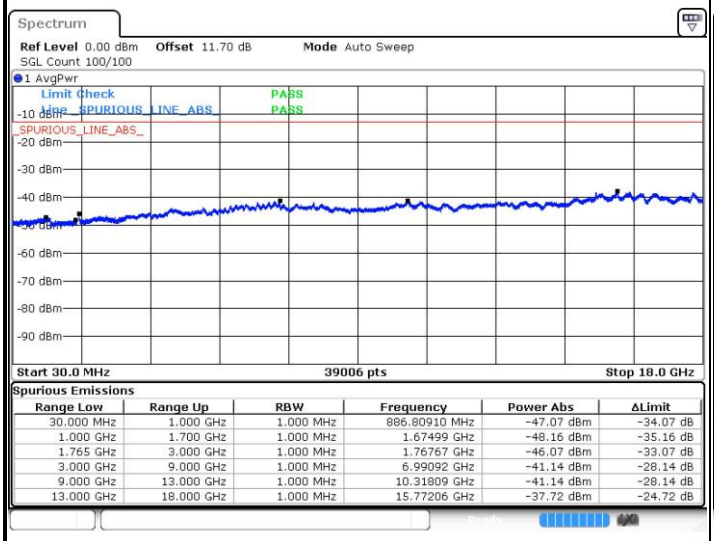
LTE Band 4 / 15MHz

Highest Channel / QPSK

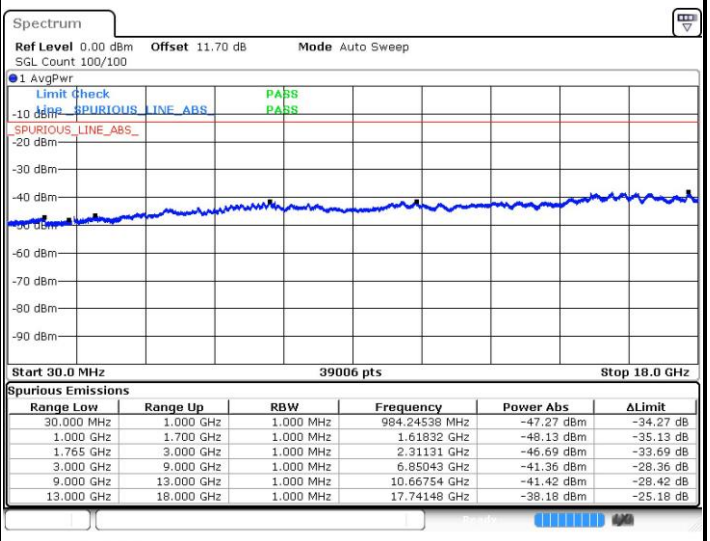


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	886.80910 MHz	-47.07 dBm	-34.07 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67499 GHz	-48.16 dBm	-35.16 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76767 GHz	-46.07 dBm	-33.07 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99092 GHz	-41.14 dBm	-28.14 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31809 GHz	-41.14 dBm	-28.14 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77206 GHz	-37.72 dBm	-24.72 dB

Date: 8.JAN.2017 22:08:35

Highest Channel / 16QAM



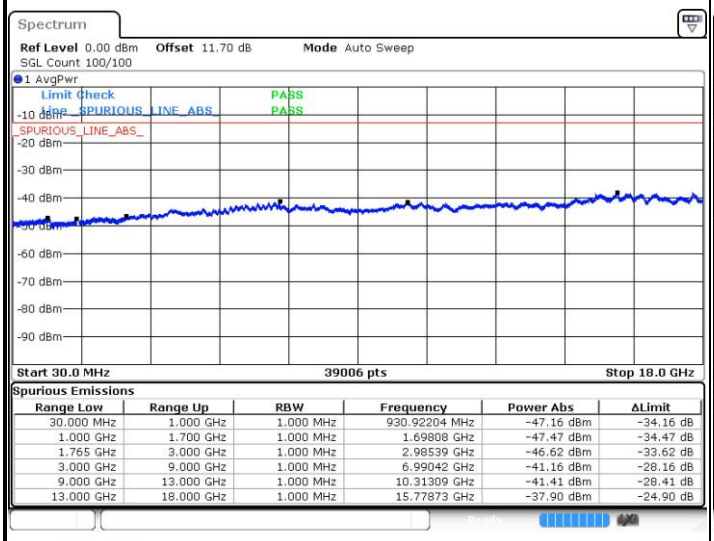
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	984.24538 MHz	-47.27 dBm	-34.27 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61832 GHz	-48.13 dBm	-35.13 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.31131 GHz	-46.69 dBm	-33.69 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.85043 GHz	-41.36 dBm	-28.36 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.66754 GHz	-41.42 dBm	-28.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.74148 GHz	-38.18 dBm	-25.18 dB

Date: 8.JAN.2017 22:09:29

LTE Band 4 / 20MHz

Lowest Channel / QPSK

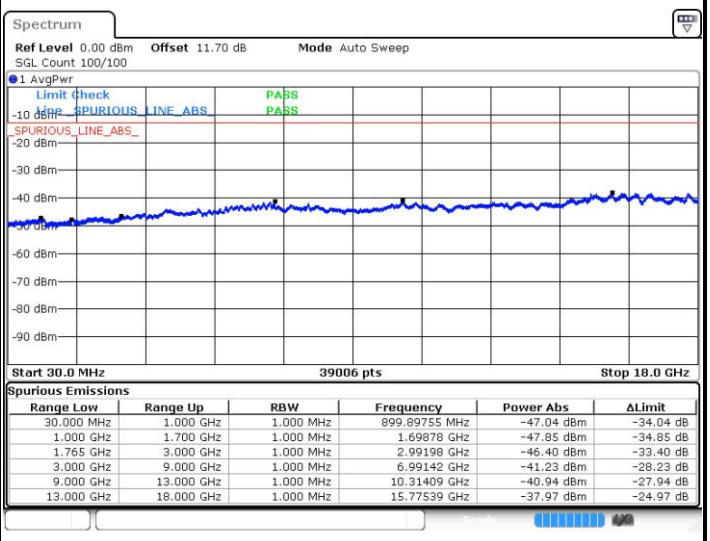


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	930.92204 MHz	-47.16 dBm	-34.16 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69808 GHz	-47.47 dBm	-34.47 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98539 GHz	-46.62 dBm	-33.62 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99042 GHz	-41.16 dBm	-28.16 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31309 GHz	-41.41 dBm	-28.41 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77873 GHz	-37.90 dBm	-24.90 dB

Date: 8.JAN.2017 22:15:42

Lowest Channel / 16QAM



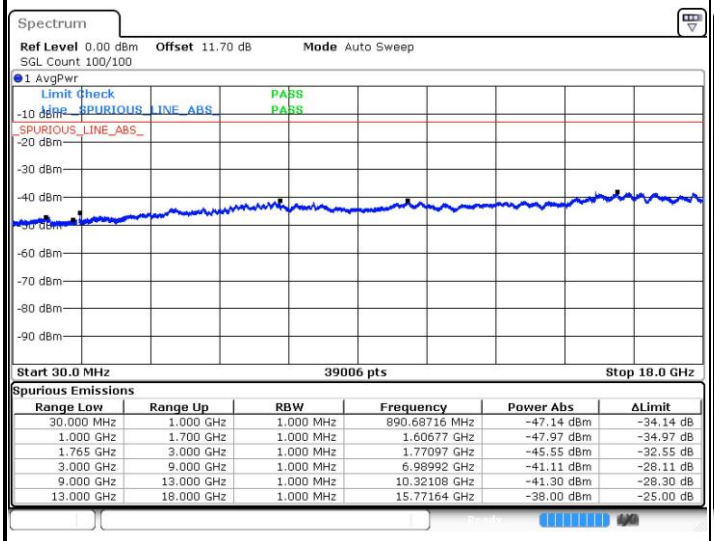
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	899.89755 MHz	-47.04 dBm	-34.04 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69878 GHz	-47.85 dBm	-34.85 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99198 GHz	-46.40 dBm	-33.40 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99142 GHz	-41.23 dBm	-28.23 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31409 GHz	-40.94 dBm	-27.94 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77539 GHz	-37.97 dBm	-24.97 dB

Date: 8.JAN.2017 22:16:36

LTE Band 4 / 20MHz

Middle Channel / QPSK

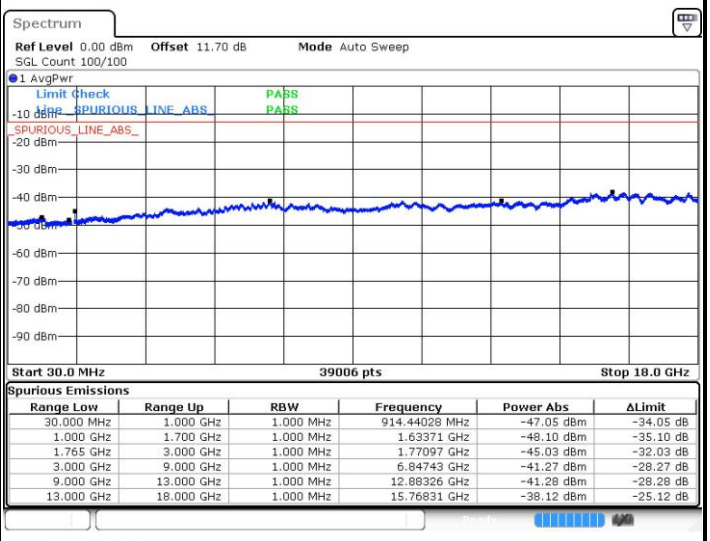


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	890.68716 MHz	-47.14 dBm	-34.14 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.60677 GHz	-47.97 dBm	-34.97 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77097 GHz	-45.55 dBm	-32.55 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98992 GHz	-41.11 dBm	-28.11 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32108 GHz	-41.30 dBm	-28.30 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77164 GHz	-38.00 dBm	-25.00 dB

Date: 8.JAN.2017 22:18:12

Middle Channel / 16QAM

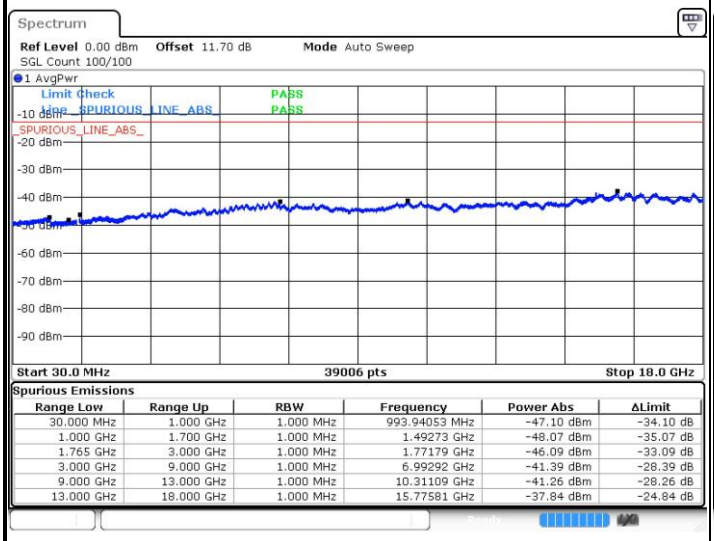


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	914.44028 MHz	-47.05 dBm	-34.05 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63371 GHz	-48.10 dBm	-35.10 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77097 GHz	-45.03 dBm	-32.03 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.84743 GHz	-41.27 dBm	-28.27 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.88326 GHz	-41.28 dBm	-28.28 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.76831 GHz	-38.12 dBm	-25.12 dB

Date: 8.JAN.2017 22:19:06

Highest Channel / QPSK

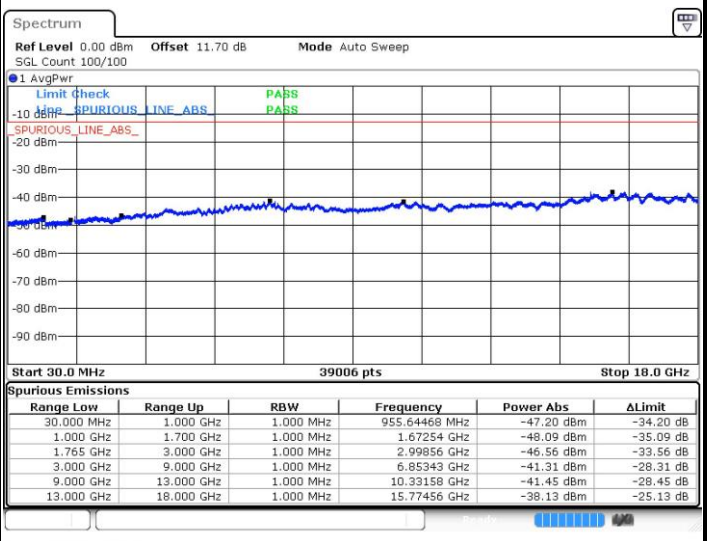


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	993.94053 MHz	-47.10 dBm	-34.10 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.49273 GHz	-48.07 dBm	-35.07 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77179 GHz	-46.09 dBm	-33.09 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99292 GHz	-41.39 dBm	-28.39 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31109 GHz	-41.26 dBm	-28.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77581 GHz	-37.84 dBm	-24.84 dB

Date: 8.JAN.2017 22:25:19

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	955.64468 MHz	-47.20 dBm	-34.20 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67254 GHz	-48.09 dBm	-35.09 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99856 GHz	-46.56 dBm	-33.56 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.85343 GHz	-41.31 dBm	-28.31 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.33158 GHz	-41.45 dBm	-28.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77456 GHz	-38.13 dBm	-25.13 dB

Date: 8.JAN.2017 22:26:13

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	0.0013	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0032	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0027	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0027	

Note:

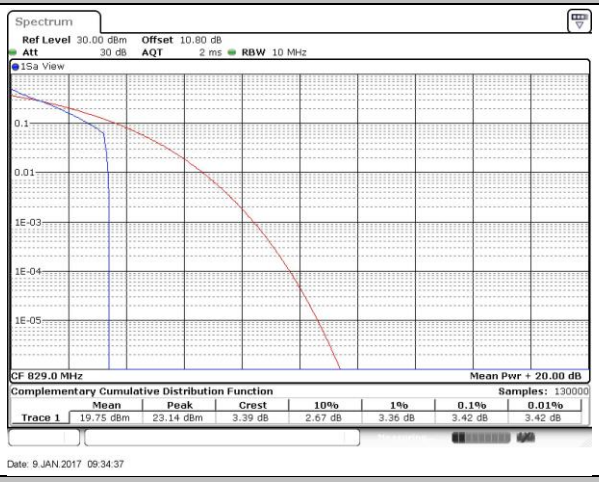
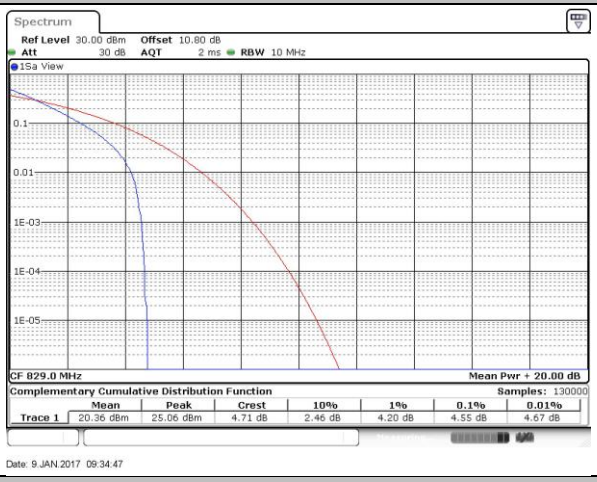
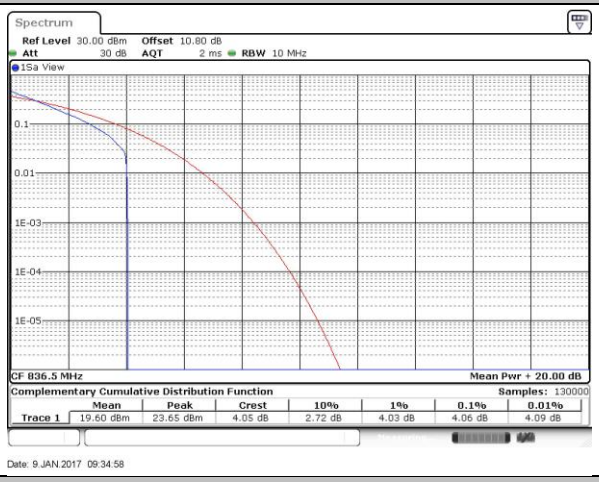
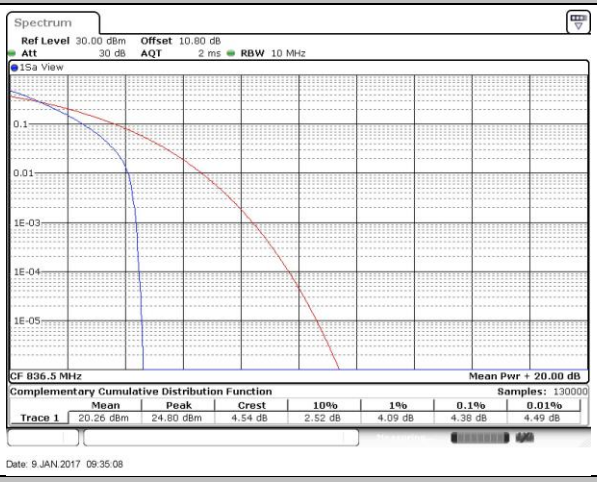
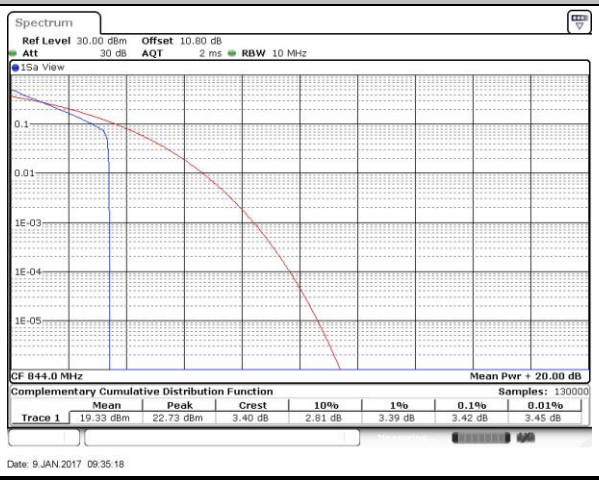
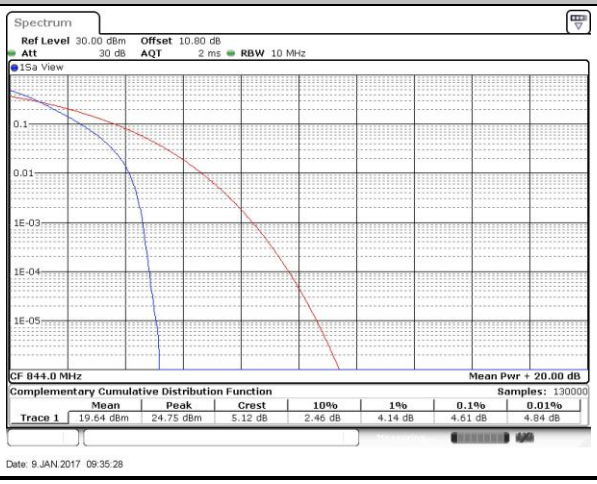
1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.4 V.

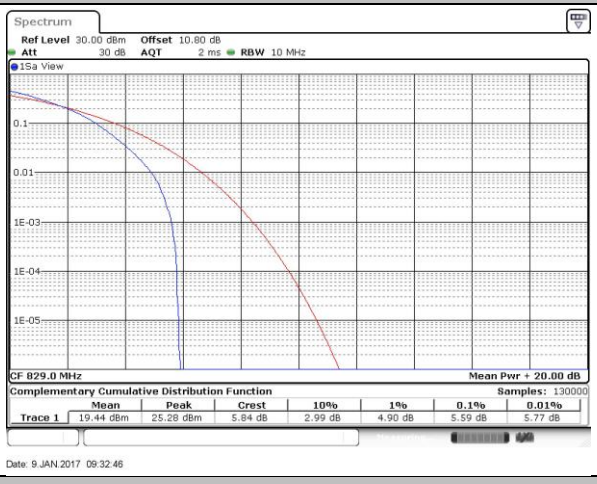
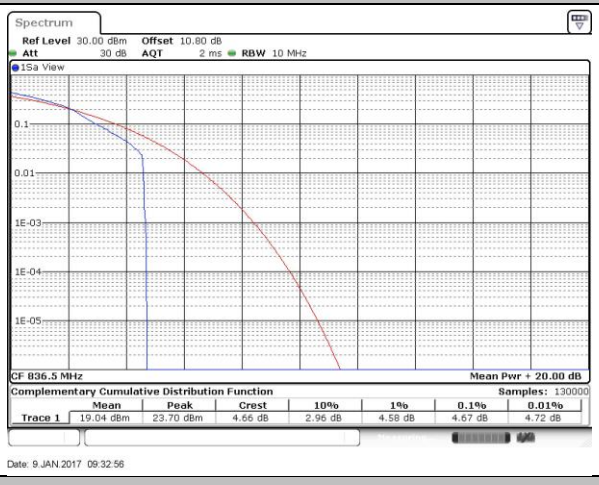
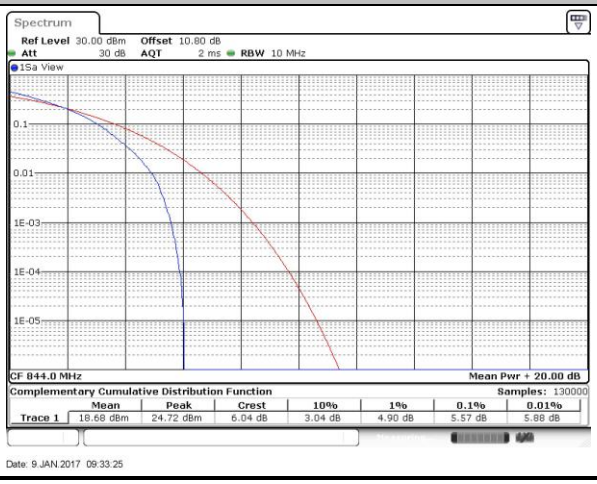
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

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	3.42	4.55	3.88	5.59	PASS
Middle CH	4.06	4.38	4.67	5.42	
Highest CH	3.42	4.61	4.87	5.57	

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**
	

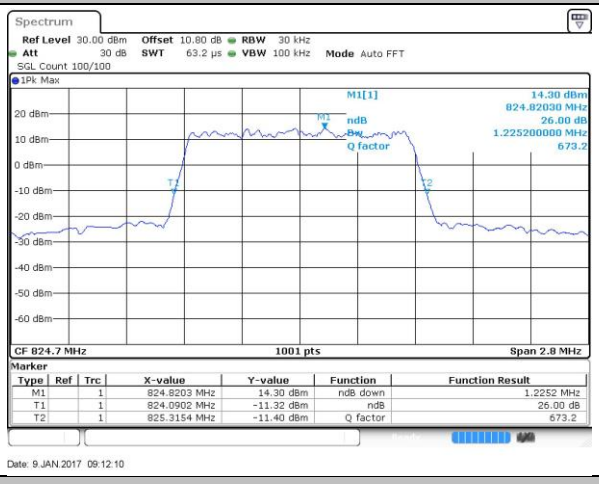
LTE Band 5 / 10MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

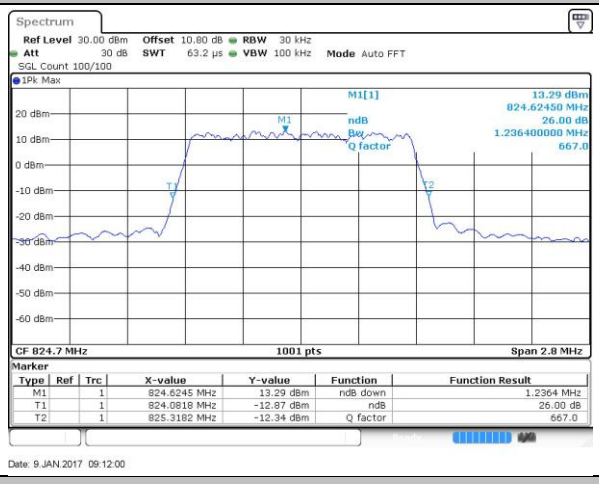
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.225	1.236	3.045	3.009	4.935	4.875	9.83	9.87	-	-	-	-
Middle CH	1.245	1.245	3.033	3.045	4.915	4.885	9.65	9.79	-	-	-	-
Highest CH	1.231	1.225	3.063	3.021	4.835	4.845	9.69	9.67	-	-	-	-

LTE Band 5

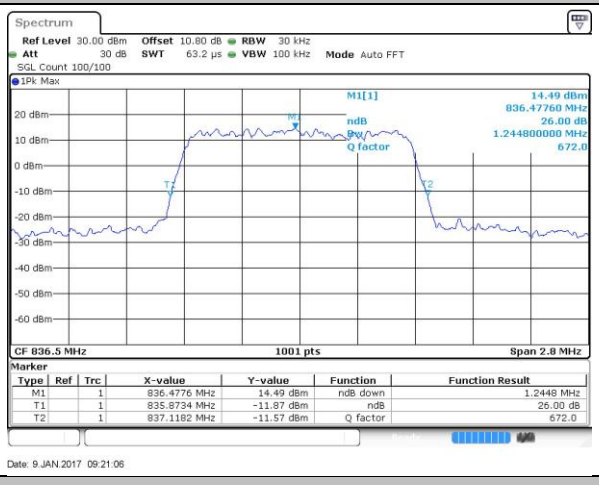
Lowest Channel / 1.4MHz / QPSK



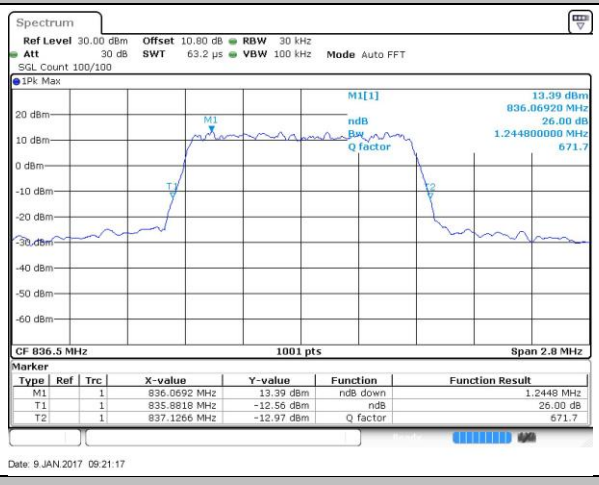
Lowest Channel / 1.4MHz / 16QAM



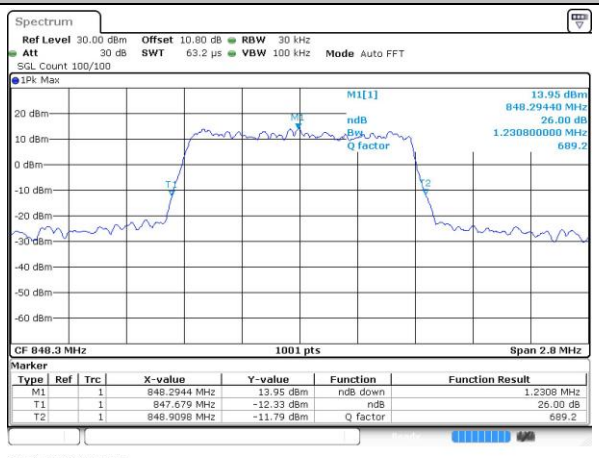
Middle Channel / 1.4MHz / QPSK



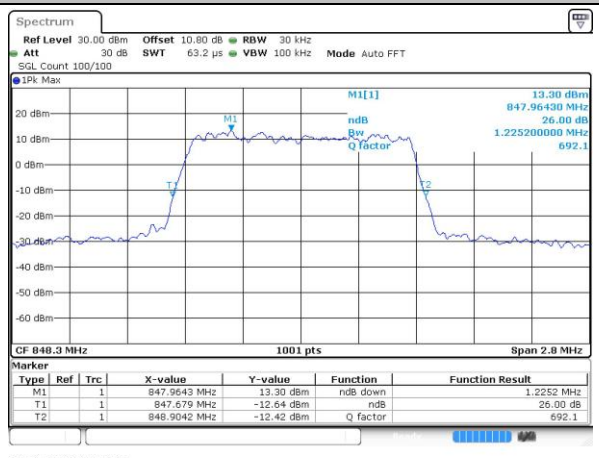
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

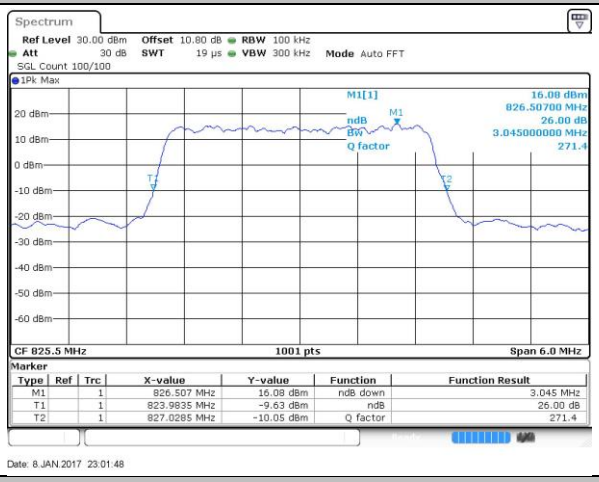


Highest Channel / 1.4MHz / 16QAM

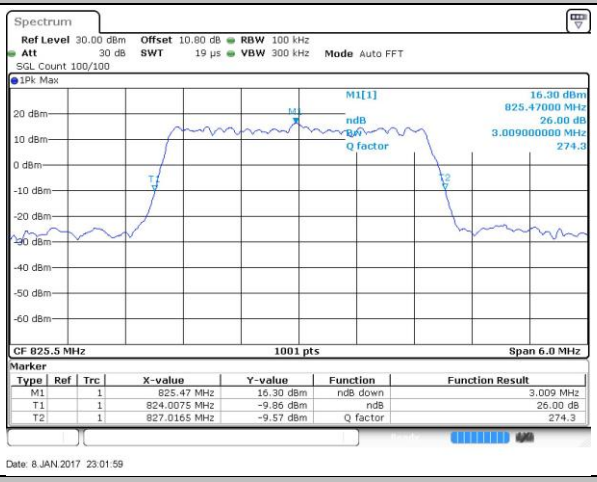


LTE Band 5

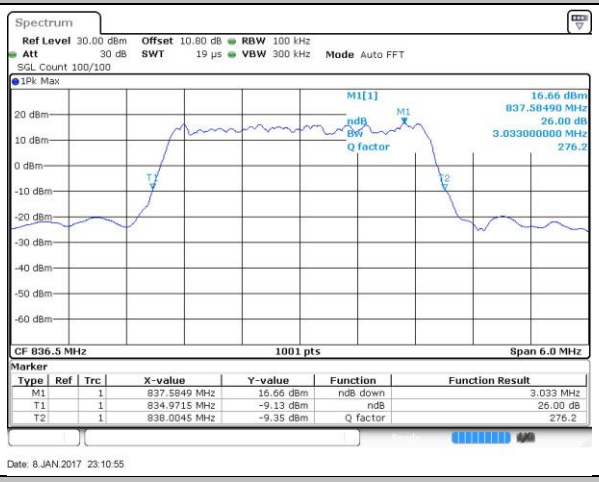
Lowest Channel / 3MHz / QPSK



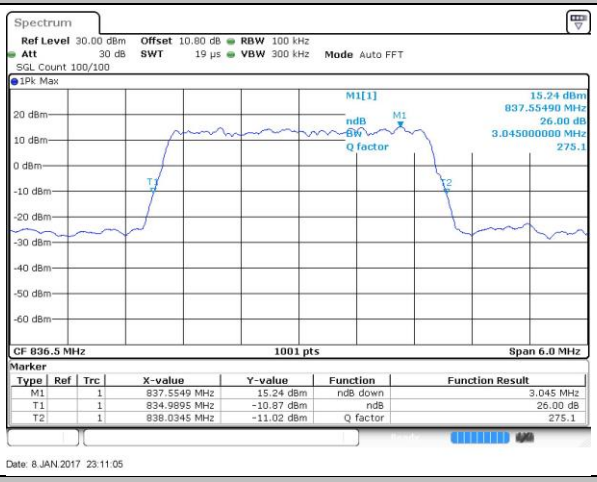
Lowest Channel / 3MHz / 16QAM



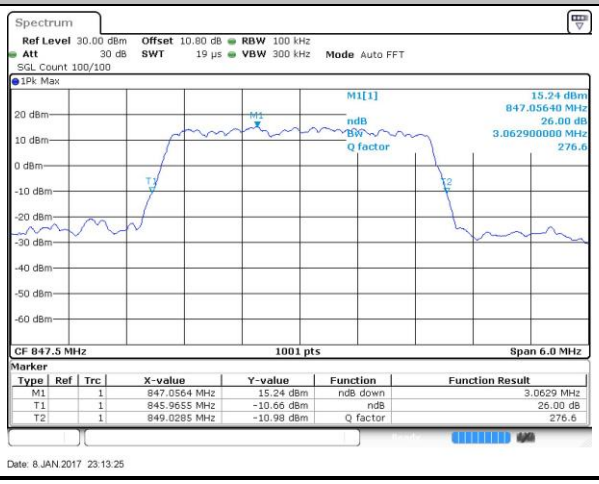
Middle Channel / 3MHz / QPSK



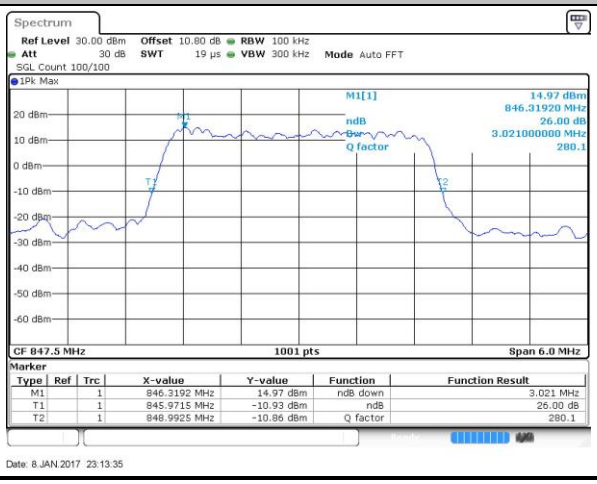
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

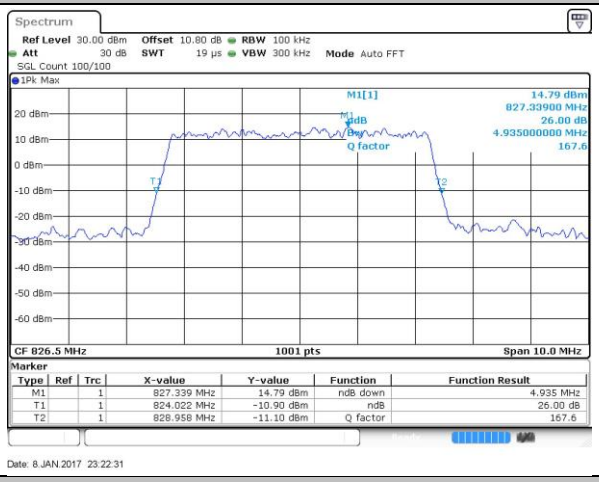


Highest Channel /3MHz / 16QAM

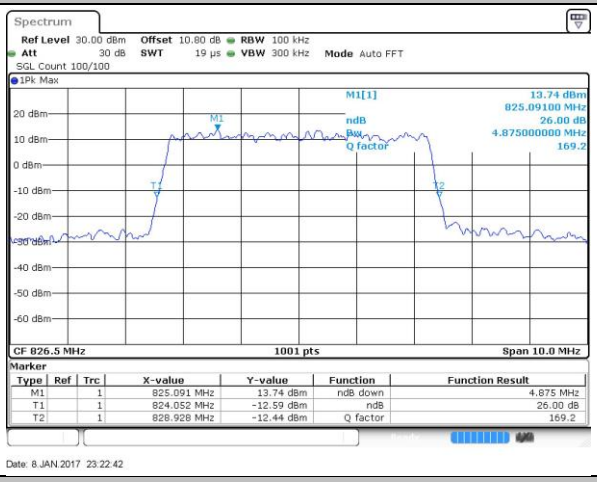


LTE Band 5

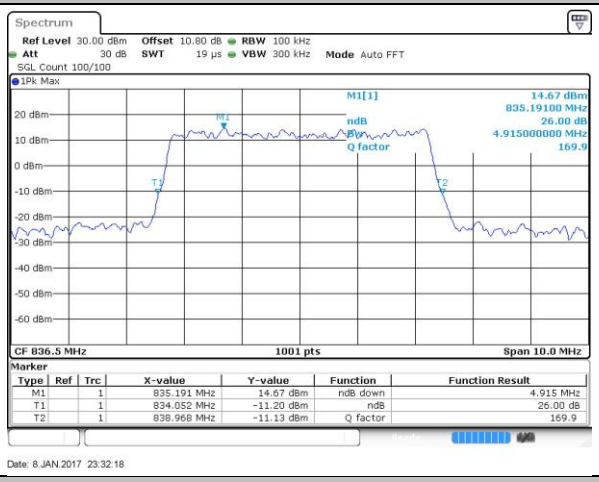
Lowest Channel / 5MHz / QPSK



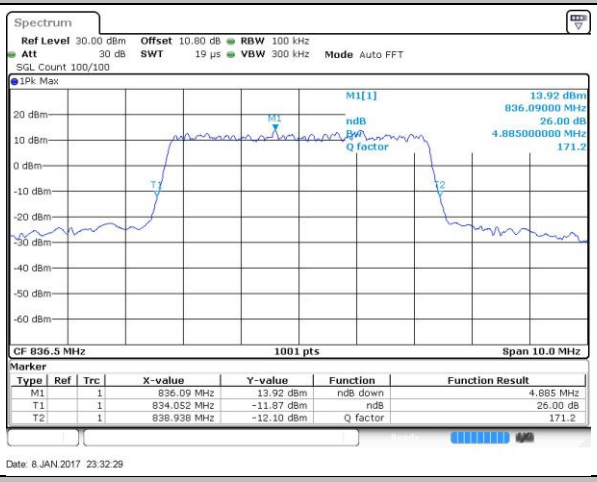
Lowest Channel / 5MHz / 16QAM



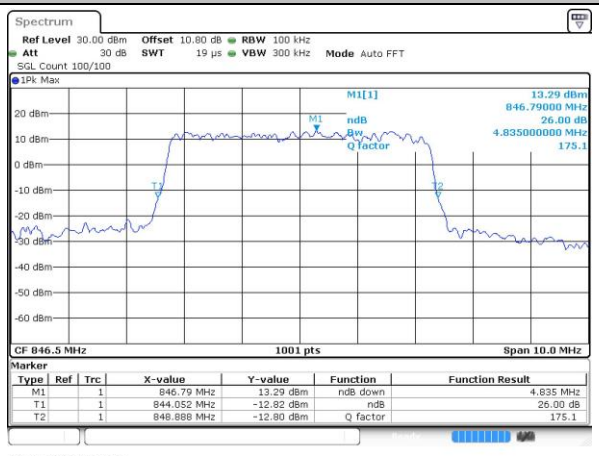
Middle Channel / 5MHz / QPSK



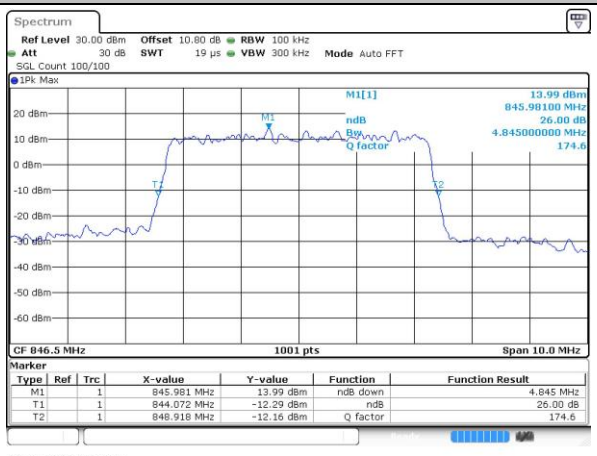
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

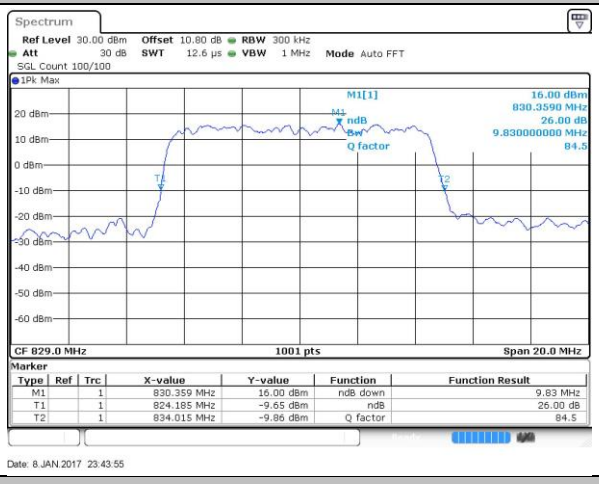


Highest Channel / 5MHz / 16QAM

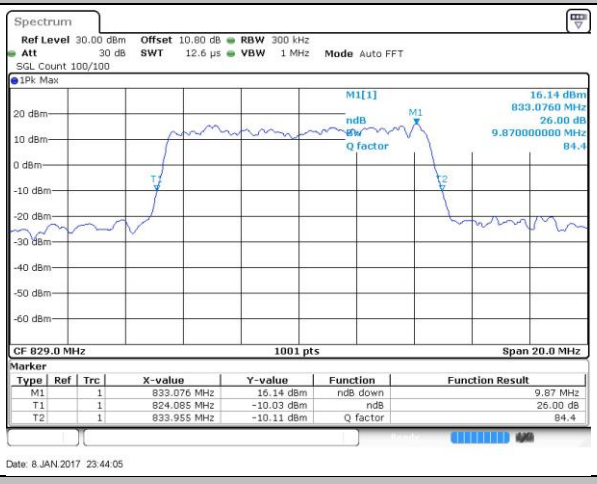


LTE Band 5

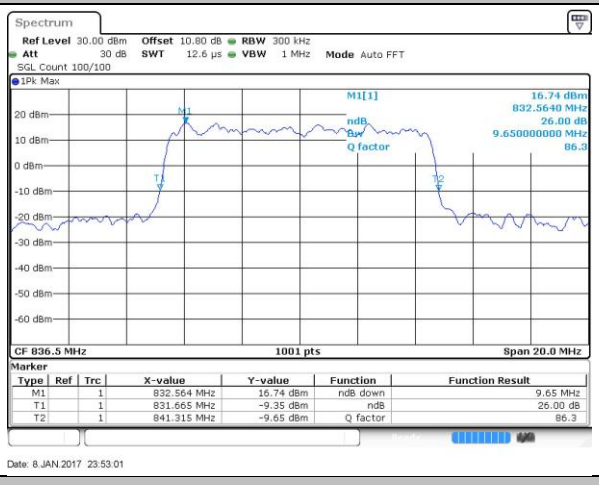
Lowest Channel / 10MHz / QPSK



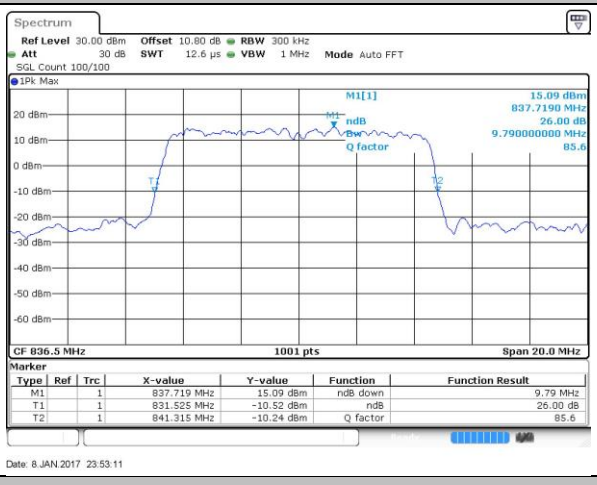
Lowest Channel / 10MHz / 16QAM



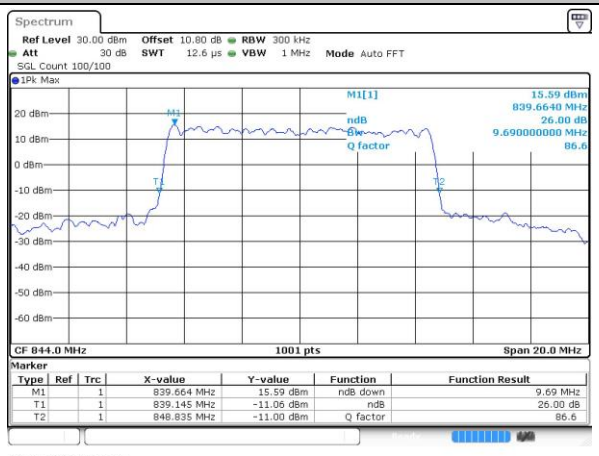
Middle Channel / 10MHz / QPSK



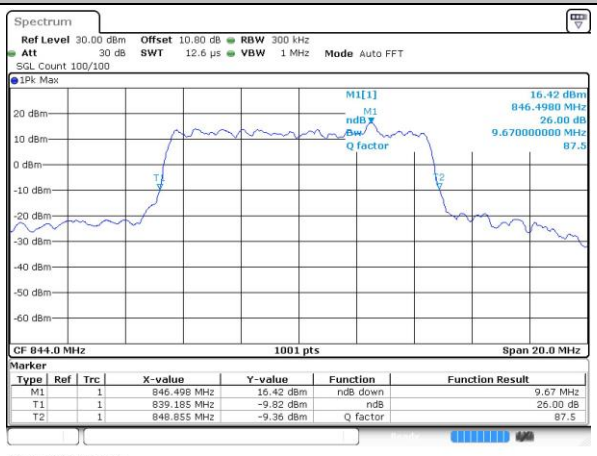
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

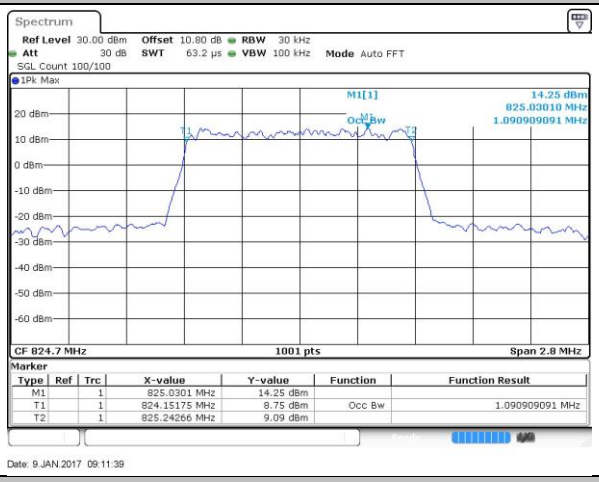


Occupied Bandwidth

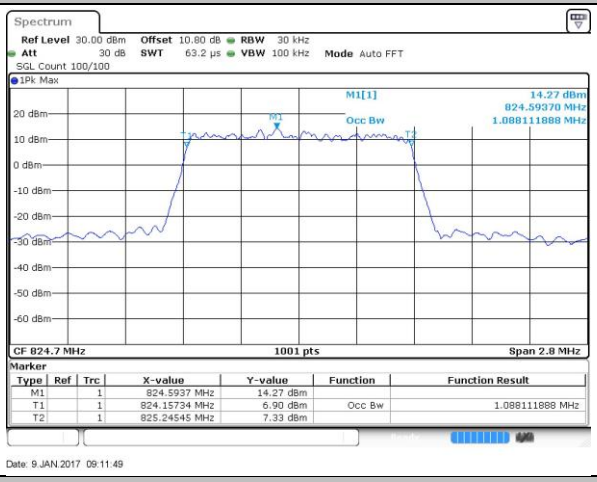
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.73	2.73	4.49	4.48	9.03	9.03	-	-	-	-
Middle CH	1.1	1.09	2.71	2.72	4.48	4.5	9.01	9.03	-	-	-	-
Highest CH	1.09	1.09	2.72	2.72	4.5	4.5	8.99	9.03	-	-	-	-

LTE Band 5

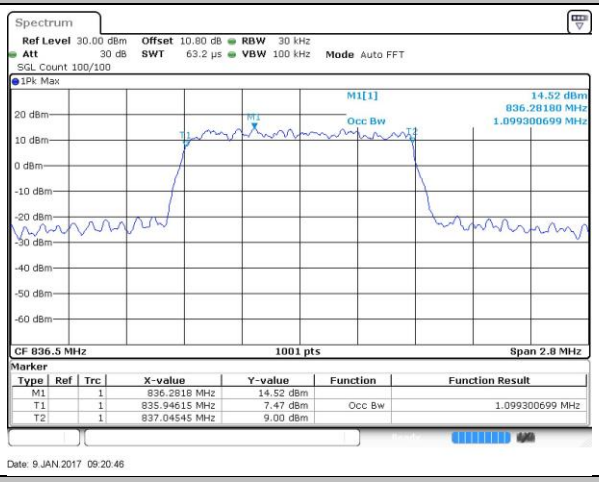
Lowest Channel / 1.4MHz / QPSK



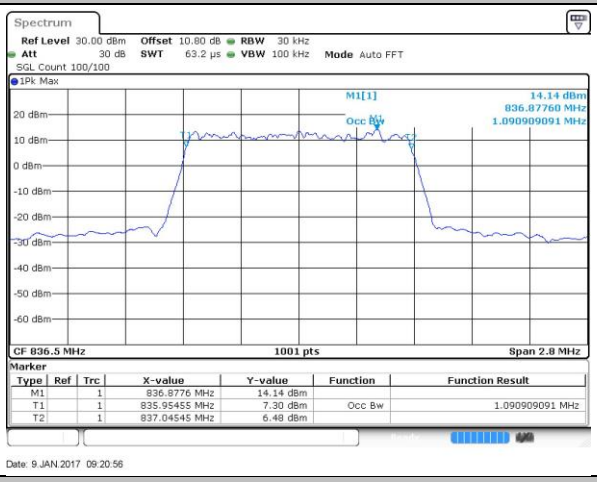
Lowest Channel / 1.4MHz / 16QAM



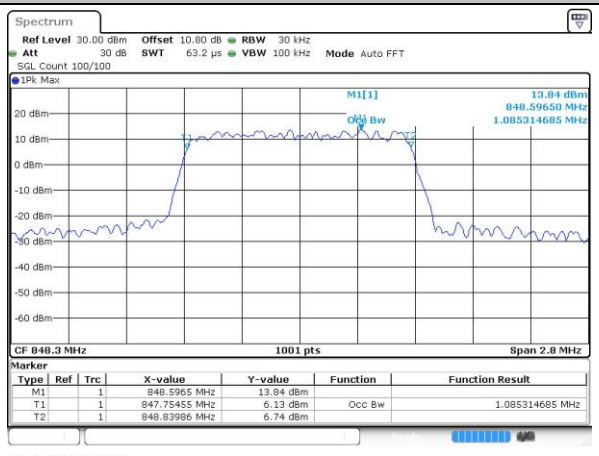
Middle Channel / 1.4MHz / QPSK



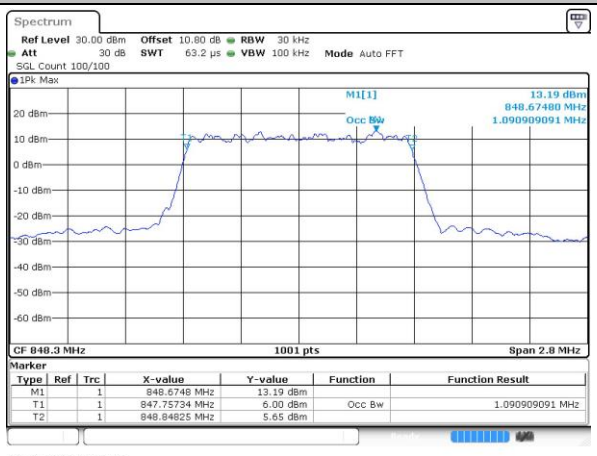
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

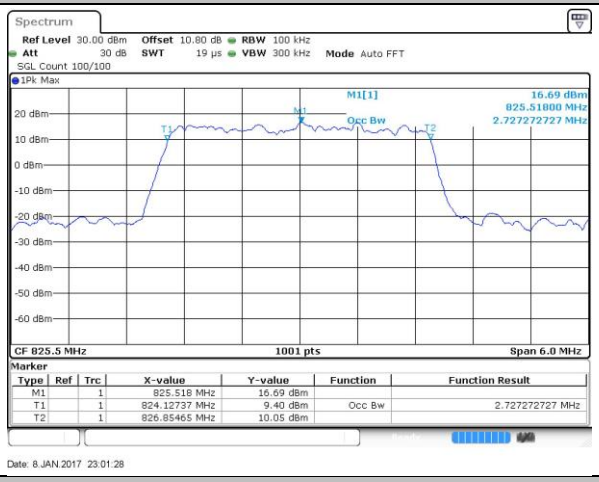


Highest Channel / 1.4MHz / 16QAM

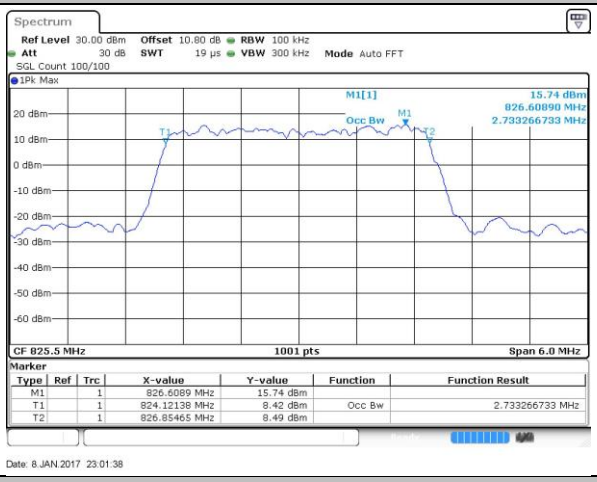


LTE Band 5

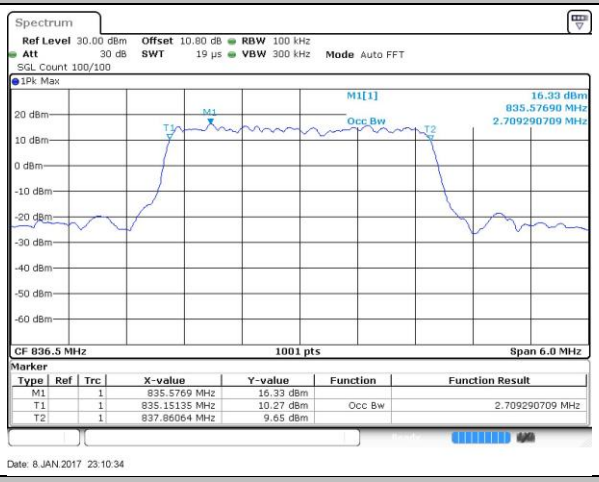
Lowest Channel / 3MHz / QPSK



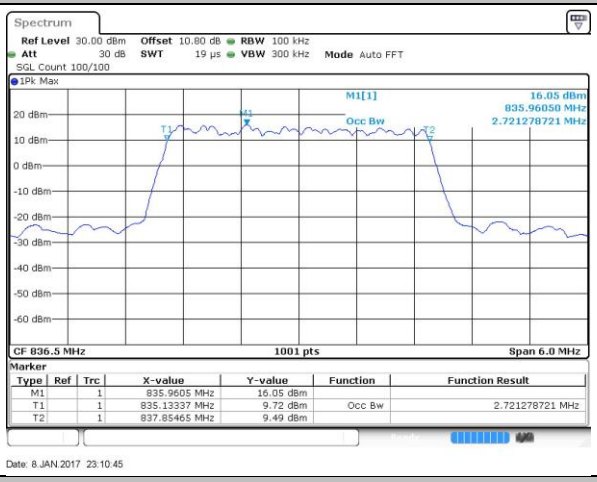
Lowest Channel / 3MHz / 16QAM



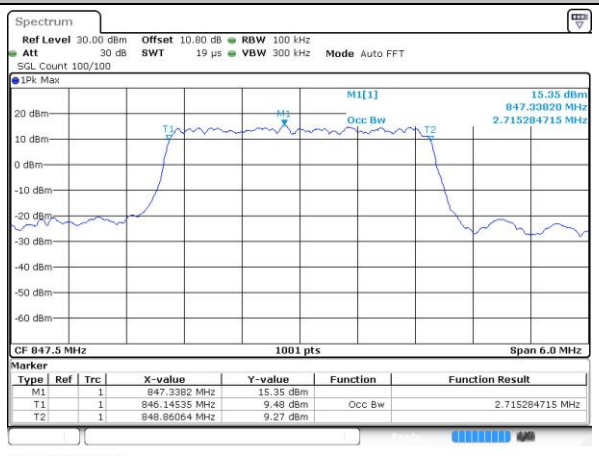
Middle Channel / 3MHz / QPSK



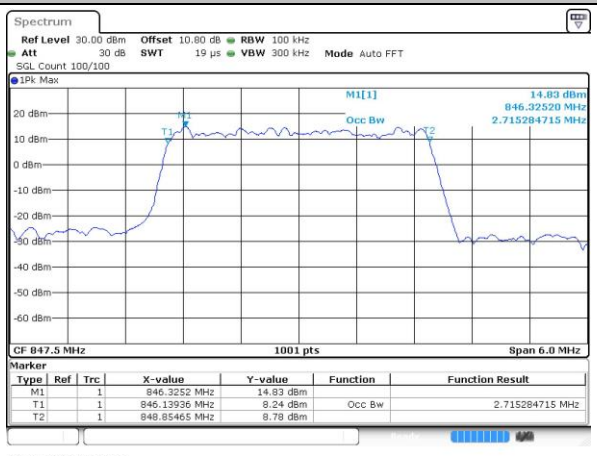
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

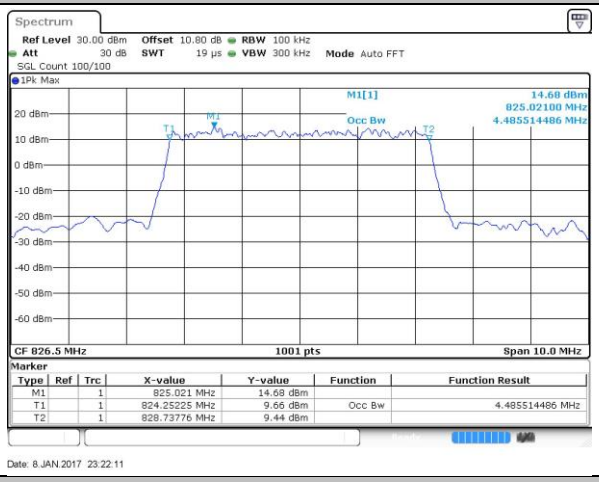


Highest Channel / 3MHz / 16QAM

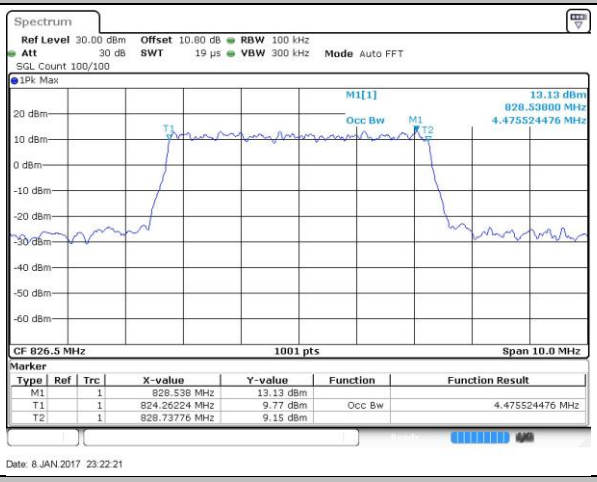


LTE Band 5

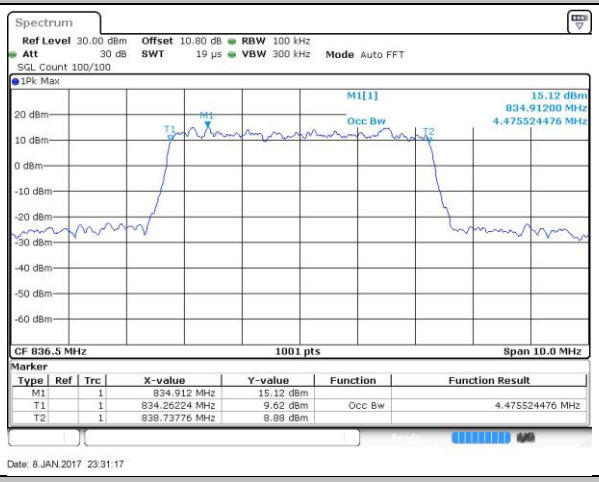
Lowest Channel / 5MHz / QPSK



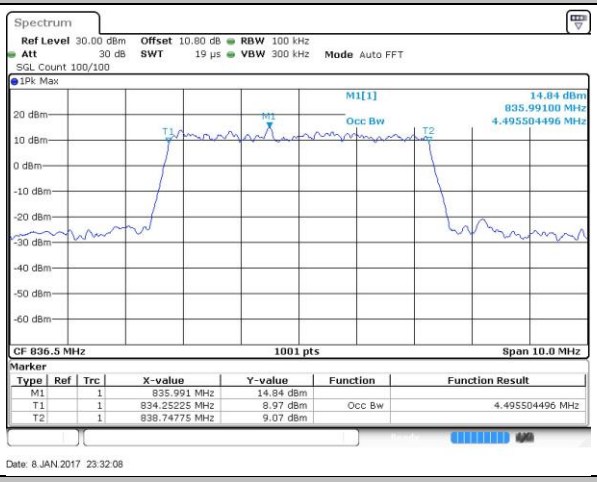
Lowest Channel / 5MHz / 16QAM



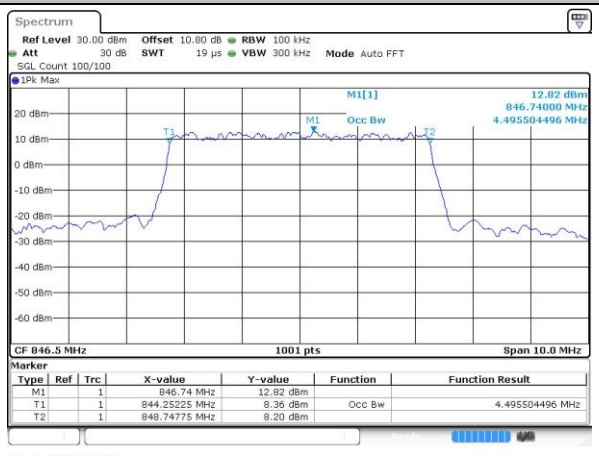
Middle Channel / 5MHz / QPSK



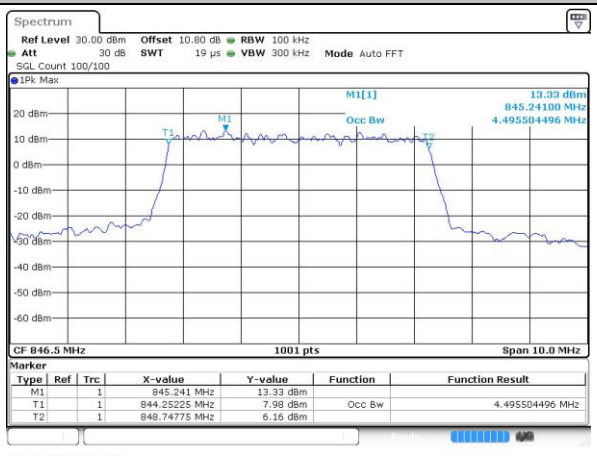
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

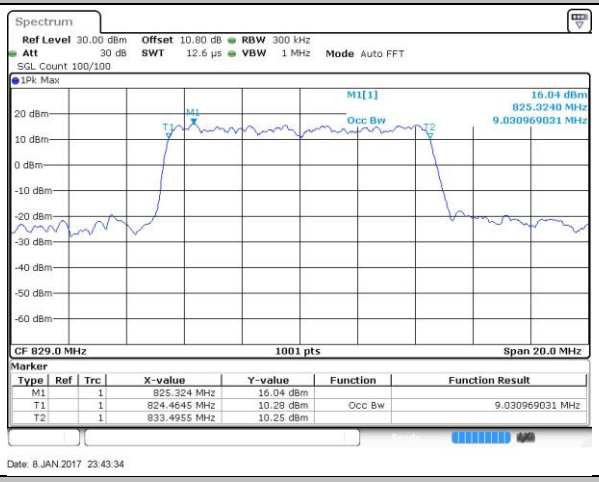


Highest Channel / 5MHz / 16QAM

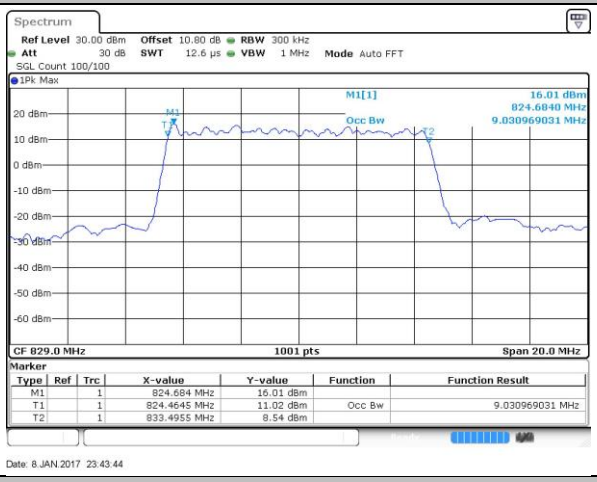


LTE Band 5

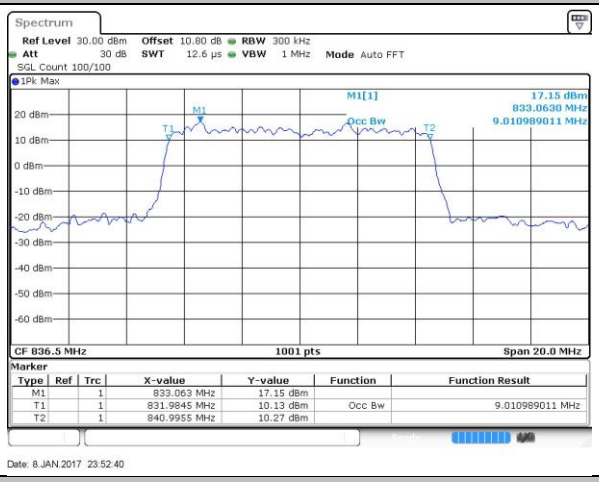
Lowest Channel / 10MHz / QPSK



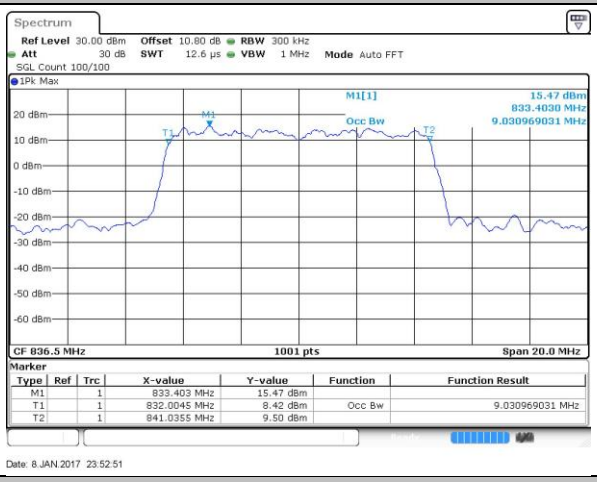
Lowest Channel / 10MHz / 16QAM



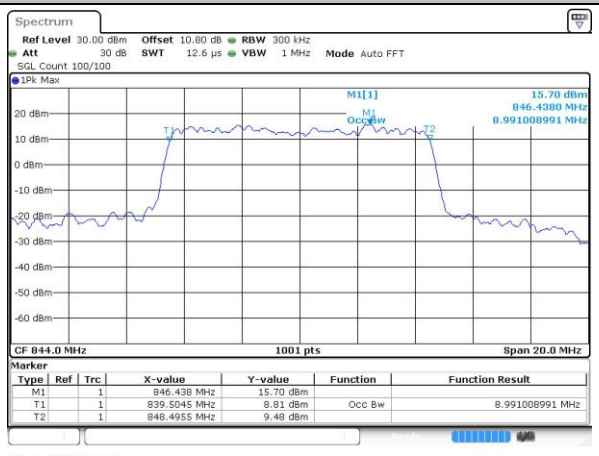
Middle Channel / 10MHz / QPSK



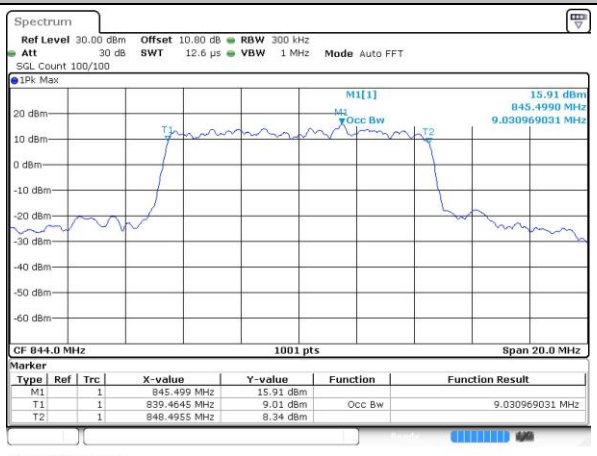
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



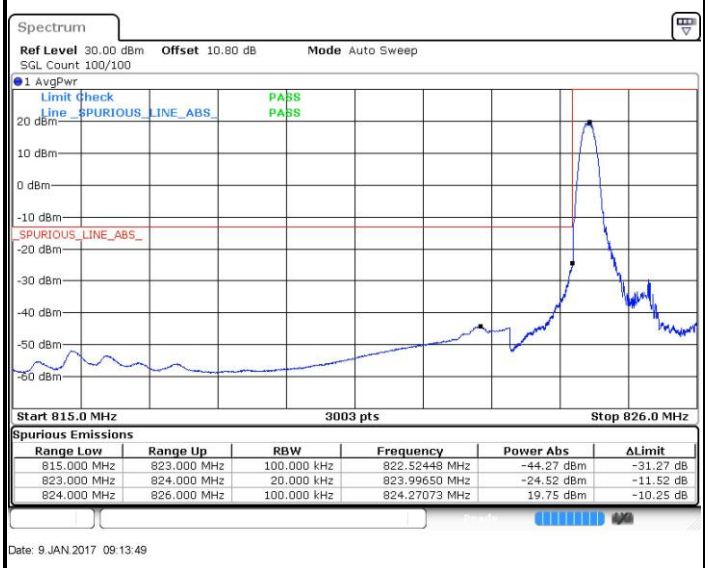
Highest Channel / 10MHz / 16QAM



Conducted Band Edge

LTE Band 5 / 1.4MHz / QPSK

Lowest Band Edge / 1RB

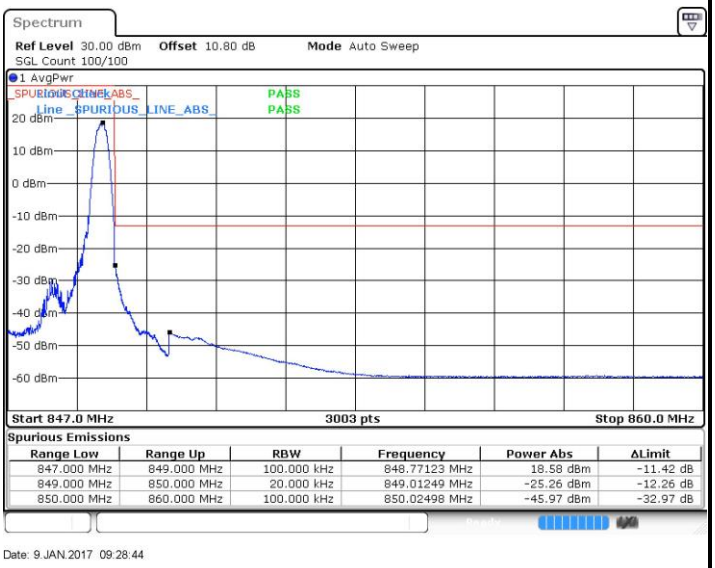


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.52448 MHz	-44.27 dBm	-31.27 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99650 MHz	-24.52 dBm	-11.52 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.27073 MHz	19.75 dBm	-10.25 dB

Date: 9.JAN.2017 09:13:49

Highest Band Edge / 1RB

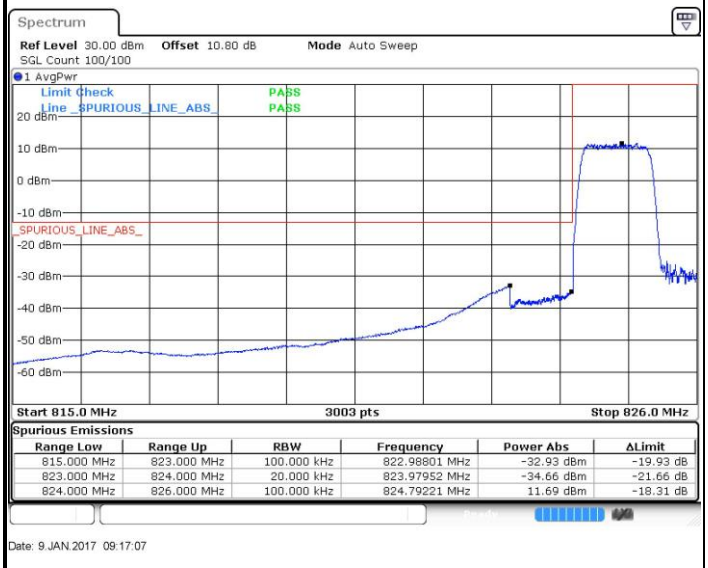


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.77123 MHz	18.58 dBm	-11.42 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.01249 MHz	-25.26 dBm	-12.26 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.02498 MHz	-45.97 dBm	-32.97 dB

Date: 9.JAN.2017 09:28:44

Lowest Band Edge / Full RB

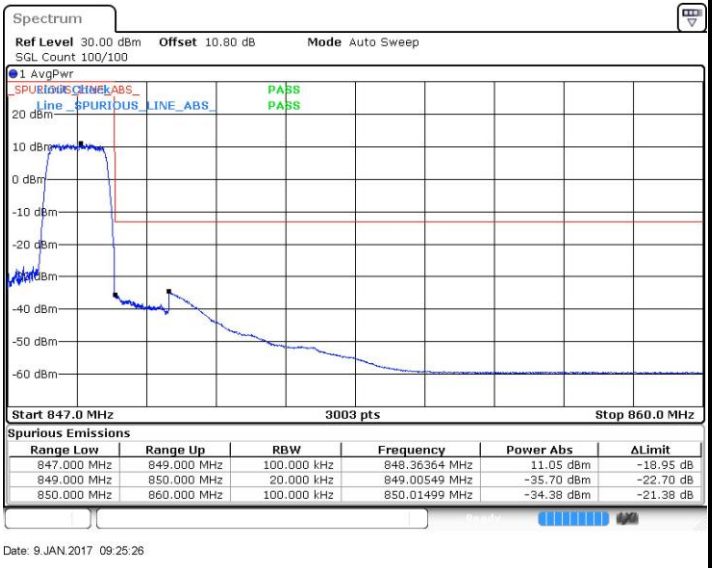


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-32.93 dBm	-19.93 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.97952 MHz	-34.66 dBm	-21.66 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.79221 MHz	11.69 dBm	-18.31 dB

Date: 9.JAN.2017 09:17:07

Highest Band Edge / Full RB



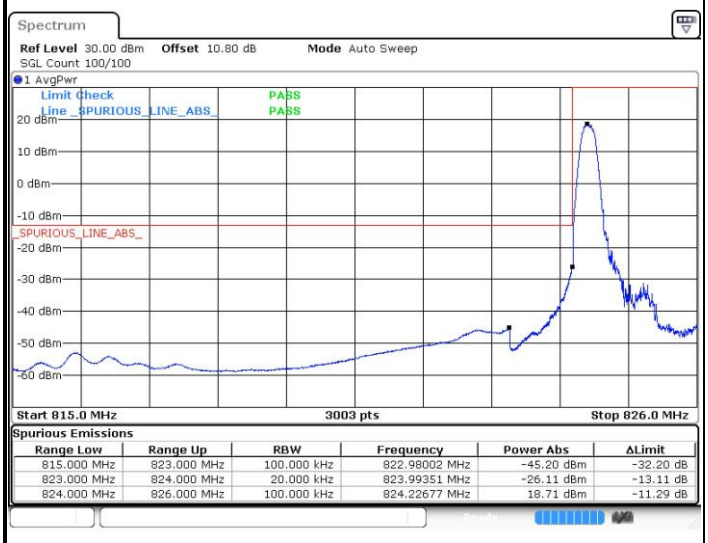
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.36364 MHz	11.05 dBm	-18.95 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00549 MHz	-35.70 dBm	-22.70 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.01499 MHz	-34.38 dBm	-21.38 dB

Date: 9.JAN.2017 09:25:26

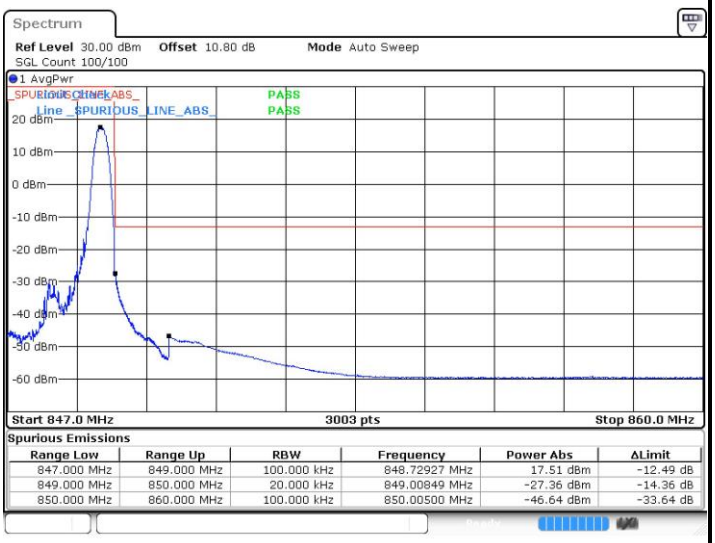
LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



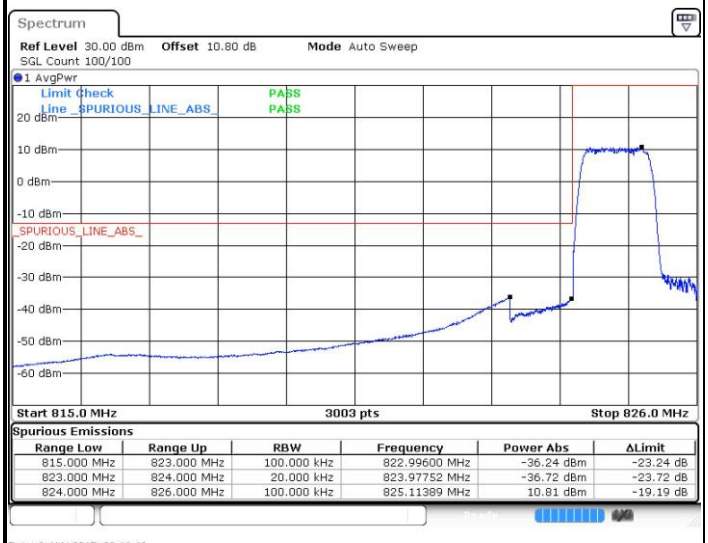
Date: 9.JAN.2017 09:15:28

Highest Band Edge / 1 RB



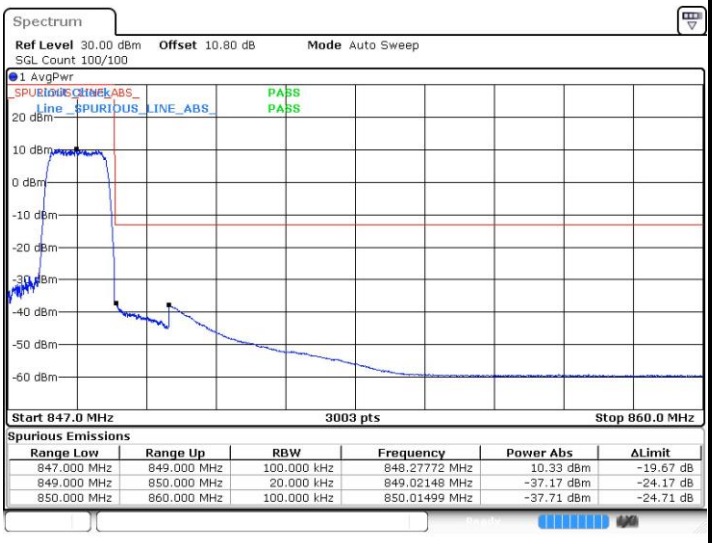
Date: 9.JAN.2017 09:30:24

Lowest Band Edge / Full RB



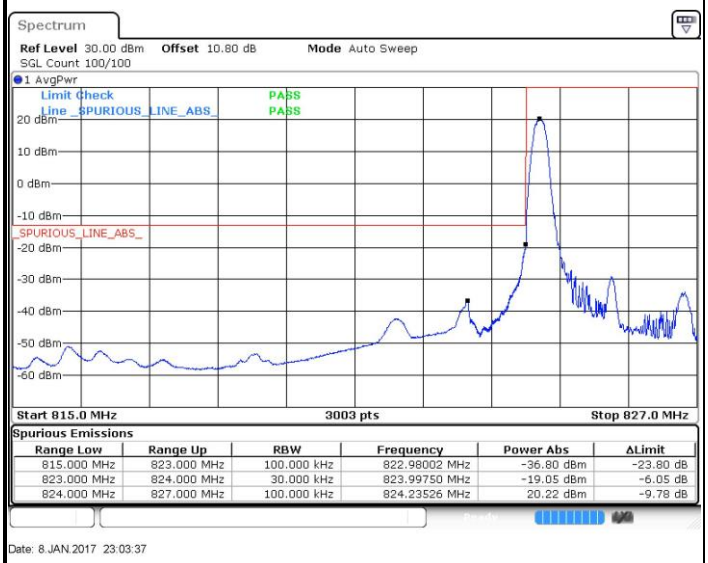
Date: 9.JAN.2017 09:18:46

Highest Band Edge / Full RB

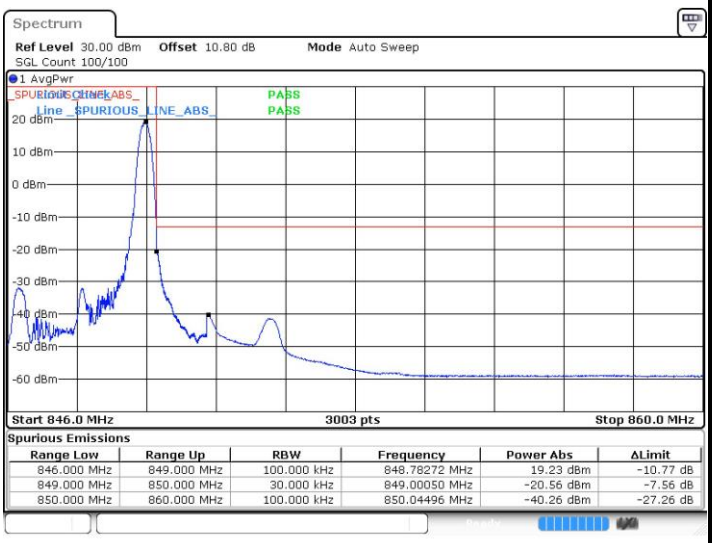


Date: 9.JAN.2017 09:27:05

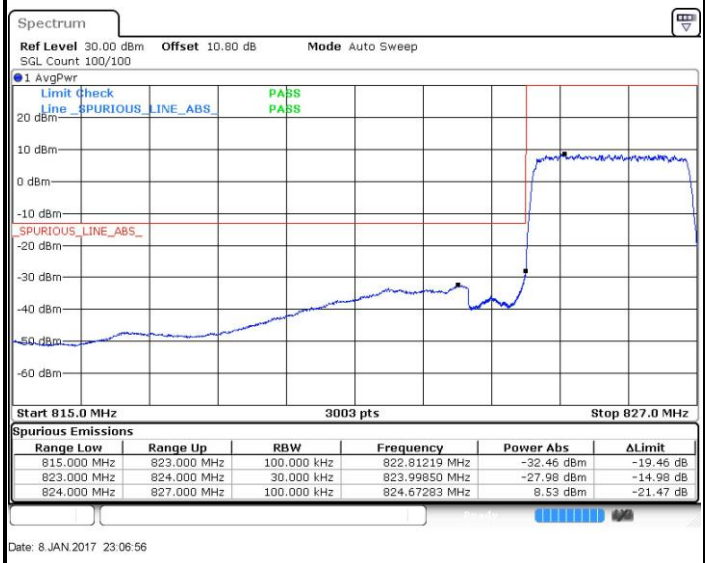
LTE Band 5 / 3MHz / QPSK	
Lowest Band Edge / 1RB	**Highest Band Edge / 1 RB**
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**



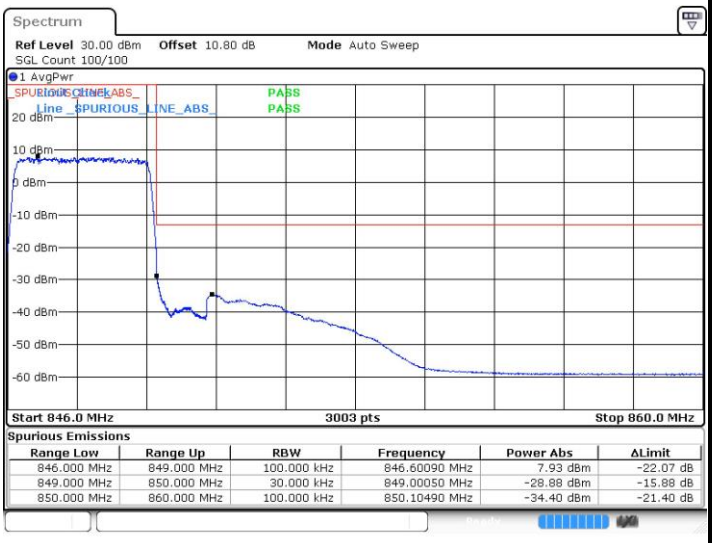
Date: 8.JAN.2017 23:03:37



Date: 8.JAN.2017 23:15:14



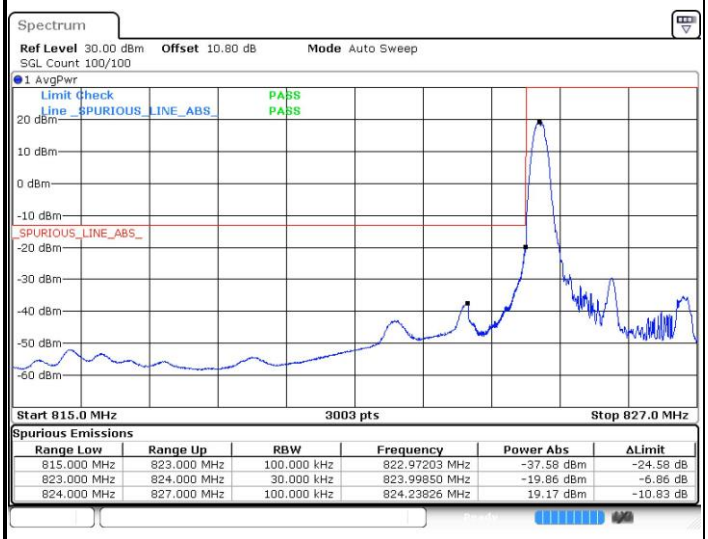
Date: 8.JAN.2017 23:06:56



Date: 8.JAN.2017 23:18:32

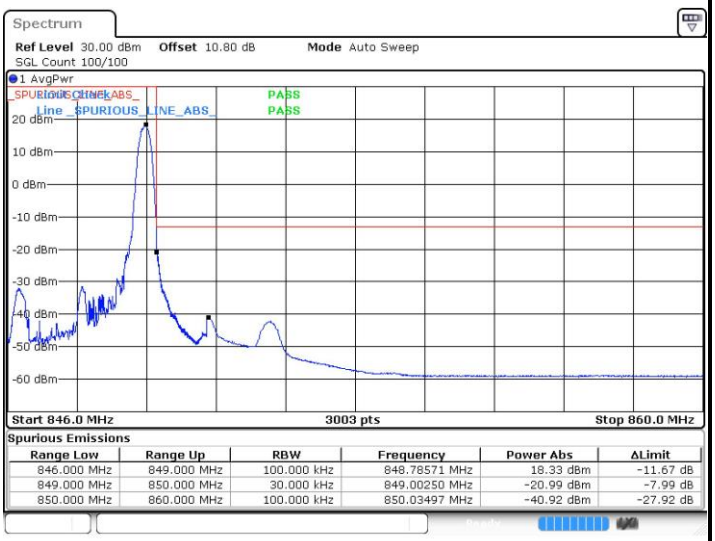
LTE Band 5 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



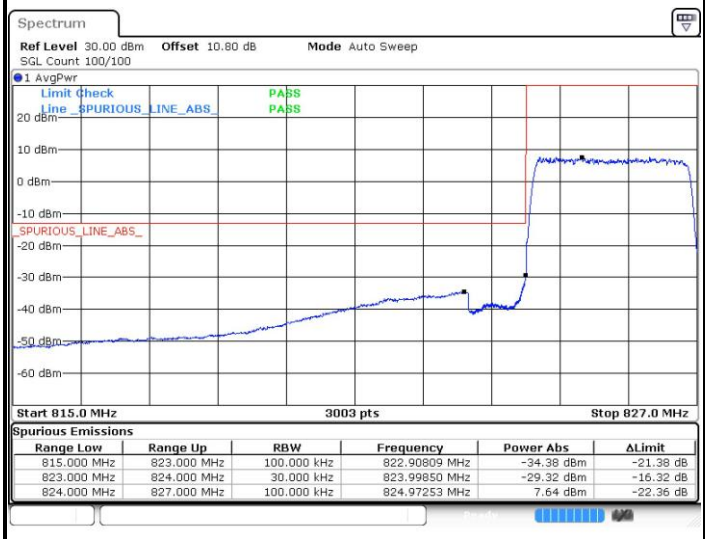
Date: 8.JAN.2017 23:05:17

Highest Band Edge /1 RB



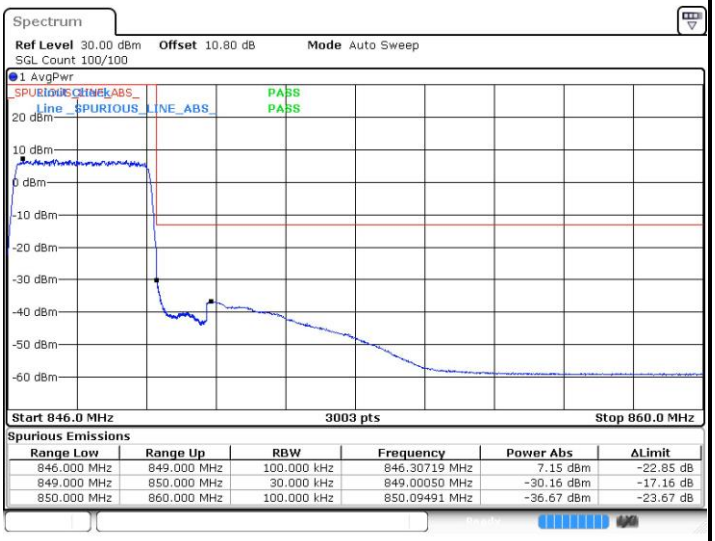
Date: 8.JAN.2017 23:16:53

Lowest Band Edge / Full RB



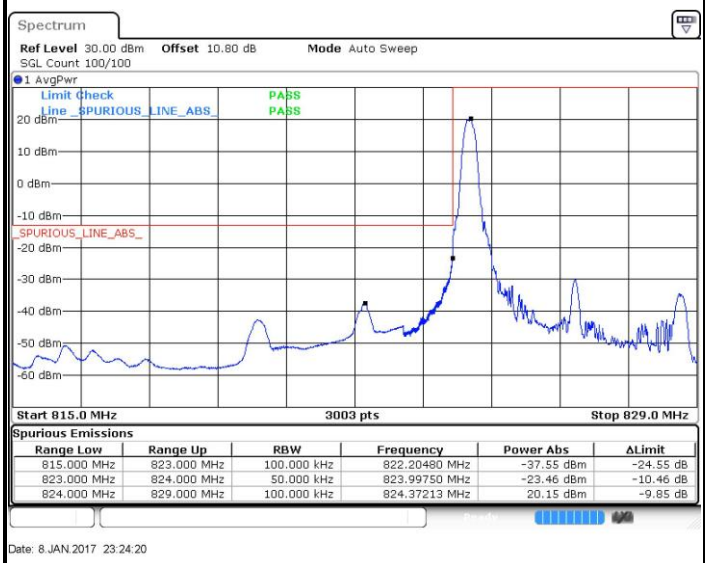
Date: 8.JAN.2017 23:08:35

Highest Band Edge / Full RB



Date: 8.JAN.2017 23:20:11

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



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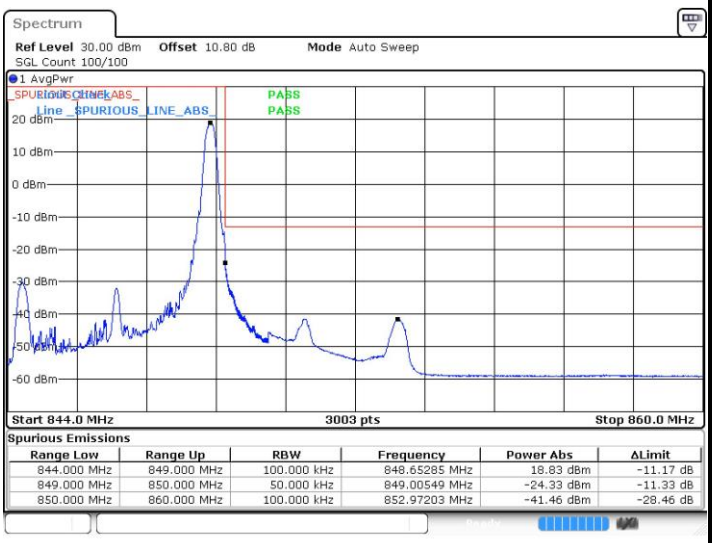

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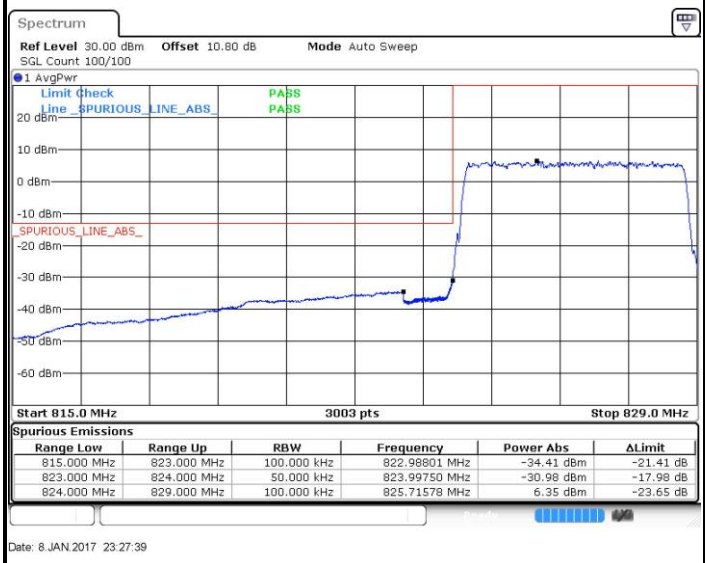

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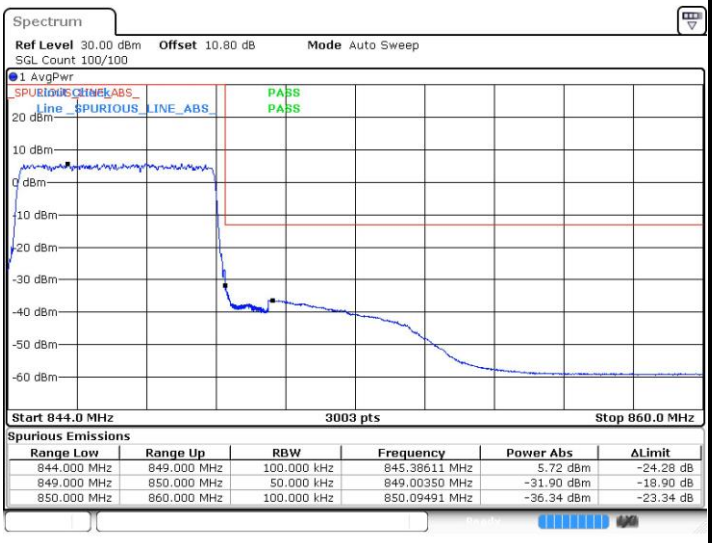

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