



GSM1900 (GSM)

Lowest Channel



Date: 8_MAR.2018 15:59:15

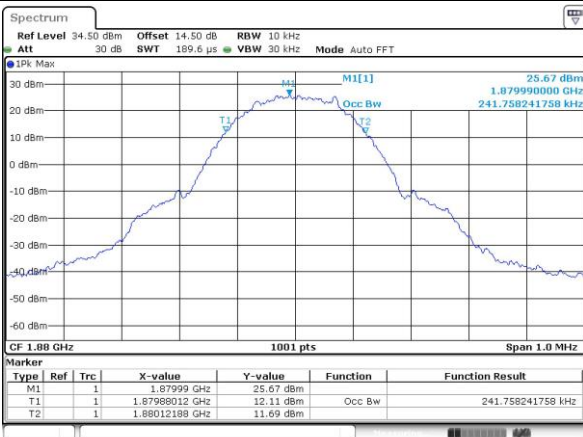
GSM1900 (EDGE class 8)

Lowest Channel



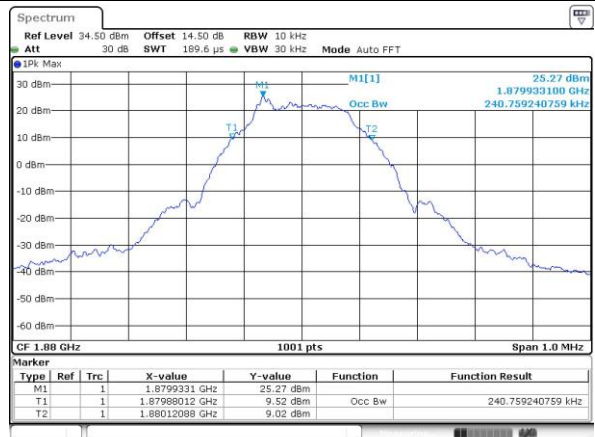
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Middle Channel



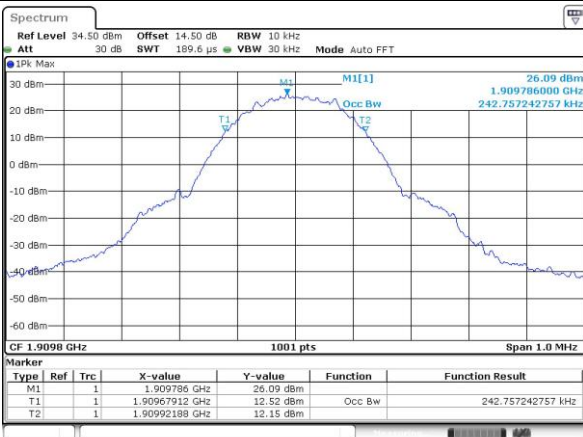
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Middle Channel



Date: 8_MAR.2018 16:55:13

Highest Channel

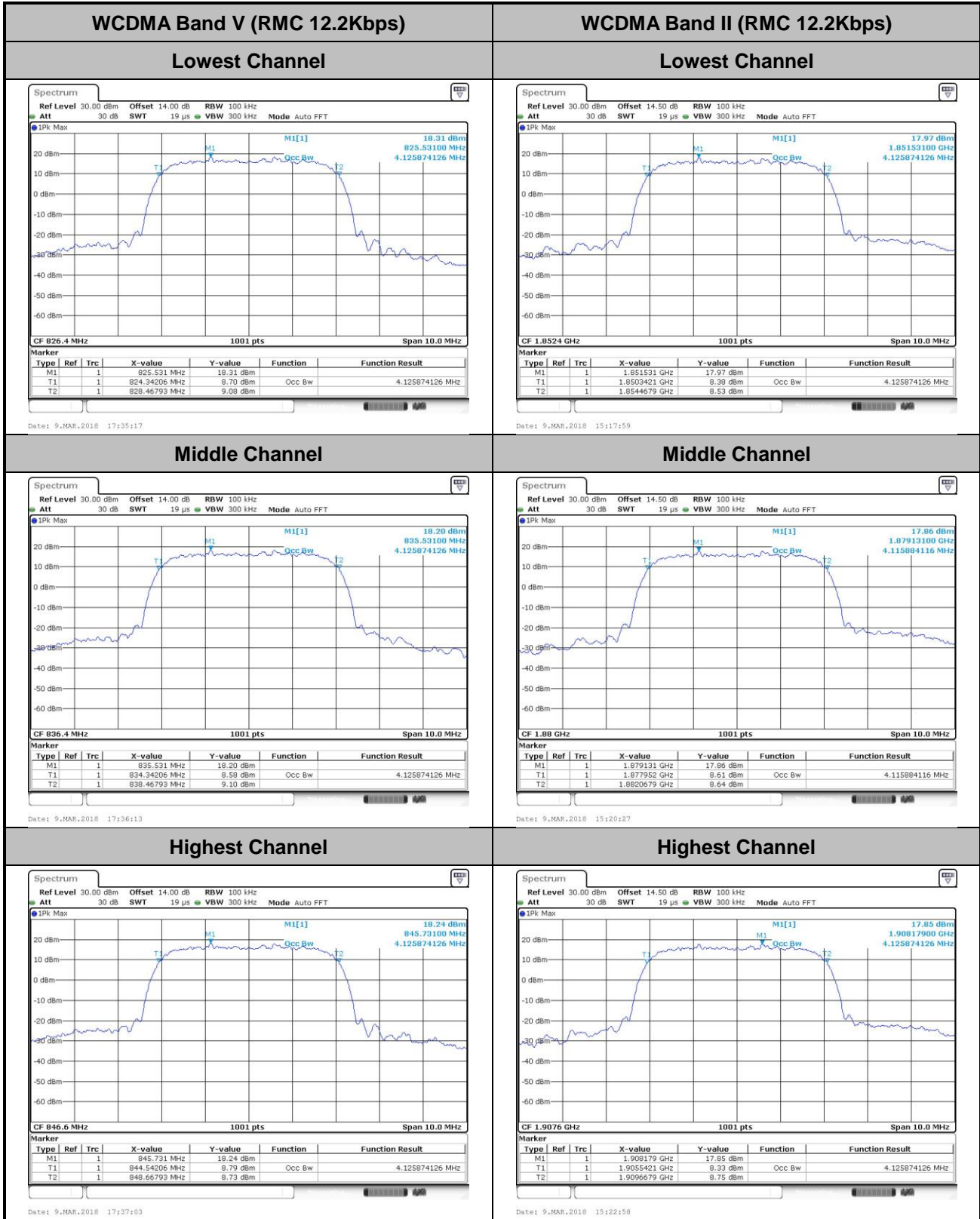


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Highest Channel



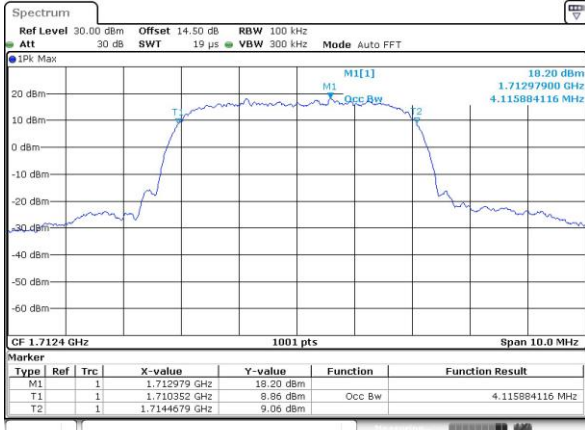
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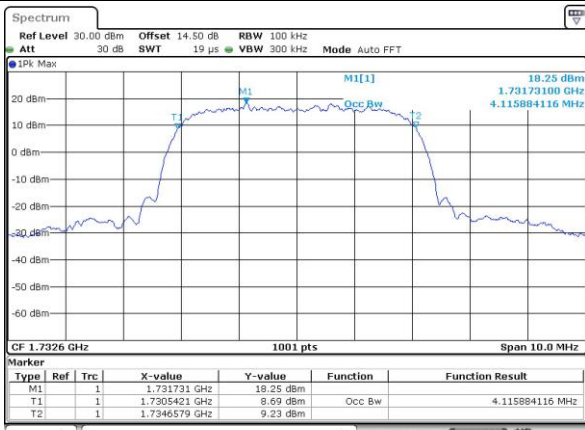
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



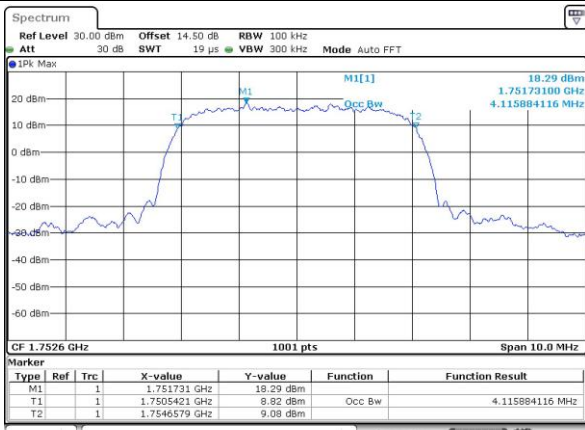
Date: 9_MAR.2018 17:03:42

Middle Channel



Date: 9_MAR.2018 17:07:17

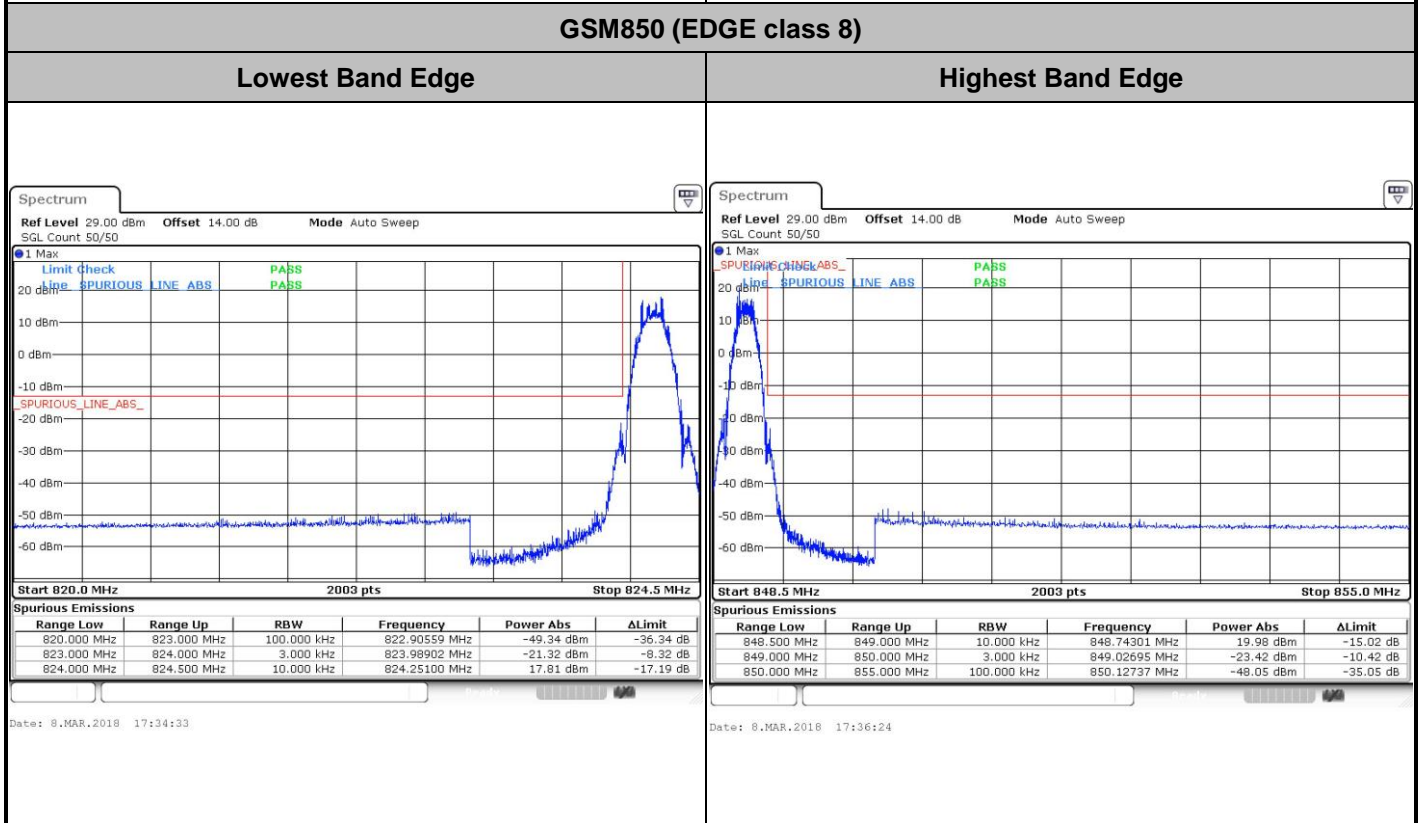
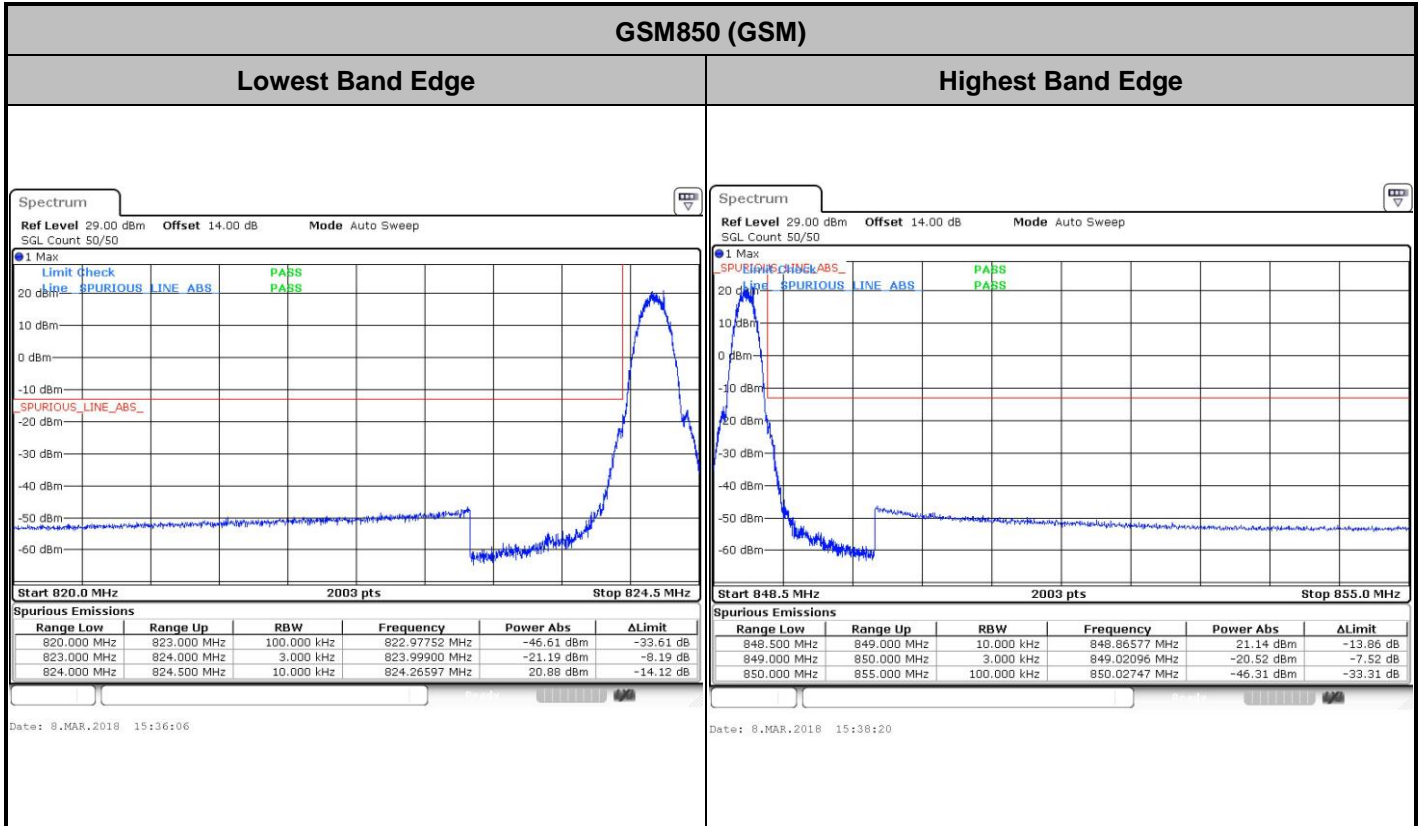
Highest Channel



Date: 9_MAR.2018 17:07:54



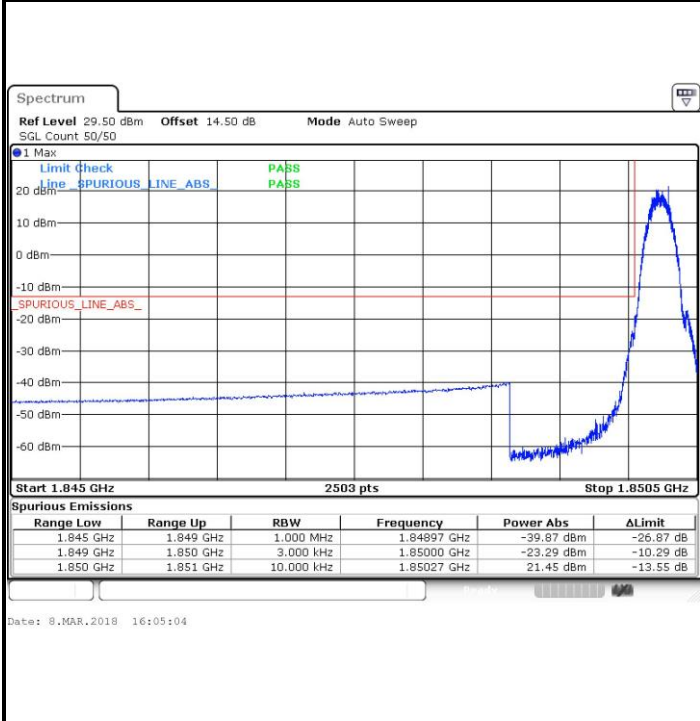
Conducted Band Edge



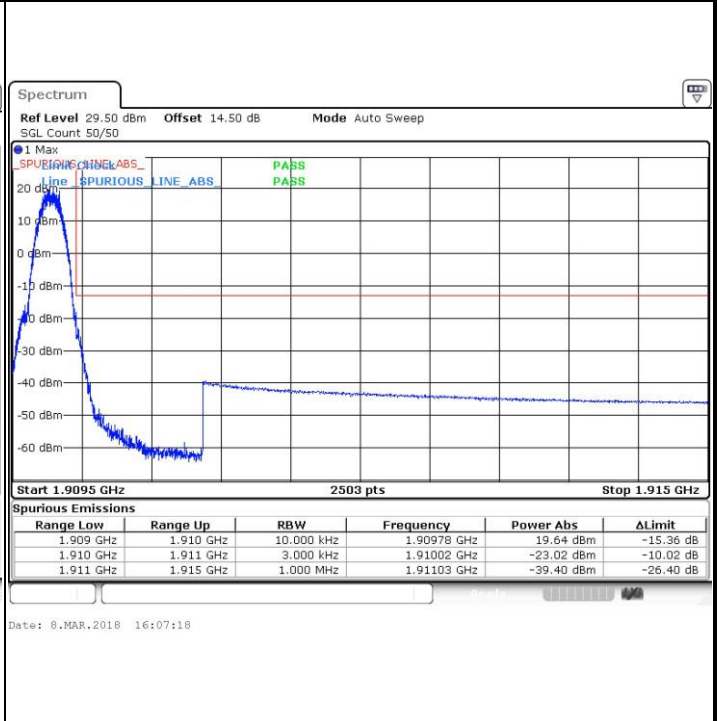


GSM1900 (GSM)

Lowest Band Edge

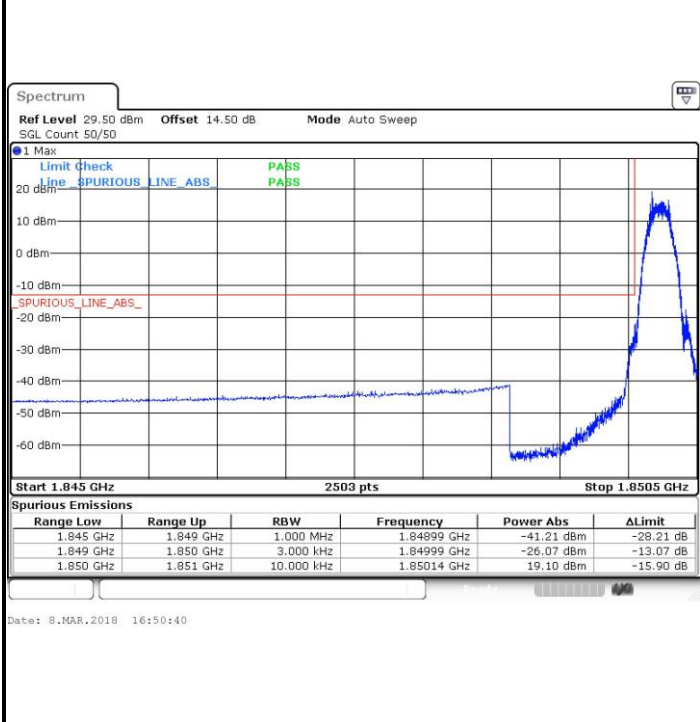


Highest Band Edge

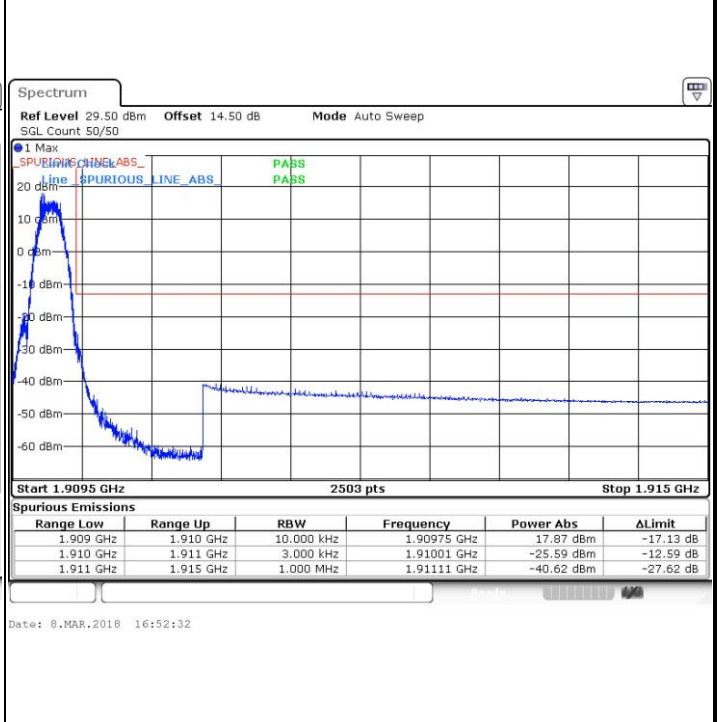


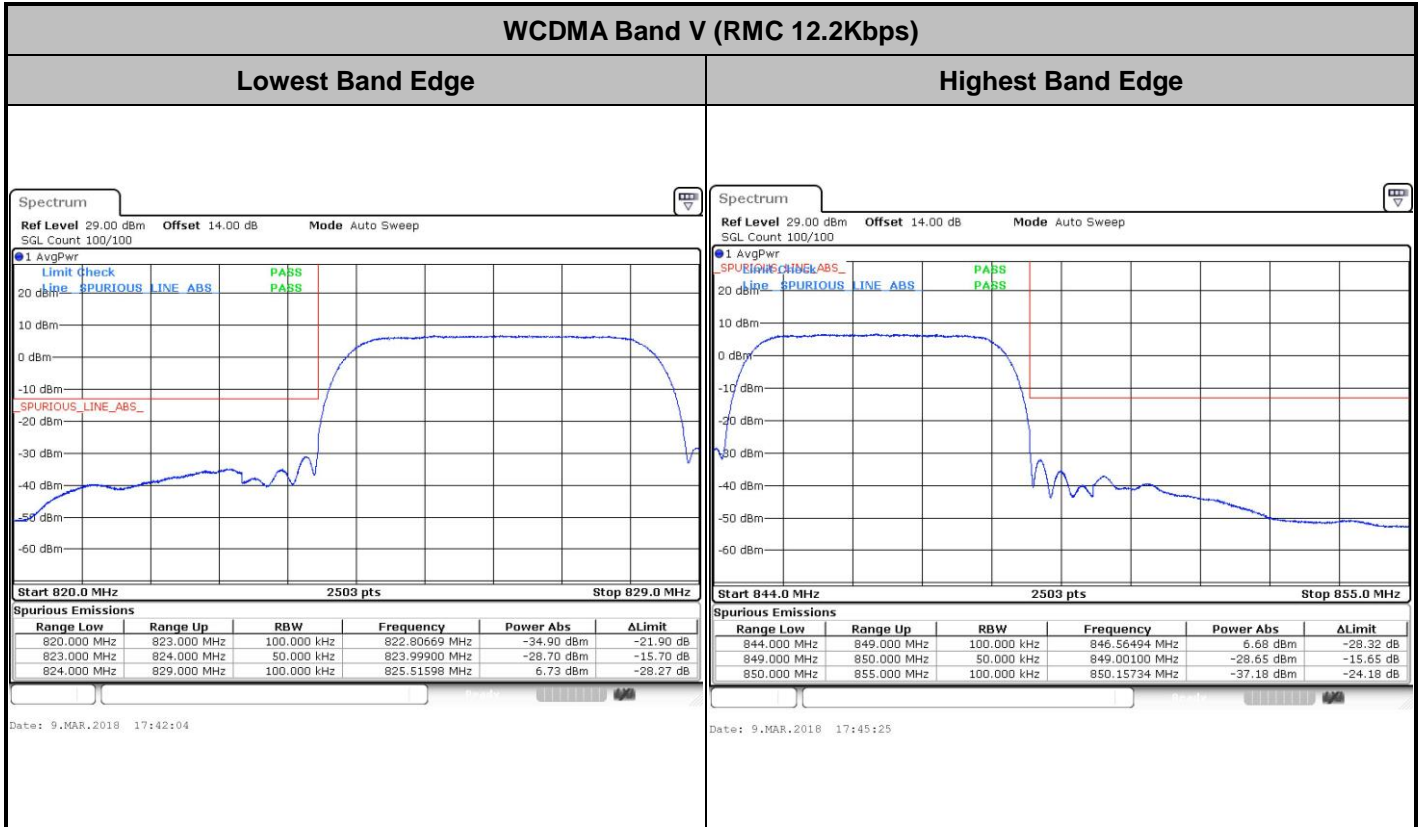
GSM1900 (EDGE class 8)

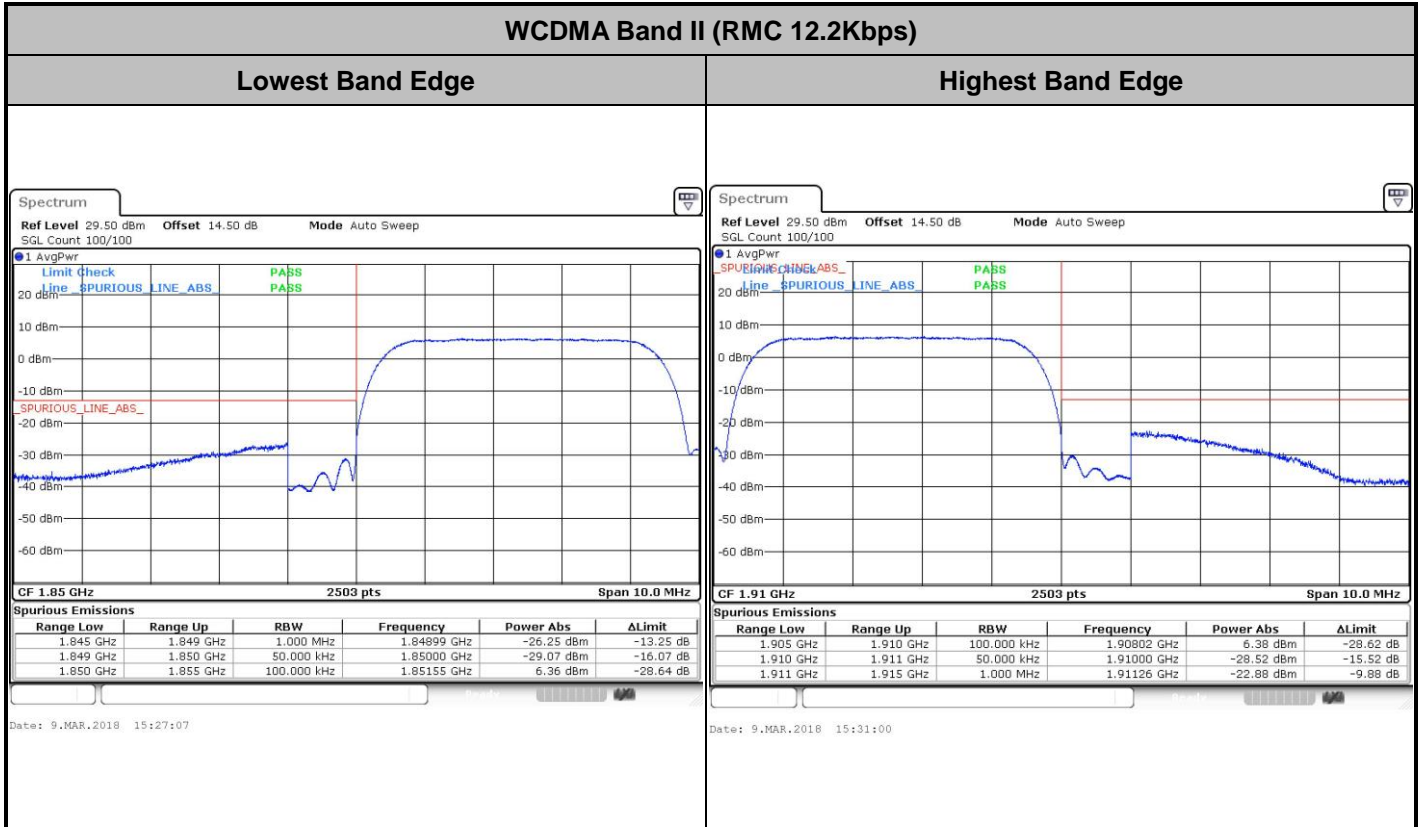
Lowest Band Edge

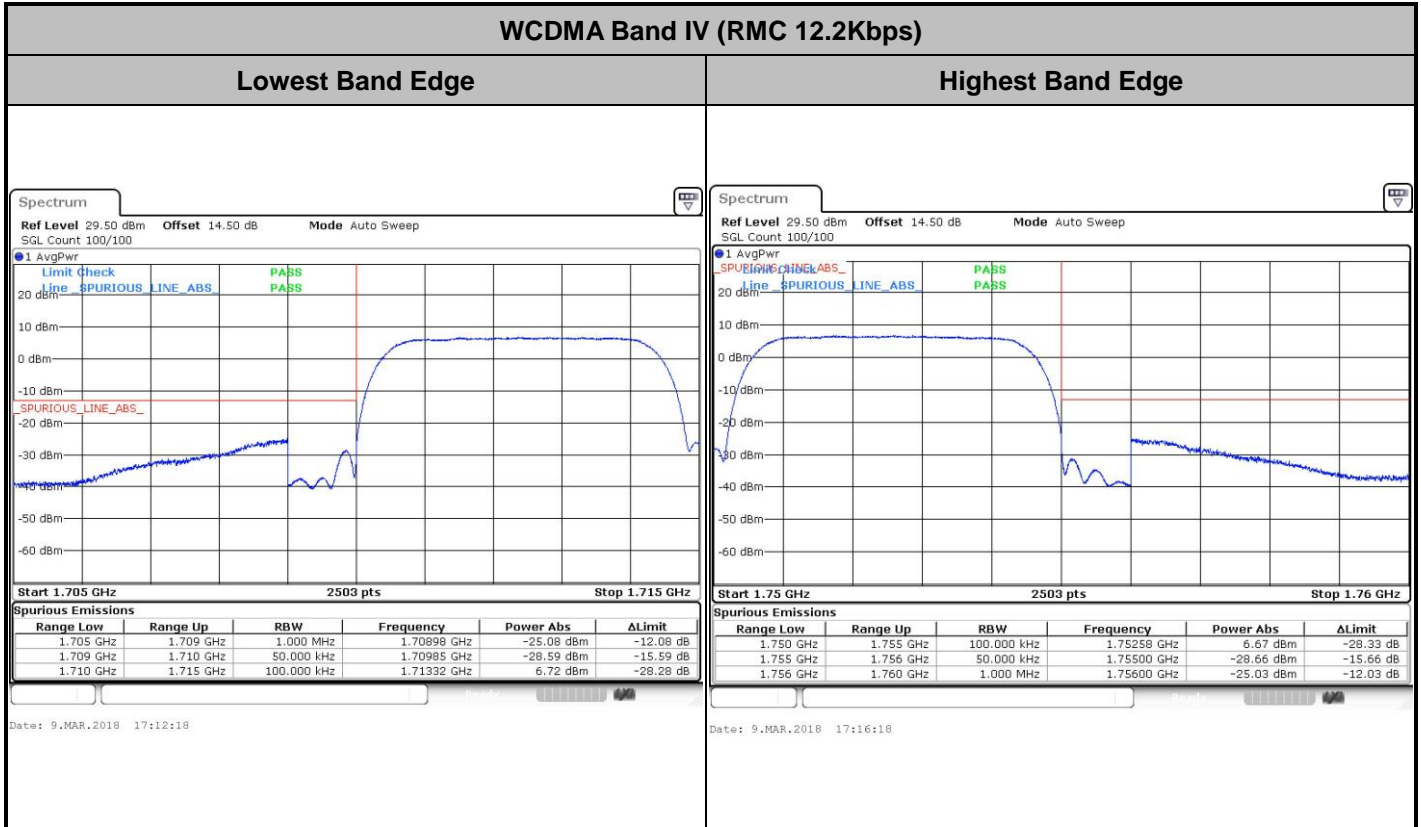


Highest Band Edge



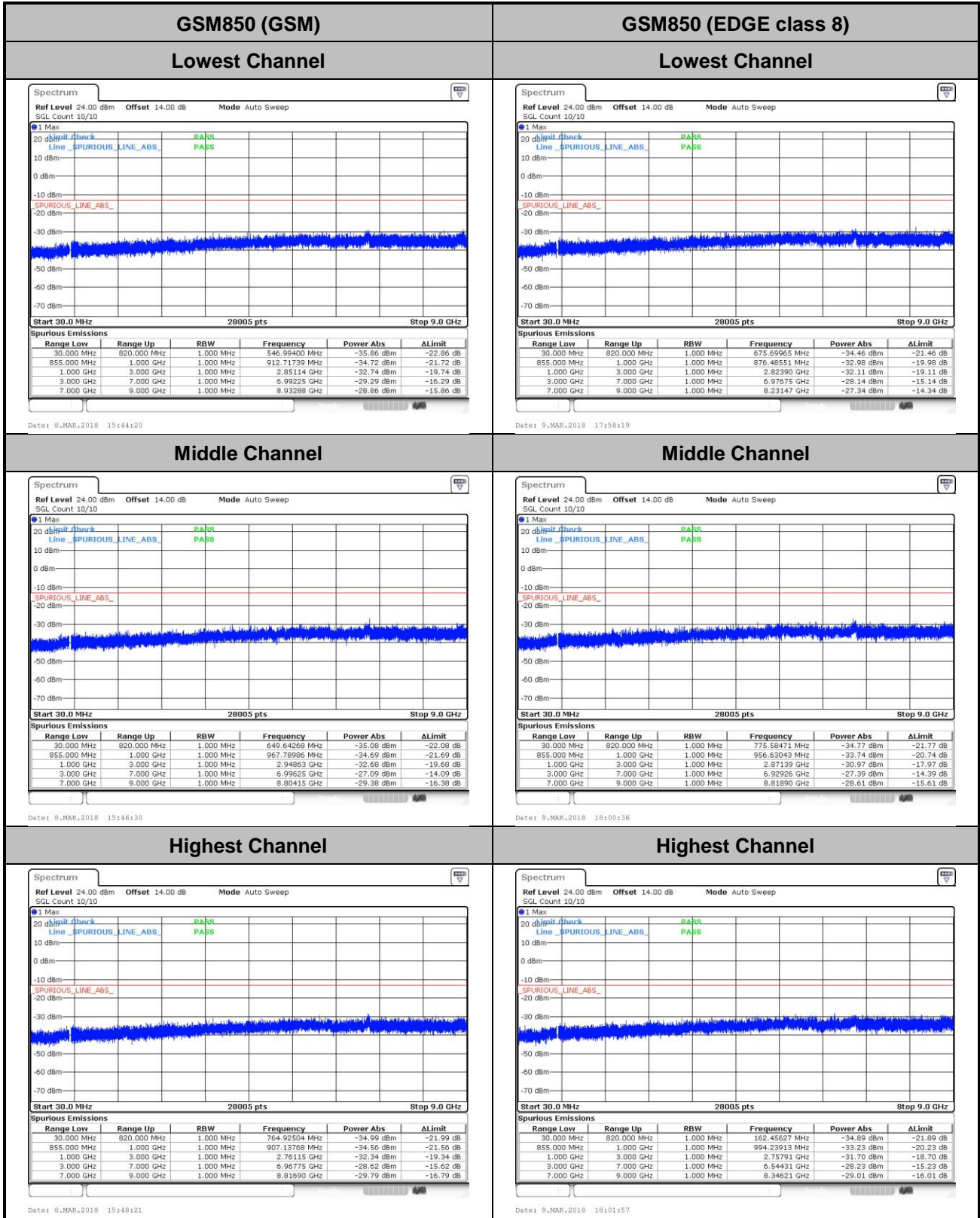








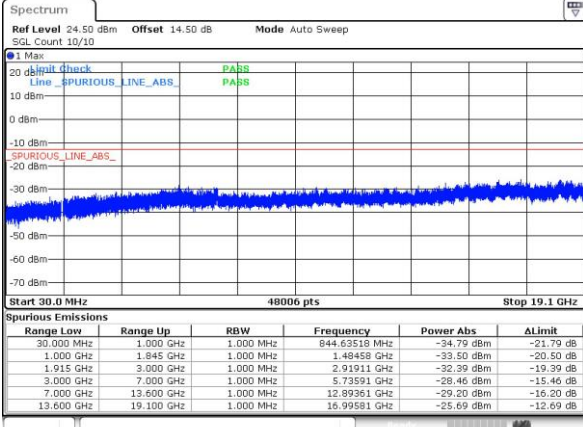
Conducted Spurious Emission





GSM1900 (GSM)

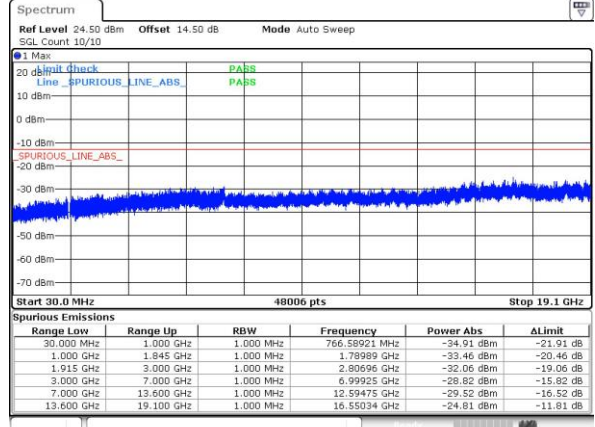
Lowest Channel



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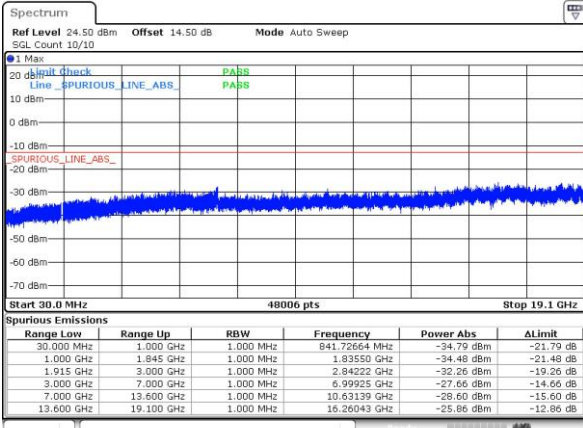
GSM1900 (EDGE class 8)

Lowest Channel



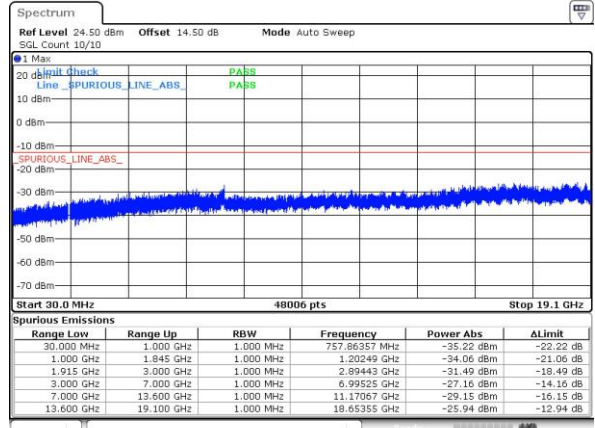
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Middle Channel



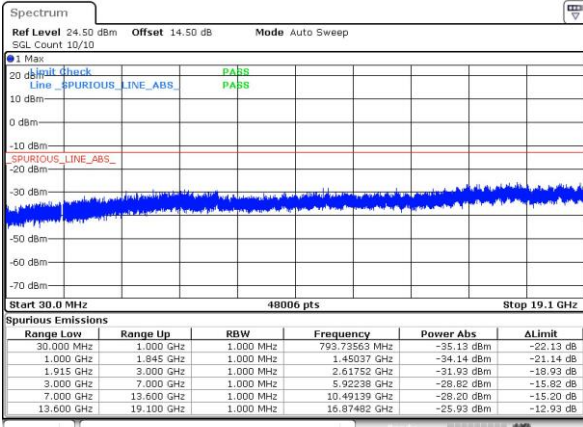
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Middle Channel



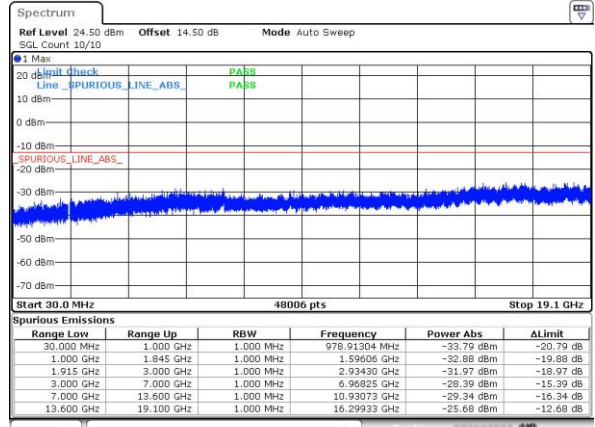
Date: 8_MAR.2018 16:41:34

Highest Channel



Date: 8_MAR.2018 16:23:09

Highest Channel

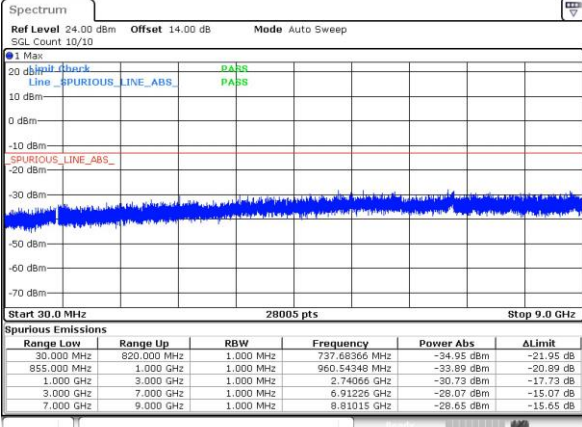


Date: 8_MAR.2018 16:43:42



WCDMA Band V (RMC 12.2Kbps)

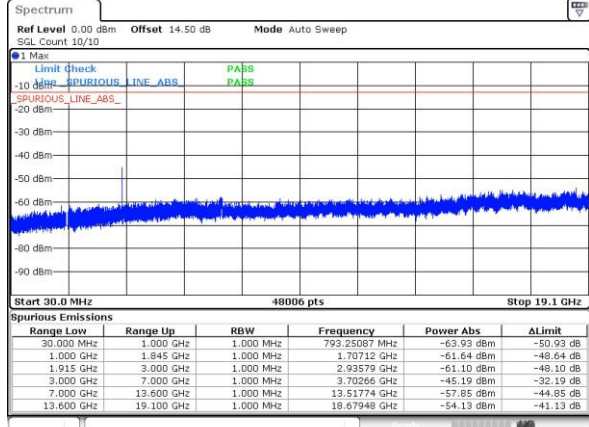
Lowest Channel



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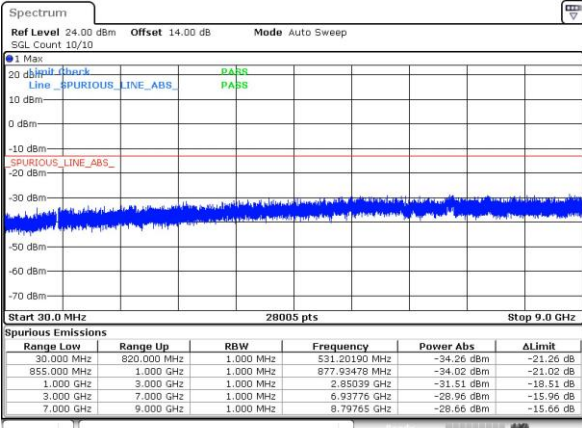
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



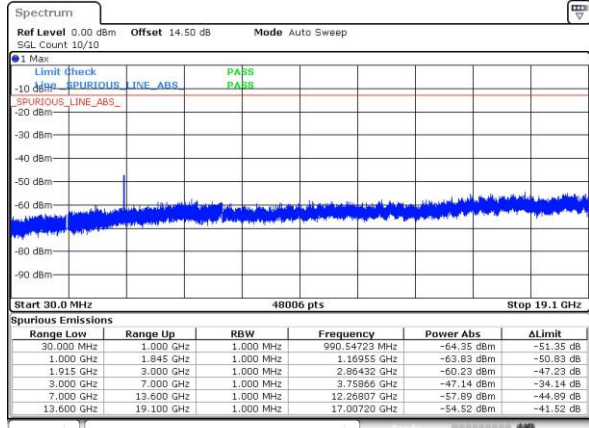
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Middle Channel



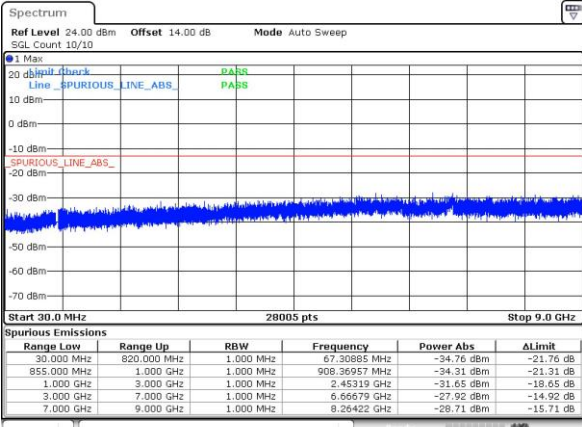
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Middle Channel



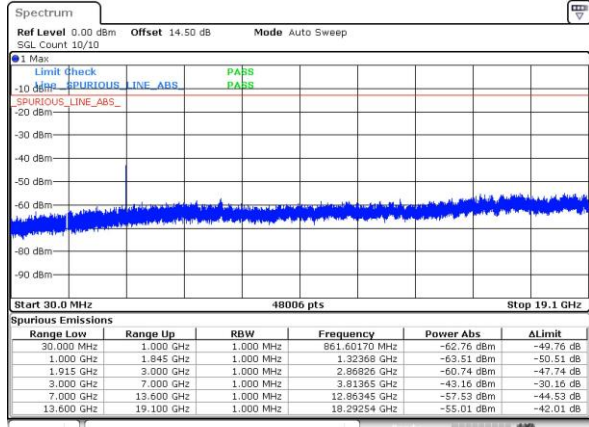
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Highest Channel



Date: 9_MAR.2018 17:55:44

Highest Channel

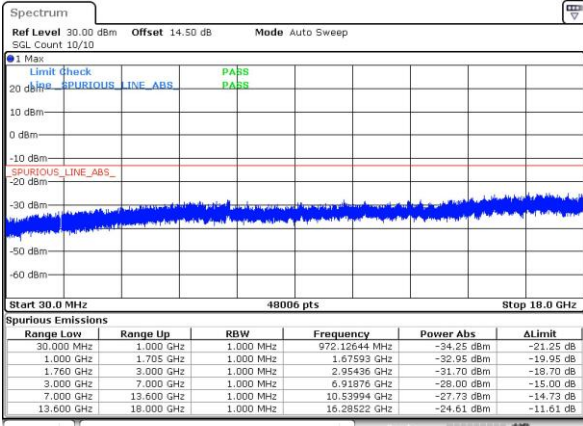


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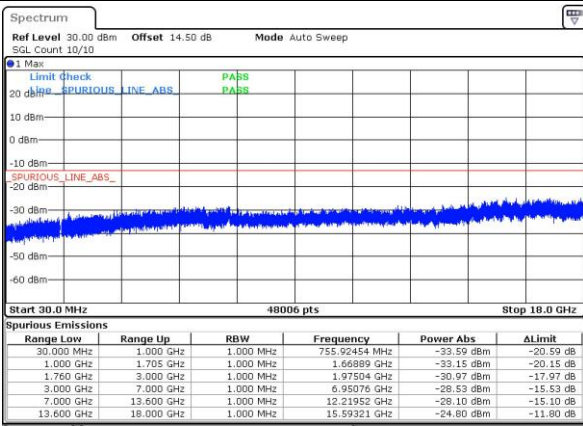
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



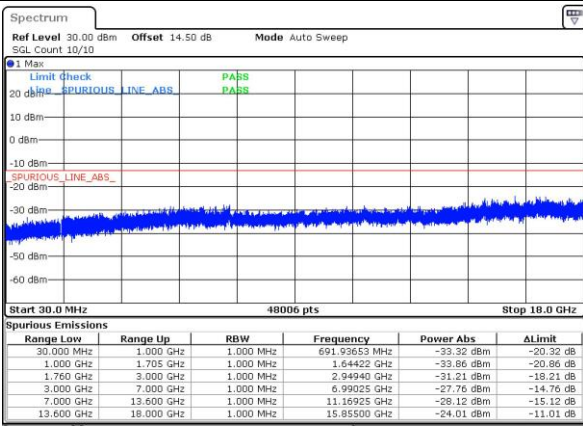
Date: 9_MAR.2018 17:24:57

Middle Channel



Date: 9_MAR.2018 17:27:32

Highest Channel



Date: 9_MAR.2018 17:29:10



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	0.0072	0.0007	PASS
40	Normal Voltage	0.0010	0.0002	
30	Normal Voltage	0.0013	0.0016	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0067	0.0020	
0	Normal Voltage	0.0141	0.0022	
-10	Normal Voltage	0.0069	0.0019	
-20	Normal Voltage	0.0060	0.0024	
-30	Normal Voltage	0.0049	0.0057	
20	Maximum Voltage	0.0023	0.0036	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0041	0.0045	

Note: Normal Voltage = 3.8V. : Battery End Point (BEP) = 3.6 V. : Maximum Voltage =4.35 V



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0016	0.0003	PASS
40	Normal Voltage	0.0007	0.0005	
30	Normal Voltage	0.0022	0.0003	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0005	0.0022	
0	Normal Voltage	0.0011	0.0016	
-10	Normal Voltage	0.0014	0.0007	
-20	Normal Voltage	0.0019	0.0017	
-30	Normal Voltage	0.0002	0.0023	
20	Maximum Voltage	0.0009	0.0028	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0003	0.0012	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 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	0.0039	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0055	
0	Normal Voltage	0.0053	
-10	Normal Voltage	0.0071	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0073	
20	Maximum Voltage	0.0087	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note: Normal Voltage = 3.8V. : Battery End Point (BEP) = 3.6 V. : Maximum Voltage =4.35 V



Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0001	PASS
40	Normal Voltage	0.0022	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 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	0.0015	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0027	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0026	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0030	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.35 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 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)
Middle	1672.8	-67.40	-13	-54.40	-69.11	-71.77	2.88	9.40	H
	2509.2	-58.02	-13	-45.02	-64.08	-63.97	2.5	10.60	H
	3345.6	-68.36	-13	-55.36	-76.36	-74.18	4.63	12.60	H
	1672.8	-69.90	-13	-56.90	-71.74	-74.27	2.88	9.40	V
	2509.2	-67.06	-13	-54.06	-73.01	-73.01	2.50	10.60	V
	3345.6	-68.49	-13	-55.49	-76.52	-74.31	4.63	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)
Middle	1672.8	-64.31	-13	-51.31	-66.02	-68.68	2.88	9.40	H
	2509.2	-58.34	-13	-45.34	-64.40	-64.29	2.5	10.60	H
	3345.6	-68.65	-13	-55.65	-76.65	-74.47	4.63	12.60	H
	1672.8	-71.16	-13	-58.16	-73.00	-75.53	2.88	9.40	V
	2509.2	-65.52	-13	-52.52	-71.47	-71.47	2.50	10.60	V
	3345.6	-68.72	-13	-55.72	-76.75	-74.54	4.63	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)
Middle	3760.00	-62.91	-13	-49.91	-76.53	-70.51	5.00	12.60	H
	5640.00	-62.52	-13	-49.52	-79.12	-68.32	7.30	13.10	H
	7520.00	-59.22	-13	-46.22	-79.20	-62.79	7.73	11.30	H
	3760.00	-62.32	-13	-49.32	-76.65	-69.92	5.00	12.60	V
	5640.00	-62.56	-13	-49.56	-79.09	-68.36	7.30	13.10	V
	7520.00	-59.40	-13	-46.40	-79.04	-62.97	7.73	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)
Middle	3760.00	-62.82	-13	-49.82	-76.44	-70.42	5.00	12.60	H
	5640.00	-62.57	-13	-49.57	-79.17	-68.37	7.30	13.10	H
	7520.00	-58.88	-13	-45.88	-78.86	-62.45	7.73	11.30	H
	3760.00	-61.88	-13	-48.88	-76.21	-69.48	5.00	12.60	V
	5640.00	-62.70	-13	-49.70	-79.23	-68.50	7.30	13.10	V
	7520.00	-59.43	-13	-46.43	-79.07	-63.00	7.73	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)
Middle	1672.8	-71.94	-13	-58.94	-73.65	-76.31	2.88	9.40	H
	2509.2	-70.32	-13	-57.32	-76.38	-76.27	2.5	10.60	H
	3345.6	-63.36	-13	-50.36	-71.36	-69.18	4.63	12.60	H
	4182	-64.77	-13	-51.77	-76.85	-70.20	5.02	12.60	H
	1672.8	-70.61	-13	-57.61	-72.45	-74.98	2.88	9.40	V
	2509.2	-68.13	-13	-55.13	-74.08	-74.08	2.50	10.60	V
	3345.6	-66.19	-13	-53.19	-74.22	-72.01	4.63	12.60	V
	4182	-63.16	-13	-50.16	-75.12	-68.59	5.02	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)
Middle	3760.00	-37.29	-13	-24.29	-52.27	-44.89	5.00	12.60	H
	5640.00	-49.00	-13	-36.00	-65.60	-54.80	7.30	13.10	H
	7520.00	-56.18	-13	-43.18	-76.16	-59.75	7.73	11.30	H
	3760.00	-33.12	-13	-20.12	-50.06	-40.72	5.00	12.60	V
	5640.00	-46.05	-13	-33.05	-62.58	-51.85	7.30	13.10	V
	7520.00	-51.09	-13	-38.09	-70.73	-54.66	7.73	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)
Middle	3465.2	-47.89	-13	-34.89	-61.59	-55.86	4.63	12.60	H
	5197.8	-43.52	-13	-30.52	-61.45	-49.97	6.25	12.70	H
	6930.4	-53.41	-13	-40.41	-73.03	-58.18	8.23	13.00	H
	3465.2	-45.84	-13	-32.84	-53.81	-53.81	4.63	12.60	V
	5197.8	-46.13	-13	-33.13	-52.58	-52.58	6.25	12.70	V
	6930.4	-46.94	-13	-33.94	-66.06	-51.71	8.23	13.00	V

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