APPROVAL SHEET

Dipole Antenna

2.4 ~ 2.5/5.15 ~ 6.5 GHz Working Frequency

P/N: RFPCA331010EMMB101

Antenna Type : Dipole

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：**RFPCA331010EMMB101** **History List**

版本 REV.	修訂者 EDITOR	修訂頁次 PAGE	修訂內容 ITEMS OF CHANGE	申請日期 DATE	生效日期 VALID DATE	ECN 編號 ECN NO.
A0	Huiwenchan	ALL	Temporary Release	2024/12/20	According to the date of PLM Release	N/A

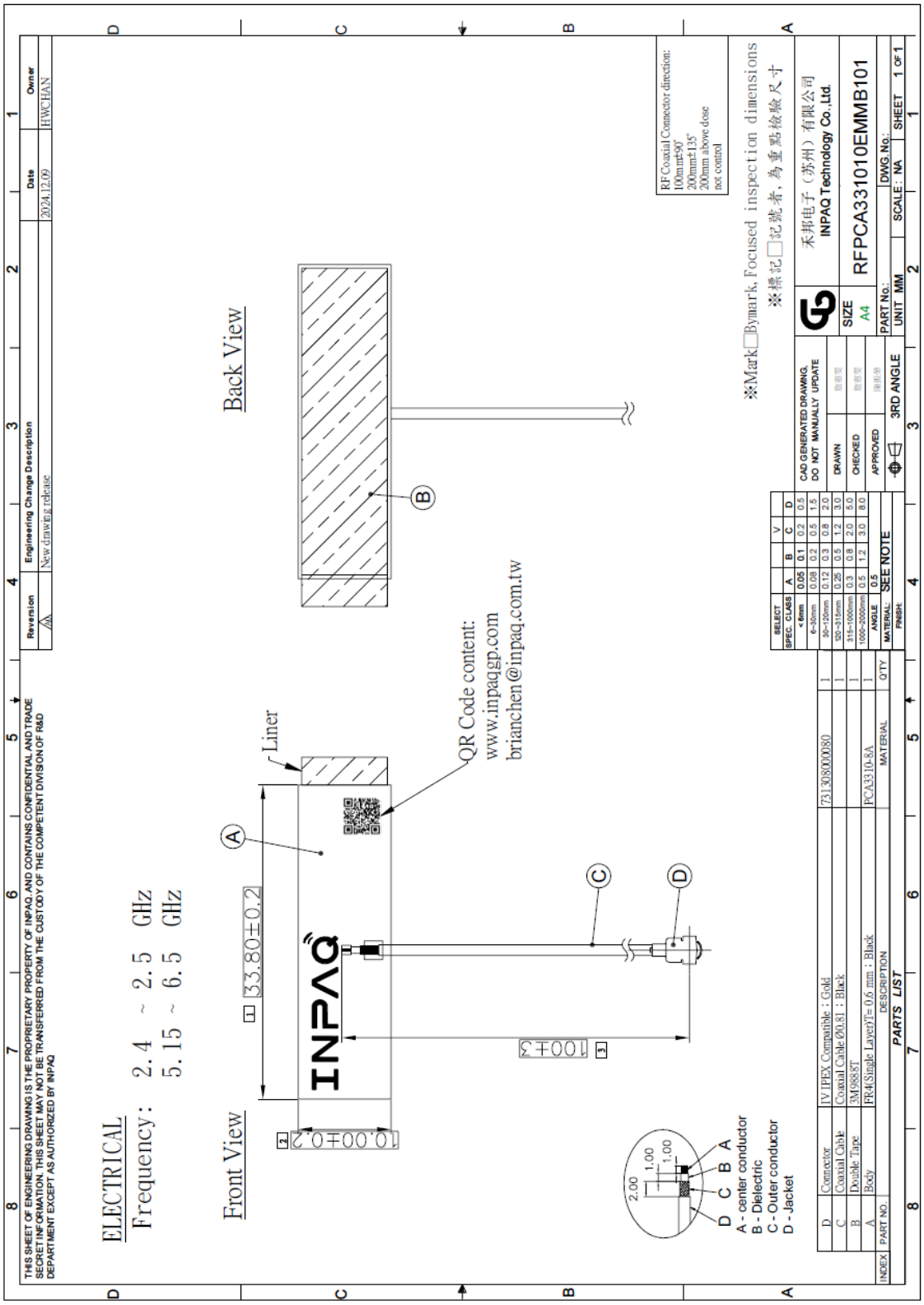
1.Explanation of part number：

RF	PCA	3310	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.: 3310 Length 33.8 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 @ 3.11 dBi 5.15 ~ 6.5 GHz@3.43 dBi
Radiation	Omni-directional
Polarization	Linear Vertical
Admitted Power	1W
Operation Temperature	－20℃ ～ ＋65℃

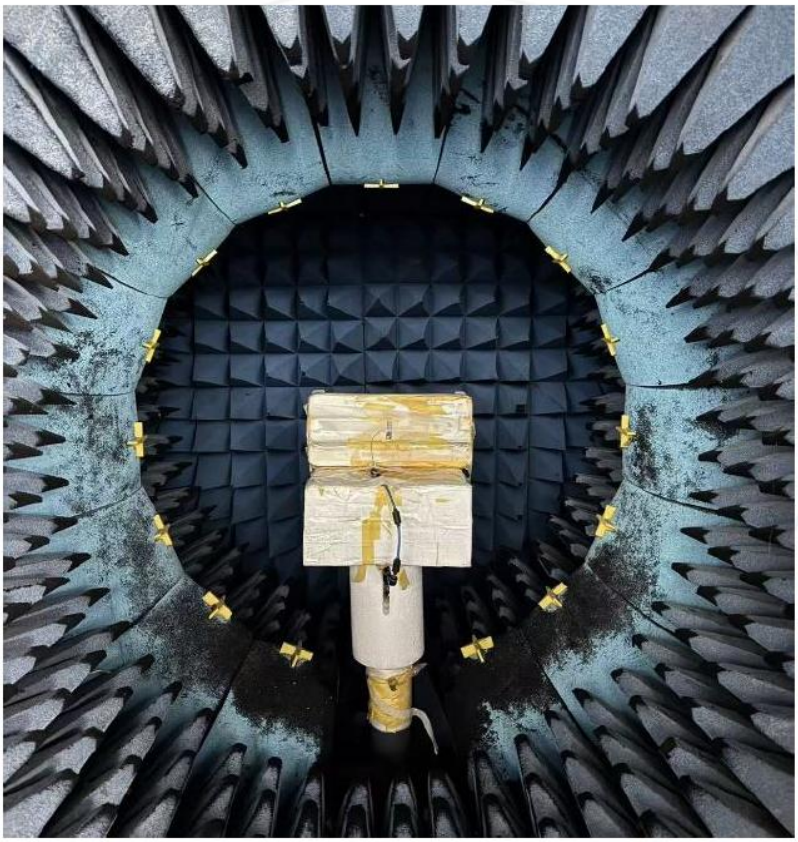
3. Antenna Drawing：

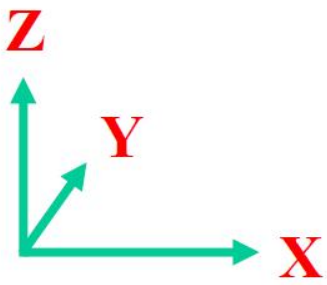


UNLESS OTHER SPECIFIED TOLERANCES ON： X＝N/A X.X＝N/A X.XX＝N/A ANGLES＝N/A HOLEDIA＝N/A	INPAQ TECHNOLOGY CO., LTD.
SCALE：N/A / UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY：HW / CHECKED BY：HW	
DESIGNED BY：Lang / APPROVED BY：Brian	
TITLE：RFPCA331010EMMB101	DOCUMENT NO. / SPEC REV. A0

Test Report

ELECTRICAL CHARACTERISTICS

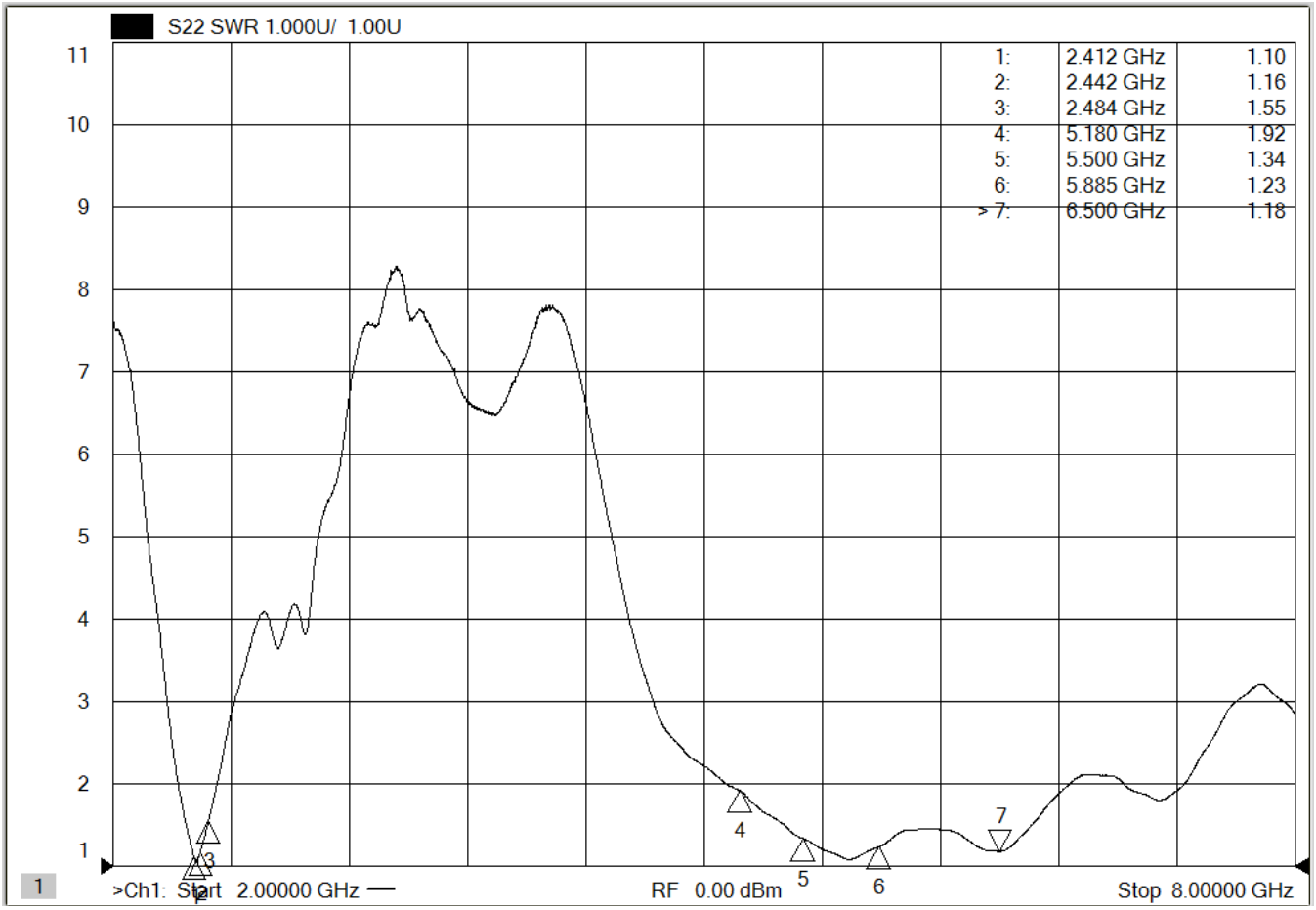




UNLESS OTHER SPECIFIED TOLERANCES ON： X＝N/A X.X＝N/A X.XX＝N/A ANGLES＝N/A HOLEDIA＝N/A			INPAQ TECHNOLOGY CO., LTD.
SCALE：N/A	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY：HW	CHECKED BY：HW		
DESIGNED BY：Lang	APPROVED BY：Brian		
TITLE：RFPCA331010EMMB101		DOCUMENT NO.	SPEC REV. A0

ELECTRICAL CHARACTERISTICS

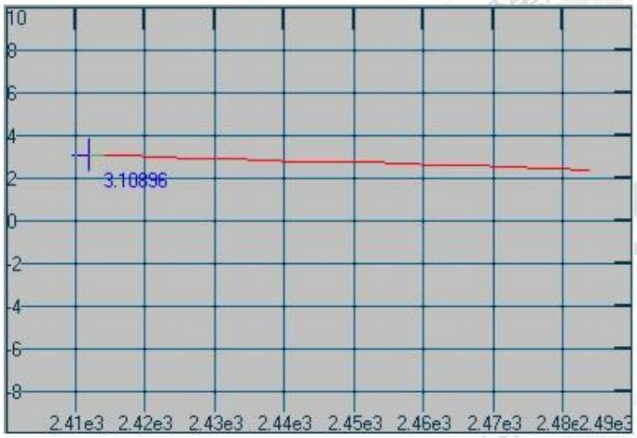
VSWR



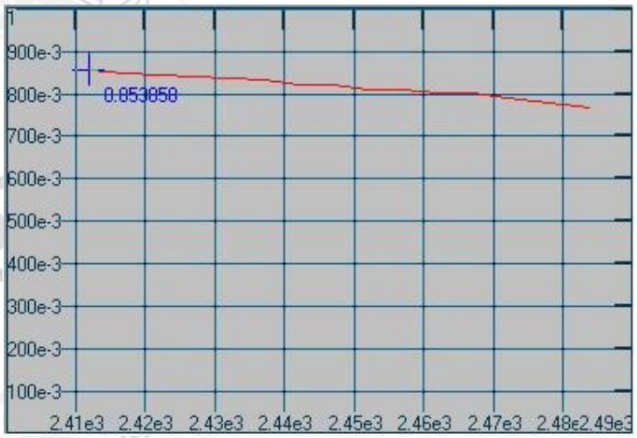
UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/A X.X=N/A X.XX=N/A ANGLES=N/A HOLEDIA=N/A		INPAQ TECHNOLOGY CO., LTD.
SCALE : N/A	UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY : HW	CHECKED BY : HW	
DESIGNED BY : Lang	APPROVED BY : Brian	
TITLE : RFPCA331010EMMB101	DOCUMENT NO.	SPEC REV. A0

Antenna Efficiency & Peak Gain

ANT_2.4G

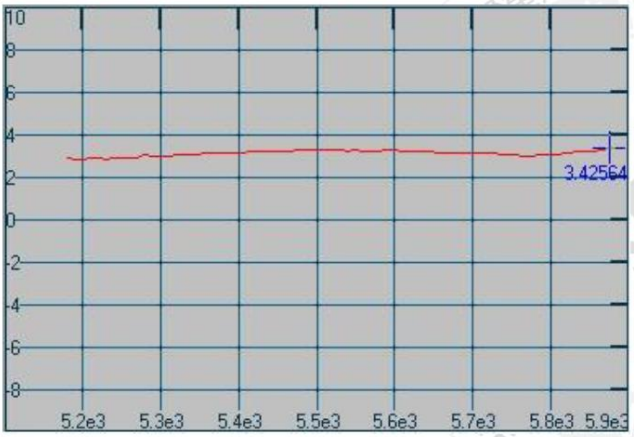


Maximum Peak Gain at 2412 MHz : 3.11 dBi

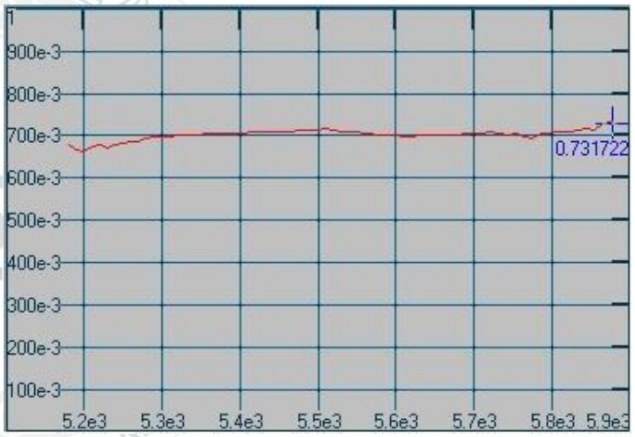


Maximum Efficiency at 2412 MHz : 85.39 %

ANT_5G



Maximum Peak Gain at 5885 MHz : 3.43 dBi



Maximum Efficiency at 5875 MHz : 73.17 %

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	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	
DRAWN BY : HW	CHECKED BY : HW		
DESIGNED BY : Lang	APPROVED BY : Brian		
TITLE : RFPCA331010EMMB101		DOCUMENT NO.	SPEC REV. A0

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

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

TITLE：RFPCA331010EMMB101

DOCUMENT NO.

SPEC REV. A0

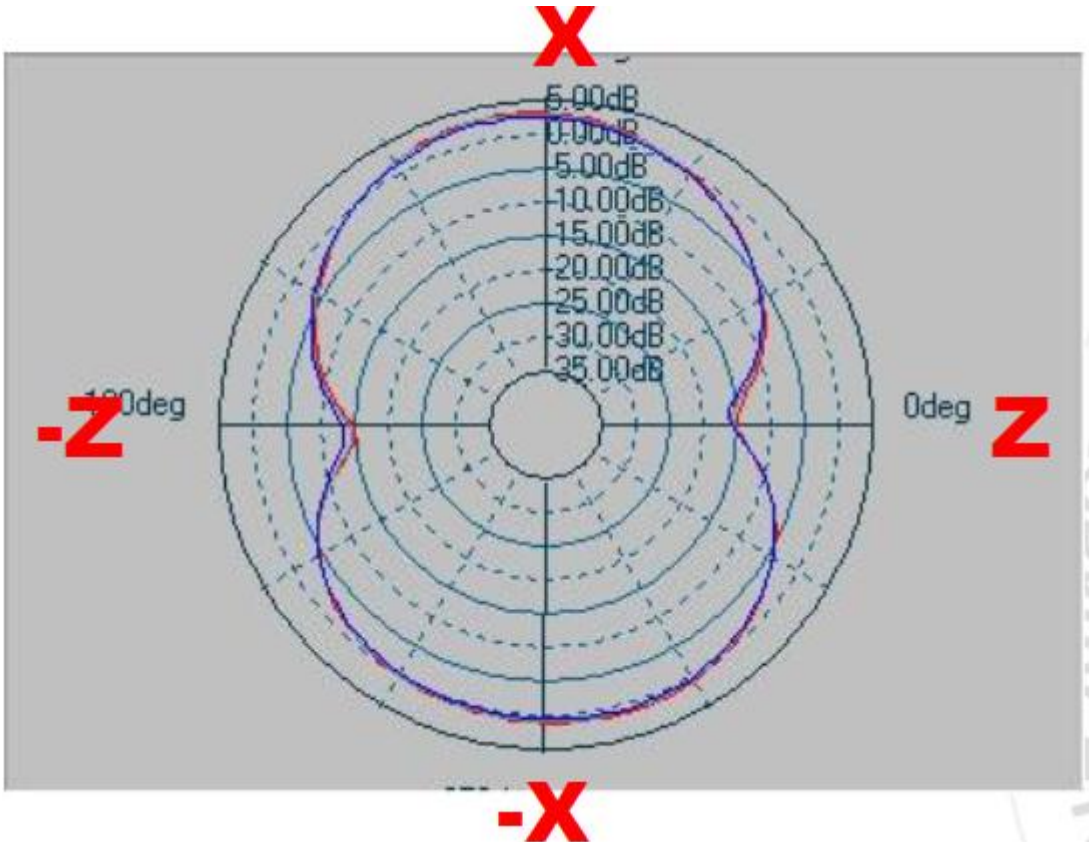
RADIATION PATTERN

ANT_2.4G

X-Z Plane

Phi=0.00deg

Gain . dB

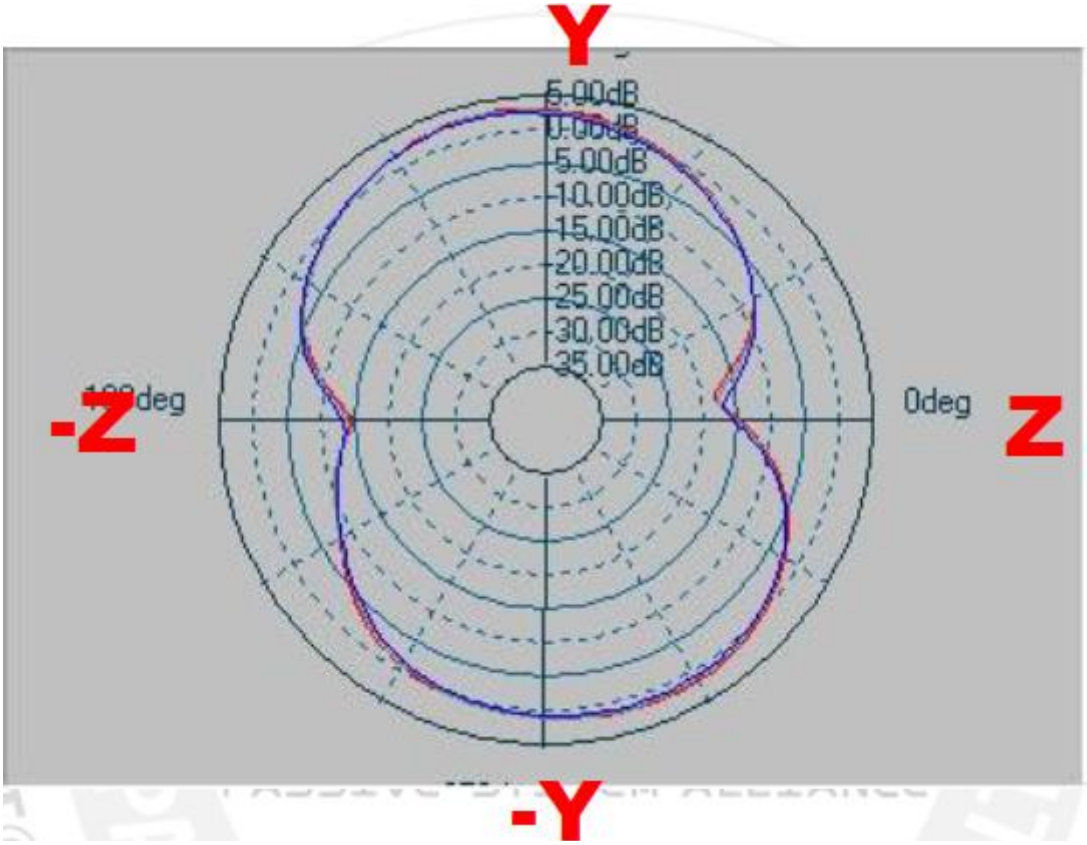


UNLESS OTHER SPECIFIED TOLERANCES ON： X＝N/A X.X＝N/A X.XX＝N/A ANGLES＝N/A HOLEDIA＝N/A			INPAQ TECHNOLOGY CO., LTD.
SCALE：N/A	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY：HW	CHECKED BY：HW		
DESIGNED BY：Lang	APPROVED BY：Brian		
TITLE：RFPCA331010EMMB101		DOCUMENT NO.	SPEC REV. A0

Y-Z Plane

Phi=90.00deg

Gain . dB

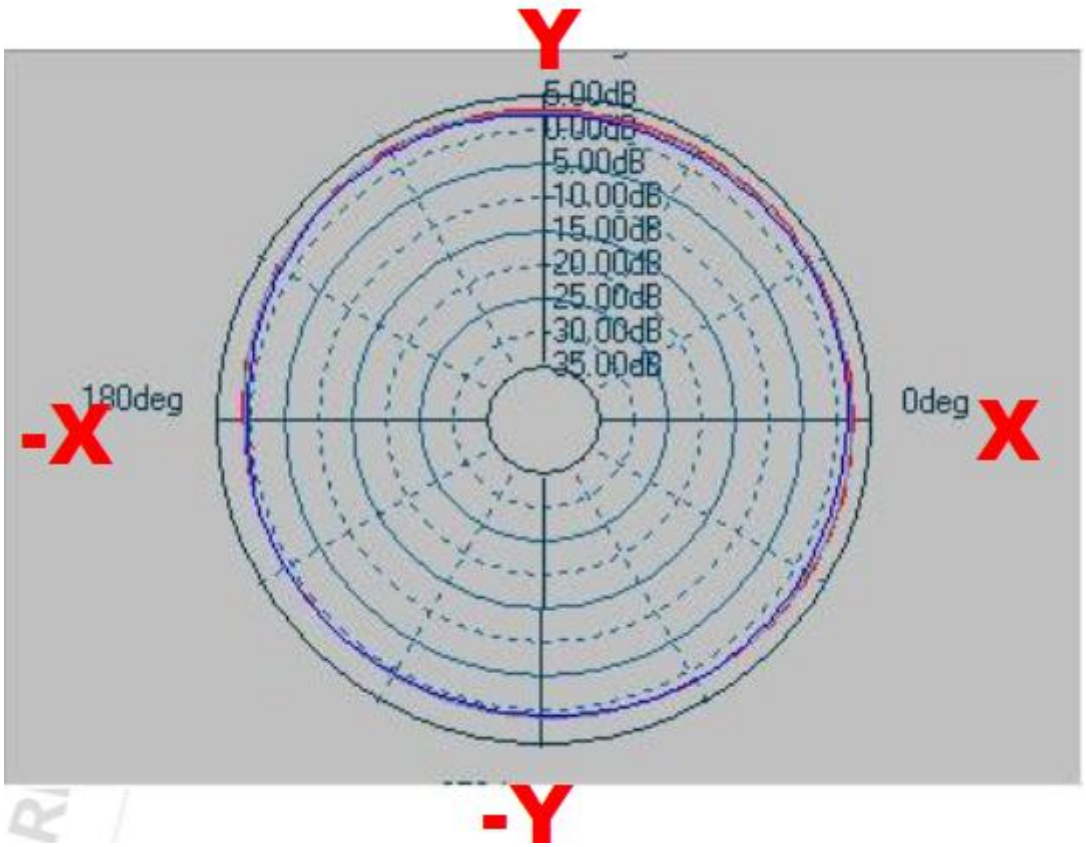


UNLESS OTHER SPECIFIED TOLERANCES ON： X＝N/A X.X＝N/A X.XX＝N/A ANGLES＝N/A HOLEDIA＝N/A			INPAQ TECHNOLOGY CO., LTD.
SCALE：N/A	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY：HW	CHECKED BY：HW		
DESIGNED BY：Lang	APPROVED BY：Brian		
TITLE：RFPCA331010EMMB101		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	2.70	-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

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

TITLE : RFPCA331010EMMB101

DOCUMENT NO.

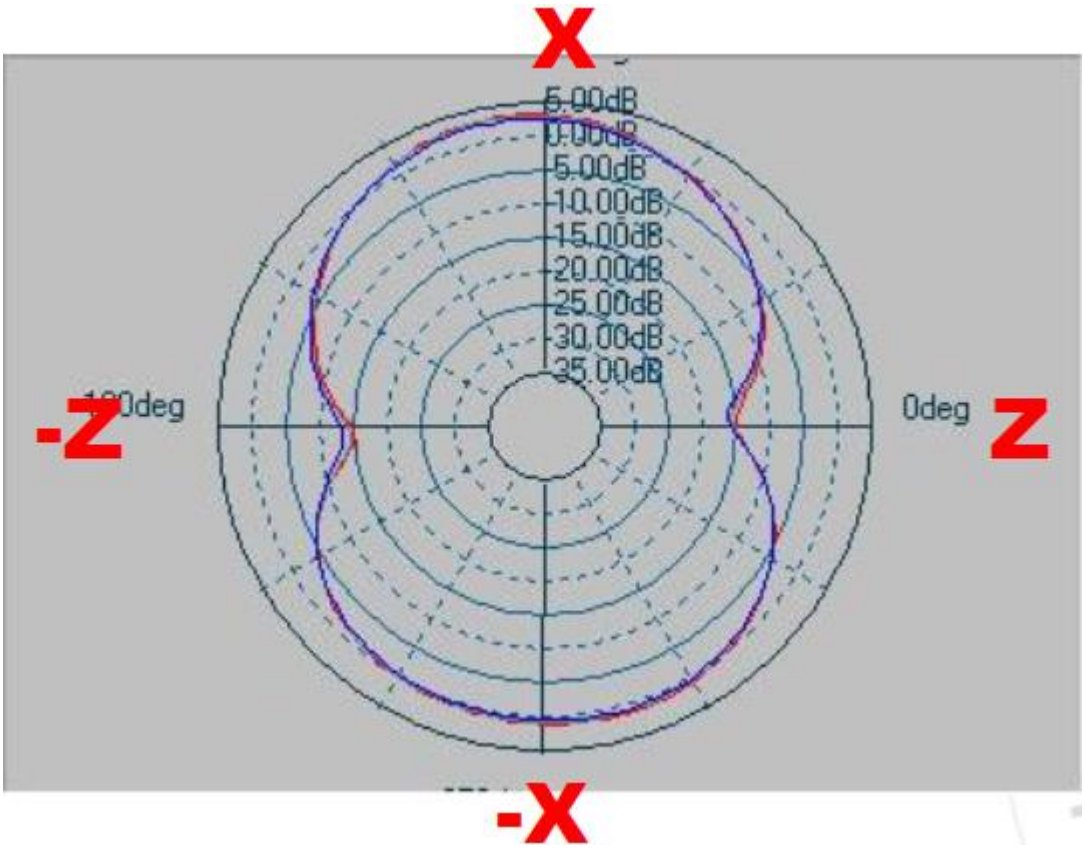
SPEC REV. A0

ANT_5G

X-Z Plane

Phi=0.00deg

Gain . dB

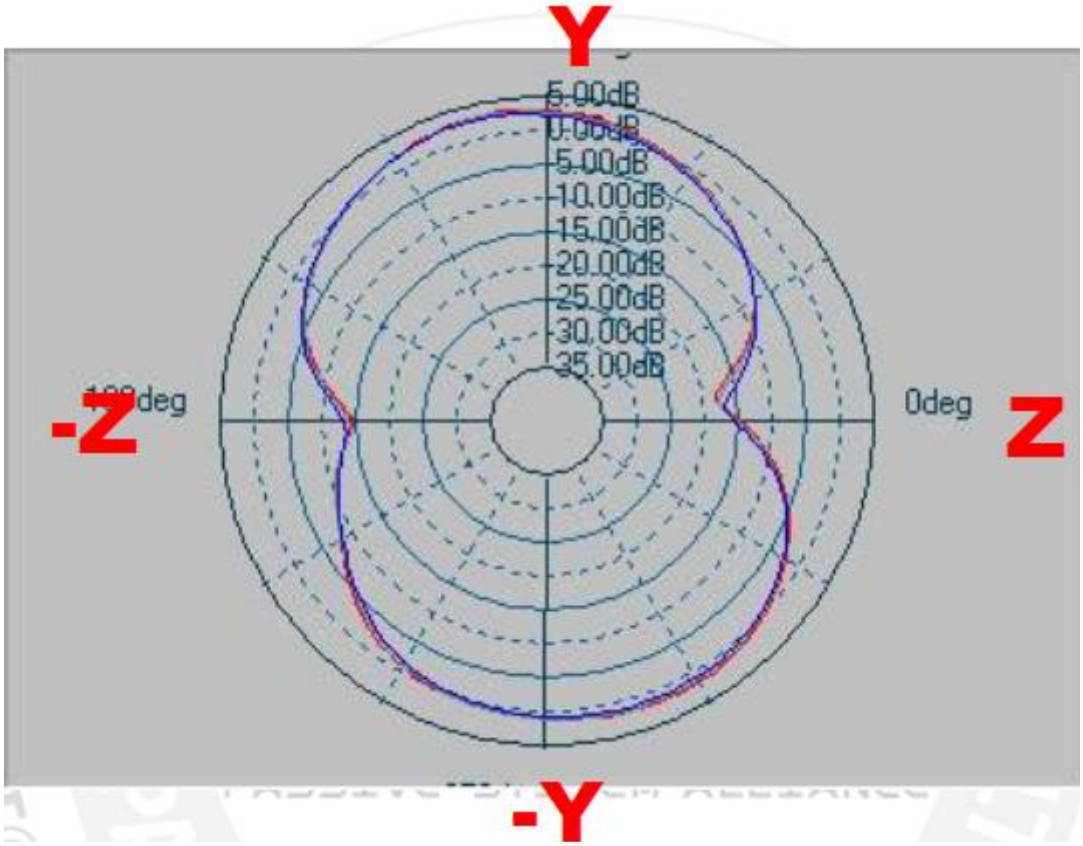


UNLESS OTHER SPECIFIED TOLERANCES ON： X＝N/A X.X＝N/A X.XX＝N/A ANGLES＝N/A HOLEDIA＝N/A			INPAQ TECHNOLOGY CO., LTD.
SCALE：N/A	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY：HW	CHECKED BY：HW		
DESIGNED BY：Lang	APPROVED BY：Brian		
TITLE：RFPCA331010EMMB101		DOCUMENT NO.	SPEC REV. A0

Y-Z Plane

Phi=90.00deg

Gain . dB

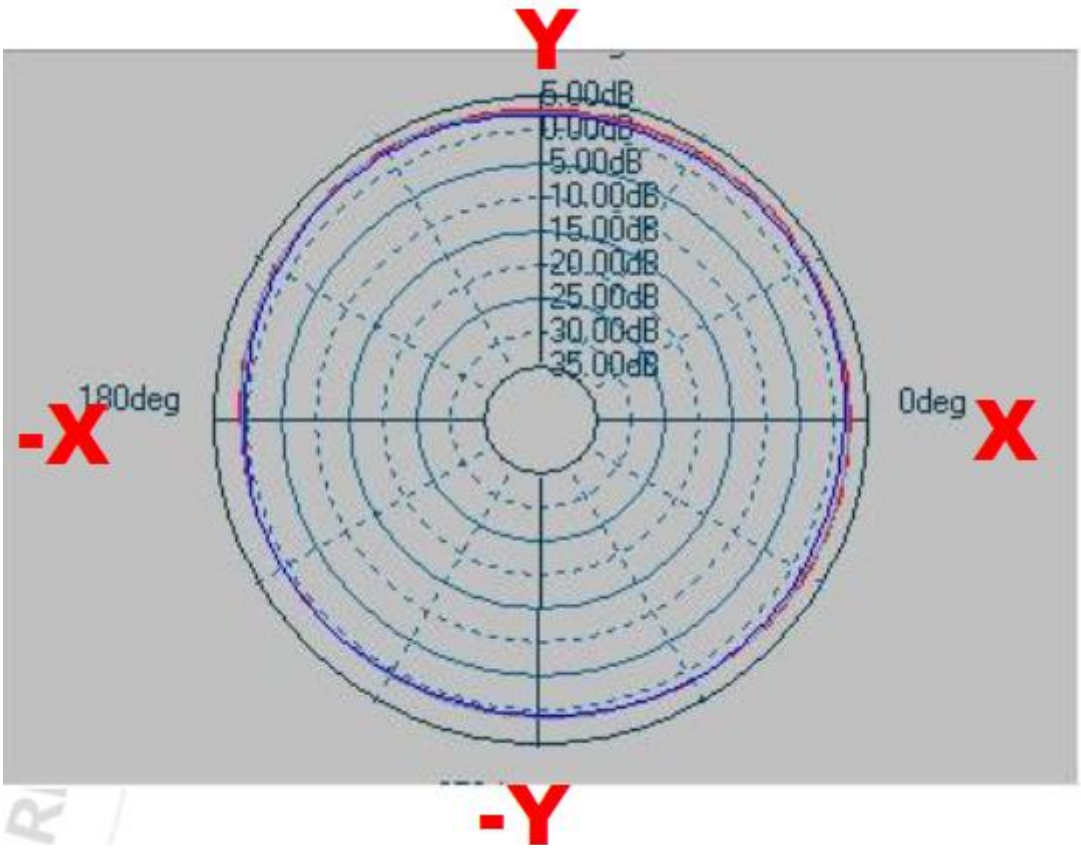


UNLESS OTHER SPECIFIED TOLERANCES ON： X＝N/A X.X＝N/A X.XX＝N/A ANGLES＝N/A HOLEDIA＝N/A		INPAQ TECHNOLOGY CO., LTD.	
SCALE：N/A	UNIT：mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY：HW	CHECKED BY：HW		
DESIGNED BY：Lang	APPROVED BY：Brian		
TITLE：RFPCA331010EMMB101		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]
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