

**698~960/1447~1511/1559~1606/1710~2170/
2300~2700GHz Working Frequency**
Halogens Free Product

RFDPA171400SMTB801

Specification

Product Name	INPAQ RF Dipole Antenna
Series/PN	RFDPA171400SMTB801

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	698~960 MHz (Note-1) 1447~1511 MHz 1559~1606 MHz 1710~2170 MHz 2300~2700 MHz
Gain	3.2 dBi@698~960 MHz 2.27 dBi@1447~1511 MHz 2.53 dBi@1559~1606 MHz 4.8 dBi@1710~2170 MHz 4.67 dBi@2300~2700 MHz
VSWR	5 Max.@698~960 MHz 2.5 Max.@1447~1511 MHz 2.5 Max.@1559~1606 MHz 2.5 Max.@1710~2170 MHz 2.5 Max.@2300~2700 MHz
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20℃ ~ +65℃

*Note 1. Central Frequency should be defined after customers' application approval.

MATERIAL TABLE

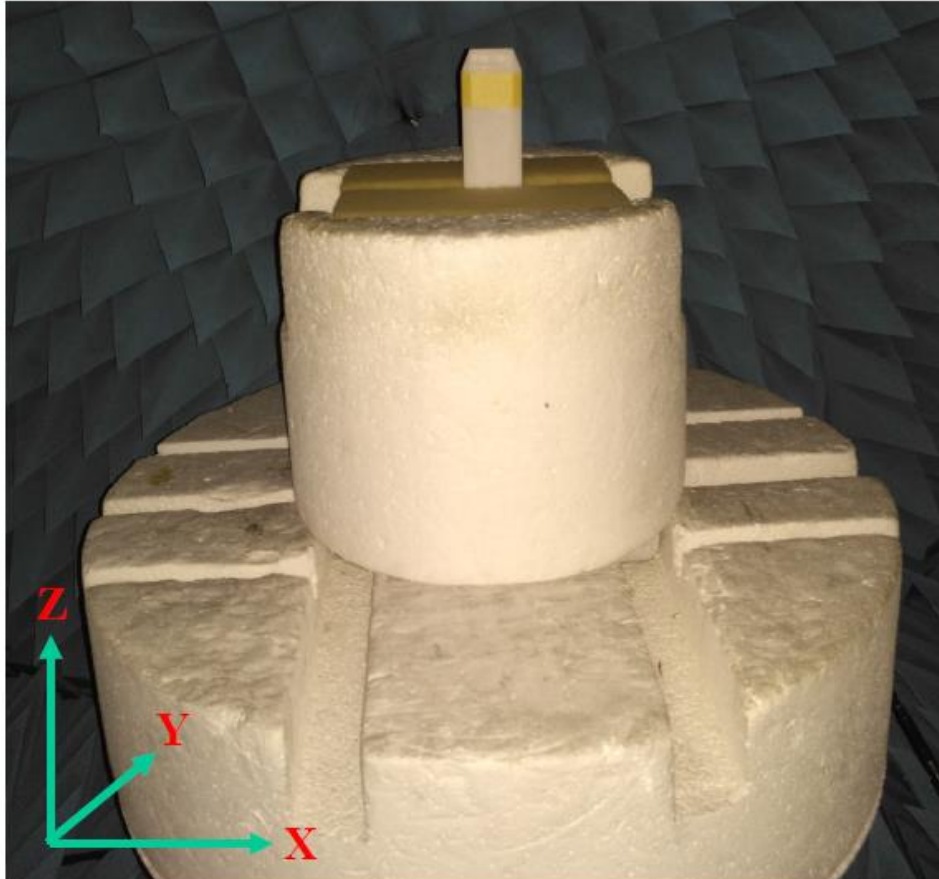
Items	Description
Antenna Down Base	PC+PBT(Black)
Antenna Up Base	PC(Black)
Rivet	POM(Black)
Antenna Cover 1	ABS(Black)
Antenna Cover 2	ABS(Black)
PCB	FR4
Cable RG178	Brown
Connector	SMA Plug(Black)

ORDERING RULE

RF	DPA	1714	00	S	M	T	B	8	01
Type Code	Product Code	Dipole Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	DPA: Dipole Antenna	Per 2 digits of length, width e.g.: 1714 Length 175.51mm, Width ø13.0mm	2 digits for cable length e.g.:14 Cable Length: 30CM	A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None	A: Reverse Female B: Reverse Male F: Female M: Male N: None	0: 0GHz 3: 3GHz 5: 5 GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T:LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:ø0.81 3:ø1.13 6:RG316 7:ø1.37 8:RG178	01~99 series number

Test Report

■ Experimental Setup



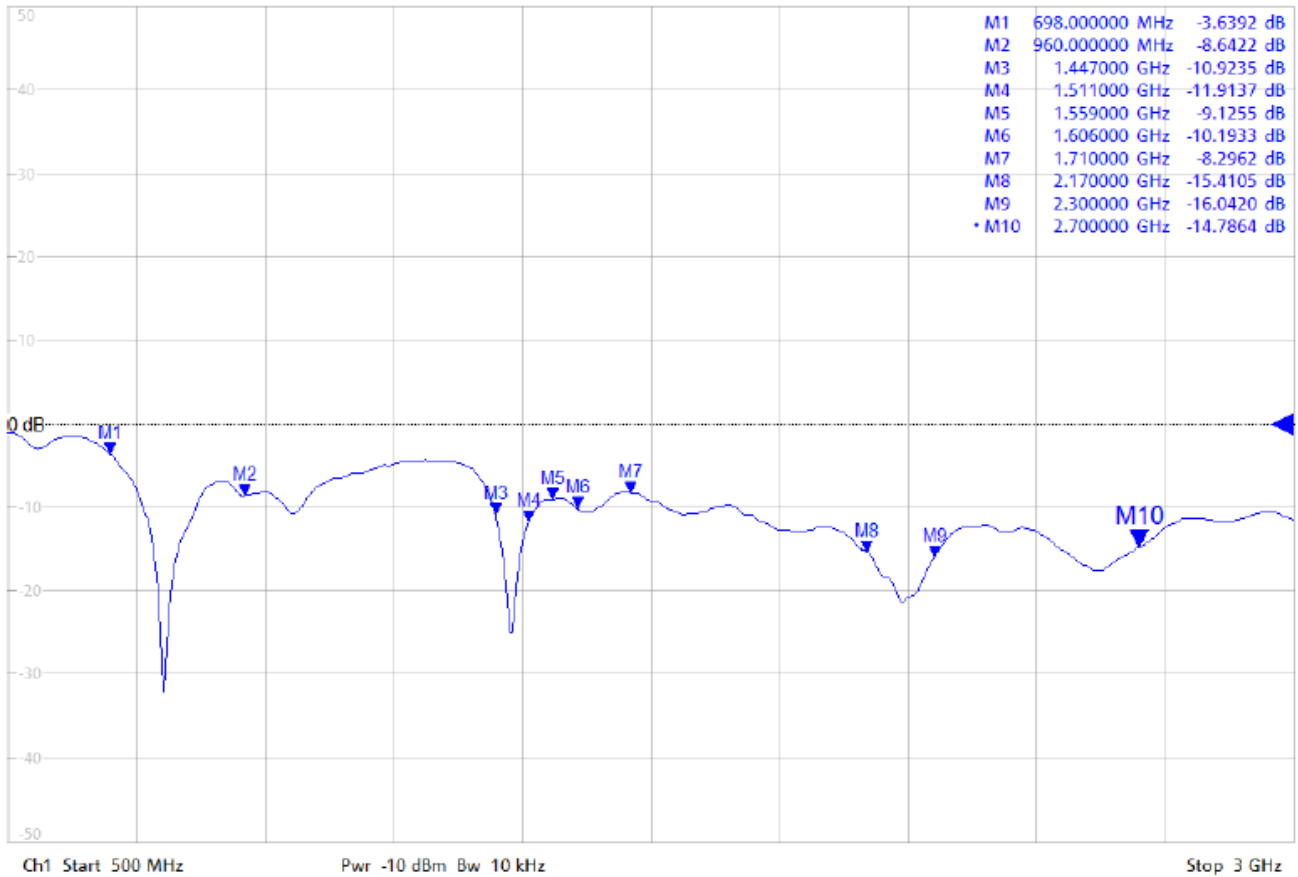
ELECTRICAL CHARACTERISTICS

Return Loss

6/19/2018 9:26:30 AM
1311.6010K44-102859-gH

Trc4 — S22 dB Mag 10 dB/ Ref 0 dB Cal Offs

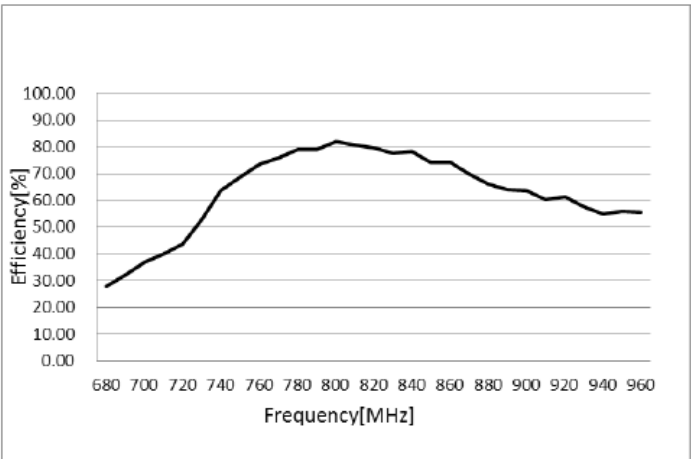
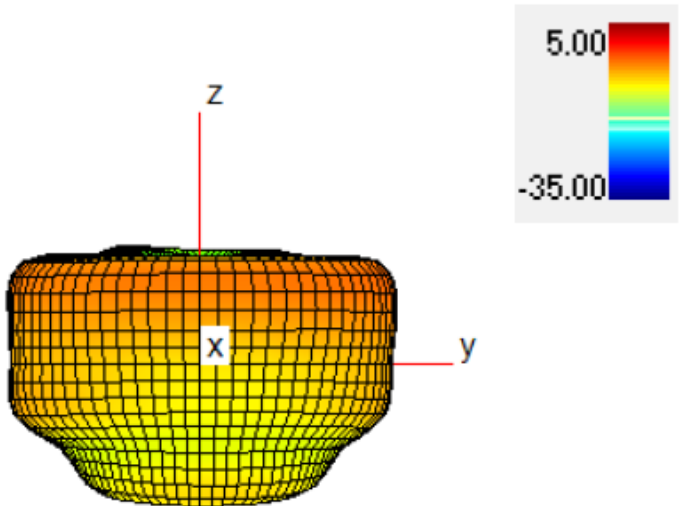
2



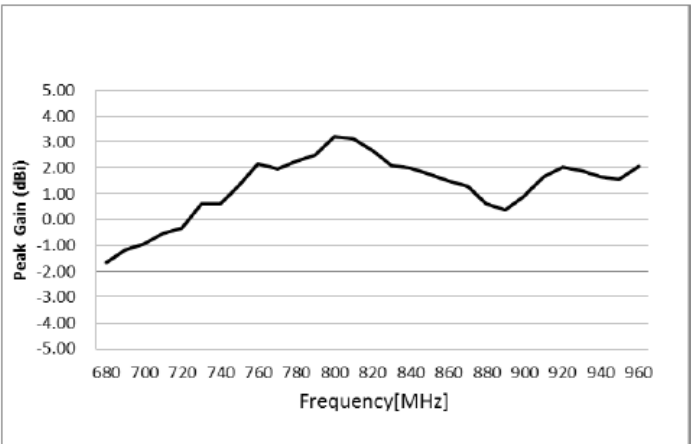
■ ANTENNA EFFICIENCY AND PEAK GAIN

698~960 MHz

f(c)829MHz



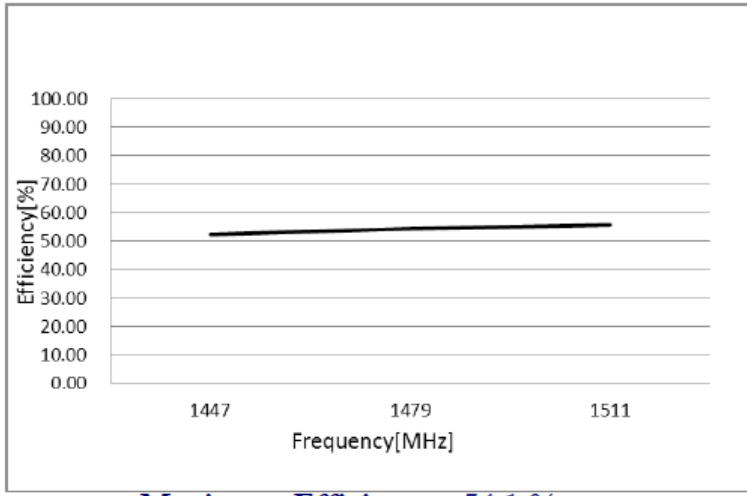
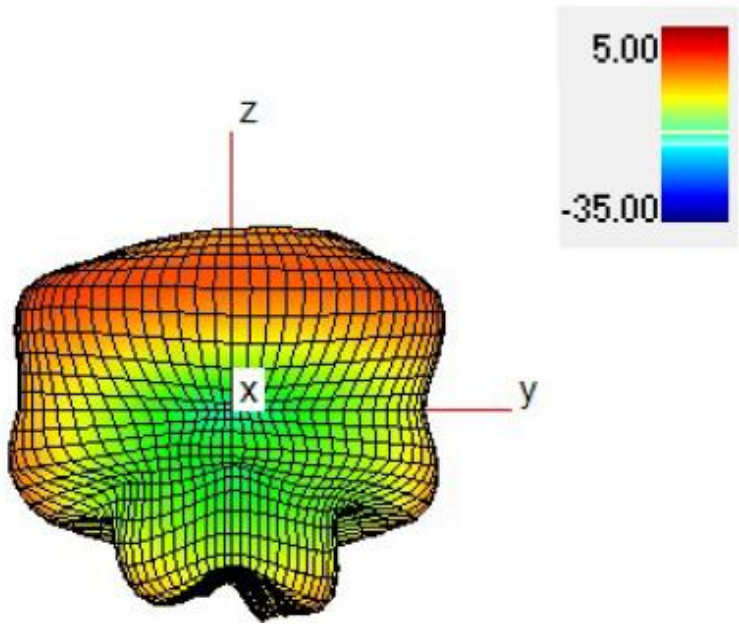
Maximum Efficiency : 81.9%



Peak Gain : 3.2 dBi

1447~1511 MHz

f(c)1479MHz



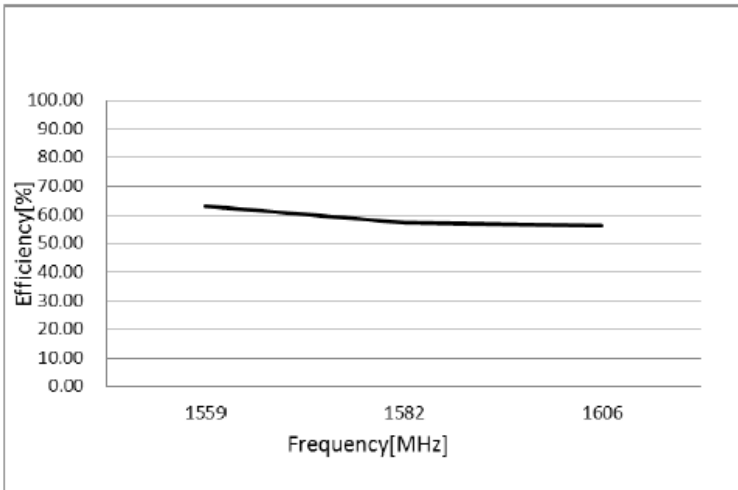
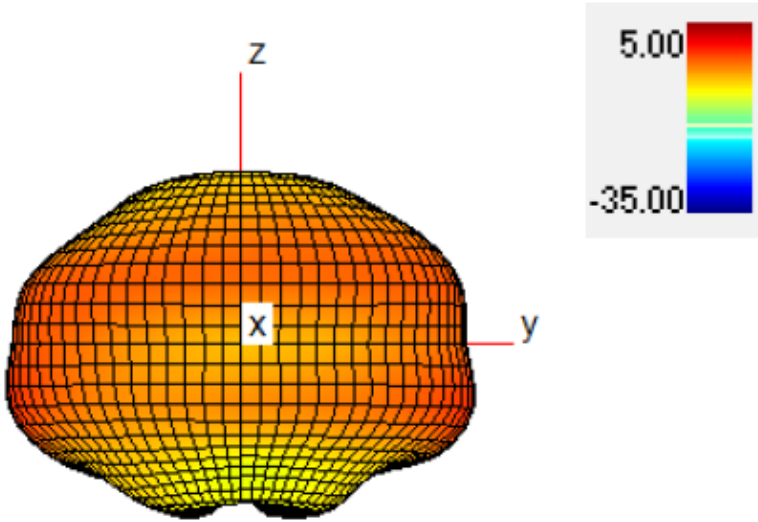
Maximum Efficiency : 54.1 %



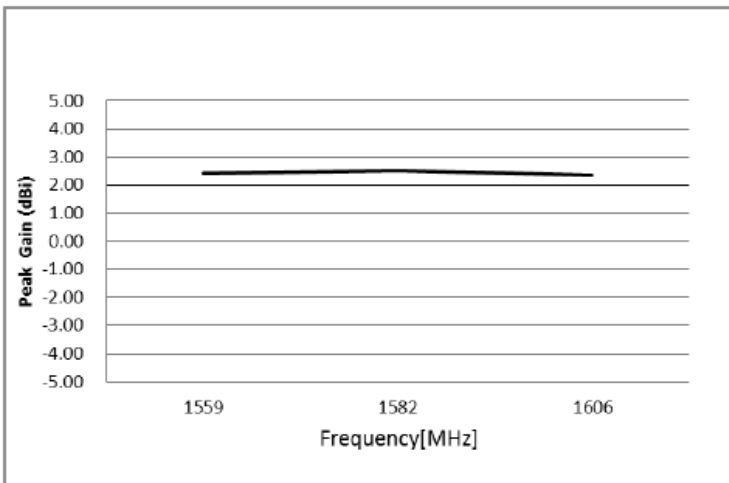
Peak Gain : 2.27dBi

1559~1606 MHz

f(c)1582MHz



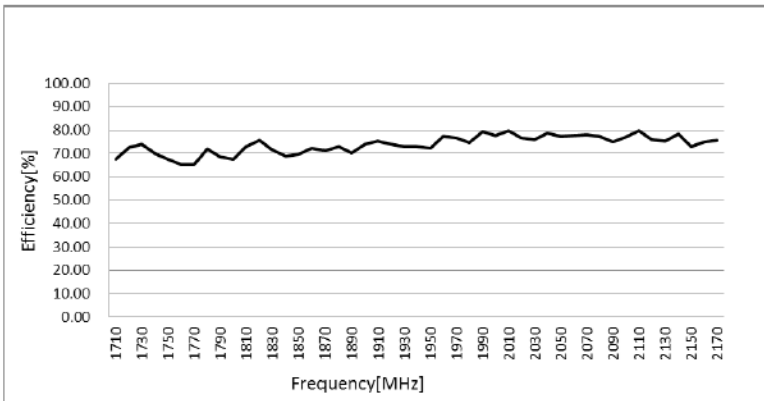
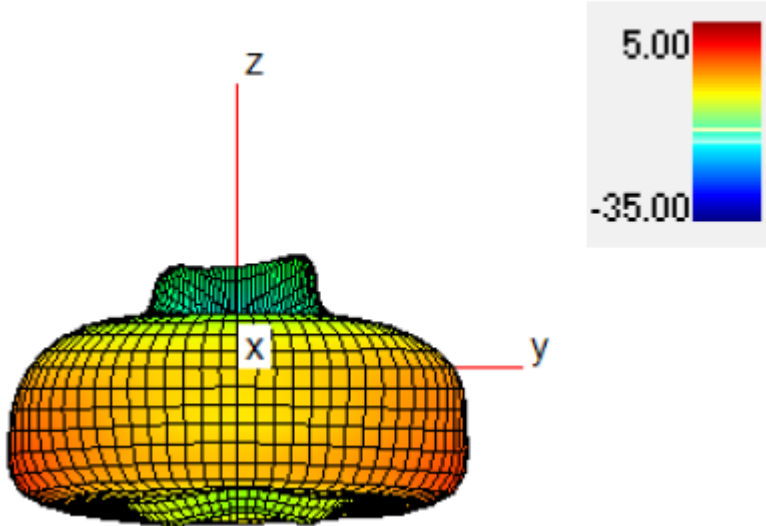
Maximum Efficiency : 63.1 %



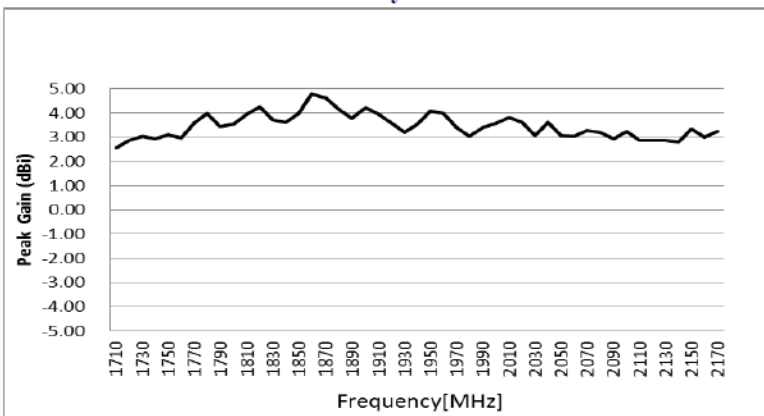
Peak Gain : 2.53 dBi

1710~2170 MHz

f(c)1940MHz



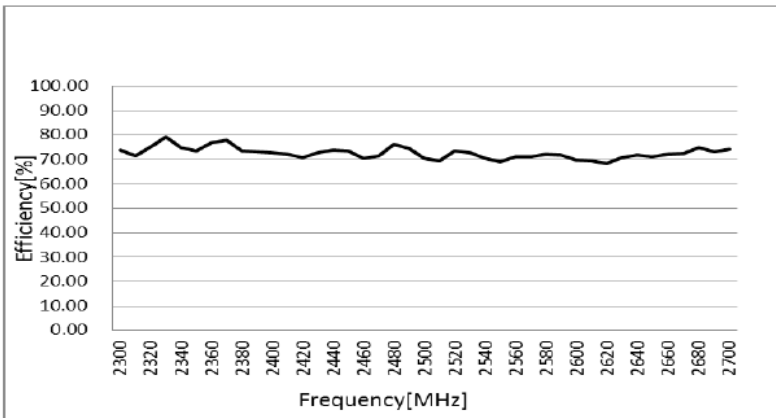
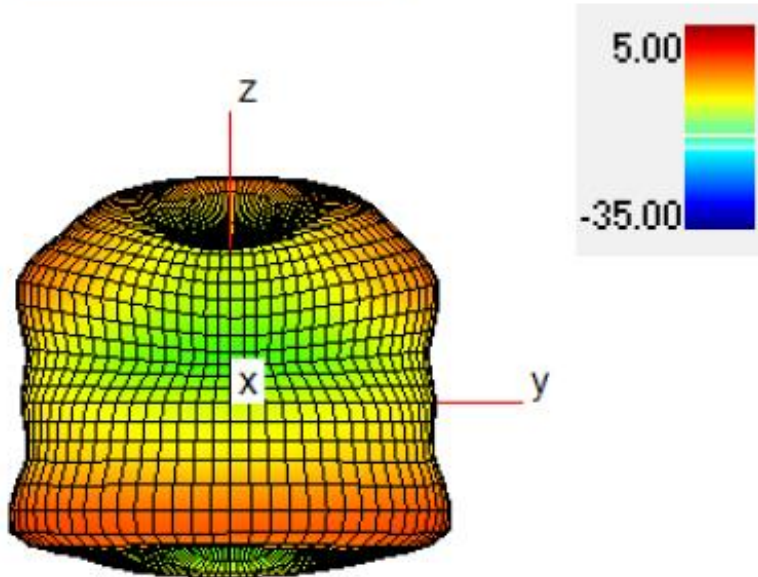
Maximum Efficiency : 79.2%



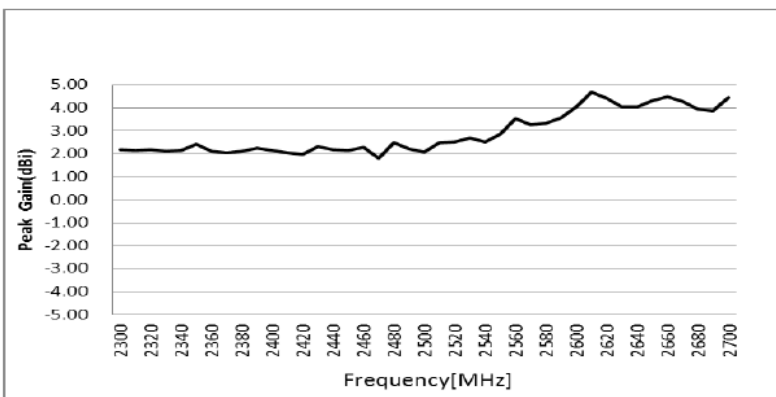
Peak Gain : 4.8dBi

2300~2690 MHz

f(c)2495MHz



Maximum Efficiency : :79.1%



Peak Gain : 4.67 dBi

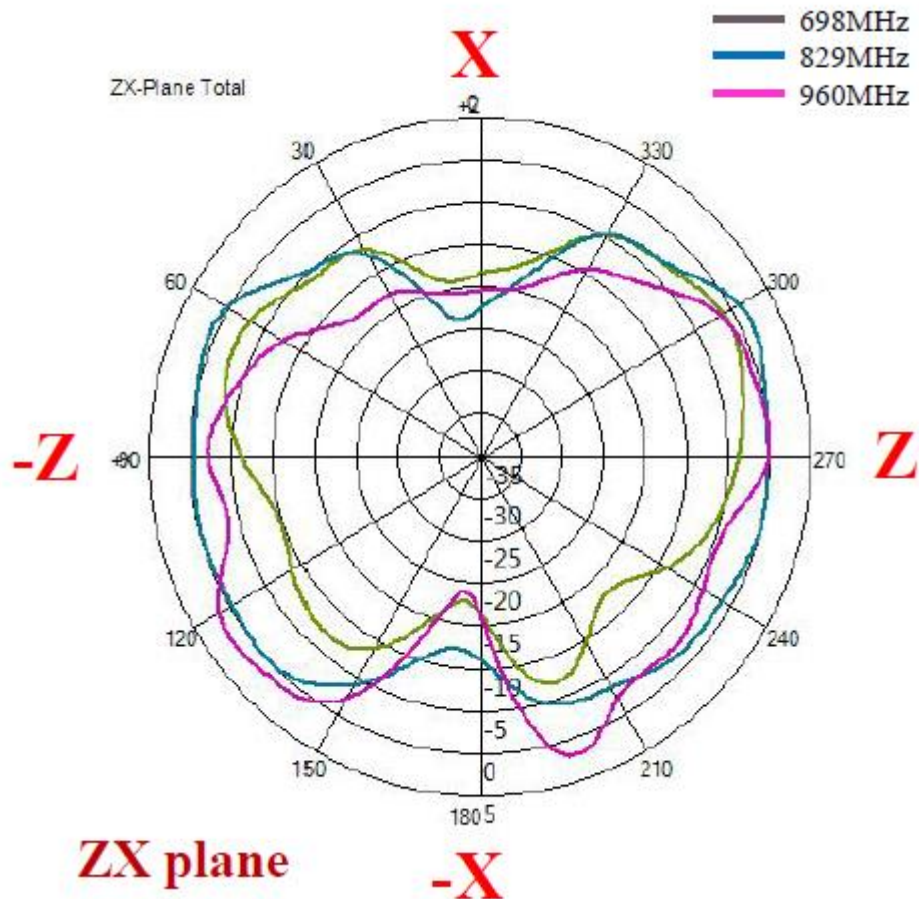
RADIATION PATTERN

698~960 MHz

X-Z Plane

Phi=0.00deg

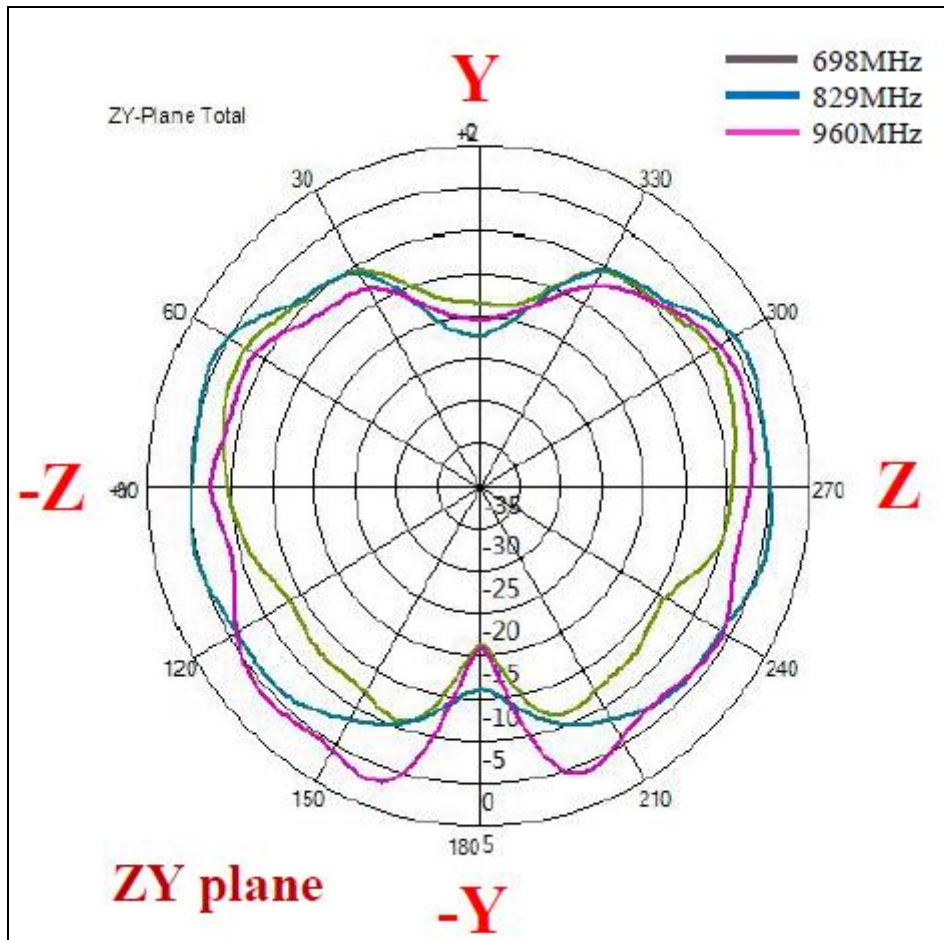
Gain . dB



Y-Z Plane

Phi=90.00deg

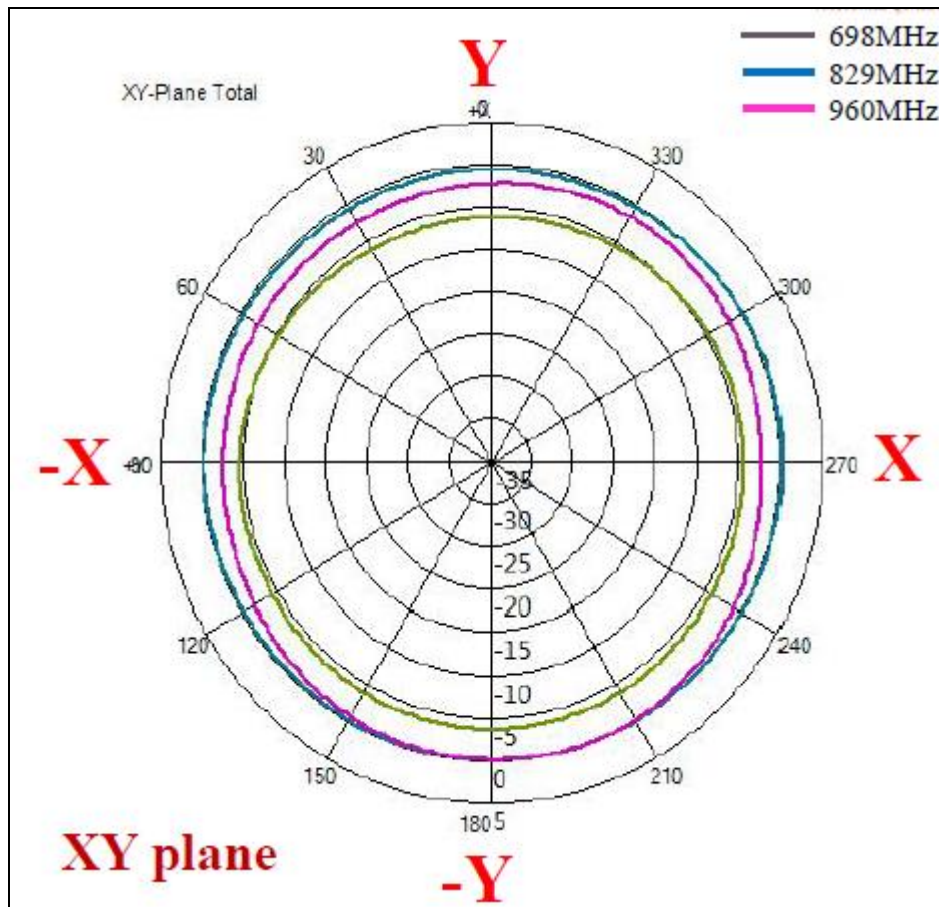
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



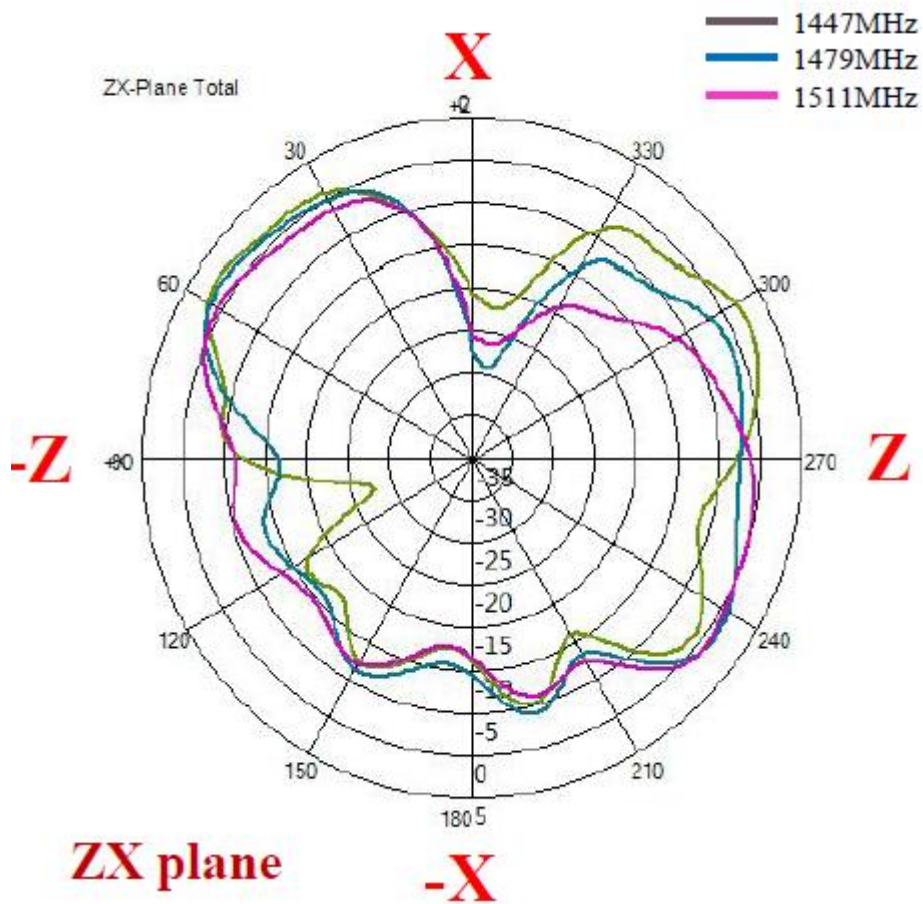
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
698	-3.75	-4.54	-2.00	-5.76	-0.95	-6.05
829	0.30	-0.07	1.02	-2.13	1.52	-2.12
960	-0.03	-1.39	2.03	-2.70	2.09	-3.23

1447~1511 MHz

X-Z Plane

Phi=0.00deg

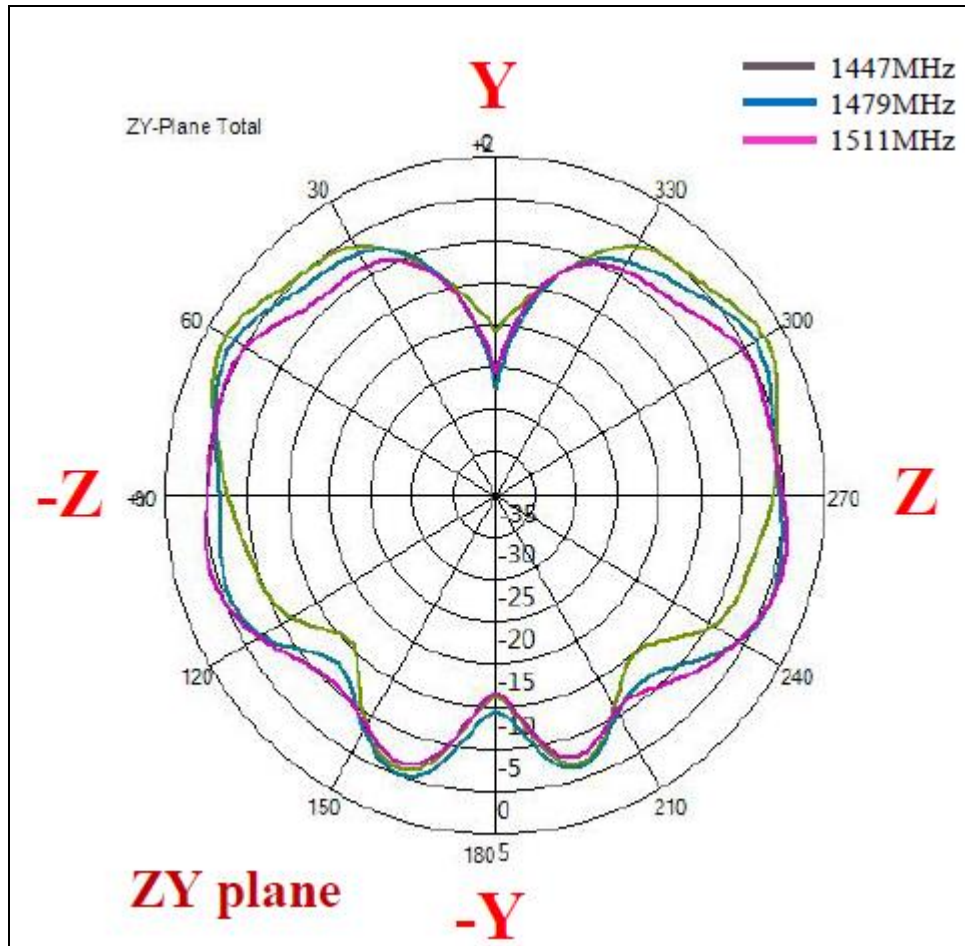
Gain . dB



Y-Z Plane

Phi=90.00deg

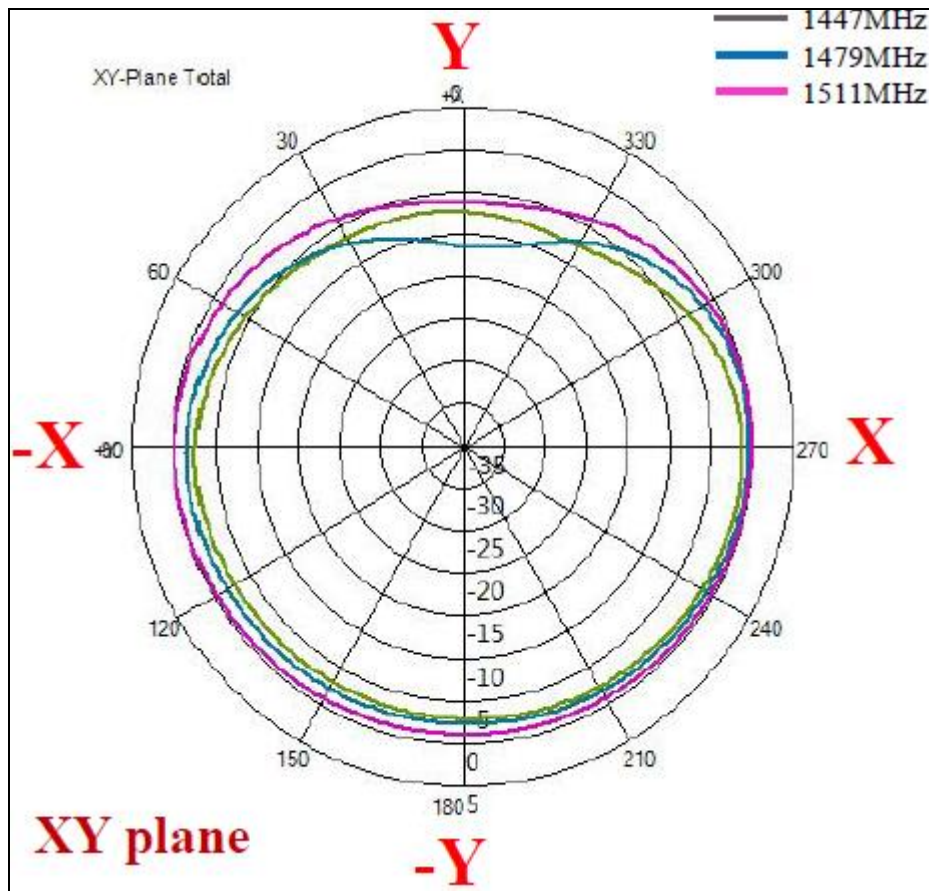
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



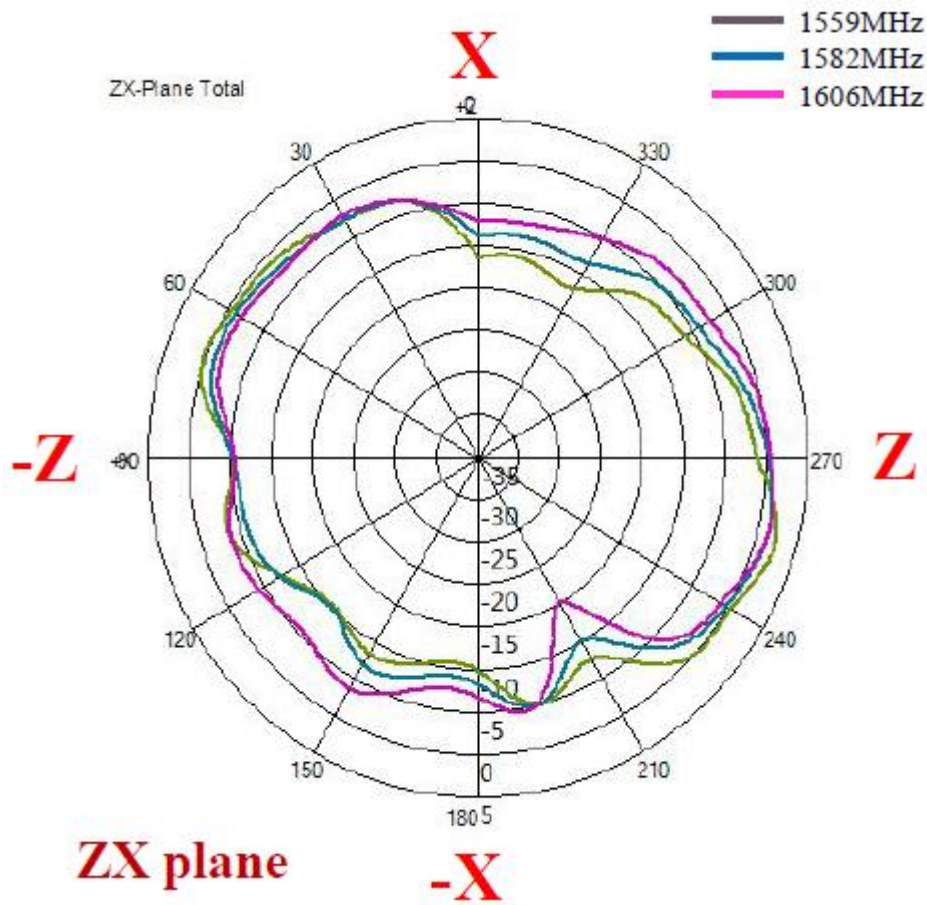
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1447	2.19	-3.09	2.17	-2.01	-1.16	-3.33
1479	1.99	-3.33	1.82	-1.79	-0.31	-2.58
1511	0.87	-3.84	1.00	-2.23	0.02	-1.25

1559~1606 MHz

X-Z Plane

Phi=0.00deg

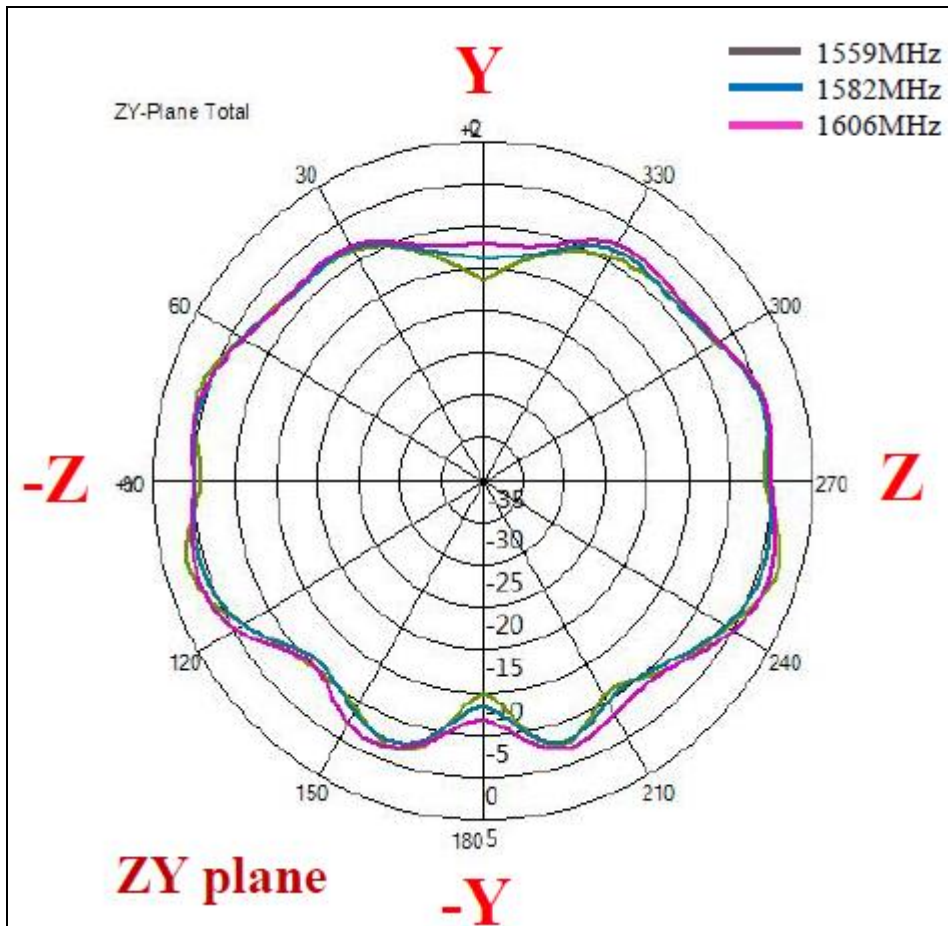
Gain . dB



Y-Z Plane

Phi=90.00deg

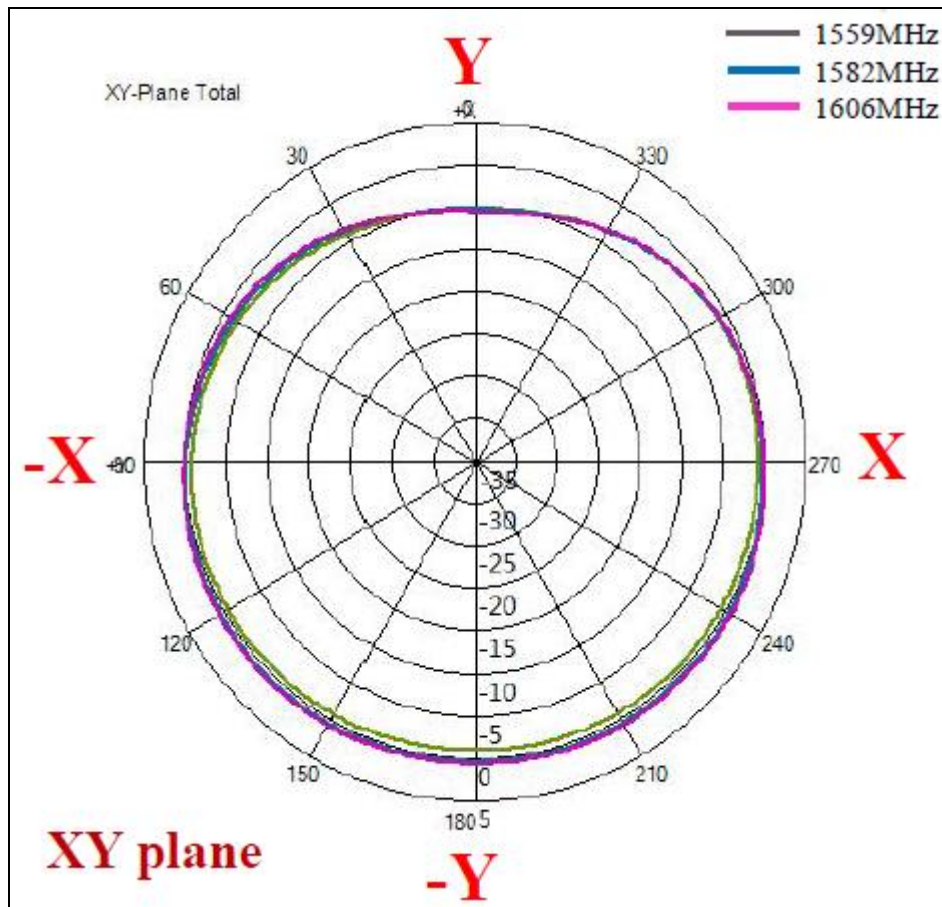
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



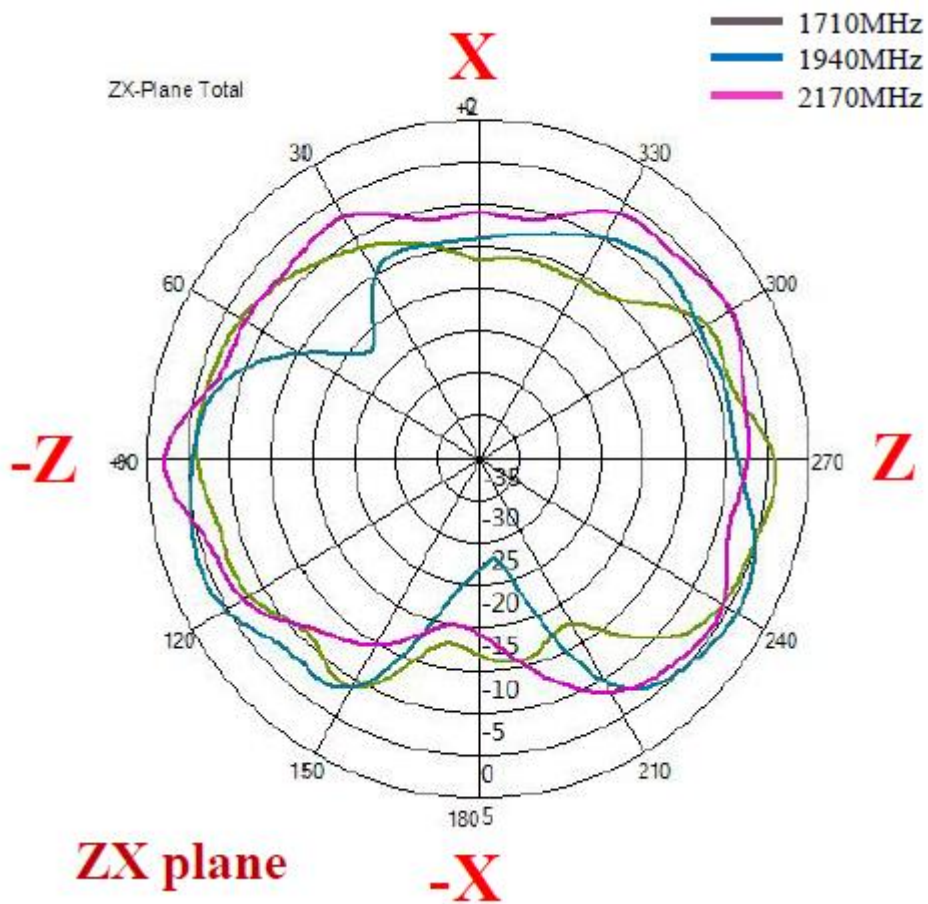
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1559	2.46	-3.32	2.31	-1.95	-0.33	-1.43
1582	1.26	-3.55	0.69	-2.24	0.70	-0.63
1606	1.39	-3.07	1.51	-1.62	0.94	-0.40

1710~2170 MHz

X-Z Plane

Phi=0.00deg

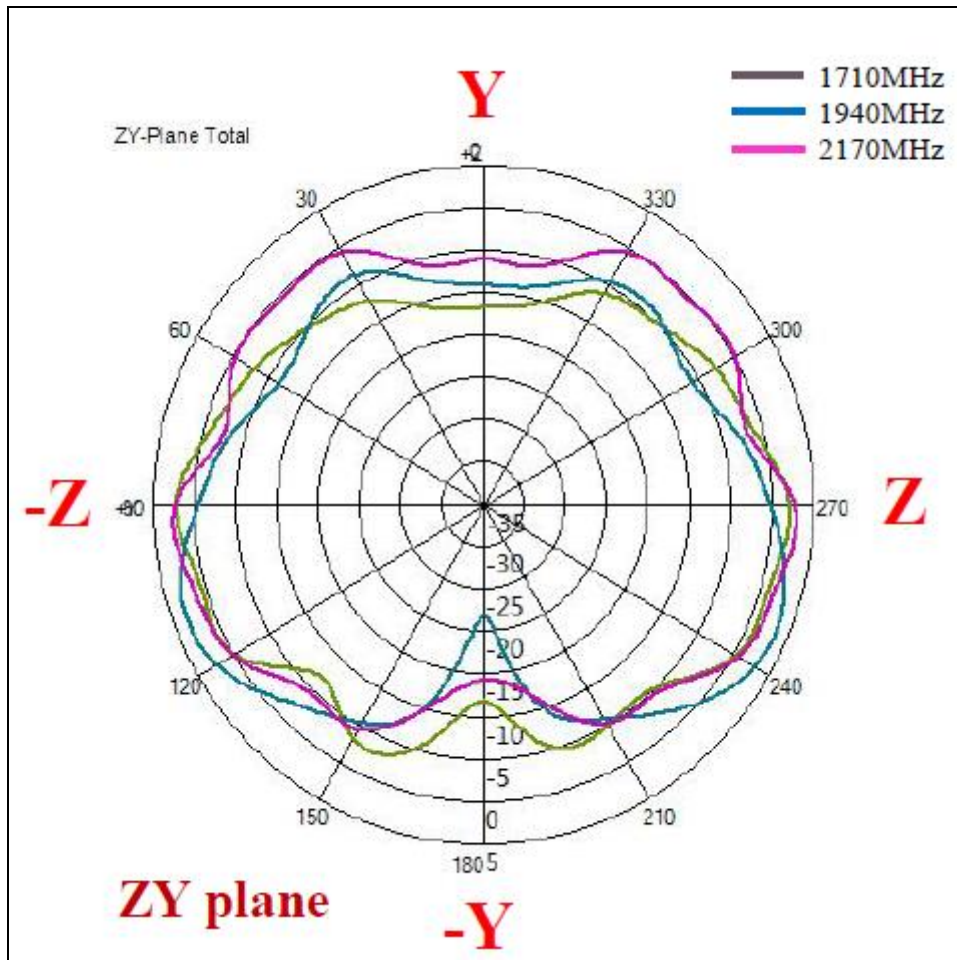
Gain . dB



Y-Z Plane

Phi=90.00deg

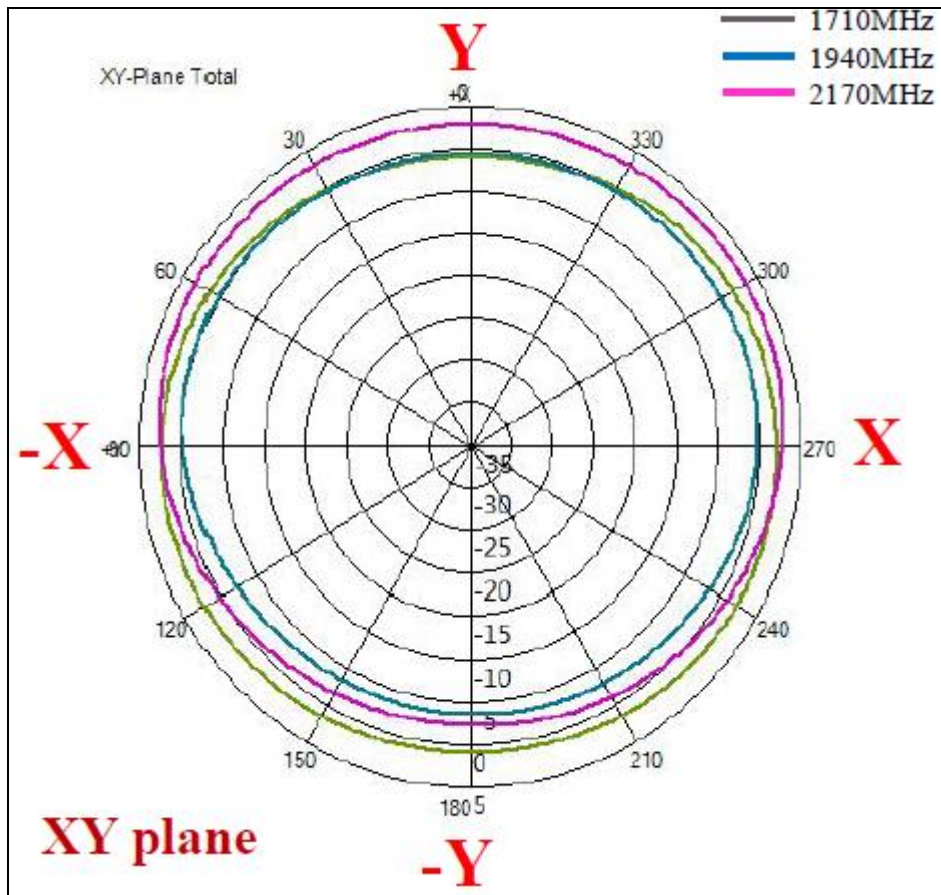
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB

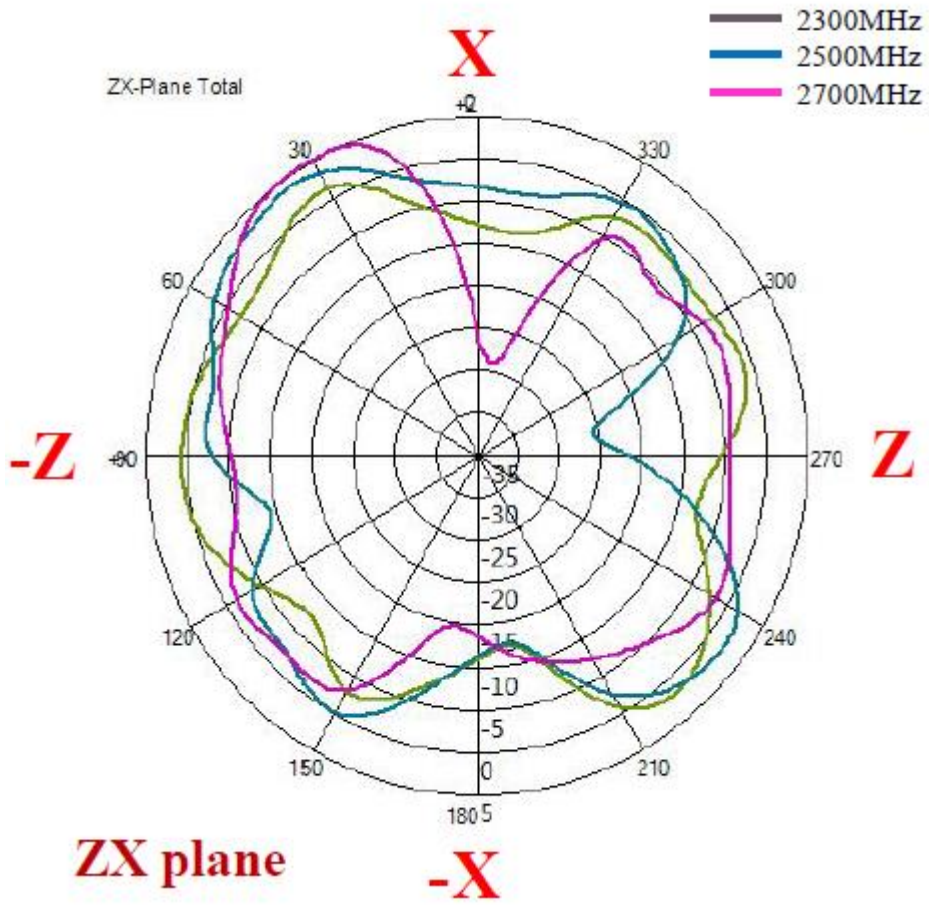


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
1710	1.13	-3.94	2.43	-2.39	2.58	1.43
1940	1.13	-3.40	3.50	-1.97	0.50	-0.94
2170	3.09	-2.47	3.01	-1.23	3.63	1.98

2300~2700 MHz

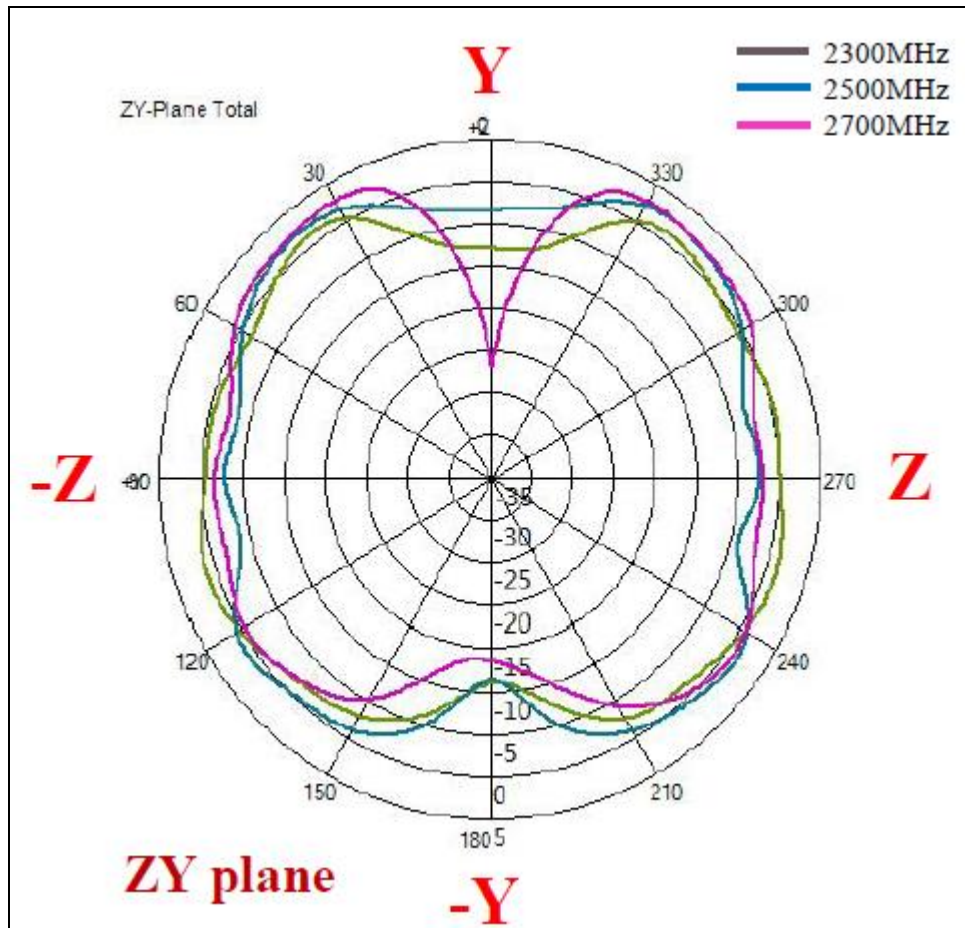
X-Z Plane
Phi=0.00deg

Gain . dB



Y-Z Plane
Phi=90.00deg

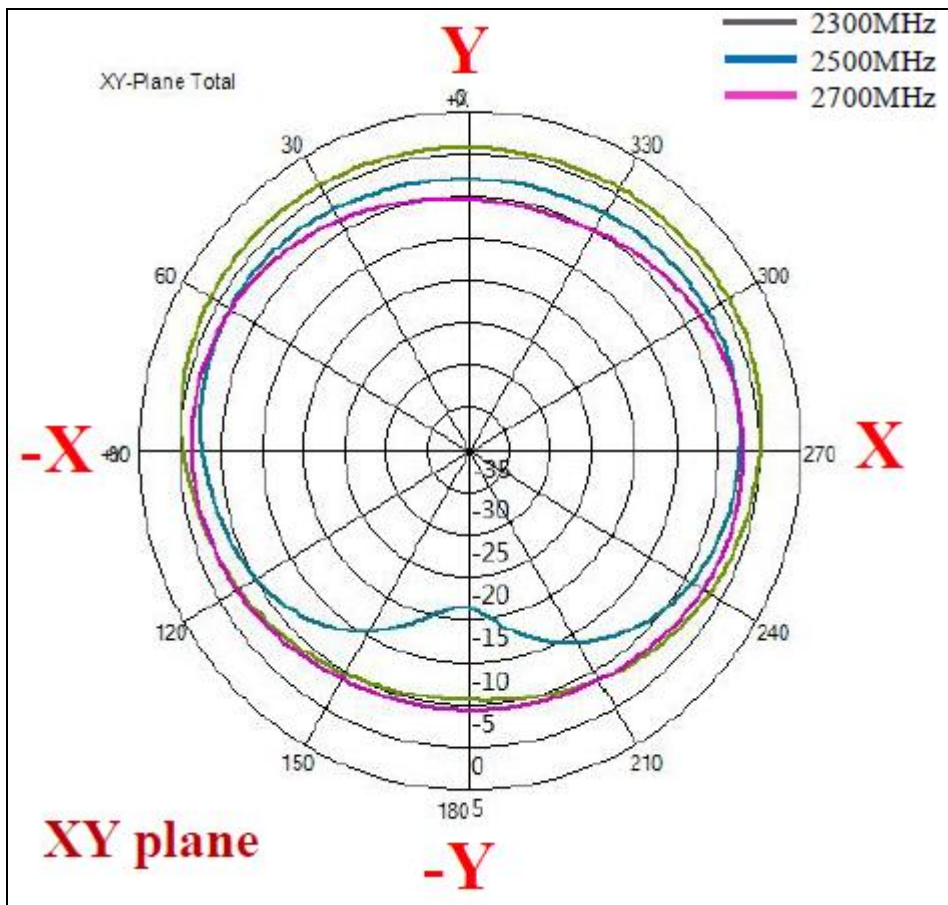
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2300	1.78	-2.31	1.50	-1.08	1.57	-0.46
2500	4.14	-1.50	2.78	-0.77	-1.21	-3.61
2700	4.50	-2.00	3.07	-0.80	-1.11	-2.99