

APPROVAL SHEET

PCB Antenna

2.4~2.5GHz Working Frequency

Halogens Free Product

P/N: RFPCA352027IMAB401

Customer : TYMPHANY

Customer 's Part No. :

Production :

Address :

品名：RFPCA352027IMAB401

1. Explanation of part number :

RF	PCA	3520	27	I	M	A	B	4	01
Type Code	Product Code	Dipole Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
RF Device	PCA Antenna	Per 2 digits of length, width e.g.: 3520 Length 35.0, Width 20.0mm	2 digits for cable length e.g.: 27 Cable Length:27cm	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 N: NFC T:LTE band W: WCDMA band	B: MP T:During Test X: Pile Run	0:None 1:Ø0.81 3:Ø1.13 4: Ø1.13 Low Loss 6:RG316 7:Ø1.37 8:RG178	01~99 series number

2. Electrical Specification :

Item	Specification
Working Frequency Range	2.4 ~ 2.5 GHz (Note-1)
Return Loss	-10dB(Max)
VSWR	2 max.
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50Ω
Operation Temperature	-20°C ~ +65°C

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 : 劉采璇

CHECKED BY : 詹惠雯

DESIGNED BY : 黃泰進

APPROVED BY : 陳振榮

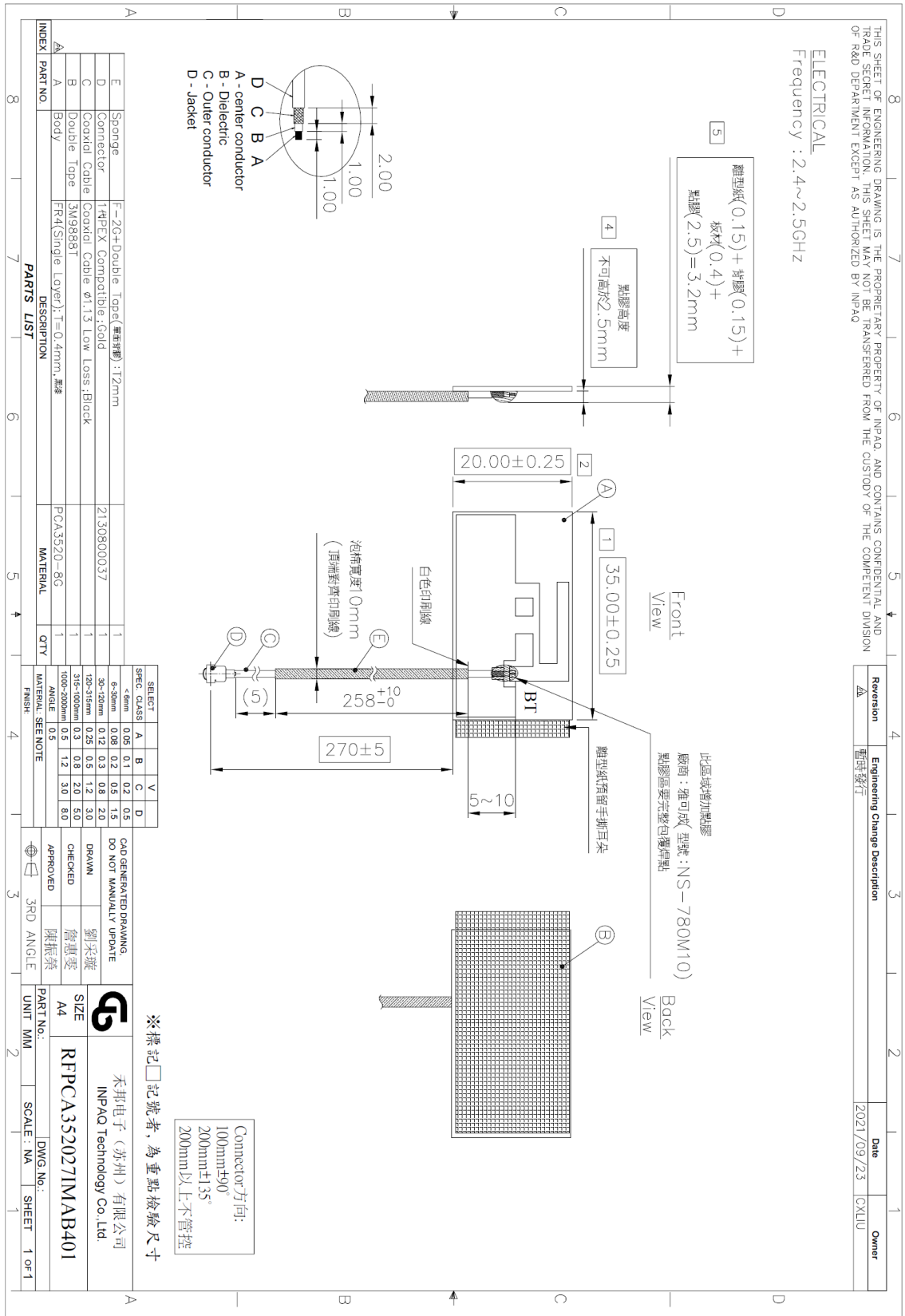
THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE : RFPCA352027IMAB401

DOCUMENT NO.

SPEC REV. P0

3. Antenna Drawing :



THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF INPAQ, AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY INPAQ

ELECTRICAL
Frequency : 2.4~2.5GHZ

Revision	Engineering Change Description	Date	Owner
Δ	暫行發行	2021/09/23	CXLIU

INDEX	PART NO.	DESCRIPTION	MATERIAL	QTY
E	Sponge	F=2G±Double Tape(雙面膠帶):T=2mm		1
D	Connector	14PFX, Compatible:Gold	2130800037	1
C	Coaxial Cable	Coaxial Cable φ1.13 Low Loss /Black		1
B	Double Tape	FR4(Single Layer):T=0.4mm, 藍膠	PCA3520-8G	1
A	Body			1

SELECT	SPEC. CLASS	A	B	C	D
6-30mm	0.05	0.1	0.2	0.5	
30-120mm	0.08	0.2	0.5	1.5	
120-180mm	0.12	0.3	0.8	2.0	
180-240mm	0.25	0.5	1.2	3.0	
240-300mm	0.5	1.2	3.0	8.0	
300-400mm	0.5	1.2	3.0	8.0	
ANGLE	0.5				

3RD ANGLE

QAO GENERATED DRAWING DO NOT MANUALLY UPDATE	劉采璇
DRAWN	詹惠雯
CHECKED	陳振榮
APPROVED	
PART No.:	RFPCA3520271MAB401
UNIT	MM
SCALE	NA
DWG. No.:	
SHEET	1 OF 1

※標記□記號者, 為重點檢驗尺寸
Connector方向:
100mm±90°
200mm±35°
200mm以上不管控

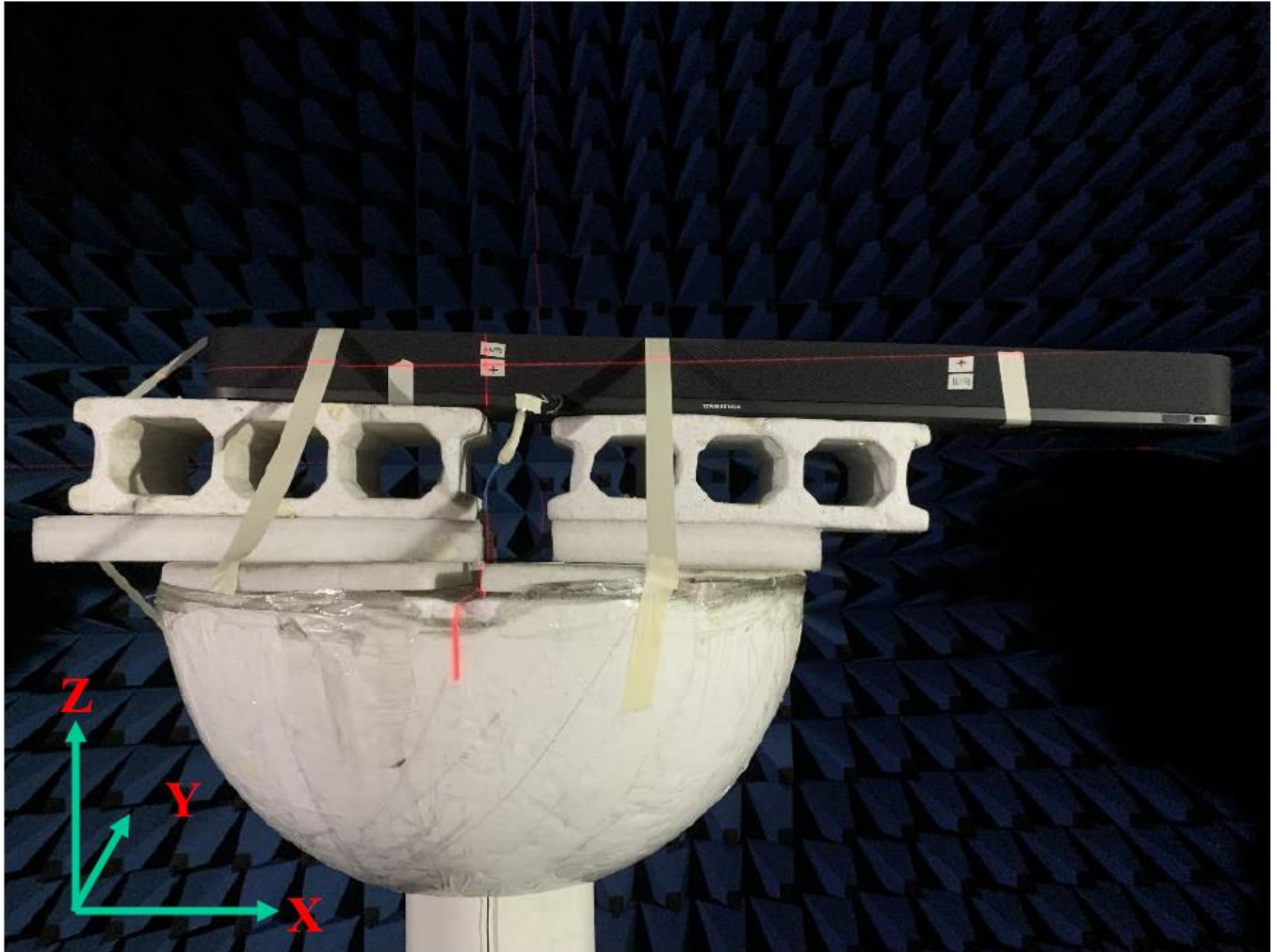
UNLESS OTHER SPECIFIED TOLERANCES ON :	
X=N/A	X.X=N/A X.XX=N/A
ANGLES=N/A	HOLEDIA=N/A
SCALE : N/A	UNIT : mm
DRAWN BY : 劉采璇	CHECKED BY : 詹惠雯
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮
TITLE : RFPCA3520271MAB401	


	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. P0

4. Performance Report :

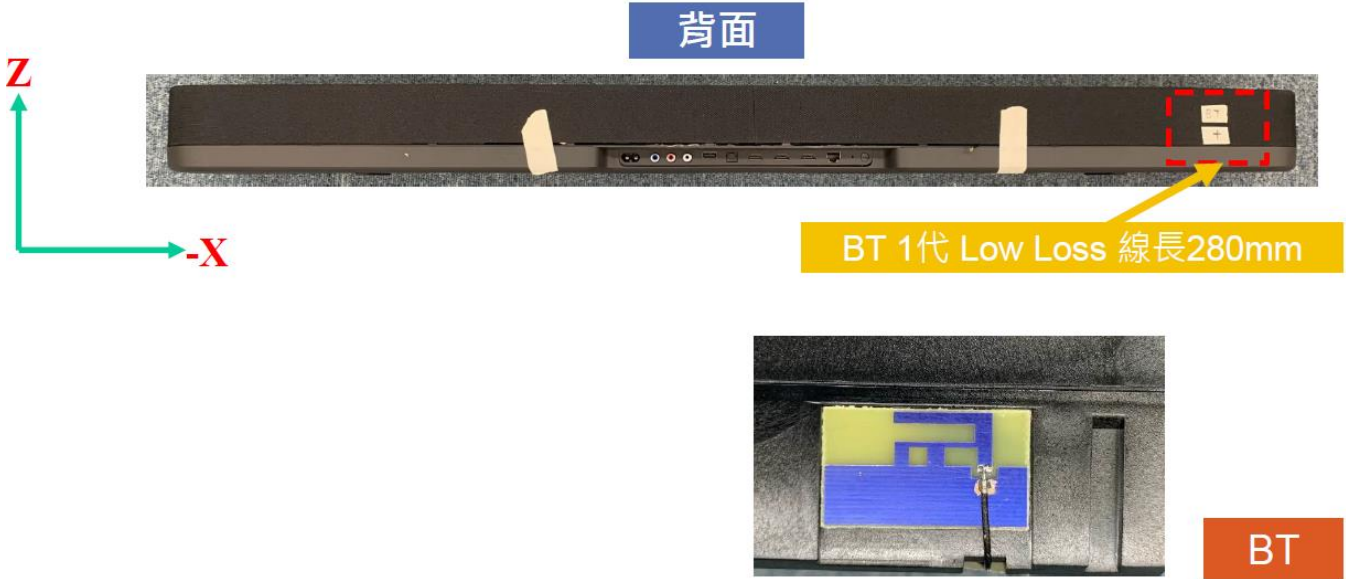
Test Report


Experimental Setup



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 : 劉采璇	CHECKED BY : 詹惠雯	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 : 黃泰進	APPROVED BY : 陳振榮	
TITLE : RFPCA352027IMAB401		DOCUMENT NO.
		SPEC REV. P0

Antenna Solution Detail

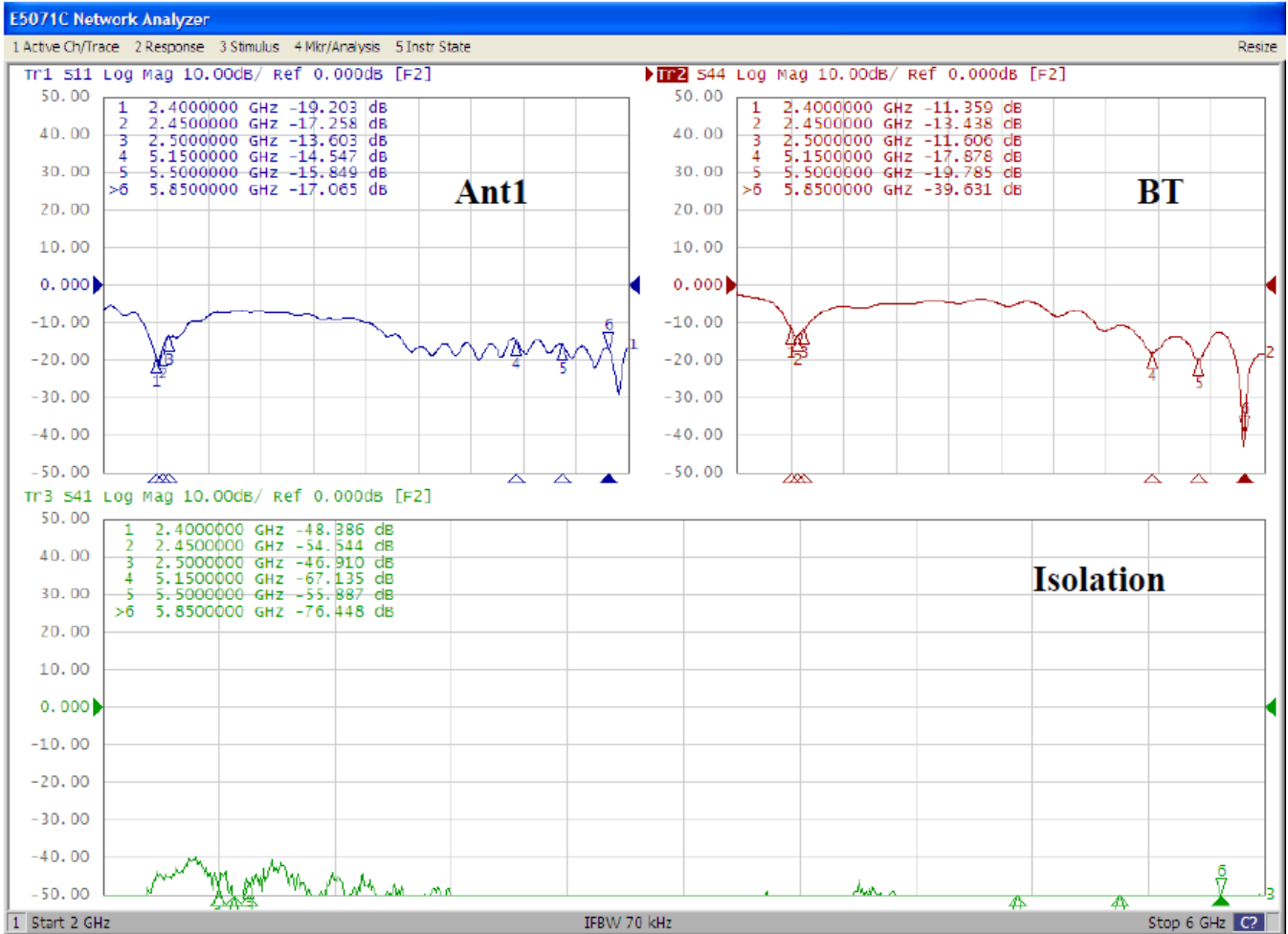



UNLESS OTHER SPECIFIED TOLERANCES ON :		 INPAQ TECHNOLOGY CO., LTD.
X=N/A	X.X=N/A X.XX=N/A	
ANGLES=N/A HOLEDIA=N/A		THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
SCALE : N/A	UNIT : mm	
DRAWN BY : 劉采璇	CHECKED BY : 詹惠雯	
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮	
TITLE : RFPCA352027IMAB401		DOCUMENT NO.
		SPEC REV. P0

Antenna Solution Detail

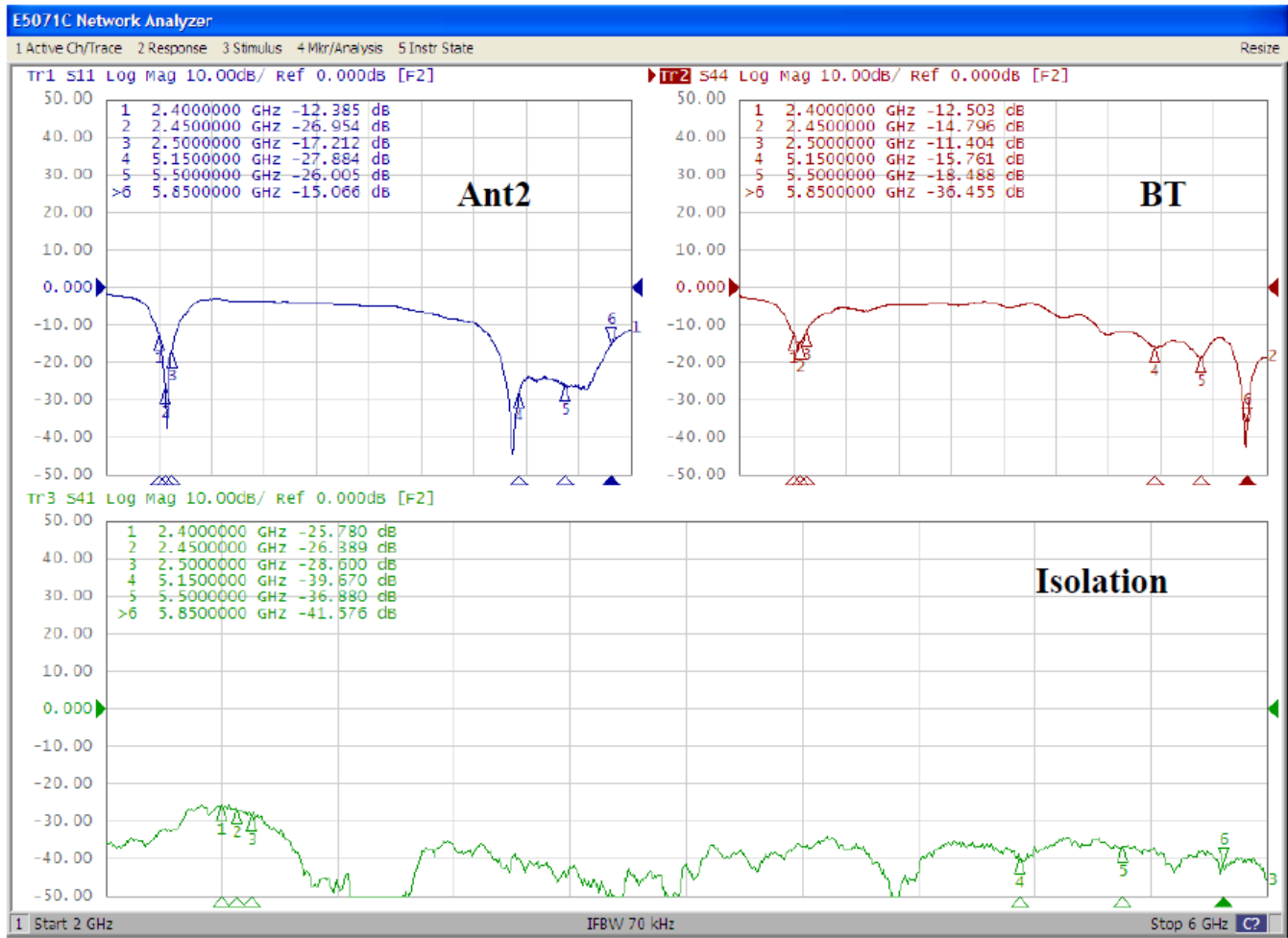
Return Loss & Isolation


Ant1_BT



UNLESS OTHER SPECIFIED TOLERANCES ON :		 INPAQ TECHNOLOGY CO., LTD.
X=N/A	X.X=N/A X.XX=N/A	
ANGLES=N/A	HOLEDIA=N/A	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
SCALE : N/A	UNIT : mm	
DRAWN BY : 劉采璇	CHECKED BY : 詹惠雯	
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮	
TITLE : RFPCA352027IMAB401		DOCUMENT NO.
		SPEC REV. P0

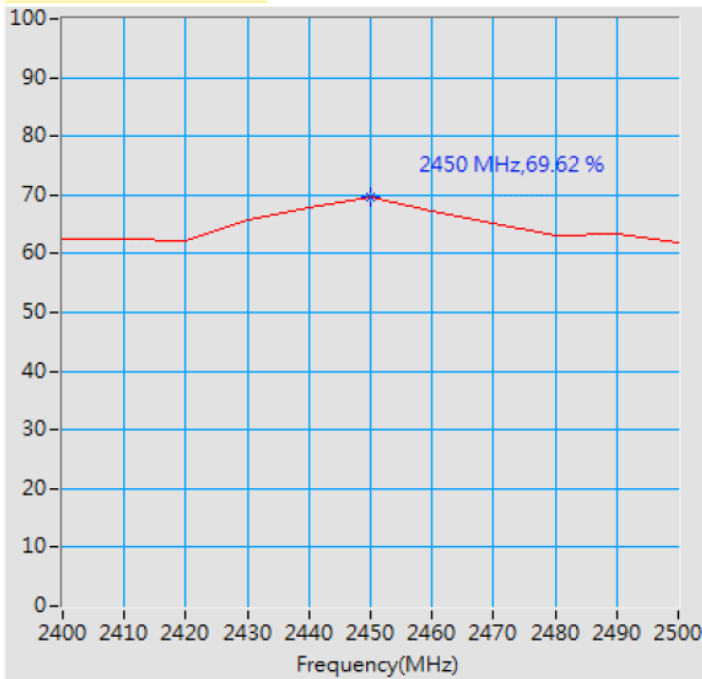
Ant2_BT



UNLESS OTHER SPECIFIED TOLERANCES ON :		 INPAQ TECHNOLOGY CO., LTD.
X=N/A	X.X=N/A X.XX=N/A	
ANGLES=N/A HOLEDIA=N/A		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
SCALE : N/A	UNIT : mm	
DRAWN BY : 劉采璇	CHECKED BY : 詹惠雯	
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮	
TITLE : RFPCA352027IMAB401		DOCUMENT NO.
		SPEC REV. P0

Antenna Efficiency and Peak Gain

BT



Maximum Efficiency at 2450 MHz : 69.62 %

BT	
Frequency (GHz)	Efficiency (%)
2.4	62.64
2.45	69.62
2.5	61.80
5.15	/
5.5	
5.85	

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 : 劉采璇

CHECKED BY : 詹惠雯

DESIGNED BY : 黃泰進

APPROVED BY : 陳振榮

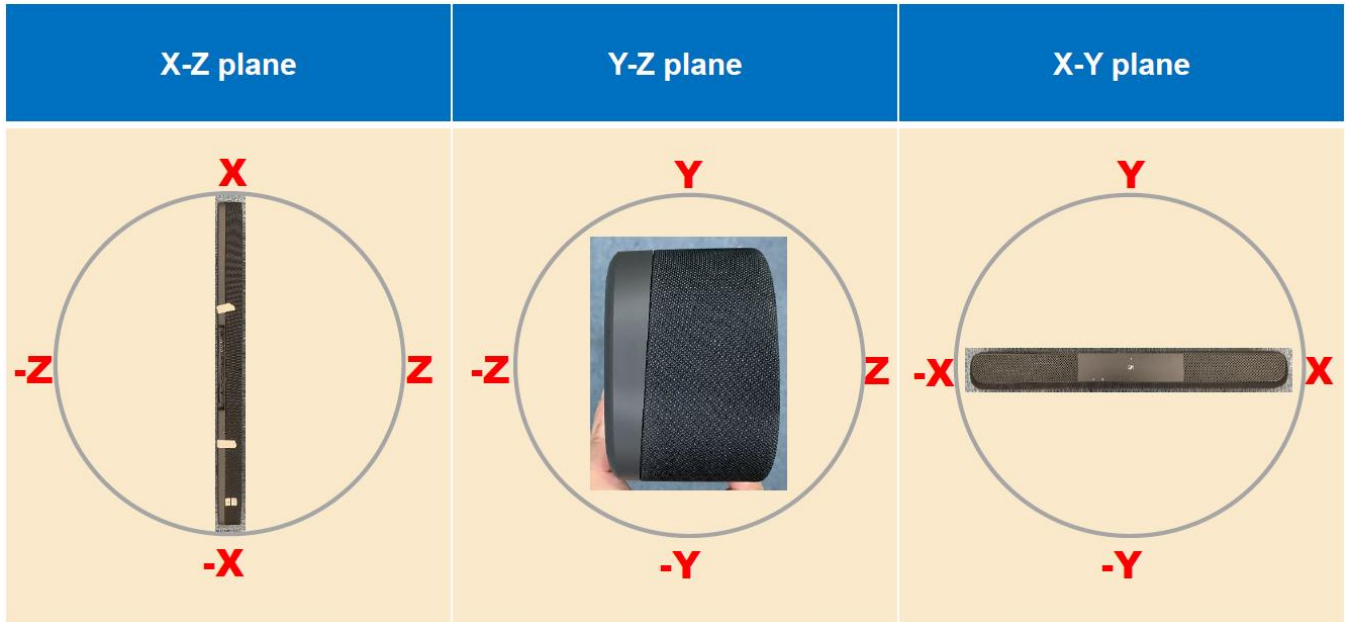
THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION


TITLE : RFPCA352027IMAB401

DOCUMENT NO.

SPEC REV.
P0

3 views of antenna



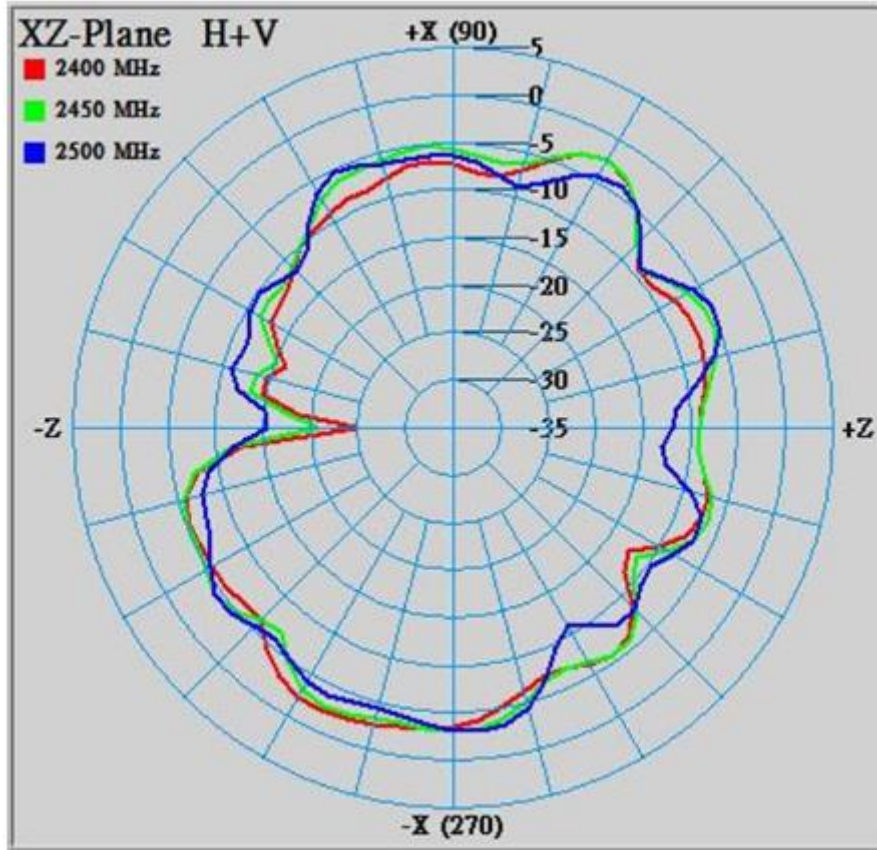
UNLESS OTHER SPECIFIED TOLERANCES ON : X = N/A X.X = N/A X.XX = N/A ANGLES = N/A HOLEDIA = N/A		 INPAQ TECHNOLOGY CO., LTD.	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
SCALE : N/A	UNIT : mm		
DRAWN BY : 劉采璇	CHECKED BY : 詹惠雯		
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮		
TITLE : RFPCA352027IMAB401		DOCUMENT NO.	SPEC REV. P0

2D Radiation Patterns

BT

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 : 劉采璇	CHECKED BY : 詹惠雯
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮

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

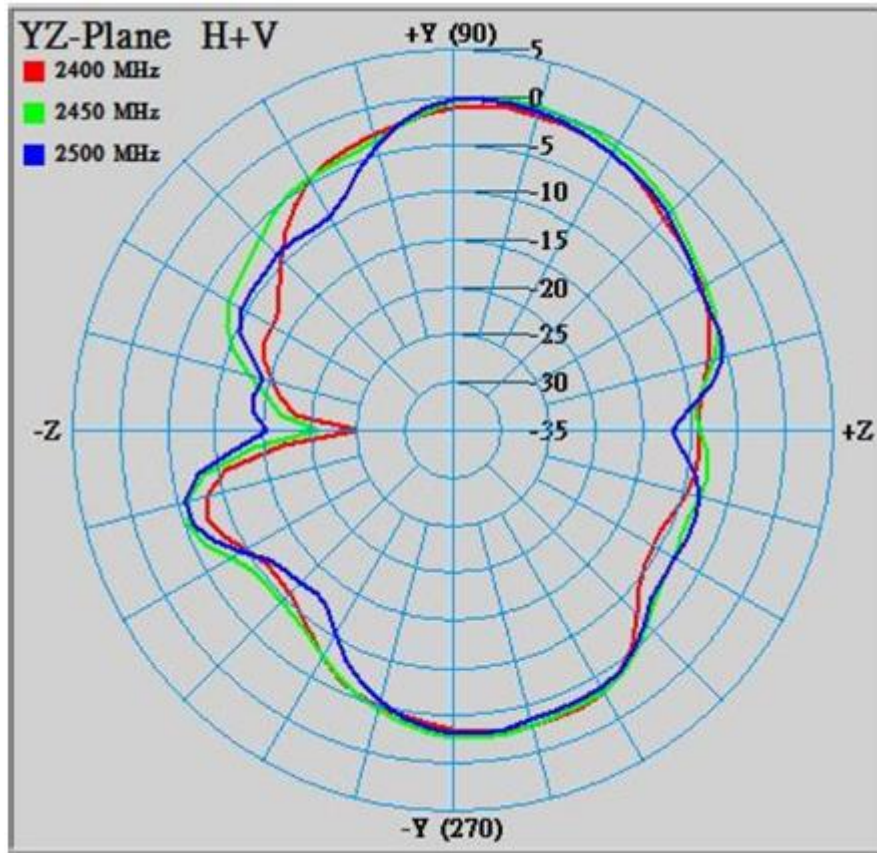
TITLE : RFPCA352027IMAB401


DOCUMENT NO.

SPEC REV.
P0

Y-Z Plane
Phi=90.00deg

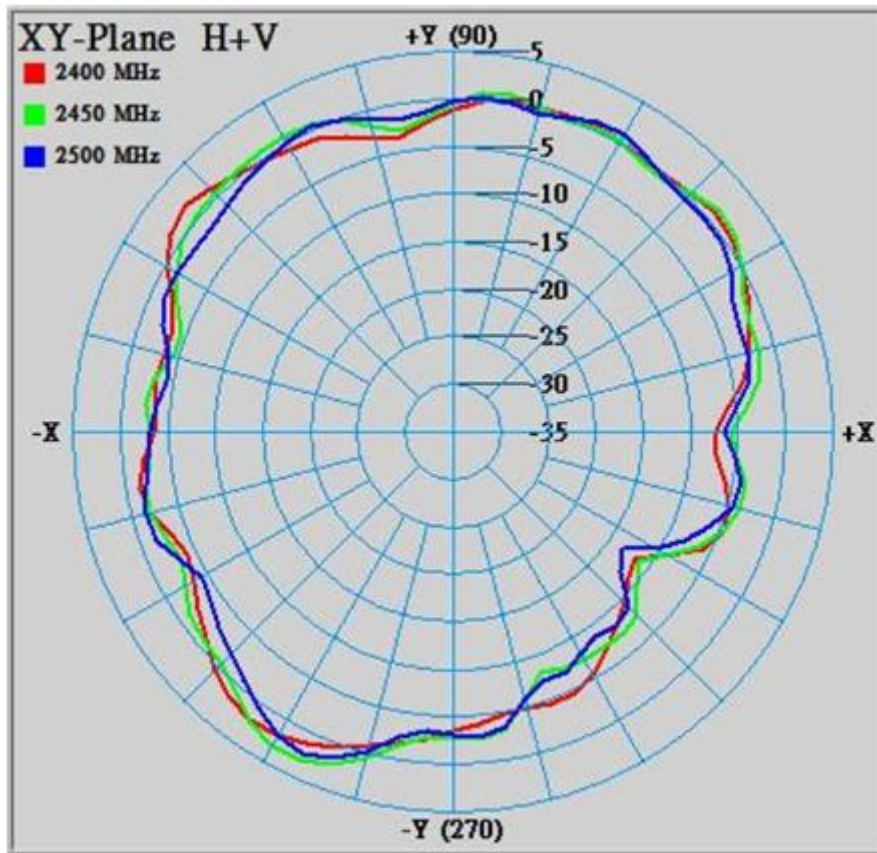
Gain . dB



UNLESS OTHER SPECIFIED TOLERANCES ON :			INPAQ TECHNOLOGY CO., LTD.
X = N/A	X.X = N/A X.XX = N/A		
ANGLES = N/A		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	
SCALE : N/A	UNIT : mm		
DRAWN BY : 劉采璇	CHECKED BY : 詹惠雯		
DESIGNED BY : 黃泰進	APPROVED BY : 陳振榮	DOCUMENT NO.	
TITLE : RFPCA352027IMAB401			

X-Y Plane
Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-2.21	-6.63	-0.74	-5.32	2.08	-1.66
2450	-2.63	-6.25	0.30	-4.56	3.17	-1.34
2500	-2.91	-6.81	-0.02	-5.23	2.24	-1.96

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 : 劉采璇 CHECKED BY : 詹惠雯
 DESIGNED BY : 黃泰進 APPROVED BY : 陳振榮

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 : RFPCA352027IMAB401

DOCUMENT NO. SPEC REV. P0