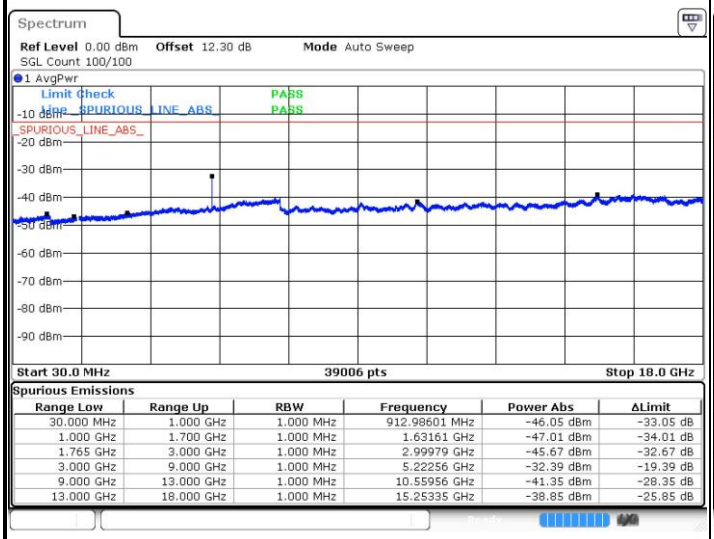
LTE Band 4 / 15MHz

Highest Channel / QPSK

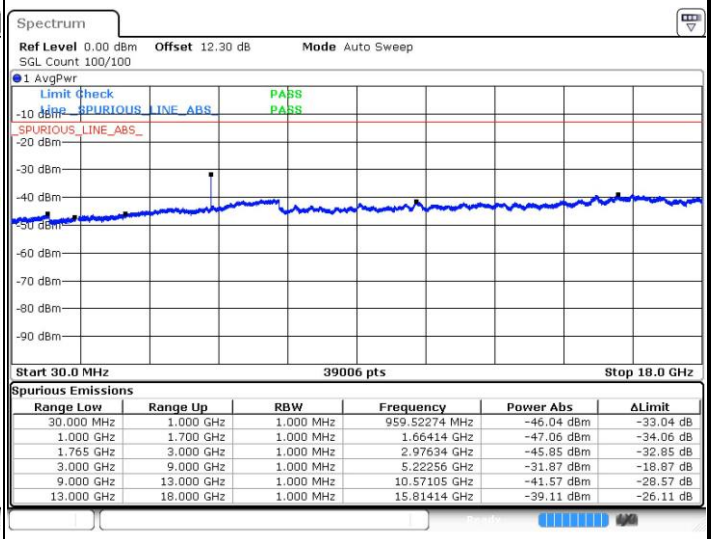


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	912.98601 MHz	-46.05 dBm	-33.05 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63161 GHz	-47.01 dBm	-34.01 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99979 GHz	-45.67 dBm	-32.67 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.22256 GHz	-32.39 dBm	-19.39 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.55956 GHz	-41.35 dBm	-28.35 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.25335 GHz	-38.85 dBm	-25.85 dB

Date: 20.JUL.2018 02:49:41

Highest Channel / 16QAM



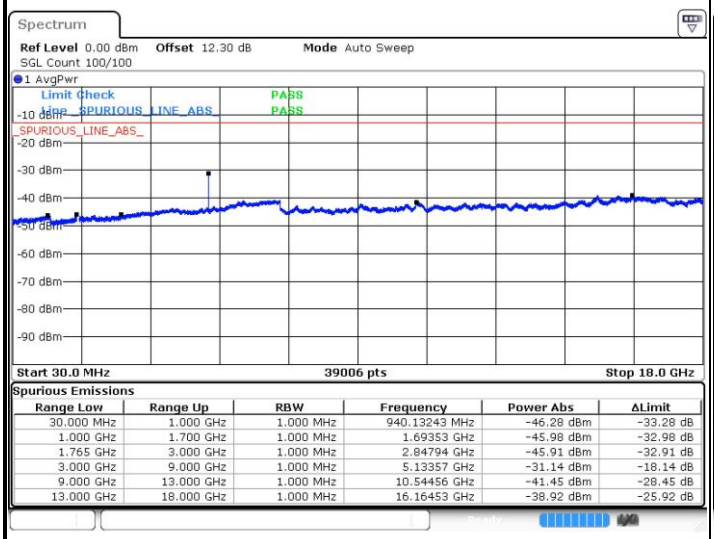
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	959.52274 MHz	-46.04 dBm	-33.04 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66414 GHz	-47.06 dBm	-34.06 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97634 GHz	-45.85 dBm	-32.85 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.22256 GHz	-31.87 dBm	-18.87 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.57105 GHz	-41.57 dBm	-28.57 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.81414 GHz	-39.11 dBm	-26.11 dB

Date: 20.JUL.2018 02:50:41

LTE Band 4 / 20MHz

Lowest Channel / QPSK

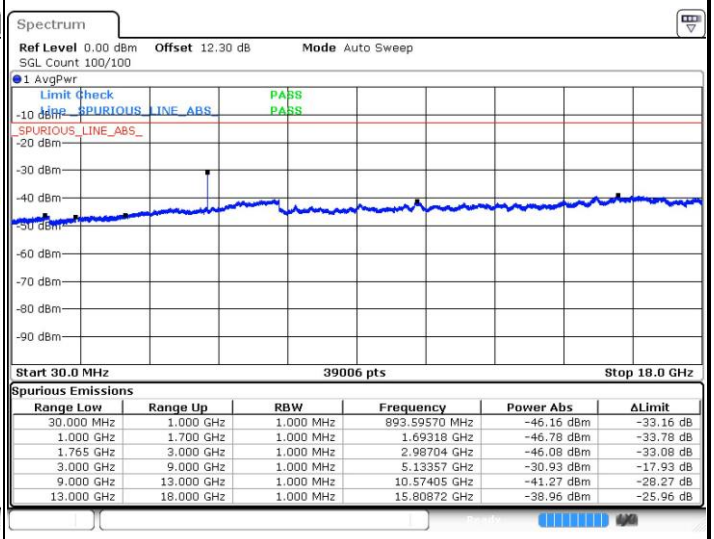


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	940.13243 MHz	-46.28 dBm	-33.28 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-45.98 dBm	-32.98 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.84794 GHz	-45.91 dBm	-32.91 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.13357 GHz	-31.14 dBm	-18.14 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.54456 GHz	-41.45 dBm	-28.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.16453 GHz	-38.92 dBm	-25.92 dB

Date: 20.JUL.2018 02:57:07

Lowest Channel / 16QAM



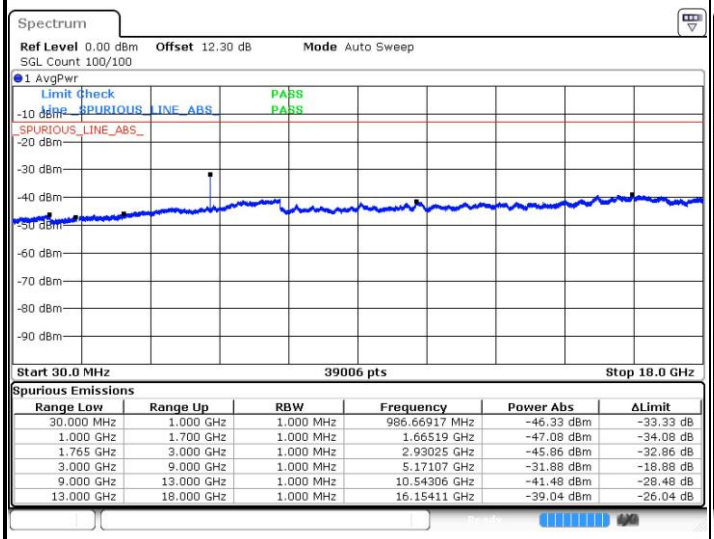
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	893.59570 MHz	-46.16 dBm	-33.16 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69318 GHz	-46.78 dBm	-33.78 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98704 GHz	-46.08 dBm	-33.08 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.13357 GHz	-30.93 dBm	-17.93 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.57405 GHz	-41.27 dBm	-28.27 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.80872 GHz	-38.96 dBm	-25.96 dB

Date: 20.JUL.2018 02:58:06

LTE Band 4 / 20MHz

Middle Channel / QPSK

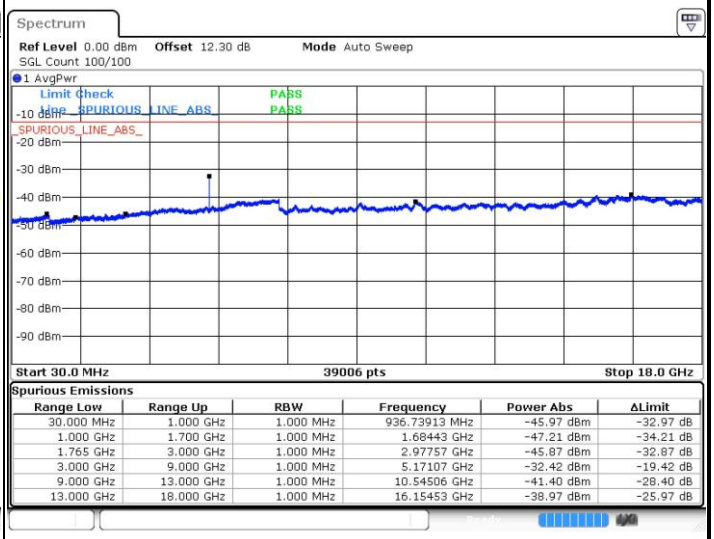


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	986.66917 MHz	-46.33 dBm	-33.33 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66519 GHz	-47.08 dBm	-34.08 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.93025 GHz	-45.86 dBm	-32.86 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.17107 GHz	-31.88 dBm	-18.88 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.54306 GHz	-41.48 dBm	-28.48 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.15411 GHz	-39.04 dBm	-26.04 dB

Date: 20.JUL.2018 02:59:46

Middle Channel / 16QAM

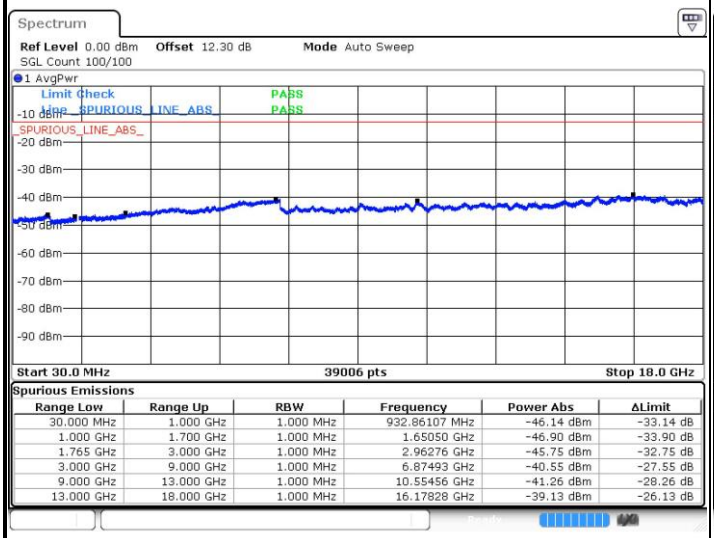


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	936.73913 MHz	-45.97 dBm	-32.97 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68443 GHz	-47.21 dBm	-34.21 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97757 GHz	-45.87 dBm	-32.87 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.17107 GHz	-32.42 dBm	-19.42 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.54506 GHz	-41.40 dBm	-28.40 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.15453 GHz	-38.97 dBm	-25.97 dB

Date: 20.JUL.2018 03:00:47

Highest Channel / QPSK

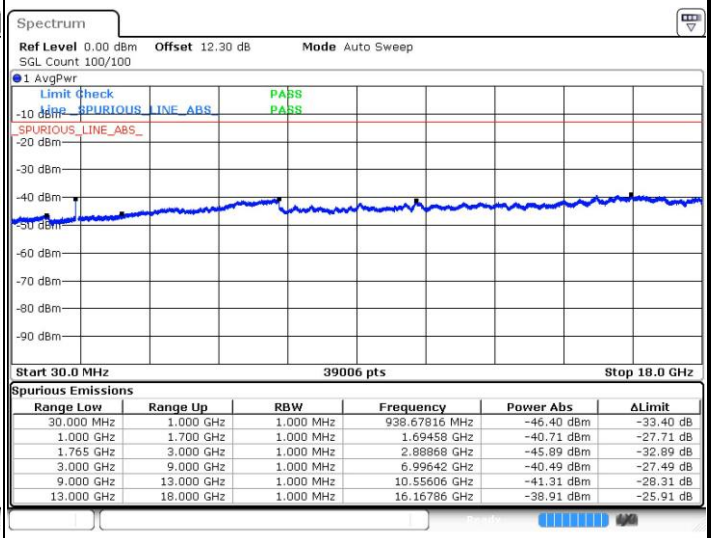


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	932.86107 MHz	-46.14 dBm	-33.14 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65050 GHz	-46.90 dBm	-33.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.96276 GHz	-45.75 dBm	-32.75 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.87493 GHz	-40.55 dBm	-27.55 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.55456 GHz	-41.26 dBm	-28.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.17828 GHz	-39.13 dBm	-26.13 dB

Date: 20.JUL.2018 03:07:13

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	938.67816 MHz	-46.40 dBm	-33.40 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69458 GHz	-40.71 dBm	-27.71 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.88868 GHz	-45.89 dBm	-32.89 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99642 GHz	-40.49 dBm	-27.49 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.55606 GHz	-41.31 dBm	-28.31 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.16786 GHz	-38.91 dBm	-25.91 dB

Date: 20.JUL.2018 03:08:12

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	0.0031	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0038	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0027	
0	Normal Voltage	0.0084	
-10	Normal Voltage	0.0077	
-20	Normal Voltage	0.0036	
-30	Normal Voltage	0.0051	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0077	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

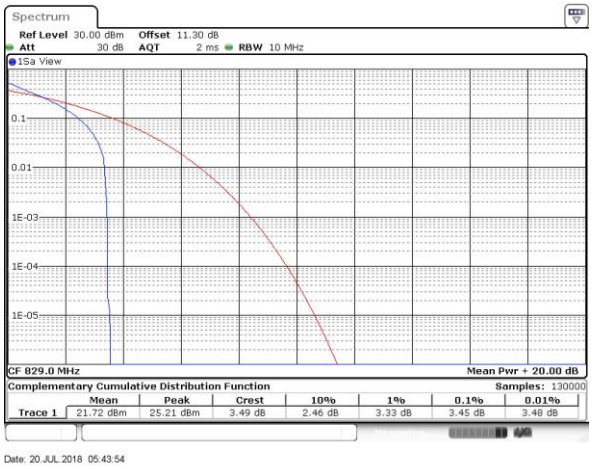
LTE Band 5

Peak-to-Average Ratio

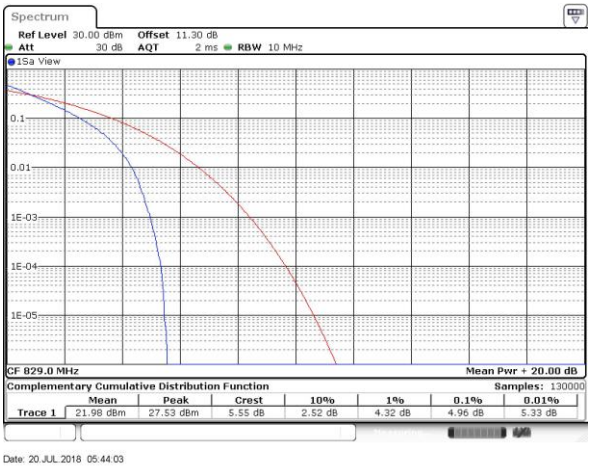
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.45	4.96	4.58	5.88	PASS
Middle CH	4.55	4.9	5.33	5.88	
Highest CH	3.77	4.81	4.9	5.83	

LTE Band 5 / 10MHz / QPSK

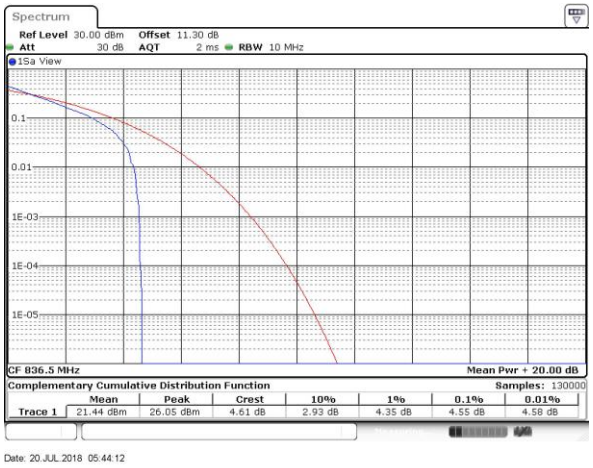
Lowest Channel / 1RB



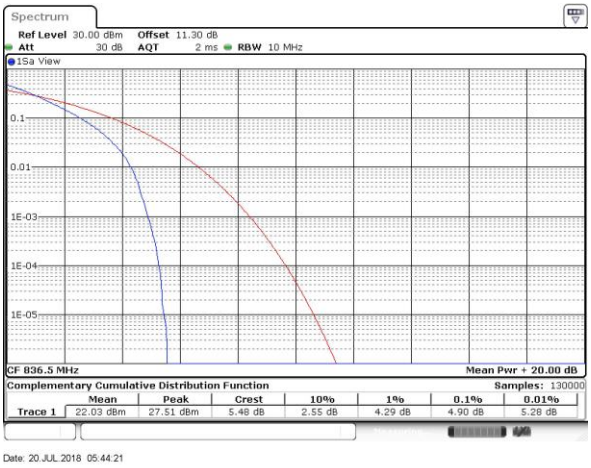
Lowest Channel / Full RB



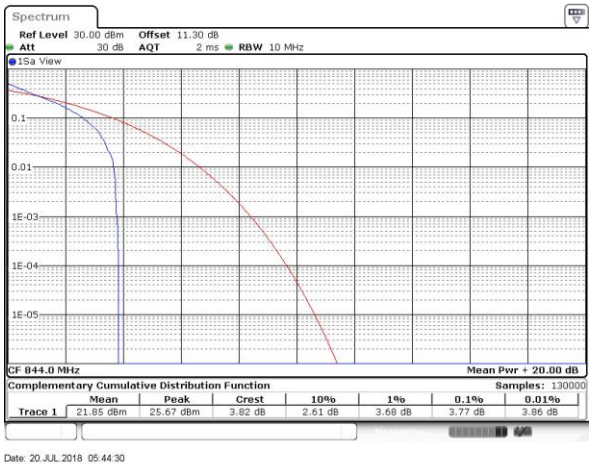
Middle Channel / 1RB



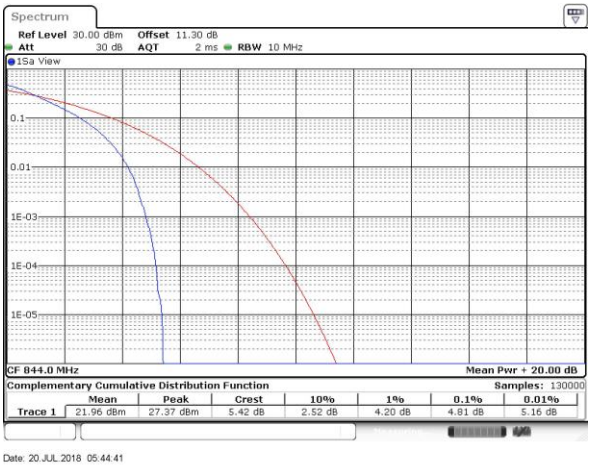
Middle Channel / Full RB



Highest Channel / 1RB

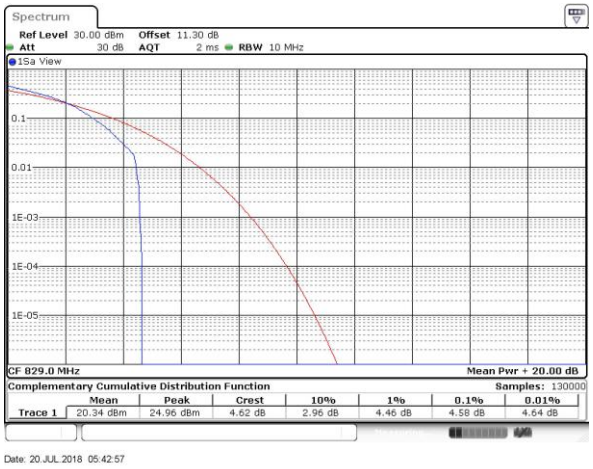


Highest Channel / Full RB

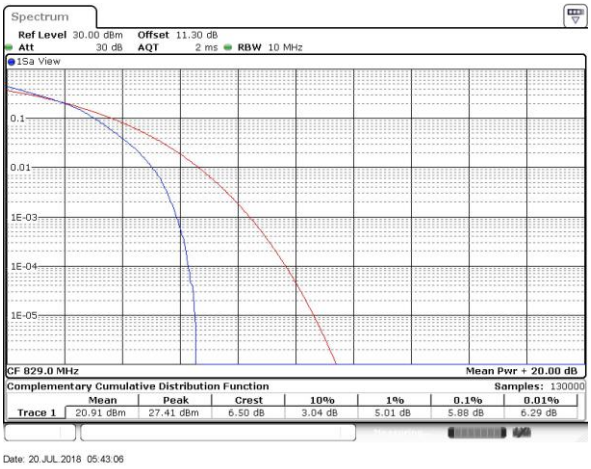


LTE Band 5 / 10MHz / 16QAM

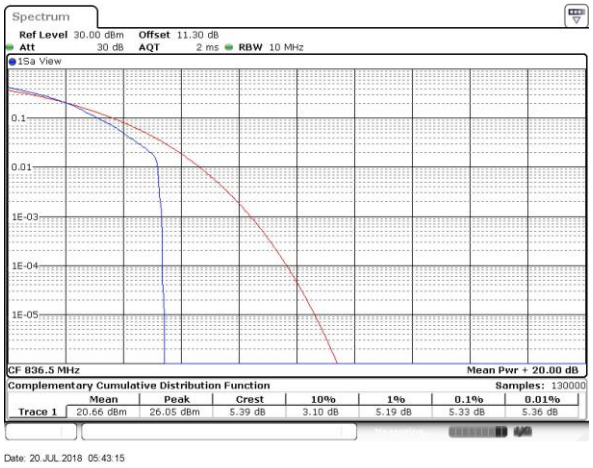
Lowest Channel / 1RB



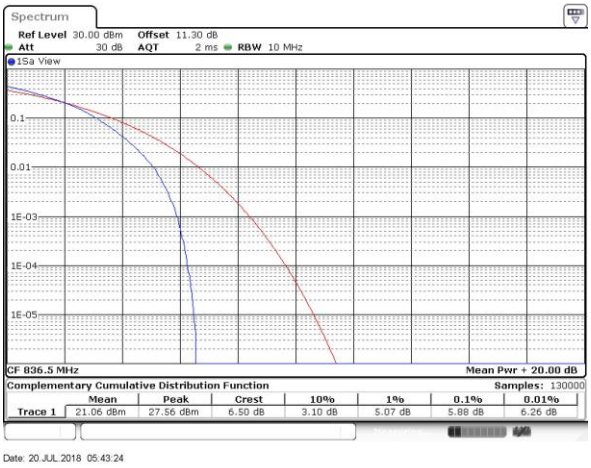
Lowest Channel / Full RB



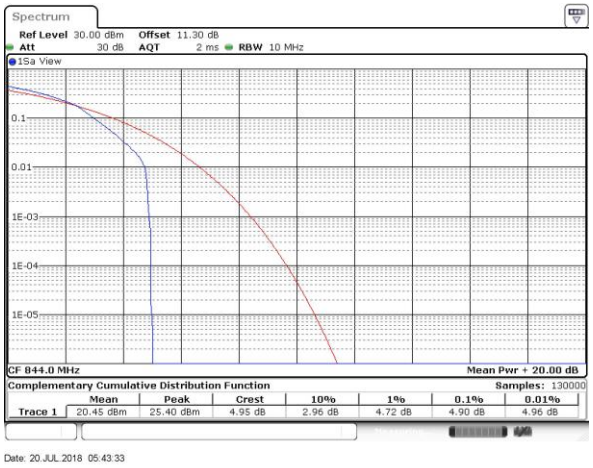
Middle Channel / 1RB



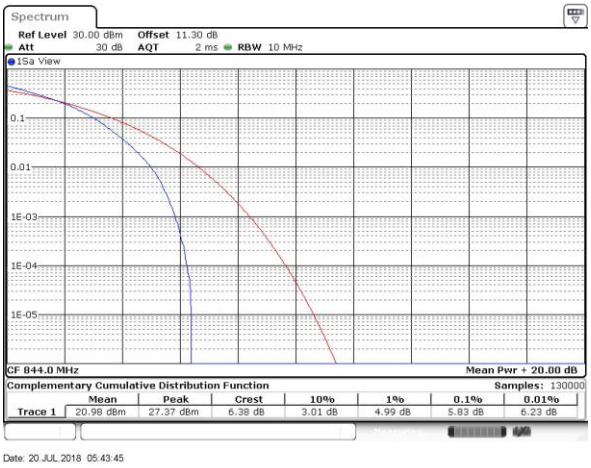
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

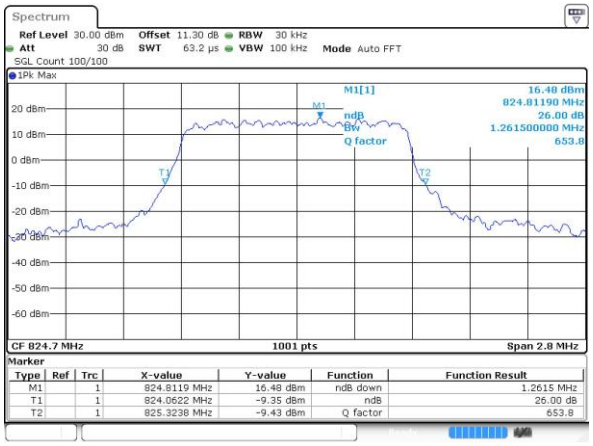


26dB Bandwidth

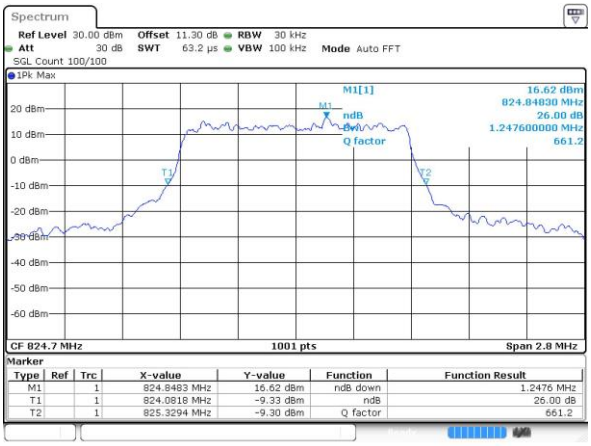
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.26	1.25	3.03	3.05	4.88	4.89	9.79	9.87	-	-	-	-
Middle CH	1.26	1.26	2.99	3.02	4.88	4.97	9.87	9.99	-	-	-	-
Highest CH	1.27	1.30	3.03	3.03	4.96	4.88	9.93	9.81	-	-	-	-

LTE Band 5

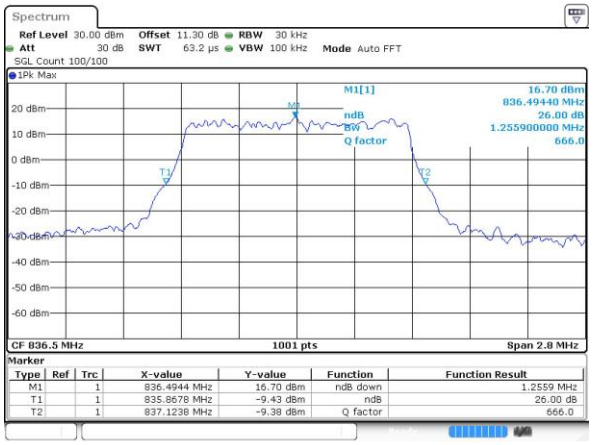
Lowest Channel / 1.4MHz / QPSK



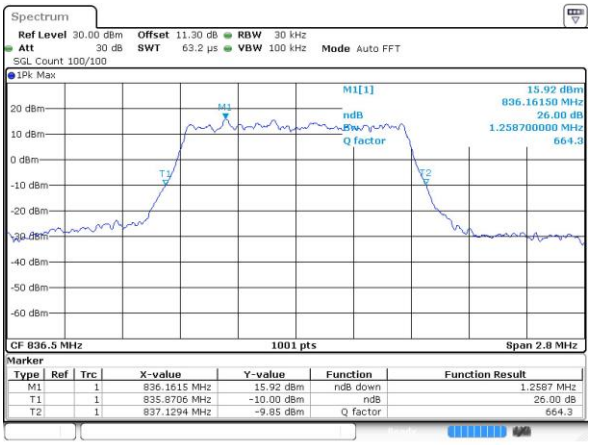
Lowest Channel / 1.4MHz / 16QAM



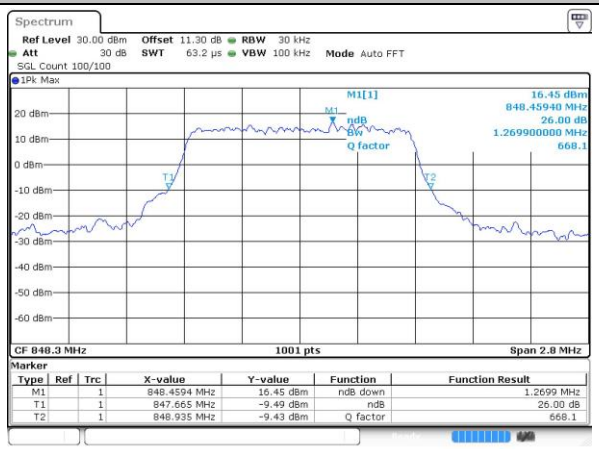
Middle Channel / 1.4MHz / QPSK



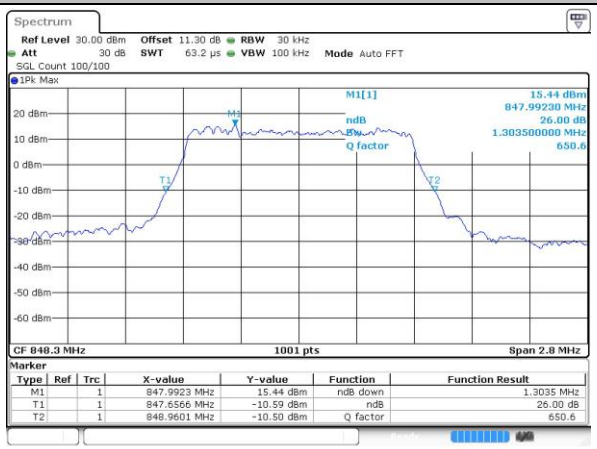
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

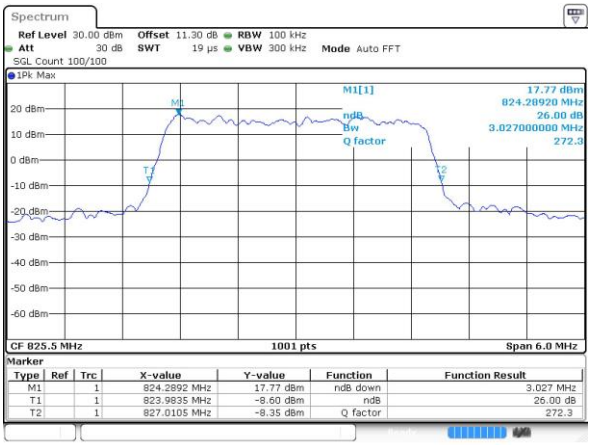


Highest Channel / 1.4MHz / 16QAM

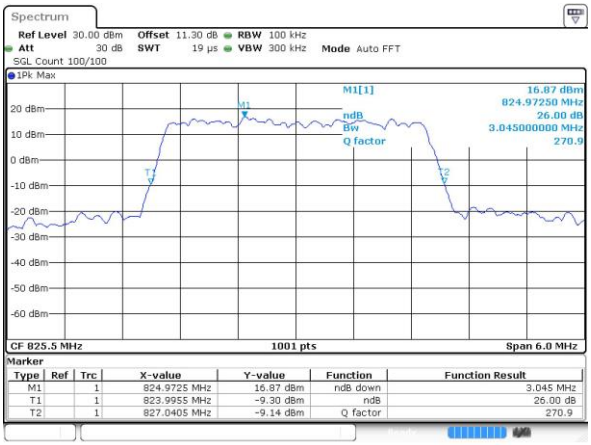


LTE Band 5

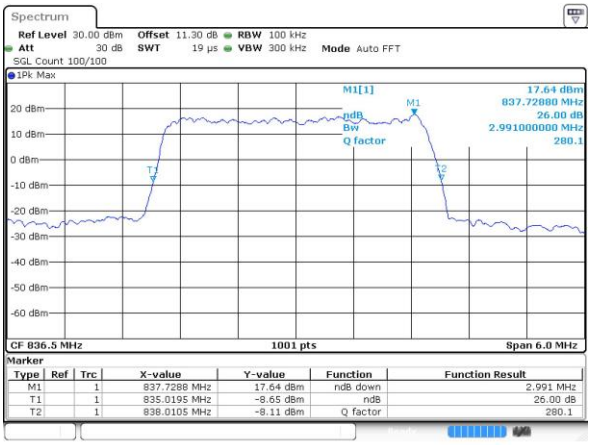
Lowest Channel / 3MHz / QPSK



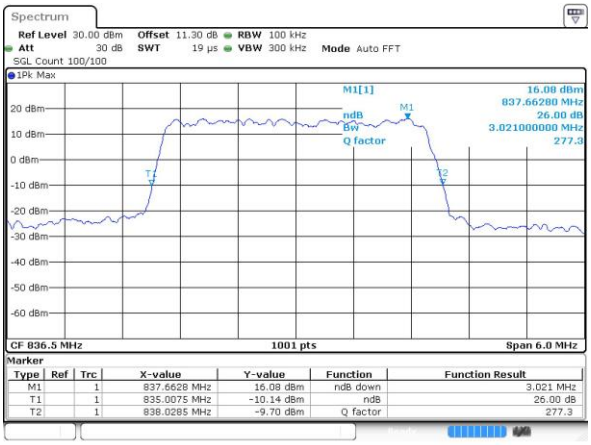
Lowest Channel / 3MHz / 16QAM



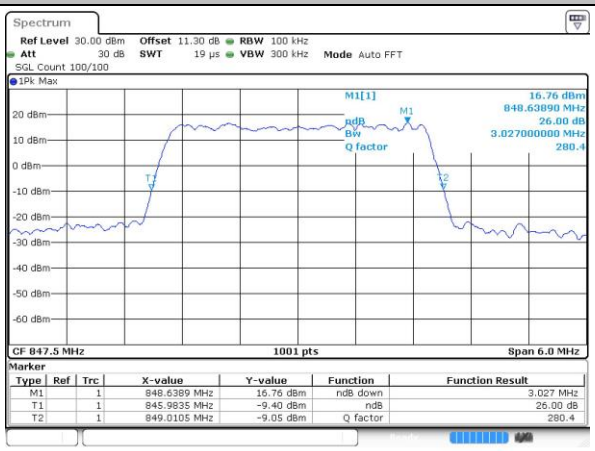
Middle Channel / 3MHz / QPSK



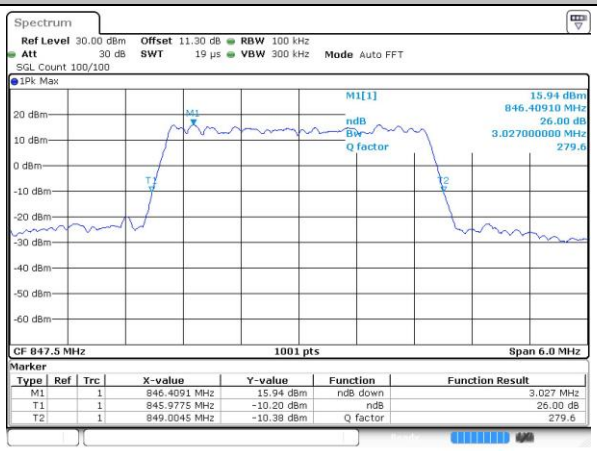
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

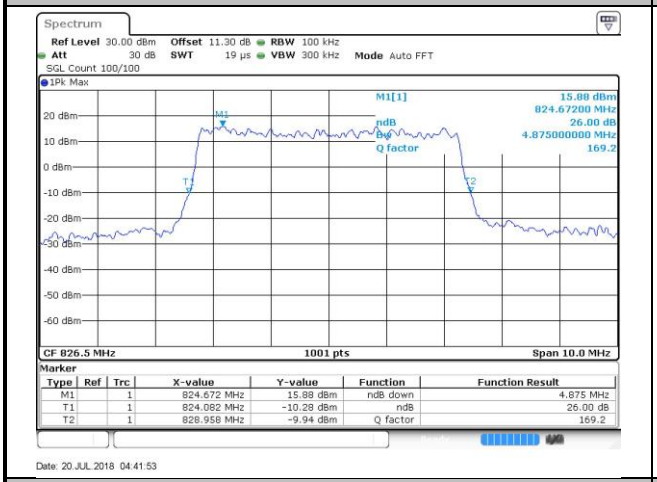


Highest Channel /3MHz / 16QAM

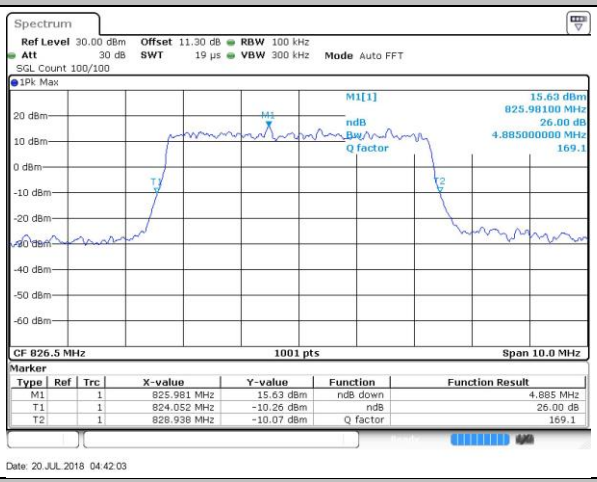


LTE Band 5

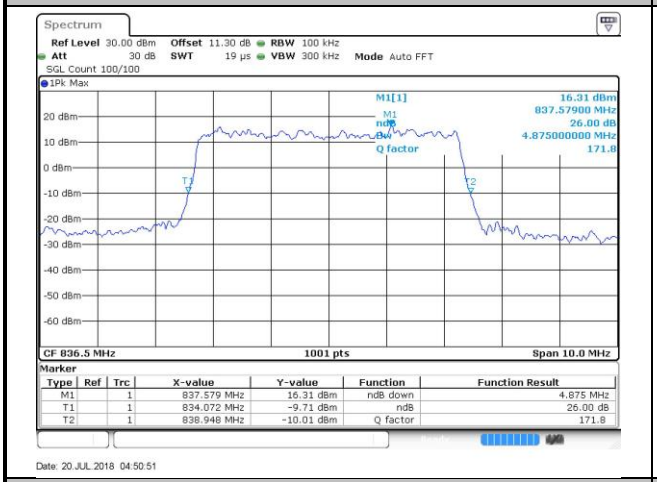
Lowest Channel / 5MHz / QPSK



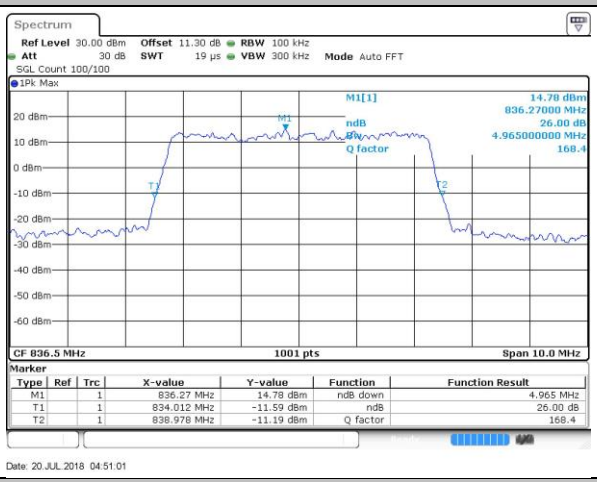
Lowest Channel / 5MHz / 16QAM



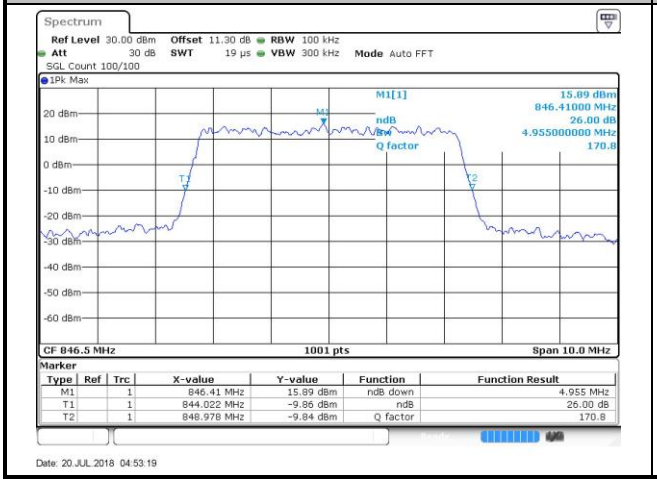
Middle Channel / 5MHz / QPSK



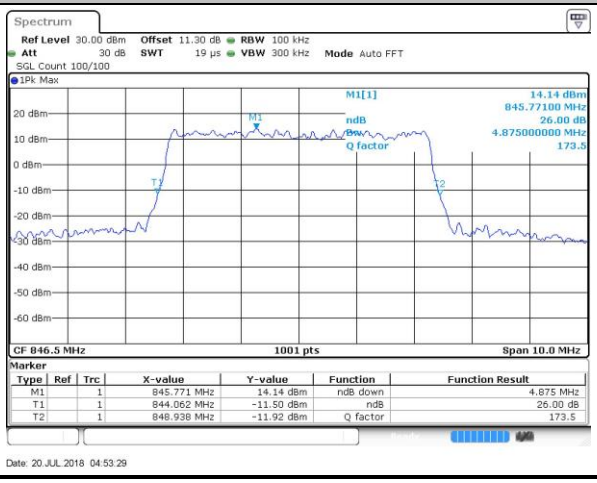
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

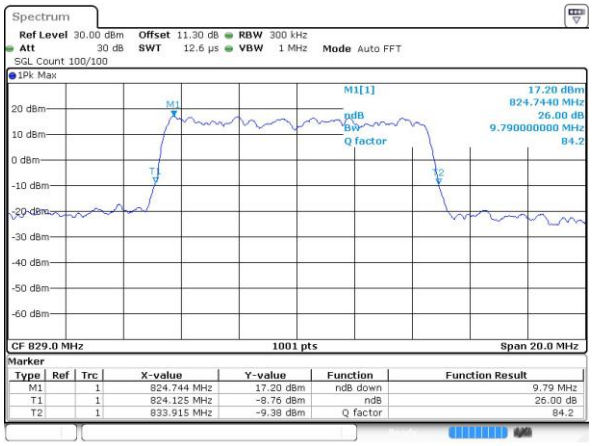


Highest Channel / 5MHz / 16QAM

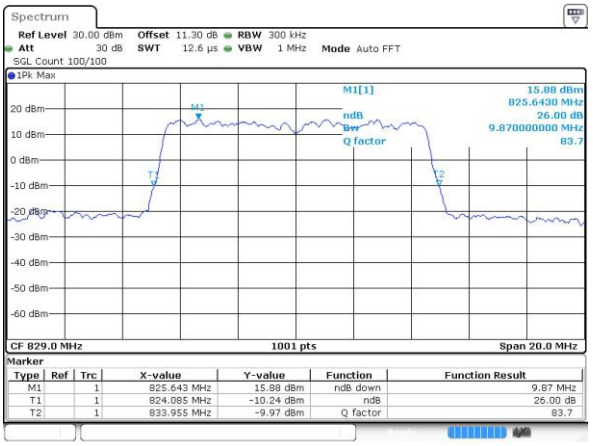


LTE Band 5

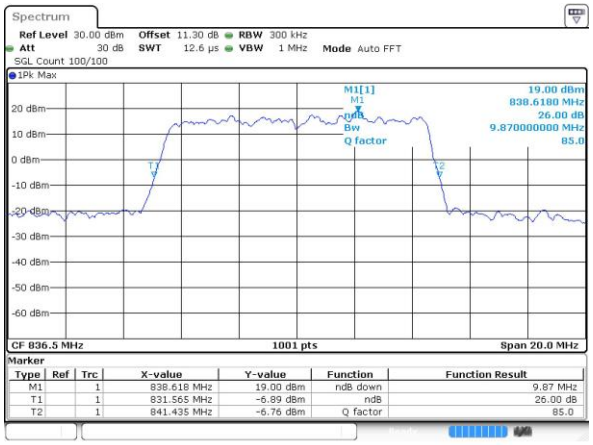
Lowest Channel / 10MHz / QPSK



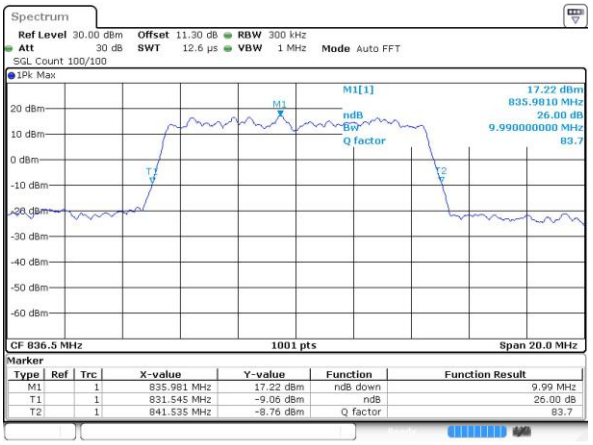
Lowest Channel / 10MHz / 16QAM



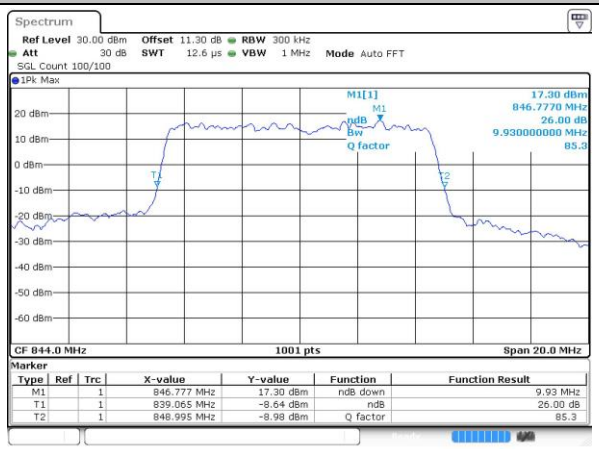
Middle Channel / 10MHz / QPSK



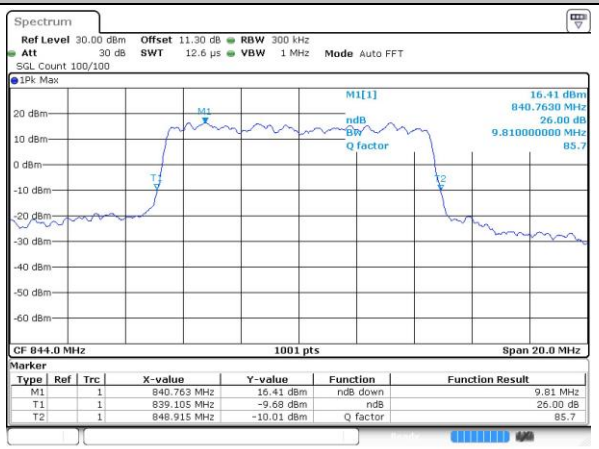
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

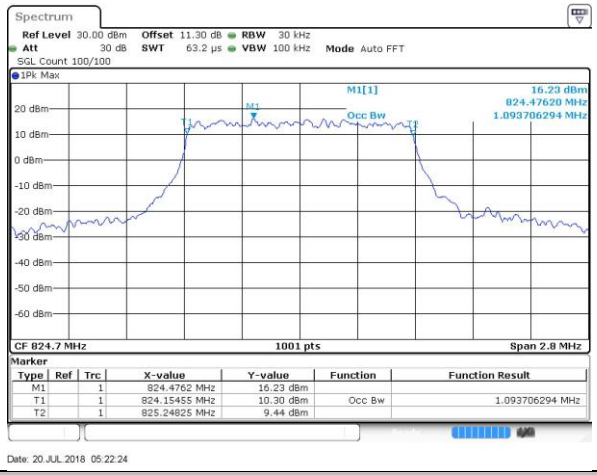


Occupied Bandwidth

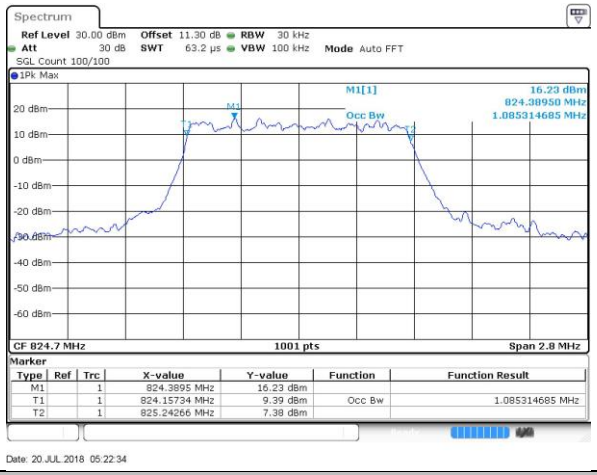
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.73	2.71	4.5	4.47	9.11	9.01	-	-	-	-
Middle CH	1.09	1.1	2.72	2.72	4.51	4.49	9.07	9.05	-	-	-	-
Highest CH	1.09	1.1	2.73	2.73	4.5	4.5	9.03	9.05	-	-	-	-

LTE Band 5

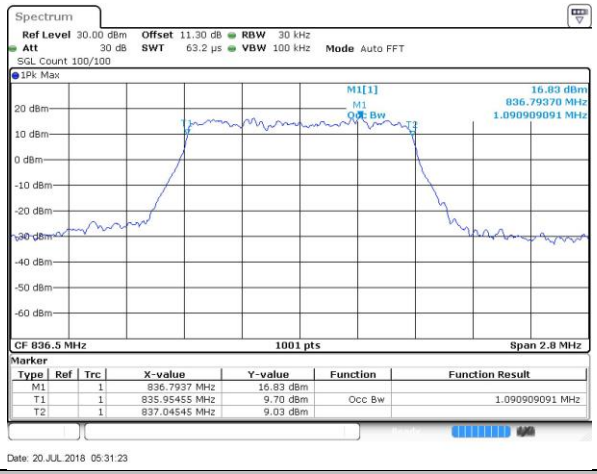
Lowest Channel / 1.4MHz / QPSK



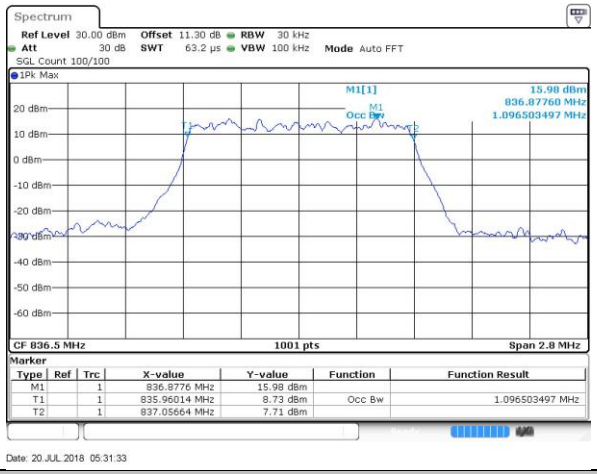
Lowest Channel / 1.4MHz / 16QAM



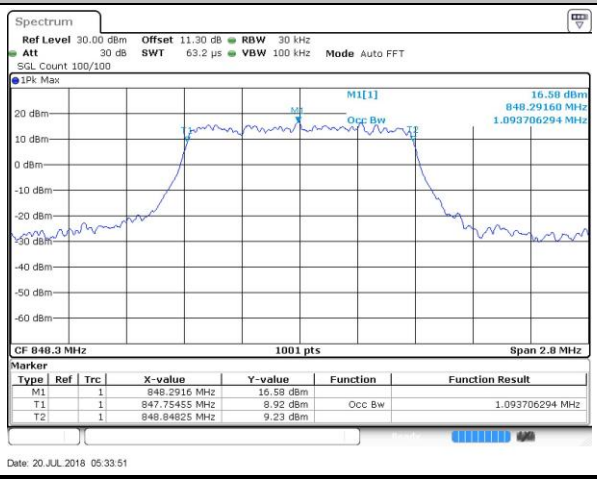
Middle Channel / 1.4MHz / QPSK



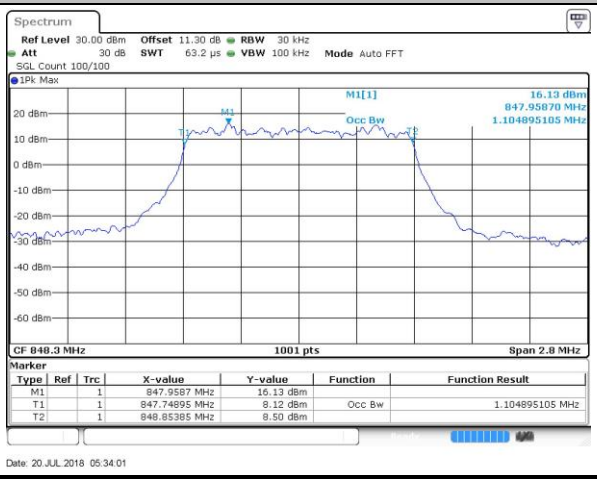
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

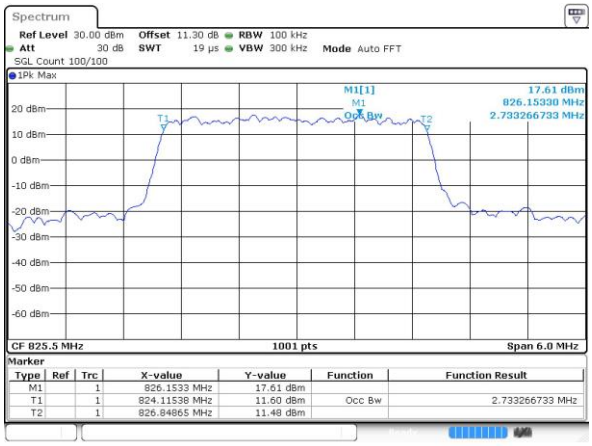


Highest Channel / 1.4MHz / 16QAM

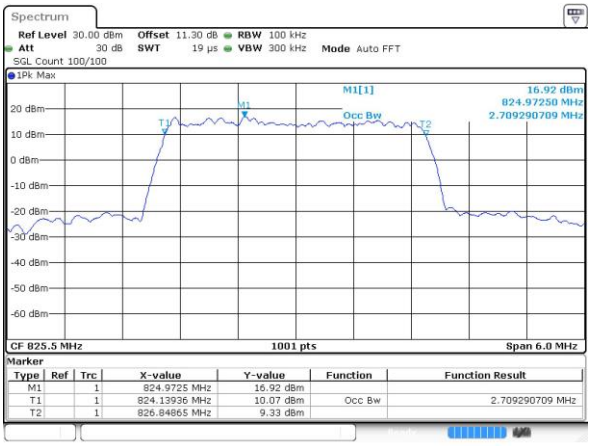


LTE Band 5

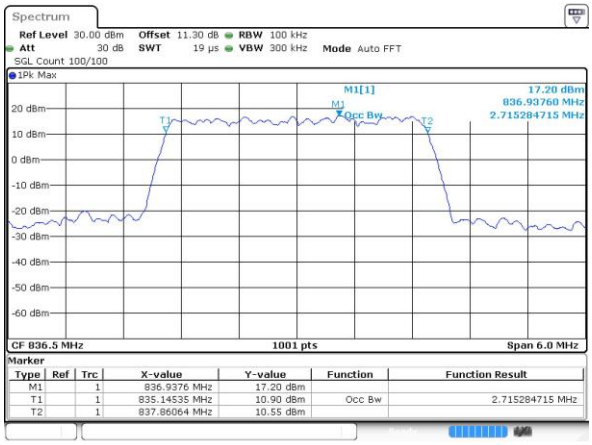
Lowest Channel / 3MHz / QPSK



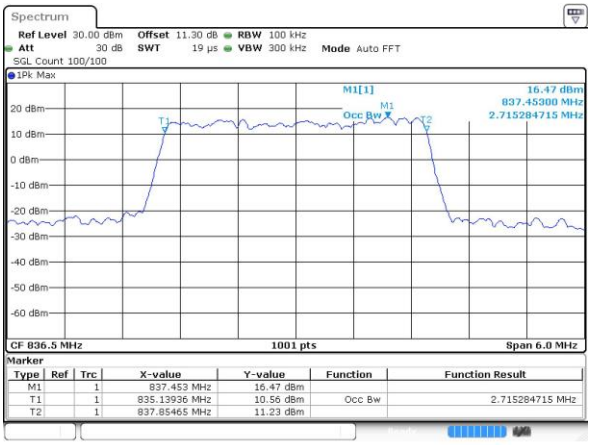
Lowest Channel / 3MHz / 16QAM



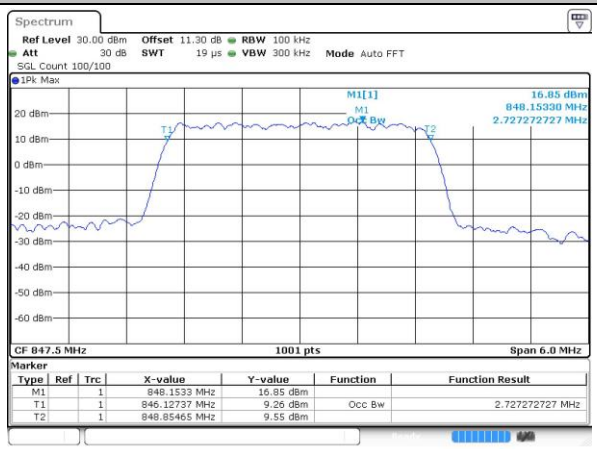
Middle Channel / 3MHz / QPSK



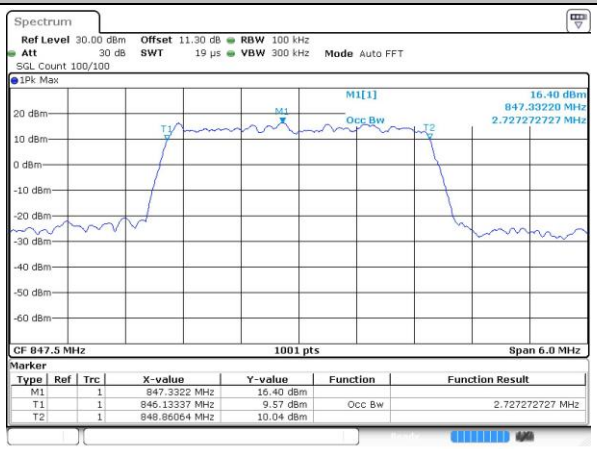
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

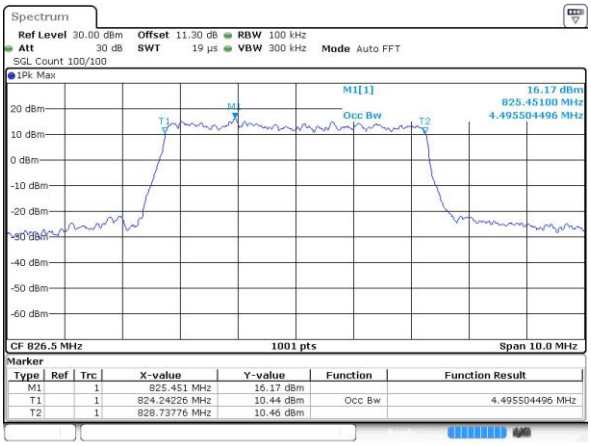


Highest Channel / 3MHz / 16QAM

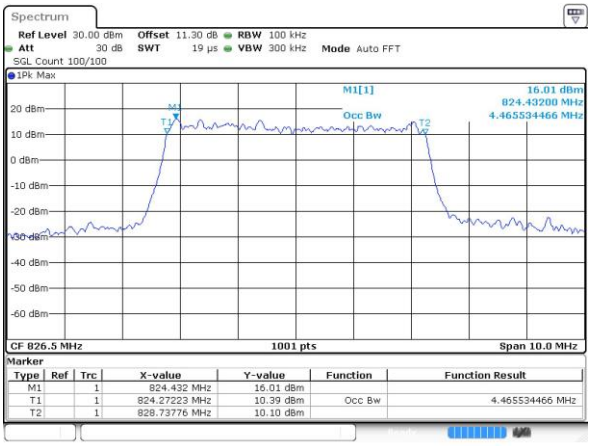


LTE Band 5

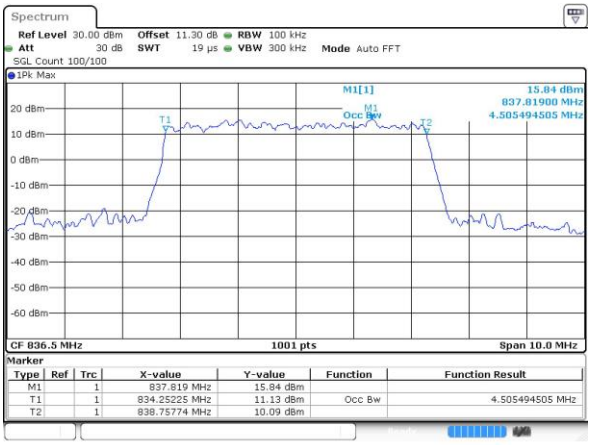
Lowest Channel / 5MHz / QPSK



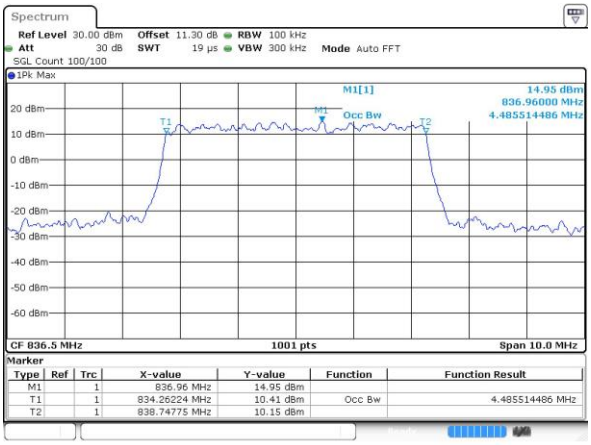
Lowest Channel / 5MHz / 16QAM



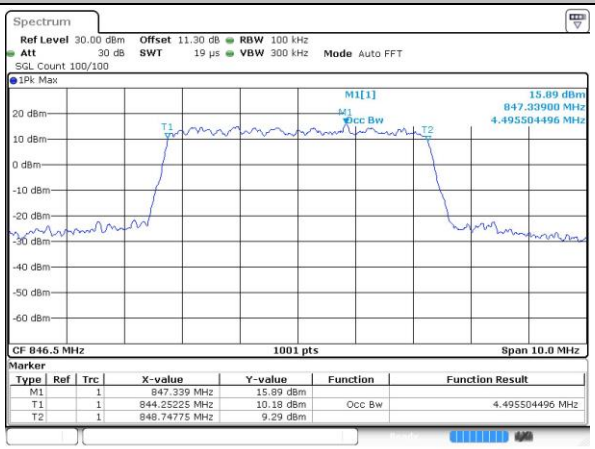
Middle Channel / 5MHz / QPSK



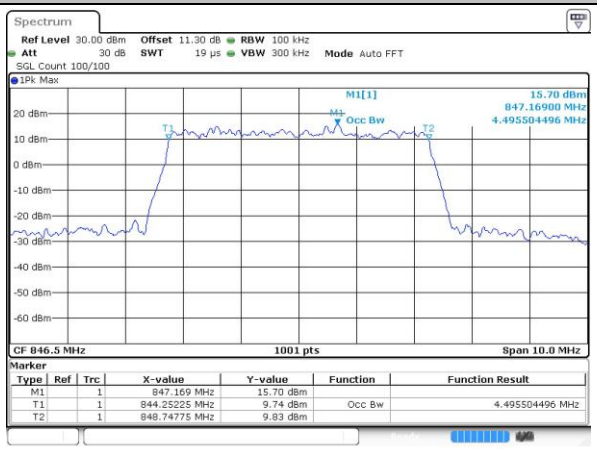
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

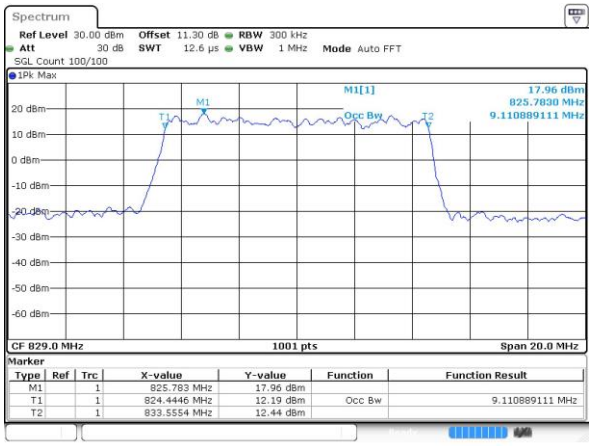


Highest Channel / 5MHz / 16QAM

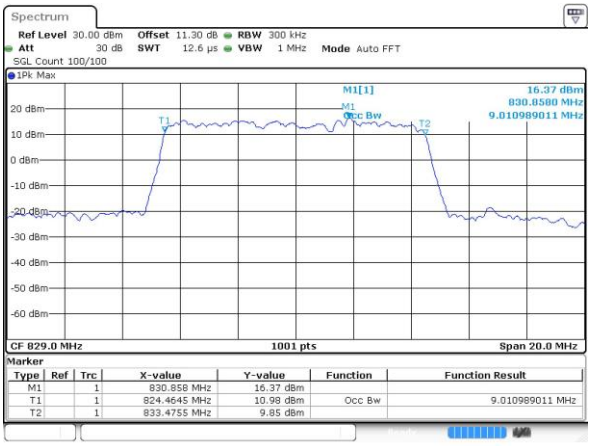


LTE Band 5

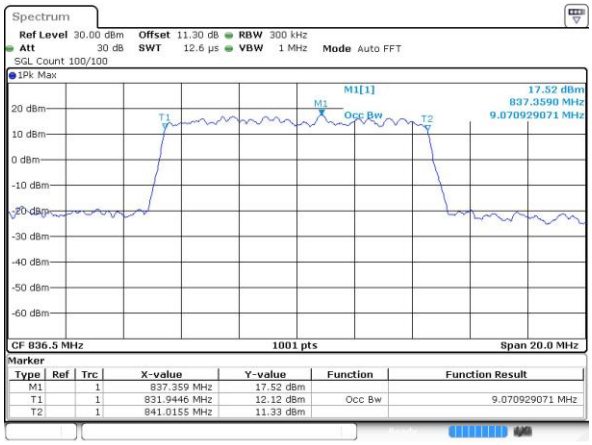
Lowest Channel / 10MHz / QPSK



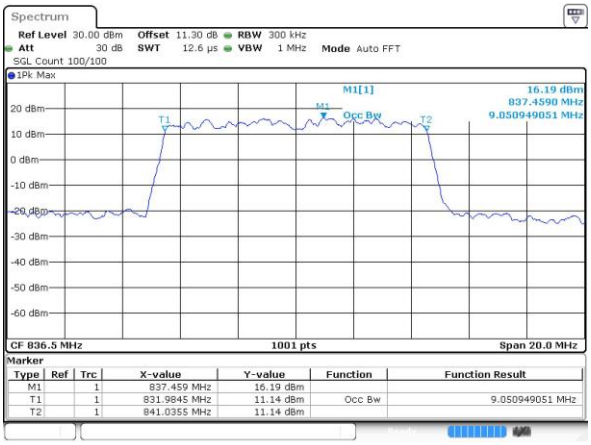
Lowest Channel / 10MHz / 16QAM



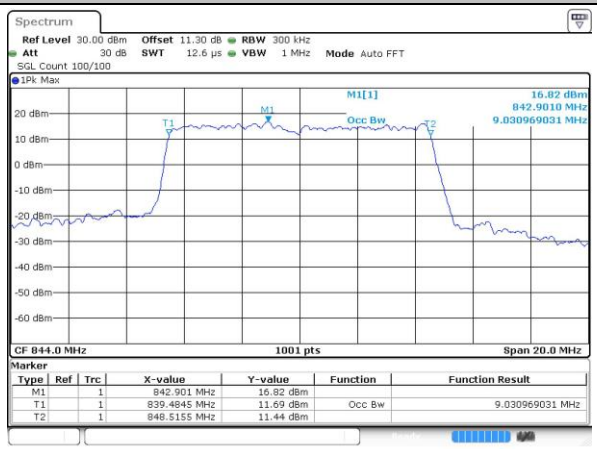
Middle Channel / 10MHz / QPSK



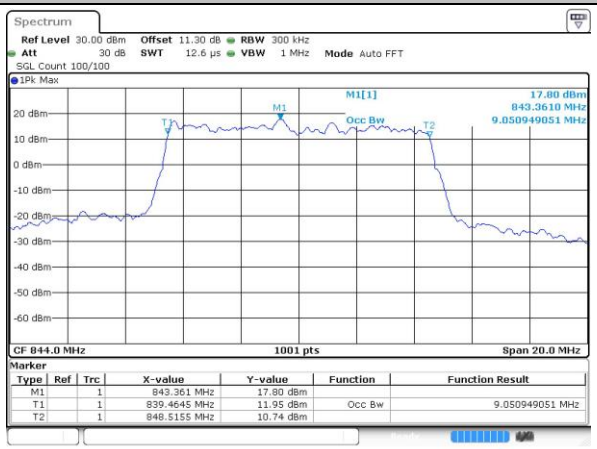
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



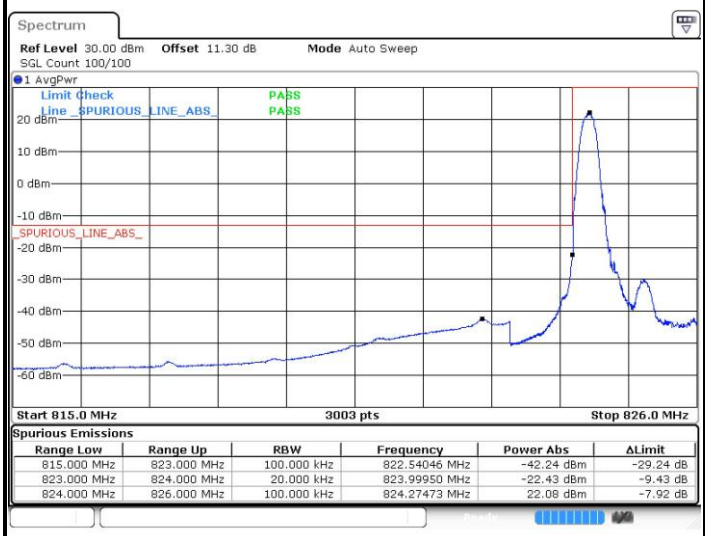
Highest Channel / 10MHz / 16QAM



Conducted Band Edge

LTE Band 5 / 1.4MHz / QPSK

Lowest Band Edge / 1RB

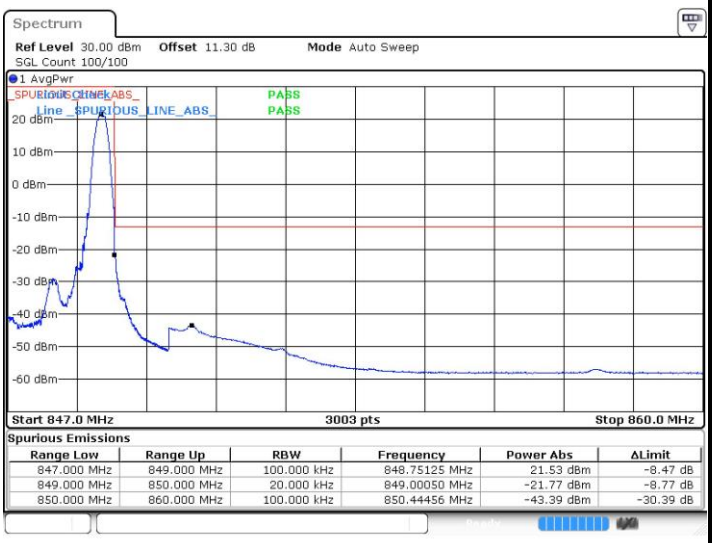


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.54046 MHz	-42.24 dBm	-29.24 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-22.43 dBm	-9.43 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.27473 MHz	22.08 dBm	-7.92 dB

Date: 20.JUL.2018 05:24:32

Highest Band Edge / 1RB

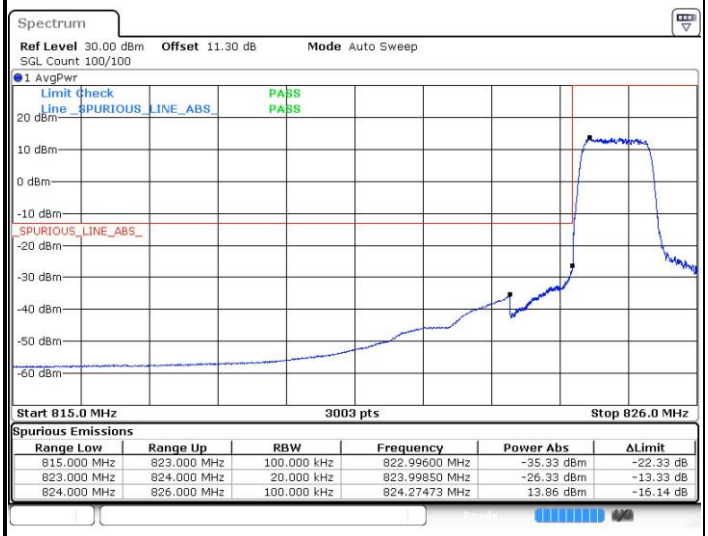


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.75125 MHz	21.53 dBm	-8.47 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00050 MHz	-21.77 dBm	-8.77 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.44456 MHz	-43.39 dBm	-30.39 dB

Date: 20.JUL.2018 05:39:15

Lowest Band Edge / Full RB

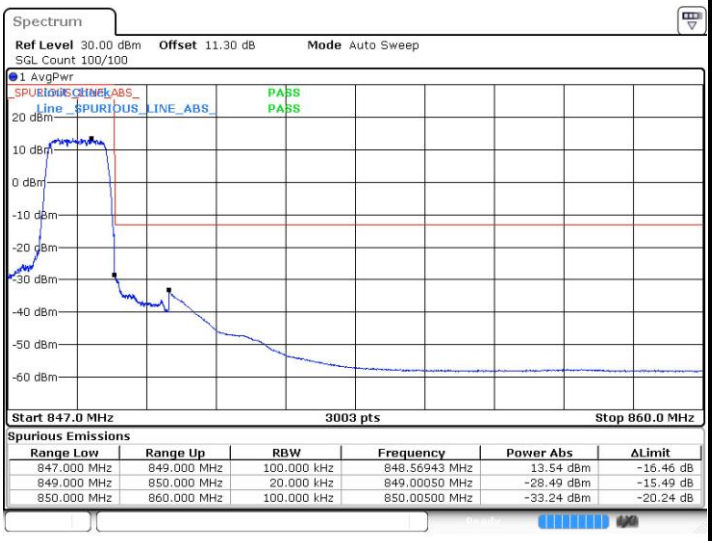


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-35.33 dBm	-22.33 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99850 MHz	-26.33 dBm	-13.33 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.27473 MHz	13.86 dBm	-16.14 dB

Date: 20.JUL.2018 05:27:47

Highest Band Edge / Full RB



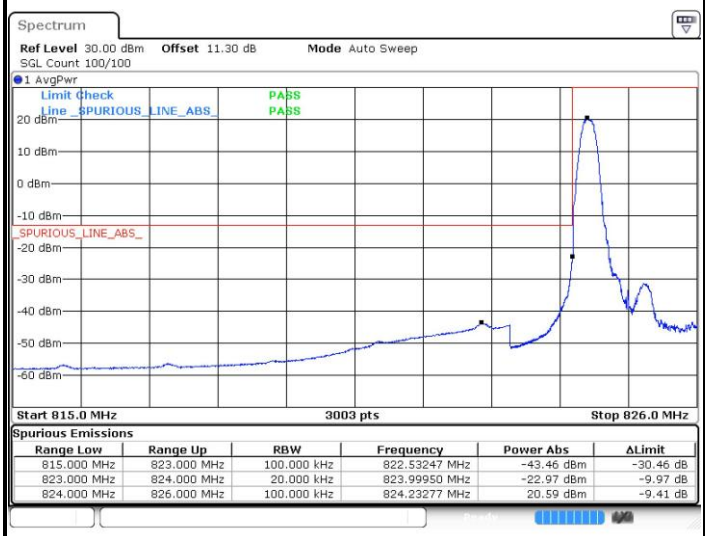
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.56943 MHz	13.54 dBm	-16.46 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00050 MHz	-28.49 dBm	-15.49 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-33.24 dBm	-20.24 dB

Date: 20.JUL.2018 05:36:00

LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

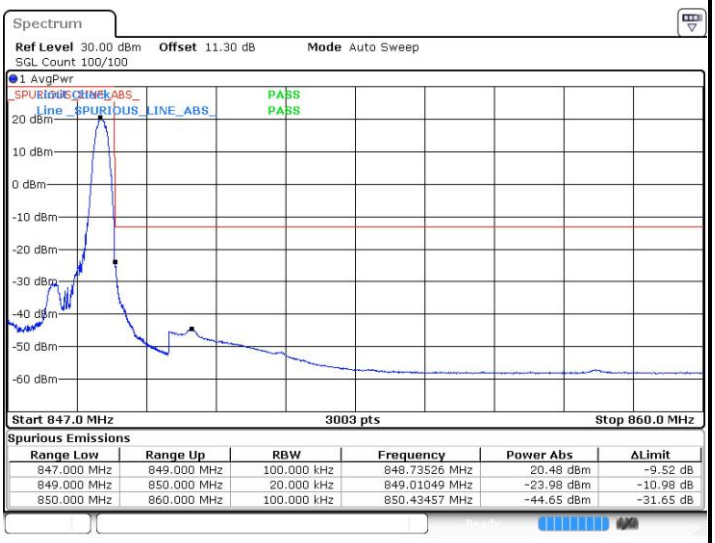


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.53247 MHz	-43.46 dBm	-30.46 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-22.97 dBm	-9.97 dB
824.000 MHz	826.000 MHz	100.000 kHz	824.23277 MHz	20.59 dBm	-9.41 dB

Date: 20.JUL.2018 05:26:10

Highest Band Edge / 1 RB

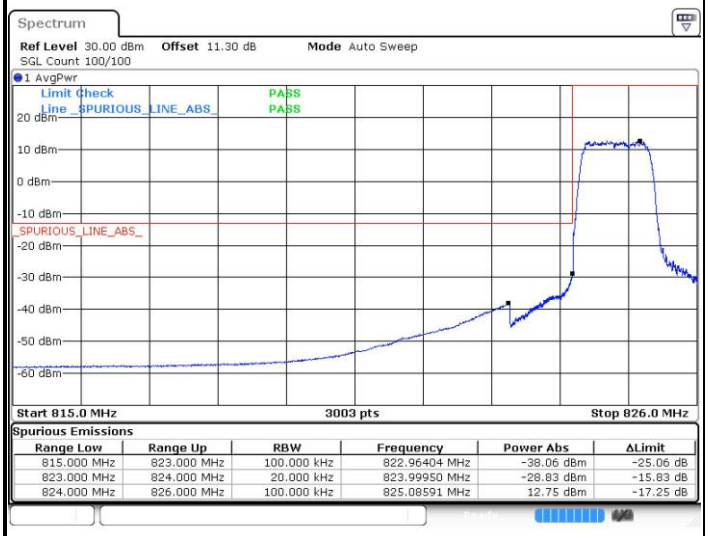


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	848.73526 MHz	20.48 dBm	-9.52 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.01049 MHz	-23.98 dBm	-10.98 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.43457 MHz	-44.65 dBm	-31.65 dB

Date: 20.JUL.2018 05:40:52

Lowest Band Edge / Full RB

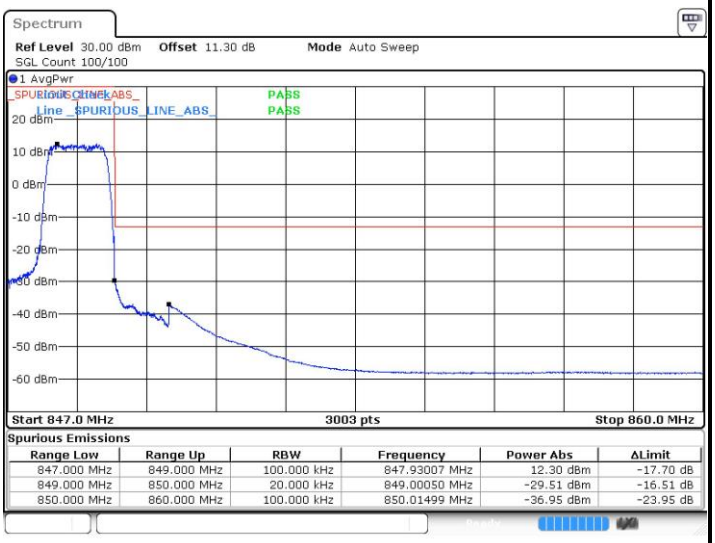


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.96404 MHz	-38.06 dBm	-25.06 dB
823.000 MHz	824.000 MHz	20.000 kHz	823.99950 MHz	-28.83 dBm	-15.83 dB
824.000 MHz	826.000 MHz	100.000 kHz	825.08591 MHz	12.75 dBm	-17.25 dB

Date: 20.JUL.2018 05:29:25

Highest Band Edge / Full RB



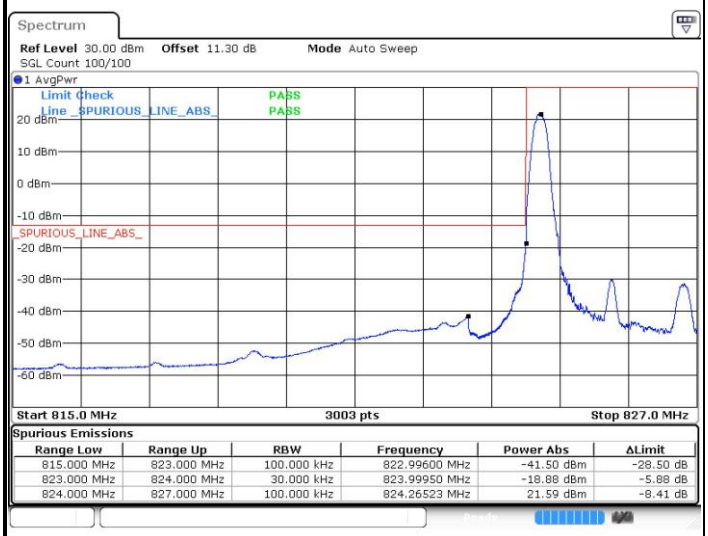
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
847.000 MHz	849.000 MHz	100.000 kHz	847.93007 MHz	12.30 dBm	-17.70 dB
849.000 MHz	850.000 MHz	20.000 kHz	849.00050 MHz	-29.51 dBm	-16.51 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.01499 MHz	-36.95 dBm	-23.95 dB

Date: 20.JUL.2018 05:37:37

LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / 1RB

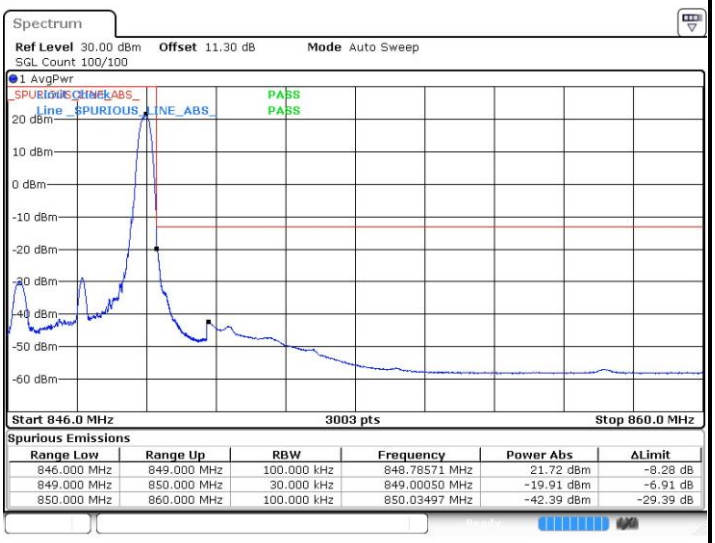


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-41.50 dBm	-28.50 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-18.88 dBm	-5.88 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.26523 MHz	21.59 dBm	-8.41 dB

Date: 20.JUL.2018 04:09:05

Highest Band Edge / 1 RB

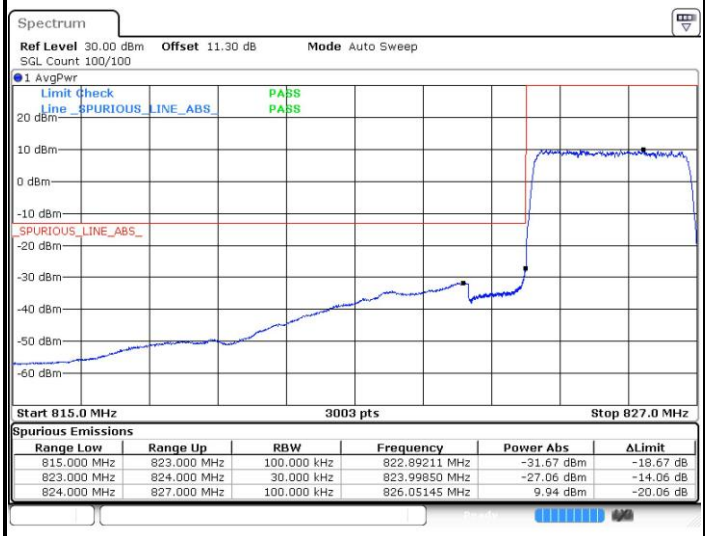


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.78571 MHz	21.72 dBm	-8.28 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-19.91 dBm	-6.91 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.03497 MHz	-42.39 dBm	-29.39 dB

Date: 20.JUL.2018 04:34:42

Lowest Band Edge / Full RB

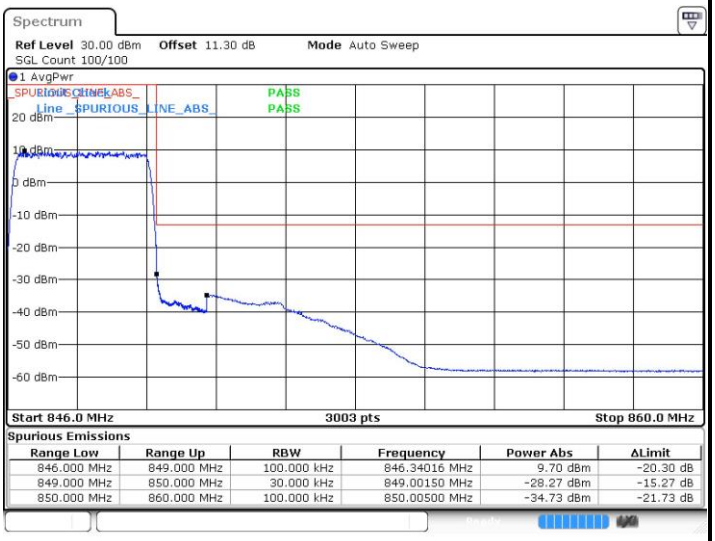


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.89211 MHz	-31.67 dBm	-18.67 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99850 MHz	-27.06 dBm	-14.06 dB
824.000 MHz	827.000 MHz	100.000 kHz	826.05145 MHz	9.94 dBm	-20.06 dB

Date: 20.JUL.2018 04:12:29

Highest Band Edge / Full RB



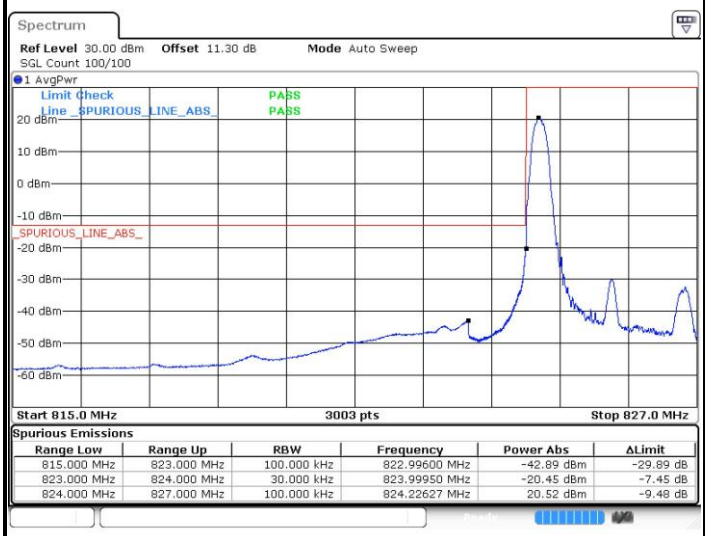
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	846.34016 MHz	9.70 dBm	-20.30 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00150 MHz	-28.27 dBm	-15.27 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-34.73 dBm	-21.73 dB

Date: 20.JUL.2018 04:37:57

LTE Band 5 / 3MHz / 16QAM

Lowest Band Edge / 1 RB

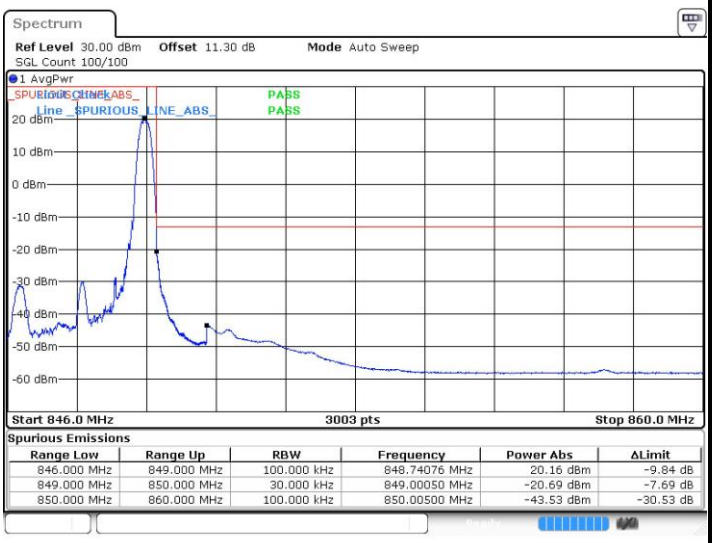


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-42.89 dBm	-29.89 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-20.45 dBm	-7.45 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.22627 MHz	20.52 dBm	-9.48 dB

Date: 20.JUL.2018 04:10:47

Highest Band Edge /1 RB

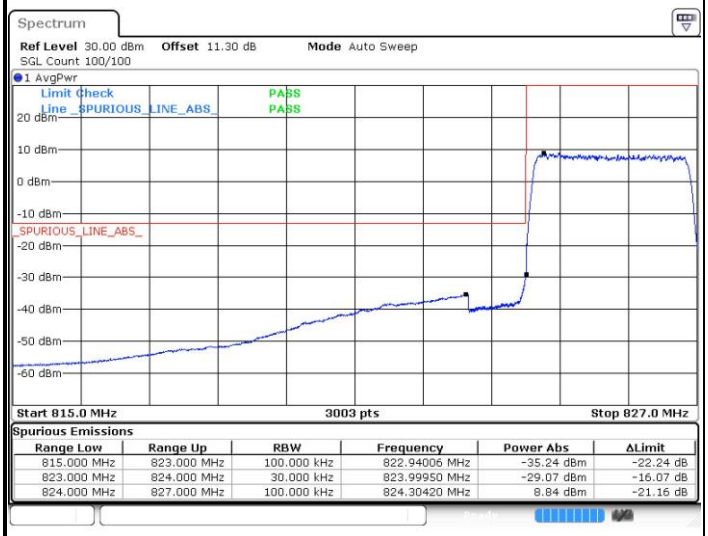


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	848.74076 MHz	20.16 dBm	-9.84 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00050 MHz	-20.69 dBm	-7.69 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-43.53 dBm	-30.53 dB

Date: 20.JUL.2018 04:36:20

Lowest Band Edge / Full RB

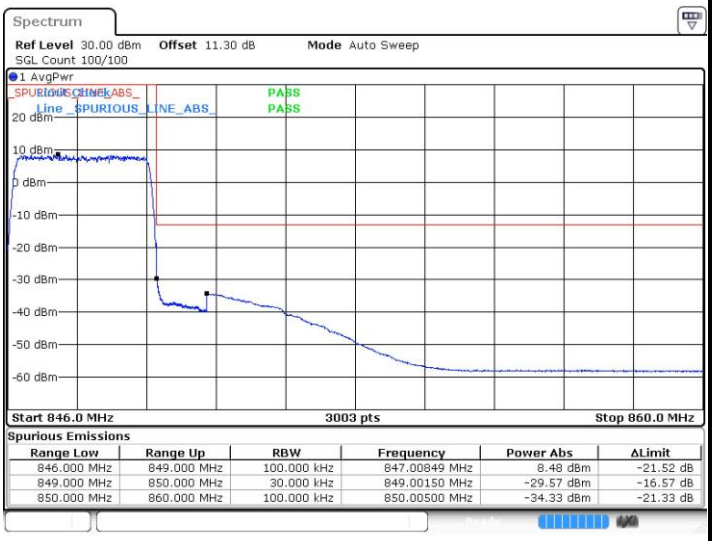


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.94006 MHz	-35.24 dBm	-22.24 dB
823.000 MHz	824.000 MHz	30.000 kHz	823.99950 MHz	-29.07 dBm	-16.07 dB
824.000 MHz	827.000 MHz	100.000 kHz	824.30420 MHz	8.84 dBm	-21.16 dB

Date: 20.JUL.2018 04:14:10

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
846.000 MHz	849.000 MHz	100.000 kHz	847.00849 MHz	8.48 dBm	-21.52 dB
849.000 MHz	850.000 MHz	30.000 kHz	849.00150 MHz	-29.57 dBm	-16.57 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-34.33 dBm	-21.33 dB

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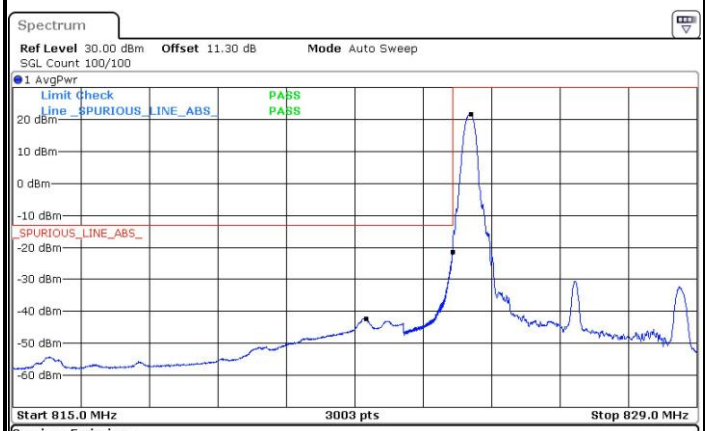
LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / 1 RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.23676 MHz	-42.28 dBm	-29.28 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99550 MHz	-21.47 dBm	-8.47 dB
824.000 MHz	829.000 MHz	100.000 kHz	824.37712 MHz	21.65 dBm	-8.35 dB

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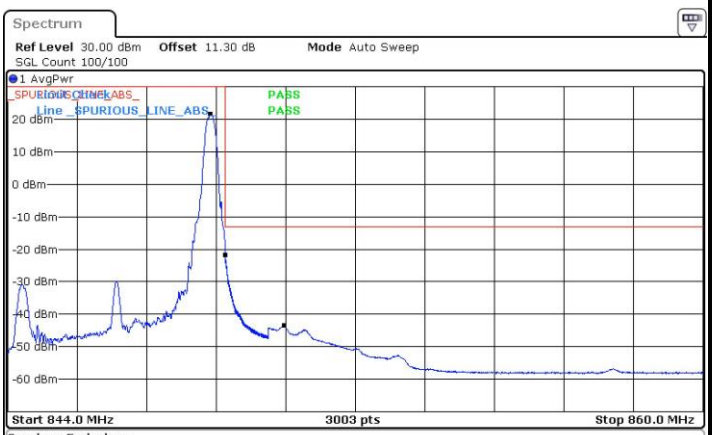
Highest Band Edge / 1 RB

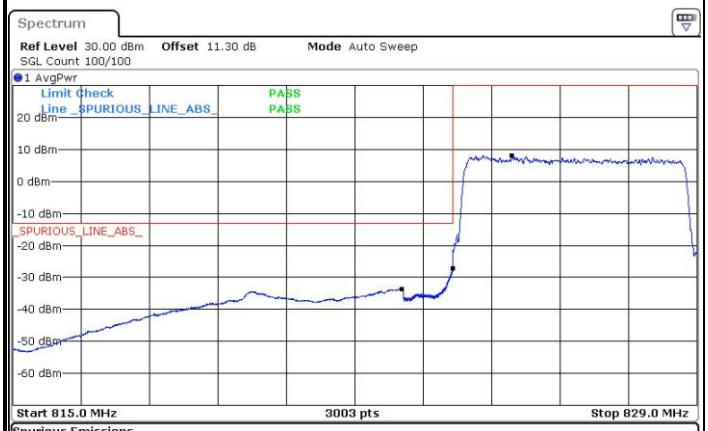


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	848.66783 MHz	21.56 dBm	-8.44 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.00050 MHz	-21.78 dBm	-8.78 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.36464 MHz	-43.44 dBm	-30.44 dB

Date: 20.JUL.2018 04:55:07

Lowest Band Edge / Full RB

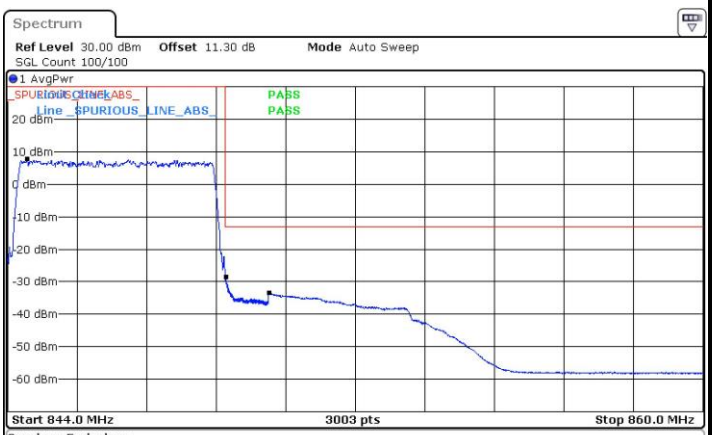


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.95604 MHz	-33.59 dBm	-20.59 dB
823.000 MHz	824.000 MHz	50.000 kHz	823.99750 MHz	-27.23 dBm	-14.23 dB
824.000 MHz	829.000 MHz	100.000 kHz	825.21129 MHz	8.05 dBm	-21.95 dB

Date: 20.JUL.2018 04:46:56

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
844.000 MHz	849.000 MHz	100.000 kHz	844.44206 MHz	7.65 dBm	-22.35 dB
849.000 MHz	850.000 MHz	50.000 kHz	849.01548 MHz	-28.45 dBm	-15.45 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.02498 MHz	-33.35 dBm	-20.35 dB

Date: 20.JUL.2018 04:58:21