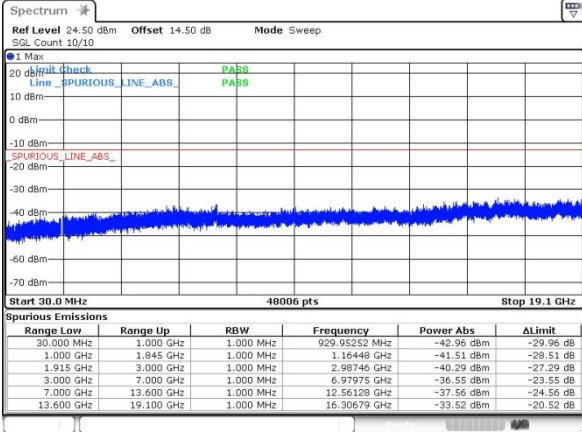




GSM1900 (GSM)

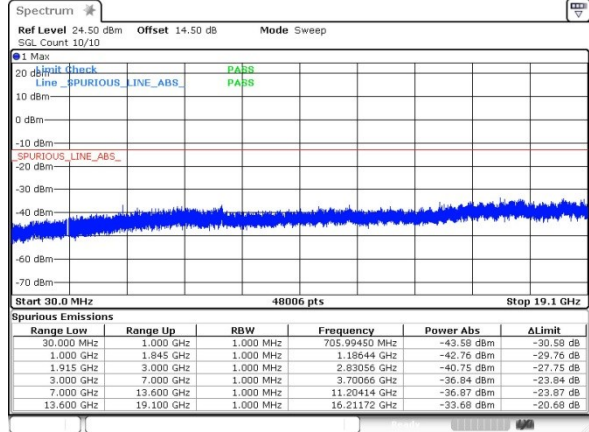
Lowest Channel



Date: 22.MAY.2019 09:28:24

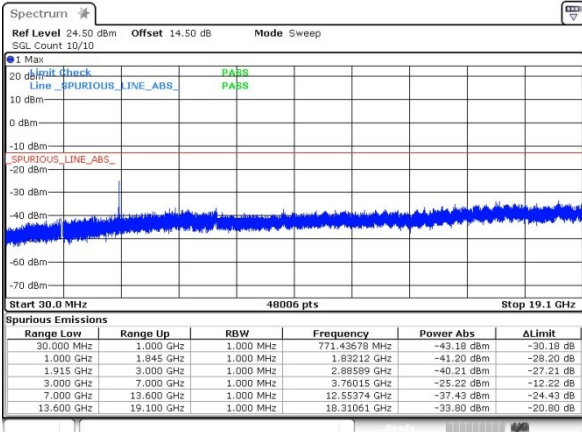
GSM1900 (EDGE class 8)

Lowest Channel



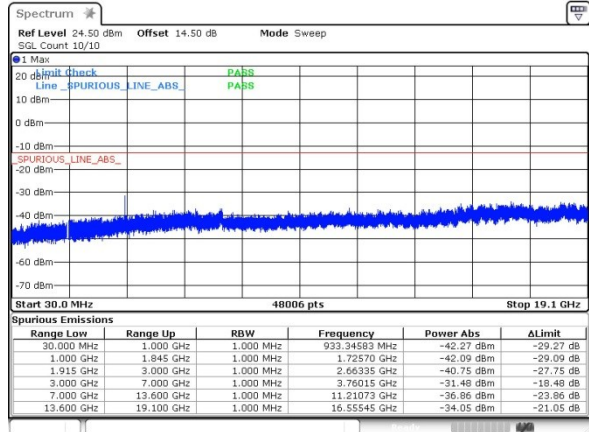
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Middle Channel



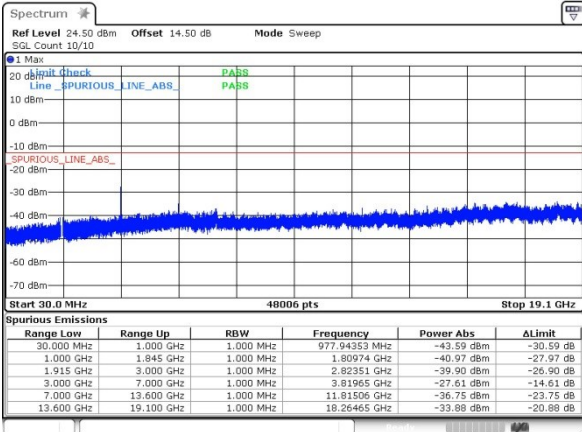
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Middle Channel



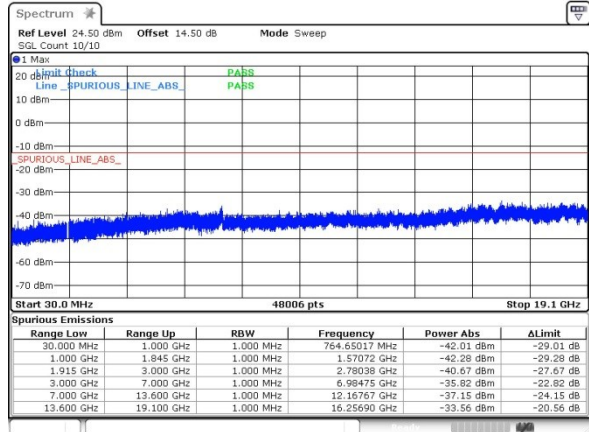
Date: 22.MAY.2019 10:18:17

Highest Channel



Date: 22.MAY.2019 09:29:24

Highest Channel

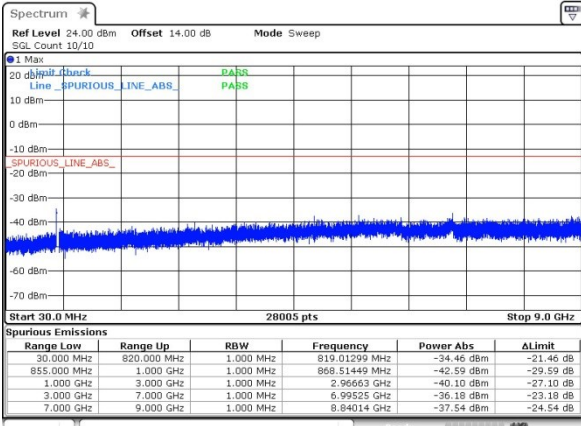


Date: 22.MAY.2019 10:18:33



WCDMA Band V (RMC 12.2Kbps)

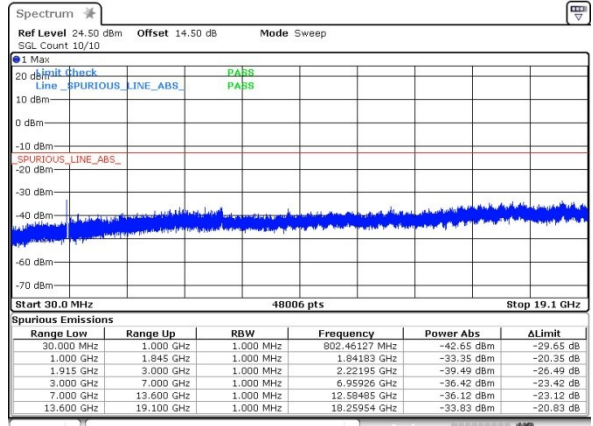
Lowest Channel



Date: 22.MAY.2019 18:54:27

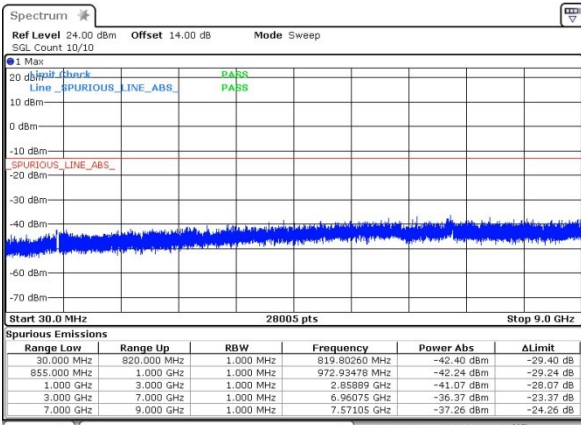
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



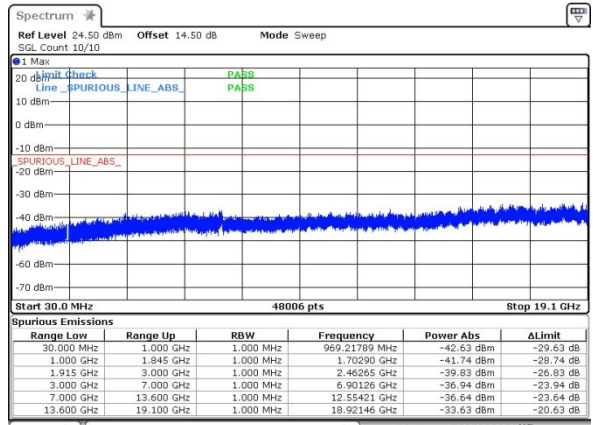
Date: 22.MAY.2019 18:49:04

Middle Channel



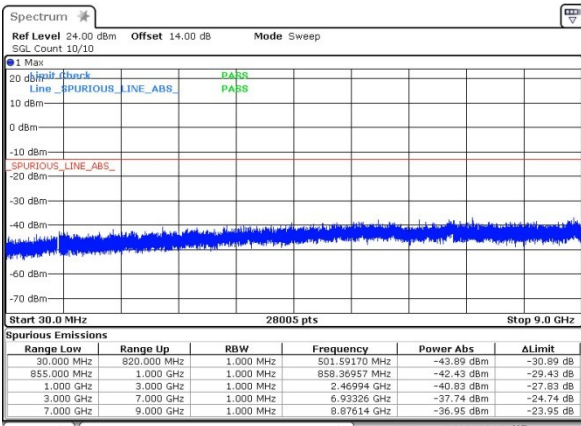
Date: 22.MAY.2019 18:54:51

Middle Channel



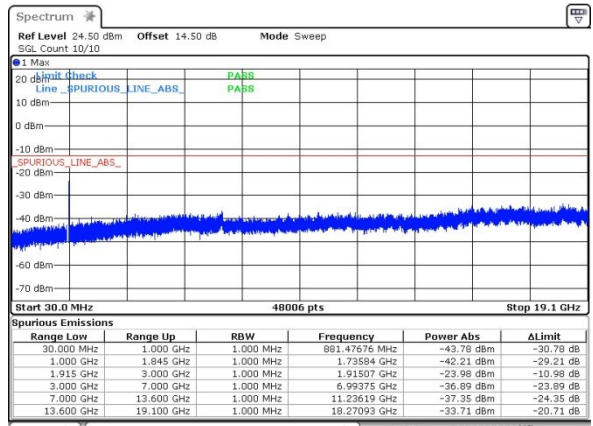
Date: 22.MAY.2019 18:49:30

Highest Channel

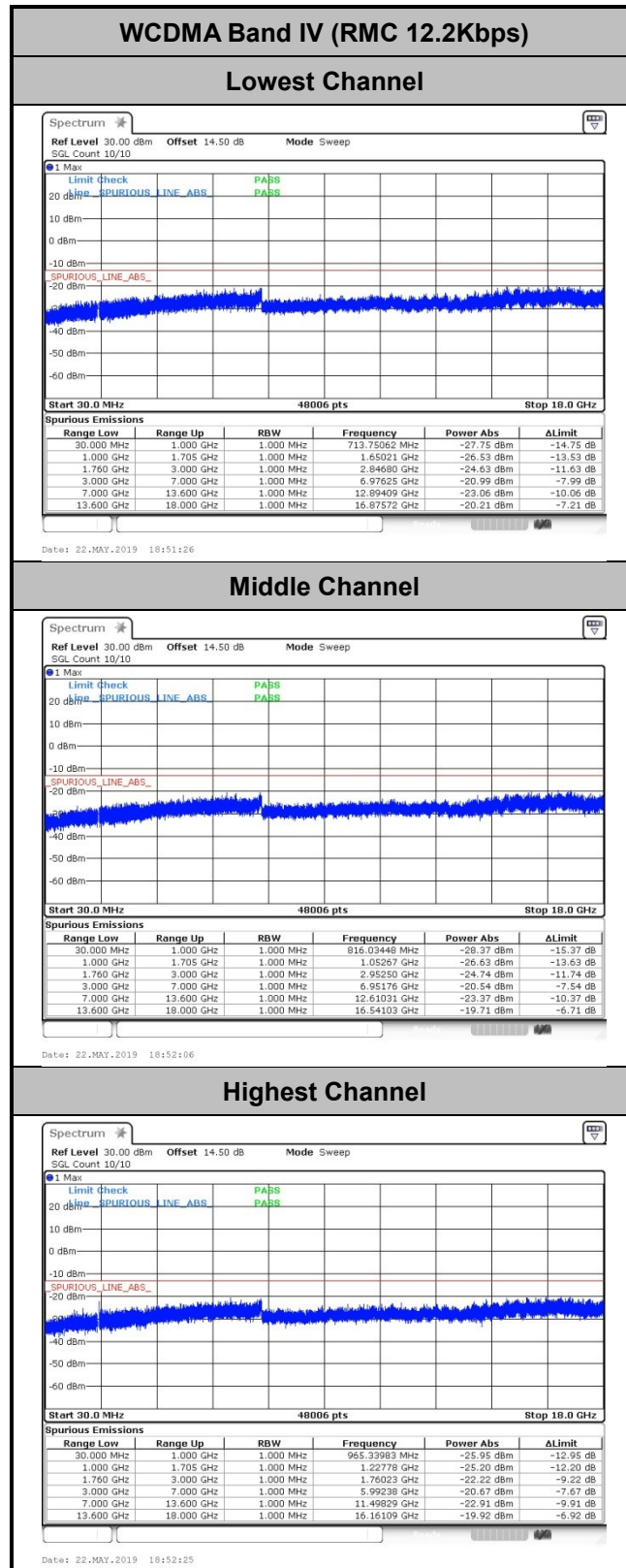


Date: 22.MAY.2019 18:55:14

Highest Channel



Date: 22.MAY.2019 18:49:48





Frequency Stability

Test Conditions	Middle Channel	GSM850 (GSM)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0096	0.0239	PASS
40	Normal Voltage	0.0048	0.0108	
30	Normal Voltage	0.0108	0.0167	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0120	0.0012	
0	Normal Voltage	0.0072	0.0215	
-10	Normal Voltage	0.0012	0.0239	
-20	Normal Voltage	0.0108	0.0167	
-30	Normal Voltage	0.0048	0.0287	
20	Maximum Voltage	0.0072	0.0275	
20	Normal Voltage	0.0108	0.0060	
20	Battery End Point	0.0143	0.0179	

Note: Normal Voltage = 3.8V. : Battery End Point (BEP) = 3.6 V. : Maximum Voltage =4.4 V



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0032	0.0048	PASS
40	Normal Voltage	0.0043	0.0016	
30	Normal Voltage	0.0069	0.0043	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0011	0.0011	
0	Normal Voltage	0.0048	0.0016	
-10	Normal Voltage	0.0032	0.0080	
-20	Normal Voltage	0.0016	0.0005	
-30	Normal Voltage	0.0037	0.0096	
20	Maximum Voltage	0.0021	0.0074	
20	Normal Voltage	0.0021	0.0053	
20	Battery End Point	0.0053	0.0011	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 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 V (RMC 12.2KbpsRMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0239	PASS
40	Normal Voltage	0.0203	
30	Normal Voltage	0.0096	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0167	
0	Normal Voltage	0.0191	
-10	Normal Voltage	0.0132	
-20	Normal Voltage	0.0179	
-30	Normal Voltage	0.0155	
20	Maximum Voltage	0.0239	
20	Normal Voltage	0.0167	
20	Battery End Point	0.0096	

Note: Normal Voltage = 3.8V. : Battery End Point (BEP) = 3.6 V. : Maximum Voltage =4.4 V



Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0053	PASS
40	Normal Voltage	0.0085	
30	Normal Voltage	0.0096	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0043	
-10	Normal Voltage	0.0085	
-20	Normal Voltage	0.0101	
-30	Normal Voltage	0.0053	
20	Maximum Voltage	0.0122	
20	Normal Voltage	0.0069	
20	Battery End Point	0.0000	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 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	0.0040	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0029	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0046	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0017	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 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

For Top Antenna

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)
Middle	1672.8	-67.20	-13	-54.20	-78.14	-70.45	4.00	9.40	H
	2509.2	-59.11	-13	-46.11	-77.71	-62.68	4.88	10.60	H
	3345.6	-59.46	-13	-46.46	-80.07	-64.39	5.52	12.60	H
	1672.8	-66.22	-13	-53.22	-77.87	-69.47	4.00	9.40	V
	2509.2	-60.12	-13	-47.12	-78.93	-63.69	4.88	10.60	V
	3345.6	-59.49	-13	-46.49	-80.40	-64.42	5.52	12.60	V

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

GSM850 (EDGE class 8)									
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	-67.15	-13	-54.15	-78.09	-70.40	4.00	9.40	H
	2509.2	-60.32	-13	-47.32	-78.92	-63.89	4.88	10.60	H
	3345.6	-59.47	-13	-46.47	-80.08	-64.40	5.52	12.60	H
	1672.8	-66.48	-13	-53.48	-78.13	-69.73	4.00	9.40	V
	2509.2	-59.99	-13	-46.99	-78.80	-63.56	4.88	10.60	V
	3345.6	-59.08	-13	-46.08	-79.99	-64.01	5.52	12.60	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)
Middle	3760	-58.78	-13	-45.78	-80.72	-65.53	5.85	12.60	H
	5640	-58.14	-13	-45.14	-81.76	-63.94	7.30	13.10	H
	7520	-56.52	-13	-43.52	-82.40	-59.67	8.35	11.50	H
	3760	-56.40	-13	-43.40	-81.5	-63.15	5.85	12.60	V
	5640	-58.20	-13	-45.20	-81.97	-64.00	7.30	13.10	V
	7520	-56.67	-13	-43.67	-82.53	-59.82	8.35	11.50	V

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

GSM1900 (EDGE class 8)									
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	-58.60	-13	-45.60	-80.54	-65.35	5.85	12.60	H
	5640	-58.31	-13	-45.31	-81.93	-64.11	7.30	13.10	H
	7520	-56.00	-13	-43.00	-81.88	-59.15	8.35	11.50	H
	3760	-55.75	-13	-42.75	-80.85	-62.50	5.85	12.60	V
	5640	-57.96	-13	-44.96	-81.73	-63.76	7.30	13.10	V
	7520	-56.14	-13	-43.14	-82	-59.29	8.35	11.50	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)
Middle	1672.8	-66.84	-13	-53.84	-77.78	-70.09	4.00	9.40	H
	2509.2	-60.05	-13	-47.05	-78.65	-63.62	4.88	10.60	H
	3345.6	-59.39	-13	-46.39	-80.00	-64.32	5.52	12.60	H
	1672.8	-66.37	-13	-53.37	-78.02	-69.62	4.00	9.40	V
	2509.2	-60.10	-13	-47.10	-78.91	-63.67	4.88	10.60	V
	3345.6	-58.94	-13	-45.94	-79.85	-63.87	5.52	12.60	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)
Middle	3760	-58.68	-13	-45.68	-80.62	-65.43	5.85	12.60	H
	5640	-57.95	-13	-44.95	-81.57	-63.75	7.30	13.10	H
	7520	-56.45	-13	-43.45	-82.33	-59.60	8.35	11.50	H
	3760	-55.82	-13	-42.82	-80.92	-62.57	5.85	12.60	V
	5640	-57.76	-13	-44.76	-81.53	-63.56	7.30	13.10	V
	7520	-56.11	-13	-43.11	-81.97	-59.26	8.35	11.50	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)
Middle	3465.2	-57.78	-13	-44.78	-79.32	-64.63	5.65	12.50	H
	5197.8	-58.02	-13	-45.02	-81.62	-63.69	7.13	12.80	H
	6930.4	-56.29	-13	-43.29	-81.43	-59.69	8.40	11.80	H
	3465.2	-57.56	-13	-44.56	-78.9	-64.41	5.65	12.50	V
	5197.8	-57.72	-13	-44.72	-81.59	-63.39	7.13	12.80	V
	6930.4	-55.30	-13	-42.30	-81.36	-58.70	8.40	11.80	V

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



For Bottom Antenna

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)
Middle	1672.8	-66.86	-13	-53.86	-77.80	-70.11	4.00	9.40	H
	2509.2	-56.03	-13	-43.03	-74.63	-59.60	4.88	10.60	H
	3345.6	-59.26	-13	-46.26	-79.87	-64.19	5.52	12.60	H
	1672.8	-65.41	-13	-52.41	-77.06	-68.66	4.00	9.40	V
	2509.2	-59.82	-13	-46.82	-78.63	-63.39	4.88	10.60	V
	3345.6	-59.06	-13	-46.06	-79.97	-63.99	5.52	12.60	V

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

GSM850 (EDGE class 8)									
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	-66.59	-13	-53.59	-77.53	-69.84	4.00	9.40	H
	2509.2	-60.19	-13	-47.19	-78.79	-63.76	4.88	10.60	H
	3345.6	-59.02	-13	-46.02	-79.63	-63.95	5.52	12.60	H
	1672.8	-65.87	-13	-52.87	-77.52	-69.12	4.00	9.40	V
	2509.2	-60.09	-13	-47.09	-78.90	-63.66	4.88	10.60	V
	3345.6	-58.90	-13	-45.90	-79.81	-63.83	5.52	12.60	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)
Middle	3760	-58.80	-13	-45.80	-80.74	-65.55	5.85	12.60	H
	5640	-58.36	-13	-45.36	-81.98	-64.16	7.30	13.10	H
	7520	-56.58	-13	-43.58	-82.46	-59.73	8.35	11.50	H
	3760	-56.02	-13	-43.02	-81.12	-62.77	5.85	12.60	V
	5640	-57.82	-13	-44.82	-81.59	-63.62	7.30	13.10	V
	7520	-56.79	-13	-43.79	-82.65	-59.94	8.35	11.50	V

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

GSM1900 (EDGE class 8)									
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	-58.69	-13	-45.69	-80.63	-65.44	5.85	12.60	H
	5640	-58.29	-13	-45.29	-81.91	-64.09	7.30	13.10	H
	7520	-55.71	-13	-42.71	-81.59	-58.86	8.35	11.50	H
	3760	-56.17	-13	-43.17	-81.27	-62.92	5.85	12.60	V
	5640	-57.89	-13	-44.89	-81.66	-63.69	7.30	13.10	V
	7520	-56.73	-13	-43.73	-82.59	-59.88	8.35	11.50	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)
Middle	1672.8	-67.03	-13	-54.03	-77.97	-70.28	4.00	9.40	H
	2509.2	-60.51	-13	-47.51	-79.11	-64.08	4.88	10.60	H
	3345.6	-59.47	-13	-46.47	-80.08	-64.40	5.52	12.60	H
	1672.8	-66.07	-13	-53.07	-77.72	-69.32	4.00	9.40	V
	2509.2	-60.47	-13	-47.47	-79.28	-64.04	4.88	10.60	V
	3345.6	-59.35	-13	-46.35	-80.26	-64.28	5.52	12.60	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)
Middle	3760	-58.71	-13	-45.71	-80.65	-65.46	5.85	12.60	H
	5640	-58.07	-13	-45.07	-81.69	-63.87	7.30	13.10	H
	7520	-56.10	-13	-43.10	-81.98	-59.25	8.35	11.50	H
	3760	-55.73	-13	-42.73	-80.83	-62.48	5.85	12.60	V
	5640	-57.86	-13	-44.86	-81.63	-63.66	7.30	13.10	V
	7520	-56.28	-13	-43.28	-82.14	-59.43	8.35	11.50	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)
Middle	3465.2	-58.14	-13	-45.14	-79.68	-64.99	5.65	12.50	H
	5197.8	-57.75	-13	-44.75	-81.35	-63.42	7.13	12.80	H
	6930.4	-56.51	-13	-43.51	-81.65	-59.91	8.40	11.80	H
	3465.2	-57.53	-13	-44.53	-78.87	-64.38	5.65	12.50	V
	5197.8	-58.15	-13	-45.15	-82.02	-63.82	7.13	12.80	V
	6930.4	-55.64	-13	-42.64	-81.7	-59.04	8.40	11.80	V

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