



GSM1900 (GSM)

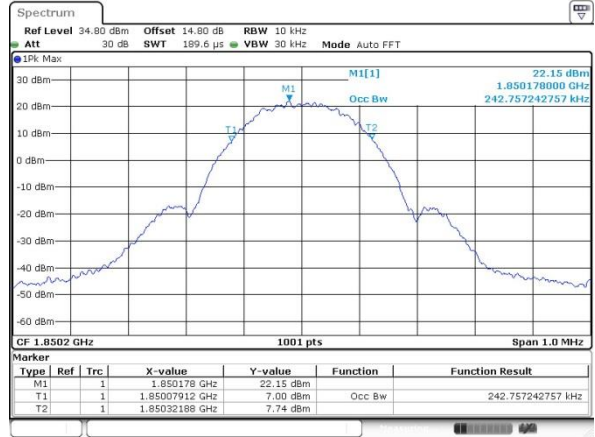
Lowest Channel



Date: 23 JUL 2018 20:21:22

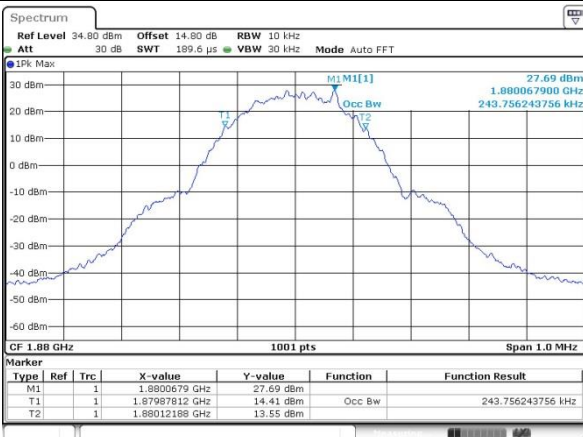
GSM1900 (EDGE class 8)

Lowest Channel



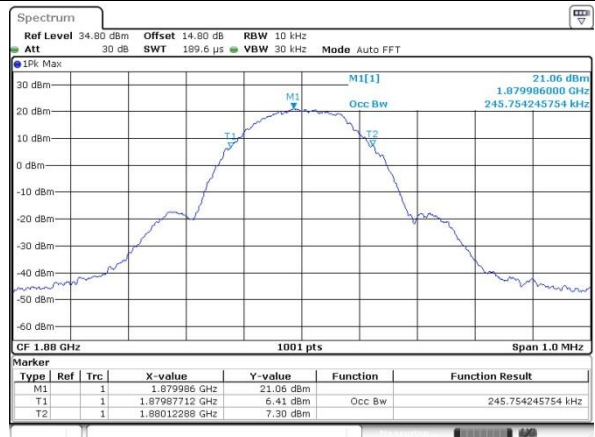
Date: 23 JUL 2018 20:38:49

Middle Channel



Date: 23 JUL 2018 20:21:55

Middle Channel



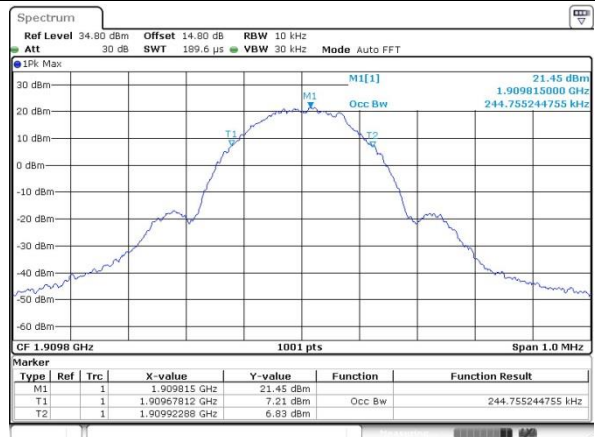
Date: 23 JUL 2018 20:39:21

Highest Channel



Date: 23 JUL 2018 20:22:34

Highest Channel

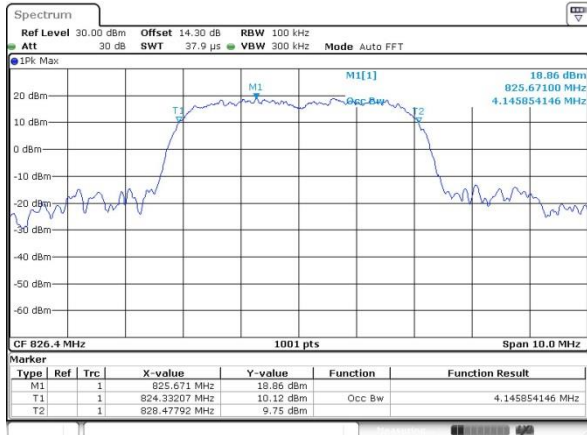


Date: 23 JUL 2018 20:39:54



WCDMA Band V (RMC 12.2Kbps)

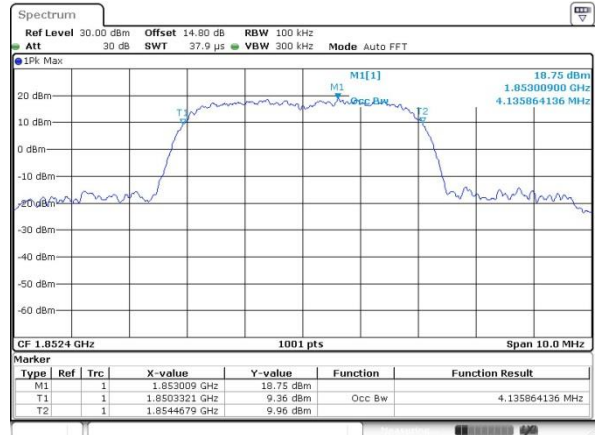
Lowest Channel



Date: 23 JUL 2018 21:41:15

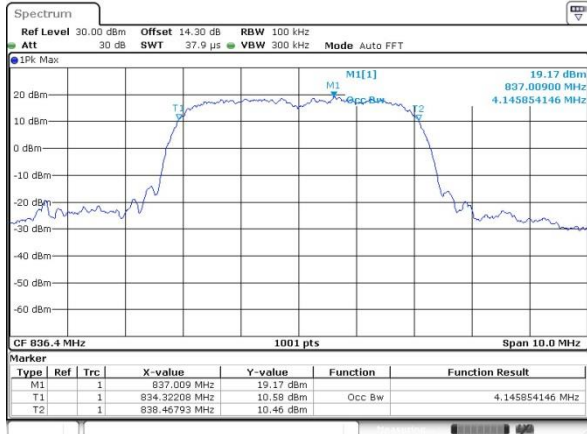
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



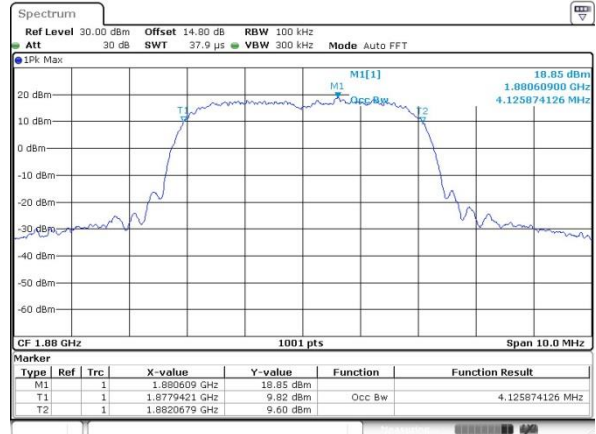
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Middle Channel



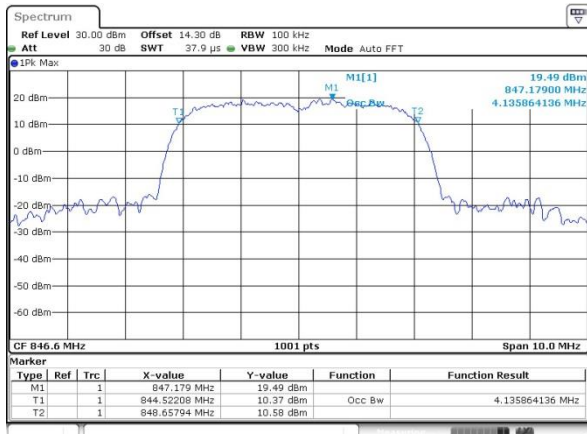
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Middle Channel



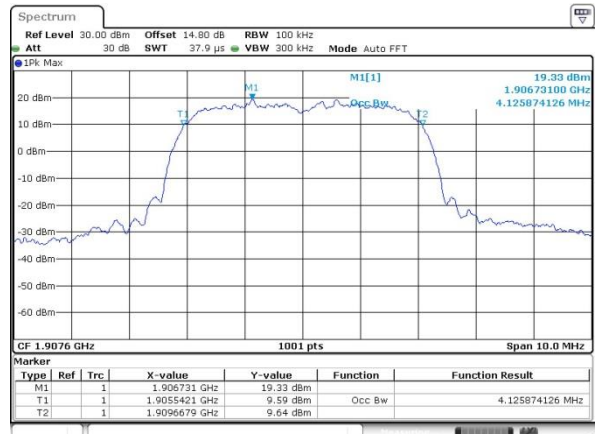
Date: 23 JUL 2018 20:57:58

Highest Channel



Date: 23 JUL 2018 21:42:36

Highest Channel

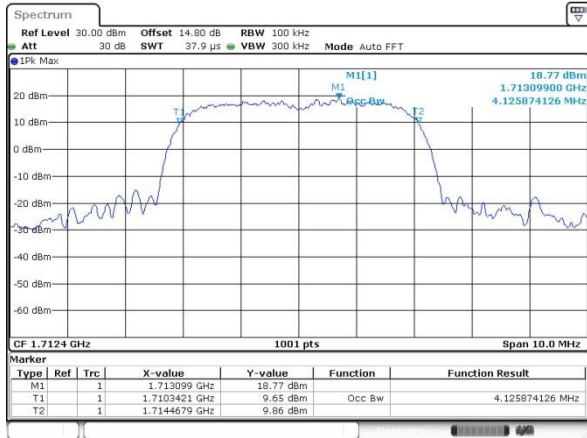


Date: 23 JUL 2018 20:58:32



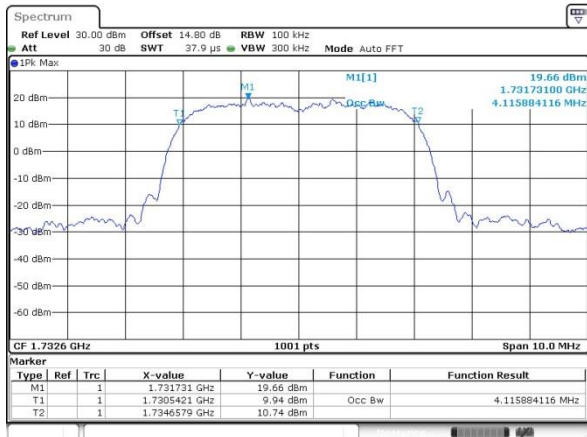
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



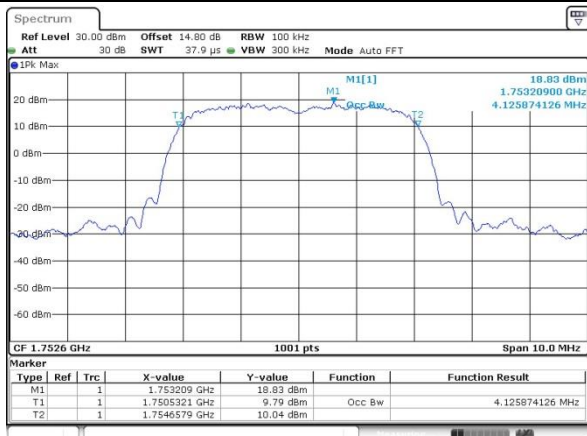
Date: 23 JUL 2018 21:18:56

Middle Channel



Date: 23 JUL 2018 21:19:30

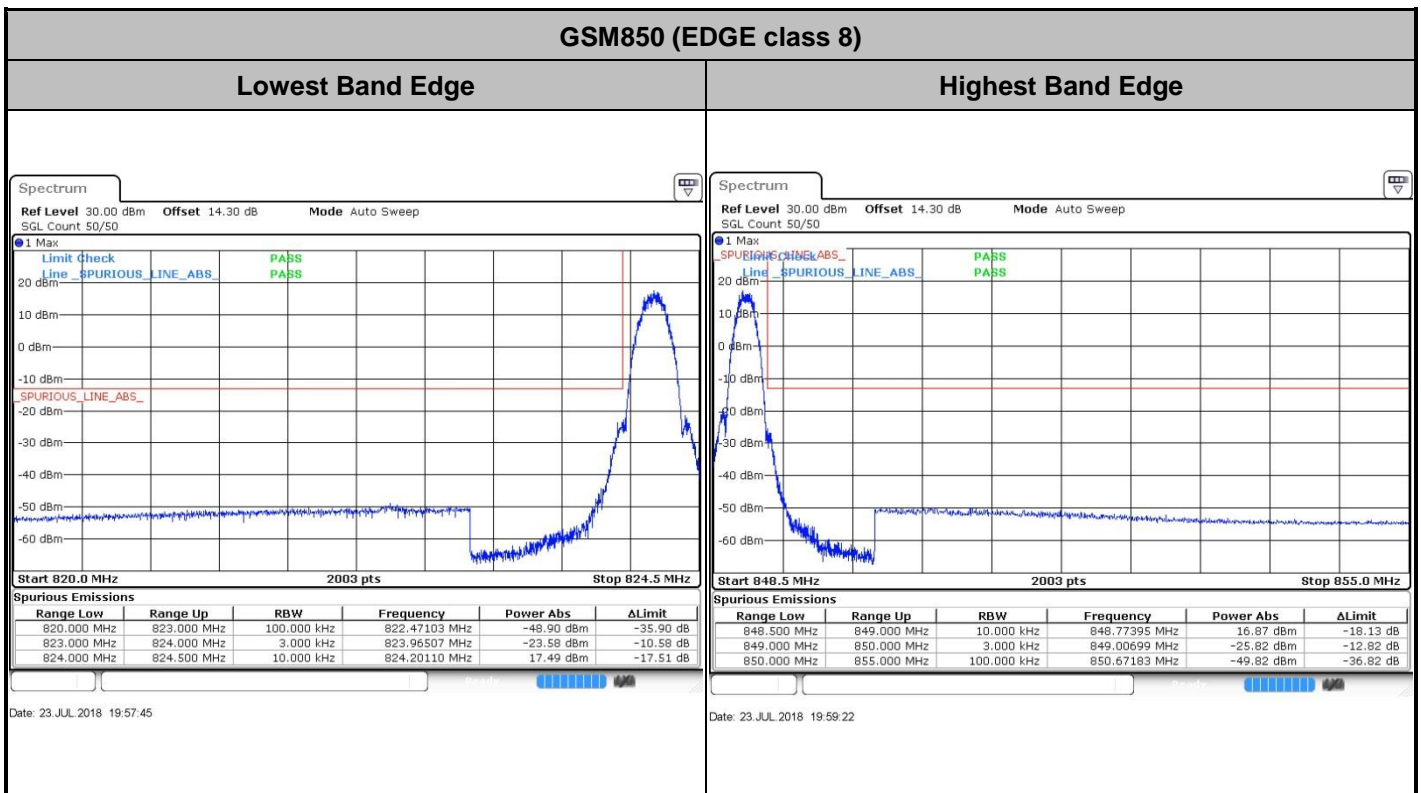
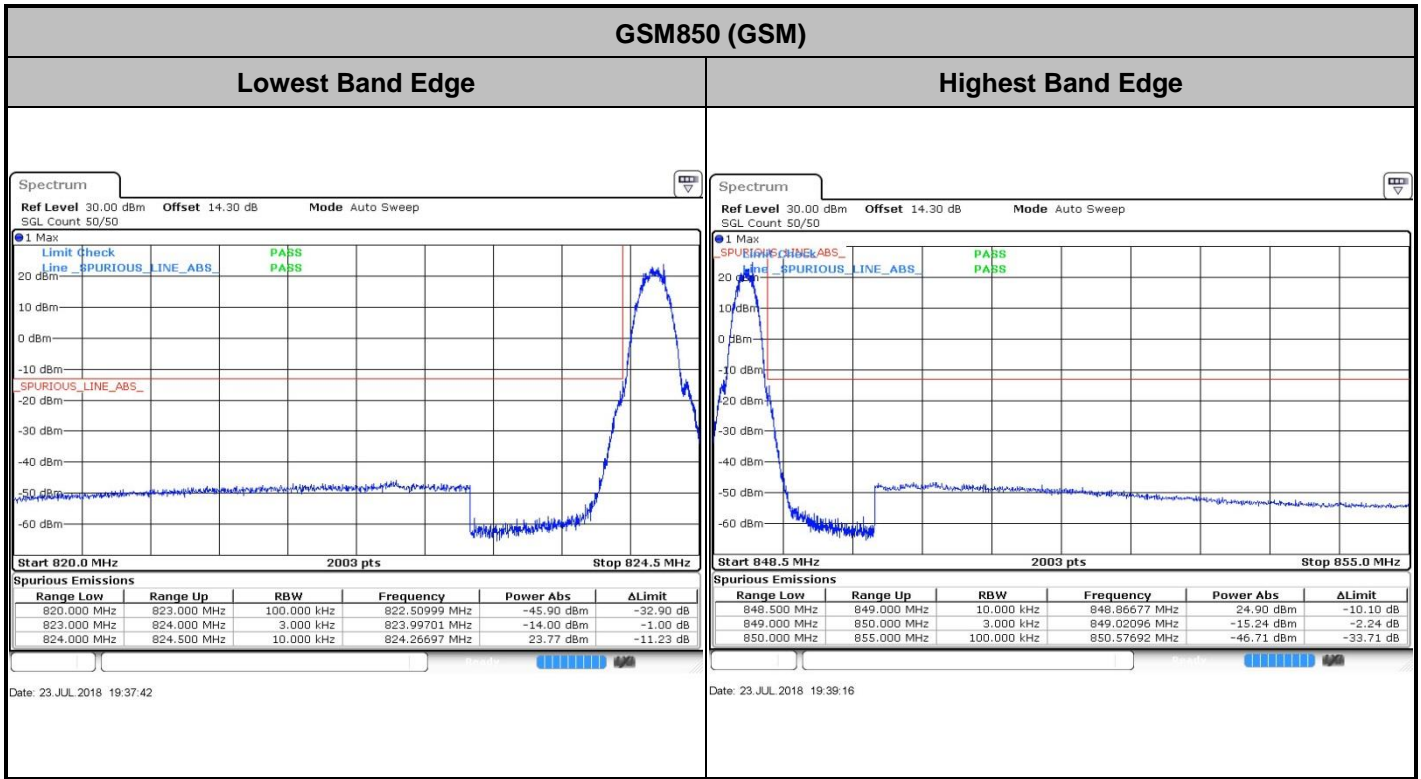
Highest Channel



Date: 23 JUL 2018 21:20:04



Conducted Band Edge

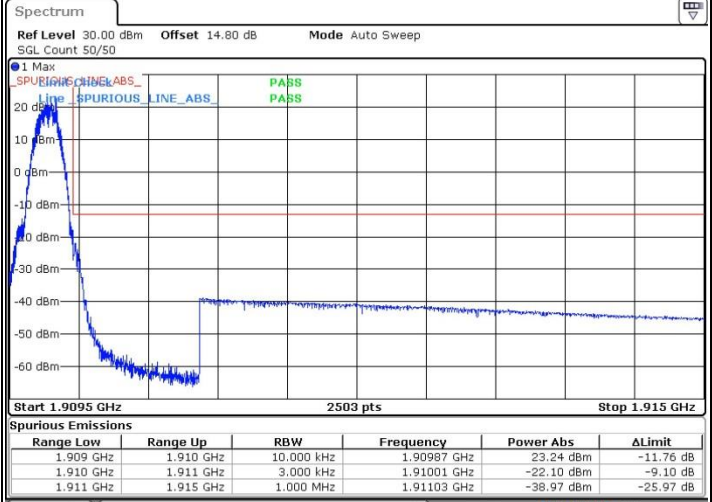
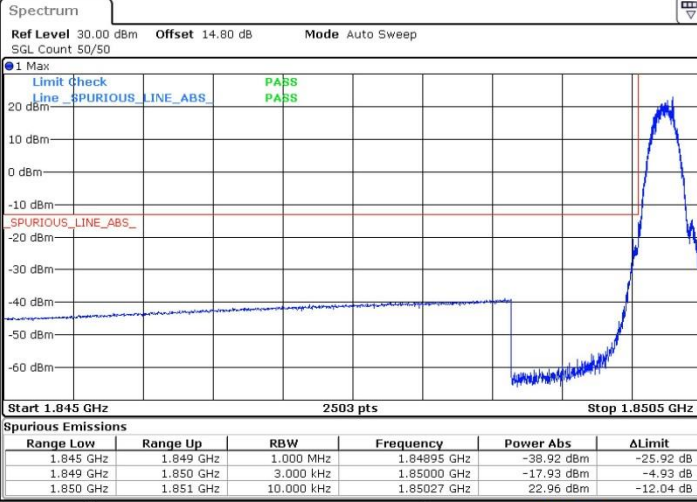




GSM1900 (GSM)

Lowest Band Edge

Highest Band Edge



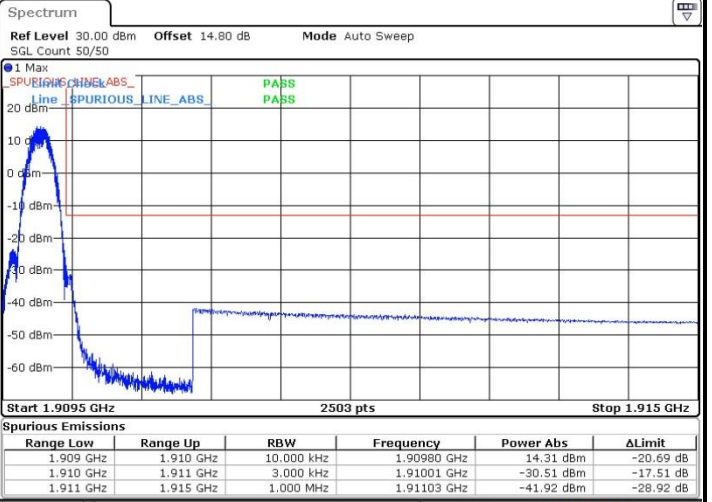
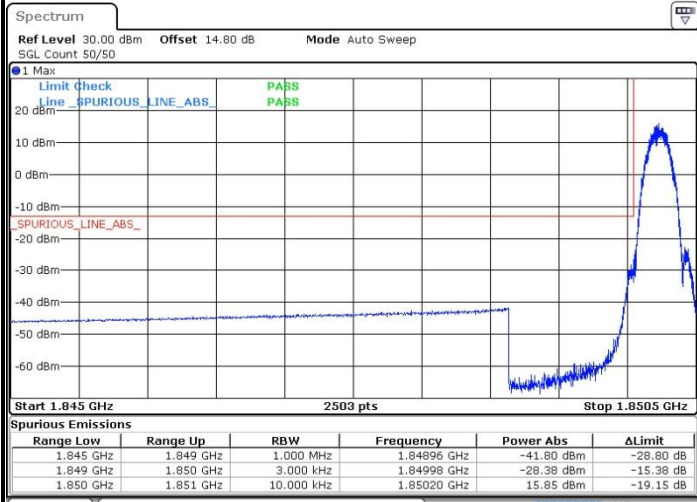
Date: 23 JUL 2018 20:24:30

Date: 23 JUL 2018 20:28:01

GSM1900 (EDGE class 8)

Lowest Band Edge

Highest Band Edge

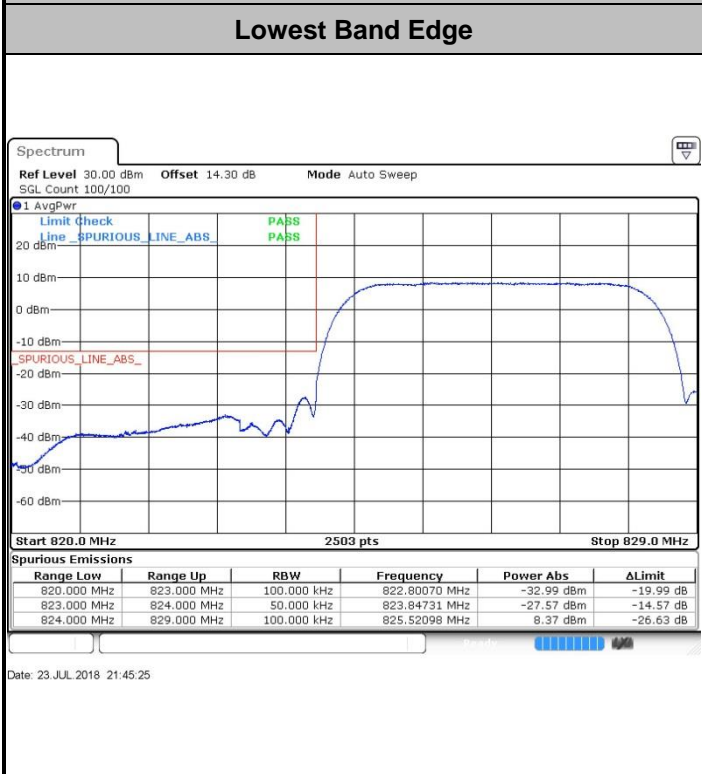


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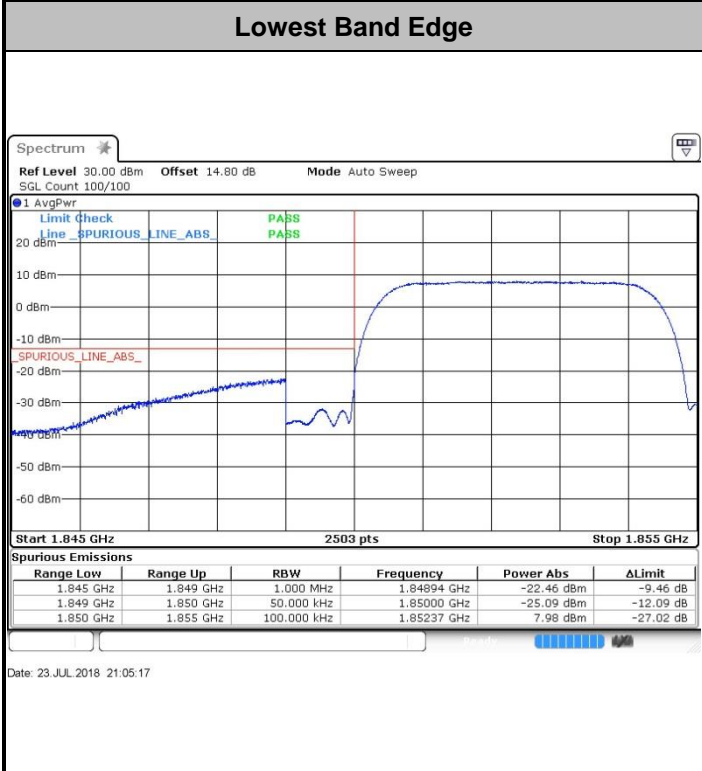
Date: 23 JUL 2018 20:43:01



WCDMA Band V (RMC 12.2Kbps)



WCDMA Band II (RMC 12.2Kbps)





WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge

Highest Band Edge



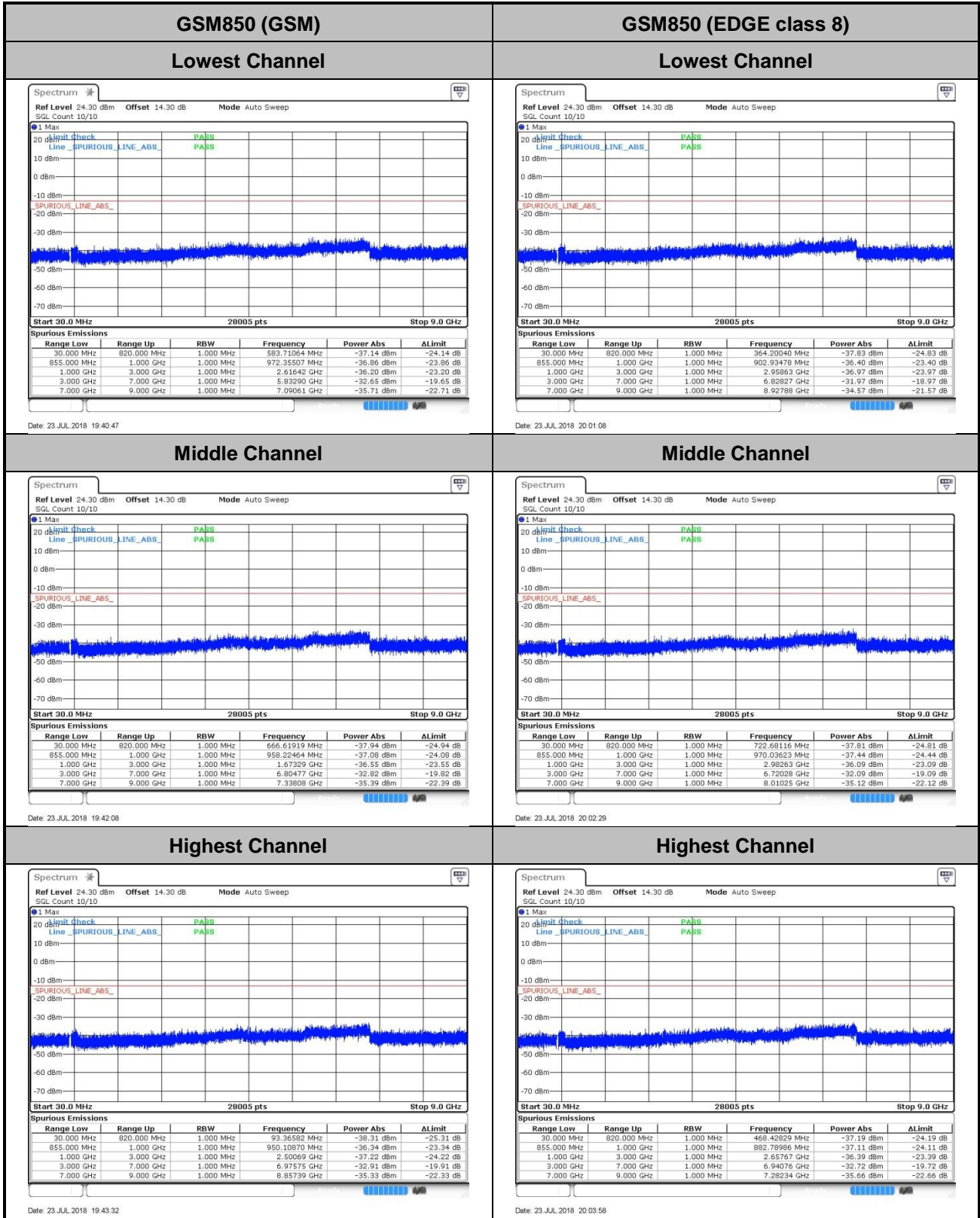
Date: 23 JUL 2018 21:25:16

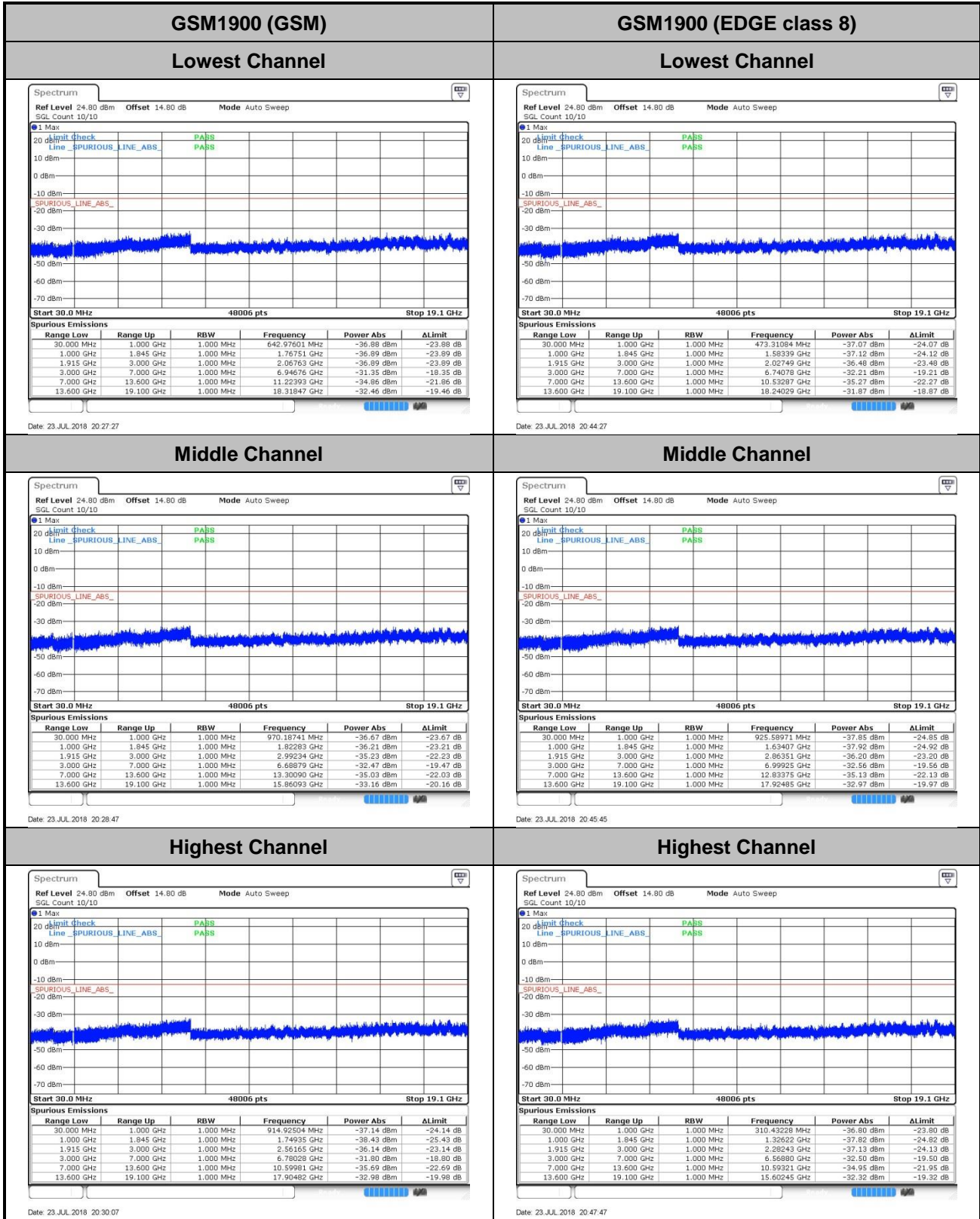


Date: 23 JUL 2018 21:28:08



Conducted Spurious Emission

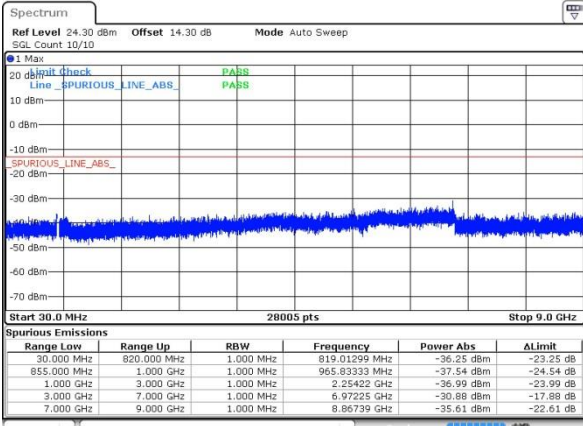






WCDMA Band V (RMC 12.2Kbps)

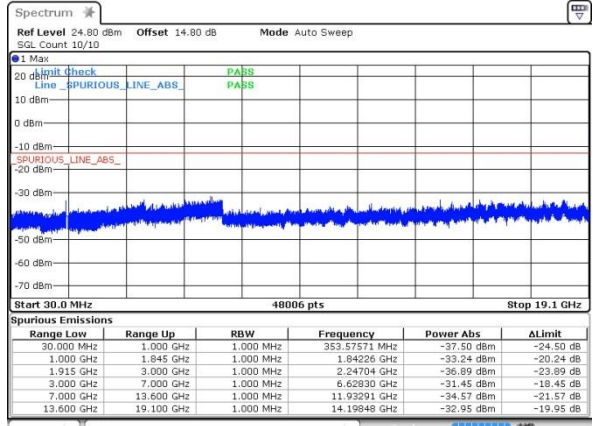
Lowest Channel



Date: 23 JUL 2018 21:53:07

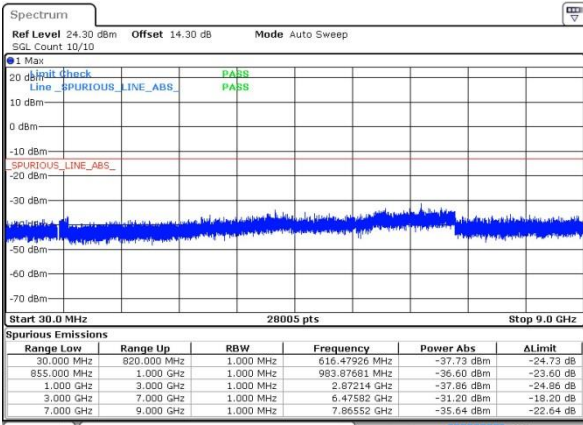
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



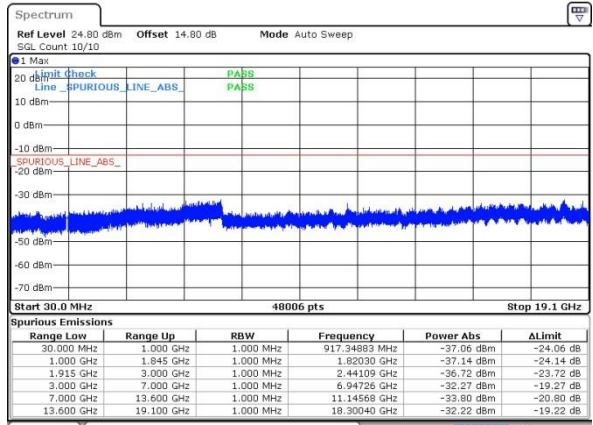
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Middle Channel



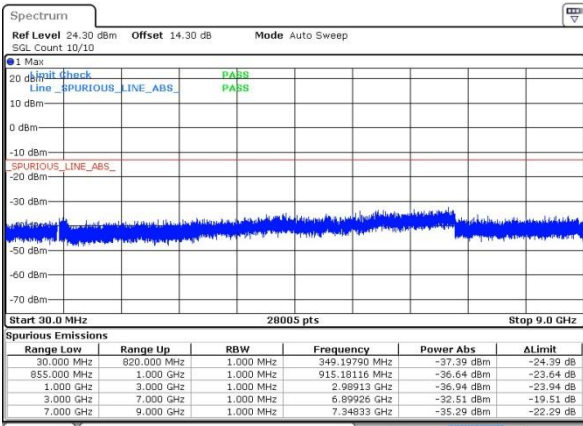
Date: 23 JUL 2018 21:55:32

Middle Channel



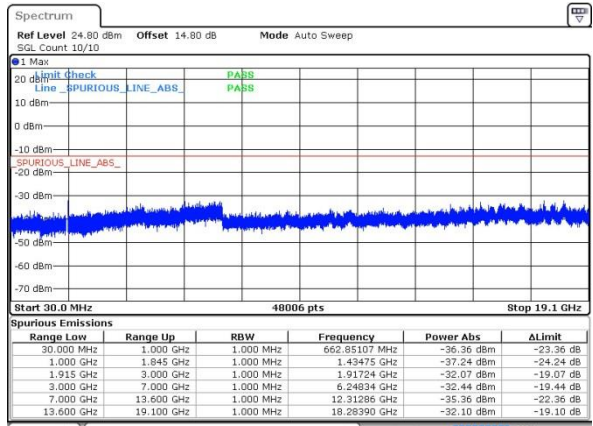
Date: 23 JUL 2018 21:11:02

Highest Channel



Date: 23 JUL 2018 21:57:13

Highest Channel

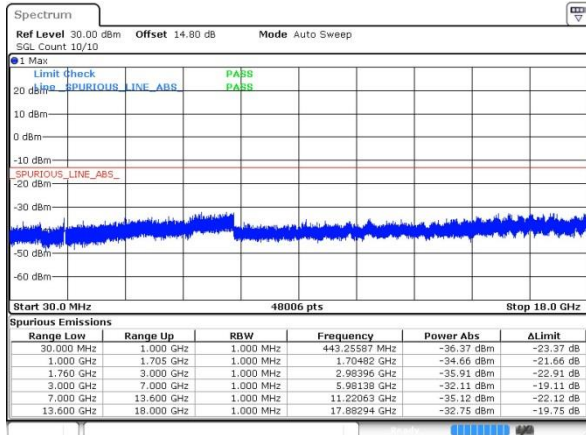


Date: 23 JUL 2018 21:12:58



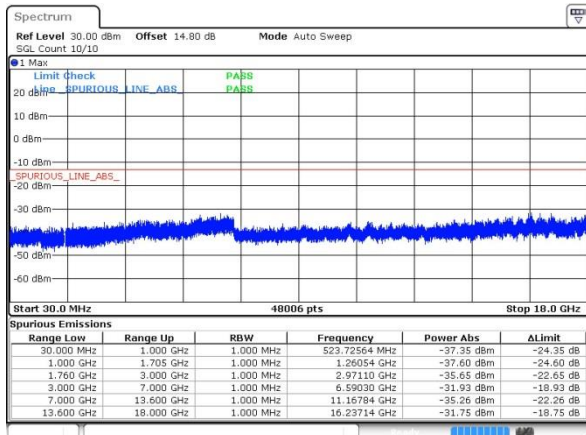
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



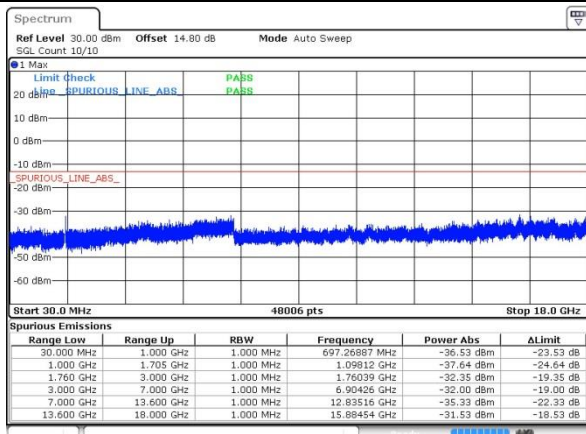
Date: 23 JUL 2018 21:30:46

Middle Channel



Date: 23 JUL 2018 21:32:09

Highest Channel



Date: 23 JUL 2018 21:34:28



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	0.0407	0.0418	PASS
40	Normal Voltage	0.0371	0.0191	
30	Normal Voltage	0.0502	0.0084	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0060	0.0191	
0	Normal Voltage	0.0347	0.0299	
-10	Normal Voltage	0.0538	0.0407	
-20	Normal Voltage	0.0383	0.0395	
-30	Normal Voltage	0.0395	0.0323	
20	Maximum Voltage	0.0430	0.0371	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0323	0.0215	

Note: Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.65V. ; 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	0.0239	0.0234	PASS
40	Normal Voltage	0.0207	0.0218	
30	Normal Voltage	0.0021	0.0101	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0186	0.0021	
0	Normal Voltage	0.0197	0.0239	
-10	Normal Voltage	0.0059	0.0245	
-20	Normal Voltage	0.0218	0.0069	
-30	Normal Voltage	0.0064	0.0293	
20	Maximum Voltage	0.0074	0.0229	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0181	0.0234	

Note:

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.65V. ; 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 12.2KbpsRMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0191	
30	Normal Voltage	0.0179	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0060	
0	Normal Voltage	0.0239	
-10	Normal Voltage	0.0215	
-20	Normal Voltage	0.0036	
-30	Normal Voltage	0.0155	
20	Maximum Voltage	0.0048	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0143	

Note: Normal Voltage = 3.85 V. ; Battery End Point (BEP) =3.65V. ; 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	0.0048	PASS
40	Normal Voltage	0.0037	
30	Normal Voltage	0.0032	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0043	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0064	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0053	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0016	

Note: Normal Voltage = 3.85 V. ; Battery End Point (BEP) =3.65V. ; Maximum Voltage =4.4V



Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0121	PASS
40	Normal Voltage	0.0139	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0092	
0	Normal Voltage	0.0063	
-10	Normal Voltage	0.0029	
-20	Normal Voltage	0.0052	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0087	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0081	

Note:

1. Normal Voltage = 3.85 V. ; Battery End Point (BEP) =3.65 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 Conducted Test

Radiated Spurious Emission

Note: Antenna 1 is Bottom Antenna, Antenna 2 is Top Antenna, the Antenna 2 verify worse case of Antenna 1.

GSM850 (GSM) for Antenna 1								
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	-60.08	-13	-47.08	-61.99	1.14	5.20	H
	2510	-41.49	-13	-28.49	-44.12	1.12	5.90	H
	3345	-60.07	-13	-47.07	-63.28	1.34	6.70	H
	1674	-55.15	-13	-42.15	-57.06	1.14	5.20	V
	2510	-40.33	-13	-27.33	-42.96	1.12	5.90	V
	3345	-60.22	-13	-47.22	-63.43	1.34	6.70	V

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

GSM850 (EDGE class 8) for Antenna 1								
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	-64.09	-13	-51.09	-66.00	1.14	5.20	H
	2510	-46.52	-13	-33.52	-49.15	1.12	5.90	H
	3345	-60.25	-13	-47.25	-63.46	1.34	6.70	H
	1672	-58.35	-13	-45.35	-60.26	1.14	5.20	V
	2510	-50.67	-13	-37.67	-53.30	1.12	5.90	V
	3345	-60.14	-13	-47.14	-63.35	1.34	6.70	V

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



GSM1900 (GSM) for Antenna 1								
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	-56.86	-13	-43.86	-58.58	5.08	6.80	H
	5640	-41.24	-13	-28.24	-42.91	8.03	9.70	H
	7521	-49.69	-13	-36.69	-52.07	9.43	11.81	H
	3759	-56.86	-13	-43.86	-58.58	5.08	6.80	V
	5640	-46.86	-13	-33.86	-48.53	8.03	9.70	V
	7521	-49.51	-13	-36.51	-51.89	9.43	11.81	V

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

GSM1900 (EDGE class 8) for Antenna 1								
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	-58.33	-13	-45.33	-60.05	5.08	6.80	H
	5640	-55.13	-13	-42.13	-56.80	8.03	9.70	H
	7521	-50.54	-13	-37.54	-52.92	9.43	11.81	H
	3759	-58.10	-13	-45.10	-59.82	5.08	6.80	V
	5640	-54.62	-13	-41.62	-56.29	8.03	9.70	V
	7521	-50.37	-13	-37.37	-52.75	9.43	11.81	V

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



WCDMA Band V(RMC 12.2Kbps) for Antenna 1								
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	-64.12	-13	-51.12	-66.03	1.14	5.20	H
	2506	-54.03	-13	-41.03	-56.66	1.12	5.90	H
	3345	-58.74	-13	-45.74	-61.95	1.34	6.70	H
	1674	-60.74	-13	-47.74	-62.65	1.14	5.20	V
	2512	-53.85	-13	-40.85	-56.48	1.12	5.90	V
	3348	-57.23	-13	-44.23	-60.44	1.34	6.70	V

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

WCDMA Band II(RMC 12.2Kbps) for Antenna 1								
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	-58.26	-13	-45.26	-59.98	5.08	6.80	H
	5640	-54.95	-13	-41.95	-56.62	8.03	9.70	H
	7521	-50.55	-13	-37.55	-52.93	9.43	11.81	H
	3759	-57.82	-13	-44.82	-59.54	5.08	6.80	V
	5640	-54.89	-13	-41.89	-56.56	8.03	9.70	V
	7521	-50.33	-13	-37.33	-52.71	9.43	11.81	V

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



WCDMA Band IV(RMC 12.2Kbps) for Antenna 1								
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	-59.30	-13	-46.30	-63.27	4.87	8.84	H
	5199	-55.89	-13	-42.89	-57.33	7.70	9.14	H
	6930	-51.94	-13	-38.94	-53.63	8.98	10.66	H
	3465	-59.07	-13	-46.07	-63.04	4.87	8.84	V
	5199	-54.18	-13	-41.18	-55.62	7.70	9.14	V
	6930	-51.63	-13	-38.63	-53.32	8.98	10.66	V

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

GSM850 (GSM) for Antenna 2								
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	-57.33	-13	-44.33	-59.24	1.14	5.20	H
	2510	-39.01	-13	-26.01	-41.64	1.12	5.90	H
	3345	-60.07	-13	-47.07	-63.28	1.34	6.70	H
	1672	-54.92	-13	-41.92	-56.83	1.14	5.20	V
	2510	-40.75	-13	-27.75	-43.38	1.12	5.90	V
	3345	-60.19	-13	-47.19	-63.40	1.34	6.70	V

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



GSM1900 (GSM) for Antenna 2								
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	-44.78	-13	-31.78	-46.50	5.08	6.80	H
	5640	-54.09	-13	-41.09	-55.76	8.03	9.70	H
	7521	-50.52	-13	-37.52	-52.90	9.43	11.81	H
	3759	-46.54	-13	-33.54	-48.26	5.08	6.80	V
	5640	-51.78	-13	-38.78	-53.45	8.03	9.70	V
	7521	-50.15	-13	-37.15	-52.53	9.43	11.81	V

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

WCDMA Band IV(RMC 12.2Kbps) for Antenna 2								
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	-59.16	-13	-46.16	-63.13	4.87	8.84	H
	5199	-55.30	-13	-42.30	-56.74	7.70	9.14	H
	6930	-51.94	-13	-38.94	-53.63	8.98	10.66	H
	3465	-59.12	-13	-46.12	-63.09	4.87	8.84	V
	5199	-55.10	-13	-42.10	-56.54	7.70	9.14	V
	6930	-51.85	-13	-38.85	-53.54	8.98	10.66	V

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