

SHEN ZHEN VLG WIRELESS TECHNOLOGY CO.,LTD.

Antenna Test Report

Customer No. : INT70AH Bluebank

Date : 2014. 07.28

ME :HailingTang RF : Andy Liu

CONTENT

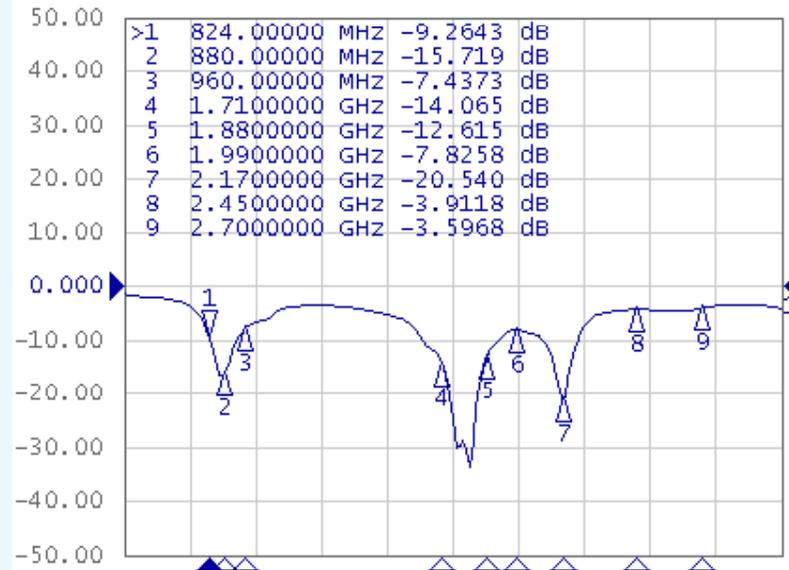
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1. Tablet PC introduce

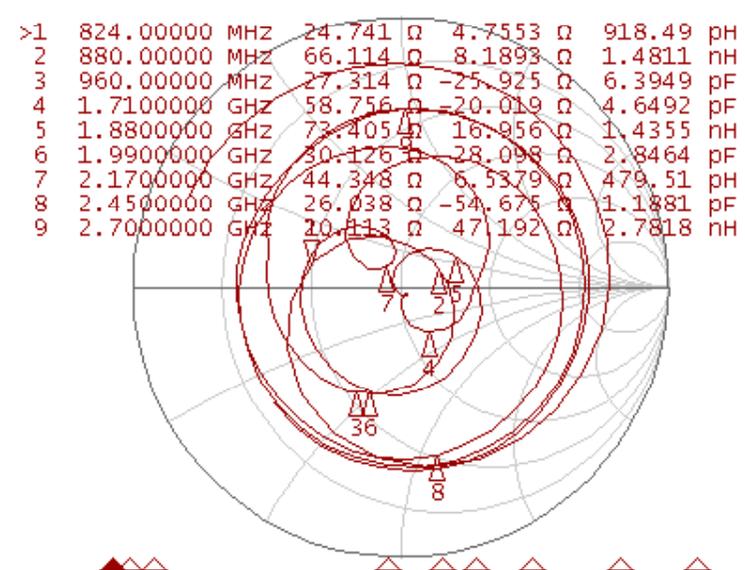
- ❖ Customer name: Bluebank
- ❖ Product type: Tablet
- ❖ Customer P/N: INT70AH
- ❖ Antenna bands: GPRS 850/900/1800/1900, WCDMA 850/900/1700/1900/2100, WIFI&GPS

2. Antenna S11 parameter RL/VSWR/Smith chart __ Main antenna

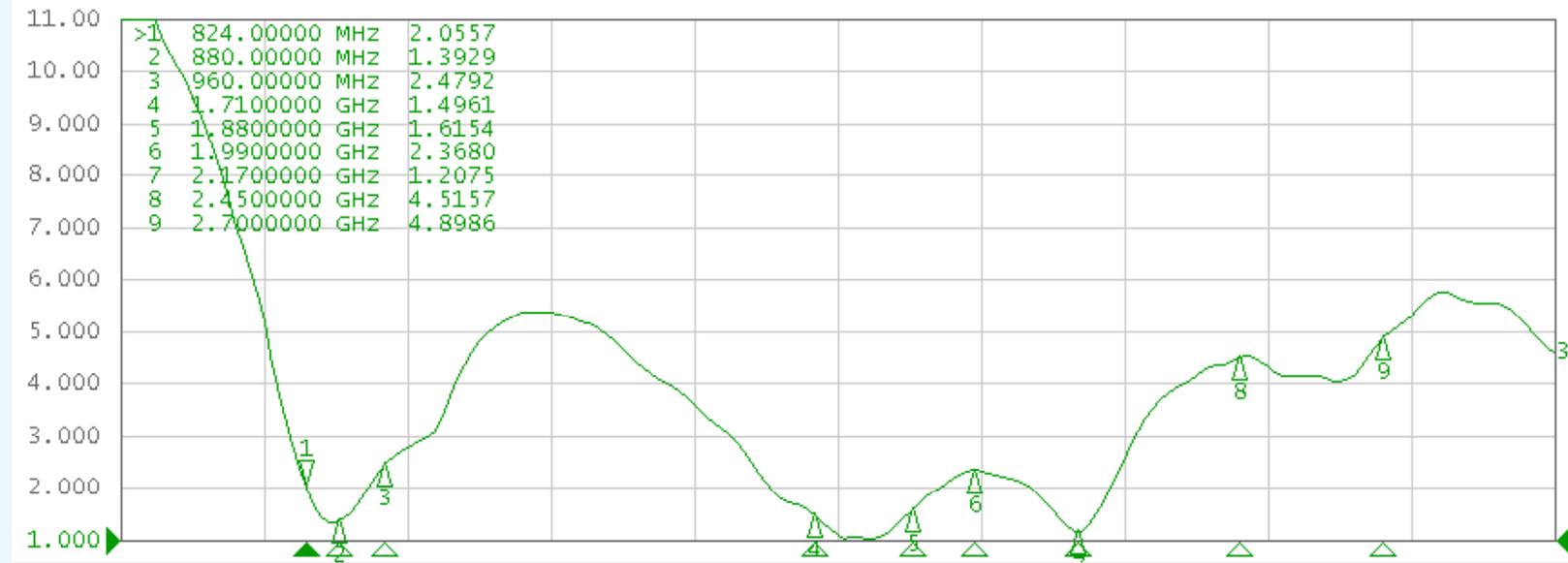
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]



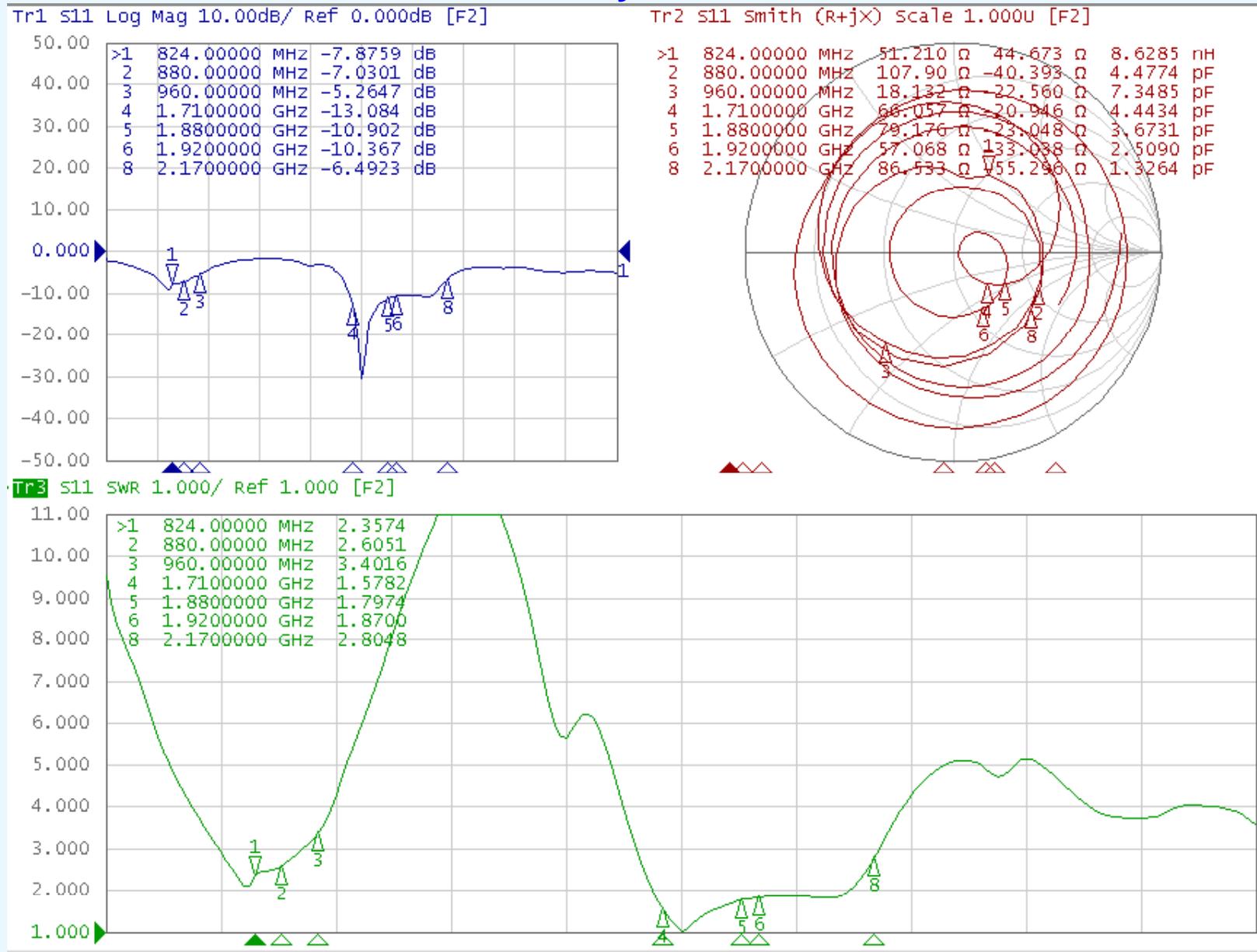
Tr2 S11 Smith (R+jX) scale 1.000U [F1]



Tr3 S11 SWR 1.000/ Ref 1.000 [F1]

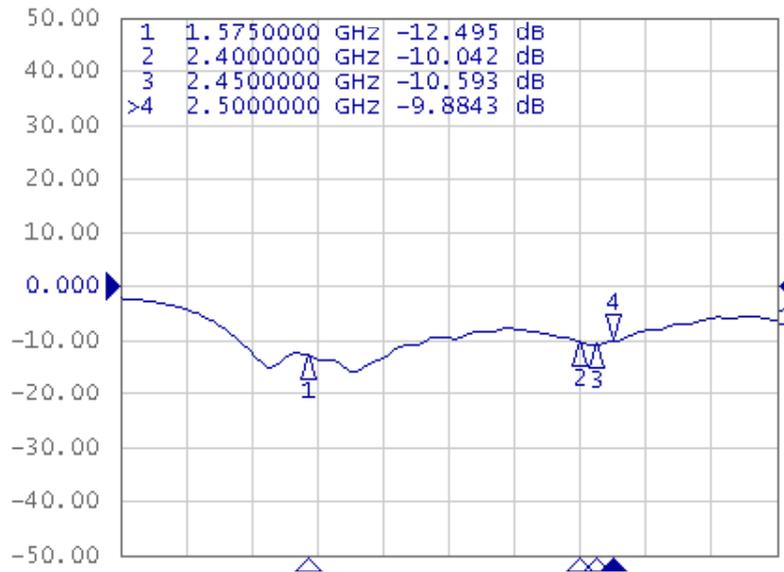


2. Antenna S11 parameter RL/VSWR/Smith chart __ diversity antenna

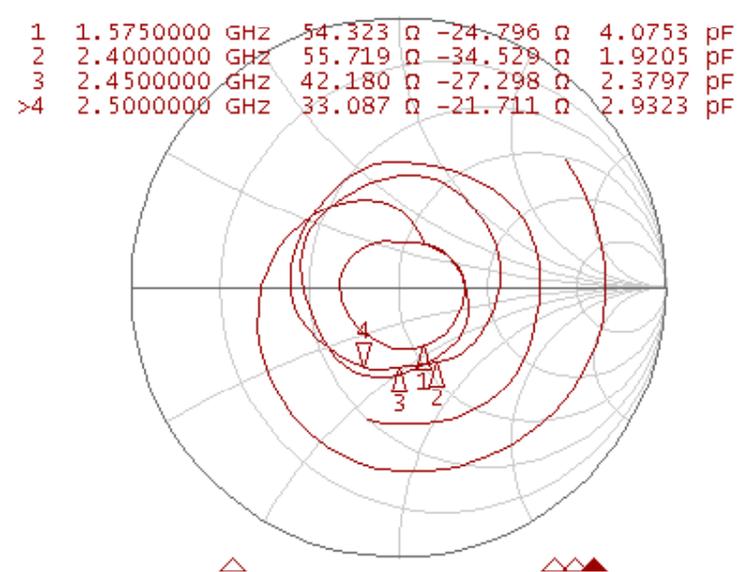


2. Antenna S11 parameter RL/VSWR/Smith chart ___ WIFI&GPS antenna

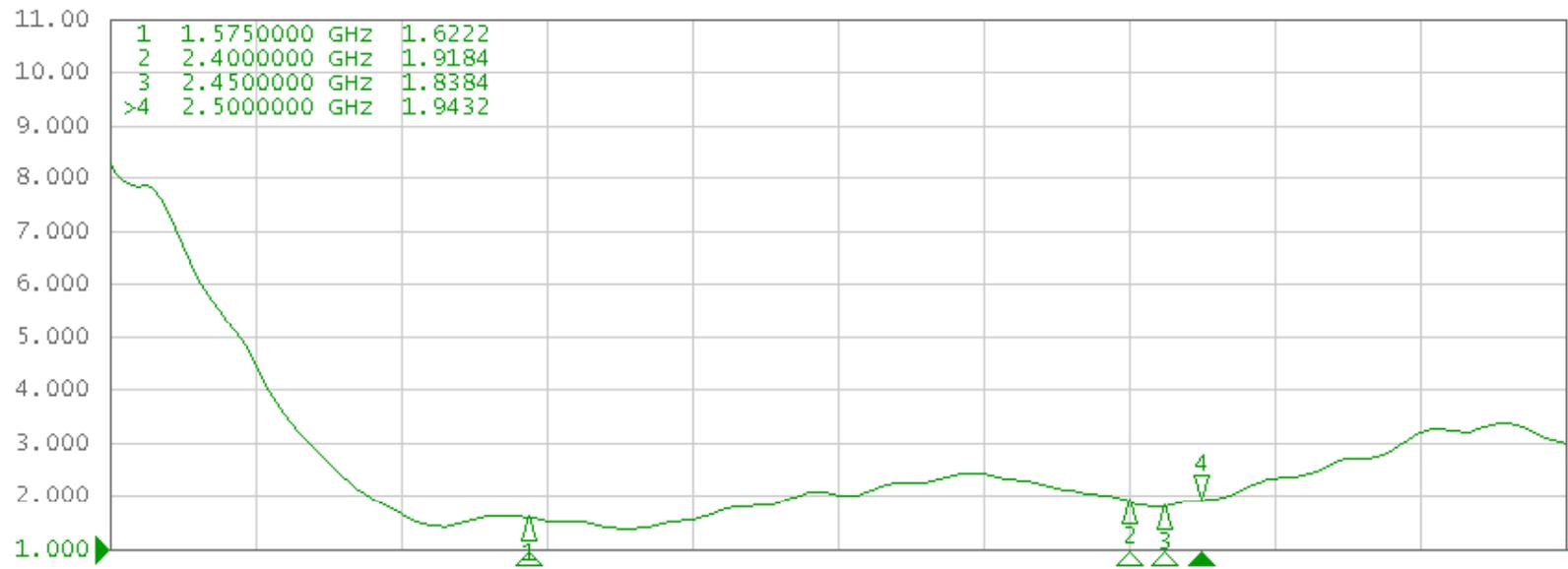
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]



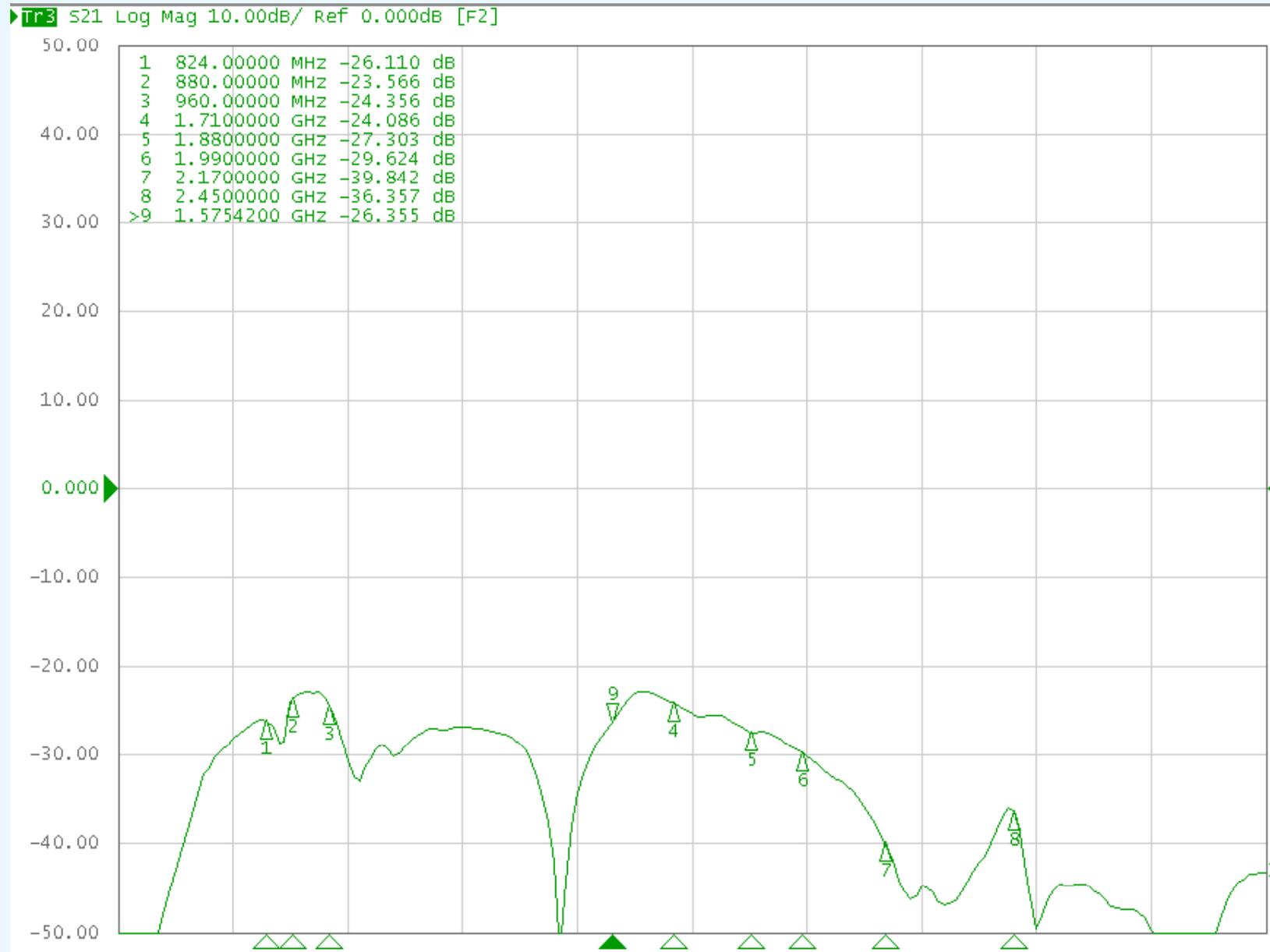
Tr2 S11 smith (R+jX) scale 1.000U [F1]



Tr3 S11 SWR 1.000/ Ref 1.000 [F1]

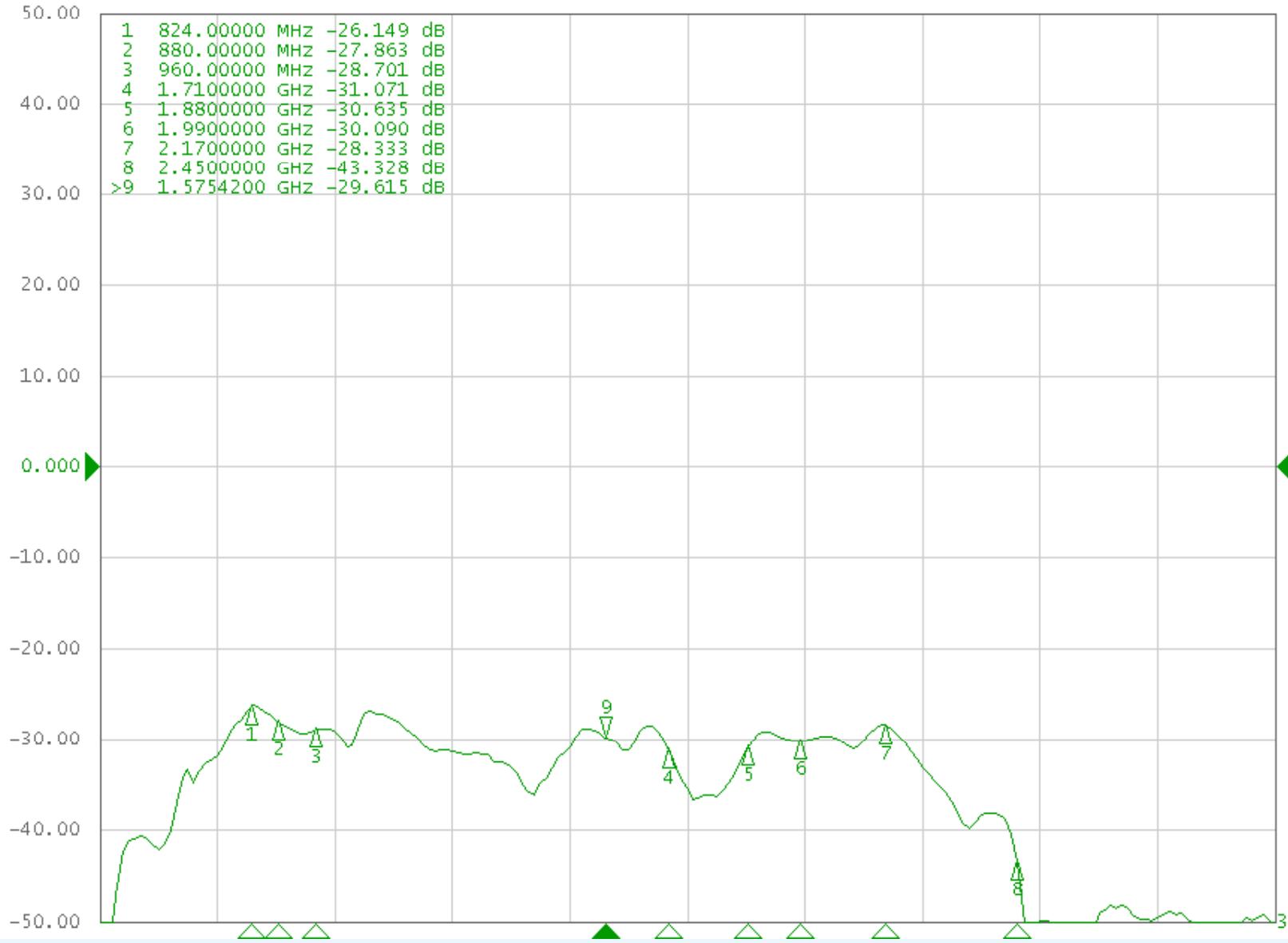


3. Antenna Isolation Main antenna VS Diversity antenna



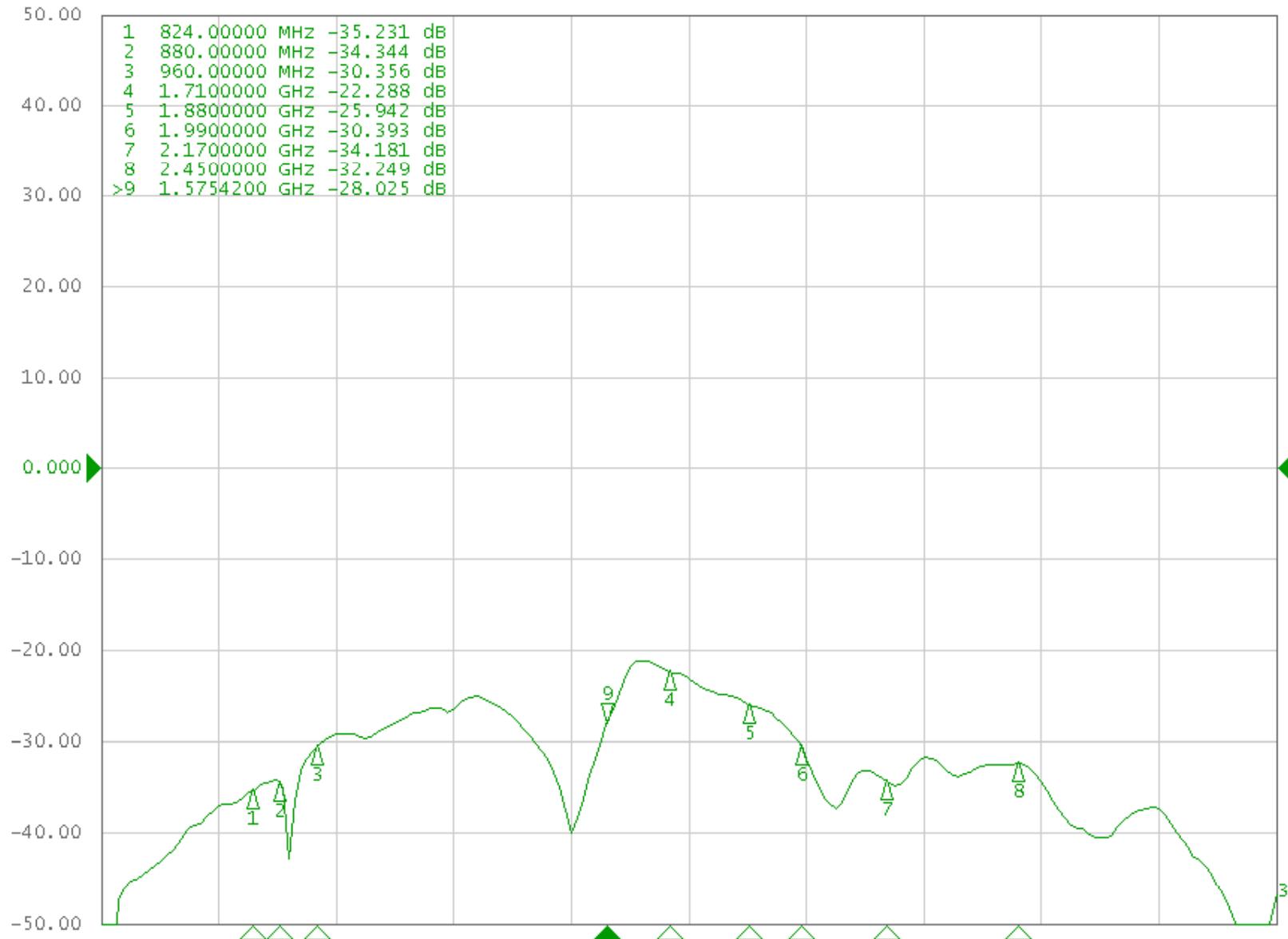
3. Antenna Isolation Main antenna VS WIFI&GPS antenna

Tr3 S21 Log Mag 10.00dB/ Ref 0.000dB [F2]



3. Antenna Isolation Diversity antenna VS WIFI&GPS antenna

Tr3 S21 Log Mag 10.00dB/ Ref 0.000dB [F2]



4. Efficiency and Gain

Main antenna

Frequency (MHz)	Efficiency	AVG Gain (dB)	Peak Gain (dBi)
824	25.63%	-5.91	-1.44
850	26.38%	-5.79	-1.26
880	26.66%	-5.74	-1.21
960	26.85%	-5.71	-1.18
1710	38.91%	-4.10	-0.47
1750	40.24%	-3.95	-0.30
1770	41.24%	-3.85	-0.18
1800	41.40%	-3.83	-0.14
1820	41.98%	-3.77	-0.07
1860	42.66%	-3.70	-0.02
1880	42.27%	-3.74	-0.07
1900	41.95%	-3.77	-0.07
1950	41.79%	-3.79	-0.02
1990	40.93%	-3.88	-0.03
2100	40.12%	-3.97	-0.03
2150	39.57%	-4.03	-0.03
2170	38.97%	-4.09	-0.04

4. Efficiency and Gain

diversity antenna

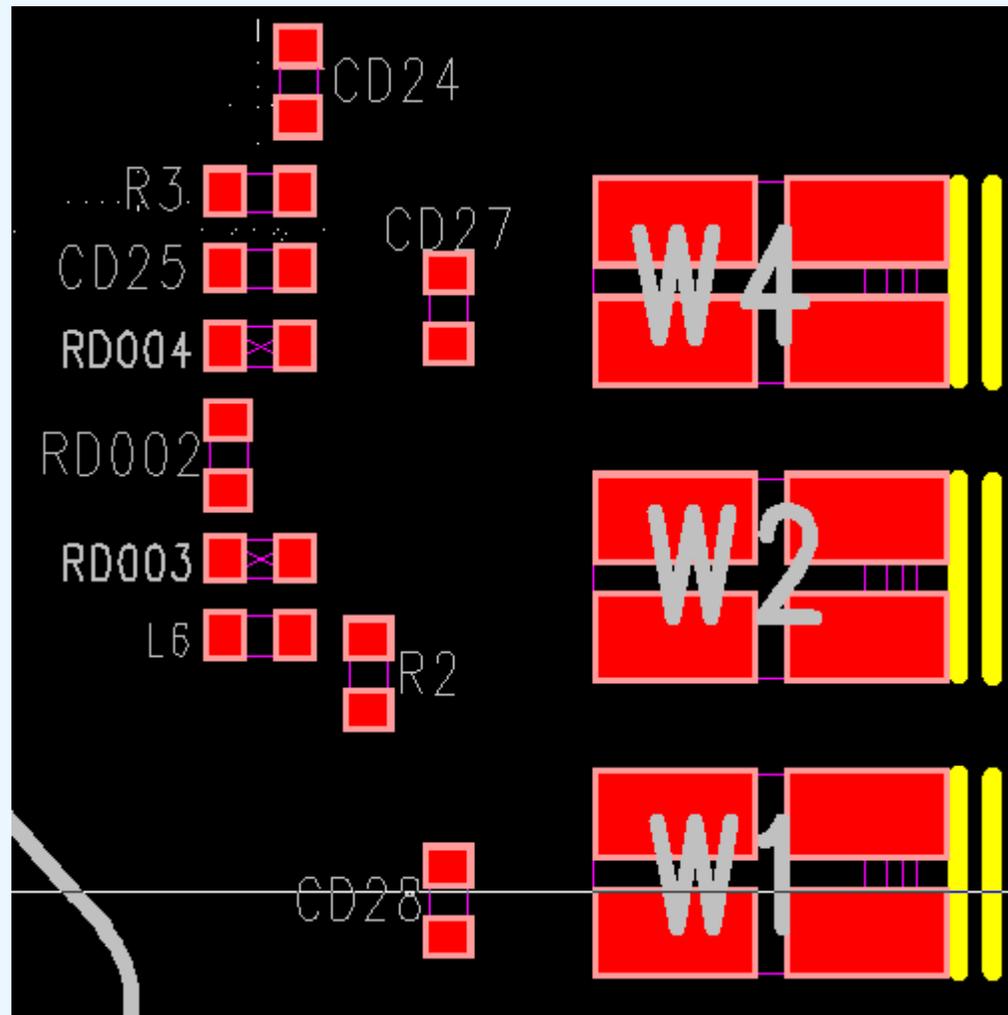
Frequency (MHz)	Efficiency	AVG Gain (dB)	Peak Gain (dBi)
824	21.77%	-6.62	-1.09
850	21.44%	-6.69	-1.20
880	20.91%	-6.80	-1.34
960	20.40%	-6.90	-1.49
1710	33.55%	-4.74	-0.05
1750	32.76%	-4.85	-0.06
1770	31.89%	-4.96	-0.09
1800	30.67%	-5.13	-0.17
1820	29.54%	-5.30	-0.26
1860	28.61%	-5.43	-0.94
1880	29.10%	-5.36	-0.77
1900	29.50%	-5.30	-0.63
1950	29.56%	-5.29	-0.59
1990	29.47%	-5.31	-0.51
2100	29.24%	-5.34	-0.43
2150	28.73%	-5.42	-0.39
2170	28.20%	-5.50	-0.36

4. Efficiency and Gain

GPS&WIFI antenna

Frequency (MHz)	Efficiency	AVG Gain(dB)	Peak Gain(dBi)
2400	43.68%	-3.60	1.19
2450	43.34%	-3.63	1.63
2500	42.94%	-3.67	1.63
1570	41.05%	-3.87	1.51
1575.42	42.00%	-3.77	1.56
1580	40.23%	-3.95	1.48

4. Antenna Matching circuit



CD28=33pF
RD002=22pF

CD27=33pF
RD004空

R2未改变
CD25=22pF

L6=22pF
R3未改变

RD003空
CD24=68pF

5. 3D chamber data

Customer:	Bluebank				
Model:	Main antenna				
Test Condition:	3D chamber				
Band	Channel	TRP (Spec)	TRP (Measured)	TIS (Spec)	TIS (Measured)
GPRS850 for (Asia, EU, Japan)	128	26 (2 Tx)	26.43	-100.5	-102.15
	190		26.33		-102.08
	251		26.86		-101.37
GPRS900 for (Asia, EU, Japan)	1	27	26.35	-102	-102.06
	62		26.64		-101.76
	124		26.43		-101.54
GPRS1800 for (Asia, EU, Japan)	512	24	27.11	-102	-105.18
	698		26.75		-105.85
	885		26.20		-106
GPRS1900 for (Asia, EU, Japan)	512	24.5 (2 Tx)	27.64	-101.5	-104.85
	661		27.37		-104.59
	810		27.22		-103.89

6. 3D chamber data

Customer:	Bluebank				
Model:	Main antenna				
Test Condition:	3D chamber				
Band	Channel	TRP (Spec)	TRP (Measured)	TIS (Spec)	TIS (Measured)
WCDMA2100	10562/9612	18	20.20	-103	-105.67
	10700/9750		20.27		-105.96
	10838/9888		18.15		-106.51
WCDMA1900	9662	18	20.39	-103	-105.19
	9800		20.37		-105.08
	9938		20.02		-104.98
WCDMA1700	1537	19	20.68	-105	-105.90
	1638		20.88		-105.47
	1738		19.85		-105.78
WCDMA850	4357	17	17.59	-100	-103.21
	4408		18.48		-103.34
	4458		18.17		-102.47
WCDMA 900	2937	18	17.77	-100	-102.21
	3012		17.89		-101.24
	3088		17.46		-101.47

7. 3D chamber data

Customer:	Bluebank				
Model:	Diversity antenna				
Test Condition:	3D chamber				
Band	Channel	TRP (Spec)	TRP (Measured)	TIS (Spec)	TIS (Measured)
WCDMA2100	10562/9612			-100	-100.95
	10700/9750				-100.41
	10838/9888				-100.74
WCDMA1900	9662			-100	-101.14
	9800				-100.98
	9938				-100.79
WCDMA1700	1537			-102	-102.48
	1638				-102.74
	1738				-102.56
WCDMA850	4357			-97	-99.15
	4408				-99.79
	4458				-99.24
WCDMA 900	2937			-97	-99.25
	3012				-99.72
	3088				-99.68

8. Summary

The test data above was made out with the new machine.

Thanks for your valuable comment!