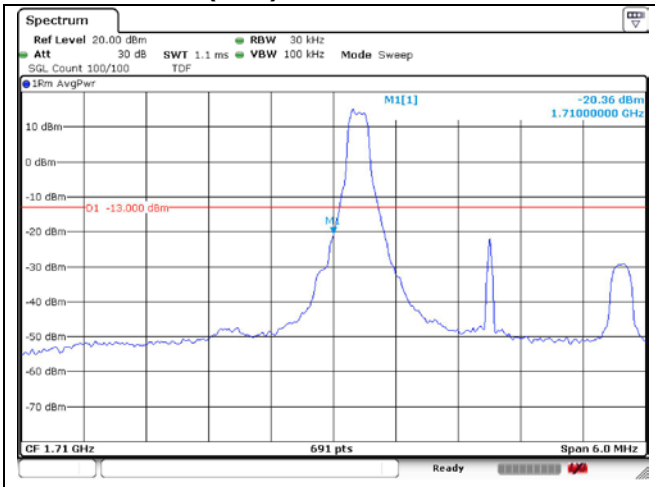
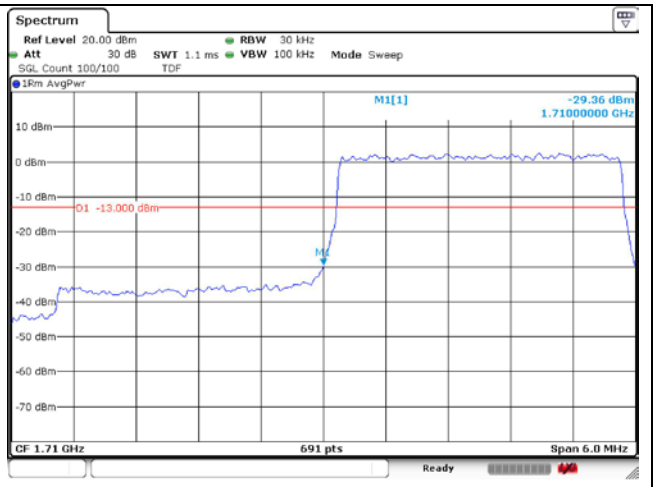
LTE band 66/4 (3 ㎒)

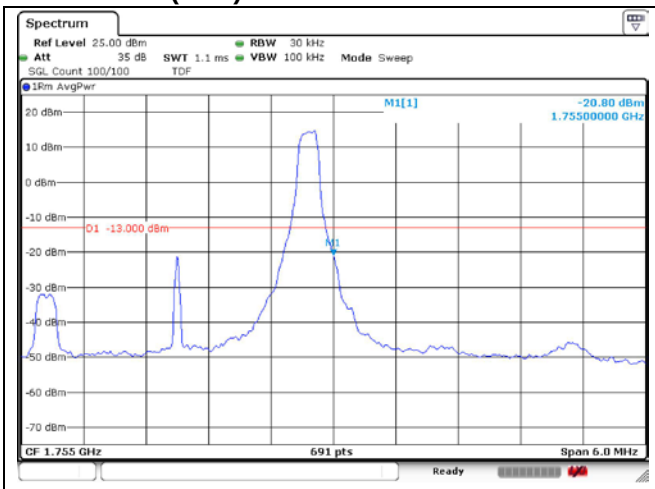


QPSK Low Channel - 1 RB

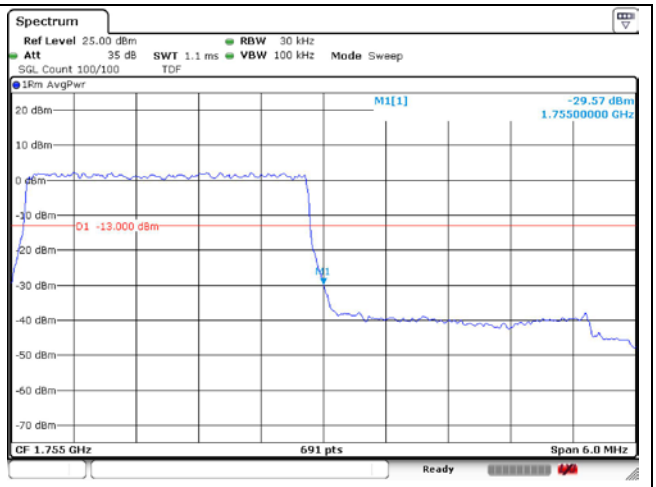


QPSK Low Channel - Full RB

LTE band 4 (3 ㎒)

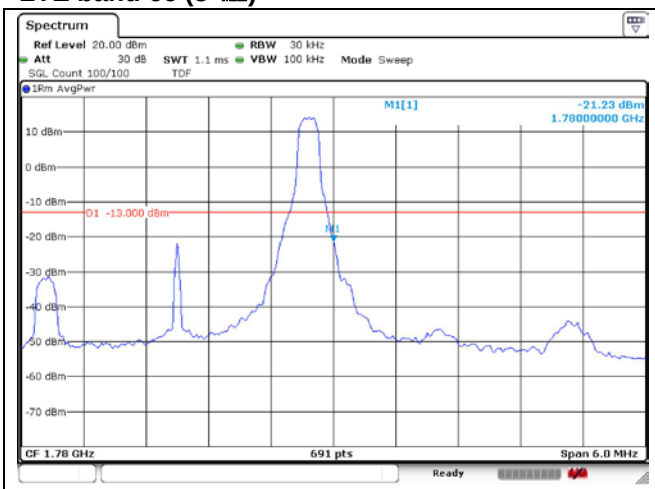


QPSK High Channel - 1 RB

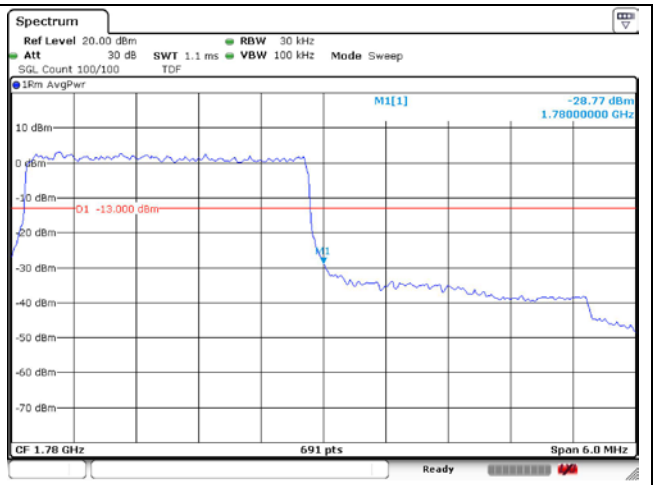


QPSK High Channel - Full RB

LTE band 66 (3 ㎒)

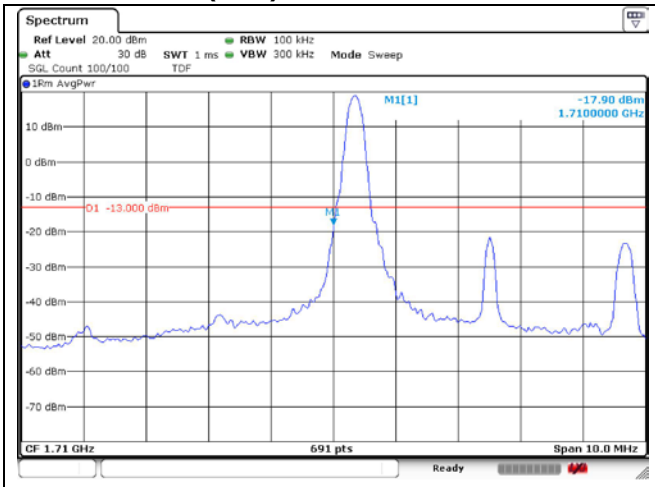


QPSK High Channel - 1 RB

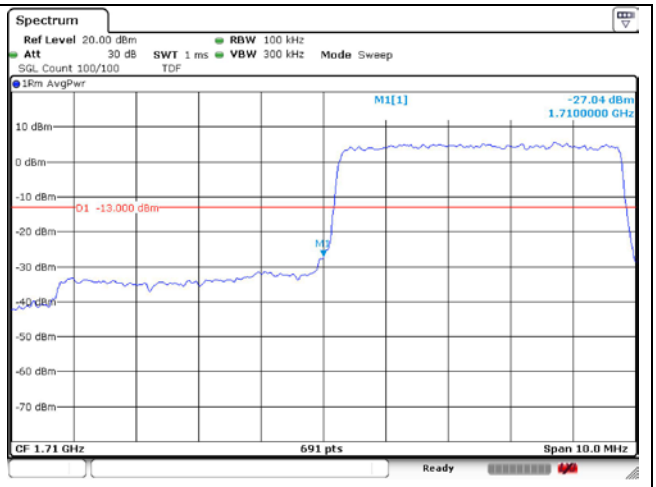


QPSK High Channel - Full RB

LTE band 66/4 (5 ㎒)

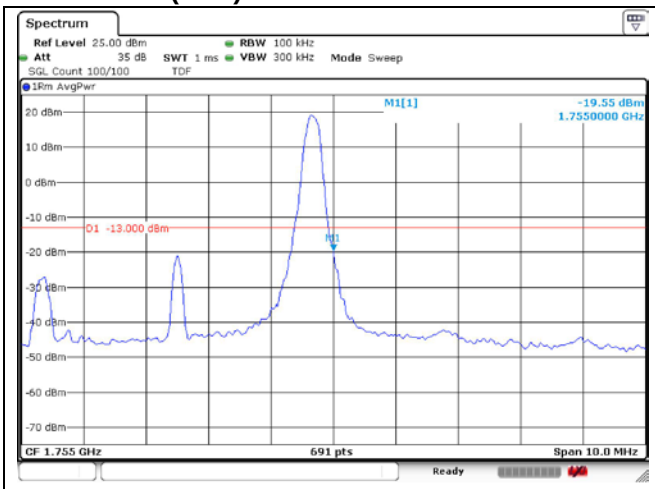


QPSK Low Channel - 1 RB

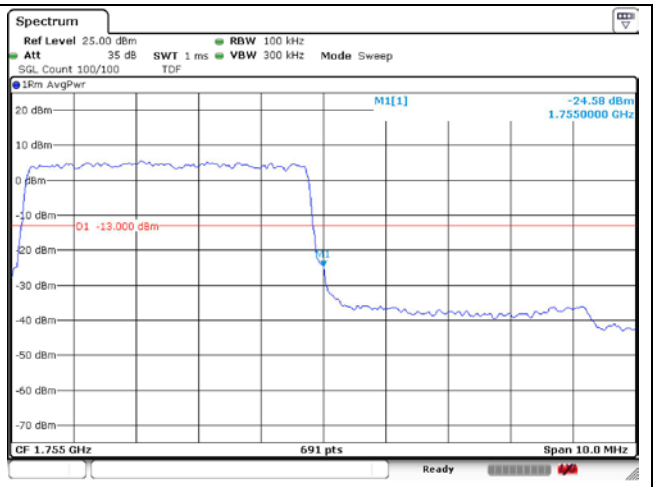


QPSK Low Channel - Full RB

LTE band 4 (5 ㎒)

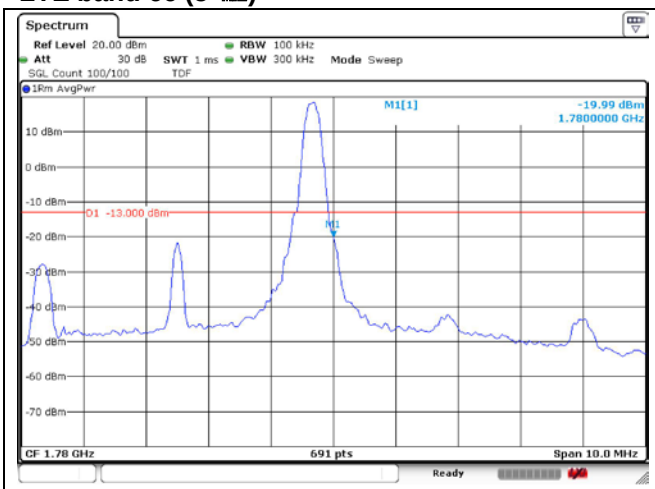


QPSK High Channel - 1 RB

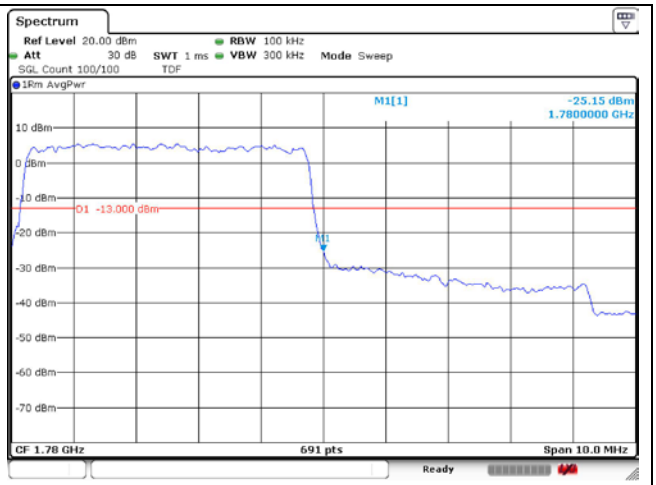


QPSK High Channel - Full RB

LTE band 66 (5 ㎒)

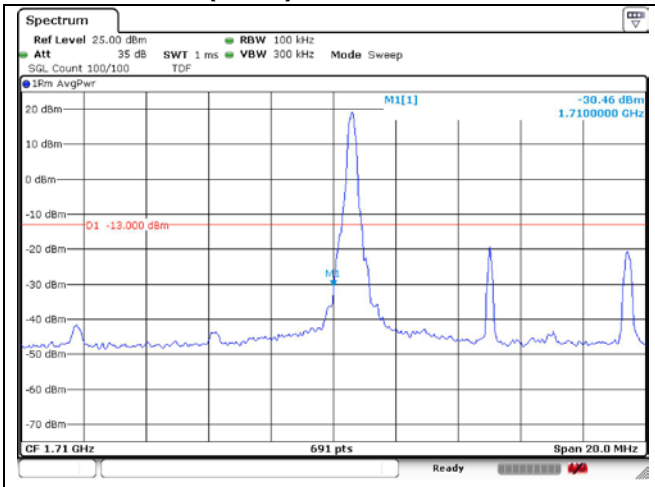


QPSK High Channel - 1 RB

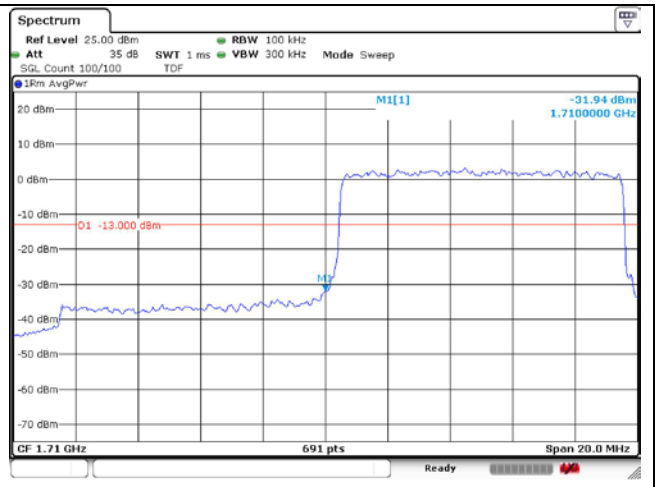


QPSK High Channel - Full RB

LTE band 66/4 (10 ㎒)

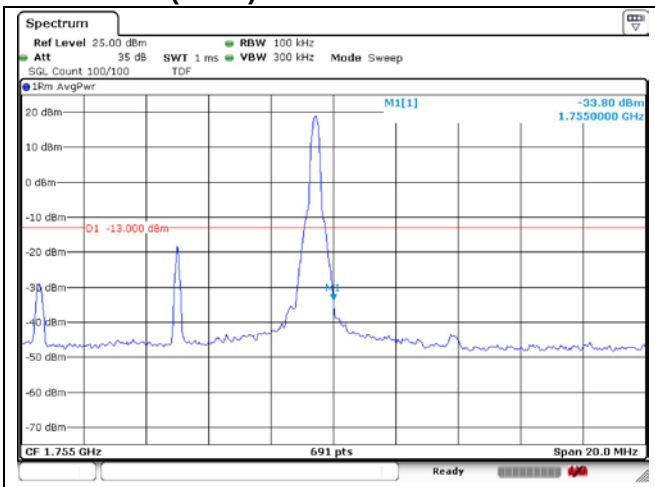


QPSK Low Channel - 1 RB

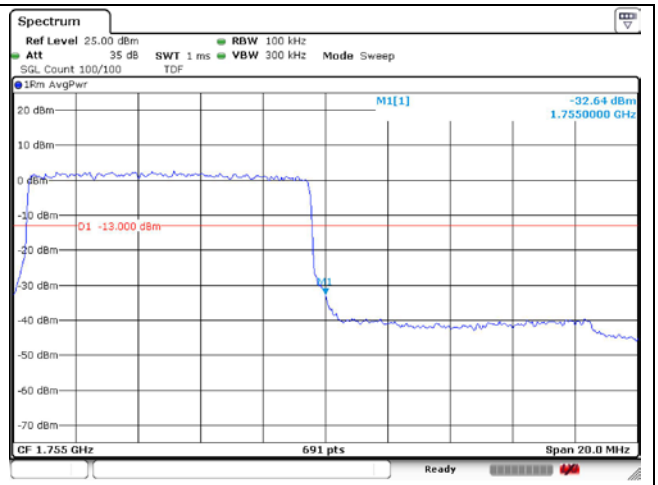


QPSK Low Channel - Full RB

LTE band 4 (10 ㎒)

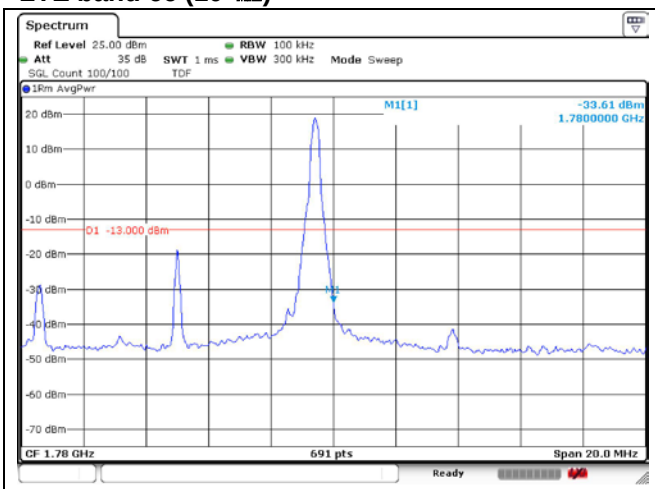


QPSK High Channel - 1 RB

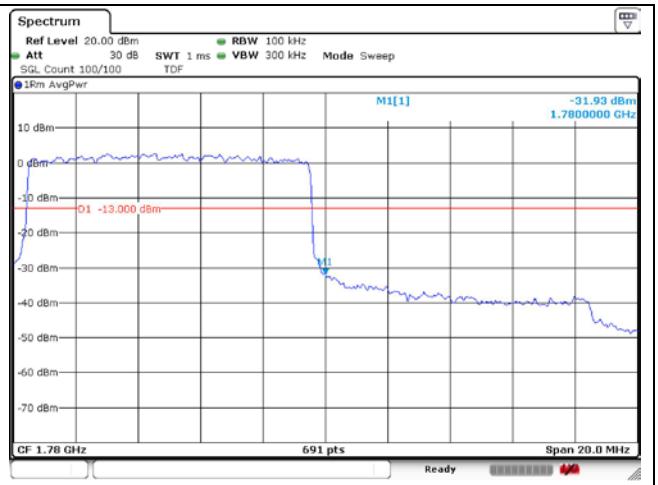


QPSK High Channel - Full RB

LTE band 66 (10 ㎒)

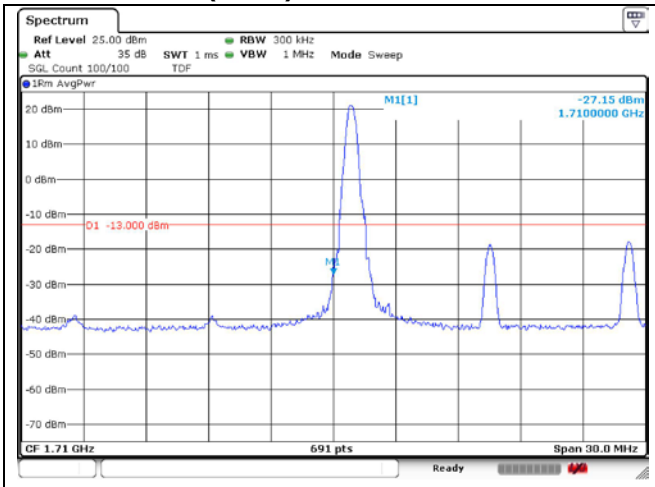


QPSK High Channel - 1 RB

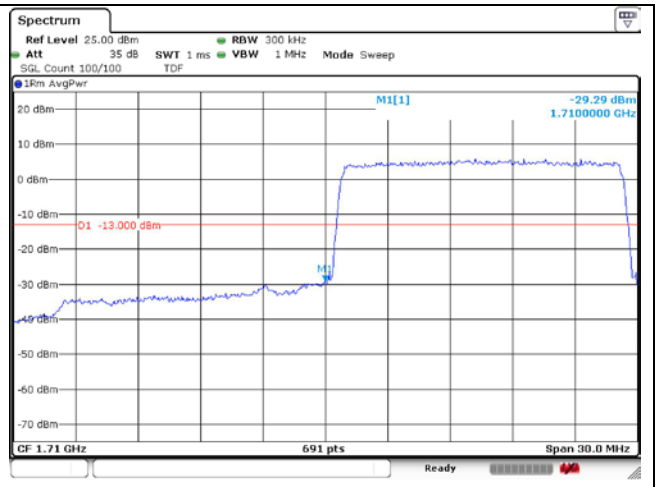


QPSK High Channel - Full RB

LTE band 66/4 (15 ㎒)

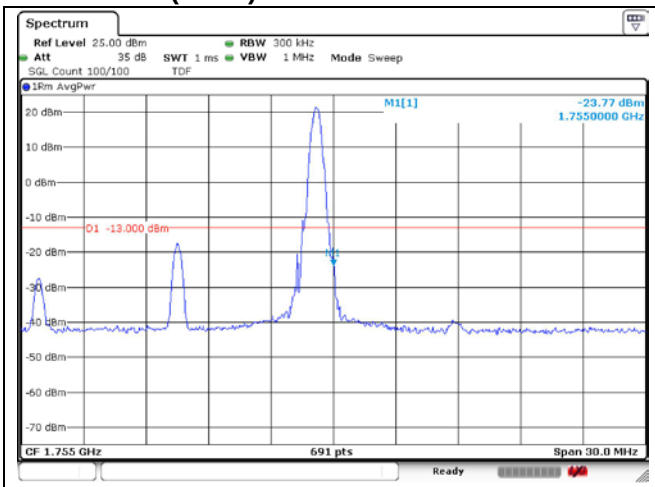


QPSK Low Channel - 1 RB

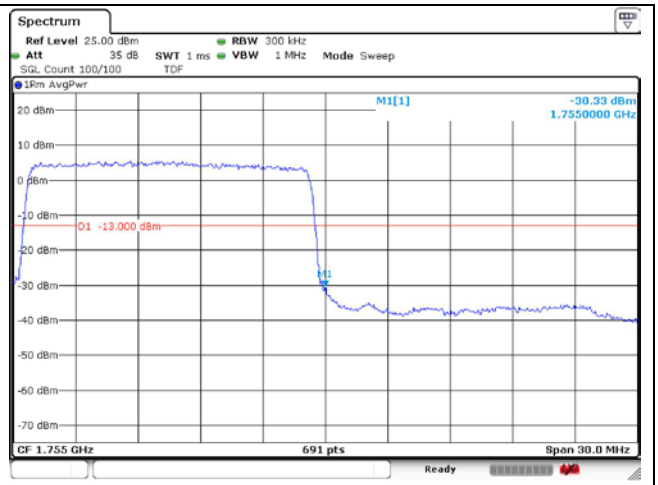


QPSK Low Channel - Full RB

LTE band 4 (15 ㎒)

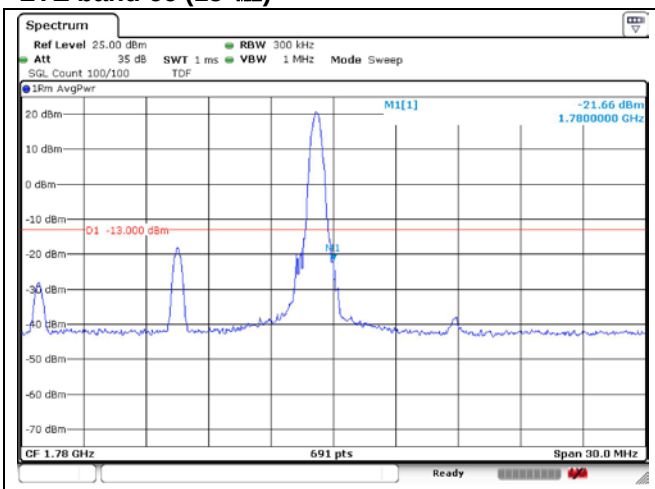


QPSK High Channel - 1 RB

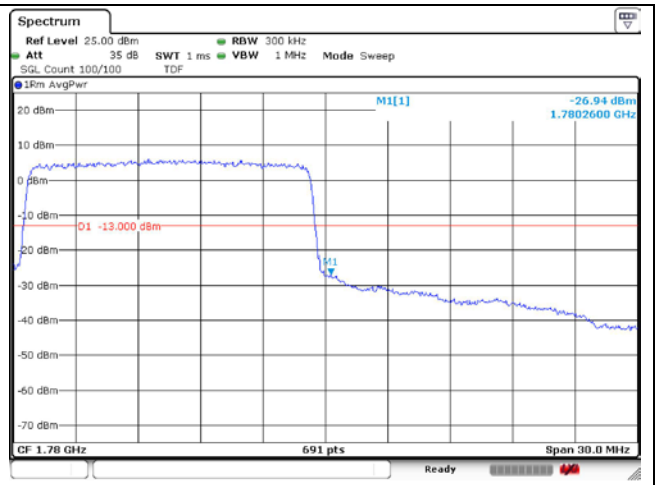


QPSK High Channel - Full RB

LTE band 66 (15 ㎒)

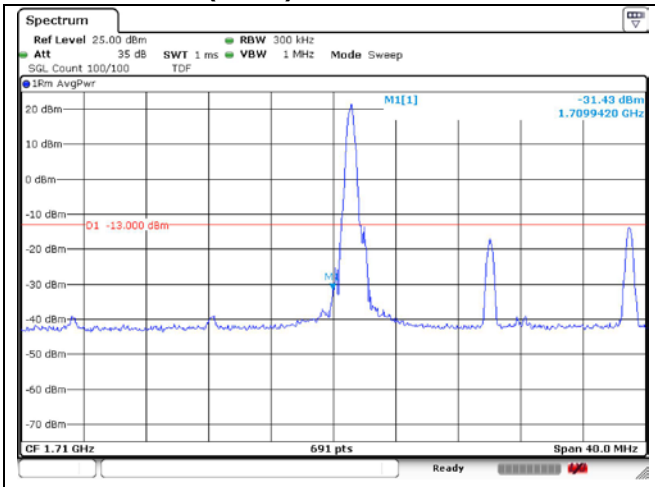


QPSK High Channel - 1 RB

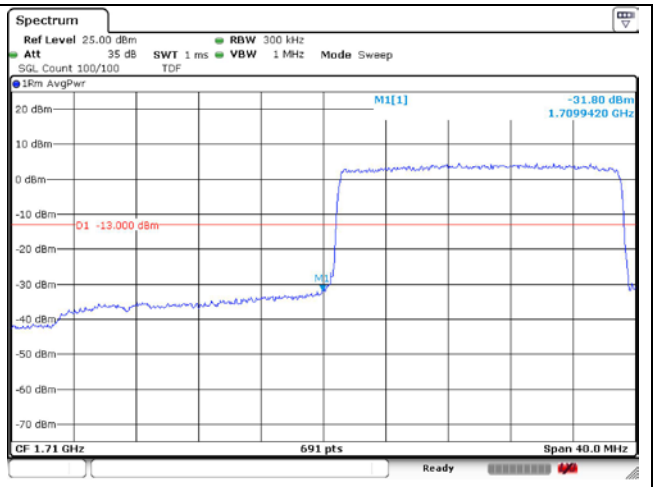


QPSK High Channel - Full RB

LTE band 66/4 (20 ㎒)

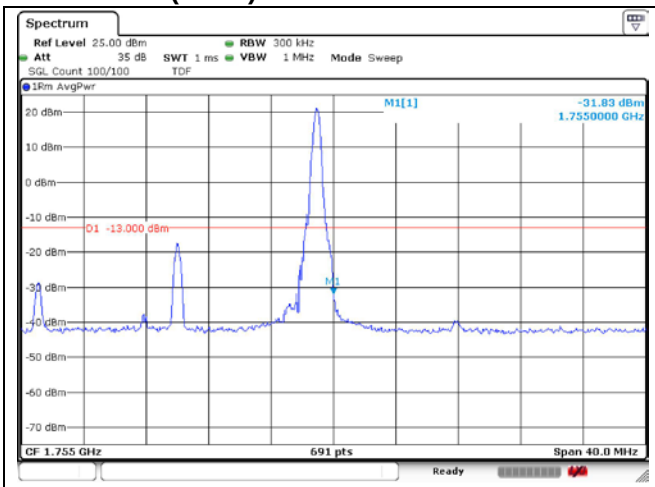


QPSK Low Channel - 1 RB

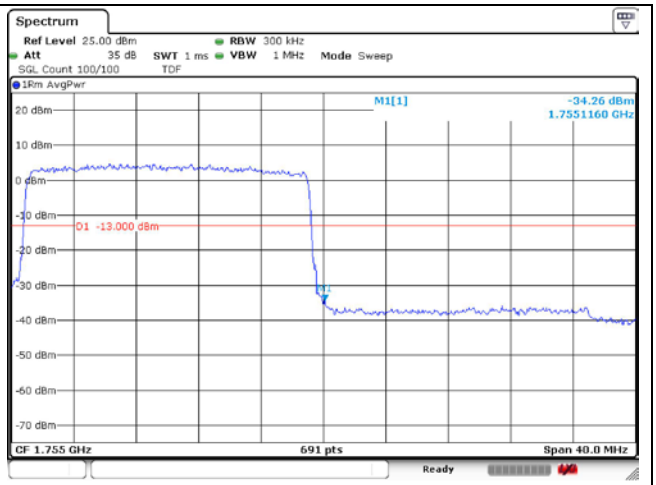


QPSK Low Channel - Full RB

LTE band 4 (20 ㎒)

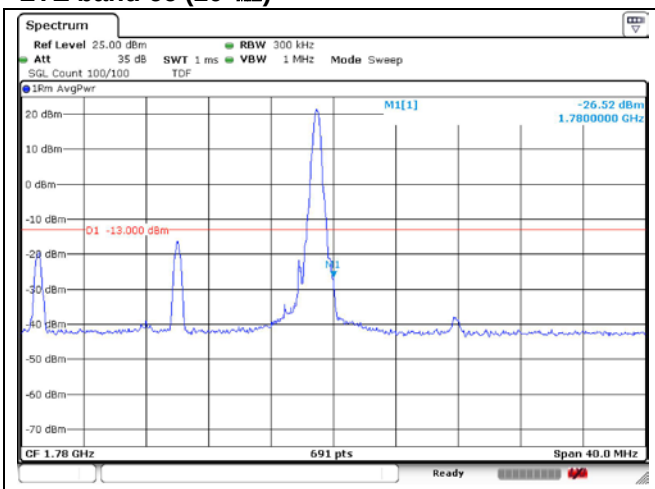


QPSK High Channel - 1 RB

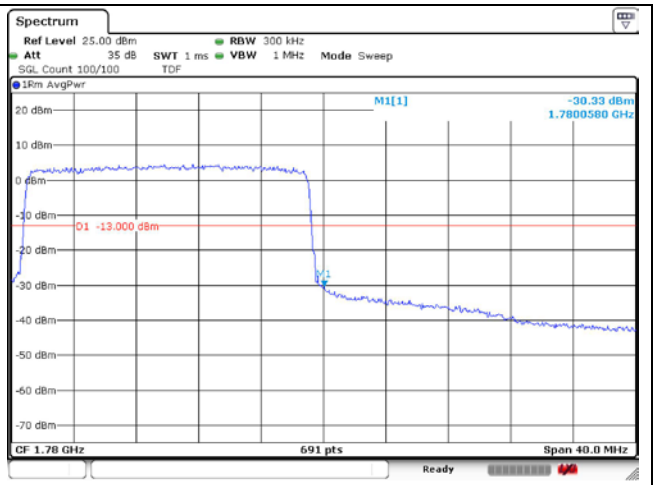


QPSK High Channel - Full RB

LTE band 66 (20 ㎒)



QPSK High Channel - 1 RB



QPSK High Channel - Full RB

7. Frequency Stability

7.1. Limit

- § 2.1055 (a), § 2.1055 (d) & following:

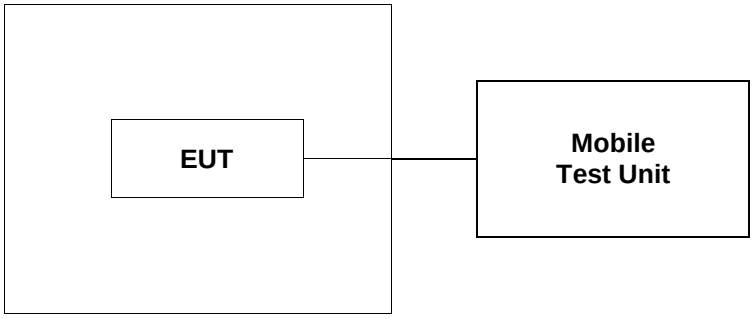
- §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table of this section.
For Mobile devices operating in the 824 to 849 ㎒ band at a power level less than or equal to 3 Watts, the limit specified in Table C-1 is +/- 2.5 ppm.

- §24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

- §27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

7.2. Test Procedure

1. Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a Mobile Test Unit via feed-through attenuators.
2. The EUT was placed inside the temperature chamber.
3. After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from Mobile Test Unit.



Temperature Chamber

7.3. Test Results

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

LTE band 2 at middle channel

Operating Frequency: 1 880.0 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	3.8	-2.88	0.000 43
40		-2.51	0.000 63
30		-3.11	0.000 31
20 (Ref.)		-3.69	-
10		-3.42	0.000 14
0		-2.54	0.000 61
-10		-2.78	0.000 48
-20		-1.65	0.001 09
-30		-1.98	0.000 91
Frequency Stability versus Power Supply			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	4.37	-2.24	0.000 77
	3.23	-1.71	0.001 05

LTE band 5 at middle channel

Operating Frequency: 836.5 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	3.8	-1.57	-0.001 26
40		-1.33	-0.000 97
30		0.62	0.001 36
20 (Ref.)		-0.52	-
10		-0.78	-0.000 31
0		1.24	0.002 10
-10		-0.51	0.000 01
-20		-0.54	-0.000 02
-30		0.82	0.001 60
Frequency Stability versus Power Supply			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	4.37	1.01	0.001 83
	3.23	-1.84	-0.001 58

LTE band 13 at middle channel

Operating Frequency: 782.0 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	3.8	2.51	0.002 15
40		1.94	0.001 42
30		1.16	0.000 42
20 (Ref.)		0.83	-
10		0.45	-0.000 49
0		-0.77	-0.002 05
-10		-0.57	-0.001 79
-20		-1.42	-0.002 88
-30		-2.02	-0.003 64
Frequency Stability versus Power Supply			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	4.37	-2.33	-0.004 04
	3.23	-1.67	-0.003 20

LTE band 66/4 at middle channel

Operating Frequency: 1 745.0 ㎒			
Frequency Stability versus Temperature			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
50	3.8	-2.54	0.000 19
40		-3.31	-0.000 25
30		-3.92	-0.000 60
20 (Ref.)		-2.88	-
10		-1.82	0.000 61
0		-2.42	0.000 26
-10		-1.99	0.000 51
-20		-2.73	0.000 09
-30		-2.12	0.000 44
Frequency Stability versus Power Supply			
Environment Temperature (°C)	**Power Supplied (V)**	**Frequency Measure with Time Elapse**	
		Frequency Error (㎐)	**ppm**
20	4.37	-3.12	-0.000 14
	3.23	-1.79	0.000 62

- End of the Test Report -