



權億科技股份有限公司
Master Wave Technology Co., Ltd.

承認書 APPROVAL SHEET

Customers: 啟碁科技股份有限公司

Customer Model No.:

Master Wave Model No.: 98151MRSX004-220

Product Description: 8151 Replacement Ant.

Issue Date: 2009/2/10

REV.: 00

客戶承認用印 Customer Approved	權億承認用印 Confirmation Signature	
		
核准 Approve	主管 Chief	承辦 Responsible
Hero	Hero	S. Y. Liu

中壢：桃園縣中壢市南園二路1巷20號2樓

電話：03-451-9540

FAX：03-451-9542

東莞廠：廣東省東莞市常平鎮木輪工業區

蘇州廠：江蘇省蘇州市角直鎮吳淞南路95號

Antenna Total Solution Provider



Table of Contents

Item

1. Antenna Specifications

- Drawing
 - Electrical Properties
 - Mechanical Properties
-

2. Test Report

- Electrical test
 - Pattern test
-

3. Material Certifications

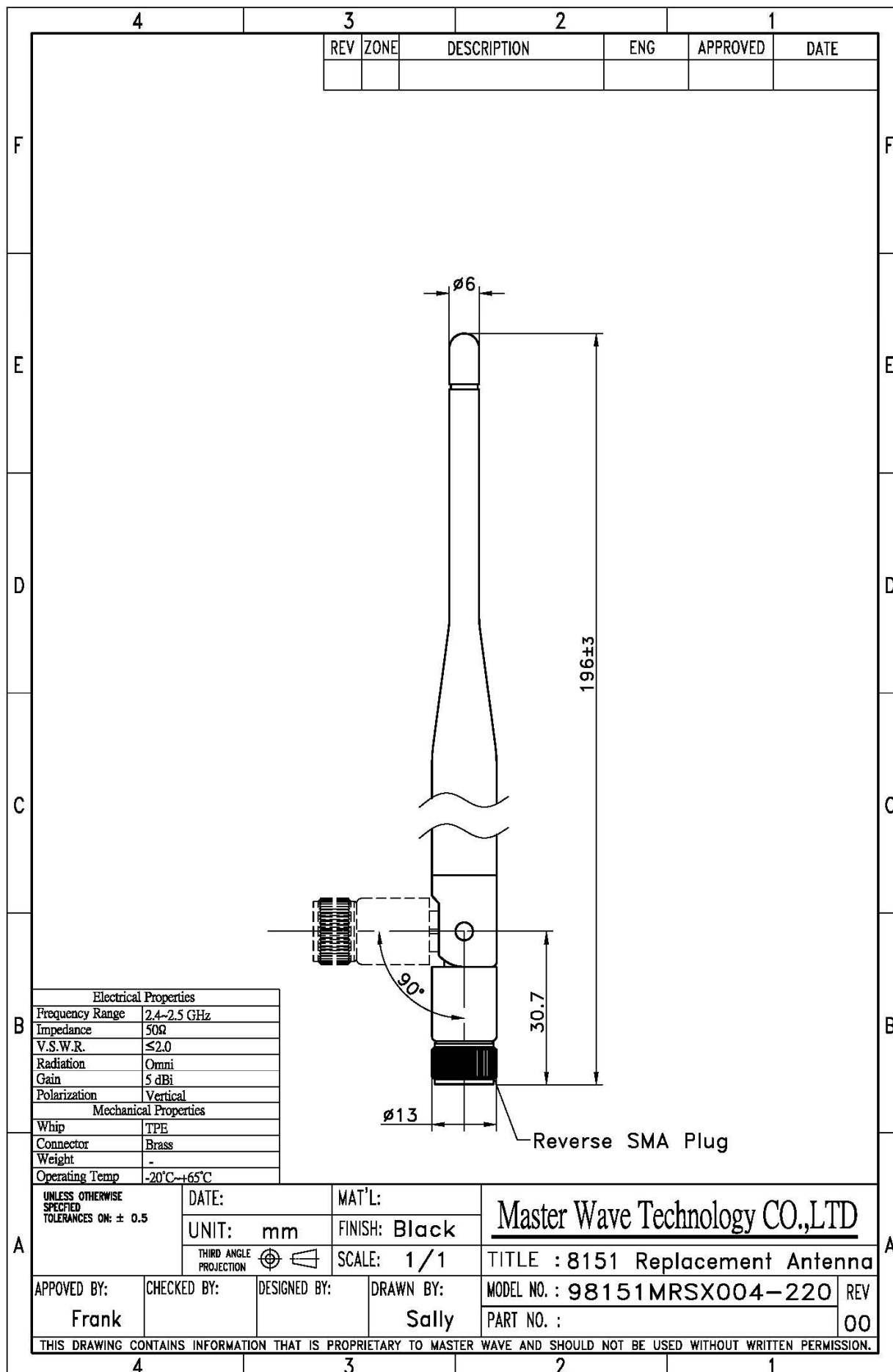
- Connector
-

4. Packing

- PE Bag
- Carton

Modification History:

REV.	Date	Content
00	2009/2/10	





Electrical Properties

Type	Replacement Antenna
Frequency range	2.4~2.5 GHz
Impedance	50 Ohms
VSWR	≤ 2.0

Mechanical Properties

Material	TPE
Connector	Reverse SMA Plug
Dimension(L*W*H)	196* $\varnothing$ 13.0



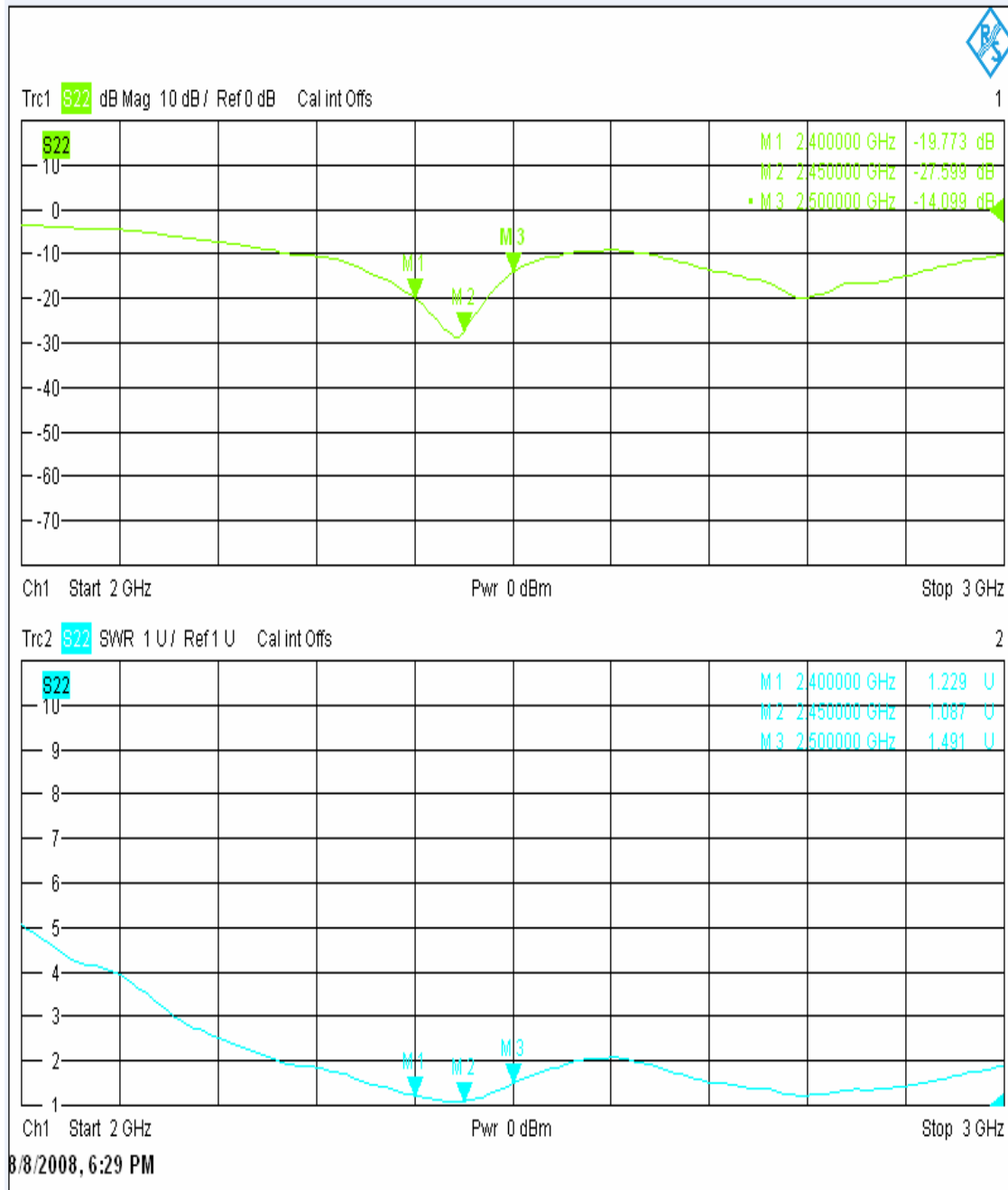
Connector

SMA

Electrical Properties	Impedance	50 ohm
	Frequency Range	0~6 GHz
	V.S.W.R	≤ 1.5
	Working Voltage	$\leq 250V_{rms}$
	Dielectric Withstanding	$\leq 670 V_{rms}$
	Voltage Insulation Resistance	≥ 2000 Megohms
	Contact Resistance	Center contact: 3.0 Milliohms (Max.) Outer contact: 2.0 Milliohms (Max.)
	Recommended coupling nut torque	4.0 in. lbs. ~ 8.8in. lbs.
	Coupling nut retention force	≥ 50 lbs.
	Contact captivation axial	≥ 5 lbs.
	Durability (mating)	≥ 500 cycles
Environmental Ratings	Operating Temperature	-65°C ~ +165°C
	Thermal shock	MIL-STD-202,METHOD 107,Condition B
	Corrosion	MIL-STD-202,METHOD 101,Condition B
	Shock	MIL-STD-202,METHOD 213,Condition I
	Vibration	MIL-STD-202,METHOD 204,Condition D
	Moisture Resistance	MIL-STD-202,METHOD 106
Material Specifications	Material Data	Material
	Body	Brass
	Center Contact	Phosphor Bronze
	Insulator	Teflon or Delrin

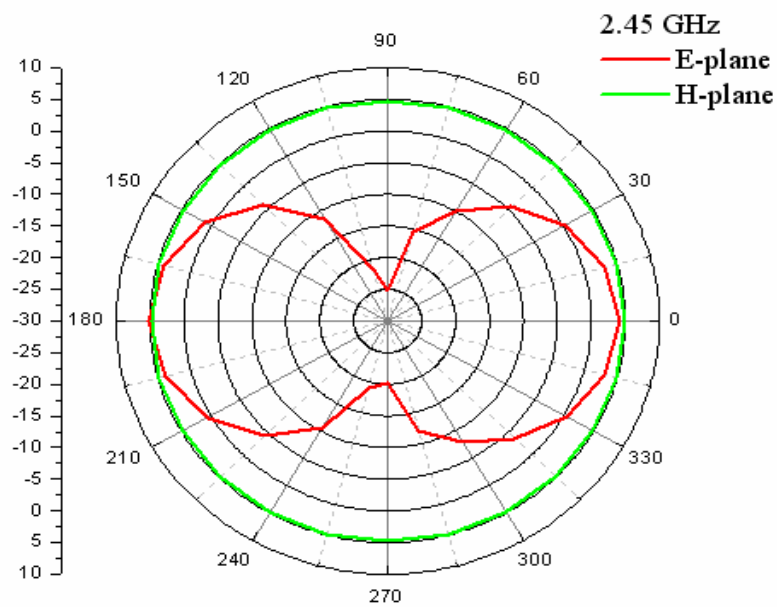
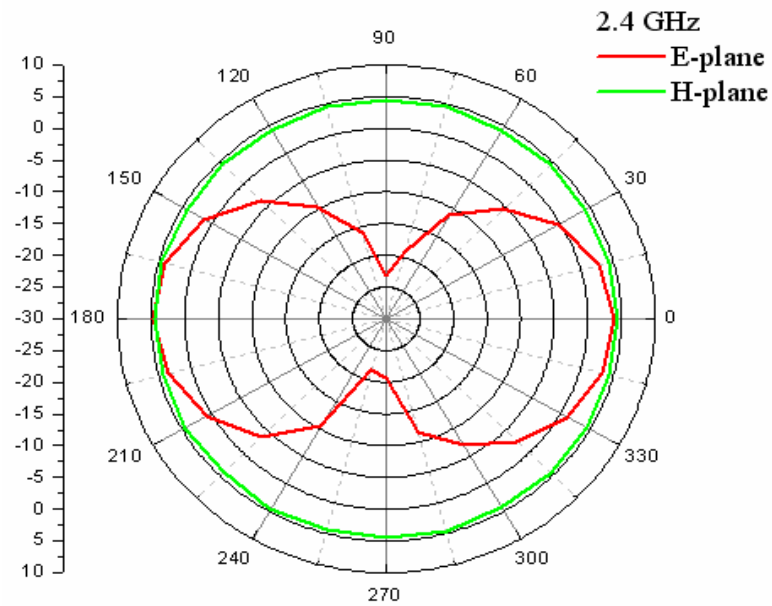


Electrical Test



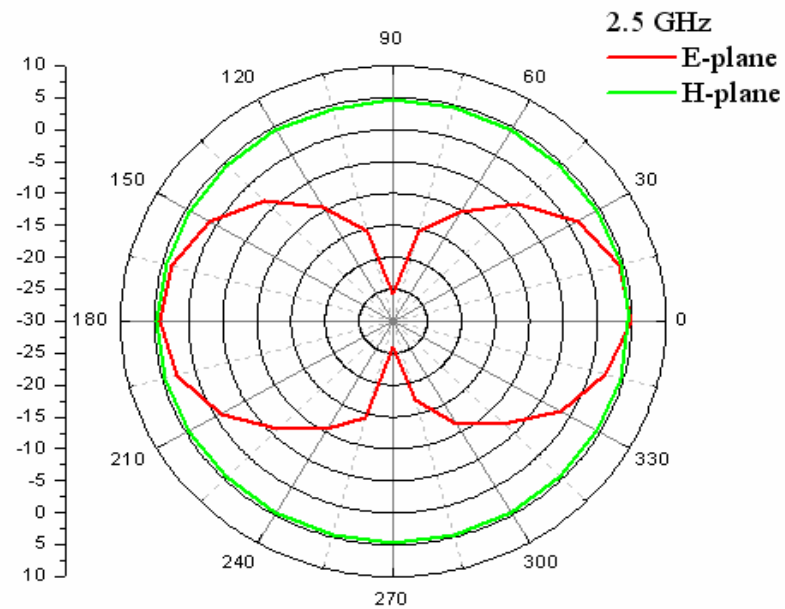


Pattern Test





Pattern Test



AP20-050-MIMO-19

MIMO Directional Antenna

Technical Sheet

Specifications

Model	AP20-050-MIMO-19
Freq.Range-MHz	5125-6100
Bandwidth-MHz	975
Gain-dBi	19(Vertical)
	16(dual slant)
Hor.Beamwidth-°	22(Vertical)
	20(dual slant)
Ver.Beamwidth-°	14(Vertical)
	19(dual slant)
VSWR	≤1.8
Isolation-dB	≥25
F/B Ratio-dB	≥25
Max.power-W	10
Impedance-Ω	50
Polarization	±45° and vertical
Connector	3×N-type female
Dimensions-mm	305×305×12
Weight-Kg	0.8(without clamps)
Mounting	pole

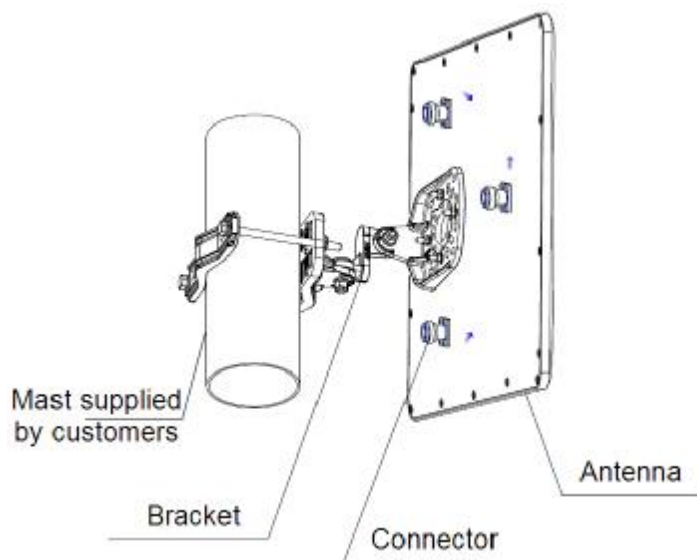
Applications

- ┆ 5.8GHz WLAN system
- ┆ 5.8GHz UNII/ISM system
- ┆ Point to point or point to multipoint

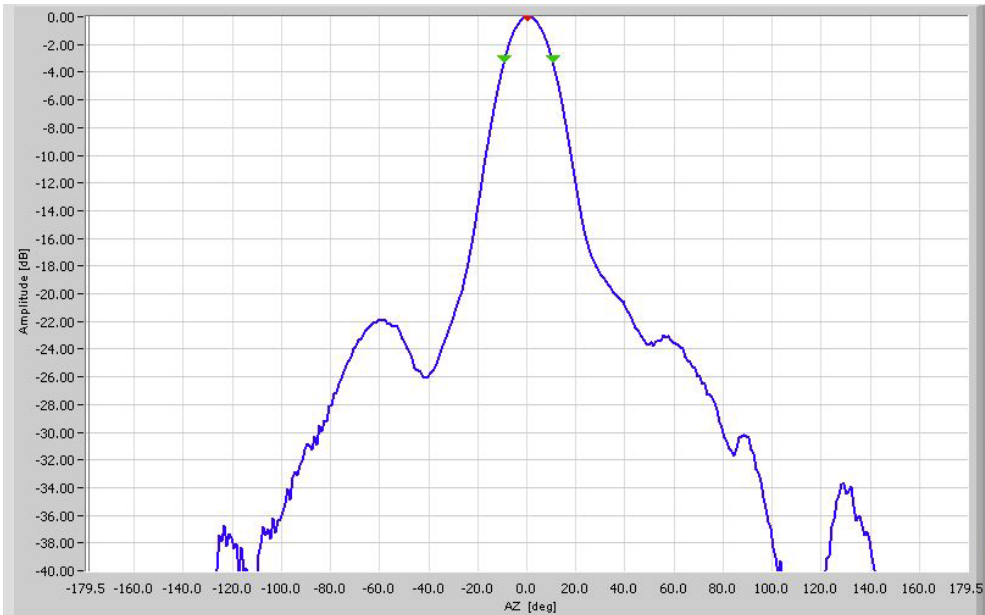
Features

- ┆ Broad band, 5.1/5.5/5.8/6.1GHz
- ┆ Triple polarization
- ┆ MIMO application
- ┆ High gain, Low VSWR
- ┆ Strong corrosion resistance ability

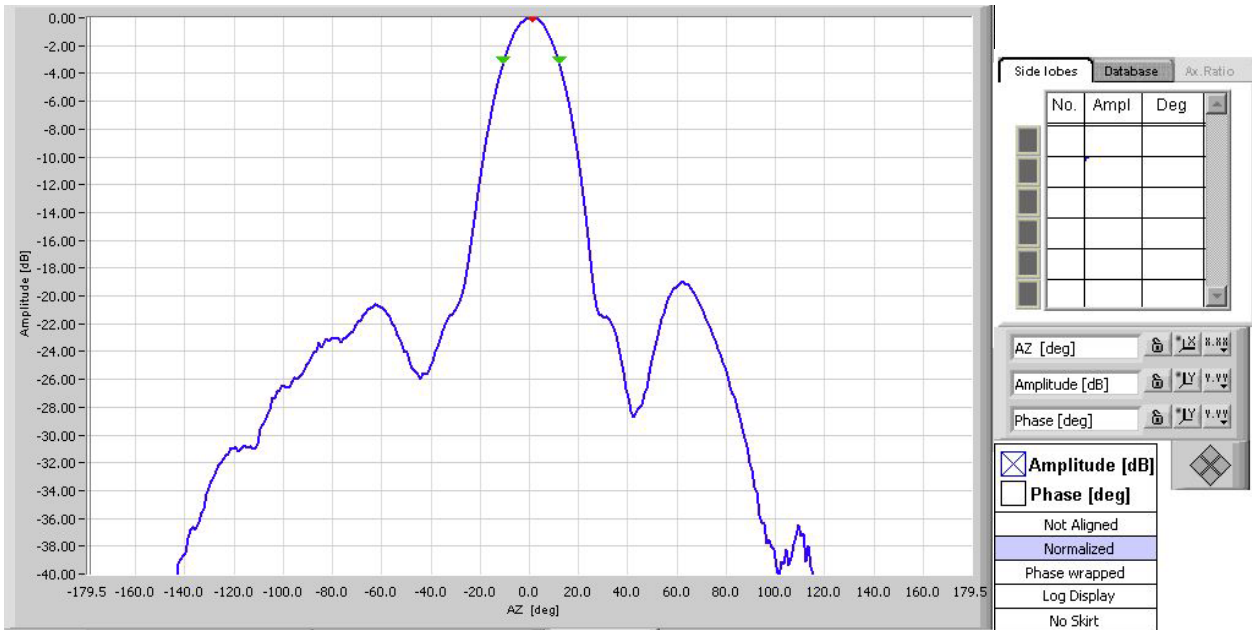
Installation sketch



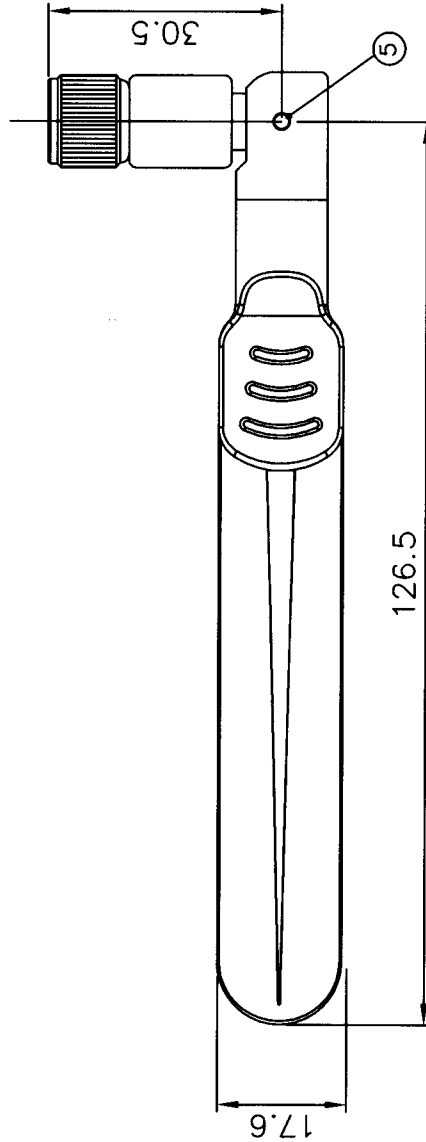
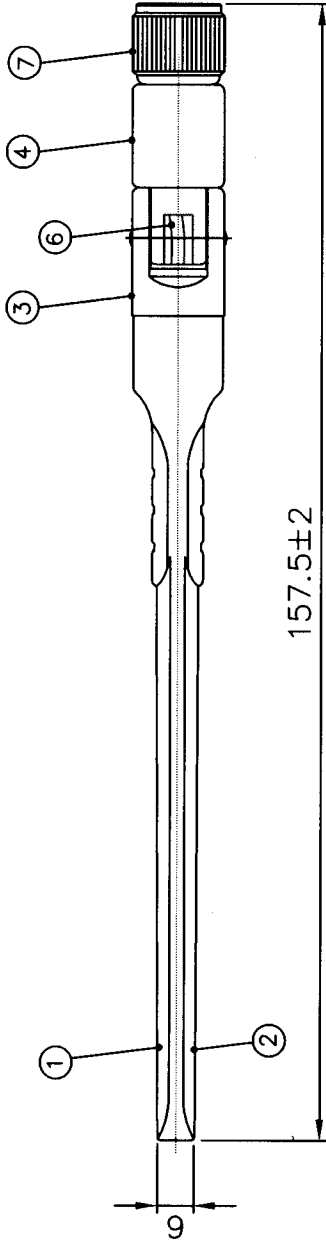
MIMO E-plane Dual Slant

[illegible]

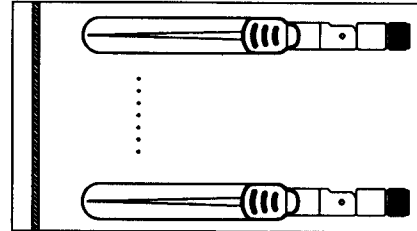
MIMO H-plane Vertical pol.

[illegible]

REV	DATE	DESCRIPTION
X1	6/24-2005	New Issue
X2	7/4-2005	Modify all



PE Bag
Shrink Line



NO	DESCRIPTION	QTY	REMARK
7	Connector	1	SMA Plug Straight Reverse
6	Cable	1	RG-178 Cable
5	Rivet	1	POM ; Black
4	Antenna Base	1	PBT Color : Black
3	Antenna Base	1	PC+ABS , Color : Black
2	Antenna Housing(S)	1	PC+ABS , Color : Black
1	Antenna Housing(M)	1	PC+ABS , Color : Black

Wha Yu
INDUSTRIAL CO.,LTD.
譚裕實業股份有限公司

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CUSTOMER:		Fire tide
PART NO :		
PARTNAME:		RF Antenna Assembly
W.Y PNO :		C812-510012-A
REV	UNIT	FILE :
X2	m/m	SHEET : 1/1

APPROVED	CHECKED	DRAWING
程淑娟	程淑娟	程淑娟

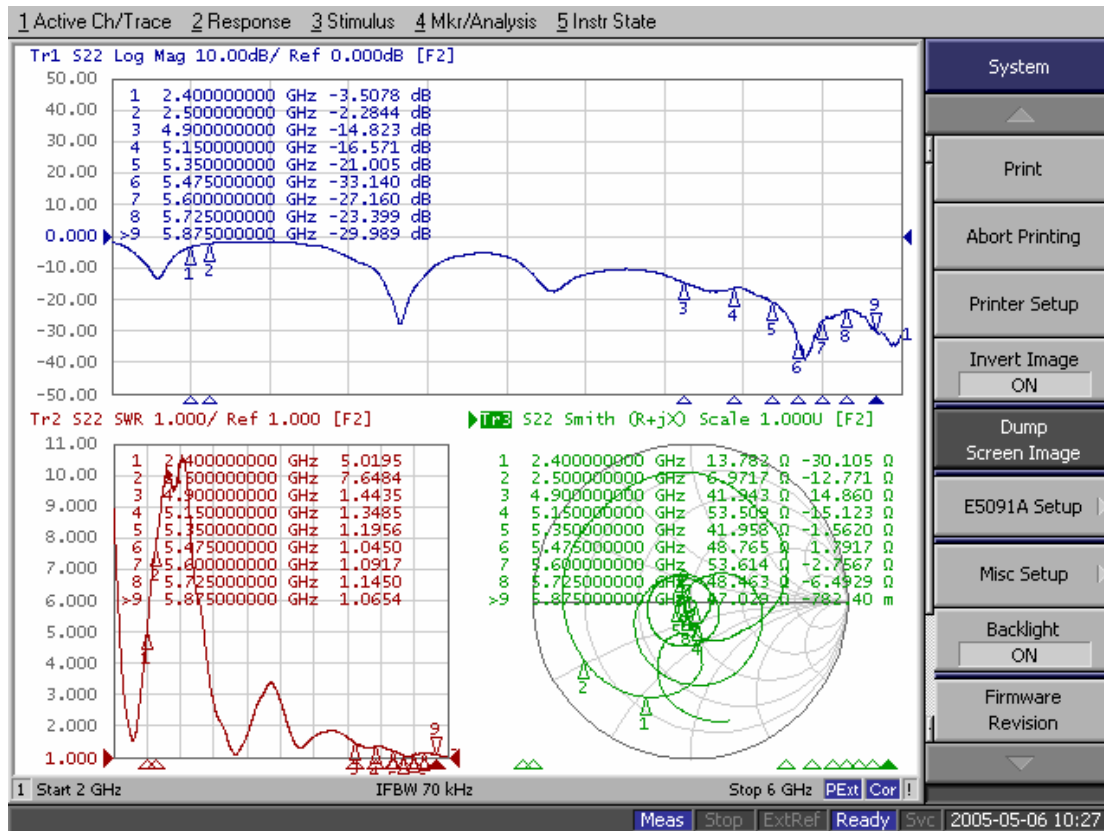
XX	±3.0
X	±2.0
X	±1.0
XX	±0.5
XXX	±0.1

CUSTOMER'S SIGNATURE	
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華裕實業股份有限公司
WHA YU INDUSTRIAL CO., LTD

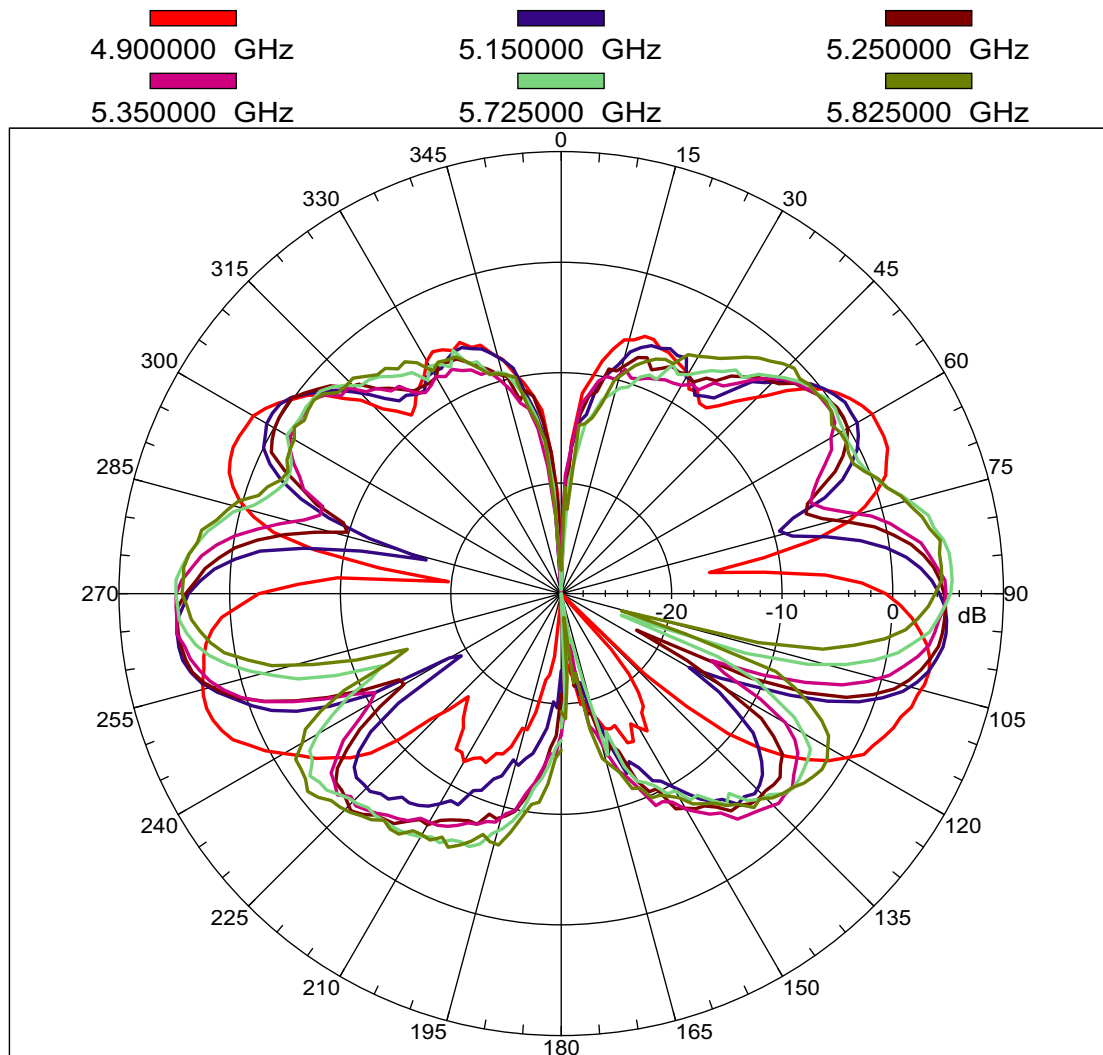
RF Antenna Assembly
P/NO :C812-510012-A SPEC : 5GHz



6/24/2005

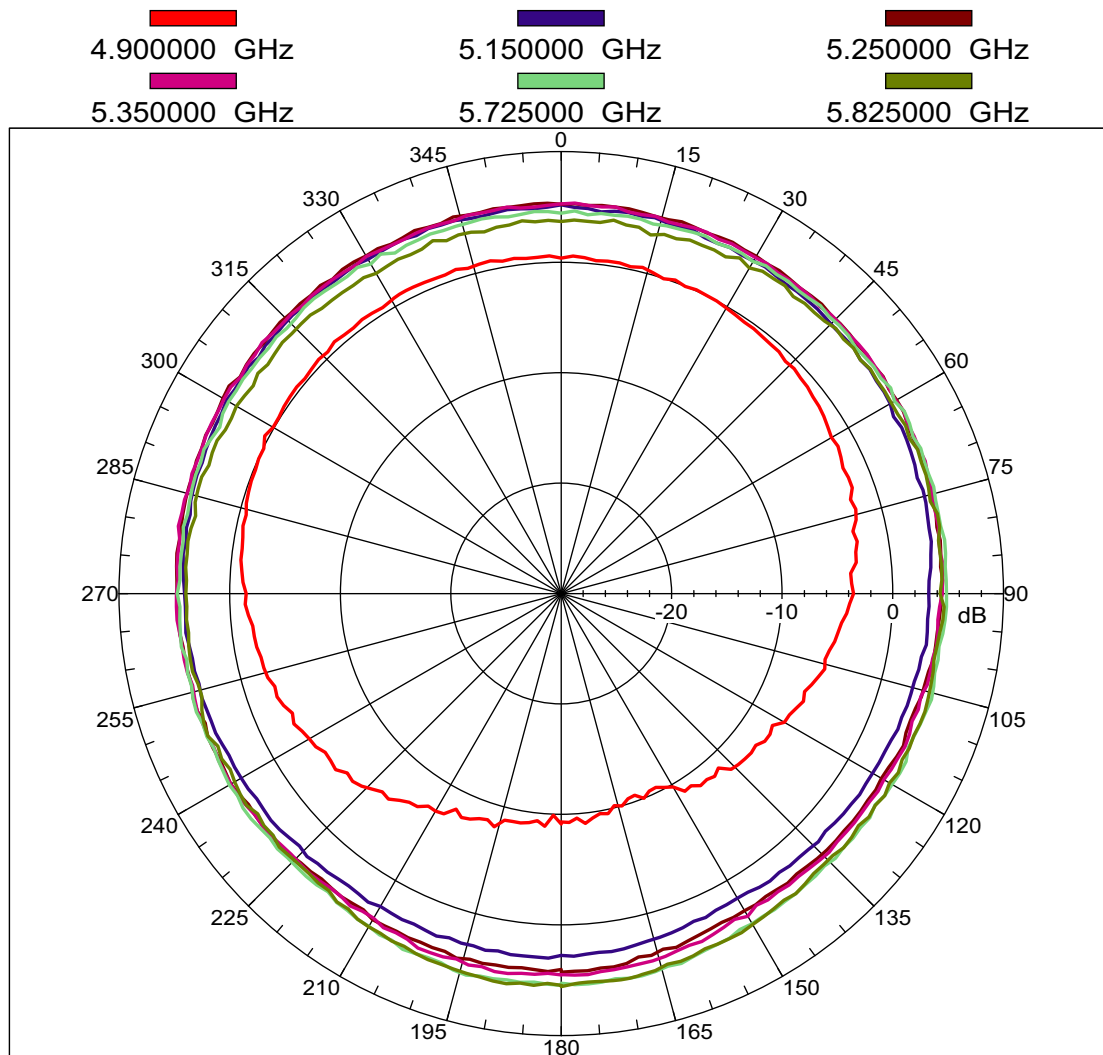


Far-field amplitude of C812-510012-A.nsi





Far-field amplitude of C812-510012-A.nsi



5.125–6.1 GHz Triple Polarization MIMO Subscriber Antenna MA-WA55-TPMIMO

Radiations Patterns

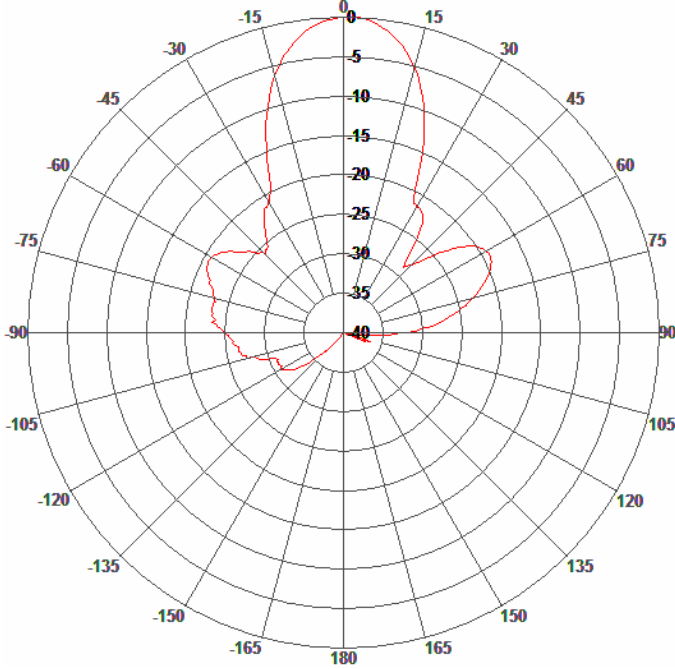
Frequency
Gain, typ.

5500 MHz
Vertical 19 dBi

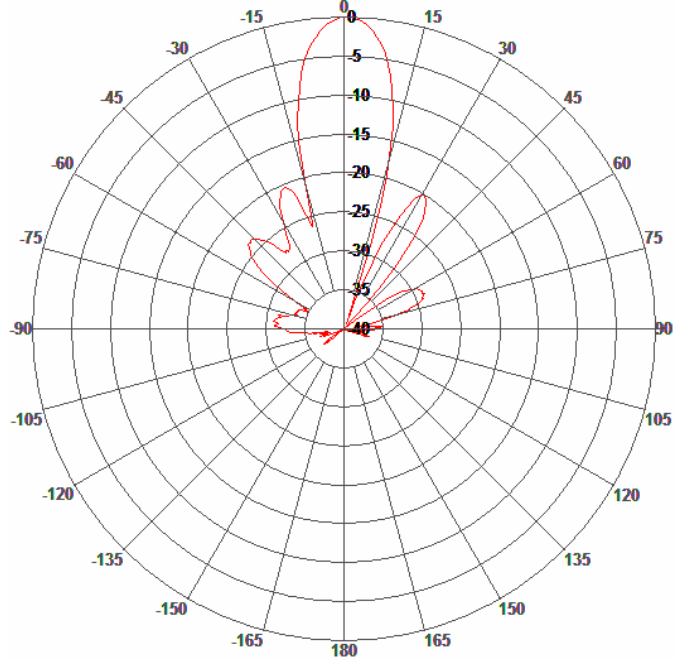
Slant 17.5 dBi

Vertical Polarization

Azimuth Pattern

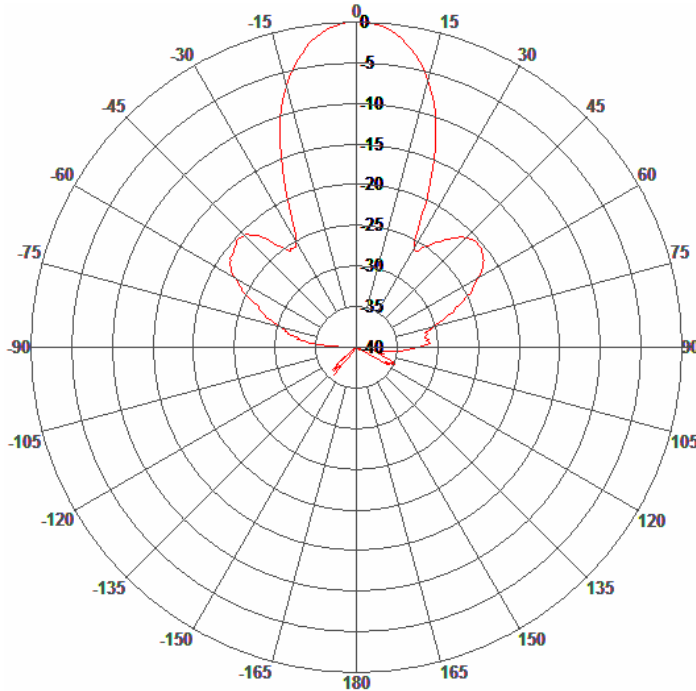


Elevation Pattern

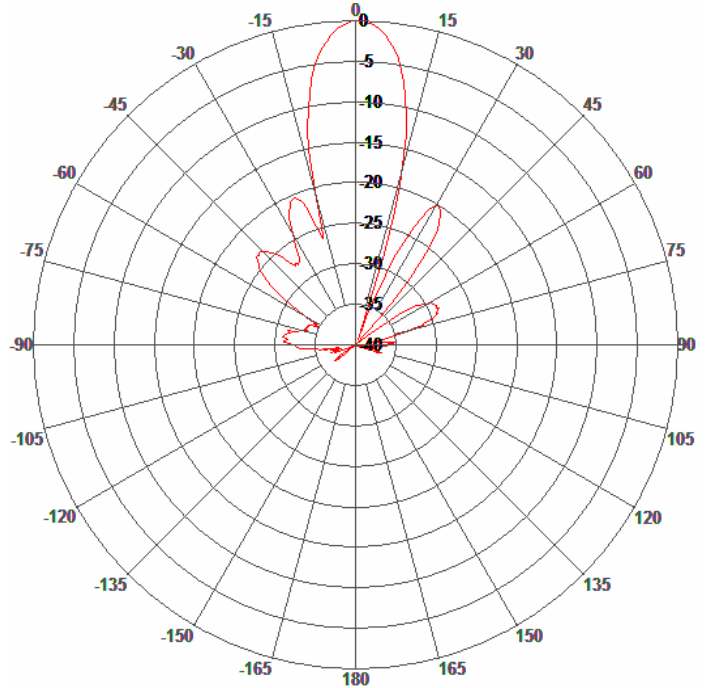


Slant $\pm 45^\circ$ Polarization

Azimuth Pattern



Elevation Pattern



2.3-2.7 GHz Base Station Antenna, 90°

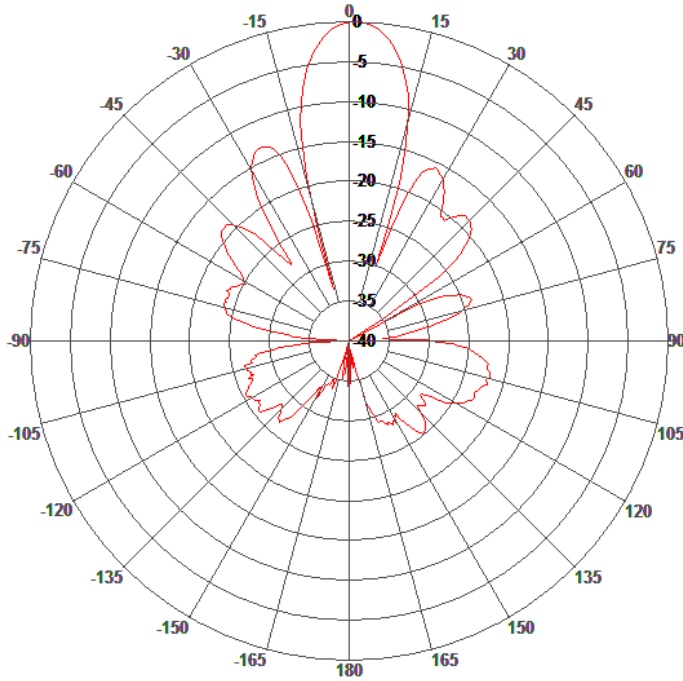
MA-WD24-13MIMO

Radiations Patterns

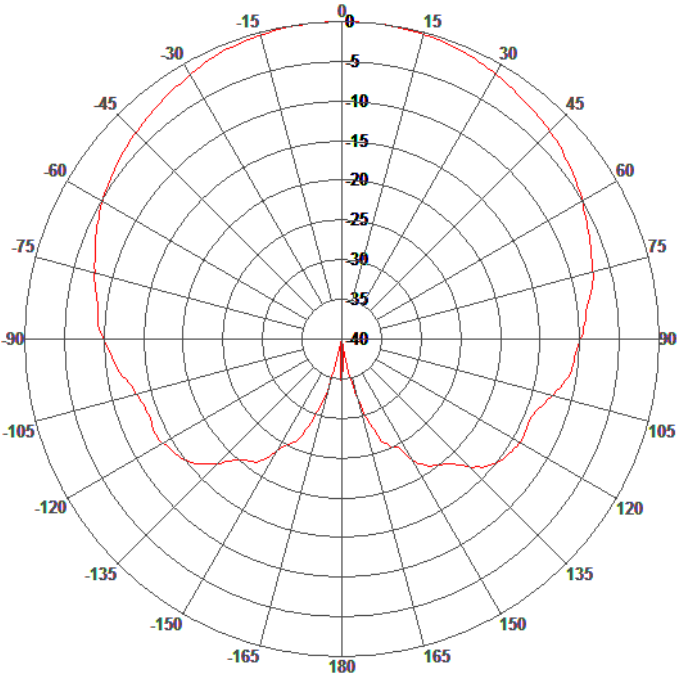
Frequency
Gain, typ.

2550 MHz
13 dBi

E-Plane Pattern



H-Plane Pattern



4.9-6.1 GHz MIMO Base Station Antenna, 90°

MA-WD55-16MIMO

Radiations Patterns

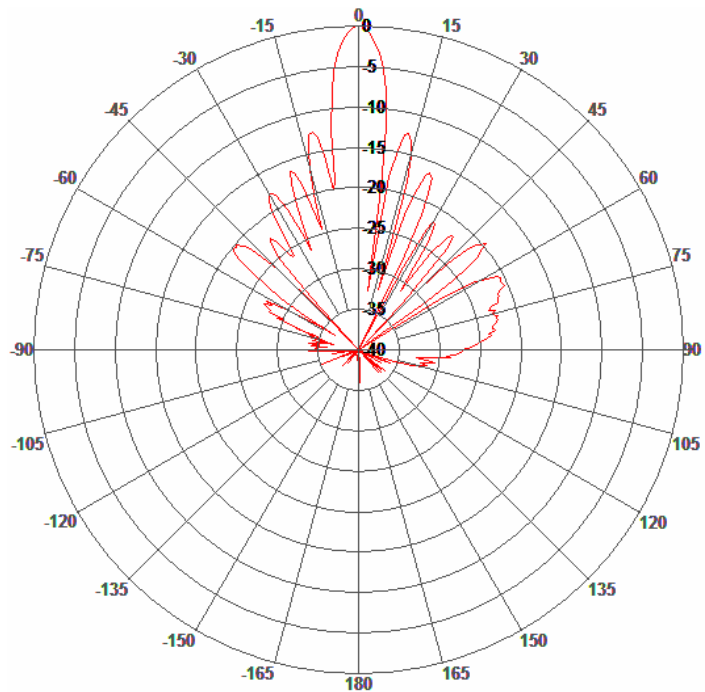
Frequency

5800 MHz

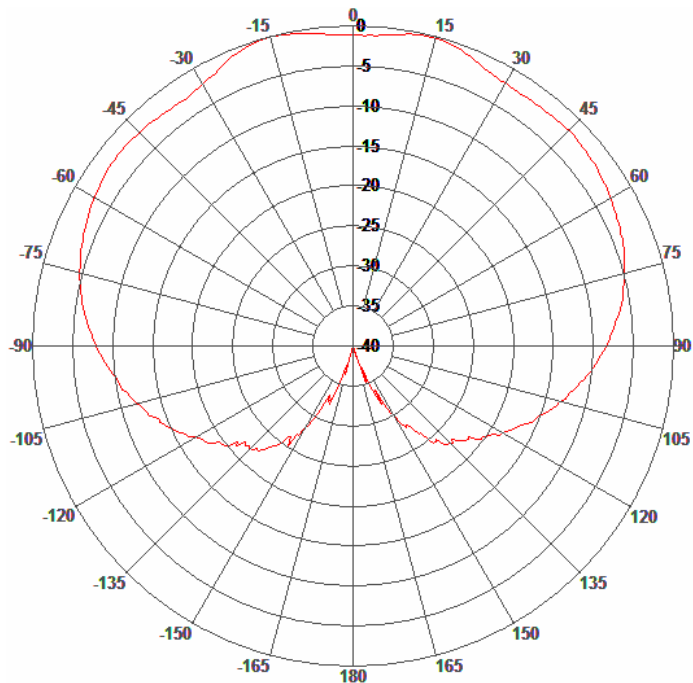
Gain, typ.

16 dBi

E-Plane Pattern



H-Plane Pattern



4.9 - 5.875 GHz MIMO Omni – Directional Base Station Antenna

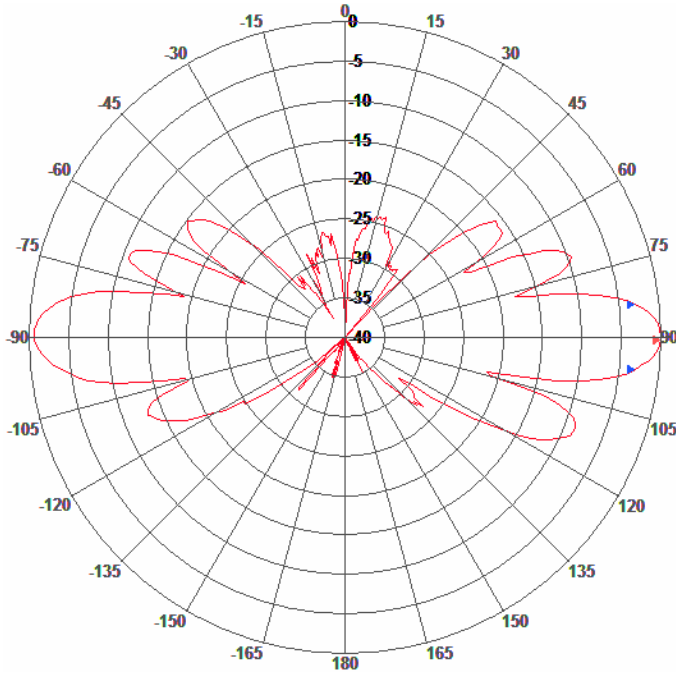
MA-WO55-MIMONHFT9

Radiations Patterns

Frequency
Gain, typ.

5500 MHz
9 dBi

E-Plane Pattern



H-Plane Pattern

