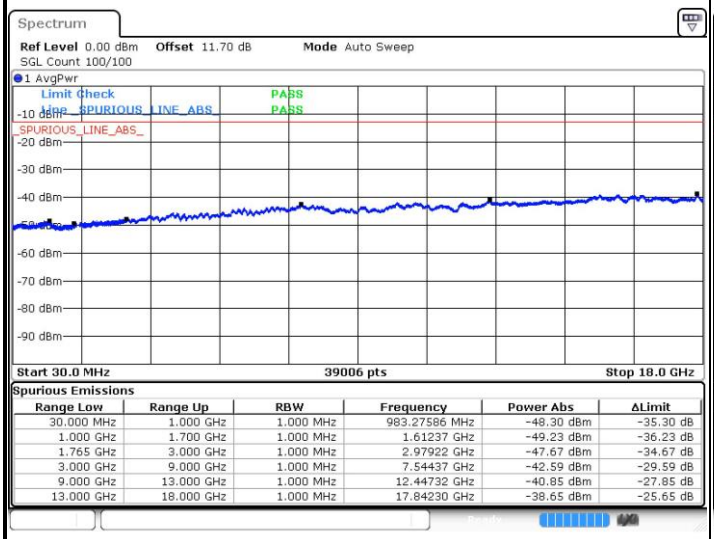
LTE Band 4 / 10MHz

Lowest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	983.27586 MHz	-48.30 dBm	-35.30 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61237 GHz	-49.23 dBm	-36.23 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97922 GHz	-47.67 dBm	-34.67 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54437 GHz	-42.59 dBm	-29.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44732 GHz	-40.85 dBm	-27.85 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.84230 GHz	-38.65 dBm	-25.65 dB

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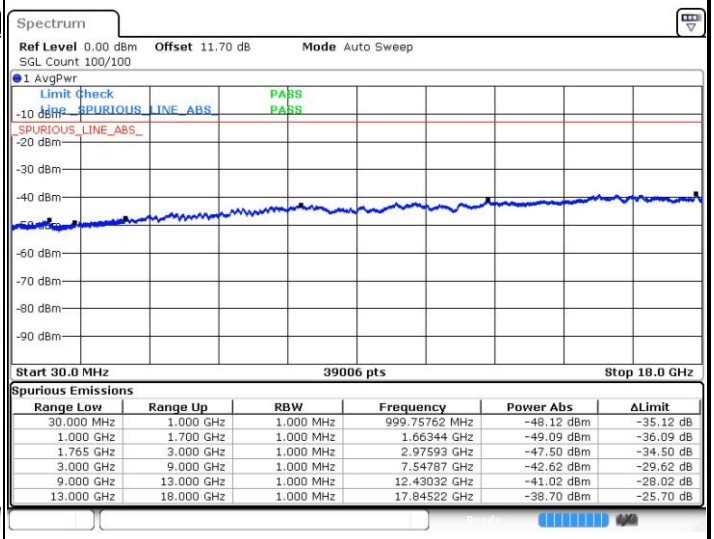
Middle Channel / 64QAM

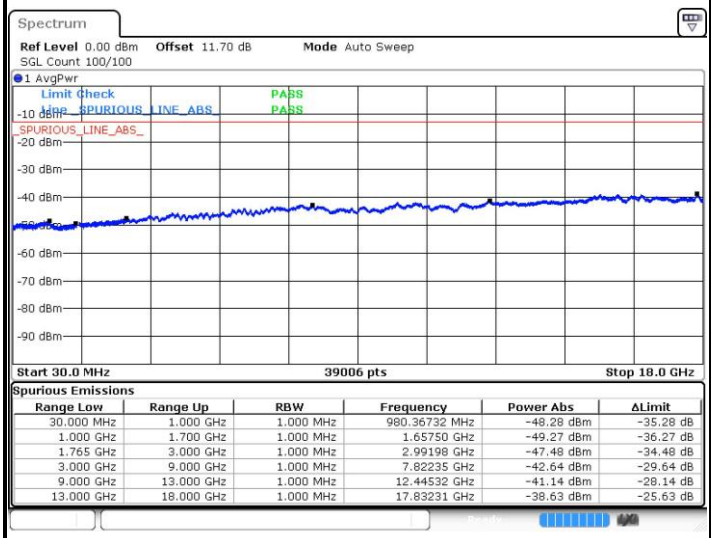


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	999.75762 MHz	-48.12 dBm	-35.12 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66344 GHz	-49.09 dBm	-36.09 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97593 GHz	-47.50 dBm	-34.50 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54787 GHz	-42.62 dBm	-29.62 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.43032 GHz	-41.02 dBm	-28.02 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.84522 GHz	-38.70 dBm	-25.70 dB

Date: 12.JUN.2018 17:34:04

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	980.36732 MHz	-48.28 dBm	-35.28 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65750 GHz	-49.27 dBm	-36.27 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99198 GHz	-47.48 dBm	-34.48 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.82235 GHz	-42.64 dBm	-29.64 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44532 GHz	-41.14 dBm	-28.14 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.83231 GHz	-38.63 dBm	-25.63 dB

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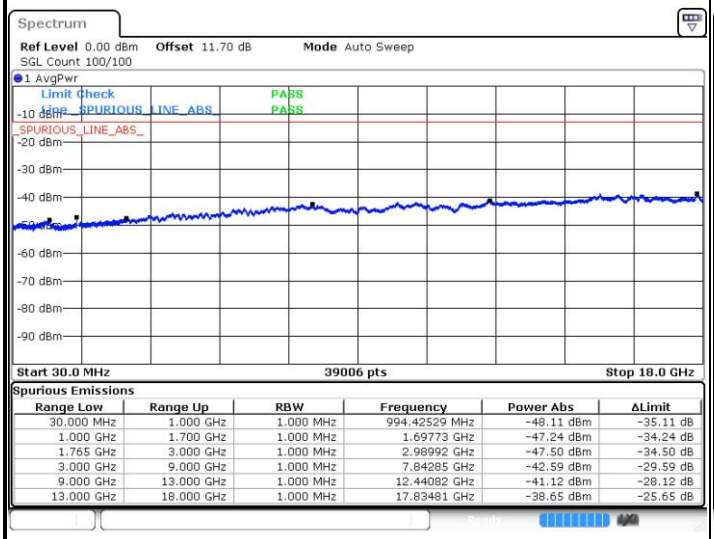
LTE Band 4 / 15MHz

Lowest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	994.42529 MHz	-48.11 dBm	-35.11 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-47.24 dBm	-34.24 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98992 GHz	-47.50 dBm	-34.50 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.84285 GHz	-42.59 dBm	-29.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44082 GHz	-41.12 dBm	-28.12 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.83481 GHz	-38.65 dBm	-25.65 dB

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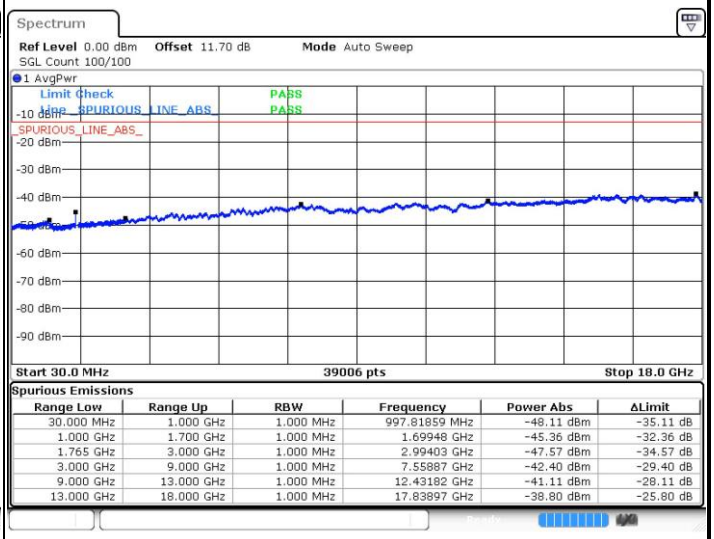
Middle Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	997.81859 MHz	-48.11 dBm	-35.11 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-45.36 dBm	-32.36 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99403 GHz	-47.57 dBm	-34.57 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.55887 GHz	-42.40 dBm	-29.40 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.43182 GHz	-41.11 dBm	-28.11 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.83897 GHz	-38.80 dBm	-25.80 dB

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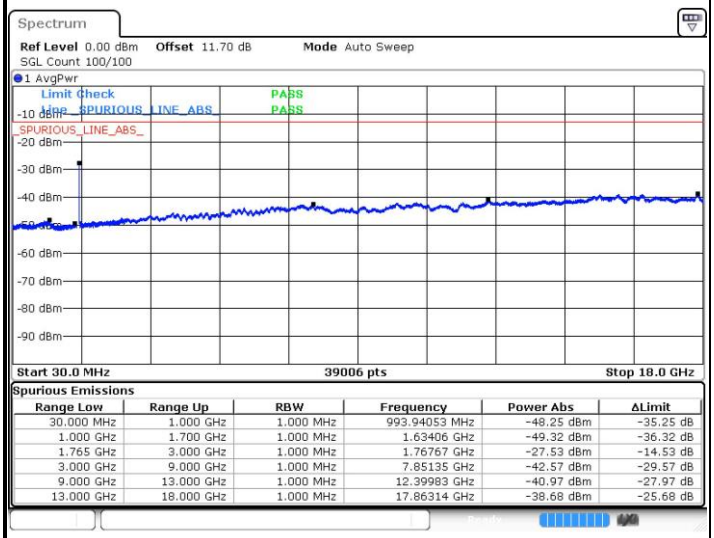
Highest Channel / 64QAM



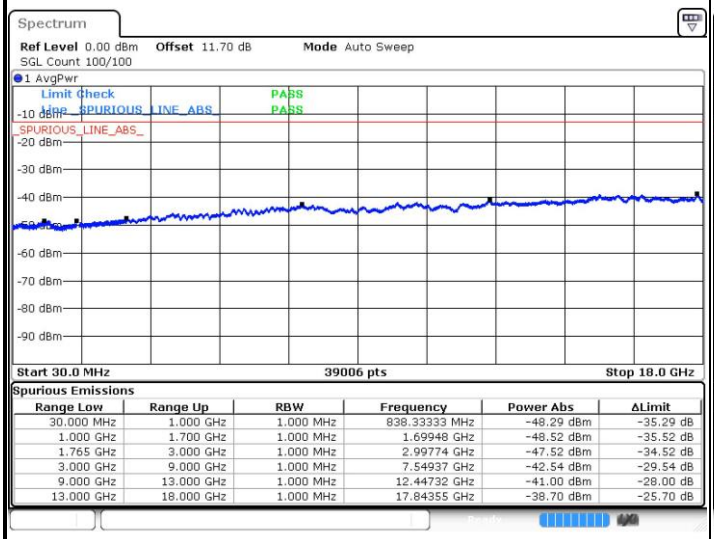
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	993.94053 MHz	-48.25 dBm	-35.25 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63406 GHz	-49.32 dBm	-36.32 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76767 GHz	-27.53 dBm	-14.53 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.85135 GHz	-42.57 dBm	-29.57 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.39983 GHz	-40.97 dBm	-27.97 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.86314 GHz	-38.68 dBm	-25.68 dB

Date: 12.JUN.2018 17:46:01

LTE Band 4 / 20MHz

Lowest Channel / 64QAM

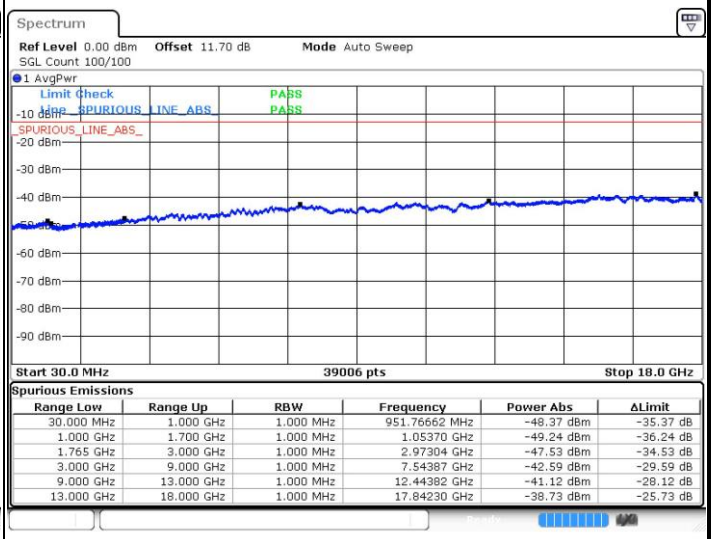


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	838.33333 MHz	-48.29 dBm	-35.29 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-48.52 dBm	-35.52 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99774 GHz	-47.52 dBm	-34.52 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54937 GHz	-42.54 dBm	-29.54 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44732 GHz	-41.00 dBm	-28.00 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.84355 GHz	-38.70 dBm	-25.70 dB

Date: 12.JUN.2018 17:49:35

Middle Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	951.76662 MHz	-48.37 dBm	-35.37 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.05370 GHz	-49.24 dBm	-36.24 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97304 GHz	-47.53 dBm	-34.53 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54387 GHz	-42.59 dBm	-29.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44382 GHz	-41.12 dBm	-28.12 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.84230 GHz	-38.73 dBm	-25.73 dB

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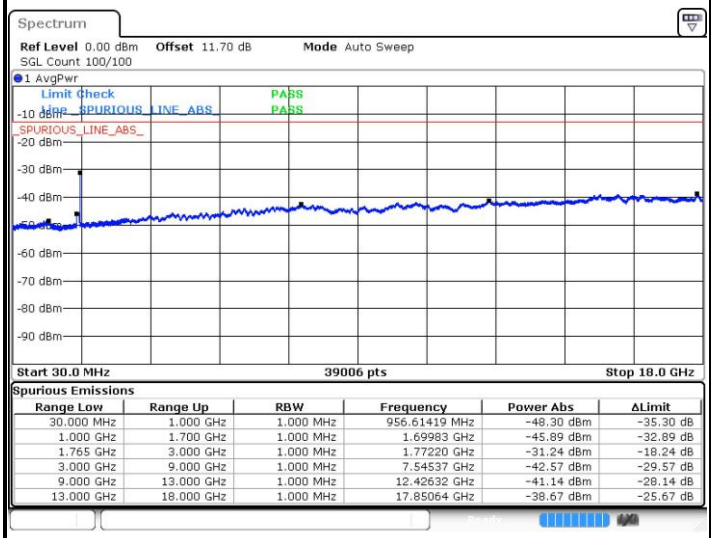
Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	956.61419 MHz	-48.30 dBm	-35.30 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-45.89 dBm	-32.89 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77220 GHz	-31.24 dBm	-18.24 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54537 GHz	-42.57 dBm	-29.57 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.42632 GHz	-41.14 dBm	-28.14 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.85064 GHz	-38.67 dBm	-25.67 dB

Date: 12.JUN.2018 17:54:25

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	0.0013	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0029	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0064	
-10	Normal Voltage	0.0043	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0021	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.5 V.；Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

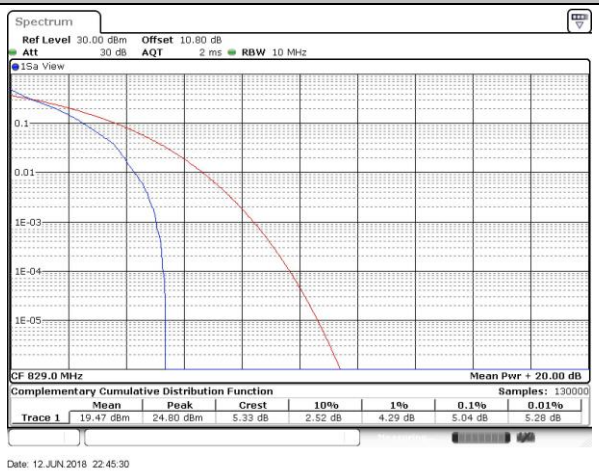
LTE Band 5

Peak-to-Average Ratio

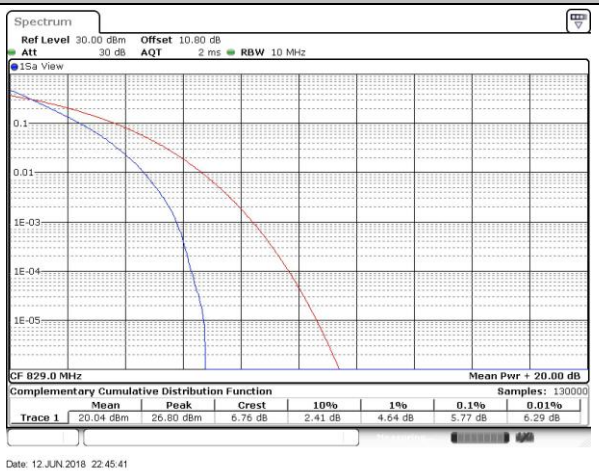
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.04	5.77	6.93	6.32	PASS
Middle CH	5.22	5.62	6.58	6.23	
Highest CH	5.1	5.59	6.09	6.49	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.04	6.61	-	-	PASS
Middle CH	7.30	6.41	-	-	
Highest CH	6.03	6.55	-	-	

LTE Band 5 / 10MHz / QPSK

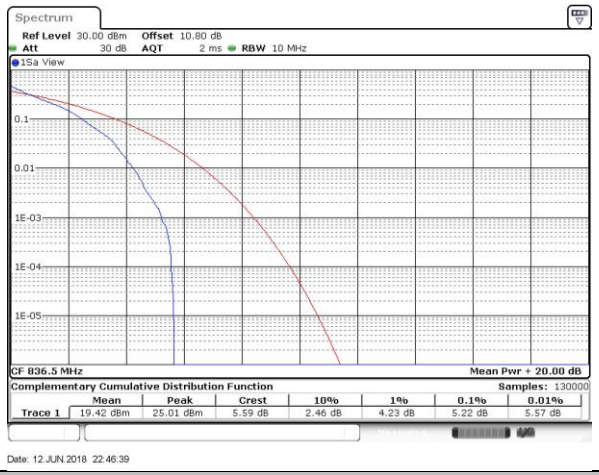
Lowest Channel / 1RB



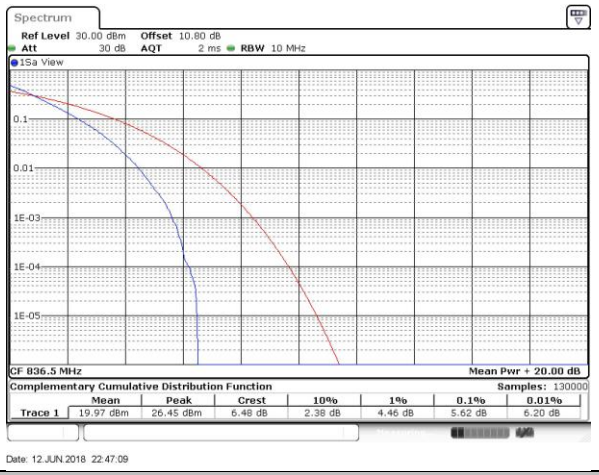
Lowest Channel / Full RB



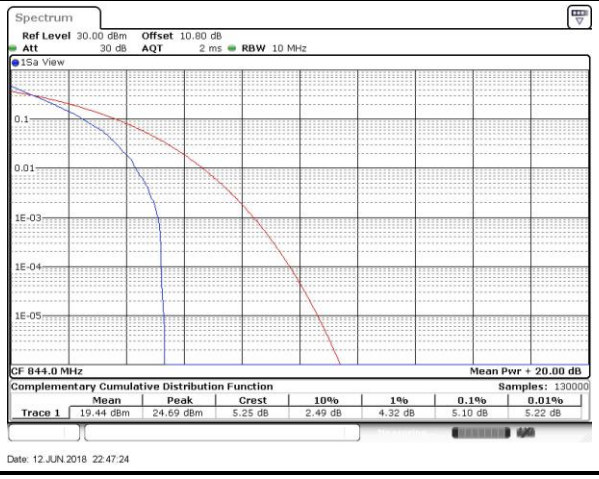
Middle Channel / 1RB



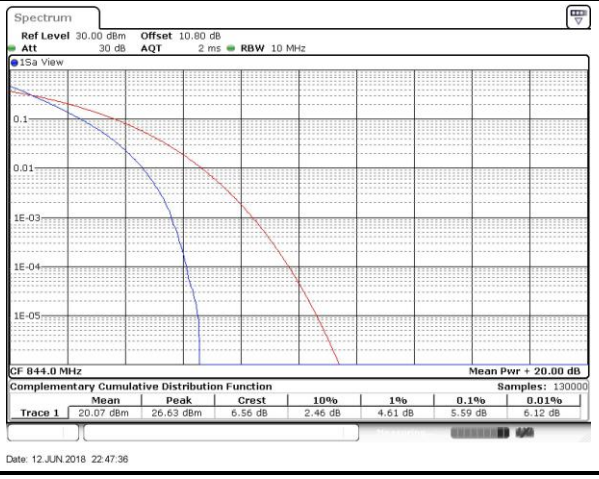
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

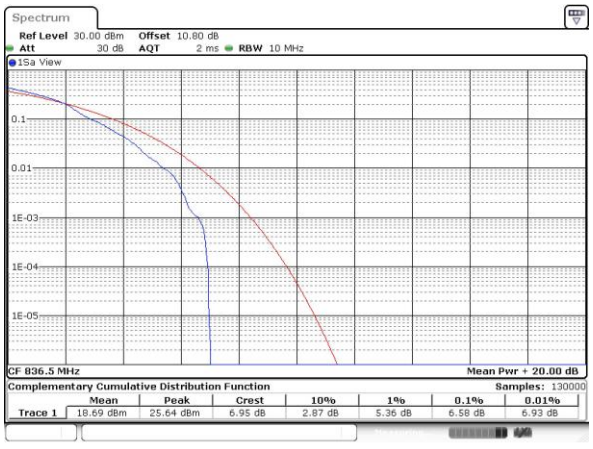


LTE Band 5 / 10MHz / 16QAM

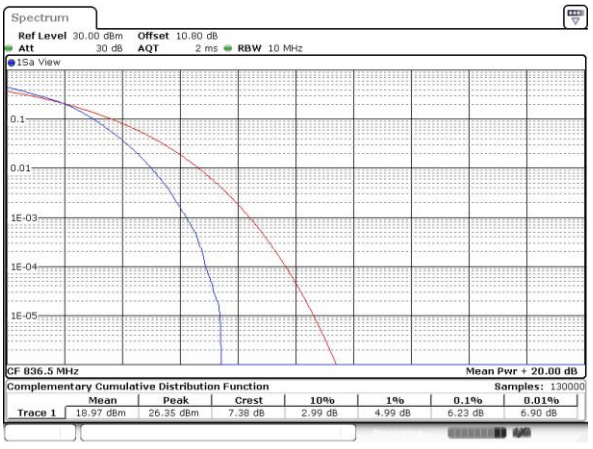
Lowest Channel / 1RB

Lowest Channel / Full RB

Middle Channel / 1RB

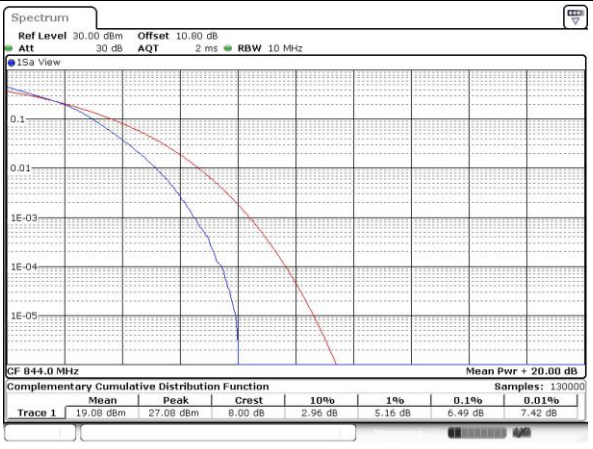


Middle Channel / Full RB



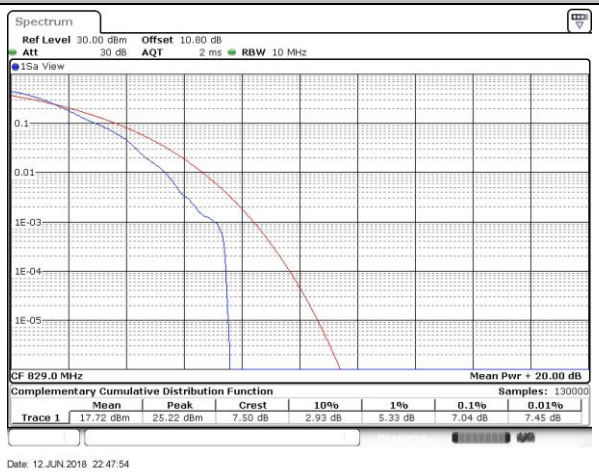
Highest Channel / 1RB

Highest Channel / Full RB

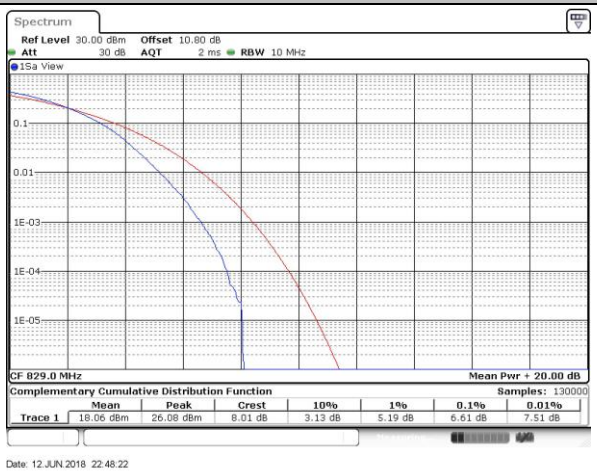


LTE Band 5 / 10MHz / 64QAM

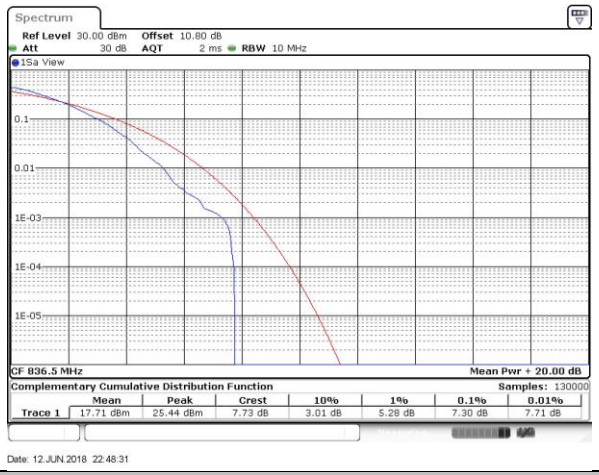
Lowest Channel / 1RB



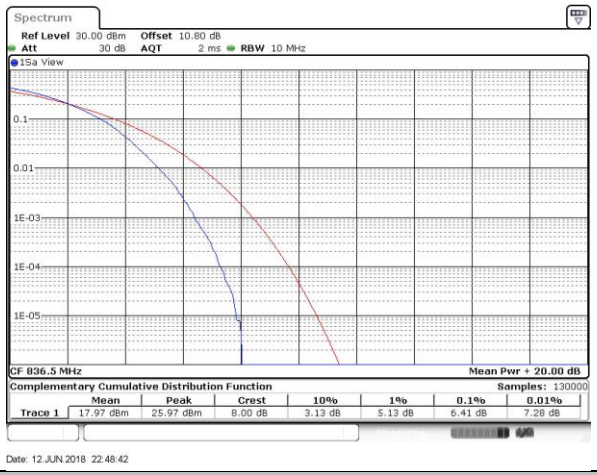
Lowest Channel / Full RB



Middle Channel / 1RB

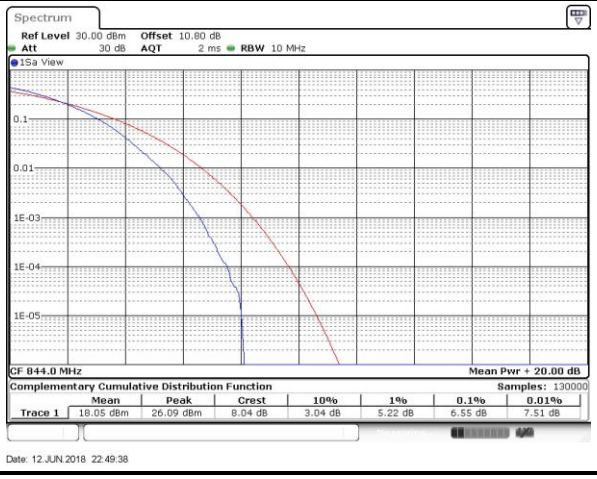


Middle Channel / Full RB



Highest Channel / 1RB

Highest Channel / Full RB

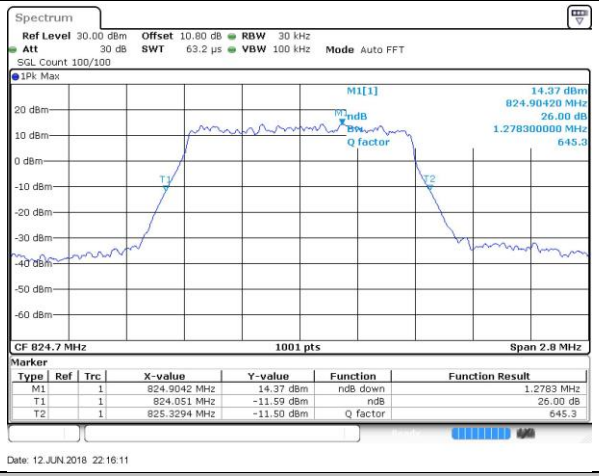


26dB Bandwidth

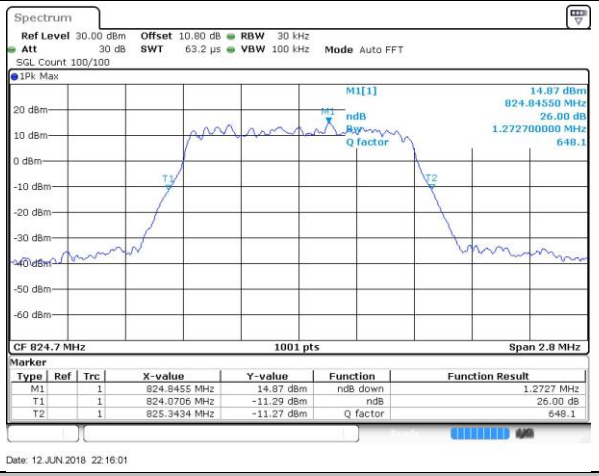
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.28	1.27	2.94	2.92	5.07	4.98	9.81	10.01	-	-	-	-
Middle CH	1.24	1.31	2.96	2.96	5.19	4.98	9.87	10.19	-	-	-	-
Highest CH	1.26	1.26	2.94	2.96	5.03	5.06	9.79	9.81	-	-	-	-
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.26	-	2.96	-	4.92	-	9.99	-	-	-	-	-
Middle CH	1.27	-	2.91	-	5.00	-	10.15	-	-	-	-	-
Highest CH	1.29	-	2.93	-	5.09	-	9.81	-	-	-	-	-

LTE Band 5

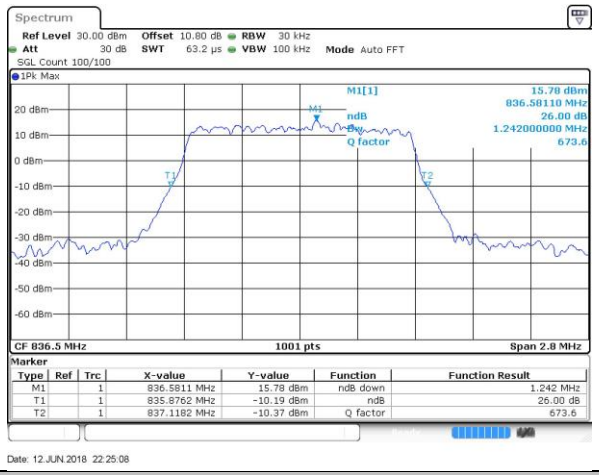
Lowest Channel / 1.4MHz / QPSK



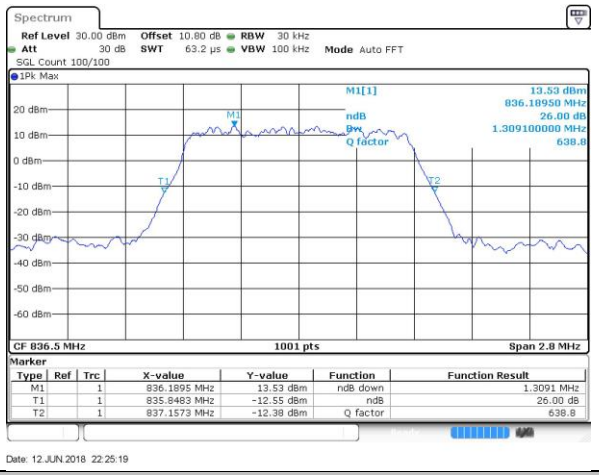
Lowest Channel / 1.4MHz / 16QAM



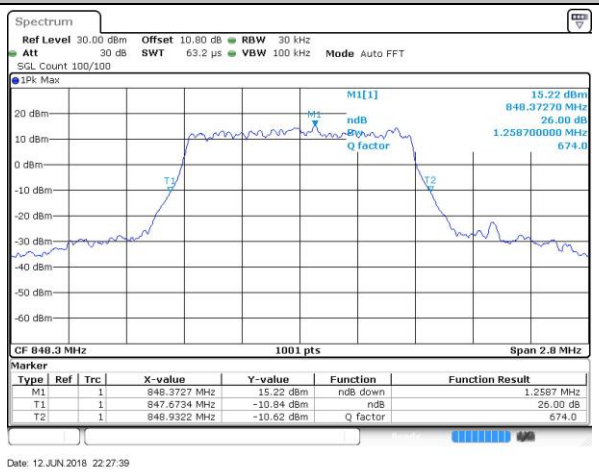
Middle Channel / 1.4MHz / QPSK



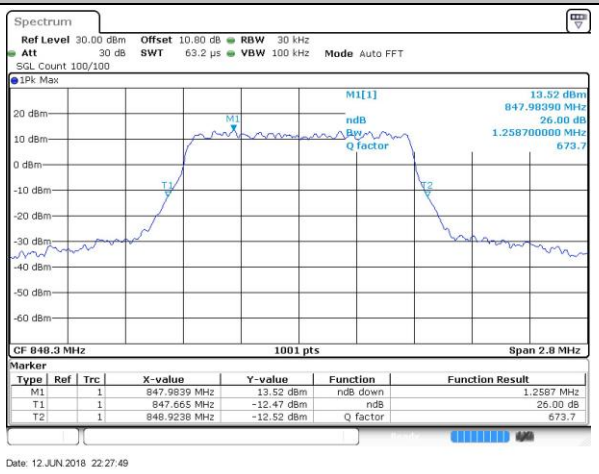
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

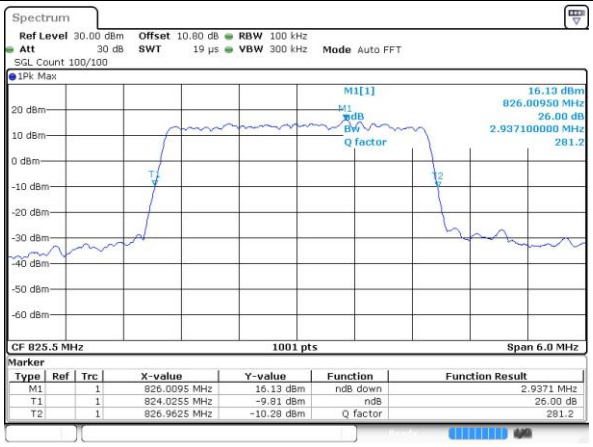


Highest Channel / 1.4MHz / 16QAM

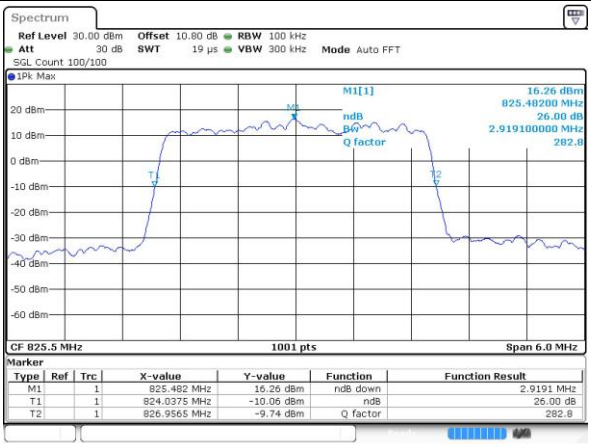


LTE Band 5

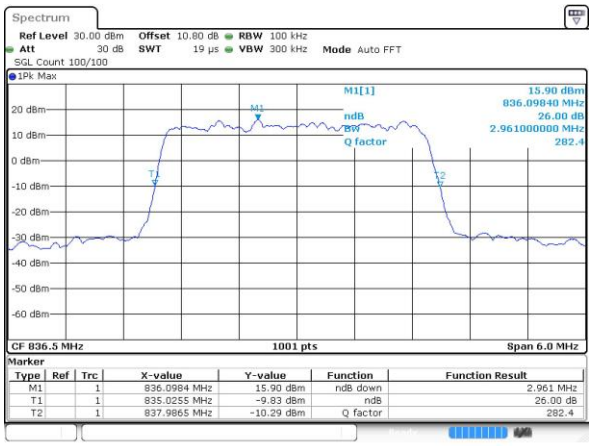
Lowest Channel / 3MHz / QPSK



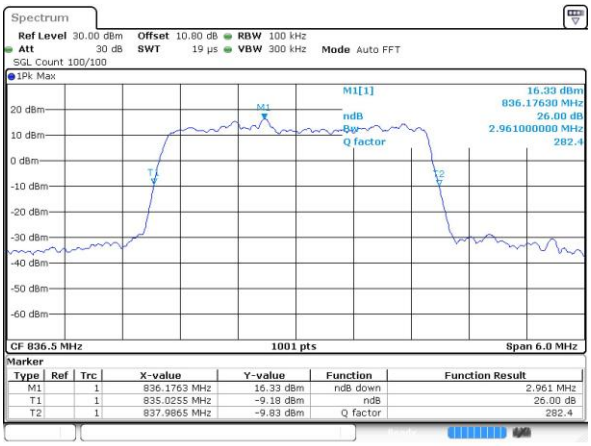
Lowest Channel / 3MHz / 16QAM



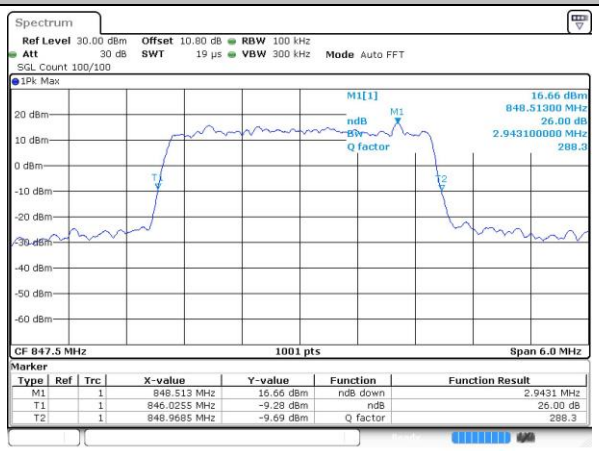
Middle Channel / 3MHz / QPSK



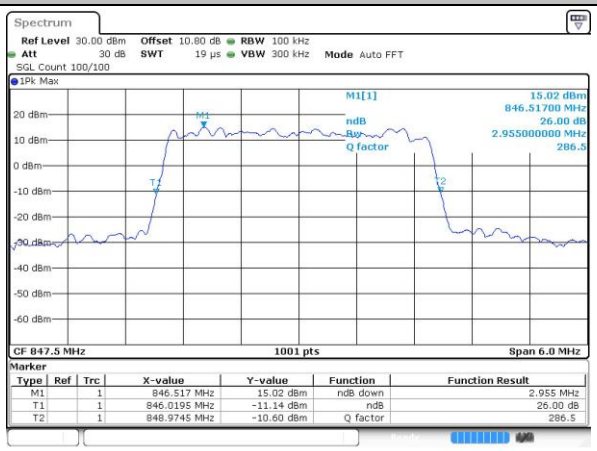
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

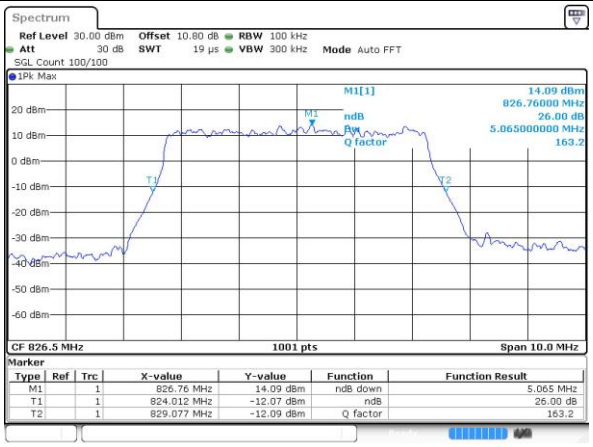


Highest Channel / 3MHz / 16QAM

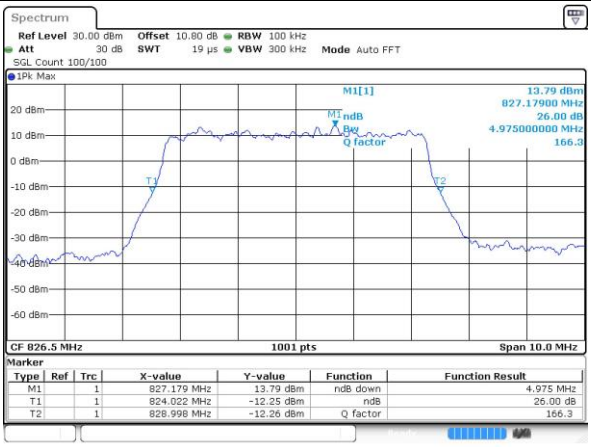


LTE Band 5

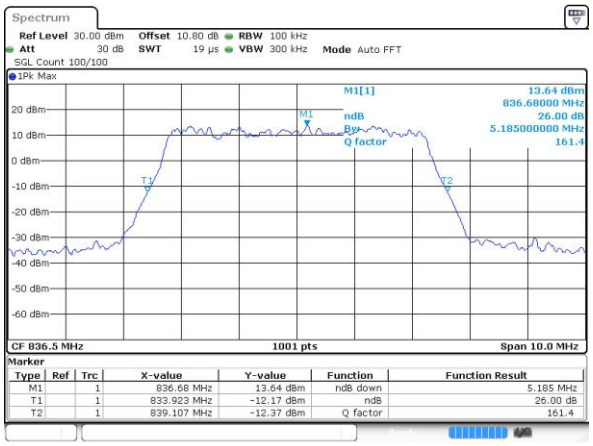
Lowest Channel / 5MHz / QPSK



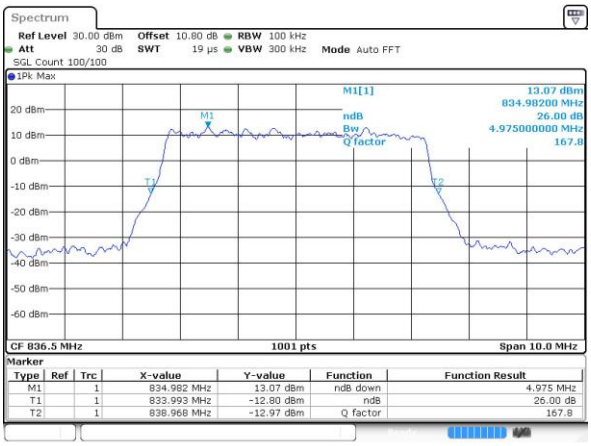
Lowest Channel / 5MHz / 16QAM



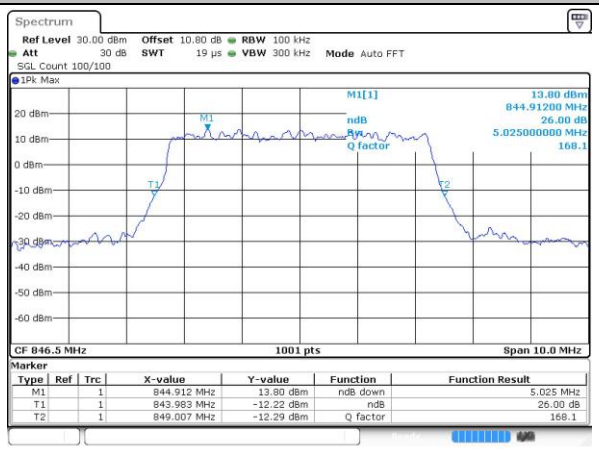
Middle Channel / 5MHz / QPSK



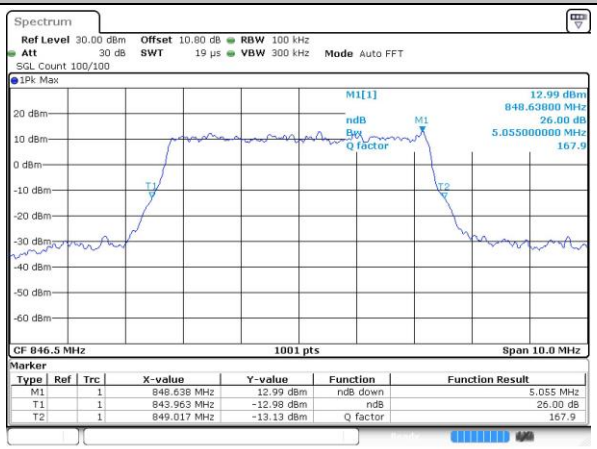
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

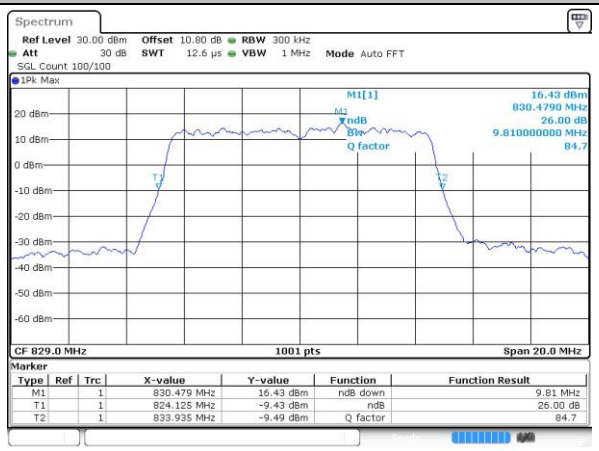


Highest Channel / 5MHz / 16QAM

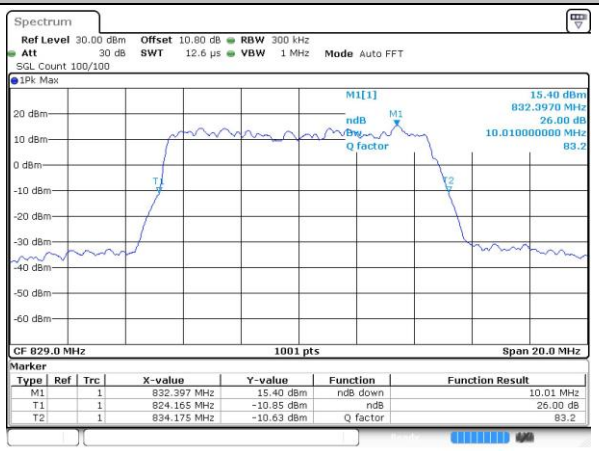


LTE Band 5

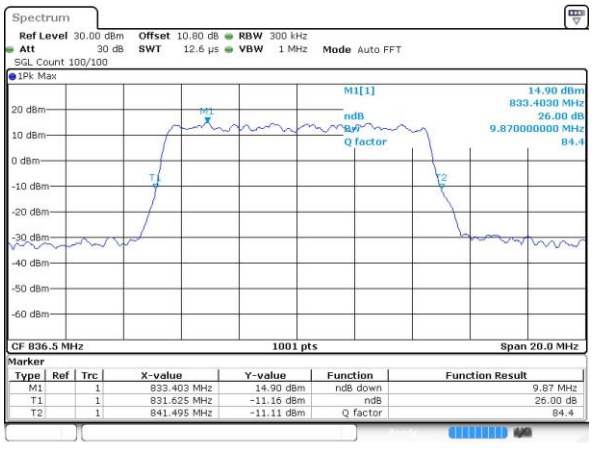
Lowest Channel / 10MHz / QPSK



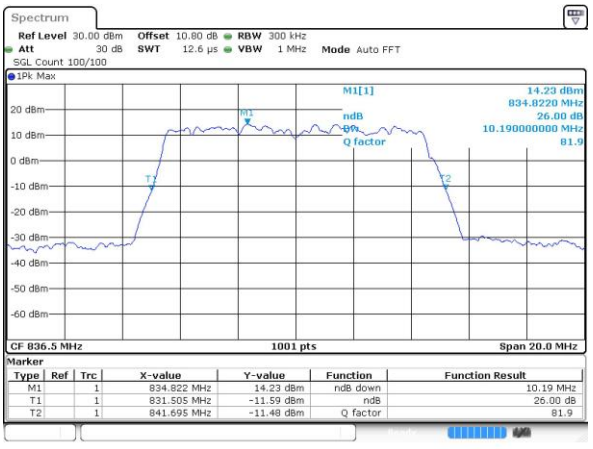
Lowest Channel / 10MHz / 16QAM



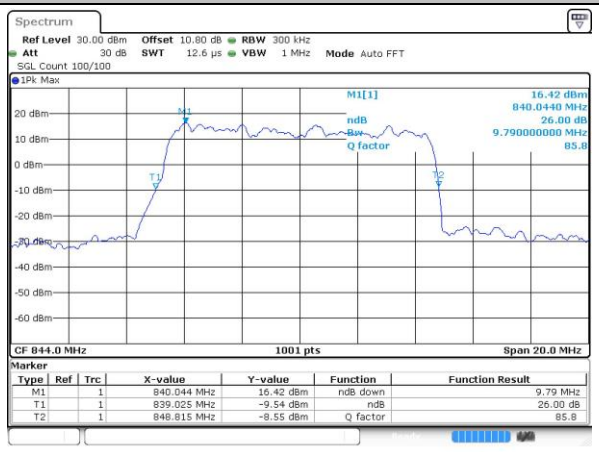
Middle Channel / 10MHz / QPSK



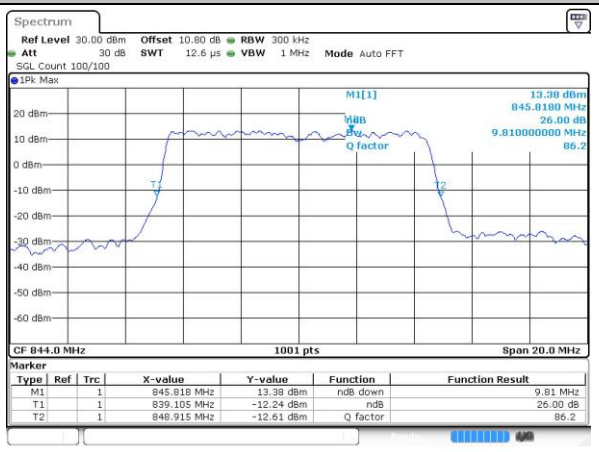
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

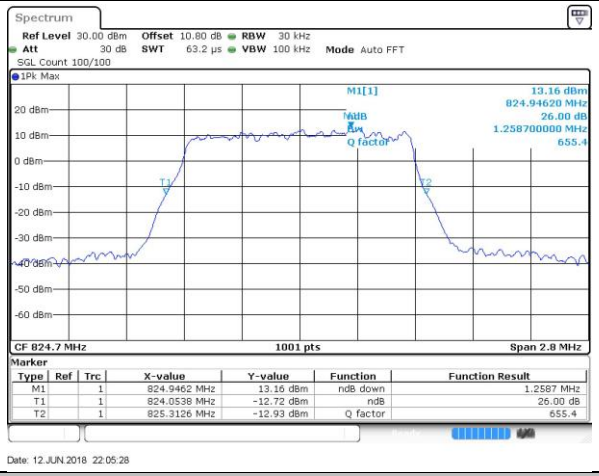


Highest Channel / 10MHz / 16QAM

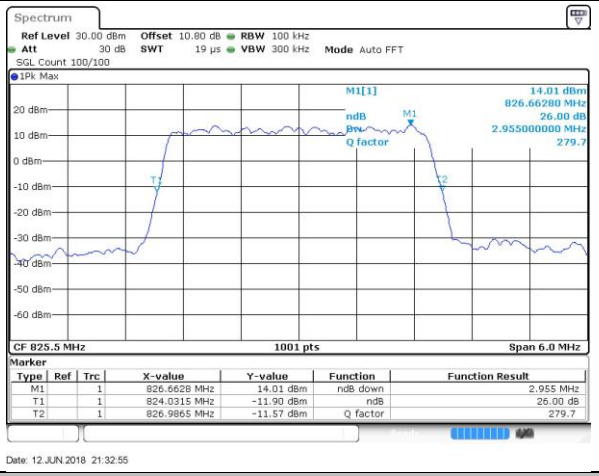


LTE Band 5

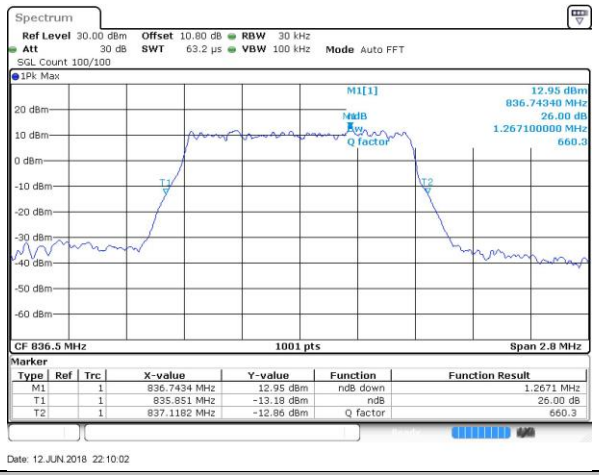
Lowest Channel / 1.4MHz / 64QAM



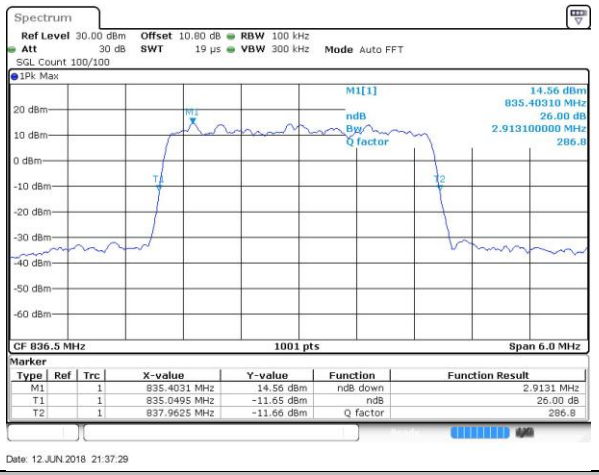
Lowest Channel / 3MHz / 64QAM



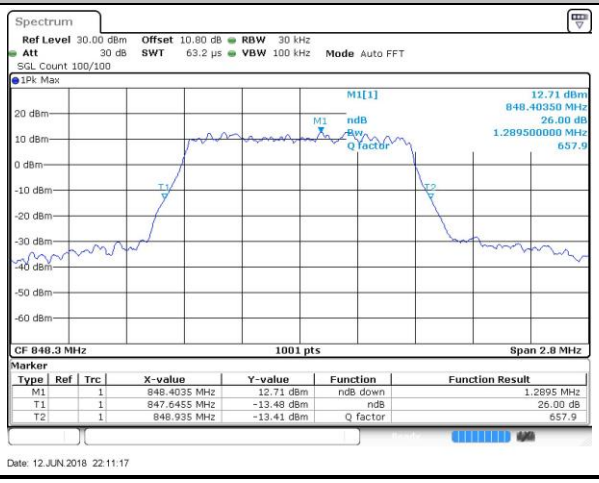
Middle Channel / 1.4MHz / 64QAM



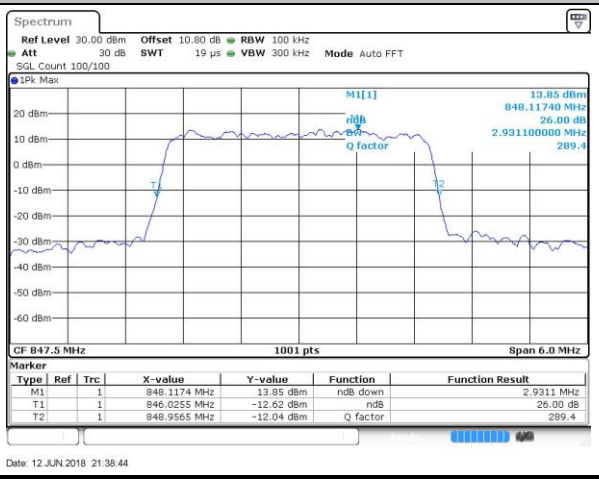
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM

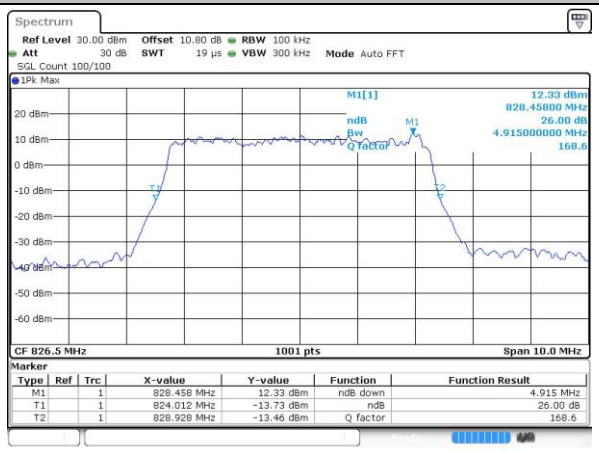


Highest Channel / 3MHz / 64QAM

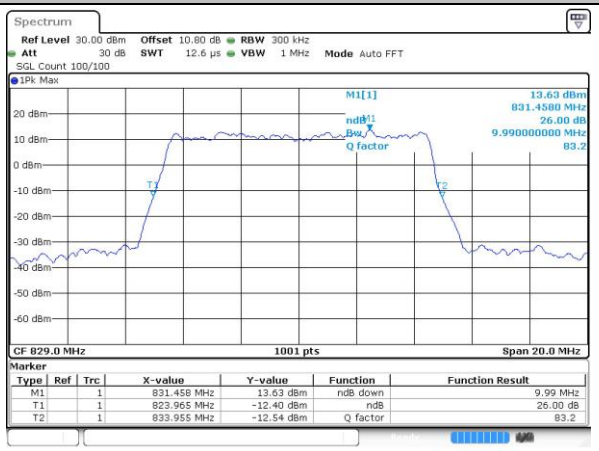


LTE Band 5

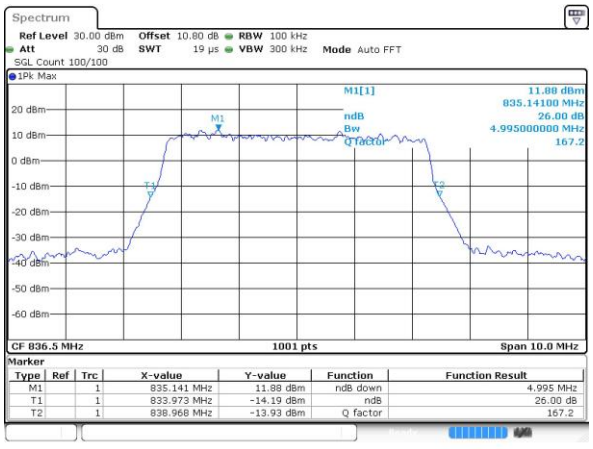
Lowest Channel / 5MHz / 64QAM



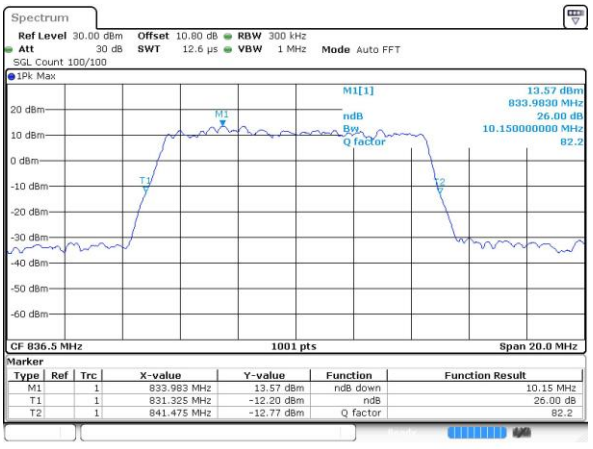
Lowest Channel / 10MHz / 64QAM



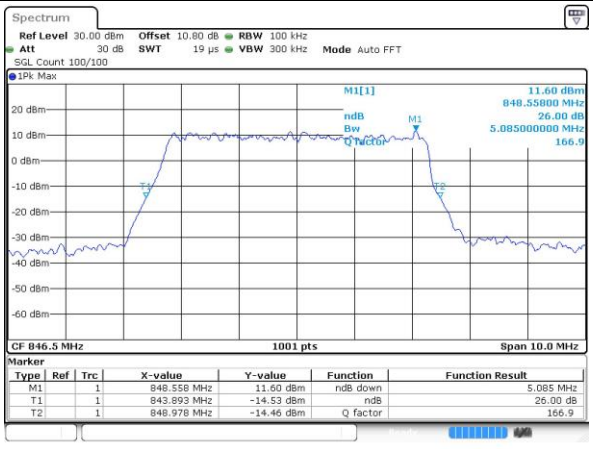
Middle Channel / 5MHz / 64QAM



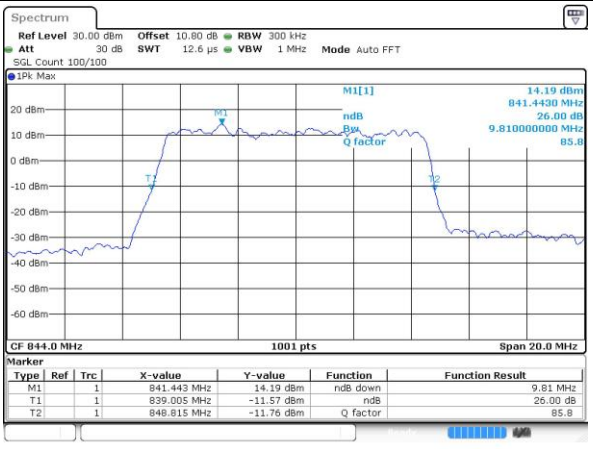
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM

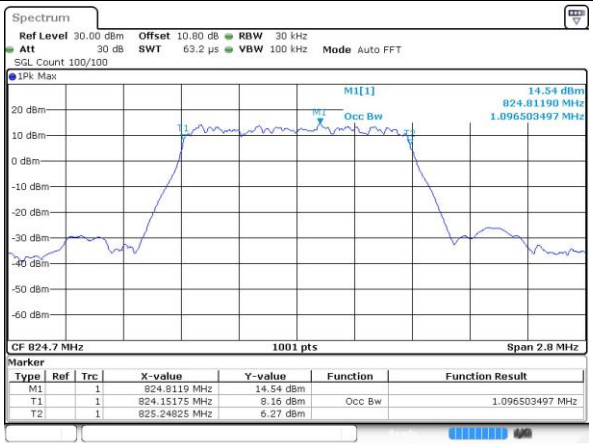


Occupied Bandwidth

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	1.1	1.09	2.72	2.7	4.5	4.51	9.05	8.97	-	-	-	-
Middle CH	1.09	1.1	2.7	2.69	4.5	4.5	9.01	9.01	-	-	-	-
Highest CH	1.1	1.09	2.72	2.7	4.52	4.48	9.03	9.05	-	-	-	-
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.70	-	4.50	-	9.09	-	-	-	-	-
Middle CH	1.10	-	2.71	-	4.50	-	9.05	-	-	-	-	-
Highest CH	1.10	-	2.72	-	4.50	-	9.03	-	-	-	-	-

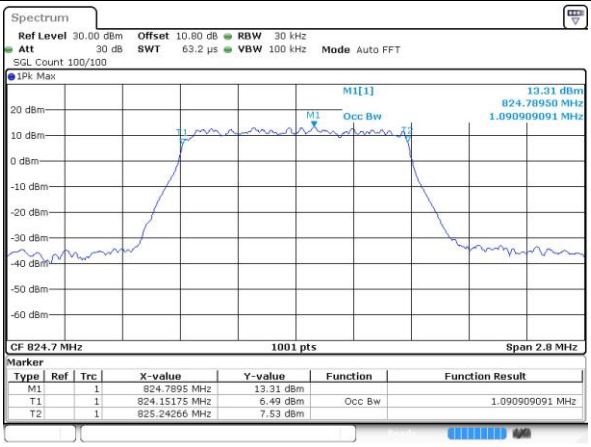
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



Date: 12.JUN.2018 22:15:40

Lowest Channel / 1.4MHz / 16QAM



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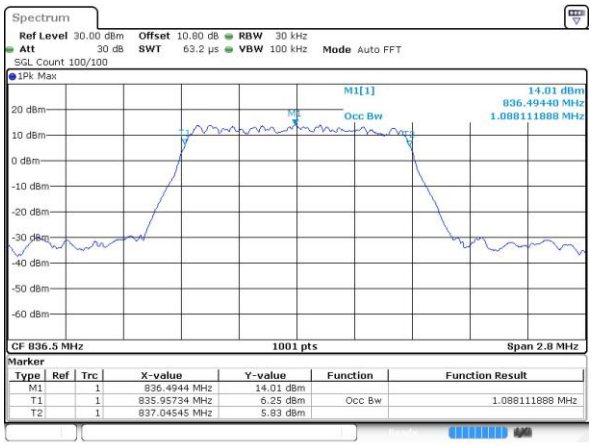
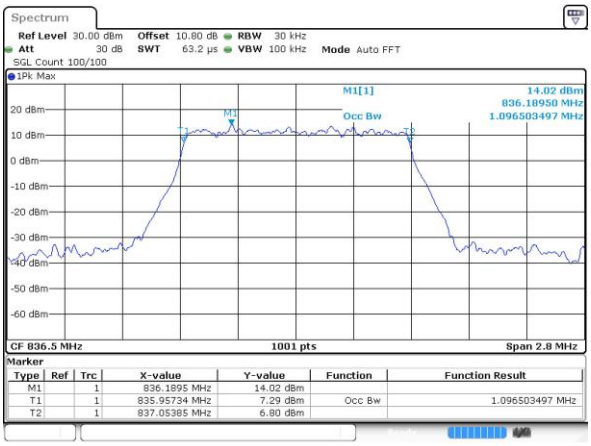
Middle Channel / 1.4MHz / QPSK



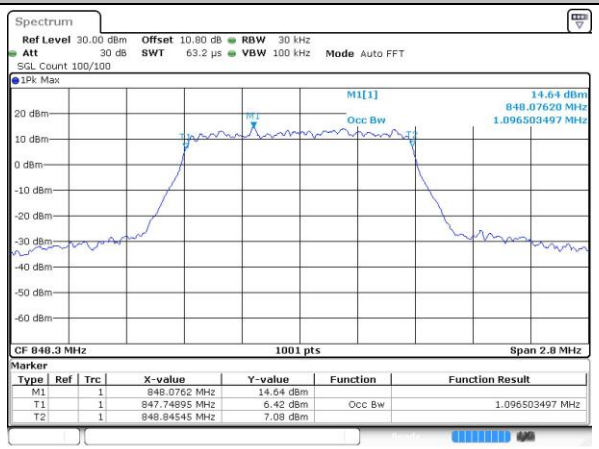
Date: 12.JUN.2018 22:24:47

Middle Channel / 1.4MHz / 16QAM



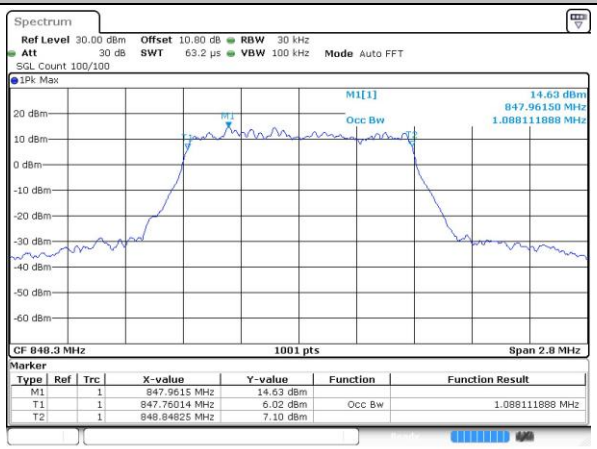
Date: 12.JUN.2018 22:24:58

Highest Channel / 1.4MHz / QPSK



Date: 12.JUN.2018 22:27:18

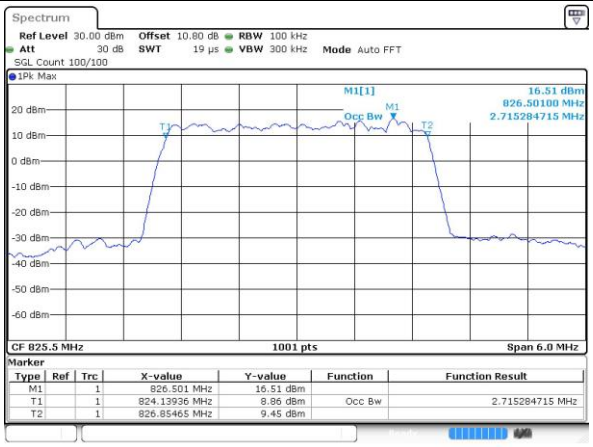
Highest Channel / 1.4MHz / 16QAM



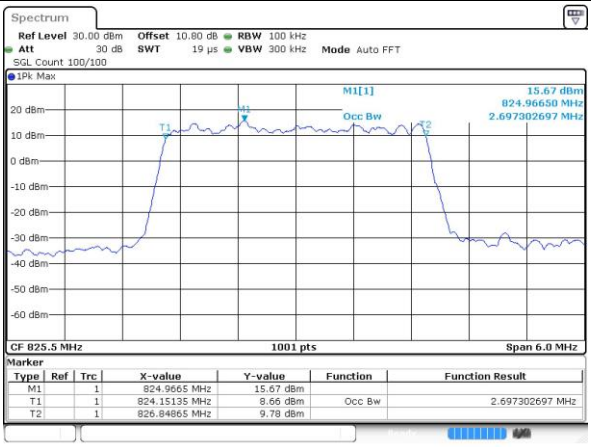
Date: 12.JUN.2018 22:27:28

LTE Band 5

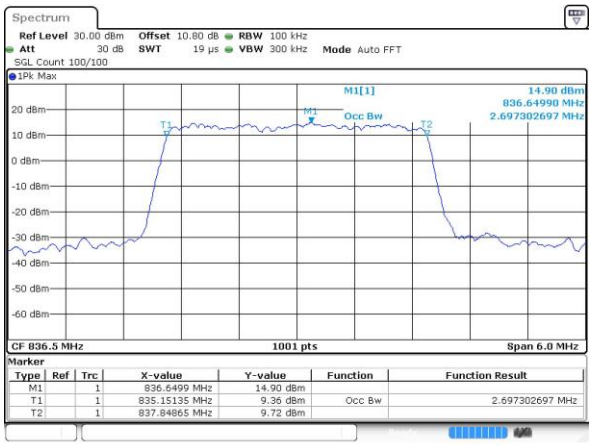
Lowest Channel / 3MHz / QPSK



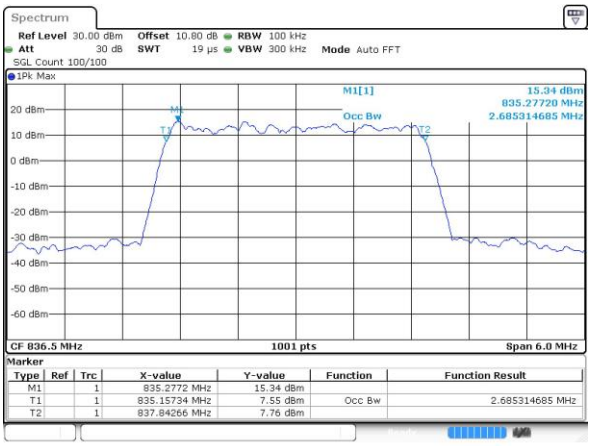
Lowest Channel / 3MHz / 16QAM



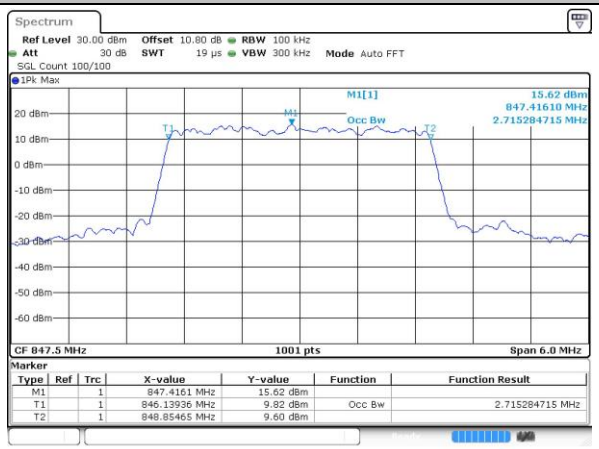
Middle Channel / 3MHz / QPSK



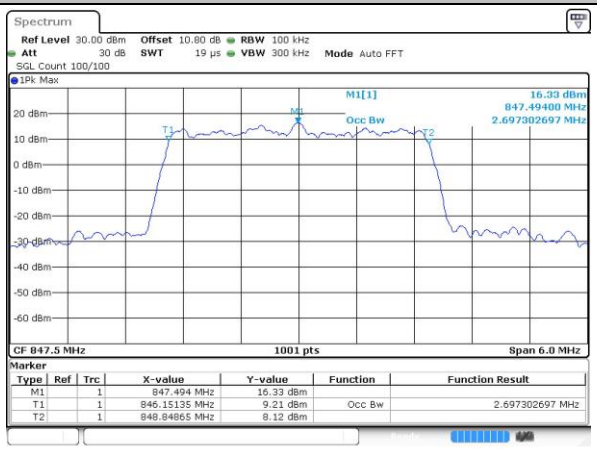
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

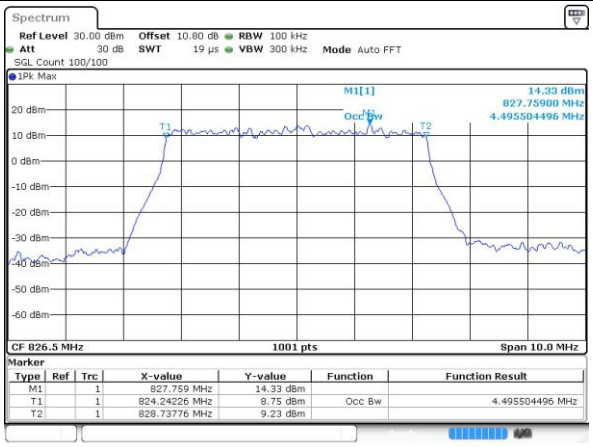


Highest Channel / 3MHz / 16QAM

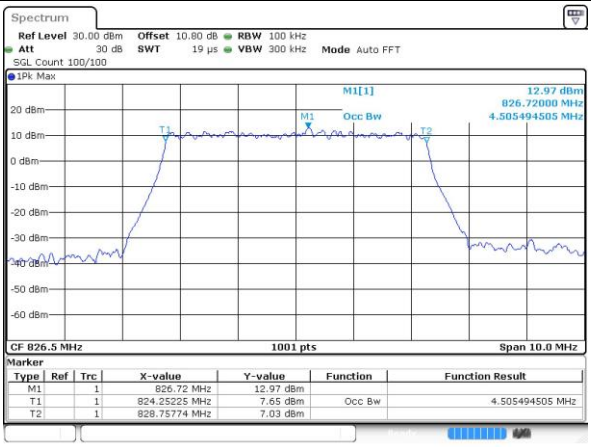


LTE Band 5

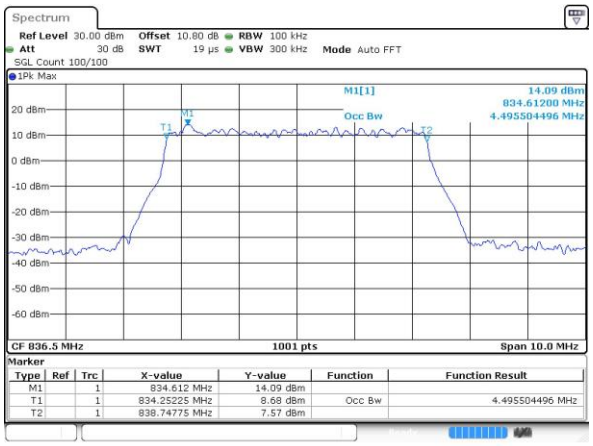
Lowest Channel / 5MHz / QPSK



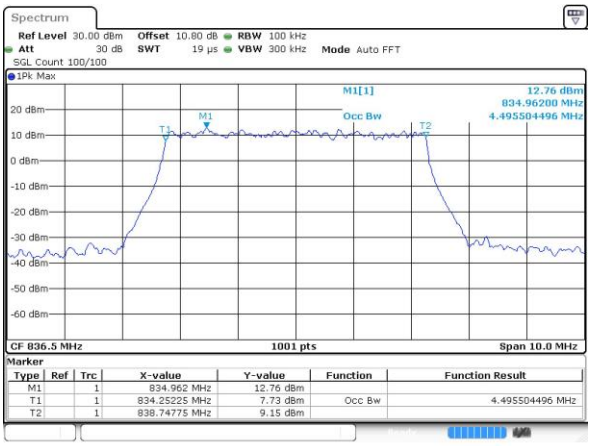
Lowest Channel / 5MHz / 16QAM



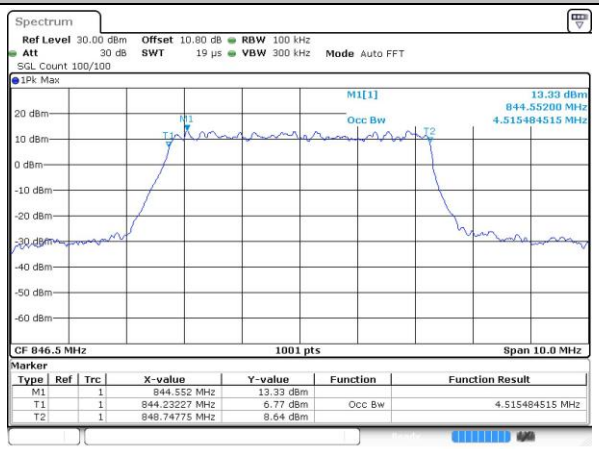
Middle Channel / 5MHz / QPSK



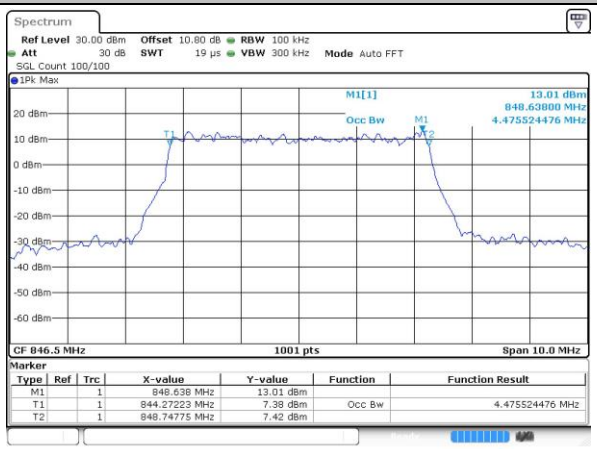
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

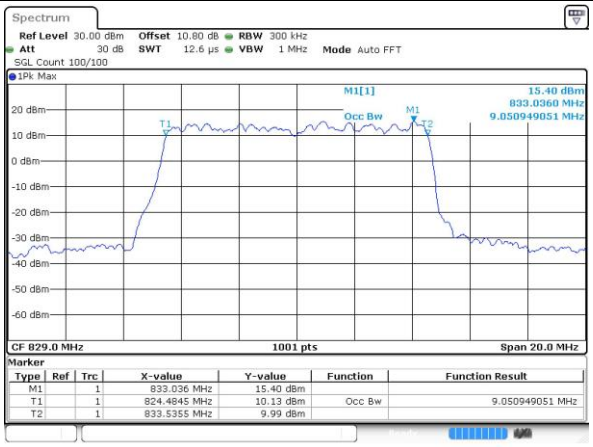


Highest Channel / 5MHz / 16QAM



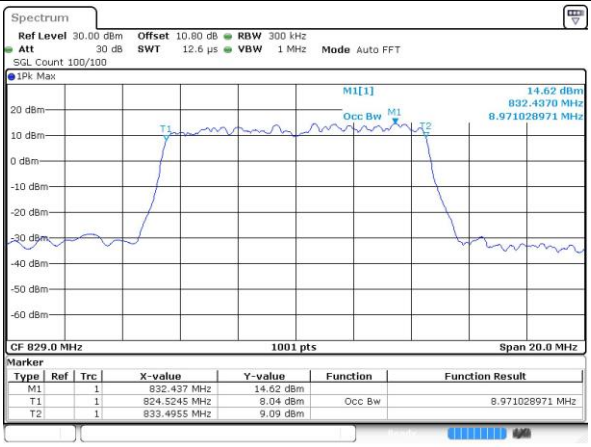
LTE Band 5

Lowest Channel / 10MHz / QPSK



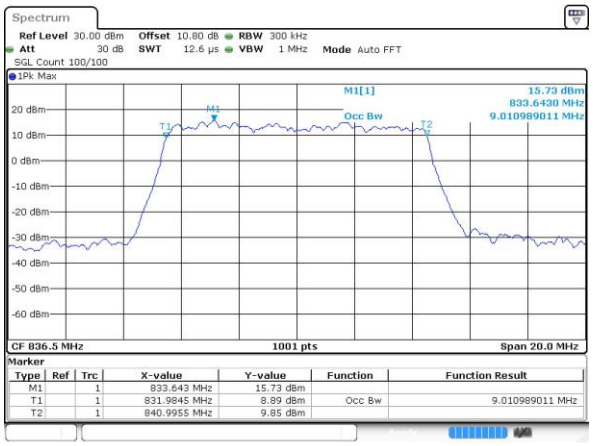
Date: 12.JUN.2018 21:07:24

Lowest Channel / 10MHz / 16QAM



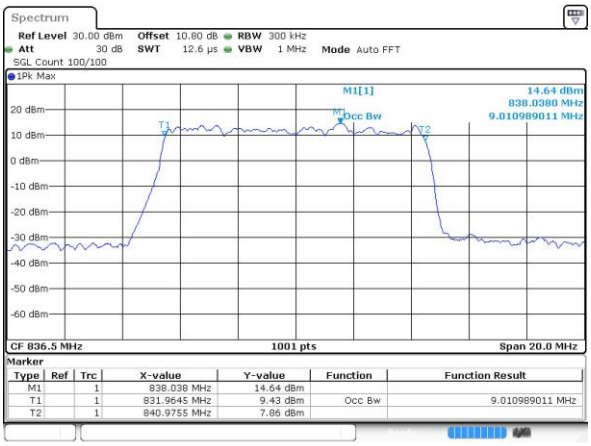
Date: 12.JUN.2018 21:07:34

Middle Channel / 10MHz / QPSK



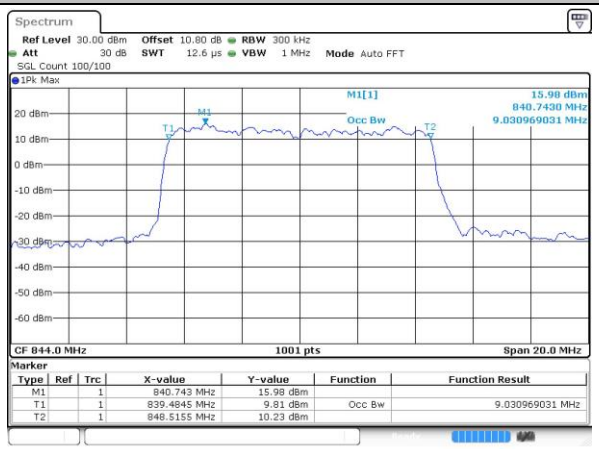
Date: 12.JUN.2018 21:16:31

Middle Channel / 10MHz / 16QAM



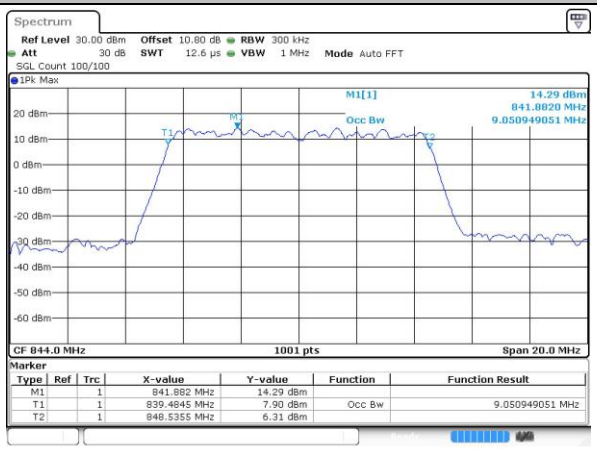
Date: 12.JUN.2018 21:16:41

Highest Channel / 10MHz / QPSK



Date: 12.JUN.2018 21:19:02

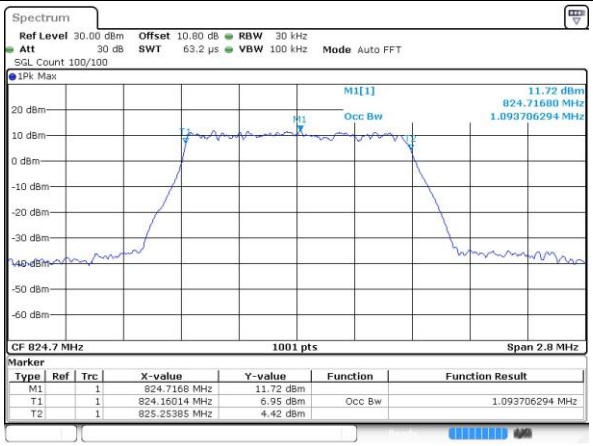
Highest Channel / 10MHz / 16QAM



Date: 12.JUN.2018 21:19:12

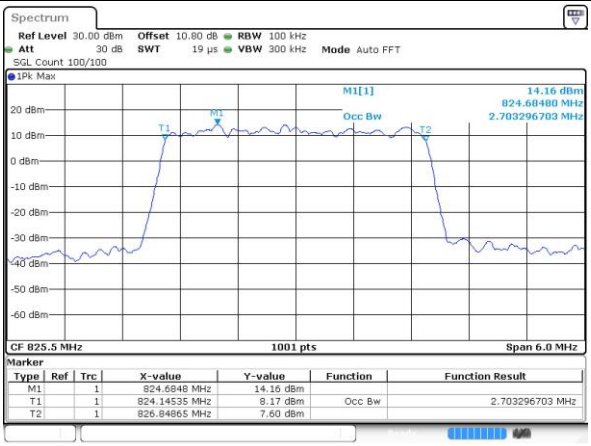
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



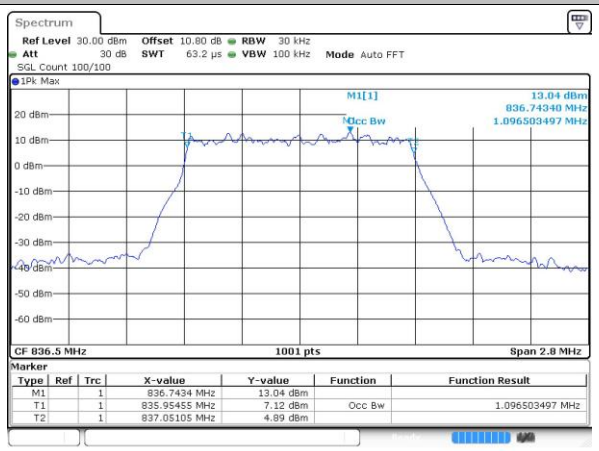
Date: 12.JUN.2018 22:05:17

Lowest Channel / 3MHz / 64QAM



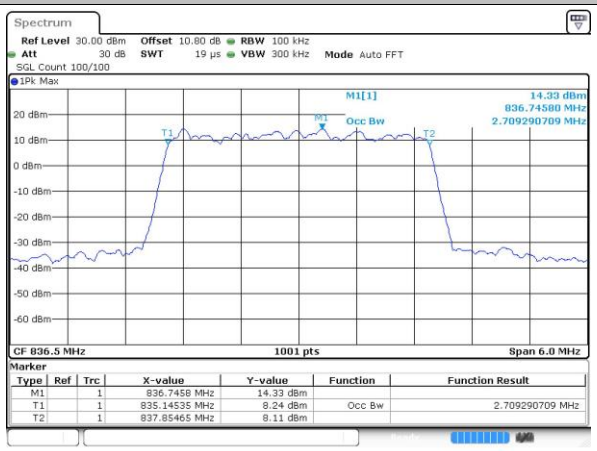
Date: 12.JUN.2018 21:32:45

Middle Channel / 1.4MHz / 64QAM



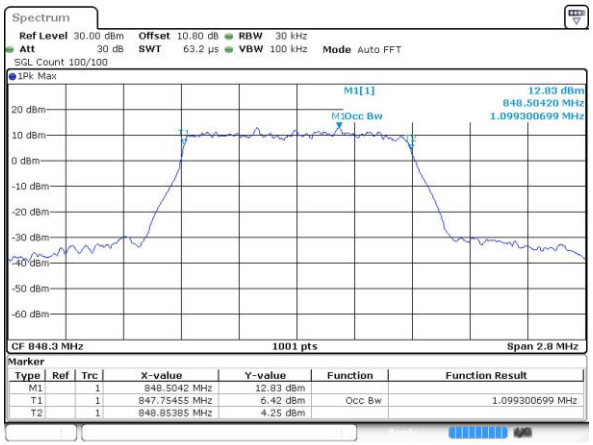
Date: 12.JUN.2018 22:09:51

Middle Channel / 3MHz / 64QAM



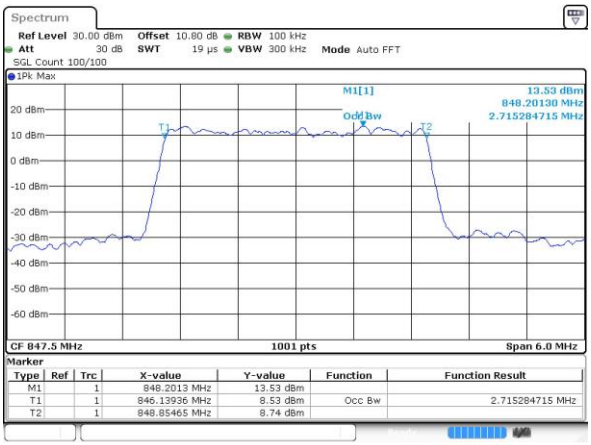
Date: 12.JUN.2018 21:37:18

Highest Channel / 1.4MHz / 64QAM



Date: 12.JUN.2018 22:11:06

Highest Channel / 3MHz / 64QAM



Date: 12.JUN.2018 21:38:34