



Antenna matching report

Customer: 华粤世纪

Model Name: SMARTKEY BOARD

Frequency: BT(2402~2480MHz)

HEK ANT P/NK: ANT3216R2400A1L0

Date: 2025.07.28

Number: 20250728001

Producer: FAE



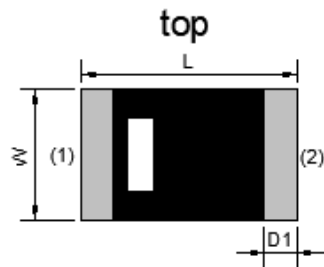
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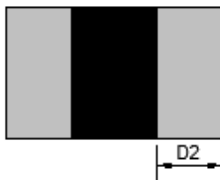
Appearance of customer Sample



Dimension (mm)	
L	3.20+-0.15
W	1.60+-0.15
T	0.60+-0.10
D1	0.50+-0.15
D2	1.30+-0.15

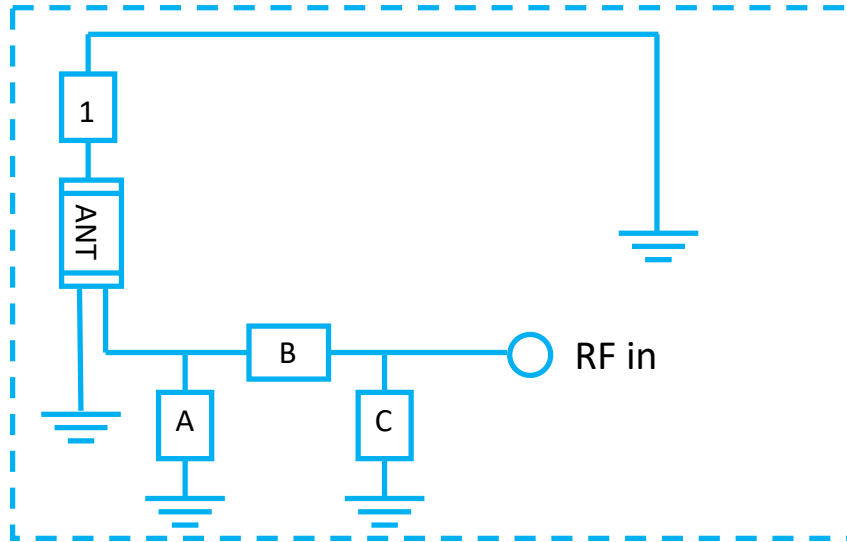
No.	Terminal Name
1	Feeding
2	Ground

btm





Matching parameters

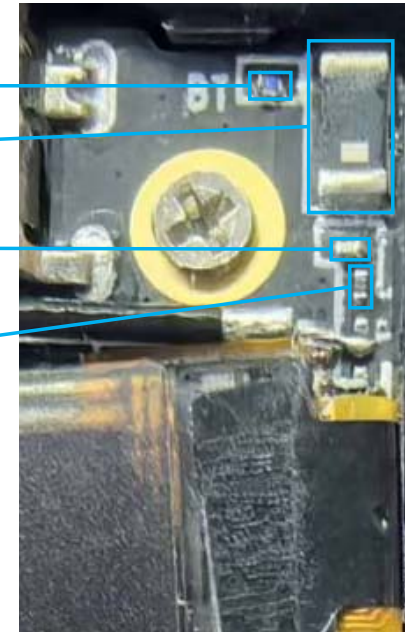


NO	Component	Brand	Description	P/N
1	Inductor	muRata	0201 4.7nH	LQP03TN4N7B02
A	Capacitor	muRata	0201 1.8pF	GRM0335C1H1R8BA01
B	Resistor	Yageo	0201 0R	RC0201JR-070R
C	OPEN	N/A	N/A	N/A

1
3216 Chip
Antenna

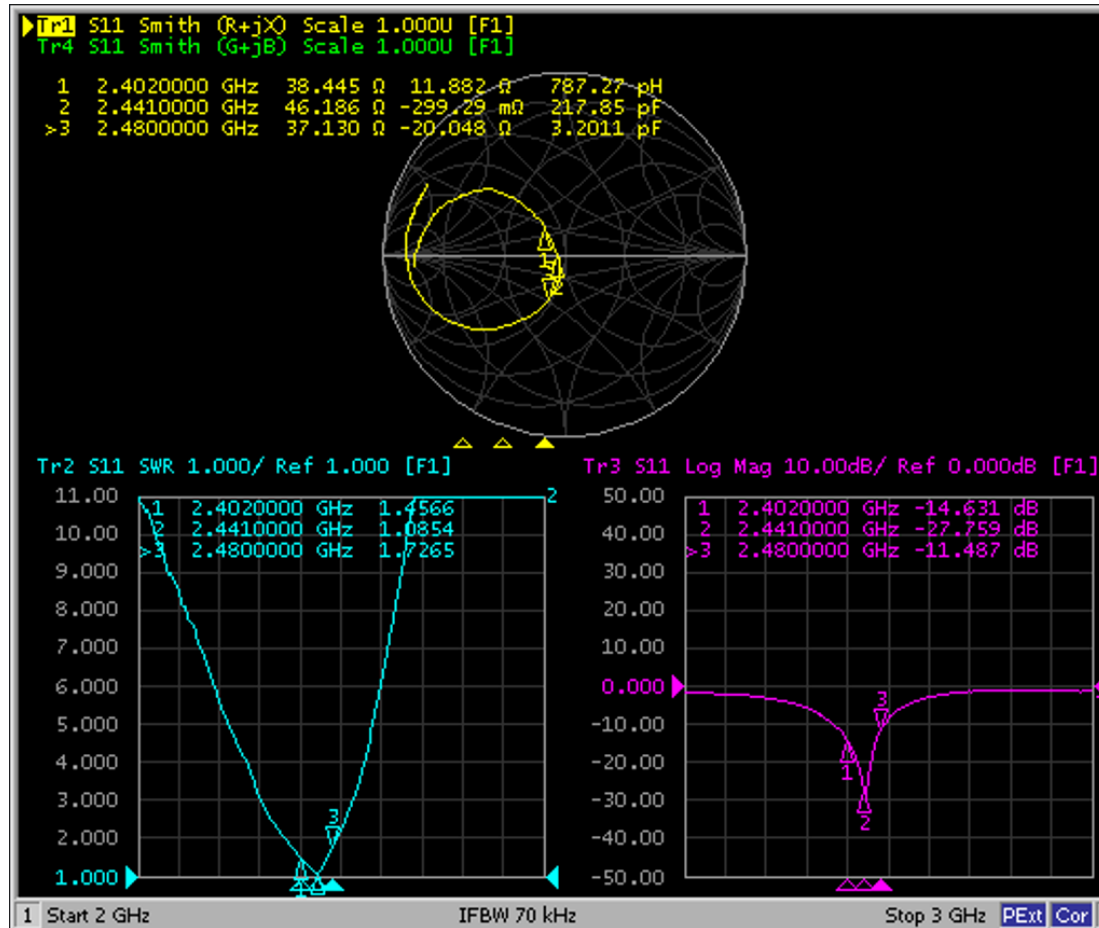
A

B





Antenna S parameters



Item	Value		
	2402(MHz)	2441(MHz)	2484(MHz)
Return loss(dB)	1.45	1.08	1.72
Smith(Ω)	38.44	46.18	37.13
VSWR	-14.63	-27.75	-11.48





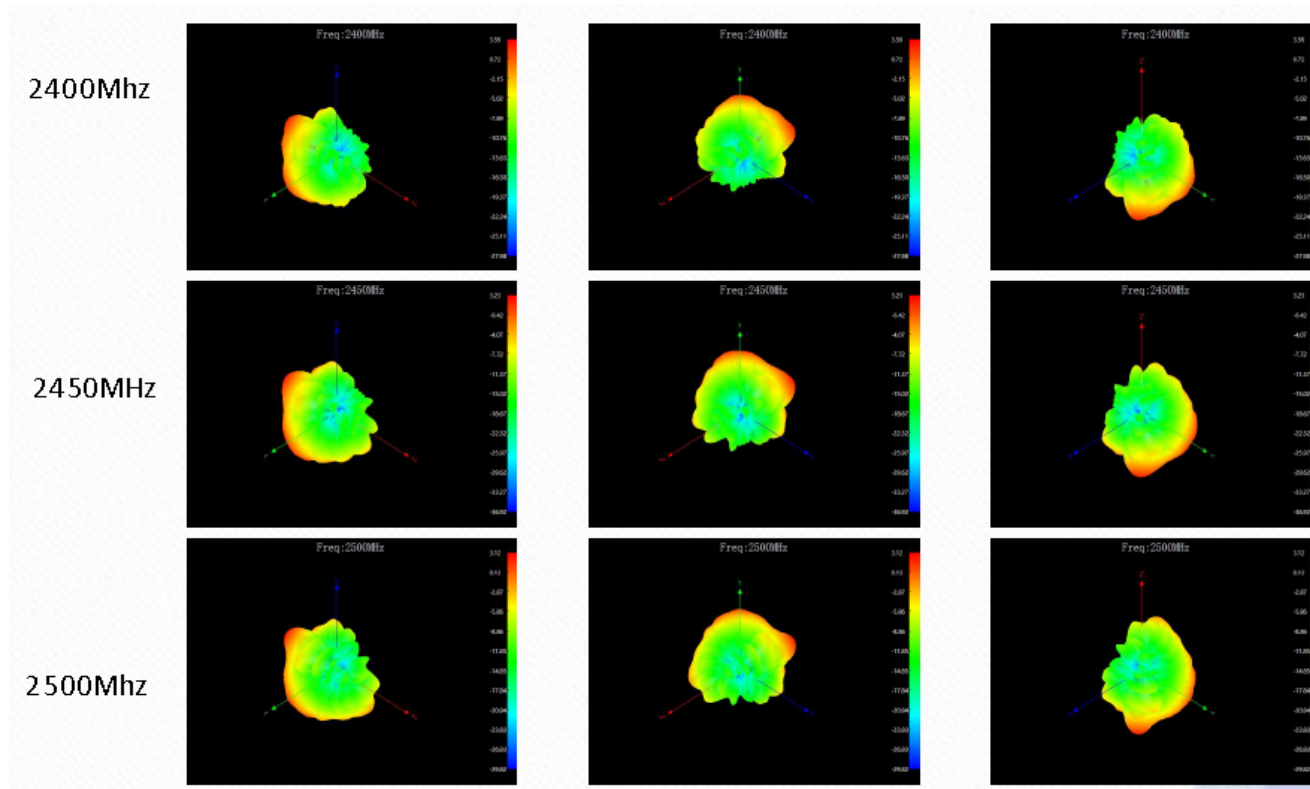
Antenna Passive parameter

Frequency (MHz)	Efficiency (%)	Mean gain (dBi)	Peak Gain (dBi)
2400	33.13	-4.8	1.21
2410	33.42	-4.76	1.18
2420	33.94	-4.69	1.17
2430	35.13	-4.54	1.26
2440	33.35	-4.77	2.00
2450	33.28	-4.78	1.13
2460	32.83	-4.84	1.22
2470	31.51	-5.02	1.47
2480	31.02	-5.08	1.54





Conclusion



Thanks

