



Antenna Specification

Client:	Cosonic
Model:	TONE-T90S-Ant
Project:	BT Antenna
Ant. Type:	monopole
Version:	V1.0
Date:	2023.06.19

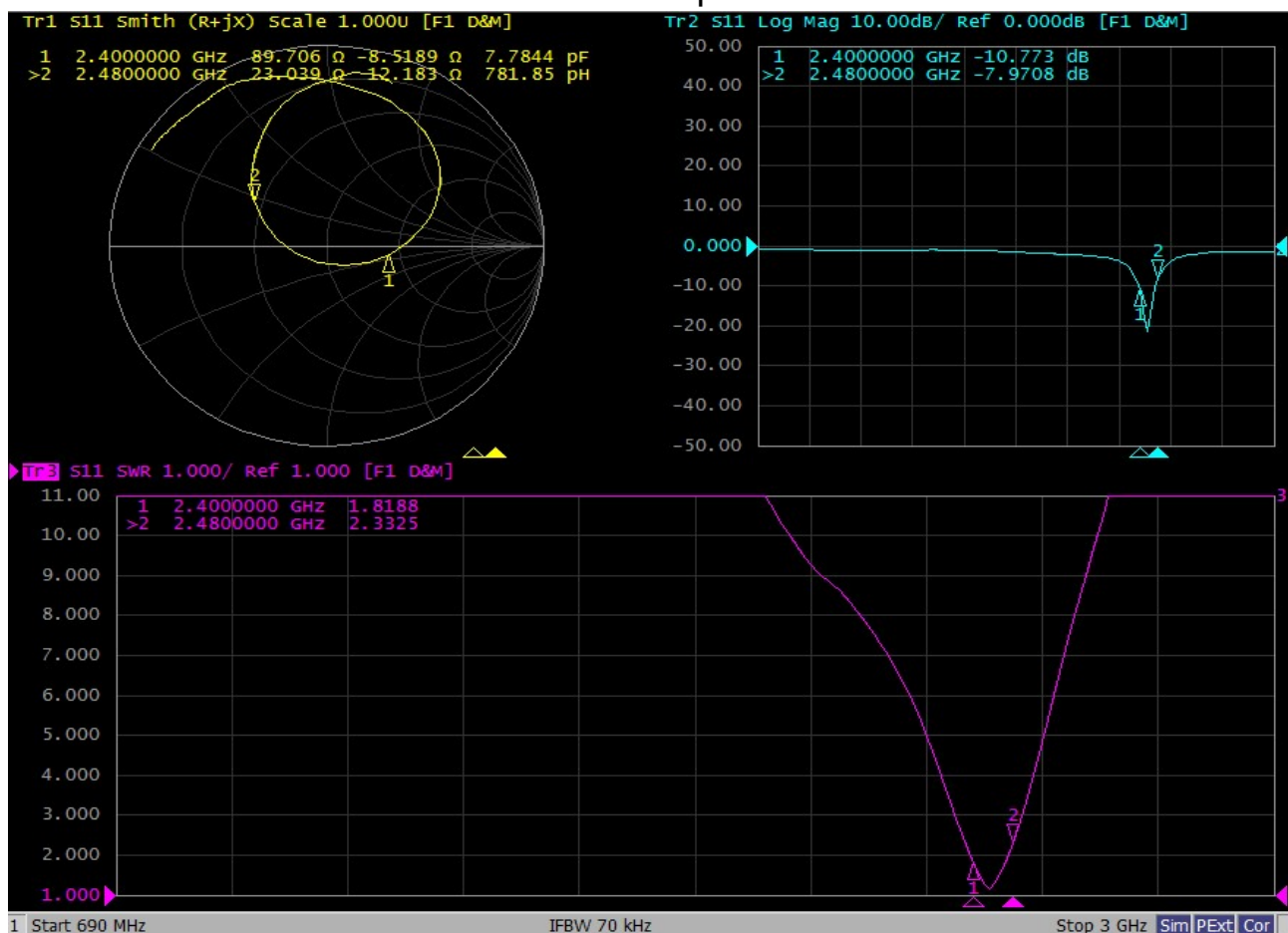


一: Passive test report



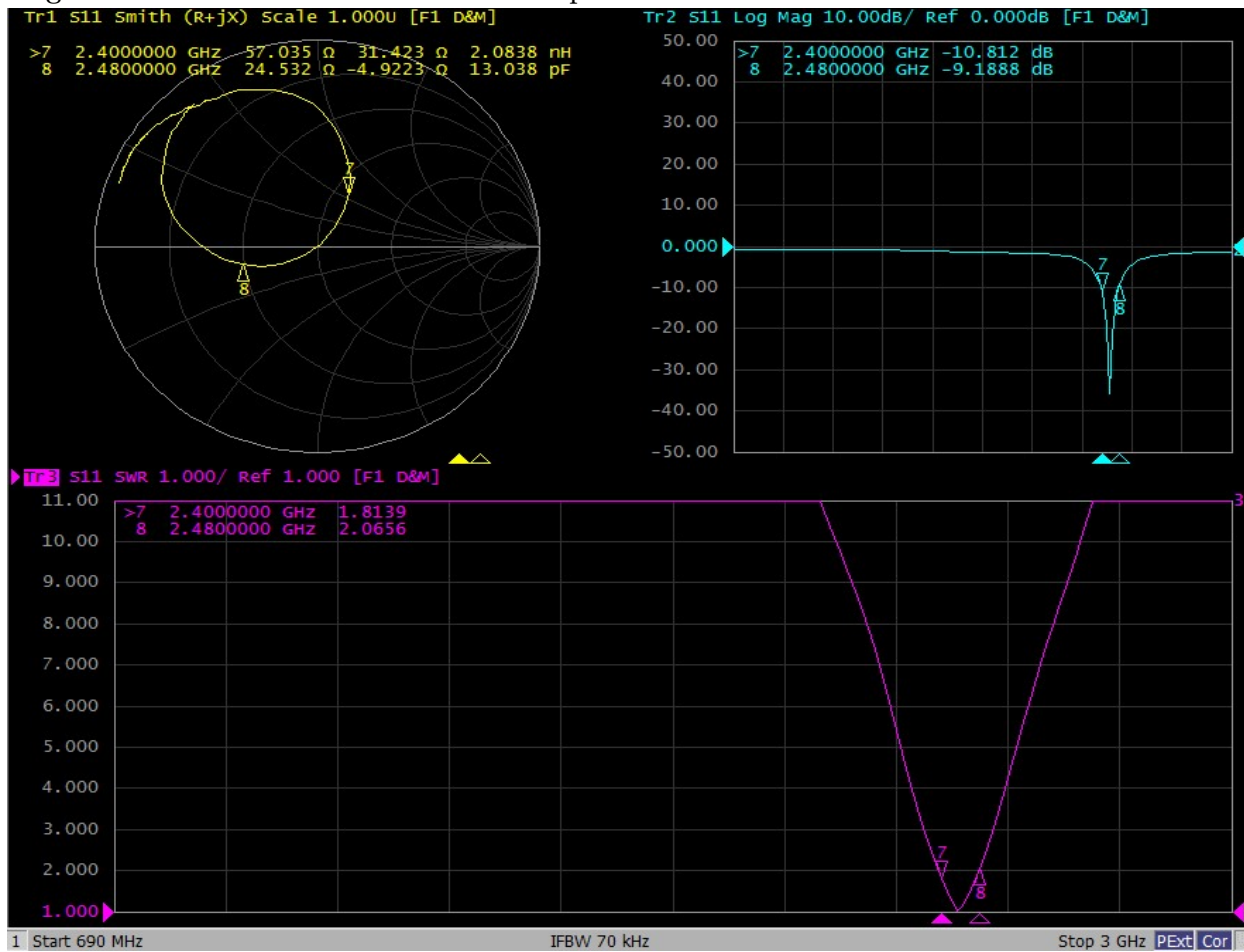
Angilent E5071C

Left Earbuds BT Antenna S11 parameter





Right Earbuds BT Antenna S11 parameter



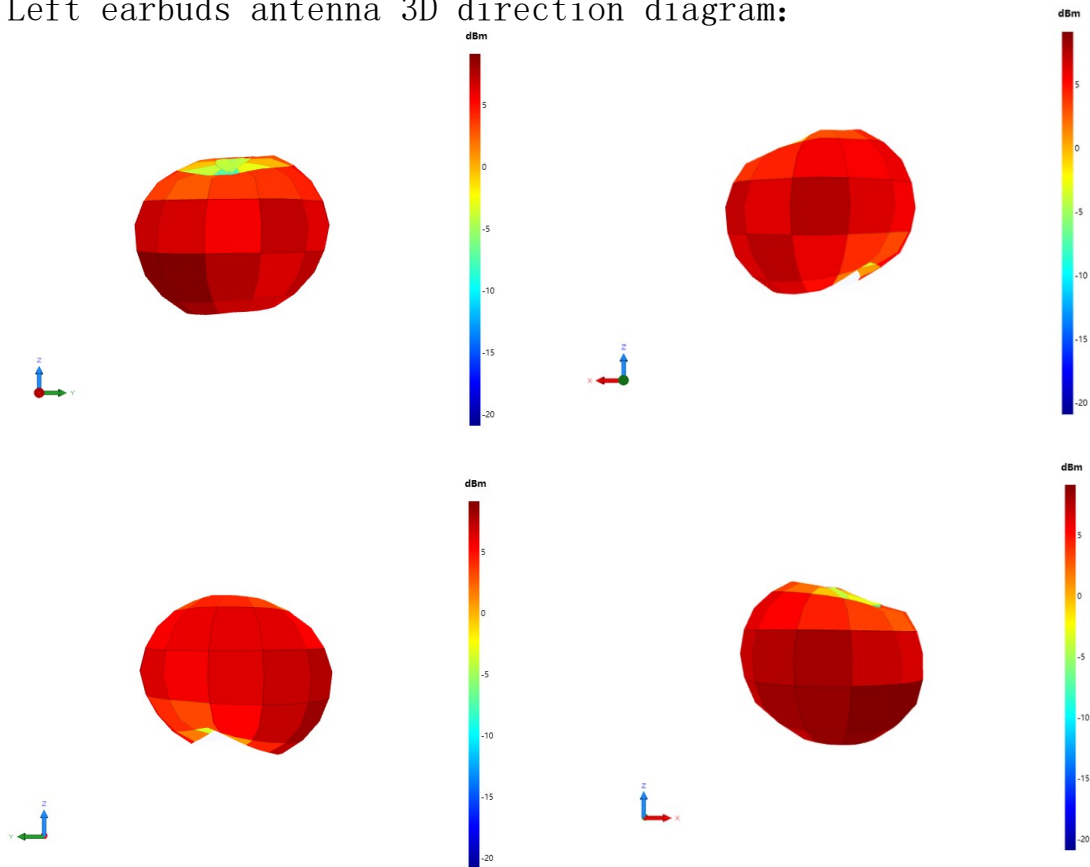
BT Antenna efficiency and gain:

Left			
Frequency MHz	Gain(dBi)	efficiency(dB)	efficiency (%)
2400	-3.41	-7.58	17.44
2410	-2.86	-7.19	19.09
2420	-2.57	-6.91	20.37
2430	-2.16	-6.62	21.75
2440	-2.00	-6.67	21.50
2450	-1.79	-6.56	22.07
2460	-1.84	-6.69	21.43
2470	-2.52	-7.32	18.53
2480	-3.28	-7.60	17.38
Ave.	-2.5	-7.0	20.0

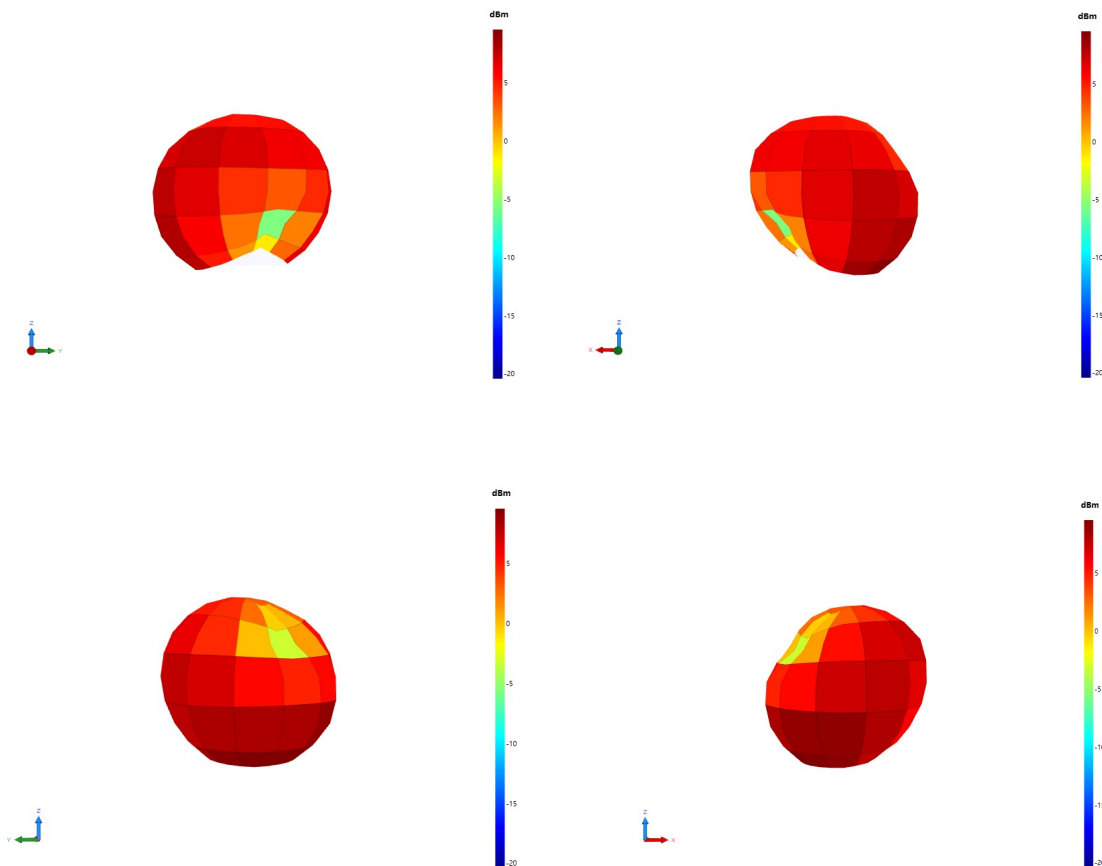
Right			
Frequency MHz	Gain(dBi)	efficiency(dB)	efficiency (%)
2400	-3.27	-7.52	17.72
2410	-3.03	-7.02	19.88
2420	-2.55	-6.74	21.17
2430	-2.46	-6.61	21.84
2440	-1.99	-6.41	22.84
2450	-1.97	-6.52	22.27
2460	-1.78	-6.42	22.80
2470	-1.78	-6.51	22.35
2480	-2.40	-7.07	19.65
Ave.	-2.4	-6.8	21.2



Left earbuds antenna 3D direction diagram:



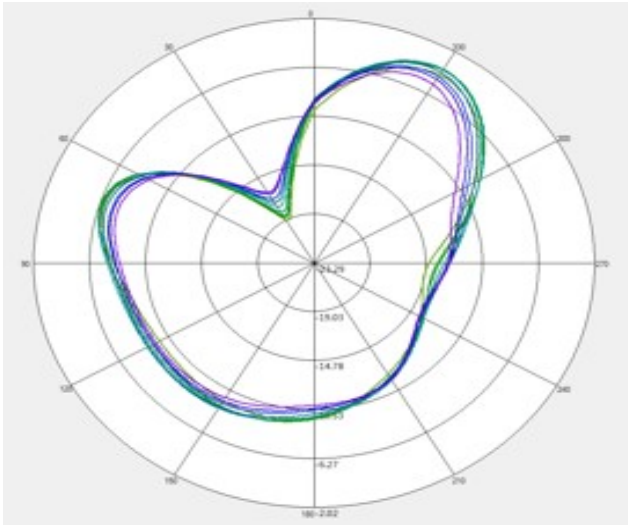
Right earbuds antenna 3D direction diagram:



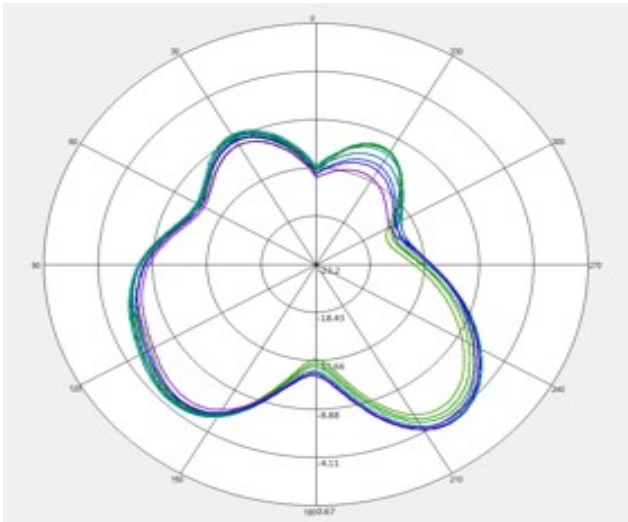


Left earbuds antenna 2D direction diagram:

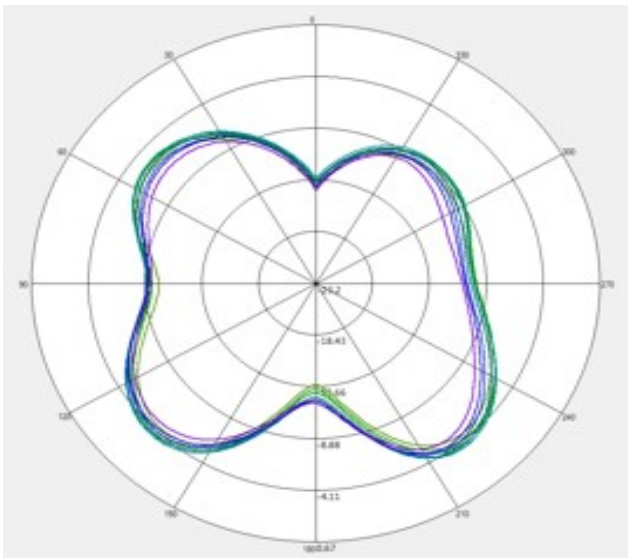
Theta=90.00deg



Phi=90.00deg



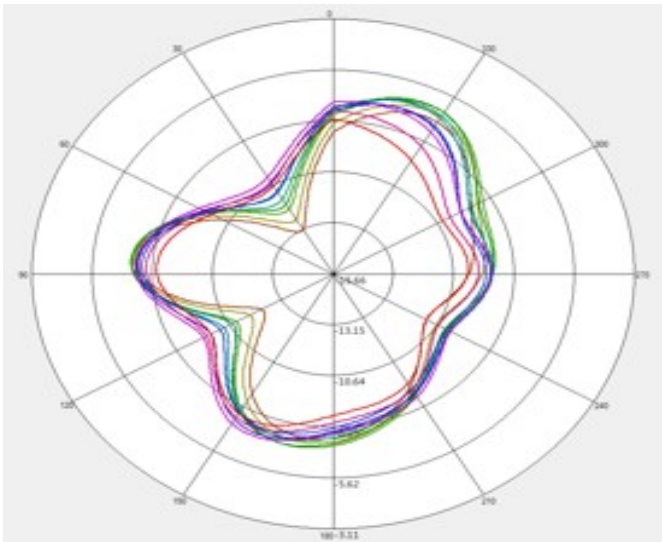
Phi=0.00deg



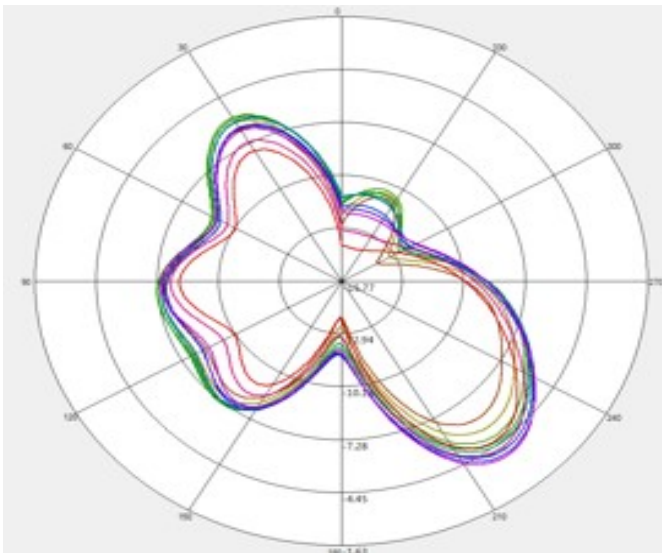


Right earbuds antenna 2D direction diagram

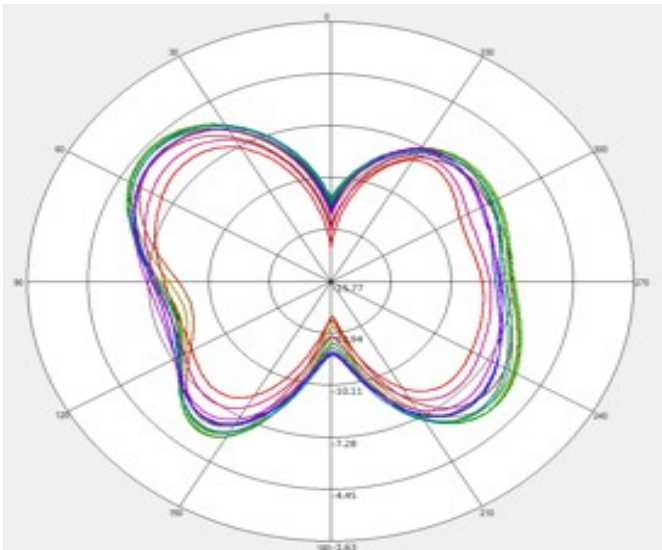
Theta=90.00deg



Phi=90.00deg



Phi=0.00deg





二: BT Antenna 3D OTA Data

Free space	Channel	TRP (dBm)	TIS (dBm)
L	CH 0	6.2	-88.5
	CH 39	6.4	-89.8
	CH 78	5.7	-89.1

Free space	Channel	TRP (dBm)	TIS (dBm)
R	CH 0	6.0	-89.4
	CH 39	6.6	-90.2
	CH 78	6.4	-89.8

Head	Channel	TRP (dBm)	TIS (dBm)
L	CH 0	1.1	-83.8
	CH 39	0.7	-84.1
	CH 78	0.2	-83.0

Head	Channel	TRP (dBm)	TIS (dBm)
R	CH 0	0.6	-83.4
	CH 39	1.0	-84.3
	CH 78	0.8	-84.0



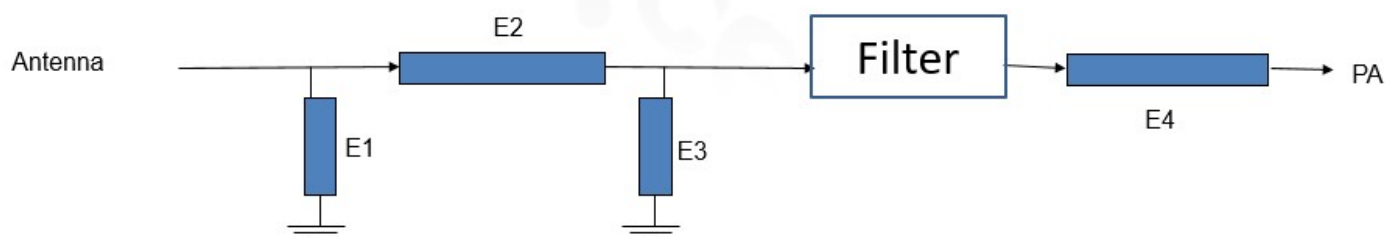
OTA Standard Chamber



三: Match Circuit

Left Earbuds:

Element	Value
E1(0201)	1.5nH
E2(0201)	0Ω
E3(0201)	N/A
E4(0201)	0Ω



Right Earbuds

Element	Value
E1(0201)	1.5nH
E2(0201)	0Ω
E3(0201)	N/A
E4(0201)	0Ω

