

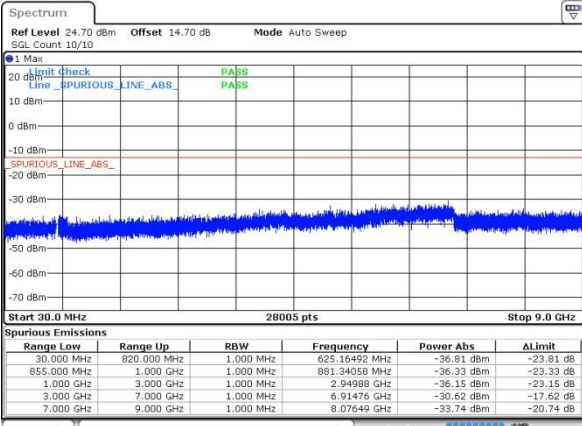


## **Conducted Spurious Emission**



GSM850 (GSM)

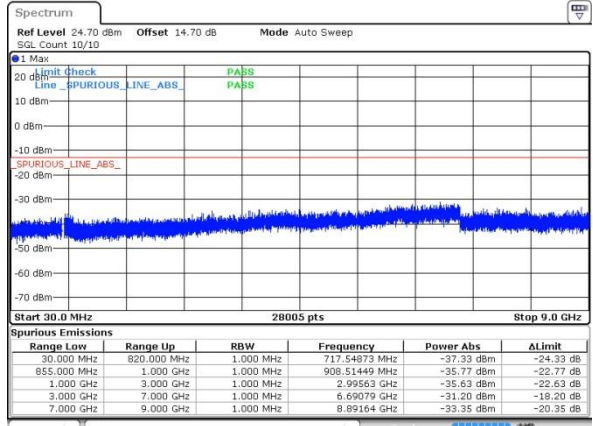
Lowest Channel



Date: 20 JUN 2019 23:52:55

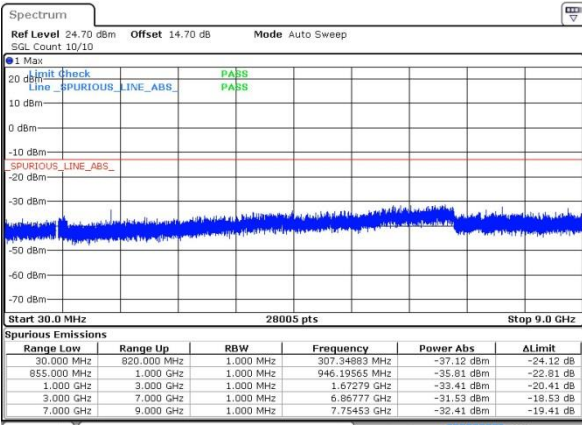
GSM850 (EDGE class 8)

Lowest Channel



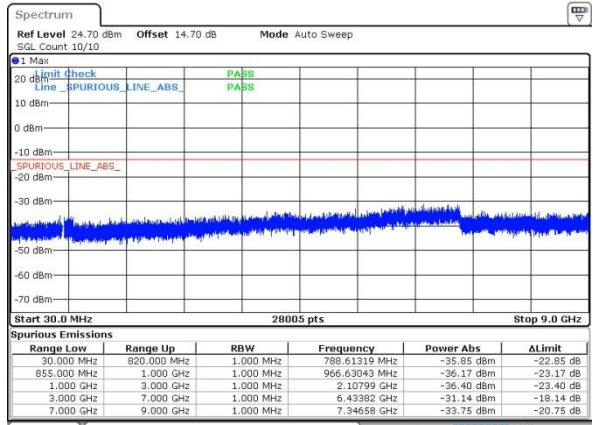
Date: 21 JUN 2019 00:13:31

Middle Channel



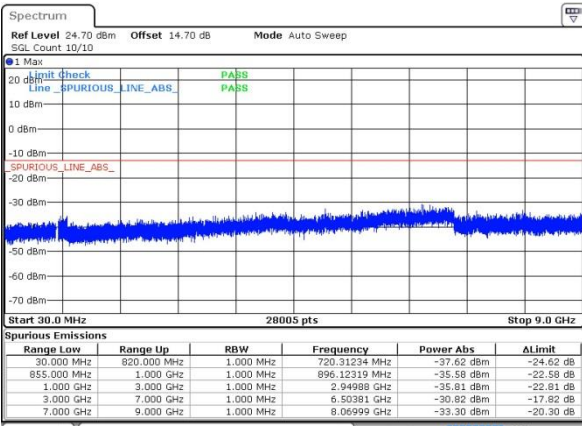
Date: 20 JUN 2019 23:54:13

Middle Channel



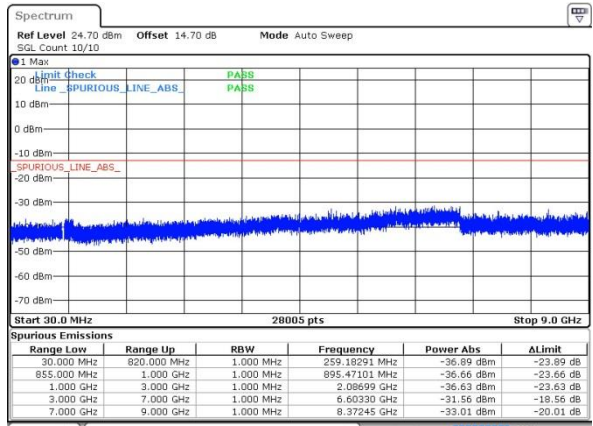
Date: 21 JUN 2019 00:14:52

Highest Channel



Date: 20 JUN 2019 23:55:33

Highest Channel

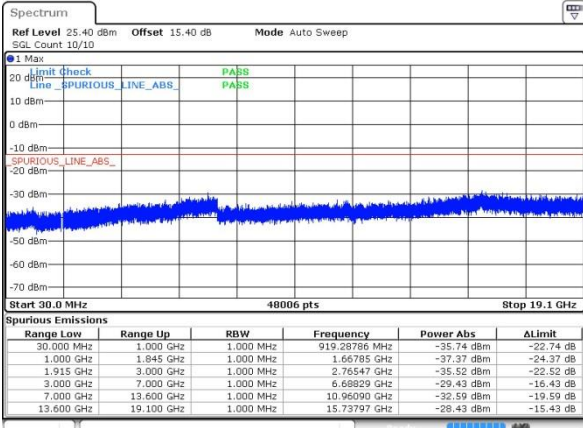


Date: 21 JUN 2019 00:16:13



GSM1900 (GSM)

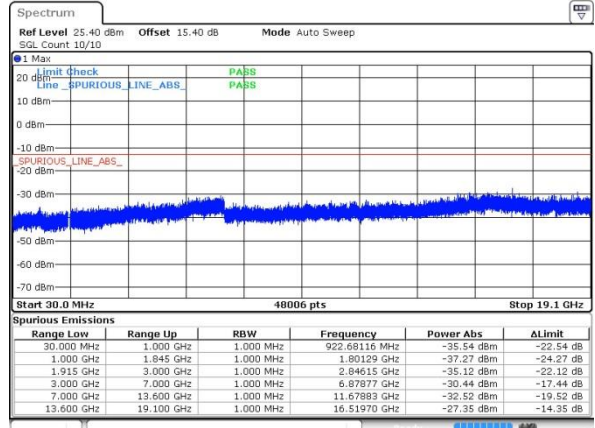
Lowest Channel



Date: 21 JUN 2019 00:28:48

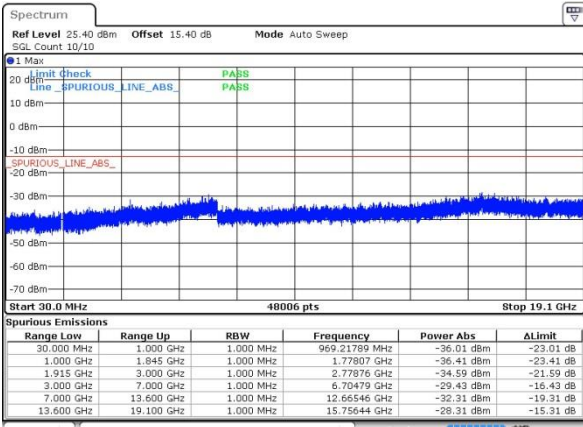
GSM1900 (EDGE class 8)

Lowest Channel



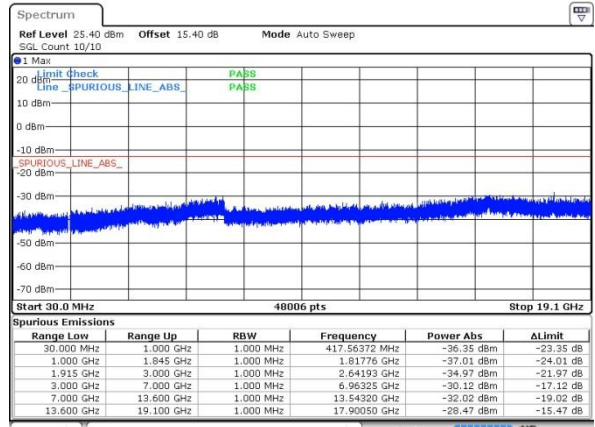
Date: 21 JUN 2019 00:48:07

Middle Channel



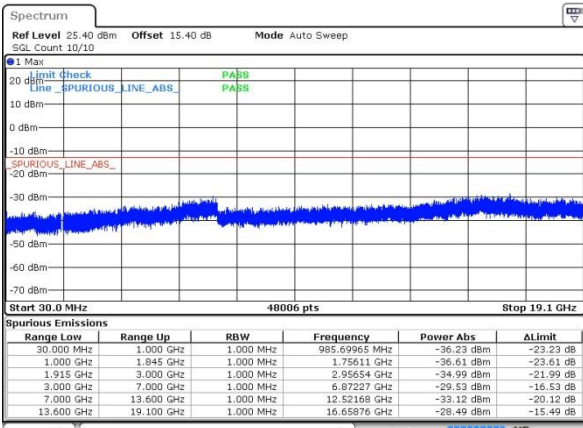
Date: 21 JUN 2019 00:30:06

Middle Channel



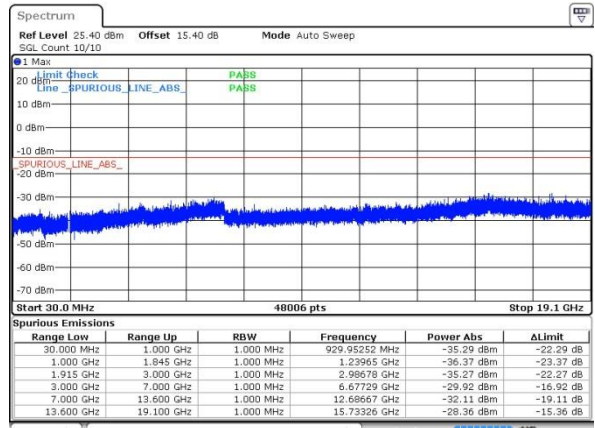
Date: 21 JUN 2019 00:49:25

Highest Channel



Date: 21 JUN 2019 00:34:53

Highest Channel

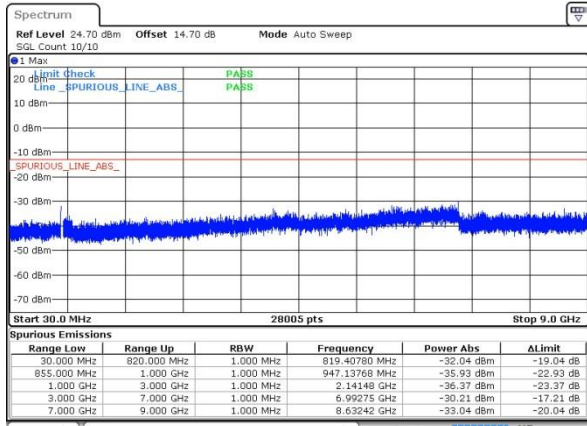


Date: 21 JUN 2019 00:50:45



WCDMA Band V (RMC 12.2Kbps)

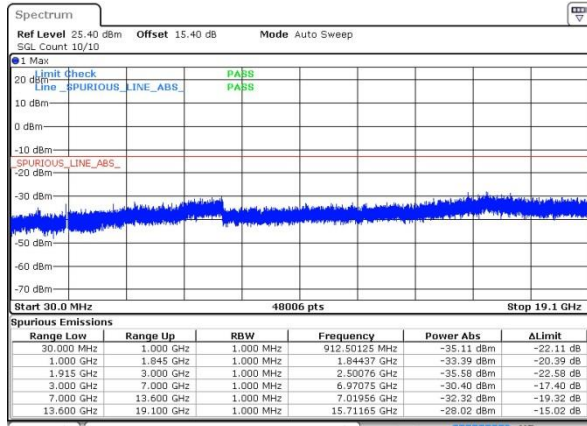
Lowest Channel



Date: 21 JUN 2019 01:09:02

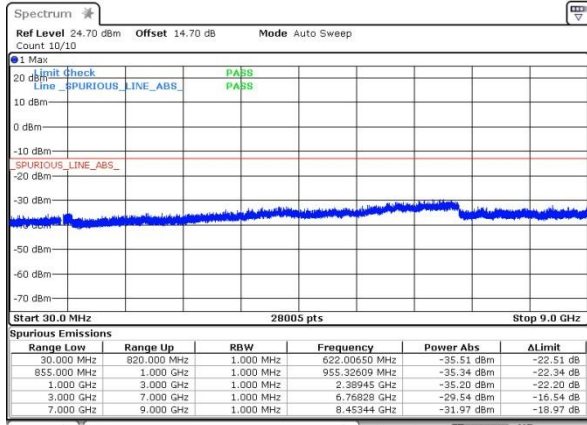
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



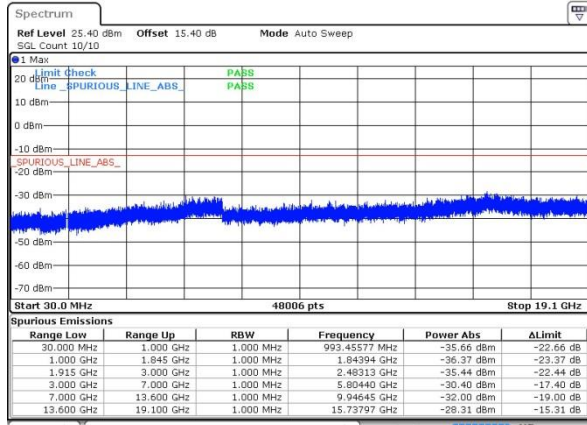
Date: 21 JUN 2019 01:26:32

Middle Channel



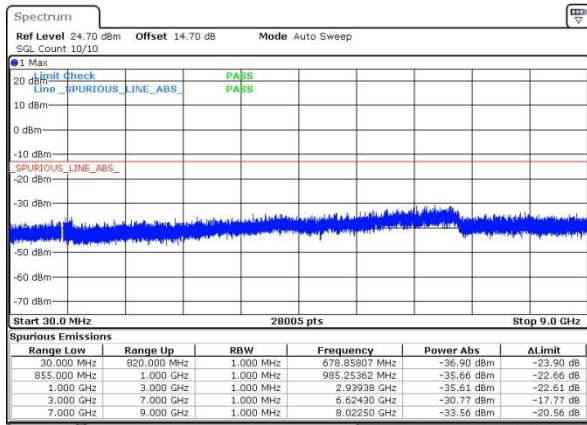
Date: 21 JUN 2019 01:10:20

Middle Channel



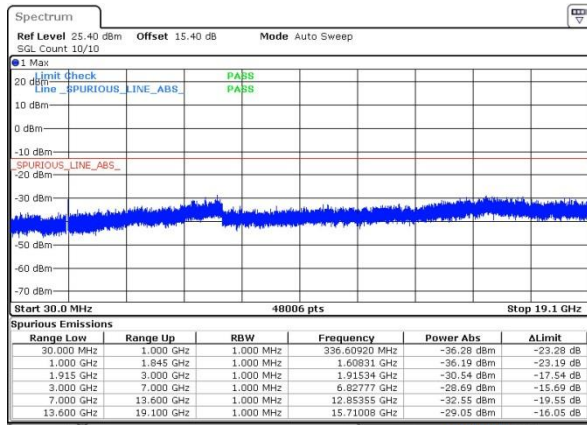
Date: 21 JUN 2019 01:28:15

Highest Channel

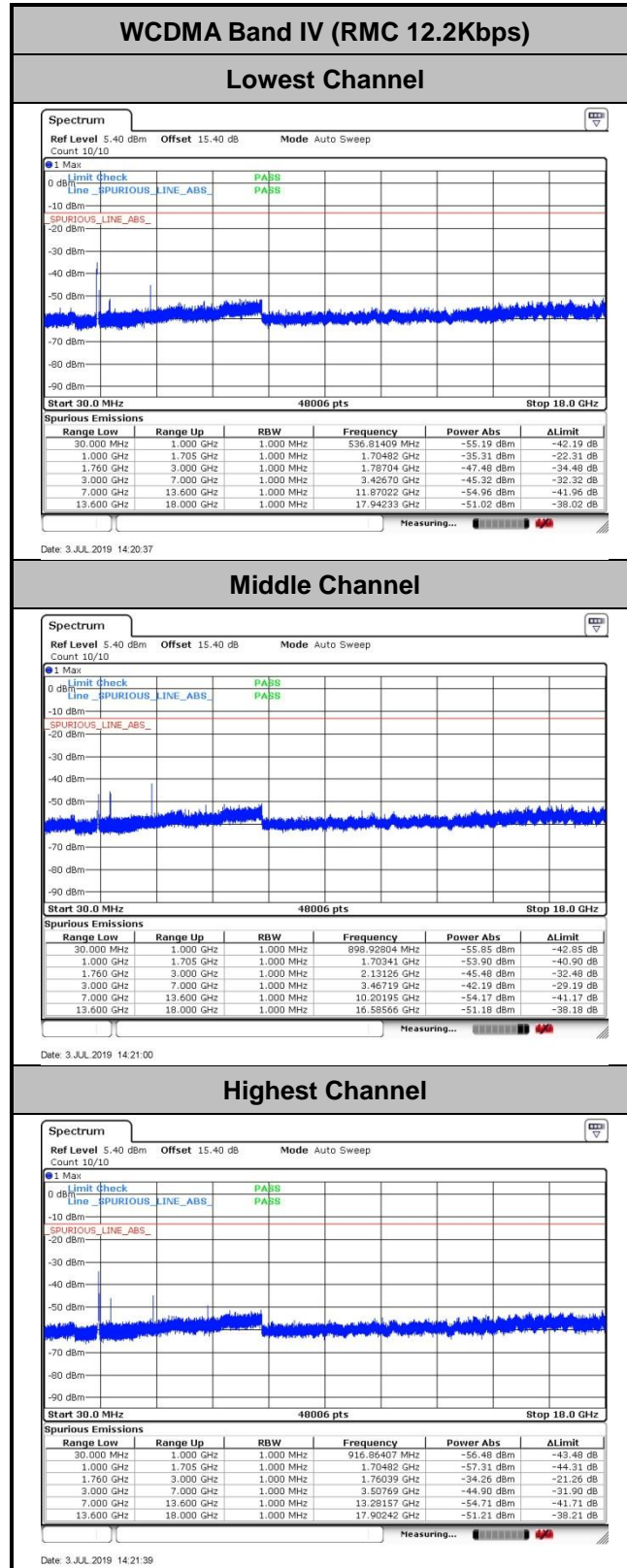


Date: 21 JUN 2019 01:11:38

Highest Channel



Date: 21 JUN 2019 01:29:33





**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	0.0048	0.0060	PASS
40	Normal Voltage	0.0526	0.0167	
30	Normal Voltage	0.0120	0.0538	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0574	0.0335	
0	Normal Voltage	0.0191	0.0538	
-10	Normal Voltage	0.0084	0.0466	
-20	Normal Voltage	0.0143	0.0167	
-30	Normal Voltage	0.0108	0.0478	
20	Maximum Voltage	0.0466	0.0514	
20	Normal Voltage	0.0155	0.0132	
20	Battery End Point	0.0395	0.0395	

Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0053	0.0005	PASS
40	Normal Voltage	0.0016	0.0016	
30	Normal Voltage	0.0027	0.0021	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0170	0.0255	
0	Normal Voltage	0.0074	0.0186	
-10	Normal Voltage	0.0160	0.0011	
-20	Normal Voltage	0.0218	0.0037	
-30	Normal Voltage	0.0005	0.0213	
20	Maximum Voltage	0.0053	0.0160	
20	Normal Voltage	0.0021	0.0016	
20	Battery End Point	0.0133	0.0011	



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	0.0060	PASS
40	Normal Voltage	0.0395	
30	Normal Voltage	0.0442	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0072	
0	Normal Voltage	0.0323	
-10	Normal Voltage	0.0048	
-20	Normal Voltage	0.0167	
-30	Normal Voltage	0.0311	
20	Maximum Voltage	0.0442	
20	Normal Voltage	0.0155	
20	Battery End Point	0.0012	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0186	PASS
40	Normal Voltage	0.0128	
30	Normal Voltage	0.0165	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0117	
0	Normal Voltage	0.0154	
-10	Normal Voltage	0.0239	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0117	
20	Maximum Voltage	0.0165	
20	Normal Voltage	0.0005	
20	Battery End Point	0.0032	





Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0069	PASS
40	Normal Voltage	0.0156	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0058	
-10	Normal Voltage	0.0150	
-20	Normal Voltage	0.0167	
-30	Normal Voltage	0.0092	
20	Maximum Voltage	0.0092	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0167	

**Note:**

1. Normal Voltage = 3.8V ; Battery End Point (BEP) =3.6V. ; Maximum Voltage =4.2V
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

GSM850 (GSM)								
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)
Middle	1672	-57.42	-13	-44.42	-64.39	1.58	10.70	H
	2510	-42.75	-13	-29.75	-51.00	2.102	12.50	H
	3348	-65.05	-13	-52.05	-73.94	2.856	13.90	H
	1672	-64.56	-13	-51.56	-71.53	1.58	10.70	V
	2510	-49.04	-13	-36.04	-57.29	2.10	12.50	V
	3348	-64.78	-13	-51.78	-73.67	2.86	13.90	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 )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-56.43	-13	-43.43	-63.40	1.58	10.70	H
	2510	-42.63	-13	-29.63	-50.88	2.102	12.50	H
	3348	-65.15	-13	-52.15	-74.04	2.856	13.90	H
	1672	-57.50	-13	-44.50	-64.47	1.58	10.70	V
	2510	-48.96	-13	-35.96	-57.21	2.10	12.50	V
	3348	-65.29	-13	-52.29	-74.18	2.86	13.90	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 )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-60.31	-13	-47.31	-72.57	2.641	14.90	H
	5640	-39.61	-13	-26.61	-51.47	2.94	14.80	H
	7524	-52.78	-13	-39.78	-62.55	3.39	13.16	H
	3759	-60.50	-13	-47.50	-72.76	2.64	14.90	V
	5640	-44.24	-13	-31.24	-56.10	2.94	14.80	V
	7524	-52.29	-13	-39.29	-62.06	3.39	13.16	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 )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-59.17	-13	-46.17	-71.43	2.641	14.90	H
	5640	-43.60	-13	-30.60	-55.46	2.94	14.80	H
	7524	-52.39	-13	-39.39	-62.16	3.39	13.16	H
	3759	-61.15	-13	-48.15	-73.41	2.64	14.90	V
	5640	-43.55	-13	-30.55	-55.41	2.94	14.80	V
	7524	-52.76	-13	-39.76	-62.53	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)								
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)
Middle	1672	-69.88	-13	-56.88	-76.85	1.58	10.70	H
	2510	-65.78	-13	-52.78	-74.03	2.102	12.50	H
	3348	-65.52	-13	-52.52	-74.41	2.856	13.90	H
	1672	-70.92	-13	-57.92	-77.89	1.58	10.70	V
	2510	-66.35	-13	-53.35	-74.60	2.10	12.50	V
	3348	-66.19	-13	-53.19	-75.08	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)								
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)
Middle	3759	-60.72	-13	-47.72	-72.98	2.641	14.90	H
	5640	-55.60	-13	-42.60	-67.46	2.94	14.80	H
	7524	-53.37	-13	-40.37	-63.14	3.39	13.16	H
	3759	-60.56	-13	-47.56	-72.82	2.64	14.90	V
	5640	-57.65	-13	-44.65	-69.51	2.94	14.80	V
	7524	-52.19	-13	-39.19	-61.96	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)								
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)
Middle	3465	-64.47	-13	-51.47	-75.21	2.604	13.34	H
	5199	-59.94	-13	-46.94	-70.45	3.011	13.52	H
	6936	-55.45	-13	-42.45	-65.65	3.271	13.47	H
	3465	-64.28	-13	-51.28	-75.02	2.604	13.34	V
	5199	-59.62	-13	-46.62	-70.13	3.011	13.52	V
	6936	-55.49	-13	-42.49	-65.69	3.271	13.47	V

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