

APPROVAL SHEET

PCB ANTENNA

2.4 / 5.x GHz Band Working Frequency

Halogens Free Product

P/N: RFPCA400772IMLB301

Customer : _____
Customer 's Part No. : _____
Approval No. : _____
Issue Date : _____

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

Contents

Version	Date	Description	Author
V01	2018 Sep.	New Release	SHLEE

Antenna Specification

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4 ~ 2.5 / 5.15 ~5.85 GHz
Return Loss	-10 dB
Peak Gain	2.20 dBi@2.4~2.5GHz 2.19 dBi@5.15~5.85GHz
VSWR	2 max.
Polarization	Linear Vertical
Radiation Pattern	Directional
Impedance	50Ω
Operation Temperature	-20°C ~ +65°C

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

MATERIAL TABLE

Items	Description
PCB	FR4(Single Layer);T=0.6mm;黑漆
Cable	φ 1.13 Cable(Black)
Connector	IPEX Compatible(Gold)
Double Tape	3M9888T
Sponge(F-2G)+Double Tape(單面背膠DS10)	L690 x W15 x T2

ORDERING RULE

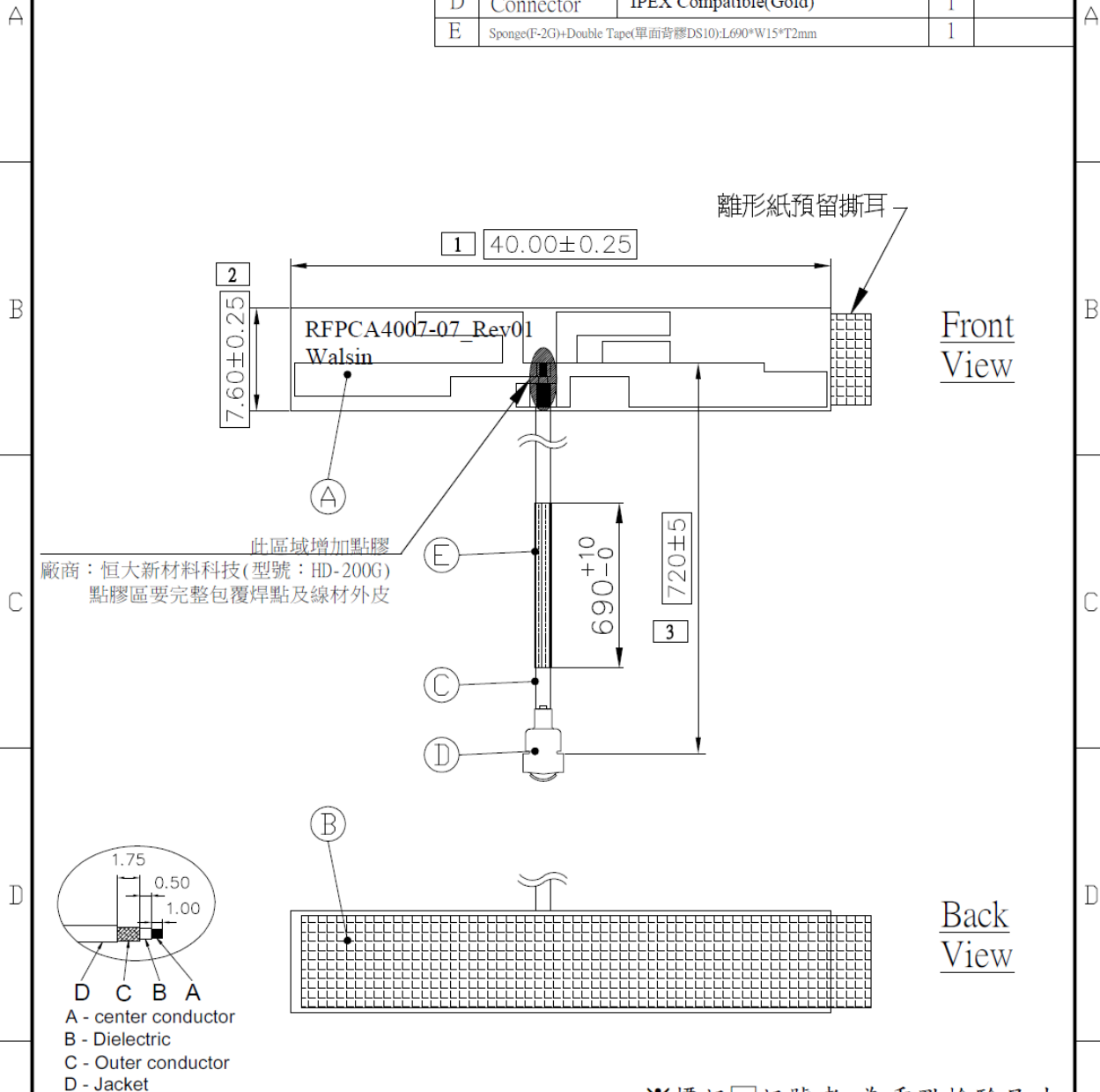
RF	PCA	4007	72	I	M	L	B	3	01
Type Code	Product Code	PCB Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	PCB Antenna	Per 2 digits of length, width e.g.: 4007 Length 40.0mm, Width7.6mm	2 digits for cable length e.g.:72 Length 72cm	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 6: 6GHz 5: 5GHz 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:∅ 0.81 2:∅ 1.32 3:∅ 1.13 4:Low Loss ∅ 1.13 5:∅ 0.5 6:RG316 7: ∅ 1.37 8:RG178 9:Low Loss ∅ 1.37	01~99 series number

DIMENSIONS

ELECTRICAL

Frequency : 2.4 GHz /
5. x GHz

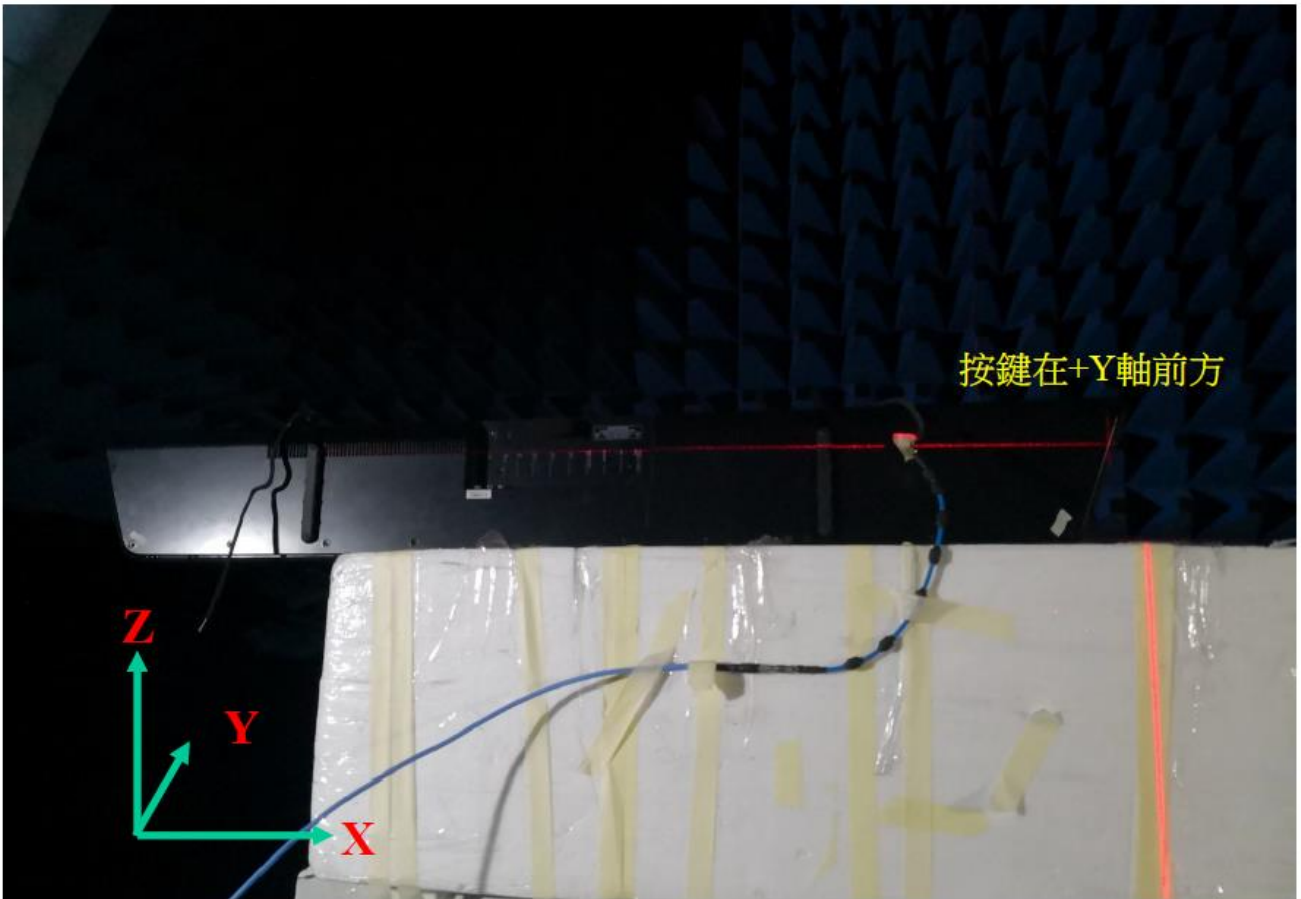
NO	DESCRIPTION	QTY	REMARK
A	Body	FR4(Single Layer);T=0.6mm,黑漆	1
B	Double Tape	3M9888T	1
C	Coaxial cable	(Coaxial Cable ϕ 1.13);Black	1
D	Connector	IPEX Compatible(Gold)	1
E	Sponge(F-2G)+Double Tape(單面背膠DS10);L690*W15*T2mm	1	



				設計DR. PIPI	2018.09.26	品名	版本 REV.
				核准APP. Marco		ARTICLE	A
				容許公差 TOLERANCE		RFPCA400772IMLB301	
				6以下.....±0.2		單位 UNIT	張數 SHEET
				6以上~30.....±0.5		mm	7
				30以上~120.....±0.8		比例 SCALE	****
				120以上~315.....±1.2			
				315以上~1000.....±2.0			
				1000以上~2000.....±3.0			

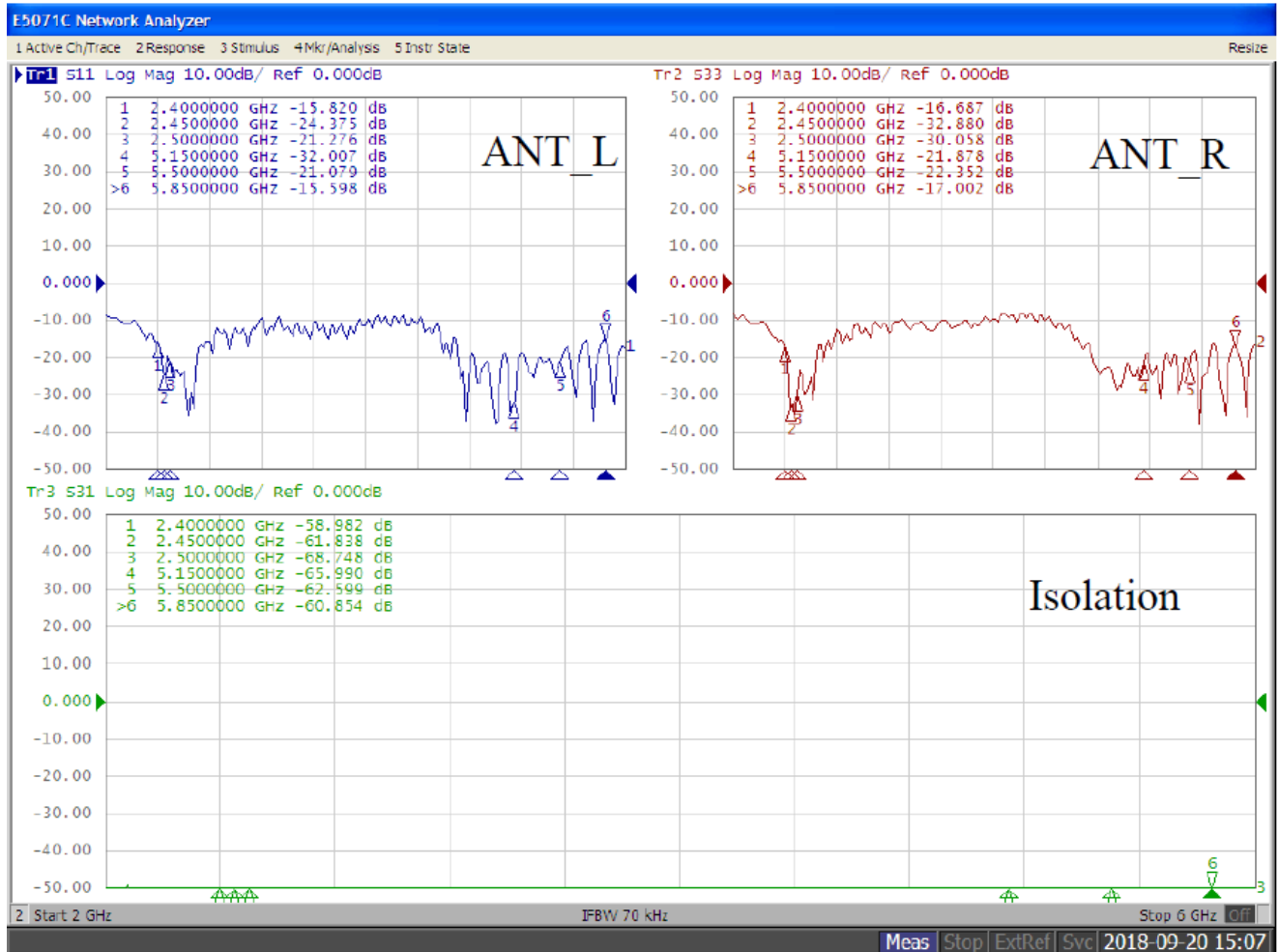
Test Report

■ Experimental Setup



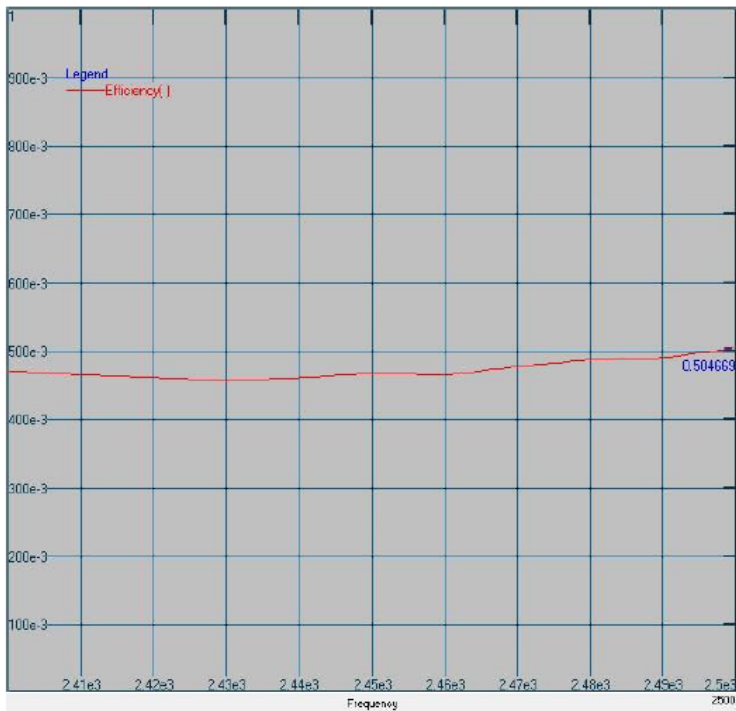
ELECTRICAL CHARACTERISTICS

Return Loss & Isolation ANT_L

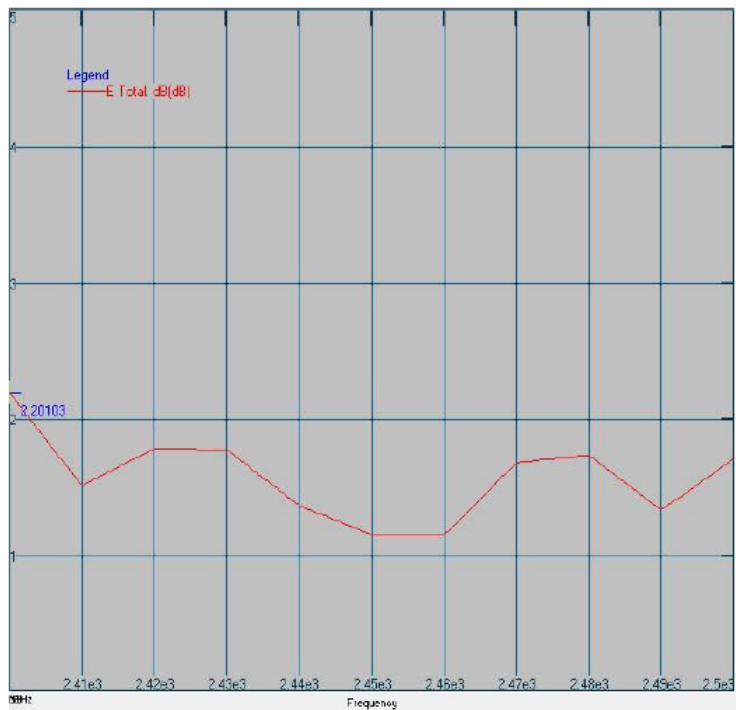


Efficiency & Peak Gain

2G

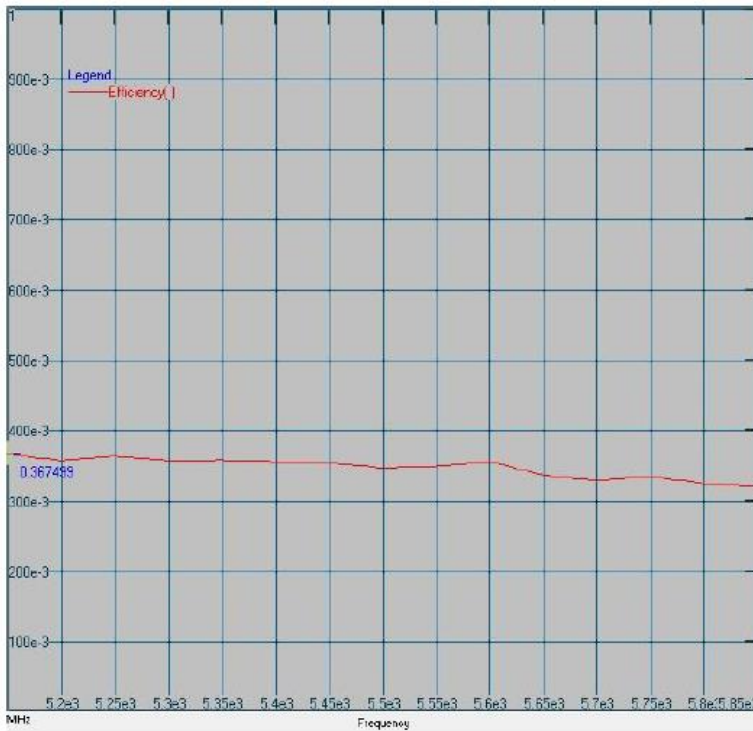


Maximum Efficiency at 2400 MHz : 50.4 %

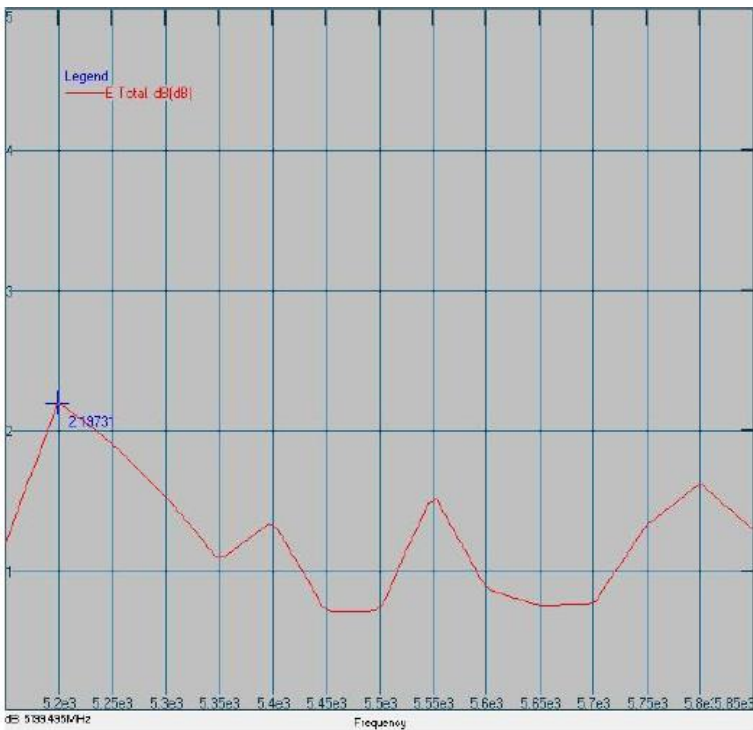


Maximum Peak Gain at 2400 MHz : 2.20 dB

5G



Maximum Efficiency at 5150 MHz : 36.7 %



Maximum Peak Gain at 5200 MHz : 2.19 dBi

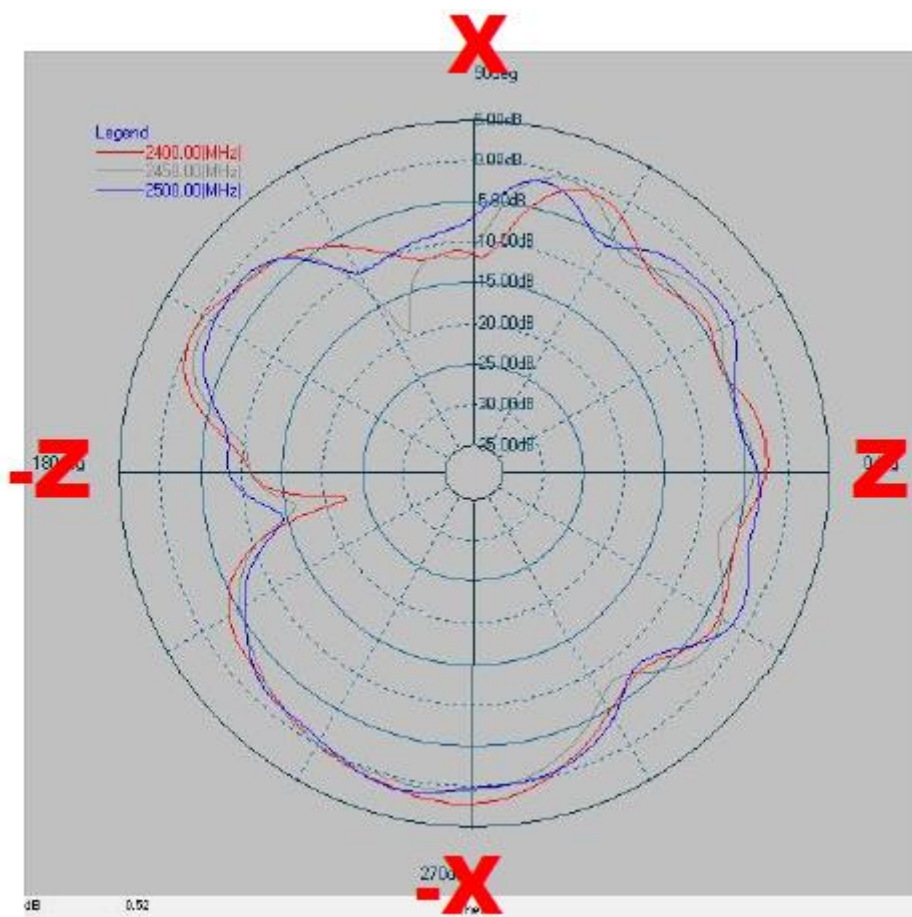
Radiation Patterns

2400~2500 MHz

X-Z Plane

Phi=0.00deg

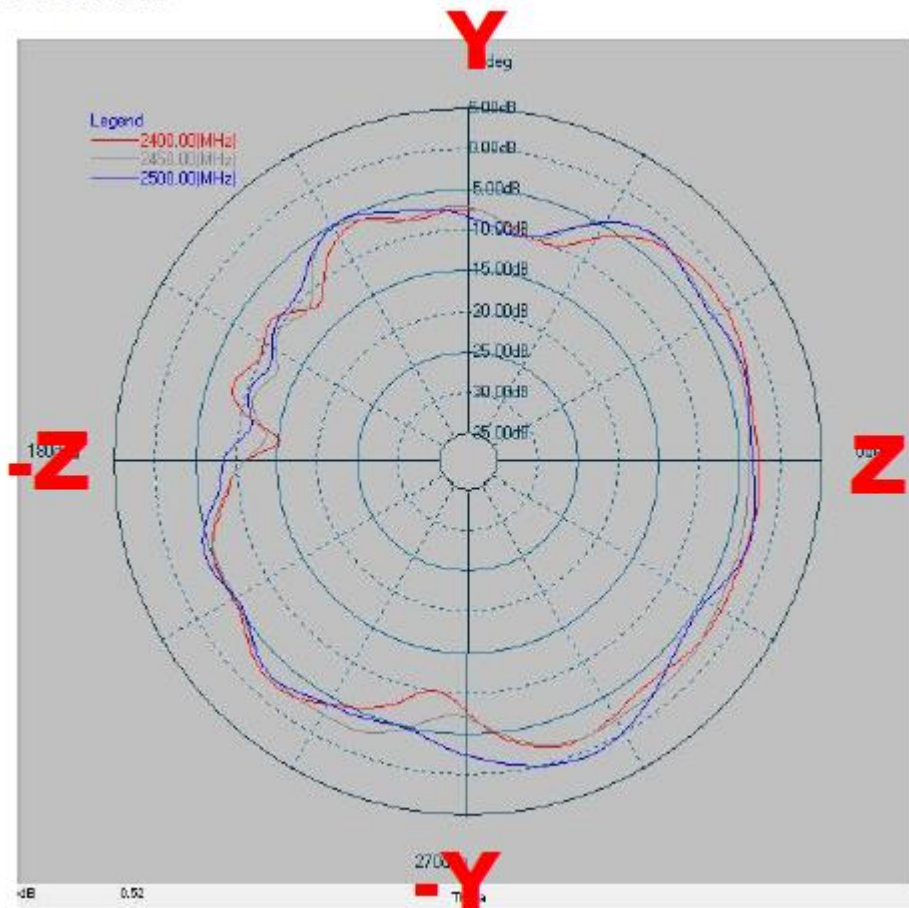
Gain . dB



Y-Z Plane

Phi=90.00deg

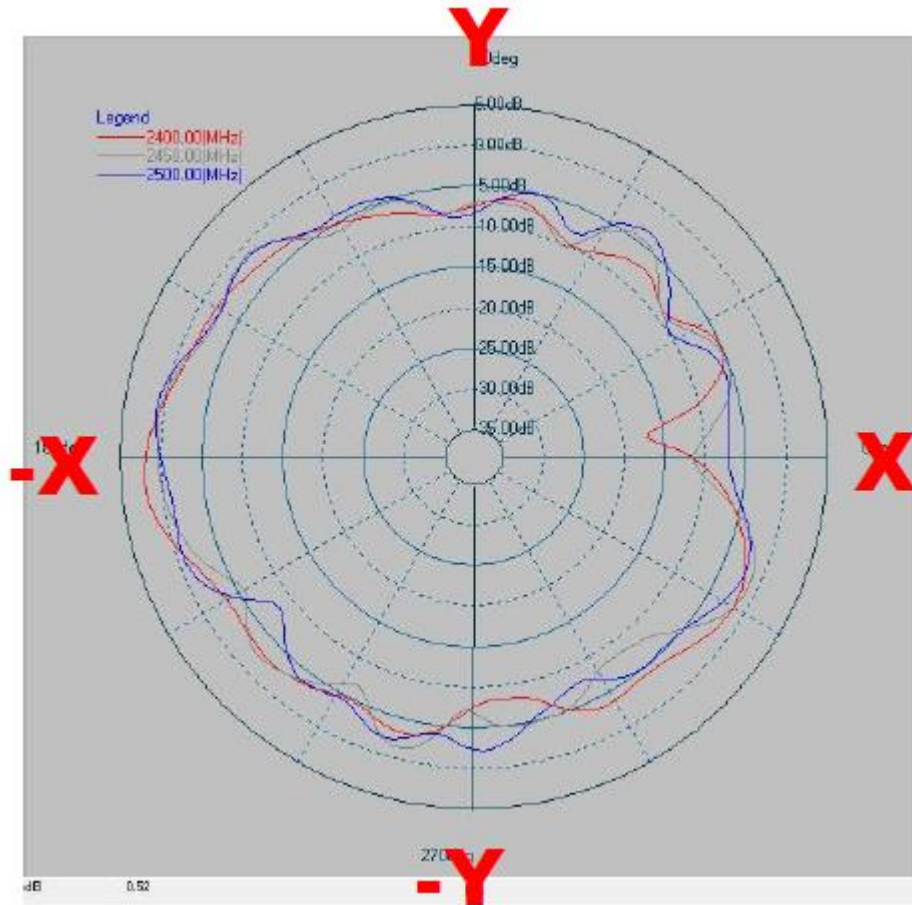
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB



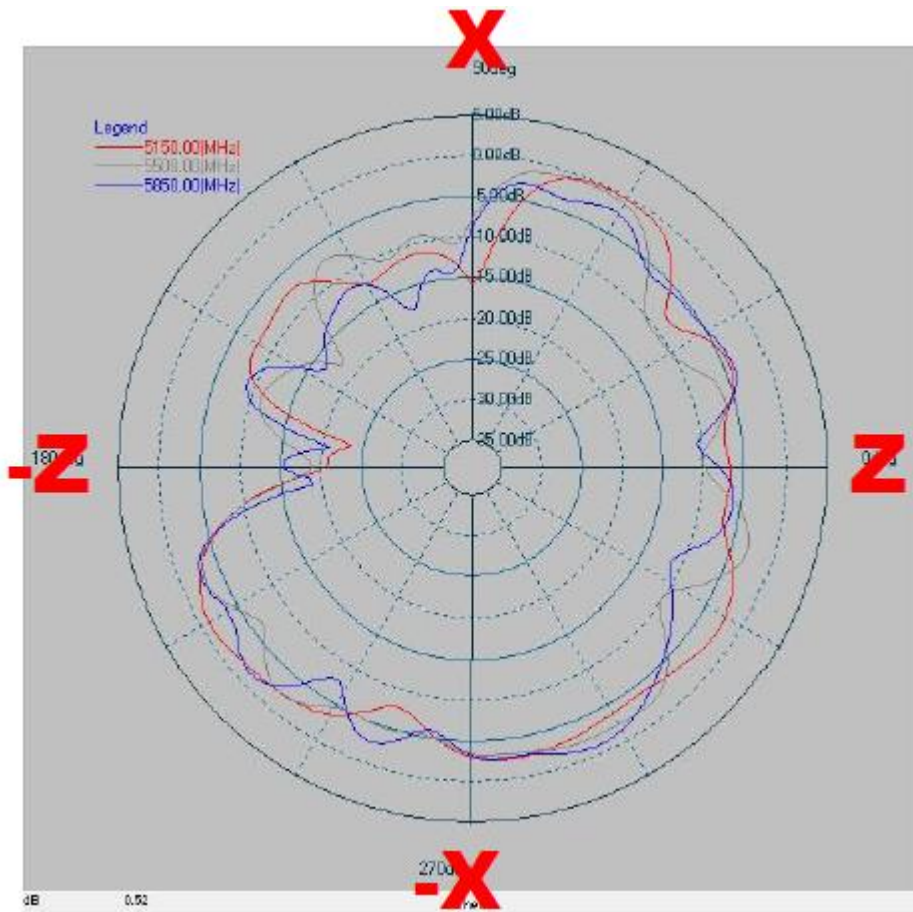
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	1.98 dB	-2.98 dB	-1.70 dB	-4.71 dB	2.15 dB	-3.74 dB
2450	0.48 dB	-3.58 dB	-1.80 dB	-4.72 dB	0.64 dB	-4.02 dB
2500	1.28 dB	-3.16 dB	0.49 dB	-4.18 dB	0.95 dB	-3.75 dB

5150~5850 MHz

X-Z Plane

Phi=0.00deg

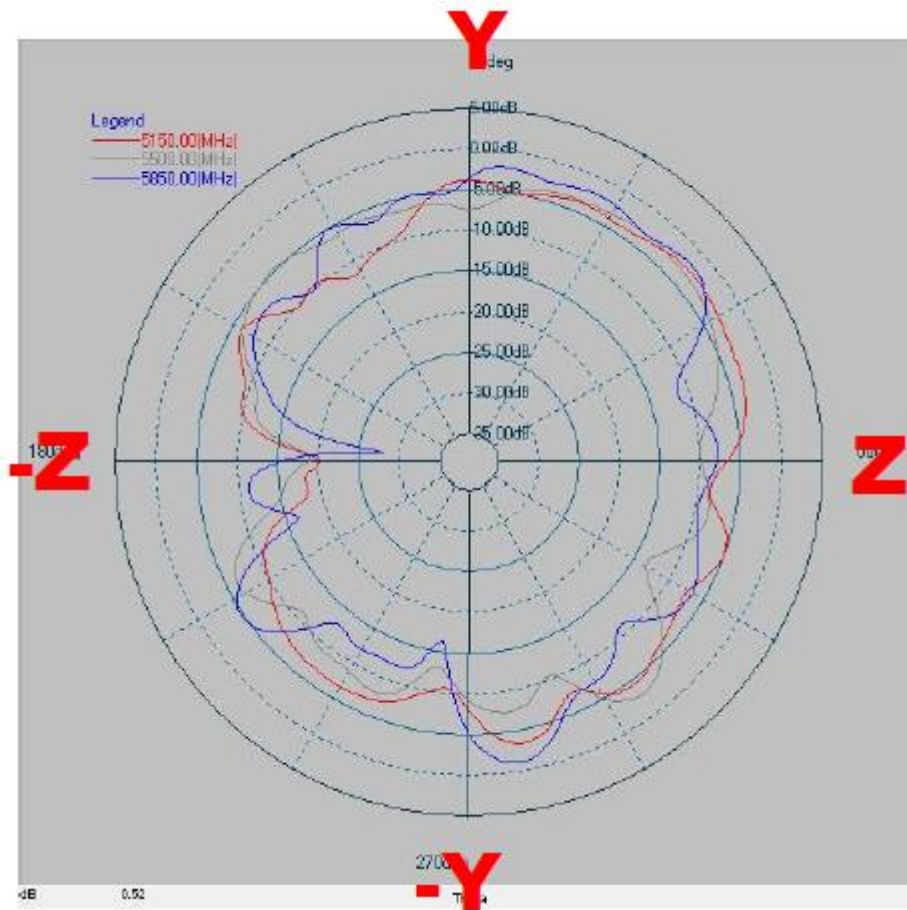
Gain . dB



Y-Z Plane

Phi=90.00deg

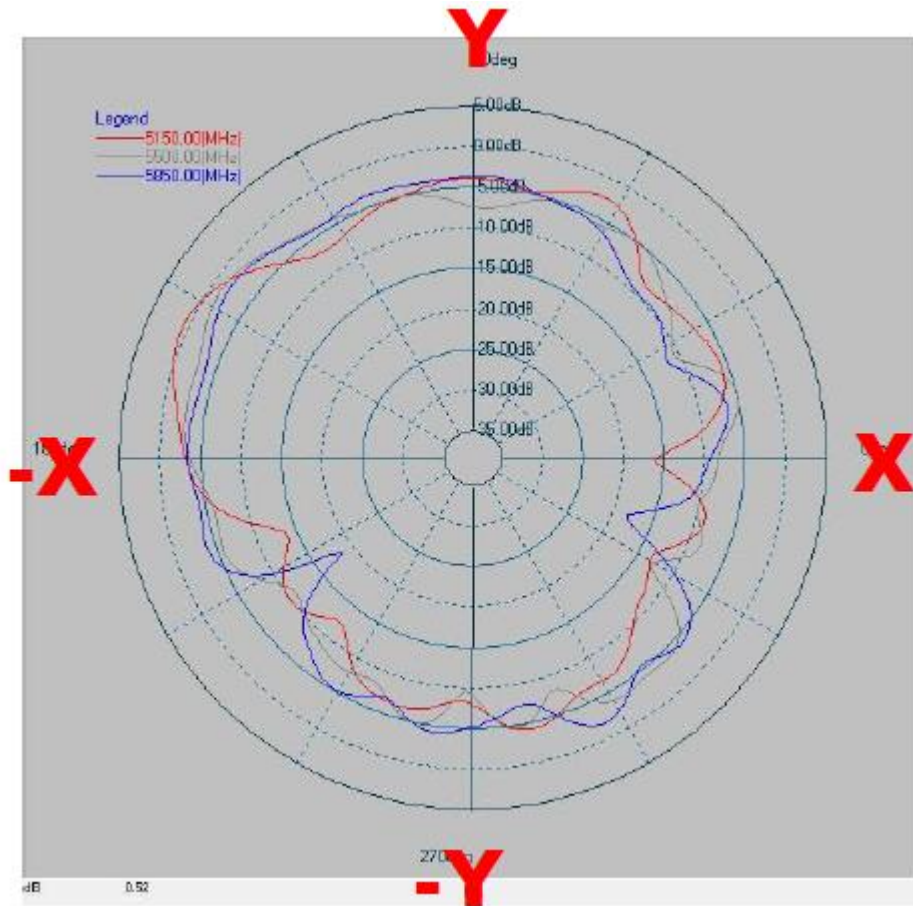
Gain . dB



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]
5150	-0.36 dB	-4.73 dB	-2.65 dB	-6.32 dB	0.63 dB	-5.51 dB
5500	-0.80 dB	-5.34 dB	-3.02 dB	-6.89 dB	-1.25 dB	-5.62 dB
5850	-1.20 dB	-5.51 dB	-1.22 dB	-6.37 dB	-2.07 dB	-5.40 dB