

# Antenna Test Report

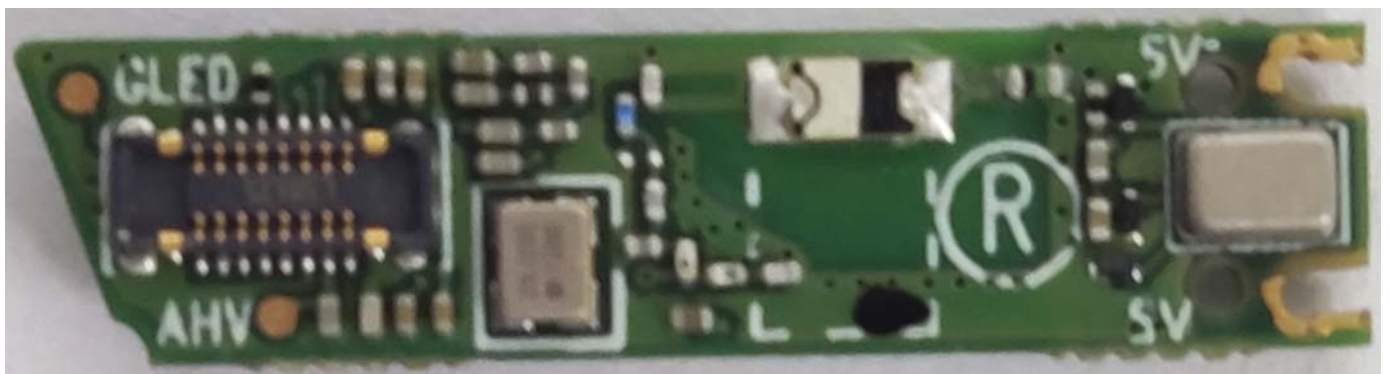
## ELT006-MB V1.1

Customer	易力声
Agent	雷盟
Project name	ELT006
Model. IC	
Model. ANT	WAN2012F245C04

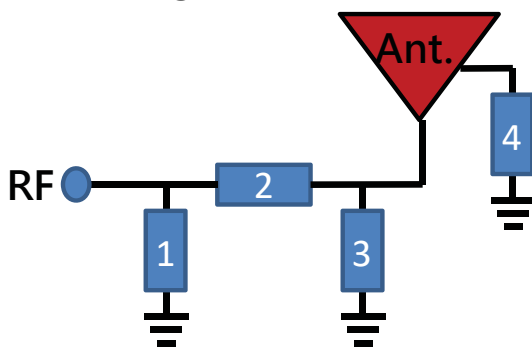
Jun 2023/11/28

# Ant. Matching-R

- Antenna Placement

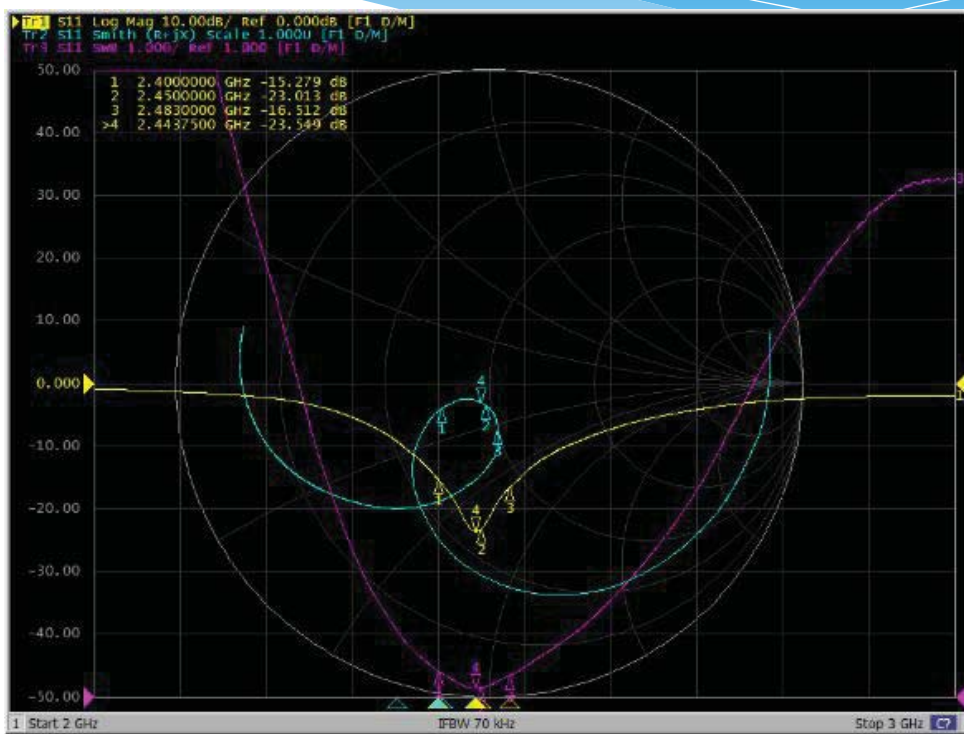


- Matching Circuit



	LC	P/N
Ant.	WAN2012F245C04	
1	NC	--
2	1nH	--
3	2.7p	--
4	1.5nH	--

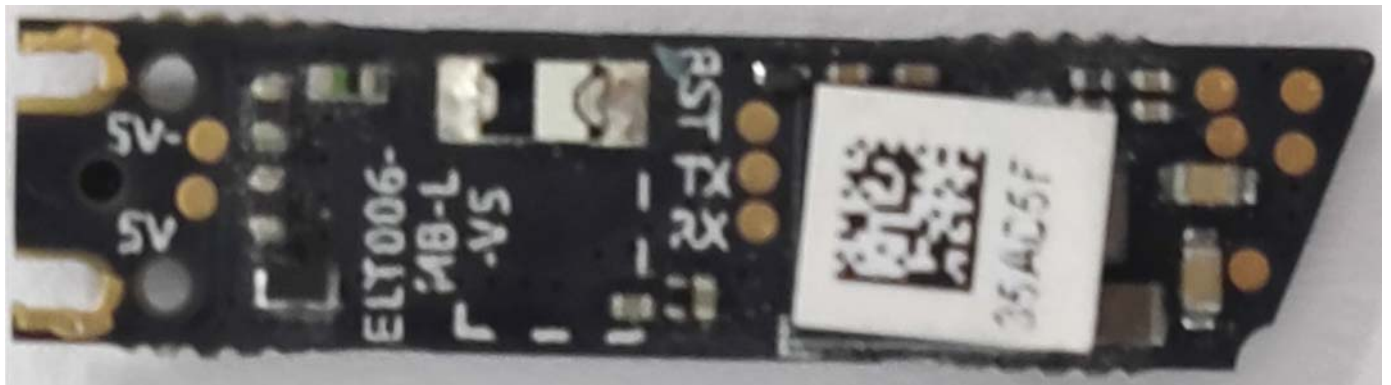
# Ant. S11 Parameter



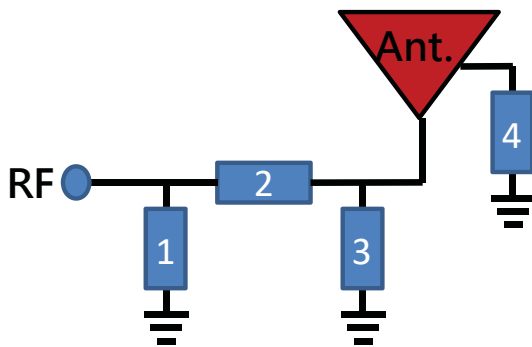
Fre.(MHz)	2400	2450	2483
S11(dB)	-15.2	-23.0	-16.5

# Ant. Matching-L

- Antenna Placement

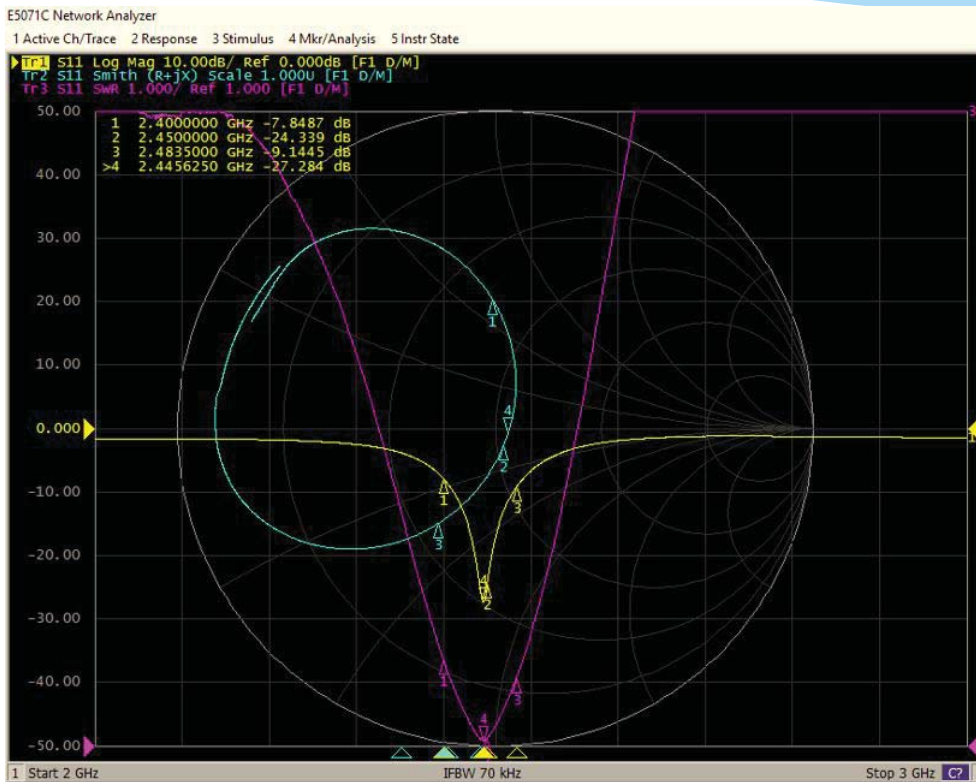


- Matching Circuit



	LC	P/N
Ant.	WAN2012F245C04	
1	NC	--
2	0R	--
3	2.7p	--
4	1nH	--

# Ant. S11 Parameter



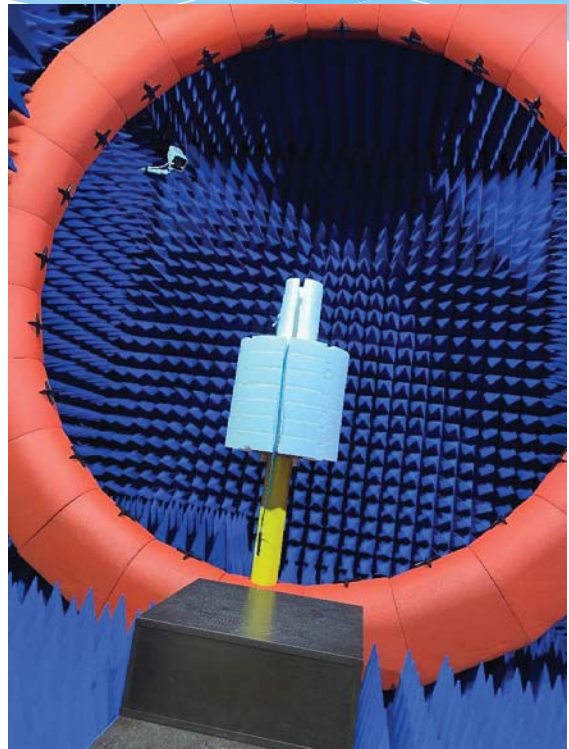
## Equipment of OTA test



網路分析儀 E5071C



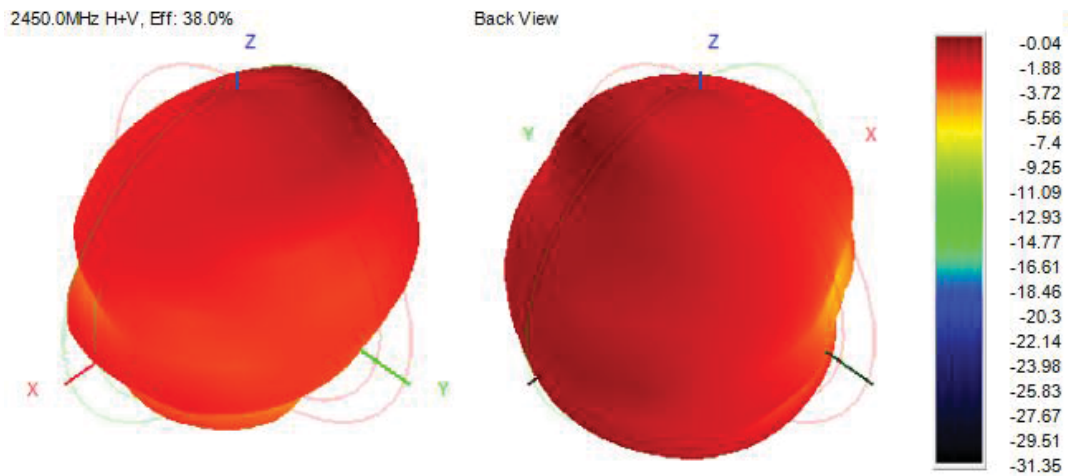
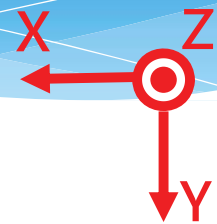
綜合測試儀 CMW500



微波暗室 FTM-24D多探頭

# Ant. Gain Pattern @2.45GHz-R

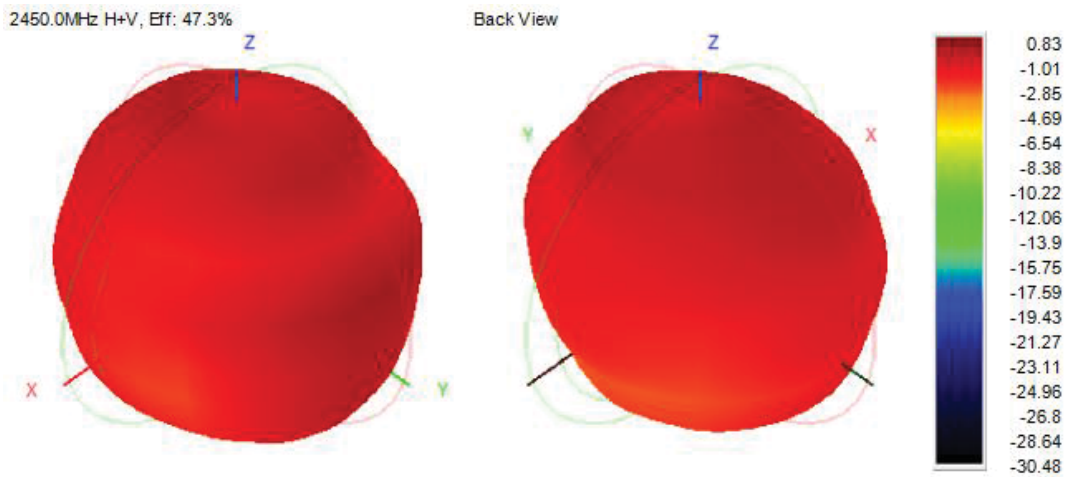
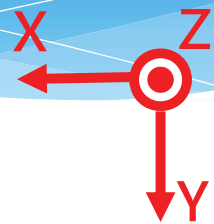
- Active Test



Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-4.92	-4.84	-4.75	-4.60	-4.40	-4.20	-4.02	-3.89	-3.81	-3.82	-3.94
Gain (dBi)	-0.05	-0.01	0.02	0.04	0.05	-0.04	-0.14	0.05	0.25	0.35	0.34
Efficiency (%)	32.20	32.78	33.47	34.70	36.28	38.00	39.60	40.83	41.63	41.46	40.40

# Ant. Gain Pattern @2.45GHz-L

- Active Test

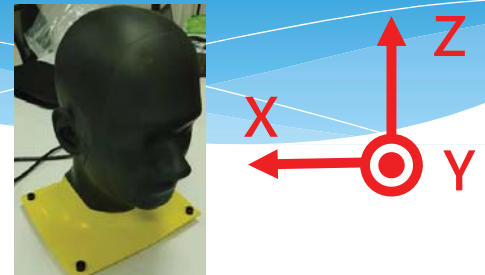


Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-3.76	-3.64	-3.56	-3.46	-3.35	-3.25	-3.22	-3.21	-3.21	-3.27	-3.39
Gain (dBi)	-0.24	-0.26	0.02	0.31	0.53	0.83	0.92	0.89	0.88	0.86	0.78
Efficiency (%)	42.10	43.24	44.05	45.04	46.21	47.26	47.63	47.72	47.70	47.07	45.81

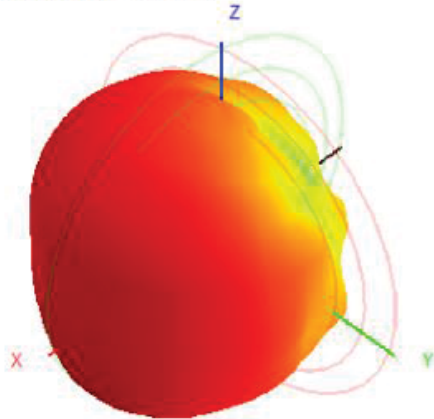


# Ant. Gain Pattern @2.45GHz-R

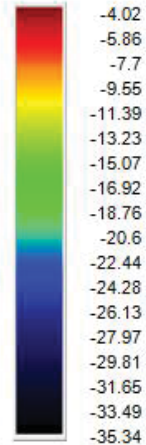
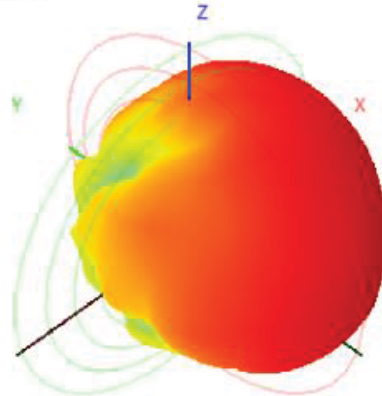
- With Head



2450.0MHz H+V, Eff: 9.9%



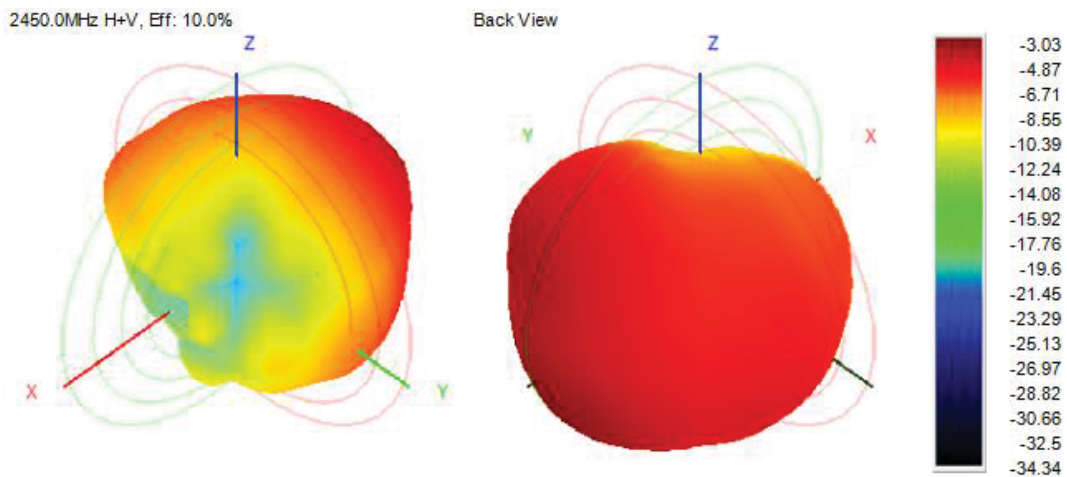
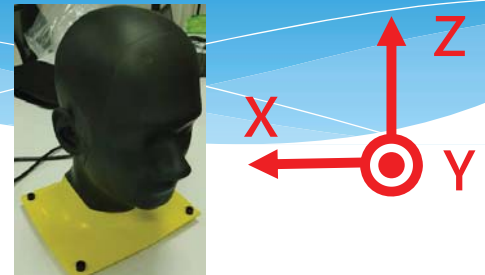
Back View



Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-10.51	-10.41	-10.34	-10.24	-10.15	-10.06	-10.00	-9.96	-9.92	-9.91	-9.92
Gain (dBi)	-4.64	-4.49	-4.37	-4.24	-4.05	-4.02	-3.96	-4.01	-4.07	-4.08	-4.21
Efficiency (%)	8.90	9.09	9.24	9.45	9.66	9.87	10.00	10.08	10.19	10.22	10.18

# Ant. Gain Pattern @2.45GHz-L

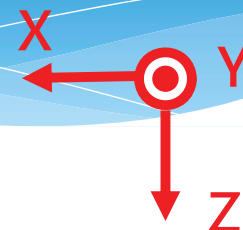
- With Head



Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-9.89	-9.92	-9.94	-9.96	-9.98	-9.99	-10.06	-10.20	-10.31	-10.49	-10.73
Gain (dBi)	-3.21	-3.17	-3.07	-3.01	-3.00	-3.03	-3.14	-3.37	-3.51	-3.70	-4.03
Efficiency (%)	10.26	10.19	10.13	10.09	10.04	10.03	9.85	9.55	9.31	8.94	8.46

# Ant. Gain Pattern @2.45GHz

- Active Test



客户金样

R	CH.	TIS(dBm)	TRP (dBm)
BT	0	-90.28	0.92
	39	-89.68	0.34
	78	-88.82	-0.22

L	CH.	TIS(dBm)	TRP (dBm)
BT	0	-90.91	1.53
	39	-90.89	1.18
	78	-89.25	2.14

万诚调试样机

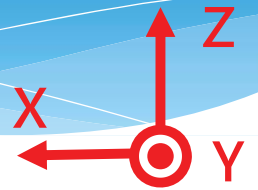
R	CH.	TIS(dBm)	TRP (dBm)
BT	0	-90.33	0.16
	39	-89.44	1.11
	78	-88.87	1.69

L	CH.	TIS(dBm)	TRP (dBm)
BT	0	-90.69	1.89
	39	-90.48	2.36
	78	-89.42	2.18

# Ant. Gain Pattern @2.45GHz

- With Head

客户金样



R	CH.	TIS(dBm)	TRP (dBm)
BT	0	-84.68	-5.12
	39	-83.81	-5.54
	78	-83.32	-6.87

L	CH.	TIS(dBm)	TRP (dBm)
BT	0	-84.3	-5.46
	39	-83.71	-5.23
	78	-83.89	-4.32

万诚调试样机

R	CH.	TIS(dBm)	TRP (dBm)
BT	0	-84.50	-5.03
	39	-83.74	-5.30
	78	-83.10	-5.77

L	CH.	TIS(dBm)	TRP (dBm)
BT	0	-84.97	-4.37
	39	-84.10	-4.12
	78	-84.04	-4.20

## Real test

- 測試環境：空曠停車場
- 測試手機：紅米K30
- 測試距離：室外測試對耳10米（音樂距離）
- 摀耳測試：雙手捂耳不卡



## 结论

- 经调试后测试10米，与原样差异不大，提供有源和无源数据供参考。