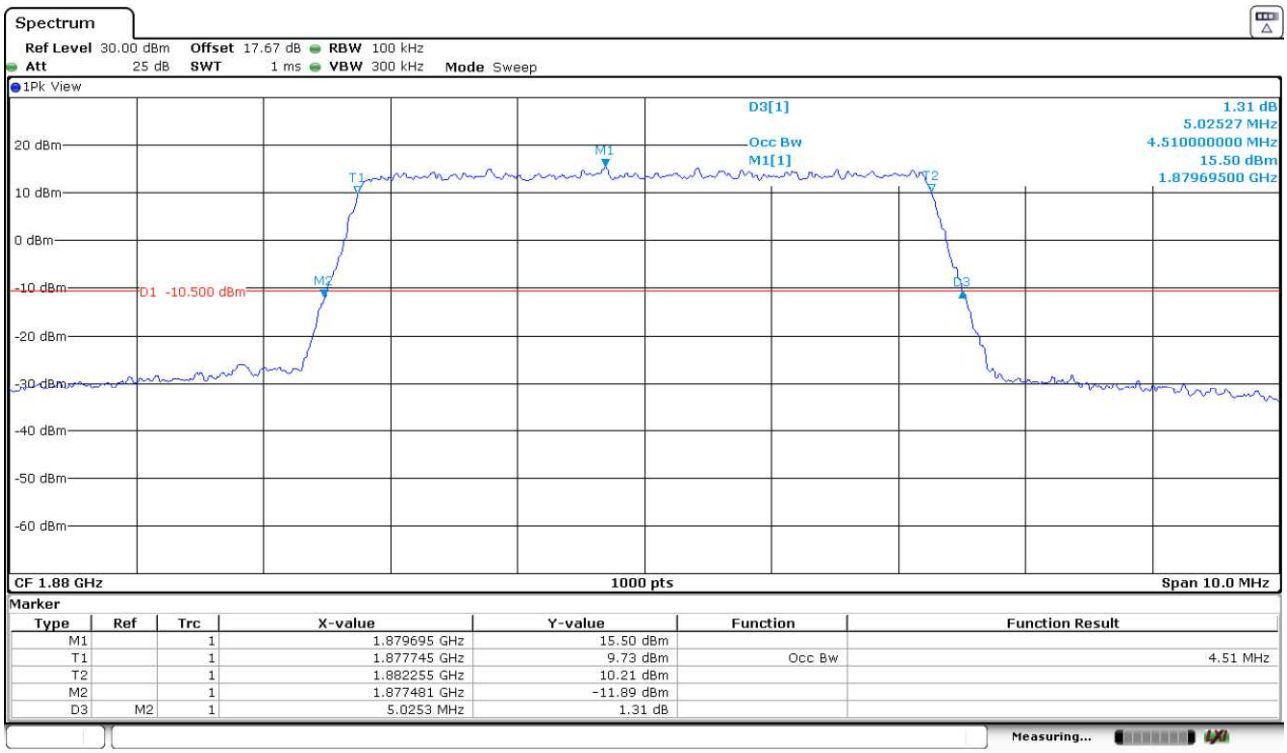
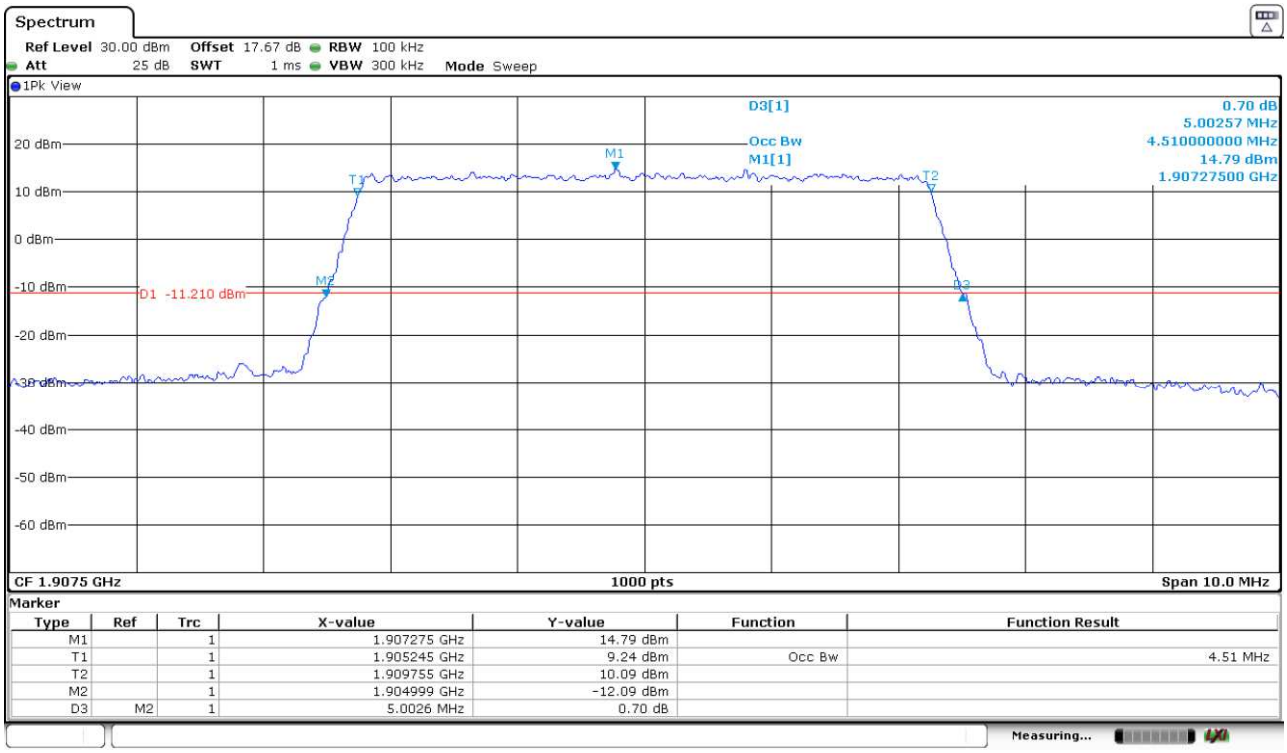
Middle Channel:

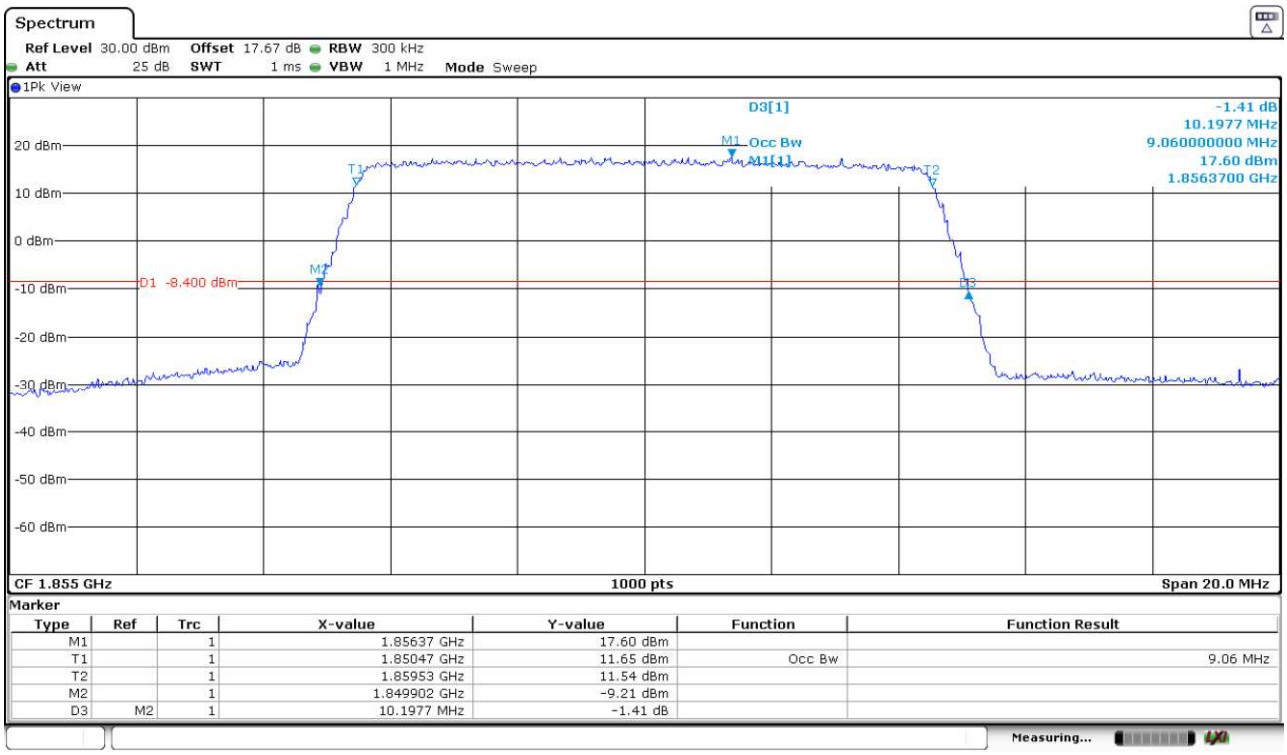


Highest Channel:

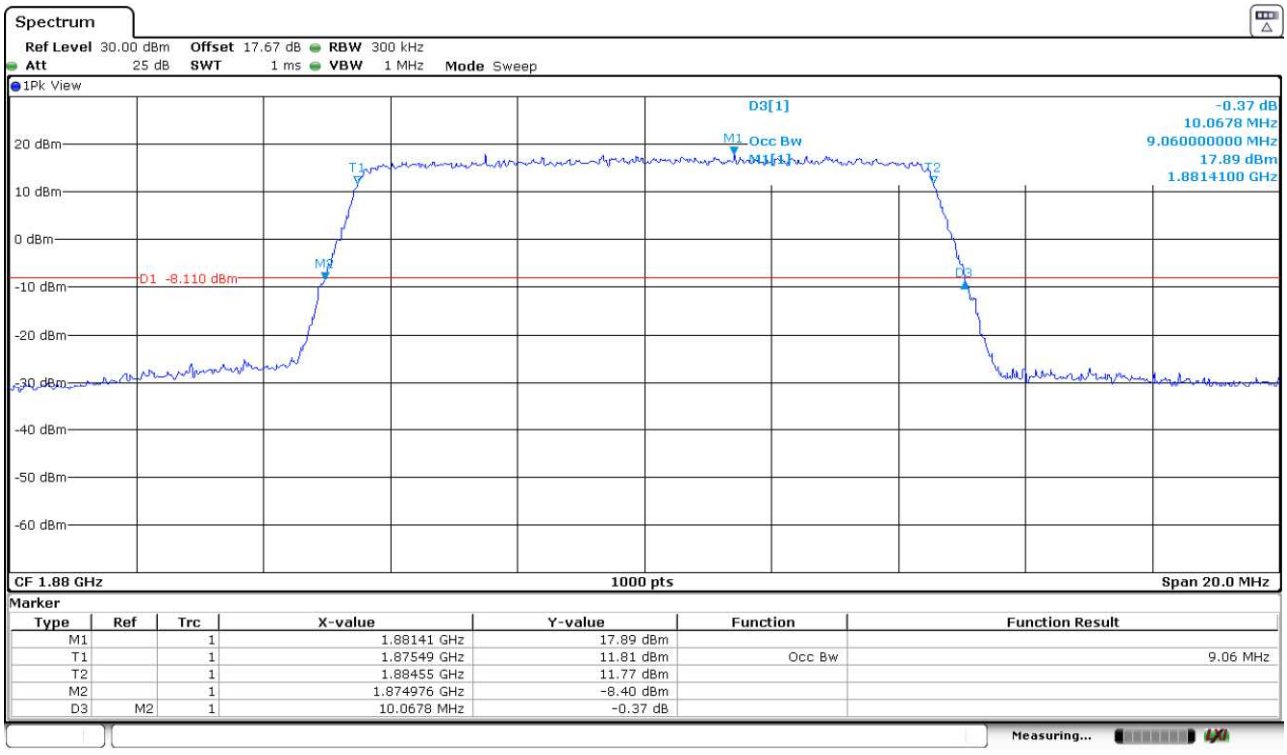


LTE Band 2. QPSK MODULATION. BW = 10 MHz.

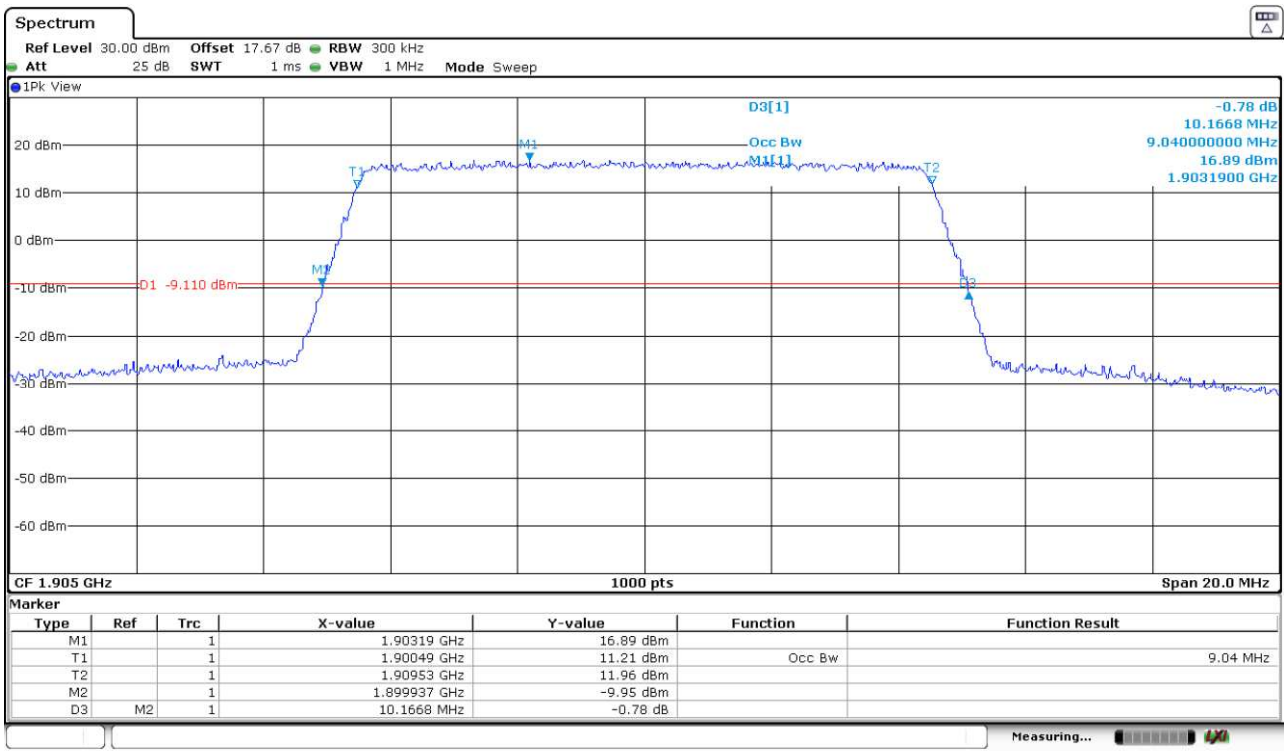
Lowest Channel:



Middle Channel:

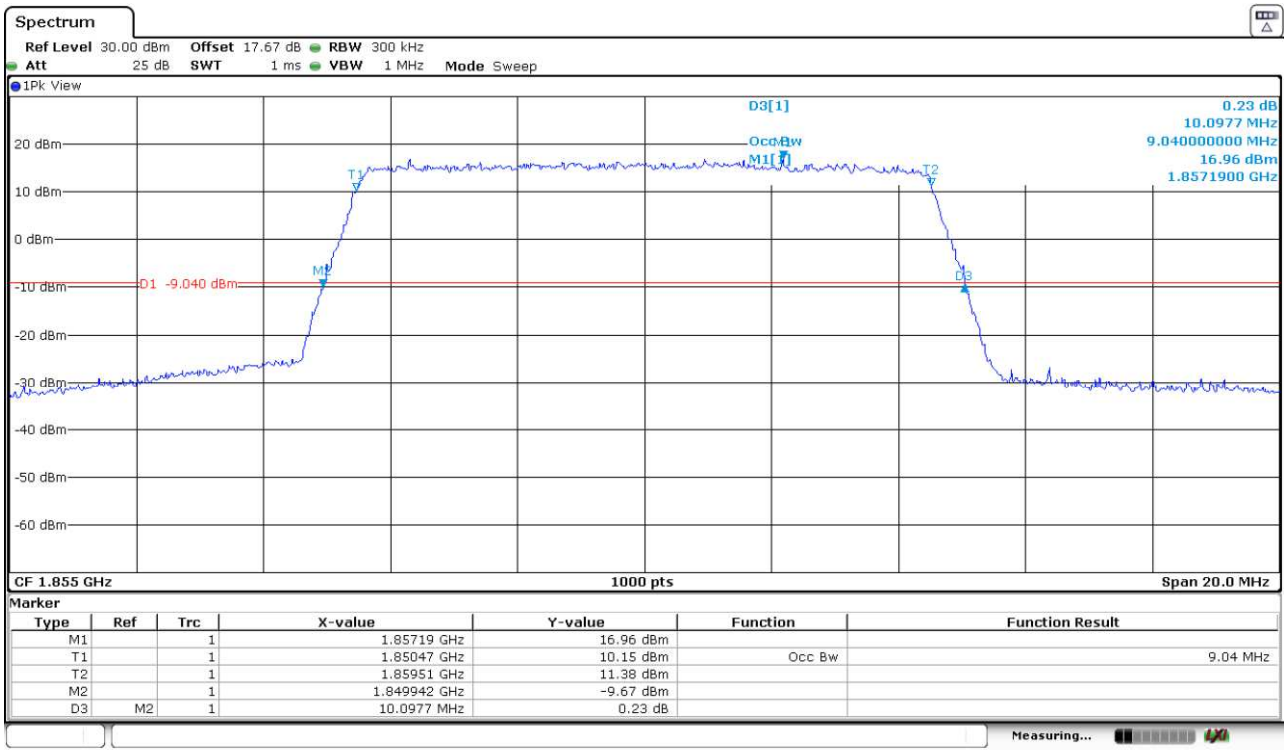


Highest Channel:

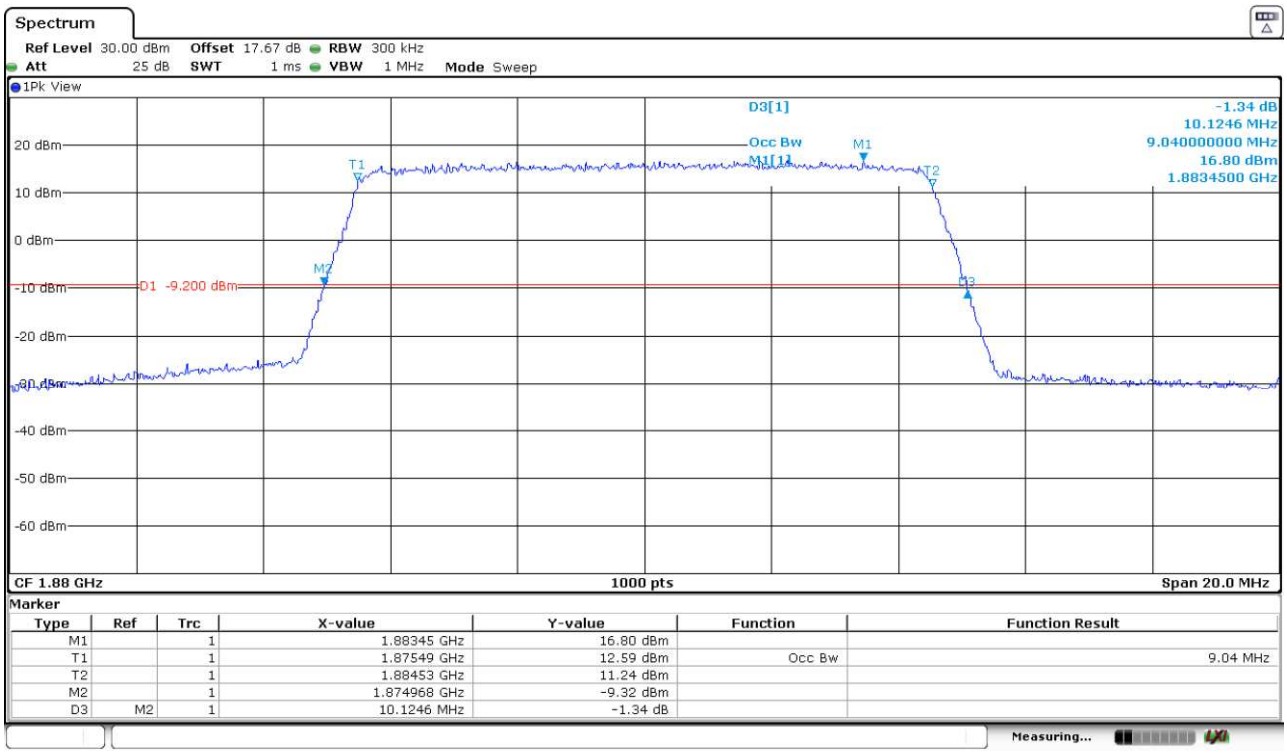


LTE Band 2. 16QAM MODULATION. BW = 10 MHz.

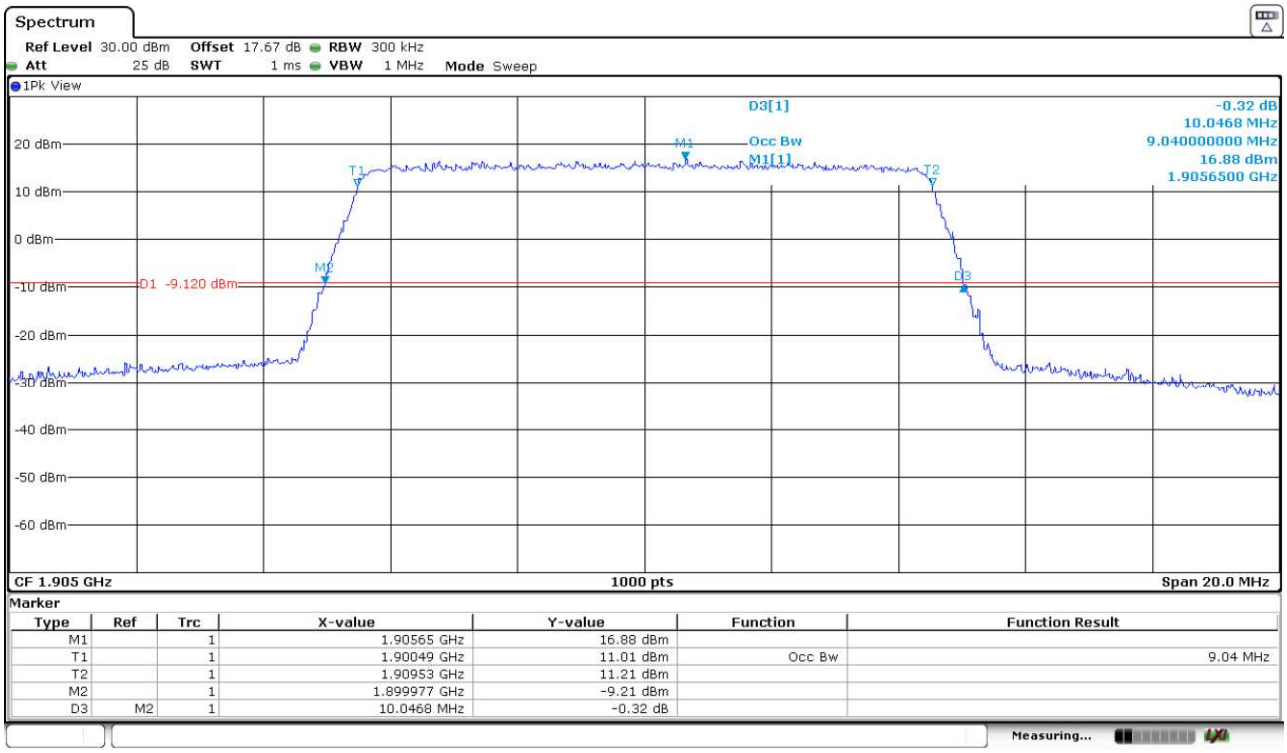
Lowest Channel:



Middle Channel:

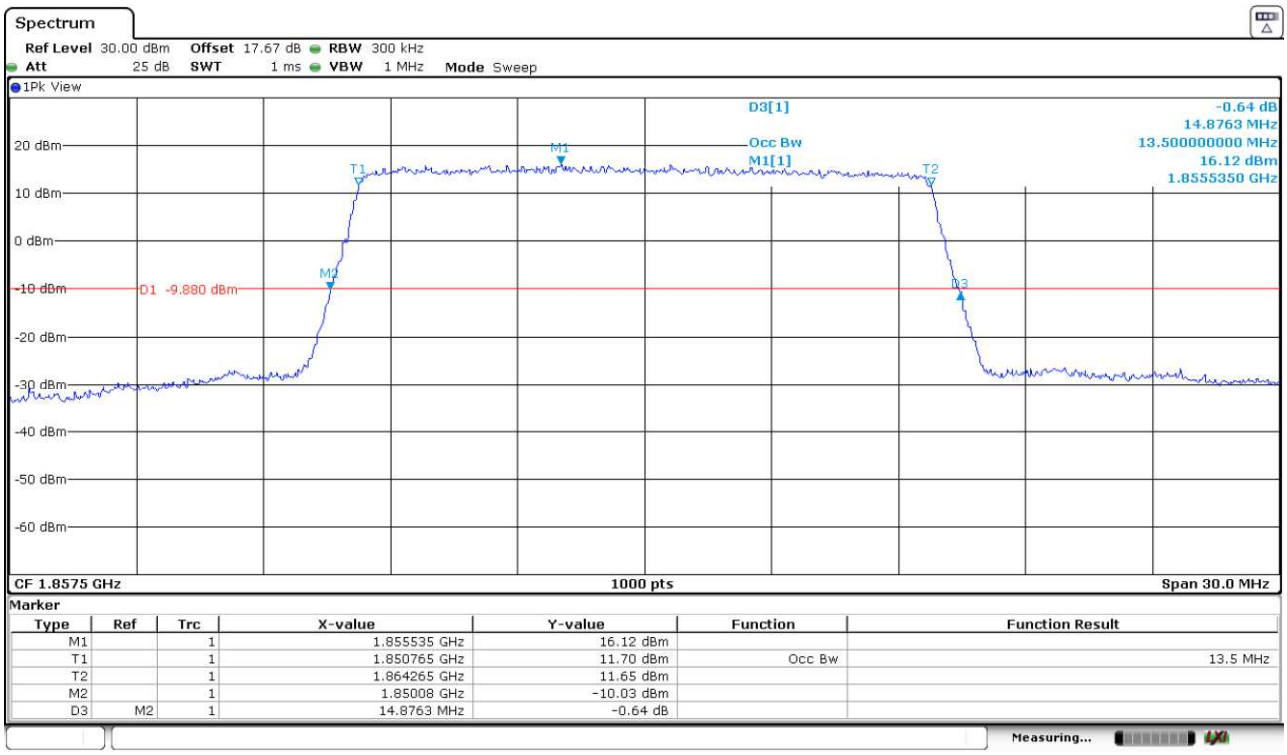


Highest Channel:

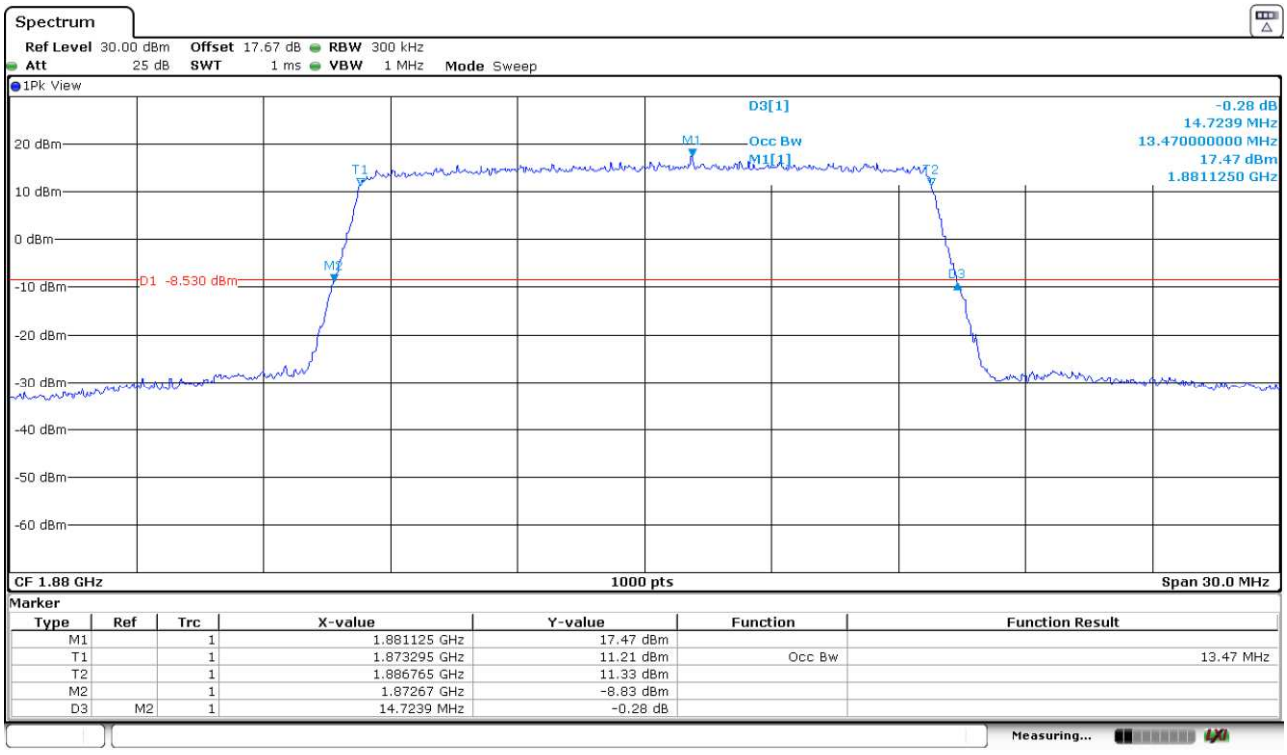


LTE Band 2. QPSK MODULATION. BW = 15 MHz.

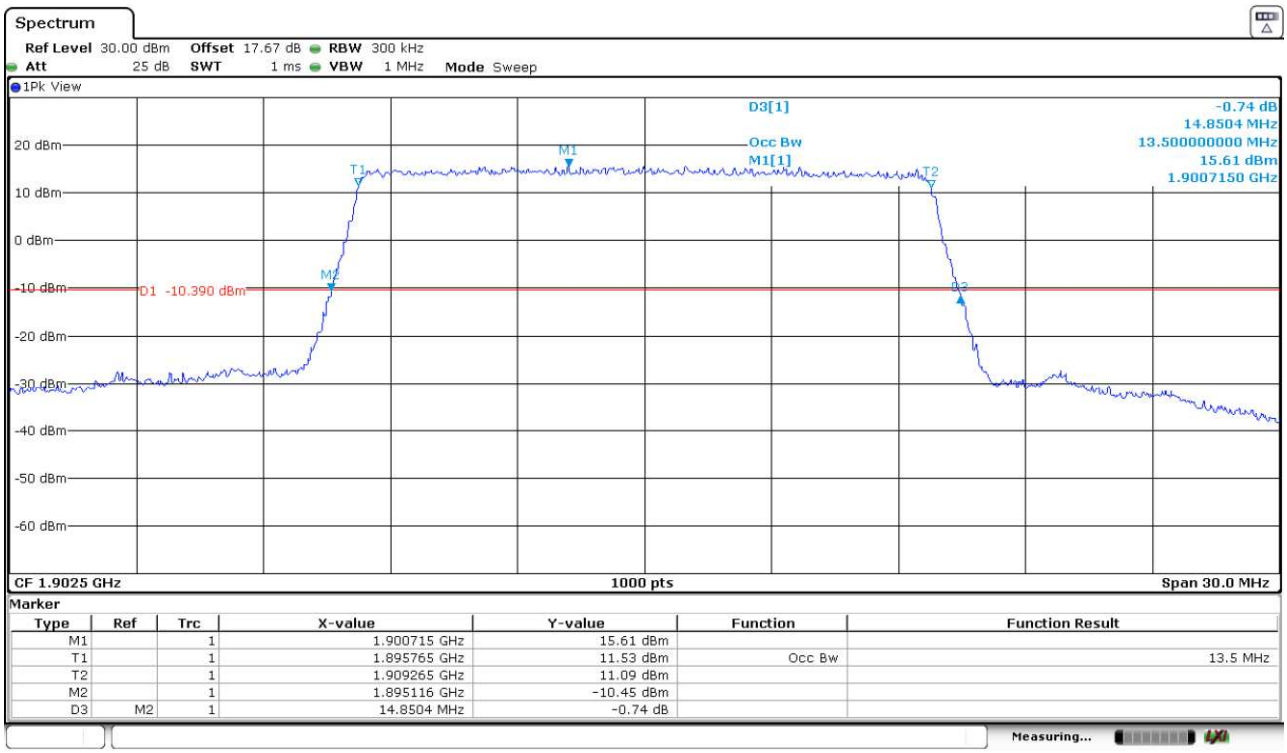
Lowest Channel:



Middle Channel:

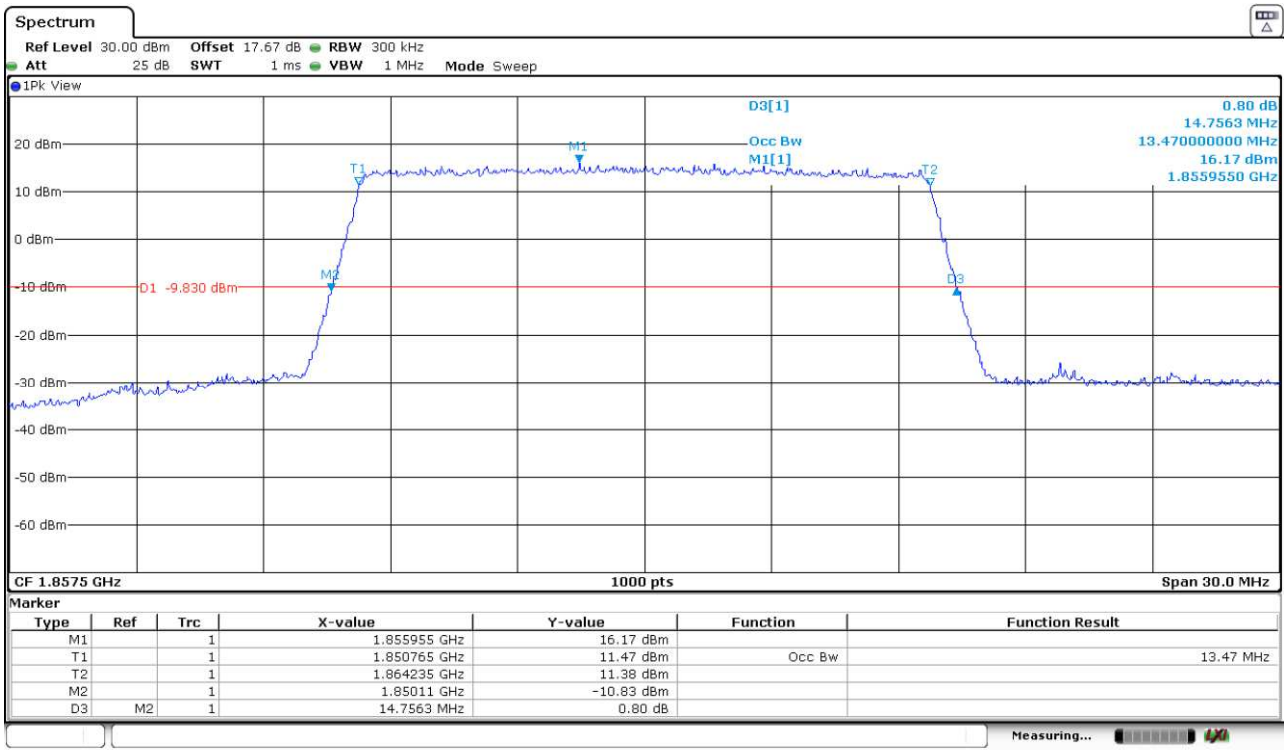


Highest Channel:

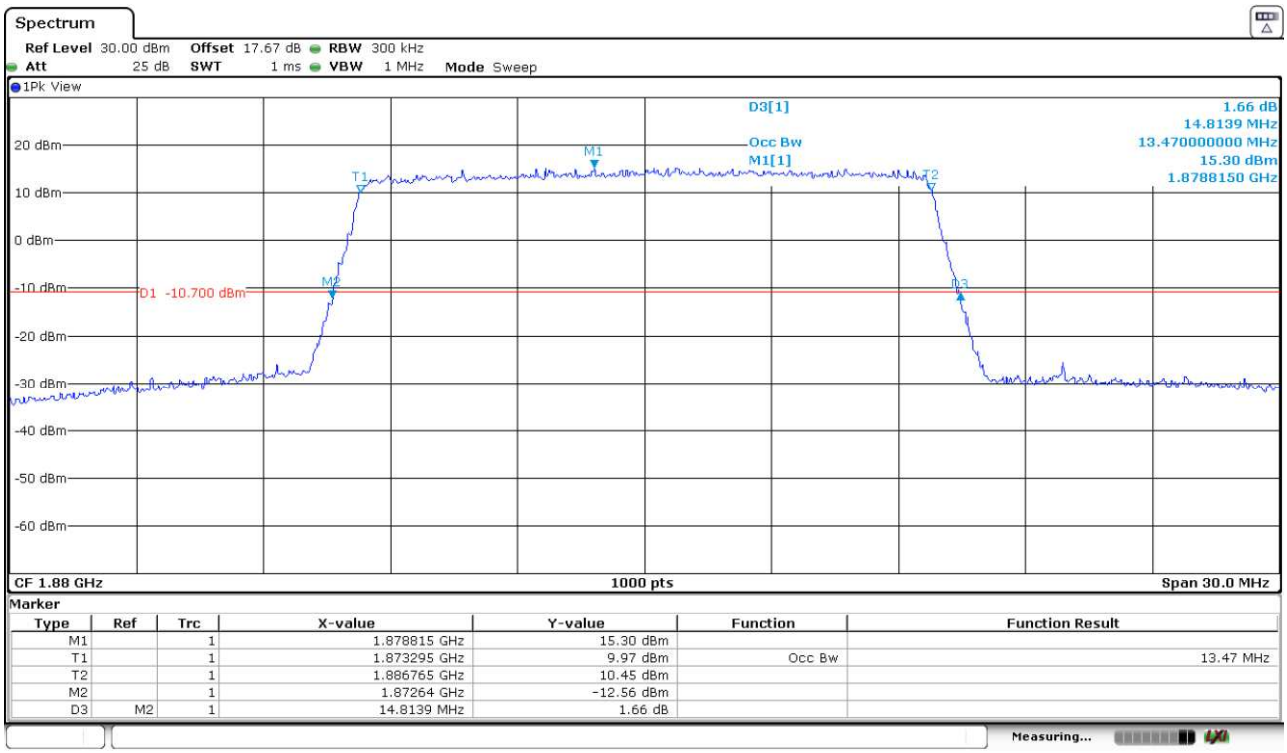


LTE Band 2. 16QAM MODULATION. BW = 15 MHz.

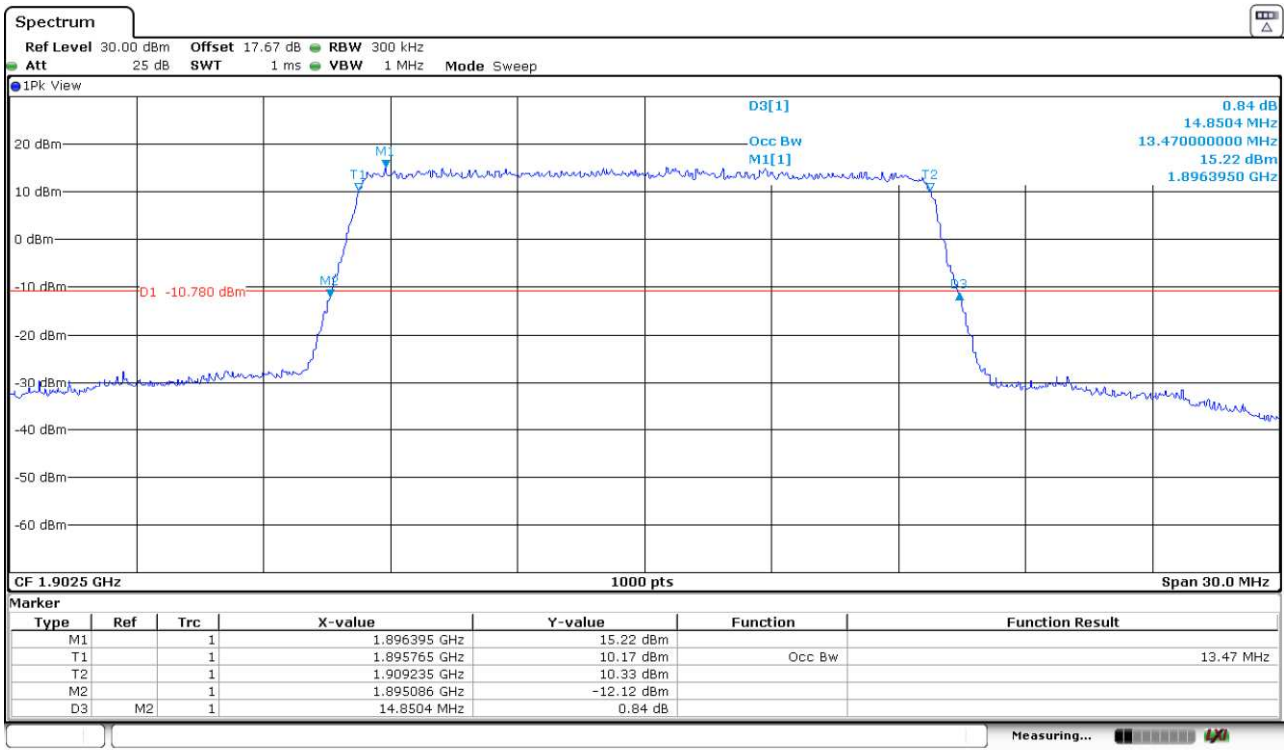
Lowest Channel:



Middle Channel:

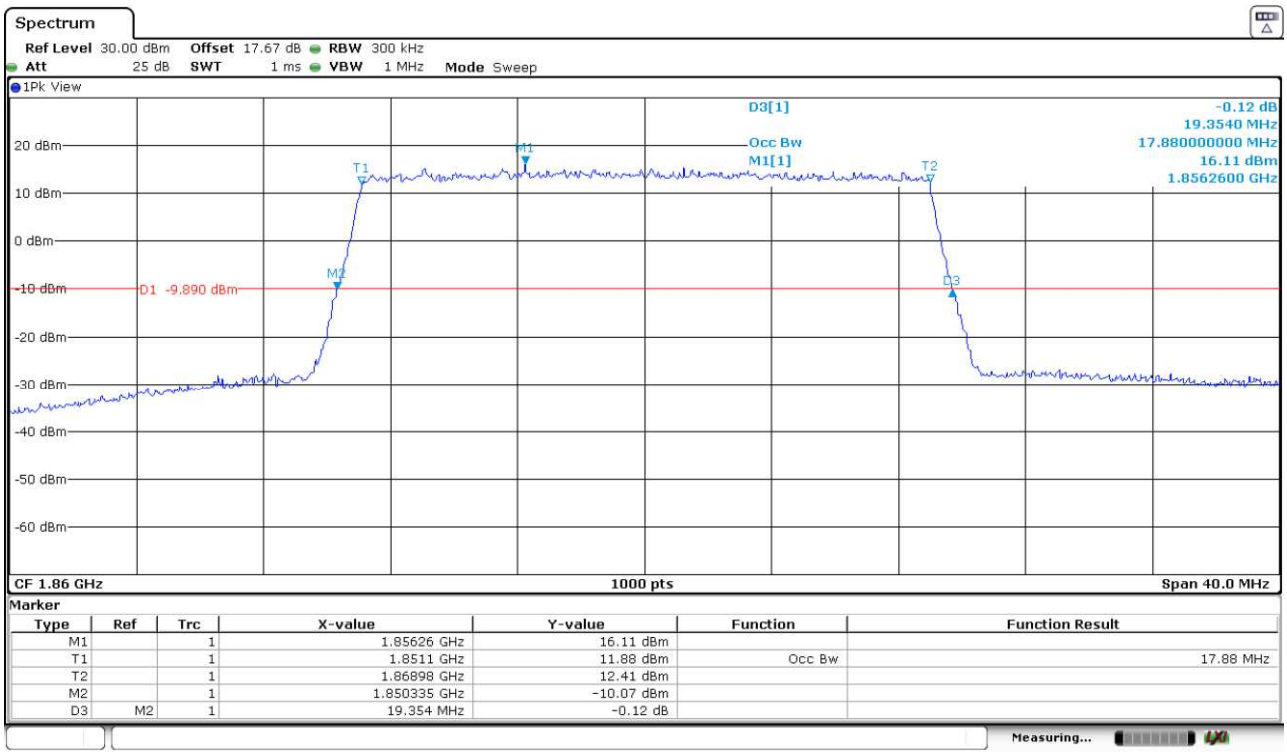


Highest Channel:

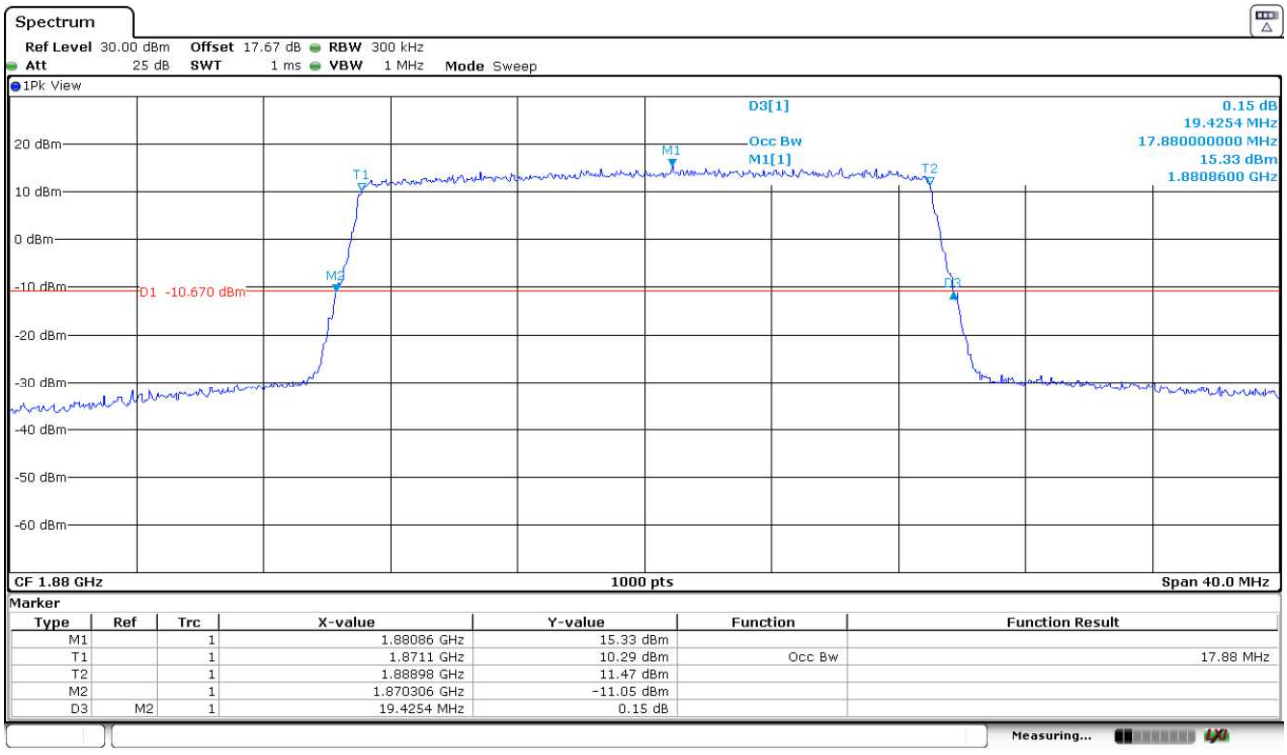


LTE Band 2. QPSK MODULATION. BW = 20 MHz.

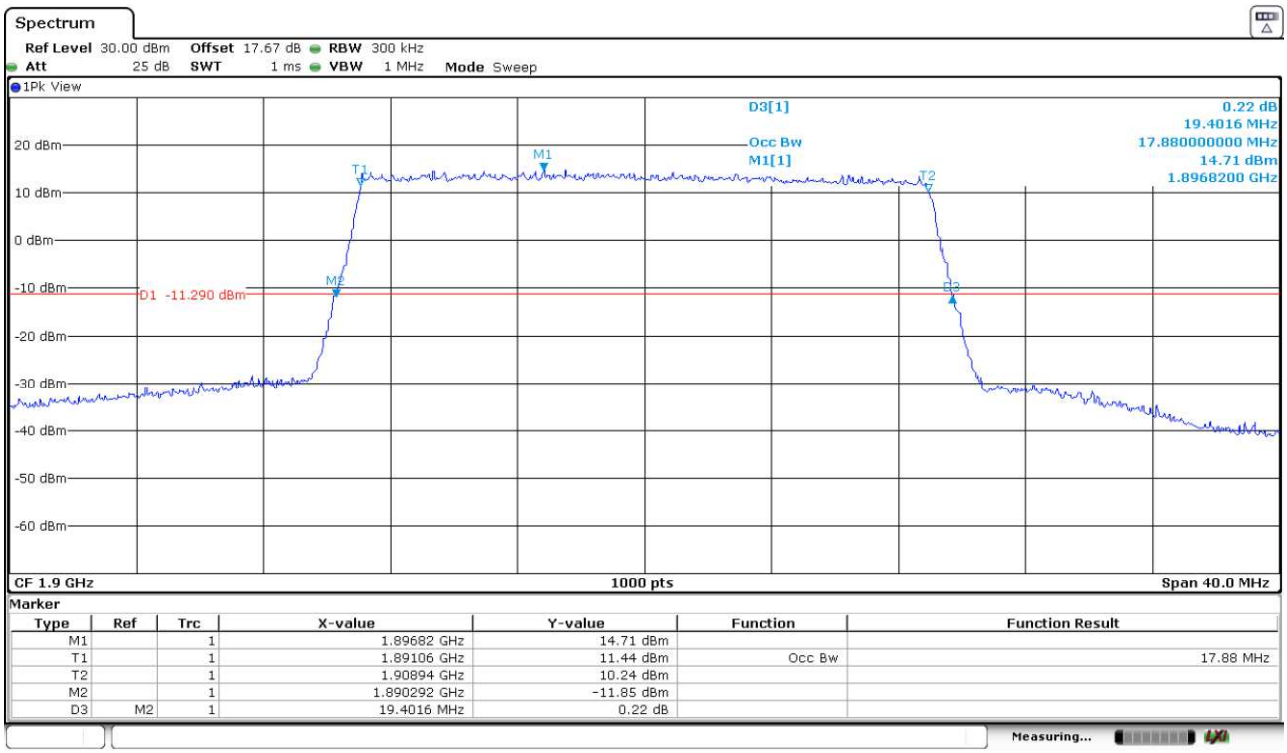
Lowest Channel:



Middle Channel:

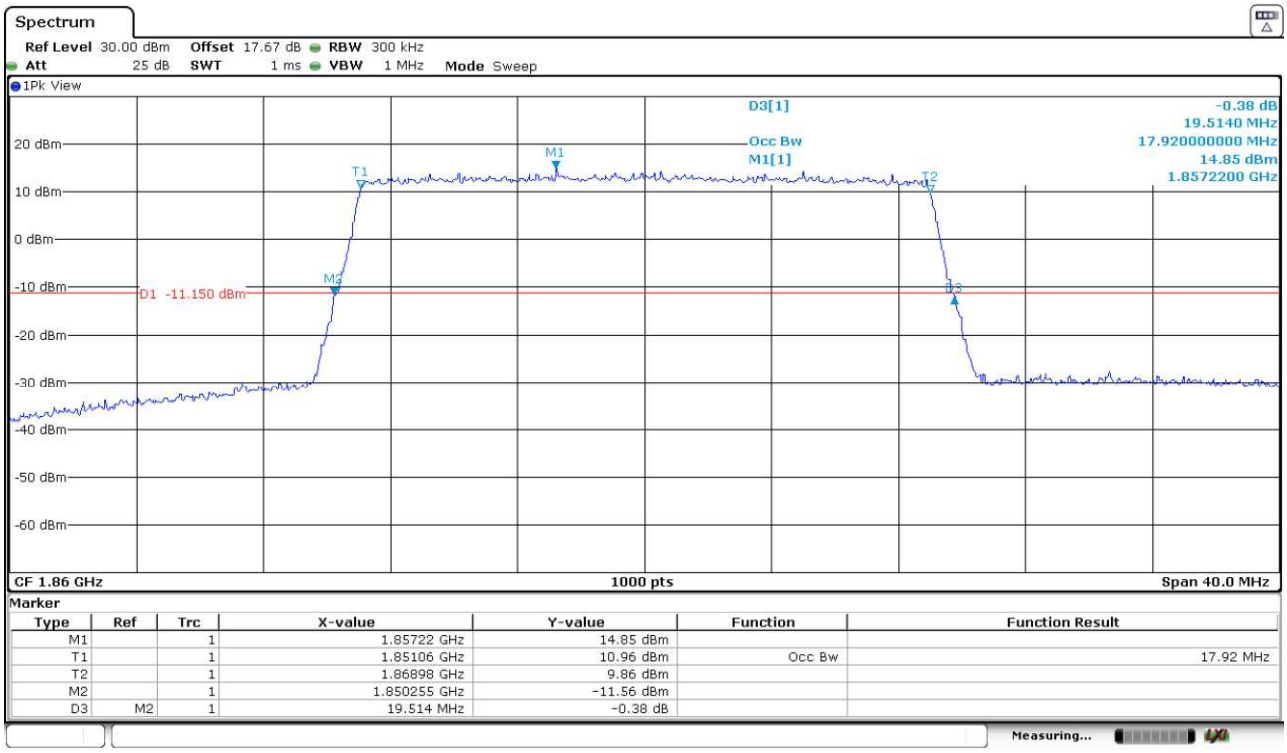


Highest Channel:

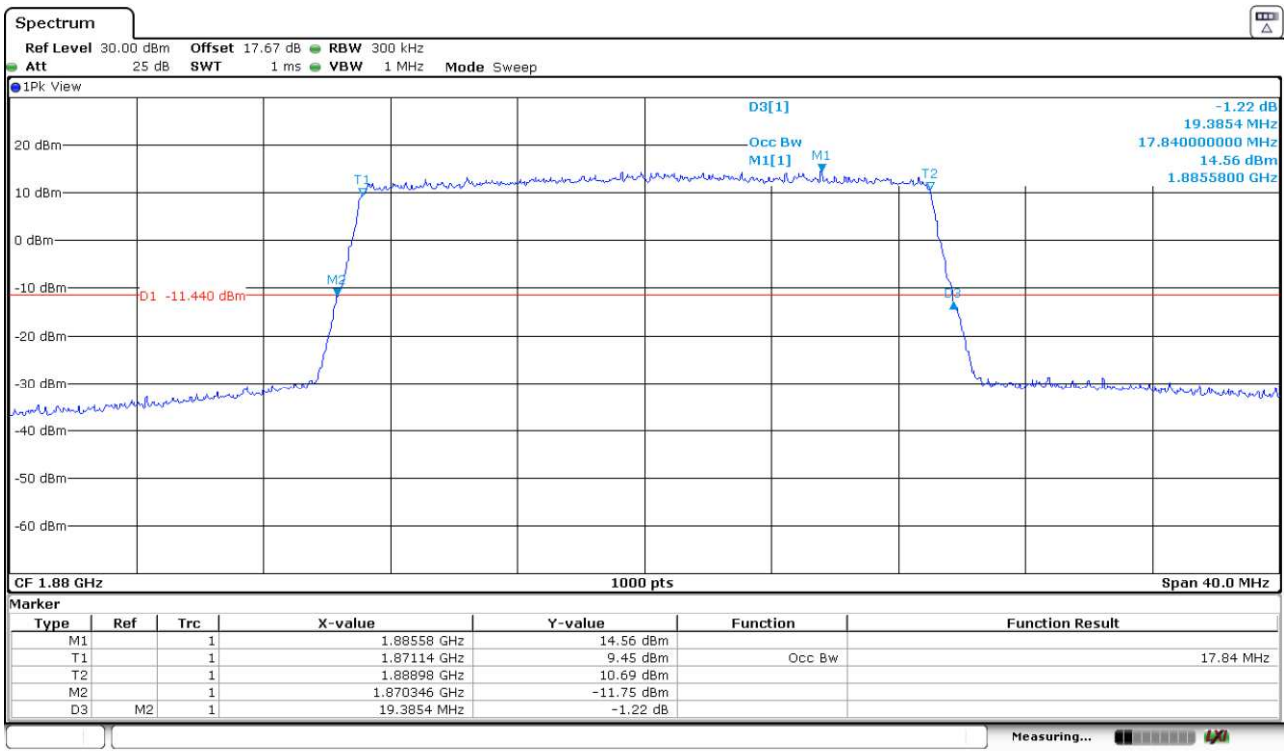


LTE Band 2. 16QAM MODULATION. BW = 20 MHz.

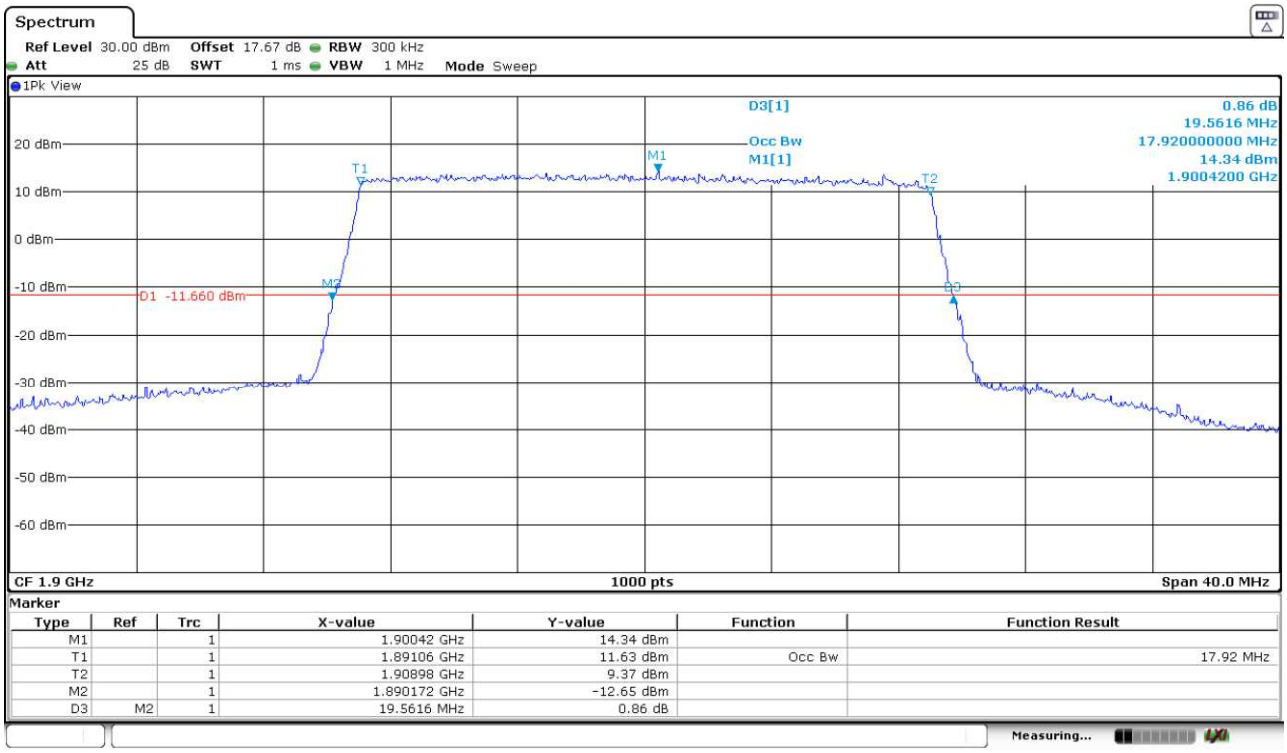
Lowest Channel:



Middle Channel:



Highest Channel:



Spurious emissions at antenna terminals

SPECIFICATION:

FCC §2.1051 and §24.238. RSS-133. Clause 6.5.

The power of emissions shall be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. P in watts.

METHOD:

The EUT RF output connector was connected to a spectrum analyser and to the Universal Radio Communication tester R&S CMW500 (selecting maximum transmission power of the EUT and different modes of modulation) using a 50 ohm attenuator and a power splitter.

The spectrum was investigated from 9 kHz to 20 GHz.

For LTE mode the configuration of Resource Blocks and modulation which is the worst case for conducted power was used.

The reading of the spectrum analyser is corrected with the attenuation loss of connection between output terminal of EUT and input of the spectrum analyser.

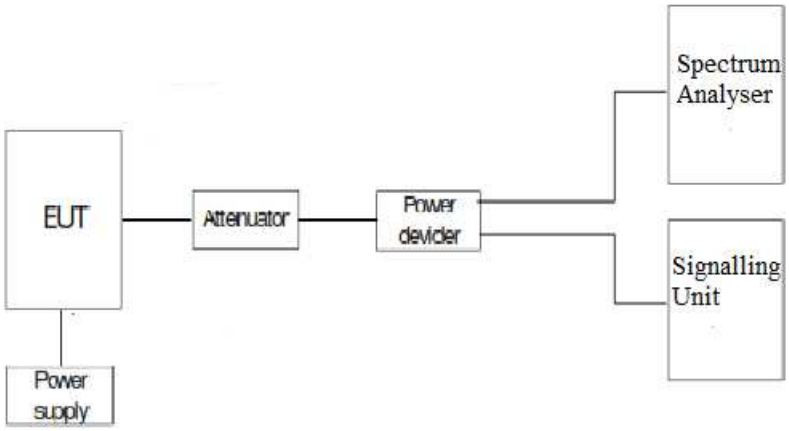
Measurement Limit**:**

According to specification. the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. P in watts.

At Po transmitting power. the specified minimum attenuation becomes 43+10log (Po). and the level in dBm relative Po becomes:

$$Po\ (dBm) - [43 + 10 \log (Po \text{ in mwatts}) - 30] = -13\ dBm$$

TEST SETUP:



RESULTS:

2G Band 1900 MHz. GPRS MODULATION.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit.

2G Band 1900 MHz. EDGE MODULATION.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit.

3G Band II. WCDMA MODULATION.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit.

3G Band II. HSUPA MODULATION.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit.
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit.

LTE Band 2. QPSK MODULATION. BW = 1.4 MHz.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit

LTE Band 2. QPSK MODULATION. BW = 3 MHz.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit

LTE Band 2. QPSK MODULATION. BW = 5 MHz.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit

LTE Band 2. QPSK MODULATION. BW = 10 MHz.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit

LTE Band 2. QPSK MODULATION. BW = 15 MHz.

- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit

LTE Band 2. QPSK MODULATION. BW = 20 MHz.

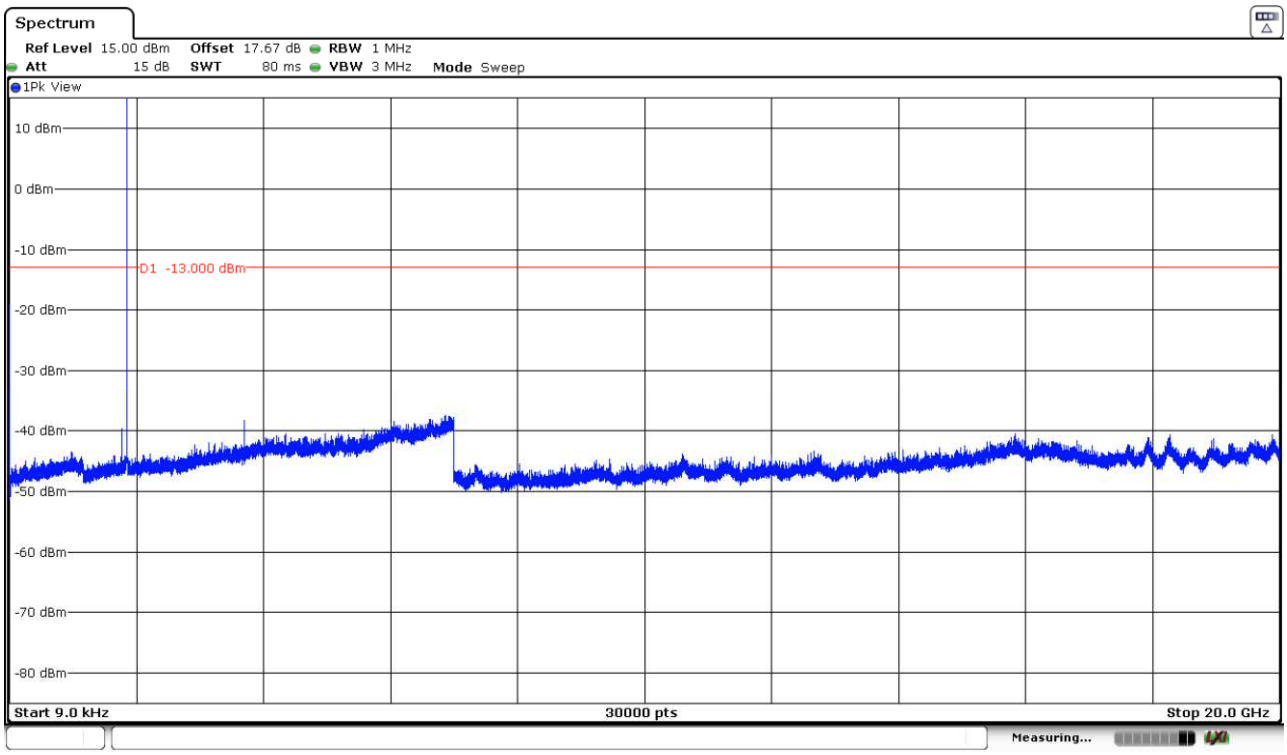
- Lowest Channel: No spurious frequencies detected at less than 20 dB below the limit
- Middle Channel: No spurious frequencies detected at less than 20 dB below the limit
- Highest Channel: No spurious frequencies detected at less than 20 dB below the limit

Measurement uncertainty (dB): < ± 2.77

Verdict: PASS

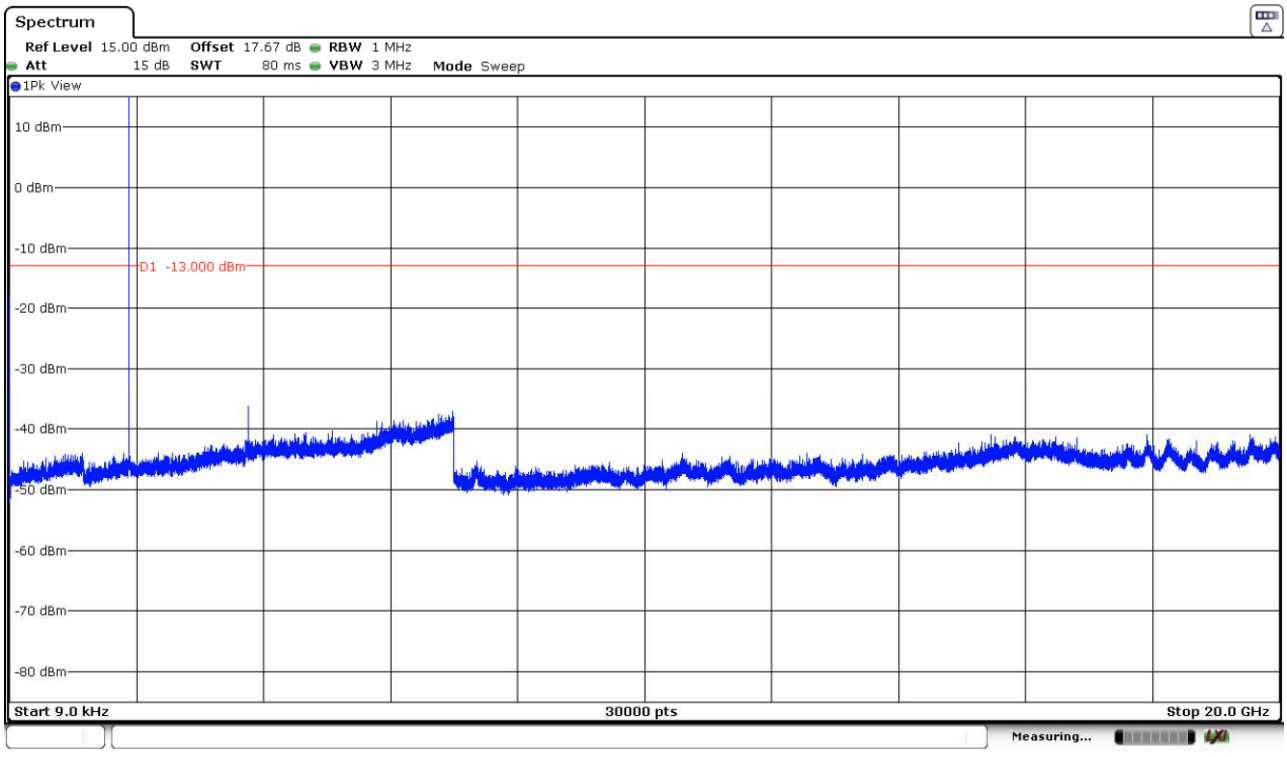
2G Band 1900 MHz. GPRS MODULATION.

Lowest Channel:



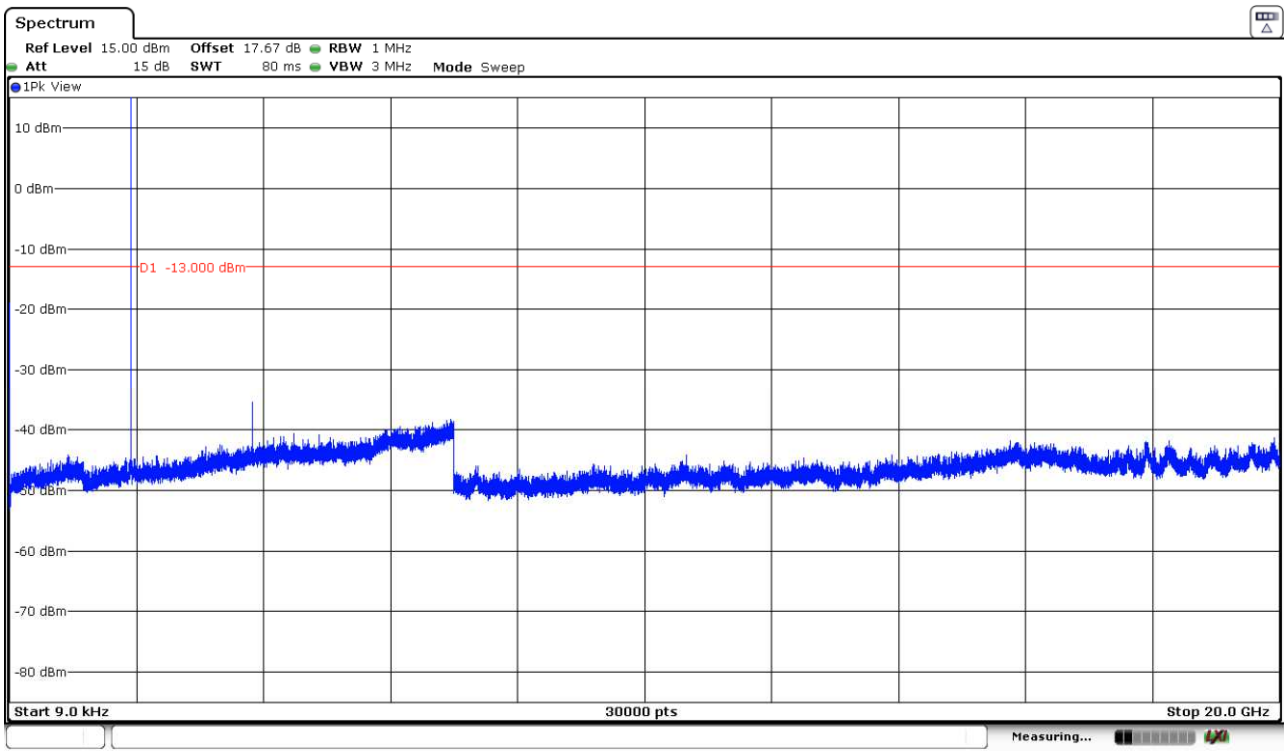
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

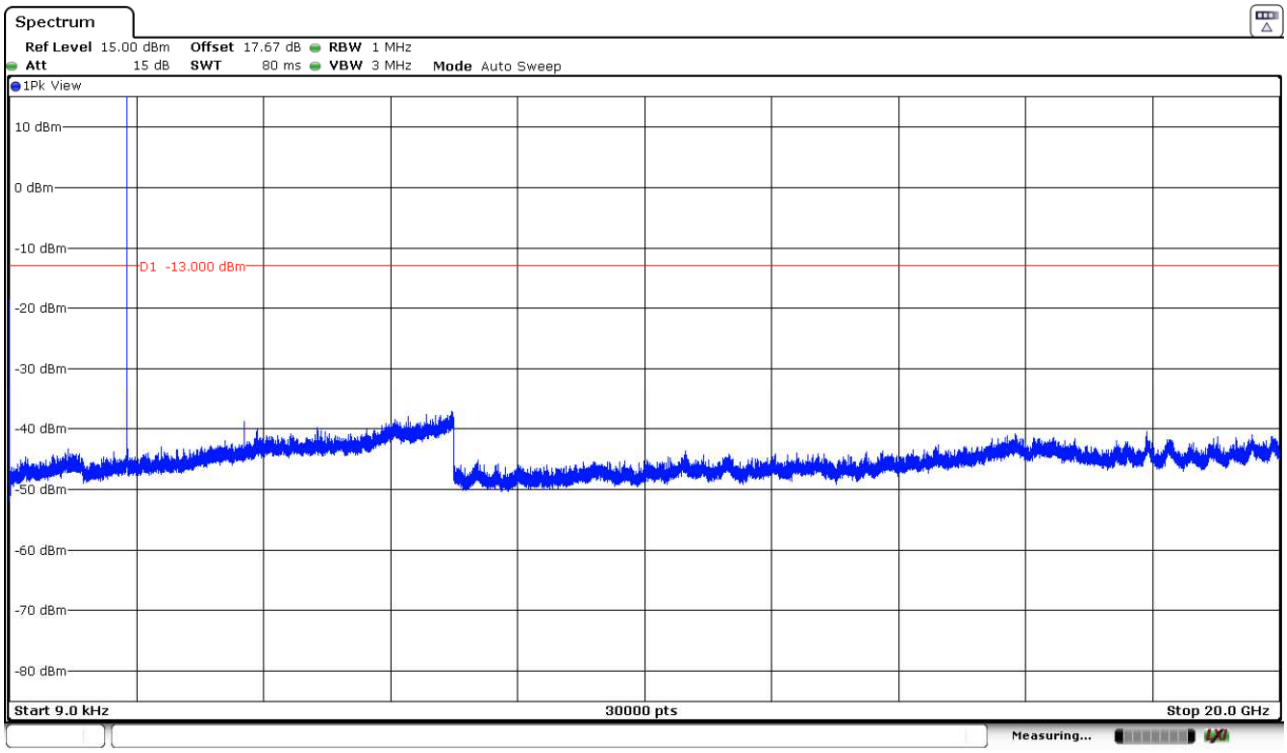
Highest Channel:



The peak above the limit is the carrier frequency.

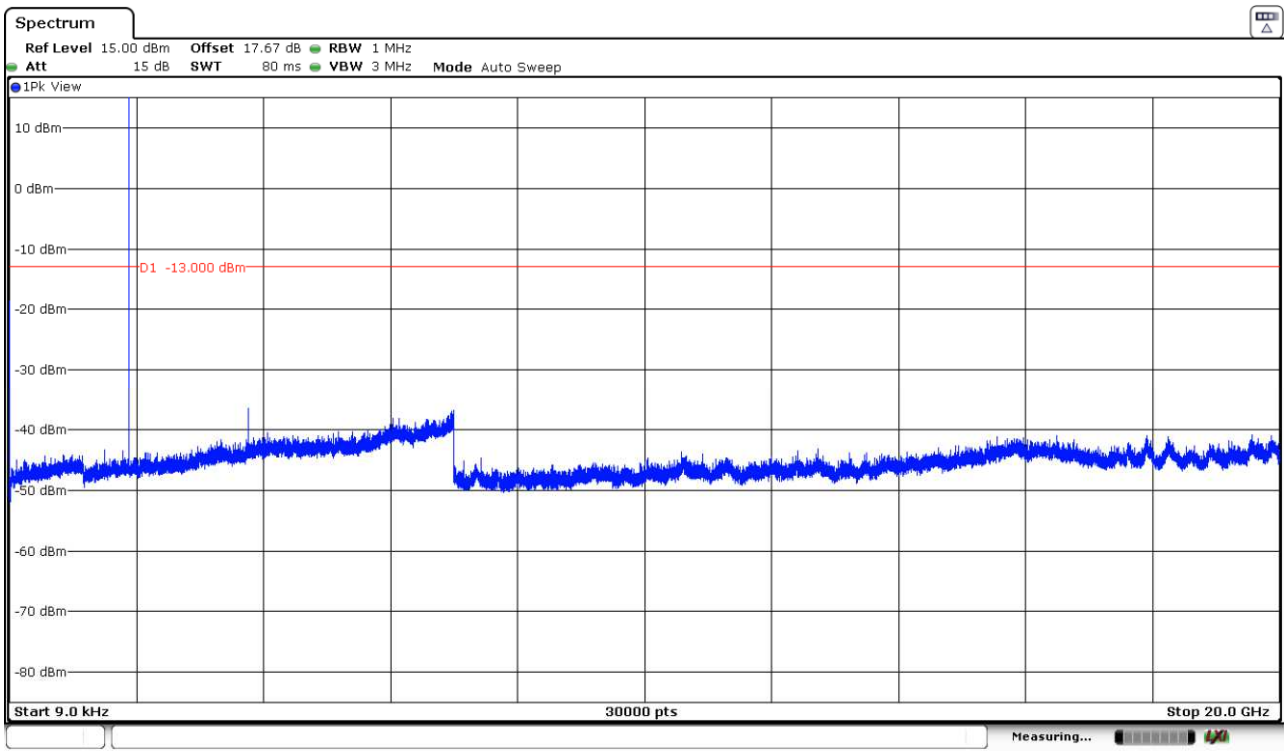
2G Band 1900 MHz. EDGE MODULATION.

Lowest Channel:



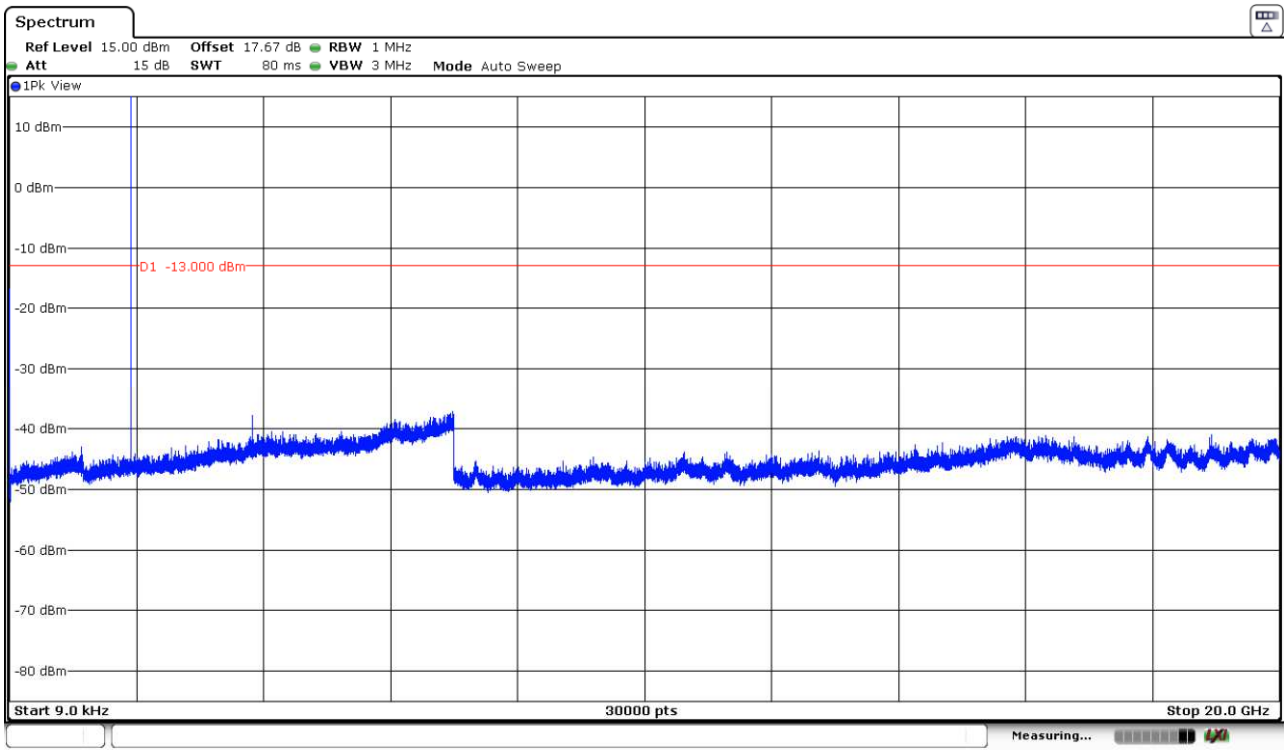
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

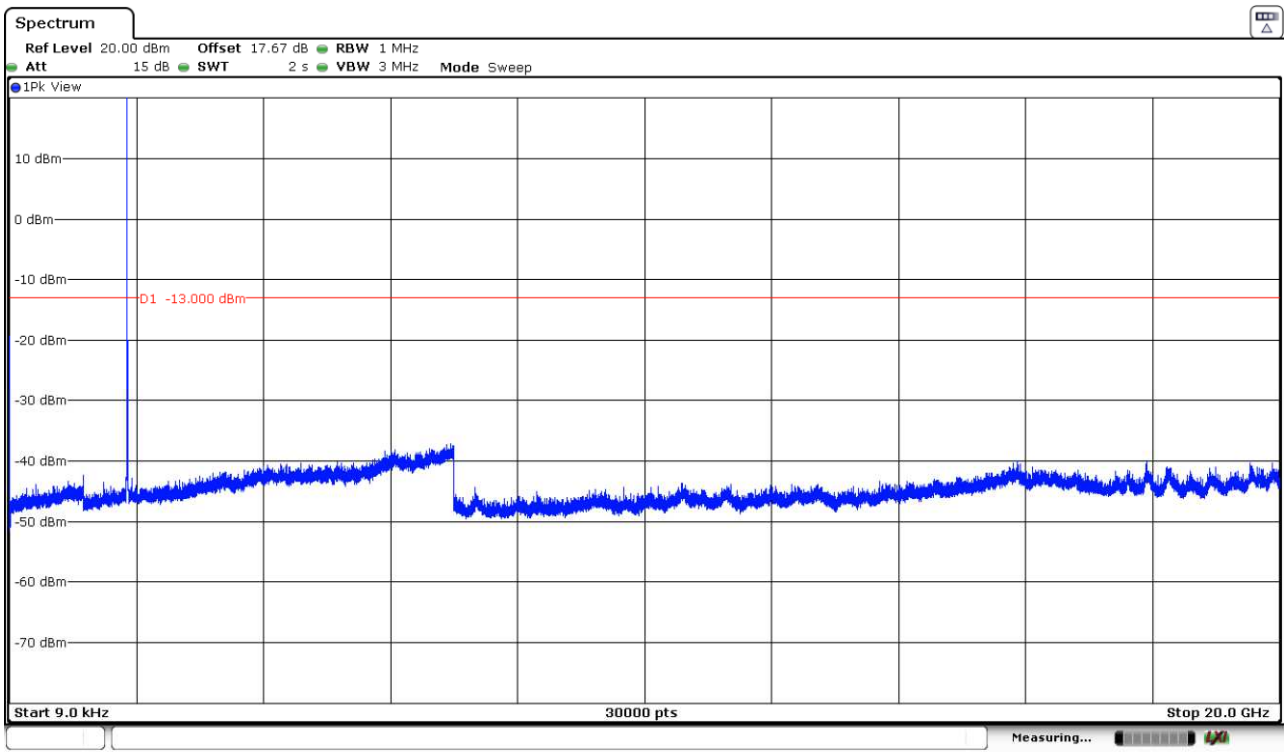
Highest Channel:



The peak above the limit is the carrier frequency.

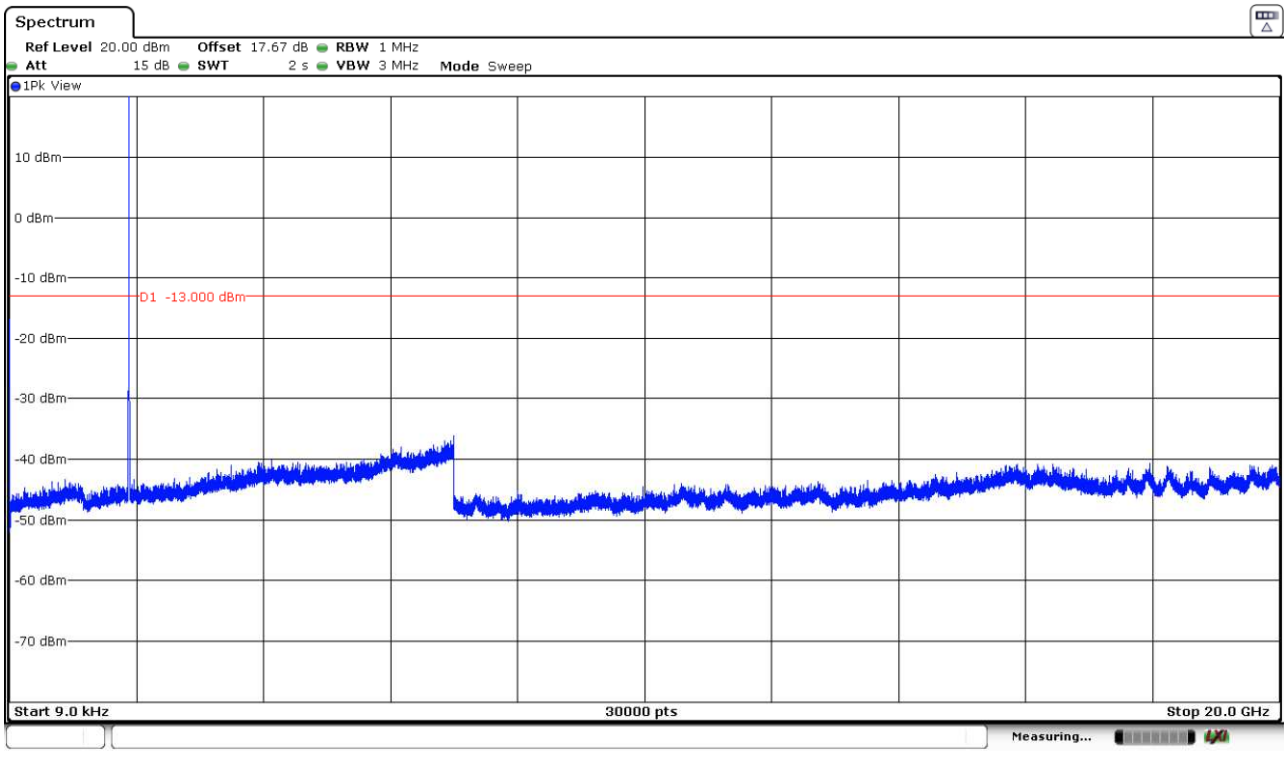
3G Band II. WCDMA MODULATION.

Lowest Channel:



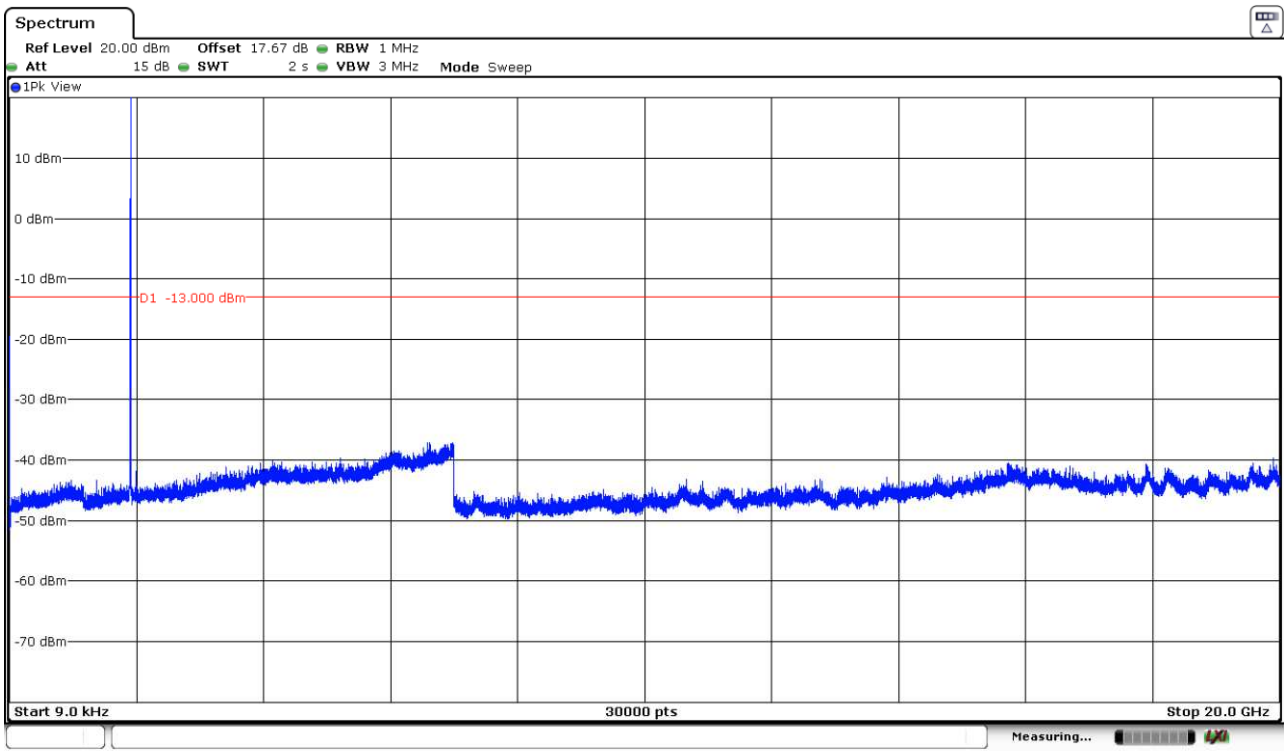
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

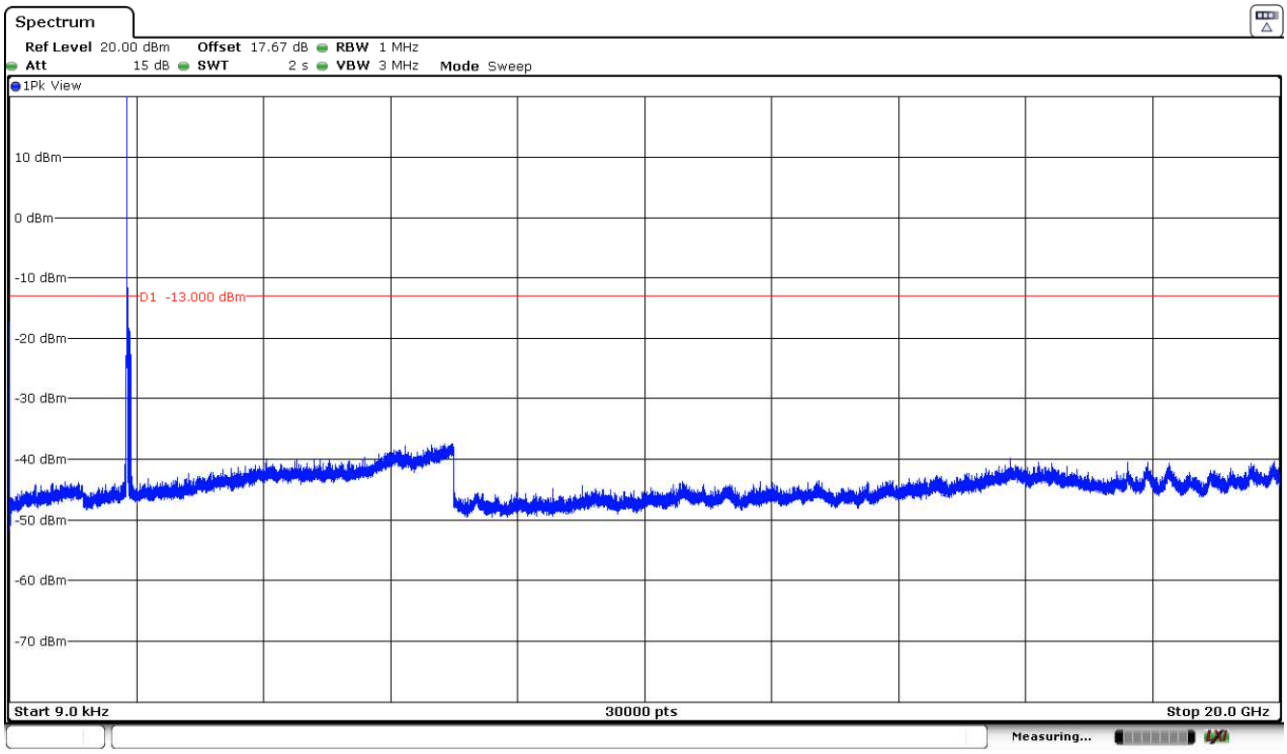
Highest Channel:



The peak above the limit is the carrier frequency.

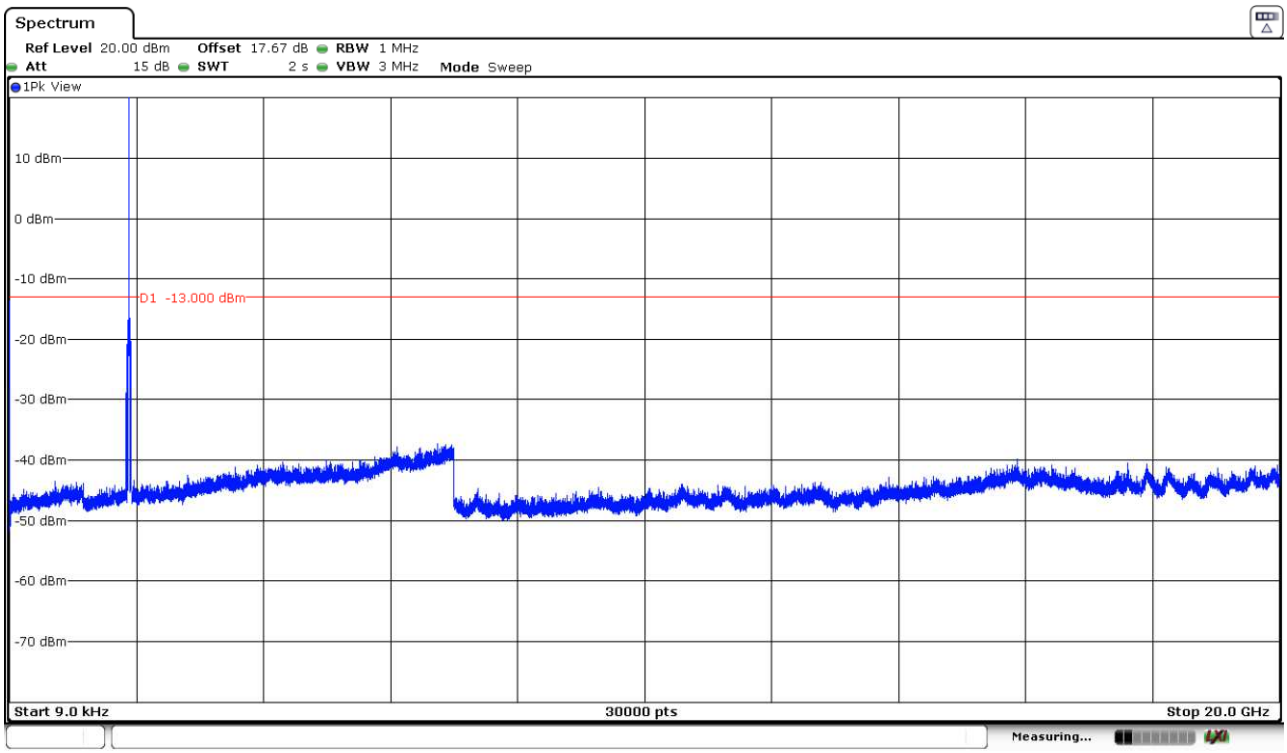
3G Band II. HSUPA MODULATION.

Lowest Channel:



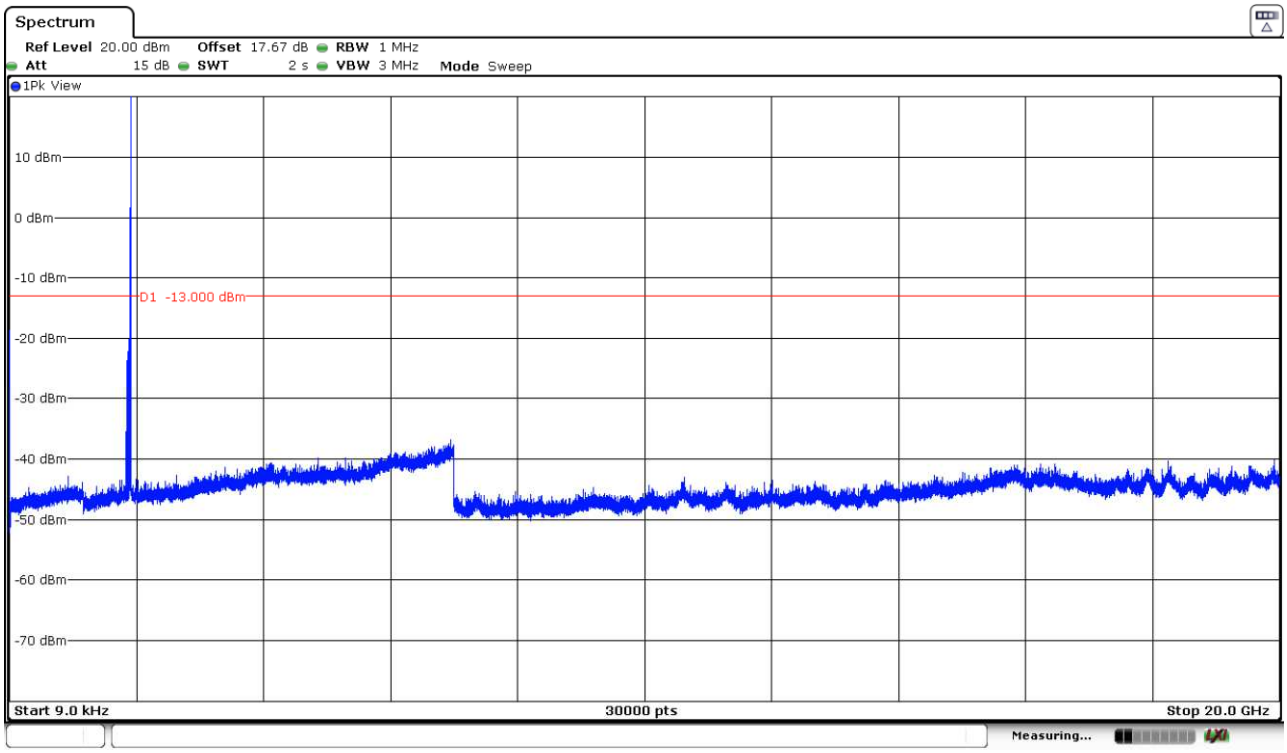
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

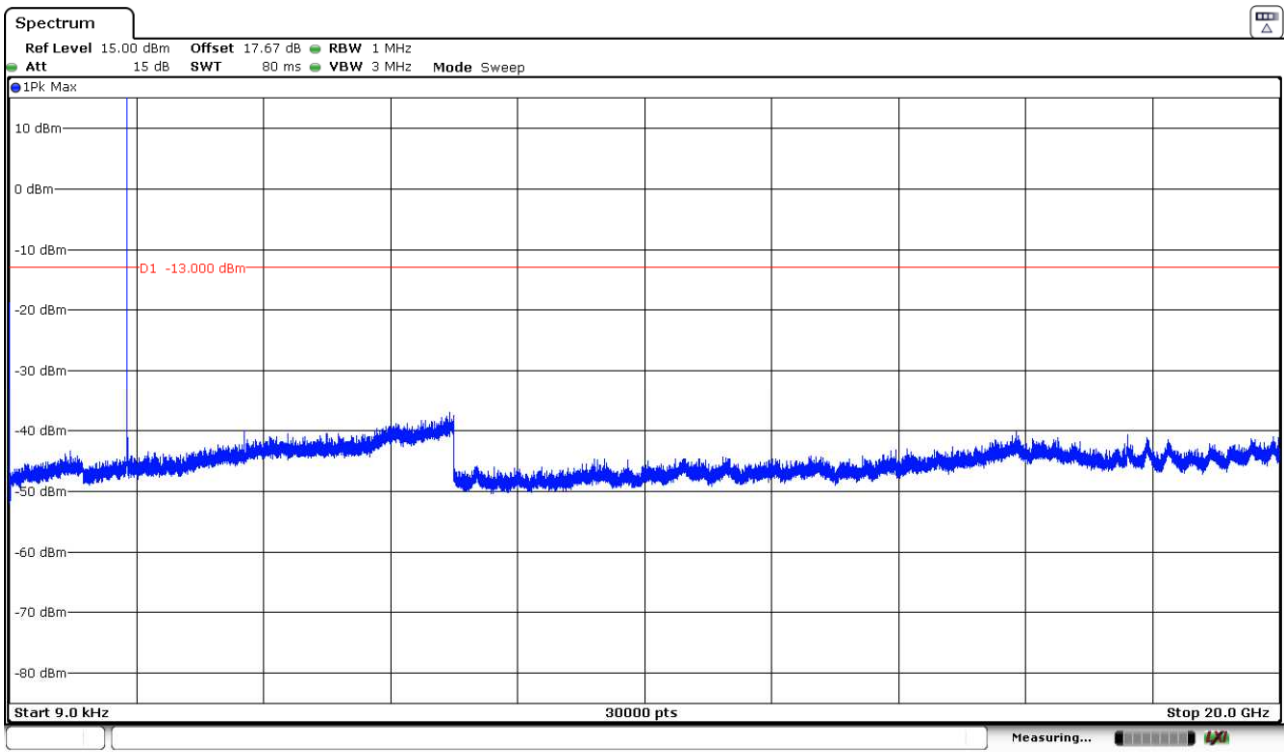
Highest Channel:



The peak above the limit is the carrier frequency.

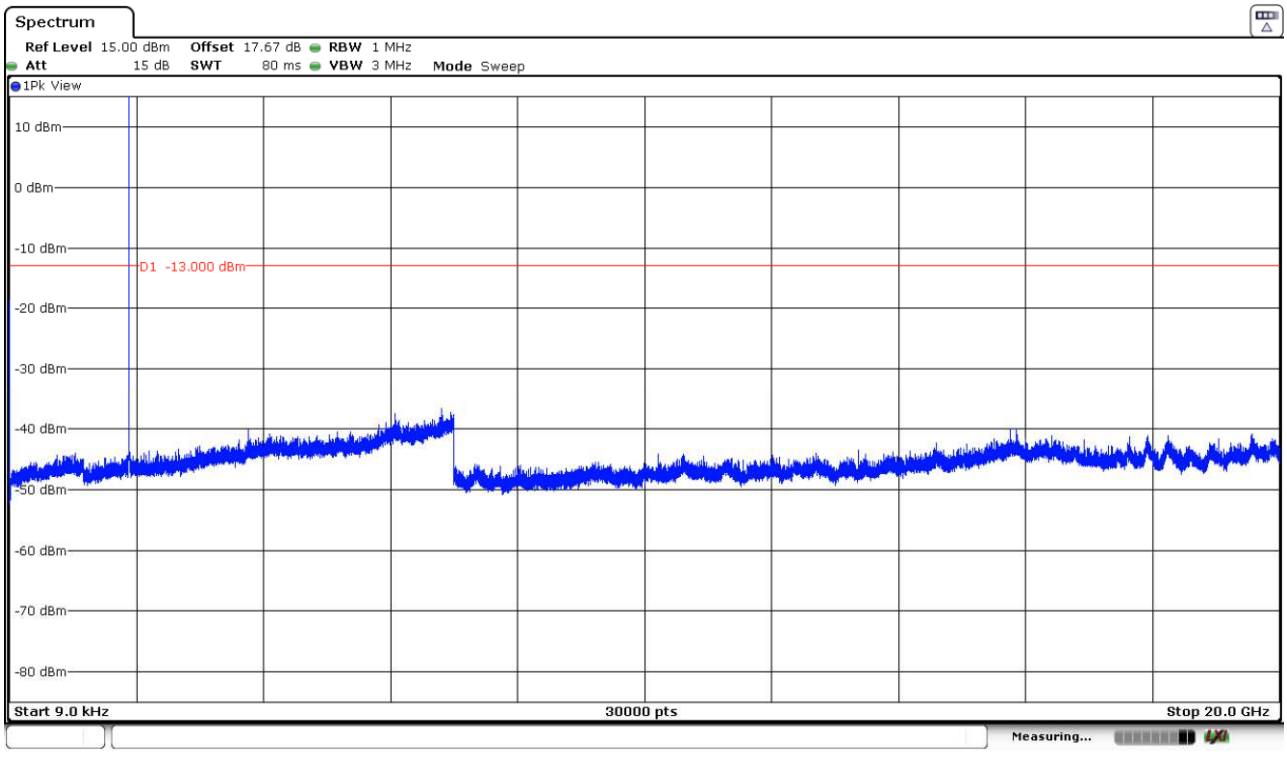
LTE Band 2. QPSK MODULATION. BW = 1.4 MHz.

Lowest Channel:



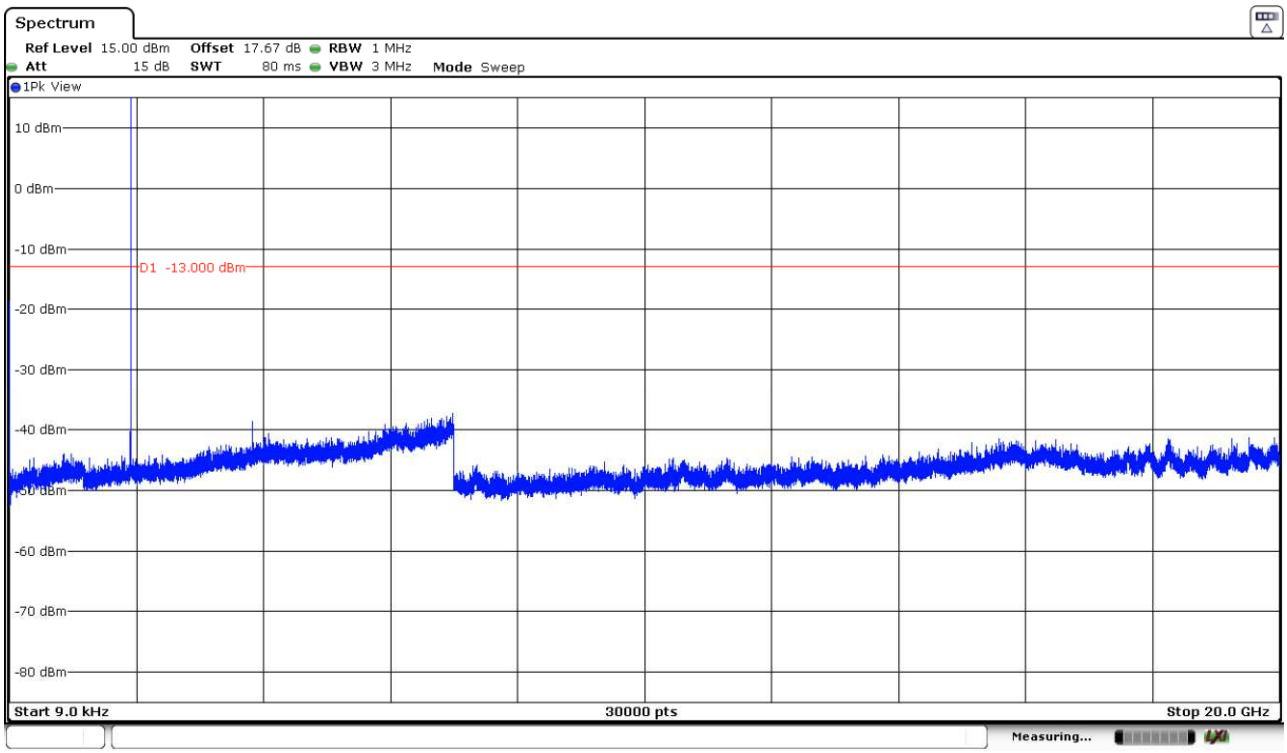
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

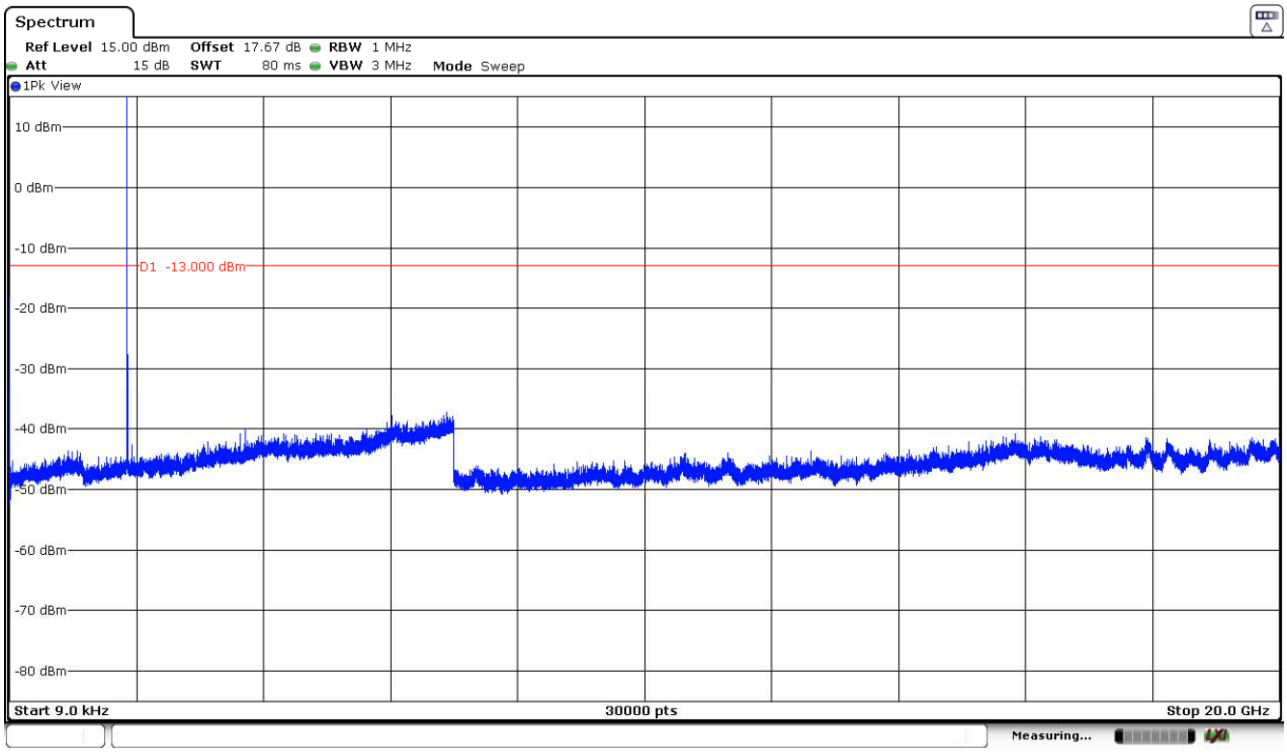
Highest Channel:



The peak above the limit is the carrier frequency.

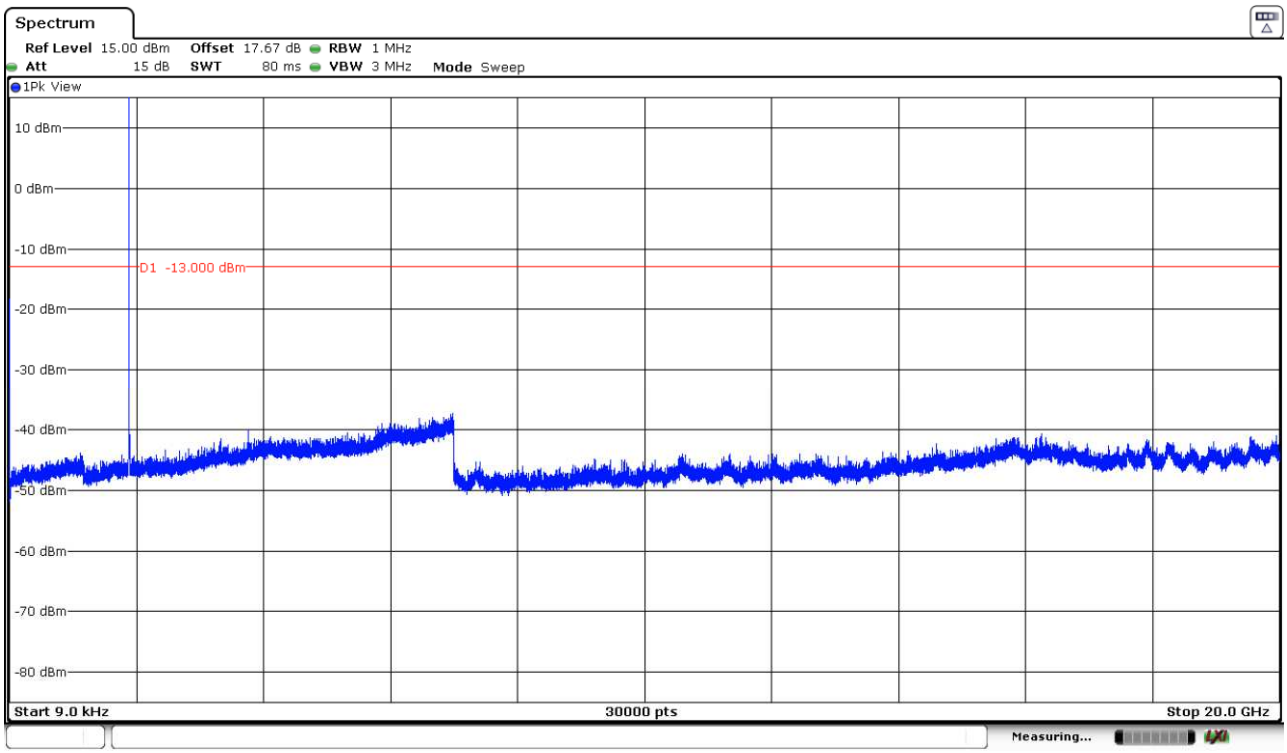
LTE Band 2. QPSK MODULATION. BW = 3 MHz.

Lowest Channel:



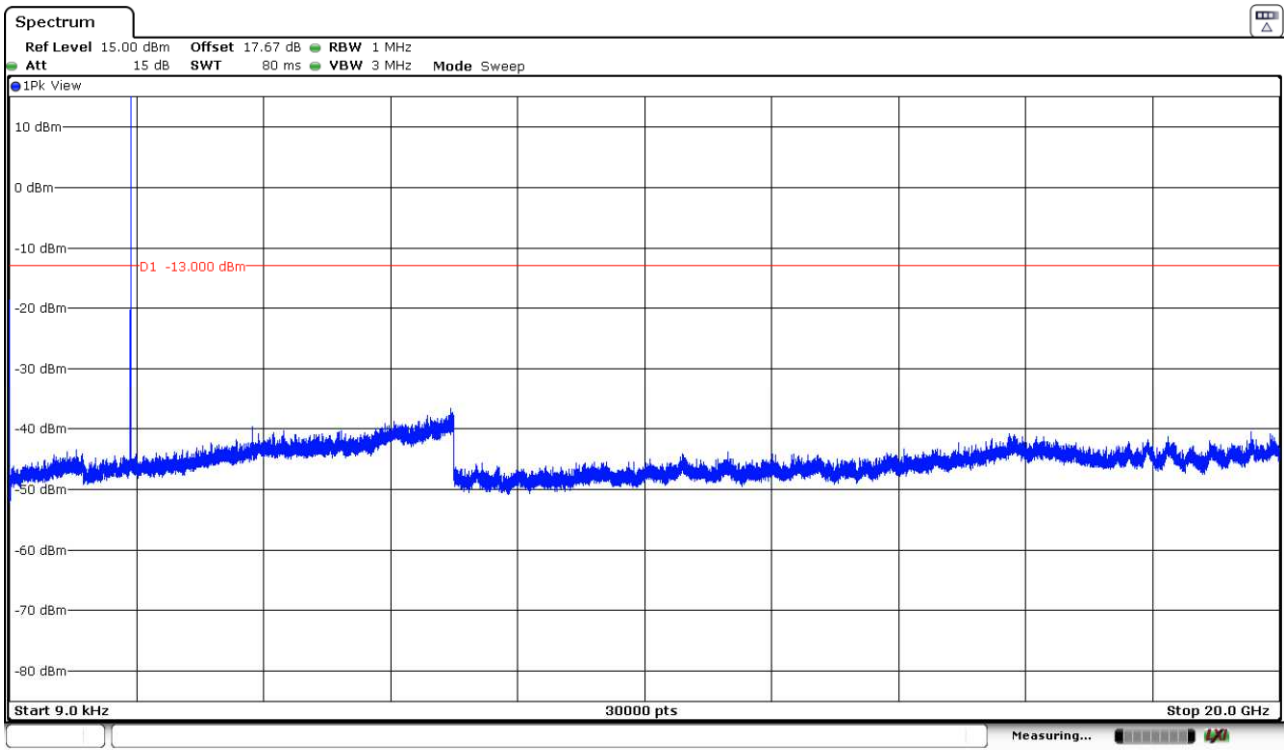
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

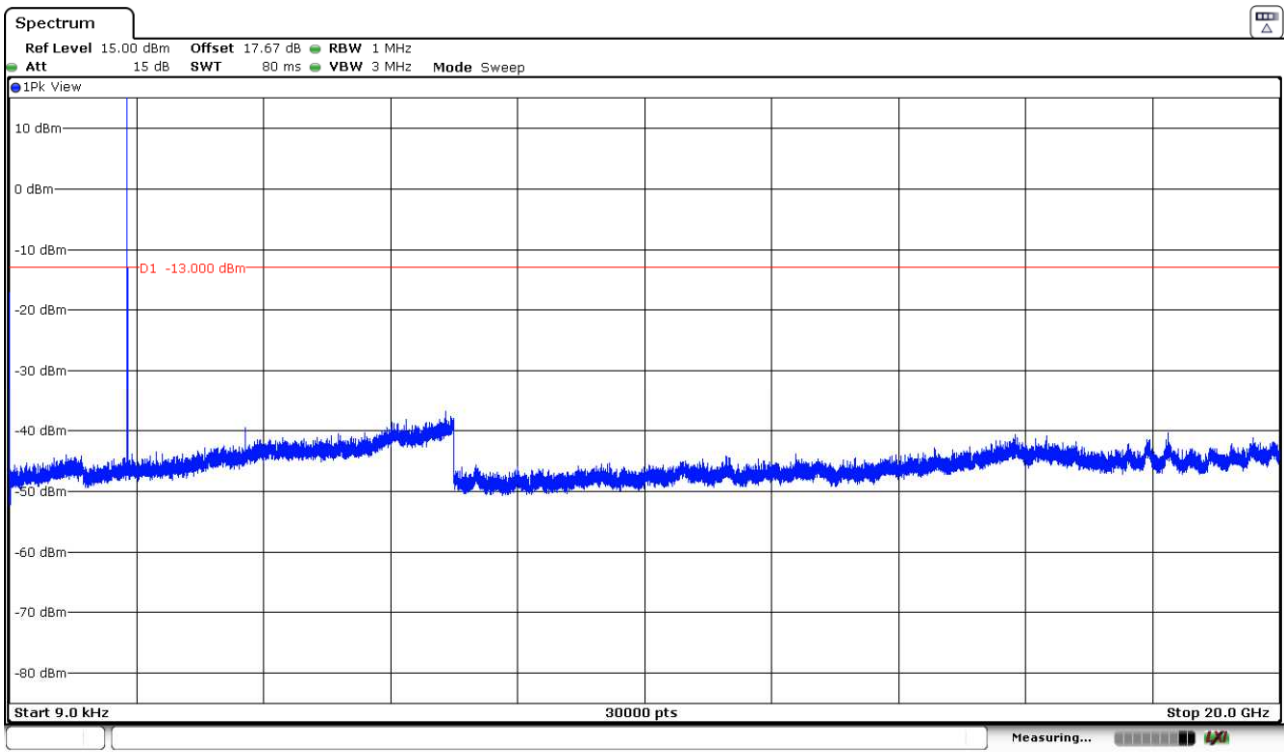
Highest Channel:



The peak above the limit is the carrier frequency.

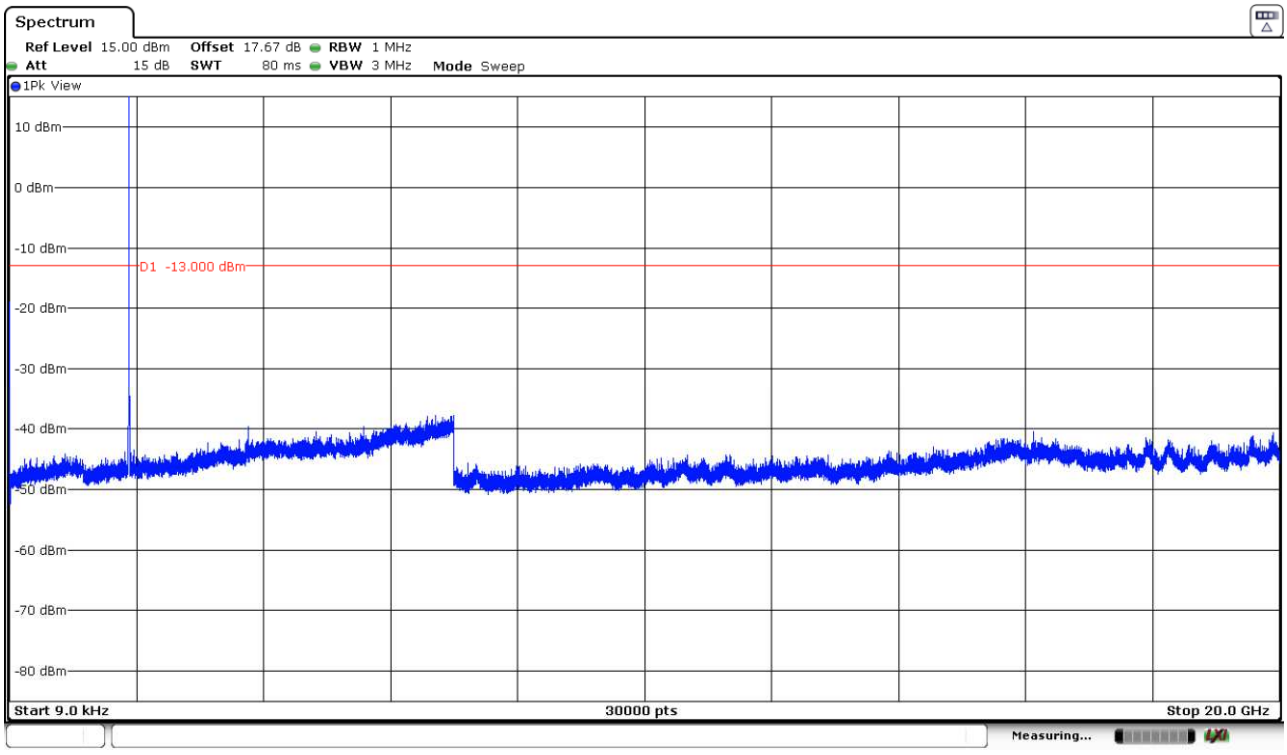
LTE Band 2. QPSK MODULATION. BW = 5 MHz.

Lowest Channel:



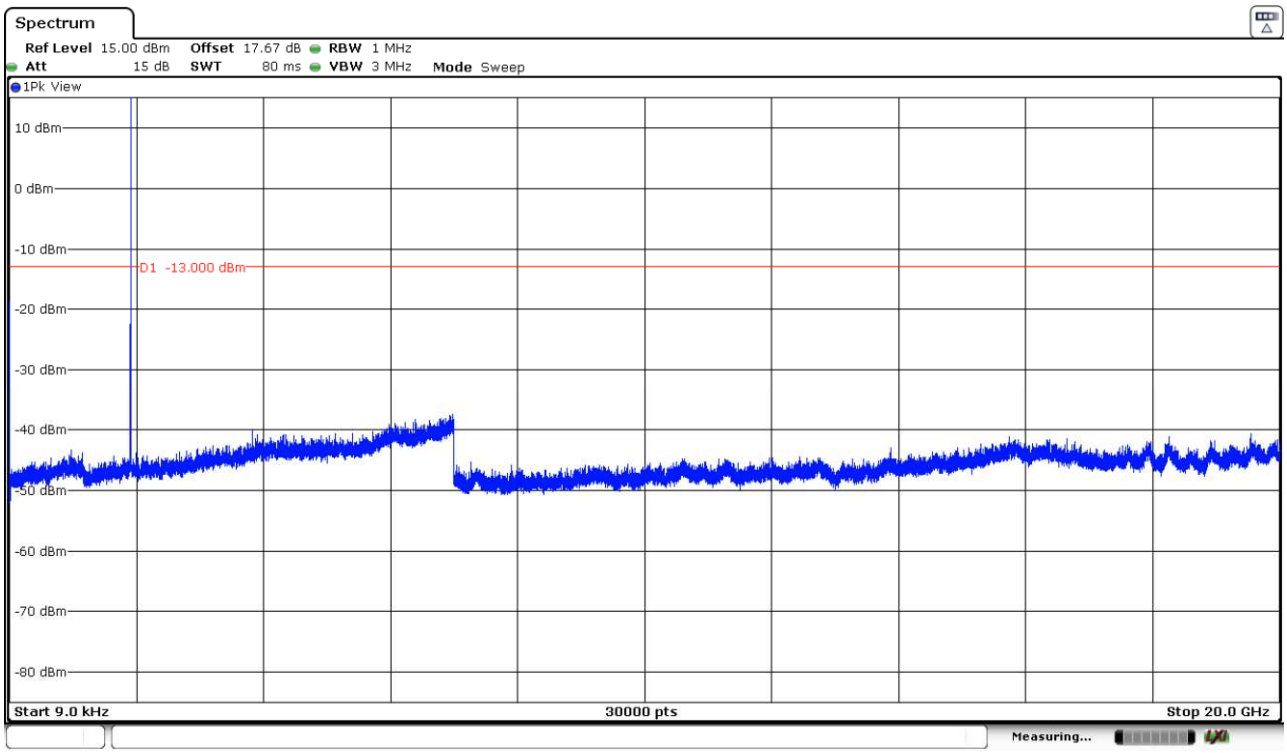
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

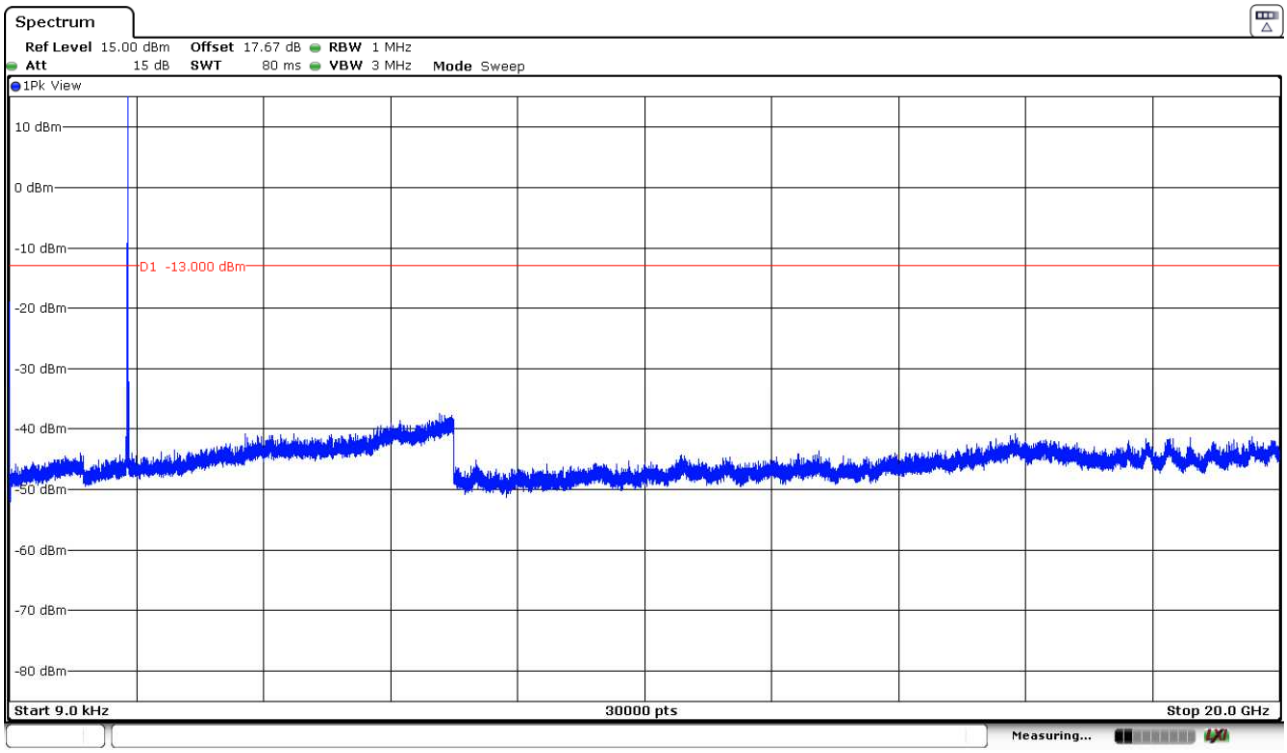
Highest Channel:



The peak above the limit is the carrier frequency.

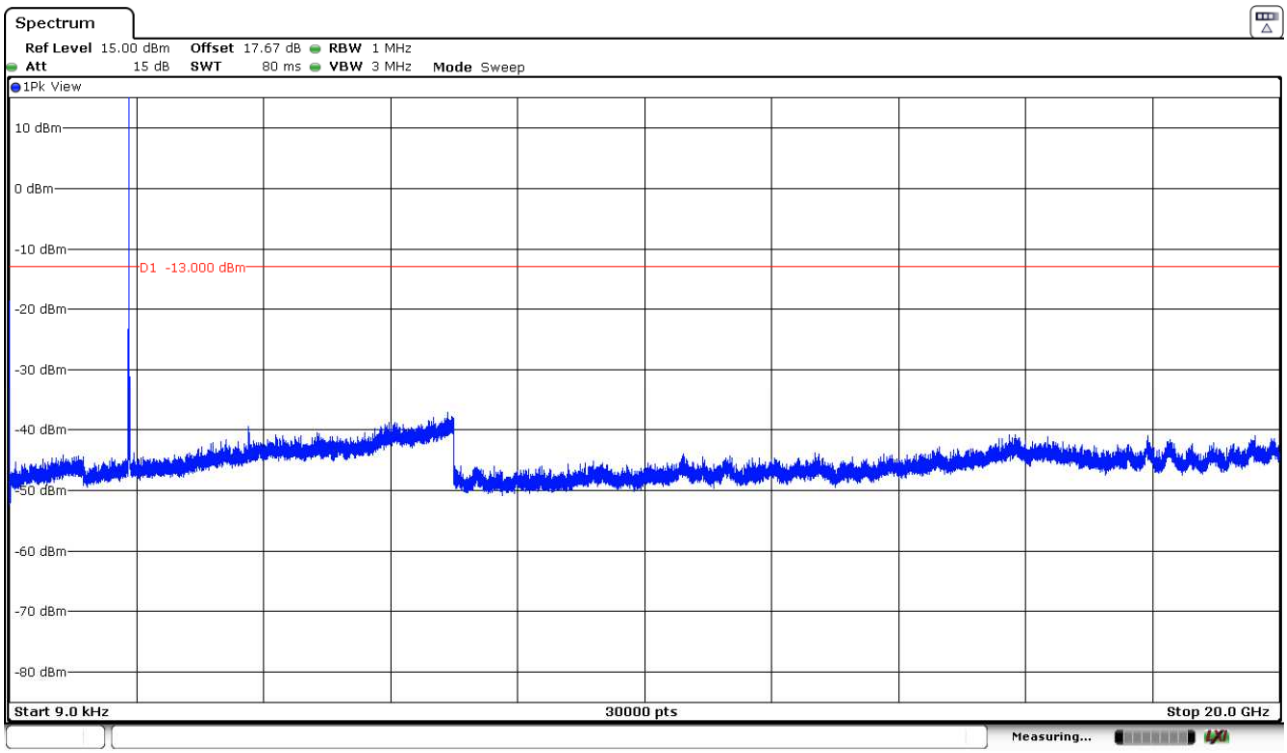
LTE Band 2. QPSK MODULATION. BW = 10 MHz.

Lowest Channel:



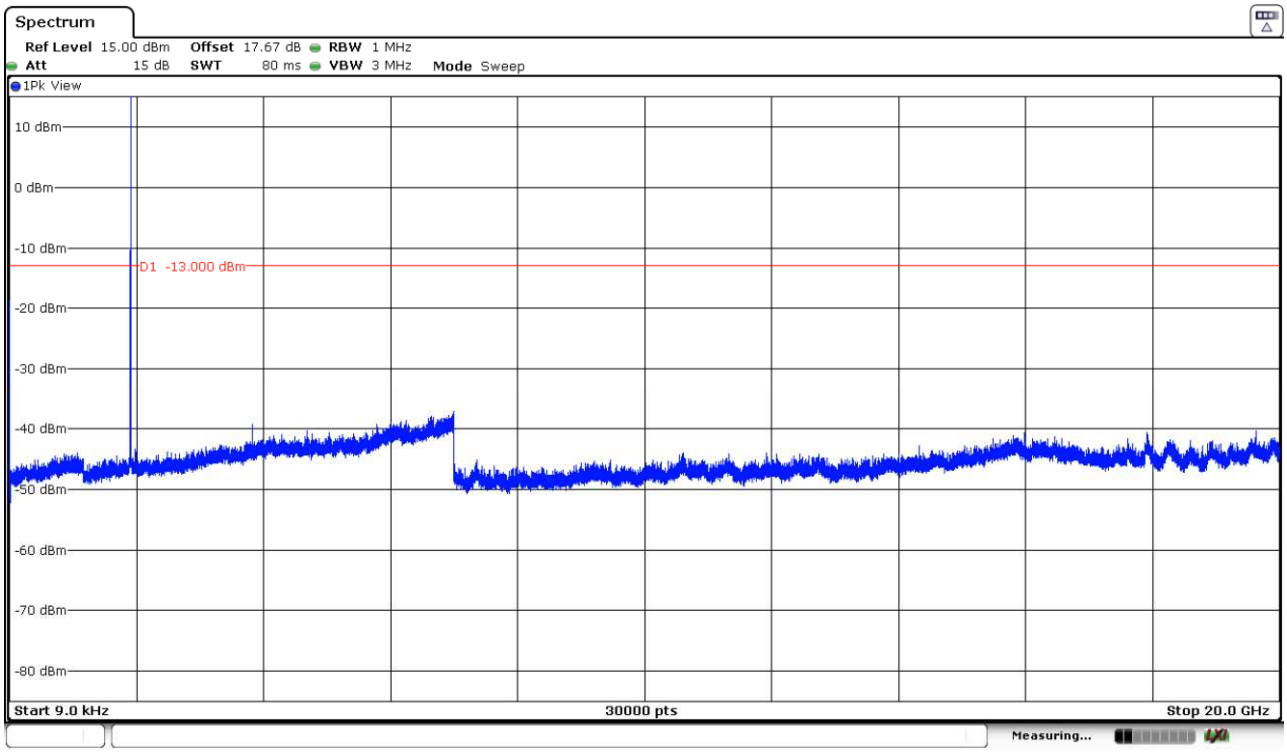
The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.

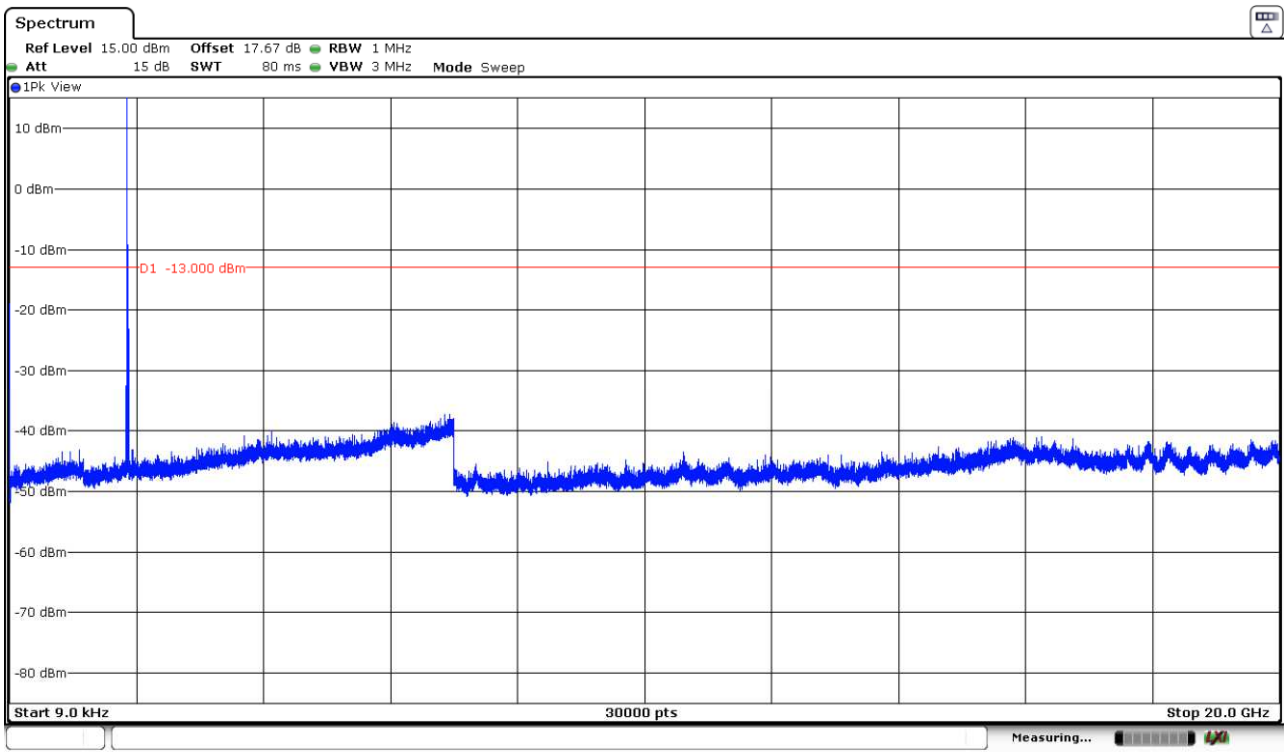
Highest Channel:



The peak above the limit is the carrier frequency.

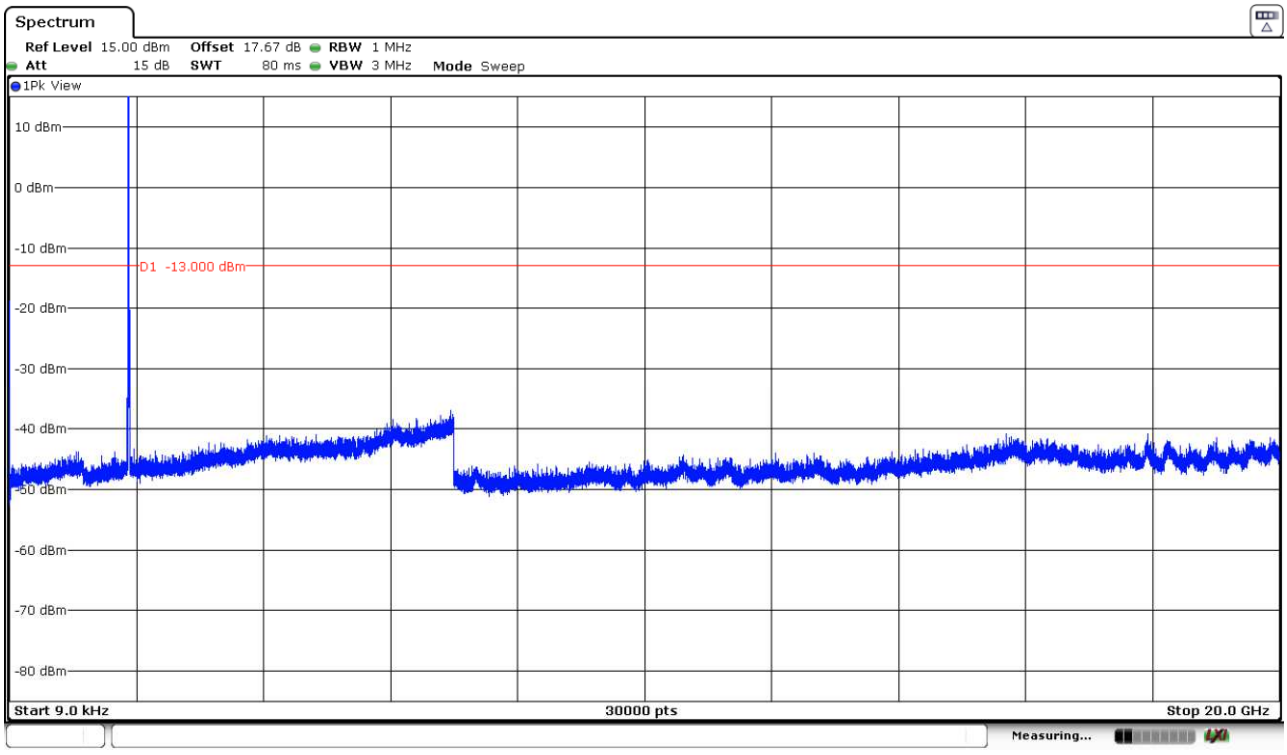
LTE Band 2. QPSK MODULATION. BW = 15 MHz.

Lowest Channel:



The peak above the limit is the carrier frequency.

Middle Channel:



The peak above the limit is the carrier frequency.