

LTE Band 25 Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level



12:29:25 04.12.2019

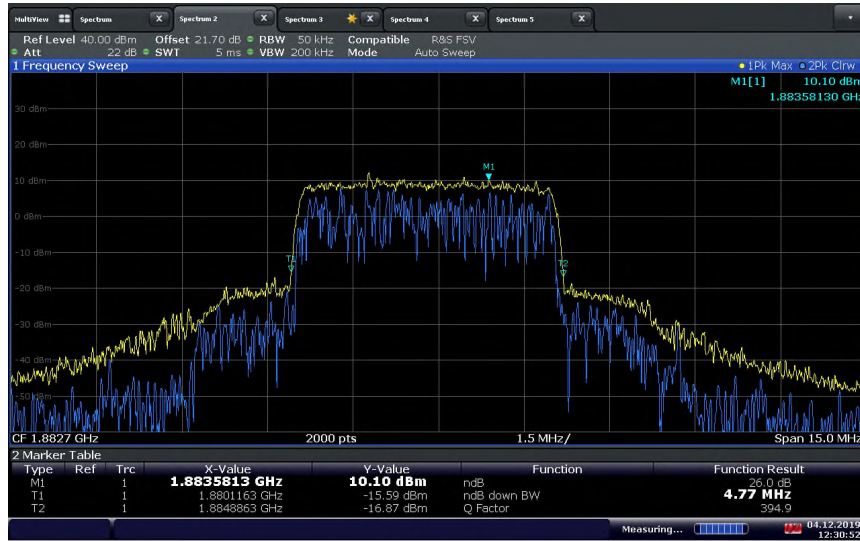
LTE Band 25 Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



15:19:26 03.12.2019



LTE Band 25 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



12:30:53 04.12.2019

LTE Band 25 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



15:20:20 03.12.2019



LTE Band 25 Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC + 3 dB Level



12:32:52 04.12.2019

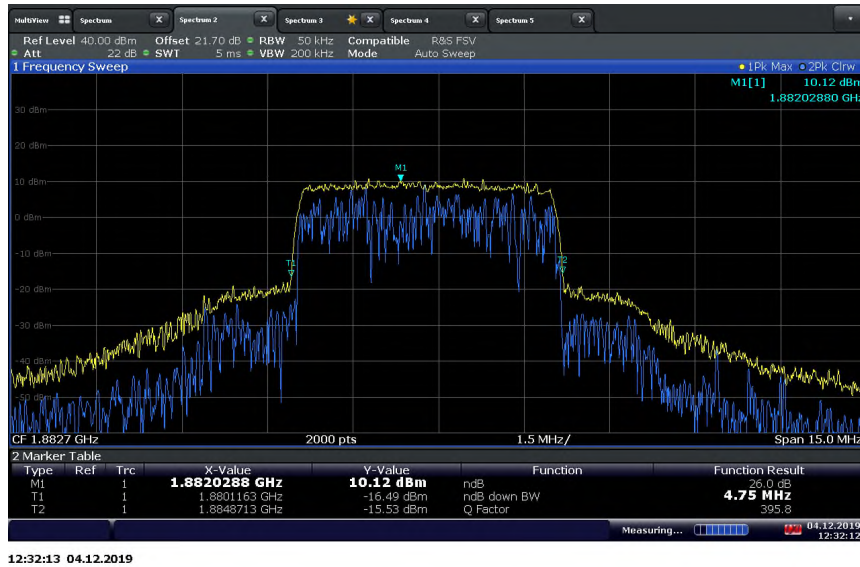
LTE Band 25 Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



15:19:26 03.12.2019



LTE Band 25 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC + 3 dB Level

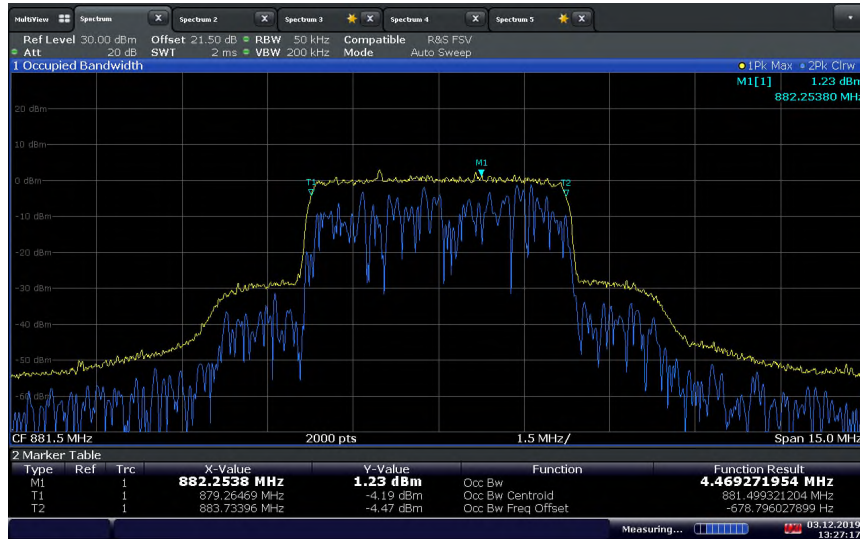


LTE Band 25 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)





LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level



13:27:17 03.12.2019

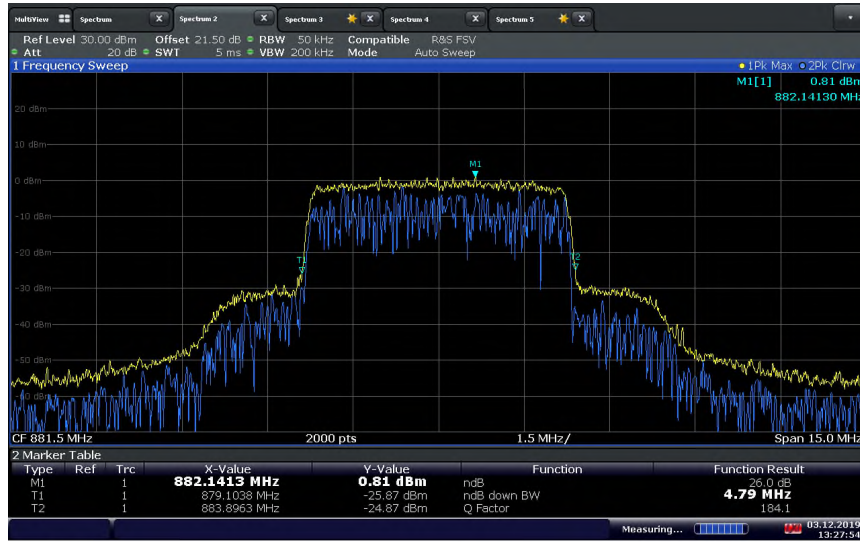
LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



13:33:07 03.12.2019



LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC + 3 dB Level



13:29:36 03.12.2019

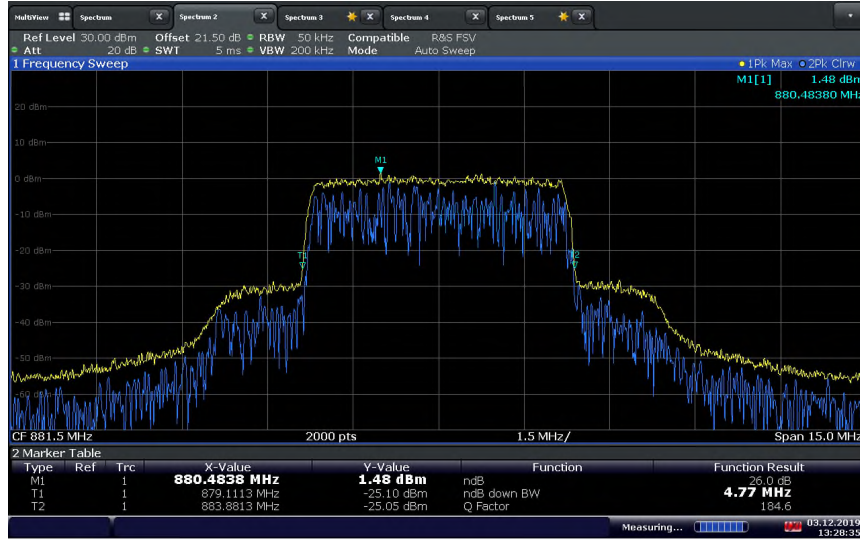
LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



13:33:07 03.12.2019

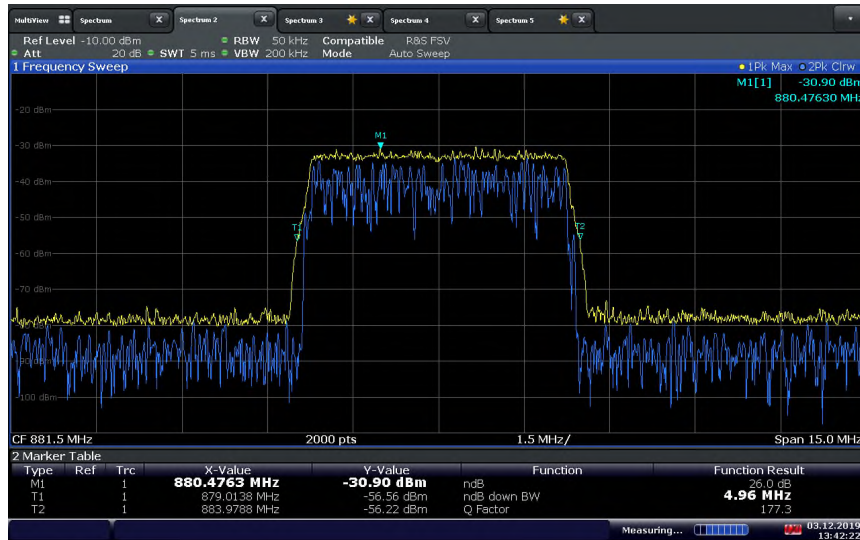


LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC + 3 dB Level



13:28:35 03.12.2019

LTE Band 26 869 - 894 MHz Downlink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



13:42:23 03.12.2019

LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level



13:15:33 03.12.2019

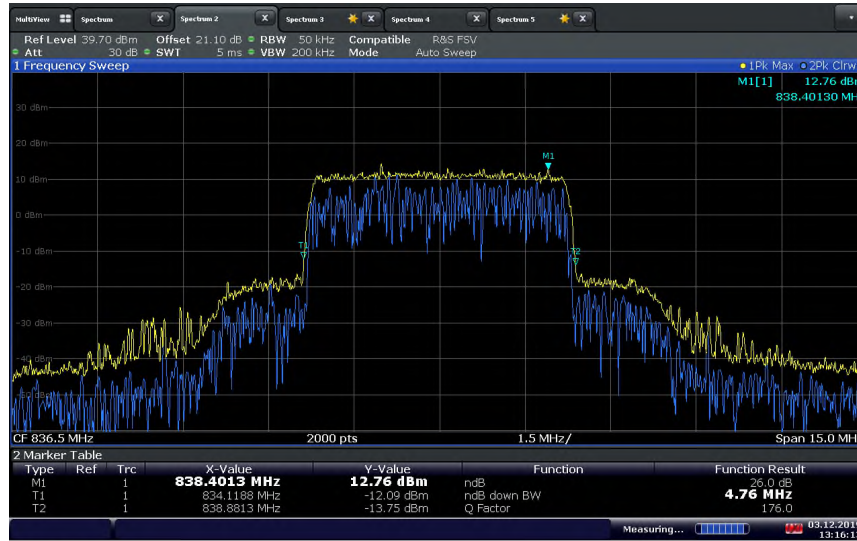
LTE Band 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



13:46:25 03.12.2019



LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



13:16:14 03.12.2019

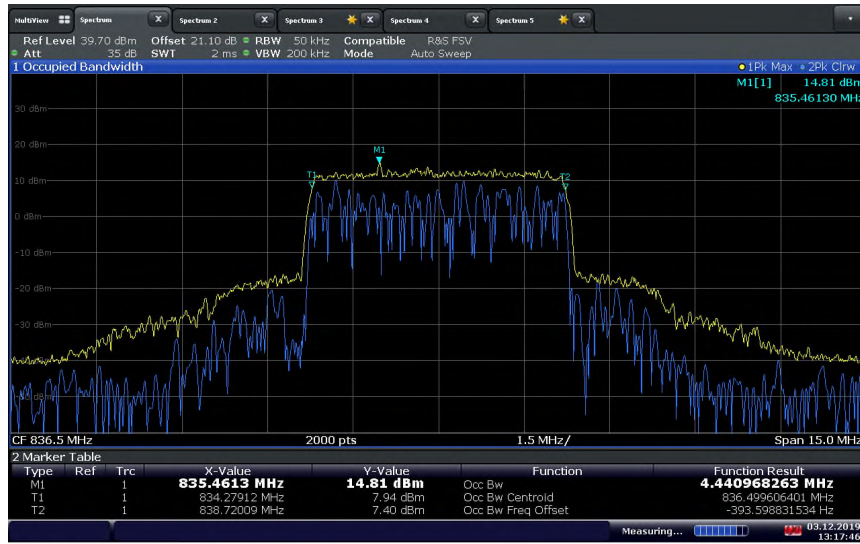
LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



13:47:22 03.12.2019

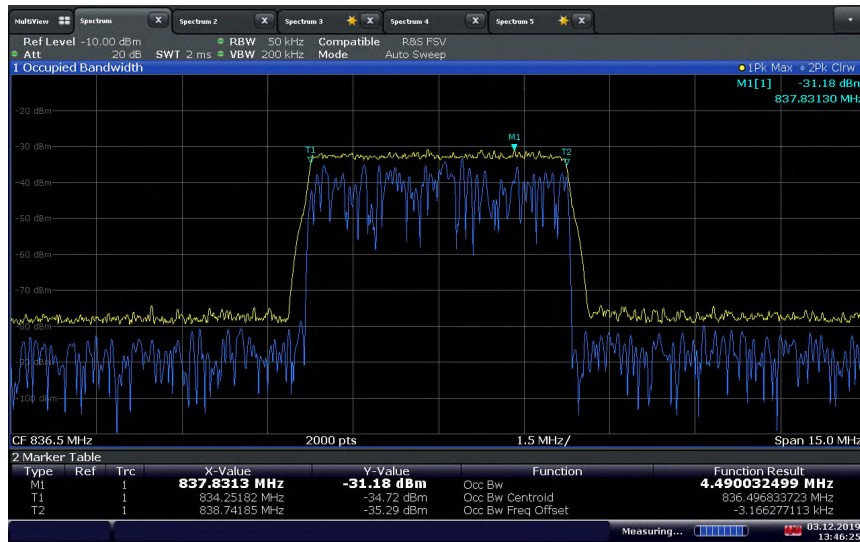


LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with input signal at AGC + 3 dB Level



13:17:46 03.12.2019

LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



13:46:25 03.12.2019

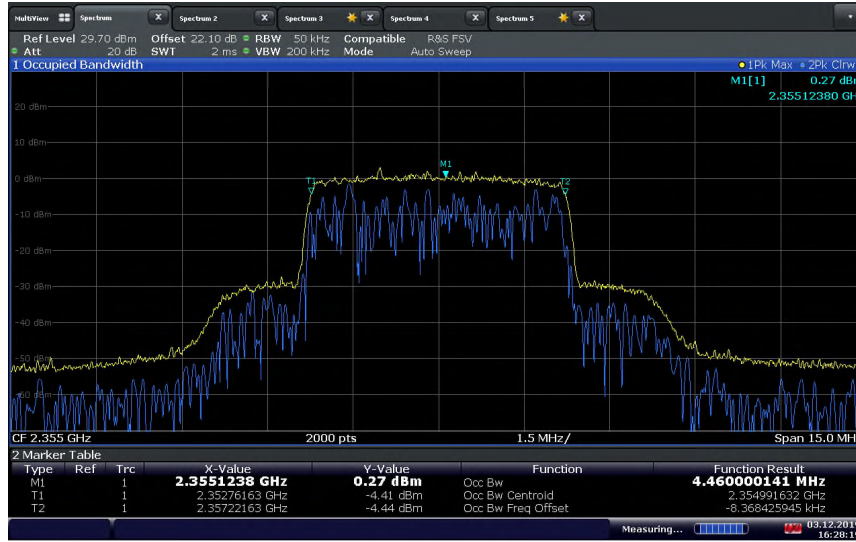
LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC + 3 dB Level



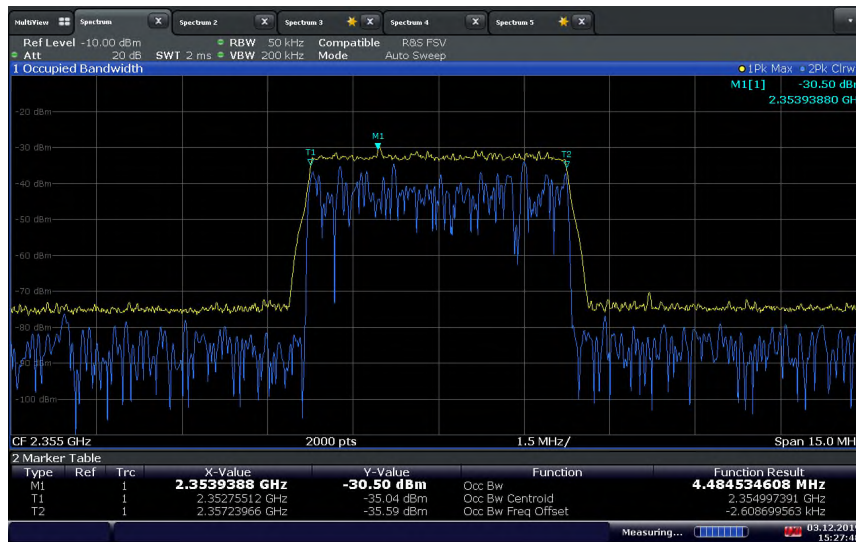
LTE Band 26 824 - 849 MHz Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



LTE Band 30 Downlink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level

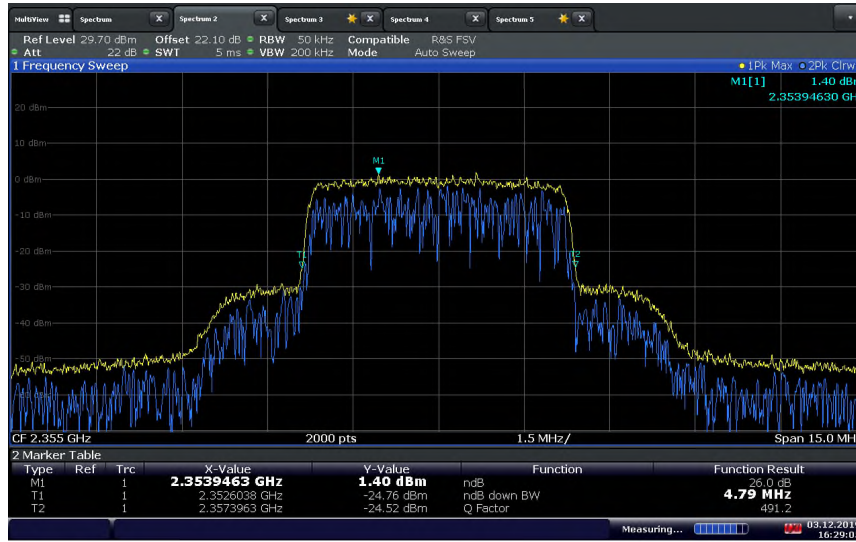


LTE Band 30 Downlink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)





LTE Band 30 Downlink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



16:29:06 03.12.2019

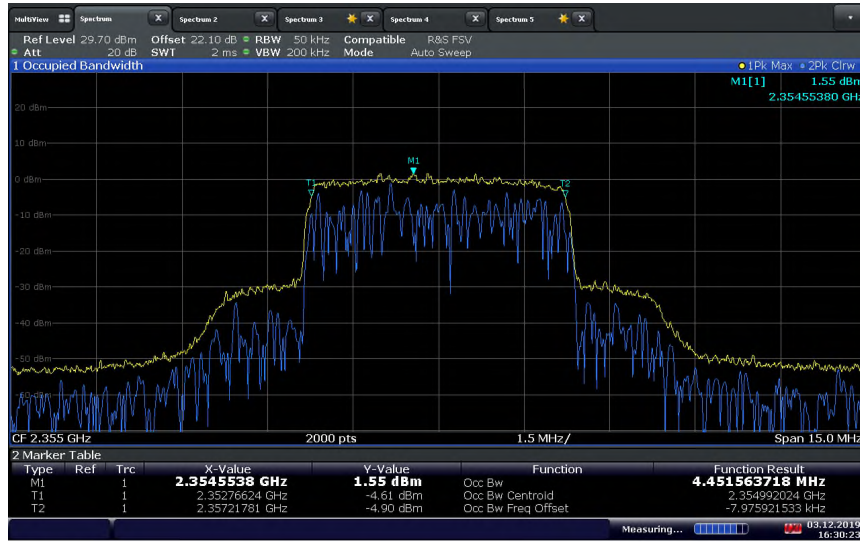
LTE Band 30 Downlink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



15:26:50 03.12.2019



LTE Band 30 Downlink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC + 3 dB Level



16:30:24 03.12.2019

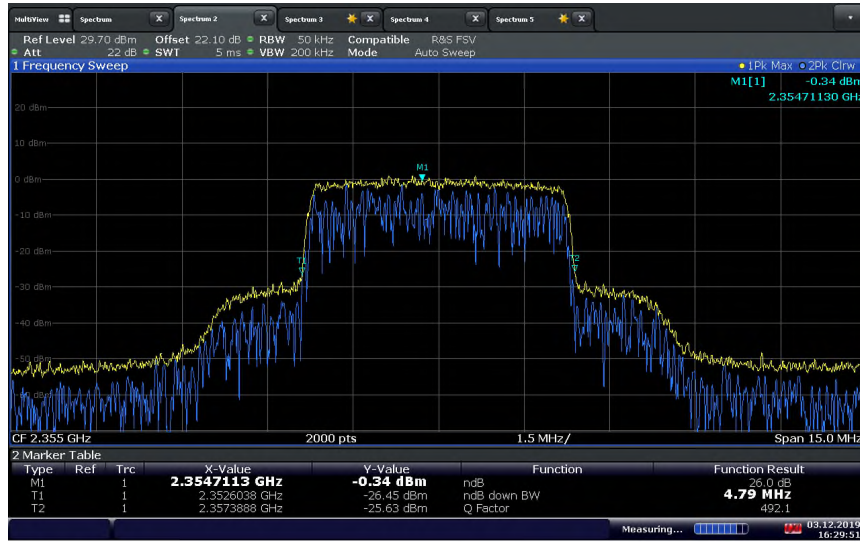
LTE Band 30 Downlink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



15:27:49 03.12.2019



LTE Band 30 Downlink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC + 3 dB Level



16:29:51 03.12.2019

LTE Band 30 Downlink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



15:26:50 03.12.2019



LTE Band 30 Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level



LTE Band 30 Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)

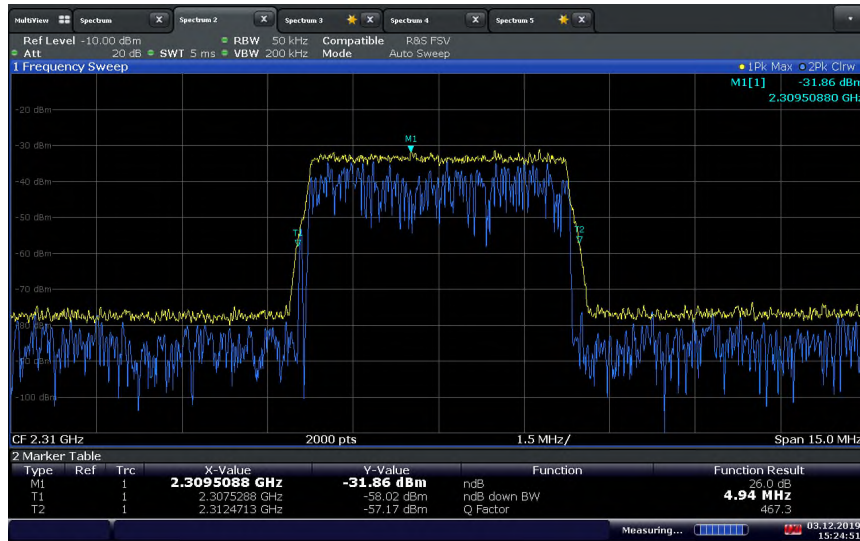




LTE Band 30 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



LTE Band 30 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



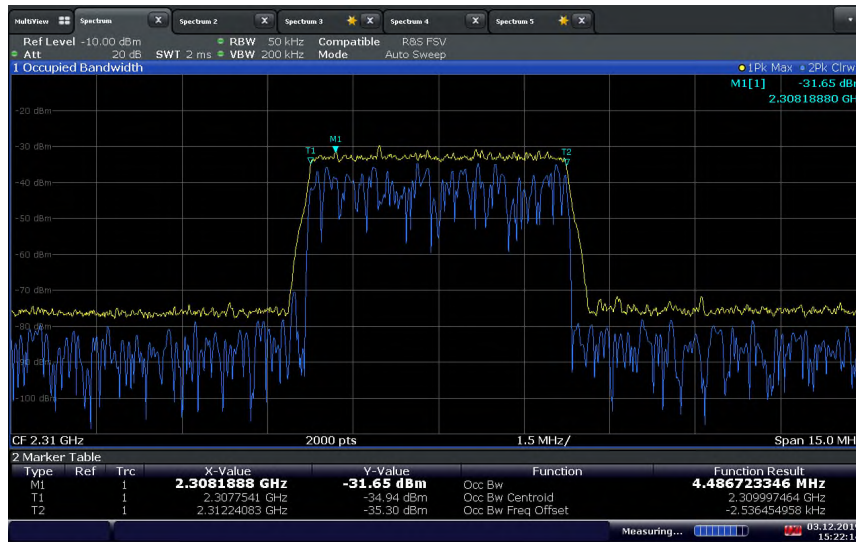


LTE Band 30 Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC + 3 dB Level



16:38:10 03.12.2019

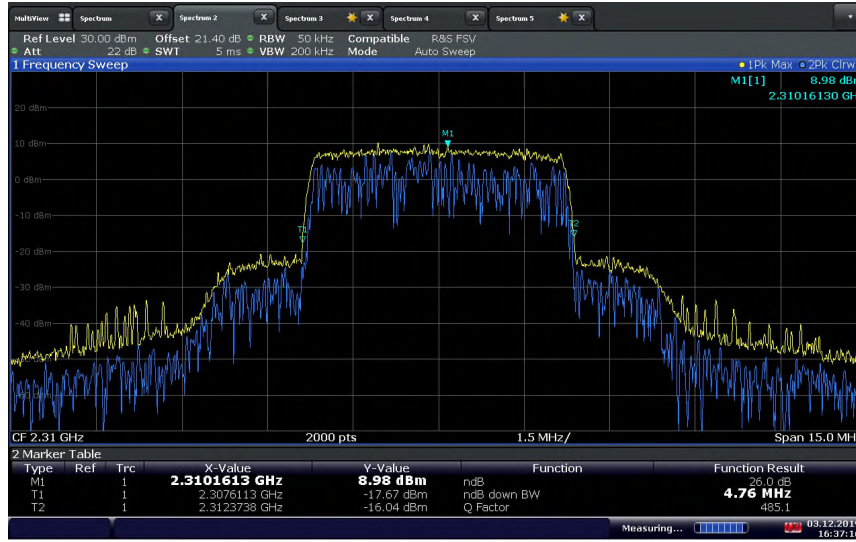
LTE Band 30 Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



15:22:14 03.12.2019



LTE Band 30 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC + 3 dB Level



LTE Band 30 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)





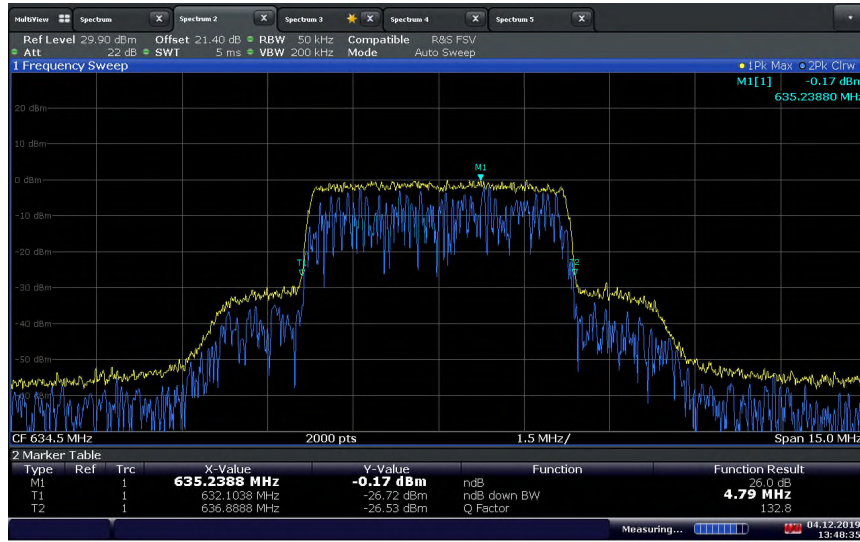
LTE Band 71 Downlink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level



LTE Band 71 Downlink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



LTE Band 71 Downlink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



13:48:36 04.12.2019

LTE Band 71 Downlink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



15:32:28 03.12.2019

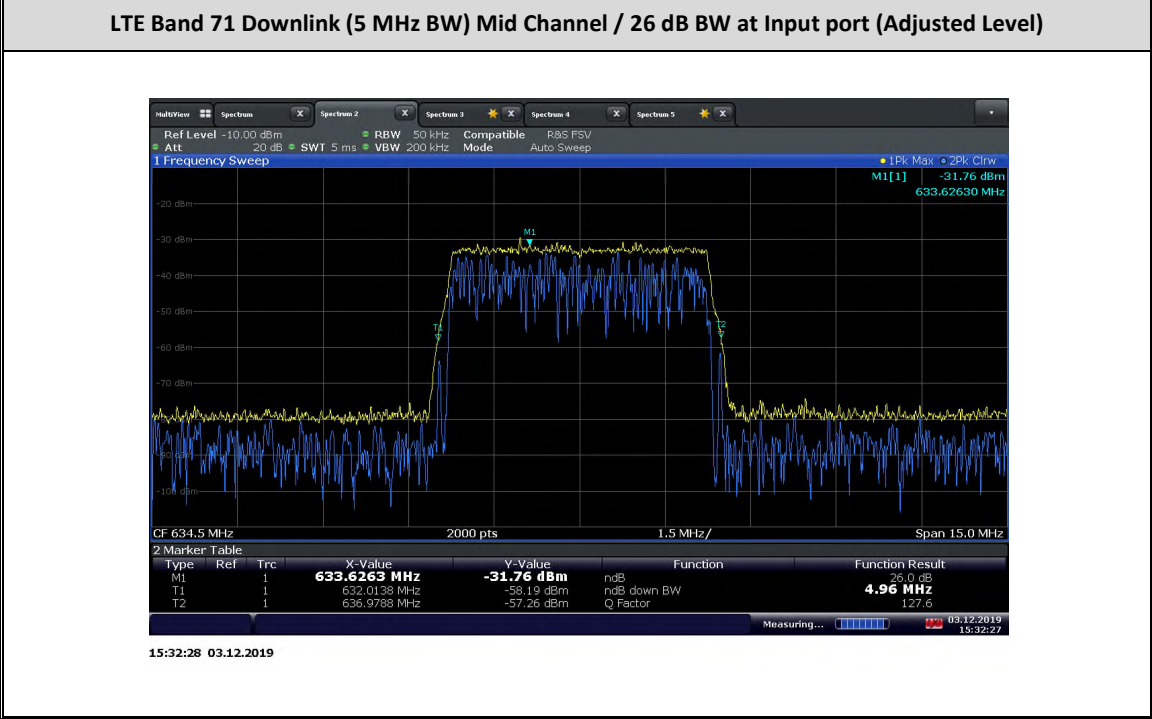
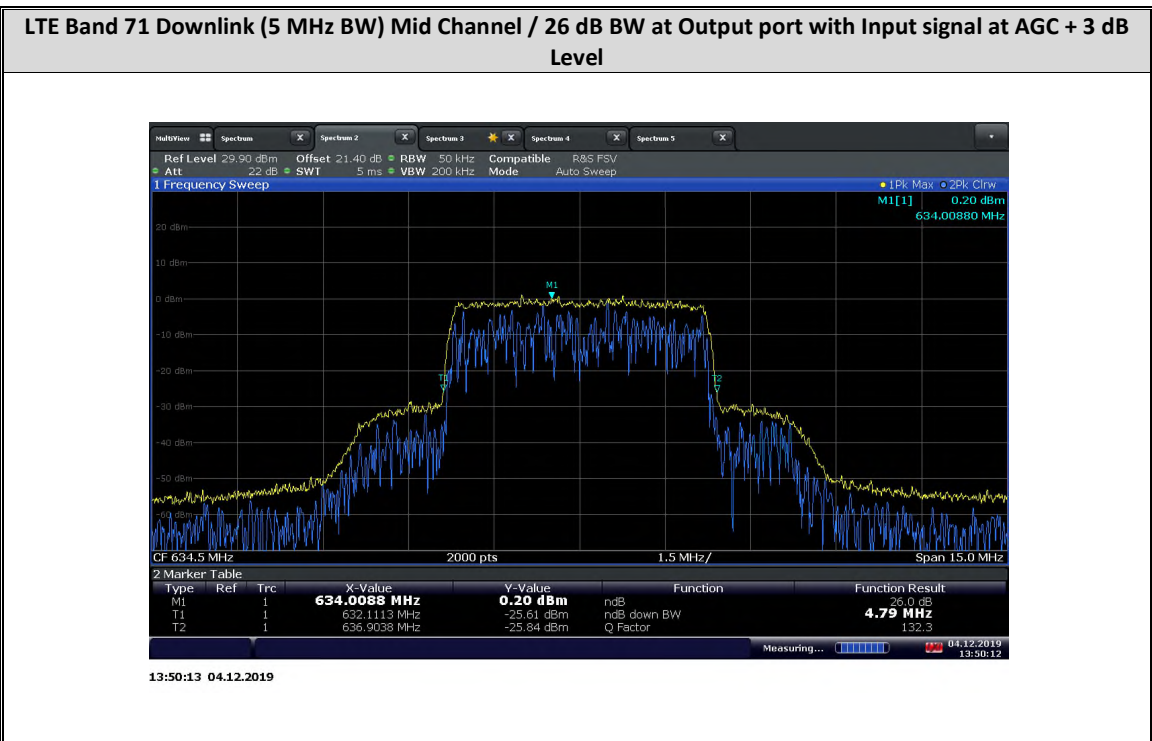


LTE Band 71 Downlink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC + 3 dB Level



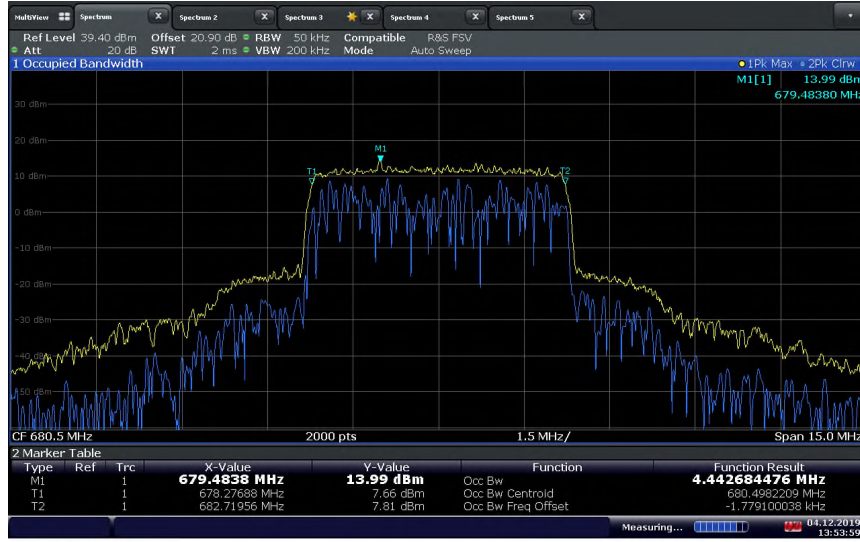
LTE Band 71 Downlink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)







LTE Band 71 Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC Threshold Level



LTE Band 71 Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)





LTE Band 71 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC Threshold Level



13:54:36 04.12.2019

LTE Band 71 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



15:39:40 03.12.2019

LTE Band 71 Uplink (5 MHz BW) Mid Channel / 99% OBW at Output port with Input signal at AGC + 3 dB Level



13:56:55 04.12.2019

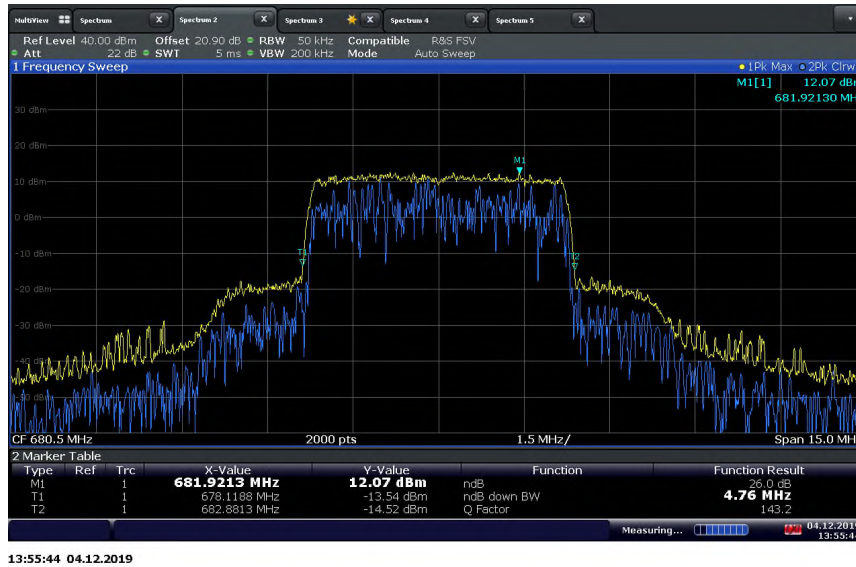
LTE Band 71 Uplink (5 MHz BW) Mid Channel / 99% OBW at Input port (Adjusted Level)



15:38:10 03.12.2019



LTE Band 71 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Output port with Input signal at AGC + 3 dB Level



LTE Band 71 Uplink (5 MHz BW) Mid Channel / 26 dB BW at Input port (Adjusted Level)



FCC ID: NU: YETI441234CNU
CU: YETI415ECU
IC: NU: 9298A-I441234CNU
CU: 9298A-I415ECU
Report No. 72154394D



2.4 MEAN OUTPUT POWER AND AMPLIFIER/BOOSTER GAIN

2.4.1 Specification Reference

RSS-131, Clause 5.2.3
KDB 935210 D05, Clause 3.5

2.4.2 Standard Applicable

RSS-131, Clause 5.2.3:
The zone enhancer gain shall not exceed the nominal gain by more than 1.0 dB.

Mean Output Power and Amplifier/Booster Gain is tested according to KDB 935210 D05, Clause 3.5.

2.4.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration A and B

2.4.4 Date of Test/Initial of test personnel who performed the test

December 05, 2019 / ZXY

2.4.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.6 Environmental Conditions/ Test Location

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility

Ambient Temperature	23.6°C
Relative Humidity	49.4%
ATM Pressure	99.4kPa



2.4.7 Additional Observations

- This is a conducted test.
- The path loss was measured and entered as an offset.
- The internal gain control of the EUT is adjusted to the maximum gain.
- The input power levels (uplink and downlink) are set to maximum input ratings, and confirm the device is not capable of operating in saturation (non-linear mode) during the test.
- The signal generator is configured to 4.1 MHz AWGN signal. A spectrum analyzer was used to measure the power according to KDB 935210 D05 clause 3.5.3.
- Both downlink and uplink are tested.

2.4.8 Test Results

Compliant. The booster gain does not exceed the nominal gain by more than 1.0 dB.

Input and Output Power and Gain						
Mode	Bandwidth (MHz)	Channel	Frequency (MHz)	AGC Threshold Input (dBm)	Output Power (dBm)	Booster Gain (dB)
WCDMA B5 Downlink	5	4408	881.6	-73.8	11.59	94.58
WCDMA B5 Uplink	5	4183	836.6	-73.80	20.31	94.11
LTE B4 Downlink	5	2175	2132.5	-83.81	11.8	95.09
LTE B4 Uplink	5	20175	1732.5	-78.50	20.52	99.02
LTE B12 Downlink	5	5095	737.5	-82.97	11.03	94.0
LTE B12 Uplink	5	23095	707.5	-71.95	23.01	94.96
LTE B13 Downlink	5	5230	751	-84.23	9.56	93.79
LTE B13 Uplink	5	23230	782	-72.09	22.15	94.24
LTE B25 Downlink	5	8365	1962.5	-87.85	11.33	99.18
LTE B25 Uplink	5	26365	1882.5	-77.62	21.23	98.85
LTE B26 (869-894 MHz) Downlink	5	8915	881.5	-82.15	10.87	93.02
LTE B26 (824-849 MHz) Uplink	5	26915	836.5	-71.05	21.76	92.81
LTE B30 Downlink	5	9820	2355	-87.74	9.86	97.60
LTE B30 Uplink	5	27710	2310	-79.42	18.38	97.80
LTE B71 Downlink	5	68761	634.5	-86.04	9.18	95.22
LTE B71 Uplink	5	133297	680.5	-73.17	21.93	95.10



Input and Output Power and Gain						
Mode	Bandwidth (MHz)	Channel	Frequency (MHz)	AGC Threshold + 3dB Input (dBm)	Output Power (dBm)	Booster Gain (dB)
WCDMA B5 Downlink	5	4408	881.6	-85.07	8.48	93.55
WCDMA B5 Uplink	5	4183	836.6	-71.07	20.29	91.36
LTE B4 Downlink	5	2175	2132.5	-81.16	11.30	92.46
LTE B4 Uplink	5	20175	1732.5	-75.52	20.42	95.94
LTE B12 Downlink	5	5095	737.5	-80.95	10.95	91.90
LTE B12 Uplink	5	23095	707.5	-69.03	21.09	90.12
LTE B13 Downlink	5	5230	751	-80.91	10.57	91.48
LTE B13 Uplink	5	23230	782	-69.05	21.46	90.51
LTE B25 Downlink	5	8365	1962.5	-84.33	11.25	95.58
LTE B25 Uplink	5	26365	1882.5	-74.61	21.28	95.89
LTE B26 (869-894 MHz) Downlink	5	8915	881.5	-79.98	10.54	90.52
LTE B26 (824-849 MHz) Uplink	5	26915	836.5	-68.05	21.03	89.08
LTE B30 Downlink	5	9820	2355	-85.24	9.39	94.63
LTE B30 Uplink	5	27710	2310	-76.42	18.16	94.58
LTE B71 Downlink	5	68761	634.5	-84.29	9.30	93.59
LTE B71 Uplink	5	133297	680.5	-70.96	21.97	92.93

Limit	
Band	System Gain (dB)
LTE Band 4, 25, 30,41	100
WCDMA Band 5, LTE Band 12, 13, 26	95



2.5 OUT-OF-BAND/OUT-OF-BLOCK (INTERMODULATION) AND SPURIOUS EMISSIONS

2.5.1 Specification Reference

KDB 935210 D05, Clause 3.6

2.5.2 Standard Applicable

Limit refer to related FCC Rule Sections for each bands.

Out-of-Band/Out-of-Block and spurious emissions is tested according to KDB 935210 D05 Clause 3.6.

2.5.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration A and B

2.5.4 Date of Test/Initial of test personnel who performed the test

December 06 and 13, 2019 / ZXY

2.5.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.6 Environmental Conditions/ Test Location

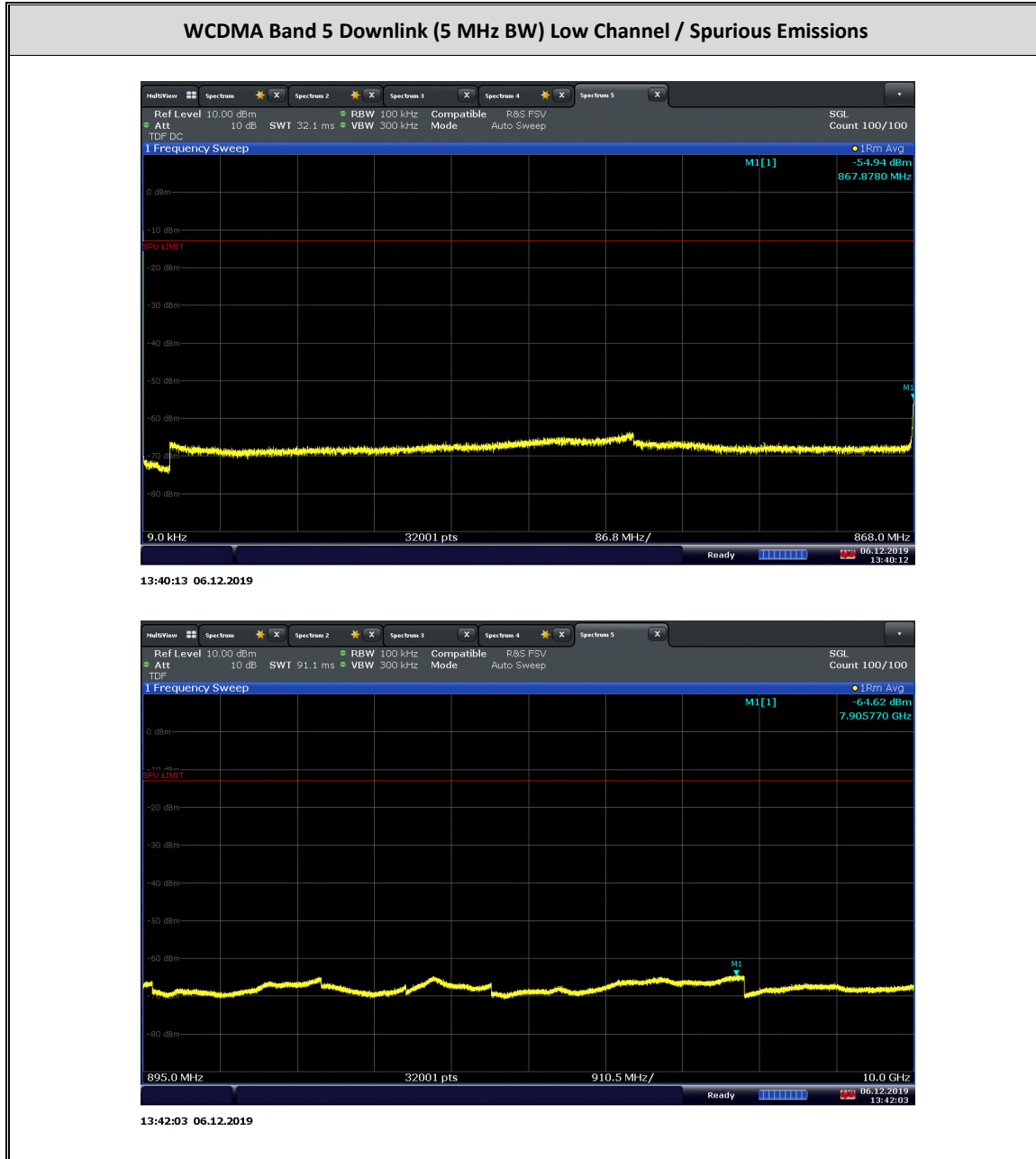
Test performed at TÜV SÜD America Inc. Rancho Bernardo facility

Ambient Temperature	23.5 - 24.0°C
Relative Humidity	42.8 - 45.4%
ATM Pressure	99.2 - 99.6kPa

2.5.7 Additional Observations

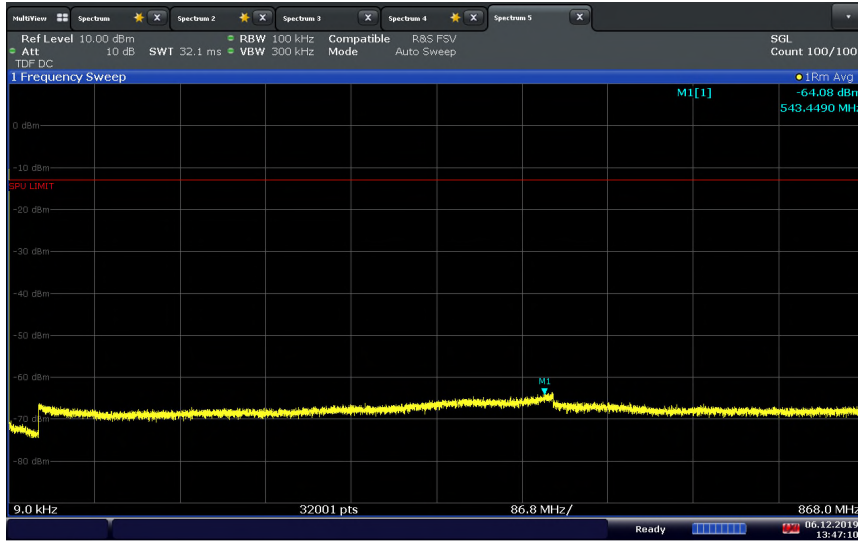
- The path loss was measured and entered as an offset.
- 5 MHz Bandwidth was tested as representative configuration.
- The Downlink and Uplink Gains are measured with a LTE signal injected to the device under test.
- The signal generator is configured for 4.1 MHz AWGN signal.
- RBW is 1 MHz or 100 kHz according to related FCC Rule Sections for each bands, VBW is > 3 x RBW.
- The spectrum analyzer was set to RMS detector and trace average is 100 traces.
- Both Downlink and Uplink are tested.
- Intermodulation-product spurious emission measurements are not required for single-channel boosters that can't accommodate two simultaneous signals within the pass band. Only WCDMA Band 5 which support two simultaneous signals was tested.

2.5.8 Test Results

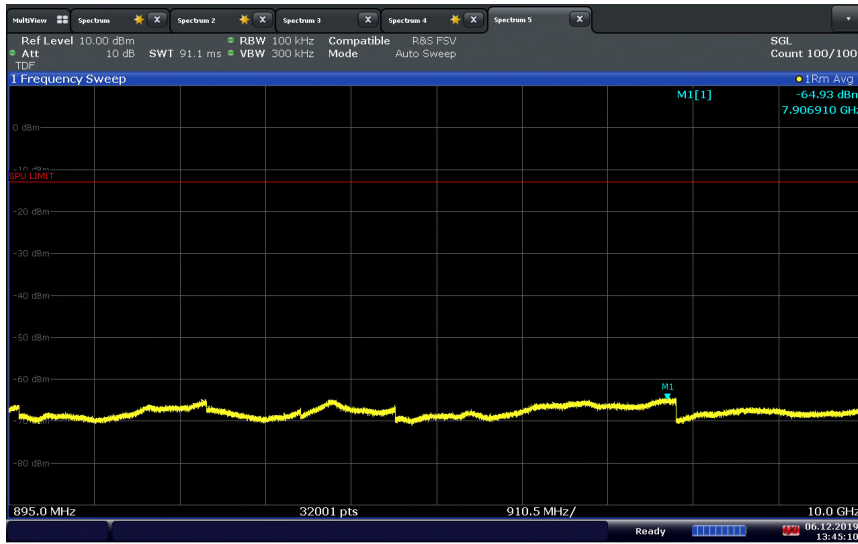




WCDMA Band 5 Downlink (5 MHz BW) Mid Channel / Spurious Emissions



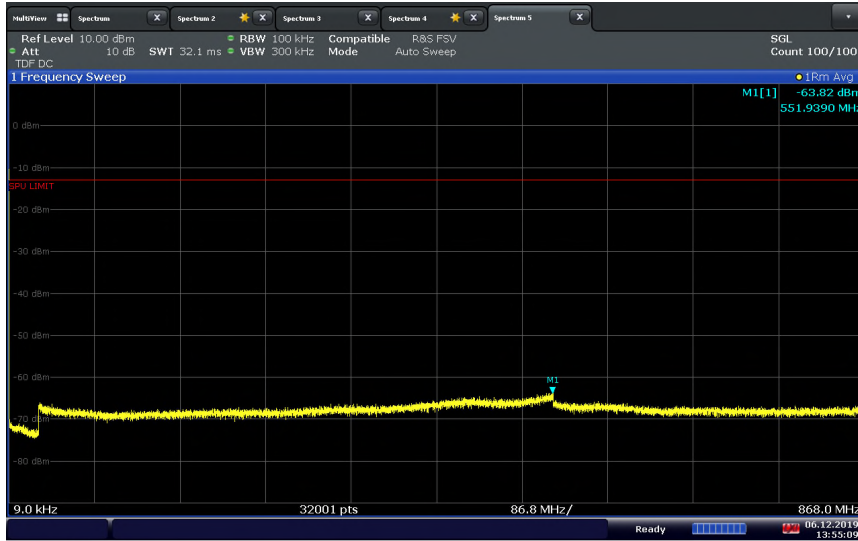
13:47:10 06.12.2019



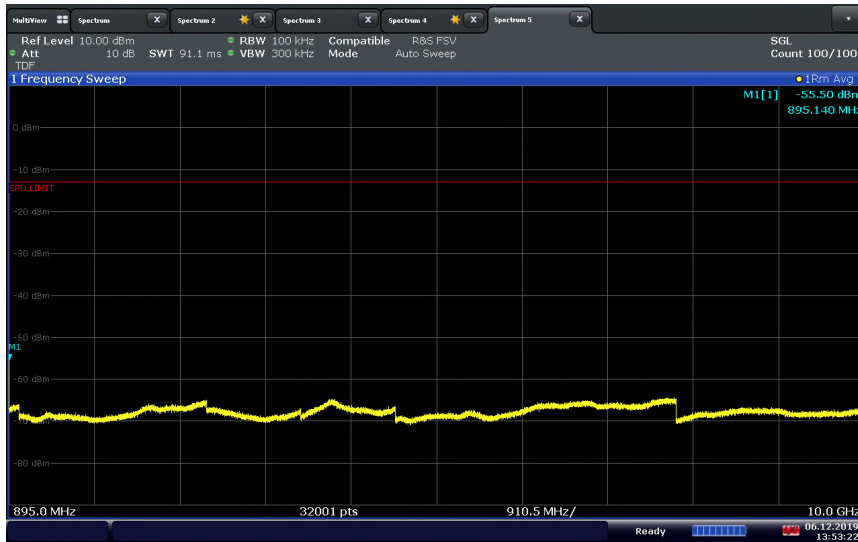
13:45:11 06.12.2019



WCDMA Band 5 Downlink (5 MHz BW) High Channel / Spurious Emissions



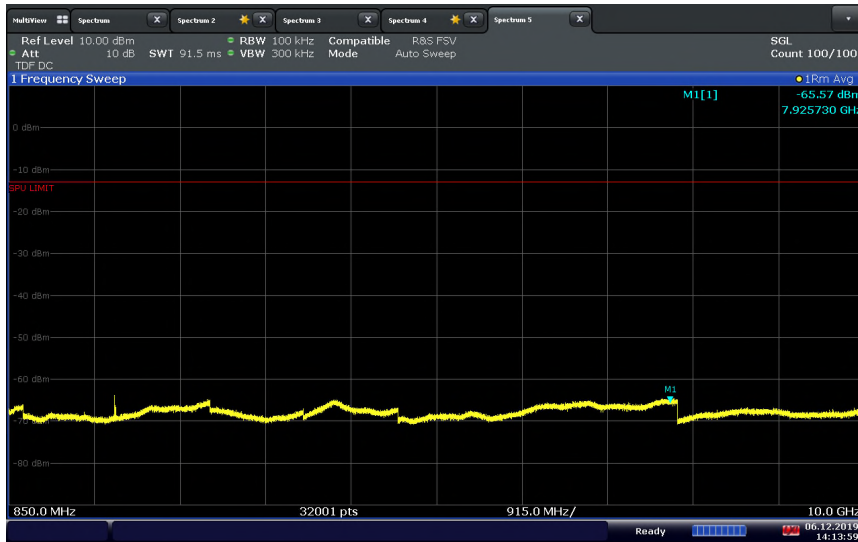
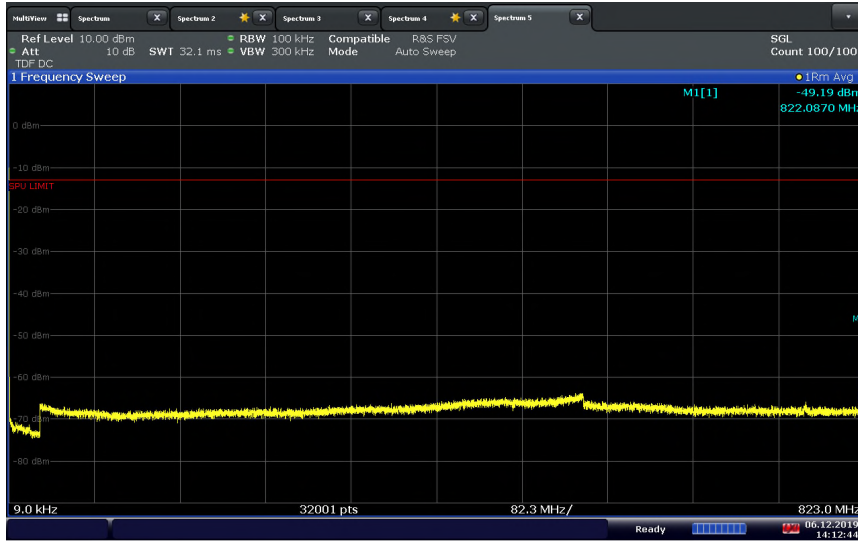
13:55:10 06.12.2019



13:53:23 06.12.2019

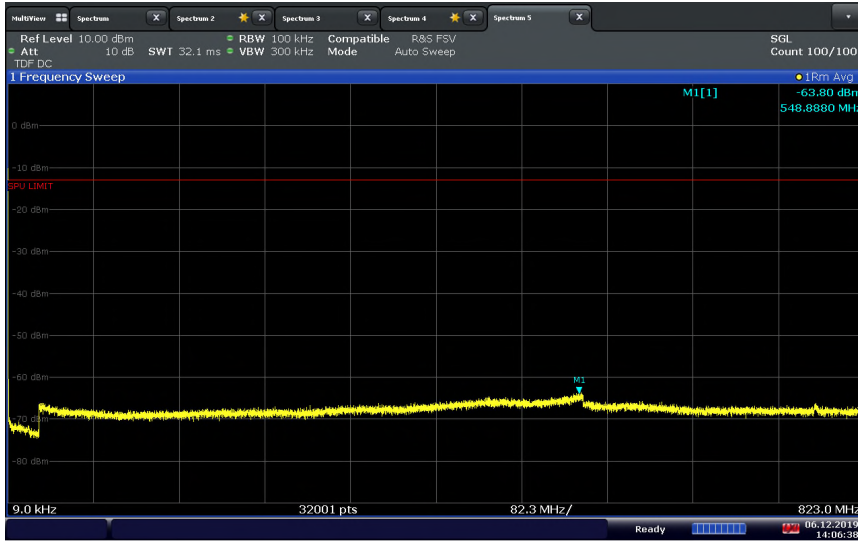


WCDMA Band 5 Uplink (5 MHz BW) Low Channel / Spurious Emissions

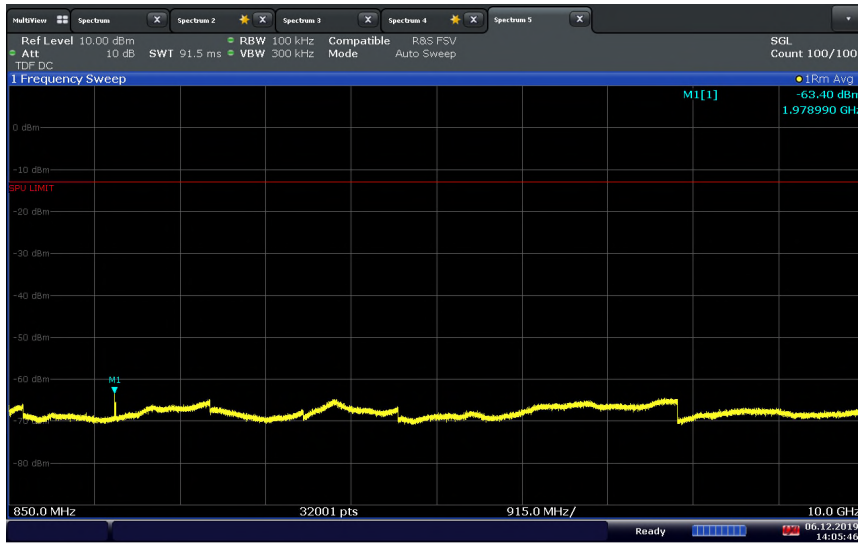




WCDMA Band 5 Uplink (5 MHz BW) Mid Channel / Spurious Emissions



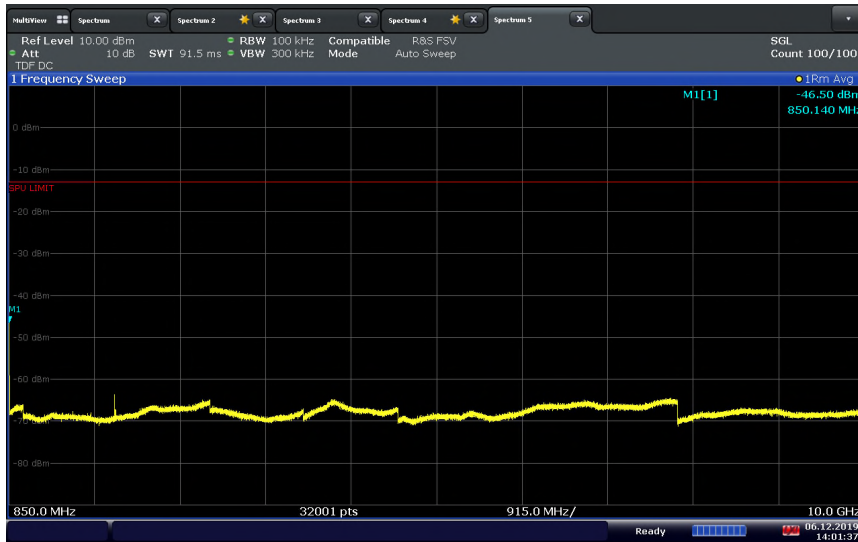
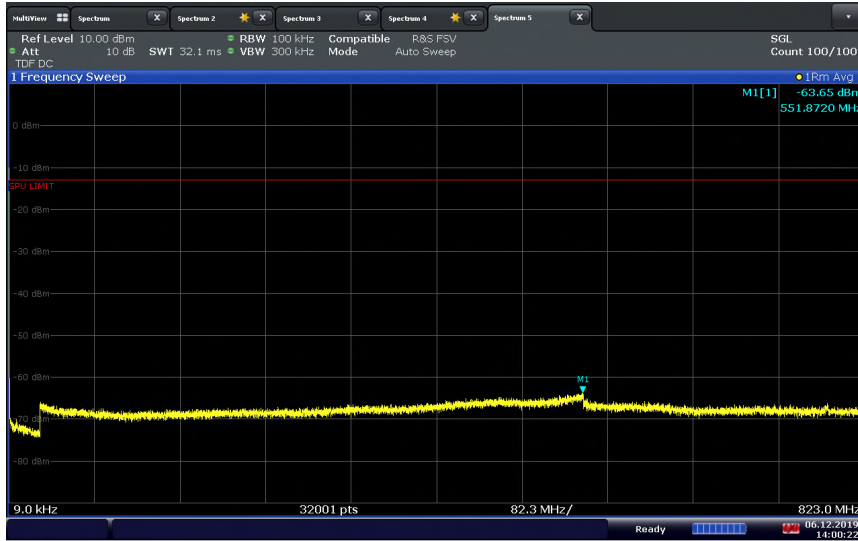
14:06:39 06.12.2019



14:05:47 06.12.2019

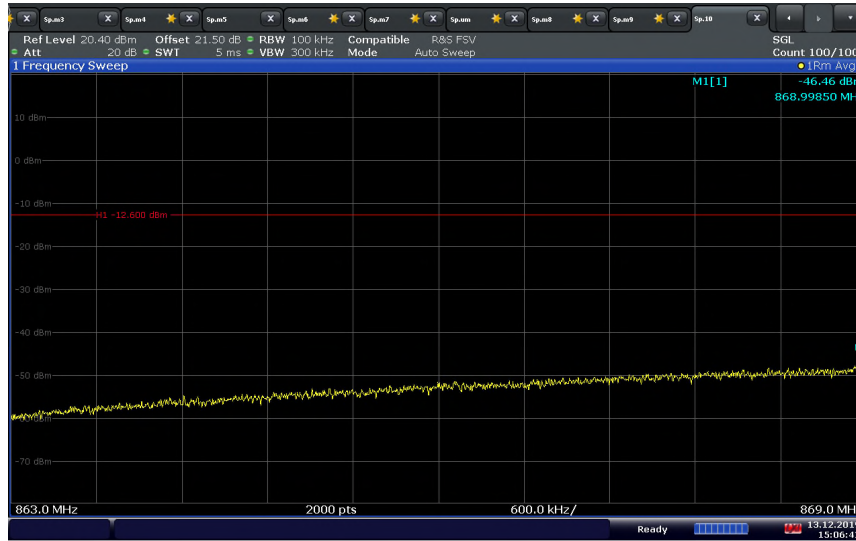


WCDMA Band 5 Uplink (5 MHz BW) High Channel / Spurious Emissions

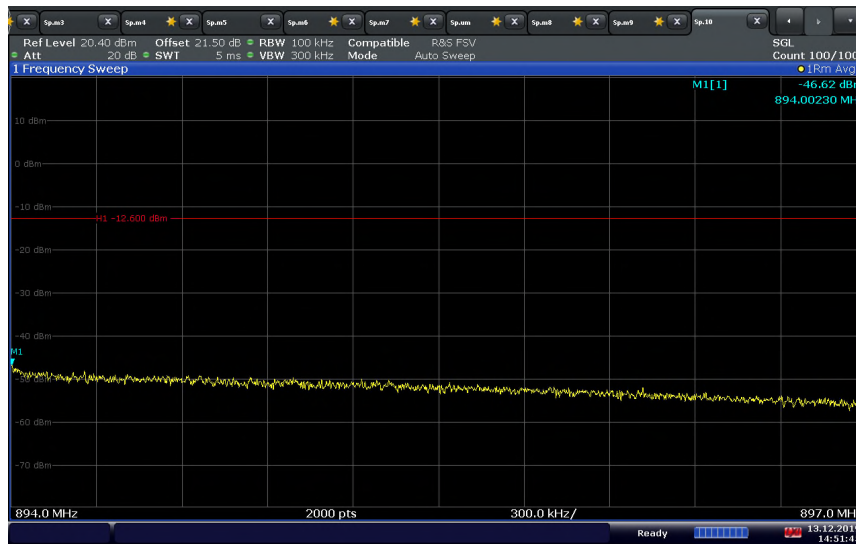




WCDMA Band 5 Downlink (2 x 5 MHz BW) Low Channel / Inter-modulation Spurious Emissions

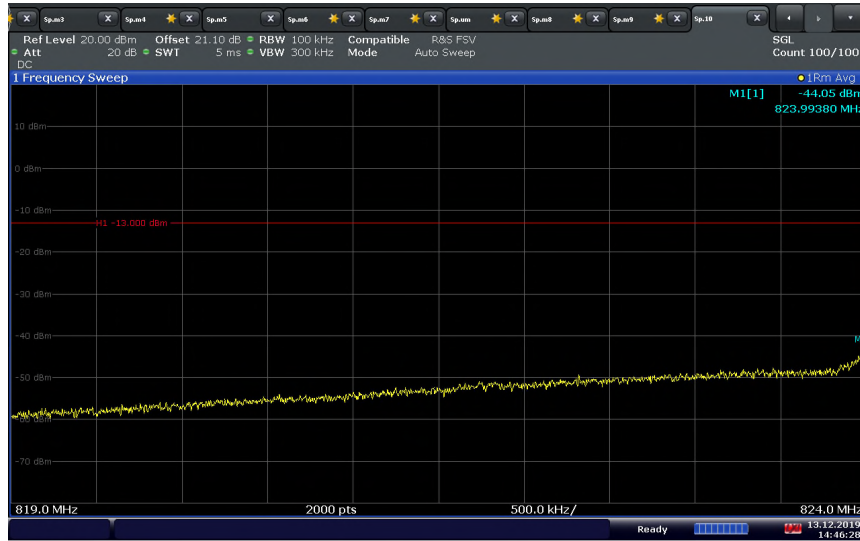


WCDMA Band 5 Downlink (2 x 5 MHz BW) High Channel / Inter-modulation Spurious Emissions



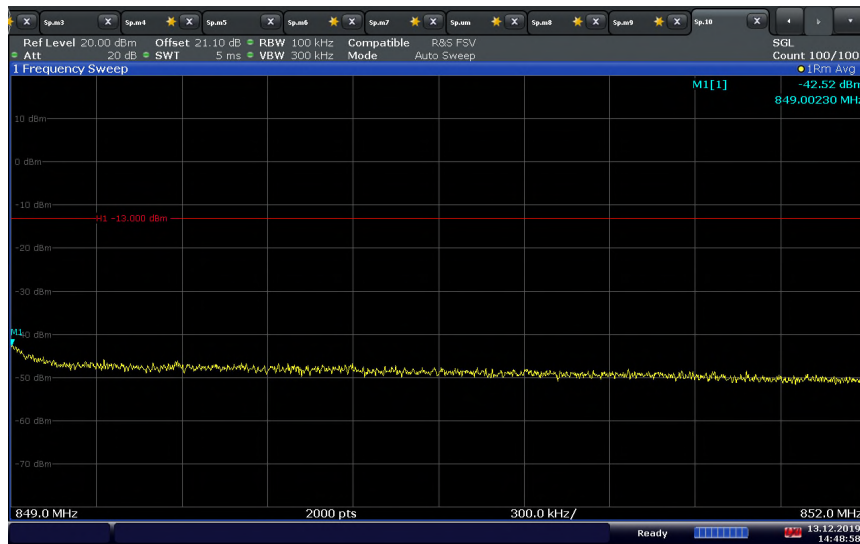


WCDMA Band 5 Uplink (2 x 5 MHz BW) Low Channel / Inter-modulation Spurious Emissions



14:46:29 13.12.2019

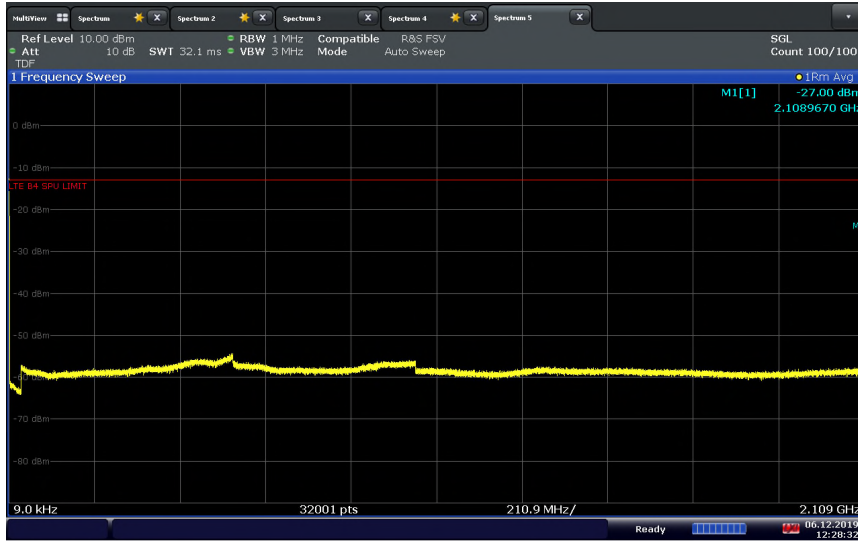
WCDMA Band 5 Uplink (2 x 5 MHz BW) High Channel / Inter-modulation Spurious Emissions



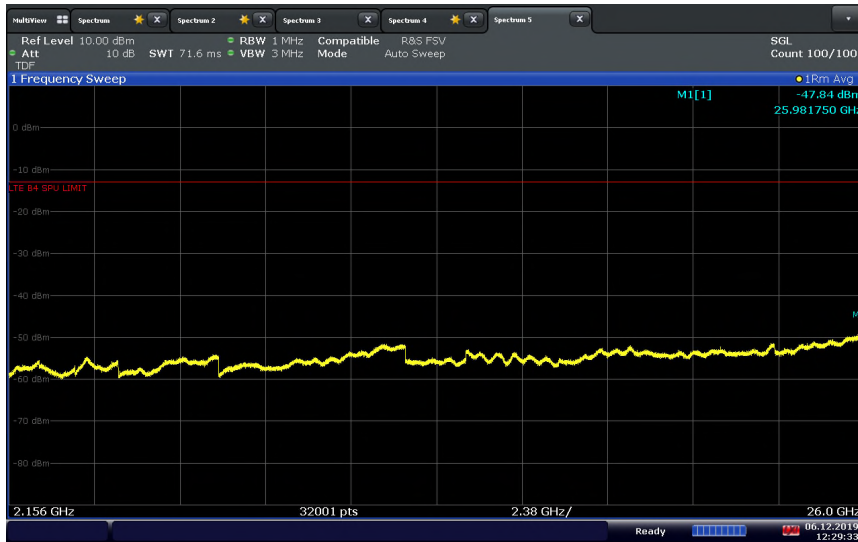
14:48:59 13.12.2019



LTE Band 4 Downlink (5 MHz BW) Low Channel / Spurious Emissions



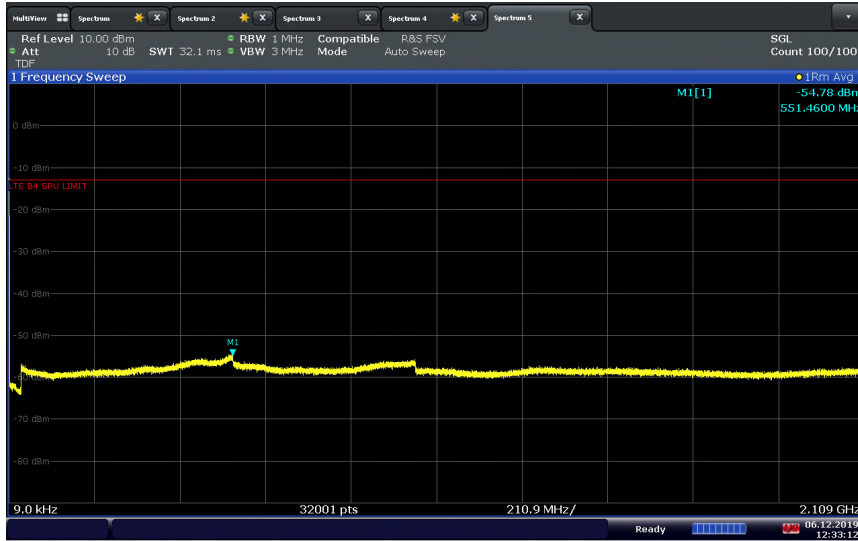
12:28:33 06.12.2019



12:29:33 06.12.2019

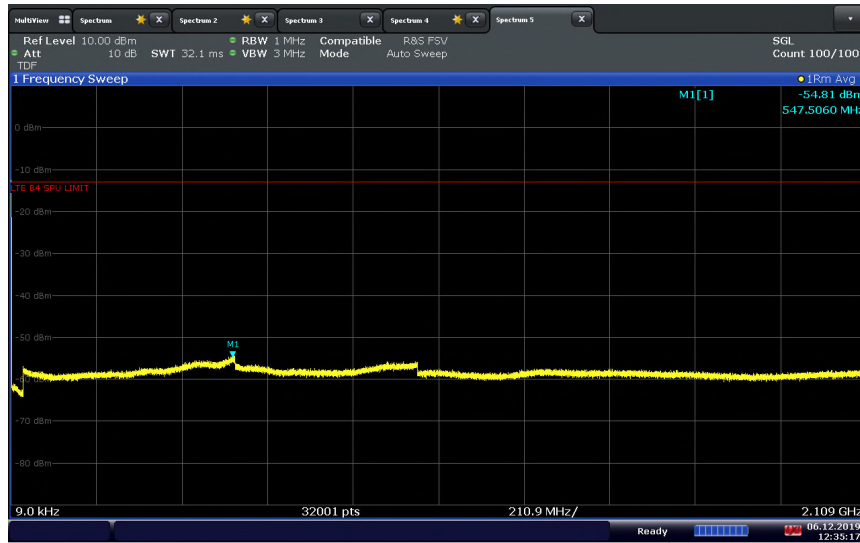


LTE Band 4 Downlink (5 MHz BW) Mid Channel / Spurious Emissions

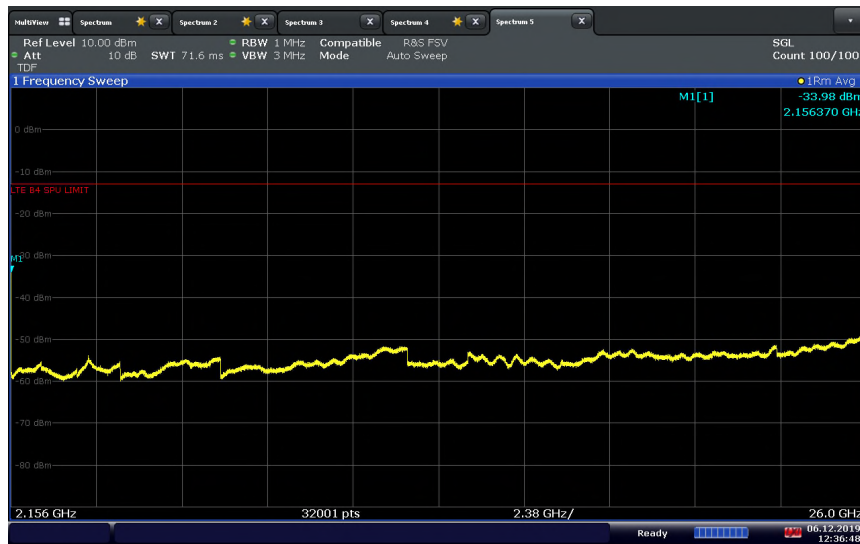




LTE Band 4 Downlink (5 MHz BW) High Channel / Spurious Emissions



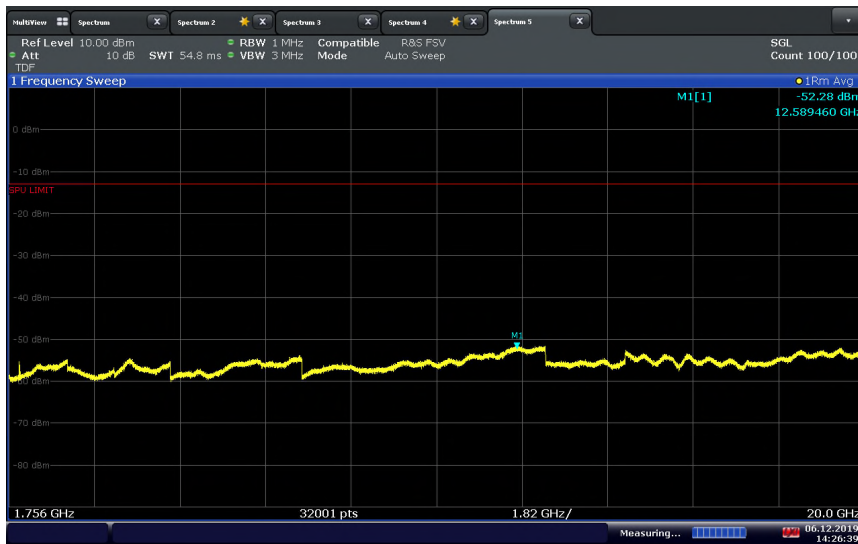
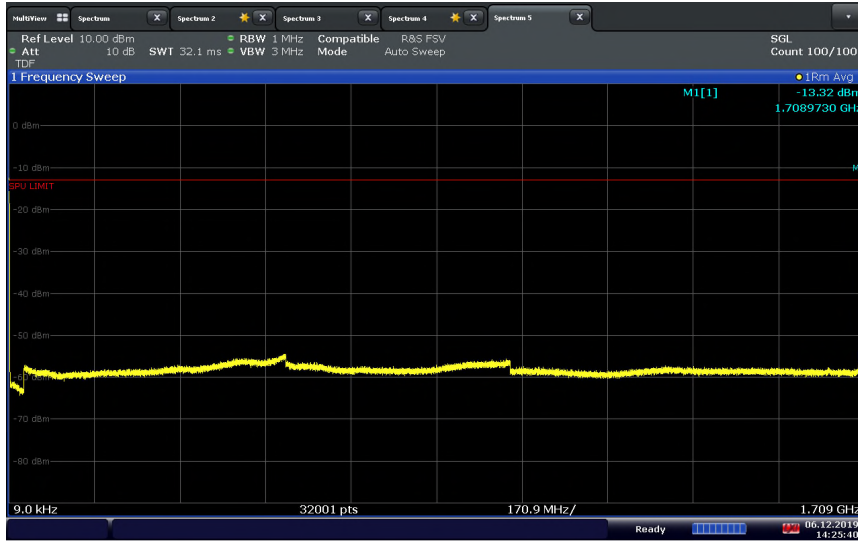
12:35:18 06.12.2019



12:36:49 06.12.2019

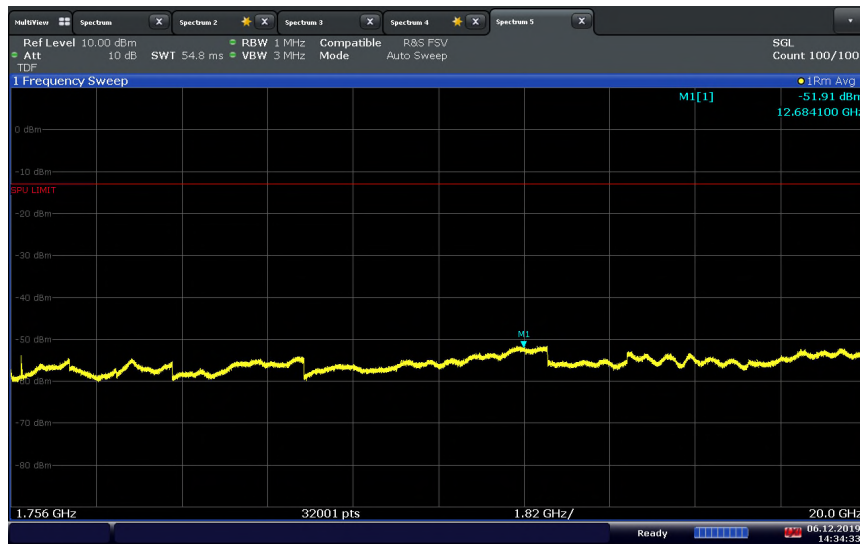
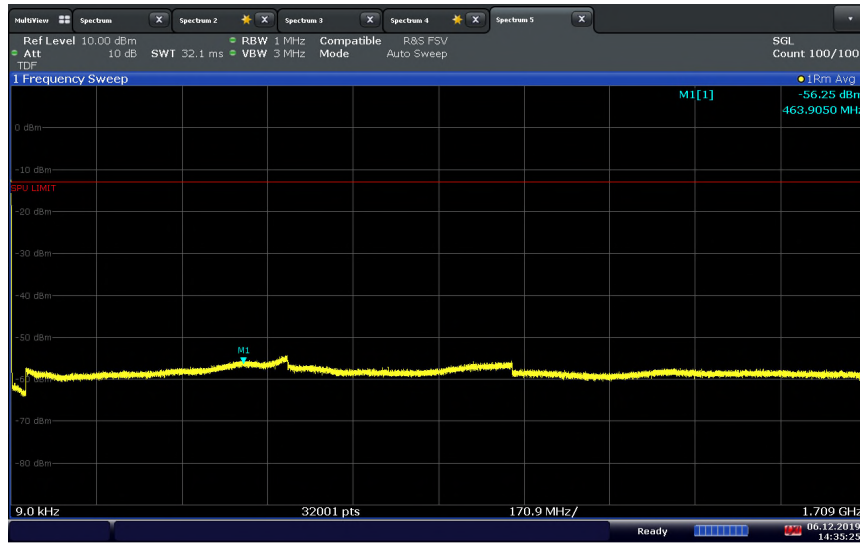


LTE Band 4 Uplink (5 MHz BW) Low Channel / Spurious Emissions



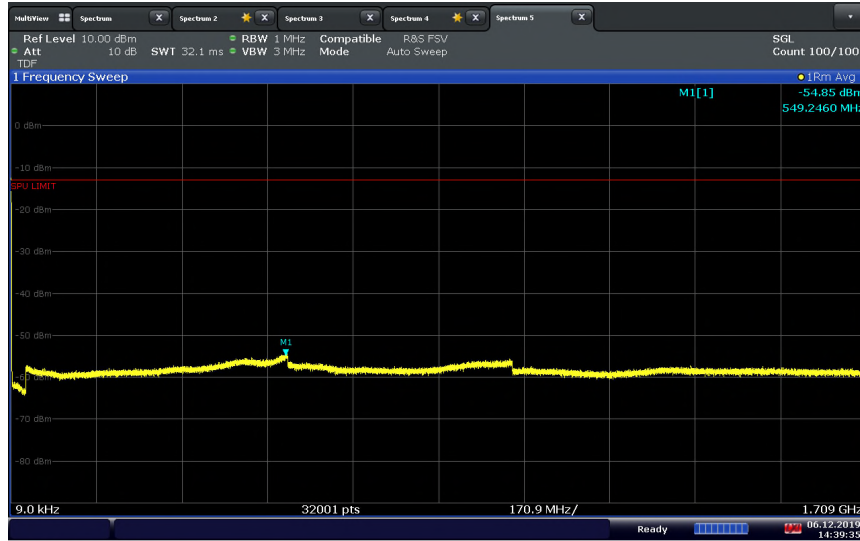


LTE Band 4 Uplink (5 MHz BW) Mid Channel / Spurious Emissions

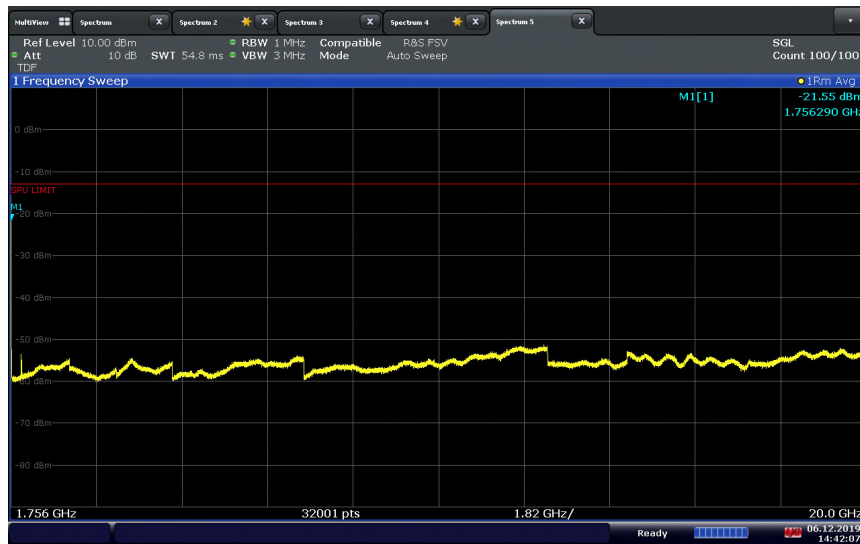




LTE Band 4 Uplink (5 MHz BW) High Channel / Spurious Emissions



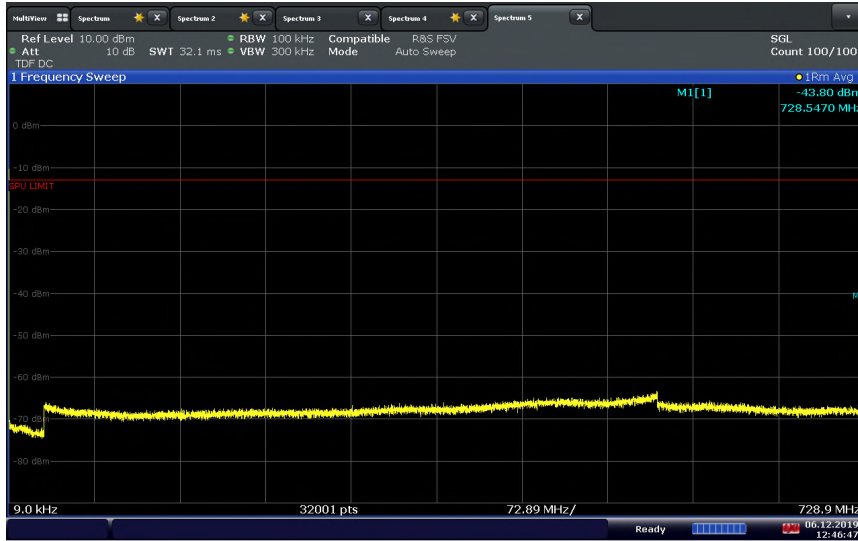
14:39:36 06.12.2019



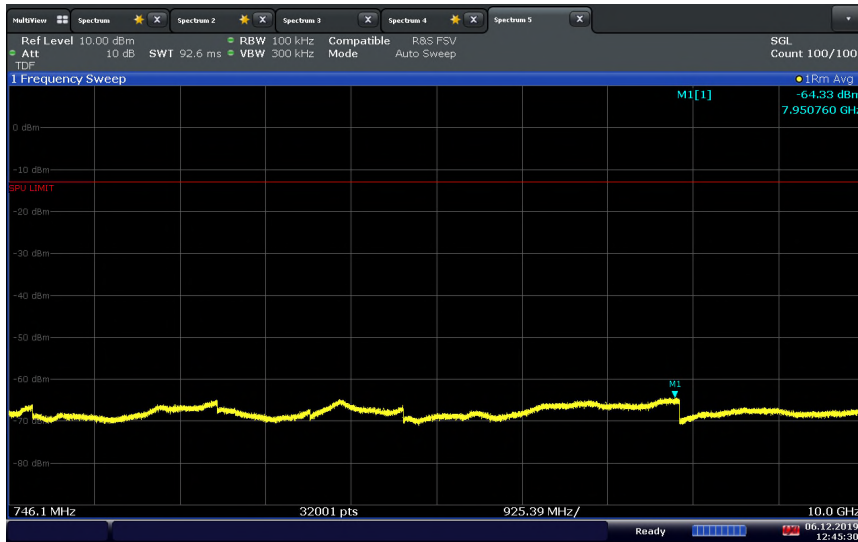
14:42:07 06.12.2019



LTE Band 12 Downlink (5 MHz BW) Low Channel / Spurious Emissions



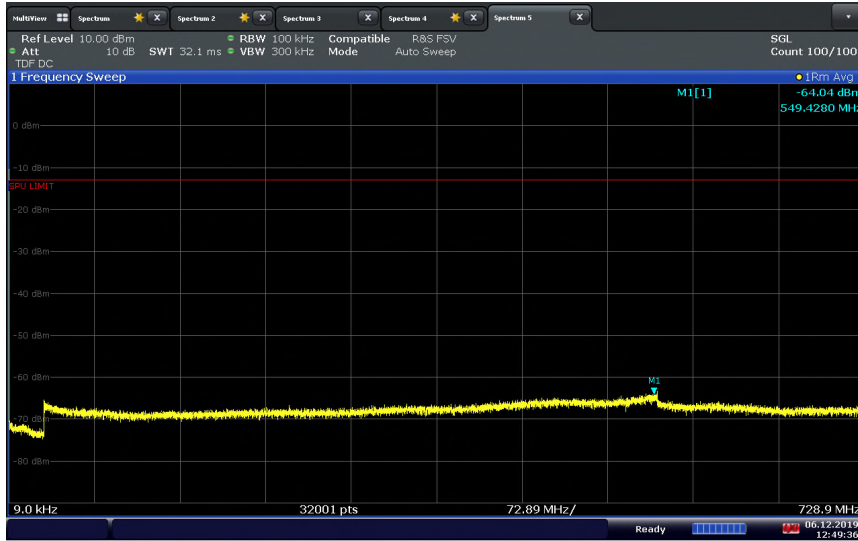
12:46:47 06.12.2019



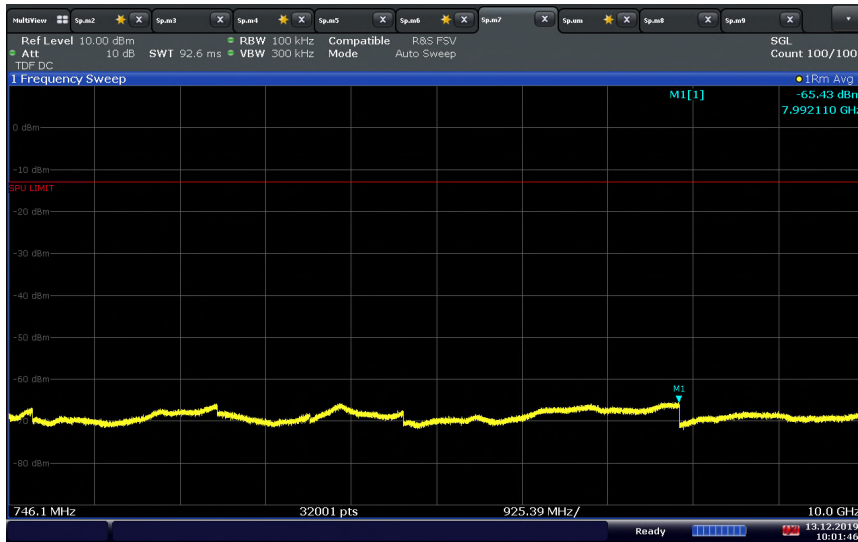
12:45:31 06.12.2019



LTE Band 12 Downlink (5 MHz BW) Mid Channel / Spurious Emissions



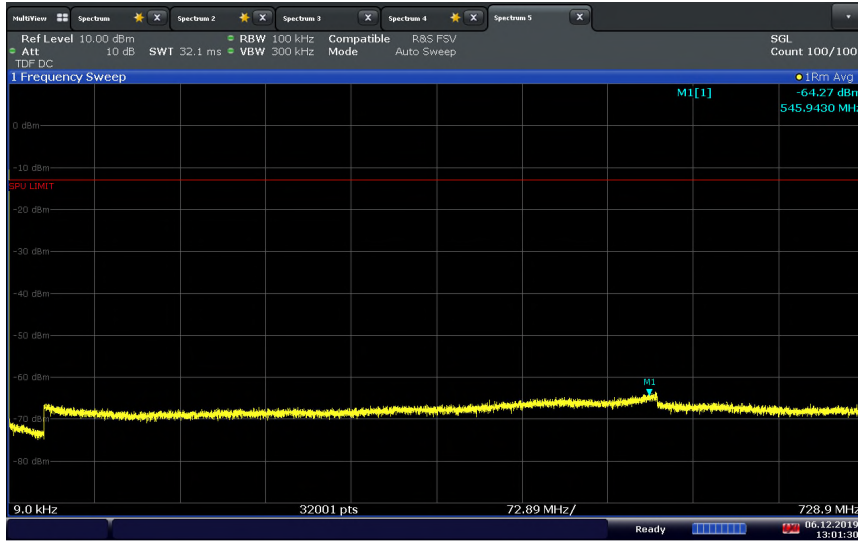
12:49:37 06.12.2019



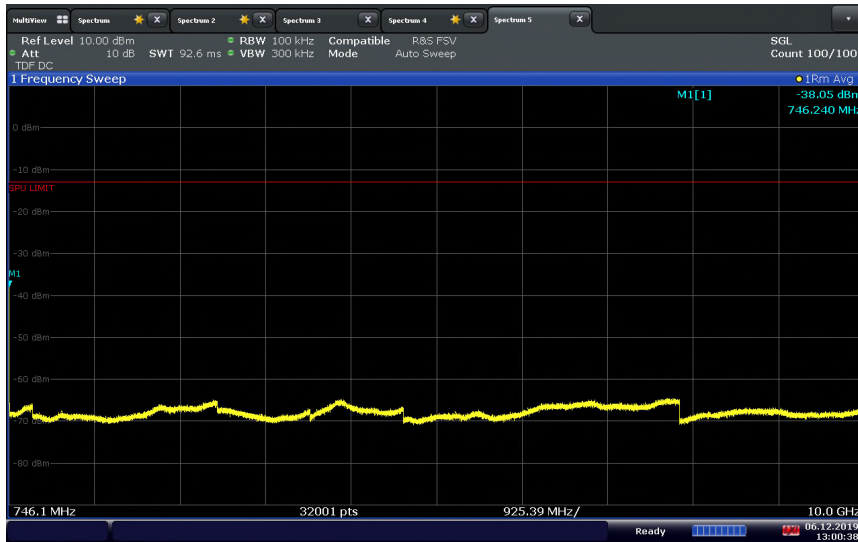
10:01:47 13.12.2019



LTE Band 12 Downlink (5 MHz BW) High Channel / Spurious Emissions



13:01:31 06.12.2019



13:00:39 06.12.2019



LTE Band 12 Uplink (5 MHz BW) Low Channel / Spurious Emissions

