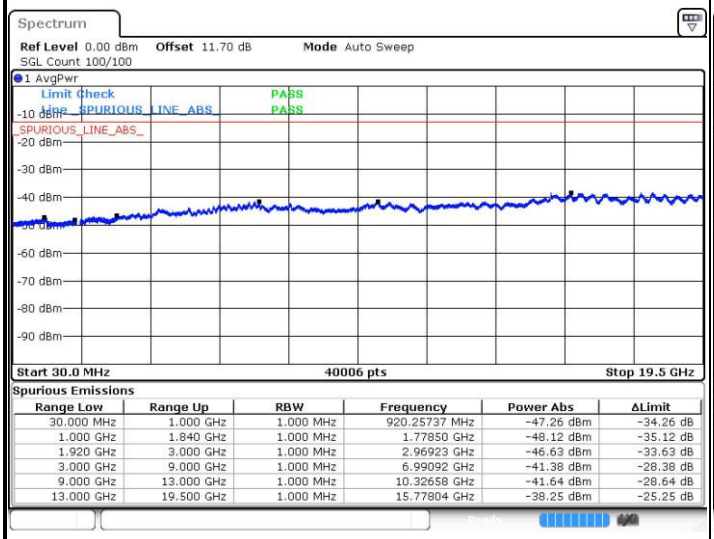
LTE Band 2 / 10MHz

Middle Channel / QPSK

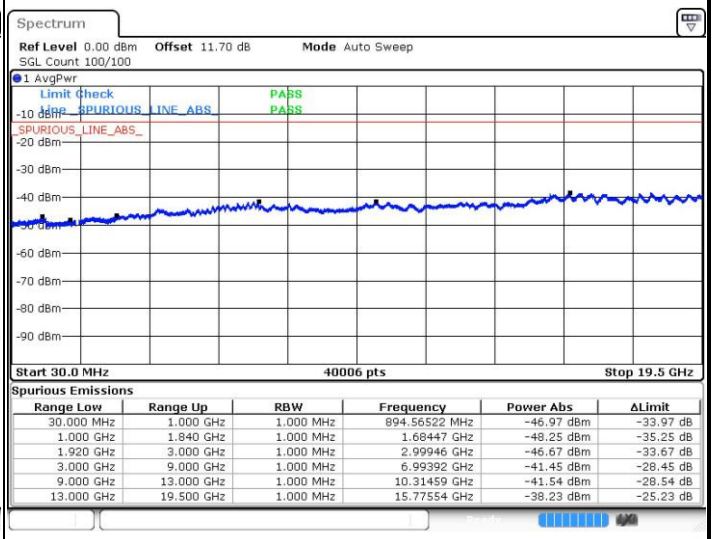


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	920.25737 MHz	-47.26 dBm	-34.26 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.77850 GHz	-48.12 dBm	-35.12 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.96923 GHz	-46.63 dBm	-33.63 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99092 GHz	-41.38 dBm	-28.38 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32658 GHz	-41.64 dBm	-28.64 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.77804 GHz	-38.25 dBm	-25.25 dB

Date: 24.FEB.2017 11:05:56

Middle Channel / 16QAM

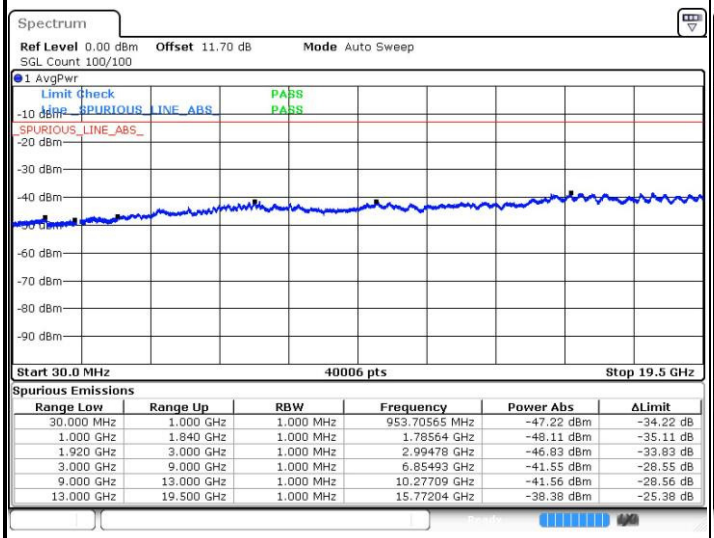


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	894.56522 MHz	-46.97 dBm	-33.97 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.68447 GHz	-48.25 dBm	-35.25 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99946 GHz	-46.67 dBm	-33.67 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99392 GHz	-41.45 dBm	-28.45 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31459 GHz	-41.54 dBm	-28.54 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.77554 GHz	-38.23 dBm	-25.23 dB

Date: 24.FEB.2017 11:06:50

Highest Channel / QPSK

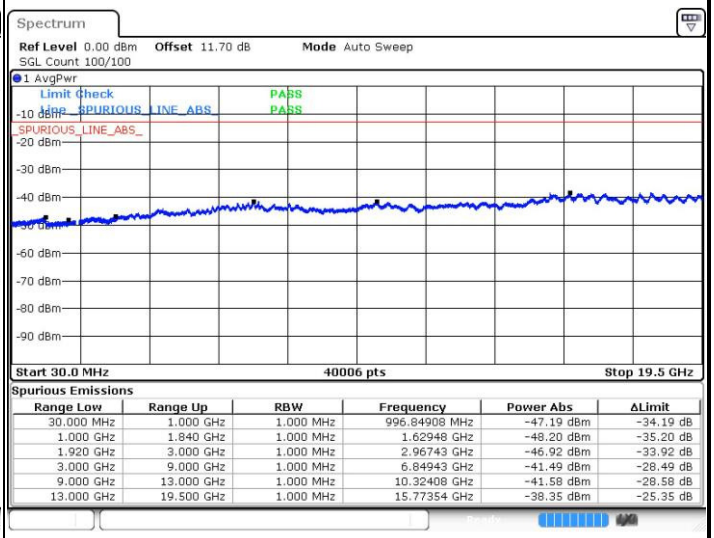


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	953.70565 MHz	-47.22 dBm	-34.22 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.78564 GHz	-48.11 dBm	-35.11 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99478 GHz	-46.83 dBm	-33.83 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.85493 GHz	-41.55 dBm	-28.55 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.27709 GHz	-41.56 dBm	-28.56 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.77204 GHz	-38.38 dBm	-25.38 dB

Date: 24.FEB.2017 11:13:03

Highest Channel / 16QAM



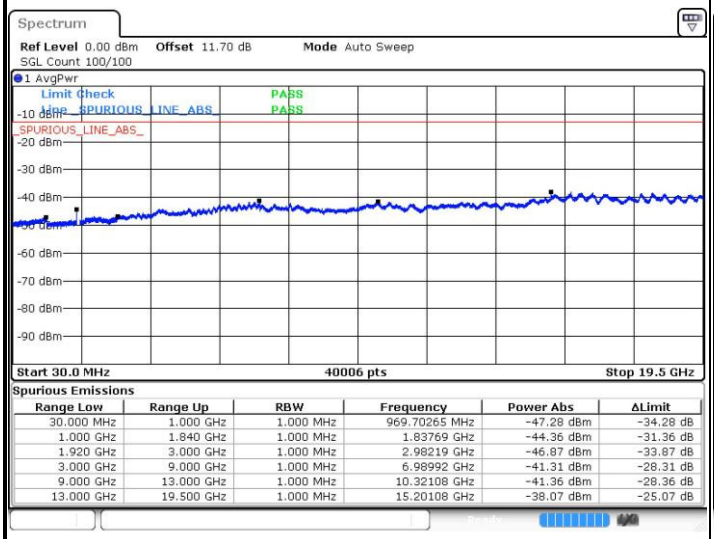
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	996.84908 MHz	-47.19 dBm	-34.19 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.62948 GHz	-48.20 dBm	-35.20 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.96743 GHz	-46.92 dBm	-33.92 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.84943 GHz	-41.49 dBm	-28.49 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32408 GHz	-41.58 dBm	-28.58 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.77354 GHz	-38.35 dBm	-25.35 dB

Date: 24.FEB.2017 11:13:58

LTE Band 2 / 15MHz

Lowest Channel / QPSK

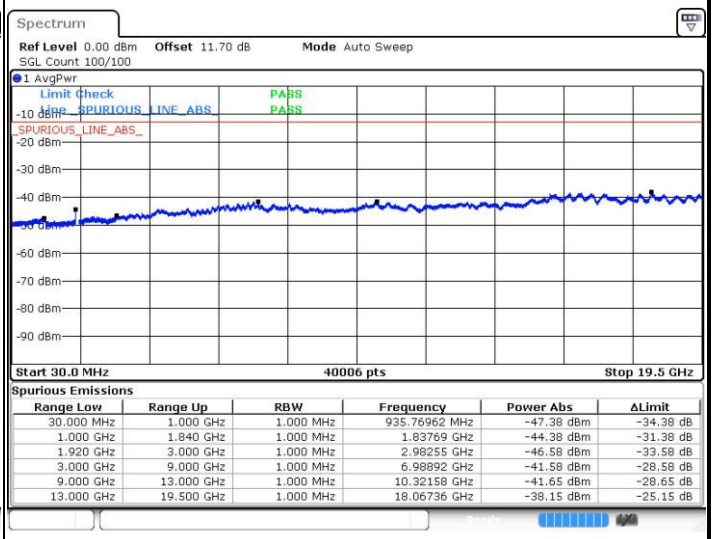


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	969.70265 MHz	-47.28 dBm	-34.28 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83769 GHz	-44.36 dBm	-31.36 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.98219 GHz	-46.87 dBm	-33.87 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98992 GHz	-41.31 dBm	-28.31 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32108 GHz	-41.36 dBm	-28.36 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.20108 GHz	-38.07 dBm	-25.07 dB

Date: 24.FEB.2017 11:20:10

Lowest Channel / 16QAM

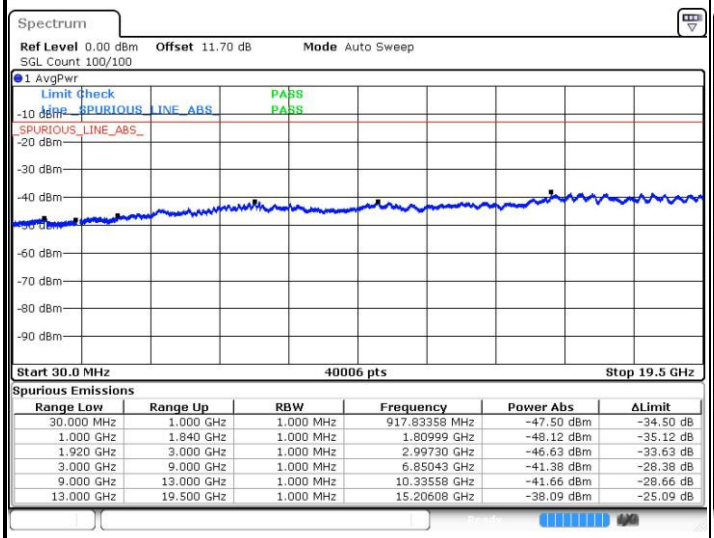


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	935.76962 MHz	-47.38 dBm	-34.38 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83769 GHz	-44.38 dBm	-31.38 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.98255 GHz	-46.58 dBm	-33.58 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98892 GHz	-41.58 dBm	-28.58 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32158 GHz	-41.65 dBm	-28.65 dB
13.000 GHz	19.500 GHz	1.000 MHz	18.06736 GHz	-38.15 dBm	-25.15 dB

Date: 24.FEB.2017 11:21:05

Middle Channel / QPSK

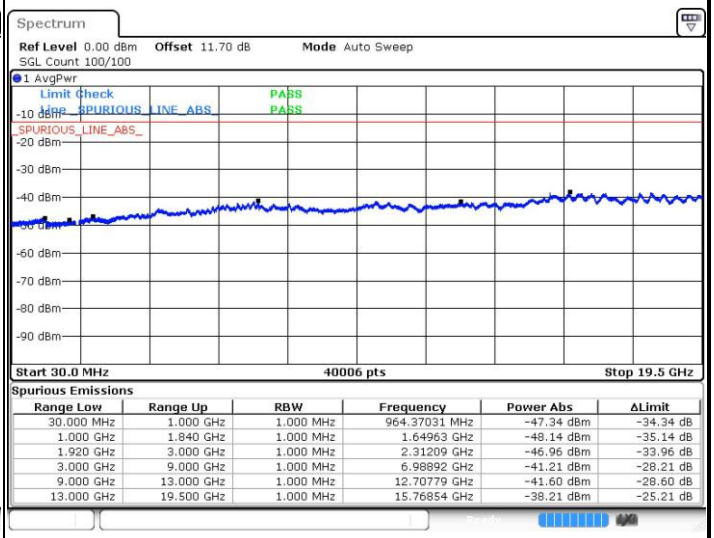


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	917.83358 MHz	-47.50 dBm	-34.50 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.80999 GHz	-48.12 dBm	-35.12 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99730 GHz	-46.63 dBm	-33.63 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.85043 GHz	-41.38 dBm	-28.38 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.33558 GHz	-41.66 dBm	-28.66 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.20608 GHz	-38.09 dBm	-25.09 dB

Date: 24.FEB.2017 11:22:41

Middle Channel / 16QAM



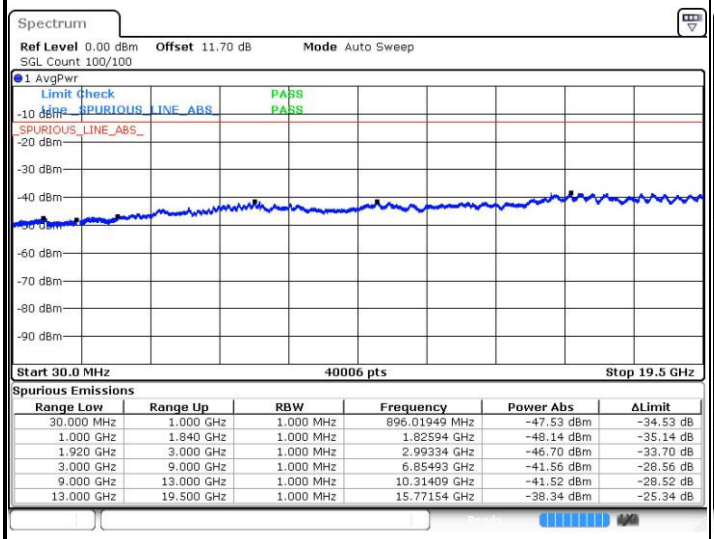
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	964.37031 MHz	-47.34 dBm	-34.34 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.64963 GHz	-48.14 dBm	-35.14 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.31209 GHz	-46.96 dBm	-33.96 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98892 GHz	-41.21 dBm	-28.21 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70779 GHz	-41.60 dBm	-28.60 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76854 GHz	-38.21 dBm	-25.21 dB

Date: 24.FEB.2017 11:23:36

LTE Band 2 / 15MHz

Highest Channel / QPSK

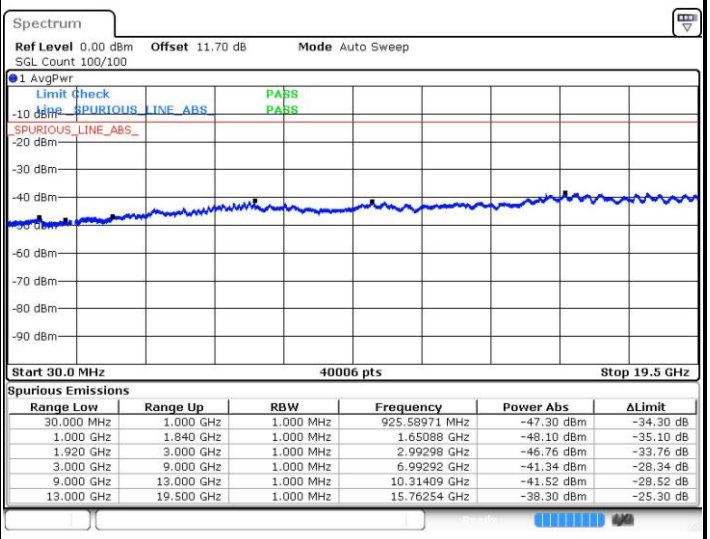


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	896.01949 MHz	-47.53 dBm	-34.53 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.82594 GHz	-48.14 dBm	-35.14 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99334 GHz	-46.70 dBm	-33.70 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.85493 GHz	-41.56 dBm	-28.56 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31409 GHz	-41.52 dBm	-28.52 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.77154 GHz	-38.34 dBm	-25.34 dB

Date: 24.FEB.2017 11:29:48

Highest Channel / 16QAM



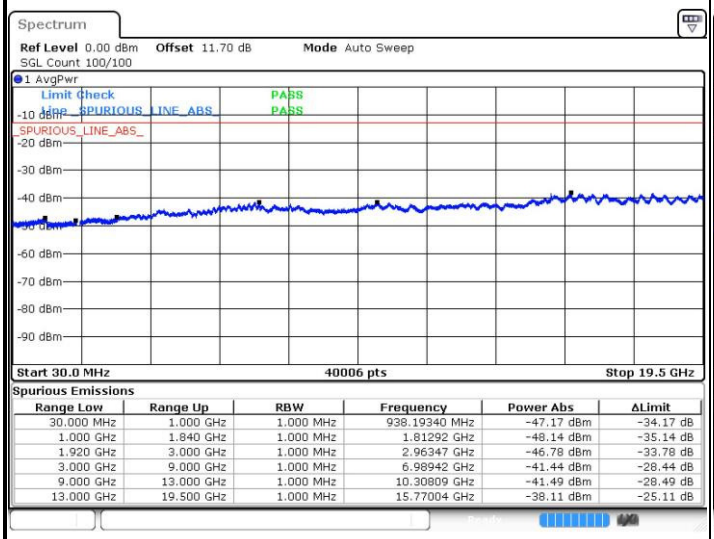
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	925.58971 MHz	-47.30 dBm	-34.30 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.65088 GHz	-48.10 dBm	-35.10 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99298 GHz	-46.76 dBm	-33.76 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99292 GHz	-41.34 dBm	-28.34 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31409 GHz	-41.52 dBm	-28.52 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76254 GHz	-38.30 dBm	-25.30 dB

Date: 24.FEB.2017 11:30:43

LTE Band 2 / 20MHz

Lowest Channel / QPSK

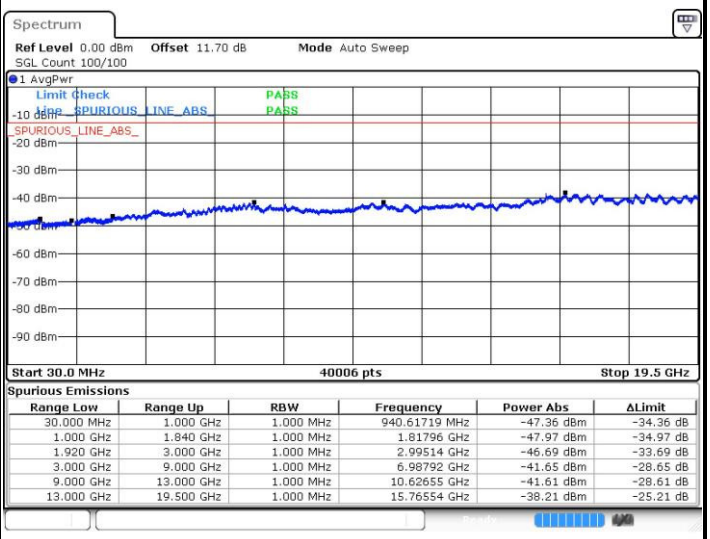


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	938.19340 MHz	-47.17 dBm	-34.17 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.81292 GHz	-48.14 dBm	-35.14 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.96347 GHz	-46.78 dBm	-33.78 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98942 GHz	-41.44 dBm	-28.44 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.30809 GHz	-41.49 dBm	-28.49 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.77004 GHz	-38.11 dBm	-25.11 dB

Date: 24.FEB.2017 11:36:56

Lowest Channel / 16QAM



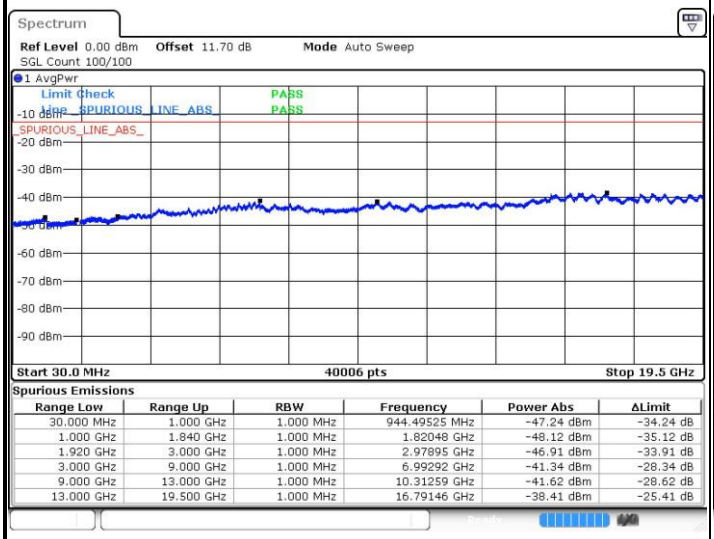
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	940.61719 MHz	-47.36 dBm	-34.36 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.81796 GHz	-47.97 dBm	-34.97 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99514 GHz	-46.69 dBm	-33.69 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98792 GHz	-41.65 dBm	-28.65 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.62655 GHz	-41.61 dBm	-28.61 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76554 GHz	-38.21 dBm	-25.21 dB

Date: 24.FEB.2017 11:37:50

LTE Band 2 / 20MHz

Middle Channel / QPSK

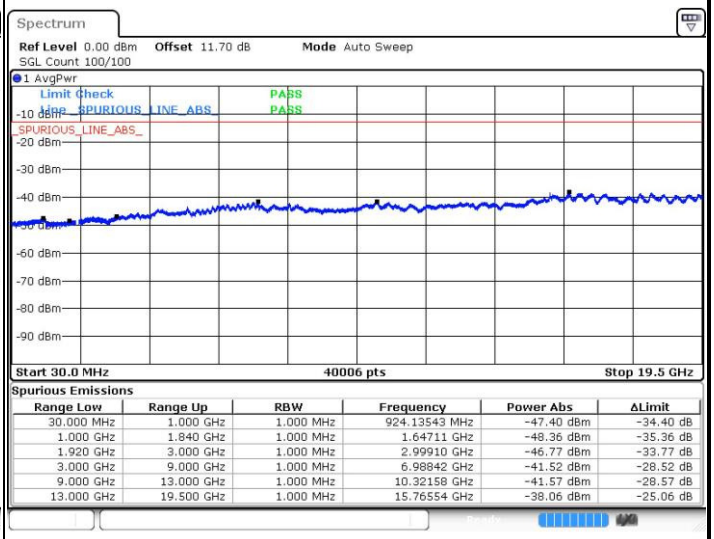


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	944.49525 MHz	-47.24 dBm	-34.24 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.82048 GHz	-48.12 dBm	-35.12 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.97895 GHz	-46.91 dBm	-33.91 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99292 GHz	-41.34 dBm	-28.34 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31259 GHz	-41.62 dBm	-28.62 dB
13.000 GHz	19.500 GHz	1.000 MHz	16.79146 GHz	-38.41 dBm	-25.41 dB

Date: 24.FEB.2017 11:39:26

Middle Channel / 16QAM

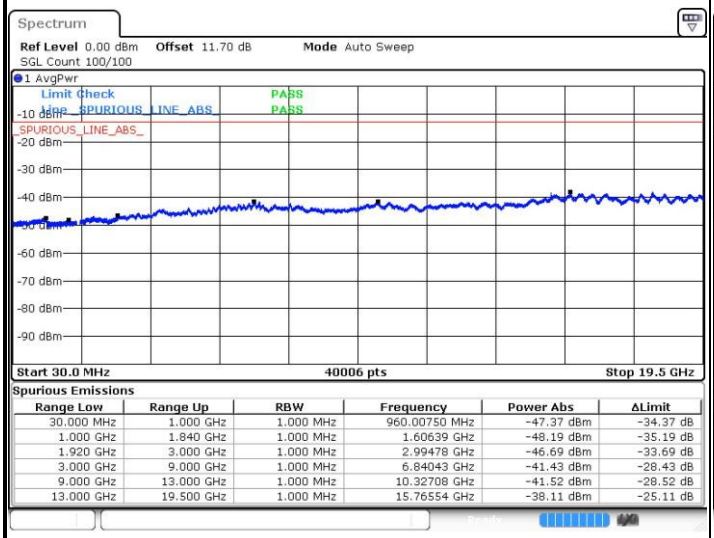


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	924.13543 MHz	-47.40 dBm	-34.40 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.64711 GHz	-48.36 dBm	-35.36 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99910 GHz	-46.77 dBm	-33.77 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98842 GHz	-41.52 dBm	-28.52 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32158 GHz	-41.57 dBm	-28.57 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76554 GHz	-38.06 dBm	-25.06 dB

Date: 24.FEB.2017 11:40:21

Highest Channel / QPSK

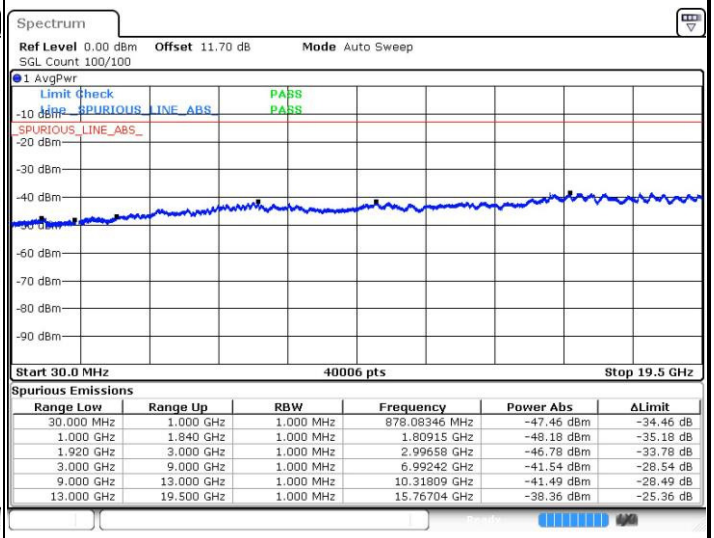


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	960.00750 MHz	-47.37 dBm	-34.37 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.60639 GHz	-48.19 dBm	-35.19 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99478 GHz	-46.69 dBm	-33.69 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.84043 GHz	-41.43 dBm	-28.43 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32708 GHz	-41.52 dBm	-28.52 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76554 GHz	-38.11 dBm	-25.11 dB

Date: 24.FEB.2017 11:46:34

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	878.08346 MHz	-47.46 dBm	-34.46 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.80915 GHz	-48.18 dBm	-35.18 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99658 GHz	-46.78 dBm	-33.78 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99242 GHz	-41.54 dBm	-28.54 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31809 GHz	-41.49 dBm	-28.49 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76704 GHz	-38.36 dBm	-25.36 dB

Date: 24.FEB.2017 11:47:29

Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0007	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

Note:

1. Normal Voltage =3.9 V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

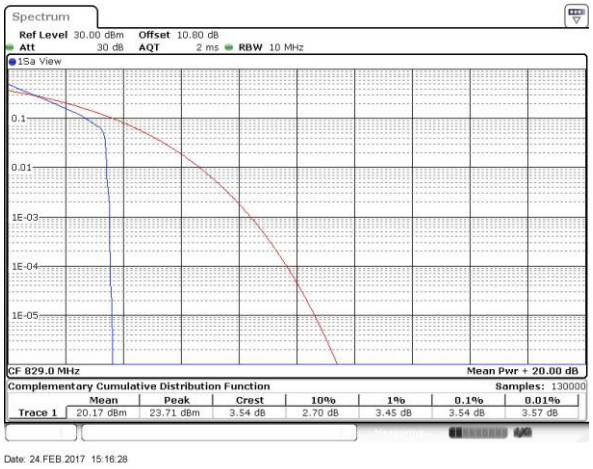
LTE Band 5

Peak-to-Average Ratio

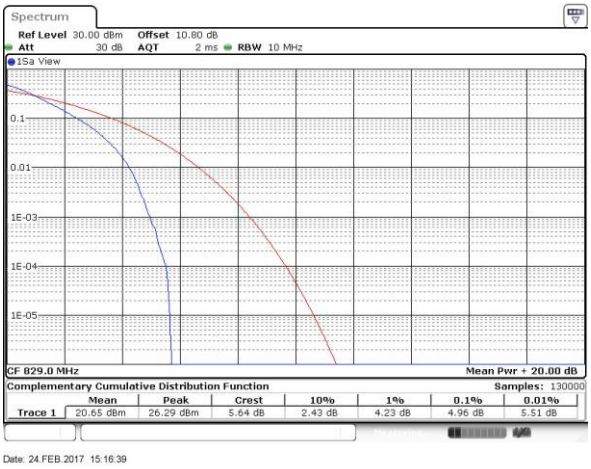
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.96	4.26	5.86	PASS
Middle CH	3.62	5.07	4.17	6	
Highest CH	3.57	4.75	4.38	5.68	

LTE Band 5 / 10MHz / QPSK

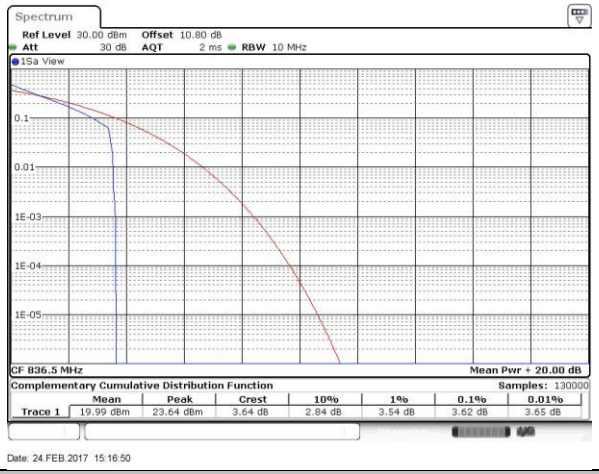
Lowest Channel / 1RB



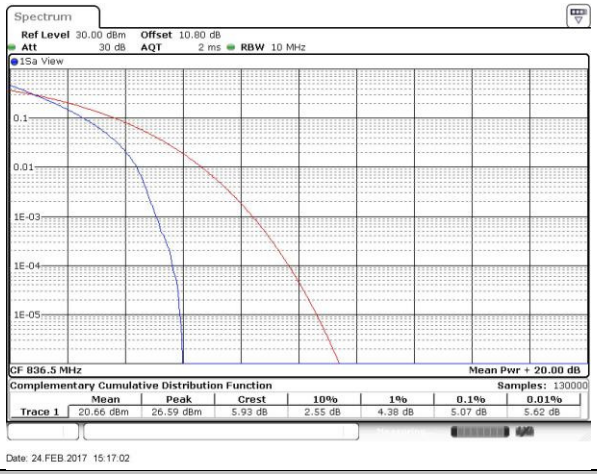
Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB

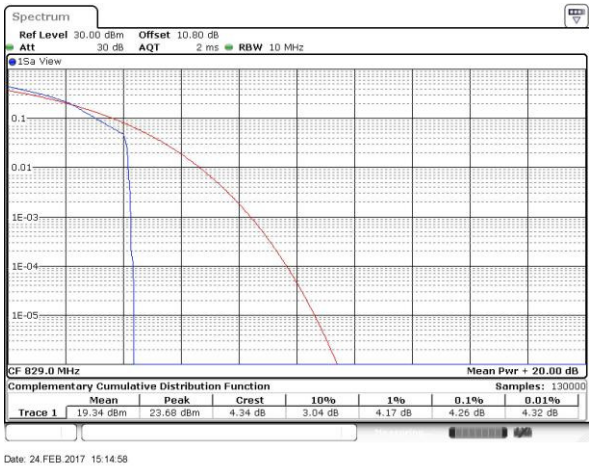


Highest Channel / 1RB

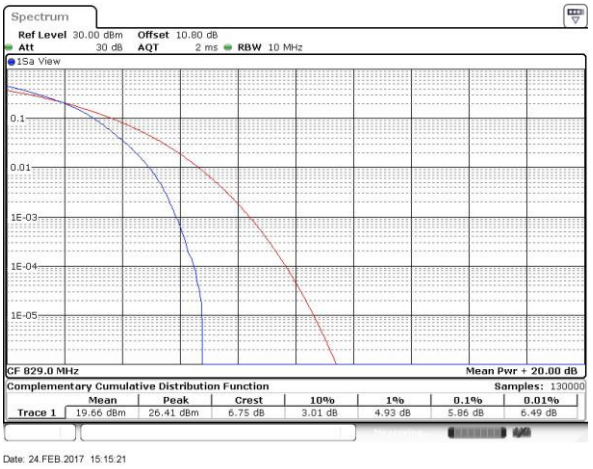
Highest Channel / Full RB

LTE Band 5 / 10MHz / 16QAM

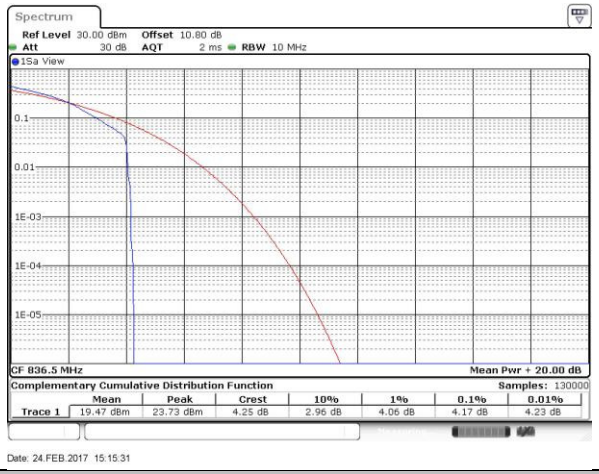
Lowest Channel / 1RB



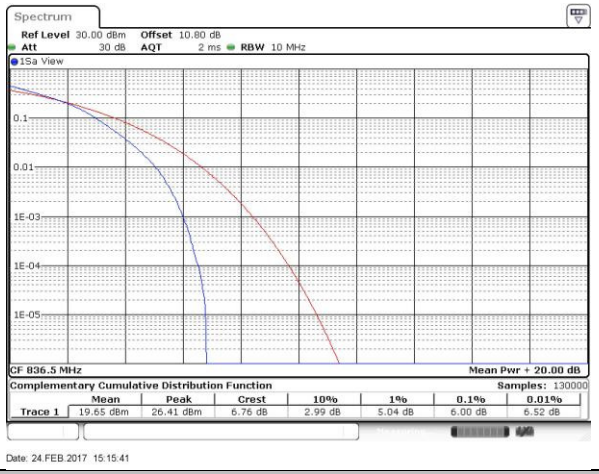
Lowest Channel / Full RB



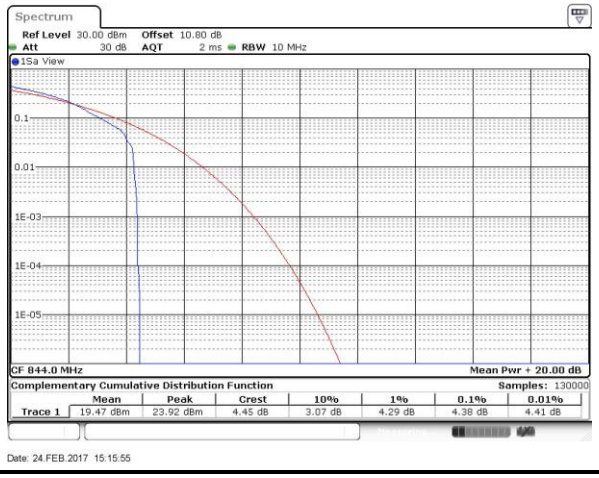
Middle Channel / 1RB



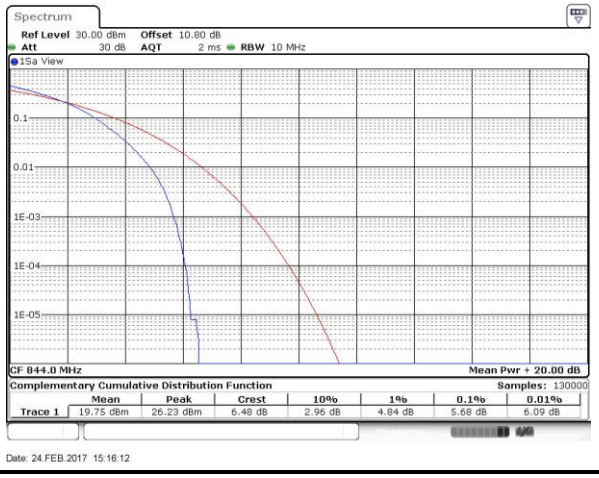
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

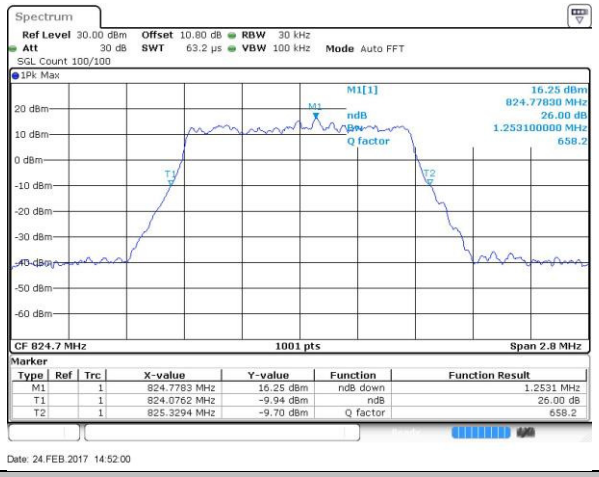


26dB Bandwidth

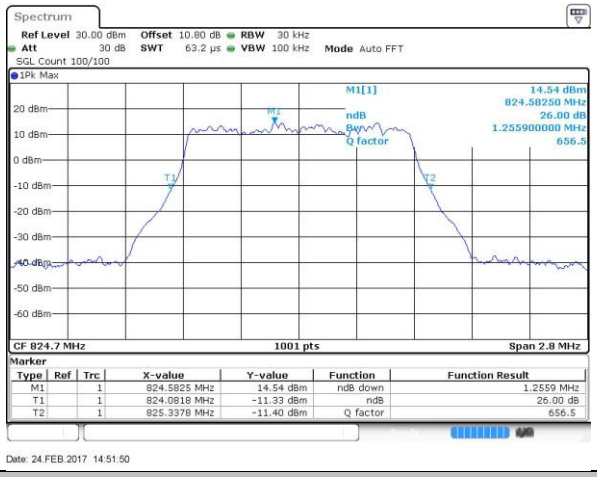
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.25	1.26	2.97	3.04	4.95	4.87	9.95	9.89	-	-	-	-
Middle CH	1.27	1.28	3.01	3.02	4.93	4.92	9.83	9.65	-	-	-	-
Highest CH	1.26	1.29	2.99	3.00	4.83	4.86	9.81	9.91	-	-	-	-

LTE Band 5

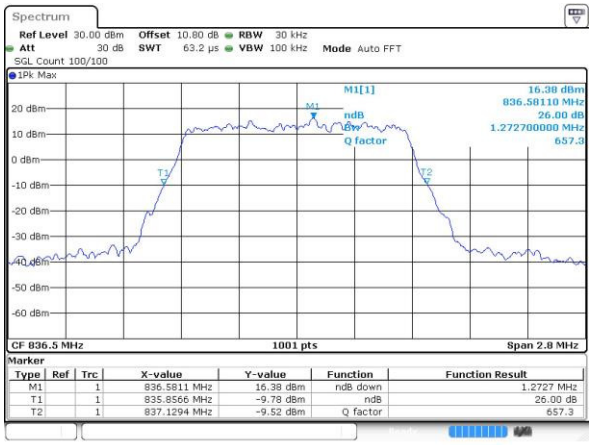
Lowest Channel / 1.4MHz / QPSK



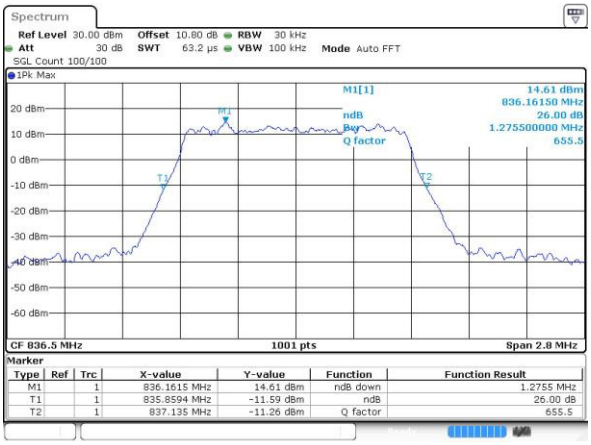
Lowest Channel / 1.4MHz / 16QAM



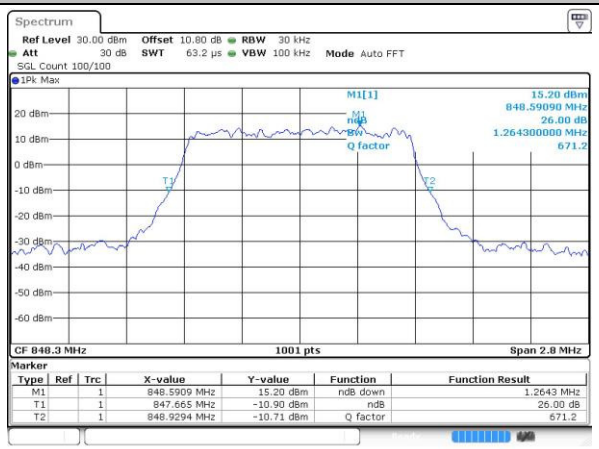
Middle Channel / 1.4MHz / QPSK



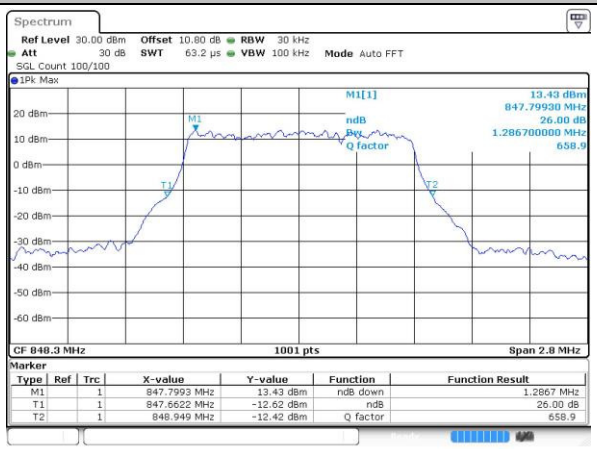
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

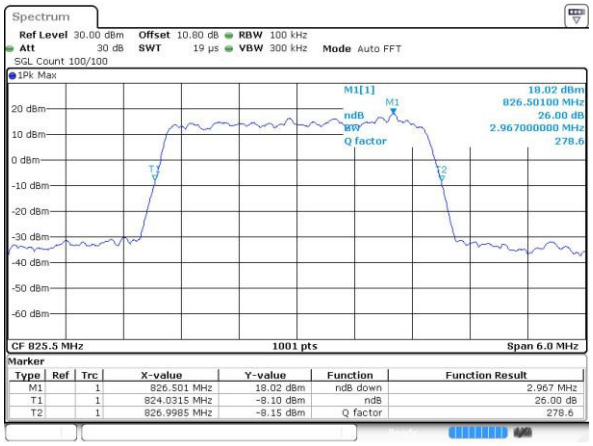


Highest Channel / 1.4MHz / 16QAM

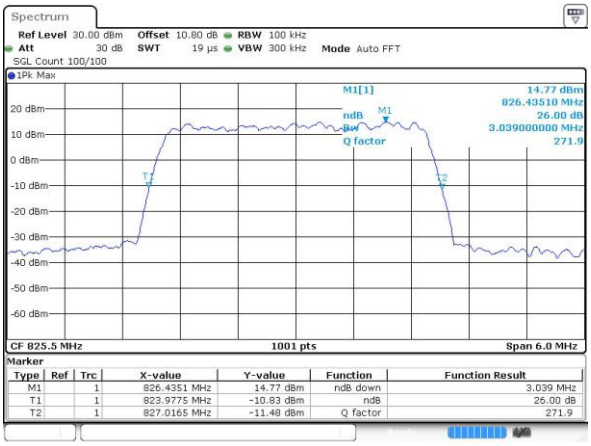


LTE Band 5

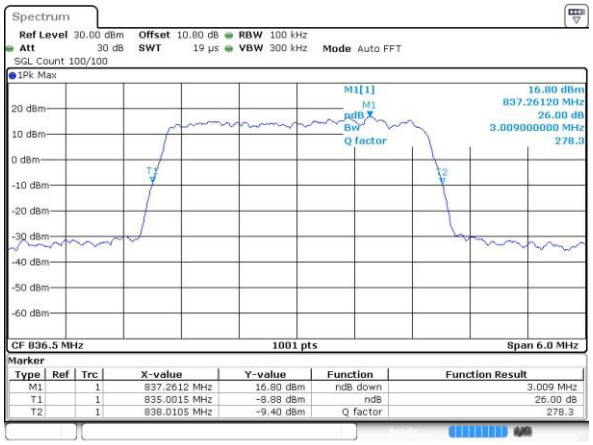
Lowest Channel / 3MHz / QPSK



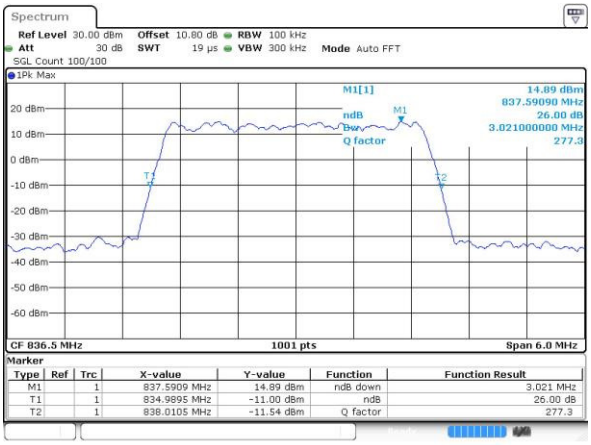
Lowest Channel / 3MHz / 16QAM



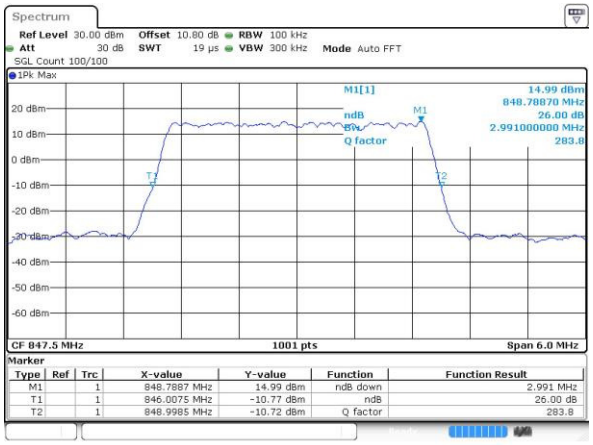
Middle Channel / 3MHz / QPSK



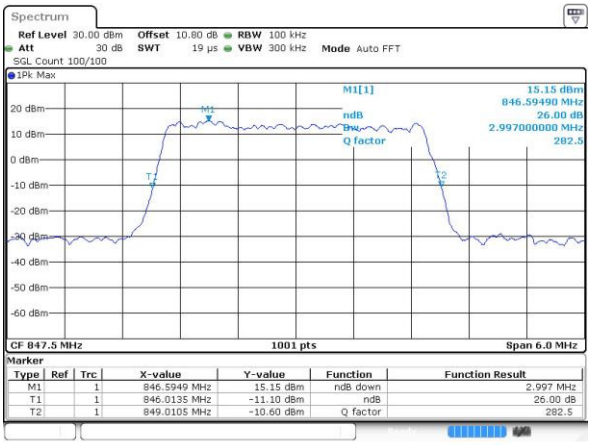
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

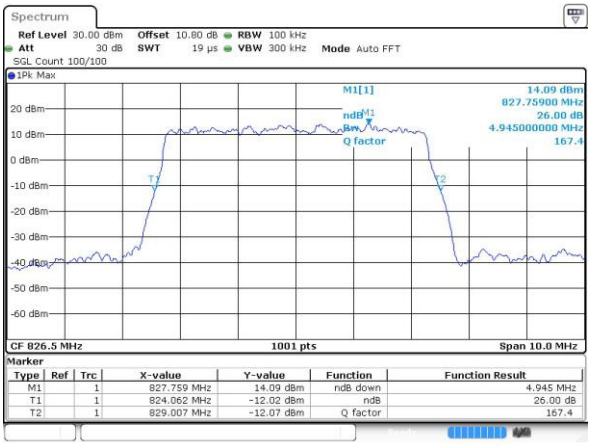


Highest Channel /3MHz / 16QAM

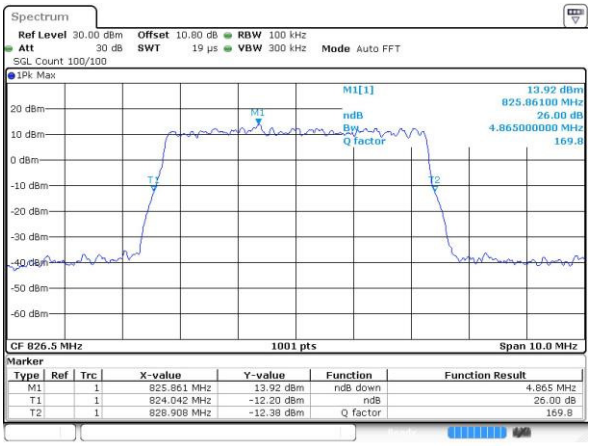


LTE Band 5

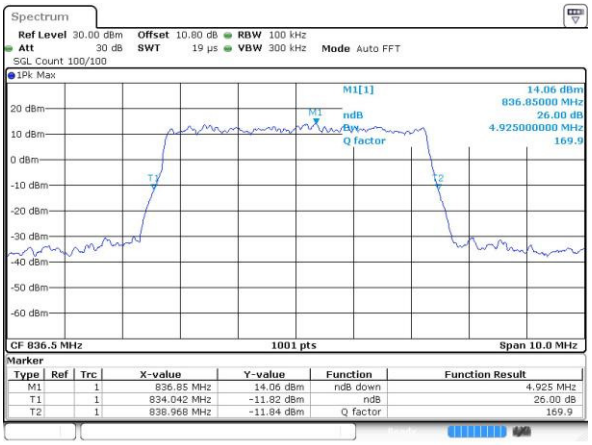
Lowest Channel / 5MHz / QPSK



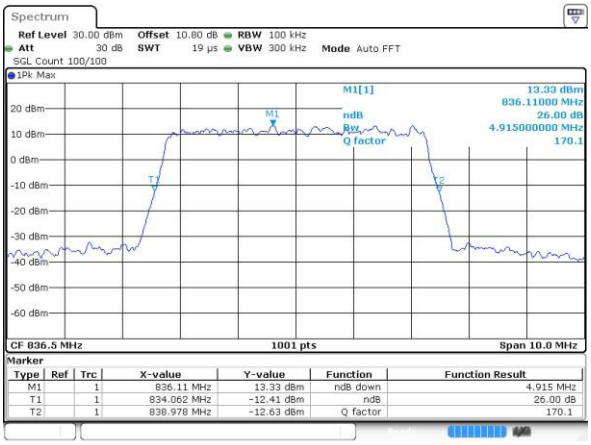
Lowest Channel / 5MHz / 16QAM



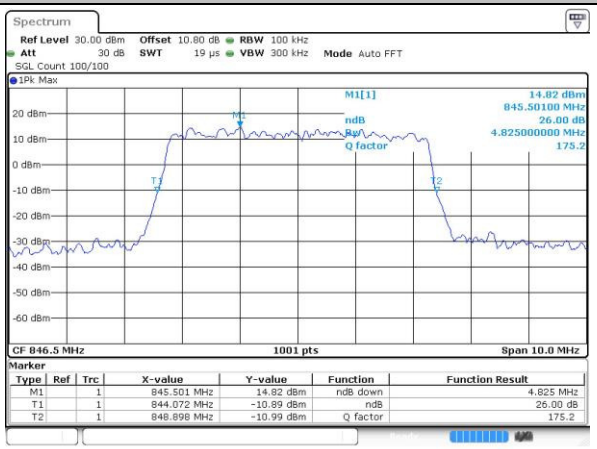
Middle Channel / 5MHz / QPSK



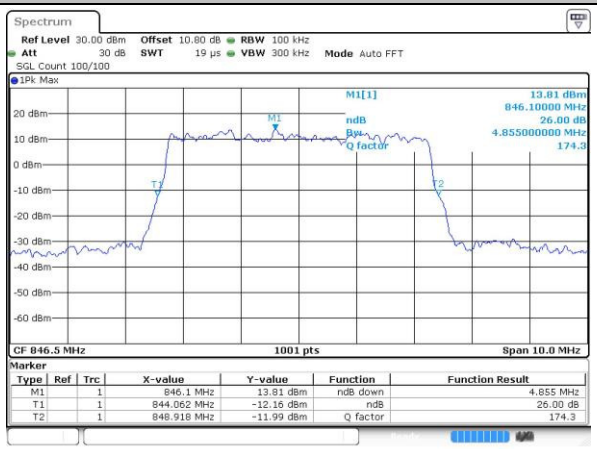
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

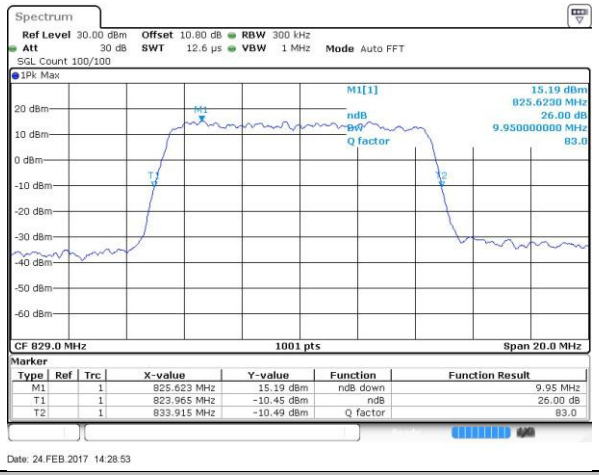


Highest Channel / 5MHz / 16QAM

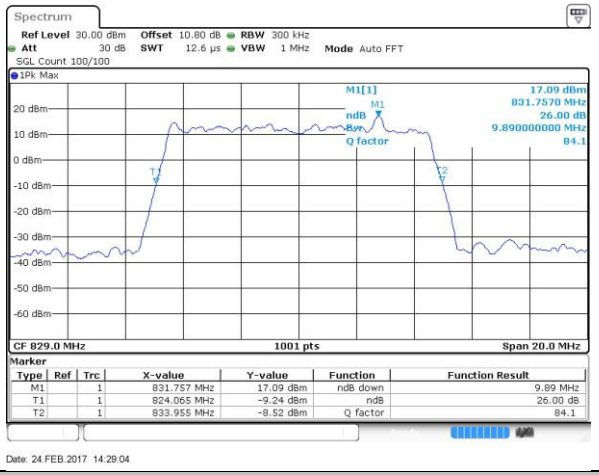


LTE Band 5

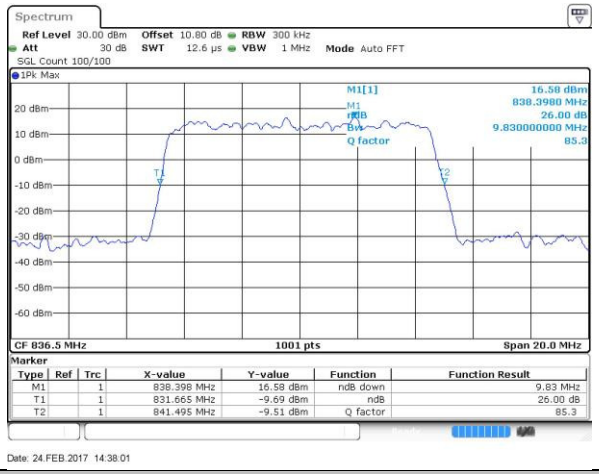
Lowest Channel / 10MHz / QPSK



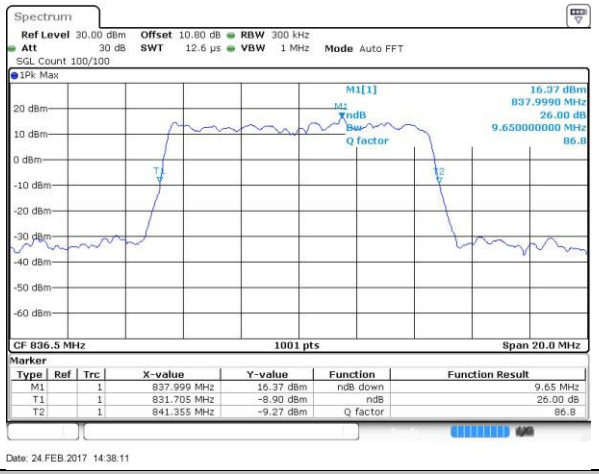
Lowest Channel / 10MHz / 16QAM



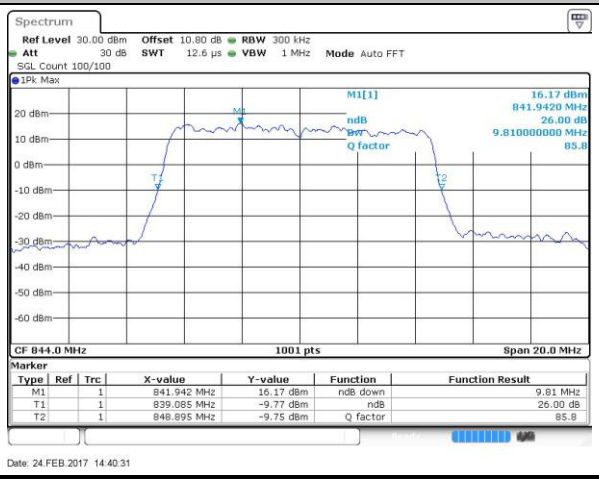
Middle Channel / 10MHz / QPSK



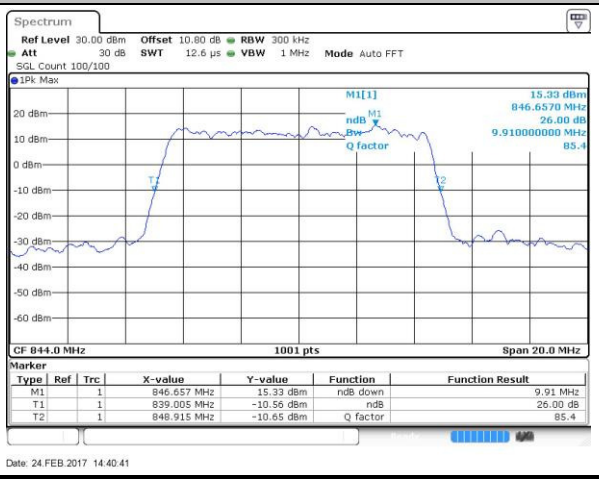
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

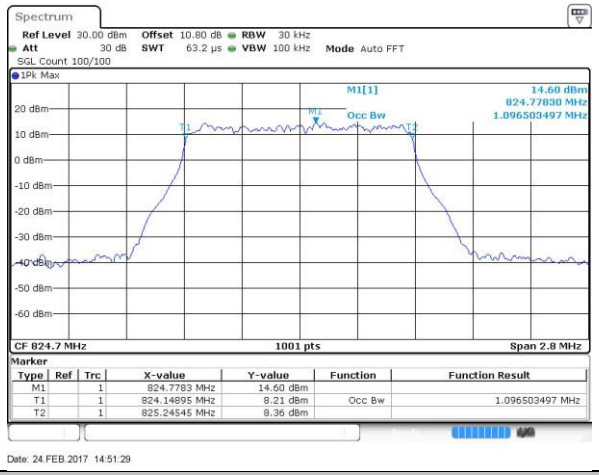


Occupied Bandwidth

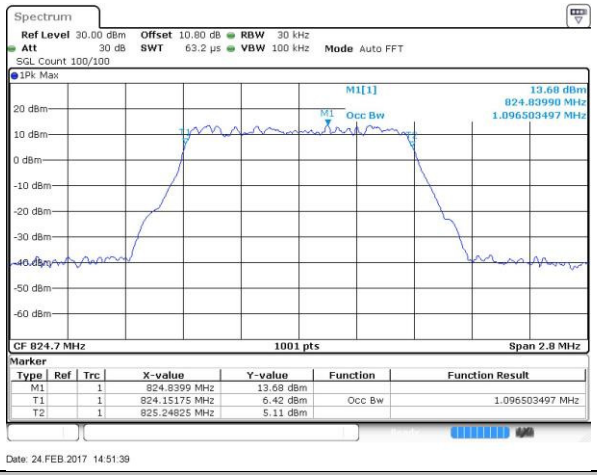
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.1	1.1	2.73	2.72	4.51	4.48	9.05	9.01	-	-	-	-
Middle CH	1.09	1.09	2.72	2.72	4.48	4.51	9.01	9.01	-	-	-	-
Highest CH	1.09	1.1	2.72	2.72	4.48	4.47	9.01	8.99	-	-	-	-

LTE Band 5

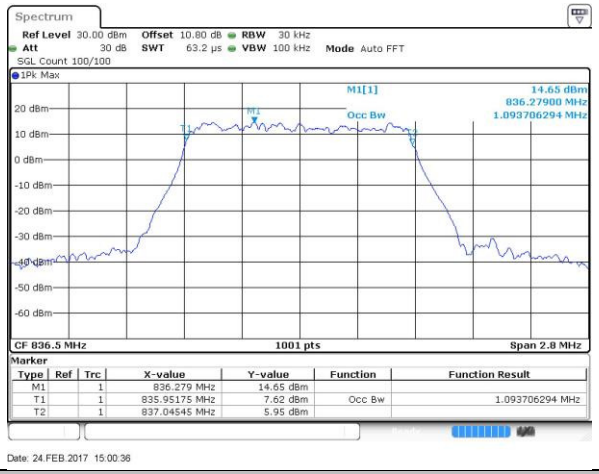
Lowest Channel / 1.4MHz / QPSK



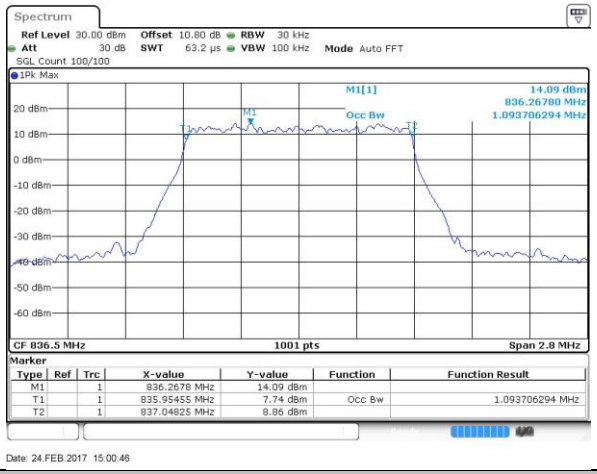
Lowest Channel / 1.4MHz / 16QAM



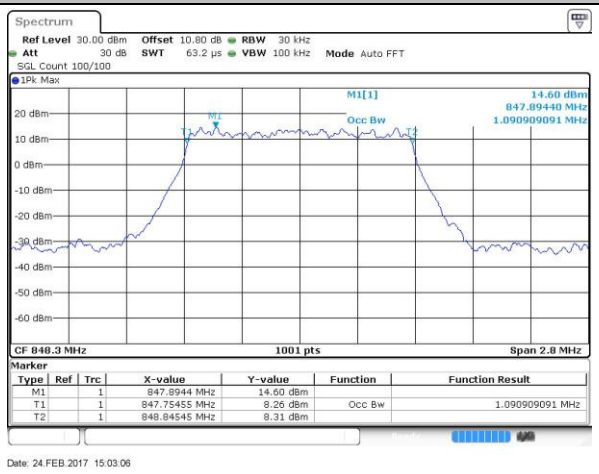
Middle Channel / 1.4MHz / QPSK



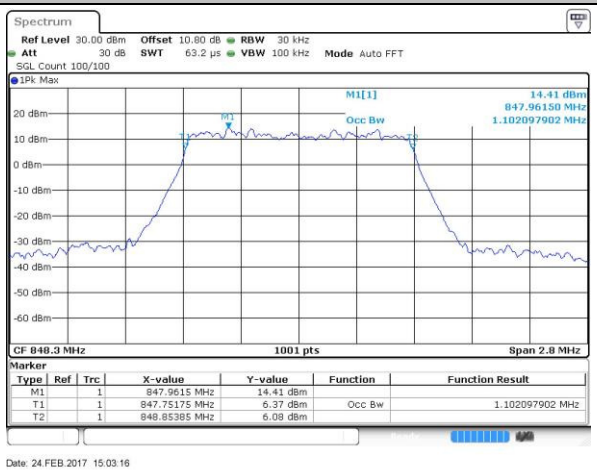
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

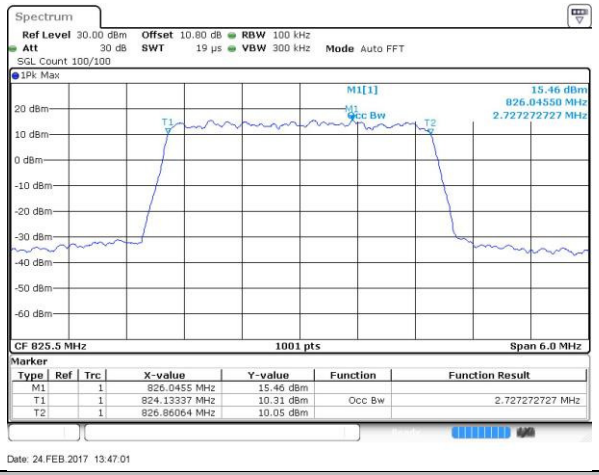


Highest Channel / 1.4MHz / 16QAM

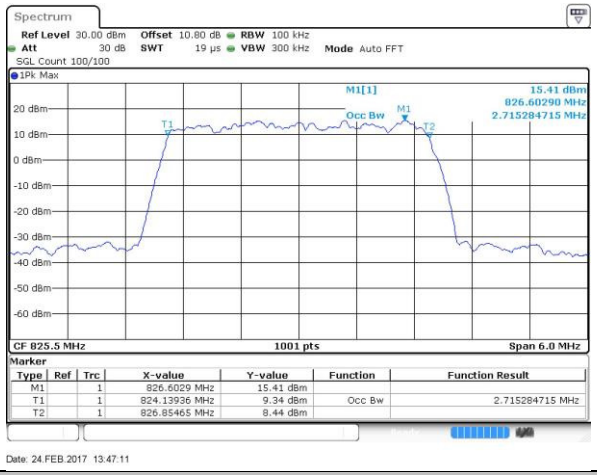


LTE Band 5

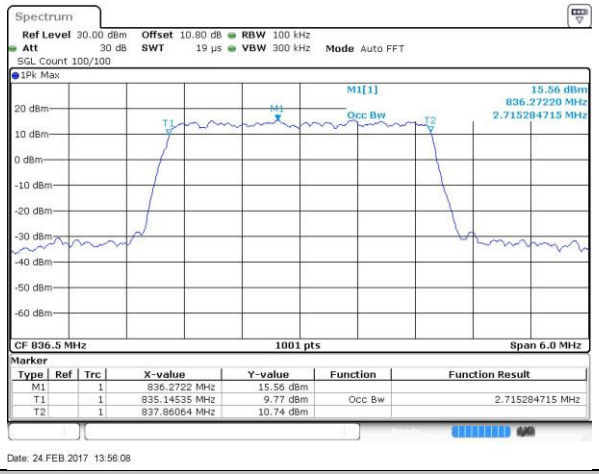
Lowest Channel / 3MHz / QPSK



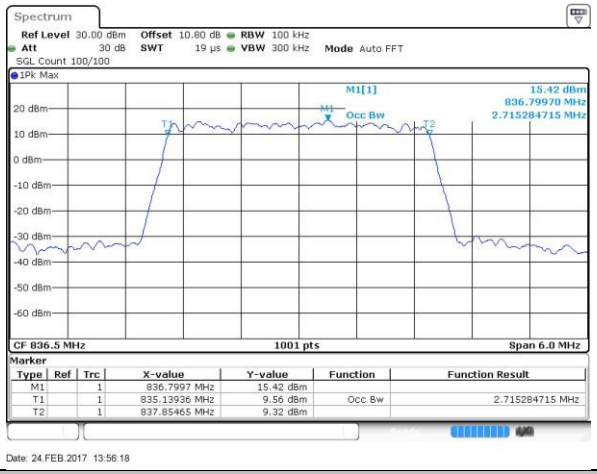
Lowest Channel / 3MHz / 16QAM



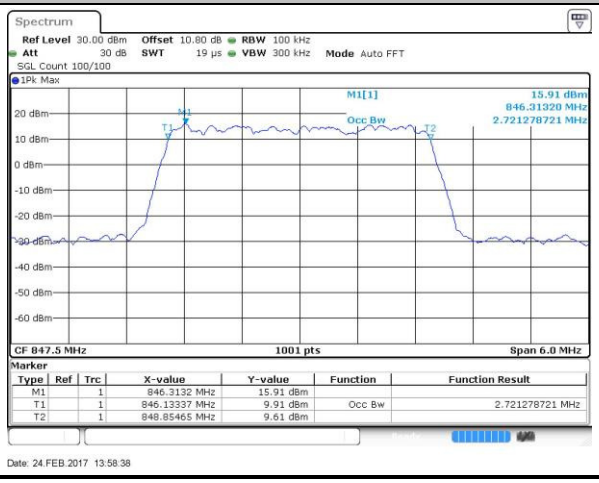
Middle Channel / 3MHz / QPSK



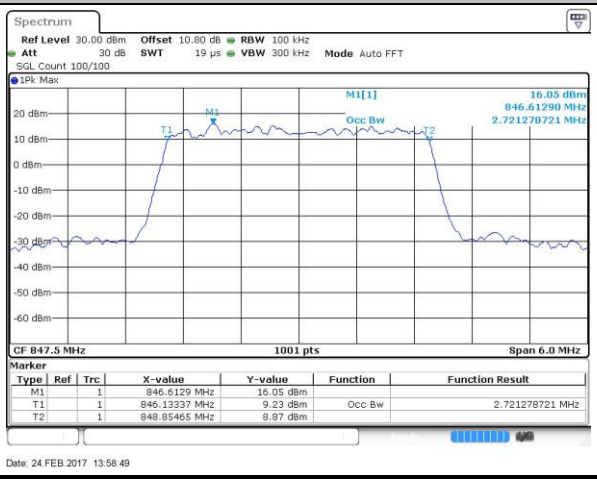
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

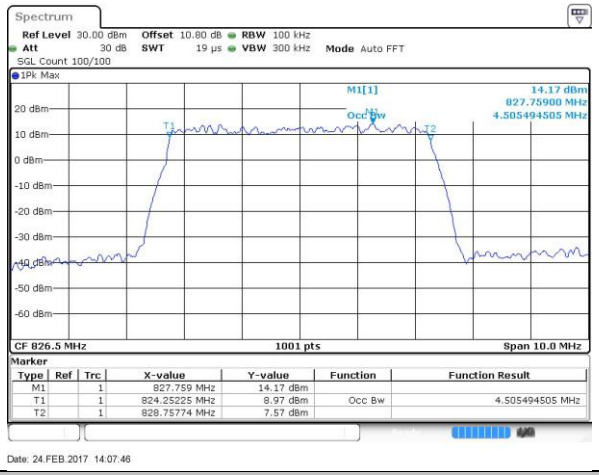


Highest Channel / 3MHz / 16QAM



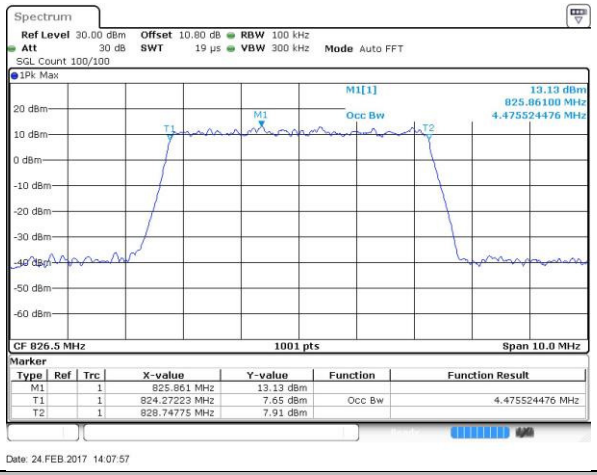
LTE Band 5

Lowest Channel / 5MHz / QPSK



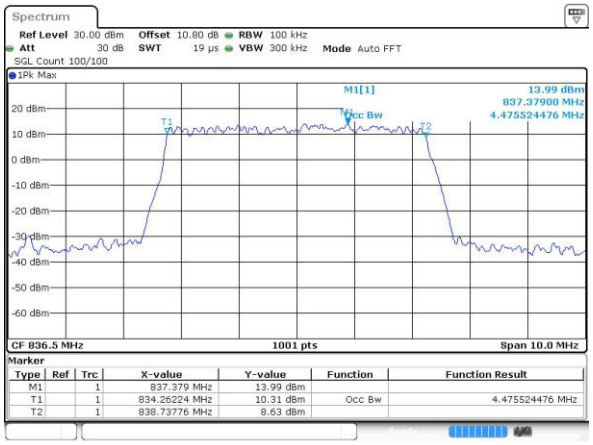
Date: 24.FEB.2017 14:07:46

Lowest Channel / 5MHz / 16QAM



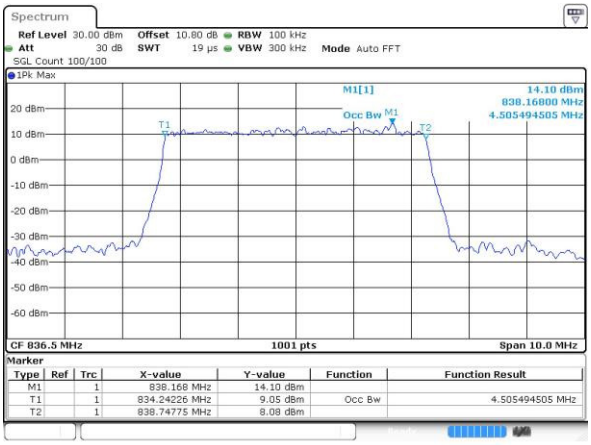
Date: 24.FEB.2017 14:07:57

Middle Channel / 5MHz / QPSK



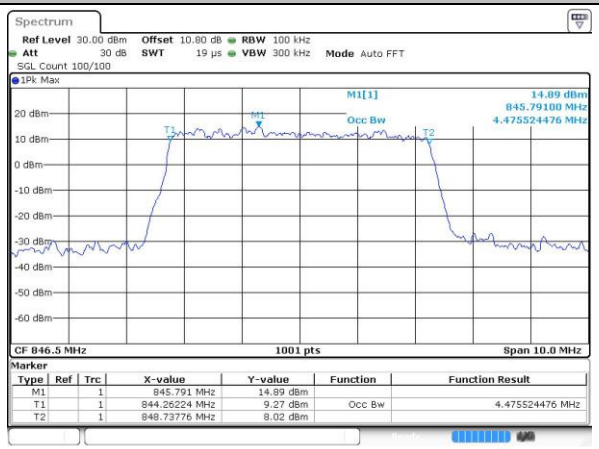
Date: 24.FEB.2017 14:16:53

Middle Channel / 5MHz / 16QAM



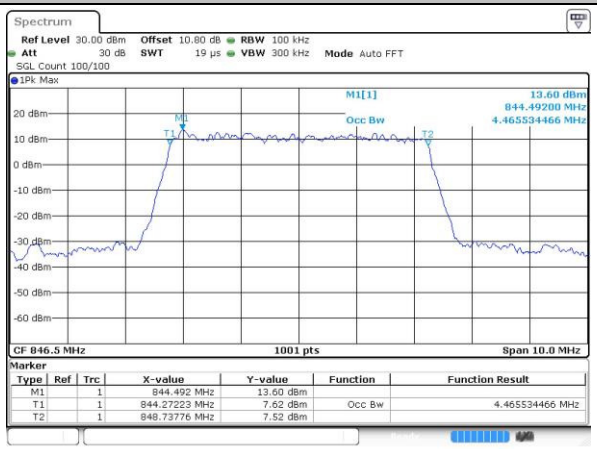
Date: 24.FEB.2017 14:17:04

Highest Channel / 5MHz / QPSK



Date: 24.FEB.2017 14:19:24

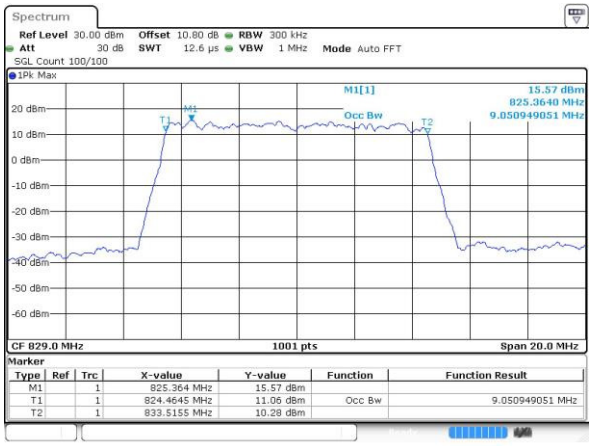
Highest Channel / 5MHz / 16QAM



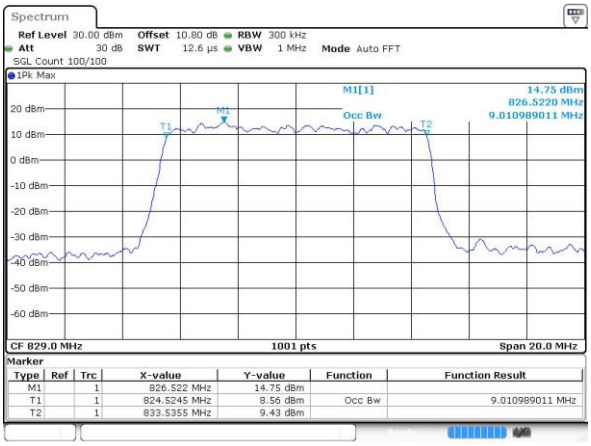
Date: 24.FEB.2017 14:19:35

LTE Band 5

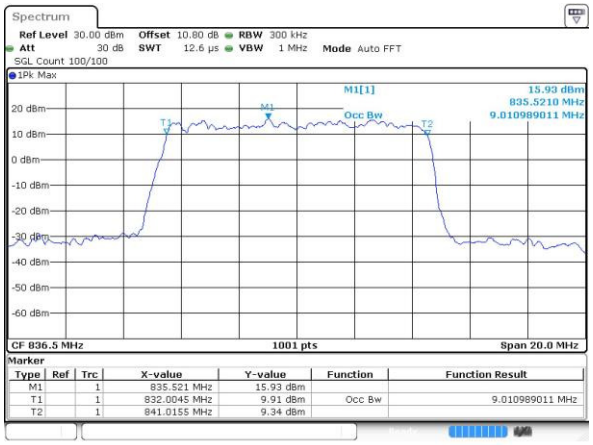
Lowest Channel / 10MHz / QPSK



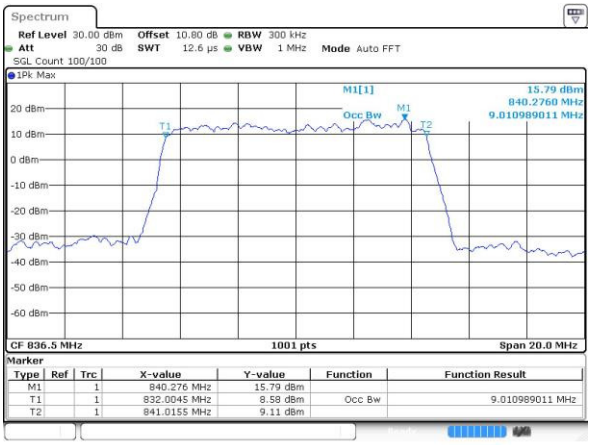
Lowest Channel / 10MHz / 16QAM



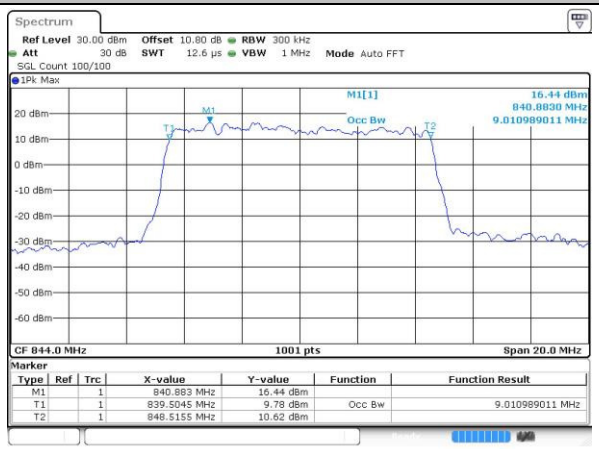
Middle Channel / 10MHz / QPSK



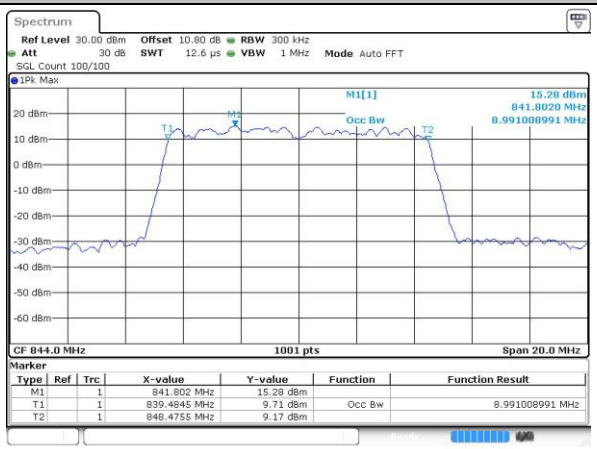
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



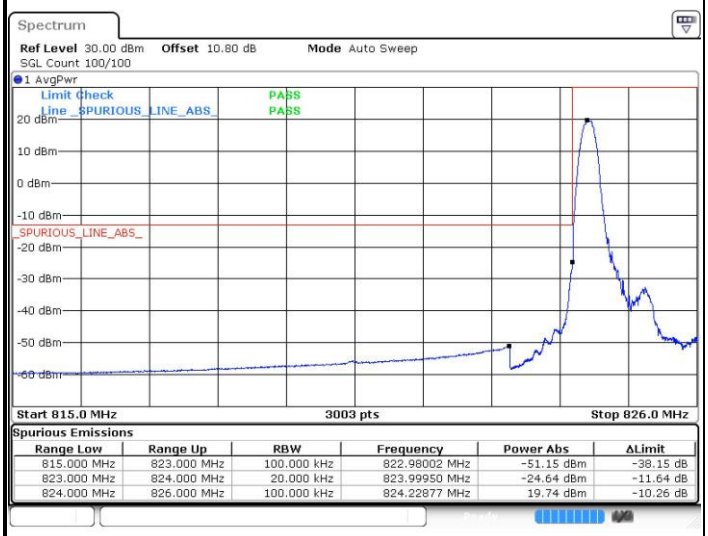
Highest Channel / 10MHz / 16QAM



Conducted Band Edge

LTE Band 5 / 1.4MHz / QPSK

Lowest Band Edge / 1RB

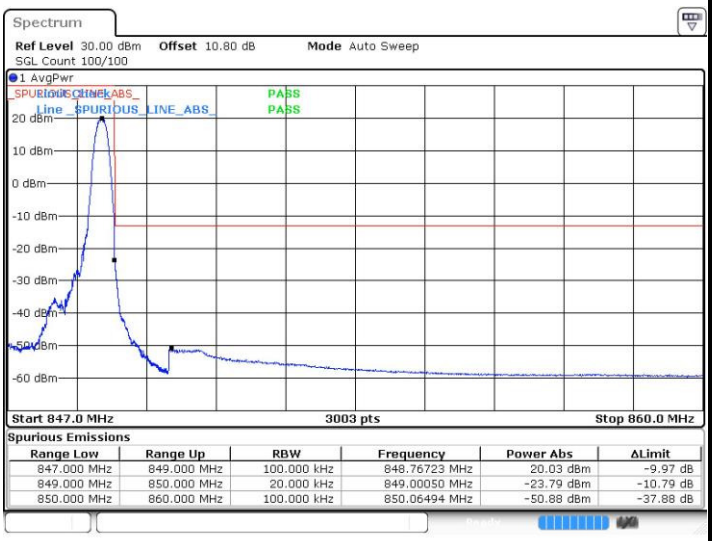


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98002 MHz	-51.15 dBm	-38.15 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-24.64 dBm	-11.64 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.22877 MHz	19.74 dBm	-10.26 dB

Date: 24.FEB.2017 14:53:39

Highest Band Edge / 1RB

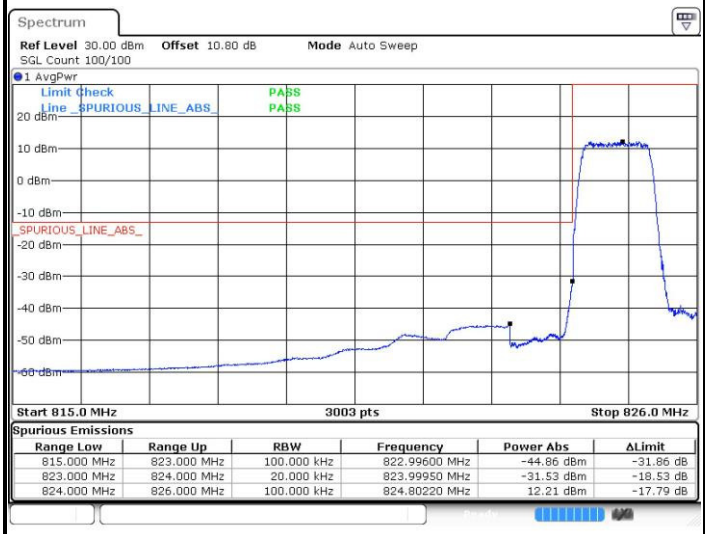


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.76723 MHz	20.03 dBm	-9.97 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00050 MHz	-23.79 dBm	-10.79 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.06494 MHz	-50.88 dBm	-37.88 dB

Date: 24.FEB.2017 15:08:34

Lowest Band Edge / Full RB

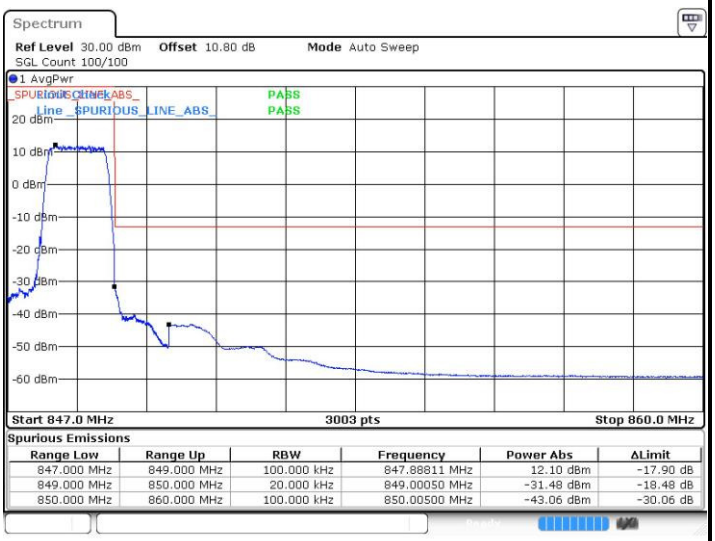


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-44.86 dBm	-31.86 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-31.53 dBm	-18.53 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.80220 MHz	12.21 dBm	-17.79 dB

Date: 24.FEB.2017 14:56:57

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	847.88811 MHz	12.10 dBm	-17.90 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00050 MHz	-31.48 dBm	-18.48 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-43.06 dBm	-30.06 dB

Date: 24.FEB.2017 15:05:16