

：重點檢驗項目

4	接頭	MHF-20278-111R-13	1	
3	熱縮套管	HT-36 ø 2.5*15mm	1	
2	線材	0.D.1.13mm ; 黑色 L=225mm	1	
1	SMA接頭	銅 ; 鍍金Fμ"	1	
序號	品名	材料	規格	數量

PART NAME: RF Cable		TITLE: SMA / OD1.13 / IPEX	
PART NO.: AF0201RSIP220		DWG NAME: AF0201RSIP220	
APPROVED BY	CHECKED BY	DESIGNED BY	Tolerance
BEN	liwen	陳宜升	XX ±0.10
2006.11.01	2006.11.01	2006.11.01	XX ±0.05
			X° ±1°
			UNITS: mm
			SCALE: 5/1
			REVISION: A

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			

## 2. Specification

A. Material List	
1. Coaxial Cable Type/ 同軸線材種類	O.D. 1.13 mm
2. Length of Coaxial Cable/ 同軸線材長度	220 mm
3. Color of Coaxial Cable/ 同軸線材顏色	Black 黑色
4. Connector 1 Type/ 接頭種類	SMA Female Reverse
5. Material of Connector 1/ 接頭材料	Gold (Au) -coated Cooper Thickness: 3E-6 (inch) or 76.2E-6 (mm)  青銅,鍍金 鍍金厚度: 3E-6 (inch) or 76.2E-6 (mm)
6. Connector 2 Type/ 接頭種類	I-PEX MHF 20278-111R-13
7. Material of Connector 2/ 接頭材料	Gold (Au) -coated Cooper Thickness: 3E-6 (inch) or 76.2E-6 (mm)  青銅,鍍金 鍍金厚度: 3E-6 (inch) or 76.2E-6 (mm)
8. Other Parts	None
B. Electrical Testing Data	
9. Application Frequency Range/ 適用頻率範圍	DC ~ 6GHz
10. V.S.W.R.	< 1.3 @ DC ~ 3.0 GHz < 1.8 @ 3.0 ~ 6.0 GHz
11. S11 Return Loss 返回損失	> 20dB @ DC ~ 3.0 GHz > 12dB @ 3.0 ~ 6.0 GHz
12. Impedance 特性阻抗	50 ohm
13. Operation Temperature Range 操作溫度範圍	- 40 degree C ~ + 90 degree C
14. Maximum Power 適用最大功率	33dBm / 2 W
15. Pull Strength of I-PEX MHF 20278-111R-13 拉力測試	<= 0.4 Kgw
16. Pull Strength of Connector 拉力測試	<= 3.0 Kgw

## 4-1. Data Sheet

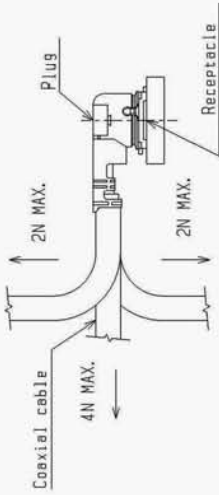
<b>O.D. 1.13 mm (AWG32) Coaxial Cable Specification</b>		
<b>1. Cable Type</b>	O.D. 1.13 mm (AWG32)	
<b>2. Impedance</b>	50 ± 3 ohm	
<b>3. Inner Conductor</b>	<b>Material</b>	silver-coated cooper
	<b>Conductor Numbers</b>	7
	<b>Conductor Size</b>	0.08 mm
	<b>Outer Diameter</b>	0.24 mm
<b>4. Dielectric Layer</b>	<b>Material</b>	FEP
	<b>Color</b>	Clear
	<b>Average Thickness</b>	0.22 mm
	<b>Diameter</b>	0.68 mm
<b>5. Braid (Shielding)</b>	<b>Material</b>	tin-coated cooper
	<b>Construction</b>	16-4-0.05 mm
	<b>Coverage</b>	90 %
<b>6. Outer Cover</b>	<b>Material</b>	FEP
	<b>Color</b>	Black / white / gray
	<b>Average Thickness</b>	0.10 mm
	<b>Diameter</b>	1.13 ± 0.05 mm
<b>7. V.S.W.R. Testing</b>	< 1.3	
<b>8. Attenuation (dB / 1 meter )</b>	<b>100 MHz</b>	<b>0.60</b>
	<b>400 MHz</b>	<b>1.25</b>
	<b>1800 MHz</b>	<b>2.23</b>
	<b>2400 MHz</b>	<b>2.70</b>
	<b>5200 MHz</b>	<b>4.15</b>
<b>9. Capacitance</b>	97 ± 3 ( pF / meter)	
<b>10. Maximum Power</b>	33 dBm	
<b>11. Spark Test</b>	500 V	
<b>12. Rating Temp. and Voltage</b>	200°C / 30V	
<b>13. Conductor Resistance</b>	520 ohm / KM / 20°C max.	
<b>14. Dielectric Resistance</b>	1500 M ohm / KM / 20°C min.	

# Coaxial Connector Data Sheet

## 5. I-PEX/MHF 20278-111R-13

### Notes

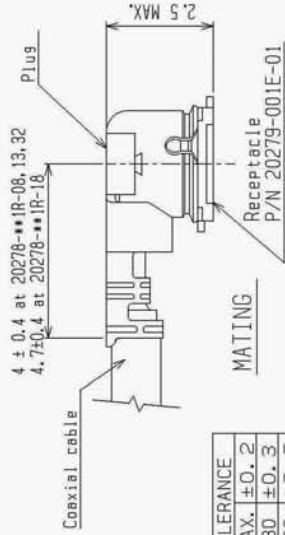
- Material  
(1) Housing : PBT, UL94V-0, black  
(2) Contact  
Phosphor bronze  
gold plating 0.1 $\mu$ m MIN.  
over nickel 1.27 $\mu$ m MIN.
- (3) Ground contact  
phosphor bronze  
gold plating 0.05 $\mu$ m MIN.  
over nickel 1.27 $\mu$ m MIN.
- Packing : reel
- Mating partner part No.  
: 20279-001E-01
- Permissible load of cable at mating



- Suggestions for mating & unmating operation.

### 5-1 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.



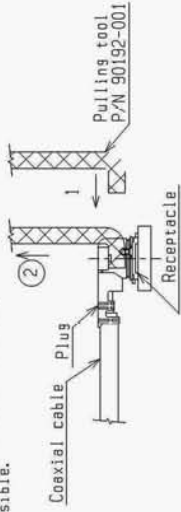
GENERAL TOLERANCE	
6 MAX.	$\pm 0.2$
6 OVER MAX. 30	$\pm 0.3$
30 OVER MAX. 120	$\pm 0.5$
ANGLE	$\pm 2^\circ$

### 1. 材料

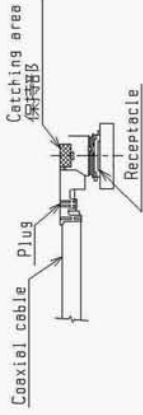
- ハウジング:PBT, UL94V-0, 黒色  
(2) コネクタ  
銅  
金メッキ0.1 $\mu$ m MIN.  
下地 ニッケル1.27 $\mu$ m MIN.
- (3) グランドコネクタ  
銅  
金メッキ0.05 $\mu$ m MIN.  
下地 ニッケル1.27 $\mu$ m MIN.
- 梱包 : リール
- かん相手 part No.  
: 20279-001E-01
- コネクタかん合後のケーブルに対する荷重

### 5-2 Unmating.

- 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.



- 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.



- Crimp over standards of outer conductor

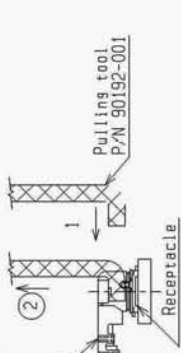
Standards: Less than 10% from total numbers of outer conductor  
(Numbers of outer conductor's crimp over from outer conductor's barrel)

- Caution about Heat shrinkage tubes

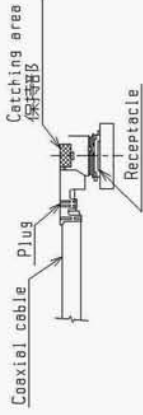
Please be careful not to melt housing when using heat shrinkage tubes. It will become cause of open circuit.

### 5-2 コネクタ抜き時

- 抜き金具を用いる場合  
下図のようにできるだけ  
垂直に引き抜いて下さい。



- 手直接引き抜く場合  
下図の保持部をつかみ、できる  
だけ垂直に引き抜いて下さい。



- 外部導体はみ出し量

外部導体はみ出し量  
: 外部導体トータル本数  
の10%以下  
(外部導体バレルの外に  
はみ出した量)

- 熱収縮チューブについて  
の注意  
熱収縮チューブが外部導体を  
覆う場合は、導体不良の  
原因になりますので、熱に  
よりハウジングを溶融させな  
いよう注意してください。

DESIGN'D BY		DATE	DATE	DATE	DATE
CHK'D BY					
APP'D BY					
REV. RECD	BY	DATE	APP		
REV. RECORD					
SERIES No.		2814			
CUSTOMER COPY					
UNIT		mm			
SCALE					
TITLE	MHF series micro coaxial connector plug vertical (ground contact : gold plating)				
PROJECT	I-PEX Interconnect and Peckasas Electronics TOKYO, JAPAN				
DWG. No.	20278				SHEET REV.
					3/3 13C

FORM REV. 4

MAS T