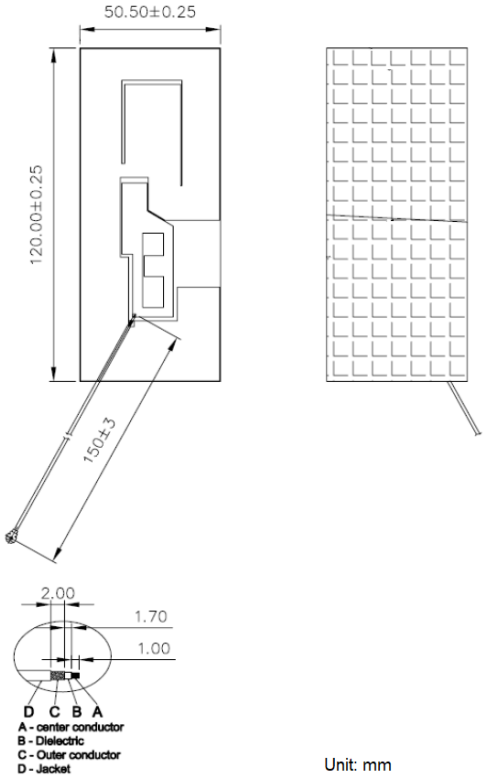
RPCF-MBE9-120050-O-W-001

■ ELECTRICAL SPECIFICATION

PARAMETERS		VALUE							UNIT
Frequency Range		698 ~ 960	1390 ~ 1435	1575	1710 ~ 2170	2400 ~ 2700	3400 ~ 3600	4800 ~ 6000	MHz
Peak Gain		2.78	3.52	4.25	3.88	3.42	4.08	4.88	dBi
VSWR, max		2						3	-
Return Loss, max		-10							dB
Radiation Pattern		Omni-Directional							-
Polarization		Linear							-
Impedance		50							Ω
Antenna		FPC							-
Double Tape		3M9888T							-
Coaxial Cable	Type	Ø1.37 Low Loss							mm
	Color	Black							-
Connector		IPEX Compatible (Gold)							-
Operating Temperature Range		-20 ~ +65							°C

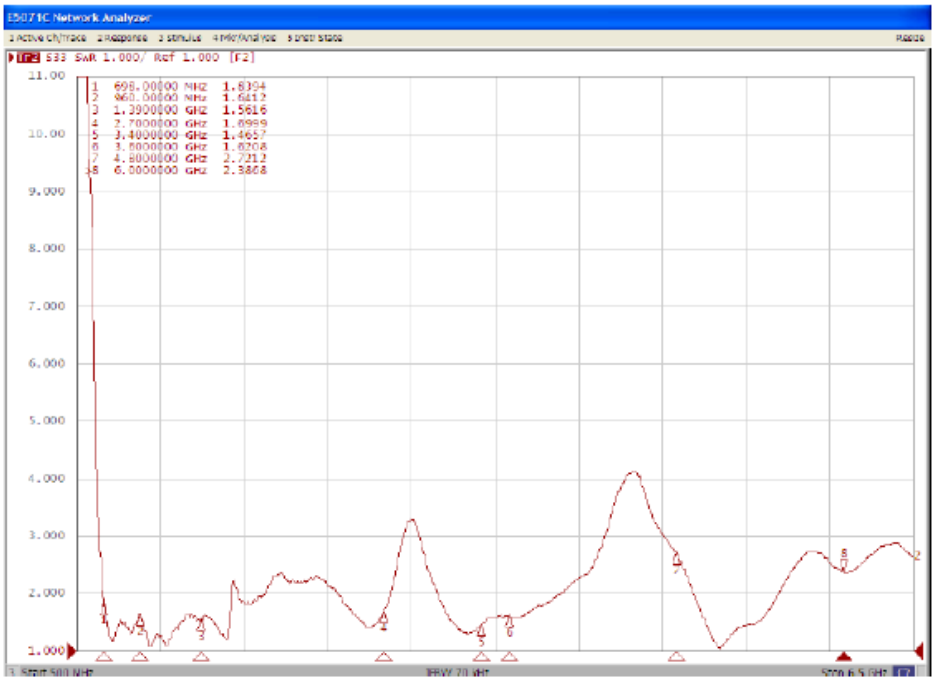
■ DIMENSIONS



Unit: mm

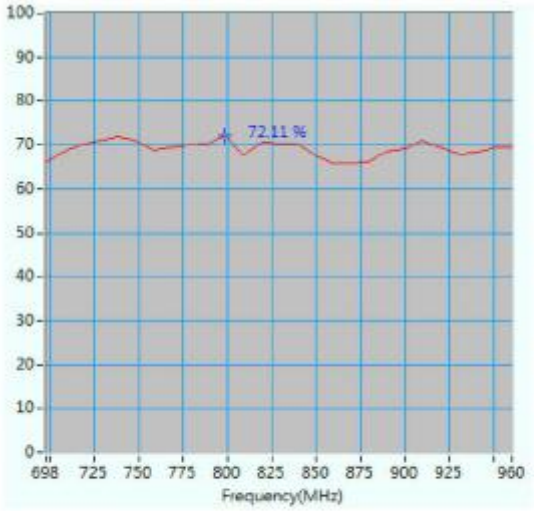
FREQUENCY CHARACTERISTICS

VSWR

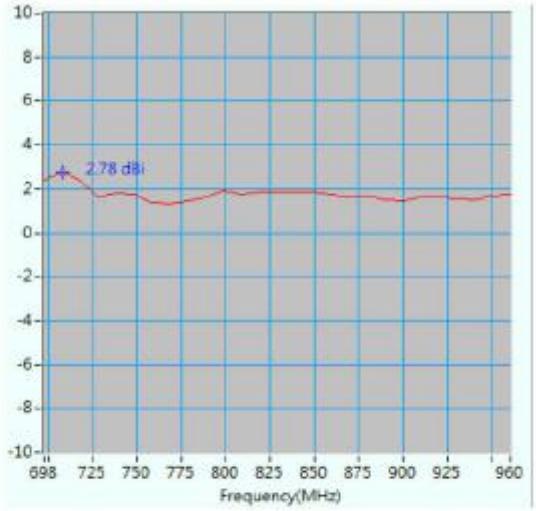


EFFICIENCY AND PEAK GAIN

698 ~ 960 MHz

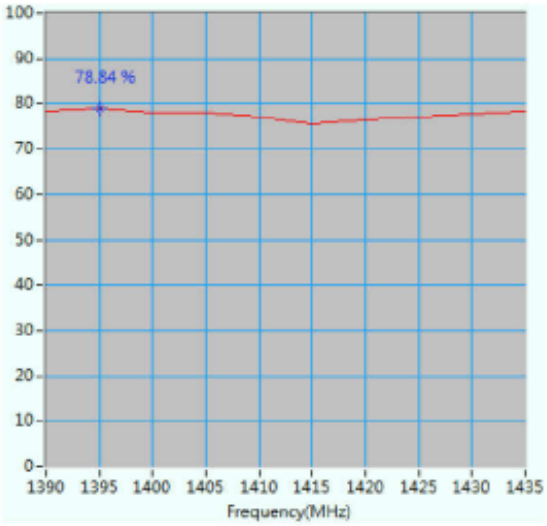


Maximum Efficiency at 800 MHz : 72.1 %

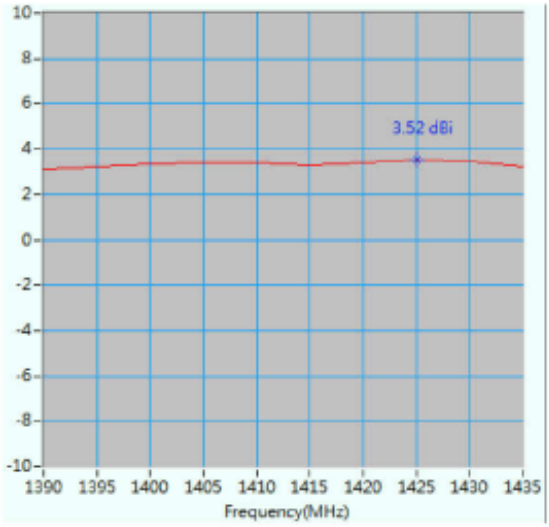


Maximum Peak Gain at 708 MHz : 2.78 dBi

1390 ~ 1435 MHz

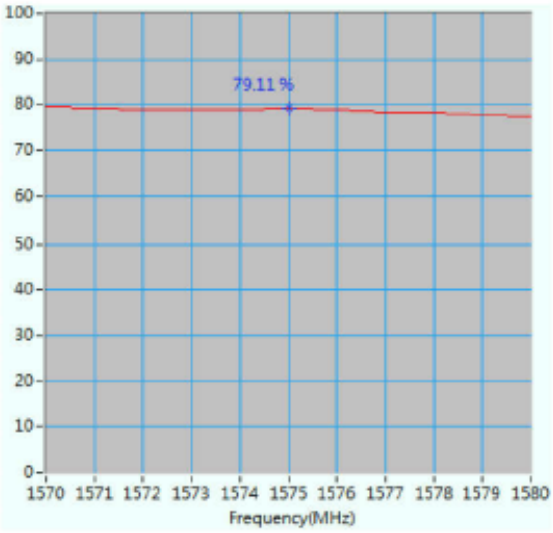


Maximum Efficiency at 1395 MHz : 78.8 %

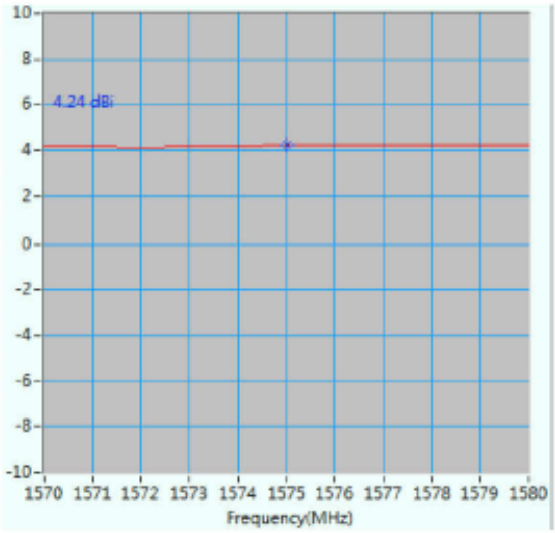


Maximum Peak Gain at 1425 MHz : 3.52 dBi

1575 MHz

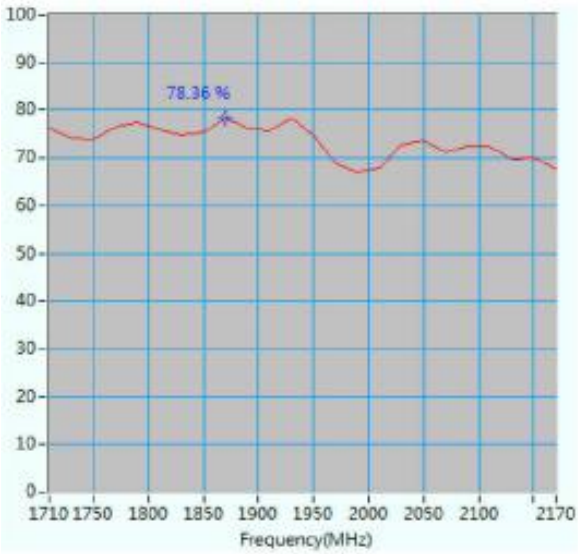


Maximum Efficiency at 1575 MHz : 79.1 %

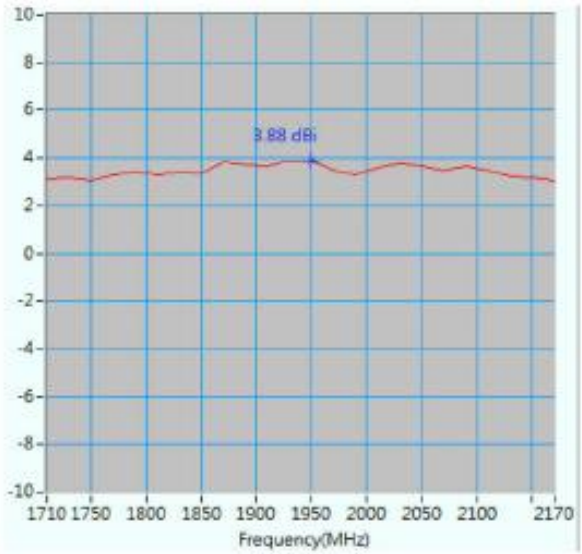


Maximum Peak Gain at 1575 MHz : 4.24 dBi

1710 ~ 2170 MHz

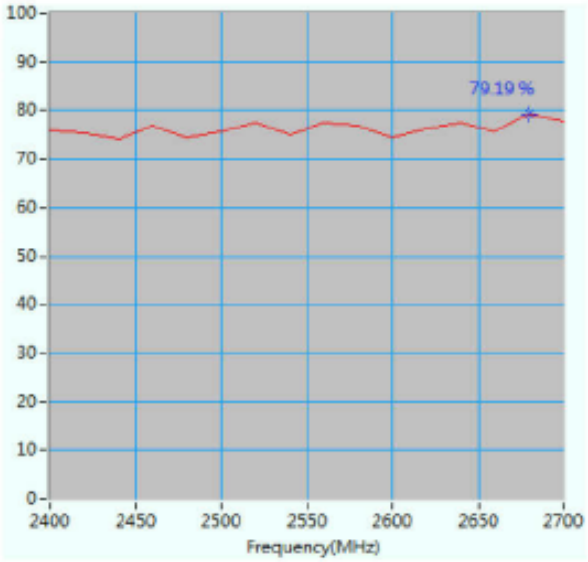


Maximum Efficiency at 1870 MHz : 78.3 %

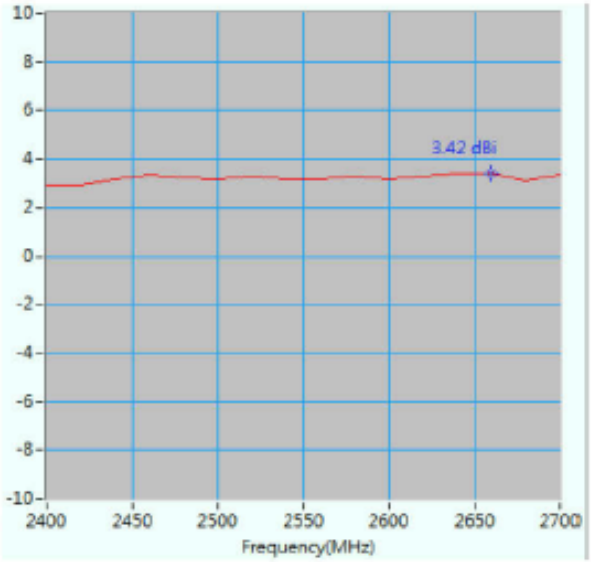


Maximum Peak Gain at 1950 MHz : 3.88 dBi

2400 ~ 2700 MHz

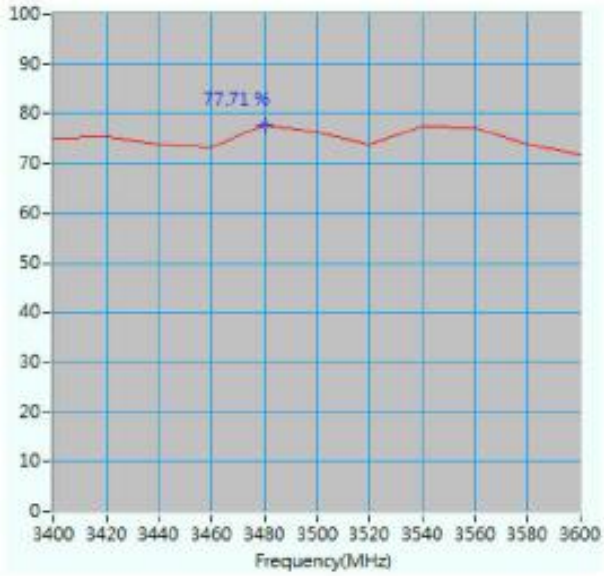


Maximum Efficiency at 2680 MHz : 79.1 %

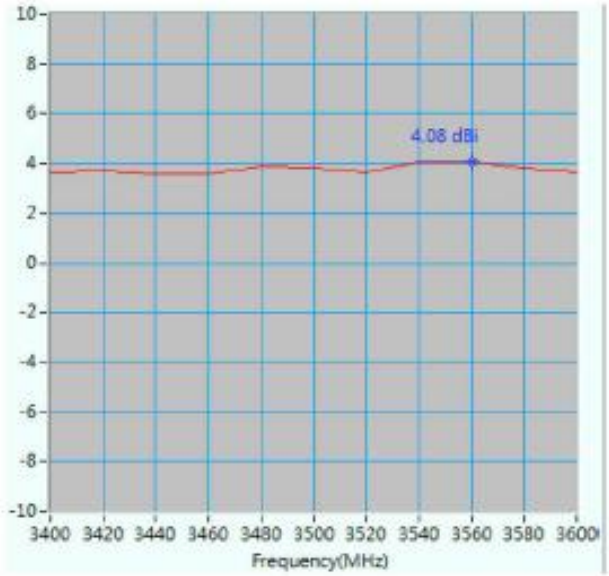


Maximum Peak Gain at 2640 MHz : 3.42 dBi

3400 ~ 3600 MHz

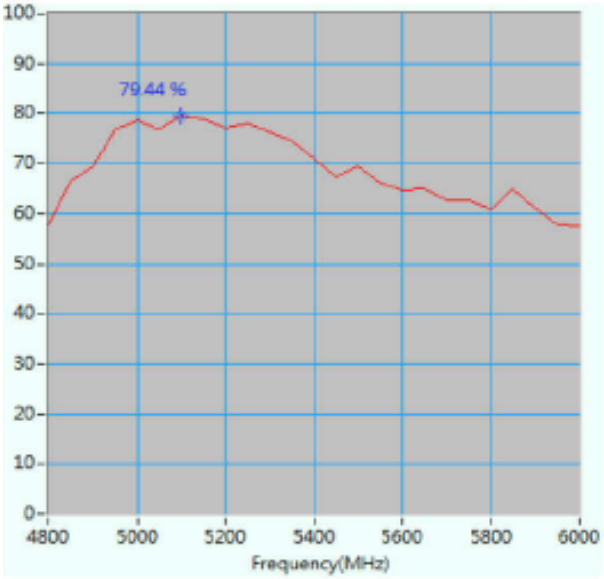


Maximum Efficiency at 3480 MHz : 77.7 %

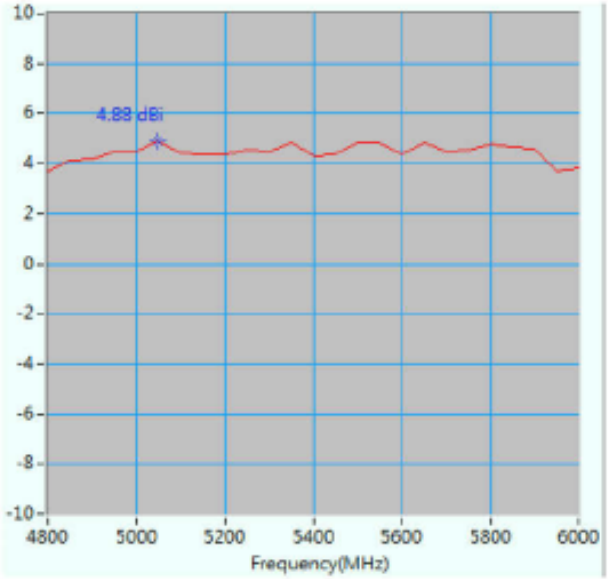


Maximum Peak Gain at 3560 MHz : 4.08 dBi

4800 ~ 6000 MHz



Maximum Efficiency at 5100 MHz : 79.4 %



Maximum Peak Gain at 5050 MHz : 4.88 dBi

	698-960MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
698	66.1	2.39
849	67.6	1.85
960	69.4	1.77

	1390-1435MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
1390	78.3	3.12
1415	75.6	3.27
1435	78.2	3.25

	1575MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
1575	79.1	4.24

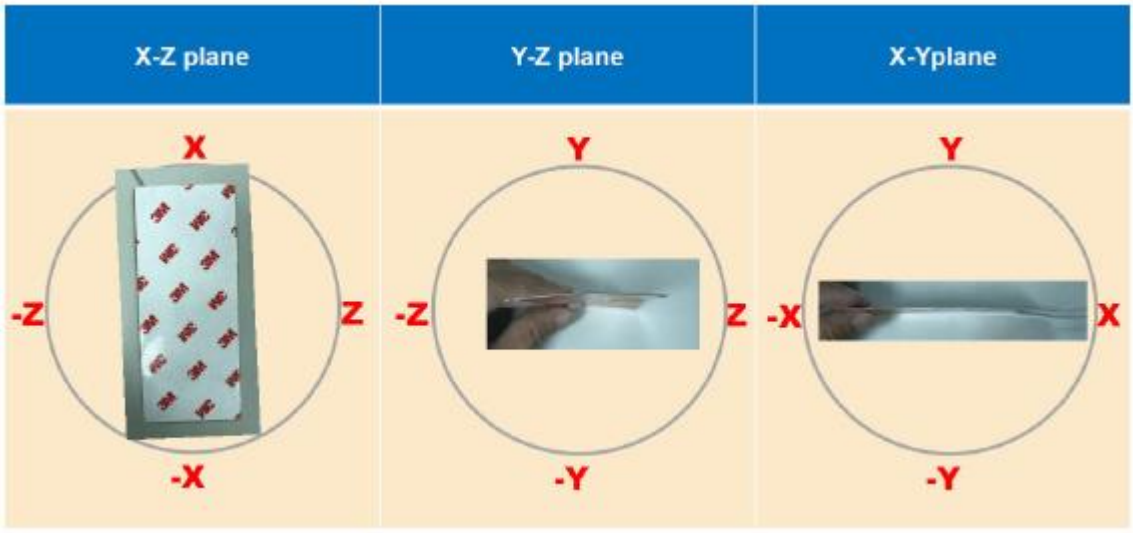
	1710-2170MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
1710	76.3	3.14
1970	68.7	3.48
2170	67.7	3.07

	2400-2700MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
2400	75.8	2.94
2560	77.4	3.17
2700	77.7	3.34

	3400-3600MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
3400	74.9	3.64
3500	76.3	3.80
3600	71.9	3.64

	4800-6000MHz	
Frequency (MHz)	Efficiency (%)	Peak gain (dBi)
4800	58.1	3.72
5500	69.4	4.82
6000	57.8	3.79

3D VIEWS OF ANTENNA

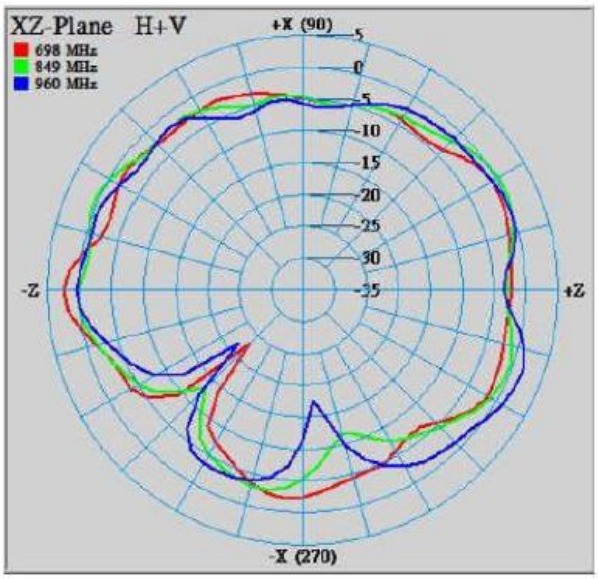


RADIATION PATTERN

698 ~ 960 MHz

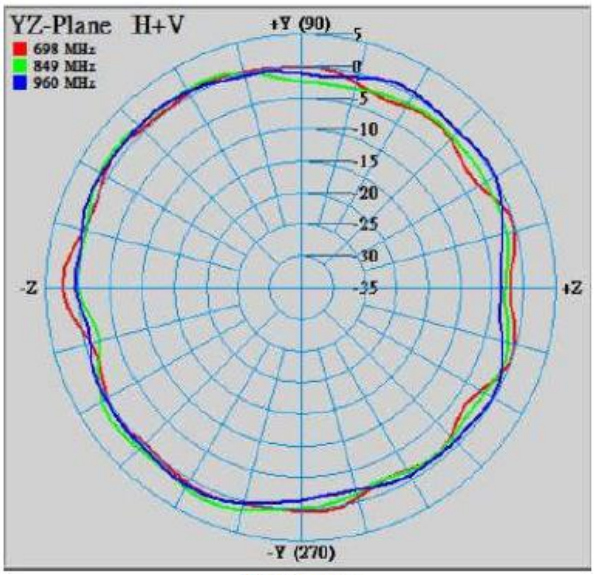
Phi=0.00deg

Gain . dB



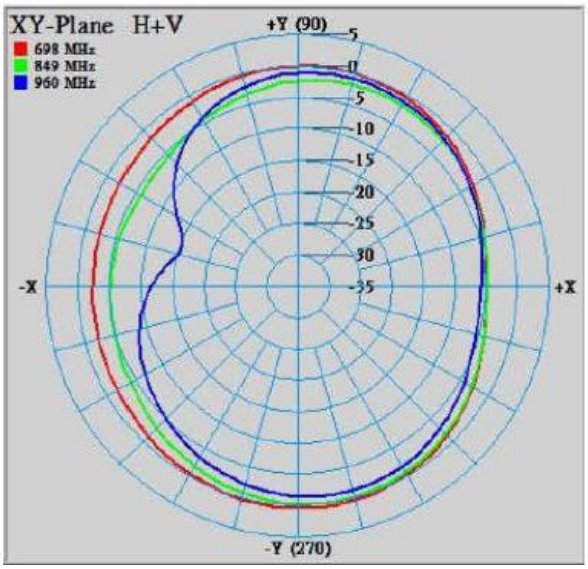
Gain . dB

Phi=90.00deg



Gain . dB

Theta=90.00deg

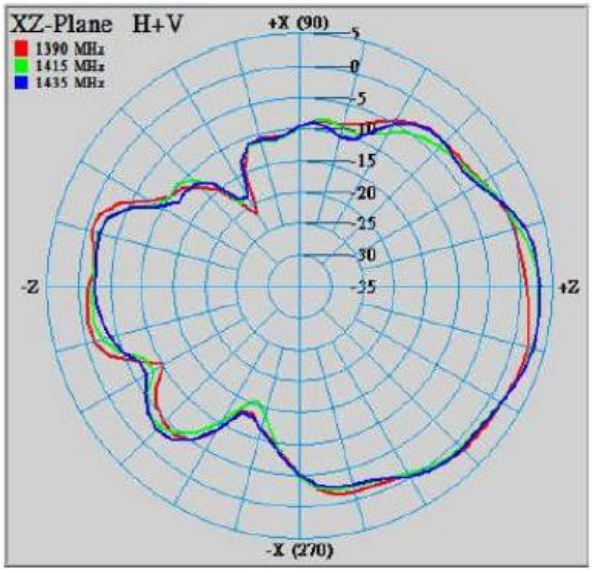


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
698	2.34	-2.83	2.37	-0.37	0.51	-1.34
849	0.48	-2.78	1.85	-0.42	-0.11	-2.82
960	1.75	-2.55	1.19	-0.29	-0.80	-3.63

1390 ~ 1435 MHz

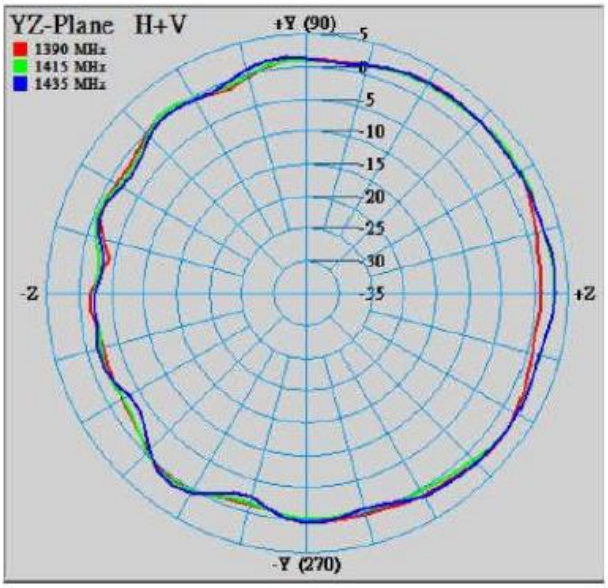
Phi=0.00deg

Gain . dB



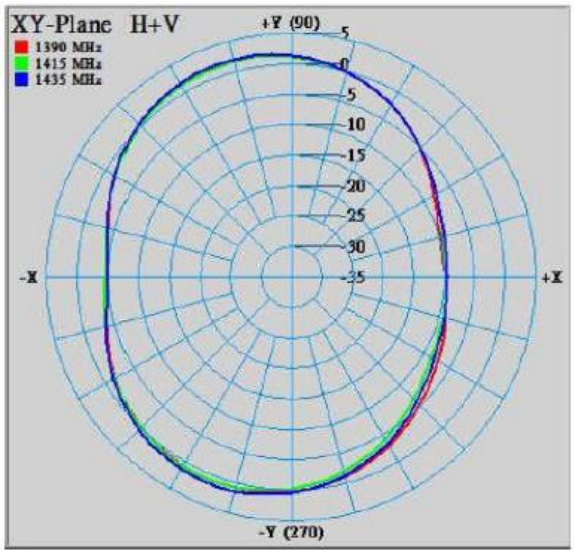
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB

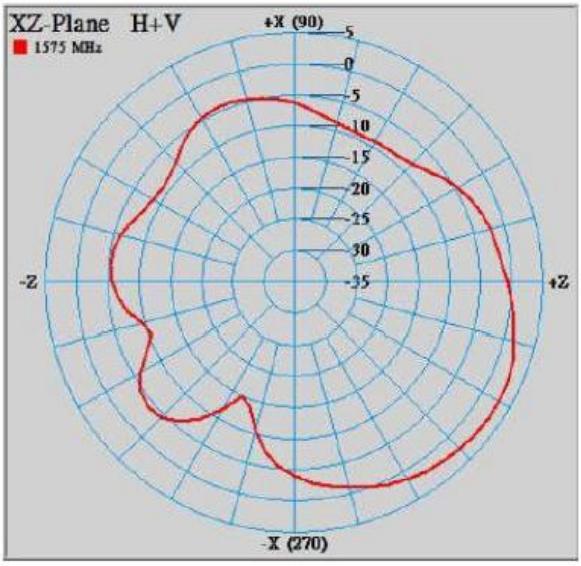


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1390	2.36	-2.38	2.78	0.53	1.86	-1.70
1415	3.10	-2.33	2.98	0.69	1.58	-1.89
1435	3.21	-2.16	3.08	0.73	1.93	-1.54

1575 MHz

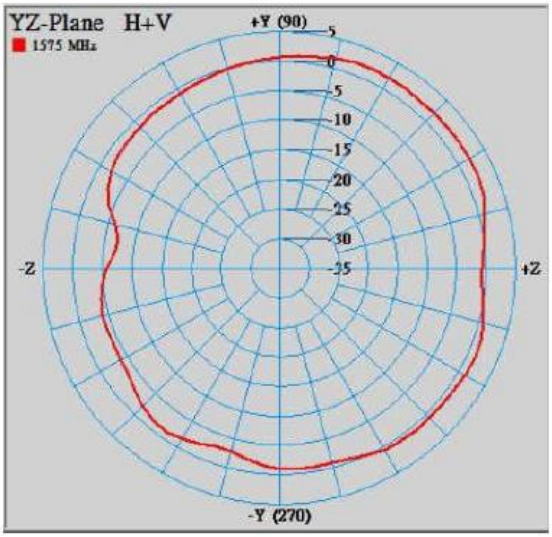
Gain . dB

Phi=0.00deg



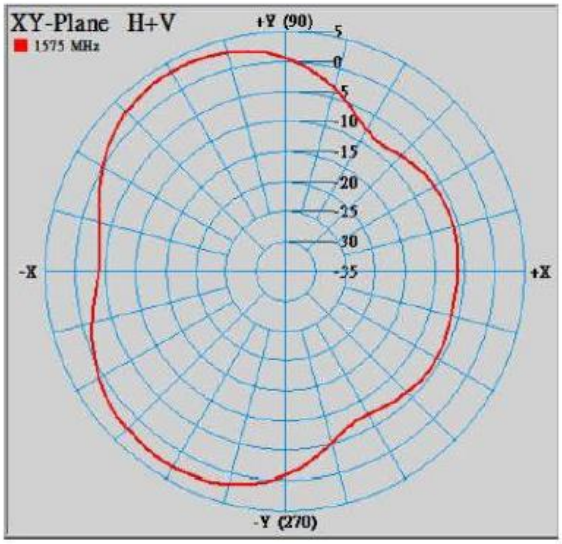
Phi=90.00deg

Gain . dB



Theta=90.00deg

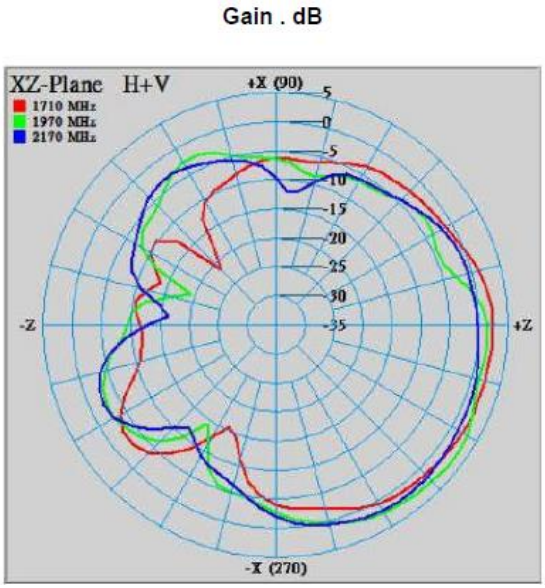
Gain . dB



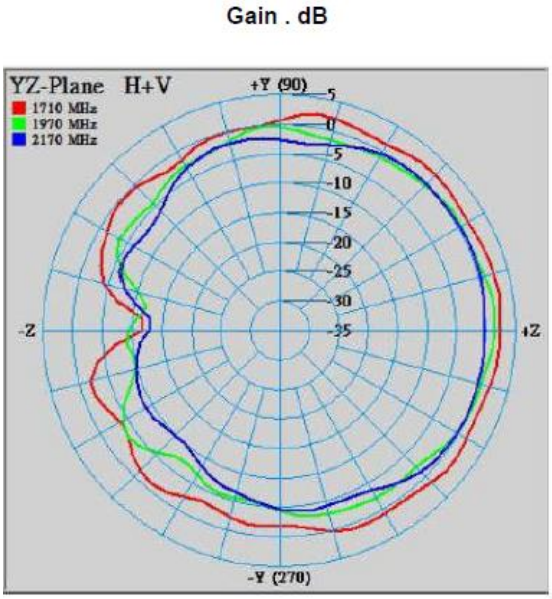
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1575	3.06	-2.78	2.13	-0.37	3.42	-0.92

1710 ~ 2170 MHz

Phi=0.00deg

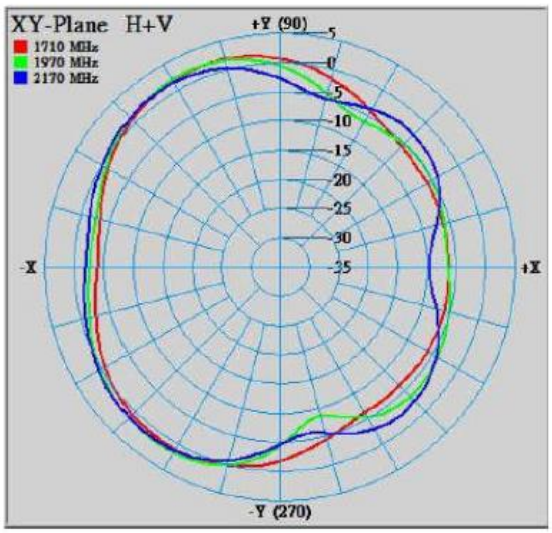


Phi=90.00deg



Theta=90.00deg

Gain . dB

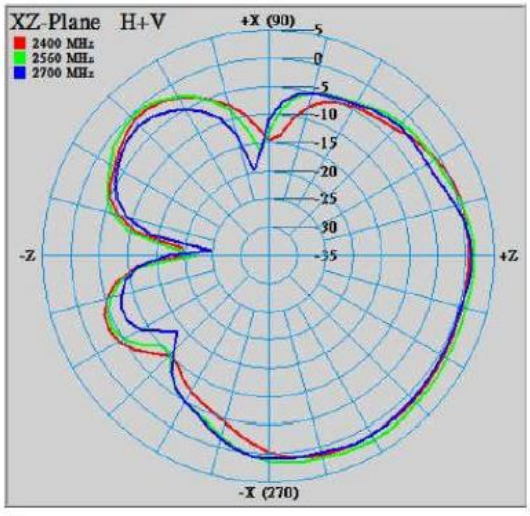


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1710	2.46	-2.45	2.64	0.14	1.95	-1.82
1970	3.38	-2.10	1.63	-2.14	2.08	-1.68
2170	2.09	-2.52	0.43	-2.87	1.55	-1.71

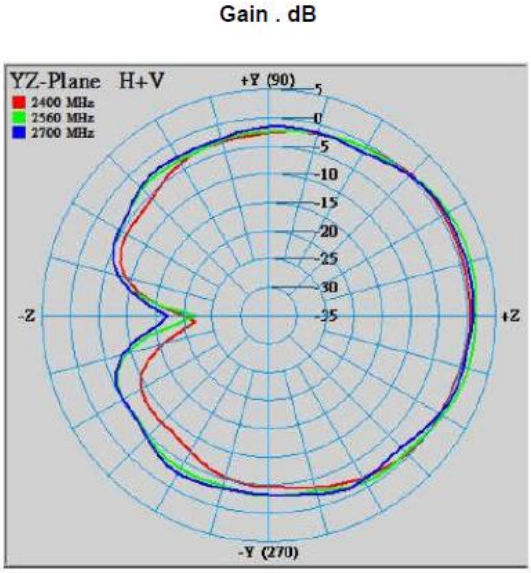
2400 ~ 2700 MHz

Phi=0.00deg

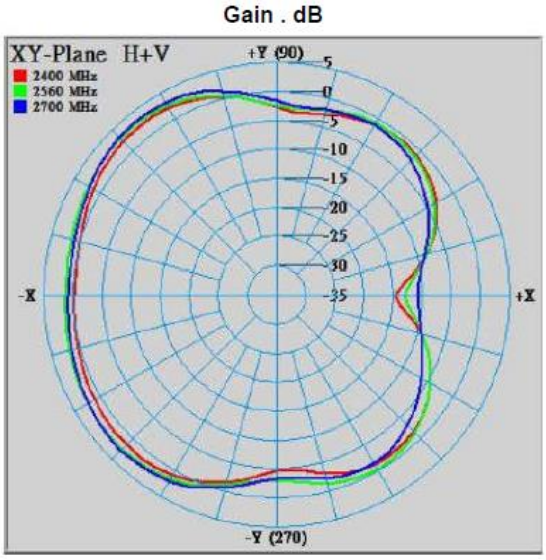
Gain . dB



Phi=90.00deg



Theta=90.00deg

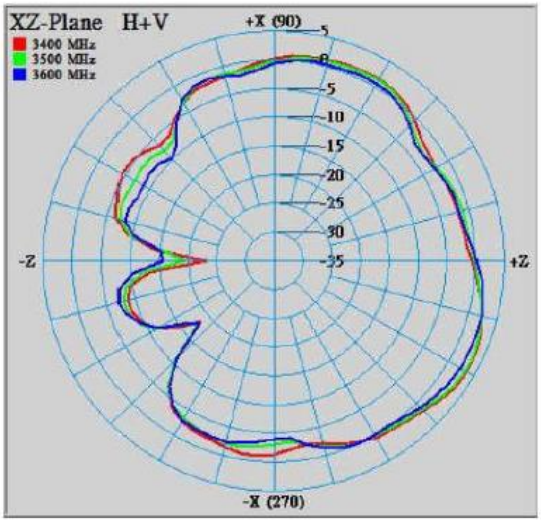


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	1.59	-2.02	0.64	-2.61	2.41	-0.96
2560	2.48	-1.29	1.94	-1.71	3.06	-0.14
2700	1.60	-2.24	1.15	-1.96	3.35	-0.24

3400 ~ 3600 MHz

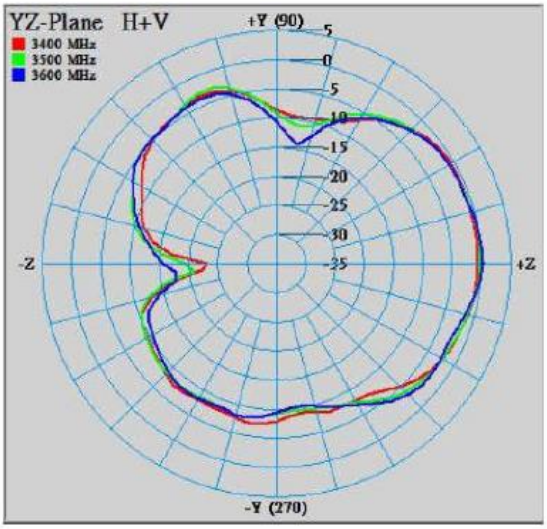
Phi=0.00deg

Gain . dB



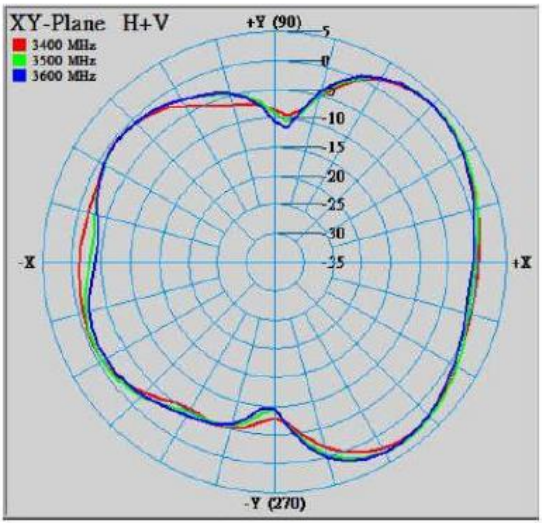
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB

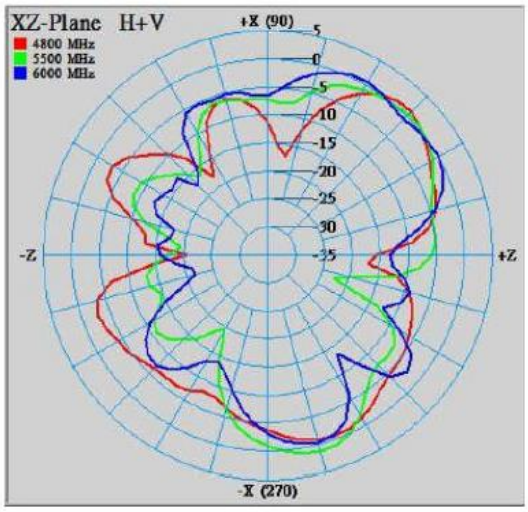


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
3400	3.63	-1.23	-0.53	-4.92	3.49	-0.48
3500	3.40	-1.46	-0.15	-4.76	3.65	-0.37
3600	2.44	-1.85	0.17	-4.95	3.41	-0.60

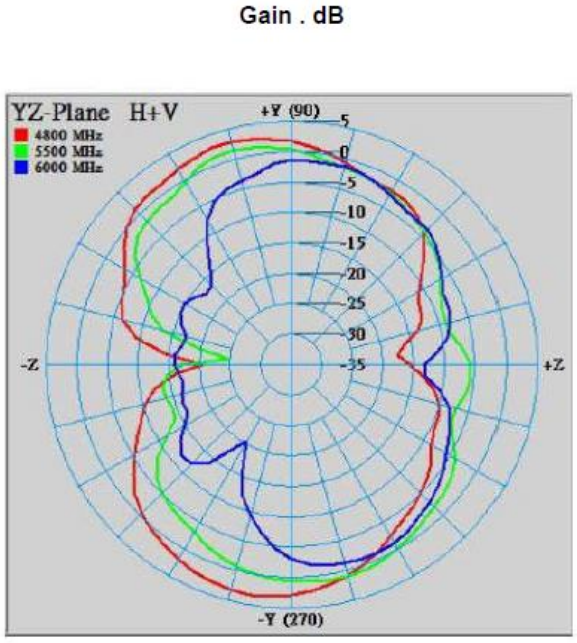
4800 ~ 6000 MHz

Gain . dB

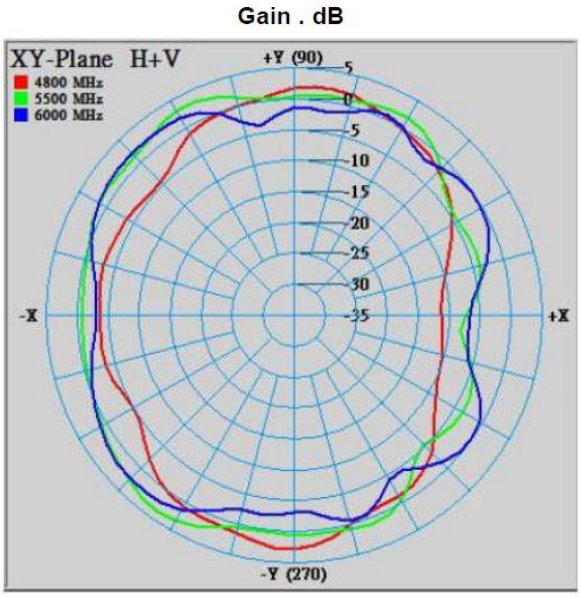
Phi=0.00deg



Phi=90.00deg

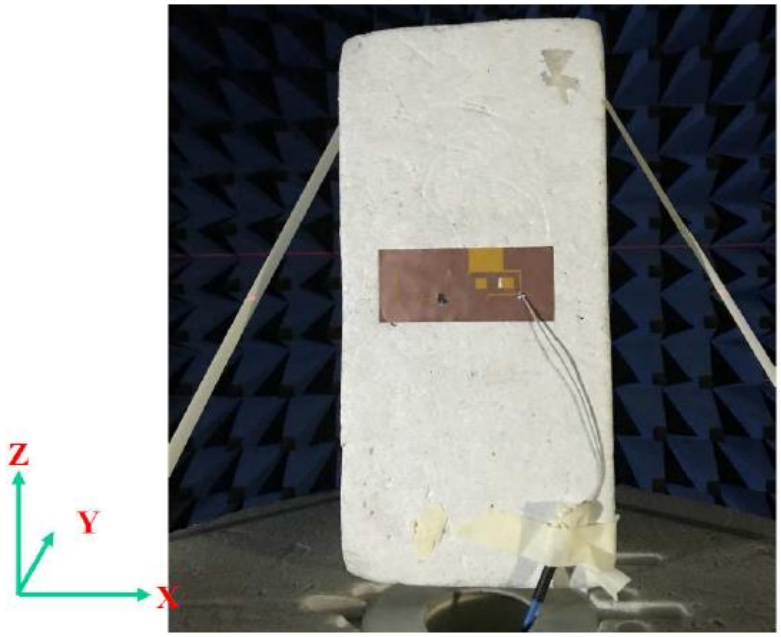


Theta=90.00deg



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
4800	0.94	-4.66	3.33	-1.27	2.75	-1.60
5500	1.29	-4.88	1.47	-2.70	3.60	0.15
6000	0.56	-4.94	-1.08	-5.62	2.40	-0.71

EXPERIMENTAL SETUP



APPROVAL

RALTRON	
DRAWN BY:	AR, November 26, 2019
APPROVED BY:	CP, November 26, 2019
REVISION:	A, Initial Release
	B, AR December 09, 2019 Updated Raditaion Pattern

RoHS Compliant