佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

RFPCA501010EMMB101

Specification

Part Series	**Monopole Antenna Type**
	RFPCA501010EMMB101
Version	**V0.1**

Contents

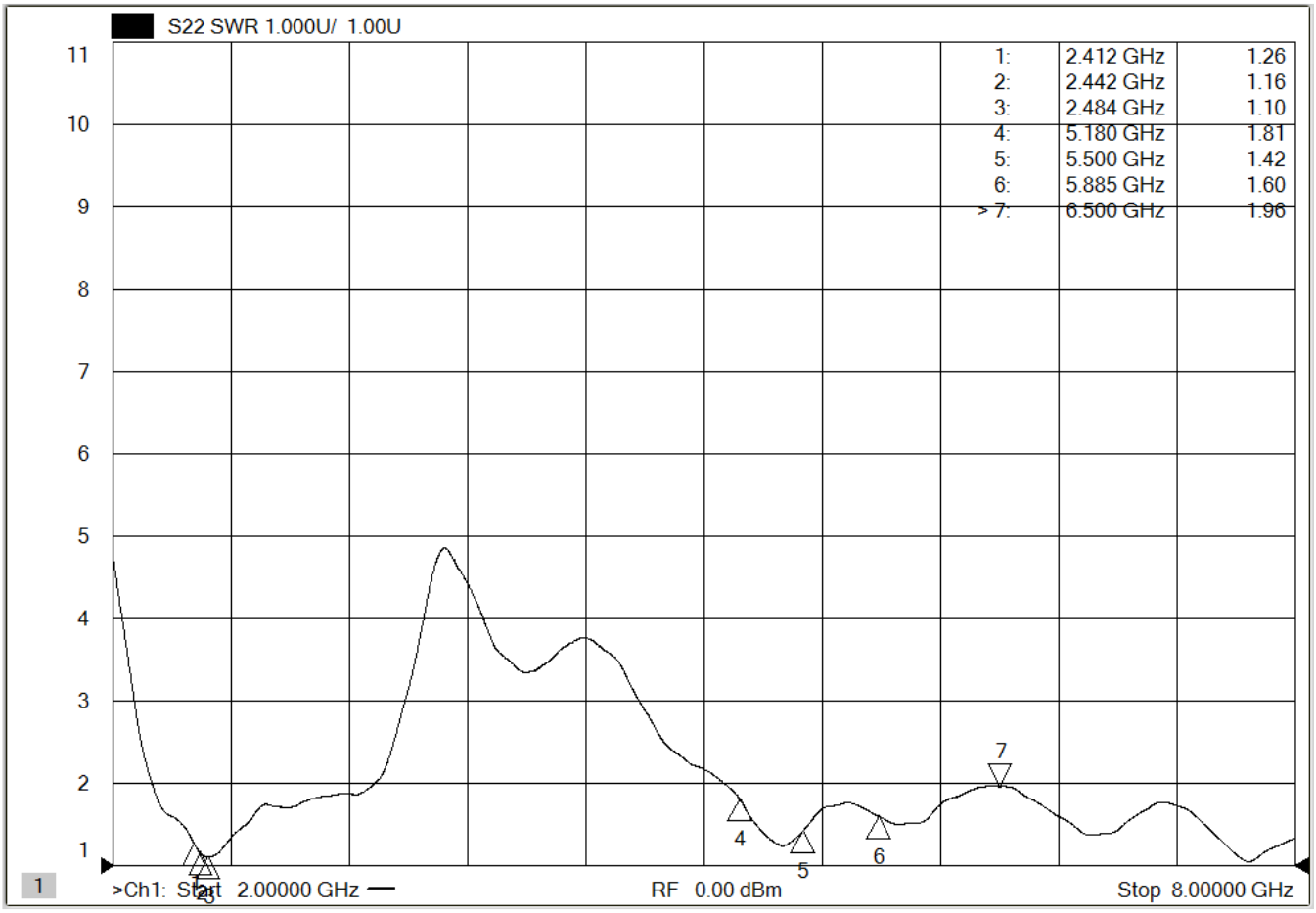
1. Performance

1.1 Antenna performance

Item	Specification
Frequency Range	2.4 ~ 2.5/5.15 ~ 6.5 GHz
Impedance	50 Ohm Nominal
VSWR	2.0 (Max)
Peak Gain	2.4 ~ 2.5 GHz @3.27 dBi 5.15 ~ 6.5 GHz@3.33 dBi
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	－20℃ ～ ＋65℃

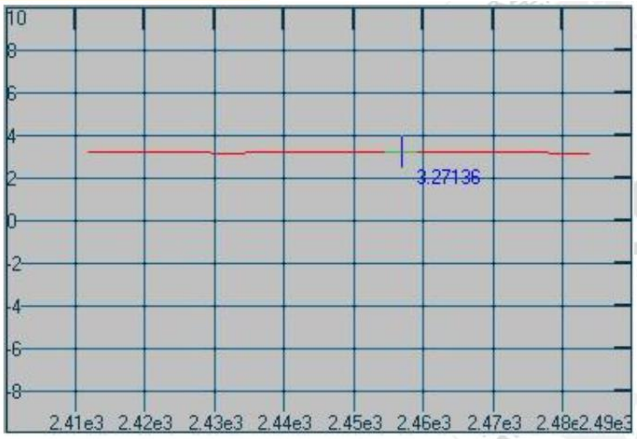
1.2 Antenna S-Parameter and matching factor

VSWR

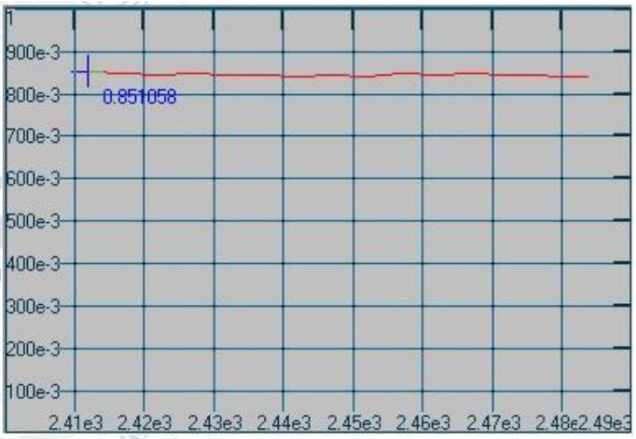


1.3 Antenna Efficiency & Peak Gain

ANT_2.4G

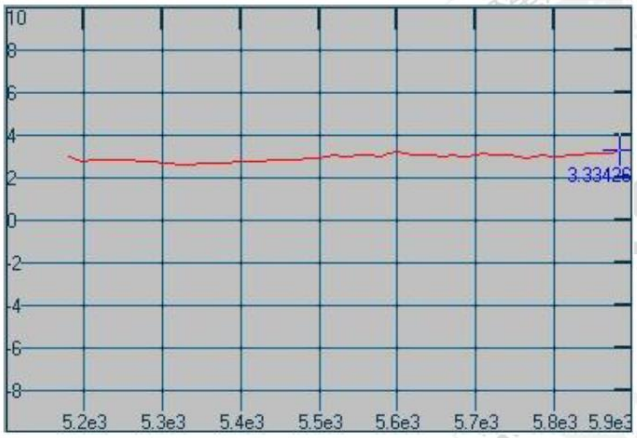


Maximum Peak Gain at 2457 MHz : 3.27 dBi

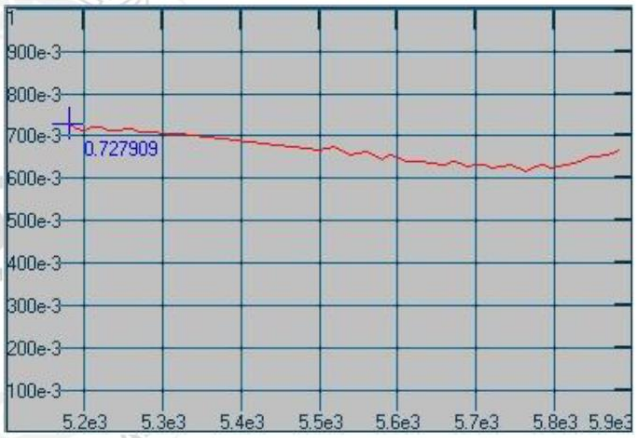


Maximum Efficiency at 2412 MHz : 85.11 %

ANT_5G



Maximum Peak Gain at 5885 MHz : 3.33 dBi



Maximum Efficiency at 5180 MHz : 72.79 %

Antenna Efficiency and Peak Gain

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
2412	85.11	3.25
2417	84.76	3.25
2422	84.55	3.24
2427	84.64	3.25
2432	84.27	3.22
2437	84.49	3.26
2442	84.05	3.23
2447	84.33	3.27
2452	84.15	3.27
2457	84.70	3.27
2462	84.27	3.25
2467	84.83	3.26
2472	84.61	3.25
2484	84.23	3.21

ANT_5G

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5180	72.79	3.00
5190	71.92	2.90
5200	71.42	2.84
5210	72.16	2.88
5220	72.07	2.88
5230	71.41	2.87
5240	71.34	2.90
5260	71.58	2.87
5270	71.11	2.82
5280	71.08	2.79
5290	71.02	2.78
5300	70.62	2.77
5310	70.70	2.76
5320	70.66	2.68

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5500	66.57	2.96
5510	67.15	3.03
5520	67.55	3.08
5530	66.49	3.04
5540	65.47	3.01
5550	66.15	3.11
5560	66.28	3.15
5580	64.34	3.07
5590	65.48	3.17
5600	65.11	3.29
5610	63.98	3.21
5620	64.13	3.15
5630	64.16	3.13
5640	63.78	3.09

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5660	63.14	3.02
5670	63.92	3.09
5680	63.74	3.06
5690	62.88	3.02
5700	63.10	3.09
5710	63.45	3.16
5720	62.55	3.09

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5745	63.17	3.08
5755	62.34	3.04
5765	61.69	2.98
5775	62.80	3.01
5785	63.32	3.08
5795	62.45	3.04
5805	62.92	3.01
5825	63.73	3.11
5835	64.08	3.10
5845	65.08	3.18
5855	65.21	3.21
5865	65.56	3.18
5875	65.91	3.16
5885	66.90	3.33

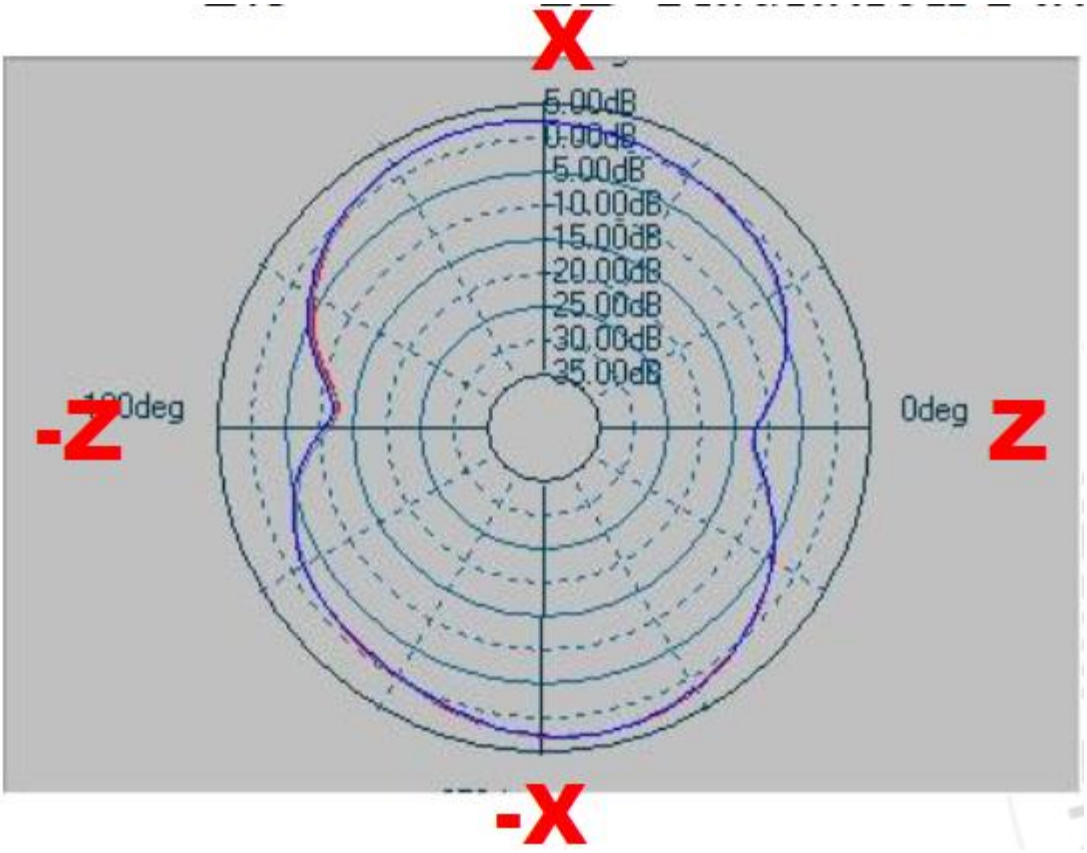
1.4 RADIATION PATTERN

ANT_2.4G

X-Z Plane

Phi=0.00deg

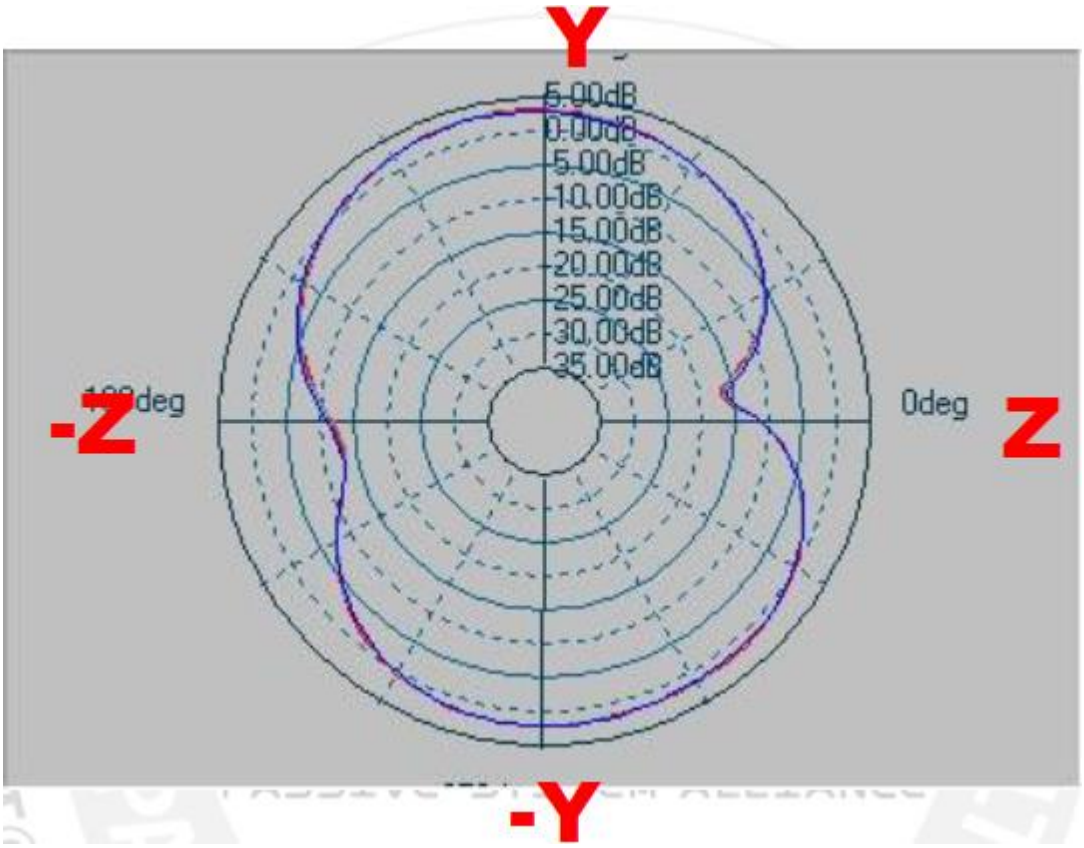
Gain . dB



Y-Z Plane

Phi=90.00deg

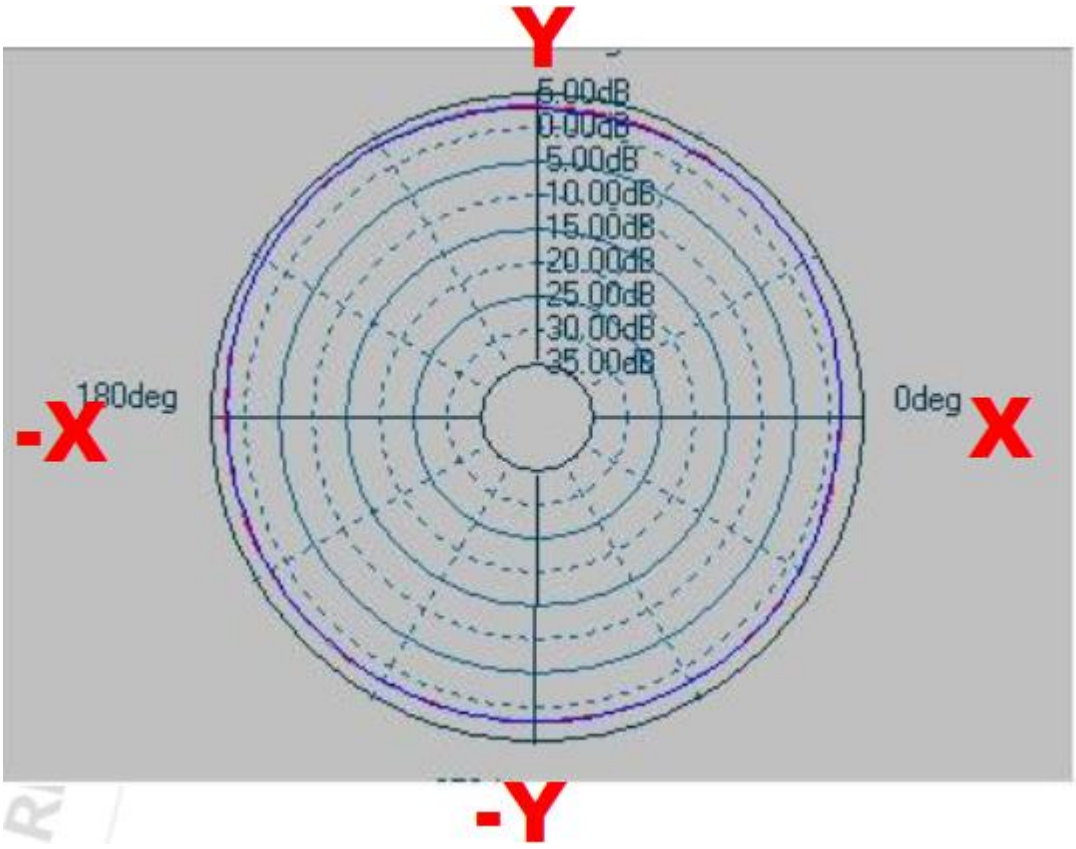
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB

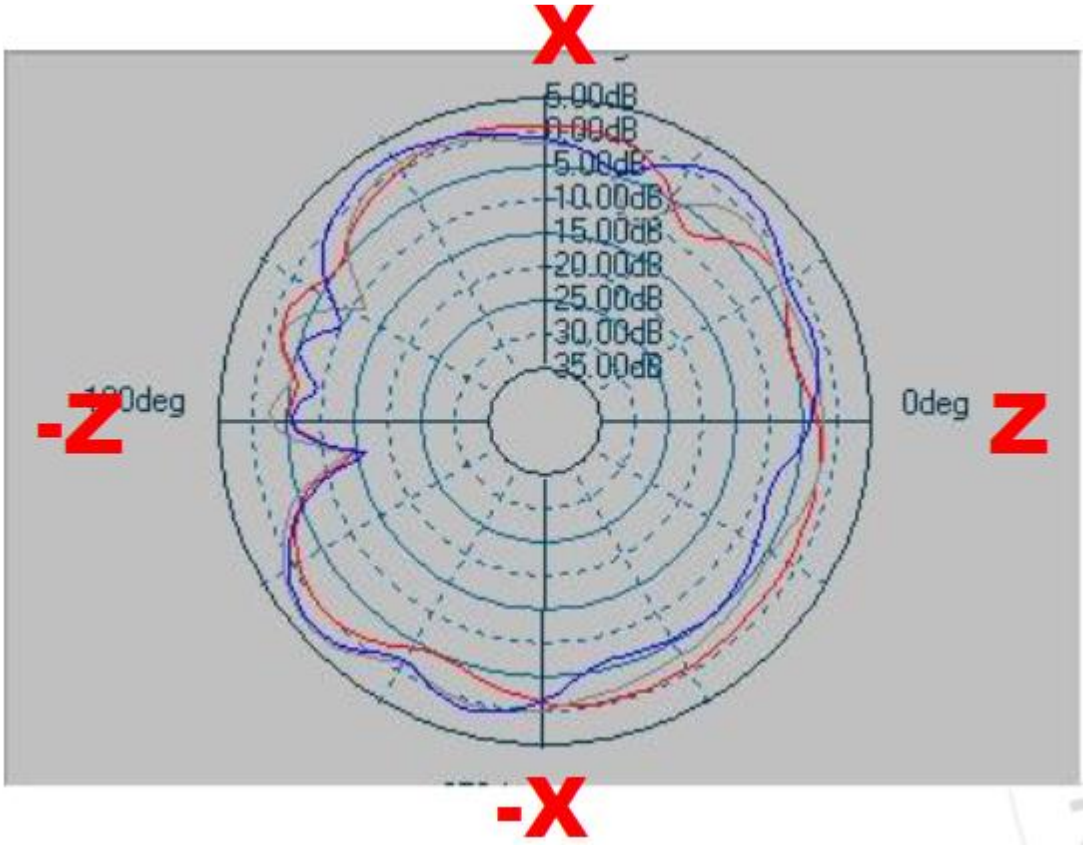


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2412	2.89	-0.80	2.62	-0.60	3.25	2.40
2442	2.80	-0.87	2.47	-0.66	3.23	2.36
2484	2.86	-0.81	2.30	-0.67	3.17	2.32

X-Z Plane

Phi=0.00deg

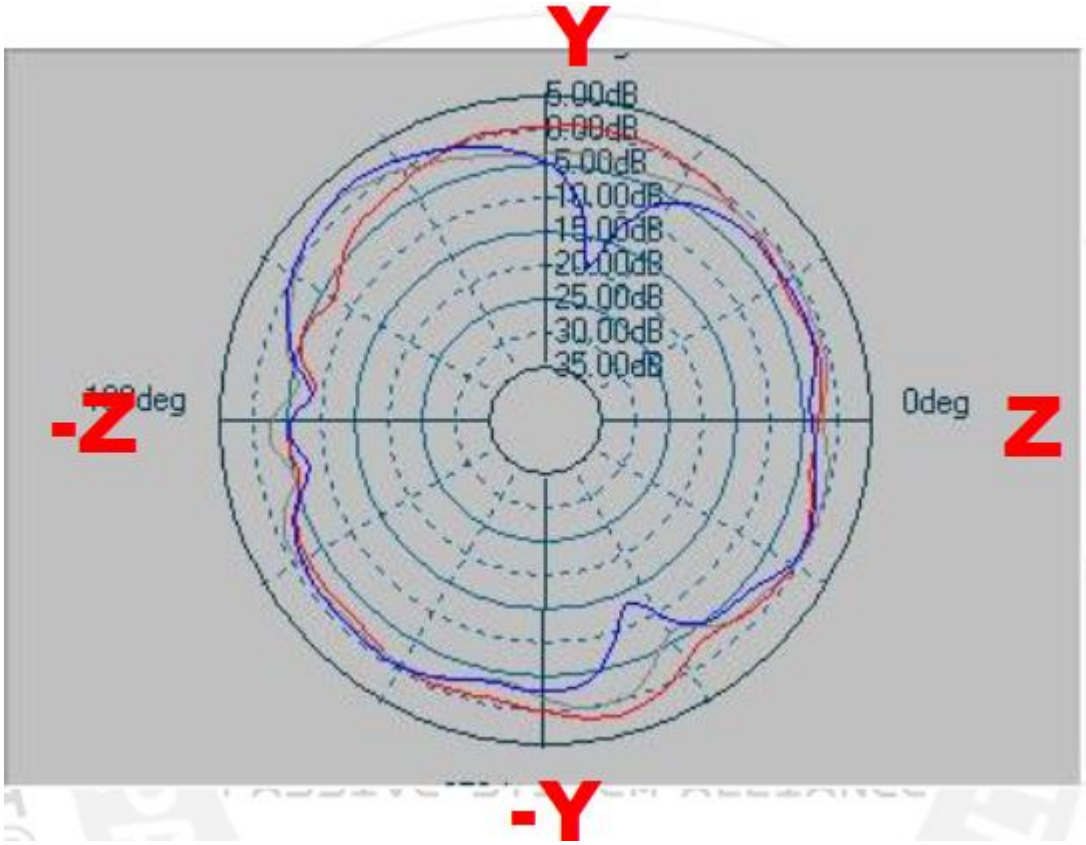
Gain . dB



Y-Z Plane

Phi=90.00deg

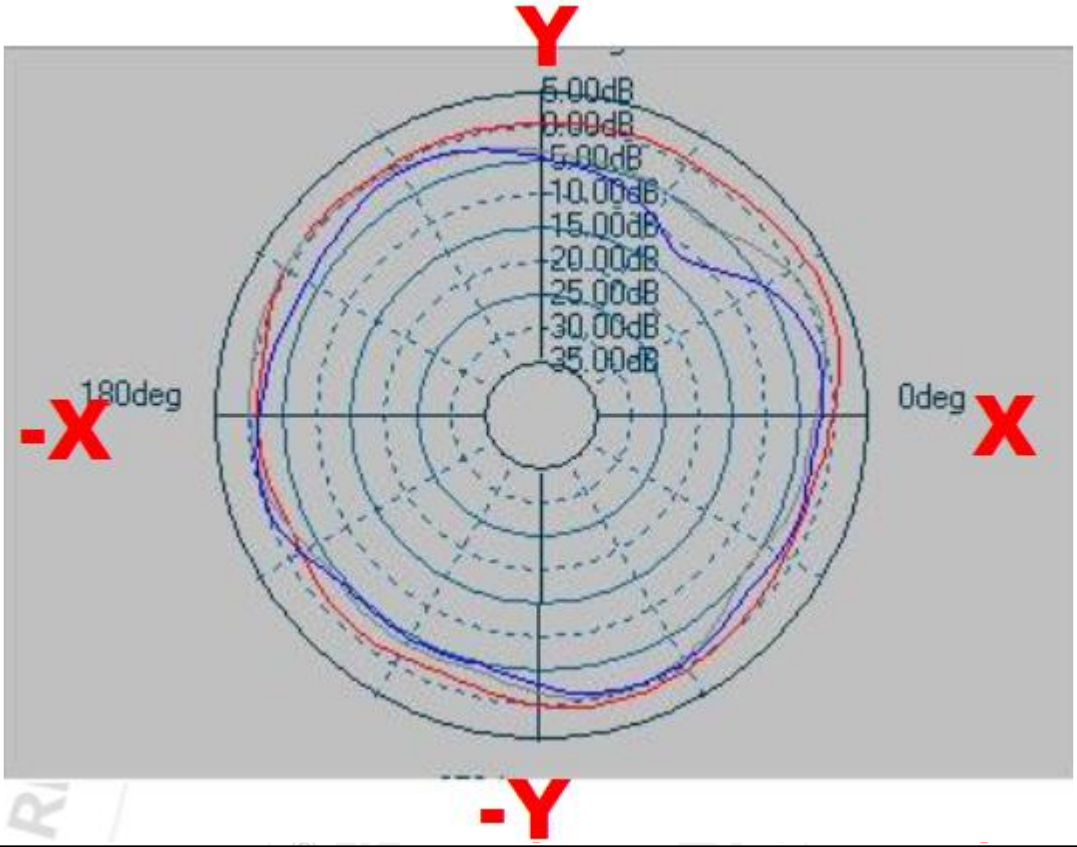
Gain . dB



X-Y Plane

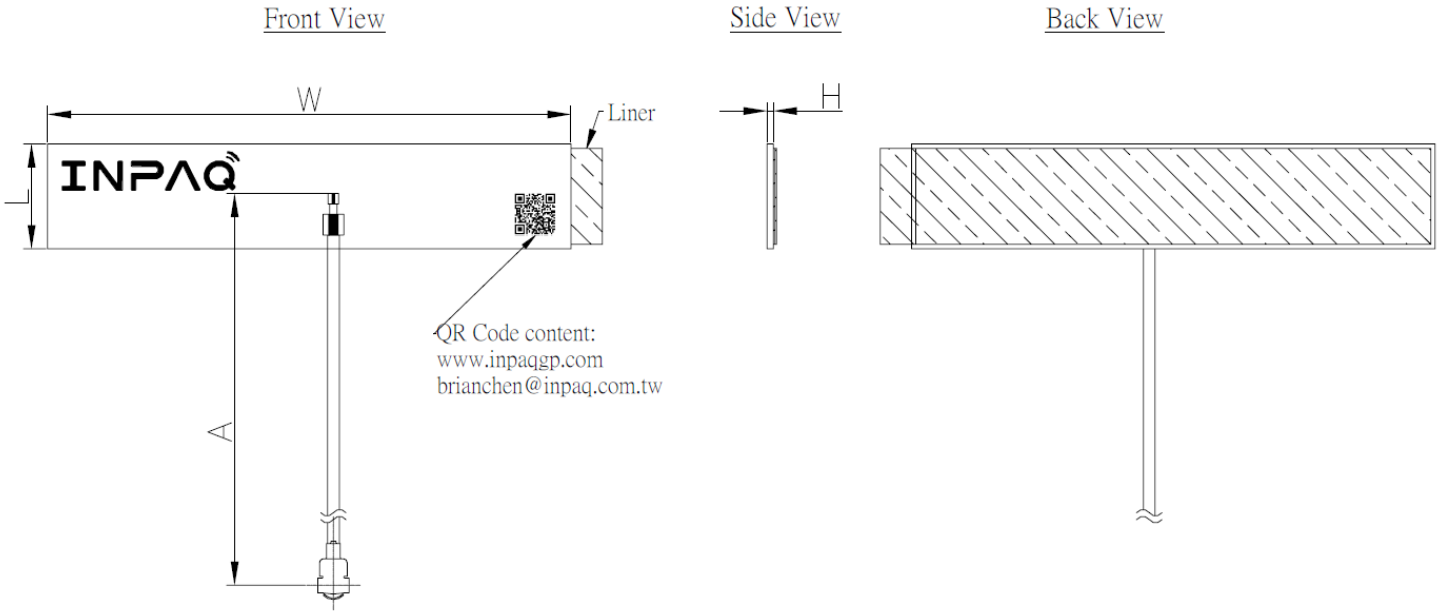
Theta=90.00deg

Gain . dB



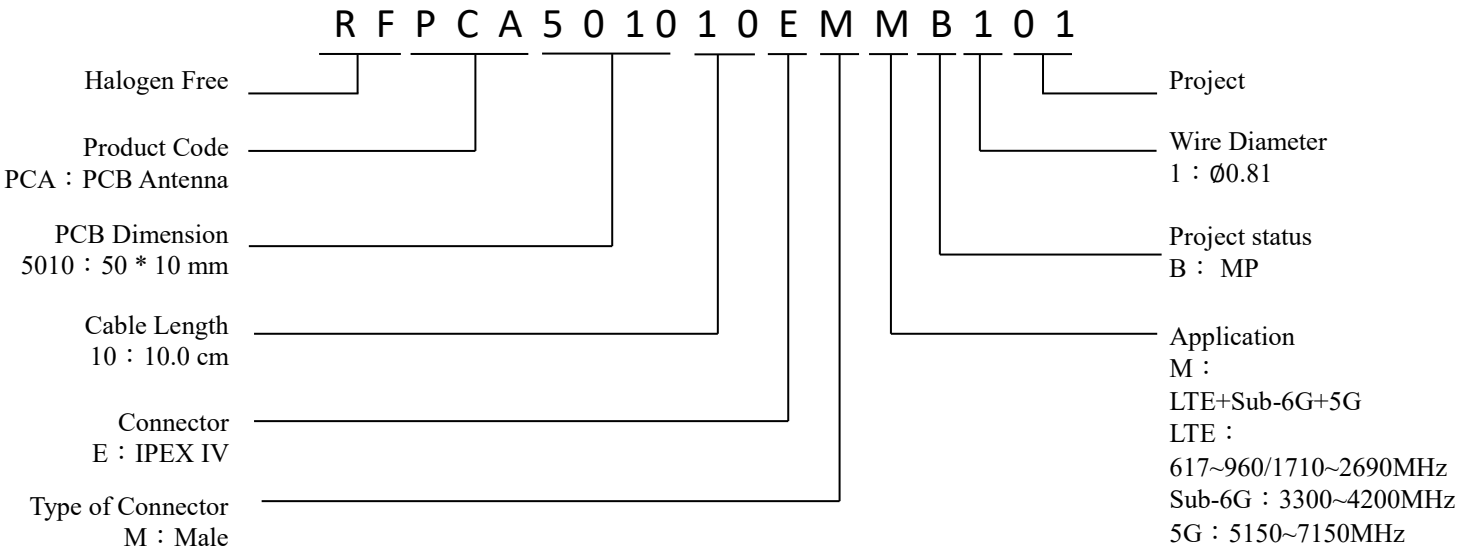
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5180	0.75	-2.16	1.80	-1.67	2.61	-0.15
5500	2.93	-1.90	1.15	-1.77	0.57	-2.07
5885	2.48	-1.77	1.69	-2.64	-0.49	-2.98

2. Mechanical Specification



Symbol	Min (mm)	Normal (mm)	Max (mm)
W	49.8	50.0	50.2
L	9.8	10.0	10.2
H	0.5	0.6	0.7
A	97	100	103

3. Ordering Information



4. Package

RFPCA501010EMMB101包規	PAGE： 1 之 1
	Version ：A0版
	Revision date：2025/1/9

Packaged

圖一

圖二

圖三

產品包裝規範：

1. Put every 1pcs of product into a shielding bag and paste the manufacturing label, and seal it with 400pcs per ziplock bag. As shown in Figure 1

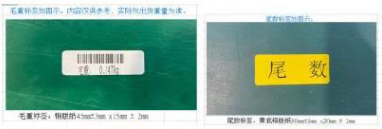
2. Put the foam in the outer box (as shown in Figure 2)

3. Put the finished product (as shown in Figure 3) into the outer box, put 2000pcs of products in each box, put 1 piece of pearl cotton up and down, seal the box and paste the manufacturing label, and seal the box with the "work" font, that is, the six-sided sealing.

4. The filling of mantissa boxes refers to this specification "Y-WI-09-281"

Metal Antenna 370625
RFMTA3706251MAB301 75B1031604 10
-WW0121-031922193619-200 75B1031604 0001

First row: 6-11 digits of model + space + Antenna + space + specification
Second row: specification + space + batch number + space + quantity
The content of the third row of barcodes: specification + batch number + serial number (the same as the last 4 codes of the fourth row) + quantity (unit is K/PCS)
Fourth row: "-"+Printer's number+"-"Month+Date+Year+Hour+Minute+Second+"-"+"The "Label Number" of the current print + batch number + 4 yards



Label Annotation Ownership (PSA) Huaxin Technology Co., Ltd

Approval:	He Yaohui	Audit:	Zhao Wenbao	Formulate:	Xu Ruonan

5. Version

Version	Date	Description
V01	2025.01.14	Initial release