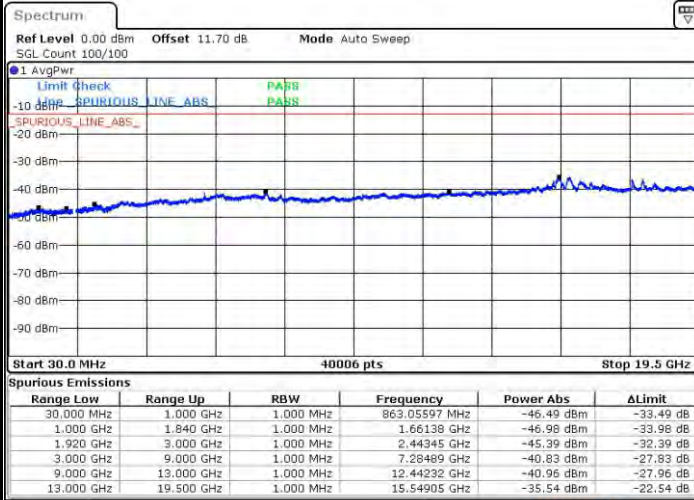




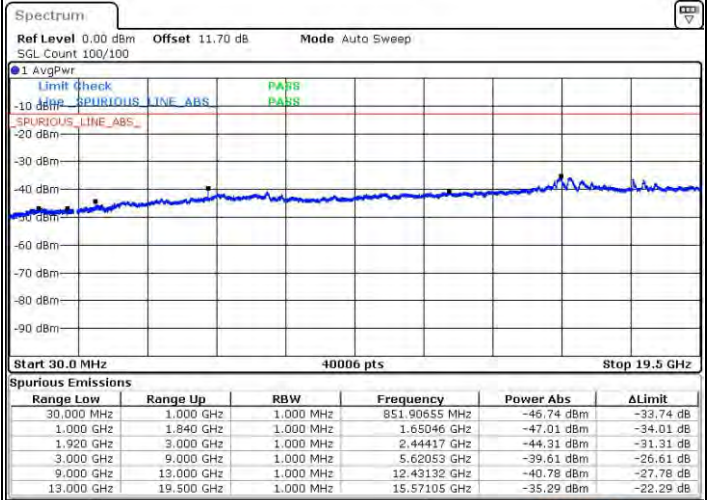
LTE Band 2 / 15MHz

Lowest Channel / 64QAM



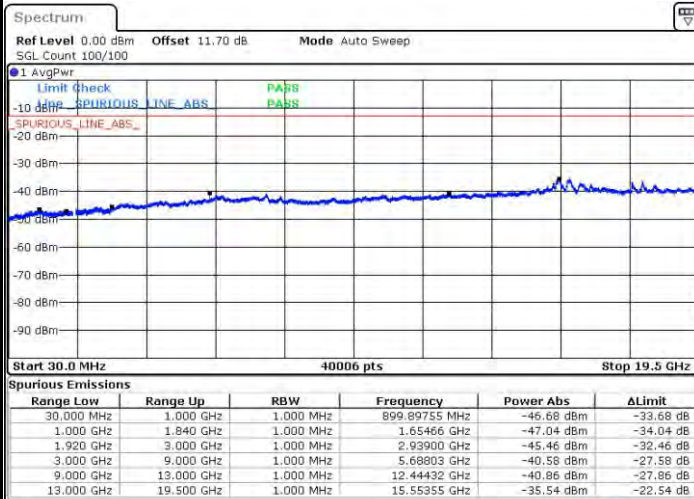
Date: 11.DEC.2018 11:18:50

Middle Channel / 64QAM



Date: 11.DEC.2018 11:19:58

Highest Channel / 64QAM

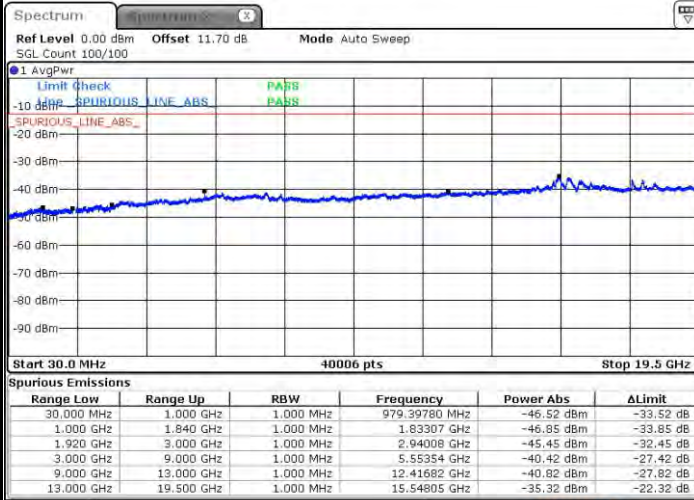


Date: 11.DEC.2018 11:22:44



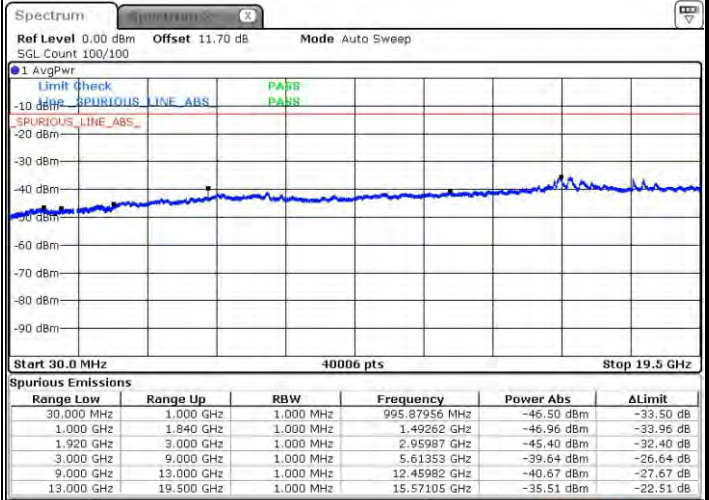
LTE Band 2 / 20MHz

Lowest Channel / 64QAM



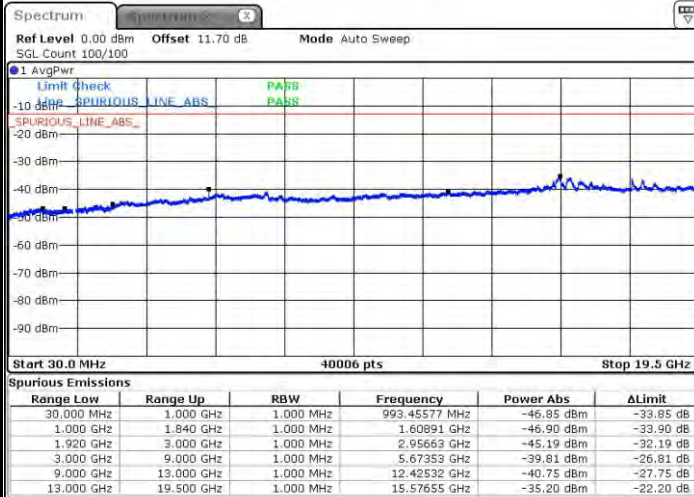
Date: 12.DEC.2018 01:22:37

Middle Channel / 64QAM



Date: 12.DEC.2018 01:24:00

Highest Channel / 64QAM



Date: 12.DEC.2018 01:27:21

Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0039	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0050	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0039	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0006	

Note:

1. Normal Voltage = 9V. ; Battery End Point (BEP) = 7.65 V. ; Maximum Voltage =10.35 V
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 4

Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.43	4.38	5.45	PASS
Middle CH	3.77	4.67	4.35	5.71	
Highest CH	4.12	4.55	4.87	5.54	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.13	6.06	-	-	PASS
Middle CH	5.48	6.32	-	-	
Highest CH	5.88	6.14	-	-	



LTE Band 4 / 20MHz / QPSK

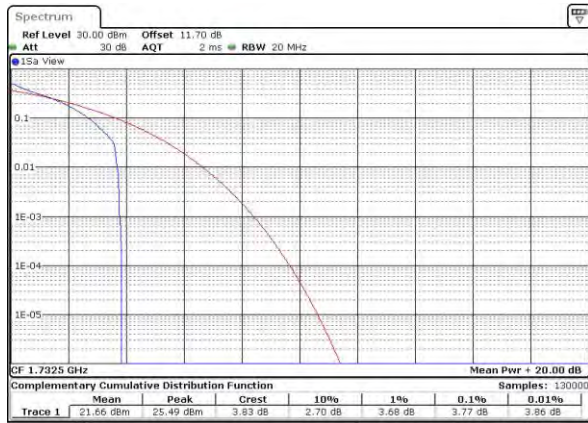
Lowest Channel / 1RB



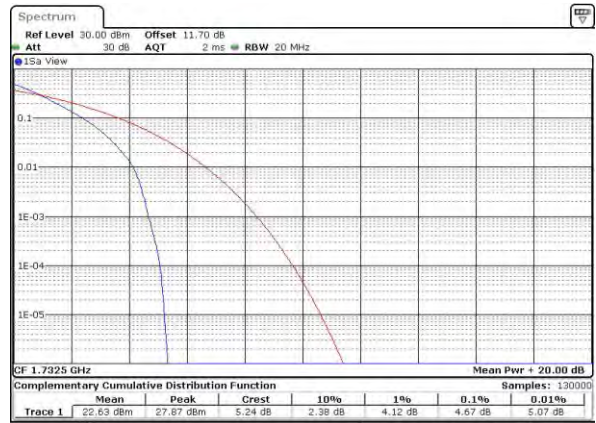
Lowest Channel / Full RB



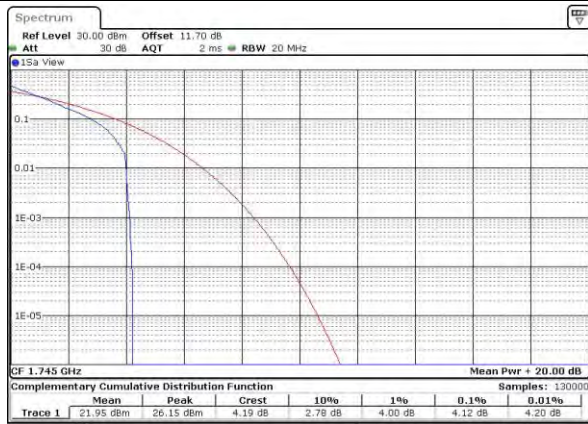
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



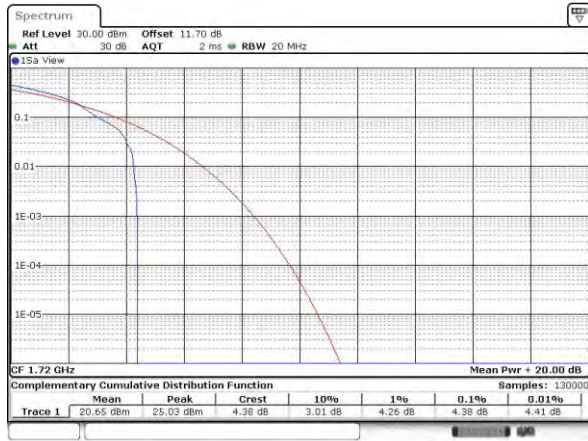
Highest Channel / Full RB



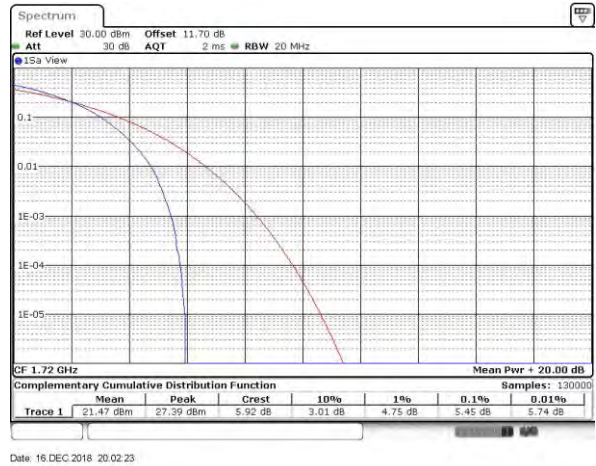


LTE Band 4 / 20MHz / 16QAM

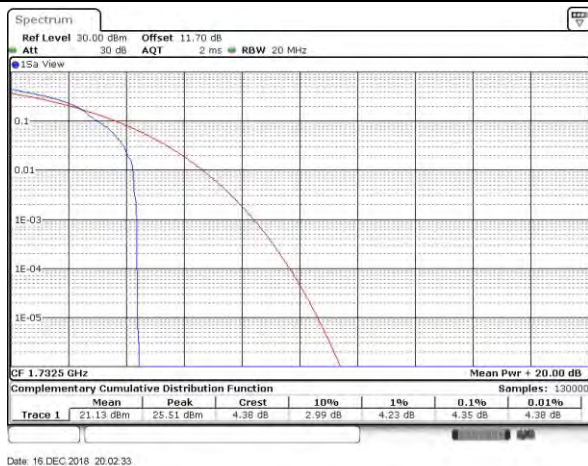
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



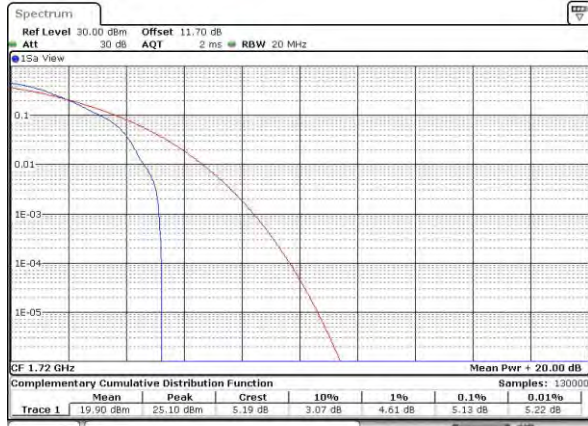
Highest Channel / Full RB





LTE Band 4 / 20MHz / 64QAM

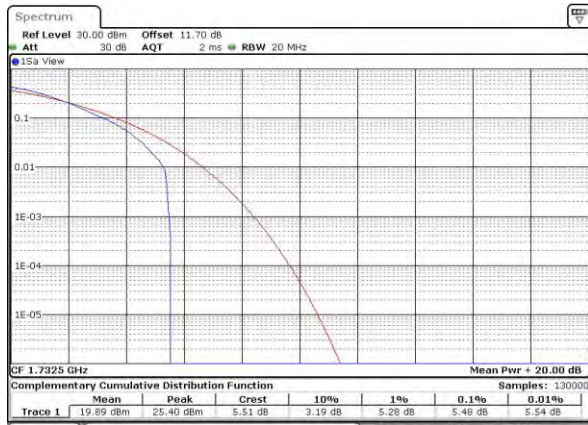
Lowest Channel / 1RB



Lowest Channel / Full RB



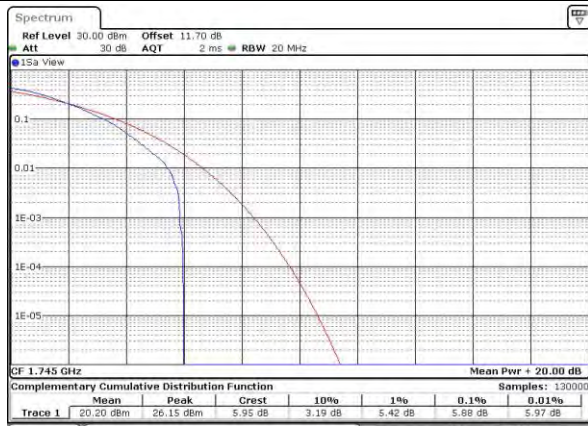
Middle Channel / 1RB



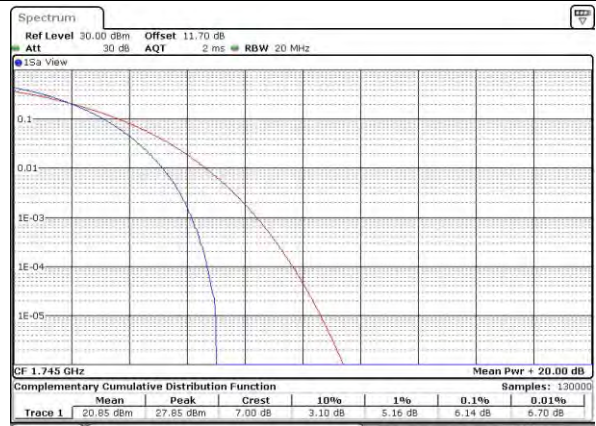
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



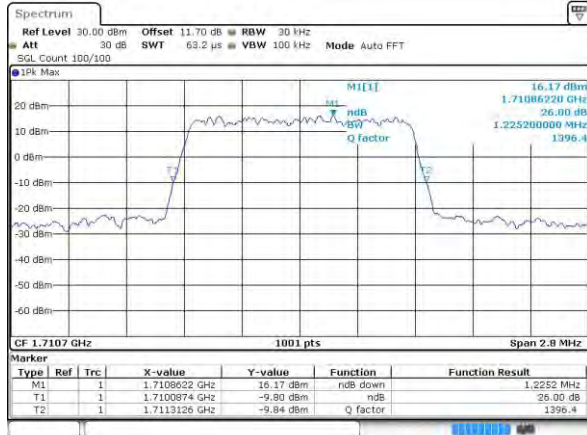
**26dB Bandwidth**

Mode	LTE Band 4 : 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	1.23	1.23	2.99	3.03	4.95	4.90	9.85	9.71	14.27	14.15	20.22	20.26
Middle CH	1.23	1.23	3.01	3.06	4.88	4.98	9.83	9.81	14.36	14.51	20.18	20.10
Highest CH	1.24	1.21	3.02	2.99	4.80	4.95	9.81	9.85	14.27	14.36	20.18	20.30
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.23	-	3.00	-	4.92	-	10.01	-	14.48	-	20.14	-
Middle CH	1.22	-	2.99	-	4.90	-	9.95	-	14.24	-	20.10	-
Highest CH	1.22	-	3.00	-	4.93	-	9.85	-	14.36	-	20.06	-

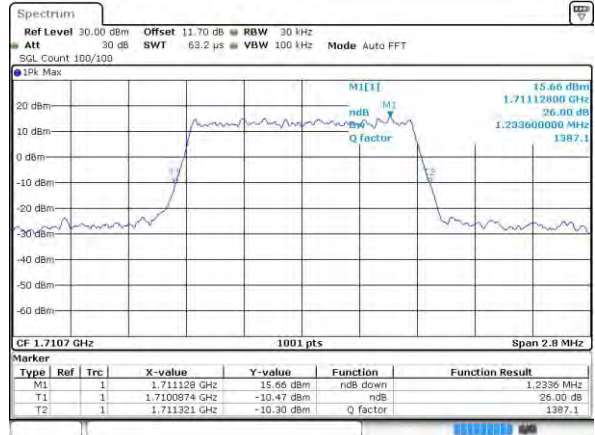


LTE Band 4

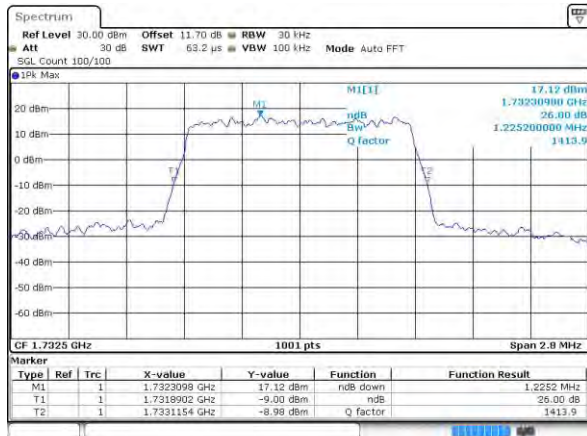
Lowest Channel / 1.4MHz / QPSK



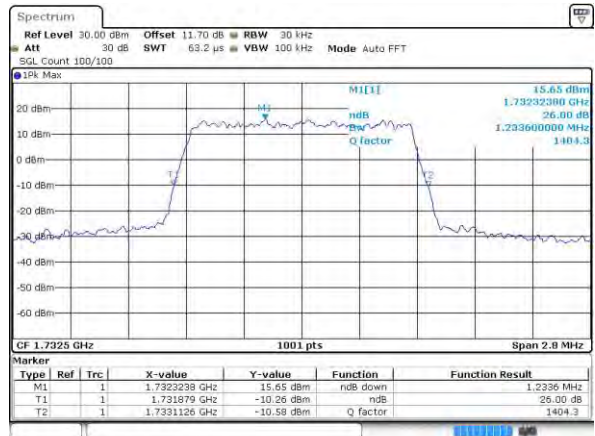
Lowest Channel / 1.4MHz / 16QAM



Middle Channel / 1.4MHz / QPSK



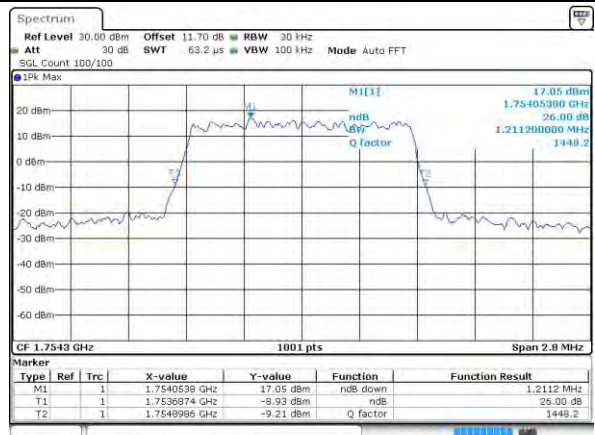
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



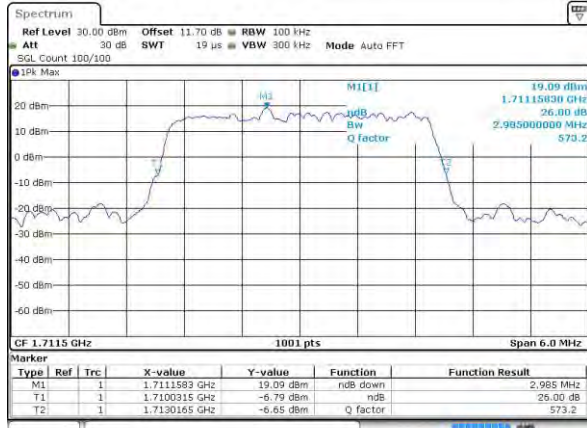
Highest Channel / 1.4MHz / 16QAM





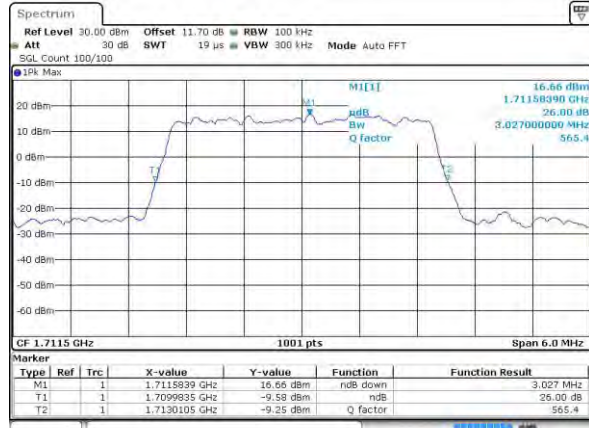
LTE Band 4

Lowest Channel / 3MHz / QPSK



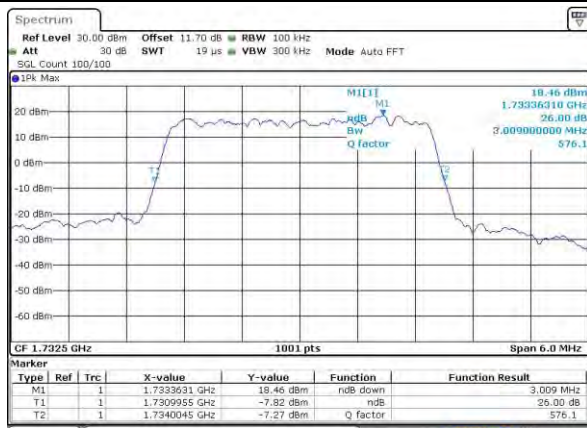
Date: 16 DEC 2016 17:25:52

Lowest Channel / 3MHz / 16QAM



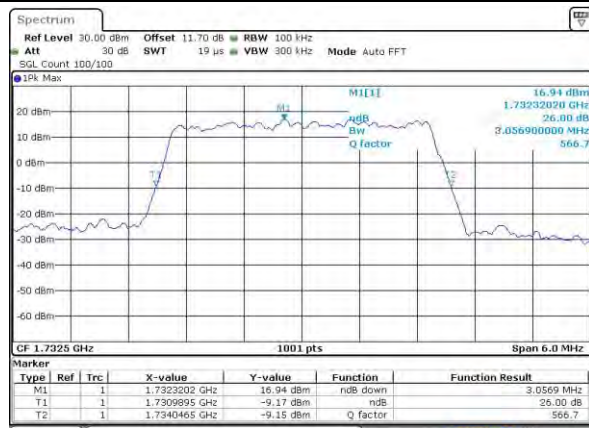
Date: 16 DEC 2016 17:26:03

Middle Channel / 3MHz / QPSK



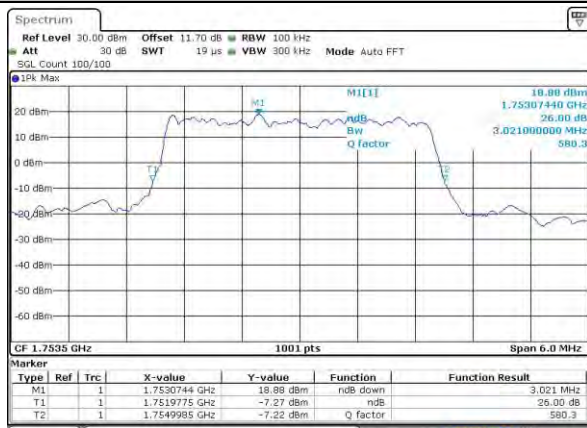
Date: 16 DEC 2016 17:32:09

Middle Channel / 3MHz / 16QAM



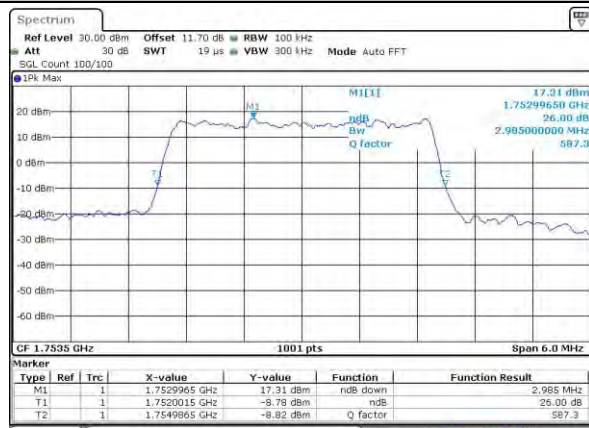
Date: 16 DEC 2016 17:32:20

Highest Channel / 3MHz / QPSK



Date: 16 DEC 2016 17:34:45

Highest Channel / 3MHz / 16QAM

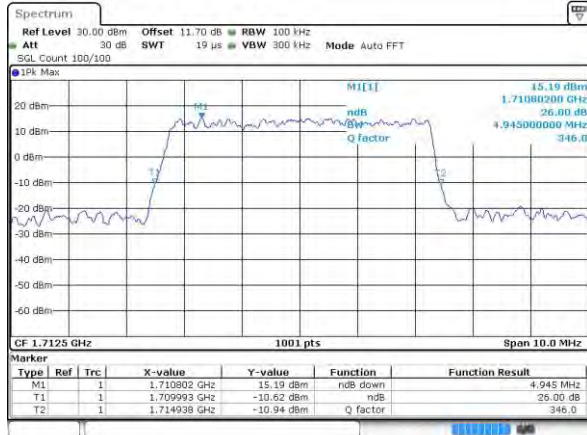


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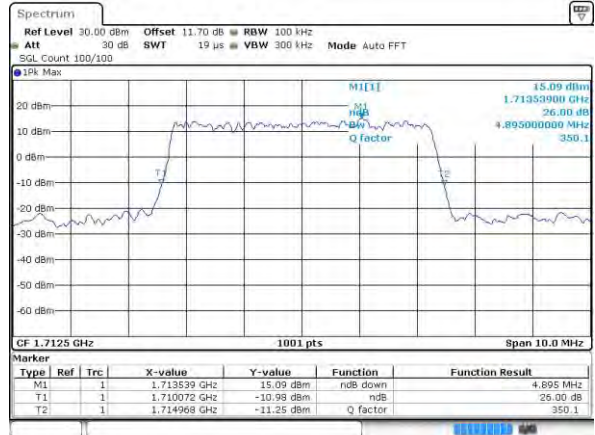


LTE Band 4

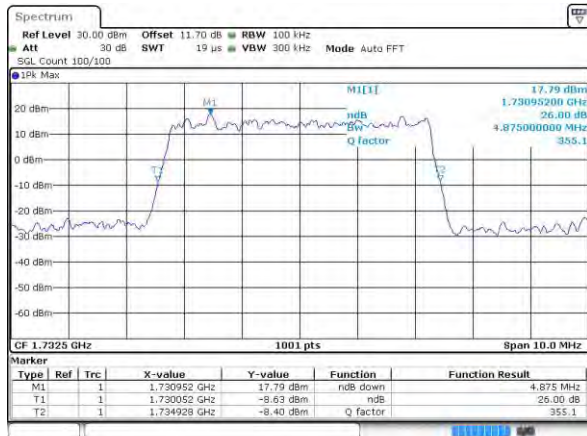
Lowest Channel / 5MHz / QPSK



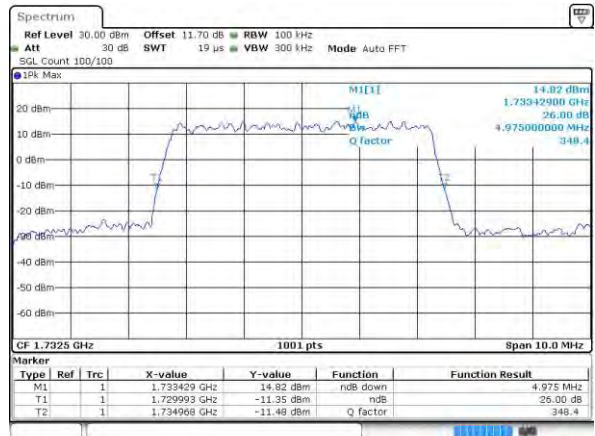
Lowest Channel / 5MHz / 16QAM



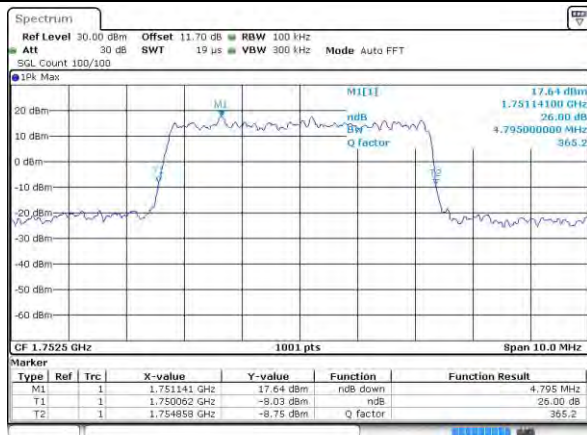
Middle Channel / 5MHz / QPSK



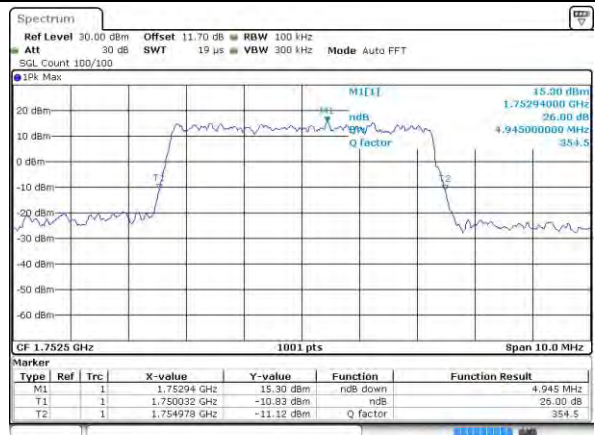
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



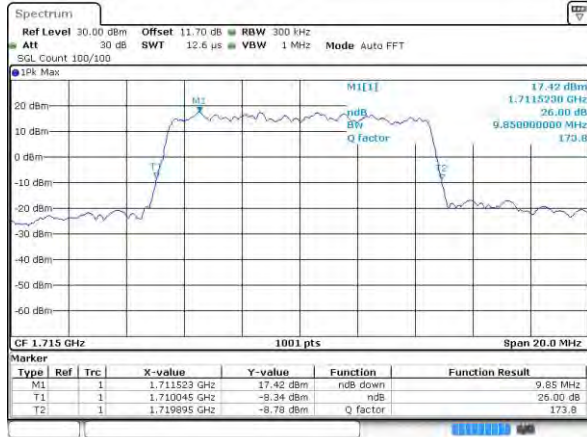
Highest Channel / 5MHz / 16QAM



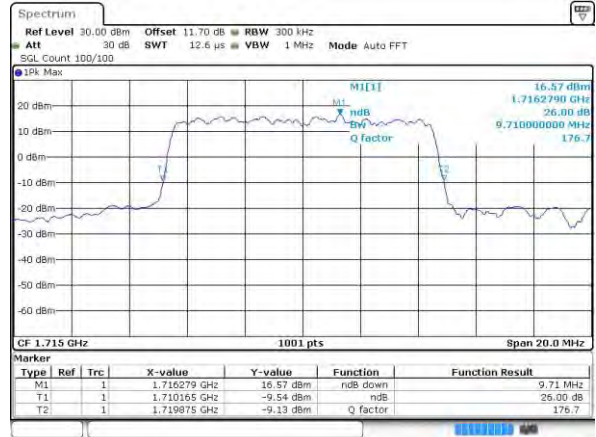


LTE Band 4

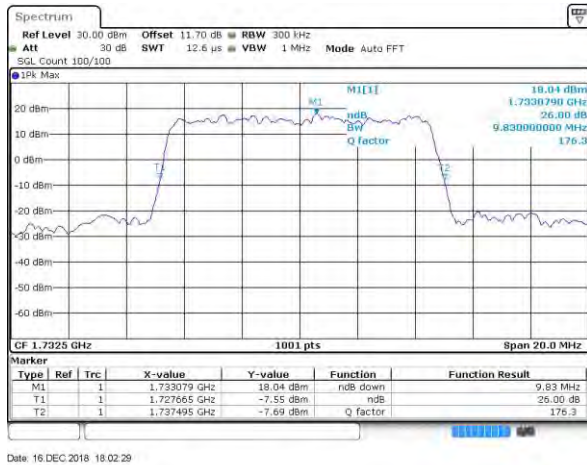
Lowest Channel / 10MHz / QPSK



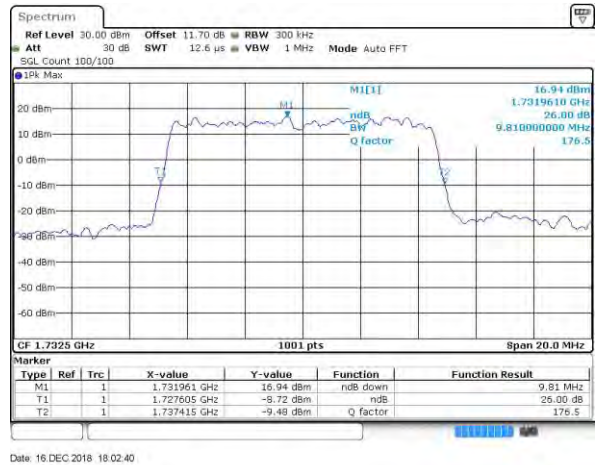
Lowest Channel / 10MHz / 16QAM



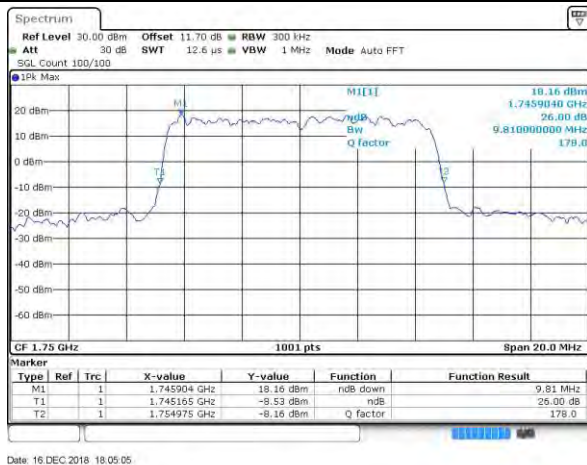
Middle Channel / 10MHz / QPSK



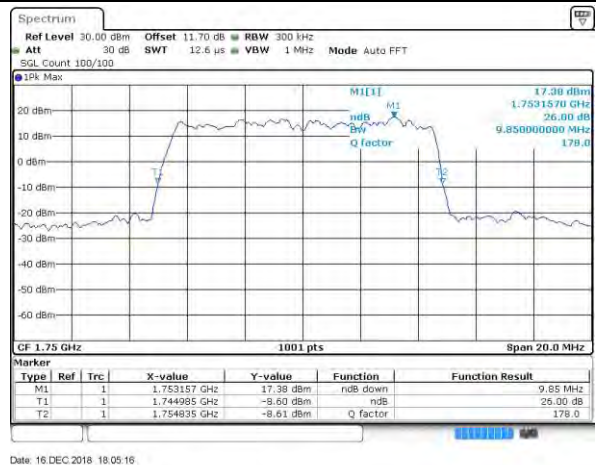
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



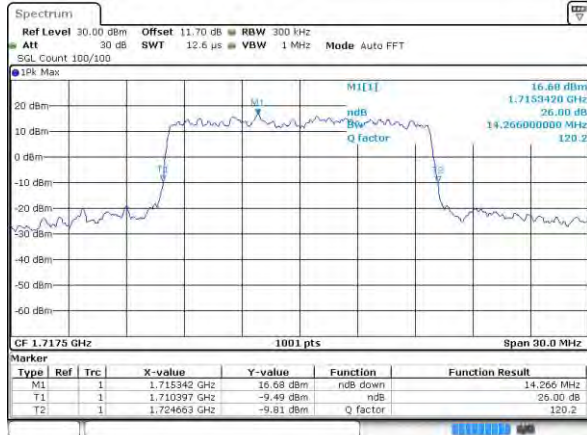
Highest Channel / 10MHz / 16QAM



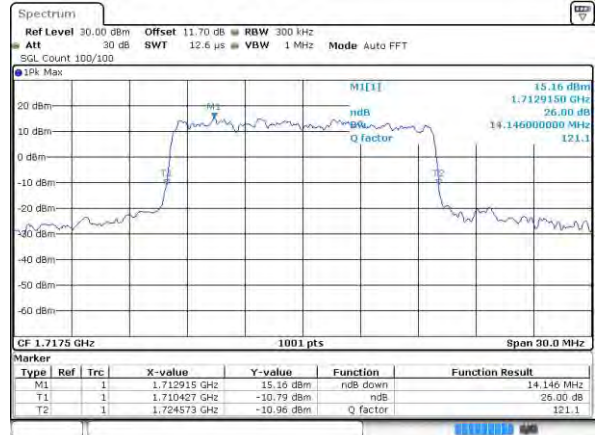


LTE Band 4

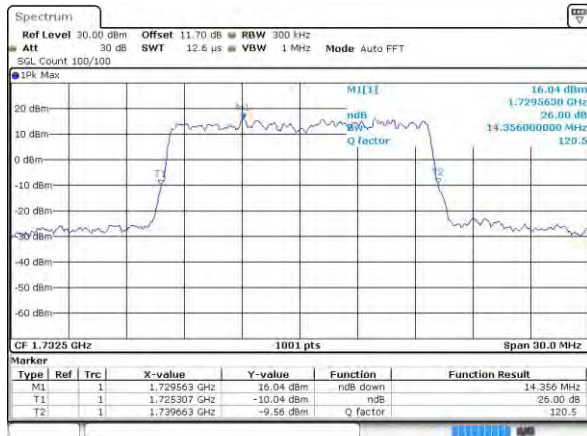
Lowest Channel / 15MHz / QPSK



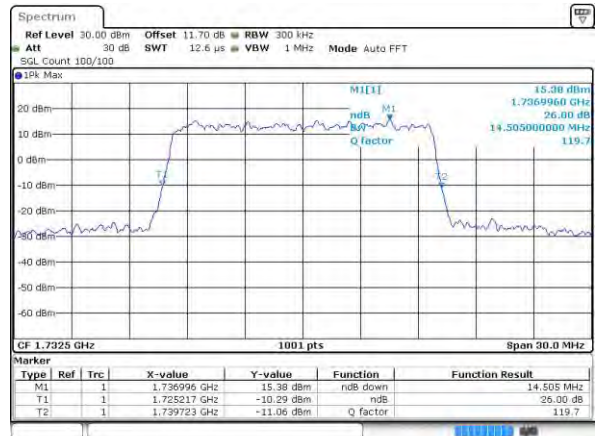
Lowest Channel / 15MHz / 16QAM



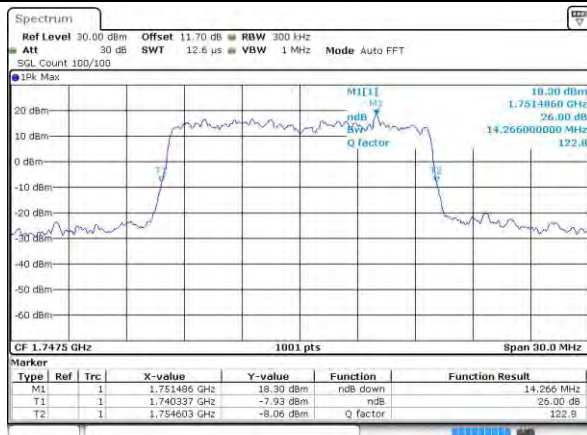
Middle Channel / 15MHz / QPSK



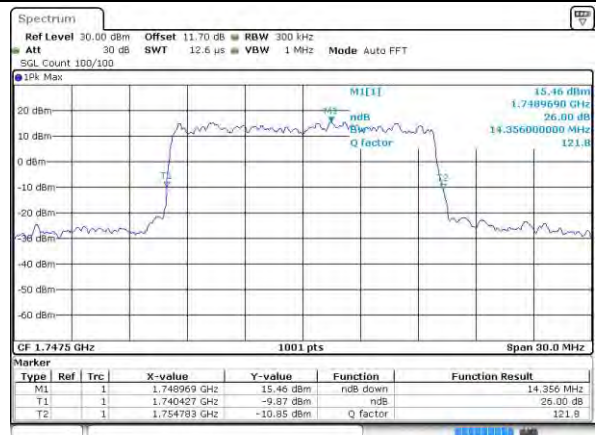
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



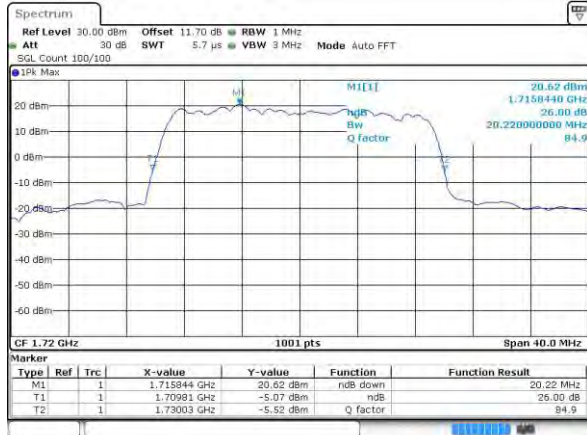
Highest Channel / 15MHz / 16QAM



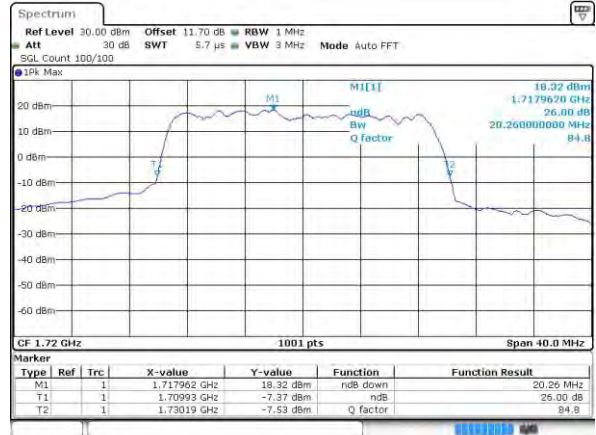


LTE Band 4

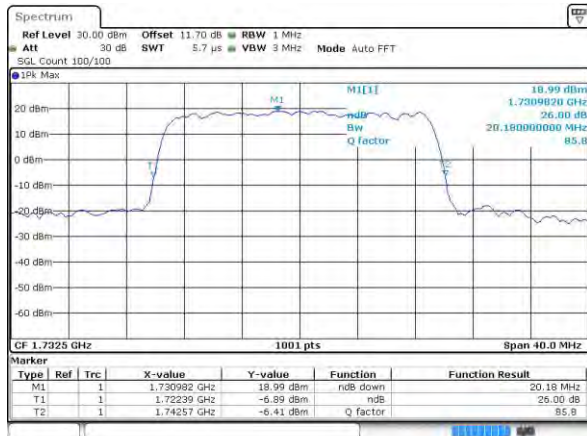
Lowest Channel / 20MHz / QPSK



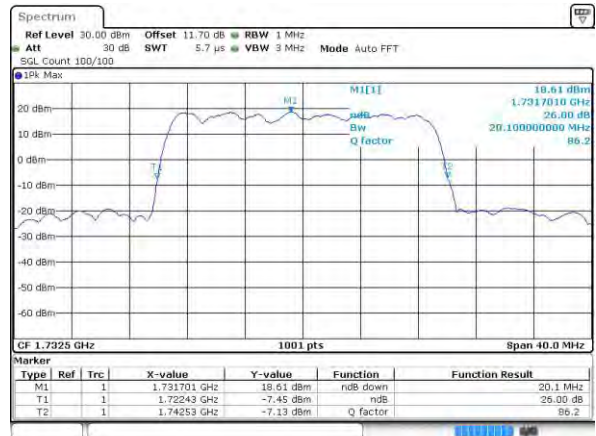
Lowest Channel / 20MHz / 16QAM



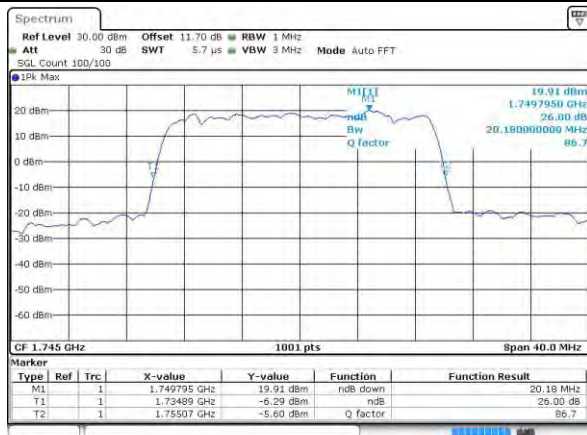
Middle Channel / 20MHz / QPSK



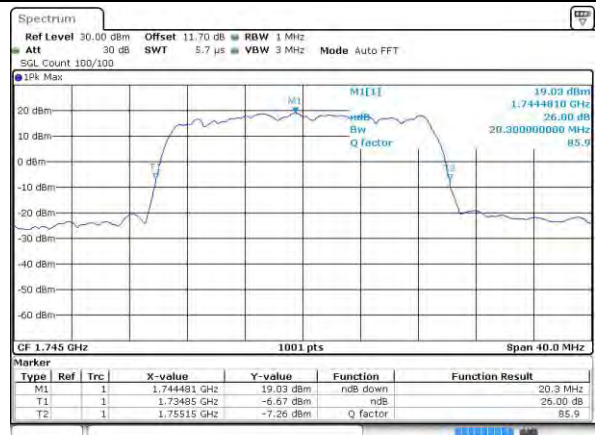
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



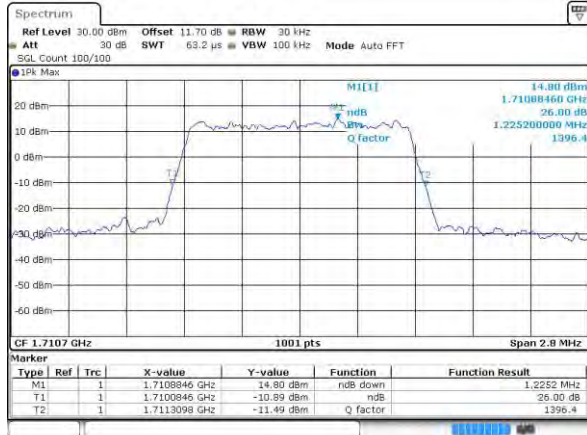
Highest Channel / 20MHz / 16QAM



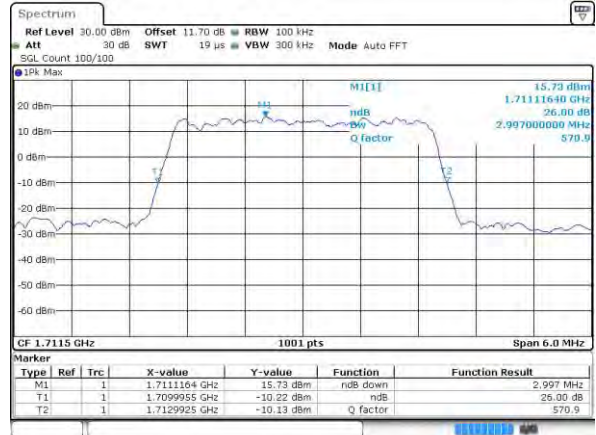


LTE Band 4

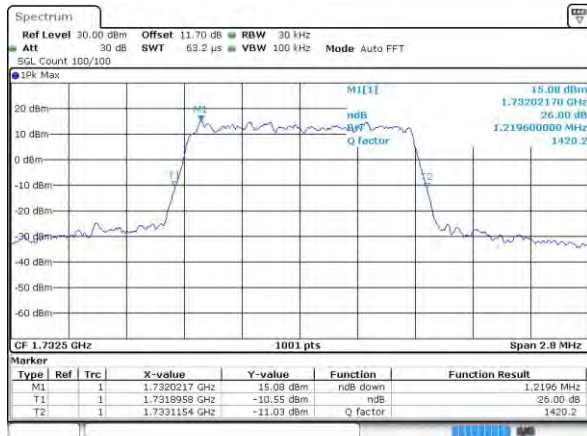
Lowest Channel / 1.4MHz / 64QAM



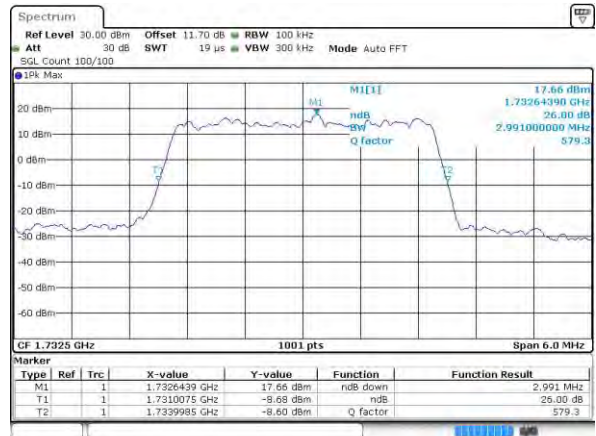
Lowest Channel / 3MHz / 64QAM



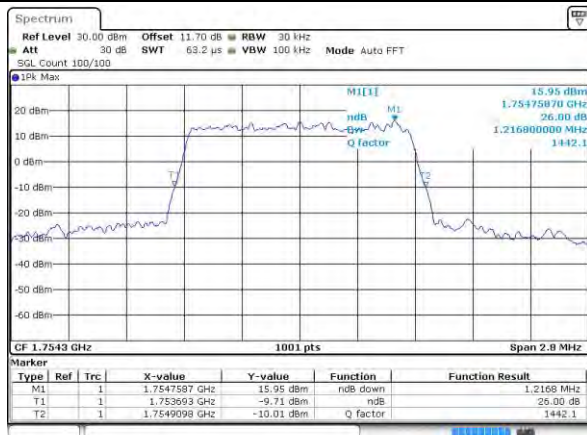
Middle Channel / 1.4MHz / 64QAM



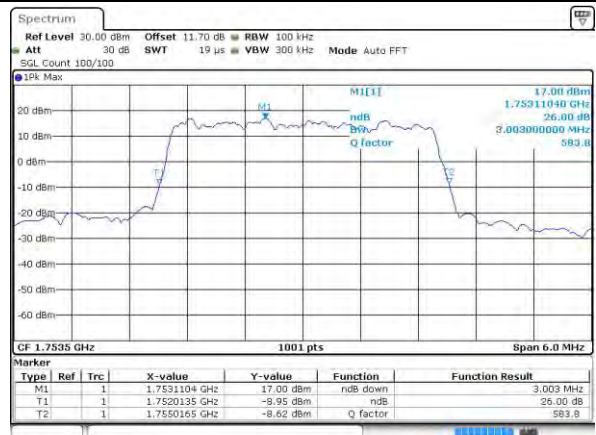
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



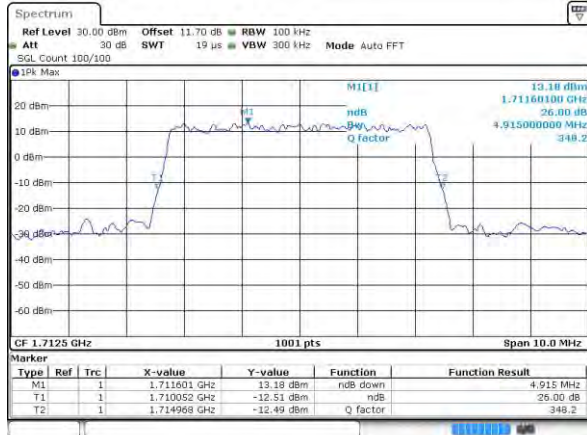
Highest Channel / 3MHz / 64QAM



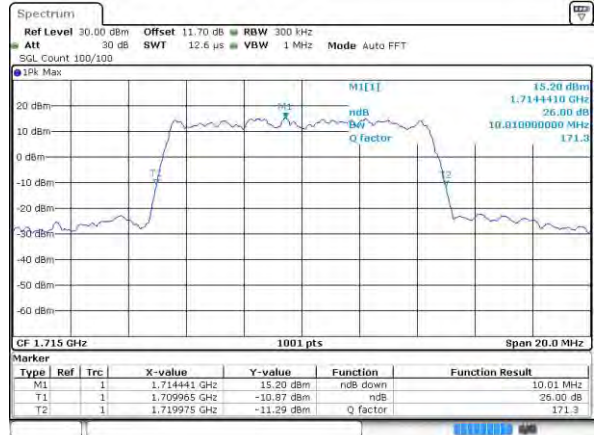


LTE Band 4

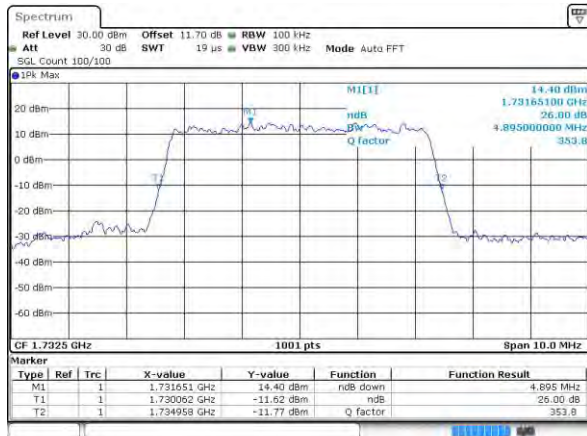
Lowest Channel / 5MHz / 64QAM



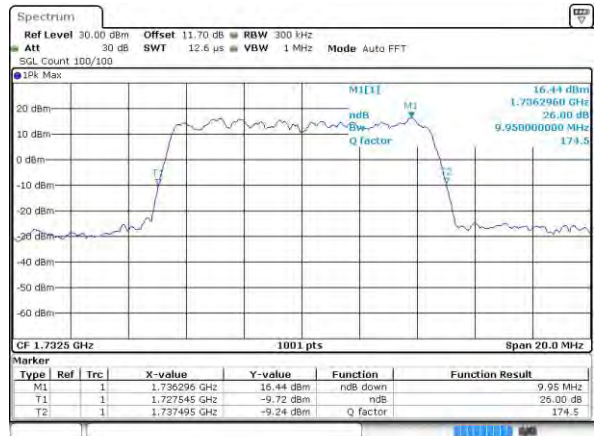
Lowest Channel / 10MHz / 64QAM



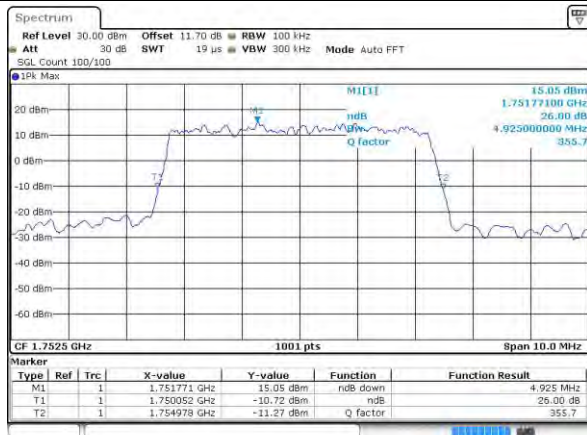
Middle Channel / 5MHz / 64QAM



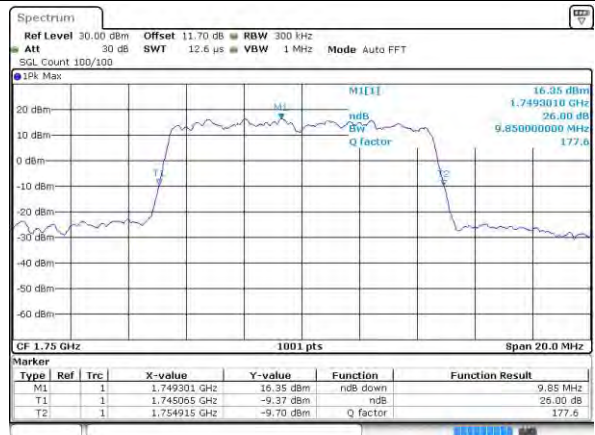
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



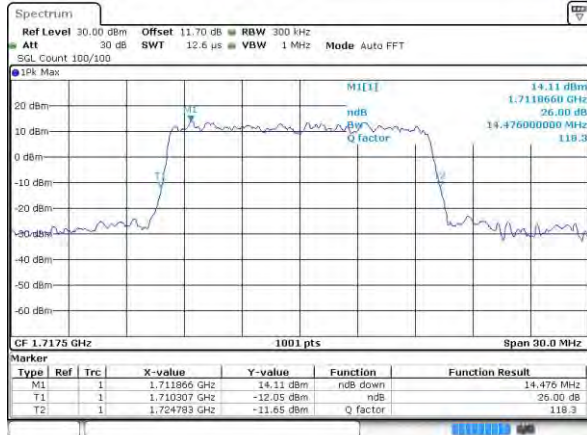
Highest Channel / 10MHz / 64QAM



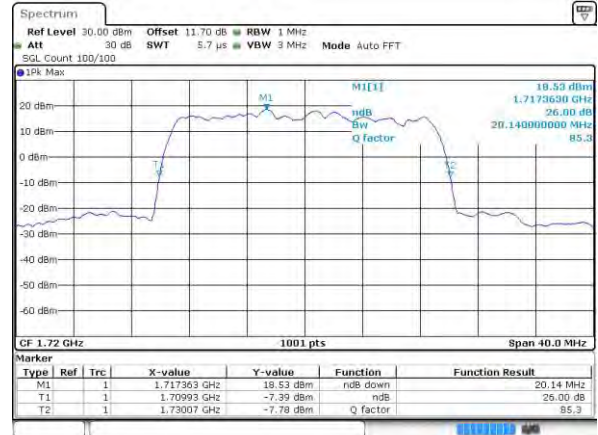


LTE Band 4

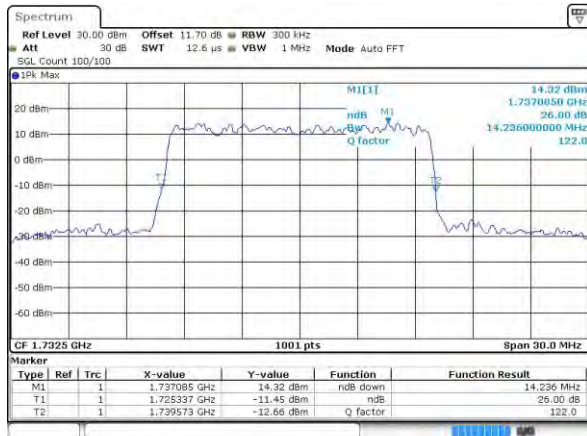
Lowest Channel / 15MHz / 64QAM



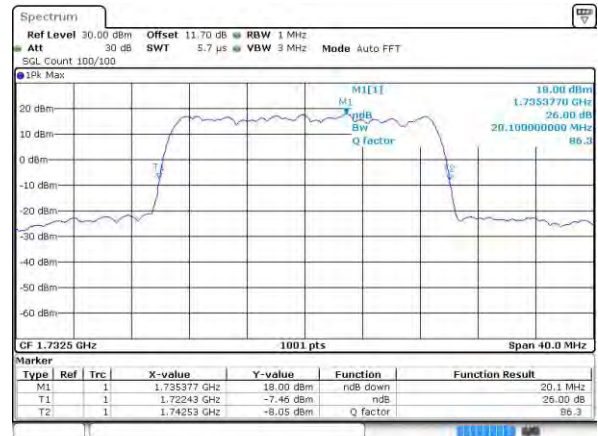
Lowest Channel / 20MHz / 64QAM



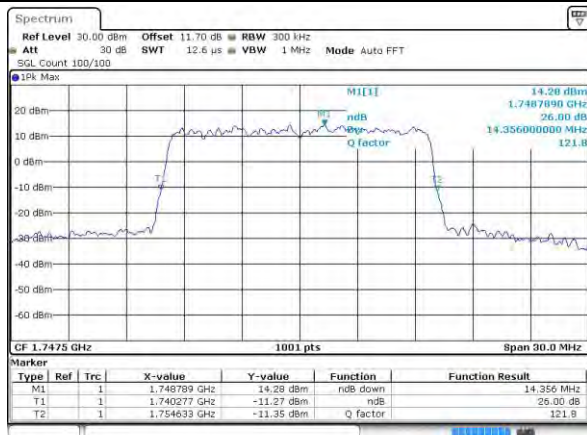
Middle Channel / 15MHz / 64QAM



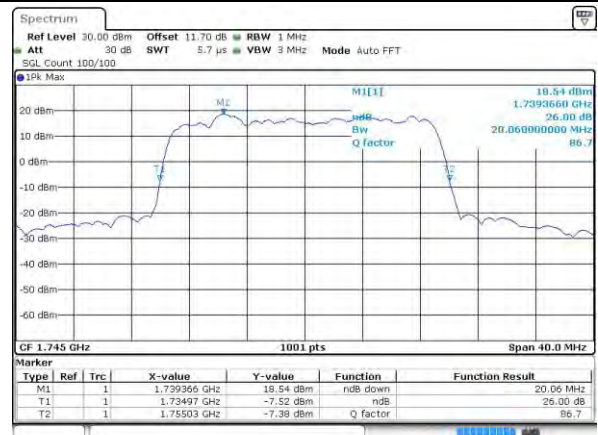
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM



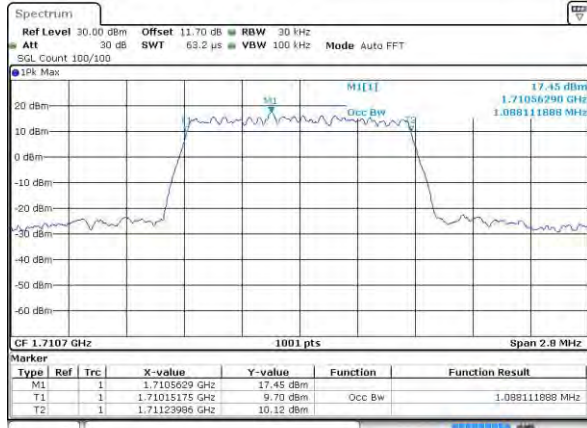
**Occupied Bandwidth**

Mode	LTE Band 4 : 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	2.74	2.72	4.5	4.49	9.05	9.01	13.4	13.4	18.22	18.34
Middle CH	1.09	1.09	2.72	2.73	4.49	4.47	9.03	9.05	13.43	13.49	18.46	18.54
Highest CH	1.09	1.09	2.73	2.72	4.49	4.48	9.03	8.99	13.34	13.4	18.3	18.3
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.72	-	4.48	-	9.03	-	13.43	-	18.18	-
Middle CH	1.09	-	2.71	-	4.47	-	9.03	-	13.43	-	18.42	-
Highest CH	1.10	-	2.71	-	4.49	-	8.97	-	13.46	-	18.34	-

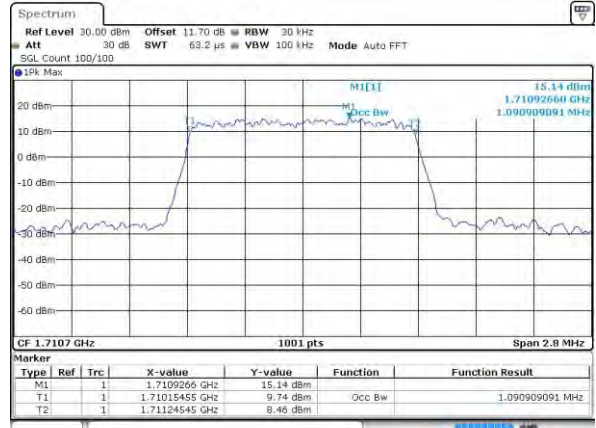


LTE Band 4

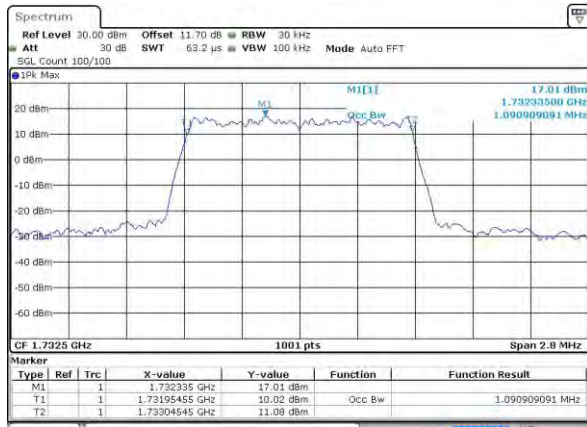
Lowest Channel / 1.4MHz / QPSK



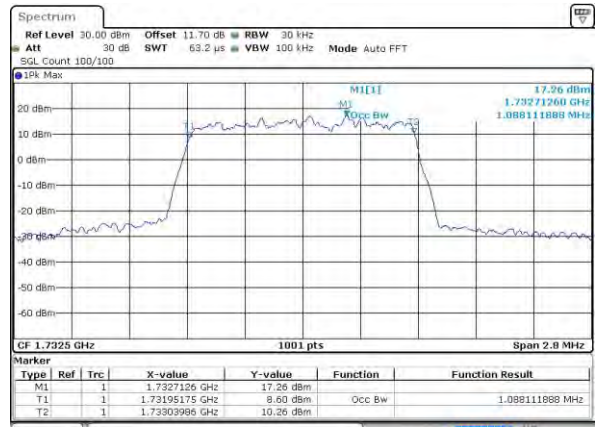
Lowest Channel / 1.4MHz / 16QAM



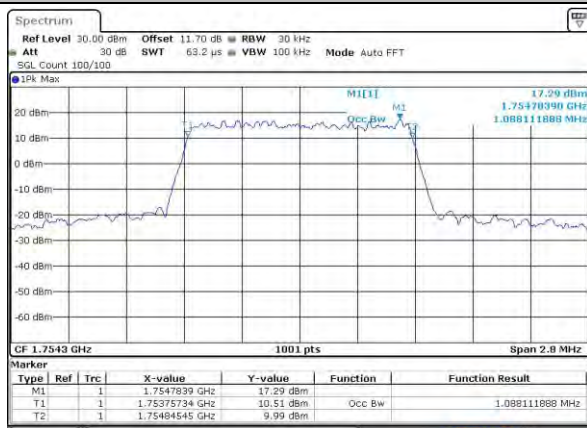
Middle Channel / 1.4MHz / QPSK



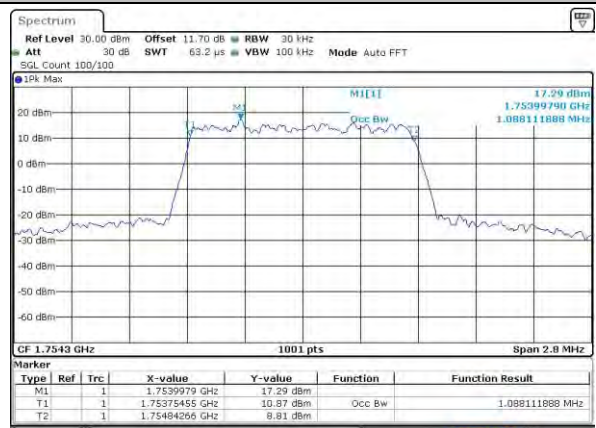
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



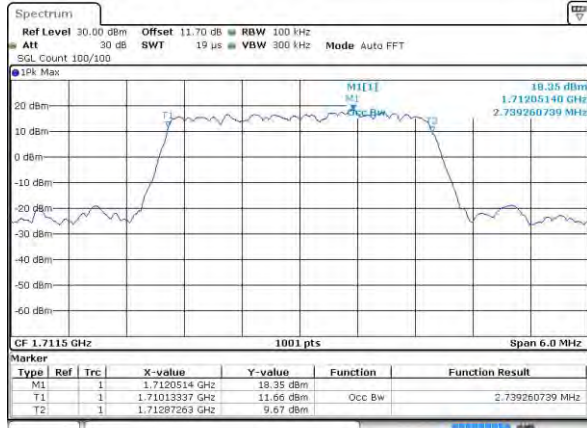
Highest Channel / 1.4MHz / 16QAM



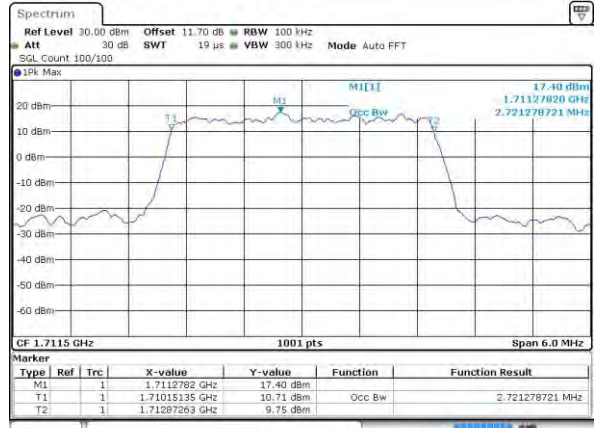


LTE Band 4

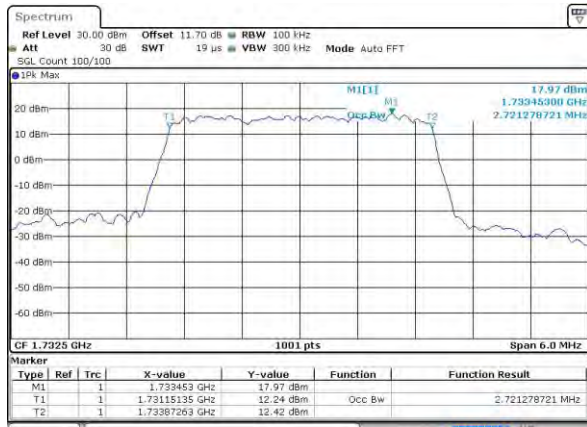
Lowest Channel / 3MHz / QPSK



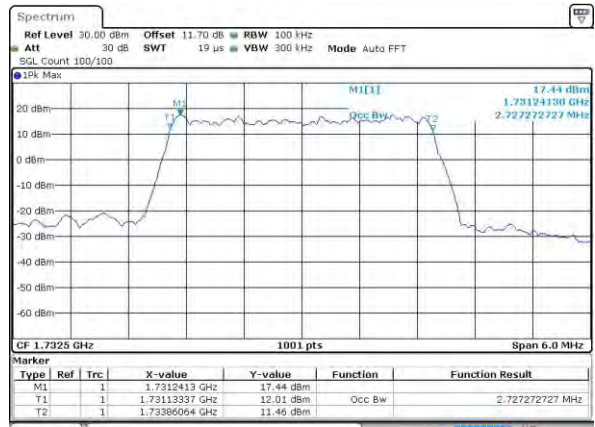
Lowest Channel / 3MHz / 16QAM



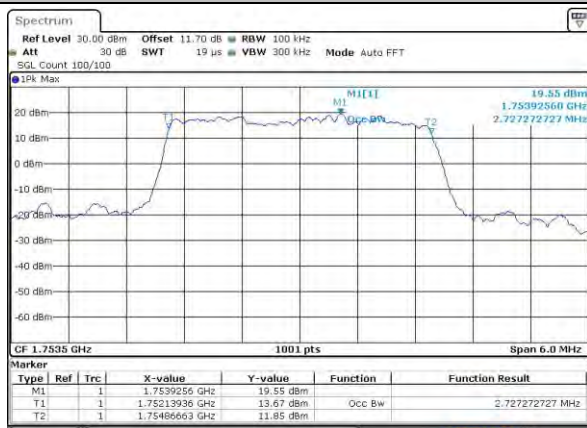
Middle Channel / 3MHz / QPSK



Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM

