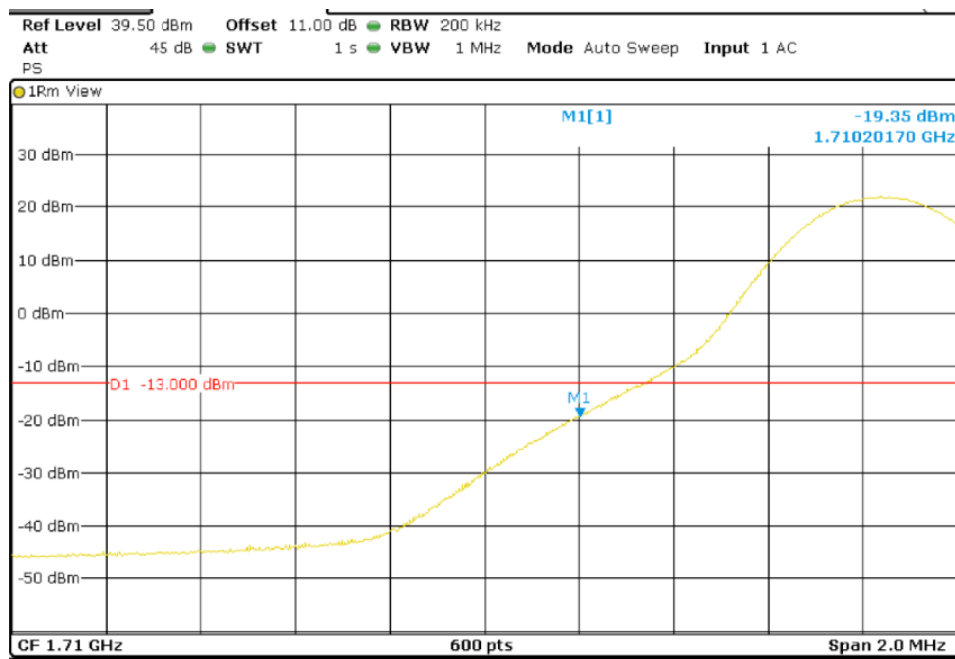


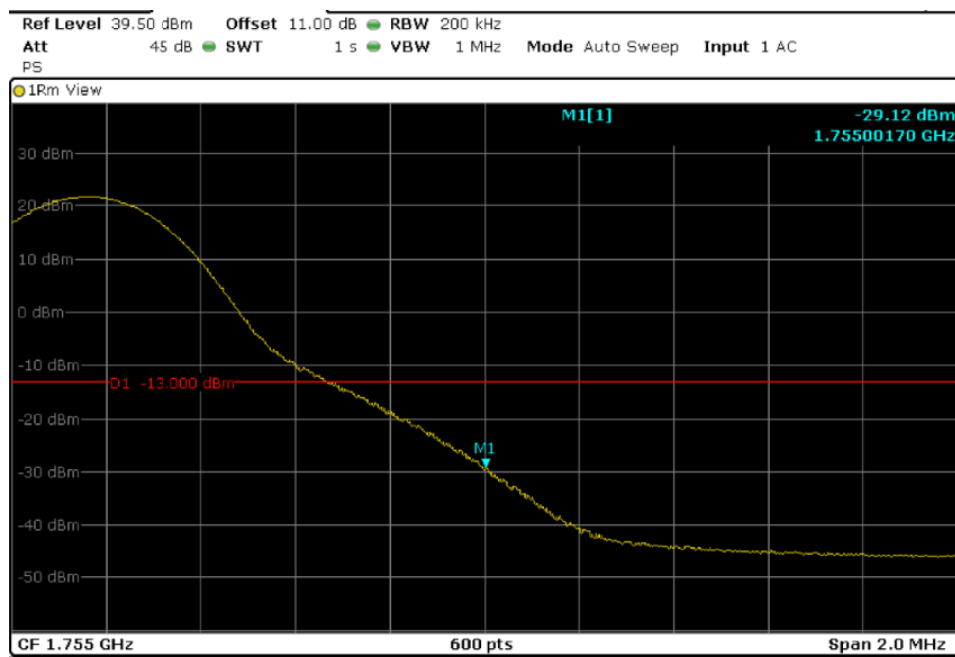
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 15 MHz

Lowest Channel



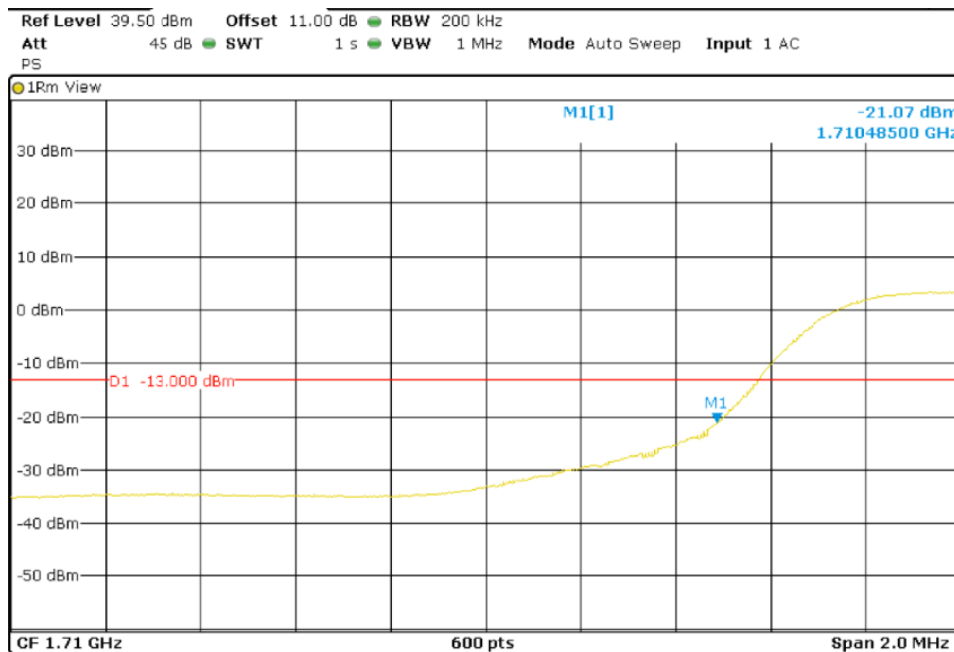
Highest Channel



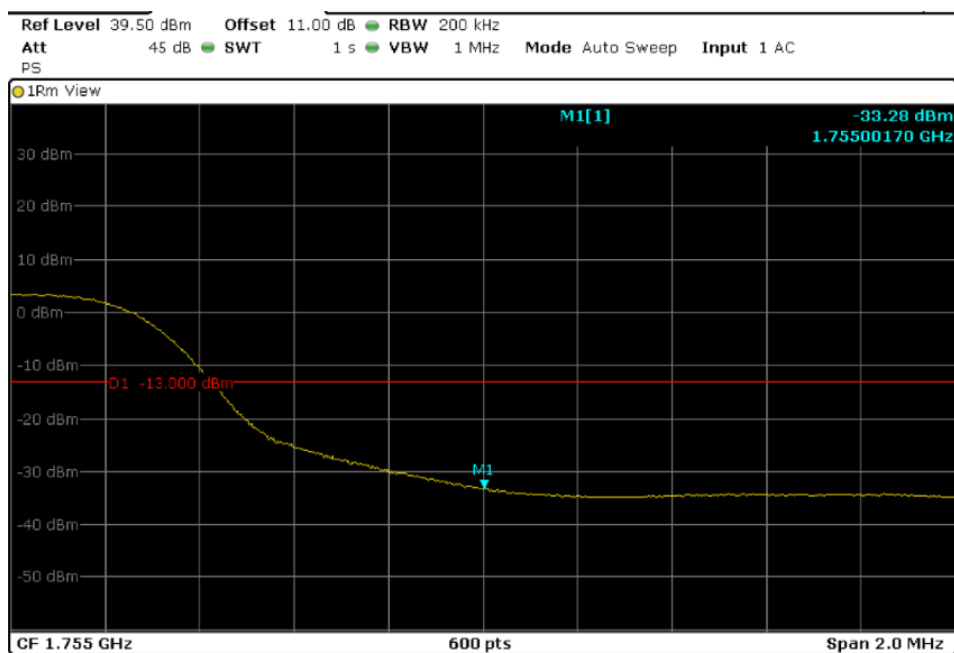
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 75. Offset = 0. BW = 15 MHz

Lowest Channel



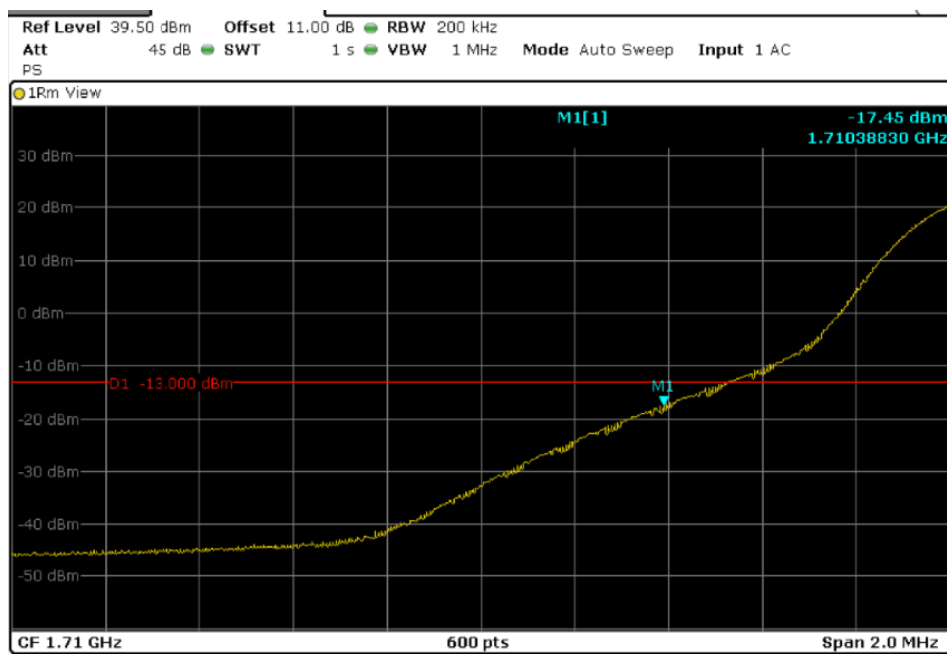
Highest Channel



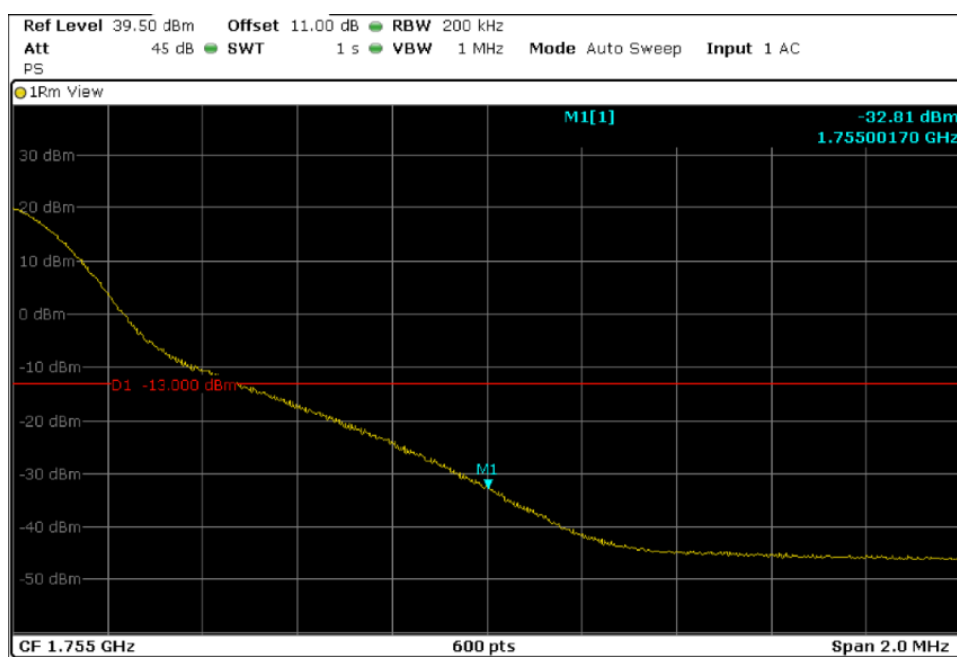
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 20 MHz

Lowest Channel



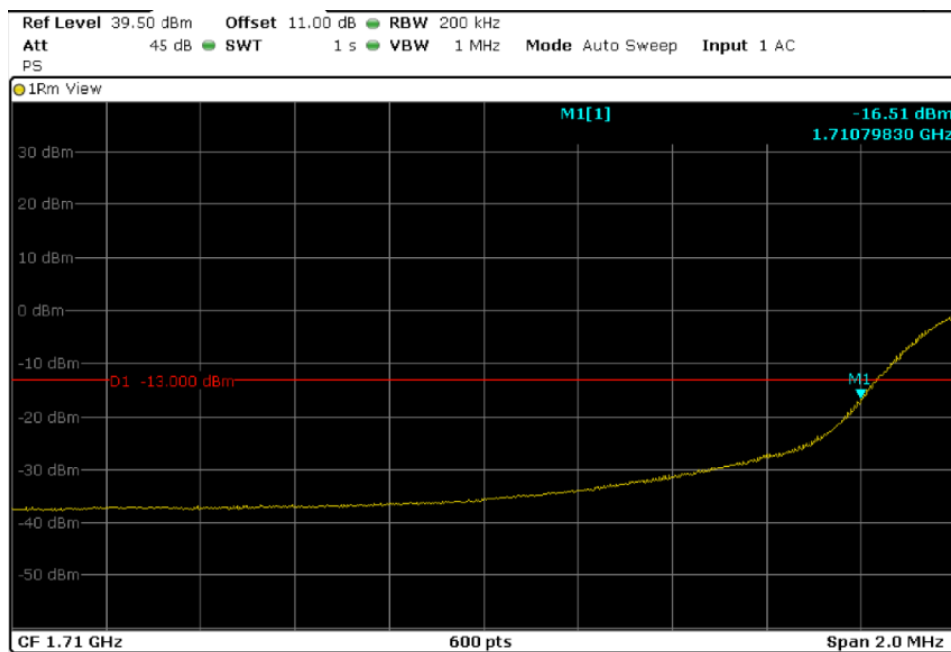
Highest Channel



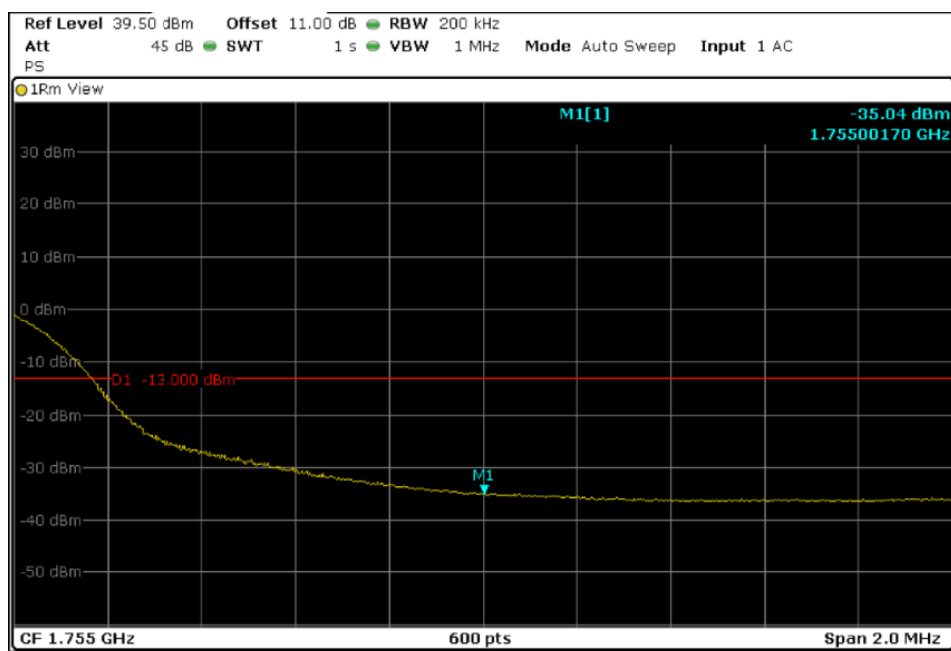
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 100. Offset = 0. BW = 20 MHz

Lowest Channel



Highest Channel



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#02 (Band 7)
TEST RESULTS:	PASS

RESULTS

LTE QPSK MODULATION	RB=1 Offset =0 BW = 5 MHz	RB=1 Offset =0 BW = 10 MHz	RB=1 Offset =0 BW = 15 MHz	RB=1 Offset =0 BW = 20 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-21.02	-21.25	-24.32	-27.53

LTE QPSK MODULATION	RB=25 Offset =0 BW = 5 MHz	RB=50 Offset =0 BW = 10 MHz	RB=75 Offset =0 BW = 15 MHz	RB=100 Offset =0 BW = 20 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-25.24	-24	-27.81	-31.78

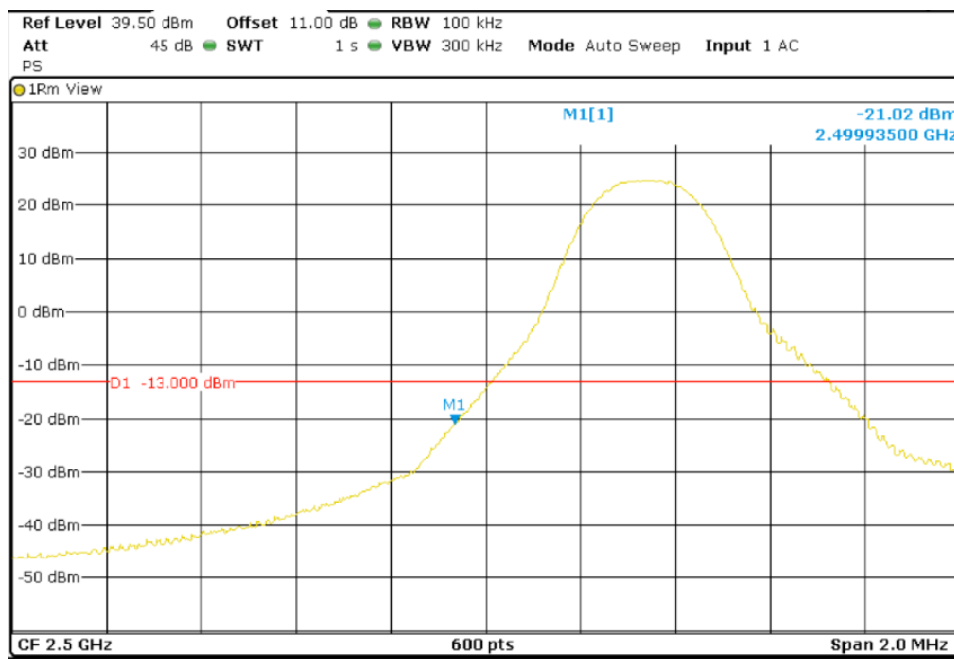
LTE QPSK MODULATION	RB=1 Offset =0 BW = 5 MHz	RB=1 Offset =0 BW = 10 MHz	RB=1 Offset =0 BW = 15 MHz	RB=1 Offset =0 BW = 20 MHz
Maximum measured level at Highest Block Edge at antenna port (dBm)	-30.89	-30.16	-26.17	-28.49

LTE QPSK MODULATION	RB=25 Offset =0 BW = 5 MHz	RB=50 Offset =0 BW = 10 MHz	RB=75 Offset =0 BW = 15 MHz	RB=100 Offset =0 BW = 20 MHz
Maximum measured level at Highest Block Edge at antenna port (dBm)	-30.29	-29.88	-28.24	-29.82

TEST RESULTS (Cont):

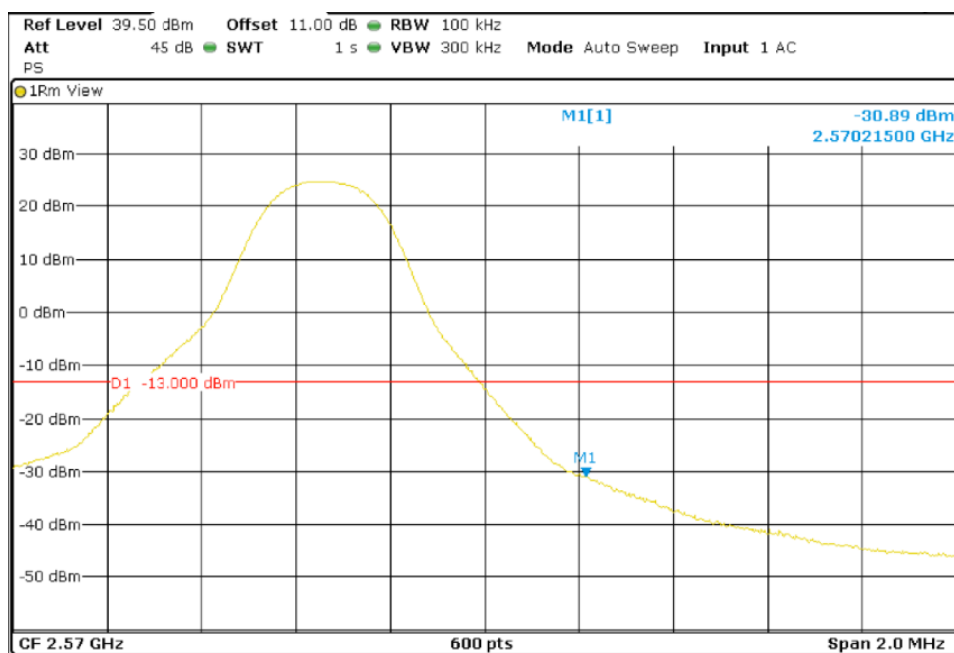
LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 5 MHz

Lowest Channel



LTE QPSK MODULATION. RB = 1. Offset = Max. BW = 5 MHz

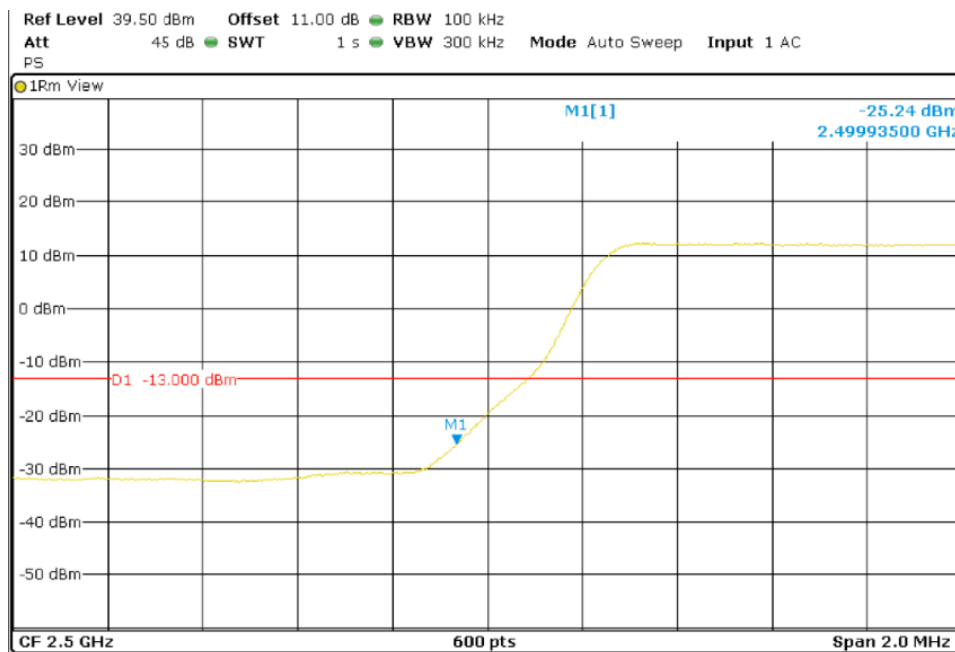
Highest Channel



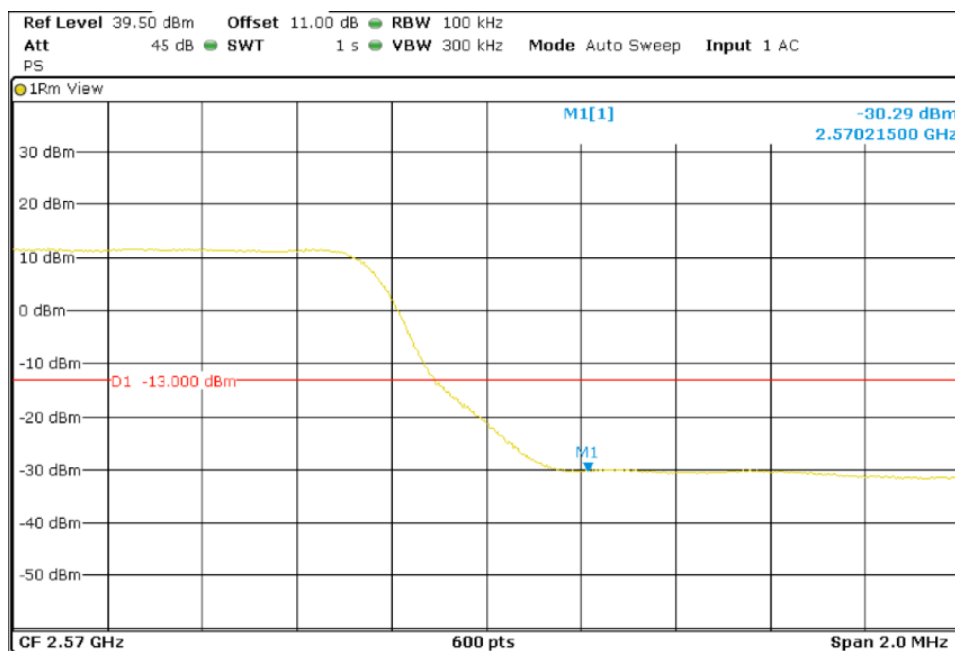
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 25. Offset = 0. BW = 5 MHz

Lowest Channel



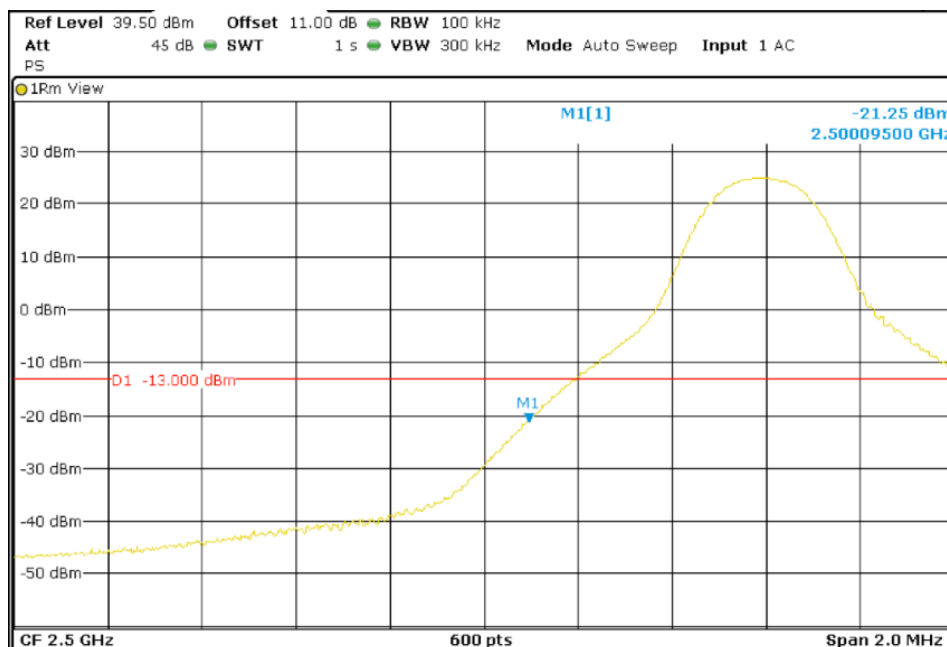
Highest Channel



TEST RESULTS (Cont):

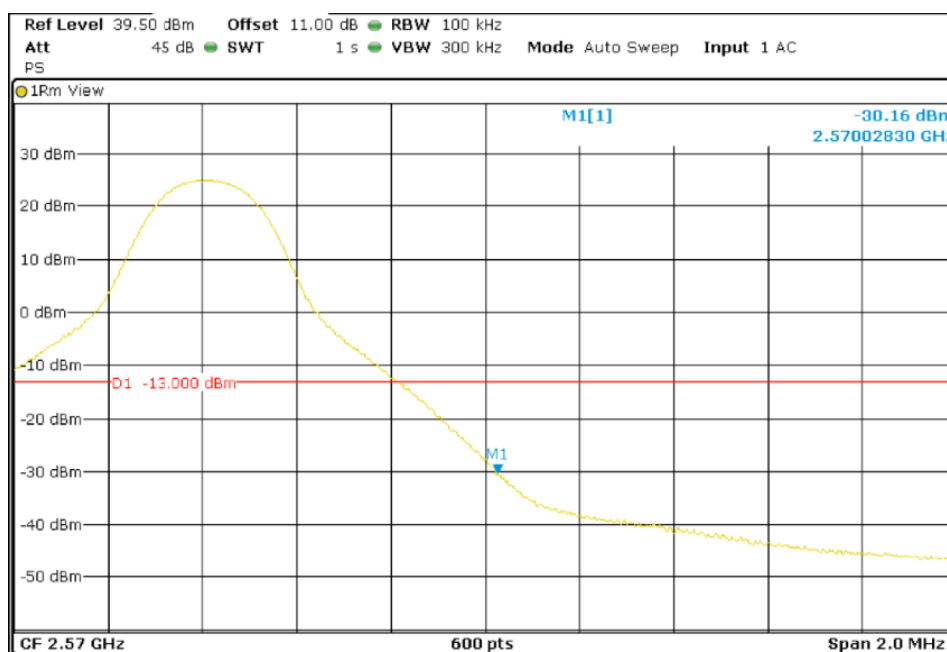
LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 10 MHz

Lowest Channel



LTE QPSK MODULATION. RB = 1. Offset = Max. BW = 10 MHz

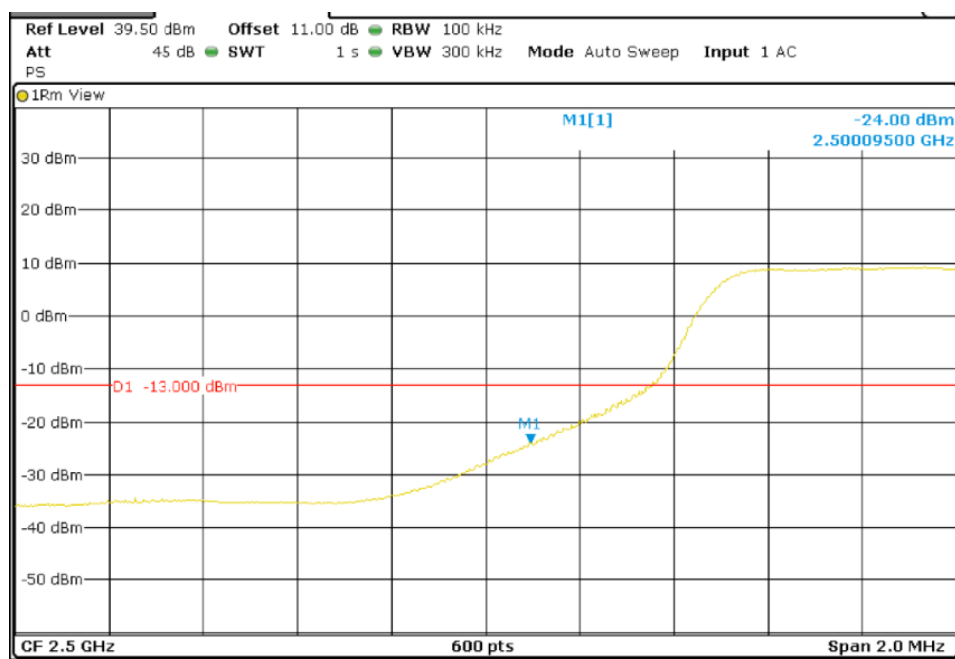
Highest Channel



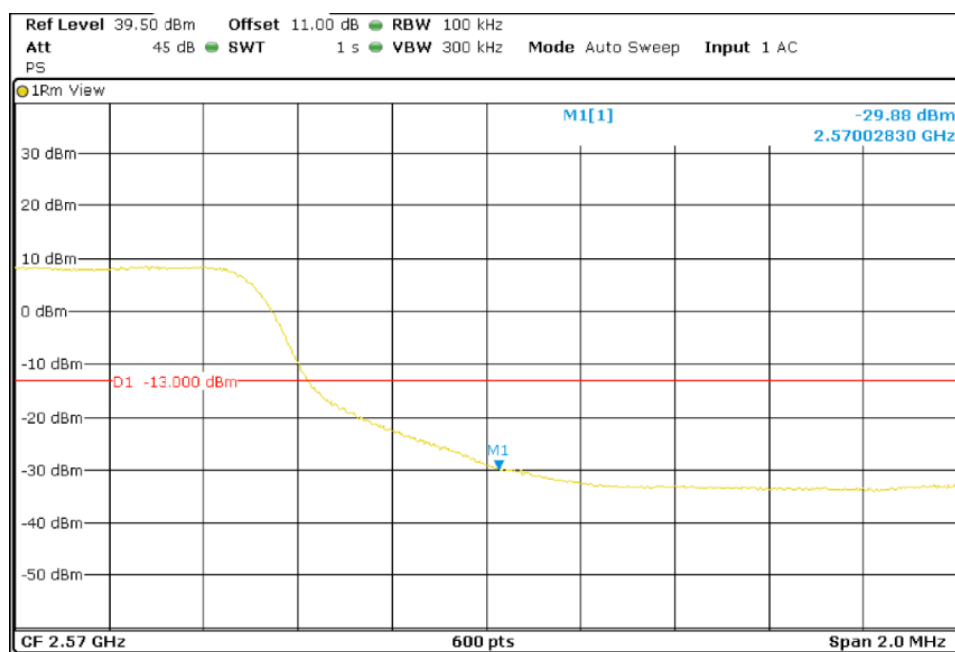
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 50. Offset = 0. BW = 10 MHz

Lowest Channel



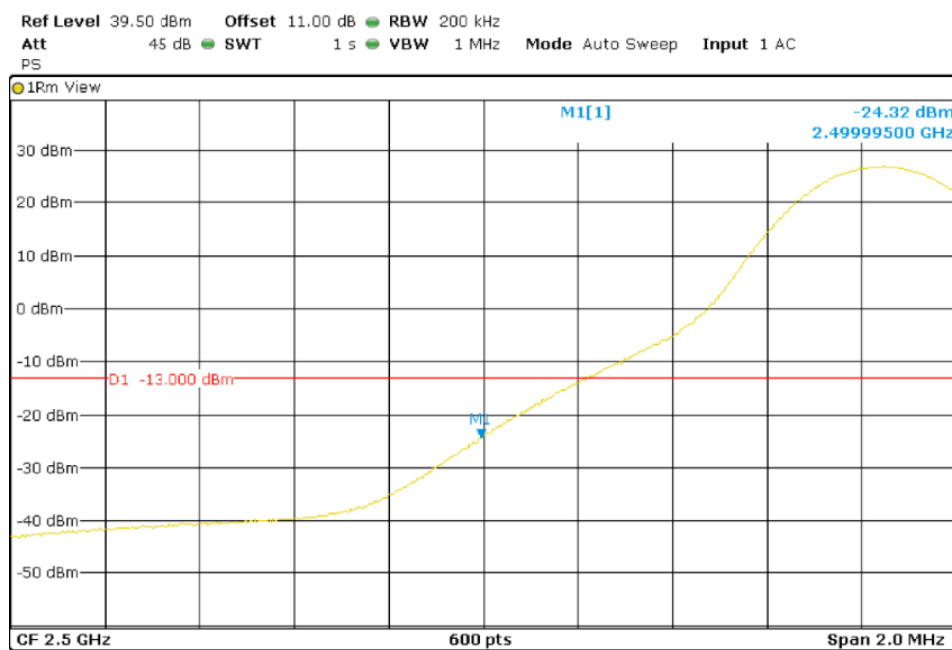
Highest Channel



TEST RESULTS (Cont):

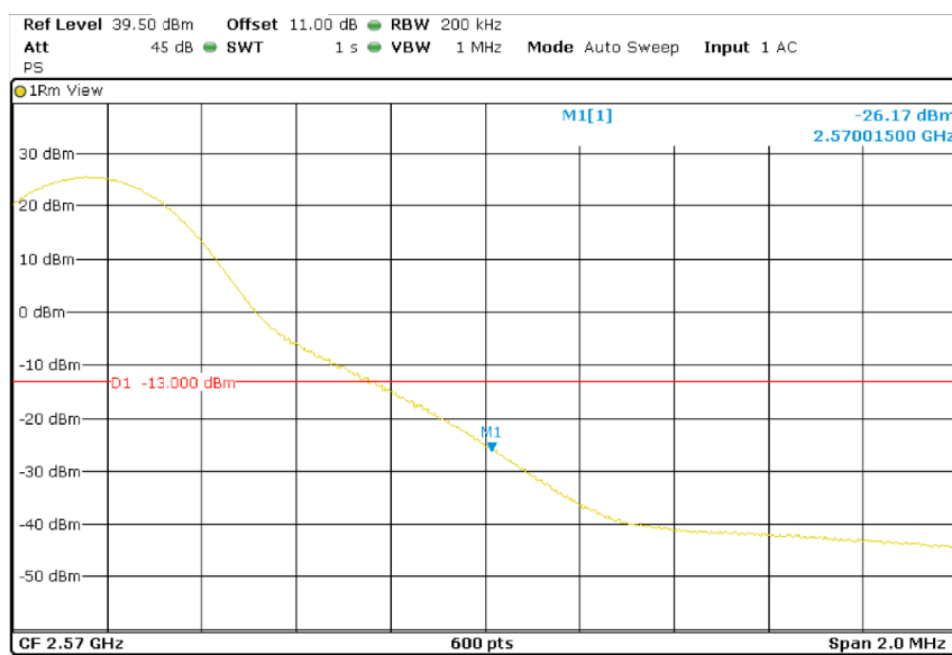
LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 15 MHz

Lowest Channel



LTE QPSK MODULATION. RB = 1. Offset = Max. BW = 15 MHz

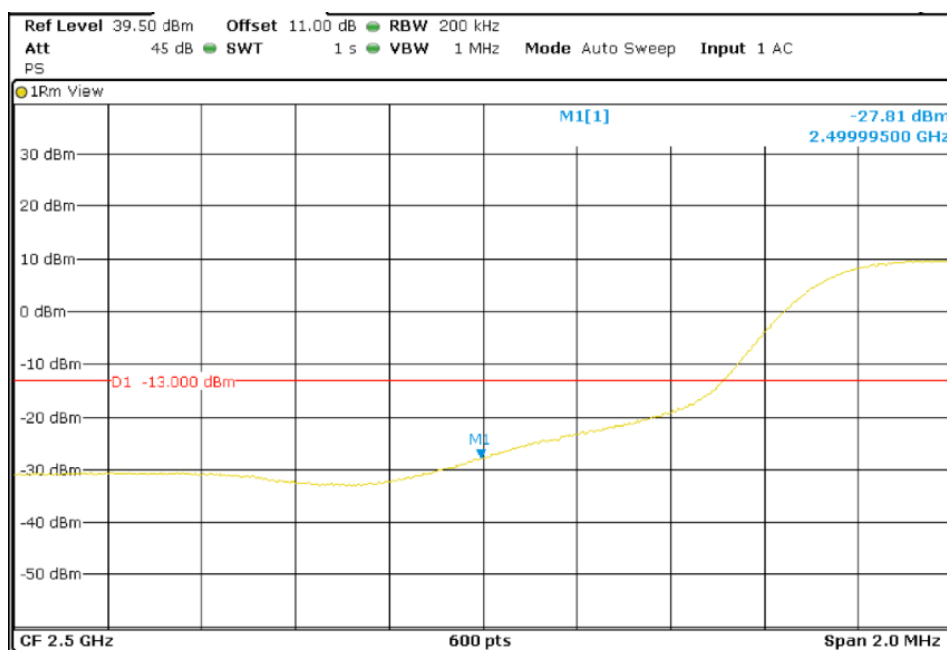
Highest Channel



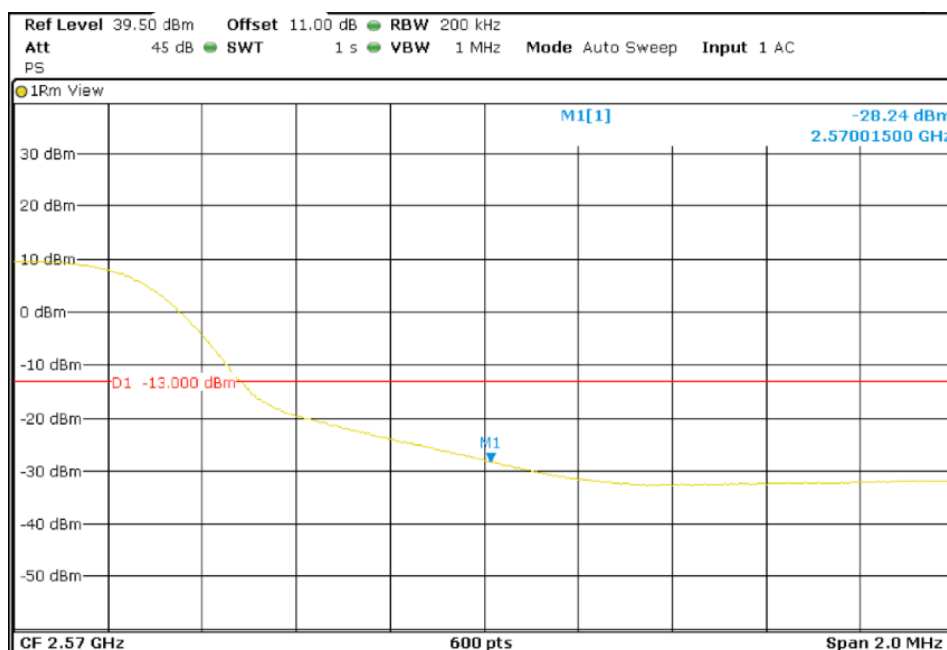
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 75. Offset = 0. BW = 15 MHz

Lowest Channel



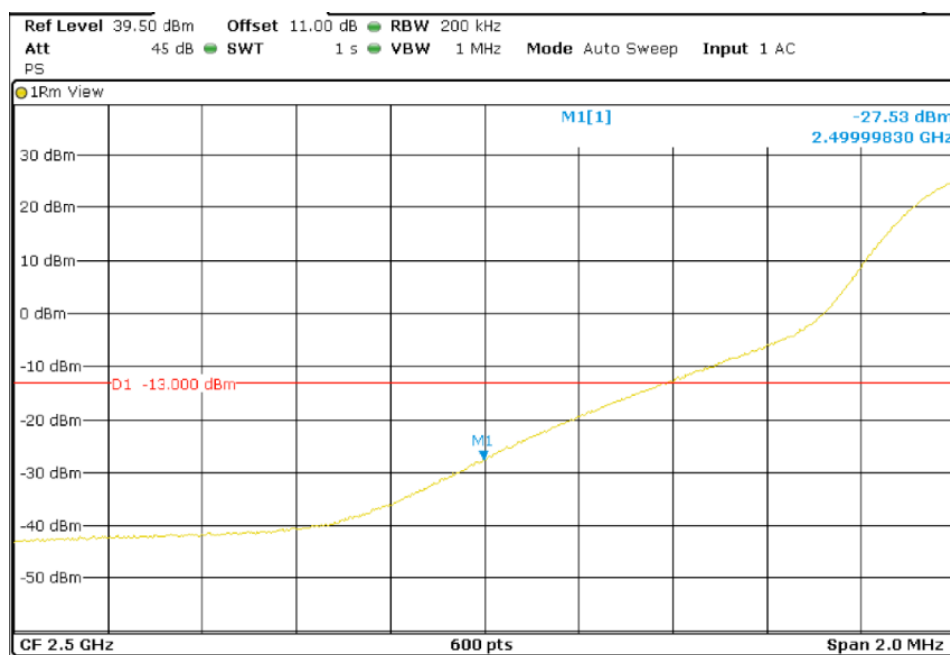
Highest Channel



TEST RESULTS (Cont):

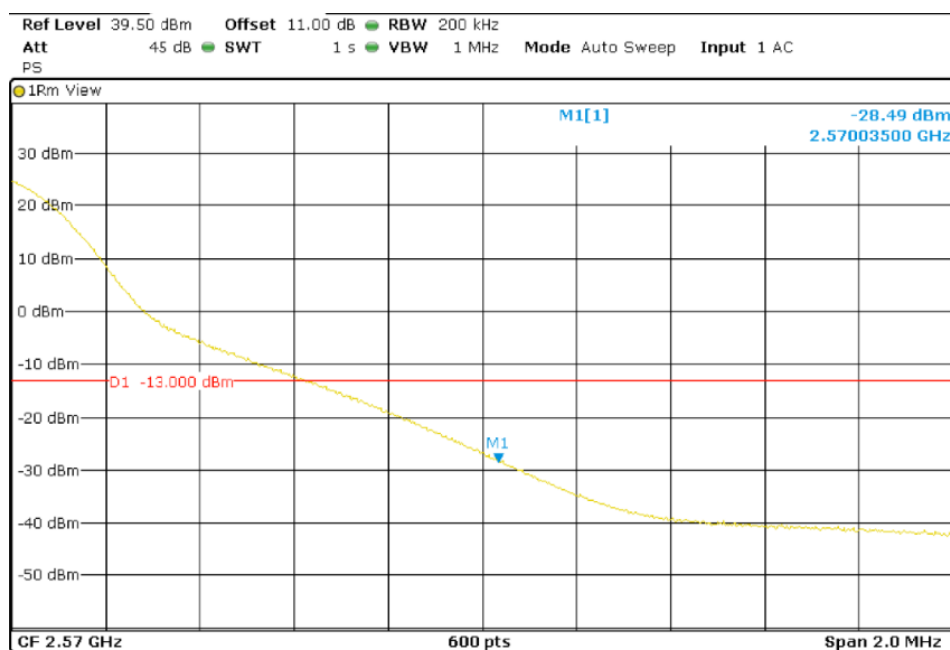
LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 20 MHz

Lowest Channel



LTE QPSK MODULATION. RB = 1. Offset = Max. BW = 20 MHz

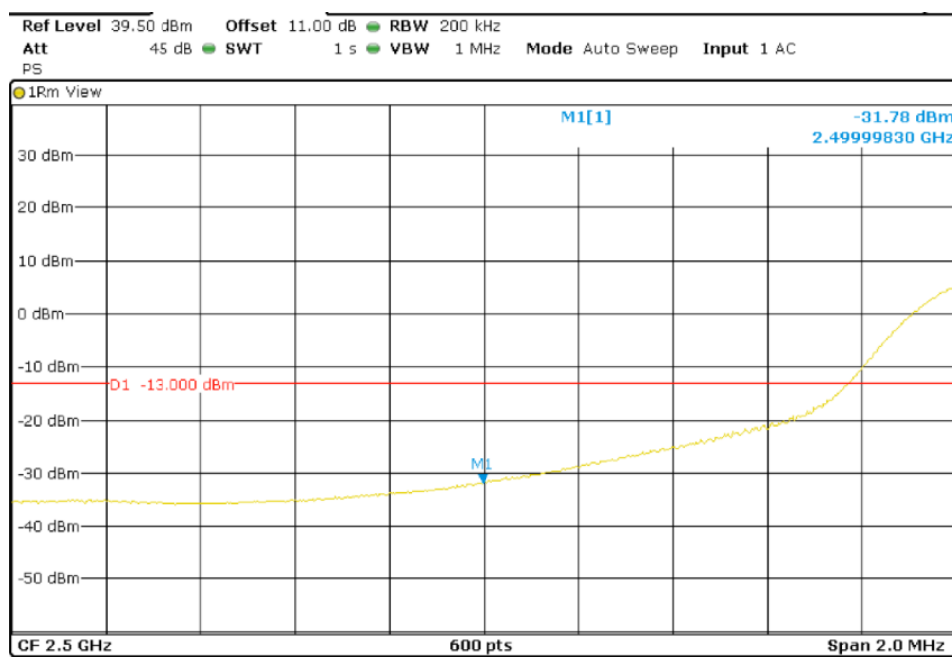
Highest Channel



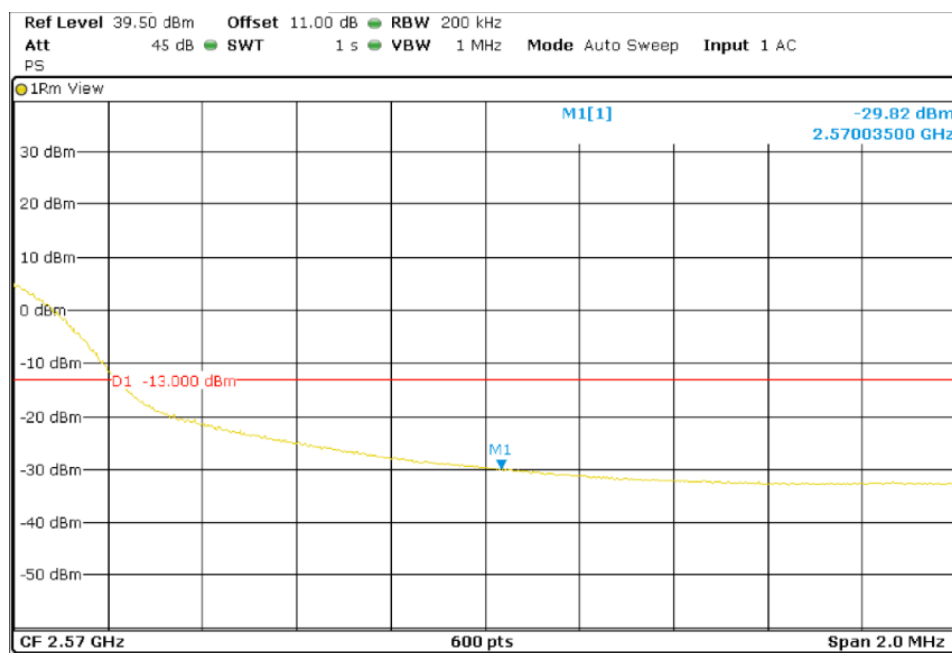
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 100. Offset = 0. BW = 20 MHz

Lowest Channel



Highest Channel

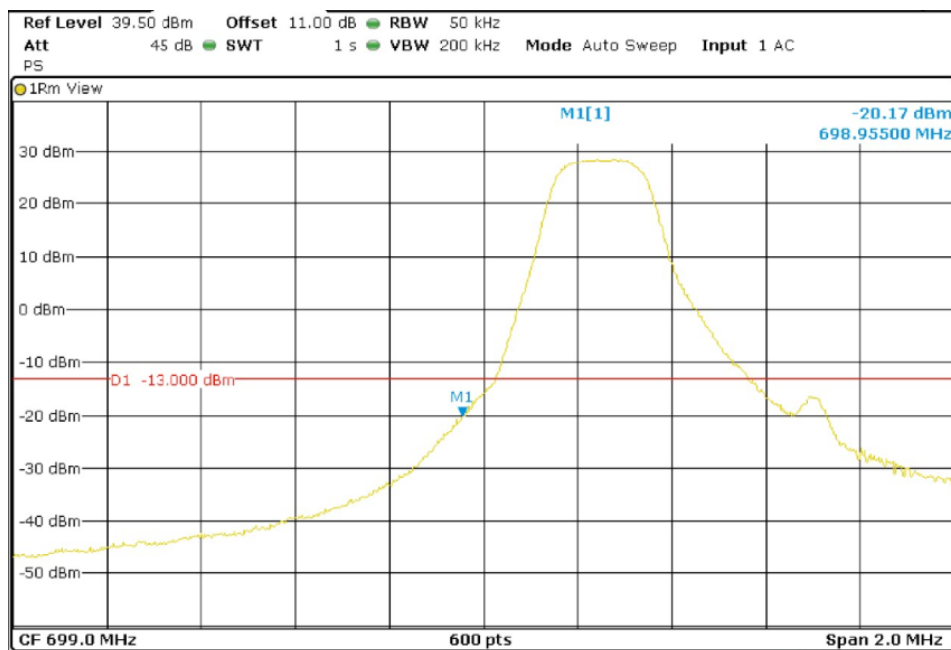


TESTED SAMPLES:		S/01		
TESTED CONDITIONS MODES:		TC#03 (Band 12)		
TEST RESULTS:		PASS		
LTE QPSK MODULATION	RB=1. Offset=0. BW=1.4 MHz	RB=1. Offset =0. BW = 3 MHz	RB=1. Offset =0. BW = 5 MHz	RB=1. Offset =0. BW = 10 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-20.17	-18.76	-21.85	-19.45
LTE QPSK MODULATION:	RB= All. Offset=0. BW=1.4 MHz	RB= All. Offset =0. BW = 3 MHz	RB= All. Offset =0. BW = 5 MHz	RB= All. Offset =0. BW = 10 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-19.39	-20.55	-23.39	-21.53
LTE QPSK MODULATION:	RB= 1. Offset=Max. BW=1.4 MHz	RB= 1. Offset=Max. BW = 3 MHz	RB= 1. Offset=Max. BW = 5 MHz	RB= 1. Offset=Max. BW = 10 MHz
Maximum measured level at highest Block Edge at antenna port (dBm)	-20.26	-20.56	-20.51	-19.52
LTE QPSK MODULATION:	RB= All. Offset=0. BW=1.4 MHz	RB= All. Offset =0. BW = 3 MHz	RB= All. Offset =0. BW = 5 MHz	RB= All. Offset =0. BW = 10 MHz
Maximum measured level at highest Block Edge at antenna port (dBm)	-19.64	-20.42	-22.67	-21.77

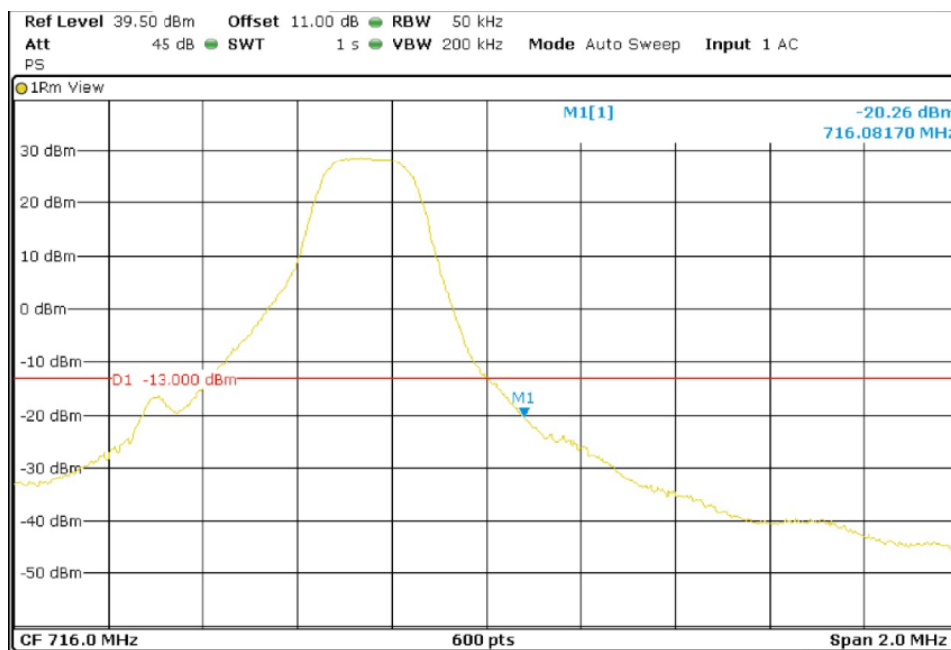
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 1.4 MHz

Lowest Channel



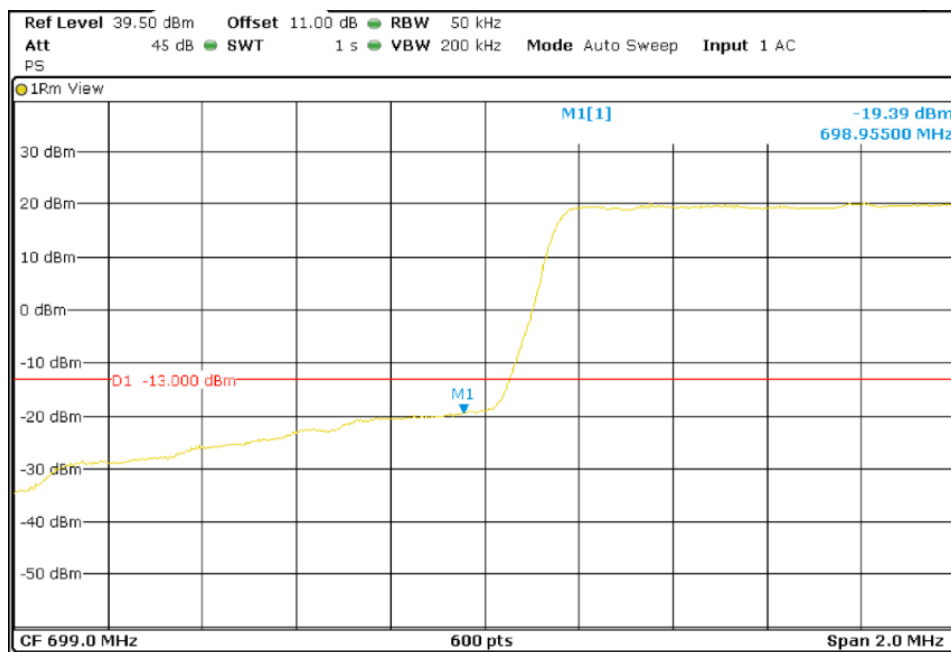
Highest Channel



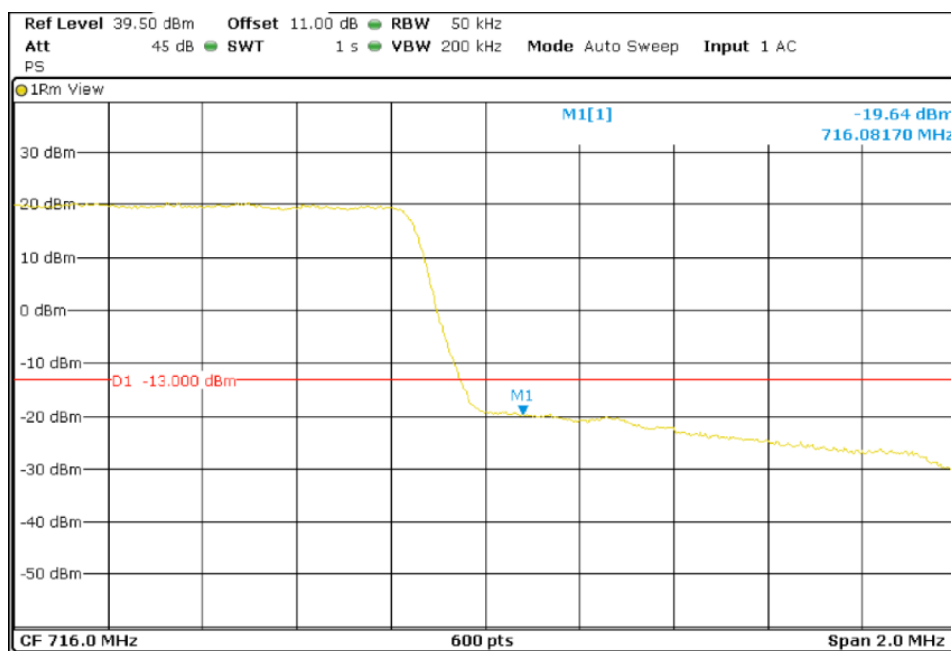
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 6. Offset = 0. BW = 1.4 MHz

Lowest Channel



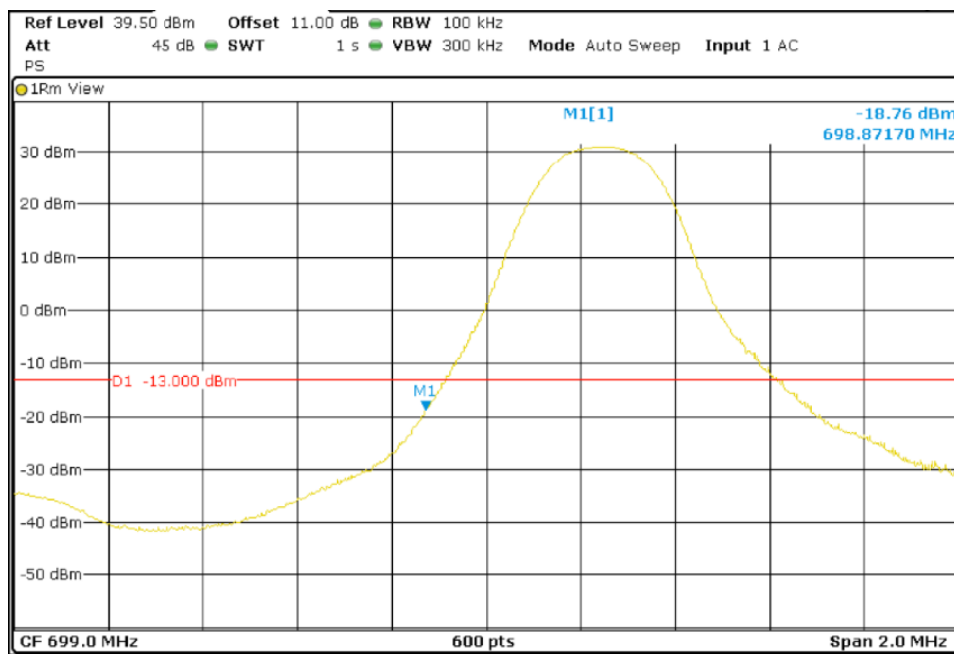
Highest Channel



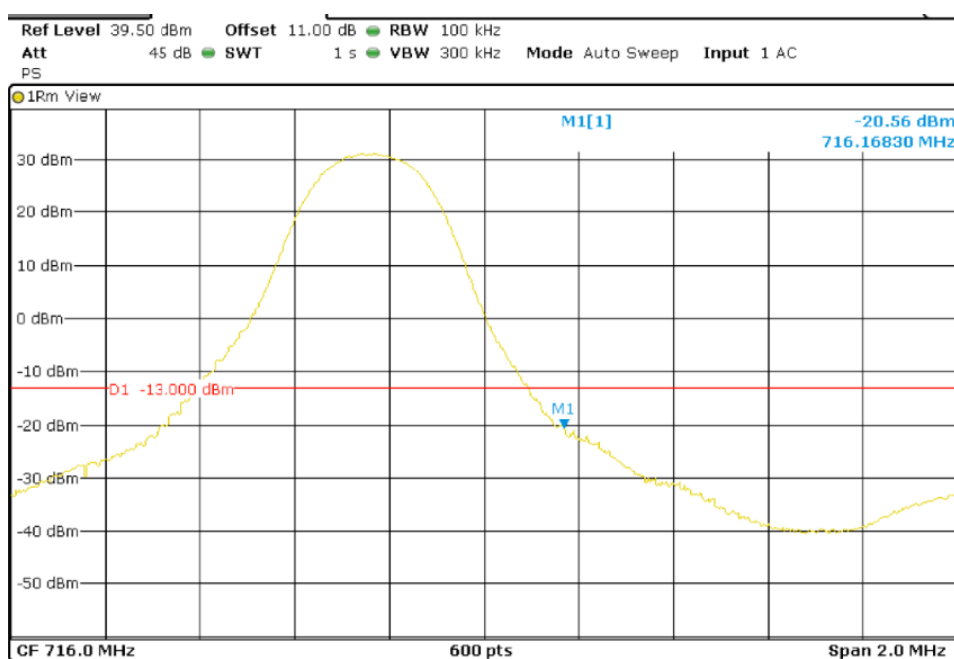
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 3 MHz

Lowest Channel



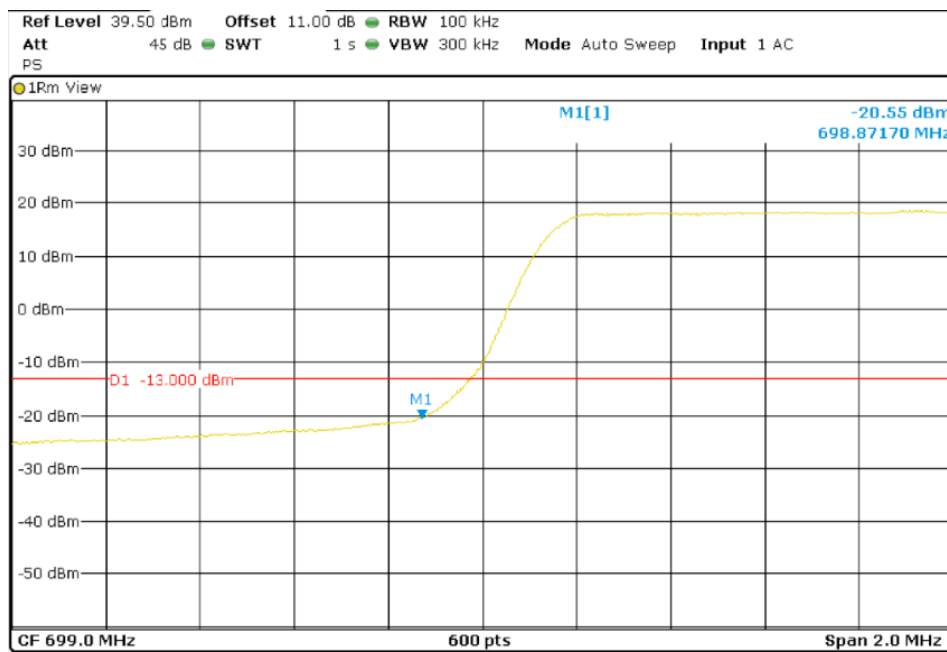
Highest Channel



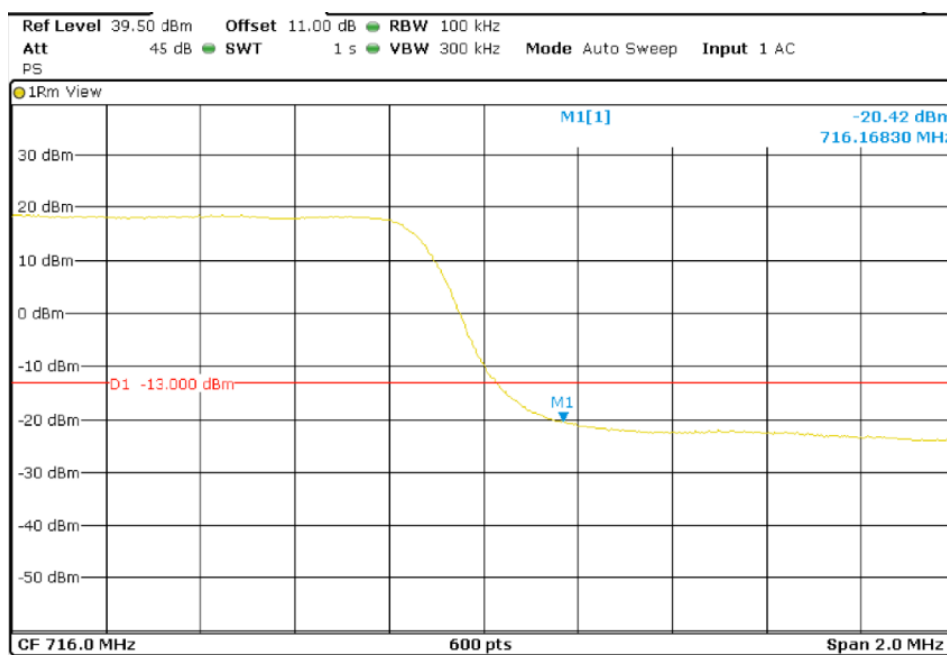
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 15. Offset = 0. BW = 3 MHz

Lowest Channel



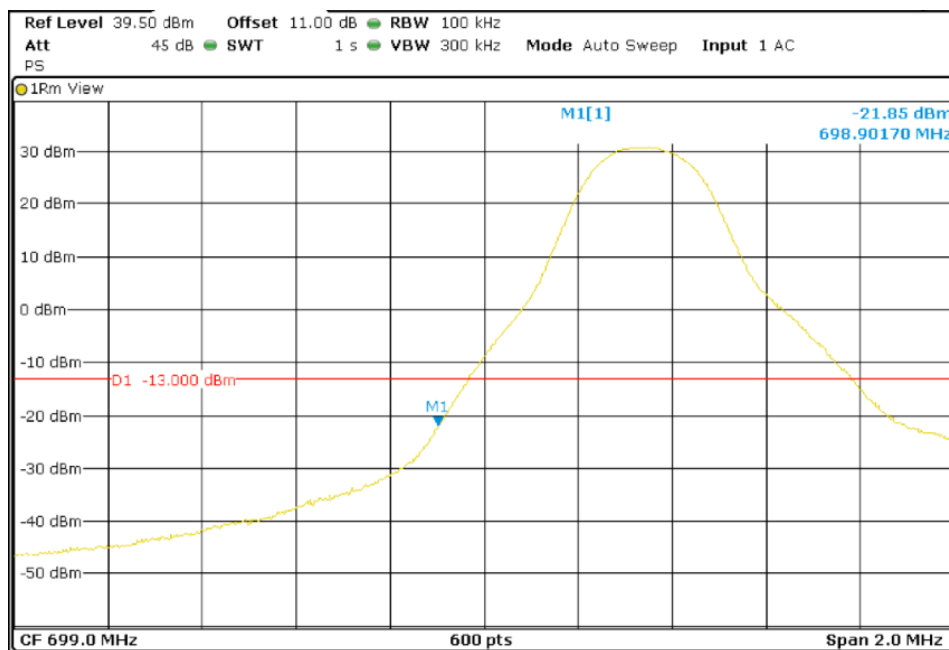
Highest Channel



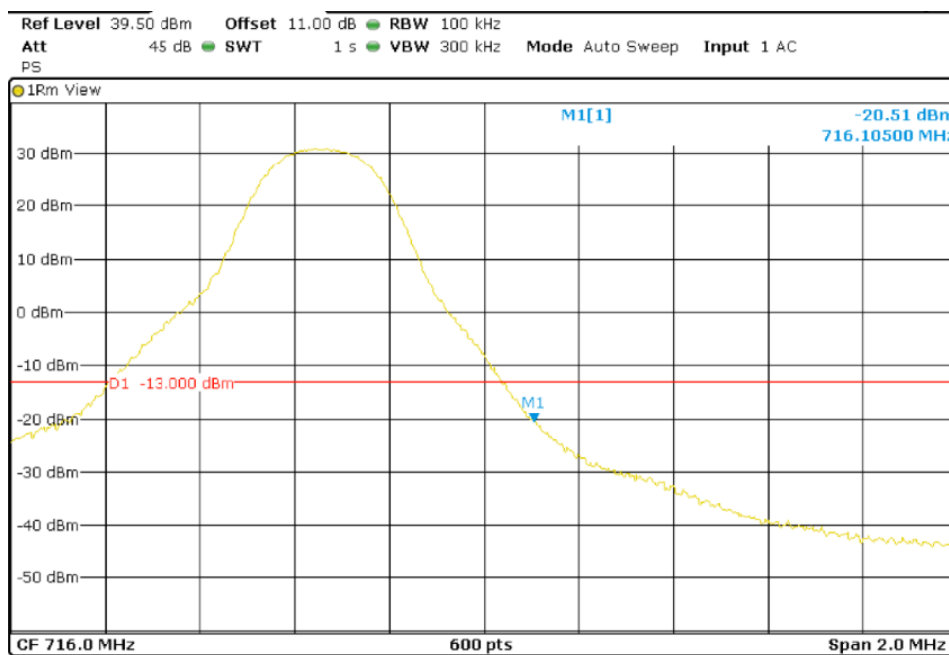
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 5 MHz

Lowest Channel



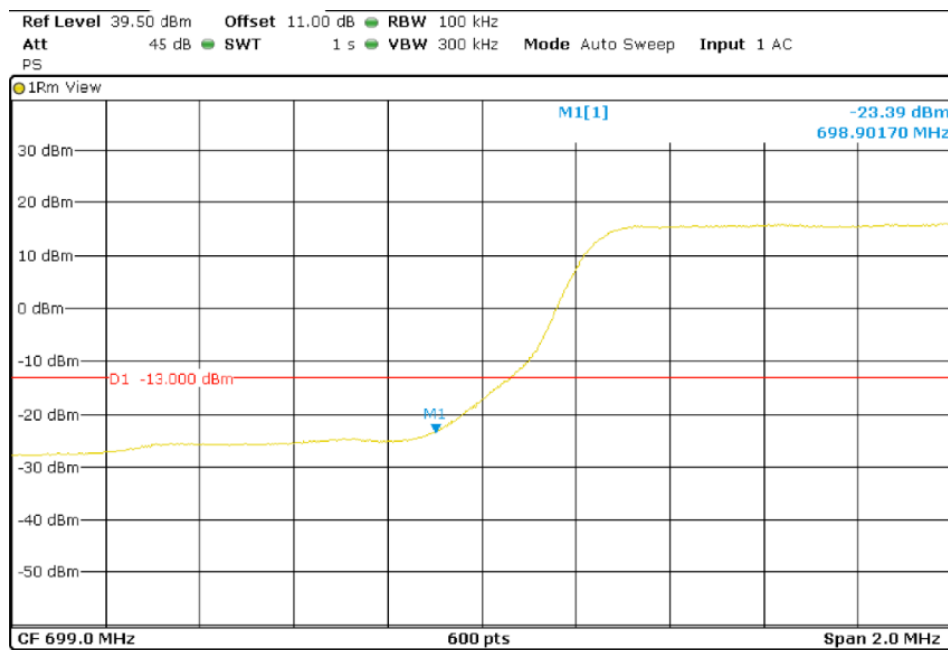
Highest Channel



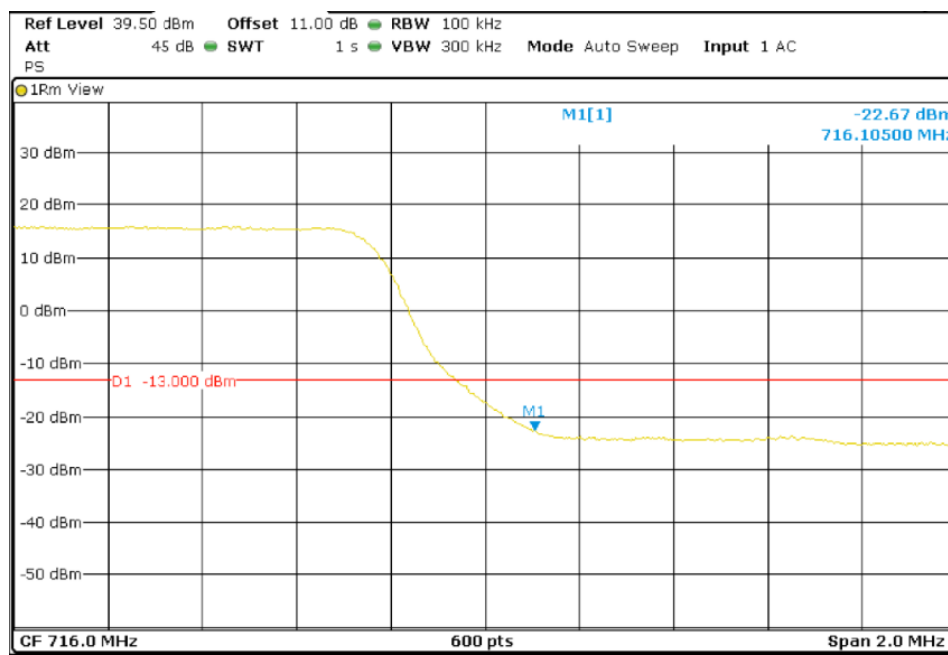
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 25. Offset = 0. BW = 5 MHz

Lowest Channel



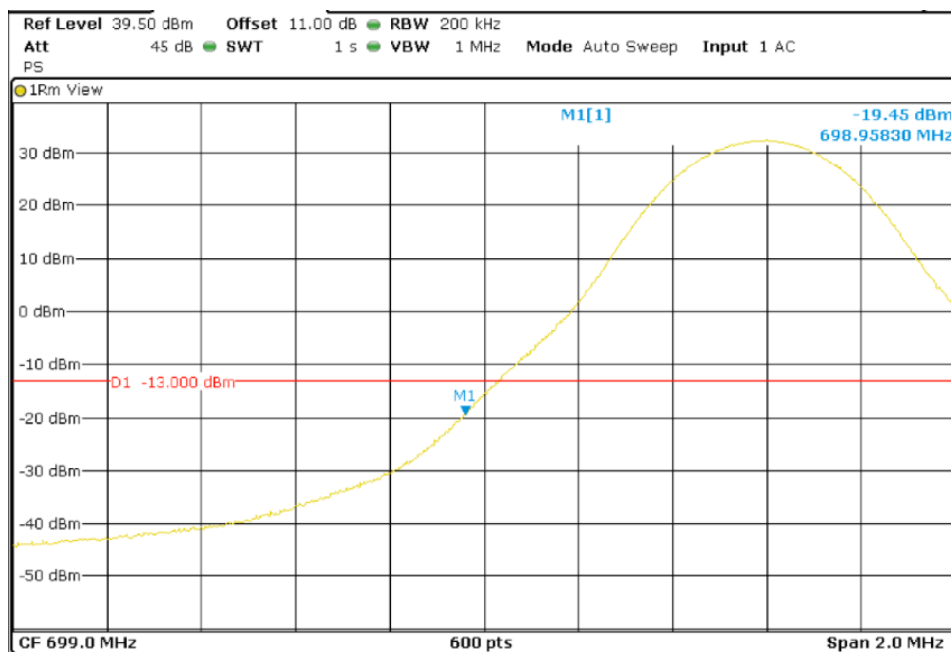
Highest Channel



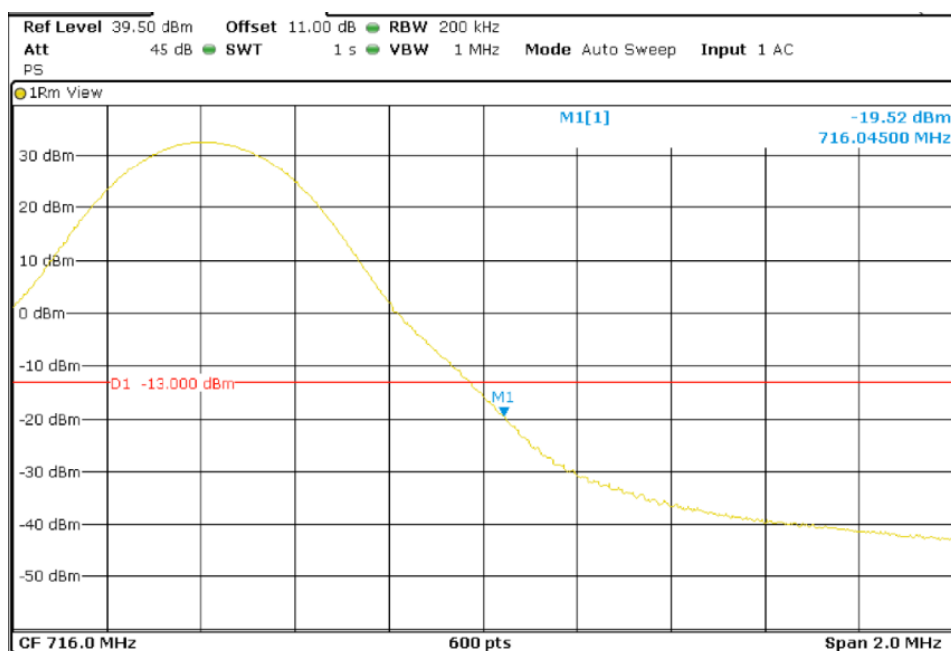
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 10 MHz

Lowest Channel



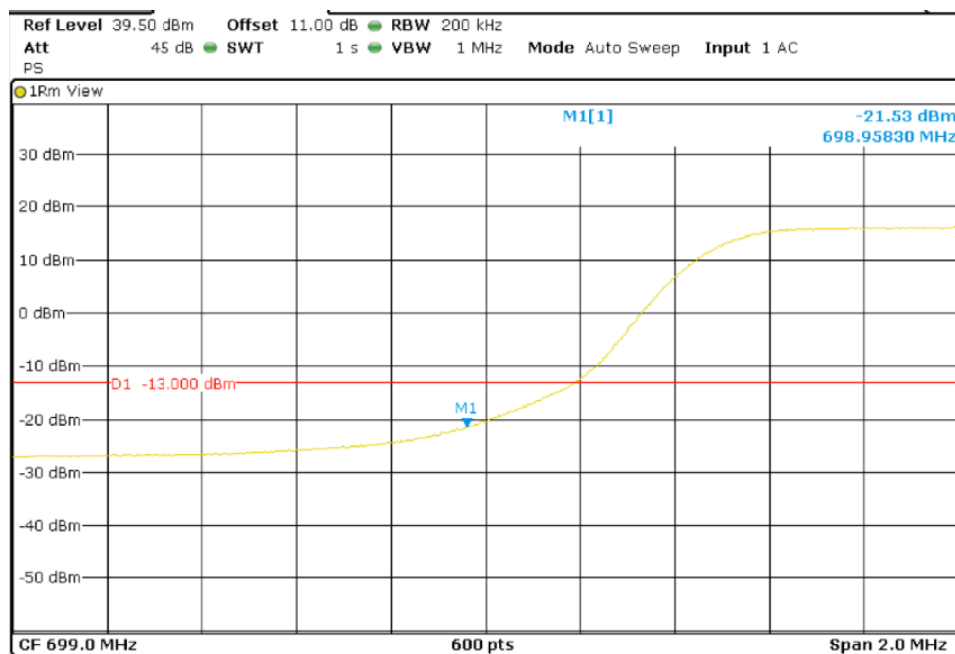
Highest Channel



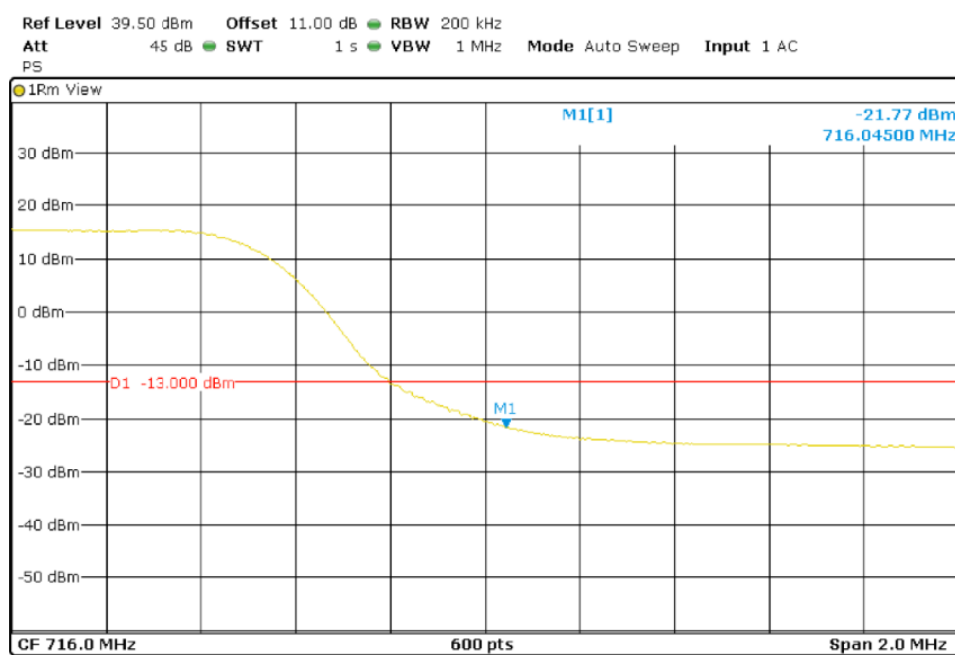
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 50. Offset = 0. BW = 10 MHz

Lowest Channel



Highest Channel

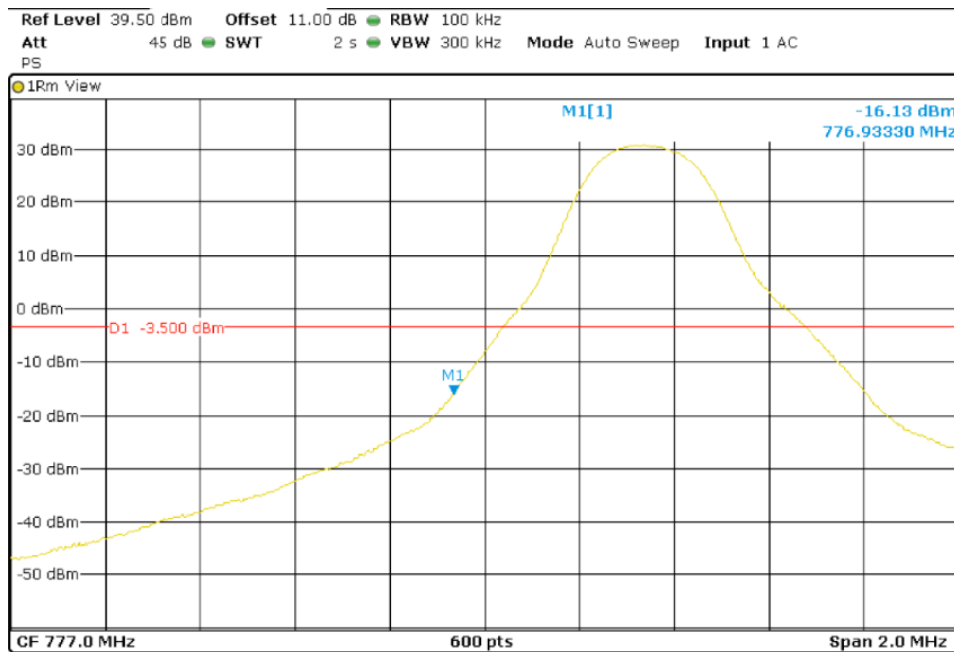


TESTED SAMPLES:	S/01	
TESTED CONDITIONS MODES:	TC#04 (Band 13)	
TEST RESULTS:	PASS	
LTE QPSK MODULATION	RB=1. Offset =0. BW = 5 MHz	RB=1. Offset =0. BW = 10 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-16.13	-22.8
LTE QPSK MODULATION:	RB= All. Offset =0. BW = 5 MHz	RB= All. Offset =0. BW = 10 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-19.59	-21.78
LTE QPSK MODULATION:	RB= 1. Offset=Max. BW = 5 MHz	RB= 1. Offset=Max. BW = 10 MHz
Maximum measured level at highest Block Edge at antenna port (dBm)	-17.16	-19.56
LTE QPSK MODULATION:	RB= All. Offset =0. BW = 5 MHz	RB= All. Offset =0. BW = 10 MHz
Maximum measured level at highest Block Edge at antenna port (dBm)	-19.46	-20.87

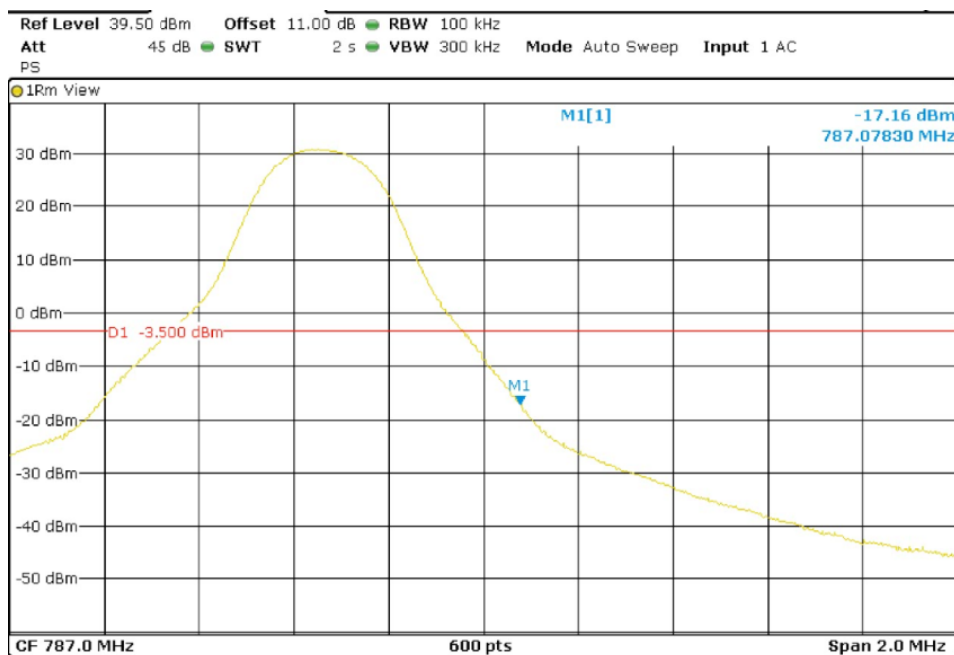
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 5 MHz

Lowest Channel



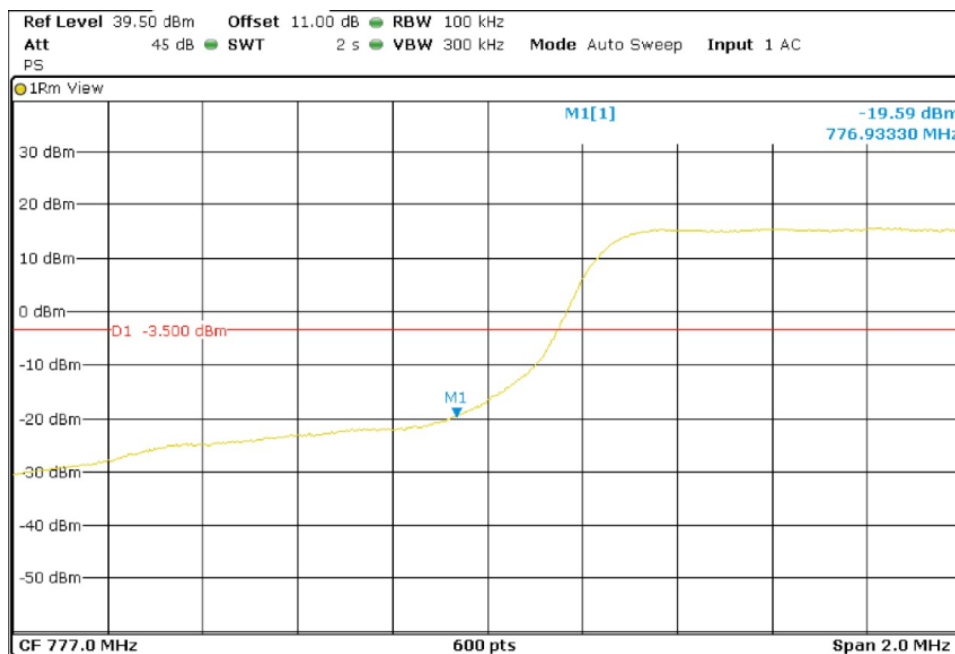
Highest Channel



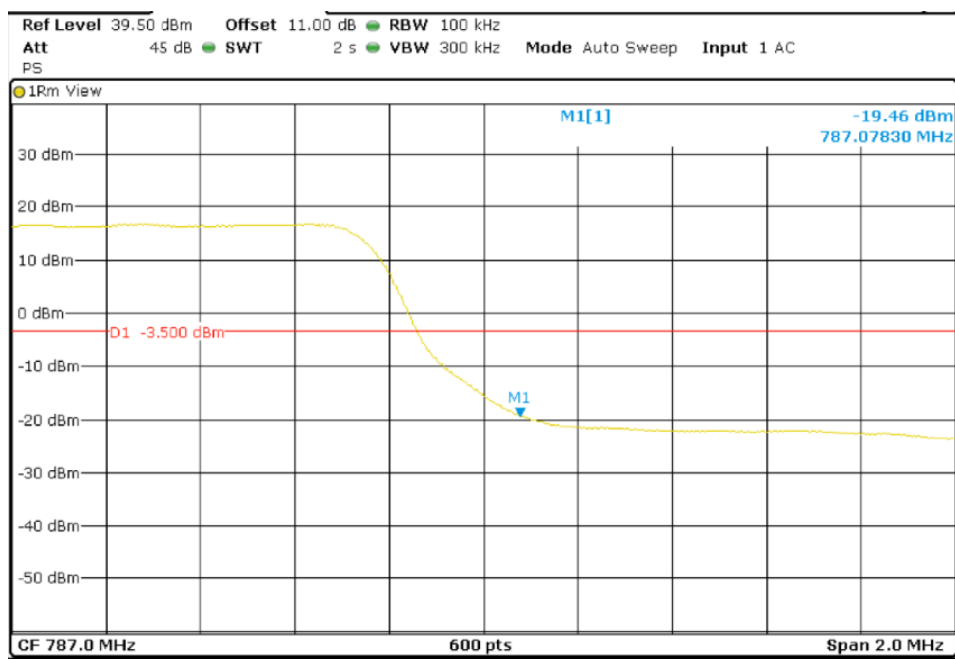
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 25. Offset = 0. BW = 5 MHz

Lowest Channel



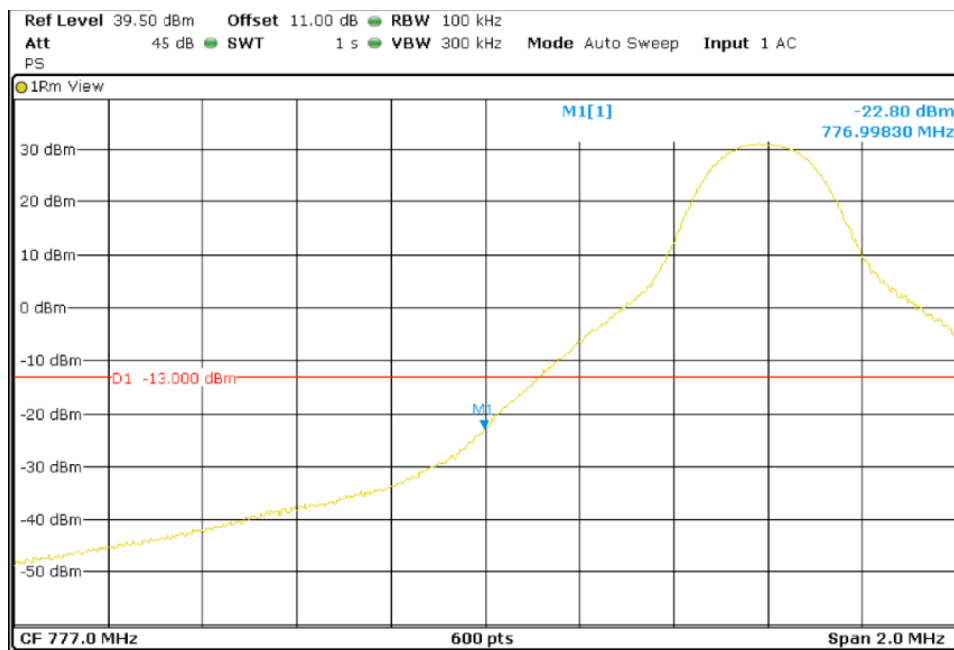
Highest Channel



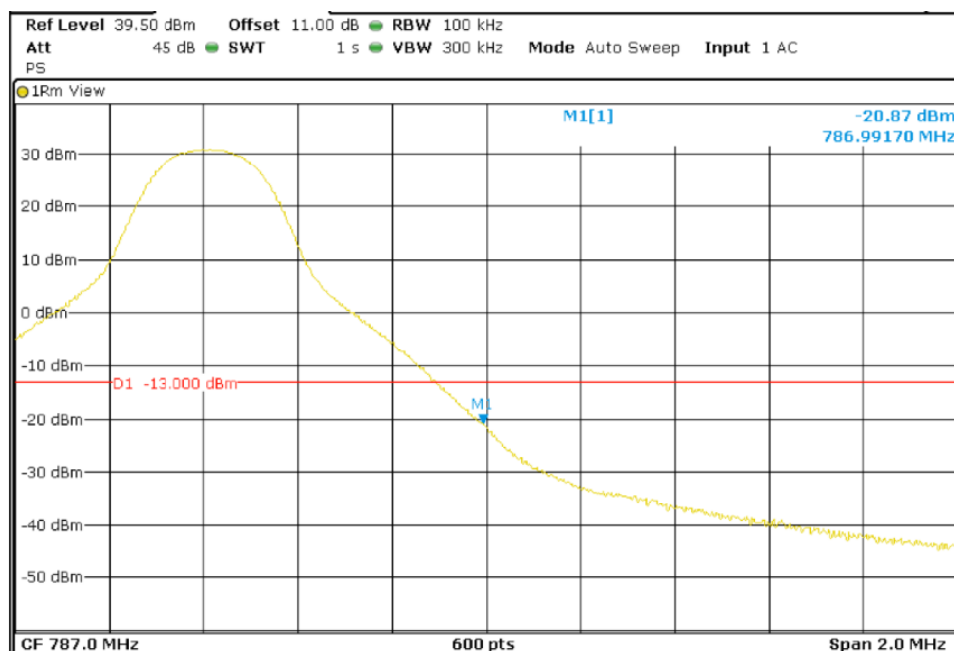
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 10 MHz

Lowest Channel



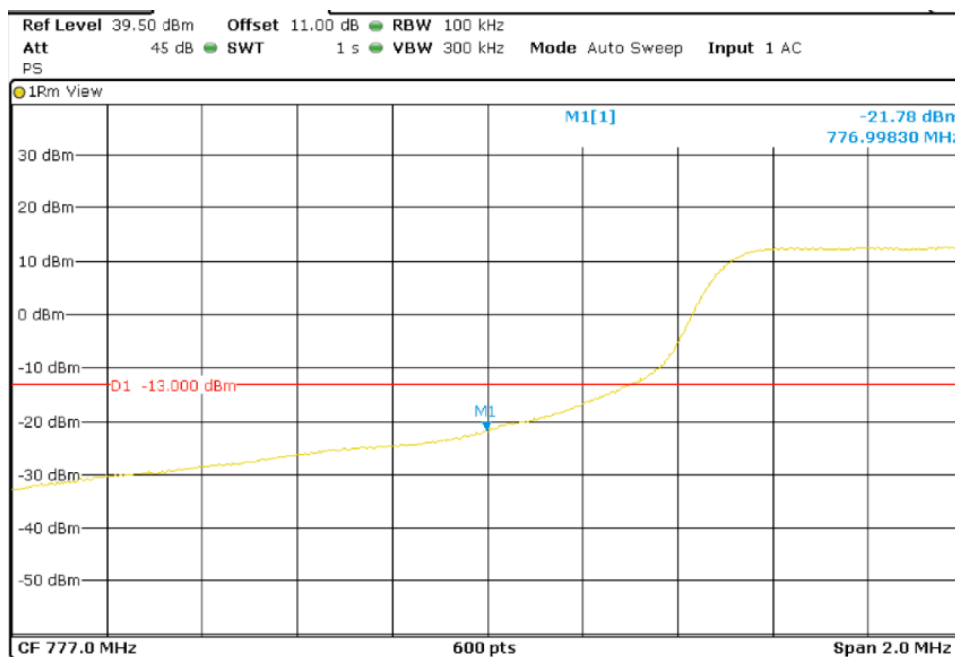
Highest Channel



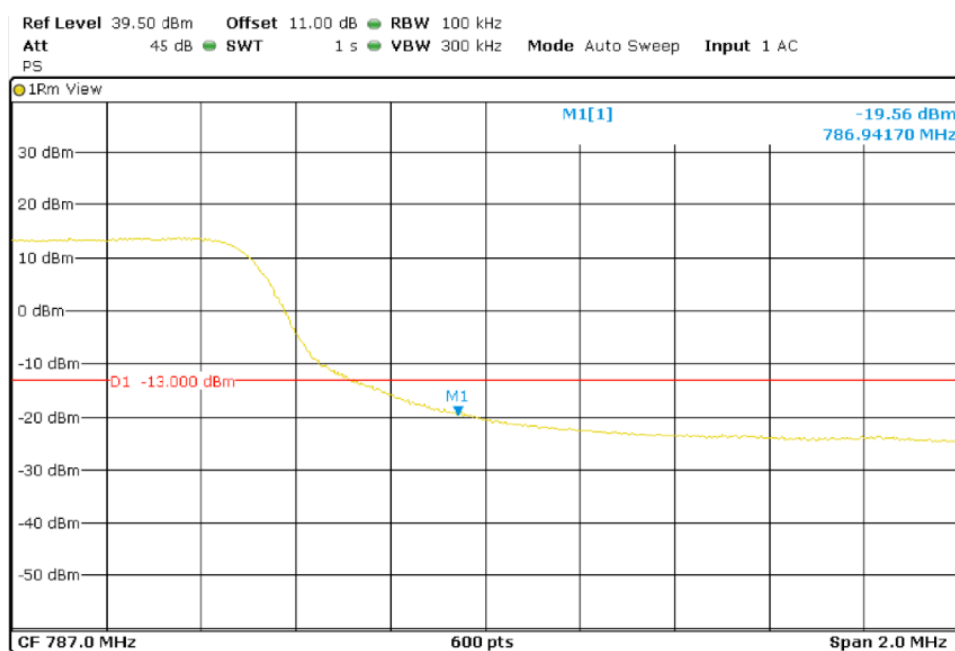
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 50. Offset = 0. BW = 10 MHz

Lowest Channel



Highest Channel

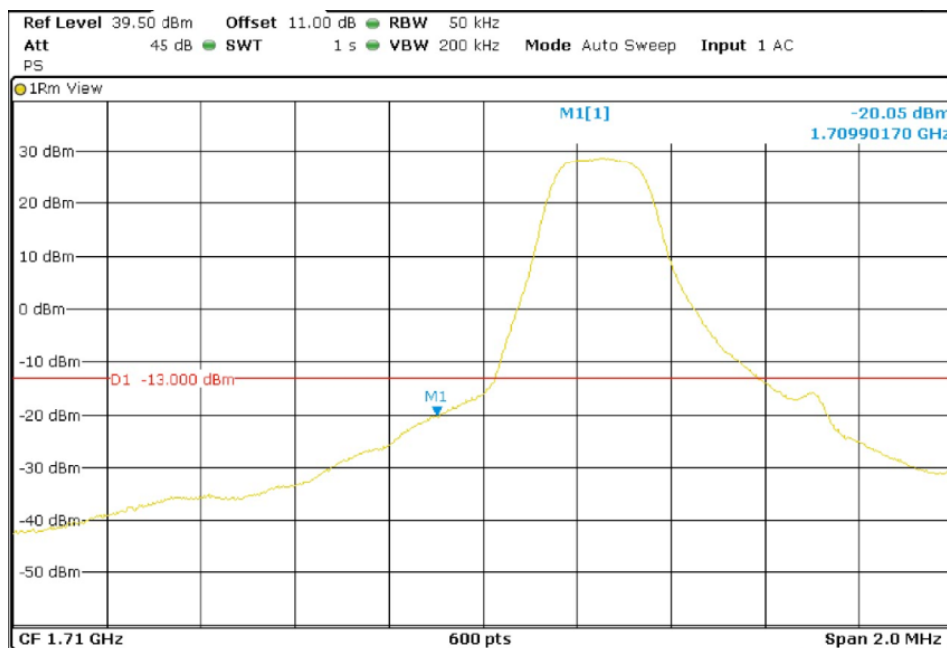


TESTED SAMPLES:		S/01				
TESTED CONDITIONS MODES:		TC#05 (Band 66)				
TEST RESULTS:		PASS				
LTE QPSK MODULATION	RB=1. Offset=0. BW=1.4 MHz	RB=1. Offset =0. BW = 3 MHz	RB=1. Offset =0. BW = 5 MHz	RB=1. Offset =0. BW = 10 MHz	RB=1. Offset =0. BW = 15 MHz	RB=1. Offset =0. BW = 20 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-20.05	-18.61	-20.71	-22.38	-19.69	-22.27
LTE QPSK MODULATION:	RB= All. Offset=0. BW=1.4 MHz	RB= All. Offset =0. BW = 3 MHz	RB= All. Offset =0. BW = 5 MHz	RB= All. Offset =0. BW = 10 MHz	RB= All. Offset =0. BW = 15 MHz	RB= All. Offset =0. BW = 20 MHz
Maximum measured level at lowest Block Edge at antenna port (dBm)	-21.24	-23.34	-23.52	-24.23	-24.45	-27.05
LTE QPSK MODULATION:	RB= 1. Offset=Max. BW=1.4 MHz	RB= 1. Offset=Max. BW = 3 MHz	RB= 1. Offset=Max. BW = 5 MHz	RB= 1. Offset=Max. BW = 10 MHz	RB= 1. Offset=Max. BW = 15 MHz	RB= 1. Offset=Max. BW = 20 MHz
Maximum measured level at highest Block Edge at antenna port (dBm)	-22.49	-20.94	-20.73	-25.53	-19.76	-19.79
LTE QPSK MODULATION:	RB= All. Offset=0. BW=1.4 MHz	RB= All. Offset =0. BW = 3 MHz	RB= All. Offset =0. BW = 5 MHz	RB= All. Offset =0. BW = 10 MHz	RB= All. Offset =0. BW = 15 MHz	RB= All. Offset =0. BW = 20 MHz
Maximum measured level at highest Block Edge - antenna port (dBm)	-27.48	-28.02	-22.58	-26.69	-24.6	-26.53

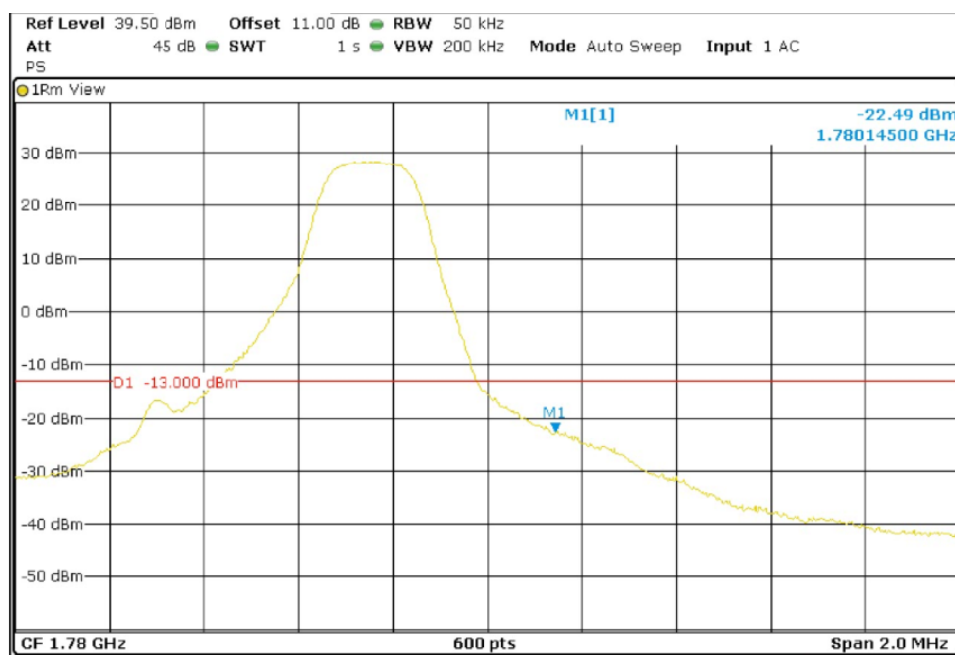
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 1.4 MHz

Lowest Channel



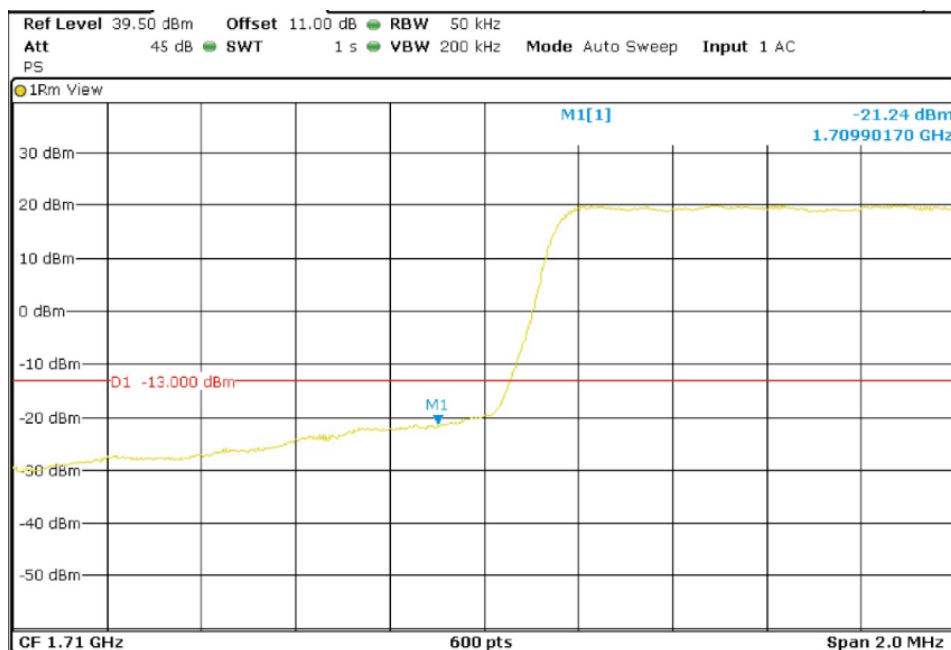
Highest Channel



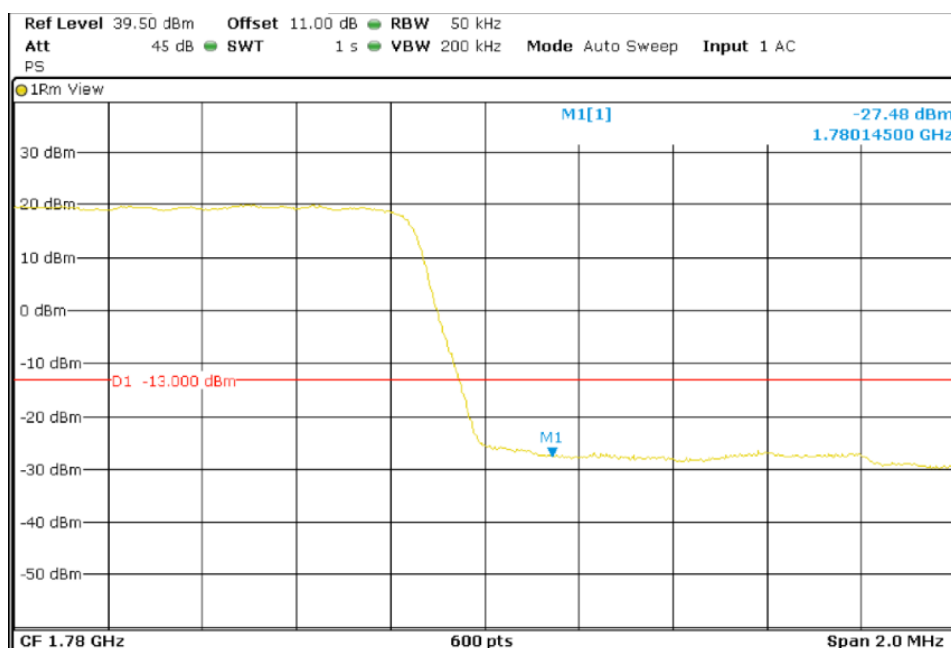
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 6. Offset = 0. BW = 1.4 MHz

Lowest Channel



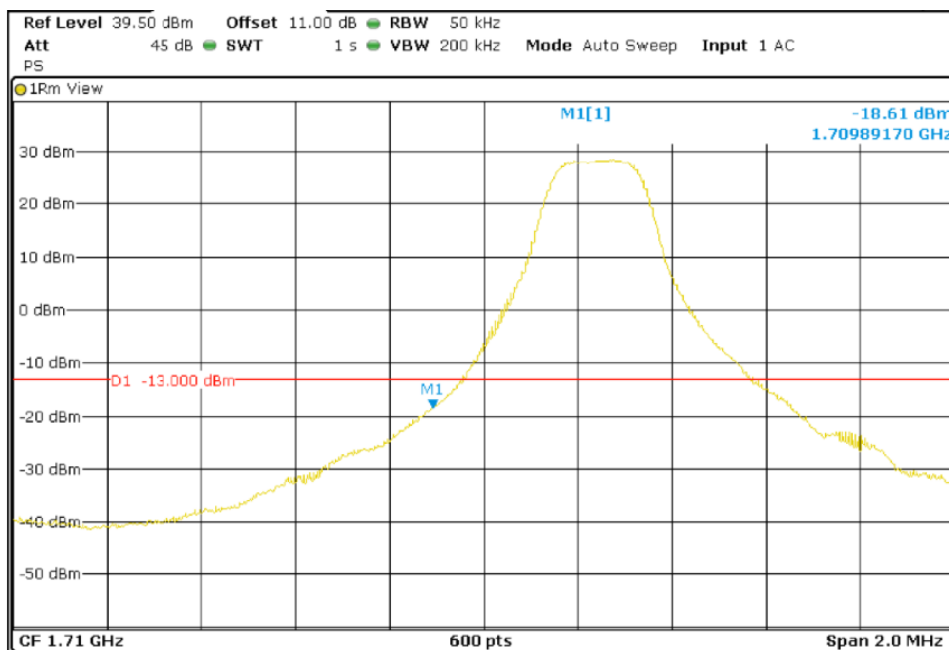
Highest Channel



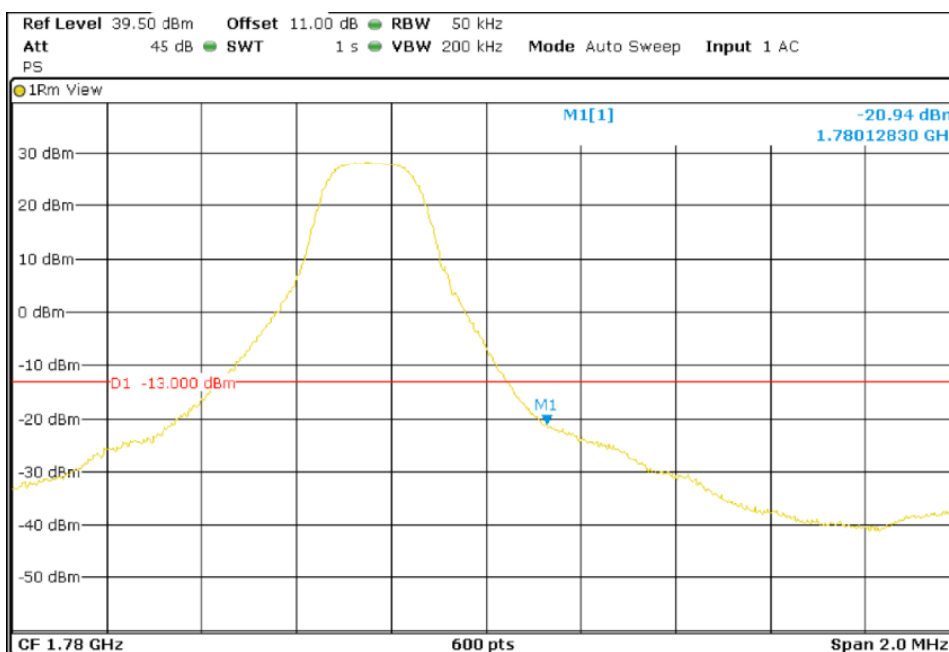
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 3 MHz

Lowest Channel



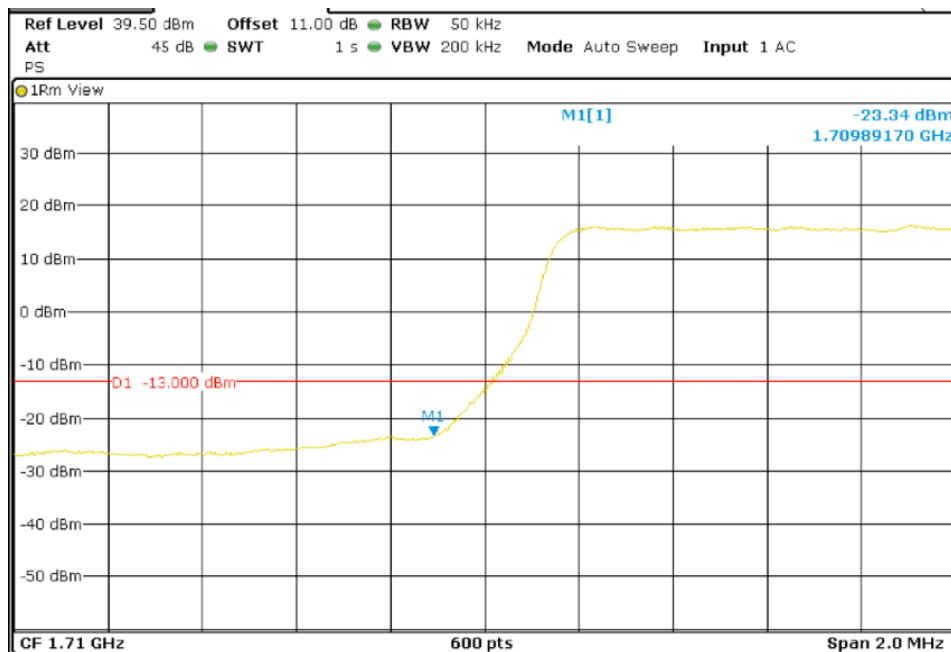
Highest Channel



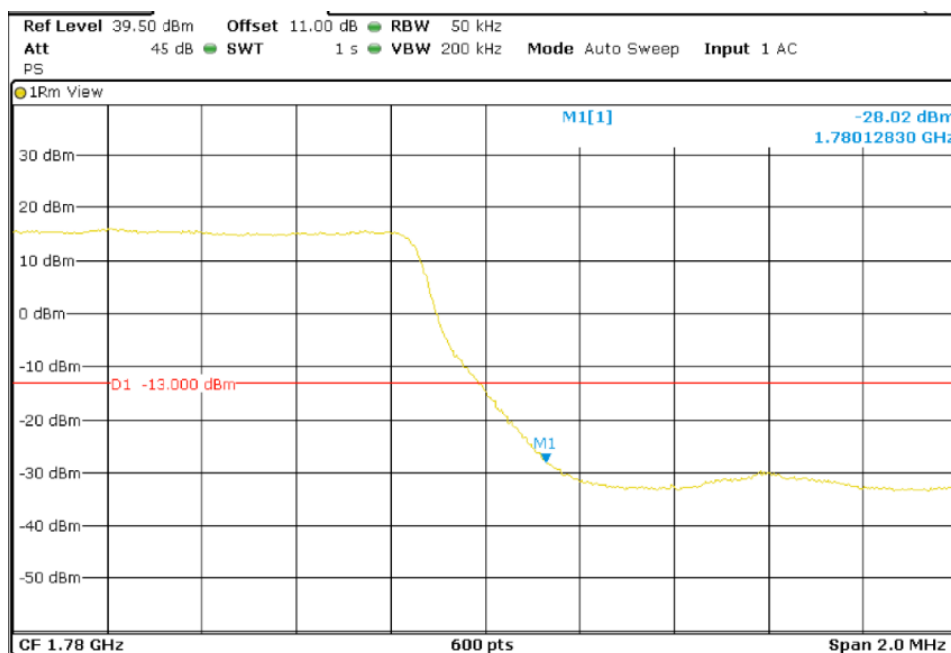
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 15. Offset = 0. BW = 3 MHz

Lowest Channel



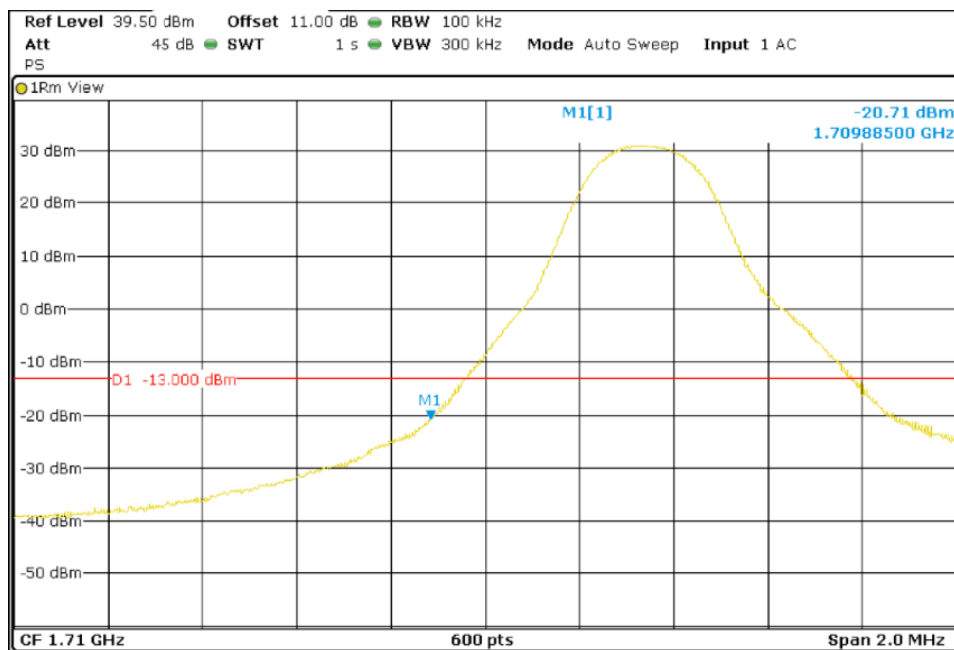
Highest Channel



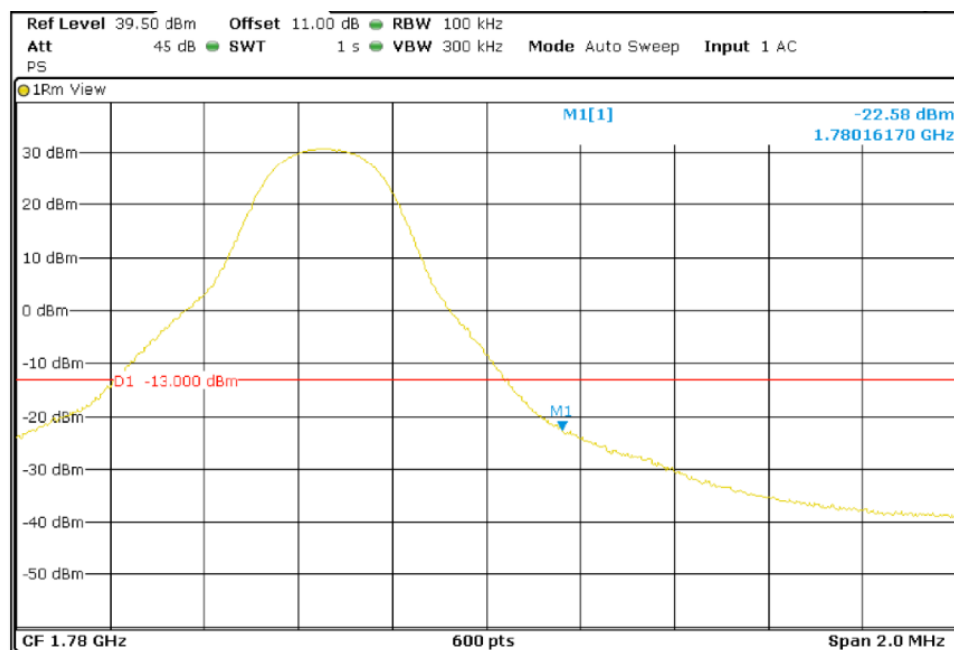
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 5 MHz

Lowest Channel



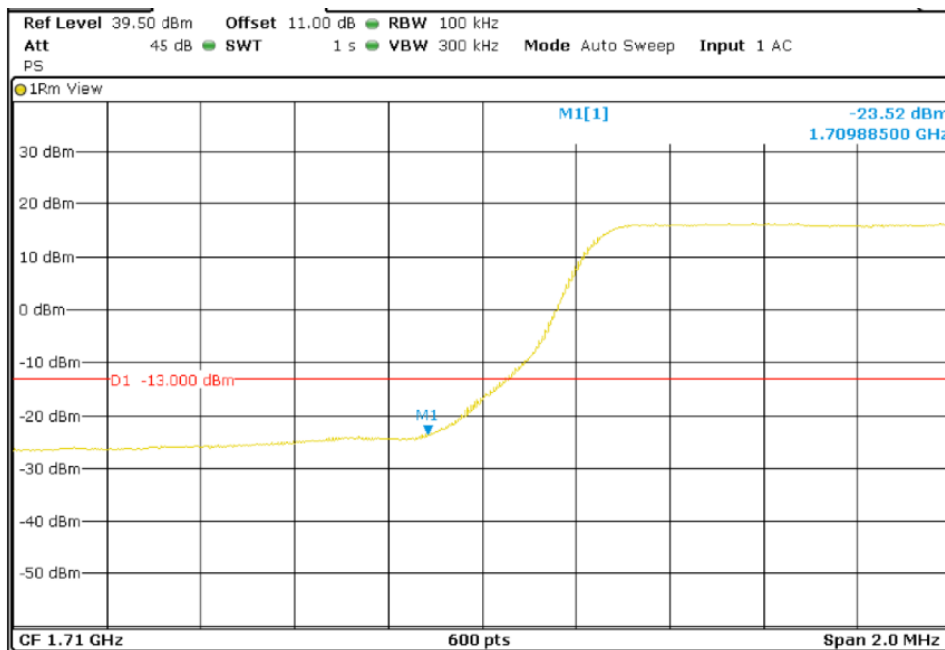
Highest Channel



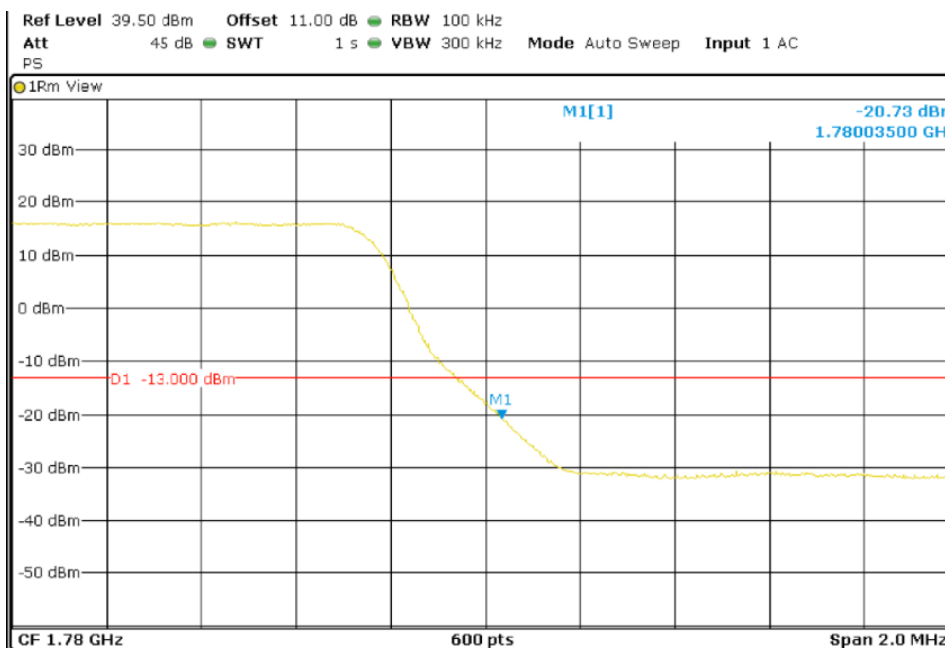
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 25. Offset = 0. BW = 5 MHz

Lowest Channel



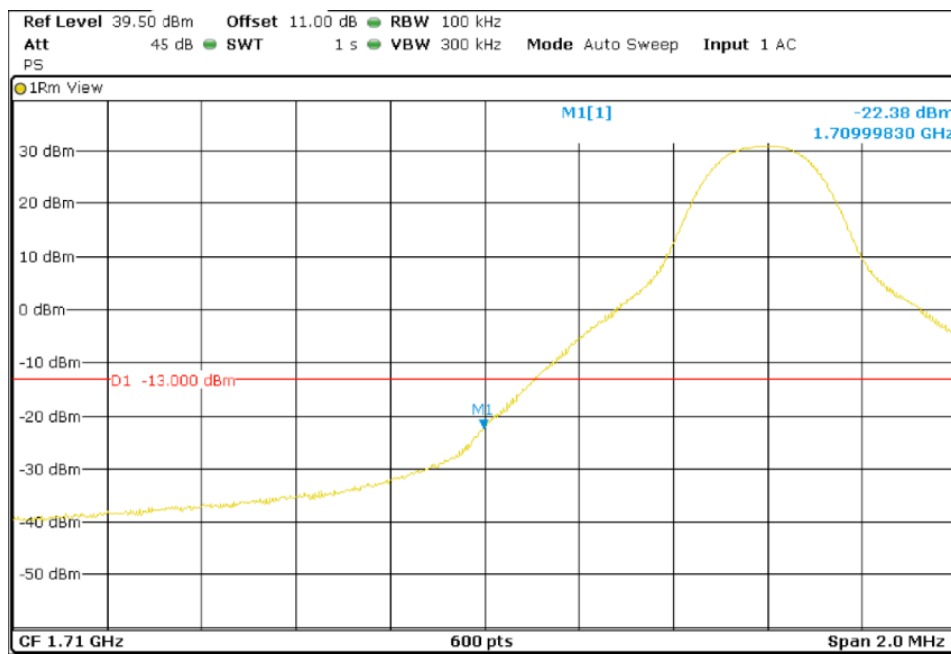
Highest Channel



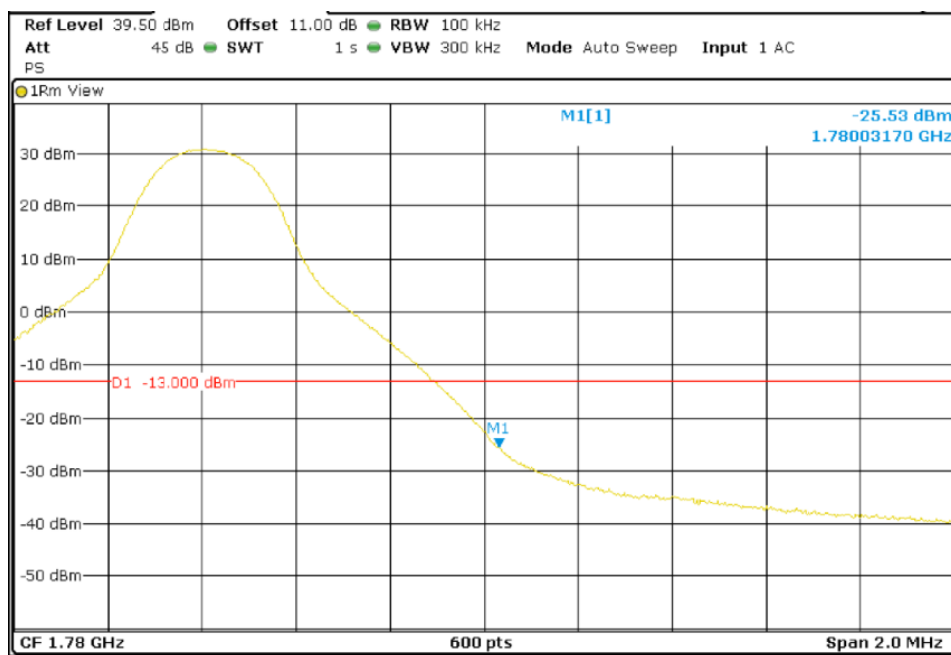
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 10 MHz

Lowest Channel



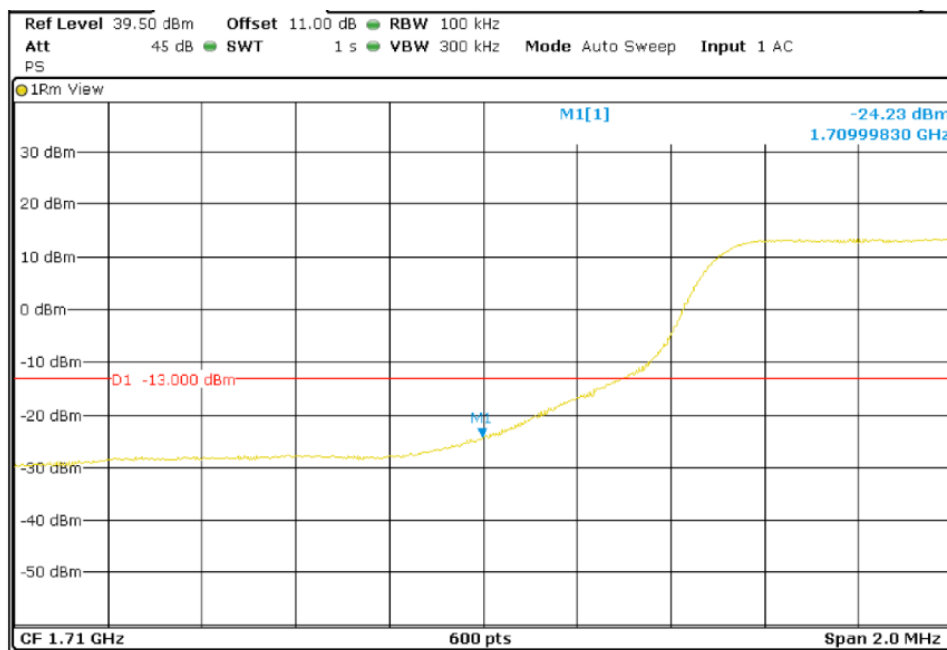
Highest Channel



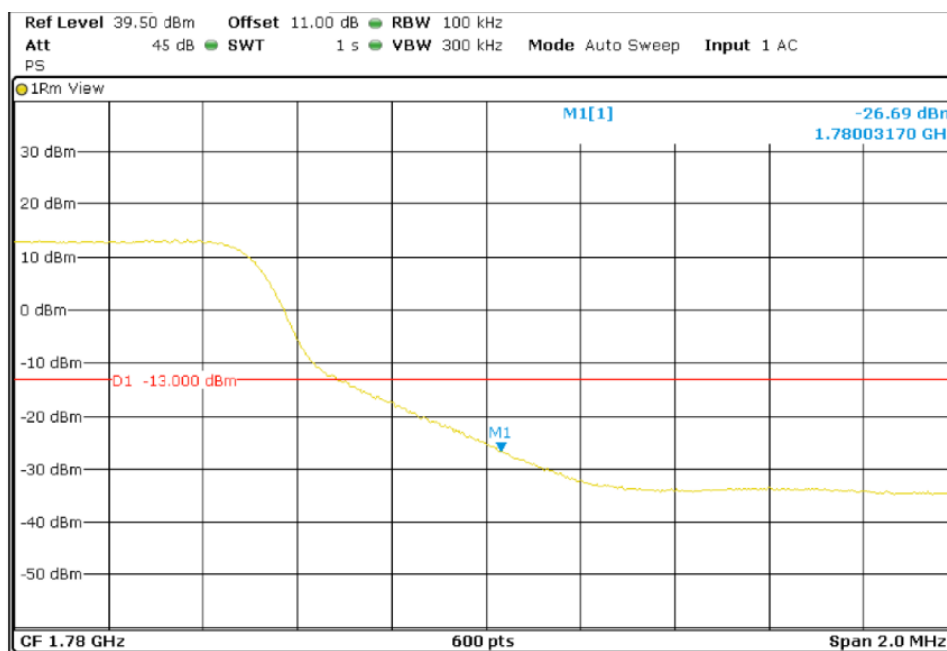
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 50. Offset = 0. BW = 10 MHz

Lowest Channel



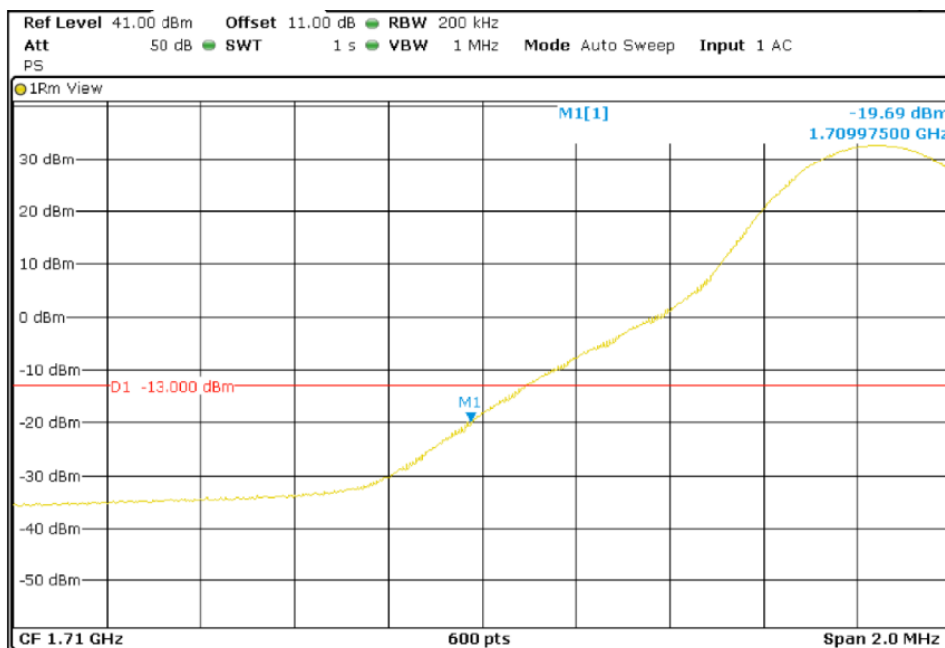
Highest Channel



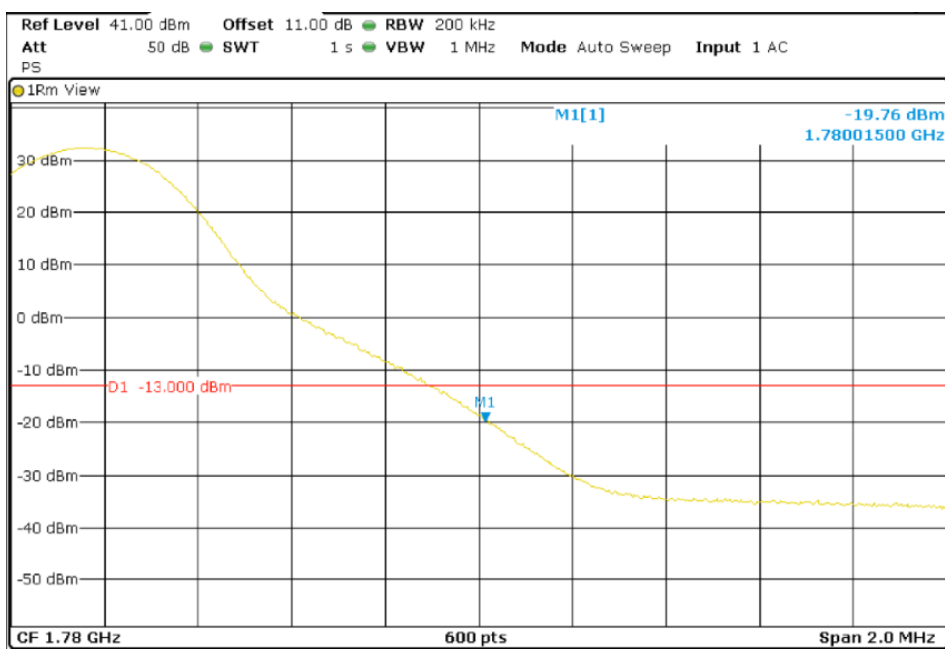
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 15 MHz

Lowest Channel



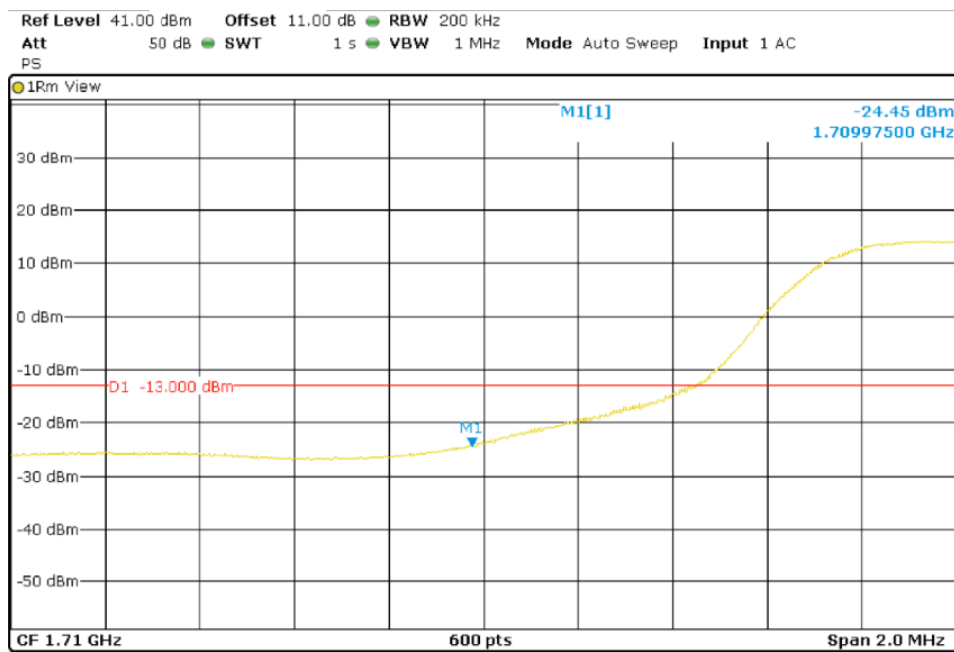
Highest Channel



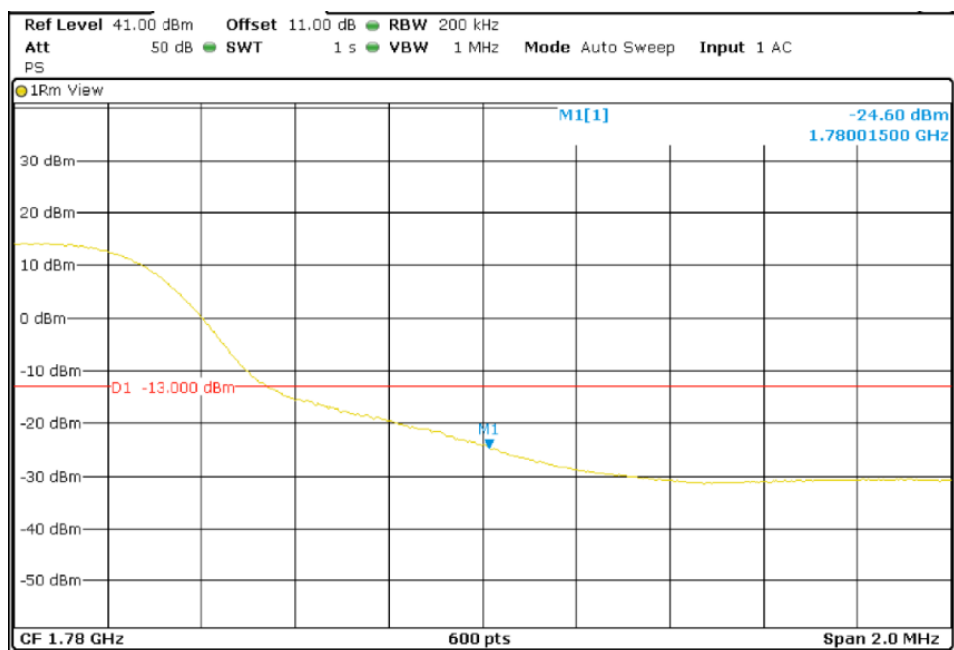
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 75. Offset = 0. BW = 15 MHz

Lowest Channel



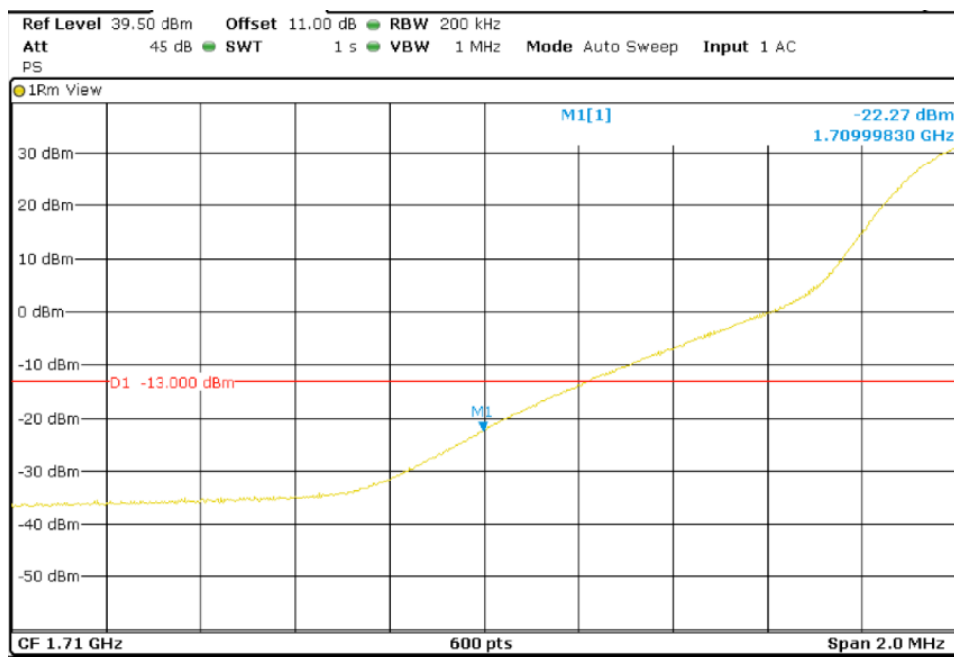
Highest Channel



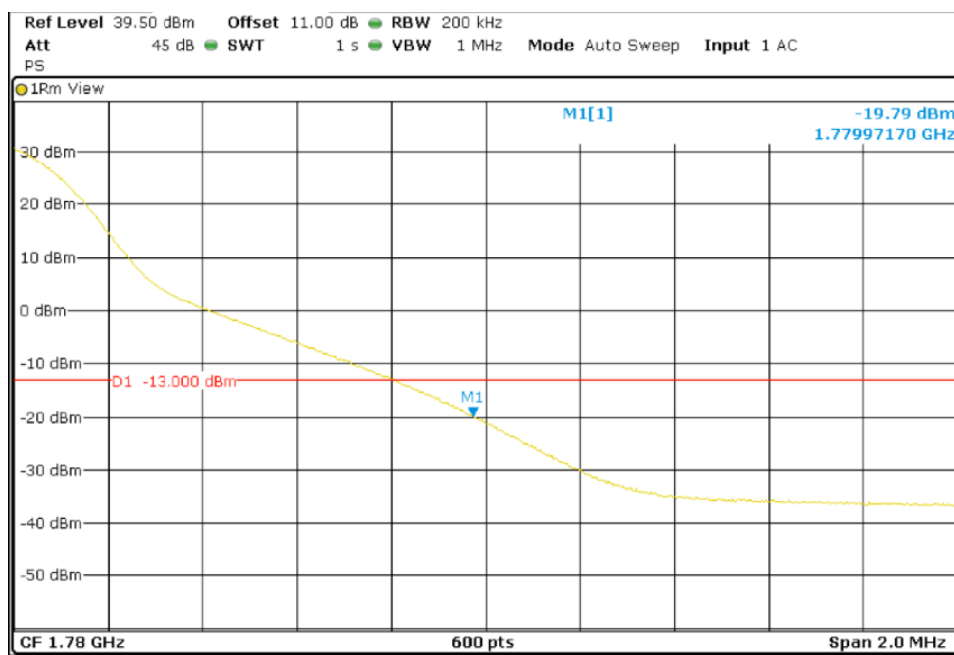
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 20 MHz

Lowest Channel



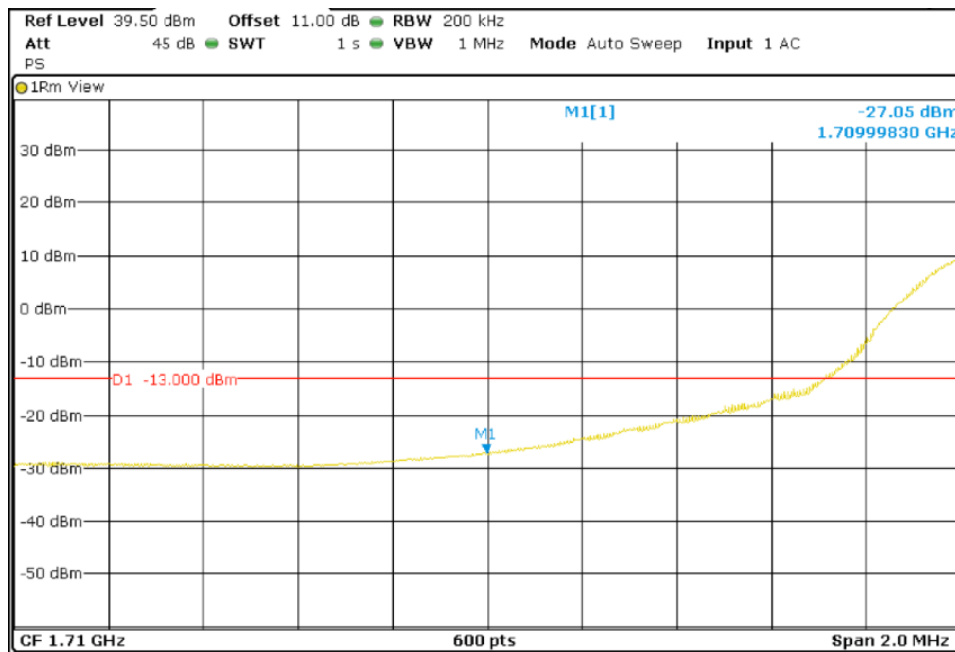
Highest Channel



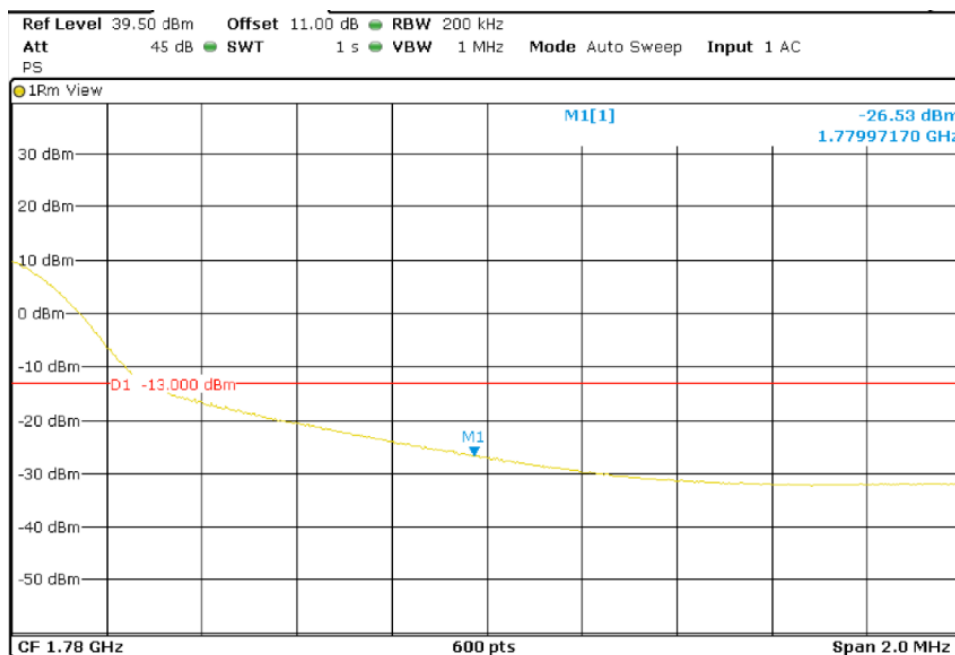
TEST RESULTS (Cont):

LTE QPSK MODULATION. RB = 100. Offset = 0. BW = 20 MHz

Lowest Channel



Highest Channel



TEST A.7: RADIATED EMISSIONS

LIMITS:	Product standard:	FCC Part 27 / IC RSS-199
	Test standard:	FCC §2.1053 and §27.53 / RSS-199 Clause 4.5

LIMITS

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 P_o transmitting power of 2 watts (33 dBm), the specified minimum attenuation becomes $43 + 10 \log (P_o)$. and the level in dBm relative to P_o becomes:

$$P_o \text{ (dBm)} - [43 + 10 \log (P_o \text{ in watts})] = -13 \text{ dBm}$$

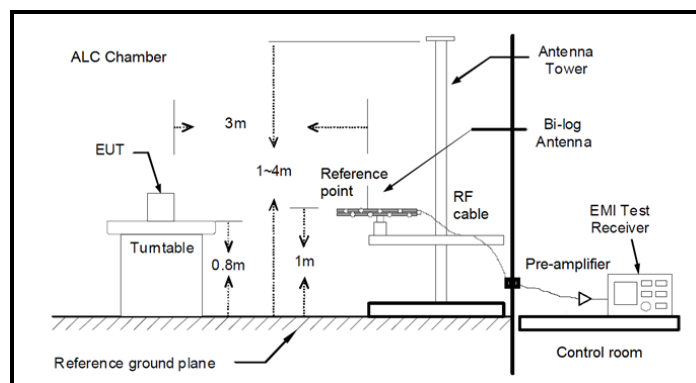
TEST SETUP

The measurement was performed with the EUT inside an anechoic chamber. The spectrum was scanned from 30 MHz to at least the 10th harmonic of the highest frequency generated within the equipment.

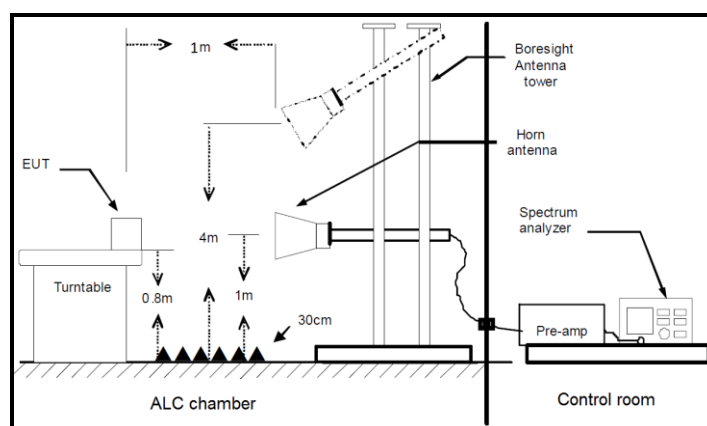
The EUT was placed on a non-conductive stand at a 3-meter distance from the measuring antenna for measurements below 1 GHz and at 1-meter distance for measurements above 1 GHz.

Detected emissions were maximized at each frequency by rotating the EUT and adjusting the measuring antenna height and polarization. The maximum reading was recorded.

Radiated measurements < 1GHz



Radiated measurements > 1GHz



TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01 (Band 4)
TEST RESULTS:	PASS

RESULTS

A preliminary scan determined the QPSK 20 MHz bandwidth as the worst case. The configuration of Resource Blocks which is the worst case for conducted power was used.

The following plots show the results for this configuration.

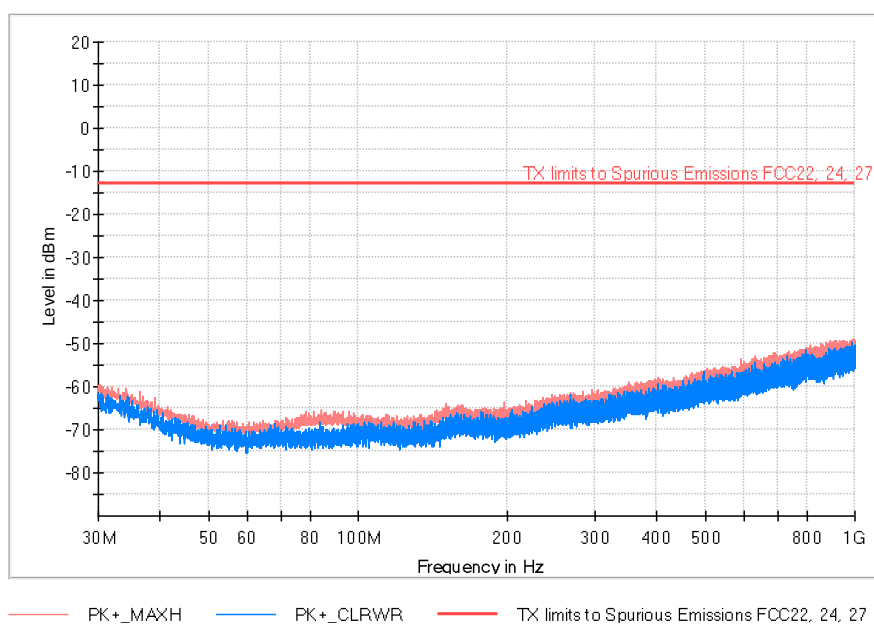
No spurious signal was found at less than 20dB respect to the limit in all the frequency ranges.

LTE QPSK MODULATION. RB = 1. Offset = 0. BW = 20 MHz

TEST RESULTS (Cont):	Low Channel
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FREQUENCY RANGE: 30-1000 MHz

Frequency (MHz)	PK+_CLRWR (dBm)	PK+_MAXH (dBm)	Comment
30.226333	-62.01	-59.66	
990.817333	-54.14	-49.04	

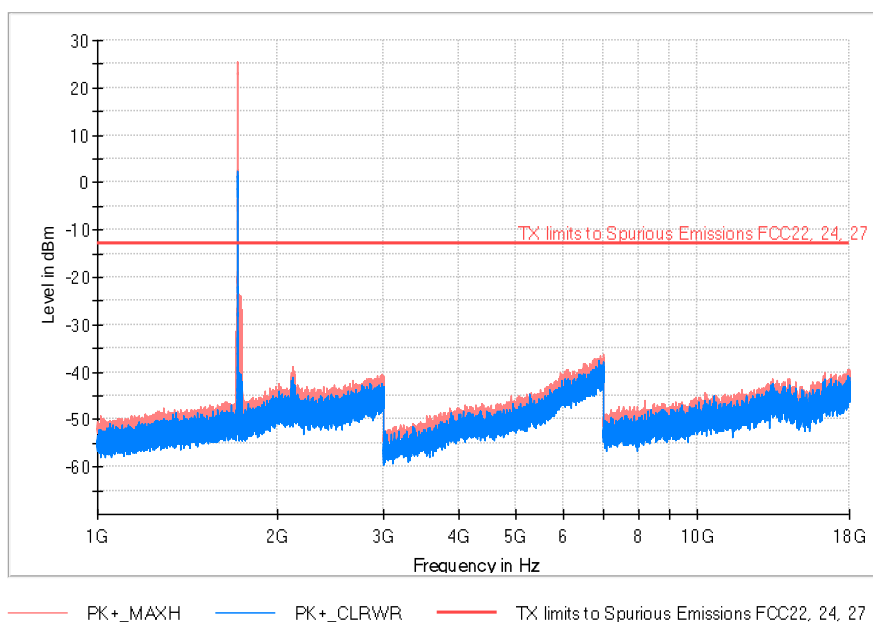


TEST RESULTS (Cont):

Low Channel

FREQUENCY RANGE: 1-18 GHz

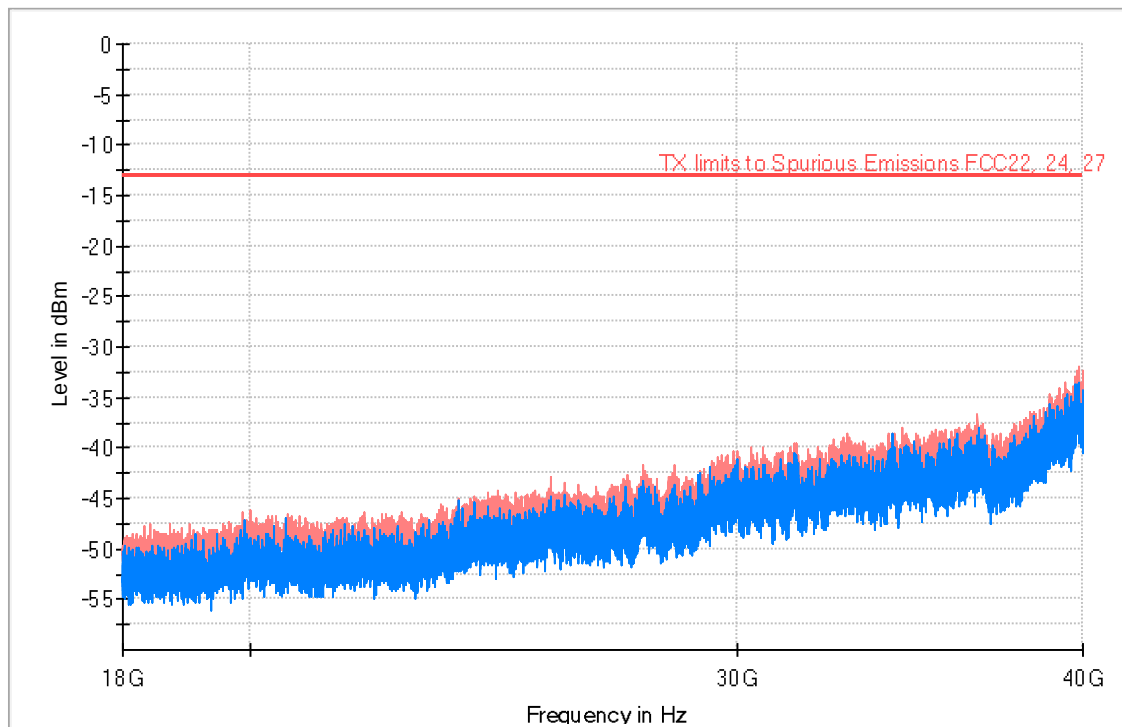
Frequency (MHz)	PK+ _CLRWR (dBm)	PK+ _MAXH (dBm)	Comment
1711.133333	2.30	25.38	
2118.600000	-47.01	-38.95	Fundamental
2978.600000	-46.01	-40.34	
6988.000000	-41.38	-36.35	
13359.000000	-45.62	-41.35	
17946.000000	-42.42	-39.34	



TEST RESULTS (Cont):

Low Channel

FREQUENCY RANGE: 18-40 GHz

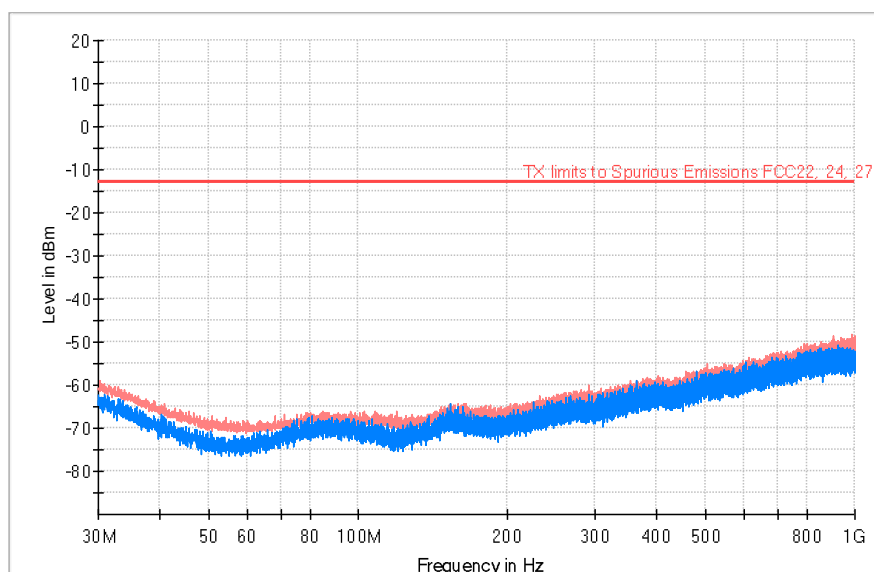


TEST RESULTS(Cont.):

Middle Channel

FREQUENCY RANGE: 30-1000 MHz

Frequency (MHz)	PK+_CLRWR (dBm)	PK+_MAXH (dBm)	Comment
30.258667	-63.29	-58.85	
983.380667	-54.68	-48.10	



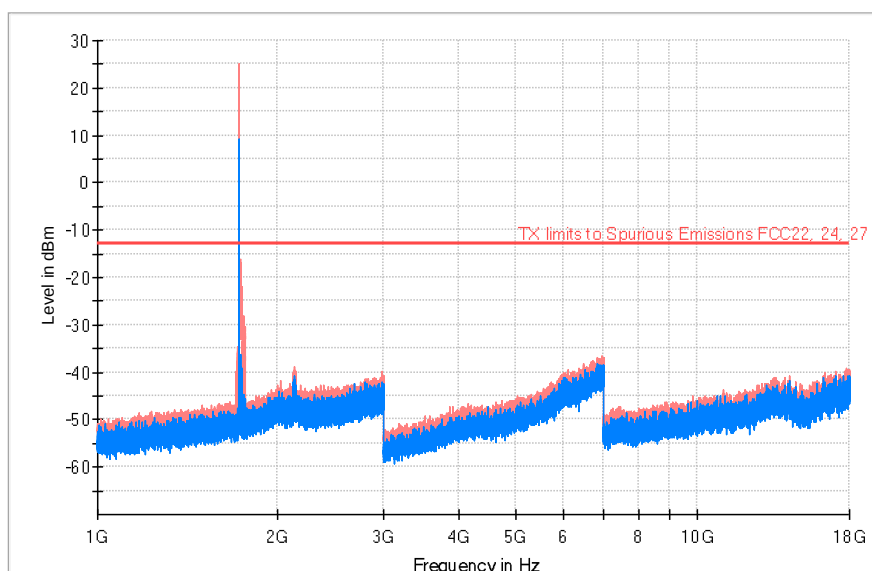
— PK+_MAXH — PK+_CLRWR — TX limits to Spurious Emissions FCC22, 24, 27

TEST RESULTS (Cont):

Middle Channel

FREQUENCY RANGE: 1-18 GHz

Frequency (MHz)	PK+_CLRWR (dBm)	PK+_MAXH (dBm)	Comment
1724.066667	8.82	25.04	
2124.800000	-42.19	-38.95	Fundamental
2991.866667	-45.23	-39.66	
6934.000000	-41.94	-36.59	
14279.500000	-45.63	-40.89	
17790.500000	-44.67	-39.14	

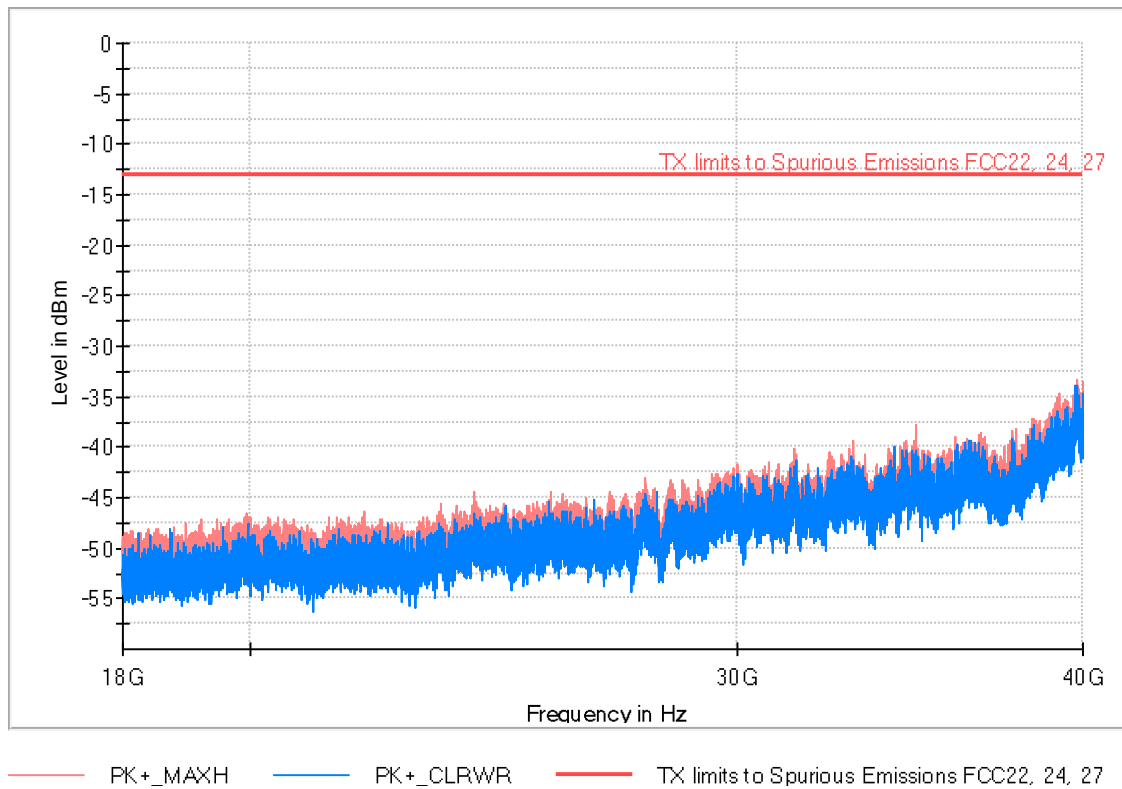


— PK+_MAXH — PK+_CLRWR — TX limits to Spurious Emissions FCC22, 24, 27

TEST RESULTS (Cont):

Middle Channel

FREQUENCY RANGE: 18-40 GHz

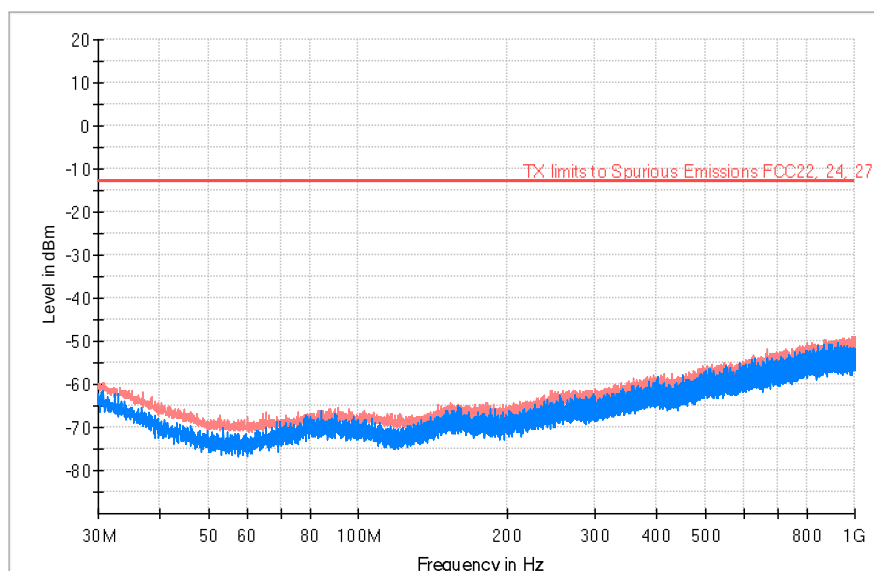


TEST RESULTS(Cont.):

High Channel

FREQUENCY RANGE: 30-1000 MHz

Frequency (MHz)	PK+ _CLRWR (dBm)	PK+ _MAXH (dBm)	Comment
30.032333	-64.56	-59.56	
996.508000	-54.83	-48.78	



PK+ _MAXH PK+ _CLRWR TX limits to Spurious Emissions FCC22, 24, 27