

MHF® I

Supports up to 9 GHz, mated height of 3.0 mm max.

Product Specifications:

Mated Height (mm max.)	(1) 2.5 (2) 3.0		
Rece. SMT Size (mm)	3.1 x 3.0		
Applicable Frequency	DC ~ 9 GHz		
Characteristic Impedance	50 ohm		
VSWR (L=100 mm)	Connector	PLUG	RECEPTACLE
	DC~3 GHz	1.3 max.	1.3 max.
	3~6 GHz	1.5 max.	1.4 max.
	6~9 GHz	(1) 1.9 max. (2) 1.6 max.	1.8 max.

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

* Cable size O.D. (1) 1.80 mm, 1.32 mm, 1.13 mm, 0.81 mm, 1.37 mm (2) 2.0 mm

Applicable Cable Size:

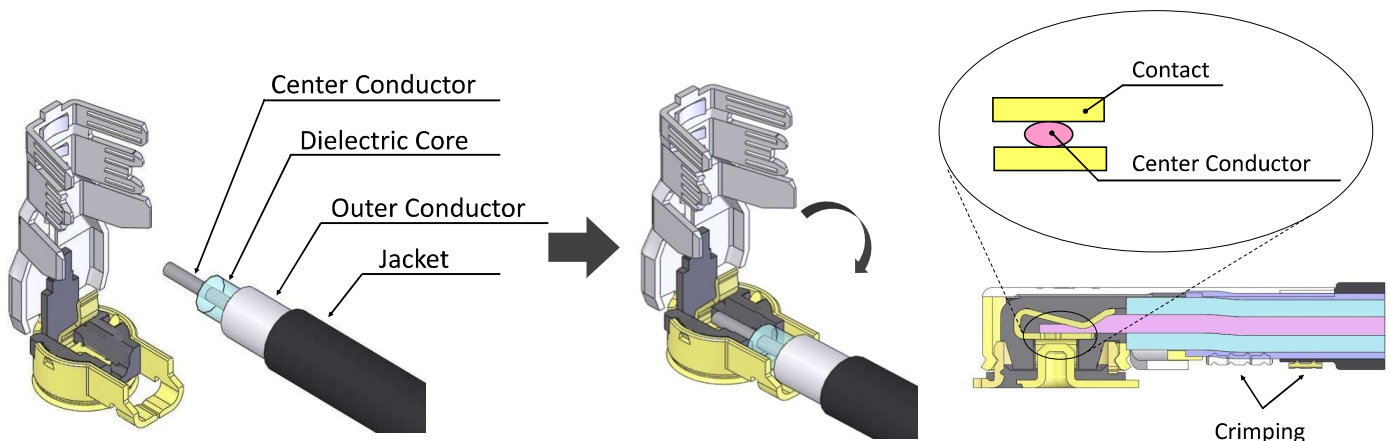
20278-112R-, 20670-001R-****
 O.D. 1.80 mm / AWG 30
 O.D. 1.32 mm, 1.13 mm / AWG 32
 O.D. 0.81 mm / AWG 36
20351-112R-37
 O.D. 1.37 mm / AWG 30
20767-001R-20
 O.D. 2.0 mm / AWG 26

Applicable Standards (Reference Only):

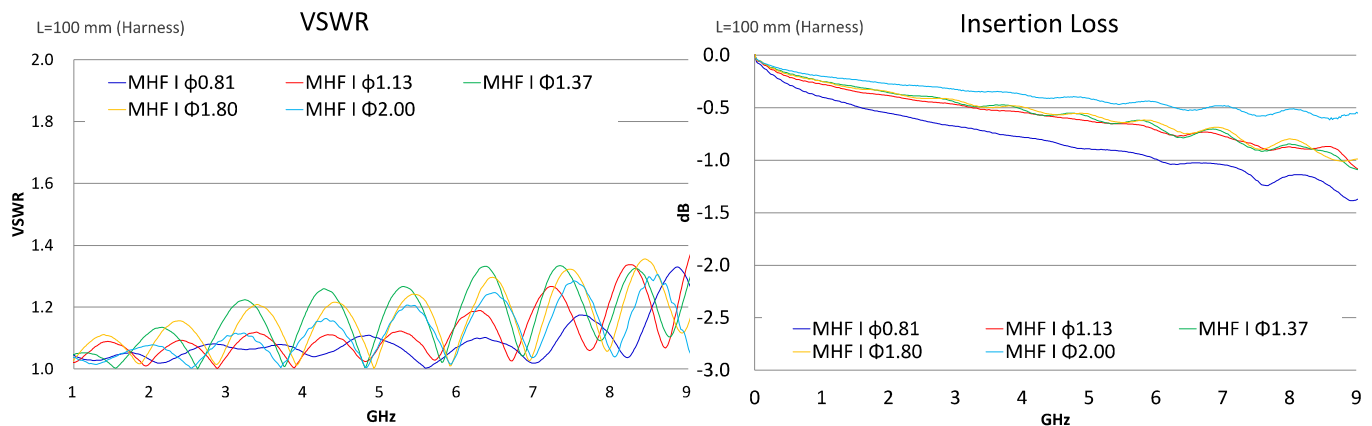
5G sub-6, Wi-Fi 6E, LTE/LTE-Advanced, LPWA, Bluetooth, GPS



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



▶ Small form factor with big performance through 9 GHz



▶ MHF® I Plug available cable O.D. : 2.0 mm, 1.80 mm, 1.37 mm, 1.32 mm, 1.13 mm, 0.81 mm

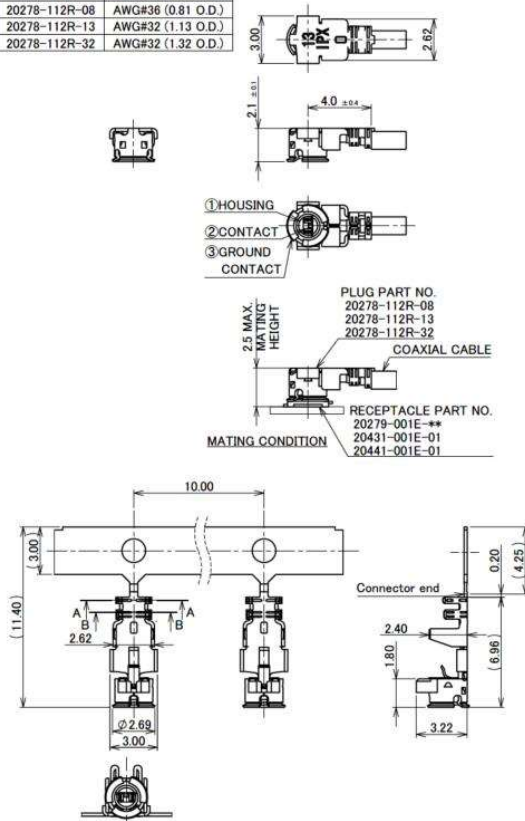
Mating Height		3.0 mm max.	2.5 mm max.
Coax O.D. (Center Conductor AWG)	2.00 mm (AWG#26)	●	
	1.80 mm (AWG#30)		●
	1.37 mm (AWG#30)		●
	1.32 mm (AWG#32)		●
	1.13 mm (AWG#32)		●
	0.81 mm (AWG#36)		●
Receptacle		MHF® I receptacle	

Component Parts Details

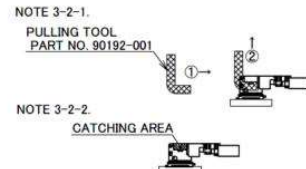
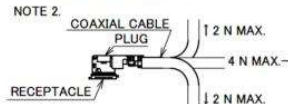
MHF® I plug Au (0.81,1.13,1.32,1.80)

Recommended P/N 20278-112R-**-**

PART No.	APPLICABLE CABLE
20278-112R-08	AWG#36 (0.81 O.D.)
20278-112R-13	AWG#32 (1.13 O.D.)
20278-112R-32	AWG#32 (1.32 O.D.)



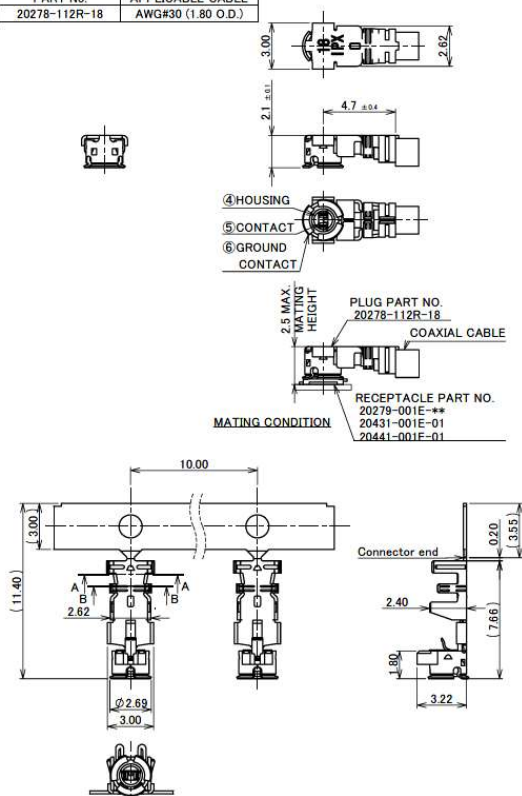
- NOTES**
1. APPLICABLE CONNECTOR:
20279-001E-**, 20431-001E-01, 20441-001E-01
 2. PERMISSIBLE LOAD OF CABLE AT MATING
 3. SUGGESTIONS FOR MATING & UNMATING OPERATION.
 - 3-1. MATING
PLEASE MATE THE CONNECTOR STRAIGHTLY TO VERTICAL DIRECTION AS MUCH AS POSSIBLE.
ADJUSTING THE MATING AXIS OF PLUG AND 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.
 - 3-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
 - 3-4. CAUTION ABOUT HEAT SHRINKAGE TUBES
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES. IT WILL BECOME
CAUSE OPEN CIRCUIT.
 4. THIS IS "PB-FREE" CONNECTOR.



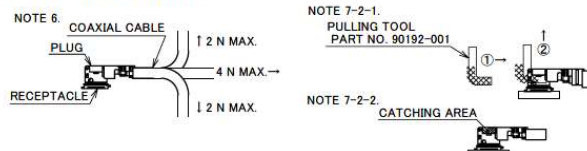
NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.10 μ m MIN.
1	HOUSING	PBT	UL94V-0, 20278-112R-08: WHITE 20278-112R-13, -32: BLACK

MHF® I plug Au (0.81,1.13,1.32,1.80)

Recommended P/N	20278-112R-**-
PART No.	APPLICABLE CABLE
20278-112R-18	AWG#30 (1.80 O.D.)



- NOTES
5. APPLICABLE CONNECTOR:
20279-001E-**, 20431-001E-01, 20441-001E-01
 6. PERMISSIBLE LOAD OF CABLE AT MATING
 7. SUGGESTIONS FOR MATING & UNMATING OPERATION.
 - 7-1. 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.
 - 7-2. UNMATING
7-2-1. 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.
 - 7-2-2. 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.
 - 7-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
 - 7-4. CAUTION ABOUT HEAT SHRINKAGE TUBES
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES. IT WILL BECOME CAUSE OPEN CIRCUIT
 8. THIS IS "PB-FREE" CONNECTOR.



NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS
6	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN.
5	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.10 μ m MIN.
4	HOUSING	PBT	UL94V-0, WHITE

Rev.30

PART NO.	20278-112R-08	20278-112R-13	20278-112R-32	20278-112R-18	
APPLICABLE CABLE NOMINAL DIMENSION					
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE	SINGLE	DOUBLE	SINGLE	
PART NO. OF HAND TOOL	90187-008C	90187-013C	90187-032C	90233-018	
PART NO. OF SEMI AUTO TERMINATION MACHINE	90213-008C	90213-013C	90213-032C	90232-018	
SECT. B-B					
SECT. A-A					
CRIMP HEIGHT	CH-1	CH-2	CH-3		
	1.34~1.40	0.76~0.84	0.85~0.97	1.34~1.40	
		1.06~1.14	1.20~1.30	1.41~1.49	
		1.15~1.35	1.26~1.46	1.70~1.80	

NOTE 9. MUST NOT USE SOLDER COATED INNER CONDUCTOR AND OUTER CONDUCTOR.

Rev.30

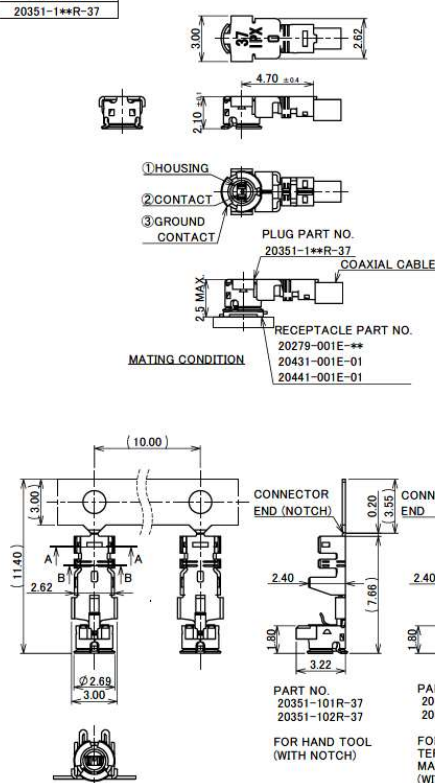
MHF® I plug Au (0.81,1.13,1.32,1.80)

ITEMS	SPECIFICATION
RECOMMENDED APPLICABLE CONNECTOR PART No.	20279-001E-**-
RATING VOLTAGE	60 V AC (R.M.S)
RATING FREQUENCY	DC~9GHz
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)
VSWR (MATED WITH SMA ADAPTER PART No.90193-001)	1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.90 MAX. AT 6~9 GHz (0.81 O.D. / 1.13 O.D. / 1.80 O.D.) 1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.60 MAX. AT 6~9 GHz (1.32 O.D.)
MAIN CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: 25 mohm MAX.
GROUND CONTACT RESISTANCE	INITIAL: 10 mohm MAX. / AFTER TEST: 15 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)	5 N MIN. / 3 N MIN.
CRIMP STRENGTH	20278-112R-08, 20278-112R-13, 20278-112R-32: 10 N MIN. 20278-112R-18: 15 N MIN.
PRODUCT SPECIFICATION	PRS-1676
TEST REPORT	TR-12044
PACKING STANDARD	300-233
INSTRUCTION MANUAL	HIM-10002
APPEARANCE CRITERIA No.	QLS-A***

Rev.30

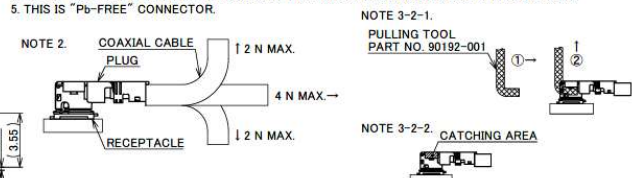
MHF® I plug Au (1.37)

Recommended P/N	20351-112R-37
PART No.	
20351-1**R-37	



NOTES

1. APPLICABLE CONNECTOR:
20279-001E-**, 20431-001E-01, 20441-001E-01
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.
- 3-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.
(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)
- 3-4. CAUTION ABOUT HEAT SHRINKAGE TUBES
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES. IT WILL BECOME CAUSE OPEN CIRCUIT.
4. TIP OF CONTACT SHOULD BE RECESSED OF HOUSING AFTER CRIMPED ABOUT MATING AREA.
5. THIS IS "Pb-FREE" CONNECTOR.



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

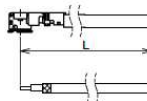
Rev.18

MHF® I plug Au (1.37)

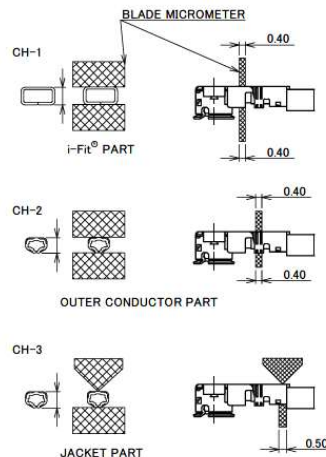
PART NO. OF NON HALOGEN FREE TYPE	20351-101R-37	20351-111R-37
PART NO. OF HALOGEN FREE TYPE	20351-102R-37	20351-112R-37
APPLICABLE CABLE NOMINAL DIMENSION		
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE	
PART NO. OF HAND TOOL	90233-037	90232-037
PART NO. OF SEMI AUTO TERMINATION MACHINE		
CRIMP HEIGHT	CH-1	1.34~1.40
	CH-2	1.36~1.42
	CH-3	1.28~1.34

NOTE 6. MUST NOT USE SOLDER COATED INNER CONDUCTOR.

CABLE CUT LENGTH



CRIMP HEIGHT



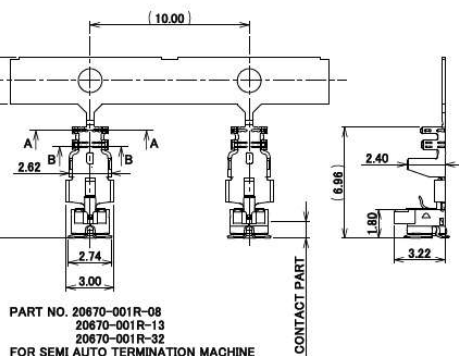
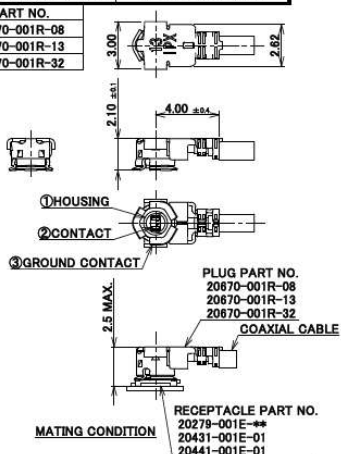
ITEMS	SPECIFICATION
RECOMMENDED APPLICABLE CONNECTOR PART No.	20279-001E-**
RATING VOLTAGE	60 V AC (R.M.S)
RATING FREQUENCY	DC~9GHz
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)
VSWR	1.3 MAX. AT 0.1~3 GHz, 1.5 MAX. AT 3~6 GHz, 1.9 MAX. AT 6~9 GHz
MAIN CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: 25 mohm MAX.
GROUND CONTACT RESISTANCE	INITIAL: 10 mohm MAX. / AFTER TEST: 15 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)	5 N MIN. / 3 N MIN.
CRIMP STRENGTH	15 N MIN.
PRODUCT SPECIFICATION	PRS-1726
TEST REPORT	TR-12096
PACKING STANDARD	300-233
INSTRUCTION MANUAL	HIM-10002
APPEARANCE CRITERIA No.	QLS-A***

Rev.18

MHF® I plug Ni top (0.81,1.13,1.32,1.37,1.80)

Recommended P/N 20670-001R-**-**

PART NO.
20670-001R-08
20670-001R-13
20670-001R-32



NOTES

1. APPLICABLE CONNECTOR:

20279-001E-**-*,
20431-001E-01,
20441-001E-01

2. PERMISSIBLE LOAD OF CABLE AT MATING

3. MATING AND UNMATING INSTRUCTION

3-1. MATING

MAKE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE.

3-2. UNMATING

3-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90192-001): 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.

3-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR

STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.

(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)

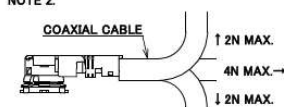
3-4. CAUTION ABOUT HEAT SHRINKAGE TUBES

PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES.

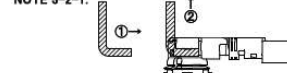
IT WILL CAUSE OPEN CIRCUIT.

4. THIS IS "Pb-FREE" CONNECTOR.

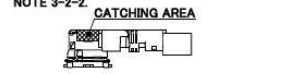
NOTE 2.



NOTE 3-2-1.



NOTE 3-2-2.

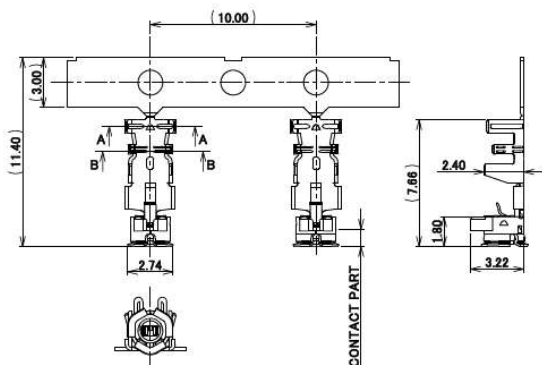
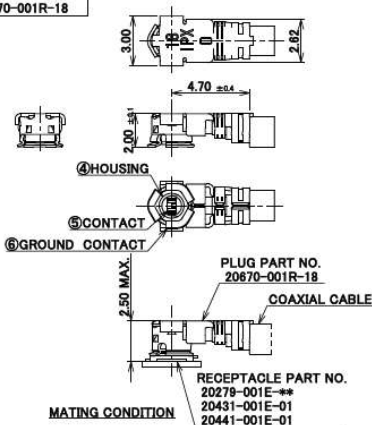


NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.02 μm MIN. [Ni PLATING AREA] Ni ONLY
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.03 μm MIN.
1	HOUSING	PBT	UL94V-0, BLACK

Rev.7

Recommended P/N 20670-001R-**-**

PART No.
20670-001R-18



PART NO. 20670-001R-18
FOR SEMI AUTO TERMINATION MACHINE



NOTES

5. APPLICABLE CONNECTOR:

20279-001E-**-*,
20431-001E-01,
20441-001E-01

6. PERMISSIBLE LOAD OF CABLE AT MATING

7. MATING AND UNMATING INSTRUCTION

7-1. MATING

MAKE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE.

7-2. UNMATING

7-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90192-001): USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

7-2-2. IN CASE OF UNMATING DIRECTLY BY HAND: CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

7-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR

STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.

(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)

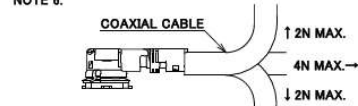
7-4. CAUTION ABOUT HEAT SHRINKAGE TUBES

PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES.

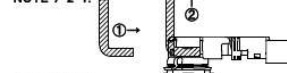
IT WILL CAUSE OPEN CIRCUIT.

8. THIS IS "Pb-FREE" CONNECTOR.

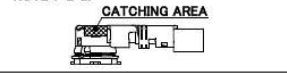
NOTE 8.



NOTE 7-2-1.



NOTE 7-2-2.



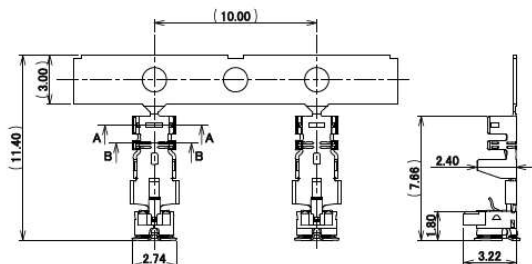
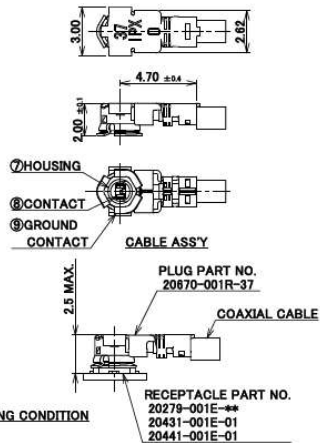
NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS
6	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.02 μm MIN. [Ni PLATING AREA] Ni ONLY
5	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.03 μm MIN.
4	HOUSING	PBT	UL94V-0, BLACK

Rev.7

MHF® I plug Ni top (0.81,1.13,1.32,1.37,1.80)

Recommended P/N 20670-001R-**-**

PART No.
20670-001R-37



PART NO. 20670-001R-37
FOR SEMI AUTO TERMINATION MACHINE

HATCHED AREA: NI PLATING AREA



NOTES

9. APPLICABLE CONNECTOR:

20279-001E-**-**
20431-001E-01
20441-001E-01

10. PERMISSIBLE LOAD OF CABLE AT MATING

11. MATING AND UNMATING INSTRUCTION

11-1. MATING

MAKE THE CONNECTOR VERTICALLY AS MUCH AS POSSIBLE, ADJUSTING THE MATING AXIS OF PLUG AND RECEPTACLE.

11-2. UNMATING

11-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90192-001): USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

11-2-2. IN CASE OF UNMATING DIRECTLY BY HAND: CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.

11-3. CRIMP OVER STANDARDS OF OUTER CONDUCTOR

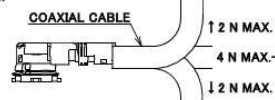
STANDARDS: LESS THAN 10% FROM TOTAL NUMBERS OF OUTER CONDUCTOR.

(NUMBERS OF OUTER CONDUCTOR'S CRIMP OVER FROM OUTER CONDUCTOR'S BARREL)

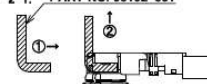
11-4. CAUTION ABOUT HEAT SHRINKAGE TUBES
PLEASE BE CAREFUL NOT TO MELT HOUSING WHEN USING HEAT SHRINKAGE TUBES.

IT WILL CAUSE OPEN CIRCUIT.
12. THIS IS "Pb-FREE" CONNECTOR.

NOTE 10.



NOTE 11-2-1. PULLING TOOL
PART NO. 90192-001



NOTE 11-2-2. CATCHING AREA

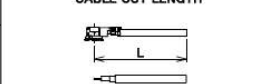


NO.	DESCRIPTION	MATERIAL	FINISH , REMARKS
9	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.02 μm MIN. [Ni PLATING AREA] Ni ONLY
8	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.03 μm MIN.
7	HOUSING	PBT	UL94V-0, BLACK

Rev.7

PART NO.	20670-001R-08	20670-001R-13	20670-001R-32	20670-001R-18	CABLE CUT LENGTH
APPLICABLE CABLE NOMINAL DIMENSION	 2.09 ±0.1 1.25 ±0.1 1.16 ±0.1 AWG #36(7/0.05) 0.40 NOMINAL 0.65 NOMINAL 0.81 NOMINAL *SEE NOTE 14.	 2.09 ±0.1 1.25 ±0.1 1.16 ±0.1 AWG #32(7/0.08) 0.68 NOMINAL 0.83 NOMINAL 1.13 NOMINAL *SEE NOTE 14.	 2.09 ±0.1 1.25 ±0.1 1.16 ±0.1 AWG #32(7/0.08) 0.68 NOMINAL 1.12 NOMINAL 1.32 NOMINAL *SEE NOTE 14.	 2.09 ±0.1 1.25 ±0.1 1.16 ±0.1 AWG #30(7/0.102) 0.84 NOMINAL 1.35 NOMINAL 1.80 NOMINAL *SEE NOTE 14.	
INNER CONDUCTOR SILVER PLATING DIELECTRIC CORE					
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE	SINGLE	DOUBLE	SINGLE	
PART NO. OF SEMI AUTO TERMINATION MACHINE	90213-008C	90213-013C	90213-032C	90232-018	
SECT. B-B	 1.68 1.12	 2.24 1.48	 2.29 1.56	 2.71 1.90	
SECT. A-A	 1.72 1.19	 2.28 1.55	 2.37 1.71	 3.10 2.26	
CRIMP HEIGHT	CH-1	1.34~1.40	1.34~1.40	1.34~1.40	
	CH-2	0.76~0.84	1.06~1.14	1.20~1.30	1.41~1.49
	CH-3	0.85~0.97	1.15~1.35	1.26~1.46	1.70~1.80

CRIMP HEIGHT



CRIMP HEIGHT

BLADE MICROMETER

CH-1



CH-2



CH-3



OUTER CONDUCTOR PART



JACKET PART



NOTE

13. MUST NOT USE SOLDER COATED INNER CONDUCTOR AND OUTER CONDUCTOR.

Rev.7

MHF® I plug Ni top (0.81,1.13,1.32,1.37,1.80)

PART NO.		20670-001R-37	CABLE CUT LENGTH
APPLICABLE CABLE NOMINAL DIMENSION			
BRAIDED SHIELD OF OUTER CONDUCTOR		SINGLE	CRIMP HEIGHT BLADE MICROMETER CH-1 I-Fit® PART CH-2 OUTER CONDUCTOR PART CH-3 JACKET PART
PART NO. OF SEMI AUTO TERMINATION MACHINE		90232-037	
SECT. B-B			
SECT. A-A			
CRIMP HEIGHT	CH-1	1.34~1.40	
	CH-2	1.36~1.42	
	CH-3	1.28~1.34	

NOTE
14. MUST NOT USE SOLDER COATED INNER CONDUCTOR AND OUTER CONDUCTOR.

Rev.7

ITEMS	SPECIFICATION
RECOMMENDED APPLICABLE CONNECTOR PART No.	20279-001E-**
RATING VOLTAGE	60 V AC (R.M.S)
RATING FREQUENCY	DC~9GHz
OPERATING TEMPERATURE	233~363 K (-40°C~+90°C)
VSWR (MATED WITH SMA ADAPTER PART No:90193-001)	1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.90 MAX. AT 6~9 GHz (0.81 O.D. / 1.13 O.D. / 1.37 O.D. / 1.80 O.D.) 1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.80 MAX. AT 6~9 GHz (1.32 O.D.)
MAIN CONTACT RESISTANCE	INITIAL: 20 mohm MAX. / AFTER TEST: Δ R 20 mohm MAX.
GROUND CONTACT RESISTANCE	INITIAL: 20mohm 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)	5 N MIN. / 3 N MIN.
CRIMP STRENGTH	20670-001R-08, 20670-001R-13, 20670-001R-32: 10 N MIN. 20670-001R-18, 20670-001R-37: 15 N MIN.
PRODUCT SPECIFICATION	PRS-2105
TEST REPORT	TR-15059
PACKING STANDARD	300-233
INSTRUCTION MANUAL	HIM-10002
APPEARANCE CRITERIA No.	QLS-A***

Rev.7

Accessories for MHF® I plug



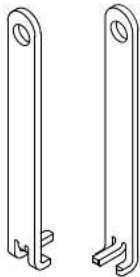
MHF I/II SMA ADAPTOR
PART NO. 90193-001



MHF I/II PLUG INSPECTION CONNECTOR
PART NO. 90194-001



FRONT SIDE BACK SIDE
MHF I/II PULLING TOOL
PART NO. 90192-001

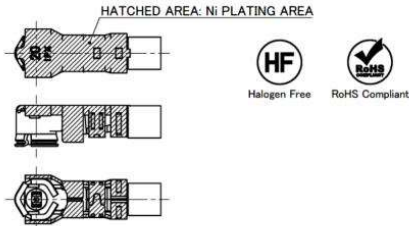
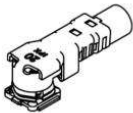
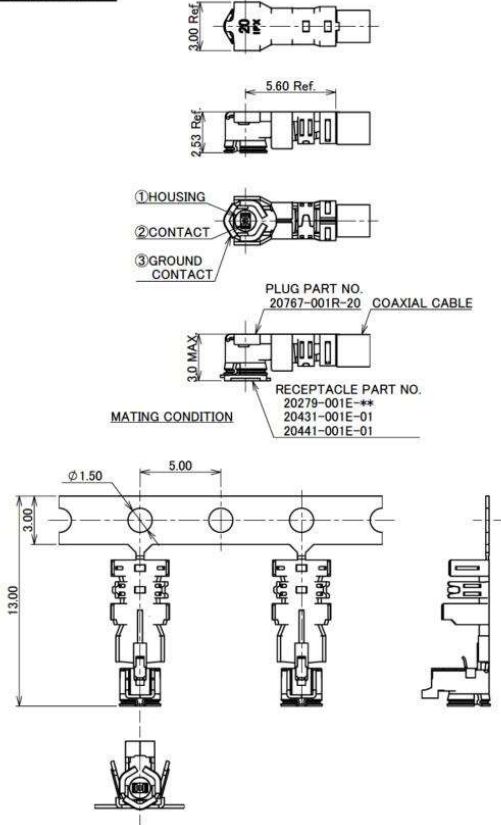


FRONT SIDE BACK SIDE
MHF I PUSHING AND PULLING TOOL
PART NO. 90224-001

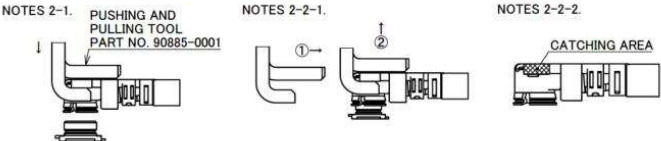
Rev.7

MHF® I plug (2.0 mm Cable O.D.)

Recommended P/N	20767-001R-20
PART No.	
20767-001R-20	



- NOTES
1. APPLICABLE CONNECTOR:
20279-001E-**, 20431-001E-01, 20441-001E-01
 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
 - 2-2-1. IN CASE OF UNMATING BY PULLING TOOL (PART NO. 90885-0001)
USE THE PULLING TOOL AS THE FOLLOWING DRAWING, AND PLEASE PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.
 - 2-2-2. IN CASE OF UNMATING DIRECTLY BY HAND
CATCH THE CATCHING AREA OF PLUG, AND PULL PLUG TO VERTICAL DIRECTION AS DIRECTLY AS POSSIBLE.



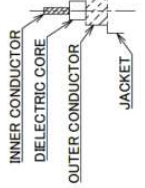
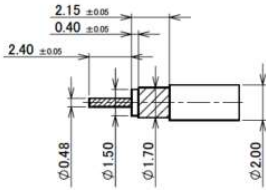
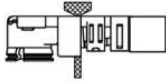
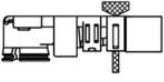
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.05 μ m MIN.
2	CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.10 μ m MIN.
1	HOUSING	PBT	UL94V-0, BLACK
NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS

Rev.4

MHF® I plug (2.0 mm Cable O.D.)

ITEMS	SPECIFICATION
RECOMMENDED APPLICABLE CONNECTOR PART No.	20279-001E-**
RATING VOLTAGE	60 V AC (R.M.S)
RATING FREQUENCY	DC~9GHz
OPERATING TEMPERATURE	233~363 K (-40℃~+90℃)
VSWR (MATED WITH SMA ADAPTER PART No.90193-001)	1.30 MAX. AT 0.1~3 GHz, 1.50 MAX. AT 3~6 GHz, 1.60 MAX. AT 6~9 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)	5 N MIN. / 3 N MIN.
CRIMP STRENGTH	15 N MIN.
PRODUCT SPECIFICATION	PRS-2490
TEST REPORT	TR-18041
PACKING STANDARD	PST-16007
INSTRUCTION MANUAL	HIM-17017
APPEARANCE CRITERIA No.	QLS-A***

Rev.4

PART NO.	20767-001R-20		
APPLICABLE CABLE NOMINAL DIMENSION 			
BRAIDED SHIELD OF OUTER CONDUCTOR	SINGLE		
PART NO. OF SEMI AUTO TERMINATION MACHINE	90876-020		
CRIMP HEIGHT	CH-1 i-Fit® PART 	CH-2 SHIELD PART 	CH-3 JACKET PART 
	2.28~2.36	1.81~1.87	1.95~2.01

Rev.4

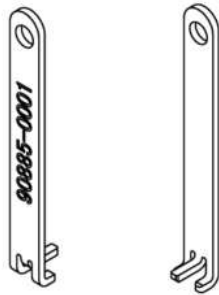
Accessories for MHF® I plug (2.0 mm Cable O.D.)



MHF I/II SMA ADAPTOR
PART NO. 90193-001



MHF I/II PLUG INSPECTION CONNECTOR
PART NO. 90194-001

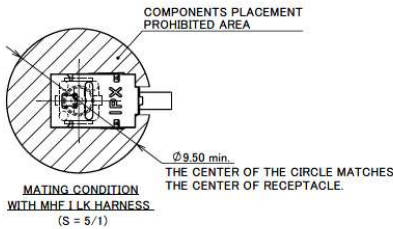
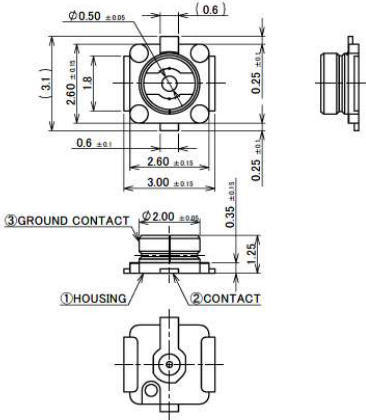


FRONT SIDE BACK SIDE
MHF I PLUG (2.00) PUSHING AND PULLING TOOL
PART NO. 90885-0001

Rev.4

MHF® I Receptacle

Recommended P/N			20279-001E-03
PART NO.	PACKING REEL	QUANTITY IN 1 REEL	
20279-001E-01	PLASTIC REEL	2,500	
20279-001E-03	CORRUGATED PAPER REEL	2,500	
20279-001E-05	PLASTIC REEL	10,000	



- NOTES
1. APPLICABLE CONNECTOR PART NO.
MHF I PLUG
20278-11R-**-**
20351-***R-37
20631-***R-**-**
20670-001R-**-**
20767-001R-20
MHF II PLUG
20311-011R-**-**
20686-001R-08
 2. COPLANARITY: 0.1mm MAX.
 3. THIS IS "Pb-FREE" CONNECTOR.

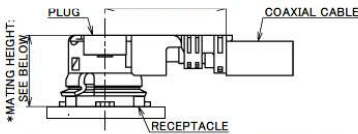
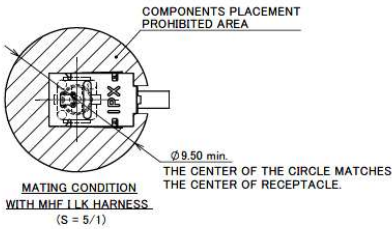
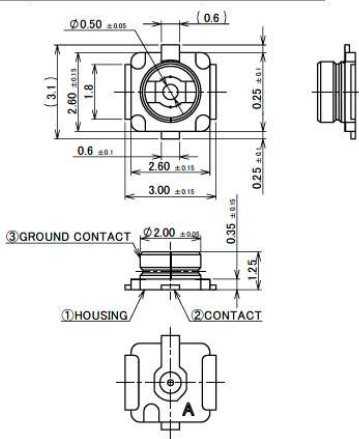
PLUG *LENGTH: SEE BELOW COAXIAL CABLE
RECEPTACLE
*MATING HEIGHT: SEE BELOW
*LENGTH: 4.0±0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32
4.7±0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37
5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)
3.8±0.3 AT PLUG PART NO. 20686-001R-08, 20311-011R-**-**
*MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-**-**
(2.9 MAX. AT MHF I LK LOCKED CONDITION)
3.0 MAX. AT PLUG PART NO. 20767-001R-20
2.0±0.1 AT PLUG PART NO. 20686-001R-08, 20311-011R-**-**
MATING CONDITION

3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.05 μm MIN. SOLDERING PART Au 0.05 μm MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.10 μm MIN. SOLDERING PART Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0, WHITE
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS

Rev.29

MHF® I Receptacle

Recommended P/N 20279-001E-03		
PART NO.	PACKING REEL	QUANTITY IN 1 REEL
20279-001E-06	PLASTIC REEL	10,000



- *LENGTH: 4.0±0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32
4.7±0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37
5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)
3.8±0.3 AT PLUG PART NO. 20686-001R-08, 20311-011R-**
- *MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-**
(2.9 MAX. AT MHF I LK LOCKED CONDITION)
3.0 MAX. AT PLUG PART NO. 20767-001R-20
2.0±0.1 AT PLUG PART NO. 20686-001R-08, 20311-011R-**

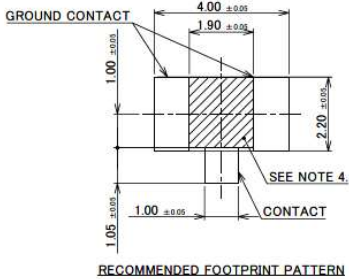
MATING CONDITION



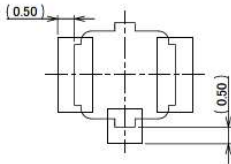
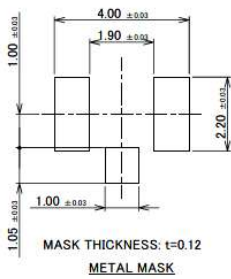
- NOTES
1. APPLICABLE CONNECTOR PART NO.
MHF I PLUG
20278-11R-**
20351-***R-37
20631-***R-**
20670-001R-**
20767-001R-20
MHF II PLUG
20311-011R-**
20686-001R-08
2. COPLANARITY: 0.1mm MAX.
3. THIS IS "Pb-FREE" CONNECTOR.

3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.05 μm MIN. SOLDERING PART Au 0.05 μm MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.10 μm MIN. SOLDERING PART Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0, WHITE
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS

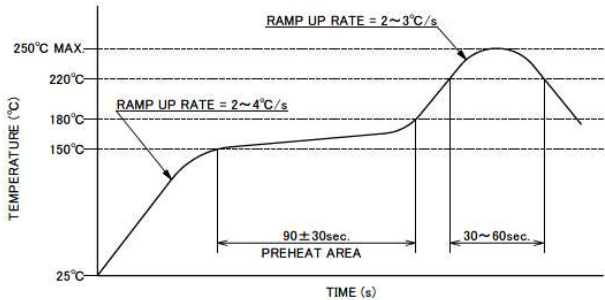
Rev.29



RECOMMENDED FOOTPRINT PATTERN



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



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

- NOTES
4. CUT OUT PROHIBITION AREA

Rev.29

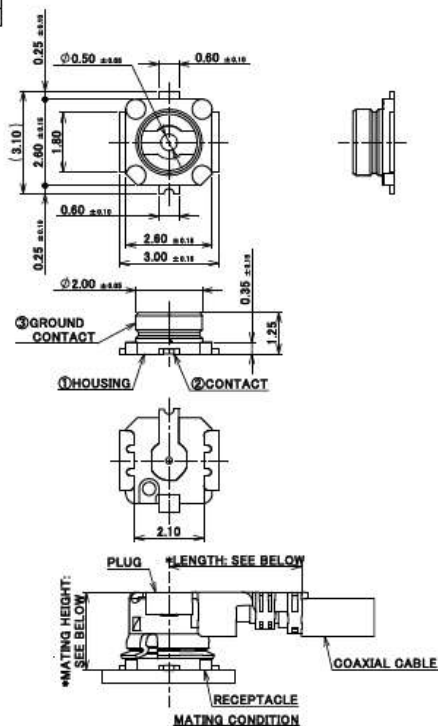
MHF® I Receptacle

ITEMS	SPECIFICATION		
RECOMMENDED APPLICABLE CONNECTOR PART NO.	20670-001R-** (MHF I PLUG Ni TOP 1.80, 1.37, 1.32, 1.13, 0.81)	20767-001R-20 (MHF I PLUG 2.00)	20686-001R-08 (MHF II PLUG Ni TOP 0.81)
RATING VOLTAGE	60 V AC (R.M.S)		
RATING FREQUENCY	DC~9GHz		
OPERATING TEMPERATURE	233~363K (-40°C~+90°C)		
VSWR (MATED WITH SMA ADAPTER PART No.90193-002)	RECEPTACLE: 1.30 MAX. AT 0.1~3 GHz, 1.40 MAX. AT 3~6 GHz, 1.80 MAX. AT 6~9 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.		INITIAL: 4 N MIN. AFTER TEST: 2 N MIN.
PRODUCT SPECIFICATION	PRS-2105	PRS-2490	PRS-2106
TEST REPORT	TR-15059	TR-18041	TR-15060
PACKING STANDARD	20279-001E-01: 300~232 (CORRUGATED PAPER REEL) PST-12002 (ANTI-STATIC PLASTIC REEL) 20279-001E-03: 300~850 20279-001E-05: PST-13040 20279-001E-06: PST-13040		
INSTRUCTION MANUAL	HIM-10002		HIM-12010
APPEARANCE CRITERIA No.	QLS-A***		

※UNLESS OTHERWISE SPECIFIED, 20279-001E-01 WILL DERIVED IN CORRUGATED PAPER REELS.
CONTACT YOUR I-PEX SALES IF YOU WISH FOR PLASTIC REELS.

Rev.29

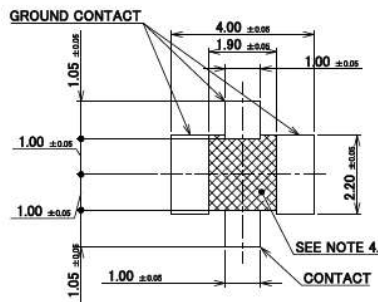
Recommended P/N	20431-001E-01
PART No.	
20431-001E-01	



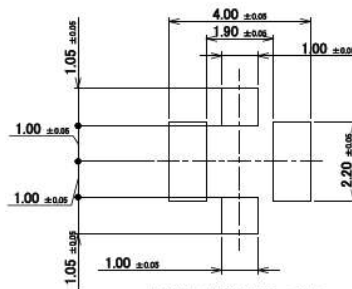
NOTES.
1. APPLICABLE CONNECTOR PART NUMBER:
MHF I PLUG
20276-112R-**
20391-1**R-37
20670-001R-**
20767-001R-20
MHF II PLUG
20311-011R-**
20686-001R-08
2. COPLANARITY: 0.1mm MAX.
3. THIS IS "Pb-FREE" CONNECTOR.

3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.03 μ m MIN. SOLDERING PART Au 0.03 μ m MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 μ m MIN. CONTACT PART Au 0.10 μ m MIN. SOLDERING PART Au 0.03 μ m MIN.
1	HOUSING	LOP	UL94V-0, WHITE
NO.	DISCRPTION	MATERIAL	FINISH, REMARKS

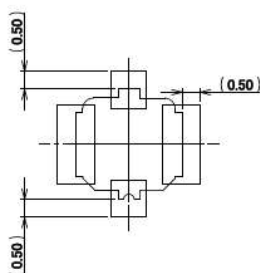
MHF® I Receptacle



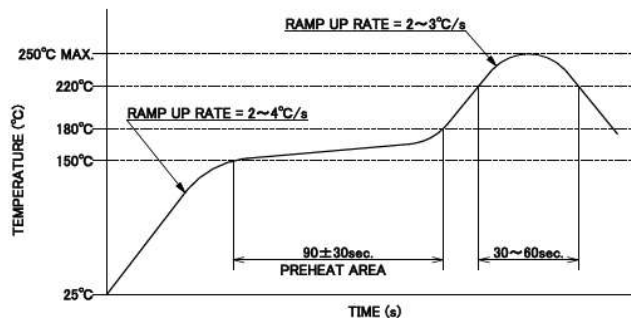
RECOMMENDED FOOTPRINT PATTERN



MASK THICKNESS : t=0.12
METAL MASK



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



REFLOW TEMPERATURE PROFILE
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn98.5 Ag3.0 Cu0.5)

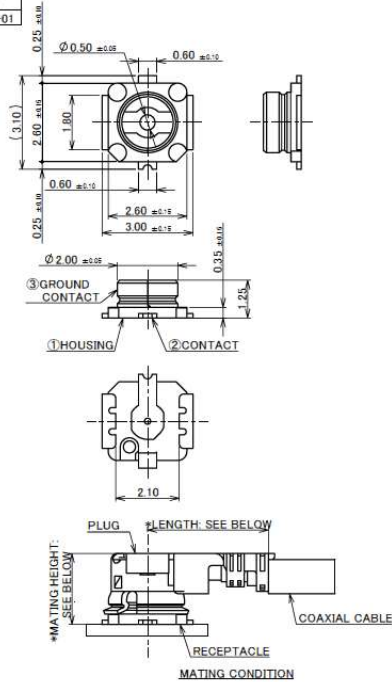
Rev.4

ITEMS	SPECIFICATION	
RECOMMENDED APPLICABLE CONNECTOR PART NO.	20670-001R-*** (MHF I PLUG Ni TOP (1.80, 1.37, 1.32, 1.13, 0.81))	20686-001R-08 (MHF II PLUG Ni TOP (0.81))
RATING VOLTAGE	60 V AC (R.M.S)	
RATING FREQUENCY	DC~9GHz	
OPERATING TEMPERATURE	233~363K (-40°C~+90°C)	
VSWR	RECEPTACLE: 1.3 MAX AT 0.1~3 GHz, 1.4 MAX AT 3~6 GHz, 1.8 MAX. AT 6~9 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.	INITIAL: 4 N MIN. AFTER TEST: 2 N MIN.
PRODUCT SPECIFICATION	PRS-2105	PRS-2106
TEST REPORT	TR-15059	TR-15060
PACKING STANDARD	PST-17011	
INSTRUCTION MANUAL	HIM-10002	HIM-12010
APPEARANCE CRITERIA No.	QLS-A***	

Rev.4

MHF® I Receptacle

Recommended P/N	20441-001E-01
PART No.	20441-001E-01

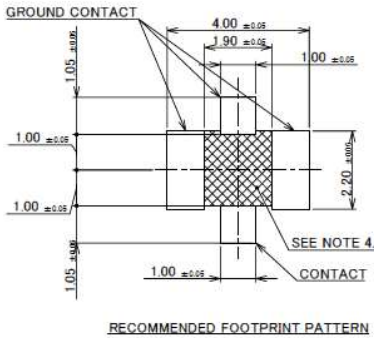


- NOTES.
1. APPLICABLE CONNECTOR PART NUMBER:
MHF I PLUG
20278-112R-**-**
20351-1**R-37
20670-001R-**-**
20767-001R-20
MHF II PLUG
20311-011R-**-**
20686-001R-08
 2. COPLANARITY: 0.1mm MAX.
 3. THIS IS "Pb-FREE" CONNECTOR.

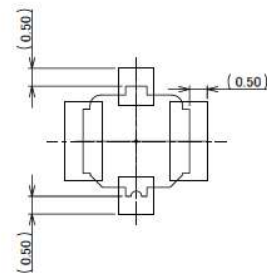
3	GROUND CONTACT	PHOSPHOR BRONZE	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.03 μm MIN. SOLDERING PART Au 0.03 μm MIN.
2	CONTACT	BRASS	ALL OVER Ni 1.00 μm MIN. CONTACT PART Au 0.10 μm MIN. SOLDERING PART Au 0.03 μm MIN.
1	HOUSING	LCP	UL94V-0, BLACK
NO.	DISCRIPTION	MATERIAL	FINISH, REMARKS

- *LENGTH: 4.0 ±0.4 AT PLUG PART NO. 20670-001R-08, 20670-001R-13, 20670-001R-32
4.7 ±0.4 AT PLUG PART NO. 20670-001R-18, 20670-001R-37
5.6 AT PLUG PART NO. 20767-001R-20 (REFERENCE DIMENSION)
3.8 ±0.3 AT PLUG PART NO. 20686-001R-08, 20311-011R-**-**
*MATING HEIGHT: 2.5 MAX. AT PLUG PART NO. 20670-001R-**-**
3.0 MAX. AT PLUG PART NO. 20767-001R-20
2.0 ±0.1 AT PLUG PART NO. 20686-001R-08, 20311-011R-**-**

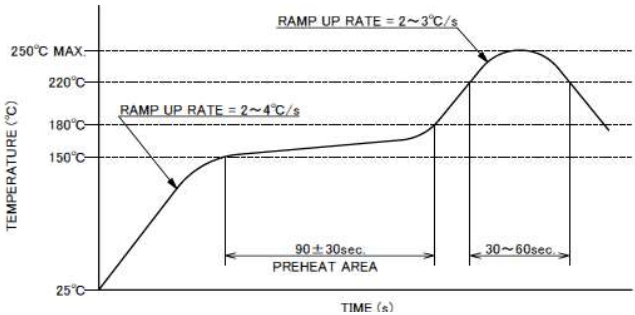
Rev.5



RECOMMENDED FOOTPRINT PATTERN



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



NOTES.
4. CUT OUT PROHIBITION AREA

Rev.5

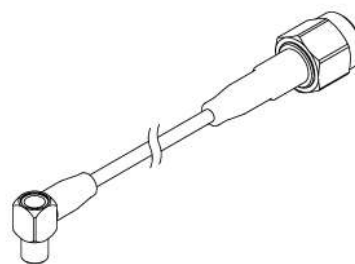
Accessories for MHF® I Receptacle



MHF I/II SMA ADAPTOR
PART NO. 90193-002



4.5MM HIGH CYCLE TEST PROBE FOR MHF/MHF A
PART NO. 90575-0001



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

* 90575-0001 AND 90577-**** SHOULD BE USED TOGETHER.

Rev.29

MHF® I Receptacle

ITEMS	SPECIFICATION	
RECOMMENDED APPLICABLE CONNECTOR PART NO.	20670-001R-** (MHF I PLUG Ni TOP (1.80, 1.37, 1.32, 1.13, 0.81))	20686-001R-08 (MHF II PLUG Ni TOP (0.81))
RATING VOLTAGE	60 V AC (R.M.S)	
RATING FREQUENCY	DC~9GHz	
OPERATING TEMPERATURE	233~363K (-40°C~+90°C)	
VSWR	RECEPTACLE: 1.3 MAX AT 0.1~3 GHz, 1.4 MAX AT 3~6 GHz, 1.8 MAX. AT 6~9 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.	INITIAL: 4 N MIN. AFTER TEST: 2 N MIN.
PRODUCT SPECIFICATION	PRS-2105	PRS-2106
TEST REPORT	TR-15059	TR-15060
PACKING STANDARD	300-596	
INSTRUCTION MANUAL	HIM-10002	HIM-12010
APPEARANCE CRITERIA No.	QLS-A***	

Rev.5

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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