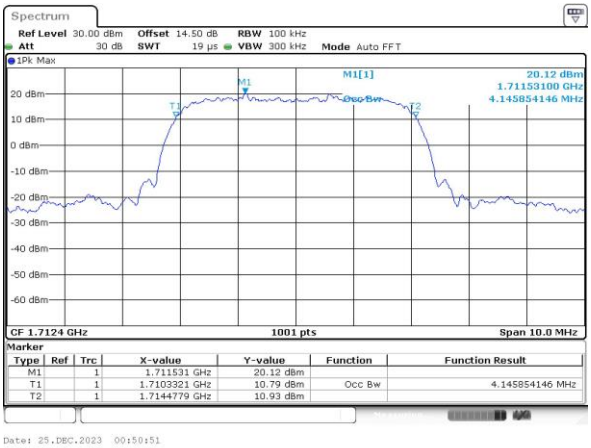
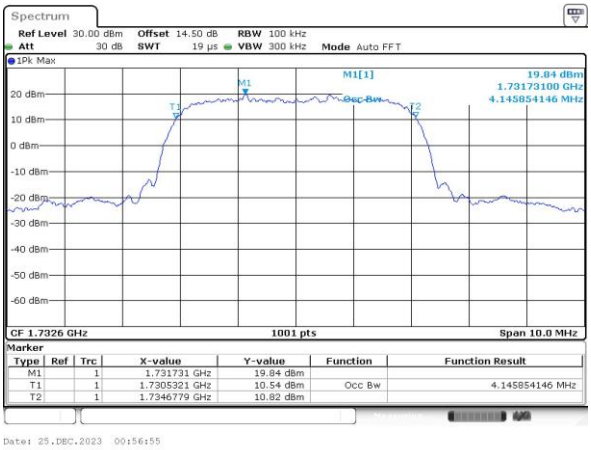
WCDMA Band IV (RMC 12.2Kbps)

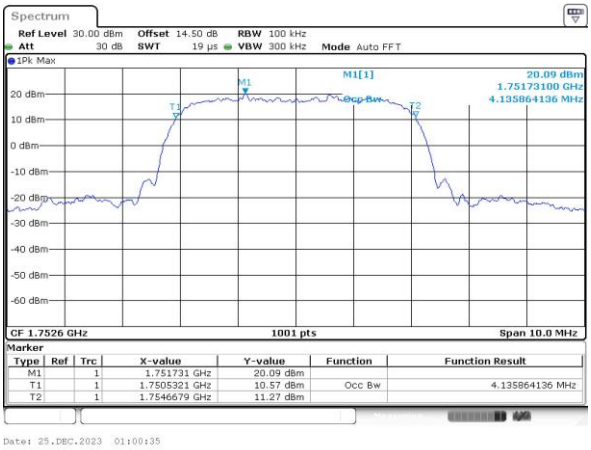
Lowest Channel



Middle Channel

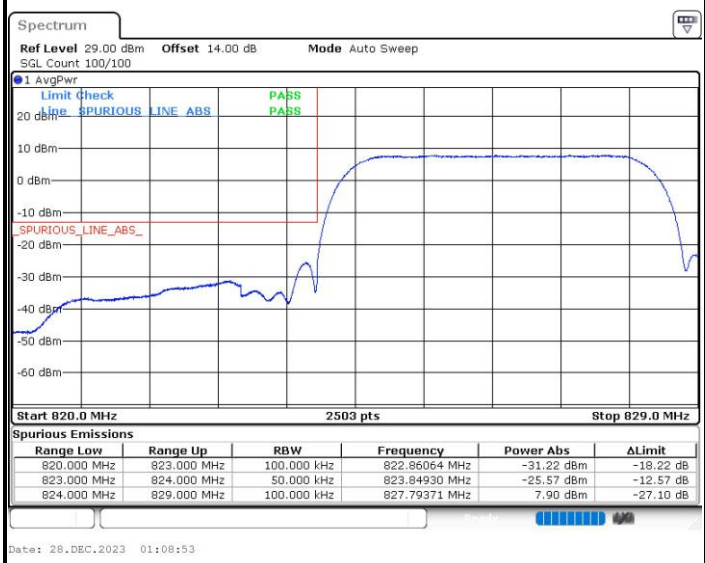


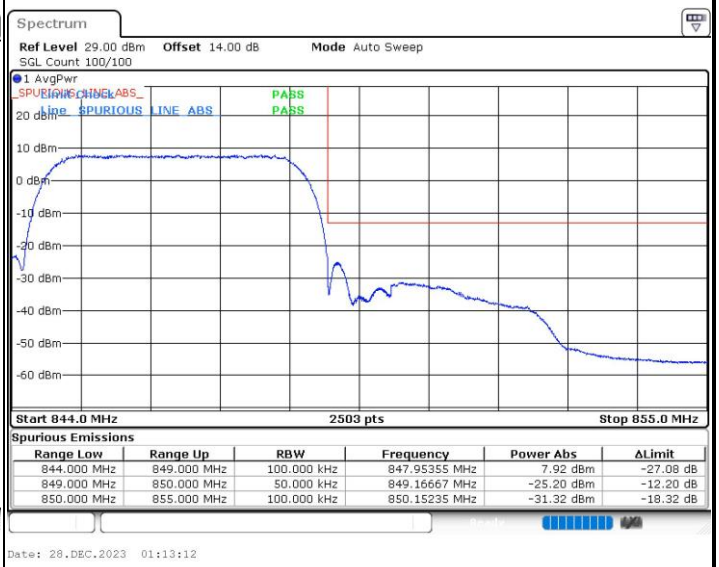
Highest Channel



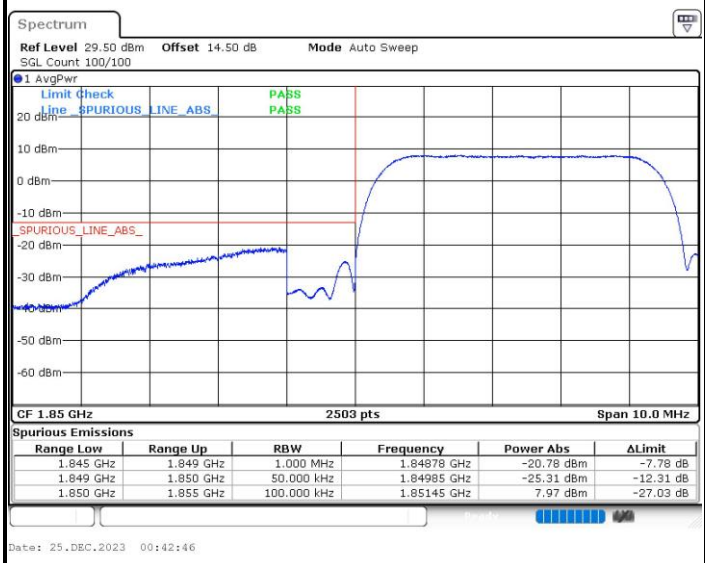
Conducted Band Edge

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





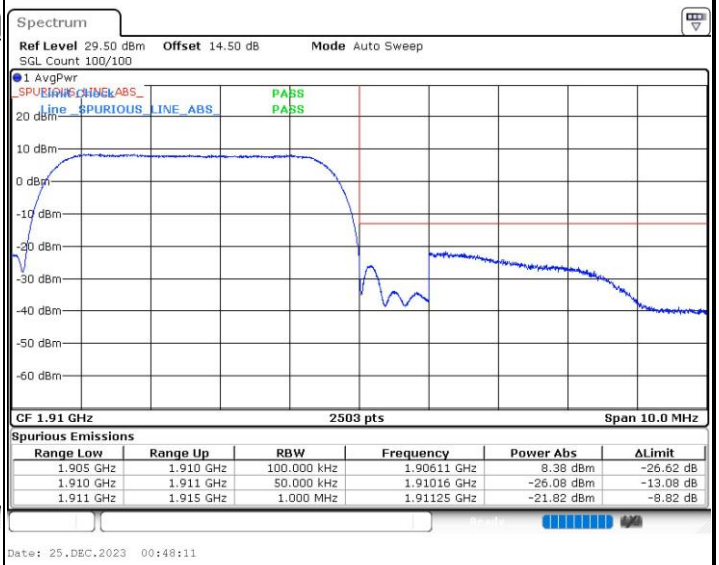
WCDMA Band II (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.845 GHz	1.849 GHz	1.000 MHz	1.84878 GHz	-20.78 dBm	-7.78 dB
1.849 GHz	1.850 GHz	50.000 kHz	1.84985 GHz	-25.31 dBm	-12.31 dB
1.850 GHz	1.855 GHz	100.000 kHz	1.85145 GHz	7.97 dBm	-27.03 dB

Date: 25.DEC.2023 00:42:46

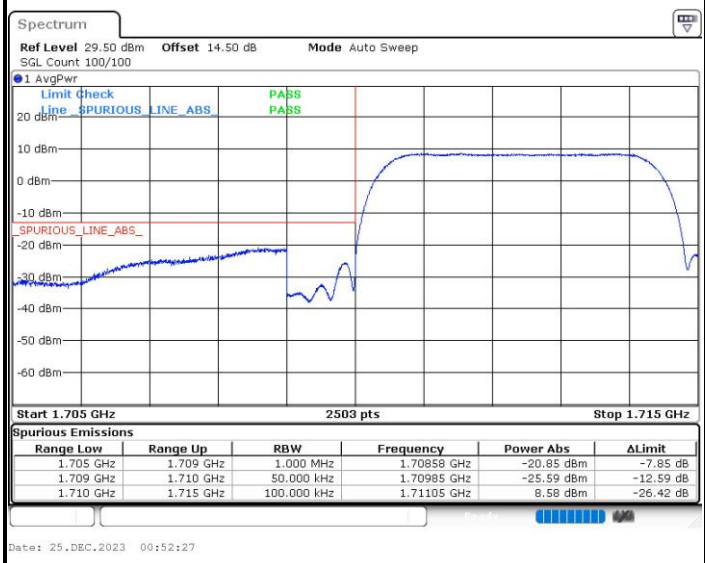


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.905 GHz	1.910 GHz	100.000 kHz	1.90611 GHz	8.38 dBm	-26.62 dB
1.910 GHz	1.911 GHz	50.000 kHz	1.91016 GHz	-26.08 dBm	-13.08 dB
1.911 GHz	1.915 GHz	1.000 MHz	1.91125 GHz	-21.82 dBm	-8.82 dB

Date: 25.DEC.2023 00:48:11

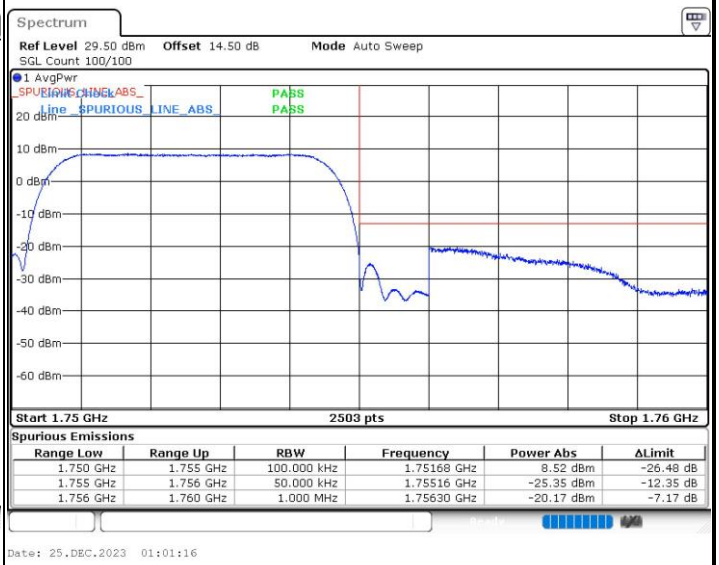
WCDMA Band IV (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.705 GHz	1.709 GHz	1.000 MHz	1.70858 GHz	-20.85 dBm	-7.85 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.70985 GHz	-25.59 dBm	-12.59 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71105 GHz	8.58 dBm	-26.42 dB

Date: 25.DEC.2023 00:52:27



Spurious Emissions

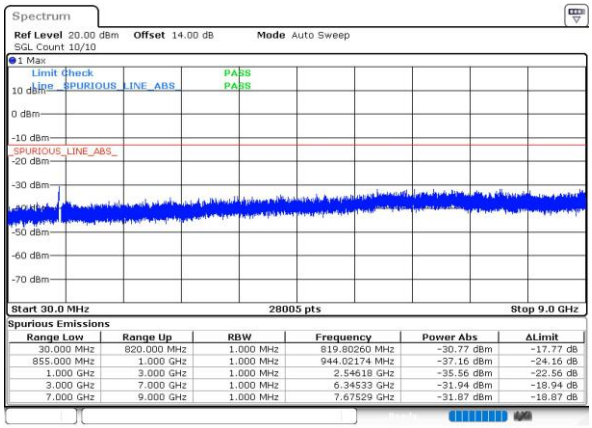
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75168 GHz	8.52 dBm	-26.48 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75516 GHz	-25.35 dBm	-12.35 dB
1.756 GHz	1.760 GHz	1.000 MHz	1.75630 GHz	-20.17 dBm	-7.17 dB

Date: 25.DEC.2023 01:01:16

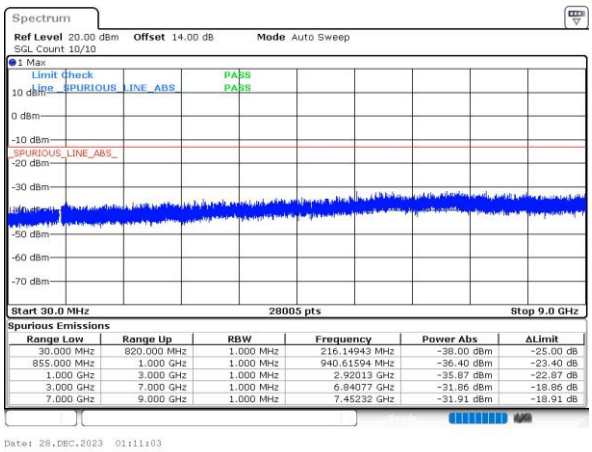
Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

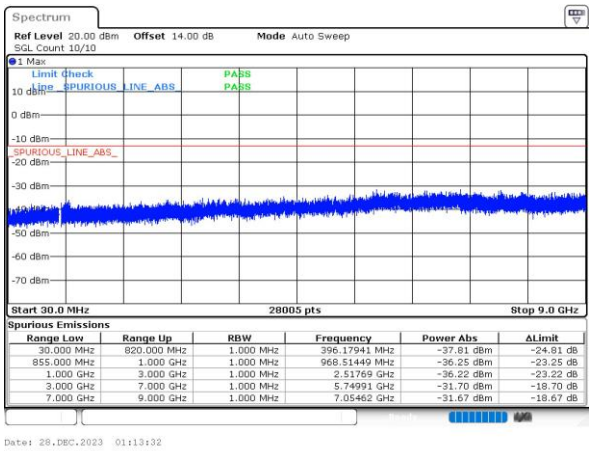
Lowest Channel



Middle Channel

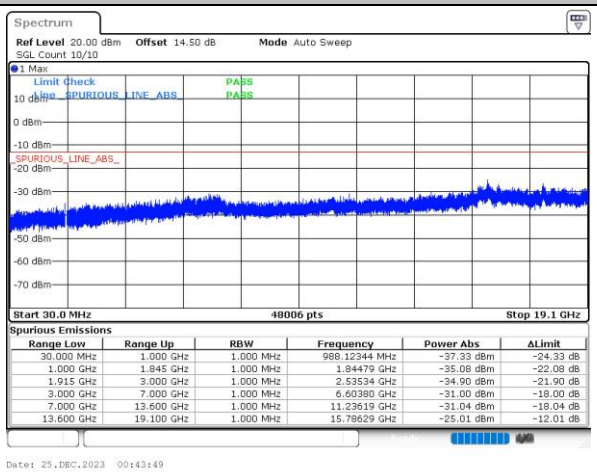


Highest Channel

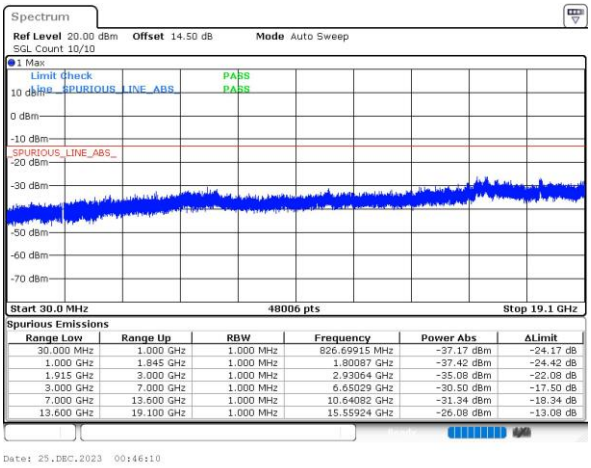


WCDMA Band II (RMC 12.2Kbps)

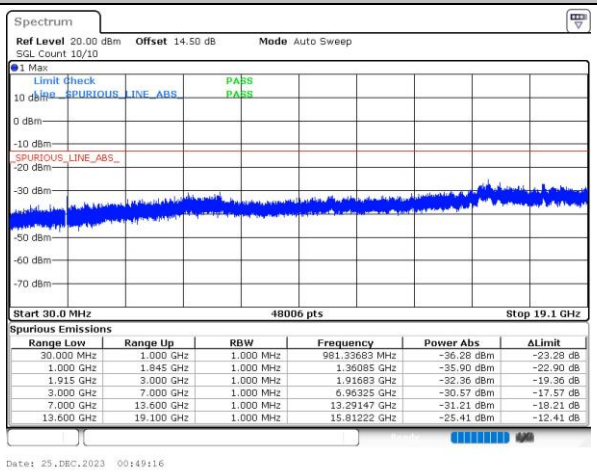
Lowest Channel



Middle Channel

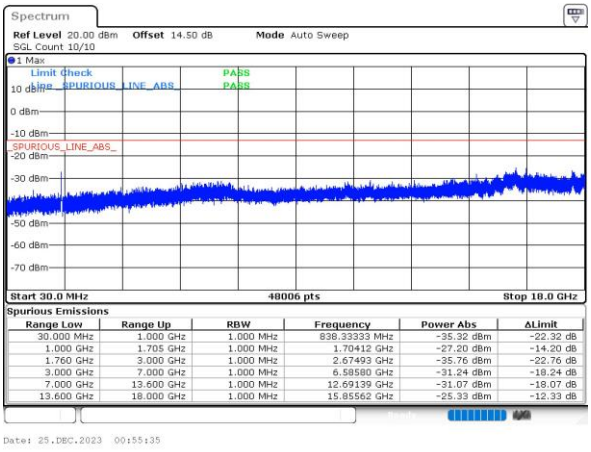


Highest Channel



WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel

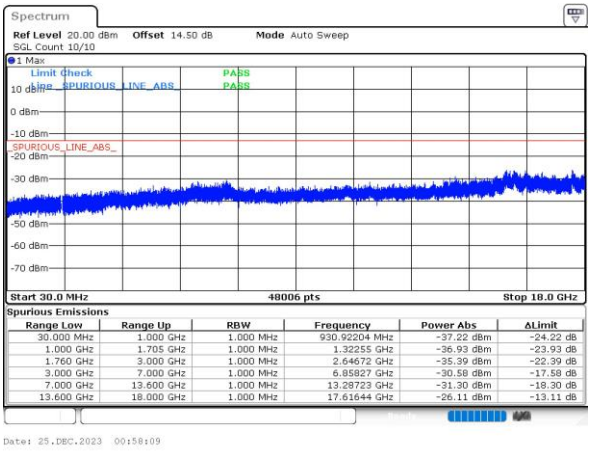


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	838.33333 MHz	-35.32 dBm	-22.32 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.70412 GHz	-27.20 dBm	-14.20 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.67493 GHz	-35.76 dBm	-22.76 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.58580 GHz	-31.24 dBm	-18.24 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.69139 GHz	-31.07 dBm	-18.07 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.85562 GHz	-25.33 dBm	-12.33 dB

Date: 25.DEC.2023 00:55:35

Middle Channel

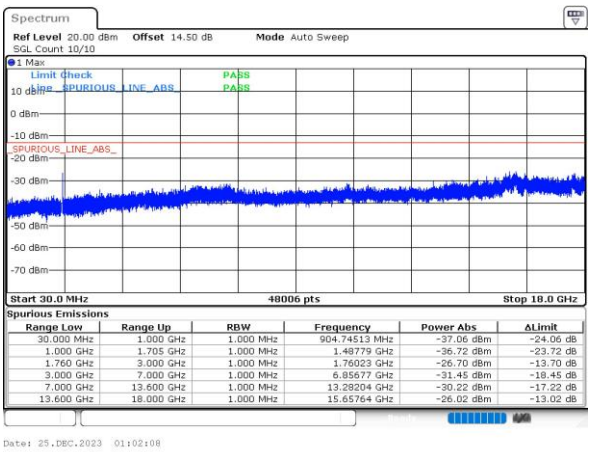


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	930.92204 MHz	-37.22 dBm	-24.22 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.32255 GHz	-36.93 dBm	-23.93 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.64672 GHz	-35.39 dBm	-22.39 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85827 GHz	-30.58 dBm	-17.58 dB
7.000 GHz	13.600 GHz	1.000 MHz	13.28723 GHz	-31.30 dBm	-18.30 dB
13.600 GHz	18.000 GHz	1.000 MHz	17.61644 GHz	-26.11 dBm	-13.11 dB

Date: 25.DEC.2023 00:58:09

Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	904.74513 MHz	-37.06 dBm	-24.06 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.48779 GHz	-36.72 dBm	-23.72 dB
1.760 GHz	3.000 GHz	1.000 MHz	1.76023 GHz	-26.70 dBm	-13.70 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85677 GHz	-31.45 dBm	-18.45 dB
7.000 GHz	13.600 GHz	1.000 MHz	13.28204 GHz	-30.22 dBm	-17.22 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.65764 GHz	-26.02 dBm	-13.02 dB

Date: 25.DEC.2023 01:02:08

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	0.0004	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0025	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0017	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0007	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0018	
-20	Normal Voltage	0.0020	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0009	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0002	

Note:

1. Normal Voltage = 3.91V；Battery End Point (BEP) = 3.4V.；Maximum Voltage =4.5V
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 :	Shiwei Wen	Temperature :	22~25℃
		Relative Humidity :	48~52%

RSE pretest all the support Antennas, only the worst results are shown in the report.

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)
Low	1648.4	-59.92	-13	-46.92	-67.97	-63.15	3.98	9.36	H
	2472.6	-55.57	-13	-42.57	-67.76	-59.12	4.85	10.55	H
	3296.8	-61.88	-13	-48.88	-77.11	-66.81	5.50	12.58	H
	1648.4	-64.16	-13	-51.16	-72.25	-67.39	3.98	9.36	V
	2472.6	-59.58	-13	-46.58	-71.81	-63.13	4.85	10.55	V
	3296.8	-62.16	-13	-49.16	-77.30	-67.09	5.50	12.58	V
Middle	1672.8	-61.31	-13	-48.31	-68.82	-64.56	4.00	9.40	H
	2509.2	-58.59	-13	-45.59	-70.87	-62.16	4.88	10.60	H
	3345.6	-62.22	-13	-49.22	-77.30	-67.15	5.52	12.60	H
	1672.8	-65.62	-13	-52.62	-73.32	-68.87	4.00	9.40	V
	2509.2	-58.50	-13	-45.50	-70.90	-62.07	4.88	10.60	V
	3345.6	-62.25	-13	-49.25	-77.35	-67.18	5.52	12.60	V
High	1697.6	-61.83	-13	-48.83	-69.51	-65.00	4.10	9.42	H
	2546.4	-58.40	-13	-45.40	-71.00	-61.98	4.90	10.63	H
	3395.2	-62.30	-13	-49.30	-77.30	-67.22	5.55	12.62	H
	1697.6	-65.05	-13	-52.05	-72.91	-68.22	4.10	9.42	V
	2546.4	-60.97	-13	-47.97	-73.58	-64.55	4.90	10.63	V
	3395.2	-62.41	-13	-49.41	-77.42	-67.33	5.55	12.62	V

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

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)
Low	1648.4	-60.50	-13	-47.50	-68.55	-63.73	3.98	9.36	H
	2472.6	-55.47	-13	-42.47	-67.66	-59.02	4.85	10.55	H
	3296.8	-62.03	-13	-49.03	-77.26	-66.96	5.50	12.58	H
	1648.4	-60.99	-13	-47.99	-69.08	-64.22	3.98	9.36	V
	2472.6	-60.17	-13	-47.17	-72.40	-63.72	4.85	10.55	V
	3296.8	-61.70	-13	-48.70	-76.84	-66.63	5.50	12.58	V
Middle	1672.8	-57.25	-13	-44.25	-64.76	-60.50	4.00	9.40	H
	2509.2	-55.35	-13	-42.35	-67.63	-58.92	4.88	10.60	H
	3345.6	-62.16	-13	-49.16	-77.24	-67.09	5.52	12.60	H
	1672.8	-62.60	-13	-49.60	-70.30	-65.85	4.00	9.40	V
	2509.2	-58.32	-13	-45.32	-70.72	-61.89	4.88	10.60	V
	3345.6	-61.81	-13	-48.81	-76.91	-66.74	5.52	12.60	V
High	1697.6	-61.24	-13	-48.24	-68.92	-64.41	4.10	9.42	H
	2546.4	-58.58	-13	-45.58	-71.18	-62.16	4.90	10.63	H
	3395.2	-62.11	-13	-49.11	-77.11	-67.03	5.55	12.62	H
	1697.6	-64.87	-13	-51.87	-72.73	-68.04	4.10	9.42	V
	2546.4	-60.73	-13	-47.73	-73.34	-64.31	4.90	10.63	V
	3395.2	-62.30	-13	-49.30	-77.31	-67.22	5.55	12.62	V

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

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)
Low	1652.8	-66.45	-13	-53.45	-74.40	-69.68	3.98	9.36	H
	2479.2	-63.92	-13	-50.92	-76.13	-67.47	4.85	10.55	H
	3305.6	-62.09	-13	-49.09	-77.29	-67.02	5.50	12.58	H
	1652.8	-66.12	-13	-53.12	-74.14	-69.35	3.98	9.36	V
	2479.2	-63.76	-13	-50.76	-76.02	-67.31	4.85	10.55	V
	3305.6	-62.11	-13	-49.11	-77.24	-67.04	5.50	12.58	V
Middle	1672.8	-66.50	-13	-53.50	-74.01	-69.75	4.00	9.40	H
	2509.2	-63.48	-13	-50.48	-75.76	-67.05	4.88	10.60	H
	3345.6	-62.00	-13	-49.00	-77.08	-66.93	5.52	12.60	H
	1672.8	-66.33	-13	-53.33	-74.03	-69.58	4.00	9.40	V
	2509.2	-63.32	-13	-50.32	-75.72	-66.89	4.88	10.60	V
	3345.6	-62.13	-13	-49.13	-77.23	-67.06	5.52	12.60	V
High	1693.2	-58.98	-13	-45.98	-66.64	-62.15	4.10	9.42	H
	2539.8	-63.02	-13	-50.02	-75.56	-66.60	4.90	10.63	H
	3386.4	-62.53	-13	-49.53	-77.55	-67.45	5.55	12.62	H
	1693.2	-64.88	-13	-51.88	-72.72	-68.05	4.10	9.42	V
	2539.8	-63.22	-13	-50.22	-75.79	-66.80	4.90	10.63	V
	3386.4	-62.37	-13	-49.37	-77.40	-67.29	5.55	12.62	V

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

GSM1900 (GSM) Ant.0									
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)
Low	3700.4	-62.30	-13	-49.30	-78.75	-69.06	5.82	12.58	H
	5550.6	-60.75	-13	-47.75	-80.83	-66.47	7.28	13.00	H
	7400.8	-55.01	-13	-42.01	-79.62	-58.17	8.32	11.48	H
	3700.4	-62.62	-13	-49.62	-78.82	-69.38	5.82	12.58	V
	5550.6	-61.14	-13	-48.14	-81.07	-66.86	7.28	13.00	V
	7400.8	-54.72	-13	-41.72	-79.64	-57.88	8.32	11.48	V
Middle	3760	-61.92	-13	-48.92	-78.61	-68.67	5.85	12.60	H
	5640	-59.04	-13	-46.04	-79.88	-64.84	7.30	13.10	H
	7520	-55.49	-13	-42.49	-79.83	-58.64	8.35	11.50	H
	3760	-62.28	-13	-49.28	-78.53	-69.03	5.85	12.60	V
	5640	-60.37	-13	-47.37	-80	-66.17	7.30	13.10	V
	7520	-54.88	-13	-41.88	-79.64	-58.03	8.35	11.50	V
High	3819.6	-61.35	-13	-48.35	-78.22	-68.09	5.88	12.62	H
	5729.4	-58.08	-13	-45.08	-79.58	-63.89	7.32	13.13	H
	7639.2	-55.41	-13	-42.41	-79.56	-58.57	8.38	11.54	H
	3819.6	-61.94	-13	-48.94	-78.33	-68.68	5.88	12.62	V
	5729.4	-58.87	-13	-45.87	-79.54	-64.68	7.32	13.13	V
	7639.2	-54.63	-13	-41.63	-79.31	-57.79	8.38	11.54	V

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

GSM1900 (EDGE 1 Tx slots) Ant.0									
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)
Low	3704.8	-62.30	-13	-49.30	-78.77	-69.06	5.82	12.58	H
	5557.2	-60.85	-13	-47.85	-80.89	-66.57	7.28	13.00	H
	7409.6	-55.14	-13	-42.14	-79.72	-58.30	8.32	11.48	H
	3704.8	-62.56	-13	-49.56	-78.76	-69.32	5.82	12.58	V
	5557.2	-61.16	-13	-48.16	-81.05	-66.88	7.28	13.00	V
	7409.6	-54.69	-13	-41.69	-79.59	-57.85	8.32	11.48	V
Middle	3760	-62.03	-13	-49.03	-78.72	-68.78	5.85	12.60	H
	5640	-58.92	-13	-45.92	-79.76	-64.72	7.30	13.10	H
	7520	-55.31	-13	-42.31	-79.65	-58.46	8.35	11.50	H
	3760	-62.35	-13	-49.35	-78.6	-69.10	5.85	12.60	V
	5640	-60.28	-13	-47.28	-79.91	-66.08	7.30	13.10	V
	7520	-54.99	-13	-41.99	-79.75	-58.14	8.35	11.50	V
High	3815.2	-61.24	-13	-48.24	-78.10	-67.98	5.88	12.62	H
	5722.8	-57.98	-13	-44.98	-79.44	-63.79	7.32	13.13	H
	7630.4	-55.12	-13	-42.12	-79.29	-58.28	8.38	11.54	H
	3815.2	-62.09	-13	-49.09	-78.45	-68.83	5.88	12.62	V
	5722.8	-59.10	-13	-46.10	-79.7	-64.91	7.32	13.13	V
	7630.4	-54.92	-13	-41.92	-79.61	-58.08	8.38	11.54	V

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

WCDMA Band II(RMC 12.2Kbps) Ant.0									
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)
Low	3700.4	-61.91	-13	-48.91	-78.36	-68.67	5.82	12.58	H
	5550.6	-60.67	-13	-47.67	-80.75	-66.39	7.28	13.00	H
	7400.8	-54.92	-13	-41.92	-79.53	-58.08	8.32	11.48	H
	3700.4	-62.17	-13	-49.17	-78.37	-68.93	5.82	12.58	V
	5550.6	-60.86	-13	-47.86	-80.79	-66.58	7.28	13.00	V
	7400.8	-53.95	-13	-40.95	-78.87	-57.11	8.32	11.48	V
Middle	3760	-61.88	-13	-48.88	-78.57	-68.63	5.85	12.60	H
	5640	-58.81	-13	-45.81	-79.65	-64.61	7.30	13.10	H
	7520	-55.30	-13	-42.30	-79.64	-58.45	8.35	11.50	H
	3760	-62.26	-13	-49.26	-78.51	-69.01	5.85	12.60	V
	5640	-60.22	-13	-47.22	-79.85	-66.02	7.30	13.10	V
	7520	-54.21	-13	-41.21	-78.97	-57.36	8.35	11.50	V
High	3819.6	-61.64	-13	-48.64	-78.51	-68.38	5.88	12.62	H
	5729.4	-58.07	-13	-45.07	-79.57	-63.88	7.32	13.13	H
	7639.2	-55.28	-13	-42.28	-79.43	-58.44	8.38	11.54	H
	3819.6	-62.13	-13	-49.13	-78.52	-68.87	5.88	12.62	V
	5729.4	-58.66	-13	-45.66	-79.33	-64.47	7.32	13.13	V
	7639.2	-53.54	-13	-40.54	-78.22	-56.70	8.38	11.54	V

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

WCDMA Band IV(RMC 12.2Kbps) Ant.0									
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)
Low	3424.8	-62.49	-13	-49.49	-77.60	-69.37	5.60	12.48	H
	5137.2	-59.59	-13	-46.59	-79.30	-65.27	7.10	12.78	H
	6849.6	-56.84	-13	-43.84	-79.73	-60.23	8.38	11.77	H
	3424.8	-62.47	-13	-49.47	-77.6	-69.35	5.60	12.48	V
	5137.2	-60.04	-13	-47.04	-79.49	-65.72	7.10	12.78	V
	6849.6	-56.72	-13	-43.72	-80.03	-60.11	8.38	11.77	V
Middle	3465.2	-62.37	-13	-49.37	-77.68	-69.22	5.65	12.50	H
	5197.8	-60.09	-13	-47.09	-79.95	-65.76	7.13	12.80	H
	6930.4	-56.98	-13	-43.98	-79.99	-60.38	8.40	11.80	H
	3465.2	-62.00	-13	-49.00	-77.34	-68.85	5.65	12.50	V
	5197.8	-60.25	-13	-47.25	-79.73	-65.92	7.13	12.80	V
	6930.4	-56.42	-13	-43.42	-79.72	-59.82	8.40	11.80	V
High	3505.2	-61.99	-13	-48.99	-77.50	-68.83	5.68	12.52	H
	5257.8	-60.72	-13	-47.72	-80.24	-66.39	7.15	12.82	H
	7010.4	-56.62	-13	-43.62	-79.77	-60.05	8.42	11.85	H
	3505.2	-61.77	-13	-48.77	-77.33	-68.61	5.68	12.52	V
	5257.8	-61.28	-13	-48.28	-80.36	-66.95	7.15	12.82	V
	7010.4	-56.49	-13	-43.49	-79.85	-59.92	8.42	11.85	V

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