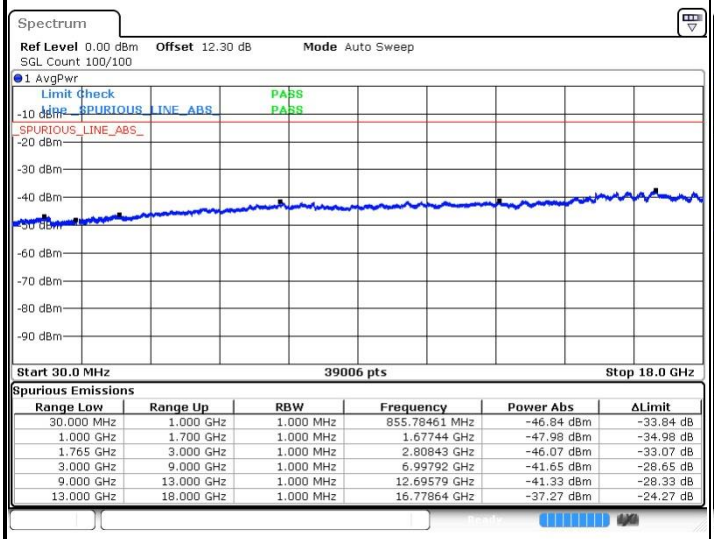
LTE Band 4 / 15MHz

Highest Channel / QPSK

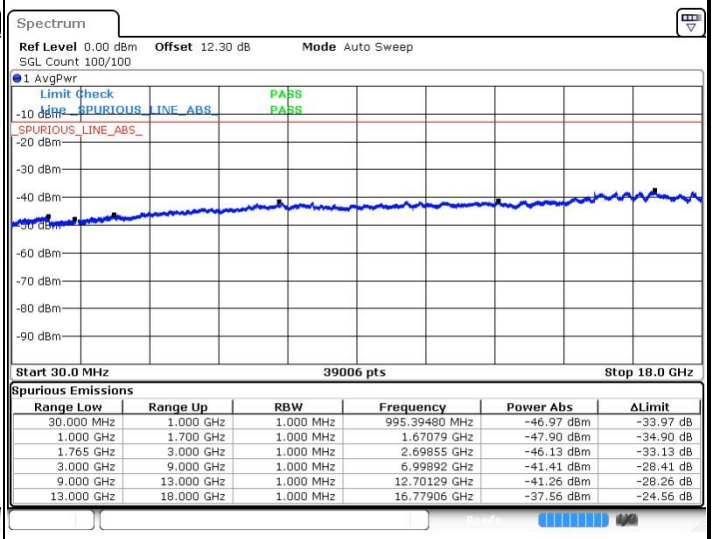


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	855.78461 MHz	-46.84 dBm	-33.84 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67744 GHz	-47.98 dBm	-34.98 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.80843 GHz	-46.07 dBm	-33.07 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99792 GHz	-41.65 dBm	-28.65 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69579 GHz	-41.33 dBm	-28.33 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.77864 GHz	-37.27 dBm	-24.27 dB

Date: 25.AUG.2015 15:05:46

Highest Channel / 16QAM



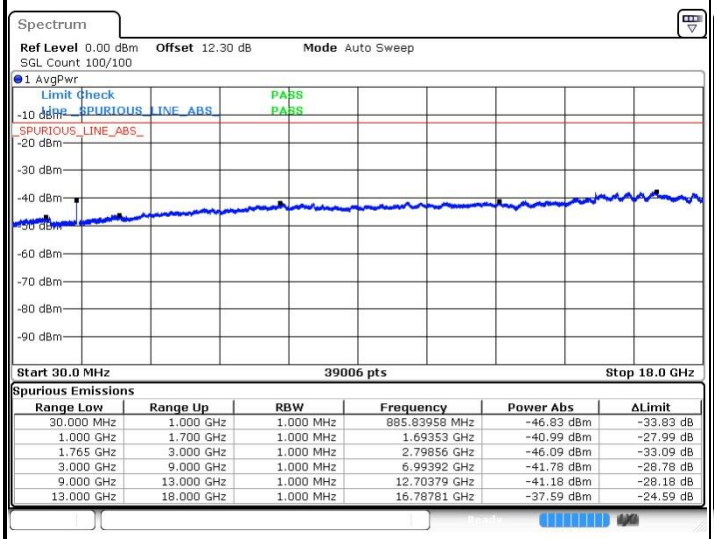
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	995.39480 MHz	-46.97 dBm	-33.97 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67079 GHz	-47.90 dBm	-34.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.69855 GHz	-46.13 dBm	-33.13 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99892 GHz	-41.41 dBm	-28.41 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70129 GHz	-41.26 dBm	-28.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.77906 GHz	-37.56 dBm	-24.56 dB

Date: 25.AUG.2015 15:06:41

LTE Band 4 / 20MHz

Lowest Channel / QPSK

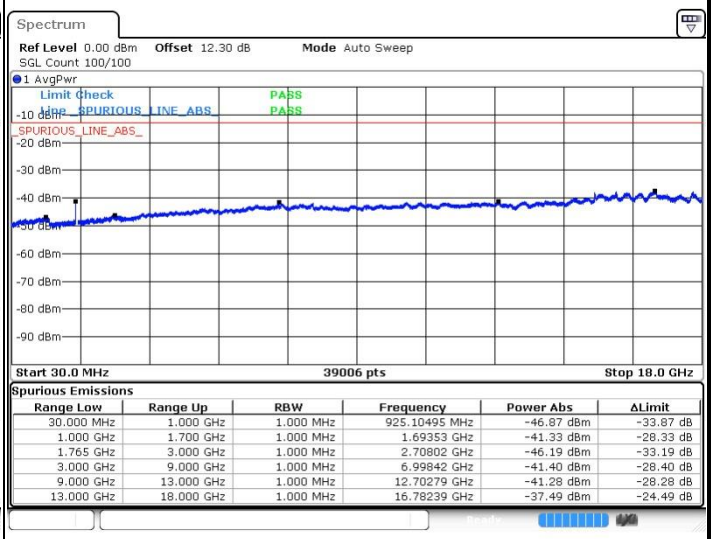


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	885.83958 MHz	-46.83 dBm	-33.83 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-40.99 dBm	-27.99 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.79856 GHz	-46.09 dBm	-33.09 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99392 GHz	-41.78 dBm	-28.78 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70379 GHz	-41.18 dBm	-28.18 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78781 GHz	-37.59 dBm	-24.59 dB

Date: 25.AUG.2015 15:12:56

Lowest Channel / 16QAM



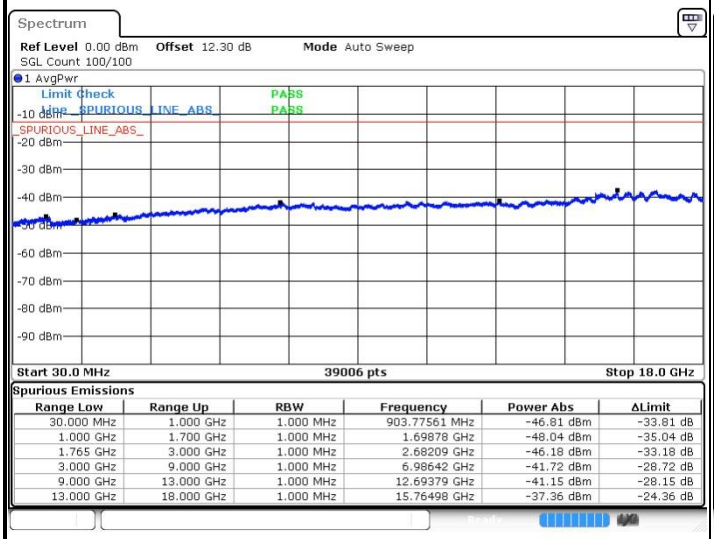
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	925.10495 MHz	-46.87 dBm	-33.87 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69353 GHz	-41.33 dBm	-28.33 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.70802 GHz	-46.19 dBm	-33.19 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99842 GHz	-41.40 dBm	-28.40 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.70279 GHz	-41.28 dBm	-28.28 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78239 GHz	-37.49 dBm	-24.49 dB

Date: 25.AUG.2015 15:13:50

LTE Band 4 / 20MHz

Middle Channel / QPSK

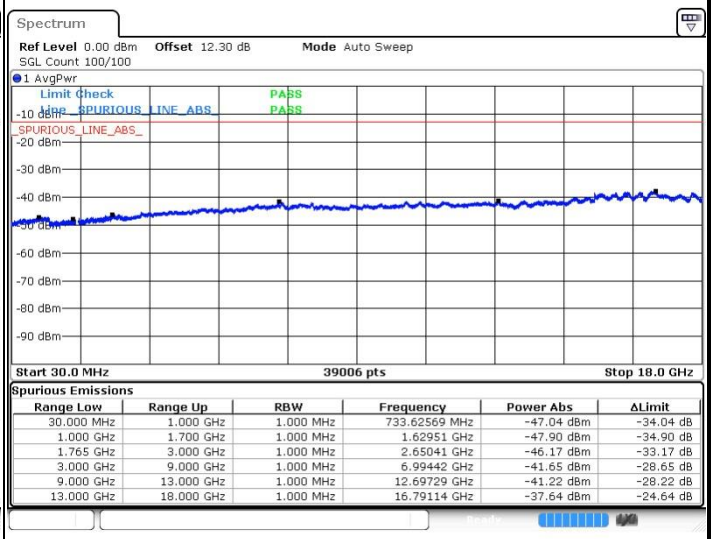


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	903.77561 MHz	-46.81 dBm	-33.81 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69878 GHz	-48.04 dBm	-35.04 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.68209 GHz	-46.18 dBm	-33.18 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98642 GHz	-41.72 dBm	-28.72 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69379 GHz	-41.15 dBm	-28.15 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.76498 GHz	-37.36 dBm	-24.36 dB

Date: 25.AUG.2015 15:15:27

Middle Channel / 16QAM

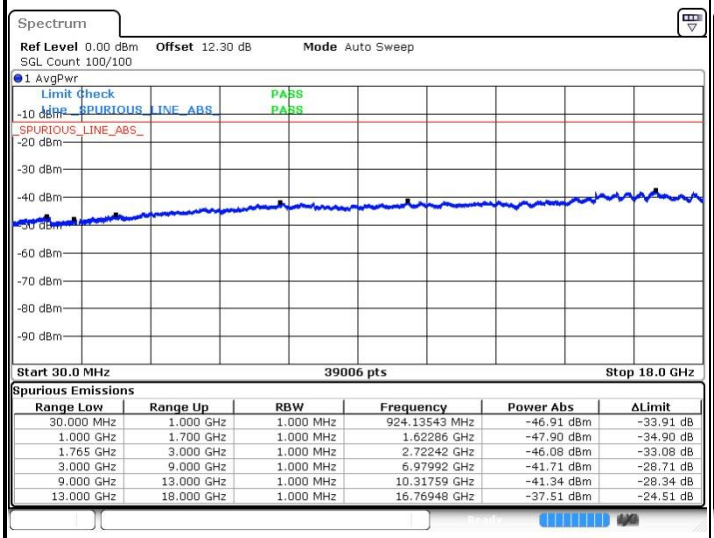


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	733.62569 MHz	-47.04 dBm	-34.04 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62951 GHz	-47.90 dBm	-34.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.65041 GHz	-46.17 dBm	-33.17 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99442 GHz	-41.65 dBm	-28.65 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.69729 GHz	-41.22 dBm	-28.22 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.79114 GHz	-37.64 dBm	-24.64 dB

Date: 25.AUG.2015 15:16:22

Highest Channel / QPSK

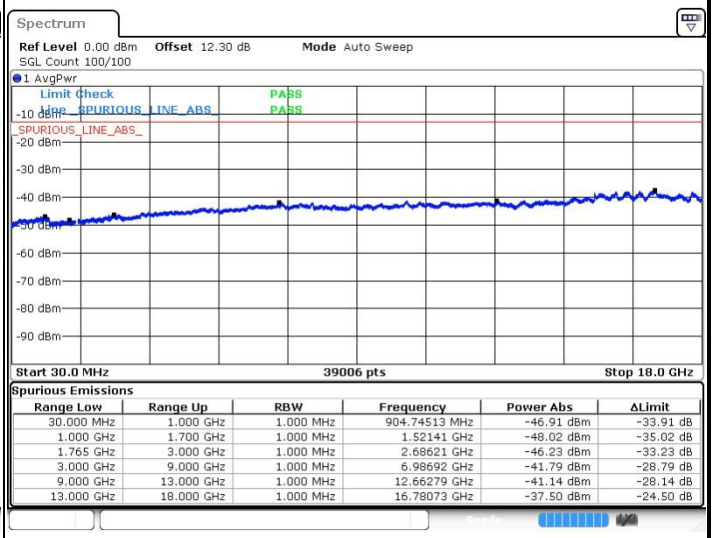


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	924.13543 MHz	-46.91 dBm	-33.91 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62286 GHz	-47.90 dBm	-34.90 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.72242 GHz	-46.08 dBm	-33.08 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97992 GHz	-41.71 dBm	-28.71 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.31759 GHz	-41.34 dBm	-28.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.76948 GHz	-37.51 dBm	-24.51 dB

Date: 25.AUG.2015 15:22:36

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	904.74513 MHz	-46.91 dBm	-33.91 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.52141 GHz	-48.02 dBm	-35.02 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.68621 GHz	-46.23 dBm	-33.23 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98692 GHz	-41.79 dBm	-28.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.66279 GHz	-41.14 dBm	-28.14 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.78073 GHz	-37.50 dBm	-24.50 dB

Date: 25.AUG.2015 15:23:31

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	0.0010	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0006	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Note:

1. Normal Voltage = 3.8V. ；Battery End Point (BEP) = 3.6 V.；Maximum Voltage =4.2 V

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

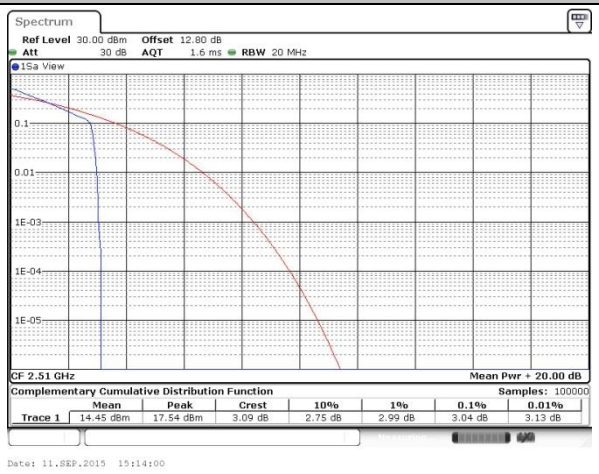
LTE Band 7

Peak-to-Average Ratio

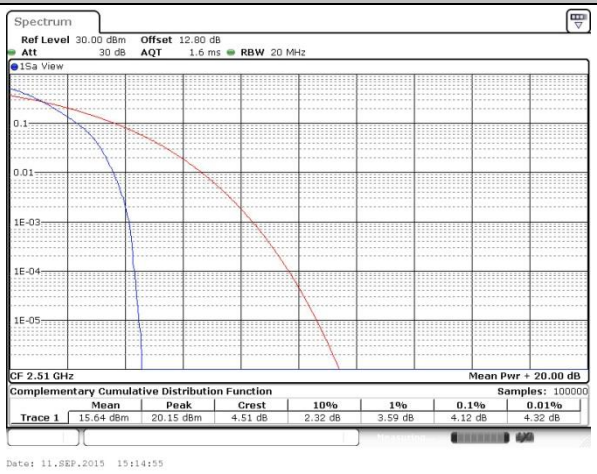
Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.04	4.12	3.83	4.96	PASS
Middle CH	3.07	4.2	3.57	5.04	
Highest CH	3.13	4.23	3.86	5.04	

LTE Band 7 / 20MHz / QPSK

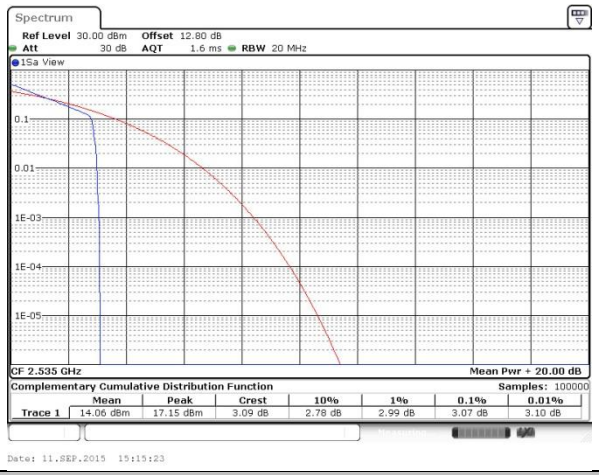
Lowest Channel / 1RB



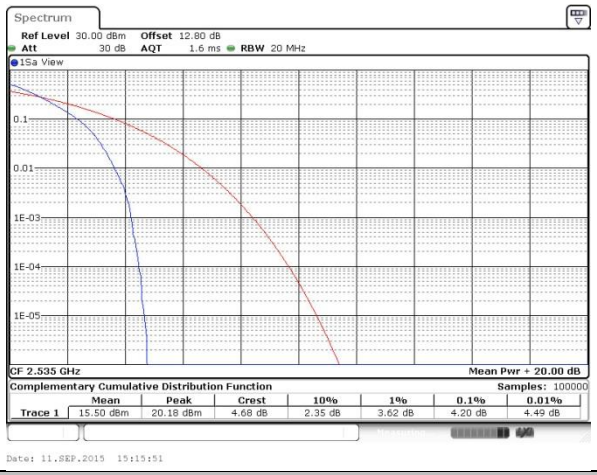
Lowest Channel / Full RB



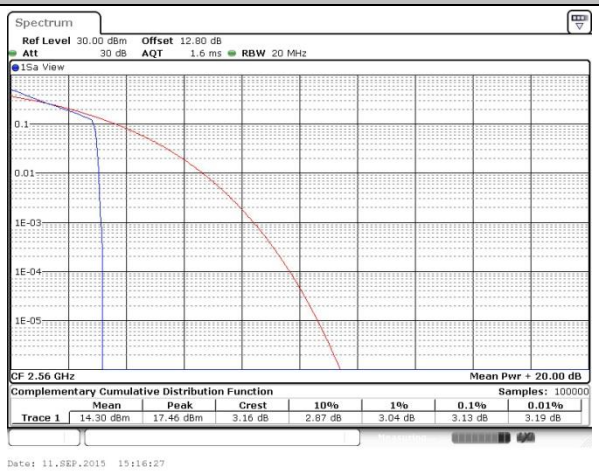
Middle Channel / 1RB



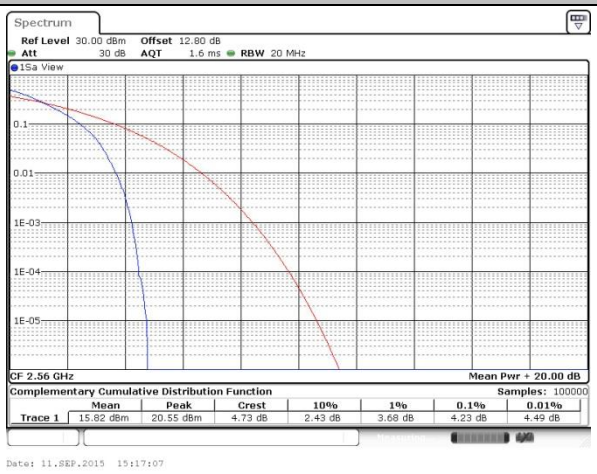
Middle Channel / Full RB



Highest Channel / 1RB

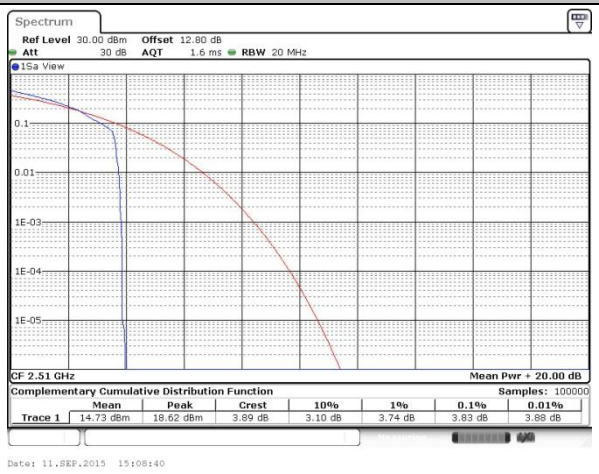


Highest Channel / Full RB

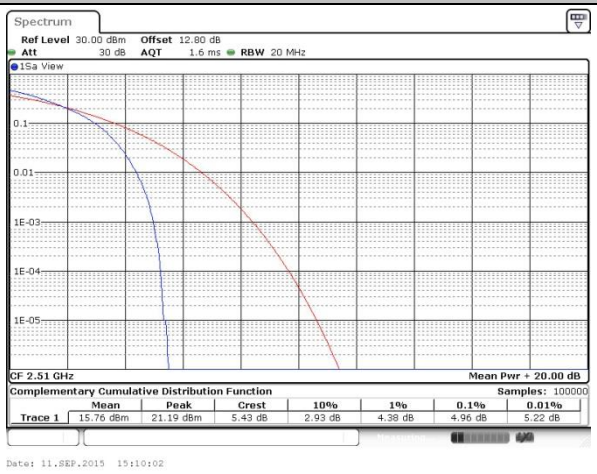


LTE Band 7 / 20MHz / 16QAM

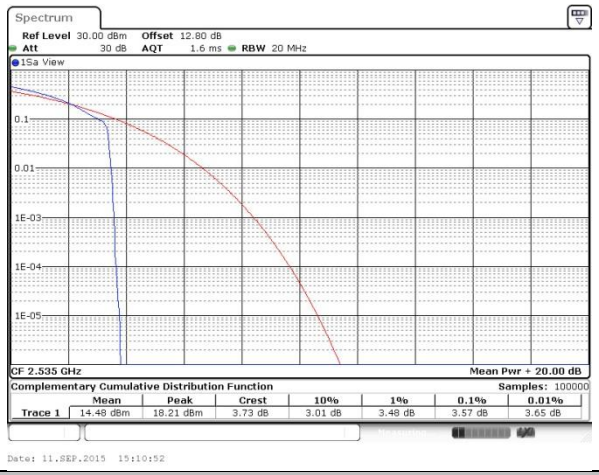
Lowest Channel / 1RB



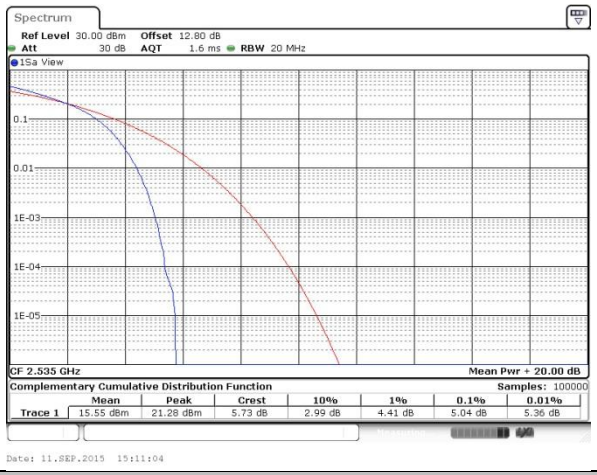
Lowest Channel / Full RB



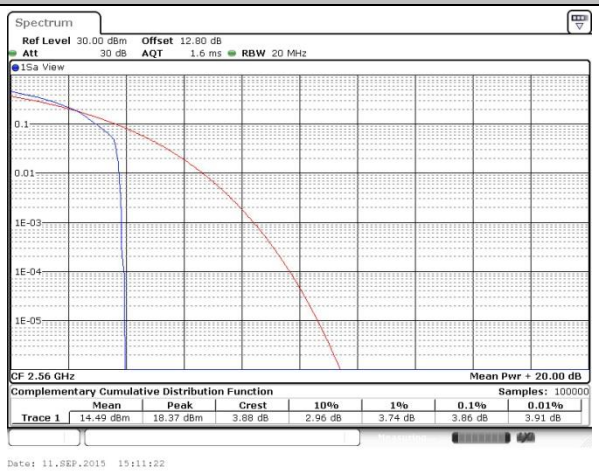
Middle Channel / 1RB



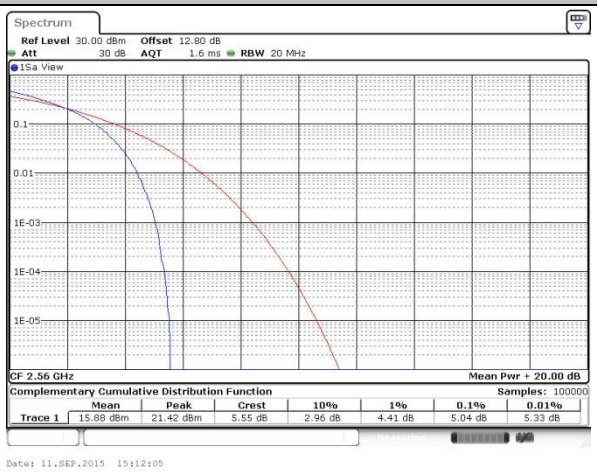
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

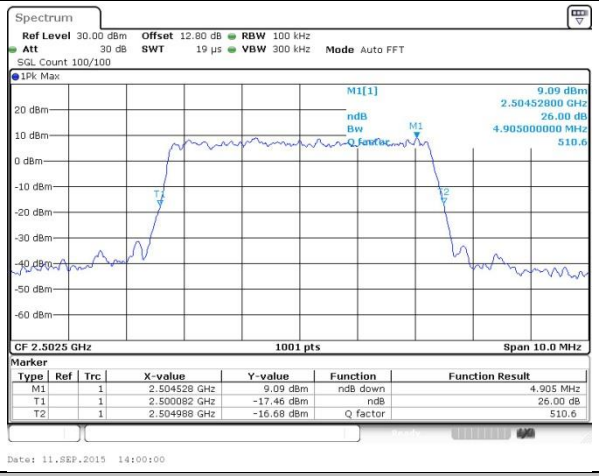


26dB Bandwidth

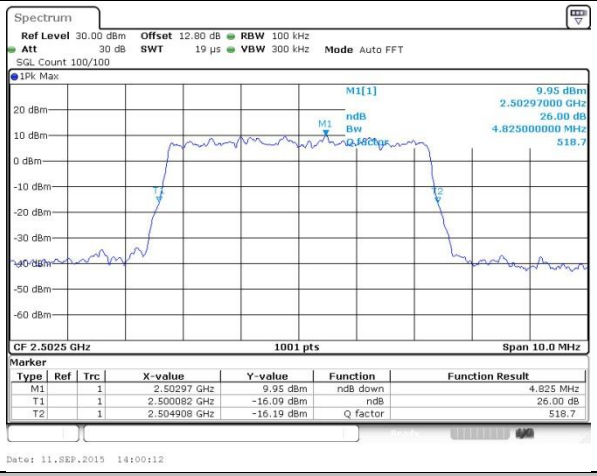
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.91	4.83	9.79	9.79	14.36	14.12	20.3	20.1
Middle CH	-	-	-	-	4.89	4.88	9.81	9.67	14.36	14.6	20.38	20.1
Highest CH	-	-	-	-	4.91	4.97	9.83	9.87	14.63	14.15	20.26	20.02

LTE Band 7

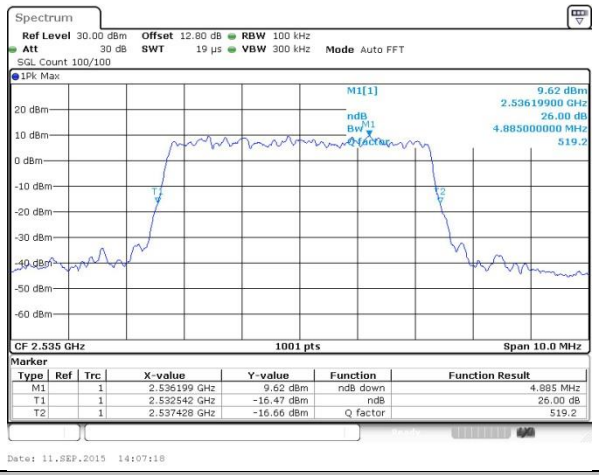
Lowest Channel / 5MHz / QPSK



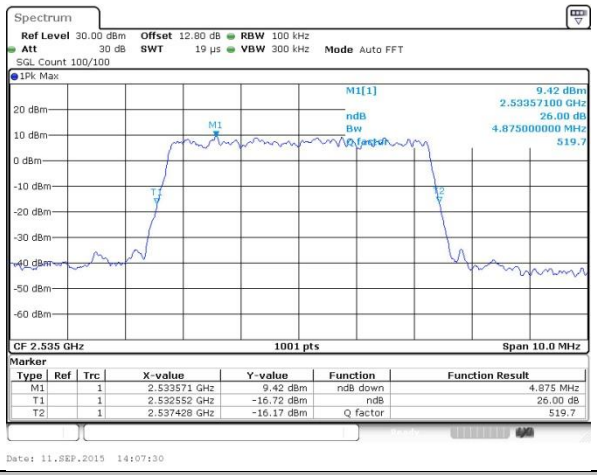
Lowest Channel / 5MHz / 16QAM



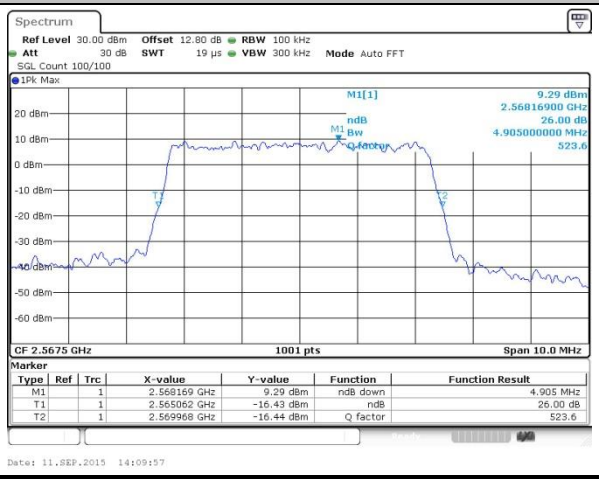
Middle Channel / 5MHz / QPSK



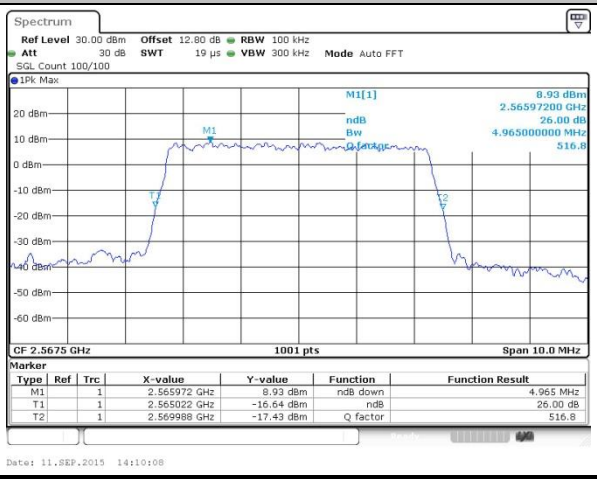
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

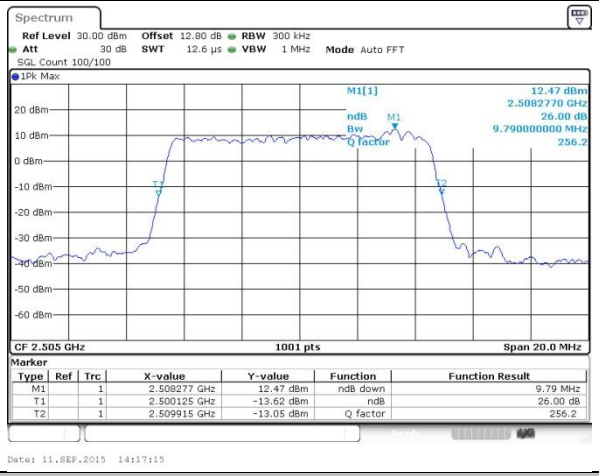


Highest Channel / 5MHz / 16QAM

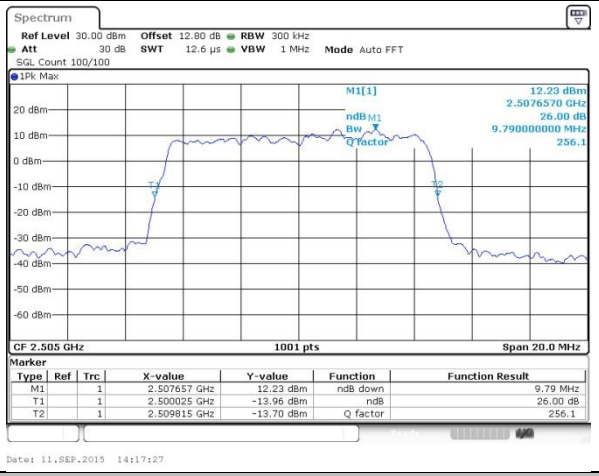


LTE Band 7

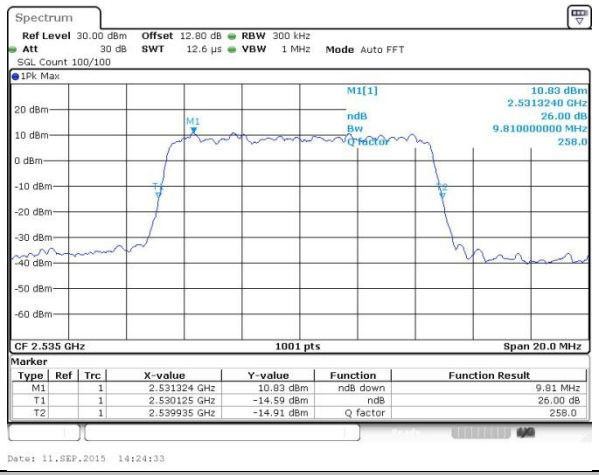
Lowest Channel / 10MHz / QPSK



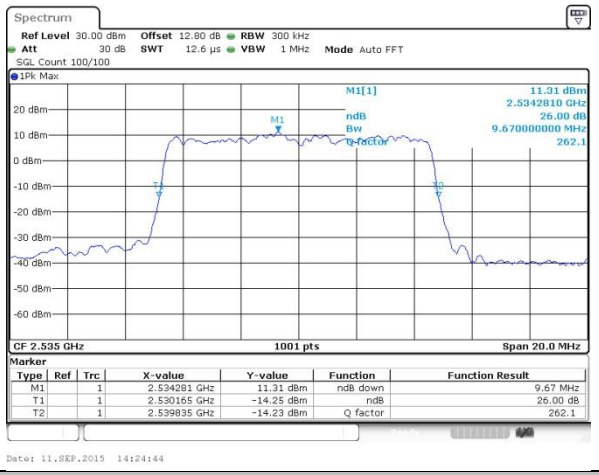
Lowest Channel / 10MHz / 16QAM



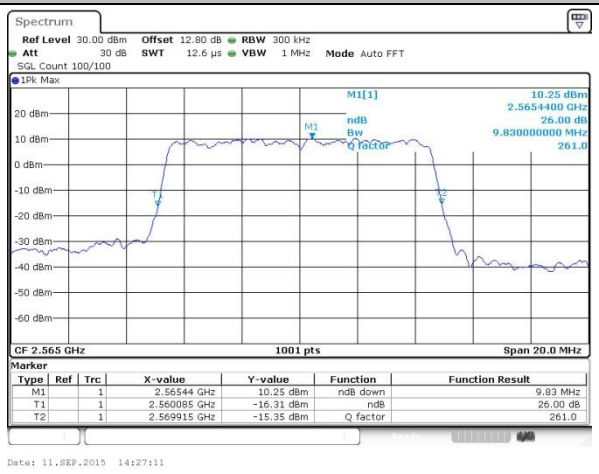
Middle Channel / 10MHz / QPSK



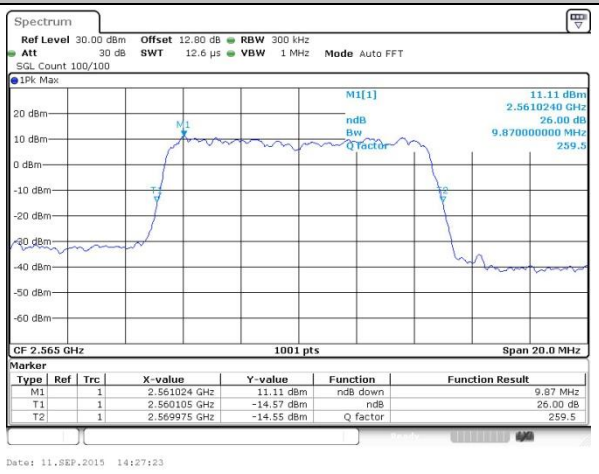
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

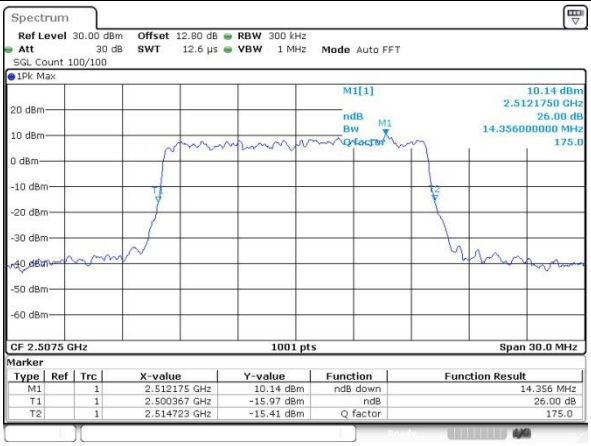


Highest Channel / 10MHz / 16QAM

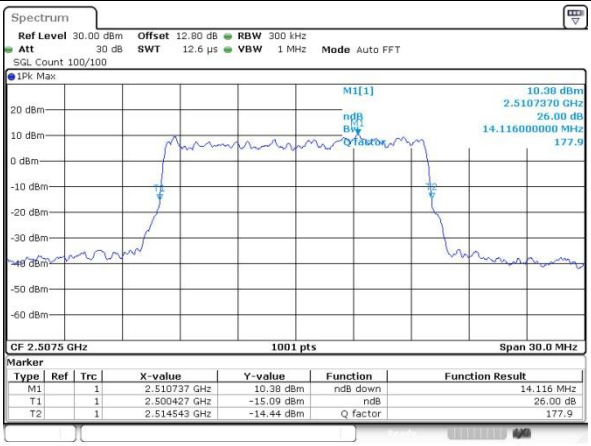


LTE Band 7

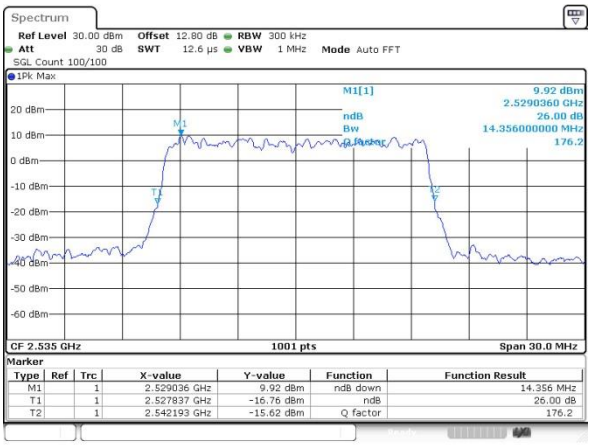
Lowest Channel / 15MHz / QPSK



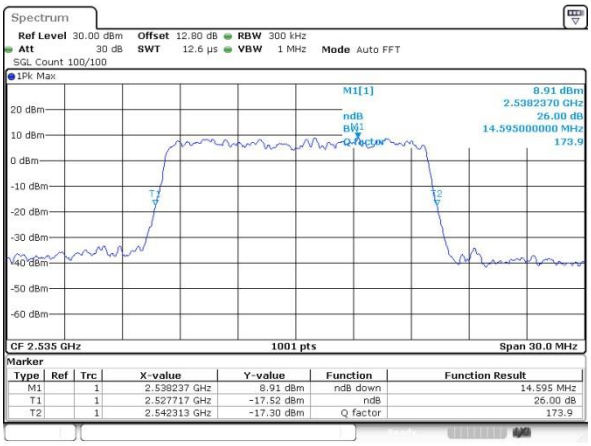
Lowest Channel / 15MHz / 16QAM



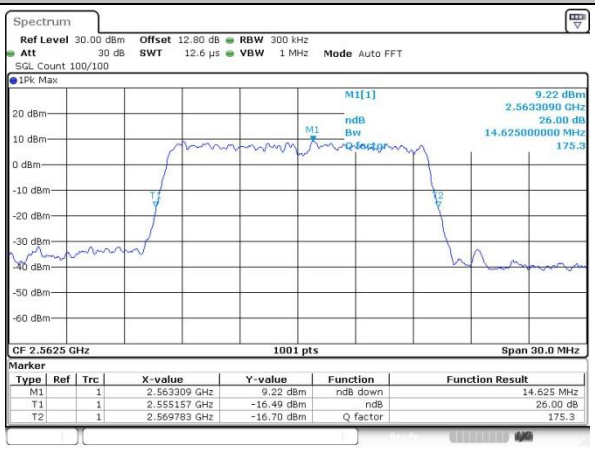
Middle Channel / 15MHz / QPSK



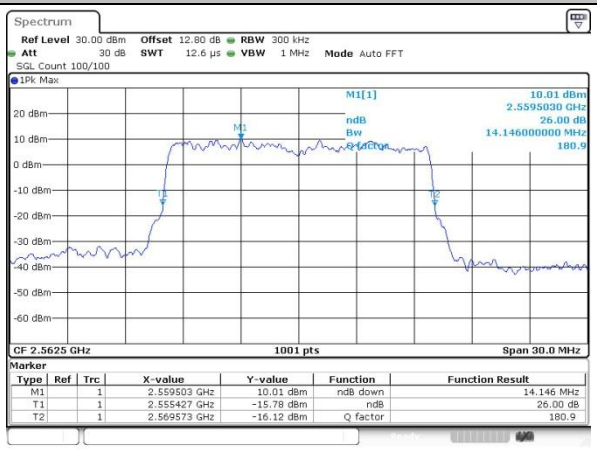
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

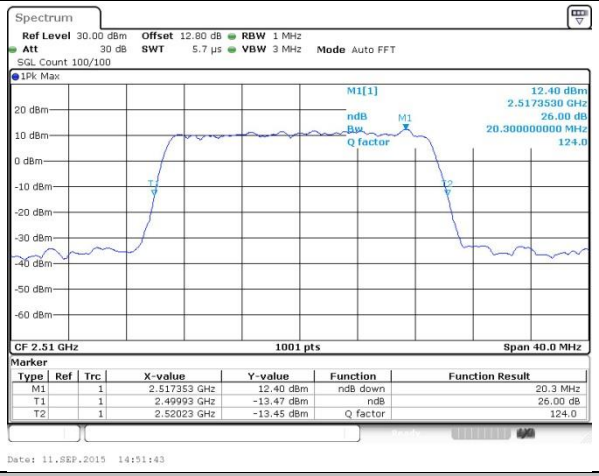


Highest Channel / 15MHz / 16QAM

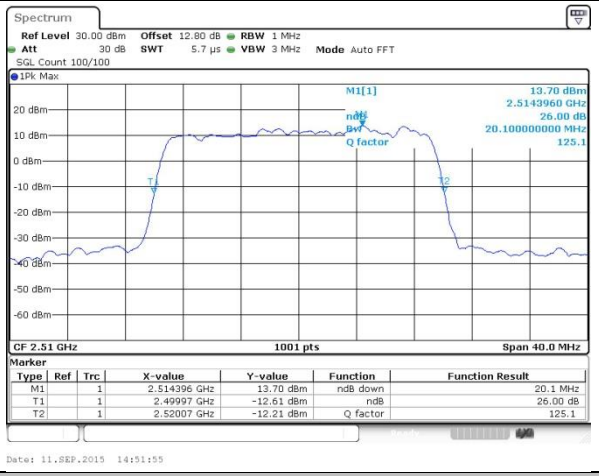


LTE Band 7

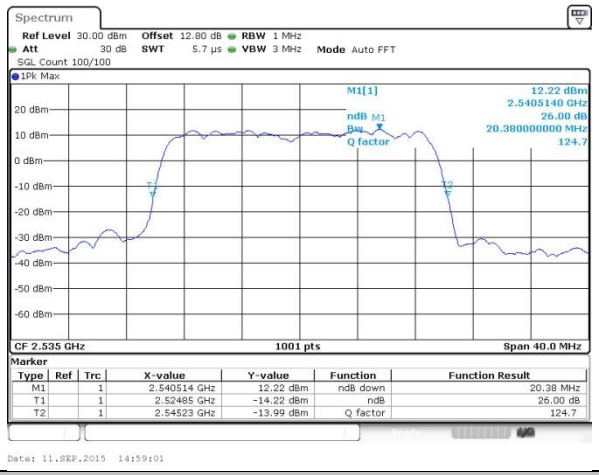
Lowest Channel / 20MHz / QPSK



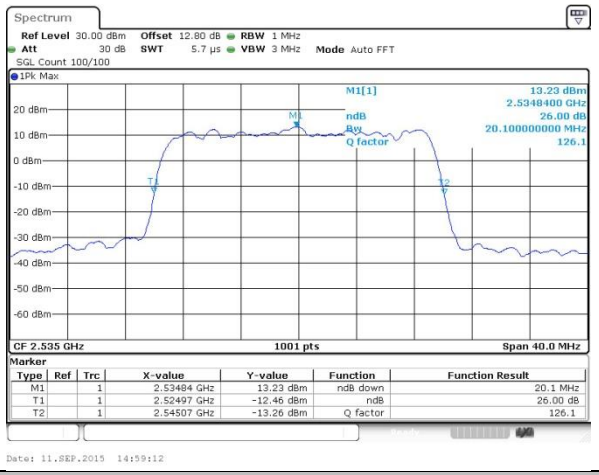
Lowest Channel / 20MHz / 16QAM



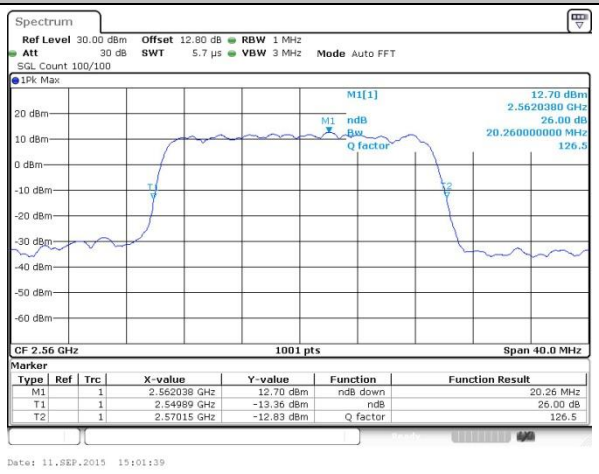
Middle Channel / 20MHz / QPSK



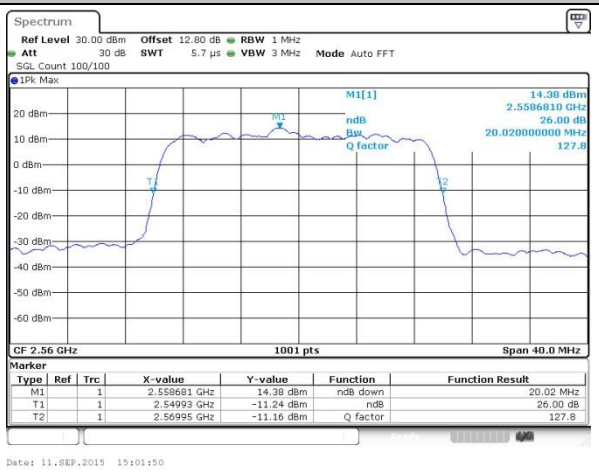
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM

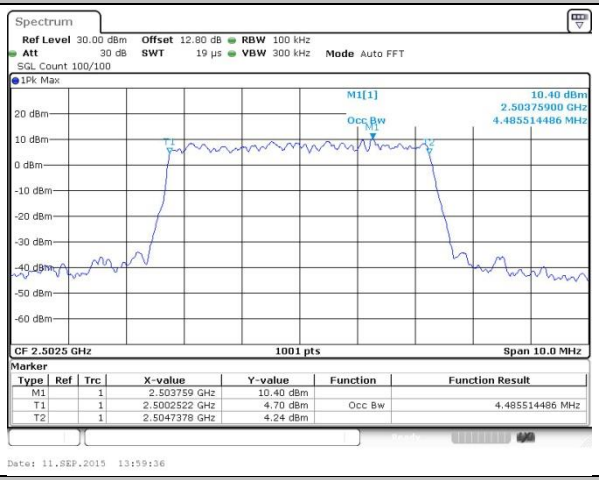


Occupied Bandwidth

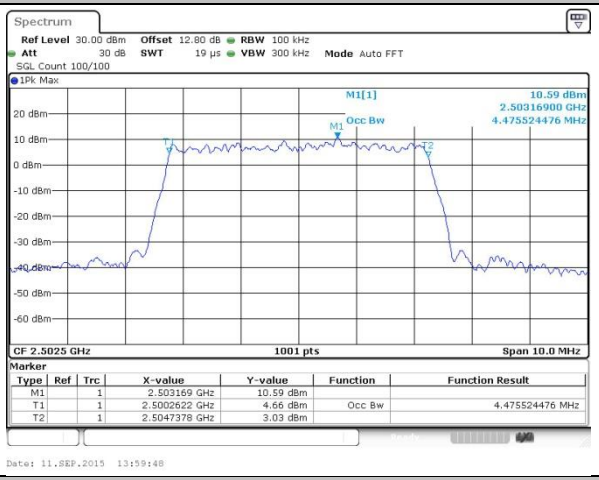
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.49	4.48	9.01	8.99	13.43	13.46	18.3	18.3
Middle CH	-	-	-	-	4.49	4.48	9.11	9.01	13.46	13.4	18.34	18.3
Highest CH	-	-	-	-	4.5	4.47	9.01	8.97	13.46	13.43	18.22	18.38

LTE Band 7

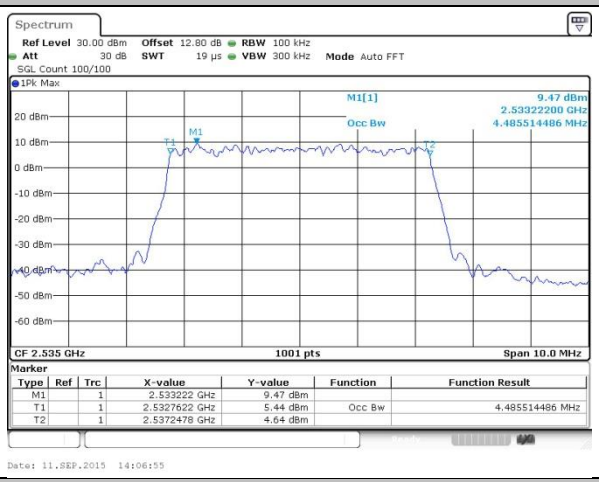
Lowest Channel / 5MHz / QPSK



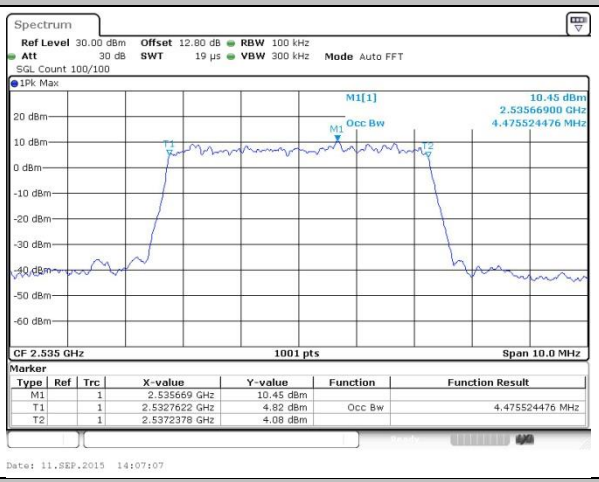
Lowest Channel / 5MHz / 16QAM



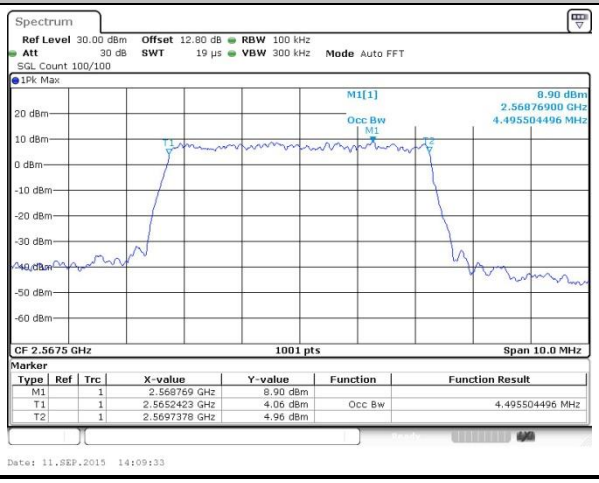
Middle Channel / 5MHz / QPSK



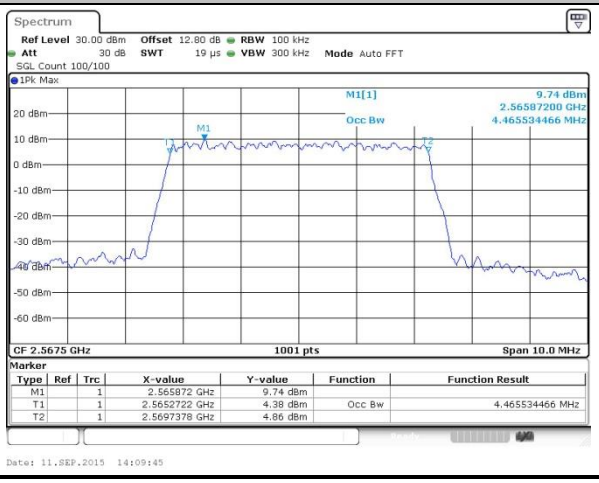
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

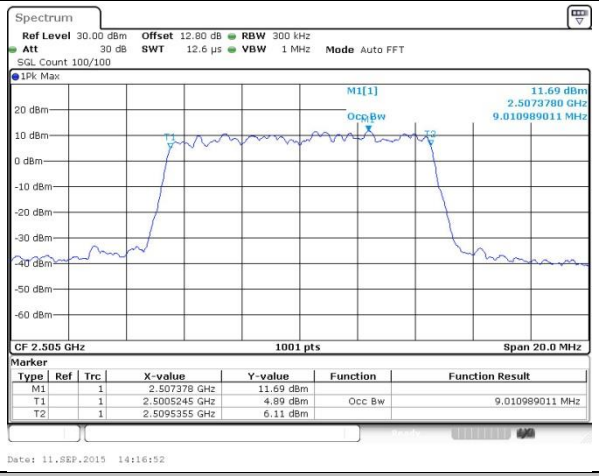


Highest Channel / 5MHz / 16QAM

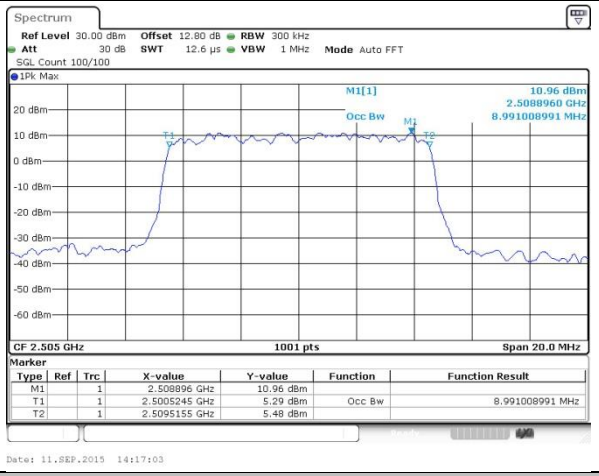


LTE Band 7

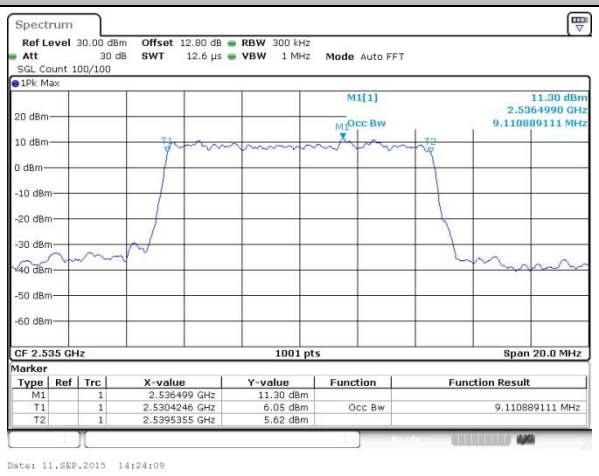
Lowest Channel / 10MHz / QPSK



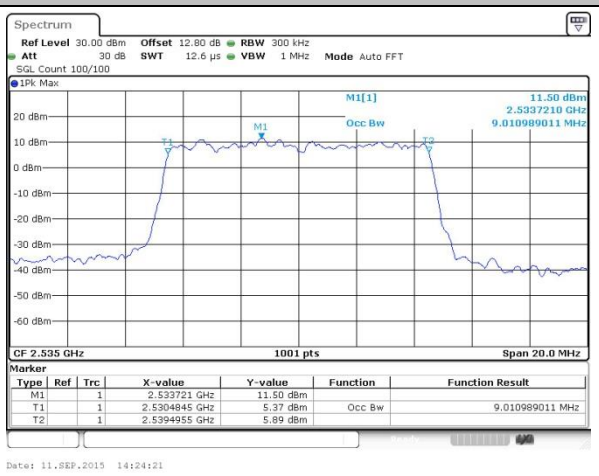
Lowest Channel / 10MHz / 16QAM



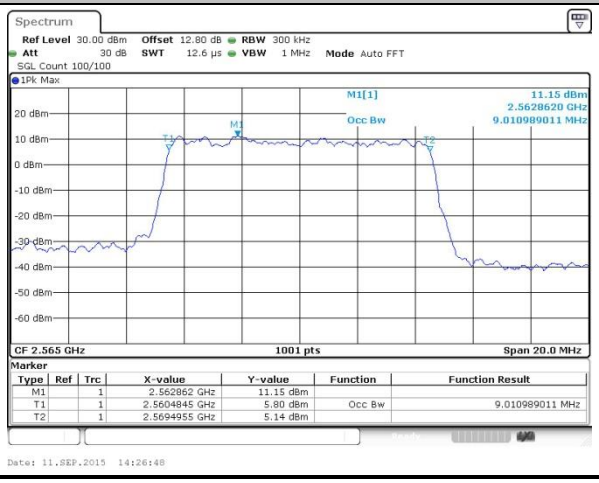
Middle Channel / 10MHz / QPSK



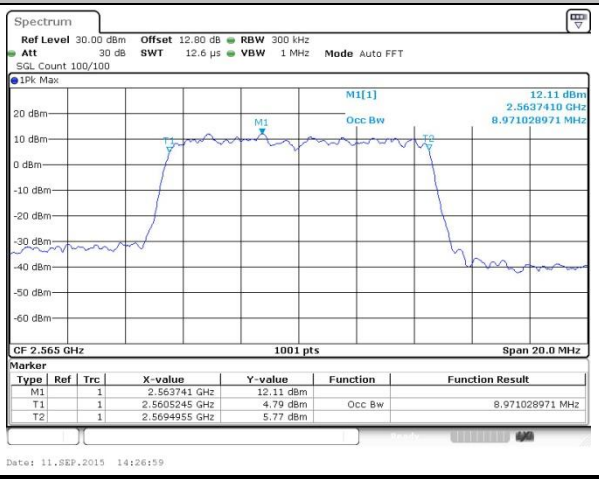
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

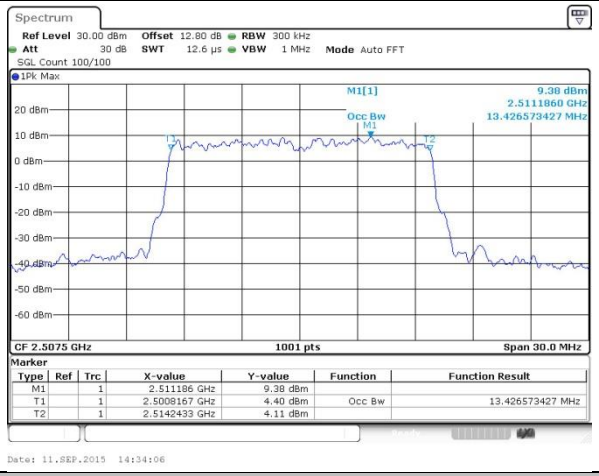


Highest Channel / 10MHz / 16QAM

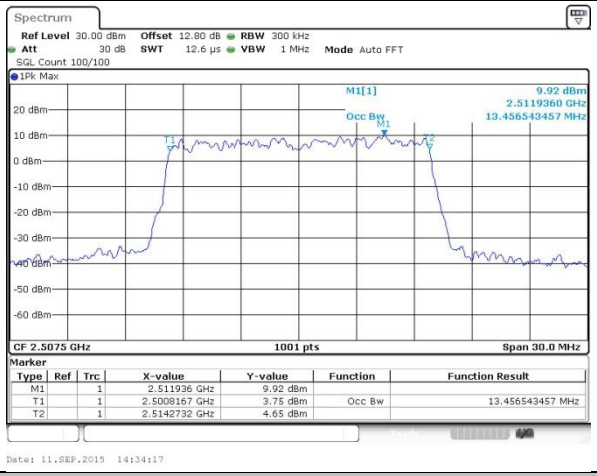


LTE Band 7

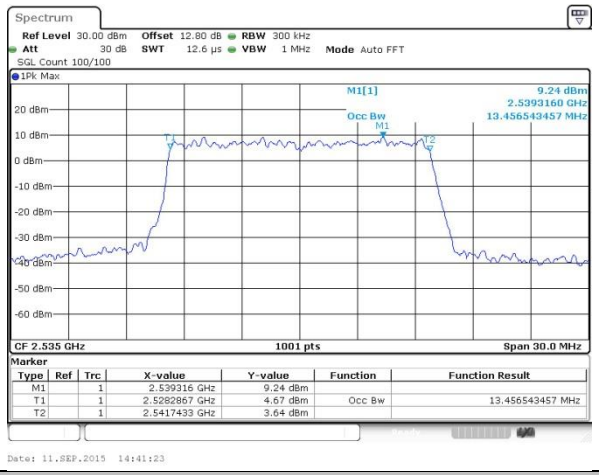
Lowest Channel / 15MHz / QPSK



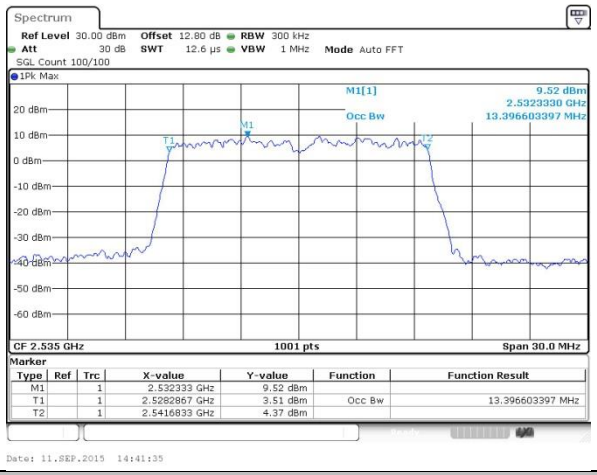
Lowest Channel / 15MHz / 16QAM



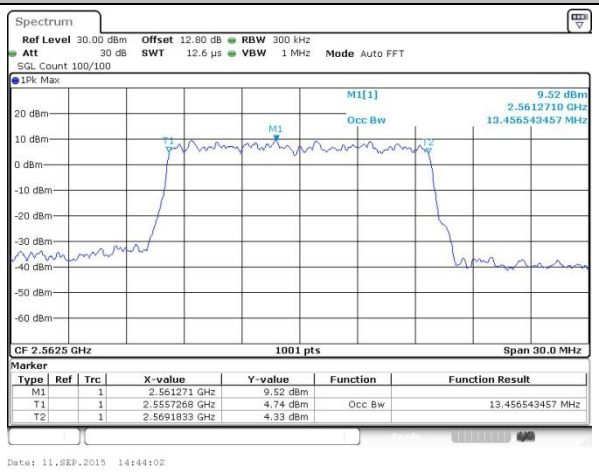
Middle Channel / 15MHz / QPSK



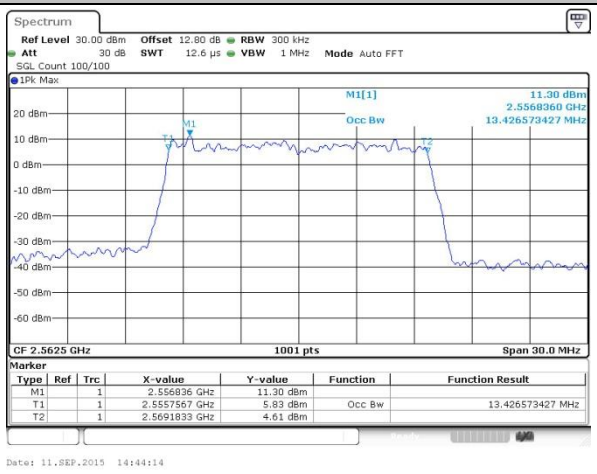
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

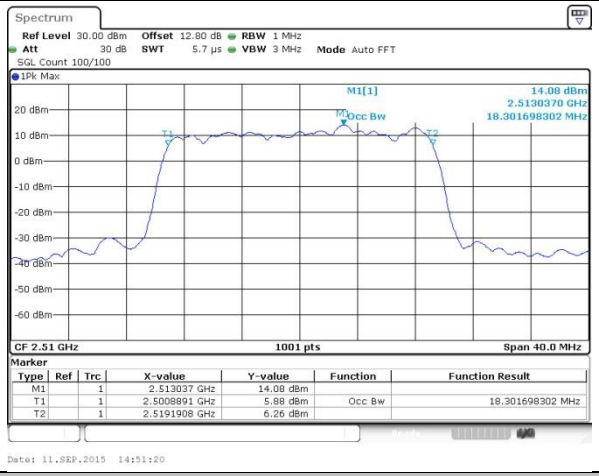


Highest Channel / 15MHz / 16QAM

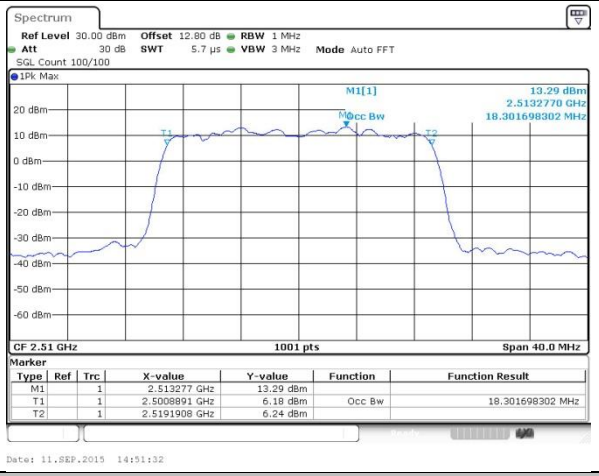


LTE Band 7

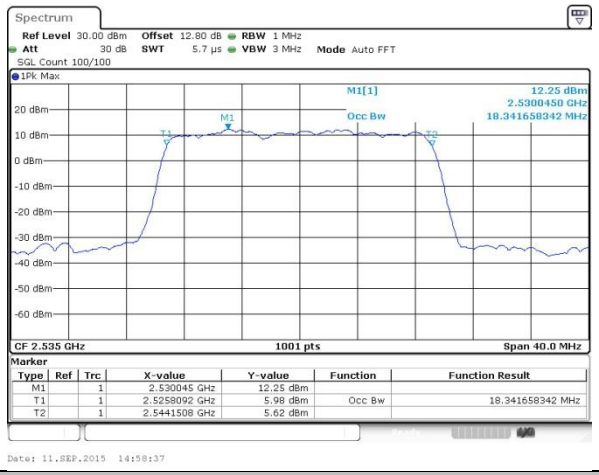
Lowest Channel / 20MHz / QPSK



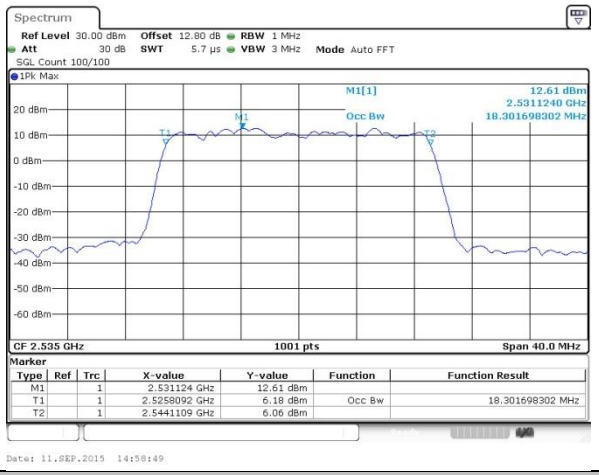
Lowest Channel / 20MHz / 16QAM



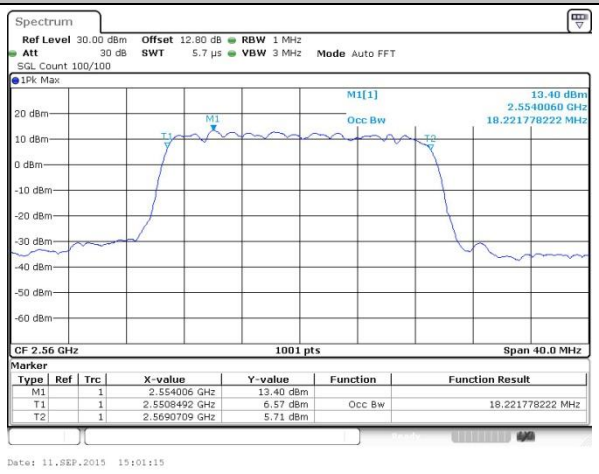
Middle Channel / 20MHz / QPSK



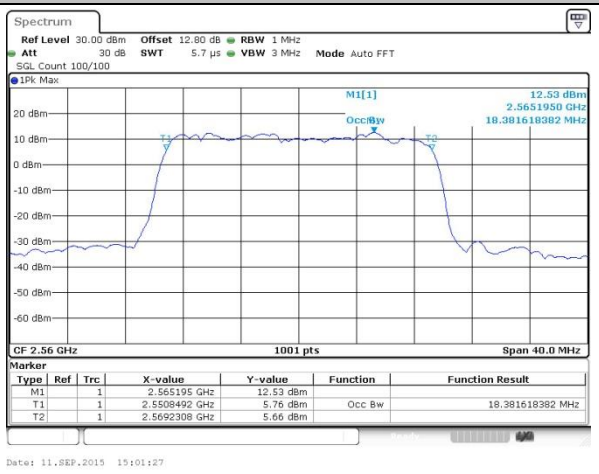
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



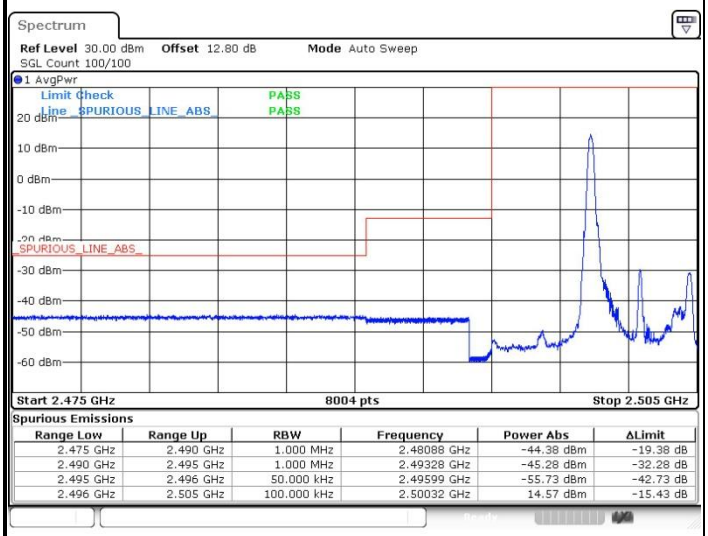
Highest Channel / 20MHz / 16QAM



Conducted Band Edge

LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB

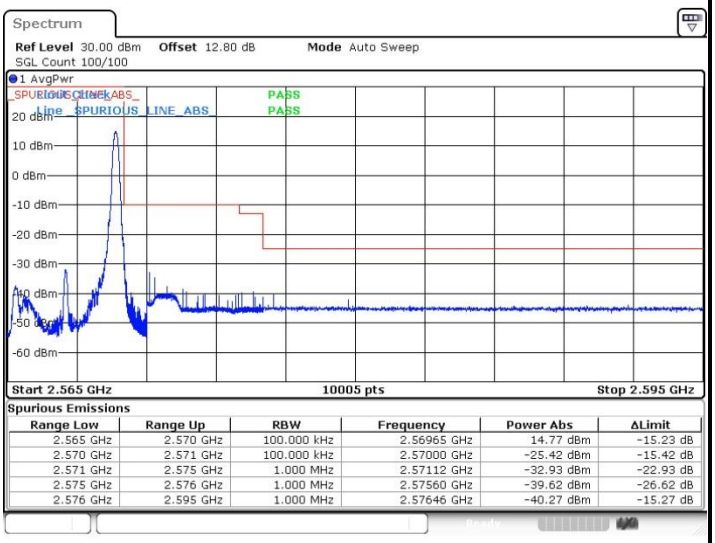


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48088 GHz	-44.38 dBm	-19.38 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49328 GHz	-45.28 dBm	-32.28 dB
2.495 GHz	2.496 GHz	50.000 kHz	2.49599 GHz	-55.73 dBm	-42.73 dB
2.496 GHz	2.505 GHz	100.000 kHz	2.50032 GHz	14.57 dBm	-15.43 dB

Date: 11.SEP.2015 14:01:21

Highest Band Edge / 1 RB

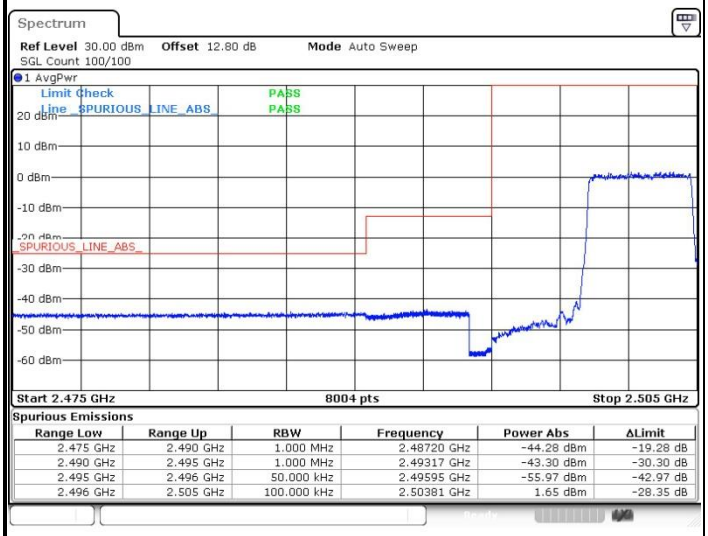


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56965 GHz	14.77 dBm	-15.23 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-25.42 dBm	-15.42 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57112 GHz	-32.93 dBm	-22.93 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57560 GHz	-39.62 dBm	-26.62 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57646 GHz	-40.27 dBm	-15.27 dB

Date: 11.SEP.2015 14:11:18

Lowest Band Edge / Full RB

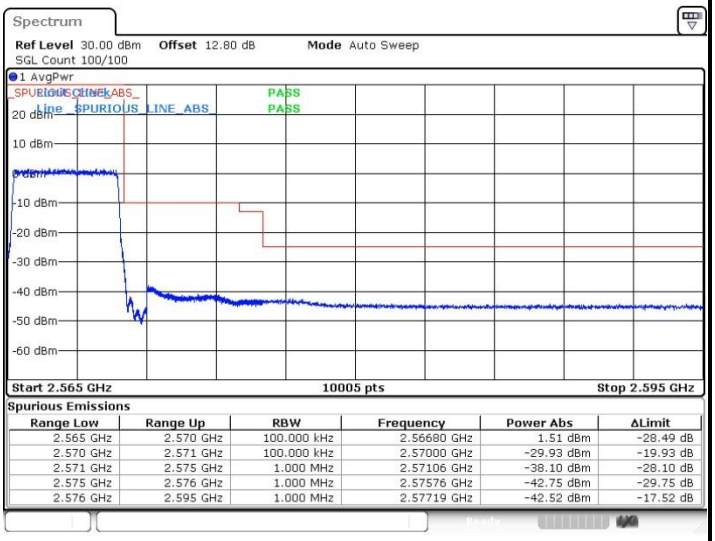


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48720 GHz	-44.28 dBm	-19.28 dB
2.490 GHz	2.495 GHz	1.000 MHz	2.49317 GHz	-43.30 dBm	-30.30 dB
2.495 GHz	2.496 GHz	50.000 kHz	2.49595 GHz	-55.97 dBm	-42.97 dB
2.496 GHz	2.505 GHz	100.000 kHz	2.50381 GHz	1.65 dBm	-28.35 dB

Date: 11.SEP.2015 14:03:41

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56680 GHz	1.51 dBm	-28.49 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-29.93 dBm	-19.93 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57106 GHz	-38.10 dBm	-28.10 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57576 GHz	-42.75 dBm	-29.75 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57719 GHz	-42.52 dBm	-17.52 dB

Date: 11.SEP.2015 14:13:39