

零組件承認/申請報告書

編號 E24682

2007/8/27

Alpha P/N : 505960079610G	申請者 :	主管 :
零組件品名 : ANT CABLE Mini 1.13 L=80mm		
原製造廠商 : 電	原廠編號 : THW0796A	
代理商 : 電		
聯絡人 :	電話 : 02-22988066	
應用機種 :		
COMMENTS :		
結果		
號		
主管 :	<input type="checkbox"/> 承辦者 :	Panton No: 日期 : // : :
結果	合格	審核 // : :

承 認 書
SPECIFICATION FOR APPROVAL

客 戶
CUSTOMER 明泰科技股份有限公司

日 期
DATE 2006 / 08 / 09

品 名
DESCRIPTION Mini 1.13 Cable Assembly (L=80)(K5A)
With RP-SMA Bulkhead Jack & MHF

客 戶 料 號
CUSTOMER P/N 505960079610G

成 品 編 號
Part NO. THW0796A
(符合環保材)



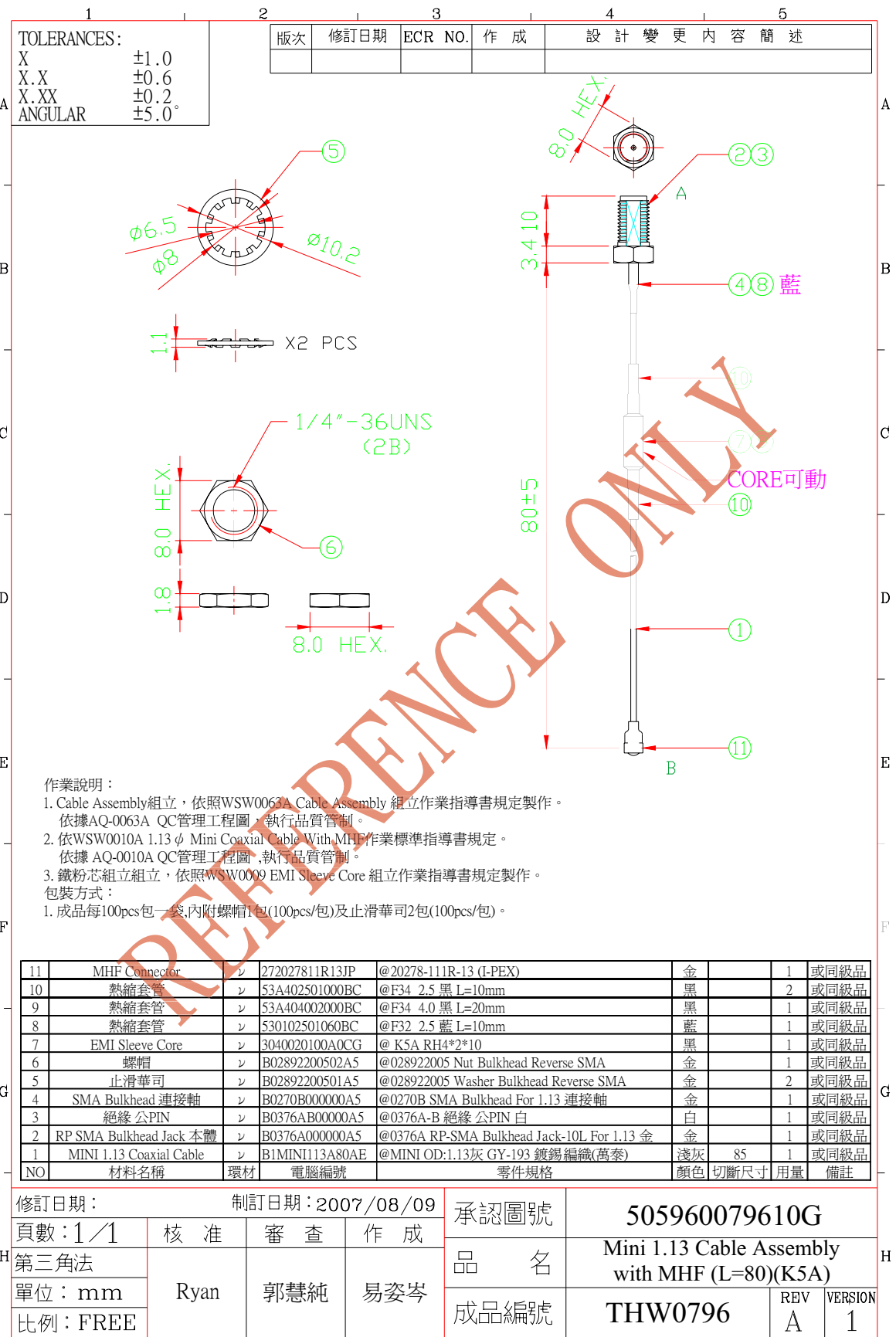
萬旭電業股份有限公司
WANSHIH ELECTRONIC CO., LTD.
台北縣五股鄉五工六路 72 號 3 樓
3F 72 WU KONG 6TH RD., WU KU INDUSTRIAL DISTRICT
TAIPEI HSIEN, TAIWAN, R.O.C.
TEL : (02) 22988066 (5 LINE) FAX : (02)22981102

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SPECIFICATION

1. Description : Mini 1.13 Cable Assembly
with RP-SMA Bulkhead Jack & MHF
2. Customer : 明泰科技股份有限公司
3. Part No. : THW0796A
4. Coaxial Length : 80 mm (see Drawing)
5. Electrical Characteristics
 - Operating Frequency : 1~6 GHz
 - Impedance : 50 Ohm nominal
 - Attenuation. : -2.0dB Max.
6. Mechanical Characteristics
 - Connector : RP-SMA Bulkhead Jack
: MHF
7. Raw Material
 - Coaxial Cable : Mini 1.13
 - Core : K5A RH4*10*2



TOLERANCES:

X	±1.0
X.X	±0.6
X.XX	±0.2
ANGULAR	±5.0°

版次	修訂日期	ECR NO.	作成	設計變更內容簡述

- 作業說明：
- Cable Assembly組立，依照WSW0063A Cable Assembly 組立作業指導書規定製作。
依據AQ-0063A QC管理工程圖，執行品質管制。
 - 依WSW0010A 1.13 φ Mini Coaxial Cable With MHF作業標準指導書規定。
依據AQ-0010A QC管理工程圖，執行品質管制。
 - 鐵粉芯組立組立，依照WSW0009 EMI Sleeve Core 組立作業指導書規定製作。
包裝方式：
1. 成品每100pcs包一袋，內附螺帽1包(100pcs/包)及止滑華司2包(100pcs/包)。

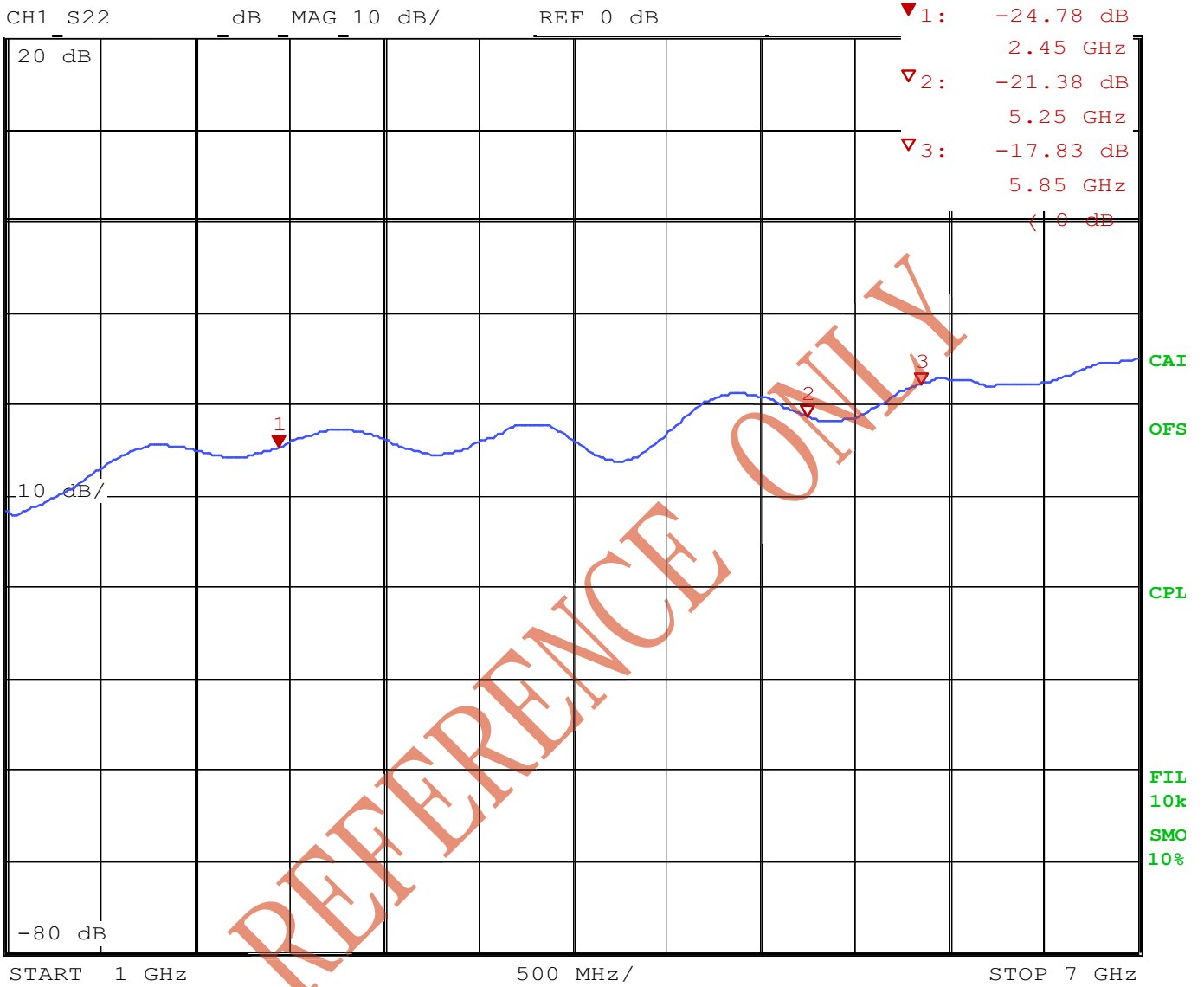
NO	材料名稱	環材	電腦編號	零件規格	顏色	切斷尺寸	用量	備註
11	MHF Connector	∩	272027811R13JP	@20278-111R-13 (I-PEX)	金		1	或同級品
10	熱縮套管	∩	53A402501000BC	@F34 2.5 黑 L=10mm	黑		2	或同級品
9	熱縮套管	∩	53A404002000BC	@F34 4.0 黑 L=20mm	黑		1	或同級品
8	熱縮套管	∩	530102501060BC	@F32 2.5 藍 L=10mm	藍		1	或同級品
7	EMI Sleeve Core	∩	3040020100A0CG	@ K5A RH4*2*10	黑		1	或同級品
6	螺帽	∩	B02892200502A5	@028922005 Nut Bulkhead Reverse SMA	金		1	或同級品
5	止滑華司	∩	B02892200501A5	@028922005 Washer Bulkhead Reverse SMA	金		2	或同級品
4	SMA Bulkhead 連接軸	∩	B0270B000000A5	@0270B SMA Bulkhead For 1.13 連接軸	金		1	或同級品
3	絕緣 公PIN	∩	B0376AB00000A5	@0376A-B 絕緣 公PIN 白	白		1	或同級品
2	RP SMA Bulkhead Jack 本體	∩	B0376A000000A5	@0376A RP-SMA Bulkhead Jack-10L For 1.13 金	金		1	或同級品
1	MINI 1.13 Coaxial Cable	∩	B1MINI113A80AE	@MINI OD:1.13灰 GY-193 鍍錫編織(萬泰)	淺灰	85	1	或同級品

修訂日期：		制訂日期：2007/08/09		承認圖號	505960079610G		
頁數：1/1	核准	審查	作成	品名	Mini 1.13 Cable Assembly with MHF (L=80)(K5A)		
第三角法	Ryan	郭慧純	易姿岑		成品編號	THW0796	REV
單位：mm				A			1
比例：FREE							

萬旭電業股份有限公司 50文件編號：FMT-0513-D7

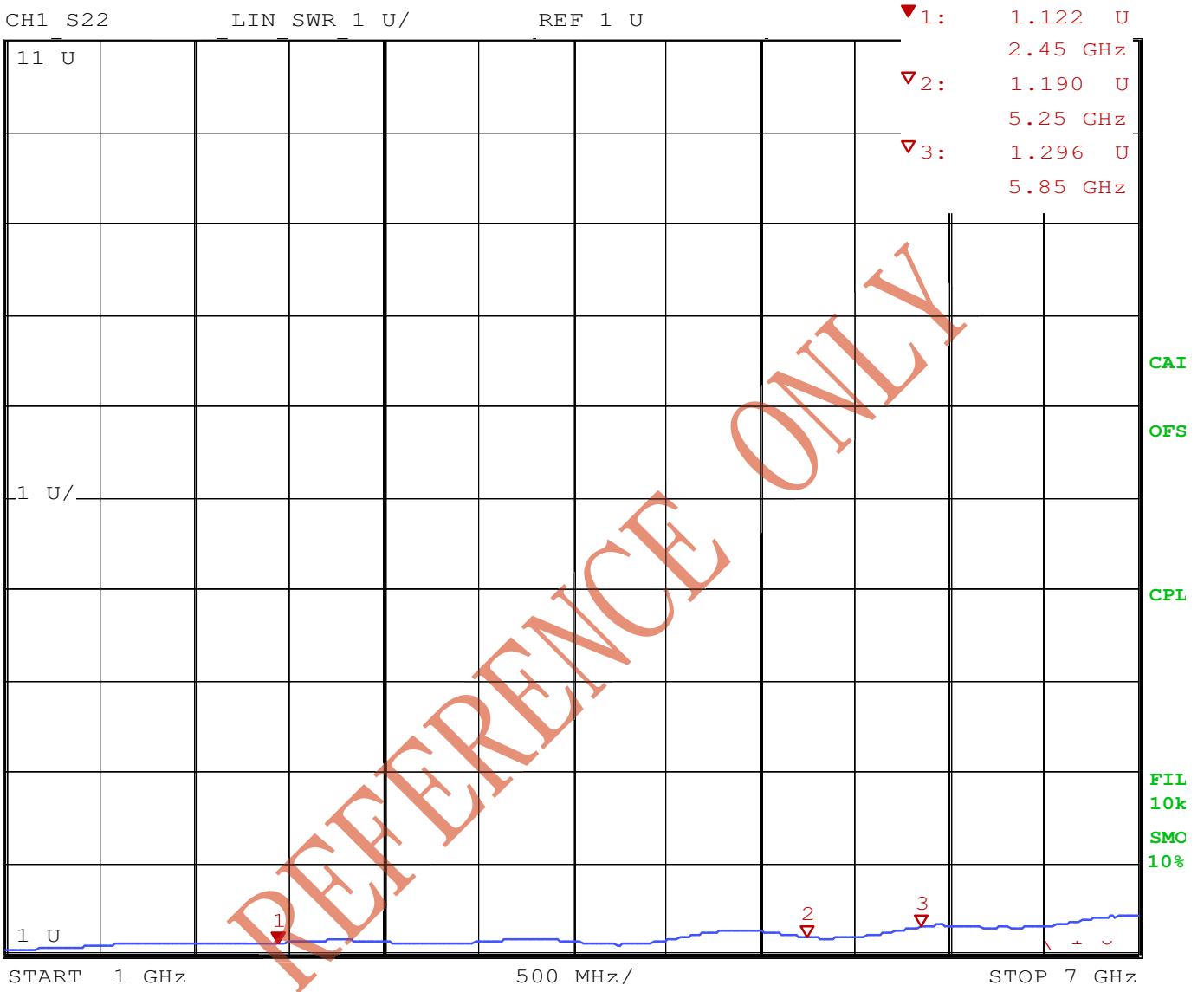
Electrical Characteristic

Return Loss



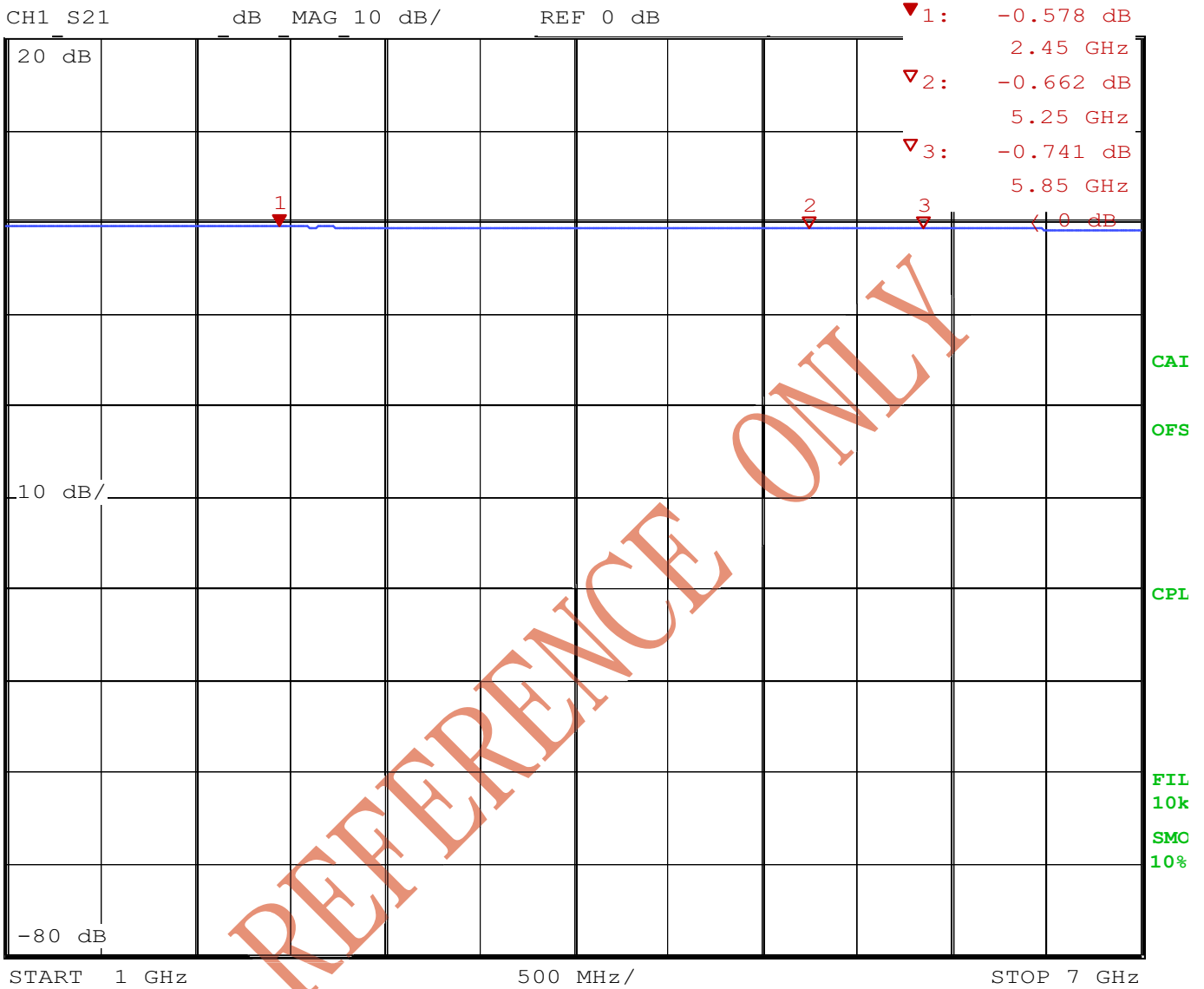
Electrical Characteristic

V.S.W.R



Electrical Characteristic

Attenuation



Material Data Sheet

Mini-1.13 Coaxial Cable

SPECIFICATION FOR APPROVAL

DOCUMENT: A3132TS001

STYLE : COAXIAL CABLE
105°C 30V

SIZE: 32AWG×1C
BRAID : TS

RECOGNIZED: UL 1979



WONDERFUL HI-TECH CO.,LTD.

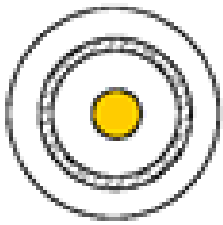
OFFICE : 72WU KONG 6TH ROAD,
WU KU IND. DISTRICT
TAIPEI HSIEN,TAIWAN

TEL : (02)22988033
FAX : (02)22988031-2

FACTORY : 17 PEI YUAN ROAD,
CHUNG-LI IND. PARK
TAIWAN, R.O.C.

TEL : (03)4527777
FAX : (03)4517214

WONDERFUL HI-TECH CO., LTD.
SPECIFICATION

STYLE	105°C 30V UL 1979	DOCUMENT NO : A3132TS001	
SIZE	32AWG	ESTABLISHED DATE: 2005/05/11	
STANDARD :			
Conductor	Size	AWG	32
	Material	----	Silver Cover Copper
	Conductors No.	----	7
	Conductors Size	mm	0.080
	O.D.	mm	0.240
Insulation	Average Thickness	mm	0.22
	Diameter	mm	0.68 ± 0.02
	Material	----	FEP
	Color	----	Clear
Braid	Material	----	Tinned Copper
	Construction	mm	16 / 4 / 0.050
	Coverage	%	90
Jacket	Average Thickness	mm	0.13
	Diameter	mm	1.13 ± 0.05
	Material	----	FEP
	Color	----	According to custom
Marking	Non		
Drawing			

AK001/210X297/1.0

PAGE : 1

EDITION : 1.1

MAKER : C.Y.CHEN

CONFIRM : S.N.WONG

APPROVAL : W.J.WANG



WONDERFUL HI-TECH CO., LTD. SPECIFICATION

Electrical & Physical Properties					
Item		32AWG			
Rating Temp Voltage		105°C 30V			
Conductor Resistance		545 OHM/KM/20°C MAX.			
Insulation Resistance		1000 MEGA OHM/KM MIN.			
Dielectric Strength		AC 500 V/Minute			
Spark Test		2.5 KV			
Insulation	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)		
		Elongation	200% MIN.		
	Aged	Tensile Strength	UNAGED MIN. 75%(168HRS×232°C)		
		Elongation	UNAGED MIN. 75%(168HRS×232°C)		
Jacket	Unaged	Tensile Strength	2500 PSI MIN.(1.76 Kg / m m ²)		
		Elongation	200% MIN.		
	Aged	Tensile Strength	UNAGED MIN.75%(168HRS×232°C)		
		Elongation	UNAGED MIN.75%(168HRS×232°C)		
Nom. Impedance		50 ± 3 Ohms			
Nom. Capacitance		96 ± 3 pF/m			
Nom. Vel. of Prop.		69%			
VSWR Test (0 – 6 GHZ)		Less 1.3			
Flame Test		VW-1 OK			
Attenuation (dB/1m)	2.0GHZ	2.4GHZ	2.5GHZ	5.0GHZ	6.0 GHZ
	2.80	3.10	3.15	4.85	5.20

AK001/210X297/1.0

PAGE : 2

EDITION : 1.1

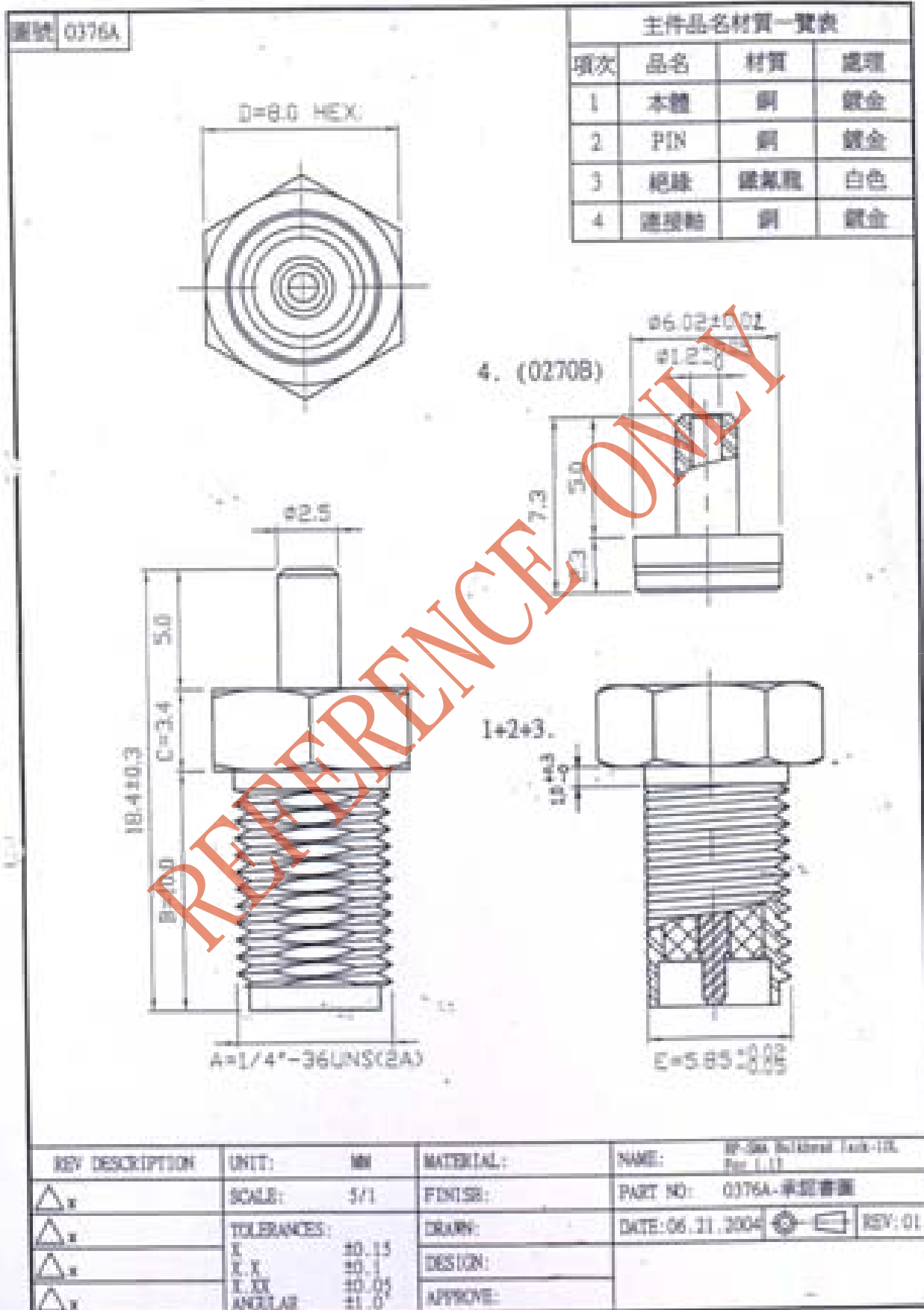
MAKER : C.Y.CHEN

CONFIRM :S.N.WONG

APPROVAL : W.J.WANG

Material Data Sheet

RP-SMA Bulkhead Jack



Material Data Sheet

MHF Connector

PART NO.
20278-11R-08

Cable Assy
Plug P/N 20278-11R-08
P/N 20278-11R-13
P/N 20278-11R-32

Coaxial cable
Receptacle Part No. 20279-001E-01

MATING

Part No. 20278-101R-08
20278-101R-13
20278-101R-32

For hand tool
(with notch)

Connector end (notch)

Part No. 20278-111R-08
20278-111R-13
20278-111R-32

For semi auto
termination machine
(without notch)

Connector end

REFERENCE ONLY

REV	ECN	BY	DATE	APP	REV	ECN	BY	DATE	APP	SERIES No.
11C	Z3041	K.O.	Mar/24/03	K.K.	4	Z2023	K.O.	JUN/30/03	E.K.	DESIGN D BY
10C	Z3014	K.O.	JAN/31/03	K.K.	3	Z1256	K.O.	NOV/14/01	K.K.	CHK D BY
9C	Z2238	K.O.	NOV/15/02	E.K.	2	Z1197	K.O.	MIC/27/01	K.K.	CHK D BY
8C	Z2224	K.O.	OCT/17/02	E.K.	1	Z1118	K.O.	JUN/26/01	K.K.	APP D BY
7C	Z2074	K.O.	OCT/29/02	E.K.	0	Z1109	K.O.	JUN/13/01	K.K.	APP D BY
6C	Z2074	K.O.	MAY/22/03	K.K.	68	Z2148	K.O.	JUN/21/03	K.K.	REV ECN
5C	Z052	K.O.	MAY/15/03	K.K.	58	Z2117	A.H.	MAY/17/02	K.K.	REV ECN
4C	Z0499	K.O.	OCT/07/04	T.H.	78	Z2180	K.O.	JUL/29/02	E.K.	REV ECN
3C	Z0524	K.O.	JAN/20/05	T.H.	9C	Z2238	K.O.	NOV/15/02	E.K.	REV ECN
2C	Z0533	K.O.	Mar/18/05	T.H.	11C	Z3041	K.O.	Mar/24/03	K.K.	REV ECN

Interconnect
of Panasonic Electronics
TOKYO, JAPAN

I-PEX

TITLE
MHF series micro coaxial connector plug
vertical (ground contact : gold plating)

SCALE UNIT: DIM. No. 20278
6/1 mm

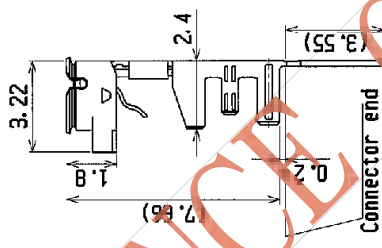
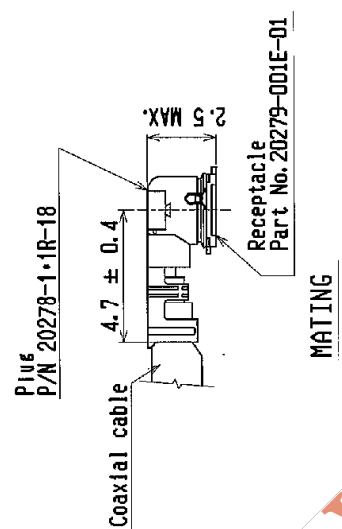
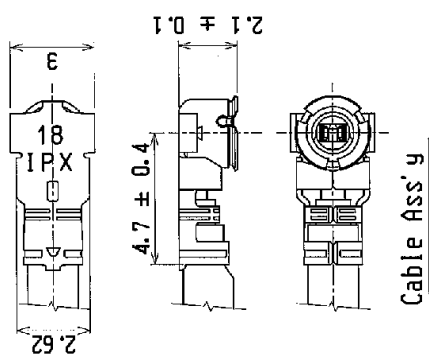
PROJECTION SHEET REV. 1/4 17C

CUSTOMER COPY

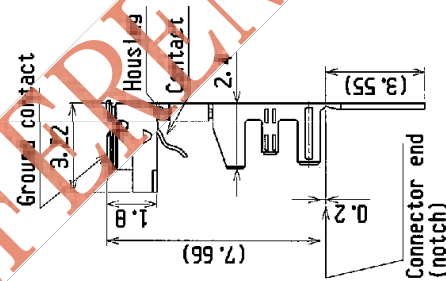
GENERAL TOLERANCE
6 MAX. ±0.2
6 OVER MAX.30 ±0.3
30 OVER MAX.120 ±0.5
ANGLE ±2'

FORM REV. 4

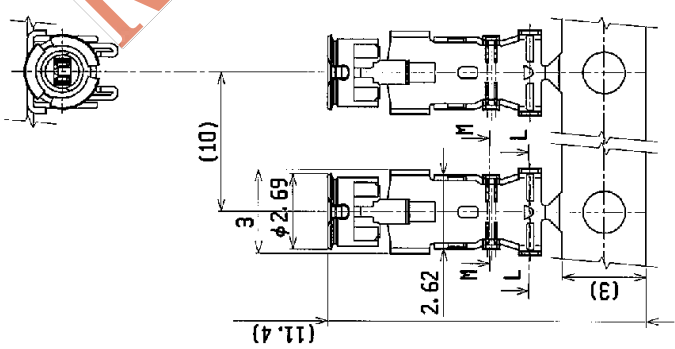
PART NO.
20278-1R-18



Part No. 20278-11R-18
For semi auto
termination machine
(without notch)



Part No. 20278-10R-18
For hand tool
(with notch)



REFERENCE ONLY

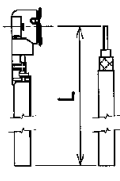
GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±

DESIGN'D BY	DATE	I-PEX Interconnect and Potassium Electroplating TOKYO, JAPAN	
CHK'D BY	DATE		
APP'D BY	DATE		
REV. ECN	BY	DATE	TITLE
REV. RECORD	BY	DATE	MF series micro coaxial connector plus vertical (ground contact : gold plating)
SERIES No.	2814	PROJECTION	SCALE UNIT
CUSTOMER COPY		8/1	MM
			DWG. No.
			20278
			SHEET REV.
			2/4
			17C

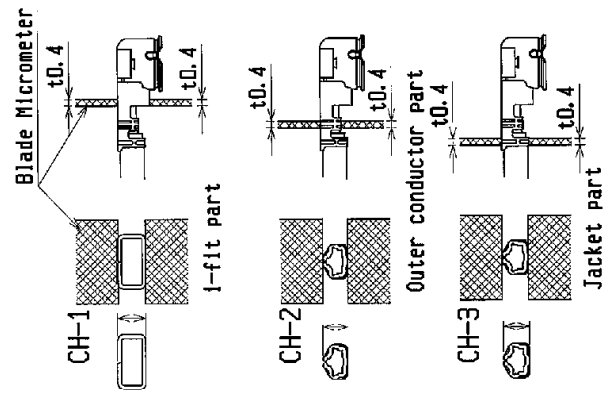
FORM REV. 4
WAS T

Part No.	20278-101R-08 20278-111R-08	20278-101R-13 20278-111R-13	20278-101R-32 20278-111R-32	20278-101R-18 20278-111R-18
Housing color	White	Black	Black	White
Applicable cable nominal dimension	2.09±0.1 1.25±0.1 1.16±0.1	2.09±0.1 1.25±0.1 1.16±0.1	2.09±0.1 1.25±0.1 1.16±0.1	2.09±0.1 1.25±0.1 1.16±0.1
Jacket	Outer conductor silver plating Dielectric core Inner conductor silver plating	Outer conductor silver plating Dielectric core Inner conductor silver plating	Outer conductor silver plating Dielectric core Inner conductor silver plating	Outer conductor silver plating Dielectric core Inner conductor silver plating
	φ0.81 Nominal φ0.4 Nominal φ0.55 φ0.4 Nominal φ0.55 φ0.4 Nominal φ0.55	φ1.13 Nominal φ0.93 Nominal φ0.68 φ0.93 Nominal φ0.68	φ1.32 Nominal φ1.12 Nominal φ0.66 φ1.12 Nominal φ0.66	φ1.8 Nominal φ0.84 Nominal φ1.35 φ0.84 Nominal φ1.35
	AMK35(7/0.5)	AMK32(7/0.8)	AMK32(7/0.8)	AMK30(7/0.102)
	* NOTE-1	* NOTE-1	* NOTE-1	* NOTE-1
Braided shield of Outer conductor 外部導体の編組	Single / 1重編組	Single / 1重編組	Double / 2重編組	Single / 1重編組
P/N of hand Tool	90187-008C	90187-013C	90187-032C	90233-018
P/N of seal auto termination machine	90213-008C	90213-013C	90213-032C	90232-018
Sect. M-M	1.68 1.12	2.24 1.48	2.29 1.56	2.71 1.9
Sect. L-L	1.72 1.19	2.28 1.55	2.37 1.71	3.1 2.26
Crimp Height	CH-1 1.34~1.40 CH-2 0.76~0.84 CH-3 0.85~0.97	1.34~1.40 1.06~1.14 1.15~1.35	1.34~1.40 1.20~1.30 1.26~1.46	1.34~1.40 1.41~1.49 1.70~1.80

Cable cut length




Crimp Height



NOTE-1

中心導体、外部導体への半田コティングは不可
Must not use solder coated
inner conductor and outer conductor.

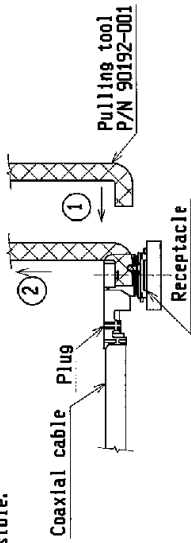
		DESIGN'D BY	DATE
		CHK'D BY	DATE
Interconnect and Packaging Electronics TOKYO, JAPAN		APP'D BY	DATE
		REV. REC'D	DATE
TITLE MIF series micro coaxial connector plus vertical (ground contact : gold plating)		SCALE UNIT DIM. No. 20278	
SERIES No. 2814		PROJECTION	
CUSTOMER COPY		SHEET REV. 9/4 17C	

GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±2°

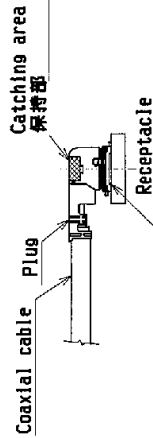
FORM REV. 4

5-2 Unmating.

(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.



(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.



5-3 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)

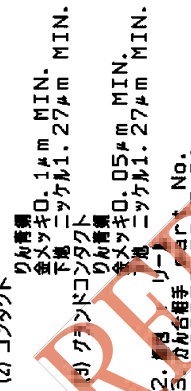
5-4 Caution about Heat shrinkage tubes

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

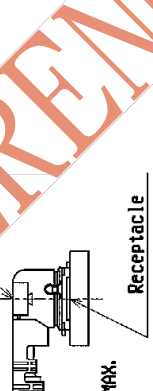
6. This is 'Pb-free' connector.

5-2 コネクタ抜き時

(1) 抜きシグを用いる場合
下図のようにできるだけ垂直に引き抜いて下さい。



(2) 手で直接引き抜く場合
下部の握持部をつかみ、できるだけ垂直に引き抜いて下さい。



5-3 外部導体はみだし量

外部導体はみだし量測定 : 外部導体トータル本数の10%以下 (外部導体バレルの外にみだし量)

5-4 熱収縮チューブについて
熱収縮チューブで外部導体を覆う場合は、熱収縮チューブの溶融に注意して下さい。これによりハウジングを溶融させるおそれがあります。

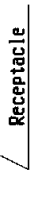
6. 本コネクタは 'Pb-free' である

1. 材料

- (1) ハウジング : PBT, UL94V-0
- (2) コンタクト
リチウム青銅 0.1μm MIN.
金メッキ 1.27μm MIN.
- (3) グランドコンタクト
リチウム青銅 0.05μm MIN.
金メッキ 1.27μm MIN.
- 2. 梱包
リール
- 3. 組立相手
Part No. : 20279-001E-01
- 4. コネクタの許容負荷に対する荷重

1. Material

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



5. 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.

5. コネクタの組立および抜き時の注意

5-1 コネクタ挿入時
プラグとReceptacleの中心を合わせ、できるだけ垂直に挿入して下さい。コネクタの斜角組立は行わないで下さい。過度な斜角挿入はコネクタの破損の原因となり、コネクタの破損は行わないで下さい。

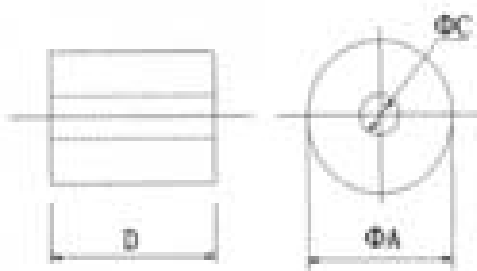


GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±2'

DESIGN D BY		DATE		
CHK D BY		DATE		
APP D BY		DATE		
REV	ECN	BY	DATE	APP
REV. RECORD		CUSTOMER COPY		
SERIES No.		2814		
PROJECTION		UNIT (mm)		
SCALE		-/-		
TITLE		MHF series micro coaxial connector plug vertical (ground contact : gold plating)		
Interconnect and Packaging Electronics TOKYO, JAPAN		DWS. No. 20278		
SHEET		4/4		
REV.		17C		

FORM REV. 4

INSPECTION DATA

ISSUE NO: WC-RH-039

CUSTOMER	萬旭電業股份有限公司			DATE	2003/10/9	Quantity	0	pcs					
PART NO.	10-13-040020100-0												
ITEM	K5A RH 4X2X10												
COIL SPEC	0.05 Φ I 63 mm T.C.W I TS												
COIL DATA	Q0=	CO=	(PF)										
TEST FREQ	FO=	Hz	Ft= 25, 100 MHz										
TEMPERATURE	28 °C	Humidity	87 %										
ELECTRIC CHARG.									DIMENSION (Unit: mm)				
	L	Q	Z(25)	Z(100)	A	B	C	D	E	F	G	H	I
SP			35.00	60.00	4.00		2.00	10.00					
+					0.20		0.15	0.40					
-			0	0	0.20		0.15	0.40					
1			45.00	82.00	3.96		2.02	9.95					
2			47.00	84.00	3.93		2.03	9.98					
3			46.00	82.00	3.92		2.04	9.96					
4			47.00	82.00	3.94		2.03	9.98					
5			45.00	81.00	3.95		2.08	9.96					
6			46.00	80.00	3.93		2.05	10.00					
7			46.00	81.00	3.95		2.03	10.02					
8			46.00	81.00	3.93		2.07	9.95					
9			46.00	80.00	3.92		2.09	9.93					
10			45.00	82.00	3.96		2.05	9.97					
Σ			45.90	81.50	3.94		2.05	9.97					
R			2.00	4.00	0.05		0.07	0.09					
TEST INSTRUMENTS				INSP No:									
1. IMPEDANCE ANALYZER: HP4191A													
REMARK:				Inspected			Checked			Approved			
													

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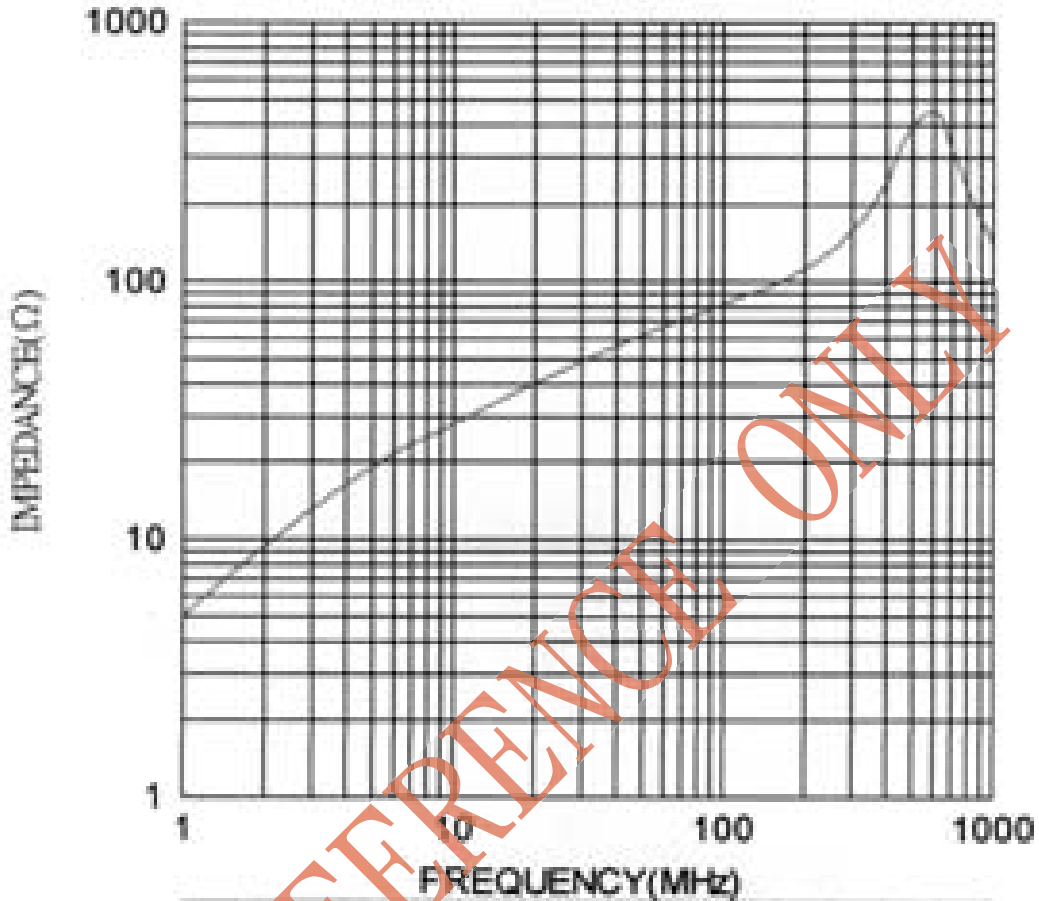
TEL: 03-42612116
FAX: 03-42612116

Z-F RESPONSE

K5A RH 4X2X10

1. TEST INSTRUMENT: HP4191A

2. WINDING: 0.65 Φ X63 mm T.C. ∇ ITS



	1	5	10	25	50	100	200	300	400	500	600	700	800	900	1000
Z—	5	15	26	45	62	82	113	160	244	392	452	322	239	176	141

(DATA BETWEEN 500MHz AND 1000MHz ARE FOR REFERENCE ONLY)

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