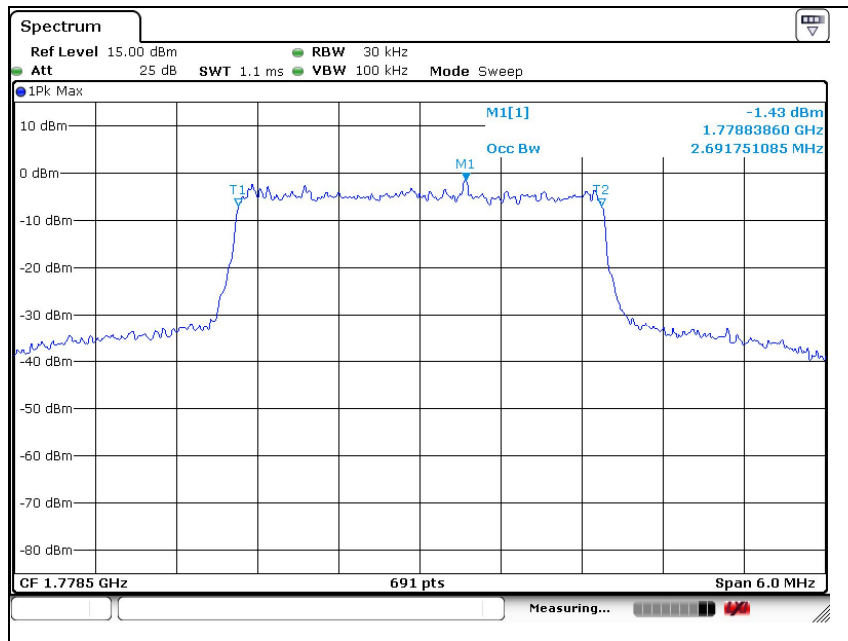
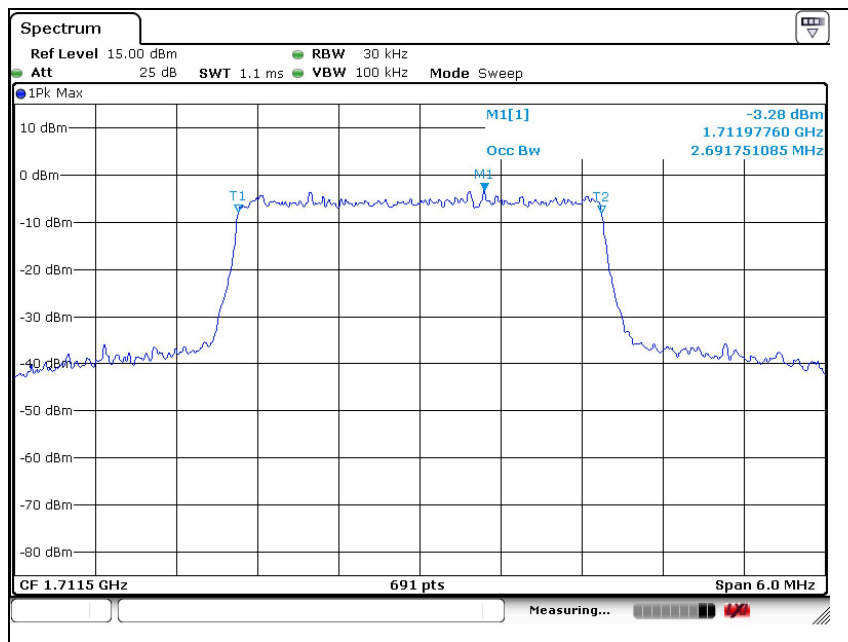


High Channel



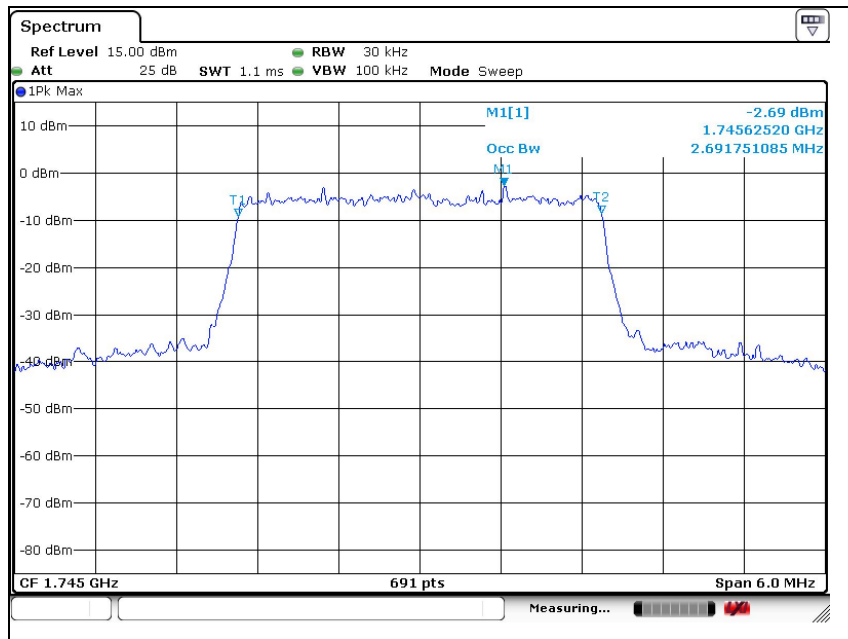
LTE band 66/4 (3 MHz – 16QAM)

Low Channel

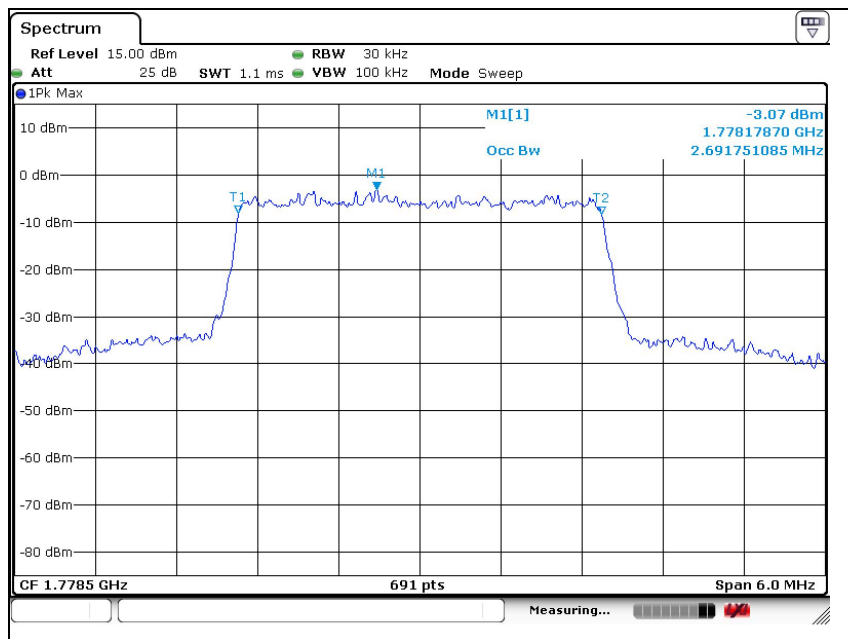


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Middle Channel



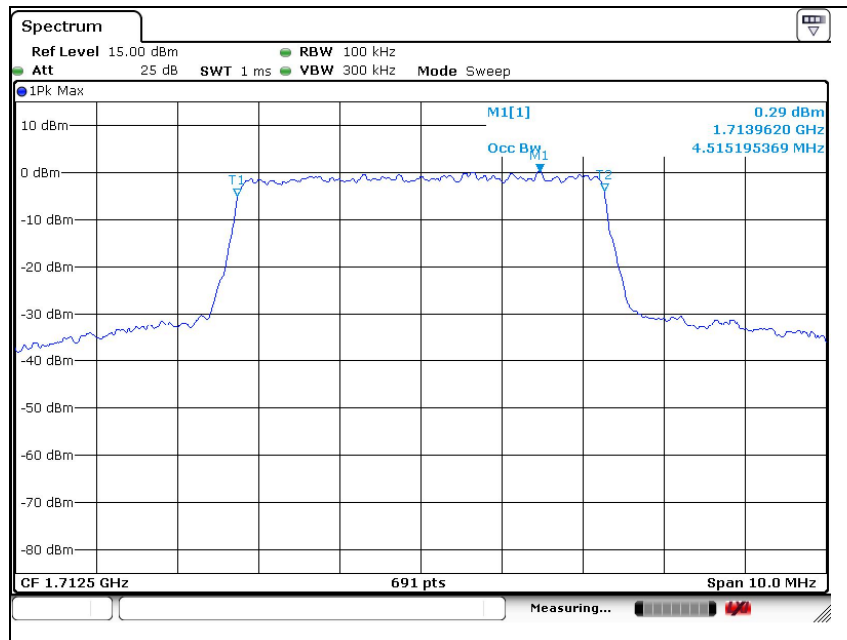
High Channel



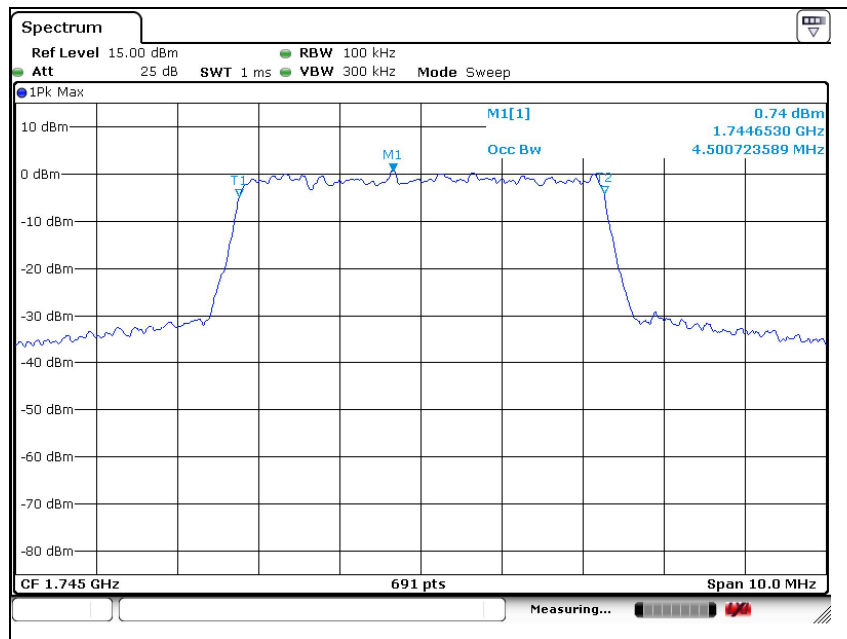
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LTE band 66/4 (5 MHz – QPSK)

Low Channel

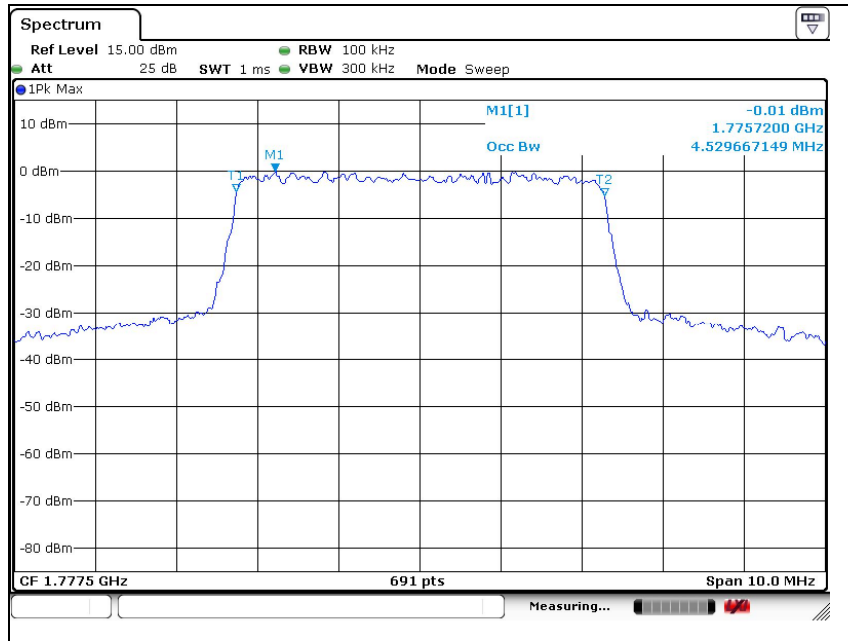


Middle Channel



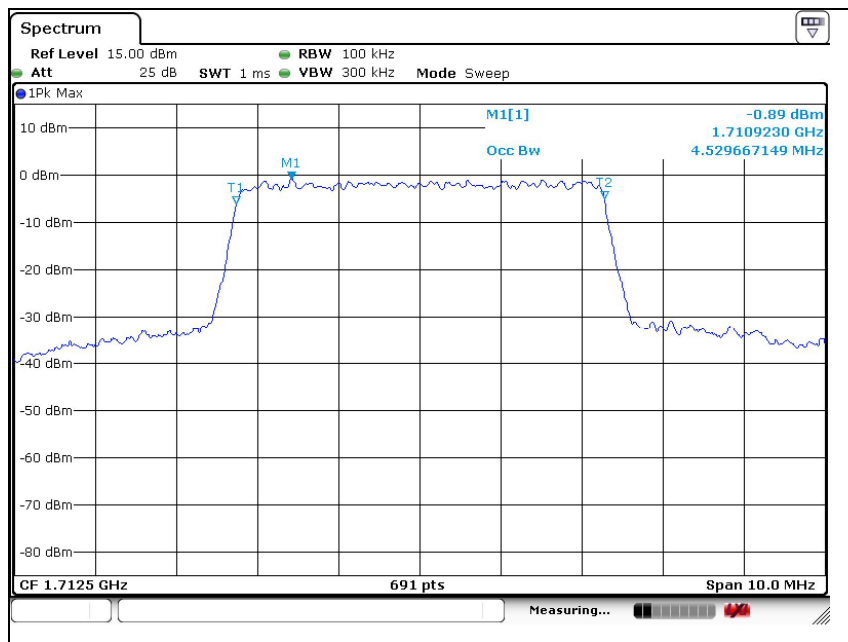
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High Channel



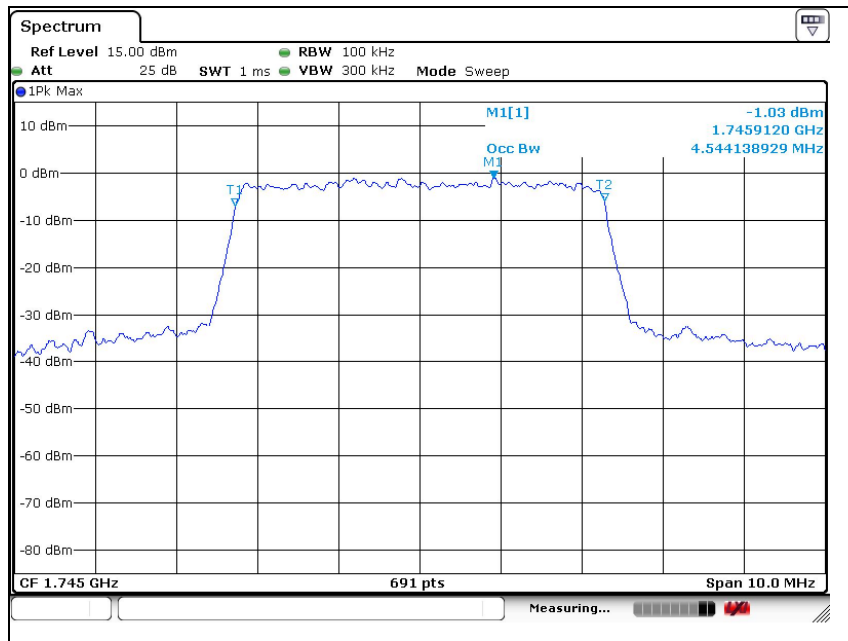
LTE band 66/4 (5 MHz – 16QAM)

Low Channel

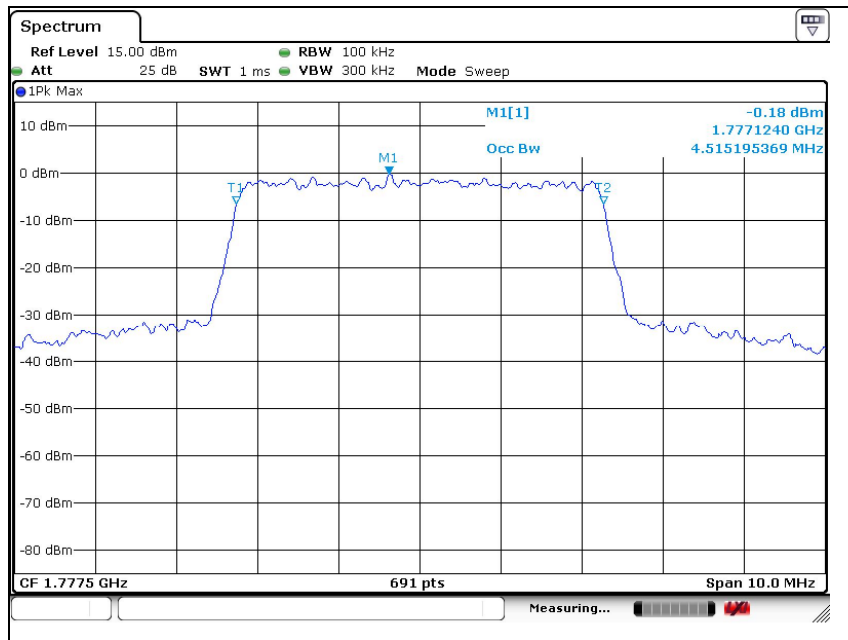


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Middle Channel



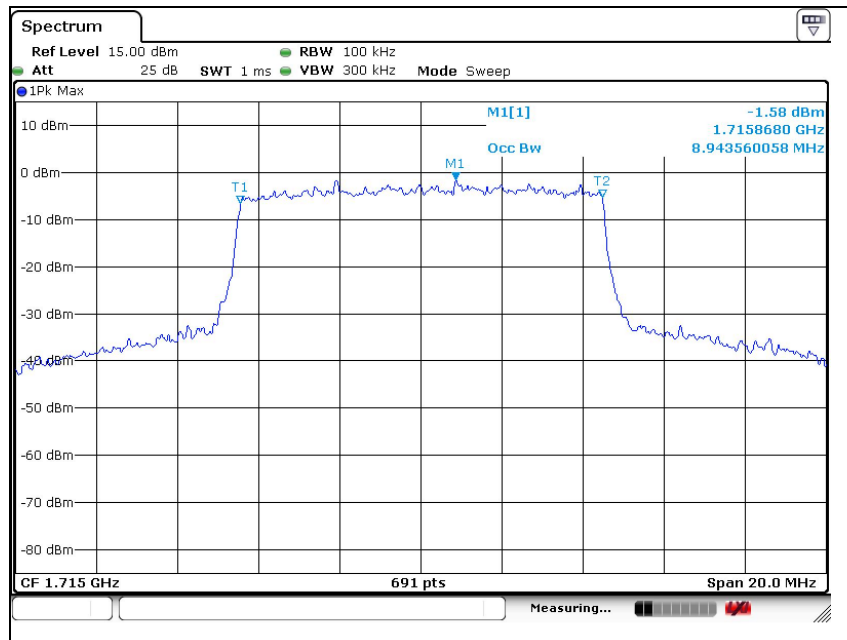
High Channel



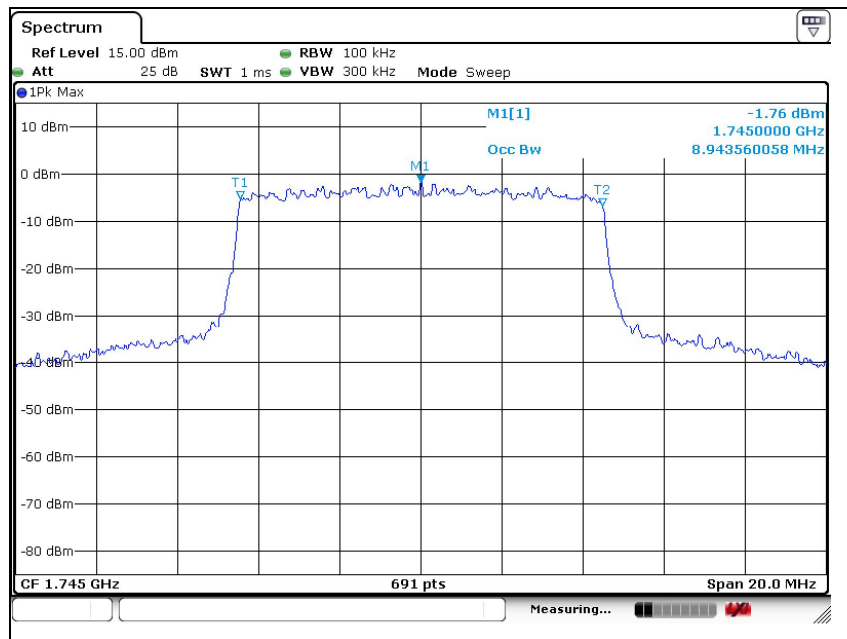
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LTE band 66/4 (10 MHz – QPSK)

Low Channel

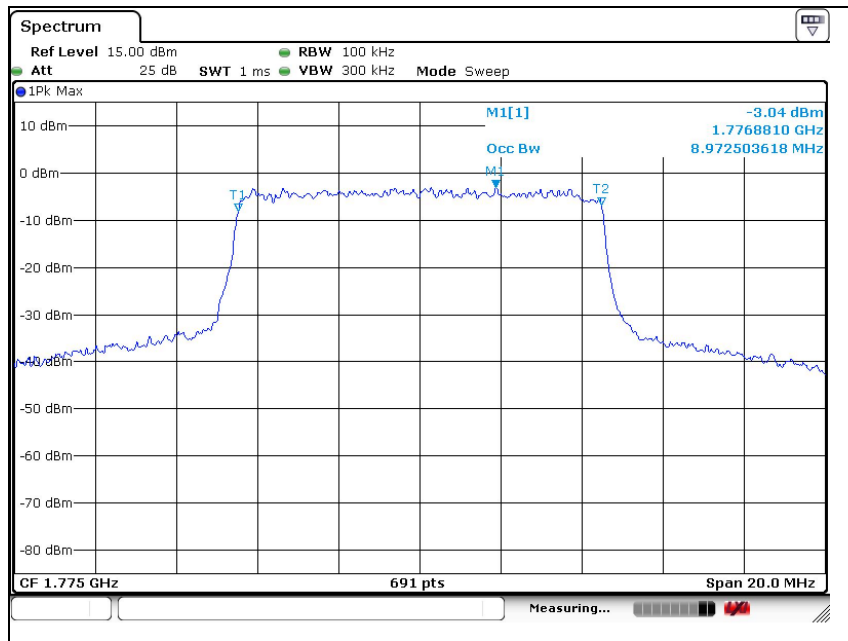


Middle Channel



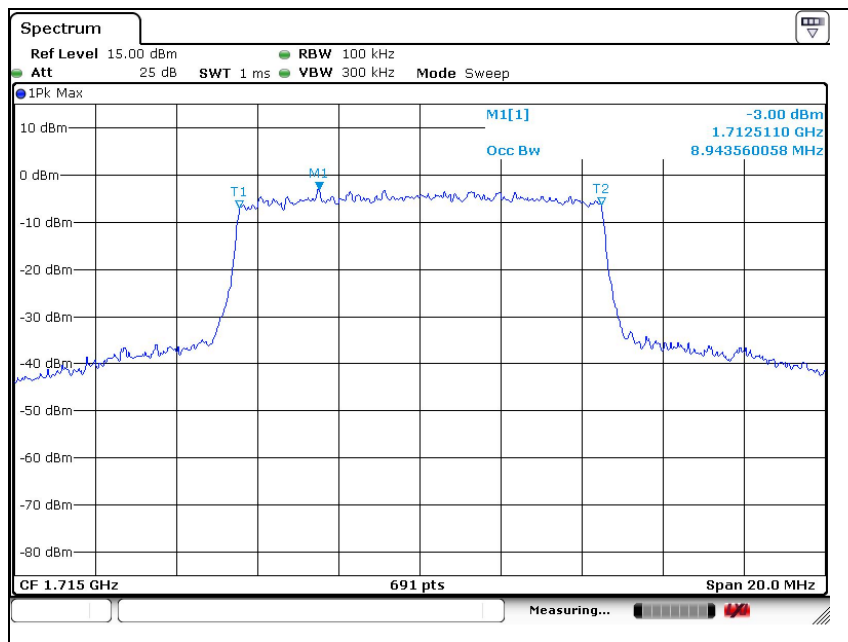
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High Channel



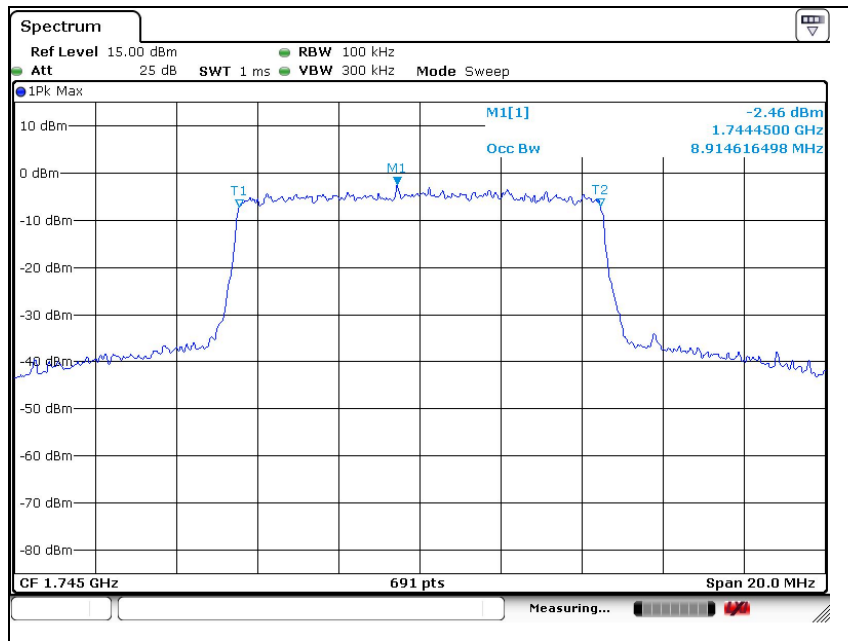
LTE band 66/4 (10 MHz – 16QAM)

Low Channel

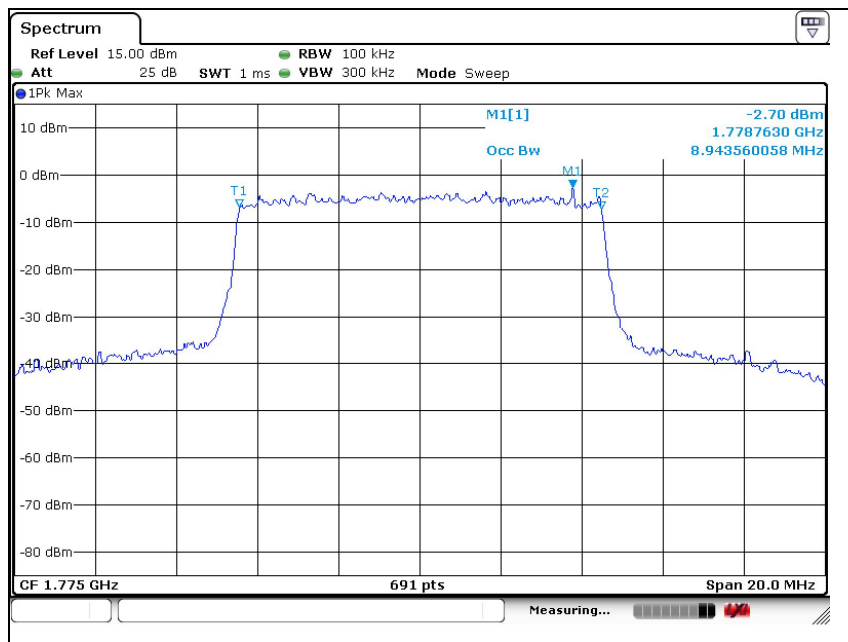


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Middle Channel



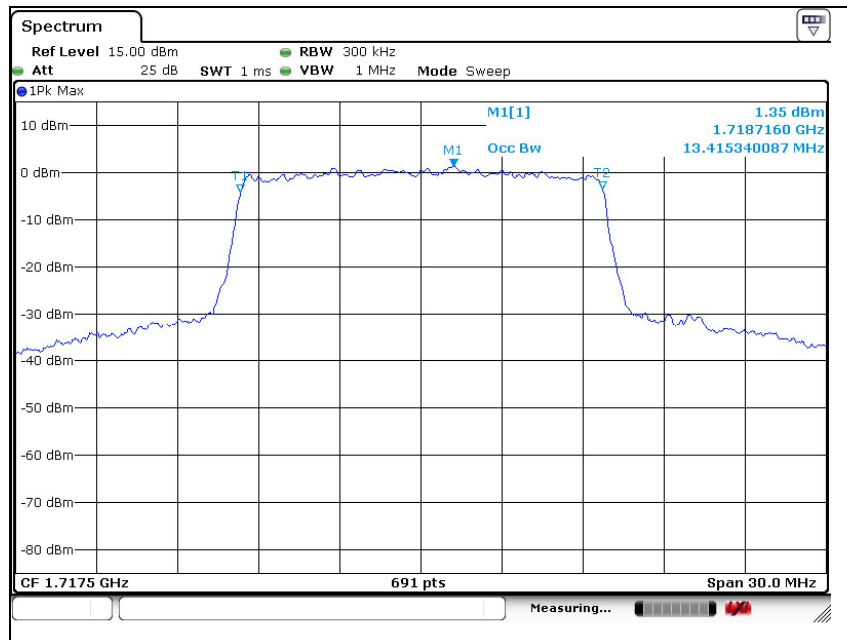
High Channel



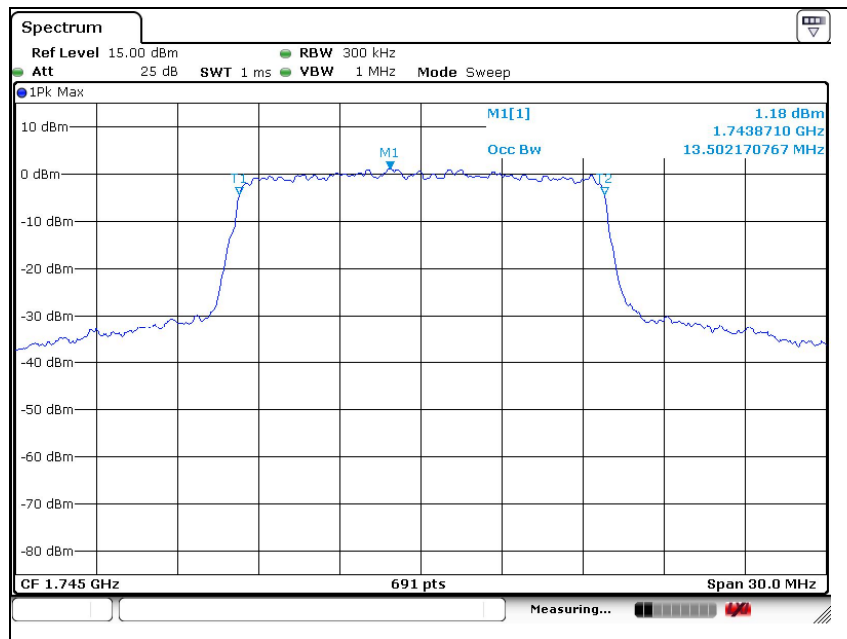
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LTE band 66/4 (15 MHz – QPSK)

Low Channel

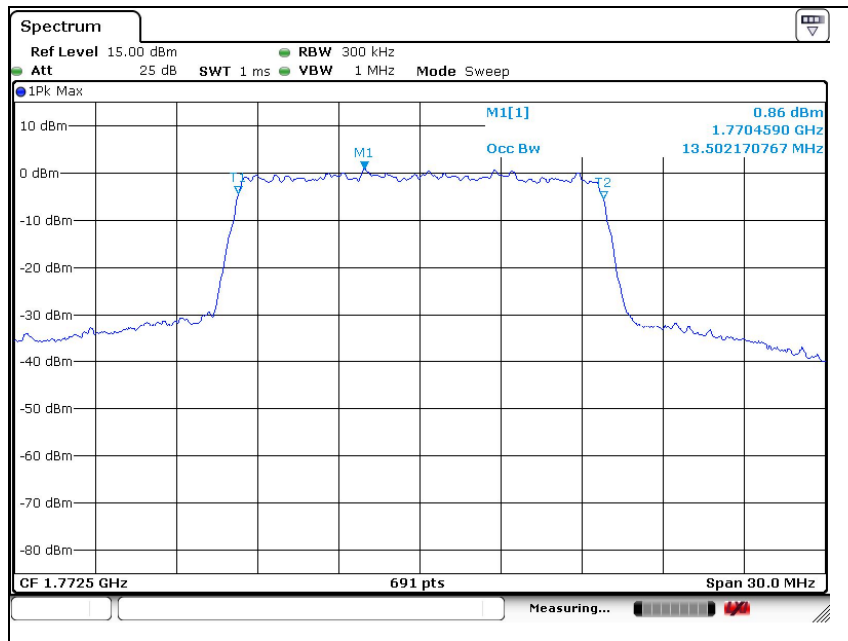


Middle Channel



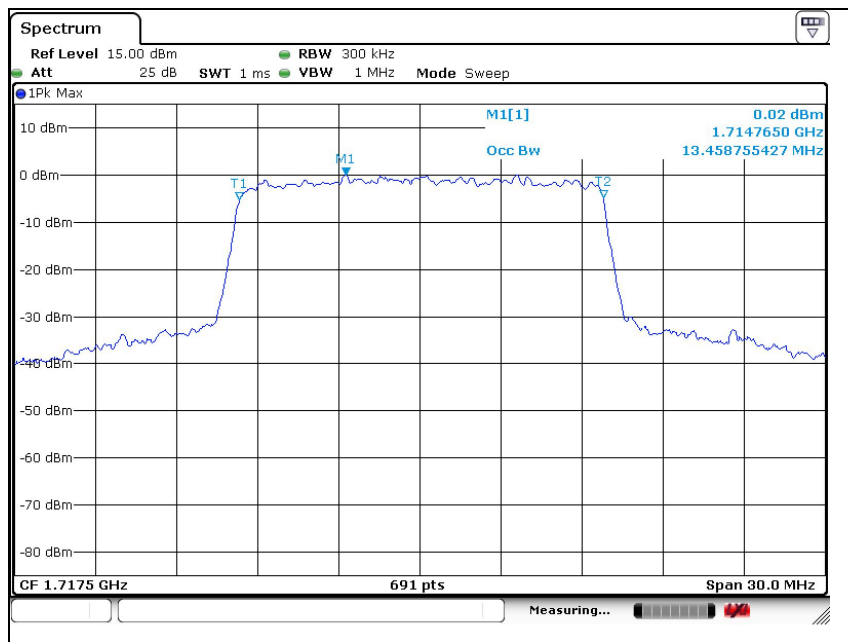
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High Channel



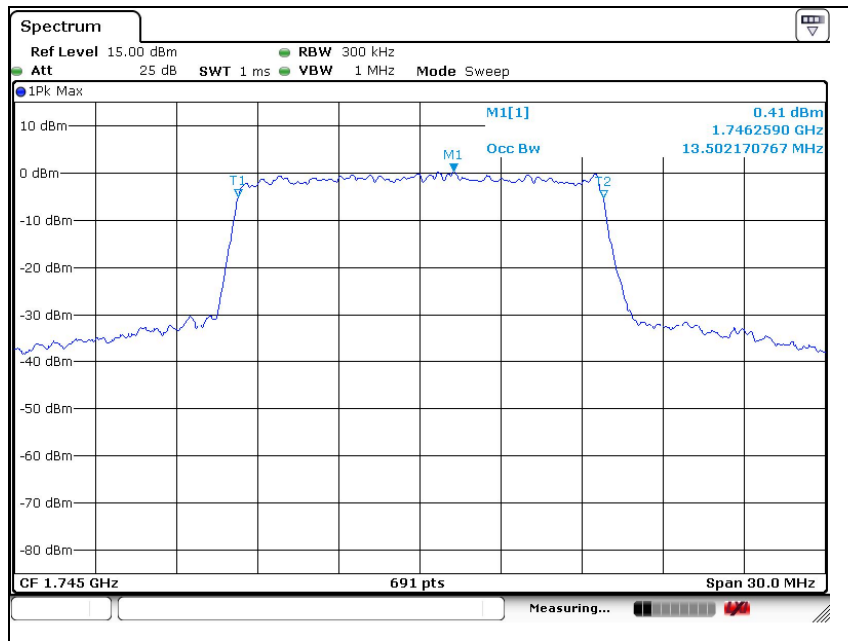
LTE band 66/4 (15 MHz – 16QAM)

Low Channel

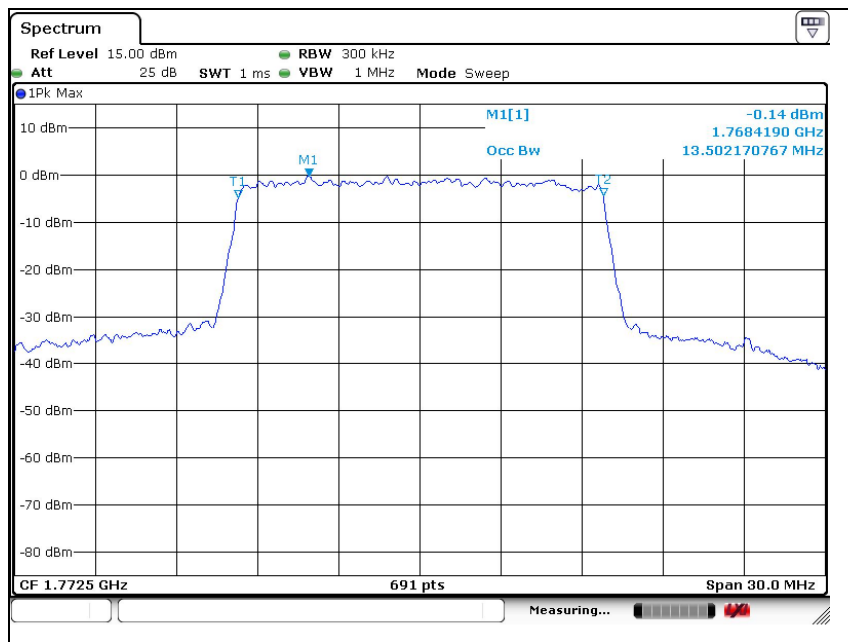


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Middle Channel



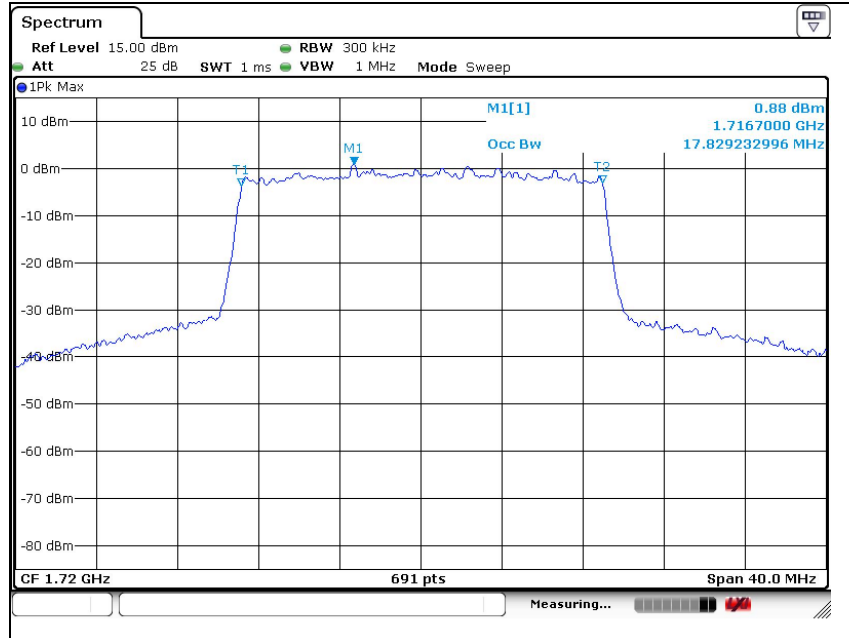
High Channel



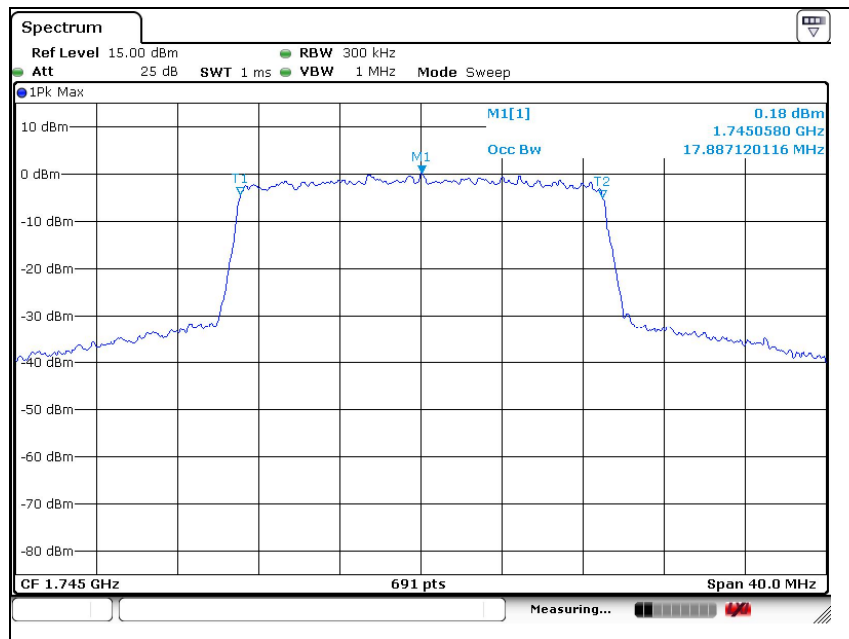
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LTE band 66/4 (20 MHz – QPSK)

Low Channel

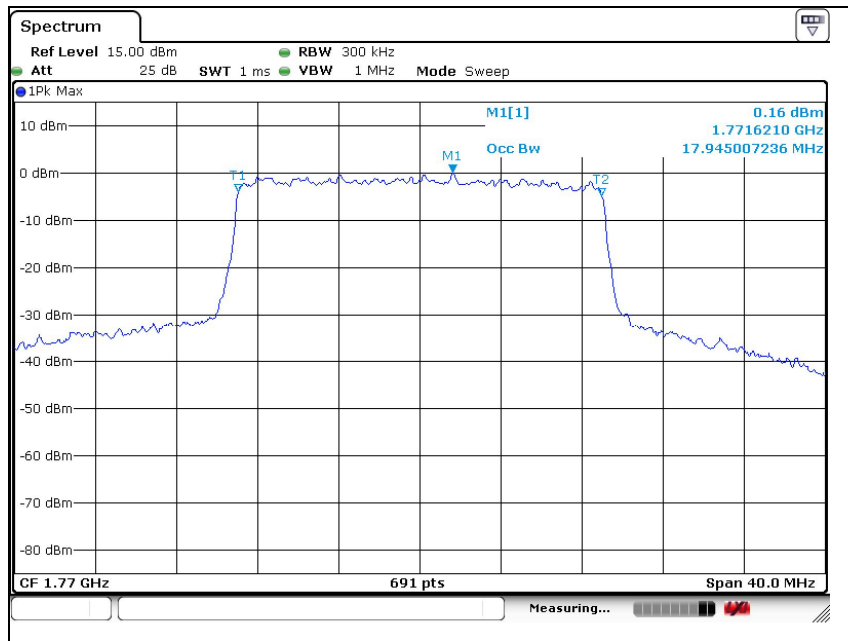


Middle Channel



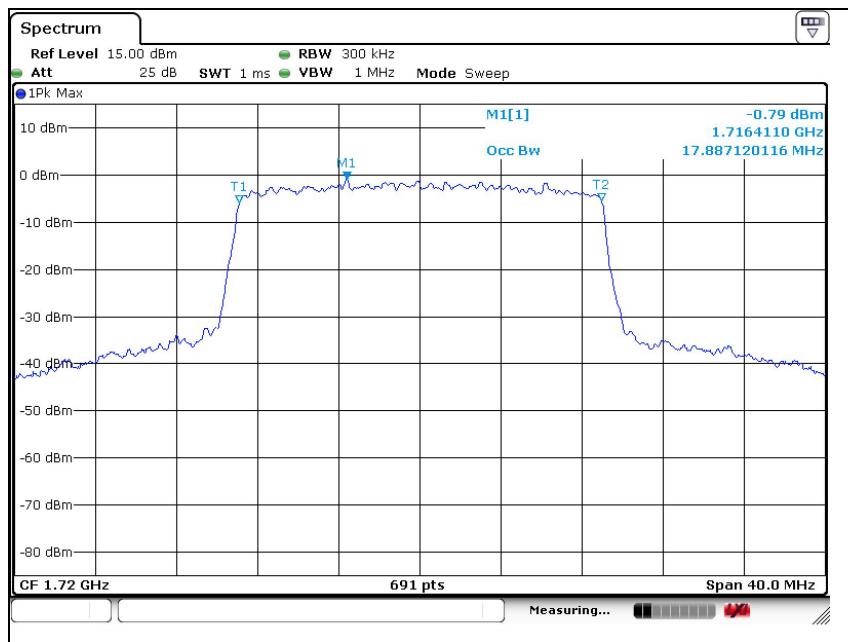
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High Channel



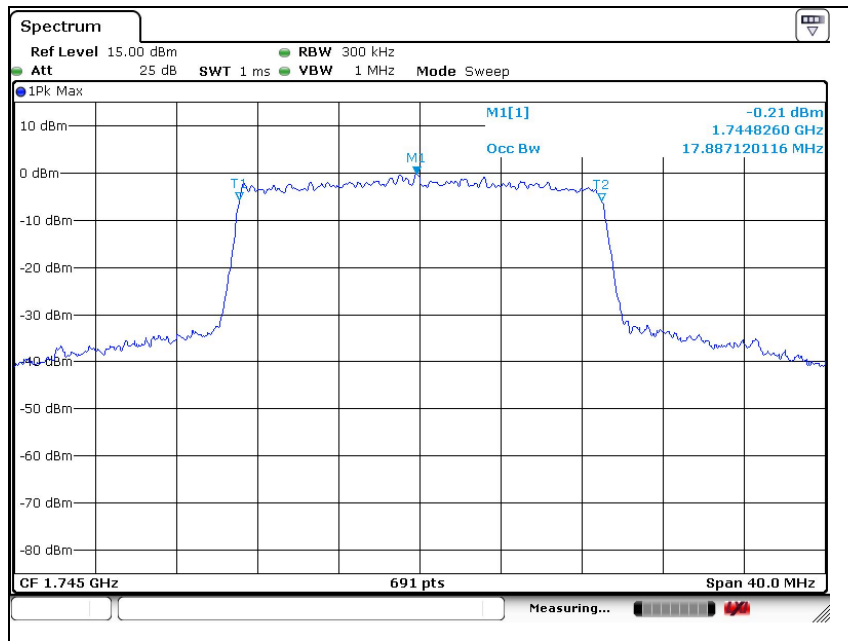
LTE band 66/4 (20 MHz – 16QAM)

Low Channel

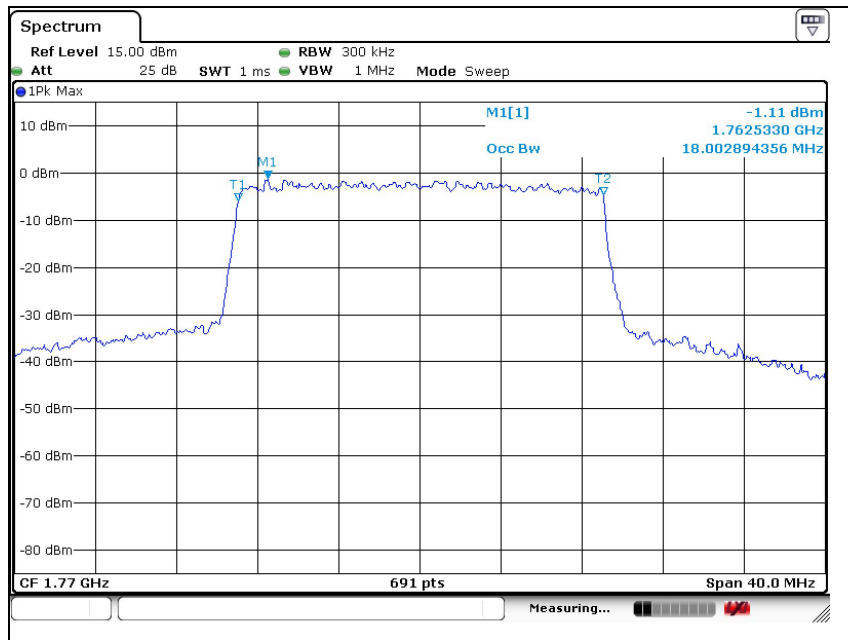


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Middle Channel



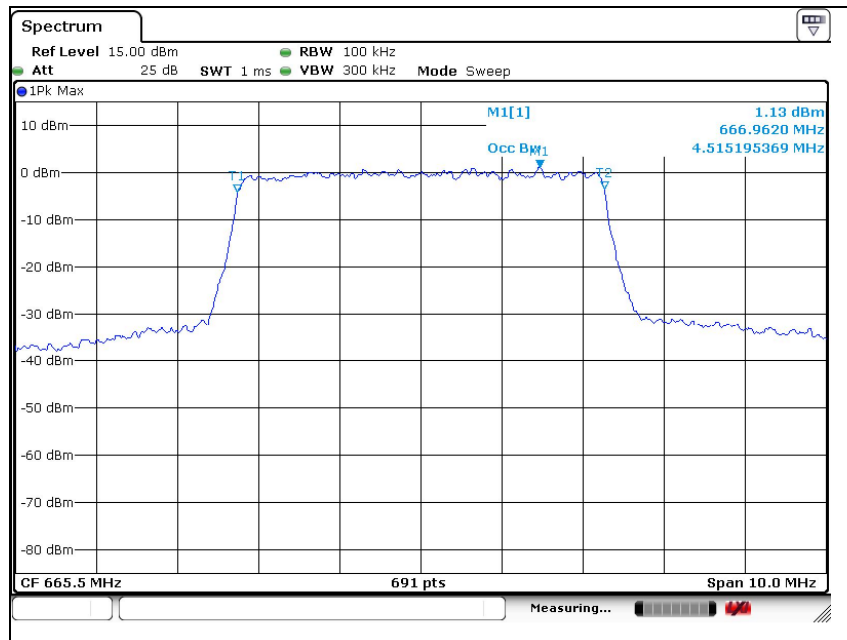
High Channel



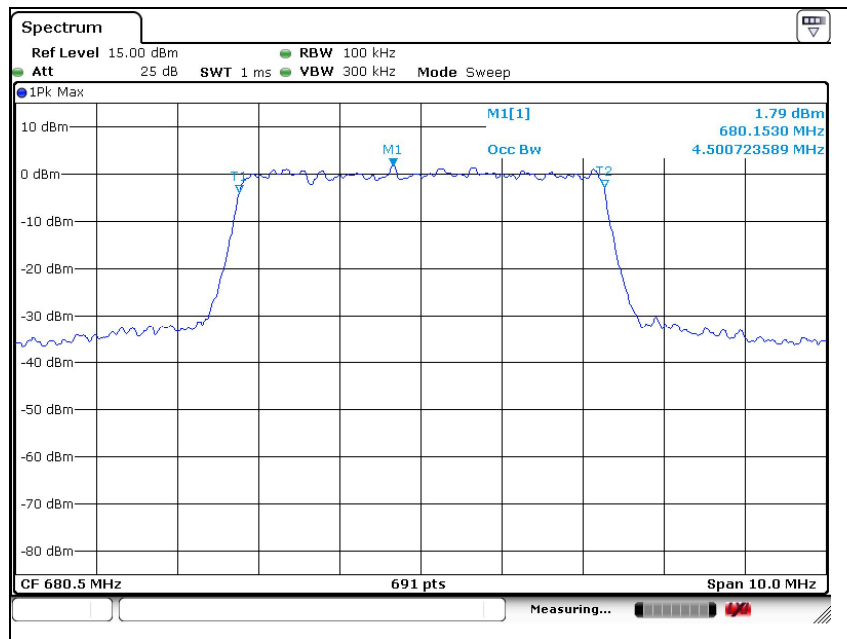
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LTE band 71 (5 MHz – QPSK)

Low Channel

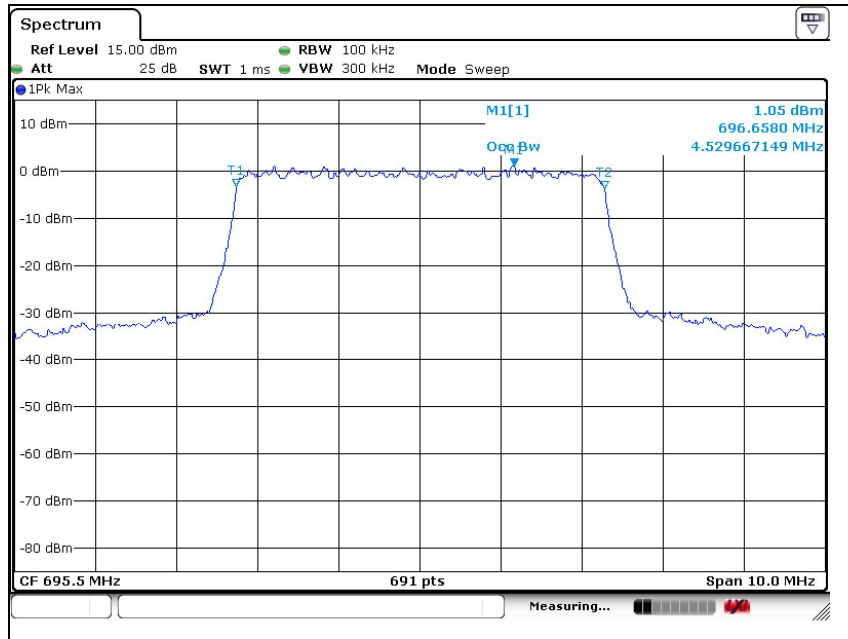


Middle Channel



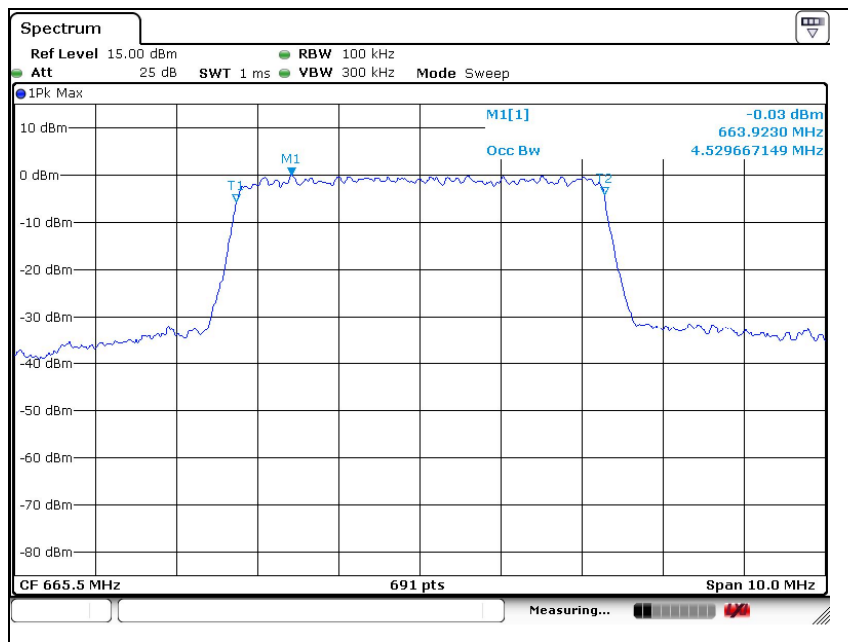
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High Channel



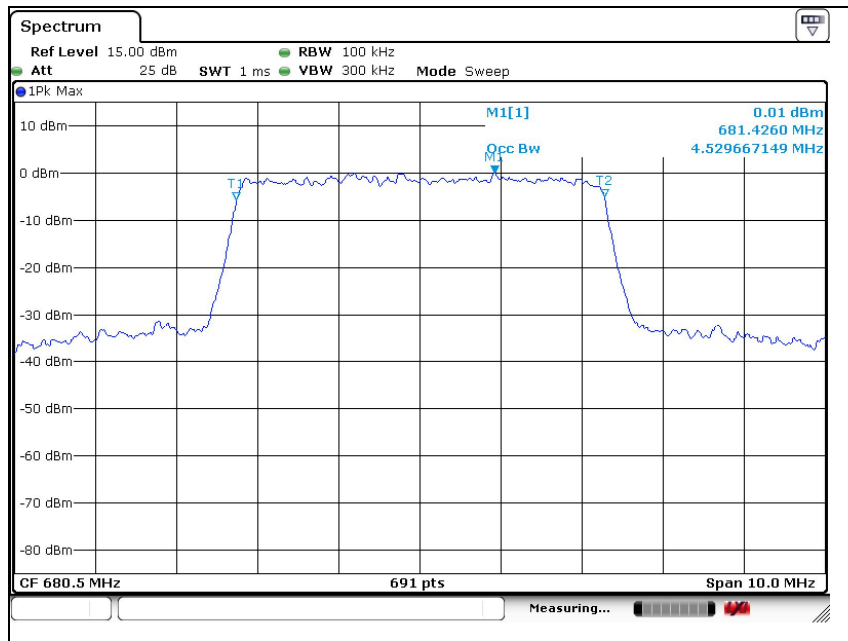
LTE band 71 (5 MHz – 16QAM)

Low Channel

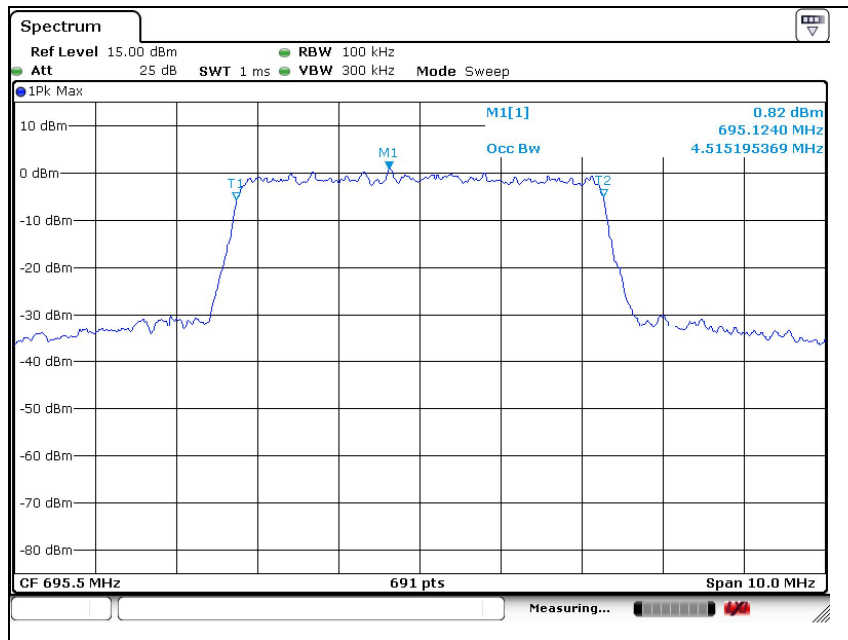


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Middle Channel



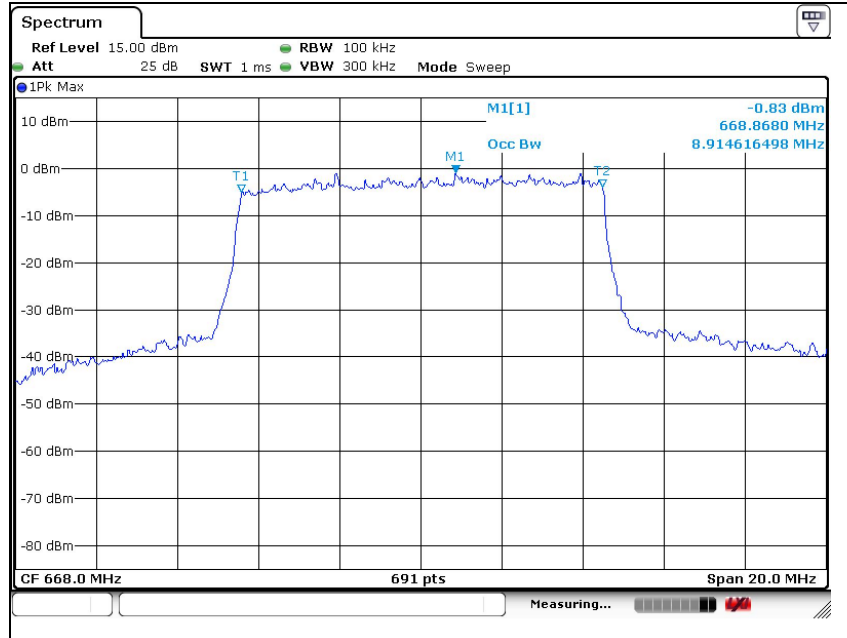
High Channel



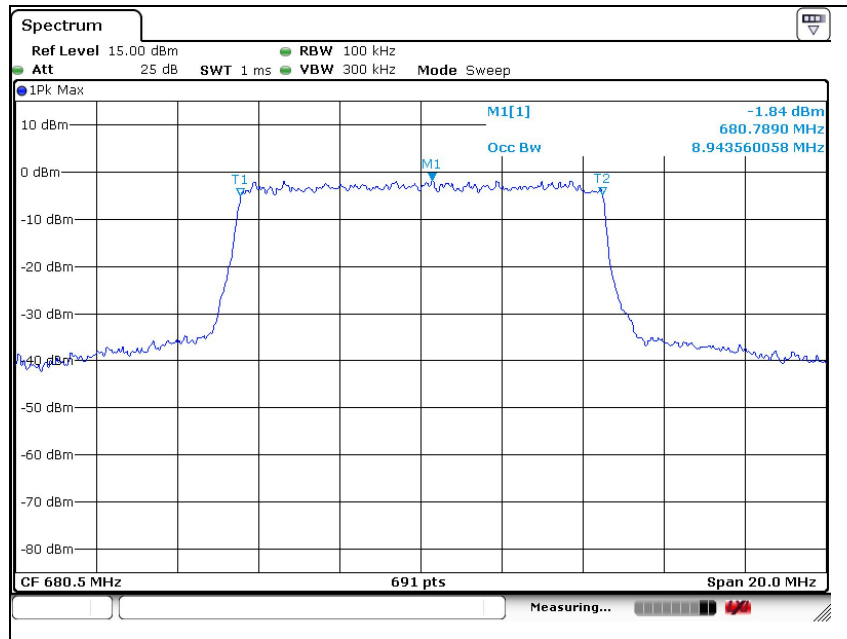
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LTE band 71 (10 MHz – QPSK)

Low Channel

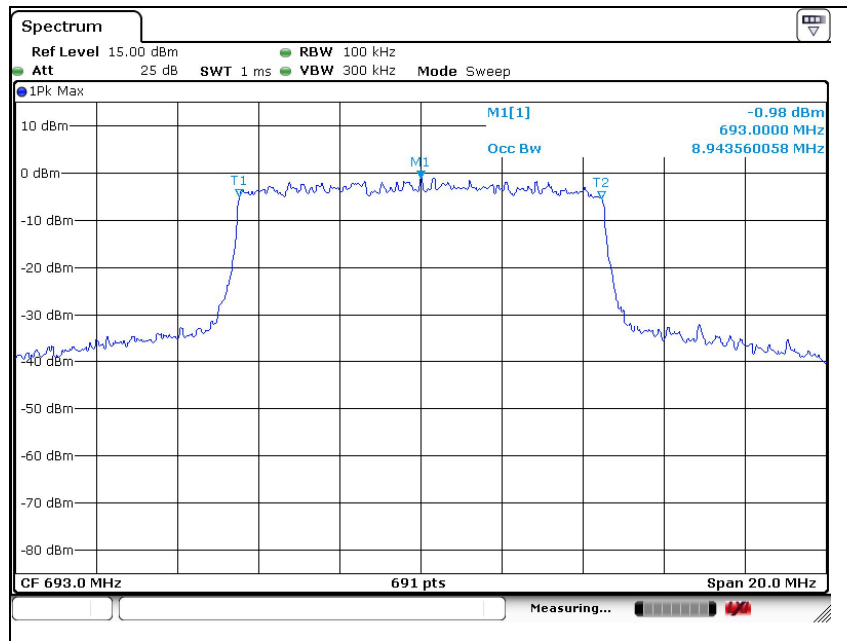


Middle Channel



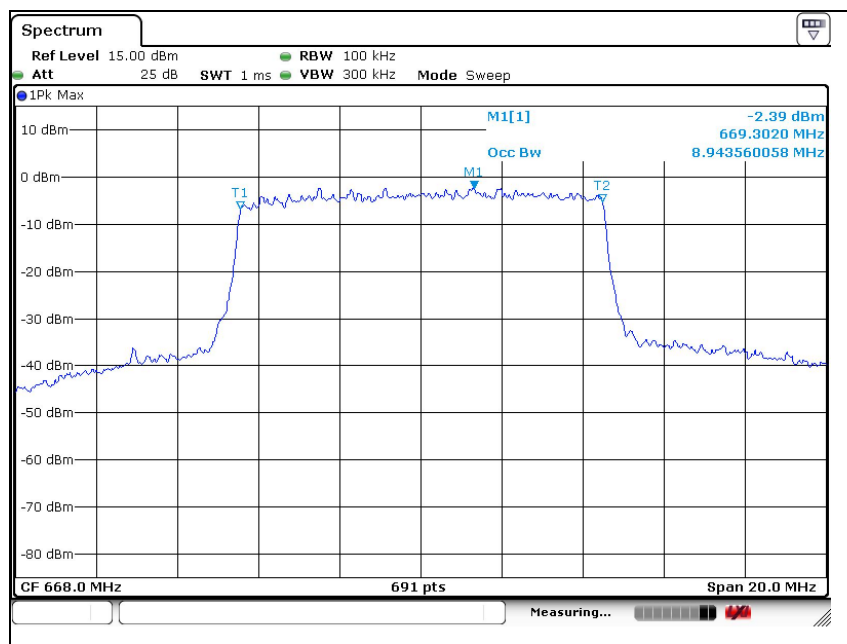
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High Channel



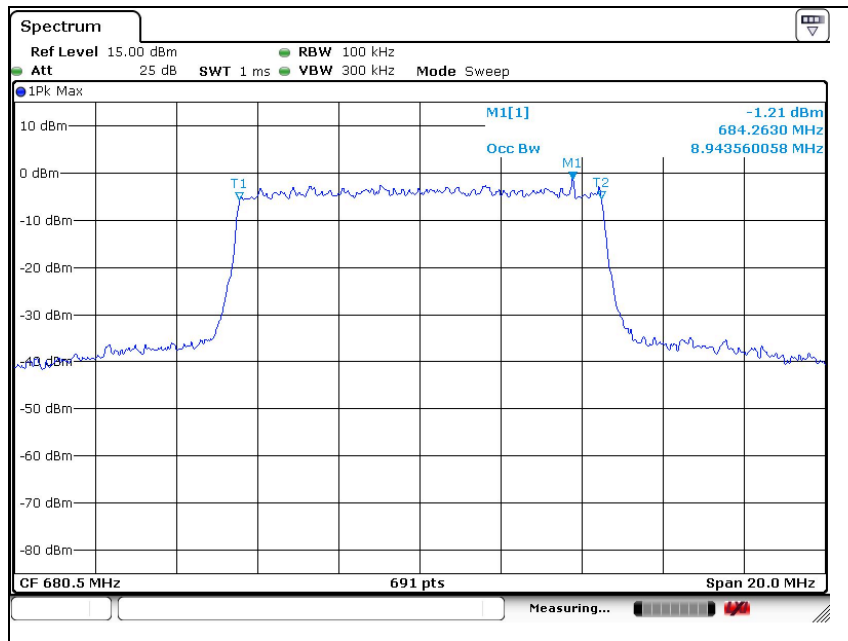
LTE band 71 (10 MHz – 16QAM)

Low Channel

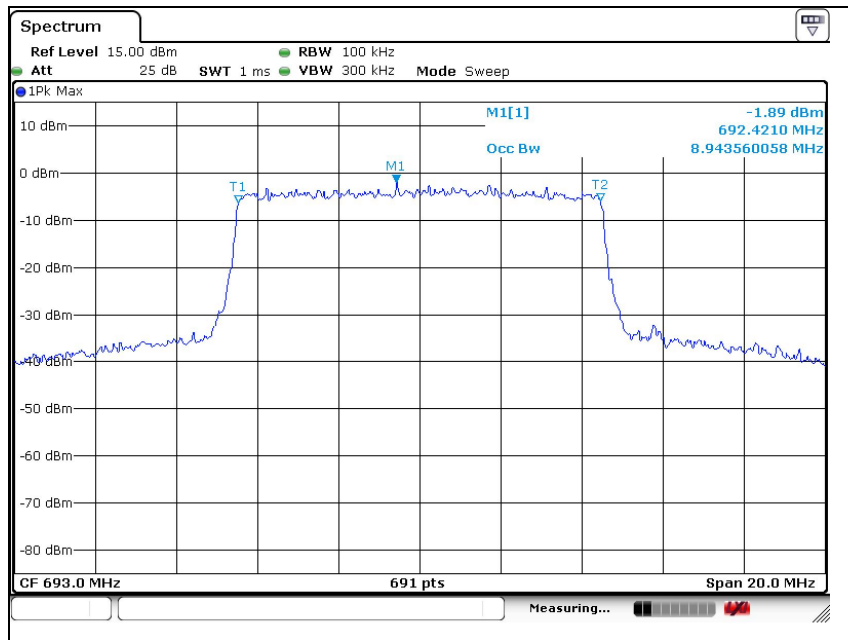


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Middle Channel



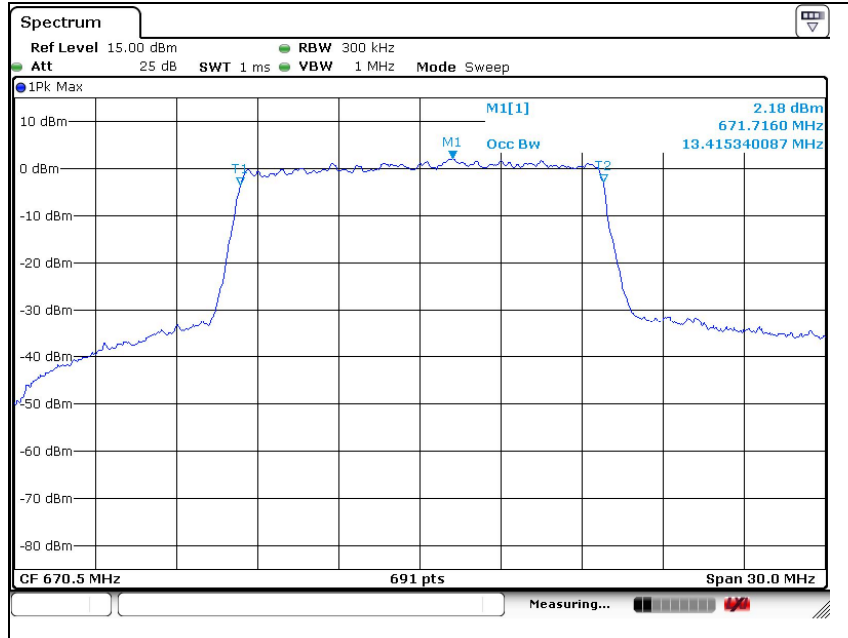
High Channel



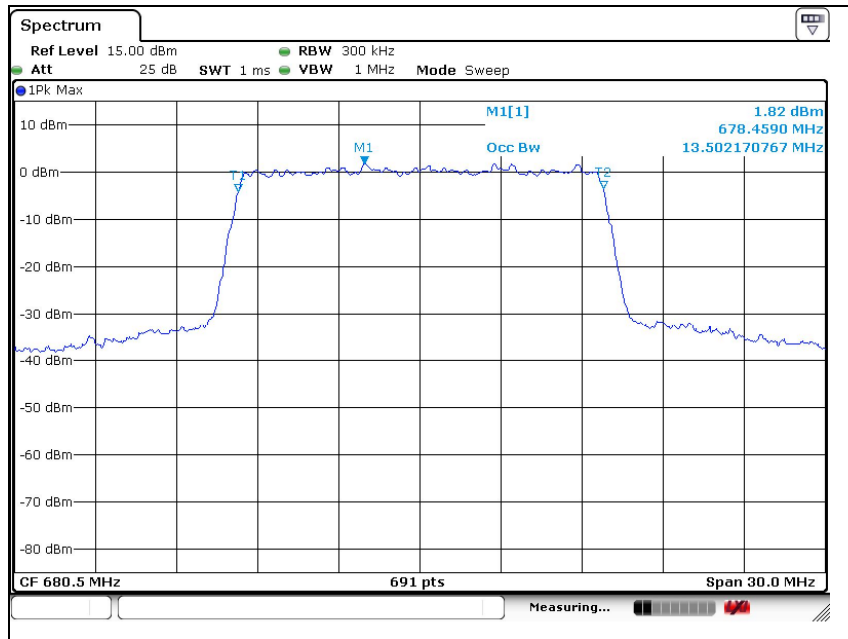
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LTE band 71 (15 MHz – QPSK)

Low Channel

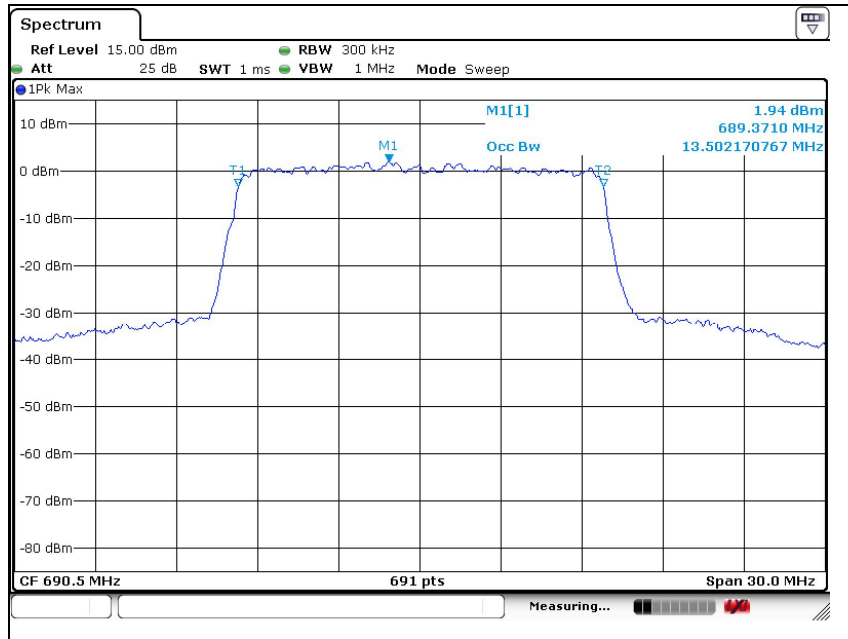


Middle Channel



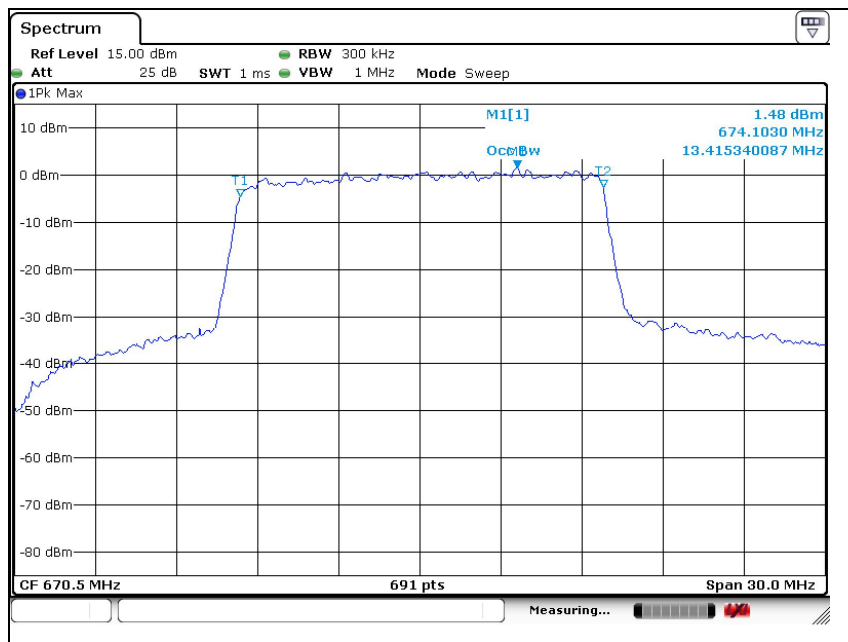
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High Channel



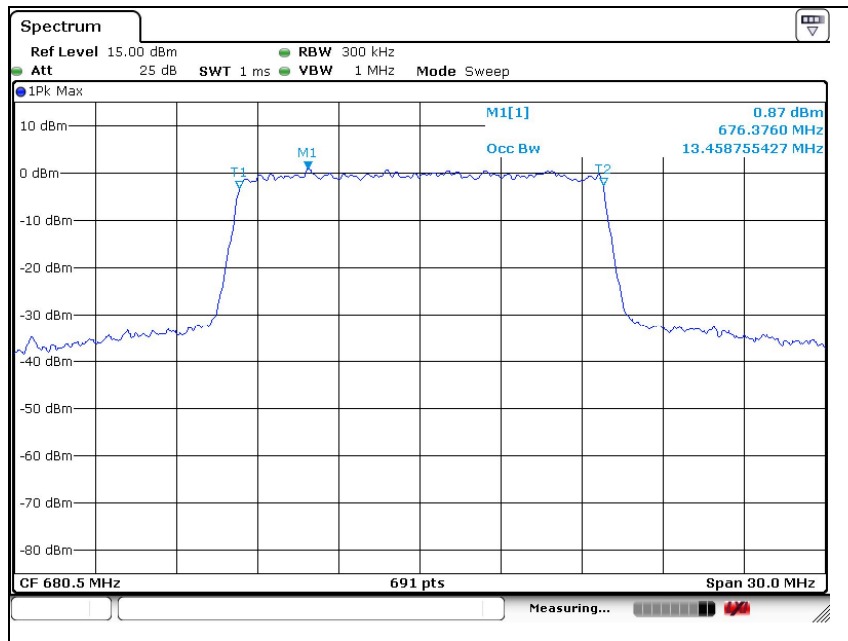
LTE band 71 (15 MHz – 16QAM)

Low Channel

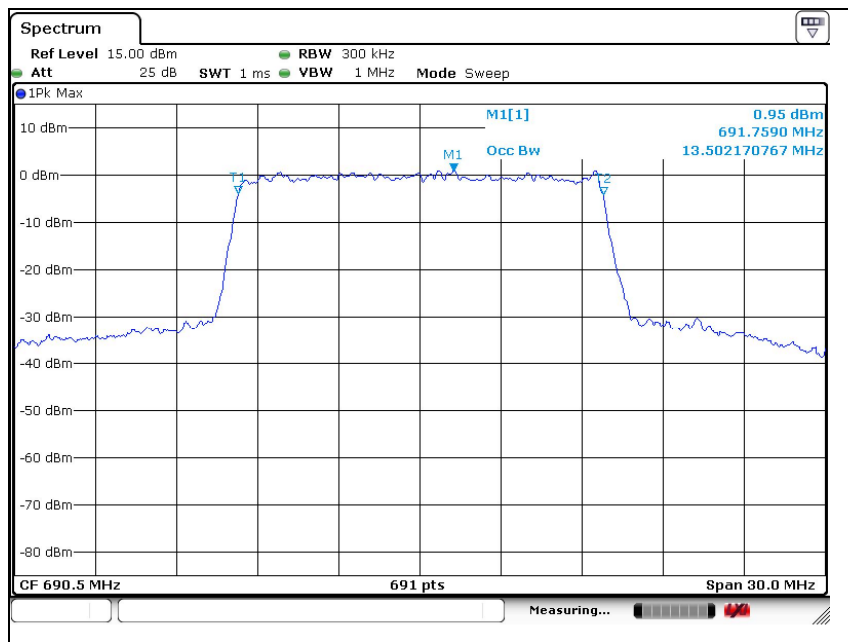


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Middle Channel



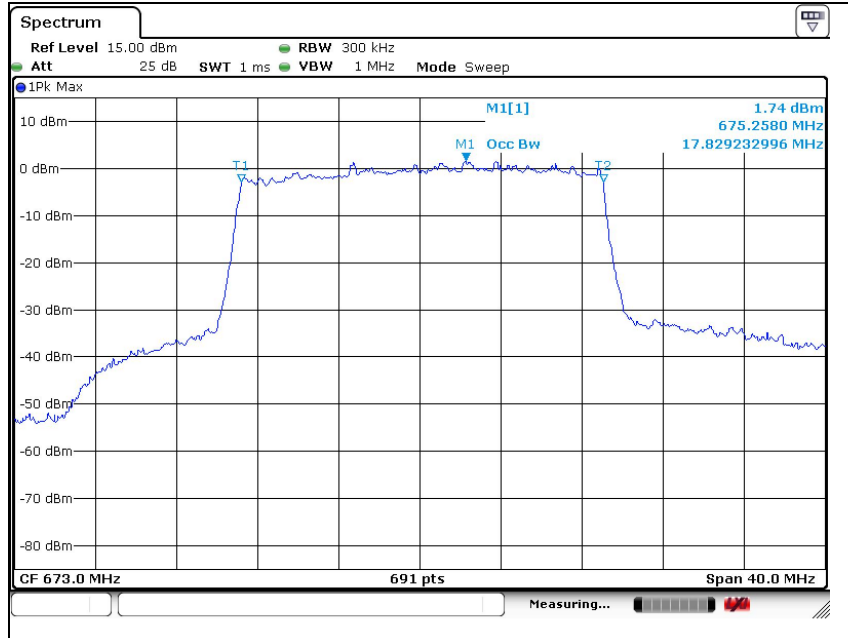
High Channel



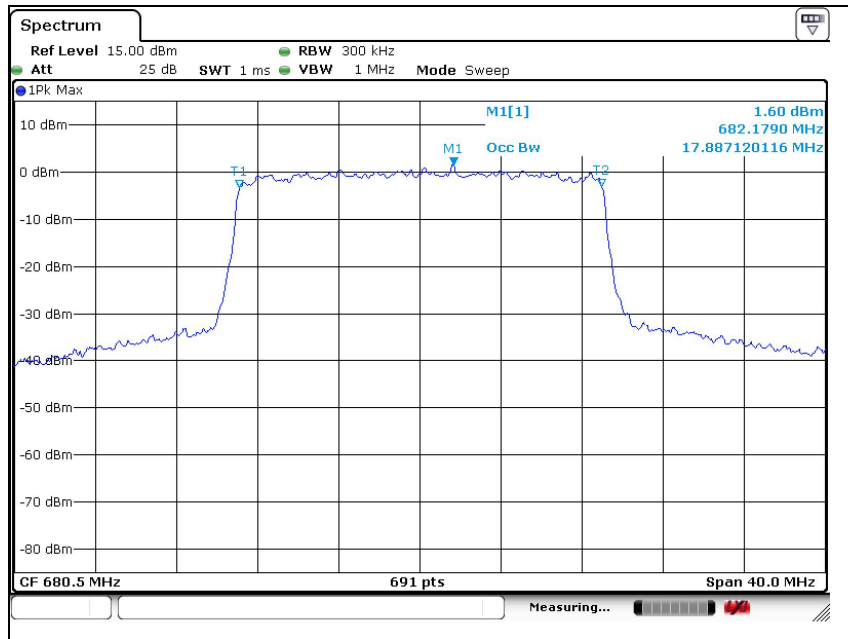
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LTE band 71 (20 MHz – QPSK)

Low Channel

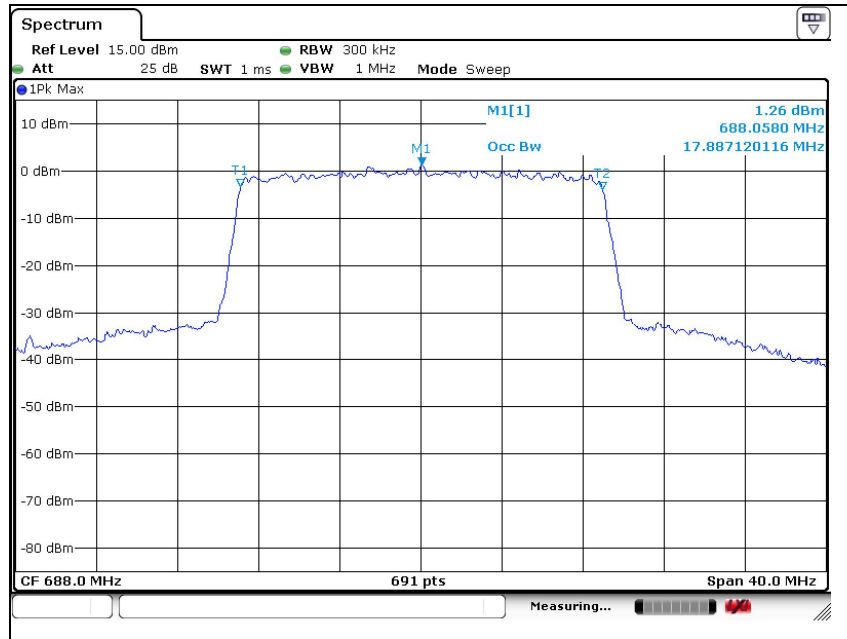


Middle Channel



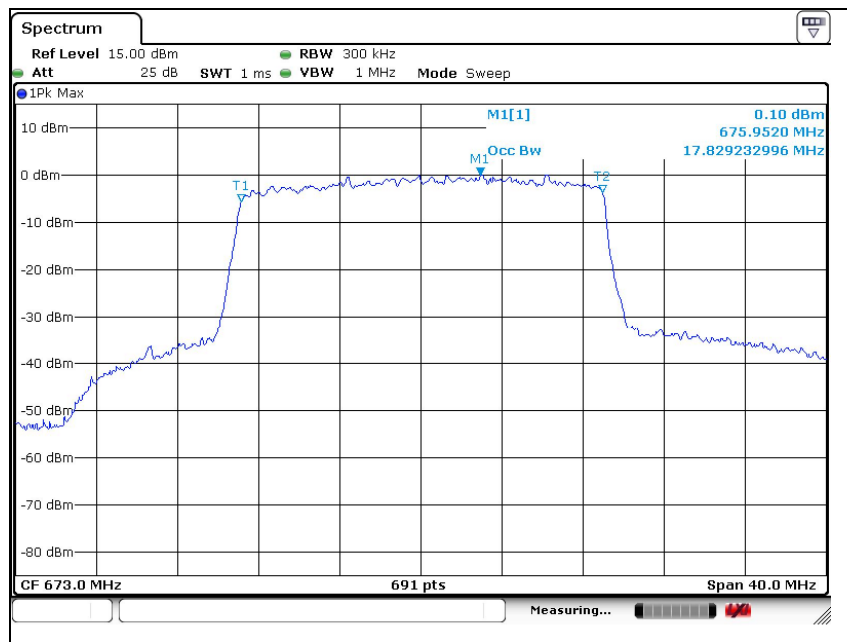
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High Channel



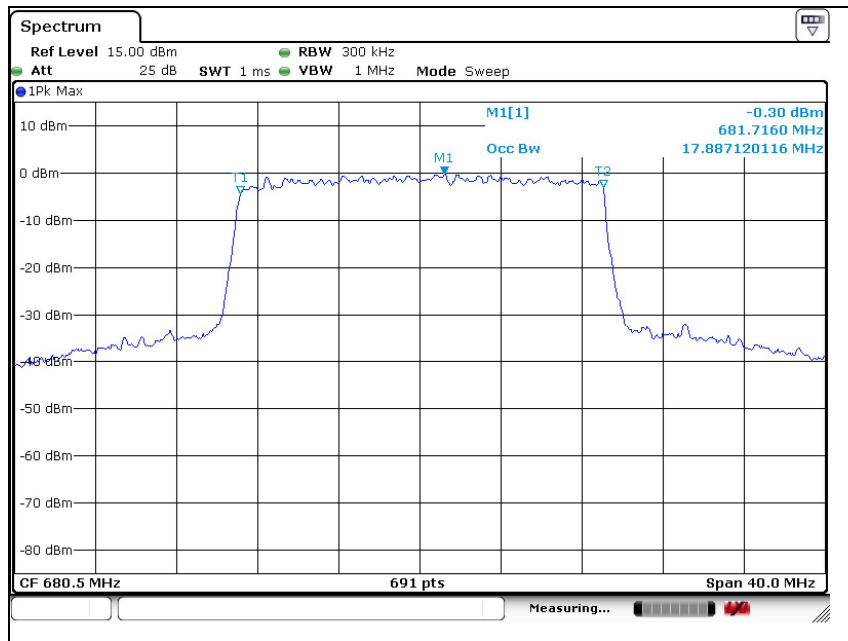
LTE band 71 (20 MHz – 16QAM)

Low Channel

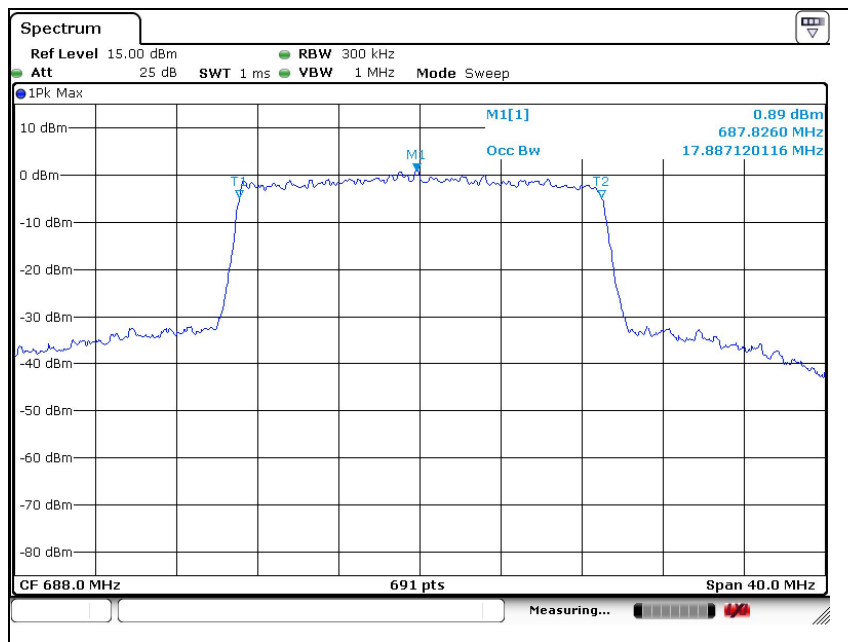


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Middle Channel



High Channel



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4. Peak-Average Ratio

4.1. Limit

- §22.913(d) Measurement of the ERP of Cellular base transmitters and repeaters must be made using an average power measurement technique. The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

- §24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

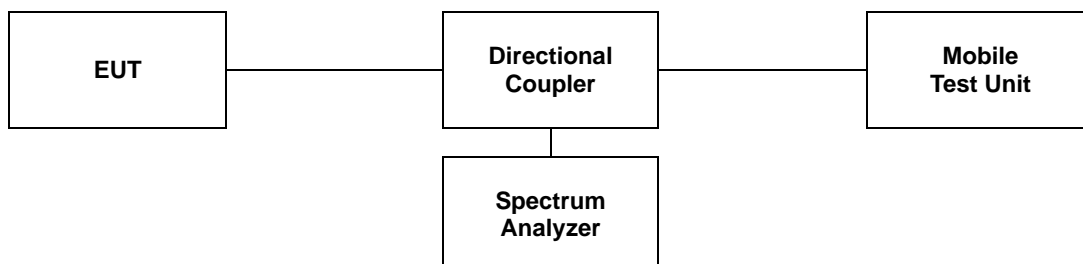
- §27.50(d)(5), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.2. Test Procedure

The test follows section 5.2.3.4 of ANSI C63.26-2015.

See instrumentation-specific application literature for further guidance regarding use of the CCDF capability. The following guidelines are offered for performing a CCDF measurement.

- a. Set resolution/measurement bandwidth \geq OBW or specified reference bandwidth.
- b. Set the number of counts to a value that stabilizes the measured CCDF curve.
- c. Set the measurement interval as follows:
 - 1) For continuous transmissions, set to greater of [10 x (number of points in sweep) x (transmission symbol period)] or 1 ms.
 - 2) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize. Set the measurement interval to a time that is less than or equal to the burst duration.
 - 3) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.
- d. Record the maximum PAPR level associated with a probability of 0.1 %.
- e. The peak power level is calculated from the sum of the PAPR value from step d) to the measured average power.



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4.3 Test Results

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 % R.H.

Band	Bandwidth (MHz)	Mode	Frequency (MHz)	PAR (dB)
12	1.4	QPSK	699.7	4.55
			707.5	4.55
			715.3	4.41
	3	QPSK	700.5	4.49
			707.5	4.43
			714.5	4.26
	5	QPSK	701.5	4.46
			707.5	4.41
			713.5	4.23
	10	QPSK	704.0	4.55
			707.5	4.35
			711.0	4.29

Band	Bandwidth (MHz)	Mode	Frequency (MHz)	PAR (dB)
25/2	1.4	QPSK	1 850.7	4.32
			1 882.5	4.32
			1 914.3	4.29
	3	QPSK	1 851.5	4.23
			1 882.5	4.38
			1 913.5	4.20
	5	QPSK	1 852.5	4.38
			1 882.5	4.29
			1 912.5	4.20
	10	QPSK	1 855.0	4.29
			1 882.5	4.20
			1 910.0	4.20
	15	QPSK	1 857.5	4.52
			1 882.5	4.41
			1 907.5	4.41
	20	QPSK	1 860.0	4.32
			1 882.5	4.41
			1 905.0	4.29

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Band	Bandwidth (MHz)	Mode	Frequency (MHz)	PAR (dB)
26/5	1.4	QPSK	824.7	4.61
			836.5	4.29
			848.3	4.17
	3	QPSK	825.5	4.64
			836.5	4.23
			847.5	4.09
	5	QPSK	826.5	4.49
			836.5	4.17
			846.5	4.09
	10	QPSK	829.0	4.52
			836.5	4.20
			844.0	4.23
26	15	QPSK	831.5	4.64
			841.5	4.58

Band	Bandwidth (MHz)	Mode	Frequency (MHz)	PAR (dB)
41	5	QPSK	2 498.5	8.64
			2 593.0	8.96
			2 687.5	8.49
	10	QPSK	2 501.0	8.41
			2 593.0	8.55
			2 685.0	8.61
	15	QPSK	2 503.5	8.23
			2 593.0	5.65
			2 682.5	6.26
	20	QPSK	2 506.0	3.80
			2 593.0	6.29
			2 680.0	4.61

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Band	Bandwidth (MHz)	Mode	Frequency (MHz)	PAR (dB)
66/4	1.4	QPSK	1 710.7	4.41
			1 745.0	4.38
			1 779.3	4.20
	3	QPSK	1 711.5	4.14
			1 745.0	4.23
			1 778.5	4.20
	5	QPSK	1 712.5	4.20
			1 745.0	4.17
			1 777.5	4.20
	10	QPSK	1 715.0	4.09
			1 745.0	4.17
			1 775.0	4.20
	15	QPSK	1 717.5	4.38
			1 745.0	4.35
			1 772.5	4.41
20	QPSK	1 720.0	4.20	
		1 745.0	4.20	
		1 770.0	4.23	

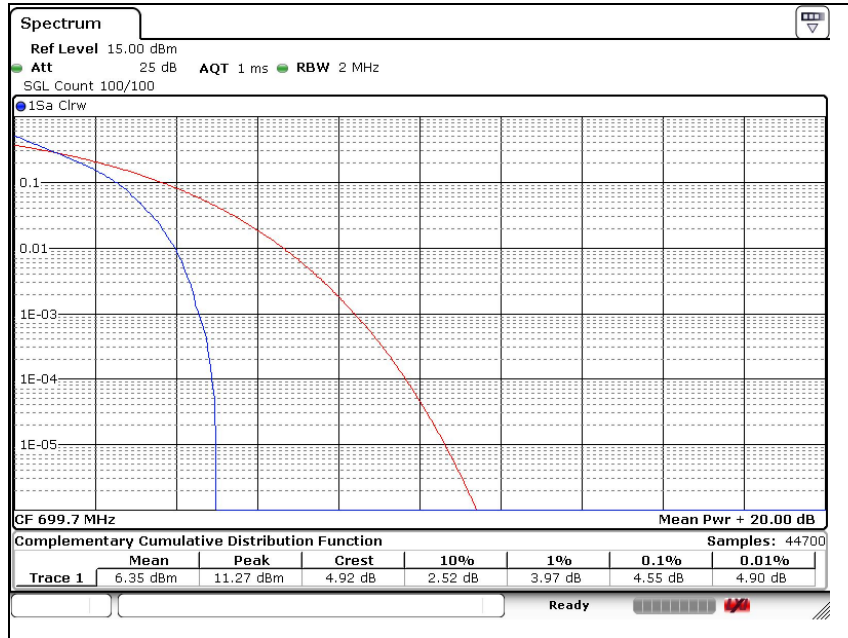
Band	Bandwidth (MHz)	Mode	Frequency (MHz)	PAR (dB)
71	5	QPSK	665.5	4.20
			680.5	4.35
			695.5	4.06
	10	QPSK	668.0	4.35
			680.5	4.35
			693.0	4.09
	15	QPSK	670.5	4.58
			680.5	4.61
			690.5	4.46
	20	QPSK	673.0	4.41
			680.5	4.29
			688.0	4.23

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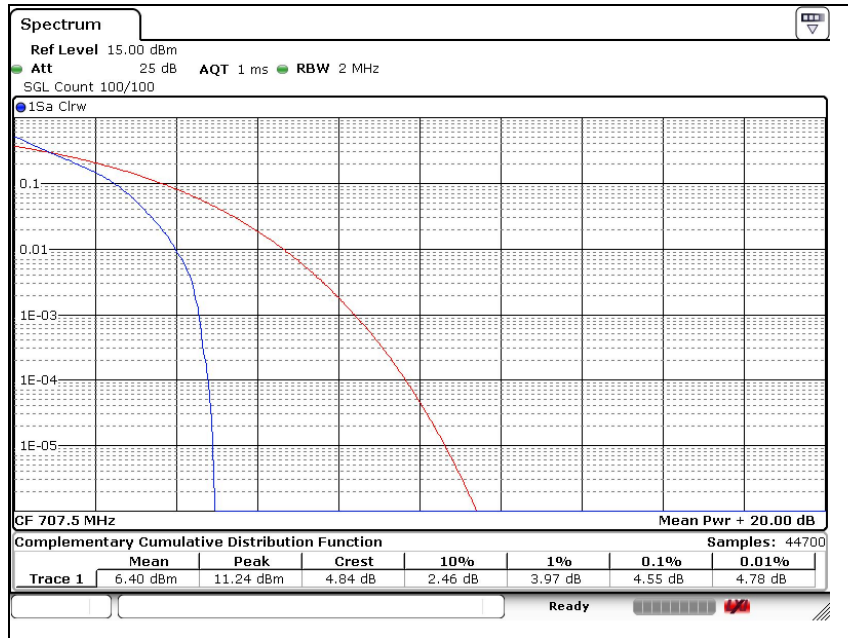
- Test plots

LTE band 12 (1.4 MHz – QPSK)

Low Channel

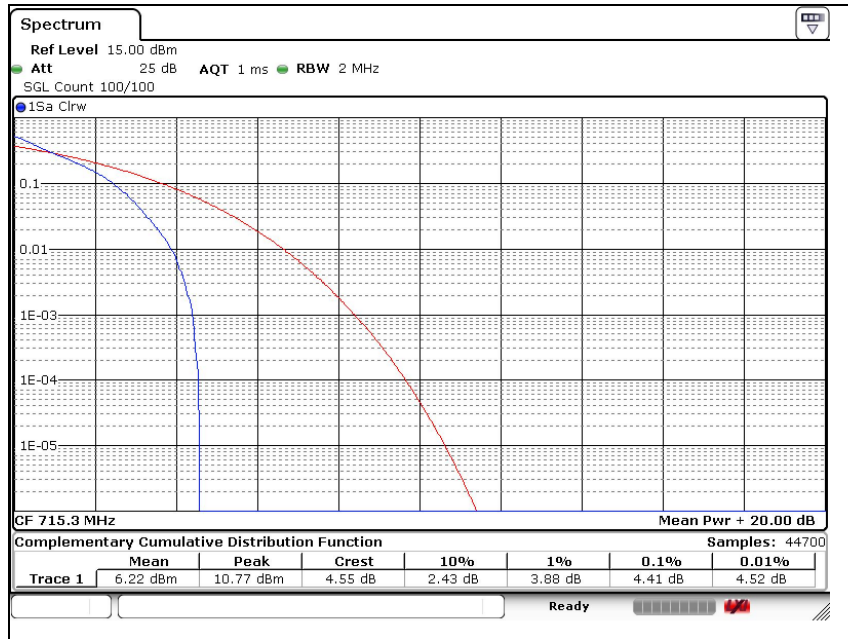


Middle Channel



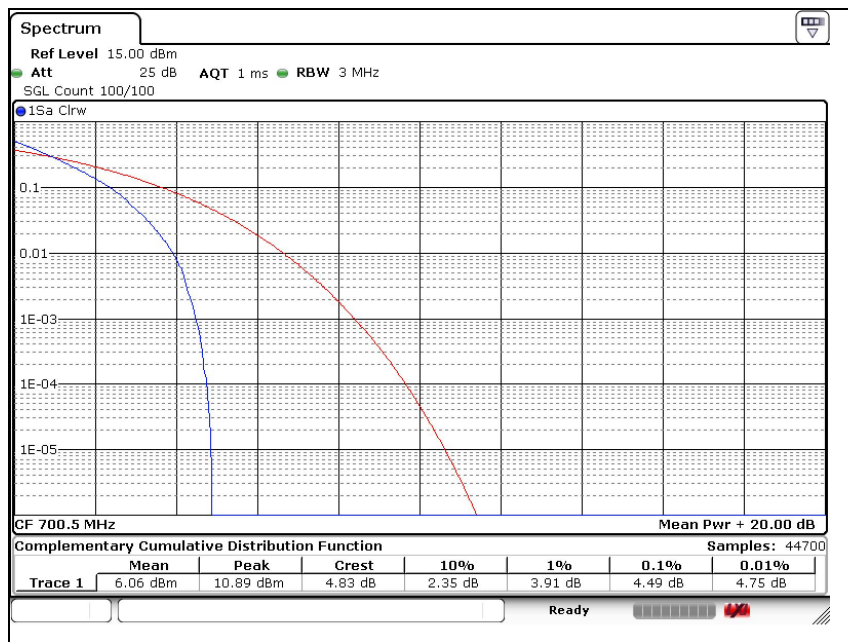
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High Channel



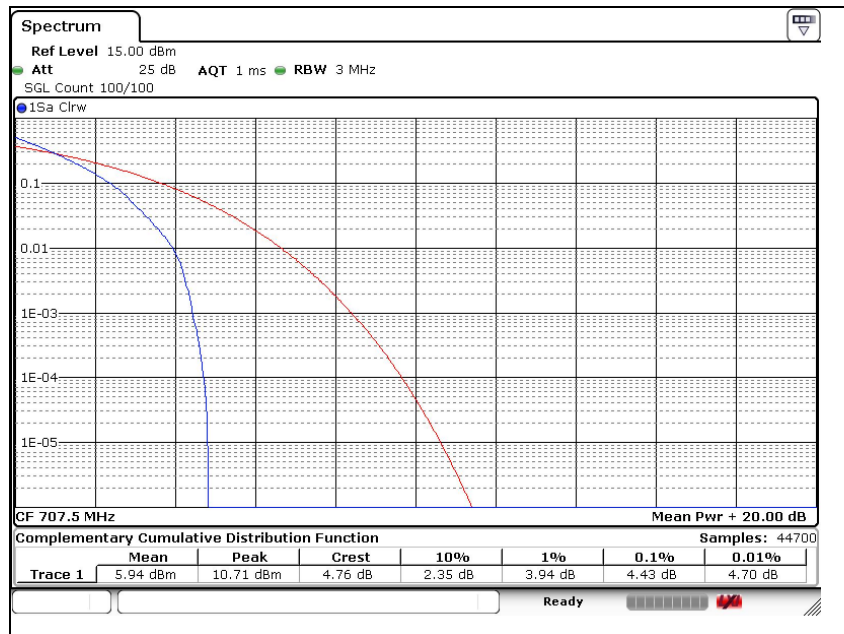
LTE band 12 (3 MHz – QPSK)

Low Channel

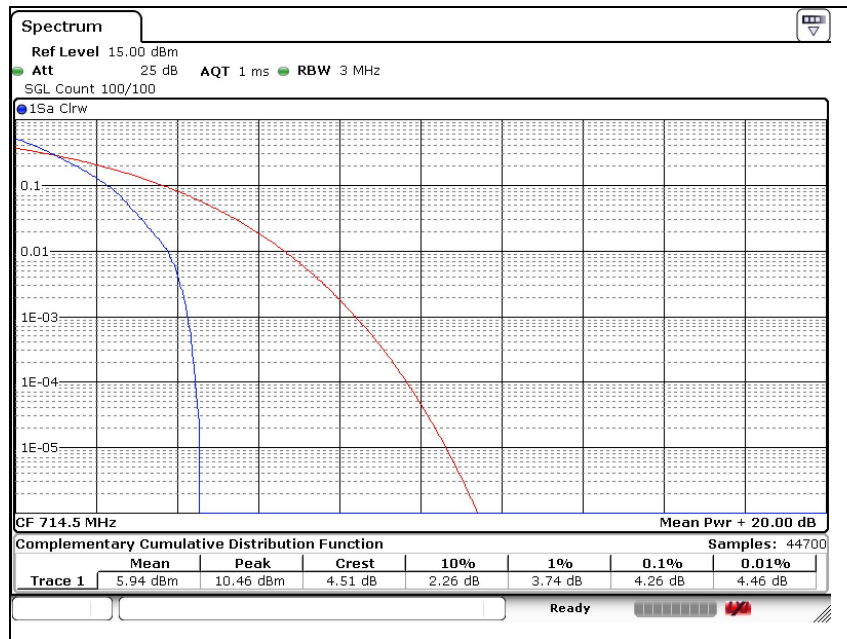


The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

Middle Channel



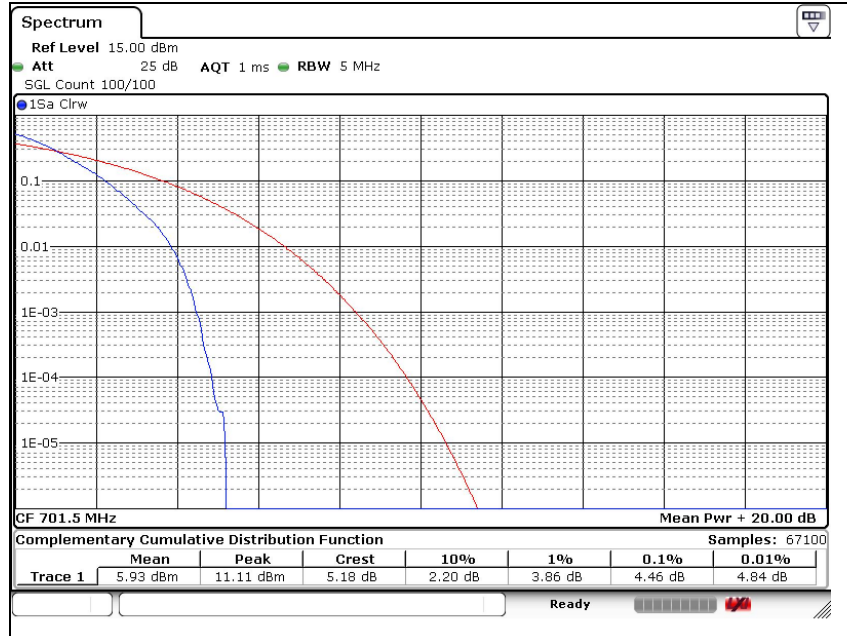
High Channel



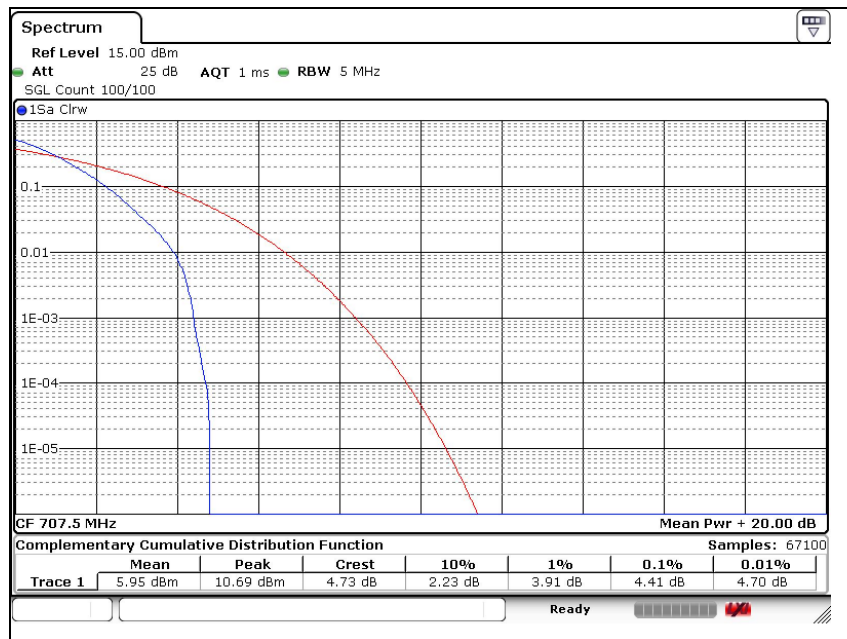
The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

LTE band 12 (5 MHz – QPSK)

Low Channel

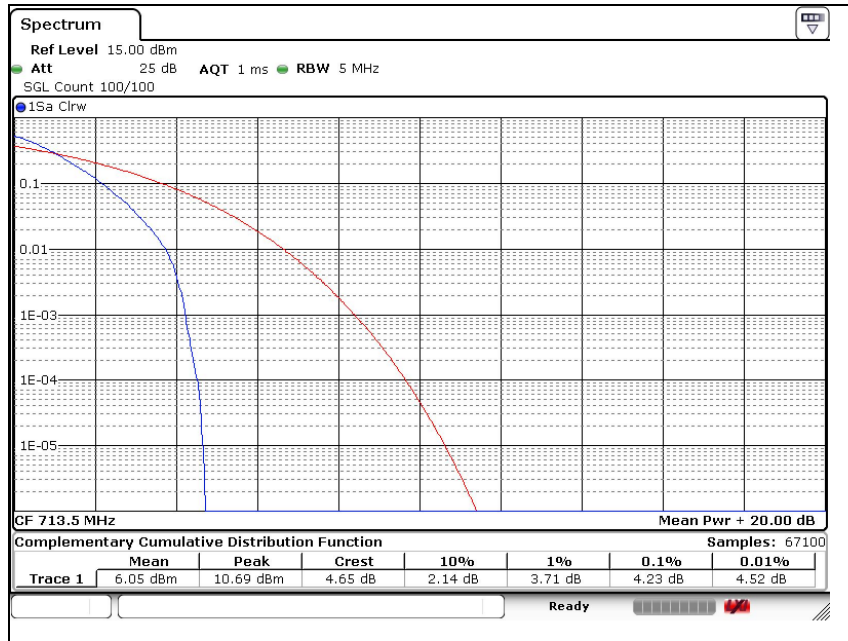


Middle Channel



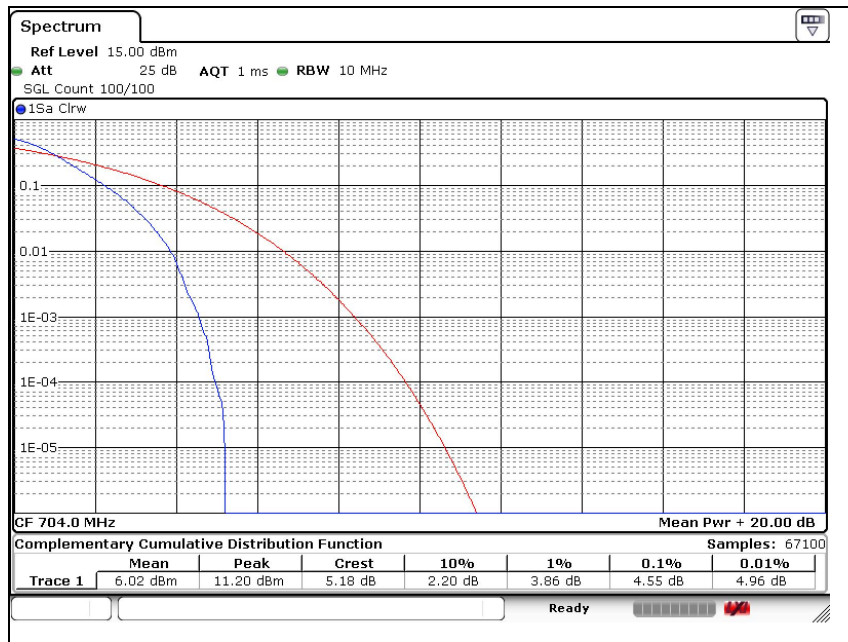
The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

High Channel



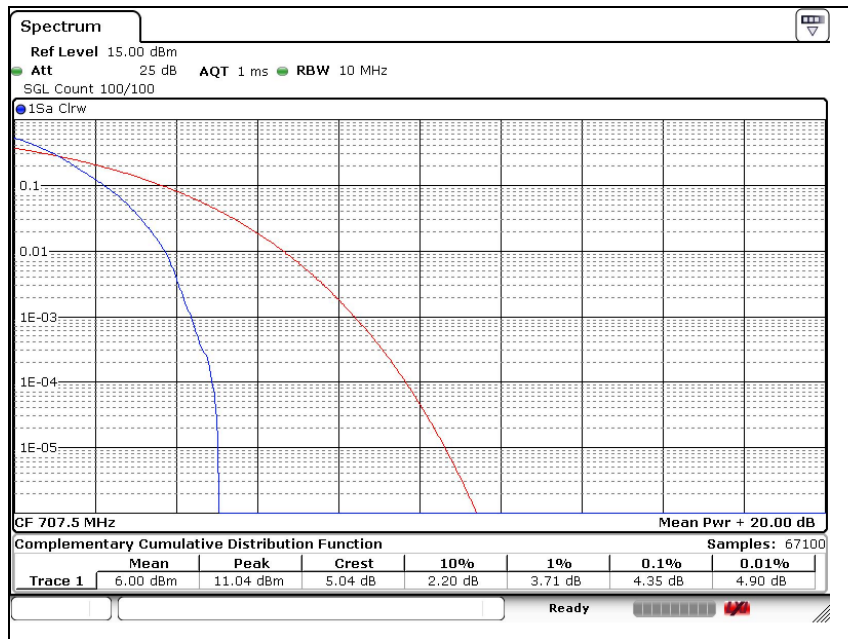
LTE band 12 (10 MHz – QPSK)

Low Channel

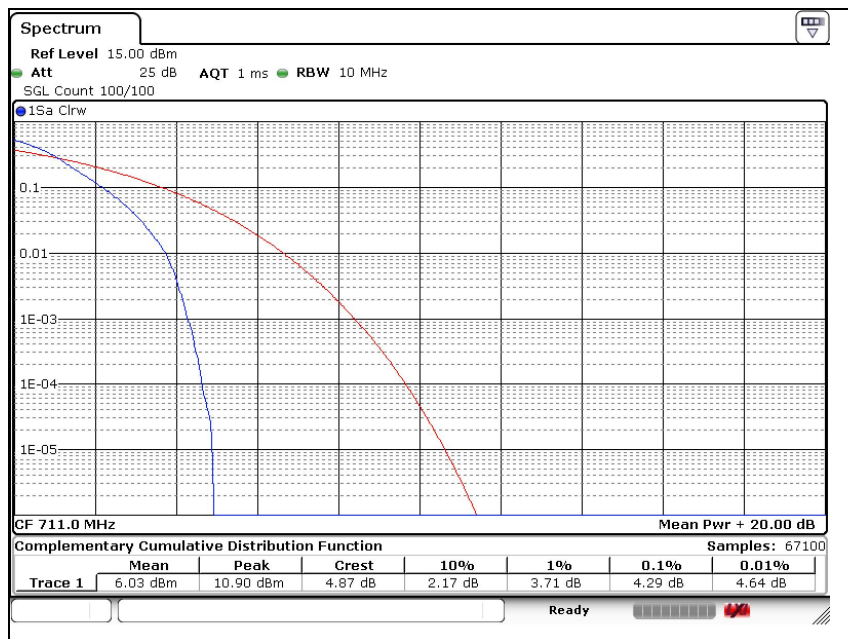


The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

Middle Channel



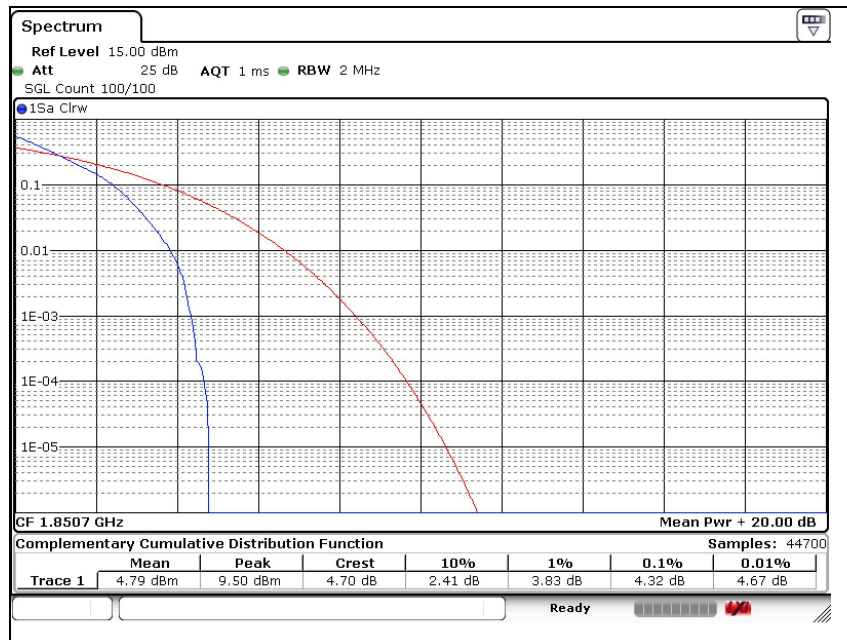
High Channel



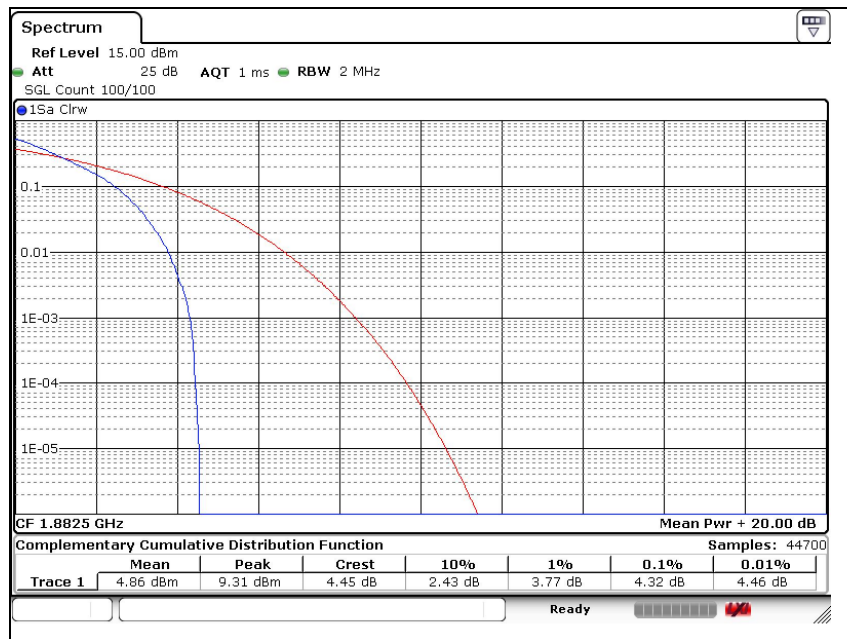
The results of this test report are effective only to the items tested. The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.

LTE band 25/2 (1.4 MHz – QPSK)

Low Channel

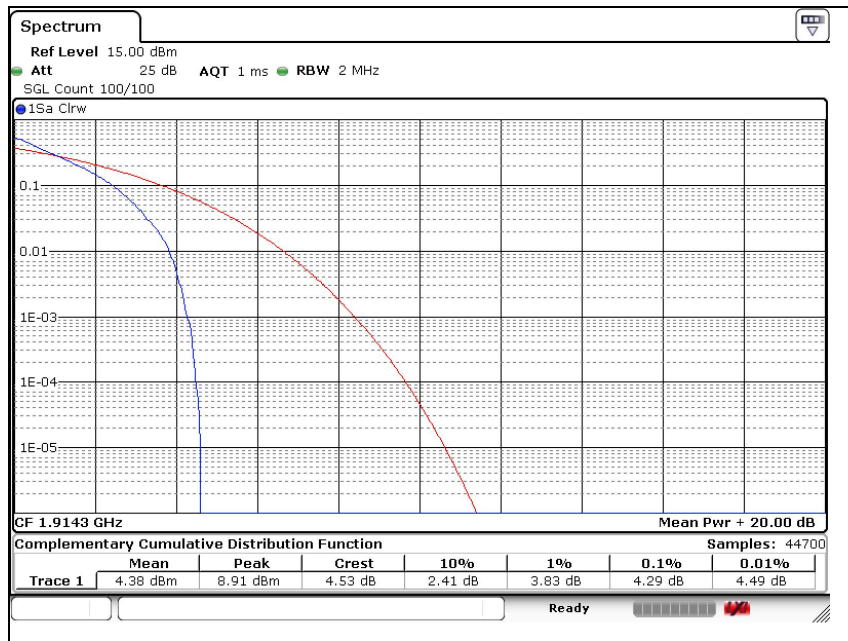


Middle Channel



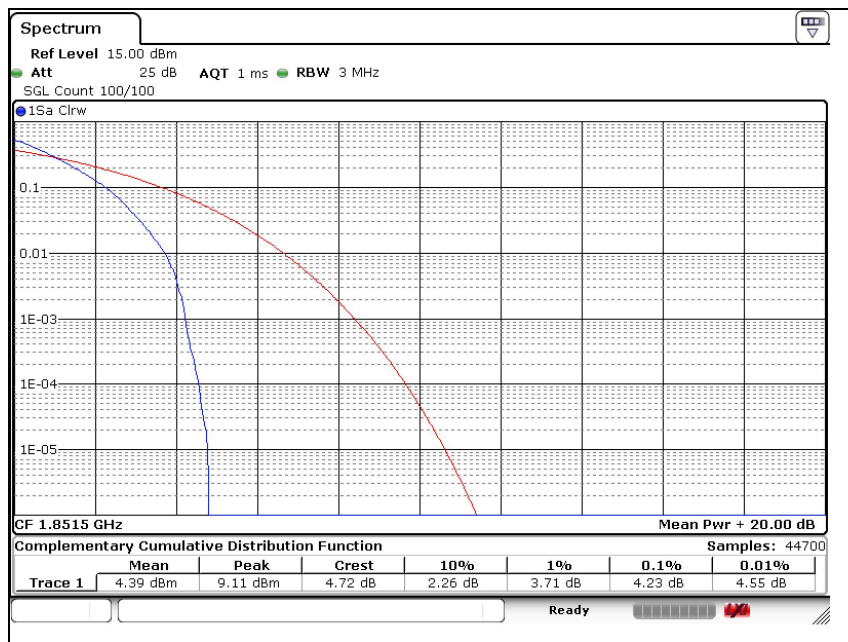
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High Channel



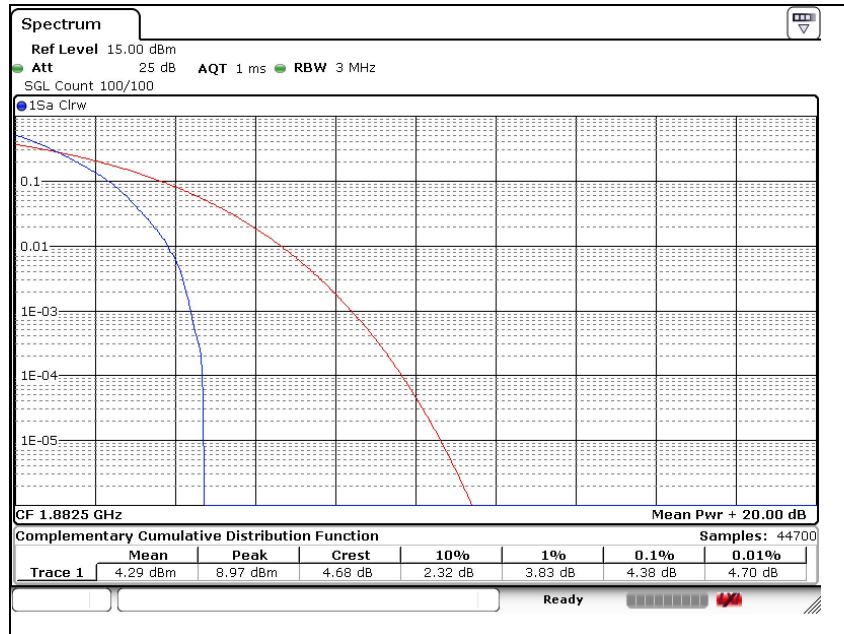
LTE band 25/2 (3 MHz – QPSK)

Low Channel

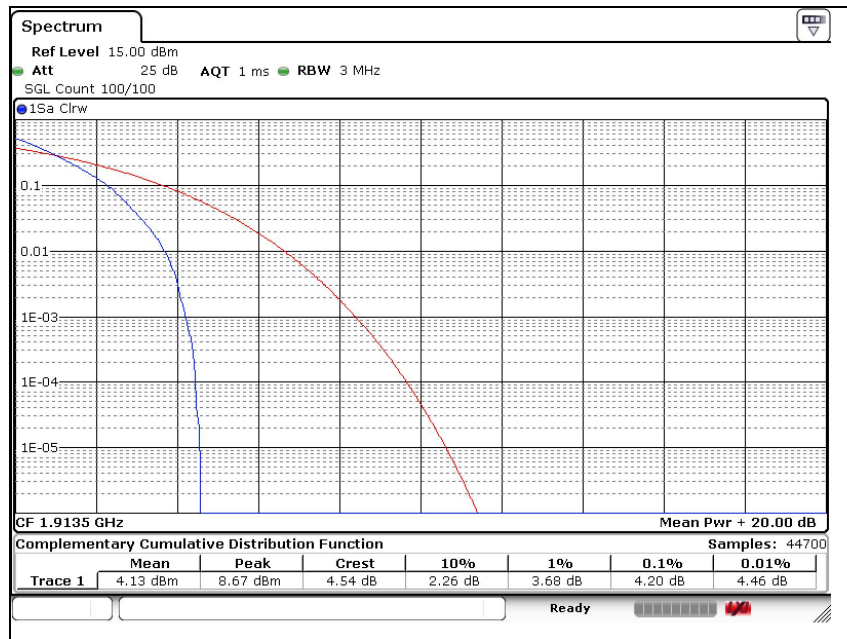


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Middle Channel



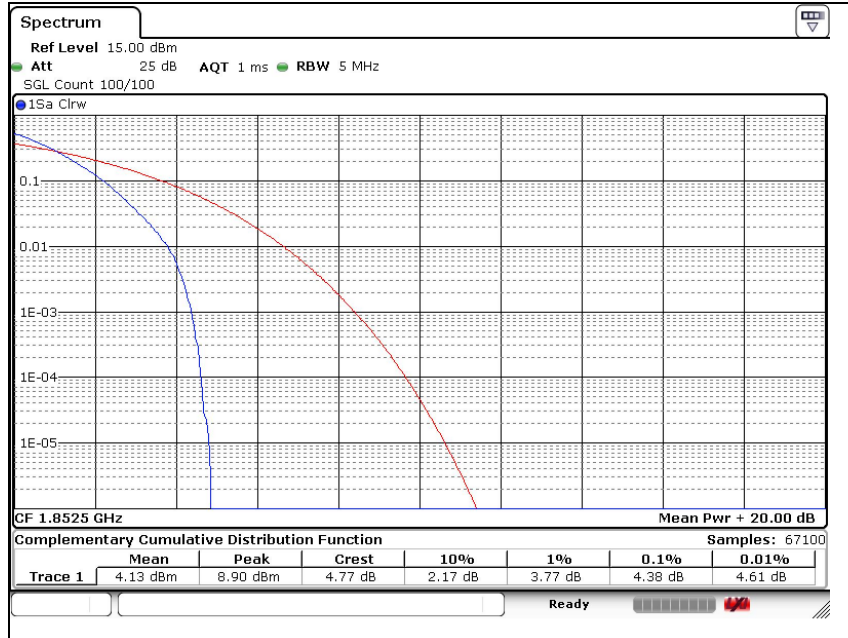
High Channel



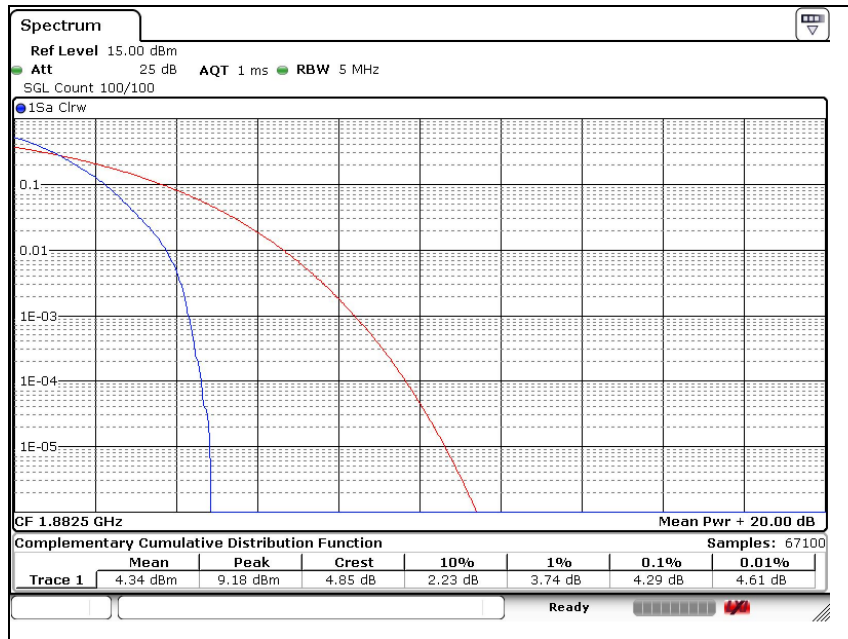
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LTE band 25/2 (5 MHz – QPSK)

Low Channel



Middle Channel



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