PSA

PASSIVE SYSTEM ALLIANCE

INPAQ TECHNOLOGY CO., LTD.

Version 0.1

N727

Presented by
YiAn Nien, RFRD Department

INPAQ Technology Co., Ltd.

Last updated in 11.02, 2023

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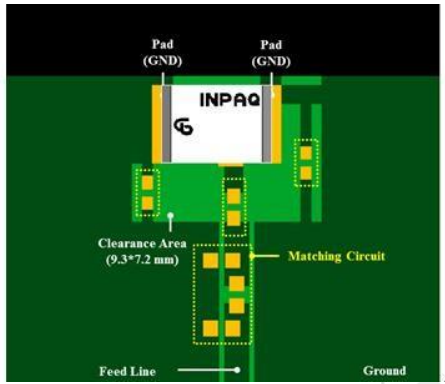
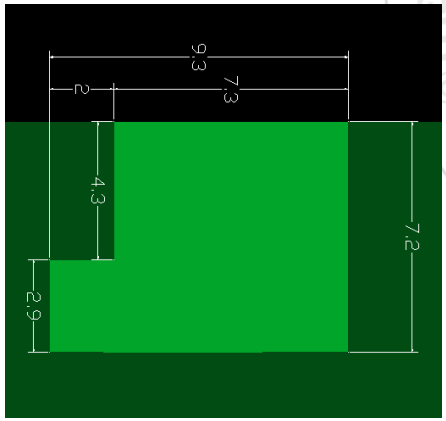
Revised History

Released Date	Version	Record
Sep. 01th , 2023	0.0	Initial report
Nov. 02th , 2023	0.1	Finetune

Product / Antenna Placement

Product / Antenna Overview

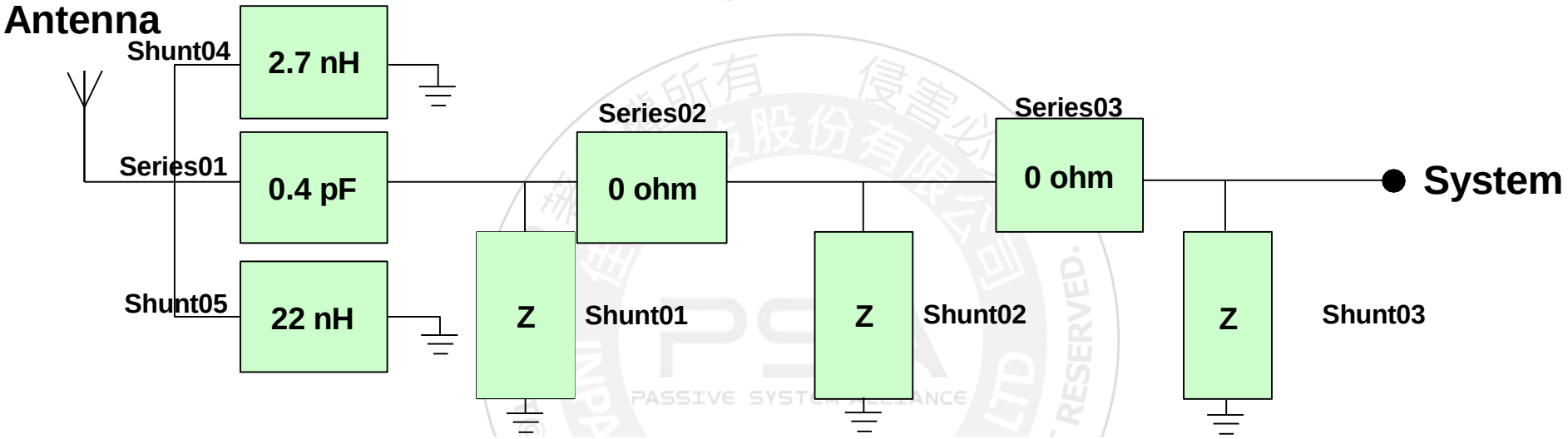




Frequency	2400-2500 5150-5850
Ant. Type	PIFA
Model Name	N727
Brand Name	MIO
Mfr. Address	INPAQ Technology Co., No. 11, Keyi St., Jhunan Township, Miaoli County350402 , Taiwan (R.O.C.)

Matching circuit

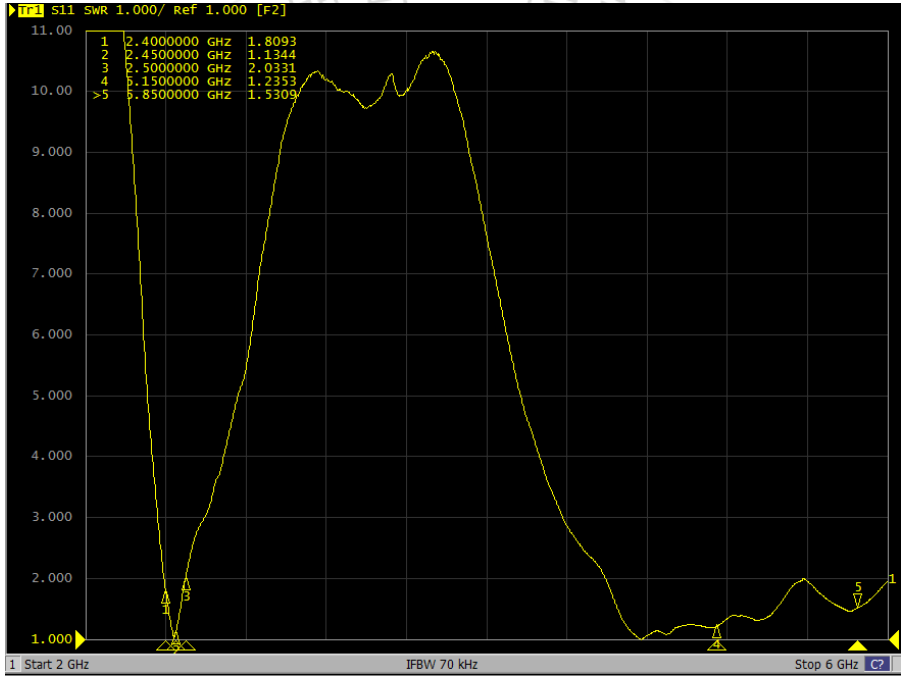
Fine Tuned Matching



Location	Description	Vendor
Series01	0.4pF	Murata
Series02	0 ohm	Murata
Series03	0 ohm	Murata
Shunt01	N/A	N/A
Shunt02	N/A	N/A
Shunt03	N/A	N/A
Shunt04	2.7nH	Murata
Shunt05	22 nH	Murata

Results

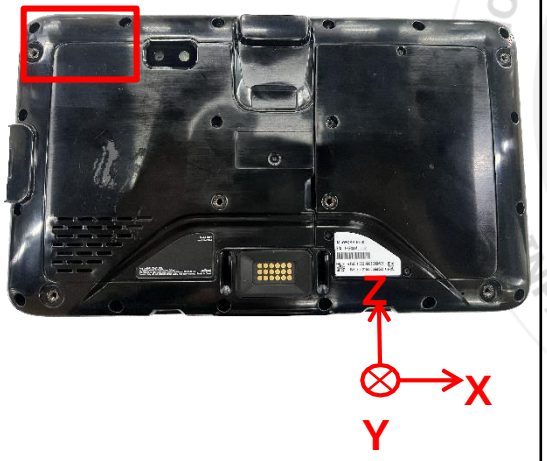
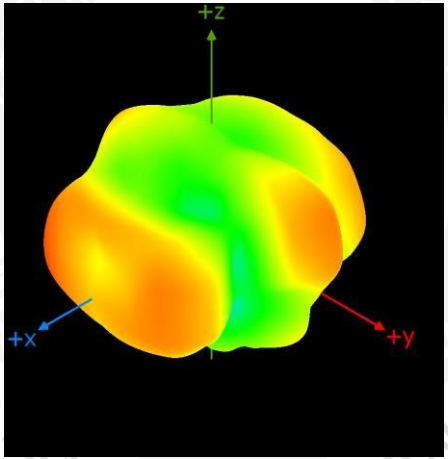
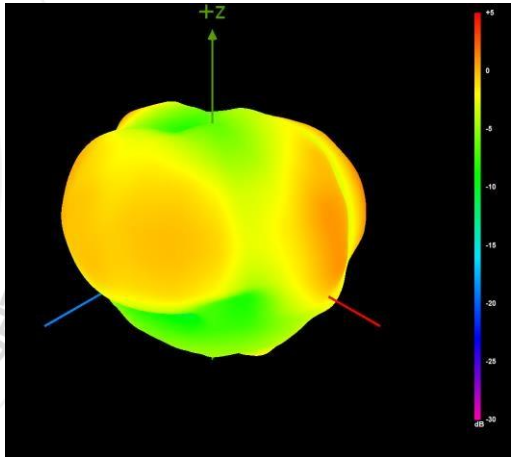
VSWR


Tr1 S11 SWR 1.000/ Ref 1.000 [F2]
1 2.4000000 GHz 1.8093
2 2.4500000 GHz 1.1344
3 2.5000000 GHz 2.0331
4 6.1500000 GHz 1.2353
>5 6.8500000 GHz 1.5309
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 2 GHz
IFBW 70 kHz
Stop 6 GHz

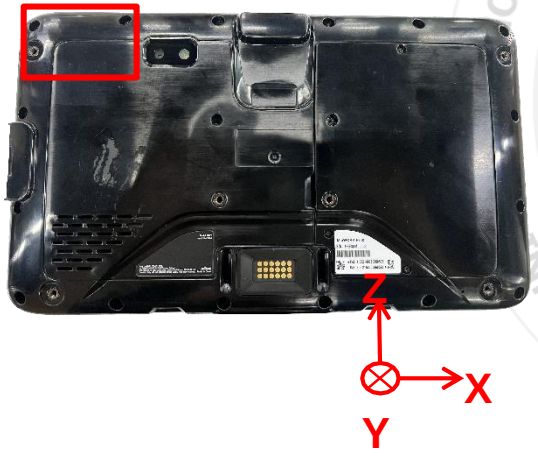
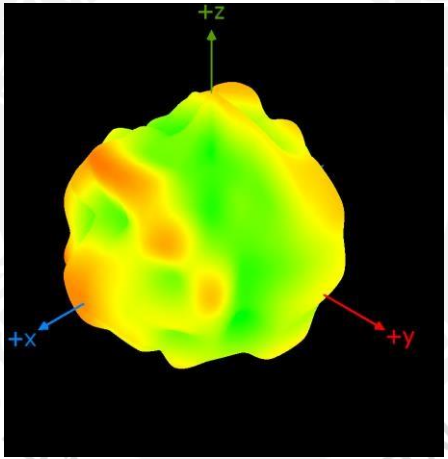
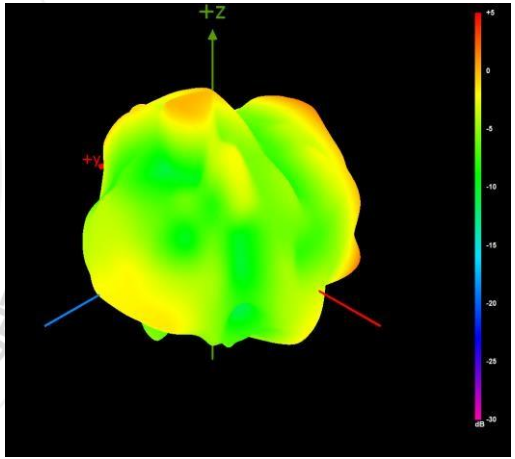
Efficiency and Peak Gain

Fine Tuned		
Frequency (MHz)	**Peak Gain (dBi)**	**Efficiency (%)**
2400	0.27	32.19
2450	0.32	40.09
2500	0.44	33.89
5150	-0.74	26.11
5470	-0.30	20.51
5850	0.53	22.93

3D Radiation Pattern

2450 MHz		
		
	Front	Back

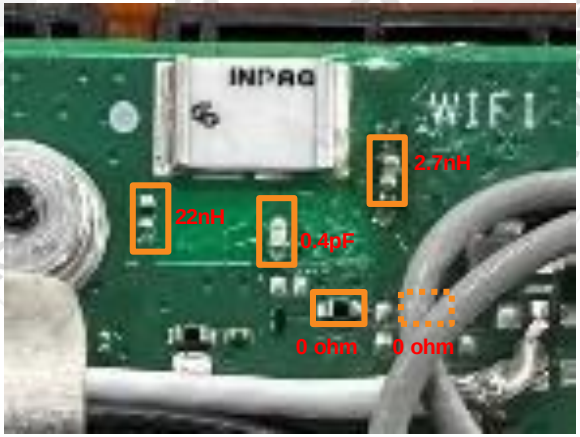
3D Radiation Pattern

5470 MHz		
	 Front	 Back

Conclusions

Conclusions

1. The chip antenna efficiency is about 20-40 %.
2. The Peak Gain of the chip antenna is about -0.74to 0.53 dBi.
3. Please follow the matching circuit shown below.



THANK YOU FOR YOUR ATTENTION