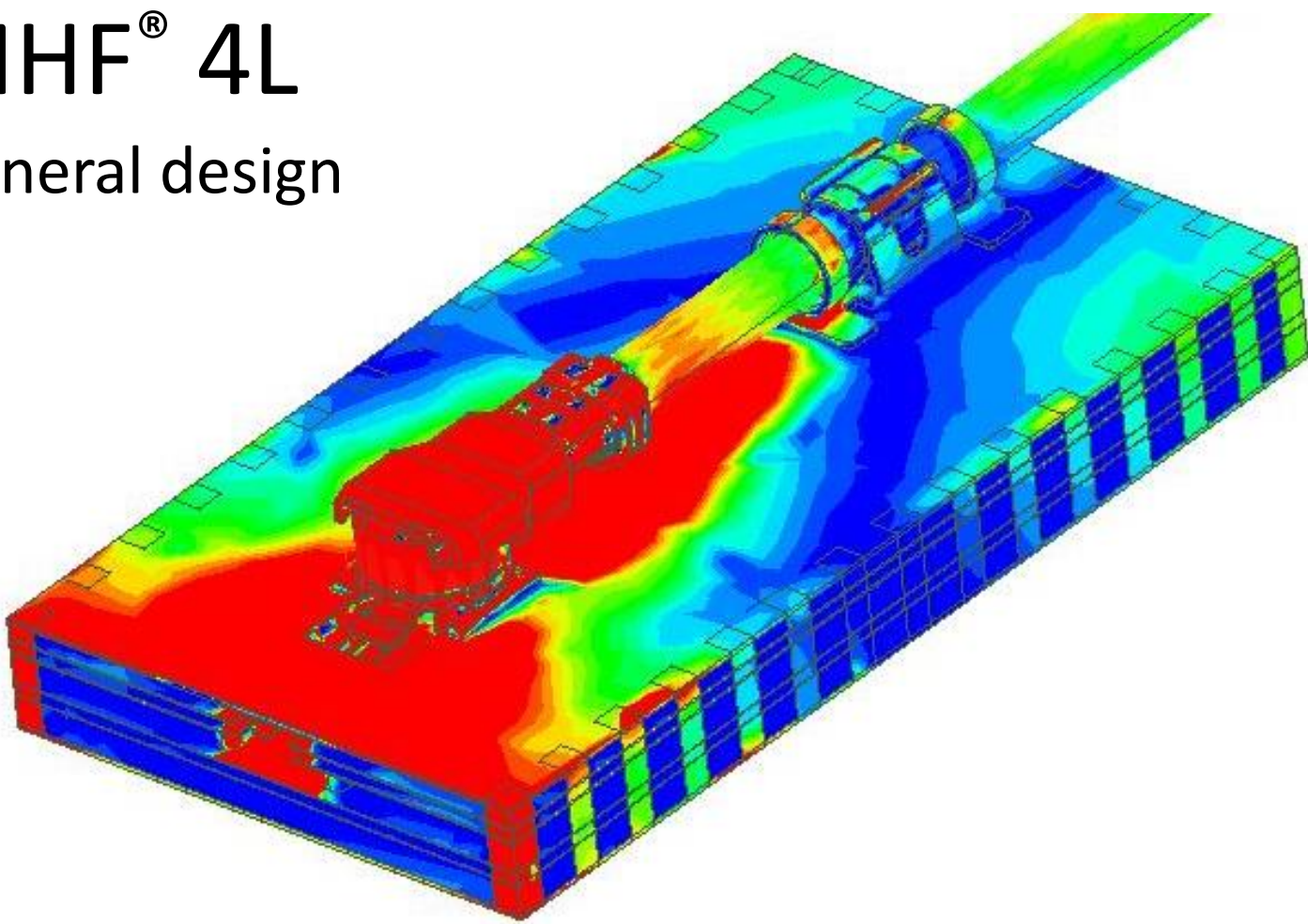
5G mmWave(~15GHz), 5G sub-6, Wi-Fi 6E, WiGig, LTE/LTE-Advanced, LPWA, Bluetooth, GPS
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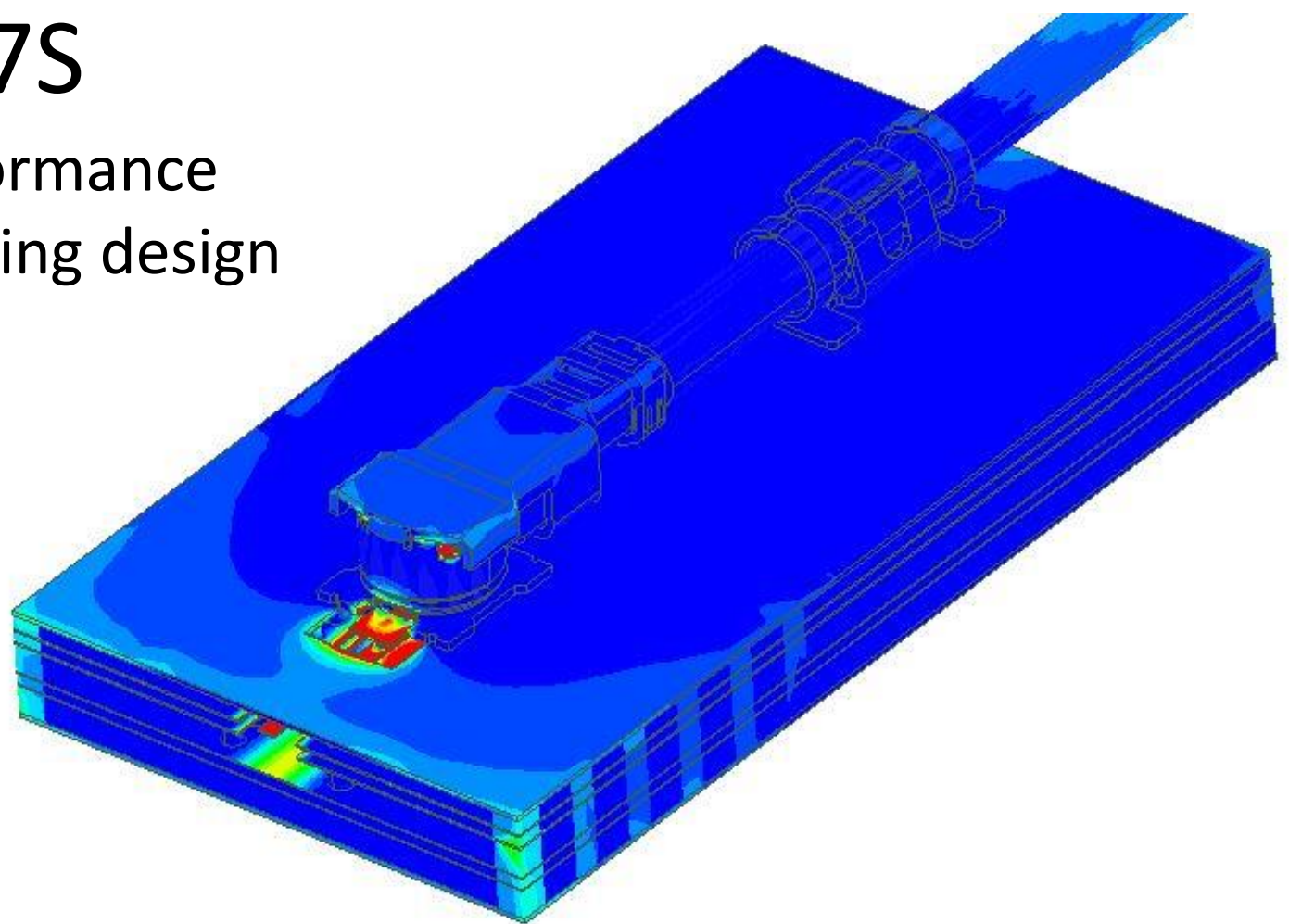
▶ 革新的なコネクタデザイン(ZenShield[®])により、卓越したシールド性能を実現。5G mm波帯の伝送に最適

Electric field strength distribution (simulation)

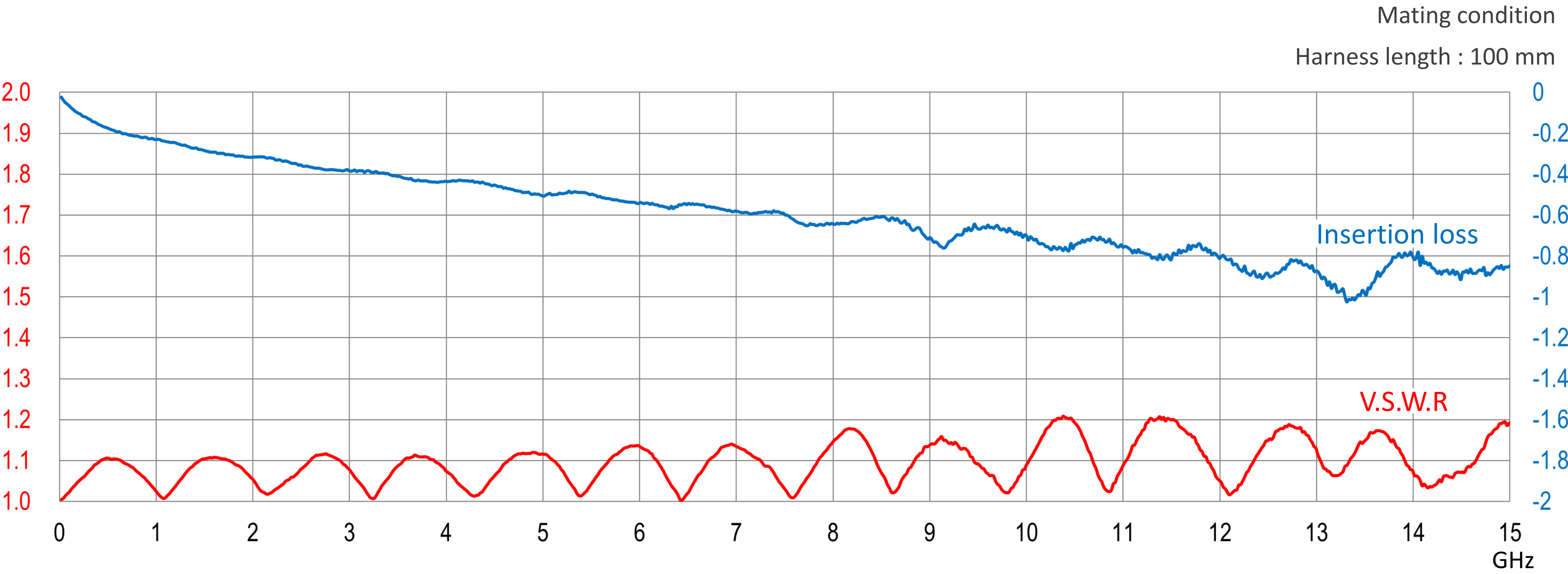
MHF[®] 4L
General design



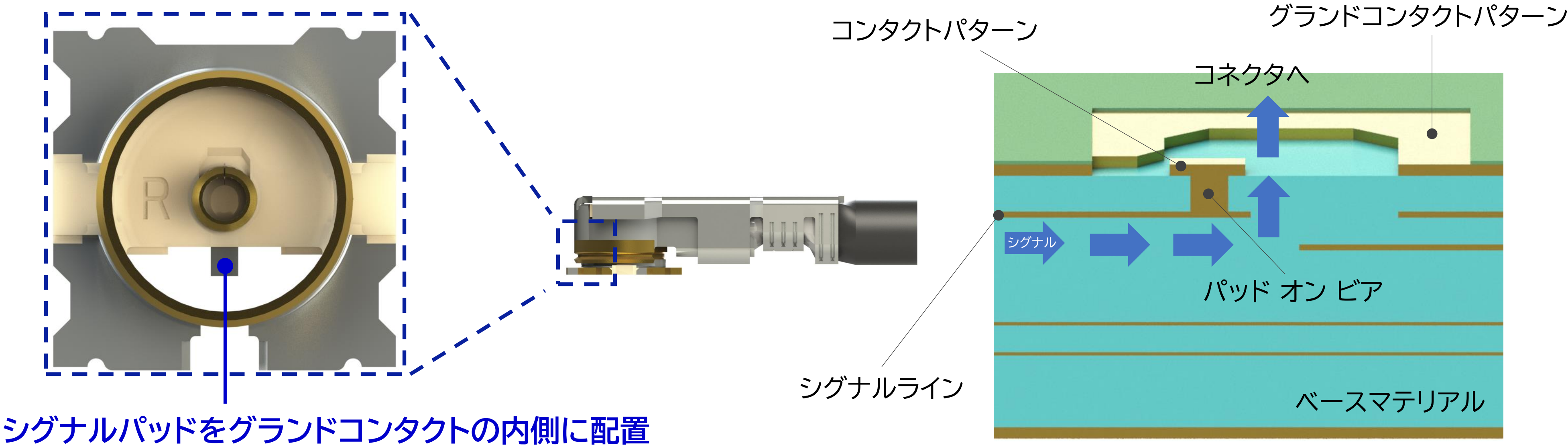
MHF[®] 7S
High-performance
EMI shielding design



▶ VSWR 1.5 max @ 15GHzの優れた伝送特性



▶ シグナルパッドをグランドコンタクトの内側に配置したストリップライン構造

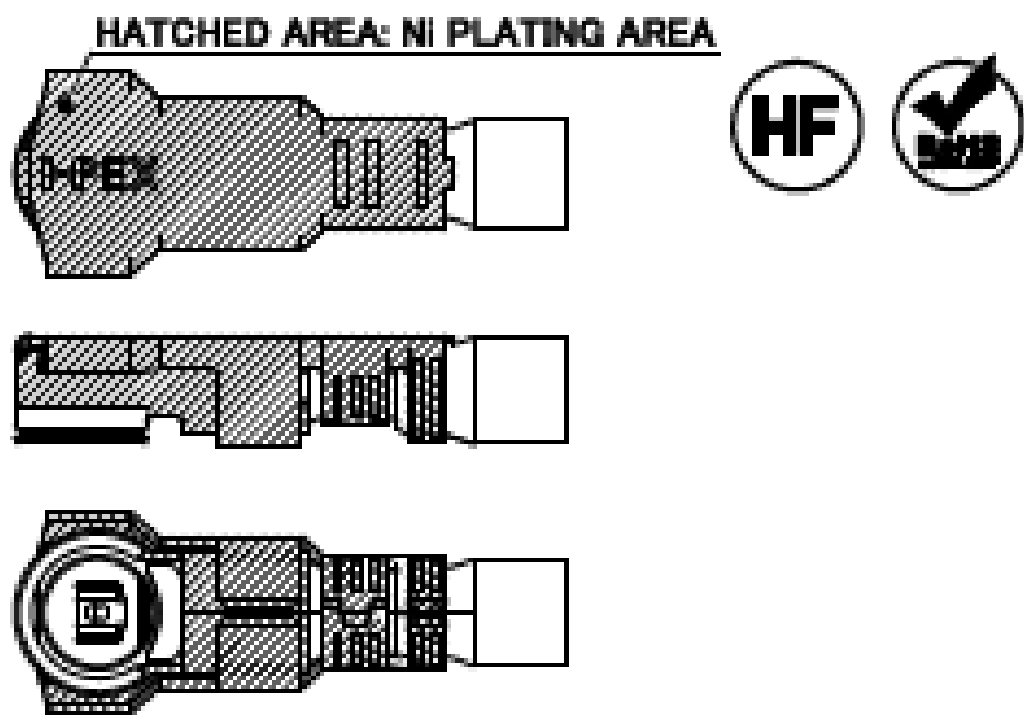
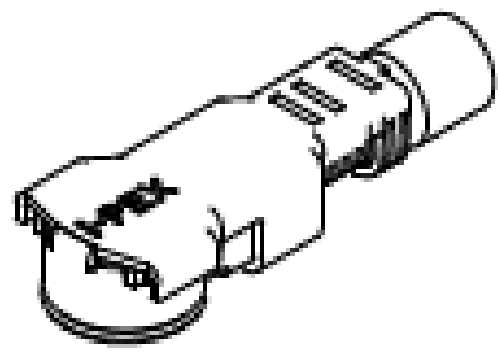
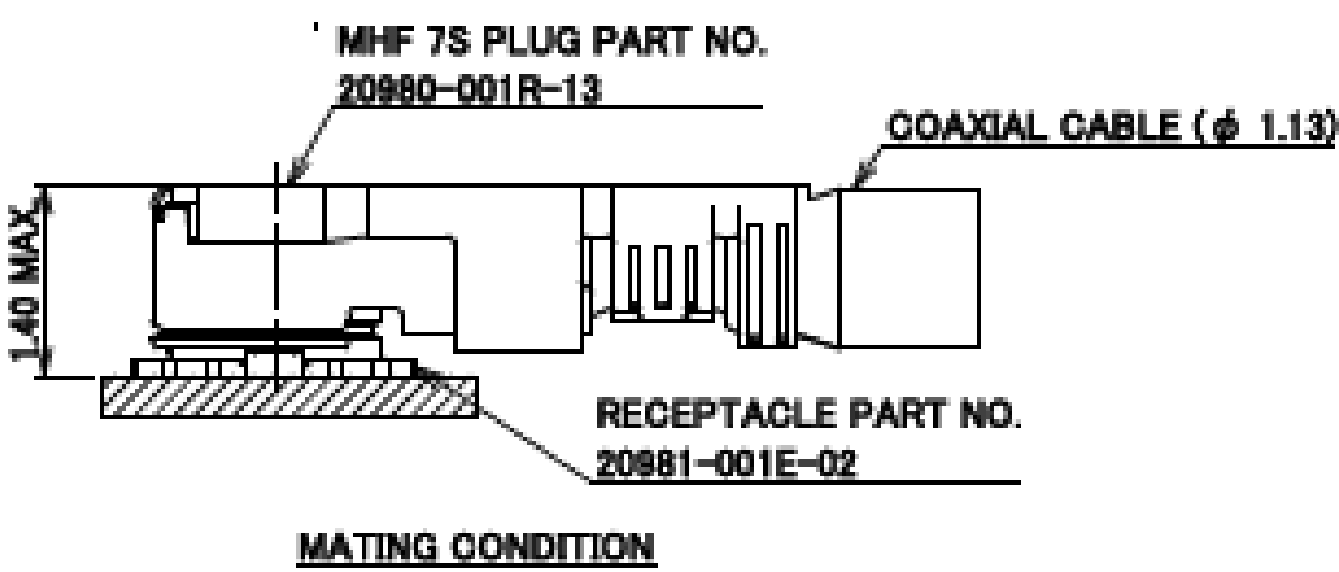
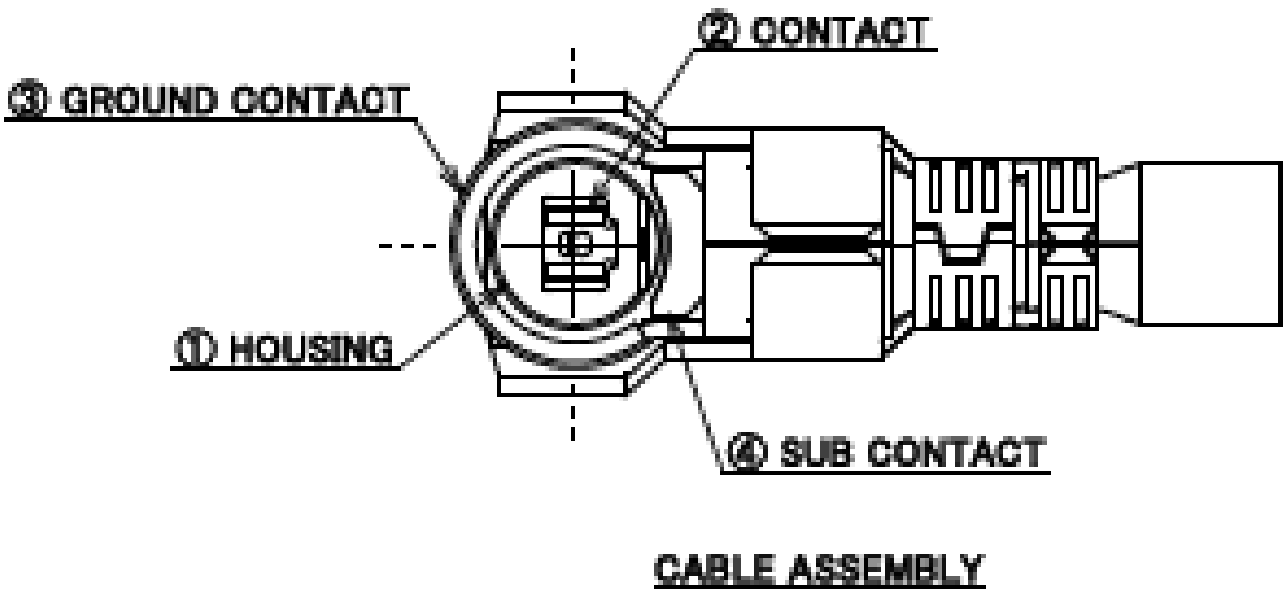
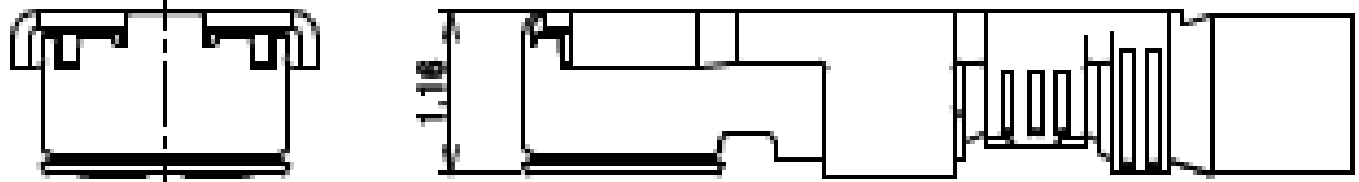
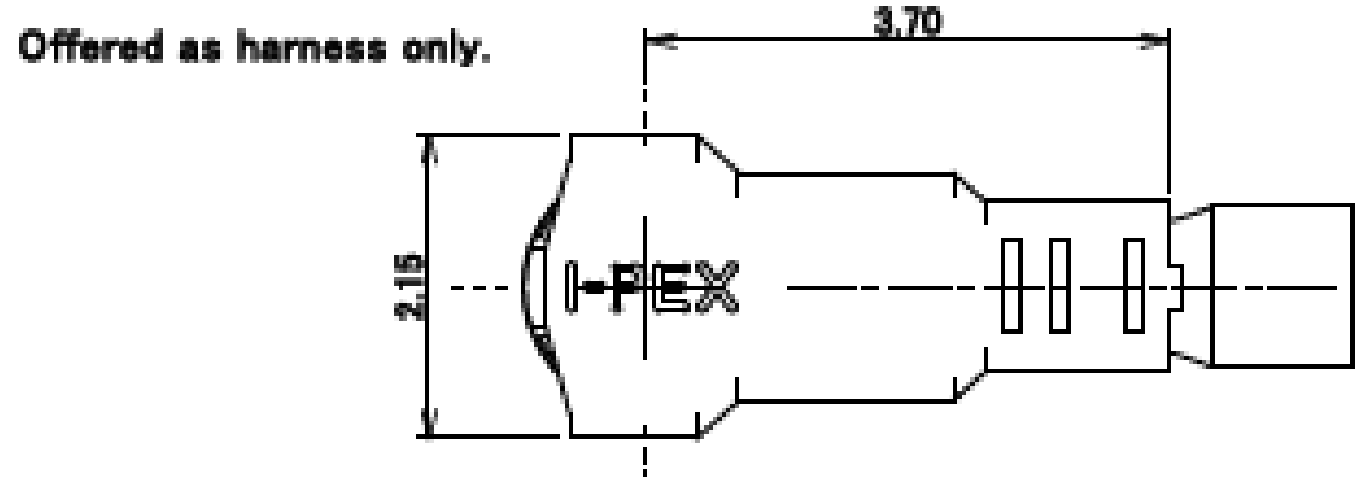


Component Parts Details

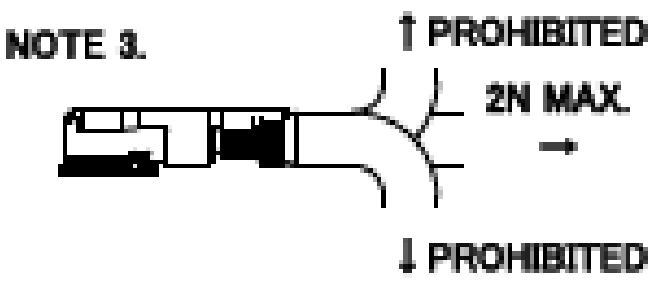
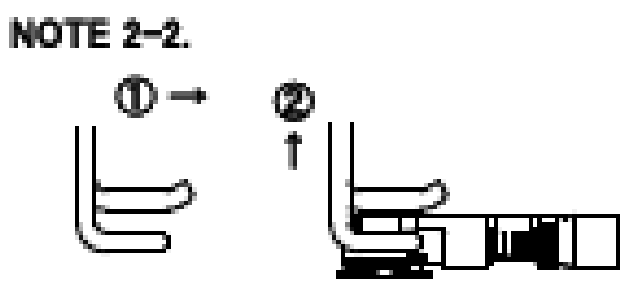
MHF® 7S plug

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

Offered as harness only.



- NOTES
1. APPLICABLE CONNECTOR: 20881-001E-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)



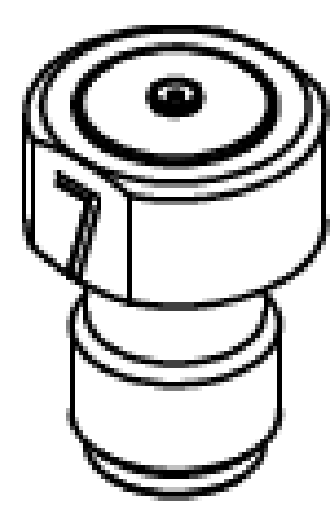
4	SUB CONTACT	PHOSPHOR BRONZE	ALL OVER: Ni 1.00 μm MIN. CONTACT PART: Au 0.1 μm MIN.
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER: Ni 0.7 μm MIN. CONTACT PART: Au 0.1 μm MIN. (Ni PLATING AREA) Ni ONLY
2	CONTACT	CORSON ALLOY	ALL OVER: Ni 1.00 μm MIN. CONTACT PART: Au 0.1 μm MIN.
1	HOUSING	LCP	UL94V-0, WHITE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

MHF® 7S plug

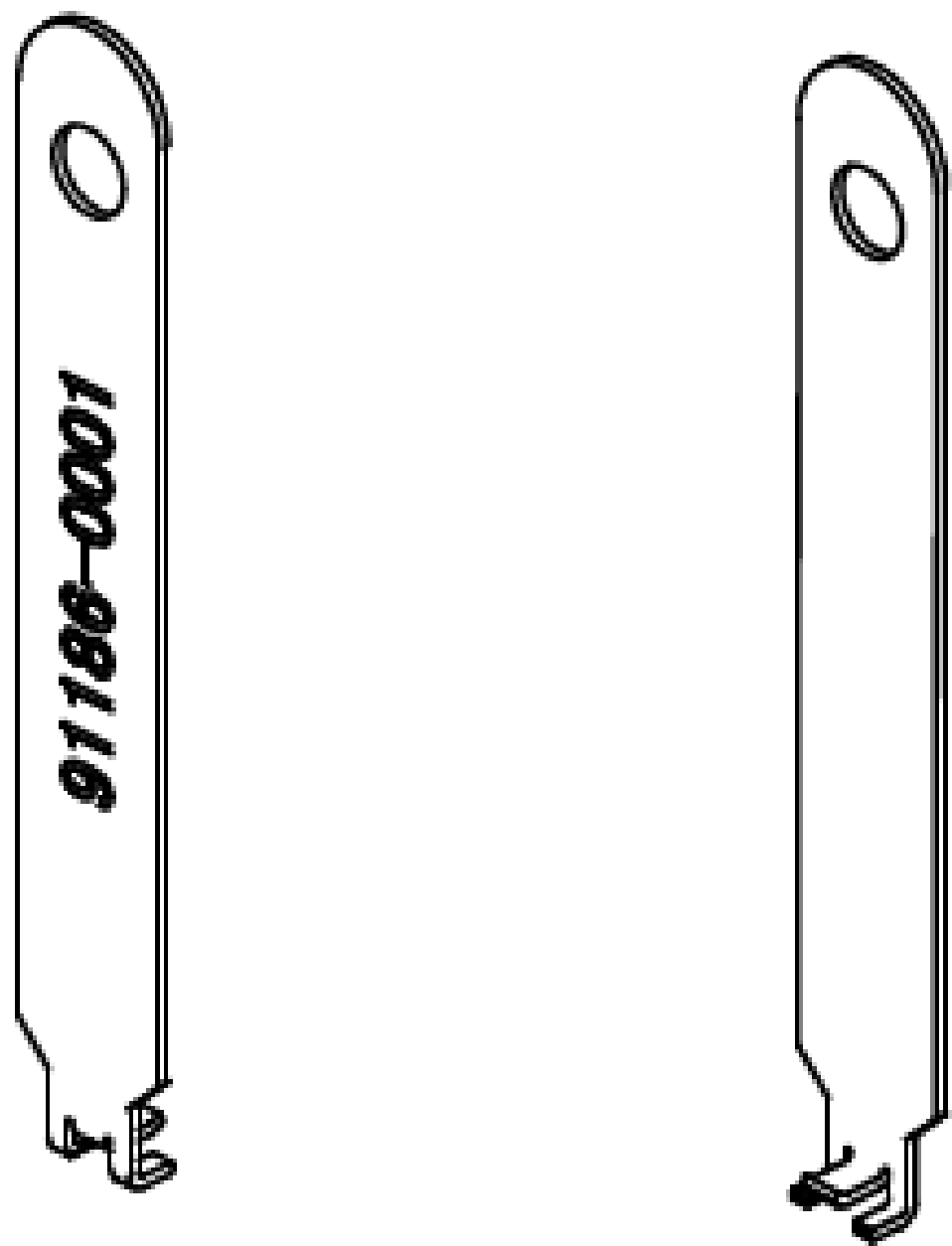
ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	20981-001E-02
RATING VOLTAGE	60 V AC (R.M.S)/DC
RATING FREQUENCY	DC~15 GHz
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)
OPERATING HUMIDITY	90% MAX. (NON-CONDENSING)
CHARACTERISTIC IMPEDANCE	50 ohm (NOMINAL VALUE)
VSWR	1.30 MAX. AT 0.1 ~ 3 GHz, 1.35 MAX. 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

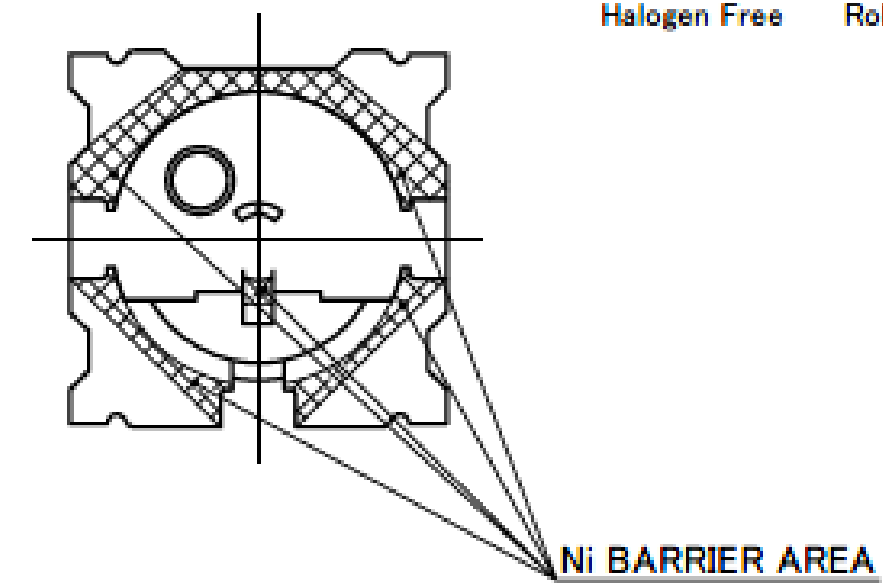
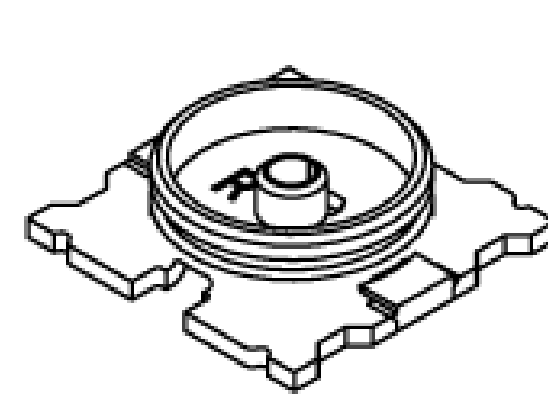
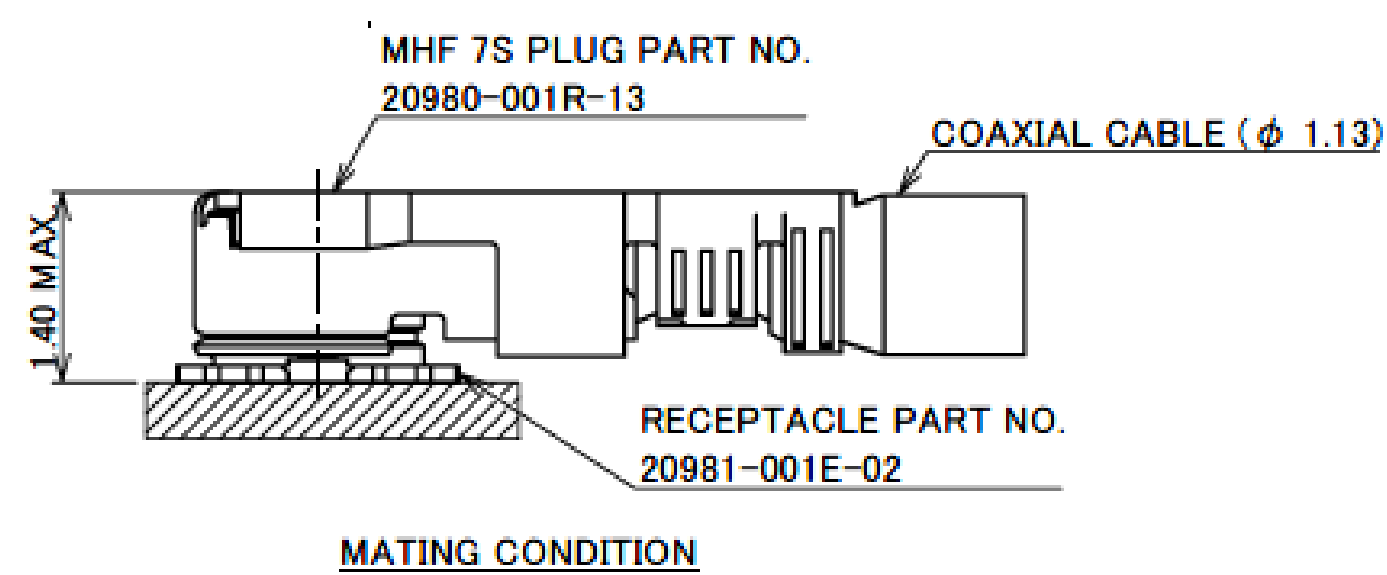
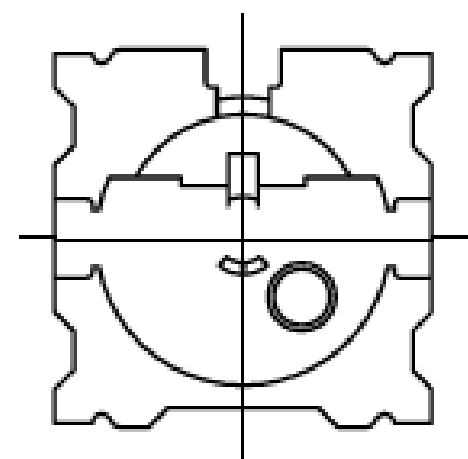
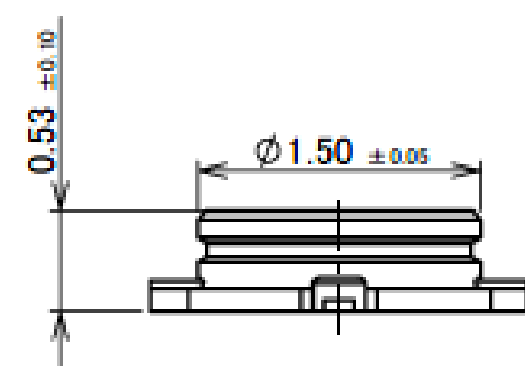
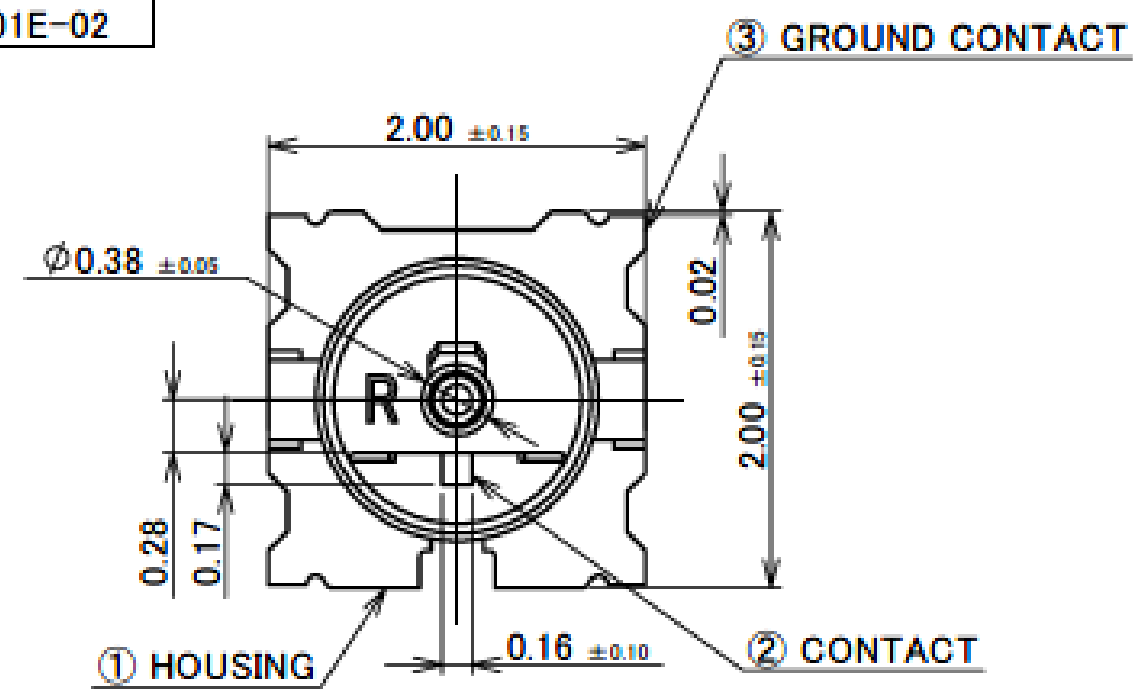


MHF 7S MATING AND UNMATING TOOL
PART NO. 91186-0001

Rev.4

MHF® 7S Receptacle

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





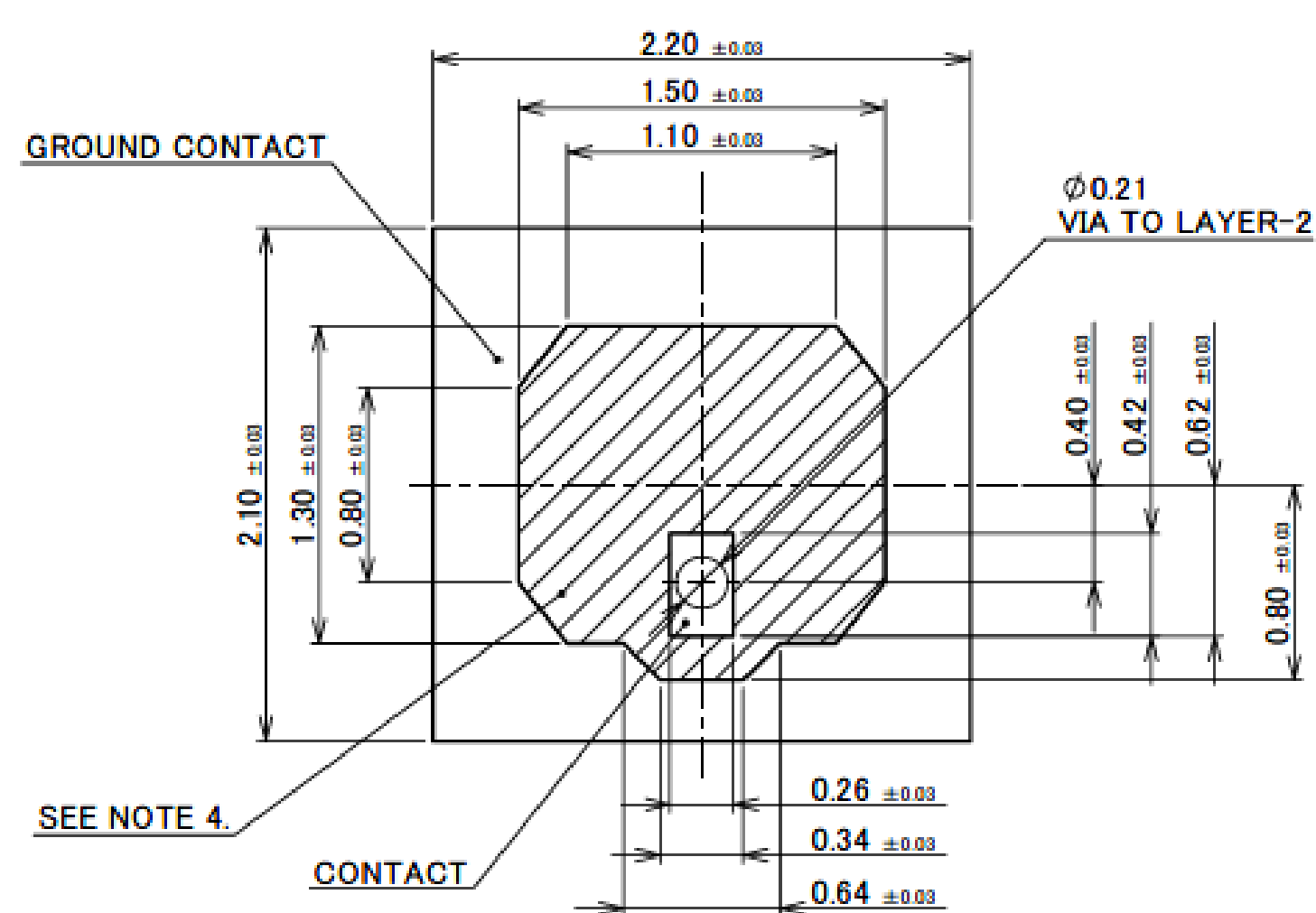

Halogen Free RoHS Compliant

NOTES

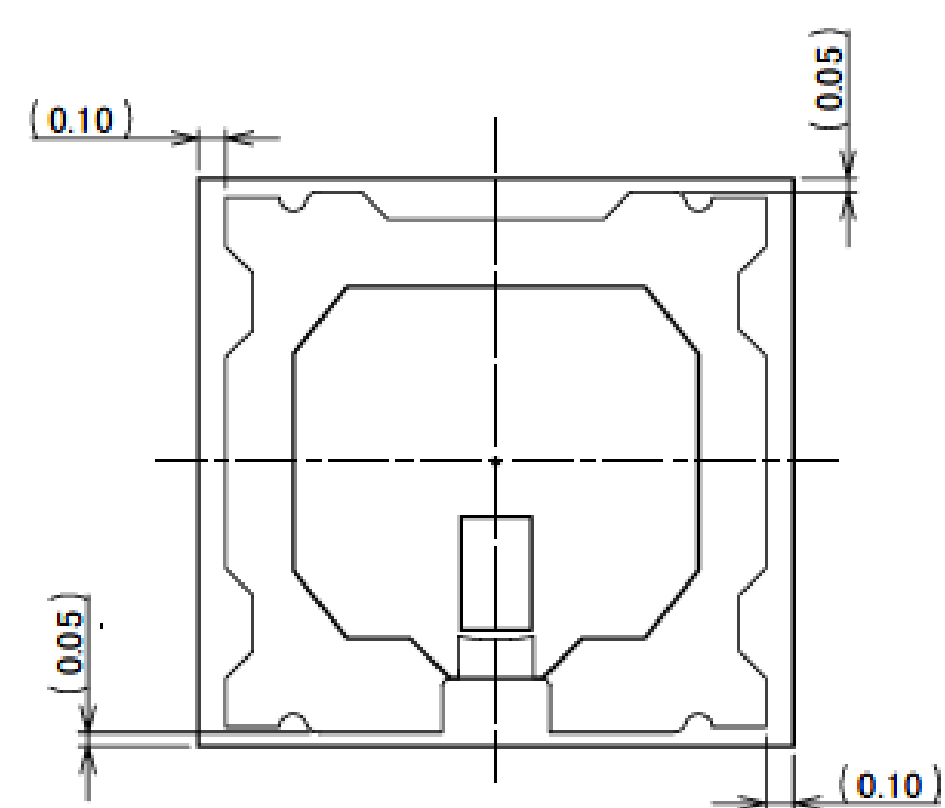
1. APPLICABLE CONNECTOR
20980-001R-13
2. COPLANARITY: 0.08mm MAX.
3. CHARACTERISTIC IMPEDANCE: 50 Ω (NOMINAL VALUE)

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

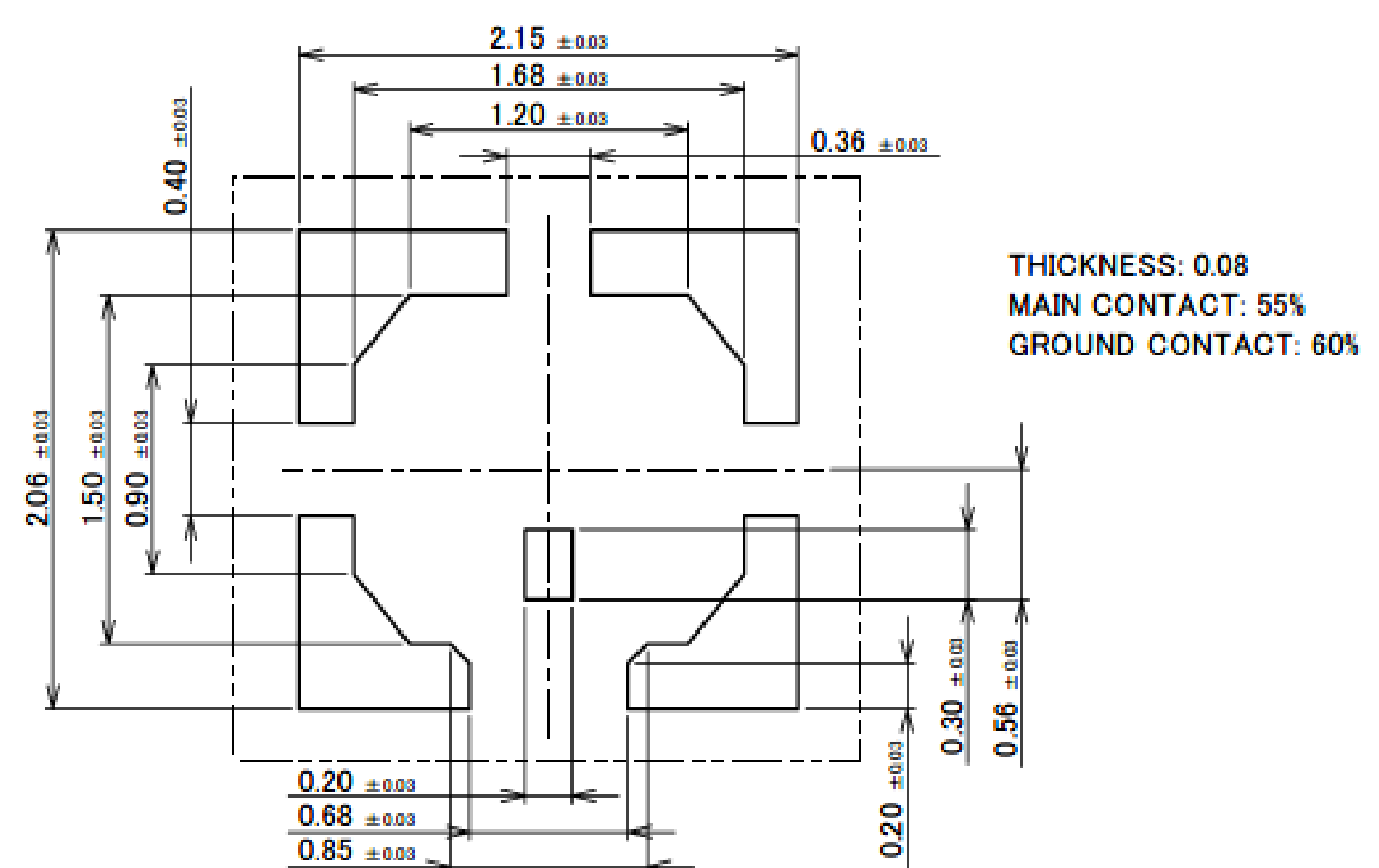
Rev.5



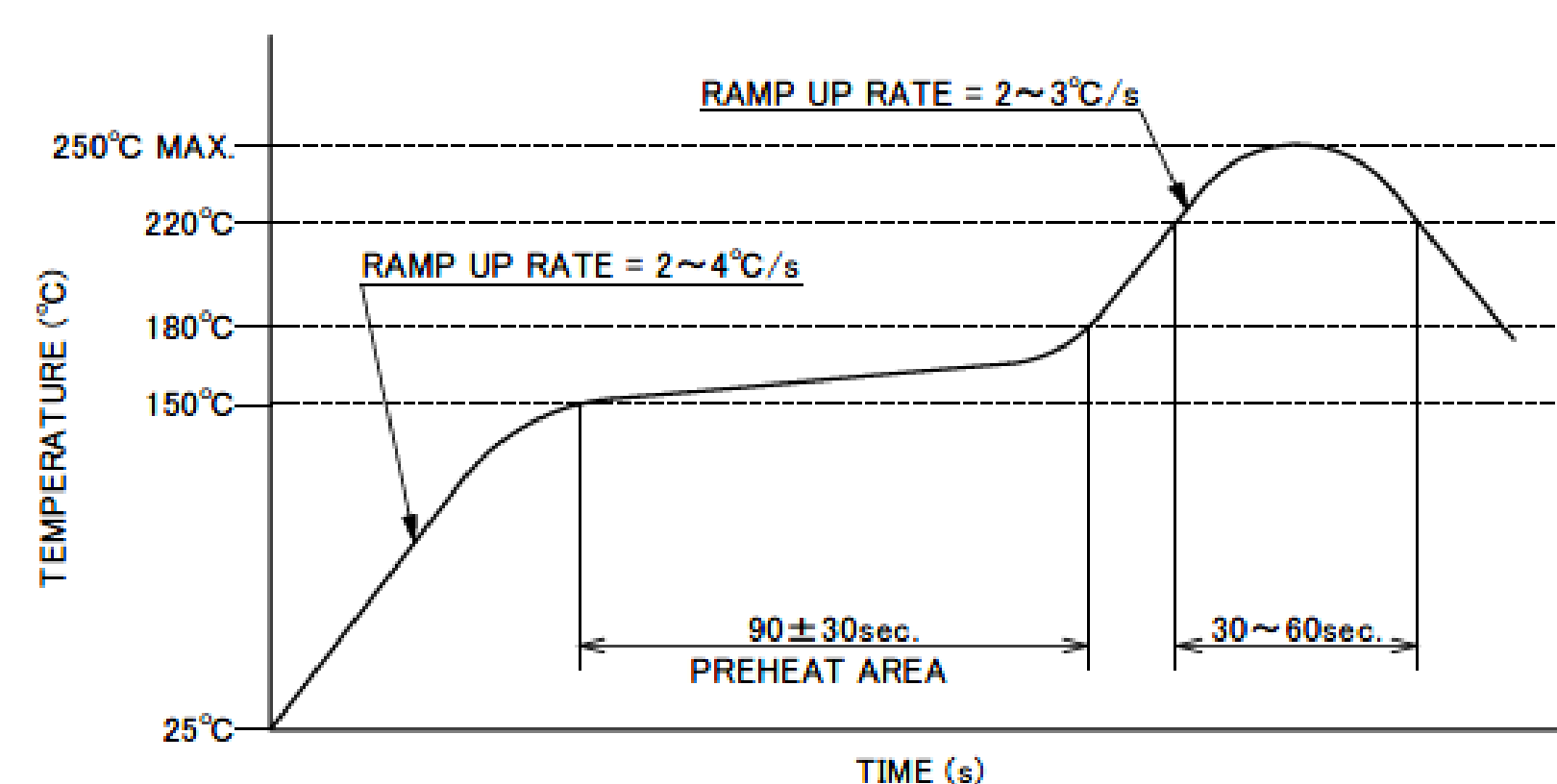
RECOMMENDED FOOTPRINT PATTERN



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.

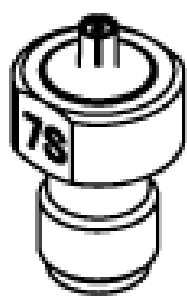
Rev.5

MHF® 7S Receptacle

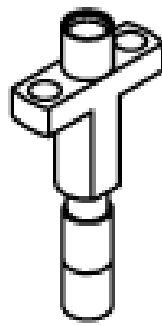
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MAIN CONTACT RESISTANCE	INITIAL : 20 mohm MAX. / AFTER TEST : $\angle$ R 20 mohm MAX.
GROUND CONTACT RESISTANCE	INITIAL : 20 mohm MAX. / AFTER TEST : $\angle$ R 20 mohm MAX.
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UNMATING FORCE (INITIAL / 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

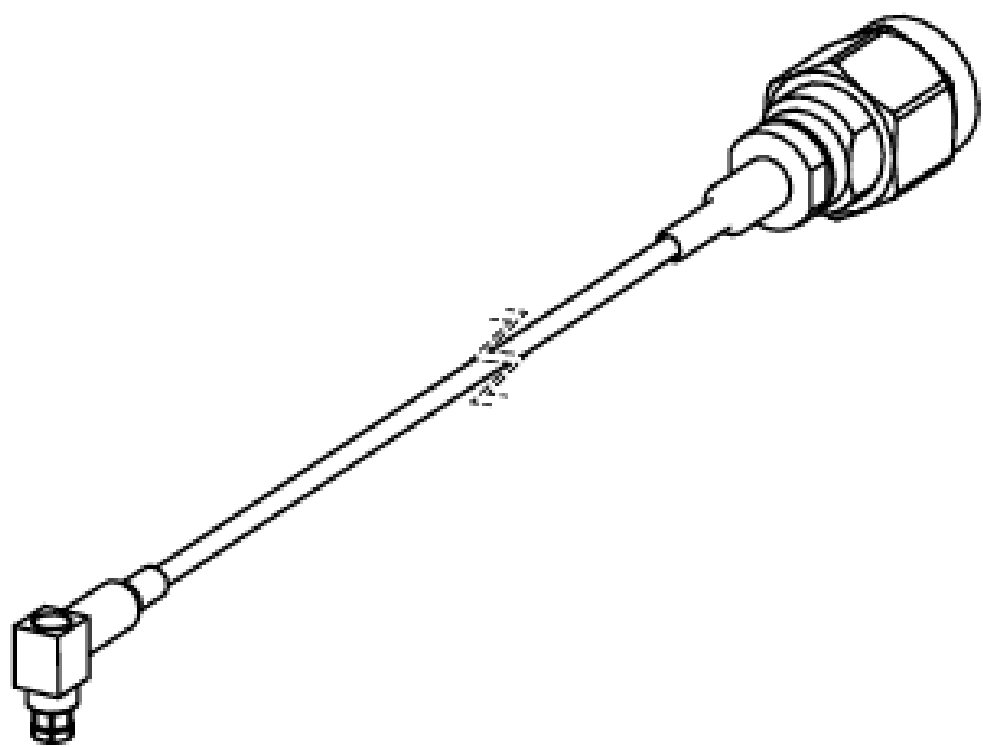
Accessories for MHF® 7S Receptacle



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*

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

Rev.5

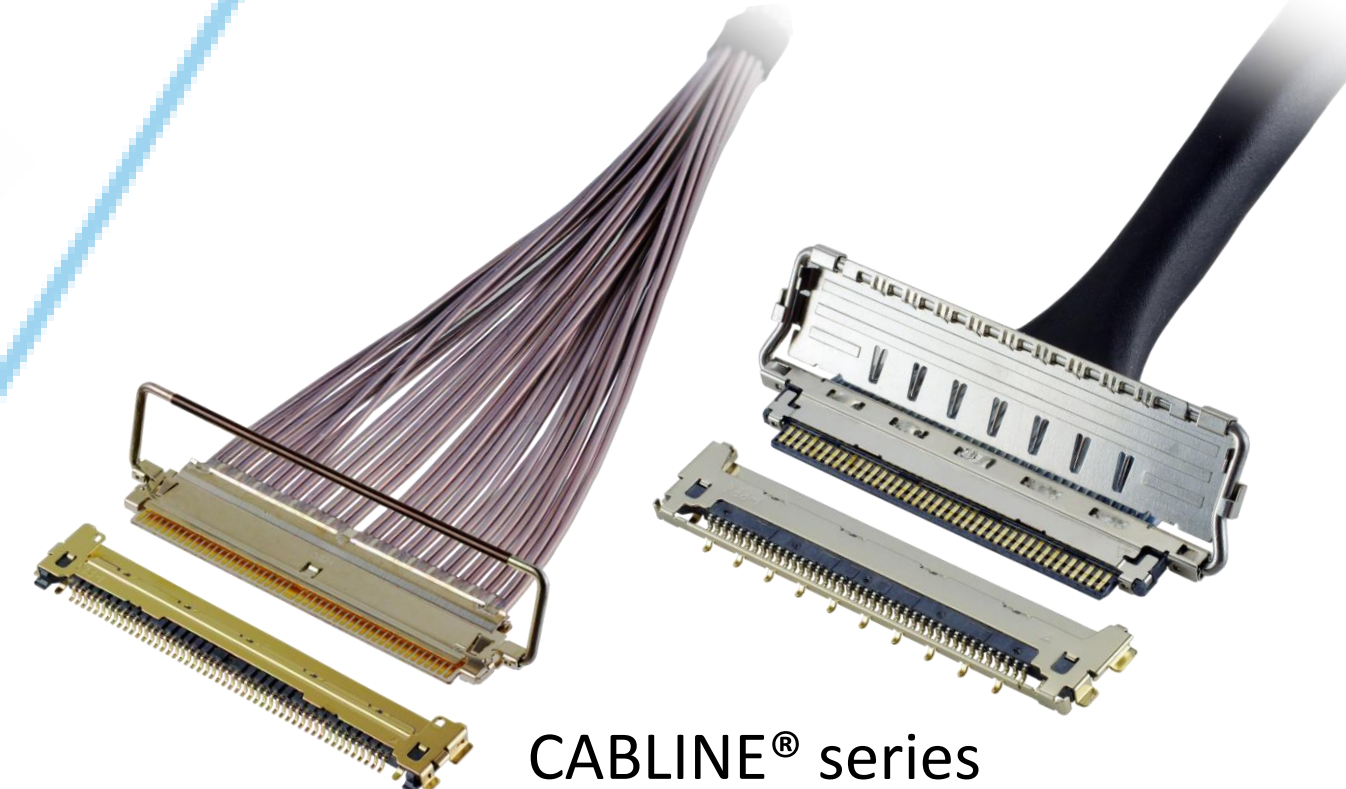
Custom Connectors Available

 RF
Connectors

MHF® series



Micro-coaxial/Twinax
Connectors

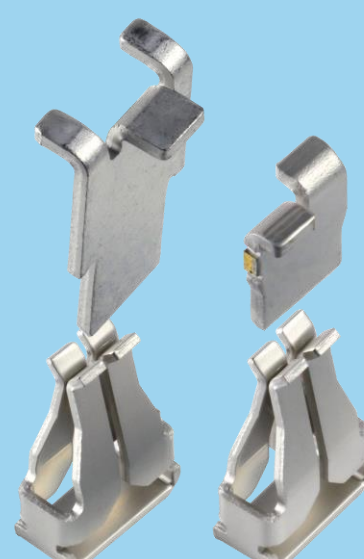


CABLINE® series

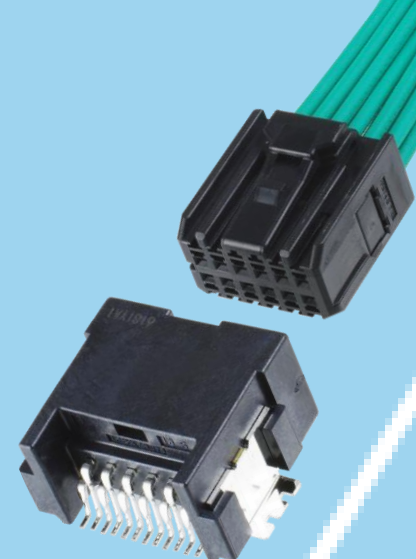


Wire-to-Board
Connectors/
Terminals

AP series



ISH® series



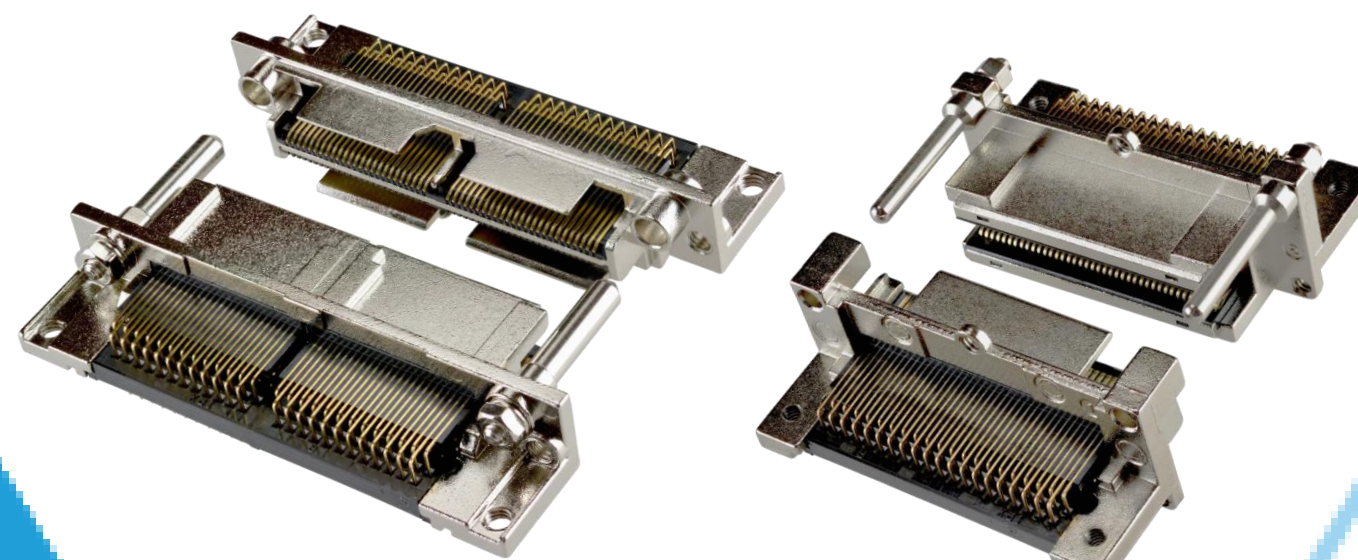
NOVASTACK® series



Board-to-Board
Connectors



I/O
Connectors



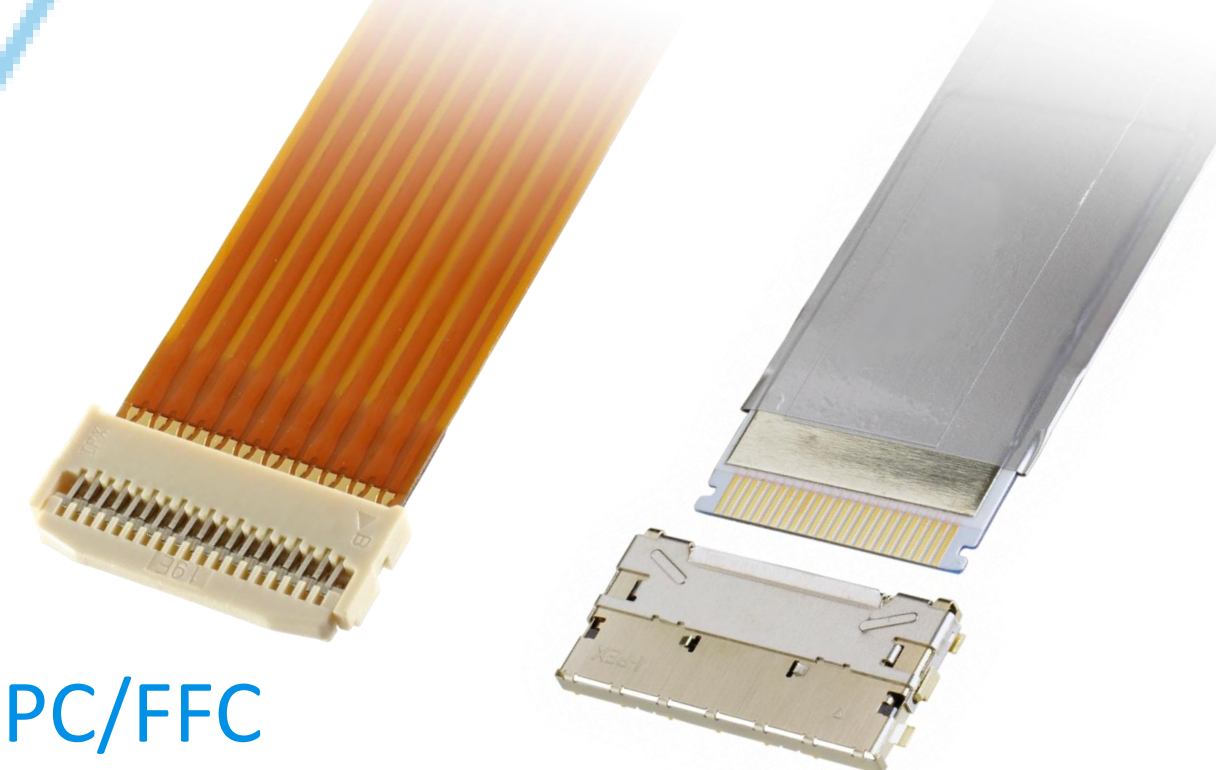
MINIDOCK™ series



FPC/FFC
Connectors

MINIFLEX® series

EVAFLEX® series



Inquiry



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