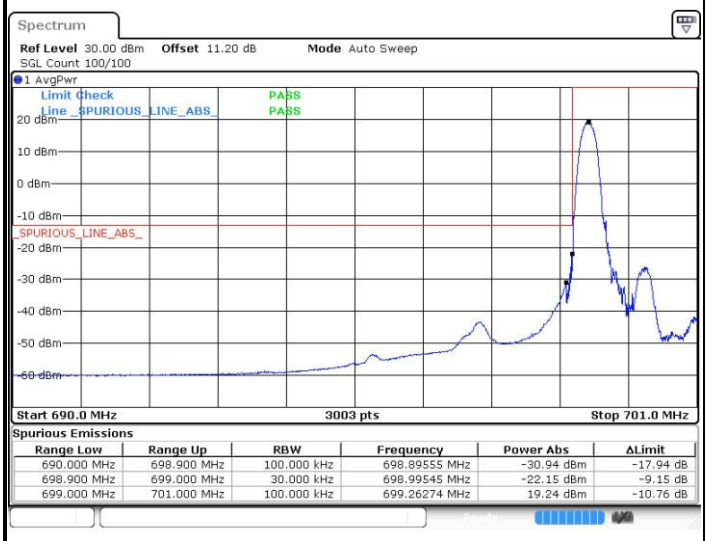
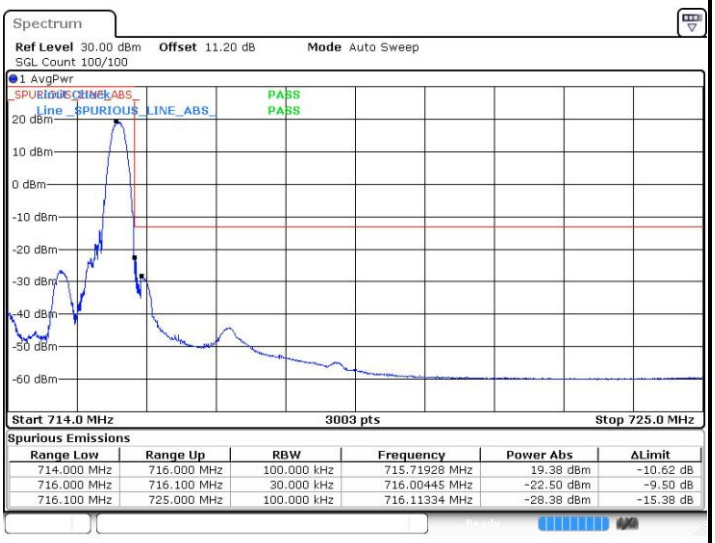
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



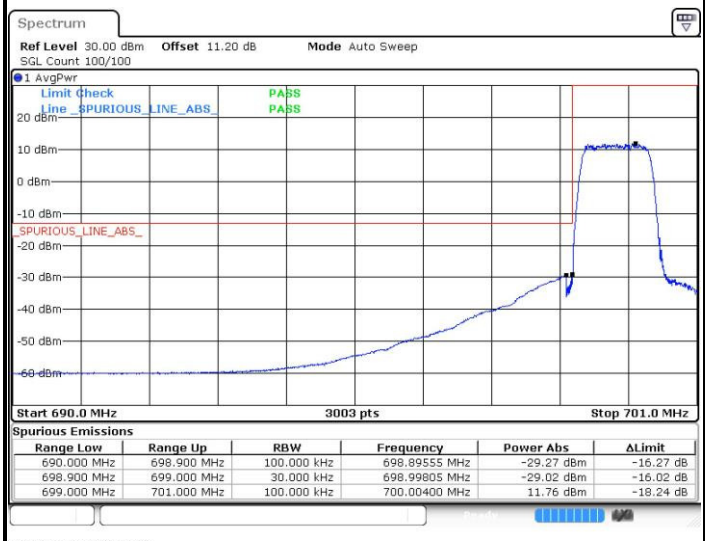
Date: 9.FEB.2016 10:22:41

Highest Band Edge / 1 RB



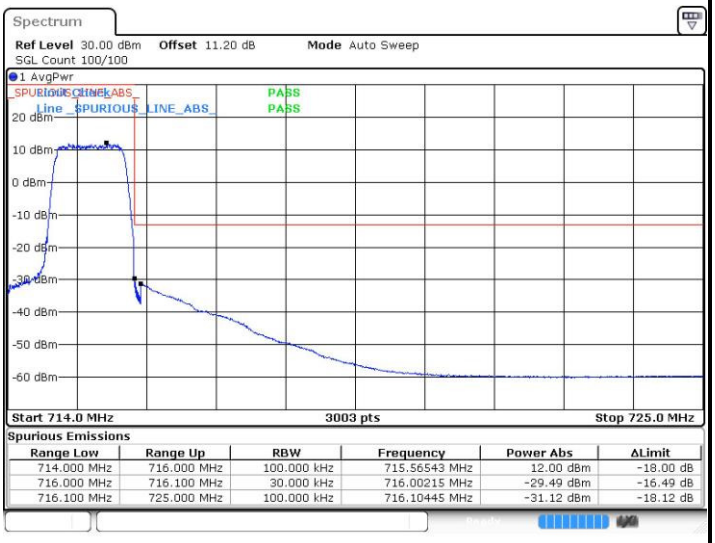
Date: 9.FEB.2016 10:35:53

Lowest Band Edge / Full RB

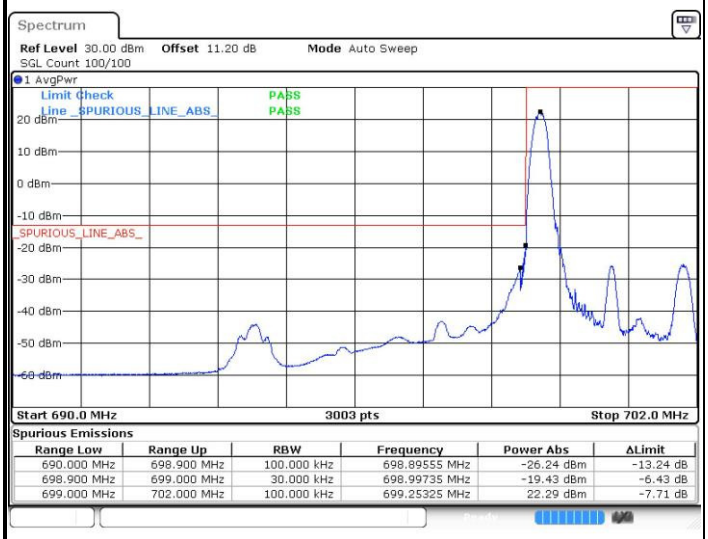
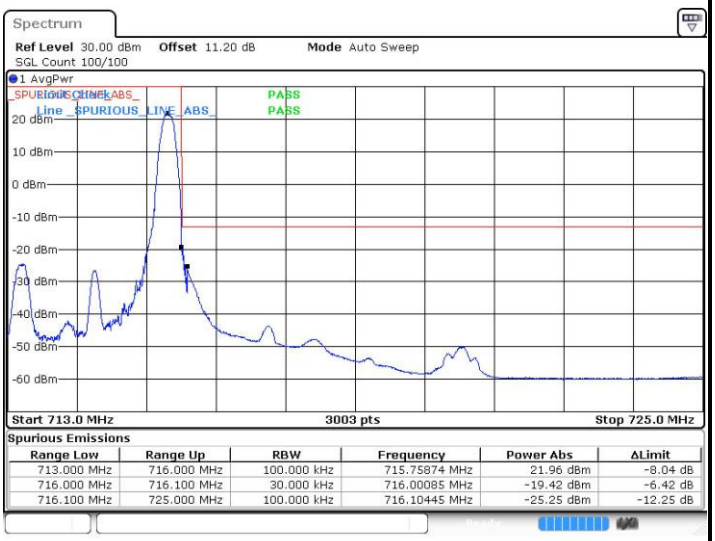
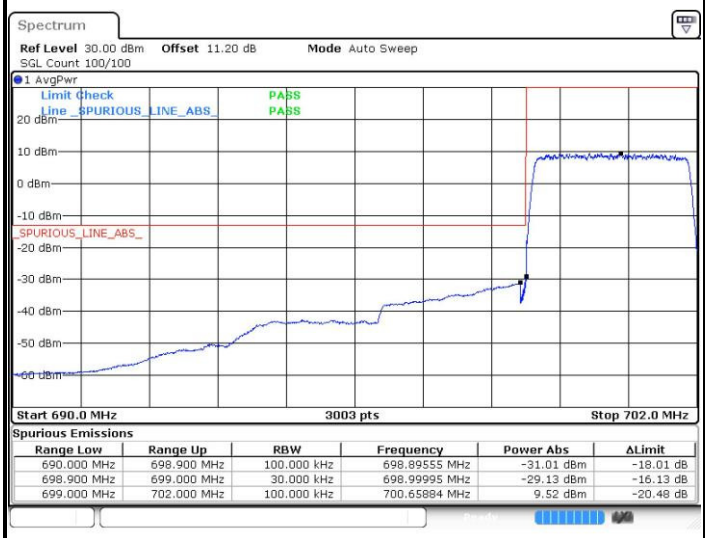
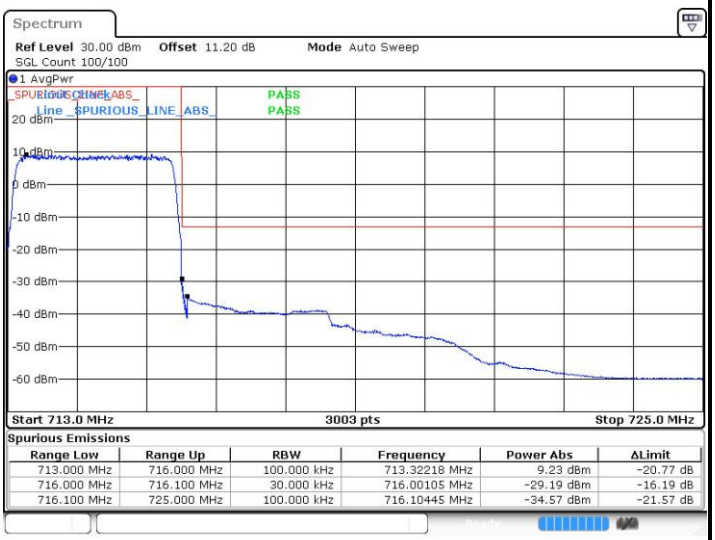


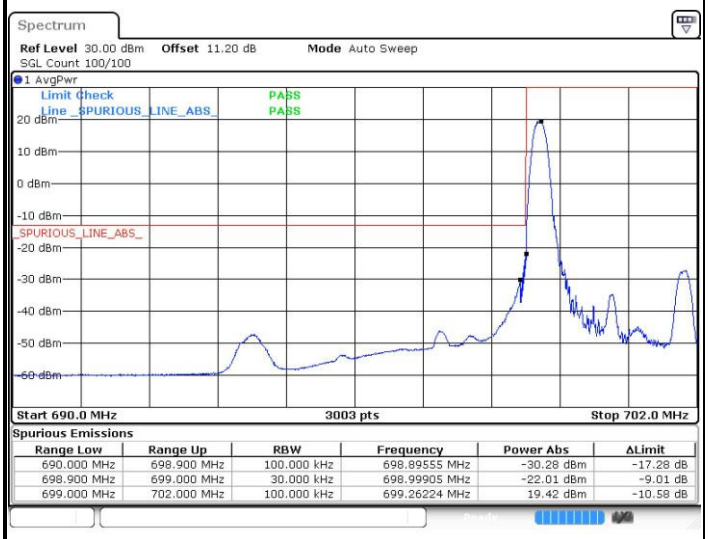
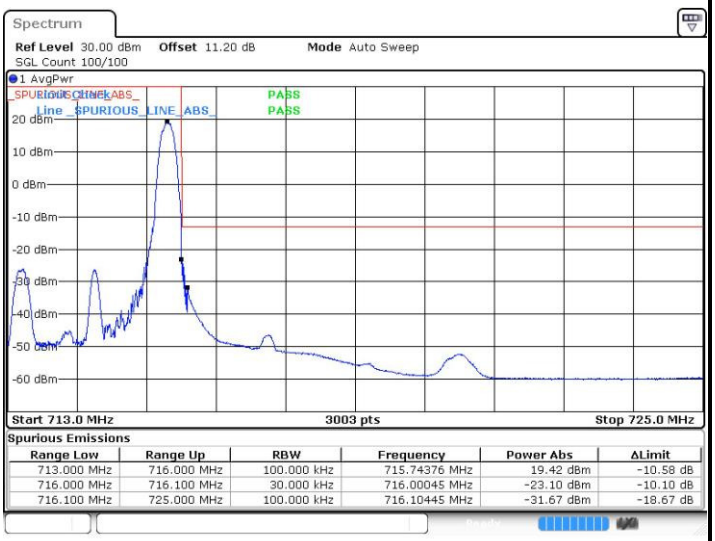
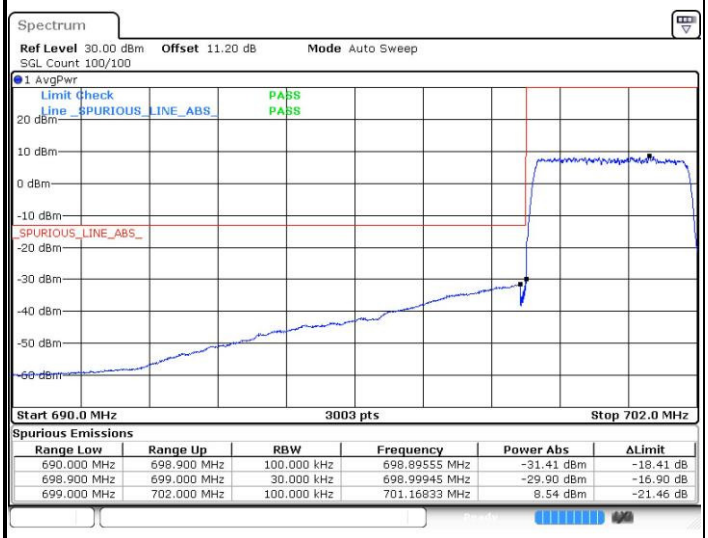
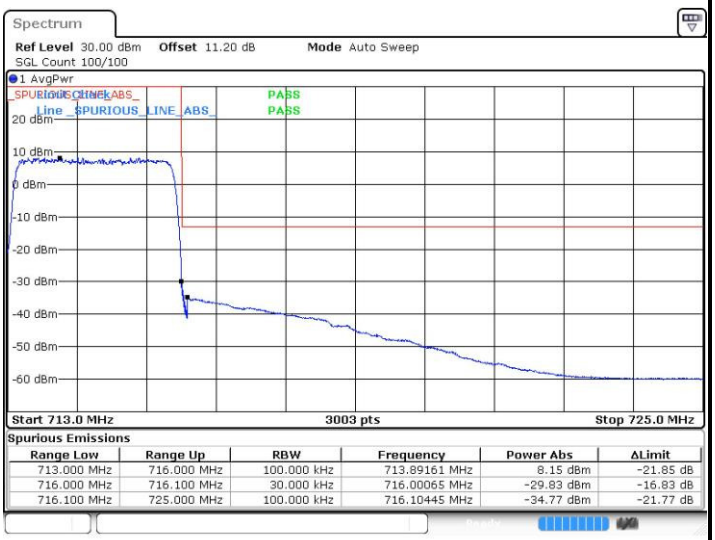
Date: 9.FEB.2016 10:20:39

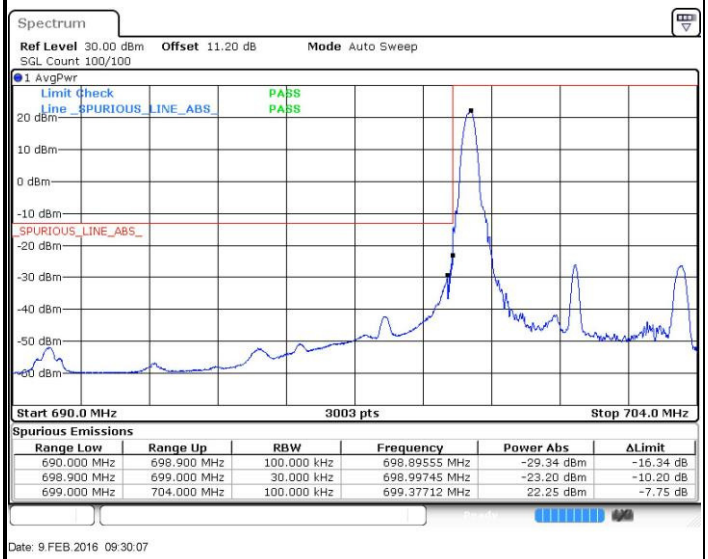
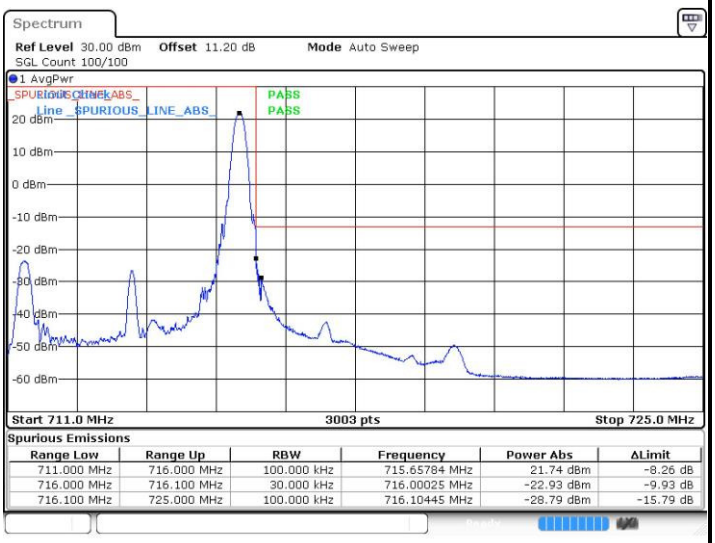
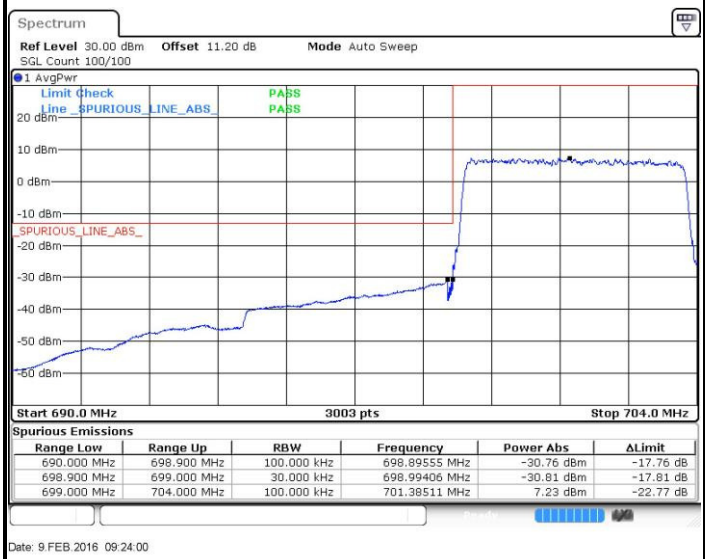
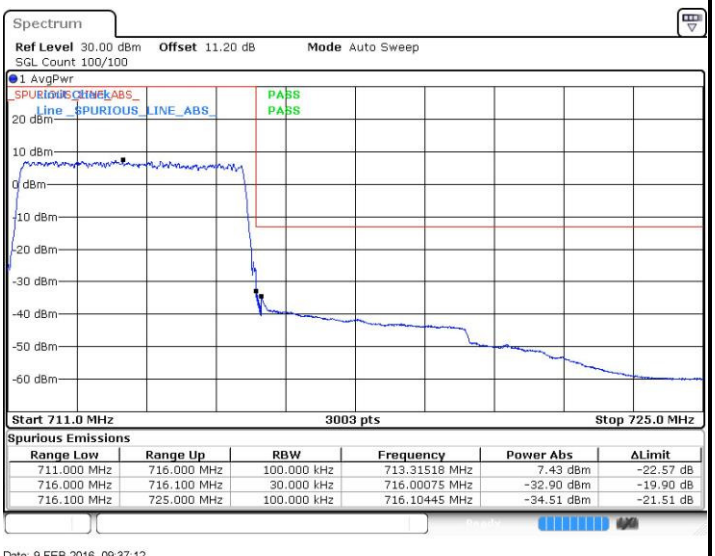
Highest Band Edge / Full RB

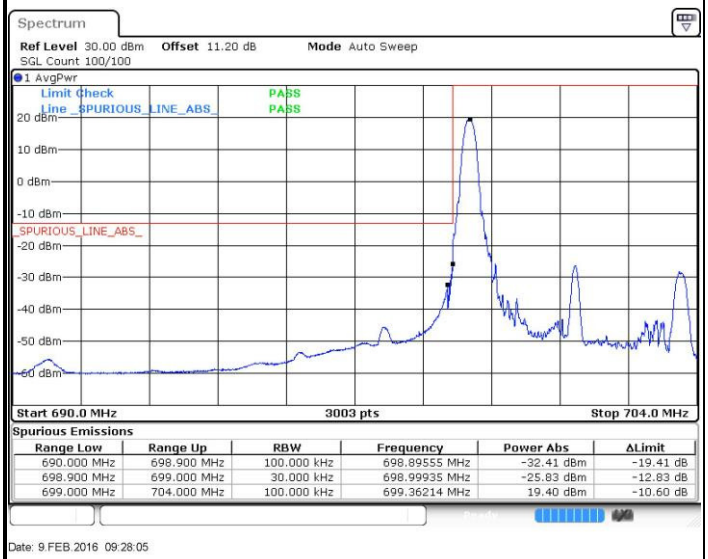
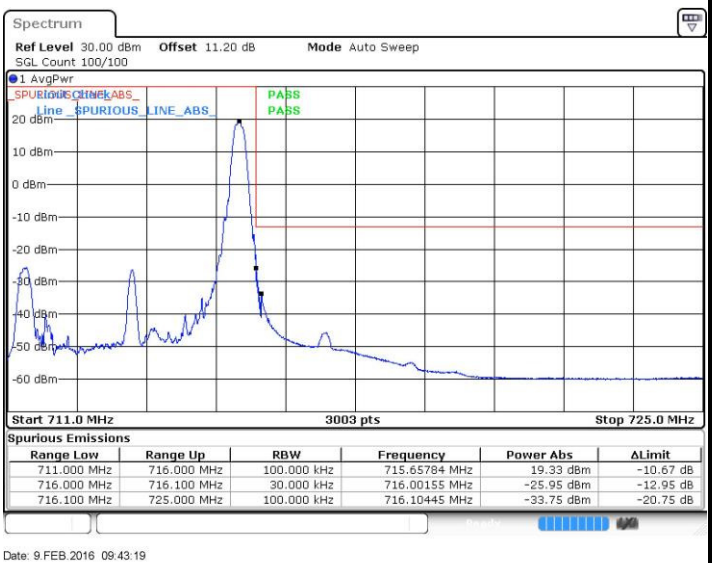
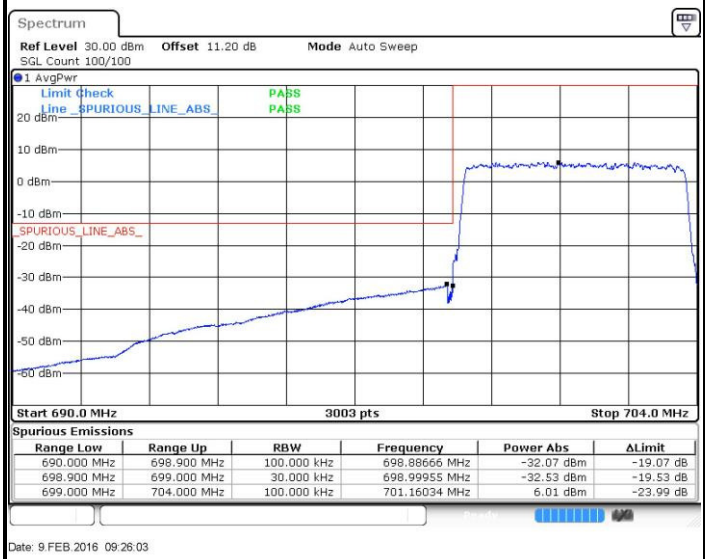
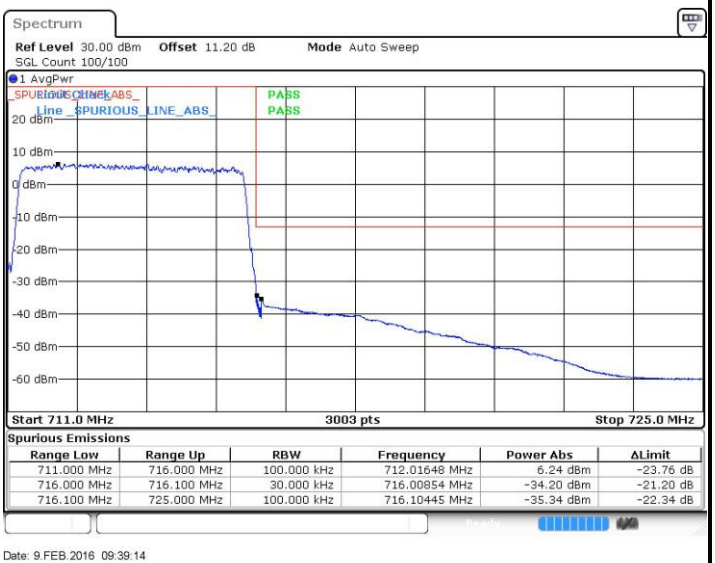


Date: 9.FEB.2016 10:33:50

LTE Band 12 / 3MHz / QPSK	
Lowest Band Edge / 1RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 12 / 3MHz / 16QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 12 / 5MHz / QPSK	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 12 / 5MHz / 16QAM	
Lowest Band Edge / 1RB	**Highest Band Edge / 1 RB**
 Date: 9.FEB.2016 09:28:05	 Date: 9.FEB.2016 09:43:19
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
 Date: 9.FEB.2016 09:26:03	 Date: 9.FEB.2016 09:39:14

LTE Band 12 / 10MHz / QPSK	
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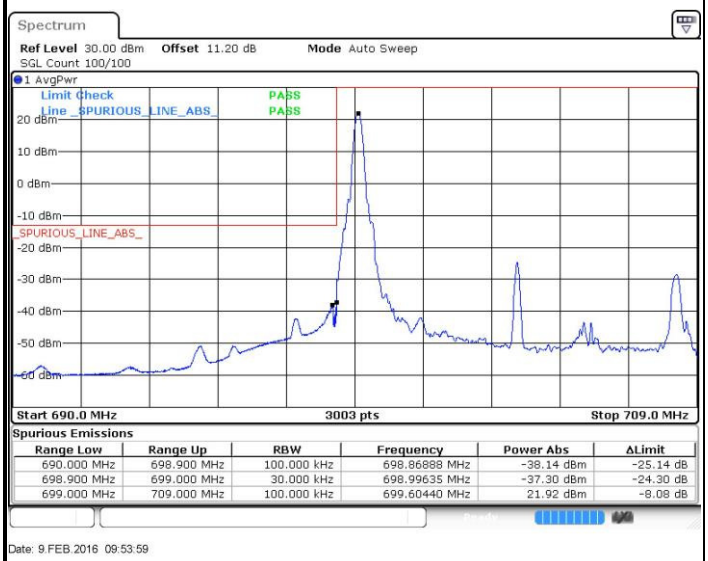
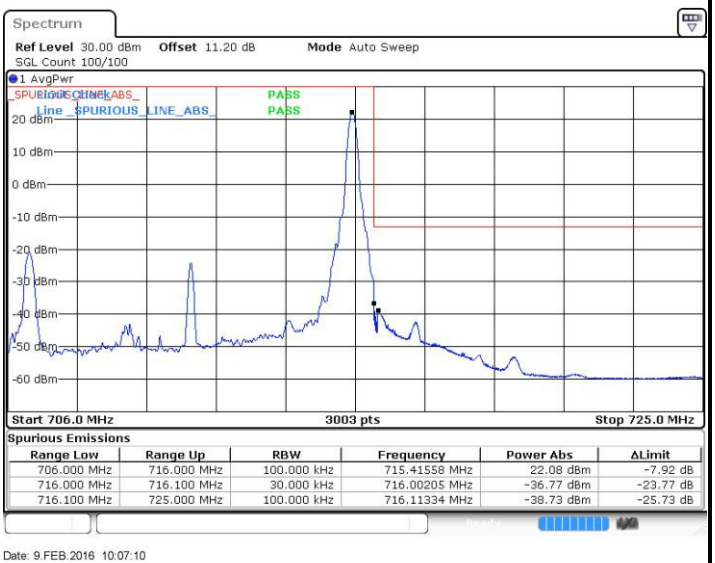
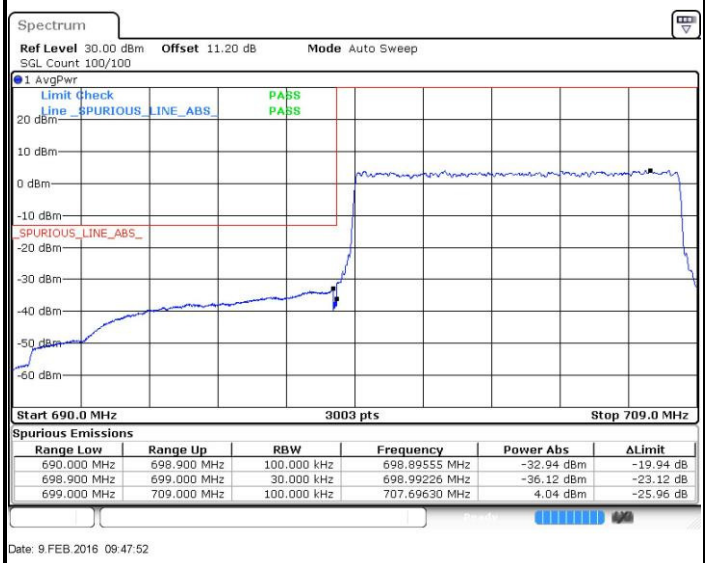
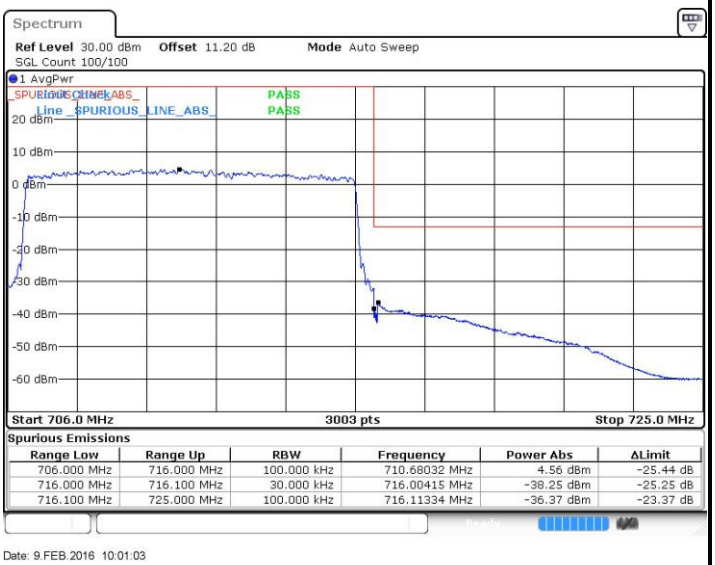
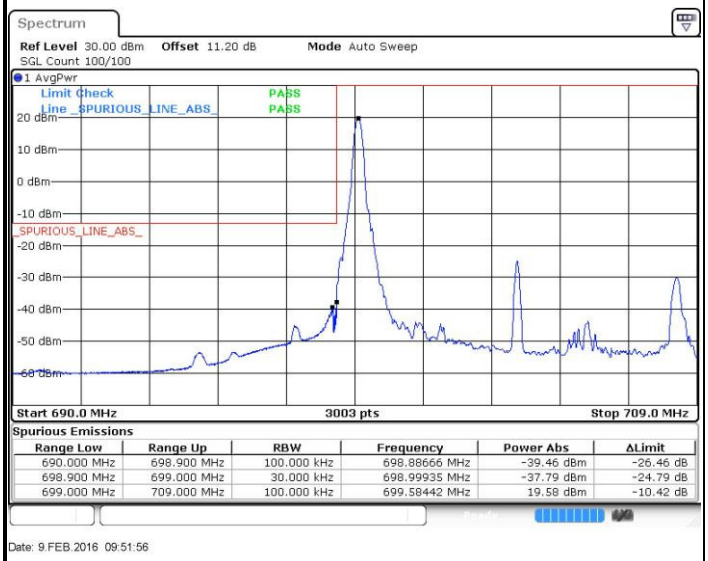
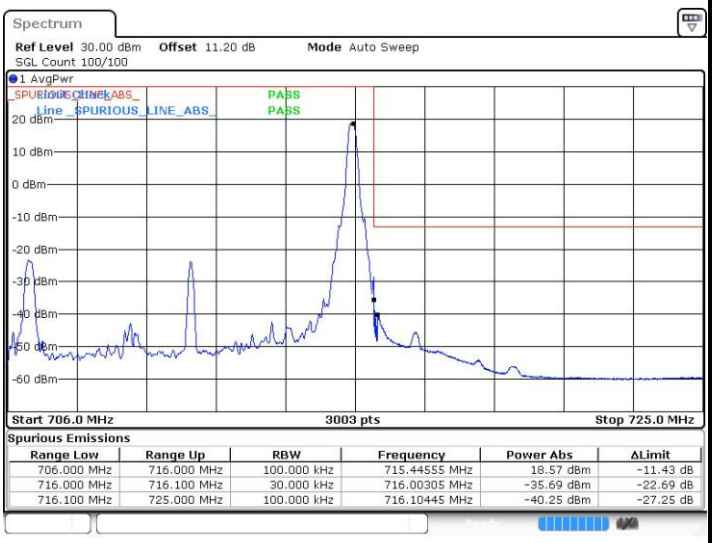
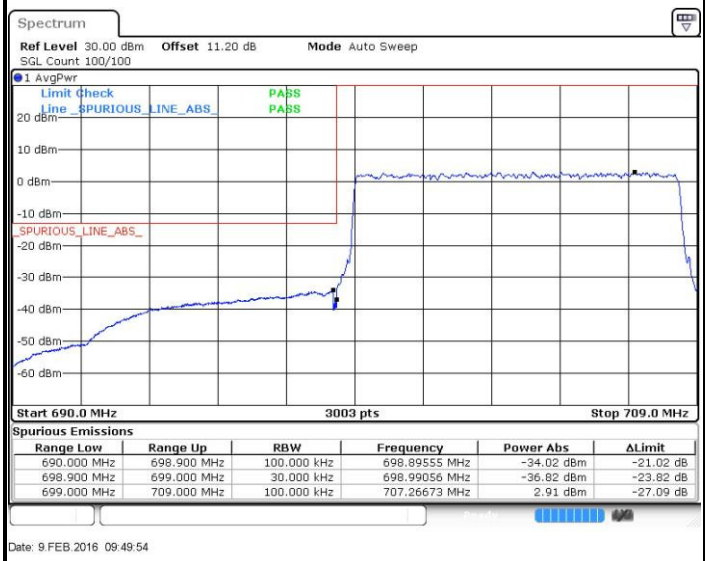
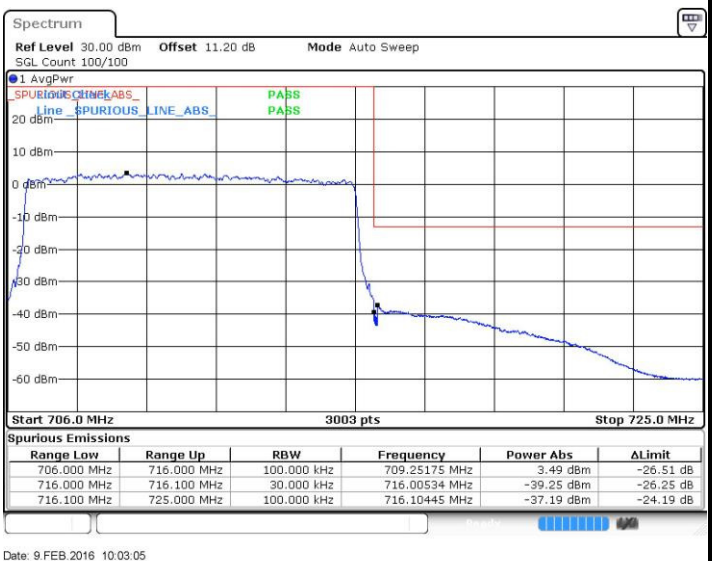
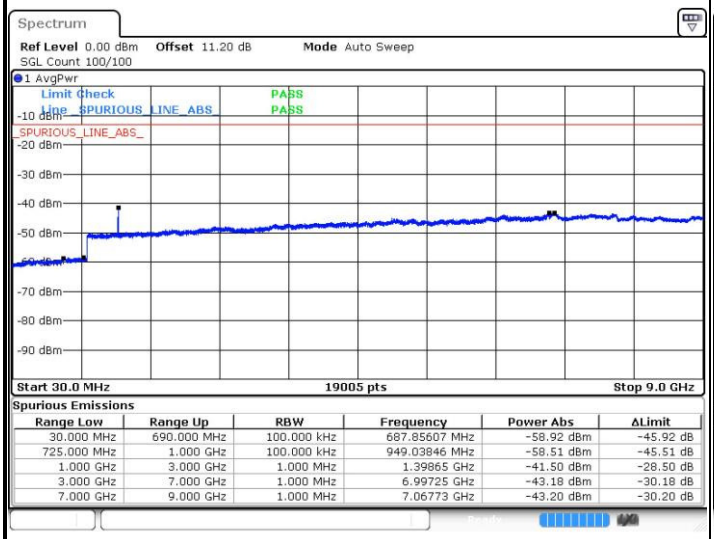
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 12 / 10MHz / 16QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

Conducted Spurious Emission

LTE Band 12 / 1.4MHz

Lowest Channel / QPSK

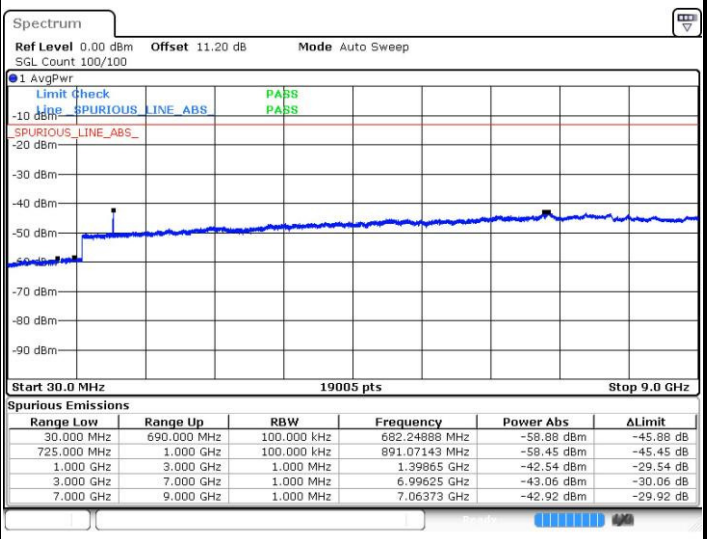


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	687.85607 MHz	-58.92 dBm	-45.92 dB
725.000 MHz	1.000 GHz	100.000 kHz	949.03846 MHz	-58.51 dBm	-45.51 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39865 GHz	-41.50 dBm	-28.50 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99725 GHz	-43.18 dBm	-30.18 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06773 GHz	-43.20 dBm	-30.20 dB

Date: 9.FEB.2016 10:25:39

Lowest Channel / 16QAM

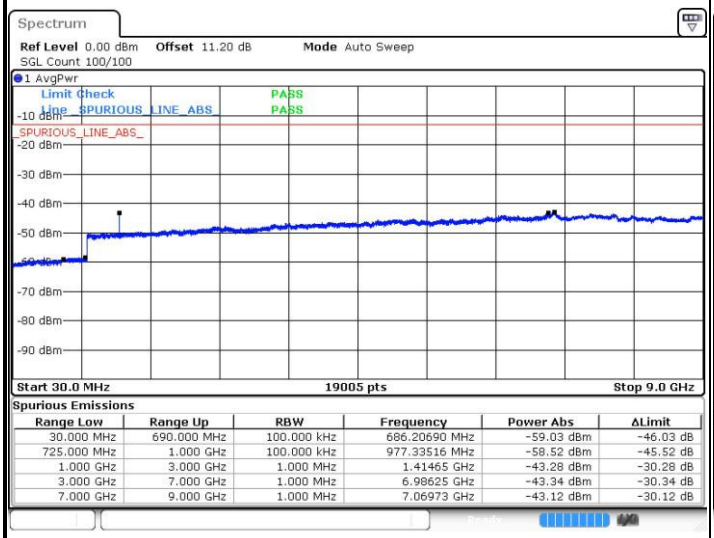


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	682.24888 MHz	-58.88 dBm	-45.88 dB
725.000 MHz	1.000 GHz	100.000 kHz	891.07143 MHz	-58.45 dBm	-45.45 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39865 GHz	-42.54 dBm	-29.54 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99625 GHz	-43.06 dBm	-30.06 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06373 GHz	-42.92 dBm	-29.92 dB

Date: 9.FEB.2016 10:26:33

Middle Channel / QPSK

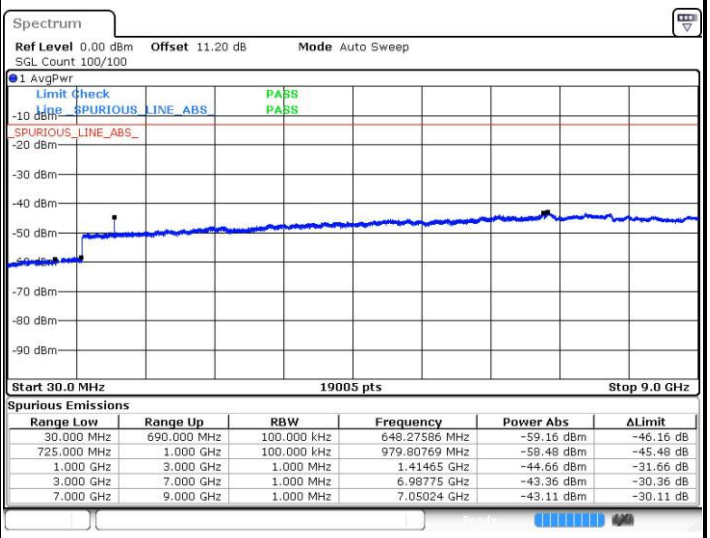


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	686.20690 MHz	-59.03 dBm	-46.03 dB
725.000 MHz	1.000 GHz	100.000 kHz	977.33516 MHz	-58.52 dBm	-45.52 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41465 GHz	-43.28 dBm	-30.28 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98625 GHz	-43.34 dBm	-30.34 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06973 GHz	-43.12 dBm	-30.12 dB

Date: 9.FEB.2016 10:29:04

Middle Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	648.27586 MHz	-59.16 dBm	-46.16 dB
725.000 MHz	1.000 GHz	100.000 kHz	979.80769 MHz	-58.48 dBm	-45.48 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41465 GHz	-44.66 dBm	-31.66 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98775 GHz	-43.36 dBm	-30.36 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05024 GHz	-43.11 dBm	-30.11 dB

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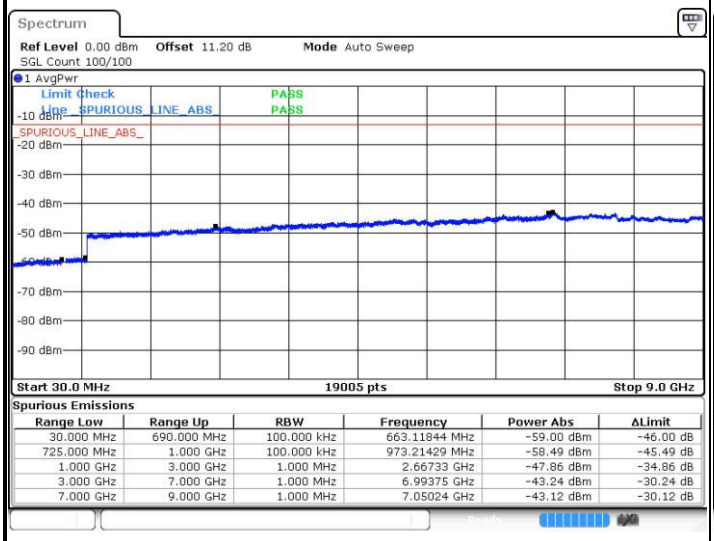
LTE Band 12 / 1.4MHz

Highest Channel / QPSK

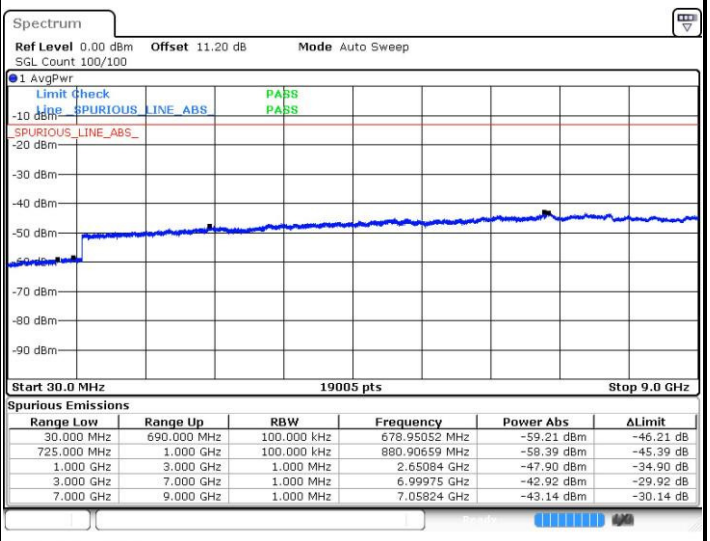


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	663.11844 MHz	-59.00 dBm	-46.00 dB
725.000 MHz	1.000 GHz	100.000 kHz	973.21429 MHz	-58.49 dBm	-45.49 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.66733 GHz	-47.86 dBm	-34.86 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99375 GHz	-43.24 dBm	-30.24 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05024 GHz	-43.12 dBm	-30.12 dB

Date: 9.FEB.2016 10:38:50

Highest Channel / 16QAM



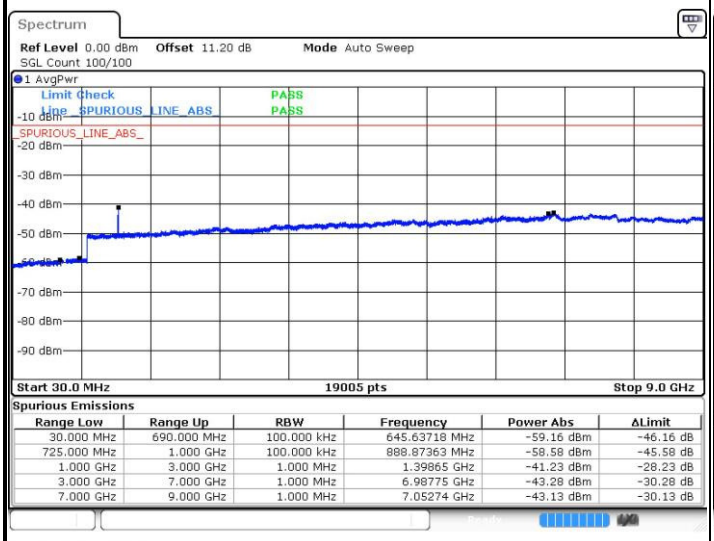
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	678.95052 MHz	-59.21 dBm	-46.21 dB
725.000 MHz	1.000 GHz	100.000 kHz	880.90659 MHz	-58.39 dBm	-45.39 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.65084 GHz	-47.90 dBm	-34.90 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99975 GHz	-42.92 dBm	-29.92 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05824 GHz	-43.14 dBm	-30.14 dB

Date: 9.FEB.2016 10:39:44

LTE Band 12 / 3MHz

Lowest Channel / QPSK

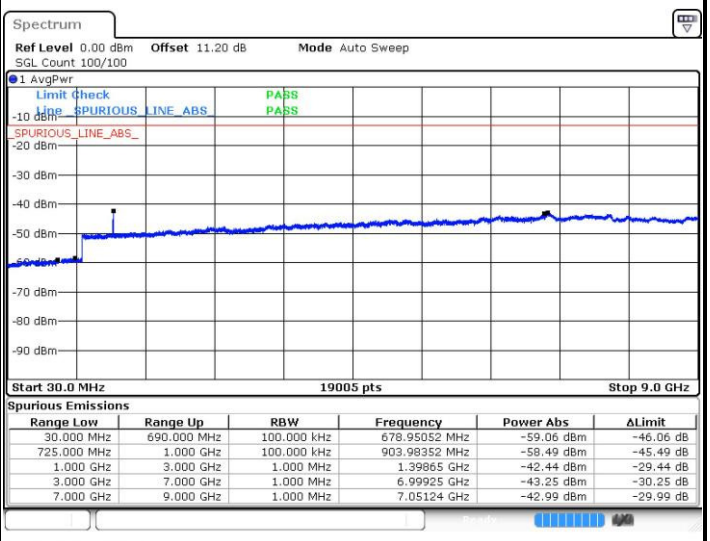


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	645.63718 MHz	-59.16 dBm	-46.16 dB
725.000 MHz	1.000 GHz	100.000 kHz	888.87363 MHz	-58.58 dBm	-45.58 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39865 GHz	-41.23 dBm	-28.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98775 GHz	-43.28 dBm	-30.28 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05274 GHz	-43.13 dBm	-30.13 dB

Date: 9.FEB.2016 09:07:11

Lowest Channel / 16QAM



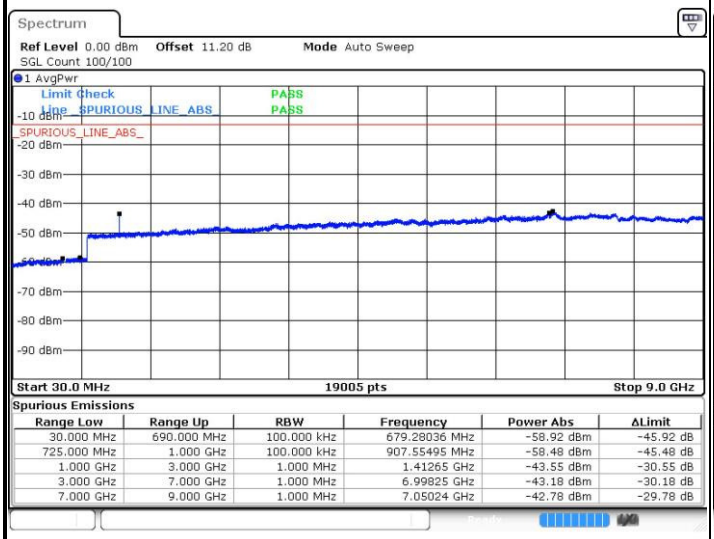
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	678.95052 MHz	-59.06 dBm	-46.06 dB
725.000 MHz	1.000 GHz	100.000 kHz	903.98352 MHz	-58.49 dBm	-45.49 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39865 GHz	-42.44 dBm	-29.44 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99925 GHz	-43.25 dBm	-30.25 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05124 GHz	-42.99 dBm	-29.99 dB

Date: 9.FEB.2016 09:08:05

LTE Band 12 / 3MHz

Middle Channel / QPSK

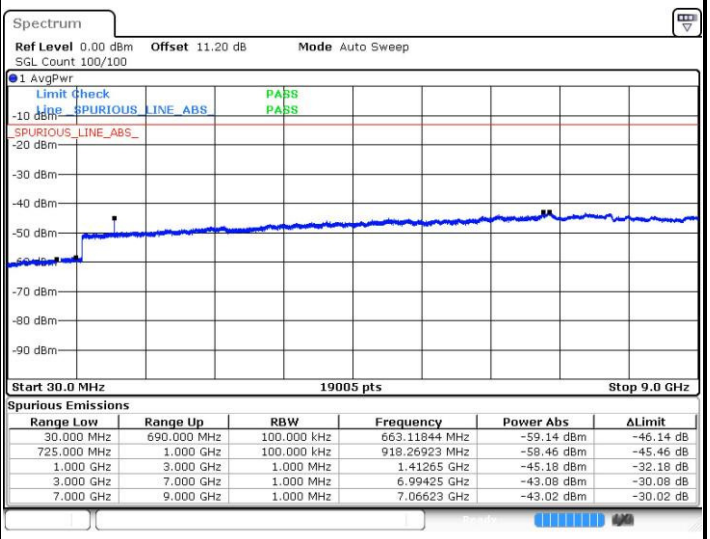


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	679.28036 MHz	-58.92 dBm	-45.92 dB
725.000 MHz	1.000 GHz	100.000 kHz	907.55495 MHz	-58.48 dBm	-45.48 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41265 GHz	-43.55 dBm	-30.55 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99825 GHz	-43.18 dBm	-30.18 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05024 GHz	-42.78 dBm	-29.78 dB

Date: 9.FEB.2016 09:10:36

Middle Channel / 16QAM

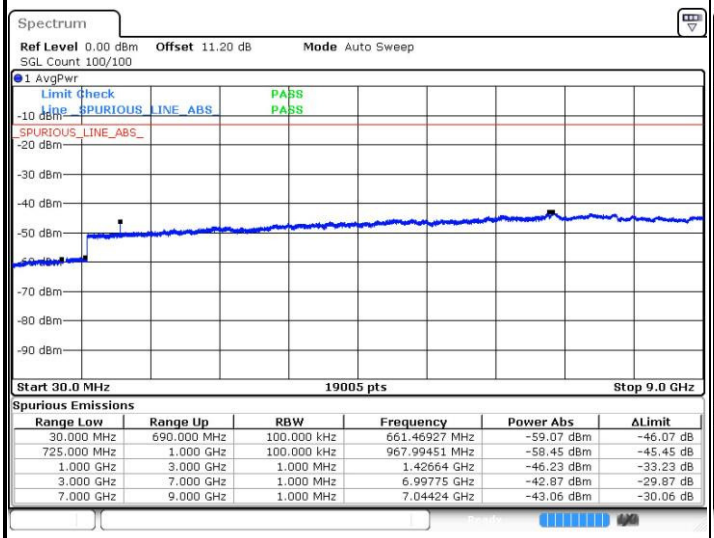


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	663.11844 MHz	-59.14 dBm	-46.14 dB
725.000 MHz	1.000 GHz	100.000 kHz	918.26923 MHz	-58.46 dBm	-45.46 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41265 GHz	-45.18 dBm	-32.18 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99425 GHz	-43.08 dBm	-30.08 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06623 GHz	-43.02 dBm	-30.02 dB

Date: 9.FEB.2016 09:09:42

Highest Channel / QPSK

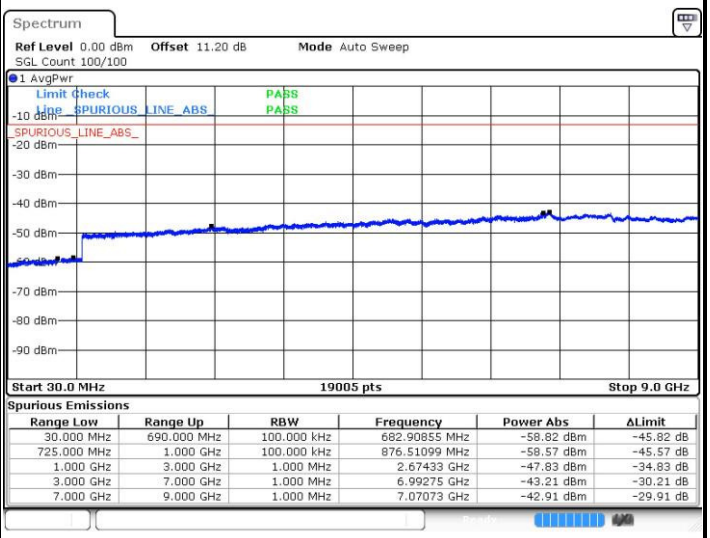


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	661.46927 MHz	-59.07 dBm	-46.07 dB
725.000 MHz	1.000 GHz	100.000 kHz	967.99451 MHz	-58.45 dBm	-45.45 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42664 GHz	-46.23 dBm	-33.23 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99775 GHz	-42.87 dBm	-29.87 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.04424 GHz	-43.06 dBm	-30.06 dB

Date: 9.FEB.2016 09:20:22

Highest Channel / 16QAM



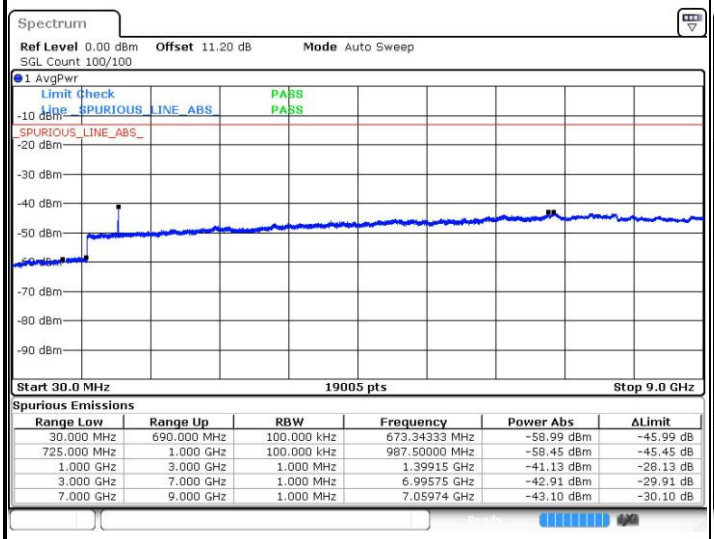
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	682.90855 MHz	-58.82 dBm	-45.82 dB
725.000 MHz	1.000 GHz	100.000 kHz	876.51099 MHz	-58.57 dBm	-45.57 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.67433 GHz	-47.83 dBm	-34.83 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99275 GHz	-43.21 dBm	-30.21 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.07073 GHz	-42.91 dBm	-29.91 dB

Date: 9.FEB.2016 09:21:16

LTE Band 12 / 5MHz

Lowest Channel / QPSK

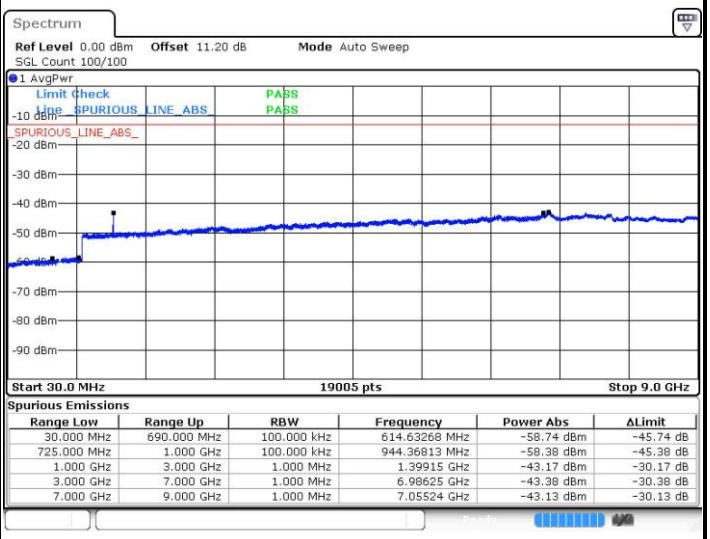


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	673.34333 MHz	-58.99 dBm	-45.99 dB
725.000 MHz	1.000 GHz	100.000 kHz	987.50000 MHz	-58.45 dBm	-45.45 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39915 GHz	-41.13 dBm	-28.13 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99575 GHz	-42.91 dBm	-29.91 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05974 GHz	-43.10 dBm	-30.10 dB

Date: 9.FEB.2016 09:31:02

Lowest Channel / 16QAM

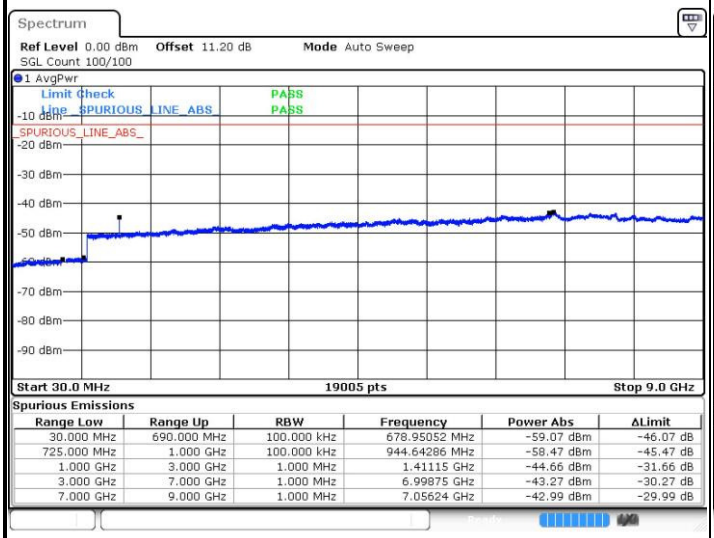


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	614.63268 MHz	-58.74 dBm	-45.74 dB
725.000 MHz	1.000 GHz	100.000 kHz	944.36813 MHz	-58.38 dBm	-45.38 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39915 GHz	-43.17 dBm	-30.17 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98625 GHz	-43.38 dBm	-30.38 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05524 GHz	-43.13 dBm	-30.13 dB

Date: 9.FEB.2016 09:31:57

Middle Channel / QPSK

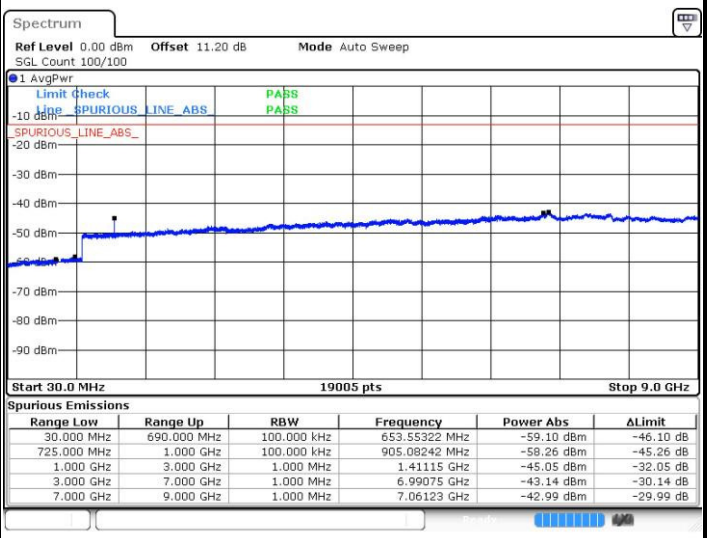


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	678.95052 MHz	-59.07 dBm	-46.07 dB
725.000 MHz	1.000 GHz	100.000 kHz	944.64286 MHz	-58.47 dBm	-45.47 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41115 GHz	-44.66 dBm	-31.66 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99875 GHz	-43.27 dBm	-30.27 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05624 GHz	-42.99 dBm	-29.99 dB

Date: 9.FEB.2016 09:34:28

Middle Channel / 16QAM



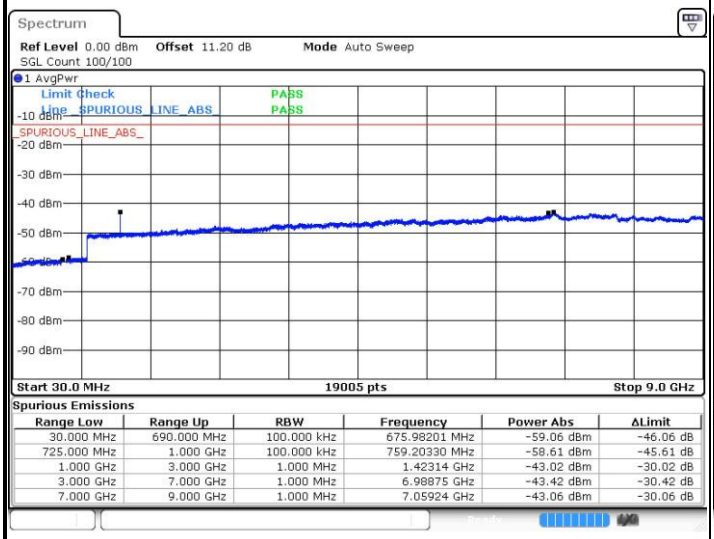
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	653.55322 MHz	-59.10 dBm	-46.10 dB
725.000 MHz	1.000 GHz	100.000 kHz	905.08242 MHz	-58.26 dBm	-45.26 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41115 GHz	-45.05 dBm	-32.05 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-43.14 dBm	-30.14 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06123 GHz	-42.99 dBm	-29.99 dB

Date: 9.FEB.2016 09:33:33

LTE Band 12 / 5MHz

Highest Channel / QPSK

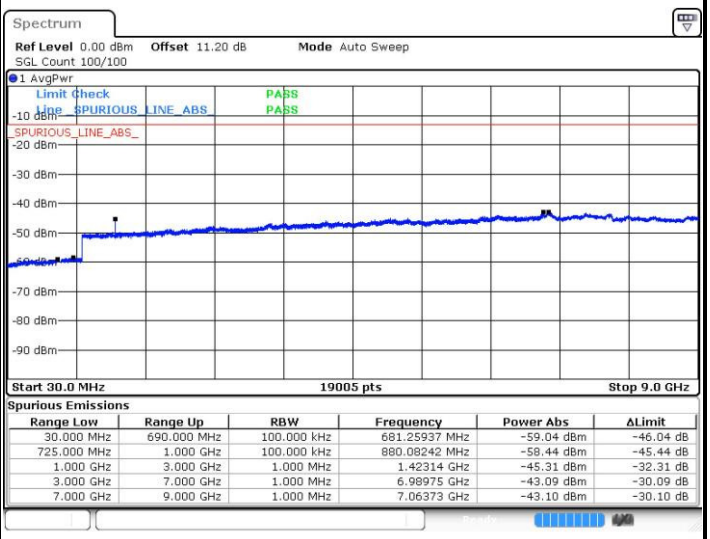


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	675.98201 MHz	-59.06 dBm	-46.06 dB
725.000 MHz	1.000 GHz	100.000 kHz	759.20330 MHz	-58.61 dBm	-45.61 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-43.02 dBm	-30.02 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98875 GHz	-43.42 dBm	-30.42 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05924 GHz	-43.06 dBm	-30.06 dB

Date: 9.FEB.2016 09:45:08

Highest Channel / 16QAM



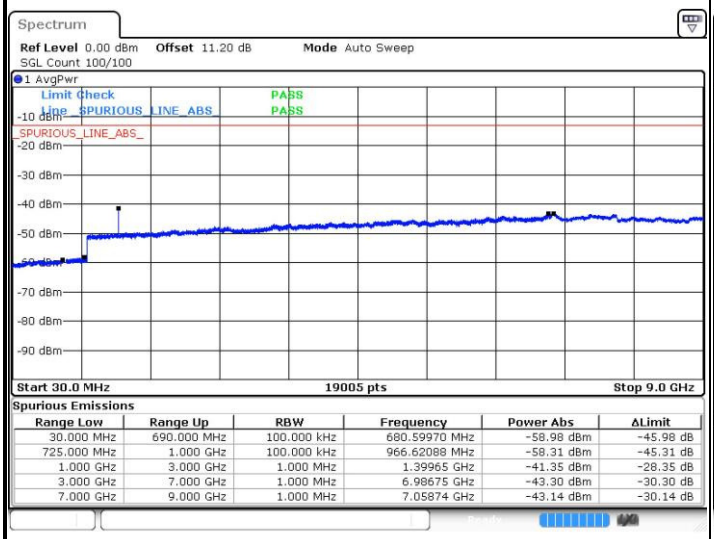
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	681.25937 MHz	-59.04 dBm	-46.04 dB
725.000 MHz	1.000 GHz	100.000 kHz	880.08242 MHz	-58.44 dBm	-45.44 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-45.31 dBm	-32.31 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98975 GHz	-43.09 dBm	-30.09 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06373 GHz	-43.10 dBm	-30.10 dB

Date: 9.FEB.2016 09:44:14

LTE Band 12 / 10MHz

Lowest Channel / QPSK

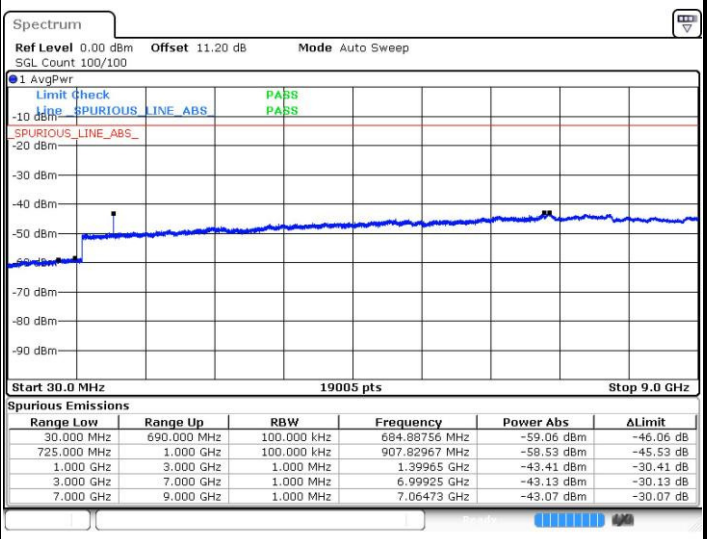


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	680.59970 MHz	-58.98 dBm	-45.98 dB
725.000 MHz	1.000 GHz	100.000 kHz	966.62088 MHz	-58.31 dBm	-45.31 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-41.35 dBm	-28.35 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98675 GHz	-43.30 dBm	-30.30 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05874 GHz	-43.14 dBm	-30.14 dB

Date: 9.FEB.2016 09:54:54

Lowest Channel / 16QAM



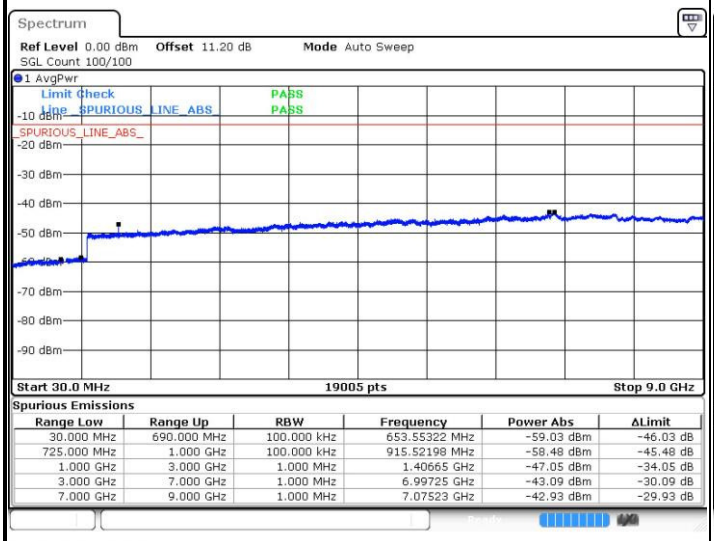
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	684.88756 MHz	-59.06 dBm	-46.06 dB
725.000 MHz	1.000 GHz	100.000 kHz	907.82967 MHz	-58.53 dBm	-45.53 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-43.41 dBm	-30.41 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99925 GHz	-43.13 dBm	-30.13 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06473 GHz	-43.07 dBm	-30.07 dB

Date: 9.FEB.2016 09:55:48

LTE Band 12 / 10MHz

Middle Channel / QPSK

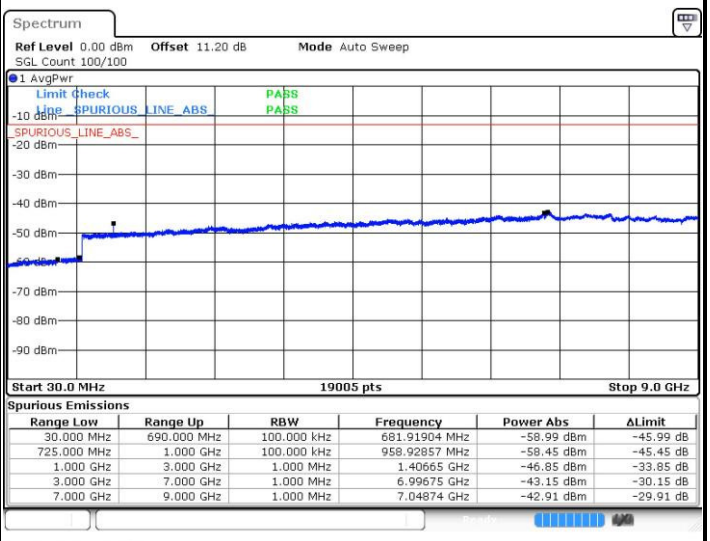


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	653.55322 MHz	-59.03 dBm	-46.03 dB
725.000 MHz	1.000 GHz	100.000 kHz	915.52198 MHz	-58.48 dBm	-45.48 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.40665 GHz	-47.05 dBm	-34.05 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99725 GHz	-43.09 dBm	-30.09 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.07523 GHz	-42.93 dBm	-29.93 dB

Date: 9.FEB.2016 09:58:19

Middle Channel / 16QAM

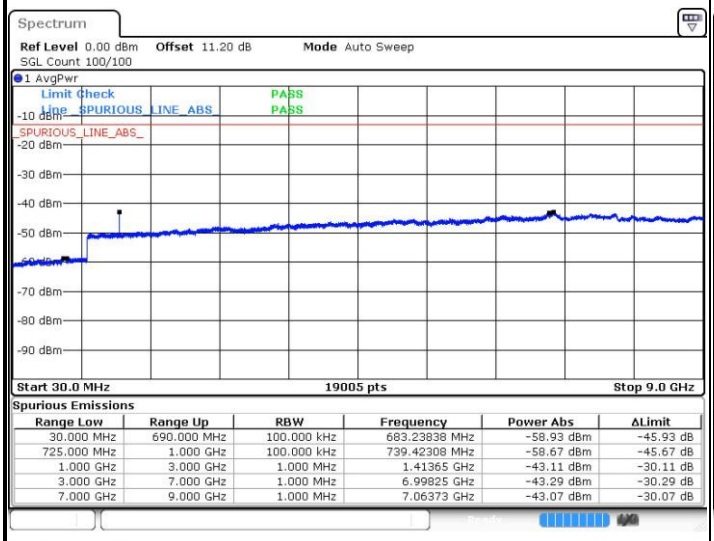


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	681.91904 MHz	-58.99 dBm	-45.99 dB
725.000 MHz	1.000 GHz	100.000 kHz	958.92857 MHz	-58.45 dBm	-45.45 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.40665 GHz	-46.85 dBm	-33.85 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99675 GHz	-43.15 dBm	-30.15 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.04874 GHz	-42.91 dBm	-29.91 dB

Date: 9.FEB.2016 09:57:25

Highest Channel / QPSK

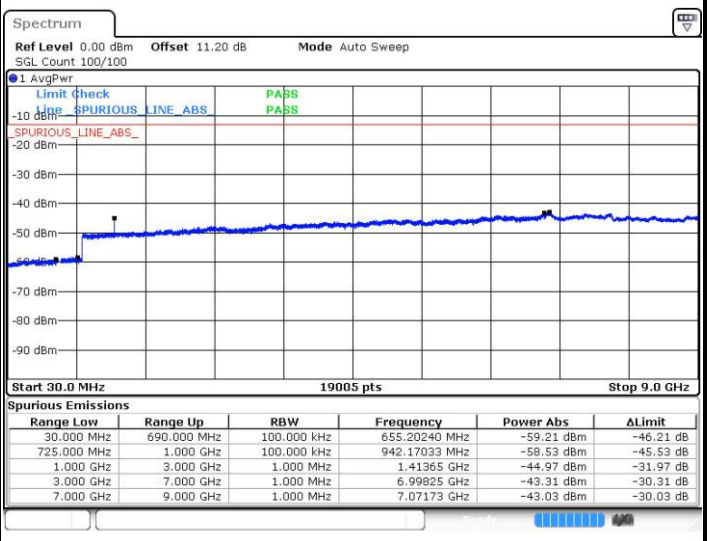


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	683.23838 MHz	-58.93 dBm	-45.93 dB
725.000 MHz	1.000 GHz	100.000 kHz	739.42308 MHz	-58.67 dBm	-45.67 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41365 GHz	-43.11 dBm	-30.11 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99825 GHz	-43.29 dBm	-30.29 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.06373 GHz	-43.07 dBm	-30.07 dB

Date: 9.FEB.2016 10:08:05

Highest Channel / 16QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	655.20240 MHz	-59.21 dBm	-46.21 dB
725.000 MHz	1.000 GHz	100.000 kHz	942.17033 MHz	-58.53 dBm	-45.53 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41365 GHz	-44.97 dBm	-31.97 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99825 GHz	-43.31 dBm	-30.31 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.07173 GHz	-43.03 dBm	-30.03 dB

Date: 9.FEB.2016 10:08:59

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0044	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0042	

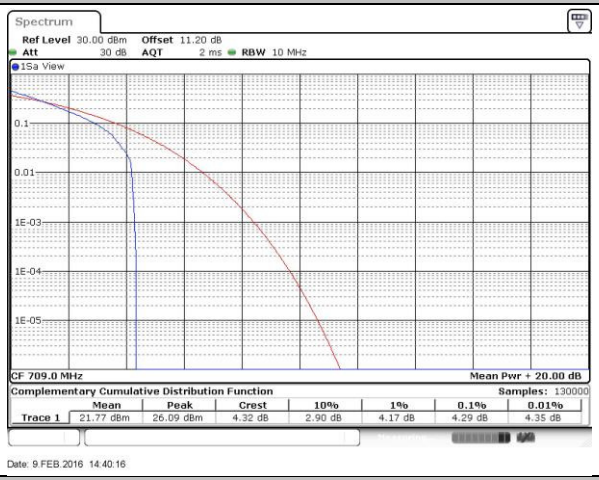
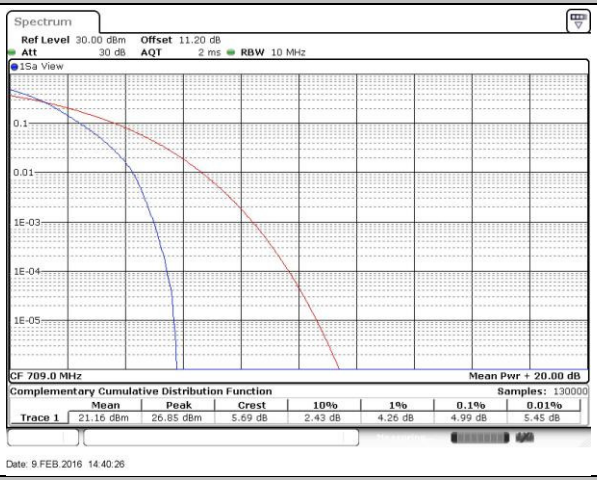
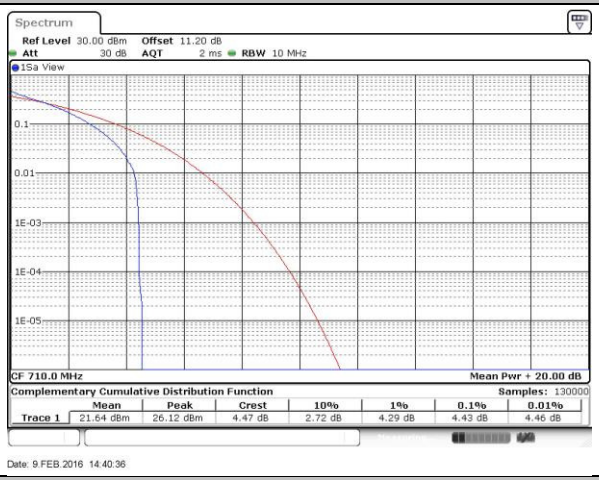
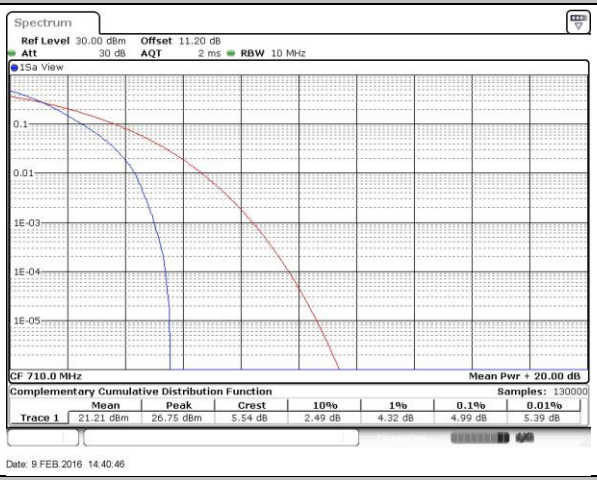
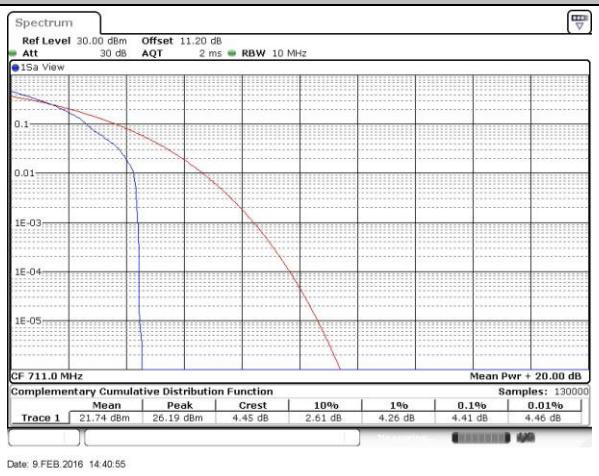
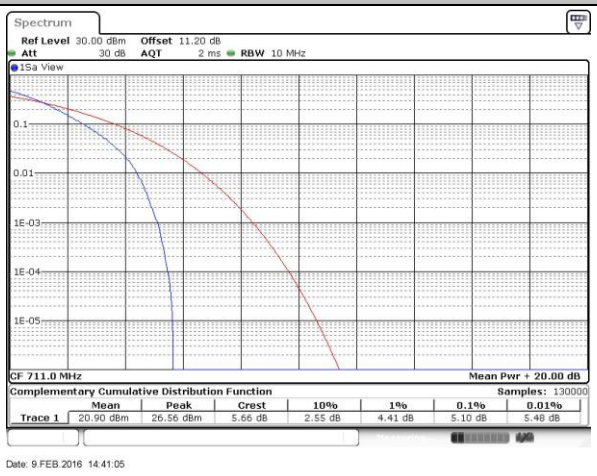
Note:

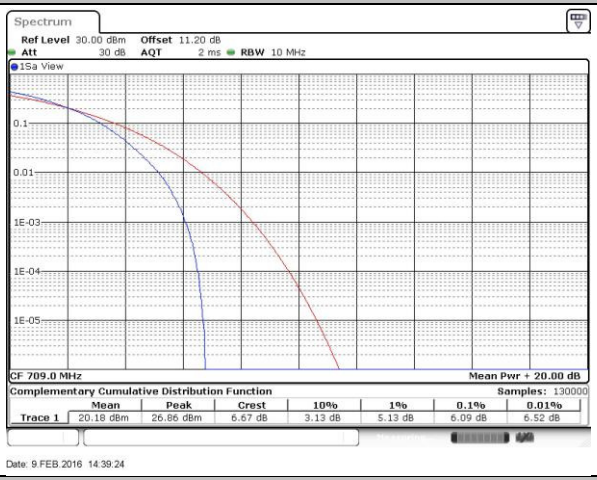
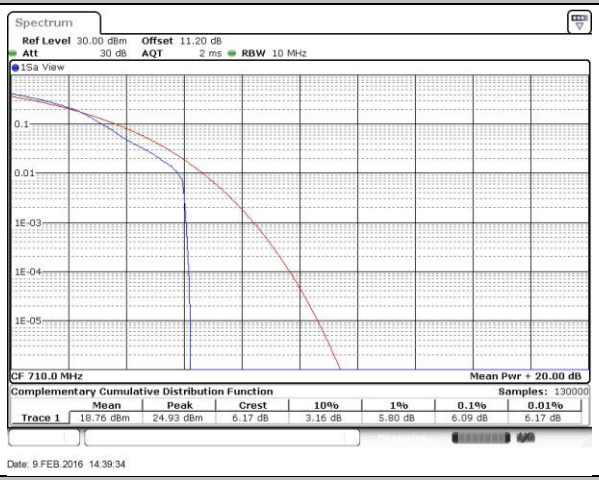
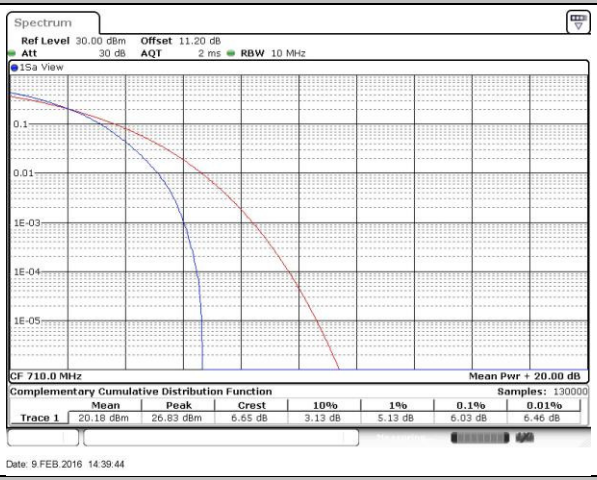
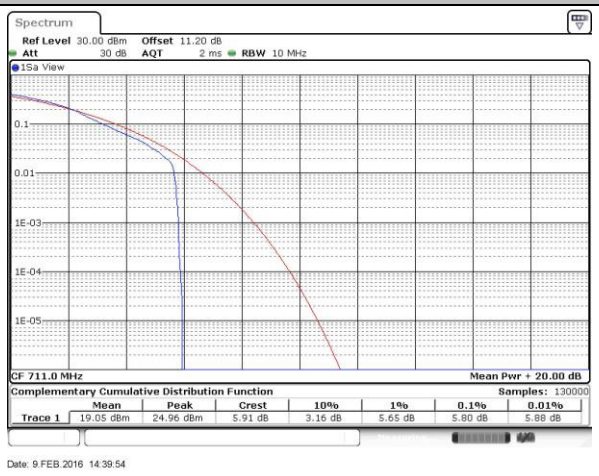
1. Normal Voltage = 3.8 V. ；Battery End Point (BEP) = 3.2 V.；Maximum Voltage =4.35 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 17

Peak-to-Average Ratio

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.29	4.99	5.68	6.09	PASS
Middle CH	4.43	4.99	6.09	6.03	
Highest CH	4.41	5.1	5.8	6.09	

LTE Band 17 / 10MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel/ 1RB	**Middle Channel / Full RB**
	
Highest Channel/ 1RB	**Highest Channel / Full RB**
	

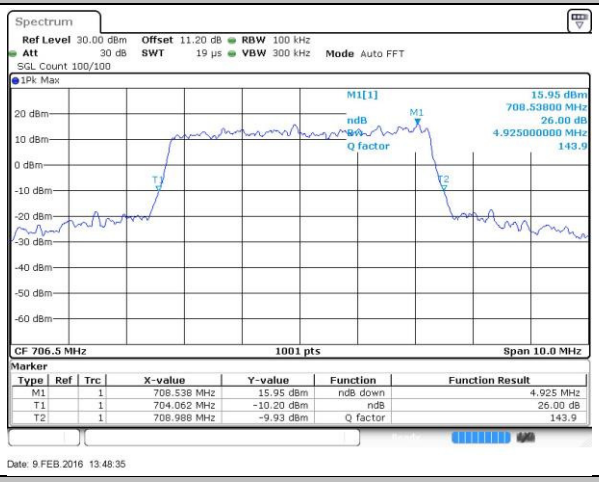
LTE Band 17 / 10MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel/ 1RB	**Middle Channel / Full RB**
	
Highest Channel/ 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

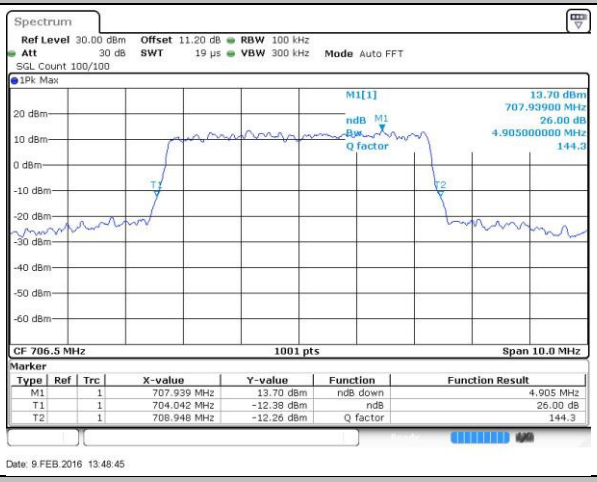
Mode	LTE Band 17 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.93	4.91	9.85	9.65	-	-	-	-
Middle CH	-	-	-	-	4.9	4.89	9.67	9.95	-	-	-	-
Highest CH	-	-	-	-	4.99	4.9	9.71	9.83	-	-	-	-

LTE Band 17

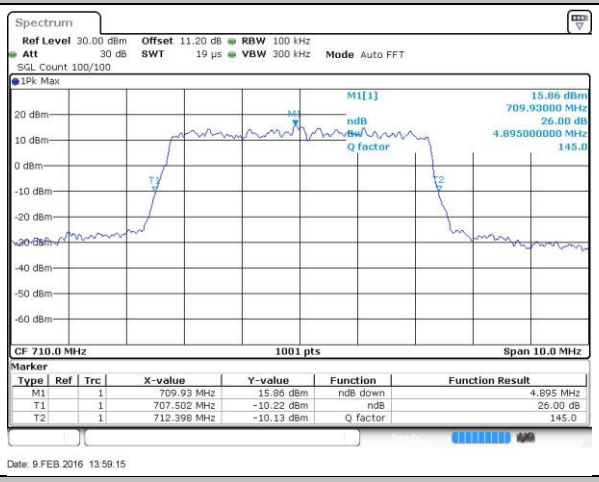
Lowest Channel / 5MHz / QPSK



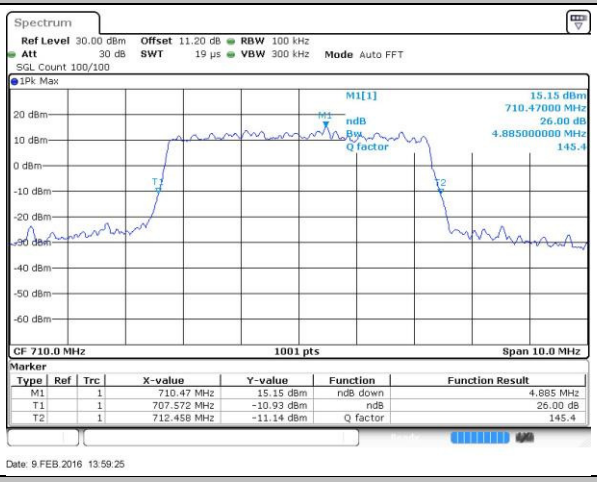
Lowest Channel / 5MHz / 16QAM



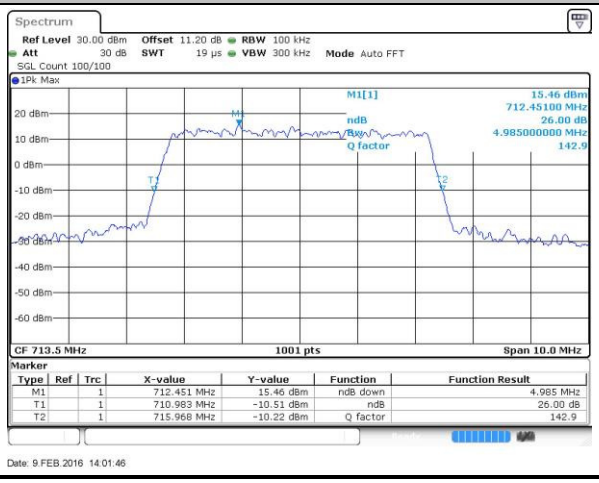
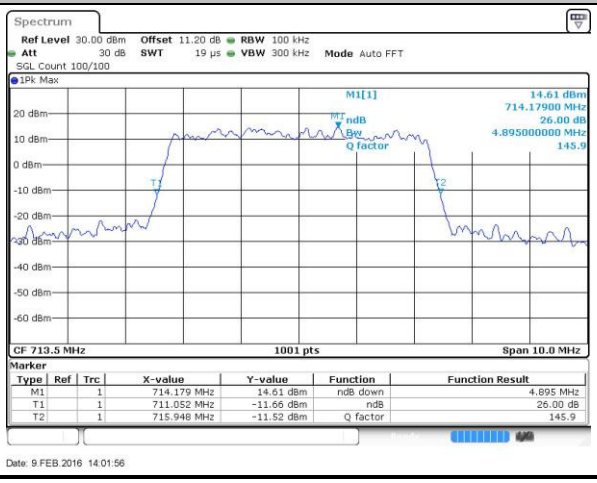
Middle Channel / 5MHz / QPSK



Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



Highest Channel / 5MHz / 16QAM