



## WCDMA Band IV (RMC 12.2Kbps)

## Lowest Band Edge

## Highest Band Edge



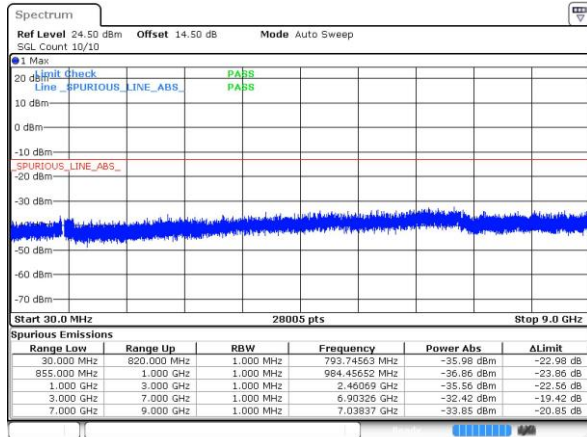


## **Conducted Spurious Emission**



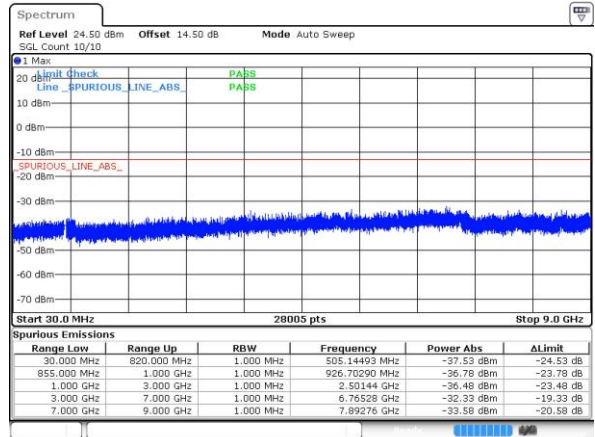
## GSM850 (GSM)

## Lowest Channel

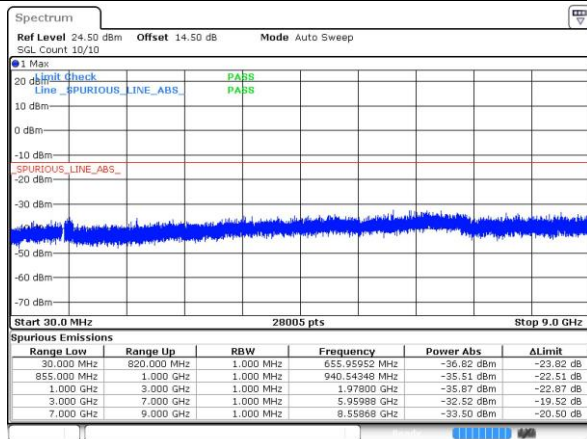


## GSM850 (EDGE class 8)

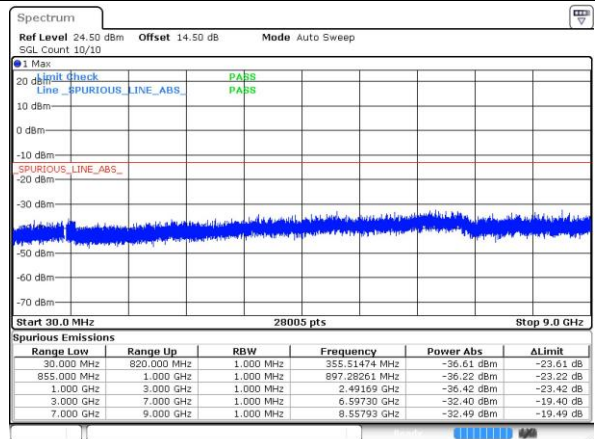
## Lowest Channel



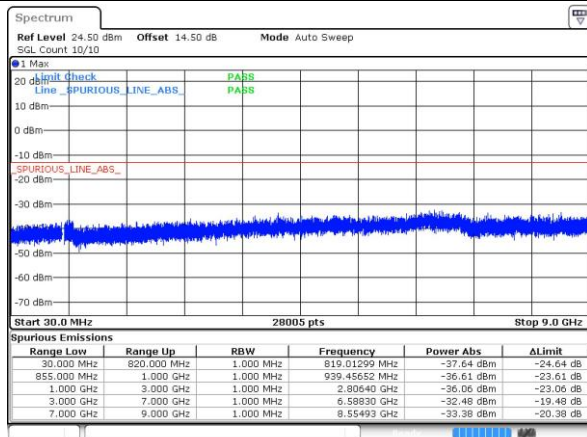
## Middle Channel



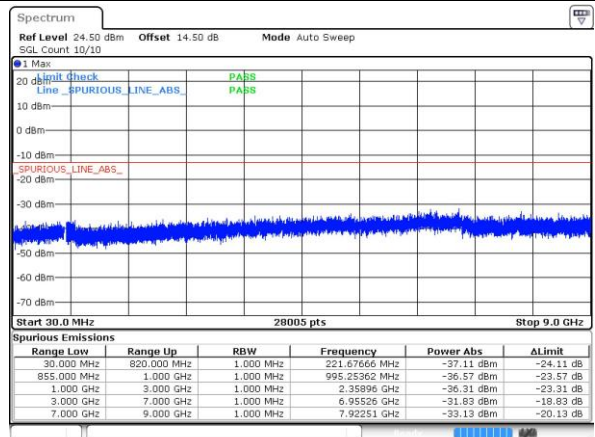
## Middle Channel



## Highest Channel



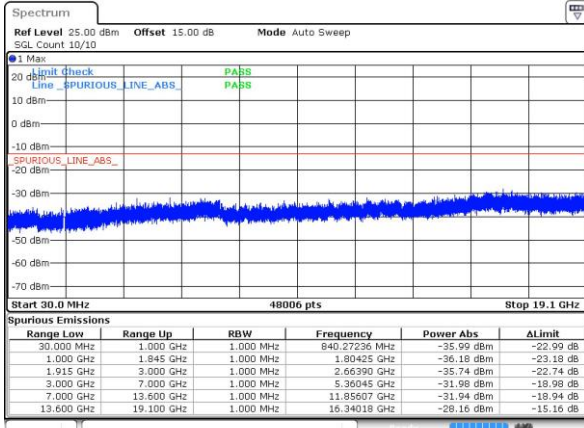
## Highest Channel





## GSM1900 (GSM)

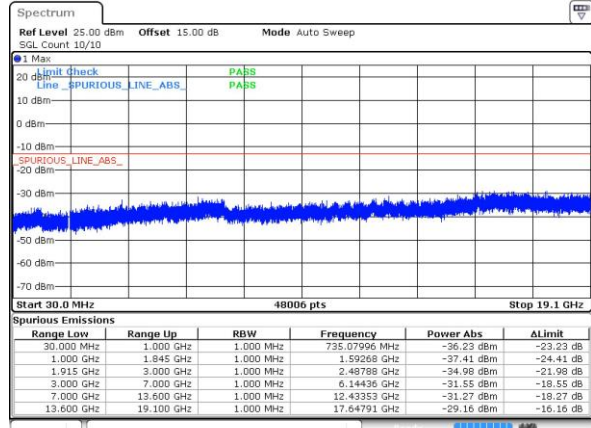
## Lowest Channel



Date: 9 MAY 2016 23:33:52

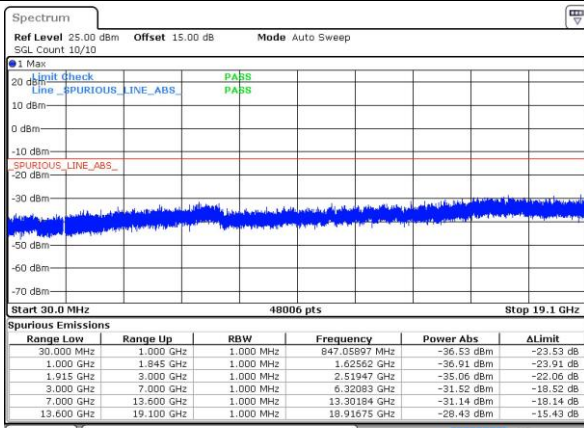
## GSM1900 (EDGE class 8)

## Lowest Channel



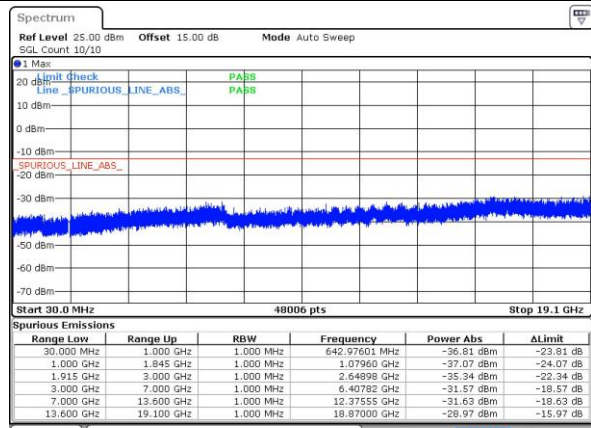
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## Middle Channel



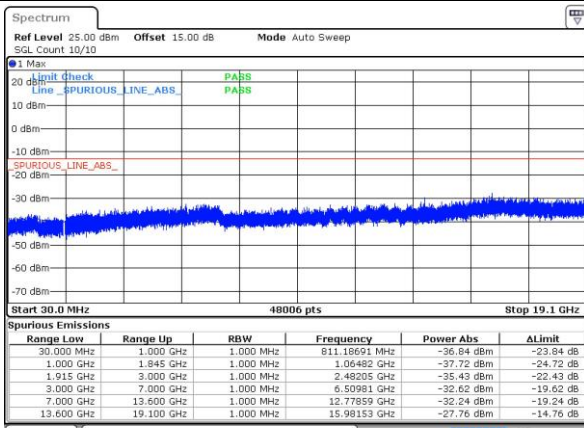
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## Middle Channel



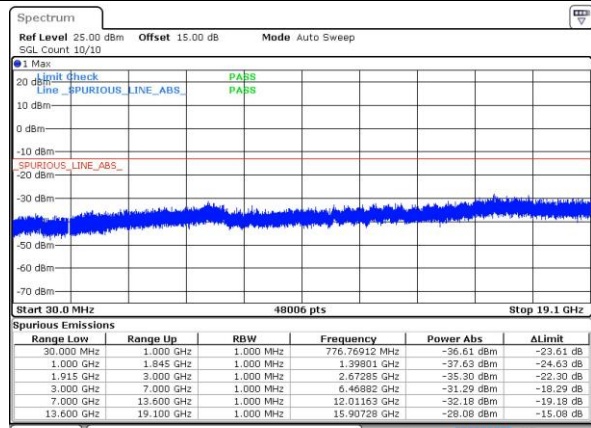
Date: 9 MAY 2016 23:29:50

## Highest Channel



Date: 9 MAY 2016 23:36:24

## Highest Channel



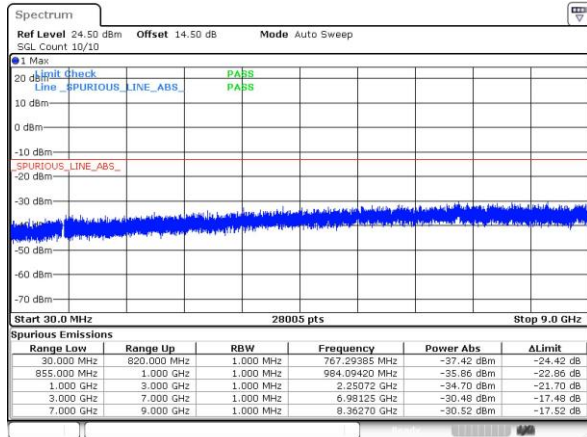
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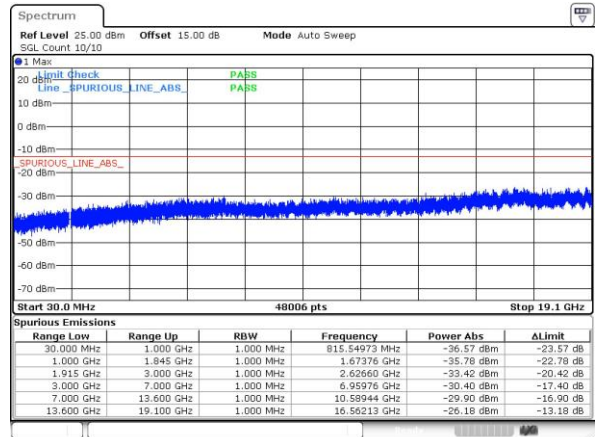
## WCDMA Band V (RMC 12.2Kbps)

## Lowest Channel

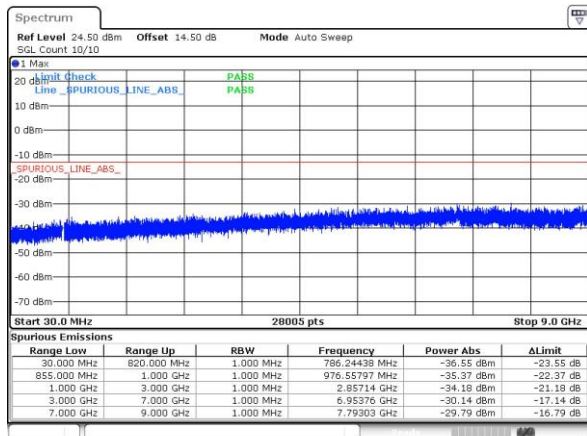


## WCDMA Band II (RMC 12.2Kbps)

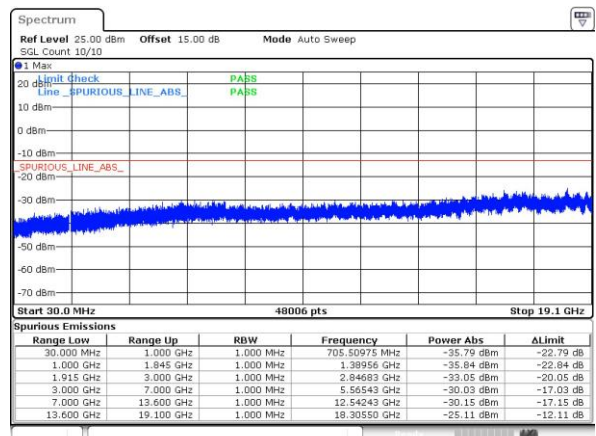
## Lowest Channel



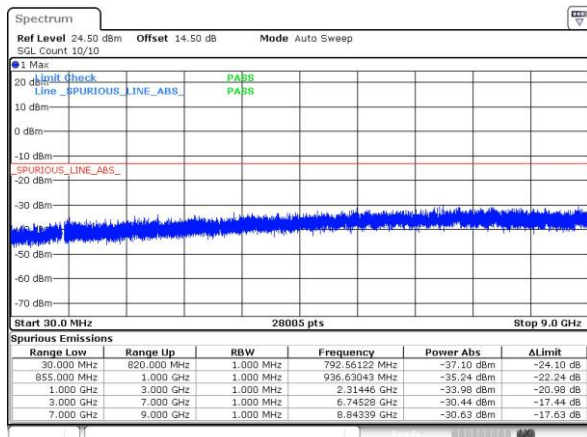
## Middle Channel



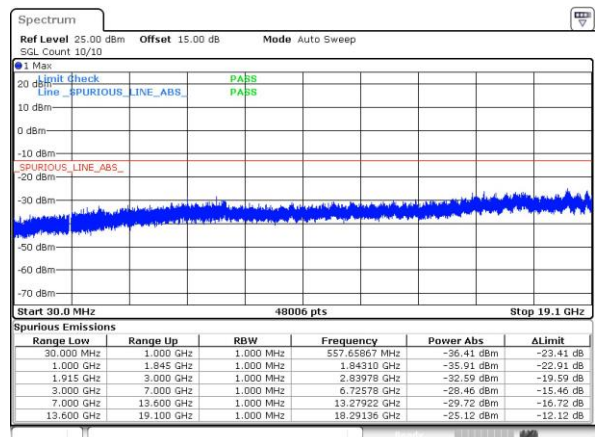
## Middle Channel



## Highest Channel



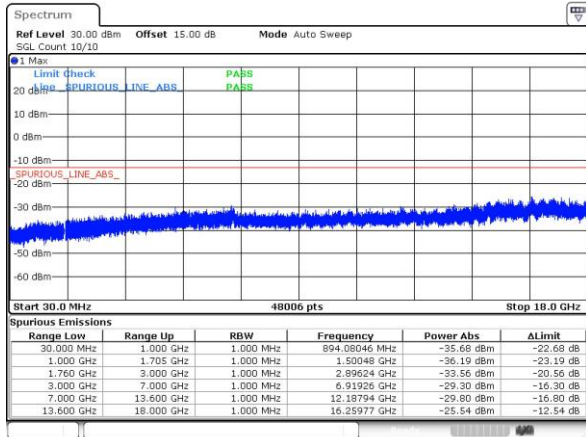
## Highest Channel



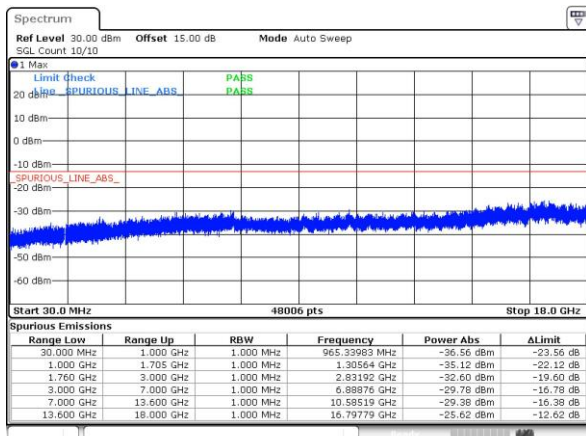


WCDMA Band IV (RMC 12.2Kbps)

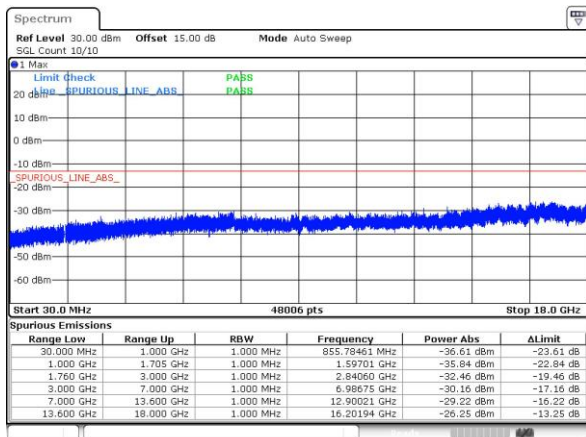
Lowest Channel



Middle Channel



Highest Channel



**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	0.0347	0.0072	PASS
40	Normal Voltage	0.0311	0.0048	
30	Normal Voltage	0.0263	0.0036	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0251	0.0263	
0	Normal Voltage	0.0036	0.0024	
-10	Normal Voltage	0.0072	0.0323	
-20	Normal Voltage	0.0335	0.0048	
-30	Normal Voltage	0.0359	0.0084	
20	Maximum Voltage	0.0275	0.0000	
20	Normal Voltage	0.0239	0.0024	
20	Battery End Point	0.0263	0.0000	

**Note:** Normal Voltage = 3.7V. : Battery End Point (BEP) = 3.5 V. : Maximum Voltage =4.2 V



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0021	0.0154	PASS
40	Normal Voltage	0.0005	0.0165	
30	Normal Voltage	0.0011	0.0149	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0117	0.0005	
0	Normal Voltage	0.0133	0.0133	
-10	Normal Voltage	0.0021	0.0144	
-20	Normal Voltage	0.0032	0.0170	
-30	Normal Voltage	0.0016	0.0027	
20	Maximum Voltage	0.0000	0.0138	
20	Normal Voltage	0.0011	0.0128	
20	Battery End Point	0.0016	0.0144	

**Note:**

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 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	0.0000	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0036	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0143	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0036	
20	Battery End Point	0.0012	

**Note:** Normal Voltage = 3.7V. : Battery End Point (BEP) = 3.5 V. : Maximum Voltage =4.2 V



Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0043	
0	Normal Voltage	0.0053	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0016	

**Note:**

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 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	0.0029	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0063	
0	Normal Voltage	0.0063	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0035	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

**Note:**

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 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

### ERP/EIRP

Channel	Mode	Horizontal		Vertical	
		ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	GSM850 GSM	25.10	0.3236	14.77	0.0300
Middle		24.77	0.2996	14.62	0.0290
Highest		24.65	0.2918	15.03	0.0319
Lowest	GSM850 EDGE class 8	19.10	0.0813	8.85	0.0077
Middle		18.83	0.0764	8.79	0.0076
Highest		18.49	0.0706	8.96	0.0079
Lowest	WCDMA Band V RMC 12.2Kbps	14.81	0.0303	3.63	0.0023
Middle		14.69	0.0294	3.70	0.0023
Highest		14.78	0.0301	4.24	0.0027
Limit	ERP < 7W	Result		PASS	



Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900 GSM	30.58	1.1429	30.76	1.1912
Middle		30.94	1.2425	30.96	1.2487
Highest		31.03	1.2677	30.88	1.2246
Lowest	GSM1900 EDGE class 8	26.79	0.4775	26.85	0.4842
Middle		26.84	0.4831	26.86	0.4853
Highest		26.66	0.4634	26.49	0.4457
Lowest	WCDMA Band II RMC 12.2Kbps	23.09	0.2037	23.23	0.2103
Middle		23.46	0.2216	23.44	0.2208
Highest		23.34	0.2160	22.97	0.1981
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV RMC 12.2Kbps	21.74	0.1491	21.85	0.1532
Middle		22.33	0.1709	22.41	0.1742
Highest		22.65	0.1842	22.83	0.1920
Limit	EIRP < 1W	Result		PASS	



## 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	-59.07	-13	-46.07	-61.90	-65.76	0.56	9.40	H
	2472.6	-58.94	-13	-45.94	-64.68	-66.65	0.74	10.60	H
	3296.8	-57.60	-13	-44.60	-66.41	-67.20	0.85	12.60	H
	1648.4	-56.58	-13	-43.58	-58.24	-63.27	0.56	9.40	V
	2472.6	-58.39	-13	-45.39	-63.97	-66.10	0.74	10.60	V
	3296.8	-58.06	-13	-45.06	-66.20	-67.66	0.85	12.60	V
Middle	1672	-60.03	-13	-47.03	-62.86	-66.72	0.56	9.40	H
	2510	-58.05	-13	-45.05	-63.79	-65.76	0.74	10.60	H
	3346	-58.35	-13	-45.35	-67.16	-67.95	0.85	12.60	H
	1672	-61.46	-13	-48.46	-63.12	-68.15	0.56	9.40	V
	2510	-55.94	-13	-42.94	-61.52	-63.65	0.74	10.60	V
	3346	-58.78	-13	-45.78	-66.92	-68.38	0.85	12.60	V
Highest	1697.6	-59.78	-13	-46.78	-62.61	-66.47	0.56	9.40	H
	2546.4	-56.75	-13	-43.75	-62.49	-64.46	0.74	10.60	H
	3395.2	-58.01	-13	-45.01	-66.82	-67.61	0.85	12.60	H
	1697.6	-59.71	-13	-46.71	-61.37	-66.40	0.56	9.40	V
	2546.4	-55.10	-13	-42.10	-60.68	-62.81	0.74	10.60	V
	3395.2	-58.11	-13	-45.11	-66.25	-67.71	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)
Lowest	1648.4	-60.42	-13	-47.42	-63.25	-67.11	0.56	9.40	H
	2472.6	-59.27	-13	-46.27	-65.01	-66.98	0.74	10.60	H
	3296.8	-57.85	-13	-44.85	-66.66	-67.45	0.85	12.60	H
	1648.4	-59.77	-13	-46.77	-61.43	-66.46	0.56	9.40	V
	2472.6	-59.07	-13	-46.07	-64.65	-66.78	0.74	10.60	V
	3296.8	-59.08	-13	-46.08	-67.22	-68.68	0.85	12.60	V
Middle	1672	-60.68	-13	-47.68	-63.51	-67.37	0.56	9.40	H
	2510	-57.86	-13	-44.86	-63.60	-65.57	0.74	10.60	H
	3346	-58.41	-13	-45.41	-67.22	-68.01	0.85	12.60	H
	1672	-62.46	-13	-49.46	-64.12	-69.15	0.56	9.40	V
	2510	-55.42	-13	-42.42	-61.00	-63.13	0.74	10.60	V
	3346	-58.64	-13	-45.64	-66.78	-68.24	0.85	12.60	V
Highest	1697.6	-59.52	-13	-46.52	-62.35	-66.21	0.56	9.40	H
	2546.4	-58.29	-13	-45.29	-64.03	-66.00	0.74	10.60	H
	3395.2	-58.19	-13	-45.19	-67.00	-67.79	0.85	12.60	H
	1697.6	-59.60	-13	-46.60	-61.26	-66.29	0.56	9.40	V
	2546.4	-53.64	-13	-40.64	-59.22	-61.35	0.74	10.60	V
	3395.2	-59.13	-13	-46.13	-67.27	-68.73	0.85	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)
Lowest	3700.4	-42.75	-13	-29.75	-56.30	-48.79	6.56	12.60	H
	5550.6	-48.39	-13	-35.39	-64.33	-53.49	8	13.10	H
	7400.8	-49.36	-13	-36.36	-68.10	-51.09	9.57	11.30	H
	3700.4	-42.68	-13	-29.68	-56.03	-48.72	6.56	12.60	V
	5550.6	-46.01	-13	-33.01	-63.36	-51.11	8	13.10	V
	7400.8	-50.30	-13	-37.30	-68.7	-52.03	9.57	11.30	V
Middle	3760	-41.05	-13	-28.05	-54.71	-47.09	6.56	12.60	H
	5640	-47.51	-13	-34.51	-63.45	-52.61	8	13.10	H
	7520	-48.46	-13	-35.46	-67.20	-50.19	9.57	11.30	H
	3760	-44.10	-13	-31.10	-57.45	-50.14	6.56	12.60	V
	5640	-45.77	-13	-32.77	-63.12	-50.87	8	13.10	V
	7520	-49.51	-13	-36.51	-67.91	-51.24	9.57	11.30	V
Highest	3819.6	-43.16	-13	-30.16	-56.71	-49.20	6.56	12.60	H
	5729.4	-46.40	-13	-33.40	-62.34	-51.50	8	13.10	H
	7639.2	-49.02	-13	-36.02	-67.76	-50.75	9.57	11.30	H
	3819.6	-44.30	-13	-31.30	-57.65	-50.34	6.56	12.60	V
	5729.4	-46.00	-13	-33.00	-63.35	-51.10	8	13.10	V
	7639.2	-48.87	-13	-35.87	-67.27	-50.60	9.57	11.30	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	-43.17	-13	-30.17	-56.72	-49.21	6.56	12.60	H
	5550.6	-46.18	-13	-33.18	-62.12	-51.28	8	13.10	H
	7400.8	-49.53	-13	-36.53	-68.27	-51.26	9.57	11.30	H
	3700.4	-34.26	-13	-21.26	-49.82	-40.30	6.56	12.60	V
	5550.6	-44.96	-13	-31.96	-62.31	-50.06	8	13.10	V
	7400.8	-49.44	-13	-36.44	-67.84	-51.17	9.57	11.30	V
Middle	3760	-39.02	-13	-26.02	-53.25	-45.06	6.56	12.60	H
	5640	-47.56	-13	-34.56	-63.50	-52.66	8	13.10	H
	7520	-49.27	-13	-36.27	-68.01	-51.00	9.57	11.30	H
	3760	-39.86	-13	-26.86	-54.35	-45.90	6.56	12.60	V
	5640	-44.85	-13	-31.85	-62.2	-49.95	8	13.10	V
	7520	-49.82	-13	-36.82	-68.22	-51.55	9.57	11.30	V
Highest	3819.6	-46.59	-13	-33.59	-60.14	-52.63	6.56	12.60	H
	5729.4	-47.67	-13	-34.67	-63.61	-52.77	8	13.10	H
	7639.2	-49.18	-13	-36.18	-67.92	-50.91	9.57	11.30	H
	3819.6	-42.08	-13	-29.08	-55.43	-48.12	6.56	12.60	V
	5729.4	-44.18	-13	-31.18	-61.53	-49.28	8	13.10	V
	7639.2	-49.33	-13	-36.33	-67.73	-51.06	9.57	11.30	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	-59.48	-13	-46.48	-62.31	-66.17	0.56	9.40	H
	2479.2	-59.64	-13	-46.64	-65.38	-67.35	0.74	10.60	H
	3305.6	-57.83	-13	-44.83	-66.64	-67.43	0.85	12.60	H
	1652.8	-62.73	-13	-49.73	-64.39	-69.42	0.56	9.40	V
	2479.2	-56.99	-13	-43.99	-62.57	-64.70	0.74	10.60	V
	3305.6	-58.64	-13	-45.64	-66.78	-68.24	0.85	12.60	V
Middle	1672	-59.46	-13	-46.46	-62.29	-66.15	0.56	9.40	H
	2510	-58.88	-13	-45.88	-64.62	-66.59	0.74	10.60	H
	3346	-57.64	-13	-44.64	-66.45	-67.24	0.85	12.60	H
	1672	-62.87	-13	-49.87	-64.53	-69.56	0.56	9.40	V
	2510	-56.51	-13	-43.51	-62.09	-64.22	0.74	10.60	V
	3346	-58.88	-13	-45.88	-67.02	-68.48	0.85	12.60	V
Highest	1693.2	-58.56	-13	-45.56	-61.39	-65.25	0.56	9.40	H
	2539.8	-58.02	-13	-45.02	-63.76	-65.73	0.74	10.60	H
	3386.4	-57.31	-13	-44.31	-66.12	-66.91	0.85	12.60	H
	1693.2	-61.58	-13	-48.58	-63.24	-68.27	0.56	9.40	V
	2539.8	-55.51	-13	-42.51	-61.09	-63.22	0.74	10.60	V
	3386.4	-58.85	-13	-45.85	-66.99	-68.45	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)
Lowest	3704.8	-48.68	-13	-35.68	-62.23	-54.72	6.56	12.60	H
	5557.2	-36.01	-13	-23.01	-53.42	-41.11	8	13.10	H
	7409.6	-49.82	-13	-36.82	-68.56	-51.55	9.57	11.30	H
	3704.8	-47.64	-13	-34.64	-60.99	-53.68	6.56	12.60	V
	5557.2	-39.11	-13	-26.11	-56.72	-44.21	8	13.10	V
	7409.6	-50.34	-13	-37.34	-68.74	-52.07	9.57	11.30	V
Middle	3760	-47.42	-13	-34.42	-60.97	-53.46	6.56	12.60	H
	5640	-38.25	-13	-25.25	-55.21	-43.35	8	13.10	H
	7520	-49.11	-13	-36.11	-67.85	-50.84	9.57	11.30	H
	3760	-48.55	-13	-35.55	-61.9	-54.59	6.56	12.60	V
	5640	-39.13	-13	-26.13	-56.73	-44.23	8	13.10	V
	7520	-49.71	-13	-36.71	-68.11	-51.44	9.57	11.30	V
Highest	3815.2	-48.98	-13	-35.98	-62.53	-55.02	6.56	12.60	H
	5722.8	-37.77	-13	-24.77	-54.87	-42.87	8	13.10	H
	7630.4	-48.64	-13	-35.64	-67.38	-50.37	9.57	11.30	H
	3815.2	-47.07	-13	-34.07	-60.42	-53.11	6.56	12.60	V
	5722.8	-38.17	-13	-25.17	-56.07	-43.27	8	13.10	V
	7630.4	-48.85	-13	-35.85	-67.25	-50.58	9.57	11.30	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	-45.78	-13	-32.78	-60.53	-52.20	6.18	12.60	H
	5137.2	-43.35	-13	-30.35	-61.35	-48.31	7.74	12.70	H
	6849.6	-49.59	-13	-36.59	-68.40	-52.29	9	11.70	H
	3424.8	-49.35	-13	-36.35	-60.3	-55.77	6.18	12.60	V
	5137.2	-48.26	-13	-35.26	-61.26	-53.22	7.74	12.70	V
	6849.6	-51.68	-13	-38.68	-68.39	-54.38	9	11.70	V
Middle	3465.2	-43.84	-13	-30.84	-58.59	-50.26	6.18	12.60	H
	5197.8	-40.21	-13	-27.21	-58.21	-45.17	7.74	12.70	H
	6930.4	-48.51	-13	-35.51	-67.32	-51.21	9	11.70	H
	3465.2	-47.35	-13	-34.35	-58.3	-53.77	6.18	12.60	V
	5197.8	-42.05	-13	-29.05	-56.8	-47.01	7.74	12.70	V
	6930.4	-51.25	-13	-38.25	-67.96	-53.95	9	11.70	V
Highest	3505.2	-42.95	-13	-29.95	-57.70	-49.37	6.18	12.60	H
	5257.8	-38.24	-13	-25.24	-56.24	-43.20	7.74	12.70	H
	7010.4	-49.43	-13	-36.43	-68.24	-52.13	9	11.70	H
	3505.2	-48.11	-13	-35.11	-59.06	-54.53	6.18	12.60	V
	5257.8	-38.11	-13	-25.11	-54.83	-43.07	7.74	12.70	V
	7010.4	-51.64	-13	-38.64	-68.35	-54.34	9	11.70	V

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