

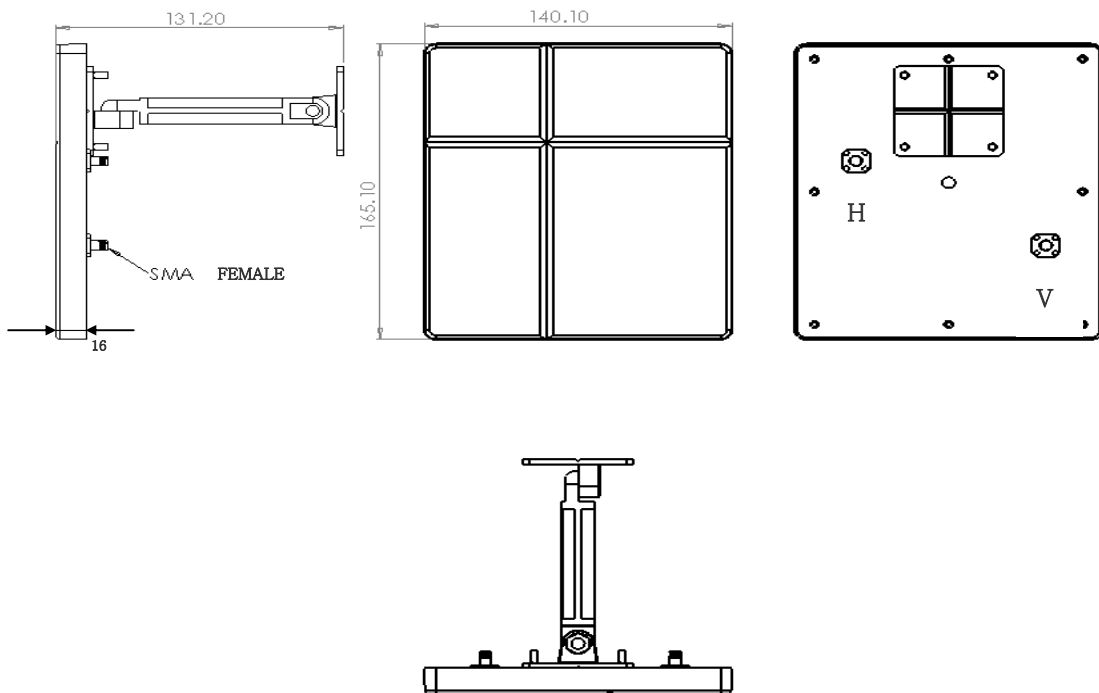


DATA SHEET

Model No. : ANT58-1510PC
Description : 4.9~5.9 GHz DUAL POLARIZATION
PANEL ANTENNA
Date : 2010/05/20
Rev : 1



1. OVERVIEW & SPECIFICATIONS

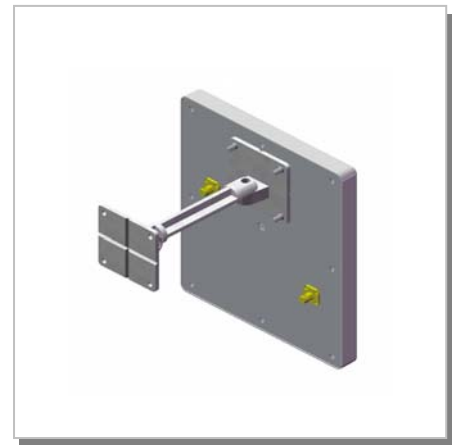
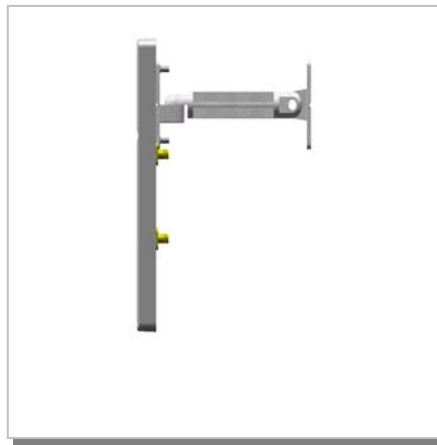


Electrical Specifications:

Frequency Range :	4.9~5.9GHz
VSWR :	≤ 2.0
Impedance :	$50\Omega \pm 5\Omega$
Gain :	15dBi
Polarization :	Dual polarization
Power Handling :	10 Watt

Mechanical Specifications:

Connector :	SMA FEMALE
Operation Temp. :	$-30^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Material :	Radome: ABS Mount: Zinc Alloy
Dimension (L*W*H) :	165.1*140.1*16 mm
Weight :	$190\text{g} \pm 5\text{g}$
Color :	White





2. TESTING CONDITION

2.1 TEST SETUP

VSWR measurement (S11): Use ROHDE & SCHWARZ ZV8 Network Analyzer with Harbour RG-142 coaxial cable: 1000mm length in free space.

2.1.1 VSWR

The table as below summarizes concern about Return loss measurement according to The frequency band is based on FWS design. The detail be shown as appendix that is from ROHDE & SCHWARZ ZV8 Network Analyzer

VSWR Performance			
Freq(MHz)	4900	5000	5100
Free space(port 1)	1.52	1.65	1.7
Free space(port 2)	1.04	1.12	1.07
Freq(MHz)	5200	5300	5400
Free space(port 1)	1.85	1.64	1.61
Free space(port 2)	1.08	1.19	1.12
Freq(MHz)	5500	5600	5700
Free space(port 1)	1.48	1.36	1.5
Free space(port 2)	1.17	1.33	1.52
Freq(MHz)	5800	5900	-
Free space(port 1)	1.66	1.65	-
Free space(port 2)	1.36	1.23	-



3. GAIN MEASUREMENT

3.1 TEST SETUP

The gain of the antenna was measured by **FWS** Chamber. The chamber provides less than -30 dB reflectivity from 800 MHz through 6 GHz and a 60cm diameter spherical quiet zone. The measurement results are calibrated using both **SCHWARZBECK** horn standards. A decoupling sleeve is used to reduce feed line radiation

3.2 TEST RESULT

The peak gain is picked up as table list from Network analyzer in Chamber room, the completely gain plots also be shown as appendix.

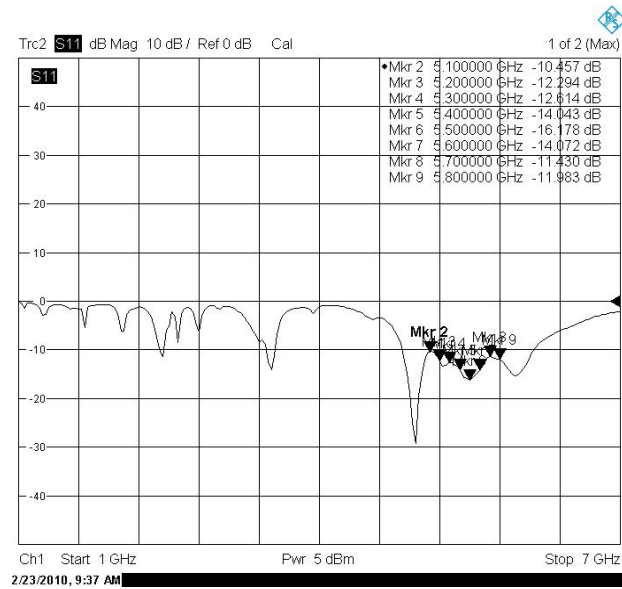
Peak Gain (dBi)			
Freq(MHz)	4900	5000	5100
Port 1	13.42	15.08	14.11
Port 2	15.02	14.67	14.04
Freq(MHz)	5200	5300	5400
Port 1	12.35	11.67	12.24
Port 2	12.84	13.42	14.48
Freq(MHz)	5500	5600	5700
Port 1	13.24	13.09	13.19
Port 2	14.67	14.1	14.5
Freq(MHz)	5800	5900	-
Port 1	12.11	13.36	-
Port 2	13.5	14.27	-



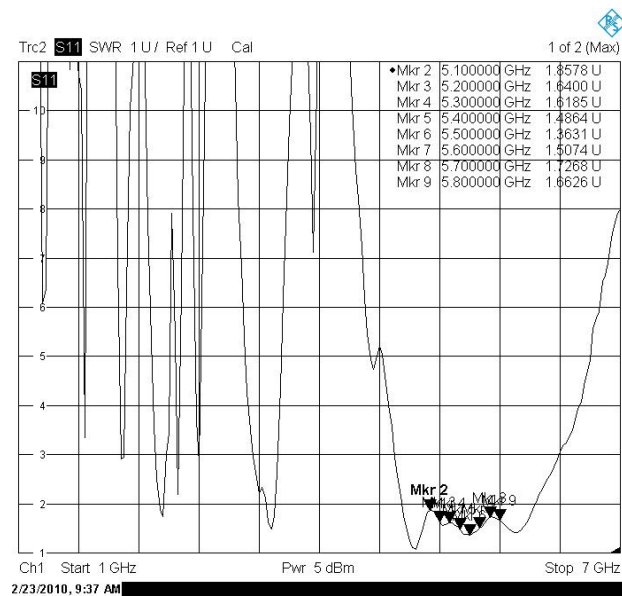
4. APPENDIX

4.1 RETURN LOSS & VSWR

RETURN LOSS (port 1)

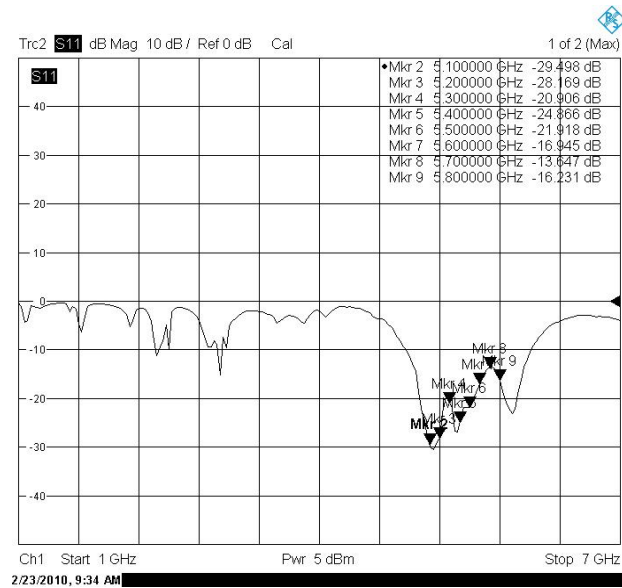


SWR (port 1)

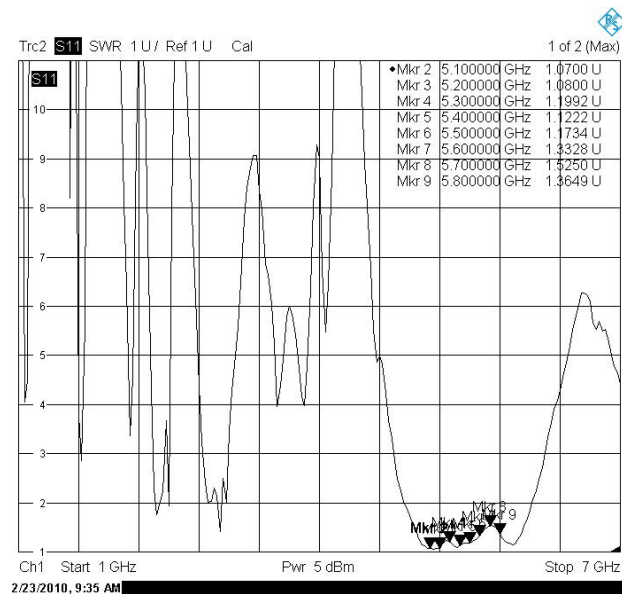




RETURN LOSS (port 2)



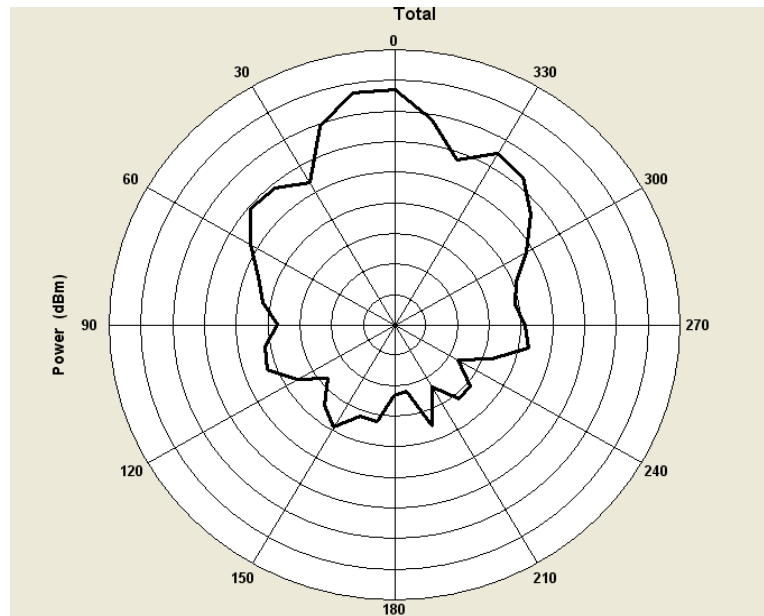
SWR (port 2)



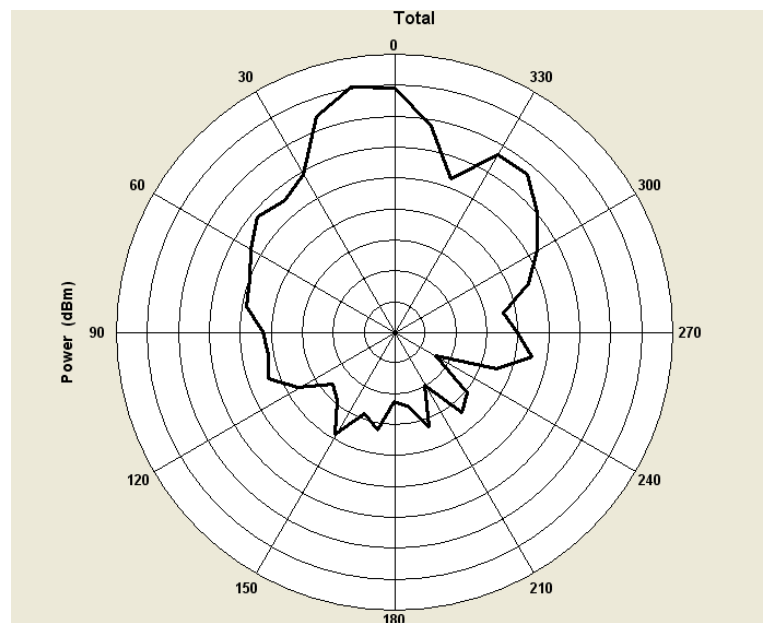


4.2 RADIATION PATTERN

4900 GHz (port 1)

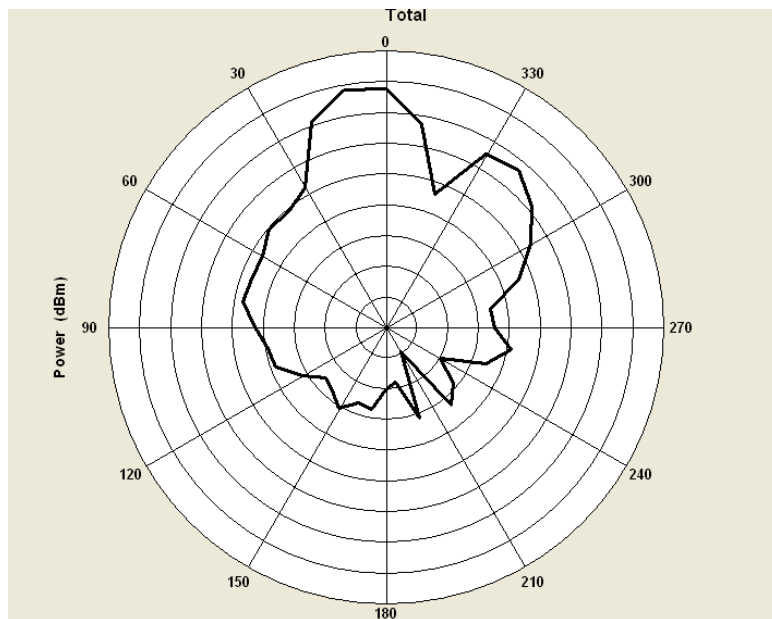


5000 GHz (port 1)

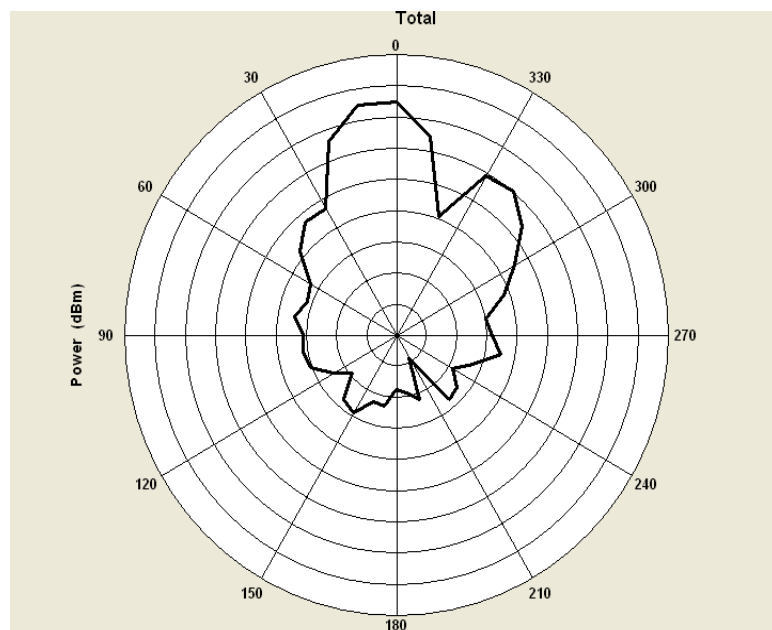




5100 GHz (port 1)

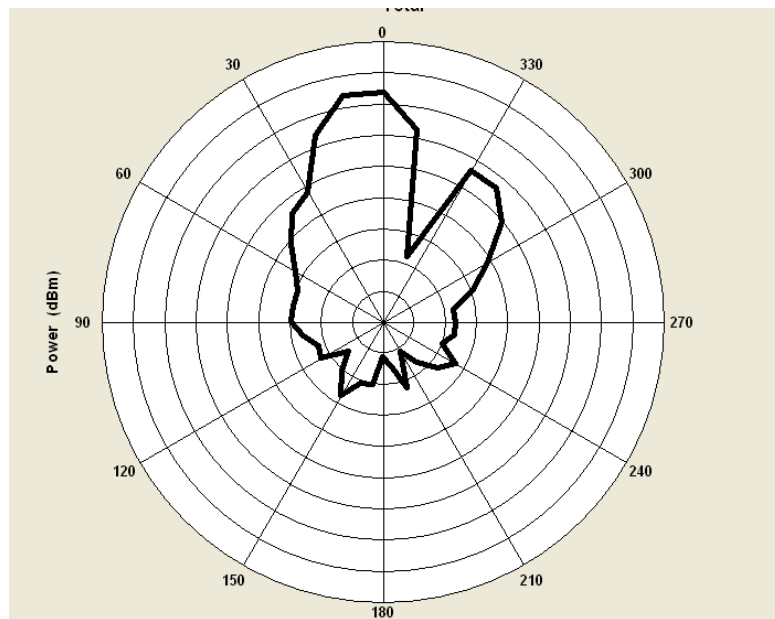


5200 GHz (port 1)

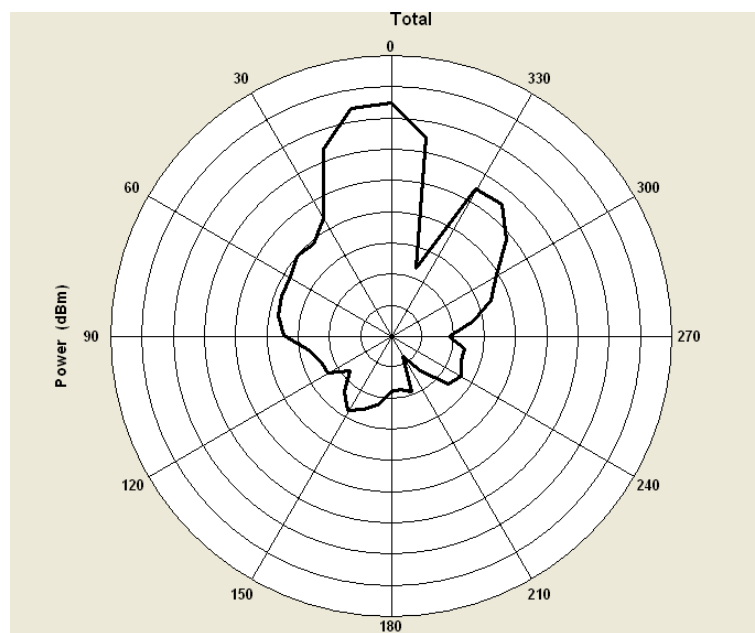




5300 GHz (port 1)

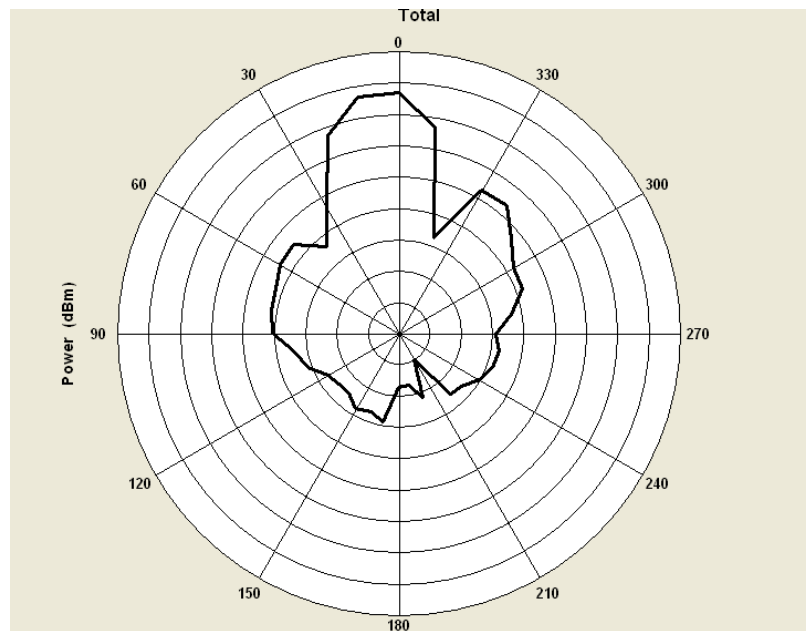


5400 GHz (port 1)

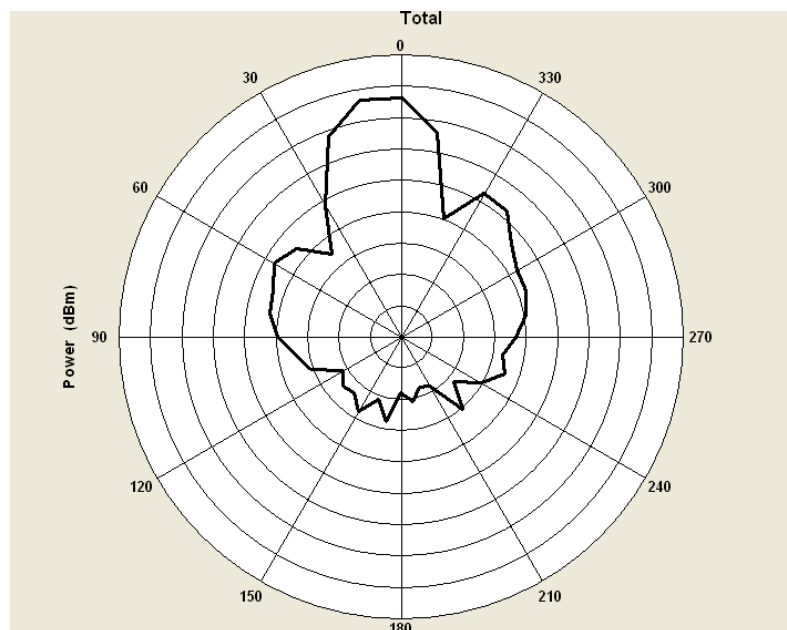




5500 GHz (port1)

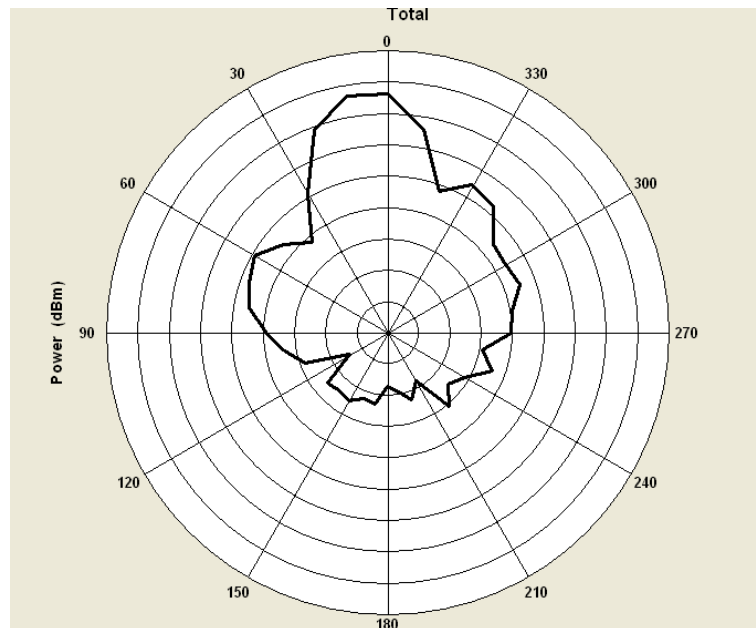


5600 GHz (port1)

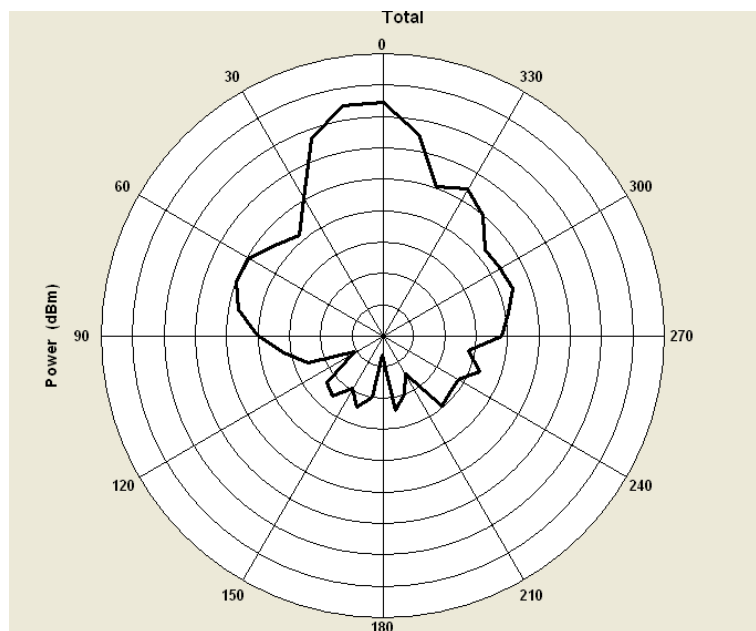




5700 GHz (port 1)



5800 GHz (port 1)



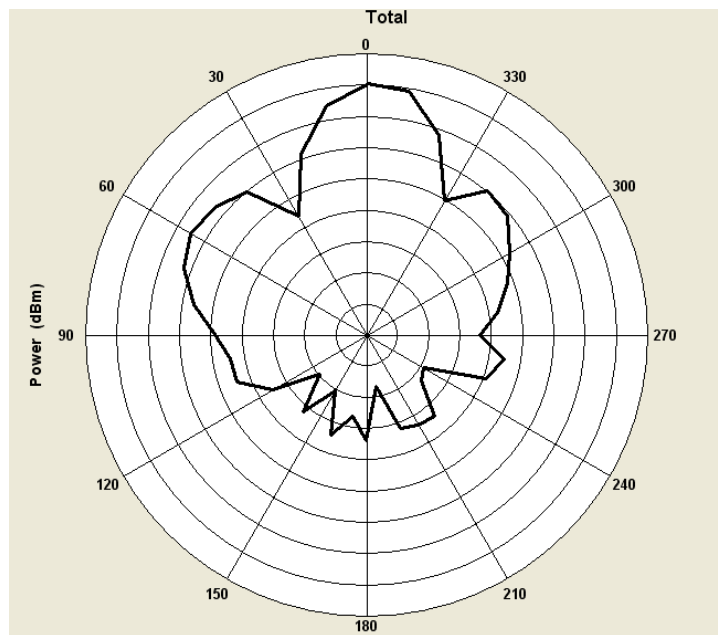


5900 GHz (port 1)

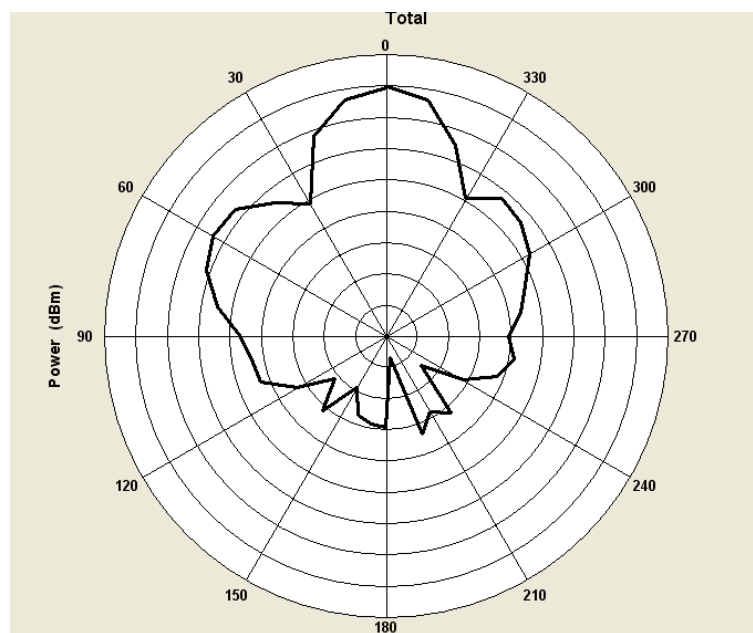




4900 GHz (port 2)

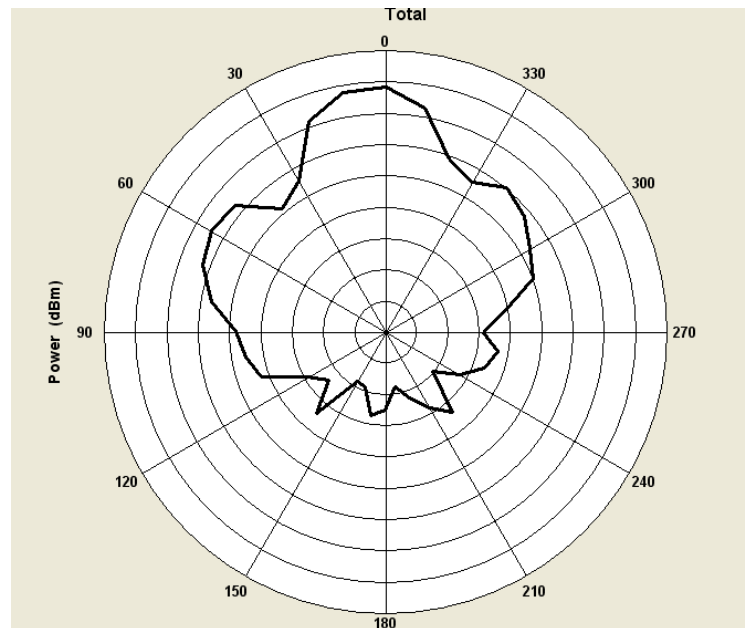


5000 GHz (port 2)





5100 GHz (port 2)

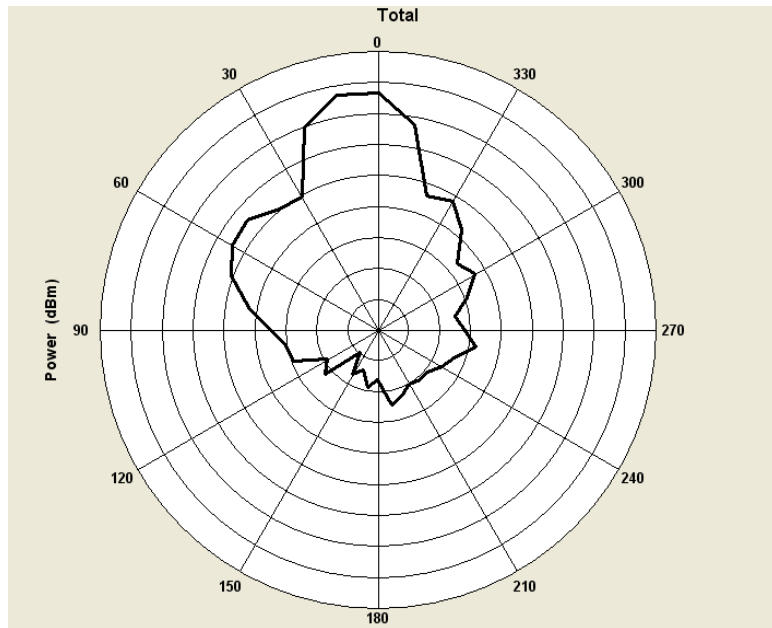


5200 GHz (port 2)

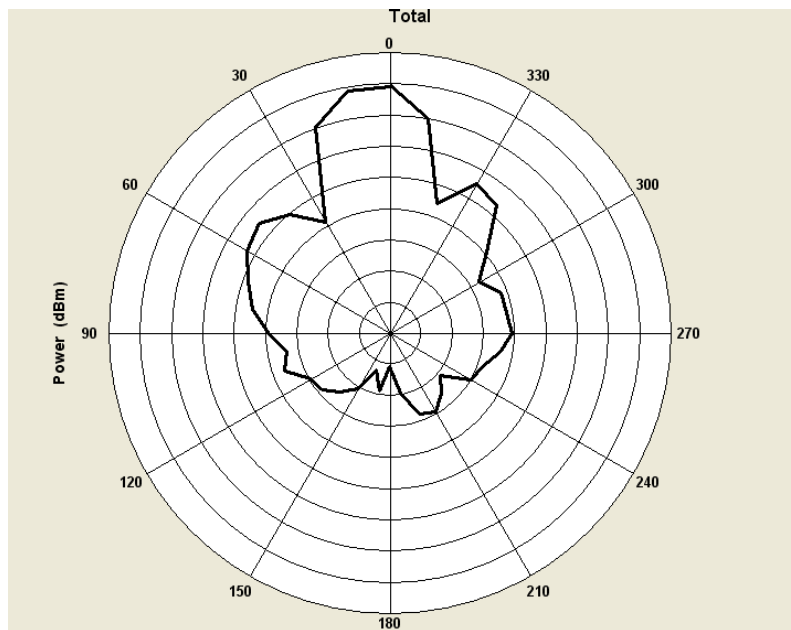




5300 GHz (port 2)

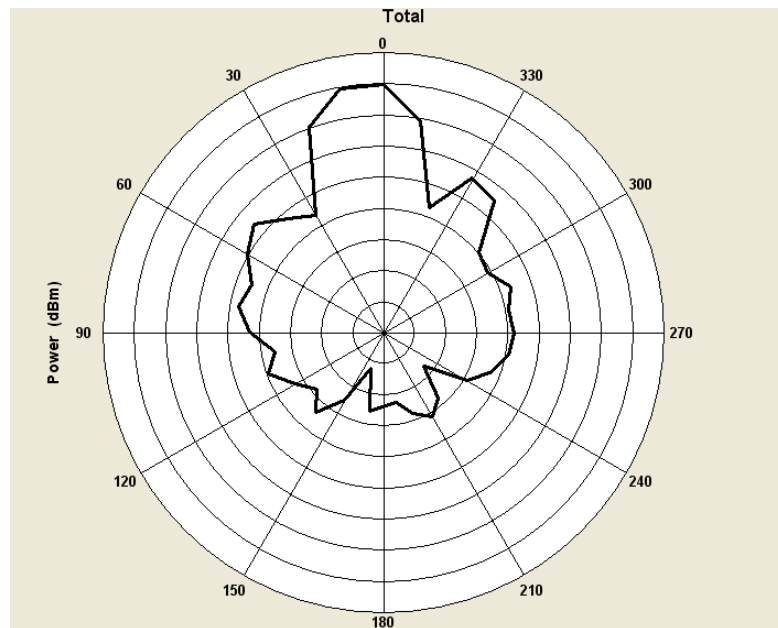


5400 GHz (port 2)

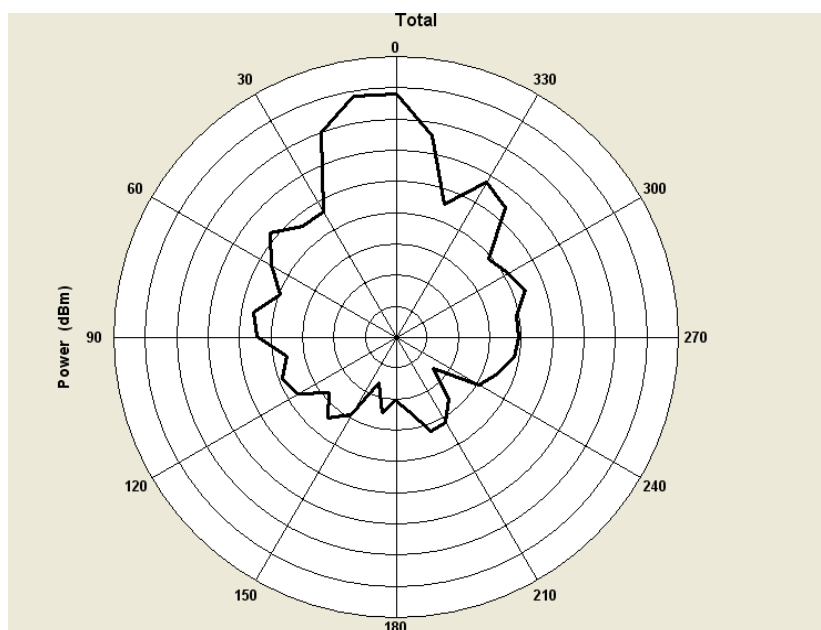




5500 GHz (port 2)

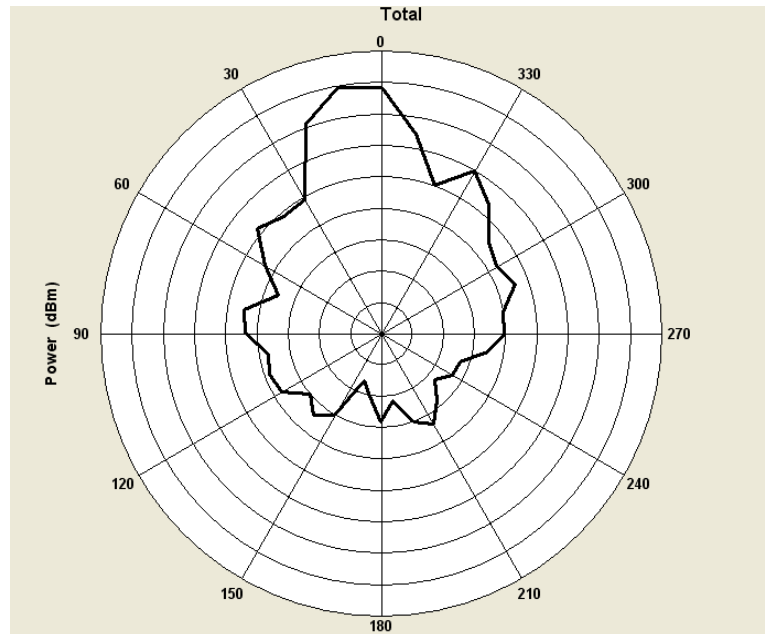


5600 GHz (port 2)

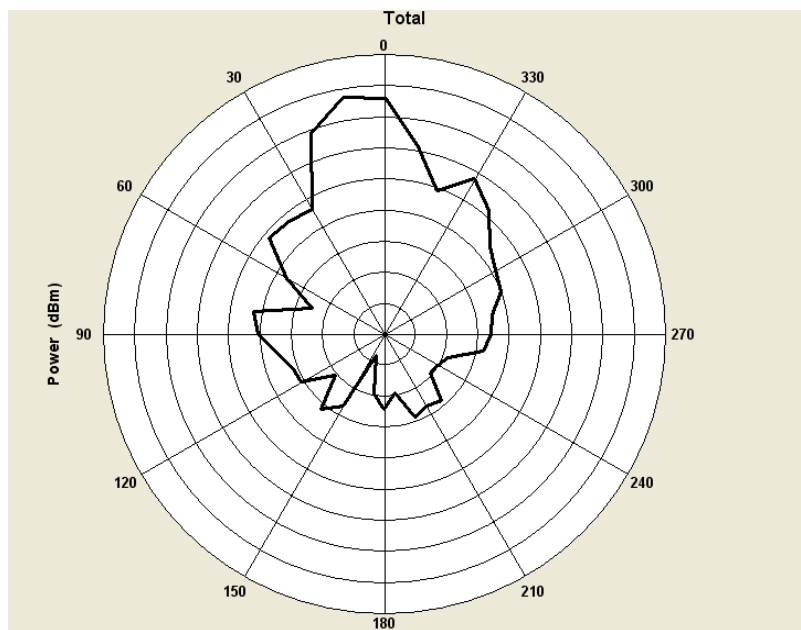




5700 GHz (port 2)



5800 GHz (port 2)





5900 GHz (port 2)

