

APPROVAL SHEET

FPC ANTENNA

2.4~2.5 GHz Working Frequency

Halogens Free Product

P/N: RFFPA301204IMAB301

Customer : 明泰

Customer 's Part No. :

Production : Antenna

Address : 蘇州工業園區長陽街369號

*Contents in this sheet are subject to change without prior notice.

Version	Date	Description	Author
V01	2019 Jun.	New Release	PIPI
V02	2019 Jun.	變更測報	PIPI

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2400~2500 MHz (Note-1)
VSWR	<2
Return Loss	-10dB(Max)
Peak Gain	2.69 dBi
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20° C~+65° C

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

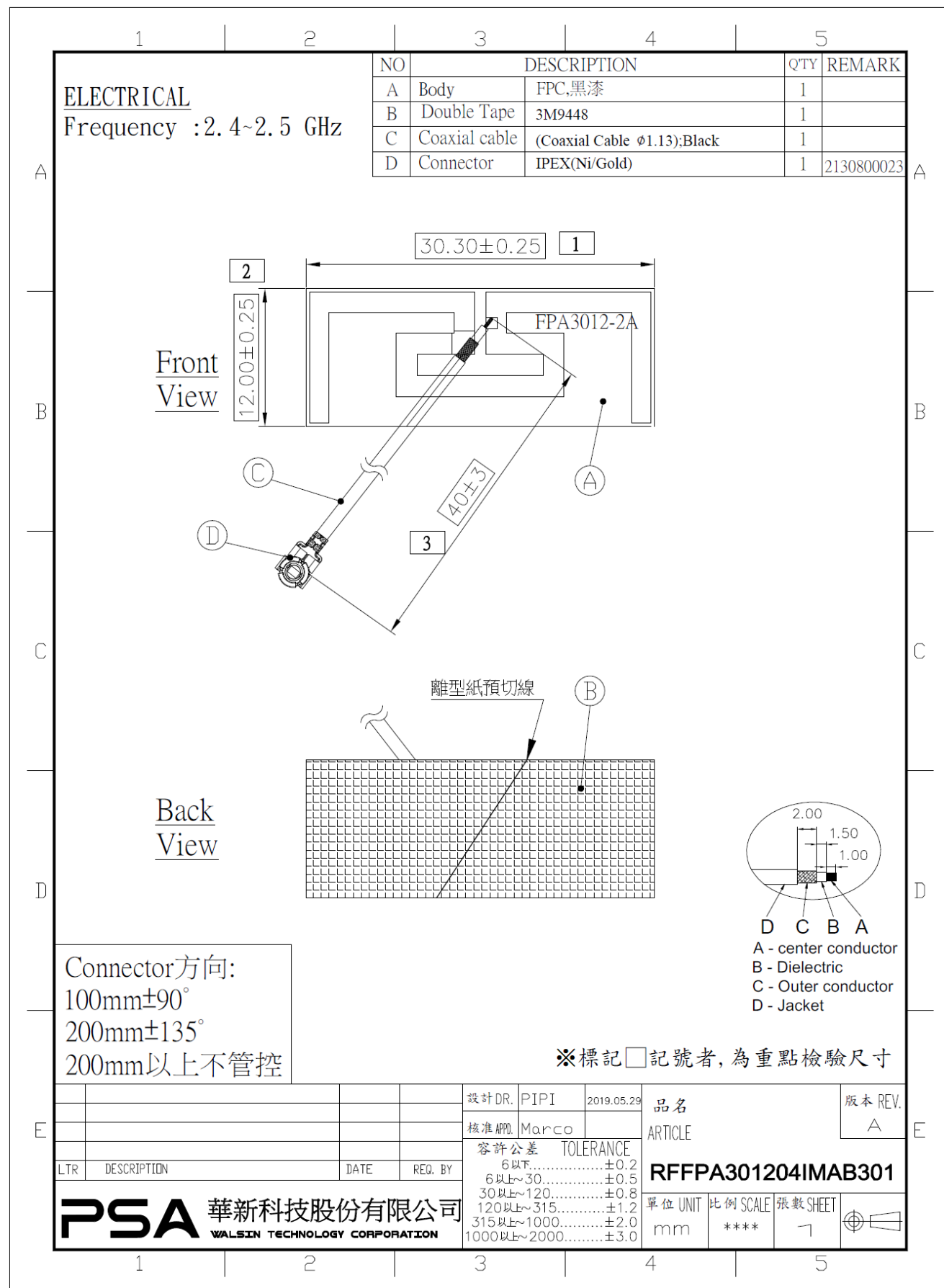
MATERIAL TABLE

Items	Description
Antenna	FPC (黑漆)
Double Tape	3M9448
Cable	(Coaxial Cable ϕ 1.13) (Black)
Connector	IPEX(Ni/Gold)

ORDERING RULE

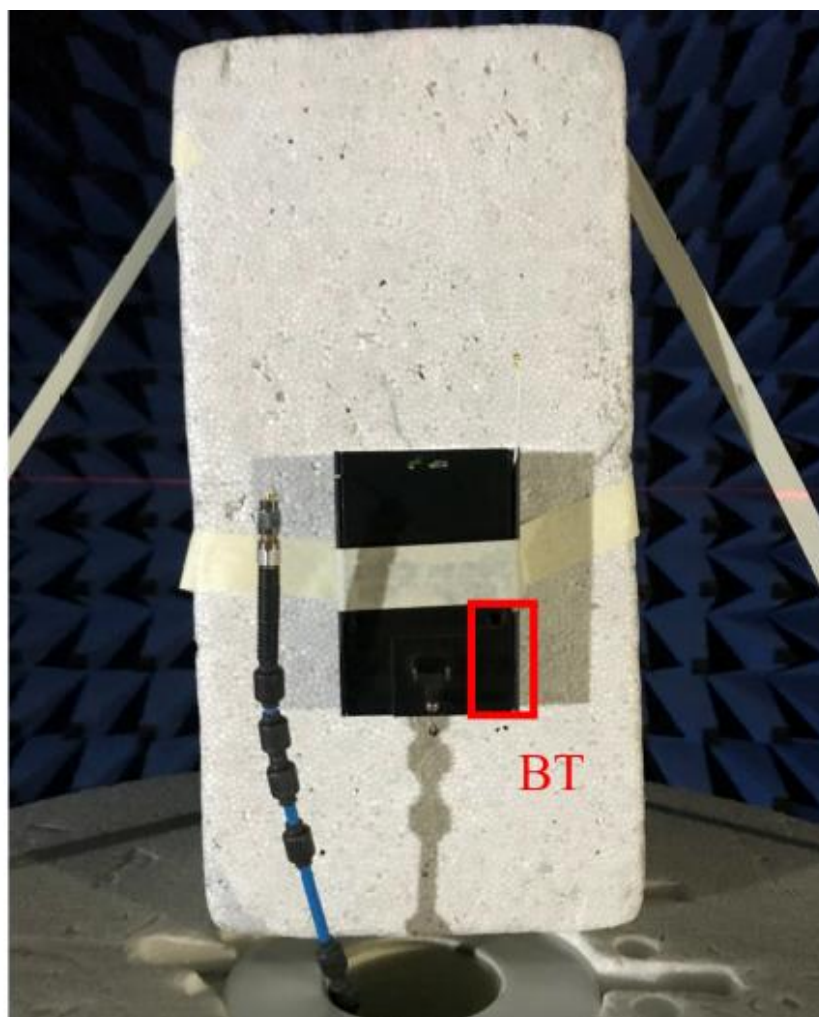
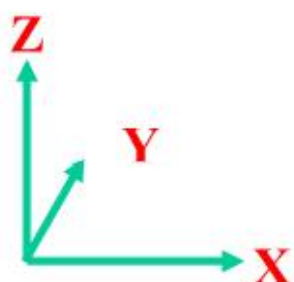
RF	FPC	3012	04	I	M	A	B	3	01
Type Code	Product Code	FPCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	FPC: Antenna	Per 2 digits of length, width e.g.: 4506 Length 45.5mm, Width 6.2mm	2 digits for cable length e.g.: 10 Cable Length:10cm	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

DIMENSIONS

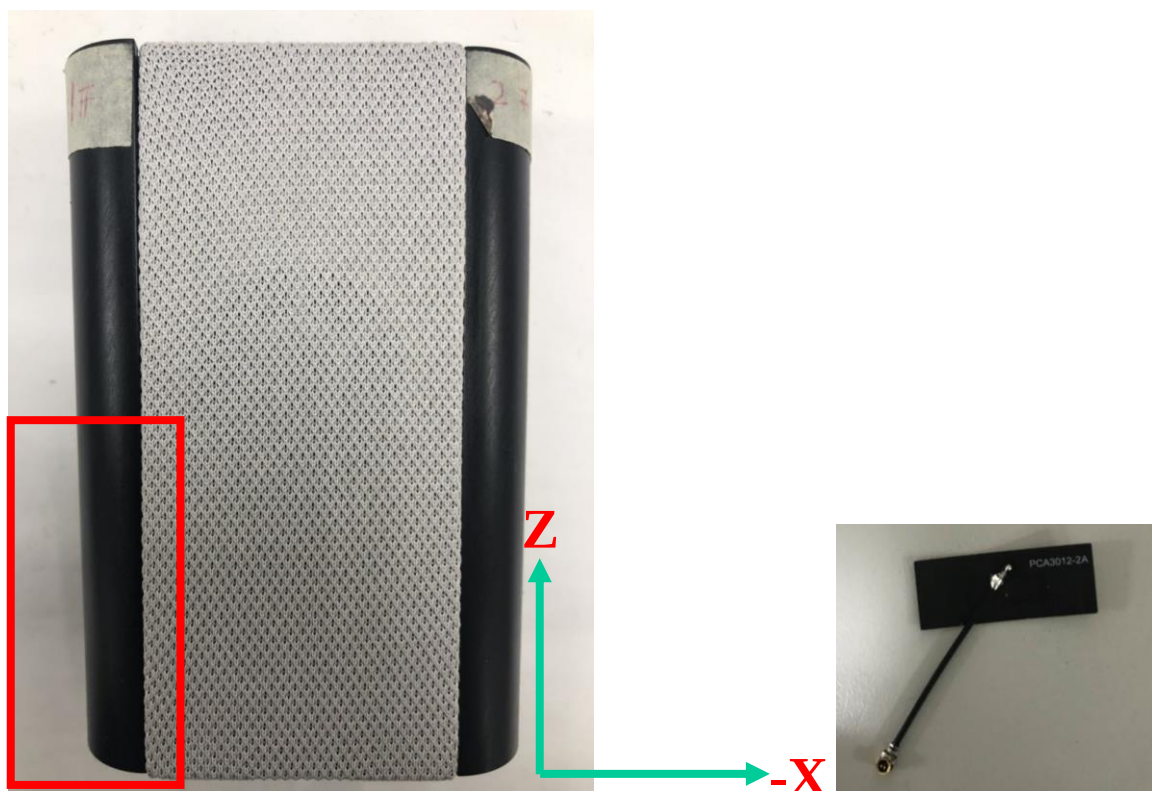


Test Report

■ Experimental Setup

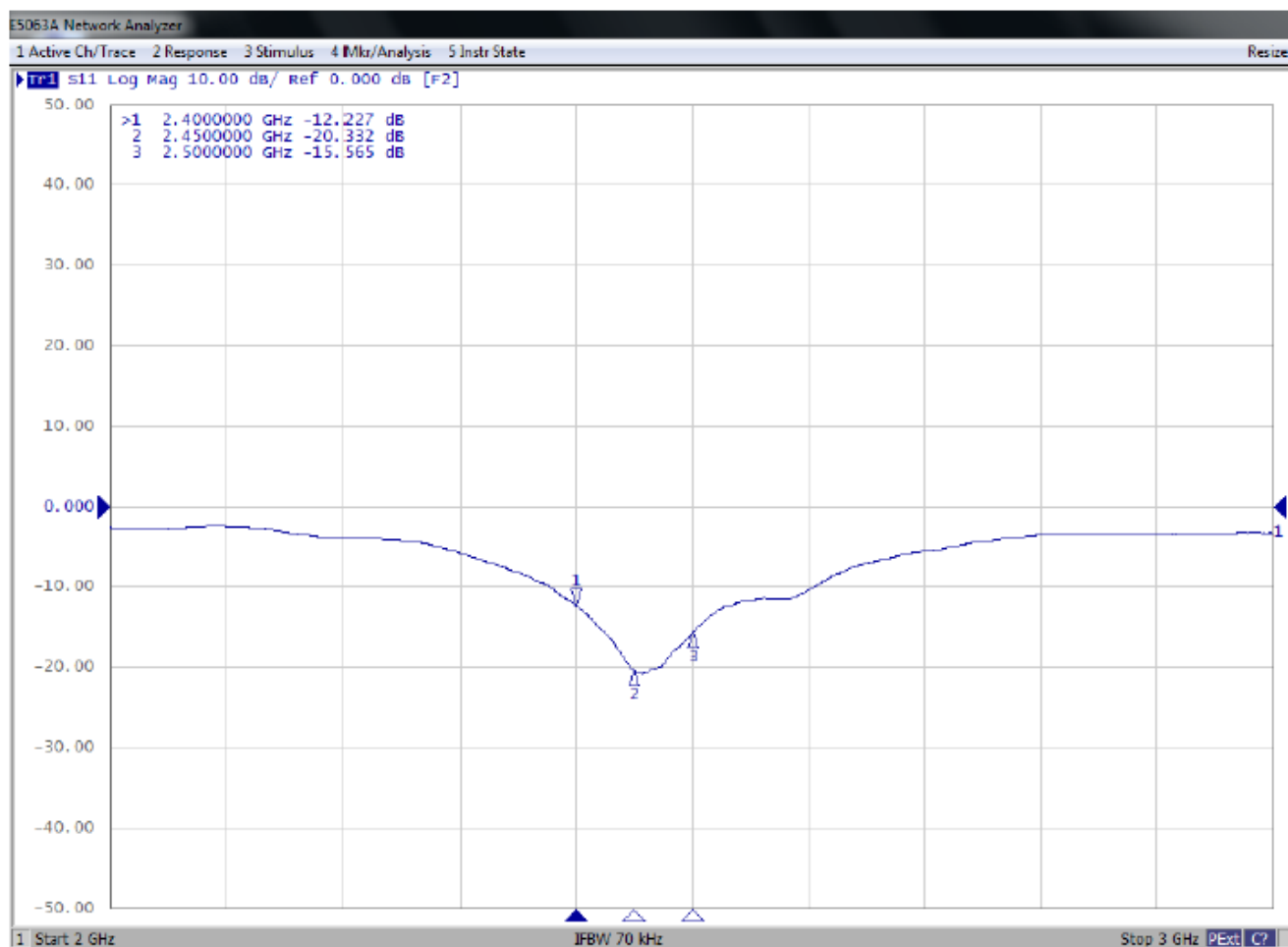


Antenna Solution Detail

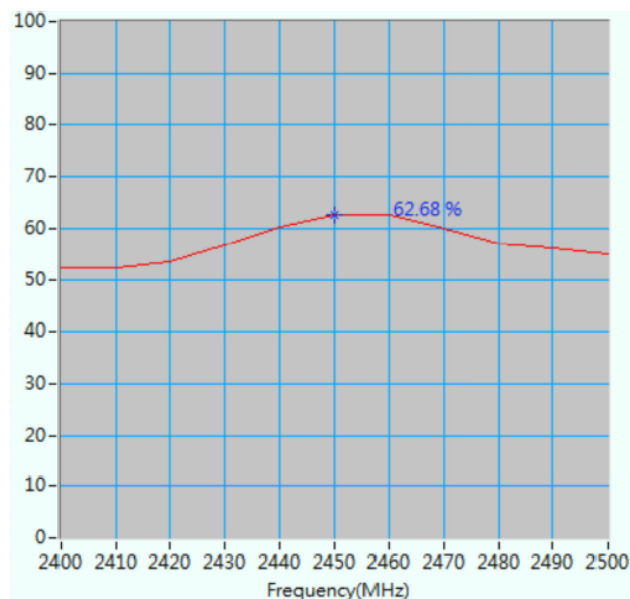


ELECTRICAL CHARACTERISTICS

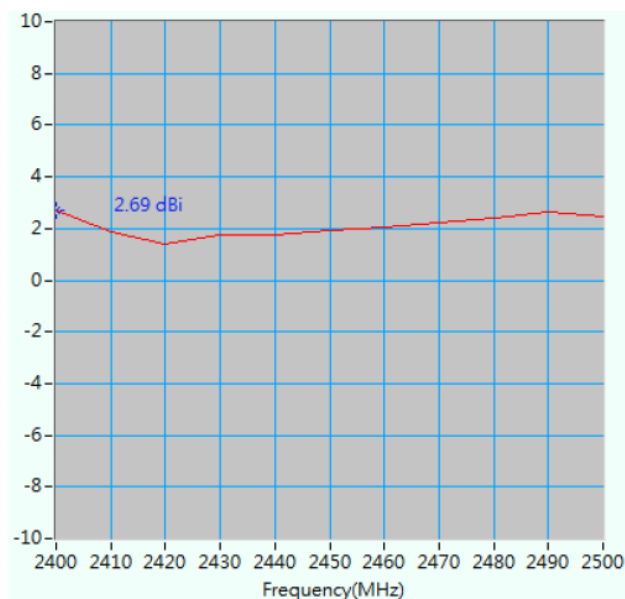
Return Loss



Antenna Efficiency and 3D Peak Gain



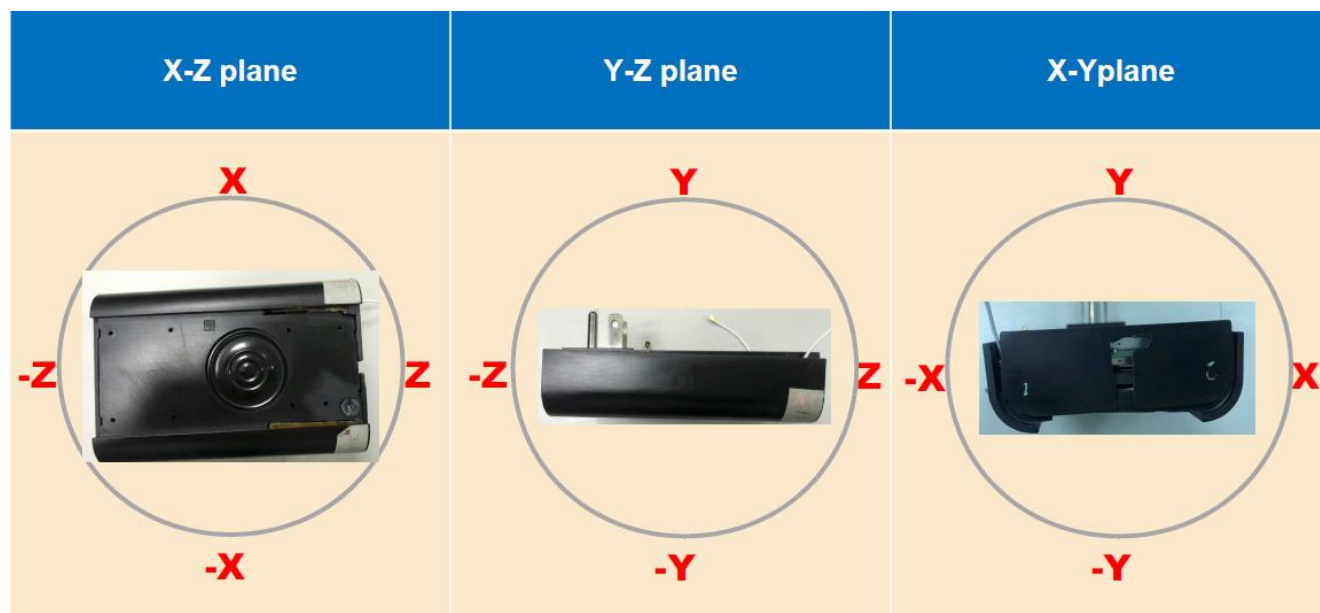
Maximum Efficiency at 2450 MHz : 62.6 %



Maximum Peak Gain at 2400 MHz : 2.69 dBi

	BT	
Frequency (GHz)	Efficiency (%)	Peak gain (dBi)
2.4	52.3	2.69
2.45	62.6	1.91
2.5	54.9	2.43

■ 3 Views of antenna

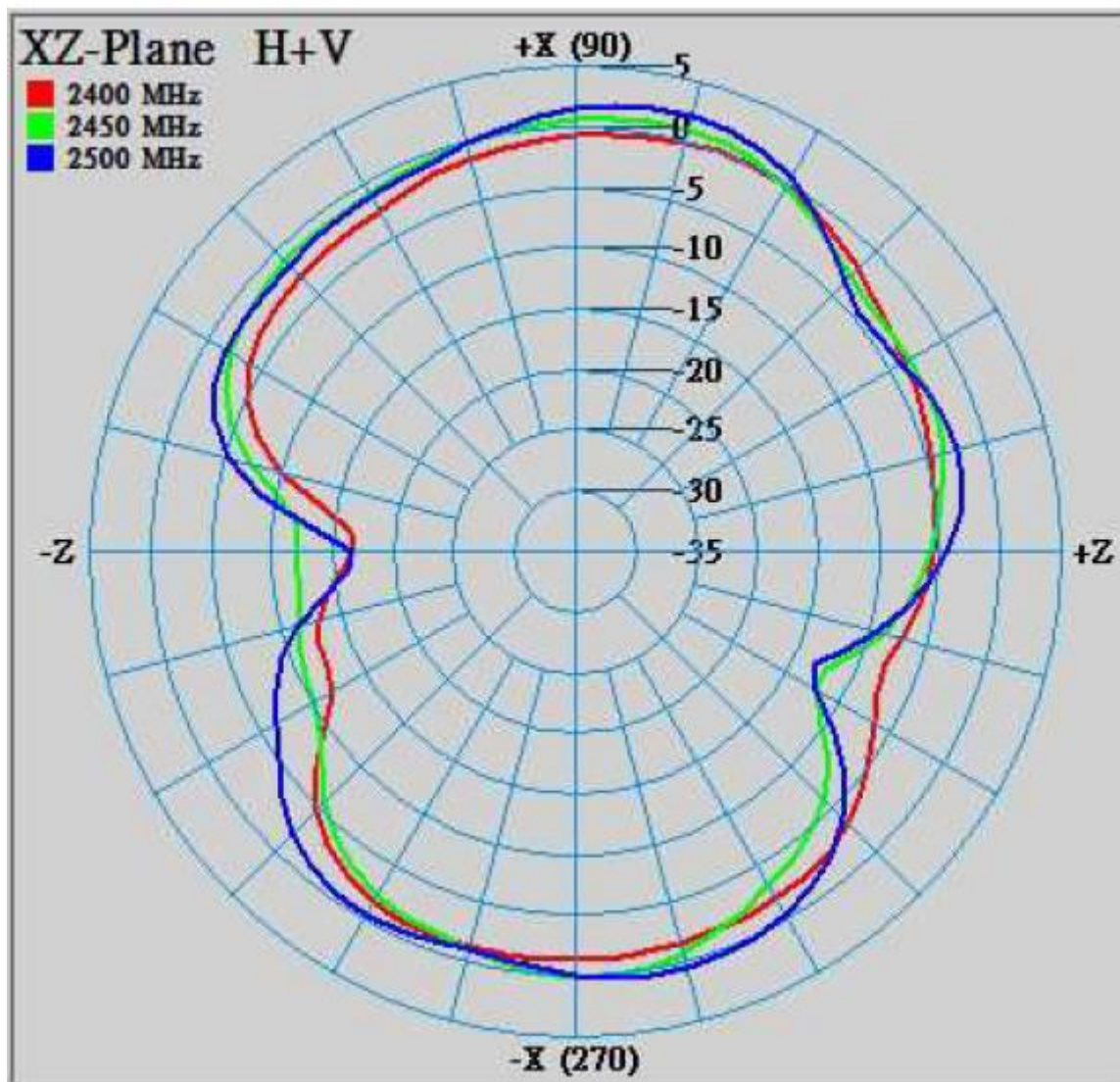


RADIATION PATTERN

2400~2500 MHz

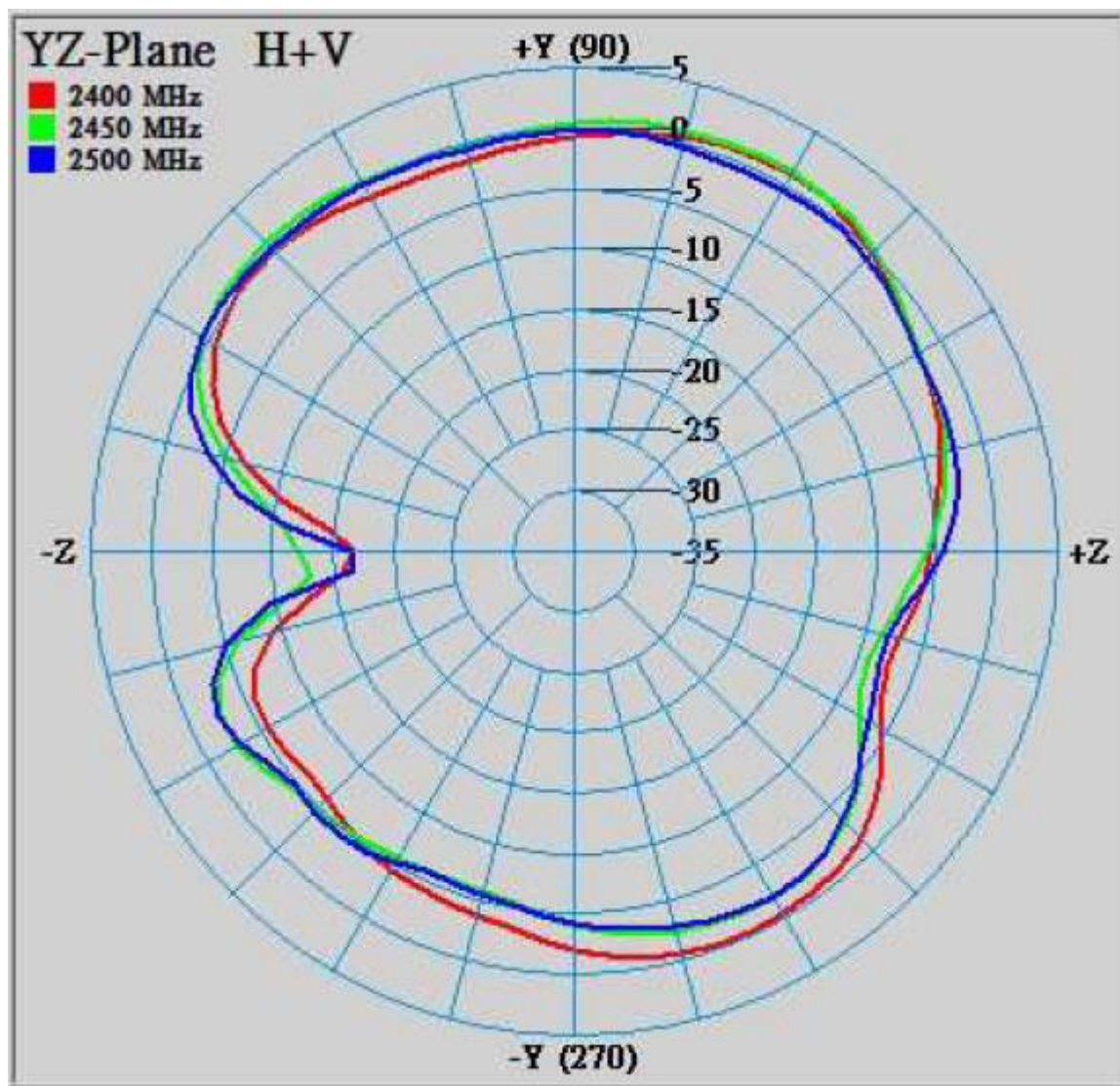
Phi=0.00deg

Gain . dB



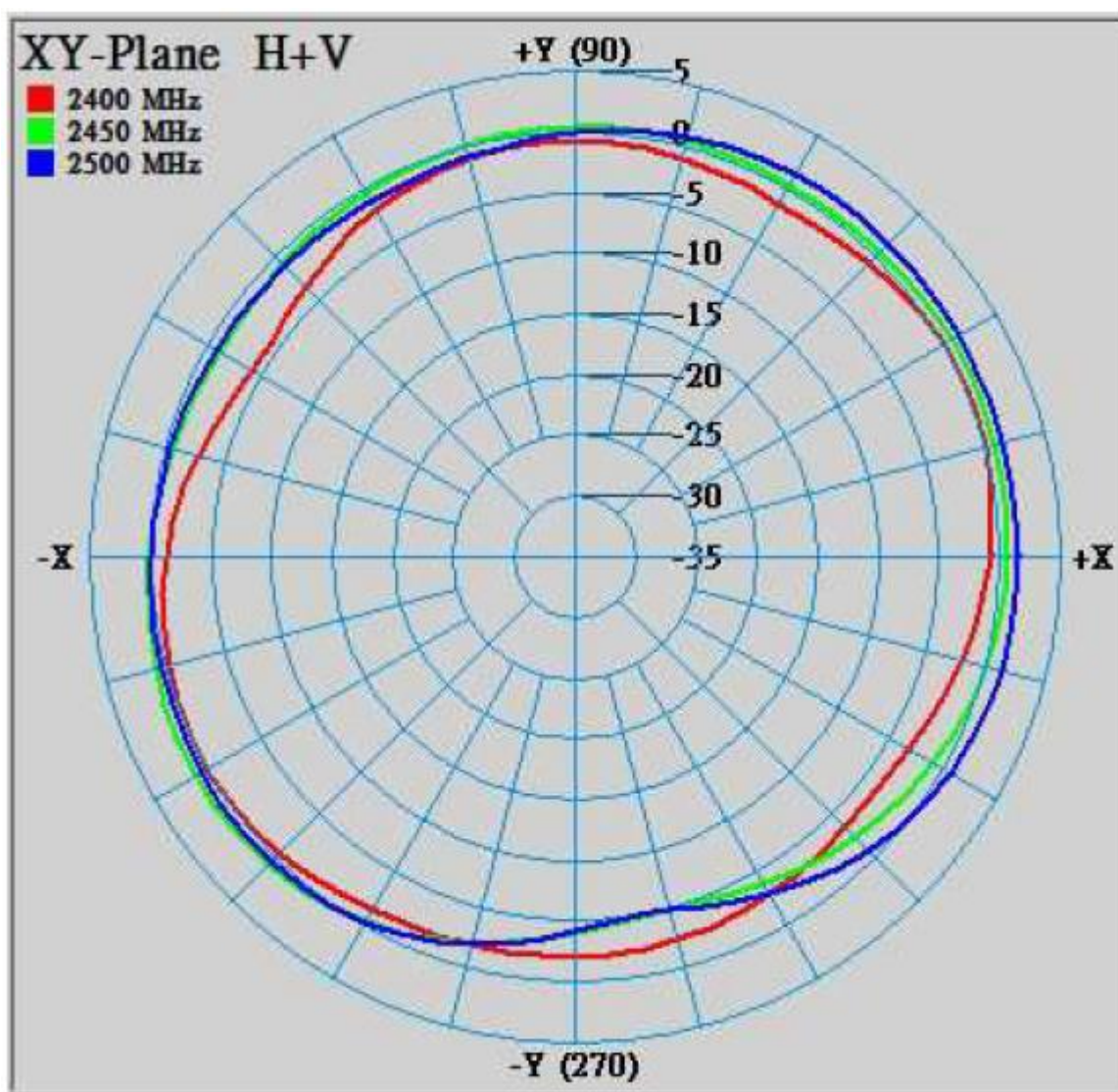
Phi=90.00deg

Gain . dB



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]
2400	0.00	-3.21	1.02	-2.32	0.08	-1.52
2450	1.01	-2.71	1.19	-2.09	1.15	-0.36
2500	2.15	-1.91	0.59	-2.42	1.51	-0.08