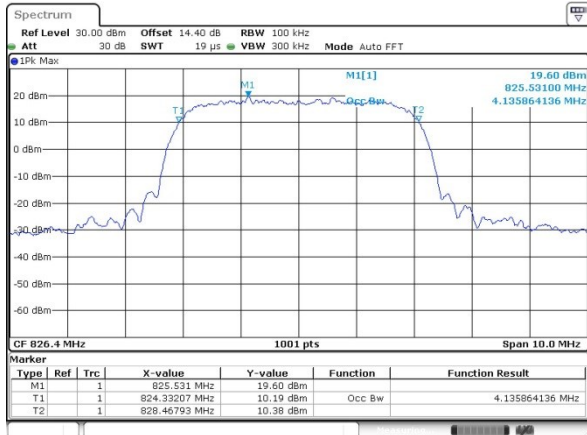




WCDMA Band V (RMC 12.2Kbps)

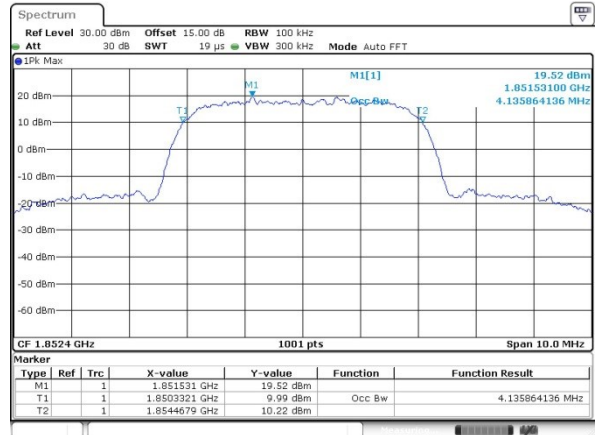
Lowest Channel



Date: 21 APR 2019 15:04:24

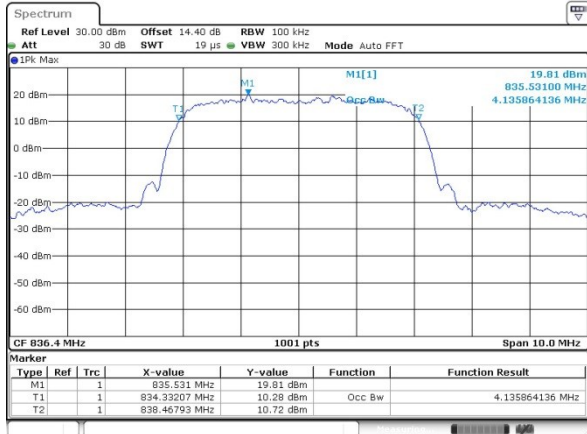
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



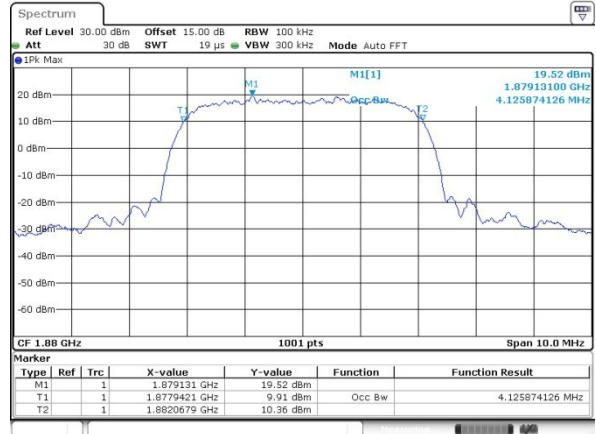
Date: 21 APR 2019 15:20:24

Middle Channel



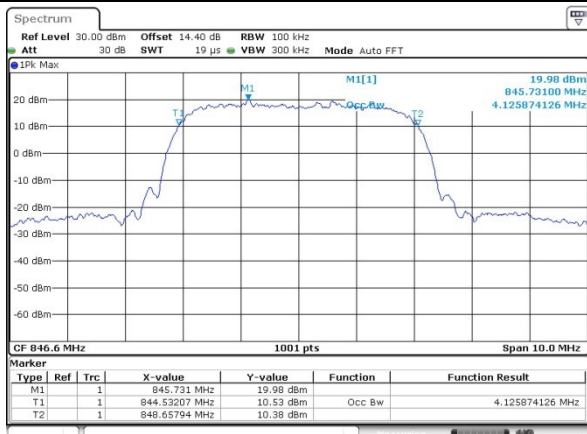
Date: 21 APR 2019 15:04:56

Middle Channel



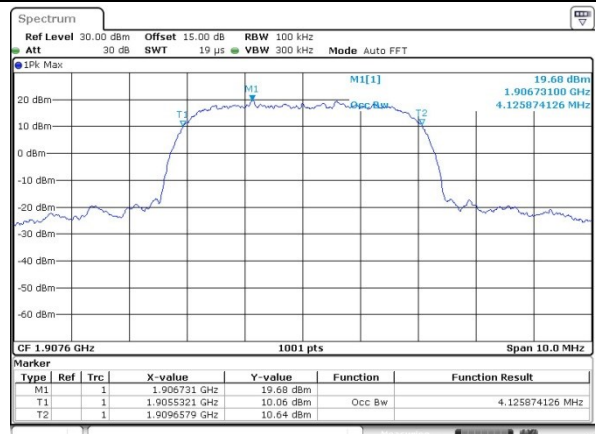
Date: 21 APR 2019 15:20:57

Highest Channel

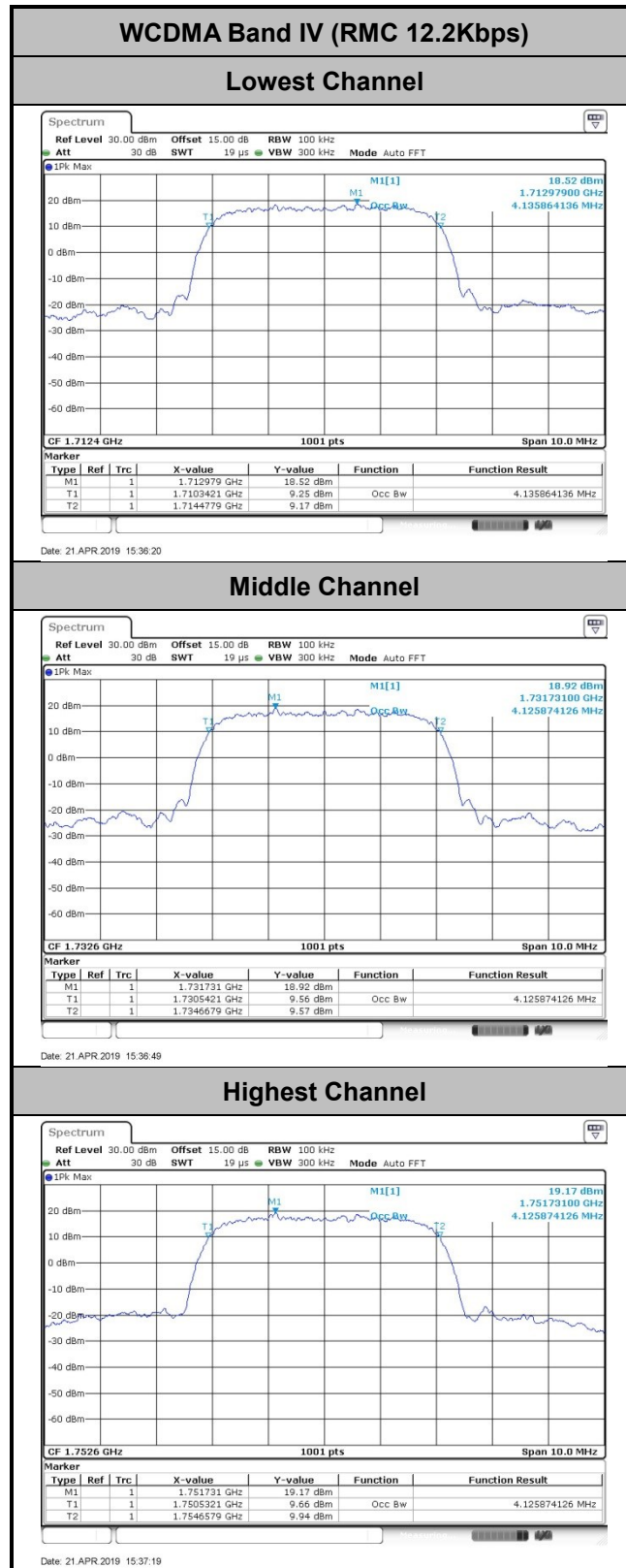


Date: 21 APR 2019 15:05:33

Highest Channel

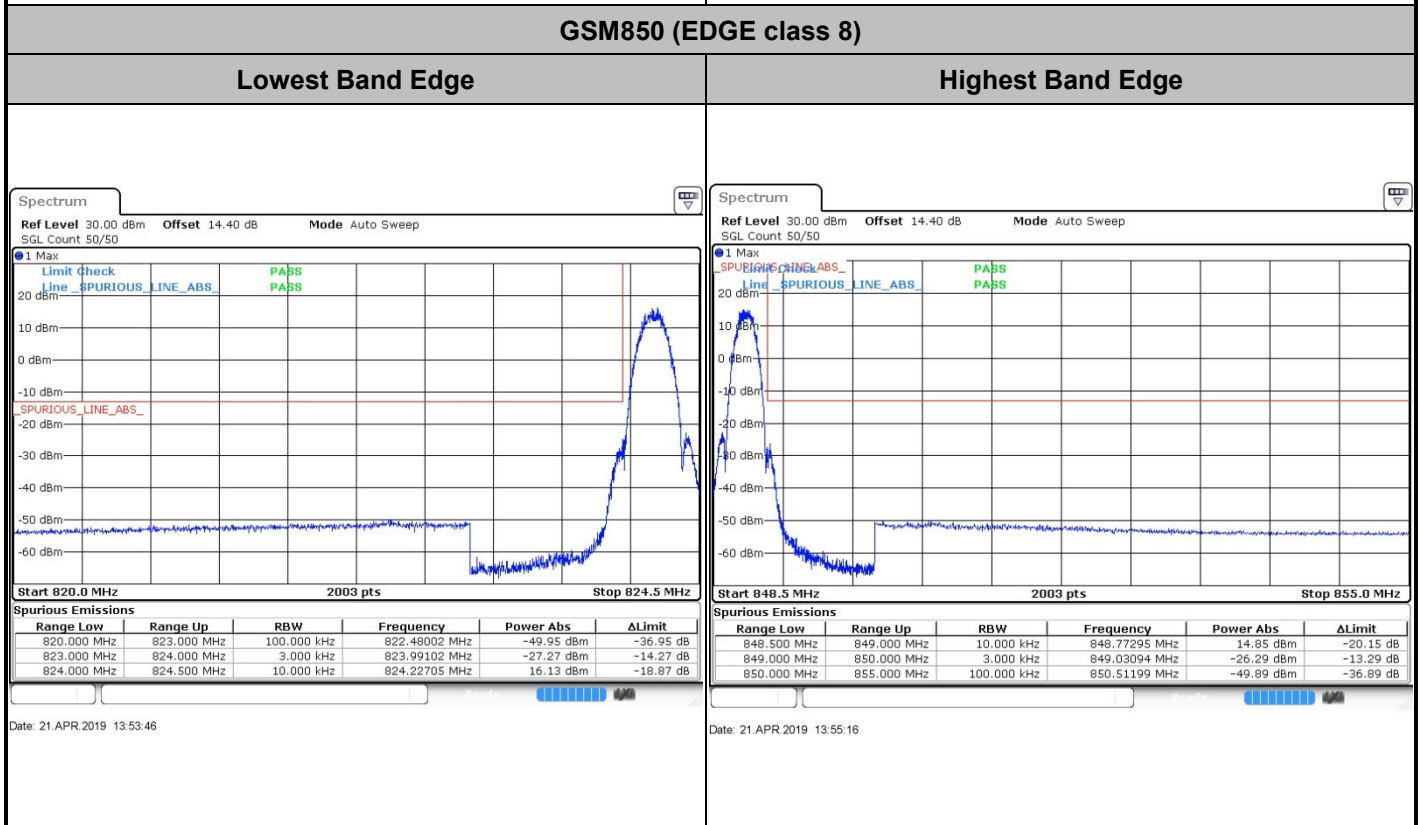
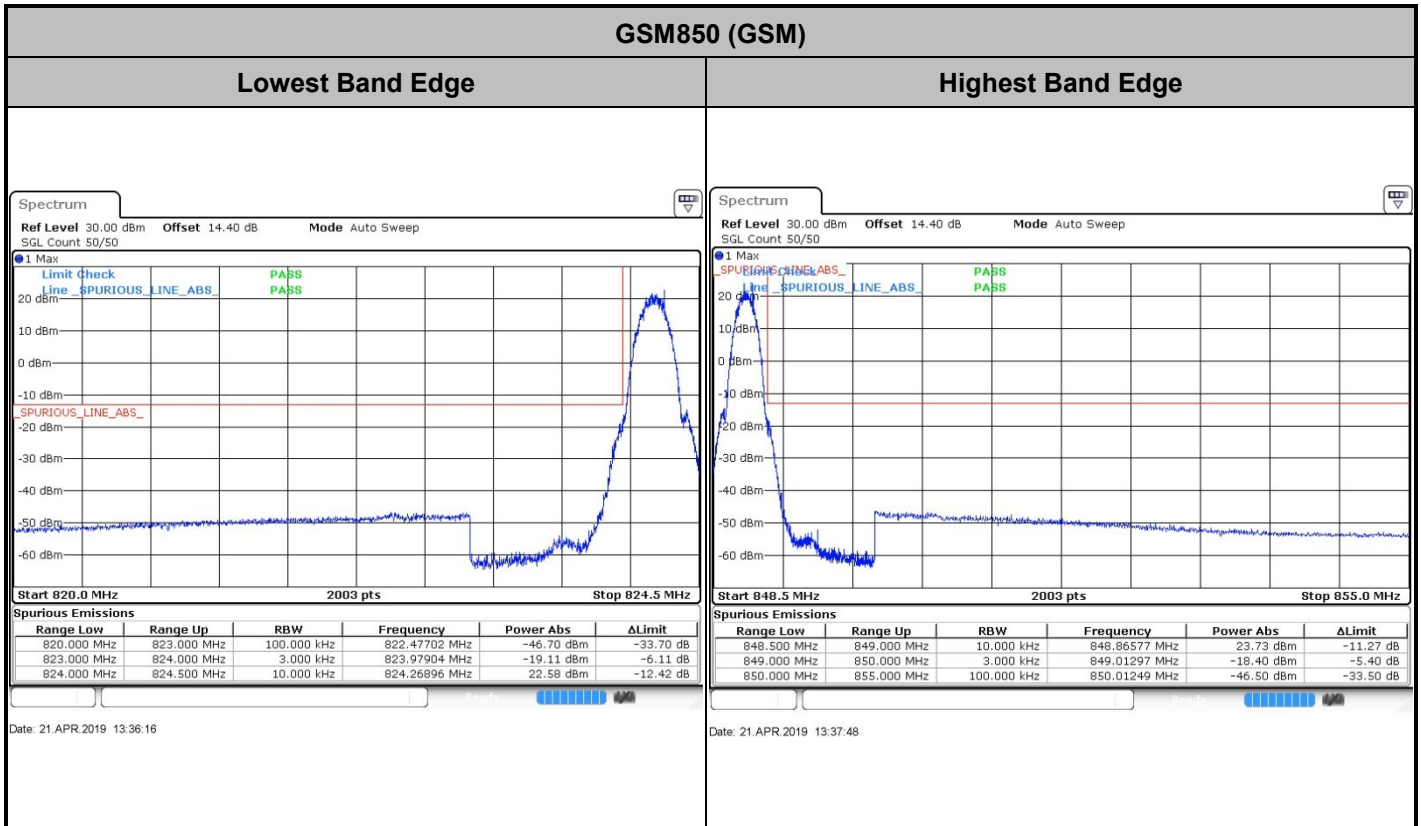


Date: 21 APR 2019 15:21:36





# Conducted Band Edge

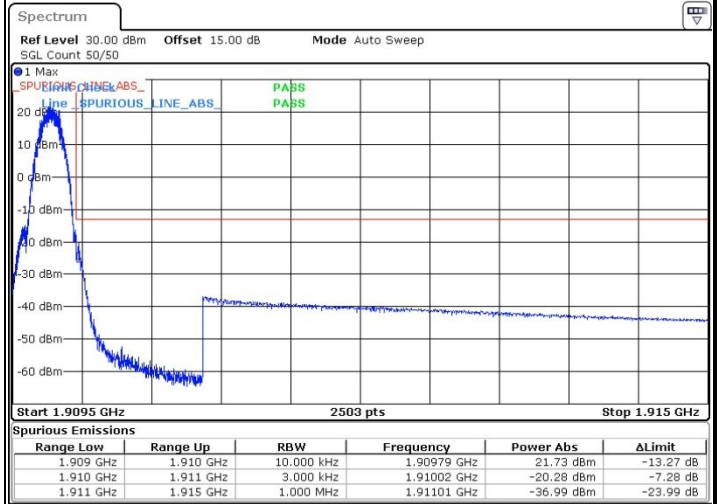
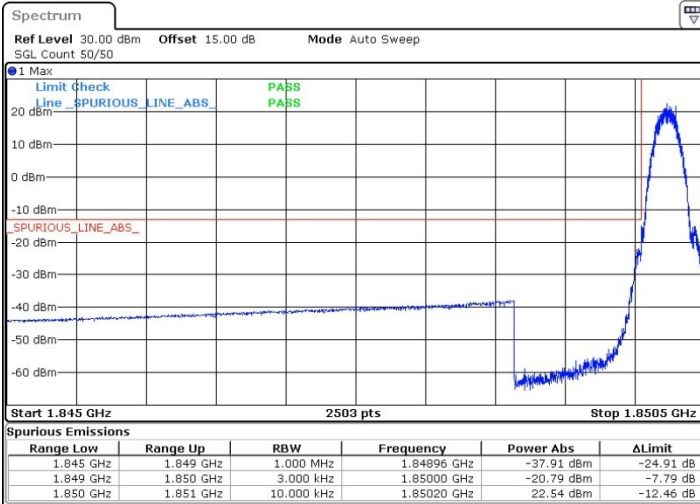




GSM1900 (GSM)

Lowest Band Edge

Highest Band Edge



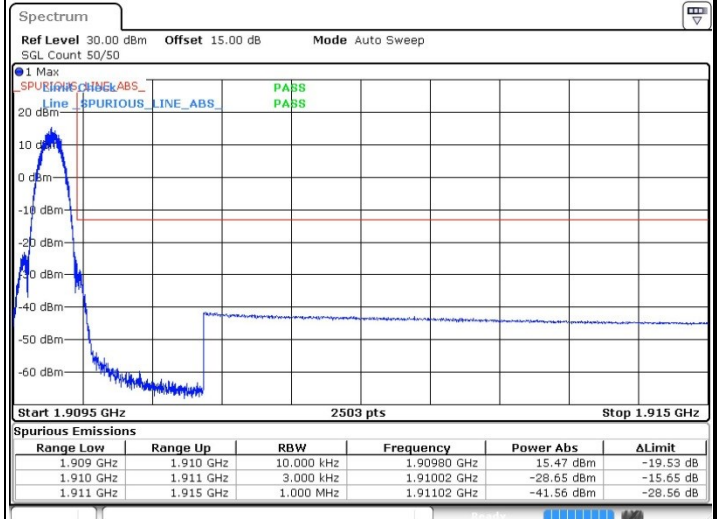
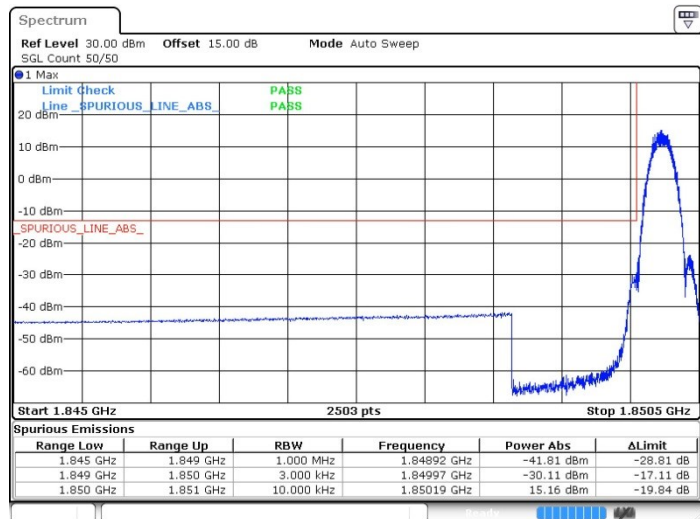
Date: 21.APR.2019 14:16:52

Date: 21.APR.2019 14:18:22

GSM1900 (EDGE class 8)

Lowest Band Edge

Highest Band Edge

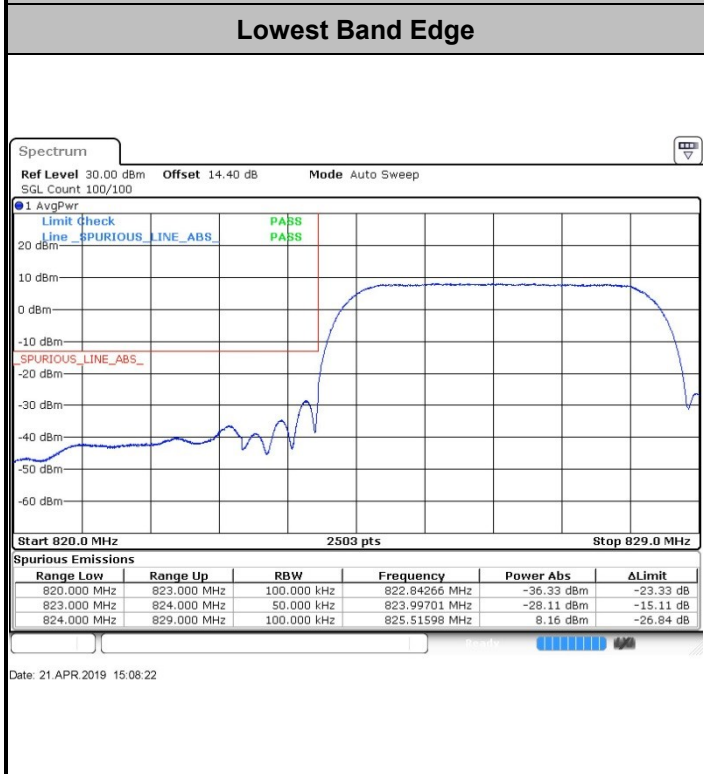


Date: 21.APR.2019 14:26:54

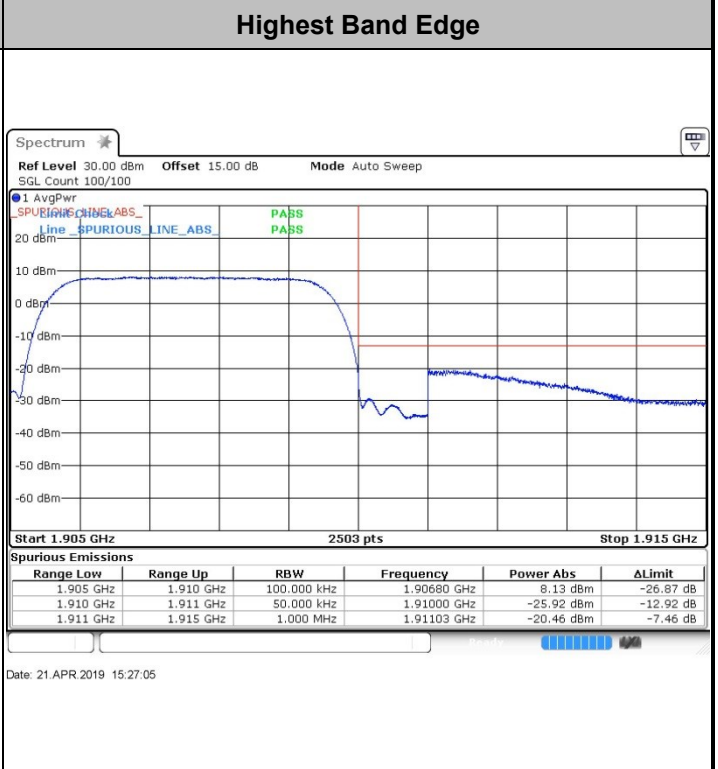
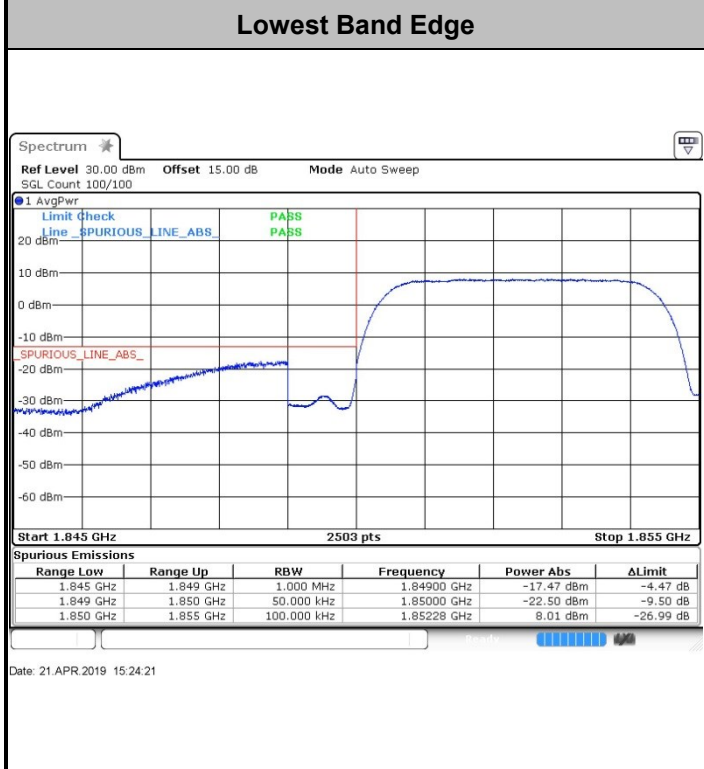
Date: 21.APR.2019 14:28:24

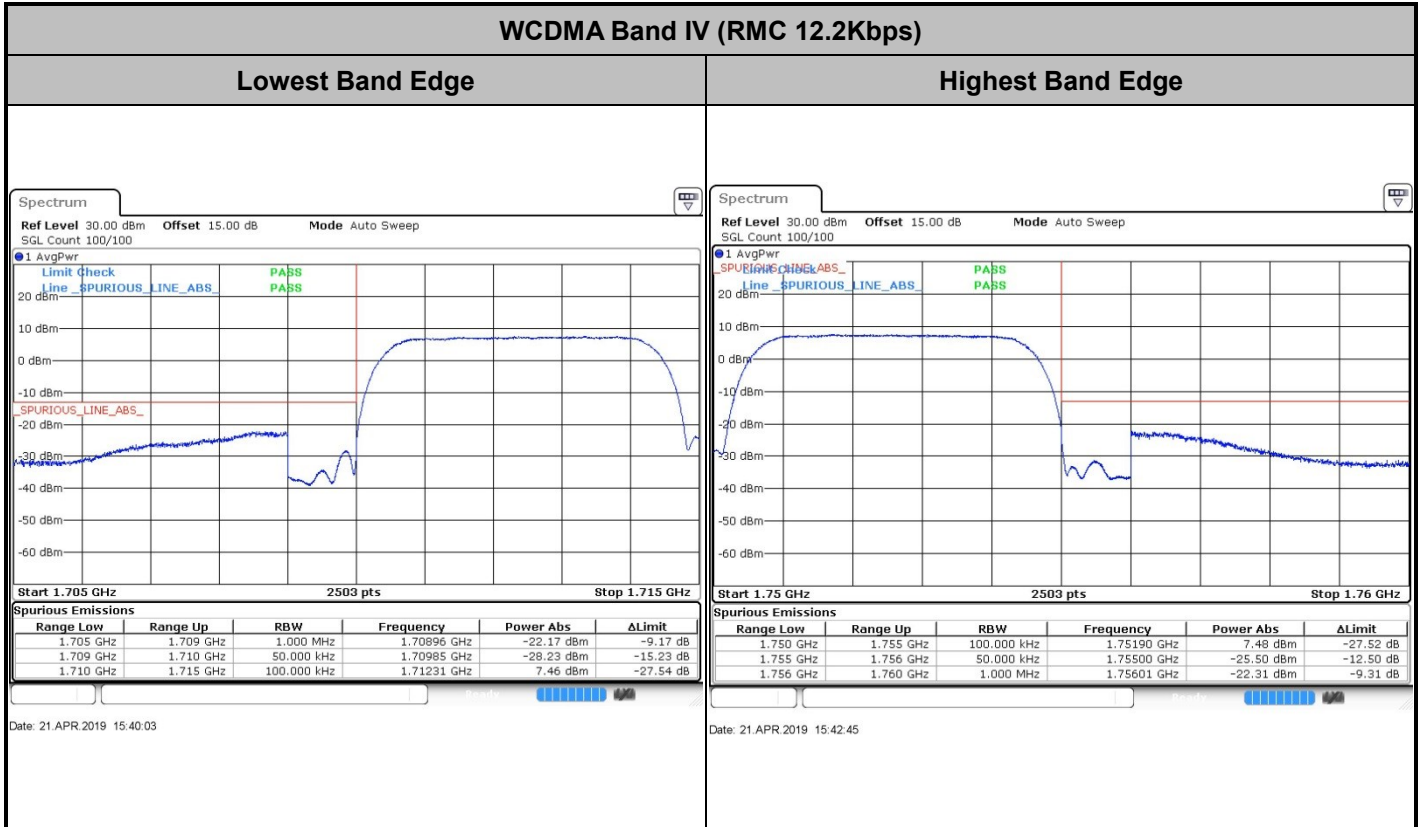


**WCDMA Band V (RMC 12.2Kbps)**



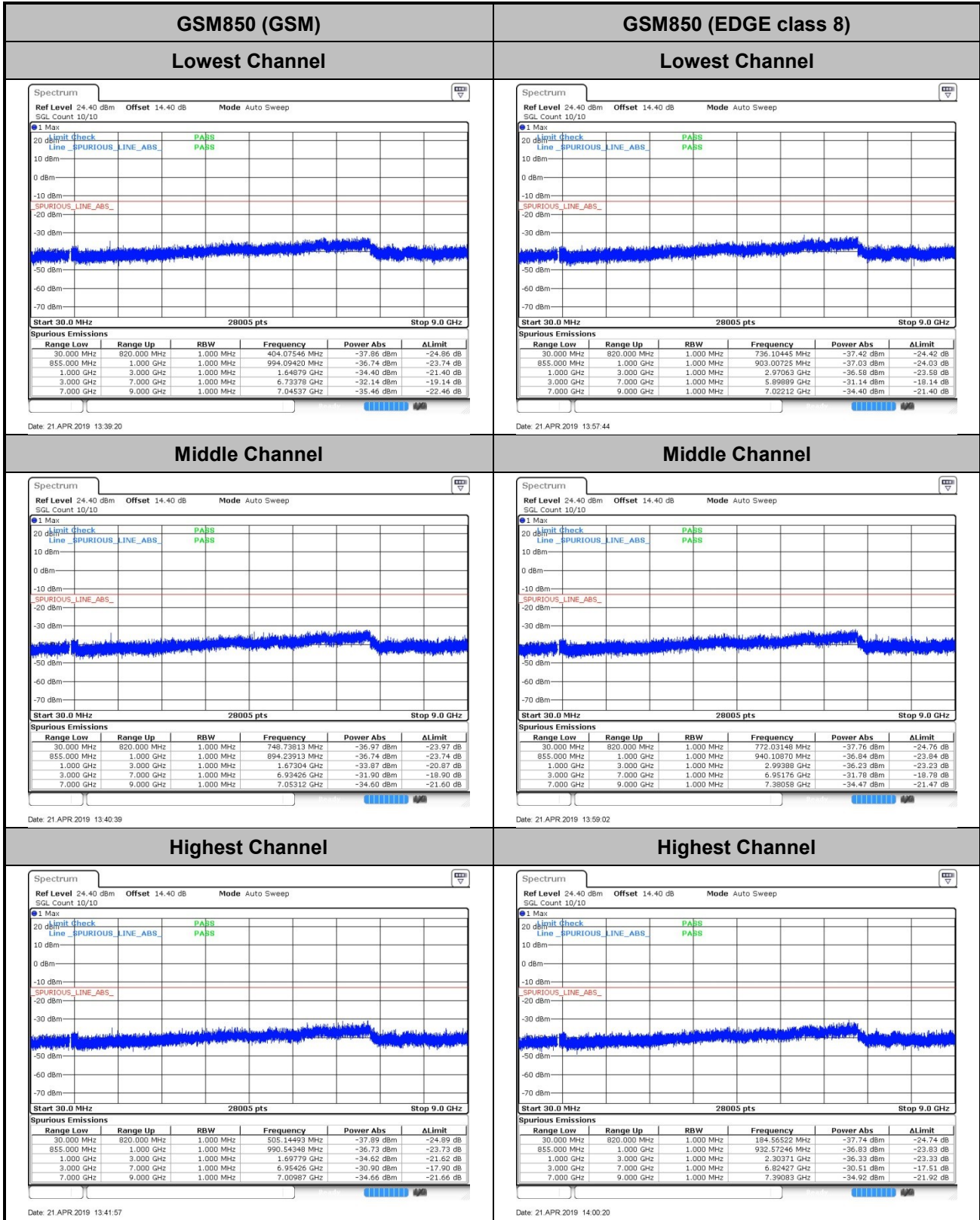
**WCDMA Band II (RMC 12.2Kbps)**

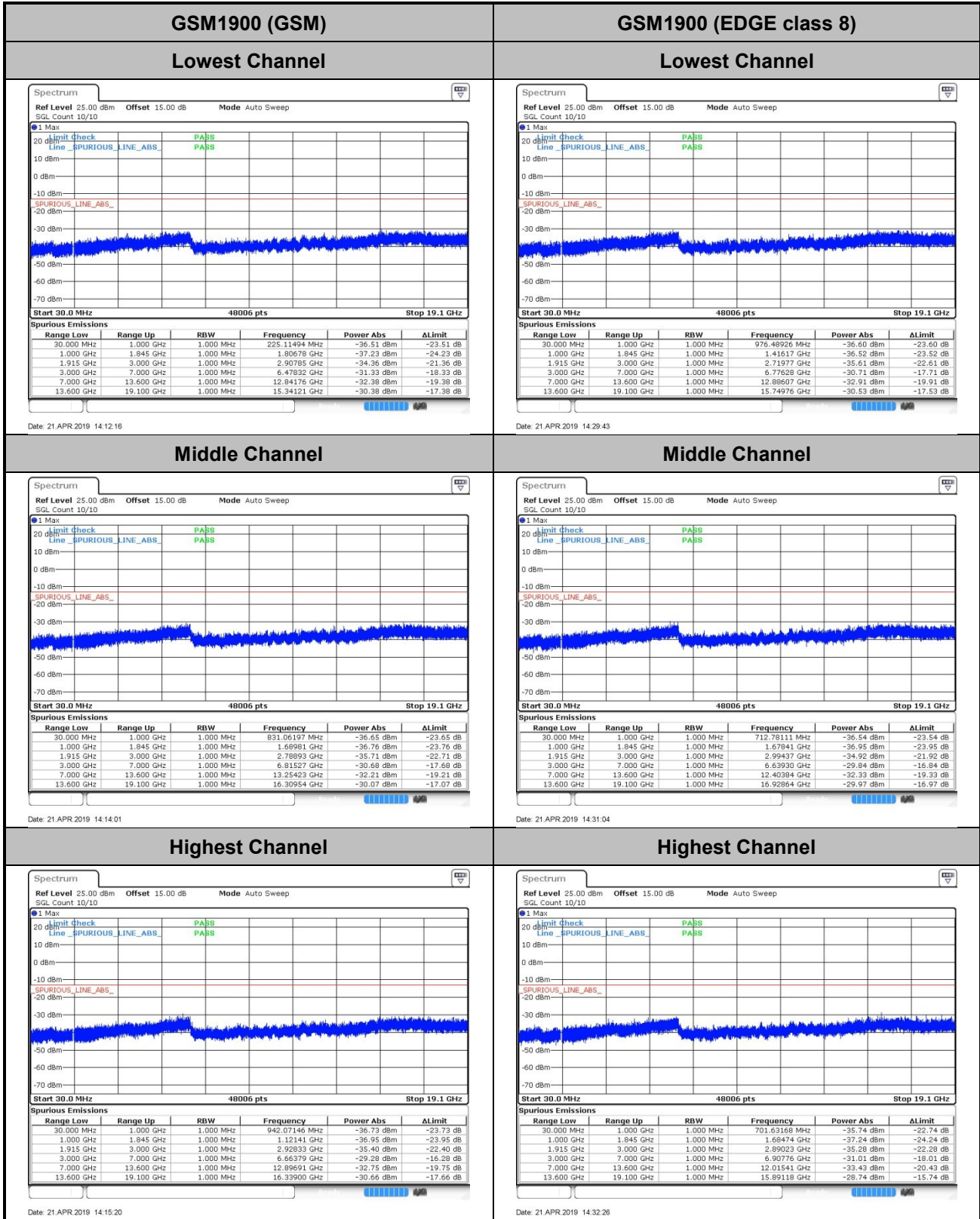






# Conducted Spurious Emission



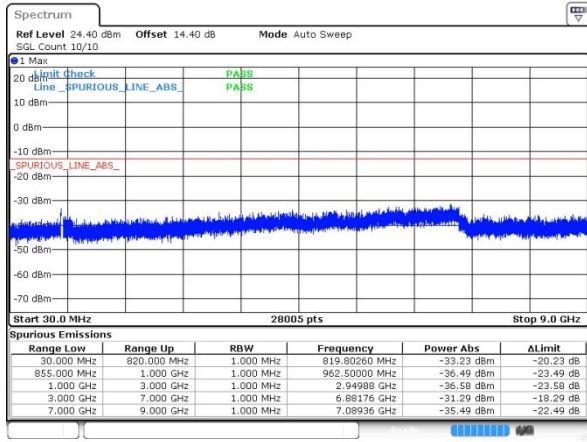






WCDMA Band V (RMC 12.2Kbps)

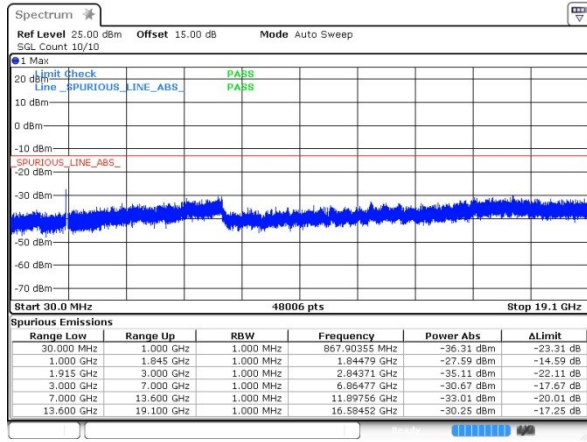
Lowest Channel



Date: 21 APR 2019 15:12:23

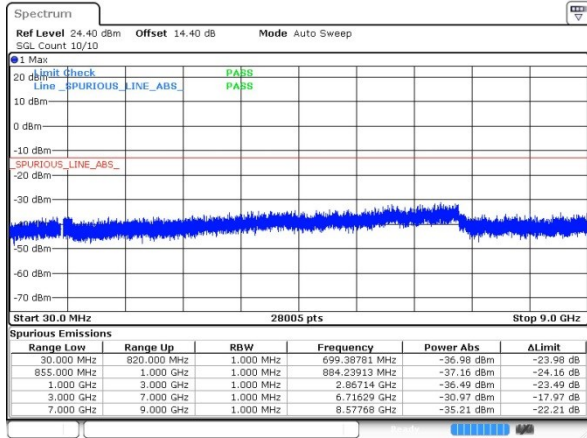
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



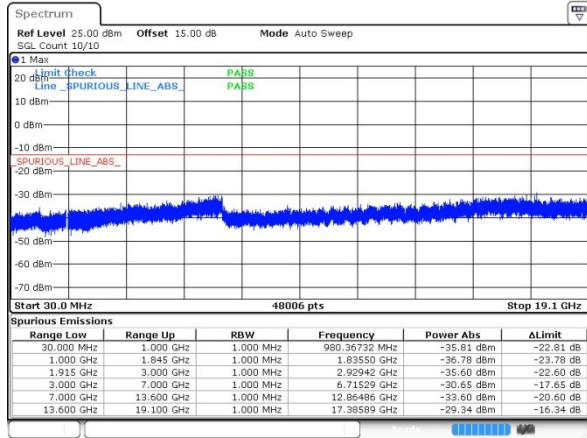
Date: 21 APR 2019 15:28:26

Middle Channel



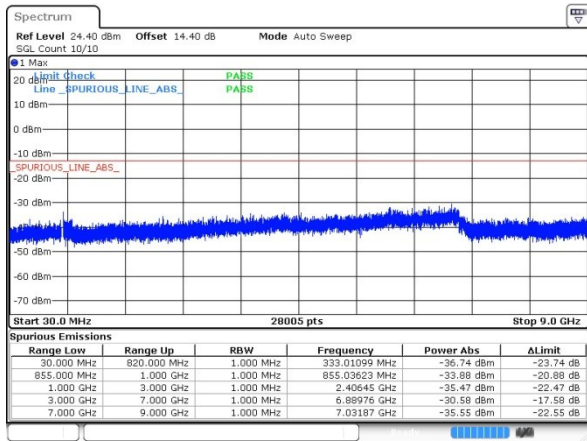
Date: 21 APR 2019 15:13:42

Middle Channel



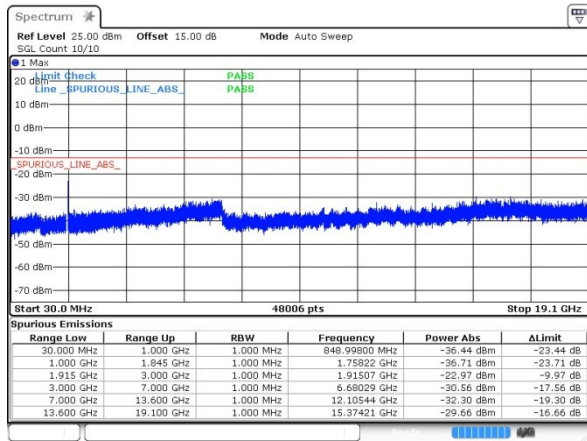
Date: 21 APR 2019 15:29:49

Highest Channel

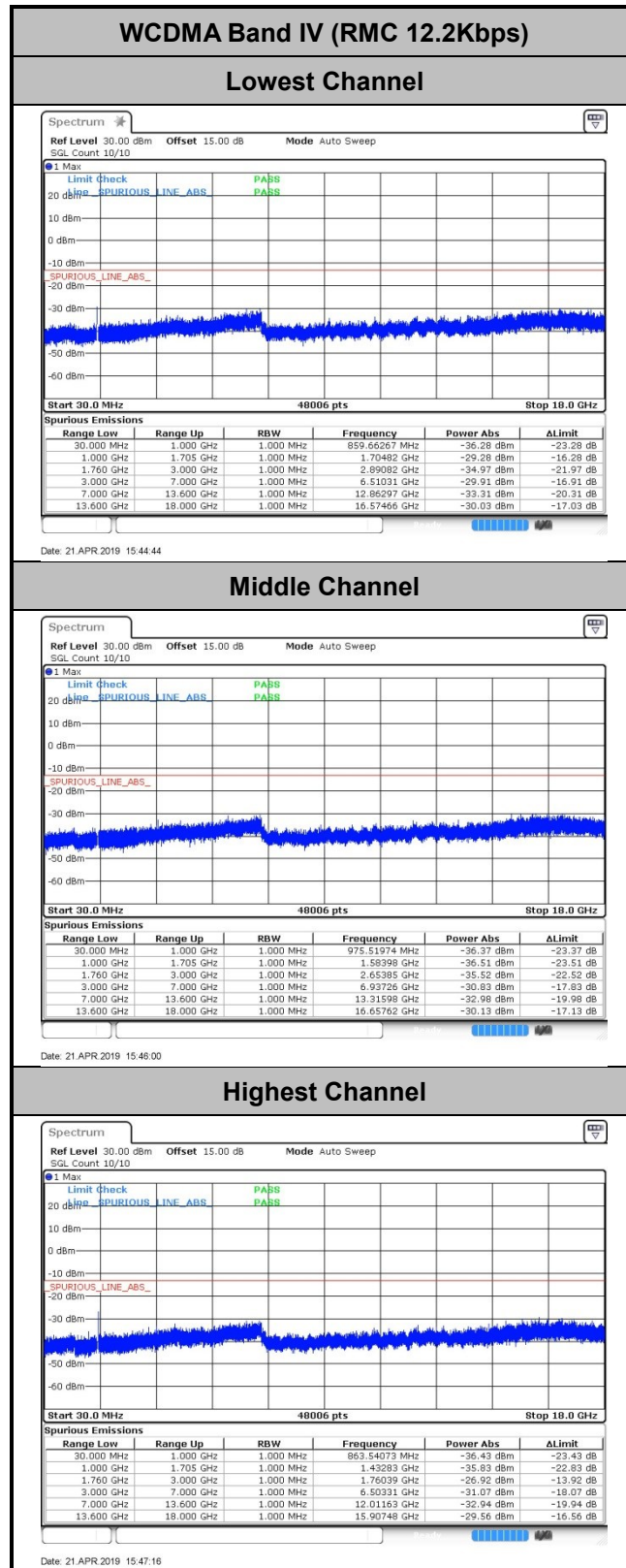


Date: 21 APR 2019 15:14:59

Highest Channel



Date: 21 APR 2019 15:31:08





**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	0.0047	0.0060	PASS
40	Normal Voltage	0.0525	0.0166	
30	Normal Voltage	0.0120	0.0538	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0574	0.0335	
0	Normal Voltage	0.0191	0.0538	
-10	Normal Voltage	0.0083	0.0466	
-20	Normal Voltage	0.0143	0.0167	
-30	Normal Voltage	0.0108	0.0478	
20	Maximum Voltage	0.0466	0.0514	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0395	0.0395	

**Note:** Normal Voltage = 3.85V. : Battery End Point (BEP) =3.5V. : Maximum Voltage =4.35V



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0053	0.0005	PASS
40	Normal Voltage	0.0016	0.0016	
30	Normal Voltage	0.0026	0.0025	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0170	0.0255	
0	Normal Voltage	0.0074	0.0186	
-10	Normal Voltage	0.0160	0.0011	
-20	Normal Voltage	0.0219	0.0038	
-30	Normal Voltage	0.0005	0.0213	
20	Maximum Voltage	0.0053	0.0160	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0133	0.0011	

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.5V. ; Maximum Voltage =4.35V
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	0.0394	
30	Normal Voltage	0.0441	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0072	
0	Normal Voltage	0.0323	
-10	Normal Voltage	0.0048	
-20	Normal Voltage	0.0168	
-30	Normal Voltage	0.0312	
20	Maximum Voltage	0.0443	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note: Normal Voltage = 3.85V. : Battery End Point (BEP) =3.5V. : Maximum Voltage =4.35V



Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0186	PASS
40	Normal Voltage	0.0129	
30	Normal Voltage	0.0166	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0118	
0	Normal Voltage	0.0154	
-10	Normal Voltage	0.0239	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0117	
20	Maximum Voltage	0.0166	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0032	

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.5V. ; Maximum Voltage =4.35V
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	0.0068	PASS
40	Normal Voltage	0.0158	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0058	
-10	Normal Voltage	0.0150	
-20	Normal Voltage	0.0164	
-30	Normal Voltage	0.0091	
20	Maximum Voltage	0.0092	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0167	

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) =3.5V. ; Maximum Voltage =4.35V
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

Pre-scanned in three orthogonal panels, X, Y, Z for WWAN Bottom / Top Antenna which can't transmit simultaneously. The worse cases were recorded in this report.

GSM850 (GSM) for Bottom Antenna								
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	-56.23	-13	-43.23	-63.20	1.58	10.70	H
	2512	-50.91	-13	-37.91	-59.16	2.102	12.50	H
	3344	-64.78	-13	-51.78	-73.67	2.856	13.90	H
	1672	-57.98	-13	-44.98	-64.95	1.58	10.70	V
	2512	-52.68	-13	-39.68	-60.93	2.10	12.50	V
	3345.6	-64.40	-13	-51.40	-73.29	2.86	13.90	V

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

GSM850 (EDGE class 8) for Bottom Antenna								
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	-59.22	-13	-46.22	-66.19	1.58	10.70	H
	2512	-54.34	-13	-41.34	-62.59	2.102	12.50	H
	3345.6	-64.70	-13	-51.70	-73.59	2.856	13.90	H
	1672	-62.07	-13	-49.07	-69.04	1.58	10.70	V
	2512	-55.05	-13	-42.05	-63.30	2.10	12.50	V
	3345.6	-64.49	-13	-51.49	-73.38	2.86	13.90	V

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





GSM1900 (GSM) for Bottom Antenna								
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	3762	-58.87	-13	-45.87	-71.13	2.641	14.90	H
	5640	-56.79	-13	-43.79	-68.65	2.94	14.80	H
	7520	-52.42	-13	-39.42	-62.19	3.39	13.16	H
	3762	-57.78	-13	-44.78	-70.04	2.64	14.90	V
	5640	-53.14	-13	-40.14	-65.00	2.94	14.80	V
	7518	-51.88	-13	-38.88	-61.65	3.39	13.16	V

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

GSM1900 (EDGE class 8) for Bottom Antenna								
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	3762	-58.29	-13	-45.29	-70.55	2.641	14.90	H
	5640	-55.01	-13	-42.01	-66.87	2.94	14.80	H
	7520	-52.47	-13	-39.47	-62.24	3.39	13.16	H
	3762	-57.37	-13	-44.37	-69.63	2.64	14.90	V
	5640	-52.82	-13	-39.82	-64.68	2.94	14.80	V
	7520	-52.04	-13	-39.04	-61.81	3.39	13.16	V

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



WCDMA Band V(RMC 12.2Kbps) for Bottom Antenna								
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	-69.26	-13	-56.26	-76.23	1.58	10.70	H
	2509	-64.94	-13	-51.94	-73.19	2.102	12.50	H
	3345.6	-64.68	-13	-51.68	-73.57	2.856	13.90	H
	1672	-69.26	-13	-56.26	-76.23	1.58	10.70	V
	2509	-64.70	-13	-51.70	-72.95	2.10	12.50	V
	3345.6	-64.43	-13	-51.43	-73.32	2.86	13.90	V

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

WCDMA Band II(RMC 12.2Kbps) for Bottom Antenna								
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	3762	-59.57	-13	-46.57	-71.83	2.641	14.90	H
	5640	-57.35	-13	-44.35	-69.21	2.94	14.80	H
	7520	-52.18	-13	-39.18	-61.95	3.39	13.16	H
	3762	-59.15	-13	-46.15	-71.41	2.64	14.90	V
	5640	-57.20	-13	-44.20	-69.06	2.94	14.80	V
	7520	-52.13	-13	-39.13	-61.90	3.39	13.16	V

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



WCDMA Band IV(RMC 12.2Kbps) for Bottom Antenna								
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	3468	-62.76	-13	-49.76	-73.50	2.604	13.34	H
	5197.8	-58.41	-13	-45.41	-68.92	3.011	13.52	H
	6930	-54.43	-13	-41.43	-64.63	3.271	13.47	H
	3468	-63.05	-13	-50.05	-73.79	2.604	13.34	V
	5197	-58.52	-13	-45.52	-69.03	3.011	13.52	V
	6930	-54.24	-13	-41.24	-64.44	3.271	13.47	V

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