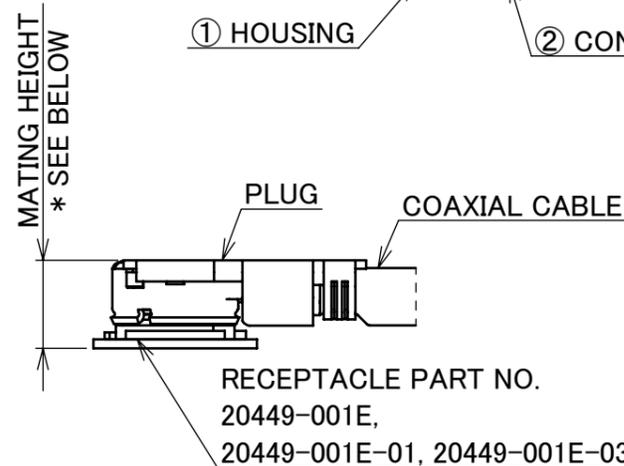
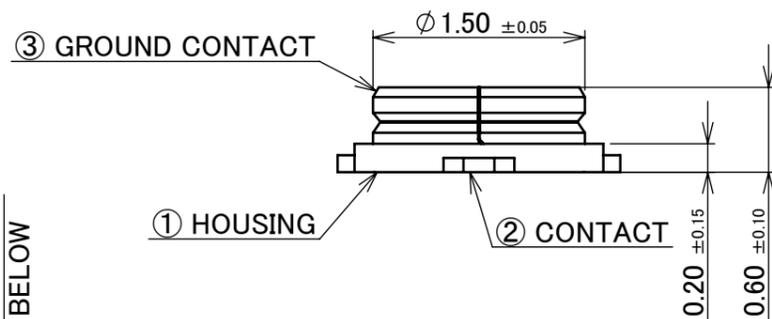
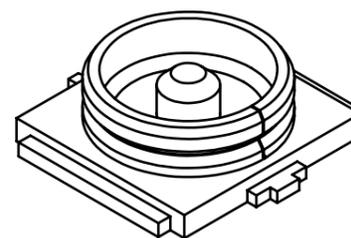
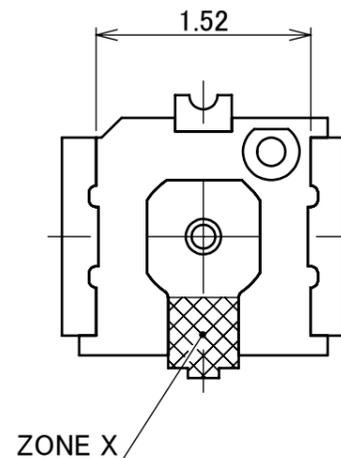
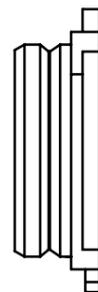
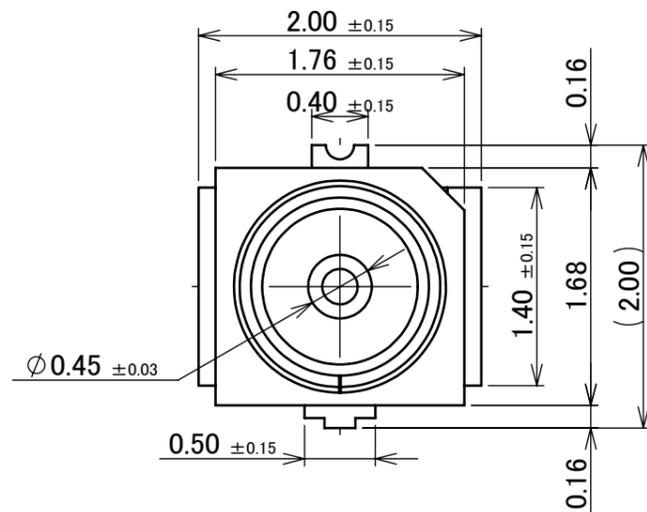


Recommended P/N 20449-001E-03

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.	TOP OTHER: Au 0.01 μm MIN. ZONE X: Au 0.03 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 0.01 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.	TOP: Au 0.01 μm MIN. MIDDLE: Pd-Ni 0.02 μm MIN.	
20449-001E-03							



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)
- COPLANARITY: 0.1 mm MAX.
- THIS IS "Pb-FREE" CONNECTOR.
- CHARACTERISTIC IMPEDANCE: 50 Ω (NOMINAL VALUE)

* 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
 (2.0 MAX. WITH MHF 4L LK LOCKED CONDITION)

MATING CONDITION
 WITH MHF 4/MHF 4L PLUG
 (S = 10 : 1)

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

REV.	ECN	BY	DATE	APP.	APP.	DWG. No.	20449	SIZE	SHEET	REV.	
22	ZC00099	TOI	2025/09/17	Yufu	ANGLE ±2° 6 OVER 30 MAX. ±0.3	PROJECTION	SERIES No. R5	SCALE	CUSTOMER COPY		
21	Z230809	Y.I	2023/07/13	M.T	6 MAX. ±0.2 30 OVER 120 MAX. ±0.5	Mating symbol	R5	20:1	I-PEX		
20	Z230517	K.M	2023/05/10	Y.H	GENERAL TOLERANCE.			mm			
19	Z230390	TOI	2023/04/04	Y.H	DWG. K.Oobayashi DATE 2007/11/12	TITLE MHF® 4 RECEPTACLE	20449	UNIT	1/7 22		
18	Z230201	TOI	2023/02/20	Y.H	CHK.			mm			
17	Z221366	M.H	2022/12/19	Y.H	-			SIZE			
REVISION RECORD					E.Kawabe			A3			

FOR MHF 4 PLUG

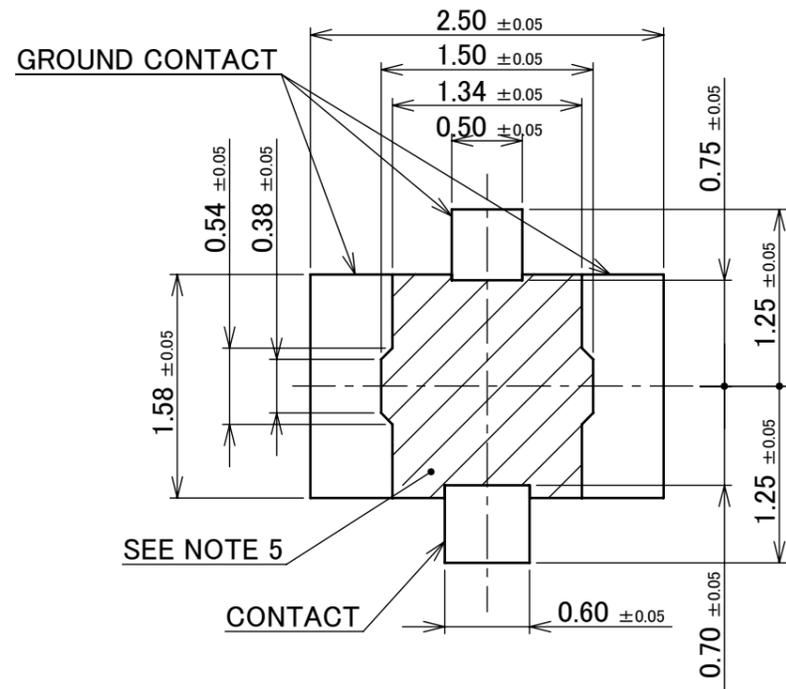
ITEMS	SPECIFICATION	
	20611-001R (CABLE Φ0.81 TYPE)	20448-001R (CABLE Φ0.81 TYPE)
APPLICABLE CONNECTOR PART No.		
RATED VOLTAGE	60 V AC (R.M.S)/DC	
RATED FREQUENCY	DC TO 9GHz	
OPERATING TEMPERATURE	233 TO 363 K (-40°C TO +90°C)	
CHARACTERISTIC IMPEDANCE	50 ohm (NOMINAL VALUE)	
VSWR (MATED WITH SMA ADAPTER PART No. 90449-002)	1.30 MAX. AT 0.1-3GHz, 1.40 MAX. AT 3-6GHz, 1.55 MAX. AT 6-9GHz	
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 100 mohm MAX.	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	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	300-604	
INSTRUCTION MANUAL	HIM-10003	
APPEARANCE CRITERIA No.	QLS-A***	

ANGLE	$\pm 2^\circ$	6 OVER 30 MAX.	± 0.3	PROJECTION 	SERIES No. R5	CUSTOMER COPY		
6 MAX.	± 0.2	30 OVER 120 MAX.	± 0.5					
GENERAL TOLERANCE.				TITLE MHF [®] 4 RECEPTACLE	SCALE -	I-PEX		
DWG.	DATE							
CHK.								
APP.								
				DWG. No.	20449	SIZE A3	SHEET 2/7	REV. 22

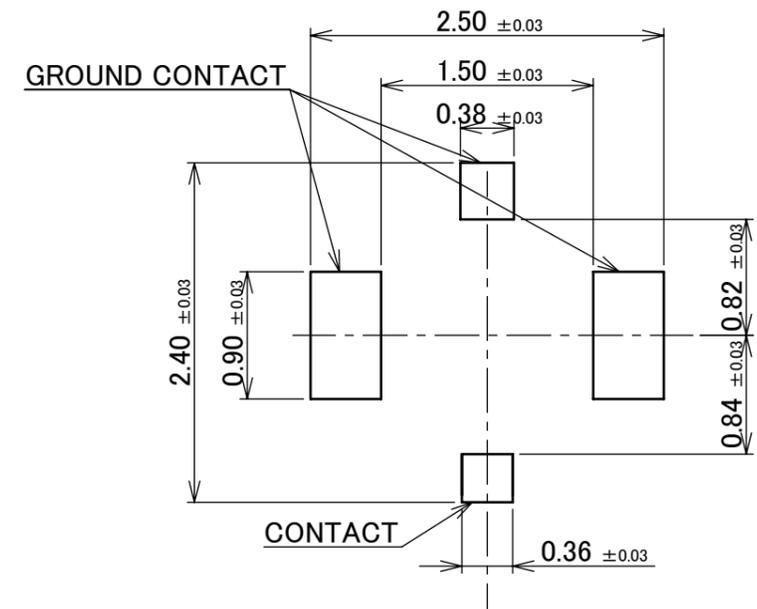
FOR MHF 4L PLUG

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)
RATED VOLTAGE	60 V AC (R.M.S)/DC			
RATED FREQUENCY	DC TO 9GHz			
OPERATING TEMPERATURE	233 TO 363 K (-40°C TO +90°C)			
CHARACTERISTIC IMPEDANCE	50 ohm (NOMINAL VALUE)			
VSWR (MATED WITH SMA ADAPTER PART No. 90449-002)	1.30 MAX. AT 0.1-3GHz, 1.40 MAX. AT 3-6GHz, 1.55 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	300-604			
INSTRUCTION MANUAL	HIM-12011	HIM-12012		HIM-16011
APPEARANCE CRITERIA No.	QLS-A***			

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION 	SERIES No. R5	CUSTOMER COPY						
	6 MAX.	±0.2	30 OVER 120 MAX.			±0.5	SCALE	-				
GENERAL TOLERANCE.				TITLE MHF® 4 RECEPTACLE	DWG. No. 20449	UNIT	mm					
DWG.	DATE					SIZE	SHEET	REV.	I-PEX			
CHK.										A3	3/7	22
APP.												

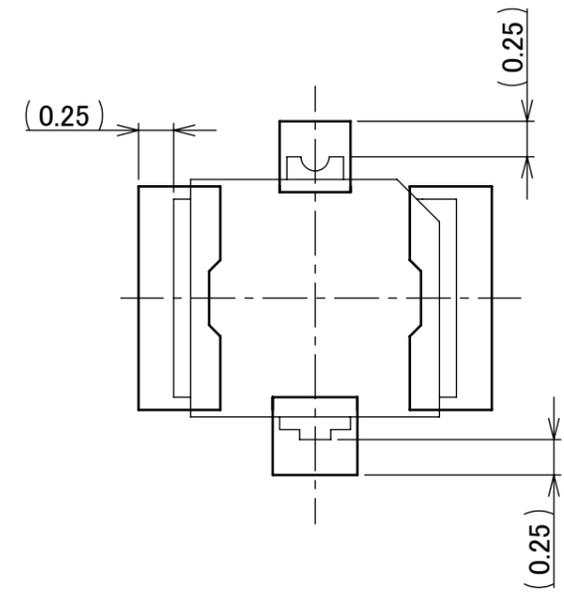


RECOMMENDED FOOTPRINT PATTERN

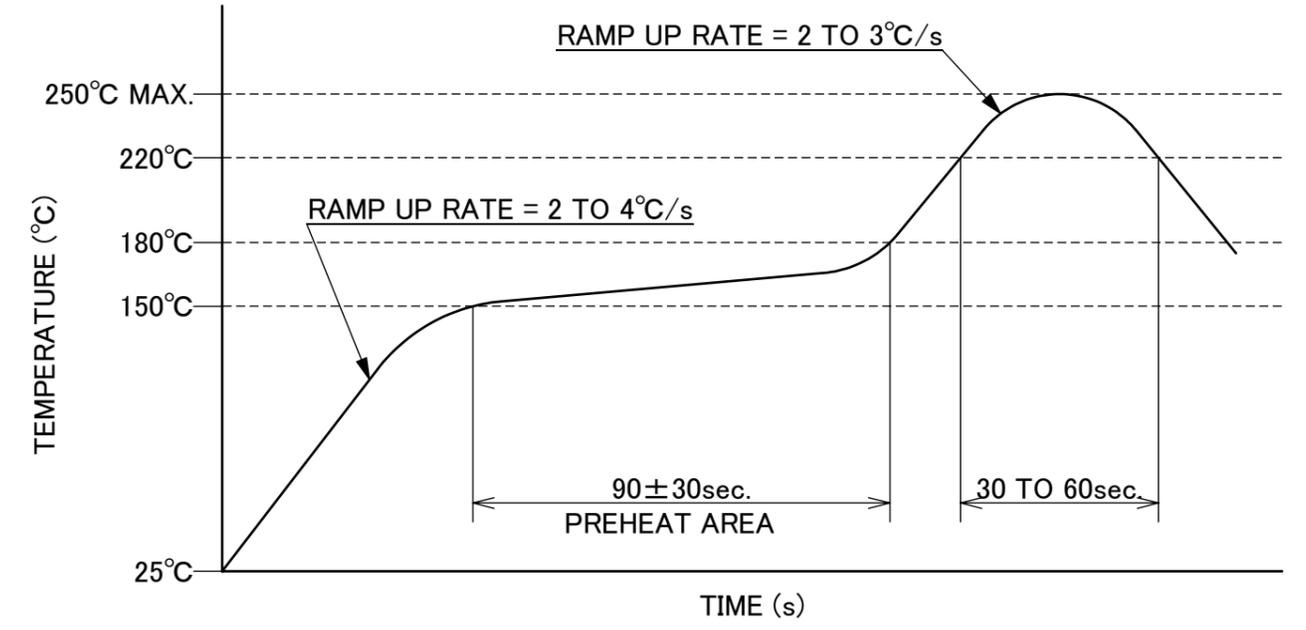


MASK THICKNESS: 0.12 mm

RECOMMENDED METAL MASK LAYOUT



CONNECTOR ON RECOMMENDED FOOTPRINT PATTERN



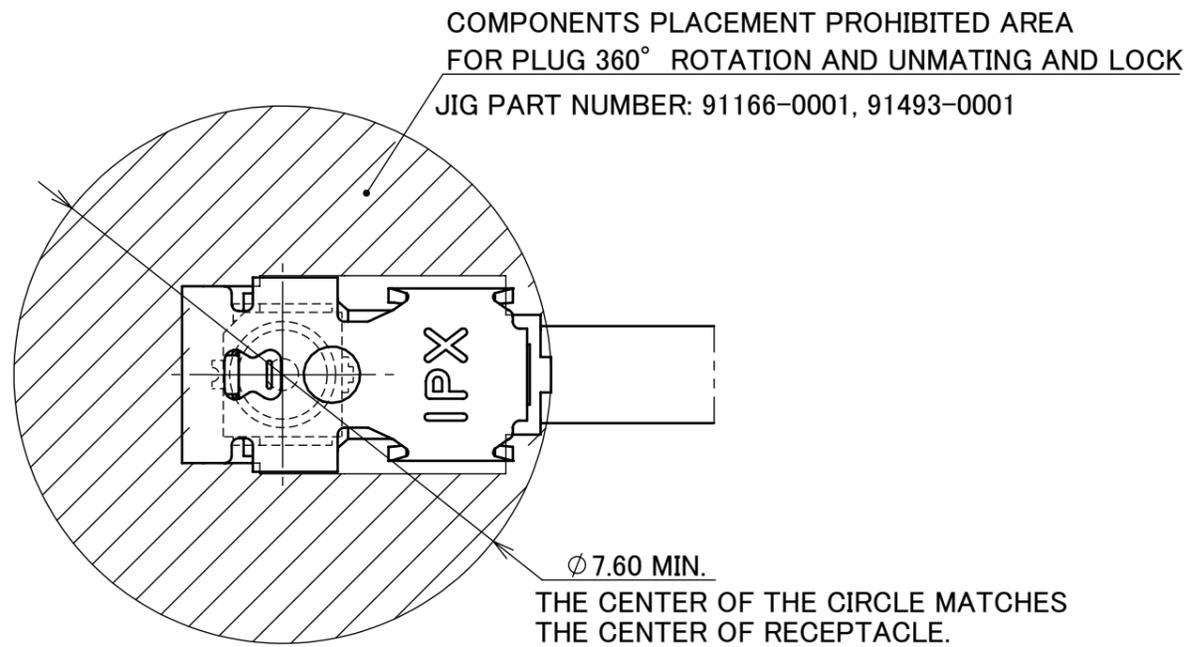
REFLOW TEMPERATURE PROFILE
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

NOTE 5. NO GROUND, SIGNAL, AND RESIST ALLOWED IN THIS AREA.

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION ⊕	SERIES No. R5	CUSTOMER COPY			
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5						
GENERAL TOLERANCE.				TITLE		SCALE	I-PEX		
DWG.	DATE			MHF® 4 RECEPTACLE		20:1			
CHK.						UNIT			
APP.				DWG. No. 20449		mm			
						SIZE	SHEET	REV.	
						A3	4/7	22	

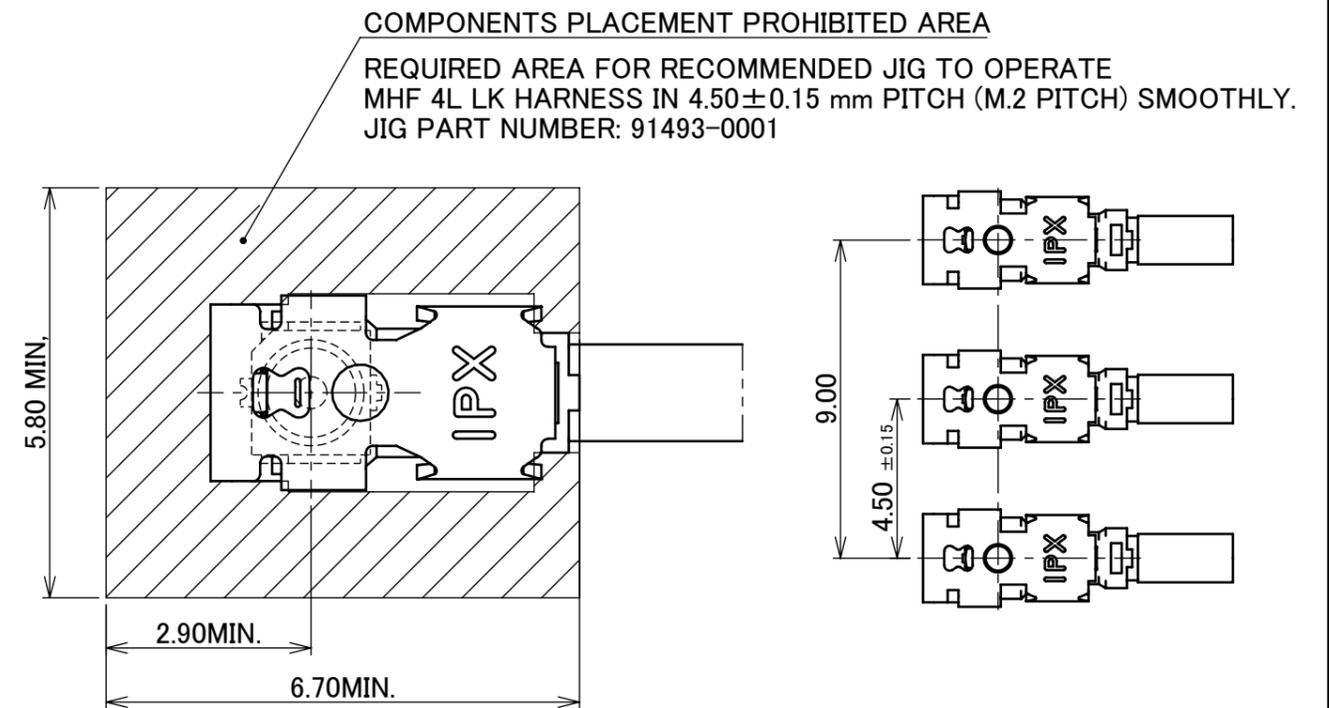
COMPONENT PLACEMENT PROHIBITED AREA FOR MHF 4 RECEPTACLE MATED WITH MHF 4L LK HARNESS REQUIRED AREA FOR RECOMMENDED JIG TO OPERATE

SINGLE CONNECTOR LAYOUT



MATING AND LOCK CONDITION
WITH MHF 4L LK HARNESS

MULTIPLE CONNECTORS LAYOUT

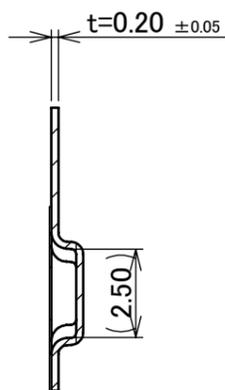
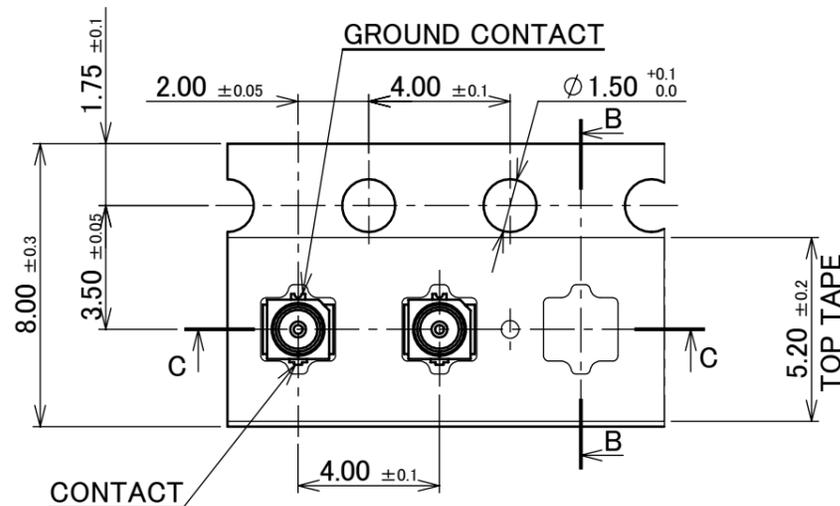
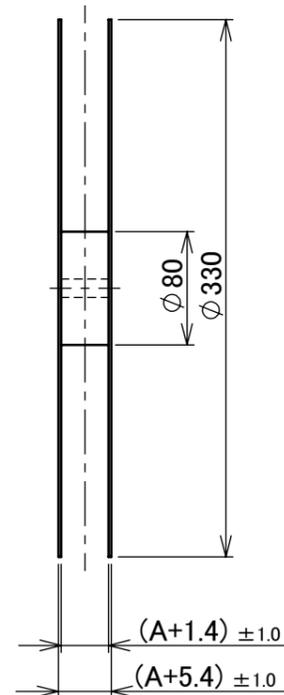
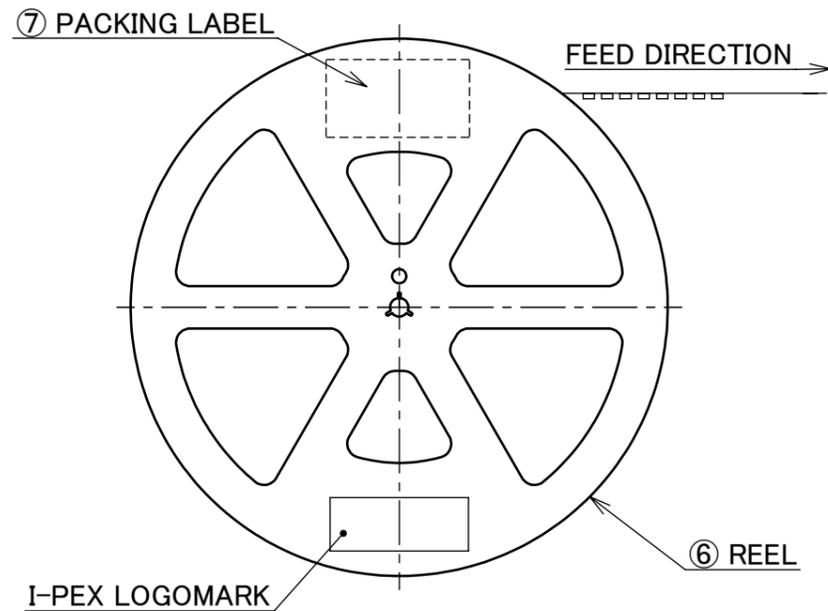


MATING AND LOCK CONDITION
WITH MHF 4L LK HARNESS NARROW PITCH

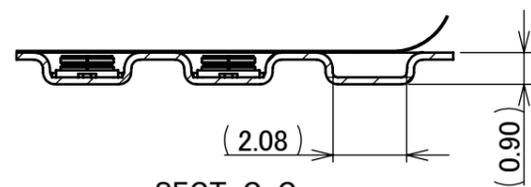
MHF 4L LK HARNESS UNLOCK CONDITION
NARROW PITCH DIMENSIONS
(S = 5 : 1)

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION ⊕	SERIES No. R5	CUSTOMER COPY			
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5						
GENERAL TOLERANCE.				TITLE		SCALE	I-PEX		
DWG.	DATE			MHF® 4 RECEPTACLE		10:1			
CHK.						UNIT			
APP.				DWG. No. 20449		mm			
						SIZE	SHEET	REV.	
						A3	5/7	22	

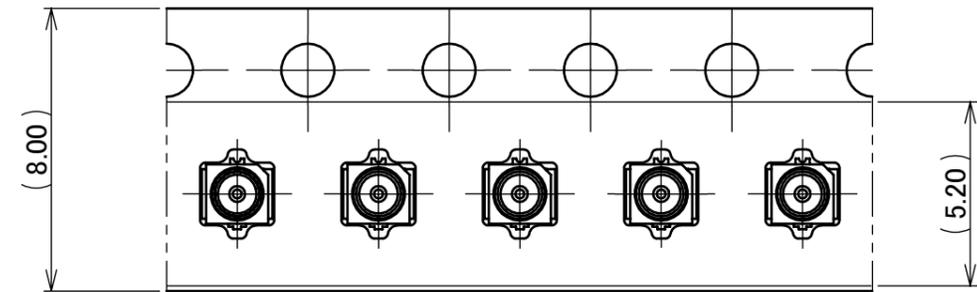
PART NO.	A	QTY. PER EMBOSS REEL (PIECES / REEL)	QTY. PER PACKING CARTON (REELS / CARTON)
20449-001E	8	10,000 / REEL	9 REELS/ CARTON = 90,000 PIECES
20449-001E-01			
20449-001E-03			



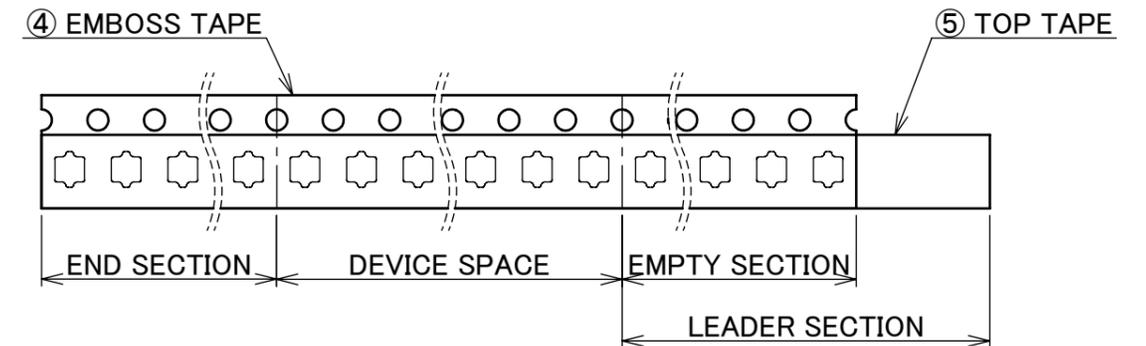
SECT. B-B
(S = 5 : 1)



SECT. C-C
(S = 5 : 1)



(S = 5 : 1)



NOTES.

- TAPING SPECIFICATION FOLLOWS JIS C 0806 (IEC 60286-3).
- EMPTY SECTION OF LEADER AND END ON EACH END OF THE TAPE FOLLOW JIS C 0806 (IEC 60286-3).
- TOP TAPE SHALL NOT STICK OUT FROM EMBOSS TAPE.
- TOP TAPE SHALL NOT COVER FEED HOLE.

NO.	DESCRIPTION	MATERIAL	FINISH, REMARKS
7	PACKING LABEL	-	-
6	REEL	PS	ANTI-STATIC TYPE
5	TOP TAPE	PET	ANTI-STATIC TYPE
4	EMBOSS TAPE	PS	ANTI-STATIC TYPE OR CONDUCTIVE

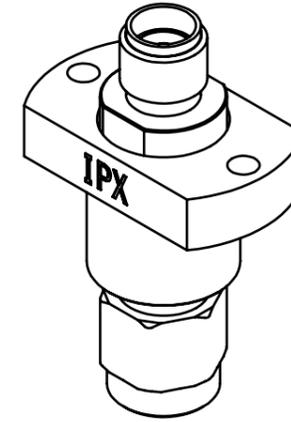
ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION	SERIES No.	CUSTOMER COPY				
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5		R5	<div style="text-align: center; font-size: 2em; font-weight: bold;">I-PEX</div>				
GENERAL TOLERANCE.				TITLE	SCALE				<div style="text-align: center; font-size: 1.5em; font-weight: bold;">MHF® 4 RECEPTACLE</div>	
DWG.	DATE			1:X						
CHK.				UNIT	mm					
APP.				DWG. No.	20449	SIZE	SHEET	REV.		
						A3	6/7	22		



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

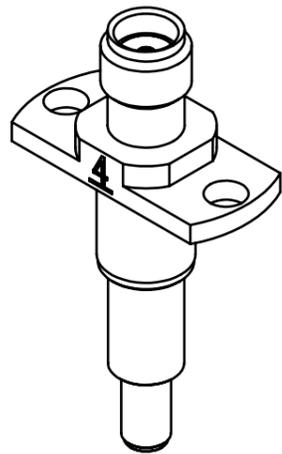


MHF 4 RECEPTACLE HIGH CYCLE ATTACHMENT
PART NO. 90683-0001

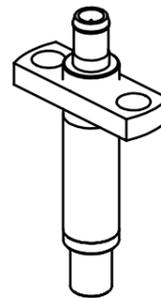


MHF SERIES HIGH CYCLE SMA ADAPTER BASE UNIT
PART NO. 90684-0001

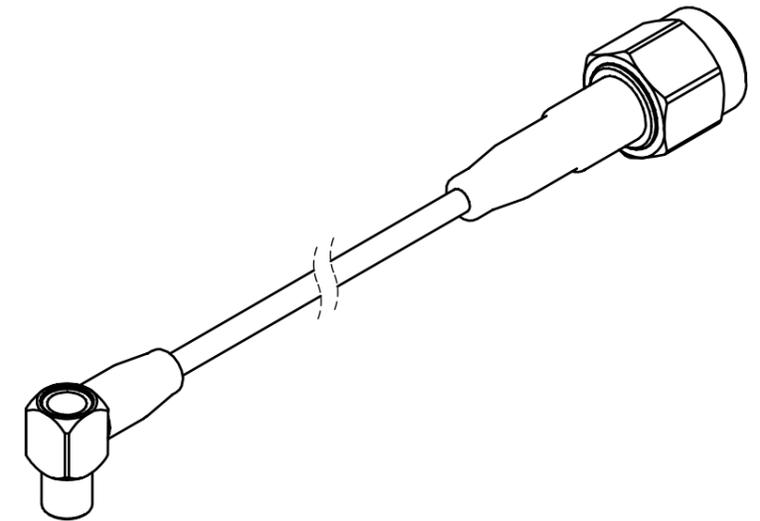
* 90683-0001 AND 90684-0001 SHOULD BE USED TOGETHER.



MHF4(4L) RECEPTACLE HIGH CYCLE SMA ADAPTER
PART NO. 90698-0001



MHF4(4L) RECEPTACLE HIGH CYCLE N45 C ADAPTER
PART NO. 90576-0001



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

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

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION ⊕	SERIES No. R5	CUSTOMER COPY			
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5						
GENERAL TOLERANCE.				TITLE		SCALE	I-PEX		
DWG.	DATE			MHF® 4 RECEPTACLE		2:1			
CHK.						UNIT			
APP.				DWG. No. 20449		mm			
						SIZE	SHEET	REV.	
						A3	7/7	22	