

APPROVAL SHEET

Customer	Queclink			
Customer P/N				
Project Name	GL55MG Antenna			
Supplier	Shanghai Saintenna Wireless Technology Co. , Ltd.			
Saintenna P/N	SAA32731A			
ROHS Compliant	Yes			
Providing Date				
Supplier	Prepared by	Designer	QA	Approver
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Customer	Prepared by	Checked by	Approver	

Note: Signature must be confirmed by hand

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4G Specification

1. Mechanical Specification

- Connect Type..... Pogopin
- Work Temperature..... -40~85℃
- Storage Temperature..... -40~85℃
- Salt spray tolerance..... 48H

2. Electrical Specification

- Frequency Range..... 700MHz~790MHz
1710MHz~2170MHz
- S11..... -3dB
- Efficiency..... <58.6%
- Peak Gain..... 2dBi
- Polarization..... Linear
- Input Impedance..... 50Ω
- Max Input Power..... 5W

BT Specification

1. Mechanical Specification

- Connect Type..... Pogopin
- Work Temperature..... -40~85℃
- Storage Temperature..... -40~85℃
- Salt spray tolerance..... 48H

2. Electrical Specification

- Frequency Range..... 2400MHz~2500MHz
- S11..... -6.8dB
- Efficiency..... <50.4%
- Peak Gain..... 1.6dBi
- Polarization..... Linear
- Input Impedance..... 50Ω
- Max Input Power..... 5W



GL55MG Antenna Debugging report

Shanghai Saintenna Wireless Technology Co., LTD.

Project Information

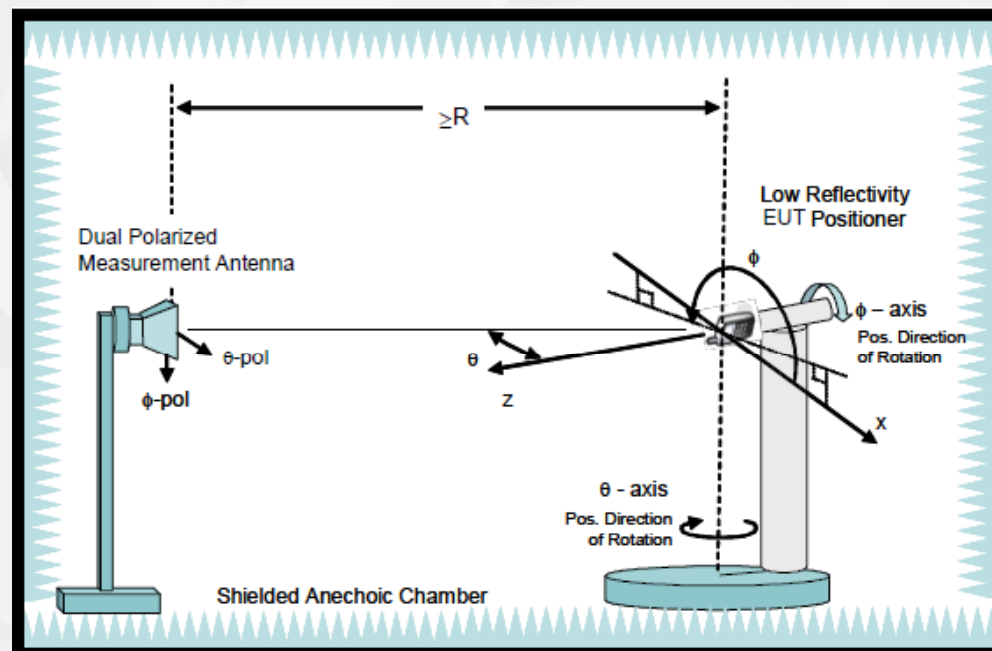
Customer	
NameProject	GL55MG
NameWorking	LTE:700-787MHz/1710-2170MHz BT: 2400-2500MHz
BandDescription	
Version	V1.0
Date	2026.3.20

Tuning Instrument

Network Analyzer	Agilent E5071C
Frequency Range	100KHz ~ 8.5GHz
Test Item	Return Loss/VSWR/Smith Chart /Isolation

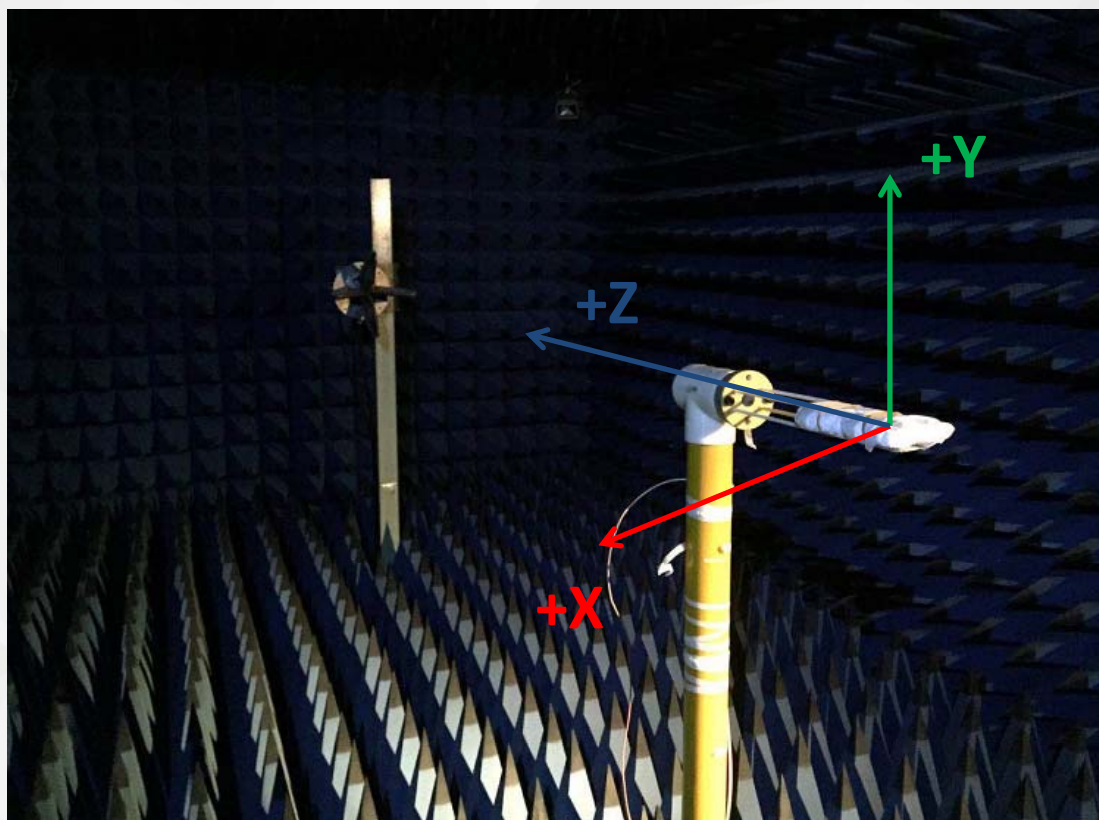


Typical Setup for Test System



Combined-Axes System

Anechoic Chamber



Combined-Axes System

Comment: E1 plane means XZ section, E2 plane means YZ section, H plane means XY section.

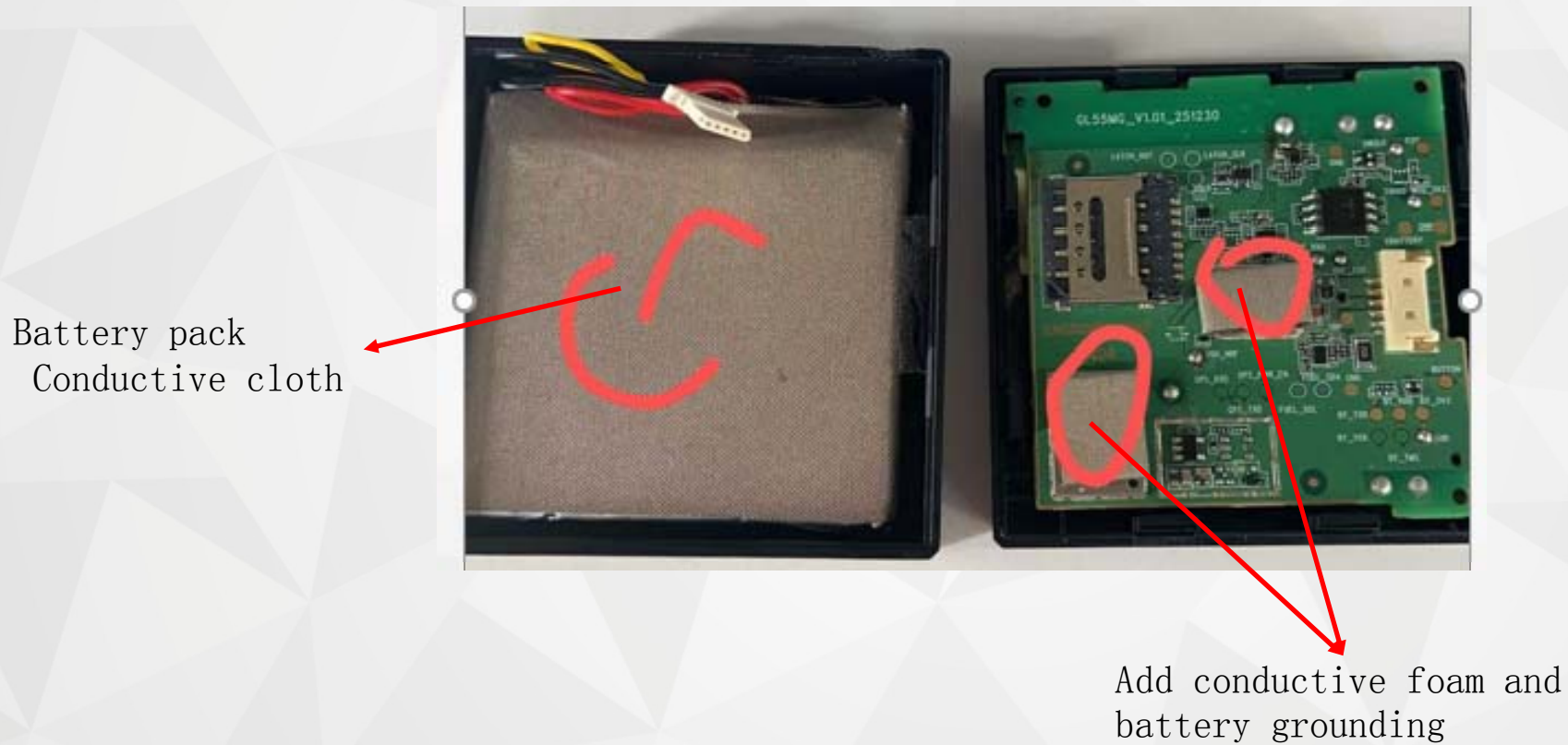
Antenna Sample Description



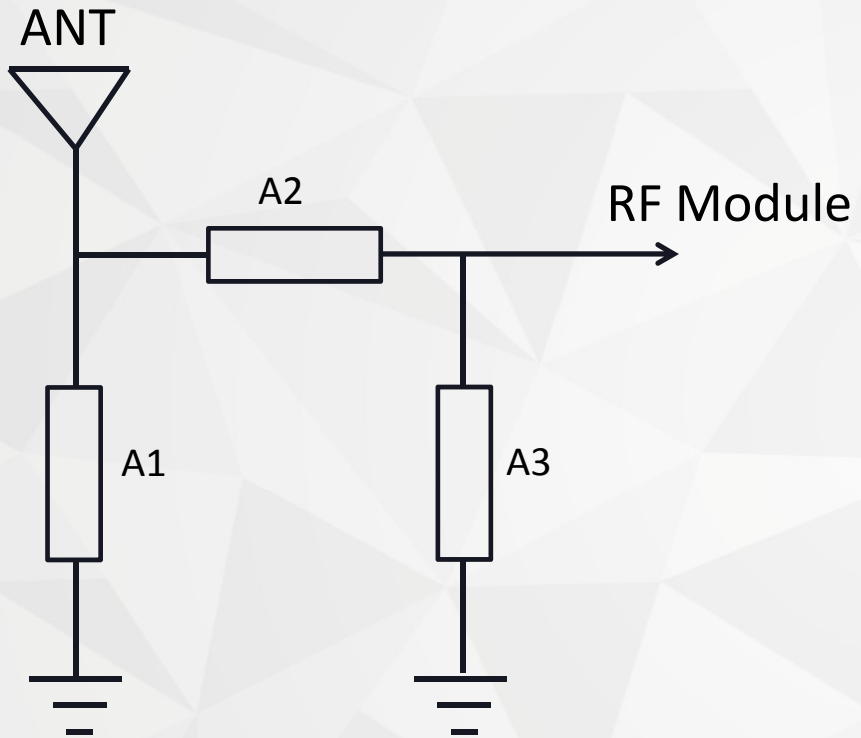
LTE Antenna

BT Antenna

Antenna Sample Description



Matching Circuit (LTE Antenna)

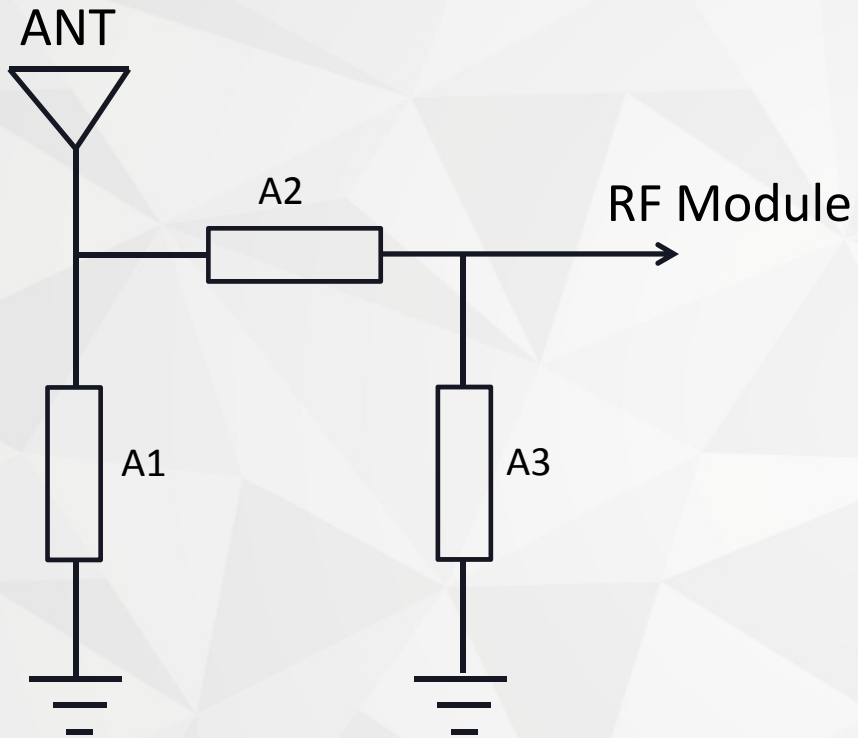


A1	5.1nH
A2	0ohm
A3	1.2pF

Matching Circuit (LTEAntenna – switching logic)

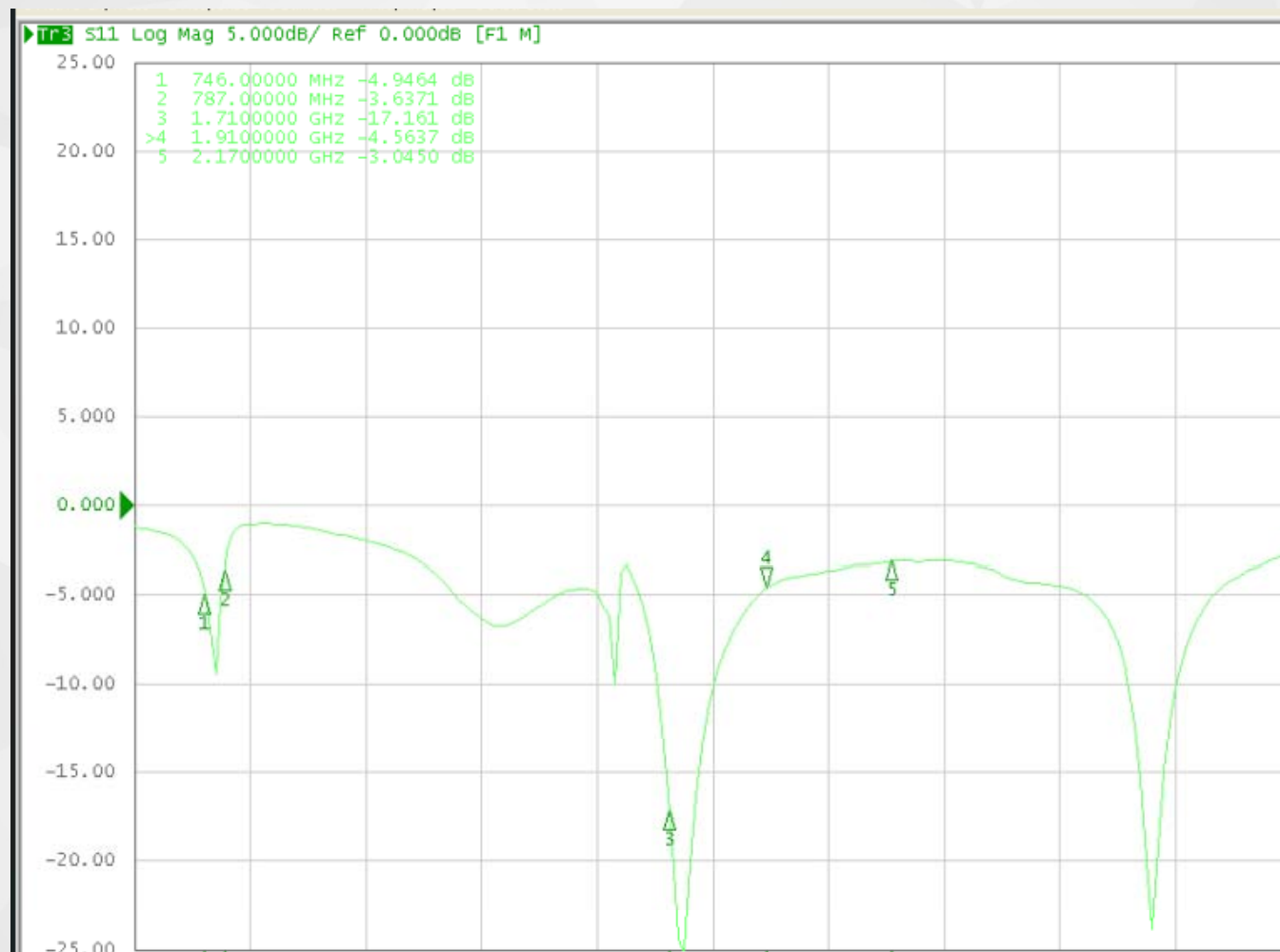
RF1	0ohm	B2/B4/B13/B66
RF2	15nH	B12 TX
RF3	12nH	B12 RX

Matching Circuit (BT Antenna)

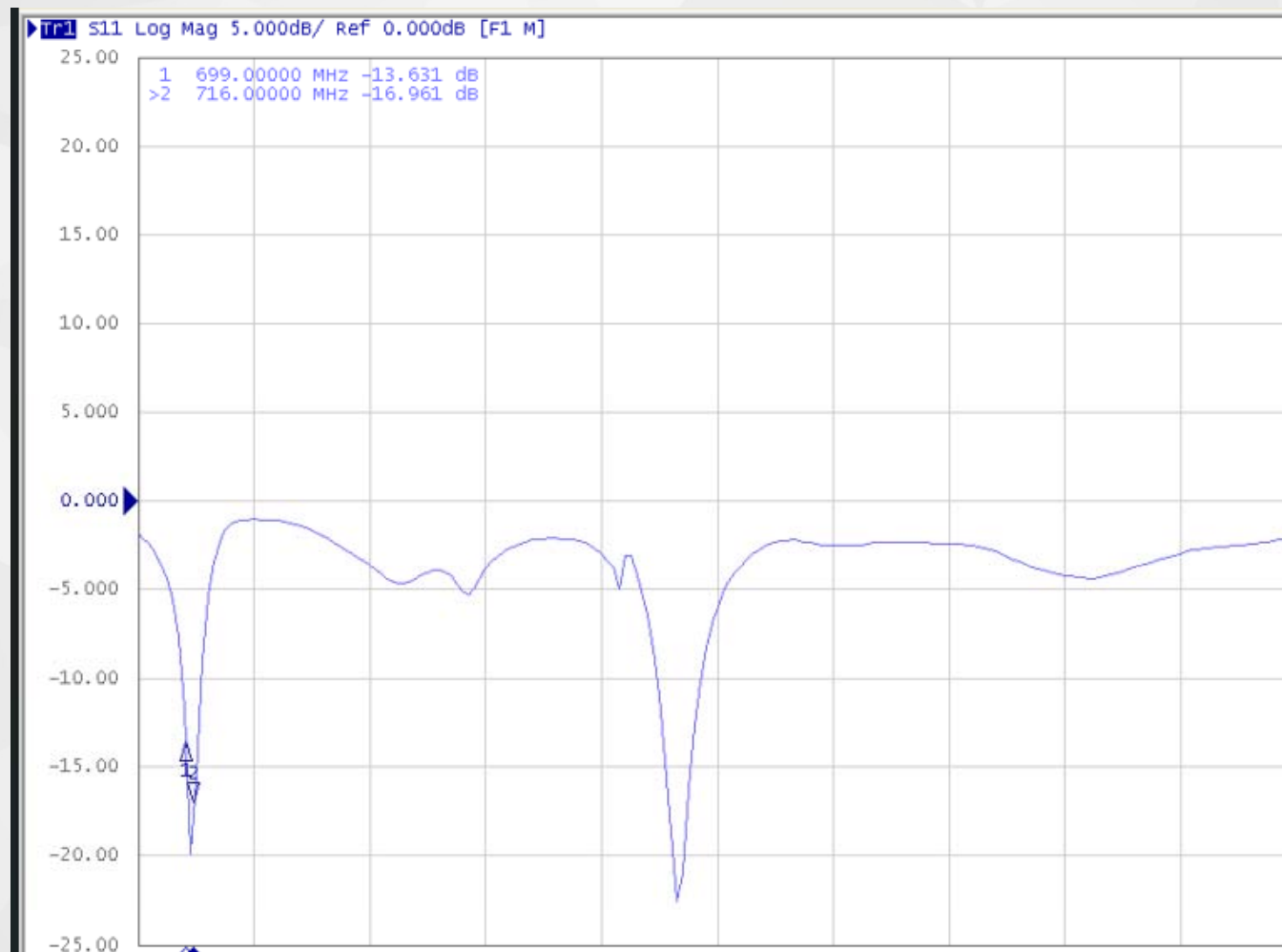


A1	/
A2	0ohm
A3	/

S11 (LTE Antenna-RF1)



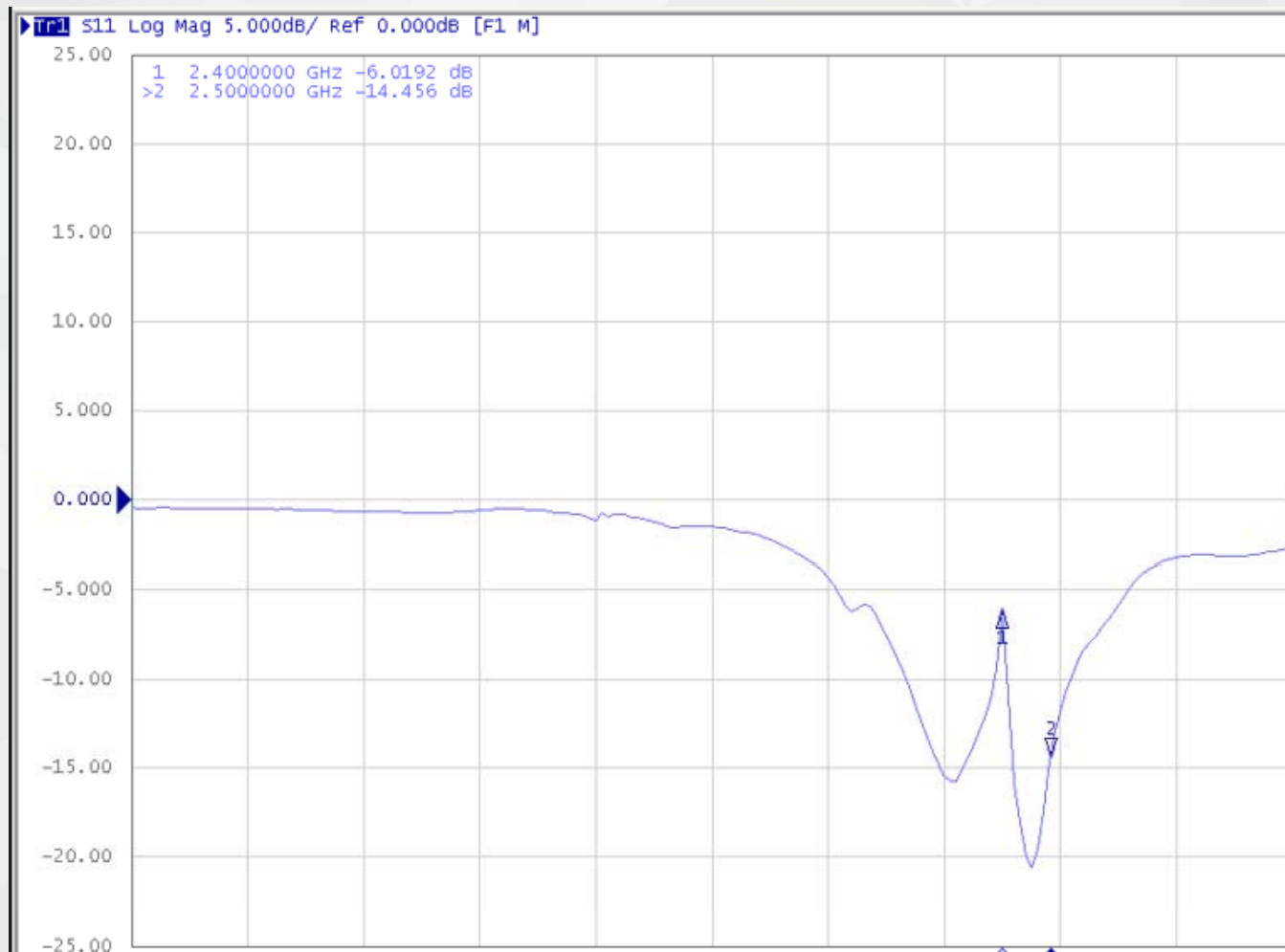
S11 (LTE Antenna-RF2)



S11 (LTE Antenna-RF3)



S11 (BT Antenna)



Test Result –Passive （LTE Antenna-RF1）

Freq. (MHz)	Gain (dBi)	Eff.	Freq. (MHz)	Gain (dBi)	Eff.
740	-5.07	19.89%	1710	2.07	53.86%
750	-3.03	24.76%	1730	1.79	55.55%
760	-1.95	29.78%	1750	1.87	56.9%
770	-1.73	30.55%	1770	1.98	58.64%
780	-2.7	25.06%	1790	1.89	55.9%
790	-4.52	20.88%	1810	1.59	54.9%
			1830	1.35	51.72%
			1850	0.9	56.48%
			1870	1.16	54.34%
			1890	0.92	50.5%
			1910	0.63	47.71%
			1930	0.88	48.18%
			1950	1.04	47.18%
			1970	1.14	46.58%
			1990	1.09	45.36%
			2010	0.64	43.24%
			2030	0.62	40.96%
			2050	0.72	39.47%
			2070	0.38	37.17%
			2090	0.1	35.53%
			2110	-0.18	33.98%
			2130	-0.15	34.32%
			2150	-0.47	33.8%
			2170	-0.91	33.27%

Test Result –Passive (LTE Antenna)

RF2		
Freq. (MHz)	Gain (dBi)	Eff.
700	-2.72	21.91%
710	-2.52	24.03%
720	-2.84	23.57%

RF3		
Freq. (MHz)	Gain (dBi)	Eff.
720	-4.34	19.77%
730	-3.67	22.77%
740	-3.27	24.87%
750	-3.43	23.85%

Test Result –Passive (BT Antenna)

Freq. (MHz)	Gain (dBi)	Eff.
2400	-0.47	37.87%
2410	-0.1	44.8%
2420	0.83	54.29%
2430	1.05	53.21%
2440	1.14	53.73%
2450	1.06	52.5%
2460	0.72	48.74%
2470	0.76	50.8%
2480	0.67	49.13%
2490	0.23	46.4%
2500	-0.2	44.72%

Test Result – Active (LTE Antenna)

Mode	Channel	TRP	Channel	TIS
EMTC B2	18650	20.53		
	18900	20.2		
	19150	19.77	1150	-102.46
EMTC B4	20000	20.89		
	20175	20.95		
	20350	20.99	2350	-100.31
EMTC B12	23035	15.98		
	23095	16.15		
	23155	16.02	5155	-95.88
EMTC B13	23230	16.88	5230	-95.24
EMTC B66	132022	20.89		
	132322	21.03		
	132622	20.84	67086	-99.87