



QuecLink GL33

Antenna evaluation and debugging report

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Date :2022.11.04

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Version



version	date	author	content
1.0	2022-06-26	Christopher	Regression debugging of prototype
1.1	2022-07-31	Richard	Prototype regression verification
1.2	2022-08-04	Richard	Optimized debugging of prototype
1.3	2022-11-04	Richard	Add antenna pattern diagram



1. Project overview

2. Antenna performance evaluation and debugging

3. Structural evaluation suggestion

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Project overview



- Clients name: Queclick
- Project name : GL33
- Main board size : 104mm*40mm
- Number of antennas : 10
- Antenna network system and frequency band :
 - GSM: GSM 4 Band





1. Project overview

2. Antenna performance evaluation and debugging

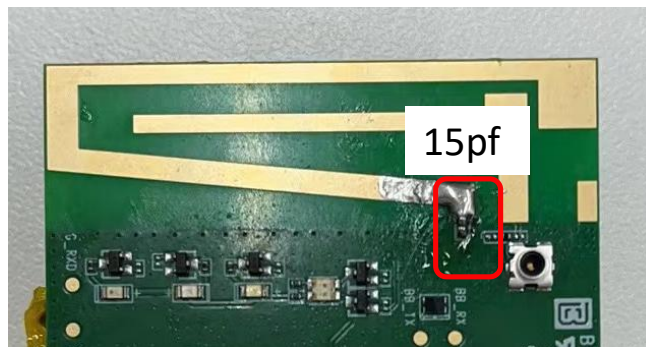
3. Conclusion

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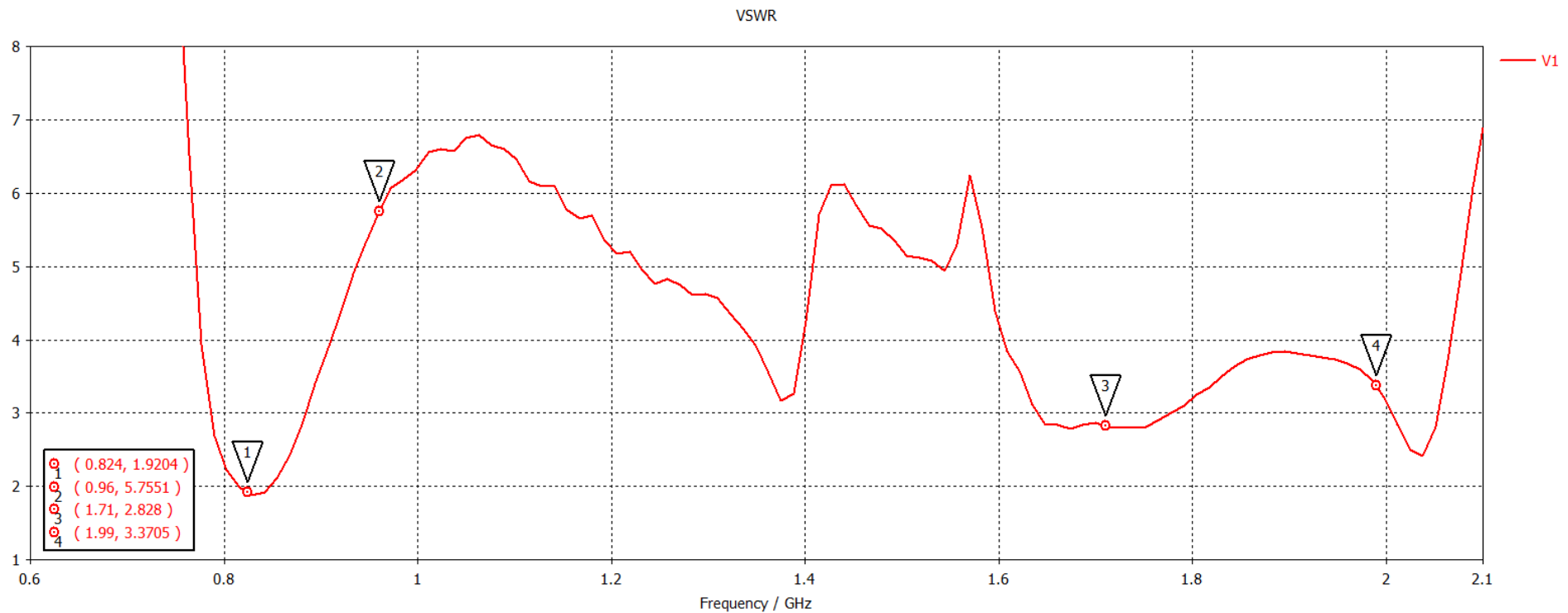
GSM Antenna



Passive testing— GSM



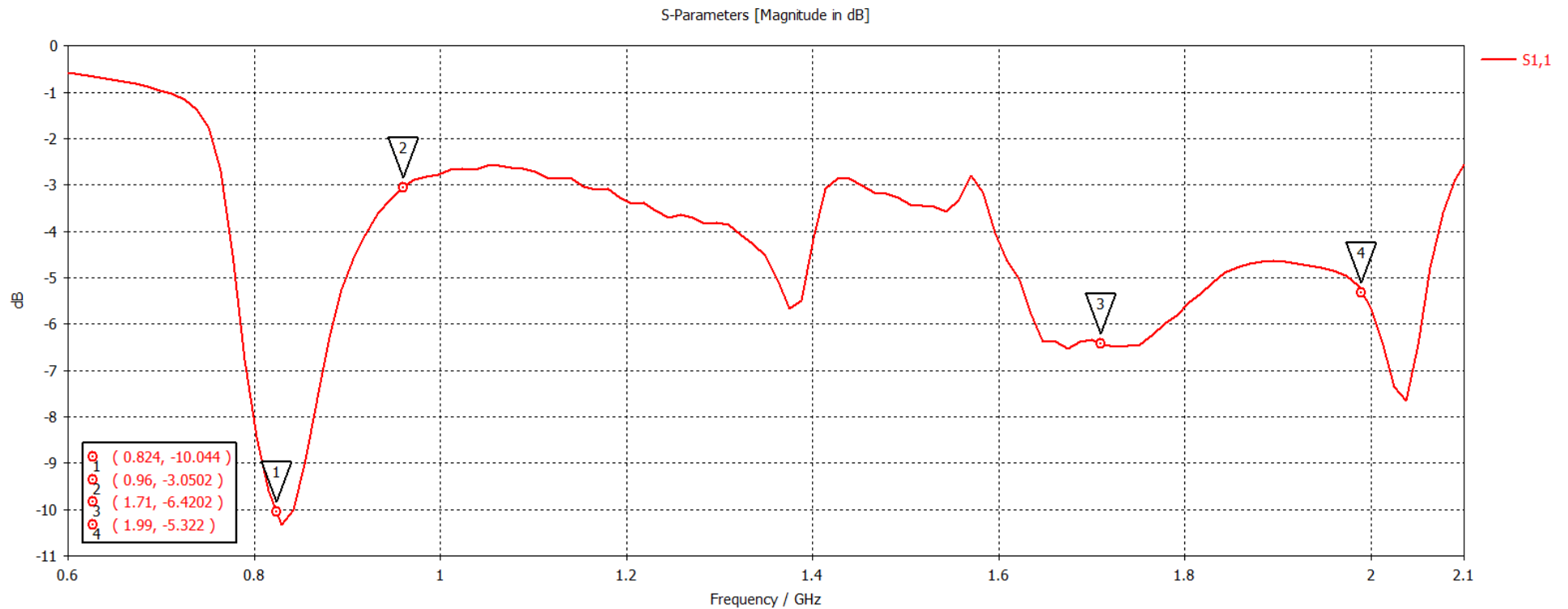
- VSWR



Passive testing— GSM



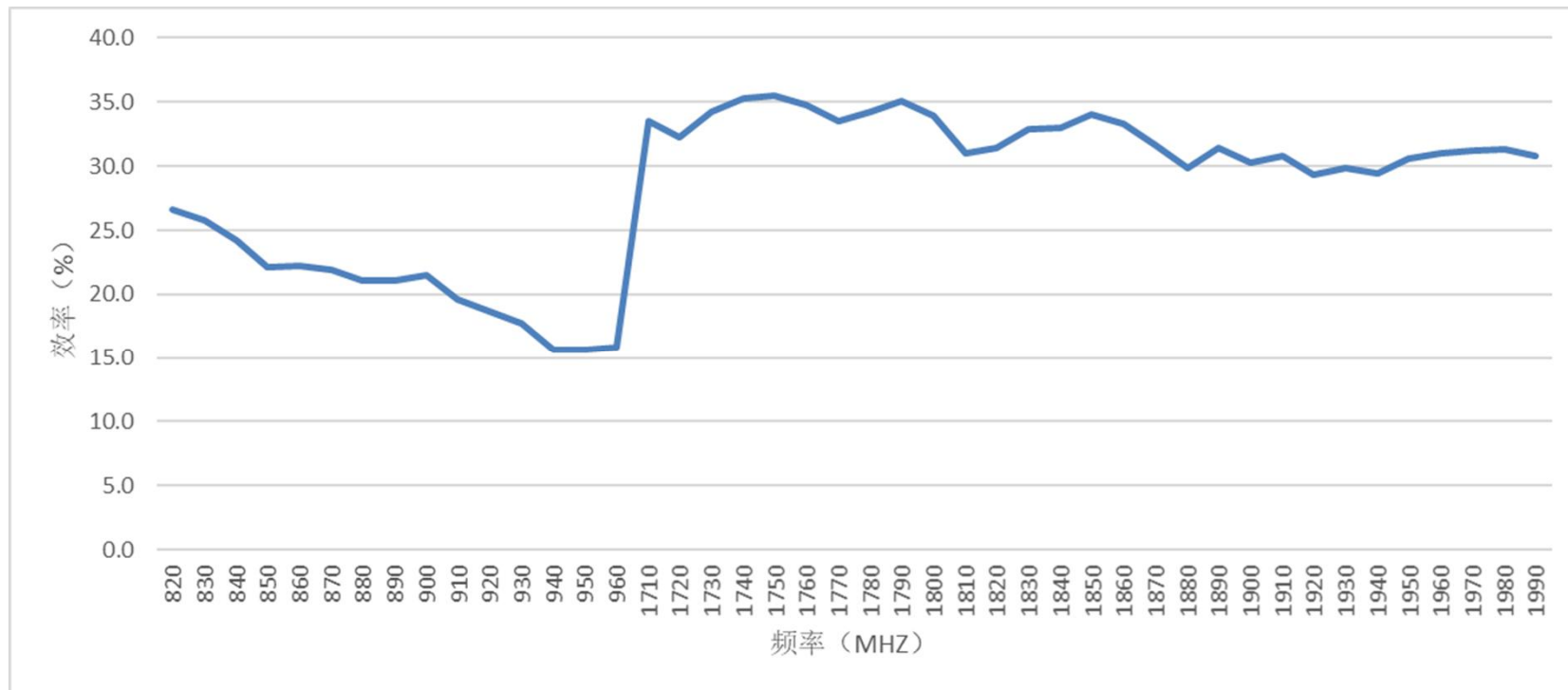
- Return loss



Passive testing— GSM



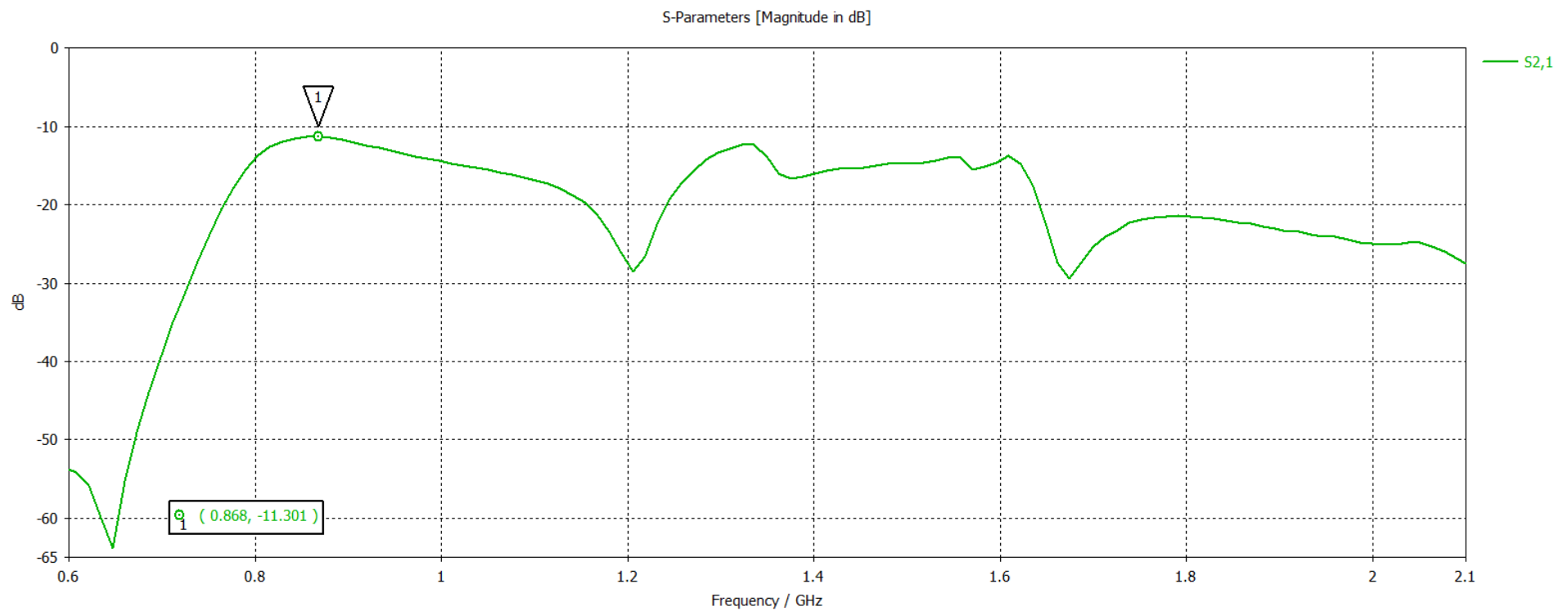
- efficiency



Passive testing



- Insulation



Active testing



制式	频段	信道	TRP	信道	TIS
GSM	850	128	25.88	128	-101.4
		190	26.69	190	-101.48
		251	27.09	251	-101.49
	900	975	26.39	975	-102.02
		38	26.18	38	-102.6
		124	25.79	124	-102.64
	1800	512	27.34	512	-109.43
		699	27.5	699	-109.73
		885	27.63	885	-109.28
	1900	512	28.38	512	-108.22
		661	27.93	661	-107.58
		810	27.35	810	-107.29

Passive testing



Freq(MHz)	Gain(dBi)	Freq(MHz)	Gain(dBi)
824	-5.10	1780	0.37
834	-4.63	1790	0.19
844	-4.62	1800	0.21
854	-4.67	1810	0.21
864	-4.23	1820	0.08
874	-4.18	1830	0.02
884	-4.10	1840	0.02
894	-4.31	1850	-0.03
904	-4.47	1860	-0.01
914	-4.58	1870	0.05
924	-4.59	1880	0.10
934	-4.66	1890	-0.04
944	-4.77	1900	0.03
954	-4.83	1910	0.15
960	-4.59	1920	0.09
1710	0.18	1930	0.12
1720	0.15	1940	0.11
1730	0.28	1950	0.10
1740	0.41	1960	-0.04
1750	0.45	1970	0.02
1760	0.35	1980	-0.06
1770	0.28	1990	-0.03

