

APPROVAL SHEET

Monopole Antenna

2.4 ~ 2.5/5.15 ~ 6.5 GHz Working Frequency

P/N: RFPCA501010EMMB101

Antenna Type : monopole

Customer : _____
Approval No. : _____
Issue Date : _____
Production : INPAQ TECHNOLOGY(SUZHOU)
Address : No. 81,Antai Road 1,Xishan Econmic Development Zone, Wuxi
City,Jiangsu Province ,China

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

品名：RFPCA501010EMMB101

History List

[illegible]

1.Explanation of part number :

RF	PCA	5010	10	E	M	M	B	1	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.: 5010 Length 50.0 mm, Width 10.0mm	2 digits for cable length e.g.: 10 Cable Length 10.0 cm	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: 5 GHz 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 M: LTE+Sub-6G+5G LTE : 617~960/1710~2690MHz Sub-6G : 3300~4200MHz 5G : 5150~7150MHz N79 : 4.4~5GHz N: NFC S: UWB(6~7GHz) T:LTE band M:LTE+Sub-6G +5G	B: MP T:During Test X: Pile Run	0:None 1:Ø0.81 3:Ø1.13 6:RG316 7:Ø1.37 8:RG178 Y: Ø0.81 Low Loss	01~99 series number

2.Electrical Specification :

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℃

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

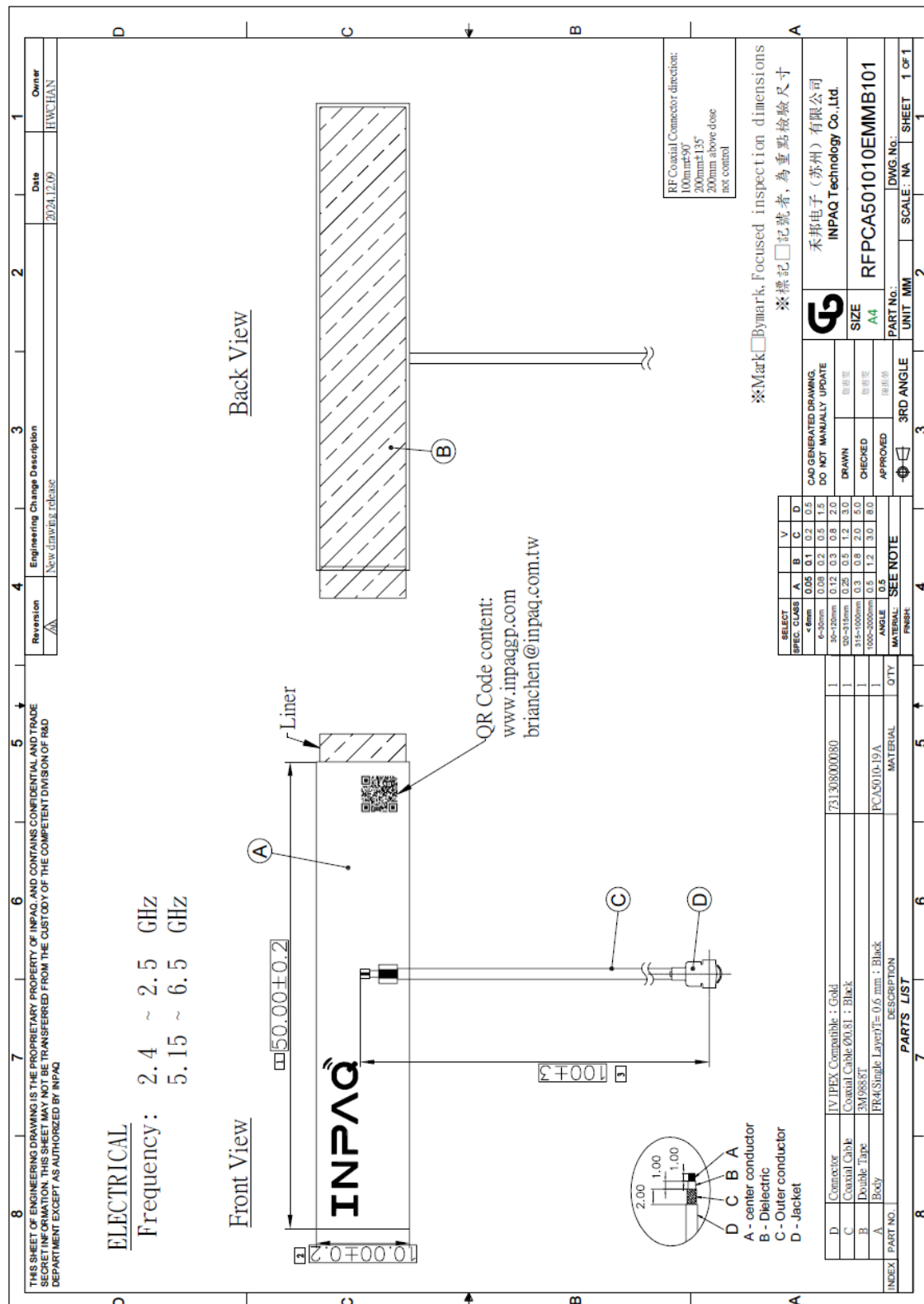
THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

DOCUMENT
NO.

SPEC REV.
A0

3. Antenna Drawing :



UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

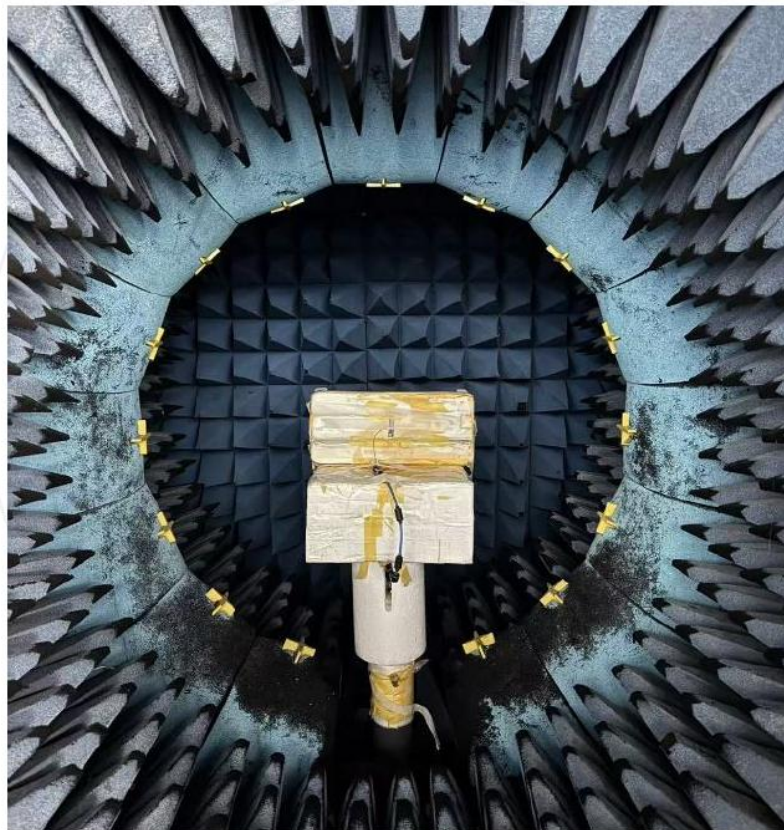
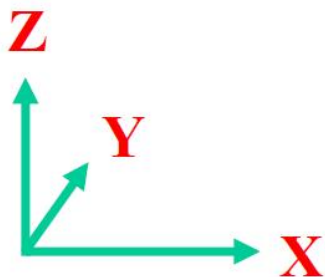
THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

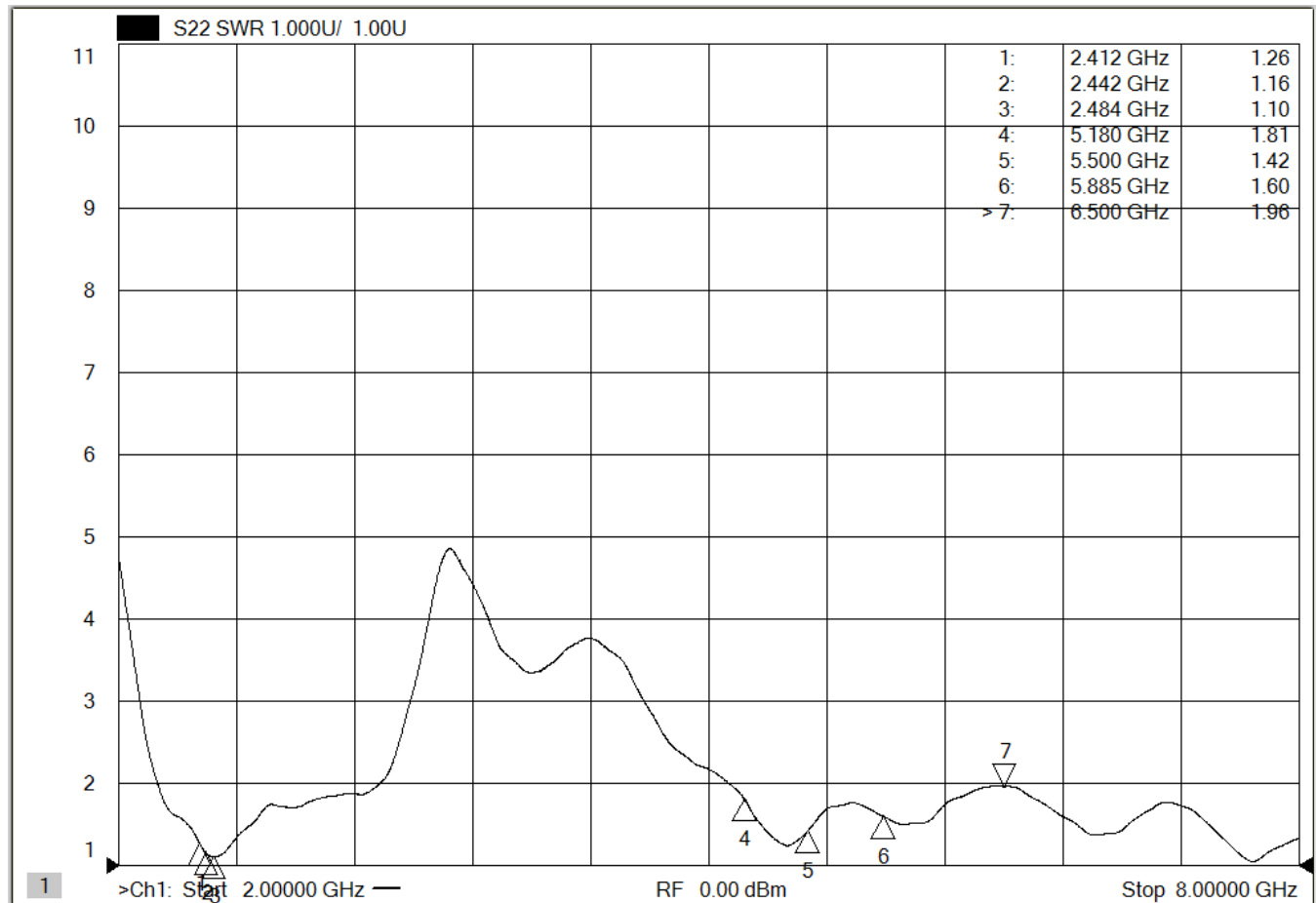
DOCUMENT
NO.SPEC REV.
A0

Test Report

ELECTRICAL CHARACTERISTICS



UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/A X.X=N/A X.XX=N/A ANGLES=N/A HOLEDIA=N/A			INPAQ TECHNOLOGY CO., LTD.
SCALE : N/A	UNIT : mm		
DRAWN BY : HW	CHECKED BY : HW	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DESIGNED BY : Lang	APPROVED BY : Brian		
TITLE : RFPCA501010EMMB101		DOCUMENT NO.	SPEC REV A0

ELECTRICAL CHARACTERISTICS**VSWR**

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A

**INPAQ TECHNOLOGY CO., LTD.**

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

DOCUMENT
NO.

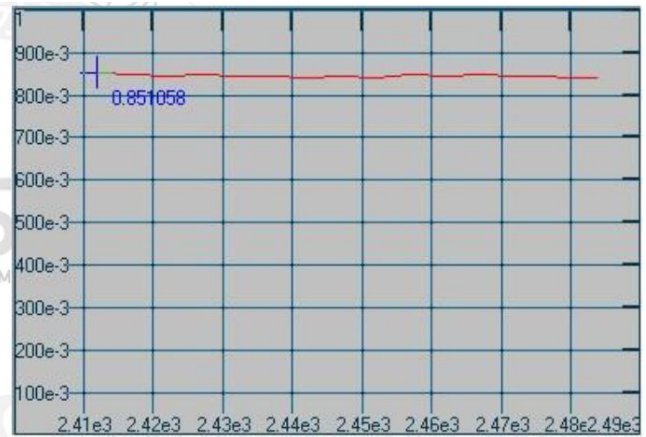
SPEC REV.
A0

Antenna Efficiency & Peak Gain

ANT_2.4G

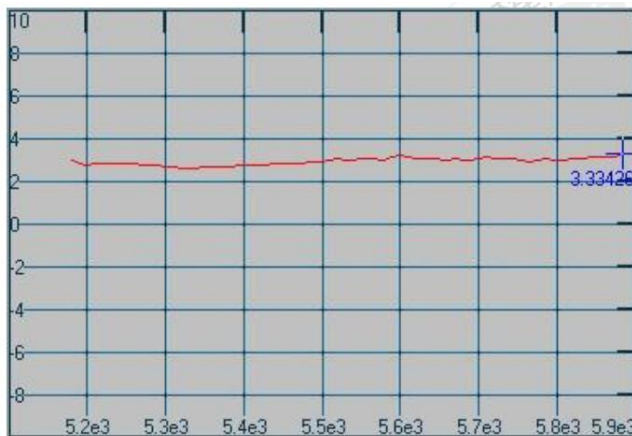


Maximum Peak Gain at 2457 MHz : 3.27 dBi

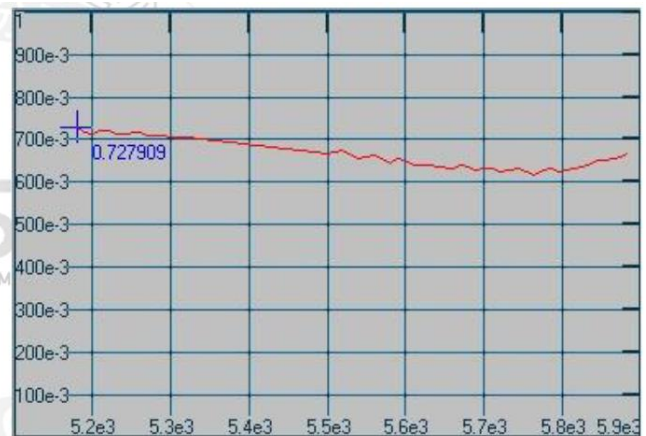


Maximum Efficiency at 2412 MHz : 85.11 %

ANT_5G



Maximum Peak Gain at 5885 MHz : 3.33 dBi



Maximum Efficiency at 5180 MHz : 72.79 %

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

TITLE : RFPCA501010EMMB101



INPAQ TECHNOLOGY CO., LTD.

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

DOCUMENT
NO.

SPEC REV.
A0

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

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

DOCUMENT
NO.

SPEC REV.
A0

ANT_5G

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)	Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5180	72.79	3.00	5500	66.57	2.96
5190	71.92	2.90	5510	67.15	3.03
5200	71.42	2.84	5520	67.55	3.08
5210	72.16	2.88	5530	66.49	3.04
5220	72.07	2.88	5540	65.47	3.01
5230	71.41	2.87	5550	66.15	3.11
5240	71.34	2.90	5560	66.28	3.15
5260	71.58	2.87	5580	64.34	3.07
5270	71.11	2.82	5590	65.48	3.17
5280	71.08	2.79	5600	65.11	3.29
5290	71.02	2.78	5610	63.98	3.21
5300	70.62	2.77	5620	64.13	3.15
5310	70.70	2.76	5630	64.16	3.13
5320	70.66	2.68	5640	63.78	3.09

Frequency(MHz)	Efficiency(%)	Peak gain(dBi)	Frequency(MHz)	Efficiency(%)	Peak gain(dBi)
5660	63.14	3.02	5745	63.17	3.08
5670	63.92	3.09	5755	62.34	3.04
5680	63.74	3.06	5765	61.69	2.98
5690	62.88	3.02	5775	62.80	3.01
5700	63.10	3.09	5785	63.32	3.08
5710	63.45	3.16	5795	62.45	3.04
5720	62.55	3.09	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

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A UNIT : mm
DRAWN BY : HW CHECKED BY : HW
DESIGNED BY : Lang APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

DOCUMENT
NO.

SPEC REV.
A0

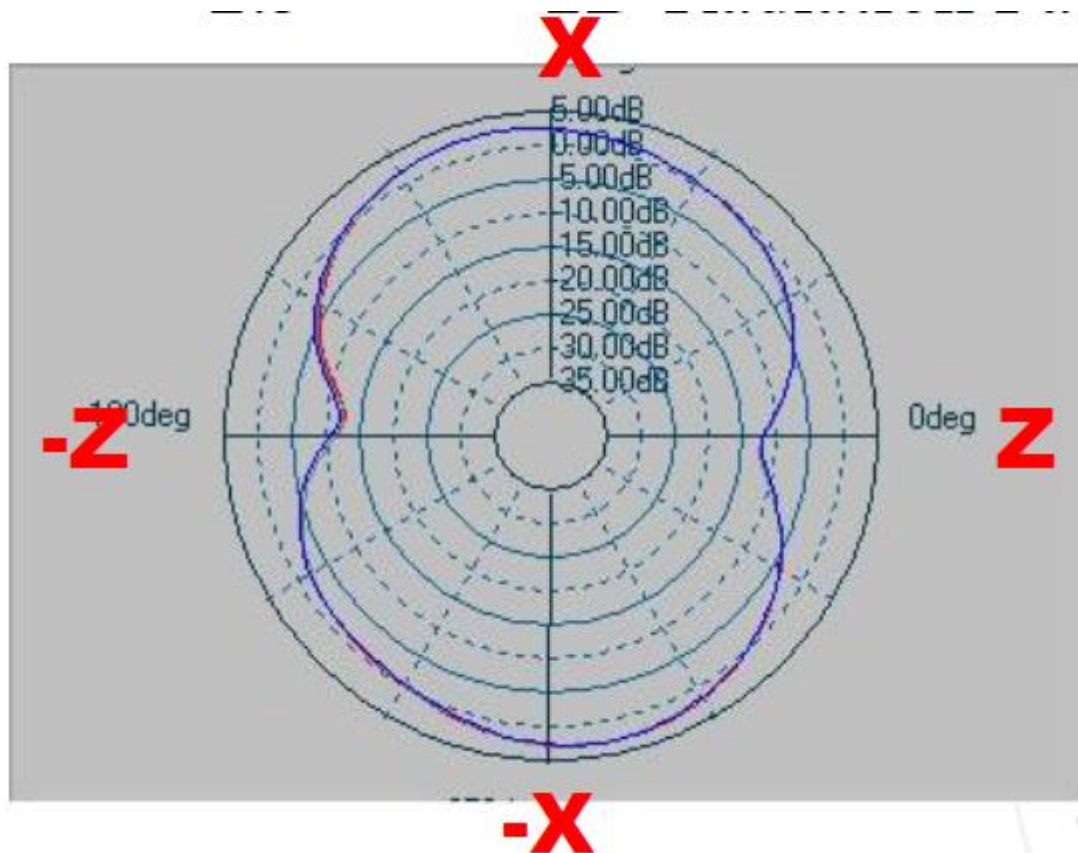
RADIATION PATTERN

ANT_2.4G

X-Z Plane

Phi=0.00deg

Gain . dB



UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

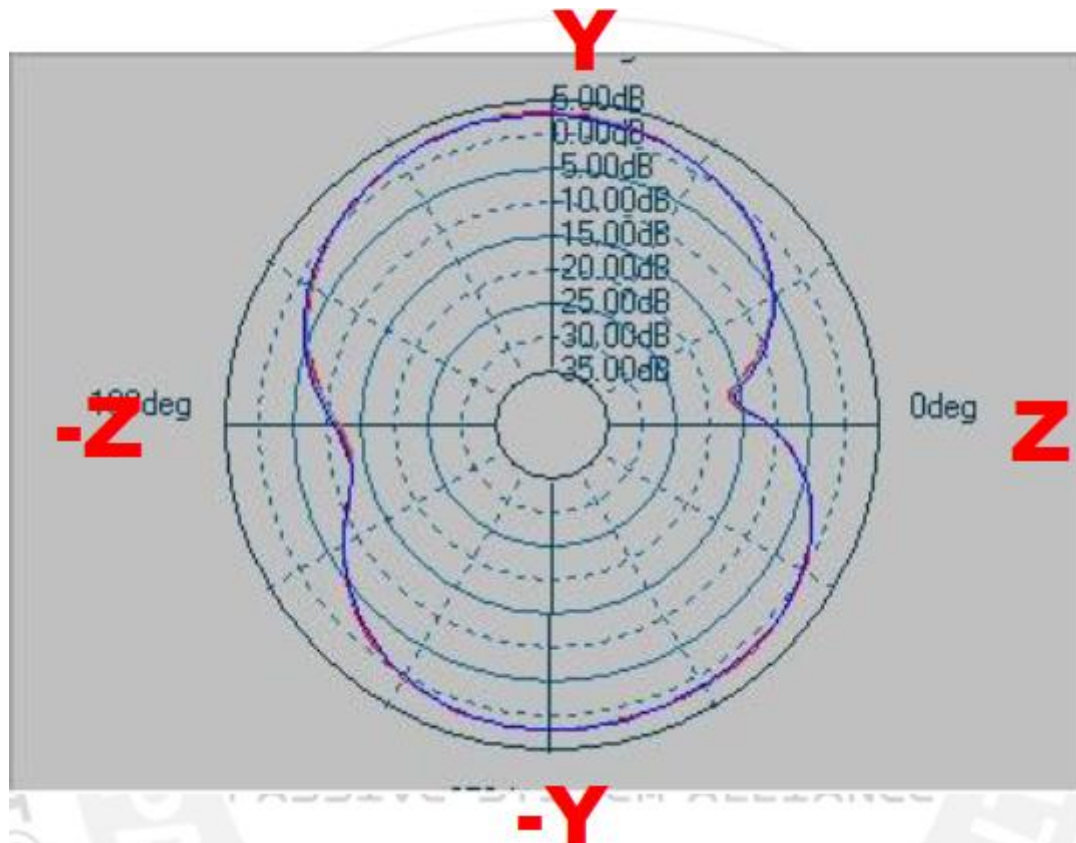
DOCUMENT
NO.

SPEC REV.
A0

Y-Z Plane

Phi=90.00deg

Gain . dB



UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

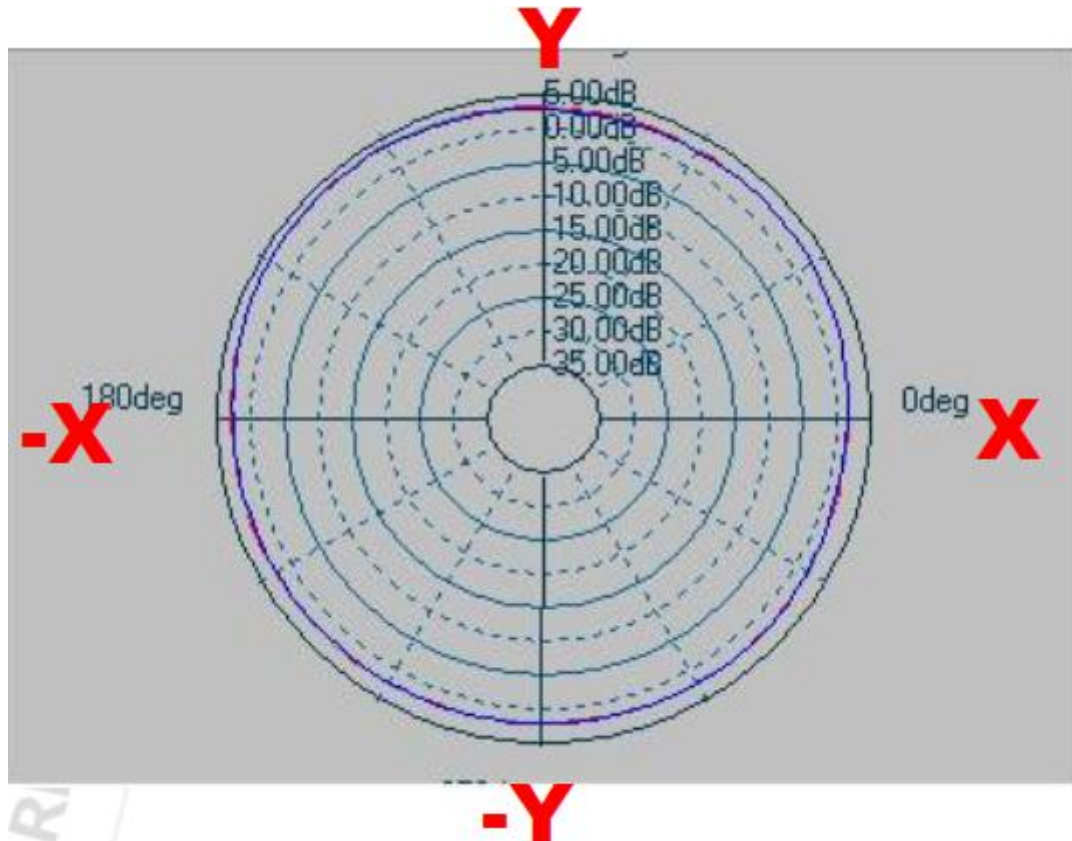
DOCUMENT
NO.

SPEC REV.
A0

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

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

DOCUMENT
NO.

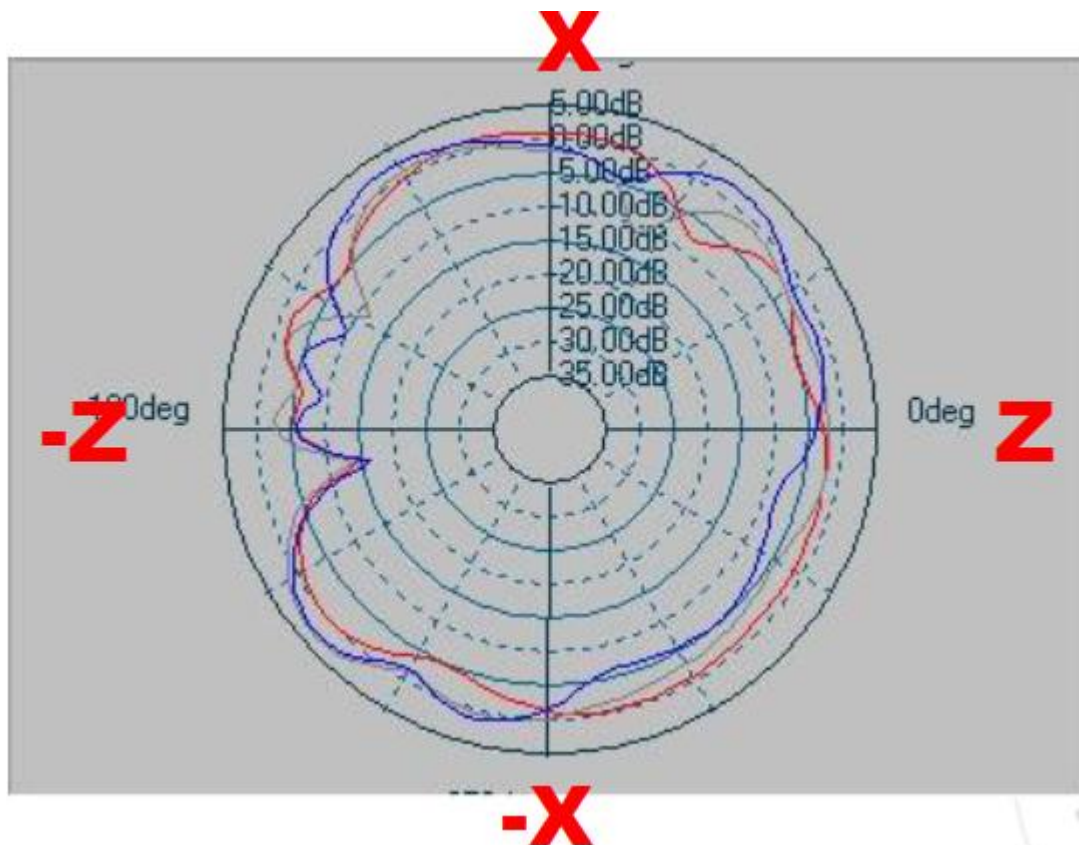
SPEC REV.
A0

ANT_5G

X-Z Plane

Phi=0.00deg

Gain . dB



UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

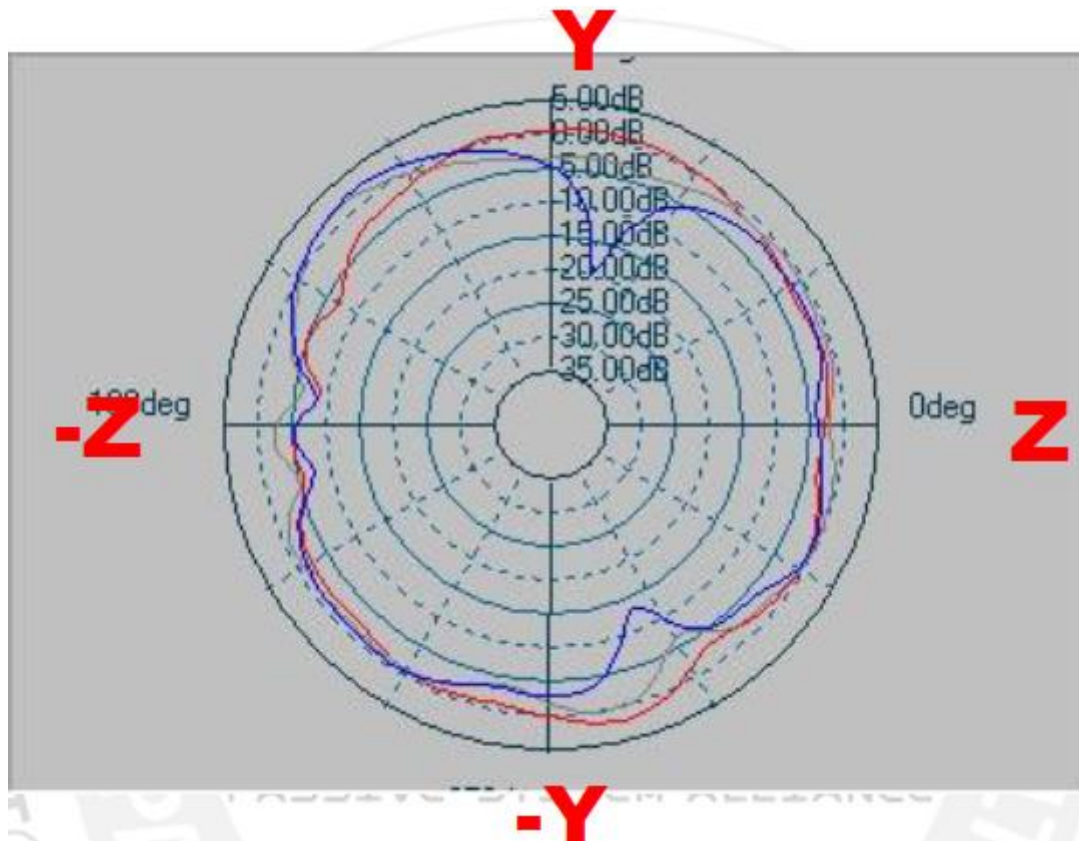
DOCUMENT
NO.

SPEC REV.
A0

Y-Z Plane

Phi=90.00deg

Gain . dB



UNLESS OTHER SPECIFIED TOLERANCES ON :
X= N/A X.X= N/A X.XX= N/A
ANGLES= N/A HOLEDIA= N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

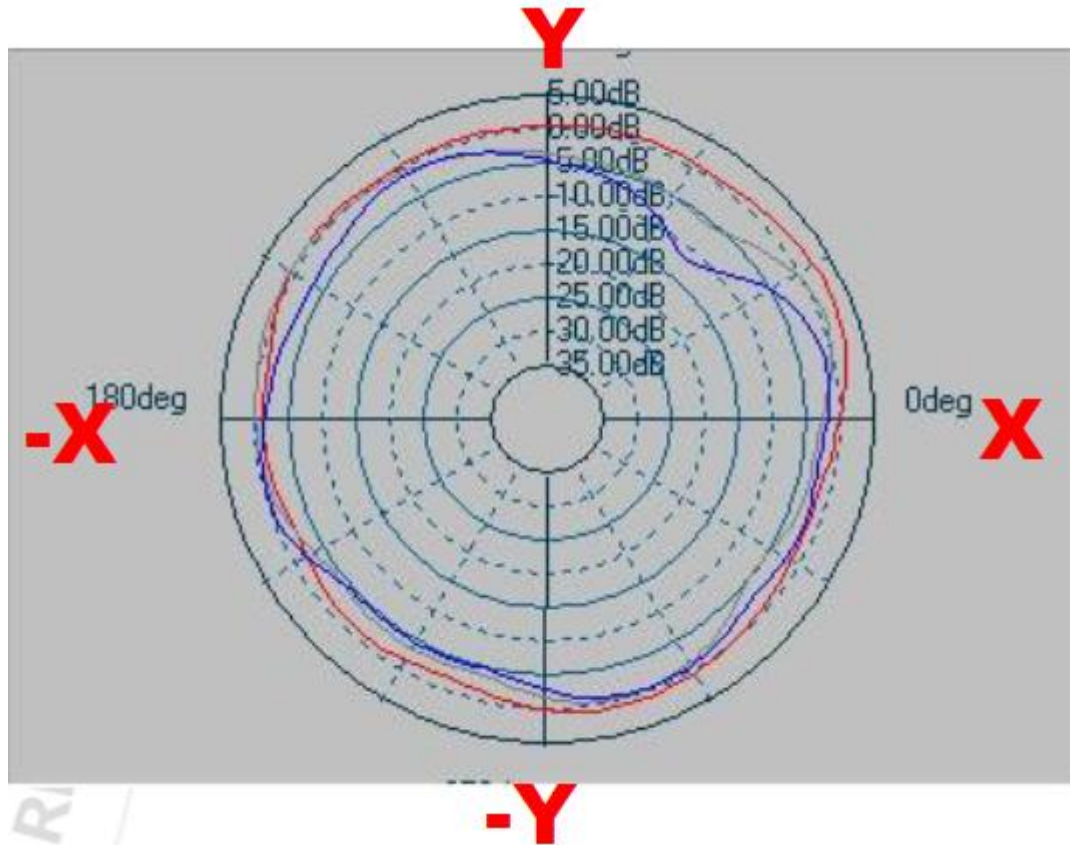
DOCUMENT
NO.

SPEC REV.
A0

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]
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

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : HW

CHECKED BY : HW

DESIGNED BY : Lang

APPROVED BY : Brian

THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF
INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED
OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF
APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA501010EMMB101

DOCUMENT
NO.

SPEC REV.
A0