

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



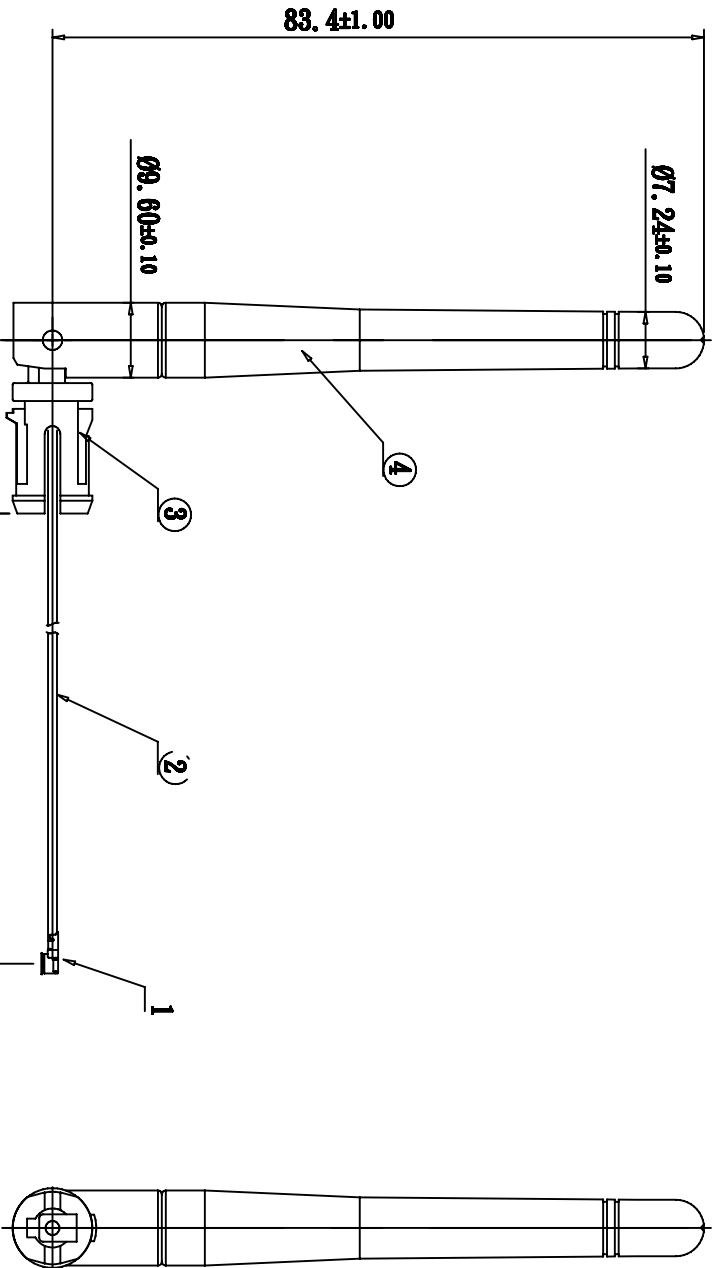
BI-TEK CO.,LTD

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	RG178W	1	
3.	Hinge	BLACK	1	
4.	Tube	BLACK	1	



PROJECTION	TOLERANCE UNLESS OTHERWISE SPECIFIED	
	LINEAR	ANGLE
UNITS	.0 ± 0.10	X REF ± 0.5°
MM	.00 ± 0.05	
	.000 ± 0.01	

3.	REV.	APPD.	RFA-02-C2H1-16W-120		SHEET
2.		CHKD			1 / 1
1.	SIZE	SCALE	DESIGN		REV.
REV	ECN	NAME	DATE	AMY	A
			A4	1/1	
			DRAW	93/04/26	

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

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: Traction 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)

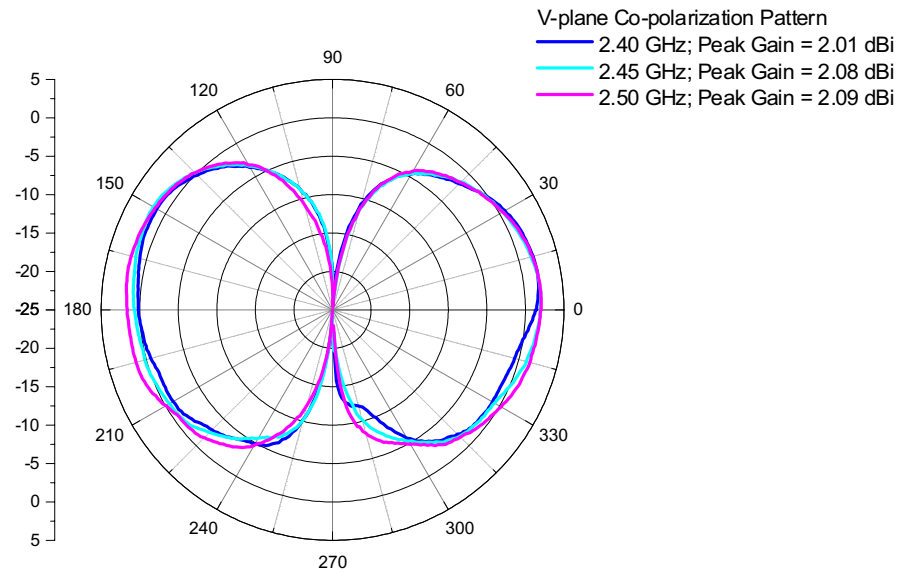
Dry heat: +55°C during 48h (IEC 68-2-2 standard Bb/Bd test)

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

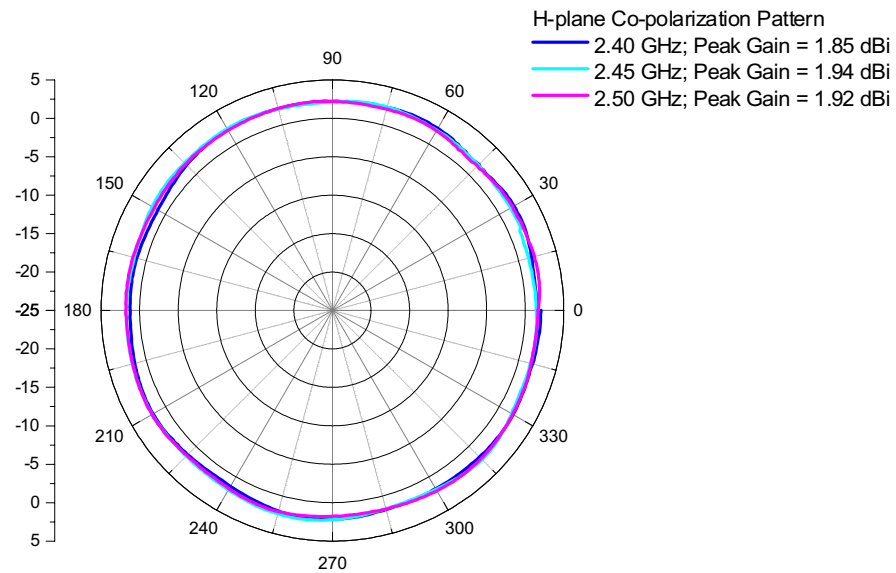
Mandatory : No mechanical or visible damage tolerated. Guaranty of functionalities during and after test.

5. Antenna radiation patterns

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

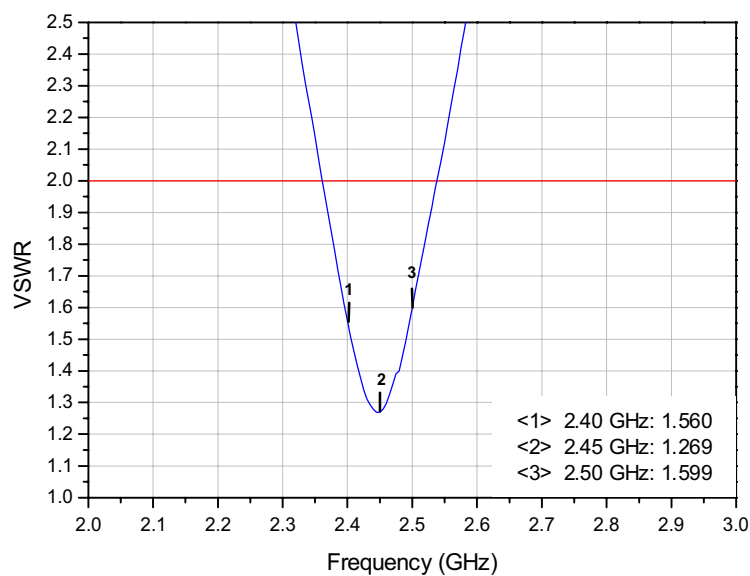


5-2. 11b dipole Antenna Radiation pattern : H-Plane

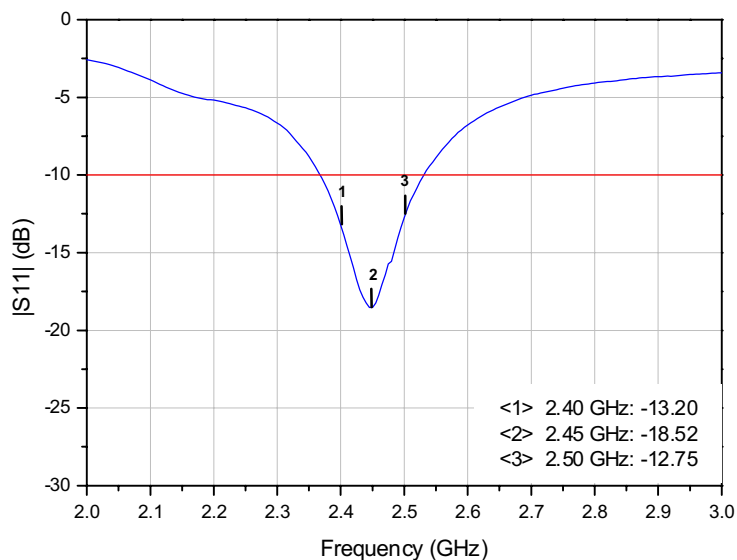


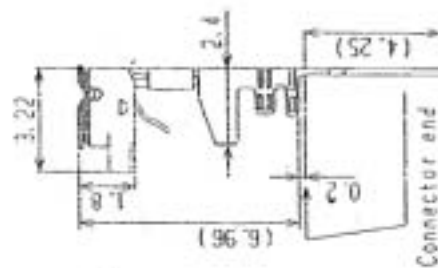
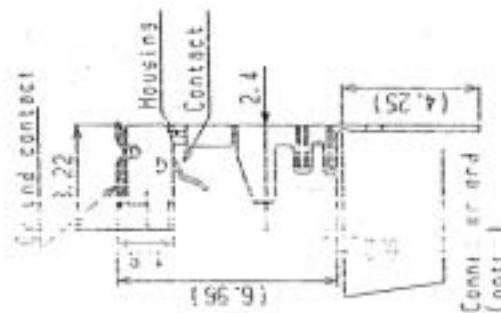
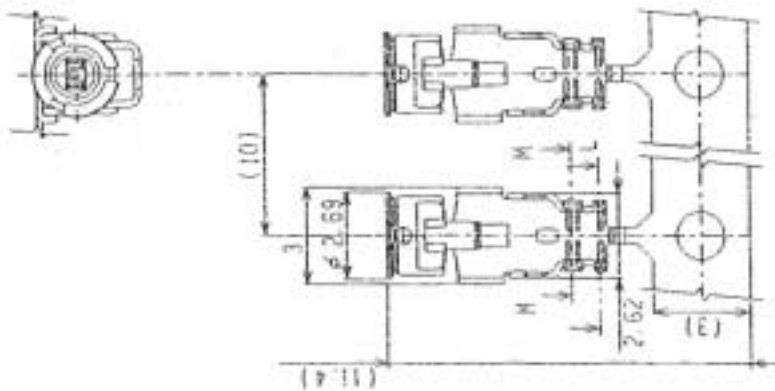
6. Antenna VSWR/Return Loss

6-1. 11b dipole Antenna VSWR



6-2. 11b dipole Return Loss



PART NO.
20278-0019-00

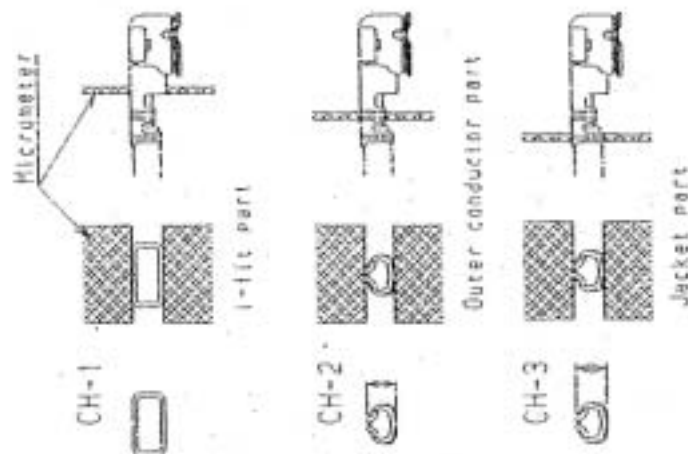
Pt.: 41.20278-101R-00
Far band coal
(4' notch)

Part No. 20278-111R-01
For semi auto
termination machine
(without notch)

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

[illegible]

Part No.	20278-101R-13	20278-11 1 3
Applicable cable nominal dimension		
Jacket Outer conductor Inner conductor Silver plating Dielectric core	Braided shield of Outer conductor 外部導体の編組	Single / 1線用
P/N of hand tool	90187-013	90213-13
	P/N of semi auto termination machine	
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

DESIGN'D BY	DATE	I-PEX INTERCONNECT and Packaging Electronics TOKYO, JAPAN	TITLE	HLF series micro coaxial conductor plug vertical
CHK'D BY	DATE		PROJECTION	SCALE
APP'D BY	DATE		5/1	mm
CUSTOMER COPY			Doc. No.	20278
			SHEET NO.	2/3

GENERAL TOLERANCE	
±	MAX. 1.0, 2
±	OVER MAX. 30 ±0.3
±	OVER MAX. 120 ±0.5
±	ANGLE 12°

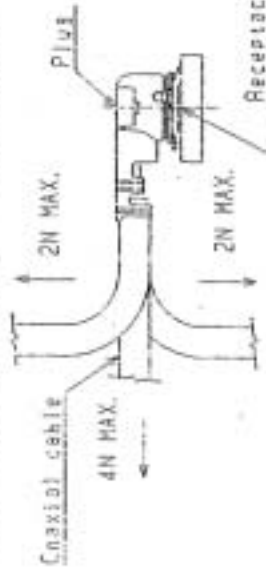
Notes

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) コンタクト
 : 黄銅
 : 金メッキ
 (3) グラウンドコンタクト
 : 黄銅
 : 金メッキ
 2. 梱包 : リール
 3. がん合相手 part No.
 : 20279-001E-01

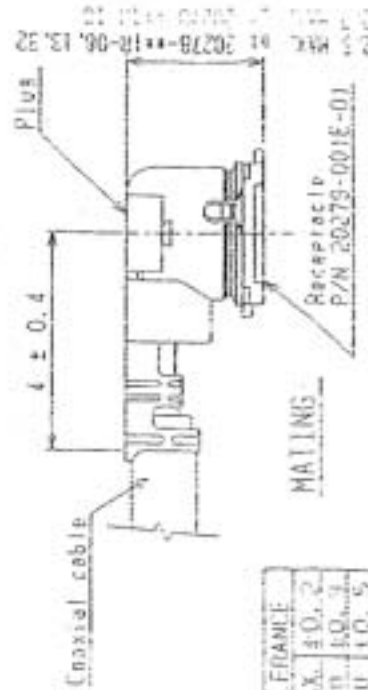
4. Permissible load of cable at mating

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.

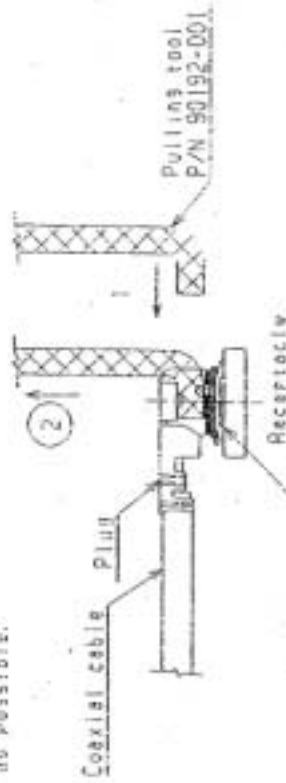
- 5-1 Mating.
 Please mate the connector straightly to vertical direction as much as possible, adjusting the mating axis of plug and receptacle.
 As excessive slant angle mating may break the connector, please don't do it.



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

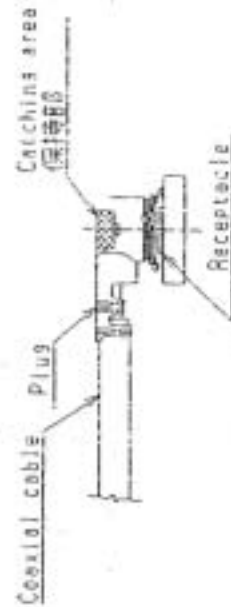
5-2 Unmating.

- (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) 手で直接抜く場合
 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。



DESIGNED BY	DATE		Inspector and Packaging Electronics
CHECK BY	DATE		TITLE
APPROVED	DATE		W8 series micro coaxial connector plug vertical
CUSTOMER COPY	PROJECTION SCALE	INITIAL	DATE
	④-①	20278	3/3

SPECIFICATION FOR APPROVAL

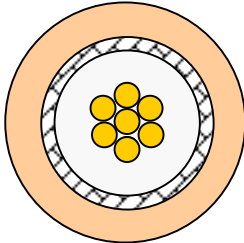
DOCUMENT: A30178B001

STYLE : 200°C 30V
RG-178B/U

SIZE: 7/0.102 SCCS

RECOGNIZED:

SPECIFICATION

STYLE	200℃ 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℃ 30V			
Conductor Resistance				838.0 OHM/KM/20℃ 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℃)			
		Elongation		UNAGED MIN.75%(168HRS×232℃)			
Jacket	Unaged	Tensile Strength		2500 PSI MIN.(1.76 Kg / m m ²)			
		Elongation		200% MIN.			
	Aged	Tensile Strength		UNAGED MIN.75%(168HRS×232℃)			
		Elongation		UNAGED MIN.75%(168HRS×232℃)			
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 :