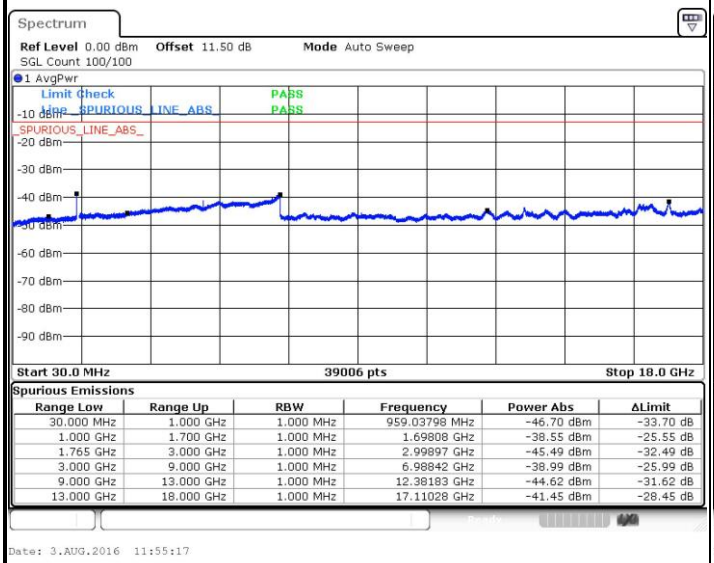
LTE Band 4 / 15MHz

Lowest Channel / QPSK

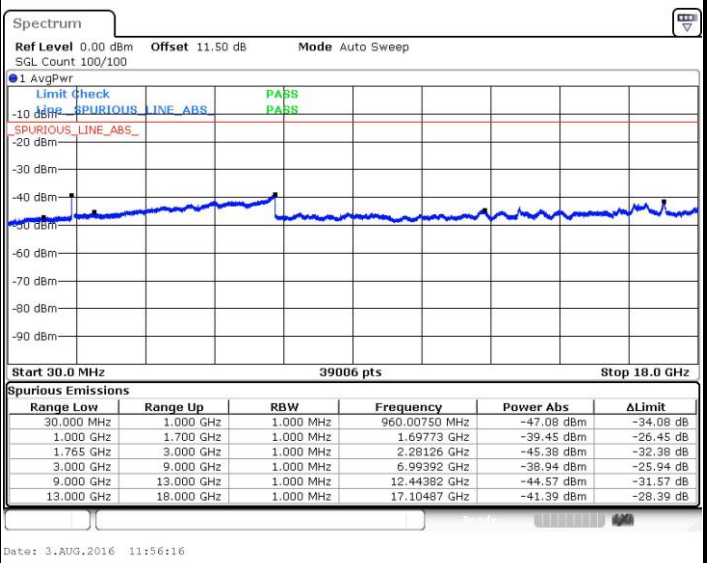


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	959.03798 MHz	-46.70 dBm	-33.70 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69808 GHz	-38.55 dBm	-25.55 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99897 GHz	-45.49 dBm	-32.49 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98842 GHz	-38.99 dBm	-25.99 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.38183 GHz	-44.62 dBm	-31.62 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11028 GHz	-41.45 dBm	-28.45 dB

Date: 3.AUG.2016 11:55:17

Lowest Channel / 16QAM

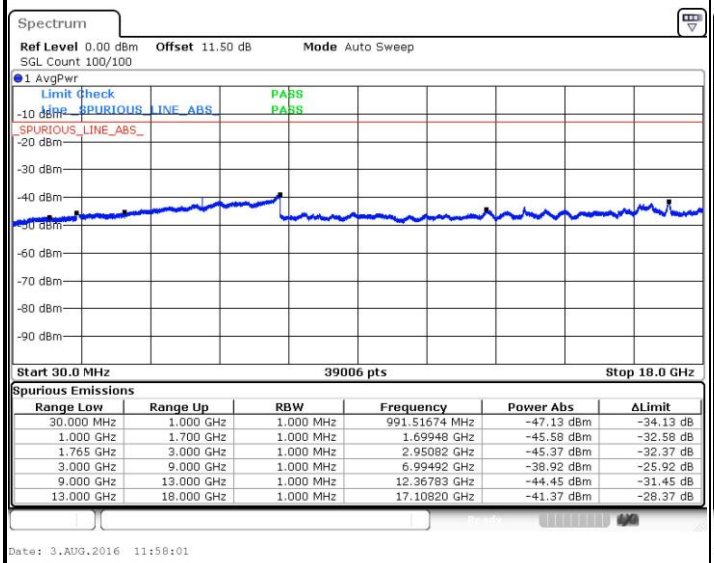


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	960.00750 MHz	-47.08 dBm	-34.08 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-39.45 dBm	-26.45 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.28126 GHz	-45.38 dBm	-32.38 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99392 GHz	-38.94 dBm	-25.94 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44382 GHz	-44.57 dBm	-31.57 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.10487 GHz	-41.39 dBm	-28.39 dB

Date: 3.AUG.2016 11:56:16

Middle Channel / QPSK

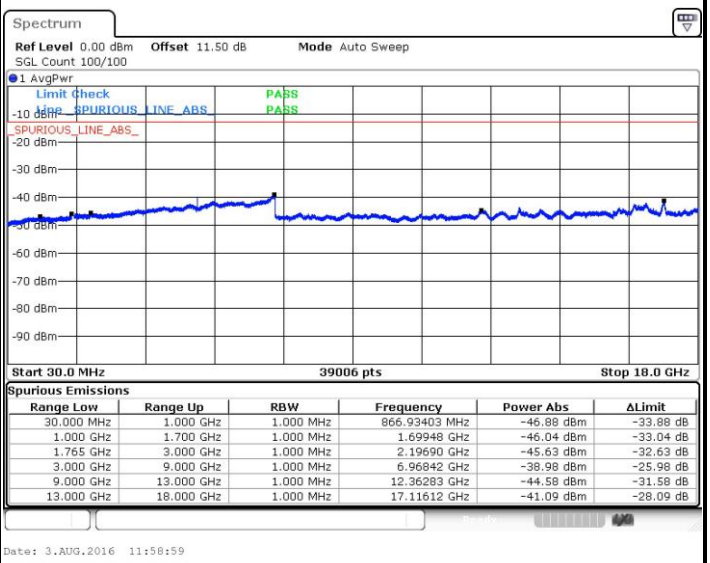


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	991.51674 MHz	-47.13 dBm	-34.13 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-45.58 dBm	-32.58 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.95082 GHz	-45.37 dBm	-32.37 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99492 GHz	-38.92 dBm	-25.92 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.36783 GHz	-44.45 dBm	-31.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.10820 GHz	-41.37 dBm	-28.37 dB

Date: 3.AUG.2016 11:58:01

Middle Channel / 16QAM



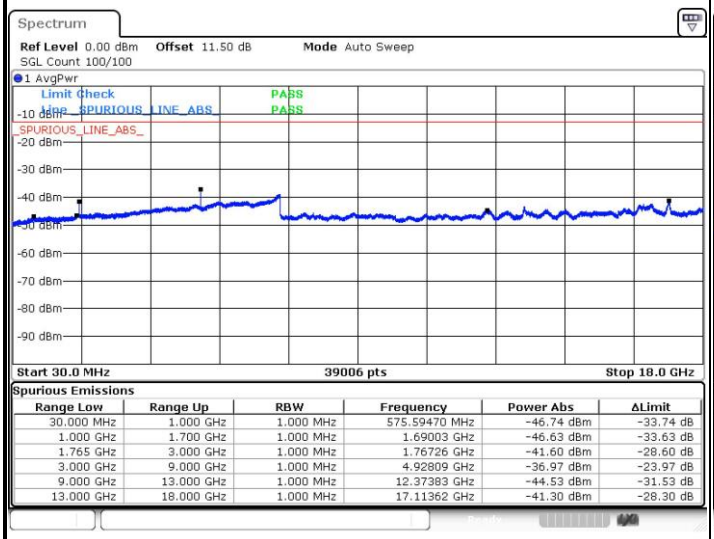
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	866.93403 MHz	-46.88 dBm	-33.88 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-46.04 dBm	-33.04 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.19690 GHz	-45.63 dBm	-32.63 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.96842 GHz	-38.98 dBm	-25.98 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.36283 GHz	-44.58 dBm	-31.58 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11612 GHz	-41.09 dBm	-28.09 dB

Date: 3.AUG.2016 11:58:59

LTE Band 4 / 15MHz

Highest Channel / QPSK

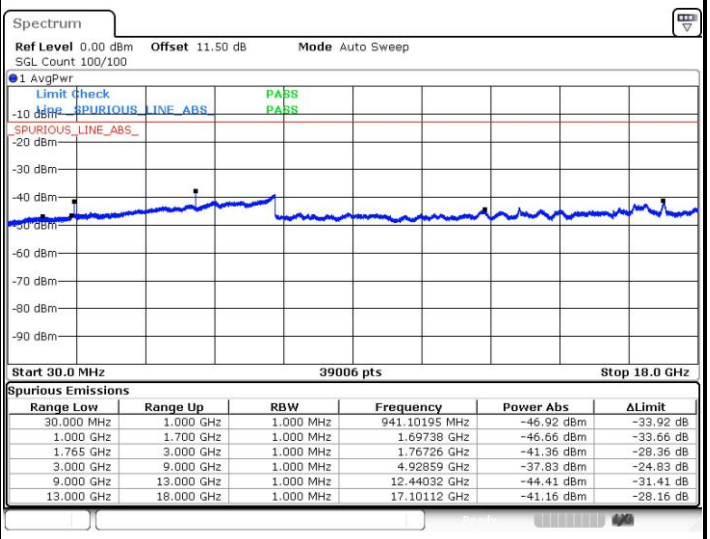


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	575.59470 MHz	-46.74 dBm	-33.74 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69003 GHz	-46.63 dBm	-33.63 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76726 GHz	-41.60 dBm	-28.60 dB
3.000 GHz	9.000 GHz	1.000 MHz	4.92809 GHz	-36.97 dBm	-23.97 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.37383 GHz	-44.53 dBm	-31.53 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11362 GHz	-41.30 dBm	-28.30 dB

Date: 3.AUG.2016 12:05:23

Highest Channel / 16QAM



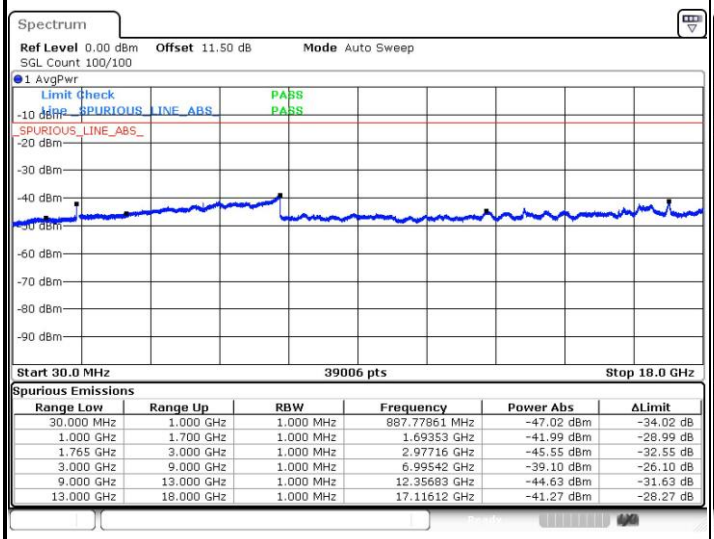
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	941.10195 MHz	-46.92 dBm	-33.92 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69738 GHz	-46.66 dBm	-33.66 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76726 GHz	-41.36 dBm	-28.36 dB
3.000 GHz	9.000 GHz	1.000 MHz	4.92859 GHz	-37.83 dBm	-24.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44032 GHz	-44.41 dBm	-31.41 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.10112 GHz	-41.16 dBm	-28.16 dB

Date: 3.AUG.2016 12:06:21

LTE Band 4 / 20MHz

Lowest Channel / QPSK

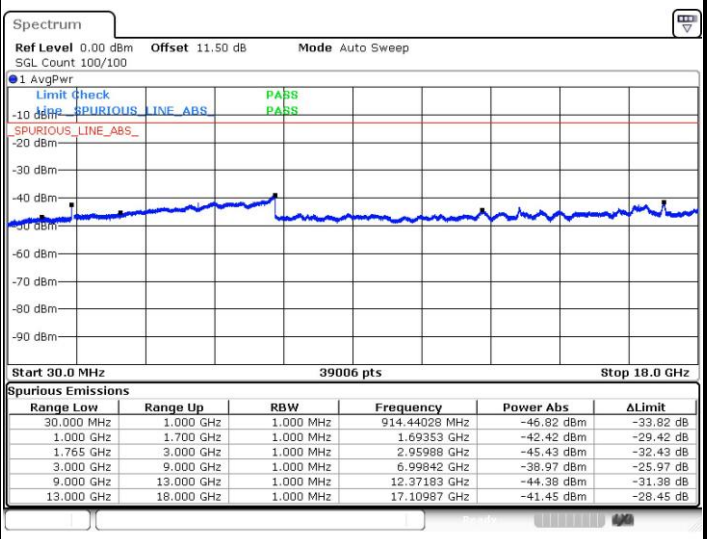


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	887.77861 MHz	-47.02 dBm	-34.02 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-41.99 dBm	-28.99 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97716 GHz	-45.55 dBm	-32.55 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99542 GHz	-39.10 dBm	-26.10 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.35683 GHz	-44.63 dBm	-31.63 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11612 GHz	-41.27 dBm	-28.27 dB

Date: 3.AUG.2016 13:41:44

Lowest Channel / 16QAM



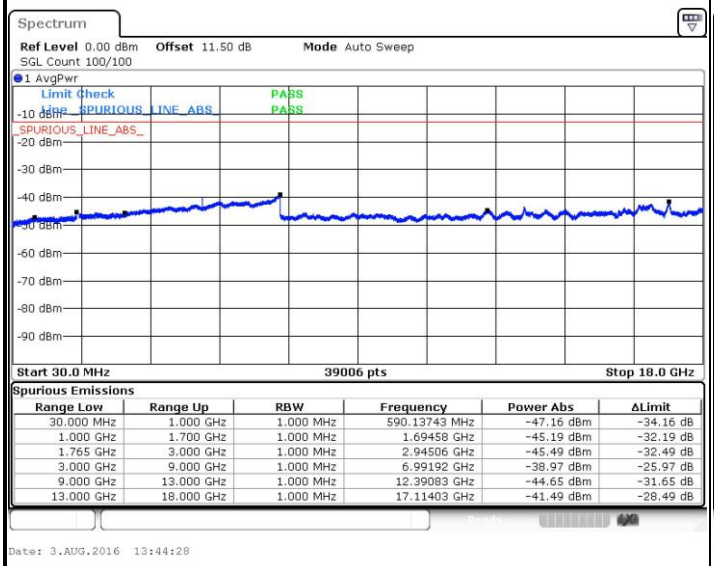
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	914.44028 MHz	-46.82 dBm	-33.82 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-42.42 dBm	-29.42 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.95988 GHz	-45.43 dBm	-32.43 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99842 GHz	-38.97 dBm	-25.97 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.37183 GHz	-44.38 dBm	-31.38 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.10987 GHz	-41.45 dBm	-28.45 dB

Date: 3.AUG.2016 13:42:42

LTE Band 4 / 20MHz

Middle Channel / QPSK

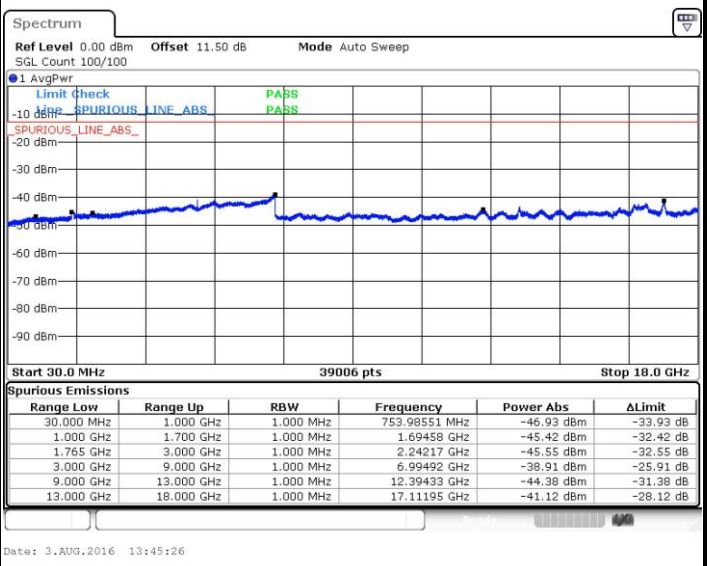


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	590.13743 MHz	-47.16 dBm	-34.16 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69458 GHz	-45.19 dBm	-32.19 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.94506 GHz	-45.49 dBm	-32.49 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99192 GHz	-38.97 dBm	-25.97 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.39083 GHz	-44.65 dBm	-31.65 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11403 GHz	-41.49 dBm	-28.49 dB

Date: 3.AUG.2016 13:44:28

Middle Channel / 16QAM

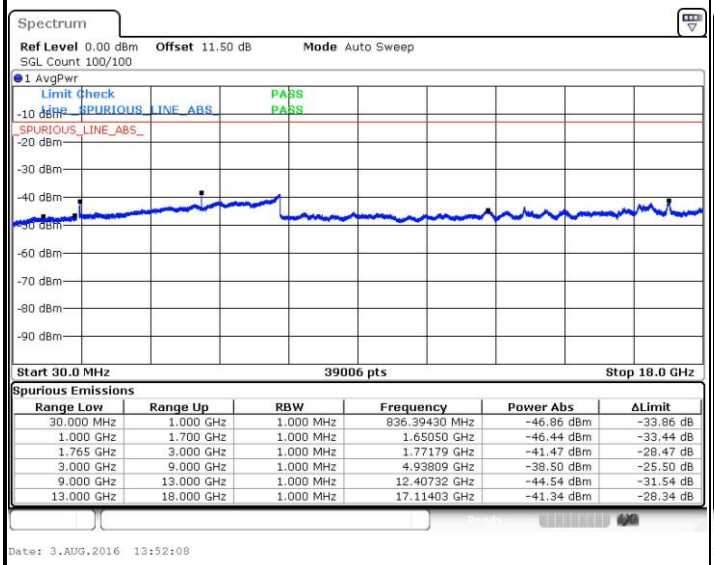


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	753.98551 MHz	-46.93 dBm	-33.93 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69458 GHz	-45.42 dBm	-32.42 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.24217 GHz	-45.55 dBm	-32.55 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99492 GHz	-38.91 dBm	-25.91 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.39433 GHz	-44.38 dBm	-31.38 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11195 GHz	-41.12 dBm	-28.12 dB

Date: 3.AUG.2016 13:45:26

Highest Channel / QPSK

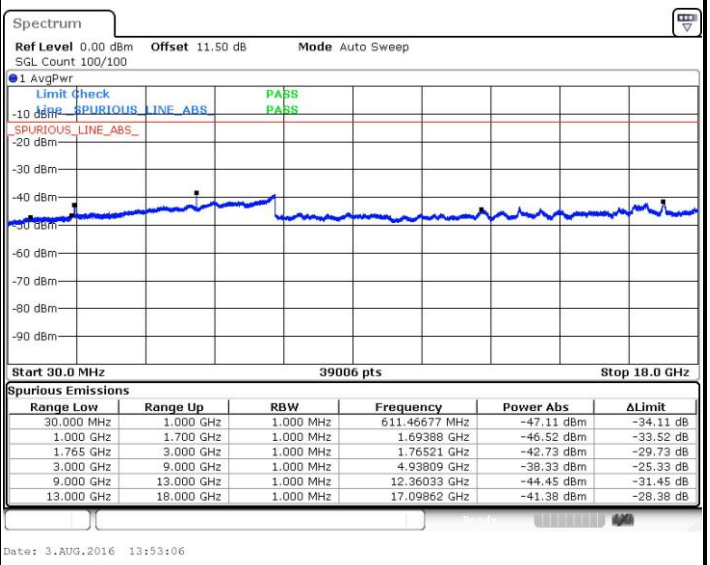


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	836.39430 MHz	-46.86 dBm	-33.86 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65050 GHz	-46.44 dBm	-33.44 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77179 GHz	-41.47 dBm	-28.47 dB
3.000 GHz	9.000 GHz	1.000 MHz	4.93809 GHz	-38.50 dBm	-25.50 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.40732 GHz	-44.54 dBm	-31.54 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.11403 GHz	-41.34 dBm	-28.34 dB

Date: 3.AUG.2016 13:52:08

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	611.46677 MHz	-47.11 dBm	-34.11 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69388 GHz	-46.52 dBm	-33.52 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76521 GHz	-42.73 dBm	-29.73 dB
3.000 GHz	9.000 GHz	1.000 MHz	4.93809 GHz	-38.33 dBm	-25.33 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.36033 GHz	-44.45 dBm	-31.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.09862 GHz	-41.38 dBm	-28.38 dB

Date: 3.AUG.2016 13:53:06

Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0008	PASS
40	Normal Voltage	0.0141	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0125	
-30	Normal Voltage	0.0130	
20	Maximum Voltage	0.0130	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

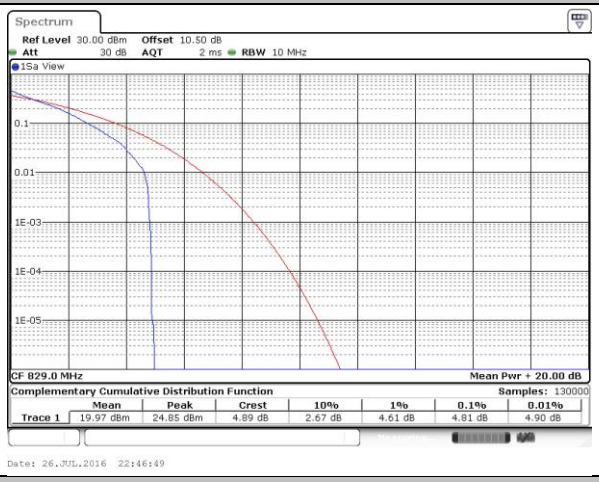
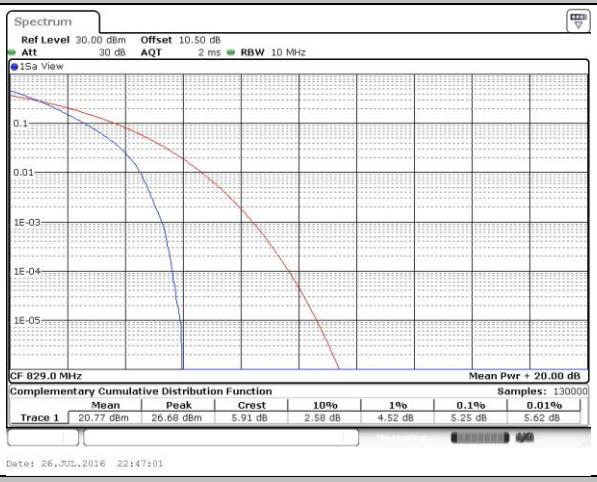
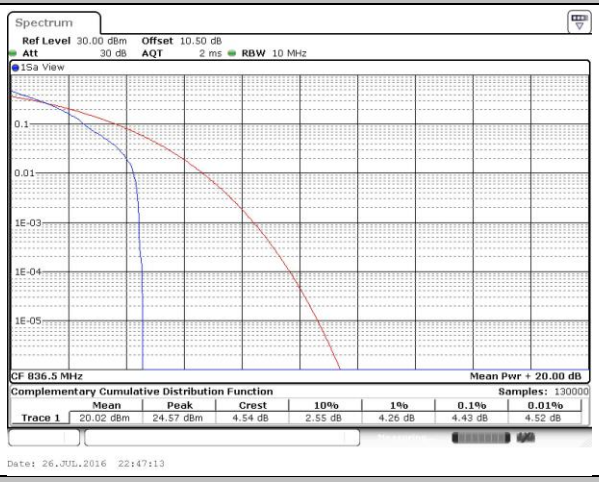
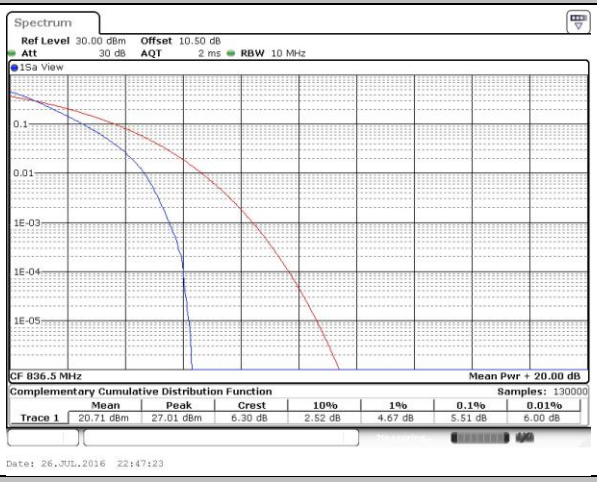
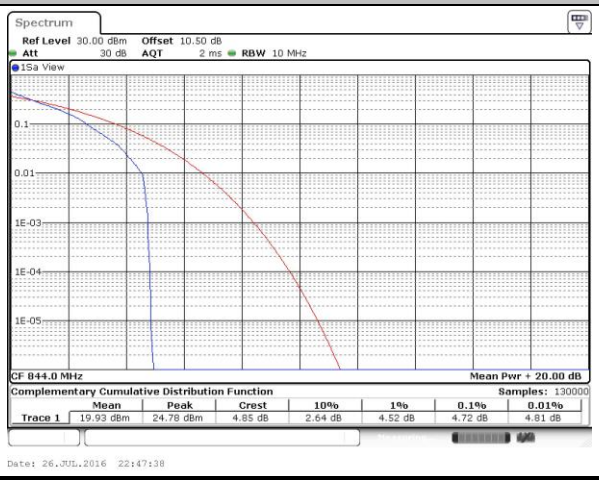
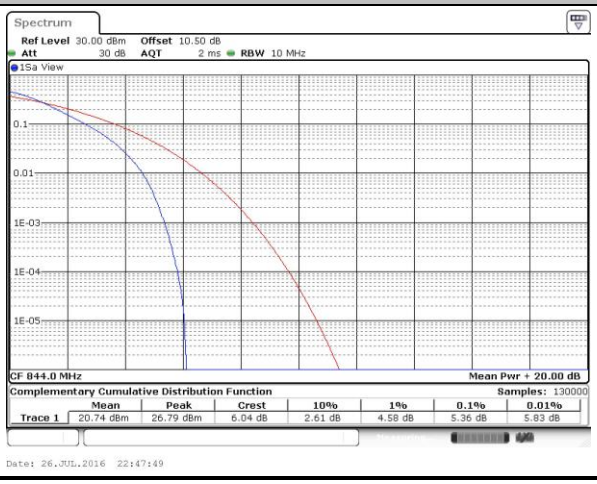
Note:

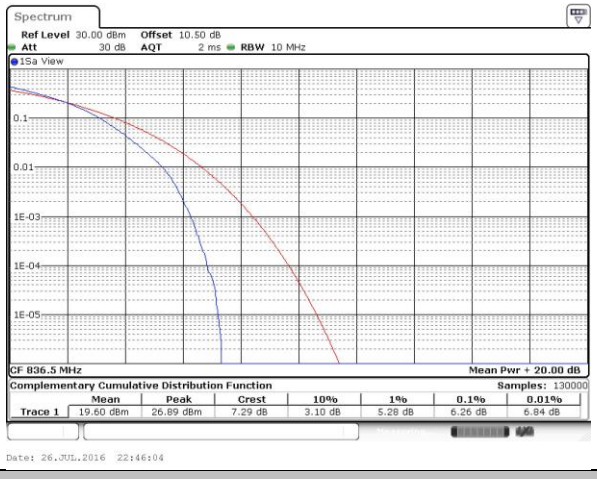
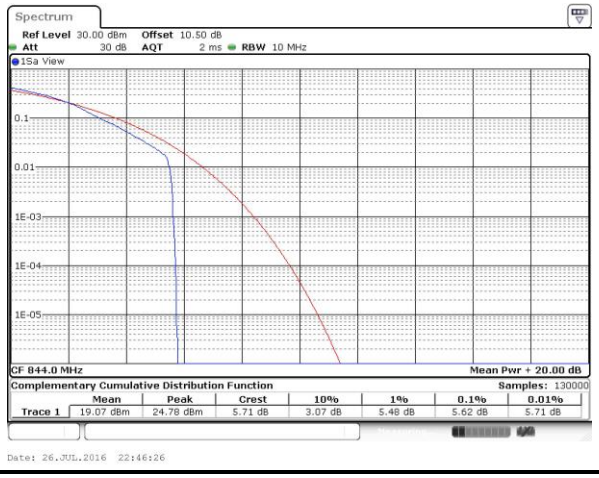
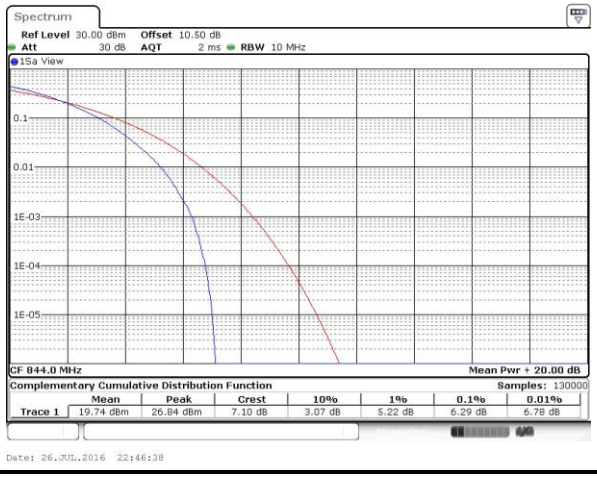
1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 5

Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.81	5.25	5.65	6.14	PASS
Middle CH	4.43	5.51	5.54	6.26	
Highest CH	4.72	5.36	5.62	6.29	

LTE Band 5 / 10MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

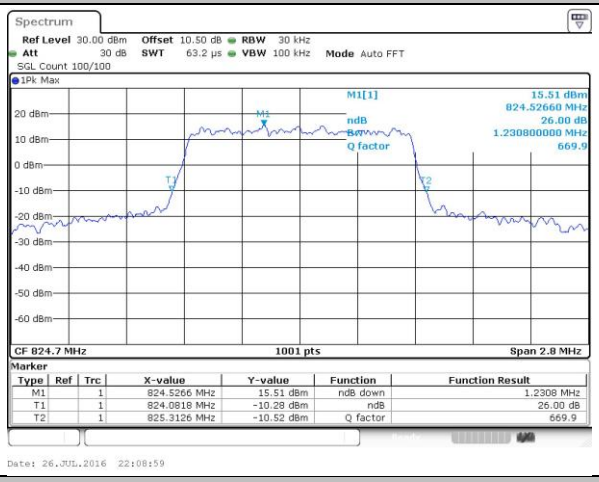
LTE Band 5 / 10MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

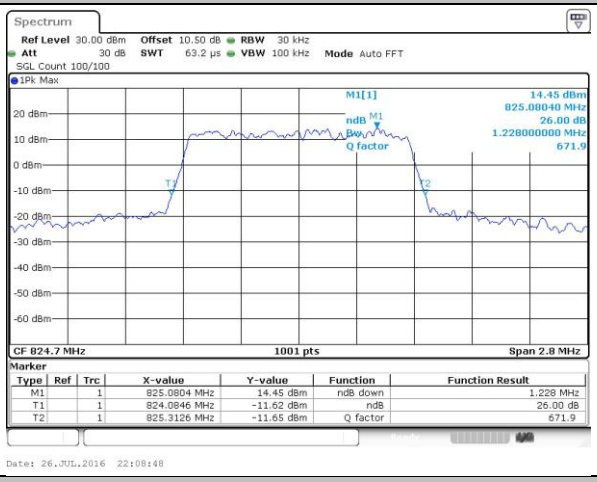
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.231	1.228	3.027	3.045	4.915	4.895	9.77	9.71	-	-	-	-
Middle CH	1.245	1.234	2.985	3.027	4.925	4.875	9.79	9.67	-	-	-	-
Highest CH	1.234	1.225	3.015	3.003	4.885	4.965	9.77	9.91	-	-	-	-

LTE Band 5

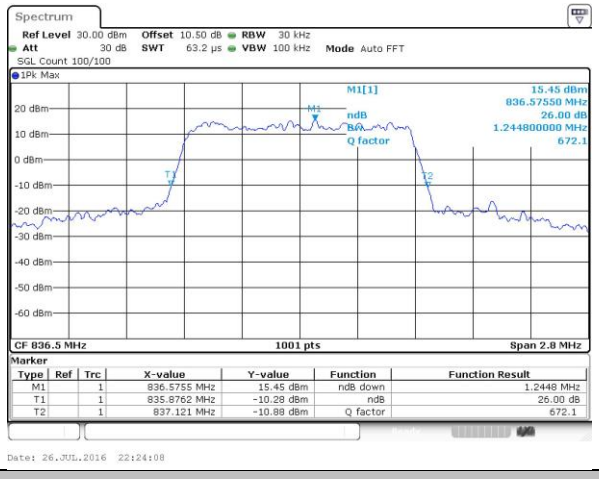
Lowest Channel / 1.4MHz / QPSK



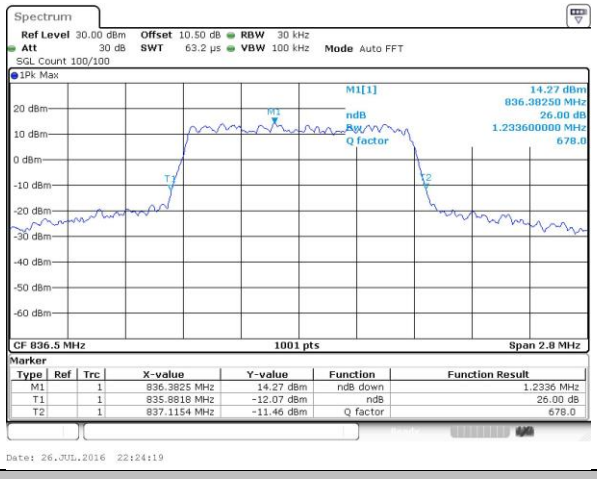
Lowest Channel / 1.4MHz / 16QAM



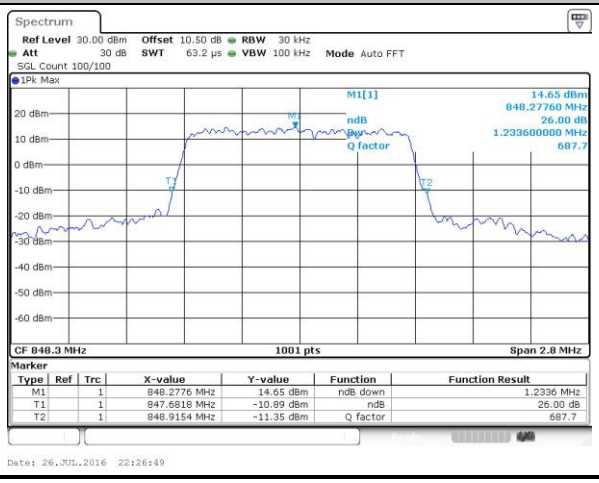
Middle Channel / 1.4MHz / QPSK



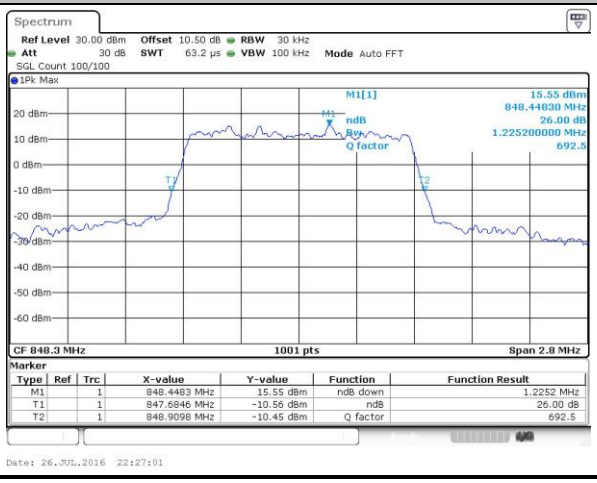
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

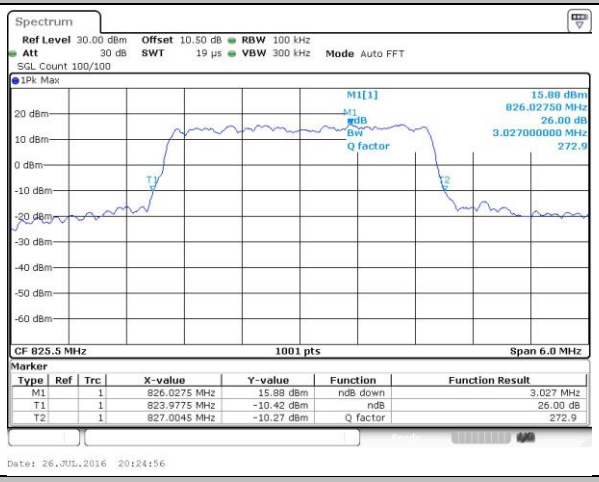


Highest Channel / 1.4MHz / 16QAM

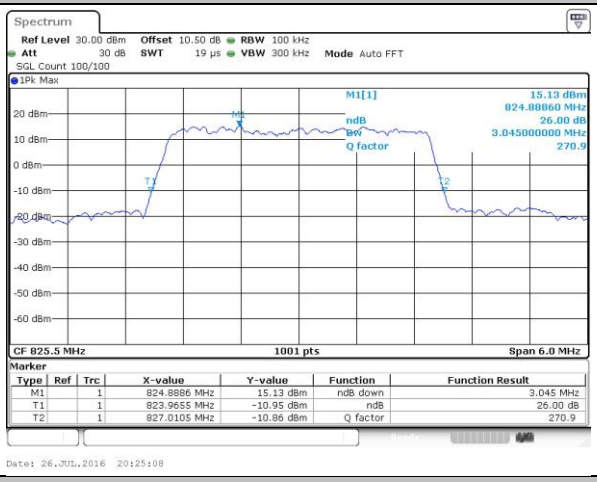


LTE Band 5

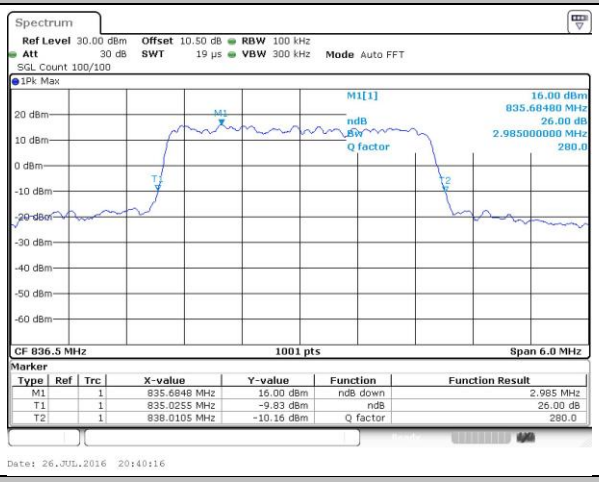
Lowest Channel / 3MHz / QPSK



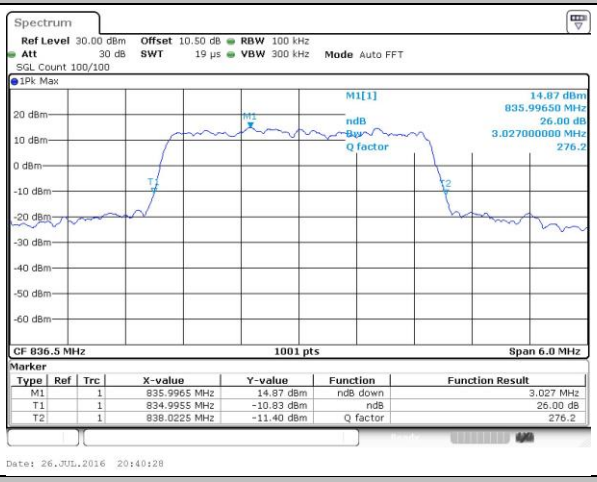
Lowest Channel / 3MHz / 16QAM



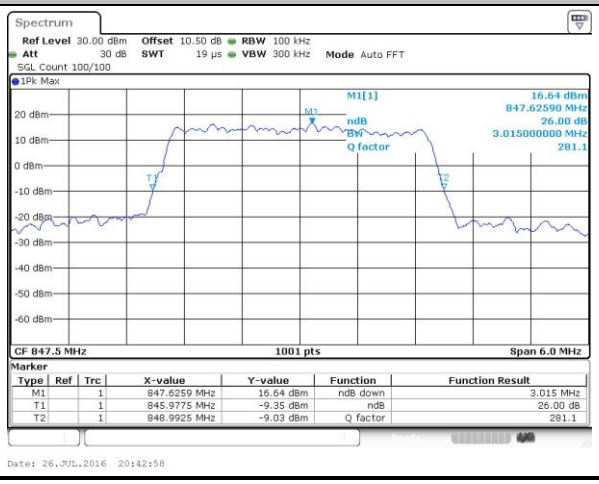
Middle Channel / 3MHz / QPSK



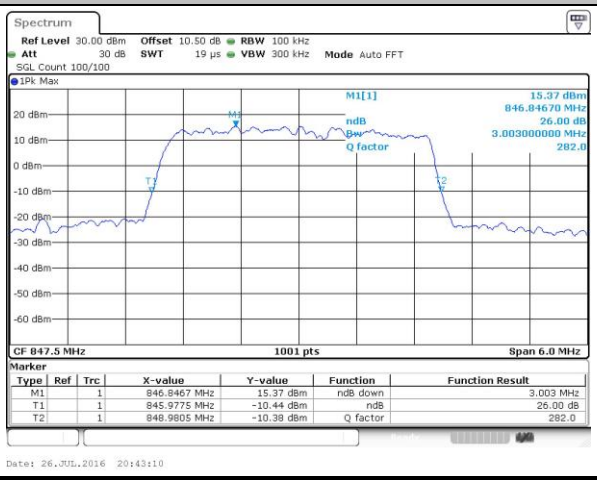
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

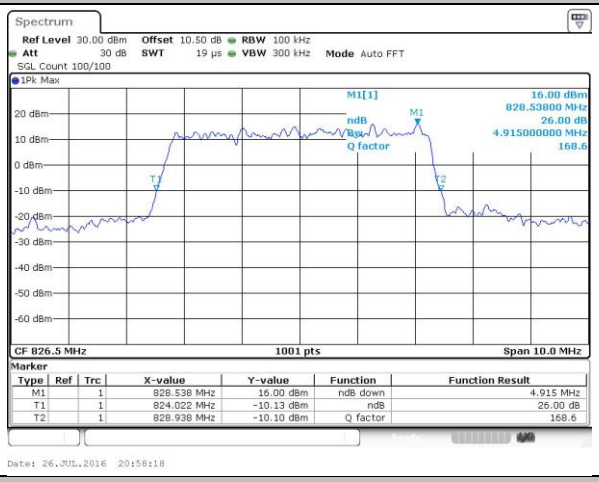


Highest Channel /3MHz / 16QAM

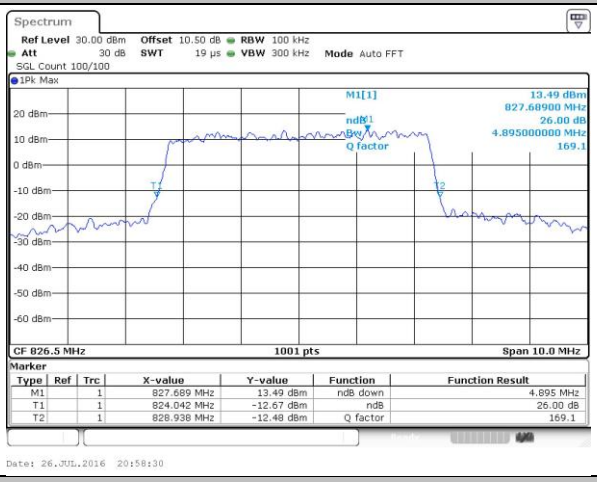


LTE Band 5

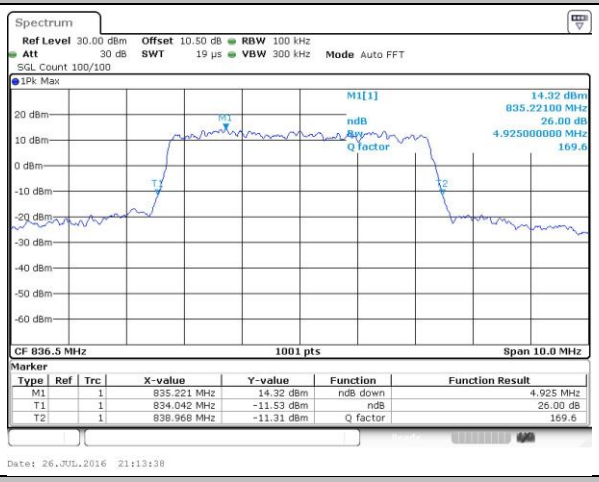
Lowest Channel / 5MHz / QPSK



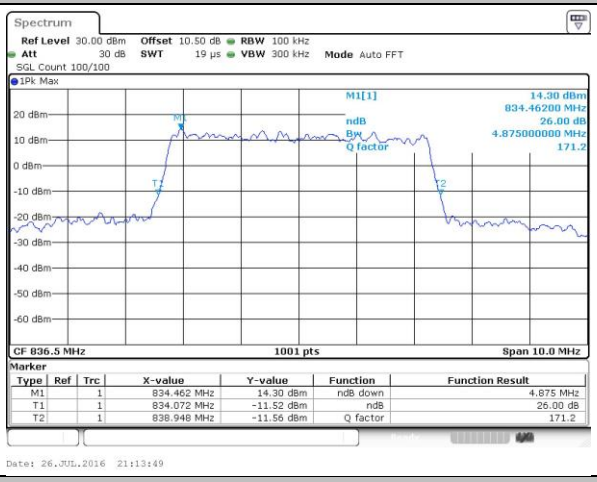
Lowest Channel / 5MHz / 16QAM



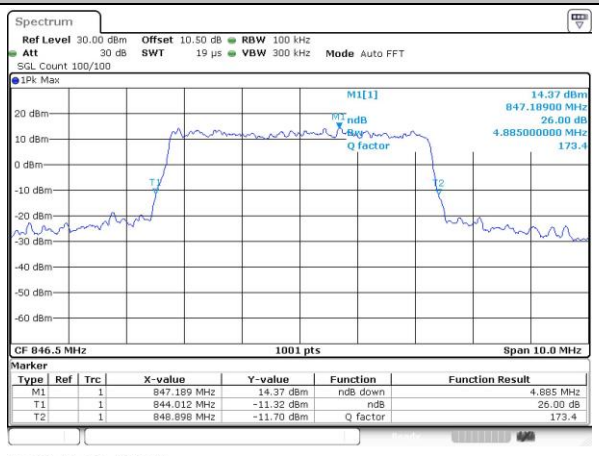
Middle Channel / 5MHz / QPSK



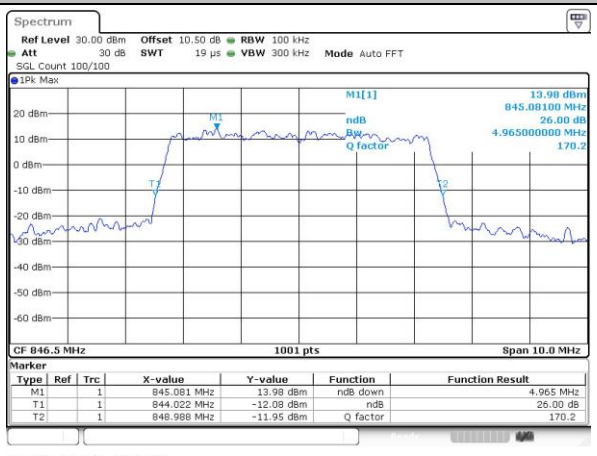
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

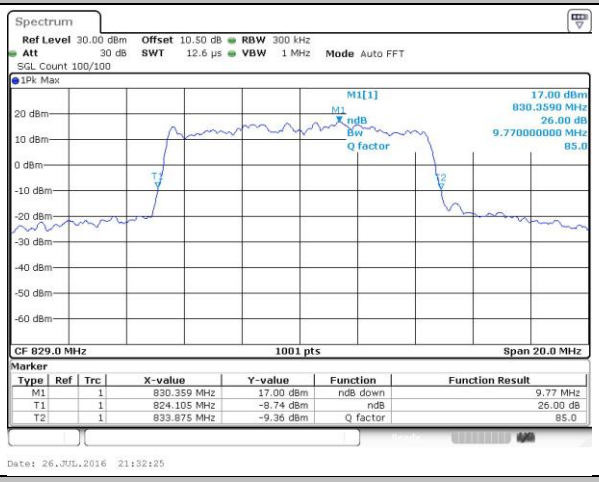


Highest Channel / 5MHz / 16QAM

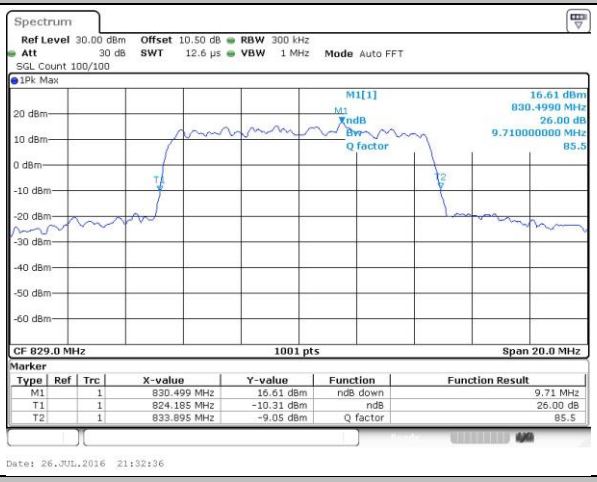


LTE Band 5

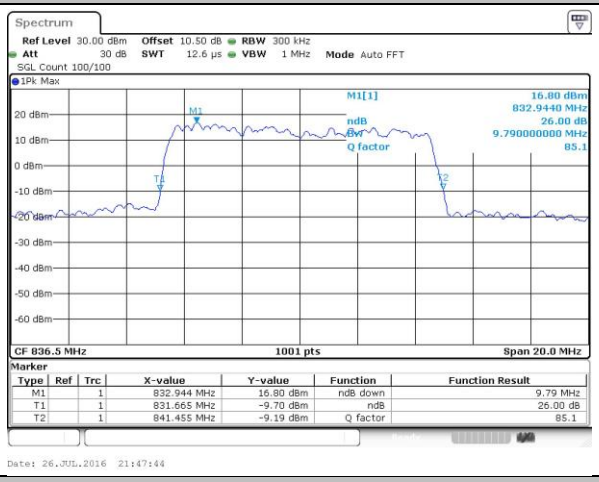
Lowest Channel / 10MHz / QPSK



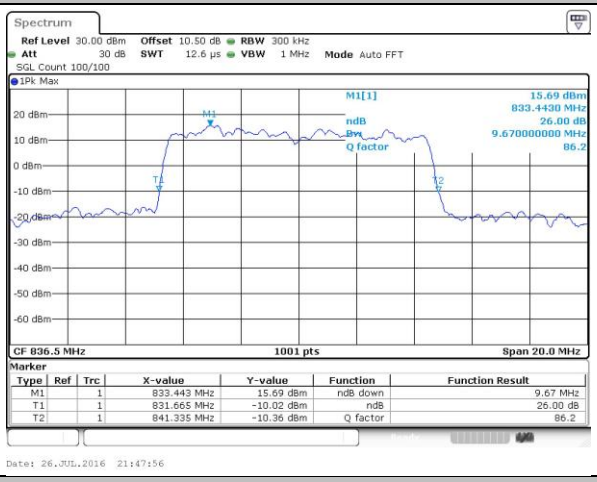
Lowest Channel / 10MHz / 16QAM



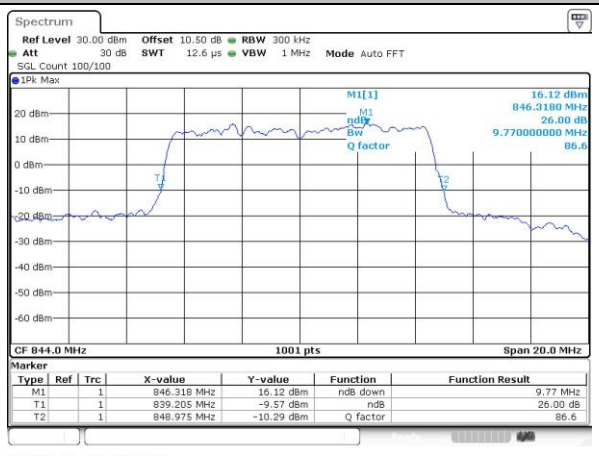
Middle Channel / 10MHz / QPSK



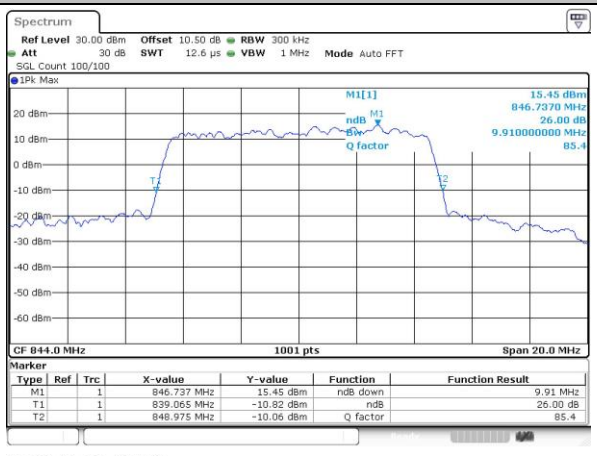
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

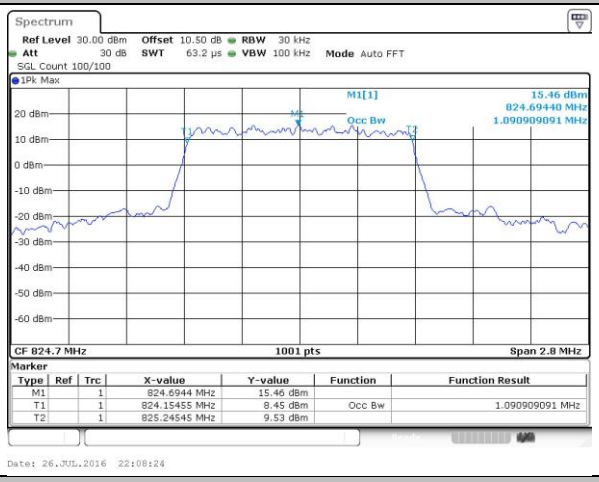


Occupied Bandwidth

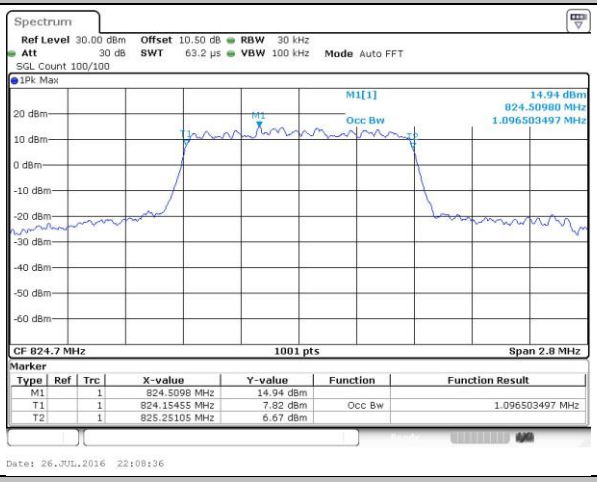
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.1	2.72	2.72	4.48	4.49	8.99	8.99	-	-	-	-
Middle CH	1.09	1.09	2.73	2.73	4.5	4.49	9.09	9.03	-	-	-	-
Highest CH	1.09	1.09	2.71	2.73	4.47	4.46	8.99	8.99	-	-	-	-

LTE Band 5

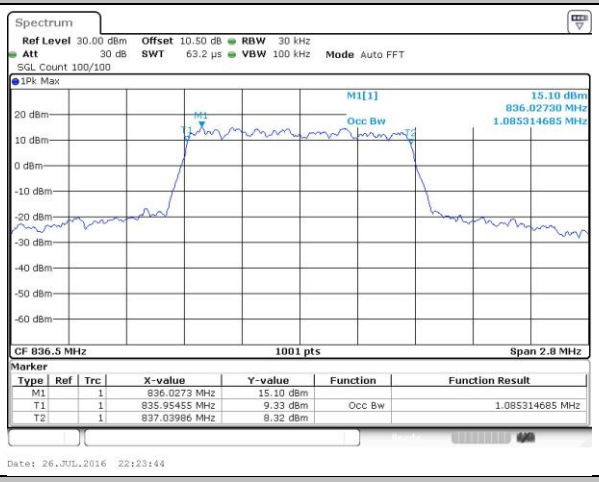
Lowest Channel / 1.4MHz / QPSK



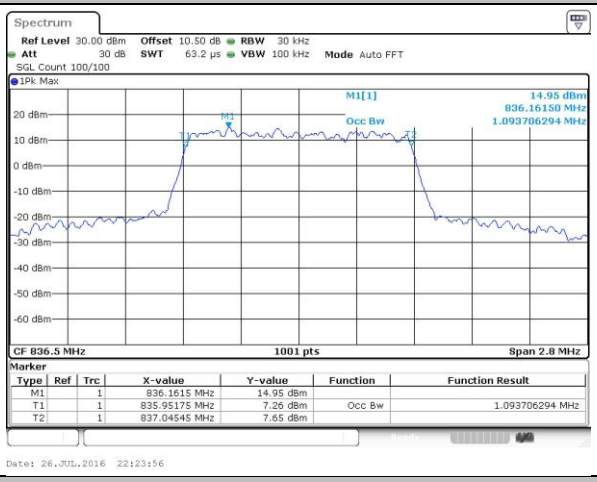
Lowest Channel / 1.4MHz / 16QAM



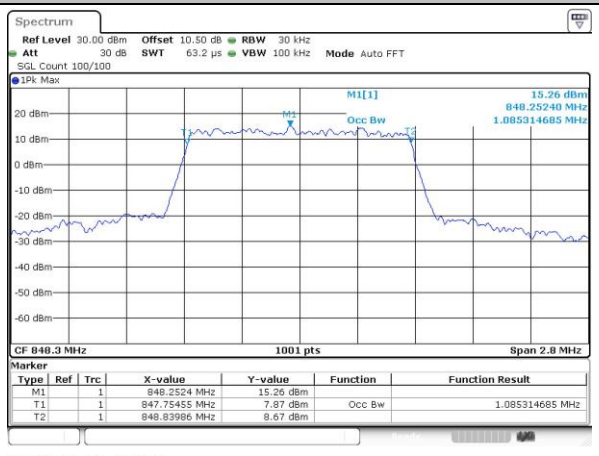
Middle Channel / 1.4MHz / QPSK



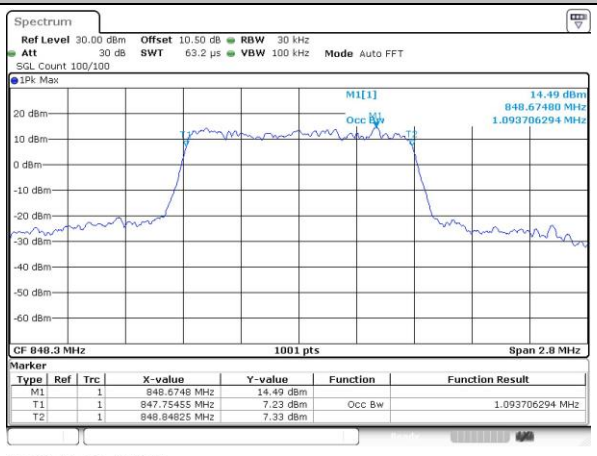
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

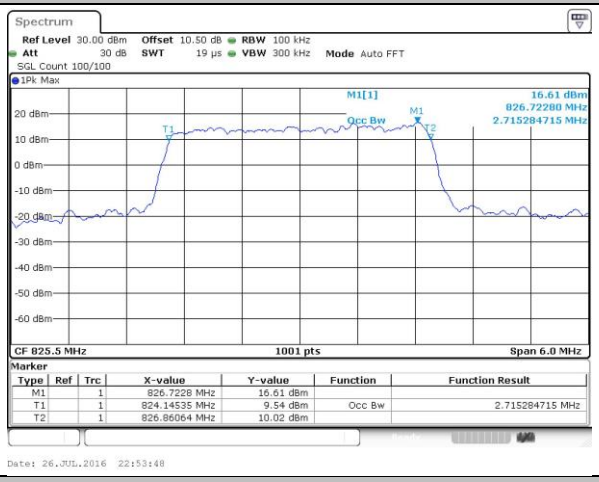


Highest Channel / 1.4MHz / 16QAM

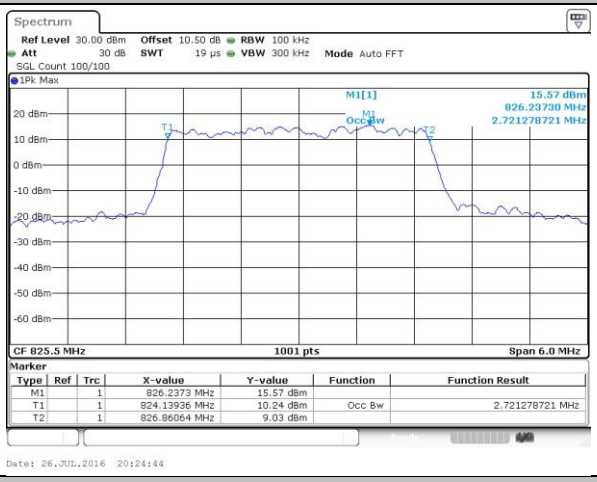


LTE Band 5

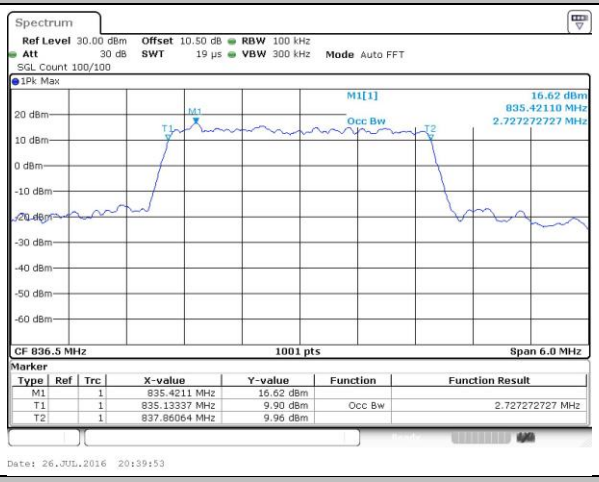
Lowest Channel / 3MHz / QPSK



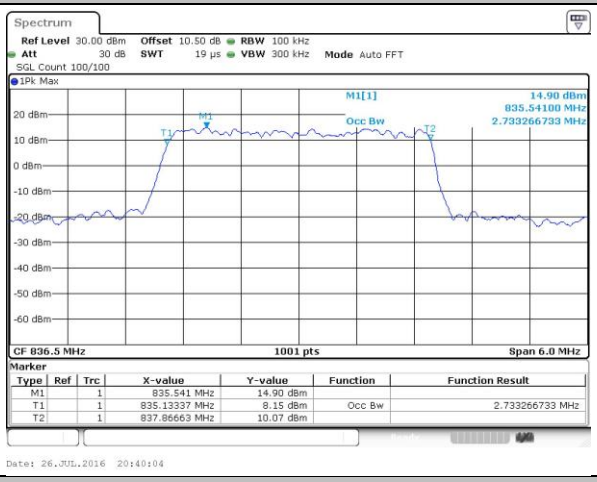
Lowest Channel / 3MHz / 16QAM



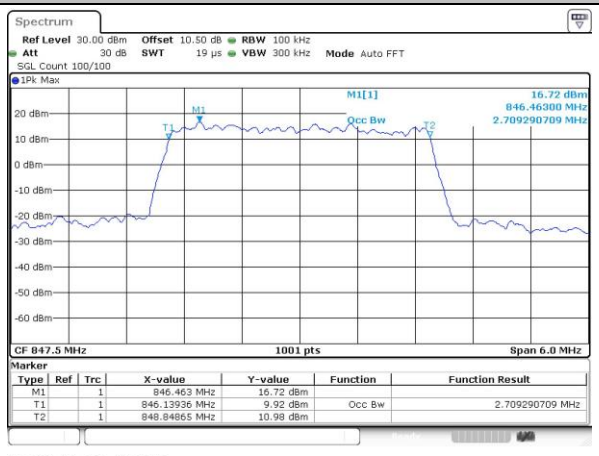
Middle Channel / 3MHz / QPSK



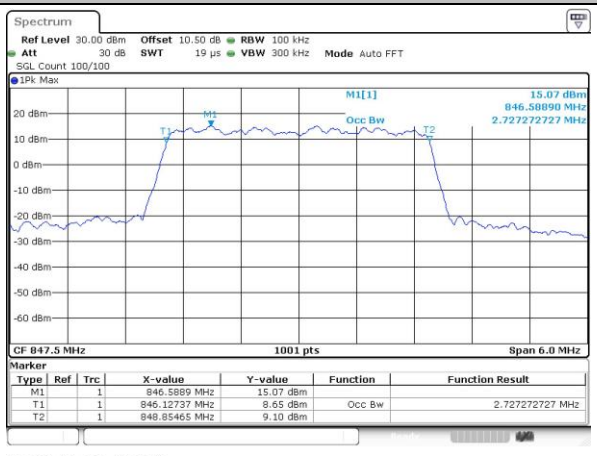
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

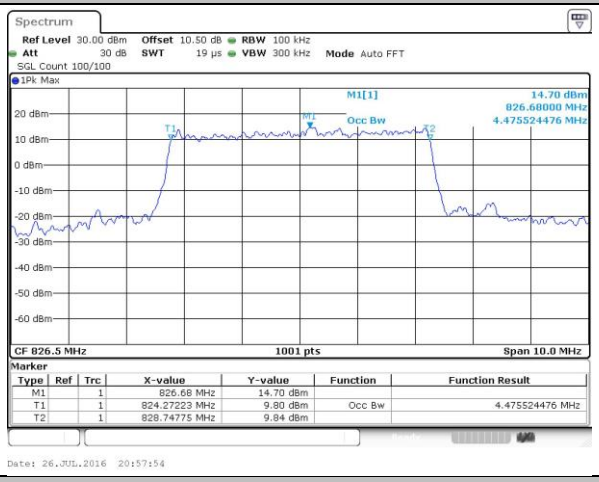


Highest Channel / 3MHz / 16QAM

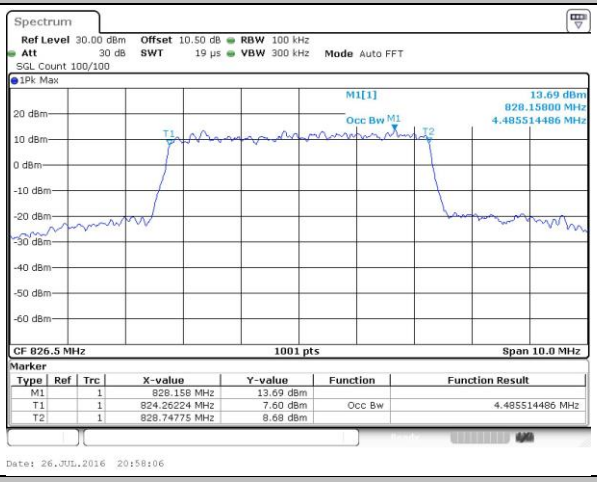


LTE Band 5

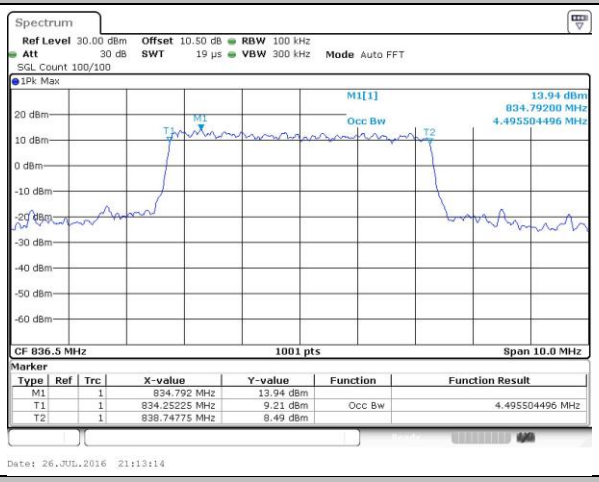
Lowest Channel / 5MHz / QPSK



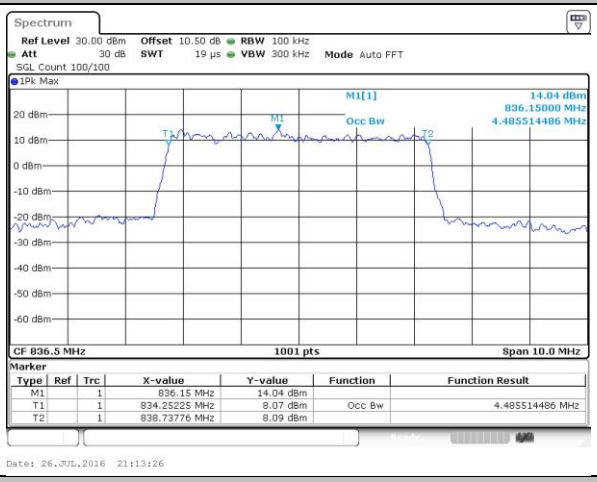
Lowest Channel / 5MHz / 16QAM



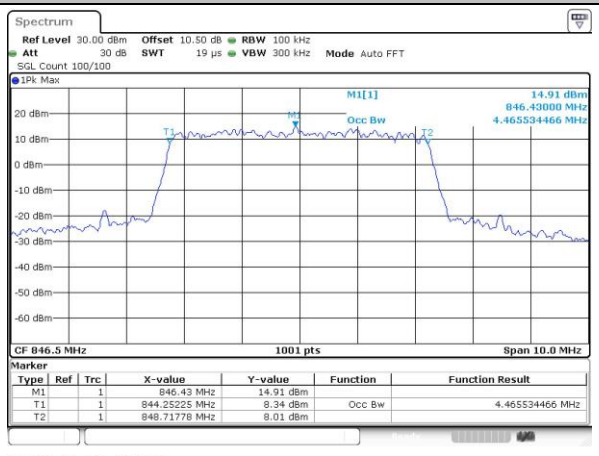
Middle Channel / 5MHz / QPSK



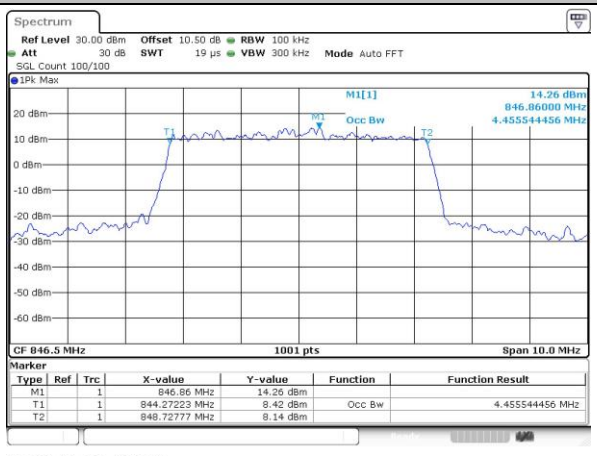
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

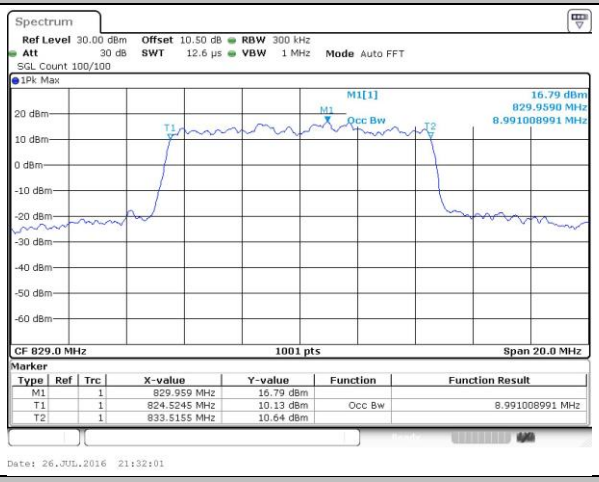


Highest Channel / 5MHz / 16QAM

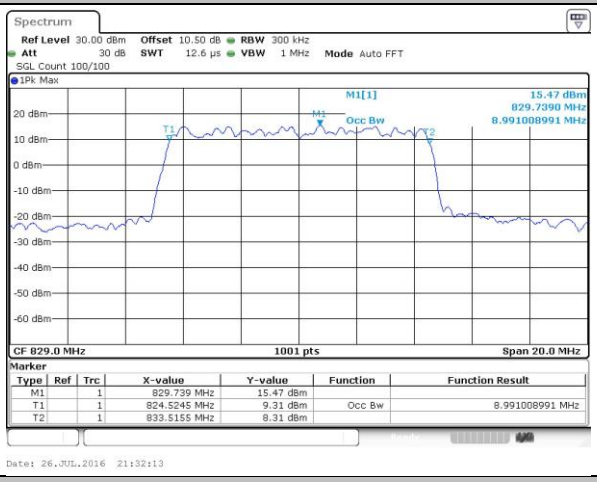


LTE Band 5

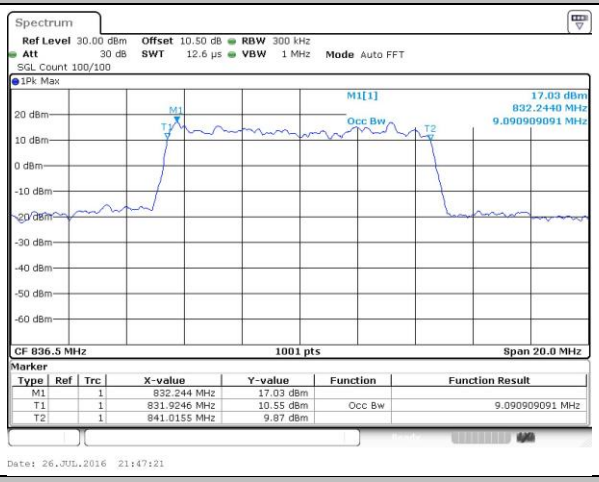
Lowest Channel / 10MHz / QPSK



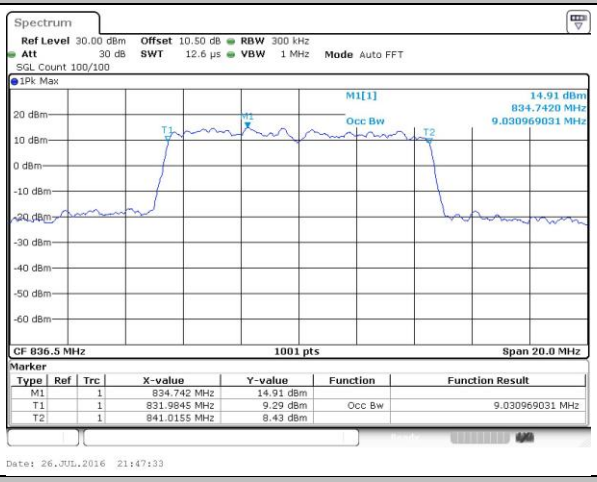
Lowest Channel / 10MHz / 16QAM



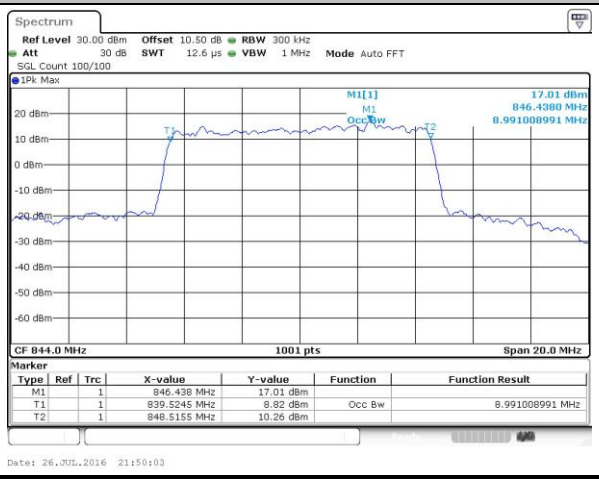
Middle Channel / 10MHz / QPSK



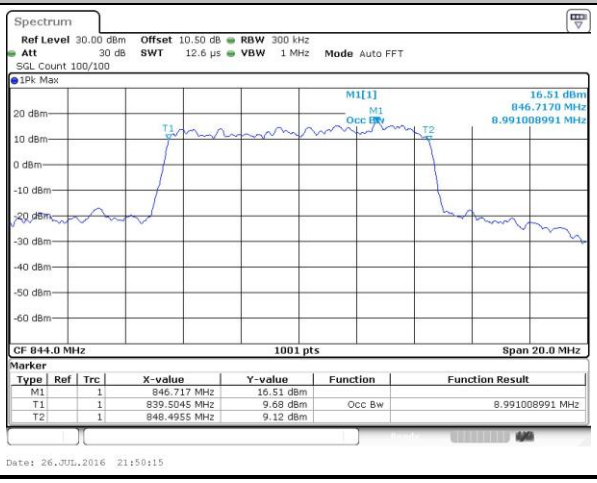
Middle Channel / 10MHz / 16QAM



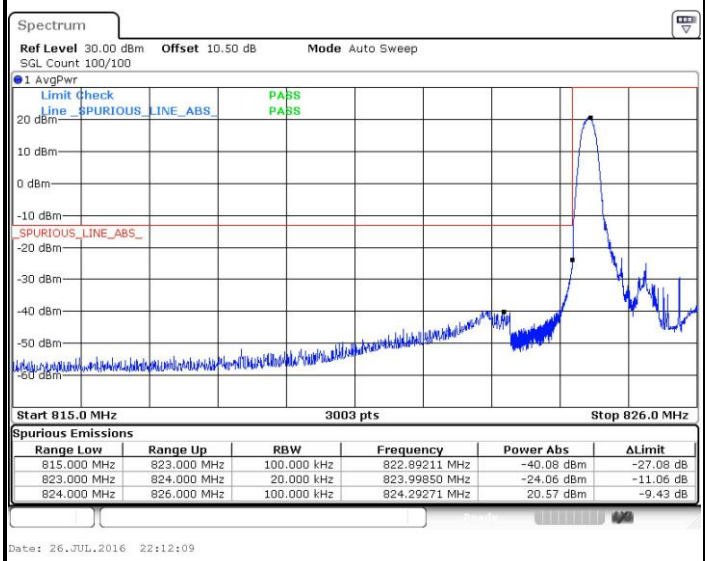
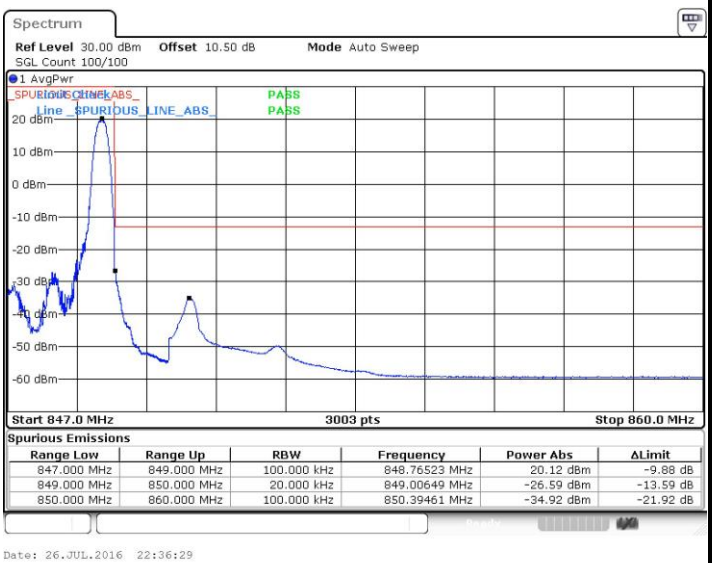
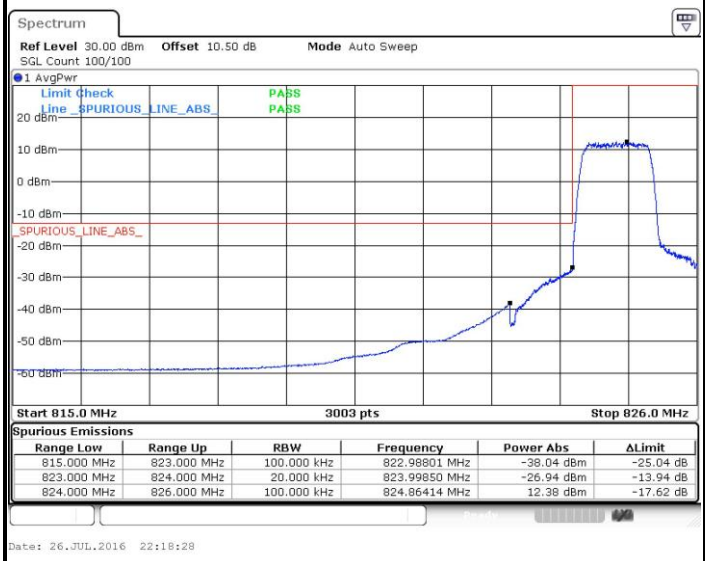
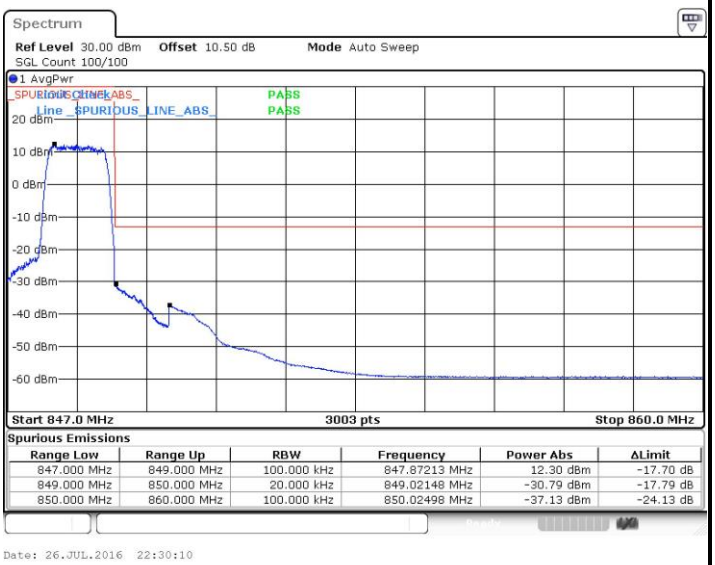
Highest Channel / 10MHz / QPSK

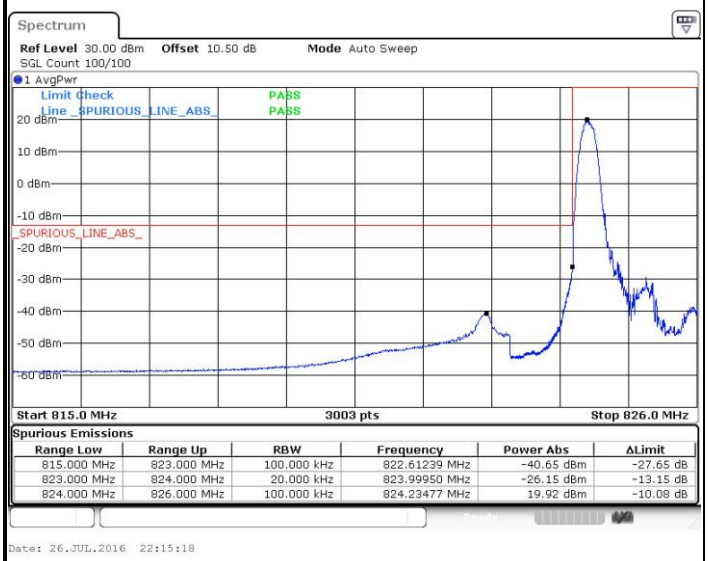
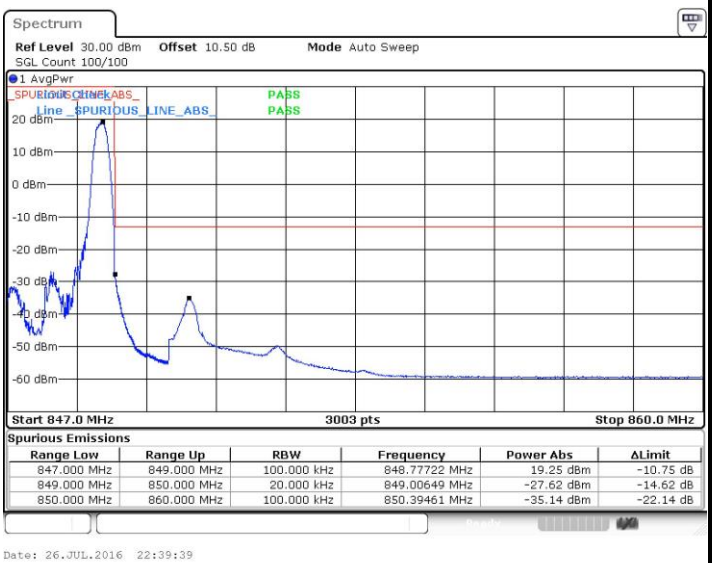
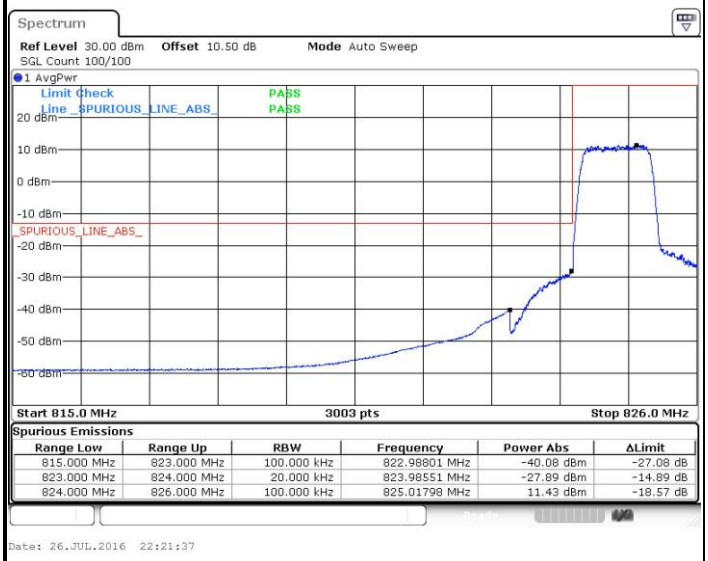
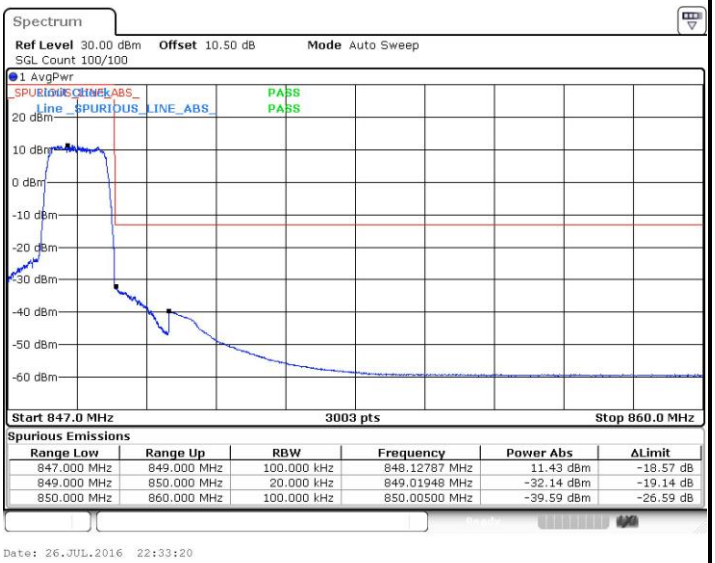


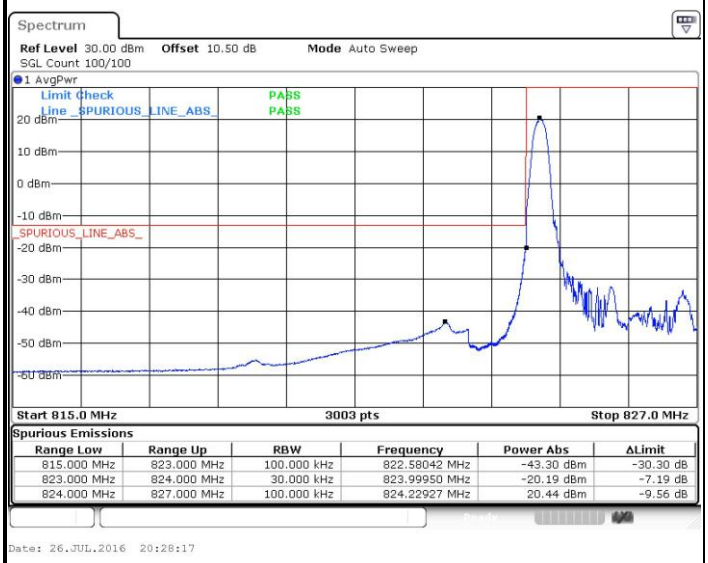
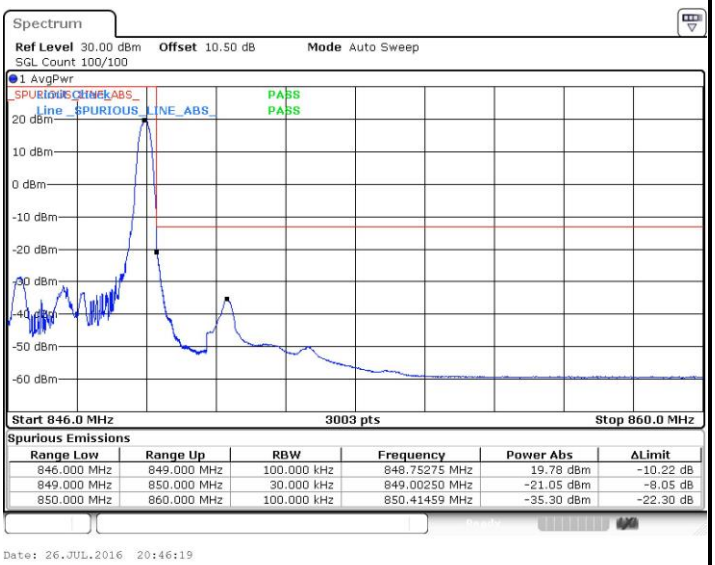
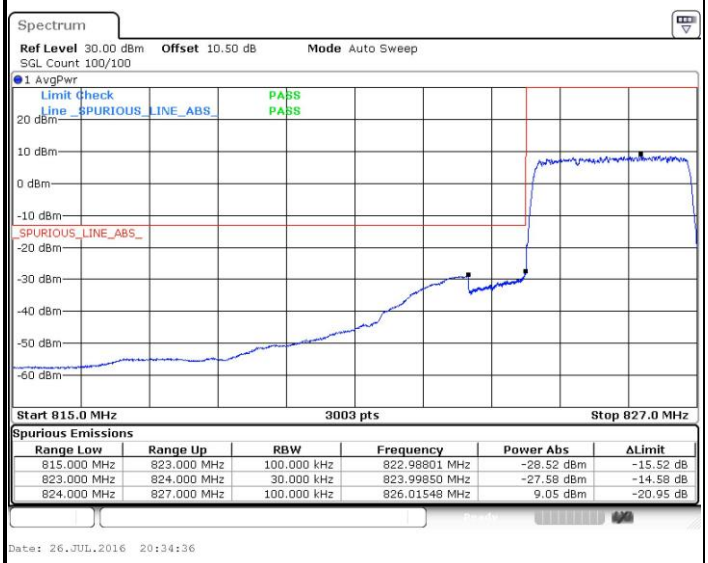
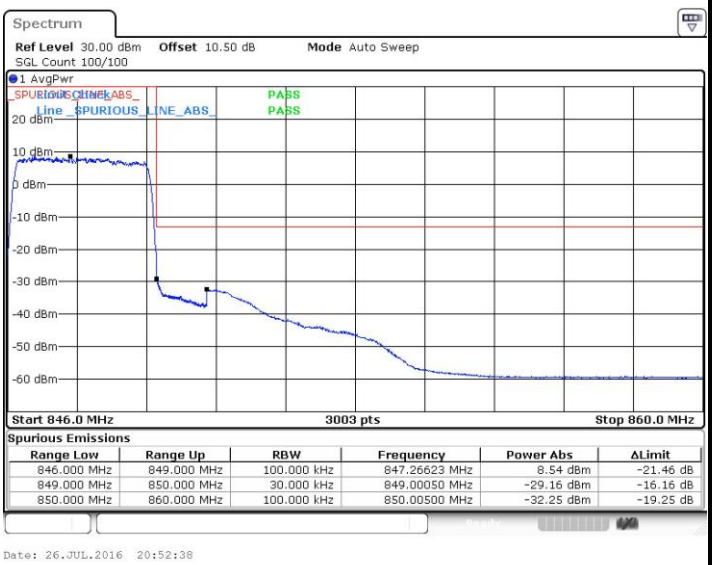
Highest Channel / 10MHz / 16QAM

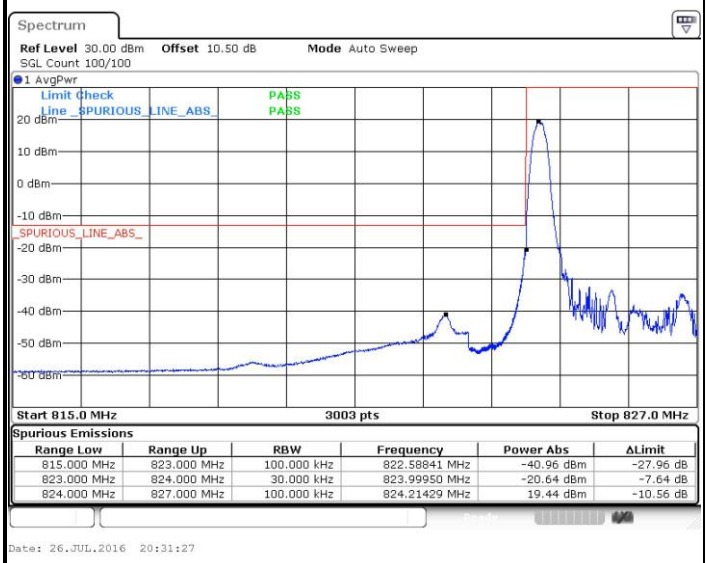
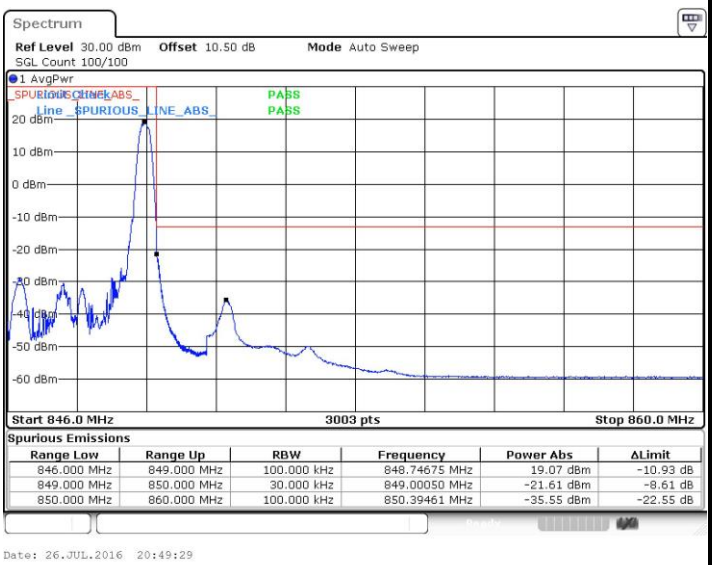
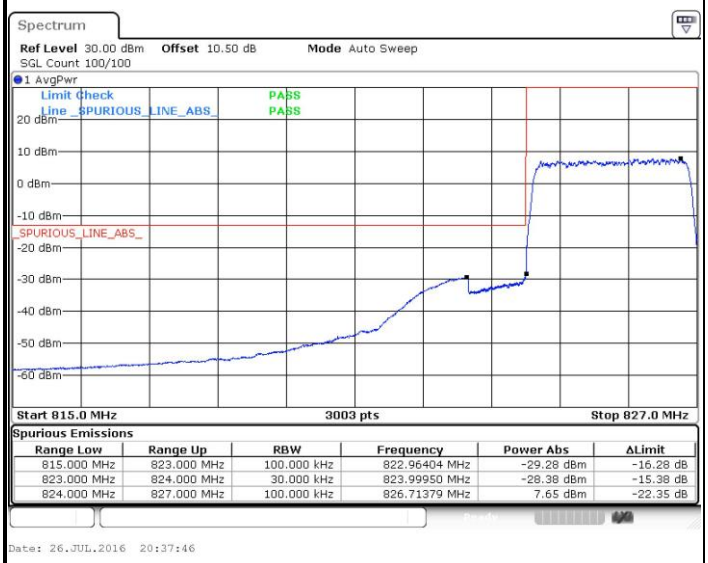
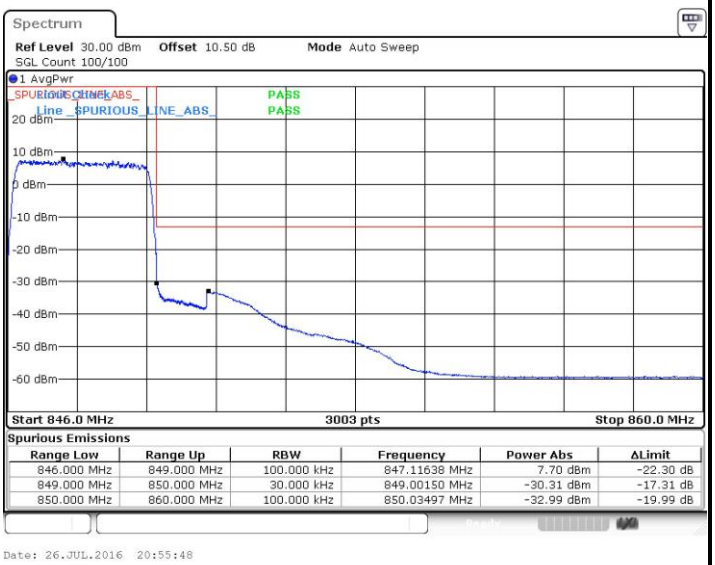


Conducted Band Edge

LTE Band 5 / 1.4MHz / QPSK	
Lowest Band Edge / 1RB	**Highest Band Edge / 1RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 1.4MHz / 16QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 3MHz / QPSK	
Lowest Band Edge / 1RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 5 / 3MHz / 16QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge /1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**