

RFPCA501010EMABY01

Specification

Part Series	Monopole Antenna Type
	RFPCA501010EMABY01
Version	V0.1

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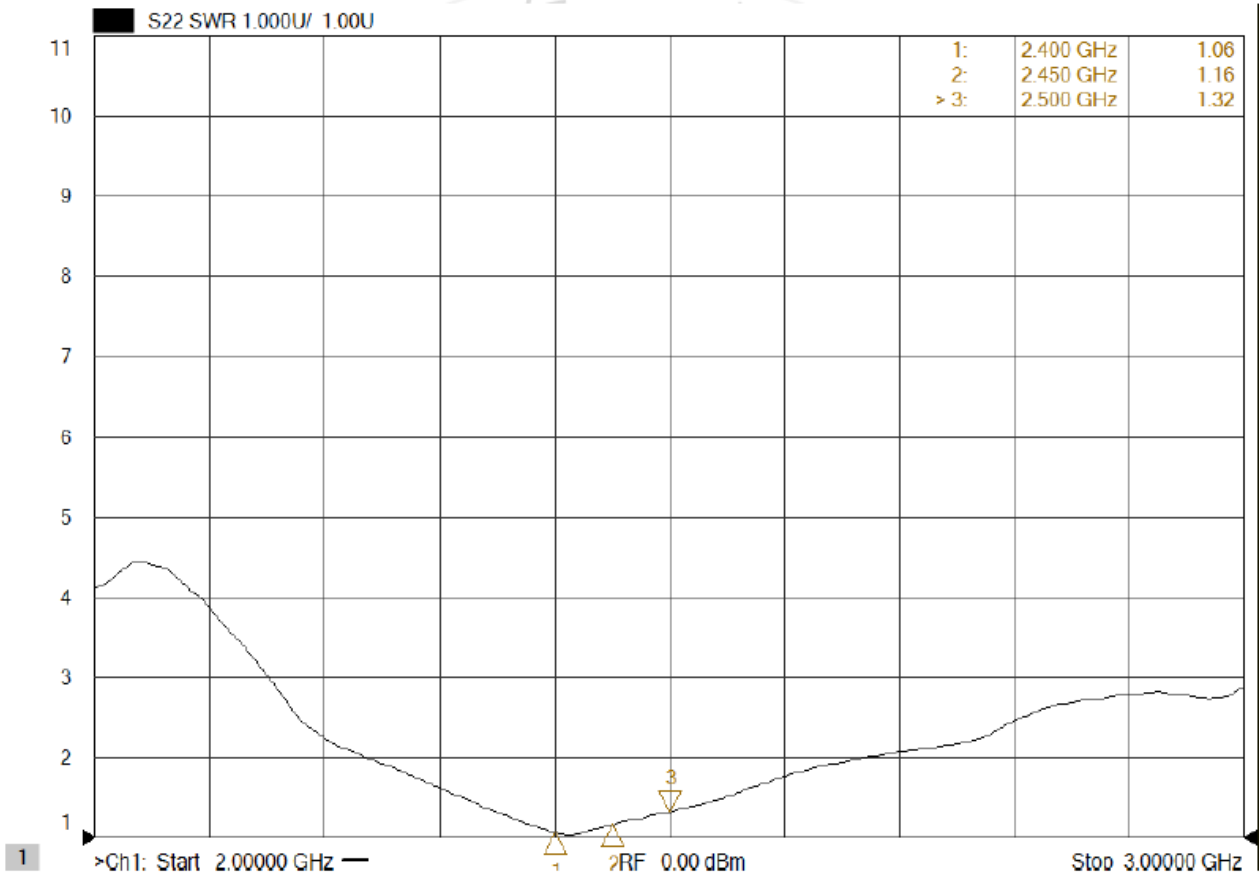
1. Performance

1.1 Antenna performance

Item	Specification
Frequency Range	2.4 ~ 2.5 GHz
Impedance	50 Ohm Nominal
VSWR	2.0 (Max)
Peak Gain	3.12 dBi
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	-20°C ~ +65°C

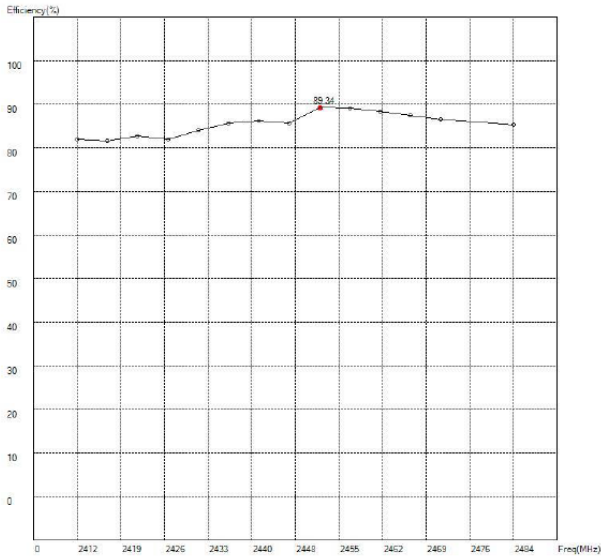
1.2 Antenna S-Parameter and matching factor

VSWR

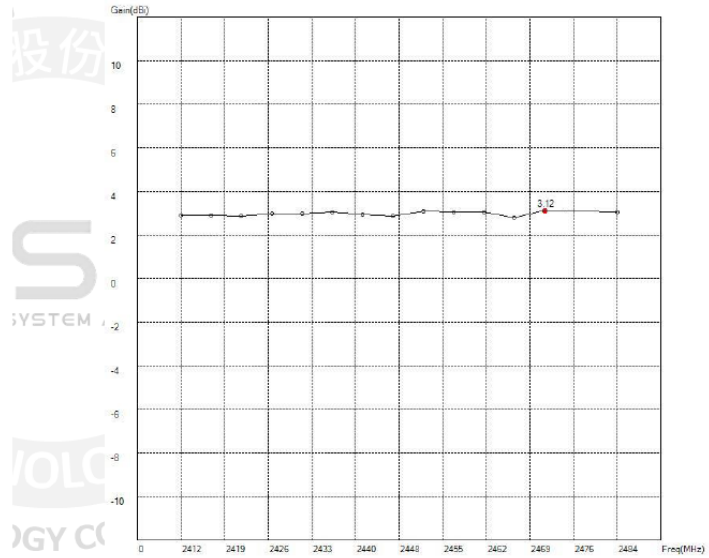


1.3 Antenna Efficiency & Peak Gain

2400-2500MHz



Maximum Efficiency at 2452 MHz : 89.34%



Peak Gain at 2472 MHz : 3.12dBi

Antenna Efficiency and Peak Gain

CH.	Freq(MHz)	Gain(dBi)	Efficiency(%)
1	2412	2.91	81.94
2	2417	2.92	81.70
3	2422	2.88	82.77
4	2427	2.98	81.97
5	2432	3.00	84.02
6	2437	3.06	85.65
7	2442	2.96	86.10
8	2447	2.88	85.63
9	2452	3.09	89.34
10	2457	3.05	89.00
11	2462	3.07	88.41
12	2467	2.80	87.41
13	2472	3.12	86.51
14	2484	3.05	85.26

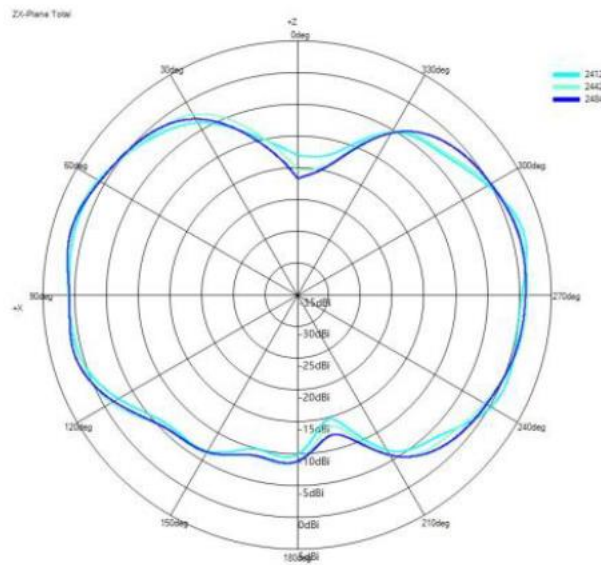
1.4 RADIATION PATTERN

2400-2500MHz

X-Z Plane

Phi=0.00deg

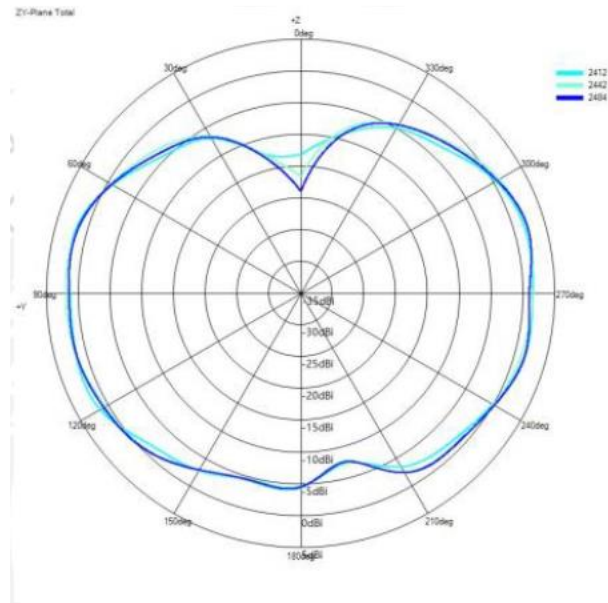
Gain . dB



Y-Z Plane

Phi=90.00deg

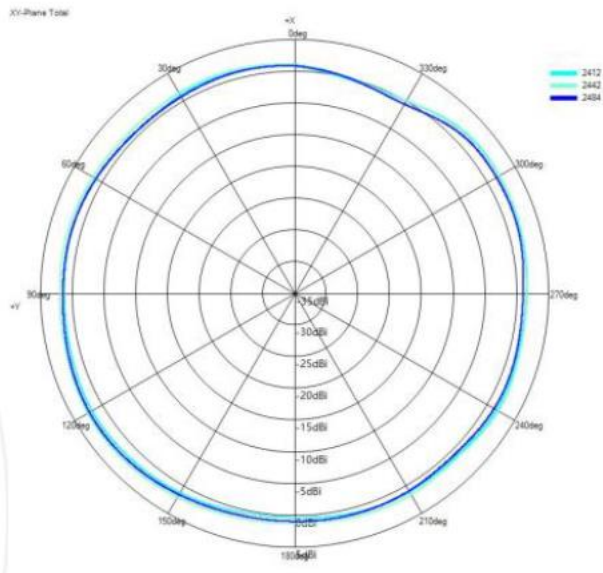
Gain . dB



X-Y Plane

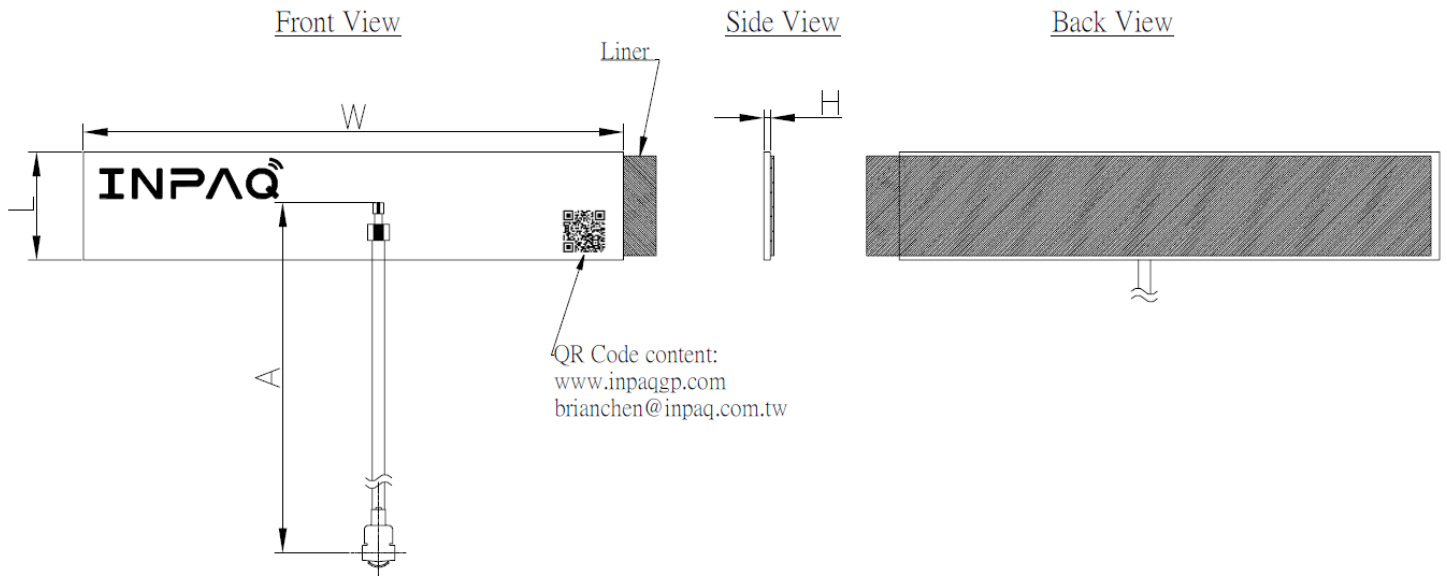
Theta=90.00deg

Gain . dB



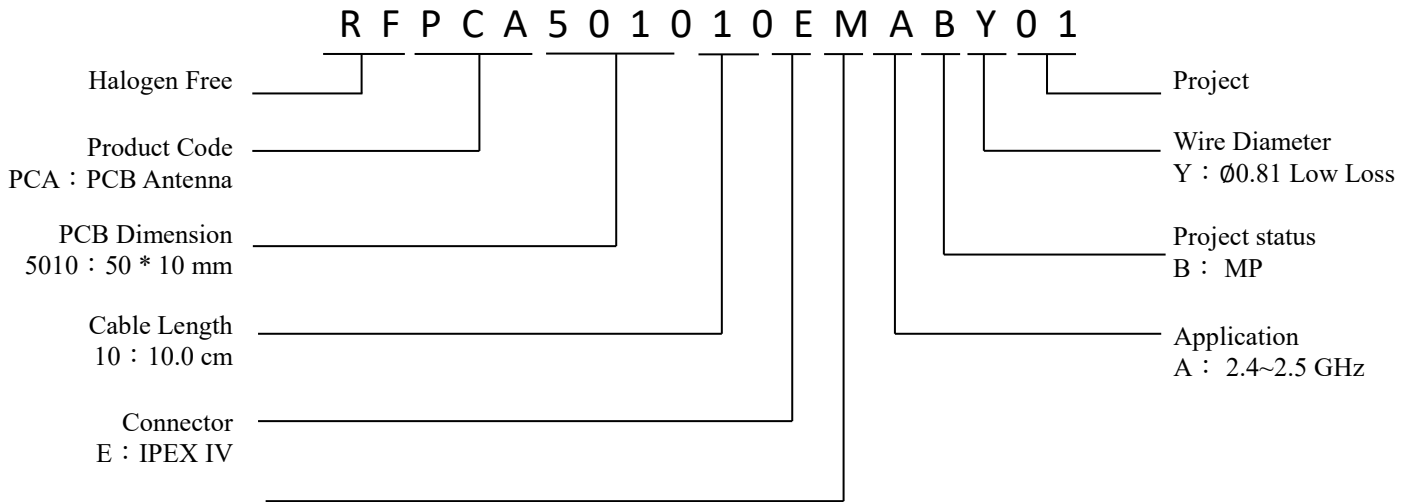
Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2412	1.96	-1.89	1.97	-1.19	2.19	1.26
2442	2.12	-1.63	2.11	-0.99	2.72	1.72
2484	2.10	-1.60	2.22	-1.06	2.42	1.23

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

RFPCA501010EMABY01 Package		PAGE: 1 之 1	
		Version : A0	
Revision date: 2024/11/15			
Packaged			
Figure 1			
<p>1 pcs product → Shielding bag → 1pcs/bag, 400/bag, ziplock bag needs to be sealed</p>			
Figure 2			
<p>pearl cotton → outer box → Put the pearl cotton in the outer box</p>			
Figure 3			
Packaging specifications :			
<ol style="list-style-type: none"> 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 Put the foam in the outer box (as shown in Figure 2) 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, The filling of mantissa boxes refers to this specification "Y-WI-09-281" 			
<p>Metal Antenna 370625 RFMTA3706251MAE301 75B1031604 10</p> <p>-WW0121-031922193619-200 75B1031604 0001</p>		<p>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 vards</p>	
Approval:	He Yaohui	Audit:	Zhao Wenbao
		Formulate:	Xu Ruonan

5. Version

Version	Date	Description
V01	2025.01.14	Initial release