

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	0.0002	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0009	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Note:

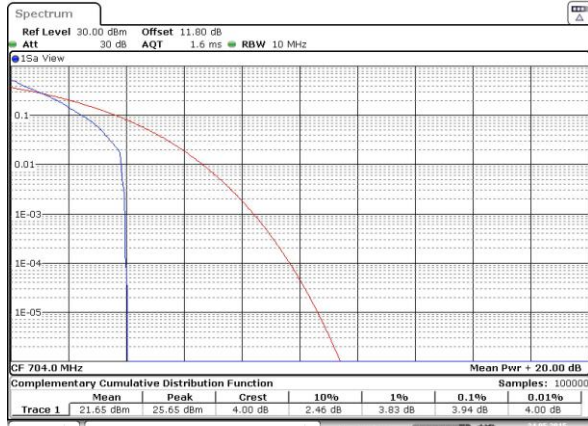
1. Normal Voltage = 3.95V. ; Battery End Point (BEP) = 3.55 V. ; Maximum Voltage =4.35 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



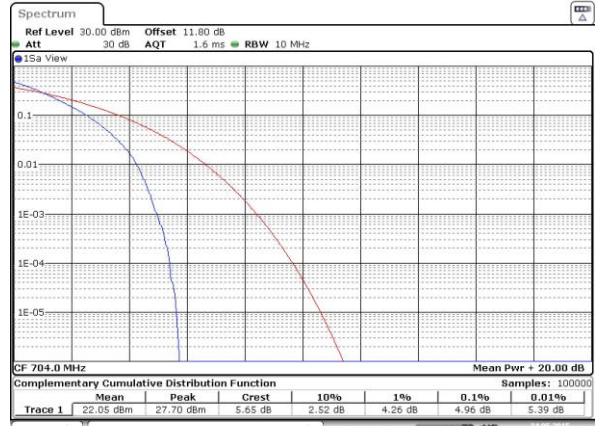
LTE Band 12

Peak-to-Average Ratio

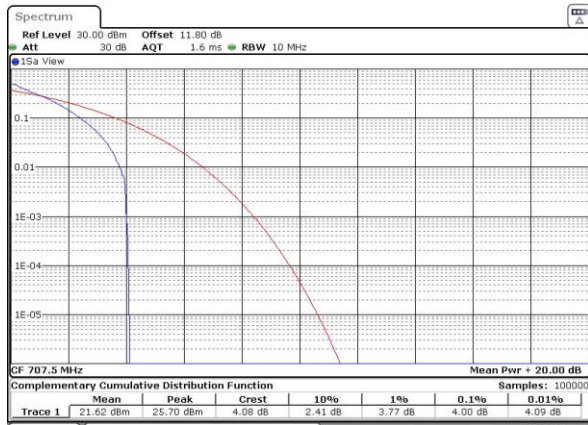
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.94	4.96	4.78	5.86	PASS
Middle CH	4.00	4.70	5.07	5.80	
Highest CH	4.14	4.93	4.81	6.00	

LTE Band 12 / 10MHz / QPSK
Lowest Channel / 1RB


Date: 24 MAY 2015 13:17:43

Lowest Channel / Full RB


Date: 24 MAY 2015 13:17:32

Middle Channel / 1RB


Date: 24 MAY 2015 13:17:58

Middle Channel / Full RB


Date: 24 MAY 2015 13:18:10

Highest Channel / 1RB


Date: 24 MAY 2015 13:18:33

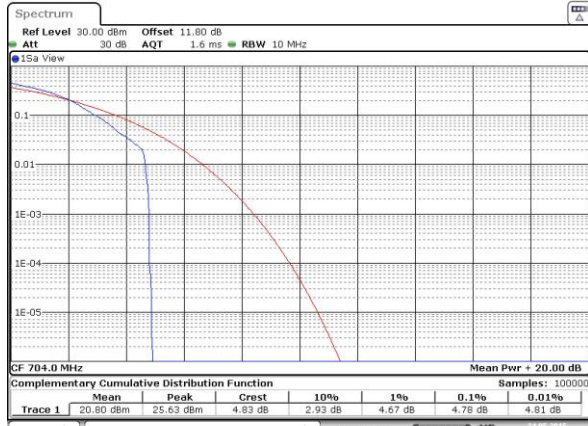
Highest Channel / Full RB


Date: 24 MAY 2015 13:18:22

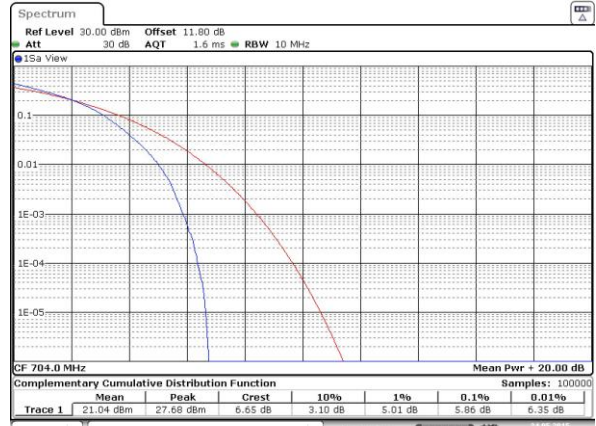


LTE Band 12 / 10MHz / 16QAM

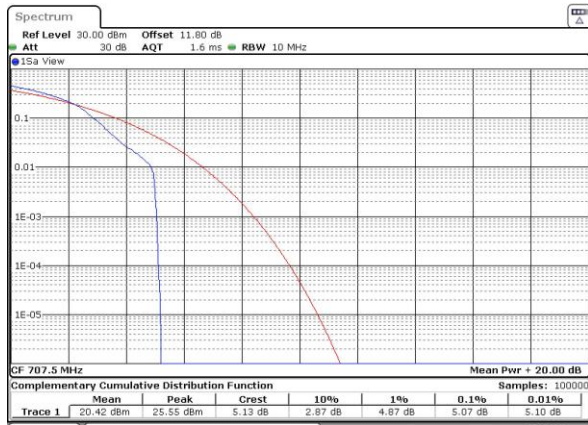
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



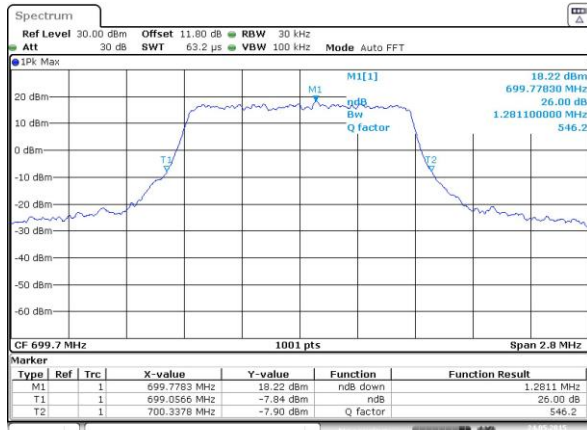
**26dB Bandwidth**

Mode	LTE Band 12 : 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	1.30	3.05	3.06	5.05	5.05	9.91	9.93	-	-	-	-
Middle CH	1.28	1.30	3.03	3.05	5.03	5.04	10.01	9.89	-	-	-	-
Highest CH	1.28	1.29	3.04	3.05	5.05	5.06	9.99	9.99	-	-	-	-

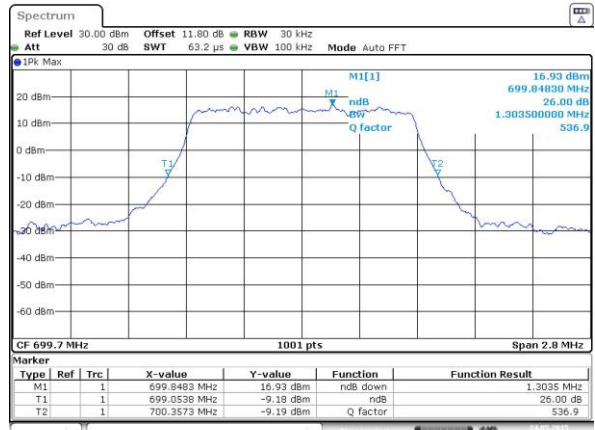


LTE Band 12

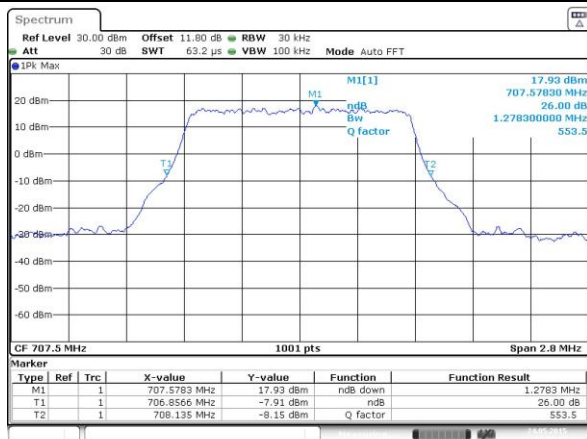
Lowest Channel / 1.4MHz / QPSK



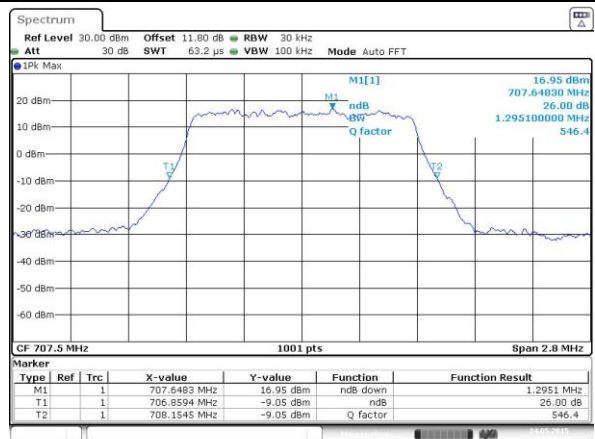
Lowest Channel / 1.4MHz / 16QAM



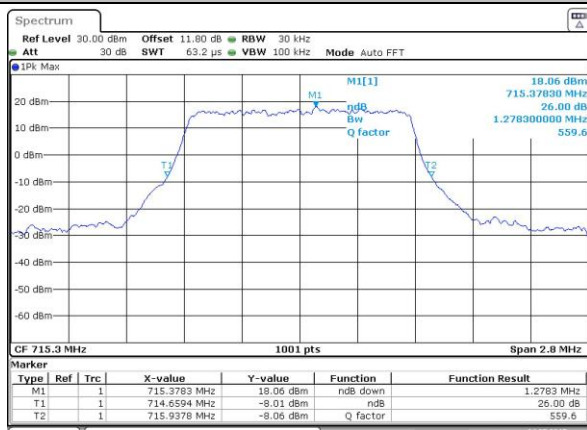
Middle Channel / 1.4MHz / QPSK



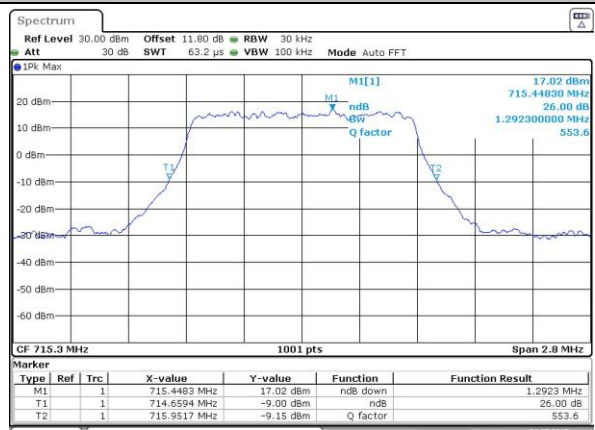
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



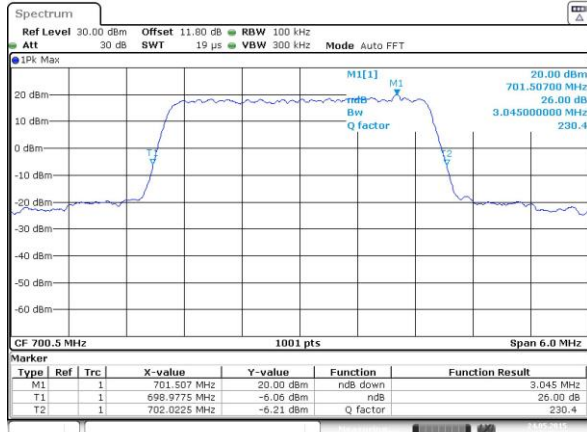
Highest Channel / 1.4MHz / 16QAM



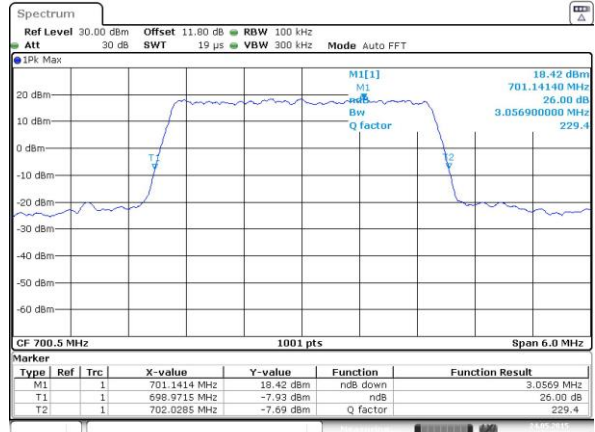


LTE Band 12

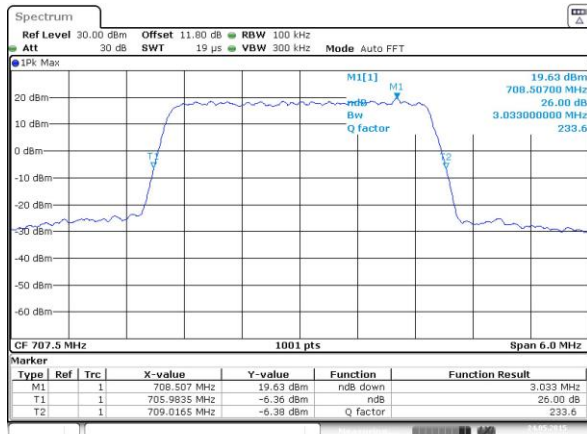
Lowest Channel / 3MHz / QPSK



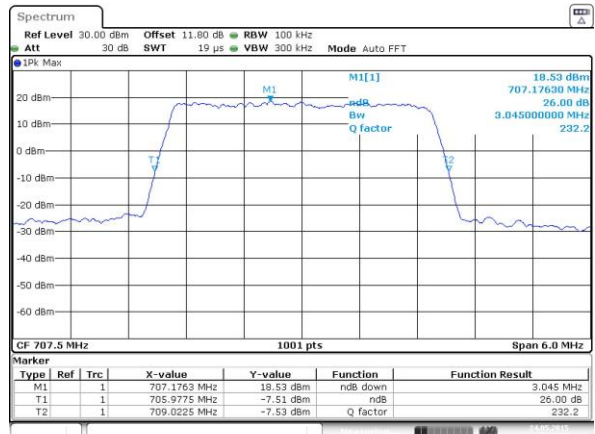
Lowest Channel / 3MHz / 16QAM



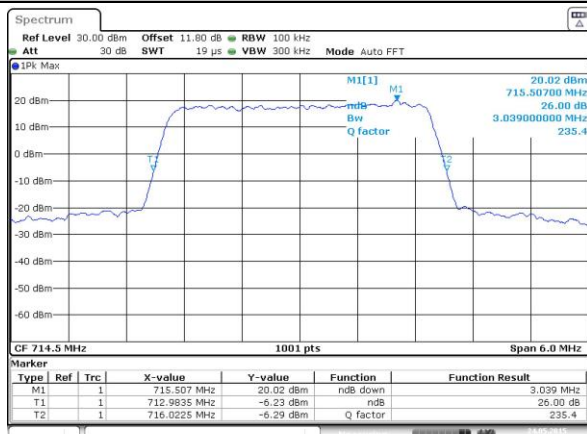
Middle Channel / 3MHz / QPSK



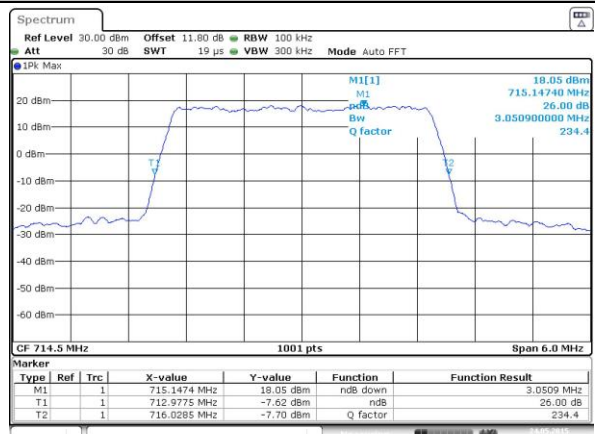
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



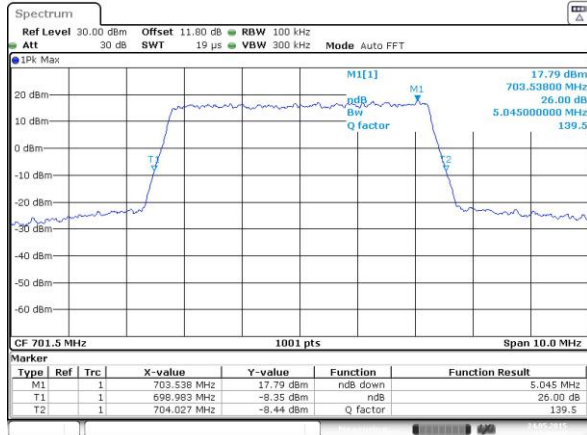
Highest Channel / 3MHz / 16QAM



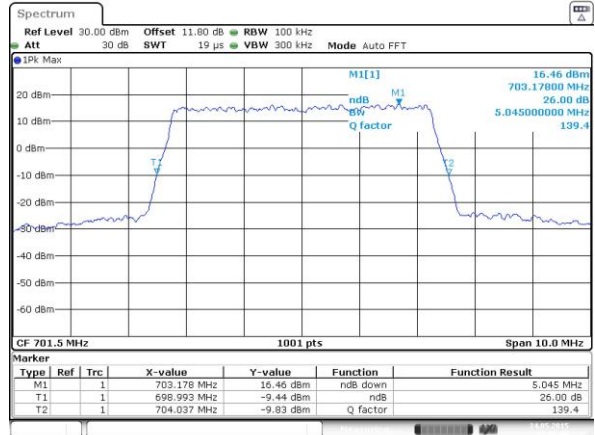


LTE Band 12

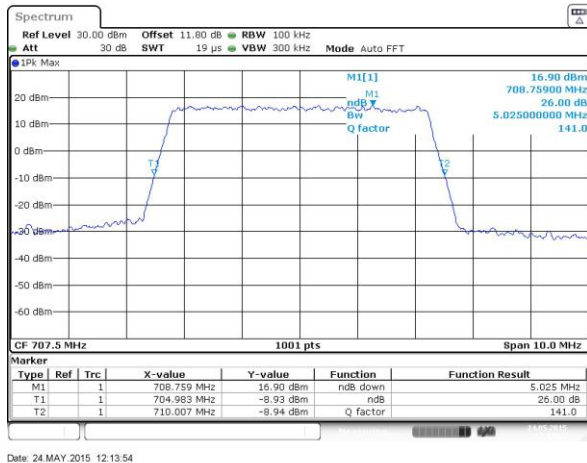
Lowest Channel / 5MHz / QPSK



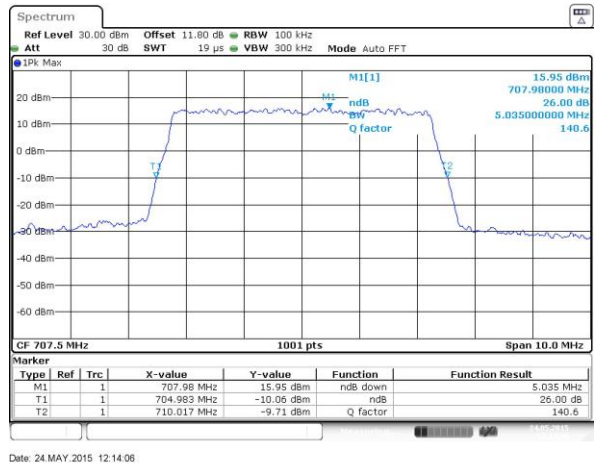
Lowest Channel / 5MHz / 16QAM



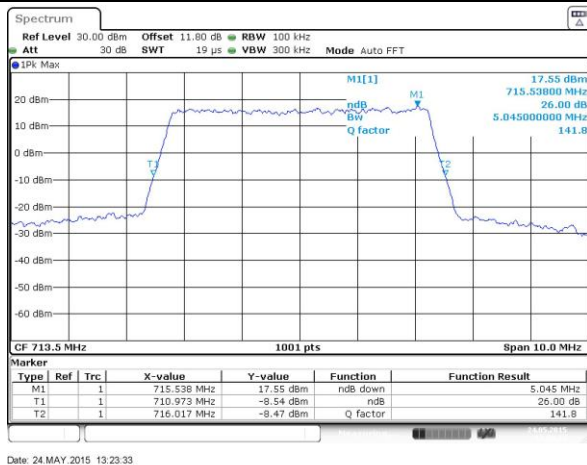
Middle Channel / 5MHz / QPSK



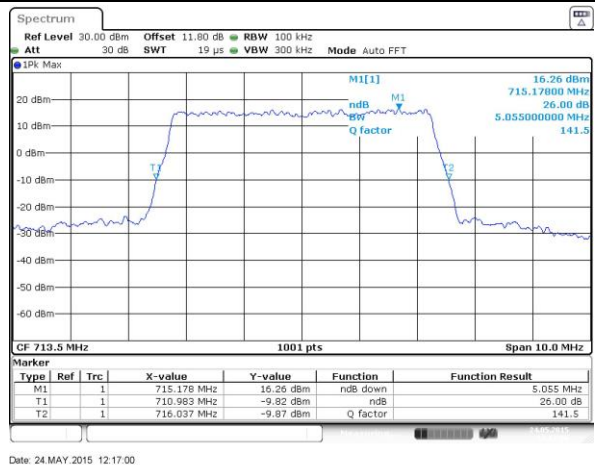
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



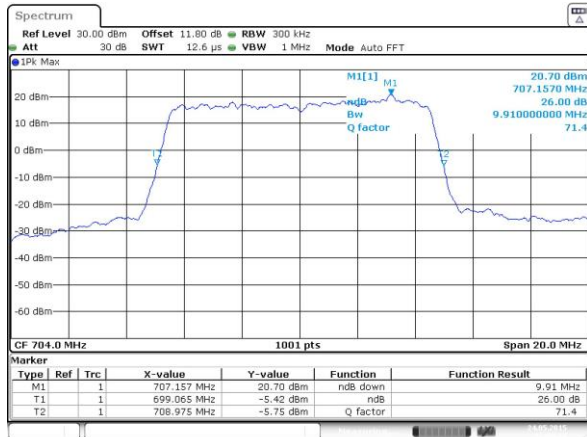
Highest Channel / 5MHz / 16QAM



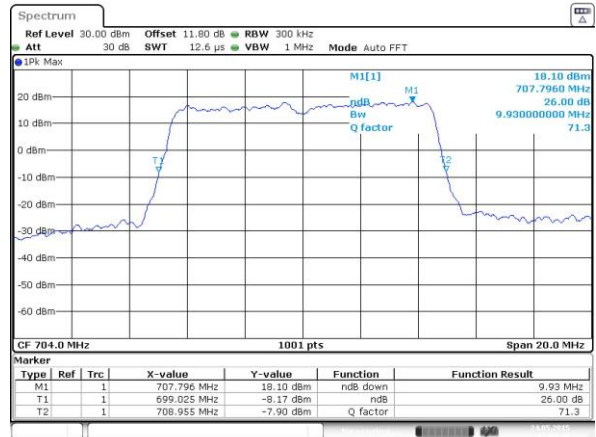


LTE Band 12

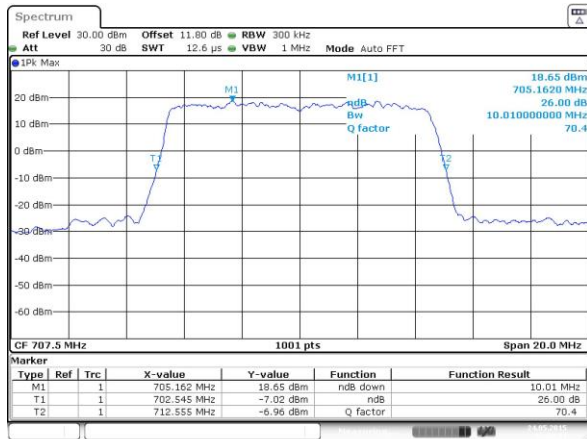
Lowest Channel / 10MHz / QPSK



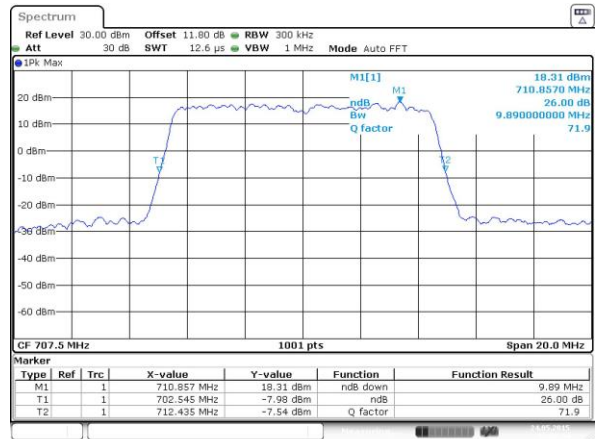
Lowest Channel / 10MHz / 16QAM



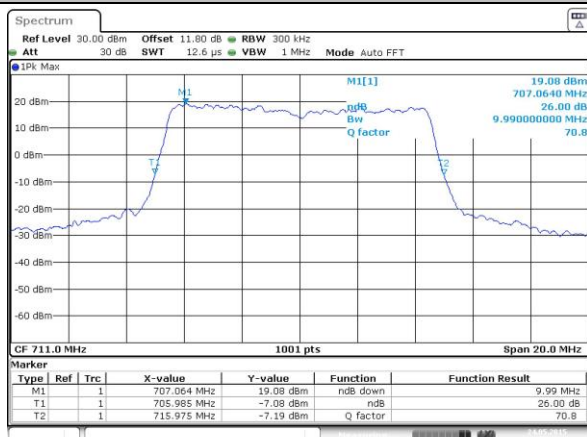
Middle Channel / 10MHz / QPSK



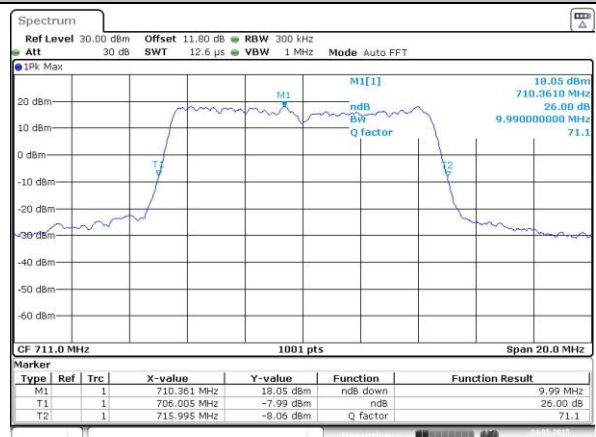
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

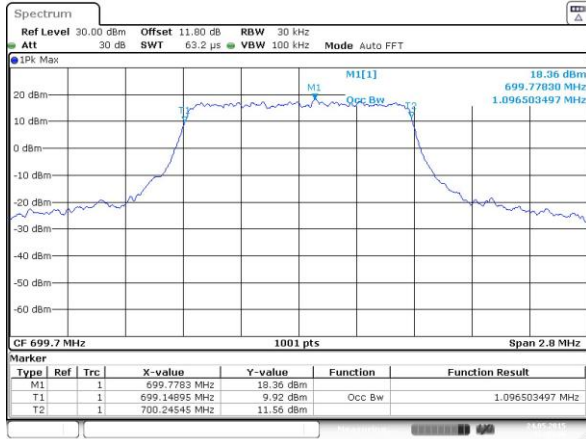


Highest Channel / 10MHz / 16QAM

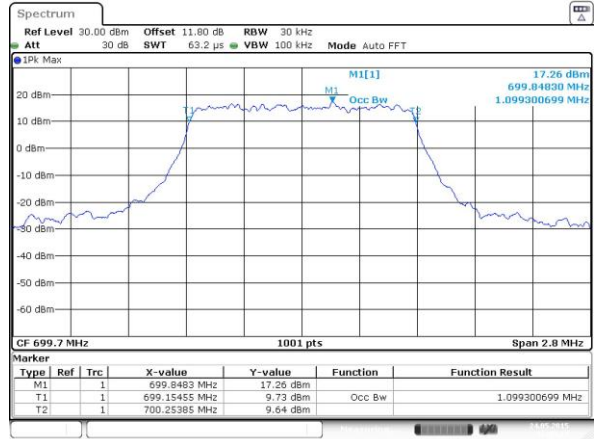


**Occupied Bandwidth**

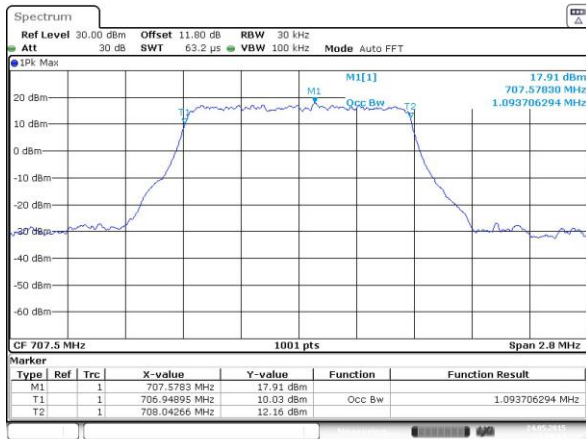
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.10	1.10	2.73	2.72	4.51	4.51	9.07	9.01	-	-	-	-
Middle CH	1.09	1.10	2.72	2.72	4.49	4.50	8.99	8.99	-	-	-	-
Highest CH	1.09	1.10	2.73	2.73	4.50	4.51	9.11	9.07	-	-	-	-

LTE Band 12
Lowest Channel / 1.4MHz / QPSK


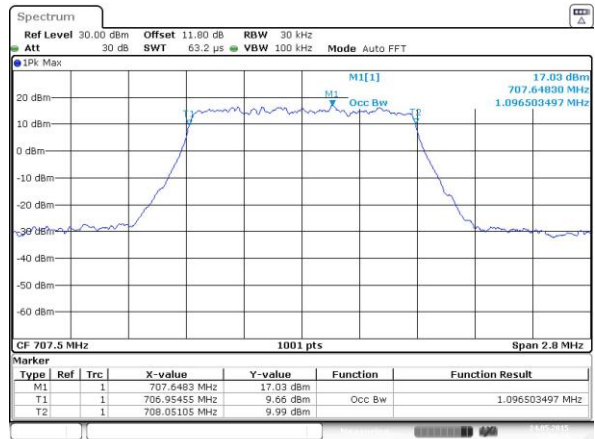
Date: 24 MAY 2015 12:43:00

Lowest Channel / 1.4MHz / 16QAM


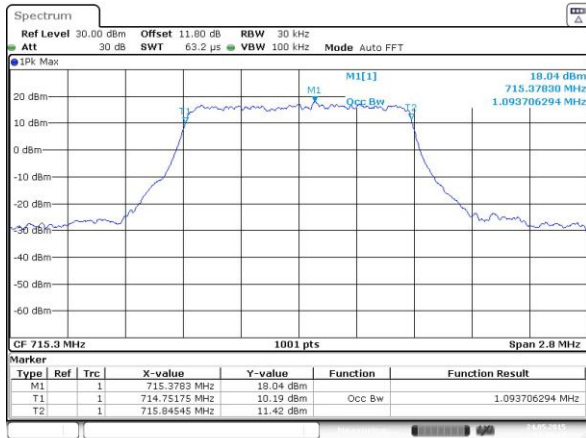
Date: 24 MAY 2015 12:43:11

Middle Channel / 1.4MHz / QPSK


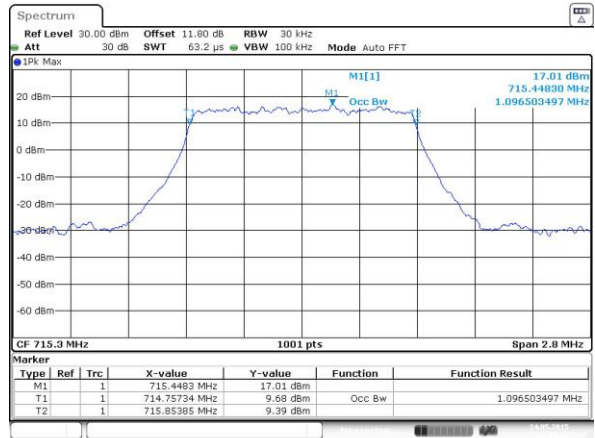
Date: 24 MAY 2015 13:00:15

Middle Channel / 1.4MHz / 16QAM


Date: 24 MAY 2015 13:00:04

Highest Channel / 1.4MHz / QPSK


Date: 24 MAY 2015 13:03:11

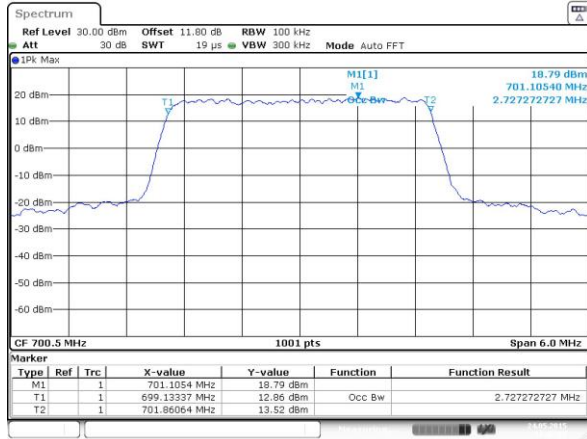
Highest Channel / 1.4MHz / 16QAM


Date: 24 MAY 2015 13:03:22

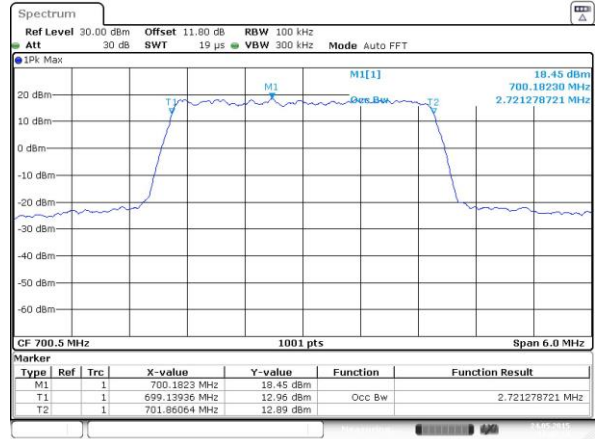


LTE Band 12

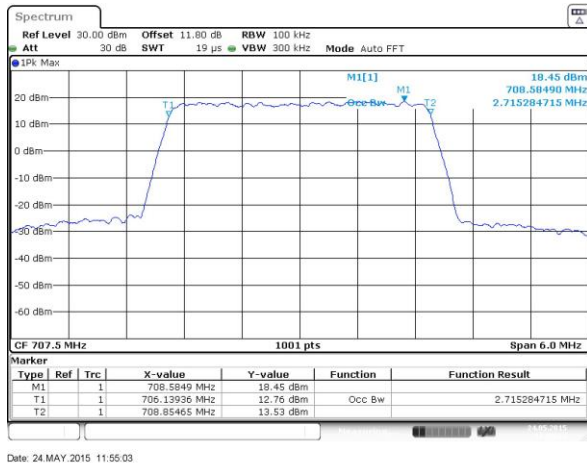
Lowest Channel / 3MHz / QPSK



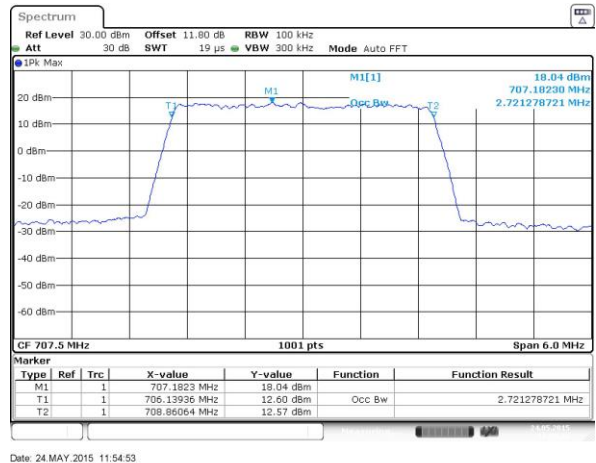
Lowest Channel / 3MHz / 16QAM



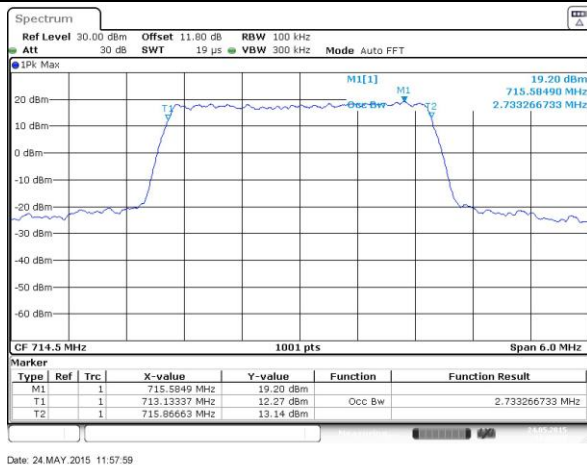
Middle Channel / 3MHz / QPSK



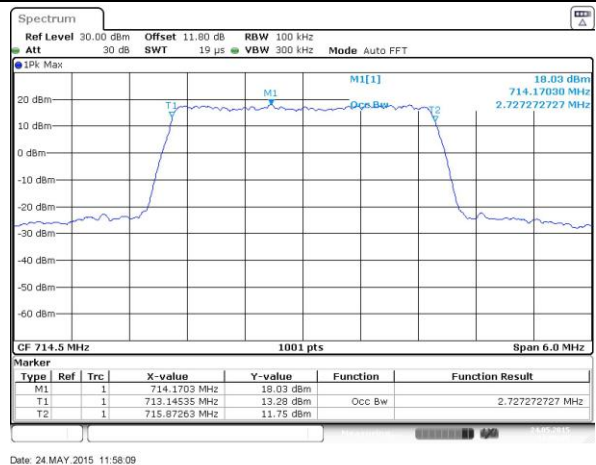
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



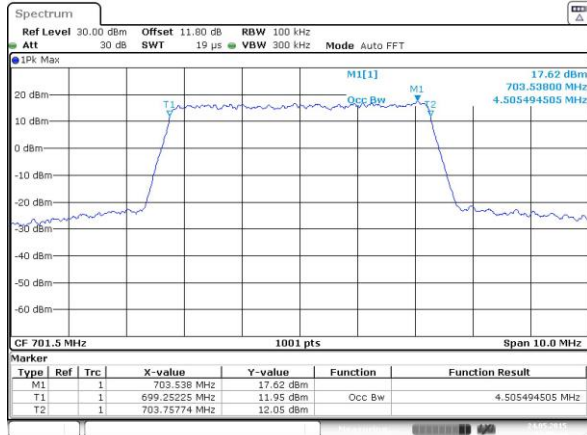
Highest Channel / 3MHz / 16QAM





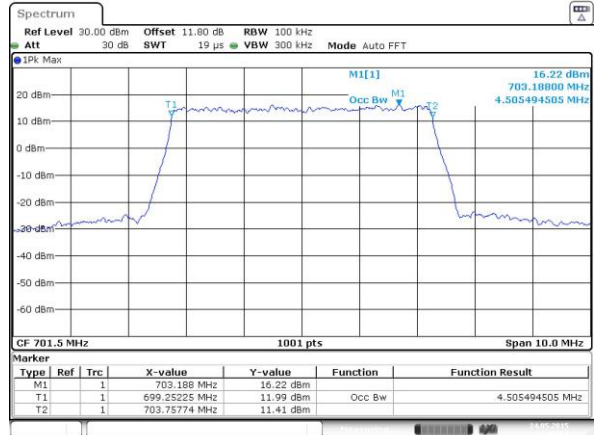
LTE Band 12

Lowest Channel / 5MHz / QPSK



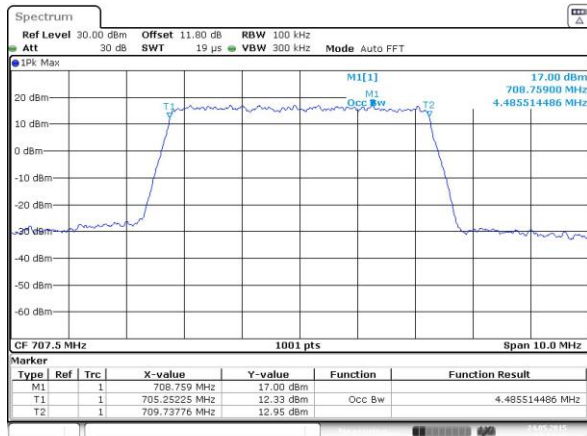
Date: 24 MAY 2015 12:05:44

Lowest Channel / 5MHz / 16QAM



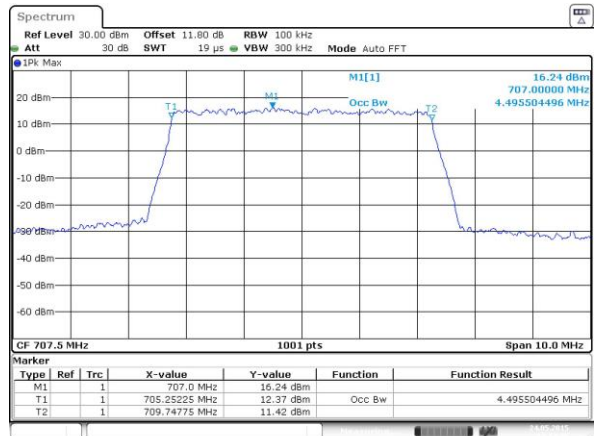
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Middle Channel / 5MHz / QPSK



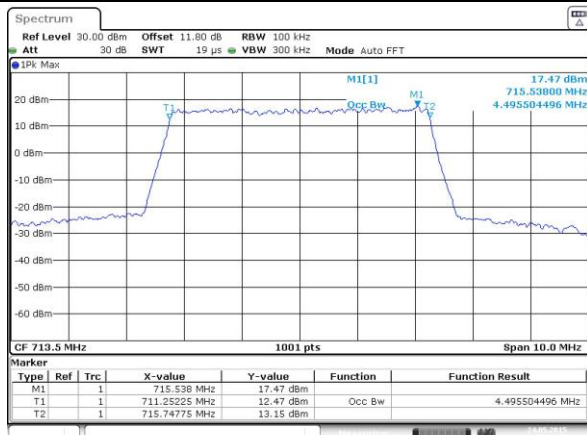
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Middle Channel / 5MHz / 16QAM



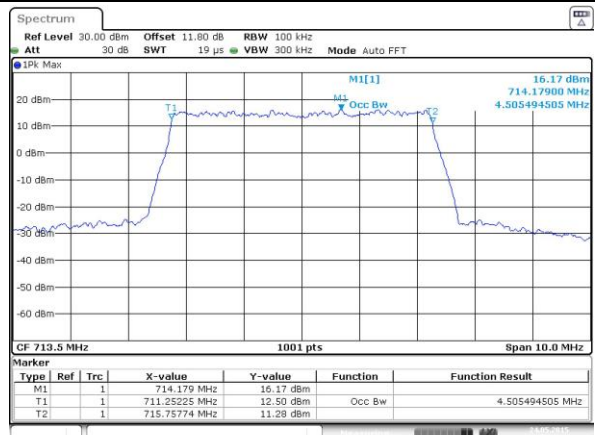
Date: 24 MAY 2015 12:13:30

Highest Channel / 5MHz / QPSK



Date: 24 MAY 2015 12:16:37

Highest Channel / 5MHz / 16QAM

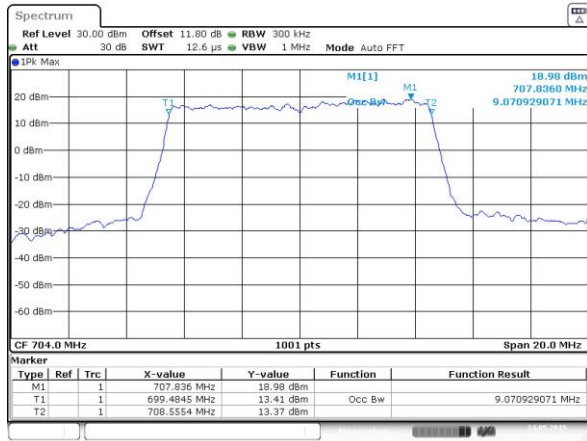


Date: 24 MAY 2015 12:16:47

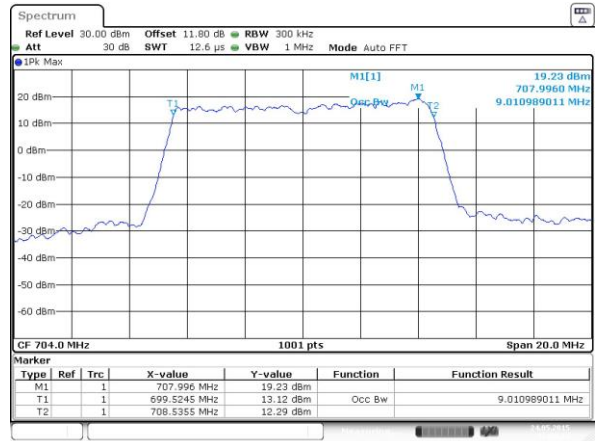


LTE Band 12

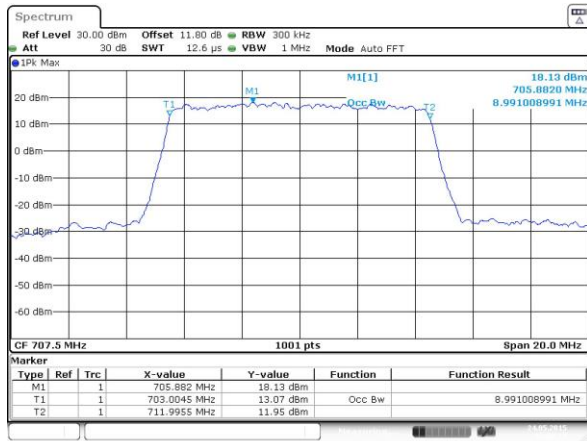
Lowest Channel / 10MHz / QPSK



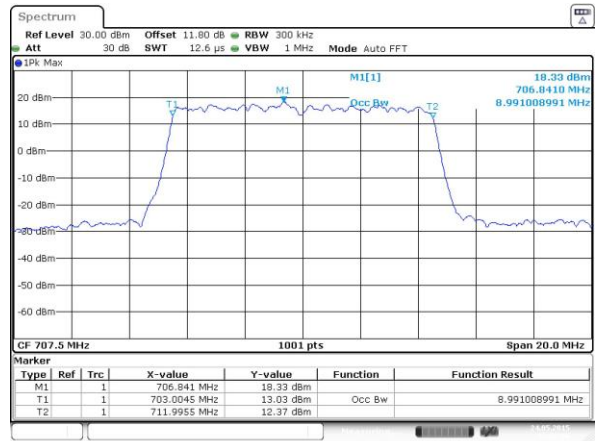
Lowest Channel / 10MHz / 16QAM



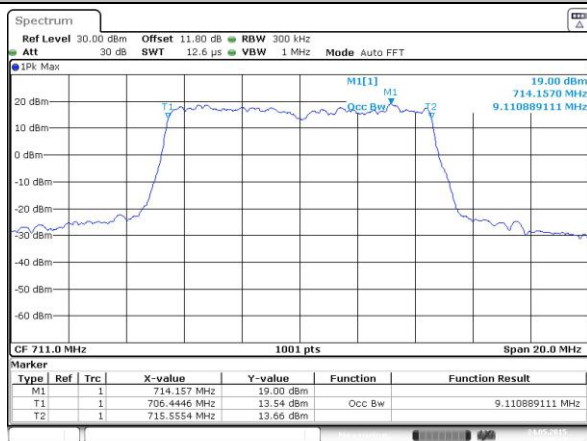
Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

