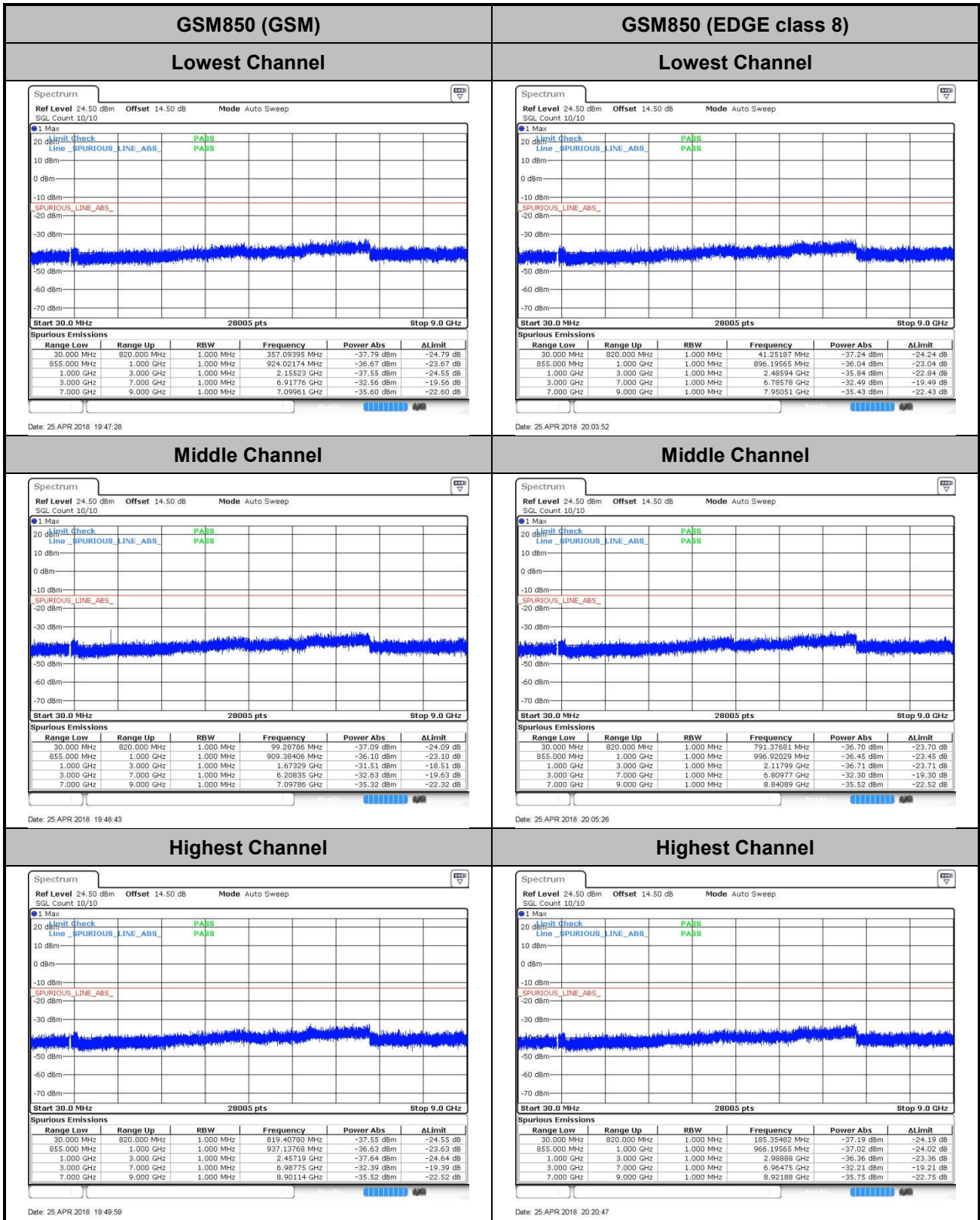




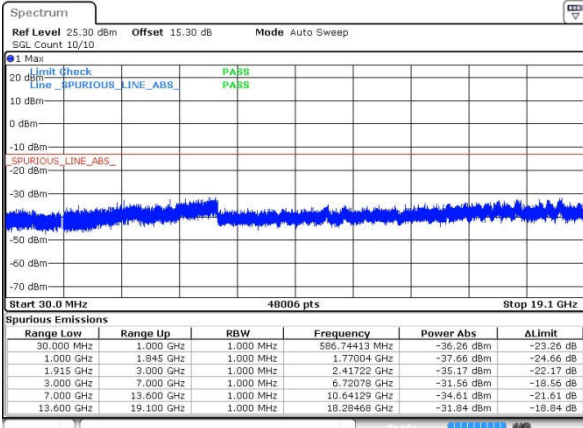
# Conducted Spurious Emission





GSM1900 (GSM)

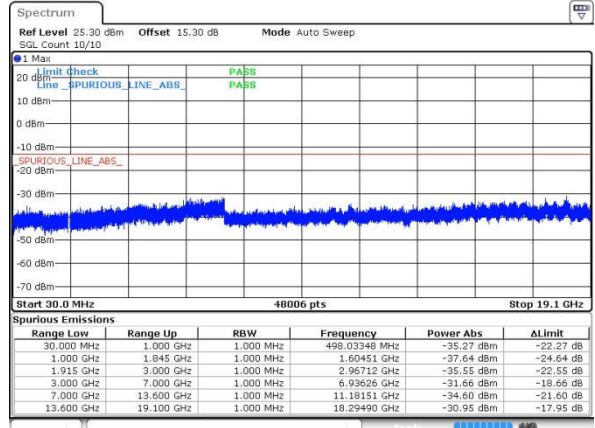
Lowest Channel



Date: 25 APR 2018 20:39:14

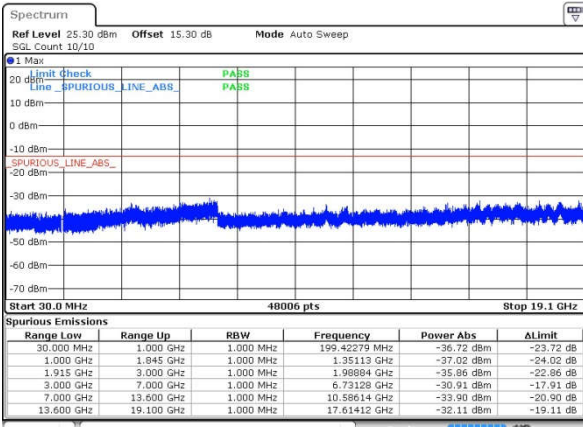
GSM1900 (EDGE class 8)

Lowest Channel



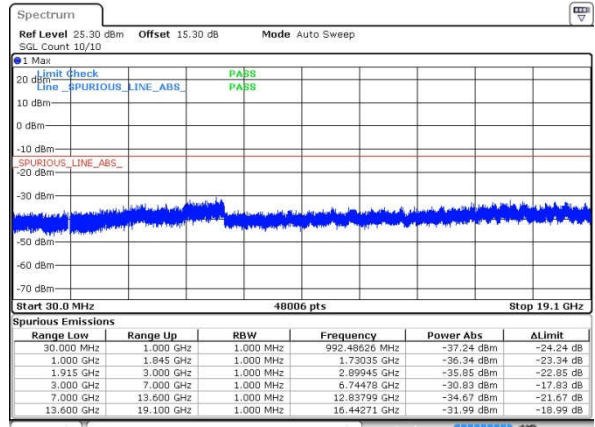
Date: 25 APR 2018 21:05:26

Middle Channel



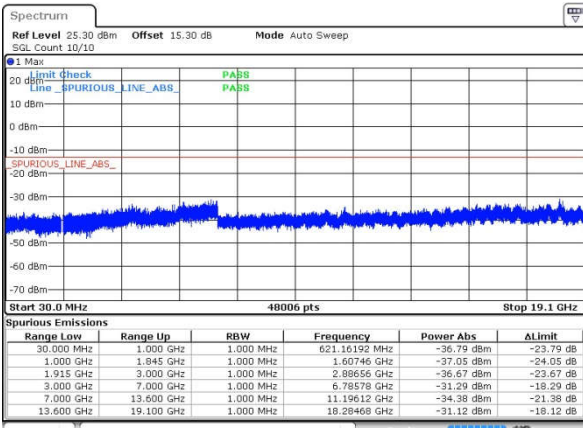
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Middle Channel



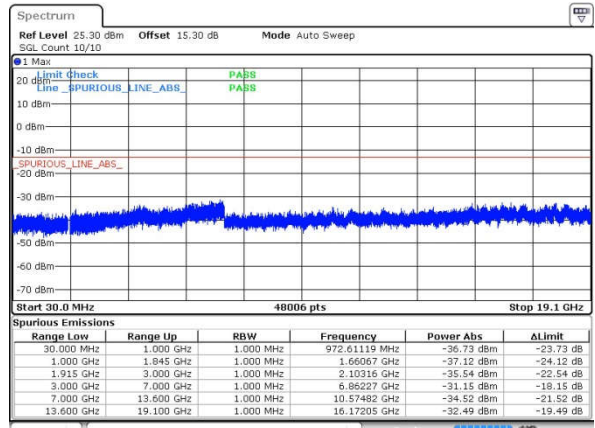
Date: 25 APR 2018 21:06:48

Highest Channel



Date: 25 APR 2018 20:41:45

Highest Channel

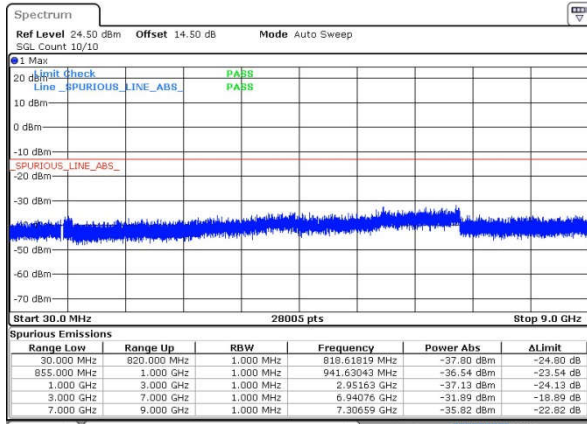


Date: 25 APR 2018 21:08:16



WCDMA Band V (RMC 12.2Kbps)

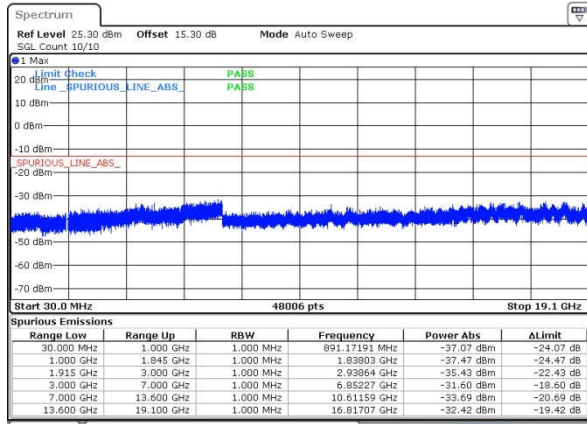
Lowest Channel



Date: 25 APR 2018 21:26:17

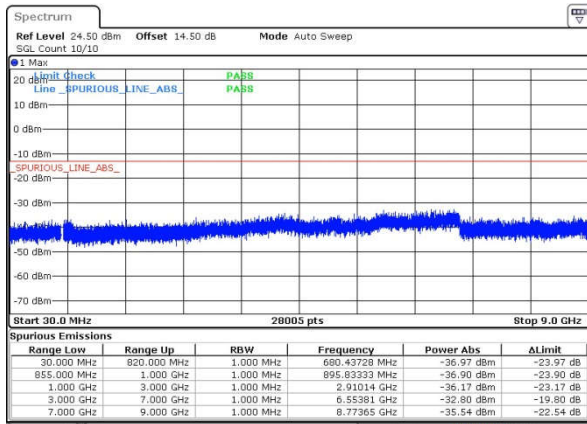
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



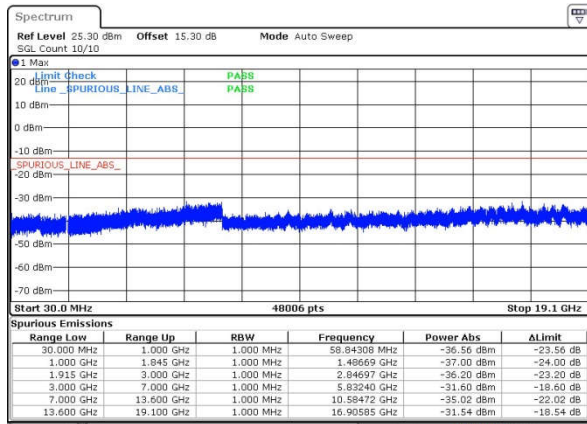
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Middle Channel



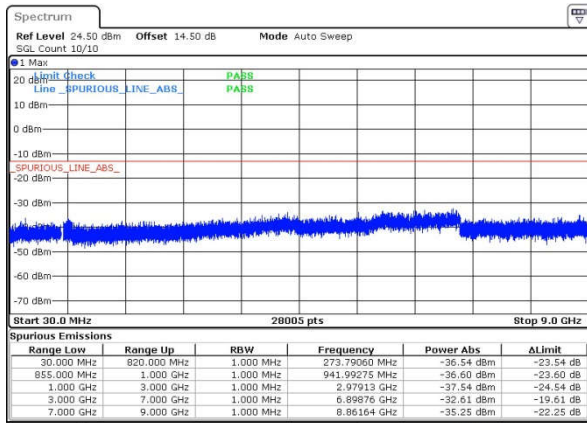
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Middle Channel



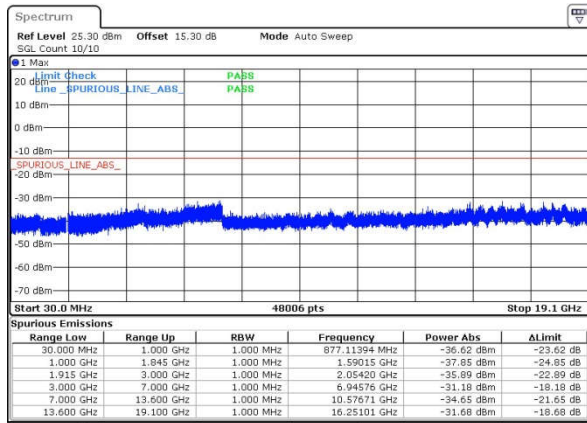
Date: 25 APR 2018 21:46:55

Highest Channel



Date: 25 APR 2018 21:28:48

Highest Channel



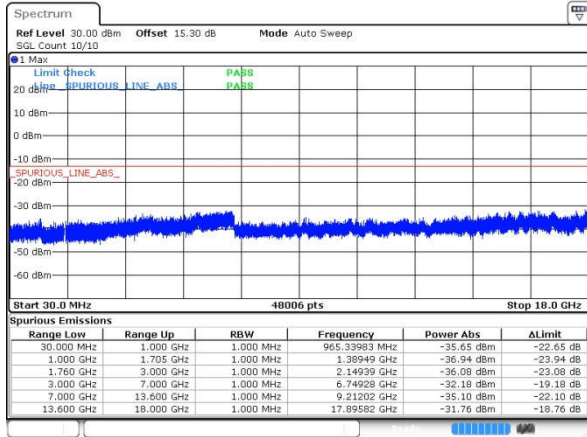
Date: 25 APR 2018 21:48:11





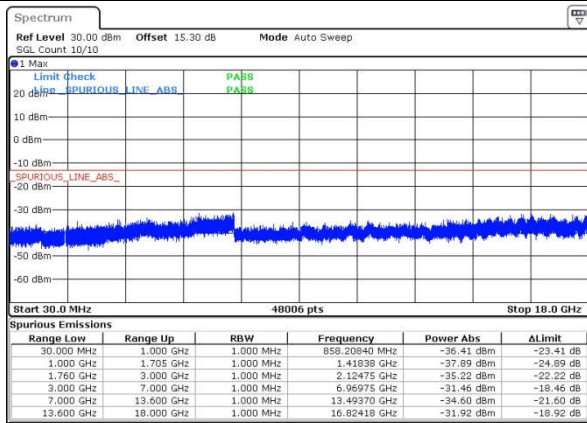
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



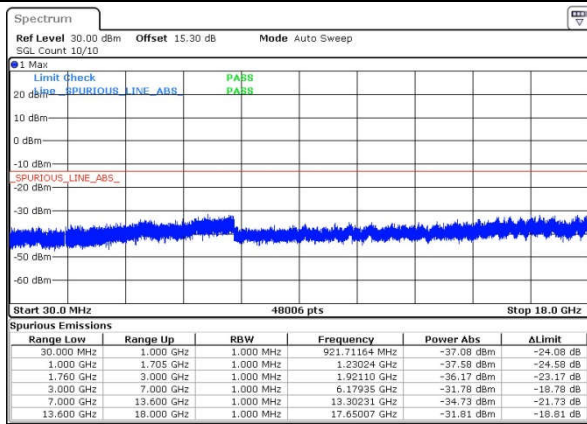
Date: 25 APR 2018 22:03:14

Middle Channel



Date: 25 APR 2018 22:04:30

Highest Channel



Date: 25 APR 2018 22:05:46



**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	0.0143	0.0155	PASS
40	Normal Voltage	0.0526	0.0072	
30	Normal Voltage	0.0120	0.0323	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0514	0.0096	
0	Normal Voltage	0.0191	0.0299	
-10	Normal Voltage	0.0084	0.0227	
-20	Normal Voltage	0.0155	0.0048	
-30	Normal Voltage	0.0108	0.0239	
20	Maximum Voltage	0.0466	0.0275	
20	Normal Voltage	0.0155	0.0108	
20	Battery End Point	0.0383	0.0120	

**Note:** Normal Voltage = 3.82V. : Battery End Point (BEP) =3.5V. : 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	0.0245	0.0005	PASS
40	Normal Voltage	0.0186	0.0011	
30	Normal Voltage	0.0176	0.0043	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0032	0.0255	
0	Normal Voltage	0.0234	0.0191	
-10	Normal Voltage	0.0027	0.0005	
-20	Normal Voltage	0.0043	0.0011	
-30	Normal Voltage	0.0191	0.0218	
20	Maximum Voltage	0.0239	0.0165	
20	Normal Voltage	0.0165	0.0021	
20	Battery End Point	0.0053	0.0016	

**Note:**

1. Normal Voltage = 3.82V. ; Battery End Point (BEP) =3.5V. ; 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	0.0060	PASS
40	Normal Voltage	0.0407	
30	Normal Voltage	0.0347	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0359	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0203	
-30	Normal Voltage	0.0323	
20	Maximum Voltage	0.0478	
20	Normal Voltage	0.0191	
20	Battery End Point	0.0048	

Note: Normal Voltage = 3.82V. : Battery End Point (BEP) =3.5V. : Maximum Voltage =4.4V





Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0202	PASS
40	Normal Voltage	0.0096	
30	Normal Voltage	0.0223	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0101	
0	Normal Voltage	0.0207	
-10	Normal Voltage	0.0117	
-20	Normal Voltage	0.0011	
-30	Normal Voltage	0.0101	
20	Maximum Voltage	0.0202	
20	Normal Voltage	0.0021	
20	Battery End Point	0.0016	

**Note:**

1. Normal Voltage = 3.82V. ; Battery End Point (BEP) =3.5V. ; 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	0.0179	PASS
40	Normal Voltage	0.0242	
30	Normal Voltage	0.0046	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0265	
0	Normal Voltage	0.0144	
-10	Normal Voltage	0.0075	
-20	Normal Voltage	0.0035	
-30	Normal Voltage	0.0133	
20	Maximum Voltage	0.0110	
20	Normal Voltage	0.0196	
20	Battery End Point	0.0035	

**Note:**

1. Normal Voltage = 3.82V. ; Battery End Point (BEP) =3.5V. ; 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 Conducted Test

### Radiated Spurious Emission

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)
Lowest	1648.4	-65.82	-13	-52.82	-71.38	-70.23	2.82	9.38	H
	2472.6	-68.74	-13	-55.74	-79.16	-73.49	3.68	10.58	H
	3296.8	-65.51	-13	-52.51	-80.27	-71.58	4.35	12.57	H
	1648.4	-70.97	-13	-57.97	-75.68	-75.38	2.82	9.38	V
	2472.6	-69.74	-13	-56.74	-79.57	-74.49	3.68	10.58	V
	3296.8	-66.75	-13	-53.75	-80.32	-72.82	4.35	12.57	V
Middle	1672.8	-60.34	-13	-47.34	-65.90	-64.75	2.84	9.40	H
	2509.2	-53.73	-13	-40.73	-64.15	-58.48	3.7	10.60	H
	3345.6	-66.63	-13	-53.63	-81.39	-72.71	4.37	12.60	H
	1672.8	-68.50	-13	-55.50	-73.21	-72.91	2.84	9.40	V
	2509.2	-54.39	-13	-41.39	-64.22	-59.14	3.70	10.60	V
	3345.6	-67.73	-13	-54.73	-81.30	-73.81	4.37	12.60	V
Highest	1697.6	-62.05	-13	-49.05	-67.61	-66.46	2.86	9.42	H
	2546.4	-59.75	-13	-46.75	-70.17	-64.49	3.74	10.63	H
	3395.2	-66.47	-13	-53.47	-81.23	-72.55	4.45	12.68	H
	1697.6	-67.12	-13	-54.12	-71.83	-71.53	2.86	9.42	V
	2546.4	-67.29	-13	-54.29	-77.12	-72.03	3.74	10.63	V
	3395.2	-67.73	-13	-54.73	-81.30	-73.81	4.45	12.68	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)
Lowest	1648.4	-69.08	-13	-56.08	-74.64	-73.49	2.82	9.38	H
	2472.6	-68.27	-13	-55.27	-78.69	-73.02	3.68	10.58	H
	3296.8	-65.79	-13	-52.79	-80.55	-71.86	4.35	12.57	H
	1648.4	-71.96	-13	-58.96	-76.67	-76.37	2.82	9.38	V
	2472.6	-68.56	-13	-55.56	-78.39	-73.31	3.68	10.58	V
	3296.8	-66.70	-13	-53.70	-80.27	-72.77	4.35	12.57	V
Middle	1672.8	-70.86	-13	-57.86	-76.42	-75.27	2.84	9.40	H
	2509.2	-65.58	-13	-52.58	-76.00	-70.33	3.7	10.60	H
	3345.6	-66.72	-13	-53.72	-81.48	-72.80	4.37	12.60	H
	1672.8	-72.76	-13	-59.76	-77.47	-77.17	2.84	9.40	V
	2509.2	-70.04	-13	-57.04	-79.87	-74.79	3.70	10.60	V
	3345.6	-67.84	-13	-54.84	-81.41	-73.92	4.37	12.60	V
Highest	1697.6	-62.32	-13	-49.32	-67.88	-66.73	2.86	9.42	H
	2546.4	-60.82	-13	-47.82	-71.24	-65.56	3.74	10.63	H
	3395.2	-66.67	-13	-53.67	-81.43	-72.75	4.45	12.68	H
	1697.6	-69.39	-13	-56.39	-74.10	-73.80	2.86	9.42	V
	2546.4	-65.13	-13	-52.13	-74.96	-69.87	3.74	10.63	V
	3395.2	-67.81	-13	-54.81	-81.38	-73.89	4.45	12.68	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)
Lowest	3700.4	-57.34	-13	-44.34	-76.95	-65.08	4.82	12.56	H
	5550.6	-49.91	-13	-36.91	-73.36	-57.44	5.55	13.08	H
	7400.8	-58.31	-13	-45.31	-81.83	-63.07	6.52	11.28	H
	3700.4	-58.79	-13	-45.79	-79.18	-66.53	4.82	12.56	V
	5550.6	-53.51	-13	-40.51	-77.56	-61.04	5.55	13.08	V
	7400.8	-58.64	-13	-45.64	-82.18	-63.40	6.52	11.28	V
Middle	3760	-52.52	-13	-39.52	-72.13	-60.27	4.85	12.60	H
	5640	-50.64	-13	-37.64	-74.09	-58.16	5.58	13.10	H
	7520	-58.62	-13	-45.62	-82.14	-63.36	6.56	11.30	H
	3760	-51.42	-13	-38.42	-71.81	-59.17	4.85	12.60	V
	5640	-53.97	-13	-40.97	-78.02	-61.49	5.58	13.10	V
	7520	-58.99	-13	-45.99	-82.53	-63.73	6.56	11.30	V
Highest	3819.6	-57.66	-13	-44.66	-77.27	-65.40	4.88	12.62	H
	5729.4	-53.28	-13	-40.28	-76.73	-60.80	5.60	13.12	H
	7639.2	-58.15	-13	-45.15	-81.67	-62.89	6.58	11.32	H
	3819.6	-53.95	-13	-40.95	-74.34	-61.69	4.88	12.62	V
	5729.4	-54.69	-13	-41.69	-78.74	-62.21	5.60	13.12	V
	7639.2	-58.12	-13	-45.12	-81.66	-62.86	6.58	11.32	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)
Lowest	3700.4	-47.55	-13	-34.55	-67.16	-55.29	4.82	12.56	H
	5550.6	-45.87	-13	-32.87	-69.32	-53.40	5.55	13.08	H
	7400.8	-58.33	-13	-45.33	-81.85	-63.09	6.52	11.28	H
	3700.4	-50.05	-13	-37.05	-70.44	-57.79	4.82	12.56	V
	5550.6	-44.90	-13	-31.90	-68.95	-52.43	5.55	13.08	V
	7400.8	-58.22	-13	-45.22	-81.76	-62.98	6.52	11.28	V
Middle	3760	-50.90	-13	-37.90	-70.51	-58.65	4.85	12.60	H
	5640	-39.04	-13	-26.04	-62.27	-46.56	5.58	13.10	H
	7520	-58.89	-13	-45.89	-82.41	-63.63	6.56	11.30	H
	3760	-52.65	-13	-39.65	-73.04	-60.40	4.85	12.60	V
	5640	-43.12	-13	-30.12	-67.17	-50.64	5.58	13.10	V
	7520	-59.08	-13	-46.08	-82.62	-63.82	6.56	11.30	V
Highest	3819.6	-48.13	-13	-35.13	-67.74	-55.87	4.88	12.62	H
	5729.4	-47.98	-13	-34.98	-71.43	-55.50	5.60	13.12	H
	7639.2	-58.01	-13	-45.01	-81.53	-62.75	6.58	11.32	H
	3819.6	-47.78	-13	-34.78	-68.17	-55.52	4.88	12.62	V
	5729.4	-45.72	-13	-32.72	-69.77	-53.24	5.60	13.12	V
	7639.2	-57.85	-13	-44.85	-81.39	-62.59	6.58	11.32	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)
Lowest	1652.8	-69.47	-13	-56.47	-75.03	-73.88	2.82	9.38	H
	2479.2	-67.19	-13	-54.19	-77.61	-71.94	3.68	10.58	H
	3305.6	-65.77	-13	-52.77	-80.53	-71.84	4.35	12.57	H
	1652.8	-72.83	-13	-59.83	-77.54	-77.24	2.82	9.38	V
	2479.2	-69.48	-13	-56.48	-79.31	-74.23	3.68	10.58	V
	3305.6	-66.94	-13	-53.94	-80.51	-73.01	4.35	12.57	V
Middle	1672.8	-68.31	-13	-55.31	-73.87	-72.72	2.84	9.40	H
	2509.2	-67.92	-13	-54.92	-78.34	-72.67	3.7	10.60	H
	3345.6	-66.71	-13	-53.71	-81.47	-72.79	4.37	12.60	H
	1672.8	-70.32	-13	-57.32	-75.03	-74.73	2.84	9.40	V
	2509.2	-69.79	-13	-56.79	-79.62	-74.54	3.70	10.60	V
	3345.6	-67.83	-13	-54.83	-81.40	-73.91	4.37	12.60	V
Highest	1693.2	-65.67	-13	-52.67	-71.23	-70.08	2.86	9.42	H
	2539.8	-68.68	-13	-55.68	-79.10	-73.42	3.74	10.63	H
	3386.4	-66.57	-13	-53.57	-81.33	-72.65	4.45	12.68	H
	1693.2	-70.04	-13	-57.04	-74.75	-74.45	2.86	9.42	V
	2539.8	-70.29	-13	-57.29	-80.12	-75.03	3.74	10.63	V
	3386.4	-67.91	-13	-54.91	-81.48	-73.99	4.45	12.68	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)
Lowest	3704.8	-57.13	-13	-44.13	-76.74	-64.87	4.82	12.56	H
	5557.2	-55.26	-13	-42.26	-78.71	-62.79	5.55	13.08	H
	7409.6	-55.59	-13	-42.59	-79.11	-60.35	6.52	11.28	H
	3704.8	-58.32	-13	-45.32	-78.71	-66.06	4.82	12.56	V
	5557.2	-57.47	-13	-44.47	-81.52	-65.00	5.55	13.08	V
	7409.6	-54.96	-13	-41.96	-78.5	-59.72	6.52	11.28	V
Middle	3760	-50.60	-13	-37.60	-70.21	-58.35	4.85	12.60	H
	5640	-52.13	-13	-39.13	-75.58	-59.65	5.58	13.10	H
	7520	-54.12	-13	-41.12	-77.64	-58.86	6.56	11.30	H
	3760	-54.42	-13	-41.42	-74.81	-62.17	4.85	12.60	V
	5640	-57.07	-13	-44.07	-81.12	-64.59	5.58	13.10	V
	7520	-52.97	-13	-39.97	-76.51	-57.71	6.56	11.30	V
Highest	3815.2	-46.04	-13	-33.04	-65.65	-53.78	4.88	12.62	H
	5722.8	-56.45	-13	-43.45	-79.90	-63.97	5.60	13.12	H
	7630.4	-52.28	-13	-39.28	-75.80	-57.02	6.58	11.32	H
	3815.2	-50.30	-13	-37.30	-70.69	-58.04	4.88	12.62	V
	5722.8	-57.85	-13	-44.85	-81.9	-65.37	5.60	13.12	V
	7630.4	-51.66	-13	-38.66	-75.2	-56.40	6.58	11.32	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)
Lowest	3424.8	-56.40	-13	-43.40	-70.10	-64.40	4.58	12.58	H
	5137.2	-56.88	-13	-43.88	-74.81	-63.34	6.21	12.67	H
	6849.6	-59.30	-13	-46.30	-78.92	-64.09	8.16	12.95	H
	8568	-47.75	-13	-34.75	-70.18	-51.33	7.72	11.30	H
	3424.8	-61.43	-13	-48.43	-72.84	-69.43	4.58	12.58	V
	5137.2	-61.44	-13	-48.44	-75.05	-67.90	6.21	12.67	V
	6849.6	-57.55	-13	-44.55	-76.67	-62.34	8.16	12.95	V
	8568	-43.47	-13	-30.47	-63.77	-47.05	7.72	11.3	V
Middle	3465.2	-54.91	-13	-41.91	-68.61	-62.88	4.63	12.60	H
	5197.8	-57.43	-13	-44.43	-75.36	-63.88	6.25	12.70	H
	6930.4	-59.40	-13	-46.40	-79.02	-64.17	8.23	13.00	H
	8663	-47.89	-13	-34.89	-70.32	-51.99	7.8	11.90	H
	3465.2	-60.27	-13	-47.27	-71.68	-68.24	4.63	12.6	V
	5197.8	-62.05	-13	-49.05	-75.66	-68.50	6.25	12.7	V
	6930.4	-57.80	-13	-44.80	-76.92	-62.57	8.23	13	V
	8663	-43.41	-13	-30.41	-63.71	-47.51	7.8	11.9	V
Highest	3505.2	-51.55	-13	-38.55	-65.25	-59.55	4.66	12.66	H
	5257.8	-49.62	-13	-36.62	-67.55	-56.06	6.31	12.75	H
	7010.4	-58.84	-13	-45.84	-78.46	-63.61	8.35	13.12	H
	8760	-45.04	-13	-32.04	-67.47	-49.05	7.97	11.98	H
	3505.2	-59.83	-13	-46.83	-71.24	-67.83	4.66	12.66	V
	5257.8	-59.52	-13	-46.52	-73.13	-65.96	6.31	12.75	V
	7010.4	-57.13	-13	-44.13	-76.25	-61.90	8.35	13.12	V
	8760	-38.62	-13	-25.62	-58.92	-42.63	7.97	11.98	V

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