佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

RFPCA331010EMMB101

Specification

Part Series	**Dipole Antenna Type**
	RFPCA331010EMMB101
Version	**V0.1**

Contents

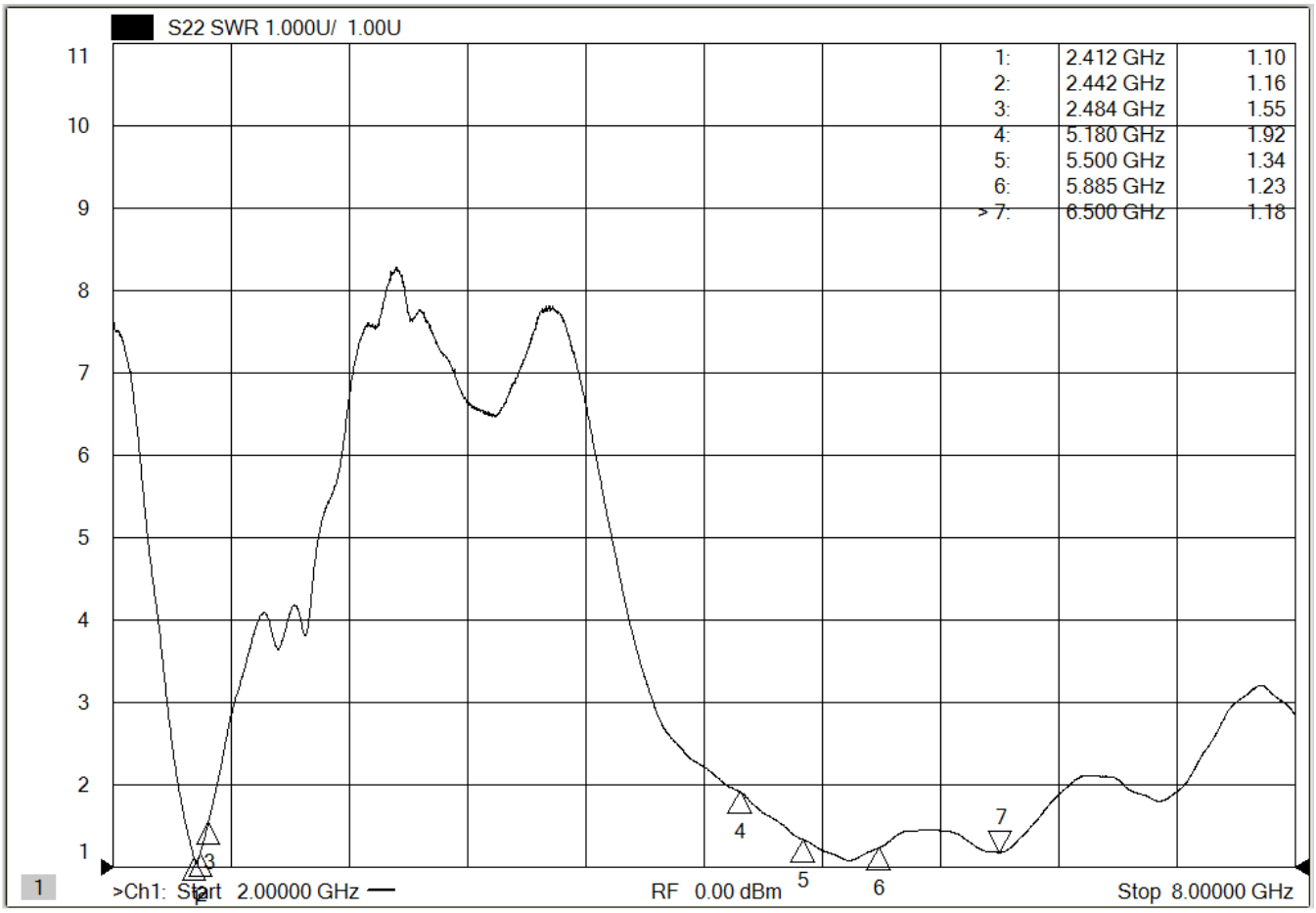
1. Performance

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 @ 3.11 dBi 5.15 ~ 6.5 GHz@3.43 dBi
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	－20℃ ～ ＋65℃

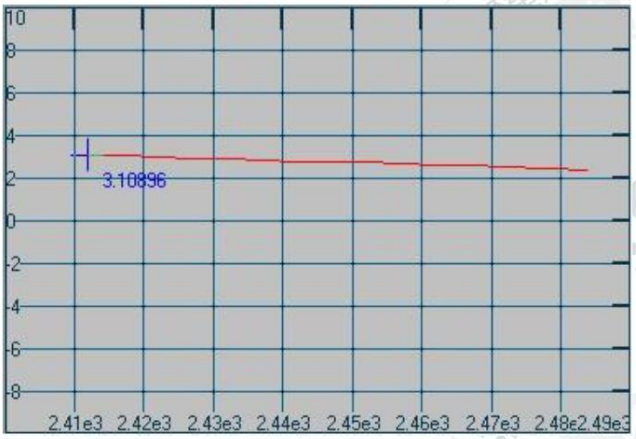
1.2 Antenna S-Parameter and matching factor

VSWR

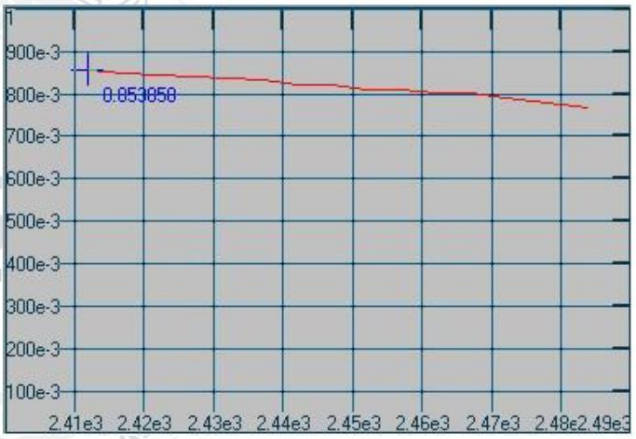


1.3 Antenna Efficiency & Peak Gain

ANT_2.4G

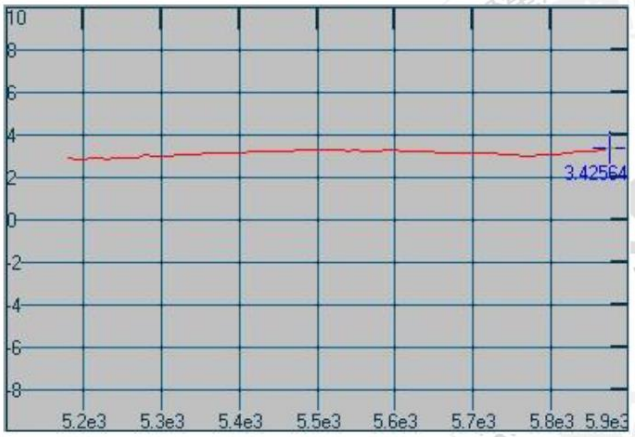


Maximum Peak Gain at 2412 MHz : 3.11 dBi

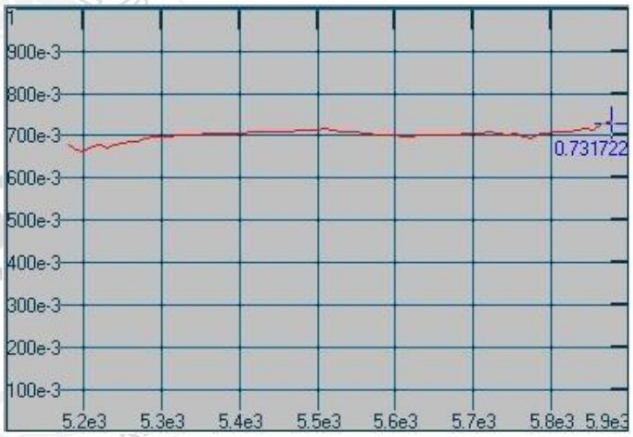


Maximum Efficiency at 2412 MHz : 85.39 %

ANT_5G



Maximum Peak Gain at 5885 MHz : 3.43 dBi



Maximum Efficiency at 5875 MHz : 73.17 %

Antenna Efficiency and Peak Gain

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
2412	85.39	3.11
2417	84.87	3.08
2422	84.46	3.03
2427	84.01	2.99
2432	83.47	2.93
2437	83.24	2.92
2442	82.13	2.83
2447	81.98	2.82
2452	81.14	2.78
2457	80.99	2.74
2462	80.15	2.68
2467	80.03	2.65
2472	78.93	2.58
2484	76.62	2.44

ANT_5G

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5180	67.84	2.97
5190	66.86	2.91
5200	66.40	2.89
5210	67.63	2.95
5220	67.88	2.97
5230	67.24	2.92
5240	67.90	2.94
5260	68.76	2.98
5270	68.68	2.96
5280	69.49	3.09
5290	69.77	3.08
5300	69.64	3.06
5310	69.85	3.06
5320	70.24	3.09

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5500	71.18	3.34
5510	71.62	3.37
5520	71.44	3.36
5530	71.00	3.32
5540	70.96	3.31
5550	71.09	3.33
5560	70.63	3.29
5580	70.05	3.28
5590	70.38	3.32
5600	70.20	3.31
5610	69.84	3.27
5620	69.94	3.27
5630	70.12	3.26
5640	70.24	3.24

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5660	70.07	3.22
5670	70.17	3.19
5680	70.31	3.19
5690	70.70	3.22
5700	70.64	3.21
5710	70.48	3.19
5720	70.84	3.22

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5745	70.14	3.14
5755	70.49	3.12
5765	69.65	3.05
5775	69.58	3.01
5785	70.45	3.08
5795	70.57	3.09
5805	70.91	3.13
5825	70.96	3.23
5835	71.30	3.26
5845	71.56	3.28
5855	71.48	3.25
5865	72.71	3.38
5875	73.17	3.43
5885	72.69	3.42

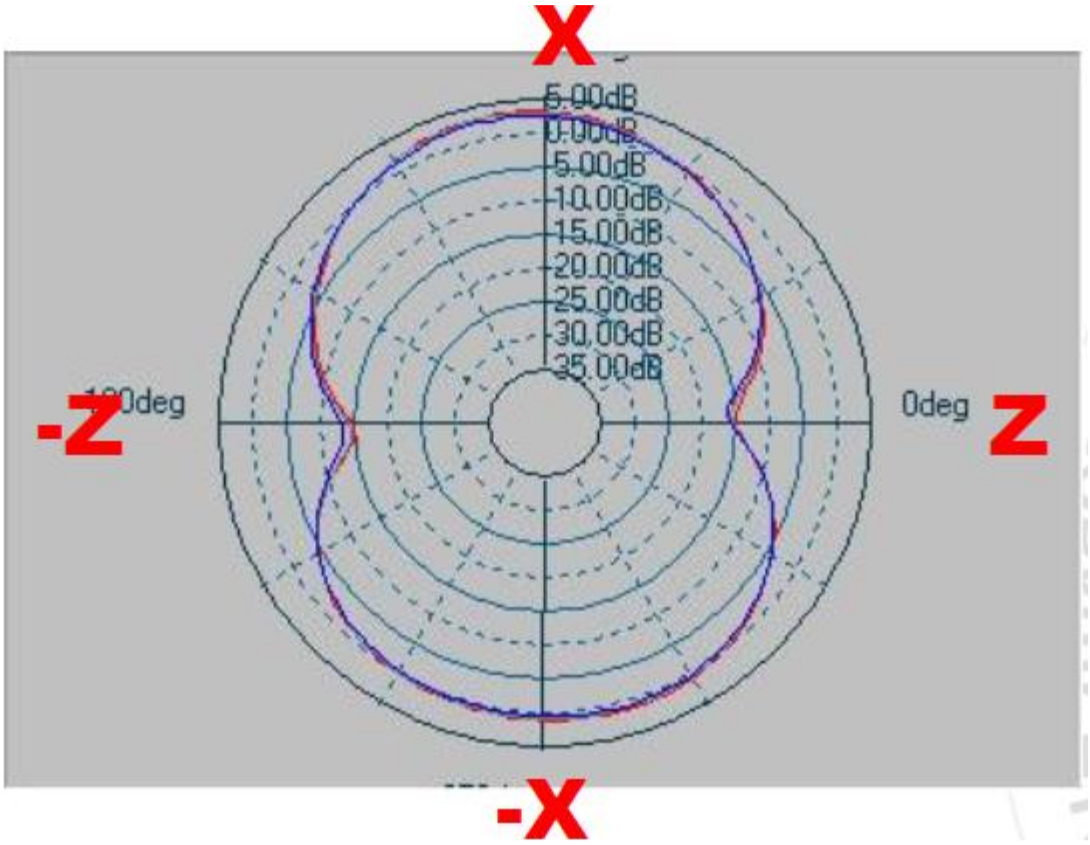
1.4 RADIATION PATTERN

ANT_2.4G

X-Z Plane

Phi=0.00deg

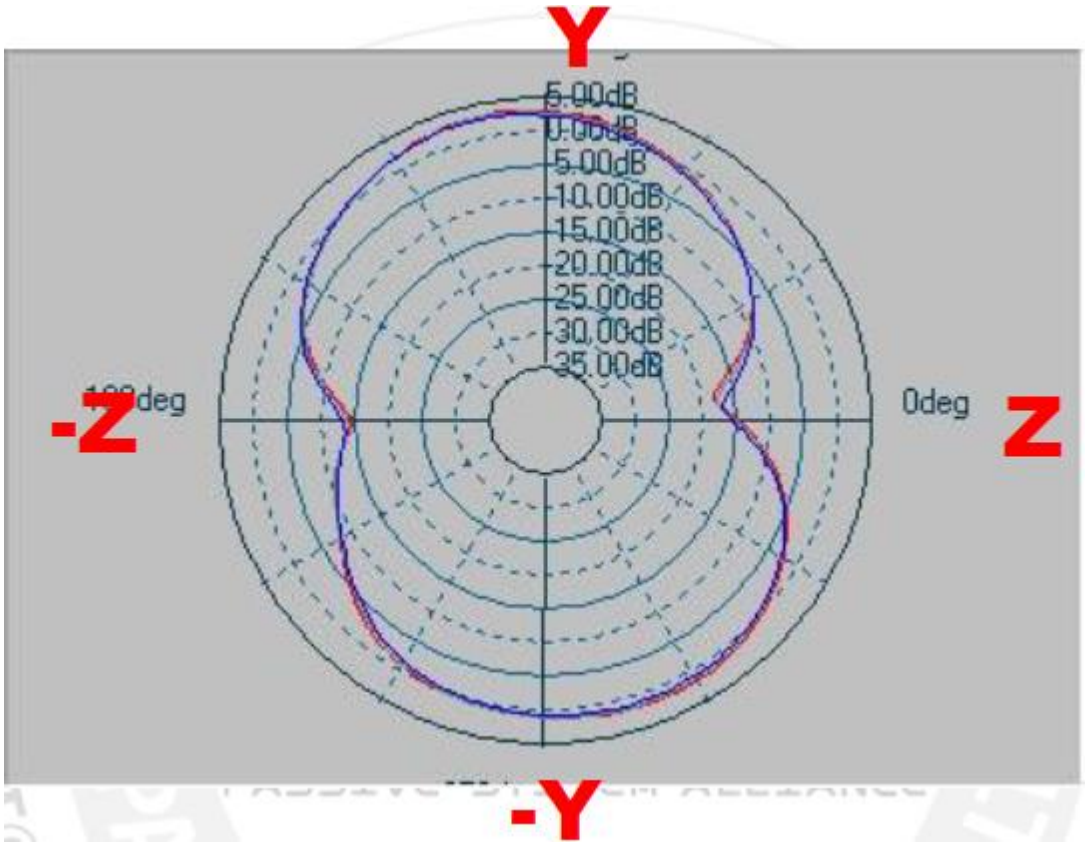
Gain . dB



Y-Z Plane

Phi=90.00deg

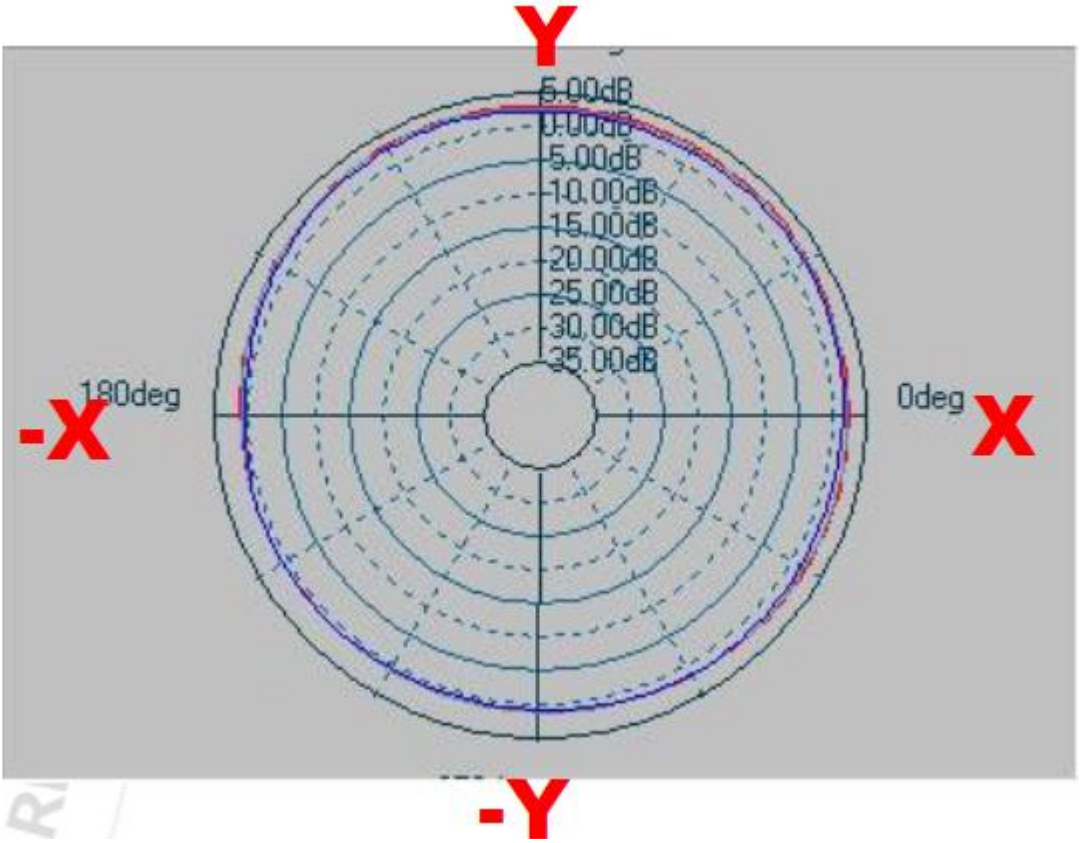
Gain . dB



X-Y Plane

Theta=90.00deg

Gain . dB

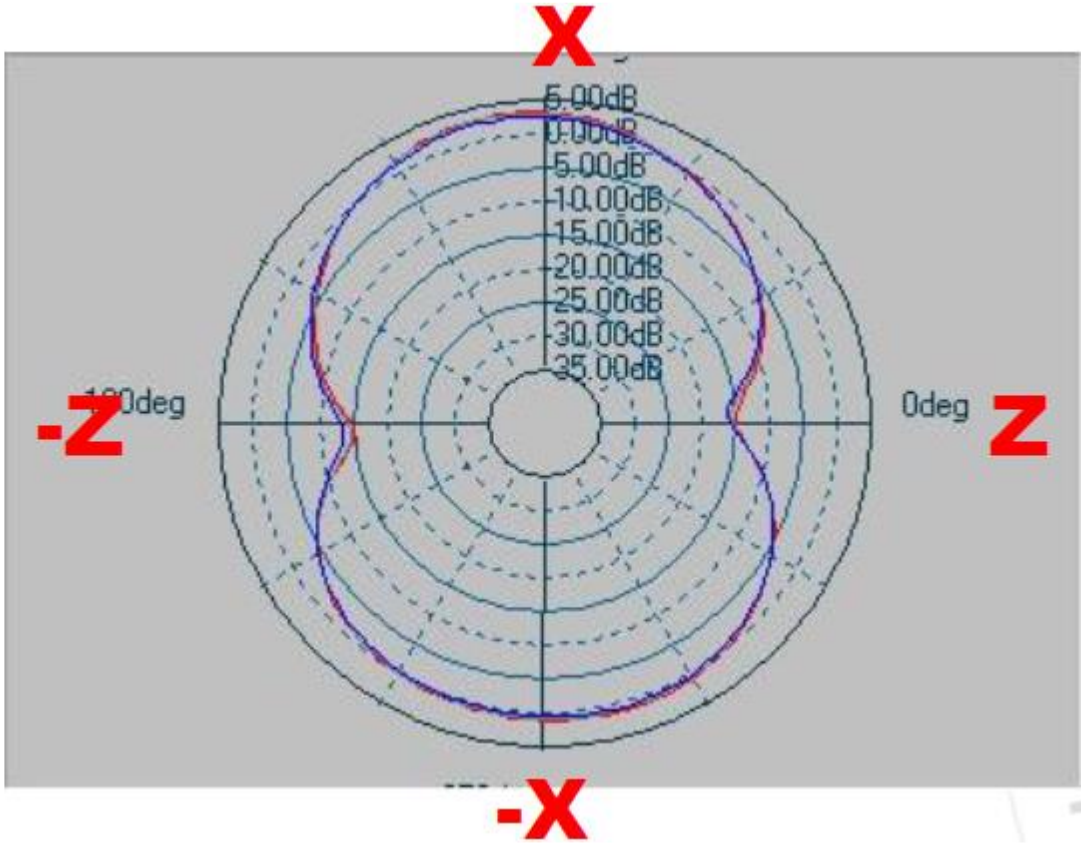


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2412	2.70	-1.41	2.59	-1.38	2.77	1.85
2442	2.45	-1.58	2.36	-1.55	2.49	1.69
2484	1.95	-1.85	2.06	-1.81	2.21	1.31

X-Z Plane

Phi=0.00deg

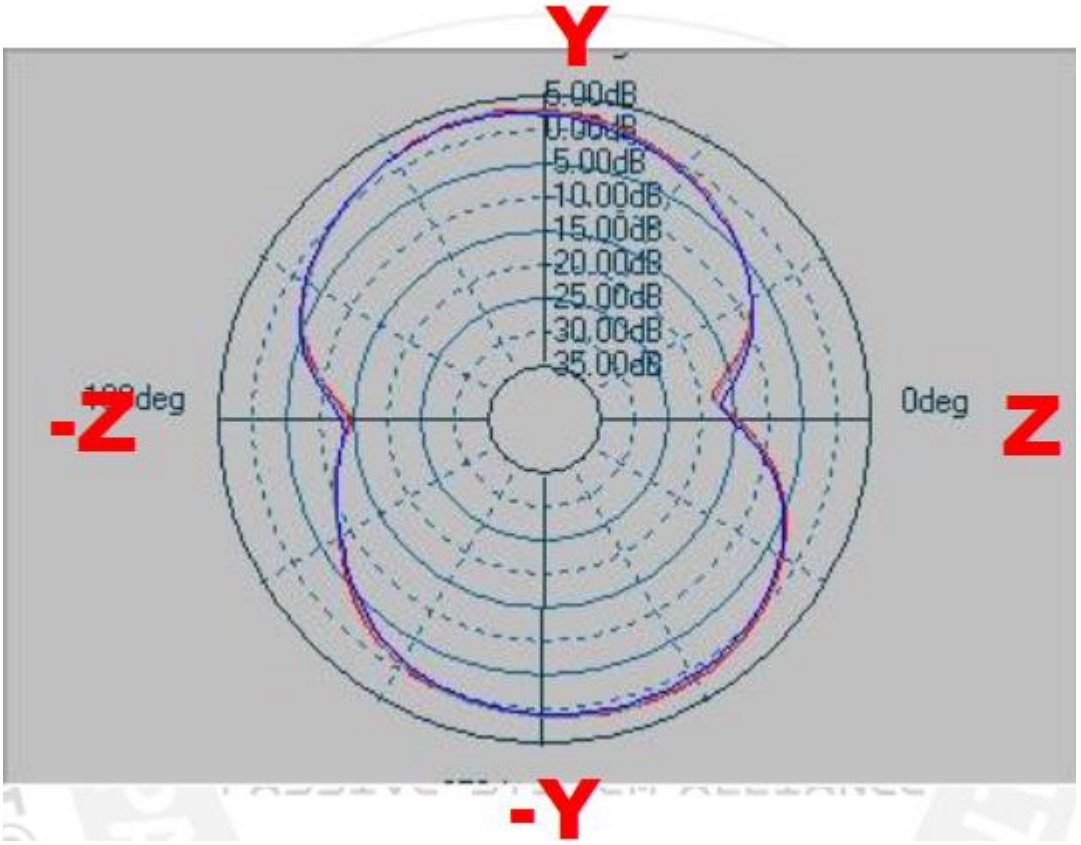
Gain . dB



Y-Z Plane

Phi=90.00deg

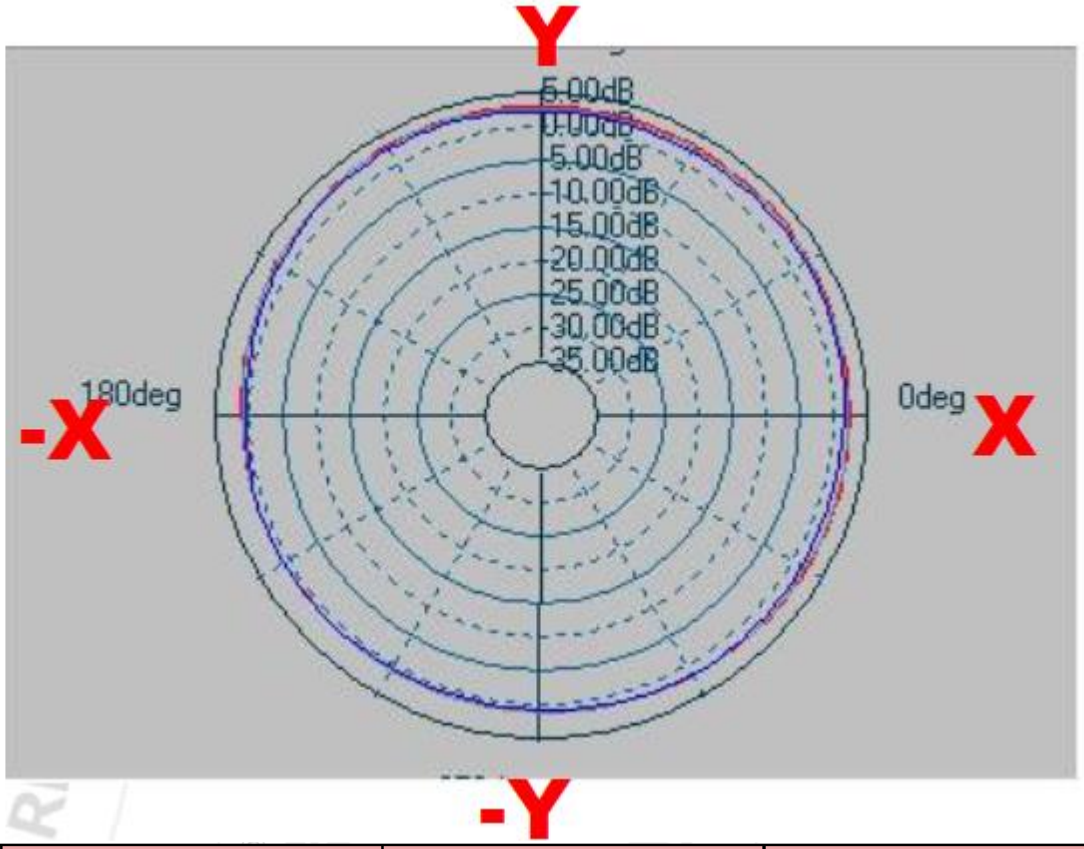
Gain . dB



X-Y Plane

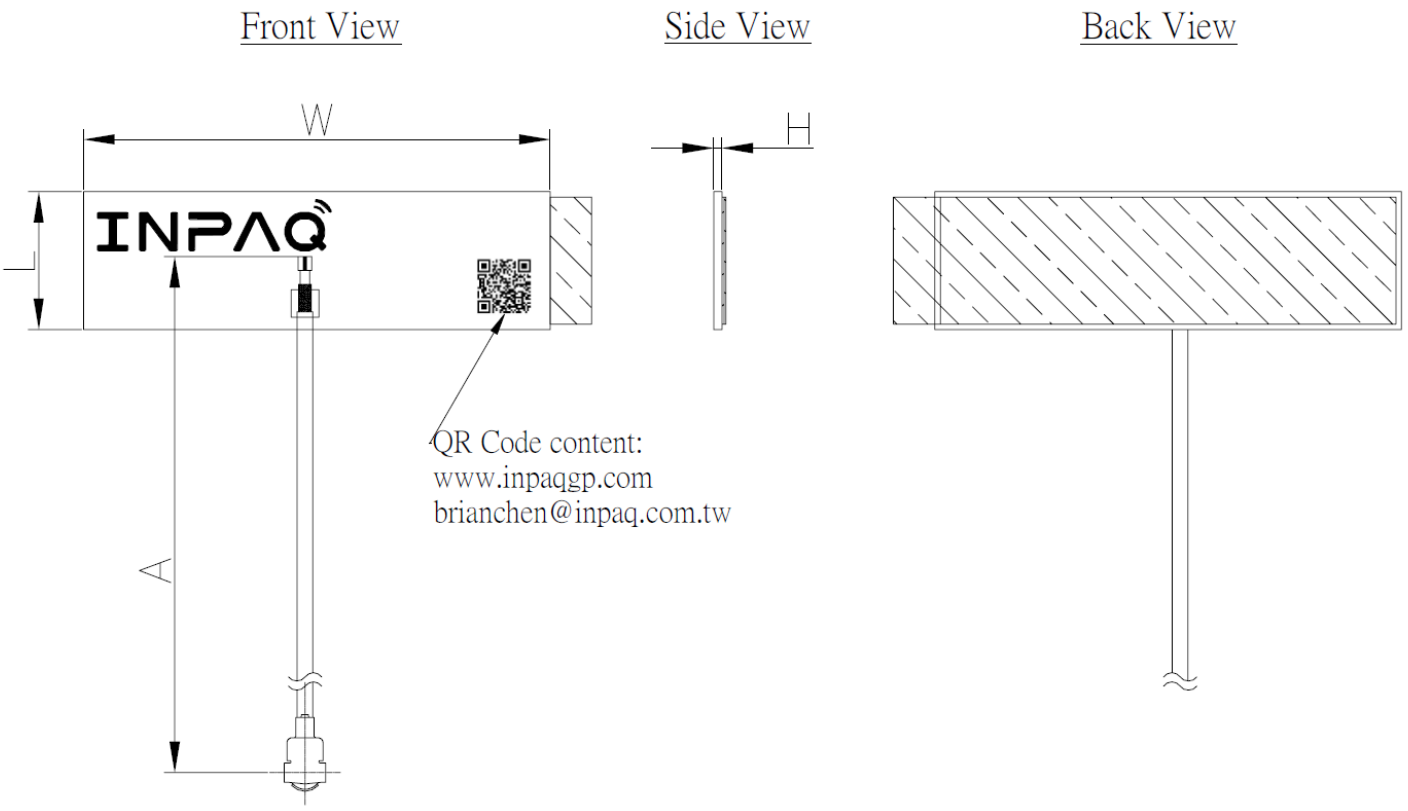
Theta=90.00deg

Gain . dB



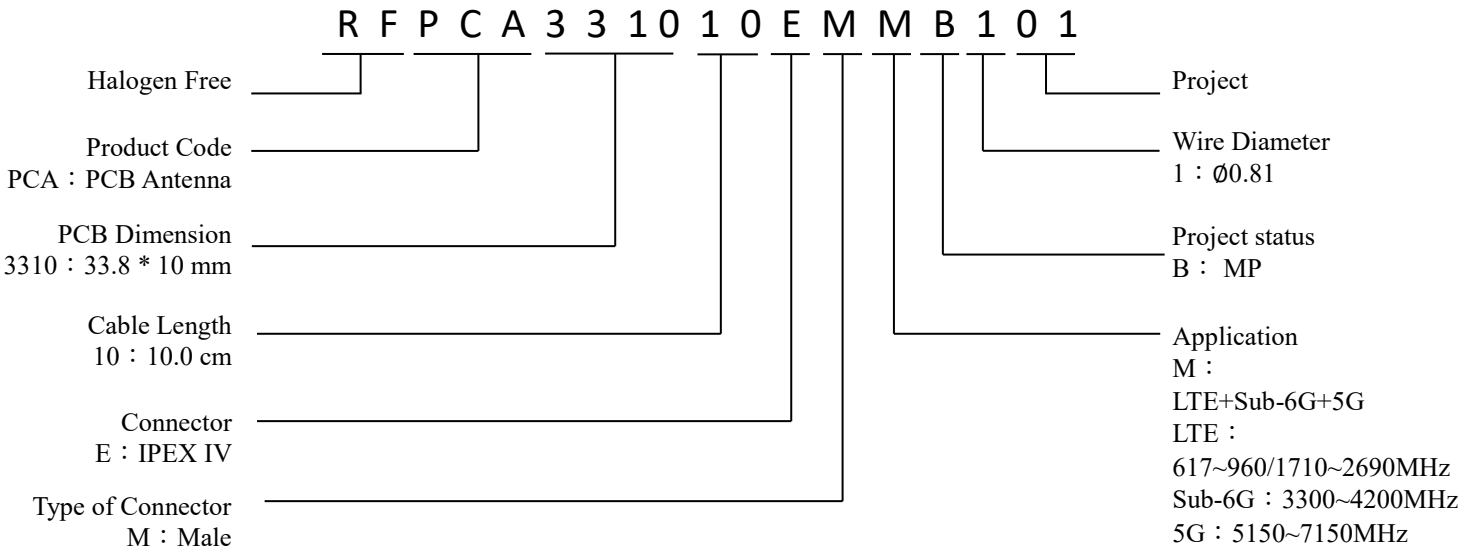
	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5180	1.88	-2.05	1.01	-2.54	2.95	0.08
5500	2.10	-2.10	1.49	-2.29	3.23	0.49
5885	2.23	-2.28	1.53	-1.91	3.05	0.66

2. Mechanical Specification



Symbol	Min (mm)	Normal (mm)	Max (mm)
W	33.6	33.8	34.0
L	9.8	10.0	10.2
H	0.5	0.6	0.7
A	97	100	103

3. Ordering Information



4. Package

RFPCA331010EMMB101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

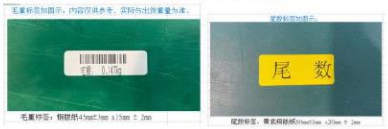
2. Put the foam in the outer box (as shown in Figure 2)

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