ASUS EBA63
Antenna Passive Pre-test Report

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2023-10-16

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Purpose & Environment

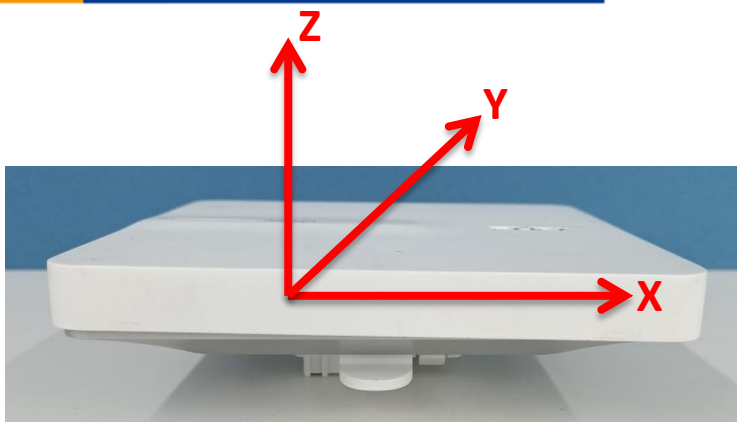
Purpose

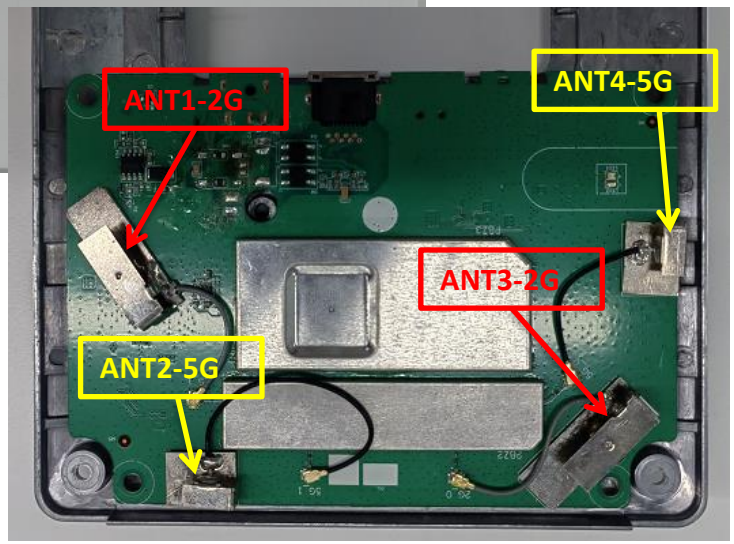
- Meet the electrical performance index ;
- Confirm the antenna scheme to meet the design requirements;

Environment

- Test Condition: the network analyzer(E5071C) and SATIMO microwave anechoic chamber
- Passive measurement results are presented

DUT Antenna

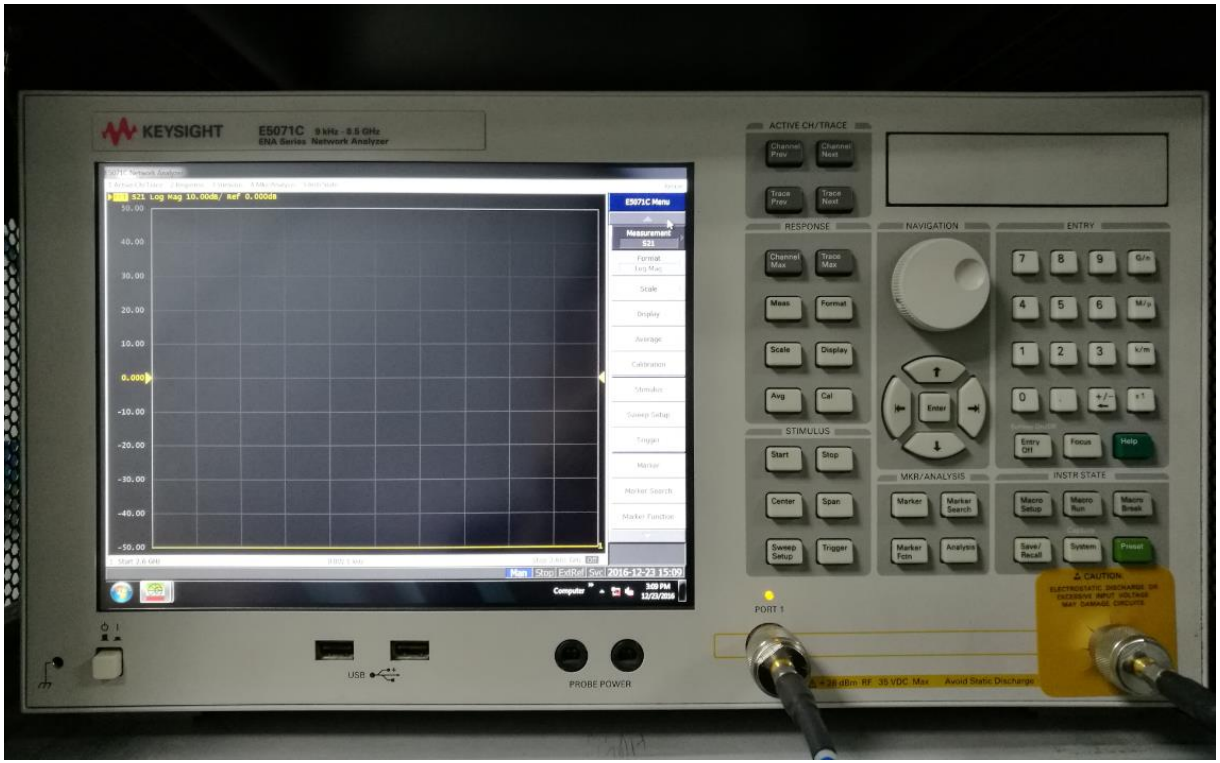




NO.	Frequency
ANT1	2.4GHz-2.5GHz
ANT2	5.15GHz-5.85GHz
ANT3	2.4GHz-2.5GHz
ANT4	5.15GHz-5.85GHz

Return Loss and Isolation

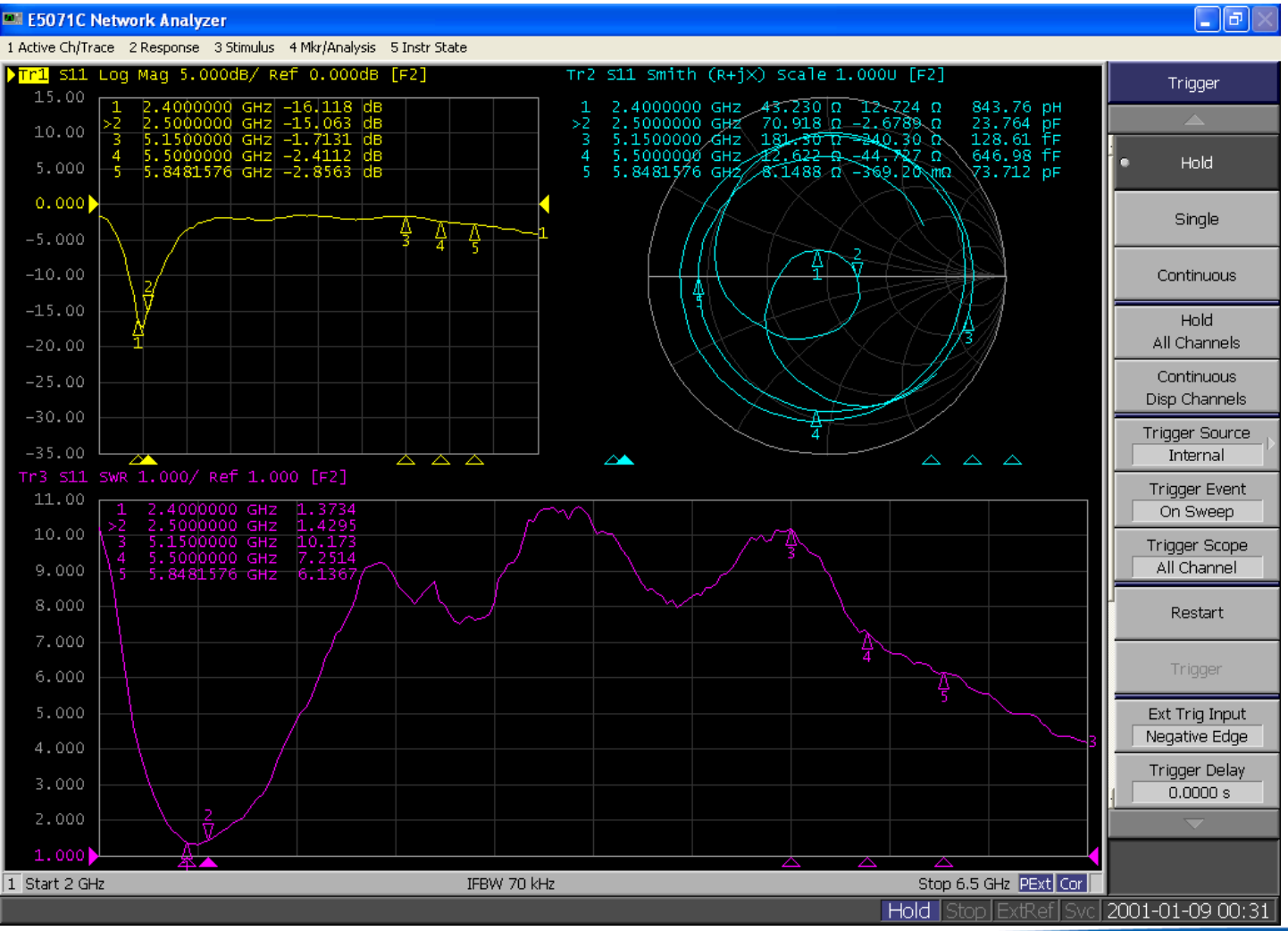
Test Condition

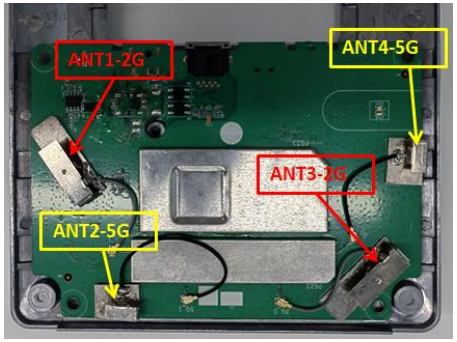


The network Analyzer

Return Loss

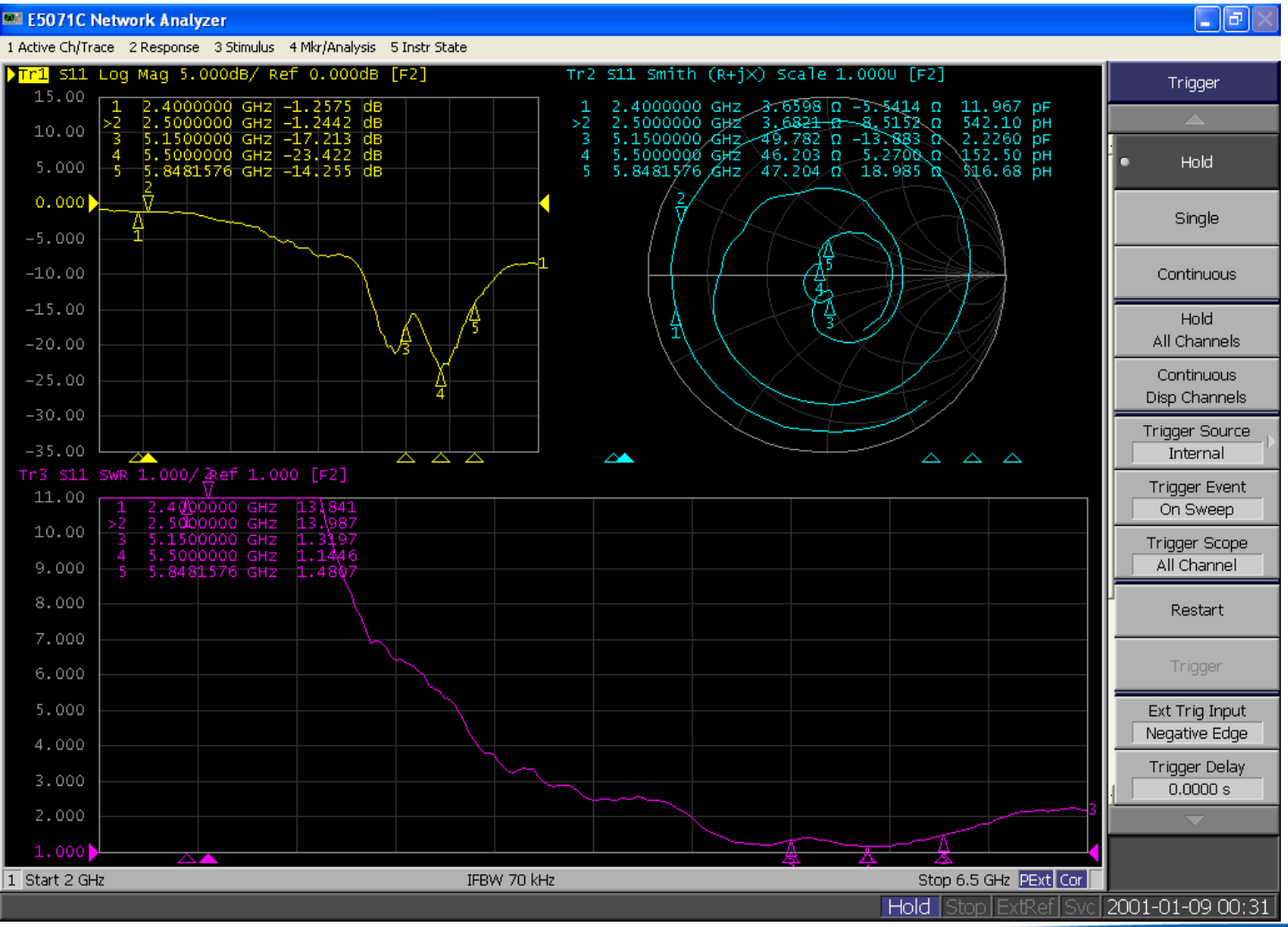
ANT1

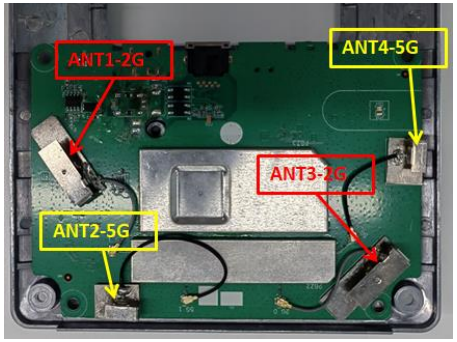




Return Loss

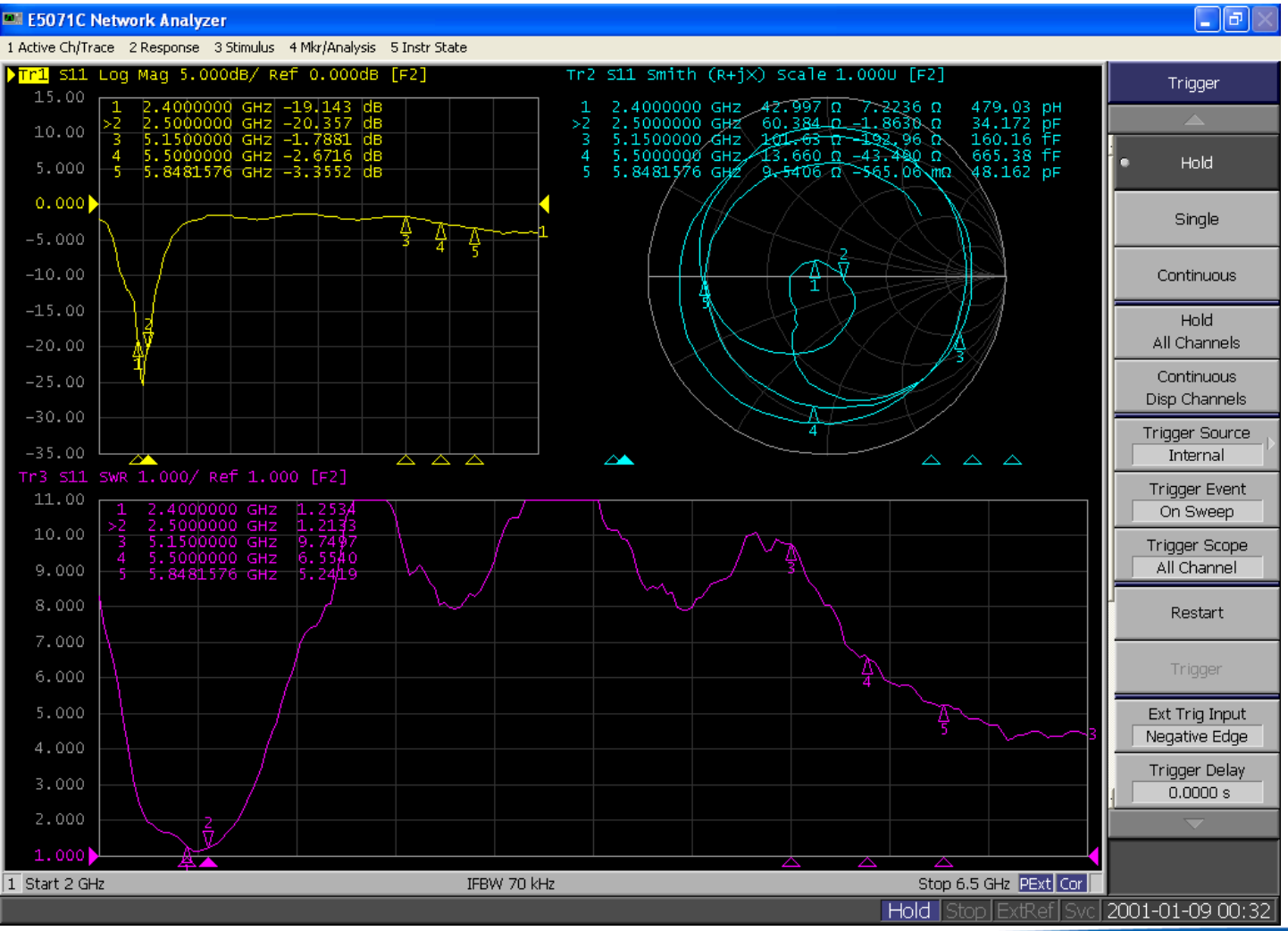
ANT2

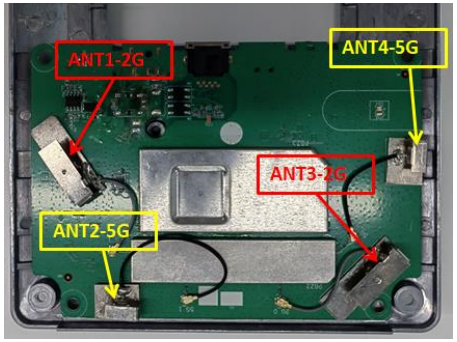




Return Loss

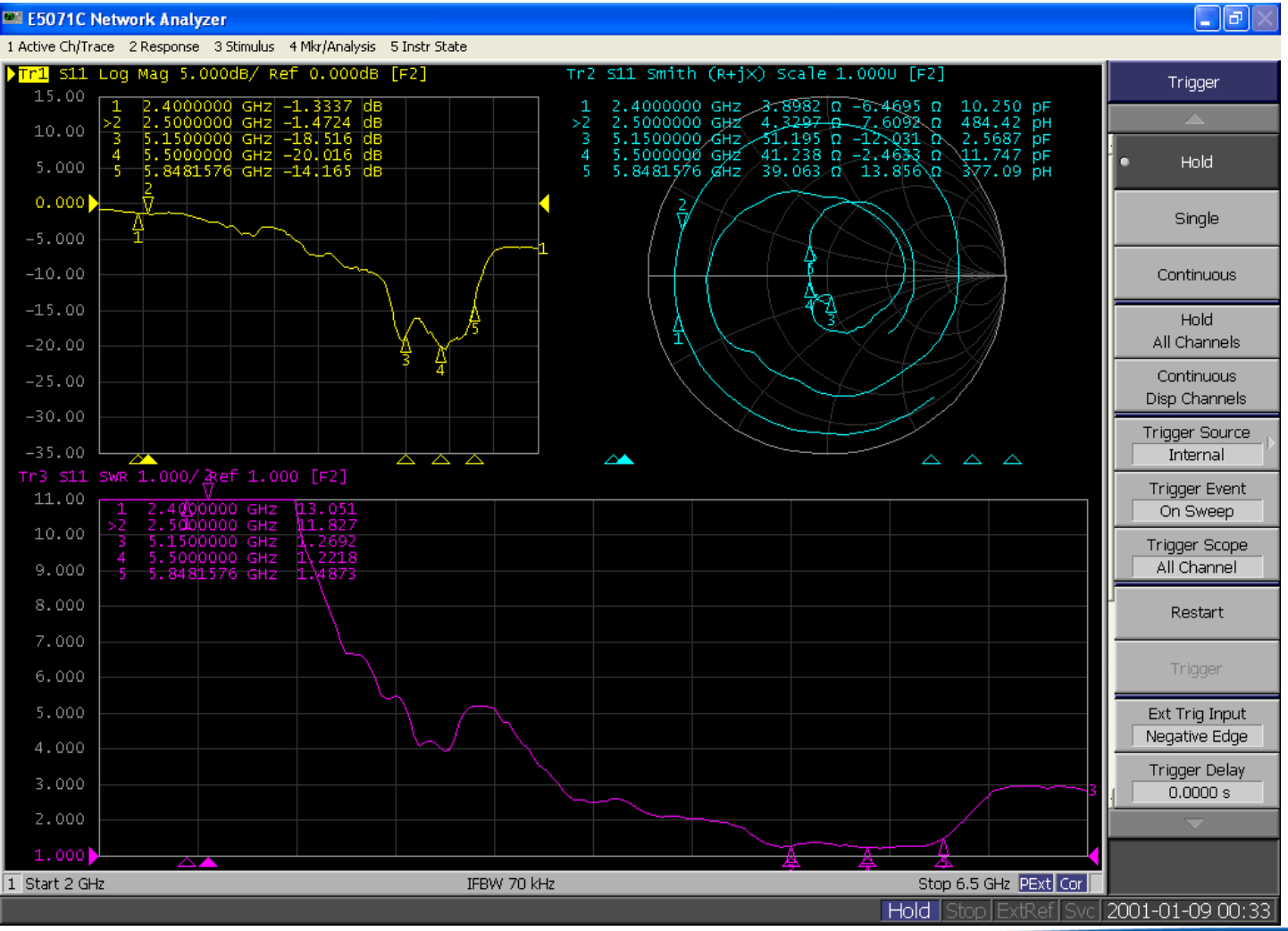
ANT3

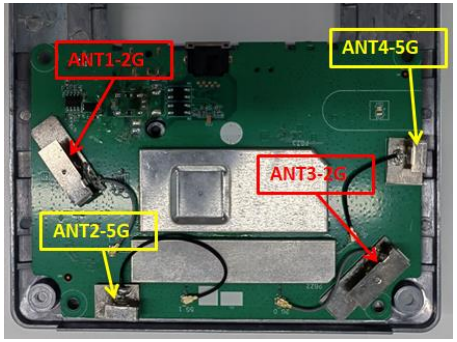




Return Loss

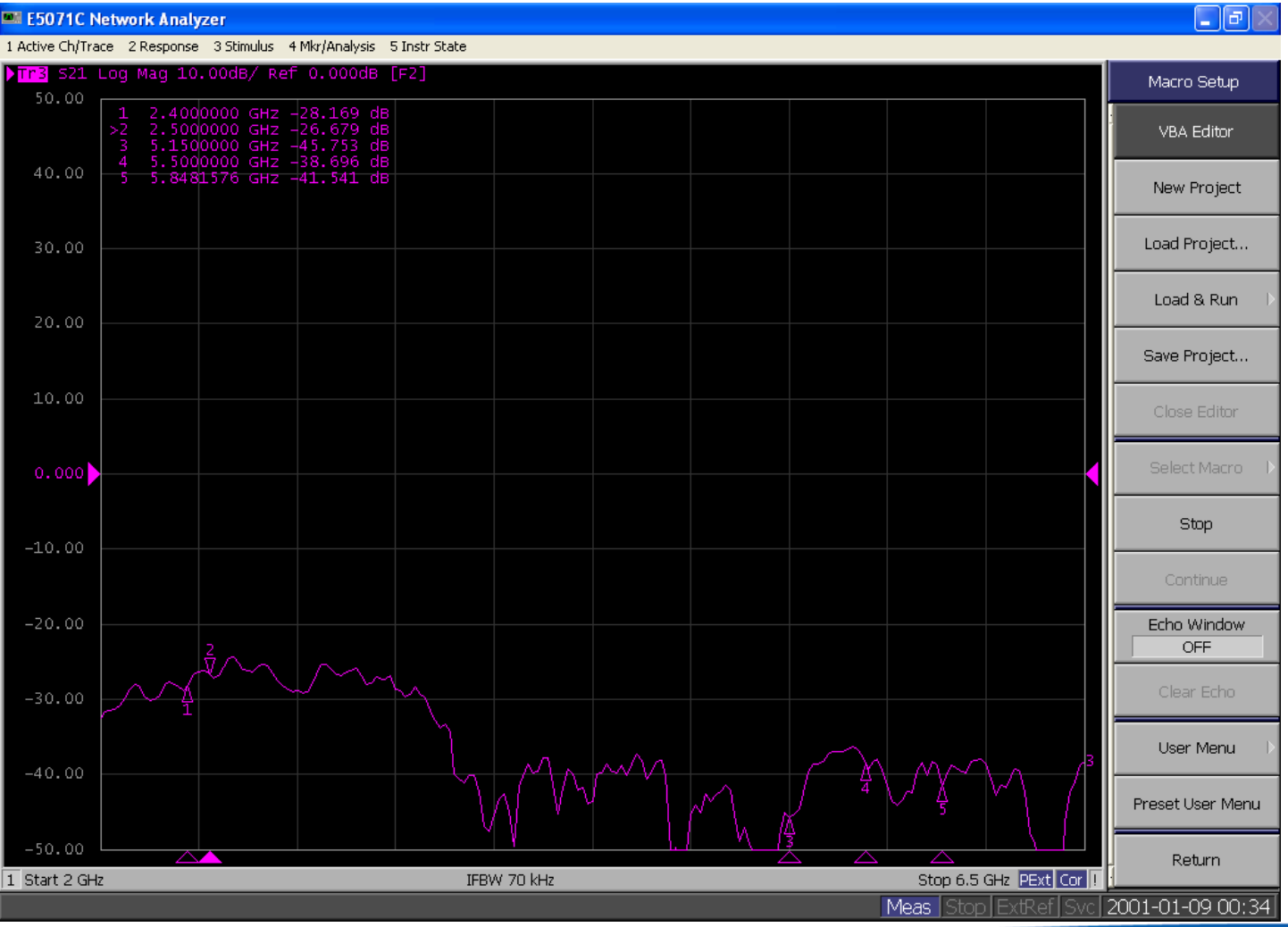
ANT4

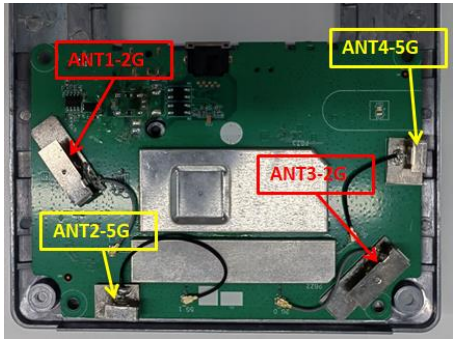




Isolation

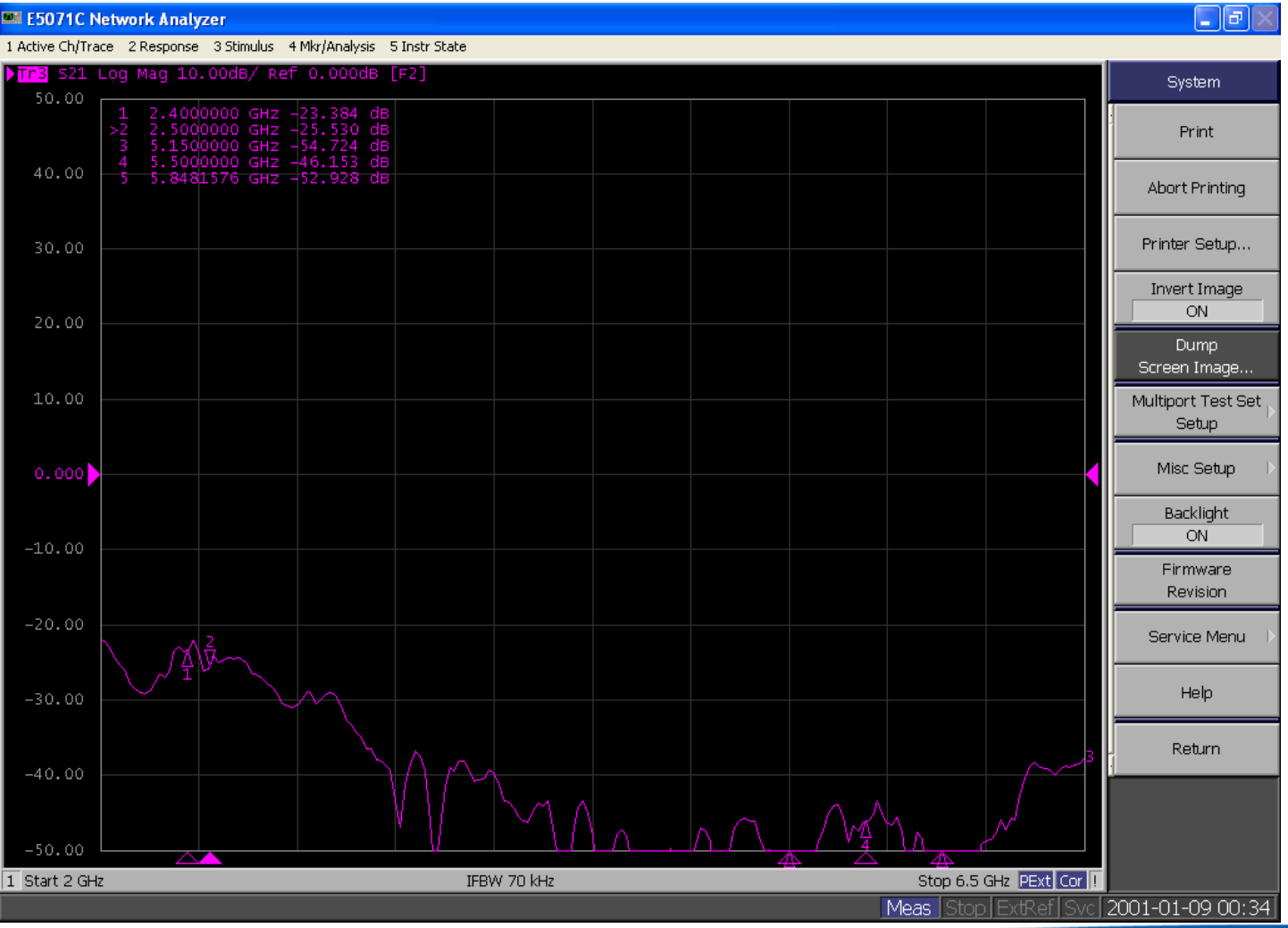
ANT1&ANT2

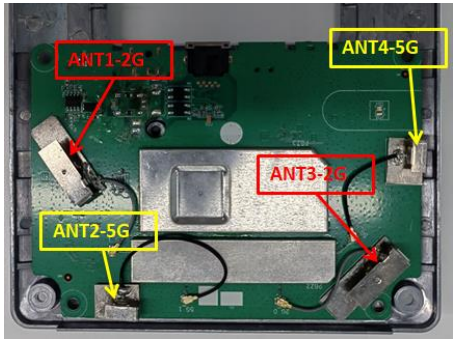




Isolation

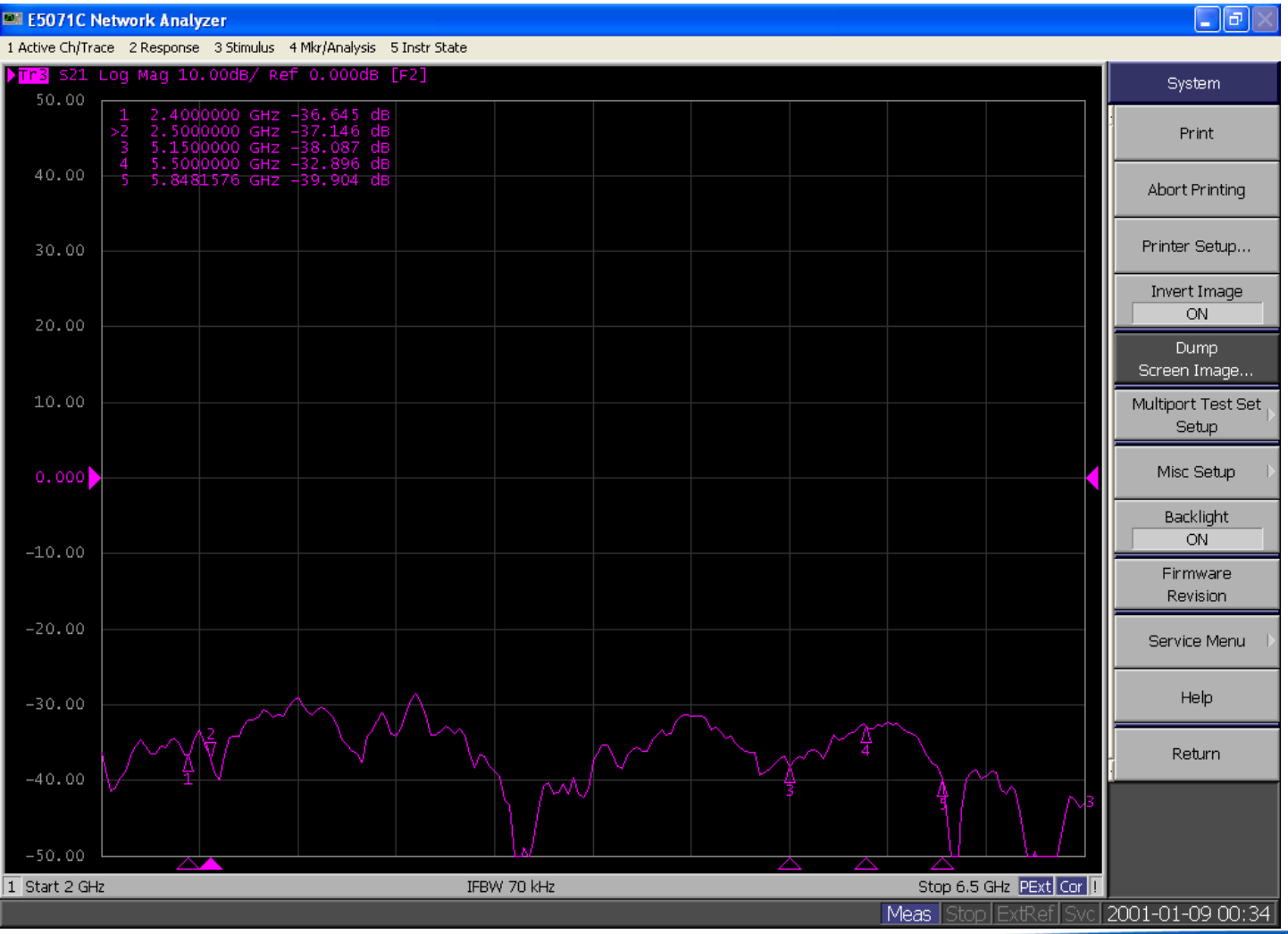
ANT1&ANT3

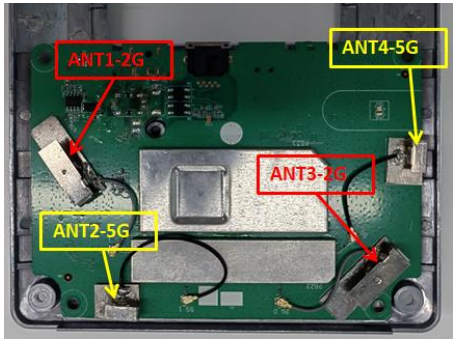




Isolation

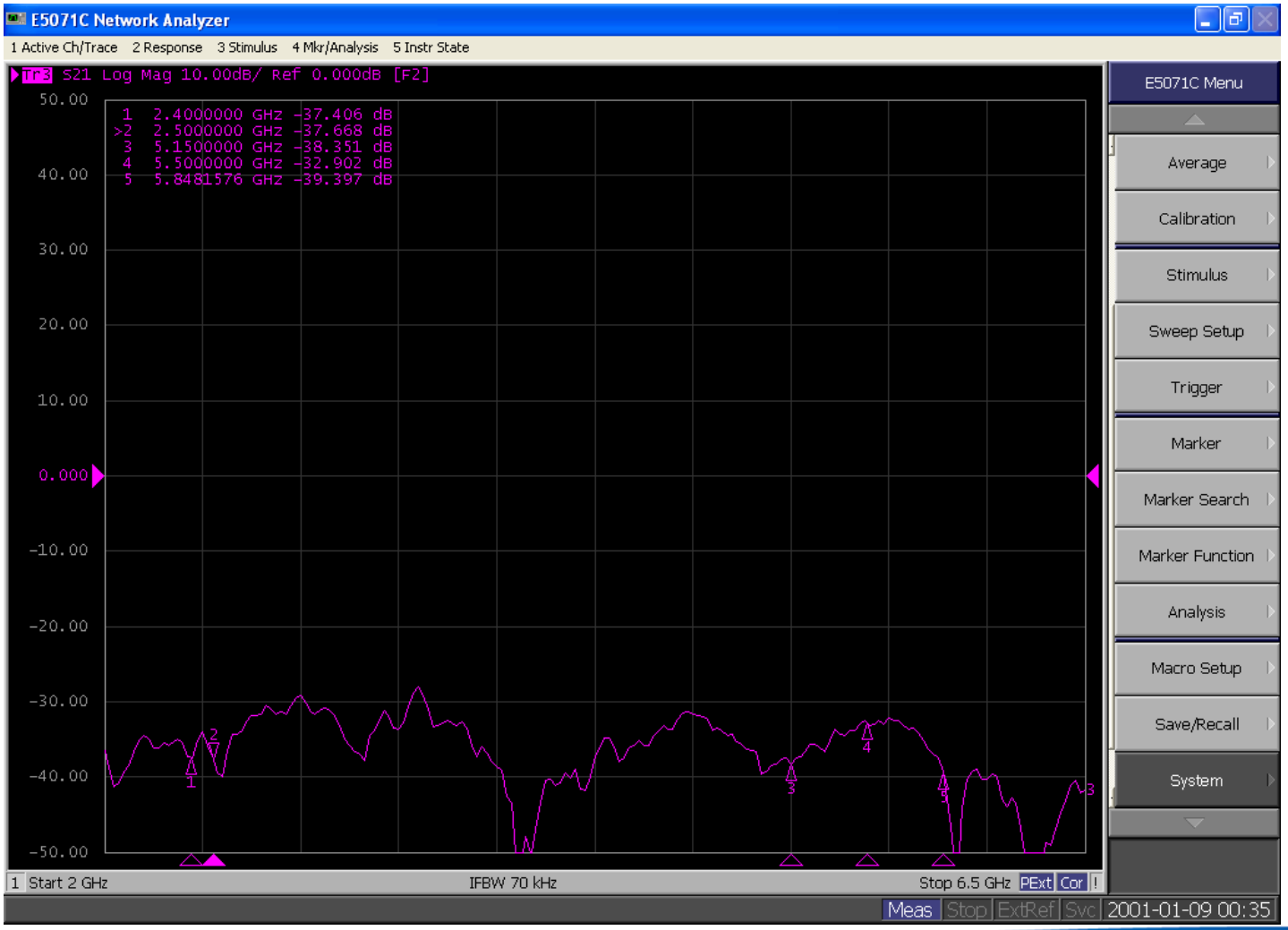
ANT1&ANT4

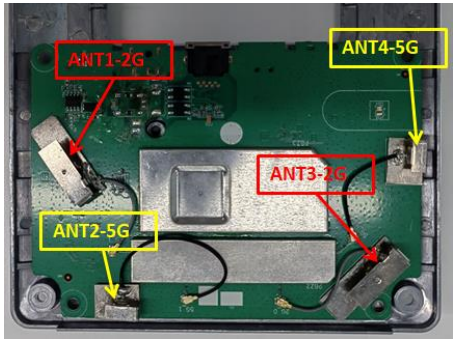




Isolation

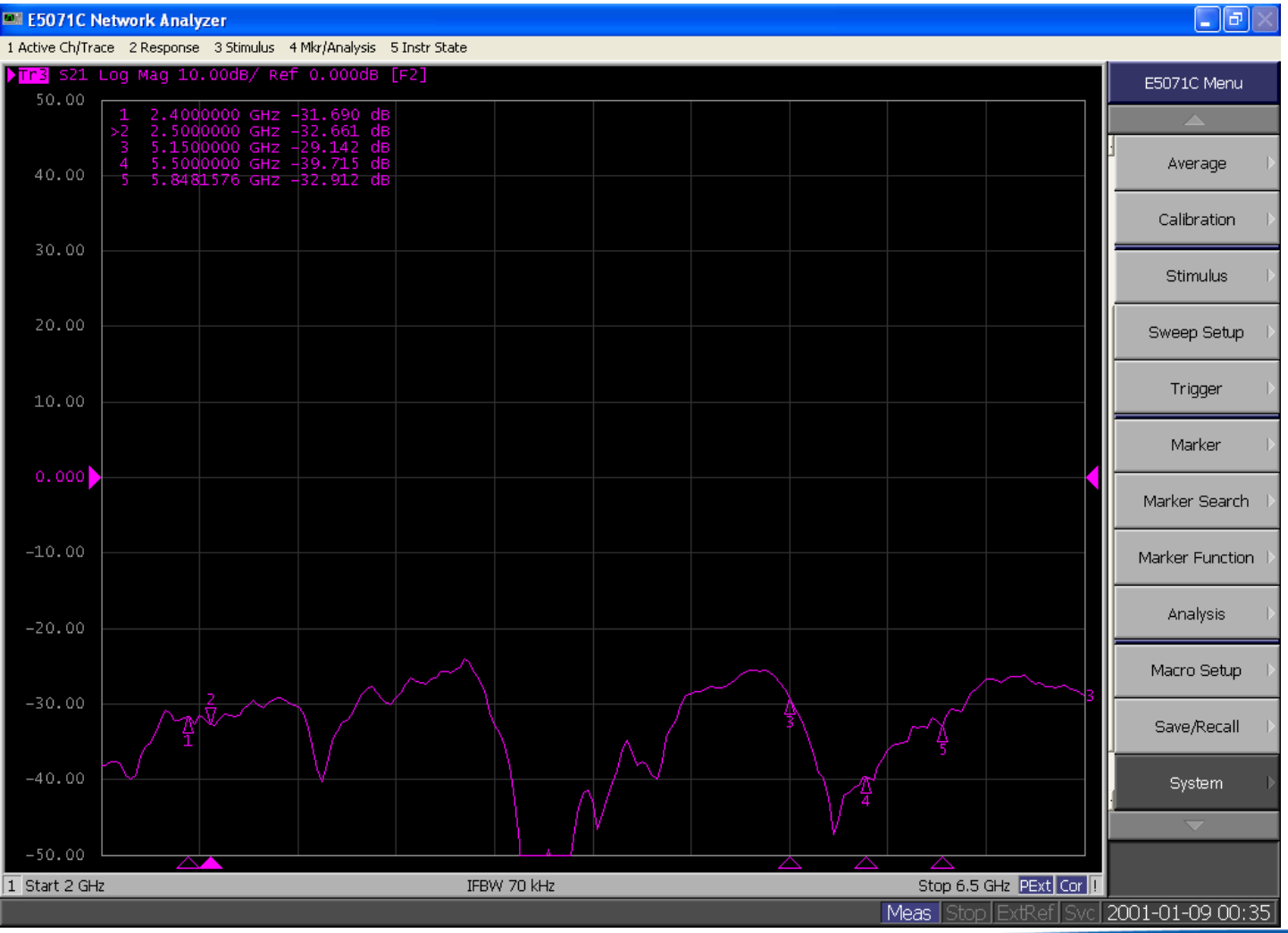
ANT2&ANT3

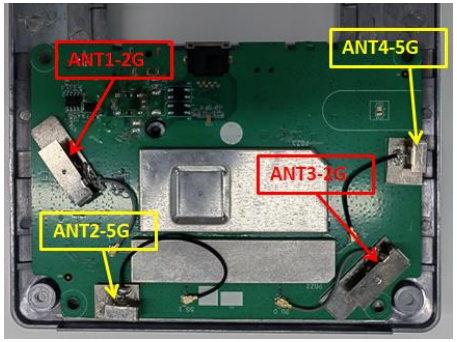




Isolation

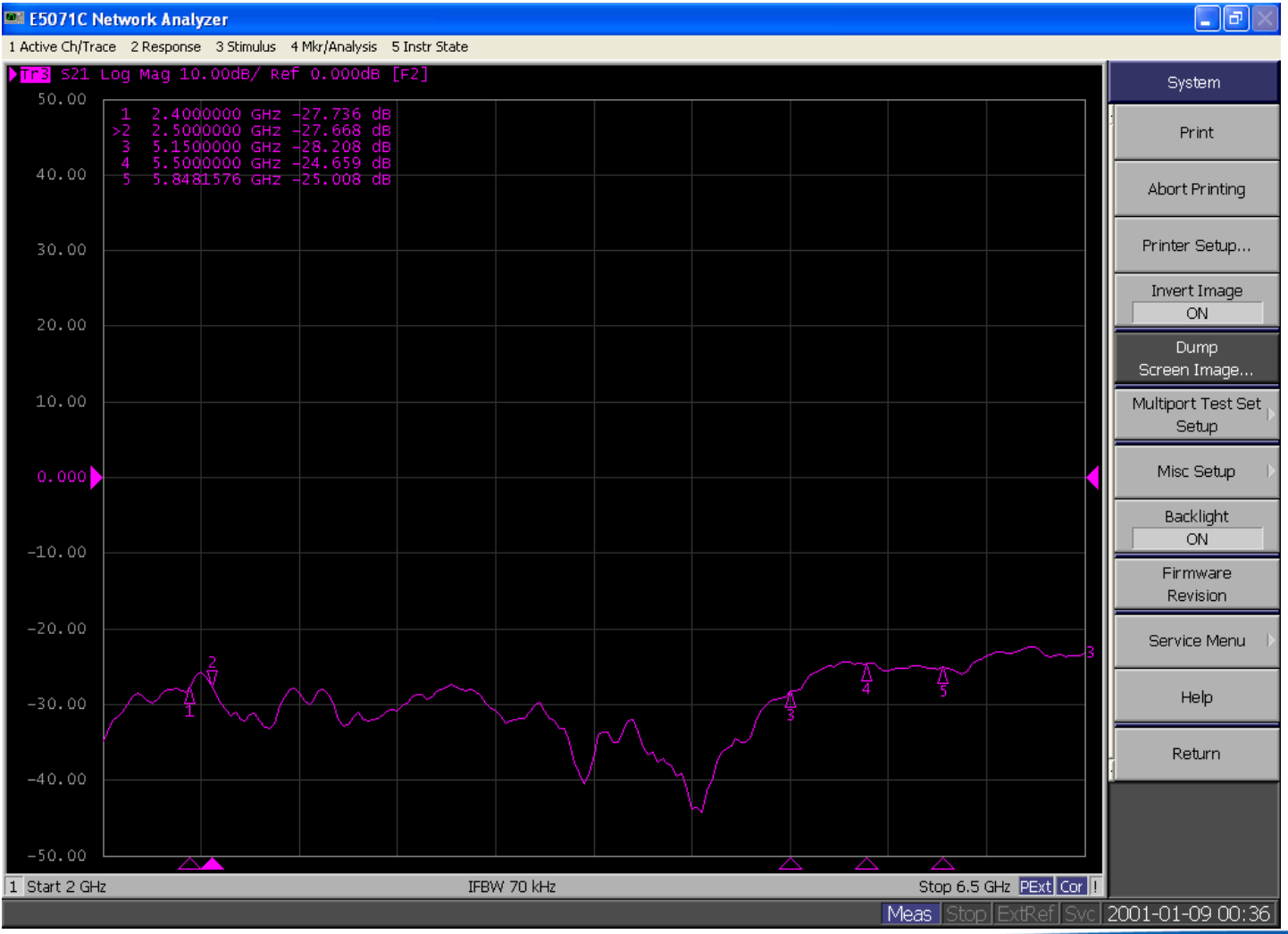
ANT2&ANT4

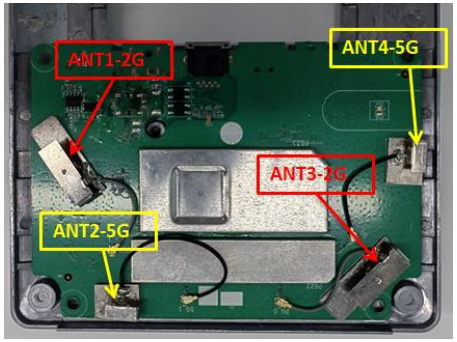




Isolation

ANT3&ANT4

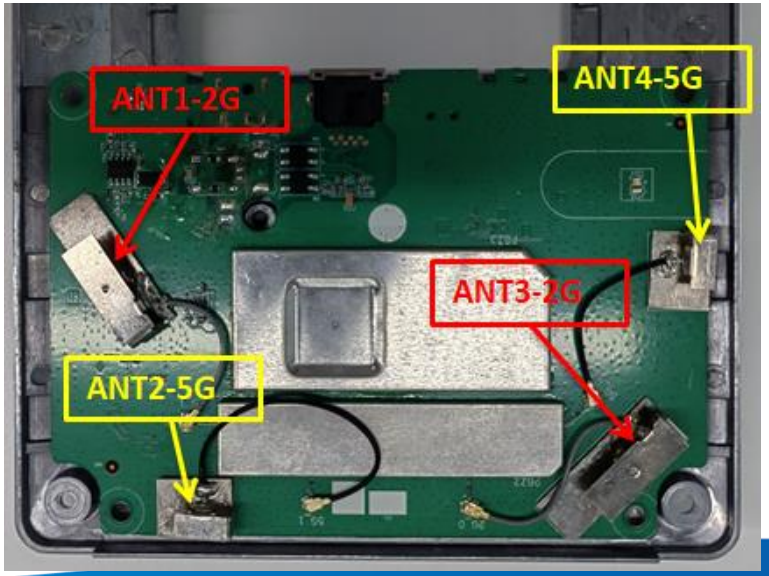




Return Loss and Isolation

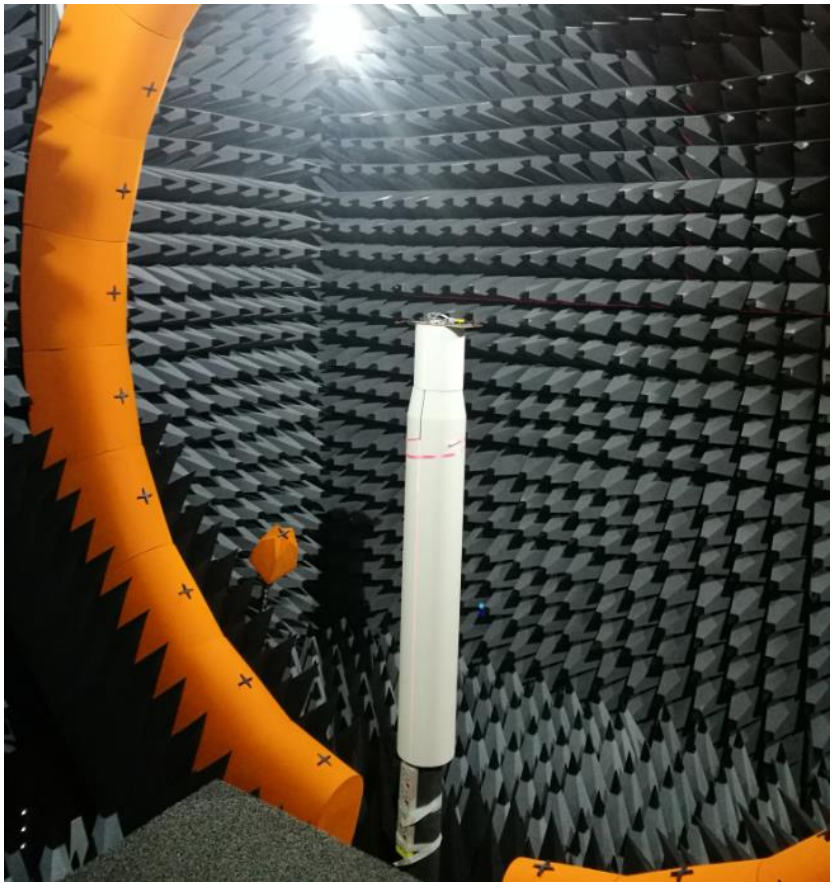
Test results

	Return loss		Isolation	
Frequency (GHz)	2.4-2.5GHz	5.15-5.85GHz	2.4-2.5GHz	5.15-5.85GHz
ANT1	<-15dB	NA	<-23dB	
ANT2	NA	<-14dB		
ANT3	<-19dB	NA		
ANT4	NA	<-14dB		



2D/3D Radiation pattern

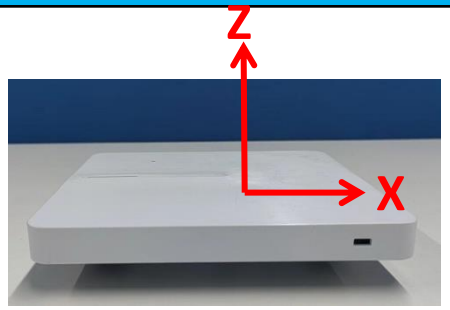
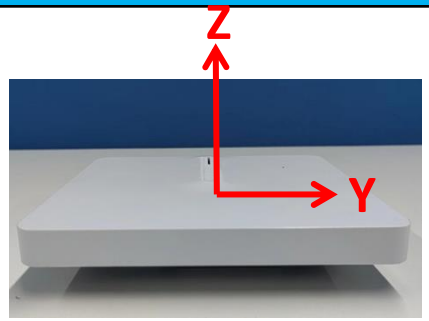
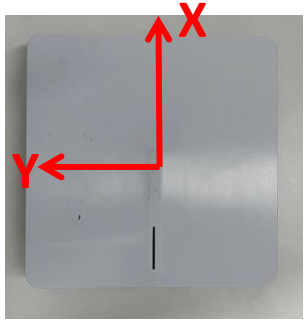
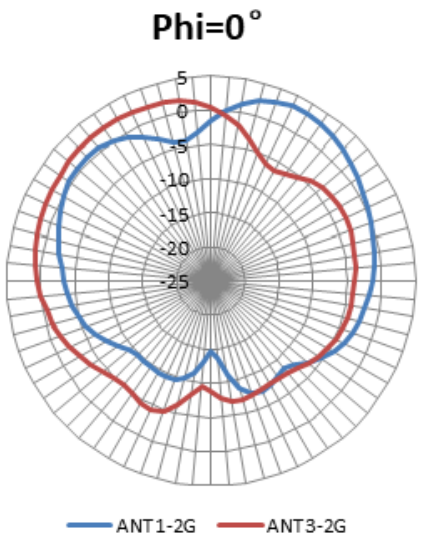
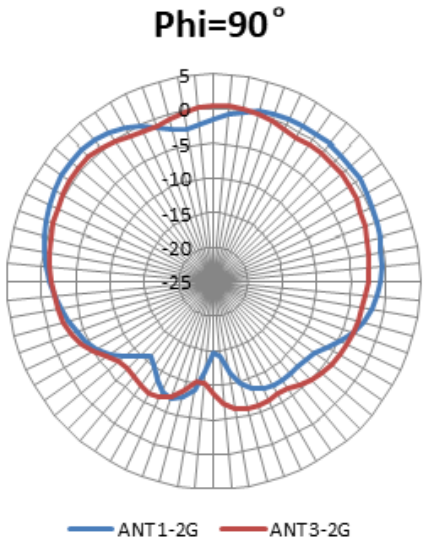
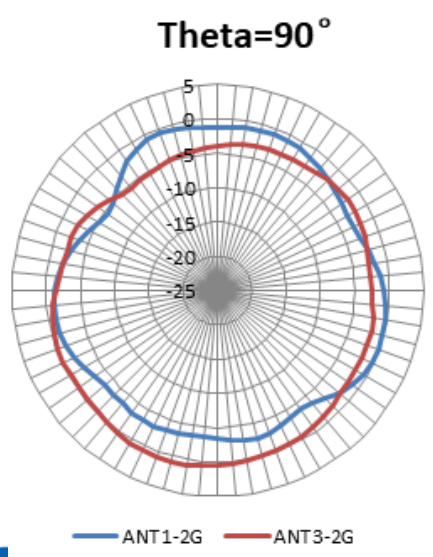
Test Condition



Microwave anechoic chamber

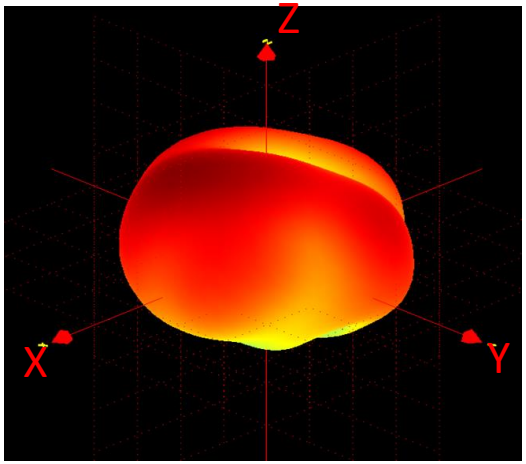
2D Radiation pattern 2.45GHz

ANT1+ANT2

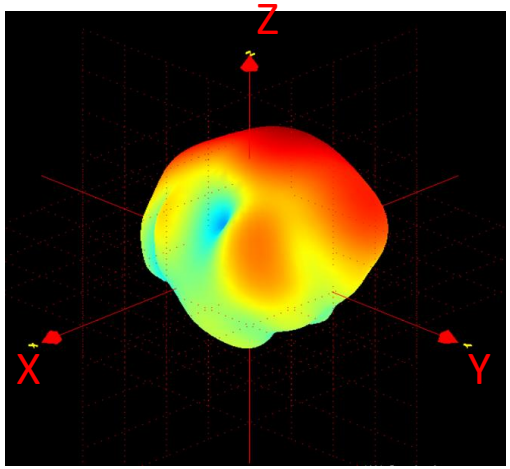
X-Z Plan	Y-Z Plan	X-Y Plan
		
		

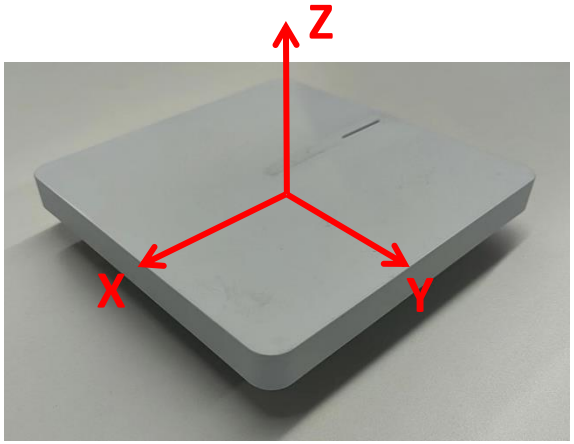
3D Radiation pattern 2.45GHz

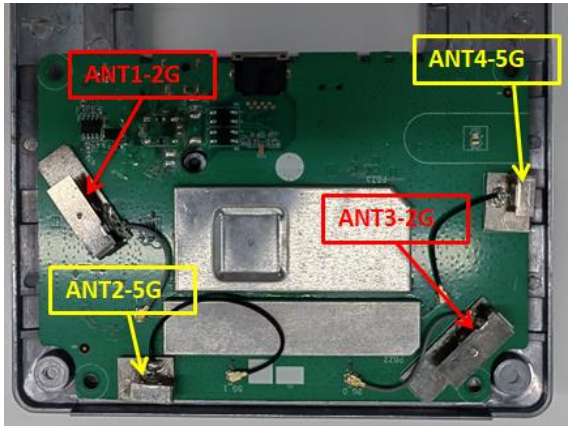
ANT1-2G



ANT3-2G

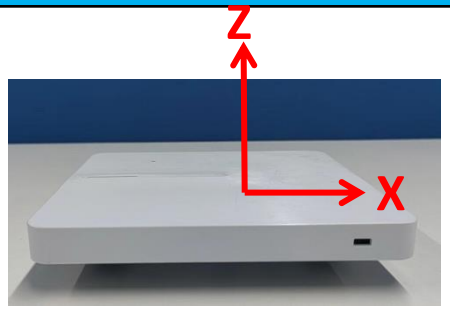
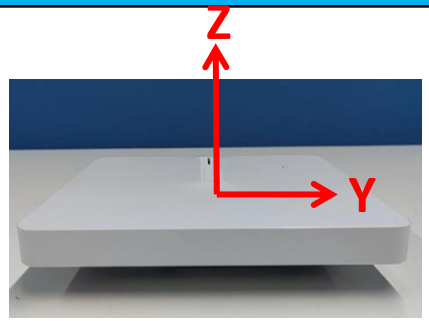
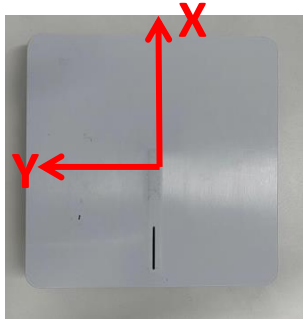
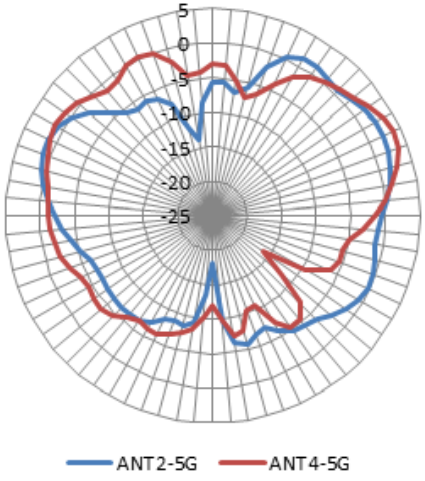
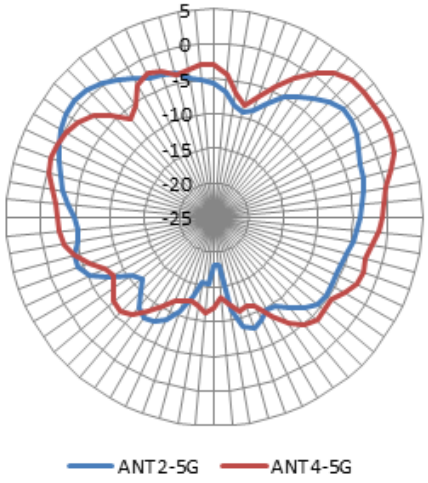
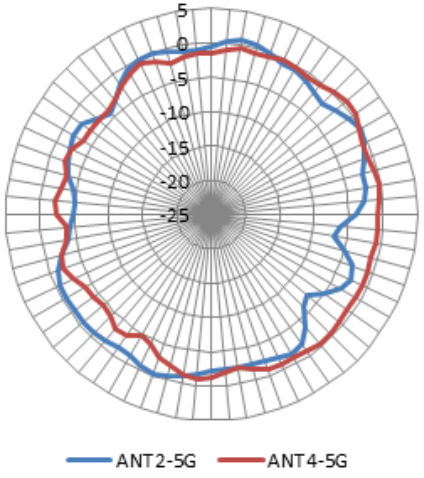






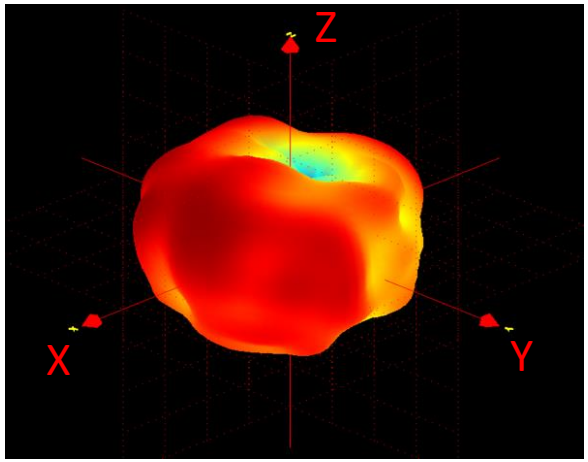
2D Radiation pattern 5GHz

ANT1+ANT2

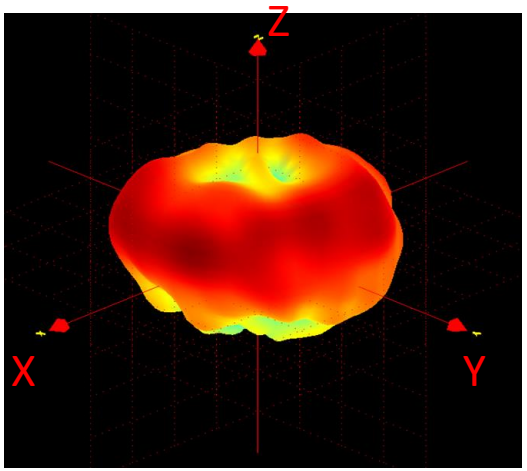
X-Z Plan	Y-Z Plan	X-Y Plan
		
Phi=0° 	Phi=90° 	Theta=90° 

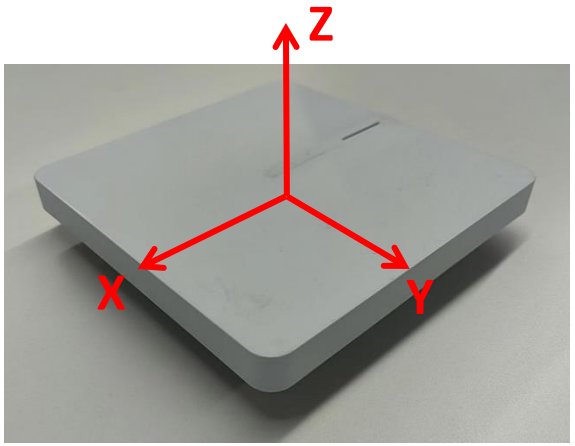
3D Radiation pattern 5GHz

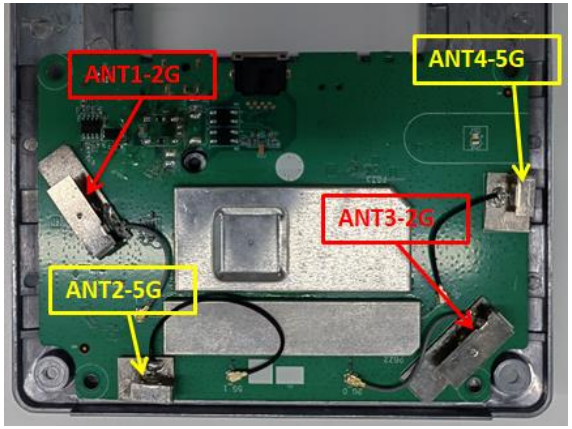
ANT2-5G



ANT4-5G







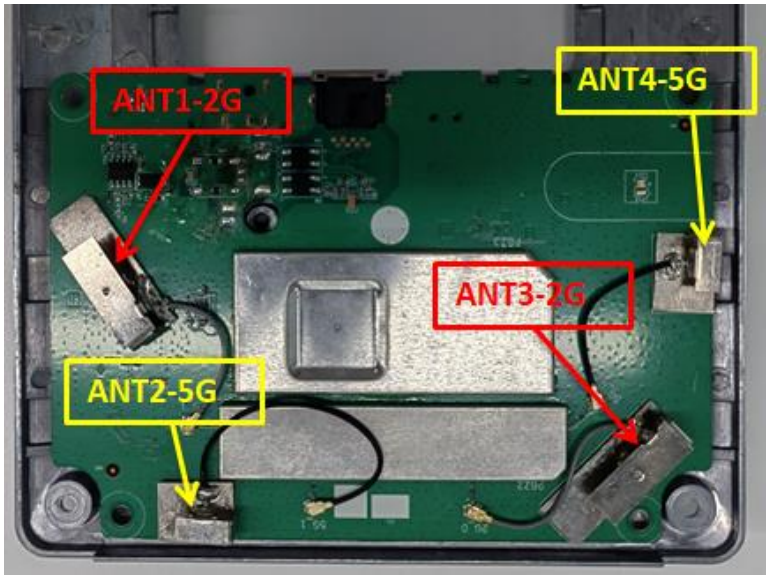
Efficiency and Peak Gain

	Frequency (GHz)	Gain(dB)	Efficiency(%)	Results
ANT1-2G	2.4	3.3	73.5	Pass
	2.5	3.6	75.6	Pass
ANT2-5G	5.15	3.8	72.7	Pass
	5.25	3.6	72.5	Pass
	5.35	3.6	71.8	Pass
	5.5	3.7	72.6	Pass
	5.6	3.9	72.1	Pass
	5.7	4.0	73.4	Pass
	5.85	4.2	73.9	Pass
ANT3-2G	2.4	3.1	73.1	Pass
	2.5	3.3	74.7	Pass
ANT4-5G	5.15	4.4	71.8	Pass
	5.25	4.5	71.7	Pass
	5.35	4.5	72.8	Pass
	5.5	4.7	73.6	Pass
	5.6	4.7	74.1	Pass
	5.7	4.6	75.2	Pass
	5.85	4.8	74.3	Pass

Summary

结论：

1. 天线 Return loss：2G＜-15dB，5G＜-14dB；
2. 天线Isolation＜-20dB；
3. 天线增益（peak gain）：2G：3~4dBi，5G：3.6~4.8dBi



T&W

Thanks!