

MHF[®] 5L

15 GHzまで対応の伝送特性に優れたコネクタ (VSWR 1.6 max. @ 15 GHz)、嵌合高さ1.3 mm max.

Product Specifications:

Mated Height (mm max.)		1.3	
Rece. SMT Size (mm)		2.0 x 2.0	
Applicable Frequency		DC ~ 15 GHz	
Characteristic Impedance		50 ohm	
VSWR (L=100 mm)	Connector	PLUG	RECEPTACLE
	DC ~ 3 GHz	1.3 max.	
	3 ~ 6 GHz	1.4 max.	
	6 ~ 12 GHz	1.5 max.	
	12 ~ 15 GHz	1.6 max.	1.65 max.

Applicable Cable Size:

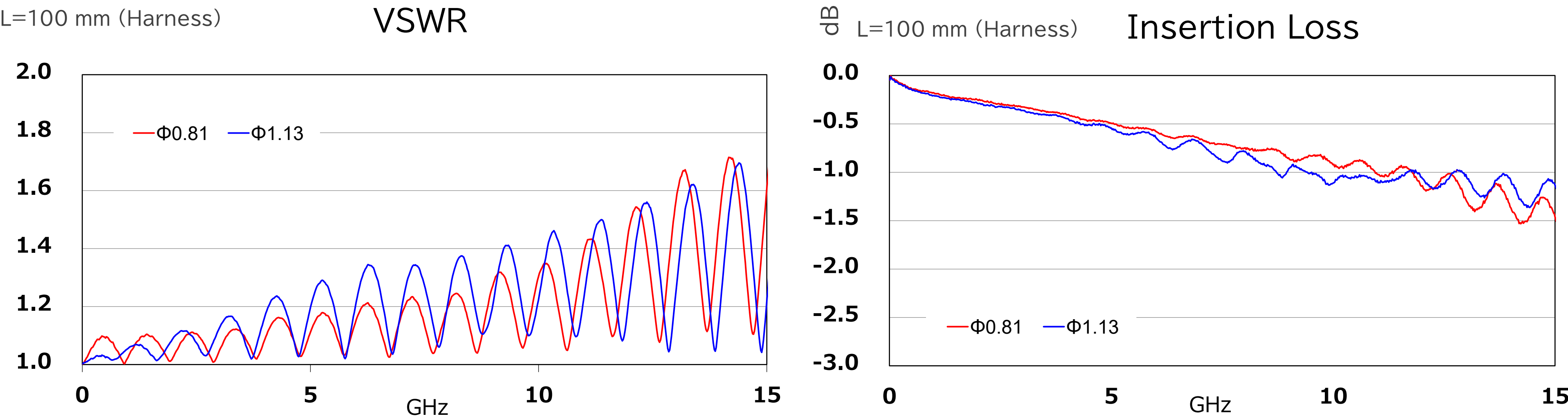
O.D. 1.13 mm / AWG 32
O.D. 0.81 mm / AWG 33

Applicable Standards (Reference Only):

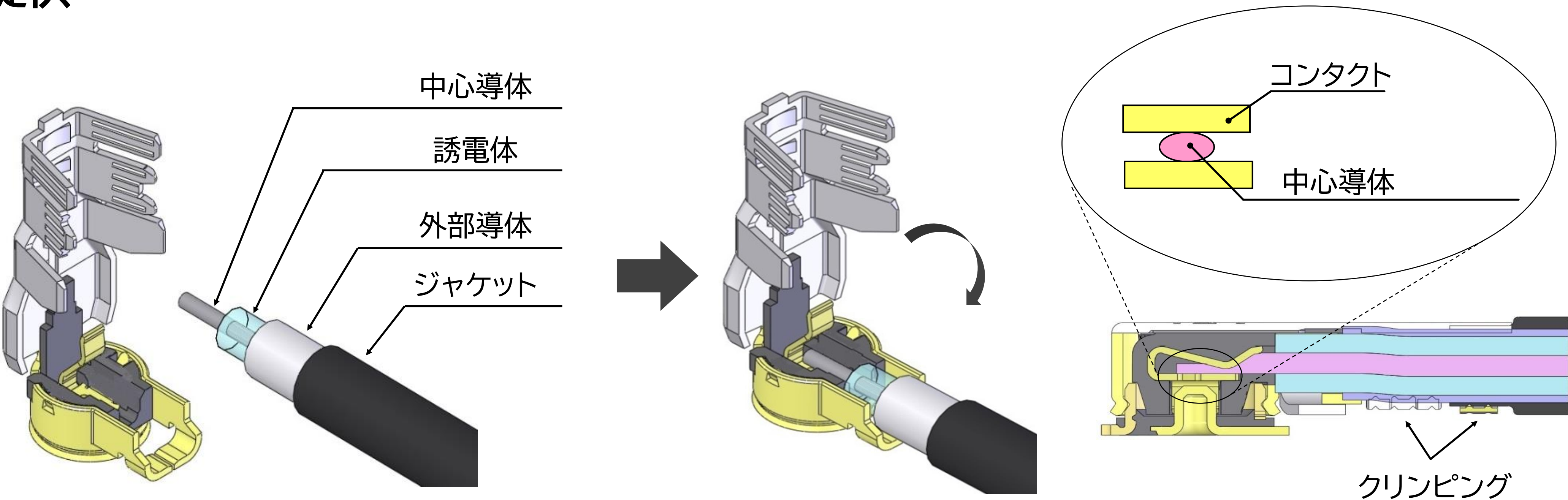
5G sub-6, Wi-Fi 6E, WiGig, LTE/LTE-Advanced, LPWA, Bluetooth, GPS



▶ 最小限の製品サイズで、~15 GHzにおいて優れたパフォーマンスを実現



▶ 信頼性の高い無半田結線技術 “i-Fit[®]” テクノロジーにより、安定した性能のハーネス提供



▶ 対応ケーブル :1.13 mm(32), 0.81 mm(33)

Product name	MHF [®] 5	MHF [®] 5L
Mating Height	1.0 mm max.	1.3 mm max.
Coaxial O.D. (Center Conductor AWG)	1.13 mm (AWG#32)	●
	0.81 mm (AWG#33)	●
	0.81 mm (AWG#36)	●
	0.64 mm (AWG#36)	●
	0.48 mm (AWG#38)	●
Receptacle	MHF [®] 5 receptacle	

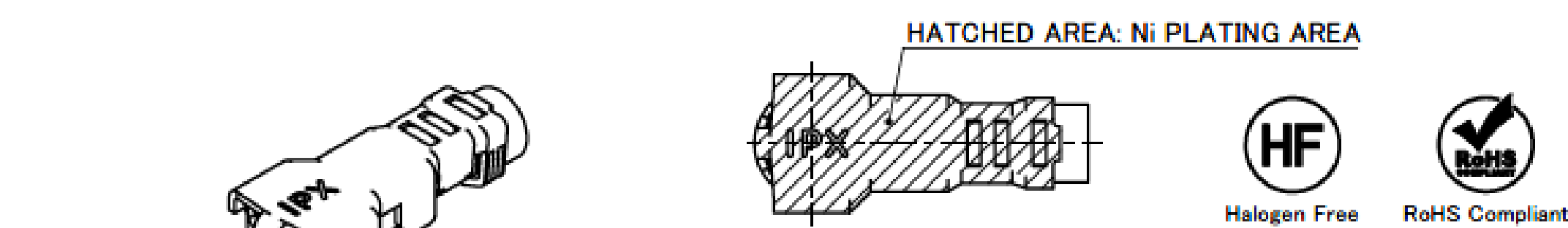
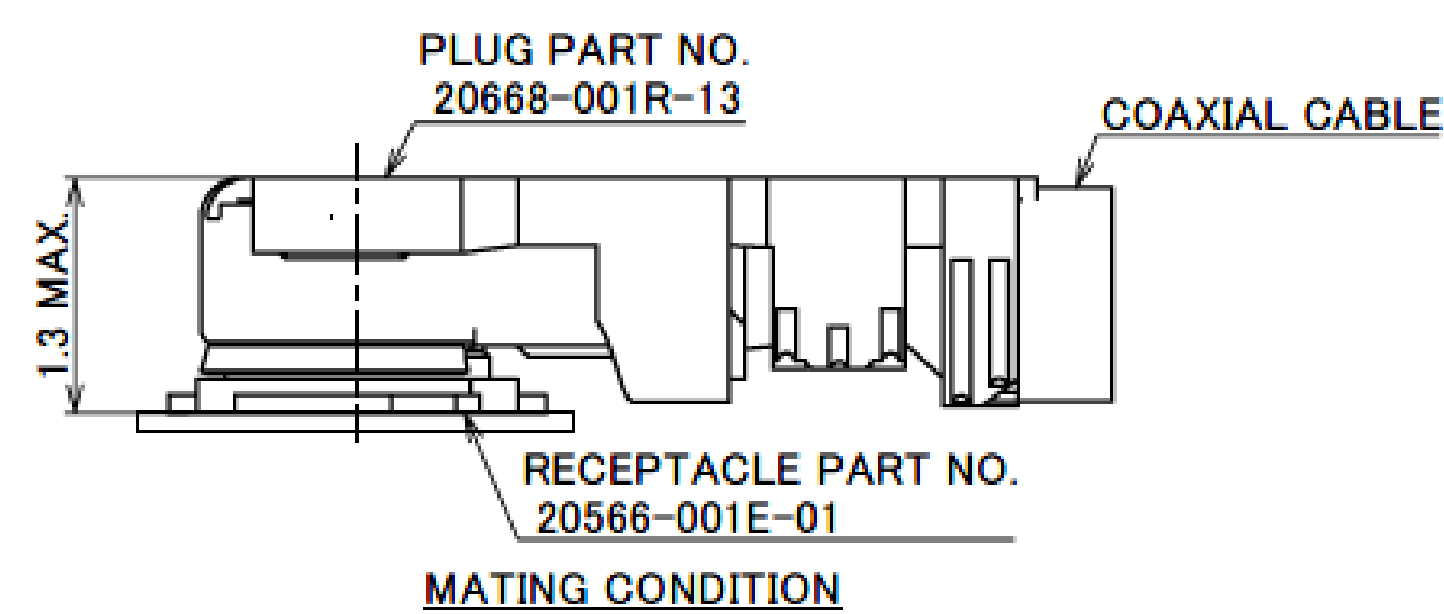
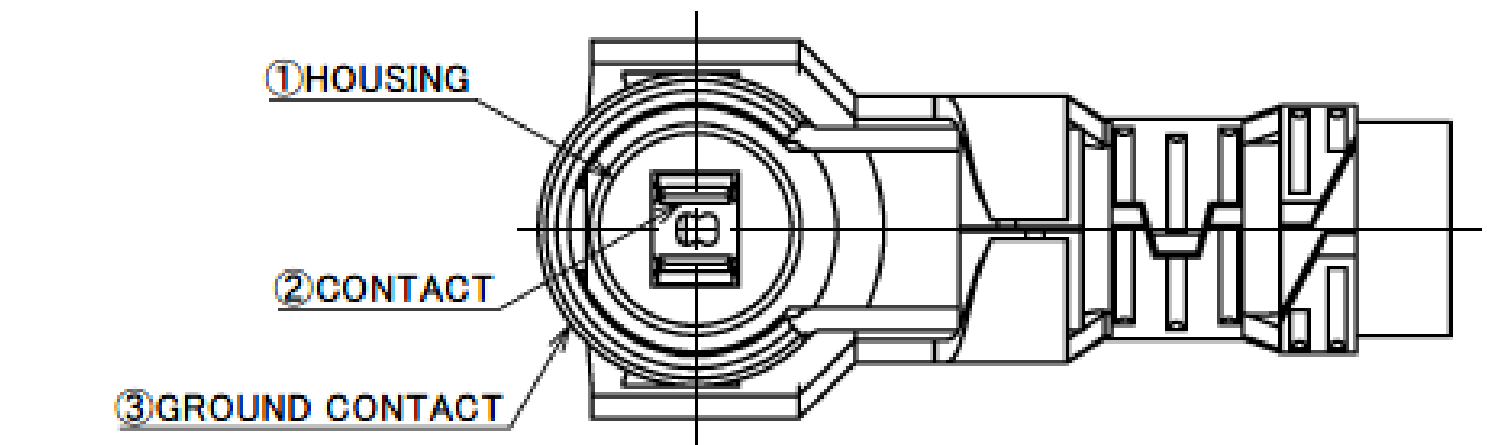
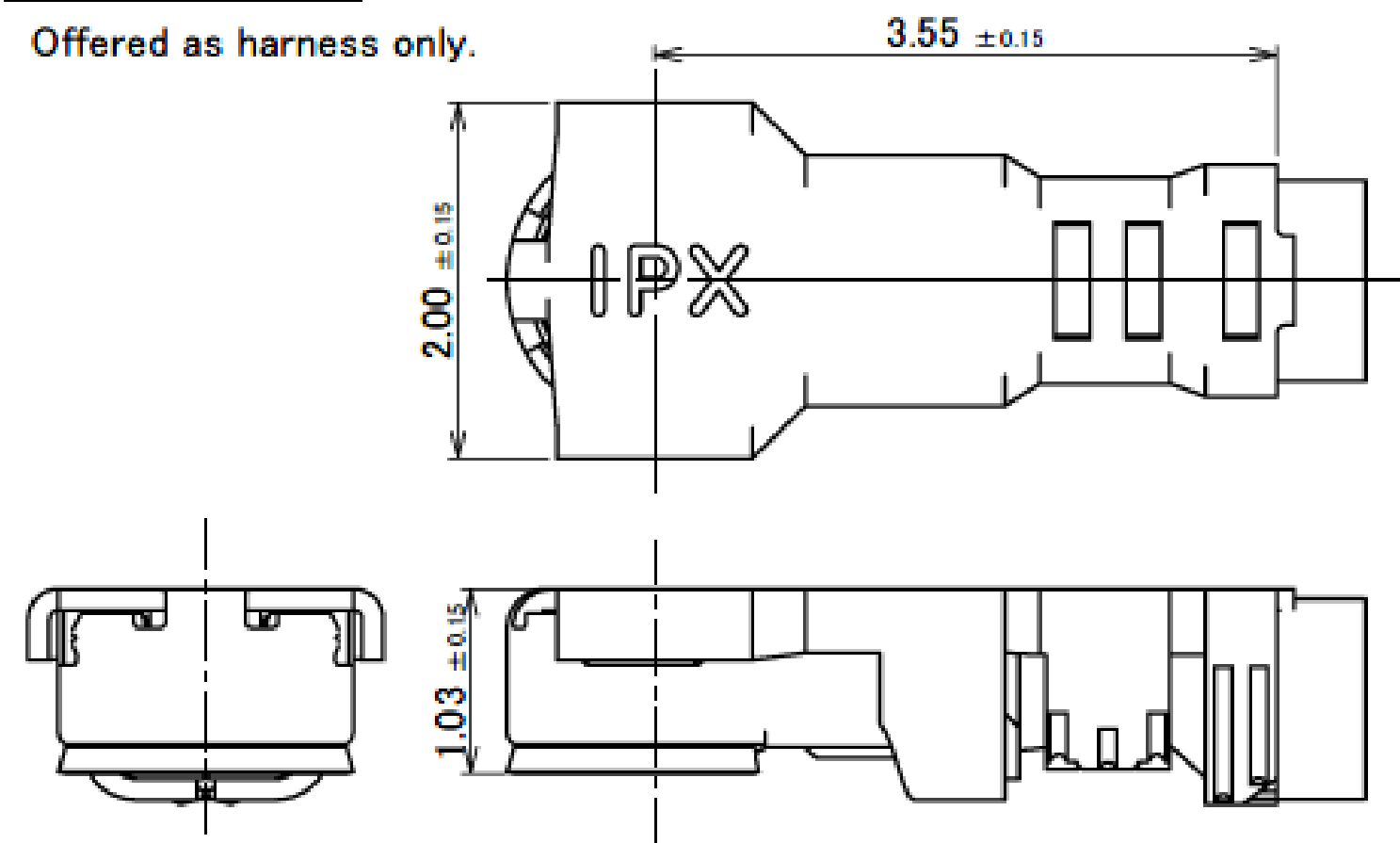
Component Parts Details

MHF® 5L plug Ni top (1.13)

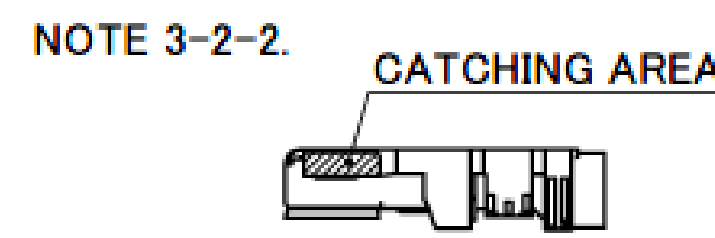
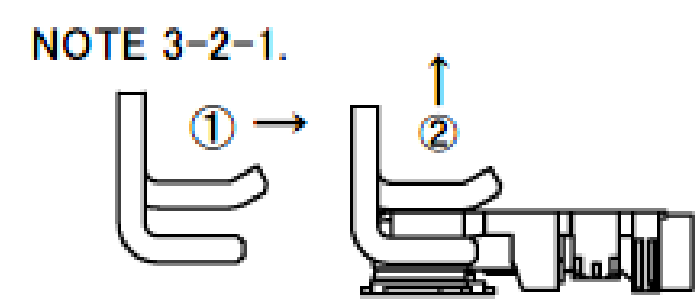
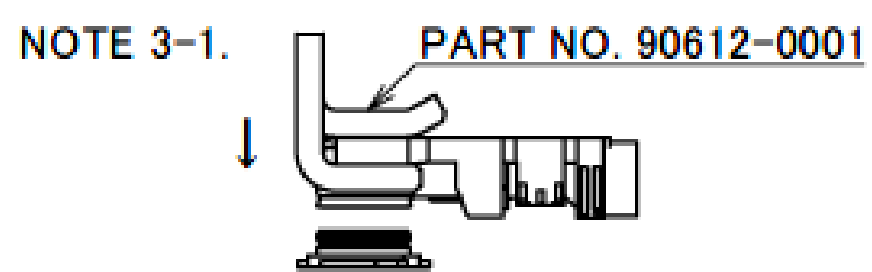
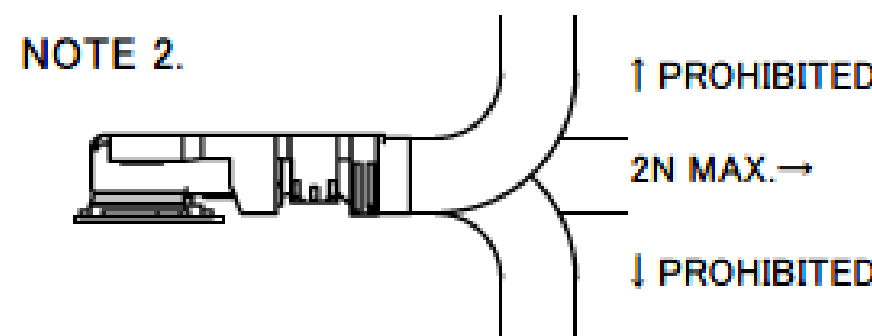
Recommended P/N	20668-001R-13
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PART No.
20668-001R-13

Offered as harness only.



NOTES.
1. APPLICABLE CONNECTOR: 20566-001E-01
2. PERMISSIBLE LOAD OF CABLE AT MATING
3. MATING AND UNMATING INSTRUCTION
3-1. MATING
MATE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. DO NOT SLANT MATE.
3-2. UNMATING
3-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90612-0001)
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	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN. [Ni PLATING AREA] Ni ONLY
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK (GF 30%)
NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS

MHF® 5L plug Ni top (1.13)

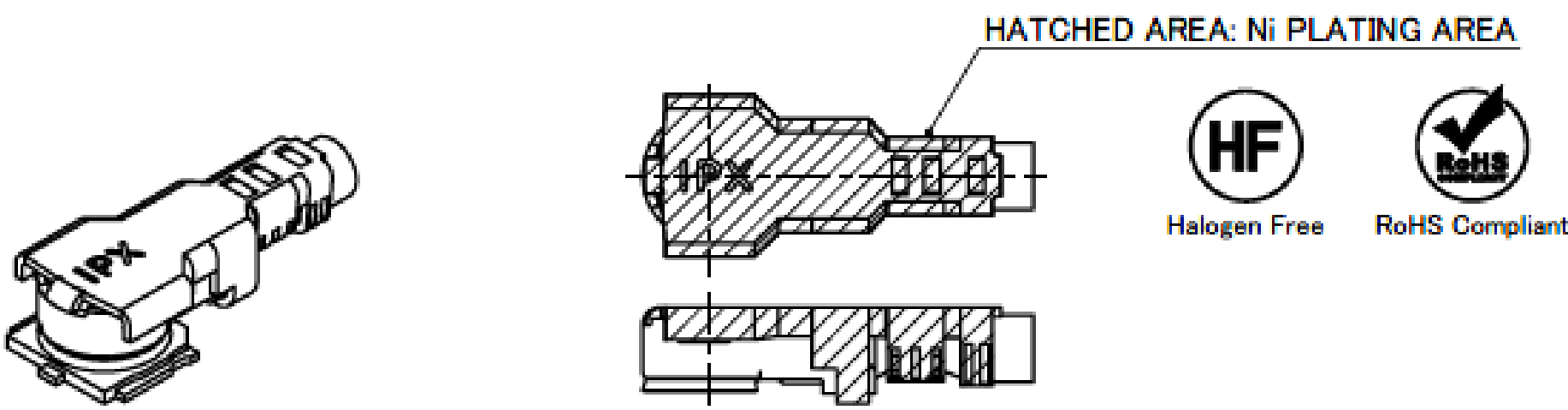
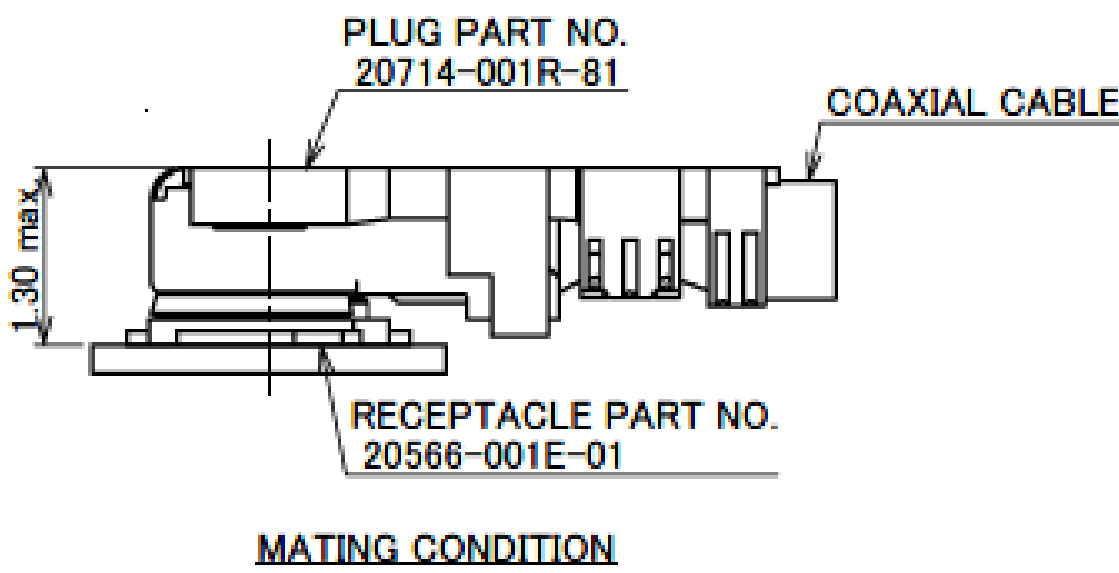
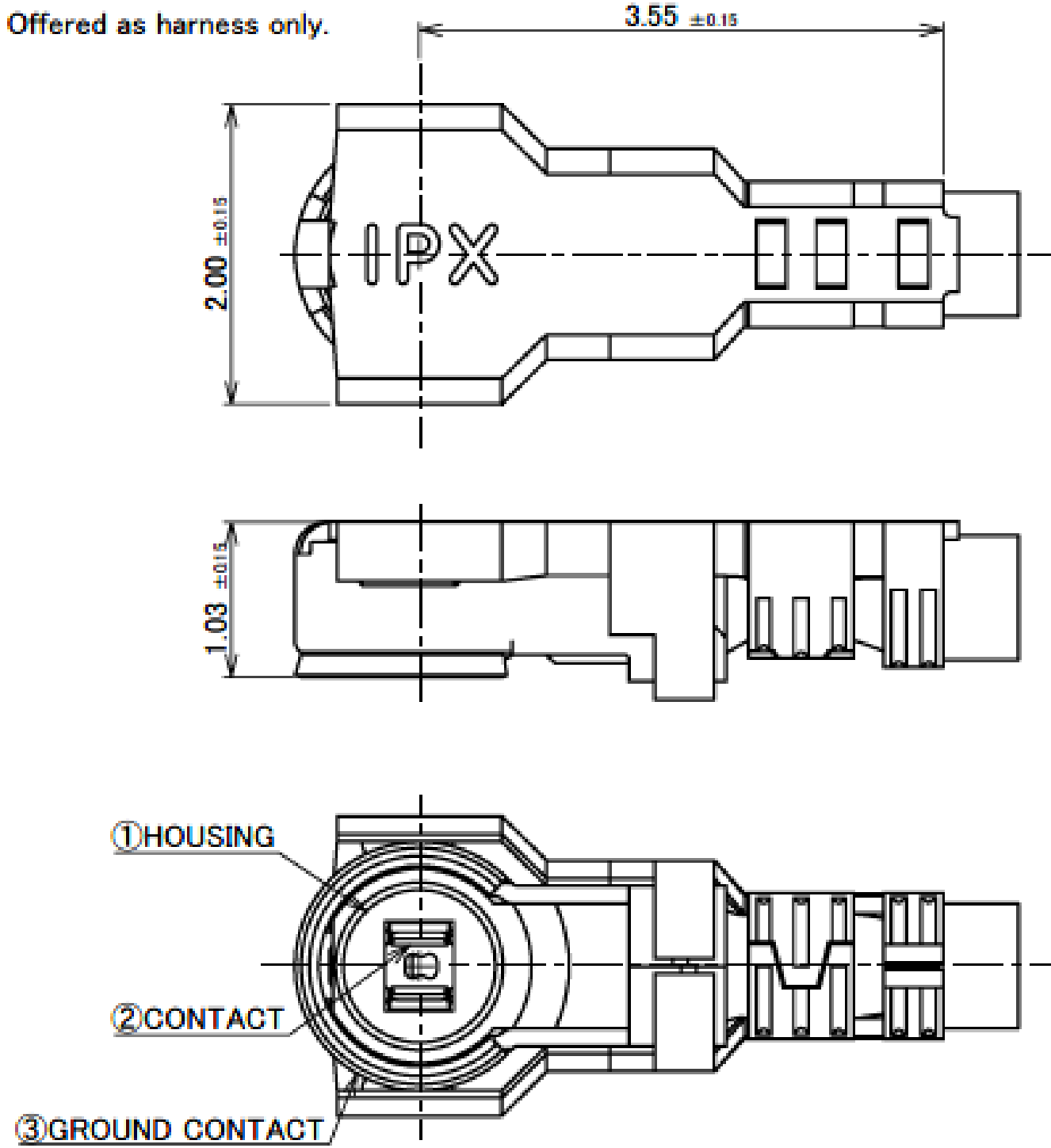
ITEMS	SPECIFICATION
RECOMMENDED APPLICABLE CONNECTOR PART No.	20566-001E-01
RATING VOLTAGE	60 V AC (R.M.S)
RATING FREQUENCY	DC~15 GHz
OPERATING TEMPERATURE	233~363K (-40℃~+90℃)
VSWR (MATED WITH SMA ADAPTER PART No. 90543-0001)	1.30 MAX. AT 0.1~3 GHz, 1.40 MAX. AT 3~6 GHz, 1.50 MAX. AT 6~12 GHz, 1.60 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 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. / AFTER TEST: 3 N MIN.
CRIMP STRENGTH	10 N MIN.
PRODUCT SPECIFICATION	PRS-2192
TEST REPORT	TR-16003
INSTRUCTION MANUAL	HIM-16014
APPEARANCE CRITERIA No.	QLS-A***

Rev.5

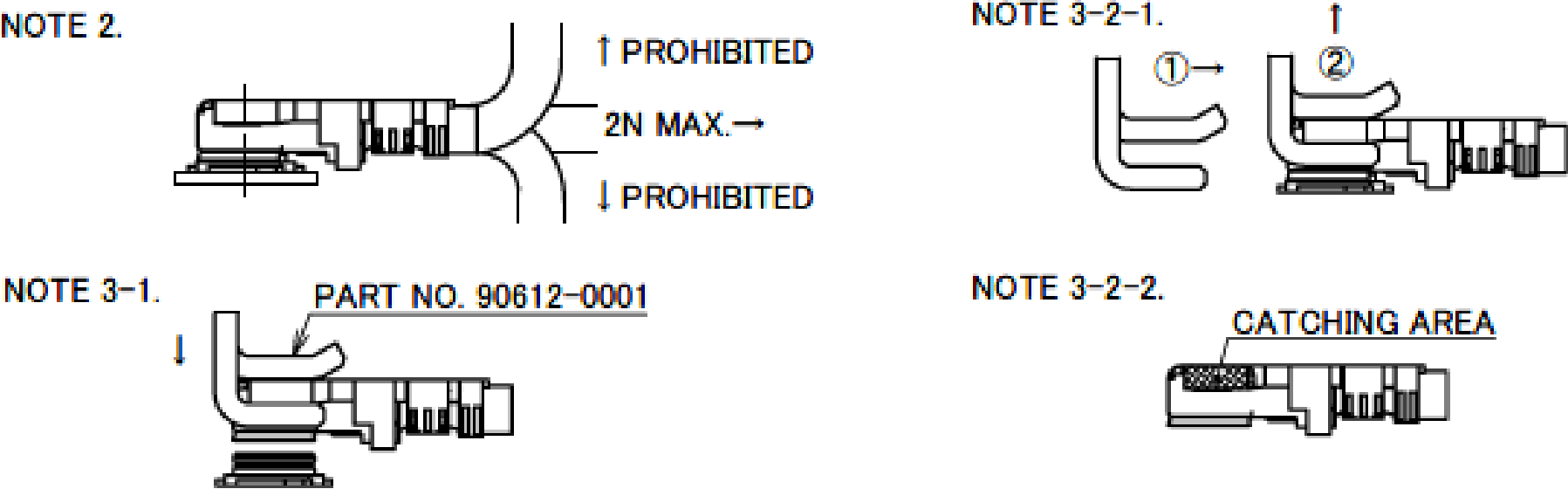
MHF® 5L plug Ni top (0.81)

Recommended P/N	20714-001R-81
PART No.	
20714-001R-81	

Offered as harness only.



- NOTES.
1. APPLICABLE CONNECTOR: 20566-001E-01
 2. PERMISSIBLE LOAD OF CABLE AT MATING
 3. MATING AND UNMATING INSTRUCTION
- 3-1. MATING
- MATE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. DO NOT SLANT MATE.
- 3-2. UNMATING
- 3-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90612-0001)
- 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	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN. [Ni PLATING AREA] Ni ONLY
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK (GF 30%)
NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS

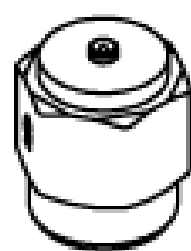
Rev.4

MHF® 5L plug Ni top (0.81)

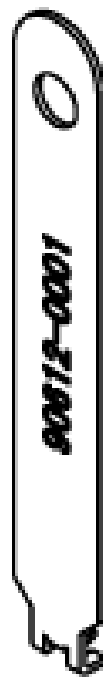
ITEMS	SPECIFICATION
RECOMMENDED APPLICABLE CONNECTOR PART No.	20566-001E-01
RATING VOLTAGE	60 V AC (R.M.S)
RATING FREQUENCY	DC ~ 15 GHz
OPERATING TEMPERATURE	233 ~ 363 K (−40°C ~ +90°C)
VSWR (MATED WITH SMA ADAPTER PART No. 90543-0001)	1.30 MAX. AT 0.1 ~ 3 GHz, 1.40 MAX. AT 3 ~ 6 GHz, 1.50 MAX. AT 6 ~ 12 GHz, 1.60 MAX. AT 12 ~ 15 GHz
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 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. / AFTER TEST: 3 N MIN.
CRIMP STRENGTH	10 N MIN.
PRODUCT SPECIFICATION	PRS-2236
TEST REPORT	TR-16049
INSTRUCTION MANUAL	HIM-16014
APPEARANCE CRITERIA No.	QLS-A***

Rev.4

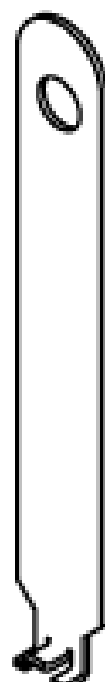
Accessories for MHF® 5L plug Ni top



SMA ADAPTOR FOR MHF 5 PLUG
PART NO. 90543-0001

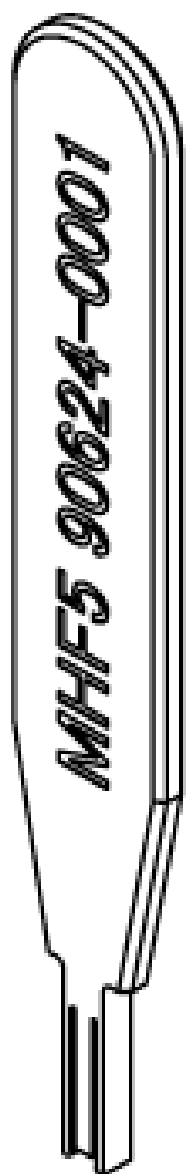


FRONT SIDE



BACK SIDE

MHF 5 PUSHING AND PULLING TOOL
PART NO. 90612-0001

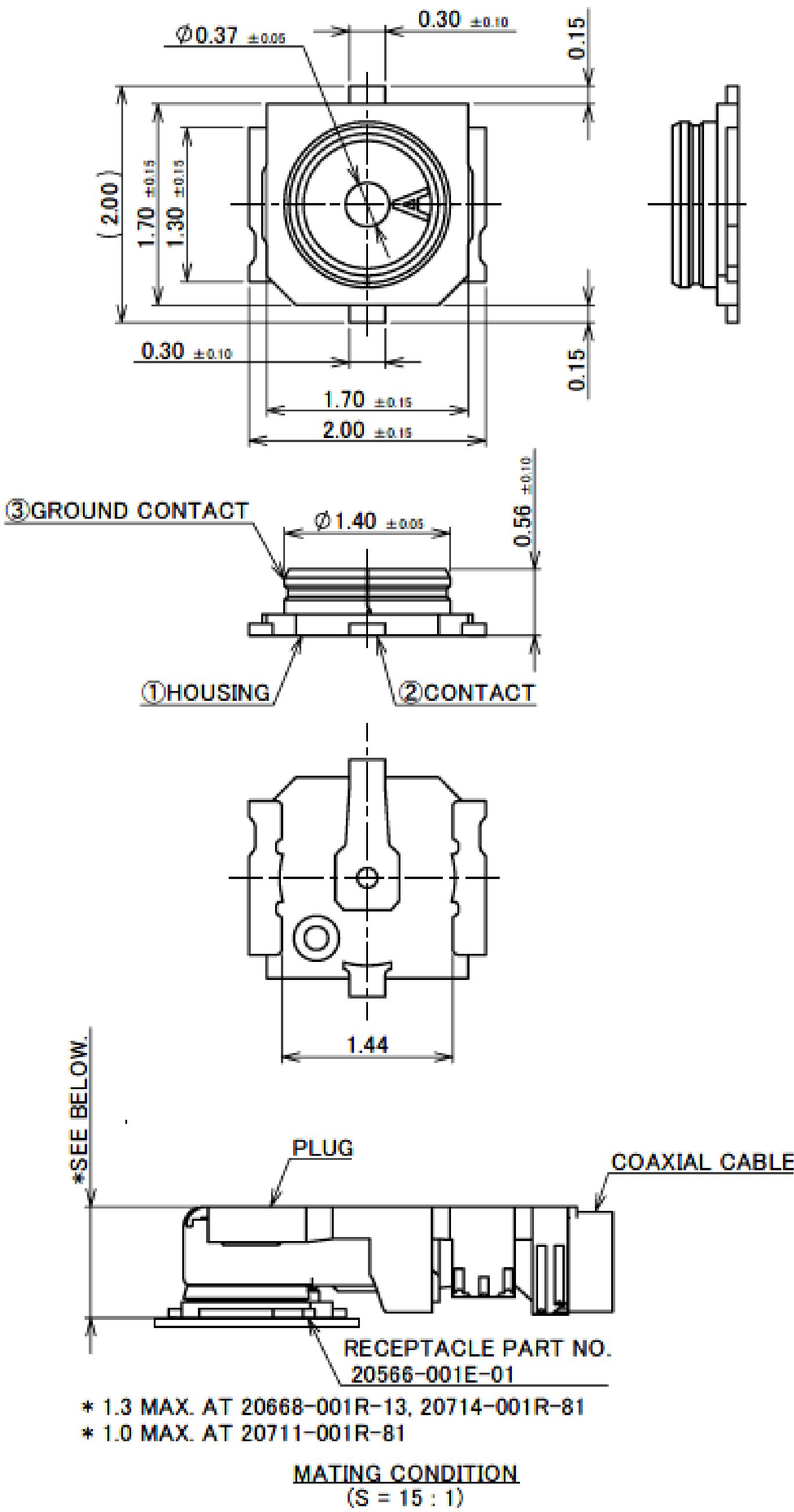
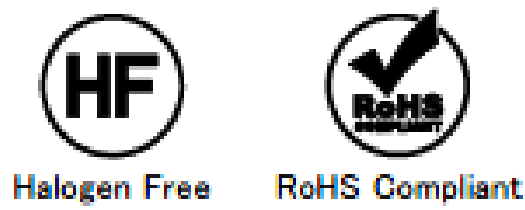


MHF 5 PUSHING TOOL
PART NO. 90624-0001

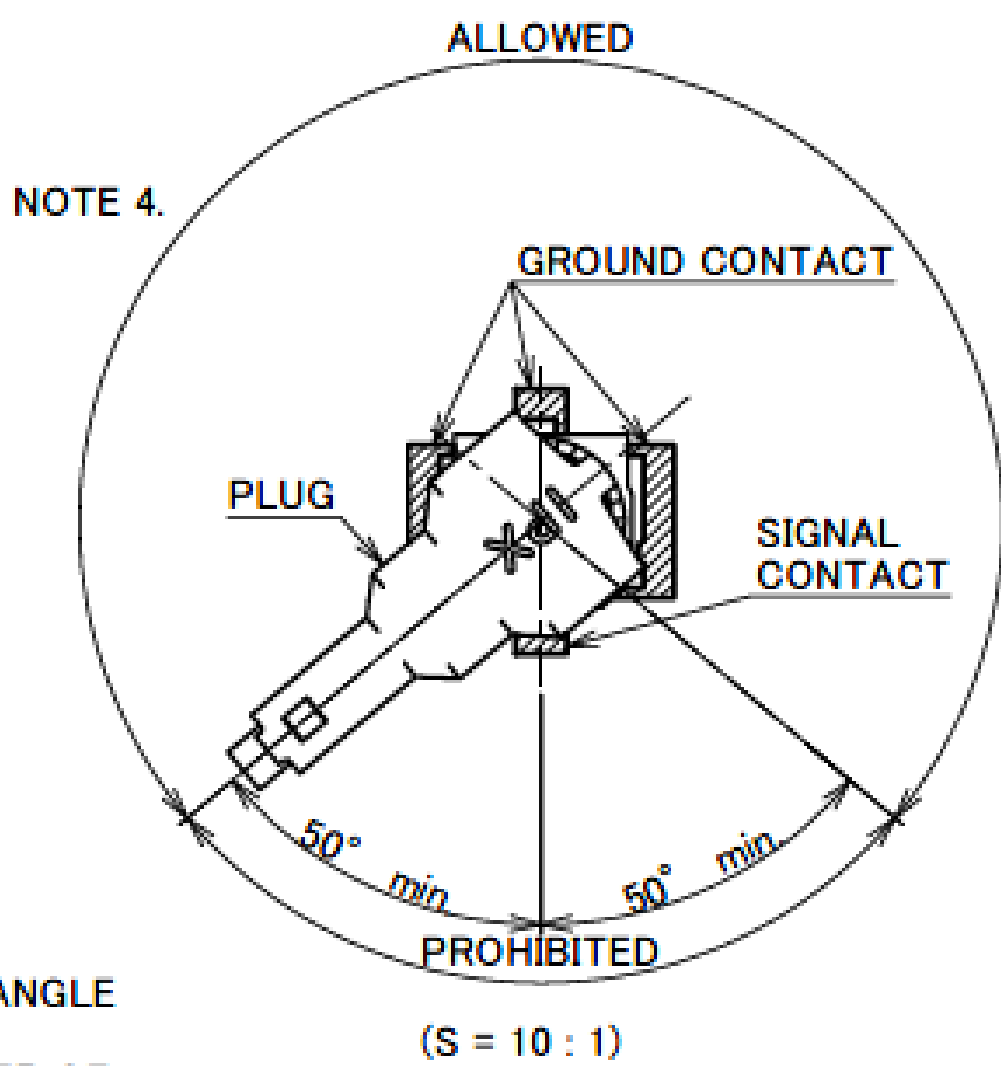
Rev.4

MHF® 5 Receptacle

Recommended P/N	20566-001E-01
PART NO.	
20566-001E-01	



- NOTES
- 1. APPLICABLE CONNECTOR
20567-001R-81
20615-00*R-48
20668-001R-13
20669-001R-81
20711-001R-81
20714-001R-81
 - 2. COPLANARITY: 0.1mm MAX.
 - 3. THIS IS "Pb-FREE" CONNECTOR.
 - 4. PRECAUTIONS FOR CABLE POSITION
[PART NO. 20567-001R-81, 20615-00*R-48]
THE PLUG SHALL NOT BE PLACED WITHIN 50 DEGREES ANGLE FROM CENTER OF THE SIGNAL CONTACT.
TILT THE PLUG AT LEAST 50 DEGREES FROM THE CENTER OF A SIGNAL CONTACT.



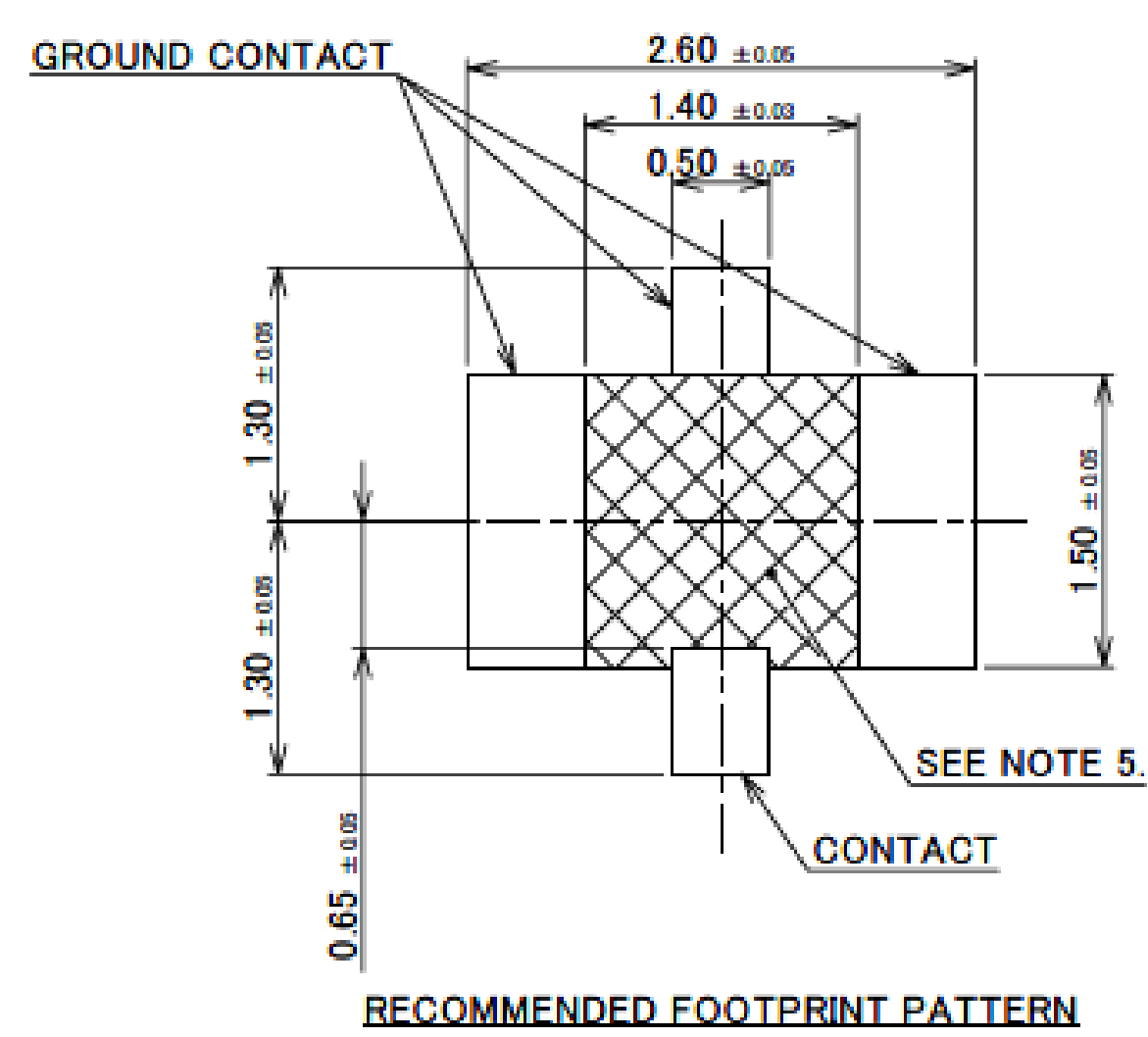
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.01 μ m MIN. UNDER PLATE Pd-Ni 0.02 μ m MIN. SOLDERING PART Au 0.01 μ m MIN. UNDER PLATE Pd-Ni 0.02 μ m MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.1 μ m MIN. SOLDERING PART Au 0.03 μ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS

Rev.9

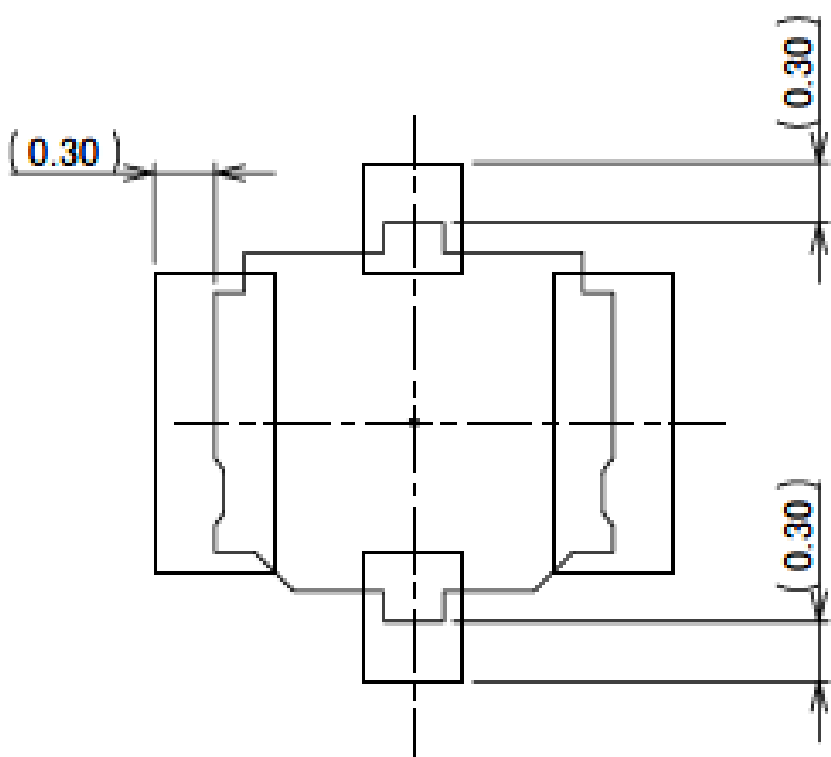
ITEMS	SPECIFICATION				
RECOMMENDED APPLICABLE CONNECTOR PART No.	20668-001R-13	20711-001R-81 (CABLE AWG#36 ϕ 0.81)	20714-001R-81	20711-001R-81 (CABLE AWG#36 ϕ 0.64)	20615-001R-48 (ALL Au PLATING TYPE)
RATING VOLTAGE	60 V AC (R.M.S)				
RATING FREQUENCY	DC~15 GHz				
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)				
VSWR (MATED WITH SMA ADAPTER PART No. 90543-0001)	1.30 MAX. AT 0.1~3 GHz, 1.40 MAX. AT 3~6 GHz, 1.50 MAX. AT 6~12 GHz, 1.65 MAX. AT 12~15 GHz				
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 100 mohm MAX.				INITIAL: 20 mohm MAX. / AFTER TEST: $\angle$ R 20 mohm MAX.
INSULATION RESISTANCE	INITIAL: 500 Mohm MIN. / AFTER TEST: 100 Mohm MIN.				
DIELECTRIC WITHSTANDING VOLTAGE	200 V AC, 1 MINUTE				
DURABILITY	30 CYCLES				
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL: 5 N MIN. AFTER TEST: 3 N MIN.	INITIAL: 4 N MIN. AFTER TEST: 2 N MIN.	INITIAL: 5 N MIN. AFTER TEST: 3 N MIN.	INITIAL: 4 N MIN. AFTER TEST: 2 N MIN.	INITIAL: 4 N MIN. AFTER TEST: 2 N MIN.
PRODUCT SPECIFICATION	PRS-2192	PRS-2108	PRS-2236	PRS-2109	PRS-1939
TEST REPORT	TR-16003	TR-15062	TR-16049	TR-15063	TR-14026
PACKING STANDARD	PST-12036				
INSTRUCTION MANUAL	HIM-16014	HIM-16013	HIM-16014	HIM-16013	HIM-13003
APPEARANCE CRITERIA No.	OLS-A***				

Rev.9

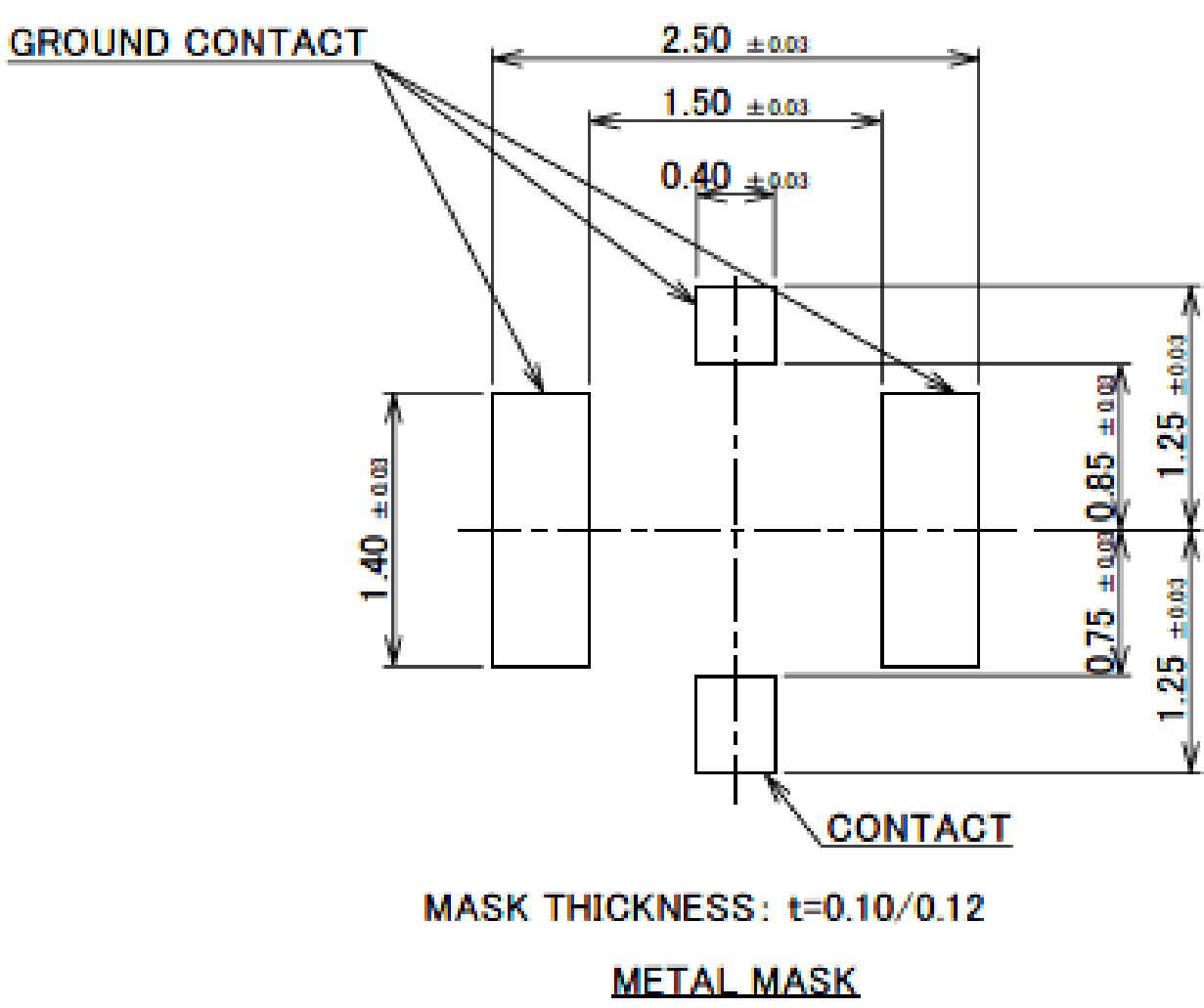
MHF® 5 Receptacle



RECOMMENDED FOOTPRINT PATTERN

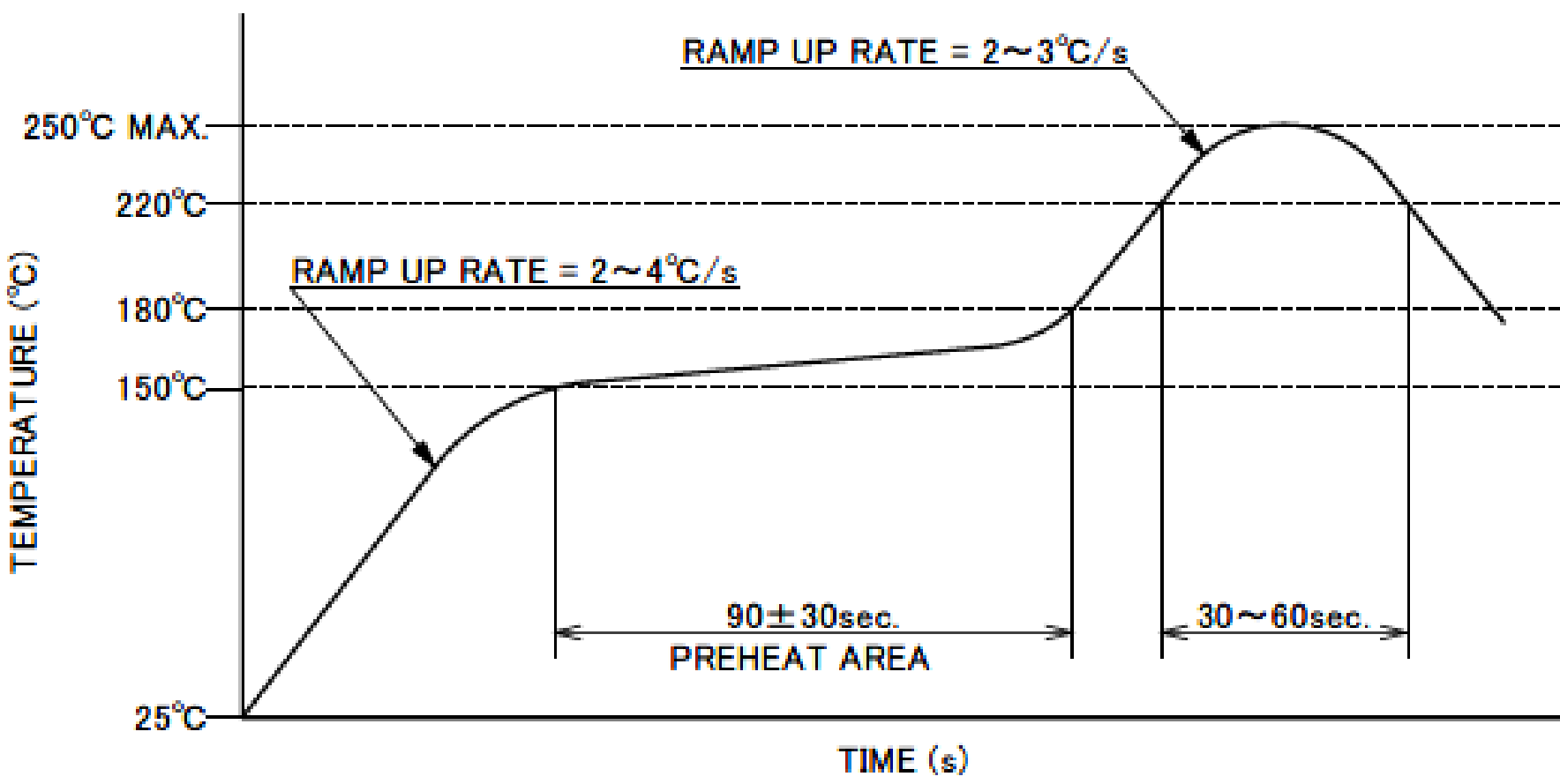


CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



MASK THICKNESS: t=0.10/0.12

METAL MASK



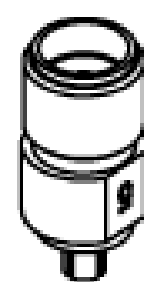
REFLOW TEMPERATURE PROFILE

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

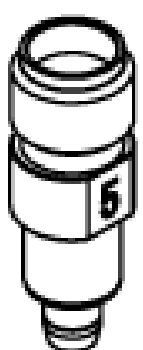
NOTES.
5. NO GROUND, SIGNAL, AND RESIST IN THIS AREA.

Rev.9

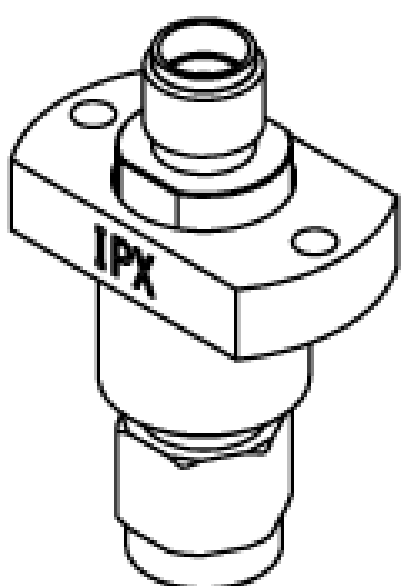
Accessories for MHF® 5 Receptacle



MHF 5 SMA ADAPTER
PART NO. 90543-0001

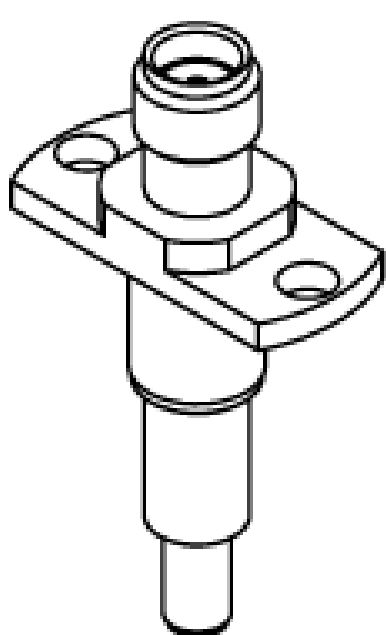


MHF 5 RECEPTACLE HIGH CYCLE ATTACHMENT
PART NO. 90690-0001

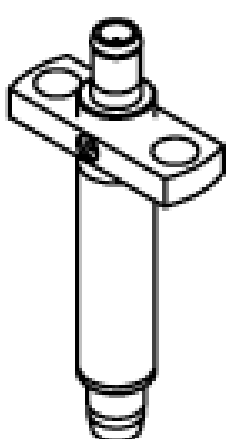


MHF SERIESE HIGH CYCLE ADAP BASE UNIT
PART NO. 90684-0001

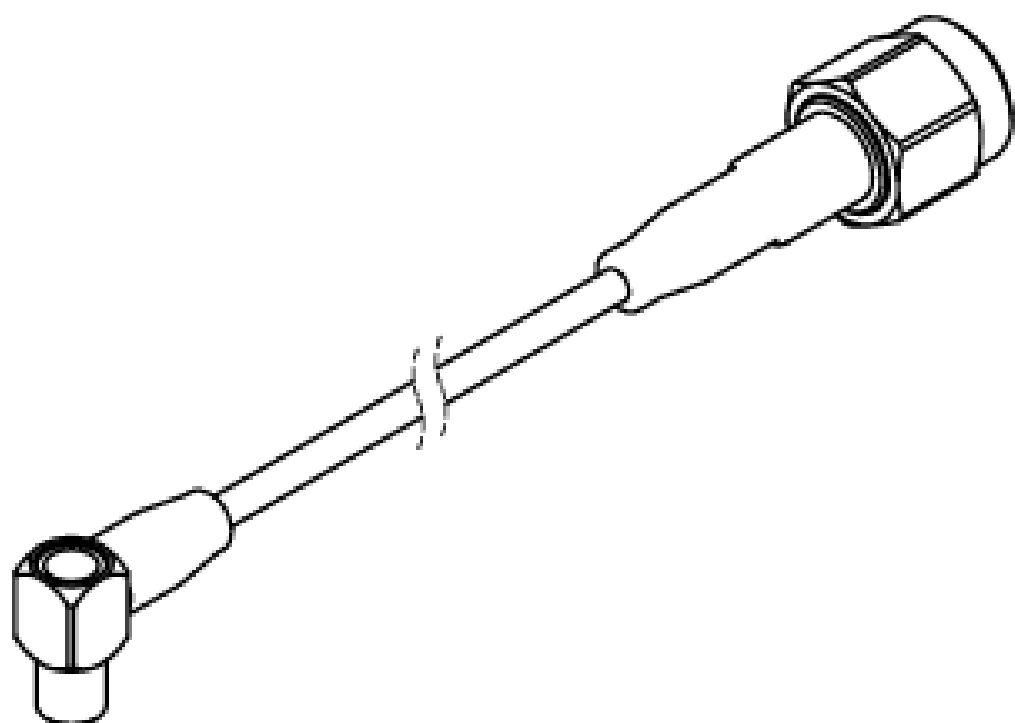
* 90690-0001 AND 90684-0001 SHOULD BE USED TOGETHER.



MHF 5 RECEPTACLE HIGH CYCLE SMA ADAPTER
PART NO. 90793-0001



MHF 5 RECEPTACLE HIGH CYCLE N45 C ADAPTER
PART NO. 90847-0001



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

* 90847-0001 AND 90577-**** SHOULD BE USED TOGETHER.

Rev.9

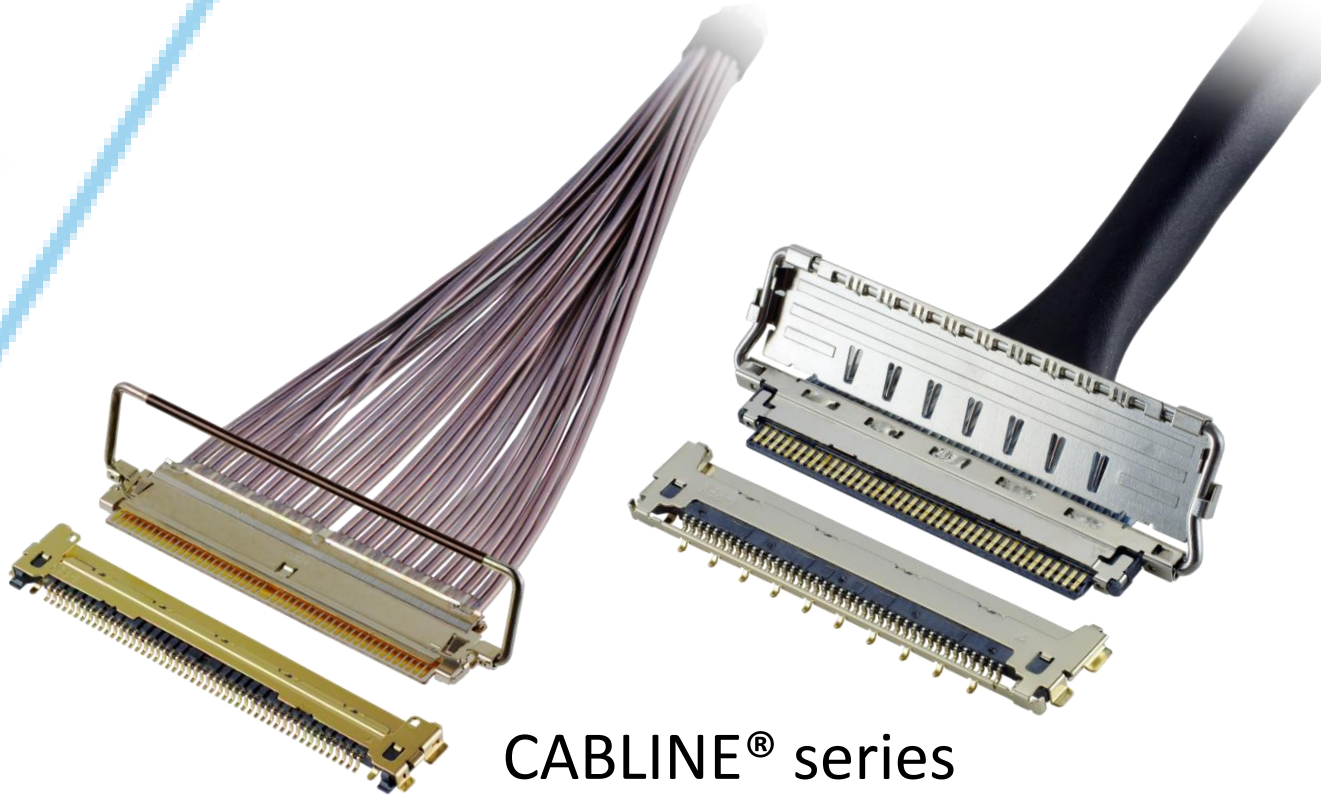
Custom Connectors Available

 RF
Connectors

MHF® series



CABLINE® series



Micro-coaxial/Twinax
Connectors

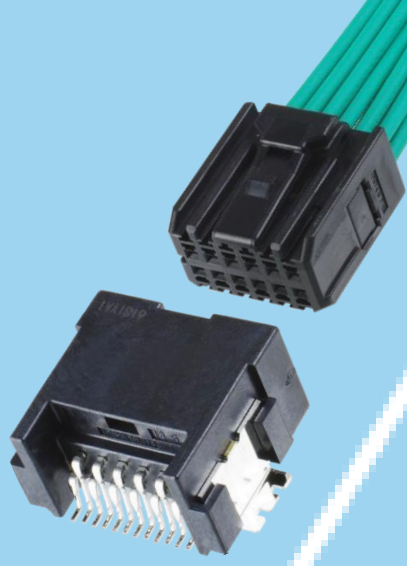


Wire-to-Board
Connectors/
Terminals

AP series



ISH® series



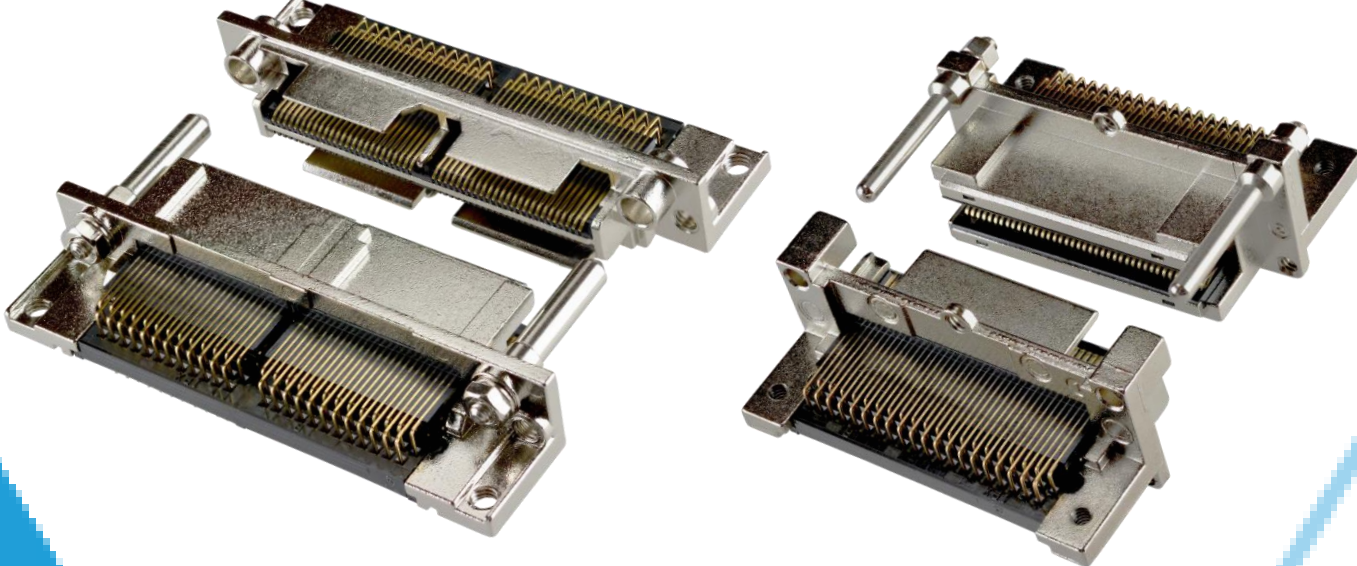
NOVASTACK® series



Board-to-Board
Connectors



I/O
Connectors



MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC
Connectors



Inquiry



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