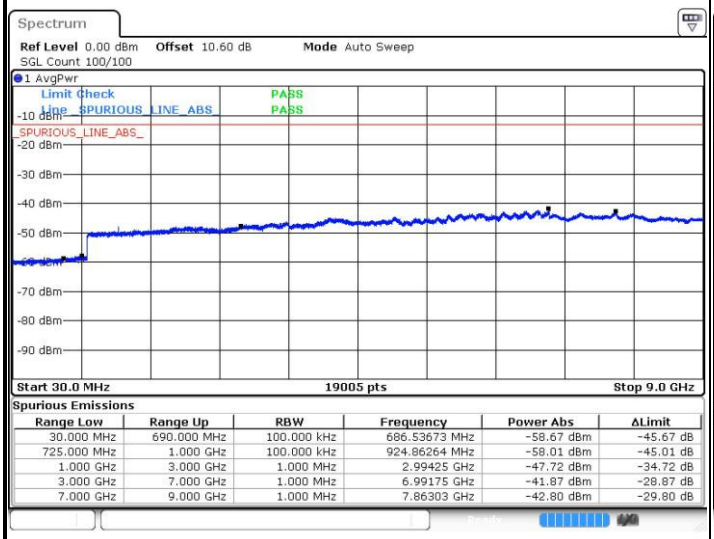
Conducted Spurious Emission

LTE Band 17 / 5MHz

Lowest Channel / QPSK

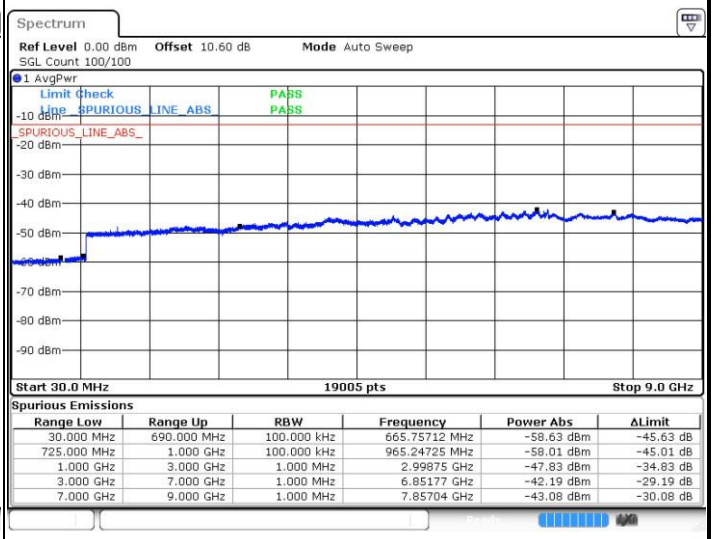


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	686.53673 MHz	-58.67 dBm	-45.67 dB
725.000 MHz	1.000 GHz	100.000 kHz	924.86264 MHz	-58.01 dBm	-45.01 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99425 GHz	-47.72 dBm	-34.72 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99175 GHz	-41.87 dBm	-28.87 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86303 GHz	-42.80 dBm	-29.80 dB

Date: 5.APR.2017 23:18:52

Lowest Channel / 16QAM

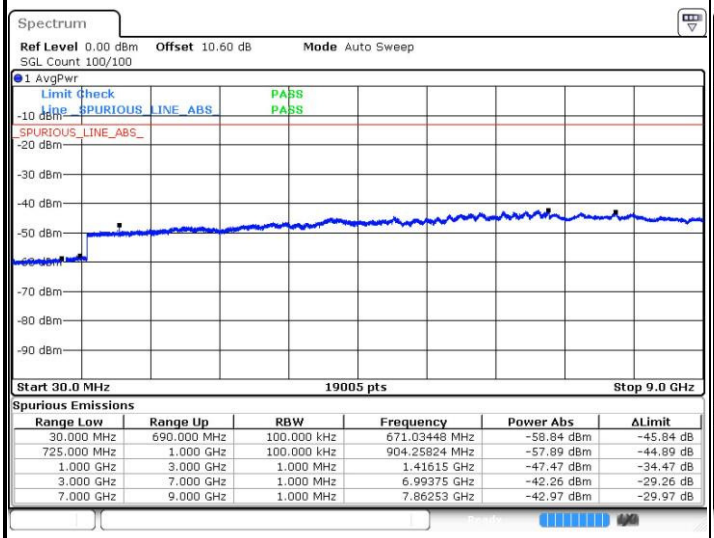


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	665.75712 MHz	-58.63 dBm	-45.63 dB
725.000 MHz	1.000 GHz	100.000 kHz	965.24725 MHz	-58.01 dBm	-45.01 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99875 GHz	-47.83 dBm	-34.83 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85177 GHz	-42.19 dBm	-29.19 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85704 GHz	-43.08 dBm	-30.08 dB

Date: 5.APR.2017 23:19:46

Middle Channel / QPSK

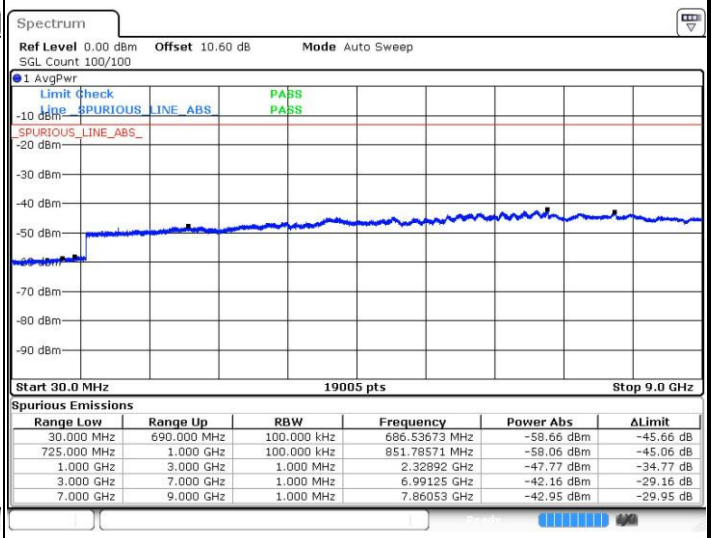


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	671.03448 MHz	-58.84 dBm	-45.84 dB
725.000 MHz	1.000 GHz	100.000 kHz	904.25824 MHz	-57.89 dBm	-44.89 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41615 GHz	-47.47 dBm	-34.47 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99375 GHz	-42.26 dBm	-29.26 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86253 GHz	-42.97 dBm	-29.97 dB

Date: 5.APR.2017 23:21:22

Middle Channel / 16QAM



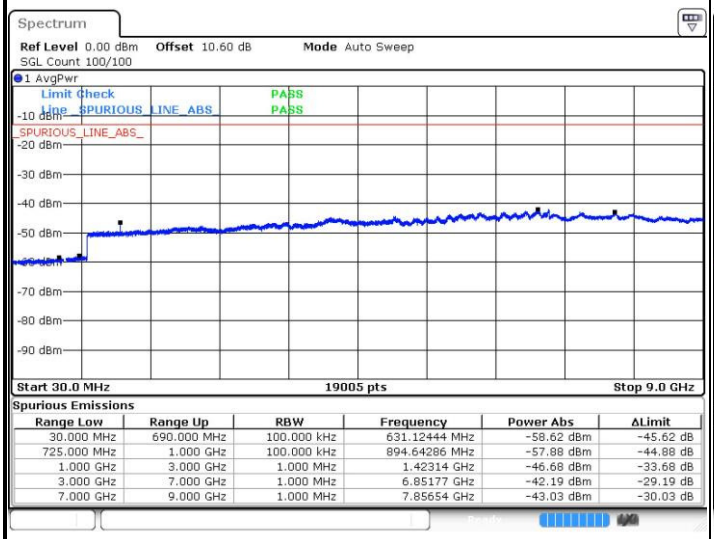
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	686.53673 MHz	-58.66 dBm	-45.66 dB
725.000 MHz	1.000 GHz	100.000 kHz	851.78571 MHz	-58.06 dBm	-45.06 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.32892 GHz	-47.77 dBm	-34.77 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99125 GHz	-42.16 dBm	-29.16 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86053 GHz	-42.95 dBm	-29.95 dB

Date: 5.APR.2017 23:22:16

LTE Band 17 / 5MHz

Highest Channel / QPSK

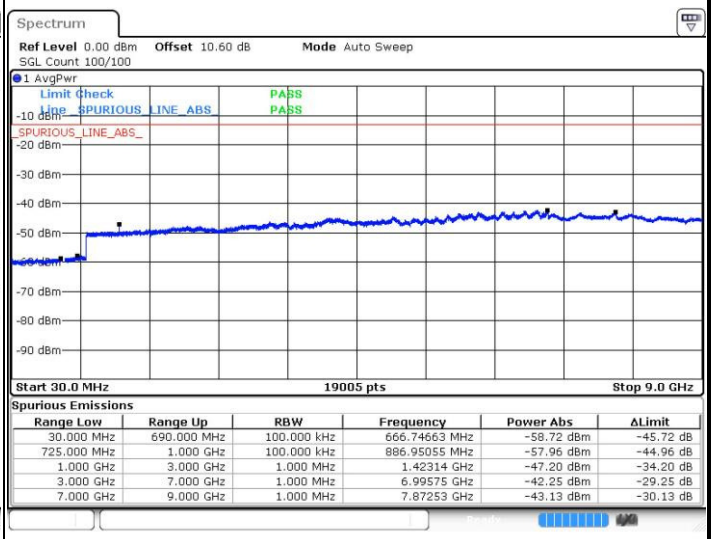


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	631.12444 MHz	-58.62 dBm	-45.62 dB
725.000 MHz	1.000 GHz	100.000 kHz	894.64286 MHz	-57.88 dBm	-44.88 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-46.68 dBm	-33.68 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.85177 GHz	-42.19 dBm	-29.19 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85654 GHz	-43.03 dBm	-30.03 dB

Date: 5.APR.2017 23:28:28

Highest Channel / 16QAM



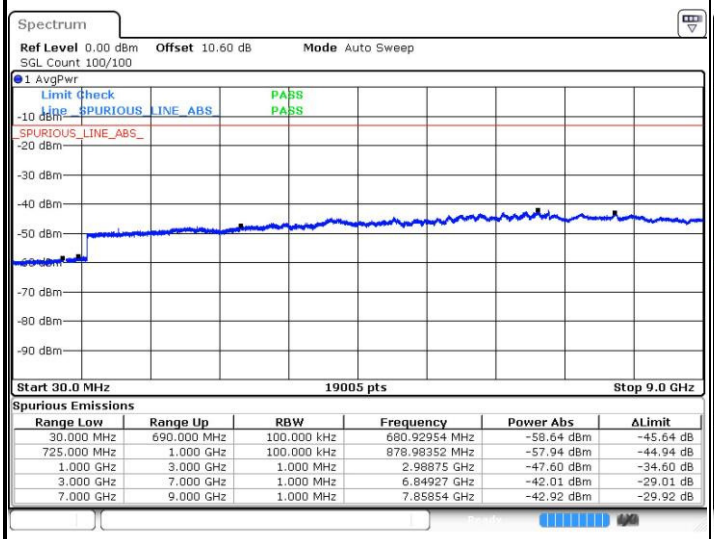
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	666.74663 MHz	-58.72 dBm	-45.72 dB
725.000 MHz	1.000 GHz	100.000 kHz	886.95055 MHz	-57.96 dBm	-44.96 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-47.20 dBm	-34.20 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99575 GHz	-42.25 dBm	-29.25 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.87253 GHz	-43.13 dBm	-30.13 dB

Date: 5.APR.2017 23:29:22

LTE Band 17 / 10MHz

Lowest Channel / QPSK

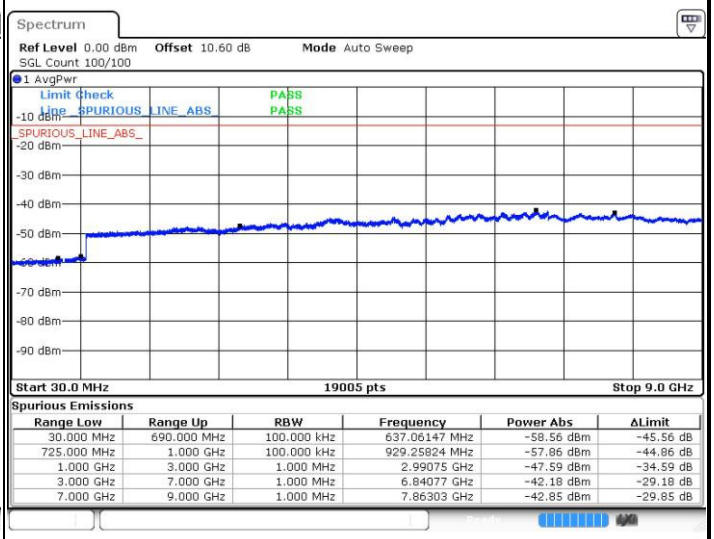


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	680.92954 MHz	-58.64 dBm	-45.64 dB
725.000 MHz	1.000 GHz	100.000 kHz	878.98352 MHz	-57.94 dBm	-44.94 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98875 GHz	-47.60 dBm	-34.60 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.84927 GHz	-42.01 dBm	-29.01 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85854 GHz	-42.92 dBm	-29.92 dB

Date: 5.APR.2017 23:35:34

Lowest Channel / 16QAM



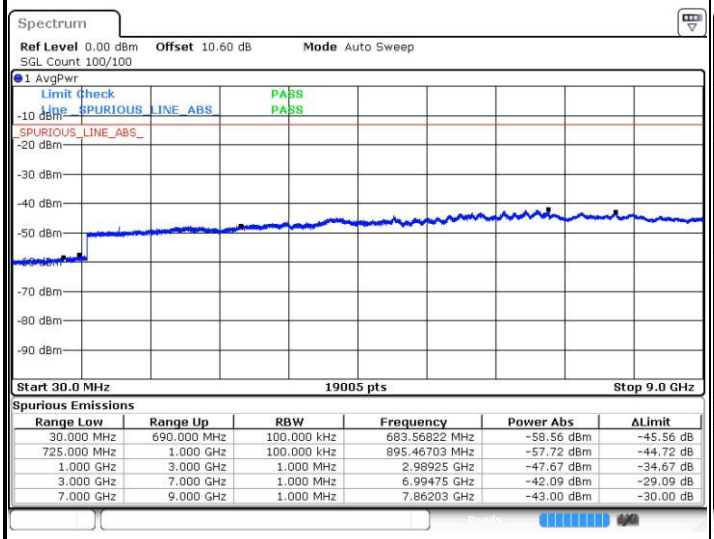
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	637.06147 MHz	-58.56 dBm	-45.56 dB
725.000 MHz	1.000 GHz	100.000 kHz	929.25824 MHz	-57.86 dBm	-44.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99075 GHz	-47.59 dBm	-34.59 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.84077 GHz	-42.18 dBm	-29.18 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86303 GHz	-42.85 dBm	-29.85 dB

Date: 5.APR.2017 23:36:28

LTE Band 17 / 10MHz

Middle Channel / QPSK

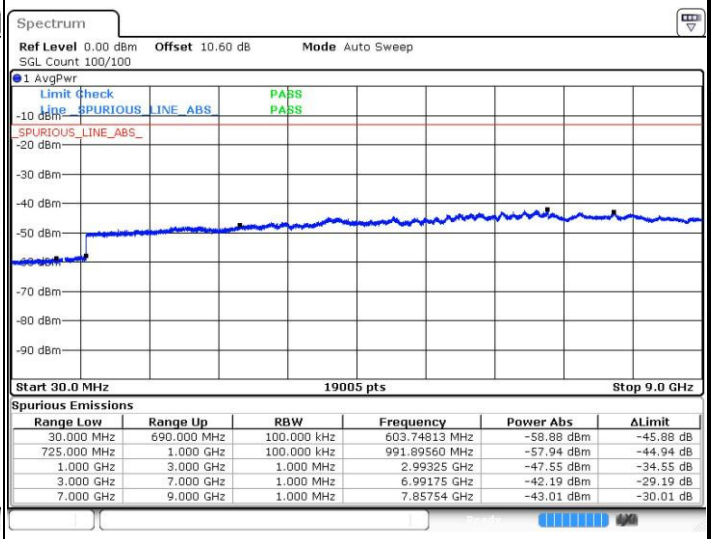


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	683.56822 MHz	-58.56 dBm	-45.56 dB
725.000 MHz	1.000 GHz	100.000 kHz	895.46703 MHz	-57.72 dBm	-44.72 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98925 GHz	-47.67 dBm	-34.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99475 GHz	-42.09 dBm	-29.09 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86203 GHz	-43.00 dBm	-30.00 dB

Date: 5.APR.2017 23:38:04

Middle Channel / 16QAM

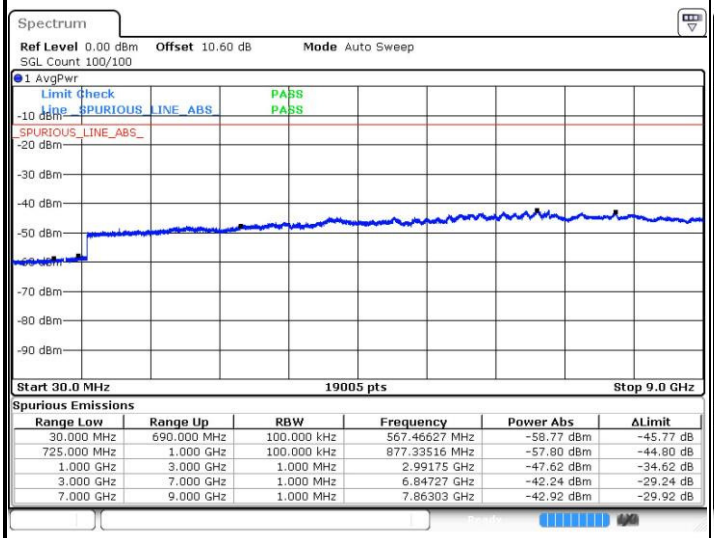


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	603.74813 MHz	-58.88 dBm	-45.88 dB
725.000 MHz	1.000 GHz	100.000 kHz	991.89560 MHz	-57.94 dBm	-44.94 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99325 GHz	-47.55 dBm	-34.55 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99175 GHz	-42.19 dBm	-29.19 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85754 GHz	-43.01 dBm	-30.01 dB

Date: 5.APR.2017 23:38:58

Highest Channel / QPSK

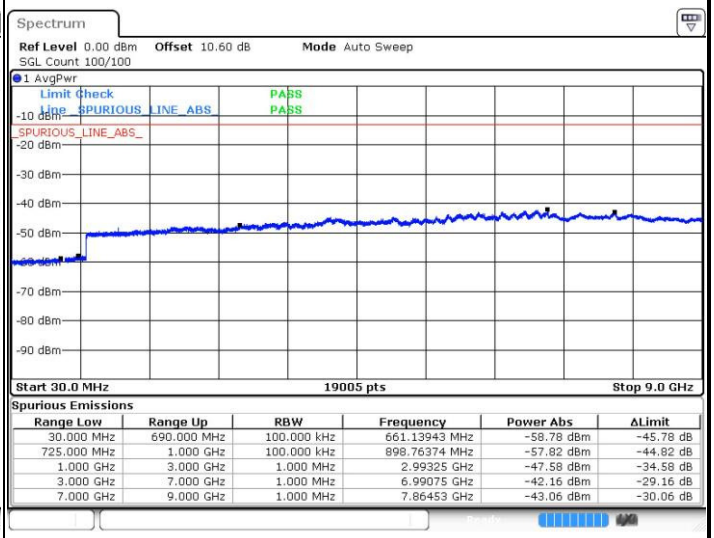


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	567.46627 MHz	-58.77 dBm	-45.77 dB
725.000 MHz	1.000 GHz	100.000 kHz	877.33516 MHz	-57.80 dBm	-44.80 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99175 GHz	-47.62 dBm	-34.62 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.84727 GHz	-42.24 dBm	-29.24 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86303 GHz	-42.92 dBm	-29.92 dB

Date: 5.APR.2017 23:45:10

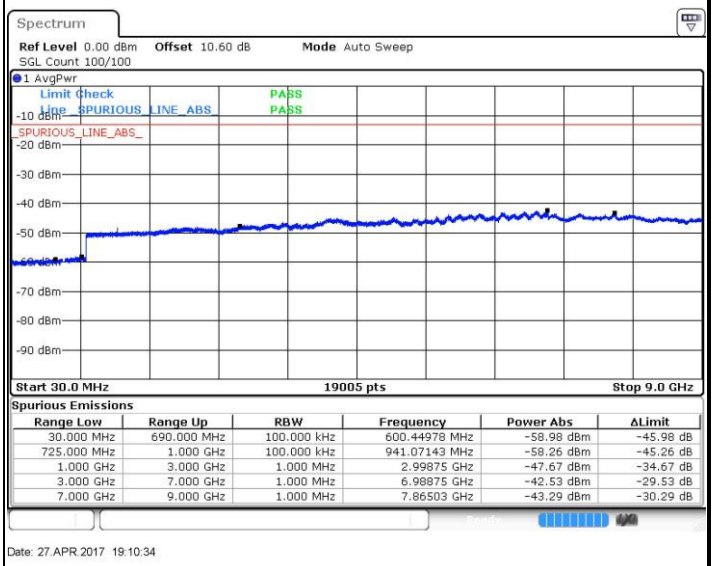
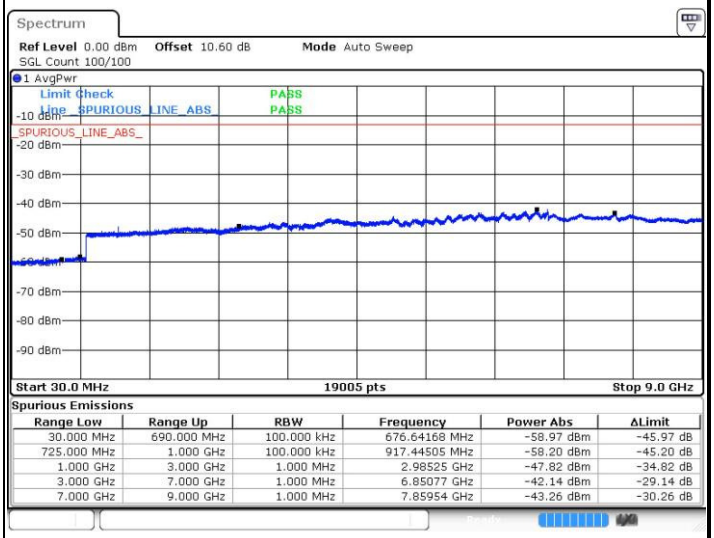
Highest Channel / 16QAM

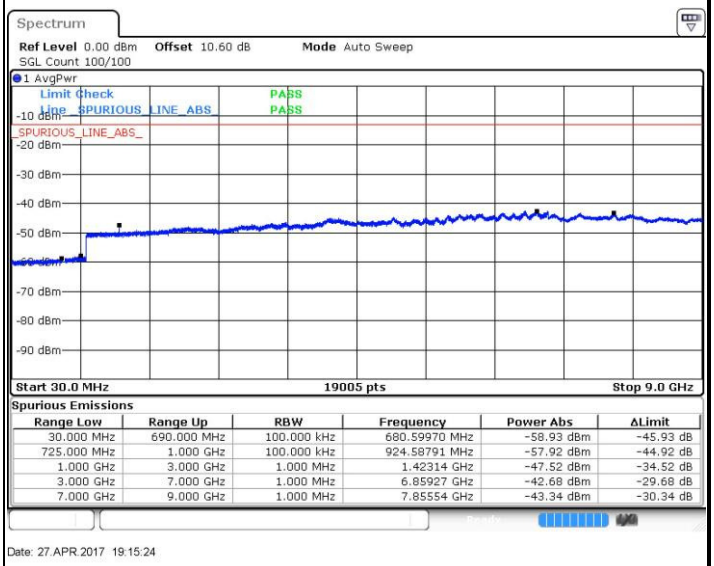
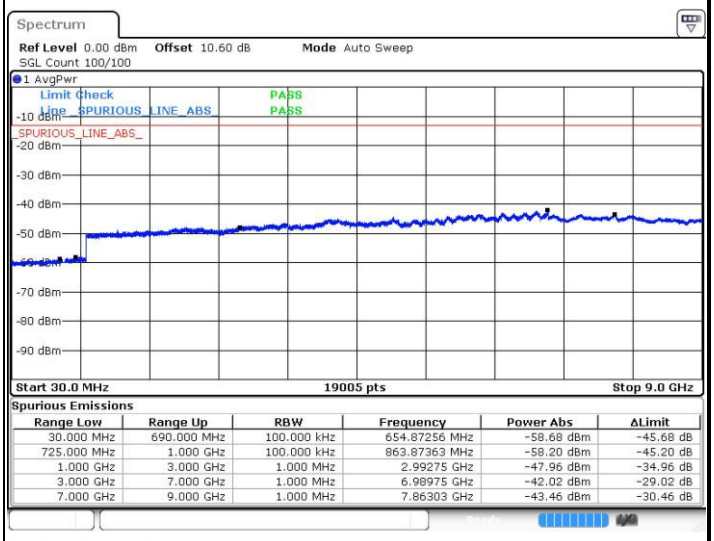


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	661.13943 MHz	-58.78 dBm	-45.78 dB
725.000 MHz	1.000 GHz	100.000 kHz	898.76374 MHz	-57.82 dBm	-44.82 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99325 GHz	-47.58 dBm	-34.58 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99075 GHz	-42.16 dBm	-29.16 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.86453 GHz	-43.06 dBm	-30.06 dB

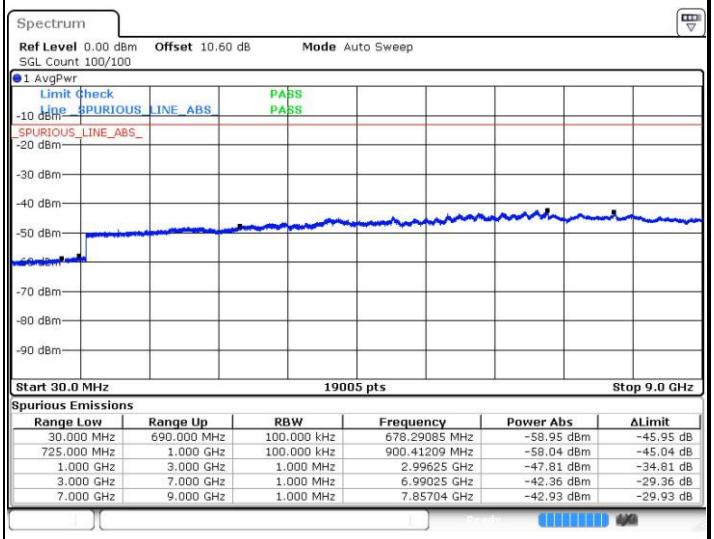
Date: 5.APR.2017 23:46:04

LTE Band 17 / 5MHz	
	Lowest Channel / 64QAM
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 30.000 MHz / 690.000 MHz / 100.000 kHz / 600.44978 MHz / -58.98 dBm / -45.98 dB 725.000 MHz / 1.000 GHz / 100.000 kHz / 941.07143 MHz / -58.26 dBm / -45.26 dB 1.000 GHz / 3.000 GHz / 1.000 MHz / 2.99875 GHz / -47.67 dBm / -34.67 dB 3.000 GHz / 7.000 GHz / 1.000 MHz / 6.98875 GHz / -42.53 dBm / -29.53 dB 7.000 GHz / 9.000 GHz / 1.000 MHz / 7.86503 GHz / -43.29 dBm / -30.29 dB Date: 27.APR.2017 19:10:34
	Middle Channel / 64QAM
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 30.000 MHz / 690.000 MHz / 100.000 kHz / 676.64168 MHz / -58.97 dBm / -45.97 dB 725.000 MHz / 1.000 GHz / 100.000 kHz / 917.44505 MHz / -58.20 dBm / -45.20 dB 1.000 GHz / 3.000 GHz / 1.000 MHz / 2.98525 GHz / -47.82 dBm / -34.82 dB 3.000 GHz / 7.000 GHz / 1.000 MHz / 6.85077 GHz / -42.14 dBm / -29.14 dB 7.000 GHz / 9.000 GHz / 1.000 MHz / 7.85954 GHz / -43.26 dBm / -30.26 dB Date: 27.APR.2017 19:11:50

LTE Band 17 / 5MHz	
	Highest Channel / 64QAM
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 30.000 MHz / 690.000 MHz / 100.000 kHz / 680.59970 MHz / -58.93 dBm / -45.93 dB 725.000 MHz / 1.000 GHz / 100.000 kHz / 924.58791 MHz / -57.92 dBm / -44.92 dB 1.000 GHz / 3.000 GHz / 1.000 MHz / 1.42314 GHz / -47.52 dBm / -34.52 dB 3.000 GHz / 7.000 GHz / 1.000 MHz / 6.85927 GHz / -42.68 dBm / -29.68 dB 7.000 GHz / 9.000 GHz / 1.000 MHz / 7.85554 GHz / -43.34 dBm / -30.34 dB Date: 27.APR.2017 19:15:24
LTE Band 17 / 10MHz	
	Lowest Channel / 64QAM
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 30.000 MHz / 690.000 MHz / 100.000 kHz / 654.87256 MHz / -58.68 dBm / -45.68 dB 725.000 MHz / 1.000 GHz / 100.000 kHz / 863.87363 MHz / -58.20 dBm / -45.20 dB 1.000 GHz / 3.000 GHz / 1.000 MHz / 2.99275 GHz / -47.96 dBm / -34.96 dB 3.000 GHz / 7.000 GHz / 1.000 MHz / 6.98975 GHz / -42.02 dBm / -29.02 dB 7.000 GHz / 9.000 GHz / 1.000 MHz / 7.86303 GHz / -43.46 dBm / -30.46 dB Date: 27.APR.2017 19:17:48

LTE Band 17 / 10MHz

Middle Channel / 64QAM

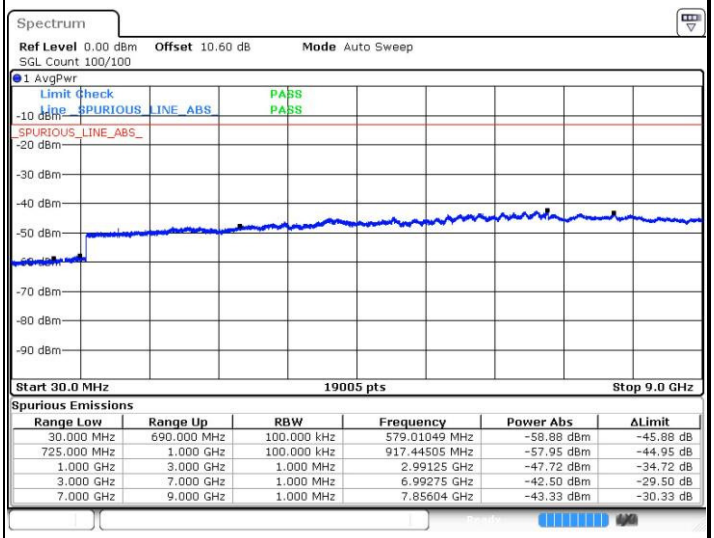


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	678.29085 MHz	-58.95 dBm	-45.95 dB
725.000 MHz	1.000 GHz	100.000 kHz	900.41209 MHz	-58.04 dBm	-45.04 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99625 GHz	-47.81 dBm	-34.81 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99025 GHz	-42.36 dBm	-29.36 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85704 GHz	-42.93 dBm	-29.93 dB

Date: 27.APR.2017 19:19:03

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	579.01049 MHz	-58.88 dBm	-45.88 dB
725.000 MHz	1.000 GHz	100.000 kHz	917.44505 MHz	-57.95 dBm	-44.95 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99125 GHz	-47.72 dBm	-34.72 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99275 GHz	-42.50 dBm	-29.50 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.85604 GHz	-43.33 dBm	-30.33 dB

Date: 27.APR.2017 19:24:41

Frequency Stability

Test Conditions		LTE Band 17 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0131	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0107	
0	Normal Voltage	0.0096	
-10	Normal Voltage	0.0118	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0014	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0100	

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.

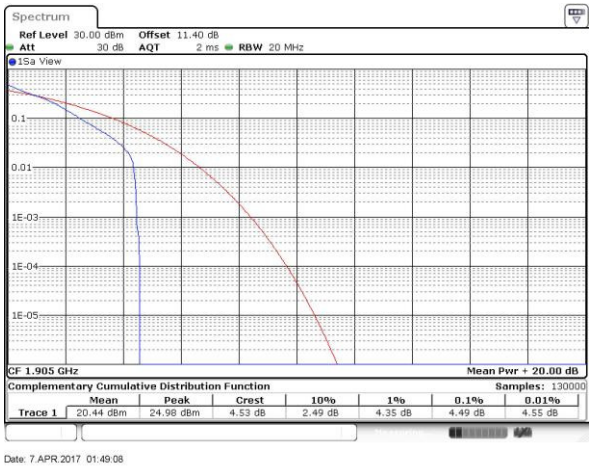
LTE Band 25

Peak-to-Average Ratio

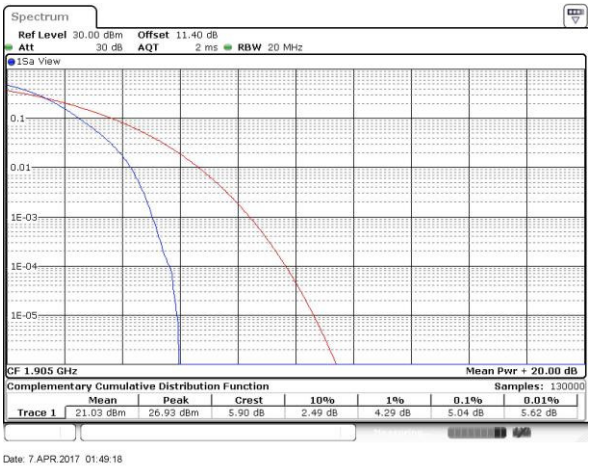
Mode	LTE Band 25 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	-	-	-	-	
Highest CH	4.49	5.04	5.51	6.12	
Mod.	-		64QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	-	-	-	-	
Highest CH	-	-	5.59	6.2	

LTE Band 25 / 20MHz / QPSK

Highest Channel / 1RB

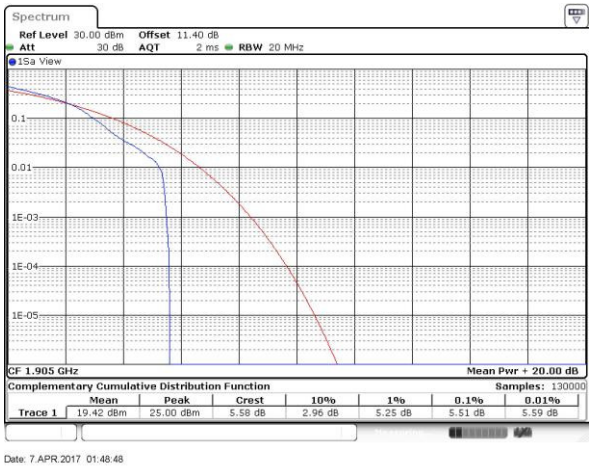


Highest Channel / Full RB

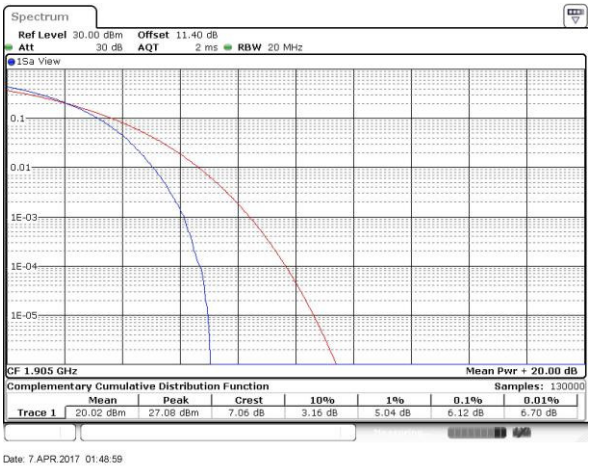


LTE Band 25 / 20MHz / 16QAM

Highest Channel / 1RB

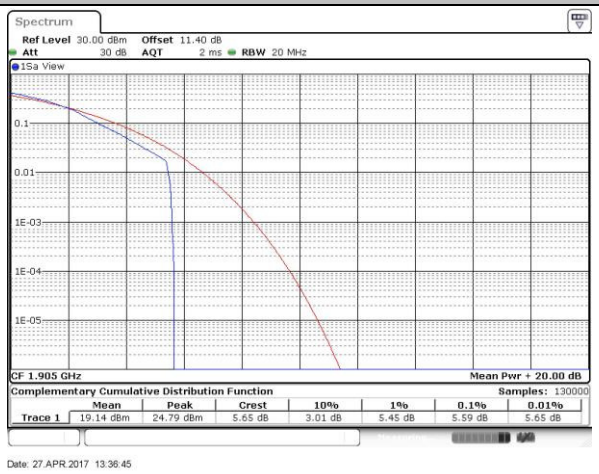


Highest Channel / Full RB

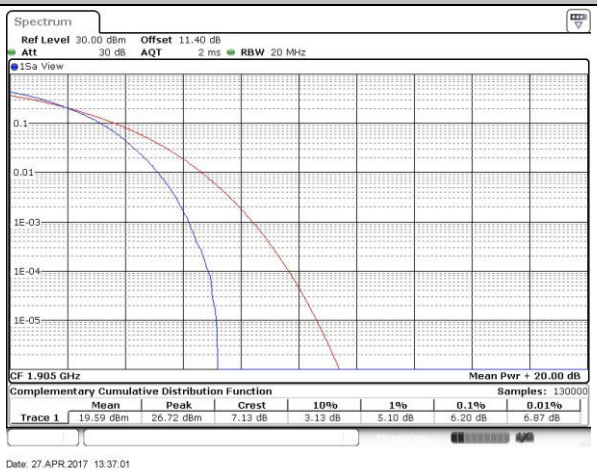


LTE Band 25 / 20MHz / 64QAM

Highest Channel / 1RB



Highest Channel / Full RB

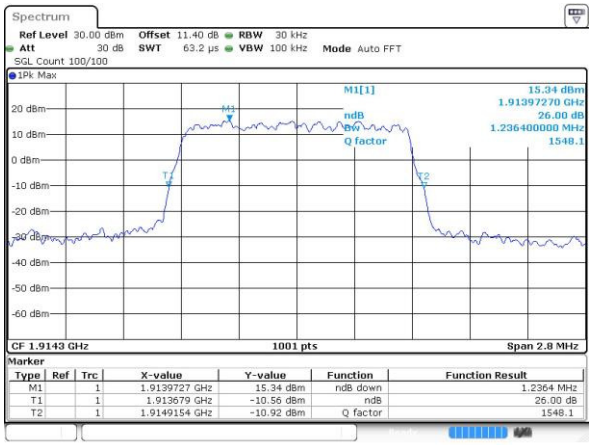


26dB Bandwidth

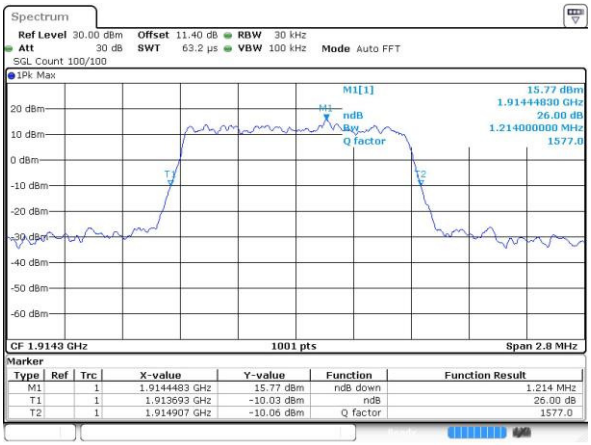
Mode	LTE Band 25 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	-	-	-	-	-	-	-	-
Middle CH	-	-	-	-	-	-	-	-	-	-	-	-
Highest CH	1.24	1.21	3.01	3.07	4.93	4.89	9.83	9.73	14.21	14.48	20.10	20.10
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	-	-	-	-	-	-	-	-	-	-	-
Middle CH	-	-	-	-	-	-	-	-	-	-	-	-
Highest CH	-	1.23	-	2.94	-	4.84	-	9.75	-	14.12	-	20.14

LTE Band 25

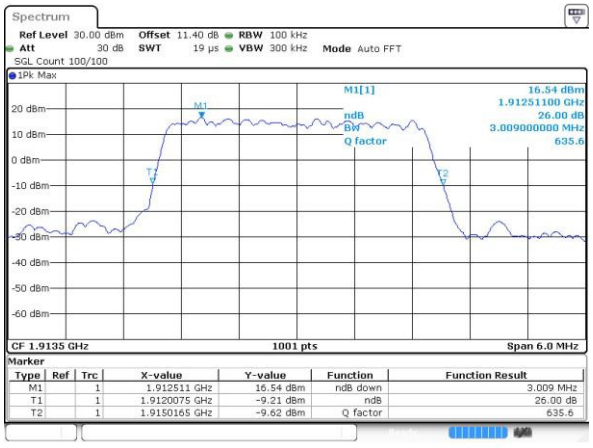
Highest Channel / 1.4MHz / QPSK



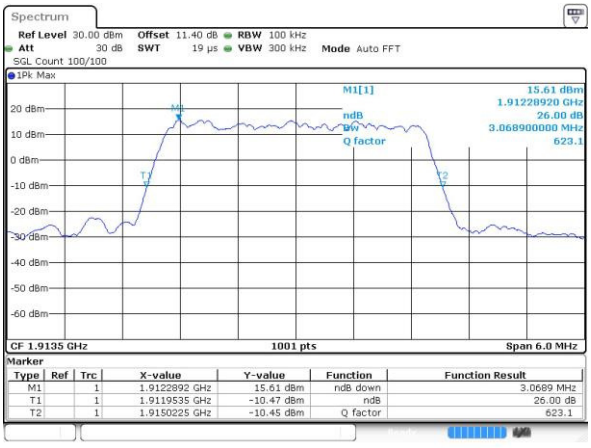
Highest Channel / 1.4MHz / 16QAM



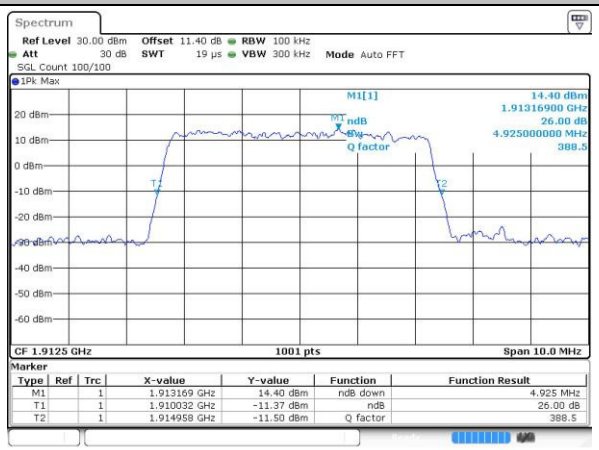
Highest Channel /3MHz / QPSK



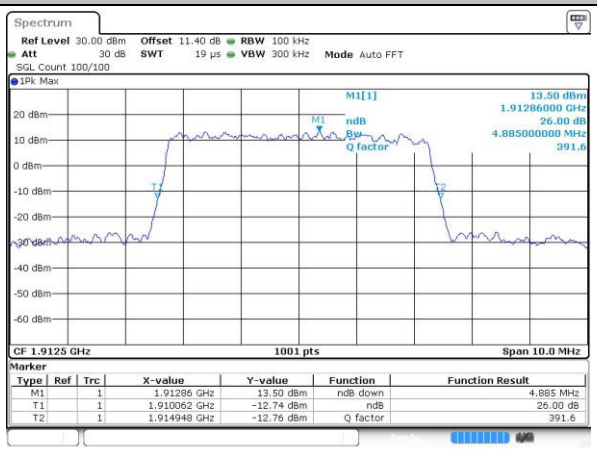
Highest Channel /3MHz / 16QAM



Highest Channel / 5MHz / QPSK

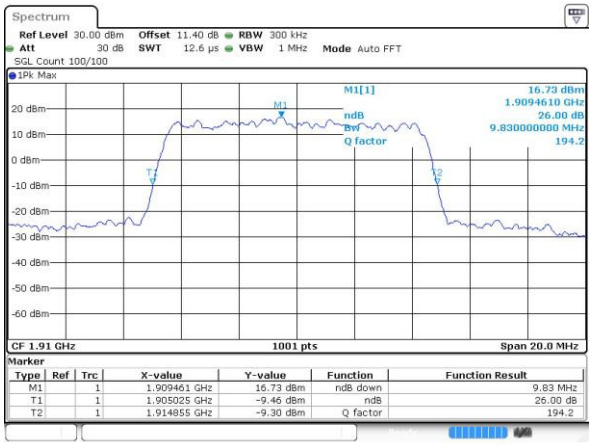


Highest Channel / 5MHz / 16QAM

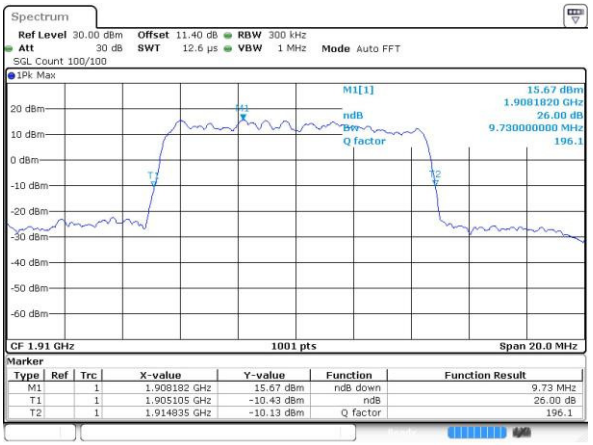


LTE Band 25

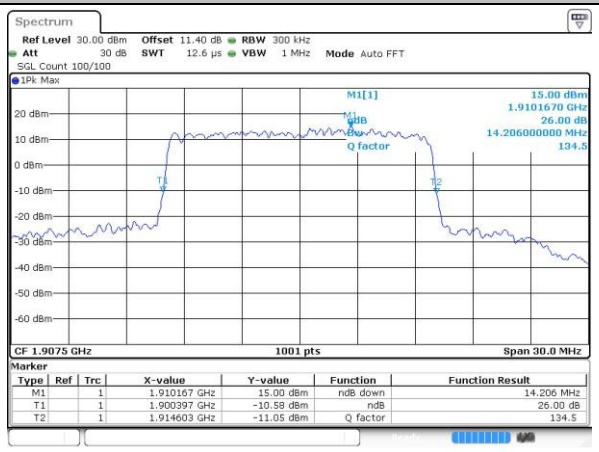
Highest Channel / 10MHz / QPSK



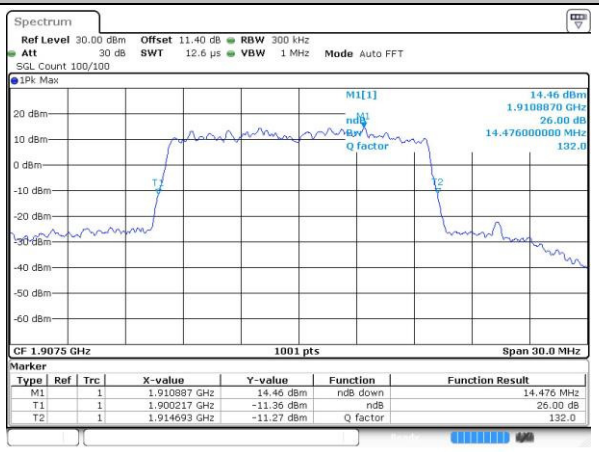
Highest Channel / 10MHz / 16QAM



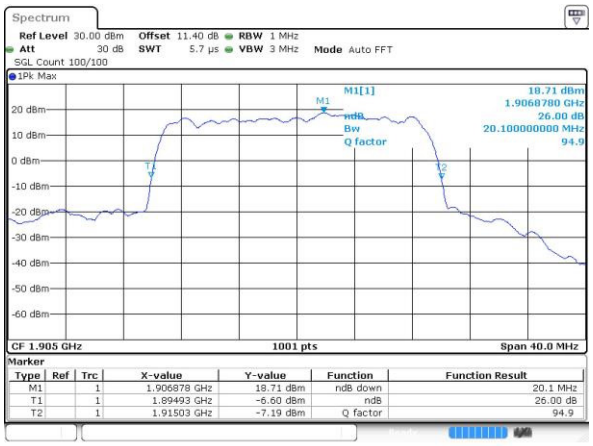
Highest Channel / 15MHz / QPSK



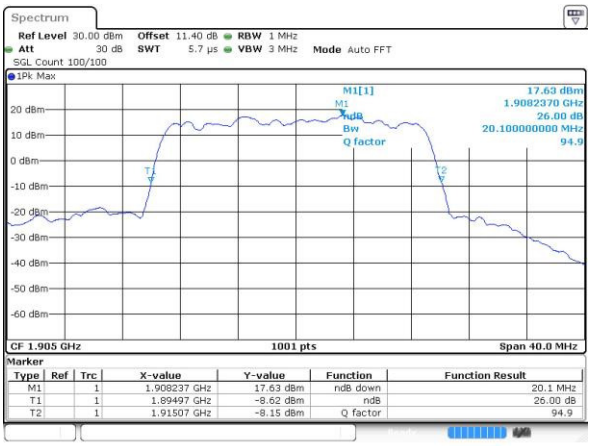
Highest Channel / 15MHz / 16QAM

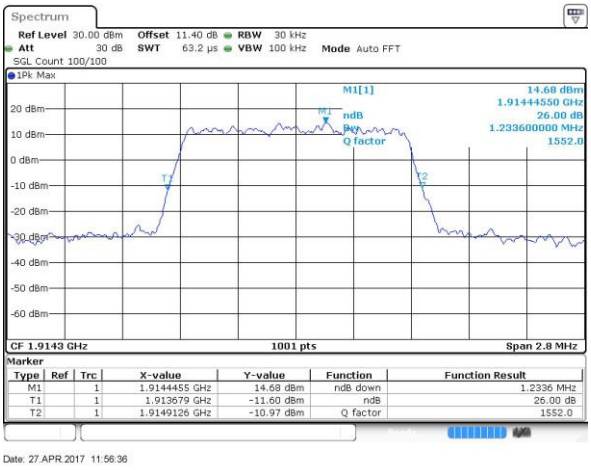
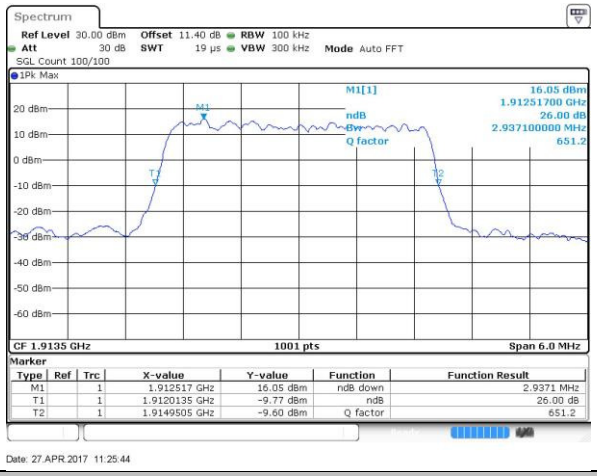
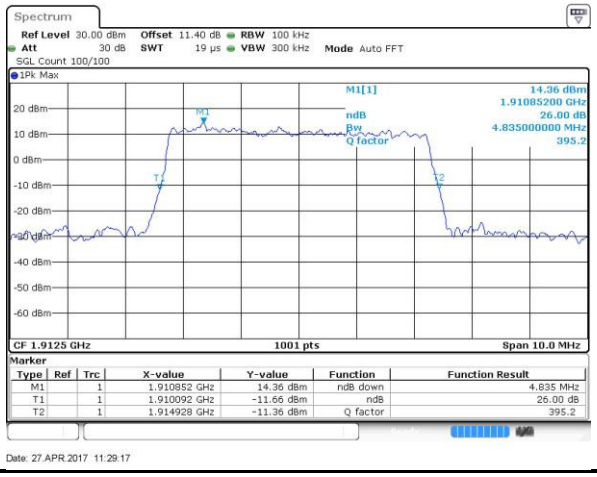


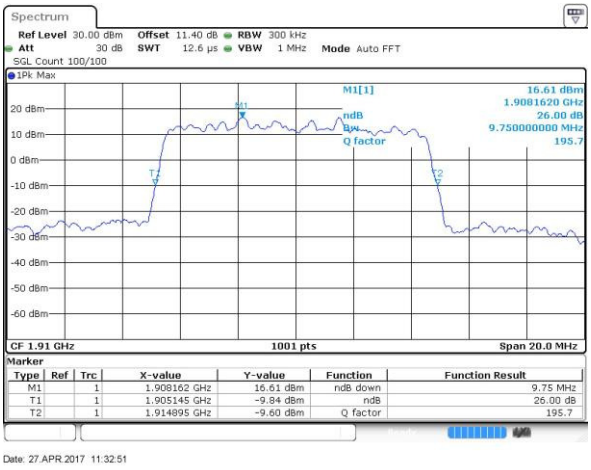
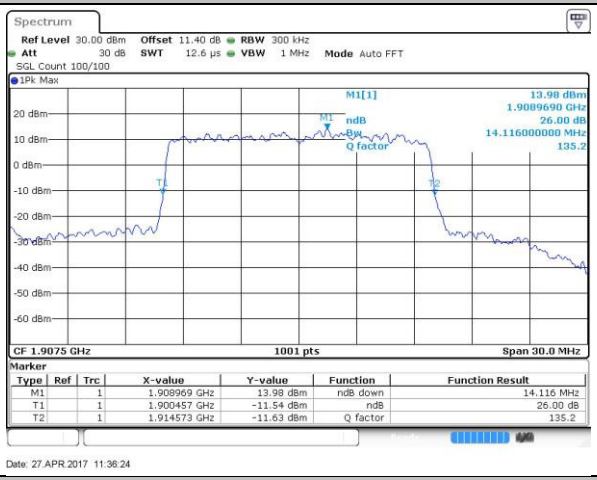
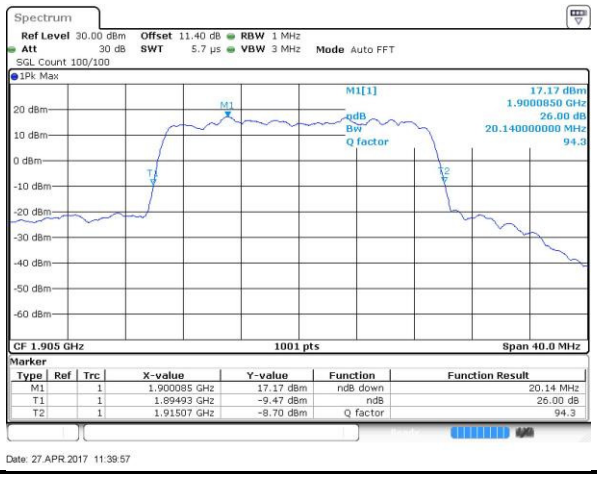
Highest Channel / 20MHz / QPSK



Highest Channel / 20MHz / 16QAM



LTE Band 25	
	Highest Channel / 1.4MHz / 64QAM
	
	Highest Channel /3MHz / 64QAM
	
	Highest Channel / 5MHz / 64QAM
	

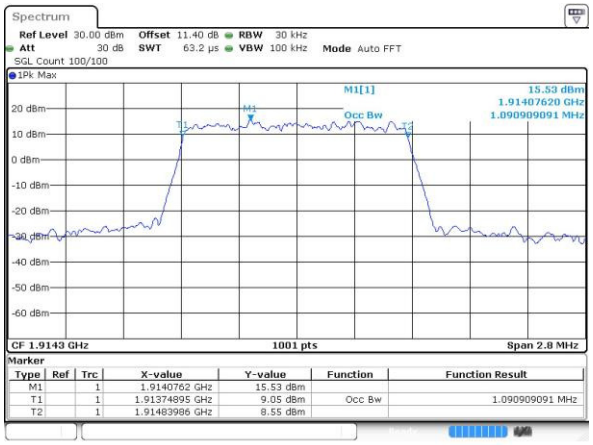
LTE Band 25	
	Highest Channel / 10MHz / 64QAM
	
	Highest Channel / 15MHz / 64QAM
	
	Highest Channel / 20MHz / 64QAM
	

Occupied Bandwidth

Mode	LTE Band 25 : 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	-	-	-	-	-	-	-	-	-	-	-	-
Middle CH	-	-	-	-	-	-	-	-	-	-	-	-
Highest CH	1.09	1.09	2.72	2.72	4.47	4.48	8.93	9.03	13.37	13.37	18.22	18.34
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	-	-	-	-	-	-	-	-	-	-	-
Middle CH	-	-	-	-	-	-	-	-	-	-	-	-
Highest CH	-	1.09	-	2.72	-	4.47	-	8.95	-	13.34	-	18.22

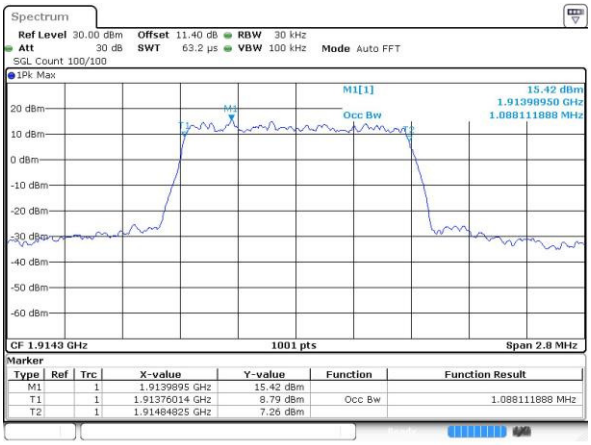
LTE Band 25

Highest Channel / 1.4MHz / QPSK



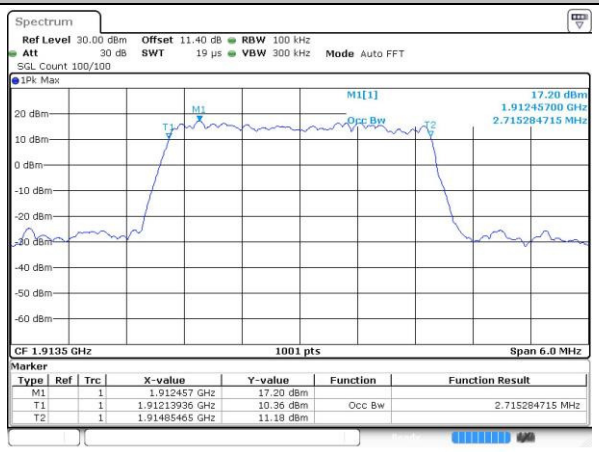
Date: 7.APR.2017 01:40:45

Highest Channel / 1.4MHz / 16QAM



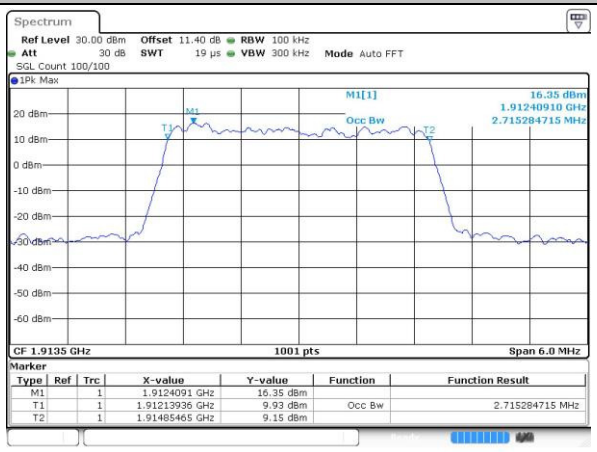
Date: 7.APR.2017 01:40:55

Highest Channel / 3MHz / QPSK



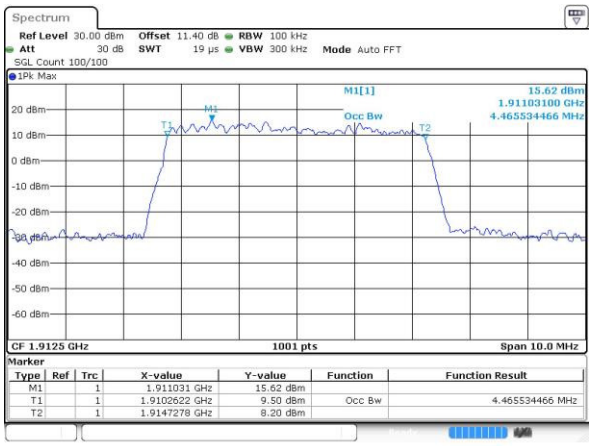
Date: 7.APR.2017 01:03:41

Highest Channel / 3MHz / 16QAM



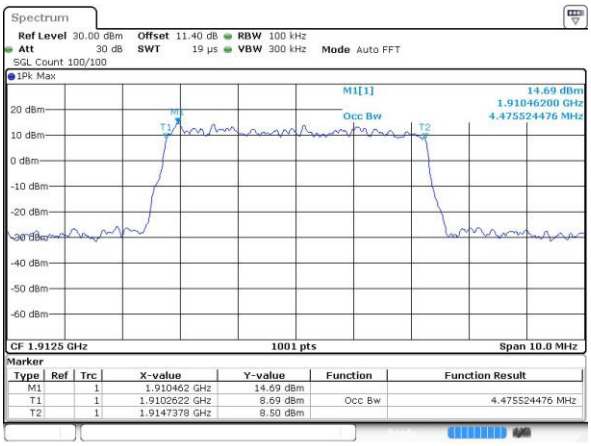
Date: 7.APR.2017 01:03:51

Highest Channel / 5MHz / QPSK



Date: 7.APR.2017 01:10:48

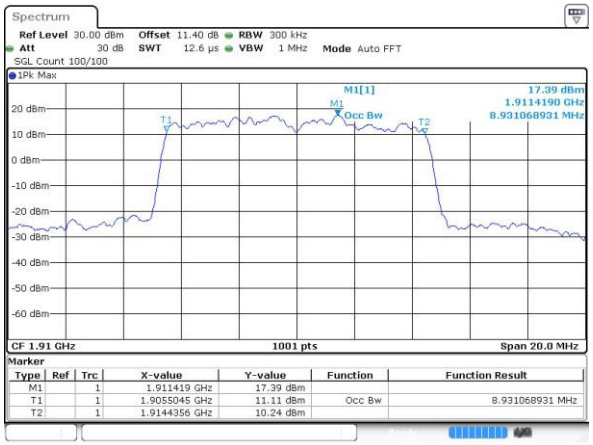
Highest Channel / 5MHz / 16QAM



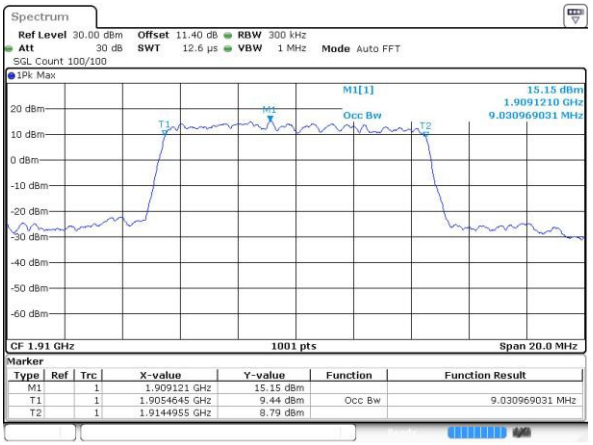
Date: 7.APR.2017 01:10:59

LTE Band 25

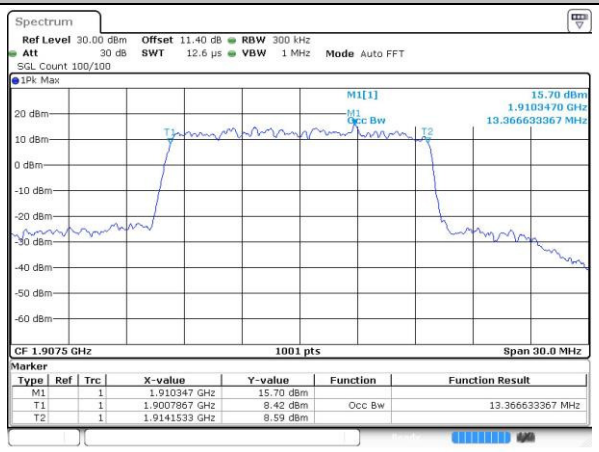
Highest Channel / 10MHz / QPSK



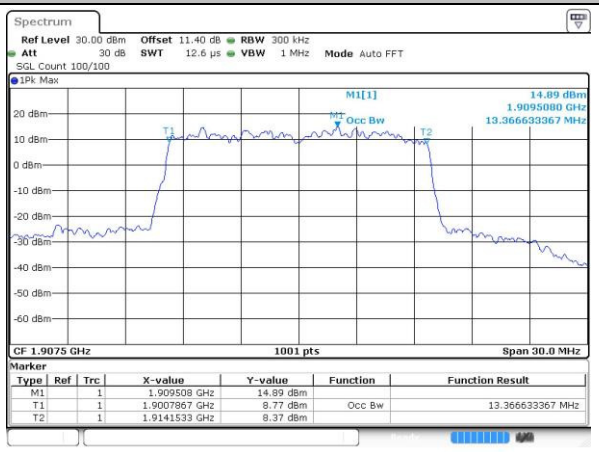
Highest Channel / 10MHz / 16QAM



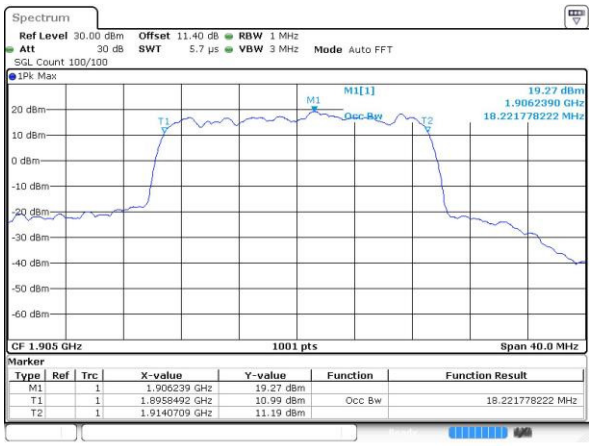
Highest Channel / 15MHz / QPSK



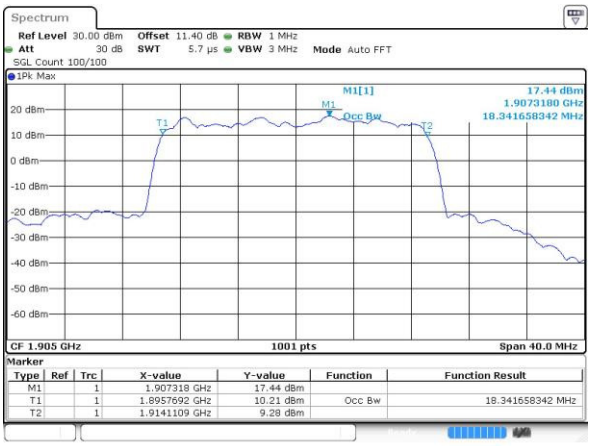
Highest Channel / 15MHz / 16QAM

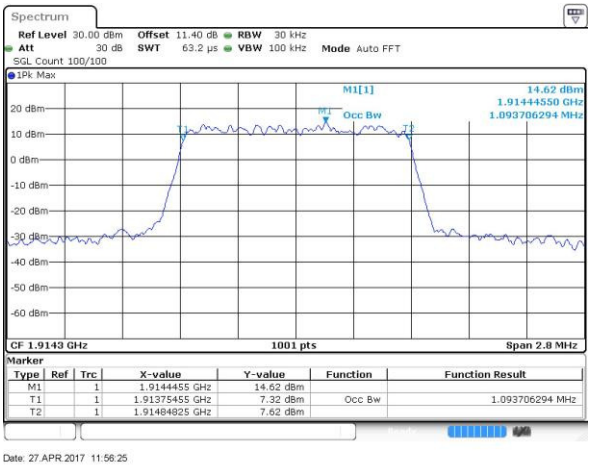
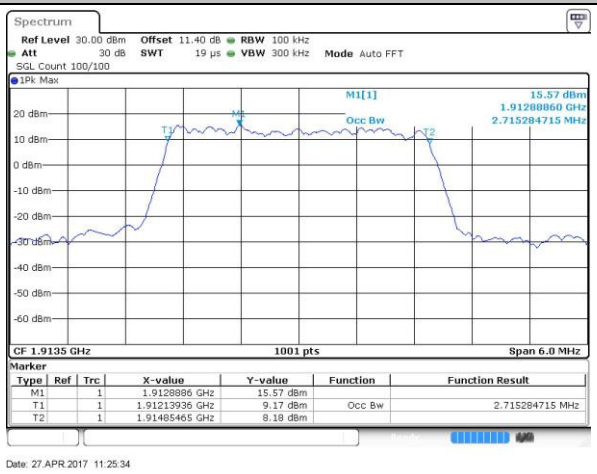
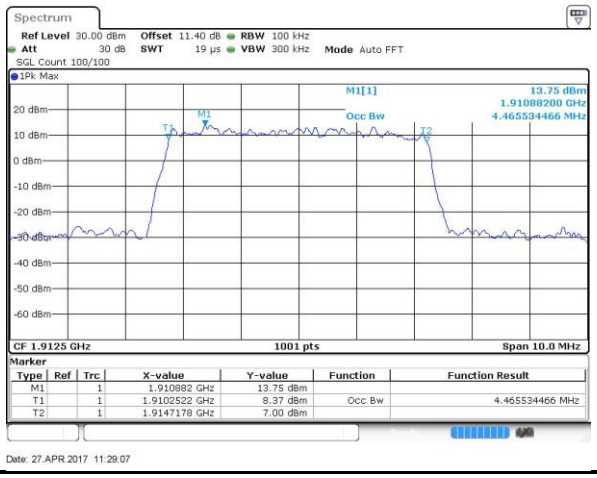


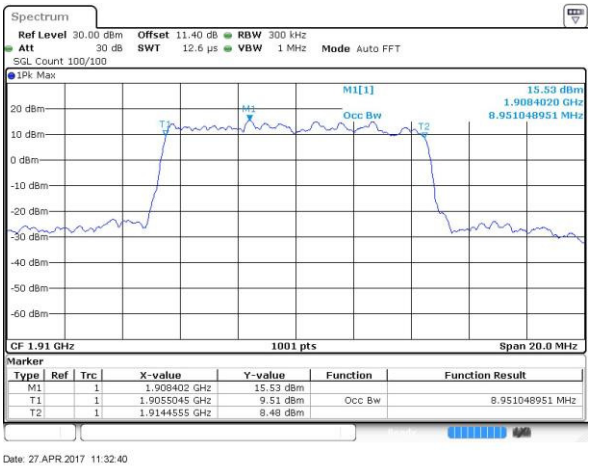
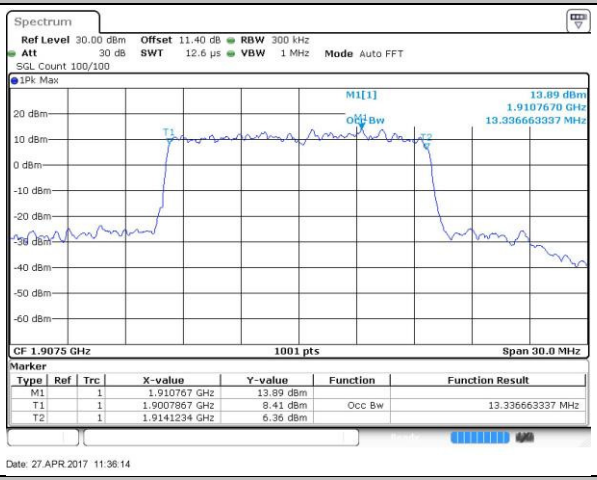
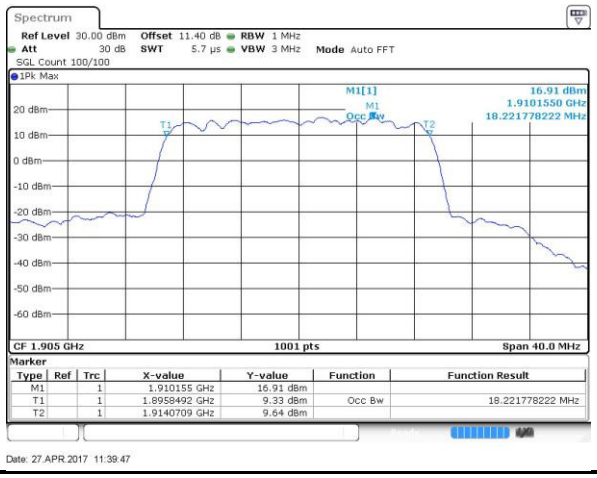
Highest Channel / 20MHz / QPSK



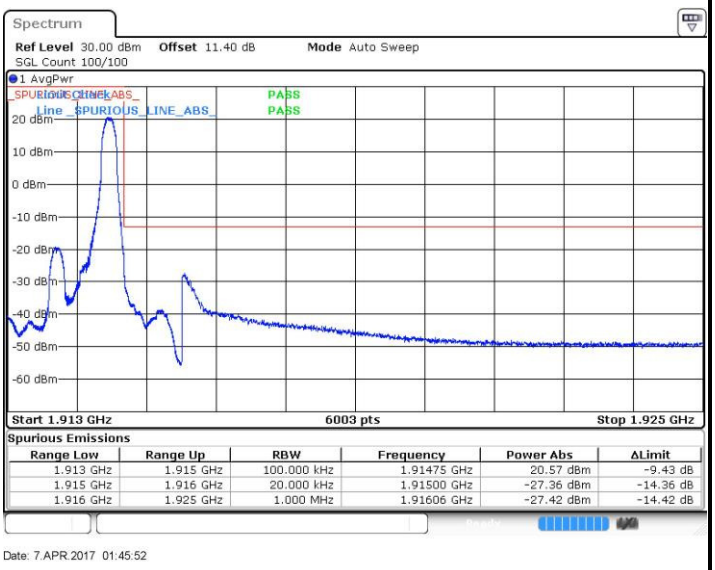
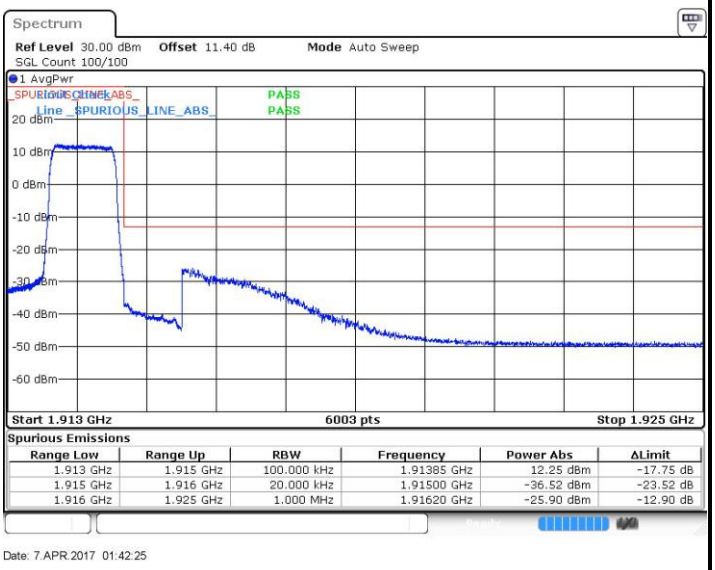
Highest Channel / 20MHz / 16QAM

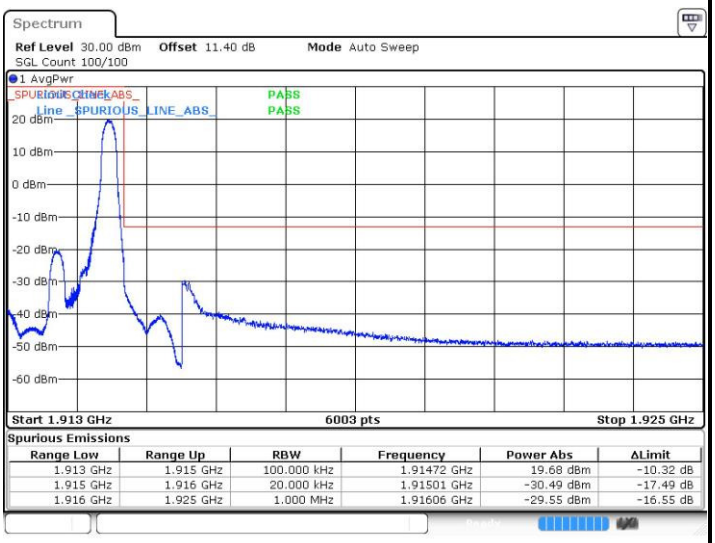
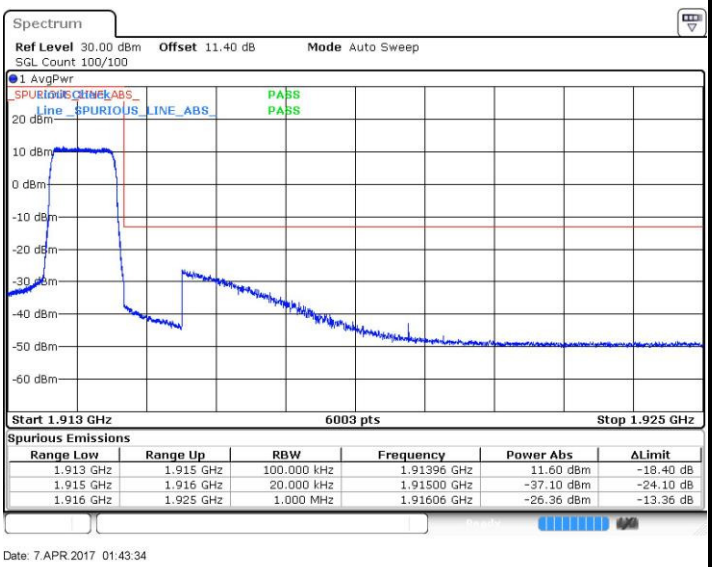


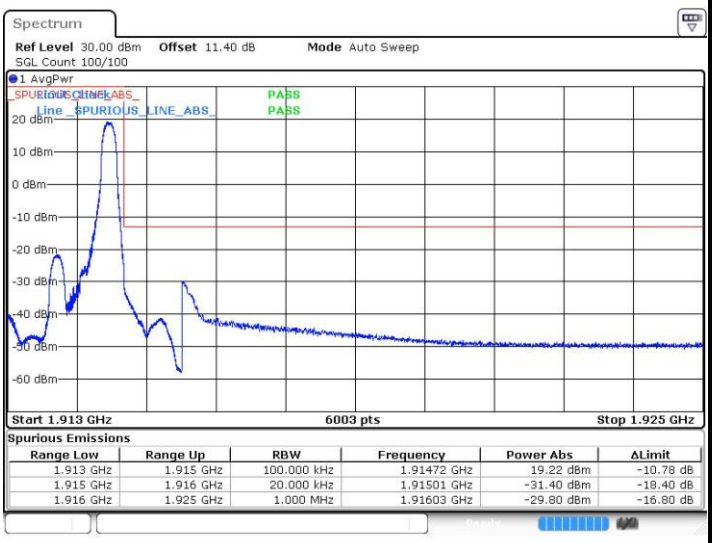
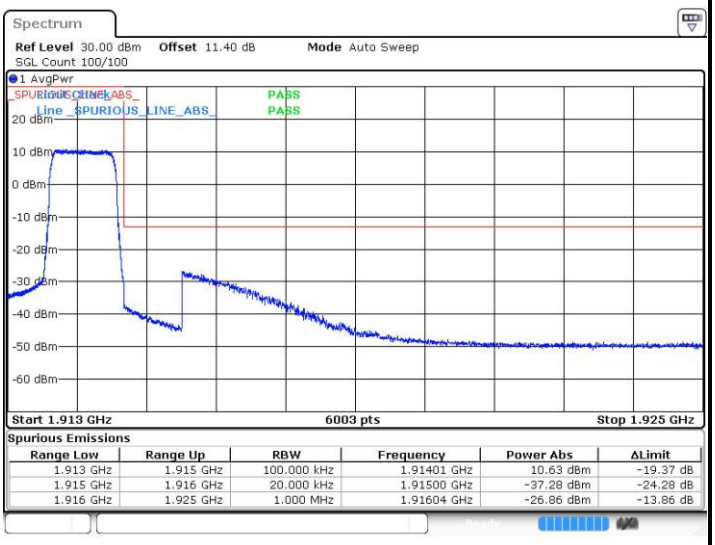
LTE Band 25	
	Highest Channel / 1.4MHz / 64QAM
	
	Highest Channel / 3MHz / 64QAM
	
	Highest Channel / 5MHz / 64QAM
	

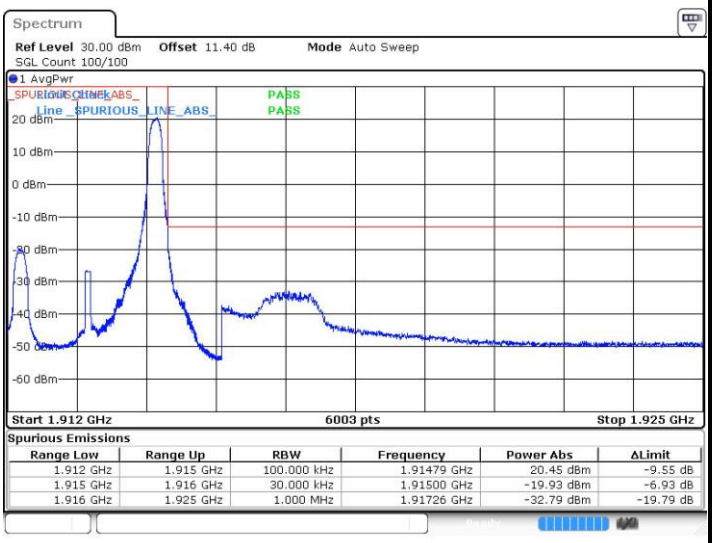
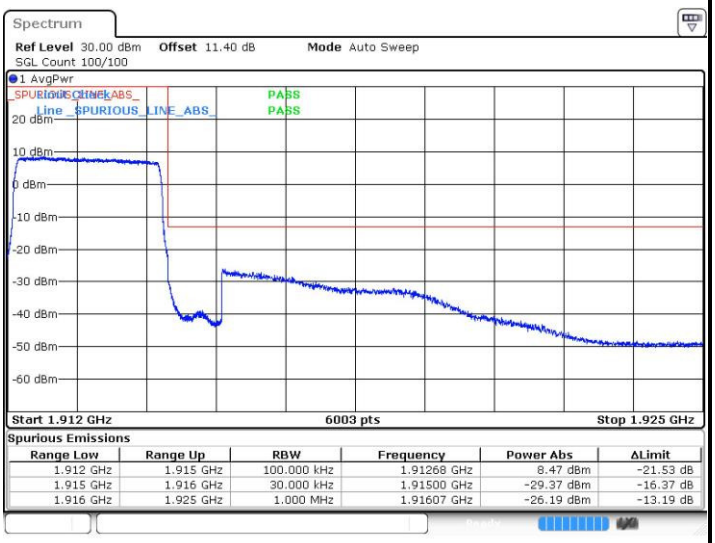
LTE Band 25	
	Highest Channel / 10MHz / 64QAM
	
	Highest Channel / 15MHz / 64QAM
	
	Highest Channel / 20MHz / 64QAM
	

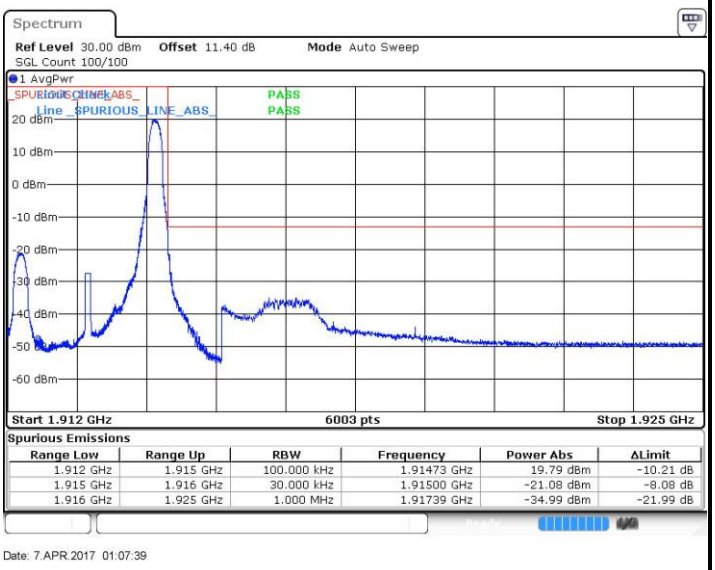
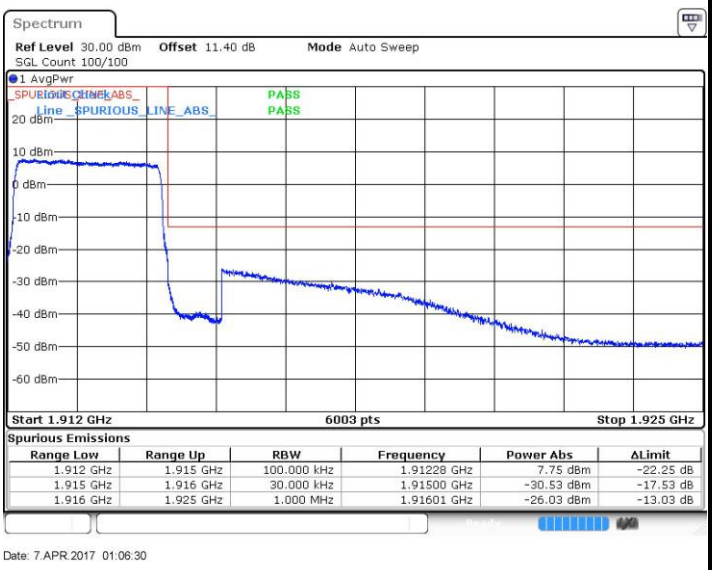
Conducted Band Edge

LTE Band 25 / 1.4MHz / QPSK	
	Highest Band Edge / 1RB
	
	Highest Band Edge / Full RB
	

LTE Band 25 / 1.4MHz / 16QAM	
	Highest Band Edge / 1 RB
	
	Highest Band Edge / Full RB
	

LTE Band 25 / 1.4MHz / 64QAM	
	Highest Band Edge / 1 RB
	
	Highest Band Edge / Full RB
	

LTE Band 25 / 3MHz / QPSK	
	Highest Band Edge / 1 RB
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 1.912 GHz / 1.915 GHz / 100.000 kHz / 1.91479 GHz / 20.45 dBm / -9.55 dB 1.915 GHz / 1.916 GHz / 30.000 kHz / 1.91500 GHz / -19.93 dBm / -6.93 dB 1.916 GHz / 1.925 GHz / 1.000 MHz / 1.91726 GHz / -32.79 dBm / -19.79 dB Date: 7.APR.2017 01:08:48
	Highest Band Edge / Full RB
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 1.912 GHz / 1.915 GHz / 100.000 kHz / 1.91268 GHz / 8.47 dBm / -21.53 dB 1.915 GHz / 1.916 GHz / 30.000 kHz / 1.91500 GHz / -29.37 dBm / -16.37 dB 1.916 GHz / 1.925 GHz / 1.000 MHz / 1.91607 GHz / -26.19 dBm / -13.19 dB Date: 7.APR.2017 01:05:20

LTE Band 25 / 3MHz / 16QAM	
	Highest Band Edge /1 RB
	
	Highest Band Edge / Full RB
	

LTE Band 25 / 3MHz / 64QAM	
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	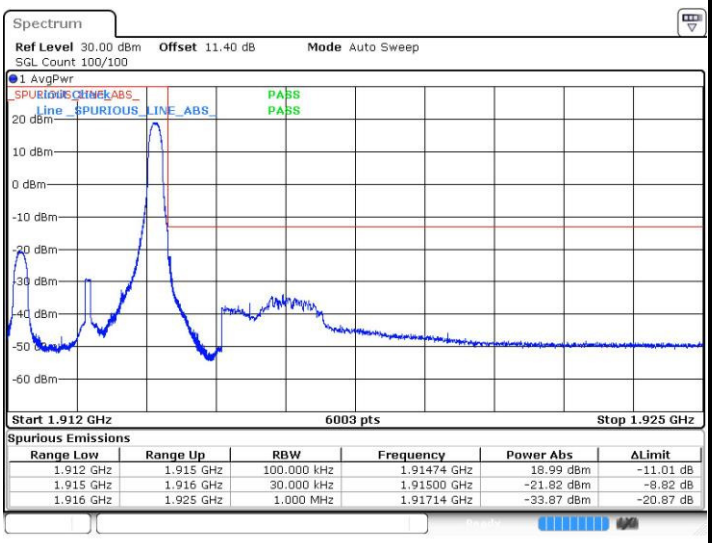
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	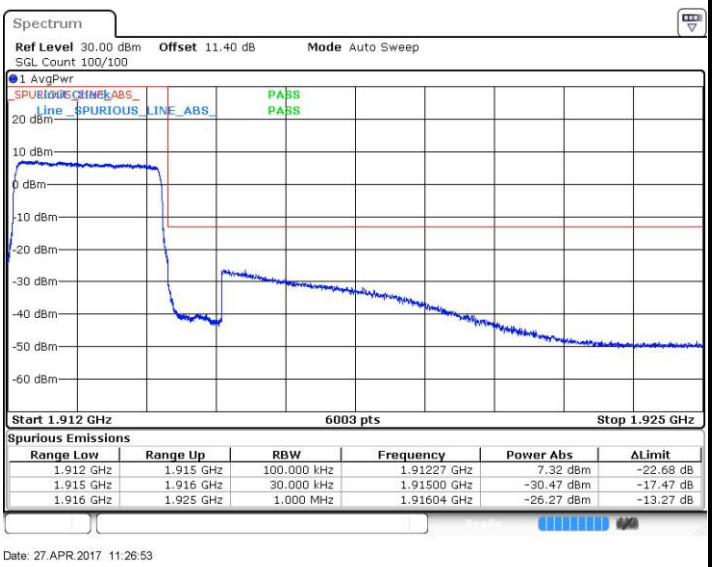

LTE Band 25 / 5MHz / QPSK	
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	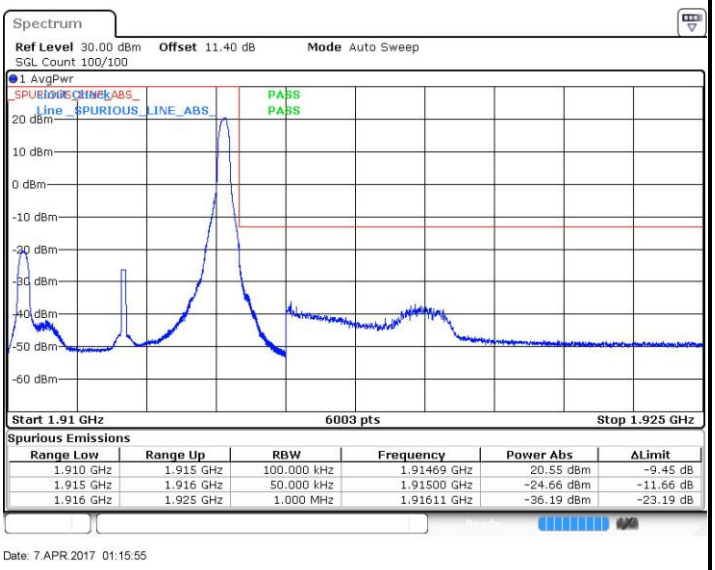
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	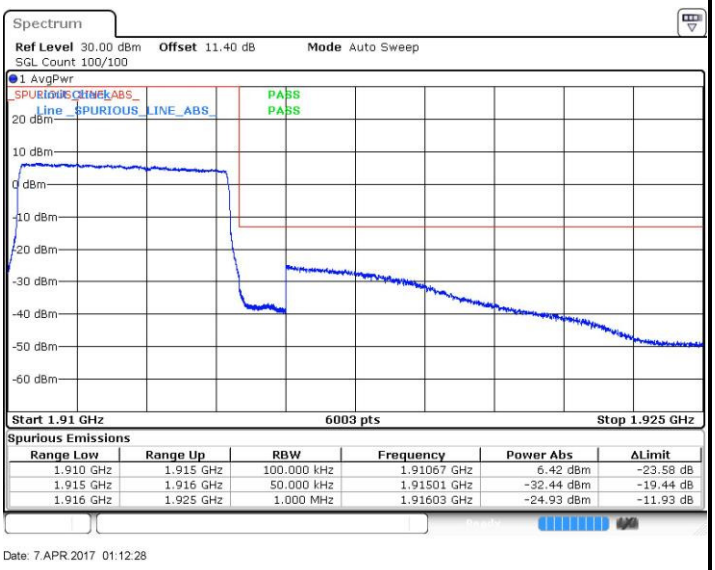

LTE Band 25 / 5MHz / 64QAM	
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	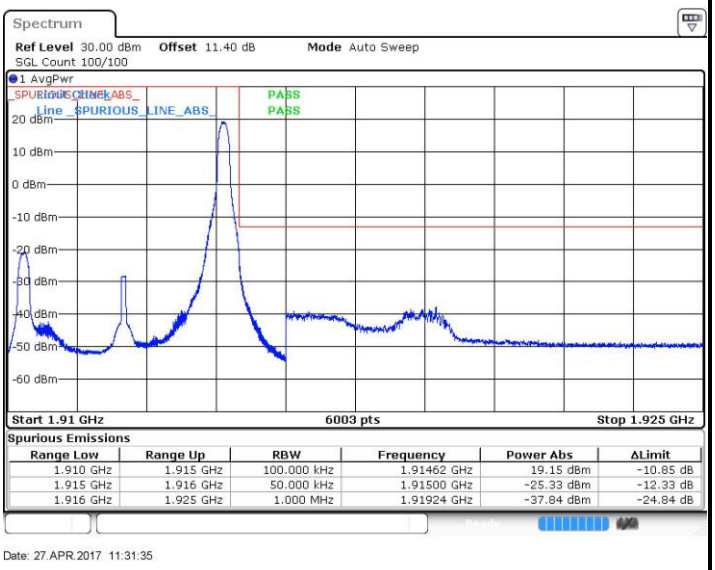
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	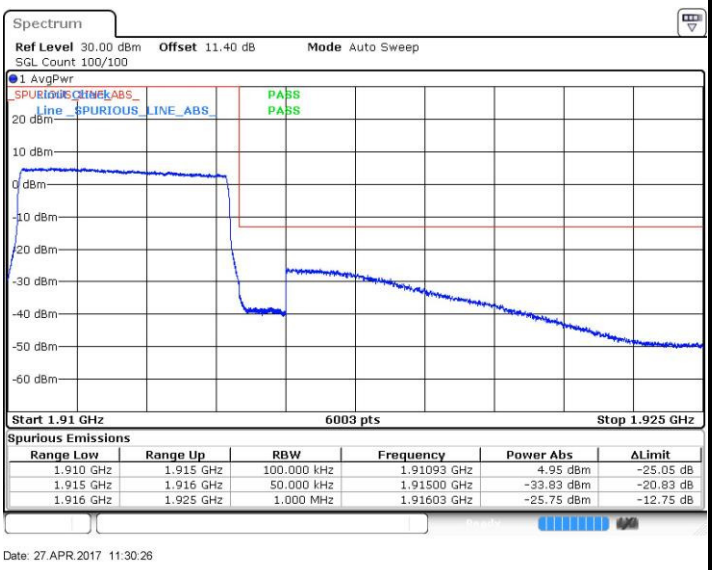

LTE Band 25 / 5MHz / 16QAM	
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	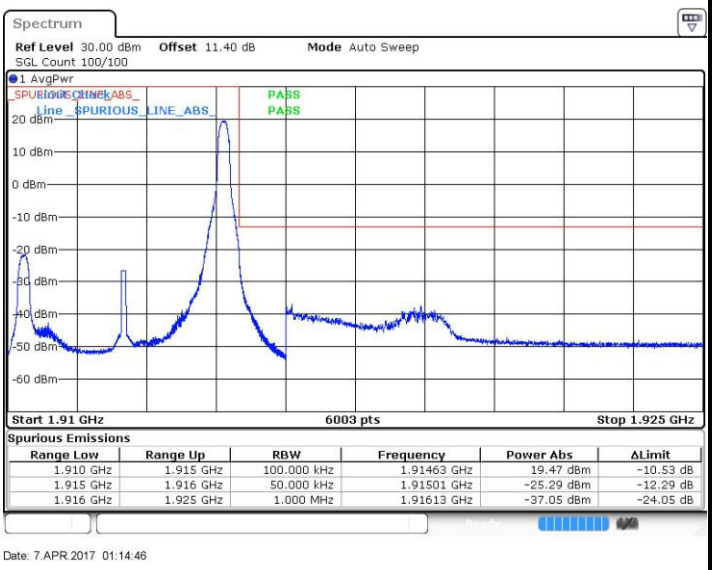
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	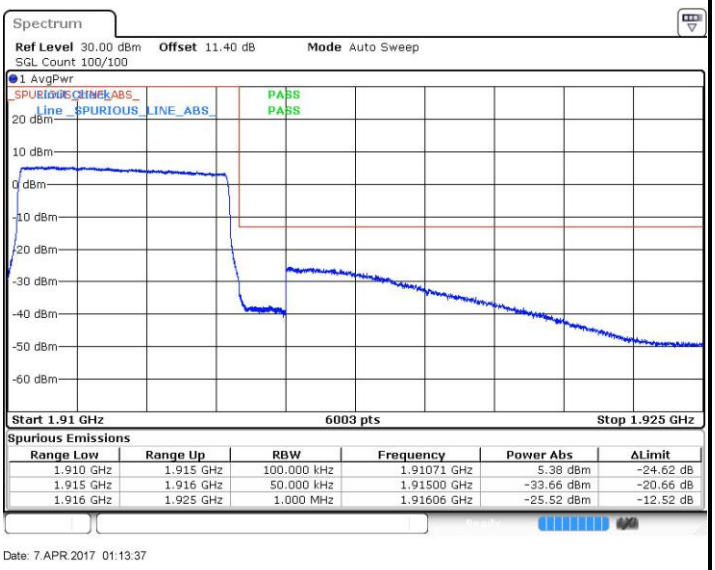

LTE Band 25 / 10MHz / QPSK	
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	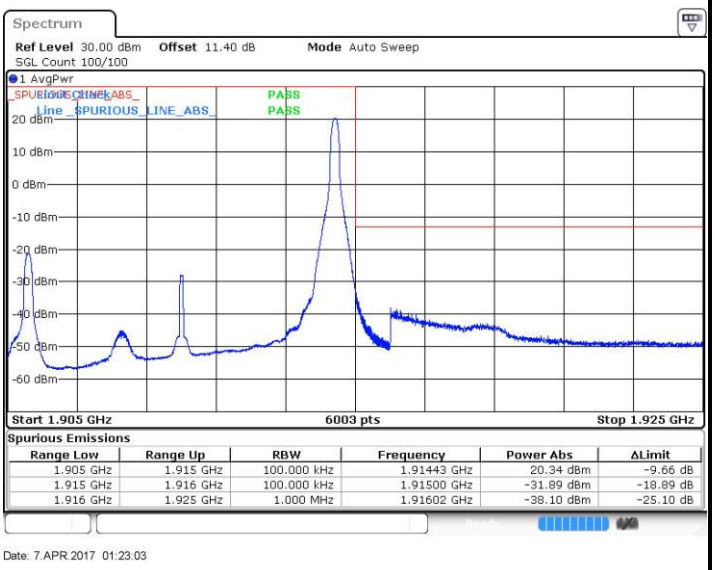
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	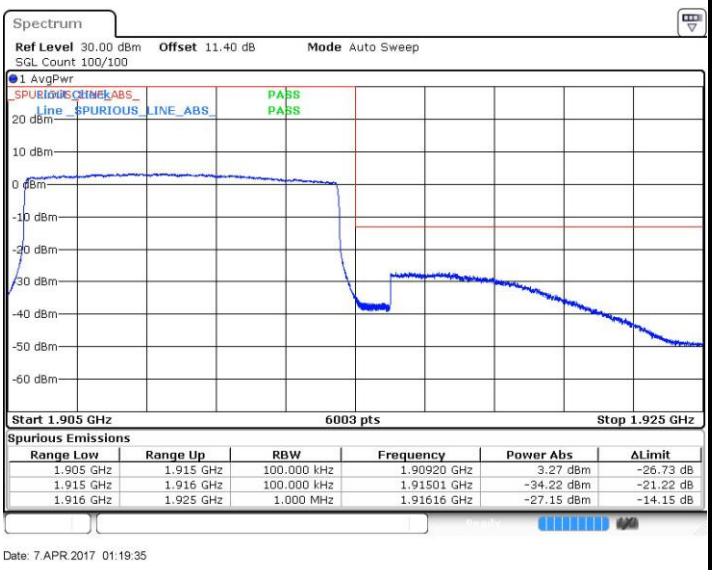

LTE Band 25 / 10MHz / 16QAM	
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	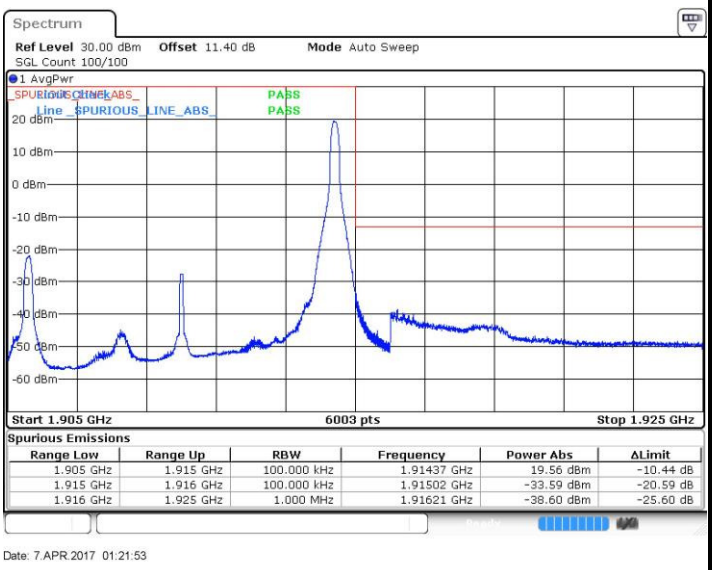
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	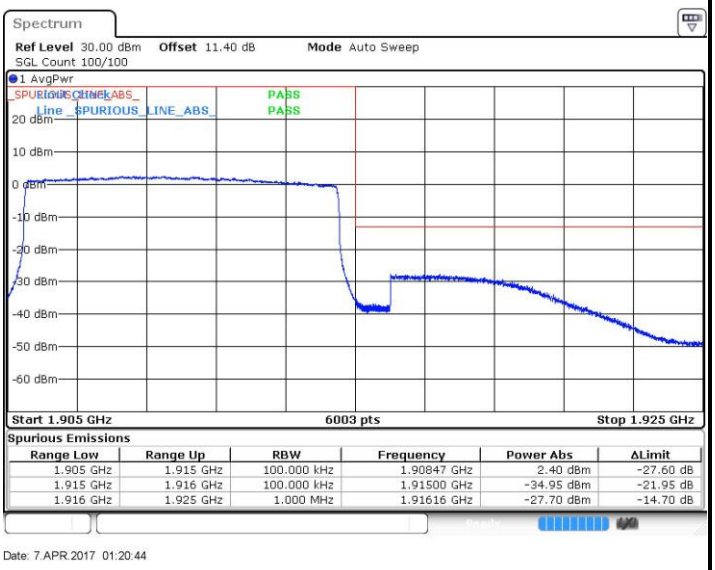

LTE Band 25 / 10MHz / 64QAM	
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	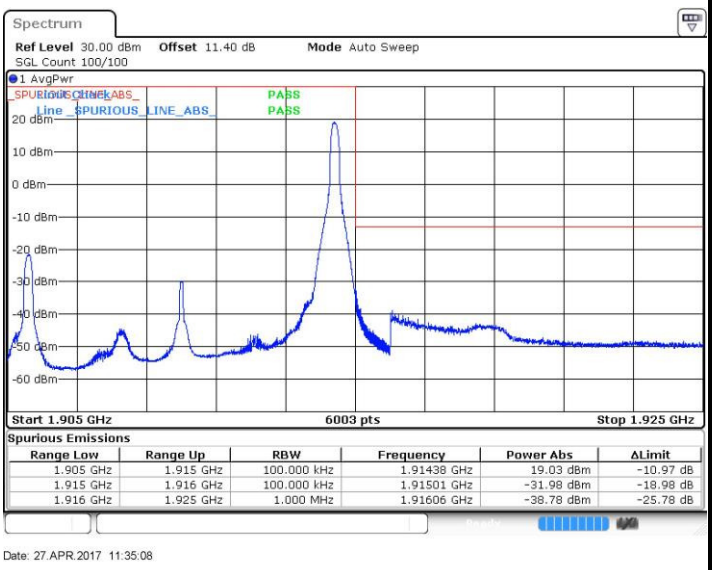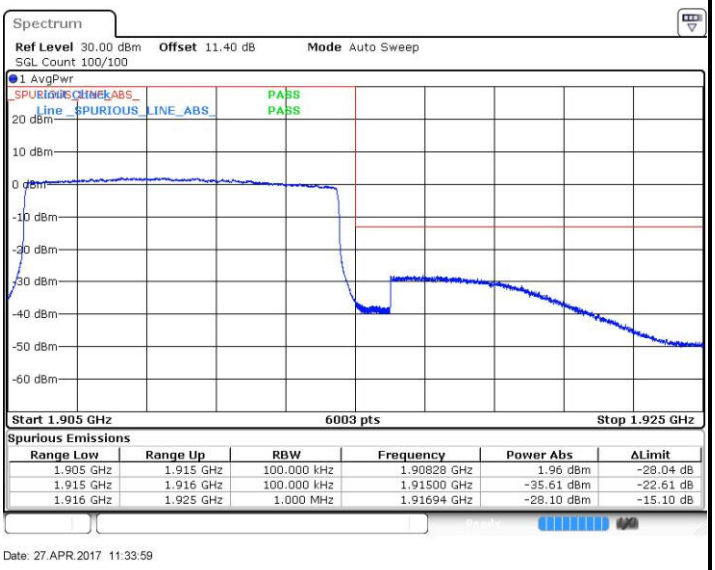
	Highest Band Edge / Full RB