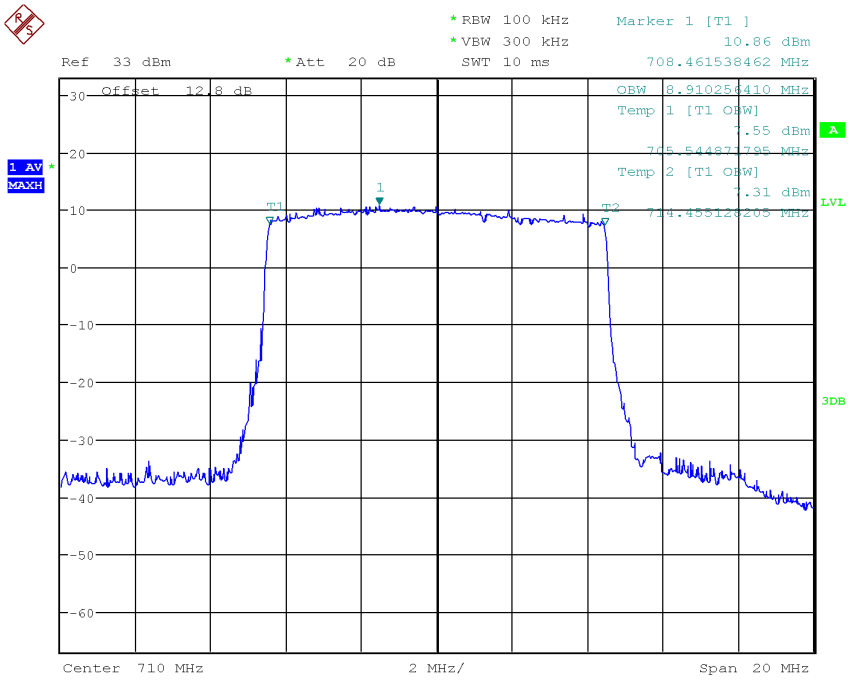
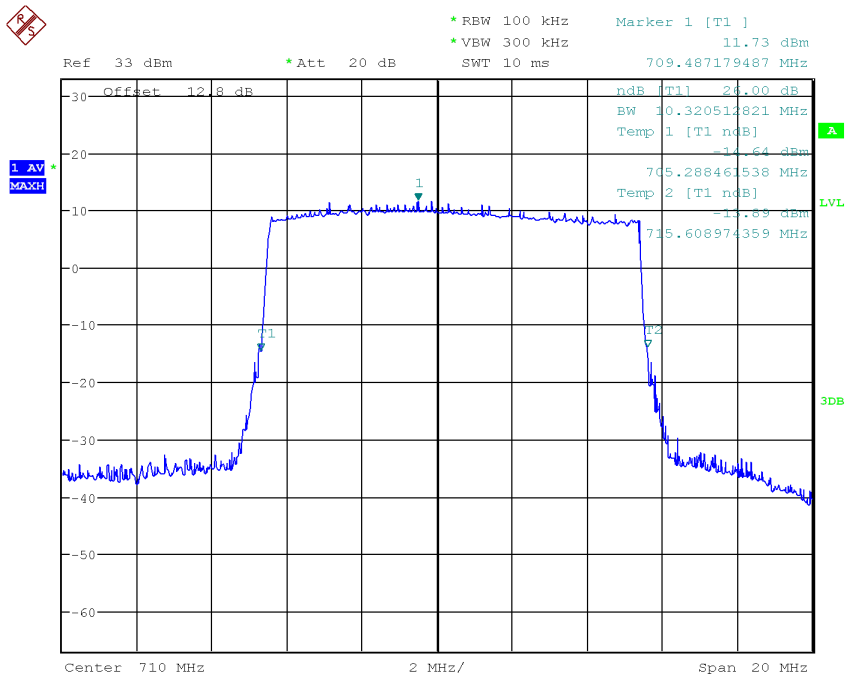


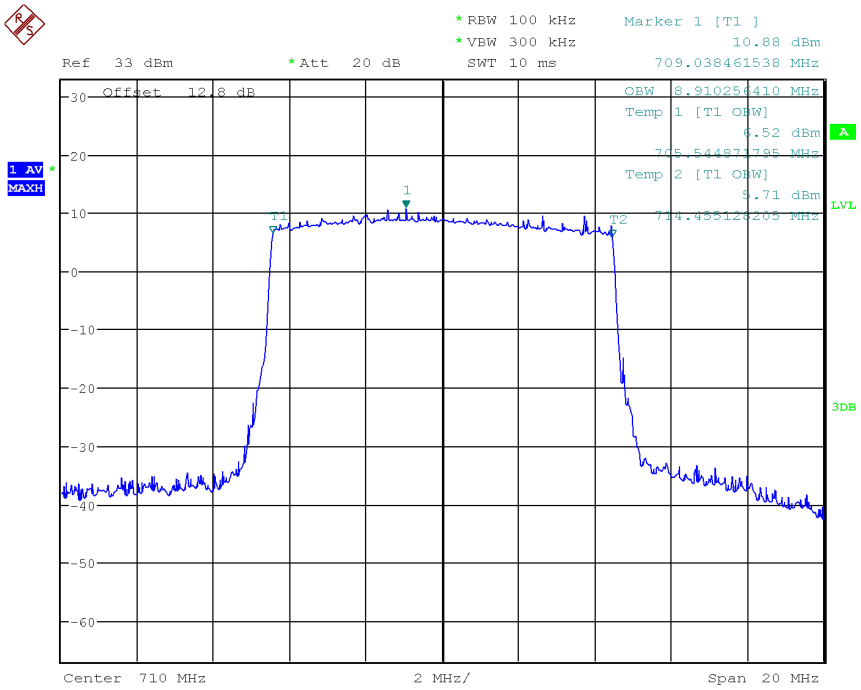
Date: 28.APR.2019 20:33:39

LTE Band17 QPSK 99% Channel 20790 BW=10MHz RB=50 RB Offset=0



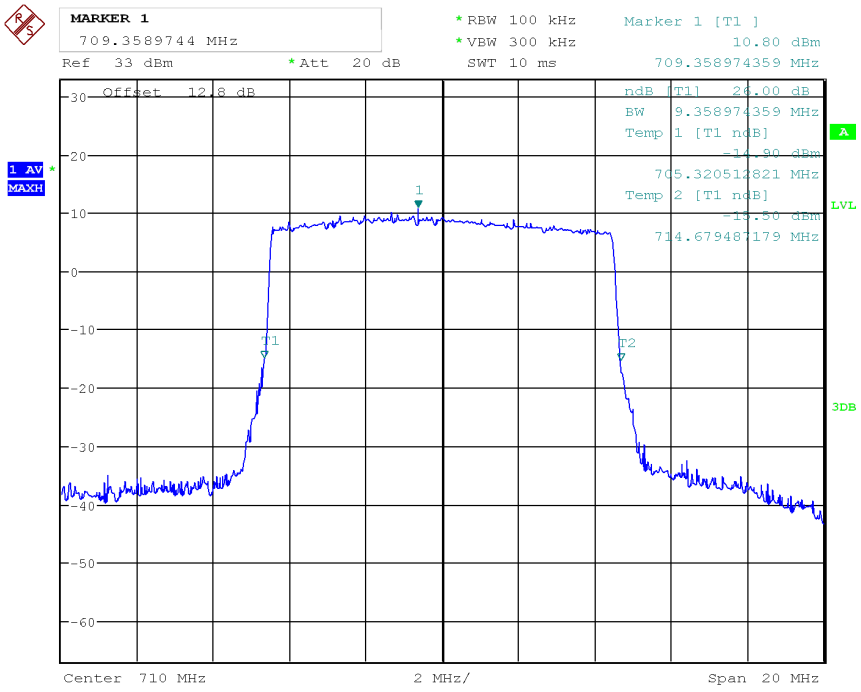
Date: 28.APR.2019 20:33:17

LTE Band17 QPSK -26dBc Channel 20790 BW=10MHz RB=50 RB Offset=0



Date: 28.APR.2019 20:34:11

LTE Band17 16QAM 99% Channel 20790 BW=10MHz RB=50 RB Offset=0



Date: 28.APR.2019 20:34:31

LTE Band17 16QAM -26dBc Channel 20790 BW=10MHz RB=50 RB Offset=0

5.3 Conducted Spurious Emission

Specifications:	FCC Part 2.1051, 24.238, 2.1053, 22.917, 27.53
DUT Serial Number:	868020030062938
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to Part 24.238 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB, so the limit level is: P(dBm)– (43 + 10 log(P)) dB= -13dBm.

According to Part 27.53(h):

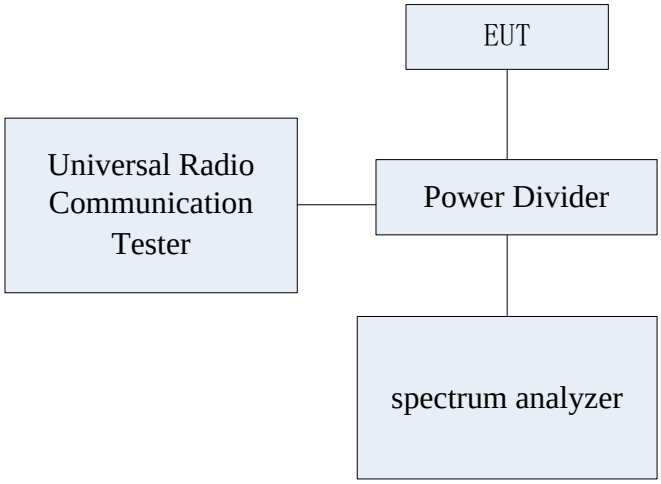
Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10(P) dB.

According to Part 27.53(g):

For operations in the 600 MHz Band and the 698-746 MHz Band, the power of any emission outside a licensee's frequency Band(s) of operation shall be attenuated below the transmitter power (P) within the licensed Band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution Bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz Bands immediately outside and adjacent to a licensee's frequency block, a resolution Bandwidth of at least 30 kHz may be employed.

Test Setup:

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.

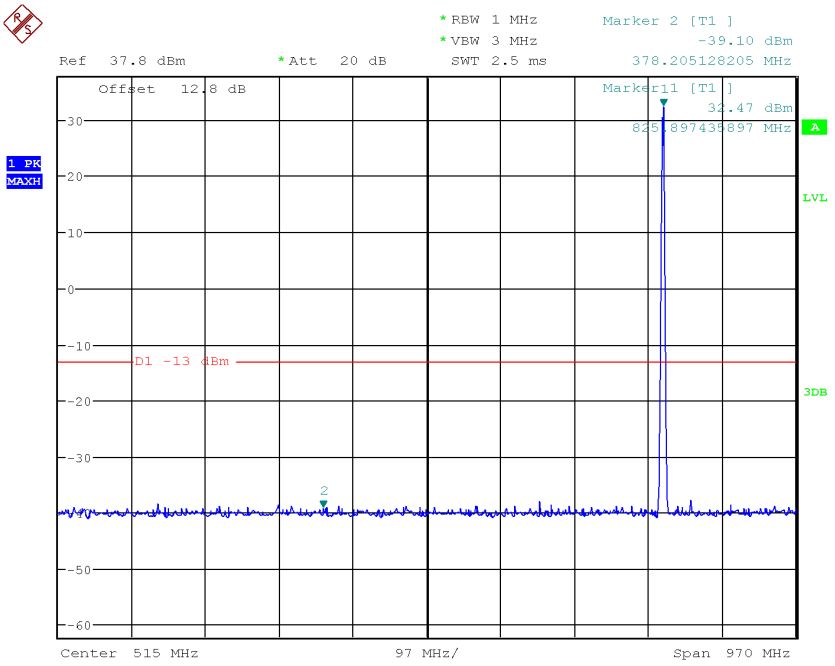


Test Method:

The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-E-2016: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-Band emissions, if any, up to 10th harmonic. The EUT was scanned for spurious emissions from 30MHz to 20GHz with sufficient Bandwidth and video resolution. The spectrum analyzer was set to Maximum hold mode to ensure that the worst-case emissions were captured.

Note: --

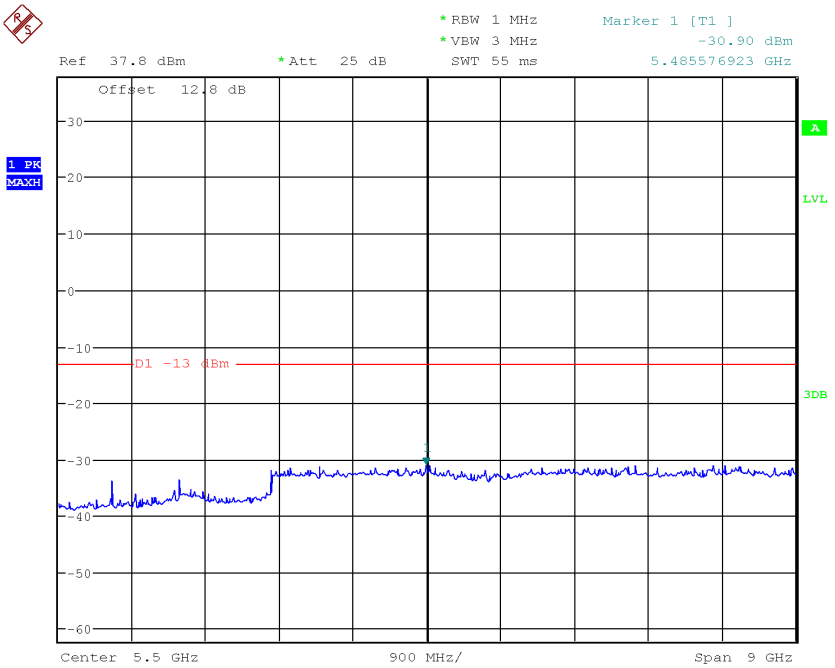
5.3.1 GSM850 Conducted Spurious Emission Results



Date: 29.APR.2019 22:08:09

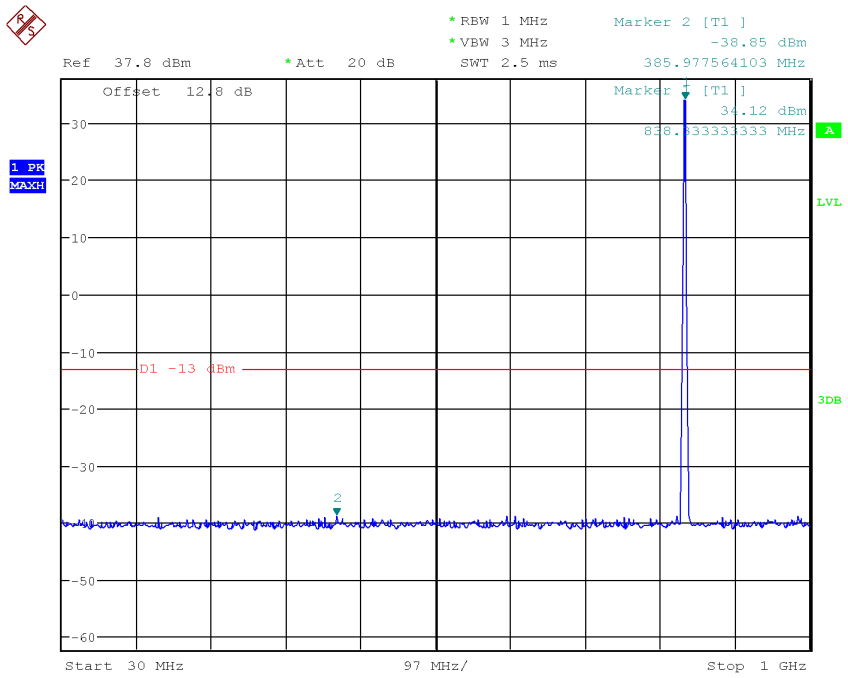
GMSK, Low channel, 824.200 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



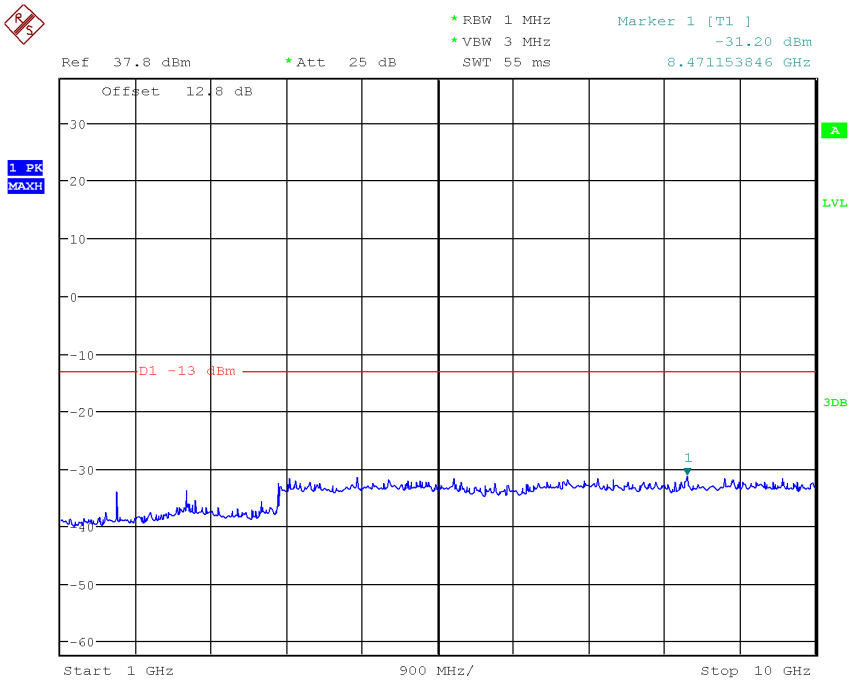
Date: 29.APR.2019 22:11:24

GMSK, Low channel, 824.200 MHz, 1GHz to 10GHz

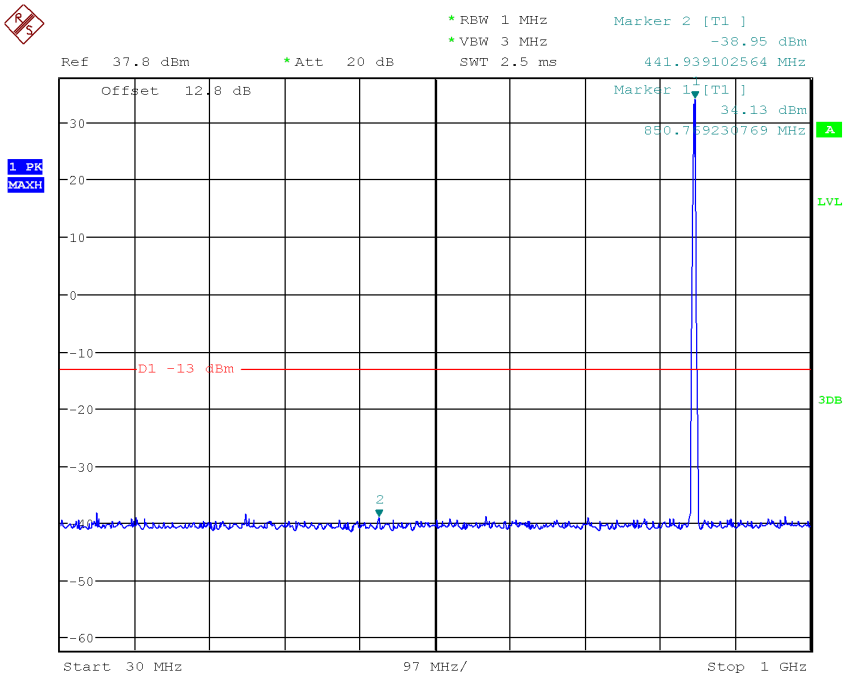


GMSK, Mid Channel, 836.6 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

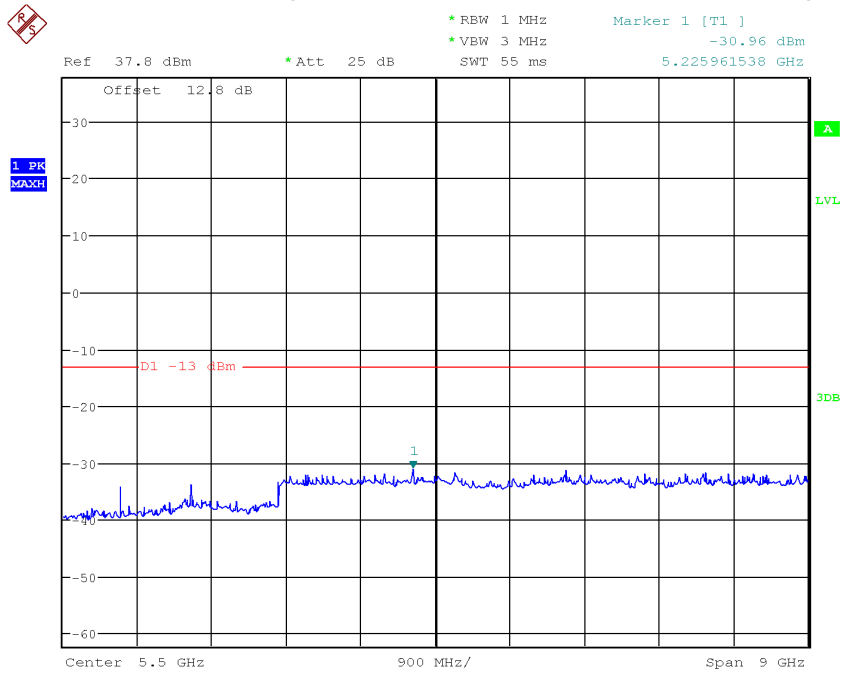


GMSK, Mid Channel, 836.6 MHz, 1GHz to 10GHz

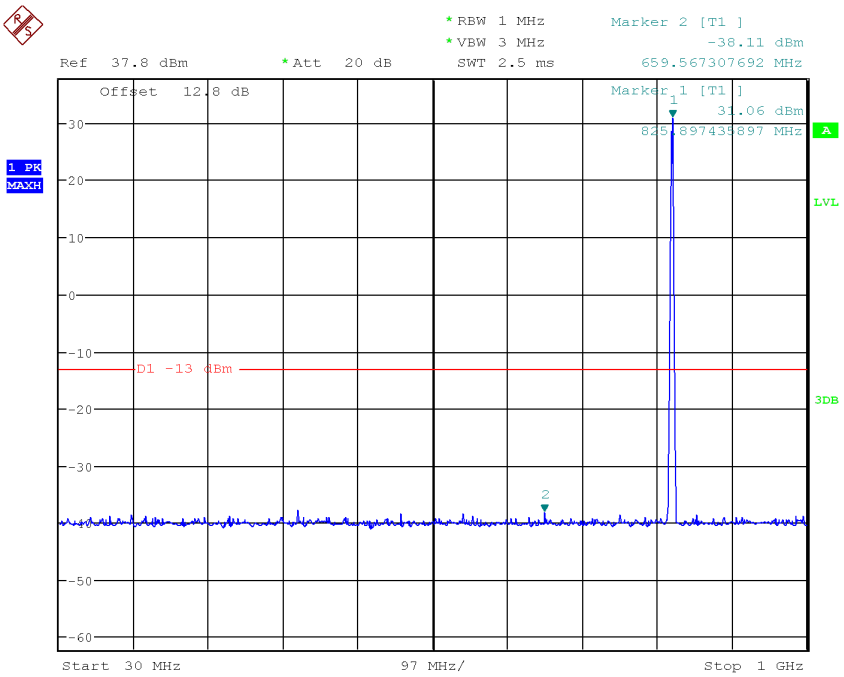


GMSK, High Channel, 848.8 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



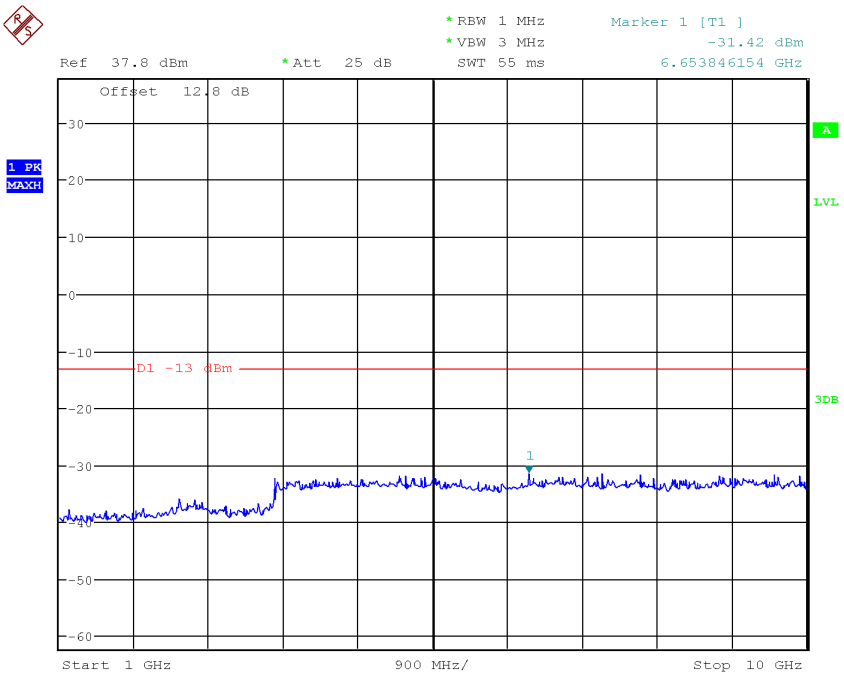
GMSK, High Channel, 848.8 MHz, 1GHz to 10GHz



Date: 30.APR.2019 09:33:39

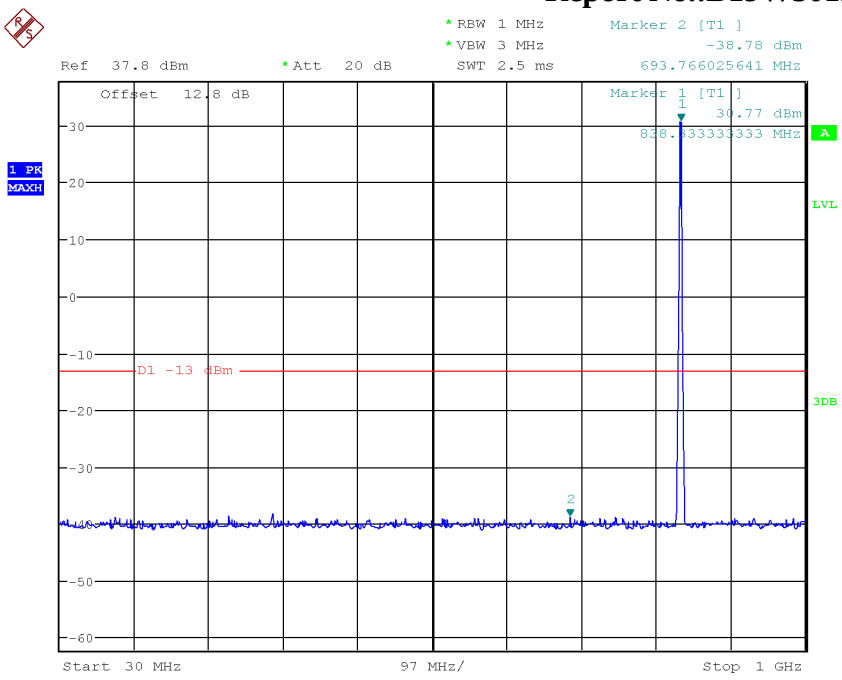
8PSK, Low channel, 824.200 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



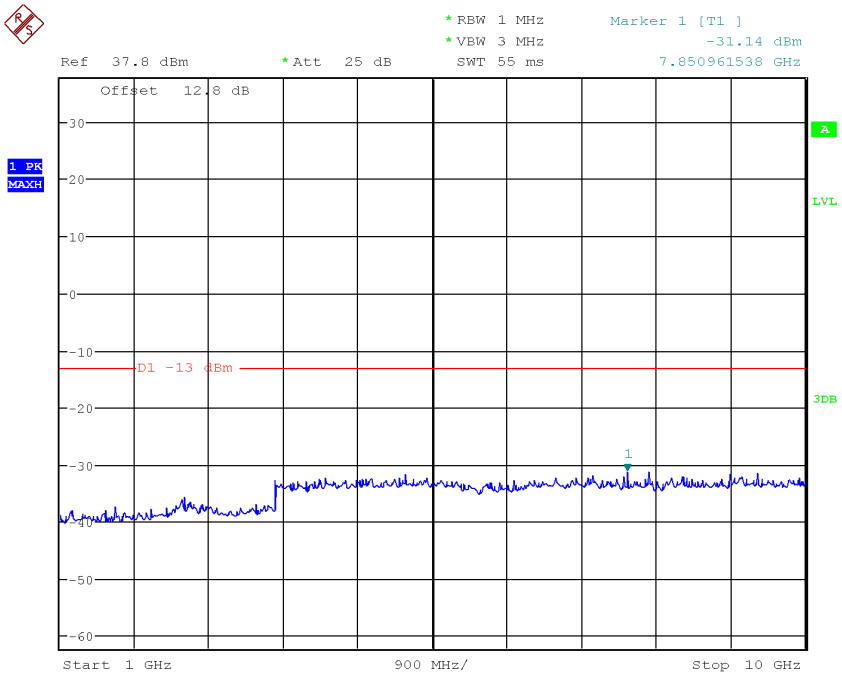
Date: 29.APR.2019 22:26:29

8PSK, Low channel, 824.200 MHz, 1GHz to 10GHz

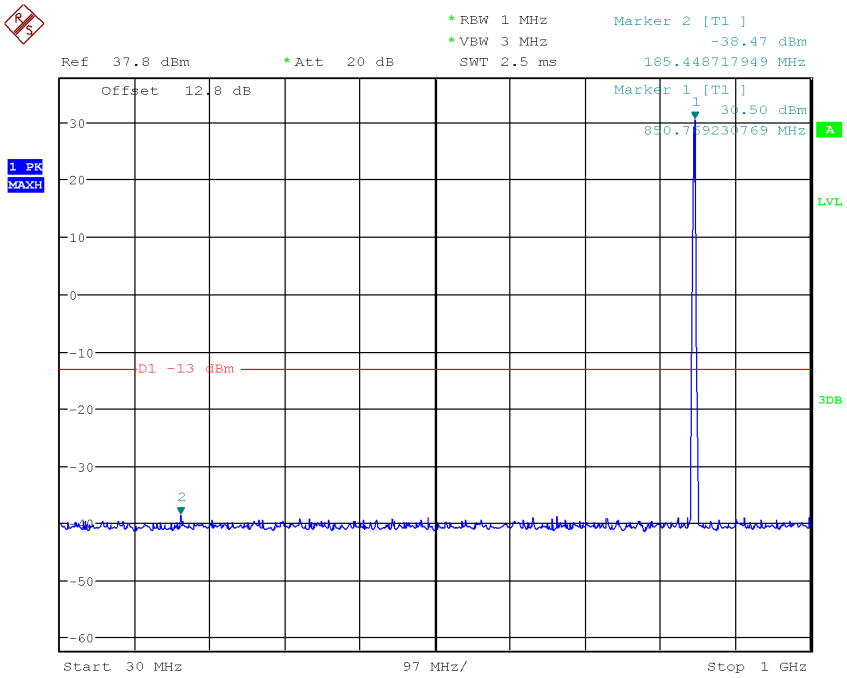


8PSK, Mid Channel, 836.6 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



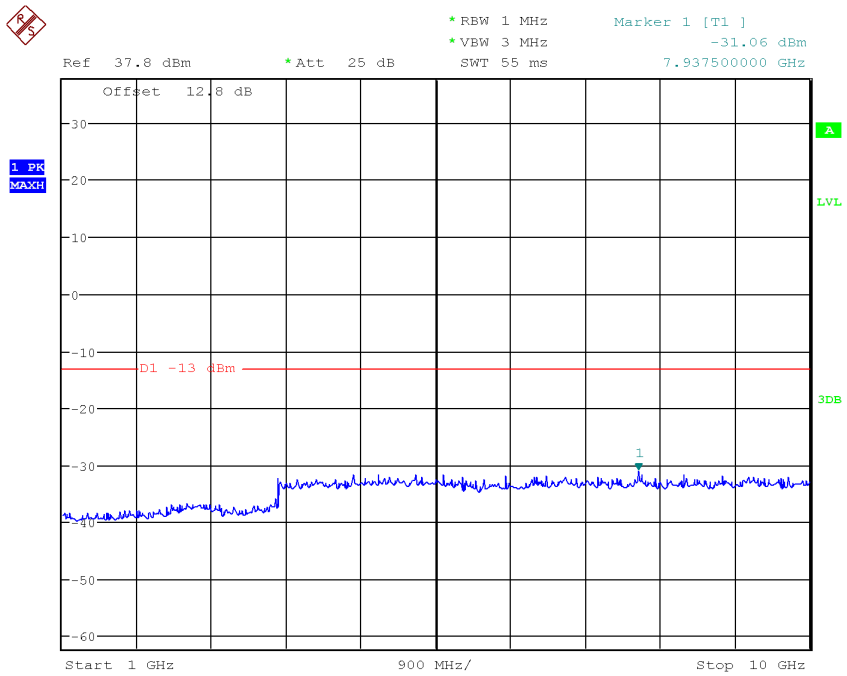
8PSK, Mid Channel, 836.6 MHz, 1GHz to 10GHz



Date: 30.APR.2019 09:35:06

8PSK, High Channel, 848.8 MHz, 30MHz to 1GHz

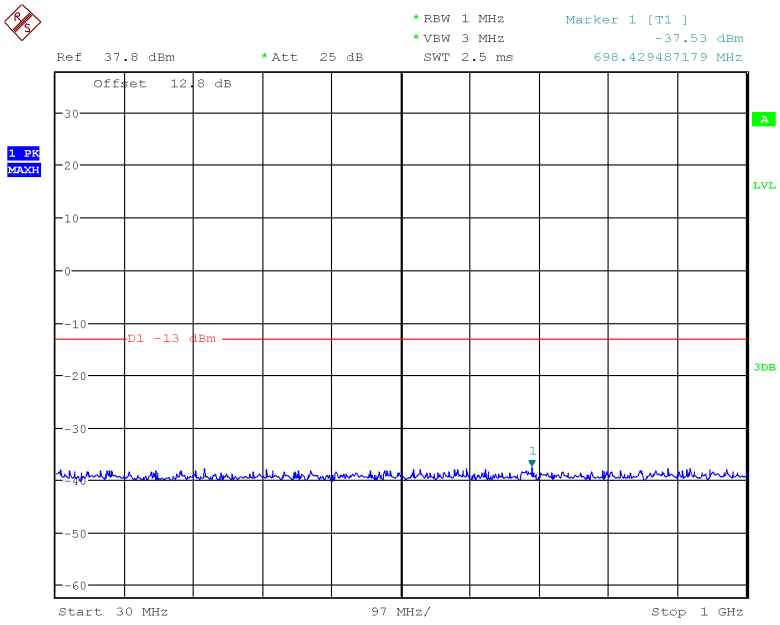
Note: The strong emission shown in each case is the carrier signal.



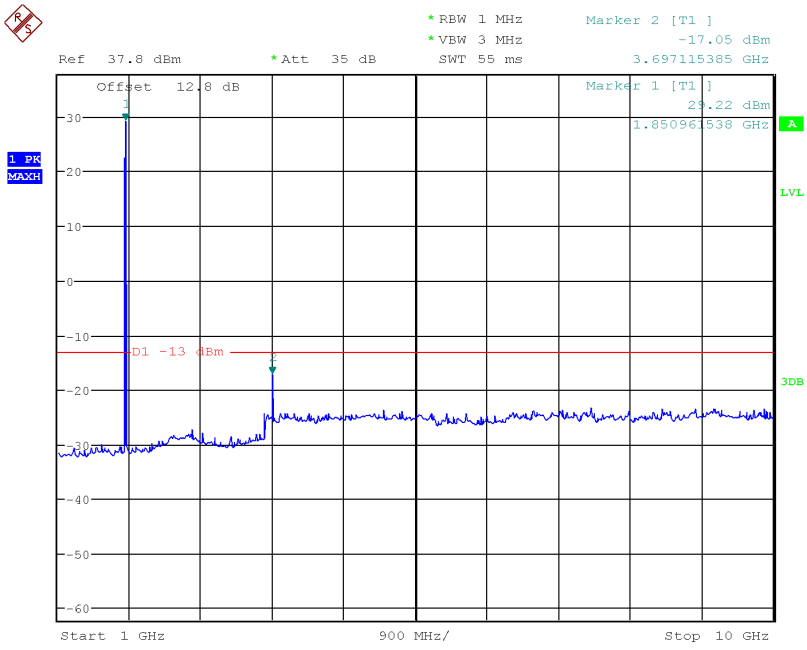
Date: 29.APR.2019 22:29:54

8PSK, High Channel, 848.8 MHz, 1GHz to 10GHz

5.3.2 PCS1900 Conducted Spurious Emission Results

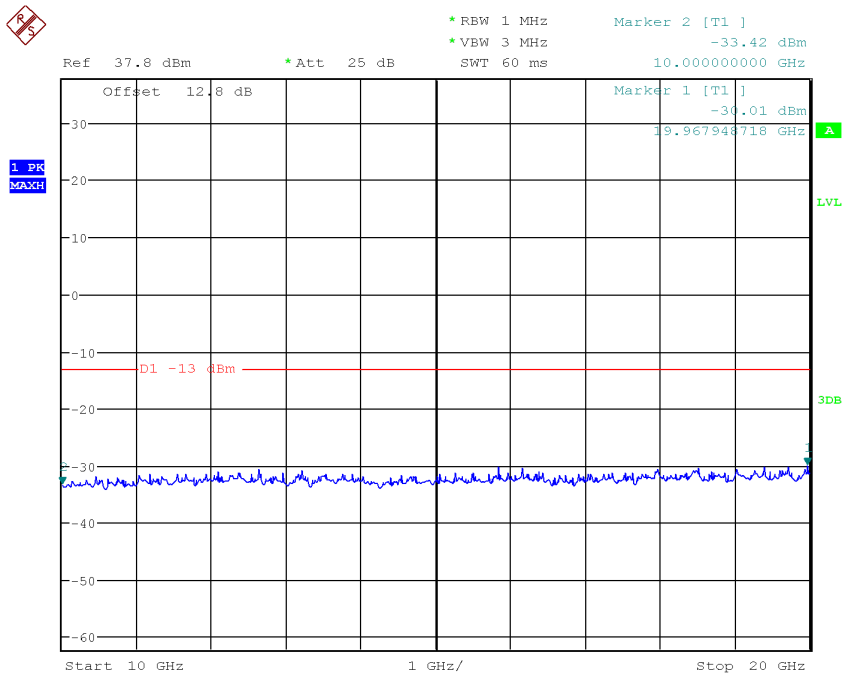


GMSK, Low channel, 1850.2 MHz, 30MHz to 1GHz

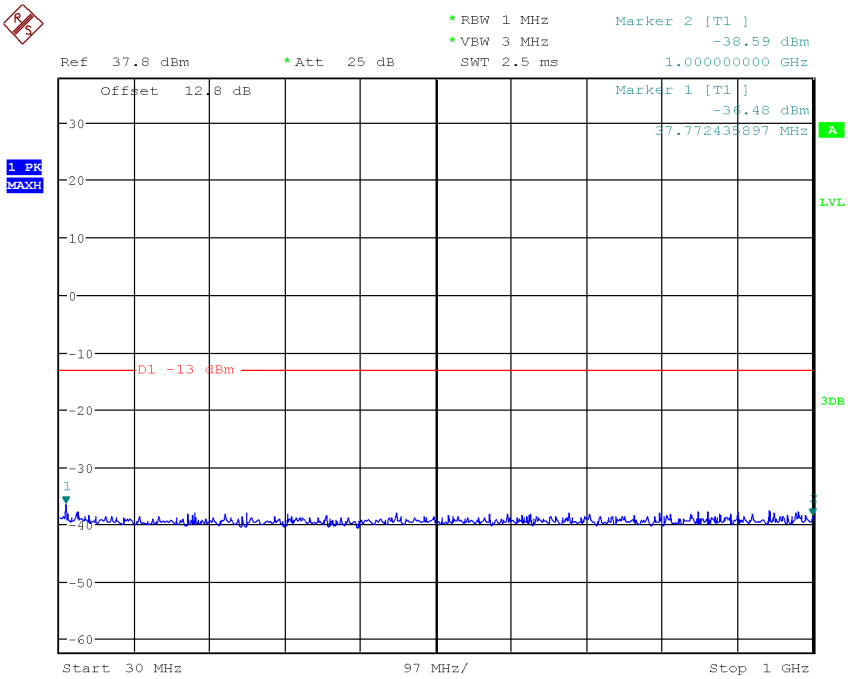


GMSK, Low channel, 1850.2 MHz, 1GHz to 10GHz

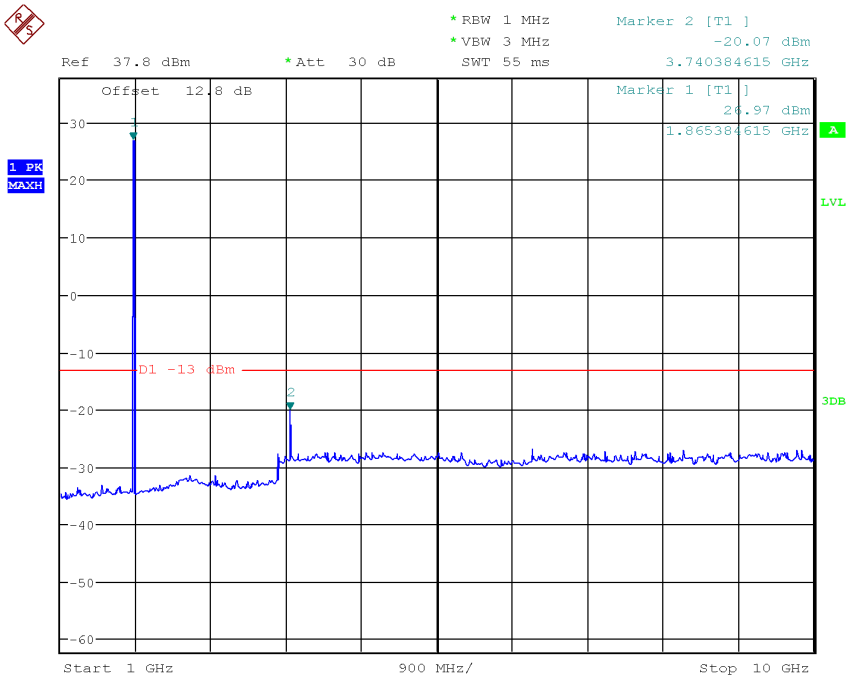
Note: The strong emission shown is the carrier signal.



GMSK, Low channel, 1850.2 MHz, 10GHz to 20GHz

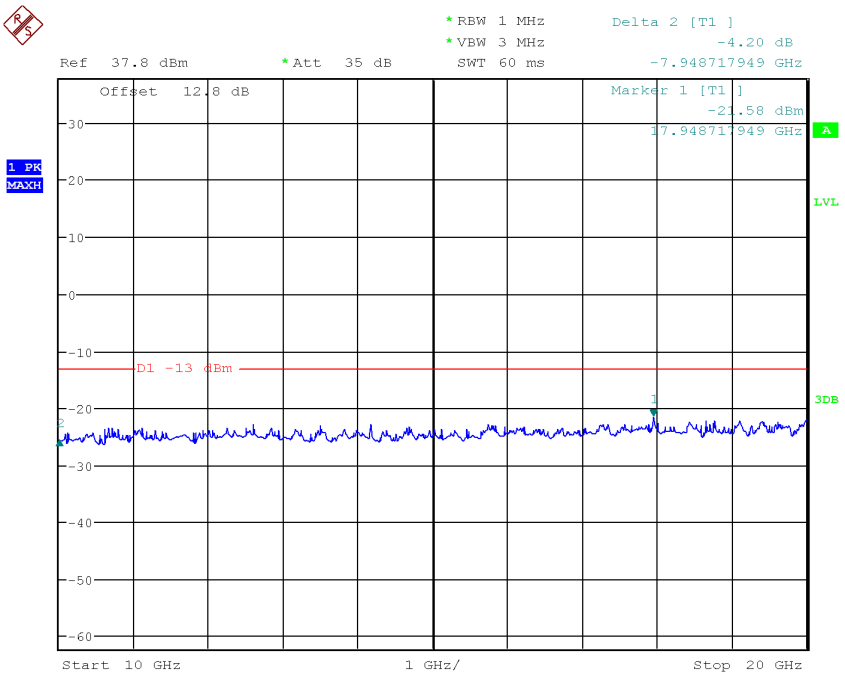


GMSK, Middle channel, 1880.0 MHz, 30MHz to 1GHz

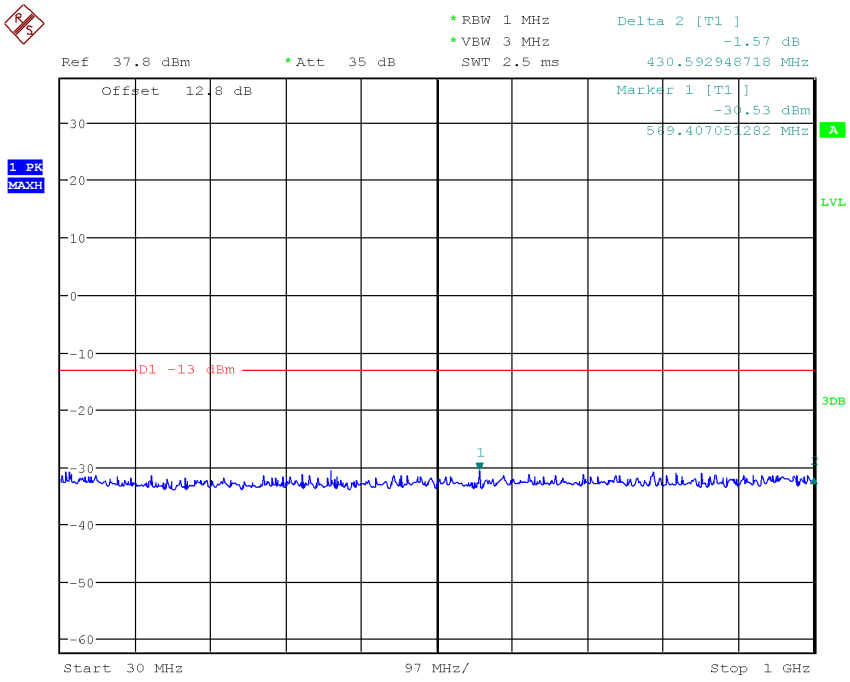


GMSK, Middle channel, 1880.0 MHz, 1GHz to 10GHz

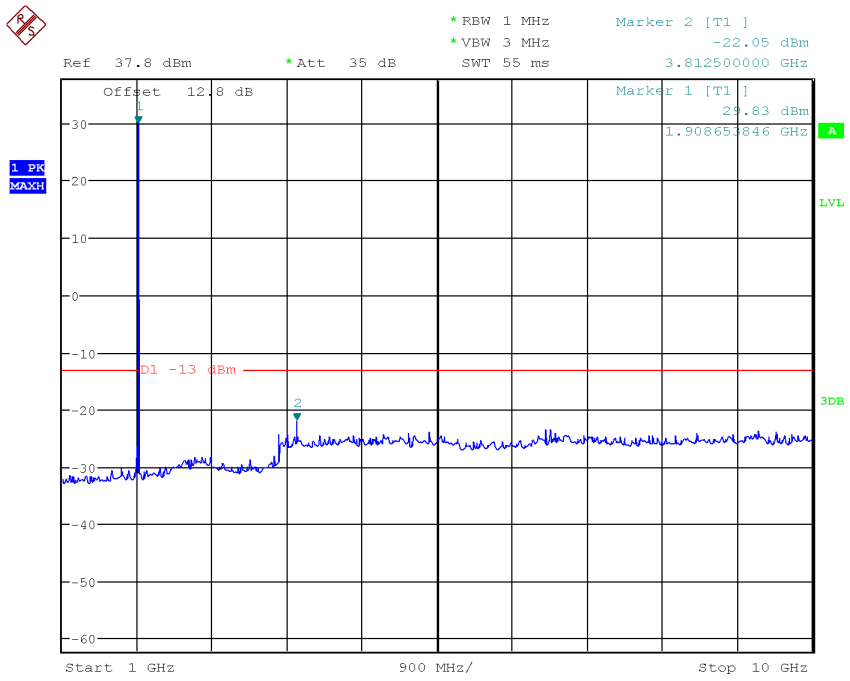
Note: The strong emission shown is the carrier signal.



GMSK, Middle channel, 1880.0 MHz, 10GHz to 20GHz

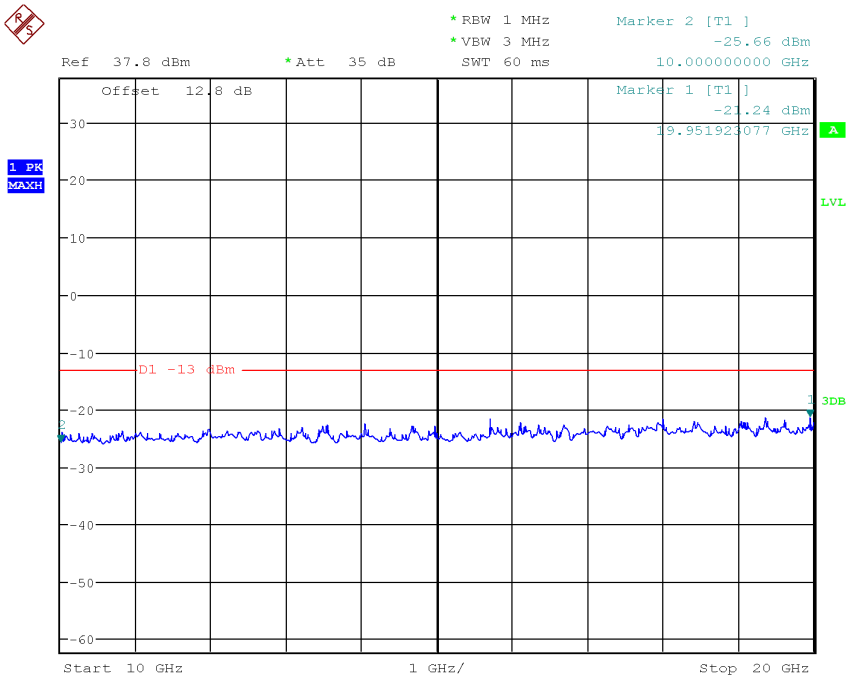


GMSK, High channel, 1909.8 MHz, 30MHz to 1GHz



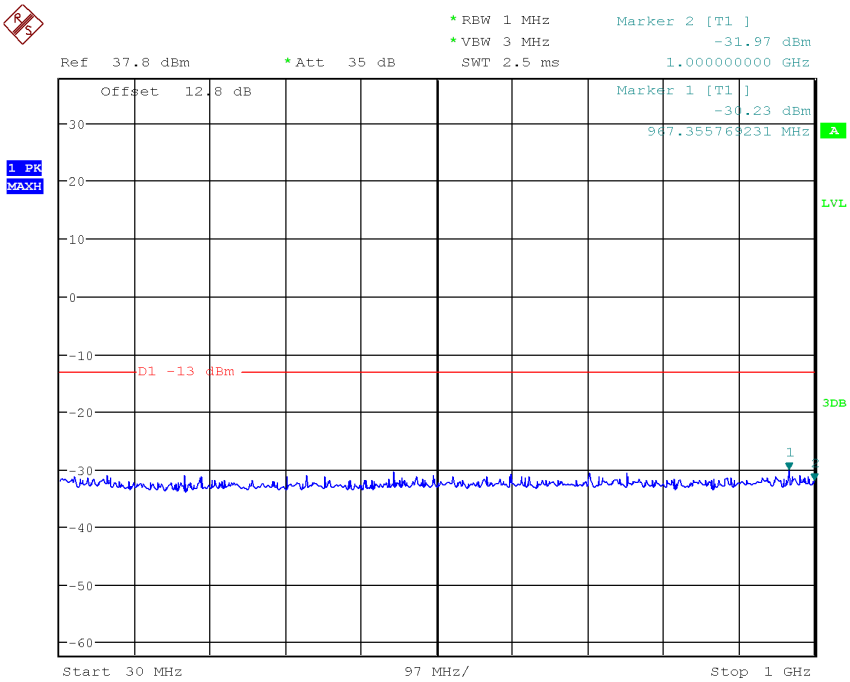
GMSK, High channel, 1909.8 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal.



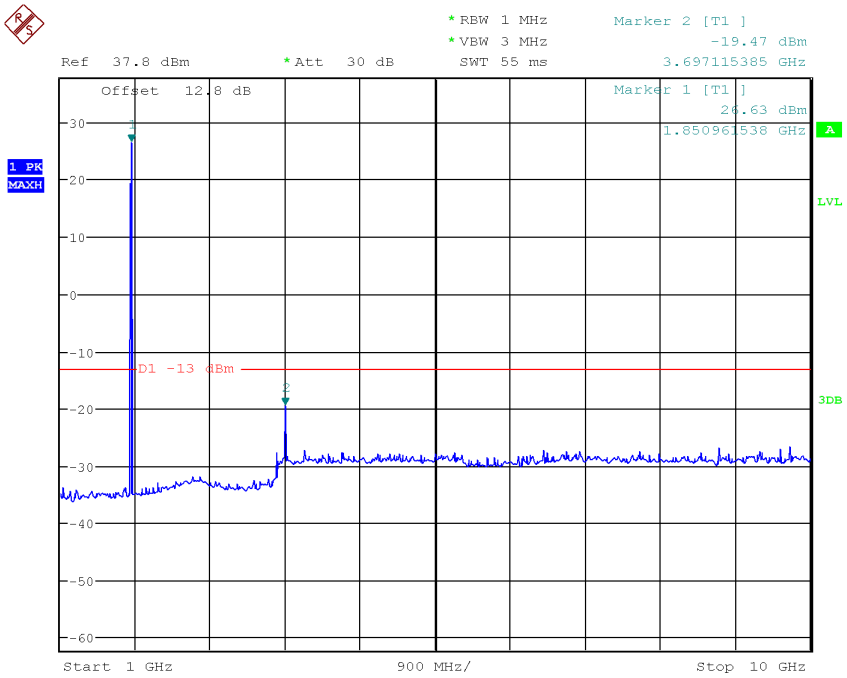
Date: 29.APR.2019 22:40:54

GMSK, High channel, 1909.8 MHz, 10GHz to 20GHz



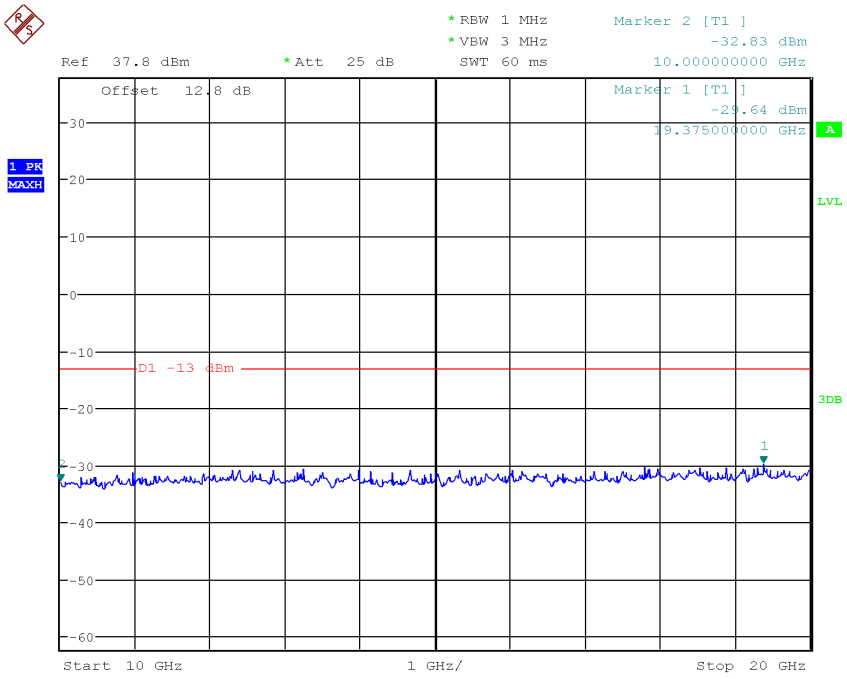
Date: 29.APR.2019 22:44:29

8PSK, Low channel, 1850.2 MHz, 30MHz to 1GHz

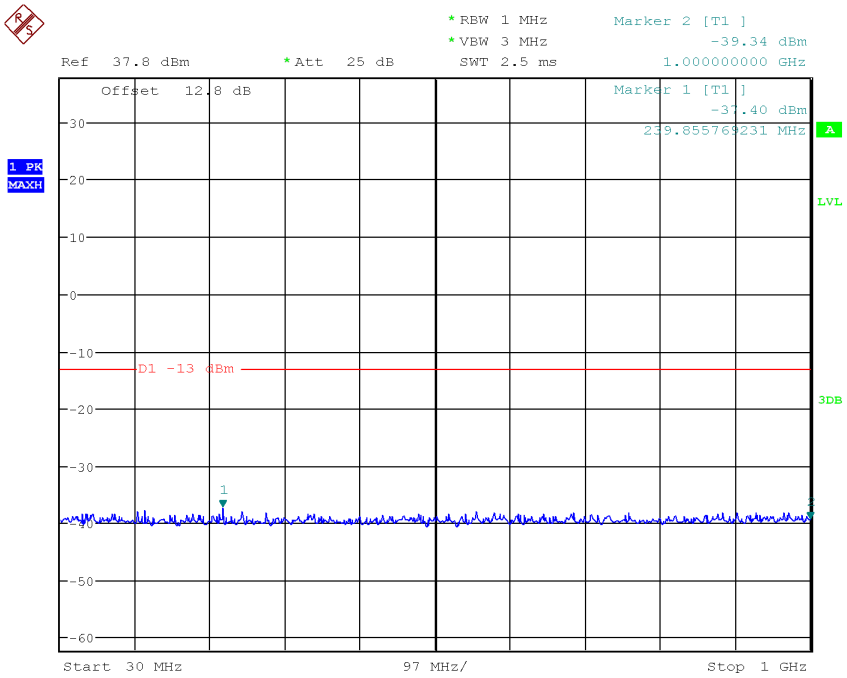


8PSK, Low channel, 1850.2 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal.

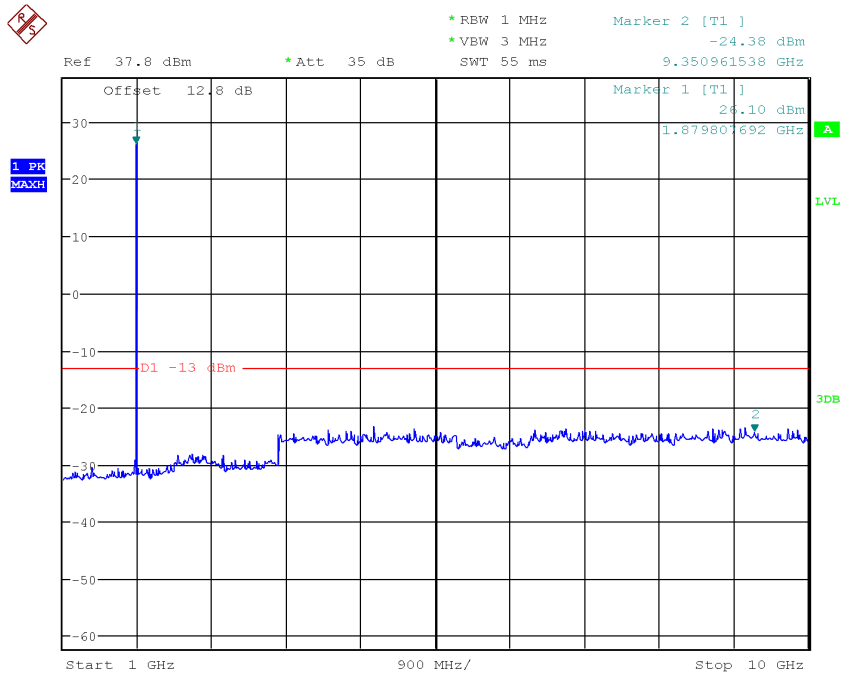


8PSK, Low channel, 1850.2 MHz, 10GHz to 20GHz



Date: 29.APR.2019 22:46:00

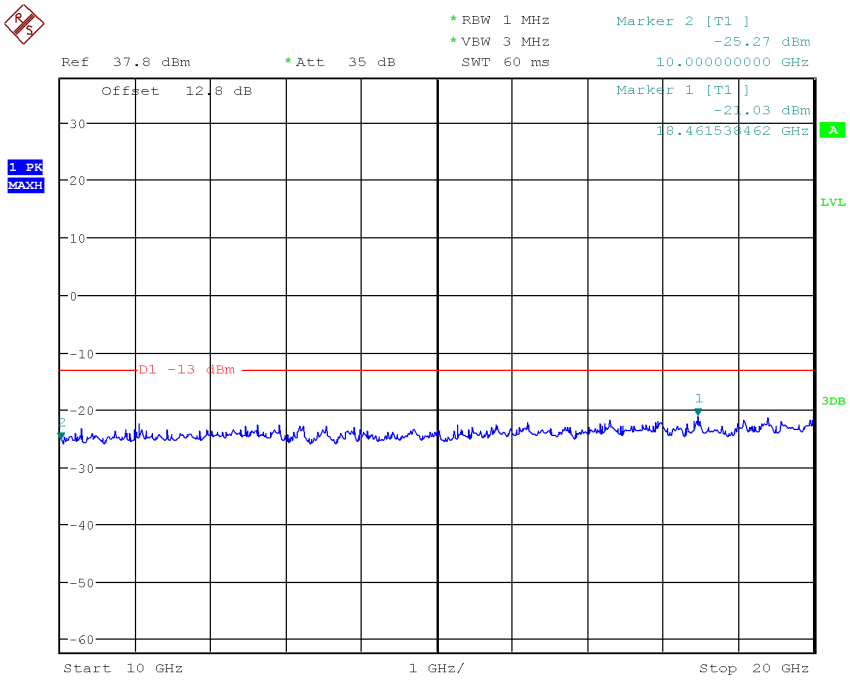
8PSK, Middle channel, 1880.0 MHz, 30MHz to 1GHz



Date: 29.APR.2019 22:46:48

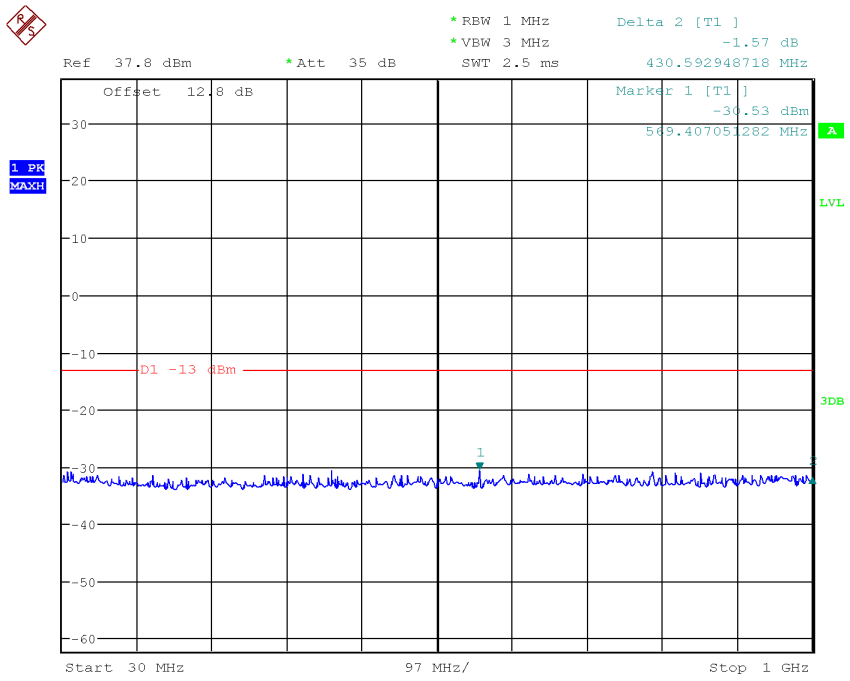
8PSK, Middle channel, 1880.0 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal.



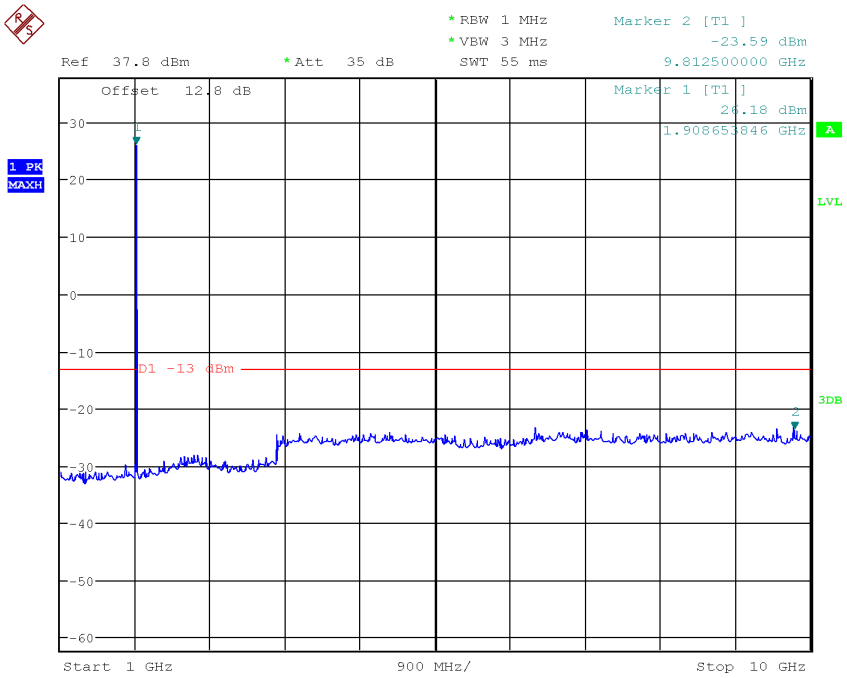
Date: 29.APR.2019 22:47:22

8PSK, Middle channel, 1880.0 MHz, 10GHz to 20GHz



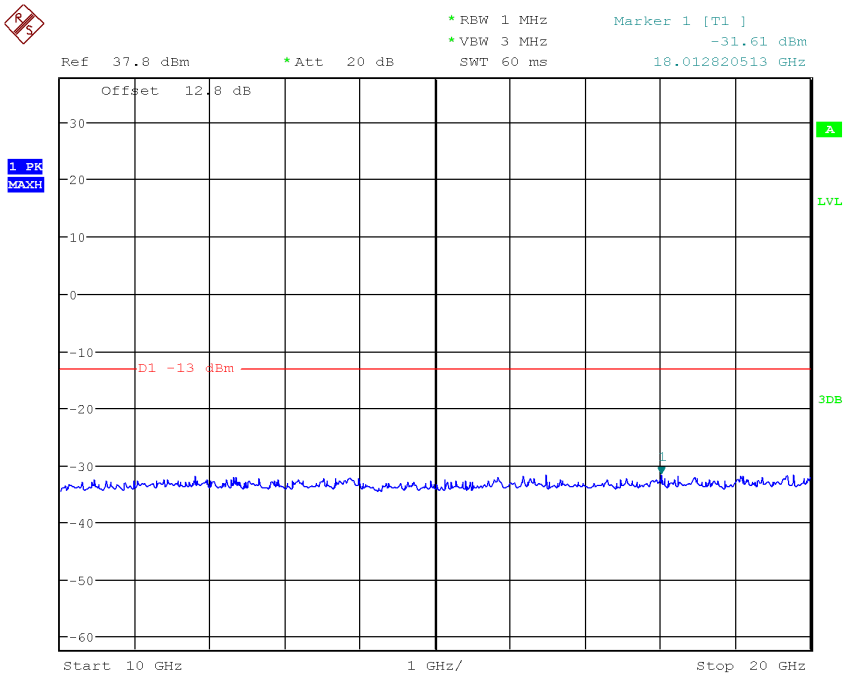
Date: 29.APR.2019 22:39:32

8PSK, High channel, 1909.8 MHz, 30MHz to 1GHz



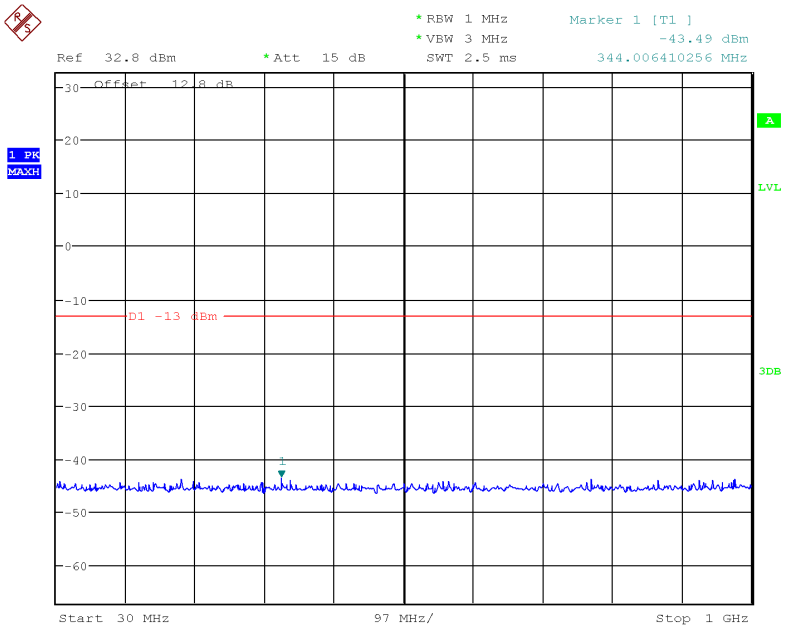
8PSK, High channel, 1909.8 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal



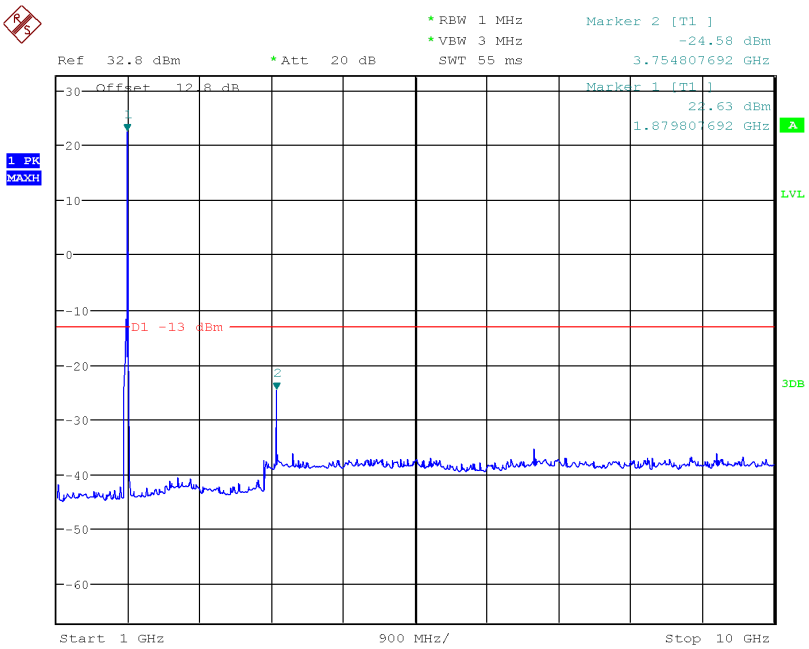
8PSK, High channel, 1909.8 MHz, 10GHz to 20GHz

5.3.3 WCDMA Band 2 Conducted Spurious Emission Results



Date: 30.APR.2019 10:11:42

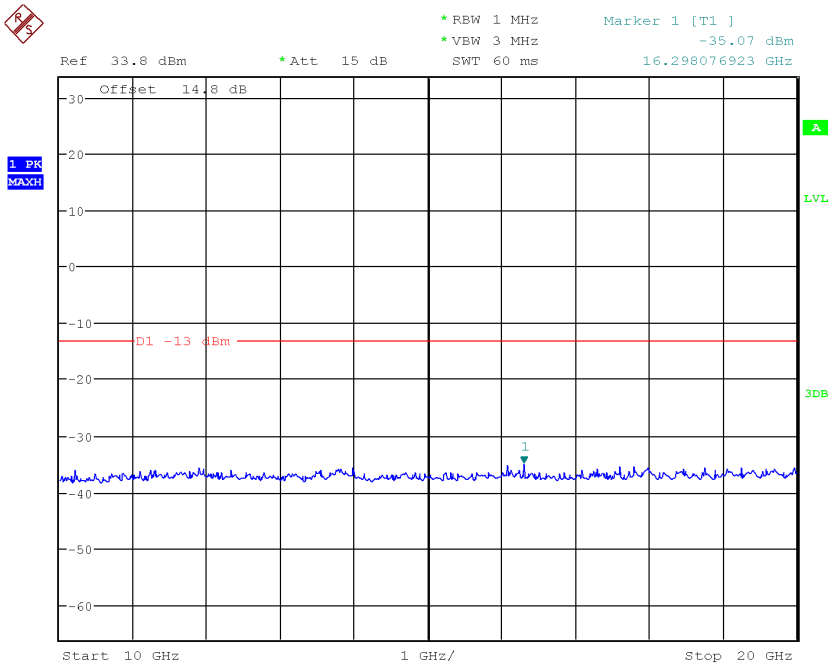
WCDMA Band 2 QPSK Middle Channel, 1880 MHz, 30MHz to 1GHz



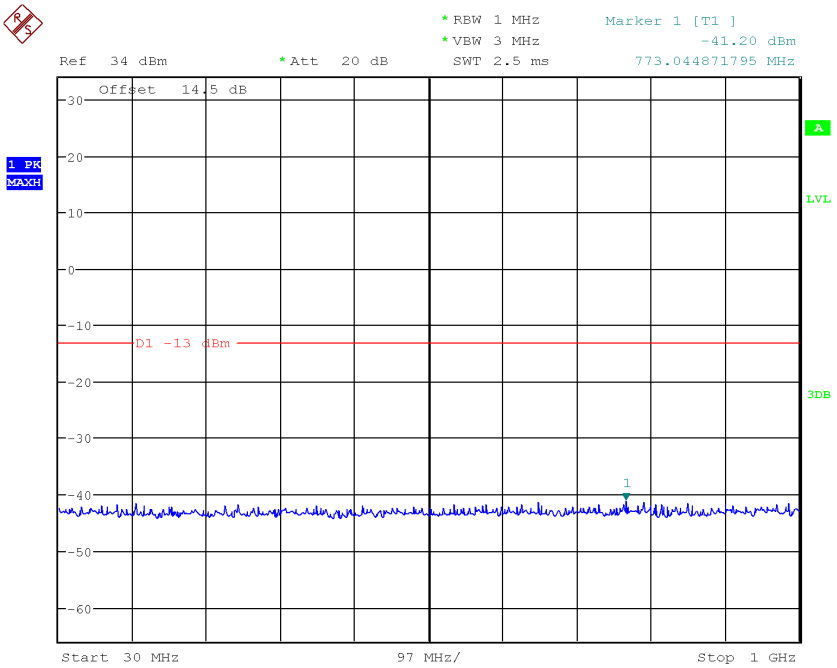
Date: 30.APR.2019 10:12:11

WCDMA Band 2 QPSK Middle Channel, 1880 MHz, 1GHz to 10GHz

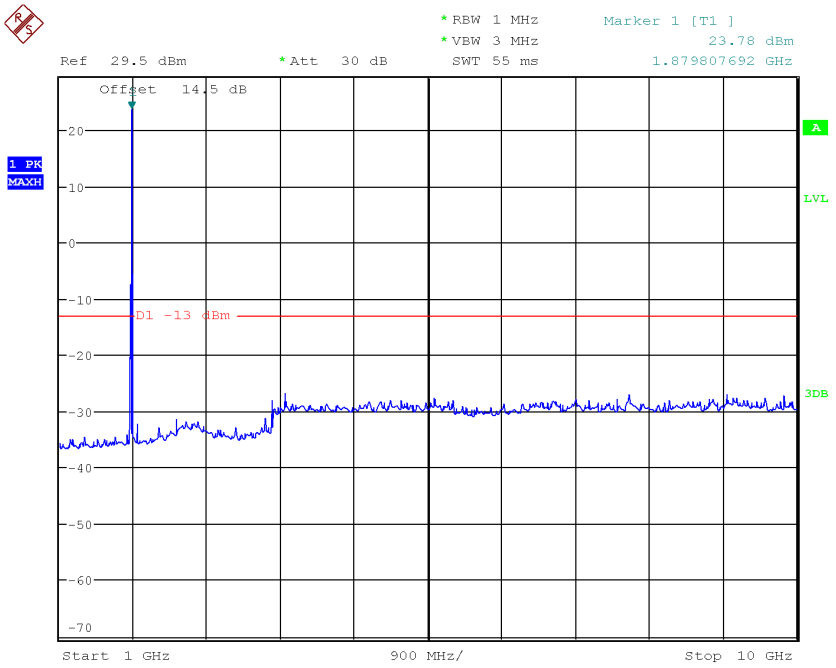
Note: The strong emission shown in each case is the carrier signal.



WCDMA Band 2 QPSK Middle Channel, 1880 MHz, 10GHz to 20GHz

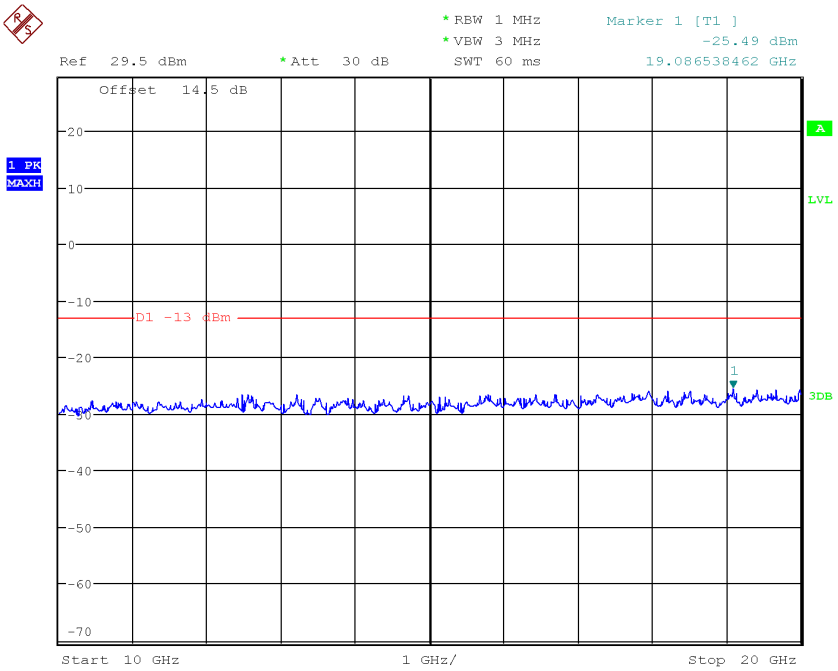


WCDMA Band 2 16QAM Middle Channel, 1880 MHz, 30MHz to 1GHz



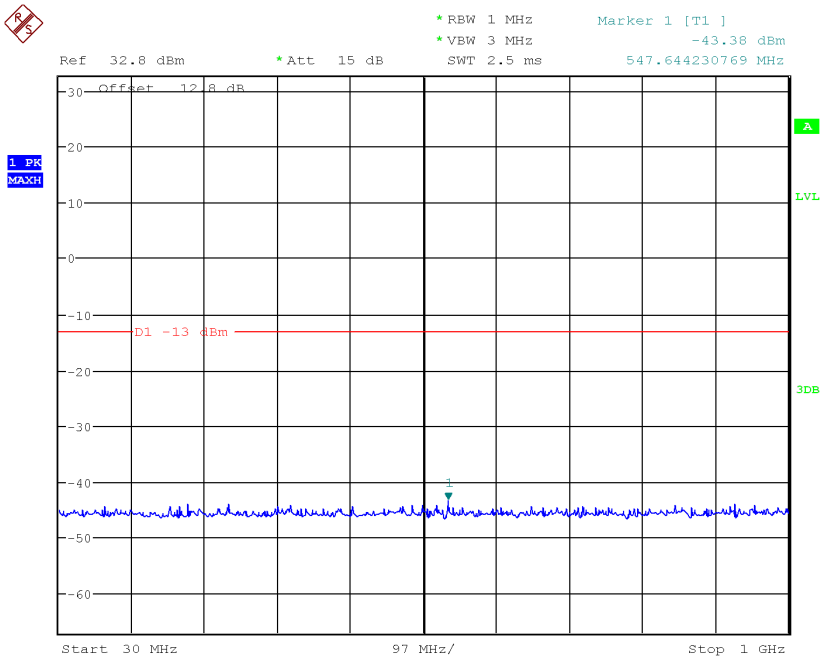
WCDMA Band 2 16QAM Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

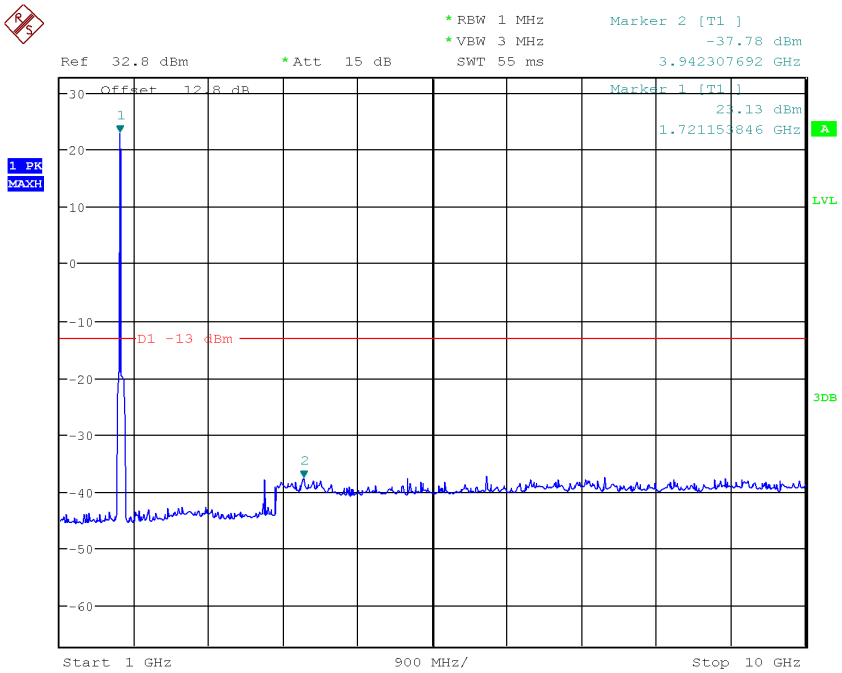


WCDMA Band 2 16QAM Middle Channel, 1880 MHz, 10GHz to 20GHz

5.3.4 WCDMA Band 4 Conducted Spurious Emission Results

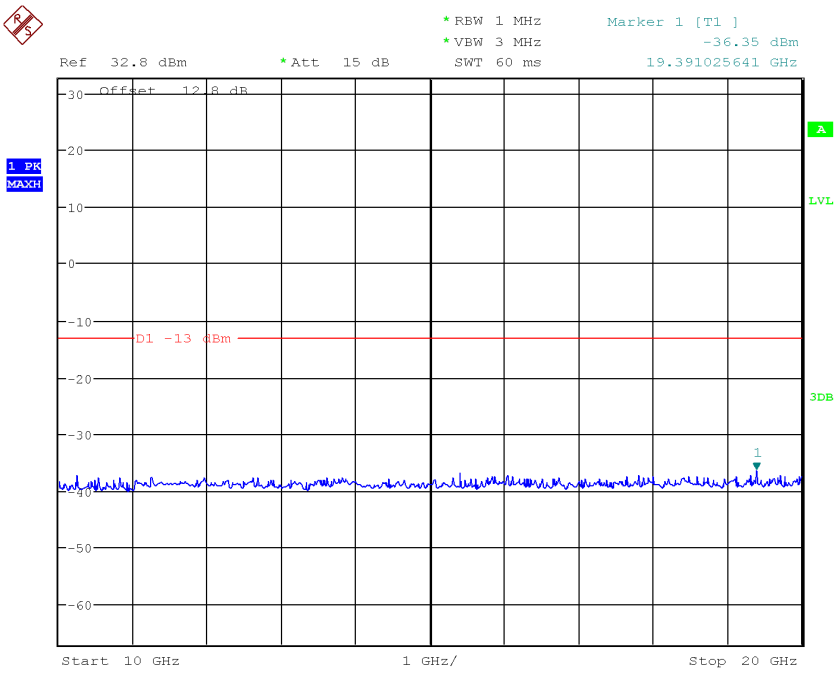


WCDMA Band 4 QPSK Middle Channel, 1732.4MHz, 30MHz to 1GHz

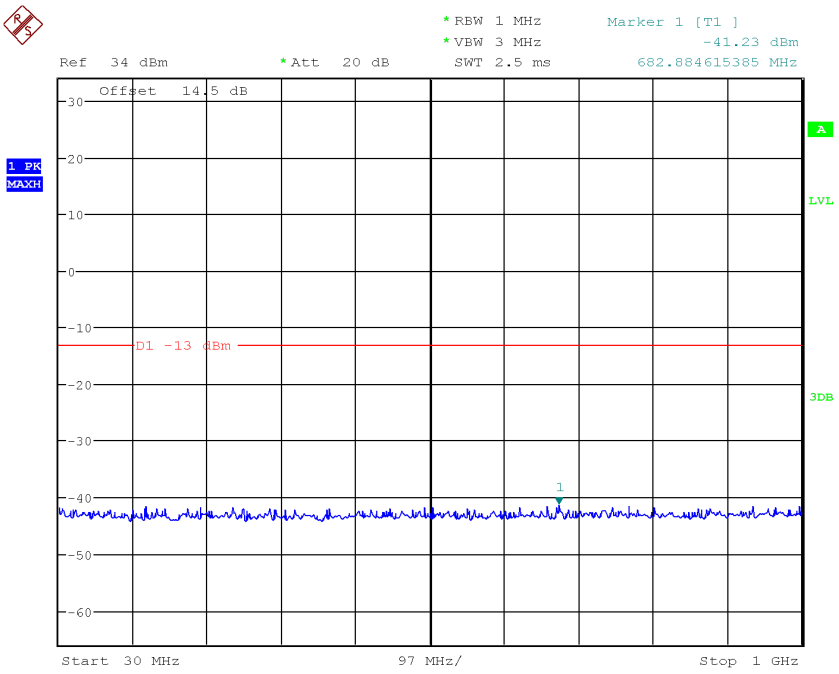


WCDMA Band 4 QPSK Middle Channel, 1732.4 MHz, 1GHz to 10GHz

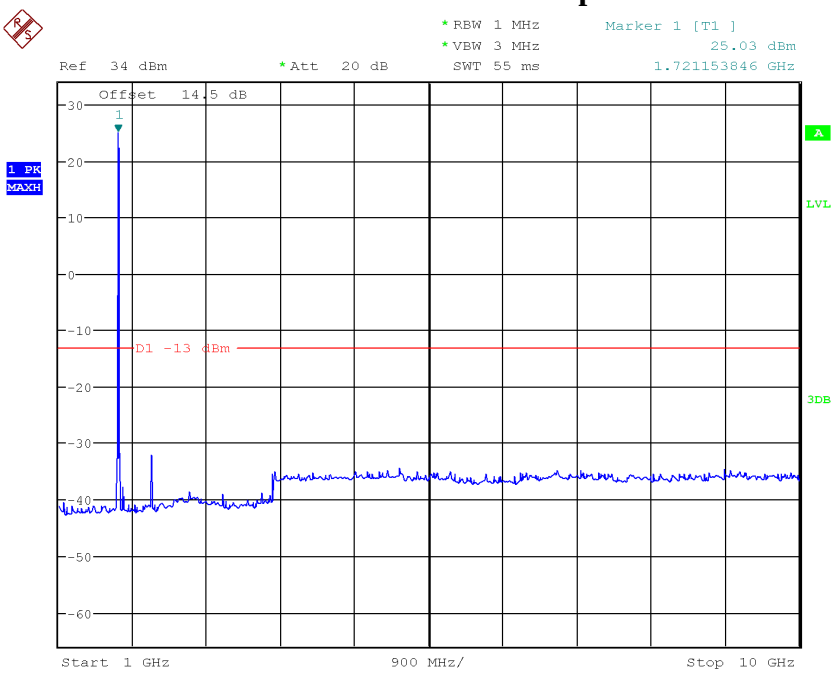
Note: The strong emission shown in each case is the carrier signal.



WCDMA Band 4 QPSK Middle Channel, 1732.4MHz, 10GHz to 20GHz

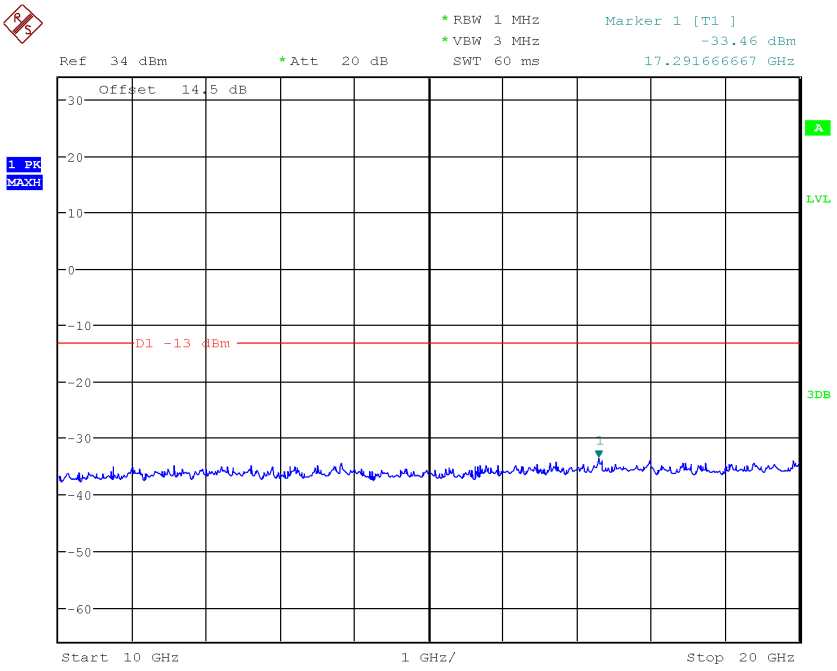


WCDMA Band 4 16QAM Middle Channel, 1732.4 MHz, 30MHz to 1GHz



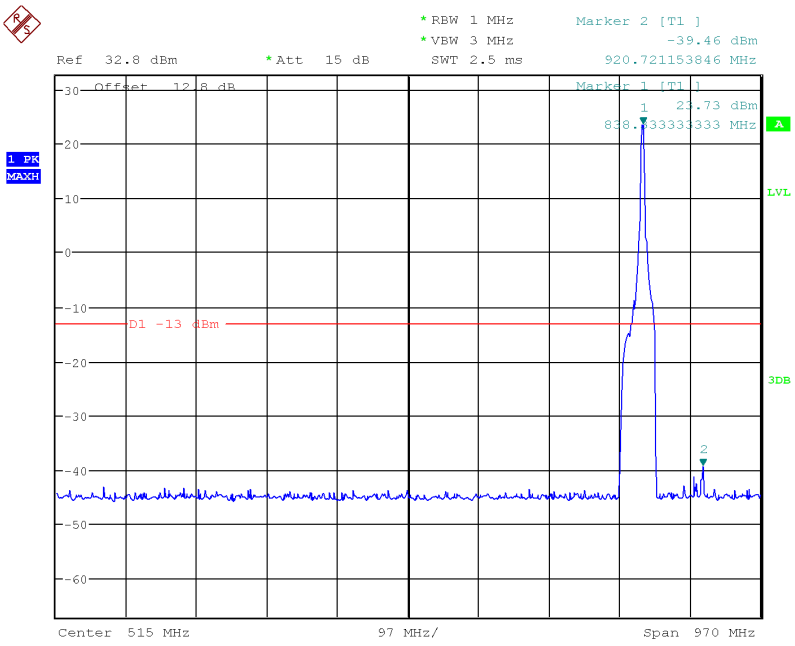
WCDMA Band 4 16QAM Middle Channel, 1732.4 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



WCDMA Band 4 16QAM Middle Channel, 1732.4 MHz, 10GHz to 20GHz

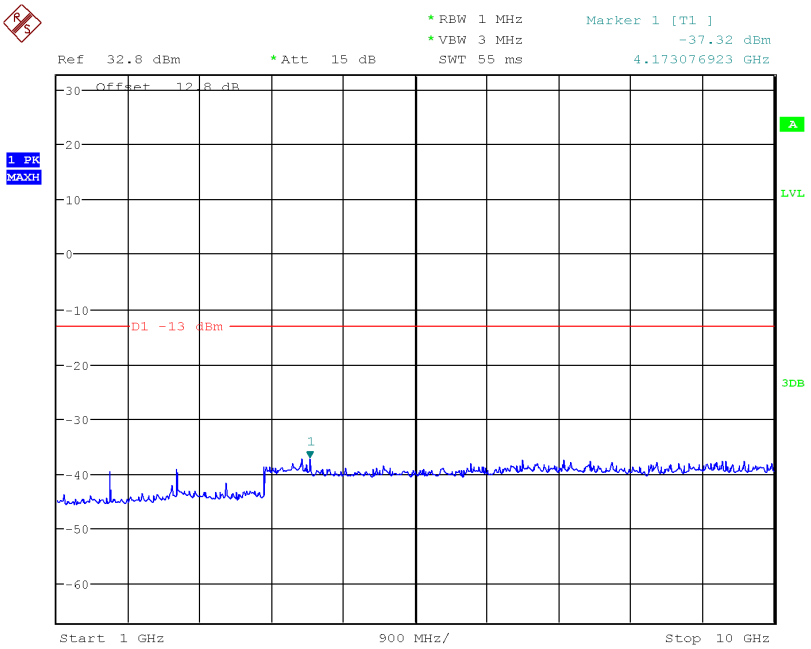
5.3.5 WCDMA Band 5 Conducted Spurious Emission Results



Date: 30.APR.2019 10:08:48

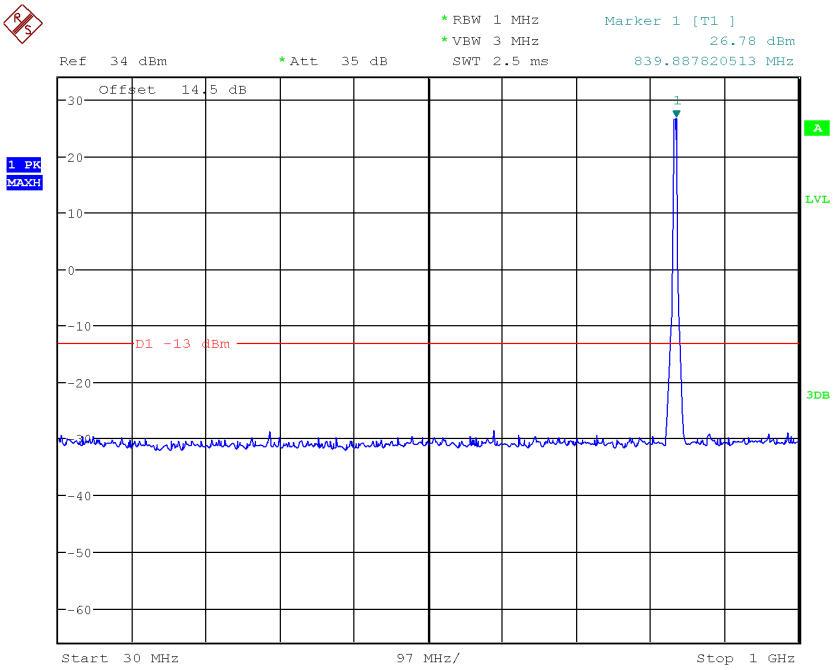
WCDMA Band 5 QPSK Middle Channel, 836.4 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



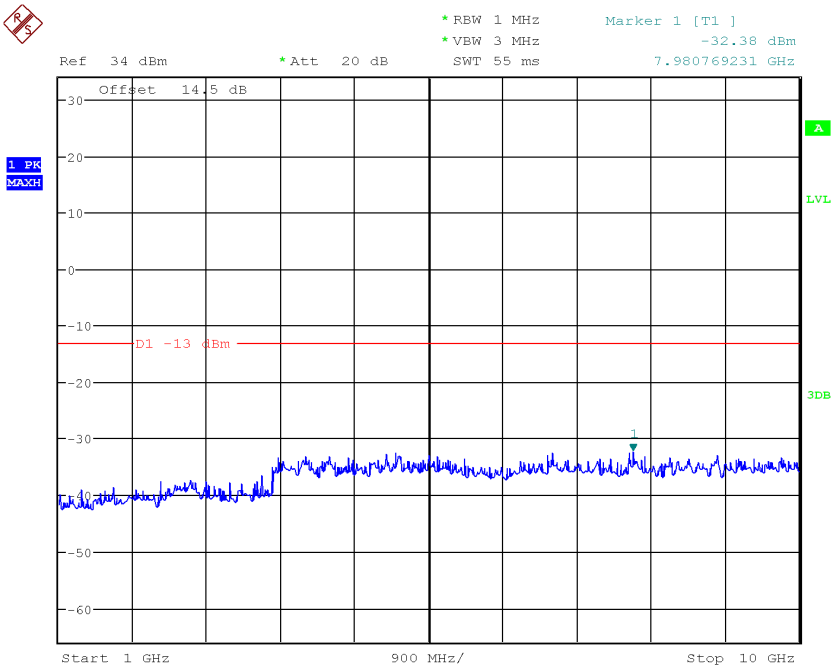
Date: 30.APR.2019 10:09:15

WCDMA Band 5 QPSK Middle Channel, 836.4 MHz, 1GHz to 10GHz



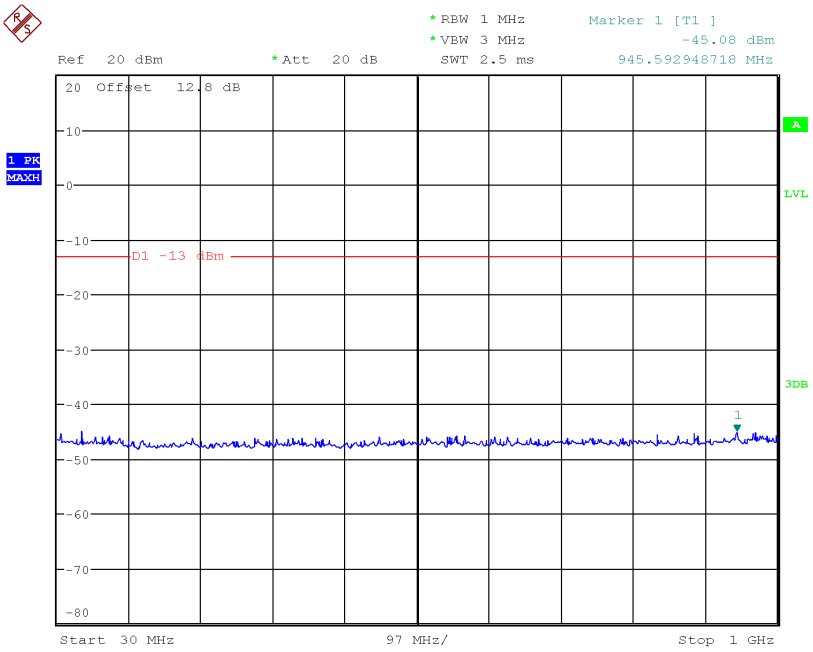
WCDMA Band 5 16QAM Middle Channel, 836.4 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

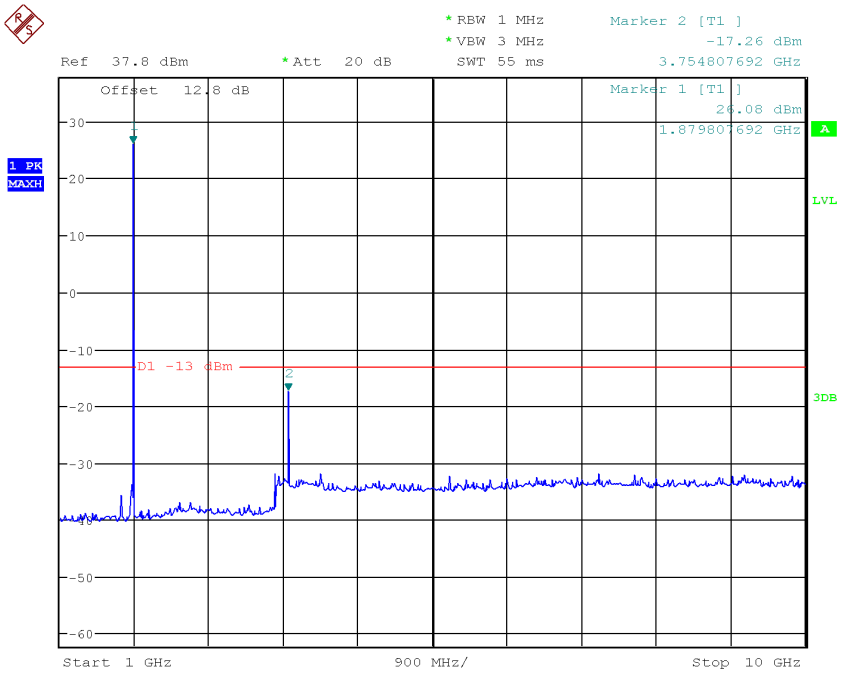


WCDMA Band 5 16QAM Middle Channel, 836.4 MHz, 1GHz to 10GHz

5.3.6 LTE B2 Conducted Spurious Emission Results

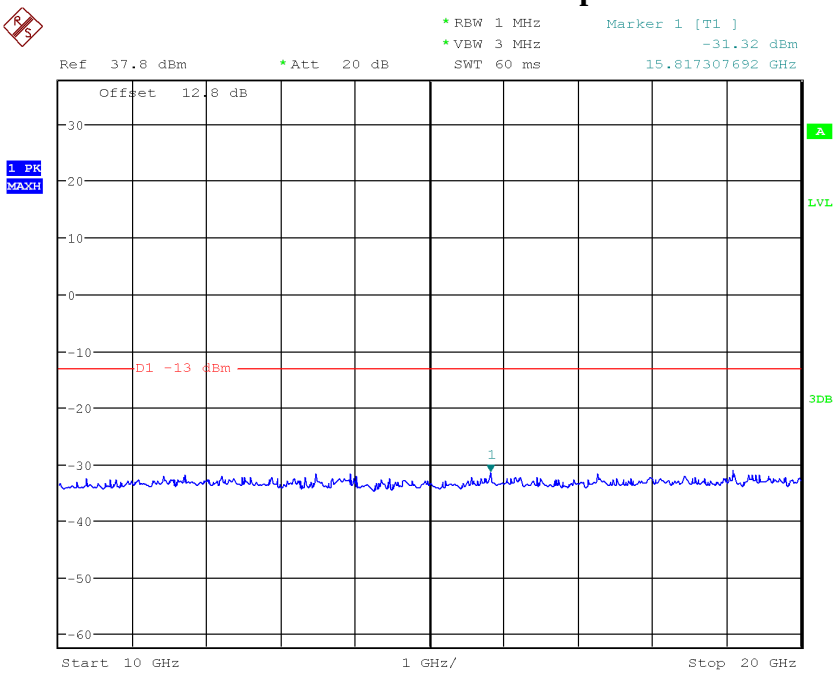


1.4MHz bandwidth QPSK Mode Middle channel, 1880 MHz, 30MHz to 1GHz

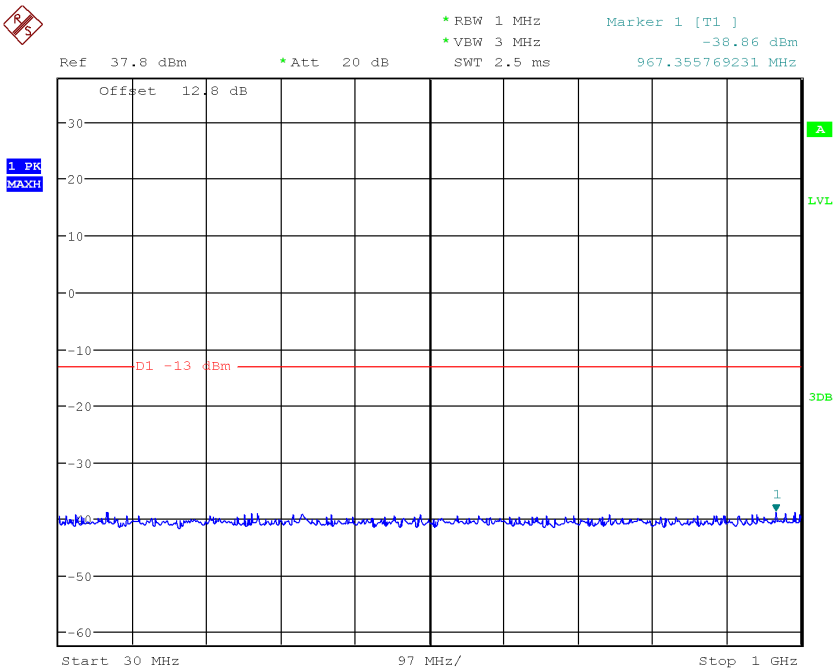


1.4MHz bandwidth QPSK Middle channel, 1880MHz,1GHz to 10GHz

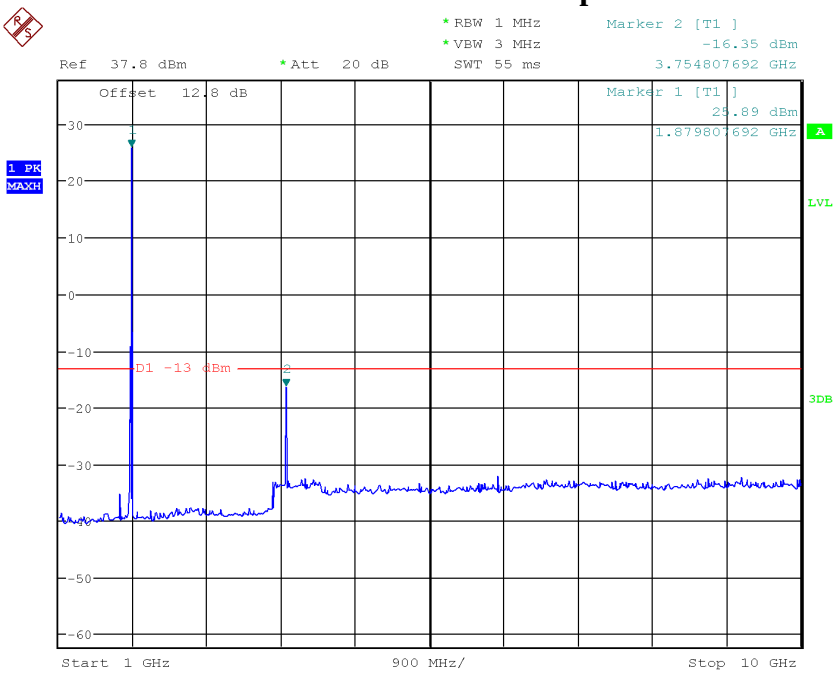
Note: The strong emission shown in each case is the carrier signal.



1.4MHz bandwidth QPSK Middle channel, 1880 MHz,10GHz to 20GHz

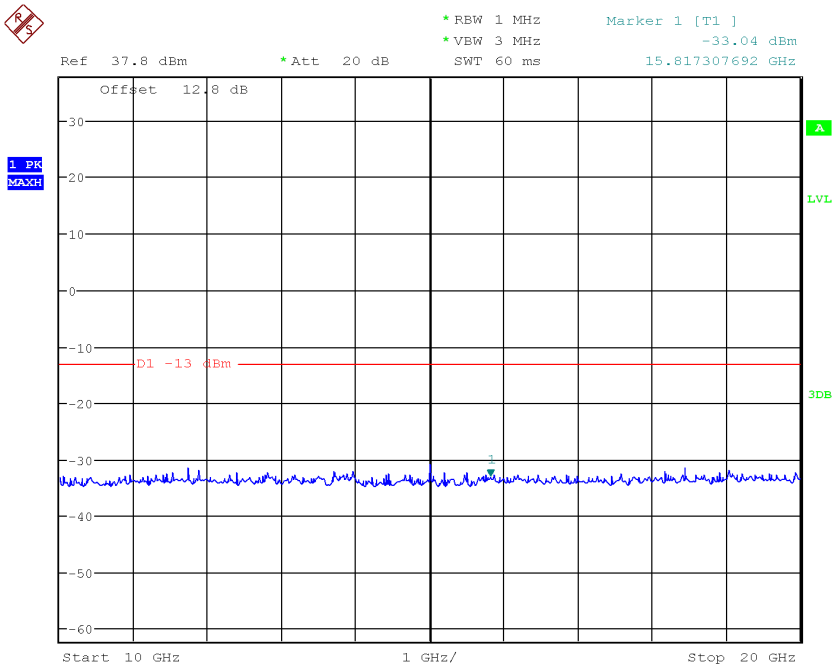


3MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

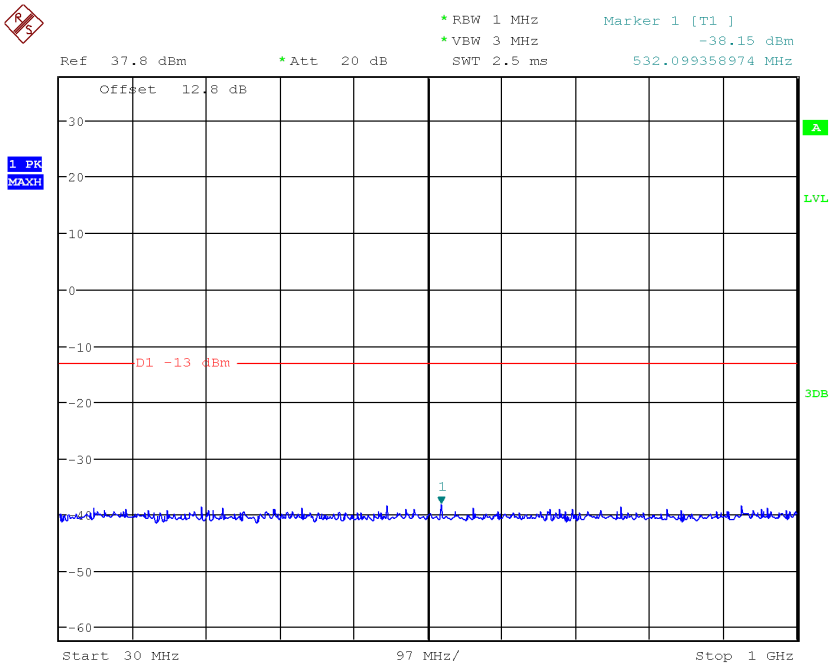


3MHz bandwidth QPSK Middle Channel, 1880 MHz, 1GHz to 10GHz

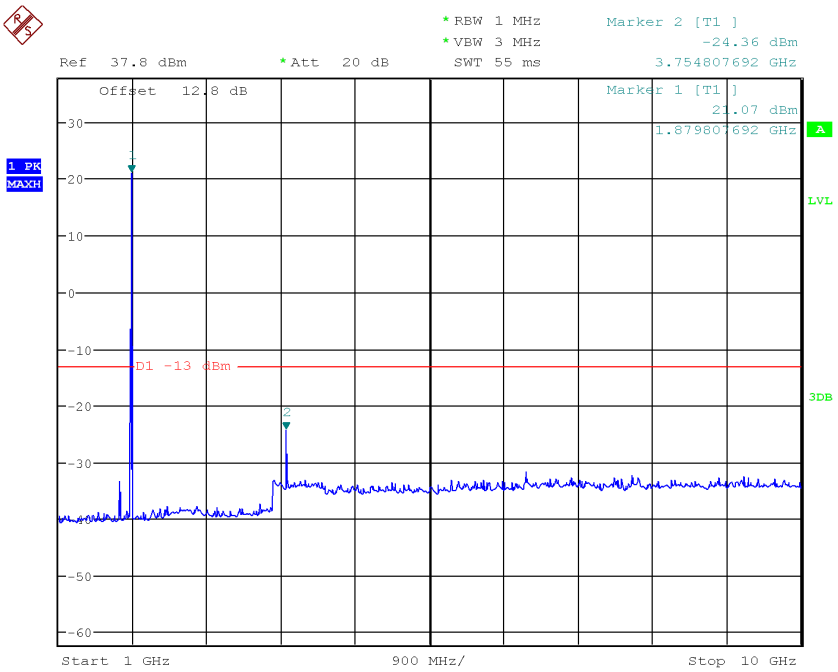
Note: The strong emission shown in each case is the carrier signal.



3MHz bandwidth QPSK Middle Channel, 1880 MHz, 10GHz to 20GHz

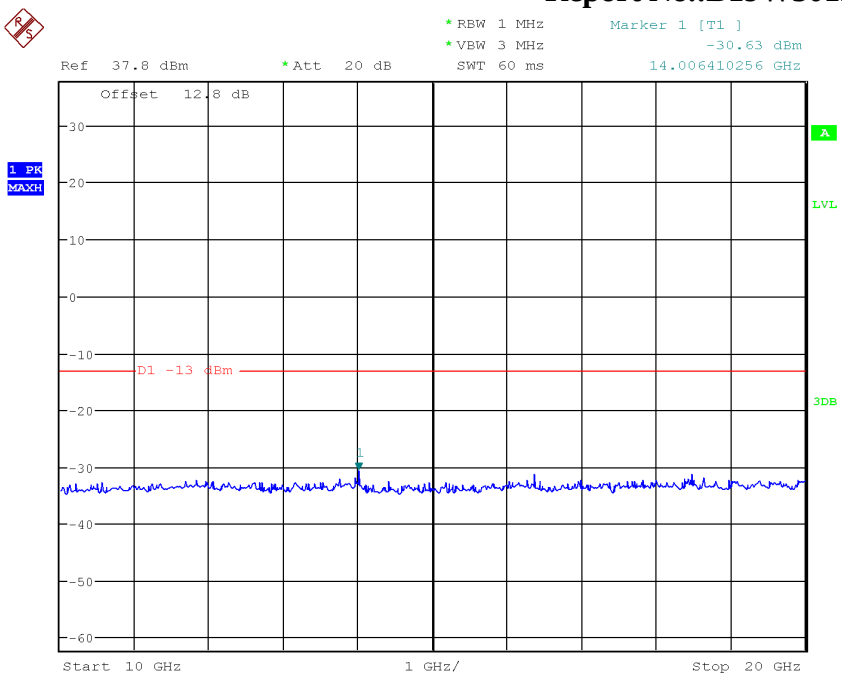


5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz,30MHz to 1GHz

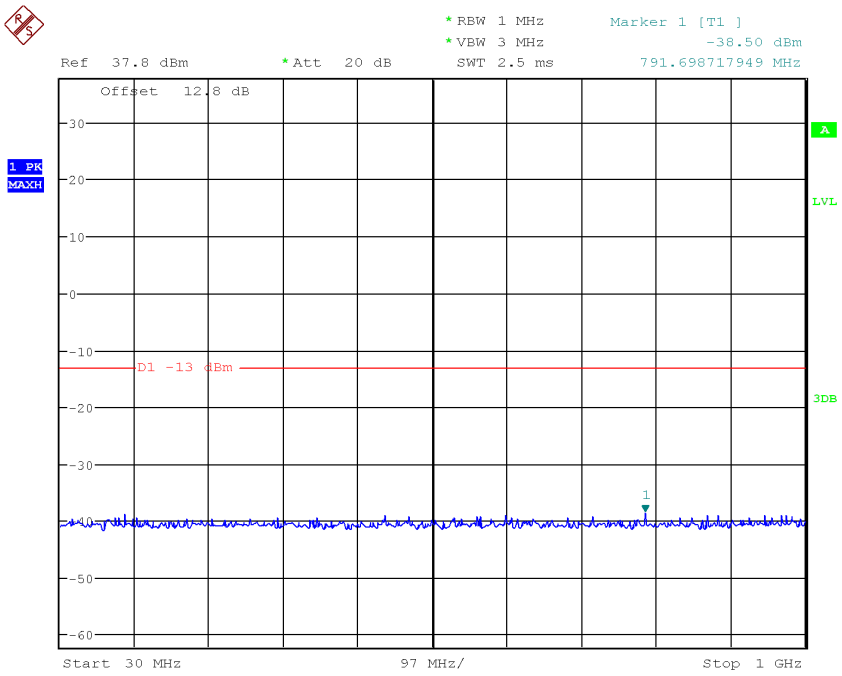


5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz,1GHz to 10GHz

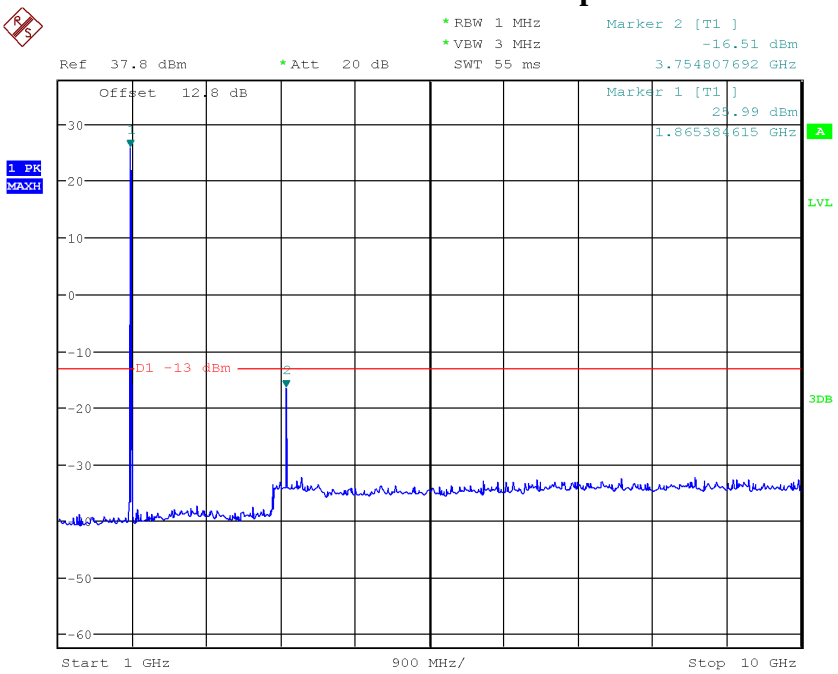
Note: The strong emission shown in each case is the carrier signal.



5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz,10GHz to 20GHz

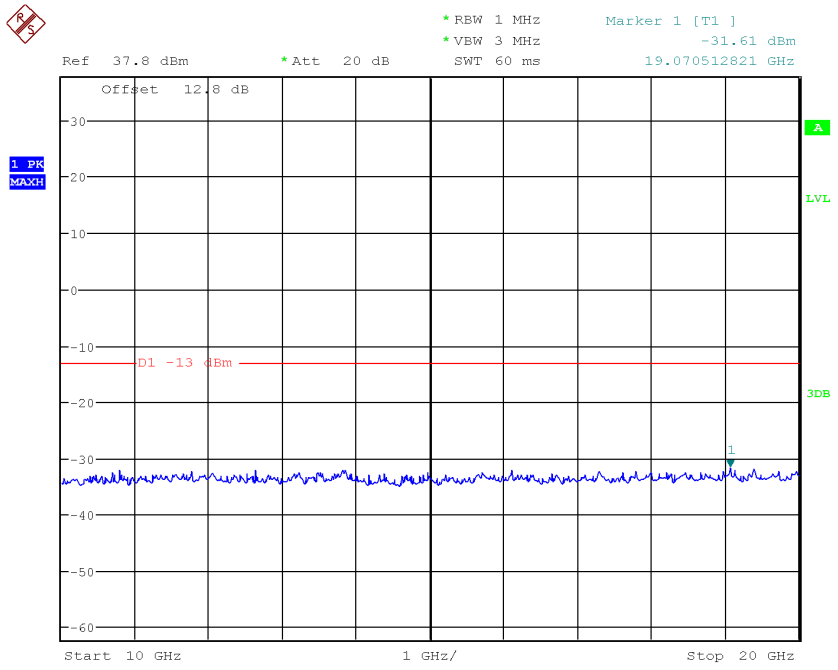


10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

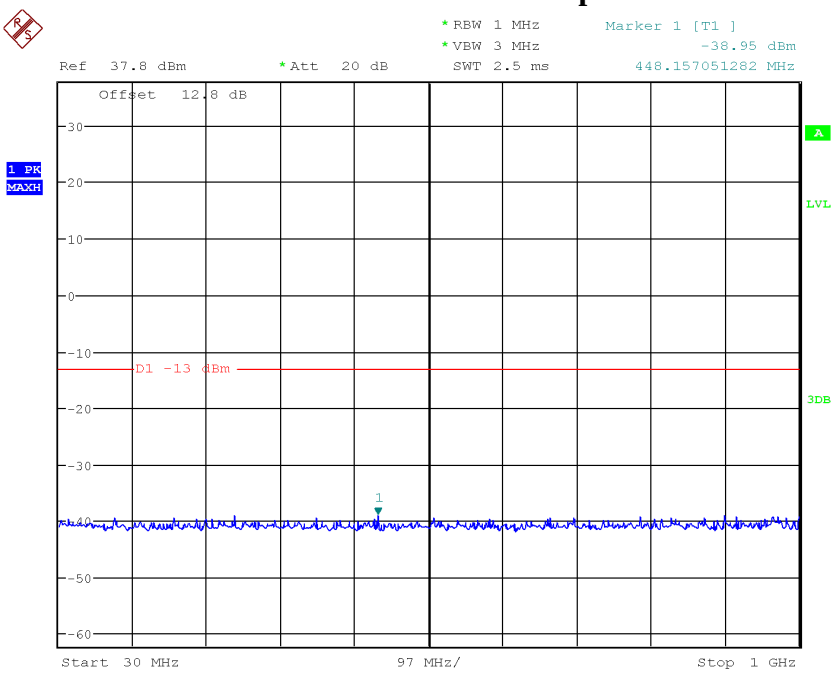


10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

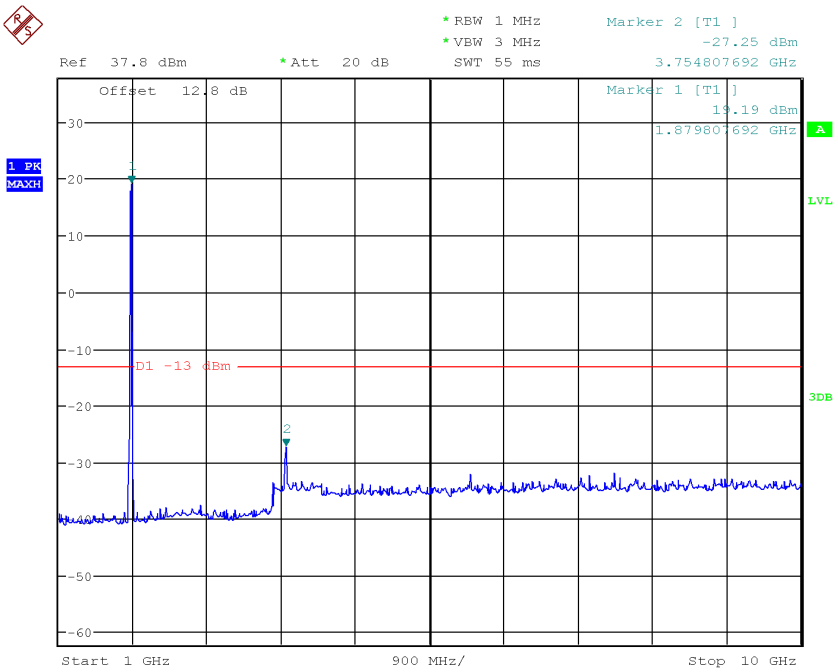


10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz



Date: 29.APR.2019 09:04:39

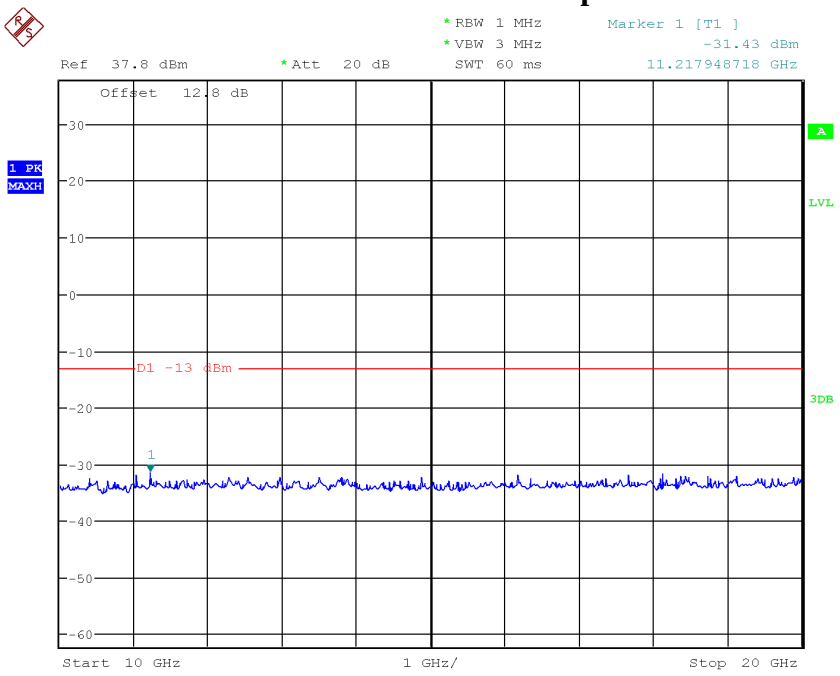
15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



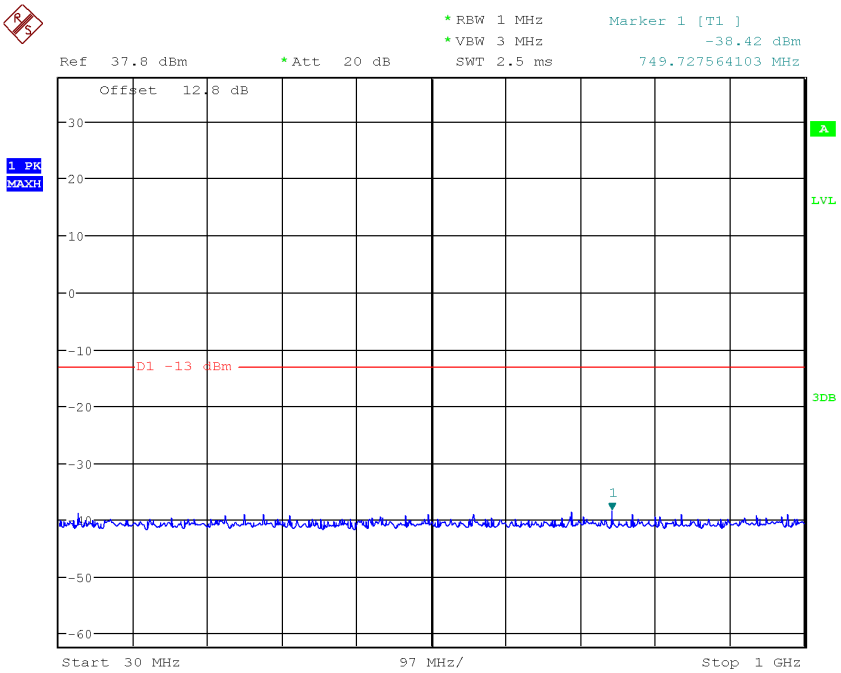
Date: 29.APR.2019 09:05:10

15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

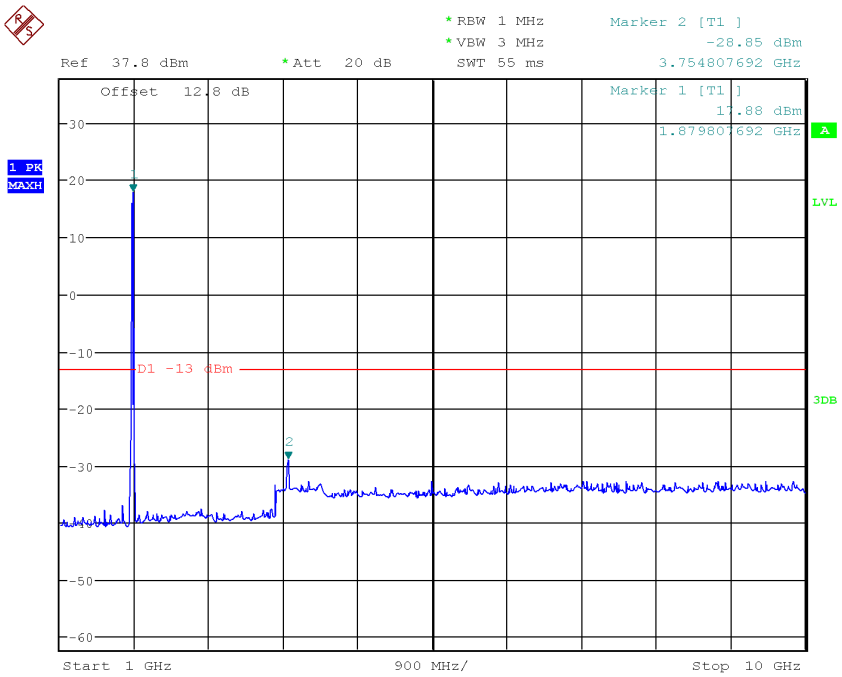
Note: The strong emission shown in each case is the carrier signal.



15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

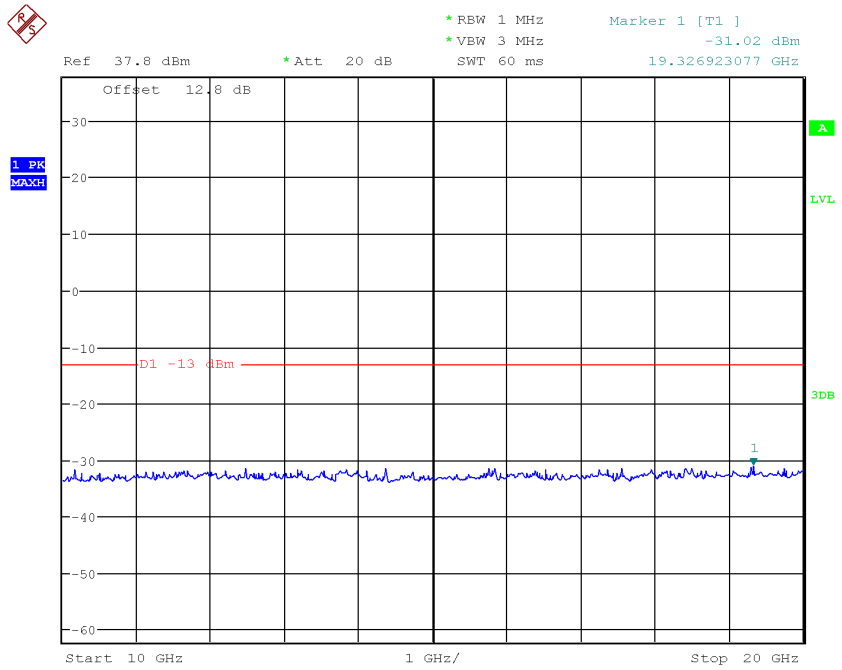


20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



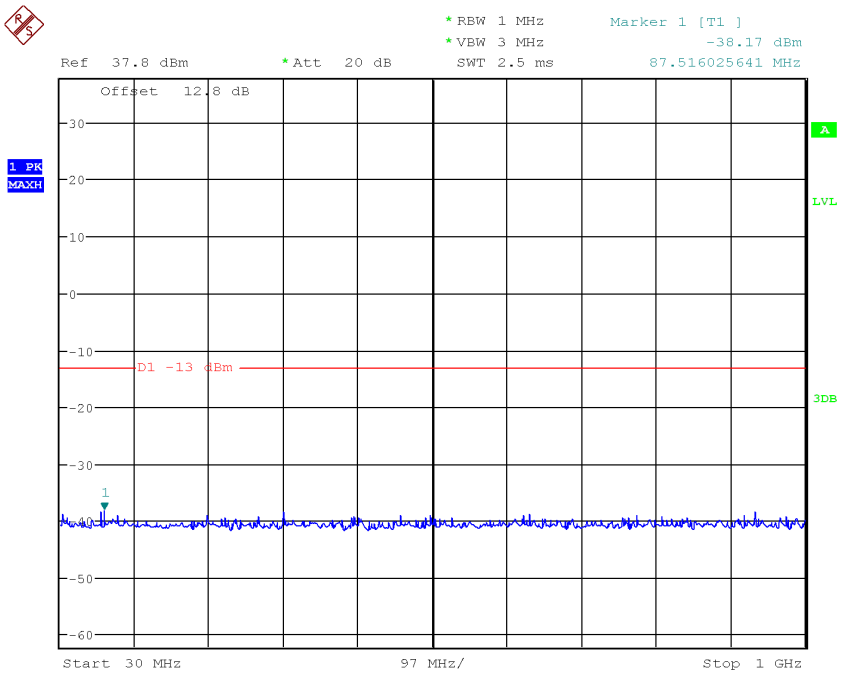
20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



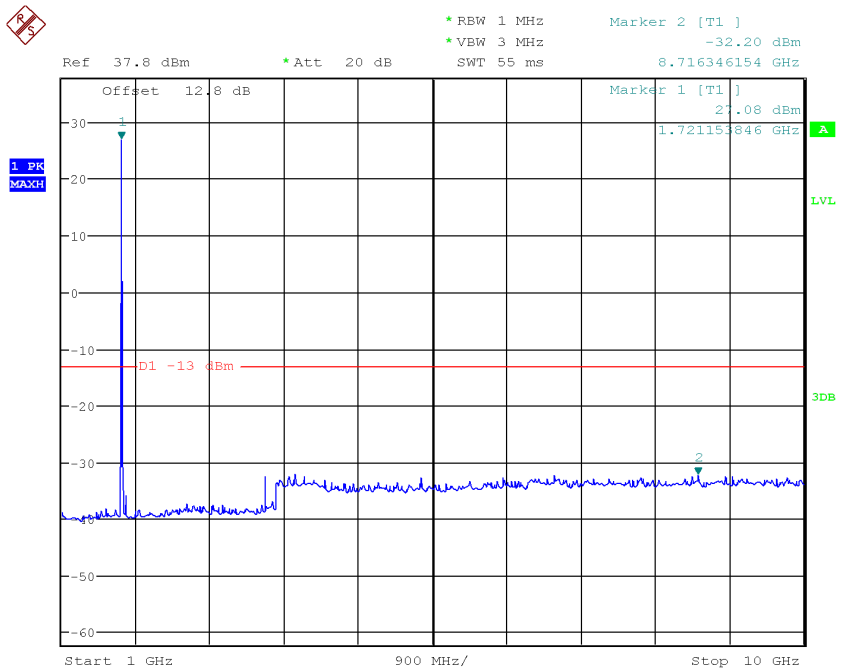
20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

5.3.7 LTE B4 Conducted Spurious Emission Results



Date: 29.APR.2019 09:27:53

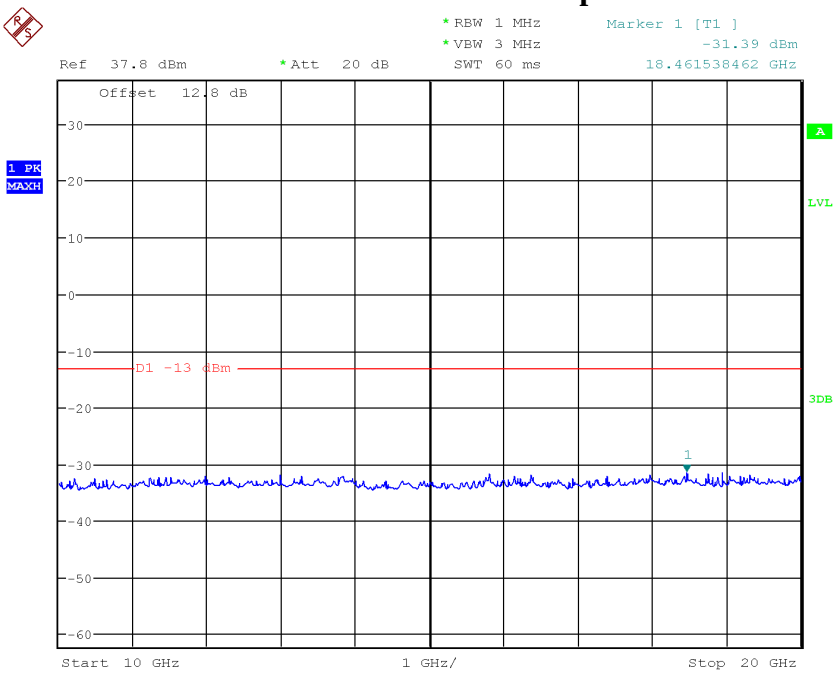
1.4MHz bandwidth QPSK Mode Middle channel, 1732.5 MHz, 30MHz to 1GHz



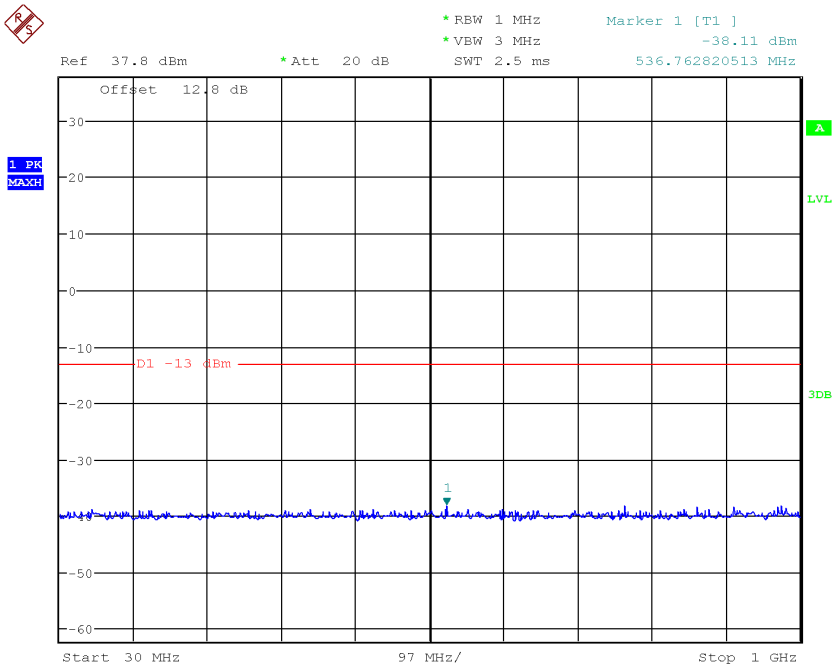
Date: 29.APR.2019 09:30:30

1.4MHz bandwidth QPSK Middle channel, 1732.5MHz,1GHz to 10GHz

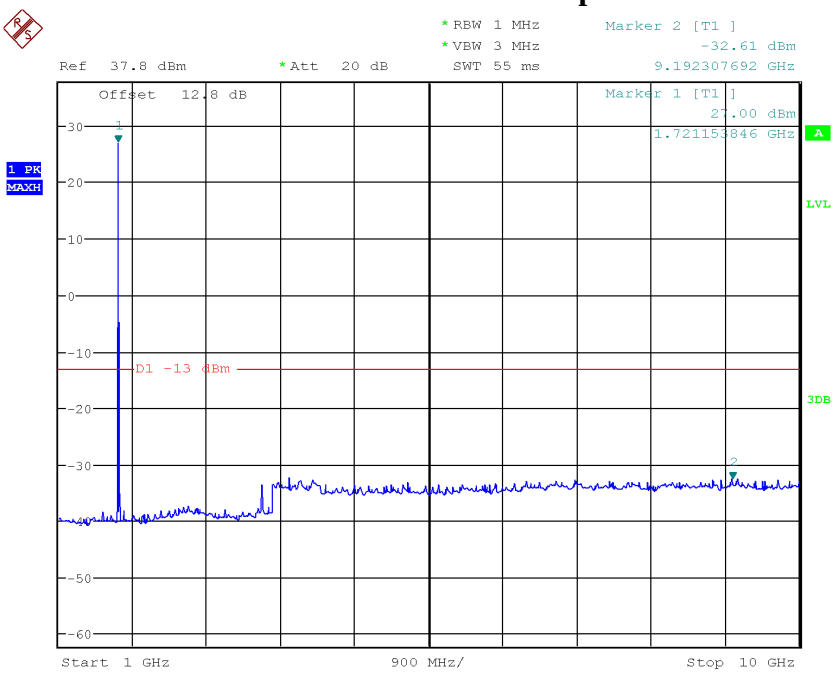
Note: The strong emission shown in each case is the carrier signal.



1.4MHz bandwidth QPSK Middle channel, 1732.5 MHz,10GHz to 20GHz

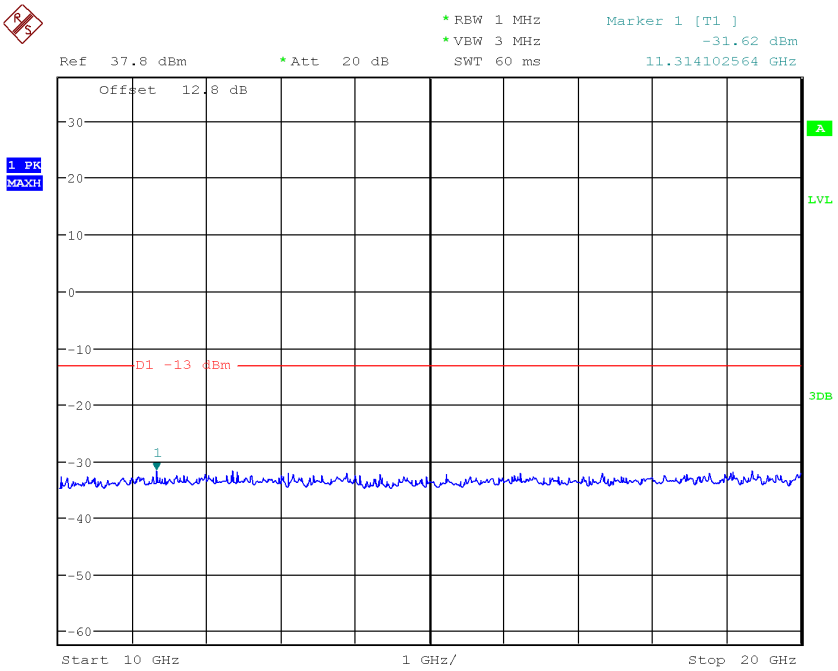


3MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz

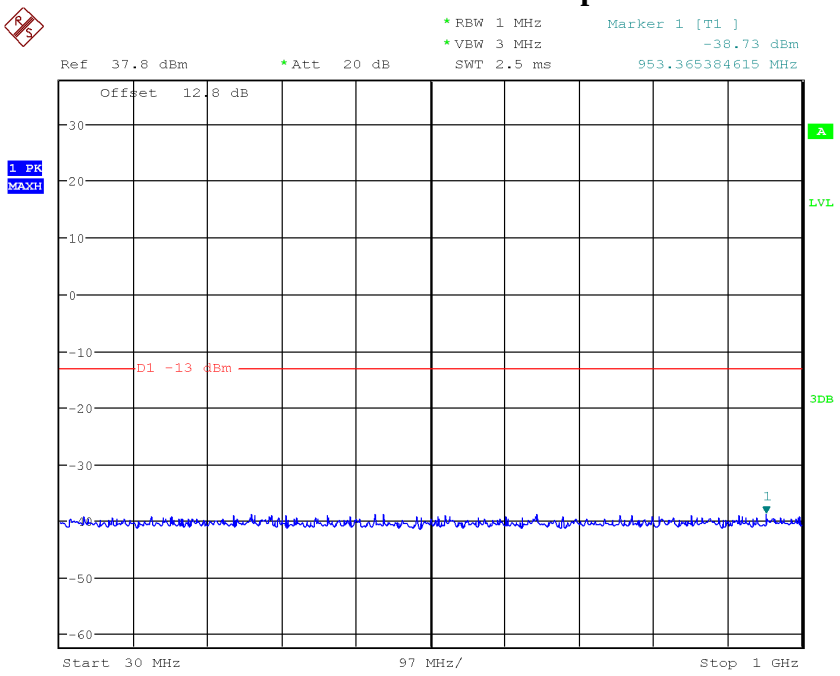


3MHz bandwidth QPSK Middle Channel, 1732.5 MHz, 1GHz to 10GHz

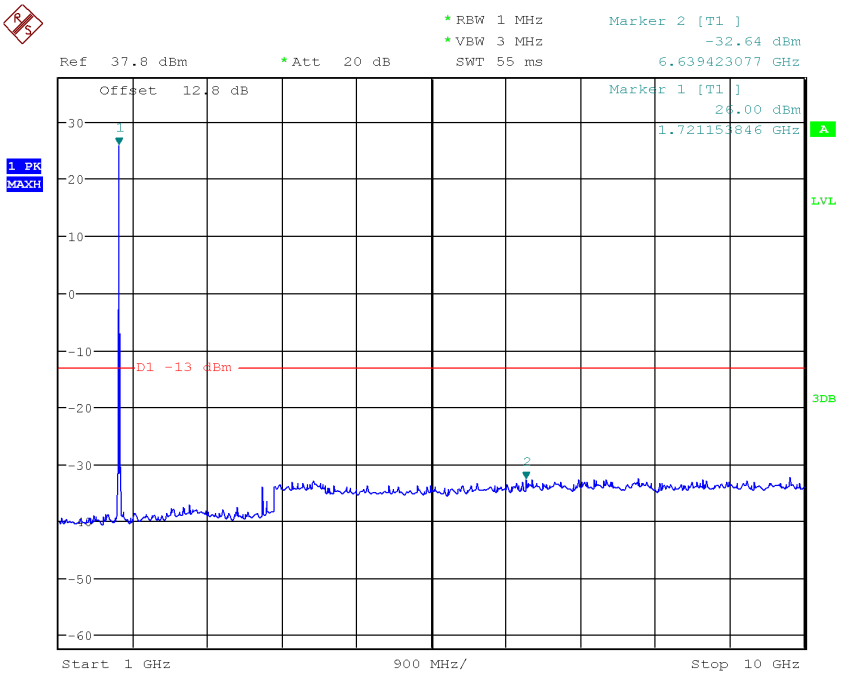
Note: The strong emission shown in each case is the carrier signal.



3MHz bandwidth QPSK Middle Channel, 1732.5 MHz, 10GHz to 20GHz

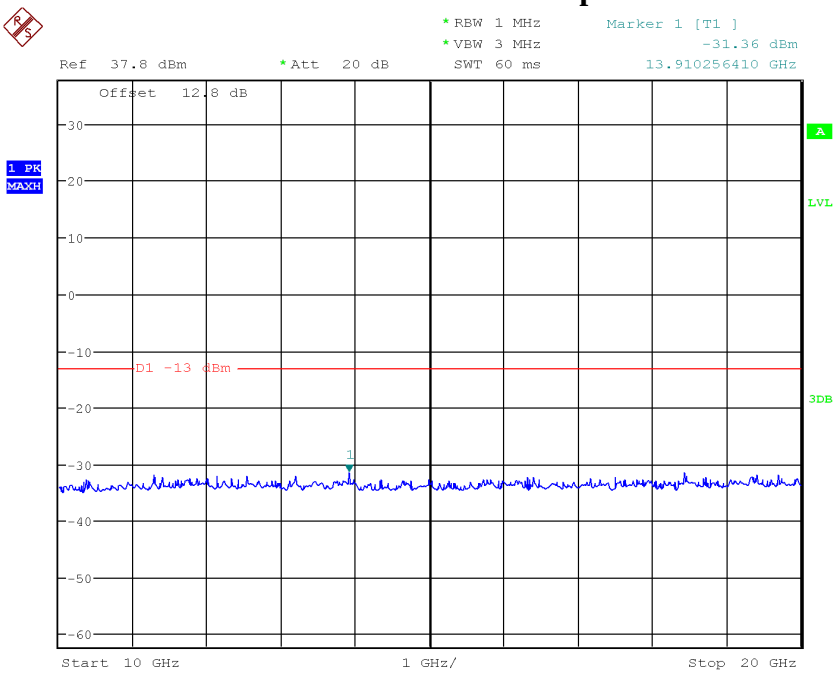


5MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz,30MHz to 1GHz

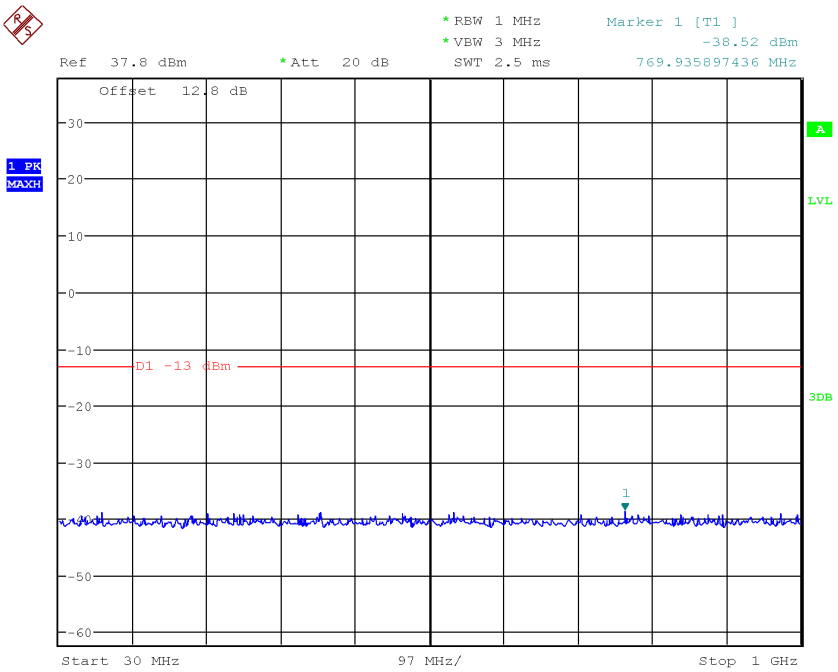


5MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz,1GHz to 10GHz

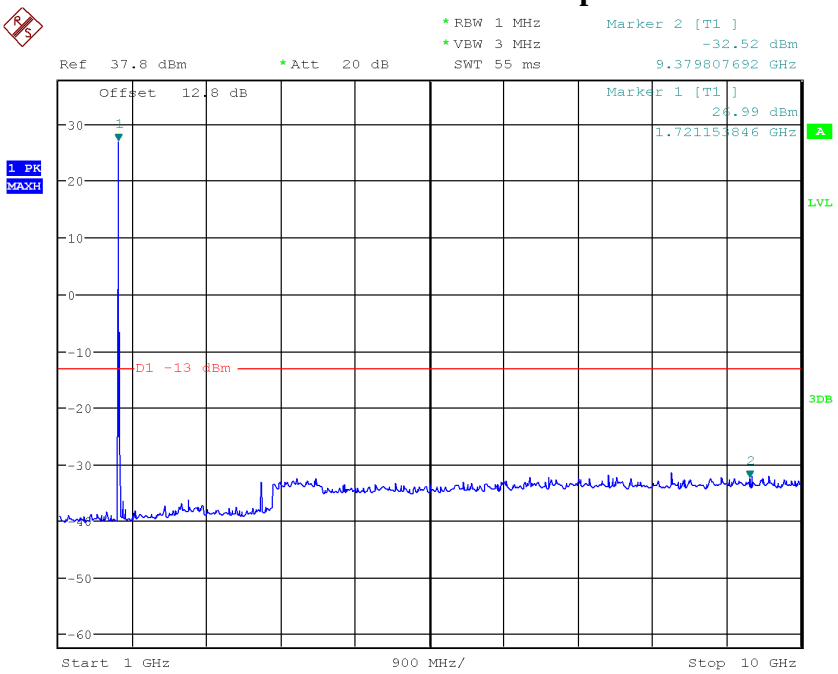
Note: The strong emission shown in each case is the carrier signal.



5MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz,10GHz to 20GHz



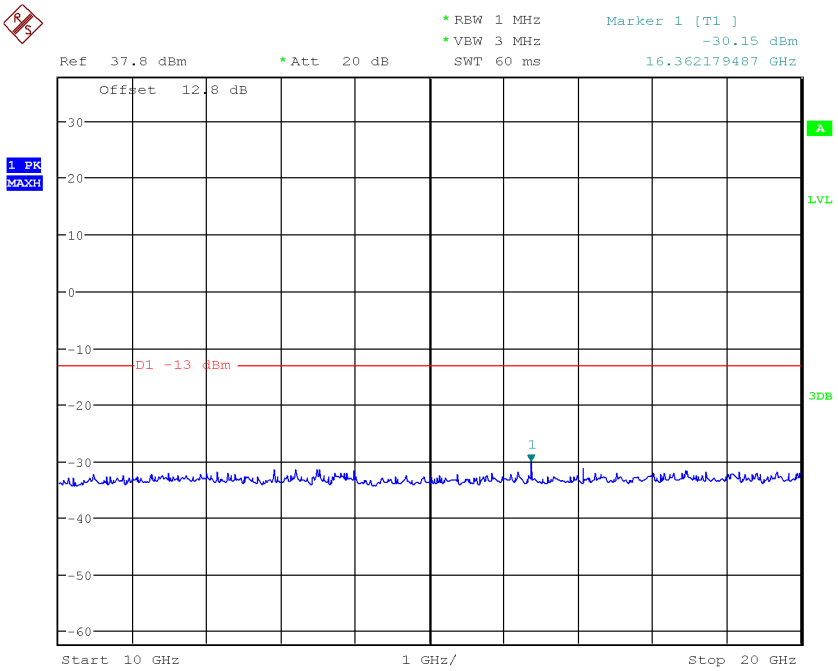
10MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz



Date: 29.APR.2019 09:38:12

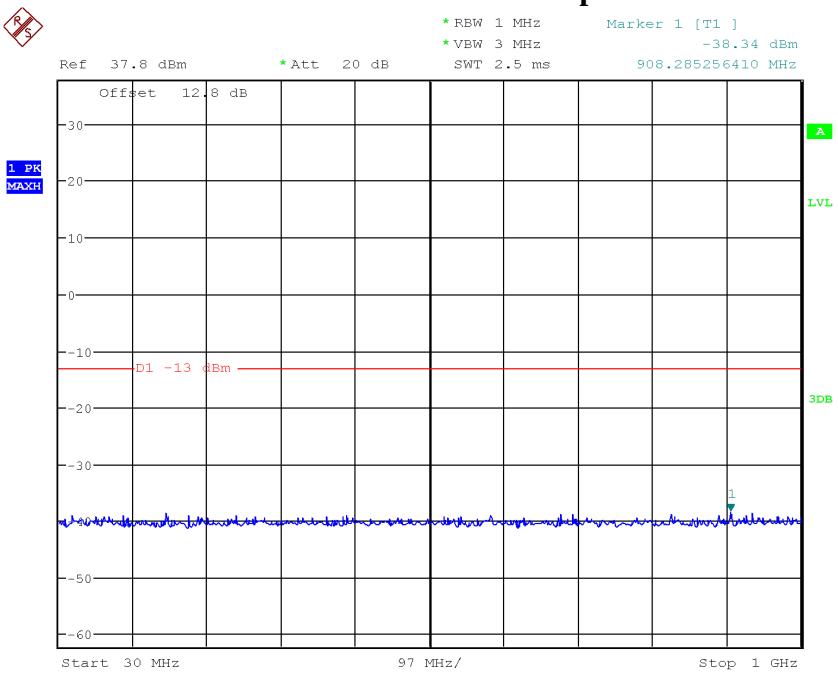
10MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

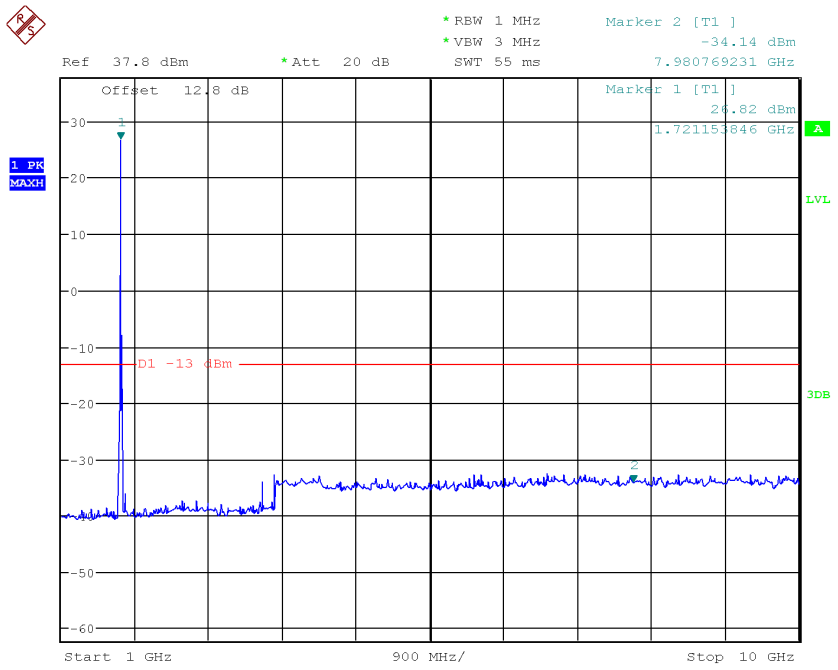


Date: 29.APR.2019 09:39:03

10MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz

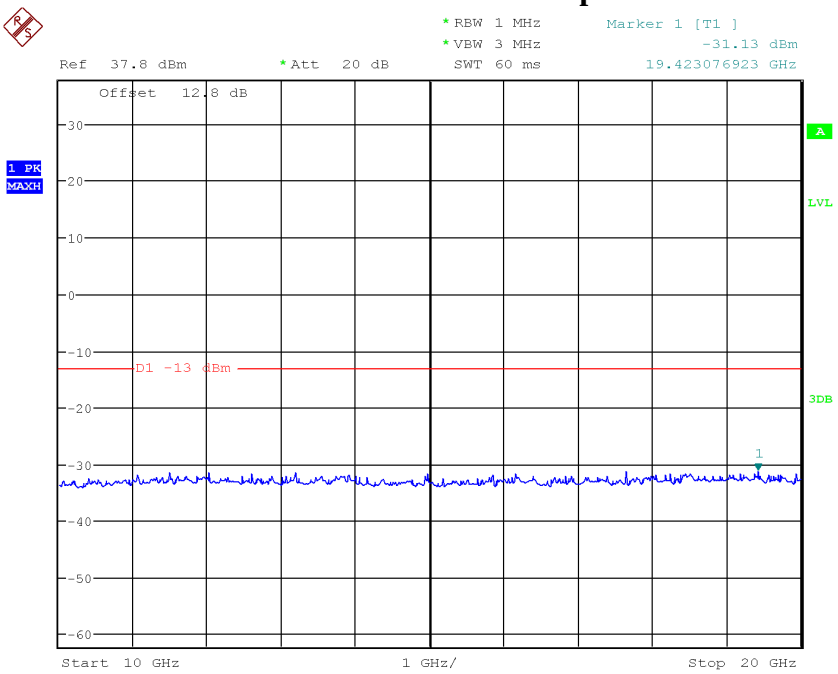


15MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz



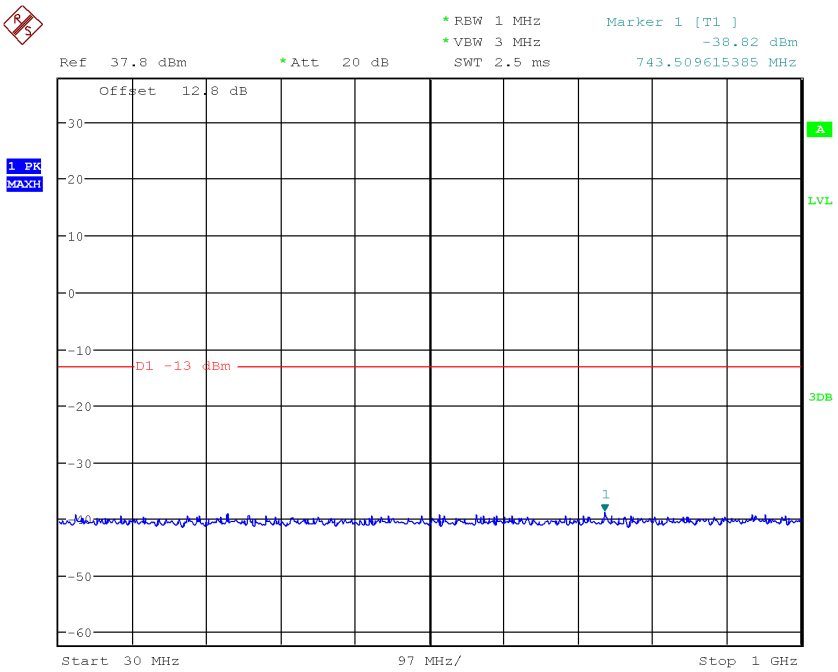
15MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



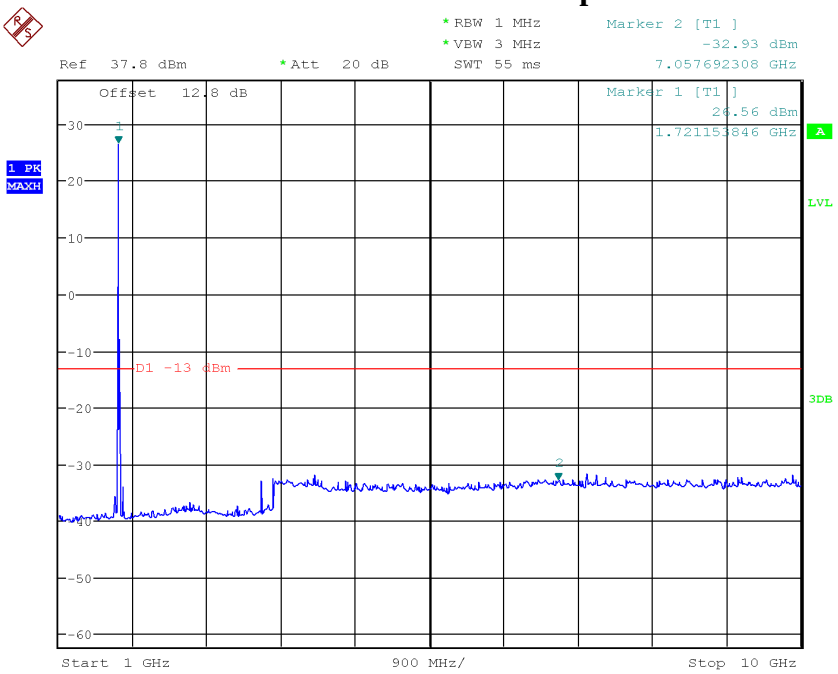
Date: 29.APR.2019 09:41:37

15MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz



Date: 29.APR.2019 09:43:57

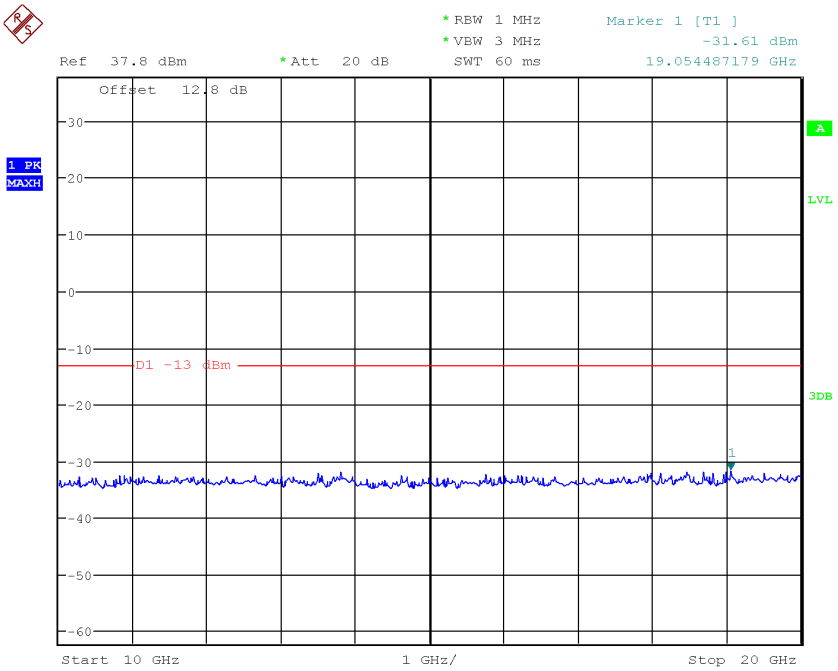
20MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz



Date: 29.APR.2019 09:46:28

20MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

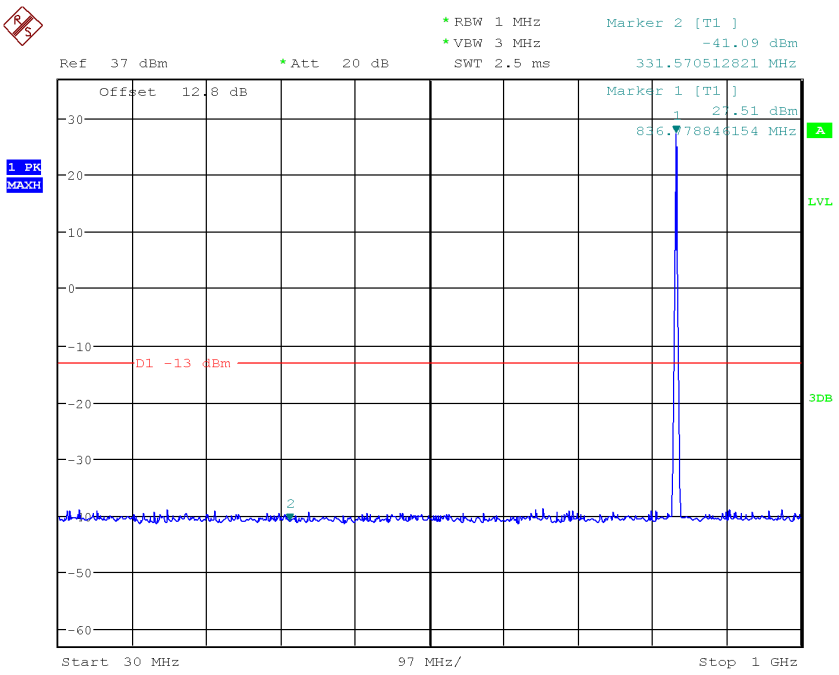
Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 09:47:02

20MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz

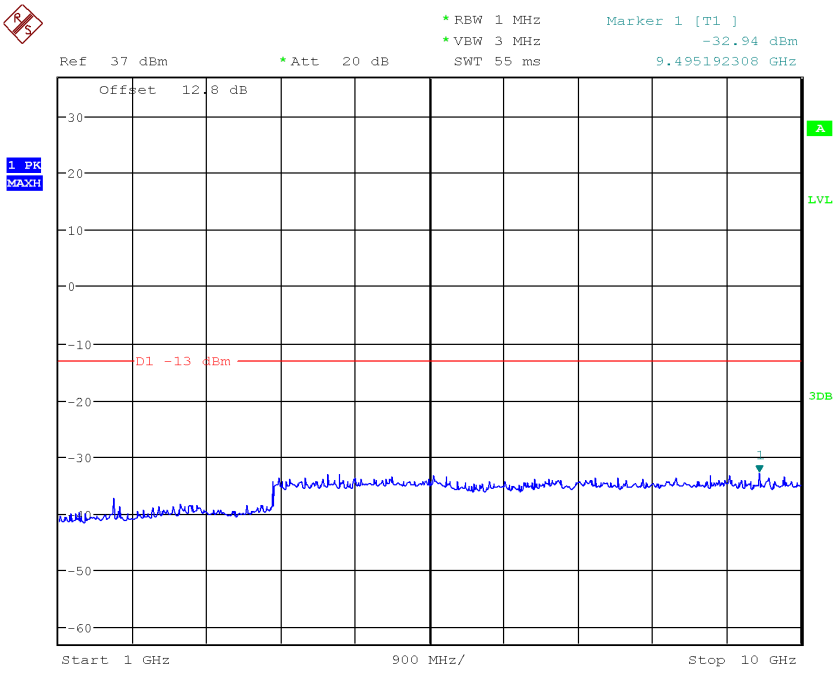
5.3.8 LTE B5 Conducted Spurious Emission Results



Date: 29.APR.2019 10:27:23

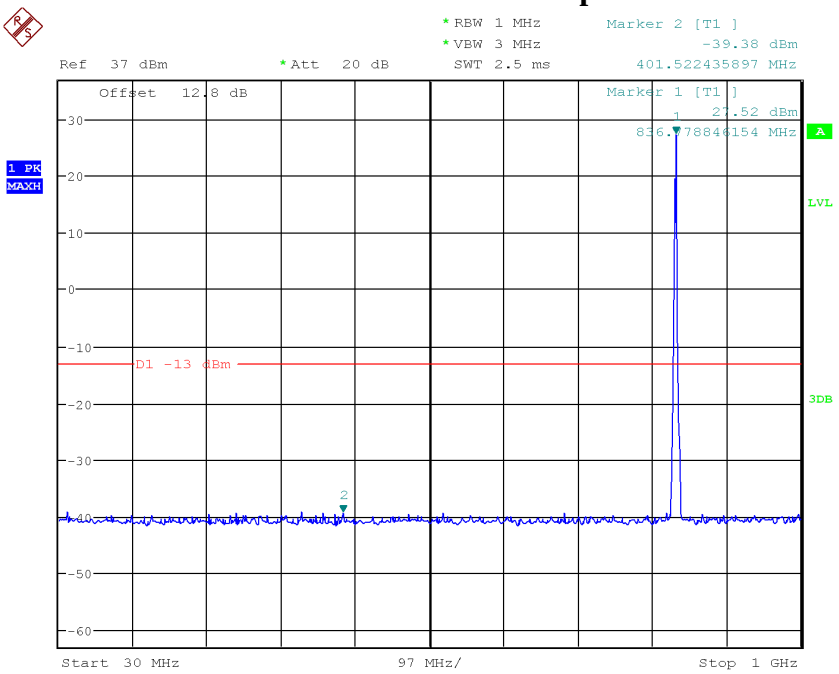
1.4MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



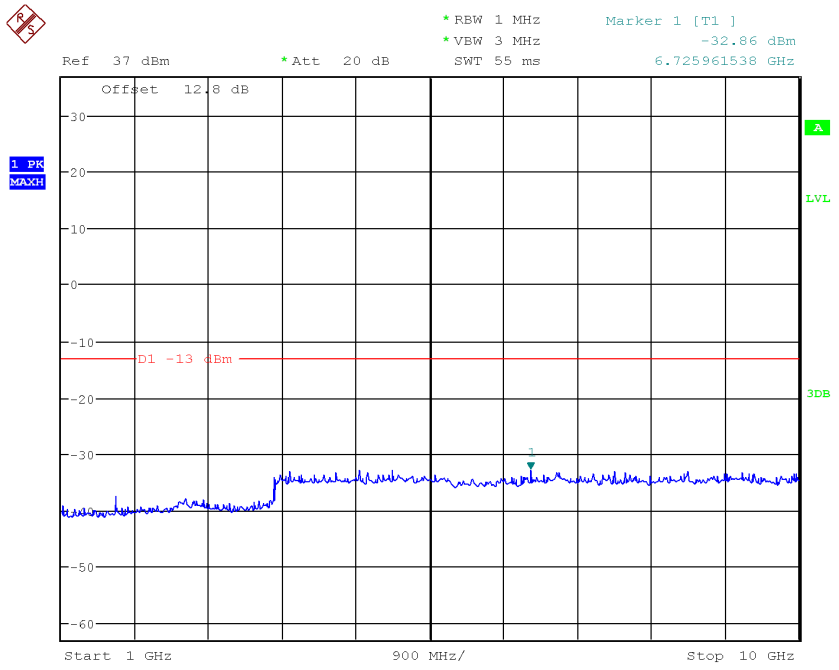
Date: 29.APR.2019 10:27:49

1.4MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,1GHz to 10GHz

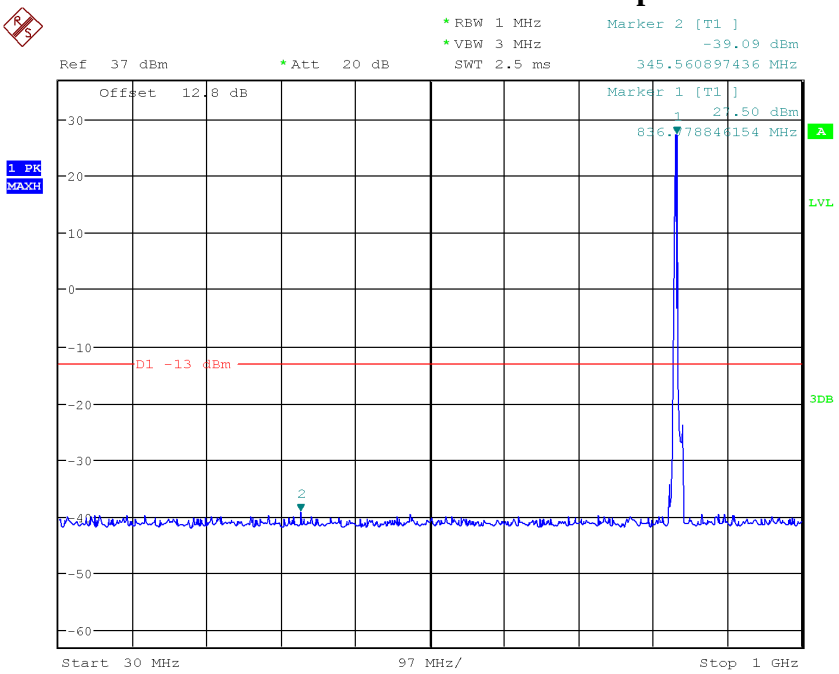


3MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



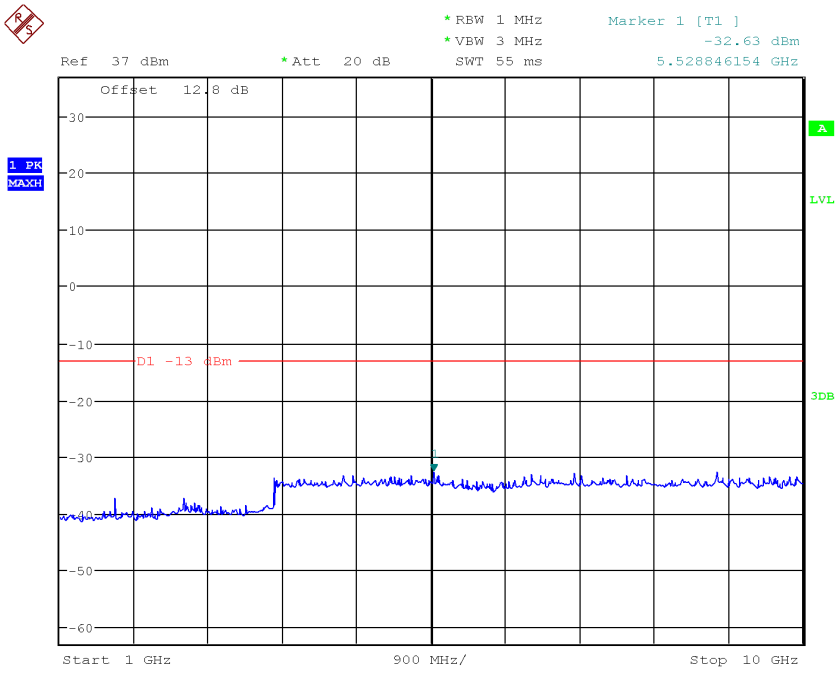
3MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,1GHz to 10GHz



Date: 29.APR.2019 10:32:01

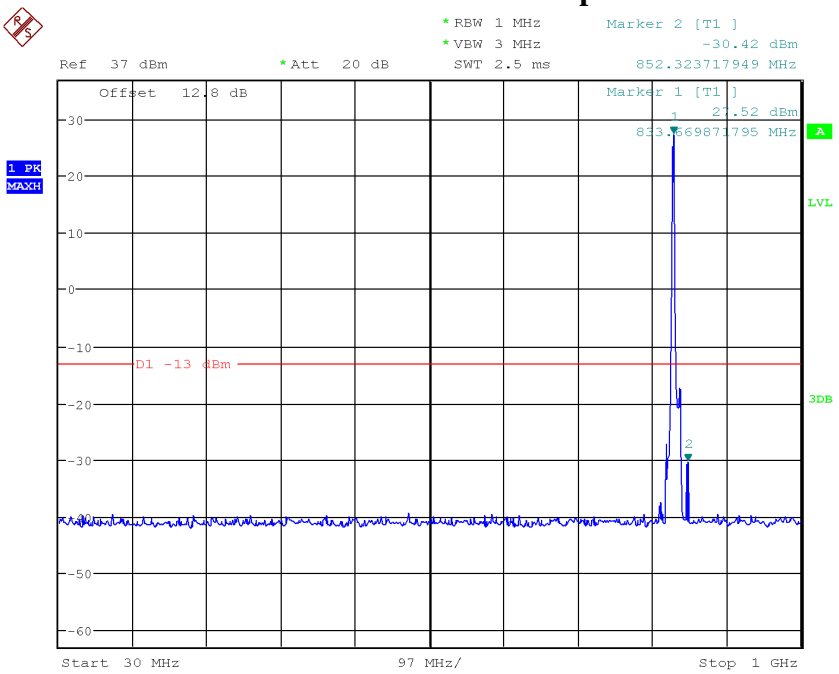
5MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 10:32:33

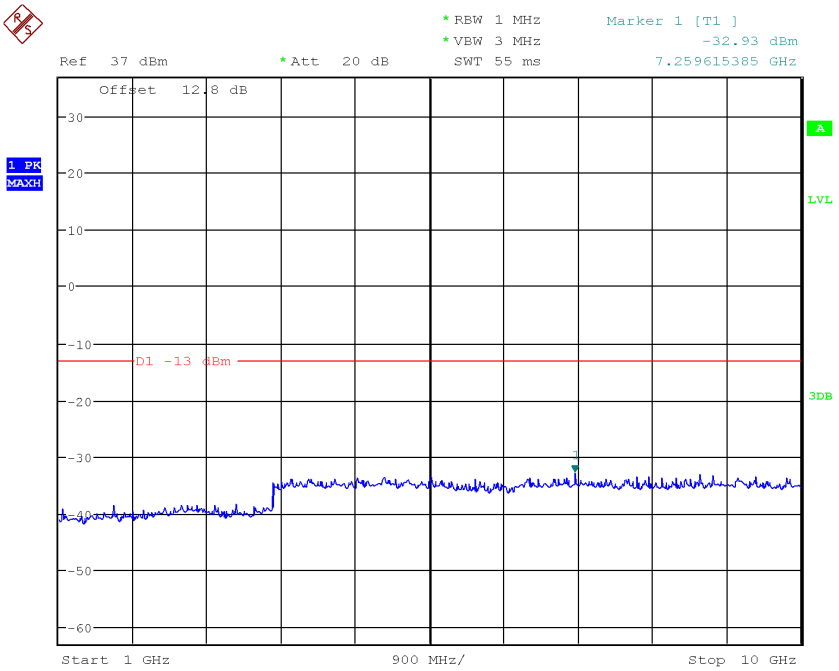
5MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 1GHz to 10GHz



Date: 29.APR.2019 10:34:22

10MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,30MHz to 1GHz

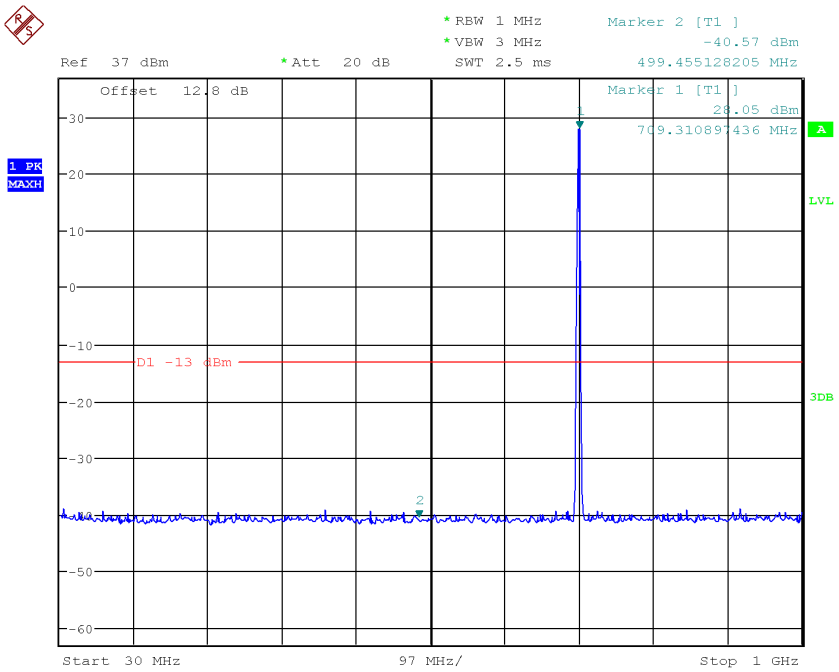
Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 10:33:43

10MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,1GHz to 10GHz

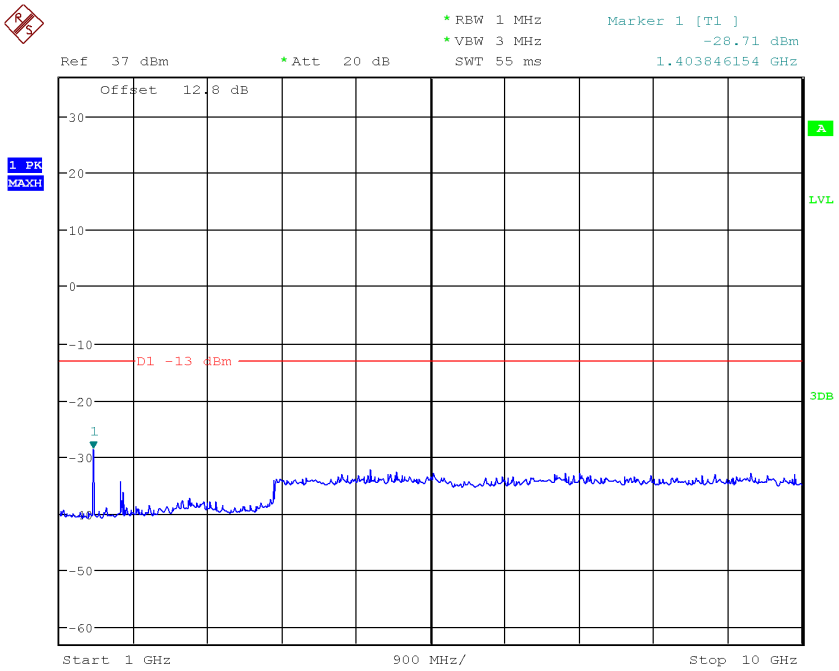
5.3.9 LTE B12 Conducted Spurious Emission Results



Date: 29.APR.2019 12:48:25

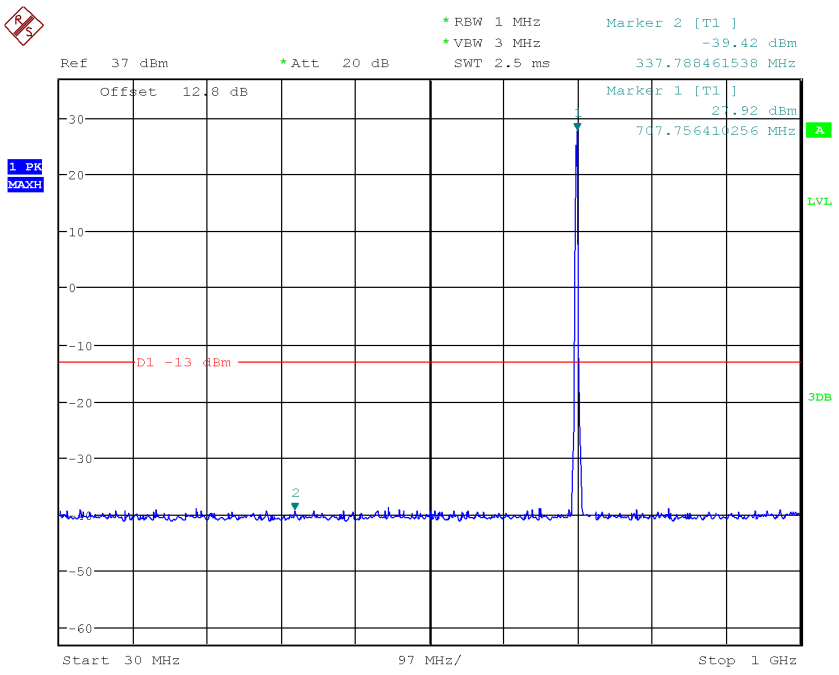
1.4MHz bandwidth QPSK Mode Middle channel, 707.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 12:49:31

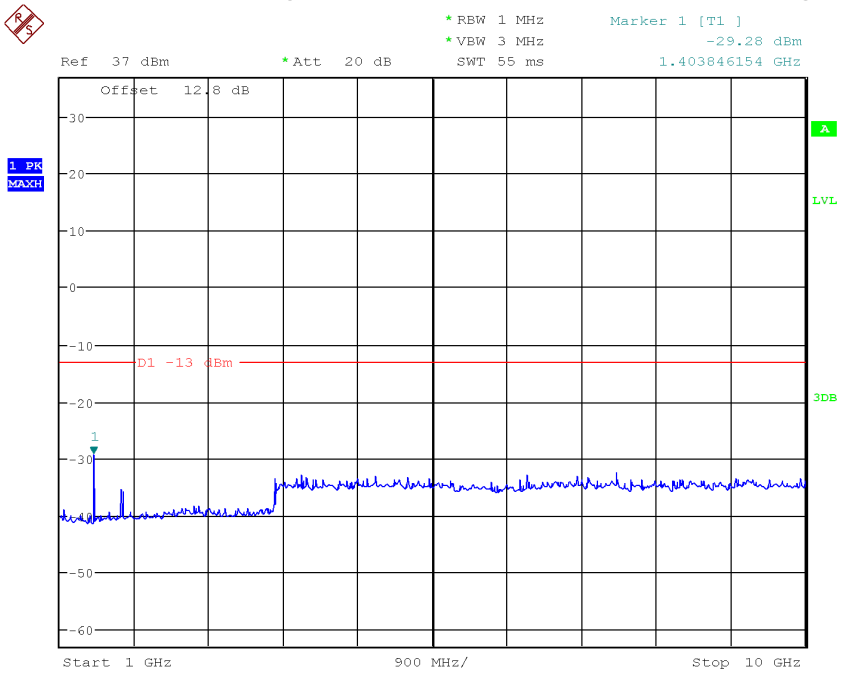
1.4MHz bandwidth QPSK Middle channel, 707.5MHz,1GHz to 10GHz



Date: 29.APR.2019 12:51:46

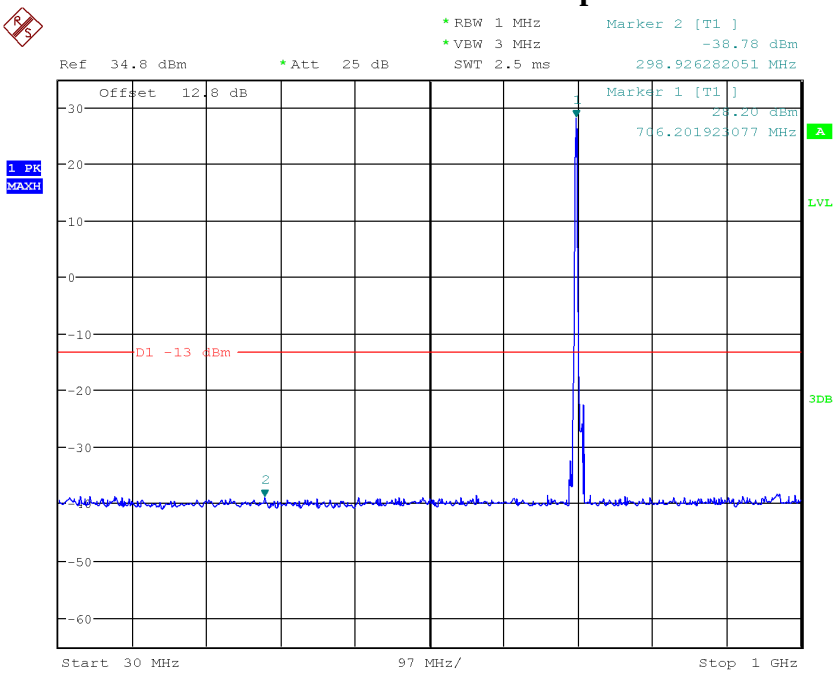
3MHz bandwidth QPSK Mode Middle Channel, 707.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 12:52:17

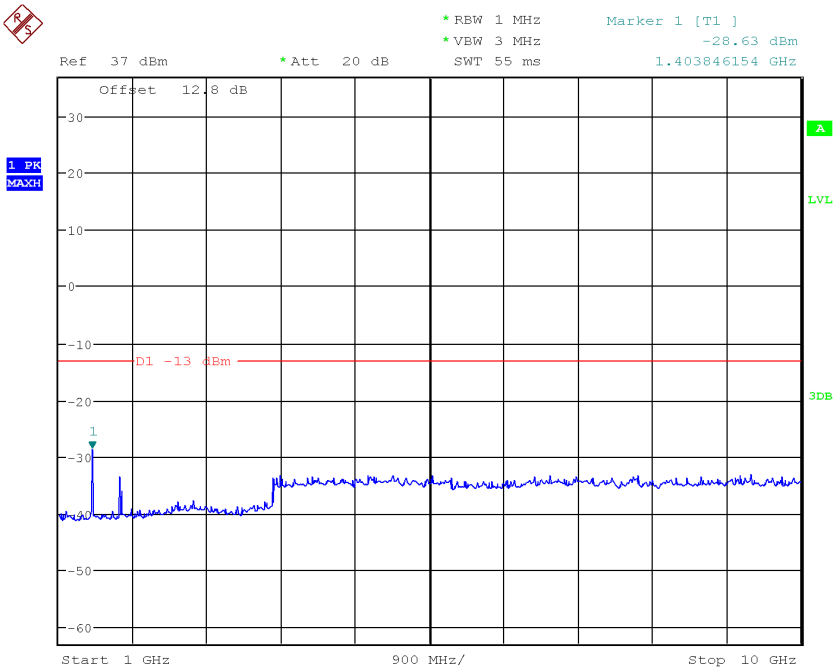
3MHz bandwidth QPSK Middle Channel, 707.5 MHz, 1GHz to 10GHz



Date: 29.APR.2019 16:21:10

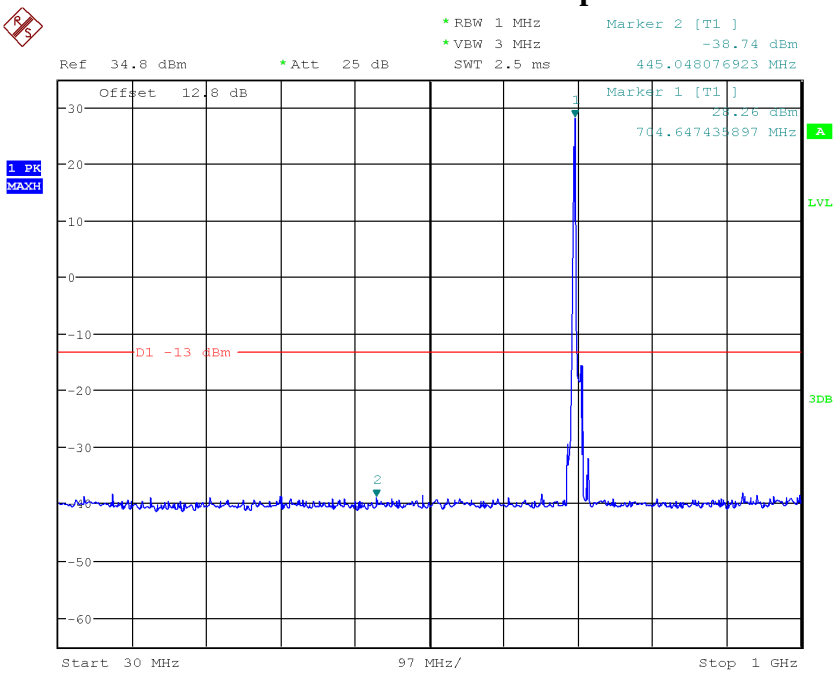
5MHz bandwidth QPSK Mode Middle Channel, 707.5 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 12:53:03

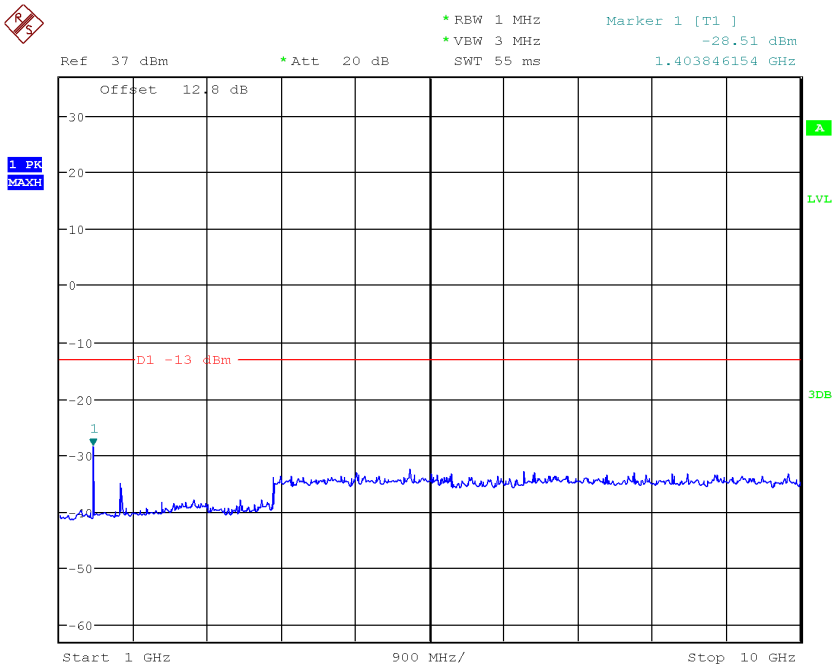
5MHz bandwidth QPSK Mode Middle Channel, 707.5 MHz,1GHz to 10GHz



Date: 29.APR.2019 16:22:01

10MHz bandwidth QPSK Mode Middle Channel, 707.5 MHz, 30MHz to 1GHz

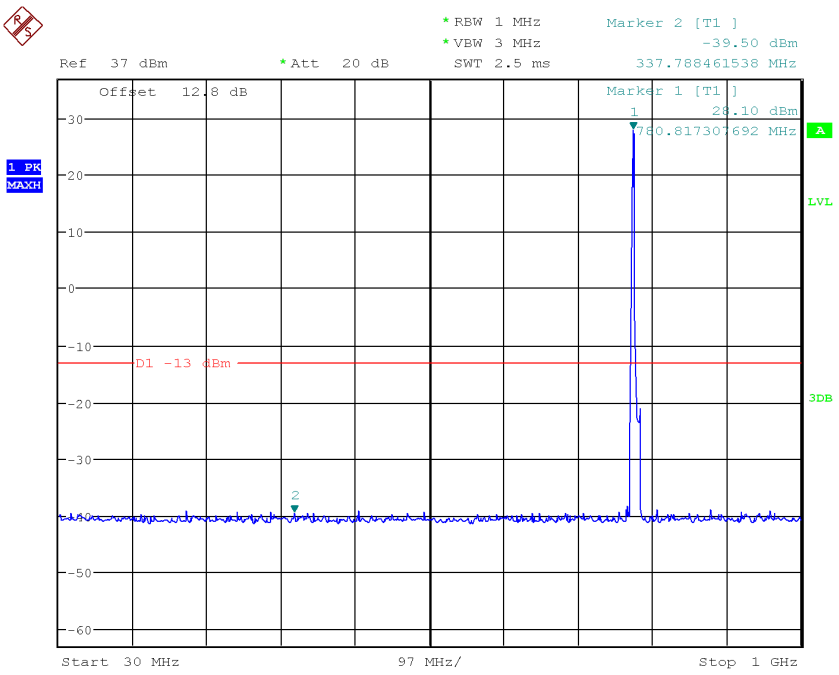
Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 12:55:33

10MHz bandwidth QPSK Mode Middle Channel, 707.5 MHz, 1GHz to 10GHz

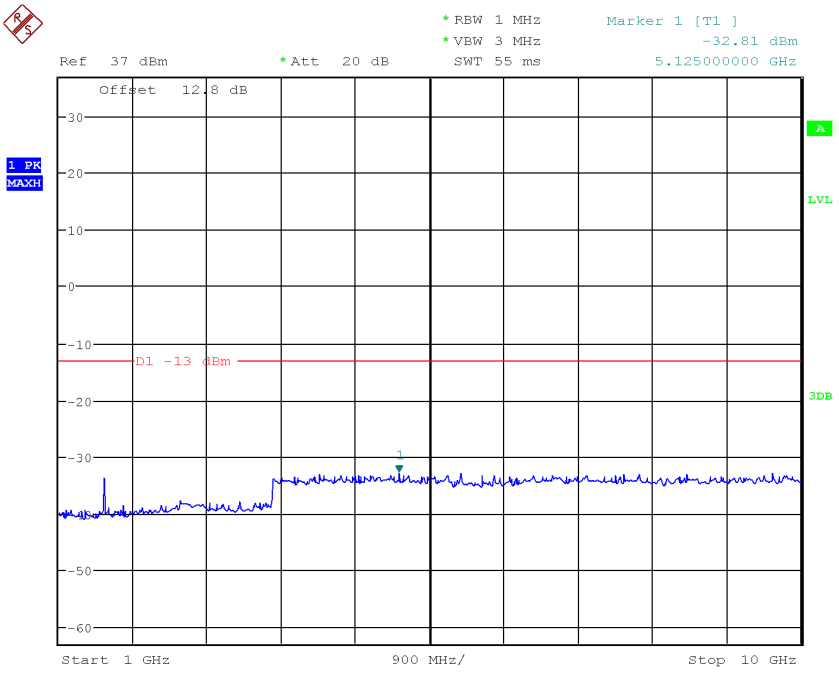
5.3.10 LTE B13 Conducted Spurious Emission Results



Date: 29.APR.2019 13:24:36

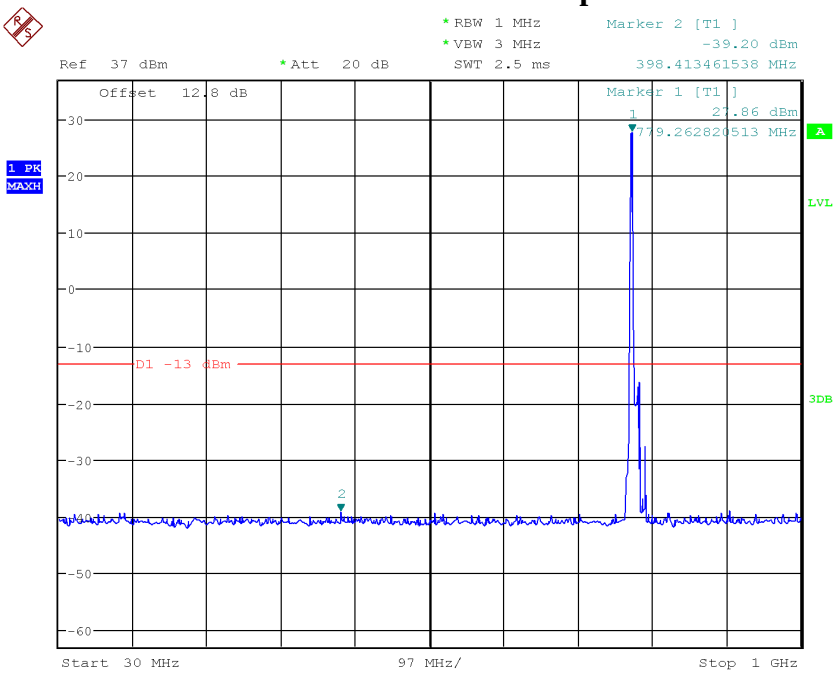
5MHz bandwidth QPSK Mode Middle Channel, 782 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 13:23:03

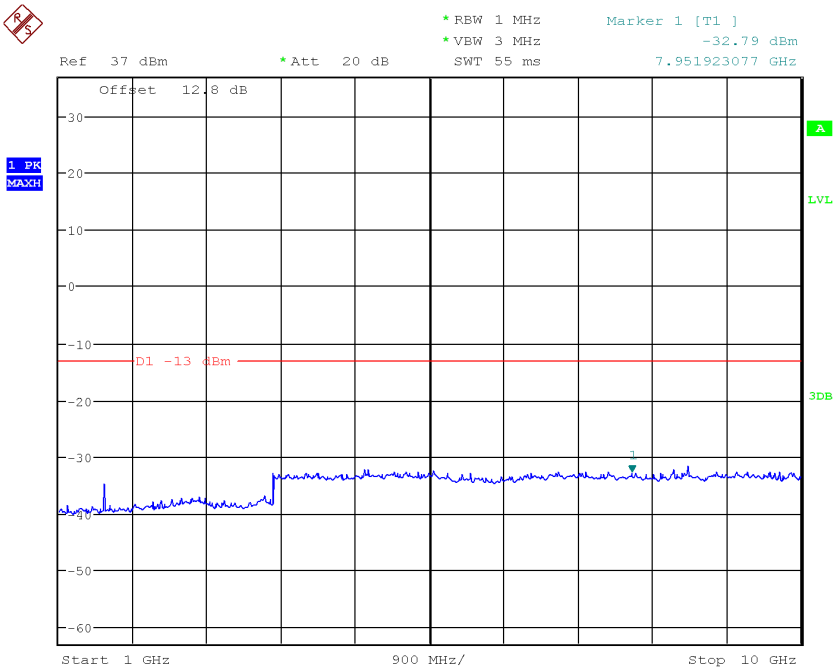
5MHz bandwidth QPSK Mode Middle Channel, 782 MHz,1GHz to 10GHz



Date: 29.APR.2019 13:39:15

10MHz bandwidth QPSK Mode Middle Channel, 782 MHz, 30MHz to 1GHz

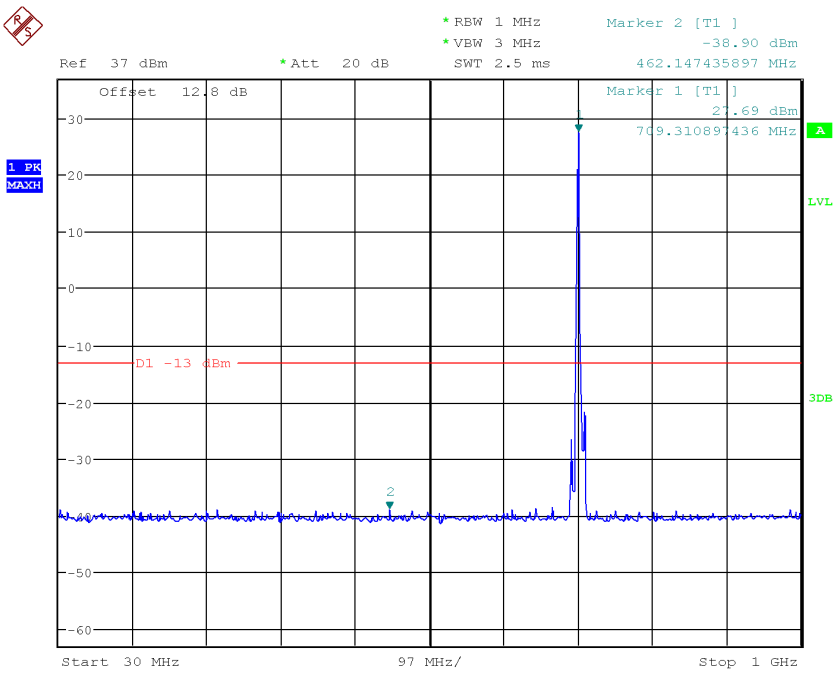
Note: The strong emission shown in each case is the carrier signal.



Date: 29.APR.2019 13:38:26

10MHz bandwidth QPSK Mode Middle Channel, 782 MHz, 1GHz to 10GHz

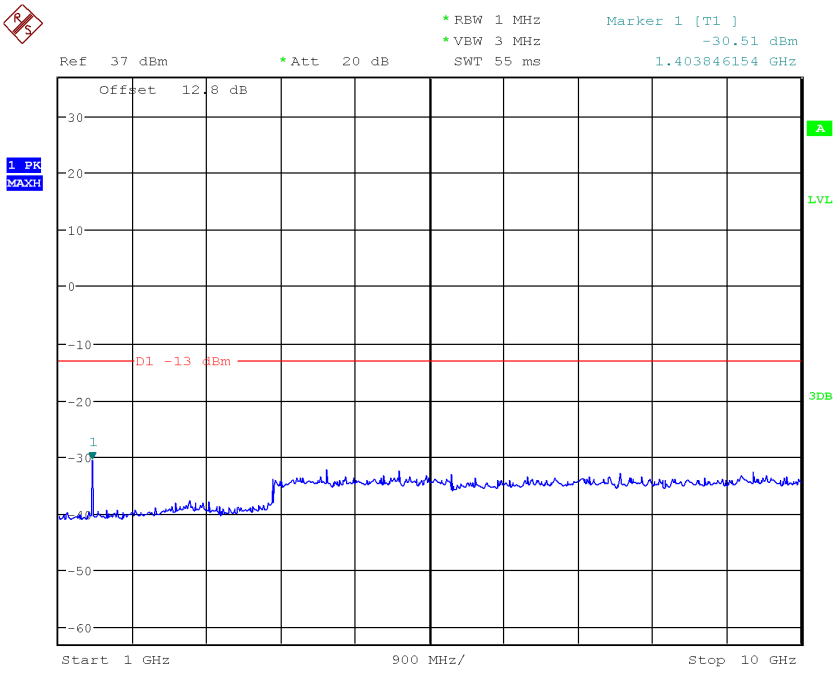
5.3.11 LTE B17 Conducted Spurious Emission Results



Date: 29.APR.2019 13:43:22

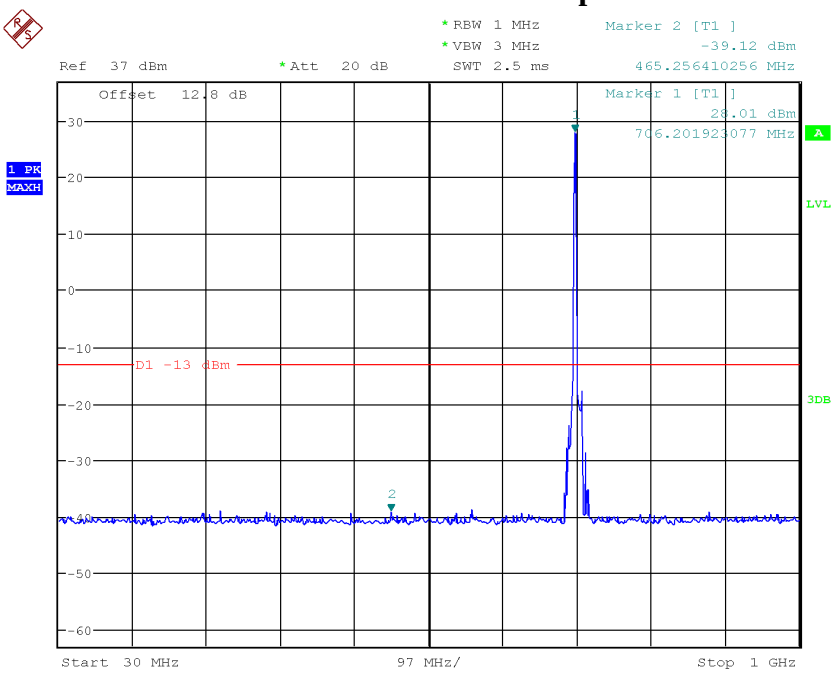
5MHz bandwidth QPSK Mode Middle Channel, 710 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



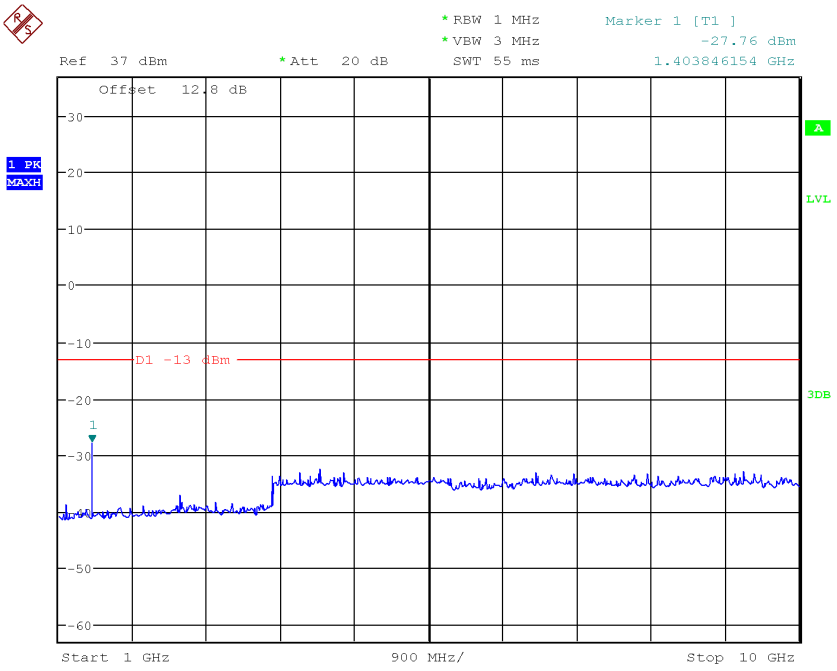
Date: 29.APR.2019 13:43:58

5MHz bandwidth QPSK Mode Middle Channel, 710 MHz,1GHz to 10GHz



10MHz bandwidth QPSK Mode Middle Channel, 710 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



10MHz bandwidth QPSK Mode Middle Channel, 710 MHz, 1GHz to 10GHz

5.4 Radiated Spurious Emission

Specifications:	FCC Part 2.1051, 24.238, 2.1053, 22.917, 27.53
DUT Serial Number:	868020030062904
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to Part 24.238 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB, so the limit level is: P(dBm)– (43 + 10 log(P)) dB= -13dBm.

According to Part 27.53(h):

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10(P) dB.

According to Part 27.53(g):

For operations in the 600 MHz Band and the 698-746 MHz Band, the power of any emission outside a licensee's frequency Band(s) of operation shall be attenuated below the transmitter power (P) within the licensed Band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution Bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz Bands immediately outside and adjacent to a licensee's frequency block, a resolution Bandwidth of at least 30 kHz may be employed.

Limits for Radiated spurious emissions(UE)	
Frequency range	**Limit Level /Resolution Bandwidth**
30 MHz to 20000 MHz	-13dBm/1MHz

Test Setup:

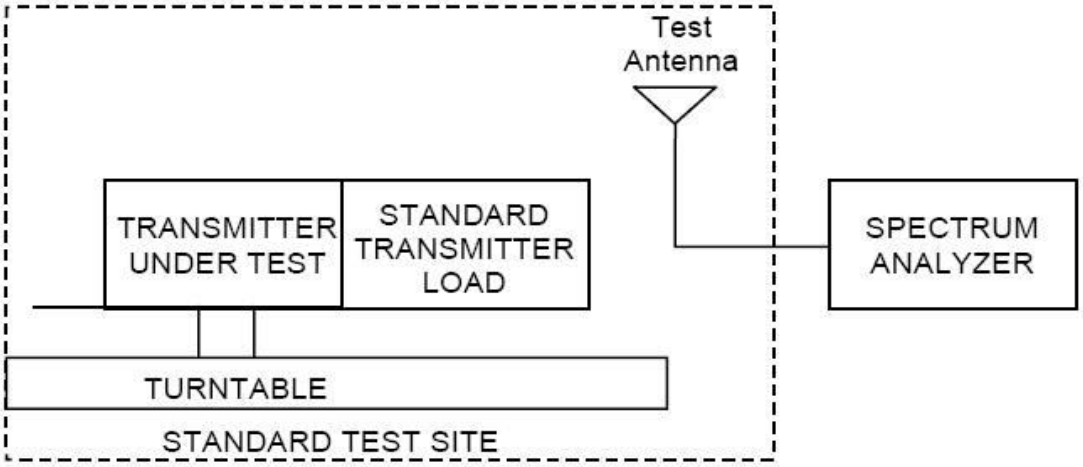
The EUT was placed in an anechoic chamber. The Wireless Communications Test Set was used to set the TX channel and power level and modulate the TX signal with different bit patterns.

Test Method:

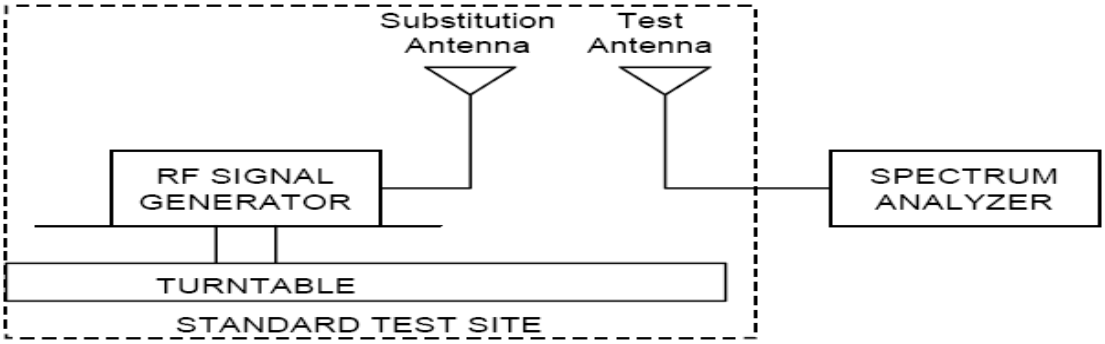
The measurement method is substitution method accordance with section 2.2.12 of ANSI/TIA-603-E-2016: Land Mobile FM or PM Communications Equipment Measurement and

Performance Standards.

(a) Connect the equipment as illustrated and measure the spurious emissions as the method as above. The distance from the device to the antenna is 3 m .



(b) Reconnect the equipment as illustrated.



(c) Remove the transmitter and replace it with a substitution antenna. The center of the substitution antenna should be approximately at the same location as the center of the transmitter.

(d) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

(e) Repeat step d) with both antennas vertically polarized for each spurious frequency.

(f) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps d) and e) by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:

P_d(dBm) = P_g(dBm) – cable loss (dB) + antenna gain (dB)

where:

Pd is the dipole equivalent power and Pg is the generator output power into the substitution antenna.

5.4.1 GSM850 GMSK Radiated Spurious Emission Results

Test Data （GMSK Mode channel 128）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1648.4	-67.00	4.8	7.3	-64.50	V
2472.6	-64.40	6.0	6.8	-63.60	V
3296.8	-55.73	6.7	8.9	-53.53	V
4121.0	-55.74	7.6	9.2	-54.14	V
4945.2	-52.22	7.7	9.9	-50.02	V
5769.4	-62.32	1.5	10.5	-53.32	V

Test Data （GMSK Mode channel 190）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1672.8	-66.11	4.8	7.3	-63.61	V
2509.2	-63.99	6.0	6.8	-63.19	V
3345.6	-54.53	6.7	8.9	-52.33	V
4182.0	-53.91	7.6	9.2	-52.31	V
5018.4	-52.64	7.7	9.9	-50.44	V
5854.8	-60.75	1.1	10.5	-51.35	V

Test Data （GMSK Mode channel 251）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1697.6	-67.38	4.8	8.0	-64.18	V
2546.4	-64.56	5.9	6.9	-63.56	V
3395.2	-56.22	6.9	8.9	-54.22	V
4244.0	-54.32	7.8	9.2	-52.92	V
5092.8	-57.40	6.8	9.9	-54.30	V
5941.6	-59.90	1.4	10.9	-50.40	V

5.4.2 GSM850 8PSK Radiated Spurious Emission Results

Test Data（8PSK Mode channel 128）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1648.4	-66.54	4.8	7.3	-64.04	V
2472.6	-64.48	6.0	6.8	-63.68	V
3296.8	-53.39	6.7	8.9	-51.19	V
4121.0	-56.50	7.6	9.2	-54.90	V
4945.2	-56.61	7.7	9.9	-54.41	V
5769.4	-63.99	1.5	10.5	-54.99	V

Test Data（8PSK Mode channel 190）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1672.8	-66.55	4.8	7.3	-64.05	V
2509.2	-64.66	6.0	6.8	-63.86	V
3345.6	-56.92	6.7	8.9	-54.72	V
4182.0	-54.23	7.6	9.2	-52.63	V
5018.4	-54.50	7.7	9.9	-52.30	V
5854.8	-63.86	1.1	10.5	-54.46	V

Test Data（8PSK Mode channel 251）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1697.6	-67.53	4.8	8.0	-64.33	V
2546.4	-64.72	5.9	6.9	-63.72	V
3395.2	-55.91	6.9	8.9	-53.91	V
4244.0	-53.52	7.8	9.2	-52.12	V
5092.8	-53.81	6.8	9.9	-50.71	V
5941.6	-60.21	1.4	10.9	-50.71	V

5.4.3 PCS1900 GMSK Radiated Spurious Emission Results

Test Data （GMSK Mode channel 512）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3700.4	-53.43	7.2	8.9	-51.73	V
5550.6	-62.92	2.0	10.5	-54.42	V
7400.8	-61.56	0.9	11.9	-50.56	V
9251.0	-64.73	1.0	11.5	-54.23	V
11101.2	-62.22	0.3	12.1	-50.42	V
12951.4	-66.61	0.4	12.4	-54.61	V

Test Data （GMSK Mode channel 661）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-54.26	7.3	8.9	-52.66	V
5640.0	-62.78	1.8	10.5	-54.08	V
7520.0	-64.64	0.9	11.9	-53.64	V
9400.0	-64.69	0.8	11.8	-53.69	V
11280.0	-66.71	0.3	12.1	-54.91	V
13160.0	-63.44	0.4	12.4	-51.44	V

Test Data （GMSK Mode channel 810）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3819.6	-54.02	7.4	9.2	-52.22	V
5729.4	-63.66	1.5	10.5	-54.66	V
7639.2	-61.68	1.1	11.9	-50.88	V
9549.0	-63.68	0.9	11.8	-52.78	V
11458.8	-61.51	0.8	12.2	-50.11	V
13368.6	-63.69	0.4	12.4	-51.69	V

5.4.4 PCS 1900 8PSK Radiated Spurious Emission Results

Test Data （8PSK Mode channel 512）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3700.4	-54.68	7.2	8.9	-52.98	V
5550.6	-63.31	2.0	10.5	-54.81	V
7400.8	-64.96	0.9	11.9	-53.96	V
9251.0	-61.64	1.0	11.5	-51.14	V
11101.2	-63.66	0.3	12.1	-51.86	V
12951.4	-65.61	0.4	12.4	-53.61	V

Test Data （8PSK Mode channel 661）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-55.48	7.3	8.9	-53.88	V
5640.0	-61.47	1.8	10.5	-52.77	V
7520.0	-65.49	0.9	11.9	-54.49	V
9400.0	-63.26	0.8	11.8	-52.26	V
11280.0	-62.08	0.3	12.1	-50.28	V
13160.0	-64.47	0.4	12.4	-52.47	V

Test Data （8PSK Mode channel 810）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3819.6	-52.35	7.4	9.2	-50.55	V
5729.4	-63.47	1.5	10.5	-54.47	V
7639.2	-61.27	1.1	11.9	-50.47	V
9549.0	-61.00	0.9	11.8	-50.10	V
11458.8	-65.04	0.8	12.2	-53.64	V
13368.6	-62.54	0.4	12.4	-50.54	V

5.4.5 WCDMA B2 Radiated Spurious Emission Results

Test Data （QPSK Mode channel 9262）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3704.8	-56.25	7.2	8.9	-54.55	V
5557.2	-61.14	2.0	10.5	-52.64	V
7409.6	-63.57	0.9	11.9	-52.57	V
9262.0	-65.06	1.0	11.5	-54.56	V
11114.4	-63.40	0.4	12.1	-51.70	V
12966.8	-63.73	0.4	12.4	-51.73	V

Test Data （QPSK Mode channel 9400）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-55.17	7.2	8.9	-53.47	V
5640.0	-60.69	2.0	10.5	-52.19	V
7520.0	-64.58	0.9	11.9	-53.58	V
9400.0	-64.41	1.0	11.5	-53.91	V
11280.0	-65.75	0.4	12.1	-54.05	V
13160.0	-64.50	0.4	12.4	-52.50	V

Test Data （QPSK Mode channel 9538）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3815.2	-54.92	7.4	9.2	-53.12	V
5722.8	-63.59	1.5	10.5	-54.59	V
7630.4	-63.96	0.8	11.9	-52.86	V
9538.0	-62.21	0.9	11.8	-51.31	V
11445.6	-65.36	0.8	12.2	-53.96	V
13353.2	-66.47	0.4	12.4	-54.47	V

Test Data （16QAM Mode channel 9262）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3704.8	-53.40	7.2	8.9	-51.70	V
5557.2	-62.12	2.0	10.5	-53.62	V
7409.6	-62.63	0.9	11.9	-51.63	V
9262.0	-60.77	1.0	11.5	-50.27	V
11114.4	-63.60	0.4	12.1	-51.90	V
12966.8	-65.41	0.4	12.4	-53.41	V

Test Data （16QAM Mode channel 9400）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3704.8	-52.36	7.2	8.9	-50.66	V
5557.2	-62.79	2.0	10.5	-54.29	V
7409.6	-62.88	0.9	11.9	-51.88	V
9262.0	-63.39	1.0	11.5	-52.89	V
11114.4	-63.35	0.4	12.1	-51.65	V

12966.8	-66.15	0.4	12.4	-54.15	V

Test Data （16QAM Mode channel 9538）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3815.2	-52.47	7.4	9.2	-50.67	V
5722.8	-62.40	1.5	10.5	-53.40	V
7630.4	-62.07	0.8	11.9	-50.97	V
9538.0	-61.66	0.9	11.8	-50.76	V
11445.6	-64.26	0.8	12.2	-52.86	V
13353.2	-66.68	0.4	12.4	-54.68	V

5.4.6 WCDMA B4 Radiated Spurious Emission Results

Test Data （QPSK Mode channel 1312）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3424.8	-53.94	6.9	8.9	-51.94	V
5137.2	-53.75	6.3	9.9	-50.15	V
6849.6	-62.13	0.8	11.9	-51.03	V
8562.0	-62.25	0.9	11.2	-51.95	V
10274.4	-63.35	0.7	12.0	-52.05	V
11986.8	-64.00	0.4	12.2	-52.20	V

Test Data （QPSK Mode channel 1413）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.2	-56.26	6.9	8.9	-54.26	V

5197.8	-58.54	5.8	10.5	-53.84	V
6930.4	-63.00	0.9	11.9	-52.00	V
8663.0	-64.00	0.9	11.2	-53.70	V
10395.6	-64.90	0.7	12.0	-53.60	V
12128.2	-63.57	0.6	12.2	-51.97	V

Test Data （QPSK Mode channel 1513）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3505.2	-56.46	7.0	8.9	-54.56	V
5257.8	-59.13	5.0	9.9	-54.23	V
7010.4	-61.50	1.2	11.9	-50.80	V
8763.0	-64.20	1.2	11.5	-53.90	V
10515.6	-62.46	0.6	12.2	-50.86	V
12268.2	-66.85	0.3	12.3	-54.85	V

Test Data （16QAM Mode channel 1312）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3424.8	-52.20	6.9	8.9	-50.20	V
5137.2	-57.42	6.3	9.9	-53.82	V
6849.6	-62.63	0.8	11.9	-51.53	V
8562.0	-63.15	0.9	11.2	-52.85	V
10274.4	-63.46	0.7	12.0	-52.16	V
11986.8	-65.70	0.4	12.2	-53.90	V

Test Data （16QAM Mode channel 1413）

Frequency [MHz]	Generator output power(Pg)	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd)	Antenna Polarization [H/V]

	[dBm]			[dBm]	
3465.2	-55.14	6.9	8.9	-53.14	V
5197.8	-56.66	5.8	10.5	-51.96	V
6930.4	-62.95	0.9	11.9	-51.95	V
8663.0	-61.78	0.9	11.2	-51.48	V
10395.6	-65.81	0.7	12	-54.51	V
12128.2	-64.59	0.6	12.2	-52.99	V

Test Data （16QAM Mode channel 1513）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3505.2	-53.59	7.0	8.9	-51.69	V
5257.8	-57.85	5.0	9.9	-52.95	V
7010.4	-63.38	1.2	11.9	-52.68	V
8763.0	-63.12	1.2	11.5	-52.82	V
10515.6	-66.24	0.6	12.2	-54.64	V
12268.2	-62.46	0.3	12.3	-50.46	V

5.4.7 WCDMA B5 Radiated Spurious Emission Results

Test Data （QPSK Mode channel 4132）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1652.8	-55.13	4.8	7.3	-52.63	V
2479.2	-52.39	6.0	6.8	-51.59	V
3305.6	-52.85	6.7	8.9	-50.65	V
4132.0	-52.58	7.6	9.2	-50.98	V
4958.4	-55.42	7.7	9.9	-53.22	V

5784.8	-59.40	1.5	10.5	-50.40	V

Test Data （QPSK Mode channel 4182）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1672.8	-53.26	4.7	7.3	-50.66	V
2509.2	-51.92	5.9	6.7	-51.12	V
3345.6	-56.56	6.8	8.9	-54.46	V
4182.0	-52.98	7.8	9.2	-51.58	V
5018.4	-52.90	7.5	9.9	-50.50	V
5854.8	-59.84	1.1	10.5	-50.44	V

Test Data （QPSK Mode channel 4233）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1693.2	-55.21	4.8	8.0	-52.01	V
2539.8	-55.35	5.9	6.9	-54.35	V
3386.4	-55.11	6.9	8.9	-53.11	V
4233.0	-53.48	7.8	9.2	-52.08	V
5079.6	-56.39	6.8	9.9	-53.29	V
5926.2	-60.04	1.4	10.9	-50.54	V

Test Data （16QAM Mode channel 4132）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1652.8	-55.20	4.8	7.3	-52.70	V
2479.2	-55.37	6	6.8	-54.57	V
3305.6	-53.03	6.7	8.9	-50.83	V

4132.0	-56.49	7.6	9.2	-54.89	V
4958.4	-54.47	7.7	9.9	-52.27	V
5784.8	-63.79	1.5	10.5	-54.79	V

Test Data （16QAM Mode channel 4182）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1672.8	-54.20	4.7	7.3	-51.60	V
2509.2	-51.94	5.9	6.7	-51.14	V
3345.6	-54.25	6.8	8.9	-52.15	V
4182.0	-51.80	7.8	9.2	-50.40	V
5018.4	-55.61	7.5	9.9	-53.21	V
5854.8	-60.19	1.1	10.5	-50.79	V

Test Data （16QAM Mode channel 4233）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
1693.2	-54.95	4.8	8.0	-51.75	V
2539.8	-53.65	5.9	6.9	-52.65	V
3386.4	-54.62	6.9	8.9	-52.62	V
4233.0	-52.30	7.8	9.2	-50.90	V
5079.6	-56.13	6.8	9.9	-53.03	V
5926.2	-64.29	1.4	10.9	-54.79	V

5.4.8 LTE B2 Radiated Spurious Emission Results

Test Data （1.4MHz bandwidth 18607 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3701.4	-54.41	7.2	8.9	-52.71	V
5552.1	-58.89	2.5	10.5	-50.89	V
7402.8	-65.05	0.9	11.9	-54.05	V
9253.5	-62.64	1.0	11.5	-52.14	V
11104.2	-62.83	0.3	12.1	-51.03	V
12954.9	-65.42	0.4	12.4	-53.42	V

Test Data （1.4MHz bandwidth 18607 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3701.4	-55.08	7.2	8.9	-53.38	V
5552.1	-58.50	2.5	10.5	-50.50	V
7402.8	-63.50	0.9	11.9	-52.50	V
9253.5	-63.90	1.0	11.5	-53.40	V
11104.2	-64.65	0.3	12.1	-52.85	V
12954.9	-63.10	0.4	12.4	-51.10	V

Test Data （1.4MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-52.79	7.3	8.9	-51.19	V
5640.0	-62.25	1.8	10.5	-53.55	V
7520.0	-61.26	0.9	11.9	-50.26	V
9400.0	-62.57	0.8	11.8	-51.57	V

11280.0	-63.15	0.3	12.1	-51.35	V
13160.0	-62.76	0.4	12.4	-50.76	V

Test Data （1.4MHz bandwidth 18900 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-51.68	7.3	8.9	-50.08	V
5640.0	-60.57	1.8	10.5	-51.87	V
7520.0	-65.79	0.9	11.9	-54.79	V
9400.0	-64.21	0.8	11.8	-53.21	V
11280.0	-62.89	0.3	12.1	-51.09	V
13160.0	-63.73	0.4	12.4	-51.73	V

Test Data （1.4MHz bandwidth 19192 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3818.4	-54.30	7.4	9.2	-52.50	V
5727.6	-61.33	1.5	10.5	-52.33	V
7636.8	-63.12	1.1	11.9	-52.32	V
9546.0	-62.11	0.9	11.8	-51.21	V
11455.2	-66.83	0.3	12.2	-54.93	V
13364.4	-63.20	0.4	12.4	-51.20	V

Test Data （1.4MHz bandwidth 19192 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3818.4	-56.30	7.4	9.2	-54.50	V
5727.6	-60.42	1.5	10.5	-51.42	V
7636.8	-65.37	1.1	11.9	-54.57	V
9546.0	-64.70	0.9	11.8	-53.80	V

11455.2	-65.74	0.3	12.2	-53.84	V
13364.4	-64.66	0.4	12.4	-52.66	V

Test Data （3MHz bandwidth 18615 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3703.0	-56.41	7.2	8.9	-54.71	V
5554.5	-60.58	2.0	10.5	-52.08	V
7406.0	-64.62	0.9	11.9	-53.62	V
9257.5	-61.24	1.0	11.5	-50.74	V
11109.0	-62.50	0.4	12.1	-50.80	V
12960.5	-65.69	0.4	12.4	-53.69	V

Test Data （3MHz bandwidth 18615 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3703.0	-54.28	7.2	8.9	-52.58	V
5554.5	-59.33	2.0	10.5	-50.83	V
7406.0	-65.65	0.9	11.9	-54.65	V
9257.5	-60.85	1.0	11.5	-50.35	V
11109.0	-64.78	0.4	12.1	-53.08	V
12960.5	-64.04	0.4	12.4	-52.04	V

Test Data （3MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-51.70	7.3	8.9	-50.10	V
5640.0	-59.20	1.8	10.5	-50.50	V
7520.0	-61.87	0.9	11.9	-50.87	V
9400.0	-63.08	0.8	11.8	-52.08	V

11280.0	-61.96	0.3	12.1	-50.16	V
13160.0	-63.89	0.4	12.4	-51.89	V

Test Data （3MHz bandwidth 18900 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-52.50	7.3	8.9	-50.90	V
5640.0	-60.04	1.8	10.5	-51.34	V
7520.0	-64.60	0.9	11.9	-53.60	V
9400.0	-65.99	0.8	11.8	-54.99	V
11280.0	-66.52	0.3	12.1	-54.72	V
13160.0	-64.10	0.4	12.4	-52.10	V

Test Data （3MHz bandwidth 19184 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3816.4	-56.01	7.4	9.2	-54.21	V
5724.8	-63.49	1.4	10.5	-54.39	V
7633.2	-64.76	1.1	11.9	-53.96	V
9541.6	-61.42	0.9	11.8	-50.52	V
11450.0	-63.75	0.8	12.2	-52.35	V
13358.4	-65.91	0.4	12.4	-53.91	V

Test Data （3MHz bandwidth 19184 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3816.4	-51.85	7.4	9.2	-50.05	V
5724.8	-60.59	1.4	10.5	-51.49	V
7633.2	-62.96	1.1	11.9	-52.16	V
9541.6	-62.50	0.9	11.8	-51.60	V

11450.0	-62.91	0.8	12.2	-51.51	V
13358.4	-62.87	0.4	12.4	-50.87	V

Test Data （5MHz bandwidth 18625 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3705.0	-54.59	7.2	8.9	-52.89	V
5557.5	-59.92	2.5	10.5	-51.92	V
7410.0	-61.79	0.9	11.9	-50.79	V
9262.5	-62.79	1.0	11.5	-52.29	V
11115.0	-65.47	0.3	12.1	-53.67	V
12967.5	-65.07	0.4	12.4	-53.07	V

Test Data （5MHz bandwidth 18625 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3705.0	-52.52	7.2	8.9	-50.82	V
5557.5	-61.31	2.5	10.5	-53.31	V
7410.0	-65.43	0.9	11.9	-54.43	V
9262.5	-61.73	1	11.5	-51.23	V
11115.0	-66.07	0.3	12.1	-54.27	V
12967.5	-65.43	0.4	12.4	-53.43	V

Test Data （5MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-56.22	7.3	8.9	-54.62	V
5640.0	-60.15	1.8	10.5	-51.45	V
7520.0	-64.18	0.9	11.9	-53.18	V
9400.0	-61.25	0.8	11.8	-50.25	V

11280.0	-64.82	0.3	12.1	-53.02	V
13160.0	-66.67	0.4	12.4	-54.67	V

Test Data （5MHz bandwidth 18900 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-56.16	7.3	8.9	-54.56	V
5640.0	-59.84	1.8	10.5	-51.14	V
7520.0	-61.21	0.9	11.9	-50.21	V
9400.0	-61.50	0.8	11.8	-50.50	V
11280.0	-66.48	0.3	12.1	-54.68	V
13160.0	-66.94	0.4	12.4	-54.94	V

Test Data （5MHz bandwidth 19174 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3814.8	-56.03	7.4	9.2	-54.23	V
5722.2	-60.39	1.5	10.5	-51.39	V
7629.6	-63.36	0.8	11.9	-52.26	V
9537.0	-65.38	0.9	11.8	-54.48	V
11444.4	-64.68	0.8	12.2	-53.28	V
13351.8	-64.54	0.4	12.4	-52.54	V

Test Data （5MHz bandwidth 19174 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3814.8	-55.70	7.4	9.2	-53.90	V
5722.2	-62.50	1.5	10.5	-53.50	V
7629.6	-64.24	0.8	11.9	-53.14	V
9537.0	-63.91	0.9	11.8	-53.01	V

11444.4	-62.78	0.8	12.2	-51.38	V
13351.8	-62.53	0.4	12.4	-50.53	V

Test Data （10MHz bandwidth 18650 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3710.0	-52.97	7.2	8.9	-51.27	V
5565.0	-61.17	2.0	10.5	-52.67	V
7420.0	-61.70	0.9	11.9	-50.70	V
9275.0	-60.81	1.0	11.5	-50.31	V
11130.0	-64.90	0.3	12.1	-53.10	V
12985.0	-65.44	0.4	12.4	-53.44	V

Test Data （10MHz bandwidth 18650 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3710.0	-55.22	7.2	8.9	-53.52	V
5565.0	-59.08	2.0	10.5	-50.58	V
7420.0	-64.69	0.9	11.9	-53.69	V
9275.0	-60.53	1.0	11.5	-50.03	V
11130.0	-66.07	0.3	12.1	-54.27	V
12985.0	-65.31	0.4	12.4	-53.31	V

Test Data （10MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-55.75	7.3	8.9	-54.15	V
5640.0	-62.16	1.8	10.5	-53.46	V
7520.0	-65.91	0.9	11.9	-54.91	V
9400.0	-65.96	0.8	11.8	-54.96	V

11280.0	-65.72	0.3	12.1	-53.92	V
13160.0	-63.36	0.4	12.4	-51.36	V

Test Data （10MHz bandwidth 18900 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-52.77	7.3	8.9	-51.17	V
5640.0	-59.84	1.8	10.5	-51.14	V
7520.0	-65.51	0.9	11.9	-54.51	V
9400.0	-65.23	0.8	11.8	-54.23	V
11280.0	-65.71	0.3	12.1	-53.91	V
13160.0	-66.46	0.4	12.4	-54.46	V

Test Data （10MHz bandwidth 19149 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3809.8	-53.03	7.4	9.2	-51.23	V
5714.7	-63.01	1.5	10.5	-54.01	V
7619.6	-65.54	1.1	11.9	-54.74	V
9524.5	-62.13	0.9	11.8	-51.23	V
11429.4	-64.70	0.8	12.2	-53.30	V
13343.3	-63.90	0.4	12.4	-51.90	V

Test Data （10MHz bandwidth 19149 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3809.8	-51.98	7.4	9.2	-50.18	V
5714.7	-63.05	1.5	10.5	-54.05	V
7619.6	-64.10	1.1	11.9	-53.30	V
9524.5	-61.59	0.9	11.8	-50.69	V

11429.4	-62.06	0.8	12.2	-50.66	V
13343.3	-64.06	0.4	12.4	-52.06	V

Test Data （15MHz bandwidth 18675 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3715.0	-52.63	7.2	8.9	-50.93	V
5572.5	-60.11	2.0	10.5	-51.61	V
7430.0	-65.96	0.9	11.9	-54.96	V
9287.5	-62.37	1.0	11.5	-51.87	V
11145.0	-66.19	0.3	12.1	-54.39	V
13002.5	-66.86	0.4	12.4	-54.86	V

Test Data （15MHz bandwidth 18675 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3715.0	-54.08	7.2	8.9	-52.38	V
5572.5	-62.96	2.0	10.5	-54.46	V
7430.0	-63.24	0.9	11.9	-52.24	V
9287.5	-64.15	1.0	11.5	-53.65	V
11145.0	-66.31	0.3	12.1	-54.51	V
13002.5	-65.18	0.4	12.4	-53.18	V

Test Data （15MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-54.52	7.3	8.9	-52.92	V
5640.0	-62.82	1.8	10.5	-54.12	V
7520.0	-61.99	0.9	11.9	-50.99	V
9400.0	-65.01	0.8	11.8	-54.01	V

11280.0	-65.72	0.3	12.1	-53.92	V
13160.0	-66.31	0.4	12.4	-54.31	V

Test Data （15MHz bandwidth 18900 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-52.76	7.3	8.9	-51.16	V
5640.0	-61.77	1.8	10.5	-53.07	V
7520.0	-61.68	0.9	11.9	-50.68	V
9400.0	-63.16	0.8	11.8	-52.16	V
11280.0	-62.54	0.3	12.1	-50.74	V
13160.0	-65.11	0.4	12.4	-53.11	V

Test Data （15MHz bandwidth 19124 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3804.8	-52.95	7.4	9.2	-51.15	V
5707.2	-62.84	1.5	10.5	-53.84	V
7609.6	-63.59	1.1	11.9	-52.79	V
9512.0	-65.73	0.9	11.8	-54.83	V
11414.4	-64.58	0.8	12.2	-53.18	V
13316.8	-65.06	0.4	12.4	-53.06	V

Test Data （15MHz bandwidth 19124 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3804.8	-55.75	7.4	9.2	-53.95	V
5707.2	-63.14	1.5	10.5	-54.14	V
7609.6	-63.89	1.1	11.9	-53.09	V
9512.0	-65.89	0.9	11.8	-54.99	V

11414.4	-62.77	0.8	12.2	-51.37	V
13316.8	-62.07	0.4	12.4	-50.07	V

Test Data （20MHz bandwidth 18700 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3720.0	-56.78	7.3	9.2	-54.88	V
5580.0	-58.56	2.0	10.5	-50.06	V
7440.0	-63.55	0.9	11.9	-52.55	V
9300.	-65.15	0.7	11.8	-54.05	V
11160.0	-66.54	0.3	12.2	-54.64	V
13020.0	-64.86	0.4	12.4	-52.86	V

Test Data （20MHz bandwidth 18700 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3720.0	-52.69	7.3	9.2	-50.79	V
5580.0	-60.30	2.0	10.5	-51.80	V
7440.0	-62.19	0.9	11.9	-51.19	V
9300..0	-63.42	0.7	11.8	-52.32	V
11160.0	-65.04	0.3	12.2	-53.14	V
13020.0	-65.45	0.4	12.4	-53.45	V

Test Data （20MHz bandwidth 18900 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-54.20	7.3	8.9	-52.60	V
5640.0	-63.41	1.8	10.5	-54.71	V
7520.0	-65.34	0.9	11.9	-54.34	V
9400.0	-65.72	0.8	11.8	-54.72	V

11280.0	-62.38	0.3	12.1	-50.58	V
13160.0	-65.64	0.4	12.4	-53.64	V

Test Data （20MHz bandwidth 18900 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-53.81	7.3	8.9	-52.21	V
5640.0	-61.10	1.8	10.5	-52.40	V
7520.0	-61.40	0.9	11.9	-50.40	V
9400.0	-62.39	0.8	11.8	-51.39	V
11280.0	-65.37	0.3	12.1	-53.57	V
13160.0	-64.08	0.4	12.4	-52.08	V

Test Data （20MHz bandwidth 19099 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3799.8	-52.42	7.4	9.2	-50.62	V
5699.7	-59.82	1.7	10.5	-51.02	V
7599.6	-63.41	0.8	11.9	-52.31	V
9499.5	-62.04	0.8	11.8	-51.04	V
11399.4	-65.98	0.8	12.2	-54.58	V
13299.3	-65.11	0.4	12.4	-53.11	V

Test Data （20MHz bandwidth 19099 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3799.8	-56.66	7.4	9.2	-54.86	V
5699.7	-60.46	1.7	10.5	-51.66	V
7599.6	-61.69	0.8	11.9	-50.59	V
9499.5	-63.79	0.8	11.8	-52.79	V

11399.4	-65.46	0.8	12.2	-54.06	V
13299.3	-63.67	0.4	12.4	-51.67	V

5.4.9 LTE B4 Radiated Spurious Emission Results

Test Data （1.4MHz bandwidth 19957 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3421.4	-55.41	6.9	8.9	-53.41	V
5132.1	-55.22	6.3	9.9	-51.62	V
6842.8	-65.32	0.8	11.9	-54.22	V
8553.5	-62.01	0.9	11.2	-51.71	V
10264.2	-63.56	0.5	12.0	-52.06	V
11974.9	-62.98	0.4	12.2	-51.18	V

Test Data （1.4MHz bandwidth 19957 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3421.4	-55.85	6.9	8.9	-53.85	V
5132.1	-56.07	6.3	9.9	-52.47	V
6842.8	-64.61	0.8	11.9	-53.51	V
8553.5	-63.02	0.9	11.2	-52.72	V
10264.2	-64.31	0.5	12.0	-52.81	V
11974.9	-64.09	0.4	12.2	-52.29	V

Test Data （1.4MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-53.48	6.9	8.9	-51.48	V
5197.5	-58.95	5.8	9.9	-54.85	V

6930.0	-65.86	0.9	11.9	-54.86	V
8662.5	-65.10	0.9	11.2	-54.80	V
10395.0	-61.73	0.7	12.2	-50.23	V
12127.5	-66.17	0.6	12.2	-54.57	V

Test Data （1.4MHz bandwidth 20175 QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-53.24	6.9	8.9	-51.24	V
5197.5	-59.08	5.8	9.9	-54.98	V
6930.0	-64.83	0.9	11.9	-53.83	V
8662.5	-61.86	0.9	11.2	-51.56	V
10395.0	-62.37	0.7	12.2	-50.87	V
12127.5	-61.74	0.6	12.2	-50.14	V

Test Data （1.4MHz bandwidth 20392 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3508.4	-53.58	7.0	8.9	-51.68	V
5262.5	-59.41	4.7	9.9	-54.21	V
7016.8	-60.89	1.2	11.9	-50.19	V
8771.0	-63.99	1.1	11.2	-53.89	V
10525.2	-64.70	0.6	12.2	-53.10	V
12279.4	-63.79	0.3	12.2	-51.89	V

Test Data （1.4MHz bandwidth 20392 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3508.4	-54.97	7.0	8.9	-53.07	V
5262.5	-60.20	4.7	9.9	-55.00	V

7016.8	-64.89	1.2	11.9	-54.19	V
8771.0	-60.40	1.1	11.2	-50.30	V
10525.2	-63.32	0.6	12.2	-51.72	V
12279.4	-66.46	0.3	12.2	-54.56	V

Test Data （3MHz bandwidth 19965 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3423.0	-53.08	6.9	8.9	-51.08	V
5134.5	-53.69	6.3	9.9	-50.09	V
6846.0	-64.94	0.8	11.9	-53.84	V
8557.5	-61.55	0.9	11.2	-51.25	V
10269.0	-65.23	0.5	12.0	-53.73	V
11980.5	-66.41	0.4	12.2	-54.61	V

Test Data （3MHz bandwidth 19965 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3423.0	-55.88	6.9	8.9	-53.88	V
5134.5	-56.45	6.3	9.9	-52.85	V
6846.0	-63.81	0.8	11.9	-52.71	V
8557.5	-63.59	0.9	11.2	-53.29	V
10269.0	-65.89	0.5	12.0	-54.39	V
11980.5	-62.39	0.4	12.2	-50.59	V

Test Data （3MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-52.21	6.9	8.9	-50.21	V
5197.5	-54.16	5.8	9.9	-50.06	V

6930.0	-65.60	0.9	11.9	-54.60	V
8662.5	-64.23	0.9	11.2	-53.93	V
10395.0	-65.70	0.7	12.2	-54.20	V
12127.5	-63.38	0.6	12.2	-51.78	V

Test Data （3MHz bandwidth 20175 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-56.35	6.9	8.9	-54.35	V
5197.5	-55.26	5.8	9.9	-51.16	V
6930.0	-63.92	0.9	11.9	-52.92	V
8662.5	-64.16	0.9	11.2	-53.86	V
10395.0	-64.61	0.7	12.2	-53.11	V
12127.5	-65.21	0.6	12.2	-53.61	V

Test Data （3MHz bandwidth 20384 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3506.8	-55.37	7.0	8.9	-53.47	V
5260.2	-56.44	5.0	9.9	-51.54	V
7013.6	-62.86	1.2	11.9	-52.16	V
8767.0	-64.38	1.2	11.2	-54.38	V
10520.4	-65.36	0.6	12.2	-53.76	V
12273.8	-63.56	0.3	12.2	-51.66	V

Test Data （3MHz bandwidth 20384 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3506.8	-53.80	7.0	8.9	-51.90	V
5260.2	-59.39	5.0	9.9	-54.49	V

7013.6	-65.59	1.2	11.9	-54.89	V
8767.0	-64.64	1.2	11.2	-54.64	V
10520.4	-65.09	0.6	12.2	-53.49	V
12273.8	-63.75	0.3	12.2	-51.85	V

Test Data （5MHz bandwidth 19975 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3425.0	-54.73	6.9	8.9	-52.73	V
5137.5	-57.05	6.3	9.9	-53.45	V
6850.0	-64.10	0.8	11.9	-53.00	V
8562.5	-60.92	0.9	11.2	-50.62	V
10275.0	-65.31	0.5	12.0	-53.81	V
11987.5	-64.88	0.4	12.2	-53.08	V

Test Data （5MHz bandwidth 19975 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3425.0	-53.91	6.9	8.9	-51.91	V
5137.5	-53.94	6.3	9.9	-50.34	V
6850.0	-65.23	0.8	11.9	-54.13	V
8562.5	-60.47	0.9	11.2	-50.17	V
10275.0	-66.11	0.5	12.0	-54.61	V
11987.5	-66.76	0.4	12.2	-54.96	V

Test Data （5MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-54.67	6.9	8.9	-52.67	V
5197.5	-55.24	5.8	9.9	-51.14	V

6930.0	-64.75	0.9	11.9	-53.75	V
8662.5	-64.84	0.9	11.2	-54.54	V
10395.0	-64.83	0.7	12.2	-53.33	V
12127.5	-66.23	0.6	12.2	-54.63	V

Test Data （5MHz bandwidth 20175 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-53.15	6.9	8.9	-51.15	V
5197.5	-58.67	5.8	9.9	-54.57	V
6930.0	-65.24	0.9	11.9	-54.24	V
8662.5	-61.75	0.9	11.2	-51.45	V
10395.0	-61.68	0.7	12.2	-50.18	V
12127.5	-62.50	0.6	12.2	-50.90	V

Test Data （5MHz bandwidth 20374 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3504.8	-56.01	7.0	8.9	-54.11	V
5257.2	-57.50	5.0	9.9	-52.60	V
7009.6	-64.87	1.2	11.9	-54.17	V
8762.0	-60.71	1.2	11.2	-50.71	V
10514.4	-65.92	0.6	12.2	-54.32	V
12266.8	-63.92	0.4	12.2	-52.12	V

Test Data （5MHz bandwidth 20374 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3504.8	-56.51	7.0	8.9	-54.61	V
5257.2	-59.62	5.0	9.9	-54.72	V

7009.6	-60.76	1.2	11.9	-50.06	V
8762.0	-62.85	1.2	11.2	-52.85	V
10514.4	-65.70	0.6	12.2	-54.10	V
12266.8	-64.39	0.4	12.2	-52.59	V

Test Data （10MHz bandwidth 20000 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3430.0	-52.09	6.9	8.9	-50.09	V
5145.0	-57.81	6.3	9.9	-54.21	V
6860.0	-63.29	0.8	11.9	-52.19	V
8575.0	-64.12	0.9	11.2	-53.82	V
10290.0	-61.70	0.5	12.0	-50.20	V
12005.0	-64.90	0.4	12.2	-53.10	V

Test Data （10MHz bandwidth 20000 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3430.0	-52.20	6.9	8.9	-50.20	V
5145.0	-56.19	6.3	9.9	-52.59	V
6860.0	-64.14	0.8	11.9	-53.04	V
8575.0	-60.98	0.9	11.2	-50.68	V
10290.0	-63.99	0.5	12.0	-52.49	V
12005.0	-63.28	0.4	12.2	-51.48	V

Test Data （10MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-56.53	6.9	8.9	-54.53	V
5197.5	-58.10	5.8	9.9	-54.00	V

6930.0	-61.19	0.9	11.9	-50.19	V
8662.5	-62.71	0.9	11.2	-52.41	V
10395.0	-63.51	0.7	12.2	-52.01	V
12127.5	-62.37	0.6	12.2	-50.77	V

Test Data （10MHz bandwidth 20175 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-54.82	6.9	8.9	-52.82	V
5197.5	-55.51	5.8	9.9	-51.41	V
6930.0	-63.76	0.9	11.9	-52.76	V
8662.5	-64.83	0.9	11.2	-54.53	V
10395.0	-65.26	0.7	12.2	-53.76	V
12127.5	-64.98	0.6	12.2	-53.38	V

Test Data （10MHz bandwidth 20349 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3499.8	-53.13	7.0	8.9	-51.23	V
5249.7	-59.27	5.0	9.9	-54.37	V
6999.6	-63.28	0.9	11.9	-52.28	V
8749.5	-61.35	1.2	11.2	-51.35	V
10499.4	-64.98	0.6	12.2	-53.38	V
12249.3	-64.41	0.3	12.2	-52.51	V

Test Data （10MHz bandwidth 20349 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3499.8	-53.08	7.0	8.9	-51.18	V
5249.7	-59.35	5.0	9.9	-54.45	V

6999.6	-62.99	0.9	11.9	-51.99	V
8749.5	-61.08	1.2	11.2	-51.08	V
10499.4	-63.87	0.6	12.2	-52.27	V
12249.3	-62.62	0.3	12.2	-50.72	V

Test Data （15MHz bandwidth 20025 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3435.0	-54.60	6.9	8.9	-52.60	V
5152.5	-57.74	6.3	9.9	-54.14	V
6870.0	-61.14	0.8	11.9	-50.04	V
8587.5	-62.54	0.9	11.2	-52.24	V
10305.0	-63.73	0.7	12.2	-52.23	V
12022.5	-65.16	0.6	12.2	-53.56	V

Test Data （15MHz bandwidth 20025 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3435.0	-55.12	6.9	8.9	-53.12	V
5152.5	-55.07	6.3	9.9	-51.47	V
6870.0	-61.81	0.8	11.9	-50.71	V
8587.5	-64.84	0.9	11.2	-54.54	V
10305.0	-61.87	0.7	12.2	-50.37	V
12022.5	-65.64	0.6	12.2	-54.04	V

Test Data （15MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-54.37	6.9	8.9	-52.37	V
5197.5	-55.33	6.3	9.9	-51.73	V

6930.0	-65.03	0.8	11.9	-53.93	V
8662.5	-60.90	0.9	11.2	-50.60	V
10395.0	-63.57	0.7	12.2	-52.07	V
12127.5	-66.48	0.6	12.2	-54.88	V

Test Data （15MHz bandwidth 20175 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-52.31	6.9	8.9	50.31	V
5197.5	-56.15	5.8	9.9	-52.05	V
6930.0	-63.31	0.9	11.9	-52.31	V
8662.5	-60.98	0.9	11.2	-50.68	V
10395.0	-62.28	0.7	12.2	-50.78	V
12127.5	-65.40	0.6	12.2	-53.80	V

Test Data （15MHz bandwidth 20324 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3494.8	-54.23	7.0	8.9	-52.33	V
5242.2	-55.28	5.0	9.9	-50.38	V
6989.6	-65.59	1.2	11.9	-54.89	V
8737.0	-64.42	1.2	11.2	-54.42	V
10484.4	-61.98	0.3	12.2	-50.08	V
12231.8	-65.81	0.3	12.2	-53.91	V

Test Data （15MHz bandwidth 20324 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3494.8	-52.90	7.0	8.9	-51.00	V
5242.2	-56.72	5.0	9.9	-51.82	V

6989.6	-65.51	1.2	11.9	-54.81	V
8737.0	-64.60	1.2	11.2	-54.60	V
10484.4	-65.18	0.3	12.2	-53.28	V
12231.8	-62.54	0.3	12.2	-50.64	V

Test Data （20MHz bandwidth 20050 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3440.0	-55.72	6.9	8.9	-53.72	V
5160.0	-54.67	6.3	9.9	-51.07	V
6880.0	-64.30	0.8	11.9	-53.20	V
8600.0	-65.23	0.9	11.2	-54.93	V
10320.0	-62.48	0.7	12.2	-50.98	V
12040.0	-65.09	0.6	12.2	-53.49	V

Test Data （20MHz bandwidth 20050 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3440.0	-53.56	6.9	8.9	-51.56	V
5160.0	-56.21	6.3	9.9	-52.61	V
6880.0	-63.69	0.8	11.9	-52.59	V
8600.0	-61.06	0.9	11.2	-50.76	V
10320.0	-62.91	0.7	12.2	-51.41	V
12040.0	-63.13	0.6	12.2	-51.53	V

Test Data （20MHz bandwidth 20175 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-52.93	6.9	8.9	-50.93	V
5197.5	-57.35	5.8	9.9	-53.25	V

6930.0	-61.48	0.9	11.9	-50.48	V
8662.5	-62.37	0.9	11.2	-52.07	V
10395.0	-64.85	0.7	12.2	-53.35	V
12127.5	-62.52	0.6	12.2	-50.92	V

Test Data （20MHz bandwidth 20175 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-55.31	6.9	8.9	-53.31	V
5197.5	-58.72	5.8	9.9	-54.62	V
6930.0	-65.83	0.9	11.9	-54.83	V
8662.5	-62.44	0.9	11.2	-52.14	V
10395.0	-62.59	0.7	12.2	-51.09	V
12127.5	-62.54	0.6	12.2	-50.94	V

Test Data （20MHz bandwidth 20299 QPSK Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3489.8	-52.84	7.0	8.9	-50.94	V
5234.7	-58.84	5.0	9.9	-53.94	V
6979.6	-62.96	0.9	11.9	-51.96	V
8724.5	-62.28	1.2	11.2	-52.28	V
10469.4	-63.27	0.3	12.2	-51.37	V
12214.3	-65.69	0.3	12.2	-53.79	V

Test Data （20MHz bandwidth 20299 16QAM Mode）

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3489.8	-53.04	7.0	8.9	-51.14	V
5234.7	-57.49	5.0	9.9	-52.59	V