

TB643DW7S Antenna report V2

2025/3/21

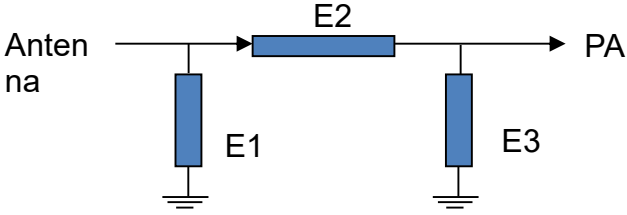
Objectives :
Conclusions :

Antenna testing

Antenna	Band	Material	performance requirement
BT	2400-2480MHz	FPC+150MM coaxial cable	
5G-1	5150-5850MHz	FPC+160MM coaxial cable	

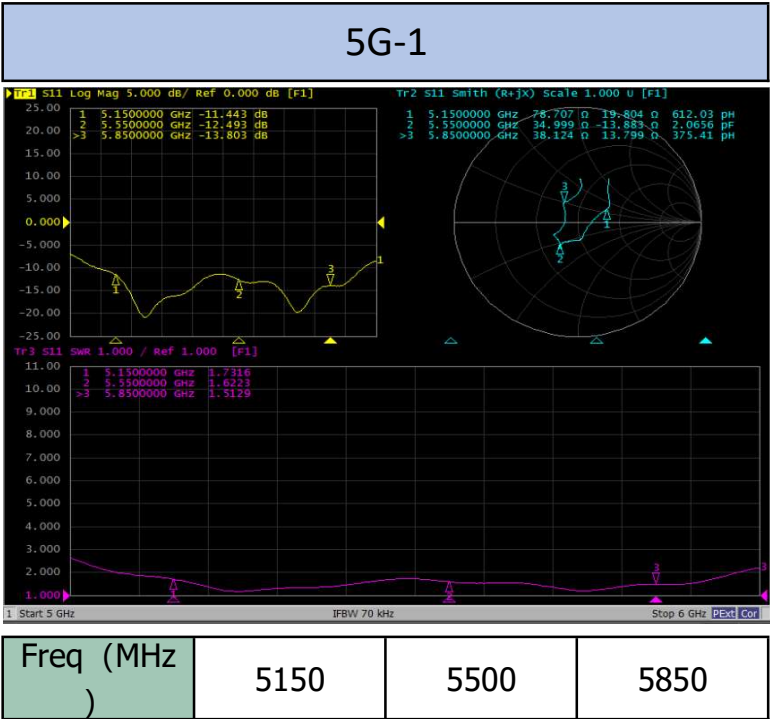
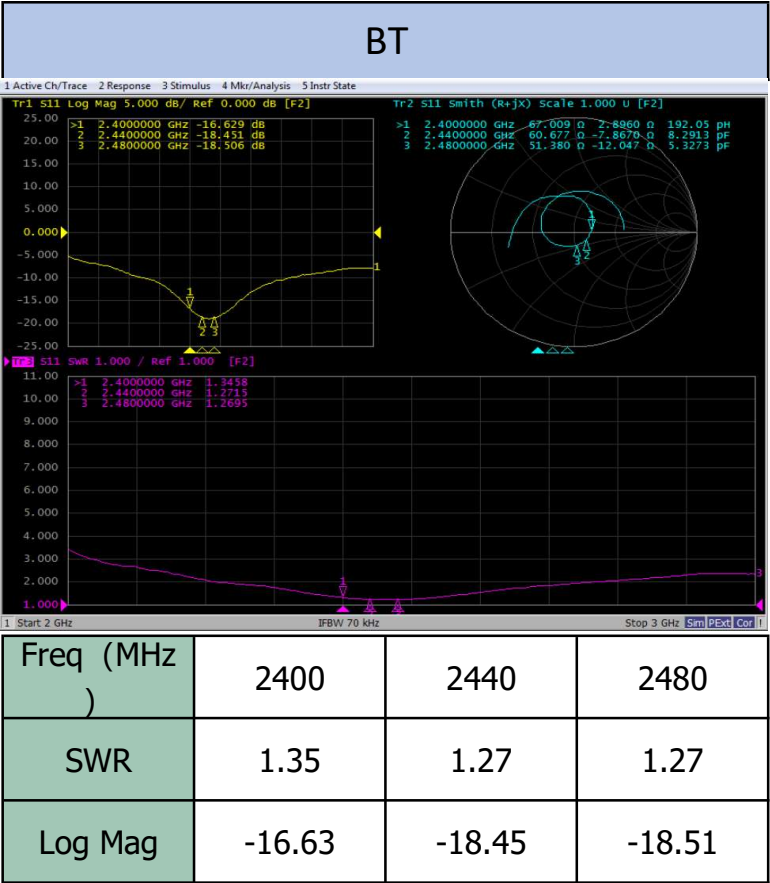
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Antenna matching circuit



Element	
E1(0402)	
E2(0402)	
E3(0402)	

Passive S11 parameter test for antenna



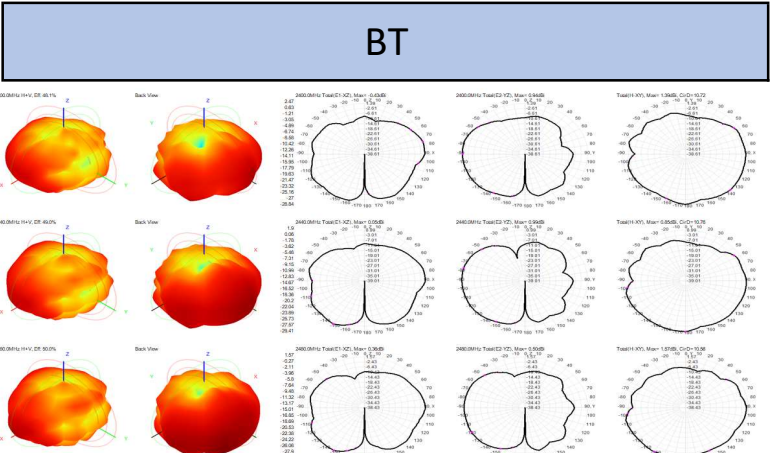
SWR	1.73	1.62	1.51
Log Mag	-11.44	-12.49	-13.80

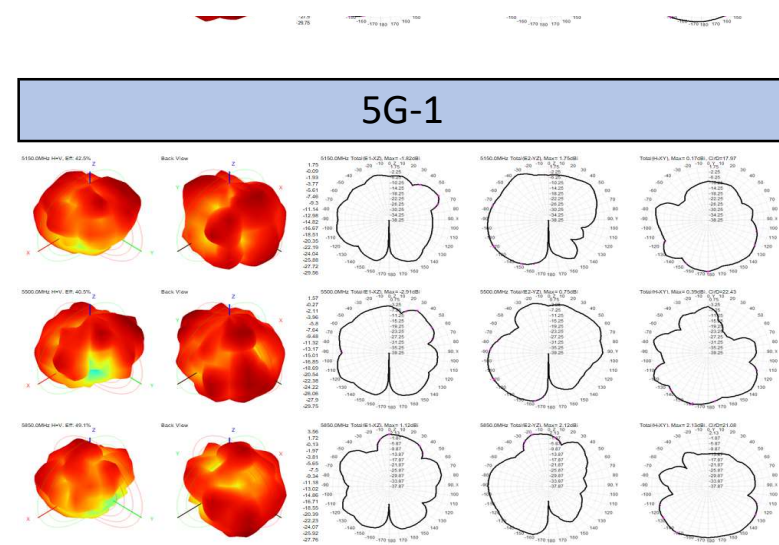
Passive efficiency and gain testing of antennas

BT		
Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400	2.47	48.11
2410	2.33	49.11
2420	1.90	48.39
2430	1.91	49.99
2440	1.90	49.03
2450	1.90	49.03
2460	1.86	49.68
2470	1.58	49.57
2480	1.57	49.95
2490	1.97	50.27
2500	2.39	50.83

5G-1		
Frequency (MHz)	Gain (dBi)	Efficiency (%)
5150	1.75	42.49
5200	1.64	44.73
5250	2.27	42.34
5300	3.53	47.43
5350	2.73	46.05
5400	2.13	40.69
5450	1.96	40.18
5500	1.57	40.48
5550	2.04	38.26
5600	3.16	40.98
5650	2.78	44.19
5700	2.38	46.20
5750	2.83	46.49
5800	3.46	47.38
5850	3.56	49.12

Passive radiation pattern of antenna





Antenna position and matching image

