

APPROVAL SHEET

Antenna Data sheet

External ANTENNA

2.4~2.5/5.15~5.9/6.0~6.9/7.0~7.125 GHz

Working Frequency

Halogens Free Product

P/N: RFDPA191300SBLB811

Manufacturer : WALSIN TECHNOLOGY CORPORATION
Antenna Type : External Antenna
Gain : 2.4GHz: 1.91dBi ; 5GHz: 4.5dBi
Antenna Model : SBLB811

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

Version	Date	Description	Author
V01	2019 Sep.	New Release	SHLEE

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4~2.5/5.15~5.9/ 6.0~6.9/7.0~7.125 GHz (Note-1)
Gain	1.91 dBi@2400~2500 MHz 4.5 dBi@5150~6000 MHz 3.37 dBi @6100~7200 MHz
Return Loss	-10 dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50
Operation Temperature	-20°C ~ +65°C

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

MATERIAL TABLE

Items	Description
Cable	RG178 Cable(Brown)
Connector	Reverse SMA Plug(Black)
Antenna Cover	TPEE(Black)
Antenna Down Base	PC/PBT(Black)
Antenna Up Base	PC(Black)
Rivet	POM(Black)
UP Brass Tube	Brass
Drown Brass Tube	Brass
Sponge	EVA
Color Ring	PP(Process Blue C)
Heat Shrink Tube	CB-HFT (Black)

ORDERING RULE

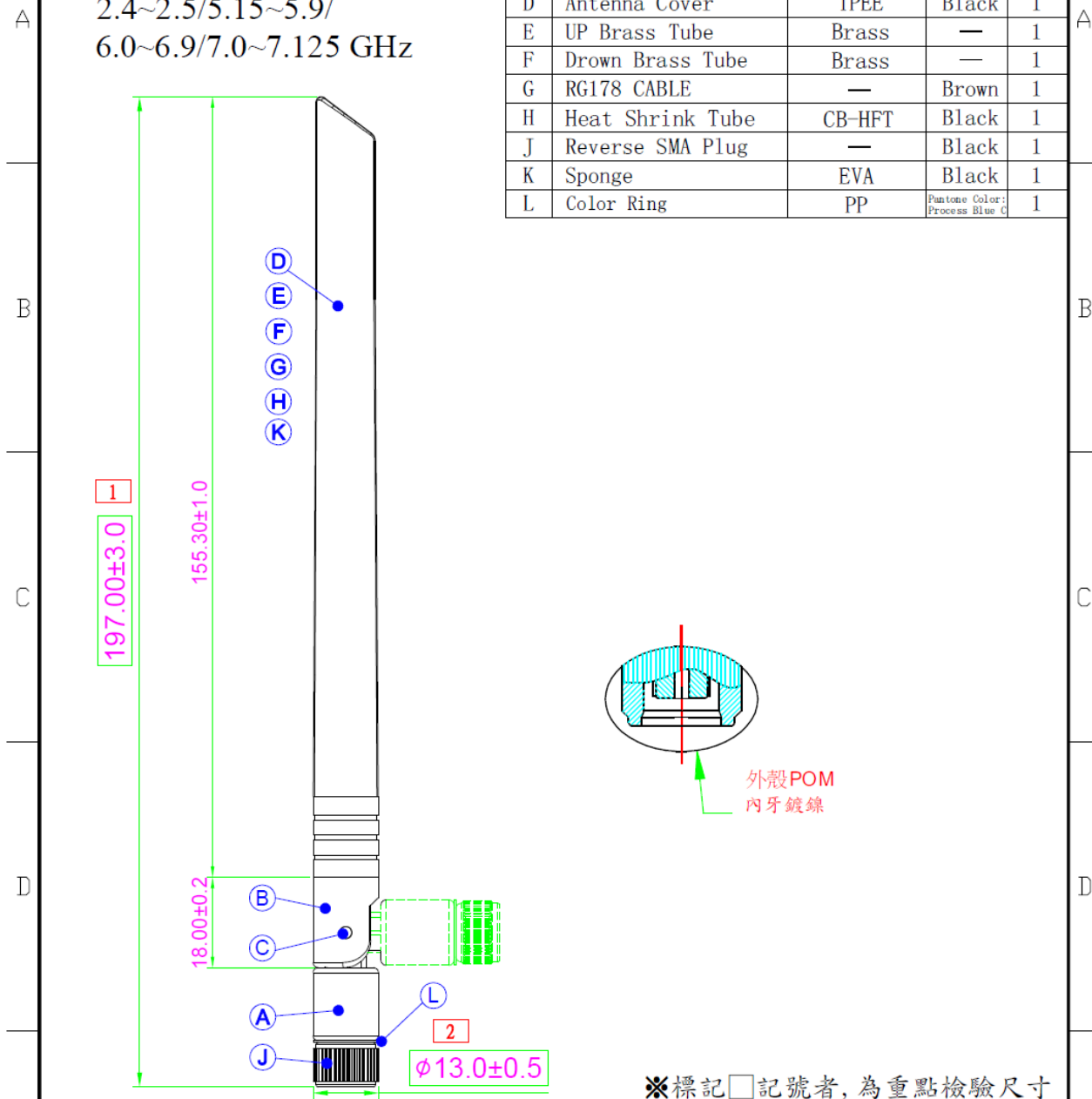
RF	DPA	1913	00	S	B	L	B	8	11
Type Code	Product Code	Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	Dipole Antenna	Per 2 digits of length, width e.g.: 1913 Length 191.9mm, Width ϕ 13mm	2 digits for cable length e.g.:00 None Cable	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: ϕ 0.81 3: ϕ 1.13 4: ϕ 1.13 Low Loss 6:RG316 7: ϕ 1.37 8:RG178 9: ϕ 1.37 Low Loss	01~99 series number

DIMENSIONS

ELECTRICAL

Frequency:
2.4~2.5/5.15~5.9/
6.0~6.9/7.0~7.125 GHz

No.	DESCRIPTION	MAT'L	Color	Q'TY
A	Antenna Down Base	PC+PBT	Black	1
B	Antenna Up Base	PC	Black	1
C	Rivet	POM	Black	2
D	Antenna Cover	TPEE	Black	1
E	UP Brass Tube	Brass	—	1
F	Down Brass Tube	Brass	—	1
G	RG178 CABLE	—	Brown	1
H	Heat Shrink Tube	CB-HFT	Black	1
J	Reverse SMA Plug	—	Black	1
K	Sponge	EVA	Black	1
L	Color Ring	PP	Pantone Color: Process Blue C	1

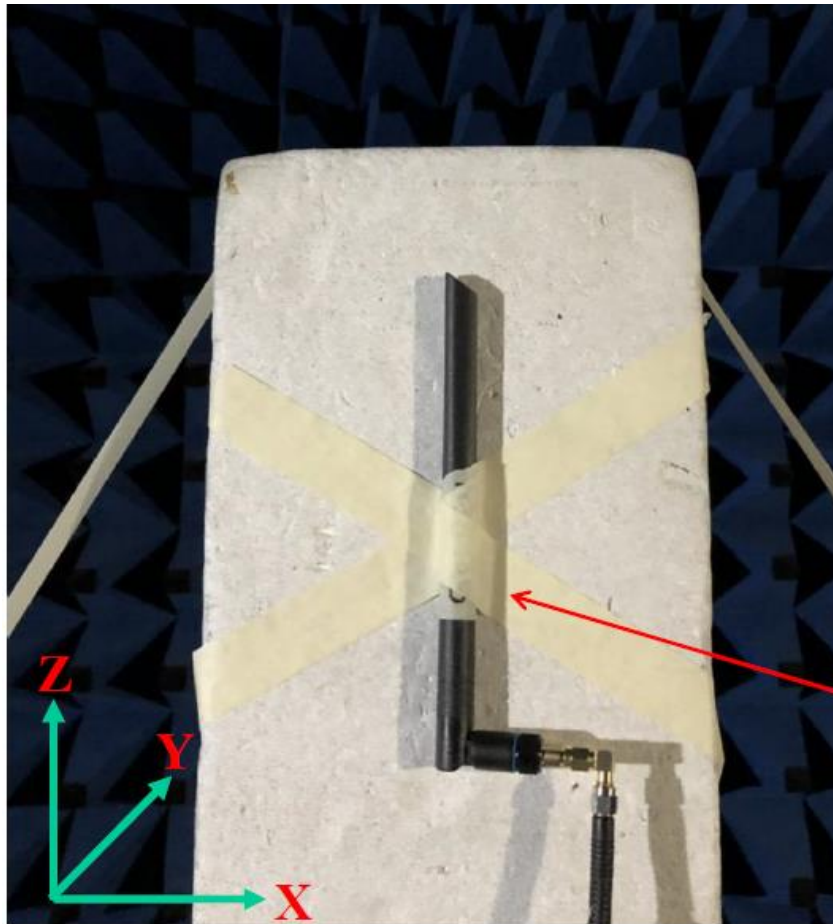


※標記□記號者，為重點檢驗尺寸

設計 DR. SHLEE		2019.08.05		品名		版本 REV.	
核准 APP. Marco				ARTICLE		A	
容許公差 TOLERANCE				RFDPA191300SBLB811			
6以下.....±0.2				單位 UNIT			
6以上~30.....±0.5				mm			
30以上~120.....±0.8				比例 SCALE			
120以上~315.....±1.2				****			
315以上~1000.....±2.0				張數 SHEET			
1000以上~2000.....±3.0				1			

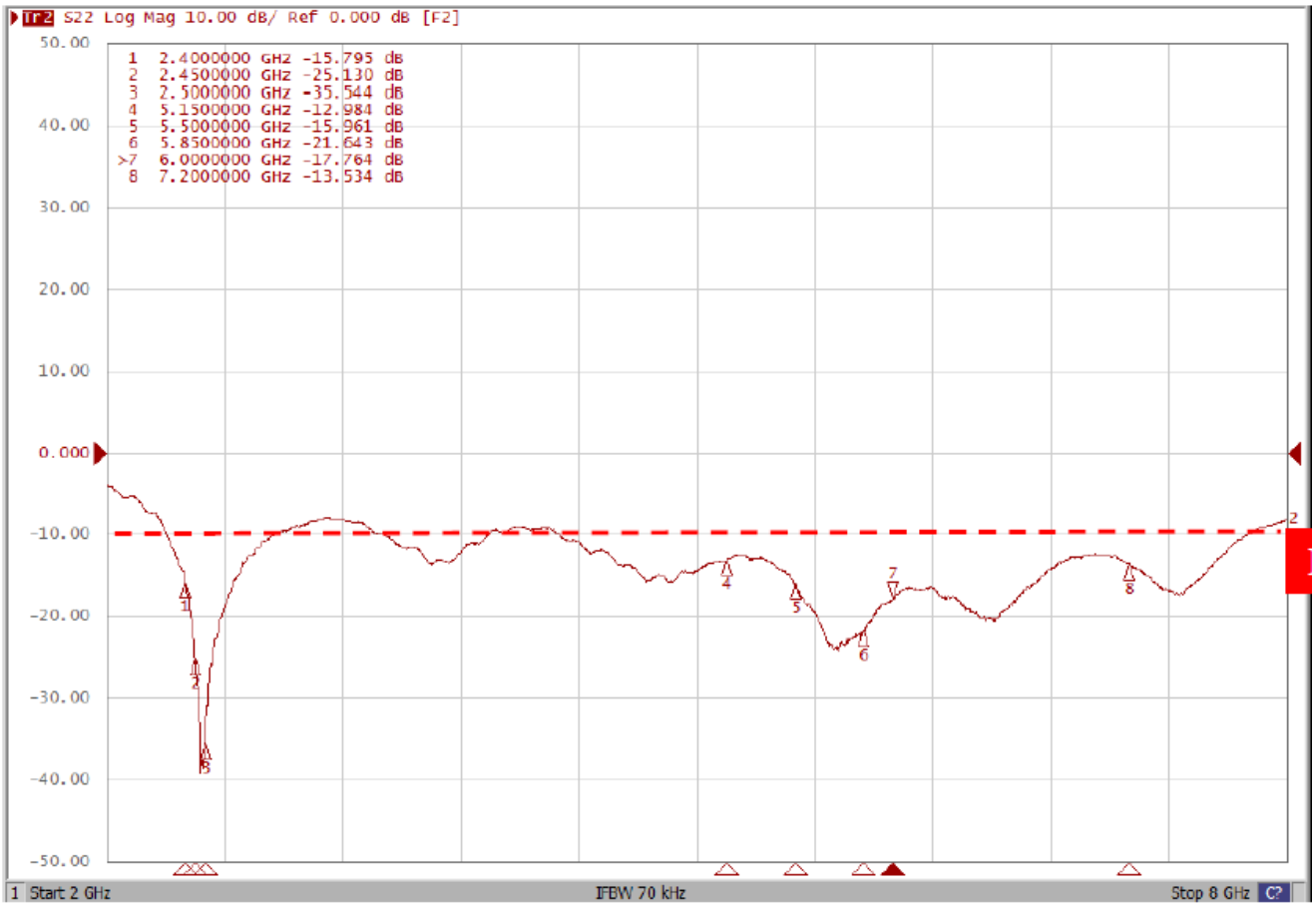
Test Report

■ ELECTRICAL CHARACTERISTICS



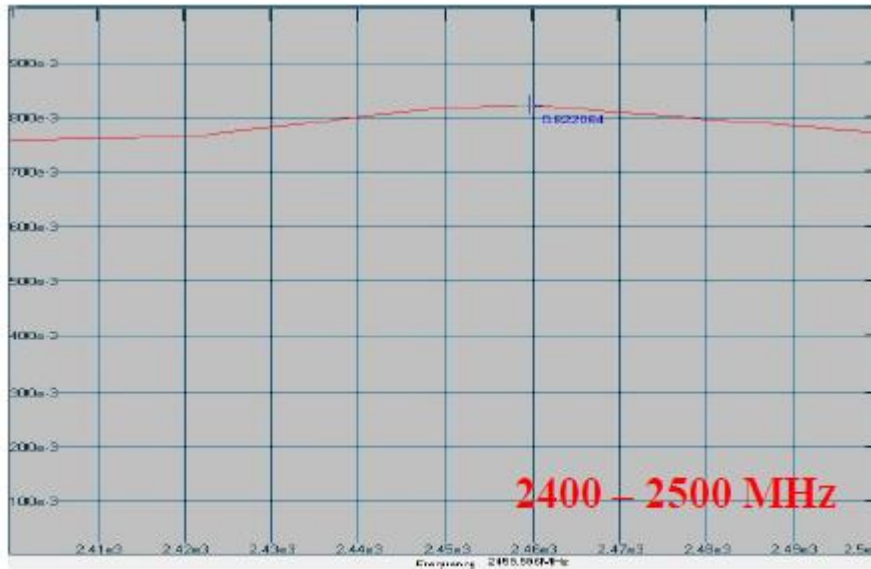
ELECTRICAL CHARACTERISTICS

Return Loss

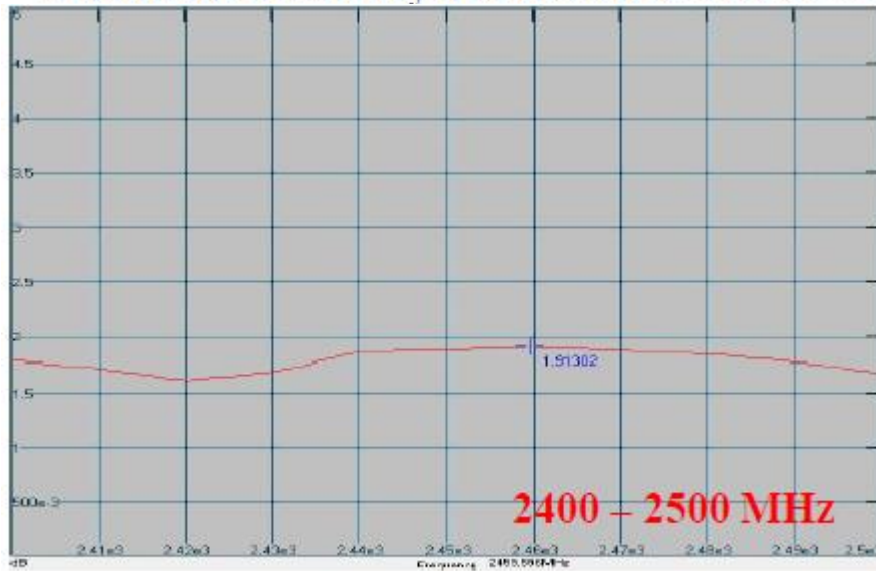


■ Antenna Efficiency & Peak Gain

2400~2500 MHz

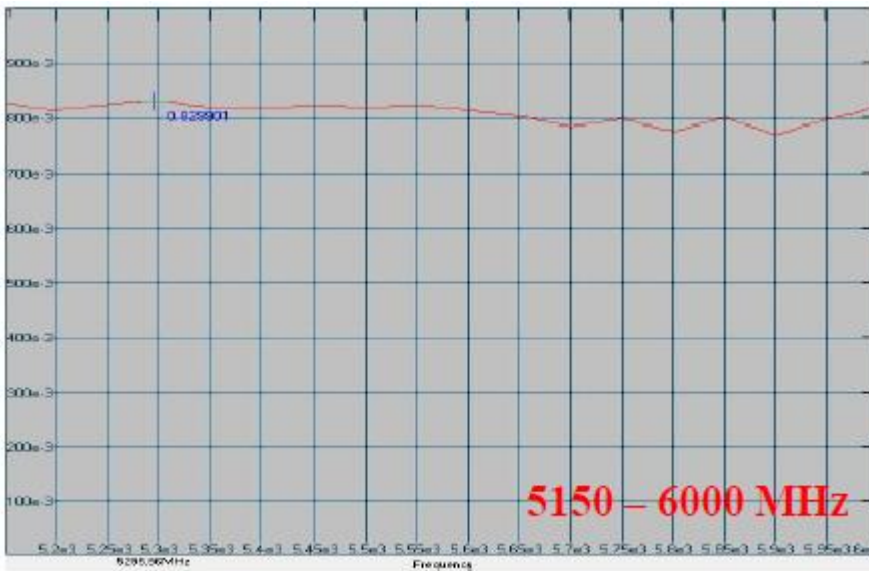


Maximum Efficiency at 2460 MHz : 82.21 %

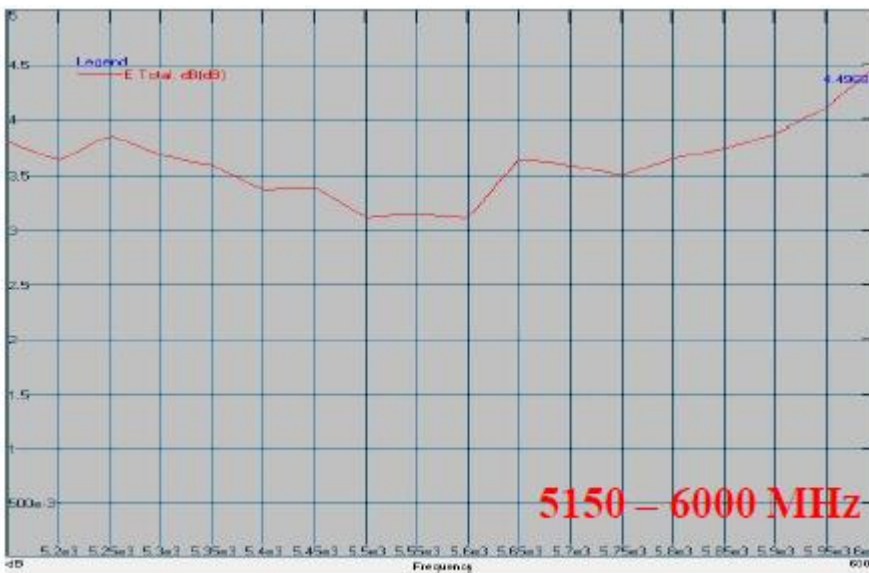


Maximum Peak Gain at 2460 MHz : 1.91 dBi

5150~6000 MHz



Maximum Efficiency at 5296 MHz : 82.99 %



Maximum Peak Gain at 6000 MHz : 4.50 dBi

6100~7200 MHz

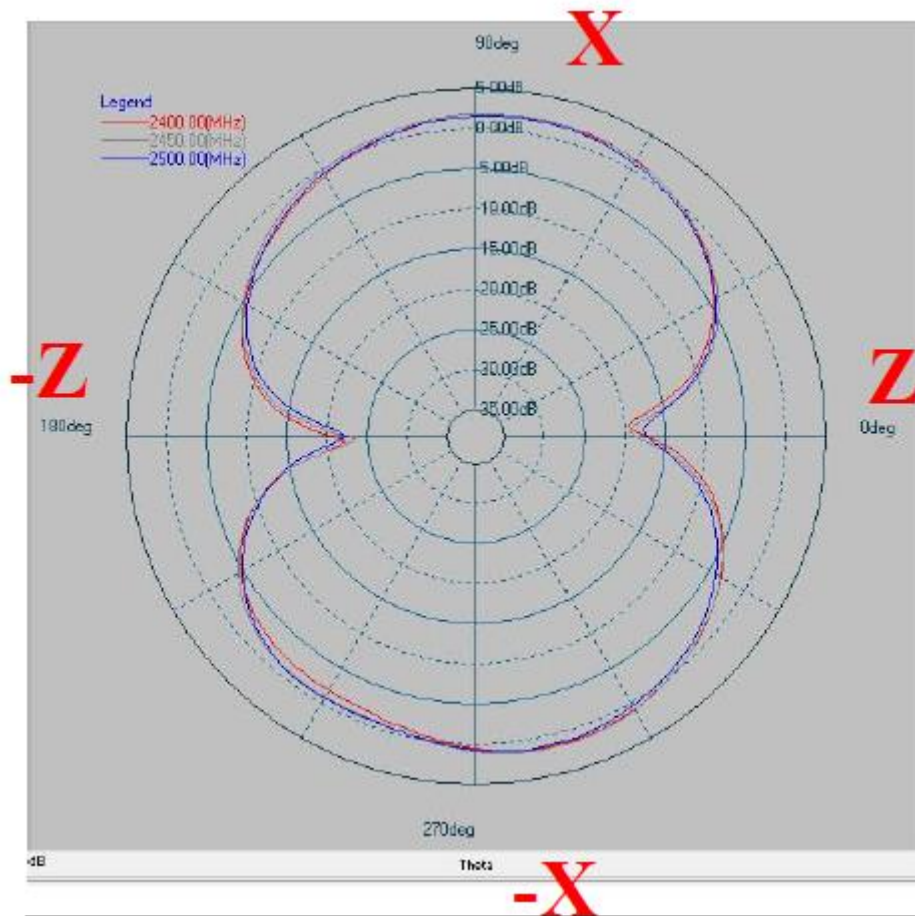
Frequency (MHz)	6100	6200	6300	6400	6500	6600	6700	6800	6900	7000	7100	7200
Efficiency (%)	78.00	77.13	77.48	75.44	75.98	78.53	78.01	71.88	73.66	80.08	78.19	71.08
Peak Gain (dBi)	3.21	3.13	3.15	3.21	2.82	2.90	3.14	2.82	2.93	3.12	3.21	3.37

RADIATION PATTERN

2400~2500 MHz

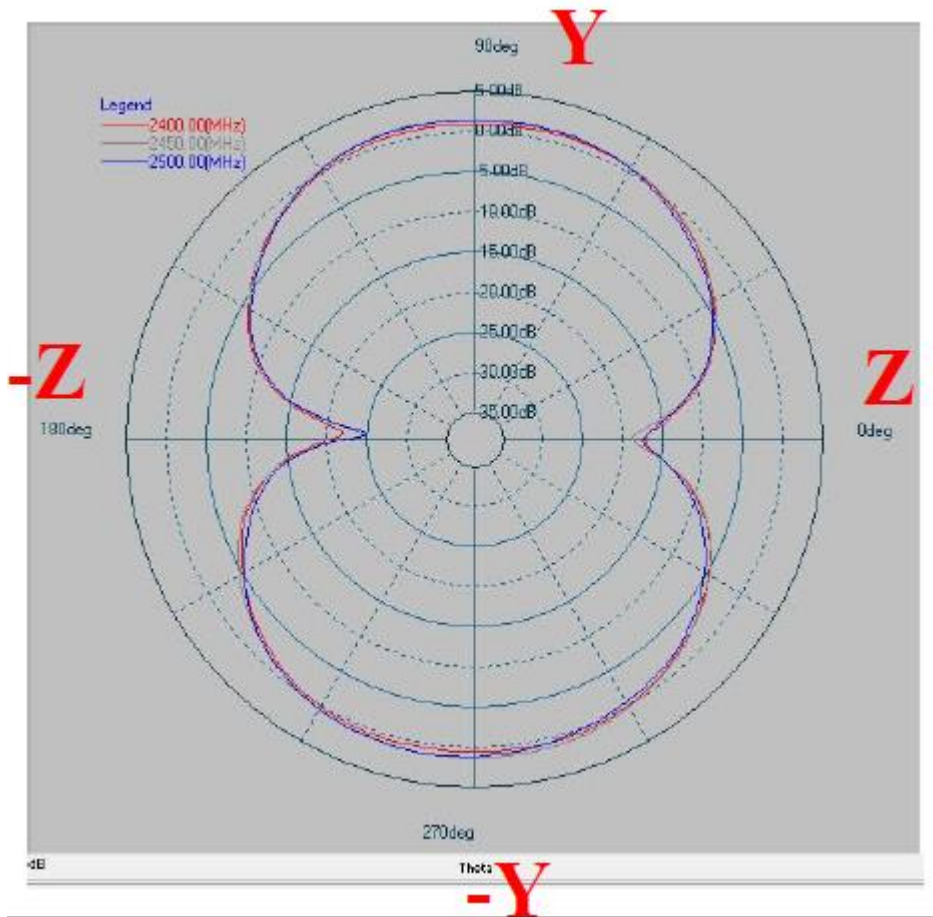
X-Z Plane
Phi=0.00deg

Gain . dB



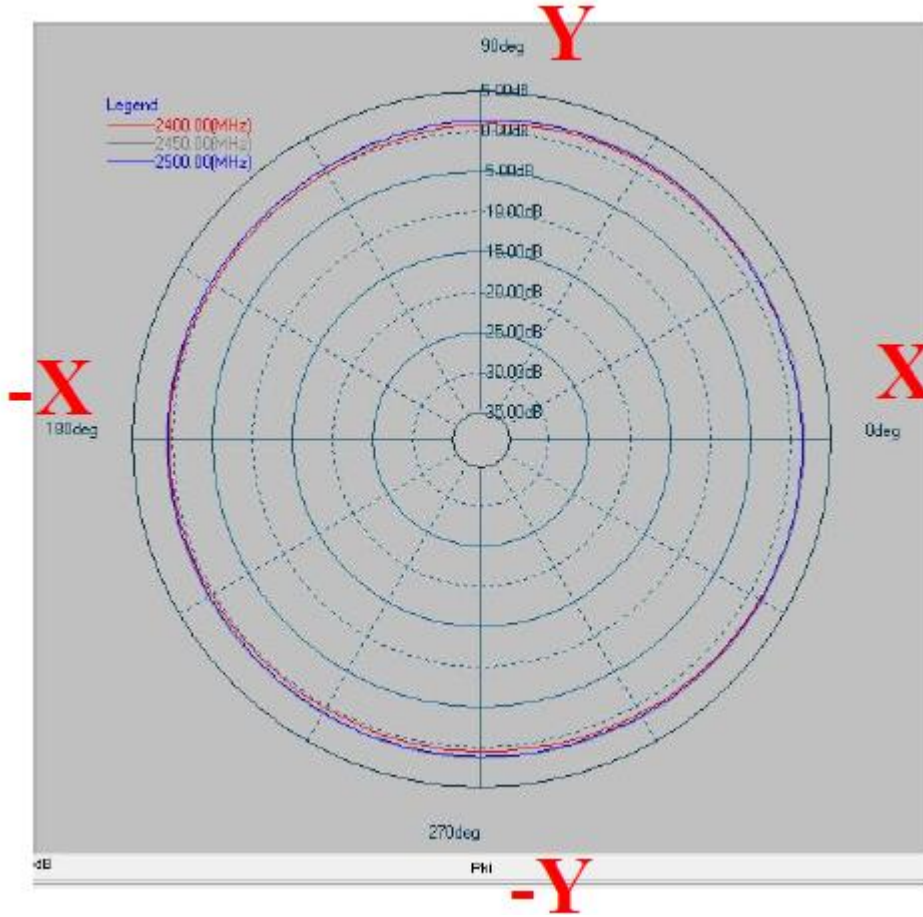
Y-Z Plane
Phi=90.00deg

Gain . dB



X-Y Plane
Theta=90.00deg

Gain . dB

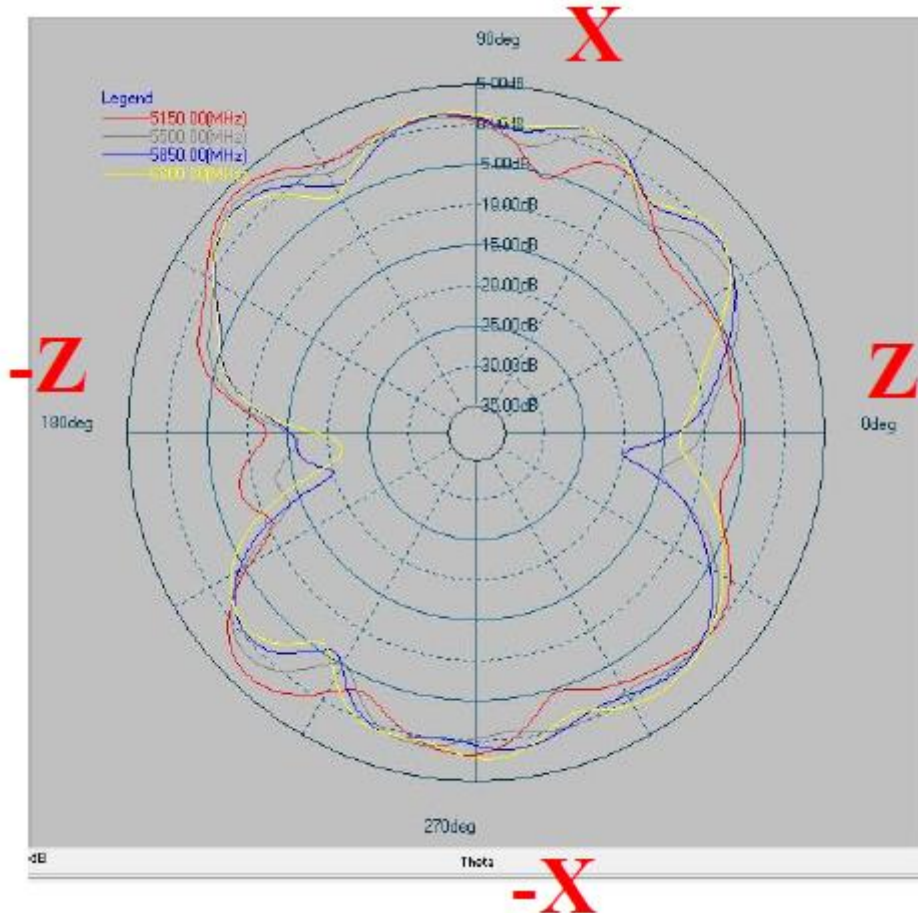


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	1.76	-1.82	0.86	-1.97	1.59	0.75
2450	1.78	-1.55	1.40	-1.60	1.91	1.17
2500	1.61	-1.86	1.30	-1.84	1.60	1.06

5150~6000 MHz

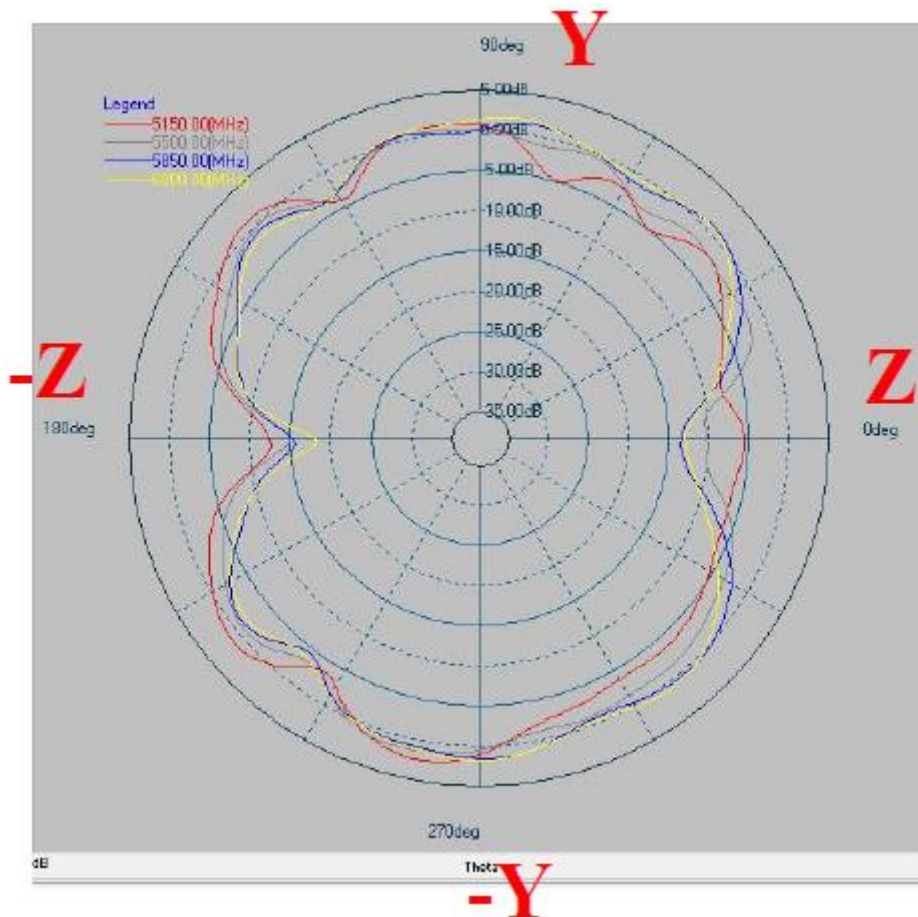
X-Z Plane
Phi=0.00deg

Gain . dB



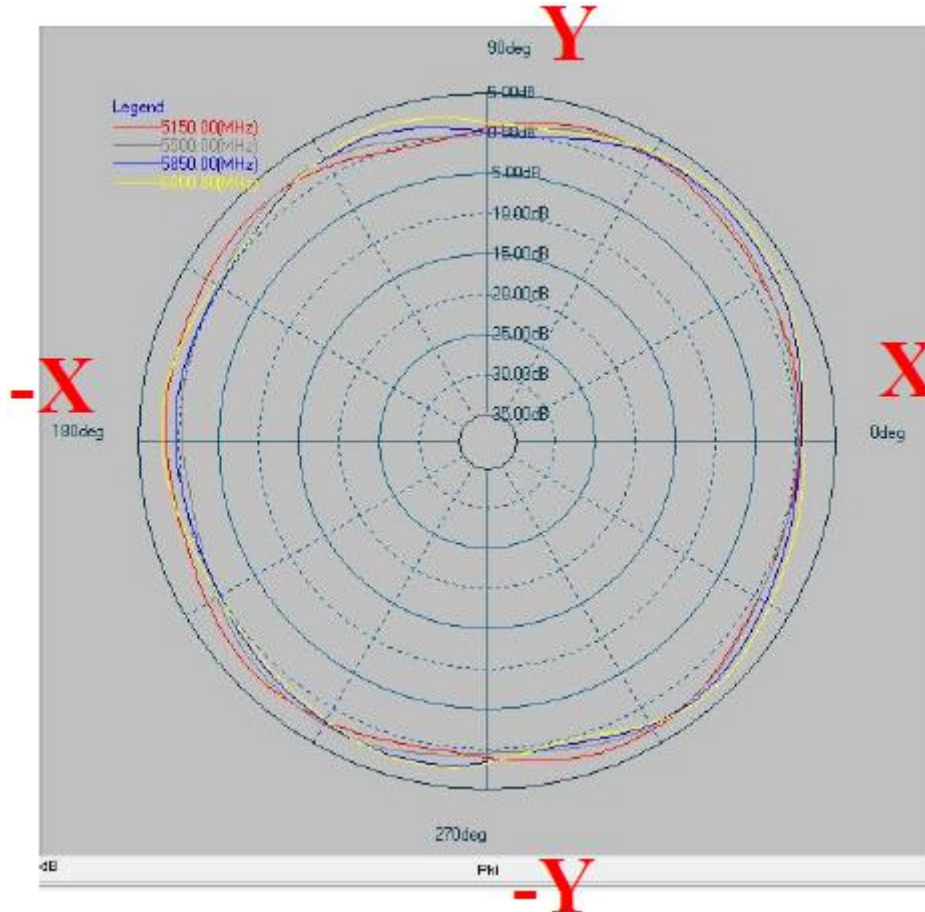
Y-Z Plane
Phi=90.00deg

Gain . dB



X-Y Plane
Theta=90.00deg

Gain . dB

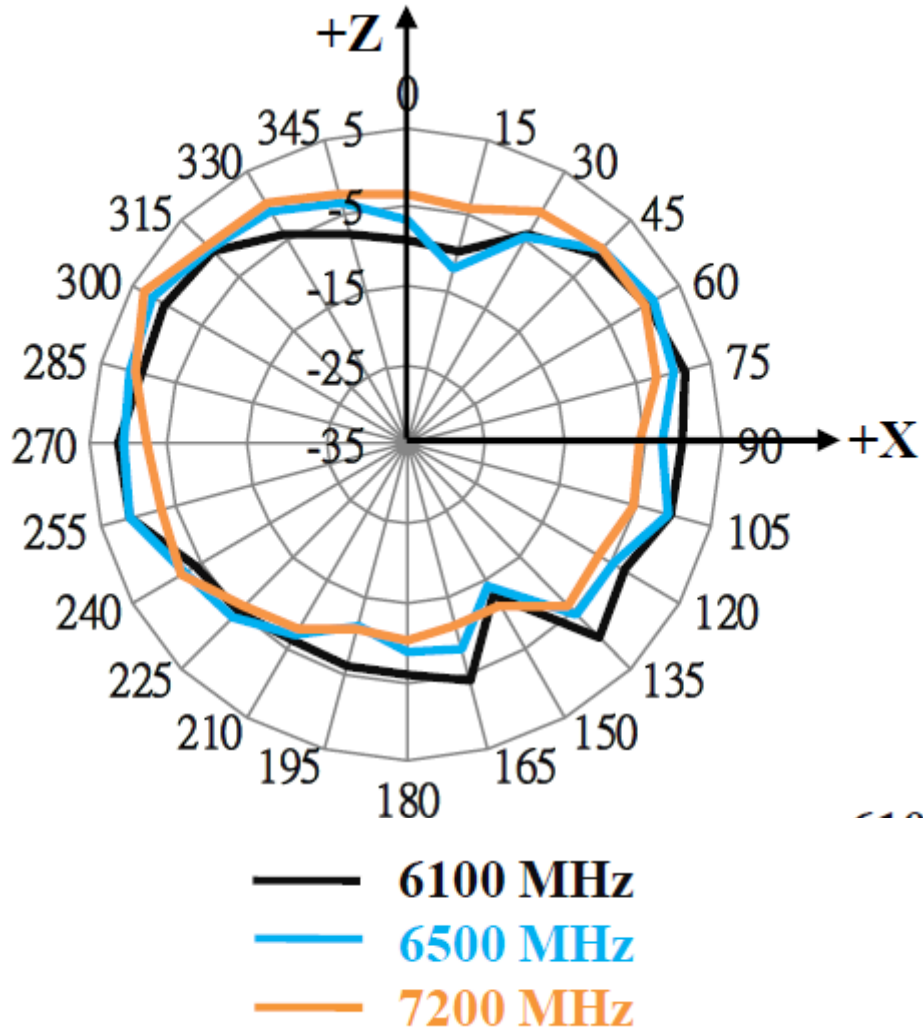


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5150	4.50	-1.32	2.29	-2.08	3.01	1.53
5500	3.04	-1.57	1.25	-2.11	2.71	1.17
5850	2.44	-1.60	1.48	-1.70	3.05	1.44
6000	2.23	-1.32	1.71	-1.64	3.64	1.91

6100~7200 MHz

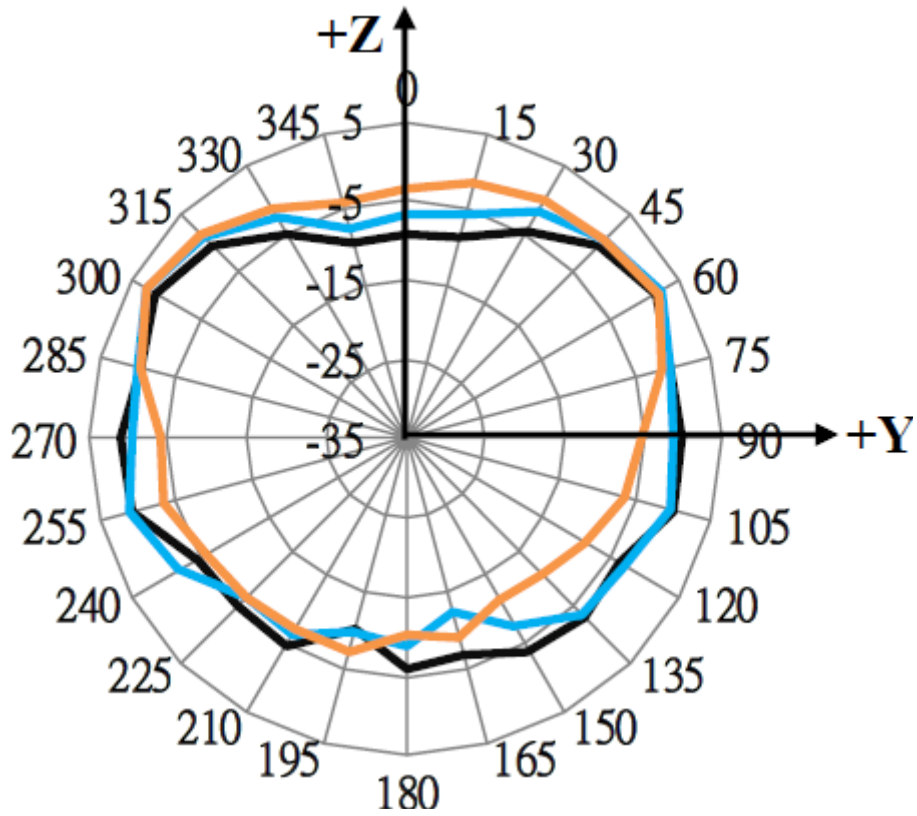
**X-Z Plane
Phi=0.00deg**

Gain . dB



Y-Z Plane
Phi=90.00deg

Gain . dB



X-Y Plane
Theta=90.00deg

Gain . dB

