



深圳市思讯通信技术有限公司

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Customer:	Golden Harvest
Project Name:	CA-7580B
Material Category:	BT Antenna + WIFI Antenna + NFC Antenna
Version:	V1.0
Date:	2024.6.22



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Change Record Column			
Date of Preparation/Change	Reason for change	Content of change	Version: 2024.6.22
2024.6.22	Initial release	First Release	V1.0



I: Passive Test Report

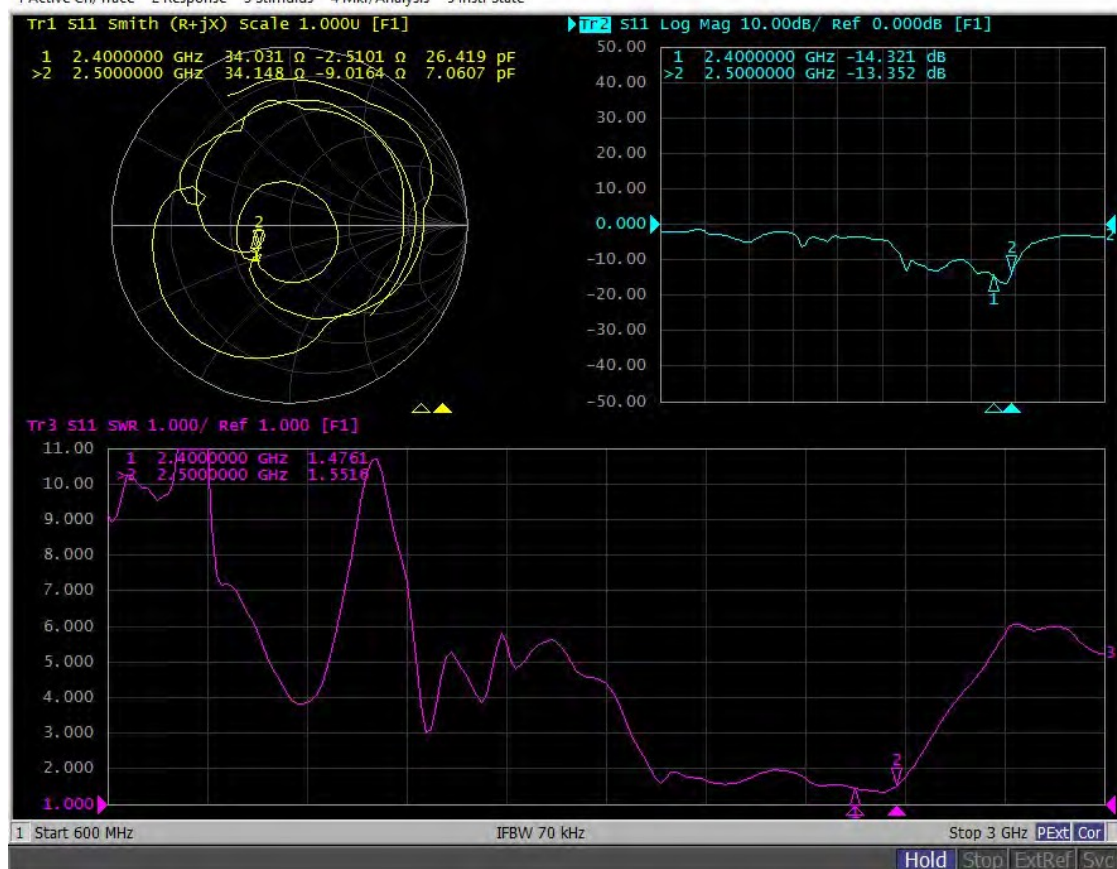


Agilent E5071C

BT Antenna S11 Parameters

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

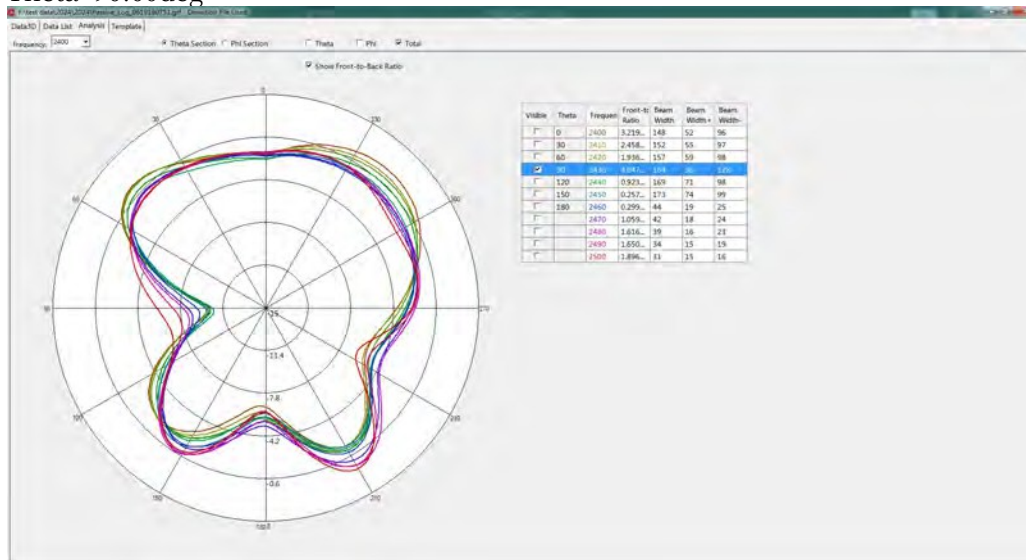




BT antenna efficiency and gain:

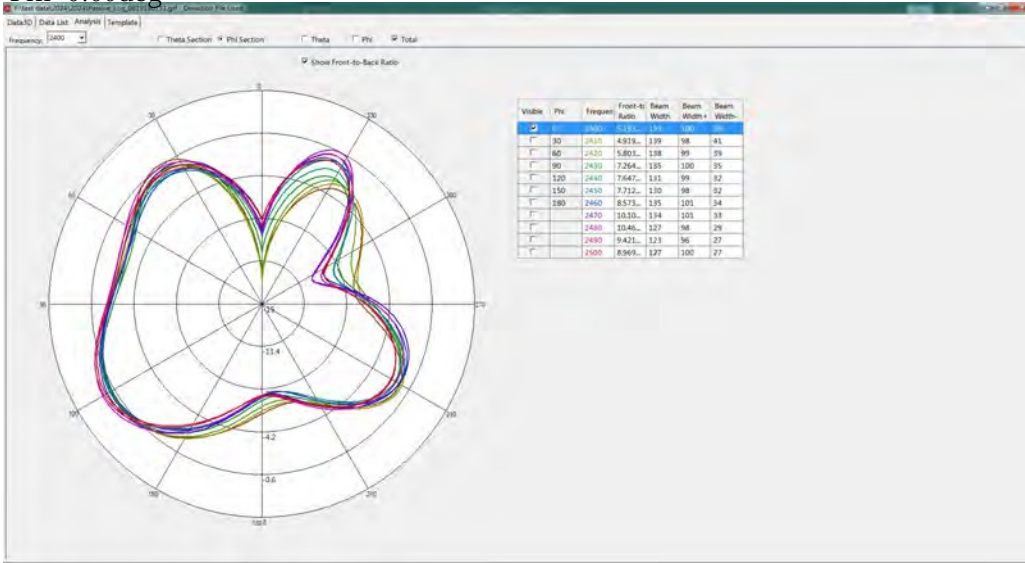
BT			
Frequency	Gain	Efficiency db	Efficiency
2400	0.5	-3.0	50.6
2410	0.3	-3.2	48.4
2420	0.2	-3.3	46.7
2430	0.4	-3.2	48.2
2440	0.5	-3.2	47.6
2450	0.7	-2.9	51.3
2460	0.6	-2.7	54.1
2470	0.4	-2.9	51.3
2480	0.6	-3.0	50.3
Average	0.5	-3.0	49.8

BT Antenna 2D
Orientation Diagram
Theta=90.00deg

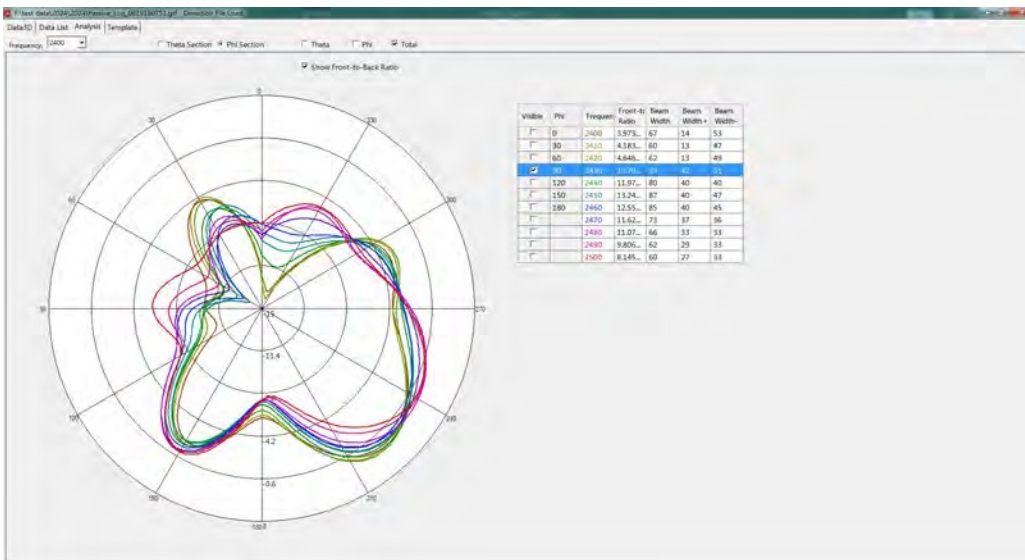




Phi=0.00deg



Phi=90.00deg





WIFI Antenna S11 Specifications

E5071C Network Analyzer

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

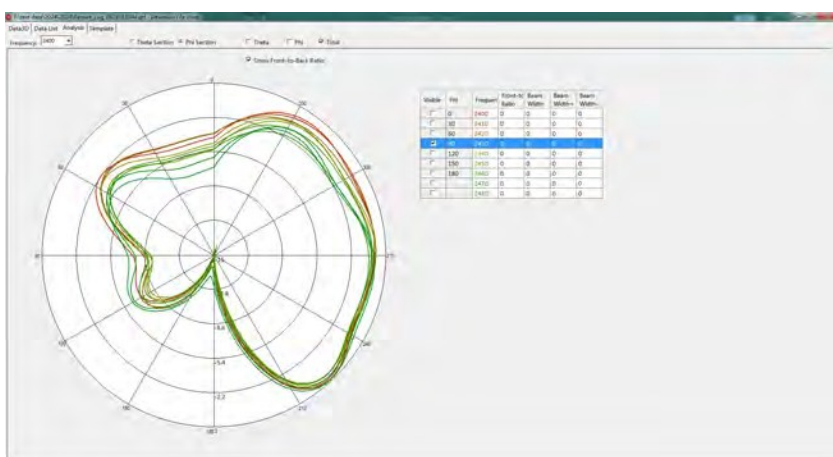
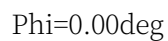


WIFI antenna efficiency and gain:

WIFI							
Frequency	Gain	Efficiency db	Efficiency %	Frequency	Gain	Efficiency db	Efficiency
2400	0.4	-3.1	49.5	5150	3.5	-3.7	43.0
2410	0.4	-3.1	49.0	5200	2.9	-4.0	39.8
2420	0.3	-3.2	48.0	5250	2.7	-3.8	41.4
2430	0.1	-3.4	45.4	5300	2.7	-3.5	44.9
2440	-0.2	-3.6	43.3	5350	2.6	-3.7	42.3
2450	-0.1	-3.6	43.7	5400	1.9	-3.9	41.1
2460	-0.5	-3.8	41.7	5450	1.6	-4.0	39.5
2470	0.0	-3.5	44.4	5500	2.9	-3.5	44.5
2480	0.5	-3.2	47.3	5550	2.3	-3.8	41.9
Mean	0.1	-3.4	45.8	5600	2.0	-4.1	38.7
				5650	2.4	-3.8	41.4
				5700	2.4	-3.7	42.2
				5750	2.7	-3.7	42.4
				5800	2.4	-3.6	43.5
				43.5	2.6	-3.6	44.1
				Average	2.5	-3.8	42.0



Theta=90.00deg



[illegible]

Gain	Phase	Frequency	Gain	Phase	Frequency	Gain	Phase
0	0	0.000	0.000	0	0.000	0.000	0
1	0	0.001	0.001	0	0.001	0.001	0
2	0	0.002	0.002	0	0.002	0.002	0
3	0	0.003	0.003	0	0.003	0.003	0
4	0	0.004	0.004	0	0.004	0.004	0
5	0	0.005	0.005	0	0.005	0.005	0
6	0	0.006	0.006	0	0.006	0.006	0
7	0	0.007	0.007	0	0.007	0.007	0
8	0	0.008	0.008	0	0.008	0.008	0
9	0	0.009	0.009	0	0.009	0.009	0
10	0	0.010	0.010	0	0.010	0.010	0
11	0	0.011	0.011	0	0.011	0.011	0
12	0	0.012	0.012	0	0.012	0.012	0
13	0	0.013	0.013	0	0.013	0.013	0
14	0	0.014	0.014	0	0.014	0.014	0
15	0	0.015	0.015	0	0.015	0.015	0
16	0	0.016	0.016	0	0.016	0.016	0
17	0	0.017	0.017	0	0.017	0.017	0
18	0	0.018	0.018	0	0.018	0.018	0
19	0	0.019	0.019	0	0.019	0.019	0
20	0	0.020	0.020	0	0.020	0.020	0
21	0	0.021	0.021	0	0.021	0.021	0
22	0	0.022	0.022	0	0.022	0.022	0
23	0	0.023	0.023	0	0.023	0.023	0
24	0	0.024	0.024	0	0.024	0.024	0
25	0	0.025	0.025	0	0.025	0.025	0
26	0	0.026	0.026	0	0.026	0.026	0
27	0	0.027	0.027	0	0.027	0.027	0
28	0	0.028	0.028	0	0.028	0.028	0
29	0	0.029	0.029	0	0.029	0.029	0
30	0	0.030	0.030	0	0.030	0.030	0
31	0	0.031	0.031	0	0.031	0.031	0
32	0	0.032	0.032	0	0.032	0.032	0
33	0	0.033	0.033	0	0.033	0.033	0
34	0	0.034	0.034	0	0.034	0.034	0
35	0	0.035	0.035	0	0.035	0.035	0
36	0	0.036	0.036	0	0.036	0.036	0
37	0	0.037	0.037	0	0.037	0.037	0
38	0	0.038	0.038	0	0.038	0.038	0
39	0	0.039	0.039	0	0.039	0.039	0
40	0	0.040	0.040	0	0.040	0.040	0
41	0	0.041	0.041	0	0.041	0.041	0
42	0	0.042	0.042	0	0.042	0.042	0
43	0	0.043	0.043	0	0.043	0.043	0
44	0	0.044	0.044	0	0.044	0.044	0
45	0	0.045	0.045	0	0.045	0.045	0
46	0	0.046	0.046	0	0.046	0.046	0
47	0	0.047	0.047	0	0.047	0.047	0
48	0	0.048	0.048	0			

Figure 10 is a polar plot showing the magnitude response of a 10th-order Butterworth low-pass filter. The plot displays multiple curves for different frequencies, with the magnitude decreasing as frequency increases. The plot is overlaid on a grid with radial lines at 30-degree intervals and concentric circles representing magnitude levels. A table on the right lists the frequency, magnitude, and phase for each curve.

Order	Freq	Magnitude	Phase
1	1.000	1.000	0.00
2	1.000	1.000	0.00
3	1.000	1.000	0.00
4	1.000	1.000	0.00
5	1.000	1.000	0.00
6	1.000	1.000	0.00
7	1.000	1.000	0.00
8	1.000	1.000	0.00
9	1.000	1.000	0.00
10	1.000	1.000	0.00



II: Antenna Darkroom

Data

	Channel	TRP (dBm)	TIS (dBm)
TIS (dBm)	CH 0	8.2	-TIS (dBm)
	CH 39	8.3	-92.6
	CH 78	7.6	-92.2

54M	Channel	TRP (dBm)	TIS (dBm)
WIFI A	CH 1	4.2	-TIS (dBm)
	CH 6	5.4	CH 6 5.4 -71.5
	CH 11	4.4	-70.7

11M	Channel	TRP (dBm)	TIS (dBm)
WIFI B	CH 1	-4.2	-84.1
	CH 6	CH 6 -4.3	-84.9
	CH 11	-4.6	-84.6

NFC distance test:

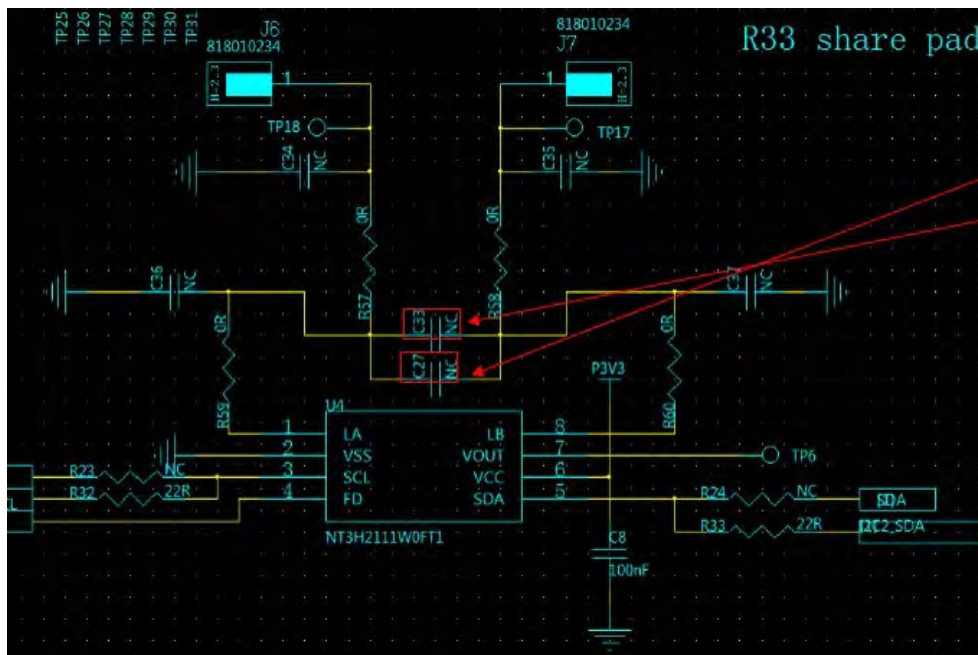


OTA Standard Chamber



III: NFC Antenna Matching

Circuit



Element	Value
C27	10Pf
C33	33PF
R57	0 Ω
R58	0 Ω
R59	0 Ω
R60	0 Ω
C34	N/A
C35	N/A
C36	N/A
C37	N/A



IV: Structure

