

# MHF<sup>®</sup> 4L

M.2 行业标准，组合高度最大为 1.2 mm, 1.4 mm, 1.7 mm  
对应 12 GHz 的插入损耗和电压驻波比

**Product Specifications:**

Mated Height (mm max.)	(1) 1.2, (2) 1.4, (3) 1.7	
Rece. SMT Size (mm)	2.0 x 2.0	
Applicable Frequency	DC ~ 12 GHz	
Characteristic Impedance	50 ohm	
VSWR (L=100 mm)	DC~3 GHz	(1) (2) (3) 1.3 max.
	3~6 GHz	(1) (2) 1.45 max. (3) 1.4 max.
	6~9 GHz	(1) (2) 1.6 max. (3) 1.5 max.
	9~12 GHz	(1) (2) 1.9 max. (3) 1.6 max.

\*如您需要了解未列出或不在范围内的Pin数，请咨询我们。  
\* Cable size O.D. (1) 0.81 mm, 0.64 mm (2) 1.13 mm, 0.95 mm (3) 1.37 mm

**Applicable Cable Size:**

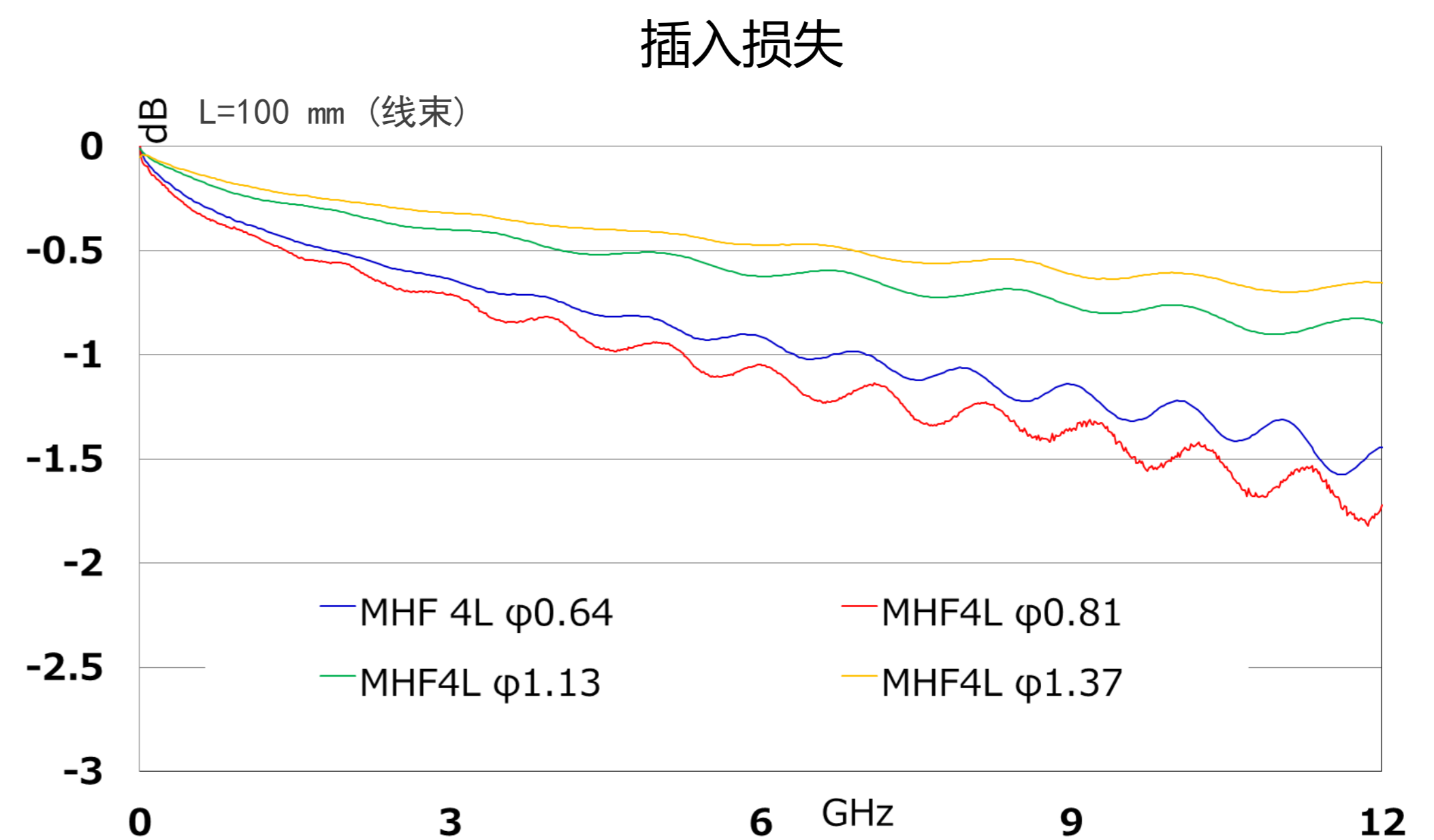
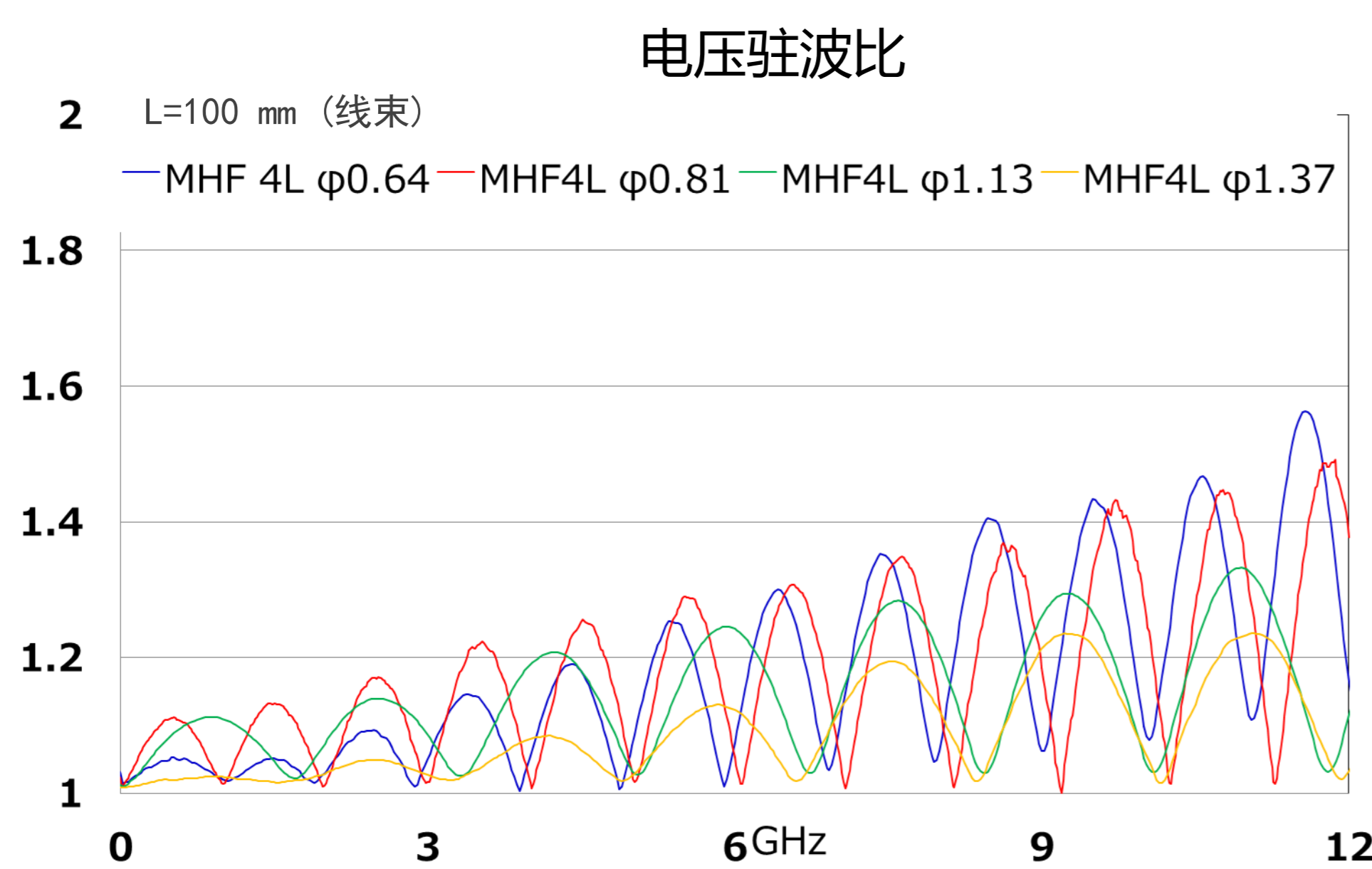
<b>(1) 20572-001R-08</b>	O.D. 0.81 mm, O.D. 0.64 mm / AWG 36
<b>(2) 20565-001R-13</b>	O.D. 1.13 mm / AWG 32 O.D. 0.95 mm / AWG 33
<b>(3) 20632-001R-37</b>	O.D. 1.37 mm / AWG 30

**Applicable Standards (Reference Only):**

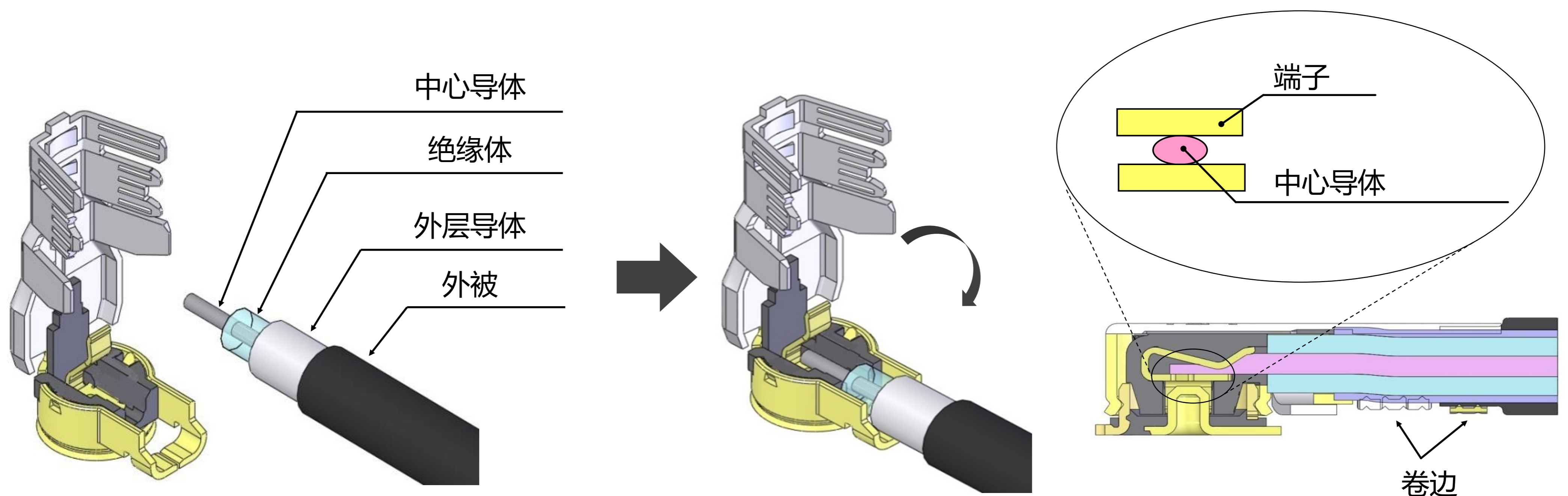
5G sub-6, Wi-Fi 6E, LTE/LTE-Advanced, LPWA, Bluetooth, GPS



## 穿过 12 GHz 的高性能小型连接器



## 使用 “i-Fit<sup>®</sup>” 技术的无需焊接极细同轴线连接



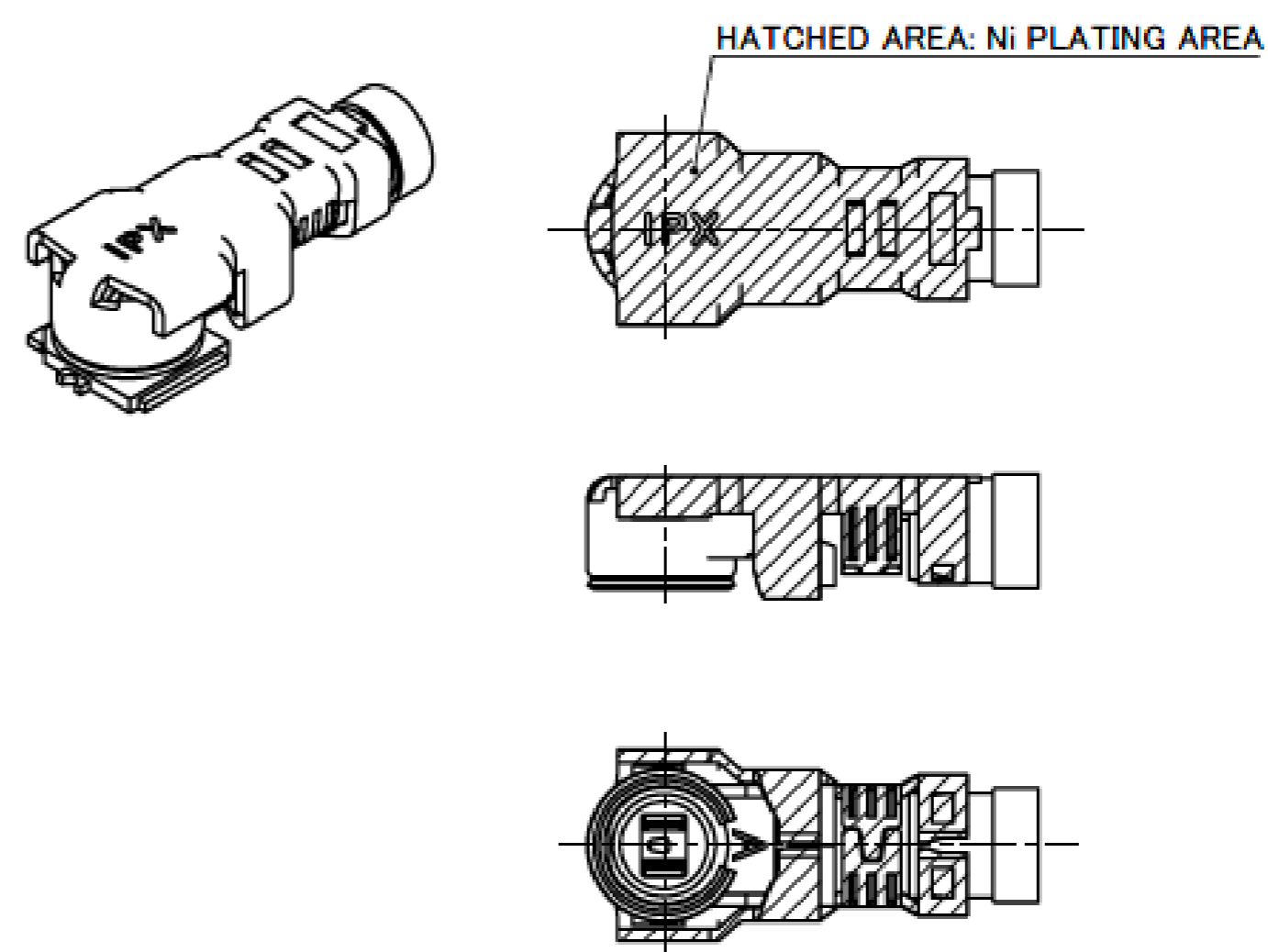
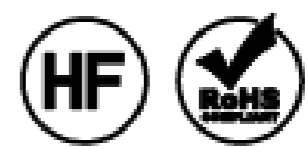
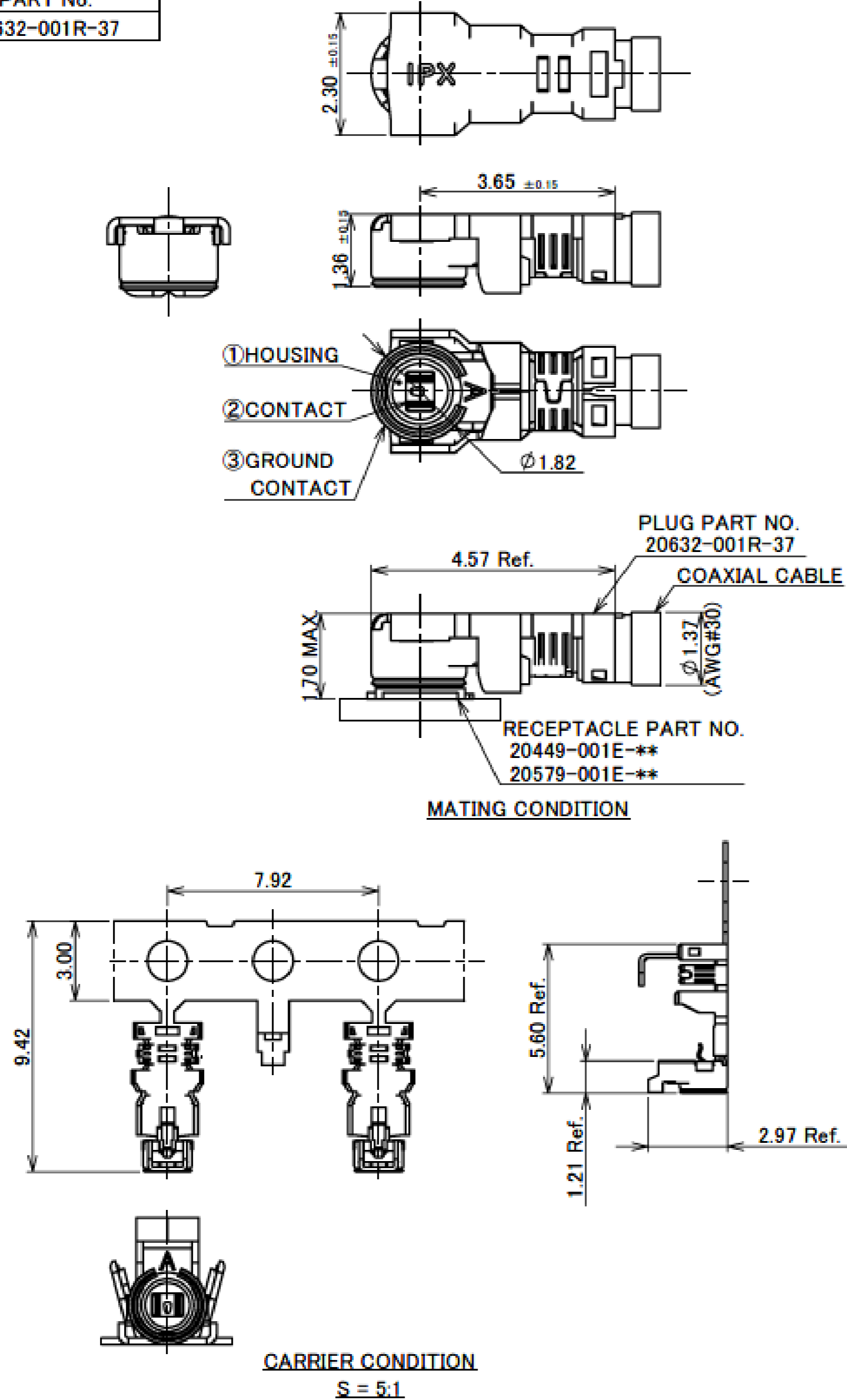
## 极细同轴线外径 O.D. : 0.64 mm, 0.81 mm, 0.95 mm, 1.13 mm, 1.37 mm

Mating Height		1.7 mm max.	1.4 mm max.	1.2 mm max.
Plug Part Number		20632-001R-37	20565-001R-13	20572-001R-08
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 4 receptacle, MHF 4L receptacle		

# Component Parts Details

## MHF<sup>®</sup> 4L plug Ni top (1.37)

Recommended P/N	20632-001R-37
PART No.	
20632-001R-37	



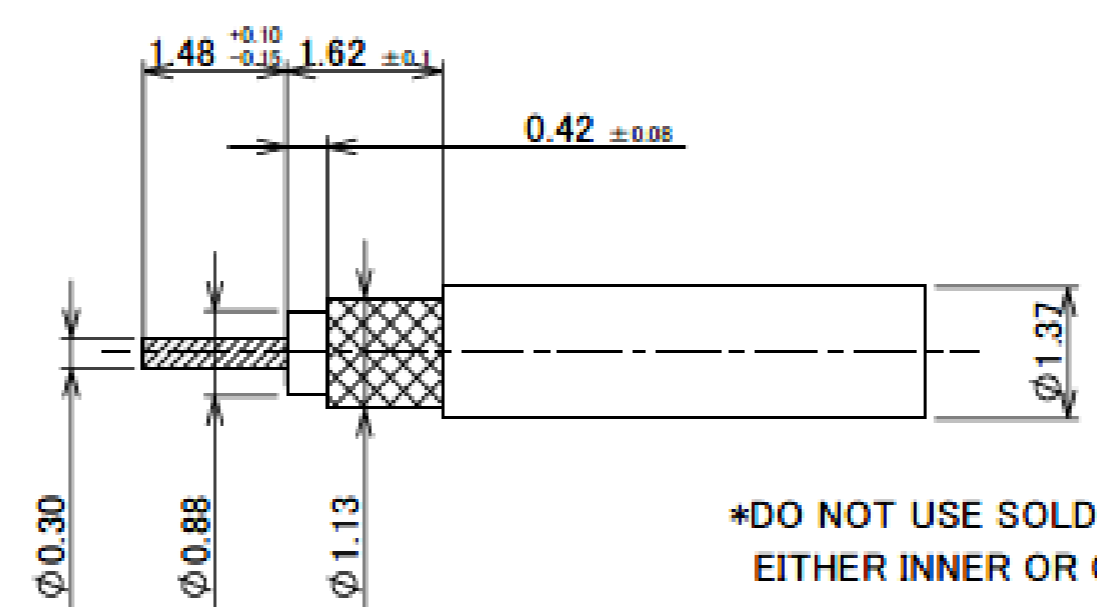
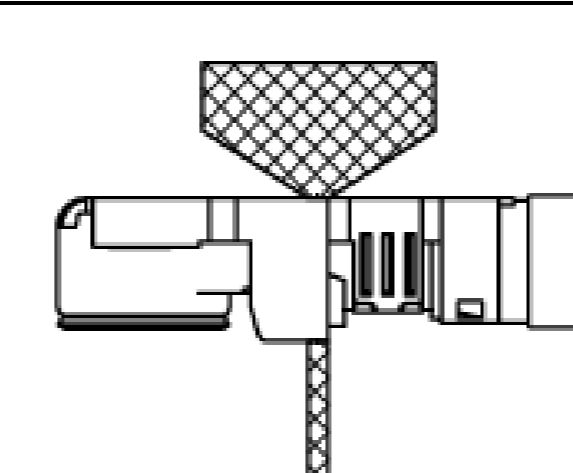
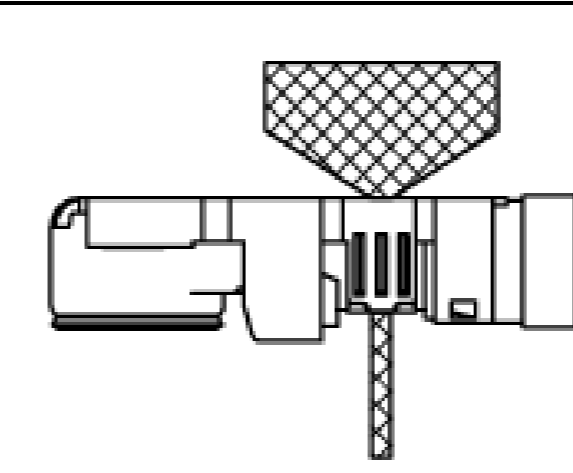
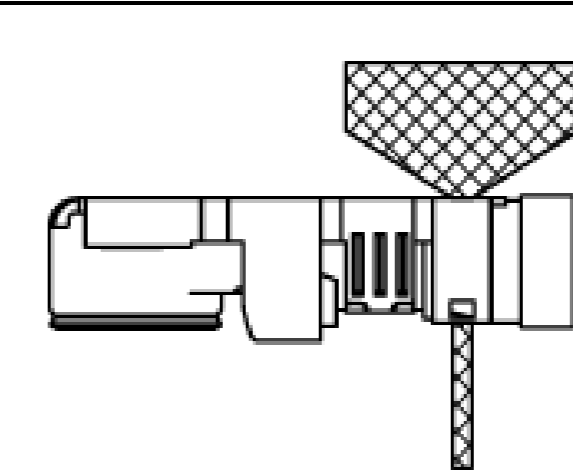
NOTES:  
1. APPLICABLE CONNECTOR  
20449-001E-\*\*  
20579-001E-\*\*

NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.05 μm MIN. [Ni PLATING AREA] Ni ONLY
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.10 μm MIN.
1	HOUSING	PBT	UL94V-0, BLACK (GF 10%)

# MHF® 4L plug Ni top (1.37)

ITEMS	SPECIFICATION	
RECOMMENDED APPLICABLE CONNECTOR PART No.	20449-001E-**-	20579-001E-**-
RATING VOLTAGE	60 V AC (R.M.S)	
RATING FREQUENCY	DC~12 GHz	
OPERATING TEMPERATURE	233~363K (-40°C~+90°C)	
VSWR	1.3 MAX. AT DC~3 GHz, 1.4 MAX. AT 3~6 GHz, 1.5 MAX. AT 6~9 GHz, 1.6 MAX. AT 9~12 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	200 V AC, 1 MINUTE	
DURABILITY	30 CYCLES	
MATING FORCE (INITIAL / AFTER TEST)	INITIAL: 30 N MAX. / AFTER TEST: 30 N MAX.	
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL: 20 N MAX. 5 N MIN. / AFTER TEST: 20 N MAX. 3 N MIN.	
PRODUCT SPECIFICATION	PRS-2008	PRS-1907
TEST REPORT	TR-14100	TR-14097
PACKING STANDARD	PST-12066	
INSTRUCTION MANUAL	HIM-16011	
APPEARANCE CRITERIA No.	QLS-A***	

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PART NO.	20632-001R-37		
APPLICABLE CABLE STRIP DIMENSION	 <p>*DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLES.</p>		
REQUIREMENTS	CHARACTERISTIC IMPEDANCE: 50(±2) ohm BY TDR METHOD NOMINAL CAPACITANCE: 98pF/m CONDUCTOR RESISTANCE OF INNER CONDUCTOR: 320 ohm/km INSULATION RESISTANCE: 1500 Mega-ohm. km MIN. DIELECTRIC WITH STANCE VOLTAGE: NO BREAKDOWN AT 1500 V AC FOR 1 MINUTE.		
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE BRAIDED SHIELD		
PART NO. OF SEMI AUTO TERMINATION MACHINE	90703-037		
CRIMP HEIGHT	 CH-1 (i-Fit® PART) 1.46~1.50	 CH-2 (SHIELD PART) 1.16~1.20	 CH-3 (JACKET PART) 1.27~1.31
	※USE FOR POINT MICROMETER.		

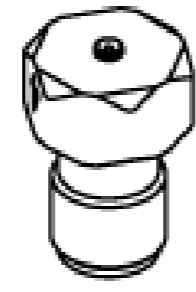
NOTES 2.

DESCRIPTION

INNER CONDUCTOR AWG#30 (7/0.102) SILVER PLATING ANNEALED COPPER WIRE  
 DIELECTRIC CORE FLUORO-PLASTICS, DIAMETER 0.88(+0.04/-0.02)mm NOMINAL THICKNESS 0.29mm  
 OUTER CONDUCTOR 16/5/0.05, NOMINAL DIAMETER 1.13mm TIN-COATED ANNEALED COPPER WIRE.  
 JACKET FLUORO-PLASTICS, DIAMETER 1.37±0.08mm NOMINAL THICKNESS 0.12mm

Rev.5

# Accessories for MHF® 4L plug Ni top (1.37)



MHF 4(4L) SMA ADAPTOR  
PART NO. 90449-001



MHF 4(4L) INSPECTION CONNECTOR  
PART NO. 90449-003-01

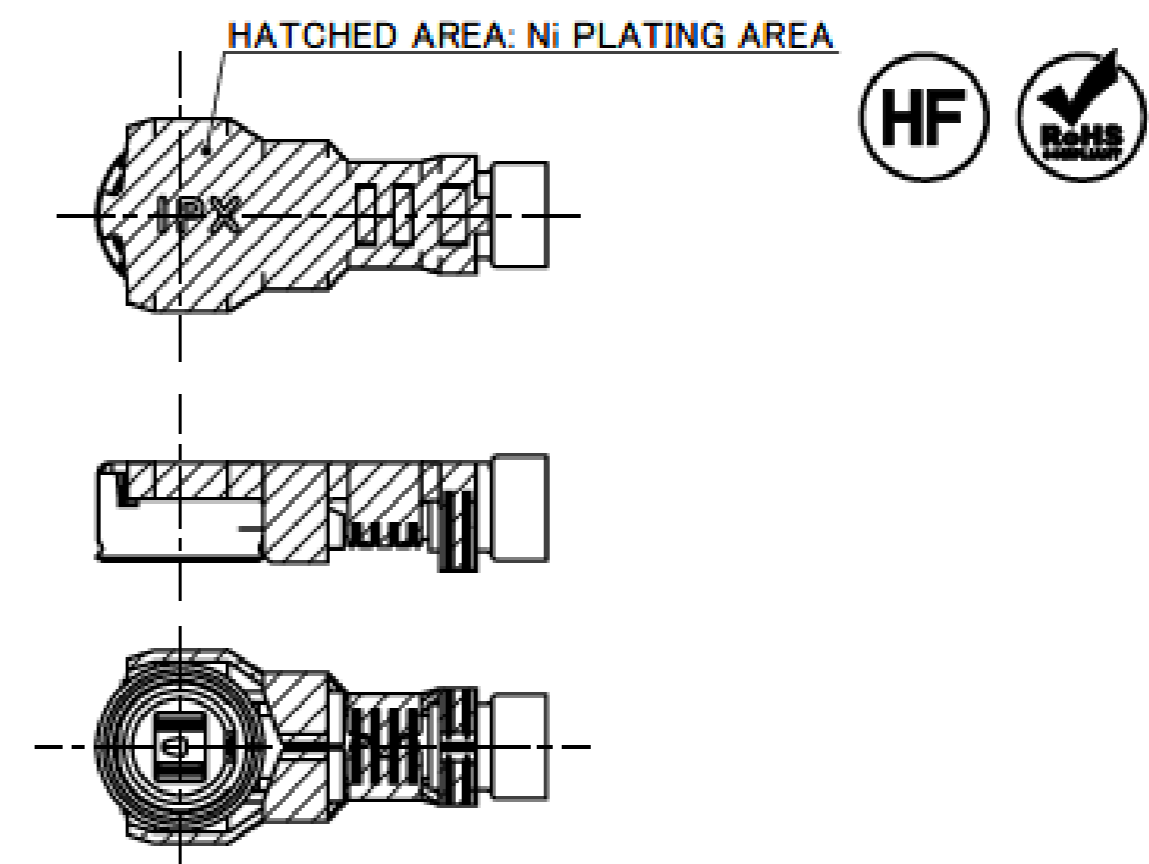
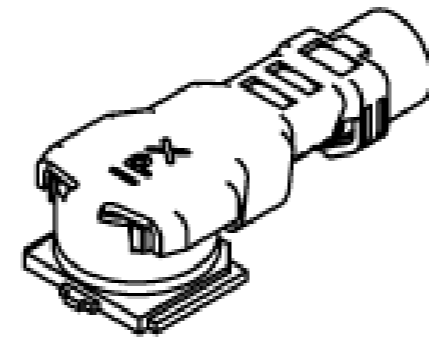
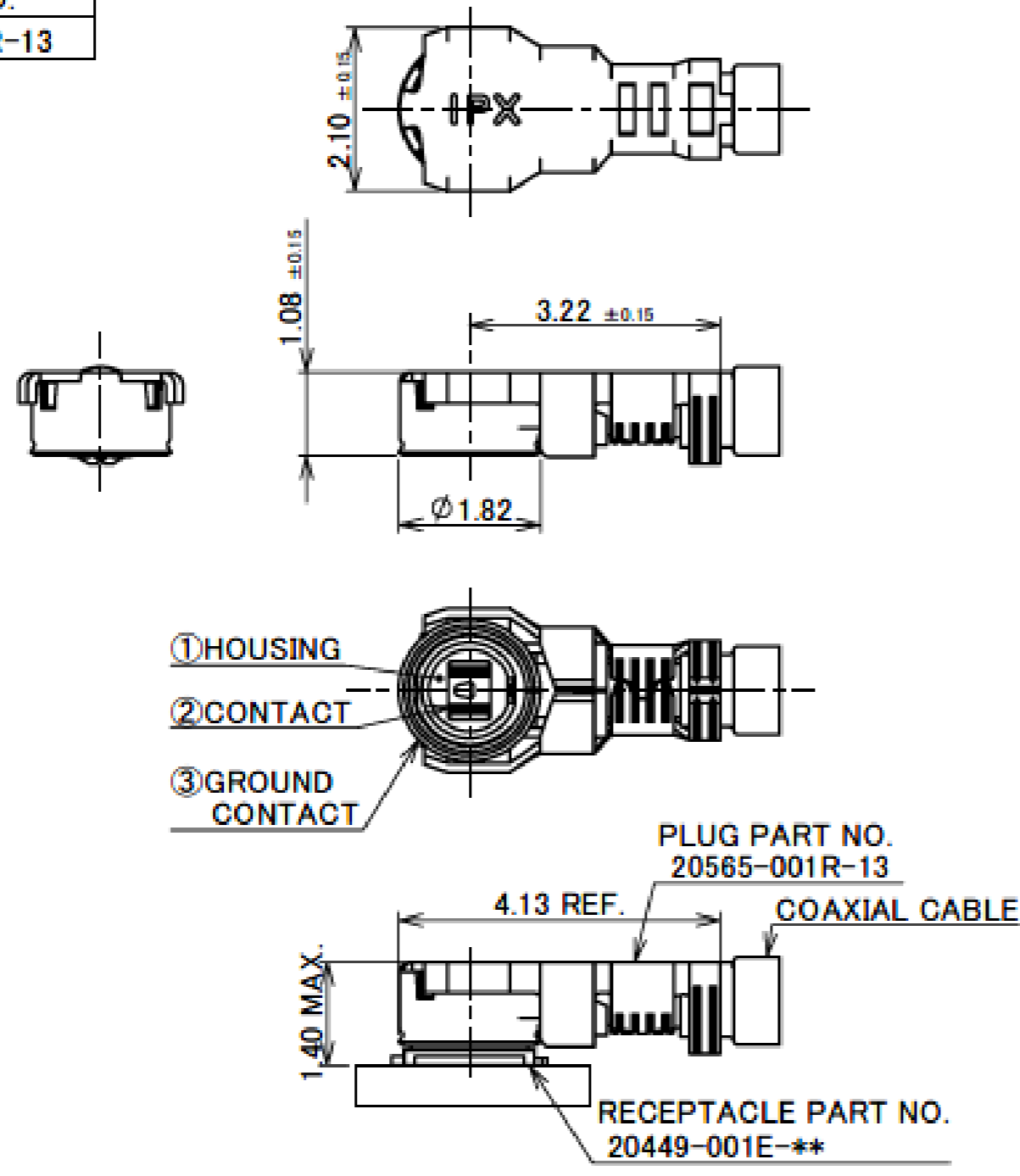


FRONT SIDE      BACK SIDE  
MHF 4L (1.37) PUSHING AND PULLING TOOL  
PART NO. 90873-0001

Rev.5

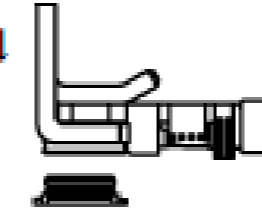
# MHF® 4L plug Ni top (1.13,0.95)

Recommended P/N	20565-001R-13
PART NO.	20565-001R-13

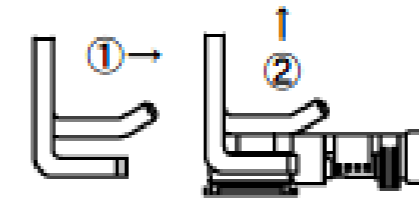


- NOTES.
- APPLICABLE CONNECTOR  
20449-001E-\*\*  
20579-001E-\*\*
  - MATING AND UNMATING INSTRUCTION
    - MATING  
MATE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. DO NOT SLANT MATE.
    - UNMATING INSTRUCTION
      - IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90609-0001)  
USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
      - IN CASE OF UNMATING DIRECTLY BY HAND  
CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

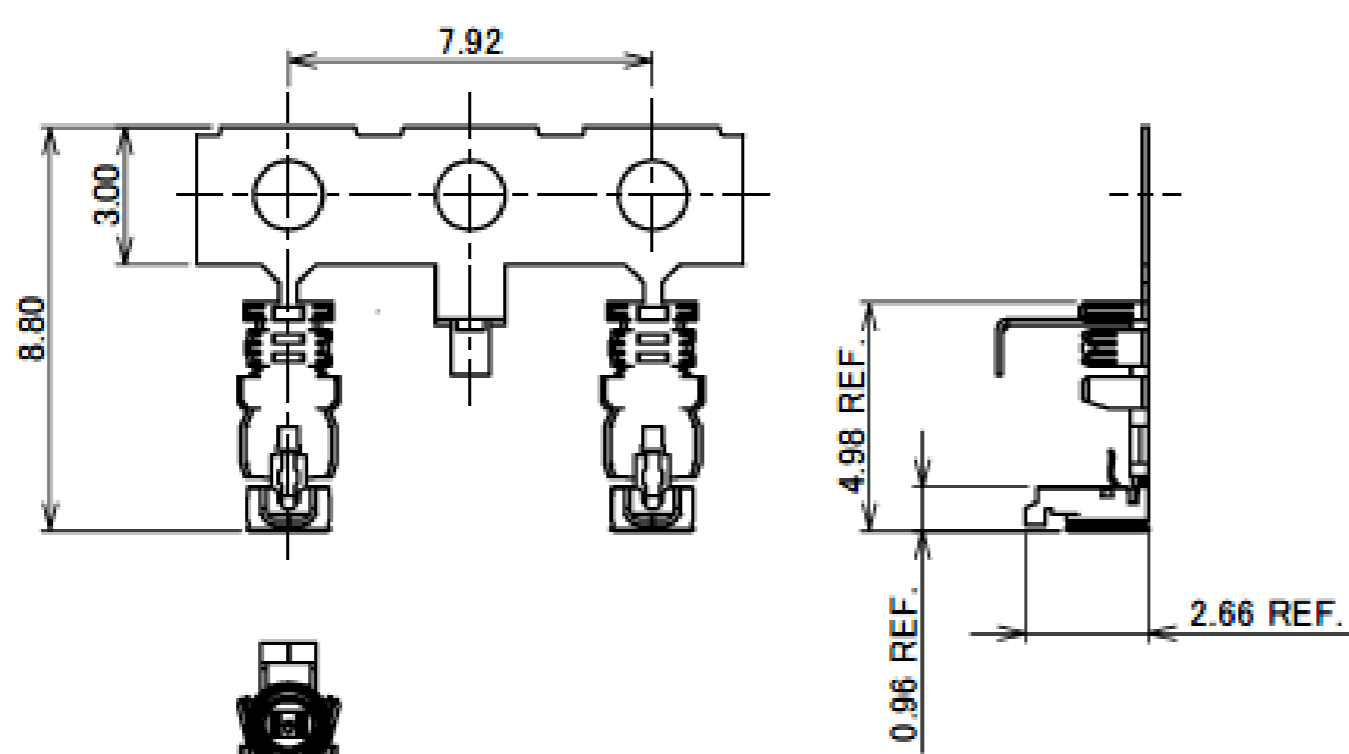
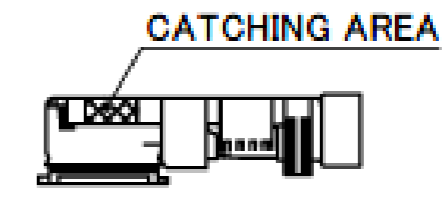
NOTE 2-1.



NOTE 2-2-1.



NOTE 2-2-2.



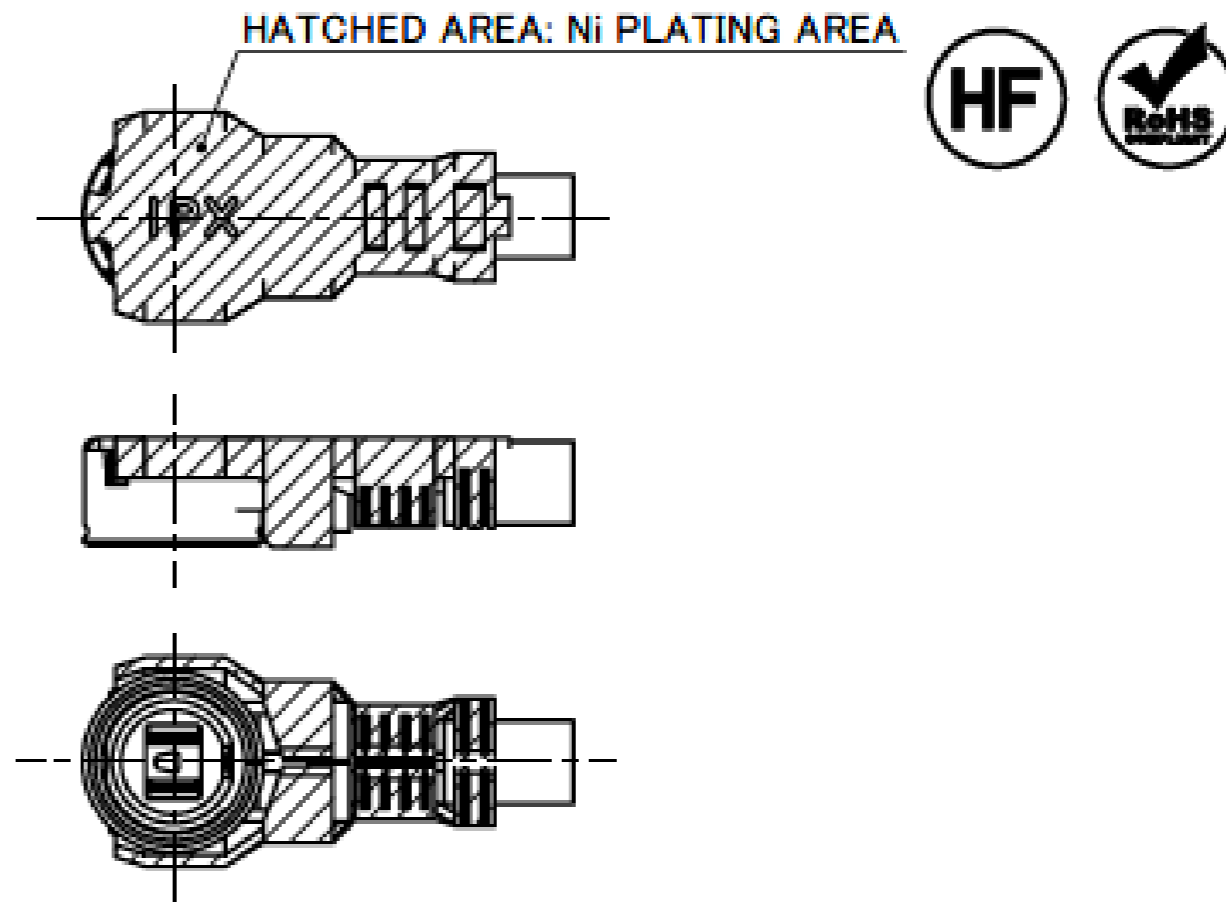
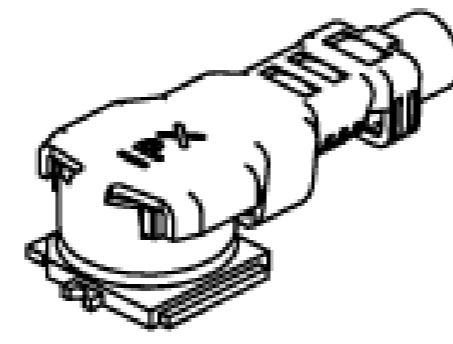
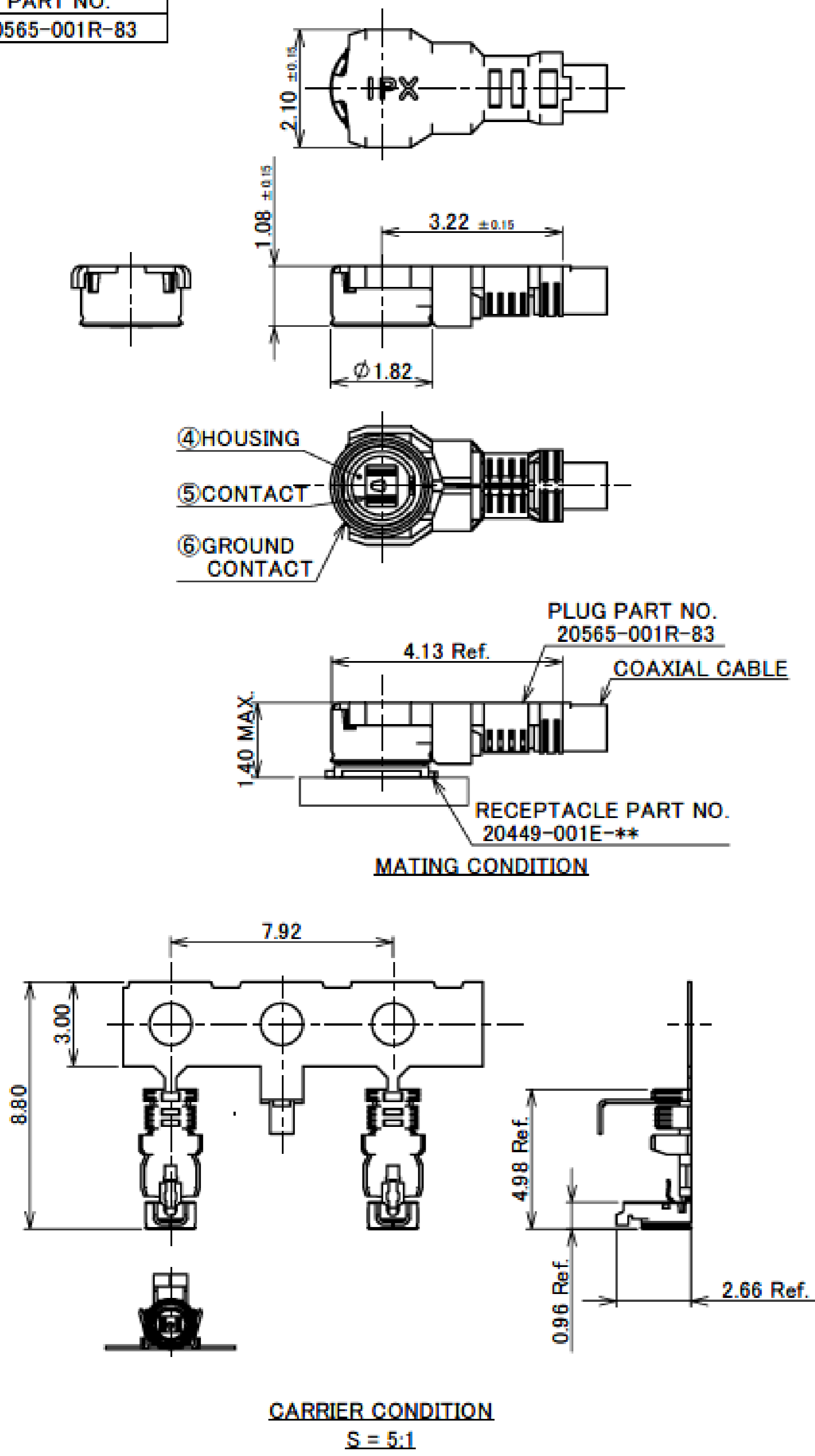
CARRIER CONDITION  
S = 5:1

NO.	DESCRIPTION	MATERIAL	FINISH . REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.05 μm MIN. [Ni PLATING AREA] Ni ONLY
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.10 μm MIN.
1	HOUSING	PBT	UL94V-0, BLACK

Rev.7

# MHF® 4L plug Ni top (1.13,0.95)

Recommended P/N	20565-001R-83
PART NO.	20565-001R-83



## NOTES.

### 3. APPLICABLE CONNECTOR:

20449-001E-\*\*

20579-001E-\*\*

### 4. MATING AND UNMATING INSTRUCTION

#### 4-1. MATING

MATE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. DO NOT SLANT MATE.

#### 4-2. UNMATING INSTRUCTION

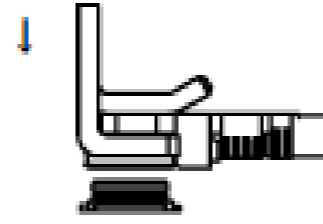
4-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90609-0001)

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

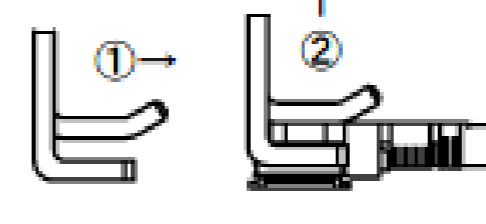
4-2-2. IN CASE OF UNMATING DIRECTLY BY HAND

CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

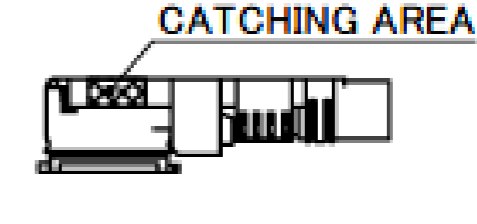
NOTE 4-1.



NOTE 4-2-1.



NOTE 4-2-2.



NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
6	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.05 μm MIN. [Ni PLATING AREA] Ni ONLY
5	CONTACT	PHOSPHOR BRONZE	CONTACT PART FINISH: Au 0.10 μm MIN. UNDER PLATE: Ni 1.00 μm MIN.
4	HOUSING	PBT	UL94V-0, BLACK

ITEMS	SPECIFICATION		
APPLICABLE CABLE	AWG#32 (1.13 O.D.)	AWG#33 (0.95 O.D.)	AWG#34 (0.83 O.D.)
RECOMMENDED APPLICABLE CONNECTOR PART No.	20449-001E-**		
RATING VOLTAGE	60 V AC (R.M.S)		
RATING FREQUENCY	DC~ 12GHz		
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)		
VSWR	1.3 MAX. AT DC~3GHz, 1.45 MAX. AT 3~6GHz, 1.6 MAX. AT 6~9GHz, 1.9 MAX. AT 9~12GHz		
MAIN CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 20 mohm MAX.		
GROUND CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 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		
MATING FORCE (INITIAL / AFTER TEST)	INITIAL: 30 N MAX. / AFTER TEST: 30 N MAX.		
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL: 20 N MAX. 5 N MIN. / AFTER TEST: 20 N MAX. 3 N MIN.		
PRODUCT SPECIFICATION	PRS-1772	PRS-2051	PRS-2062
TEST REPORT	TR-13011	TR-14142	TR-15011
PACKING STANDARD	PST-12066		
INSTRUCTION MANUAL	HIM-12012		
APPEARANCE CRITERIA No.	QLS-A***		

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# MHF® 4L plug Ni top (1.13,0.95)

PART NO.	20565-001R-13	
APPLICABLE CABLE STRIP DIMENSION	<p>※DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLES.</p>	<p>※DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLES.</p>
	<p>REQUIREMENTS</p> <p>CHARACTERISTIC IMPEDANCE: 50 ohm by TDR METHOD</p> <p>NOMINAL CAPACITANCE (REFERENCE VALUE): 97pF/m</p> <p>CONDUCTOR RESISTANCE OF INNER CONDUCTOR AT 293K (REFERENCE VALUE): OD 1.13 TYPE... 520 ohm/km OD 0.95 TYPE... 752 ohm/km</p> <p>INSULATION RESISTANCE: OD 1.13 TYPE... 1500 Mega-ohm.km MIN. OD 0.95 TYPE... 1000 Mega-ohm.km MIN.</p> <p>DIELECTRIC WITHSTAND VOLTAGE: OD 1.13 TYPE... NO BREAKDOWN AT AC 1000V FOR 1 MINUTE. OD 0.95 TYPE... NO BREAKDOWN AT AC 500V FOR 1 MINUTE.</p>	
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE BRAIDED SHIELD	
PART NO. OF SEMI AUTO TERMINATION MACHINE	90600-013	
CRIMP HEIGHT	<p>※USE FOR POINT MICROMETER.</p>	
	CH-1 (i-Fit® PART) 1.07~1.11	CH-2 (SHIELD PART) 0.90~0.94
	CH-3 (JACKET PART) 1.16~1.20	CH-1 (i-Fit® PART) 1.04~1.08
	CH-2 (SHIELD PART) 0.92~0.96	CH-3 (JACKET PART) 1.16~1.20

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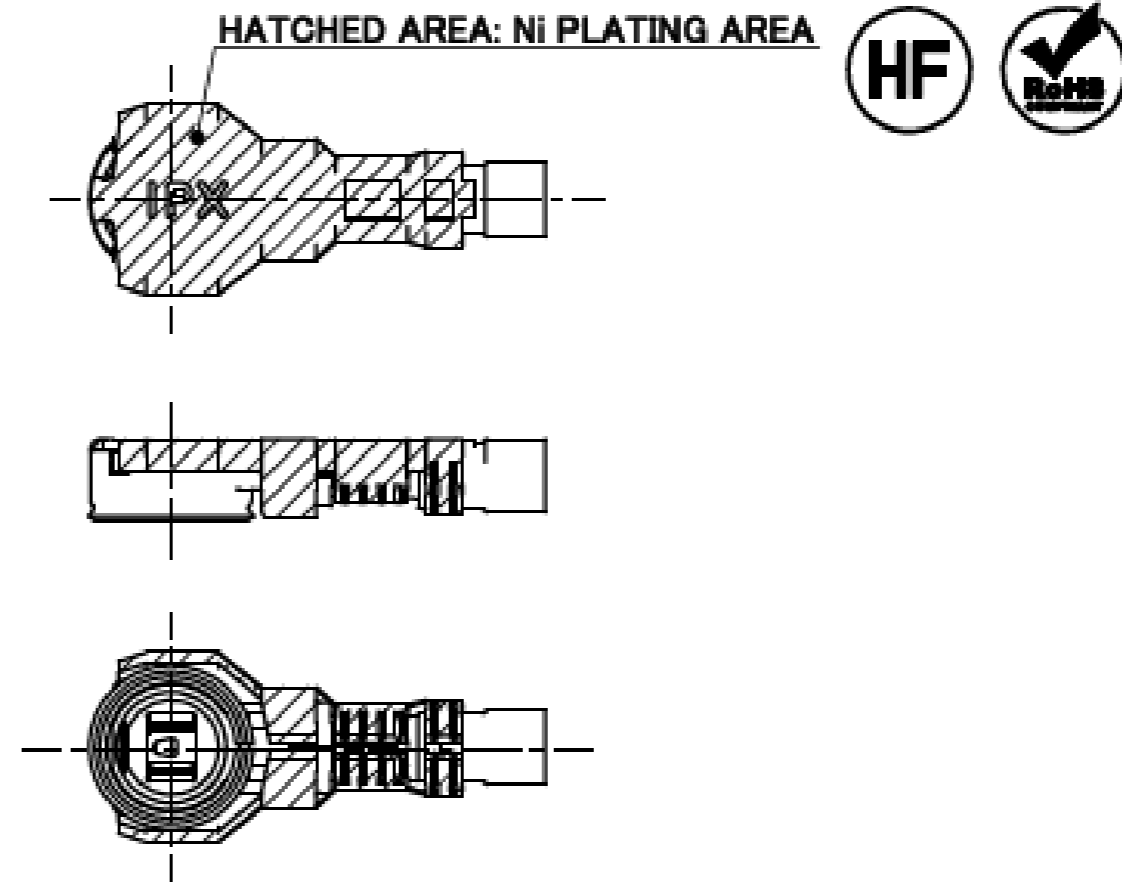
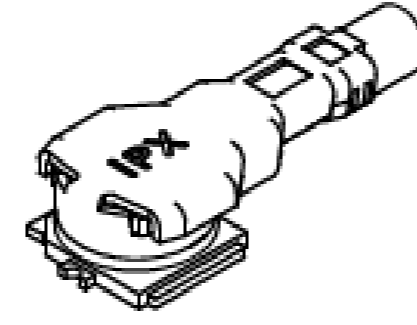
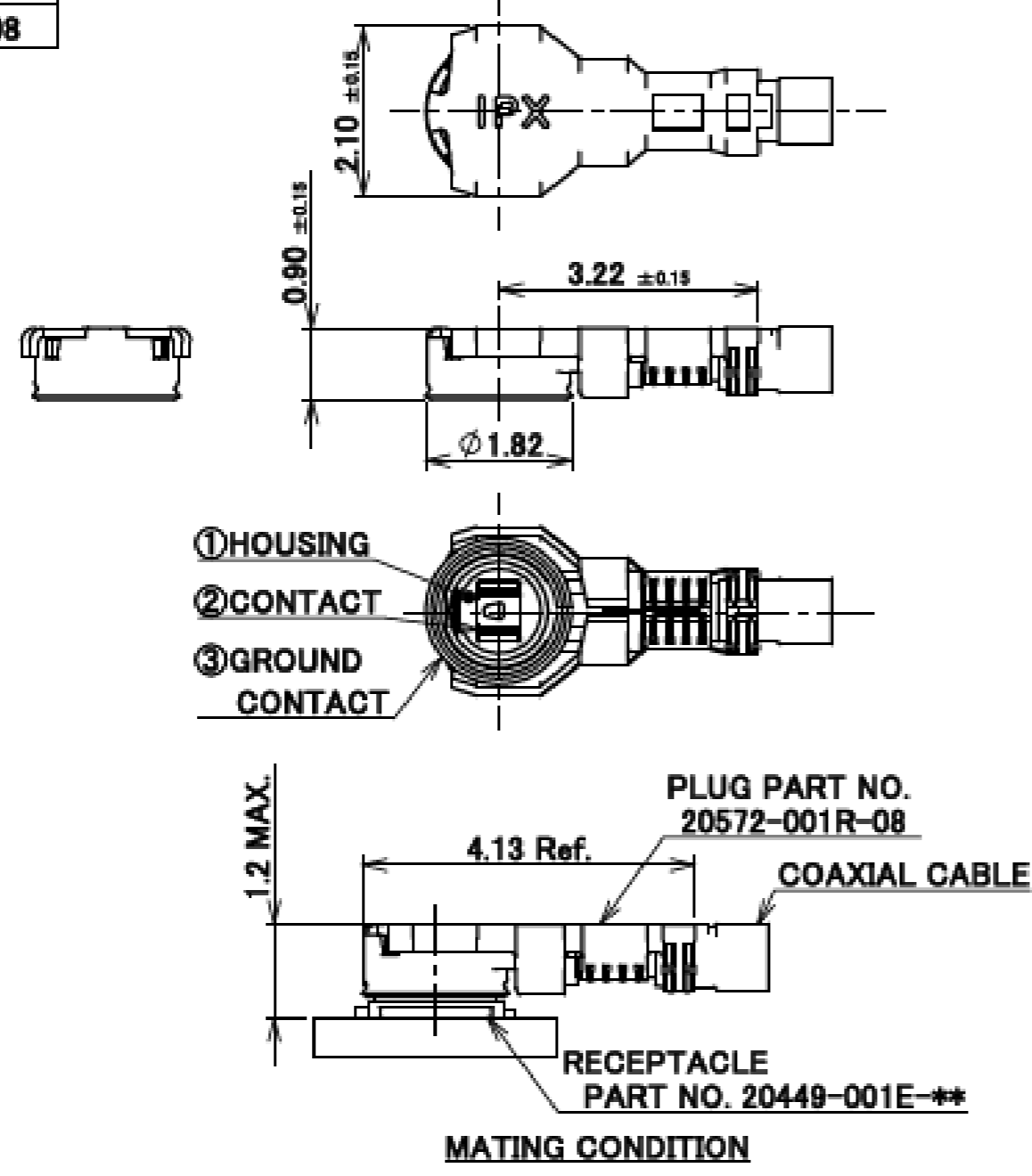
## Plug Housing Assembly

PART NO.	20565-001R-83		
APPLICABLE CABLE STRIP DIMENSION	<p>※DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLES.</p>		
	<p>REQUIREMENTS</p> <p>CHARACTERISTIC IMPEDANCE: 50 ohm BY TDR METHOD</p> <p>NOMINAL CAPACITANCE(REFERENCE VALUE): 96pF/m</p> <p>CONDUCTOR RESISTANCE OF INNER CONDUCTOR AT 293K (Reference value): 925 ohm/km</p> <p>INSULATION RESISTANCE: 1000 Mega-ohm.km MIN.</p> <p>DIELECTRIC WITH STANCE VOLTAGE: NO BREAKDOWN AT AC 1500V FOR 1 MINUTE.</p>		
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE BRAIDED SHIELD		
PART NO. OF SEMI AUTO TERMINATION MACHINE	90600-083		
CRIMP HEIGHT	<p>※USE FOR POINT MICROMETER.</p>		
	CH-1 (i-Fit® PART) 0.91~0.95	CH-2 (SHIELD PART) 0.84~0.88	CH-3 (JACKET PART) 0.82~0.86

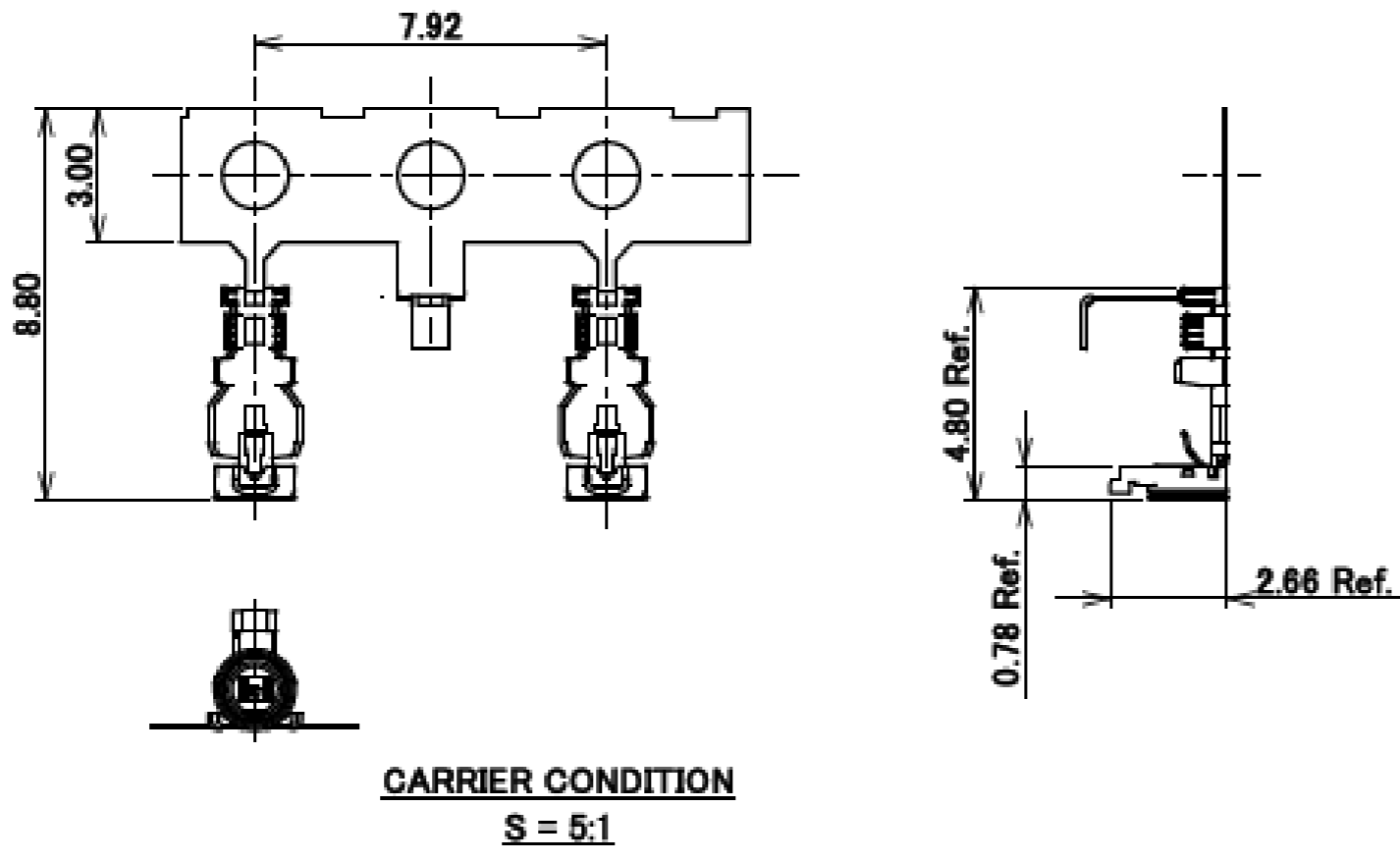
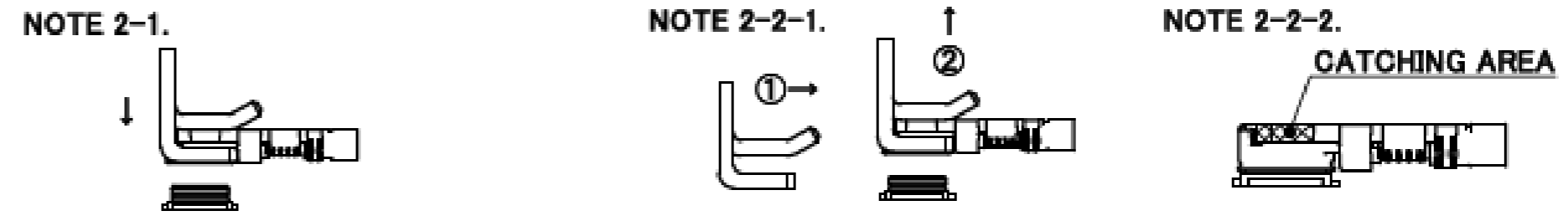
Rev.7

# MHF<sup>®</sup> 4L plug Ni top (0.81,0.64)

Recommended P/N	20572-001R-08
PART NO.	20572-001R-08



- NOTES.
- APPLICABLE CONNECTOR  
20449-001E-\*\*  
20579-001E-\*\*
  - MATING AND UNMATING INSTRUCTION
    - MATING  
MATE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE. DO NOT SLANT MATE.
    - UNMATING INSTRUCTION
      - IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90609-0001)  
USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
      - IN CASE OF UNMATING DIRECTLY BY HAND  
CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.



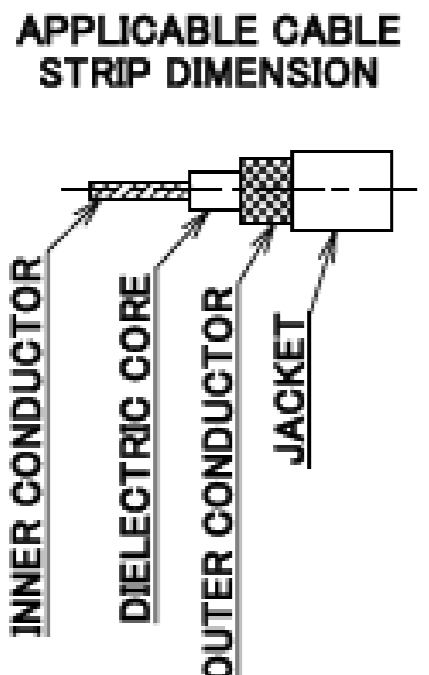
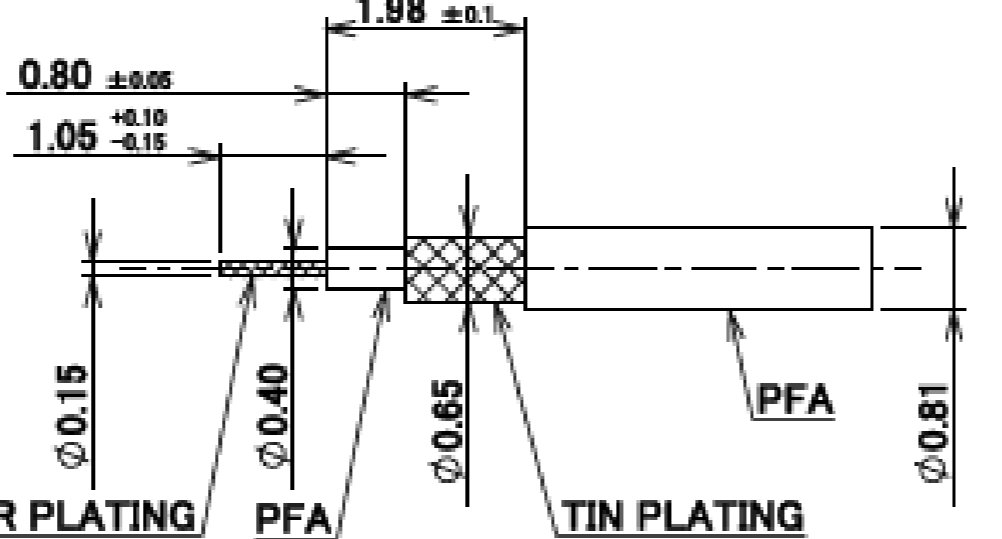
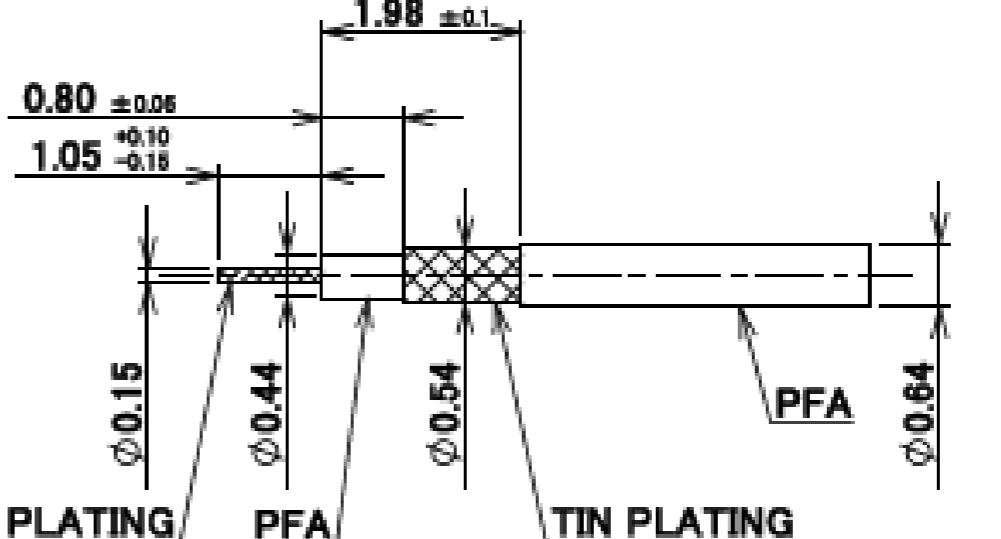
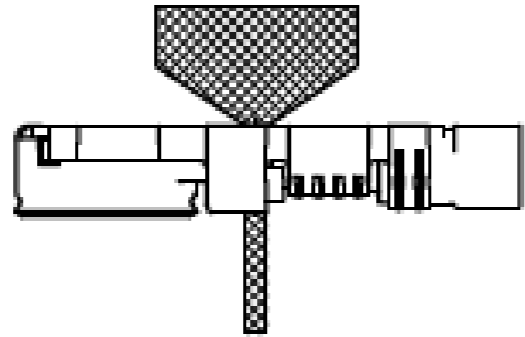
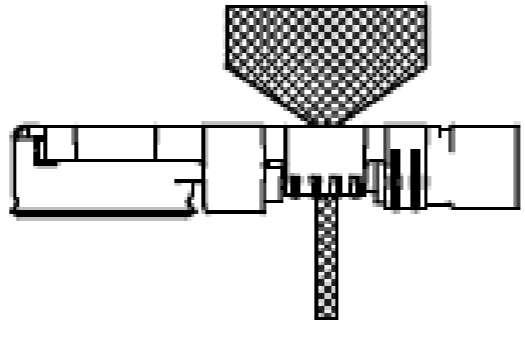
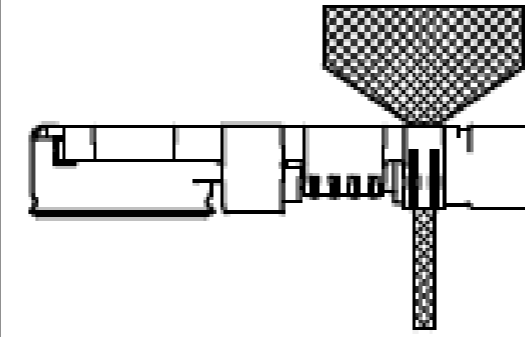
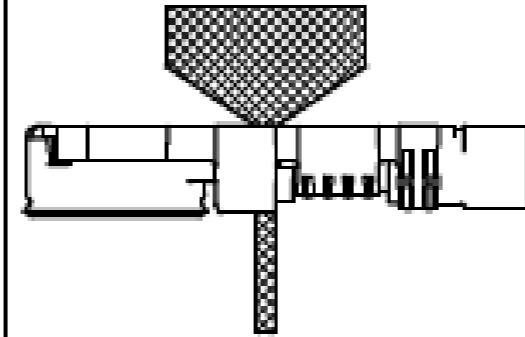
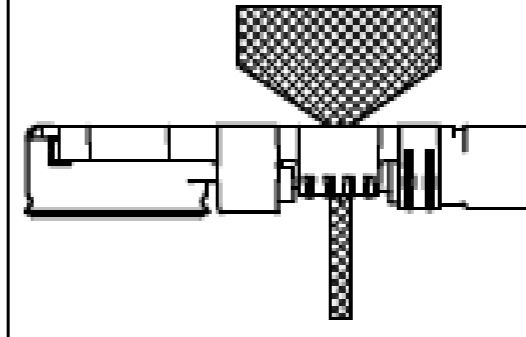
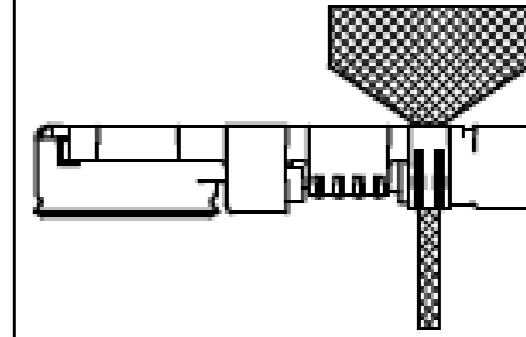
NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.05 μm MIN. [Ni PLATING AREA] Ni ONLY
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.10 μm MIN.
1	HOUSING	PBT	UL94V-0, BLACK

ITEMS	SPECIFICATION	
	AWG#36 (0.81 O.D.)	AWG#36 (0.64 O.D.)
APPLICABLE CABLE	AWG#36 (0.81 O.D.)	AWG#36 (0.64 O.D.)
RECOMMENDED CONNECTOR PART No.	20449-001E-**	
RATING VOLTAGE	60 V AC (R.M.S)	
RATING FREQUENCY	DC~12 GHz	
OPERATING TEMPERATURE	233~363K (-40°C~+90°C)	
VSWR	1.3 MAX. AT DC~3 GHz, 1.45 MAX. AT 3~6 GHz, 1.8 MAX. AT 6~9 GHz, 1.9 MAX. AT 9~12 GHz	
MAIN CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 20 mohm MAX.	
GROUND CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 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	
MATING FORCE (INITIAL / AFTER TEST)	INITIAL: 30 N MAX. / AFTER TEST: 30 N MAX.	
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL: 20 N MAX. 5 N MIN. / AFTER TEST: 20 N MAX. 3 N MIN.	
CRIMP STRENGTH	-	8 N MIN.
PRODUCT SPECIFICATION	PRS-1772	PRS-1944
TEST REPORT	TR-13011	TR-14078
PACKING STANDARD	PST-12066	
INSTRUCTION MANUAL	HIM-12011	
APPEARANCE CRITERIA No.	QLS-A***	

Rev.6

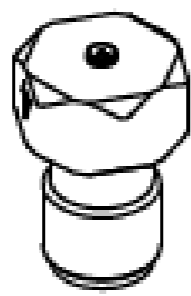
Rev.6

# MHF® 4L plug Ni top (0.81,0.64)

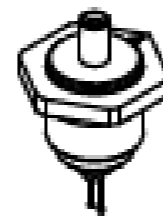
PART NO.	20572-001R-08					
 <p>APPLICABLE CABLE STRIP DIMENSION</p> <p>INNER CONDUCTOR DIELECTRIC CORE OUTER CONDUCTOR JACKET</p>	 <p>SILVER PLATING PFA TIN PLATING</p> <p>※DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLES.</p>			 <p>SILVER PLATING PFA TIN PLATING</p> <p>※DO NOT USE SOLDER COATED EITHER INNER OR OUTER CONDUCTOR CABLES.</p>		
	<p>NOTES</p> <p>3.REQUIREMENTS</p> <p>CHARACTERISTIC IMPEDANCE: 50(±3)ohm BY TDR METHOD</p> <p>NOMINAL CAPACITANCE (REFERENCE VALUE): 96pF/m</p> <p>CONDUCTOR RESISTANCE OF INNER CONDUCTOR AT 293 (REFERENCE): OD 0.81 TYPE/OD 0.64 TYPE...1400ohm/km</p> <p>INSULATION RESISTANCE: OD 0.81 TYPE/OD 0.64 TYPE... 1000Mega-ohm.km MIN.</p> <p>DIELECTRIC WITH STANCE VOLTAGE: OD 0.81 TYPE...NO BREAKDOWN AT AC 1500V FOR 1 MINUTES. OD 0.64 TYPE...NO BREAKDOWN AT AC 500V FOR 1 MINUTES.</p>					
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE BRAIDED SHIELD			SINGLE SPIRAL SHIELD		
PART NO. OF SEMI AUTO TERMINATION MACHINE	90599-008			90599-006		
CRIMP HEIGHT						
	CH-1 (i-Fit® PART) 0.83~0.87	CH-2 (SHIELD PART) 0.76~0.80	CH-3 (JACKET PART) 0.92~0.96	CH-1 (i-Fit® PART) 0.81~0.85	CH-2 (SHIELD PART) 0.73~0.77	CH-3 (JACKET PART) 0.71~0.75
	※USE FOR POINT MICROMETER.			※USE FOR POINT MICROMETER.		

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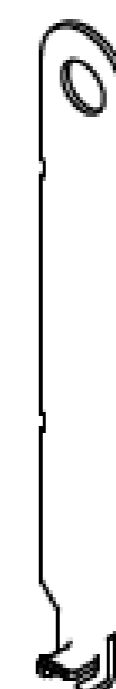
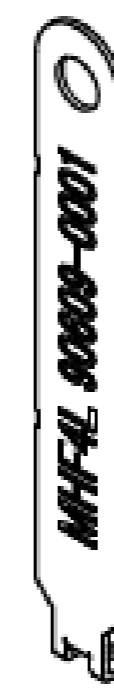
# Accessories for MHF® 4L (0.81,0.64,1.13,0.95)



MHF 4 (4L) SMA ADAPTOR  
PART NO. 90449-001



MHF 4 (4L) INSPECTION CONNECTOR  
PART NO. 90449-003-01



FRONT SIDE

BACK SIDE

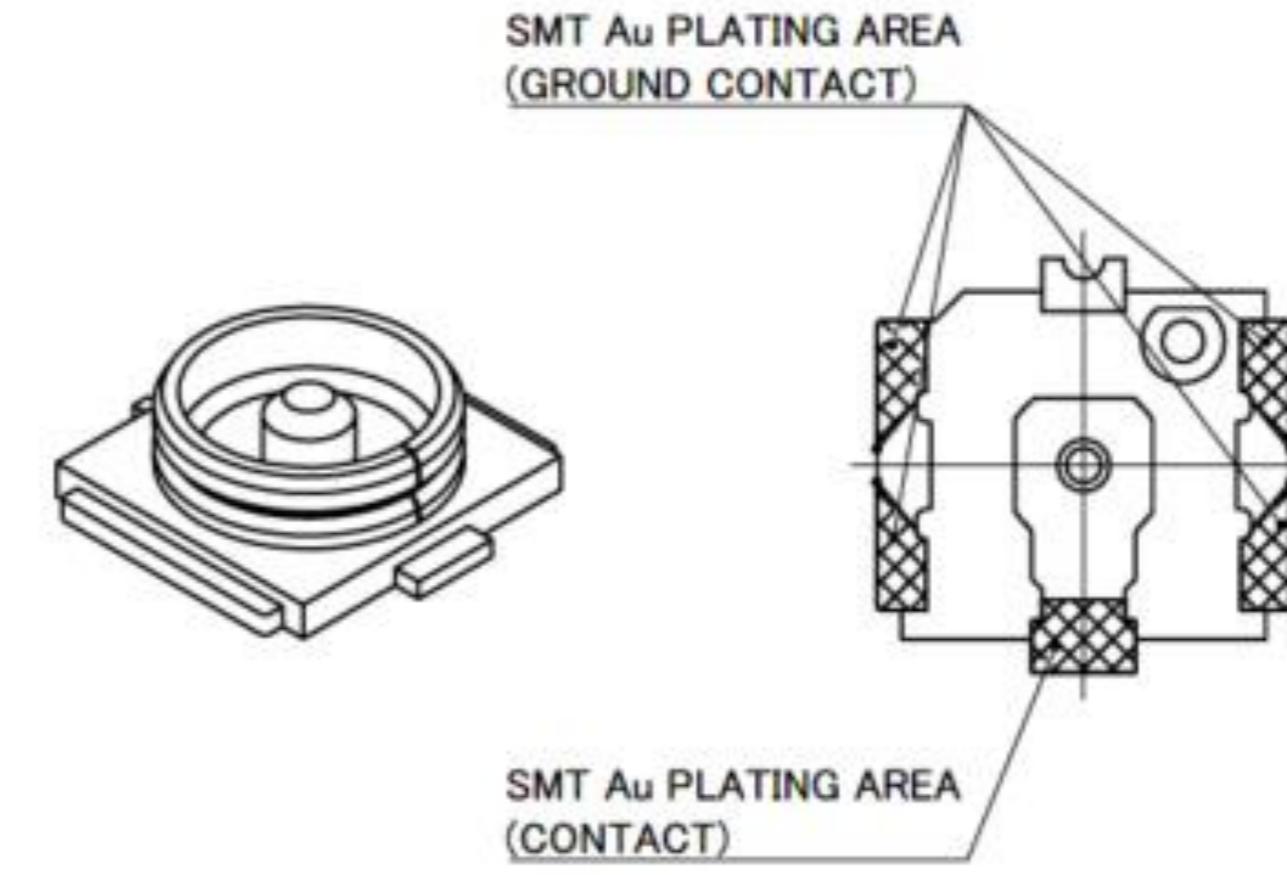
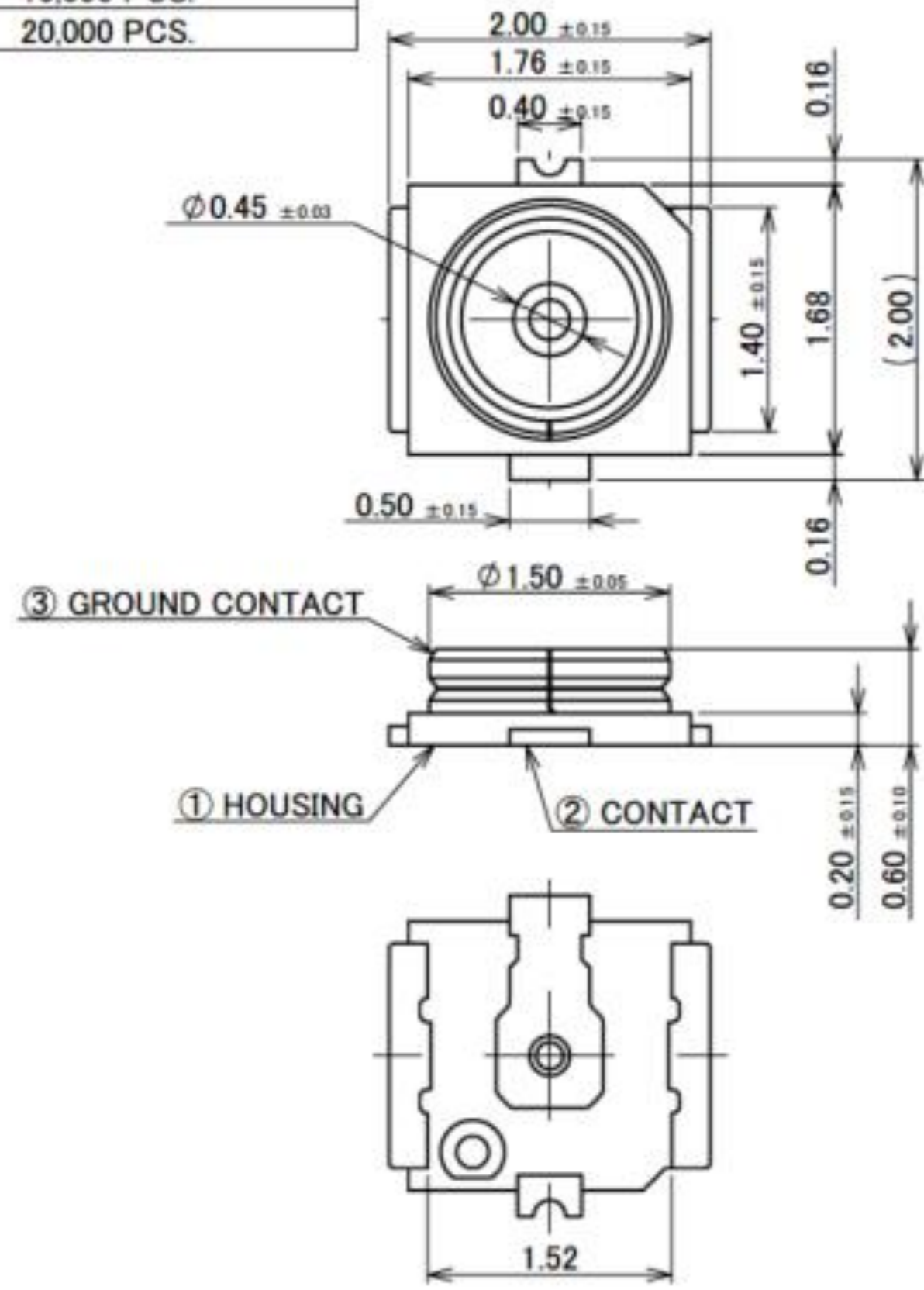
MHF 4L PUSHING AND PULLING TOOL  
PART NO. 90809-0001

Rev.6

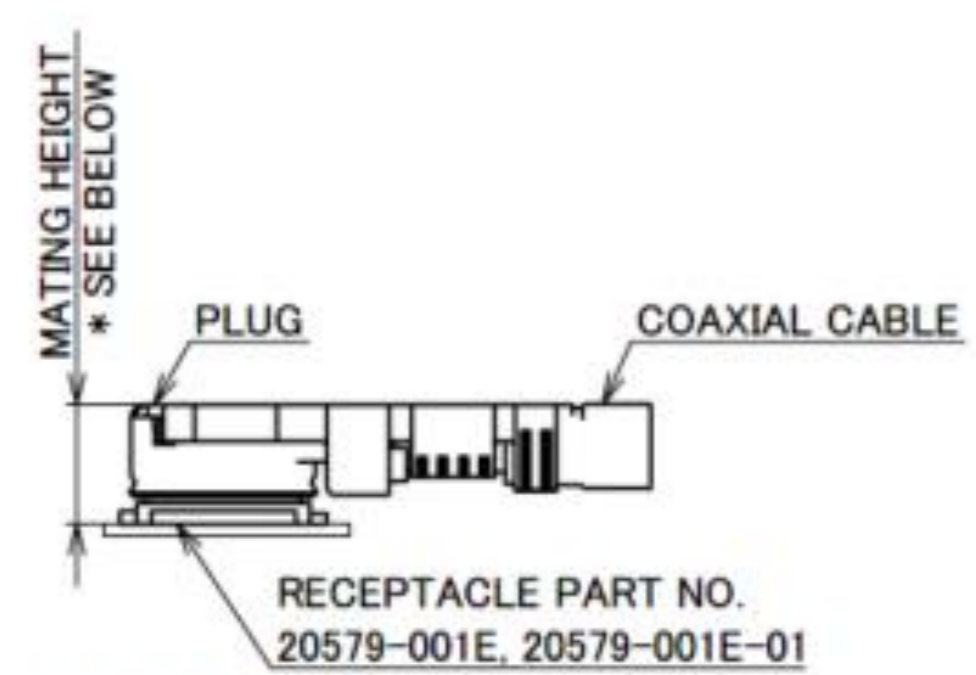


# MHF® 4L Receptacle

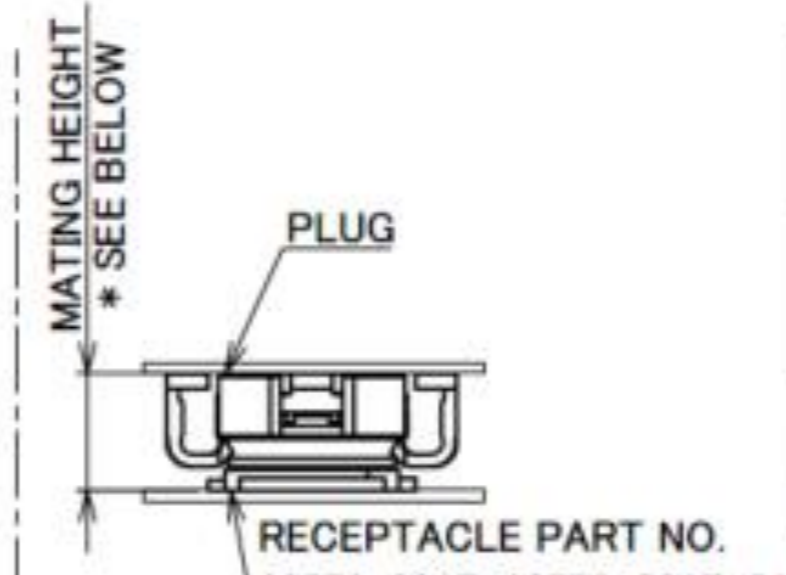
Recommended P/N		20579-001E
PART NO.	PACKING QUANTITY / REEL	
20579-001E	10,000 PCS.	
20579-001E-01	20,000 PCS.	



- NOTES.
- APPLICABLE CONNECTOR (CABLE SIZE)  
 MHF 4 PLUG: 20611-001R (Φ0.81), 20448-00\*R-081 (Φ0.81), 20448-001R-081E (Φ0.81)  
 MHF 4L PLUG: 20572-001R-08 (Φ0.64, Φ0.81), 20565-001R-\*\* (Φ0.83, Φ0.95, Φ1.13), 20632-001R-37 (Φ1.37)  
 MHF 4 SMT PUG: 20462-001E  
 2. COPLANARITY: 0.1 mm MAX.



- \* MATING HEIGHT  
 1.2 MAX. WITH 20611-001R, 20572-001R-08, 20448-00\*R-081, 20448-001R-081E  
 1.4 MAX. WITH 20565-001R-\*\*  
 1.7 MAX. WITH 20632-001R-37  
 MATING CONDITION WITH MHF 4/MHF 4L PLUG (S = 10/1)



- \* MATING HEIGHT  
 1.2 MAX. WITH 20462-001E  
 MATING CONDITION WITH MHF 4 SMT (S = 10/1)

NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART: Au 0.05 μm MIN., SOLDERING PART Au AREA: 0.03 μm MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 μm MIN. CONTACT PART: Au 0.05 μm MIN. SOLDERING PART Au AREA: 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK

## FOR MHF 4L PLUG

ITEMS	SPECIFICATION	
	20572-001R-08 (CABLE Φ0.81 TYPE)	20565-001E-13 (CABLE Φ1.13 TYPE)
APPLICABLE CONNECTOR PART No.		
RATING VOLTAGE	60 V AC (R.M.S)/DC	
RATING FREQUENCY	DC ~ 12GHz	
OPERATING TEMPERATURE	233~363 K(-40°C~+90°C)	
VSWR	1.3 MAX. AT DC~3GHz, 1.4 MAX. AT 3~6GHz, 1.85 MAX. AT 6~12GHz	
MAIN CONTACT RESISTANCE	INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 20 mohm MAX.	
GROUND CONTACT RESISTANCE	INITIAL : 20 mohm MAX. / AFTER TEST : ΔR 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	
MATING FORCE (INITIAL / AFTER TEST)	INITIAL : 30 N MAX. / AFTER TEST : 30 N MAX.	
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL : 20 N MAX. 5 N MIN. / AFTER TEST : 20 N MAX. 3 N MIN.	
PRODUCT SPECIFICATION	PRS-1907	
TEST REPORT	TR-14097	
PACKING STANDARD	20579-001E: PST-14004 20579-001E-01: PST-14067	
INSTRUCTION MANUAL	HIM-12011	HIM-12012
APPEARANCE CRITERIA No.	QLS-A***	

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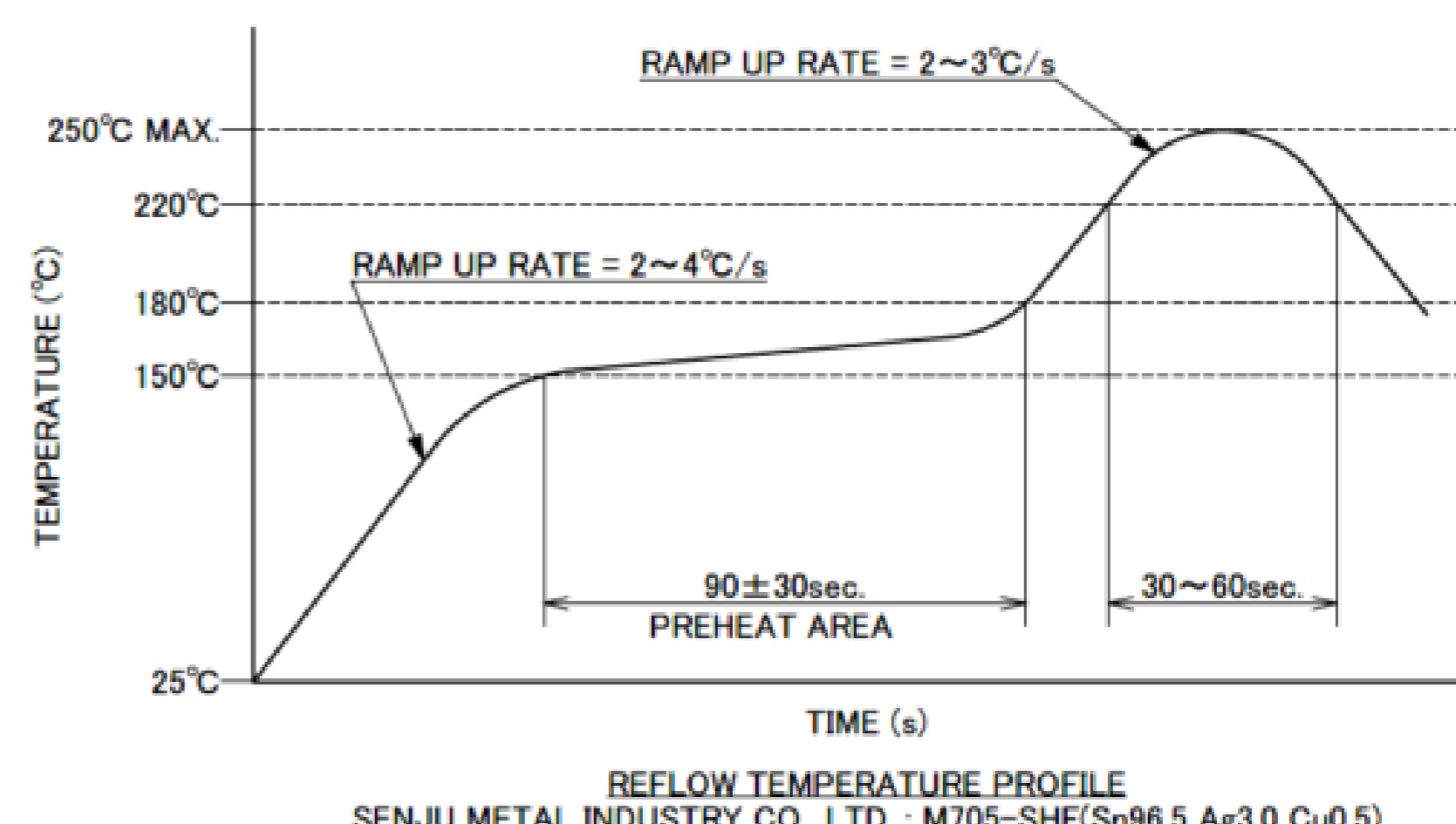
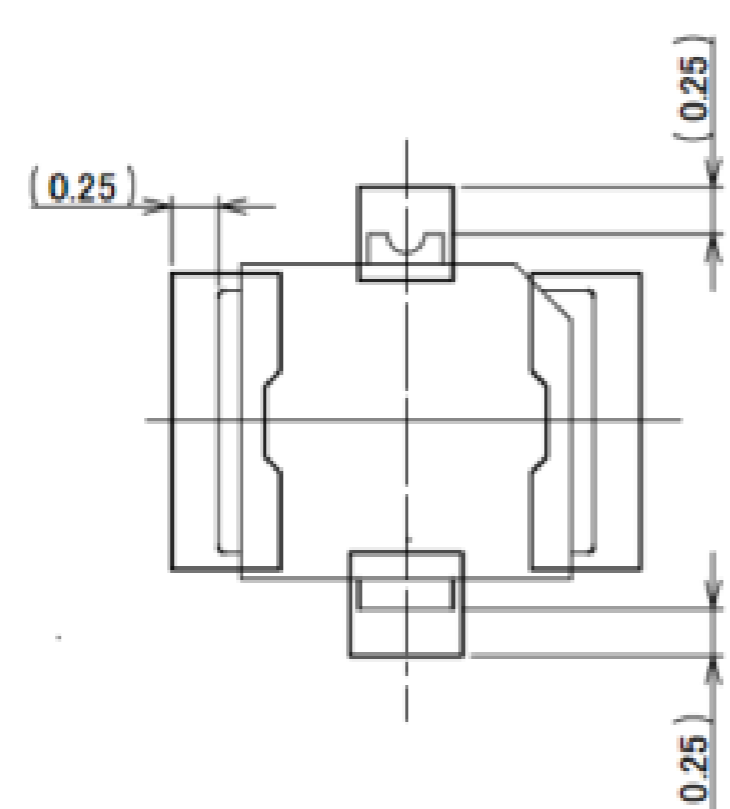
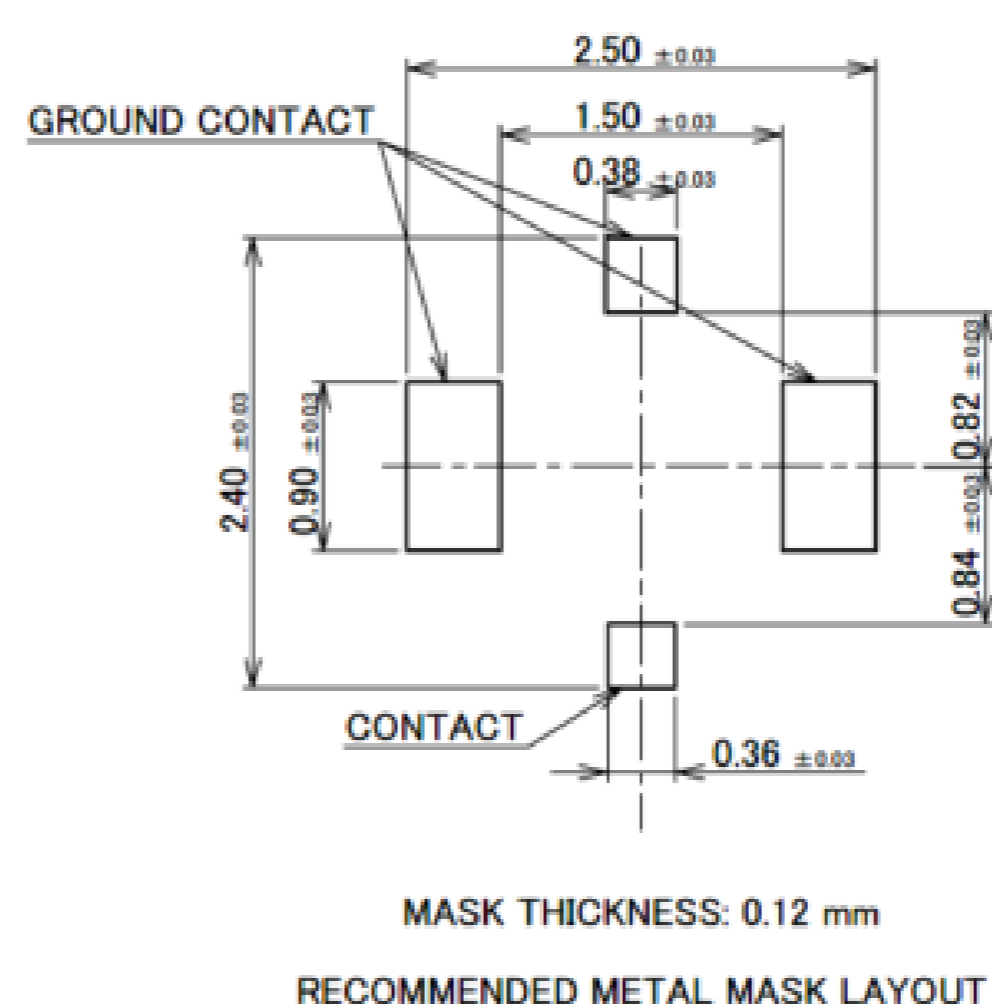
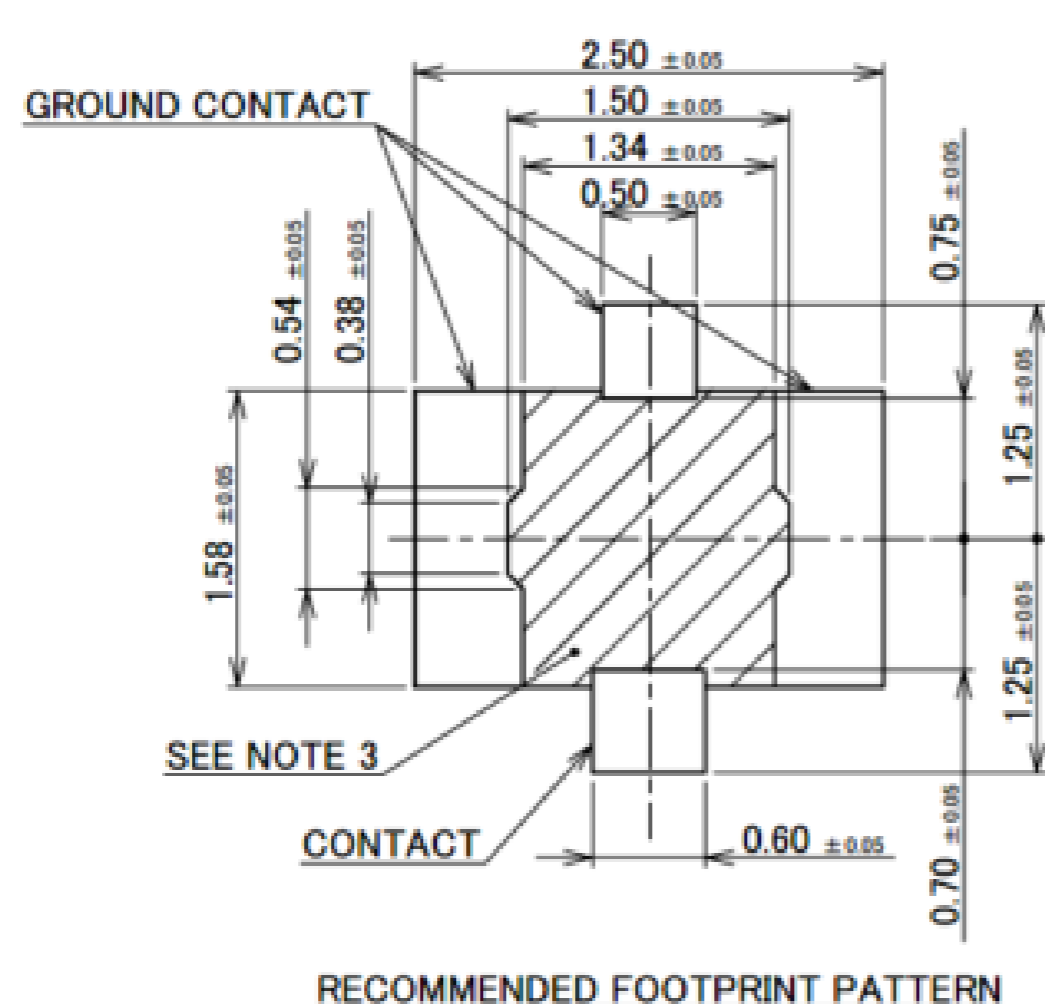
Rev.10

# MHF® 4L Receptacle

FOR MHF 4 SMT PLUG

ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	20462-001E (MHF 4 SMT PLUG)
RATING VOLTAGE	60 V AC (R.M.S)/DC
RATING FREQUENCY	DC~12GHz
OPERATING TEMPERATURE	233~363 K(-40°C~+90°C)
VSWR	1.3 MAX. AT DC~3GHz, 1.4 MAX. AT 3~6GHz, 1.85 MAX. AT 6~12GHz
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.
INSULATION RESISTANCE	INITIAL : 500 Mohm MIN. AFTER TEST : 100 Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	200 V AC 1 MINUTE
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	INITIAL : 30 N MAX. / AFTER TEST : 15 N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL : 4 N MIN. / AFTER TEST : 2 N MIN.
PRODUCT SPECIFICATION	PRS-1404
TEST REPORT	TR-08022
PACKING STANDARD	20579-001E: PST-14004 20579-001E-01: PST-14067
APPEARANCE CRITERIA No.	QLS-A***

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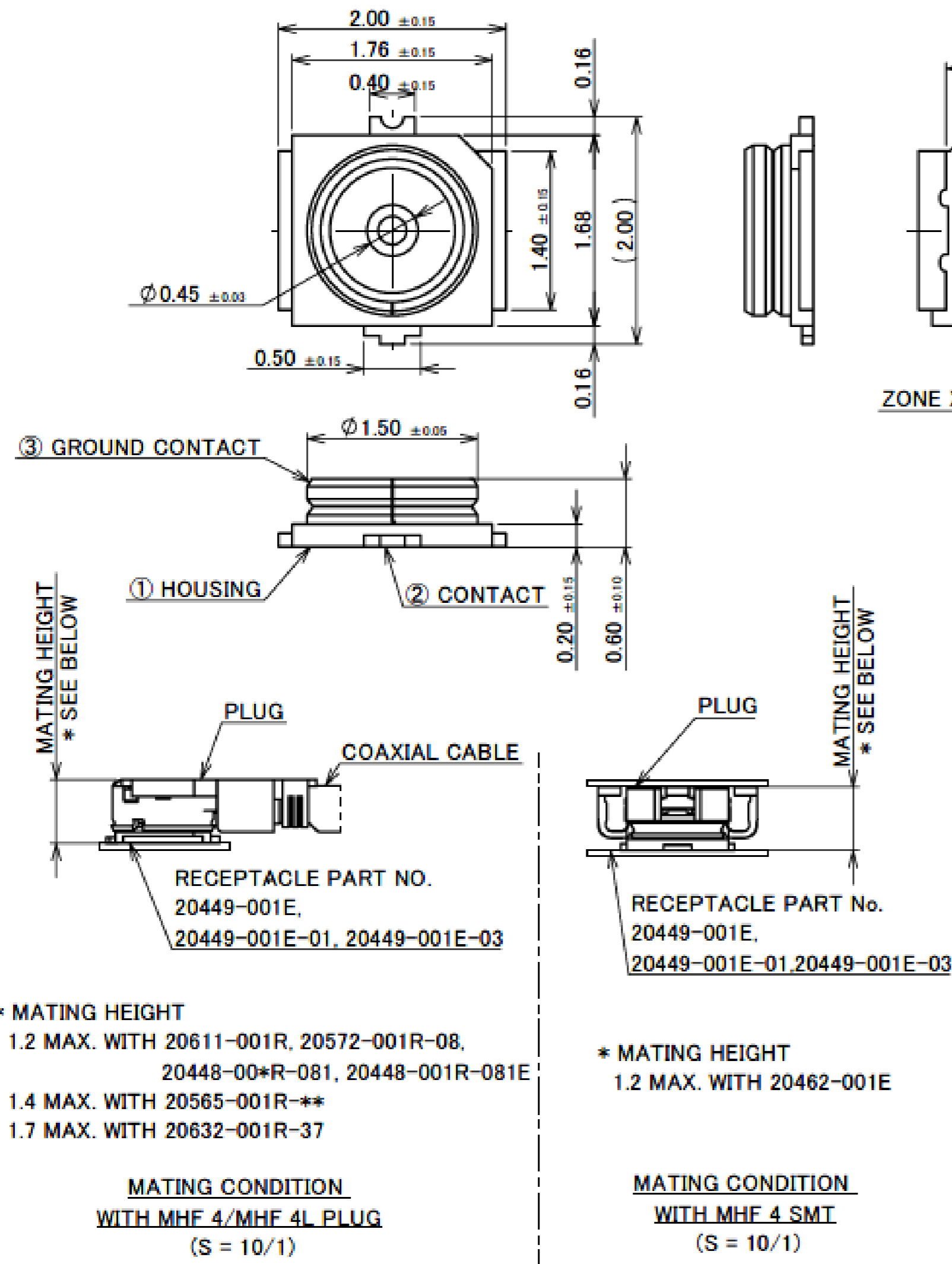
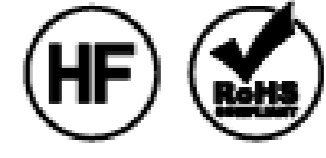
NOTE 3. CUT OUT PROHIBITION AREA.

Rev.10

# MHF<sup>®</sup> 4 Receptacle

Recommended P/N 20449-001E-03

PART NO.	PACKING QUANTITY / REEL	CONTACT PLATING			GROUND CONTACT PLATING		
		CONTACT PART	SOLDERING PART	ALL OVER	CONTACT PART	SOLDERING PART	ALL OVER
20449-001E	10,000 PCS.	TOP: Au 0.05 μm MIN. ZONE X: Au 0.03 μm MIN.	TOP: Au 0.01 μm MIN.	Ni 1.00 μm MIN.	TOP: Au 0.03 μm MIN.	TOP: Au 0.01 μm MIN.	Ni 1.00 μm MIN.
20449-001E-01		TOP: Au 0.05 μm MIN.					
20449-001E-03		TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN.	TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN.		TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN.		



## NOTES.

- APPLICABLE CONNECTOR (CABLE SIZE)  
MHF 4 PLUG: 20611-001R (Φ0.81), 20448-00\*R-081 (Φ0.81), 20448-001R-081E (Φ0.81)  
MHF 4L PLUG: 20572-001R-08 (Φ0.64, Φ0.81), 20565-001R-\*\*\* (Φ0.83, Φ0.95, Φ1.13), 20632-001R-37 (Φ1.37)  
MHF 4 SMT PUG: 20462-001E
- COPLANARITY: 0.1 mm MAX.
- THIS IS "Pb-FREE" CONNECTOR.
- CHARACTERISTIC IMPEDANCE: 50 Ω (NOMINAL VALUE)

NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	SEE TABLE
2	CONTACT	BRASS	
1	HOUSING	LCP	UL94V-0, BLACK

## FOR MHF 4 PLUG

ITEMS	SPECIFICATION	
	20611-001R (CABLE Φ0.81 TYPE)	20448-001R (CABLE Φ0.81 TYPE)
APPLICABLE CONNECTOR PART No.	20611-001R (CABLE Φ0.81 TYPE)	20448-001R (CABLE Φ0.81 TYPE)
RATING VOLTAGE	60 V AC (R.M.S)/DC	
RATING FREQUENCY	DC~9GHz	
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)	
CHARACTERISTIC IMPEDANCE	50 ohm (NOMINAL VALUE)	
VSWR	1.3 MAX. AT DC~3GHz, 1.4 MAX. AT 3~6GHz, 1.5 MAX. AT 6~9GHz	
MAIN CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 20 mohm MAX.	
GROUND CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 100 mohm MAX.	INITIAL: 20 mohm MAX. / AFTER TEST: ΔR 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	
MATING FORCE (INITIAL / AFTER TEST)	-	
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL: 4 N MIN. / AFTER TEST: 2 N MIN.	
PRODUCT SPECIFICATION	PRS-2530	PRS-1745
TEST REPORT	TR-18086	TR-12118
PACKING STANDARD	20449-001E-03: 300-604	
INSTRUCTION MANUAL	HIM-10003	
APPEARANCE CRITERIA No.	QLS-A***	

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# MHF® 4 Receptacle

## FOR MHF 4L PLUG

ITEMS	SPECIFICATION			
APPLICABLE CONNECTOR PART No.	20572-001R-08 (CABLE Φ0.64 TYPE) (CABLE Φ0.81 TYPE)	20565-001E-13 (CABLE Φ0.95 TYPE) (CABLE Φ1.13 TYPE)	20565-001R-83 (CABLE Φ0.83 TYPE)	20632-001R-37 (CABLE Φ1.37 TYPE)
RATING VOLTAGE	60 V AC (R.M.S)/DC			
RATING FREQUENCY	DC ~ 9GHz			
OPERATING TEMPERATURE	233~363 K(-40°C~+90°C)			
CHARACTERISTIC IMPEDANCE	50 ohm (NOMINAL VALUE)			
VSWR	1.3 MAX. AT DC~3GHz, 1.4 MAX. AT 3~6GHz, 1.5 MAX. AT 6~9GHz			
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.			
INSULATION RESISTANCE	INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN.			
DIELECTRIC WITHSTANDING VOLTAGE	200 V AC 1 MINUTE			
DURABILITY	30 CYCLES			
MATING FORCE (INITIAL / AFTER TEST)	INITIAL : 30 N MAX. / AFTER TEST : 30 N MAX.			
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL : 20 N MAX. 5 N MIN. / AFTER TEST : 20 N MAX. 3 N MIN.			
PRODUCT SPECIFICATION	PRS-1944 (CABLE Φ0.64 TYPE) PRS-1772 (CABLE Φ0.81 TYPE)	PRS-2051 (CABLE Φ0.95 TYPE) PRS-1772 (CABLE Φ1.13 TYPE)	PRS-2062 (CABLE Φ0.83 TYPE)	PRS-2008 (CABLE Φ1.37 TYPE)
TEST REPORT	TR-14078 (CABLE Φ0.64 TYPE) TR-13011 (CABLE Φ0.81 TYPE)	TR-14142 (CABLE Φ0.95 TYPE) TR-13011 (CABLE Φ1.13 TYPE)	TR-15011 (CABLE Φ0.83 TYPE)	TR-14100 (CABLE Φ1.37 TYPE)
PACKING STANDARD	20449-001E-03: 300-604			
INSTRUCTION MANUAL	HIM-12011	HIM-12012		HIM-16011
APPEARANCE CRITERIA No.	QLS-A***			

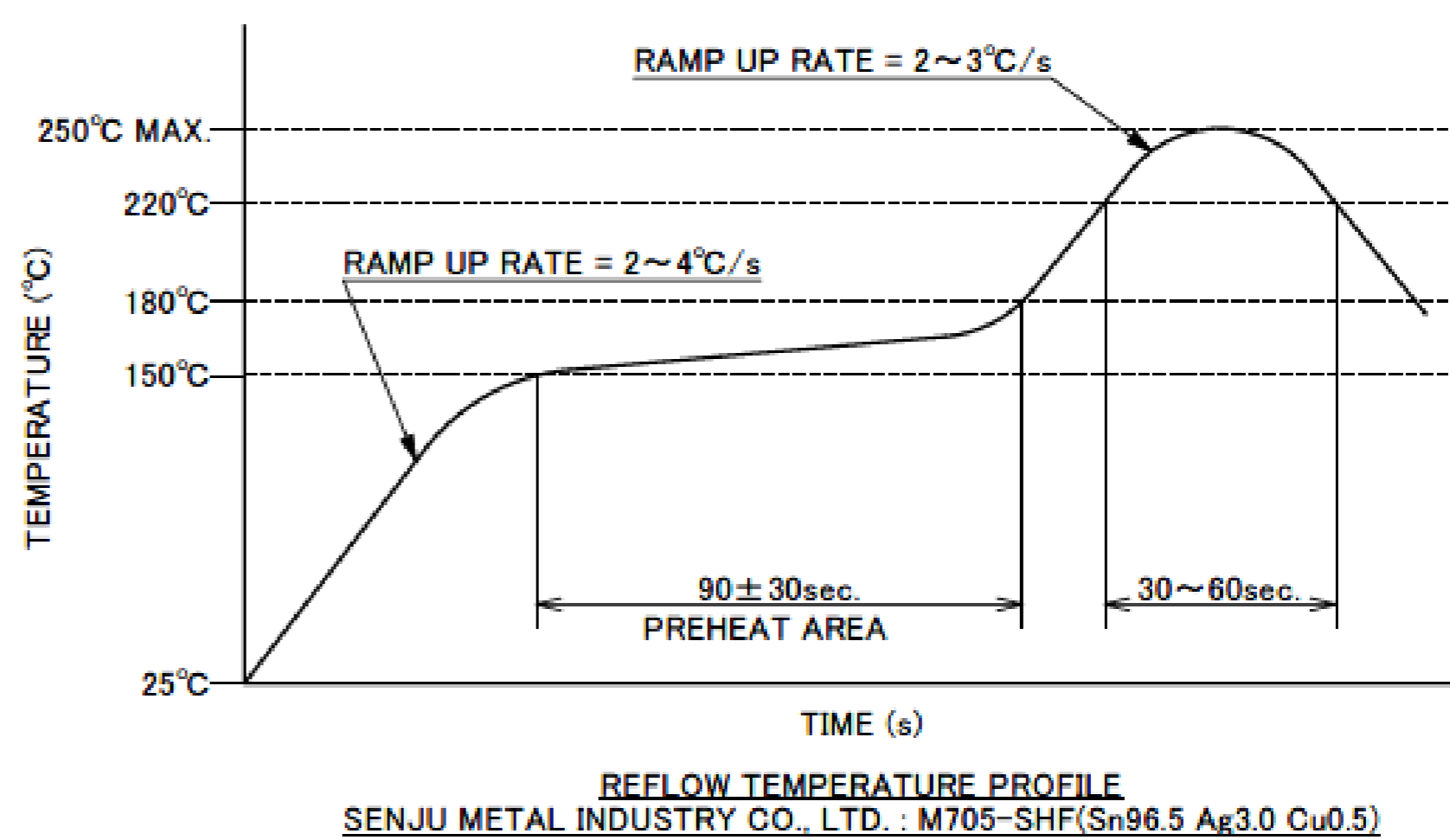
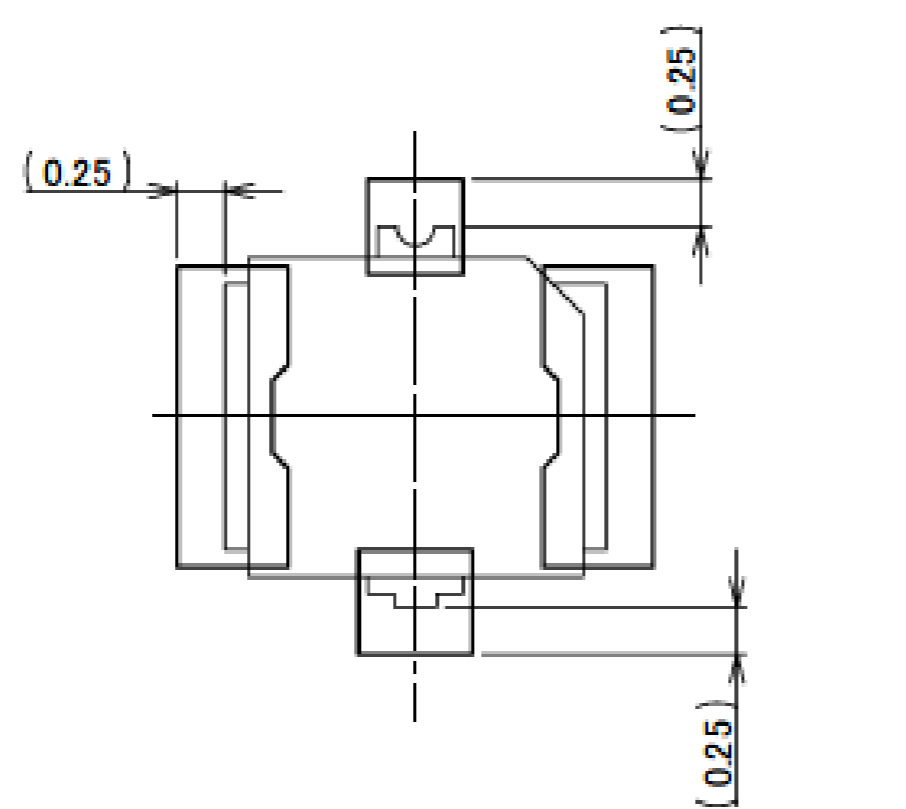
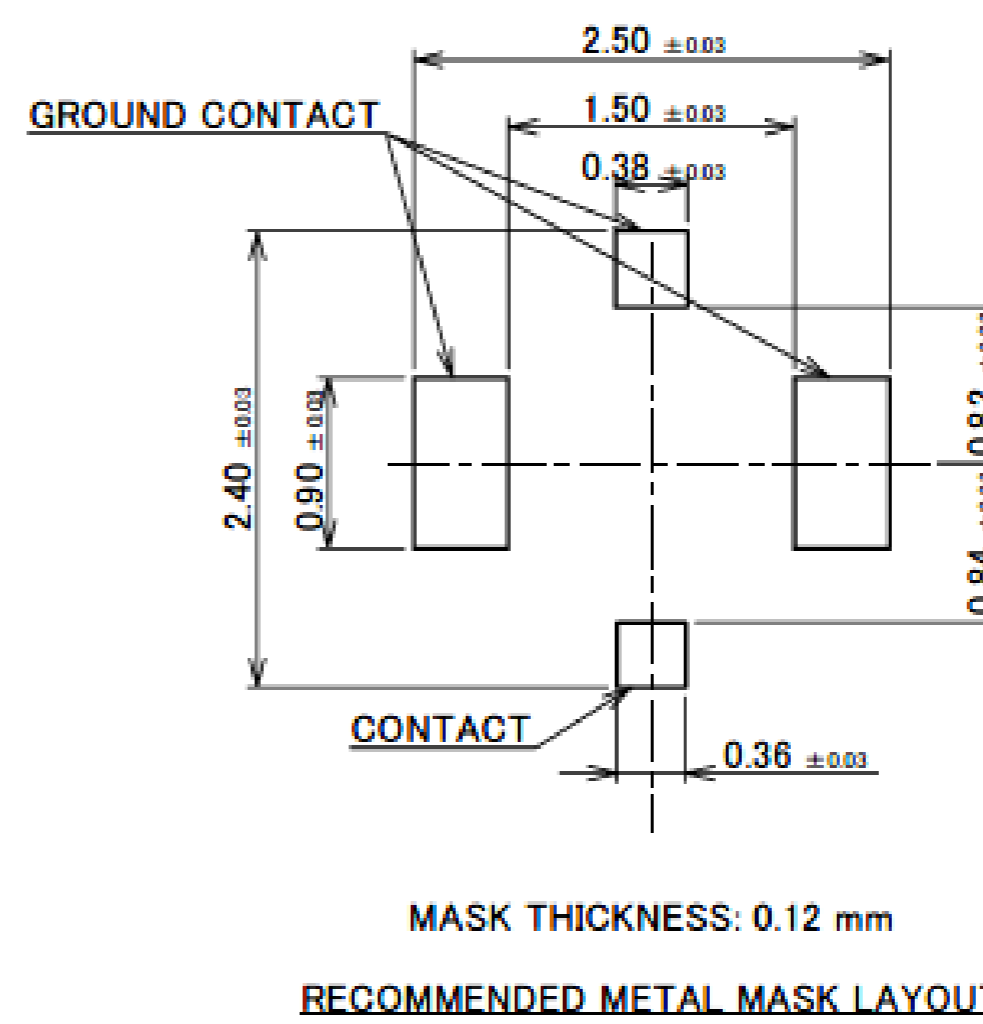
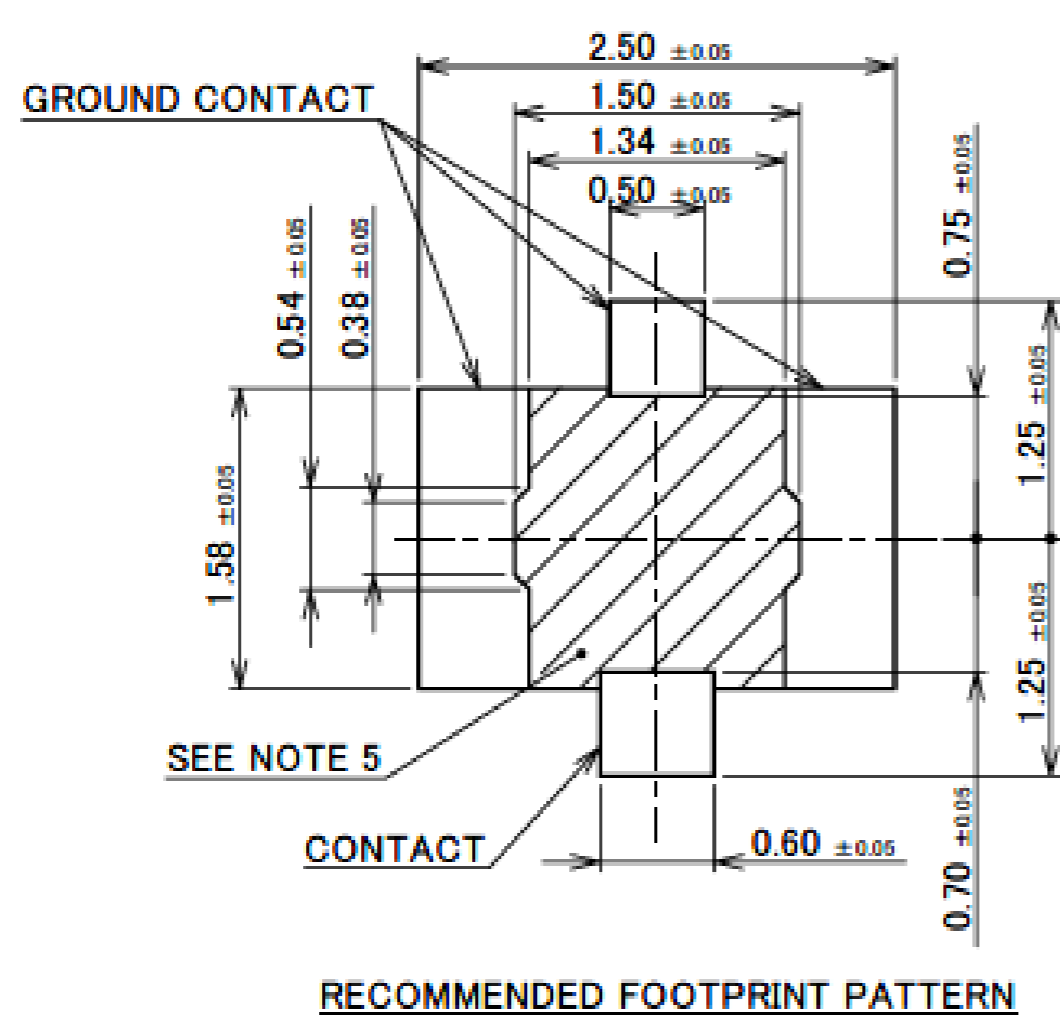
Rev.15

## FOR MHF 4 SMT PLUG

ITEMS	SPECIFICATION
APPLICABLE CONNECTOR PART No.	20462-001E (MHF 4 SMT PLUG)
RATING VOLTAGE	60 V AC (R.M.S)/DC
RATING FREQUENCY	DC~9GHz
OPERATING TEMPERATURE	233~363 K(-40°C~+90°C)
CHARACTERISTIC IMPEDANCE	50 ohm (NOMINAL VALUE)
VSWR	1.3 MAX. AT DC~3GHz, 1.4 MAX. AT 3~6GHz, 1.5 MAX. AT 6~9GHz
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.
INSULATION RESISTANCE	INITIAL : 500 Mohm MIN. / AFTER TEST : 100 Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	200 V AC 1 MINUTE
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	INITIAL : 30 N MAX. / AFTER TEST : 15 N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	INITIAL : 4 N MIN. / AFTER TEST : 2 N MIN.
PRODUCT SPECIFICATION	PRS-1404
TEST REPORT	TR-08022
PACKING STANDARD	20449-001E-03: 300-604
INSTRUCTION MANUAL	HIM-15005
APPEARANCE CRITERIA No.	QLS-A***

Rev.15

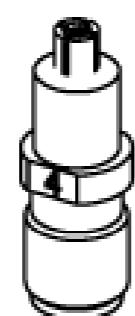
# Plug for Cable Assembly



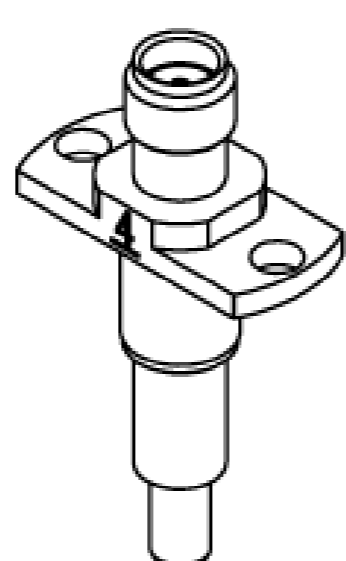
NOTE 5. CUT OUT PROHIBITION AREA.

Rev.15

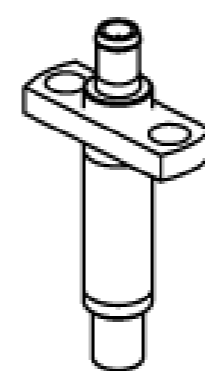
# Accessories for MHF<sup>®</sup> 4L Receptacle



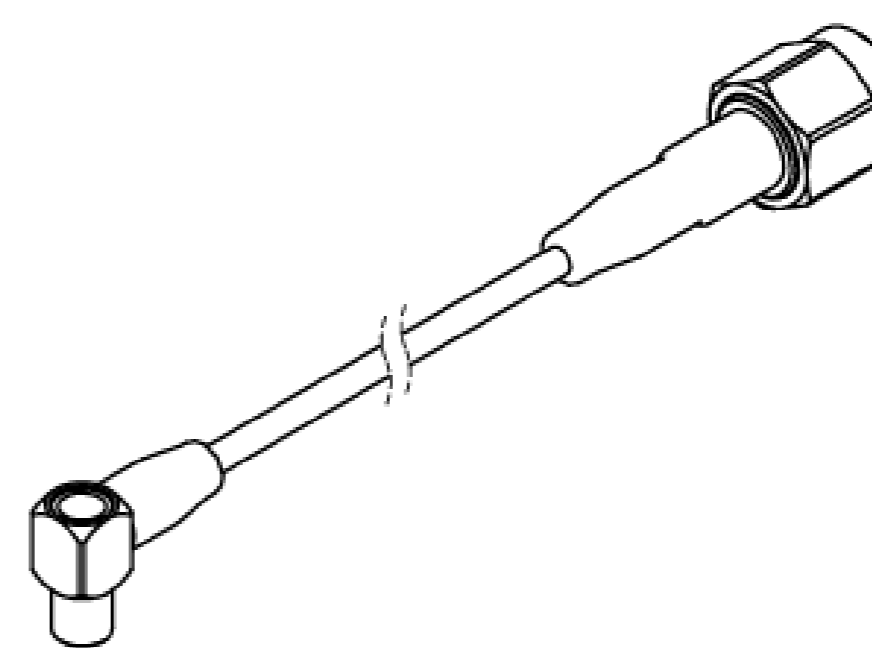
MHF 4 (4L) SMA ADAPTOR  
PART NO. 90449-002



MHF 4 SMA ADAPTOR HIGH CYCLE TYPE  
PART NO. 90698-0001



MHF 4 RECEPTACLE NARROW PITCH  
SMA ADAPTOR HIGH CYCLE TYPE  
PART NO. 90576-0001



4.5MM HIGH CYCLE TEST PROBE CABLE ASS'Y  
PART NO. 90577-\*\*\*\*

\* 90576-0001 AND 90577-\*\*\*\* SHOULD BE USED TOGETHER.

Board to Board



High-Density



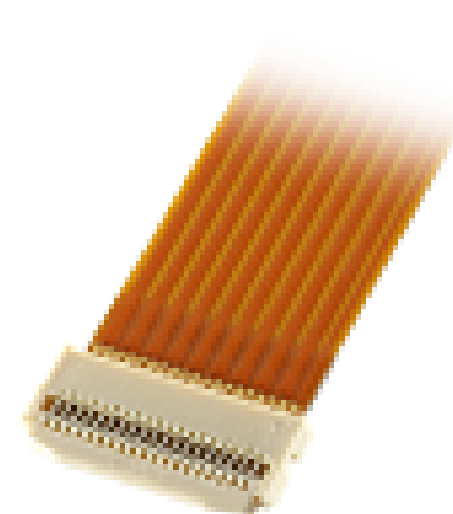
Autolocking FPC/FFC



High-Density



FPC/FFC



Micro-Coaxial / Discrete Cable



High-Speed



RF



High-Frequency



Optical Module



High-Speed



Effector



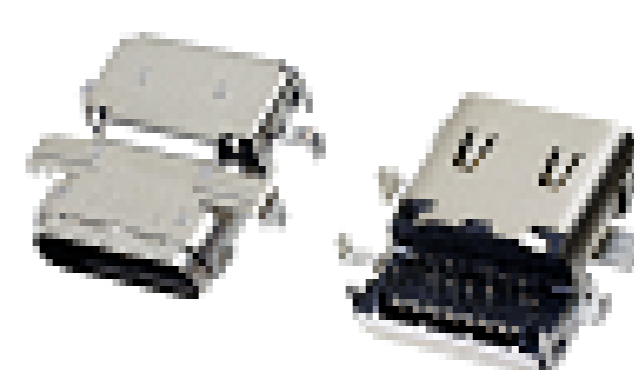
Power



High-Power



I/O (Input/Output)



Quick charge



Inquiry



Custom Connectors Available



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