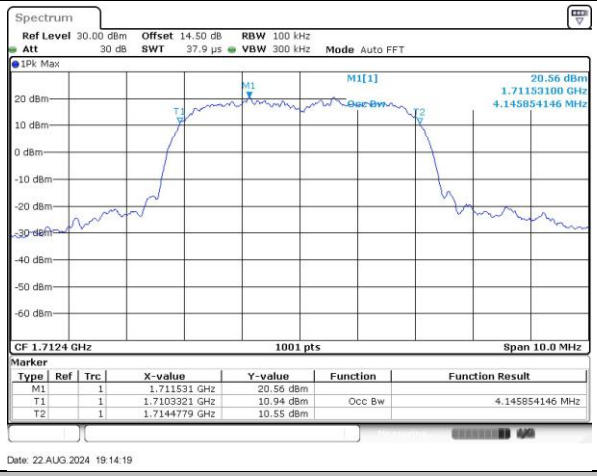
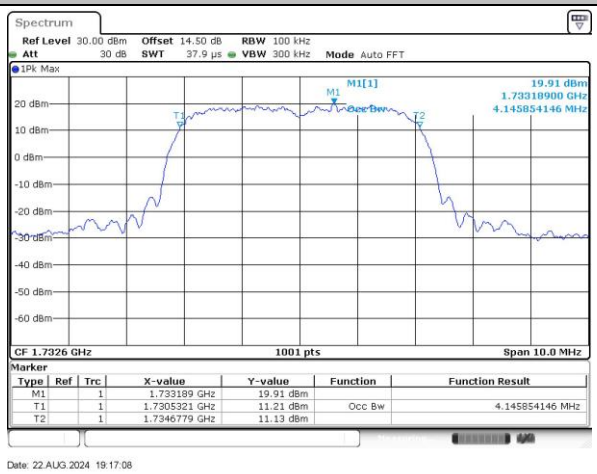
WCDMA Band IV (RMC 12.2Kbps)

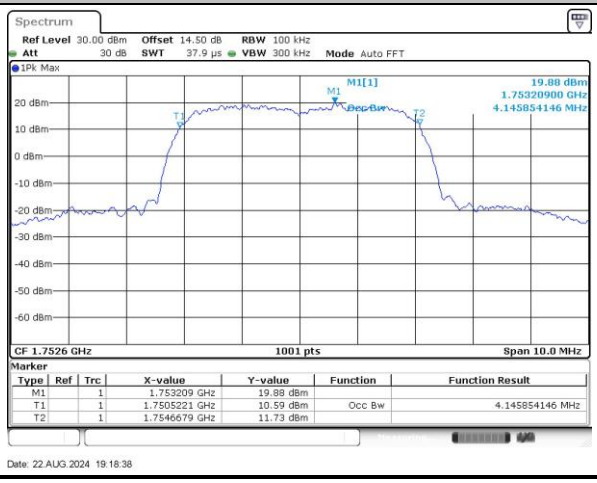
Lowest Channel



Middle Channel

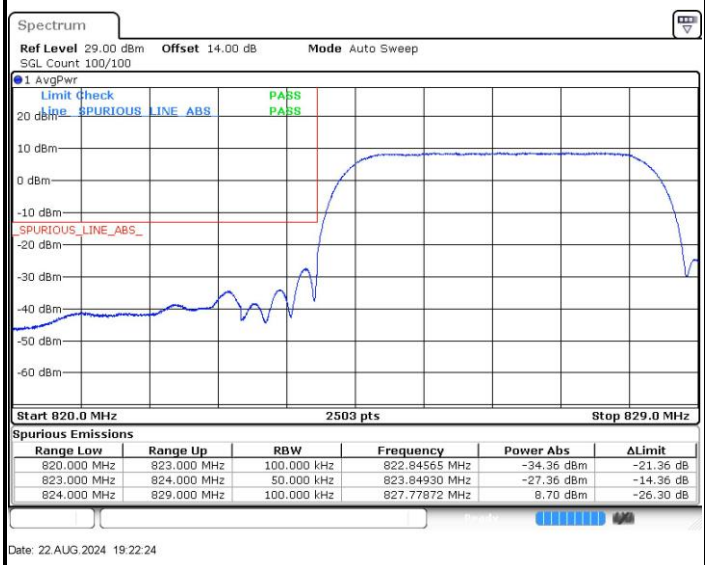


Highest Channel



Conducted Band Edge

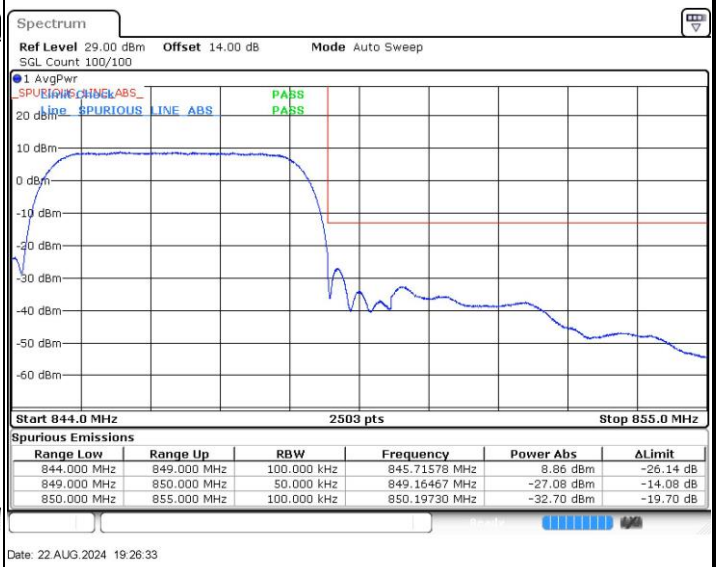
WCDMA Band V (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
820.000 MHz	823.000 MHz	100.000 kHz	822.84565 MHz	-34.36 dBm	-21.36 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.84930 MHz	-27.36 dBm	-14.36 dB
824.000 MHz	829.000 MHz	100.000 kHz	827.77872 MHz	8.70 dBm	-26.30 dB

Date: 22.AUG.2024 19:22:24



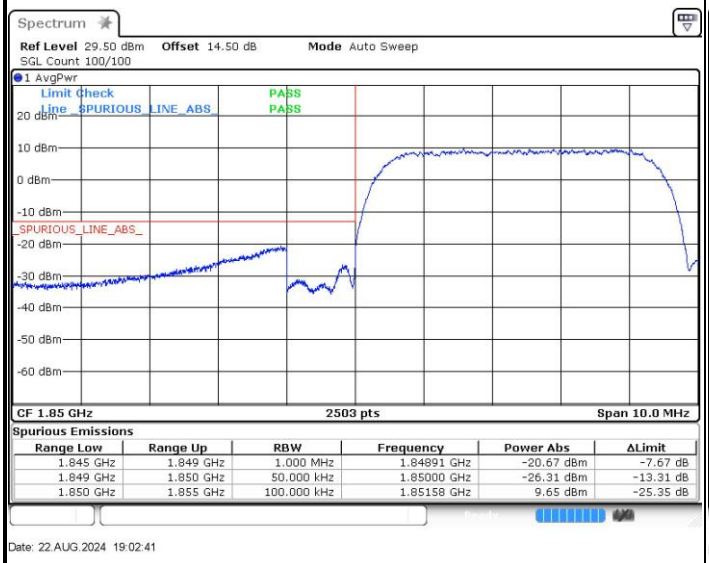
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	845.71578 MHz	8.86 dBm	-26.14 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.16467 MHz	-27.08 dBm	-14.08 dB
850.000 MHz	855.000 MHz	100.000 kHz	850.19730 MHz	-32.70 dBm	-19.70 dB

Date: 22.AUG.2024 19:26:33

WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge

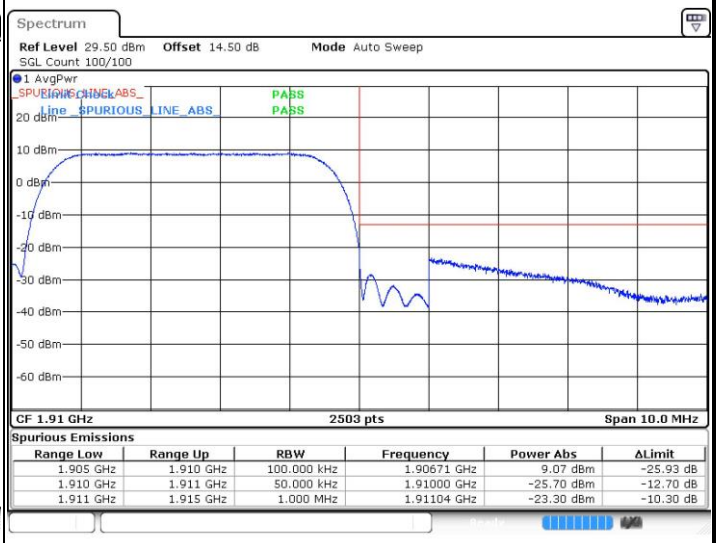


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.845 GHz	1.849 GHz	1.000 MHz	1.84891 GHz	-20.67 dBm	-7.67 dB
1.849 GHz	1.850 GHz	50.000 kHz	1.85000 GHz	-26.31 dBm	-13.31 dB
1.850 GHz	1.855 GHz	100.000 kHz	1.85158 GHz	9.65 dBm	-25.35 dB

Date: 22.AUG.2024 19:02:41

Highest Band Edge



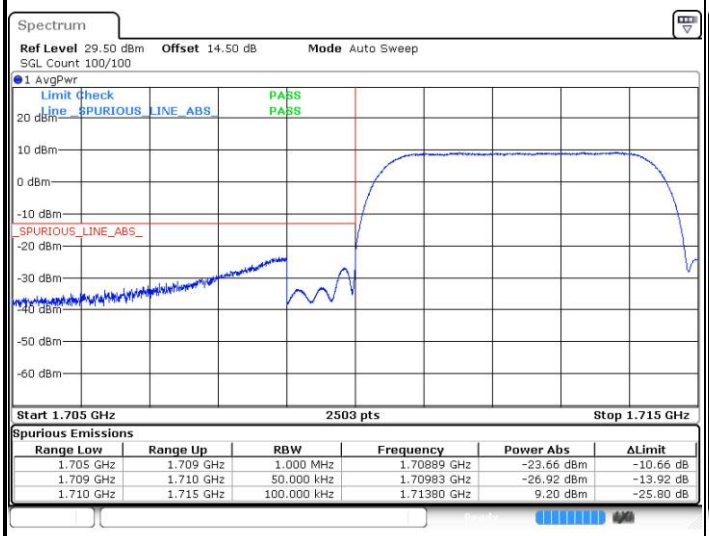
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.905 GHz	1.910 GHz	100.000 kHz	1.90671 GHz	9.07 dBm	-25.93 dB
1.910 GHz	1.911 GHz	50.000 kHz	1.91000 GHz	-25.70 dBm	-12.70 dB
1.911 GHz	1.915 GHz	1.000 MHz	1.91104 GHz	-23.30 dBm	-10.30 dB

Date: 22.AUG.2024 19:11:49

WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge

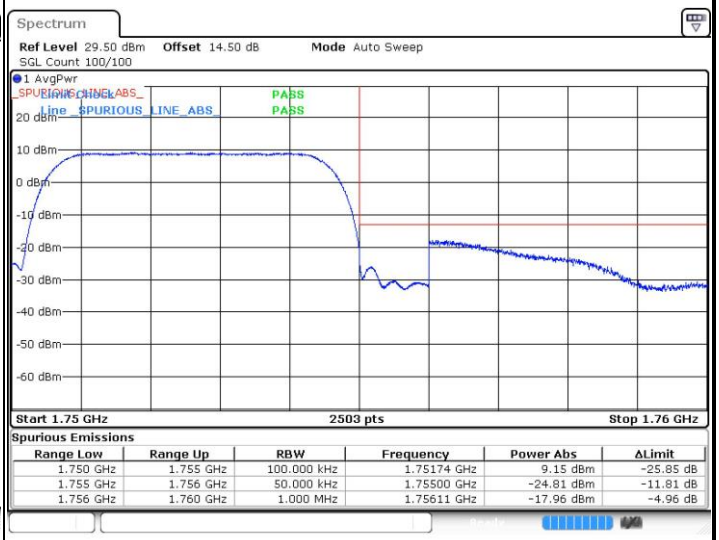


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.705 GHz	1.709 GHz	1.000 MHz	1.70889 GHz	-23.66 dBm	-10.66 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.70983 GHz	-26.92 dBm	-13.92 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71380 GHz	9.20 dBm	-25.80 dB

Date: 22.AUG.2024 19:14:52

Highest Band Edge



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75174 GHz	9.15 dBm	-25.85 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-24.81 dBm	-11.81 dB
1.756 GHz	1.760 GHz	1.000 MHz	1.75611 GHz	-17.96 dBm	-4.96 dB

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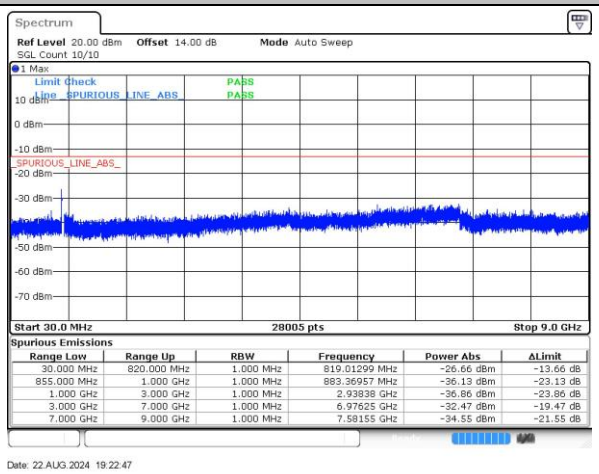
Conducted Spurious Emission

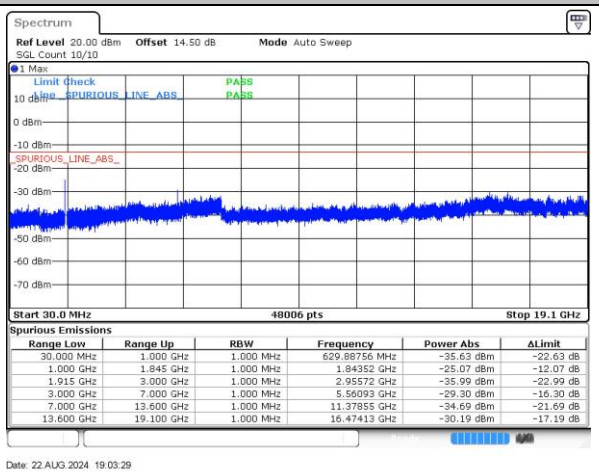
WCDMA Band V (RMC 12.2Kbps)

Lowest Channel

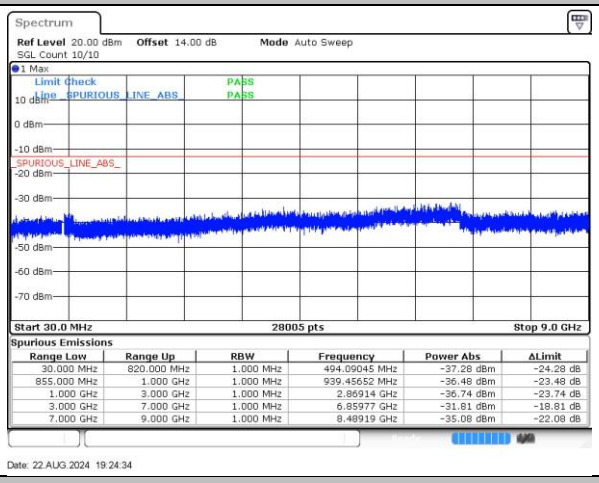


WCDMA Band II (RMC 12.2Kbps)

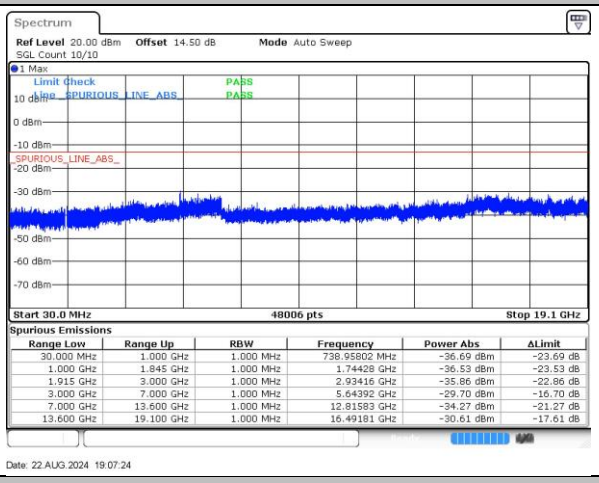
Lowest Channel



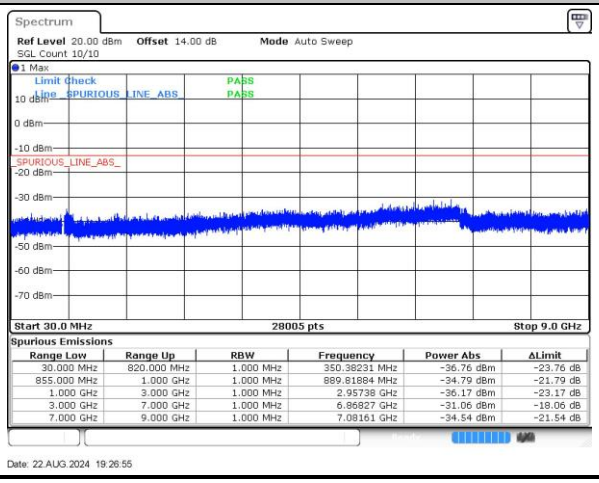
Middle Channel



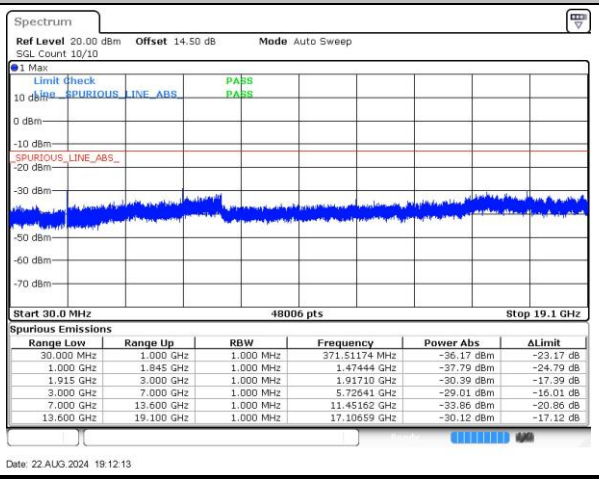
Middle Channel



Highest Channel

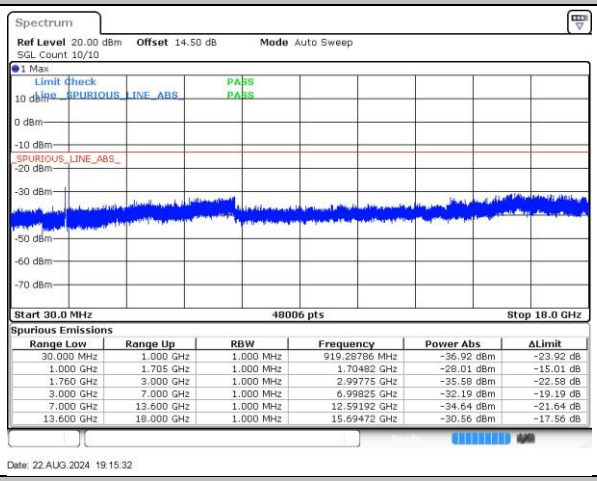


Highest Channel



WCDMA Band IV (RMC 12.2Kbps)

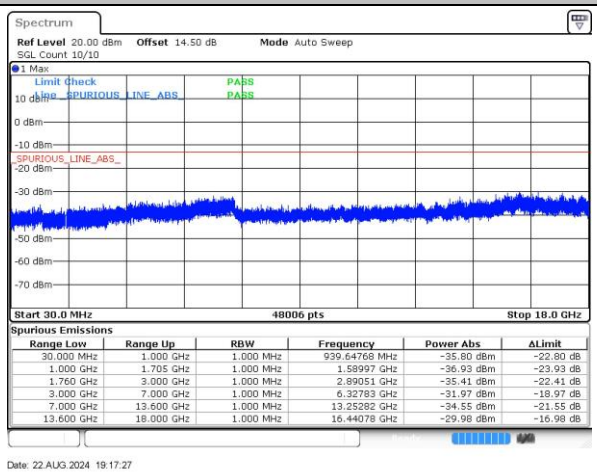
Lowest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	919.28786 MHz	-36.92 dBm	-23.92 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.70482 GHz	-28.01 dBm	-15.01 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.99775 GHz	-35.58 dBm	-22.58 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99825 GHz	-32.19 dBm	-19.19 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.59192 GHz	-34.64 dBm	-21.64 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.69472 GHz	-30.56 dBm	-17.56 dB

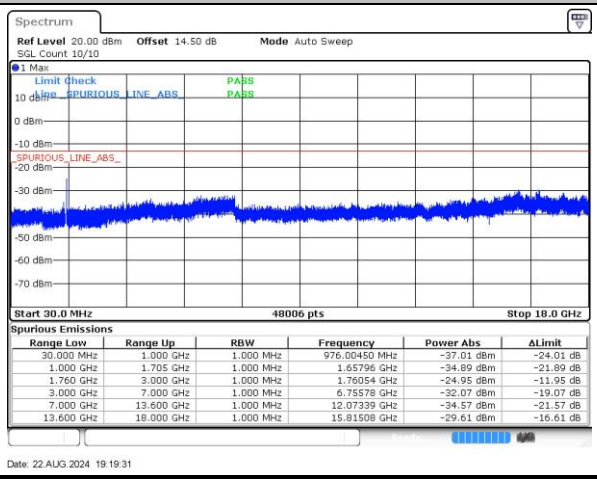
Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	939.64768 MHz	-35.80 dBm	-22.80 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.58997 GHz	-36.93 dBm	-23.93 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.89051 GHz	-35.41 dBm	-22.41 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.32783 GHz	-31.97 dBm	-18.97 dB
7.000 GHz	13.600 GHz	1.000 MHz	13.25282 GHz	-34.55 dBm	-21.55 dB
13.600 GHz	18.000 GHz	1.000 MHz	16.44078 GHz	-29.98 dBm	-16.98 dB

Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	976.00450 MHz	-37.01 dBm	-24.01 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.65796 GHz	-34.89 dBm	-21.89 dB
1.760 GHz	3.000 GHz	1.000 MHz	1.76054 GHz	-24.95 dBm	-11.95 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.75578 GHz	-32.07 dBm	-19.07 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.07339 GHz	-34.57 dBm	-21.57 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.81508 GHz	-29.61 dBm	-16.61 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	0.0012	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0002	PASS
40	Normal Voltage	0.0004	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

Note:

1. Normal Voltage = 8.0 V. ; Battery End Point (BEP) = 7.2 V. ; Maximum Voltage = 9.0 V.
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0002	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0001	

Note:

1. Normal Voltage = 8.0 V. ; Battery End Point (BEP) = 7.2 V. ; Maximum Voltage = 9.0 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 :	Jia Kuang	Temperature :	22~25℃
		Relative Humidity :	48~52%

RSE pre-scanned harmonic for different antennas, choose the worst antenna perform final test and record in the report.

GSM850 (GSM)									
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)
Lowest	1648.4	-57.56	-13	-44.56	-65.48	-60.79	3.98	9.36	H
	2472.6	-62.40	-13	-49.40	-74.15	-65.95	4.85	10.55	H
	3296.8	-61.67	-13	-48.67	-76.14	-66.60	5.50	12.58	H
	1648.4	-63.89	-13	-50.89	-71.85	-67.12	3.98	9.36	V
	2472.6	-63.26	-13	-50.26	-75.05	-66.81	4.85	10.55	V
	3296.8	-61.78	-13	-48.78	-76.16	-66.71	5.50	12.58	V
Middle	1672.8	-59.12	-13	-46.12	-66.54	-62.37	4.00	9.40	H
	2509.2	-62.78	-13	-49.78	-74.55	-66.35	4.88	10.60	H
	3345.6	-62.68	-13	-49.68	-76.99	-67.61	5.52	12.60	H
	1672.8	-66.19	-13	-53.19	-73.80	-69.44	4.00	9.40	V
	2509.2	-63.84	-13	-50.84	-75.73	-67.41	4.88	10.60	V
	3345.6	-62.50	-13	-49.50	-76.83	-67.43	5.52	12.60	V
Highest	1697.6	-64.89	-13	-51.89	-72.52	-68.06	4.10	9.42	H
	2546.4	-63.29	-13	-50.29	-75.37	-66.87	4.90	10.63	H
	3395.2	-61.92	-13	-48.92	-76.14	-66.84	5.55	12.62	H
	1697.6	-66.15	-13	-53.15	-73.96	-69.32	4.10	9.42	V
	2546.4	-63.61	-13	-50.61	-75.70	-67.19	4.90	10.63	V
	3395.2	-62.13	-13	-49.13	-76.36	-67.05	5.55	12.62	V

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

GSM850 (EDGE 1 Tx slots)									
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)
Lowest	1648.4	-58.19	-13	-45.19	-66.11	-61.42	3.98	9.36	H
	2472.6	-58.74	-13	-45.74	-70.49	-62.29	4.85	10.55	H
	3296.8	-61.97	-13	-48.97	-76.44	-66.90	5.50	12.58	H
	1648.4	-64.57	-13	-51.57	-72.53	-67.80	3.98	9.36	V
	2472.6	-61.79	-13	-48.79	-73.58	-65.34	4.85	10.55	V
	3296.8	-61.73	-13	-48.73	-76.11	-66.66	5.50	12.58	V
Middle	1672.8	-61.20	-13	-48.20	-68.62	-64.45	4.00	9.40	H
	2509.2	-58.58	-13	-45.58	-70.35	-62.15	4.88	10.60	H
	3345.6	-62.36	-13	-49.36	-76.67	-67.29	5.52	12.60	H
	1672.8	-65.35	-13	-52.35	-72.96	-68.60	4.00	9.40	V
	2509.2	-61.67	-13	-48.67	-73.56	-65.24	4.88	10.60	V
	3345.6	-62.04	-13	-49.04	-76.37	-66.97	5.52	12.60	V
Highest	1697.6	-64.00	-13	-51.00	-71.63	-67.17	4.10	9.42	H
	2546.4	-62.63	-13	-49.63	-74.71	-66.21	4.90	10.63	H
	3395.2	-61.65	-13	-48.65	-75.87	-66.57	5.55	12.62	H
	1697.6	-66.35	-13	-53.35	-74.16	-69.52	4.10	9.42	V
	2546.4	-62.50	-13	-49.50	-74.59	-66.08	4.90	10.63	V
	3395.2	-62.02	-13	-49.02	-76.25	-66.94	5.55	12.62	V

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

GSM1900 (GSM)									
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)
Lowest	3700.4	-62.51	-13	-49.51	-77.96	-69.27	5.82	12.58	H
	5550.6	-61.14	-13	-48.14	-80.65	-66.86	7.28	13.00	H
	7400.8	-55.52	-13	-42.52	-80.33	-58.68	8.32	11.48	H
	3700.4	-62.84	-13	-49.84	-78.04	-69.60	5.82	12.58	V
	5550.6	-61.49	-13	-48.49	-80.85	-67.21	7.28	13.00	V
	7400.8	-54.83	-13	-41.83	-79.95	-57.99	8.32	11.48	V
Middle	3760	-62.16	-13	-49.16	-77.79	-68.91	5.85	12.60	H
	5640	-59.21	-13	-46.21	-79.53	-65.01	7.30	13.10	H
	7520	-55.84	-13	-42.84	-80.47	-58.99	8.35	11.50	H
	3760	-62.58	-13	-49.58	-77.77	-69.33	5.85	12.60	V
	5640	-60.62	-13	-47.62	-79.73	-66.42	7.30	13.10	V
	7520	-55.16	-13	-42.16	-80.21	-58.31	8.35	11.50	V
Highest	3819.6	-62.38	-13	-49.38	-78.13	-69.12	5.88	12.62	H
	5729.4	-57.90	-13	-44.90	-78.94	-63.71	7.32	13.13	H
	7639.2	-55.45	-13	-42.45	-79.79	-58.61	8.38	11.54	H
	3819.6	-62.63	-13	-49.63	-77.9	-69.37	5.88	12.62	V
	5729.4	-58.82	-13	-45.82	-79.03	-64.63	7.32	13.13	V
	7639.2	-54.91	-13	-41.91	-79.78	-58.07	8.38	11.54	V

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

GSM1900 (EDGE 1 Tx slots)									
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)
Lowest	3700.4	-62.50	-13	-49.50	-77.95	-69.26	5.82	12.58	H
	5550.6	-61.19	-13	-48.19	-80.70	-66.91	7.28	13.00	H
	7400.8	-55.10	-13	-42.10	-79.91	-58.26	8.32	11.48	H
	3700.4	-62.77	-13	-49.77	-77.97	-69.53	5.82	12.58	V
	5550.6	-61.41	-13	-48.41	-80.77	-67.13	7.28	13.00	V
	7400.8	-55.14	-13	-42.14	-80.26	-58.30	8.32	11.48	V
Middle	3760	-62.09	-13	-49.09	-77.72	-68.84	5.85	12.60	H
	5640	-59.53	-13	-46.53	-79.85	-65.33	7.30	13.10	H
	7520	-55.46	-13	-42.46	-80.09	-58.61	8.35	11.50	H
	3760	-62.69	-13	-49.69	-77.88	-69.44	5.85	12.60	V
	5640	-60.26	-13	-47.26	-79.37	-66.06	7.30	13.10	V
	7520	-55.23	-13	-42.23	-80.28	-58.38	8.35	11.50	V
Highest	3819.6	-62.03	-13	-49.03	-77.78	-68.77	5.88	12.62	H
	5729.4	-58.24	-13	-45.24	-79.28	-64.05	7.32	13.13	H
	7639.2	-55.52	-13	-42.52	-79.86	-58.68	8.38	11.54	H
	3819.6	-62.58	-13	-49.58	-77.85	-69.32	5.88	12.62	V
	5729.4	-59.15	-13	-46.15	-79.36	-64.96	7.32	13.13	V
	7639.2	-54.96	-13	-41.96	-79.83	-58.12	8.38	11.54	V

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

WCDMA Band V(RMC 12.2Kbps)									
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)
Lowest	1652.8	-65.95	-13	-52.95	-73.78	-69.18	3.98	9.36	H
	2479.2	-63.18	-13	-50.18	-74.93	-66.73	4.85	10.55	H
	3305.6	-61.42	-13	-48.42	-75.86	-66.35	5.50	12.58	H
	1652.8	-65.76	-13	-52.76	-73.66	-68.99	3.98	9.36	V
	2479.2	-62.97	-13	-49.97	-74.77	-66.52	4.85	10.55	V
	3305.6	-61.68	-13	-48.68	-76.05	-66.61	5.50	12.58	V
Middle	1672.8	-66.11	-13	-53.11	-73.53	-69.36	4.00	9.40	H
	2509.2	-63.75	-13	-50.75	-75.52	-67.32	4.88	10.60	H
	3345.6	-61.71	-13	-48.71	-76.02	-66.64	5.52	12.60	H
	1672.8	-66.24	-13	-53.24	-73.85	-69.49	4.00	9.40	V
	2509.2	-63.76	-13	-50.76	-75.65	-67.33	4.88	10.60	V
	3345.6	-62.29	-13	-49.29	-76.62	-67.22	5.52	12.60	V
Highest	1693.2	-66.31	-13	-53.31	-73.91	-69.48	4.10	9.42	H
	2539.8	-63.06	-13	-50.06	-75.09	-66.64	4.90	10.63	H
	3386.4	-61.58	-13	-48.58	-75.82	-66.50	5.55	12.62	H
	1693.2	-65.99	-13	-52.99	-73.77	-69.16	4.10	9.42	V
	2539.8	-63.35	-13	-50.35	-75.41	-66.93	4.90	10.63	V
	3386.4	-61.85	-13	-48.85	-76.10	-66.77	5.55	12.62	V

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

WCDMA Band II(RMC 12.2Kbps)									
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)
Lowest	3704.8	-62.30	-13	-49.30	-77.77	-69.06	5.82	12.58	H
	5557.2	-57.84	-13	-44.84	-77.32	-63.56	7.28	13.00	H
	7409.6	-54.83	-13	-41.83	-79.62	-57.99	8.32	11.48	H
	3704.8	-63.04	-13	-50.04	-78.24	-69.80	5.82	12.58	V
	5557.2	-60.54	-13	-47.54	-79.87	-66.26	7.28	13.00	V
	7409.6	-54.76	-13	-41.76	-79.87	-57.92	8.32	11.48	V
Middle	3760	-62.23	-13	-49.23	-77.86	-68.98	5.85	12.60	H
	5640	-59.14	-13	-46.14	-79.46	-64.94	7.30	13.10	H
	7520	-55.53	-13	-42.53	-80.16	-58.68	8.35	11.50	H
	3760	-62.78	-13	-49.78	-77.97	-69.53	5.85	12.60	V
	5640	-60.39	-13	-47.39	-79.5	-66.19	7.30	13.10	V
	7520	-54.83	-13	-41.83	-79.88	-57.98	8.35	11.50	V
Highest	3815.2	-62.13	-13	-49.13	-77.88	-68.87	5.88	12.62	H
	5722.8	-57.12	-13	-44.12	-78.11	-62.93	7.32	13.13	H
	7630.4	-55.38	-13	-42.38	-79.74	-58.54	8.38	11.54	H
	3815.2	-62.66	-13	-49.66	-77.91	-69.40	5.88	12.62	V
	5722.8	-58.13	-13	-45.13	-78.26	-63.94	7.32	13.13	V
	7630.4	-54.77	-13	-41.77	-79.65	-57.93	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)									
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)
Lowest	3424.8	-62.13	-13	-49.13	-76.46	-69.01	5.60	12.48	H
	5137.2	-59.45	-13	-46.45	-79.00	-65.13	7.10	12.78	H
	6849.6	-57.78	-13	-44.78	-80.53	-61.17	8.38	11.77	H
	3424.8	-62.40	-13	-49.40	-76.75	-69.28	5.60	12.48	V
	5137.2	-59.66	-13	-46.66	-78.95	-65.34	7.10	12.78	V
	6849.6	-57.74	-13	-44.74	-80.91	-61.13	8.38	11.77	V
Middle	3465.2	-62.78	-13	-49.78	-77.30	-69.63	5.65	12.50	H
	5197.8	-59.77	-13	-46.77	-79.39	-65.44	7.13	12.80	H
	6930.4	-58.02	-13	-45.02	-80.86	-61.42	8.40	11.80	H
	3465.2	-62.77	-13	-49.77	-77.32	-69.62	5.65	12.50	V
	5197.8	-60.02	-13	-47.02	-79.26	-65.69	7.13	12.80	V
	6930.4	-57.83	-13	-44.83	-80.96	-61.23	8.40	11.80	V
Highest	3505.2	-62.24	-13	-49.24	-76.95	-69.08	5.68	12.52	H
	5257.8	-60.31	-13	-47.31	-79.52	-65.98	7.15	12.82	H
	7010.4	-57.83	-13	-44.83	-80.79	-61.26	8.42	11.85	H
	3505.2	-62.14	-13	-49.14	-76.9	-68.98	5.68	12.52	V
	5257.8	-60.60	-13	-47.60	-79.37	-66.27	7.15	12.82	V
	7010.4	-57.42	-13	-44.42	-80.59	-60.85	8.42	11.85	V

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