

APPROVAL SHEET

FPC ANTENNA

2.4 GHz Working Frequency

Halogens Free Product

P/N: RFFPA361009IMAB301

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

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

Version	Date	Description	Author
V01	2017 Apr.	New Release	SHLEE

Approval sheet

ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4 ~ 2.5 GHz(Note-1)
Impedance	50 Ohm Nominal
VSWR	2.0 (Max)
Radiation	Omni-directional
Gain(peak)	2.44 dBi
Polarization	Linear Vertical

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

MATERIAL TABLE

Items	Description
FPC	0.5oz(黑漆板)
Cable	Coaxial Cable (Ø1.13) (Gray)
Connector	IPEX Compatible(Gold)
Double Tape	3M9888T
Sponge(F-2G)+Double Tape(單面背膠)	L58*W15*T3mm

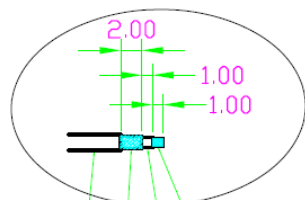
ORDERING RULE

RF	FPA	3610	09	I	M	A	B	3	01
Type Code	Product Code	PCB Dimension (Unit: mm)	PCB 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.: 3610 Length 36.9mm, Width 10.2mm	2 digits for cable length e.g.: 09 Length 9.0cm	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: 5GHz 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: Ø 0.81 2: Ø 1.32 3: Ø 1.13 4: Low Loss Ø 1.13 5: Ø 0.5 6: RG316 7: Ø 1.37 8: RG178 9: Low Loss Ø 1.37	01~99 series number

Dimensions

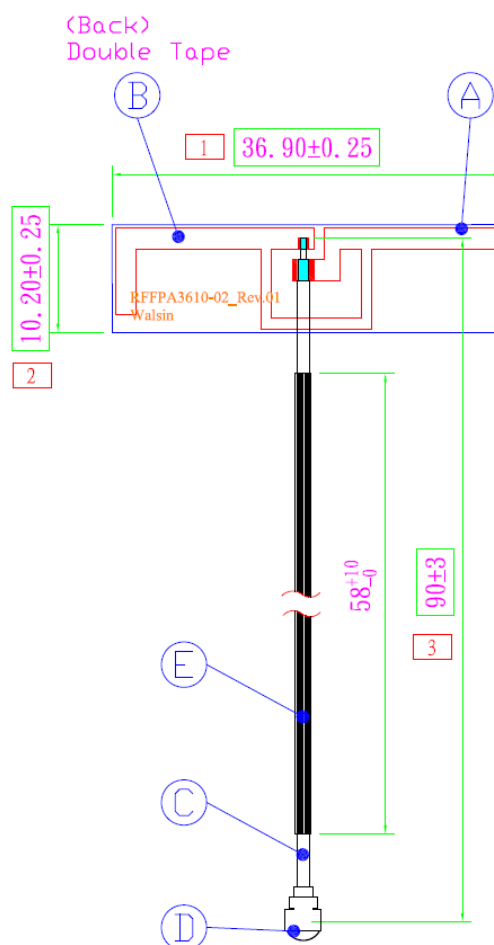
ELECTRICAL

Frequency : 2.4 GHz



D C B A
 A - center conductor
 B - Dielectric
 C - Outer conductor
 D - Jacket

NO	DESCRIPTION		QTY	REMARK
A	Body	FR4(T=0.4mm),黑漆板	1	
B	Double Tape	3M467	1	
C	Coaxial cable	($\phi 1.13$)(Gray)	1	
D	Connector	IPEX Compatible(Gold)	1	
E	Sponge(F-2G)+Double Tape(單面背膠):L58*W15*T3mm		1	



IPEX方向:
 100mm : $\pm 90^\circ$
 200mm : $\pm 135^\circ$
 200mm以上不管控

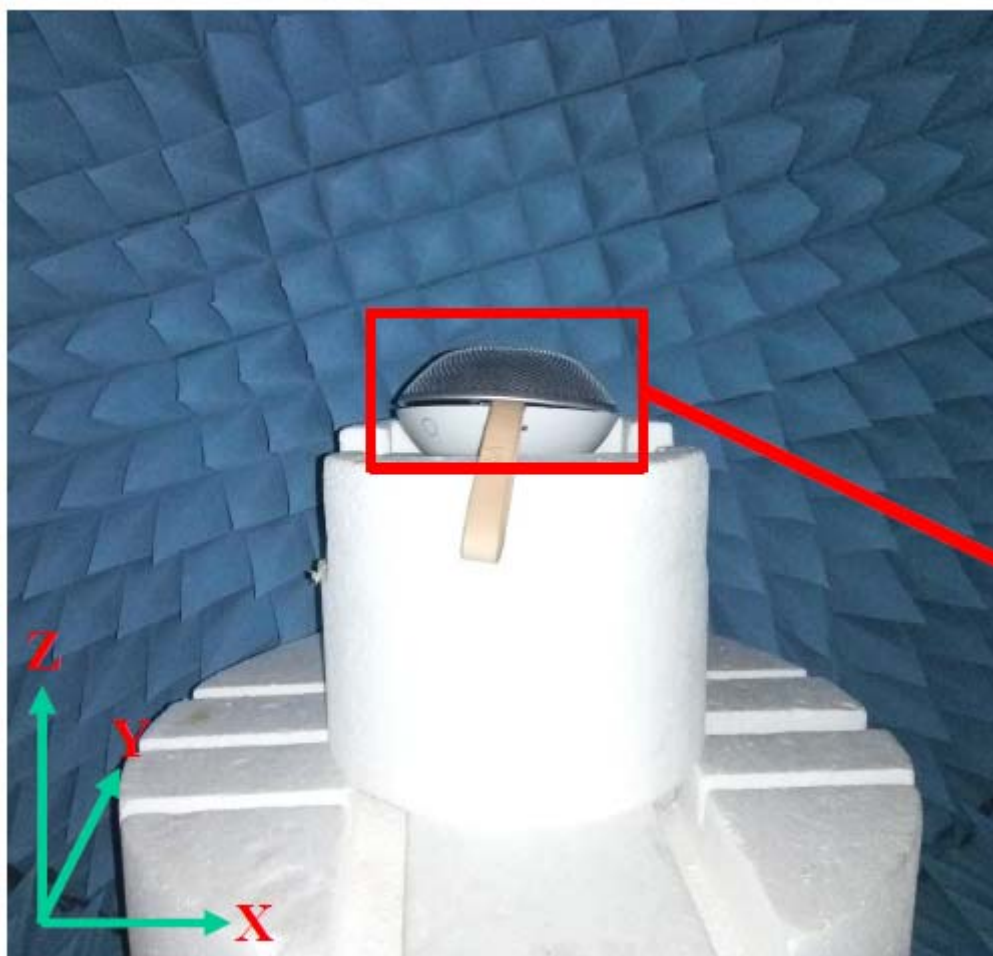
注意IPEX方向

※標記□記號者, 為重點檢驗尺寸

		設計 DR.	SHLEE	2017.04.26	品名	版本 REV.
		核准 APP.	Marco		ARTICLE	A
		容許公差 TOLERANCE		RFFPA361009IMAB301		
		6以下..... ± 0.2		單位 UNIT	比例 SCALE	張數 SHEET
		6以上~30..... ± 0.5		mm	****	1
		30以上~120..... ± 0.8				
		120以上~315..... ± 1.2				
		315以上~1000..... ± 2.0				
		1000以上~2000..... ± 3.0				

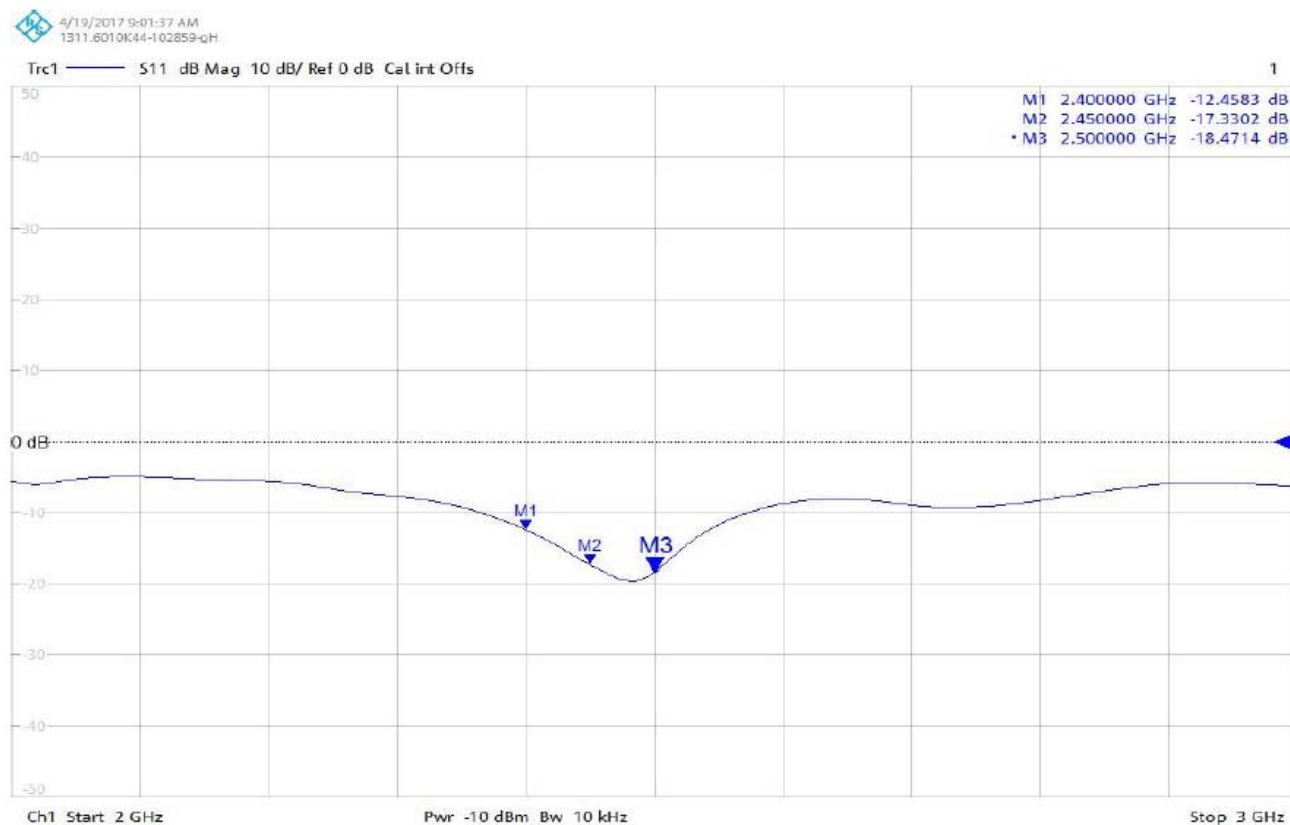
Test Report

■ Experimental Setup



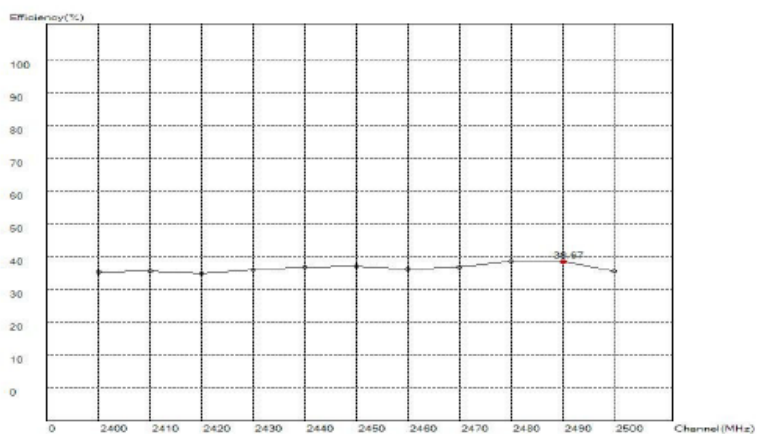
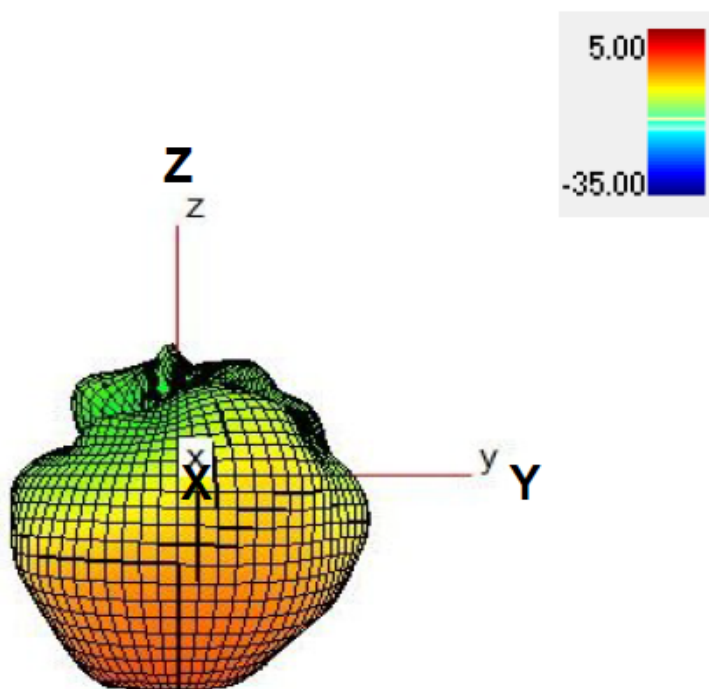
■ **Antenna Solution Detail**



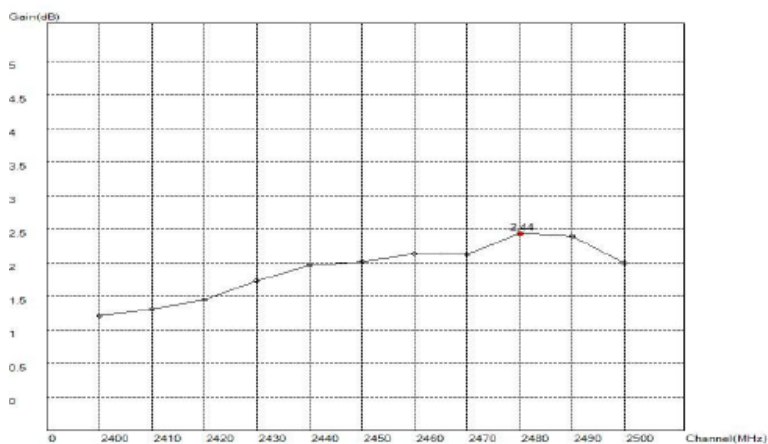
ELECTRICAL CHARACTERISTICS**Return Loss**

■ Antenna Efficiency and Peak Gain

2450MHz



Maximum Efficiency at 2490 MHz 38.67%



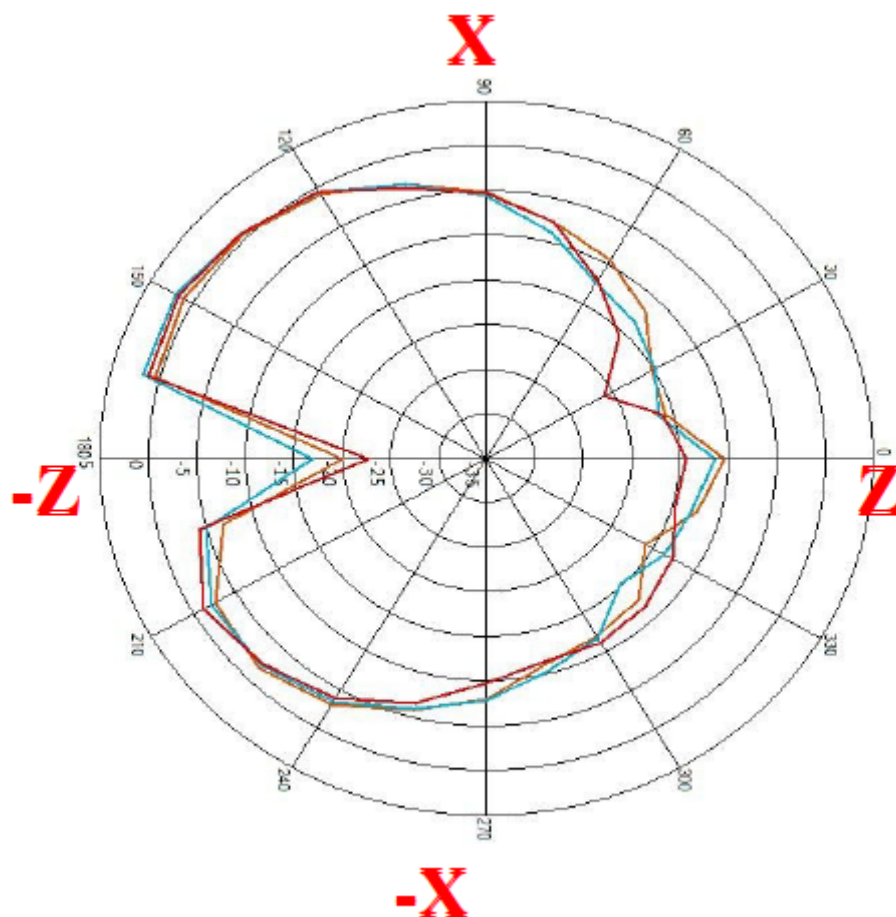
Maximum Peak Gain at 2480 MHz: 2.44dBi

RADIATION PATTERN

2400~2500 MHz

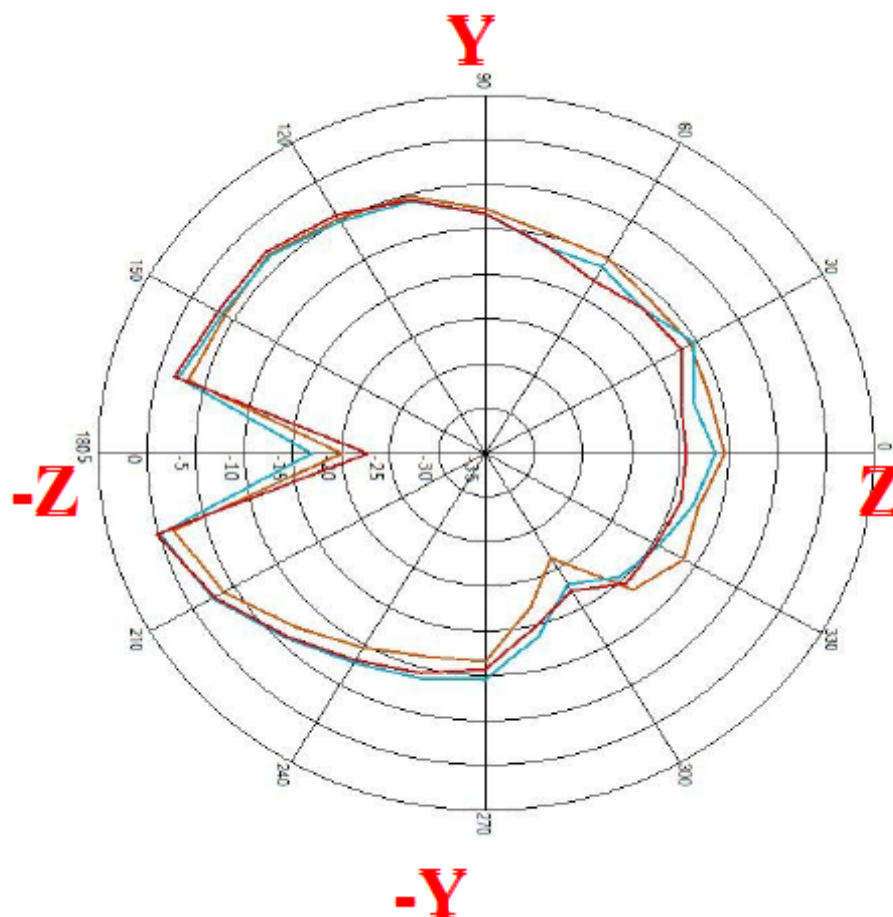
Phi=0.00deg

Gain . dB



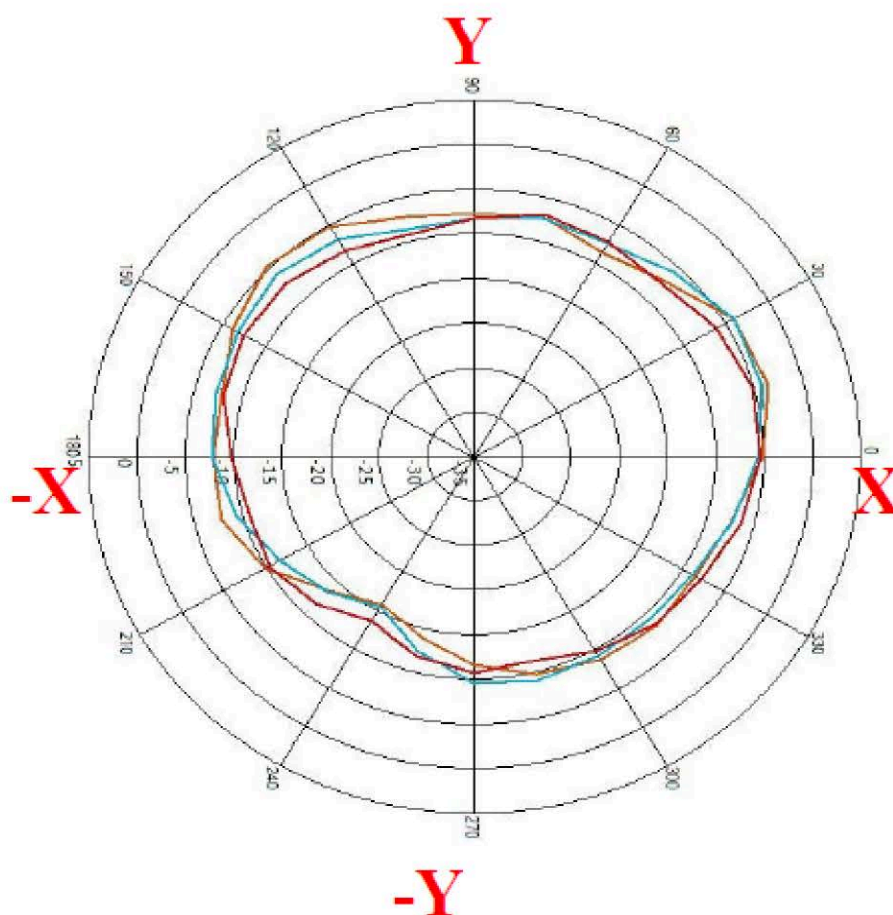
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB



	XZ-Plane		YZ-Plane		XY-Plane	
Frequency [MHz]	Max. Value (dB)	Ave. Value (dB)	Max. Value (dB)	Ave. Value (dB)	Max. Value (dB)	Ave. Value (dB)
2400 MHz	1.14	-4.89	-1.57	-7.58	-3.43	-7.21
2450 MHz	2.44	-4.56	-0.20	-7.06	-3.81	-7.49
2500 MHz	1.74	-4.73	0.12	-7.01	-4.96	-7.99