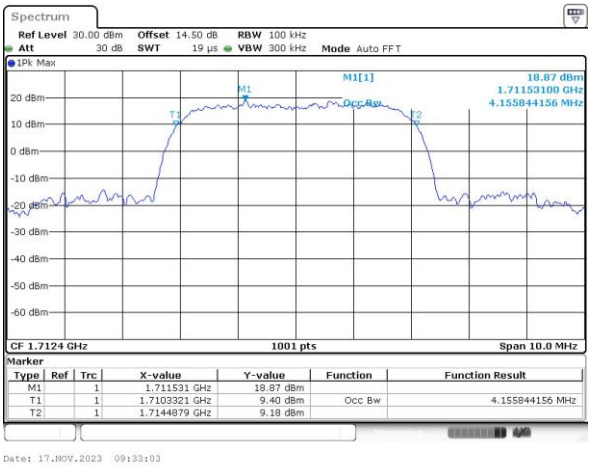
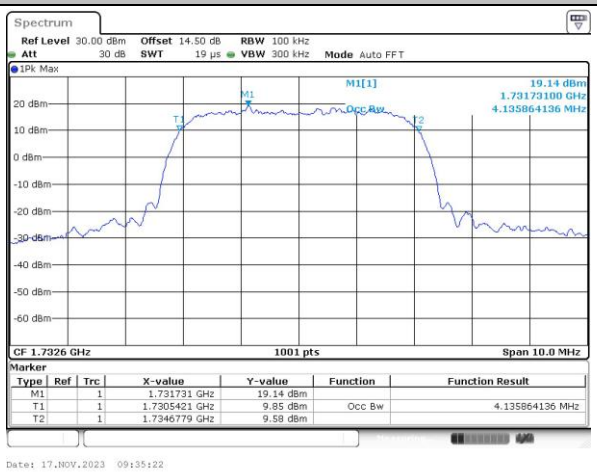
WCDMA Band IV (RMC 12.2Kbps)

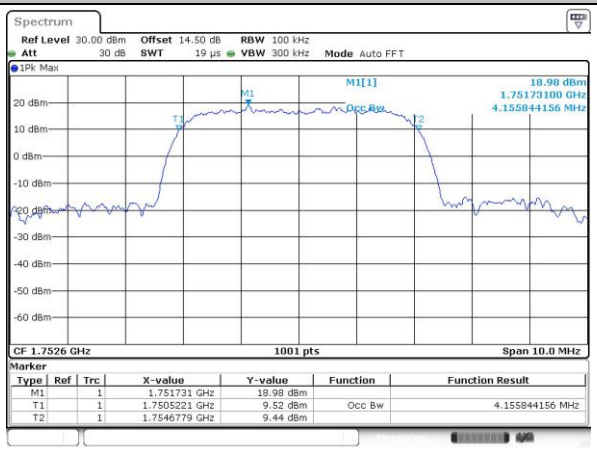
Lowest Channel



Middle Channel



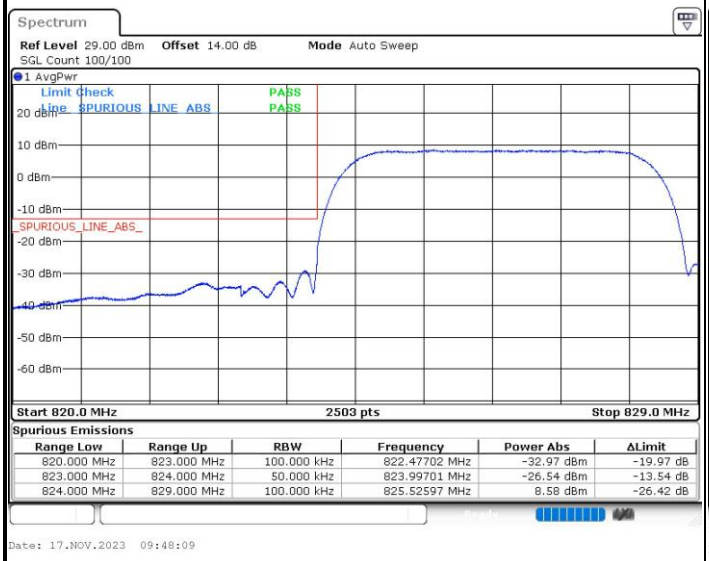
Highest Channel



Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge

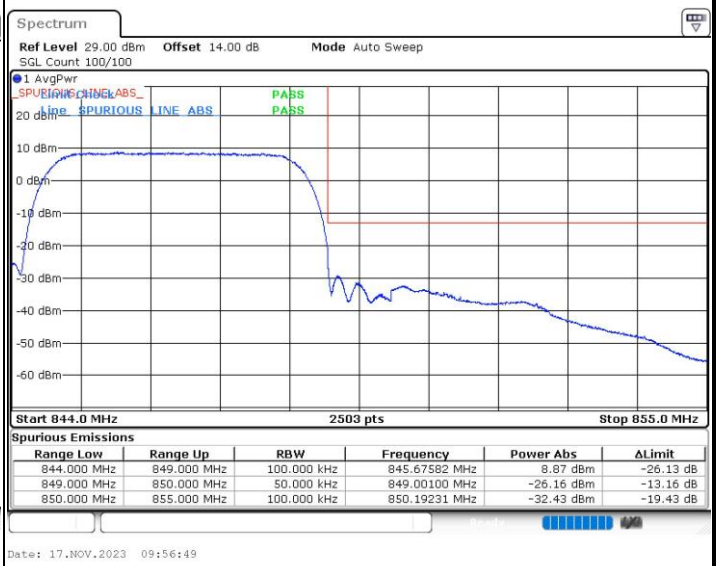


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
820.000 MHz	823.000 MHz	100.000 kHz	822.47702 MHz	-32.97 dBm	-19.97 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99701 MHz	-26.54 dBm	-13.54 dB
824.000 MHz	829.000 MHz	100.000 kHz	825.52597 MHz	8.58 dBm	-26.42 dB

Date: 17.NOV.2023 09:48:09

Highest Band Edge



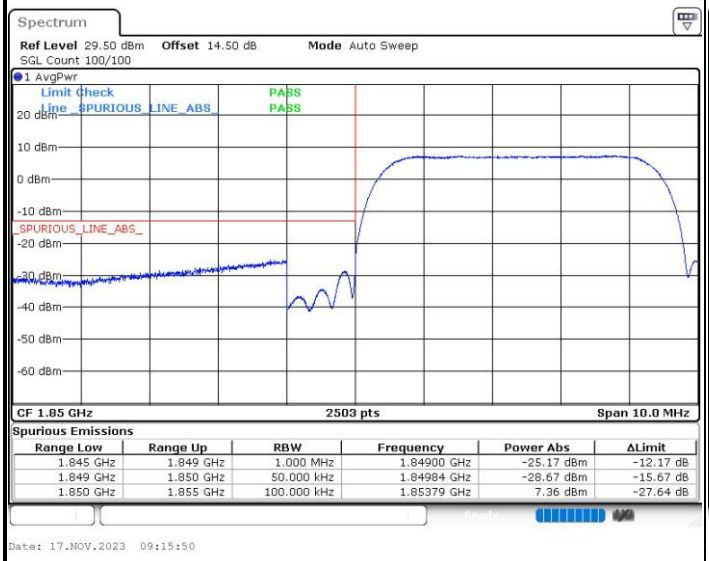
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	845.67582 MHz	8.87 dBm	-26.13 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00100 MHz	-26.16 dBm	-13.16 dB
850.000 MHz	855.000 MHz	100.000 kHz	850.19231 MHz	-32.43 dBm	-19.43 dB

Date: 17.NOV.2023 09:56:49

WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge

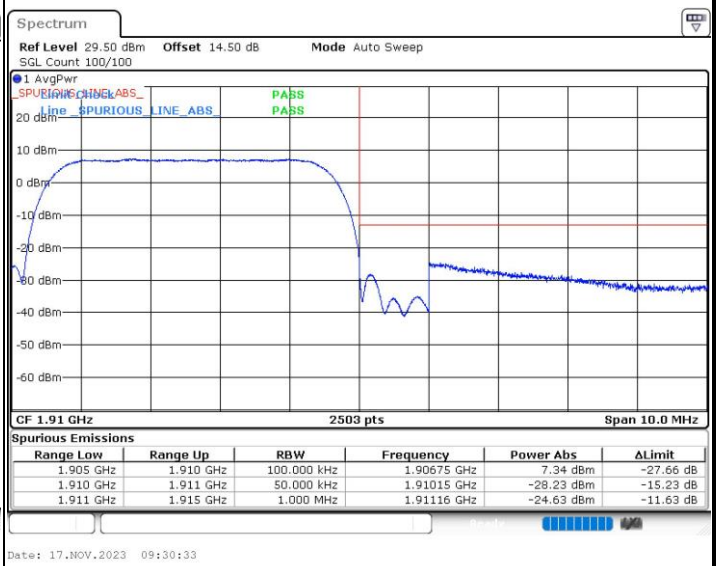


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.845 GHz	1.849 GHz	1.000 MHz	1.84900 GHz	-25.17 dBm	-12.17 dB
1.849 GHz	1.850 GHz	50.000 kHz	1.84984 GHz	-28.67 dBm	-15.67 dB
1.850 GHz	1.855 GHz	100.000 kHz	1.85379 GHz	7.36 dBm	-27.64 dB

Date: 17.NOV.2023 09:15:50

Highest Band Edge

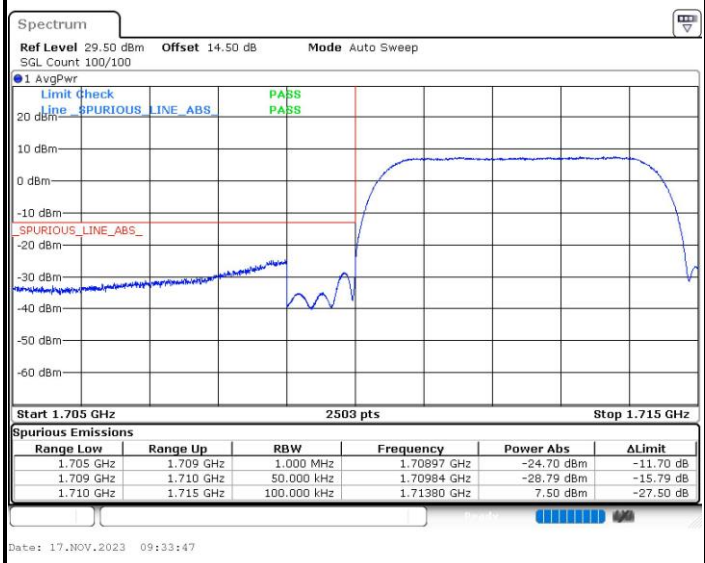


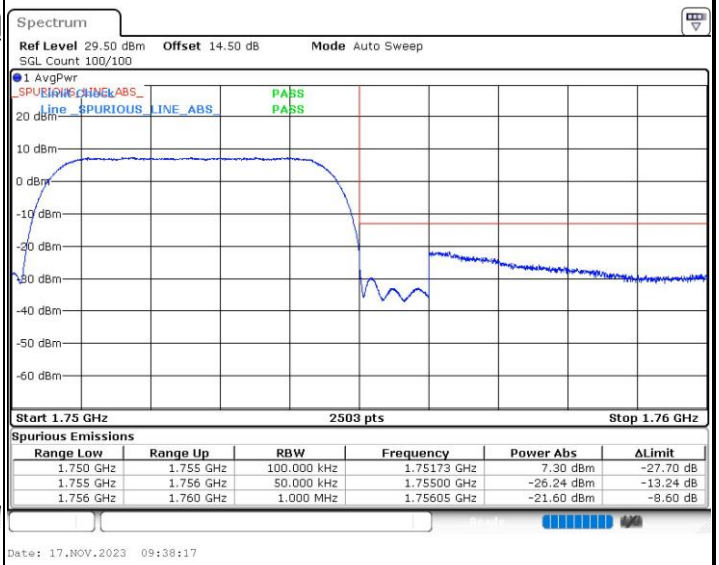
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.905 GHz	1.910 GHz	100.000 kHz	1.90675 GHz	7.34 dBm	-27.66 dB
1.910 GHz	1.911 GHz	50.000 kHz	1.91015 GHz	-28.23 dBm	-15.23 dB
1.911 GHz	1.915 GHz	1.000 MHz	1.91116 GHz	-24.63 dBm	-11.63 dB

Date: 17.NOV.2023 09:30:33

WCDMA Band IV (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**

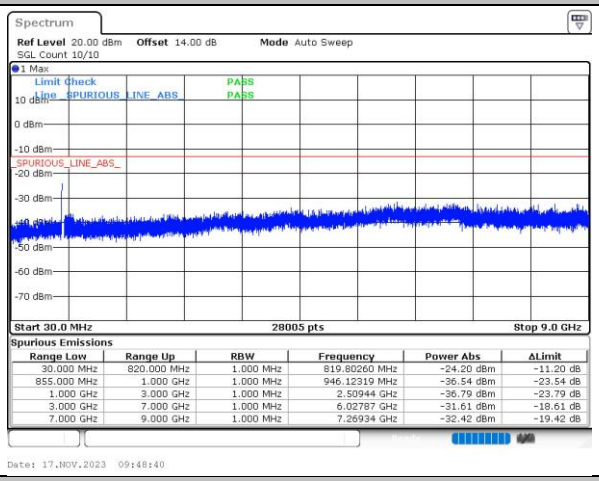




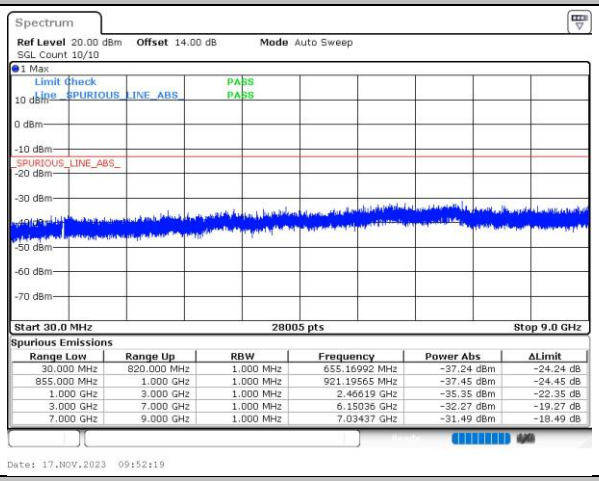
Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

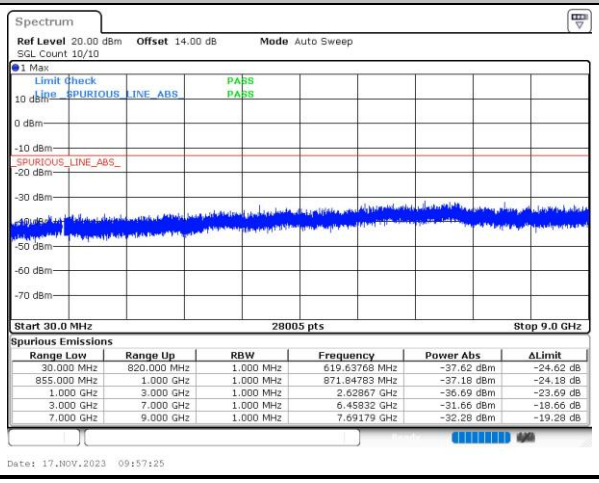
Lowest Channel



Middle Channel

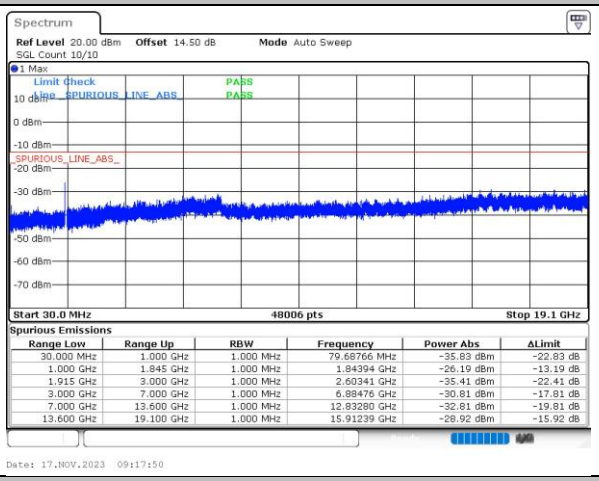


Highest Channel

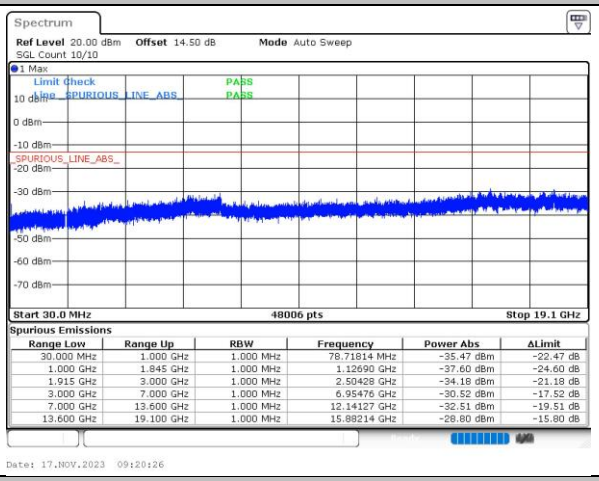


WCDMA Band II (RMC 12.2Kbps)

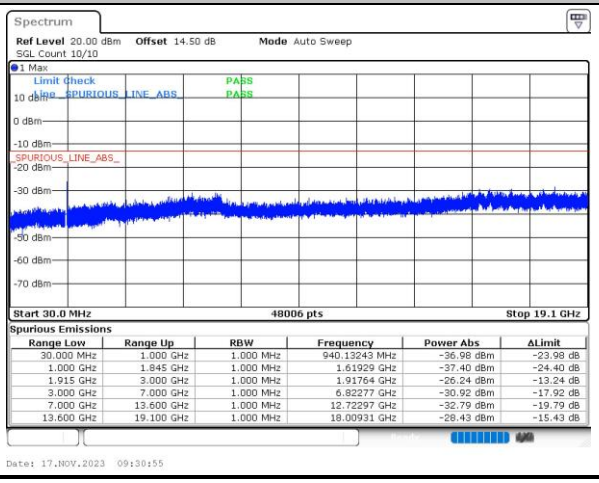
Lowest Channel



Middle Channel

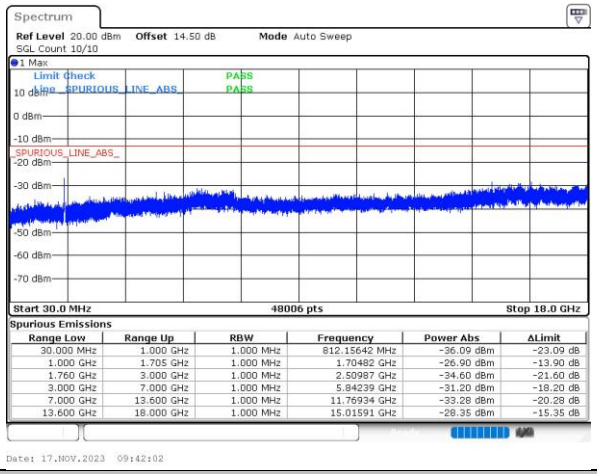


Highest Channel



WCDMA Band IV (RMC 12.2Kbps)

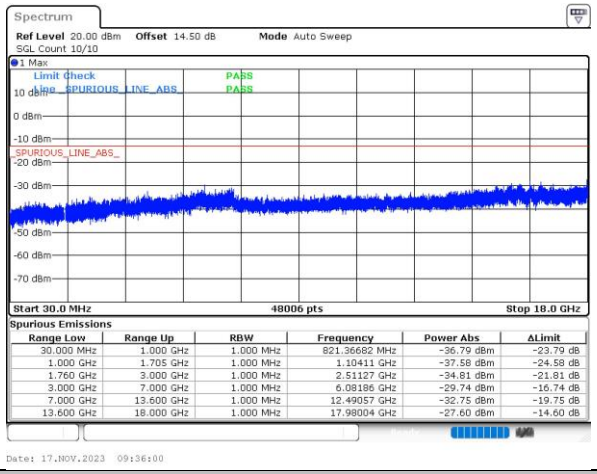
Lowest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	812.15642 MHz	-36.09 dBm	-23.09 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.70482 GHz	-26.90 dBm	-13.90 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.50987 GHz	-34.60 dBm	-21.60 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.84239 GHz	-31.20 dBm	-18.20 dB
7.000 GHz	13.600 GHz	1.000 MHz	11.76934 GHz	-33.28 dBm	-20.28 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.01591 GHz	-28.35 dBm	-15.35 dB

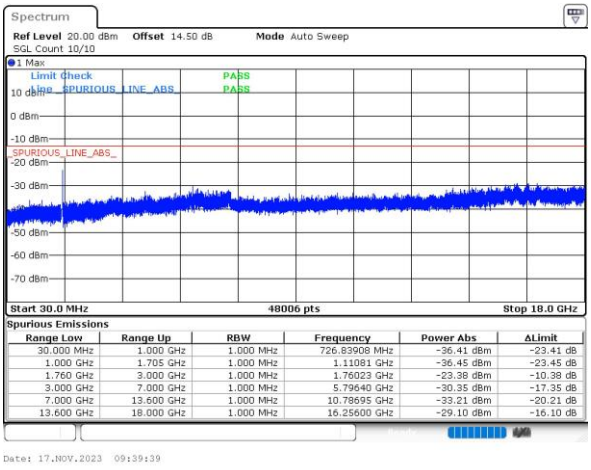
Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	821.36682 MHz	-36.79 dBm	-23.79 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.10411 GHz	-37.58 dBm	-24.58 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.51127 GHz	-34.81 dBm	-21.81 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.08186 GHz	-29.74 dBm	-16.74 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.49057 GHz	-32.75 dBm	-19.75 dB
13.600 GHz	18.000 GHz	1.000 MHz	17.98004 GHz	-27.60 dBm	-14.60 dB

Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	726.83908 MHz	-36.41 dBm	-23.41 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.11081 GHz	-36.45 dBm	-23.45 dB
1.760 GHz	3.000 GHz	1.000 MHz	1.76023 GHz	-23.38 dBm	-10.38 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.79640 GHz	-30.35 dBm	-17.35 dB
7.000 GHz	13.600 GHz	1.000 MHz	10.78695 GHz	-33.21 dBm	-20.21 dB
13.600 GHz	18.000 GHz	1.000 MHz	16.25600 GHz	-29.10 dBm	-16.10 dB

Frequency Stability

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0002	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0029	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0015	

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0002	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0000	

Note:

1. Normal Voltage = 7.78V. ; Battery End Point (BEP) = 7.3 V. ; Maximum Voltage =8.7 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Reid Huang	Temperature :	22~25℃
		Relative Humidity :	48~52%

RSE Pretest all the supported antennas, only the worst results are shown in the report.

Sample 1:

GSM850 (GSM) / ANT 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672.8	-58.50	-13	-45.50	-63.48	-61.75	4.00	9.40	H
	2509.2	-62.06	-13	-49.06	-71.01	-65.63	4.88	10.60	H
	3345.6	-65.33	-13	-52.33	-76.50	-70.26	5.52	12.60	H
	1672.8	-63.49	-13	-50.49	-68.19	-66.74	4.00	9.40	V
	2509.2	-65.29	-13	-52.29	-74.57	-68.86	4.88	10.60	V
	3345.6	-65.06	-13	-52.06	-76.61	-69.99	5.52	12.60	V

GSM850 (EDGE 1 Tx slots) / ANT 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672.8	-61.25	-13	-48.25	-66.23	-64.50	4.00	9.40	H
	2509.2	-61.28	-13	-48.28	-70.23	-64.85	4.88	10.60	H
	3345.6	-64.90	-13	-51.90	-76.07	-69.83	5.52	12.60	H
	1672.8	-63.74	-13	-50.74	-68.44	-66.99	4.00	9.40	V
	2509.2	-64.24	-13	-51.24	-73.52	-67.81	4.88	10.60	V
	3345.6	-64.81	-13	-51.81	-76.36	-69.74	5.52	12.60	V

WCDMA Band V(RMC 12.2Kbps) / ANT 0									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672.8	-69.05	-13	-56.05	-74.03	-72.30	4.00	9.40	H
	2509.2	-66.52	-13	-53.52	-75.47	-70.09	4.88	10.60	H
	3345.6	-65.54	-13	-52.54	-76.71	-70.47	5.52	12.60	H
	1672.8	-69.38	-13	-56.38	-74.08	-72.63	4.00	9.40	V
	2509.2	-65.82	-13	-52.82	-75.10	-69.39	4.88	10.60	V
	3345.6	-65.13	-13	-52.13	-76.68	-70.06	5.52	12.60	V

GSM1900 (GSM) / ANT 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3760	-51.75	-13	-38.75	-65.55	-58.50	5.85	12.60	H
	5640	-30.09	-13	-17.09	-46.55	-35.89	7.30	13.10	H
	7520	-58.48	-13	-45.48	-79.63	-61.63	8.35	11.50	H
	3760	-52.23	-13	-39.23	-66.21	-58.98	5.85	12.60	V
	5640	-30.44	-13	-17.44	-46.79	-36.24	7.30	13.10	V
	7520	-58.53	-13	-45.53	-79.56	-61.68	8.35	11.50	V

GSM1900 (EDGE 1 Tx slots) / ANT 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3760	-51.15	-13	-38.15	-64.95	-57.90	5.85	12.60	H
	5640	-29.63	-13	-16.63	-46.09	-35.43	7.30	13.10	H
	7520	-58.16	-13	-45.16	-79.31	-61.31	8.35	11.50	H
	3760	-49.59	-13	-36.59	-63.57	-56.34	5.85	12.60	V
	5640	-34.12	-13	-21.12	-50.47	-39.92	7.30	13.10	V
	7520	-58.39	-13	-45.39	-79.42	-61.54	8.35	11.50	V

WCDMA Band II(RMC 12.2Kbps) / ANT 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3760	-57.59	-13	-44.59	-71.39	-64.34	5.85	12.60	H
	5640	-45.14	-13	-32.14	-61.60	-50.94	7.30	13.10	H
	7520	-57.68	-13	-44.68	-78.83	-60.83	8.35	11.50	H
	3760	-60.85	-13	-47.85	-74.83	-67.60	5.85	12.60	V
	5640	-45.55	-13	-32.55	-61.9	-51.35	7.30	13.10	V
	7520	-58.50	-13	-45.50	-79.53	-61.65	8.35	11.50	V

WCDMA Band IV(RMC 12.2Kbps) / ANT 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3465.2	-63.20	-13	-50.20	-75.22	-70.05	5.65	12.50	H
	5197.8	-48.73	-13	-35.73	-64.98	-54.40	7.13	12.80	H
	6930.4	-59.43	-13	-46.43	-79.30	-62.83	8.40	11.80	H
	3465.2	-62.84	-13	-49.84	-75.4	-69.69	5.65	12.50	V
	5197.8	-54.37	-13	-41.37	-70.57	-60.04	7.13	12.80	V
	6930.4	-59.68	-13	-46.68	-79.56	-63.08	8.40	11.80	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Sample 2:

WCDMA Band II(RMC 12.2Kbps) / ANT 1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3760	-59.78	-13	-46.78	-73.58	-66.53	5.85	12.60	H
	5640	-46.45	-13	-33.45	-62.91	-52.25	7.30	13.10	H
	7520	-58.09	-13	-45.09	-79.24	-61.24	8.35	11.50	H
	3760	-59.20	-13	-46.20	-73.18	-65.95	5.85	12.60	V
	5640	-52.84	-13	-39.84	-69.19	-58.64	7.30	13.10	V
	7520	-57.92	-13	-44.92	-78.95	-61.07	8.35	11.50	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.