Antenna Specification

Tested Products: HB1-32_V1.0

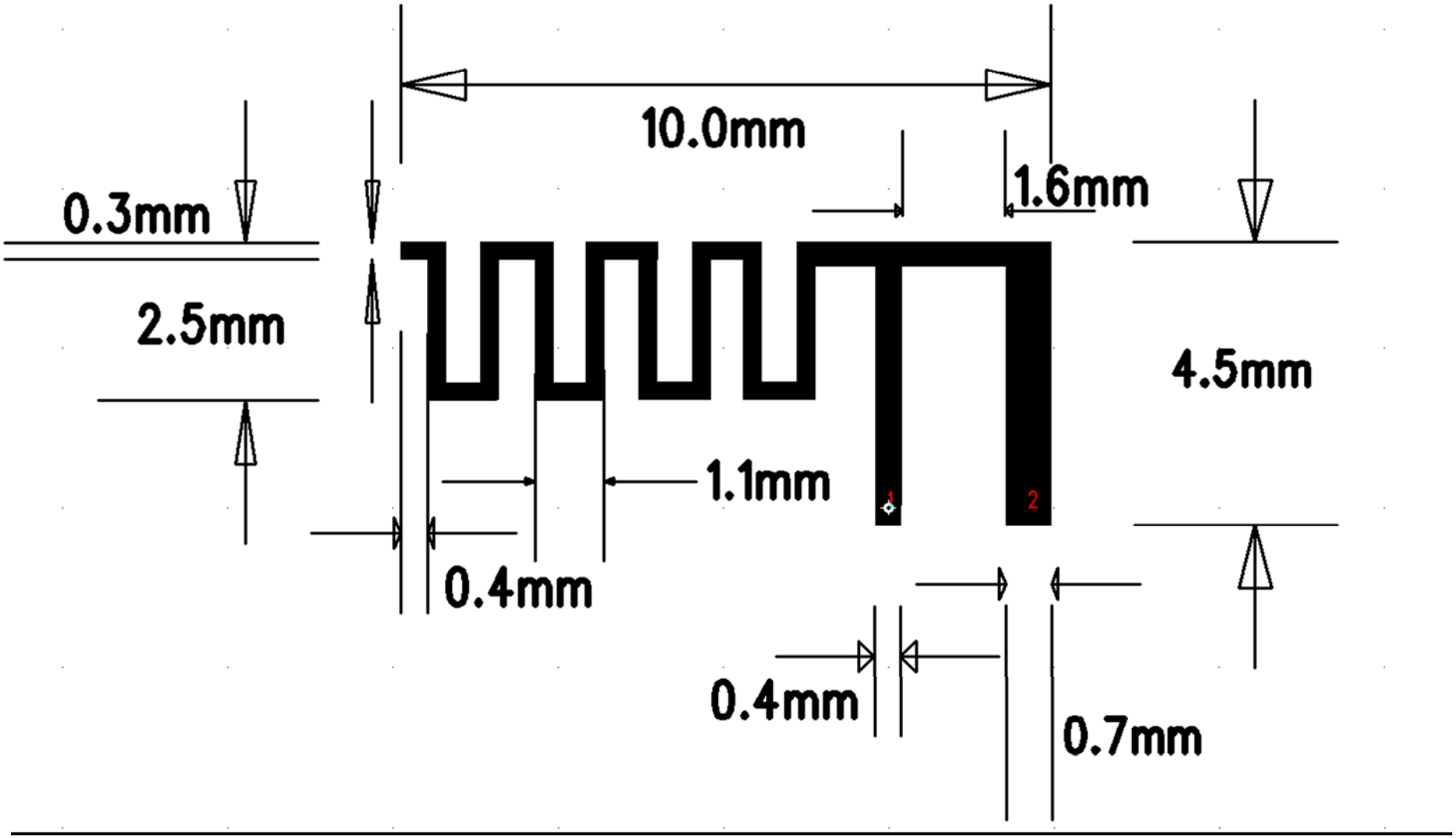
Manufacturer：ShenZhen Belon Technology Co.,Ltd

Antenna type：PCB Antenna

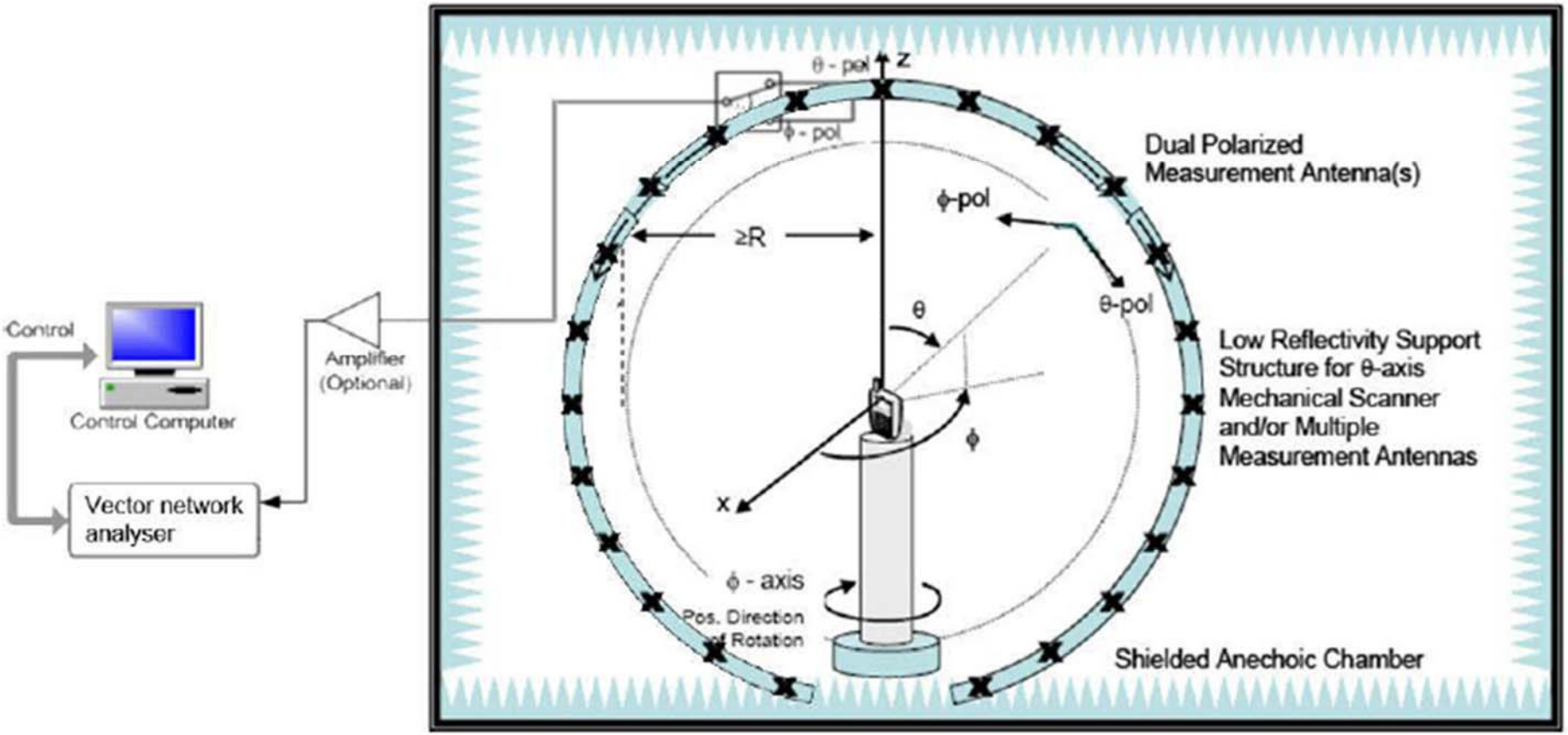
Max Gain: 1.87 dBi

- Antenna 1: integrated antenna.
  - Frequency = 2.402GHz.
  - Frequency = 2.440GHz.
  - Frequency = 2.480GHz.

• Antenna Photo &Length(mm)



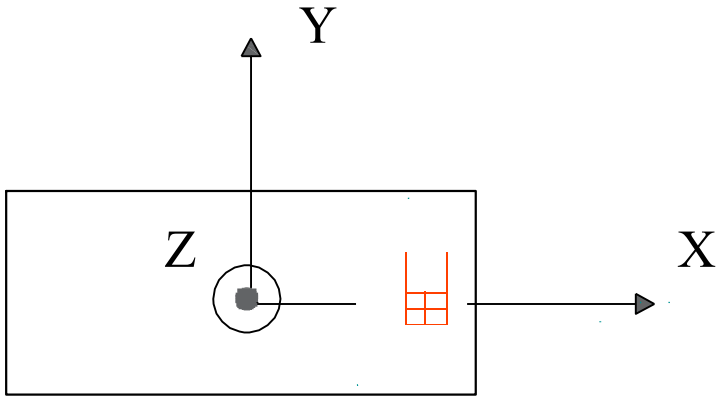
• Test Setup


Control
Control Computer
Vector network analyser
Amplifier (Optional)
θ - pol
z
ϕ - pol
Dual Polarized Measurement Antenna(s)
ϕ-pol
≥R
θ
θ-pol
Low Reflectivity Support Structure for θ-axis Mechanical Scanner and/or Multiple Measurement Antennas
ϕ
x
ϕ - axis
Pos. Direction of Rotation
Shielded Anechoic Chamber

Coordinate System Reference:Antenna 1.

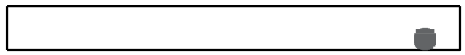
Top view

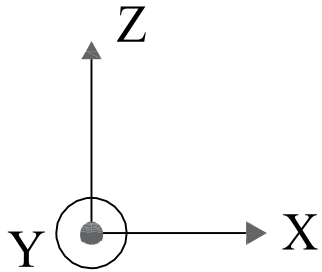
Front view



Side view

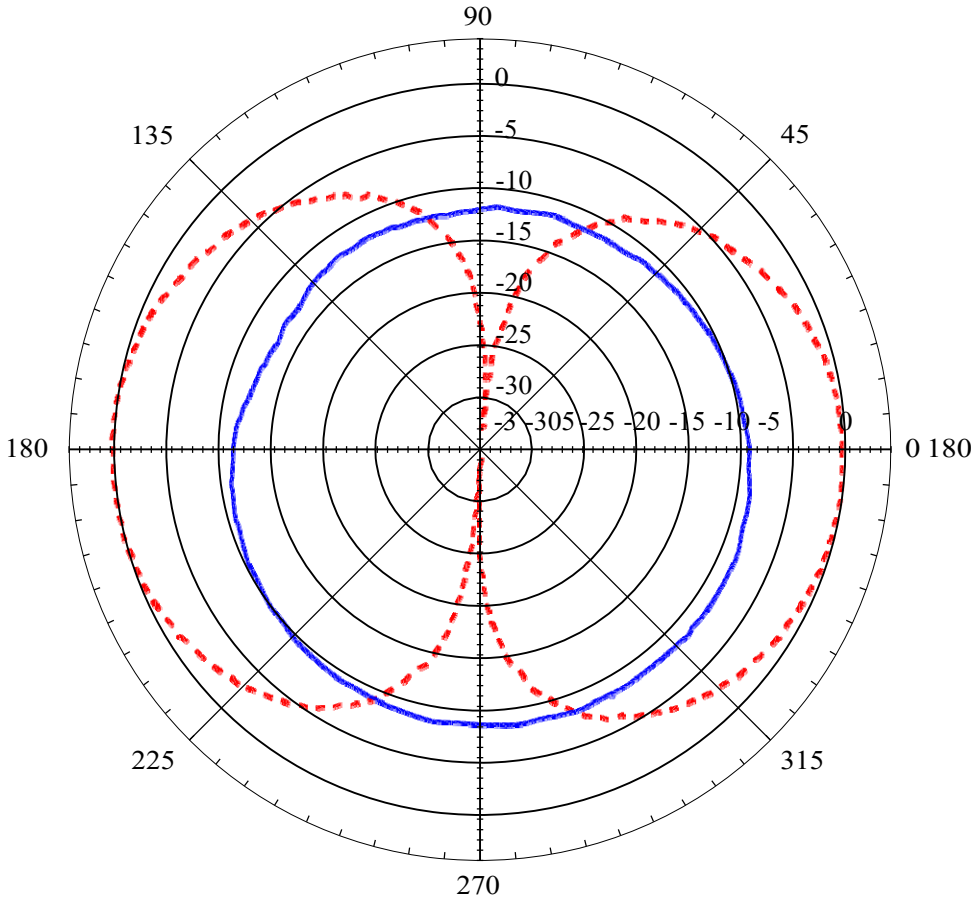
Front view



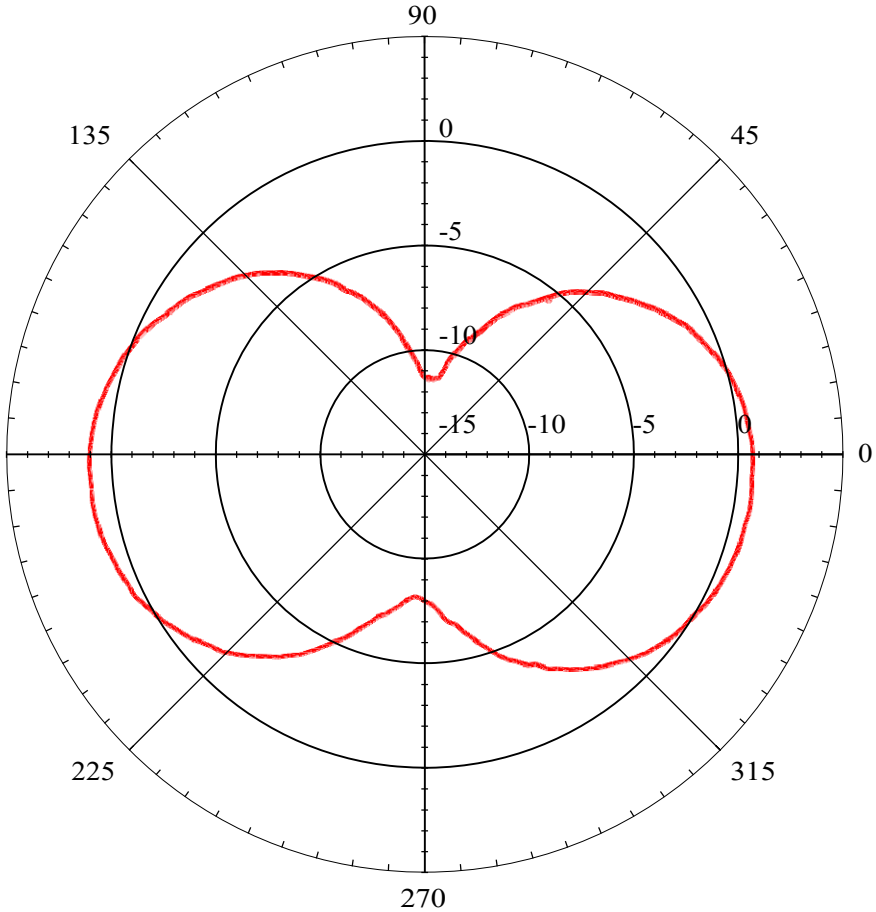


Rear view

Radiation pattern: Antenna 1. XZ Plane at f = 2.402GHz



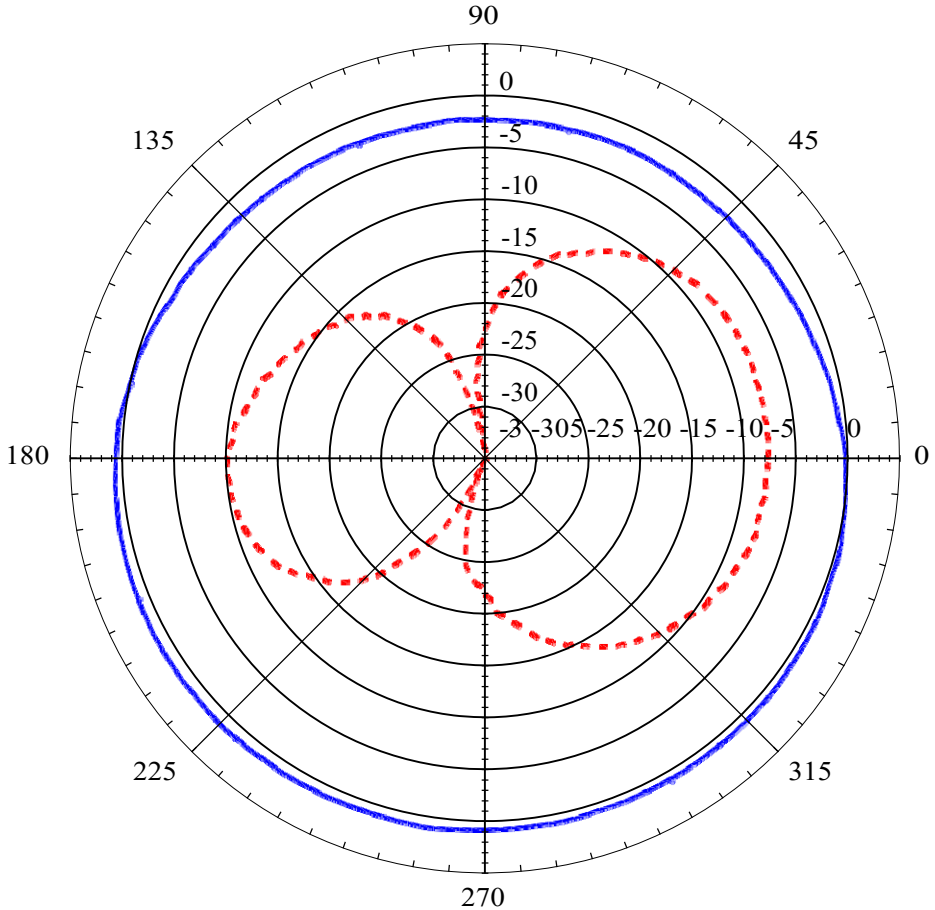
Co-cross polarization field (dBi)



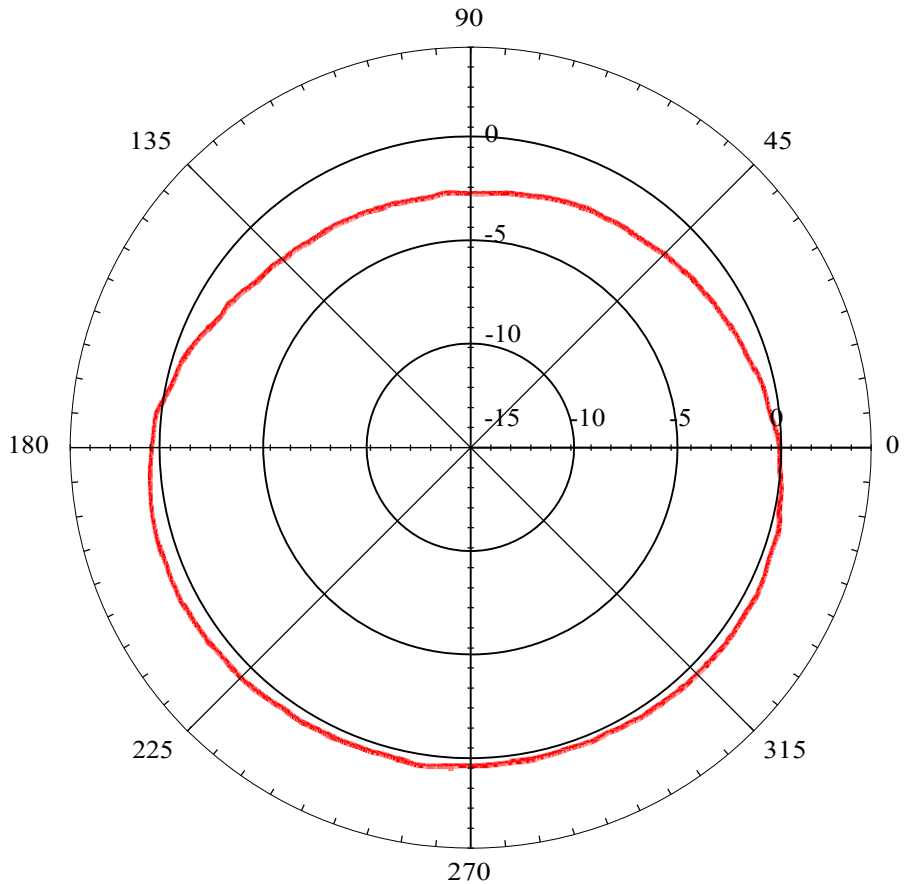
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. YZ Plane at f = 2.402GHz



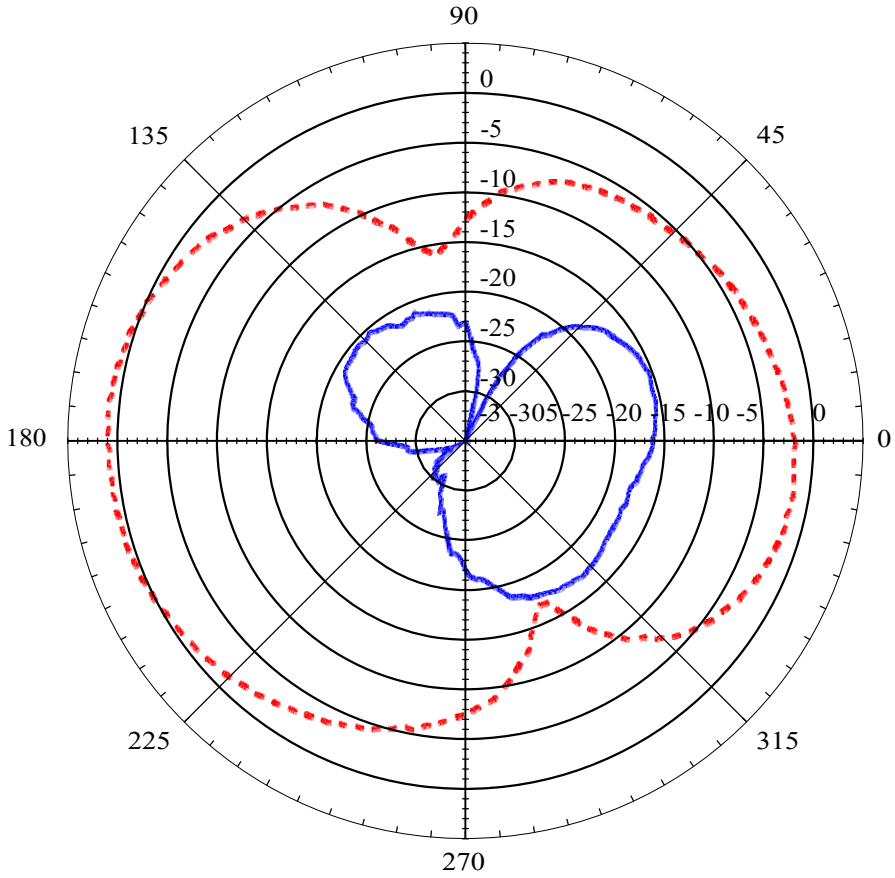
Co-cross polarization field (dBi)



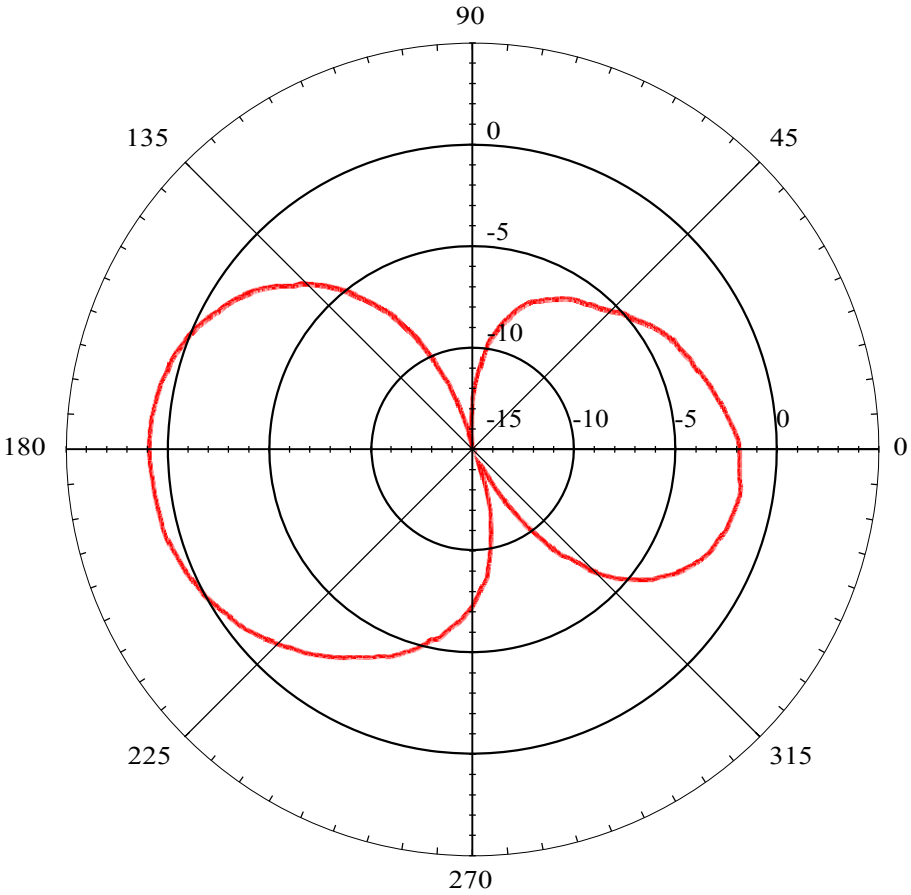
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. XY Plane at f = 2.402GHz



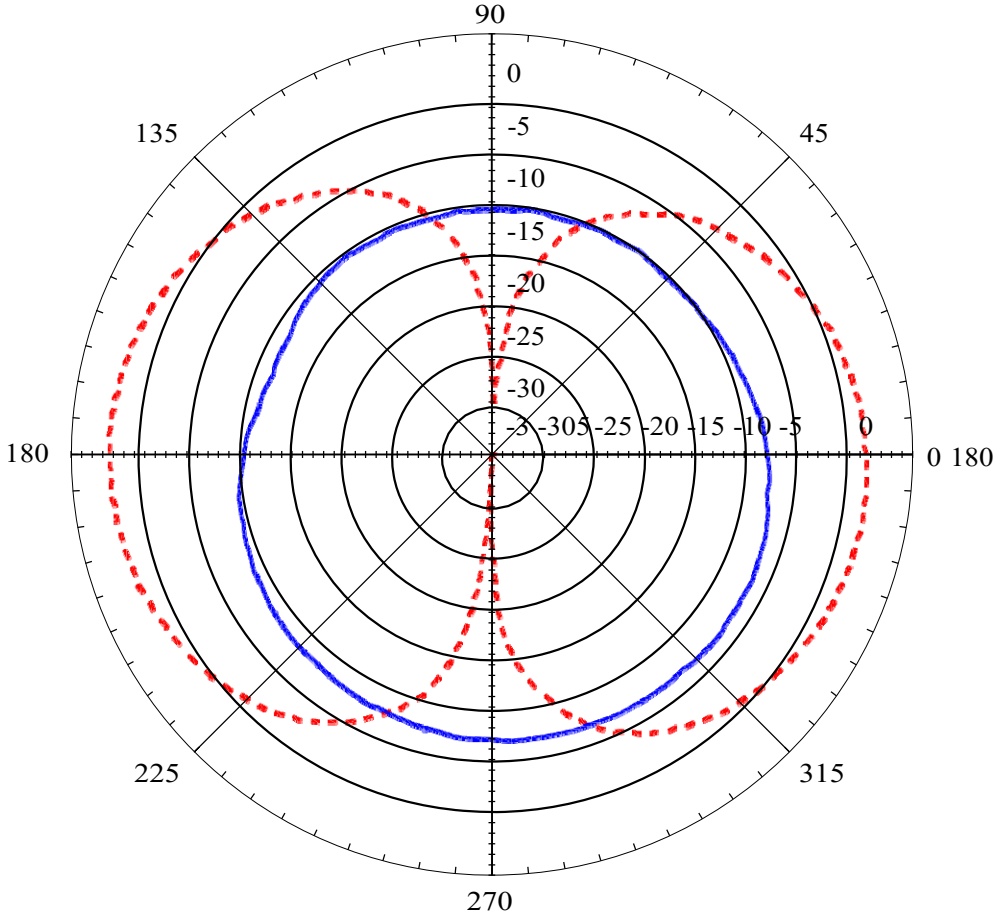
Co-cross polarization field (dBi)



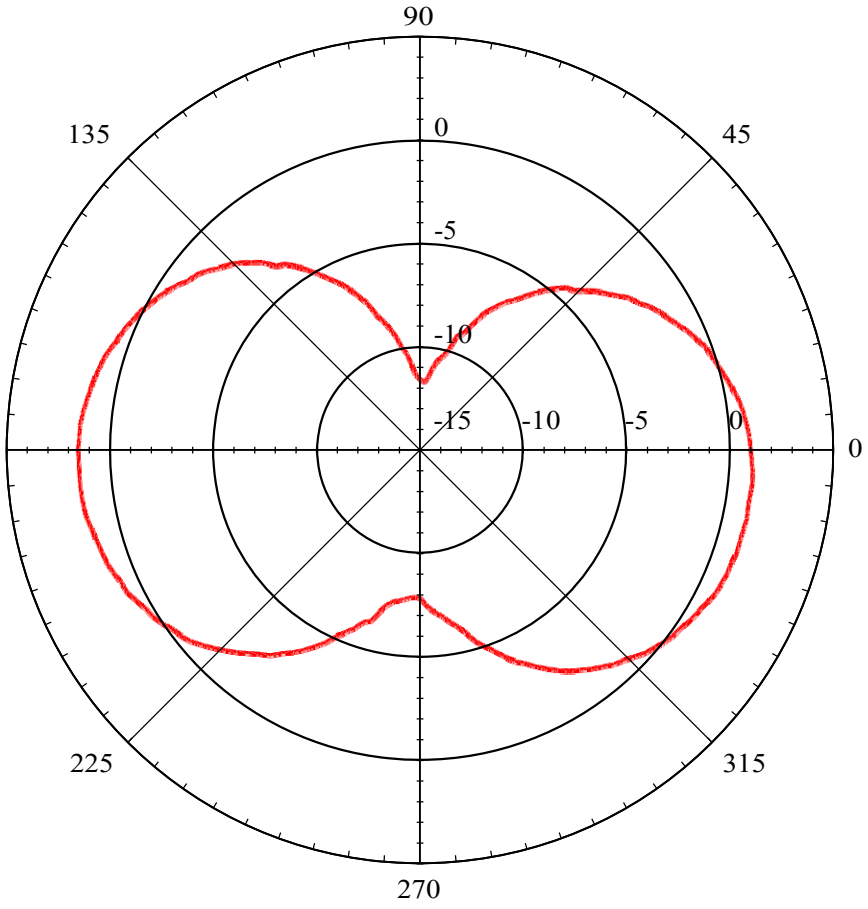
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. XZ Plane at f = 2.440GHz



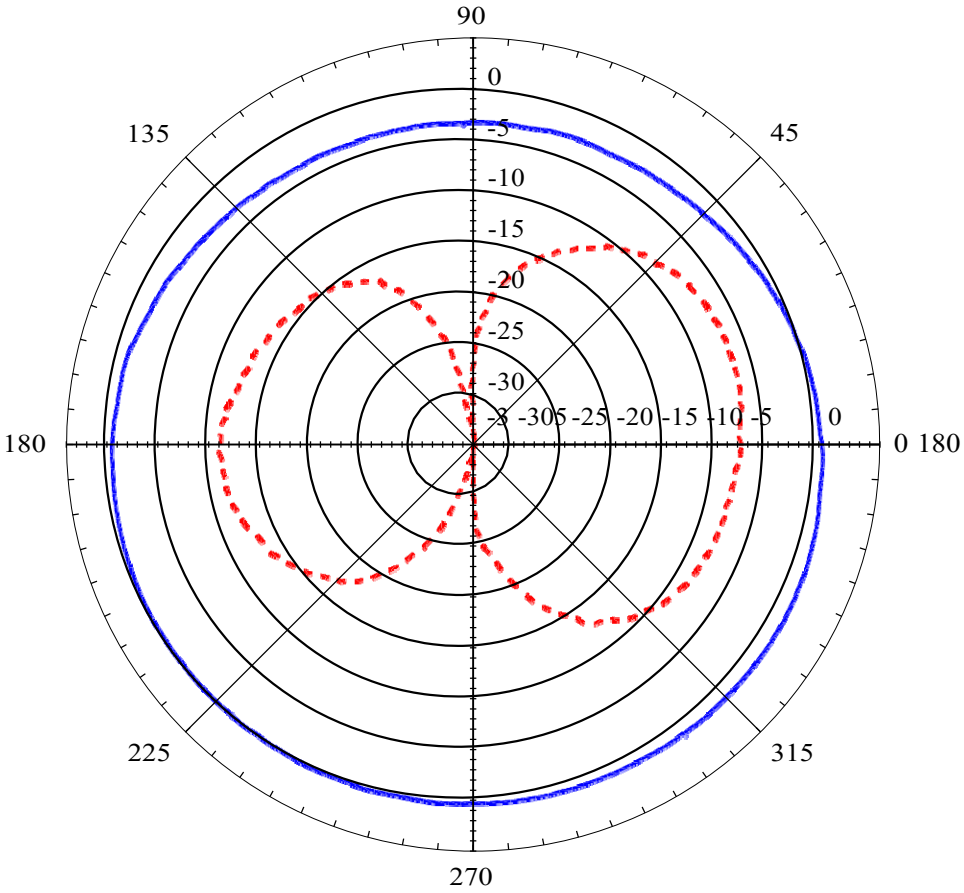
Co-cross polarization field (dBi)



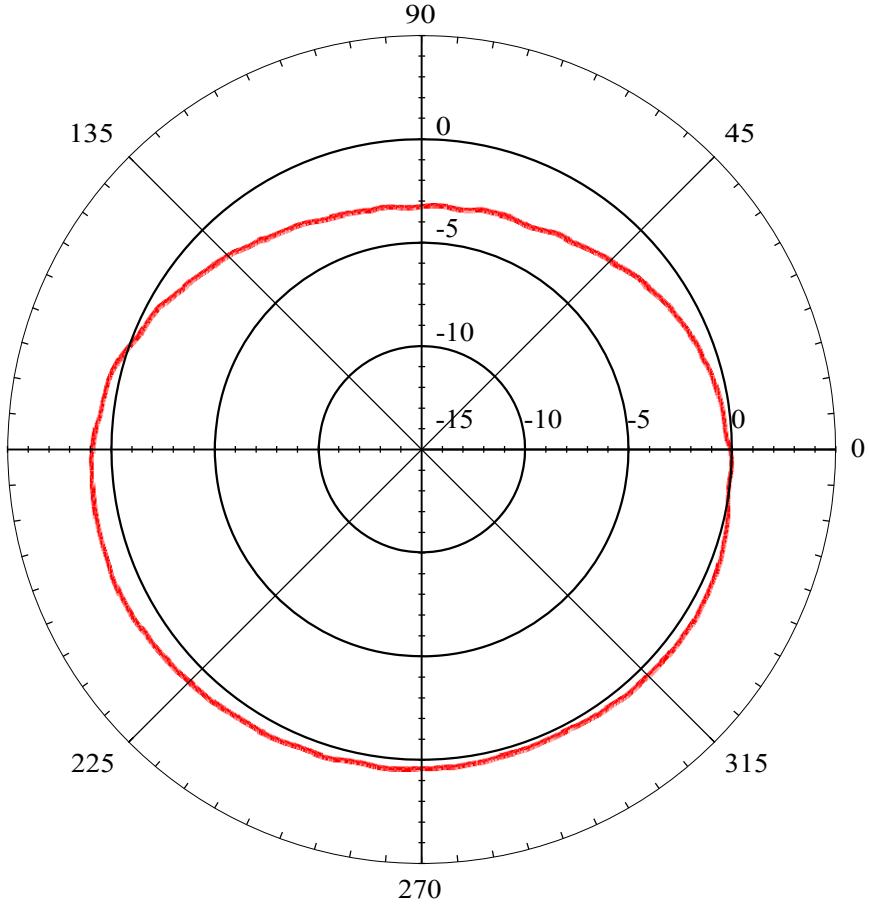
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. YZ Plane at f = 2.440GHz



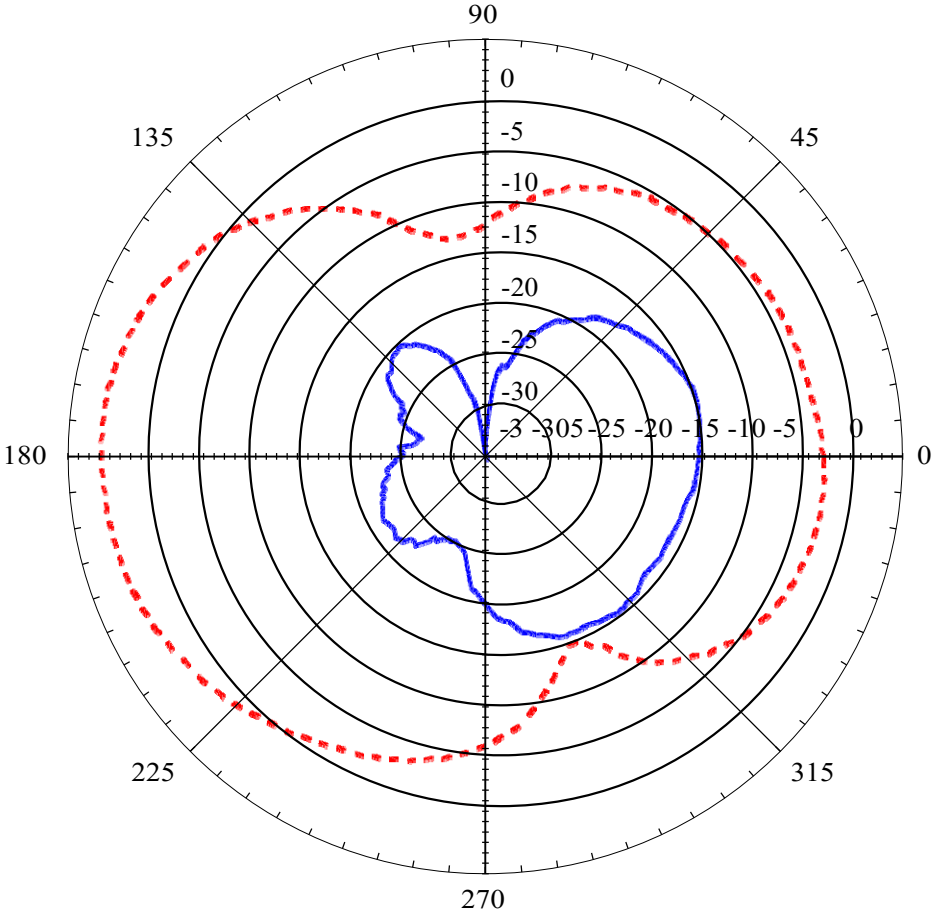
Co-cross polarization field (dBi)



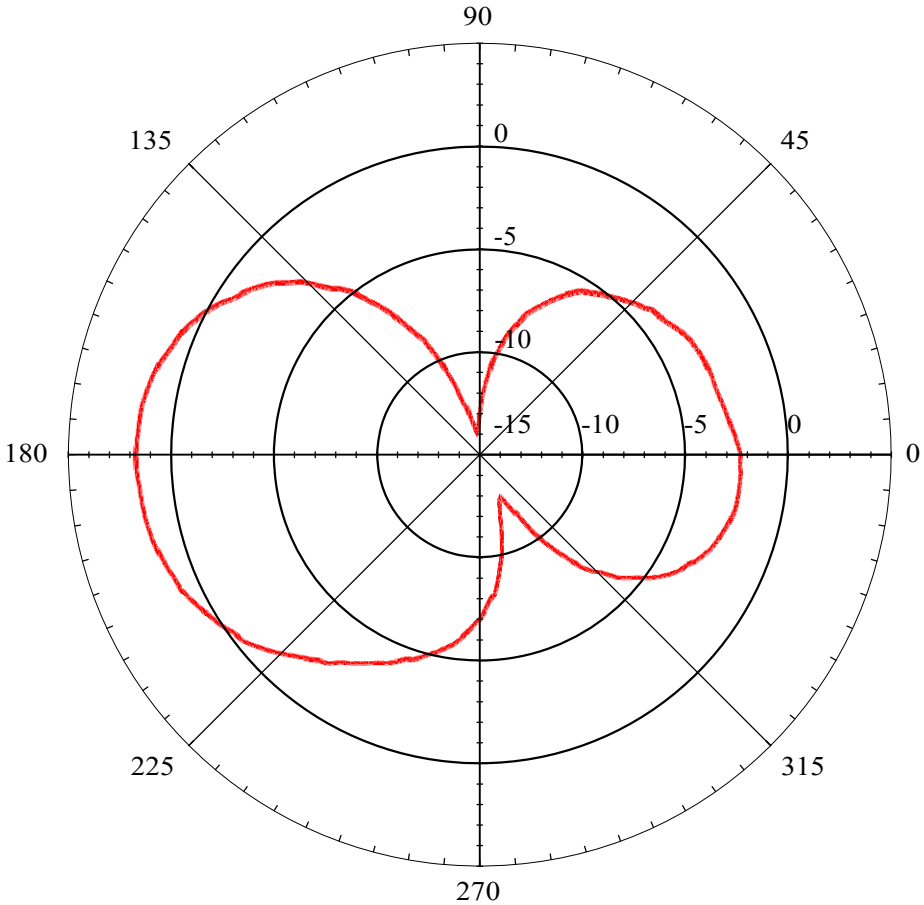
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. XY Plane at f = 2.440GHz



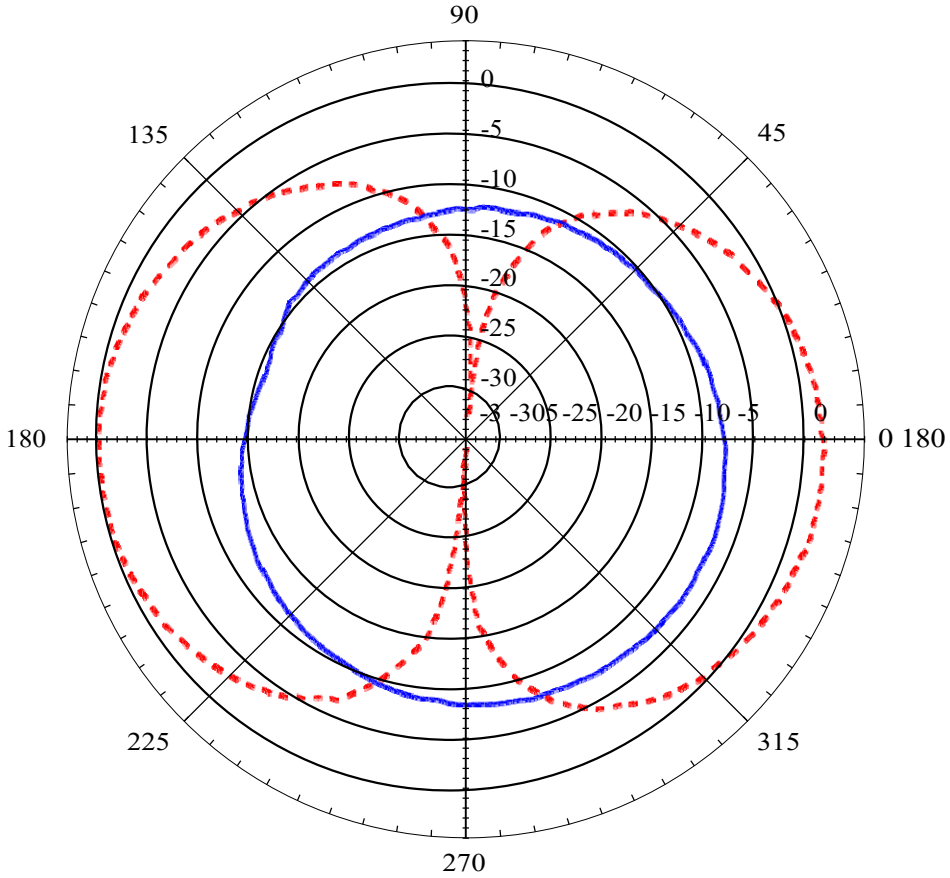
Co-cross polarization field (dBi)



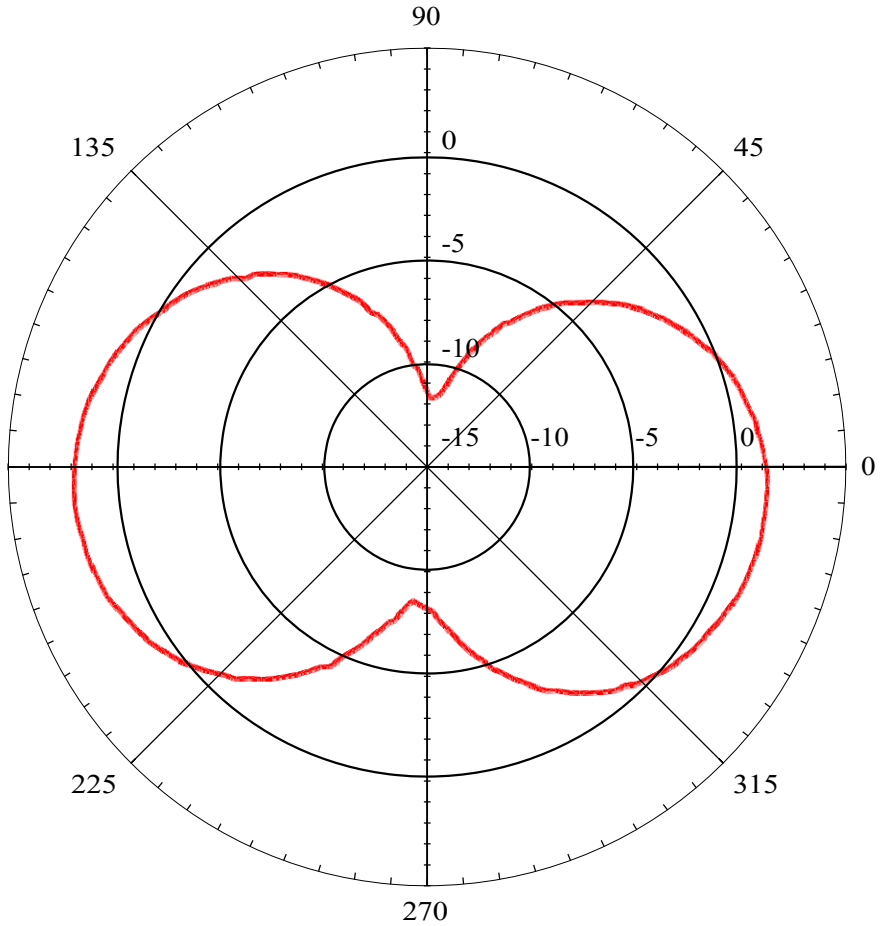
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. XZ Plane at f = 2.480GHz



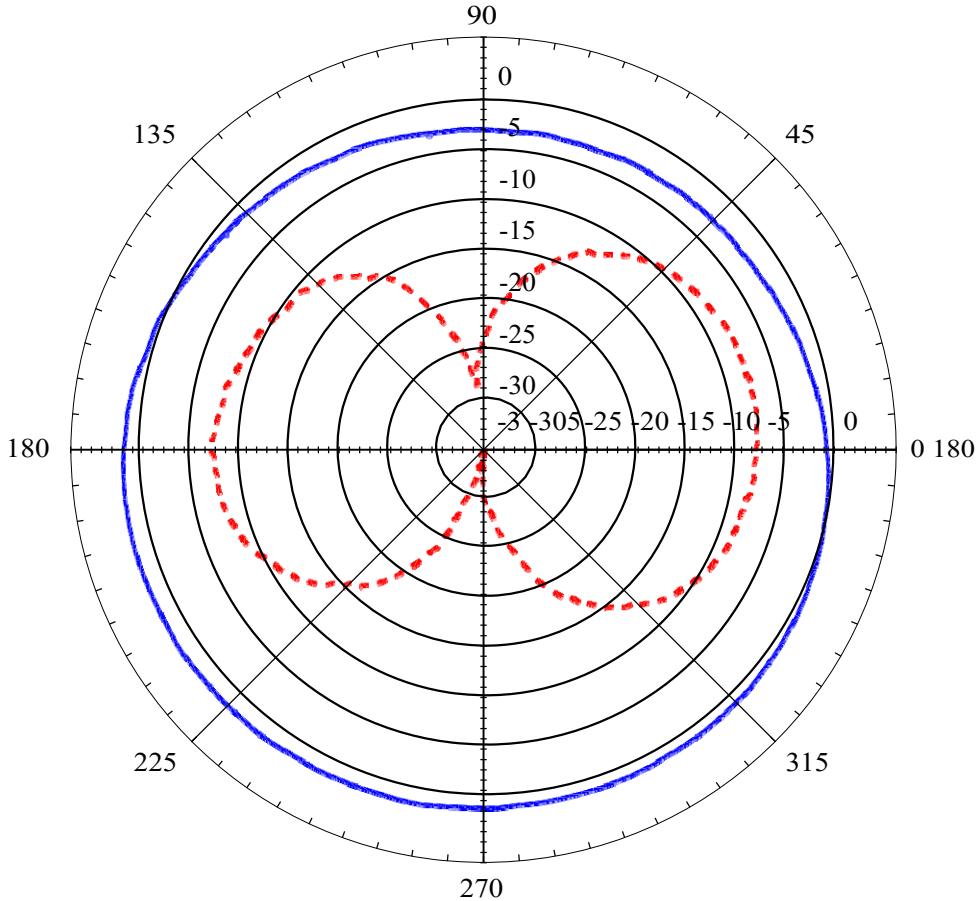
Co-cross polarization field (dBi)



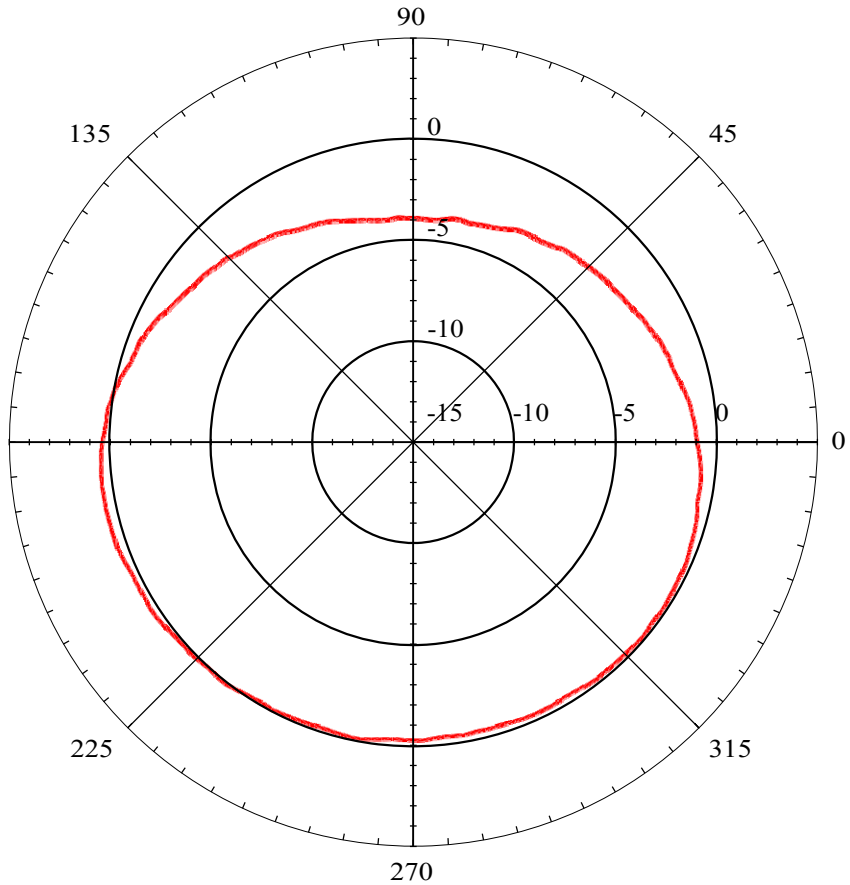
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. YZ Plane at f = 2.480GHz



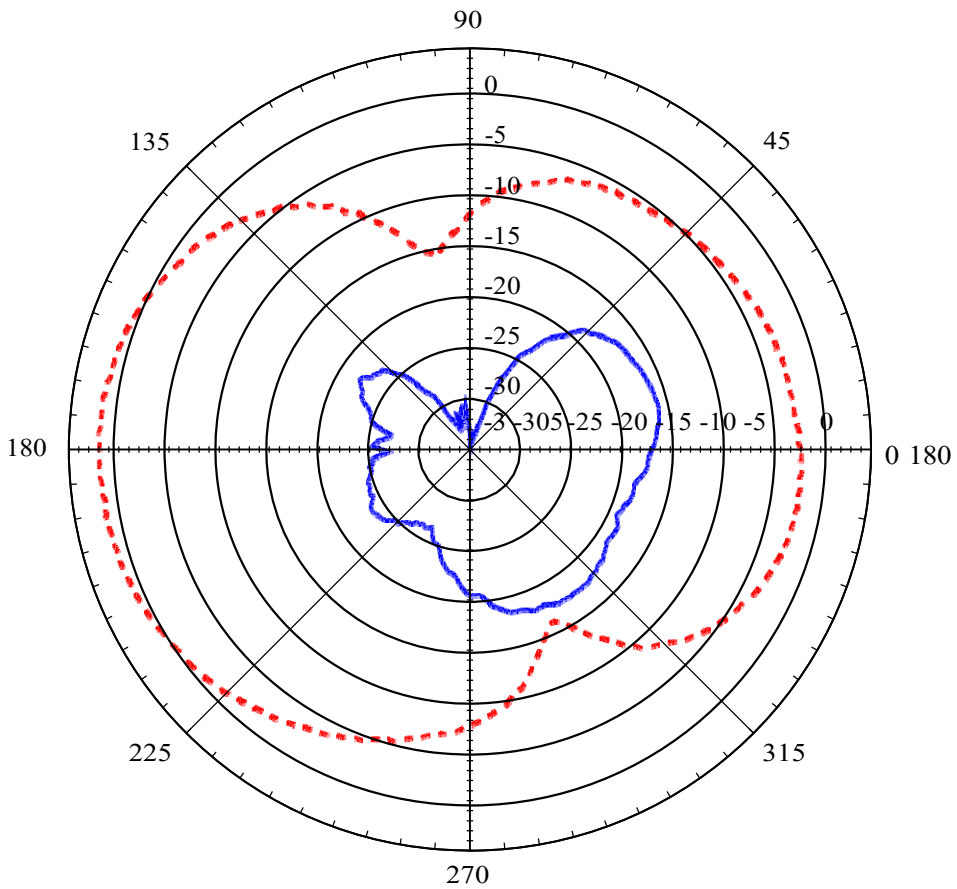
Co-cross polarization field (dBi)



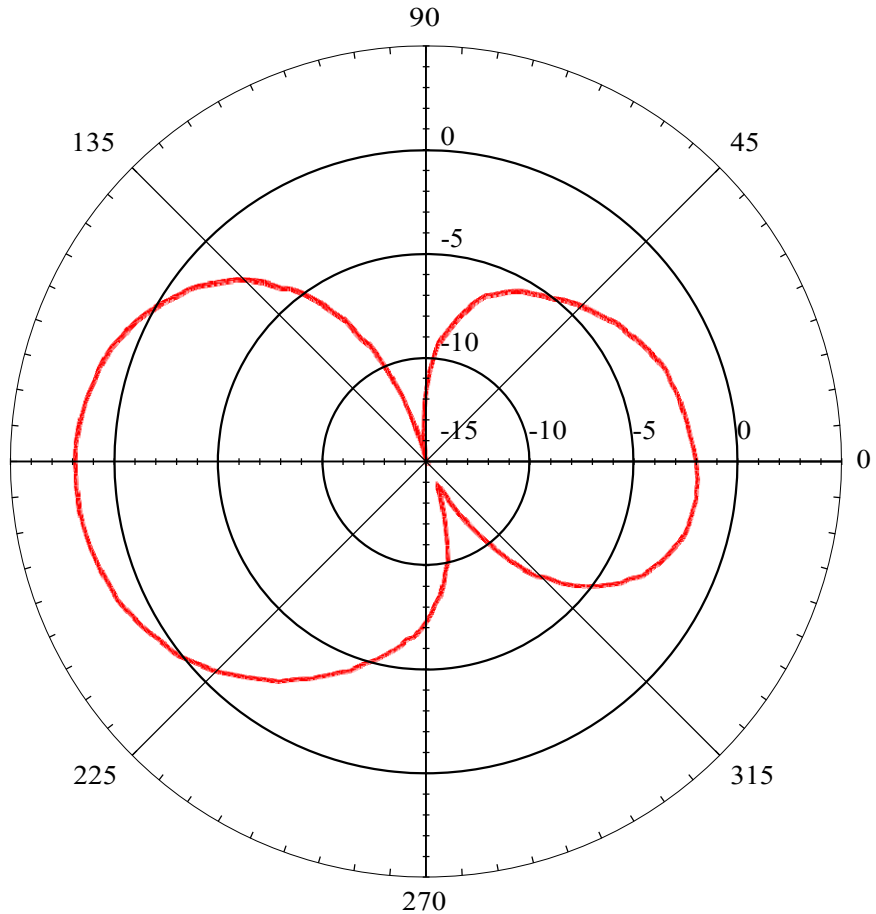
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

Radiation pattern: Antenna 1. XY Plane at f = 2.480GHz



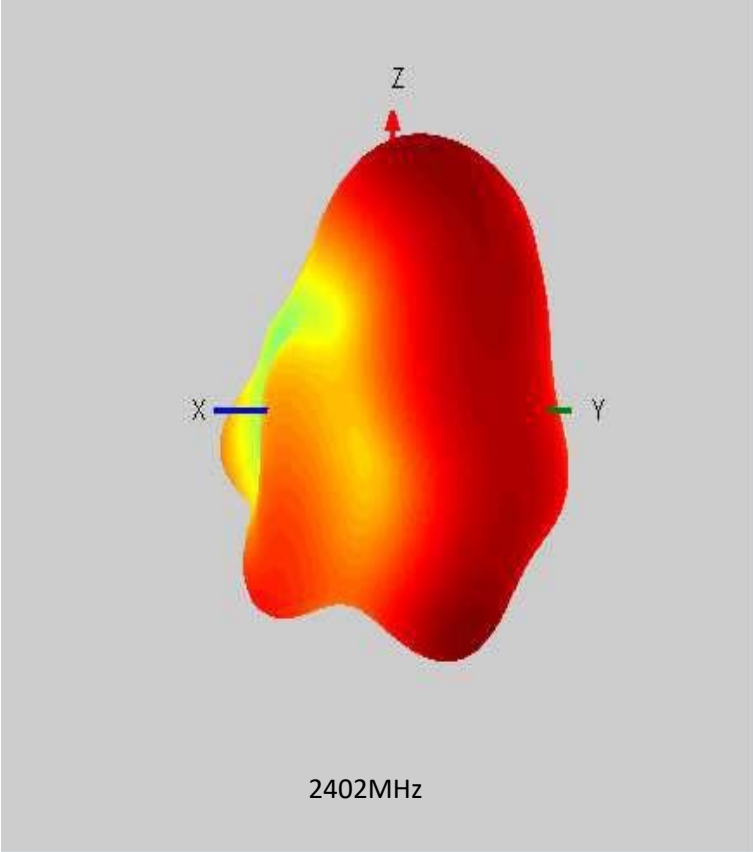
Co-cross polarization field (dBi)



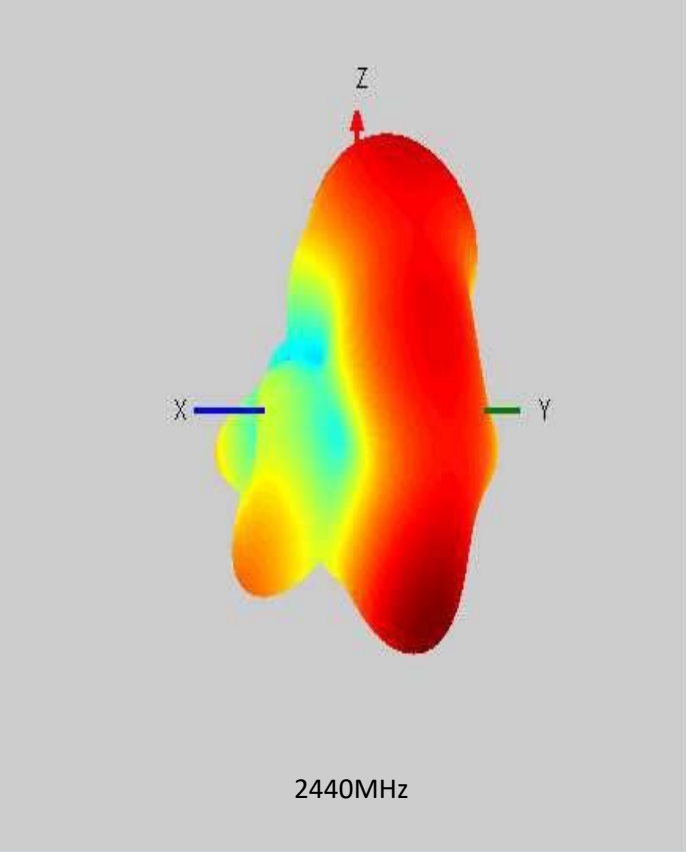
Total field (dBi)

Solid line: vertical polarization
Dash line: horizontal polarization

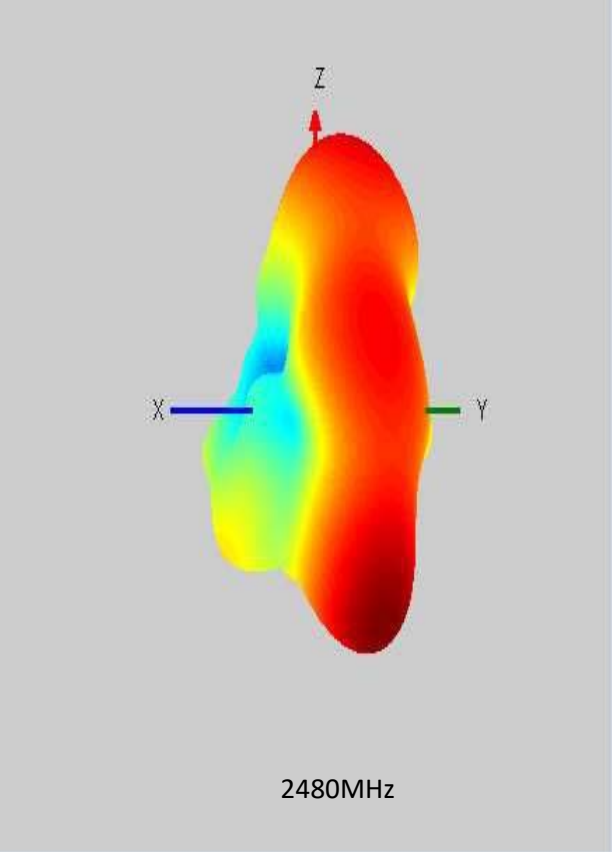
Radiation Pattern 3D



2402MHz

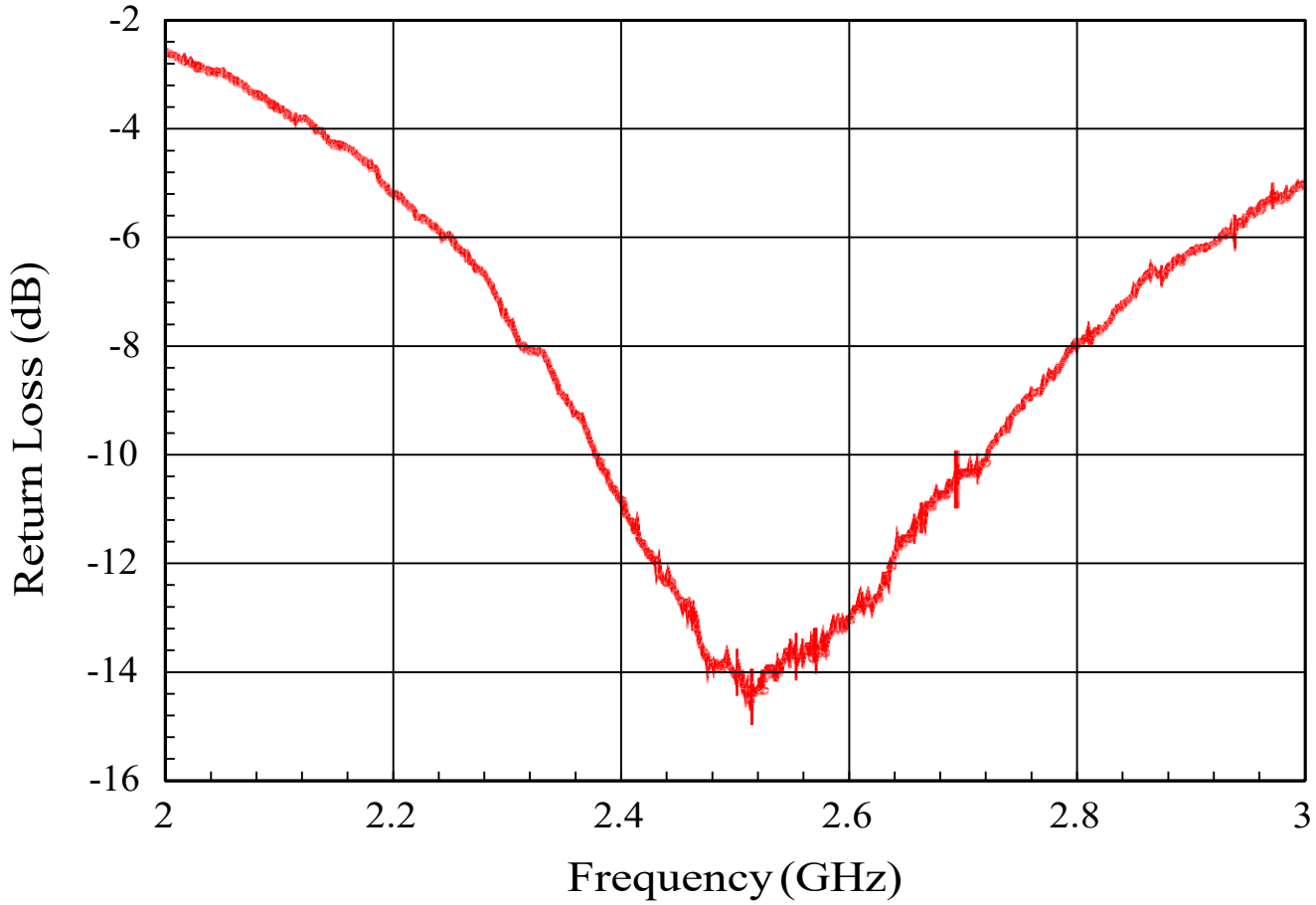


2440MHz



2480MHz

Return Loss: Antenna 1



BW(-10dB) 13.48%

Measurements summary

	Frequency (GHz)	Plane	Return Loss (dB)	Polarization	Gain max. (dBi)	θ for Gain max.	φ for Gain max.
Antenna 1							
	2.402	XZ	-10.90	Vertical	-7.8	290	
	2.402	XZ	-10.90	Horizontal	0.786	182	
	2.402	YZ	-10.90	Vertical	1.21	226	
	2.402	YZ	-10.90	Horizontal	-7.75	10	
	2.402	XY	-10.90	Vertical	-15.4		20
	2.402	XY	-10.90	Horizontal	0.93		180
	2.440	XZ	-12.20	Vertical	-7.36	318	
	2.440	XZ	-12.20	Horizontal	1.32	180	
	2.440	YZ	-12.20	Vertical	0.981	204	
	2.440	YZ	-12.20	Horizontal	-8.23	24	
	2.440	XY	-12.20	Vertical	-14.1		-14
	2.440	XY	-12.20	Horizontal	1.74		180
	2.480	XZ	-13.80	Vertical	-7.95	312	
	2.480	XZ	-13.80	Horizontal	1.81	186	
	2.480	YZ	-13.80	Vertical	0.204	214	
	2.480	YZ	-13.80	Horizontal	-8.38	8	
	2.480	XY	-13.80	Vertical	-15.8		12
	2.480	XY	-13.80	Horizontal	1.87		180