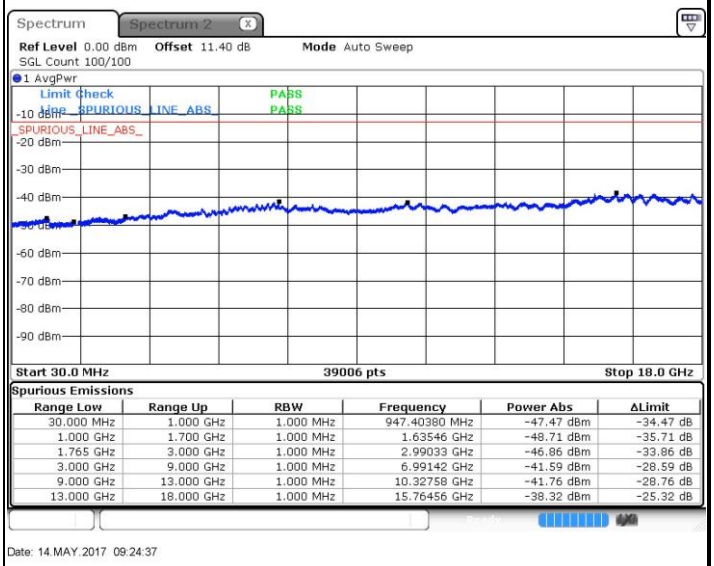
LTE Band 4 / 5MHz

Highest Channel / 64QAM



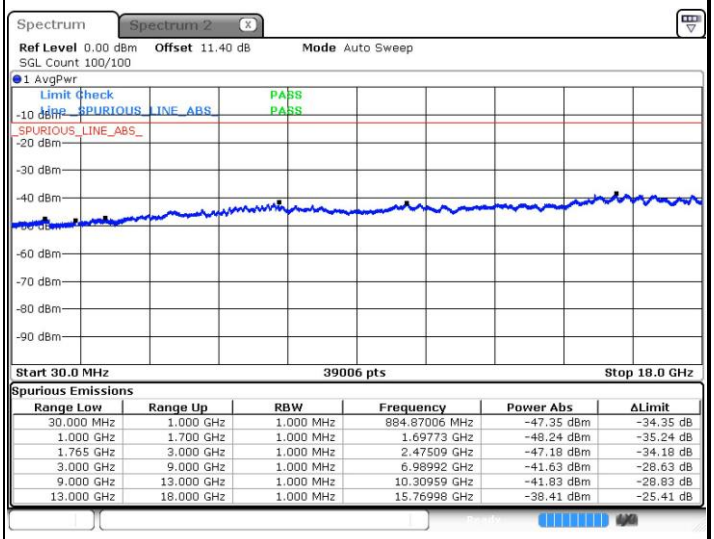
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	947.40380 MHz	-47.47 dBm	-34.47 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63546 GHz	-48.71 dBm	-35.71 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99033 GHz	-46.86 dBm	-33.86 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99142 GHz	-41.59 dBm	-28.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32758 GHz	-41.76 dBm	-28.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.76456 GHz	-38.32 dBm	-25.32 dB

Date: 14.MAY.2017 09:24:37

LTE Band 4 / 10MHz

Lowest Channel / 64QAM



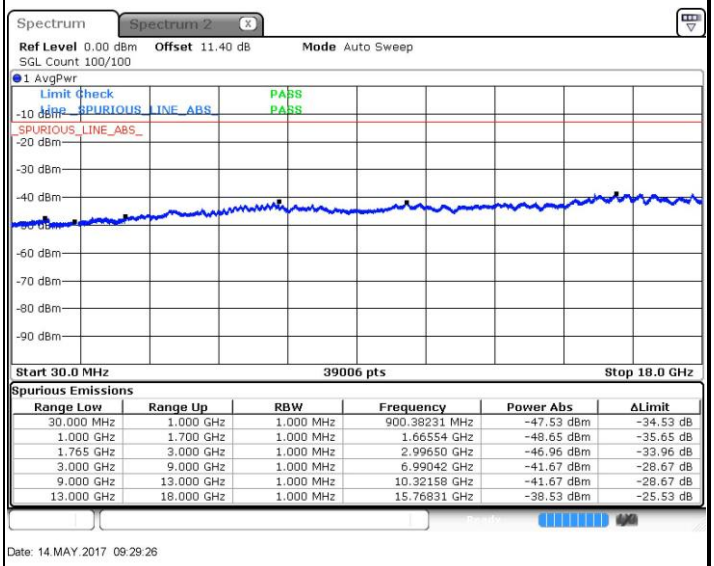
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	884.87006 MHz	-47.35 dBm	-34.35 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-48.24 dBm	-35.24 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.47509 GHz	-47.18 dBm	-34.18 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98992 GHz	-41.63 dBm	-28.63 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.30959 GHz	-41.83 dBm	-28.83 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.76998 GHz	-38.41 dBm	-25.41 dB

Date: 14.MAY.2017 09:28:11

LTE Band 4 / 10MHz

Middle Channel / 64QAM

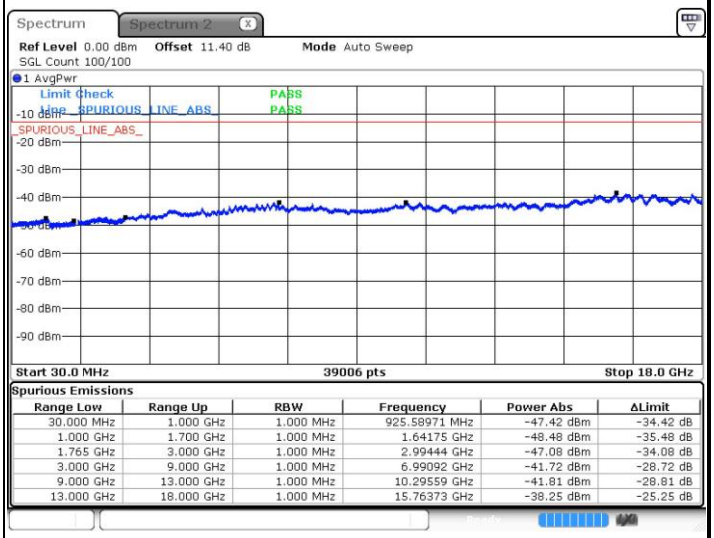


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	900.38231 MHz	-47.53 dBm	-34.53 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66554 GHz	-48.65 dBm	-35.65 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99650 GHz	-46.96 dBm	-33.96 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99042 GHz	-41.67 dBm	-28.67 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32158 GHz	-41.67 dBm	-28.67 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.76831 GHz	-38.53 dBm	-25.53 dB

Date: 14.MAY.2017 09:29:26

Highest Channel / 64QAM



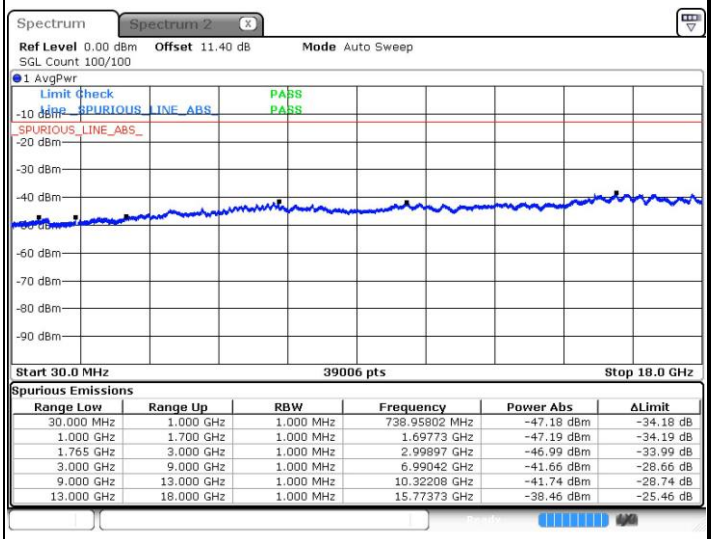
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	925.58971 MHz	-47.42 dBm	-34.42 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64175 GHz	-48.48 dBm	-35.48 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99444 GHz	-47.08 dBm	-34.08 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99092 GHz	-41.72 dBm	-28.72 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.29559 GHz	-41.81 dBm	-28.81 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.76373 GHz	-38.25 dBm	-25.25 dB

Date: 14.MAY.2017 09:32:59

LTE Band 4 / 15MHz

Lowest Channel / 64QAM

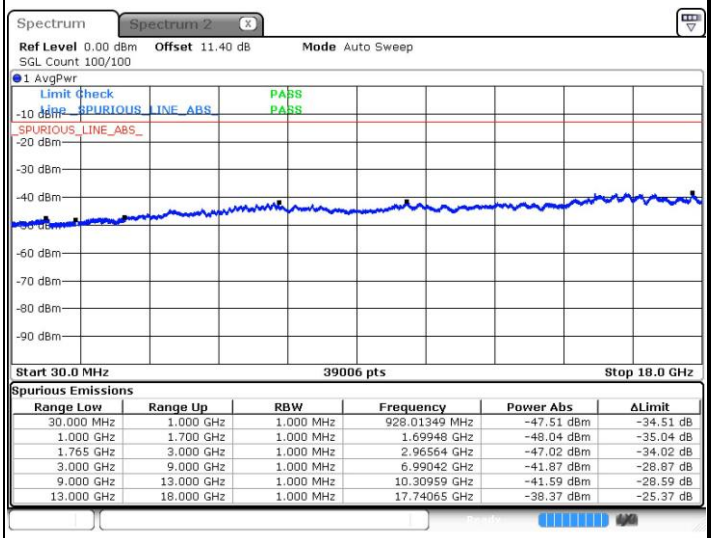


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	738.95802 MHz	-47.18 dBm	-34.18 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-47.19 dBm	-34.19 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99897 GHz	-46.99 dBm	-33.99 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99042 GHz	-41.66 dBm	-28.66 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.32208 GHz	-41.74 dBm	-28.74 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.77373 GHz	-38.46 dBm	-25.46 dB

Date: 14.MAY.2017 09:36:33

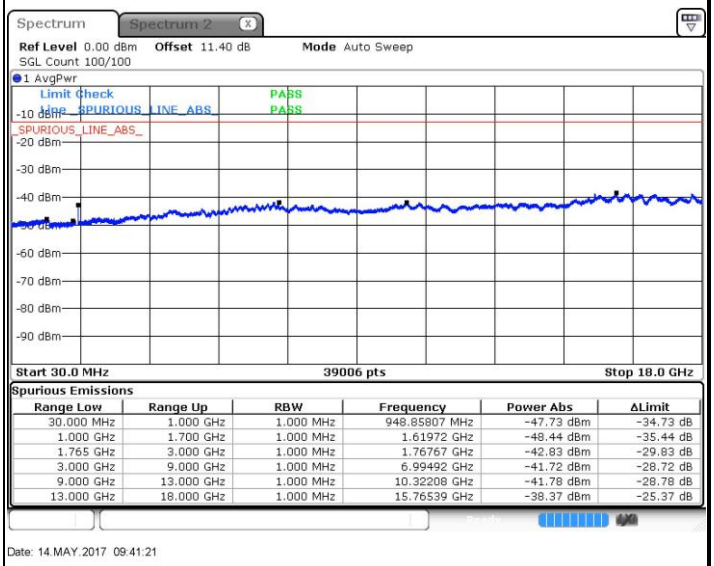
Middle Channel / 64QAM

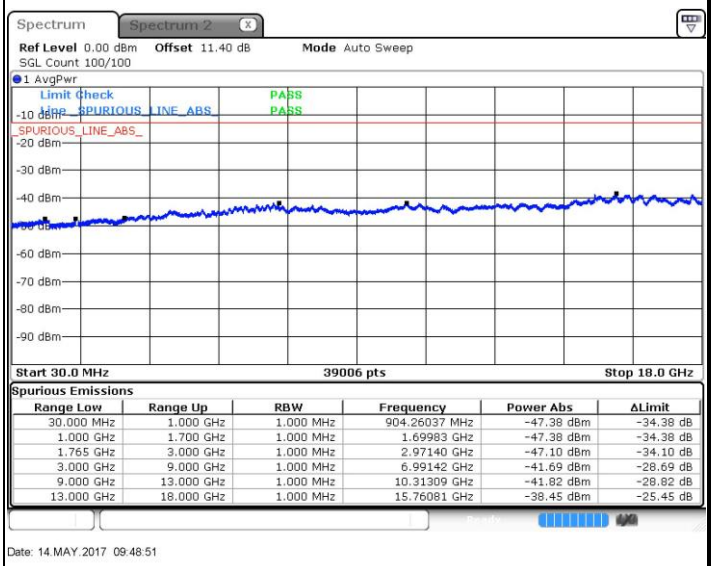


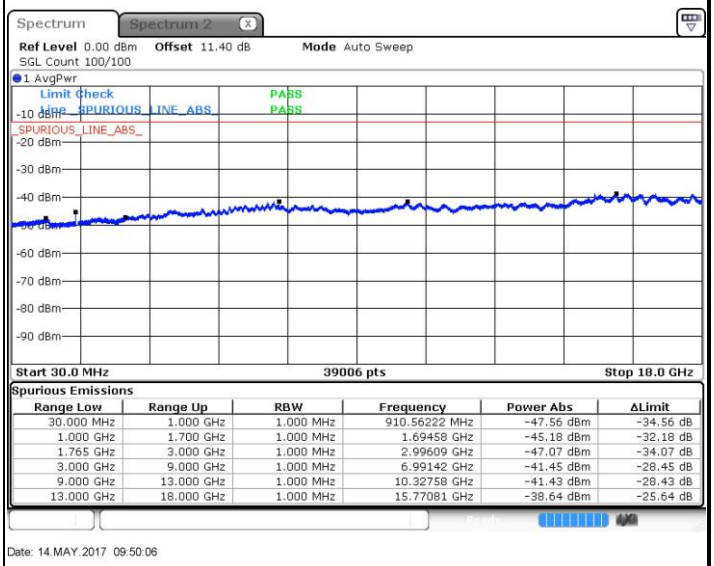
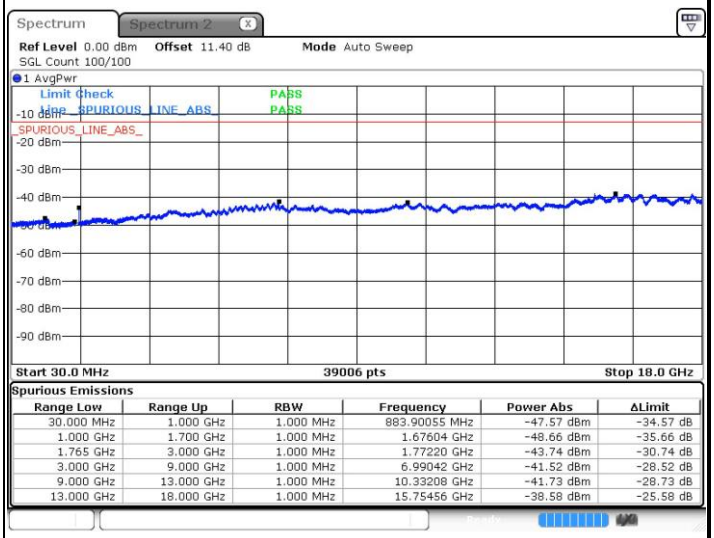
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	928.01349 MHz	-47.51 dBm	-34.51 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-48.04 dBm	-35.04 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.96564 GHz	-47.02 dBm	-34.02 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99042 GHz	-41.87 dBm	-28.87 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.30959 GHz	-41.59 dBm	-28.59 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.74065 GHz	-38.37 dBm	-25.37 dB

Date: 14.MAY.2017 09:37:48

LTE Band 4 / 15MHz	
	Highest Channel / 64QAM
	

LTE Band 4 / 20MHz	
	Lowest Channel / 64QAM
	

LTE Band 4 / 20MHz	
	Middle Channel / 64QAM
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 30.000 MHz / 1.000 GHz / 1.000 MHz / 910.56222 MHz / -47.56 dBm / -34.56 dB 1.000 GHz / 1.700 GHz / 1.000 MHz / 1.69458 GHz / -45.18 dBm / -32.18 dB 1.765 GHz / 3.000 GHz / 1.000 MHz / 2.99609 GHz / -47.07 dBm / -34.07 dB 3.000 GHz / 9.000 GHz / 1.000 MHz / 6.99142 GHz / -41.45 dBm / -28.45 dB 9.000 GHz / 13.000 GHz / 1.000 MHz / 10.32758 GHz / -41.43 dBm / -28.43 dB 13.000 GHz / 18.000 GHz / 1.000 MHz / 15.77081 GHz / -38.64 dBm / -25.64 dB Date: 14.MAY.2017 09:50:06
	Highest Channel / 64QAM
	 Spurious Emissions Range Low / Range Up / RBW / Frequency / Power Abs / ΔLimit 30.000 MHz / 1.000 GHz / 1.000 MHz / 883.90055 MHz / -47.57 dBm / -34.57 dB 1.000 GHz / 1.700 GHz / 1.000 MHz / 1.67604 GHz / -48.66 dBm / -35.66 dB 1.765 GHz / 3.000 GHz / 1.000 MHz / 1.77220 GHz / -43.74 dBm / -30.74 dB 3.000 GHz / 9.000 GHz / 1.000 MHz / 6.99042 GHz / -41.52 dBm / -28.52 dB 9.000 GHz / 13.000 GHz / 1.000 MHz / 10.33208 GHz / -41.73 dBm / -28.73 dB 13.000 GHz / 18.000 GHz / 1.000 MHz / 15.75456 GHz / -38.58 dBm / -25.58 dB Date: 14.MAY.2017 09:53:40

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	0.0097	PASS
40	Normal Voltage	0.0098	
30	Normal Voltage	0.0088	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0091	
0	Normal Voltage	0.0087	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0101	
-30	Normal Voltage	0.0101	
20	Maximum Voltage	0.0090	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0094	

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.

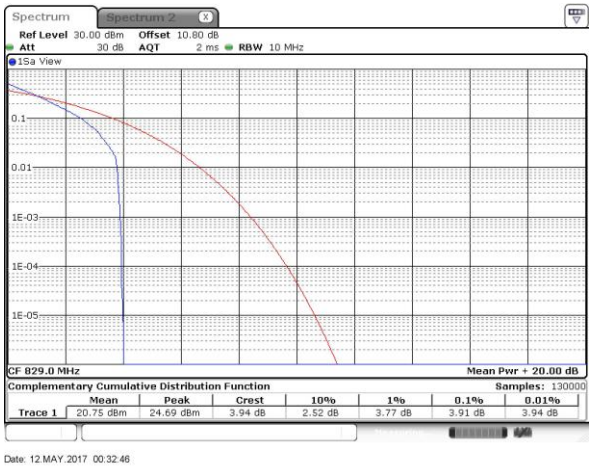
LTE Band 5

Peak-to-Average Ratio

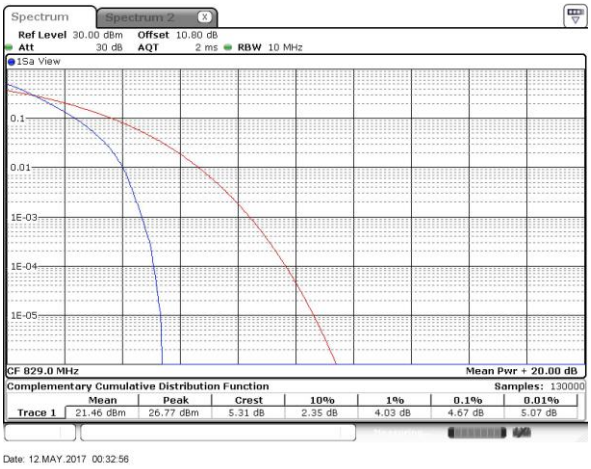
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.91	4.67	4.55	5.54	PASS
Middle CH	4.41	5.13	5.42	5.94	
Highest CH	4.46	5.04	5.1	5.91	
Mod.	-		64QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	4.99	5.65	PASS
Middle CH	-	-	5.1	5.91	
Highest CH	-	-	5.19	5.86	

LTE Band 5 / 10MHz / QPSK

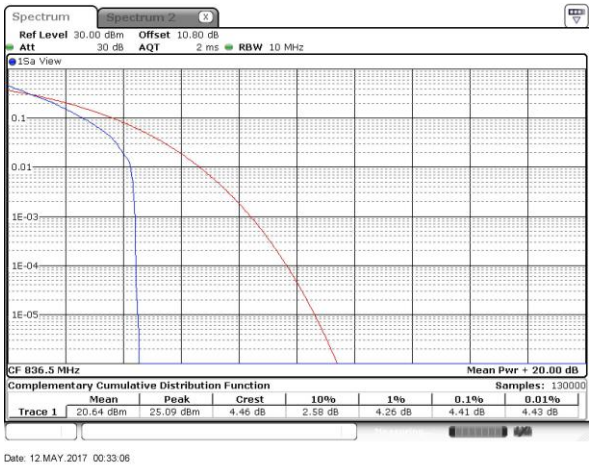
Lowest Channel / 1RB



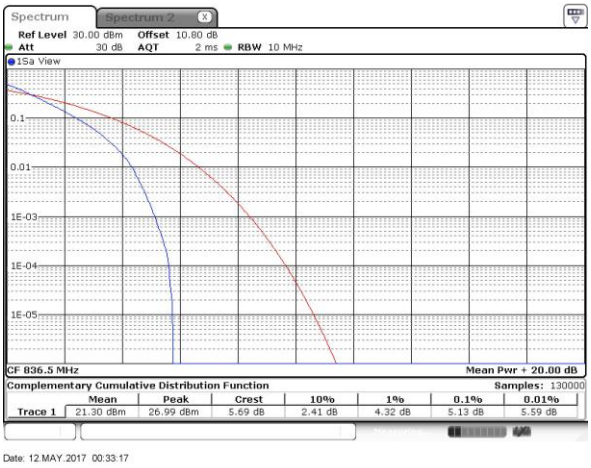
Lowest Channel / Full RB



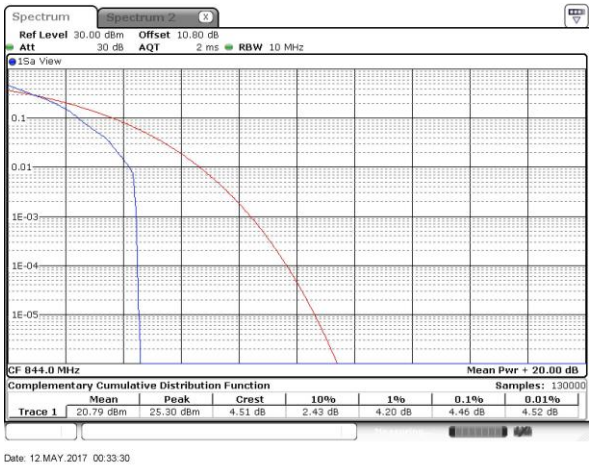
Middle Channel / 1RB



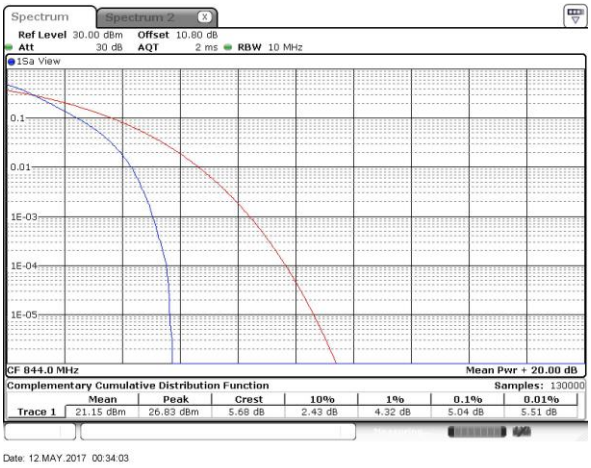
Middle Channel / Full RB



Highest Channel / 1RB

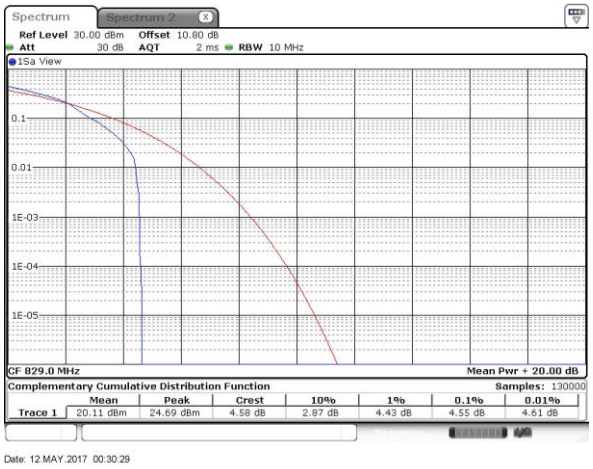


Highest Channel / Full RB

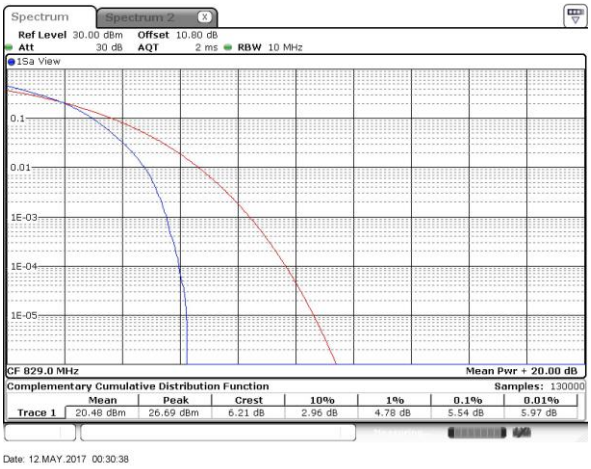


LTE Band 5 / 10MHz / 16QAM

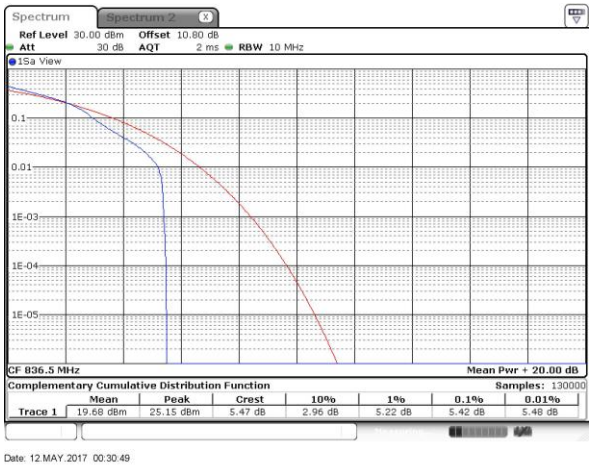
Lowest Channel / 1RB



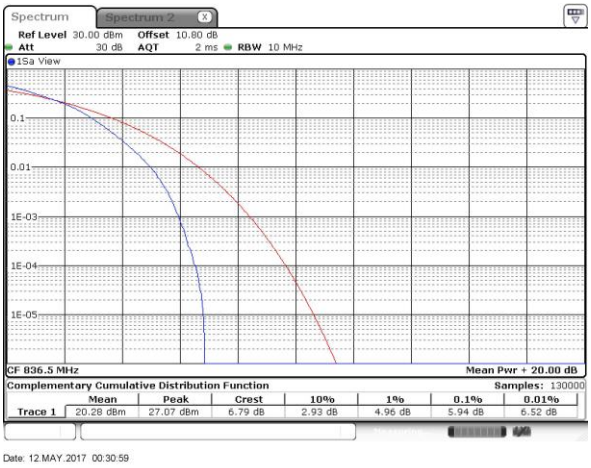
Lowest Channel / Full RB



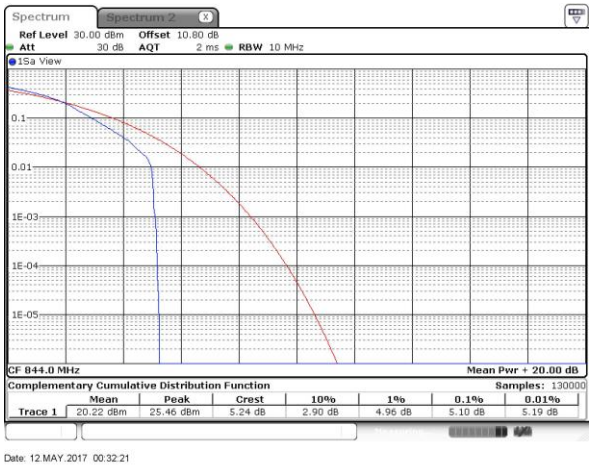
Middle Channel / 1RB



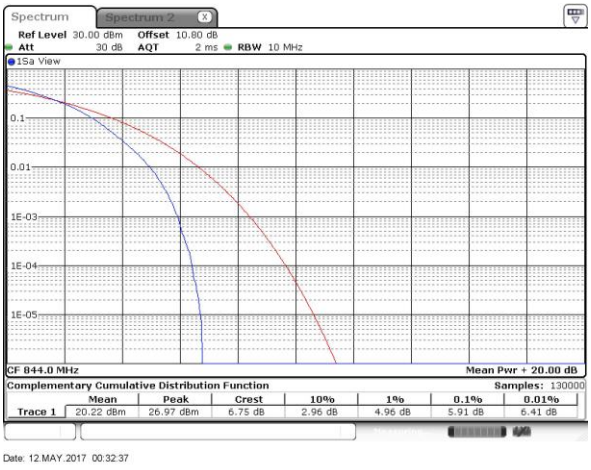
Middle Channel / Full RB



Highest Channel / 1RB

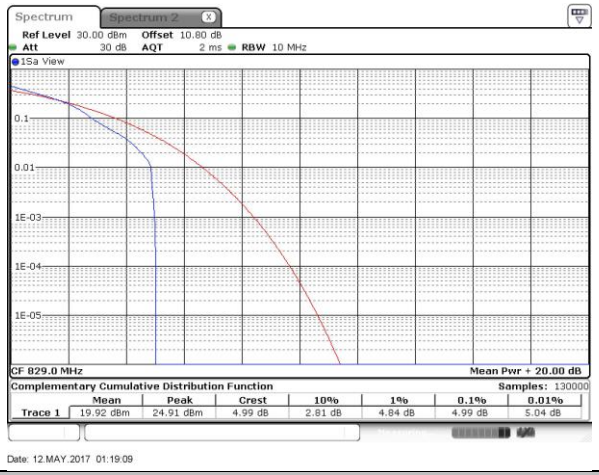


Highest Channel / Full RB

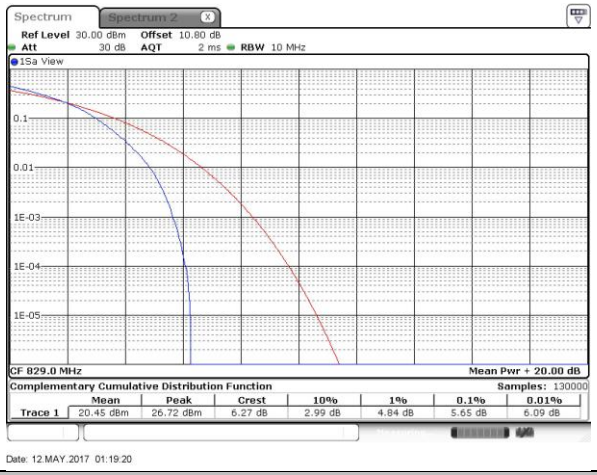


LTE Band 5 / 10MHz / 64QAM

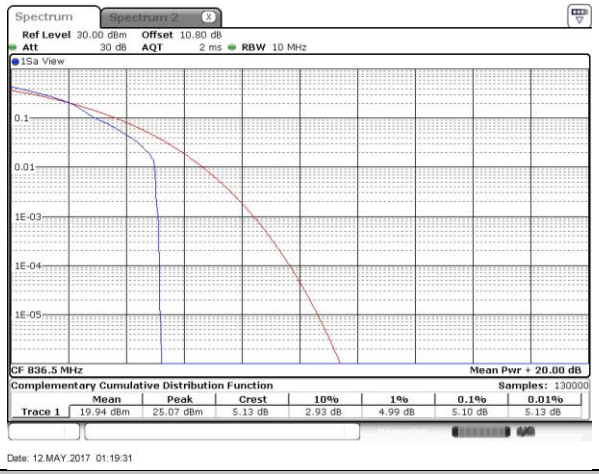
Lowest Channel / 1RB



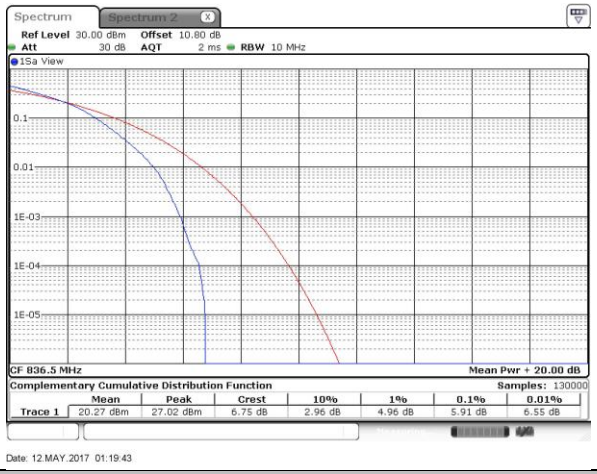
Lowest Channel / Full RB



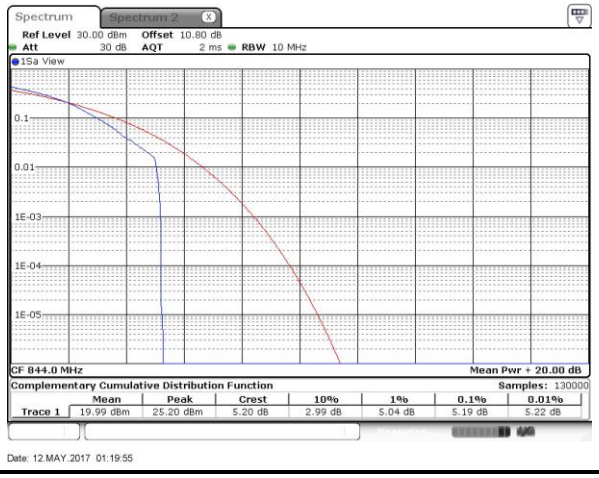
Middle Channel / 1RB



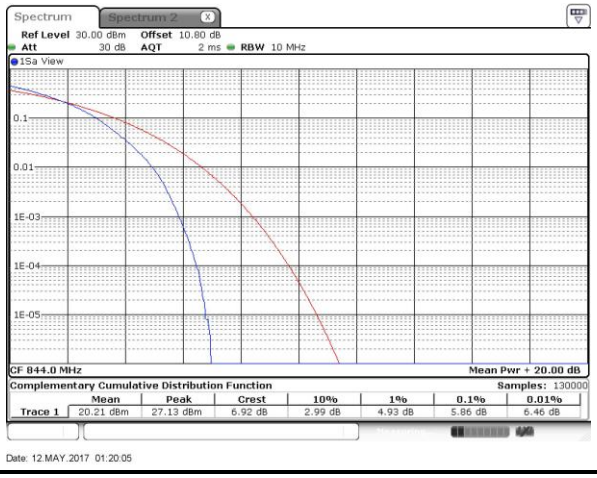
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

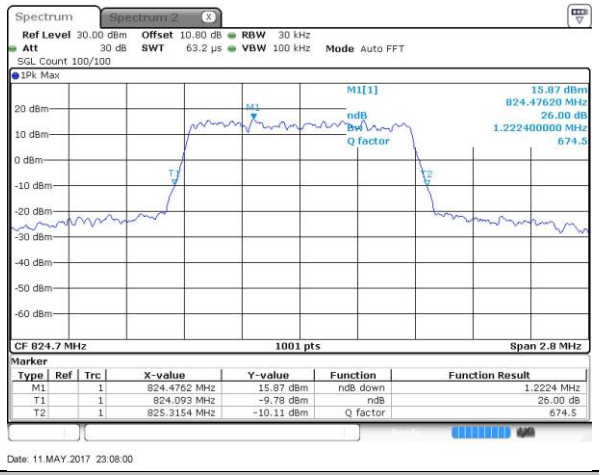


26dB Bandwidth

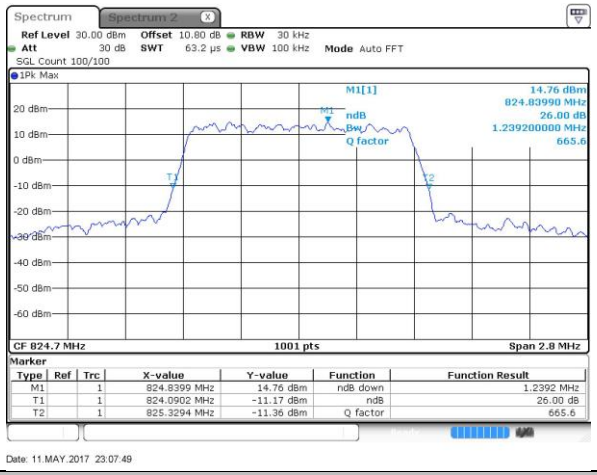
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.22	1.24	3.05	3.01	4.92	4.82	9.77	9.95	-	-	-	-
Middle CH	1.22	1.23	2.99	3.02	4.89	4.85	9.89	9.75	-	-	-	-
Highest CH	1.22	1.23	3.05	3.04	4.87	4.89	9.77	9.95	-	-	-	-
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	1.24	-	3.06	-	4.91	-	9.81	-	-	-	-
Middle CH	-	1.25	-	3.03	-	5.00	-	9.63	-	-	-	-
Highest CH	-	1.22	-	3.02	-	4.89	-	9.87	-	-	-	-

LTE Band 5

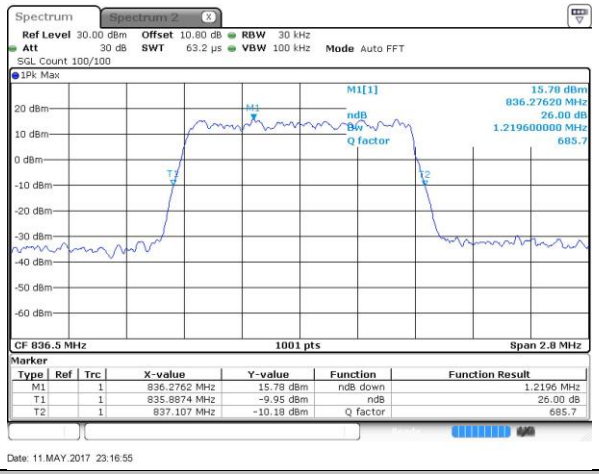
Lowest Channel / 1.4MHz / QPSK



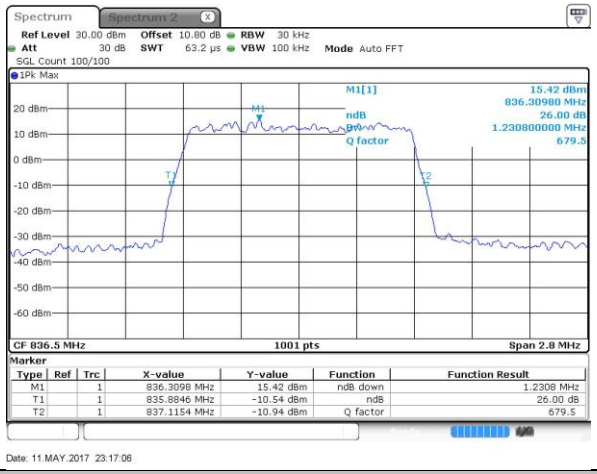
Lowest Channel / 1.4MHz / 16QAM



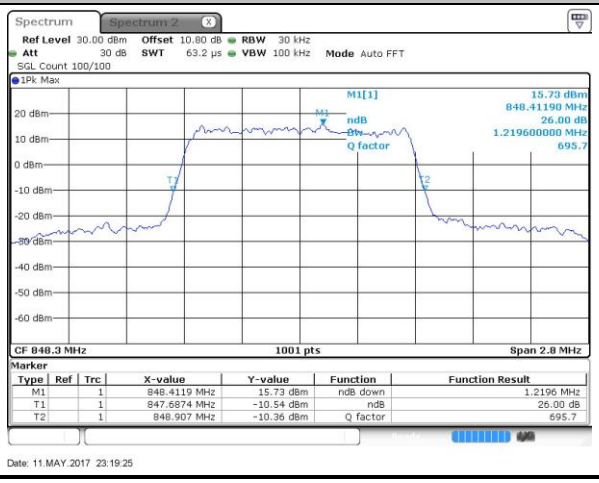
Middle Channel / 1.4MHz / QPSK



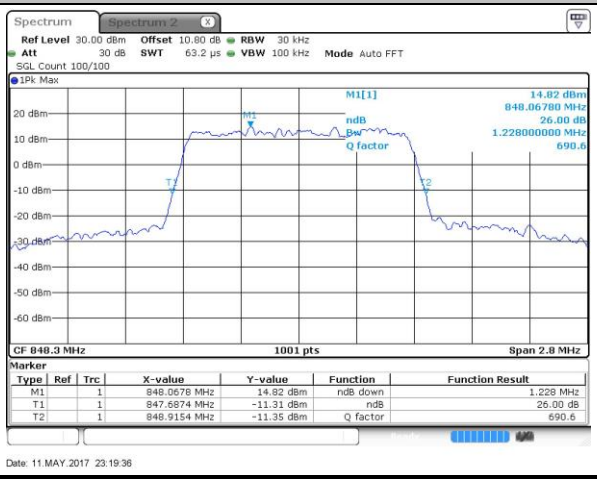
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

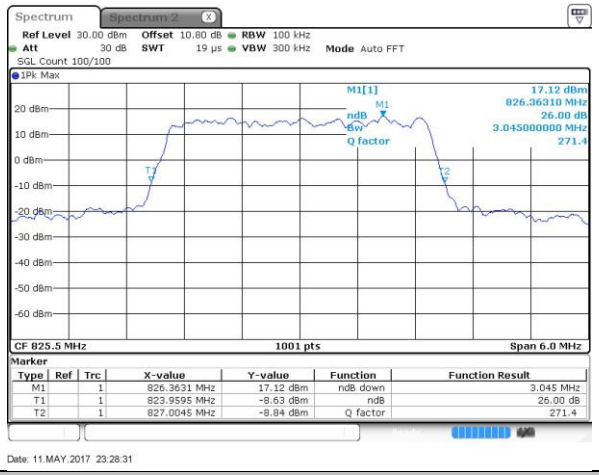


Highest Channel / 1.4MHz / 16QAM

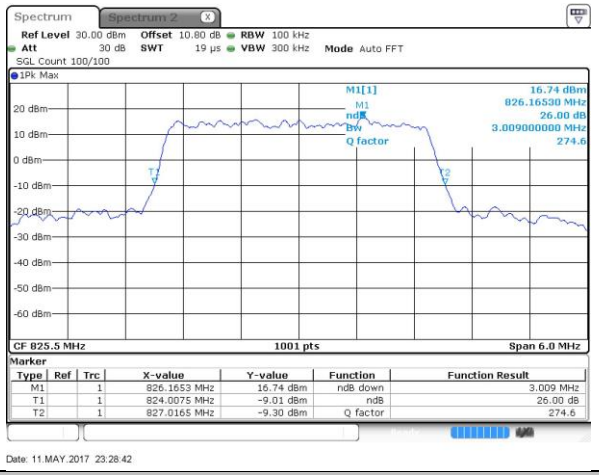


LTE Band 5

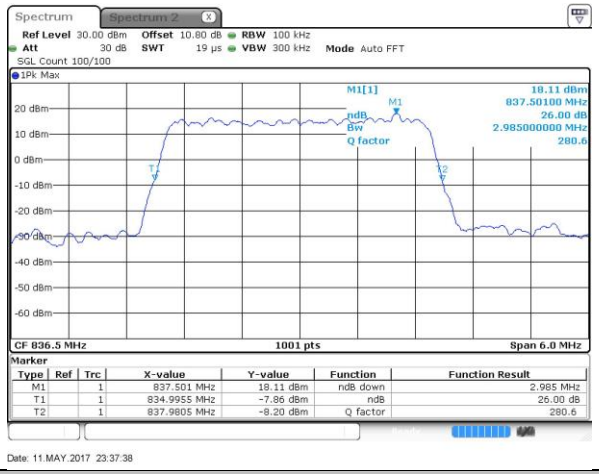
Lowest Channel / 3MHz / QPSK



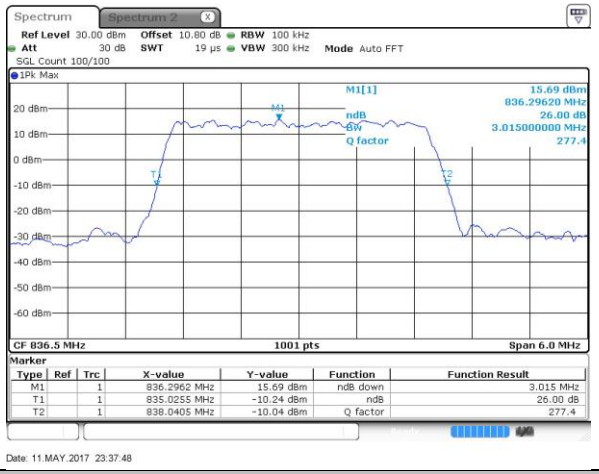
Lowest Channel / 3MHz / 16QAM



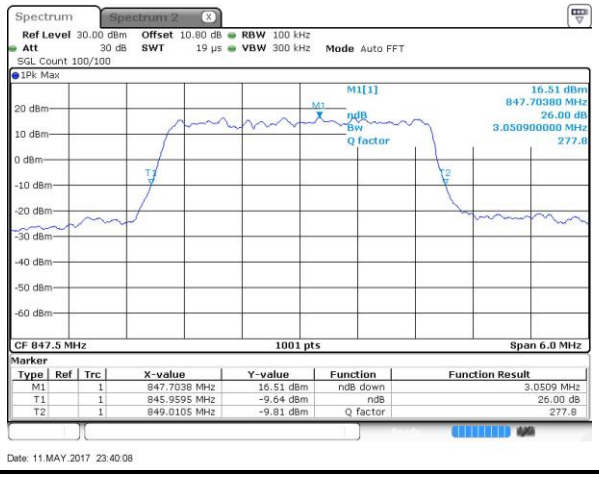
Middle Channel / 3MHz / QPSK



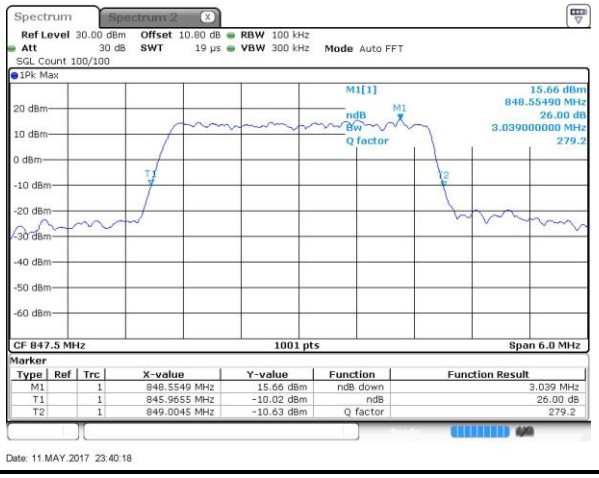
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

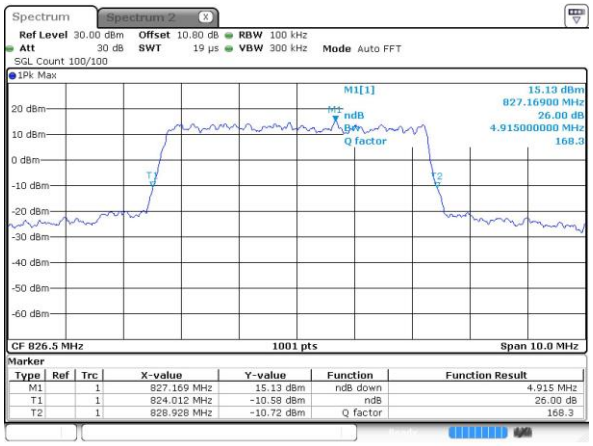


Highest Channel /3MHz / 16QAM

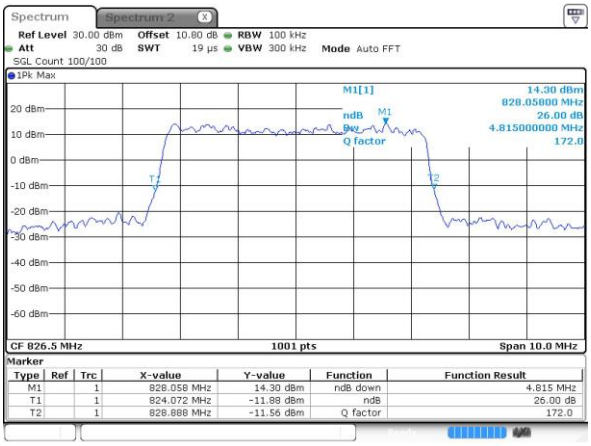


LTE Band 5

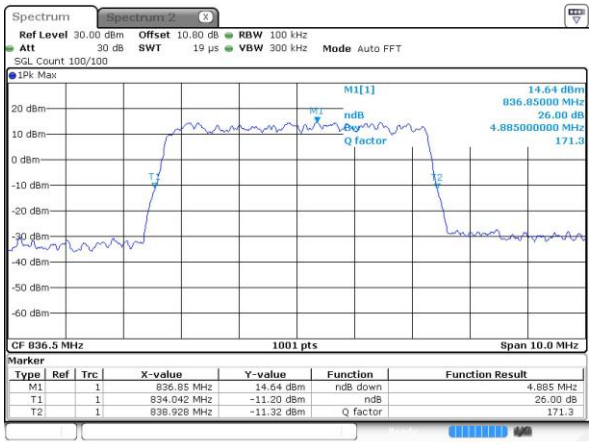
Lowest Channel / 5MHz / QPSK



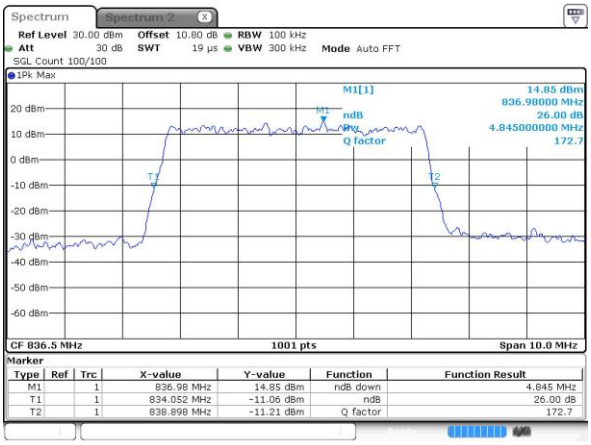
Lowest Channel / 5MHz / 16QAM



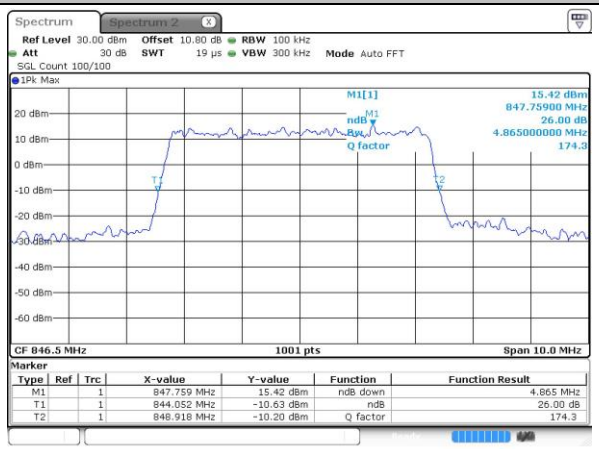
Middle Channel / 5MHz / QPSK



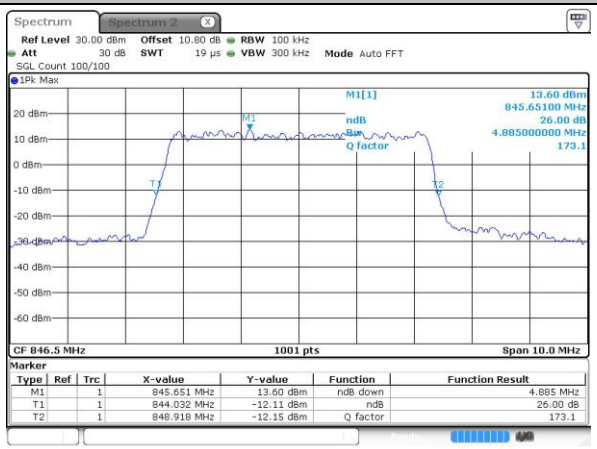
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

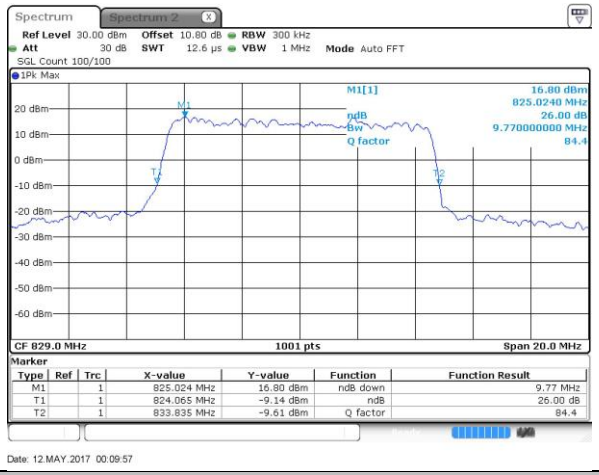


Highest Channel / 5MHz / 16QAM

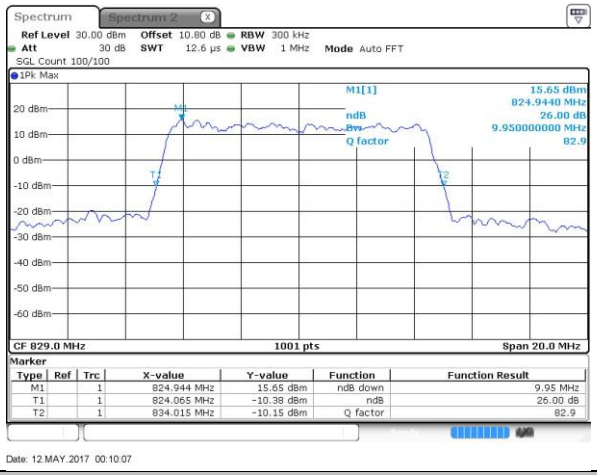


LTE Band 5

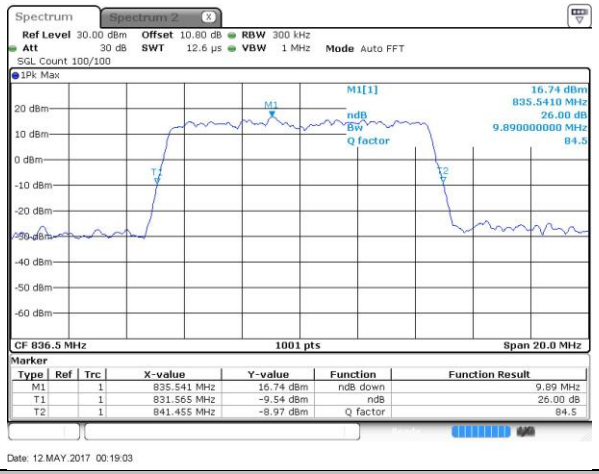
Lowest Channel / 10MHz / QPSK



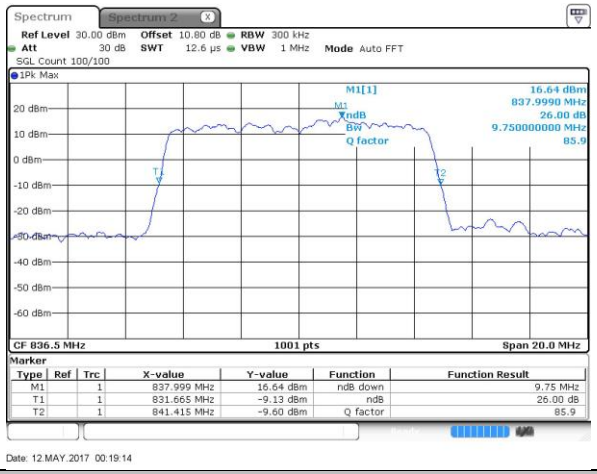
Lowest Channel / 10MHz / 16QAM



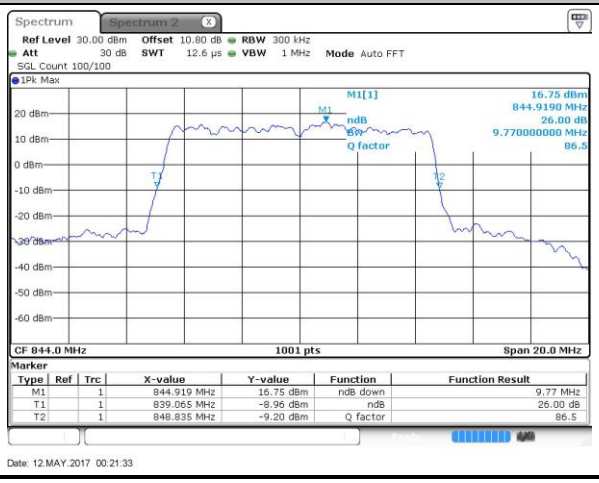
Middle Channel / 10MHz / QPSK



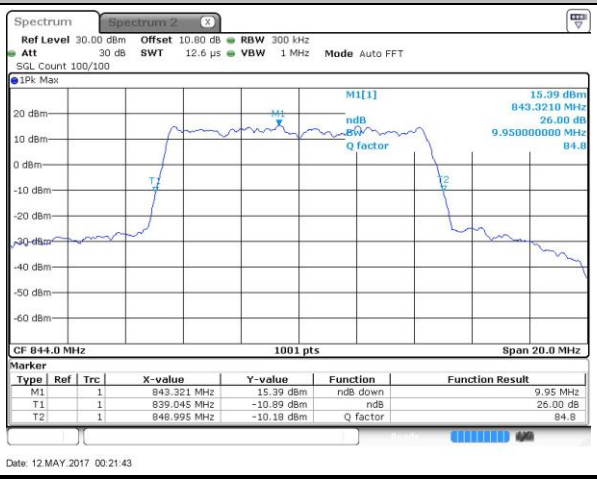
Middle Channel / 10MHz / 16QAM

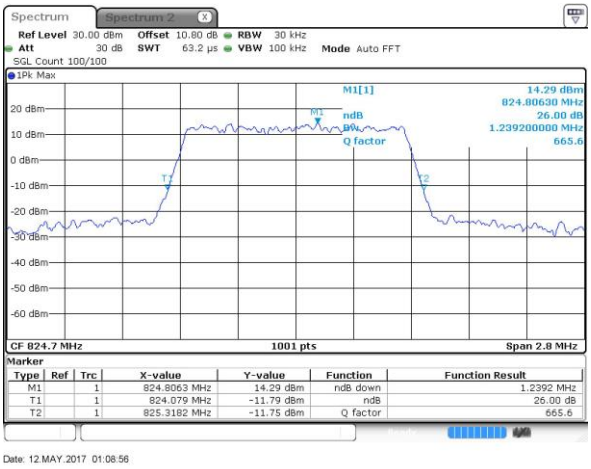
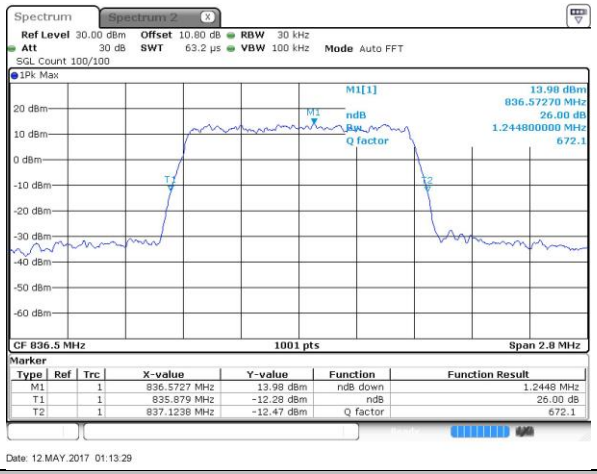
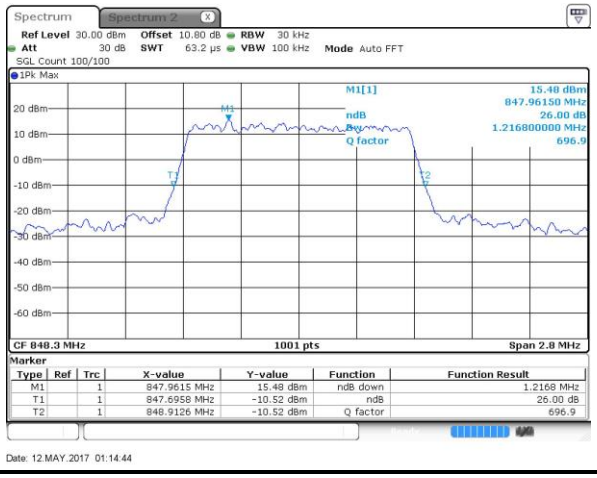


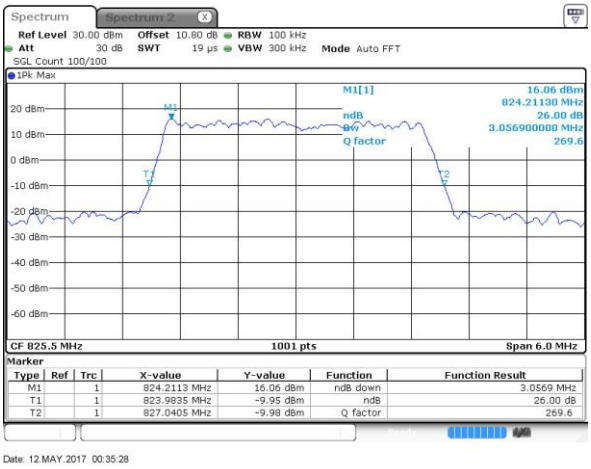
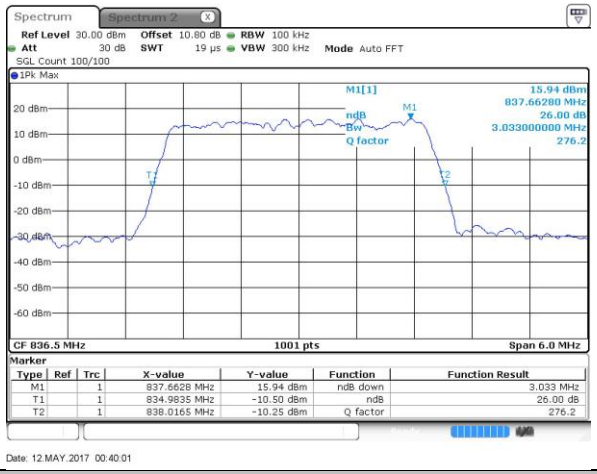
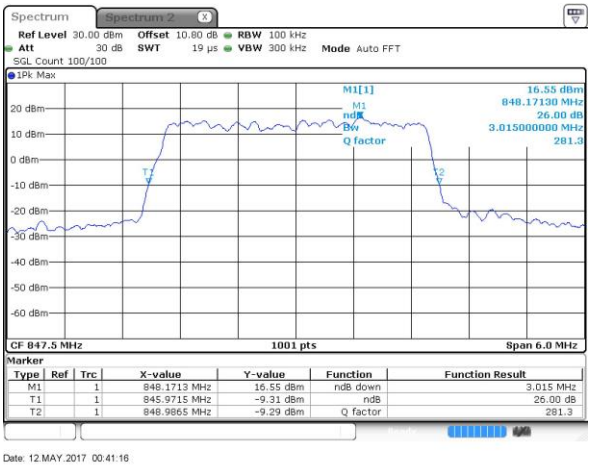
Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

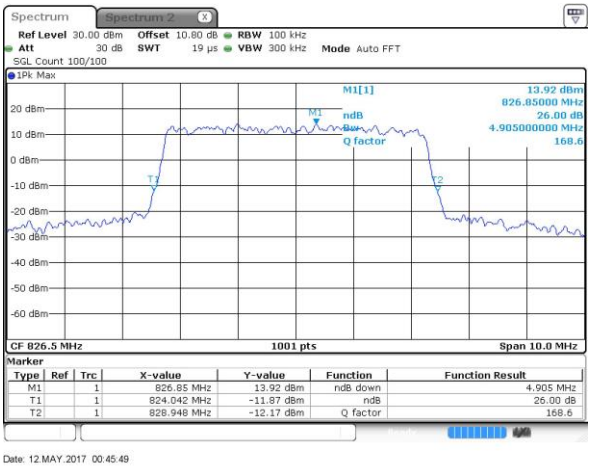


LTE Band 5	
	Lowest Channel / 1.4MHz / 64QAM
	
	Middle Channel / 1.4MHz / 64QAM
	
	Highest Channel / 1.4MHz / 64QAM
	

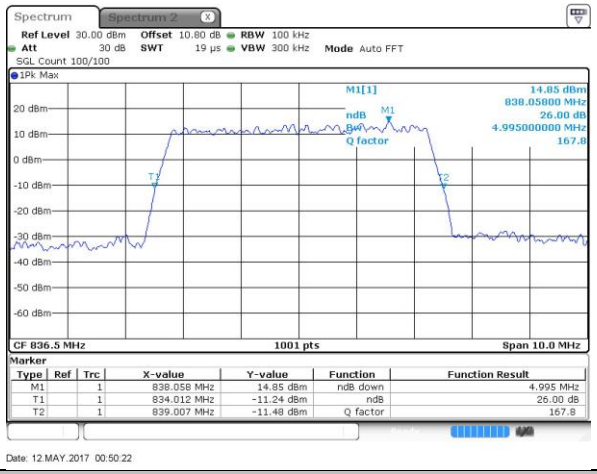
LTE Band 5	
	Lowest Channel / 3MHz / 64QAM
	
	Middle Channel /3MHz / 64QAM
	
	Highest Channel /3MHz / 64QAM
	

LTE Band 5

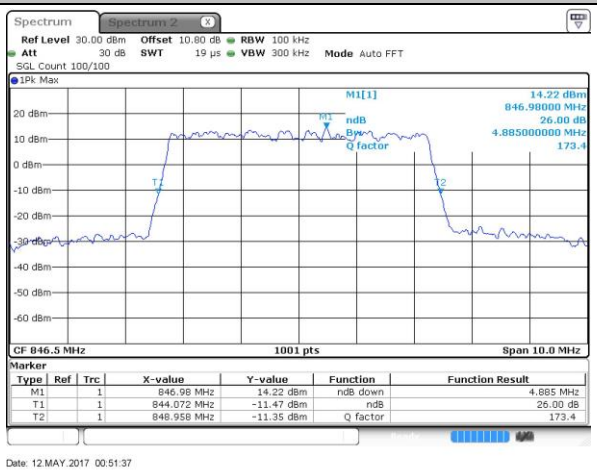
Lowest Channel / 5MHz / 64QAM



Middle Channel / 5MHz / 64QAM

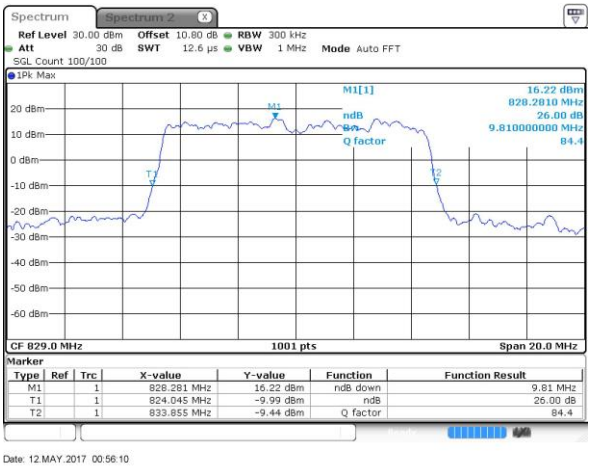


Highest Channel / 5MHz / 64QAM

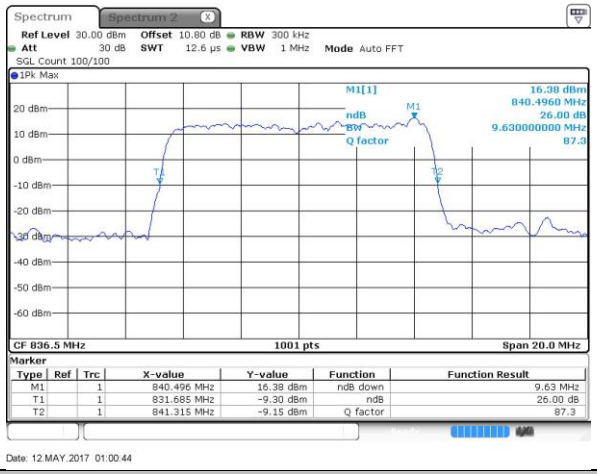


LTE Band 5

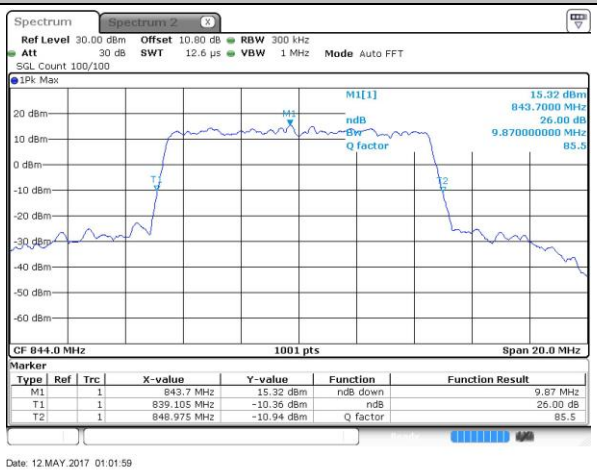
Lowest Channel / 10MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 10MHz / 64QAM

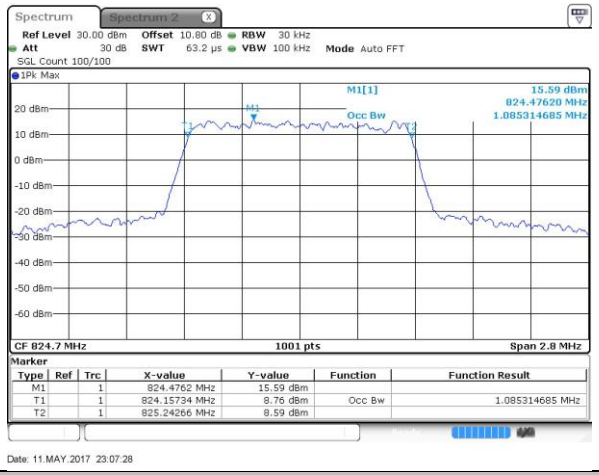


Occupied Bandwidth

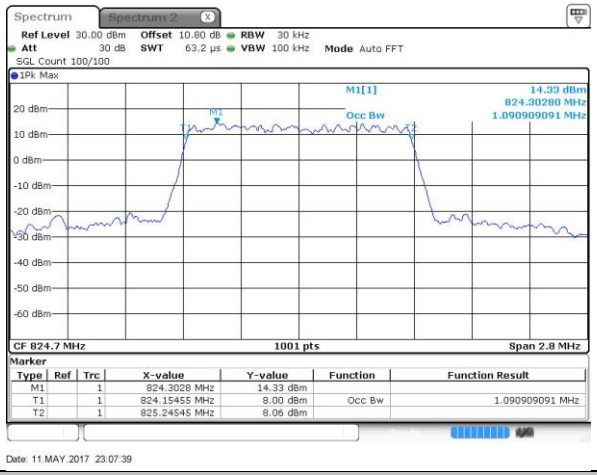
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.7	2.73	4.49	4.52	9.03	9.03	-	-	-	-
Middle CH	1.09	1.09	2.72	2.72	4.49	4.5	8.99	8.97	-	-	-	-
Highest CH	1.09	1.08	2.72	2.72	4.51	4.5	9.01	9.01	-	-	-	-
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	1.09	-	2.72	-	4.49	-	9.07	-	-	-	-
Middle CH	-	1.09	-	2.73	-	4.49	-	9.03	-	-	-	-
Highest CH	-	1.09	-	2.73	-	4.51	-	8.99	-	-	-	-

LTE Band 5

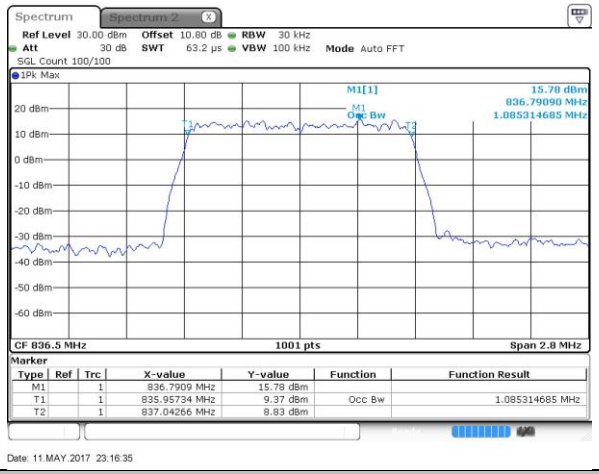
Lowest Channel / 1.4MHz / QPSK



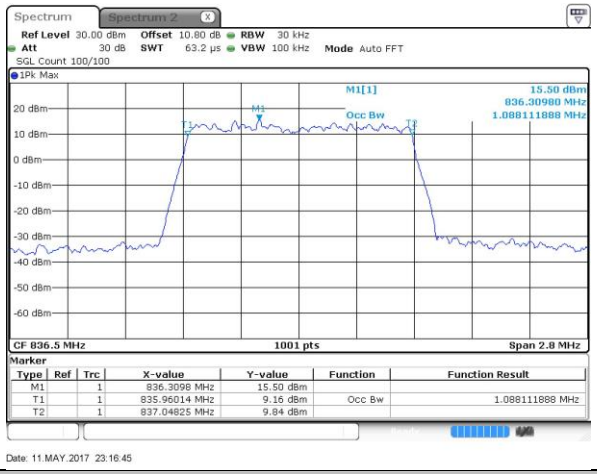
Lowest Channel / 1.4MHz / 16QAM



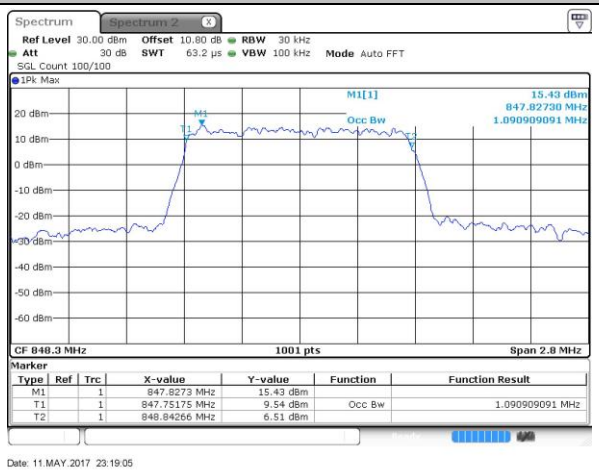
Middle Channel / 1.4MHz / QPSK



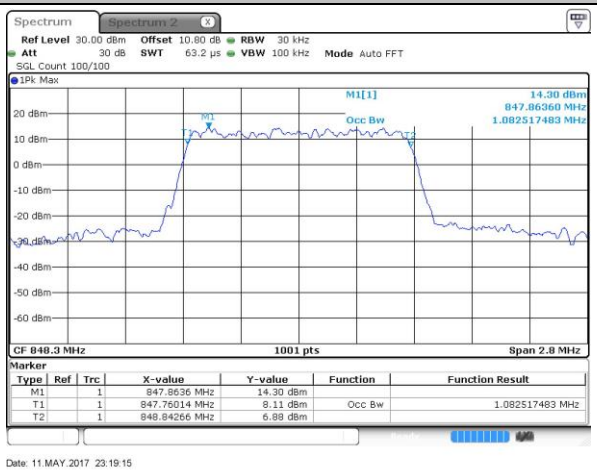
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

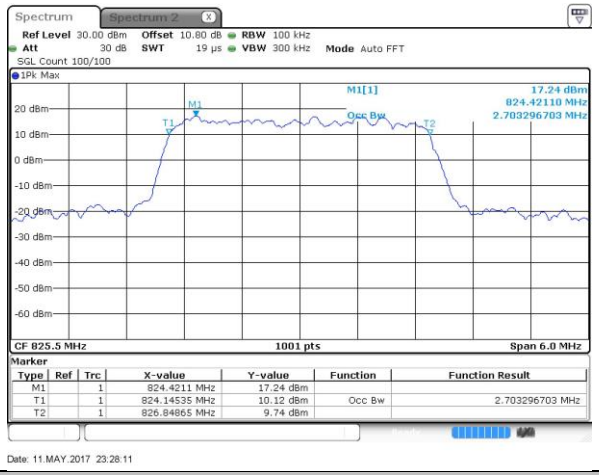


Highest Channel / 1.4MHz / 16QAM

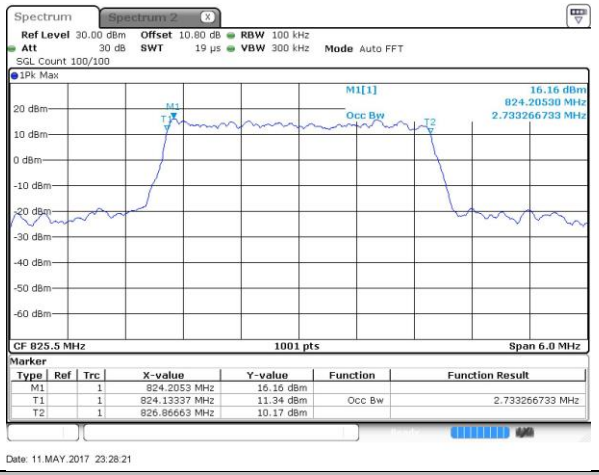


LTE Band 5

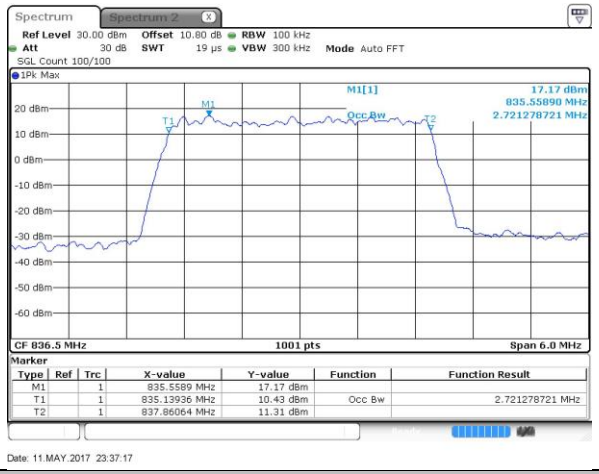
Lowest Channel / 3MHz / QPSK



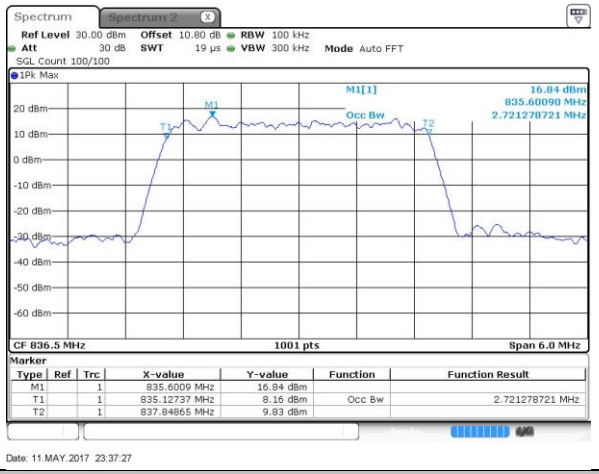
Lowest Channel / 3MHz / 16QAM



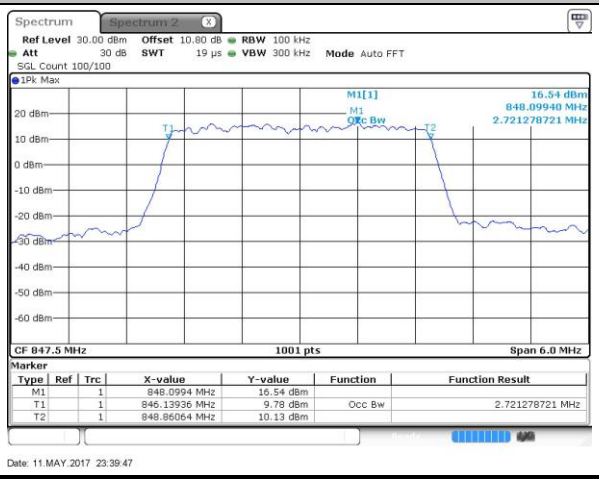
Middle Channel / 3MHz / QPSK



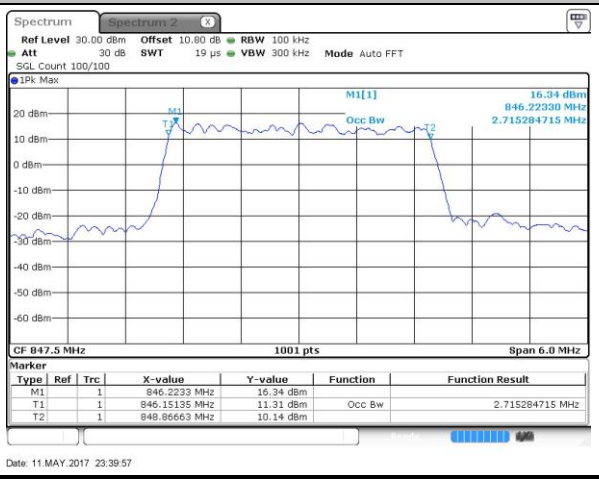
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

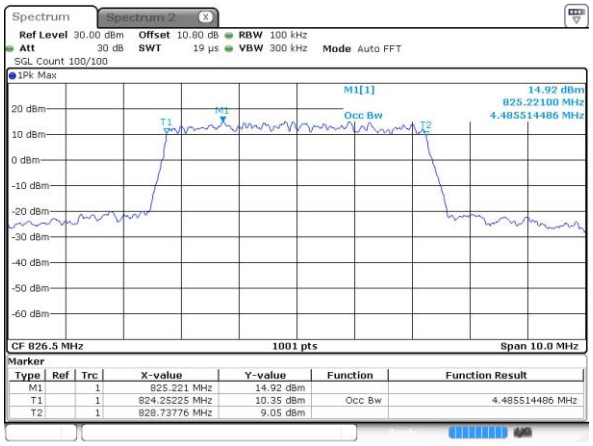


Highest Channel / 3MHz / 16QAM

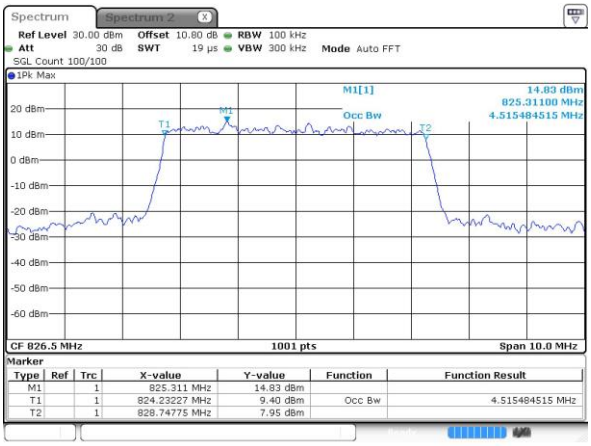


LTE Band 5

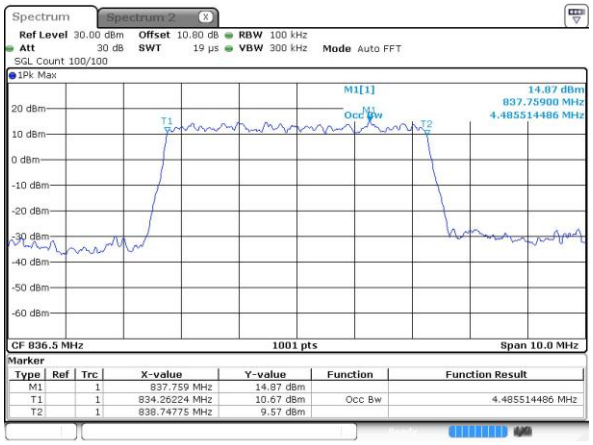
Lowest Channel / 5MHz / QPSK



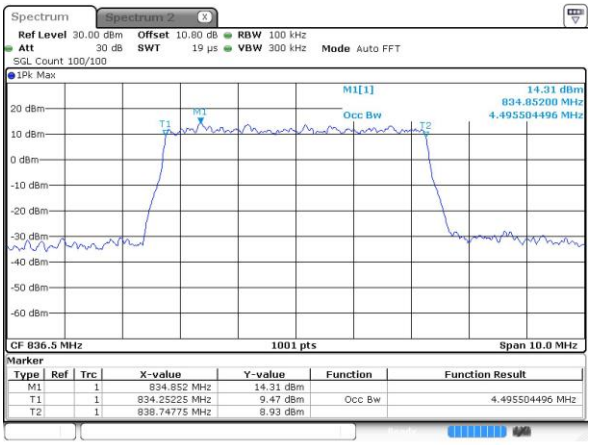
Lowest Channel / 5MHz / 16QAM



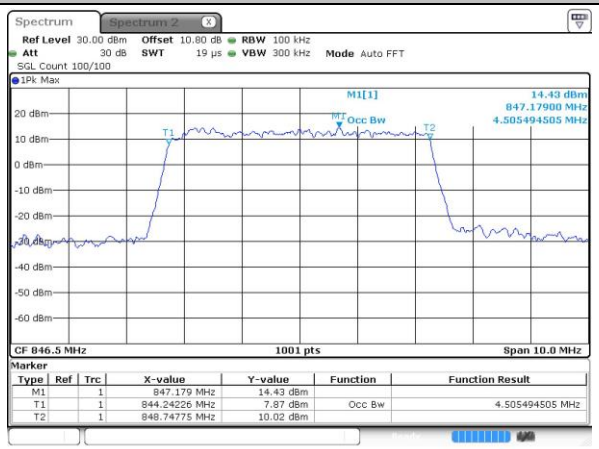
Middle Channel / 5MHz / QPSK



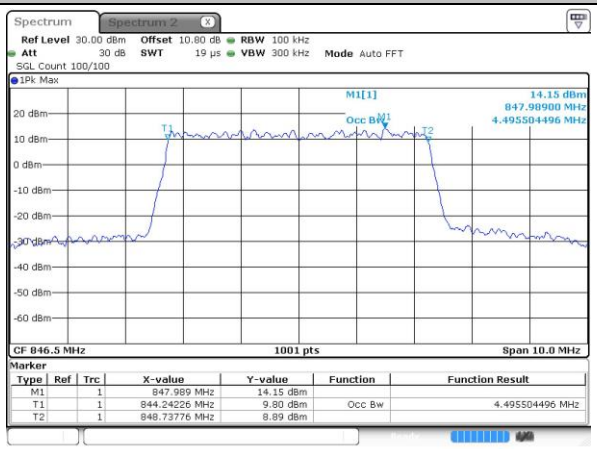
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

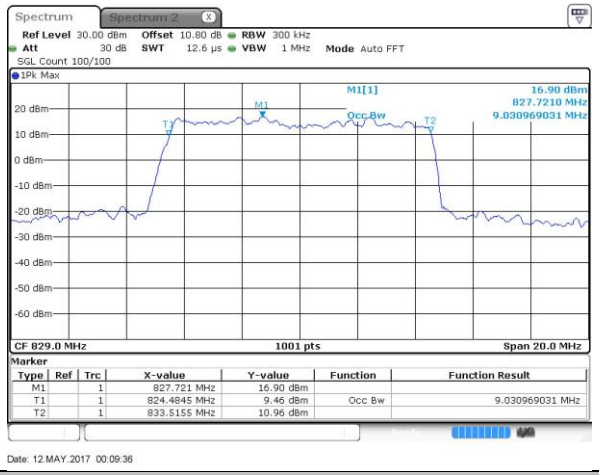


Highest Channel / 5MHz / 16QAM

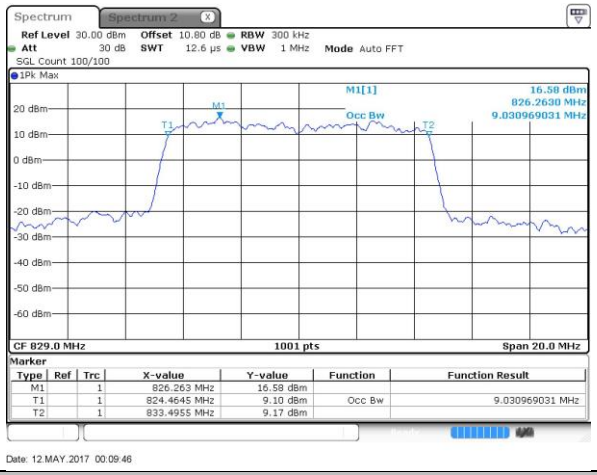


LTE Band 5

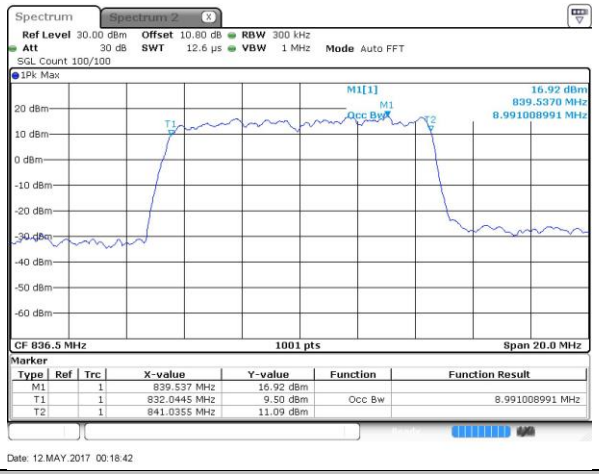
Lowest Channel / 10MHz / QPSK



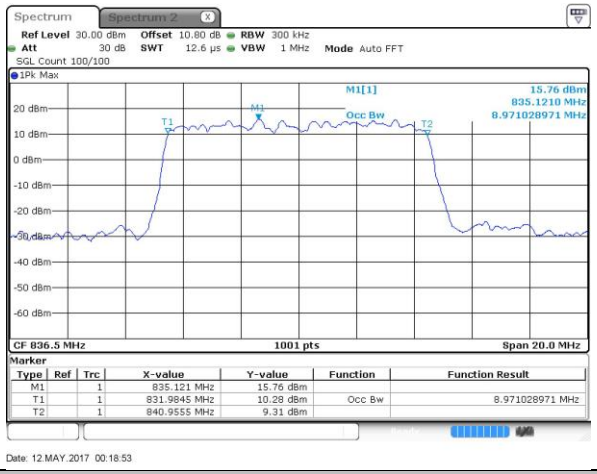
Lowest Channel / 10MHz / 16QAM



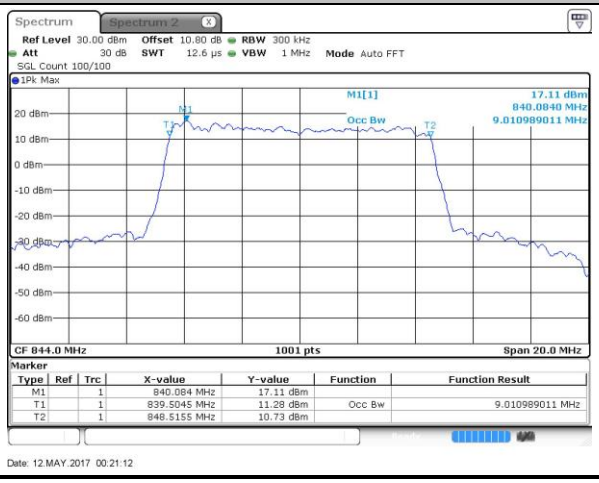
Middle Channel / 10MHz / QPSK



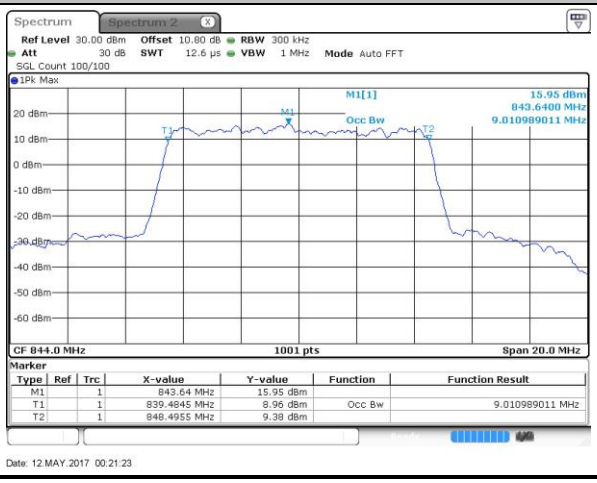
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM



LTE Band 5	
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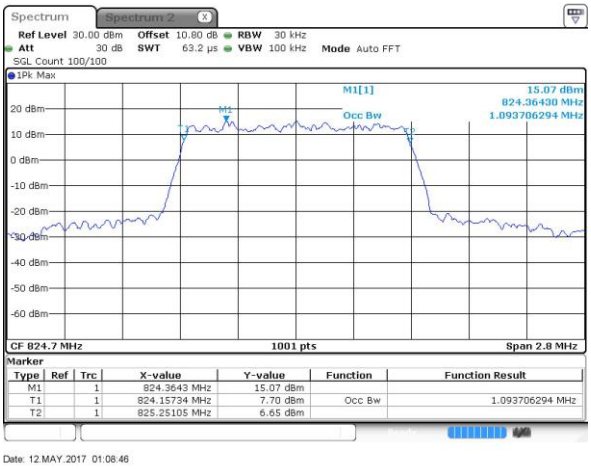
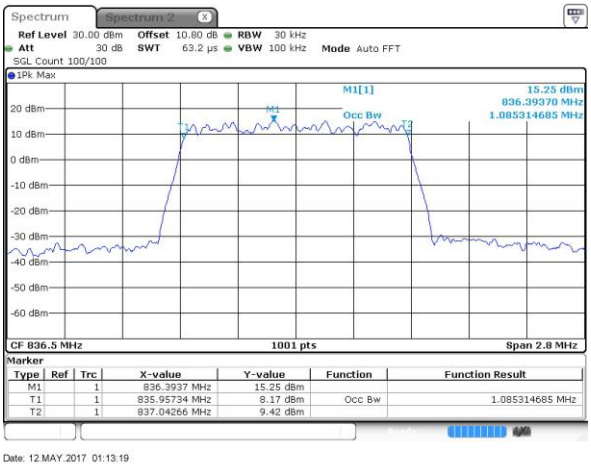
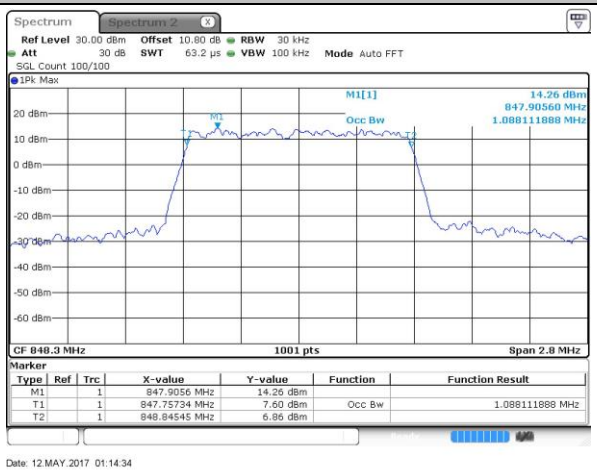
	
	Middle Channel / 1.4MHz / 64QAM
	
	Highest Channel / 1.4MHz / 64QAM