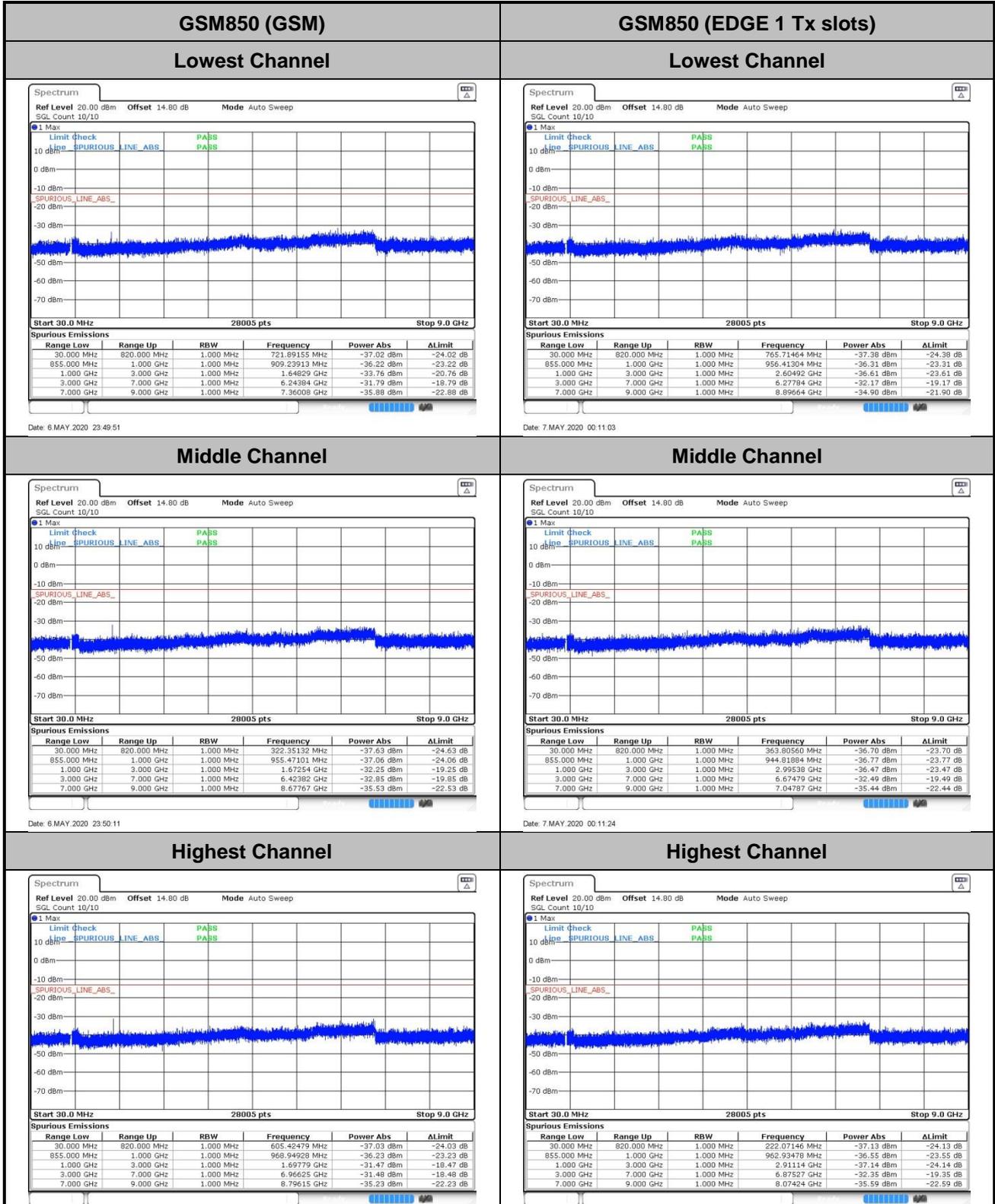




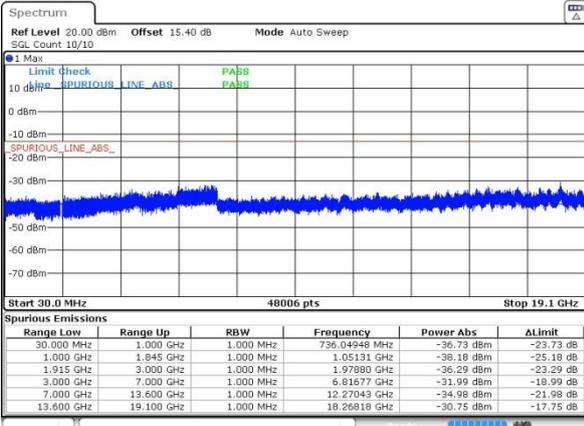
# Conducted Spurious Emission





GSM1900 (GSM)

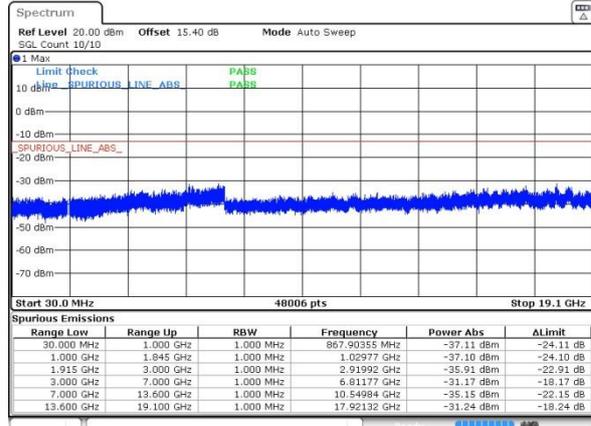
Lowest Channel



Date: 7.MAY.2020 19:53:51

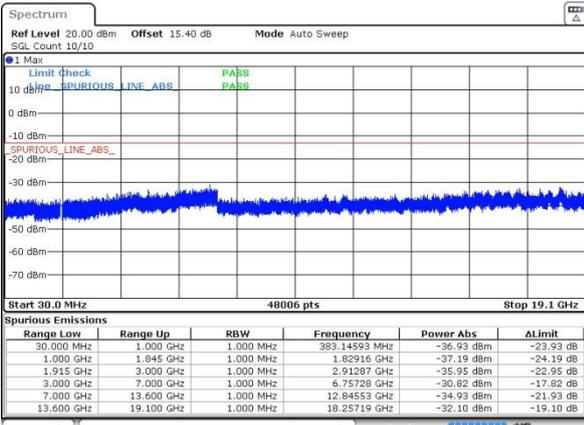
GSM1900 (EDGE 1 Tx slots)

Lowest Channel



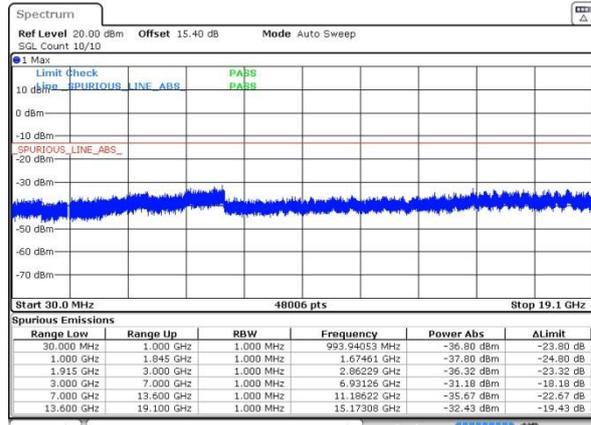
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Middle Channel



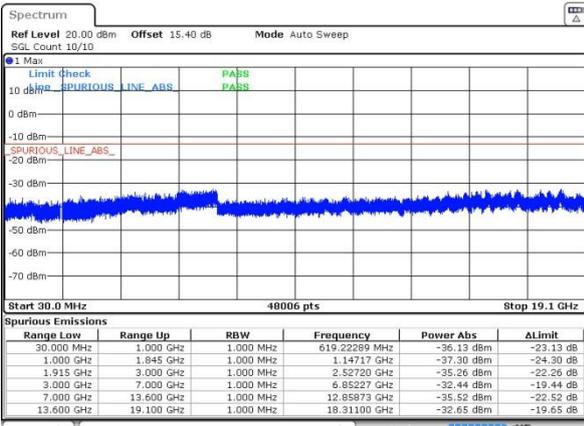
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Middle Channel



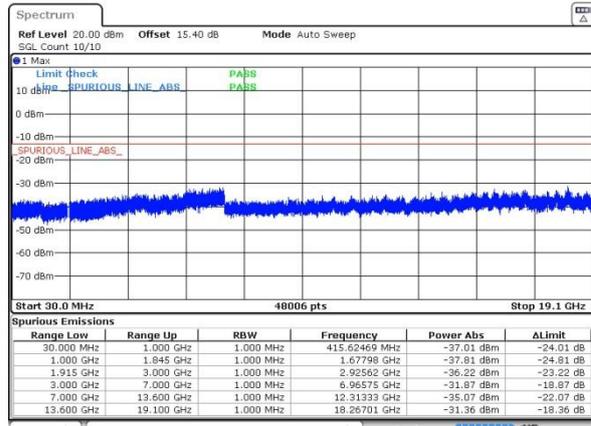
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Highest Channel



Date: 7.MAY.2020 19:54:22

Highest Channel

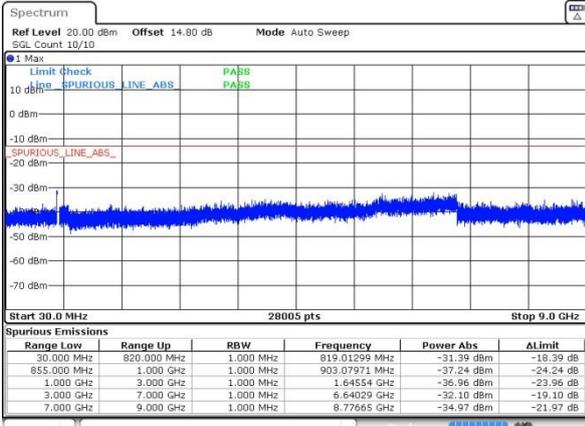


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WCDMA Band V (RMC 12.2Kbps)

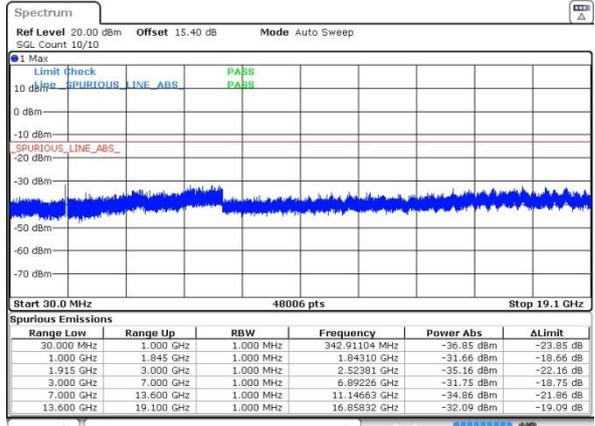
Lowest Channel



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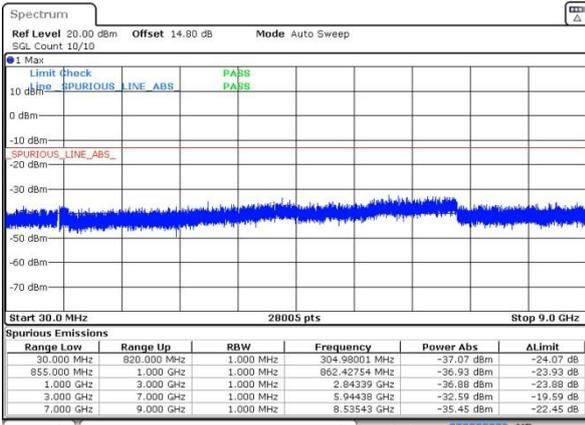
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



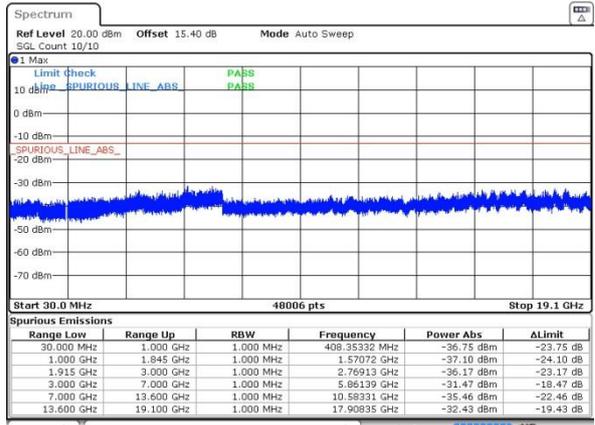
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Middle Channel



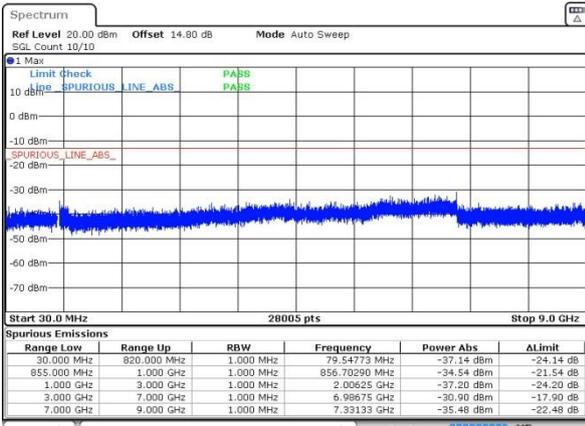
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Middle Channel



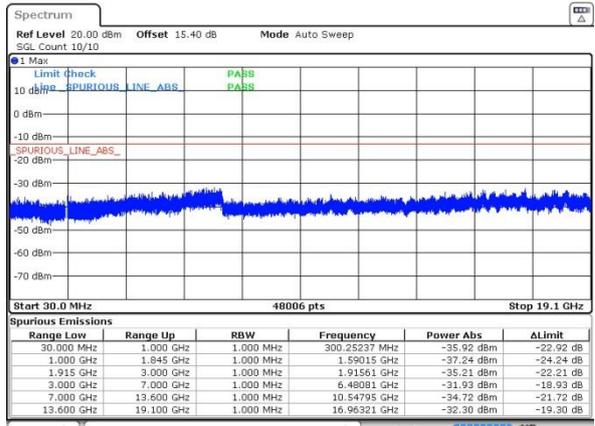
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Highest Channel

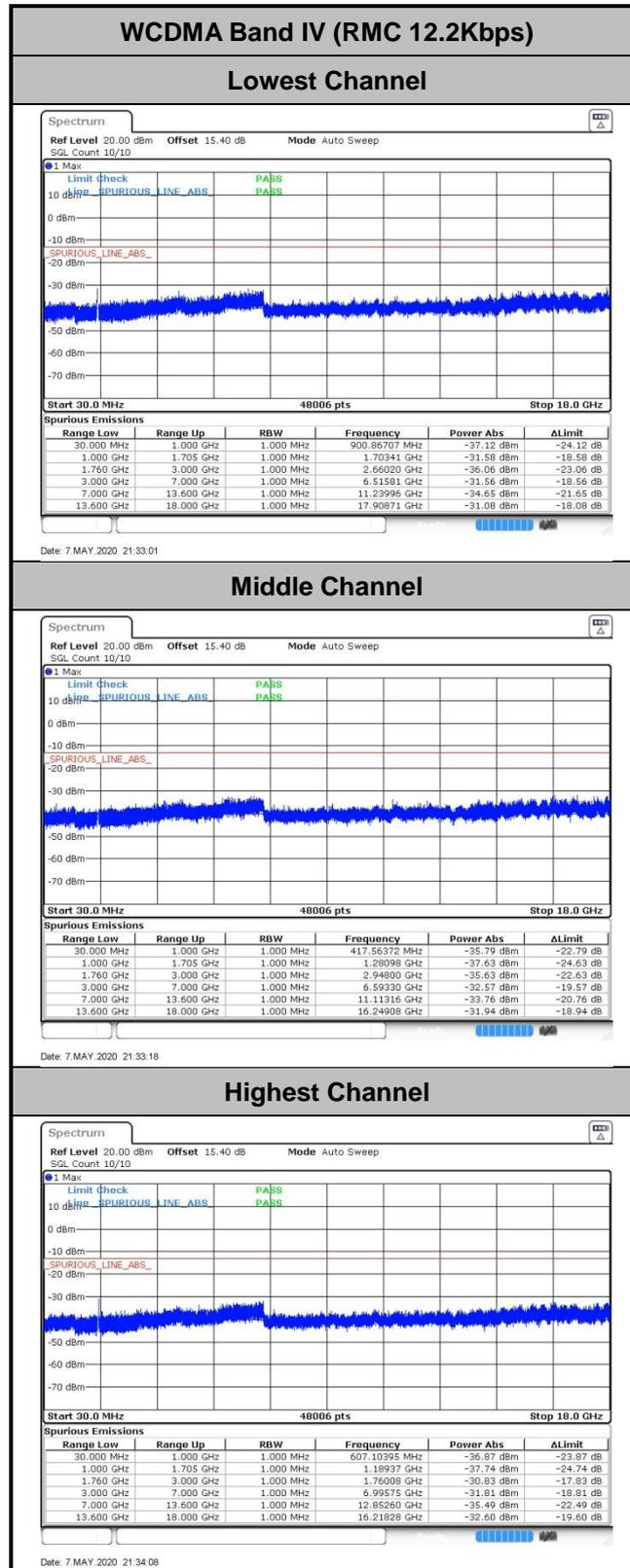


Date: 7.MAY.2020 20:54:45

Highest Channel



Date: 7.MAY.2020 21:15:55





### Frequency Stability

Test Conditions	Middle Channel	GSM850 (GSM)	GSM850 (EDGE 1 Tx Slots)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0108	0.0224	PASS
40	Normal Voltage	0.0032	0.0178	
30	Normal Voltage	0.0130	0.0085	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0145	0.0155	
0	Normal Voltage	0.0078	0.0169	
-10	Normal Voltage	0.0175	0.0234	
-20	Normal Voltage	0.0159	0.0031	
-30	Normal Voltage	0.0143	0.0109	
20	Maximum Voltage	0.0096	0.0132	
20	Normal Voltage	0.0120	0.0204	
20	Battery End Point	0.0191	0.0036	

Note: Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.6V. ; Maximum Voltage =4.4 V



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE 1 Tx Slots)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0058	0.0171	PASS
40	Normal Voltage	0.0015	0.0131	
30	Normal Voltage	0.0119	0.0023	
20(Ref.)	Normal Voltage	0.0000	0.0003	
10	Normal Voltage	0.0145	0.0112	
0	Normal Voltage	0.0136	0.0135	
-10	Normal Voltage	0.0089	0.0174	
-20	Normal Voltage	0.0021	0.0127	
-30	Normal Voltage	0.0118	0.0119	
20	Maximum Voltage	0.0052	0.0018	
20	Normal Voltage	0.0011	0.0134	
20	Battery End Point	0.0124	0.0027	

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.6V. ; 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 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0088	PASS
40	Normal Voltage	0.0255	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0274	
0	Normal Voltage	0.0243	
-10	Normal Voltage	0.0068	
-20	Normal Voltage	0.0273	
-30	Normal Voltage	0.0036	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0234	
20	Battery End Point	0.0263	

Note: Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.6V. ; 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	0.0018	PASS
40	Normal Voltage	0.0122	
30	Normal Voltage	0.0118	
20(Ref.)	Normal Voltage	0.0002	
10	Normal Voltage	0.0174	
0	Normal Voltage	0.0048	
-10	Normal Voltage	0.0143	
-20	Normal Voltage	0.0159	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0022	
20	Normal Voltage	0.0096	
20	Battery End Point	0.0032	

**Note:**

1. Normal Voltage = 3.85V ; Battery End Point (BEP) =3.6V ; Maximum Voltage =4.4V
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	0.0035	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0150	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0127	
-10	Normal Voltage	0.0035	
-20	Normal Voltage	0.0144	
-30	Normal Voltage	0.0046	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0133	
20	Battery End Point	0.0035	

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4V
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	-57.10	-13	-44.10	-60.34	1.11	6.50	H
	2510	-50.56	-13	-37.56	-53.18	1.43	6.20	H
	3348	-60.65	-13	-47.65	-65.09	1.71	8.30	H
	1672	-61.71	-13	-48.71	-64.95	1.11	6.50	V
	2510	-54.89	-13	-41.89	-57.51	1.43	6.20	V
	3348	-60.37	-13	-47.37	-64.81	1.71	8.30	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 )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-64.11	-13	-51.11	-67.35	1.11	6.50	H
	2510	-62.79	-13	-49.79	-65.41	1.43	6.20	H
	3348	-60.78	-13	-47.78	-65.22	1.71	8.30	H
	1672	-65.54	-13	-52.54	-68.78	1.11	6.50	V
	2510	-62.59	-13	-49.59	-65.21	1.43	6.20	V
	3348	-60.73	-13	-47.73	-65.17	1.71	8.30	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	-54.67	-13	-41.67	-60.93	1.84	8.10	H
	5640	-50.90	-13	-37.90	-59.21	2.19	10.50	H
	7524	-45.92	-13	-32.92	-54.84	2.58	11.50	H
	3759	-54.60	-13	-41.60	-60.86	1.84	8.10	V
	5640	-50.57	-13	-37.57	-58.88	2.19	10.50	V
	7524	-45.79	-13	-32.79	-54.71	2.58	11.50	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 )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-54.87	-13	-41.87	-61.13	1.84	8.10	H
	5640	-50.60	-13	-37.60	-58.91	2.19	10.50	H
	7524	-46.05	-13	-33.05	-54.97	2.58	11.50	H
	3759	-54.92	-13	-41.92	-61.18	1.84	8.10	V
	5640	-50.71	-13	-37.71	-59.02	2.19	10.50	V
	7524	-45.43	-13	-32.43	-54.35	2.58	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 )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-65.56	-13	-52.56	-68.80	1.11	6.50	H
	2510	-62.71	-13	-49.71	-65.33	1.43	6.20	H
	3348	-60.88	-13	-47.88	-65.32	1.71	8.30	H
	1672	-65.56	-13	-52.56	-68.80	1.11	6.50	V
	2510	-62.70	-13	-49.70	-65.32	1.43	6.20	V
	3348	-60.97	-13	-47.97	-65.41	1.71	8.30	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	-54.95	-13	-41.95	-61.21	1.84	8.10	H
	5640	-50.72	-13	-37.72	-59.03	2.19	10.50	H
	7524	-45.71	-13	-32.71	-54.63	2.58	11.50	H
	3759	-54.85	-13	-41.85	-61.11	1.84	8.10	V
	5640	-50.91	-13	-37.91	-59.22	2.19	10.50	V
	7524	-45.67	-13	-32.67	-54.59	2.58	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	-58.54	-13	-45.54	-65.23	1.75	8.44	3465	H
	5196	-51.47	-13	-38.47	-59.89	1.94	10.36	5196	H
	6936	-47.11	-13	-34.11	-56.35	2.47	11.71	6936	H
	3465	-58.59	-13	-45.59	-65.28	1.75	8.44	3465	V
	5196	-51.74	-13	-38.74	-60.16	1.94	10.36	5196	V
	6936	-47.46	-13	-34.46	-56.70	2.47	11.71	6936	V

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