

# MHF®-A

Low profile design with 1.13 mm OD, supports to 6 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 (L=100 mm)	DC~3 GHz	1.3 max.
	3~6 GHz	1.5 max.

Applicable Cable Size:

O.D. 1.13 mm / AWG 32
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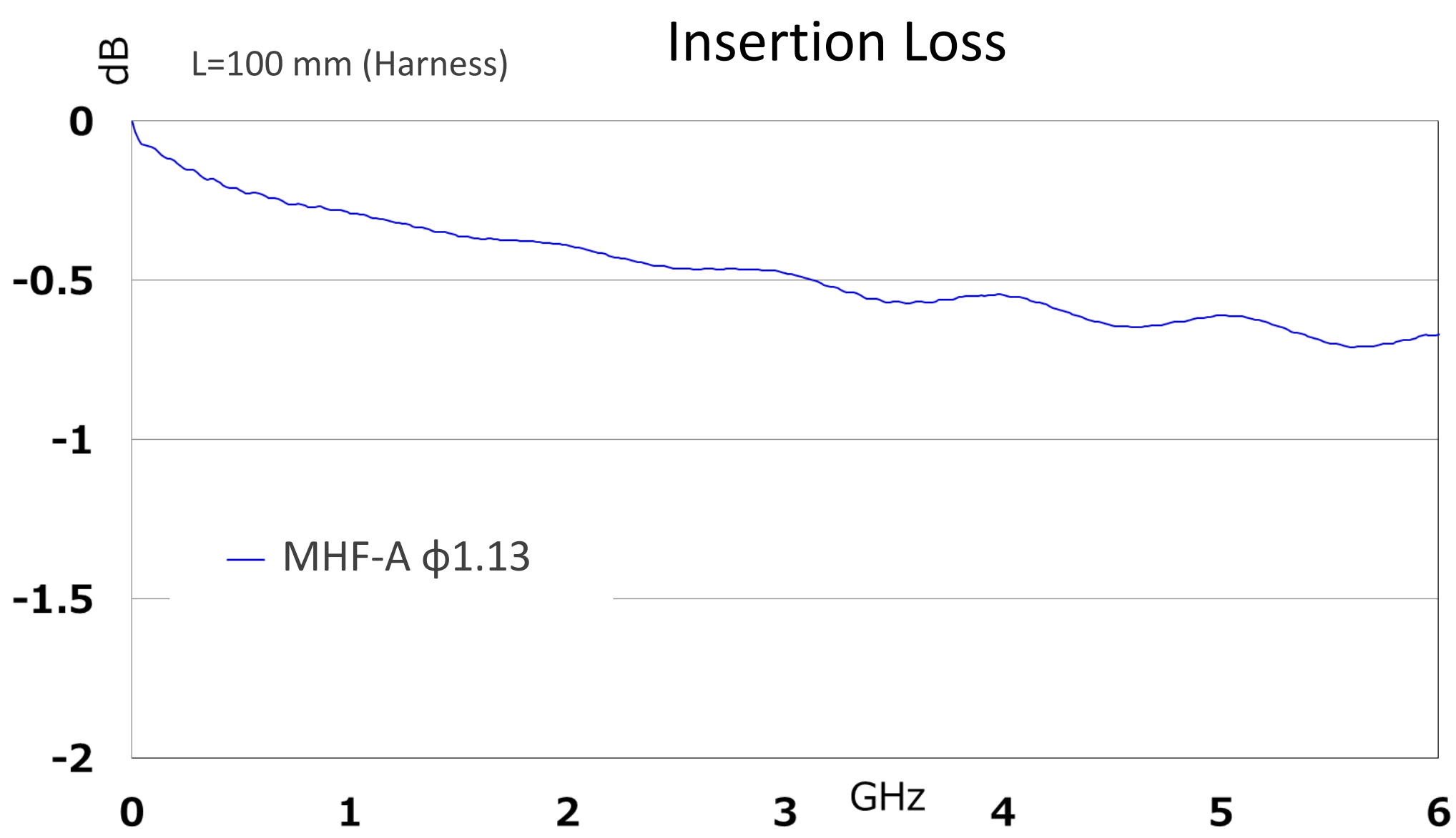
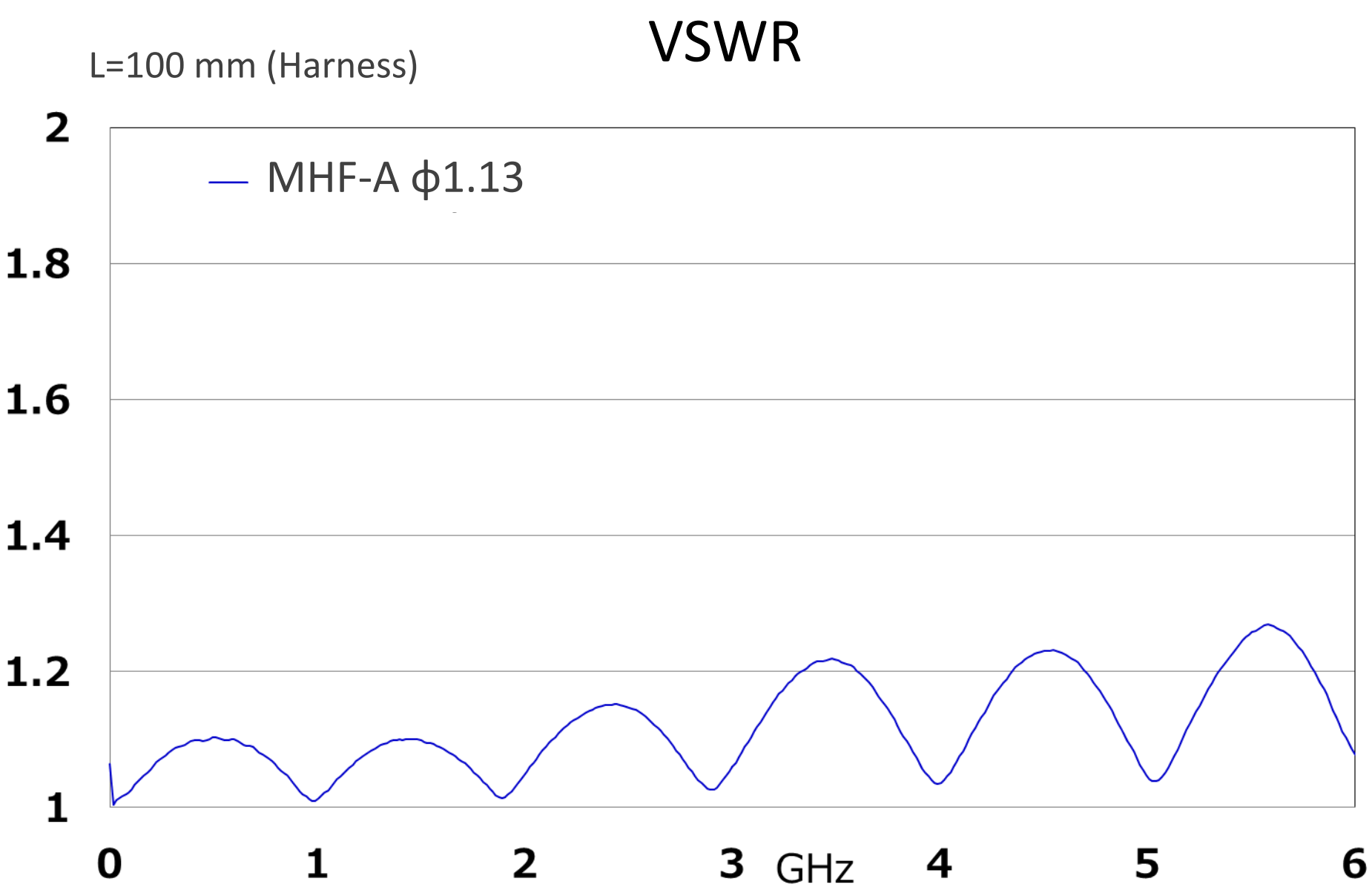
Applicable Standards (Reference Only):

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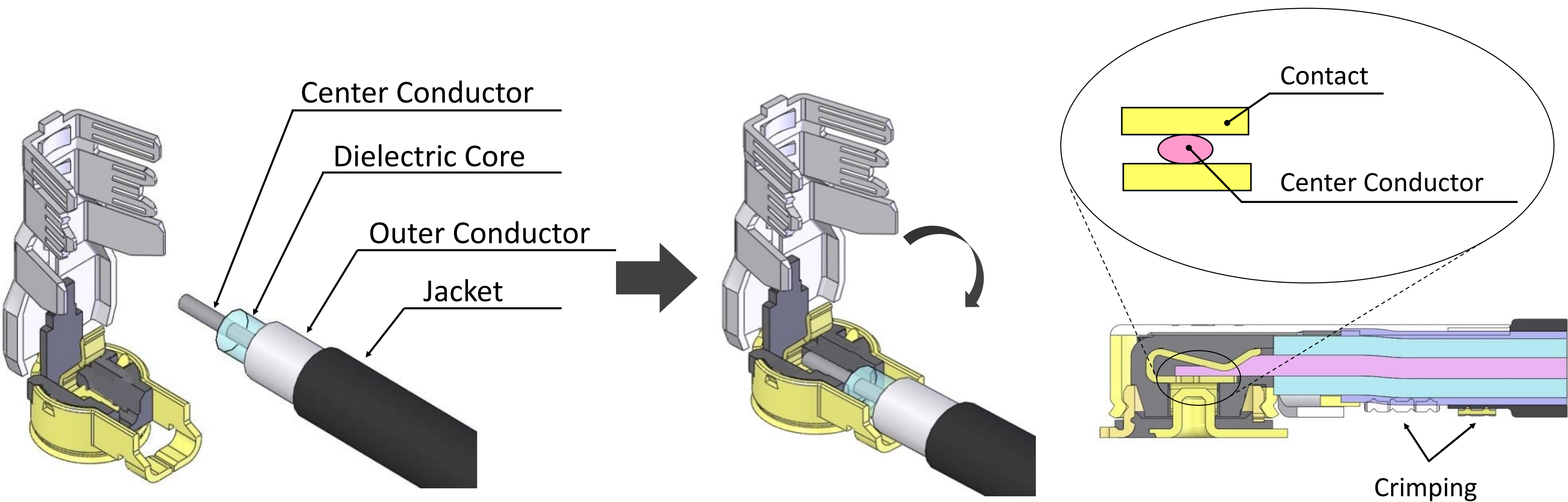


\* Please inquire for pin counts not listed or outside of the pin count range.

► Small form factor with big performance through 6 GHz



► Solderless micro-coax termination technology "i-Fit®" provides consistent performance



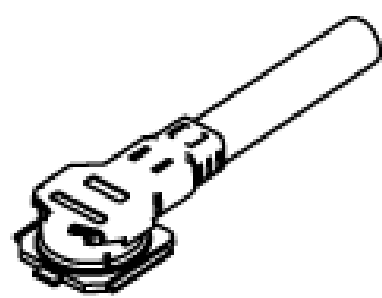
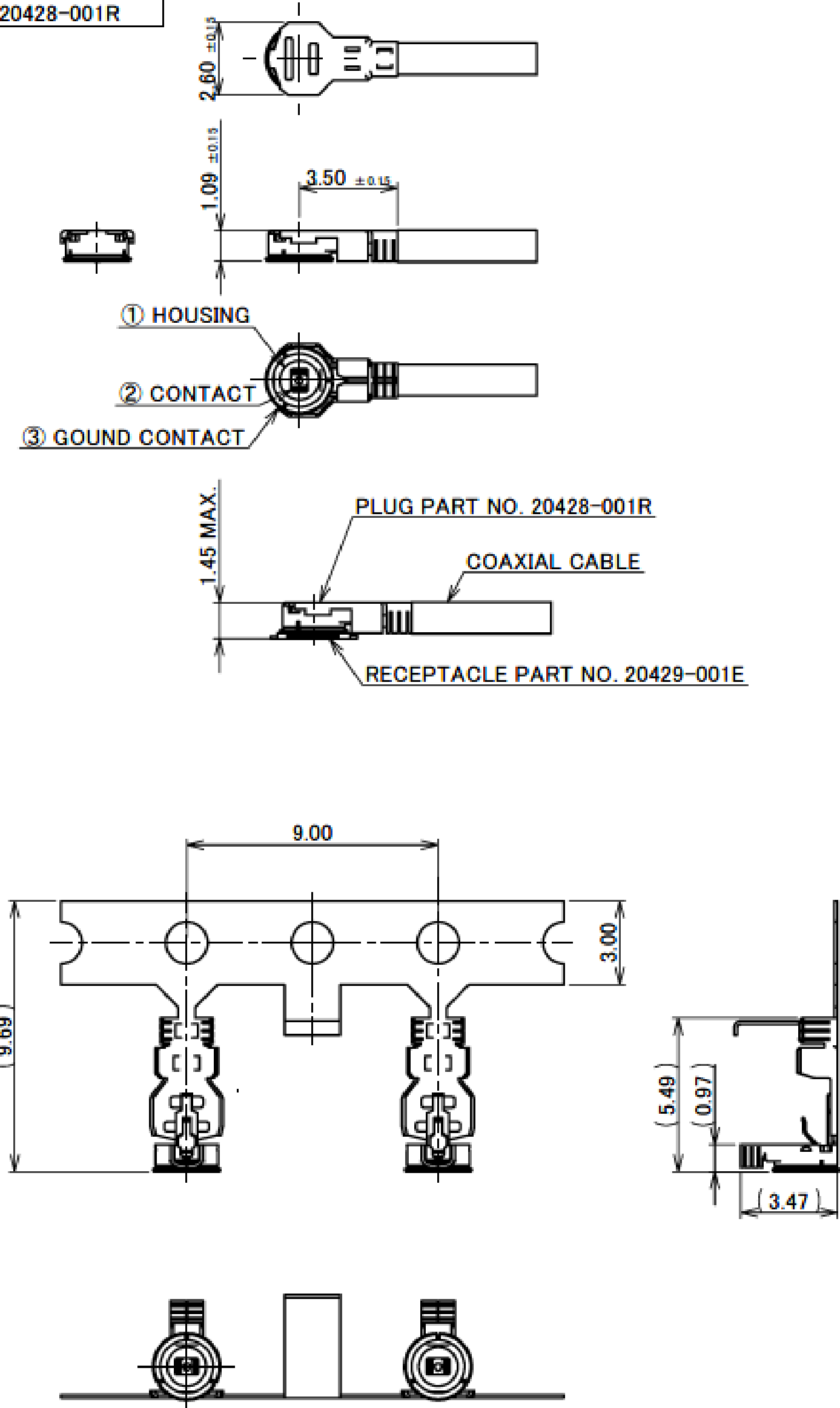
► MHF®-A Plug available micro-coax O.D. (AWG): 1.13 mm (32)

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. (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	

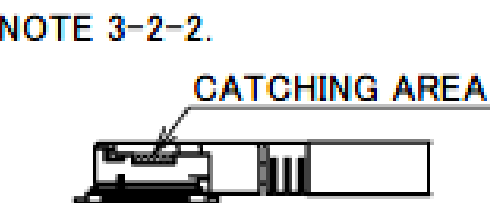
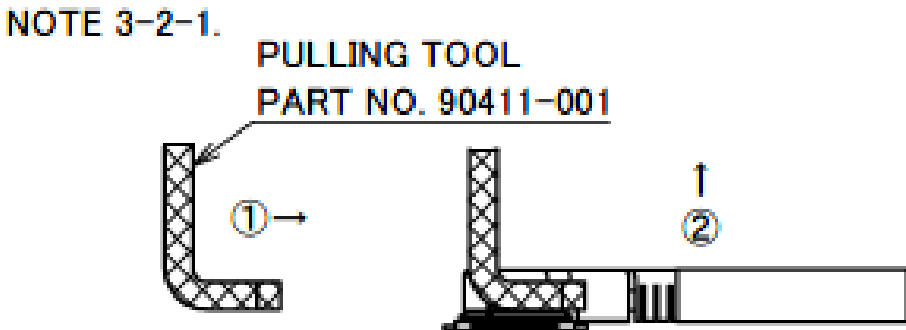
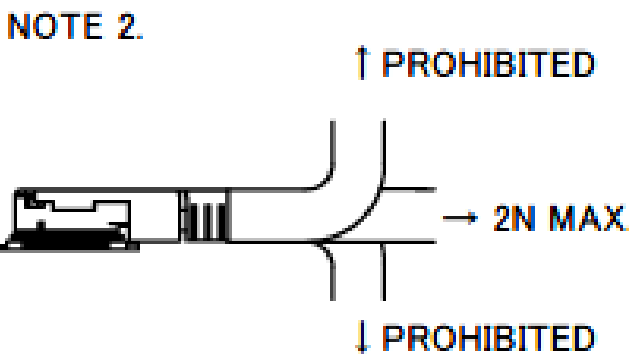


Halogen Free



RoHS Compliant

- 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.

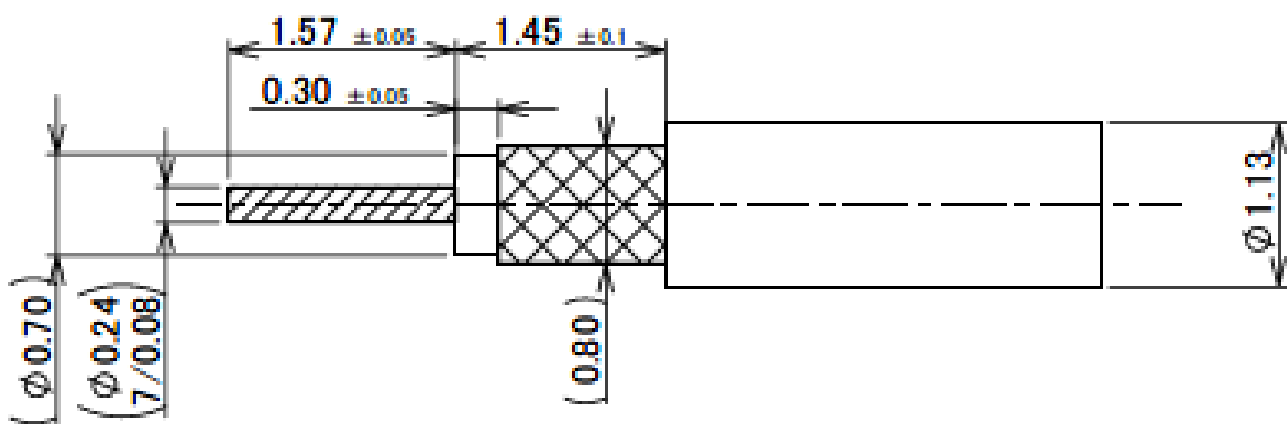
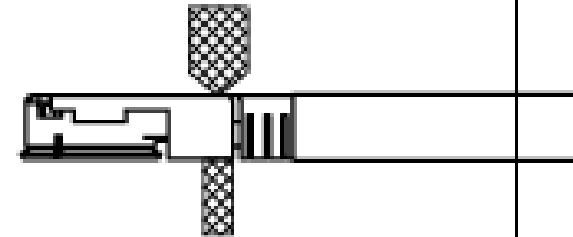
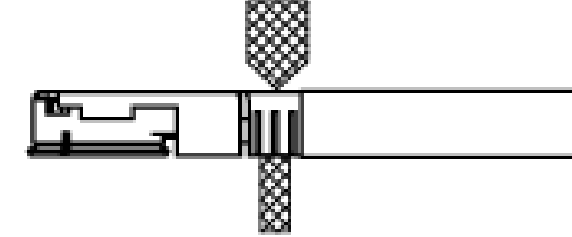
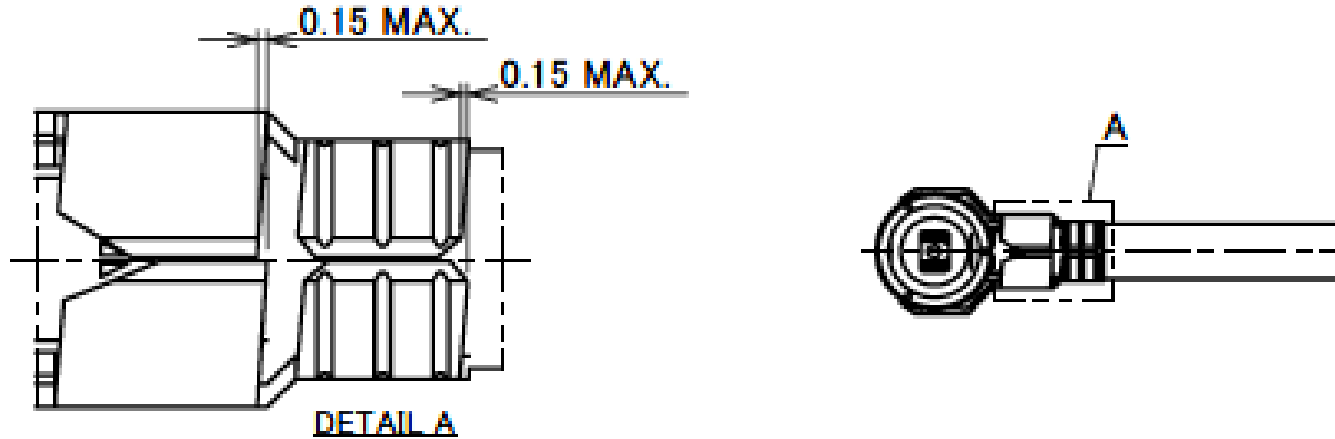


3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 $\mu$ m MIN. CONTACT PART Au 0.05 $\mu$ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 $\mu$ m MIN. CONTACT PART Au 0.1 $\mu$ m MIN.
1	HOUSING	PBT	UL94V-0, BLACK
NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS

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 (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. CH-1 (i-Fit® PART) : 1.055~1.105	USE FOR POINT MICROMETER. CH-2 (JACKET PART) : 1.06~1.13
BARREL GAP		

NOTES

4. APPLICABLE CABLE

4-1. DISCRIPTION

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

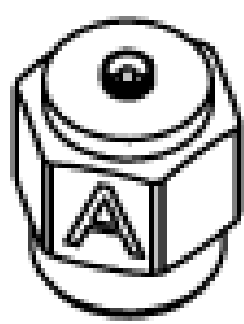
INSULATION RESISTANCE: 1500 MEGA-OHM/KM MIN.

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

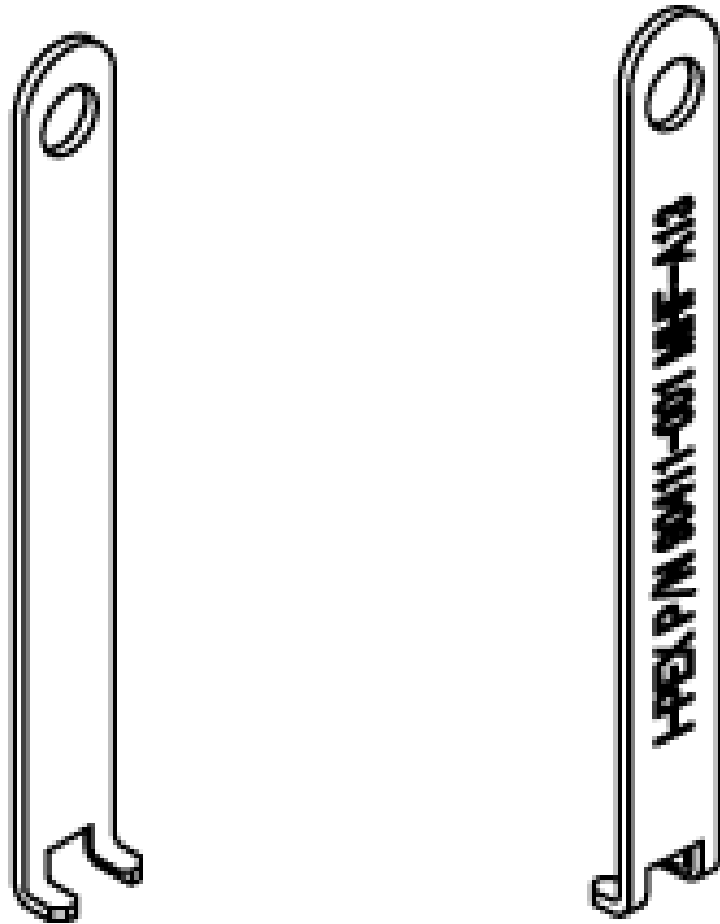
Rev.6



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

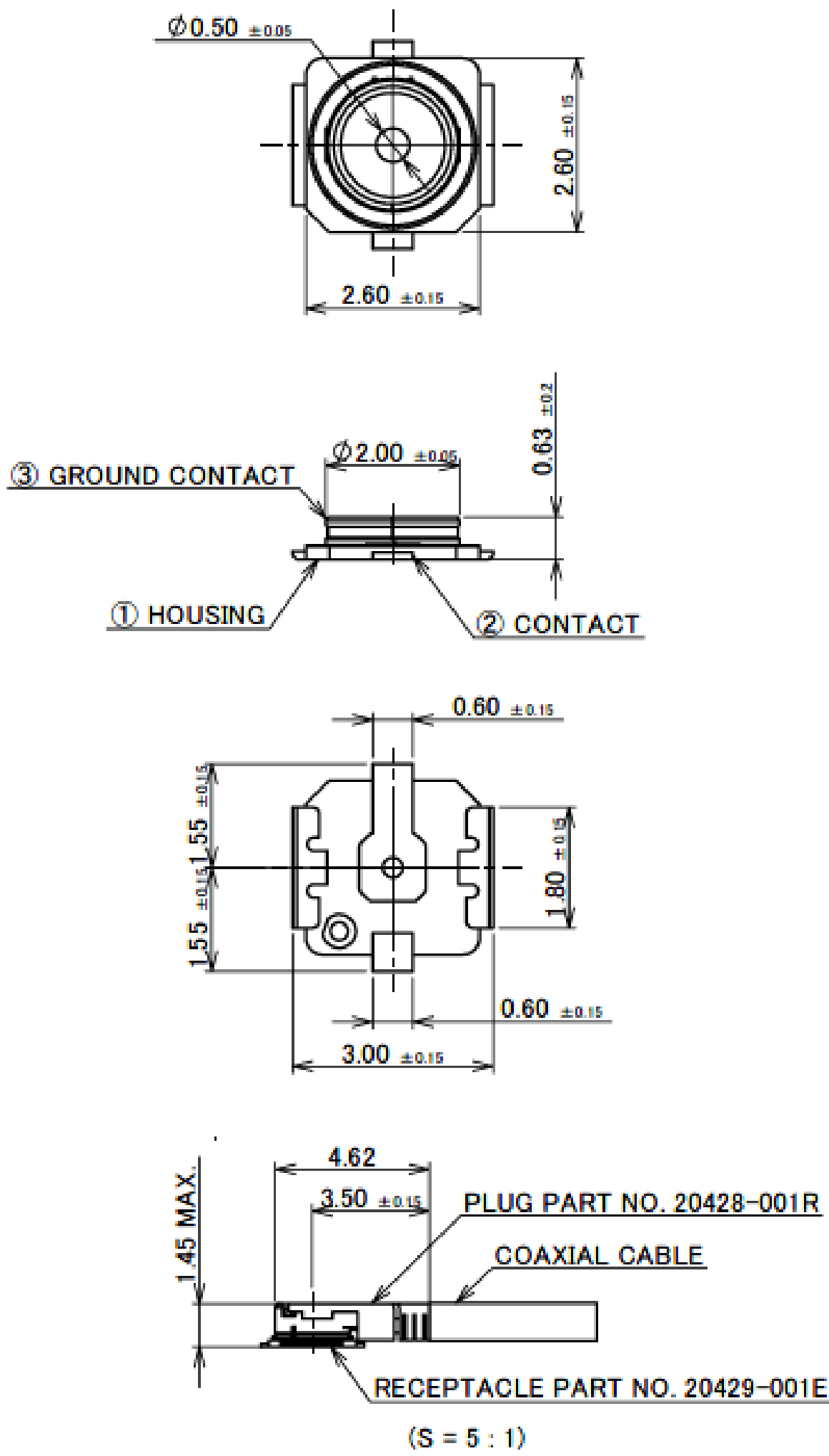
Recommended P/N	20429-001E
PART NO.	
20429-001E	



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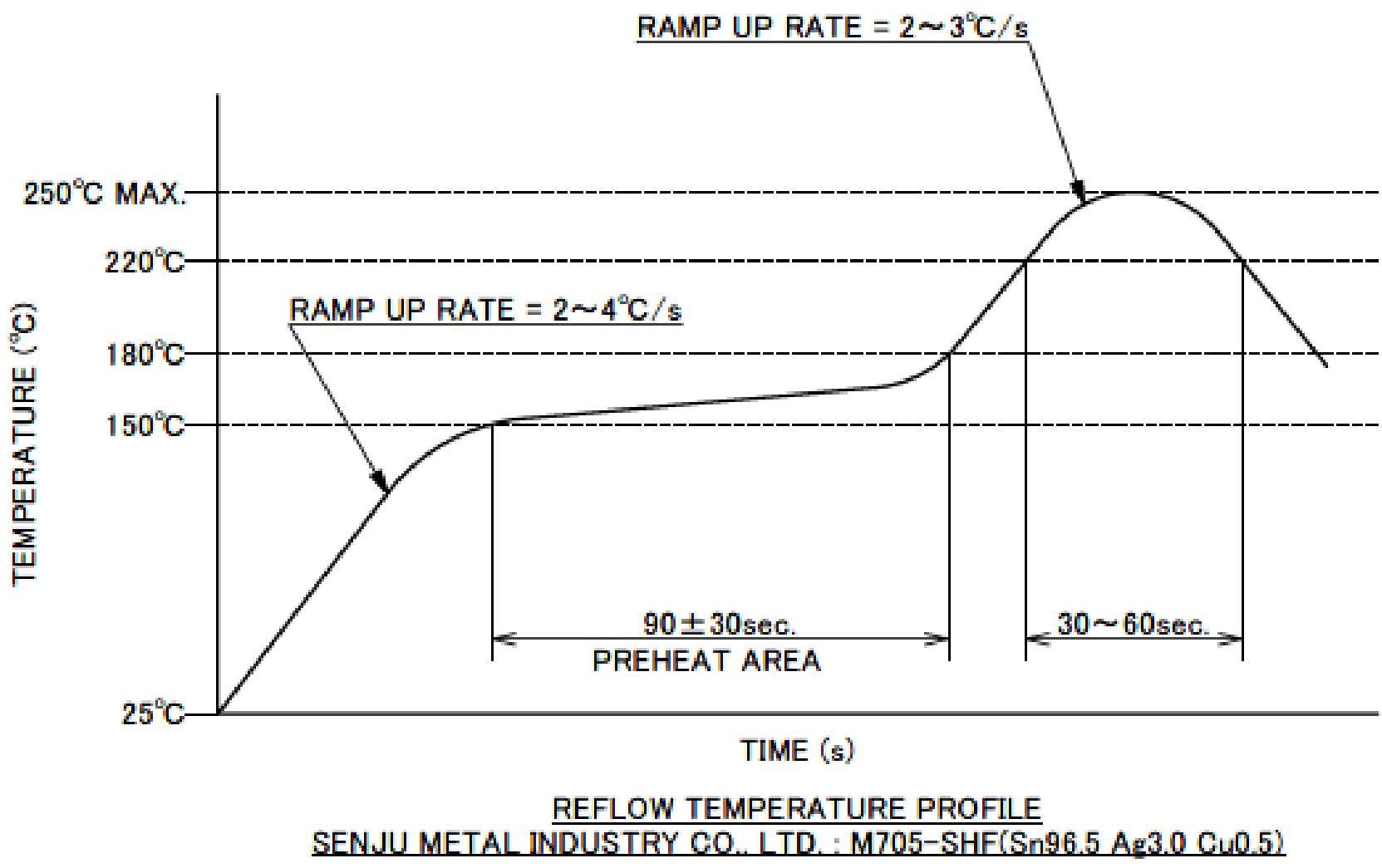
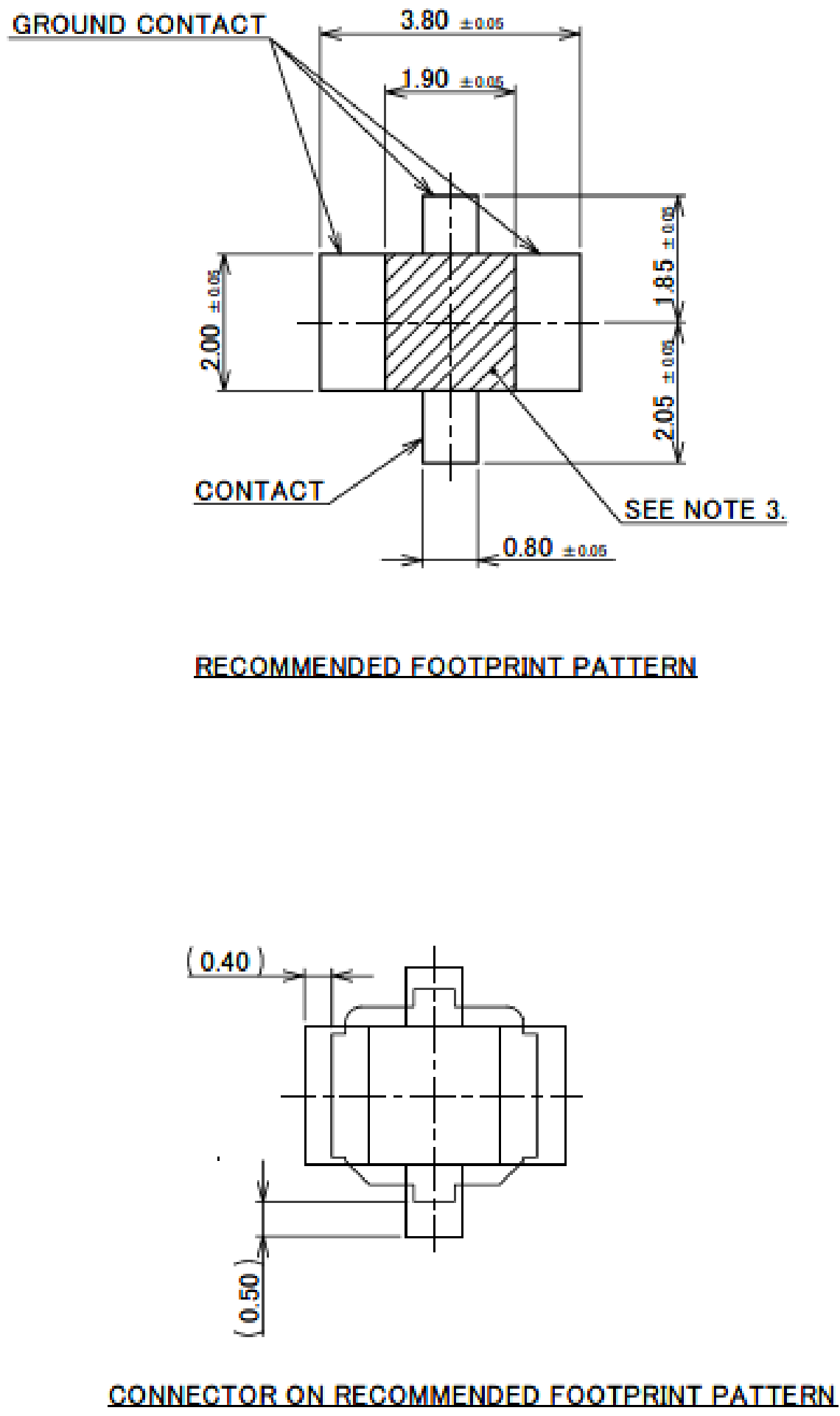
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 $\mu$ m MIN. CONTACT PART Au 0.03 $\mu$ m MIN. SOLDERING PART Au 0.03 $\mu$ m MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 $\mu$ m MIN. CONTACT PART Au 0.05 $\mu$ m MIN. SOLDERING PART Au 0.05 $\mu$ m MIN.
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DESCRIPTION	MATERIAL	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 (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



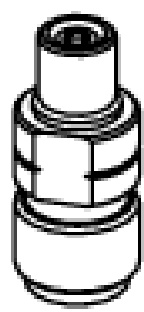
NOTES  
3. NO GROUND, SIGNAL, AND RESIST IN THIS AREA.

Rev.10

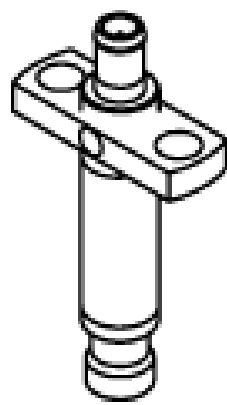
# Accessories for MHF®-A Receptacle



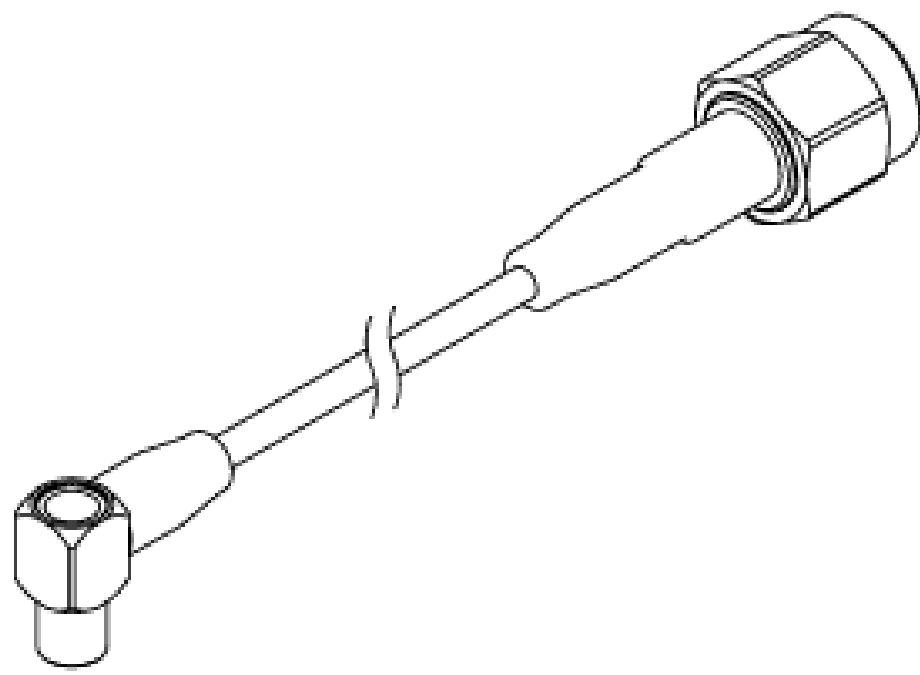
MHF-A13 SMA ADAPTER  
PART NO. 90413-002



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



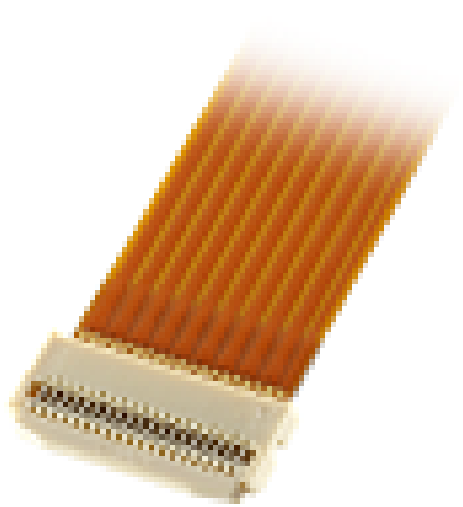
Autolocking  
FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial  
/ Discrete Cable



High-Speed



RF



High-Frequency



Optical  
Module



High-Speed



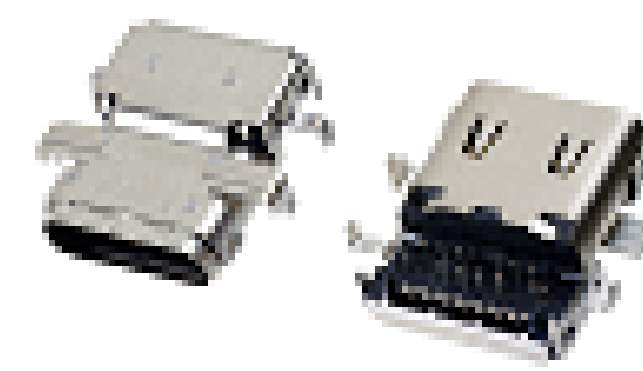
Power



High-Power



I/O  
(Input/Output)



Quick charge



Effector



Custom  
Connectors  
Available

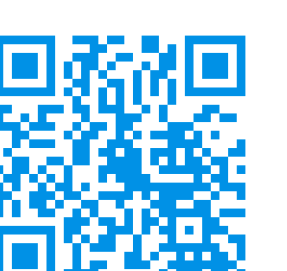
Inquiry



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