

JOYMAX
THF-6280B-566
Dual-Band Antenna report

Prepared by	Checked by	Checked by	Release to
Howard Mei	Steven Chang	Steve Teng	Steve Teng

1. Joymax THF-6280B-566 antenna**measurement results :**

(a) IEEE 802.11B/G (2 meter cable is included the measurement)

Frequency range - 2.45 GHz	
Peak Gain (dBi)	1.17
Average (dBi)	-5.59
Cross-Polarization (dB)	-12.45

(b) IEEE 802.11A (2 meter cable is included the measurement)

Frequency range - 5.25 GHz	
Peak Gain (dBi)	0.93
Average (dBi)	-6.36
Cross-Polarization (dB)	-10.79

Frequency range - 5.825 GHz	
Peak Gain (dBi)	0.60
Average (dBi)	-5.75
Cross-Polarization (dB)	-9.77

2. Antenna diagram

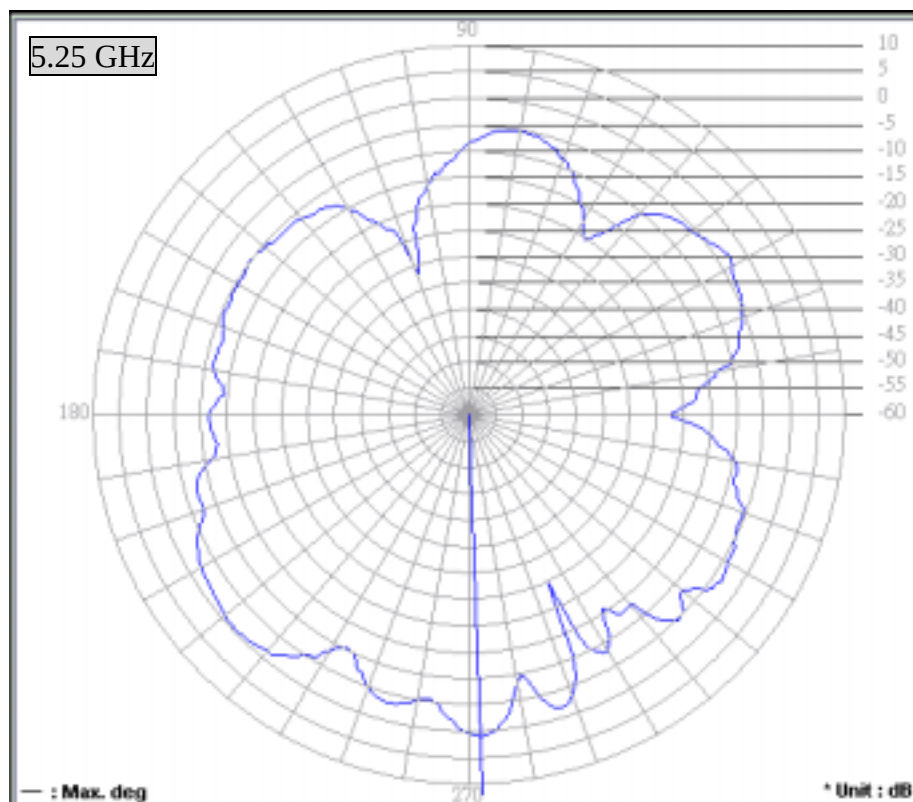
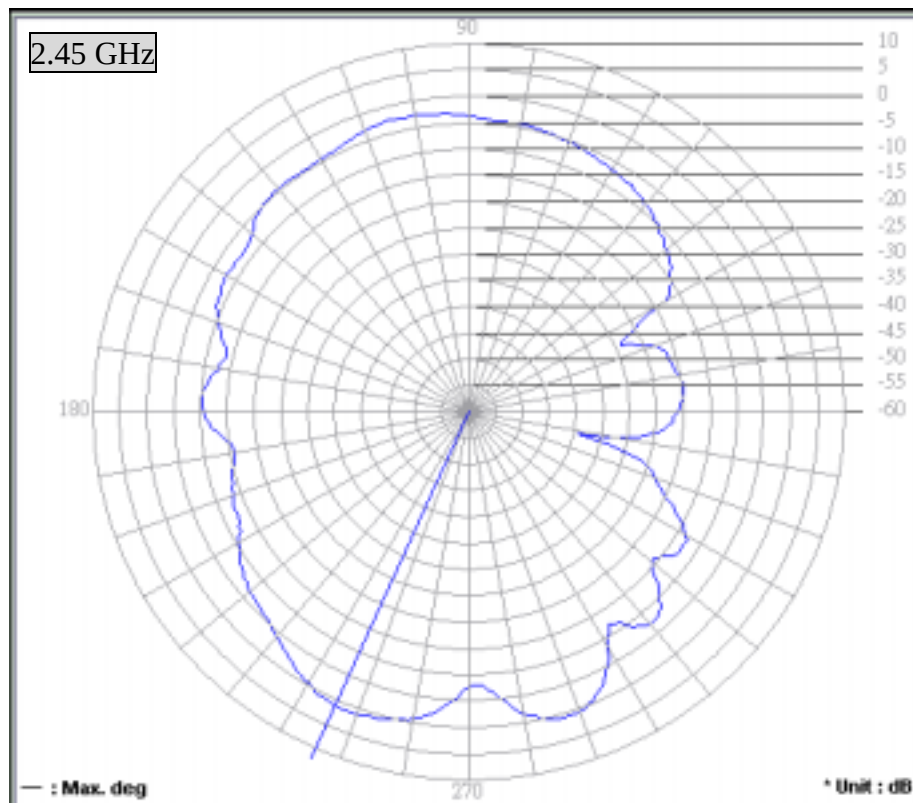
(a) YZ-plane

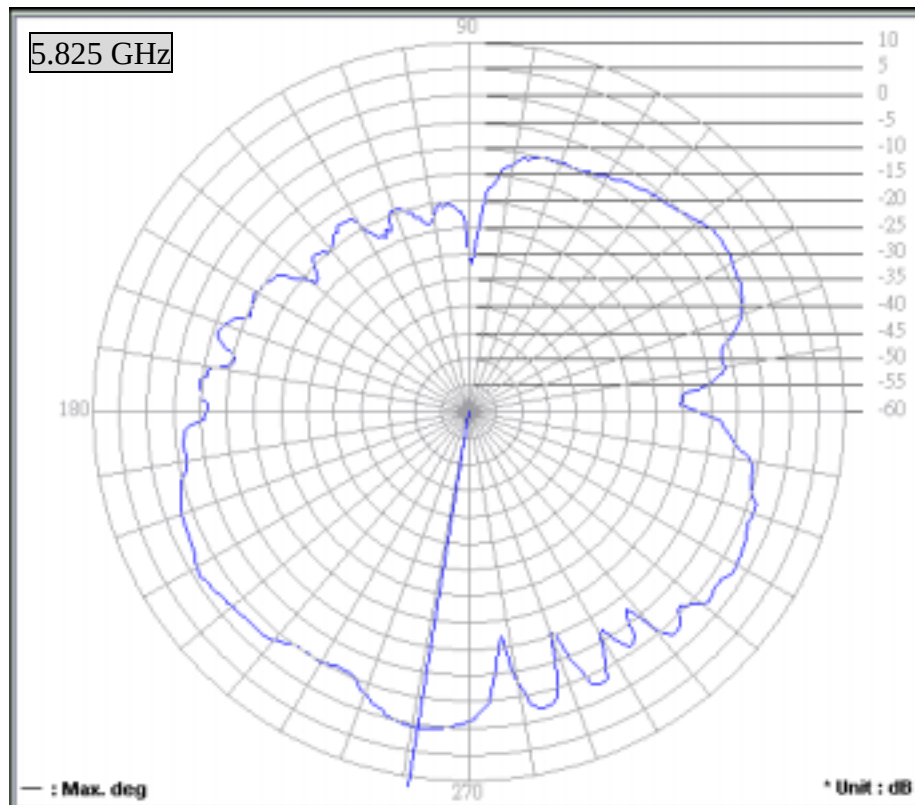


(b) XZ-plane

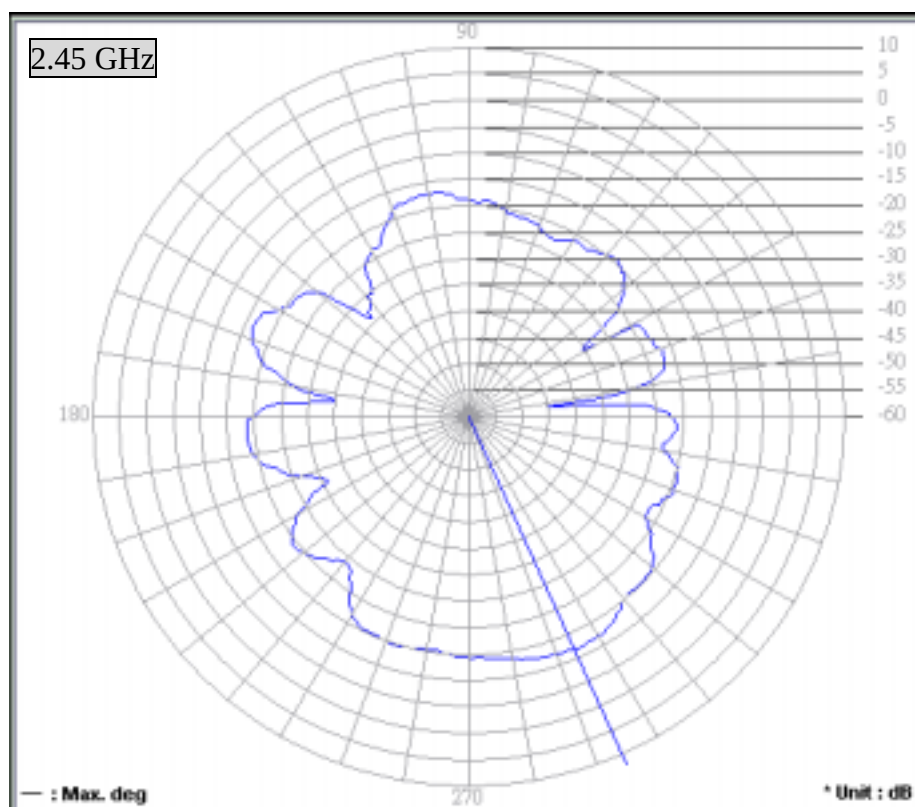


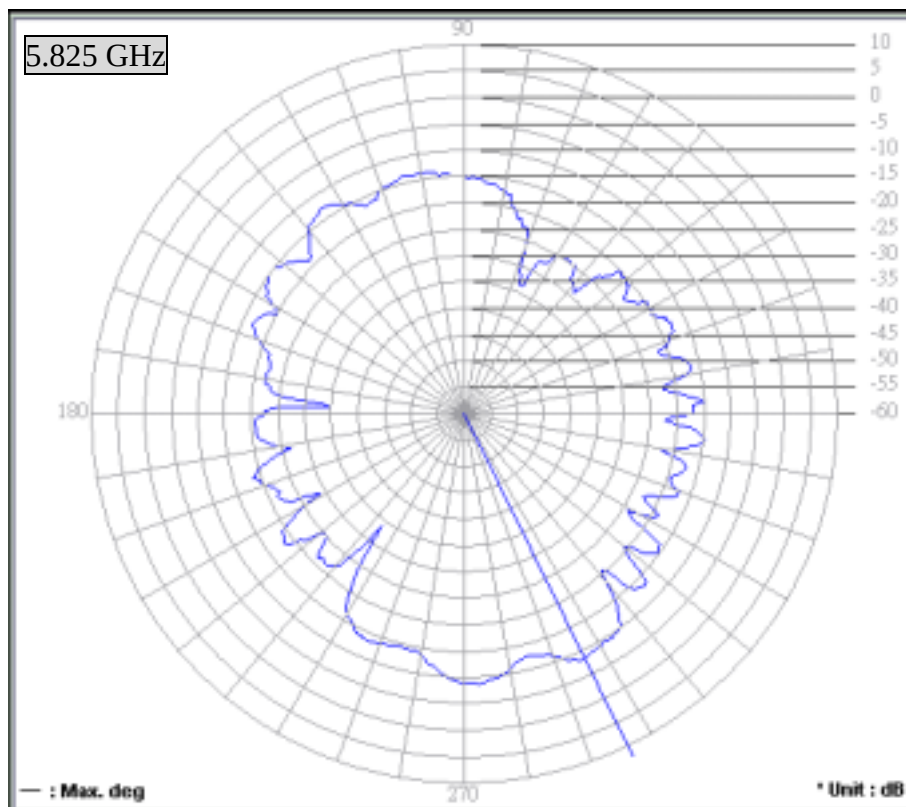
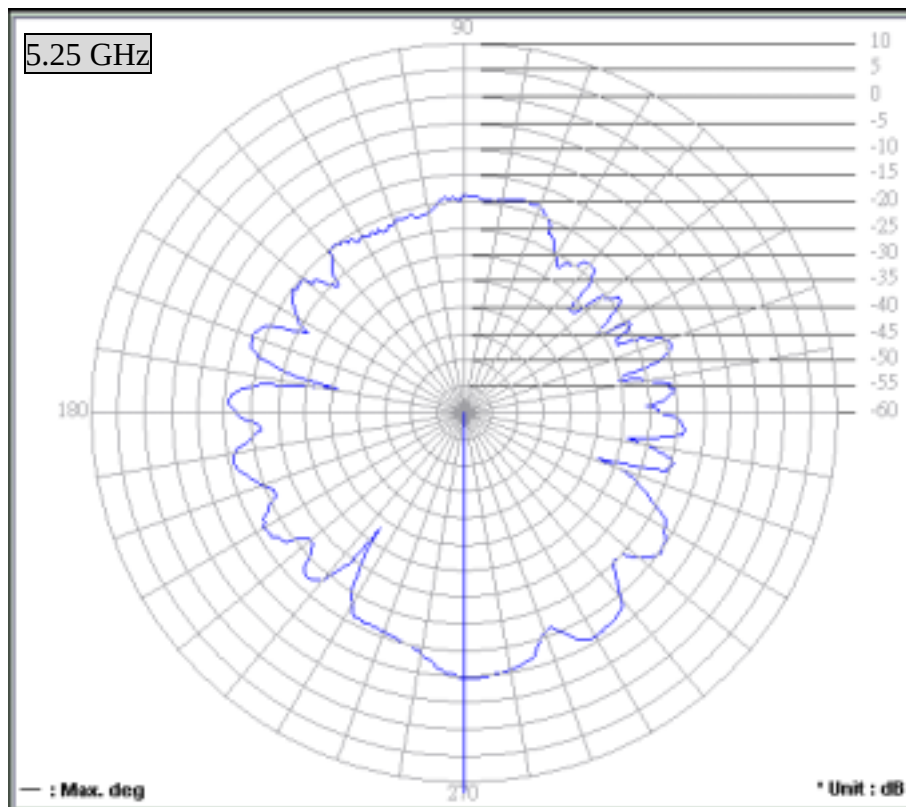
3.1.1 x-y plane **Horizontal Polarization**



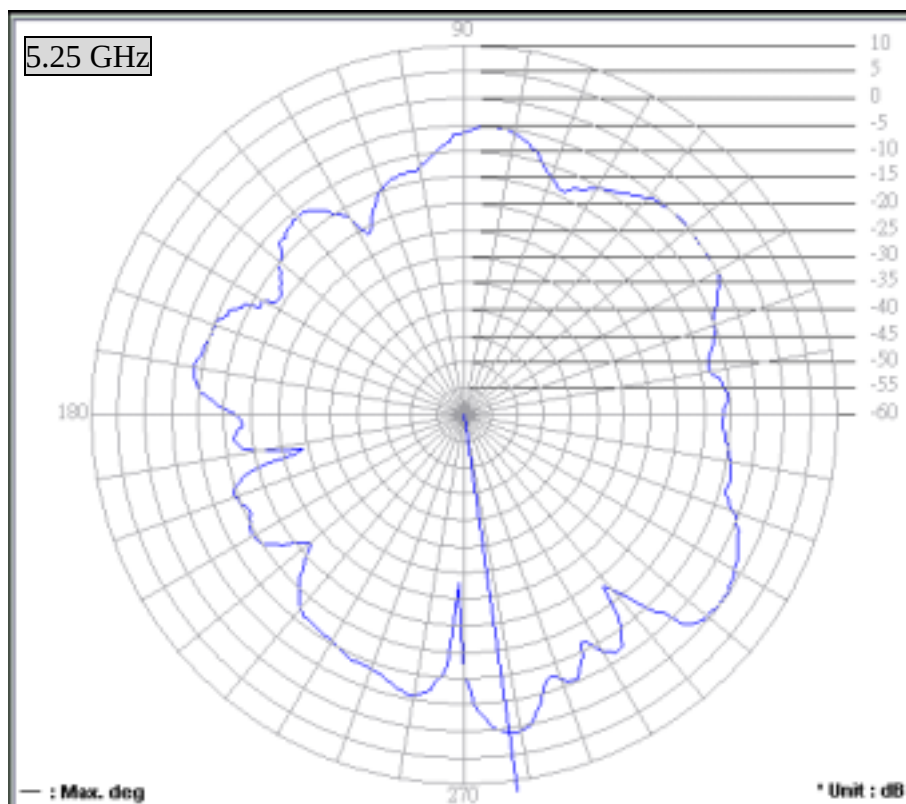
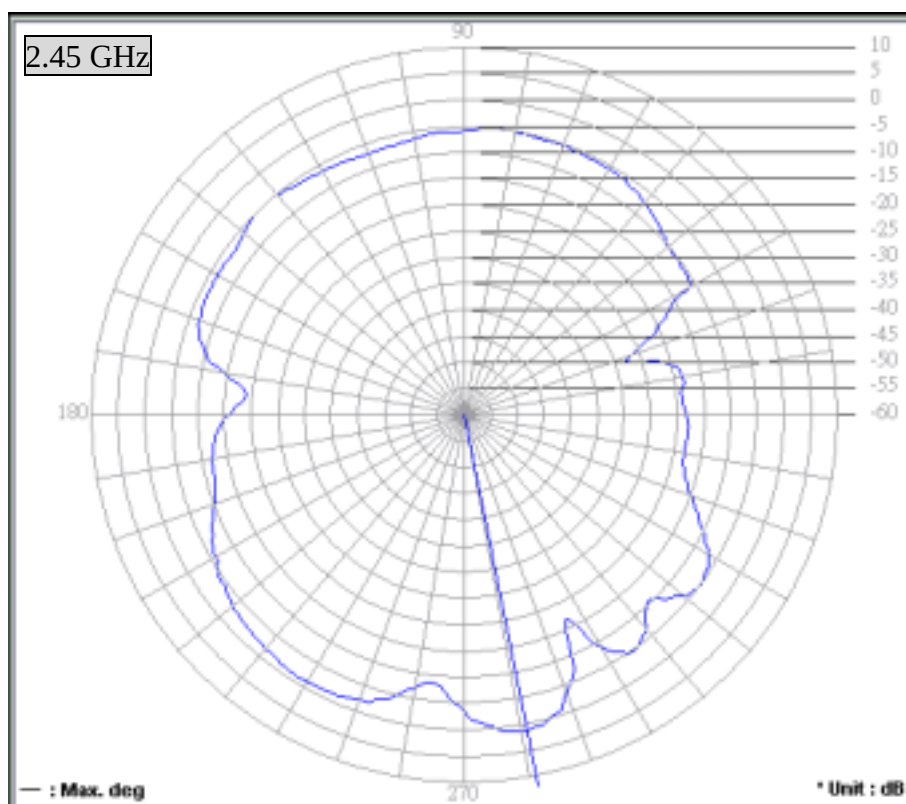


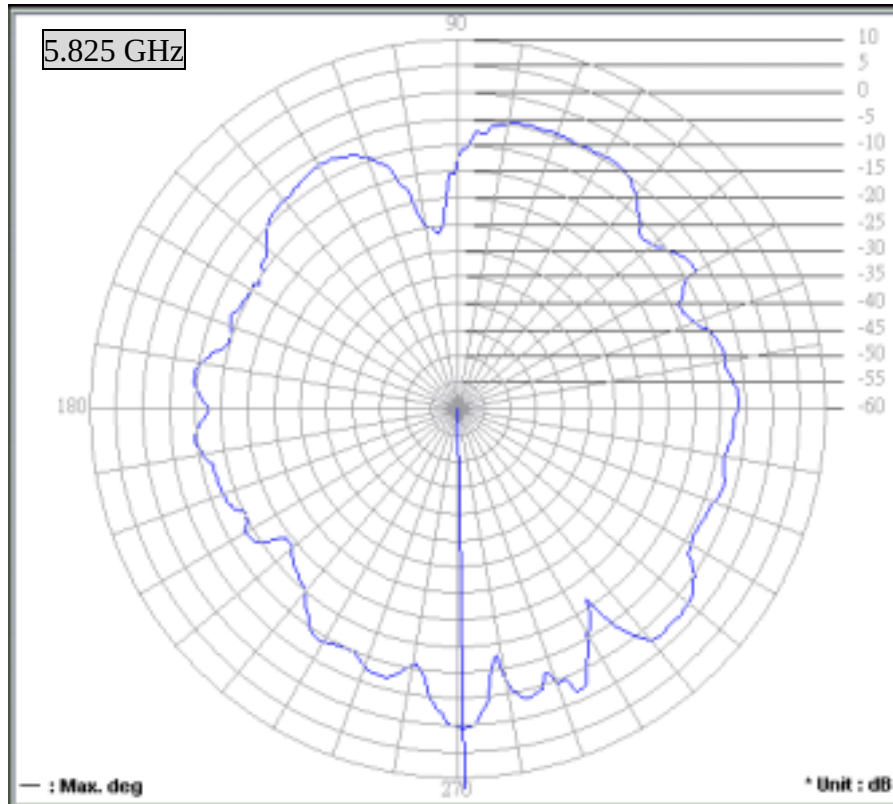
3.1.2 x-y plane **Vertical Polarization**



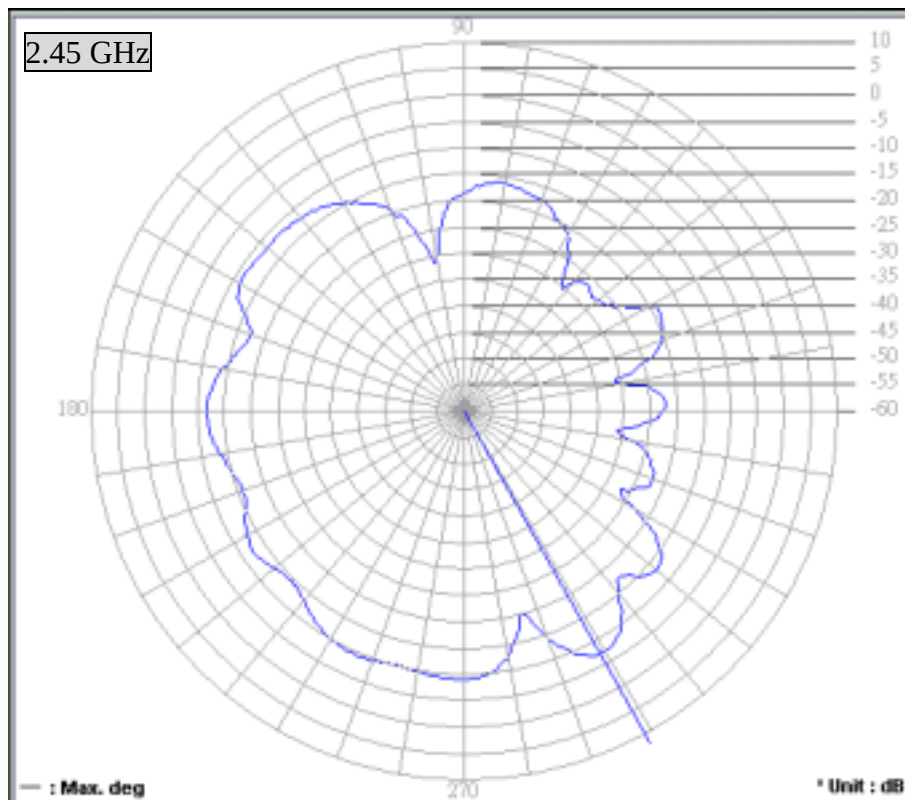


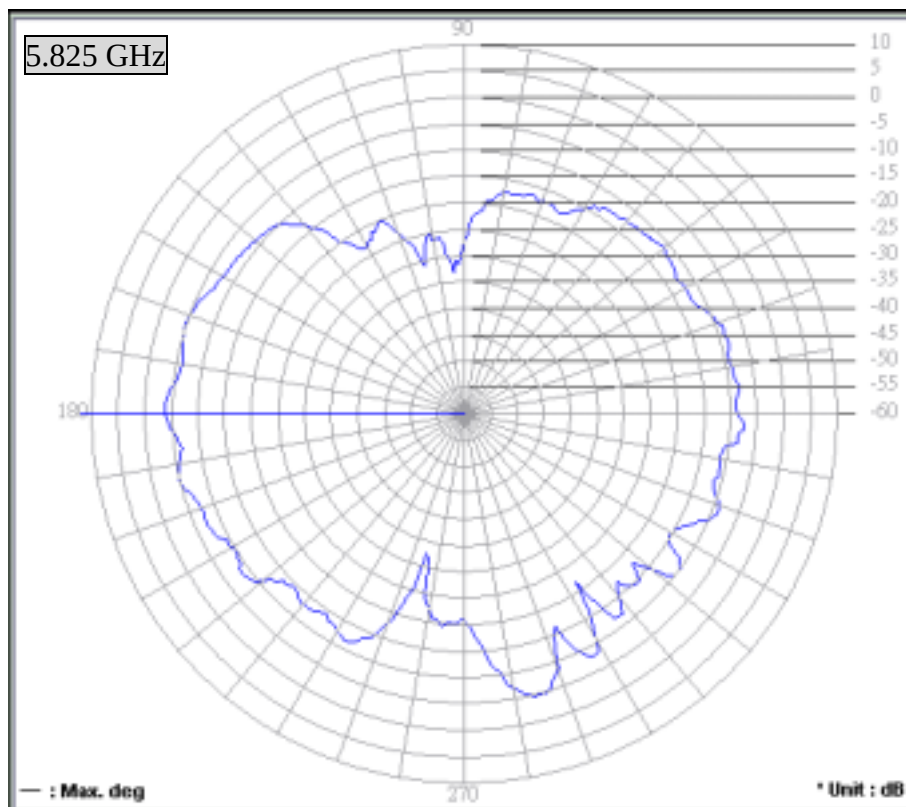
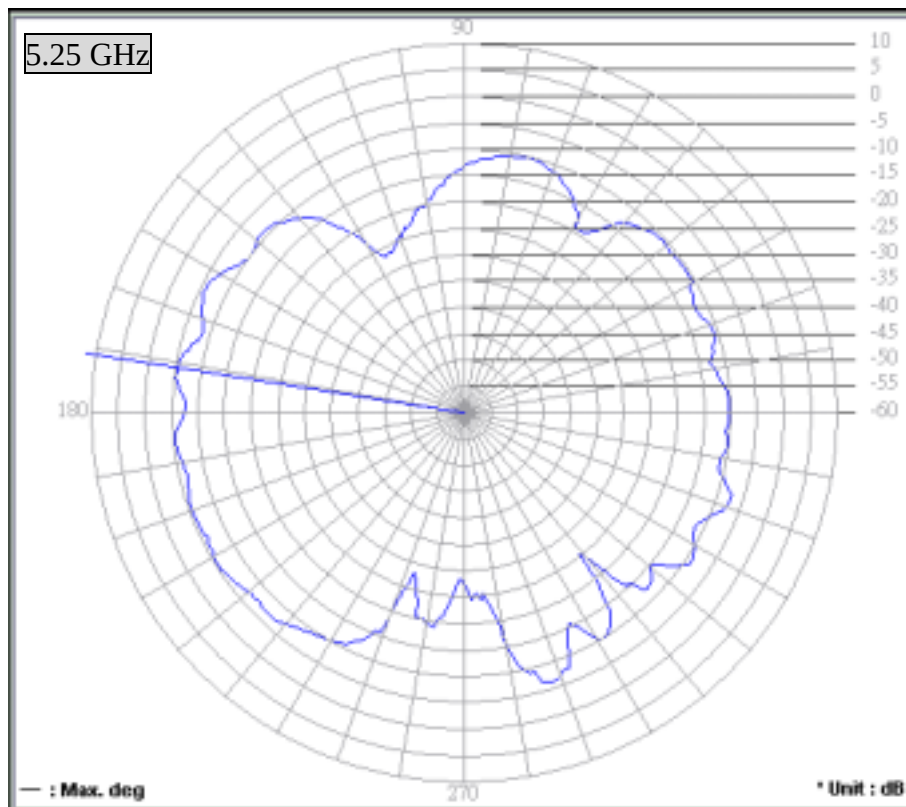
3.2.1 x-z plane **Horizontal Polarization**



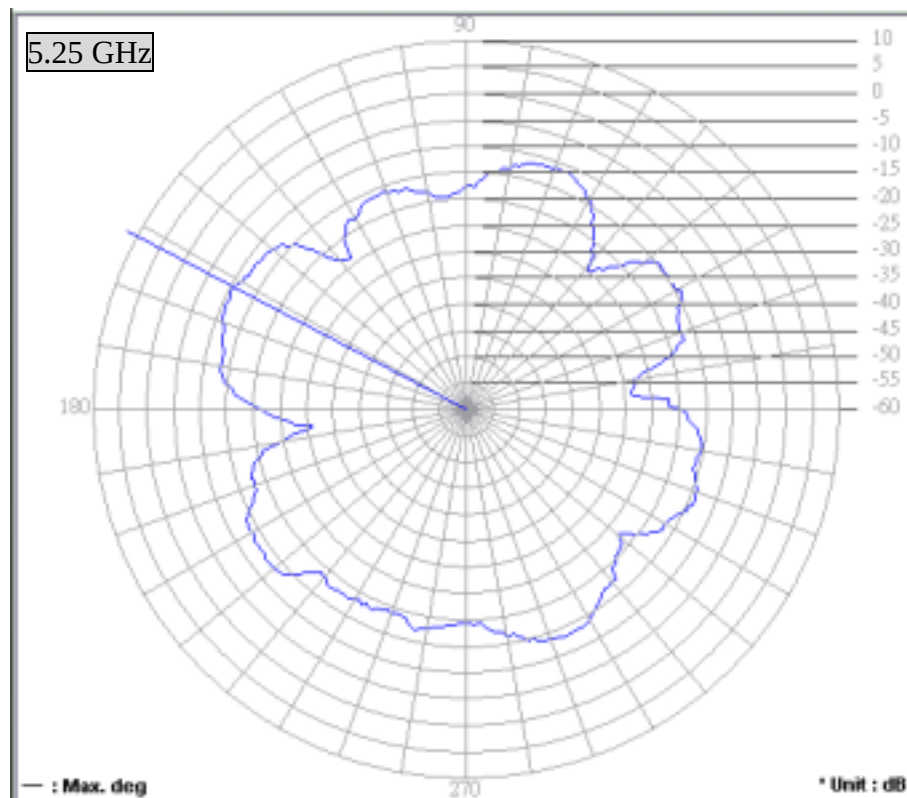
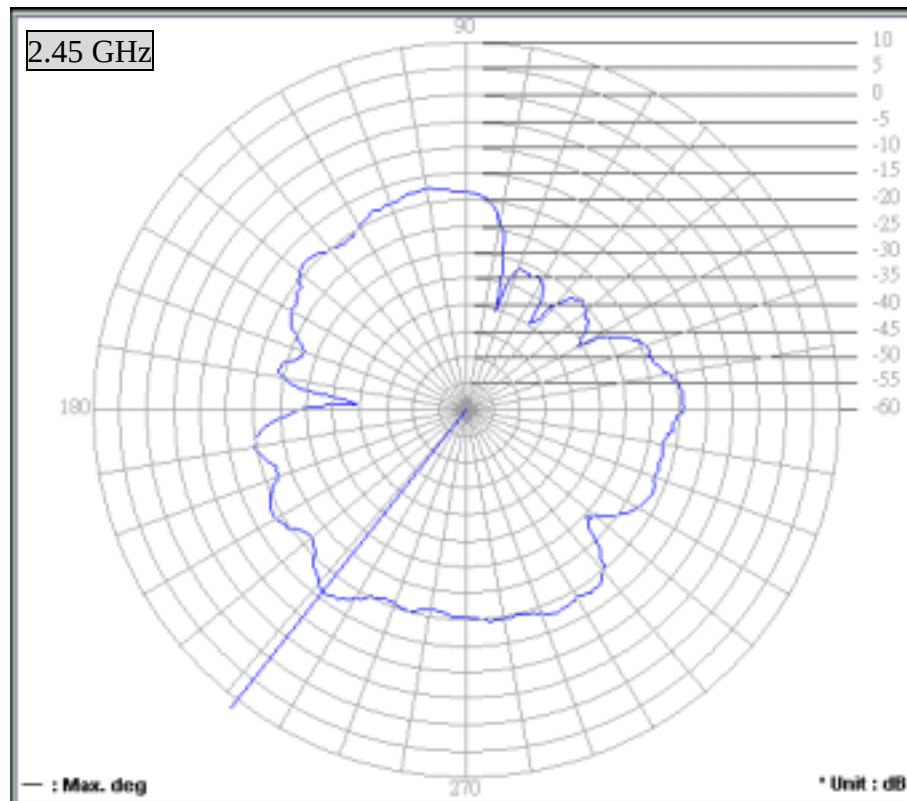


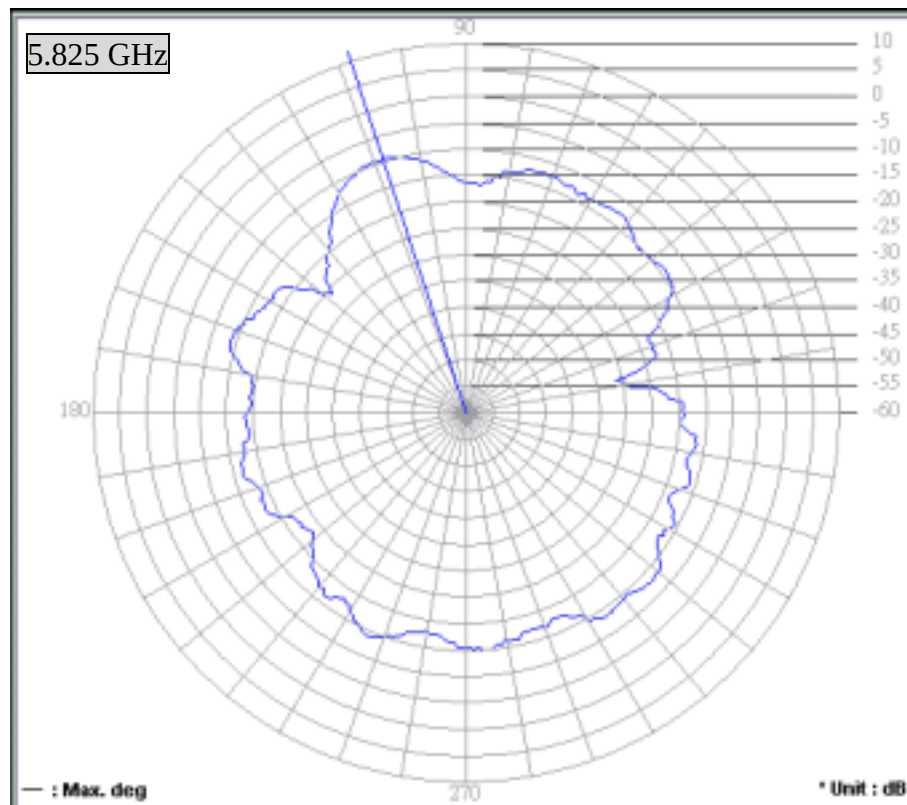
3.2.2 x-z plane **Vertical Polarization**



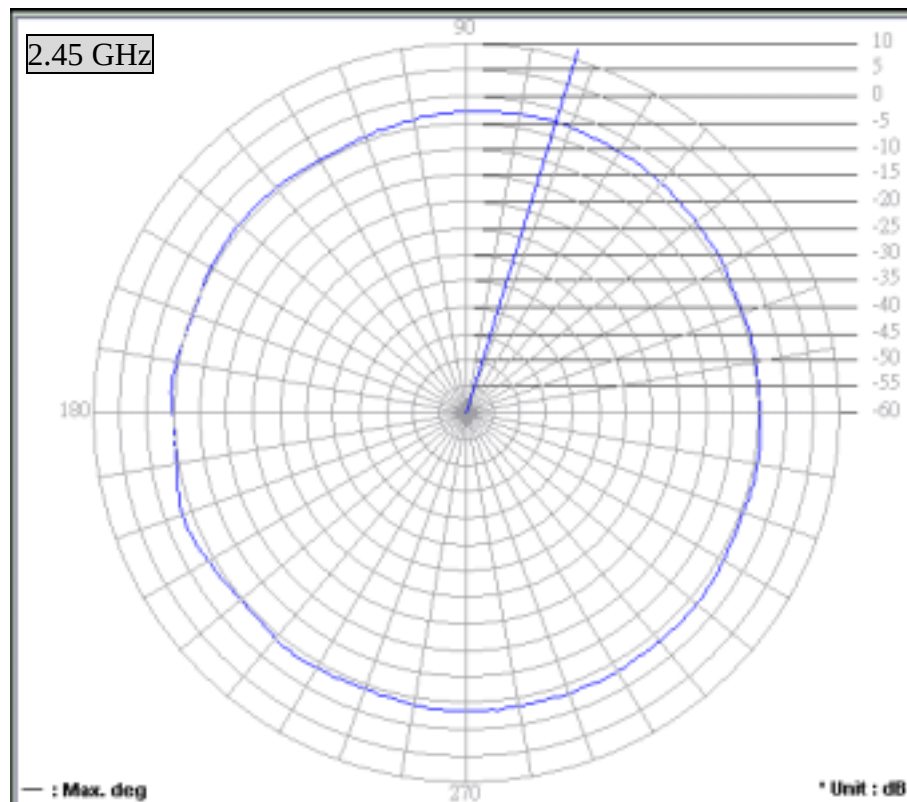


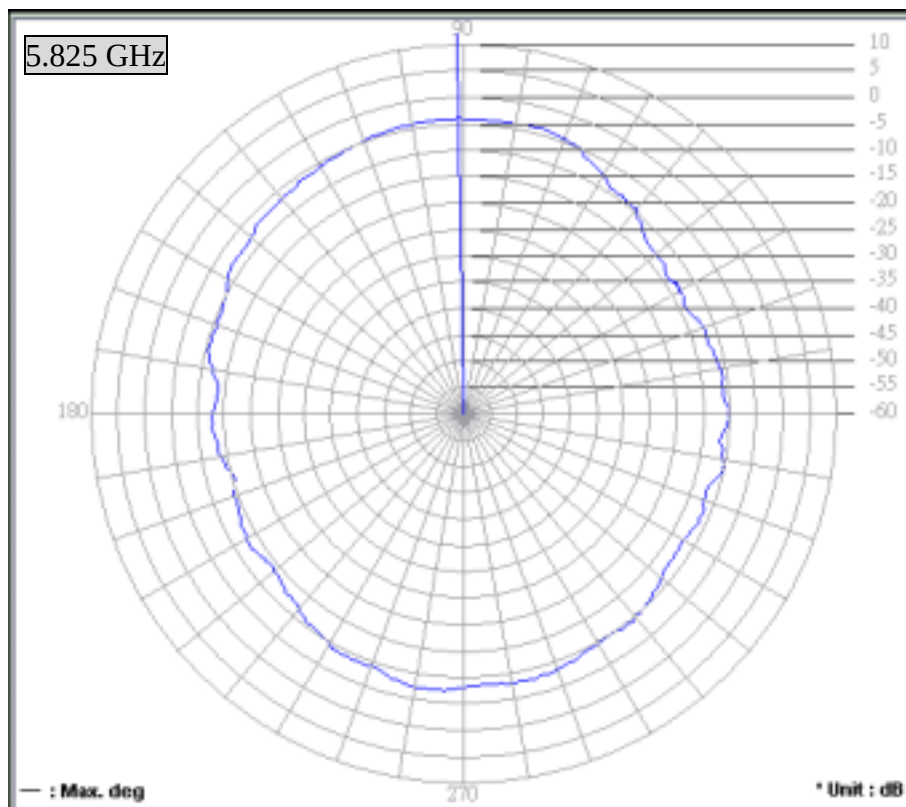
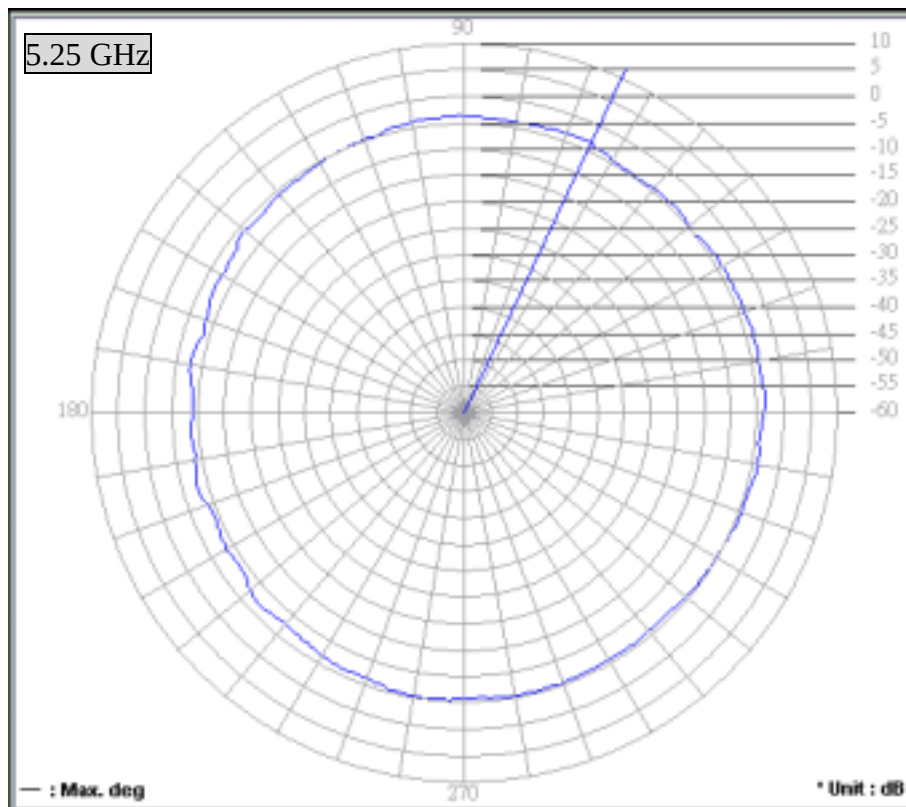
3.3.1 y-z plane **Horizontal Polarization**





3.3.2 y-z plane **Vertical Polarization**





4. Joymax THF-6280B-566 PCI Antenna Gain

(a) Antenna Peak Gain

Peak Gain (dBi)	2.45GHz	5.25GHz	5.825GHz
<i>Y-Z Plane (dBi)</i>	-2.33	-3.57	-3.90
<i>X-Y Plane (dBi)</i>	1.17	0.93	0.60
<i>X-Z Plane (dBi)</i>	1.50	1.05	0.60

(b) Antenna Average Gain

<i>Y-Z Plane (dBi)</i>	2.45GHz	5.25GHz	5.825GHz
Vertical	-3.97	-5.55	-8.62
Horizontal	-21.01	-15.61	-15.38

<i>X-Y Plane (dBi)</i>	2.45GHz	5.25GHz	5.825GHz
Vertical	-18.05	-17.15	-15.52
Horizontal	-5.59	-6.36	-5.75

<i>X-Z Plane (dBi)</i>	2.45GHz	5.25GHz	5.825GHz
Vertical	-13.86	-9.96	-10.13
Horizontal	-5.88	-7.57	-7.53

APPROVAL SHEET

CUSTOMER : 國碁電子股份有限公司
AMBIT Microsystems Corporation

MODEL NO. : THF-6280B-566(Rev.01)

DESCRIPTION : **Tri-Band Flying Lead
Straight Antenna**

Customer Approval

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士誼科技事業股份有限公司
JOYMAX ELECTRONICS CO.,LTD.

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Tel: +886-3-4931401 Fax: +886-3-4931126
E-Mail : ericlai@joymax.com.tw

1.Description:

The Antenna is tri-band flying lead and straight antenna. Which is useful for the construction of an accesspoint.

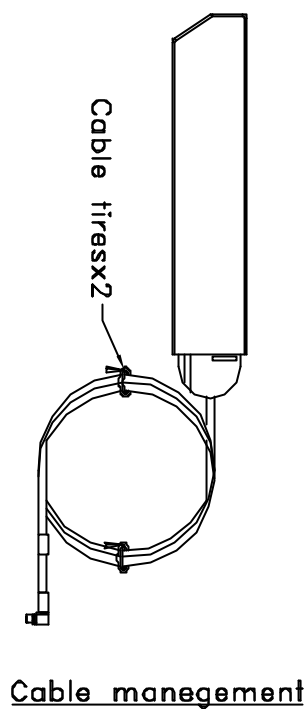
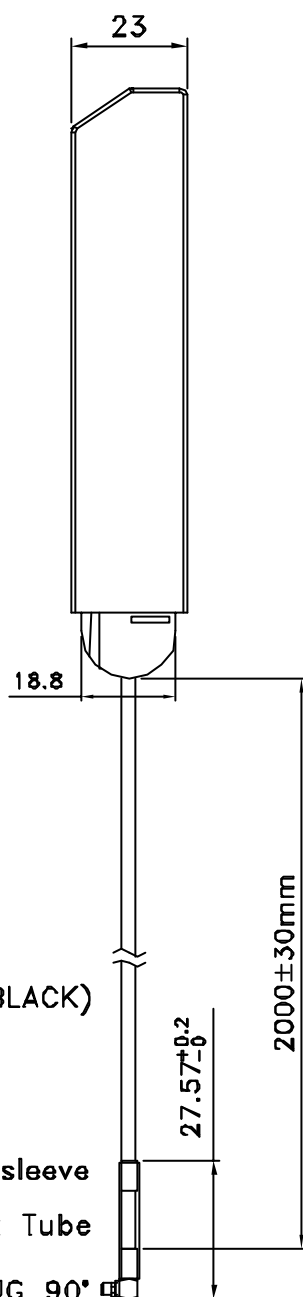
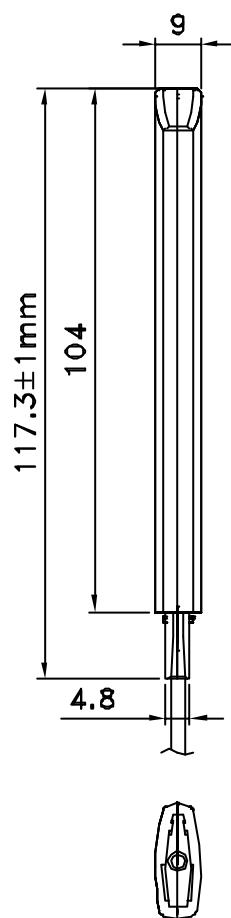
2. Electrical Properties

2-1 Frequency Range.....	2.4~2.5GHz	
	5.15~5.35GHz	
	5.725~5.85GHz	
2-2 Impedance.....	50 Ohms nominal	
2-3 SWR.....	≤ 2.0	
2-4 Return Loss.....	≤ -10 dB	
2-5 Gain.....	2.4~2.5GHz	4.0dBi
	5.15~5.35GHz	5.0dBi
	5.725~5.85GHz	5.5dBi
2-6 Polarization.....	Vertical	

3. Mechanical Properties :

3-1 Connector.....	MMCX PLUG
3-2 Cable.....	HPP100
3-3 Houshing.....	Polycarbonate
3-4 Attachment Strength.....	5.0 Kg-cm





HPP 100(BLACK)

Fixing sleeve
 △ Heat Shrink Tube

MMCX PLUG 90°

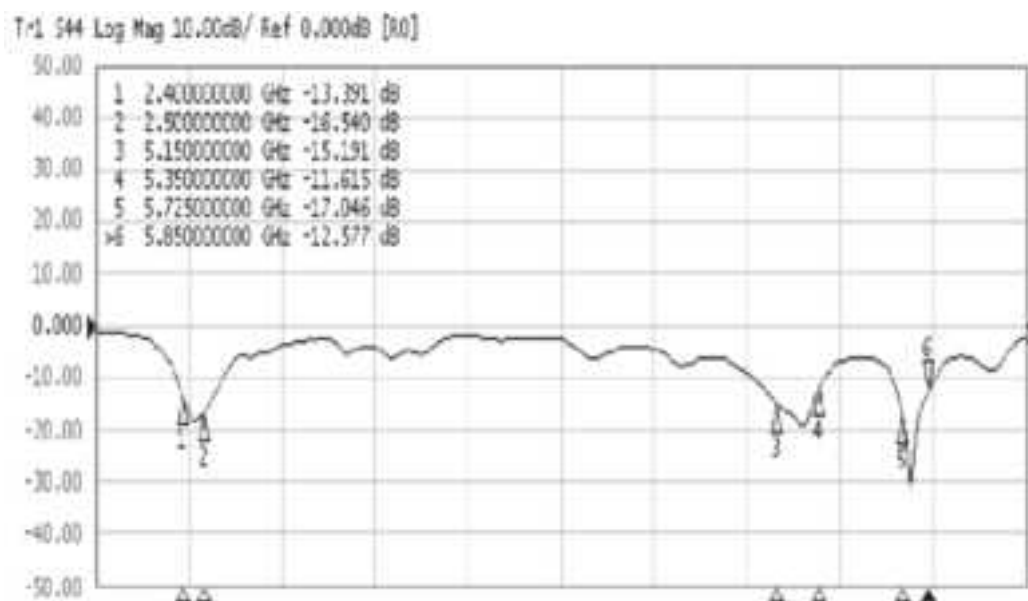
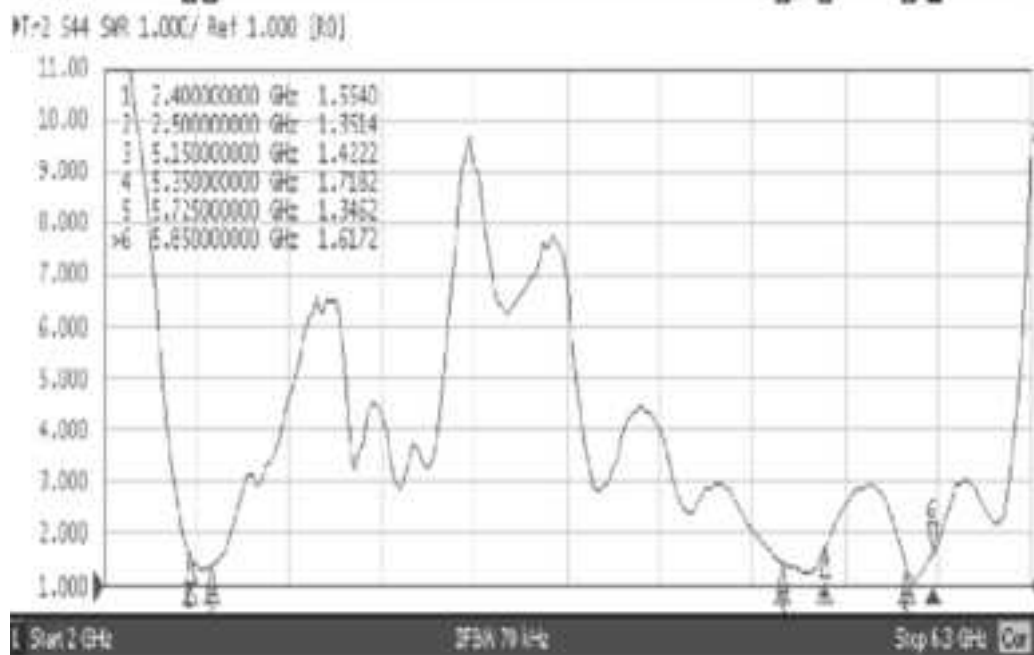
TOLERANCES:	
X	± 1
X.X	± 0.5
X.XX	± 0.25
ANG.	± 2.0°

REV DESCRIPTION	△ 熱縮加長 92/5/28	MATERIAL	MODEL: THF-6280B-566		
		FINISH	NAME: Straight Antenna		
		UNIT: mm	PART No: THF-6280B-566		
		SCALE: 1/ 1.5	DESIGN	APPROVE	REV
		DATE: 5/28/2003	K.Y.Liu		01

QP0502-01-02



JOYMAX ELECTRONICS CO.,LTD.

**Return
Loss****SWR**

1. Description:

The connector is a MMCX right angle plug crimp for HPP-100 cable.

2. Electrical Properties

2-1 Impedance.....	50 Ohms
2-2 Frequency Range.....	0~6 GHz
2-3 SWR.....	1.30 (Max.)
2-4 Working Voltage.....	170 V rms (Max.)
2-5 Dielectric Withstanding Voltage.....	500 V rms (Min.)
2-6 Insulation Resistance.....	1000 Megohms
2-7 Contact Resistance.....	Center contact: 5.0 Milliohms (Max.) Outer contact: 2.5 Milliohms (Max.)
2-8 Insertion Loss.....	0.3 dB

3. Mechanical Properties :

3-1 Engagement Force.....	8 lbs. (Max.)
3-2 Disengagement Force.....	1.4 lbs. (Min.)
3-3 Contact Retention.....	2.0 lbs. (Min.) axial force
3-4 Durability.....	500 Cycles (Min.)

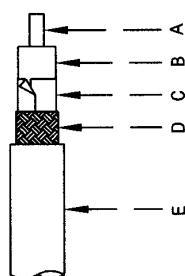
4. Environmental Ratings

4-1 Operating Temperature.....	-65°C ~ +165°C
4-2 Thermal Shock.....	MIL-STD-202, Method 107, Condition C, Except -55°C ~ +155°C
4-3 Corrosion.....	MIL-STD-202, Method 101, Condition B
4-4 Shock.....	MIL-STD-202, Method 213, Condition B
4-5 Vibration.....	MIL-STD-202, Method 204, Condition D
4-6 Moisture Resistance.....	MIL-STD-202, Method 106

5. Material Specifications

5-1 Body.....	Brass Per JIS H3250 C3604 BD, Gold Plated Per MIL-G-45204
5-2 Contact.....	Beryllium Copper Per QQ-C-530, Gold Plated Per MIL-G-45204
5-3 Insulator.....	PTFE Fluorocarbon Per ASTM D 1710
5-4 C-Ring.....	Beryllium Copper Per QQ-C-530, Gold Plated Per MIL-G-45204





MASTER

Rev	Change	By	Date

MASTER

<u>Construction:</u>		<u>Electrical:</u>		<u>Attenuation</u> dB/100ft.	
A) Center Conductor:	25 1/25 Bare Copperweld	50 Ohms Nom.	31 pF/ft Nom.	Frequency	Typical (Max.)
	OD 0.0179" ± .0002"	Velocity of Propagation: >90 dB	Shielding Effectiveness: 2,500 VDC	1.00	22.8(25.2)
B) Dielectric:	Extruded Polyethylene	Voltage Withstand: <1.15:1 Typical	VSWR(.45-6.00GHz): 1.30:1 Maximum	2.00	32.6(35.8)
	OD 0.063" Nom.			3.00	40.1(44.1)
C) Inner Shield:	Aluminum/Mylar/Aluminum Tape			4.00	46.5(51.2)
	OD 0.066" Nom.			5.00	52.3(57.5)
				6.00	57.5(63.2)
D) Outer Shield:	38 AWG Tin Plated Copper				
	90% Minimum Coverage				
	OD 0.085" Nom.				
E) Jacket:	PVC(White)				
	OD 0.110" ± 0.003"				
	Printed "Harbour Industries HPP100HPVC"				

Drawn By: MTPiner	
Approved By: MTPiner	
Date: 01/27/03	Scale: None

Part Number: TBD	Rev:	Sheet 1 of 1
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Drawing Name: HPP100HPVC
Drawing Number: 012703

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