

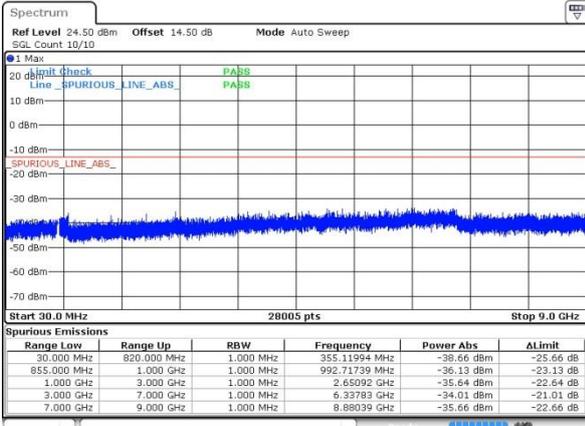


Conducted Spurious Emission



GSM850 (GPRS)

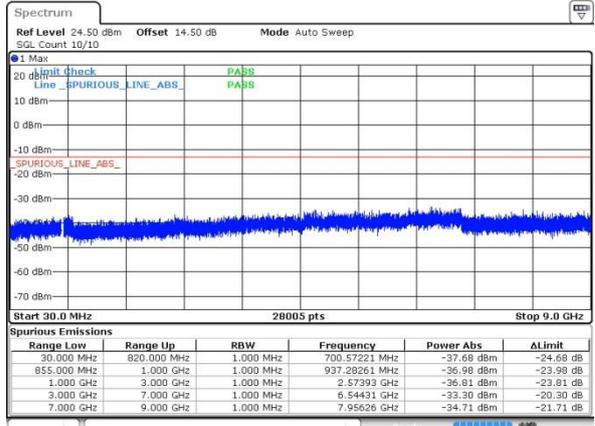
Lowest Channel



Date: 14 JUL 2016 05:13:40

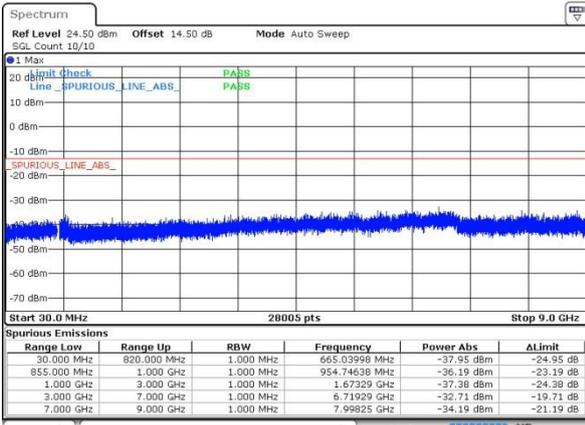
GSM850 (EDGE)

Lowest Channel



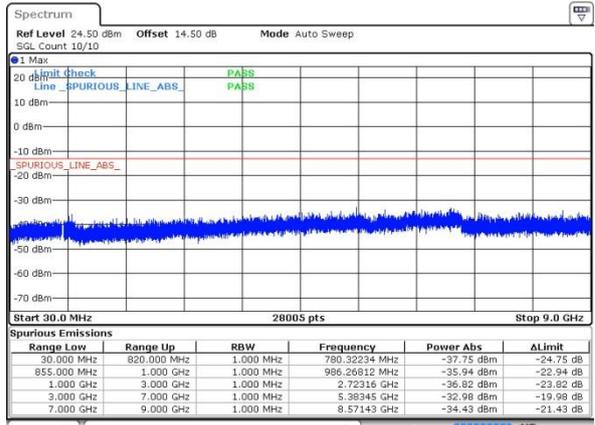
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Middle Channel



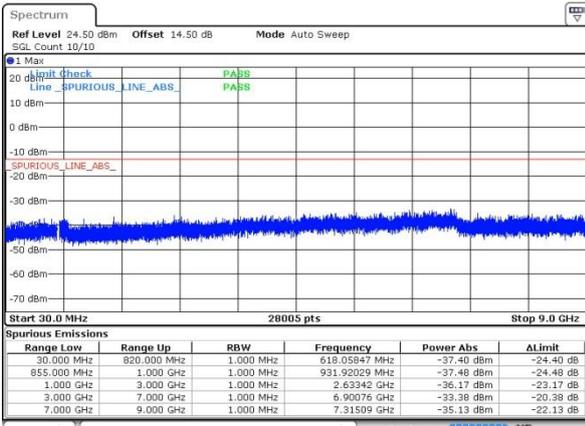
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Middle Channel



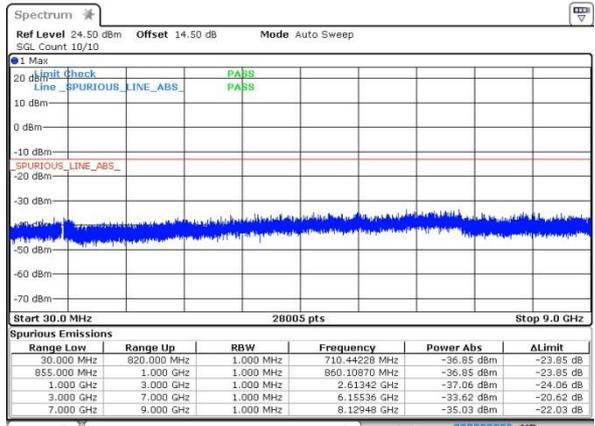
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Highest Channel



Date: 14 JUL 2016 05:16:26

Highest Channel

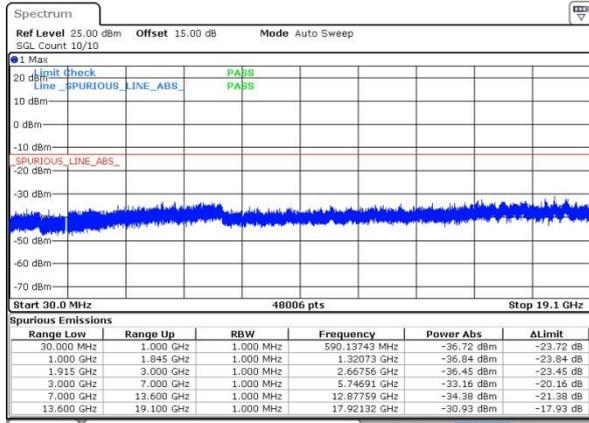


Date: 14 JUL 2016 05:41:05



GSM1900 (GPRS)

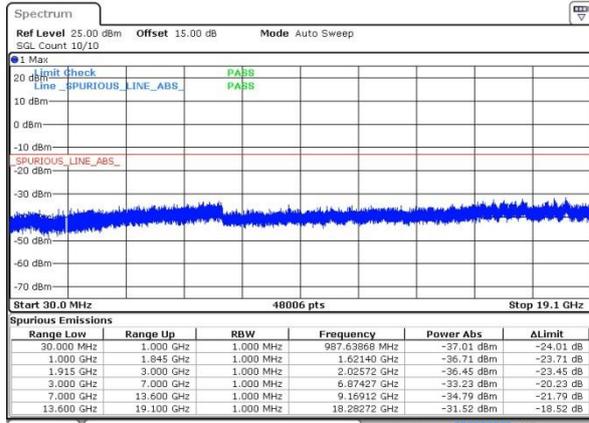
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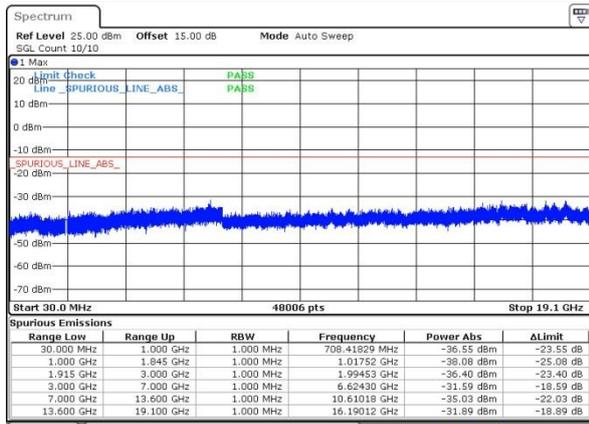
GSM1900 (EDGE)

Lowest Channel



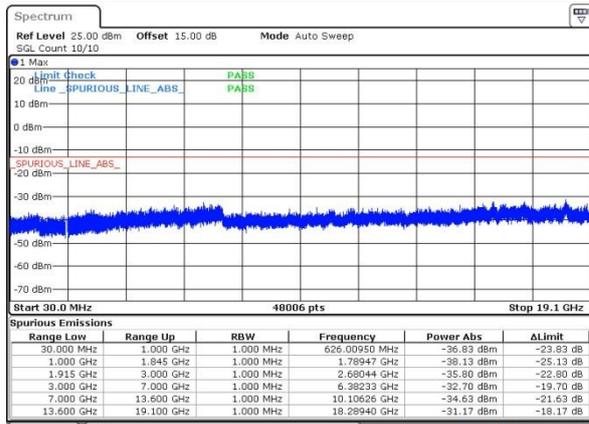
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Middle Channel



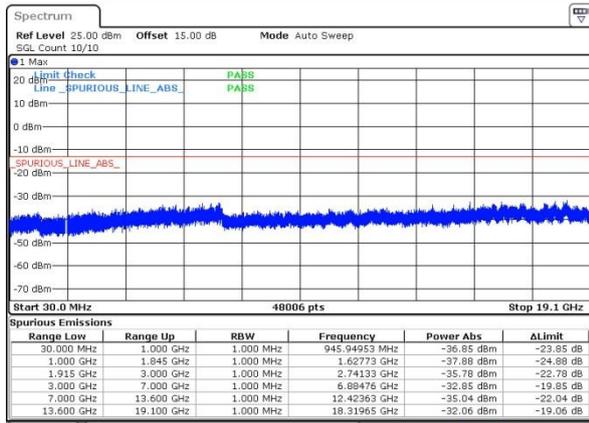
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Middle Channel



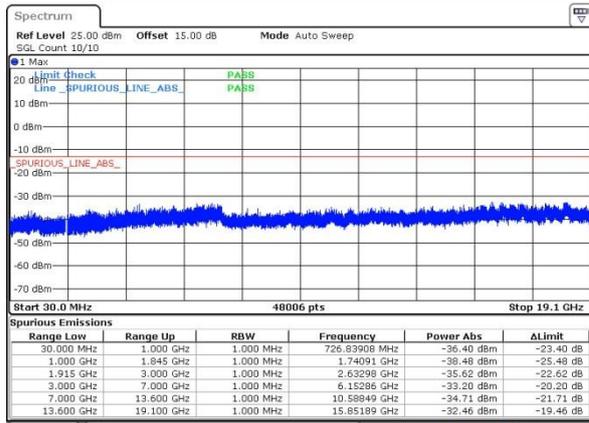
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Highest Channel



Date: 14 JUL 2016 05:57:49

Highest Channel

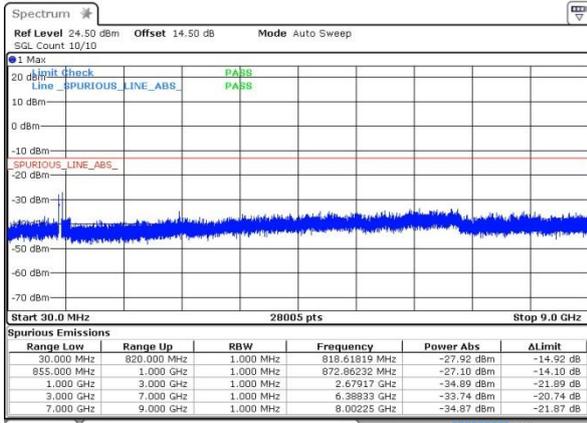


Date: 14 JUL 2016 06:17:20



WCDMA Band V (RMC 12.2Kbps)

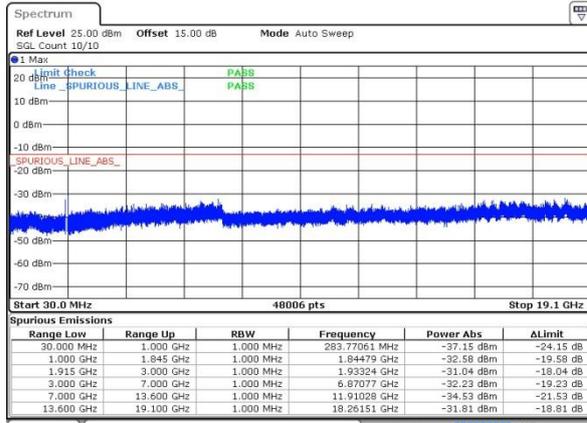
Lowest Channel



Date: 14 JUL 2016 06:38:50

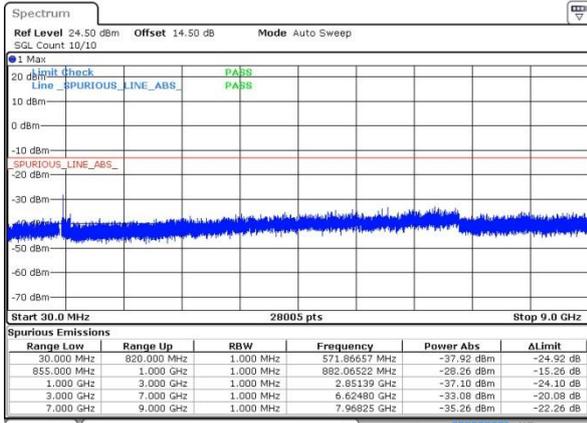
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



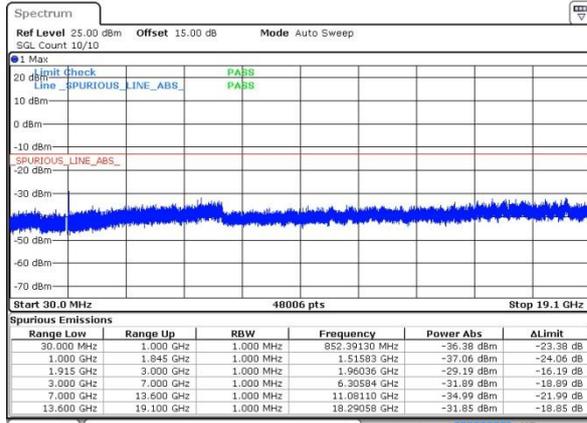
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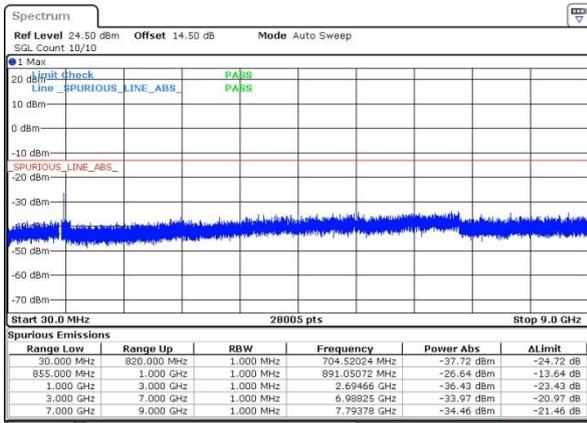
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Middle Channel



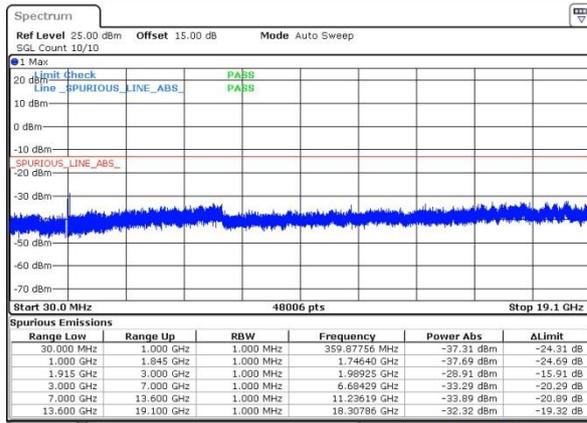
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Highest Channel



Date: 14 JUL 2016 06:55:55

Highest Channel

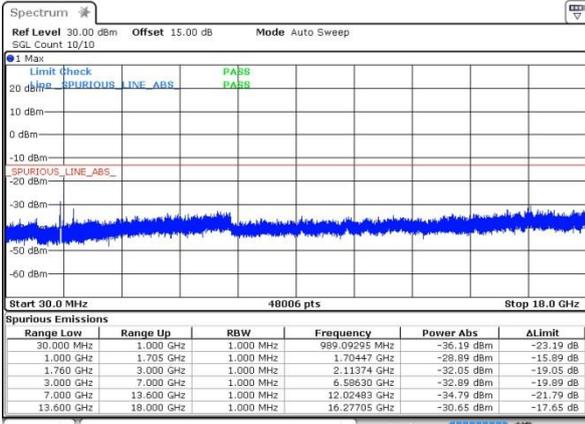


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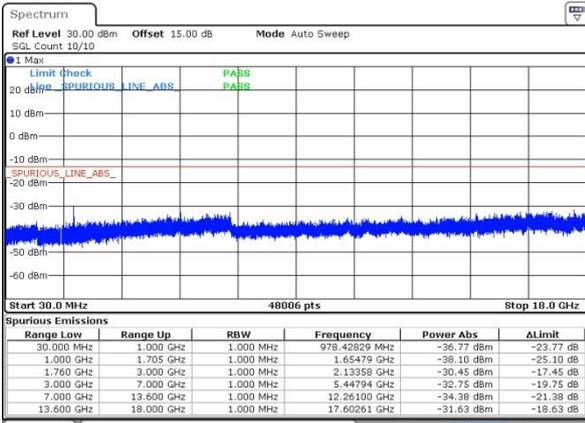
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



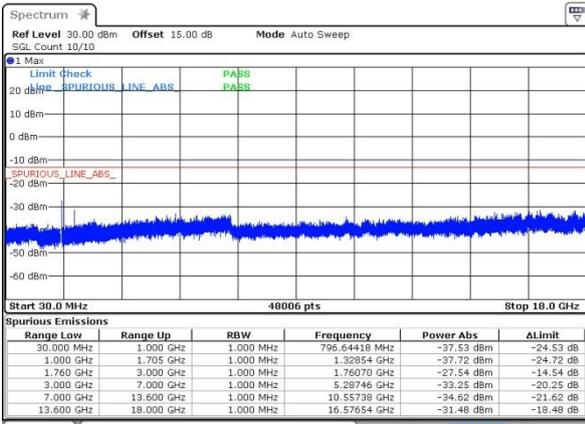
Date: 14 JUL 2016 07:45:20

Middle Channel



Date: 14 JUL 2016 07:47:17

Highest Channel



Date: 14 JUL 2016 07:48:50



Frequency Stability

Test Conditions	Middle Channel	GSM850 (GPRS class 8)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0179	0.0096	PASS
40	Normal Voltage	0.0072	0.0215	
30	Normal Voltage	0.0024	0.0060	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0191	0.0060	
0	Normal Voltage	0.0036	0.0012	
-10	Normal Voltage	0.0048	0.0012	
-20	Normal Voltage	0.0012	0.0036	
-30	Normal Voltage	0.0167	0.0036	
20	Maximum Voltage	0.0036	0.0060	
20	Normal Voltage	0.0024	0.0024	
20	Battery End Point	0.0072	0.0048	

Note:

- 1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 V



Test Conditions	Middle Channel	GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0165	0.0021	PASS
40	Normal Voltage	0.0016	0.0027	
30	Normal Voltage	0.0218	0.0021	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0021	0.0154	
0	Normal Voltage	0.0005	0.0144	
-10	Normal Voltage	0.0149	0.0005	
-20	Normal Voltage	0.0165	0.0149	
-30	Normal Voltage	0.0154	0.0138	
20	Maximum Voltage	0.0186	0.0037	
20	Normal Voltage	0.0191	0.0021	
20	Battery End Point	0.0160	0.0016	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 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 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0167	PASS
40	Normal Voltage	0.0072	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0132	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0108	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0143	
20	Maximum Voltage	0.0036	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0120	

Note:

- 1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 V



Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0037	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0096	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0074	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0064	
-30	Normal Voltage	0.0085	
20	Maximum Voltage	0.0059	
20	Normal Voltage	0.0080	
20	Battery End Point	0.0096	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 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	0.0017	PASS
40	Normal Voltage	0.0087	
30	Normal Voltage	0.0035	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0092	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0029	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6V. ; Maximum Voltage =4.35V
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

ERP/EIRP

Channel	Mode	Horizontal		Vertical	
		ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	GSM850 GPRS class 8	28.89	0.7749	29.23	0.8384
Middle		28.75	0.7506	29.27	0.8447
Highest		29.24	0.8396	29.84	0.9640
Lowest	GSM850 EDGE class 8	23.50	0.2241	24.30	0.2690
Middle		22.74	0.1879	23.69	0.2341
Highest		23.79	0.2394	24.34	0.2717
Lowest	WCDMA Band V RMC 12.2Kbps	19.85	0.0966	20.07	0.1015
Middle		19.73	0.0939	19.88	0.0974
Highest		20.25	0.1059	20.74	0.1186
Limit	ERP < 7W	Result		PASS	



Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900 GPRS class 8	27.94	0.6223	31.77	1.5031
Middle		27.74	0.5943	31.83	1.5241
Highest		28.59	0.7228	31.54	1.4256
Lowest	GSM1900 EDGE class 8	24.67	0.2931	28.04	0.6368
Middle		24.20	0.2630	28.28	0.6730
Highest		25.08	0.3221	28.17	0.6561
Lowest	WCDMA Band II RMC 12.2Kbps	21.50	0.1413	25.38	0.3451
Middle		21.19	0.1315	25.40	0.3467
Highest		21.79	0.1510	24.94	0.3119
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV RMC 12.2Kbps	20.38	0.1091	23.68	0.2333
Middle		21.42	0.1387	23.94	0.2477
Highest		22.02	0.1592	24.41	0.2761
Limit	EIRP < 1W	Result		PASS	



Radiated Spurious Emission

GSM850 (GPRS 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	-62.23	-13	-49.23	-65.06	-68.92	0.56	9.40	H
	2510	-53.12	-13	-40.12	-58.86	-60.83	0.74	10.60	H
	3346	-57.91	-13	-44.91	-66.72	-67.51	0.85	12.60	H
	1672	-64.42	-13	-51.42	-66.08	-71.11	0.56	9.40	V
	2510	-53.13	-13	-40.13	-58.71	-60.84	0.74	10.60	V
	3346	-59.19	-13	-46.19	-67.33	-68.79	0.85	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	-58.74	-13	-45.74	-61.57	-65.43	0.56	9.40	H
	2510	-54.49	-13	-41.49	-60.23	-62.20	0.74	10.60	H
	3346	-57.43	-13	-44.43	-66.24	-67.03	0.85	12.60	H
	1672	-63.99	-13	-50.99	-65.65	-70.68	0.56	9.40	V
	2510	-55.82	-13	-42.82	-61.40	-63.53	0.74	10.60	V
	3346	-59.08	-13	-46.08	-67.22	-68.68	0.85	12.60	V

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



GSM1900 (GPRS 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	-52.63	-13	-39.63	-66.18	-58.67	6.56	12.60	H
	5640	-49.90	-13	-36.90	-65.84	-55.00	8	13.10	H
	7520	-47.70	-13	-34.70	-66.44	-49.43	9.57	11.30	H
	3760	-53.60	-13	-40.60	-66.95	-59.64	6.56	12.6	V
	5640	-51.27	-13	-38.27	-68.62	-56.37	8	13.1	V
	7520	-49.01	-13	-36.01	-67.41	-50.74	9.57	11.3	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	-51.67	-13	-38.67	-65.22	-57.71	6.56	12.60	H
	5640	-50.94	-13	-37.94	-66.88	-56.04	8	13.10	H
	7520	-47.57	-13	-34.57	-66.31	-49.30	9.57	11.30	H
	3760	-53.36	-13	-40.36	-66.71	-59.40	6.56	12.6	V
	5640	-46.67	-13	-33.67	-64.02	-51.77	8	13.1	V
	7520	-48.82	-13	-35.82	-67.22	-50.55	9.57	11.3	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	-63.35	-13	-50.35	-66.18	-70.04	0.56	9.40	H
	2510	-61.16	-13	-48.16	-66.90	-68.87	0.74	10.60	H
	3346	-57.74	-13	-44.74	-66.55	-67.34	0.85	12.60	H
	1672	-63.56	-13	-50.56	-65.22	-70.25	0.56	9.40	V
	2510	-60.50	-13	-47.50	-66.08	-68.21	0.74	10.60	V
	3346	-58.69	-13	-45.69	-66.83	-68.29	0.85	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	-52.25	-13	-39.25	-65.80	-58.29	6.56	12.60	H
	5640	-51.72	-13	-38.72	-67.66	-56.82	8	13.10	H
	7520	-48.54	-13	-35.54	-67.28	-50.27	9.57	11.30	H
	3760	-54.01	-13	-41.01	-67.36	-60.05	6.56	12.6	V
	5640	-51.44	-13	-38.44	-68.79	-56.54	8	13.1	V
	7520	-48.77	-13	-35.77	-67.17	-50.50	9.57	11.3	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	-51.83	-13	-38.83	-66.58	-58.25	6.18	12.60	H
	5197.8	-49.40	-13	-36.40	-67.40	-54.36	7.74	12.70	H
	6930.4	-48.42	-13	-35.42	-67.23	-51.12	9	11.70	H
	3465.2	-55.70	-13	-42.70	-66.65	-62.12	6.18	12.60	V
	5197.8	-54.48	-13	-41.48	-67.48	-59.44	7.74	12.70	V
	6930.4	-46.92	-13	-33.92	-63.63	-49.62	9	11.70	V

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