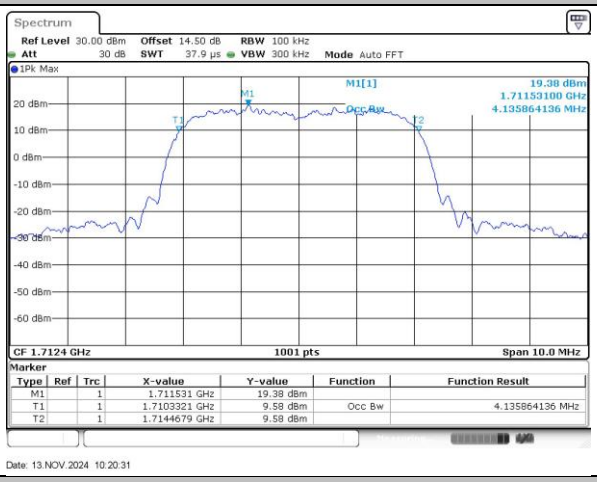
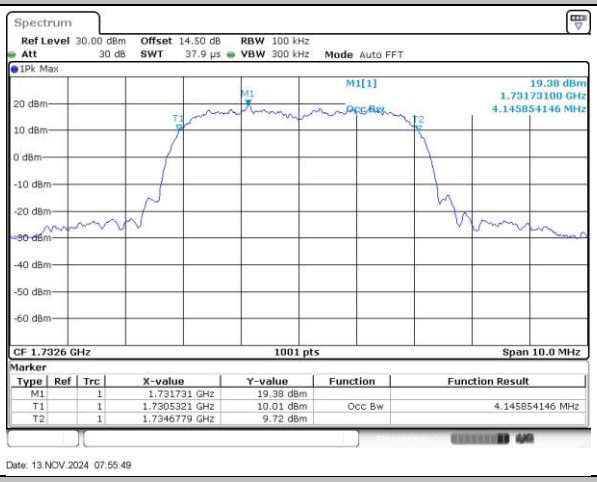
WCDMA Band IV (RMC 12.2Kbps)

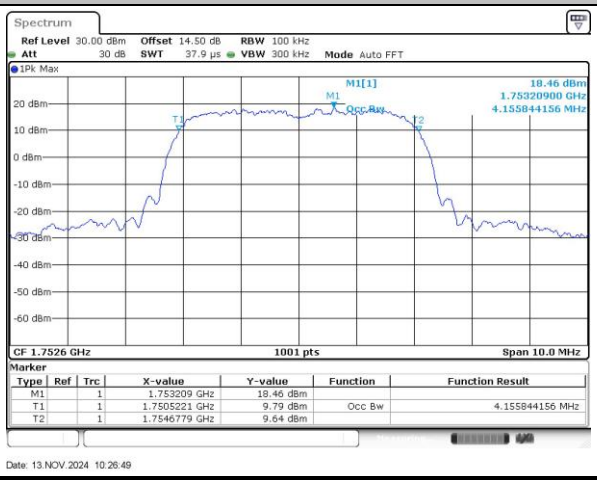
Lowest Channel



Middle Channel



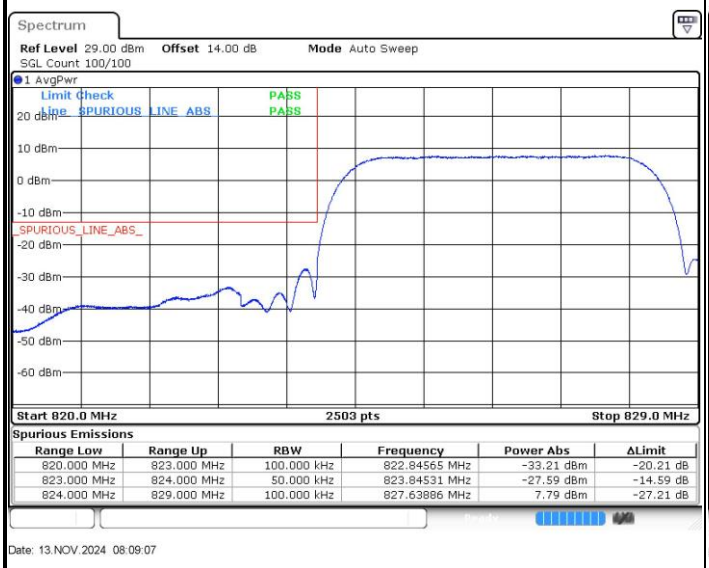
Highest Channel



Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge



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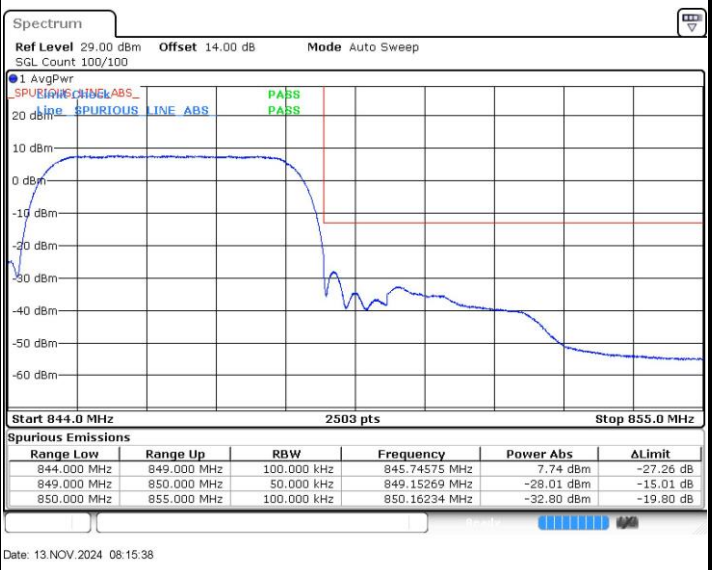
Highest Band Edge



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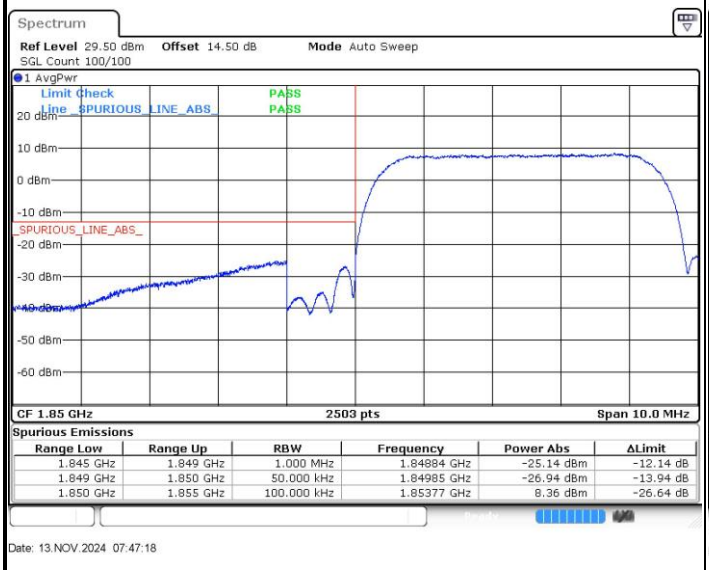
WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge



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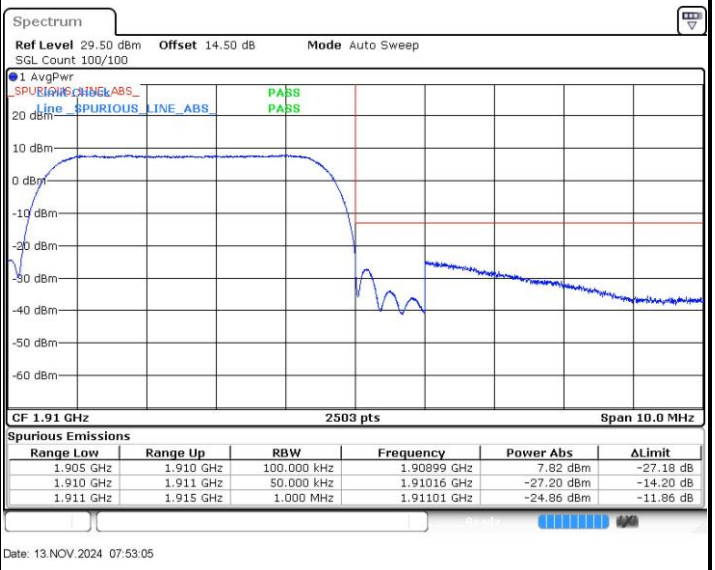
Highest Band Edge



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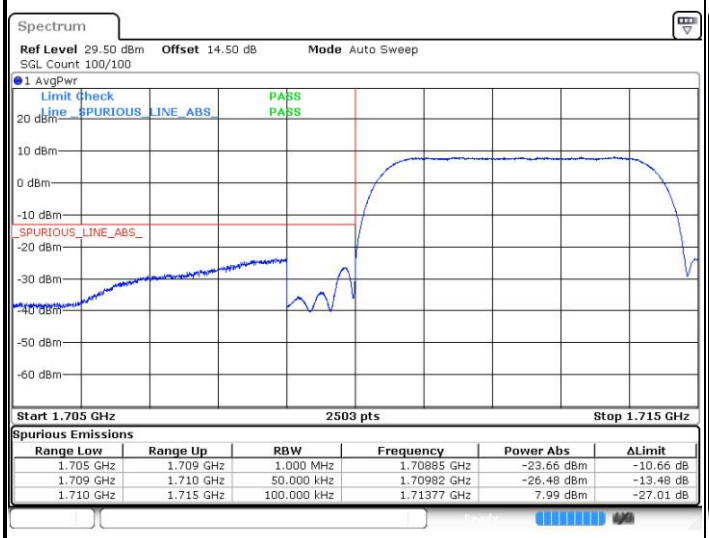
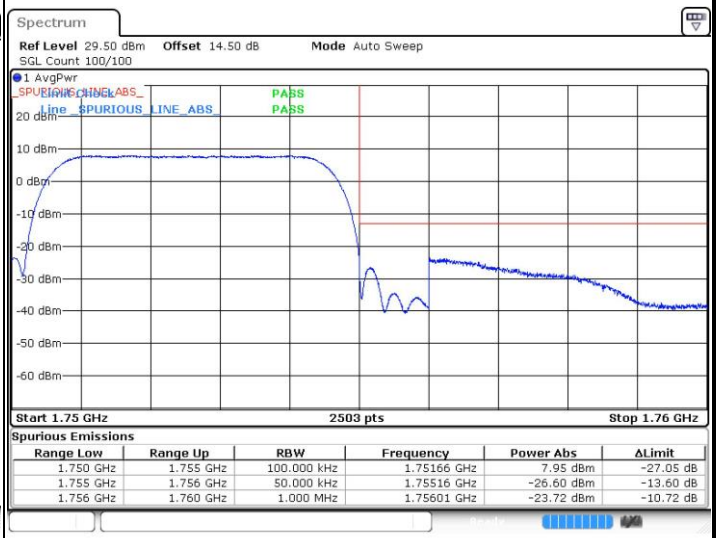
WCDMA Band IV (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**

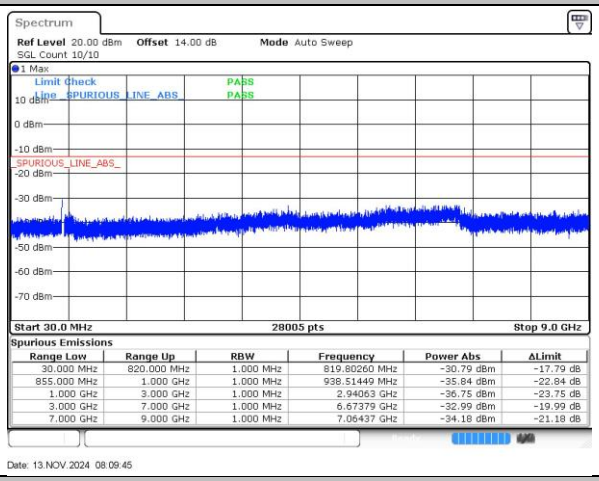




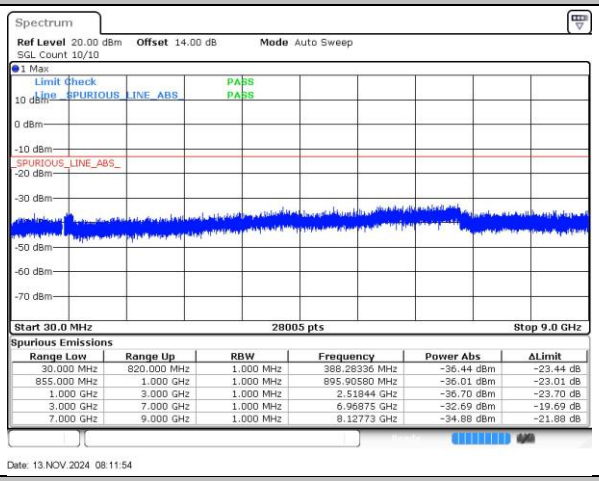
Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

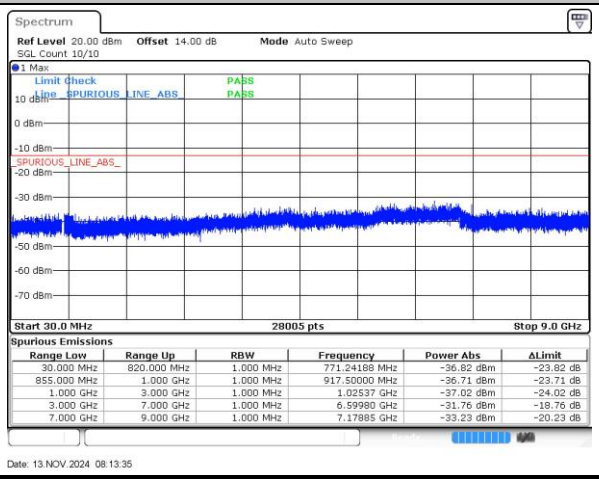
Lowest Channel



Middle Channel

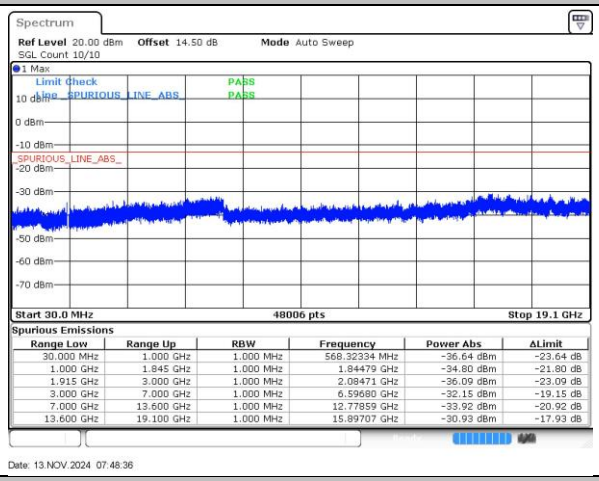


Highest Channel

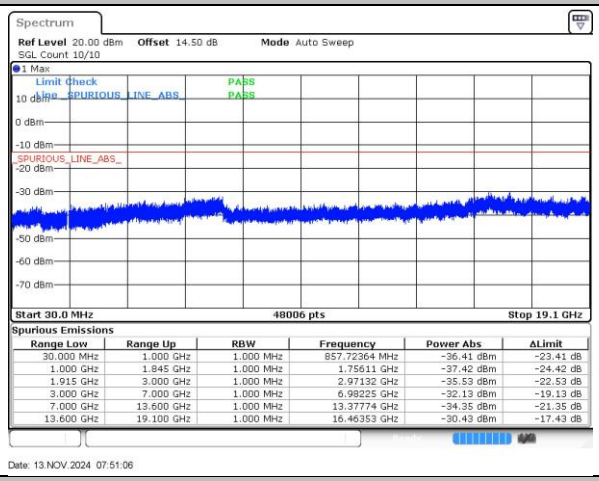


WCDMA Band II (RMC 12.2Kbps)

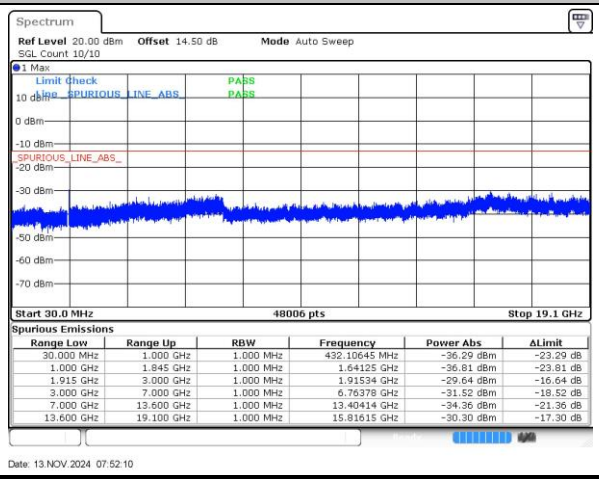
Lowest Channel



Middle Channel

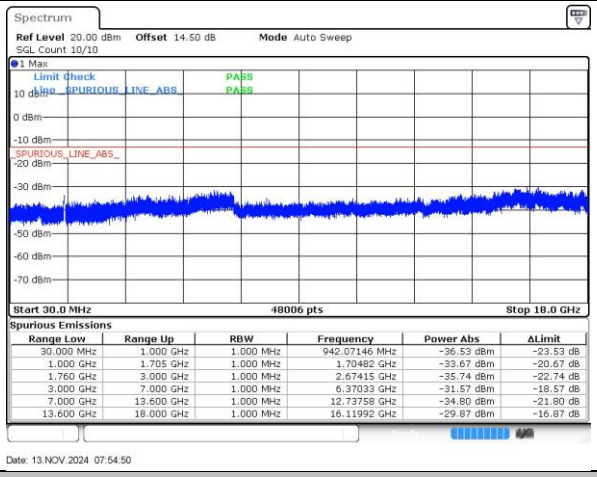


Highest Channel



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	942.07146 MHz	-36.53 dBm	-23.53 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.70482 GHz	-33.67 dBm	-20.67 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.67415 GHz	-35.74 dBm	-22.74 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.37033 GHz	-31.57 dBm	-18.57 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.73758 GHz	-34.80 dBm	-21.80 dB
13.600 GHz	18.000 GHz	1.000 MHz	16.11992 GHz	-29.87 dBm	-16.87 dB

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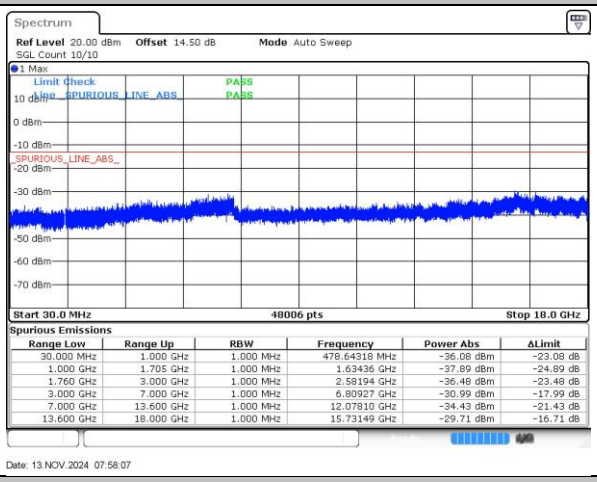
Middle Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	478.64318 MHz	-36.08 dBm	-23.08 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.63436 GHz	-37.89 dBm	-24.89 dB
1.760 GHz	3.000 GHz	1.000 MHz	2.58194 GHz	-36.48 dBm	-23.48 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.80927 GHz	-30.99 dBm	-17.99 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.07810 GHz	-34.43 dBm	-21.43 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.73149 GHz	-29.71 dBm	-16.71 dB

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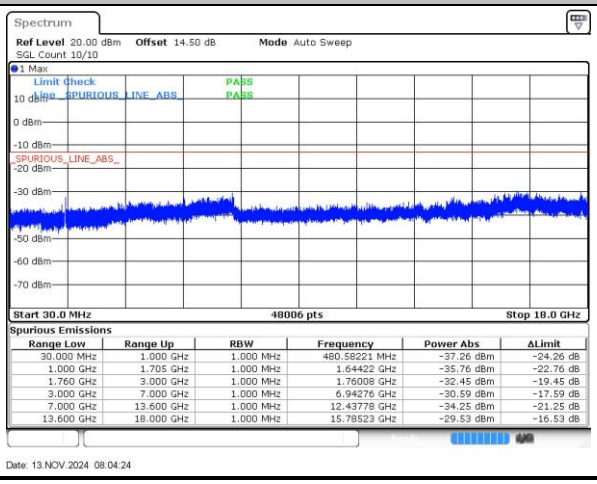
Highest Channel



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	480.58221 MHz	-37.26 dBm	-24.26 dB
1.000 GHz	1.705 GHz	1.000 MHz	1.64422 GHz	-35.76 dBm	-22.76 dB
1.760 GHz	3.000 GHz	1.000 MHz	1.76008 GHz	-32.45 dBm	-19.45 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94276 GHz	-30.59 dBm	-17.59 dB
7.000 GHz	13.600 GHz	1.000 MHz	12.43778 GHz	-34.25 dBm	-21.25 dB
13.600 GHz	18.000 GHz	1.000 MHz	15.78523 GHz	-29.53 dBm	-16.53 dB

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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	0.0002	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Frequency Offset (△f) (Hz)	Result
50	Normal Voltage	3.3	PASS
40	Normal Voltage	4.6	
30	Normal Voltage	-3.9	
20(Ref.)	Normal Voltage	5.2	
10	Normal Voltage	3.7	
0	Normal Voltage	4.3	
-10	Normal Voltage	3.8	
-20	Normal Voltage	2.6	
-30	Normal Voltage	4.4	
20	Maximum Voltage	6.1	
20	Normal Voltage	5.2	
20	Battery End Point	3.5	

|MAX(△f)| = 6.1Hz

Frequency Stability	WCDMA Band II Frequency (MHz)	Limit Line	Result
f_L – |MAX(△f)|	1850.332086	≧ 1850MHz	PASS
f_H + |MAX(△f)|	1909.687906	≦ 1910MHz	

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Frequency Offset (△f) (Hz)	Result
50	Normal Voltage	5.1	PASS
40	Normal Voltage	-7.4	
30	Normal Voltage	7.8	
20(Ref.)	Normal Voltage	7.7	
10	Normal Voltage	5.7	
0	Normal Voltage	-6.9	
-10	Normal Voltage	4.4	
-20	Normal Voltage	-5	
-30	Normal Voltage	6.6	
20	Maximum Voltage	-6.6	
20	Normal Voltage	7.7	
20	Battery End Point	4	

|MAX(△f)| = 7.8Hz

Frequency Stability	WCDMA Band IV Frequency (MHz)	Limit Line	Result
f_L – |MAX(△f)|	1710.332088	≧ 1710MHz	PASS
f_H + |MAX(△f)|	1754.677908	≦ 1755MHz	

Note:

1. Normal Voltage = 3.91V. ； Battery End Point (BEP) = 3.4 V.； 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 :	Jake	Temperature :	21~25℃
		Relative Humidity :	51~53%

Note: Pre-scanned harmonic for the different antennas, we choose the worst antenna mode to test.

GSM850 (GSM) Ant.0								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-60.17	-13	-47.17	-67.14	1.58	10.70	H
	2472	-47.58	-13	-34.58	-55.83	2.102	12.50	H
	3296	-59.37	-13	-46.37	-68.26	2.856	13.90	H
	1648	-59.29	-13	-46.29	-66.26	1.58	10.70	V
	2472	-42.15	-13	-29.15	-50.40	2.10	12.50	V
	3296	-58.89	-13	-45.89	-67.78	2.86	13.90	V
Middle	1672	-63.86	-13	-50.86	-70.83	1.58	10.70	H
	2512	-42.44	-13	-29.44	-50.69	2.102	12.50	H
	3344	-58.79	-13	-45.79	-67.68	2.856	13.90	H
	1672	-62.69	-13	-49.69	-69.66	1.58	10.70	V
	2512	-39.91	-13	-26.91	-48.16	2.10	12.50	V
	3345	-58.94	-13	-45.94	-67.83	2.86	13.90	V
Highest	1696	-41.22	-13	-28.22	-48.19	1.58	10.70	H
	2544	-46.95	-13	-33.95	-55.20	2.102	12.50	H
	3392	-54.16	-13	-41.16	-63.05	2.856	13.90	H
	1696	-40.78	-13	-27.78	-47.75	1.58	10.70	V
	2544	-43.32	-13	-30.32	-51.57	2.10	12.50	V
	3392	-52.54	-13	-39.54	-61.43	2.86	13.90	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-64.66	-13	-51.66	-71.63	1.58	10.70	H
	2472	-54.03	-13	-41.03	-62.28	2.102	12.50	H
	3296	-59.17	-13	-46.17	-68.06	2.856	13.90	H
	1648	-63.70	-13	-50.70	-70.67	1.58	10.70	V
	2472	-58.14	-13	-45.14	-66.39	2.10	12.50	V
	3296	-58.98	-13	-45.98	-67.87	2.86	13.90	V
Middle	1672	-58.72	-13	-45.72	-65.69	1.58	10.70	H
	2512	-58.40	-13	-45.40	-66.65	2.102	12.50	H
	3344	-58.98	-13	-45.98	-67.87	2.856	13.90	H
	1672	-60.96	-13	-47.96	-67.93	1.58	10.70	V
	2512	-58.34	-13	-45.34	-66.59	2.10	12.50	V
	3344	-58.51	-13	-45.51	-67.40	2.86	13.90	V
Highest	1696	-55.48	-13	-42.48	-62.45	1.58	10.70	H
	2544	-56.16	-13	-43.16	-64.41	2.102	12.50	H
	3392	-55.77	-13	-42.77	-64.66	2.856	13.90	H
	1696	-55.06	-13	-42.06	-62.03	1.58	10.70	V
	2544	-54.00	-13	-41.00	-62.25	2.10	12.50	V
	3392	-54.70	-13	-41.70	-63.59	2.86	13.90	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-58.32	-13	-45.32	-70.58	2.64	14.90	H
	5550	-57.86	-13	-44.86	-69.72	2.94	14.80	H
	7395	-54.07	-13	-41.07	-63.84	3.39	13.16	H
	3705	-58.21	-13	-45.21	-70.47	2.64	14.90	V
	5550	-57.90	-13	-44.90	-69.76	2.94	14.80	V
	7395	-54.10	-13	-41.10	-63.87	3.39	13.16	V
Middle	3765	-58.53	-13	-45.53	-70.79	2.64	14.90	H
	5640	-57.65	-13	-44.65	-69.51	2.94	14.80	H
	7515	-53.97	-13	-40.97	-63.74	3.39	13.16	H
	3765	-58.05	-13	-45.05	-70.31	2.64	14.90	V
	5640	-58.28	-13	-45.28	-70.14	2.94	14.80	V
	7515	-53.74	-13	-40.74	-63.51	3.39	13.16	V
Highest	3825	-58.64	-13	-45.64	-70.90	2.64	14.90	H
	5730	-57.48	-13	-44.48	-69.34	2.94	14.80	H
	7635	-54.43	-13	-41.43	-64.20	3.39	13.16	H
	3825	-58.73	-13	-45.73	-70.99	2.64	14.90	V
	5730	-57.37	-13	-44.37	-69.23	2.94	14.80	V
	7635	-54.59	-13	-41.59	-64.36	3.39	13.16	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-57.91	-13	-44.91	-70.17	2.64	14.90	H
	5550	-58.00	-13	-45.00	-69.86	2.94	14.80	H
	7395	-54.20	-13	-41.20	-63.97	3.39	13.16	H
	3705	-57.83	-13	-44.83	-70.09	2.64	14.90	V
	5550	-58.25	-13	-45.25	-70.11	2.94	14.80	V
	7395	-54.01	-13	-41.01	-63.78	3.39	13.16	V
Middle	3765	-58.50	-13	-45.50	-70.76	2.64	14.90	H
	5640	-57.76	-13	-44.76	-69.62	2.94	14.80	H
	7515	-53.62	-13	-40.62	-63.39	3.39	13.16	H
	3765	-58.04	-13	-45.04	-70.30	2.64	14.90	V
	5640	-58.00	-13	-45.00	-69.86	2.94	14.80	V
	7515	-53.80	-13	-40.80	-63.57	3.39	13.16	V
Highest	3825	-58.59	-13	-45.59	-70.85	2.64	14.90	H
	5730	-57.40	-13	-44.40	-69.26	2.94	14.80	H
	7635	-54.41	-13	-41.41	-64.18	3.39	13.16	H
	3825	-58.22	-13	-45.22	-70.48	2.64	14.90	V
	5730	-57.50	-13	-44.50	-69.36	2.94	14.80	V
	7635	-54.56	-13	-41.56	-64.33	3.39	13.16	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1656	-64.61	-13	-51.61	-71.58	1.58	10.70	H
	2480	-59.78	-13	-46.78	-68.03	2.102	12.50	H
	3304	-59.88	-13	-46.88	-68.77	2.856	13.90	H
	1656	-63.45	-13	-50.45	-70.42	1.58	10.70	V
	2480	-58.64	-13	-45.64	-66.89	2.10	12.50	V
	3304	-59.70	-13	-46.70	-68.59	2.86	13.90	V
Middle	1672	-63.54	-13	-50.54	-70.51	1.58	10.70	H
	2512	-59.09	-13	-46.09	-67.34	2.102	12.50	H
	3344	-59.45	-13	-46.45	-68.34	2.856	13.90	H
	1672	-62.88	-13	-49.88	-69.85	1.58	10.70	V
	2512	-58.82	-13	-45.82	-67.07	2.10	12.50	V
	3344	-59.63	-13	-46.63	-68.52	2.86	13.90	V
Highest	1696	-63.17	-13	-50.17	-70.14	1.58	10.70	H
	2536	-59.50	-13	-46.50	-67.75	2.102	12.50	H
	3384	-60.31	-13	-47.31	-69.20	2.856	13.90	H
	1696	-62.54	-13	-49.54	-69.51	1.58	10.70	V
	2536	-59.63	-13	-46.63	-67.88	2.10	12.50	V
	3384	-60.23	-13	-47.23	-69.12	2.86	13.90	V

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

WCDMA Band II(RMC 12.2Kbps) Ant.1								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3705	-58.44	-13	-45.44	-70.70	2.64	14.90	H
	5550	-57.89	-13	-44.89	-69.75	2.94	14.80	H
	7410	-54.29	-13	-41.29	-64.06	3.39	13.16	H
	3705	-58.31	-13	-45.31	-70.57	2.64	14.90	V
	5550	-57.86	-13	-44.86	-69.72	2.94	14.80	V
	7410	-54.28	-13	-41.28	-64.05	3.39	13.16	V
Middle	3765	-59.14	-13	-46.14	-71.40	2.64	14.90	H
	5640	-57.95	-13	-44.95	-69.81	2.94	14.80	H
	7515	-53.72	-13	-40.72	-63.49	3.39	13.16	H
	3765	-58.69	-13	-45.69	-70.95	2.64	14.90	V
	5640	-58.81	-13	-45.81	-70.67	2.94	14.80	V
	7515	-53.84	-13	-40.84	-63.61	3.39	13.16	V
Highest	3810	-59.51	-13	-46.51	-71.77	2.64	14.90	H
	5715	-58.03	-13	-45.03	-69.89	2.94	14.80	H
	7635	-54.53	-13	-41.53	-64.30	3.39	13.16	H
	3810	-59.36	-13	-46.36	-71.62	2.64	14.90	V
	5715	-58.33	-13	-45.33	-70.19	2.94	14.80	V
	7635	-54.64	-13	-41.64	-64.41	3.39	13.16	V

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

WCDMA Band IV(RMC 12.2Kbps) Ant.1								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-58.57	-13	-45.57	-69.31	2.604	13.34	H
	5130	-57.38	-13	-44.38	-67.89	3.011	13.52	H
	6855	-56.82	-13	-43.82	-67.02	3.271	13.47	H
	3420	-59.03	-13	-46.03	-69.77	2.604	13.34	V
	5130	-57.39	-13	-44.39	-67.90	3.011	13.52	V
	6855	-56.91	-13	-43.91	-67.11	3.271	13.47	V
Middle	3465	-58.66	-13	-45.66	-69.40	2.604	13.34	H
	5130	-57.28	-13	-44.28	-67.79	3.011	13.52	H
	6855	-56.61	-13	-43.61	-66.81	3.271	13.47	H
	3465	-58.88	-13	-45.88	-69.62	2.604	13.34	V
	5130	-57.57	-13	-44.57	-68.08	3.011	13.52	V
	6855	-56.54	-13	-43.54	-66.74	3.271	13.47	V
Highest	3510	-59.43	-13	-46.43	-70.17	2.604	13.34	H
	5250	-58.01	-13	-45.01	-68.52	3.011	13.52	H
	7005	-56.19	-13	-43.19	-66.39	3.271	13.47	H
	3510	-59.90	-13	-46.90	-70.64	2.604	13.34	V
	5250	-57.87	-13	-44.87	-68.38	3.011	13.52	V
	7005	-56.68	-13	-43.68	-66.88	3.271	13.47	V

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