



Antenna Part Specification

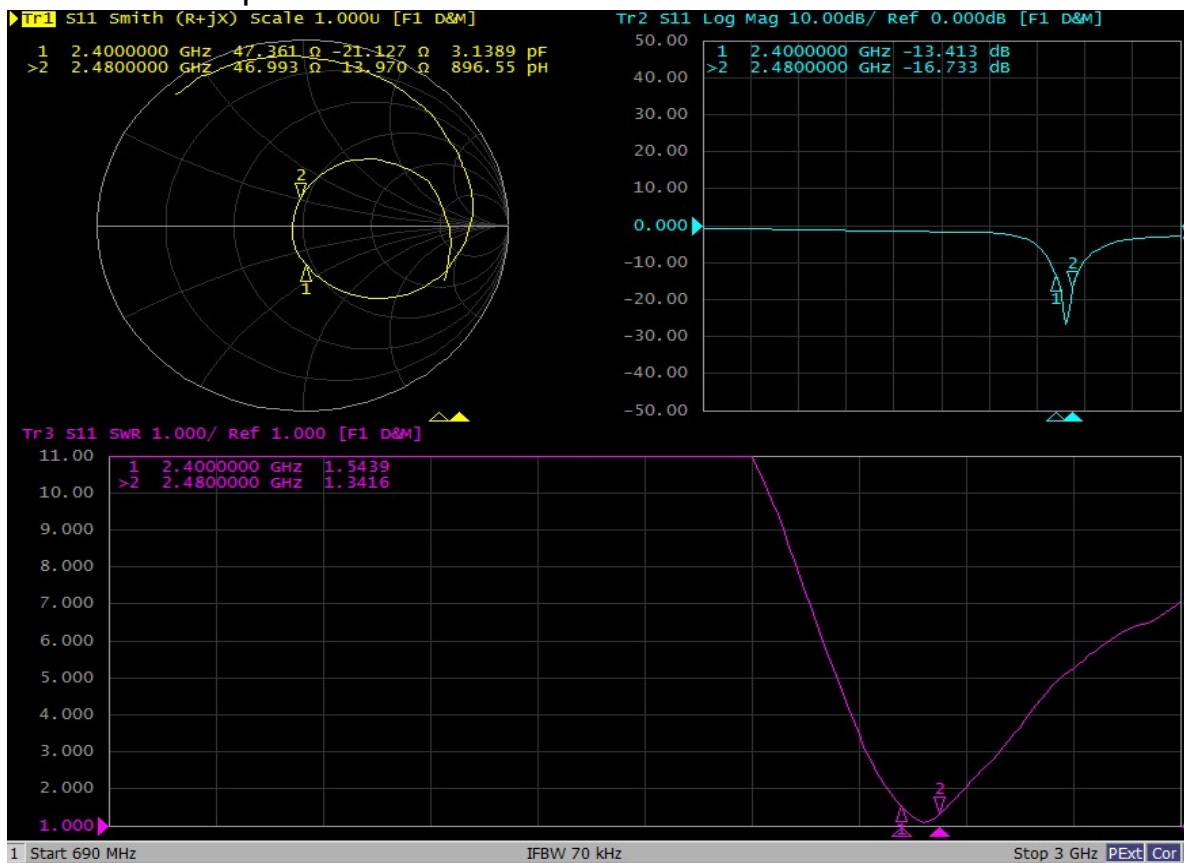
Customer name:	Tianjian
Project name:	LE Audio Dongle
Material category:	BT antenna
Version:	V2.0
Date:	2024.1.20

1: The report of passive data



Angilent E5071C

Antenna S11 parameters



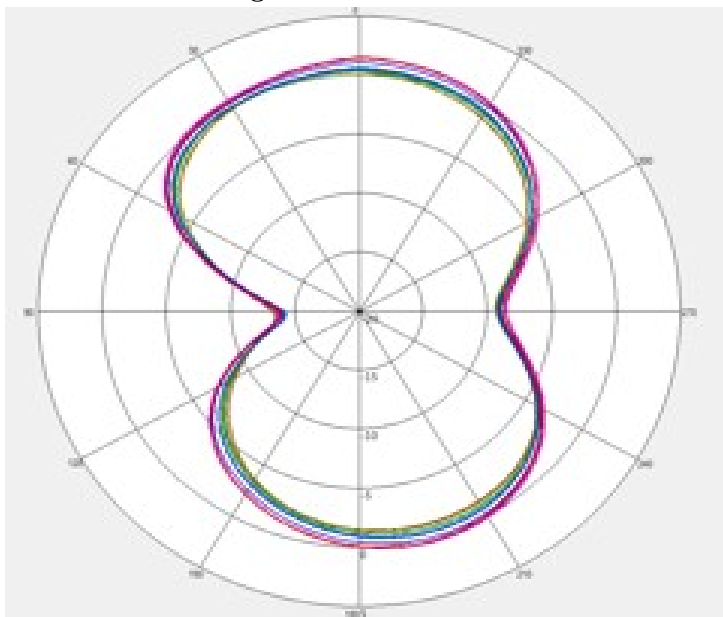
Antenna efficiency and gain:

dongle PIFA				
Freq. MHz	Directivity D	Gain	efficiency db	efficiency %
2400	3.41	1.42	-1.99	63.24
2410	3.47	1.61	-1.85	65.27
2420	3.39	1.66	-1.73	67.21
2430	3.32	1.55	-1.77	66.47
2440	3.32	1.48	-1.85	65.34
2450	3.24	1.53	-1.71	67.48
2460	3.10	1.34	-1.76	66.69
2470	3.01	1.55	-1.46	71.48
2480	2.96	1.70	-1.26	74.83
AVG	3.25	1.54	-1.71	67.56

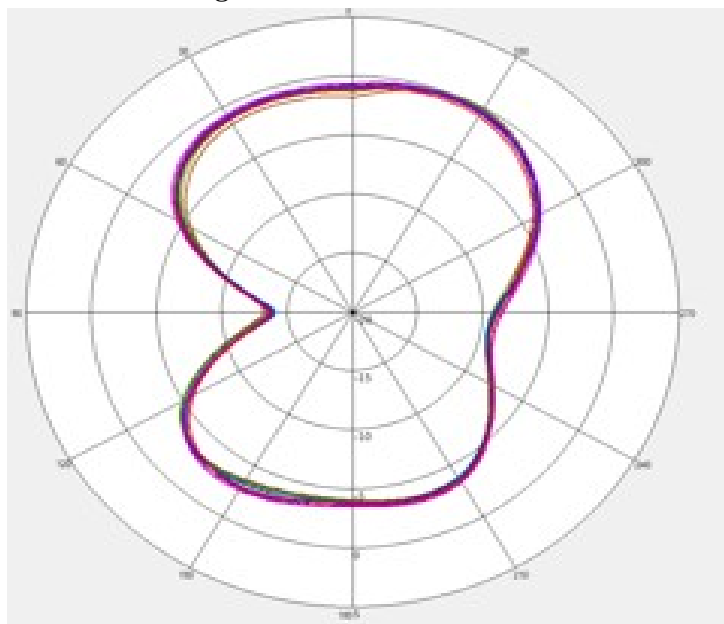
Connect to Samsung S22 PIFA				
Freq. MHz	Directivity D	Gain	efficiency db	efficiency %
2400	3.63	-0.71	-4.33	36.88
2410	3.45	-0.59	-4.04	39.45
2420	3.31	-0.57	-3.89	40.87
2430	3.35	-0.62	-3.97	40.11
2440	3.32	-0.71	-4.02	39.60
2450	3.21	-0.61	-3.82	41.48
2460	3.15	-0.83	-3.98	40.00
2470	3.20	-0.63	-3.83	41.43
2480	3.11	-0.59	-3.70	42.65
AVG	3.30	-0.65	-3.95	40.27

Antenna passive pattern (Single Dongle):

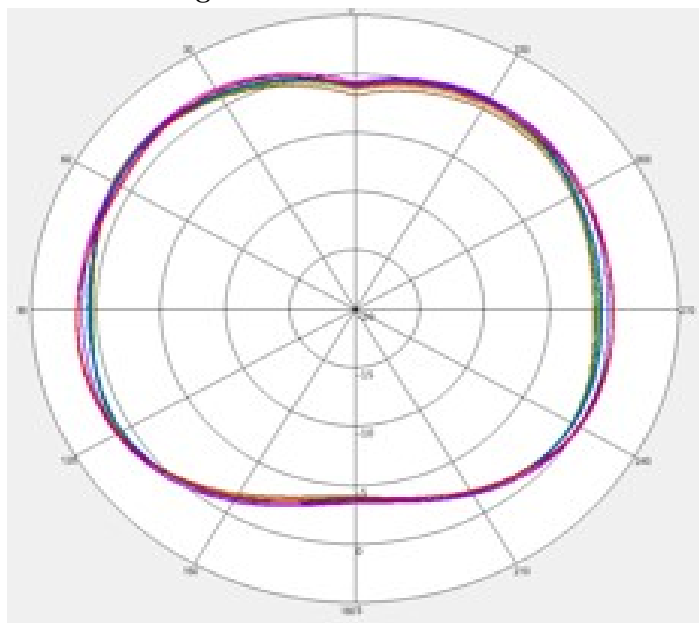
Theta=90.00deg



Phi=90.00deg

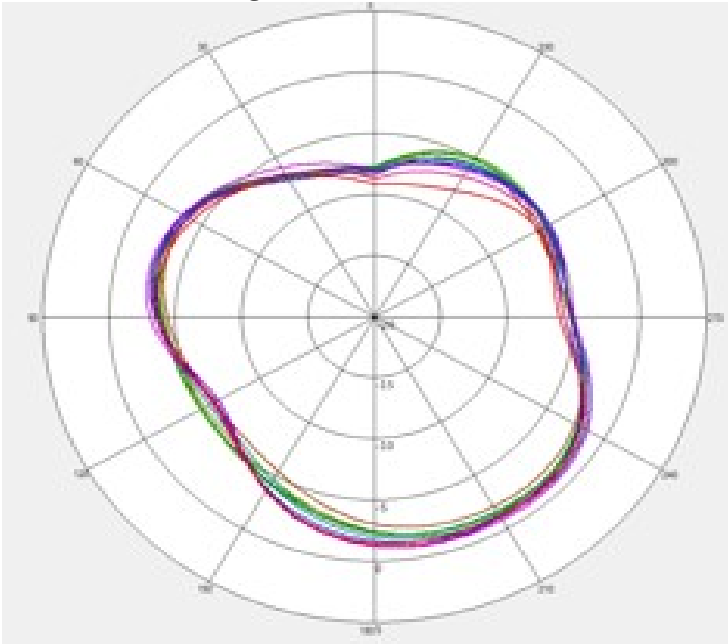


Phi=0.00deg

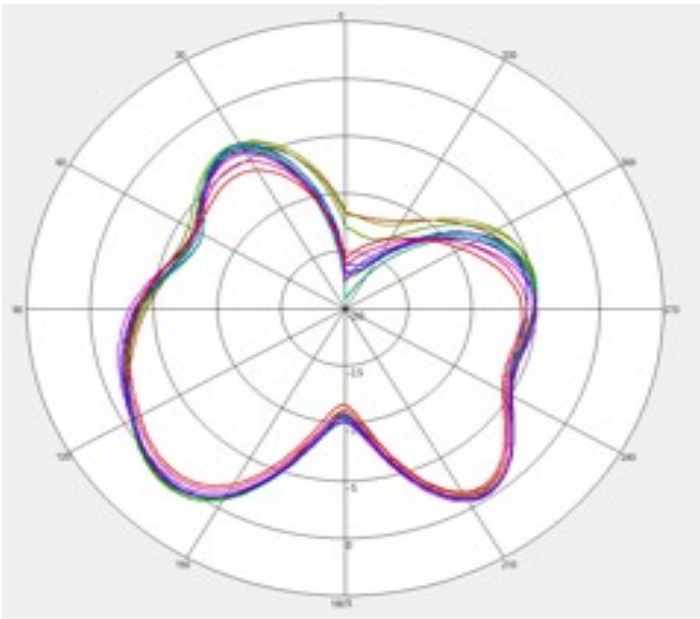


Antenna passive direction diagram (Dongle connected to Samsung S22):

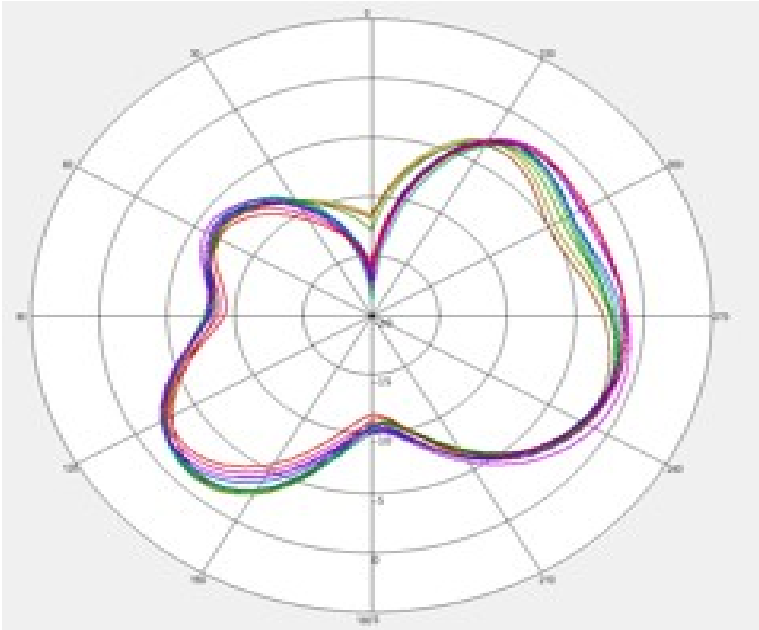
Theta=90.00deg



Phi=90.00deg



Phi=0.00deg



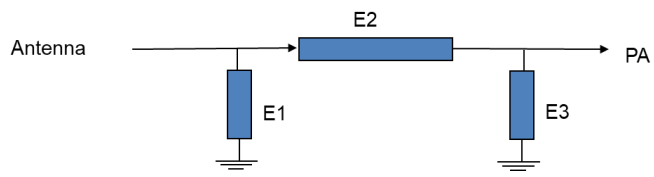
2: Antenna 3D darkroom data

1M PHY						
S22	Channel	TRP (dBm)	TIS (dBm)	EIRP (dBm)	EIS (dBm)	D
2.4G	0	12.1	-96.3	17.5	-101.7	5.4
	20	11.7	-97.6	16.8	-102.1	5.1
	39	11.3	-97.5	16.7	-103.0	5.5
2M PHY						
	Channel	TRP (dBm)	TIS (dBm)	EIRP (dBm)	EIS (dBm)	D
	0	12.0	-94.6	17.6	-98.6	5.5
	20	11.7	-95.8	17.6	-101.7	5.9
	39	11.3	-95.4	17.1	-101.3	5.9



OTA Standard Chamber

3: Matching circuit



Element	Value
E1(0201)	ESD
E2(0201)	100pF
E3(0201)	N/A

4: Structure drawing file

