

SPECIFICATIONS

NO:

CUSTOMER: 博達科技股份有限公司

PRODUCT: ANTENNA

PART NO: RFA-02-C2H1-16W-120

DIVISION	APPROVED BY	SALES BY
SIGNATURE		

公司承認章	客戶承認章



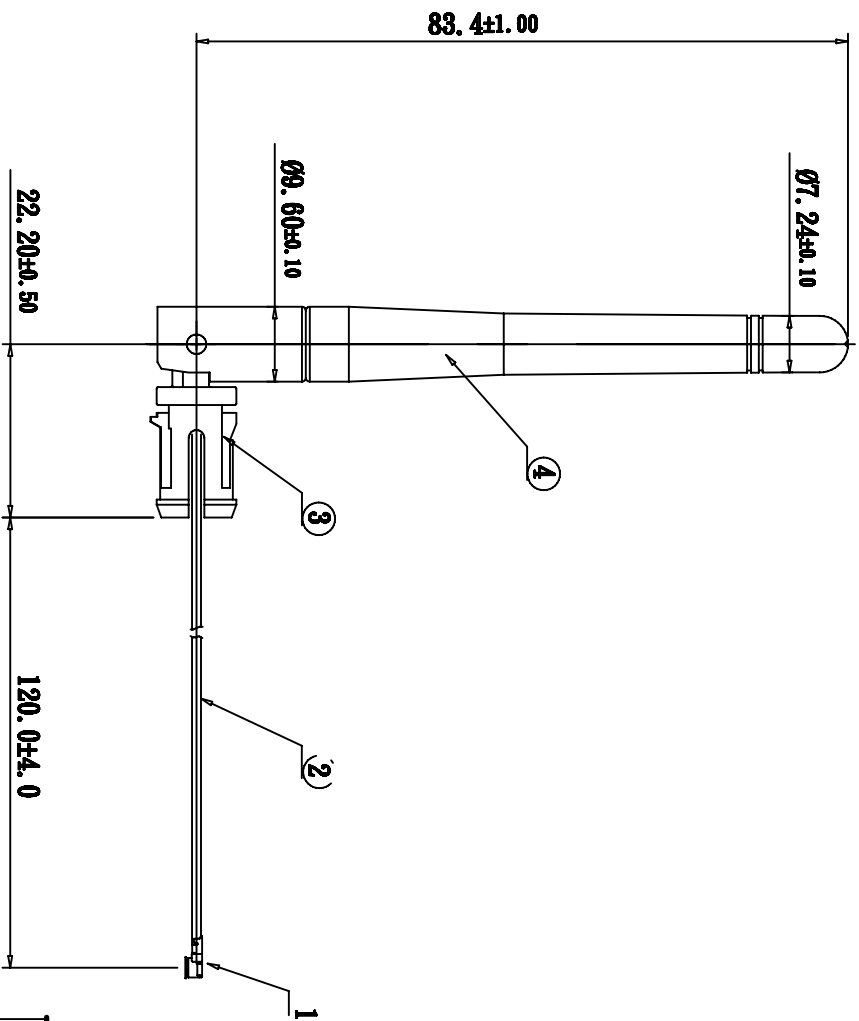
BI-TEK CO.,LTD

12F,-2,NO,700, Jhongheng Rd., Jhonghe City, Taipei County 235, Taiwan

TEL:886-2-82278533

FAX:886-2-82278535

NO.	NAME	FINISH	QTY	MEMO
1.	Connector	MBR(I-PEX 20278)	1	
2.	Cable	RC178W	1	
3.	Hinge	BLACK	1	
4.	Tube	BLACK	1	



PROJECTION	OTHERWISE SPECIFIED
UNITS	LINEAR
M/M	ANGLE
.0 ± 0.10	X REF ± 0.5
.00 ± 0.05	
.000± 0.01	

RFA-02-C2H1-16W-120

RFA-02-C2H1-16W-120.DWG

REV	ECN	NAME	DATE
3.			
2.			
1.			

REV.	SCALE	DESIGN	APPD.	CHKD.
A4	1/1	AMY		

SHEET	1 / 1
REV.	A

I N D E X

RFA-02-C2H1-16W-120

- 1. Specification**
- 2. Radiation Pattern**
 - 2.1 E-plane pattern**
 - 2.2 H-plane pattern**
- 3. VSWR Test Data**

1. Specification

03-11-02

DESCRIPTION : Swivel Access Point Antenna

MODEL NO : RFA-02-C2H1-16W-120

1.1 ELECTRICAL

Frequency Range: 2400~2500 MHZ
Gain: 2.5dBi (min.)
VSWR: ≤ 2
Polarization: Linear, Vertical
Impedance : 50Ω
Connector: IPEX MHF
Cable: RG178W



1.2 MECHANICAL

Condition : Non operating during test.

Material : PCABS(UL94V-0)

Endurance

Number of 90° rotation of the connector : 1000 cycles (min.)

Mandatory : Guaranty of functionalities after test.

Bending: Number of 90° at the hinge parts and bending on one direction with 1 kg force : 1000 cycles

Mandatory : No mechanical damage tolerated. Guaranty of functionalities after test.

Antenna resistance

Tests are applicable to all parts and both sides.

Traction: Tractions force applied 3 times on plugs during 15 second : 5 kg

Mandatory : No mechanical damage tolerated. Guaranty of functionalities after test.

1.3 ENVIROMENTAL

Storage

Condition : Non operating during test.

Cold: -40°C during 72h (IEC 68-2-1 standard Ab/Ad test)

Dry heat: +80°C during 96h (IEC 68-2-2 standard Bb/Bd test)

Humidity: +40°C at 95%R.H. during 4 days (IEC 68-2-56 standard Cb test)

Mandatory : No mechanical or visible damage tolerated. Guaranty of functionalities after test.

Operation

Condition : Operating during test.

Cold: -10°C during 48h (IEC 68-2-1 standard Ab/Ad test)

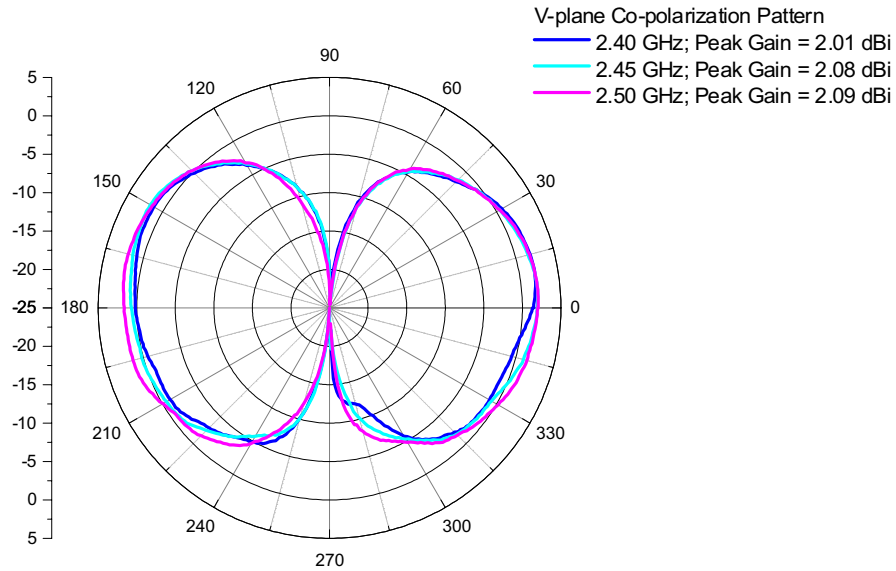
Dry heat: +55°C during 48h (IEC 68-2-2 standard Bb/Bd test)

Composite: -10°C to +55°C 95%R.H 4 cycles(IEC 68-2-30 standard Nb test)

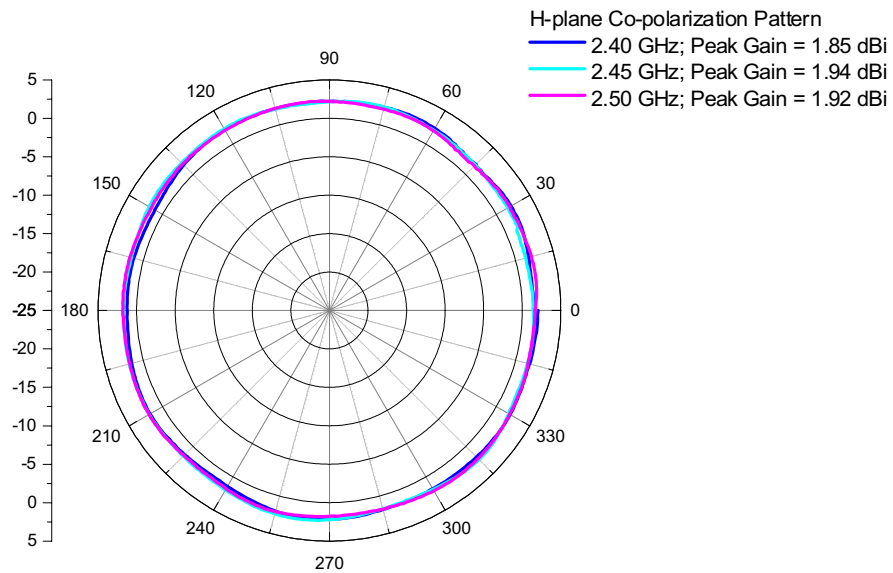
Mandatory : No mechanical or visible damage tolerated. Guaranty of functionalities during and after test.

5. Antenna radiation patterns

5-1. 11b dipole Antenna Radiation pattern : E-Plane

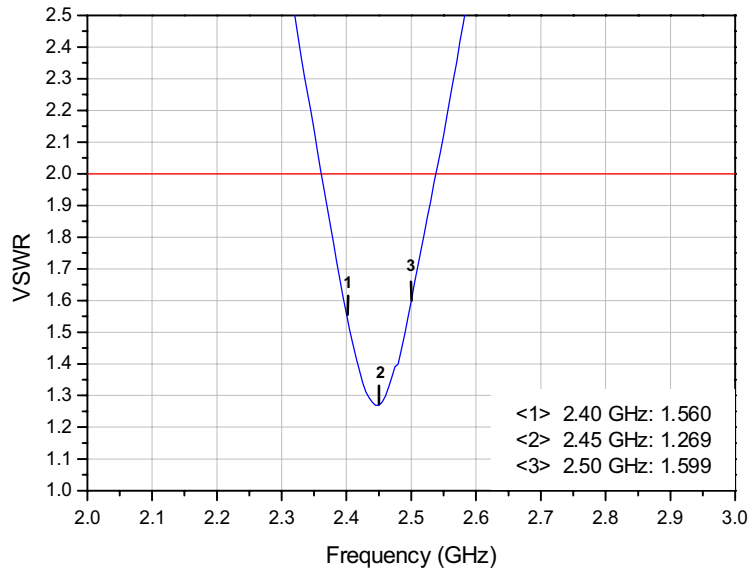


5-2. 11b dipole Antenna Radiation pattern : H-Plane

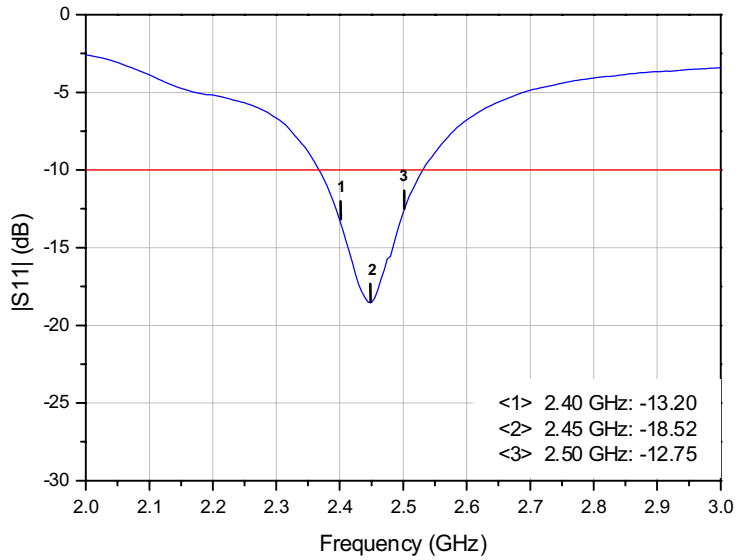


6. Antenna VSWR/Return Loss

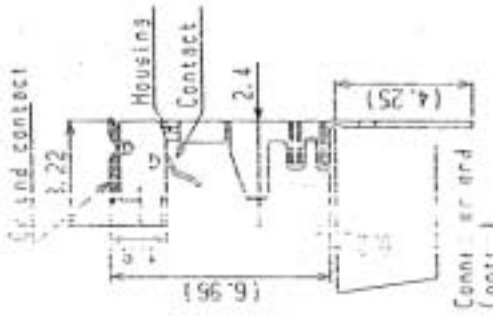
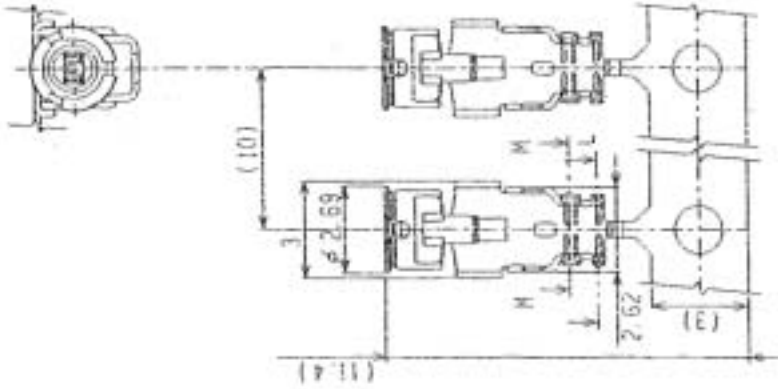
6-1. 11b dipole Antenna VSWR



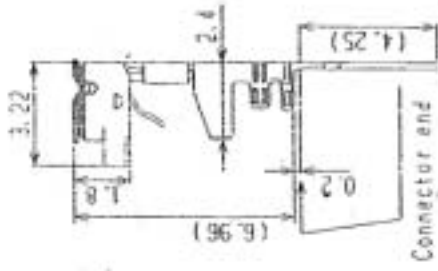
6-2. 11b dipole Return Loss



PART NO.
20278-11R-00



Part No. 20278-101R-00
For hand tool
(with notch)



Part No. 20278-111R-00
For semi auto
termination machine
(without notch)

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

REV	ECN	BY	DATE	APP	RECORD	NO.	2018
4	22023	K.O.	JAN/30/08	E.K.			
3	21256	K.O.	NOV/14/07	K.K.			
2	21197	K.O.	AUG/27/07	K.K.			
1	21118	K.O.	JUN/26/07	K.K.			
0	21105	K.O.	JUN/13/07	APP			
REV		ECN	BY	DATE	APP		
SAI	22117	A.H.	MAY/11	K.K.			
REV	ECN	BY	DATE	APP	SERIES	NO.	2018

DESIGN	BY	DATE	PRODUCTION	SCALE	UNIT	DWG. NO.	CUSTOMER	COPY
	K. Oshayashi	JUN/13/07		6/1	mm	20278	WHF series micro connector	1/3
							connector plus optical	50

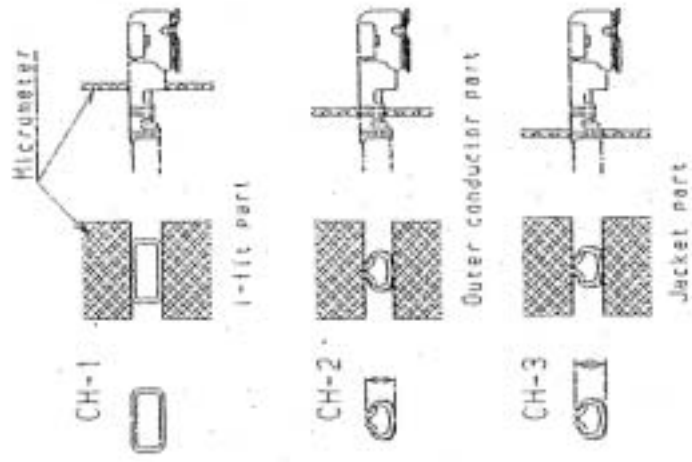
I-PEX
Interconnect
and Packaging Electronics
SOUTH AFRICA

TITLE: WHF series micro connector
connector plus optical

DATE: JUN/13/07
PRODUCTION SCALE: 6/1 mm
UNIT: mm
DWG. NO.: 20278

SHEET NO.: 1/3

Part No.	20278-101R-13 20278-11 1 3
Applicable cable nominal dimension	
Jacket Outer conductor Silver or tin plates Electric core Inner conductor Silver plating	
Braided shield of Outer conductor 外被導体の編組	Single / 1線
P/N of hand tool	90187-013
P/N of semi auto termination machine	90213-113
Sect. M-M	
Sect. L-L	
Crimp Height	CH-1 1.34-1.40 CH-2 1.06-1.14 CH-3 1.15-1.35



Crimp Height

GENERAL TOLERANCE	±0.2
5 MAX.	±0.3
5 OVER MAX.	±0.5
50 OVER MAX.	±0.5
ANGLE	12°

DESIGN'D BY	DATE		Inverternet and Rectifying Electronics TOKYO, JAPAN
CHK'D BY	DATE		
APP'Y	DATE	TITLE	MIF STRIPS MICRO COAXIAL CONDUCTOR PLUG APPLIC.
CUSTOMER COPY	PROJECTION SCALE 5/1	DRW. NO.	20278
		SHEET NO.	2/3

Notes:

1. Material
 (1) Housing : PBT , UL94V-0 , Black
 (2) Contact
 phosphor bronze
 gold plating
 (3) Ground contact
 phosphor bronze , gold plating
 2. Packing : reel
 3. Mating partner part No.
 : 20279-001E-01

1. 材料
 (1) ハウジング: PBT, UL94V-0, 黒色
 (2) コネクタ
 : 銅
 : 金メッキ
 (3) グラウンドコンタクト
 : 引線銅 金メッキ
 2. 梱包 : リール
 3. がん合相手 part No.
 : 20279-001E-01

4. Permissible load of cable at mating コネクタが合後のケーブルに掛かる荷重



5. Suggestions for mating & unmating operation.

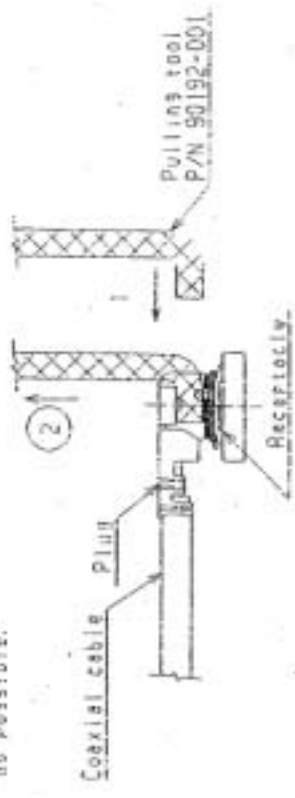
5-1 Mating.
 Please mate the connector straightly to vertical direction as much as possible, adjusting the mating axis of plug and receptacle.
 As excessive slant angle mating may break the connector, please don't do it.

5. コネクタが合時および取外時の注意

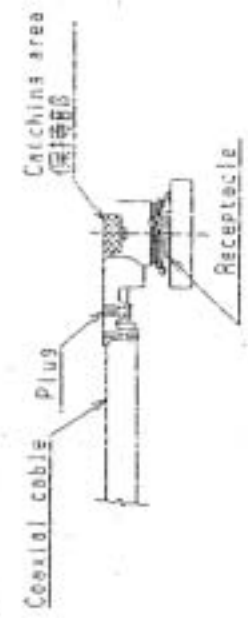
5-1 コネクタ挿入時
 PlugとReceptacleの中心が合軸を合わせ、できるだけ垂直に挿入して下さい。
 感応材料の挿入は行わないで下さい。
 コネクタ取外時の注意については、適宜ごじり挿入は行わないで下さい。

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.



(2) 手で取外しは慎重
 下部の保持部をつかみ、できるだけ垂直に引き抜いて下さい。

GENERAL TOLERANCE	
5 MAX.	±0.2
5 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGUL.	±2°



DESIGNED BY	DATE		Inverter and Rectifier Electronics IPEX/JAPAN
CHK'D BY	DATE		
APP'D BY	DATE		
CUSTOMER	PROJECTION SCALE	TITLE	
COPY	④	MF series micro coaxial connector plug vertical	
		DRW. NO.	20278
		SHEET	3/3
		REV.	5R

SPECIFICATION FOR APPROVAL

DOCUMENT: A30178B001

STYLE : 200°C 30V
RG-178B/U

SIZE: 7/0.102 SCCS

RECOGNIZED:

SPECIFICATION

STYLE	200°C 30V COAXIAL	DOCUMENT NO : A30178B001	
SIZE	RG-178B/U	ESTABLISHED DATE: 2000/06/29	
STANDARD : MIL-C-17			
Conductor	Size	AWG	30
	Material	----	Silver-Coated Copper Clad Steel
	Conductors No.	----	7
	Conductors Size	mm	0.102
	O.D.	mm	0.30
Insulation	Average Thickness	mm	0.28
	Diameter	mm	0.86
	Material	----	FEP
	Color	----	Clear
Braid	Material	----	Silver-Coated Copper
	Construction	mm	16 / 3 / 0.10
	Coverage	%	95
Jacket	Average Thickness	mm	0.25
	Diameter	mm	1.80 ±0.05
	Material	----	FEP
	Color	----	Brown
Marking	M17/93-RG178B/U WONDERFUL		
Drawing			

AK001/210X297/1.0

PAGE : 1

EDITION : 1.0

REVISED DATE :

MAKER :

CONFIRM :

APPROVAL :

WONDERFUL WIRE CABLE CO., LTD

SPECIFICATION

Electrical & Physical Properties						
Item		RG-178B/U				
Rating Temp Voltage		200°C 30V				
Conductor Resistance		838.0 OHM/KM/20°C MAX.				
Insulation Resistance		100 MEGA OHM/KM MIN.				
Dielectric Strength		AC 1.0 KV/Minute				
Spark Test		0.5 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 Ohms				
VSWR		MAX. 1.3 at 0.4G~3GHz				
Nom. Vel. of Prop.		69.5%				
Flame Test		VW-1 OK				
Attenuation (dB/100m)	50MHz	100MHz	400MHz	900MHz	1.8GHz	3GHz
	34.4	45.9	91.8	139.4	207.5	308.2

AK001/210X297/1.0

PAGE : 2

EDITION : 1.0

REVISED DATE :

MAKER :

CONFIRM :

APPROVAL :