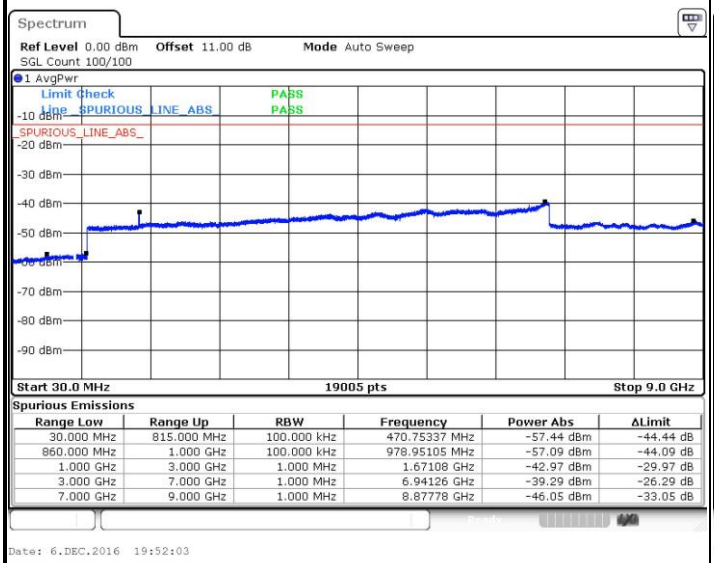
LTE Band 5 / 3MHz

Middle Channel / QPSK

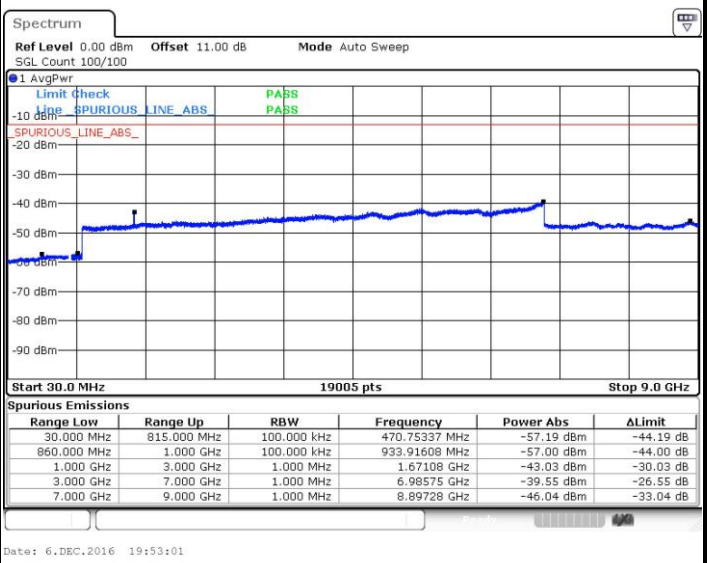


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	470.75337 MHz	-57.44 dBm	-44.44 dB
860.000 MHz	1.000 GHz	100.000 kHz	978.95105 MHz	-57.09 dBm	-44.09 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67108 GHz	-42.97 dBm	-29.97 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94126 GHz	-39.29 dBm	-26.29 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.87778 GHz	-46.05 dBm	-33.05 dB

Date: 6.DEC.2016 19:52:03

Middle Channel / 16QAM

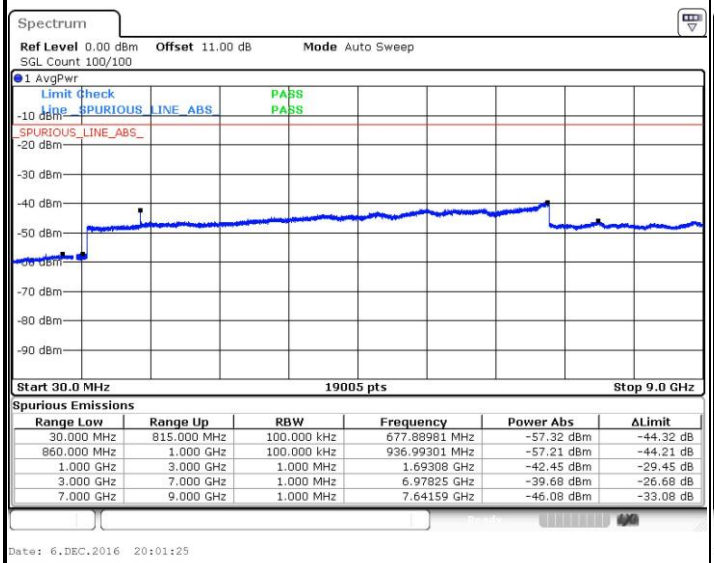


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	470.75337 MHz	-57.19 dBm	-44.19 dB
860.000 MHz	1.000 GHz	100.000 kHz	933.91608 MHz	-57.00 dBm	-44.00 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67108 GHz	-43.03 dBm	-30.03 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98575 GHz	-39.55 dBm	-26.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.89728 GHz	-46.04 dBm	-33.04 dB

Date: 6.DEC.2016 19:53:01

Highest Channel / QPSK

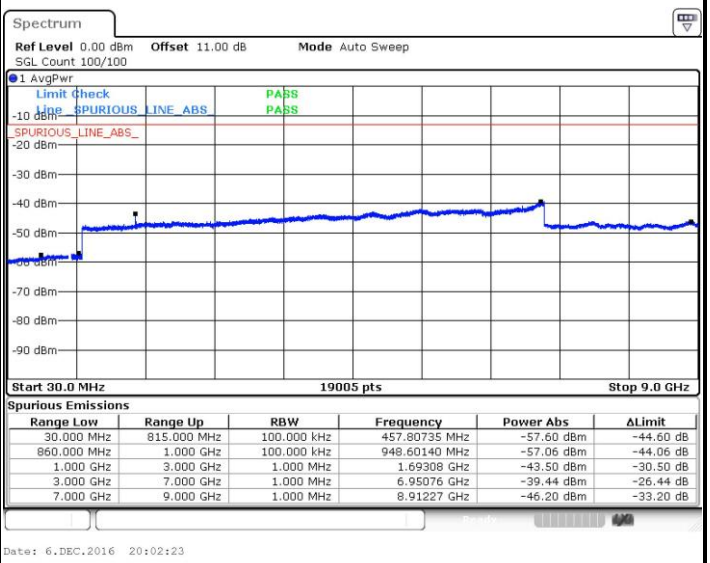


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	677.88981 MHz	-57.32 dBm	-44.32 dB
860.000 MHz	1.000 GHz	100.000 kHz	936.99301 MHz	-57.21 dBm	-44.21 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69308 GHz	-42.45 dBm	-29.45 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97825 GHz	-39.68 dBm	-26.68 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.64159 GHz	-46.08 dBm	-33.08 dB

Date: 6.DEC.2016 20:01:25

Highest Channel / 16QAM



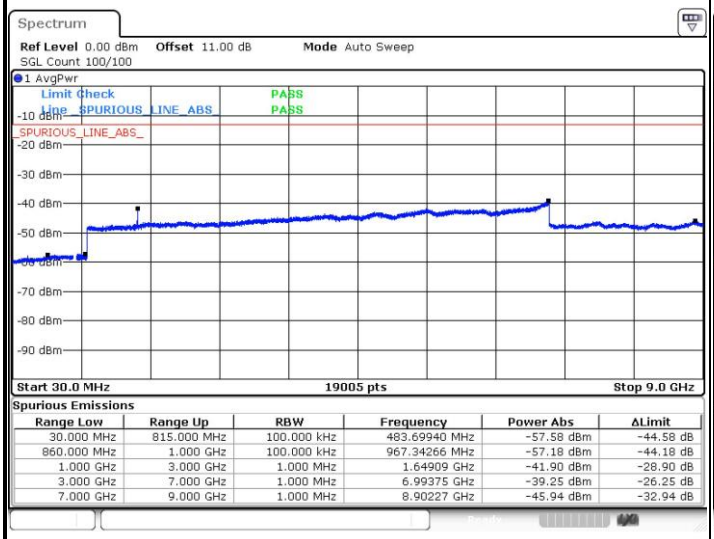
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	457.80735 MHz	-57.60 dBm	-44.60 dB
860.000 MHz	1.000 GHz	100.000 kHz	948.60140 MHz	-57.06 dBm	-44.06 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69308 GHz	-43.50 dBm	-30.50 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.95076 GHz	-39.44 dBm	-26.44 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.91227 GHz	-46.20 dBm	-33.20 dB

Date: 6.DEC.2016 20:02:23

LTE Band 5 / 5MHz

Lowest Channel / QPSK

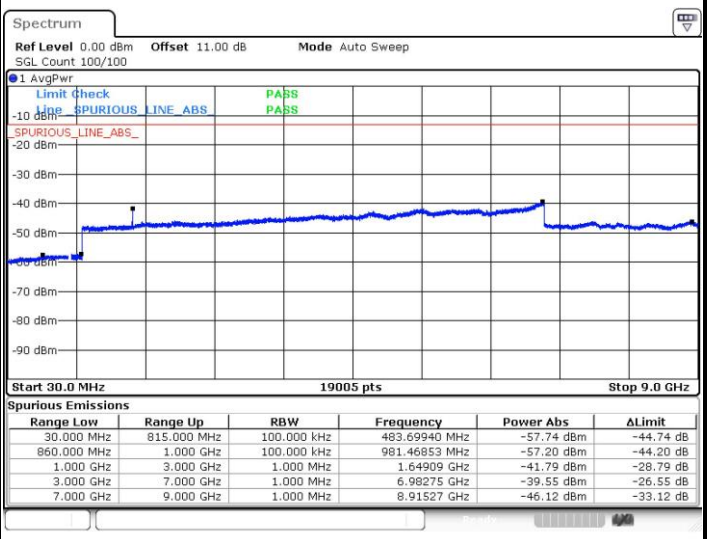


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	483.69940 MHz	-57.58 dBm	-44.58 dB
860.000 MHz	1.000 GHz	100.000 kHz	967.34266 MHz	-57.18 dBm	-44.18 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64909 GHz	-41.90 dBm	-28.90 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99375 GHz	-39.25 dBm	-26.25 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.90227 GHz	-45.94 dBm	-32.94 dB

Date: 6.DEC.2016 20:10:46

Lowest Channel / 16QAM

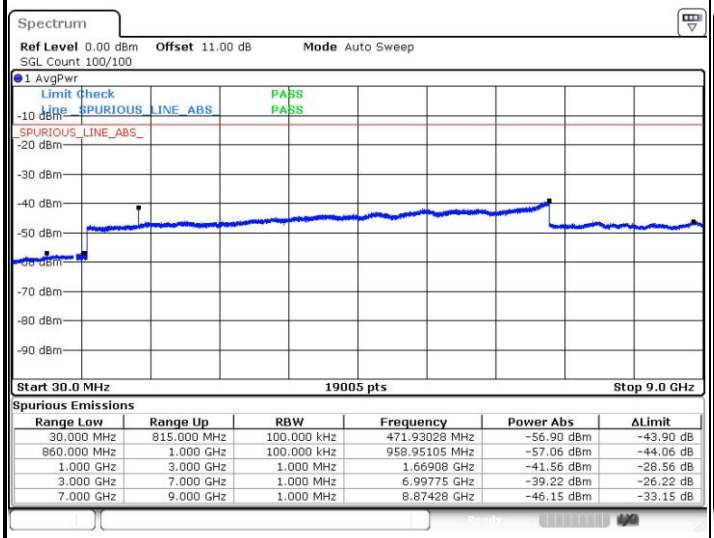


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	483.69940 MHz	-57.74 dBm	-44.74 dB
860.000 MHz	1.000 GHz	100.000 kHz	981.46853 MHz	-57.20 dBm	-44.20 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64909 GHz	-41.79 dBm	-28.79 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98275 GHz	-39.55 dBm	-26.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.91527 GHz	-46.12 dBm	-33.12 dB

Date: 6.DEC.2016 20:11:44

Middle Channel / QPSK

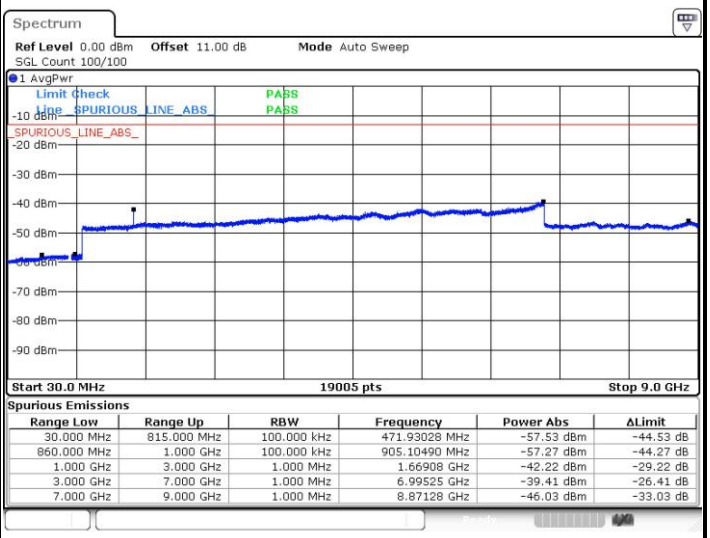


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	471.93028 MHz	-56.90 dBm	-43.90 dB
860.000 MHz	1.000 GHz	100.000 kHz	958.95105 MHz	-57.06 dBm	-44.06 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66908 GHz	-41.56 dBm	-28.56 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99775 GHz	-39.22 dBm	-26.22 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.87428 GHz	-46.15 dBm	-33.15 dB

Date: 6.DEC.2016 20:13:29

Middle Channel / 16QAM



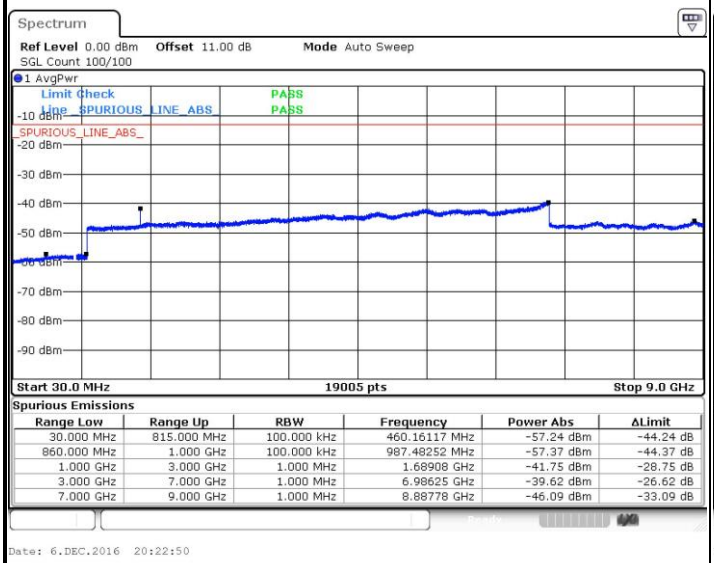
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	471.93028 MHz	-57.53 dBm	-44.53 dB
860.000 MHz	1.000 GHz	100.000 kHz	905.10490 MHz	-57.27 dBm	-44.27 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66908 GHz	-42.22 dBm	-29.22 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99525 GHz	-39.41 dBm	-26.41 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.87128 GHz	-46.03 dBm	-33.03 dB

Date: 6.DEC.2016 20:14:27

LTE Band 5 / 5MHz

Highest Channel / QPSK

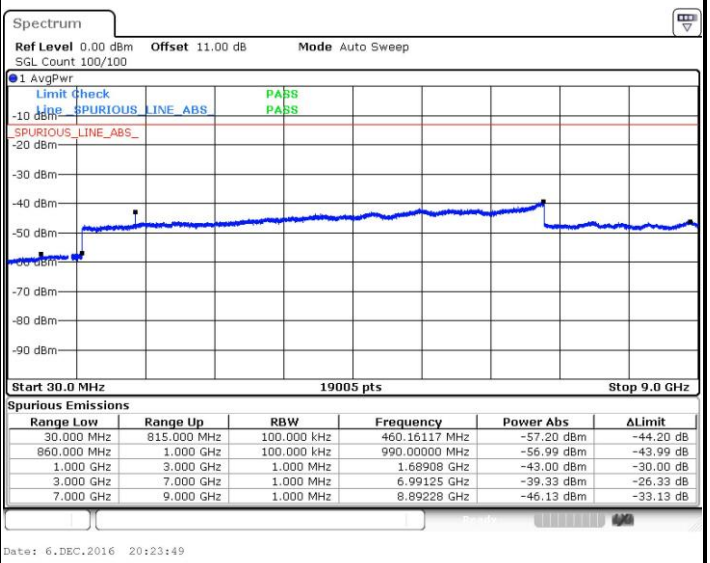


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	460.16117 MHz	-57.24 dBm	-44.24 dB
860.000 MHz	1.000 GHz	100.000 kHz	987.48252 MHz	-57.37 dBm	-44.37 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68908 GHz	-41.75 dBm	-28.75 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98625 GHz	-39.62 dBm	-26.62 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.88778 GHz	-46.09 dBm	-33.09 dB

Date: 6.DEC.2016 20:22:50

Highest Channel / 16QAM



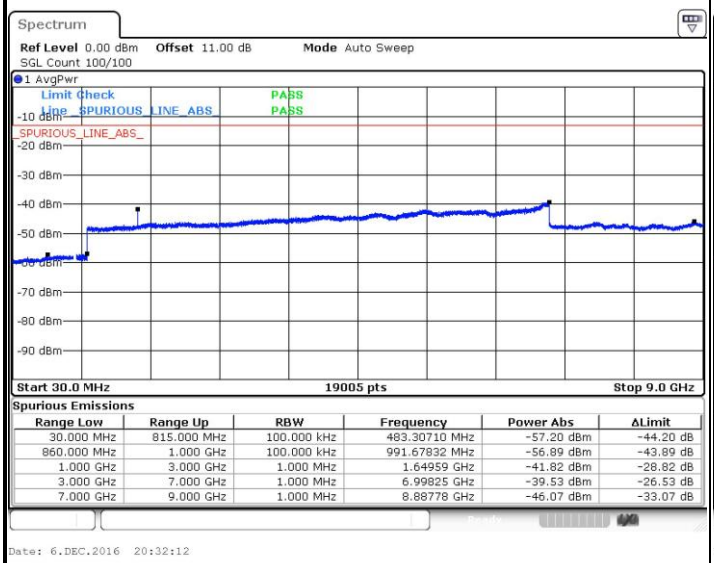
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	460.16117 MHz	-57.20 dBm	-44.20 dB
860.000 MHz	1.000 GHz	100.000 kHz	990.00000 MHz	-56.99 dBm	-43.99 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68908 GHz	-43.00 dBm	-30.00 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99125 GHz	-39.33 dBm	-26.33 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.89228 GHz	-46.13 dBm	-33.13 dB

Date: 6.DEC.2016 20:23:49

LTE Band 5 / 10MHz

Lowest Channel / QPSK

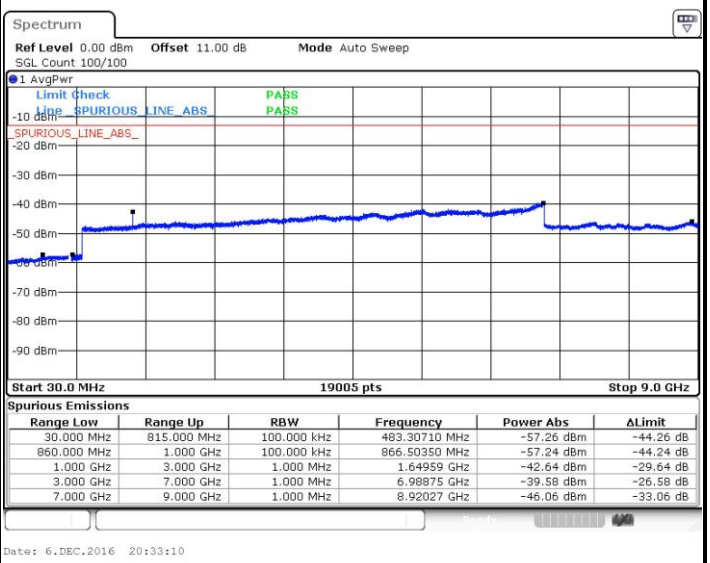


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	483.30710 MHz	-57.20 dBm	-44.20 dB
860.000 MHz	1.000 GHz	100.000 kHz	991.67832 MHz	-56.89 dBm	-43.89 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64959 GHz	-41.82 dBm	-28.82 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99825 GHz	-39.53 dBm	-26.53 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.88778 GHz	-46.07 dBm	-33.07 dB

Date: 6.DEC.2016 20:32:12

Lowest Channel / 16QAM



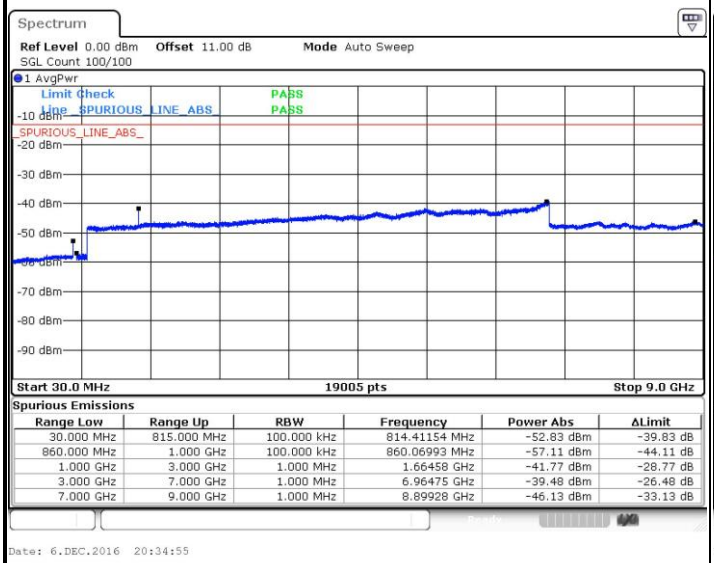
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	483.30710 MHz	-57.26 dBm	-44.26 dB
860.000 MHz	1.000 GHz	100.000 kHz	866.50350 MHz	-57.24 dBm	-44.24 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.64959 GHz	-42.64 dBm	-29.64 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98875 GHz	-39.58 dBm	-26.58 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.92027 GHz	-46.06 dBm	-33.06 dB

Date: 6.DEC.2016 20:33:10

LTE Band 5 / 10MHz

Middle Channel / QPSK

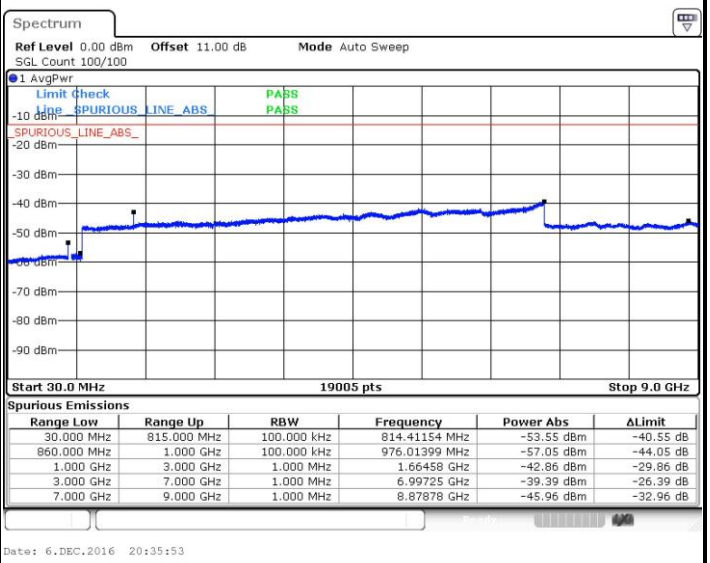


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-52.83 dBm	-39.83 dB
860.000 MHz	1.000 GHz	100.000 kHz	860.06993 MHz	-57.11 dBm	-44.11 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66458 GHz	-41.77 dBm	-28.77 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96475 GHz	-39.48 dBm	-26.48 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.89928 GHz	-46.13 dBm	-33.13 dB

Date: 6.DEC.2016 20:34:55

Middle Channel / 16QAM

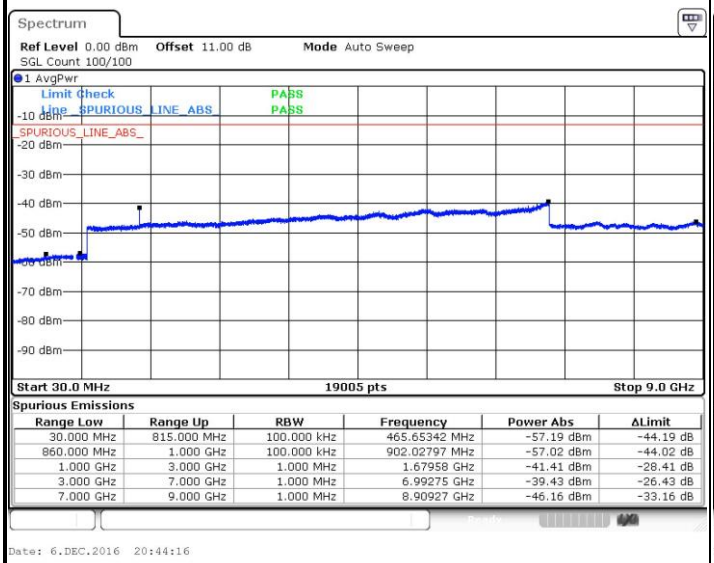


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-53.55 dBm	-40.55 dB
860.000 MHz	1.000 GHz	100.000 kHz	976.01399 MHz	-57.05 dBm	-44.05 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66458 GHz	-42.86 dBm	-29.86 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99725 GHz	-39.39 dBm	-26.39 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.87878 GHz	-45.96 dBm	-32.96 dB

Date: 6.DEC.2016 20:35:53

Highest Channel / QPSK

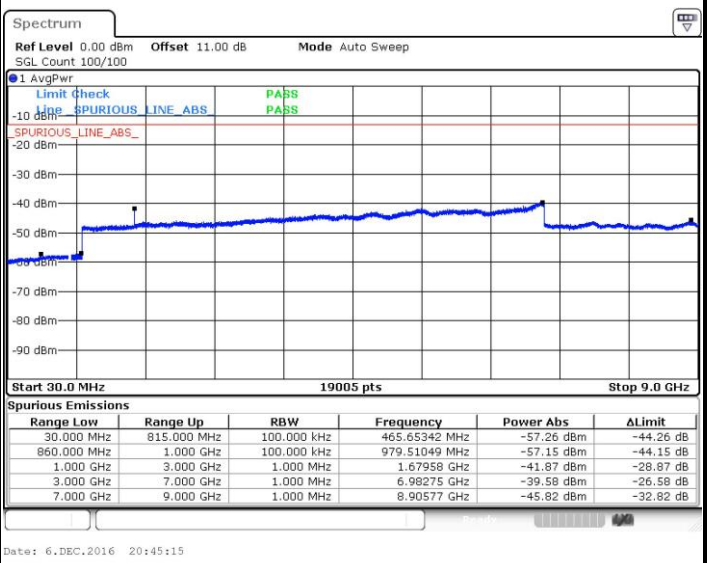


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	465.65342 MHz	-57.19 dBm	-44.19 dB
860.000 MHz	1.000 GHz	100.000 kHz	902.02797 MHz	-57.02 dBm	-44.02 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67958 GHz	-41.41 dBm	-28.41 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99275 GHz	-39.43 dBm	-26.43 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.90927 GHz	-46.16 dBm	-33.16 dB

Date: 6.DEC.2016 20:44:16

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	465.65342 MHz	-57.26 dBm	-44.26 dB
860.000 MHz	1.000 GHz	100.000 kHz	979.51049 MHz	-57.15 dBm	-44.15 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67958 GHz	-41.87 dBm	-28.87 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98275 GHz	-39.58 dBm	-26.58 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.90577 GHz	-45.82 dBm	-32.82 dB

Date: 6.DEC.2016 20:45:15

Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0051	
30	Normal Voltage	0.0093	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0035	
-30	Normal Voltage	0.0078	
20	Maximum Voltage	0.0030	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0024	

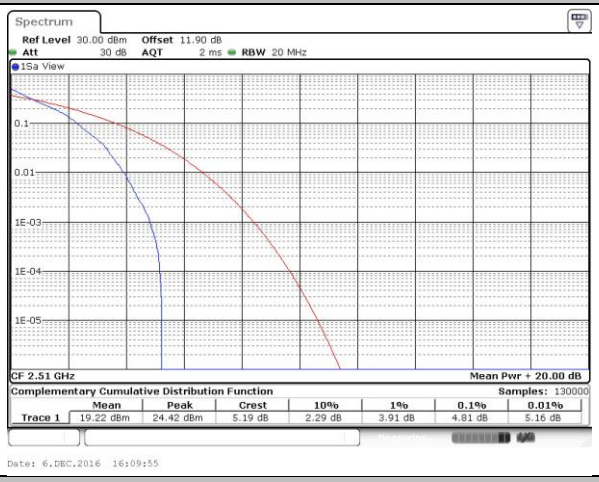
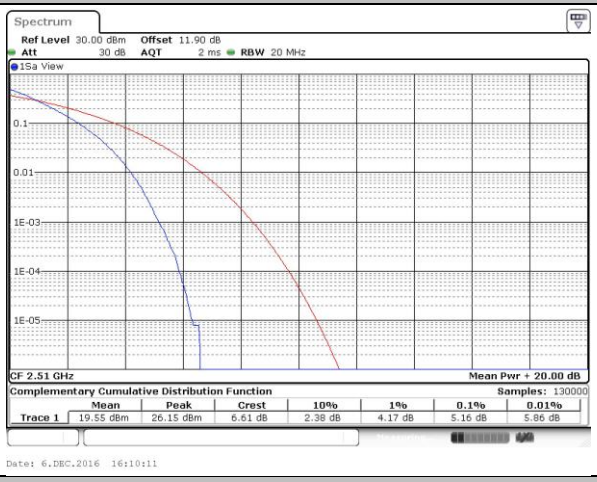
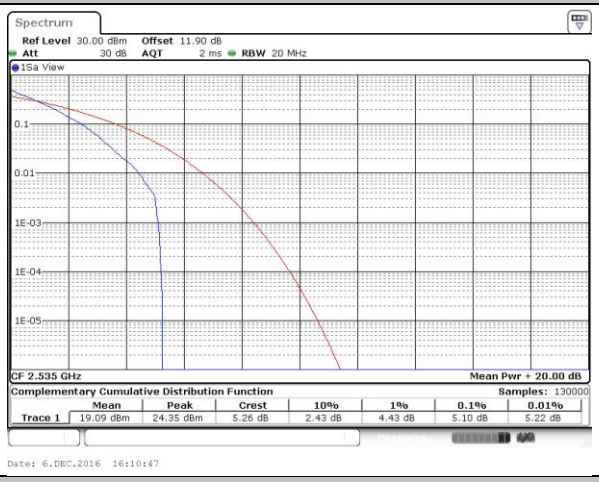
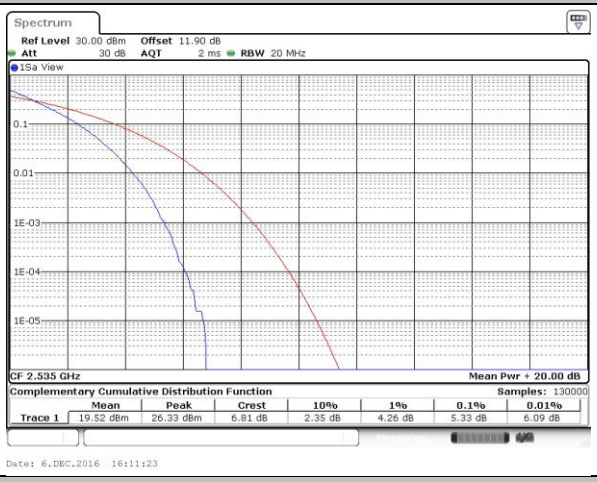
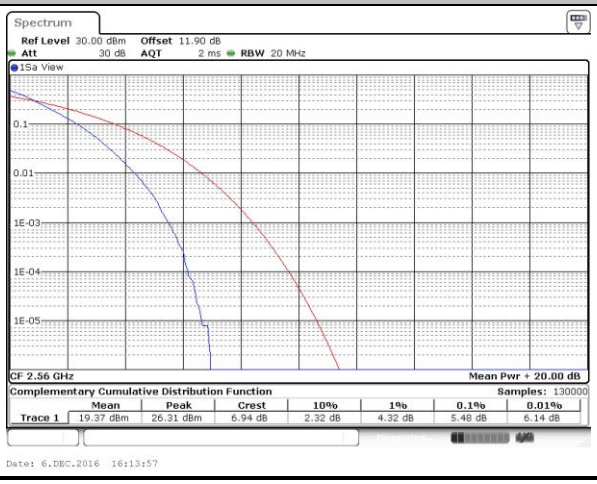
Note:

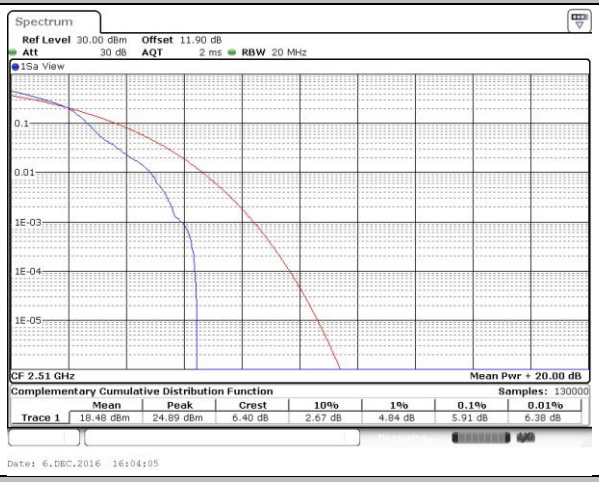
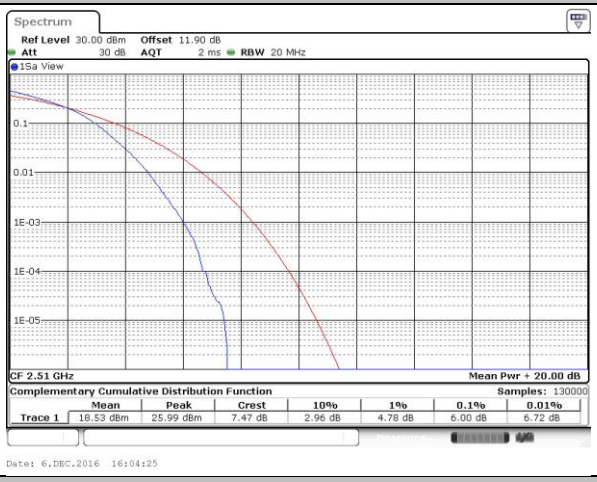
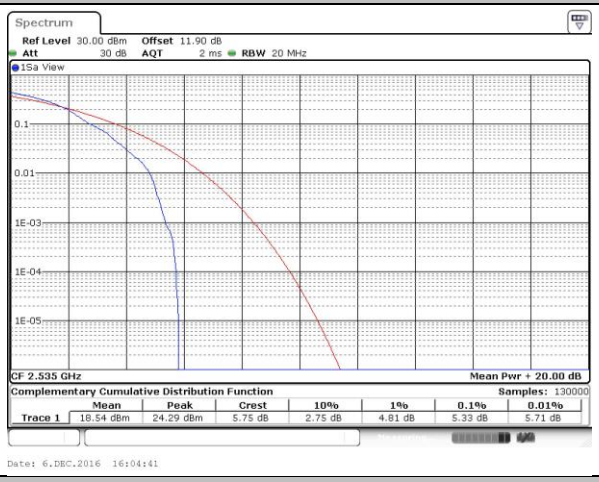
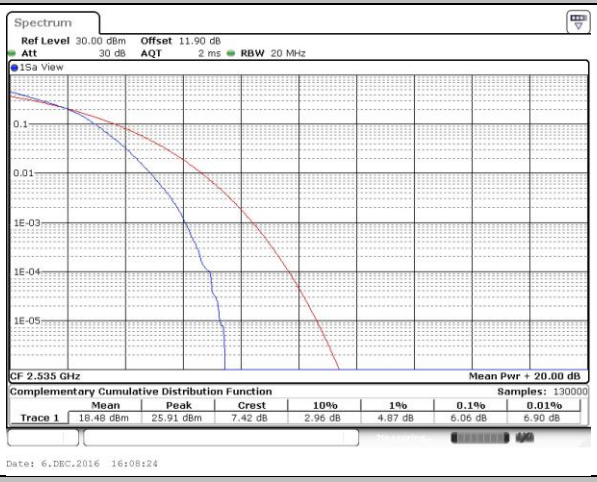
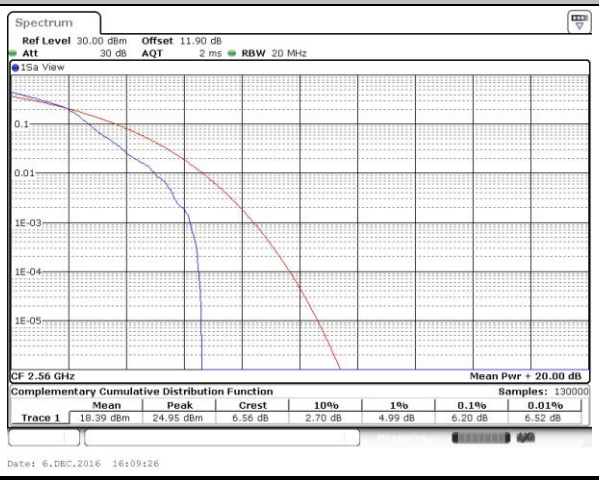
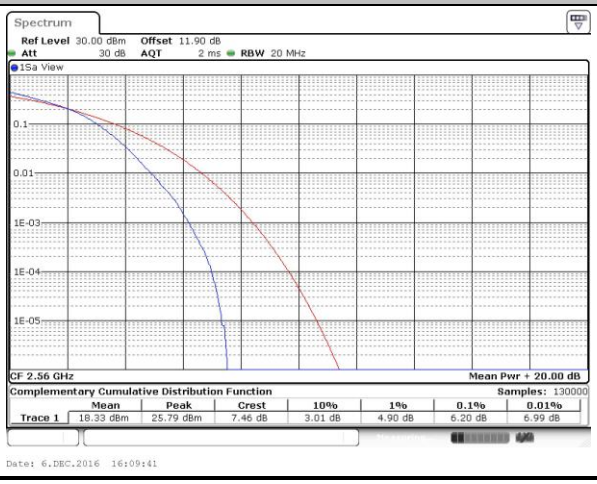
1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 7

Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.81	5.16	5.91	6	PASS
Middle CH	5.1	5.33	5.33	6.06	
Highest CH	5.22	5.48	6.2	6.2	

LTE Band 7 / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

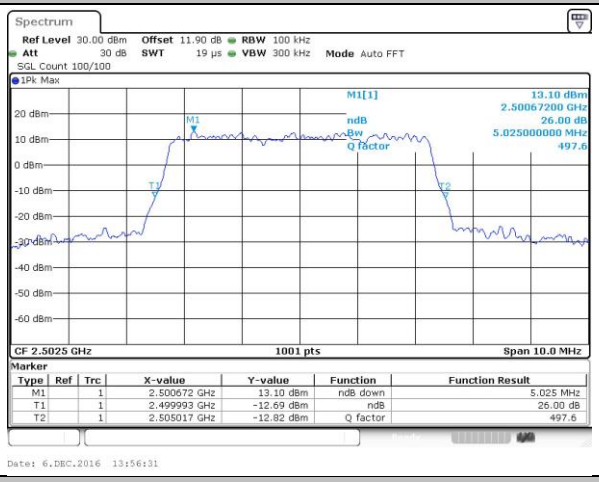
LTE Band 7 / 20MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

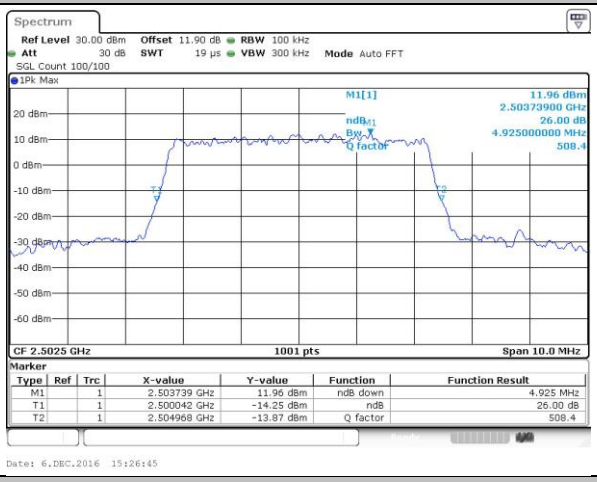
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.025	4.925	9.91	9.85	14.505	14.296	20.34	20.22
Middle CH	-	-	-	-	4.915	4.955	9.81	9.95	14.625	14.206	20.26	20.42
Highest CH	-	-	-	-	4.965	4.965	9.87	9.87	14.775	14.865	20.22	20.14

LTE Band 7

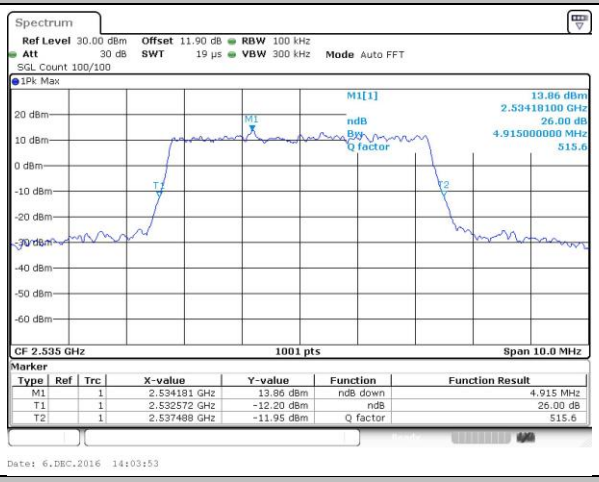
Lowest Channel / 5MHz / QPSK



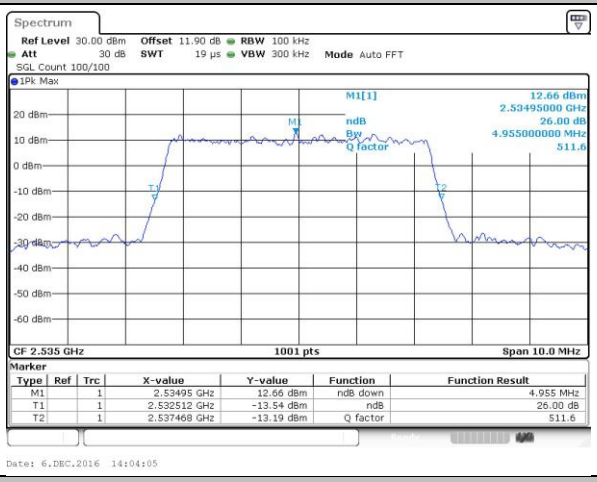
Lowest Channel / 5MHz / 16QAM



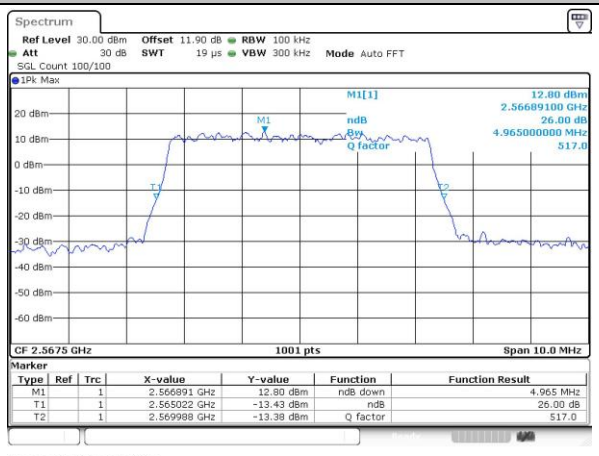
Middle Channel / 5MHz / QPSK



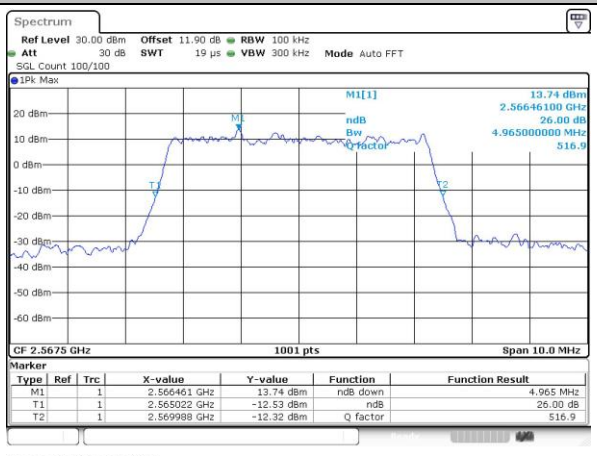
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

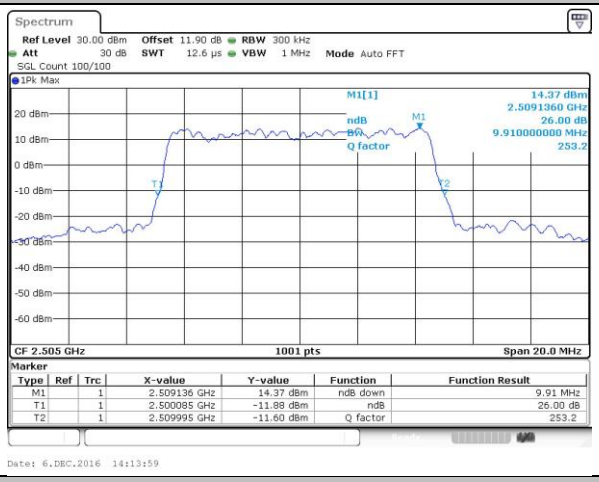


Highest Channel / 5MHz / 16QAM

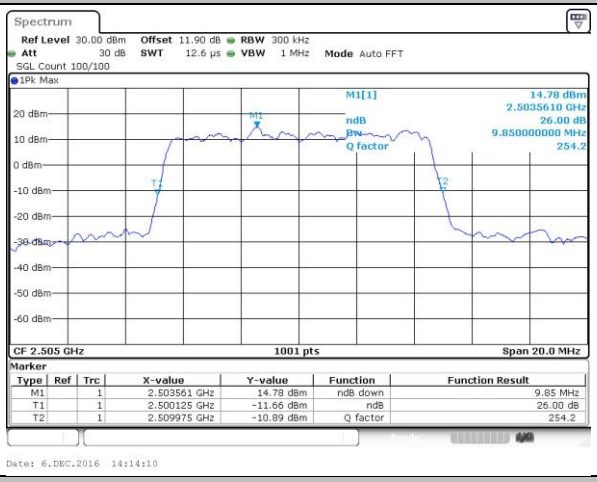


LTE Band 7

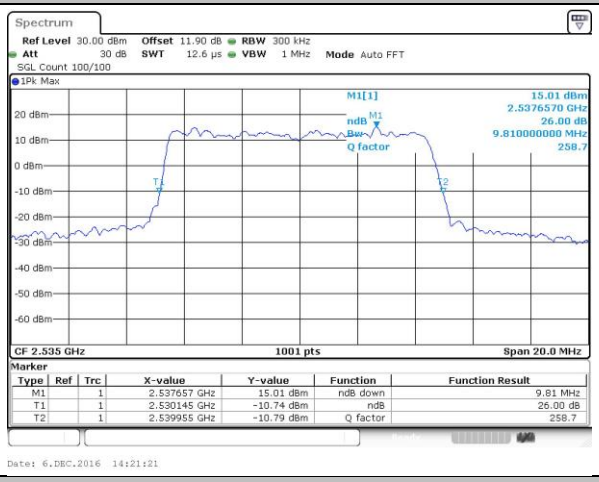
Lowest Channel / 10MHz / QPSK



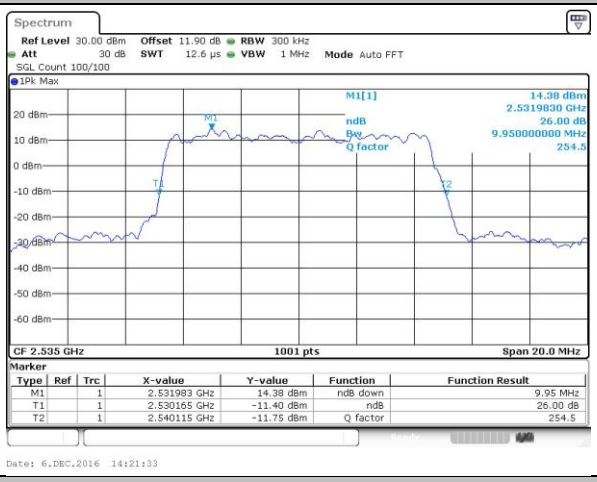
Lowest Channel / 10MHz / 16QAM



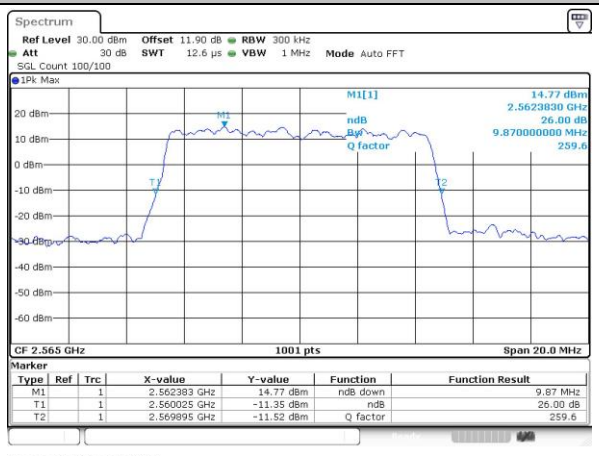
Middle Channel / 10MHz / QPSK



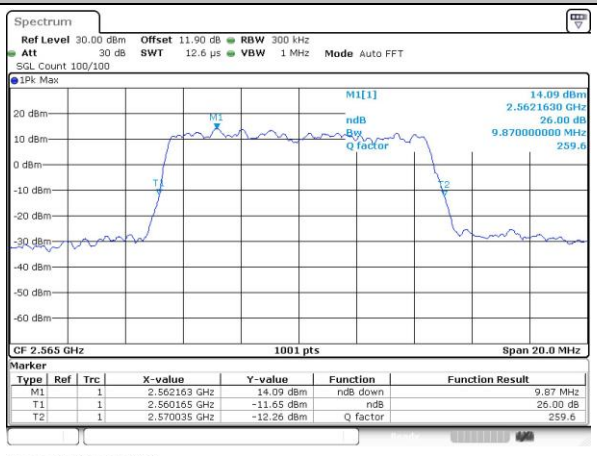
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

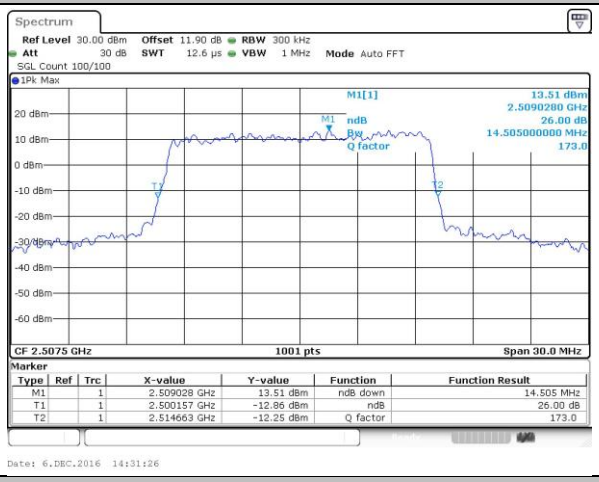


Highest Channel / 10MHz / 16QAM

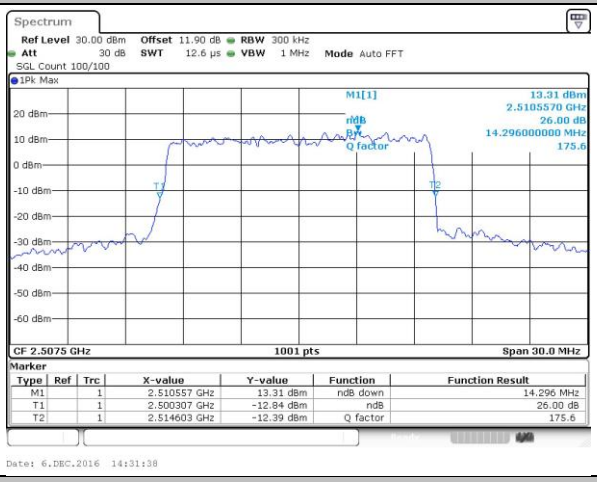


LTE Band 7

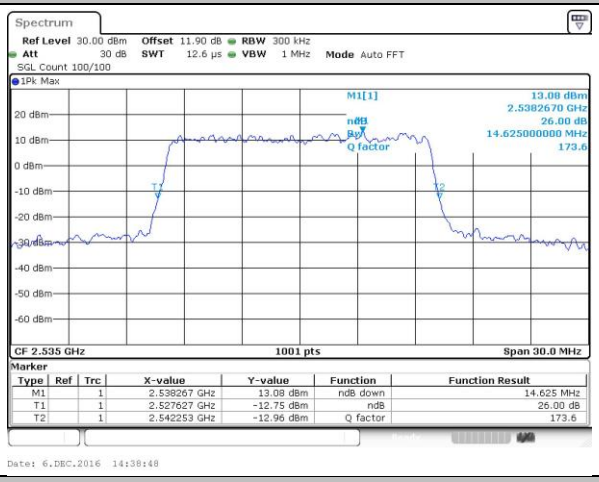
Lowest Channel / 15MHz / QPSK



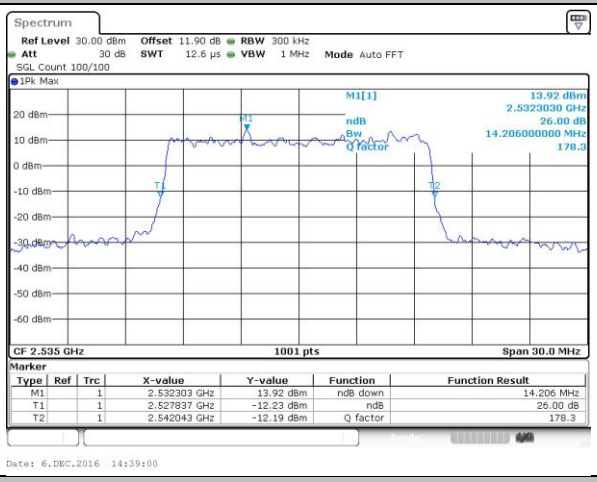
Lowest Channel / 15MHz / 16QAM



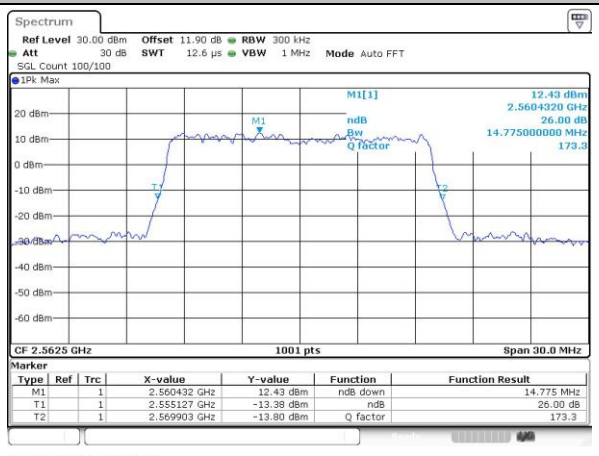
Middle Channel / 15MHz / QPSK



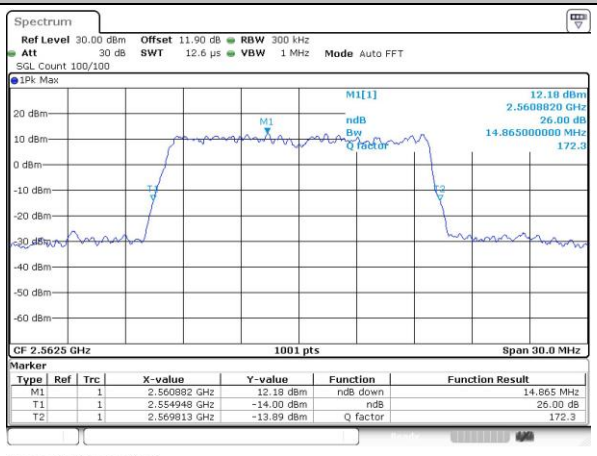
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

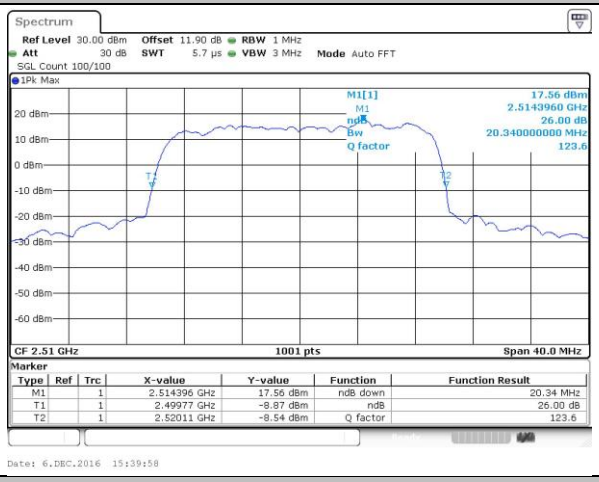


Highest Channel / 15MHz / 16QAM

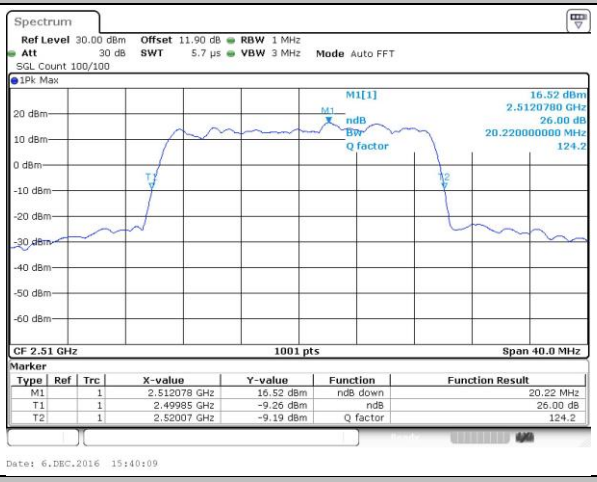


LTE Band 7

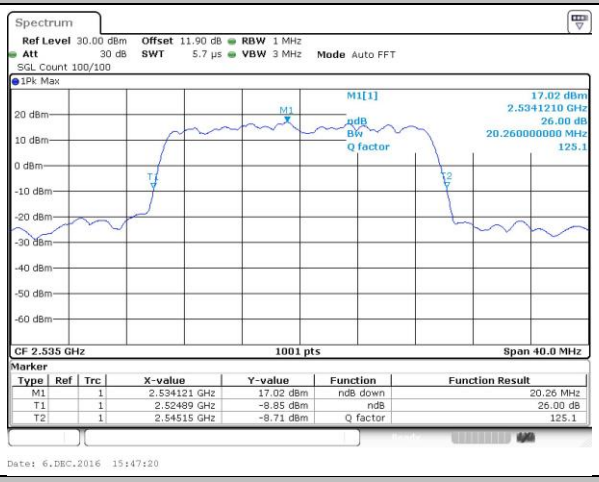
Lowest Channel / 20MHz / QPSK



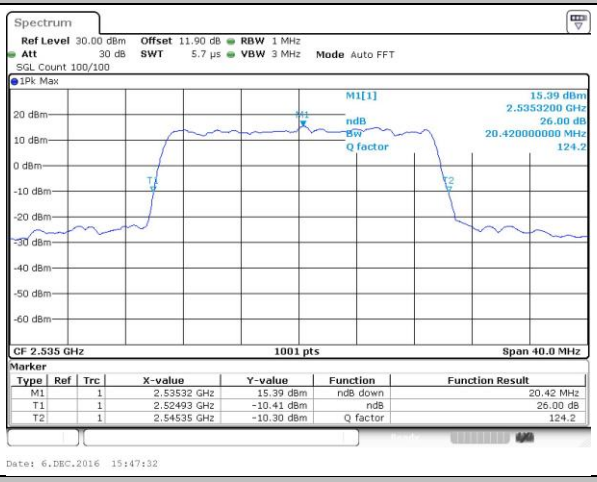
Lowest Channel / 20MHz / 16QAM



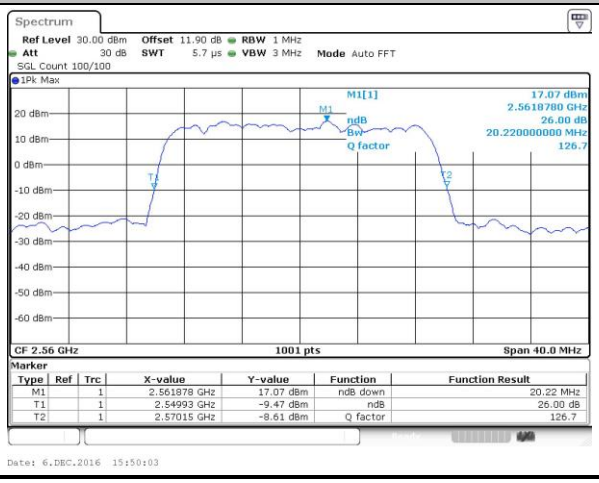
Middle Channel / 20MHz / QPSK



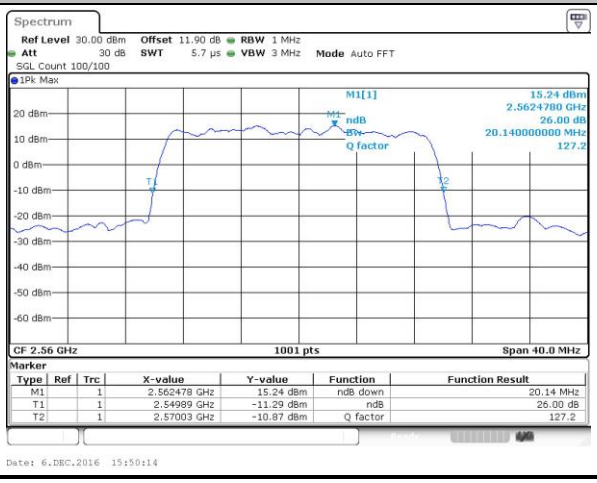
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM

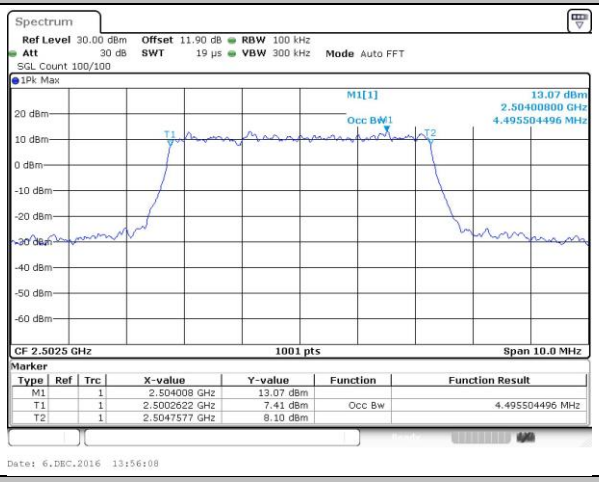


Occupied Bandwidth

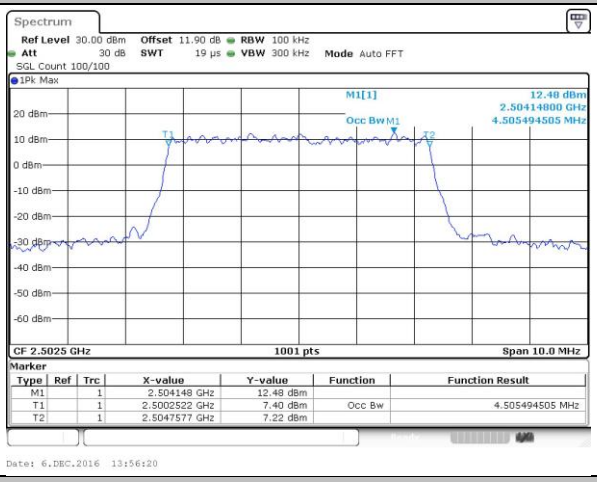
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.5	4.51	9.03	9.07	13.49	13.49	18.42	18.34
Middle CH	-	-	-	-	4.51	4.53	9.09	9.01	13.43	13.46	18.42	18.5
Highest CH	-	-	-	-	4.5	4.51	9.05	9.07	13.49	13.4	18.3	18.38

LTE Band 7

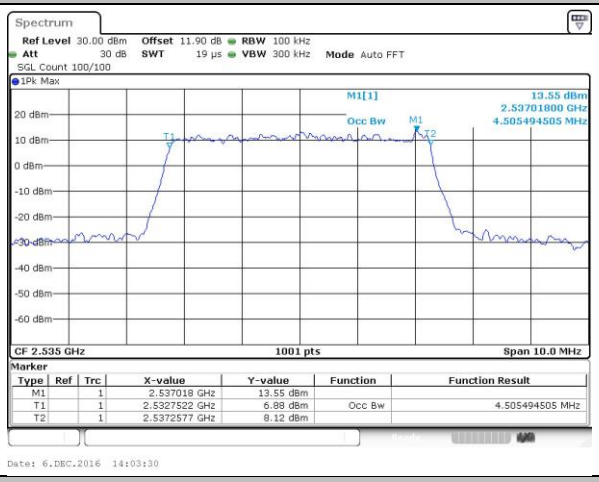
Lowest Channel / 5MHz / QPSK



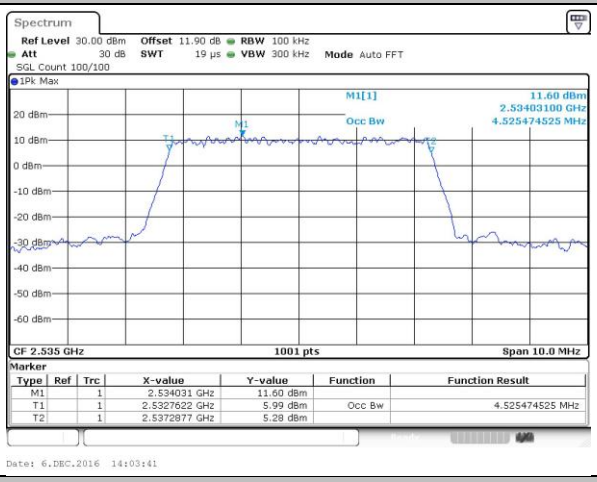
Lowest Channel / 5MHz / 16QAM



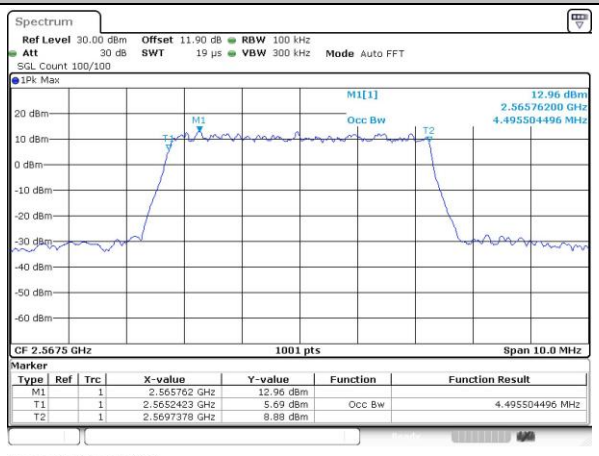
Middle Channel / 5MHz / QPSK



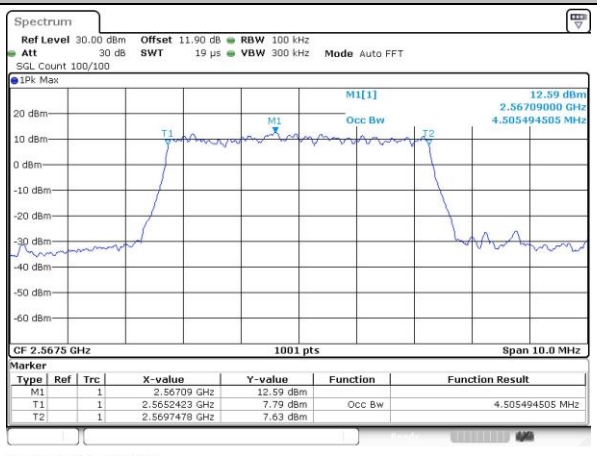
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

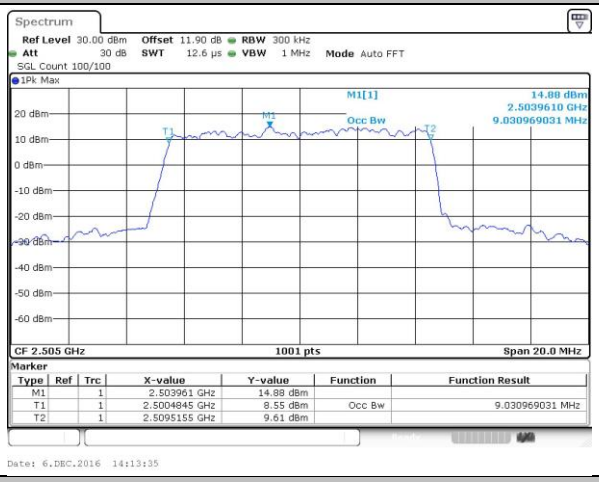


Highest Channel / 5MHz / 16QAM

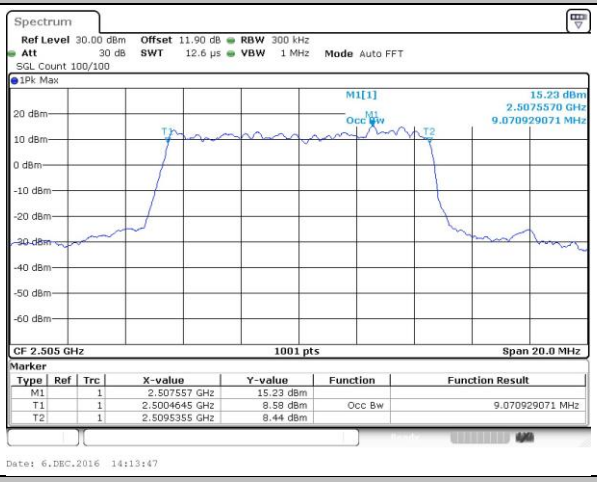


LTE Band 7

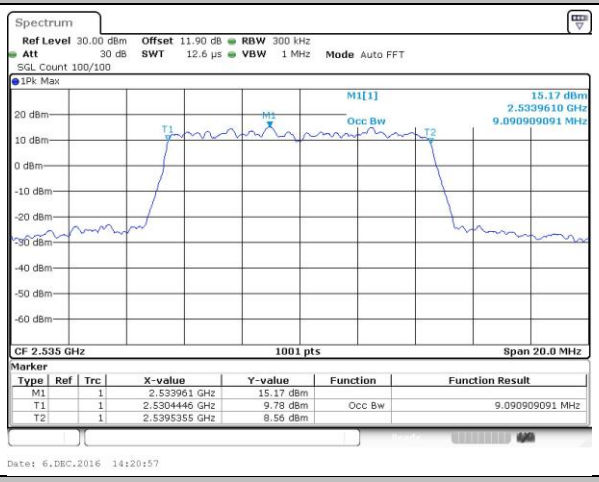
Lowest Channel / 10MHz / QPSK



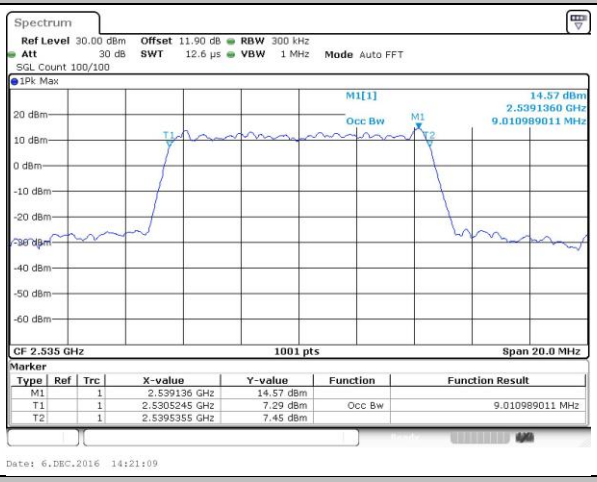
Lowest Channel / 10MHz / 16QAM



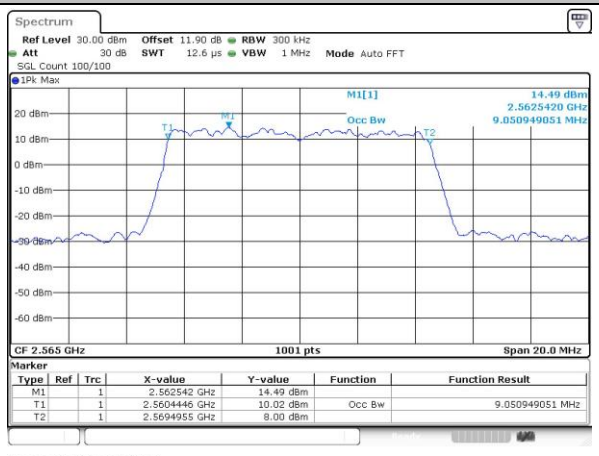
Middle Channel / 10MHz / QPSK



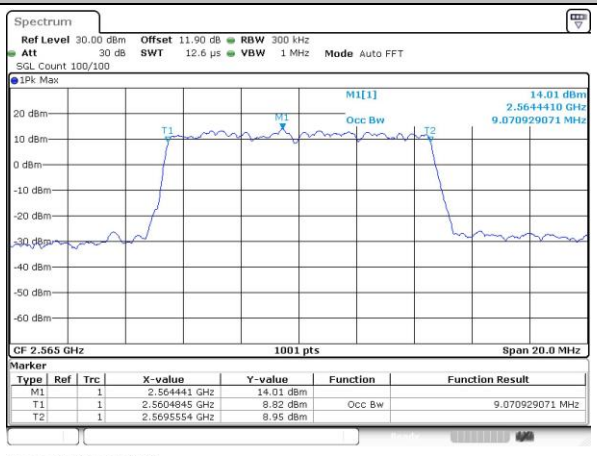
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

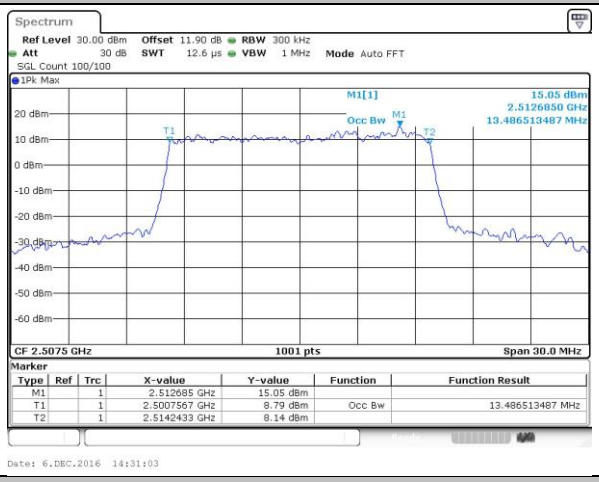


Highest Channel / 10MHz / 16QAM

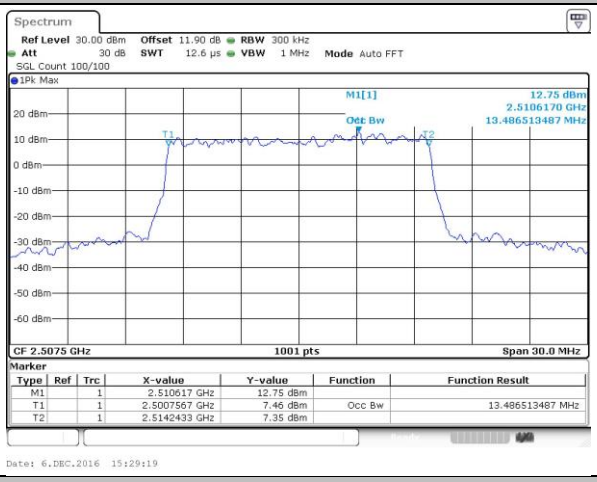


LTE Band 7

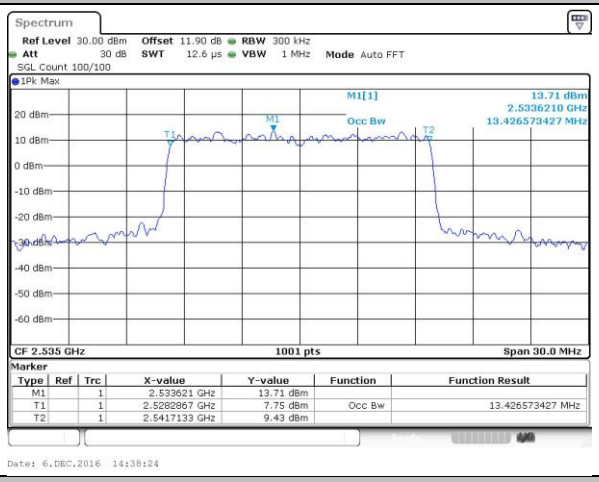
Lowest Channel / 15MHz / QPSK



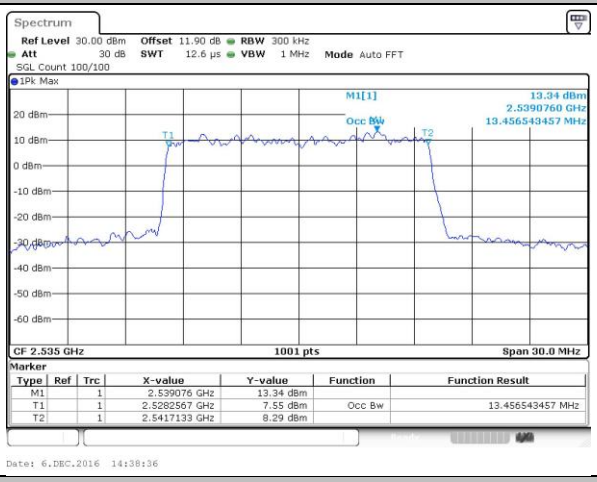
Lowest Channel / 15MHz / 16QAM



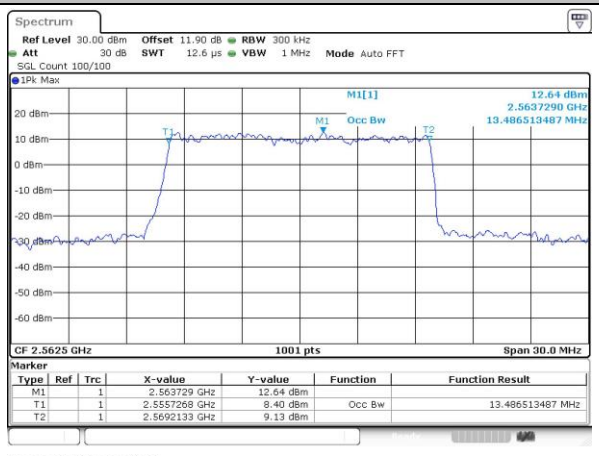
Middle Channel / 15MHz / QPSK



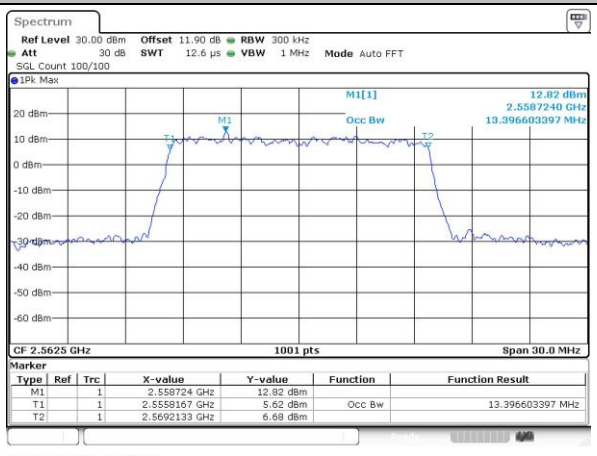
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

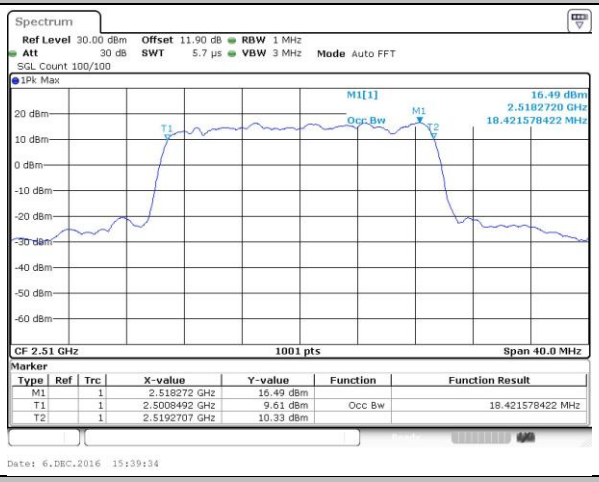


Highest Channel / 15MHz / 16QAM

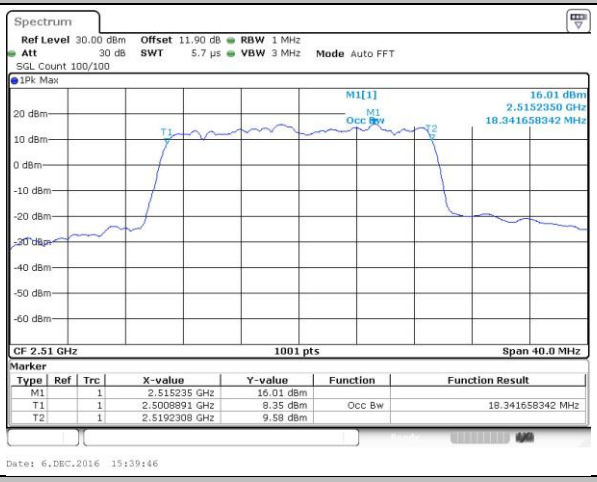


LTE Band 7

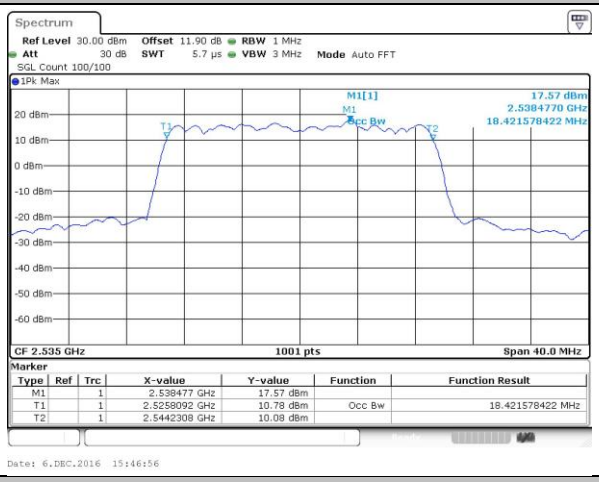
Lowest Channel / 20MHz / QPSK



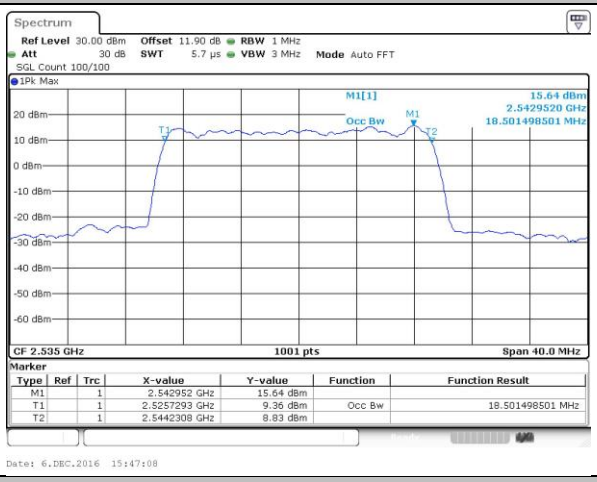
Lowest Channel / 20MHz / 16QAM



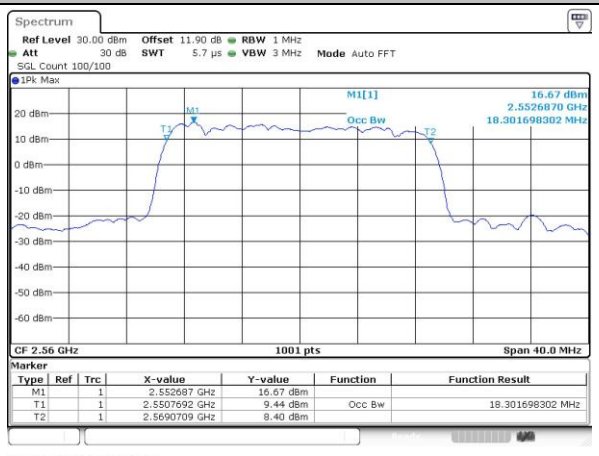
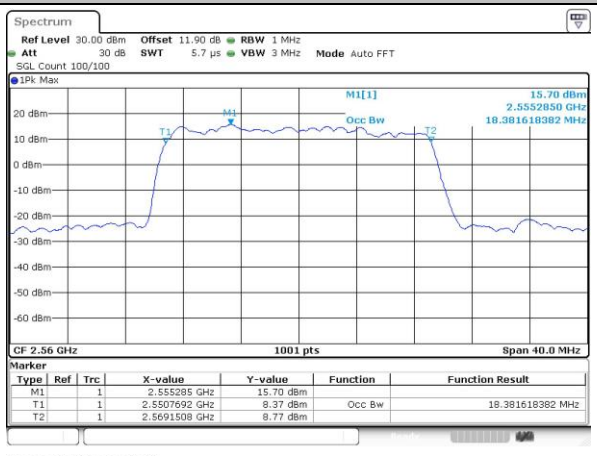
Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM