

## 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	0.0032	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0040	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

**Note:**

1. Normal Voltage =9 V. ; 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 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	4.49	5.28	5.28	5.88	PASS
Middle CH	4.46	4.84	5.48	5.83	
Highest CH	4.52	5.28	5.28	6.06	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.14	6.52	-	-	PASS
Middle CH	5.65	6.38	-	-	
Highest CH	6.26	6.55	-	-	

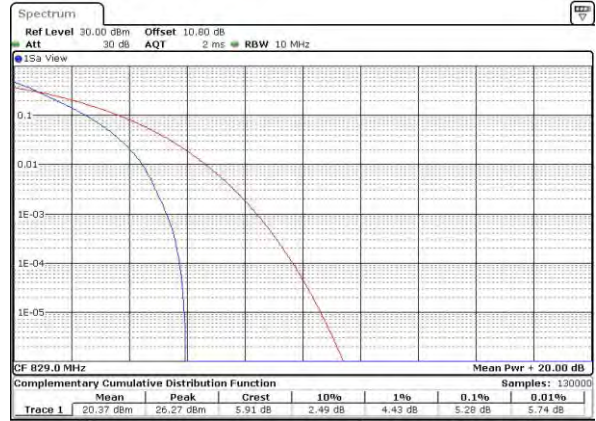


## LTE Band 5 / 10MHz / QPSK

## Lowest Channel / 1RB



## Lowest Channel / Full RB



## Middle Channel / 1RB



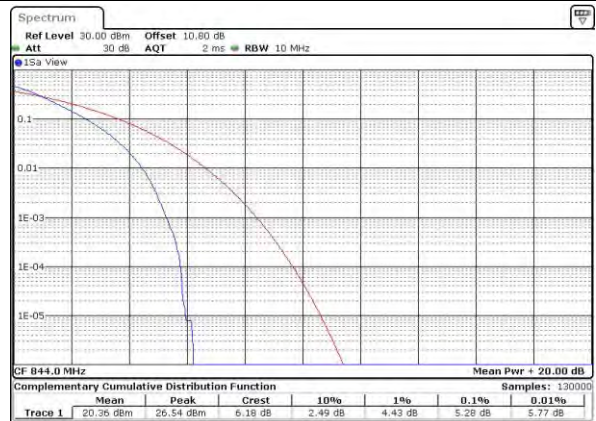
## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



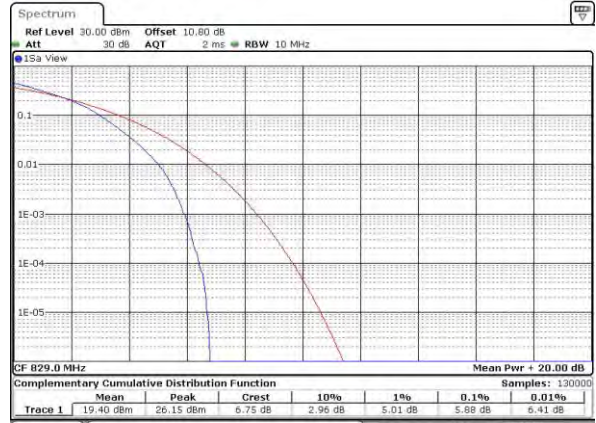


## LTE Band 5 / 10MHz / 16QAM

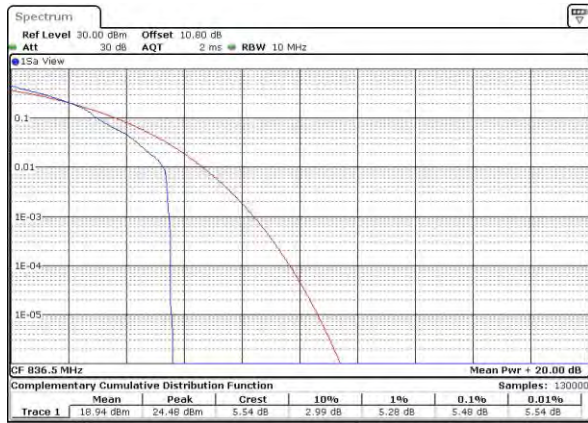
## Lowest Channel / 1RB



## Lowest Channel / Full RB



## Middle Channel / 1RB



## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB

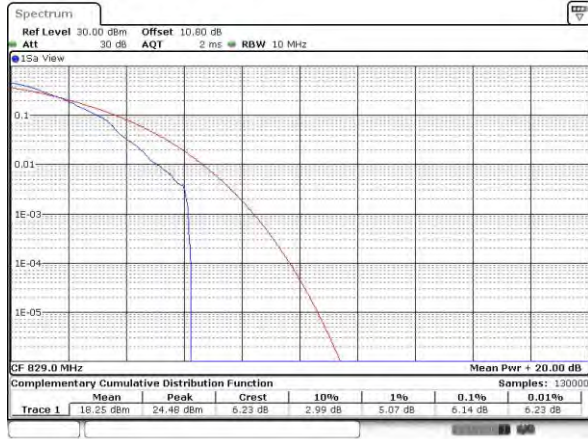




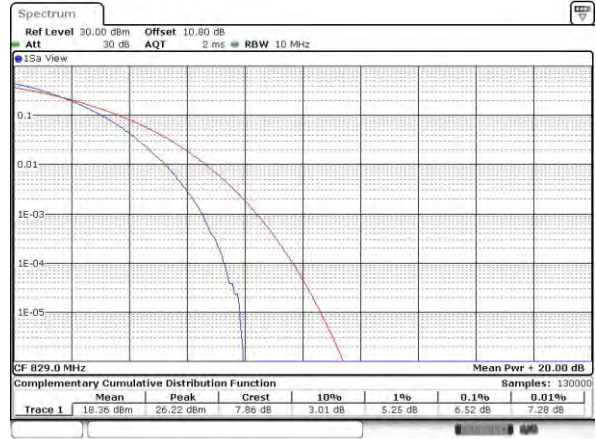


## LTE Band 5 / 10MHz / 64QAM

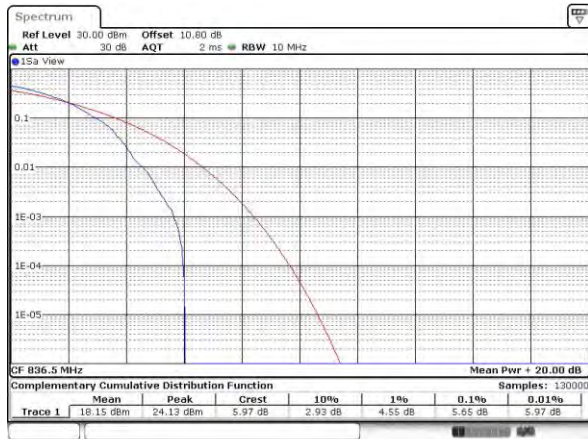
## Lowest Channel / 1RB



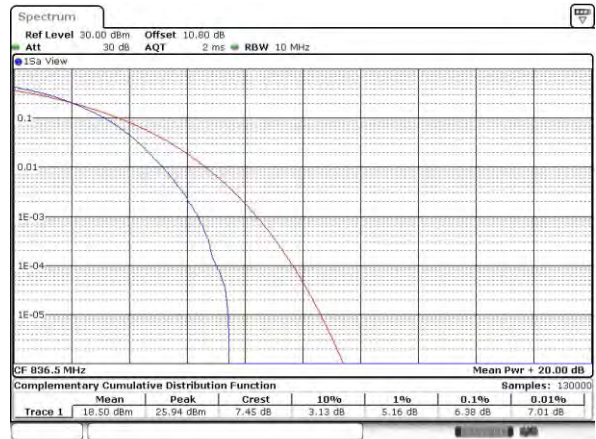
## Lowest Channel / Full RB



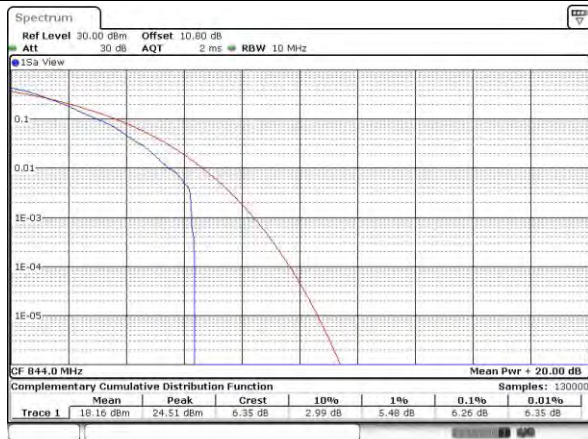
## Middle Channel / 1RB



## Middle Channel / Full RB



## Highest Channel / 1RB



## Highest Channel / Full RB



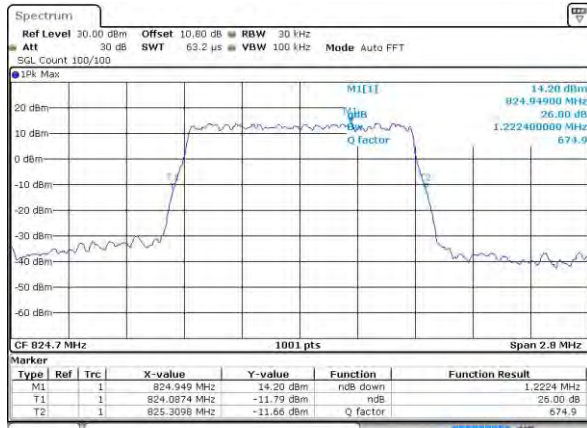
**26dB Bandwidth**

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	1.22	1.23	3.05	3.02	4.88	4.88	9.83	9.65	-	-	-	-
Middle CH	1.19	1.23	3.01	3.02	4.95	4.94	9.79	9.71	-	-	-	-
Highest CH	1.21	1.23	3.02	3.03	4.85	4.87	9.73	9.95	-	-	-	-
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.21	-	2.99	-	4.96	-	10.03	-	-	-	-	-
Middle CH	1.22	-	3.02	-	4.86	-	9.73	-	-	-	-	-
Highest CH	1.24	-	3.05	-	4.90	-	9.85	-	-	-	-	-

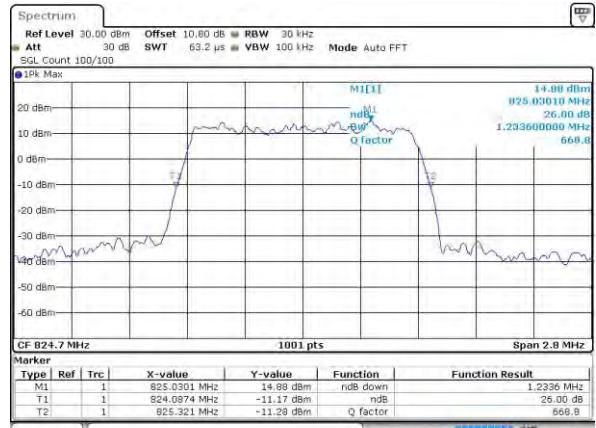


## LTE Band 5

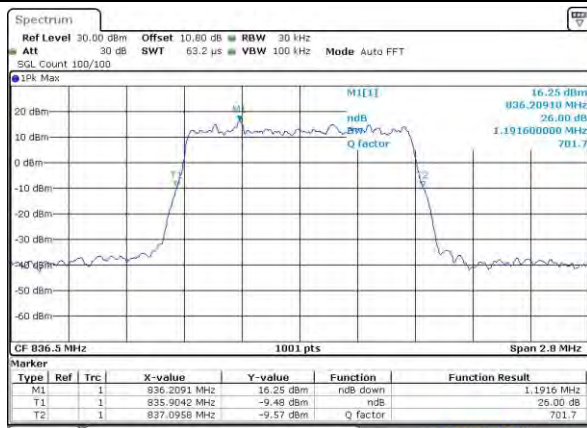
## Lowest Channel / 1.4MHz / QPSK



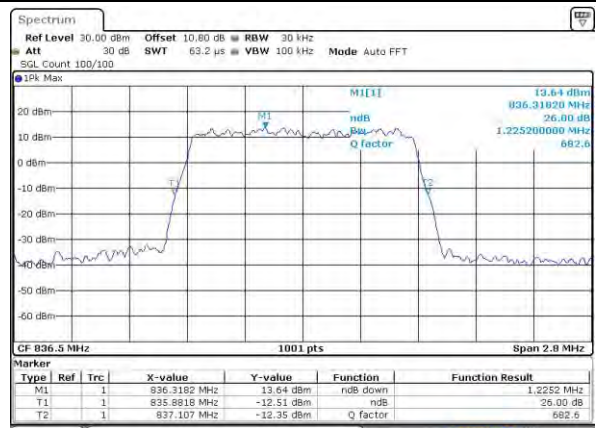
## Lowest Channel / 1.4MHz / 16QAM



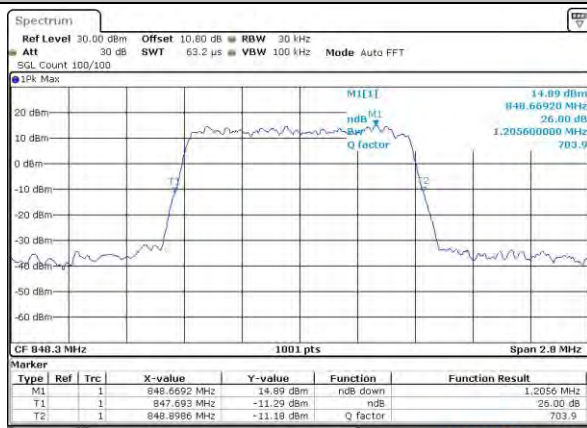
## Middle Channel / 1.4MHz / QPSK



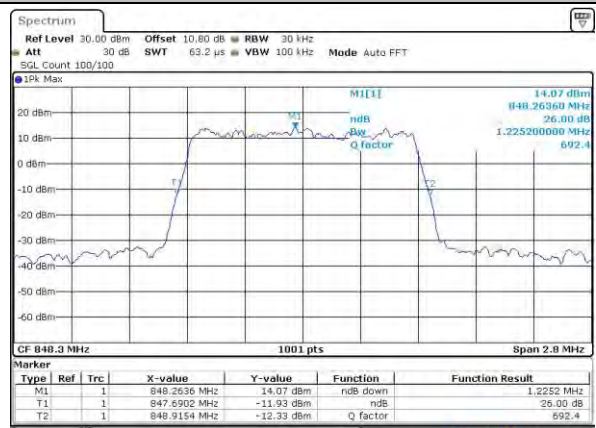
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



## Highest Channel / 1.4MHz / 16QAM

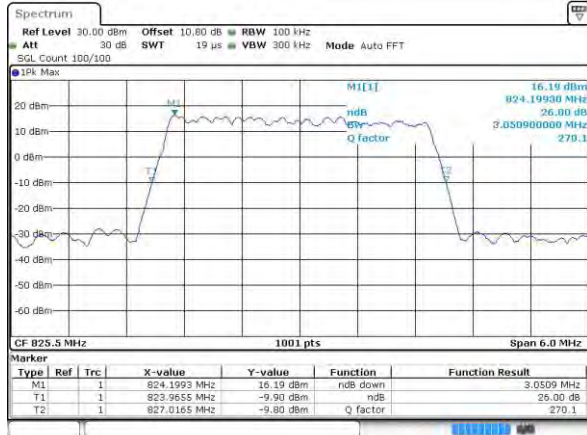






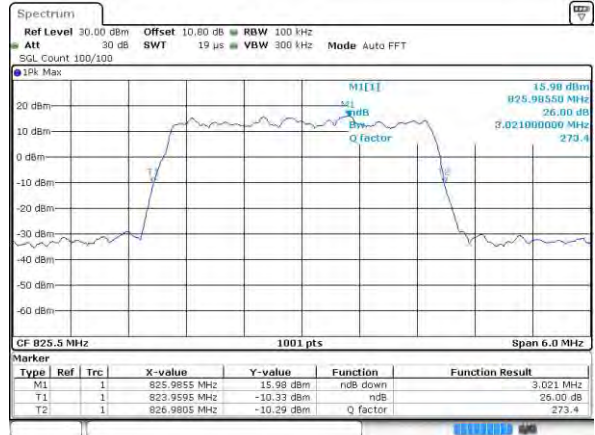
## LTE Band 5

## Lowest Channel / 3MHz / QPSK



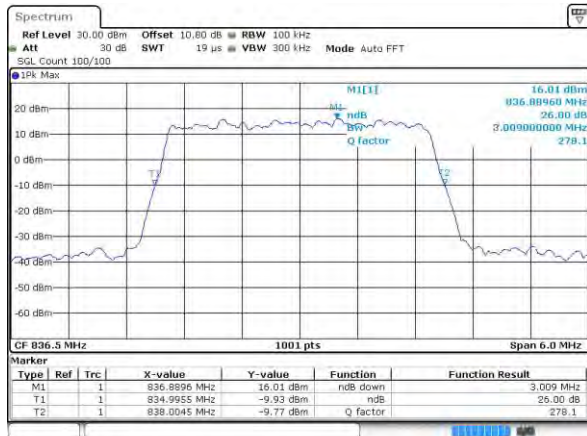
Date: 16 DEC 2016 12:41:14

## Lowest Channel / 3MHz / 16QAM



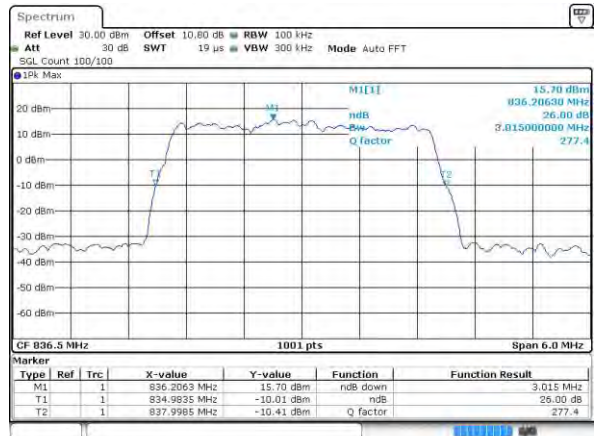
Date: 16 DEC 2016 12:41:25

## Middle Channel / 3MHz / QPSK



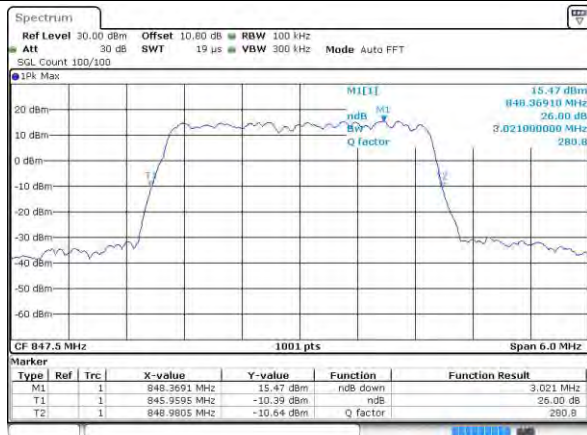
Date: 16 DEC 2016 12:50:31

## Middle Channel / 3MHz / 16QAM



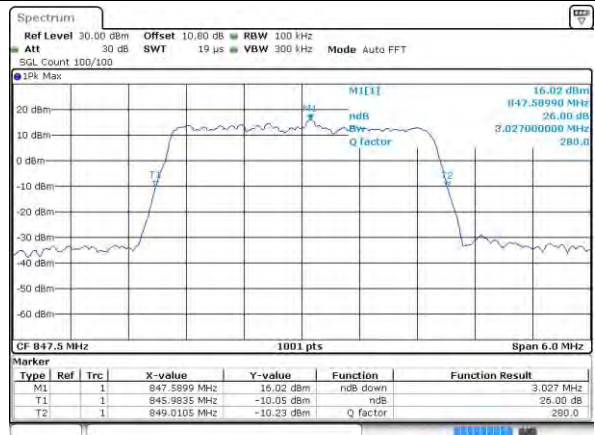
Date: 16 DEC 2016 12:50:42

## Highest Channel / 3MHz / QPSK



Date: 16 DEC 2016 12:53:07

## Highest Channel / 3MHz / 16QAM



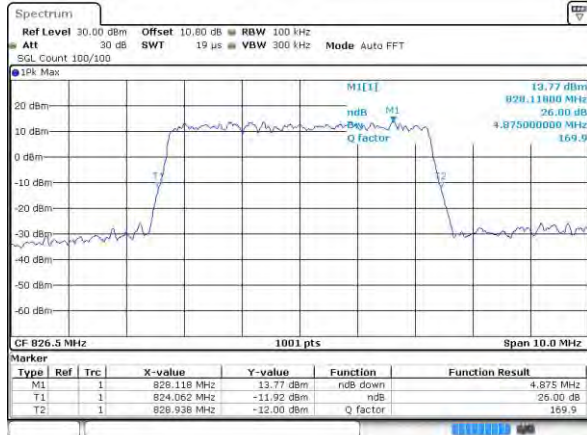
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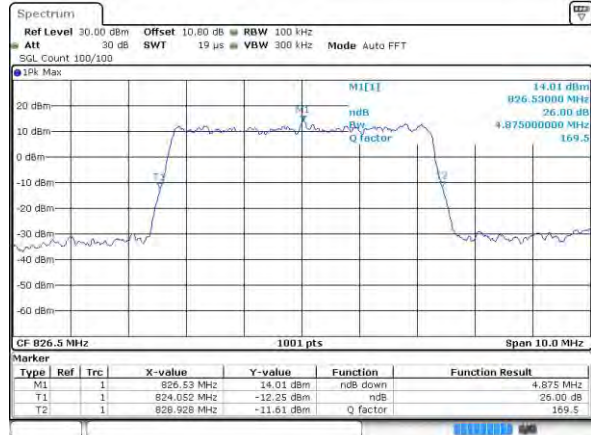


## LTE Band 5

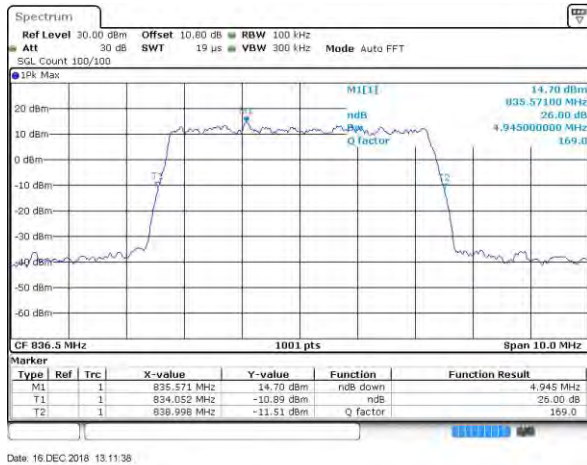
## Lowest Channel / 5MHz / QPSK



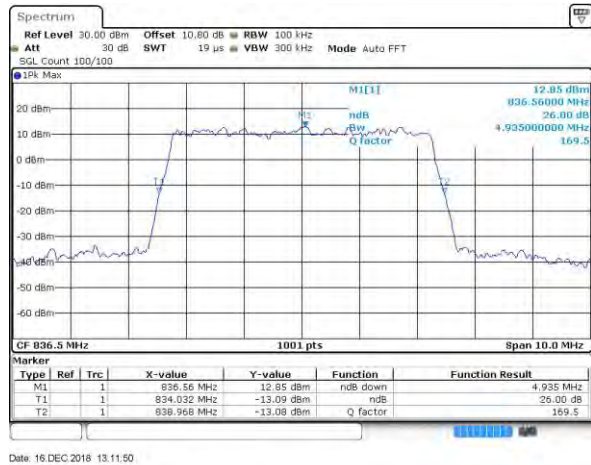
## Lowest Channel / 5MHz / 16QAM



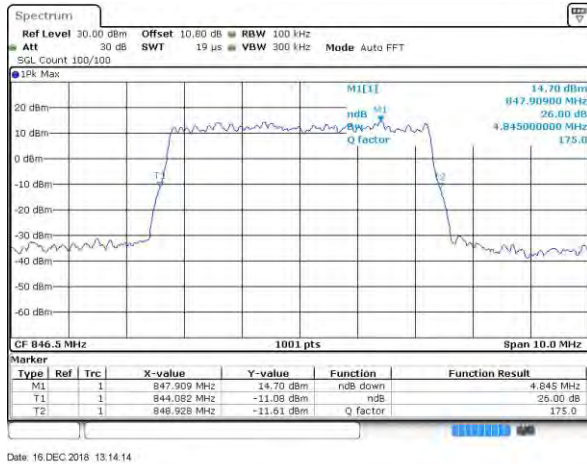
## Middle Channel / 5MHz / QPSK



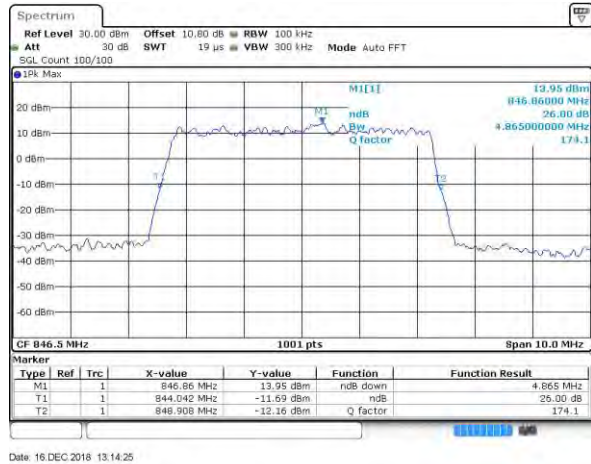
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



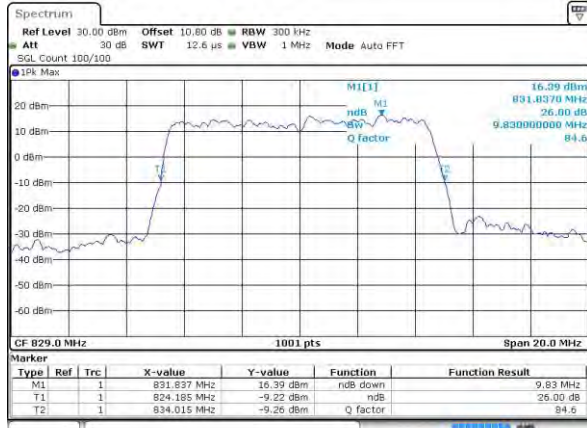
## Highest Channel / 5MHz / 16QAM



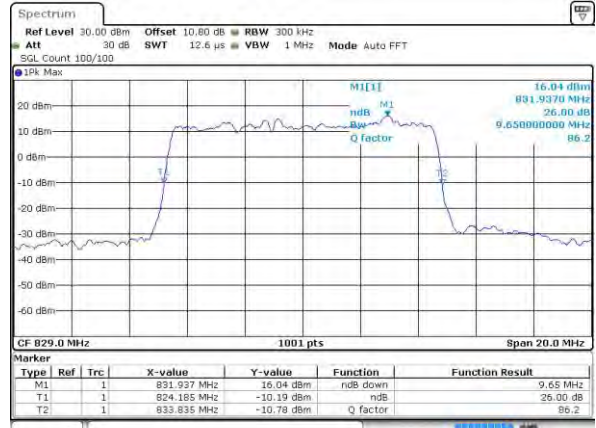


## LTE Band 5

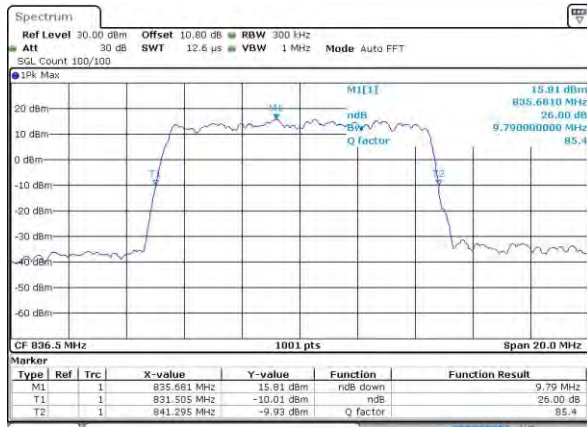
## Lowest Channel / 10MHz / QPSK



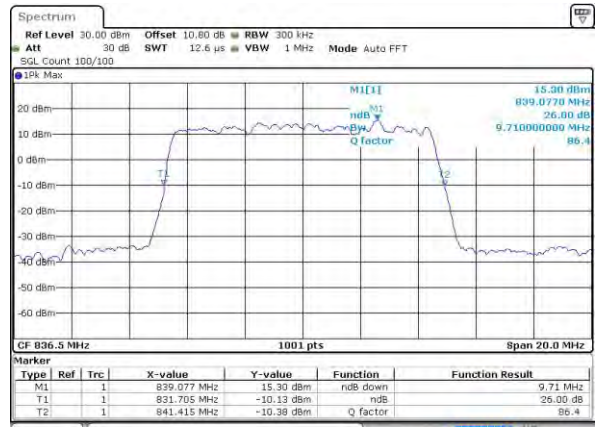
## Lowest Channel / 10MHz / 16QAM



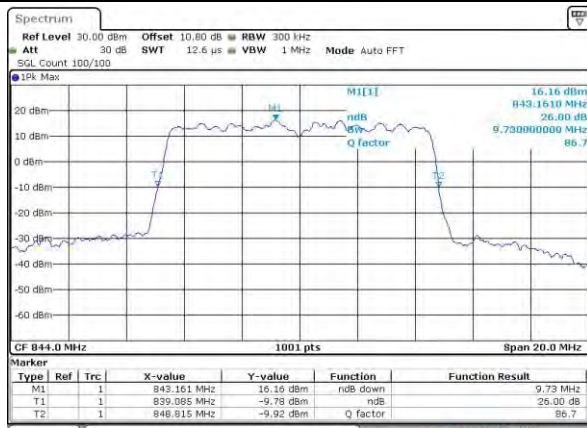
## Middle Channel / 10MHz / QPSK



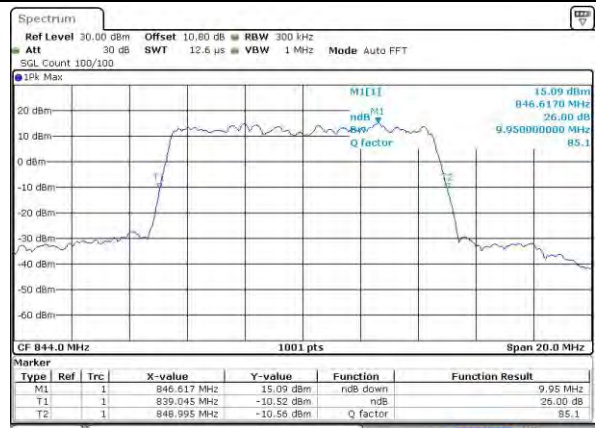
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



## Highest Channel / 10MHz / 16QAM

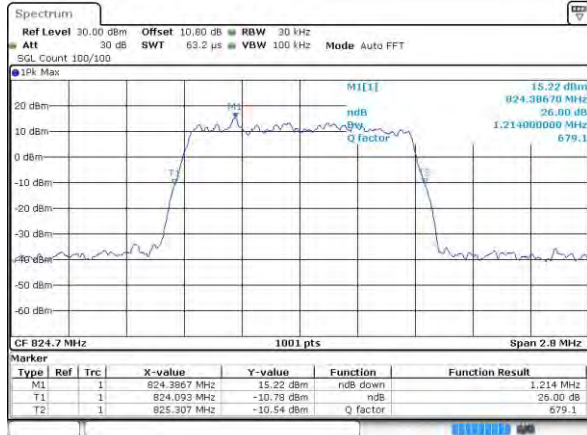




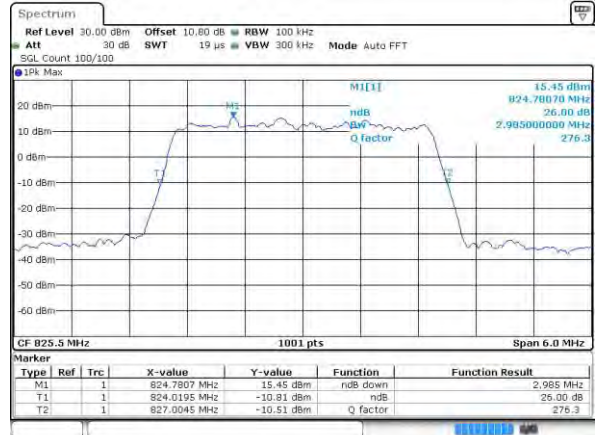


## LTE Band 5

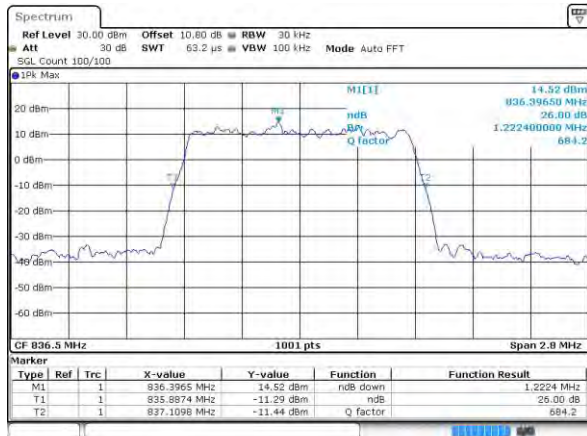
## Lowest Channel / 1.4MHz / 64QAM



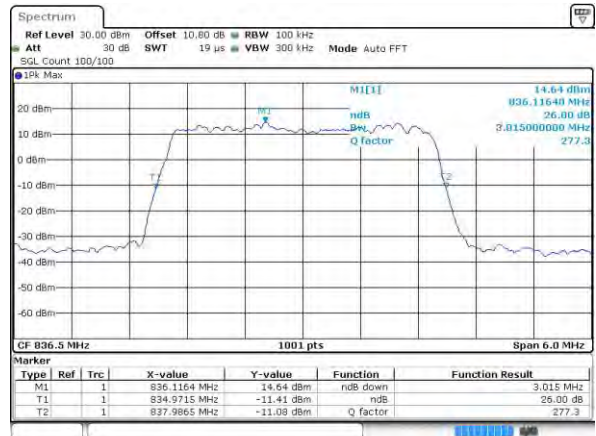
## Lowest Channel / 3MHz / 64QAM



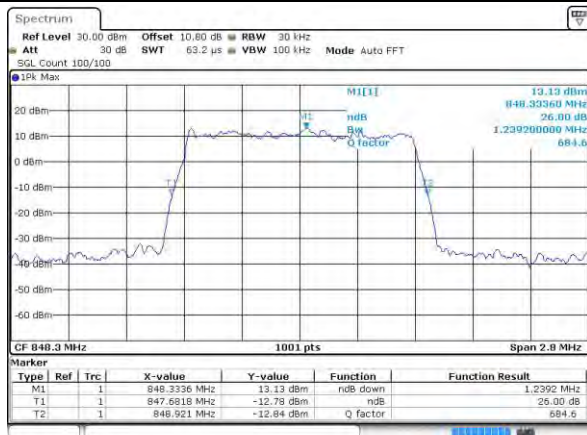
## Middle Channel / 1.4MHz / 64QAM



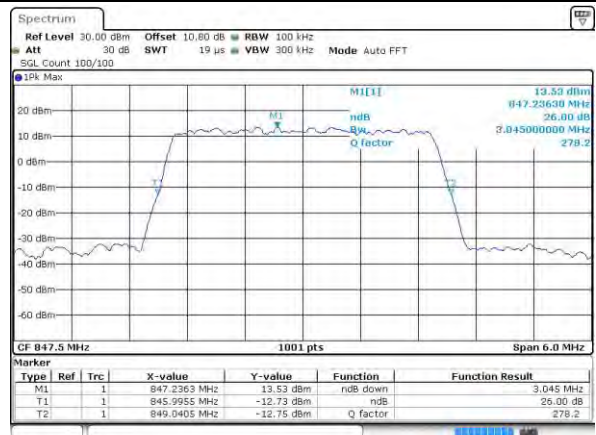
## Middle Channel / 3MHz / 64QAM



## Highest Channel / 1.4MHz / 64QAM



## Highest Channel / 3MHz / 64QAM

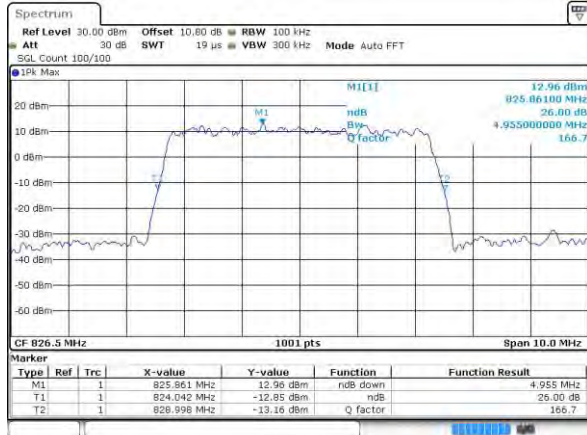




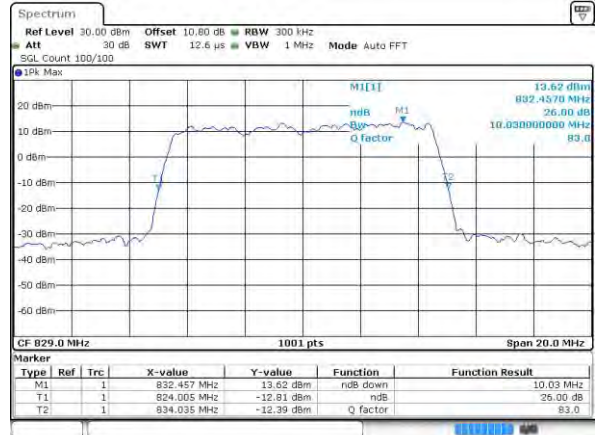


## LTE Band 5

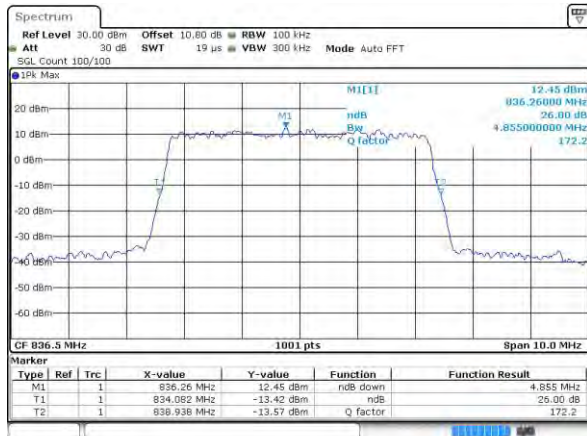
## Lowest Channel / 5MHz / 64QAM



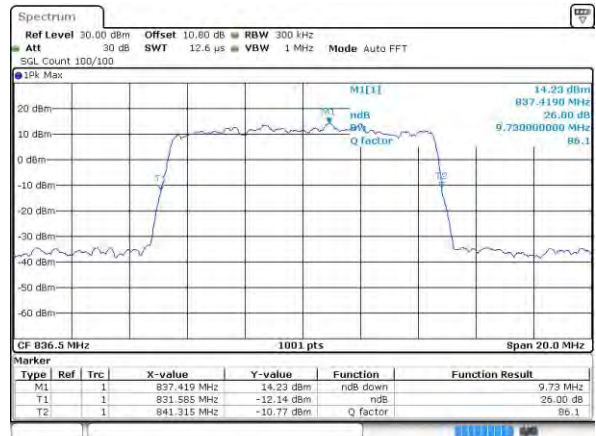
## Lowest Channel / 10MHz / 64QAM



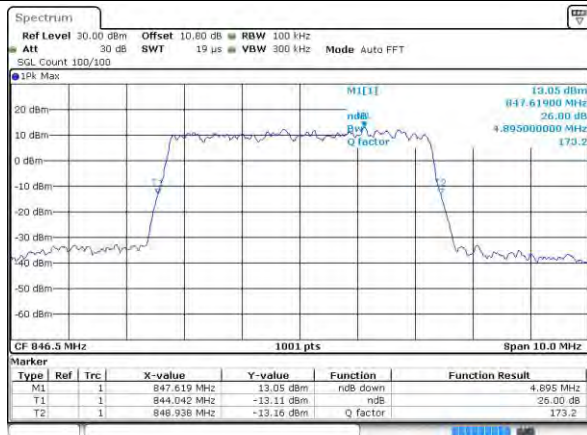
## Middle Channel / 5MHz / 64QAM



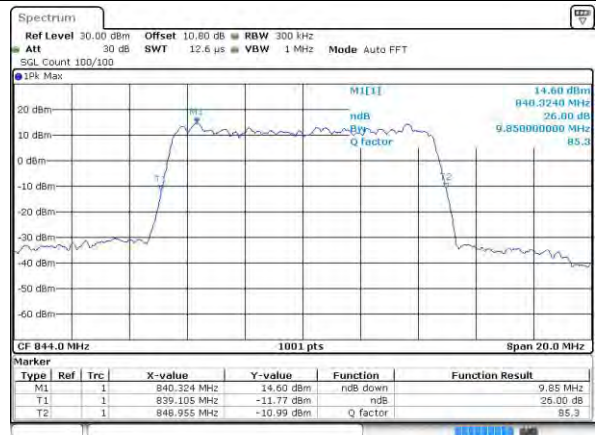
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



## Highest Channel / 10MHz / 64QAM



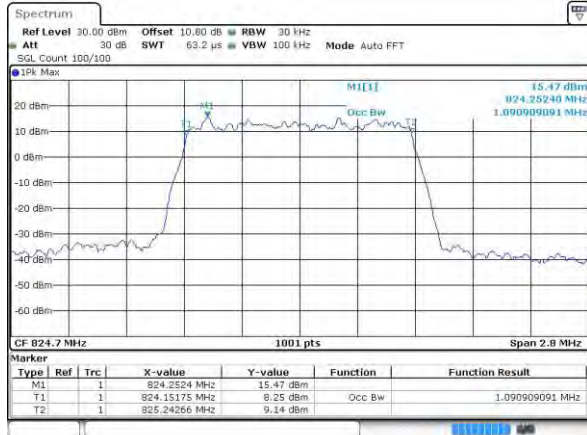
**Occupied Bandwidth**

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	1.09	1.09	2.72	2.72	4.51	4.48	9.03	9.09	-	-	-	-
Middle CH	1.09	1.09	2.71	2.71	4.49	4.48	8.97	8.99	-	-	-	-
Highest CH	1.08	1.09	2.75	2.71	4.49	4.49	9.05	9.01	-	-	-	-
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	-	2.72	-	4.51	-	9.03	-	-	-	-	-
Middle CH	1.09	-	2.73	-	4.47	-	8.97	-	-	-	-	-
Highest CH	1.09	-	2.73	-	4.48	-	9.05	-	-	-	-	-

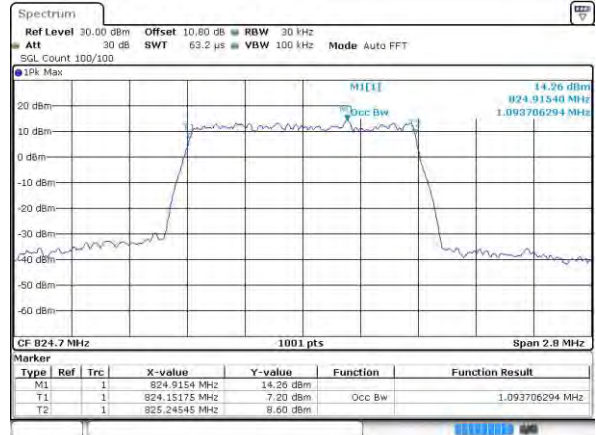


## LTE Band 5

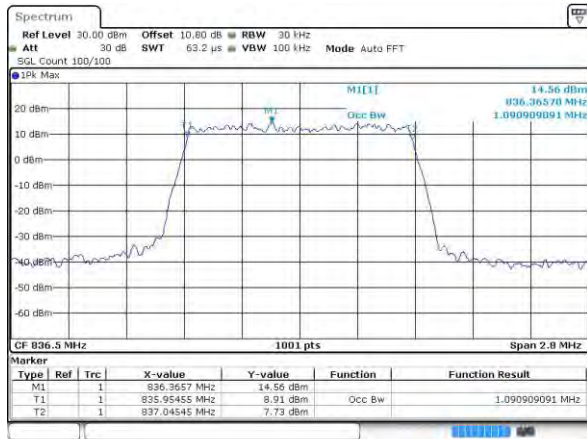
## Lowest Channel / 1.4MHz / QPSK



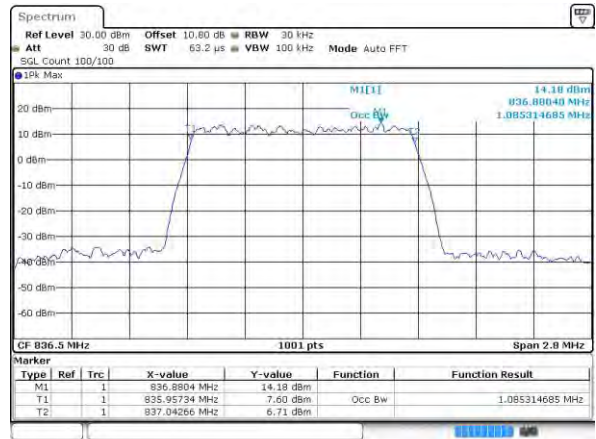
## Lowest Channel / 1.4MHz / 16QAM



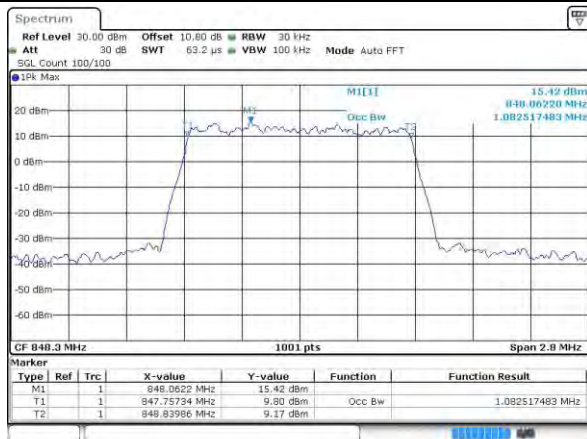
## Middle Channel / 1.4MHz / QPSK



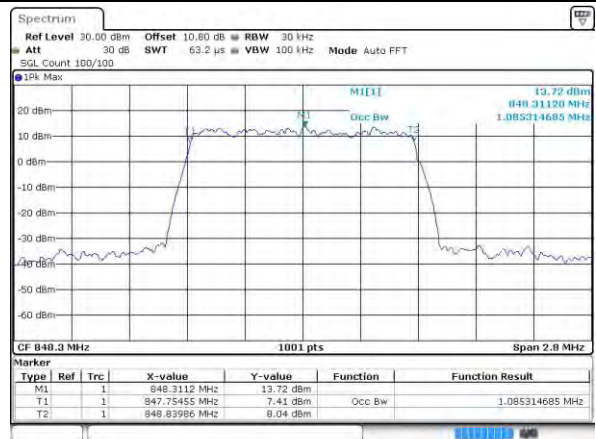
## Middle Channel / 1.4MHz / 16QAM



## Highest Channel / 1.4MHz / QPSK



## Highest Channel / 1.4MHz / 16QAM

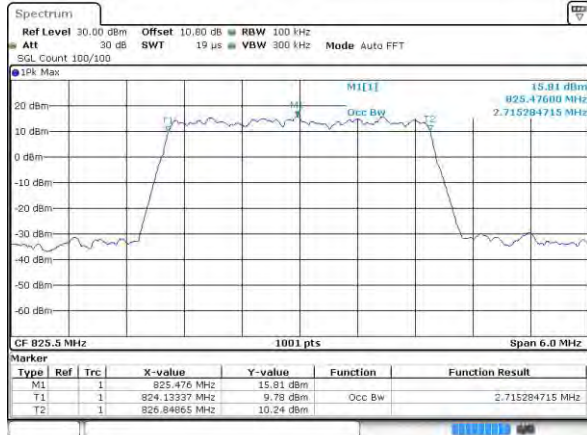




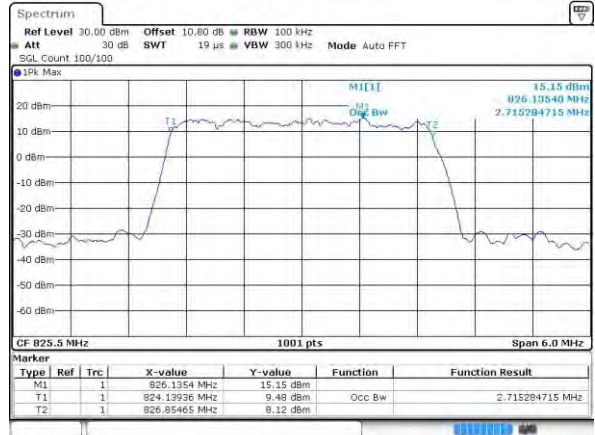


## LTE Band 5

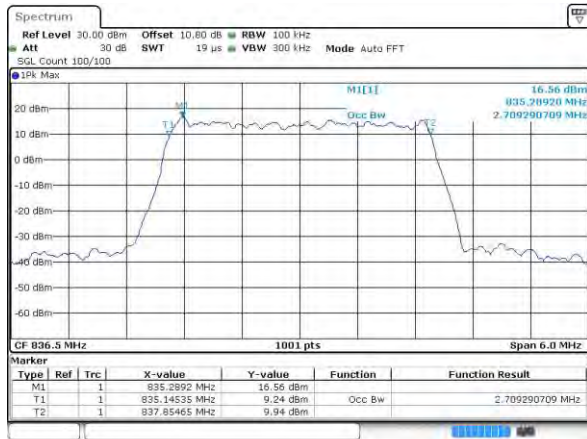
## Lowest Channel / 3MHz / QPSK



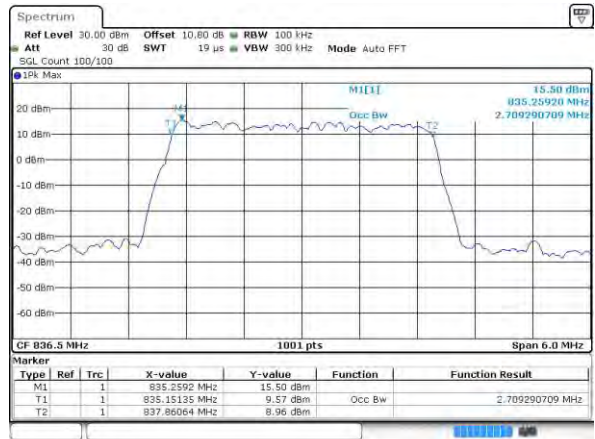
## Lowest Channel / 3MHz / 16QAM



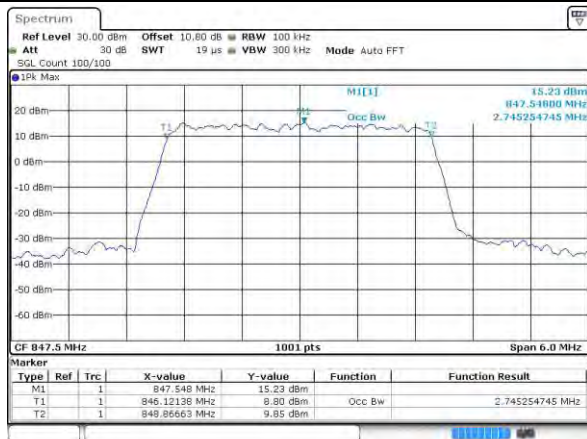
## Middle Channel / 3MHz / QPSK



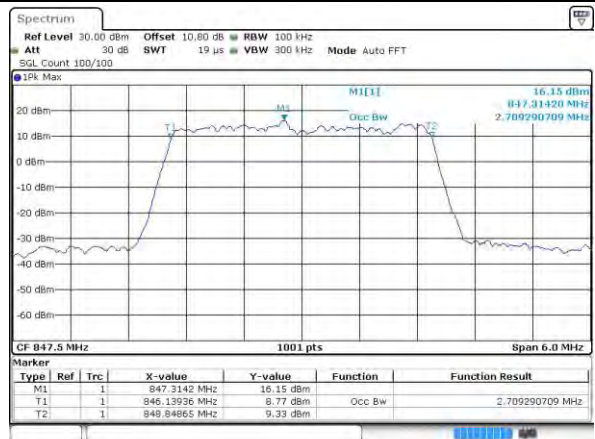
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



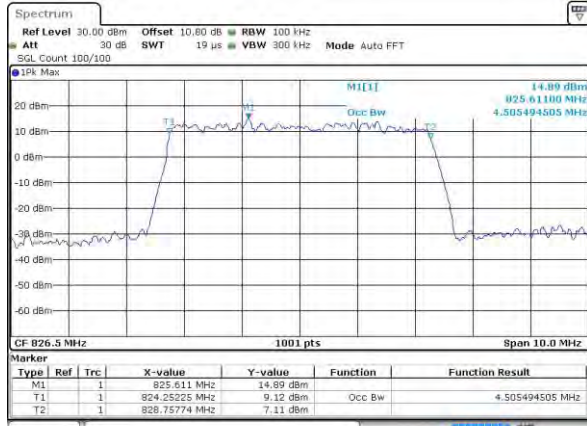
## Highest Channel / 3MHz / 16QAM





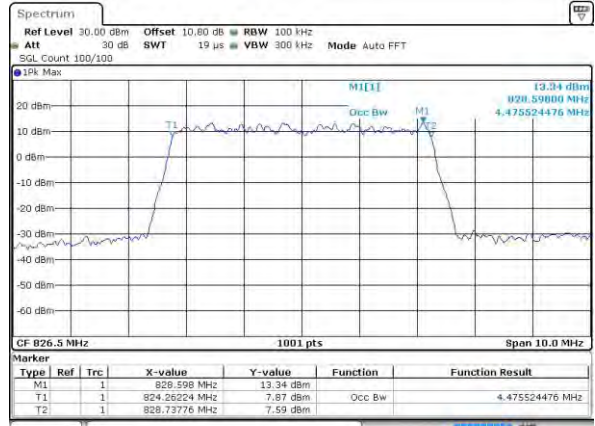
## LTE Band 5

## Lowest Channel / 5MHz / QPSK



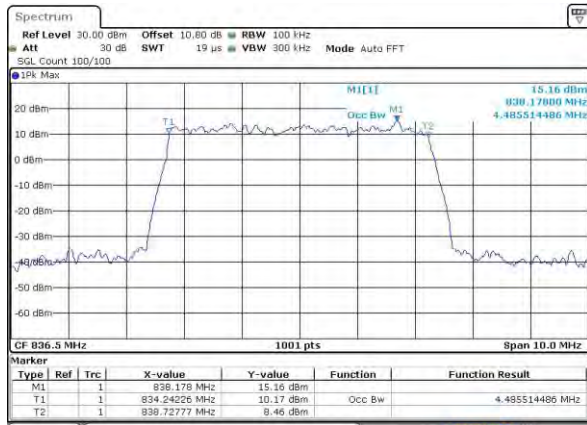
Date: 16 DEC 2016 13:02:00

## Lowest Channel / 5MHz / 16QAM



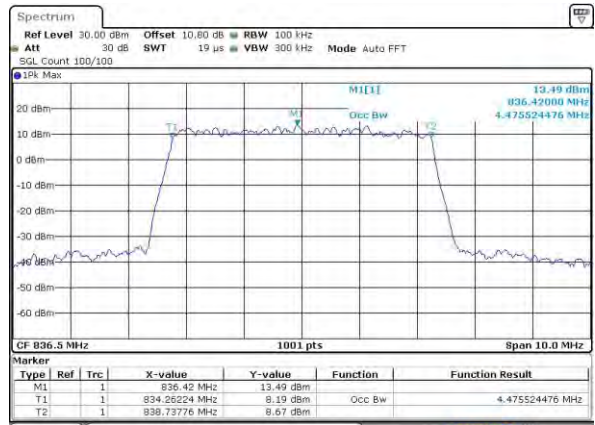
Date: 16 DEC 2016 13:02:11

## Middle Channel / 5MHz / QPSK



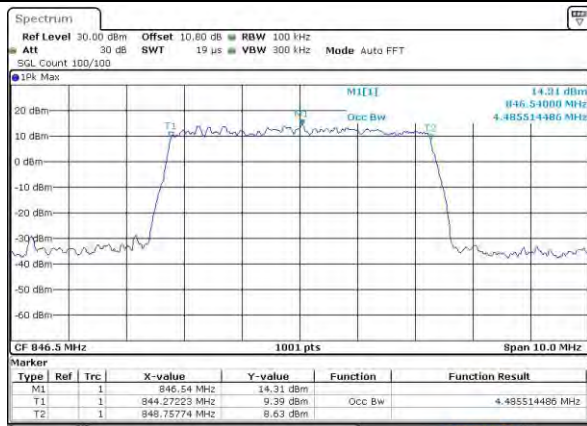
Date: 16 DEC 2016 13:11:15

## Middle Channel / 5MHz / 16QAM



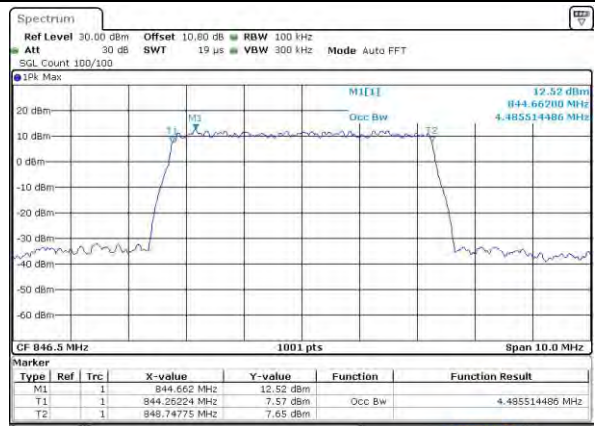
Date: 16 DEC 2016 13:11:27

## Highest Channel / 5MHz / QPSK



Date: 16 DEC 2016 13:13:51

## Highest Channel / 5MHz / 16QAM



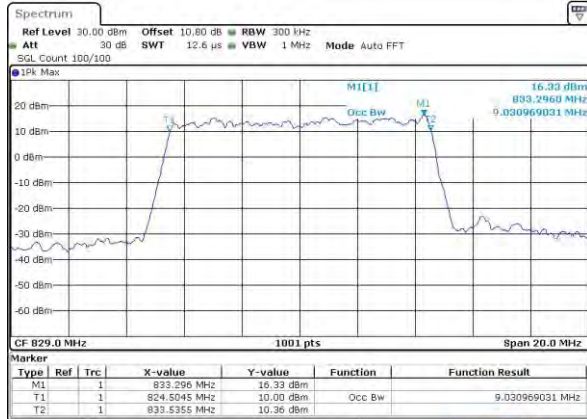
Date: 16 DEC 2016 13:14:03





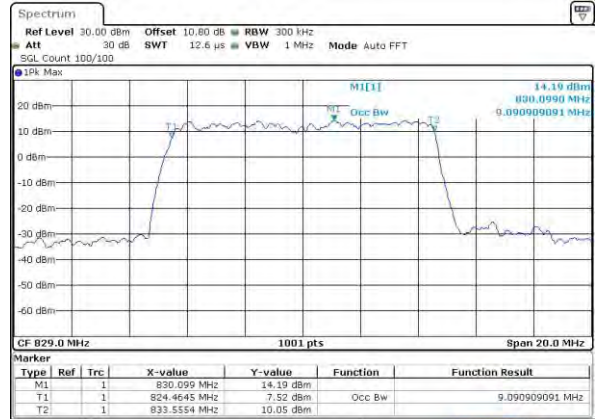
## LTE Band 5

## Lowest Channel / 10MHz / QPSK



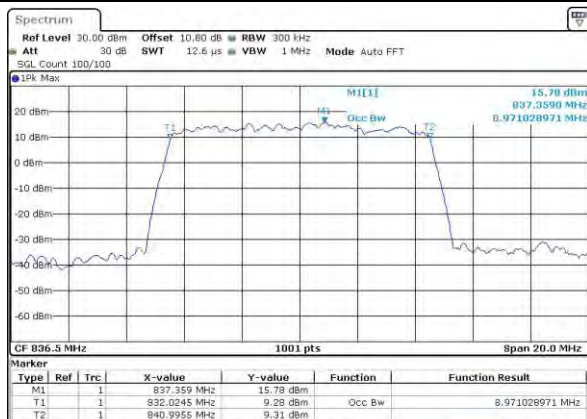
Date: 16 DEC 2016 13:23:07

## Lowest Channel / 10MHz / 16QAM



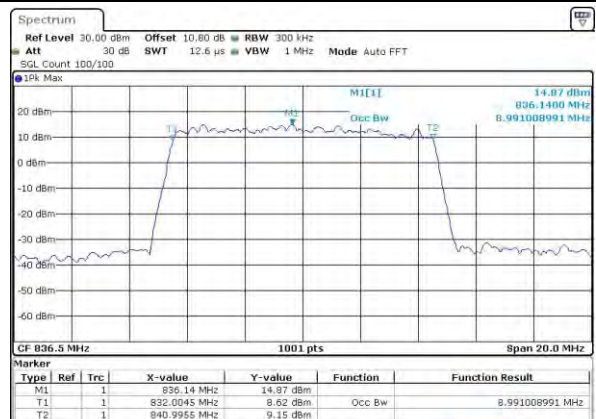
Date: 16 DEC 2016 13:23:16

## Middle Channel / 10MHz / QPSK



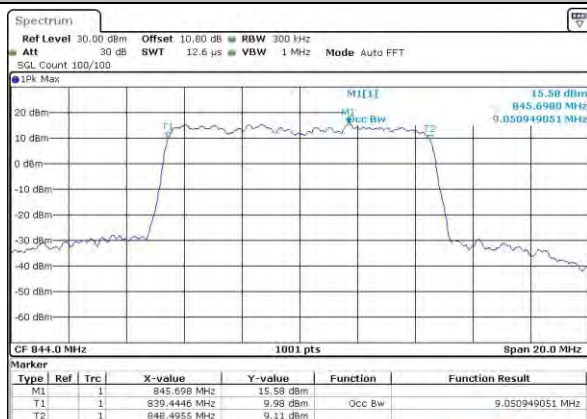
Date: 16 DEC 2016 13:32:23

## Middle Channel / 10MHz / 16QAM



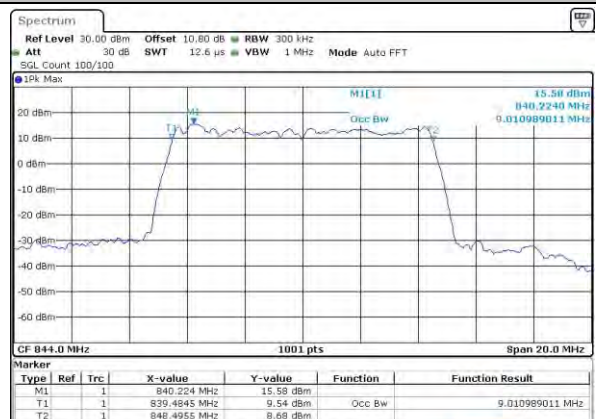
Date: 16 DEC 2016 13:32:35

## Highest Channel / 10MHz / QPSK



Date: 16 DEC 2016 13:34:59

## Highest Channel / 10MHz / 16QAM



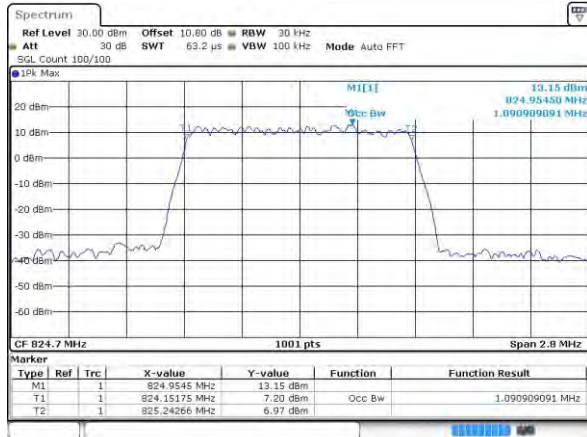
Date: 16 DEC 2016 13:35:11



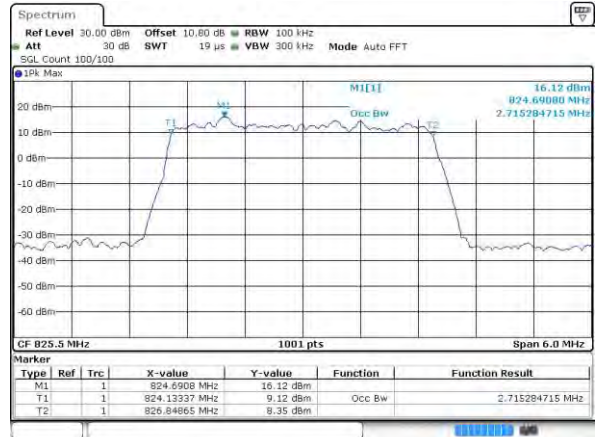


## LTE Band 5

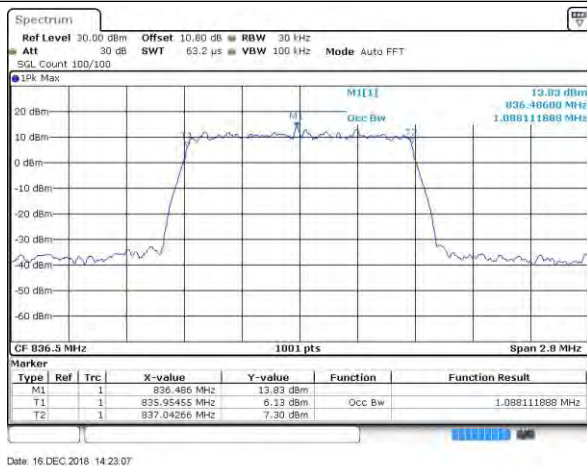
## Lowest Channel / 1.4MHz / 64QAM



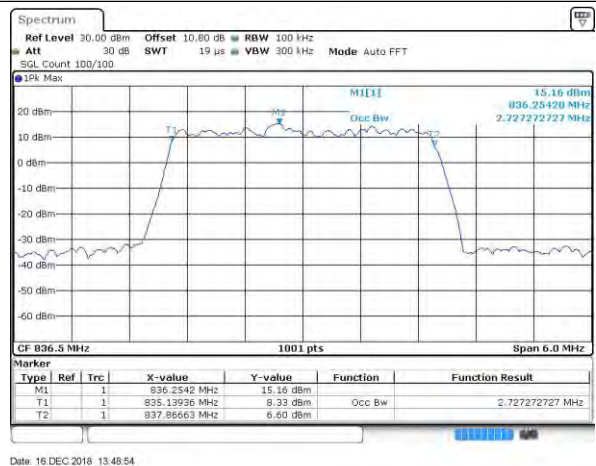
## Lowest Channel / 3MHz / 64QAM



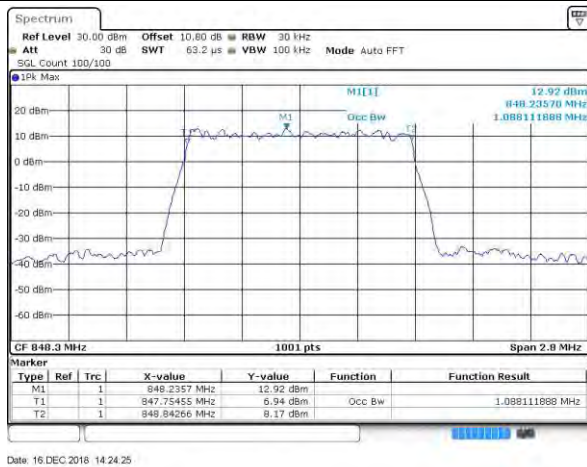
## Middle Channel / 1.4MHz / 64QAM



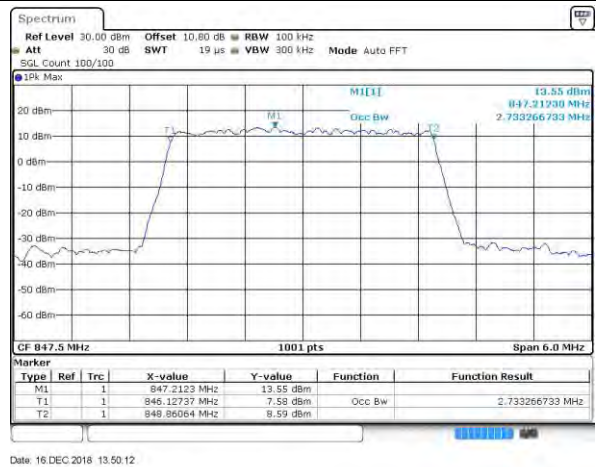
## Middle Channel / 3MHz / 64QAM



## Highest Channel / 1.4MHz / 64QAM



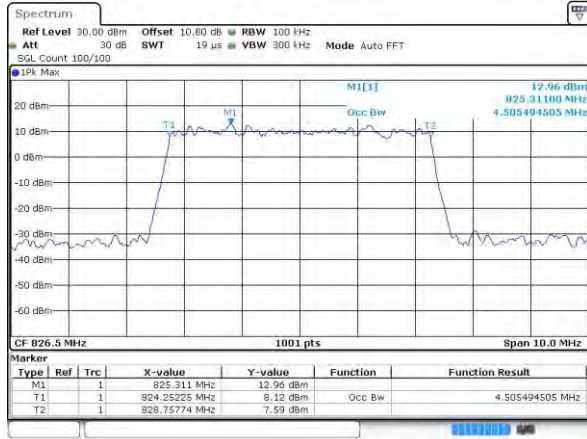
## Highest Channel / 3MHz / 64QAM



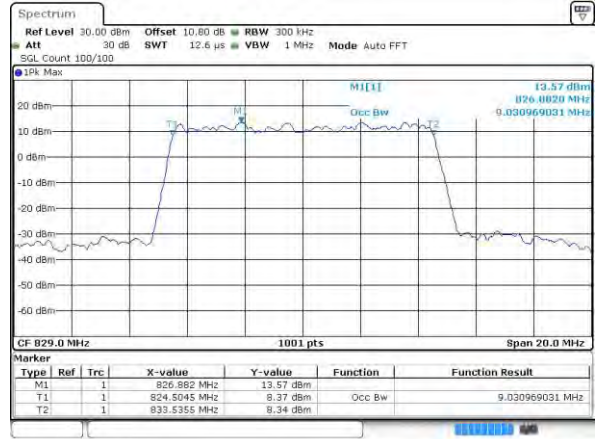


## LTE Band 5

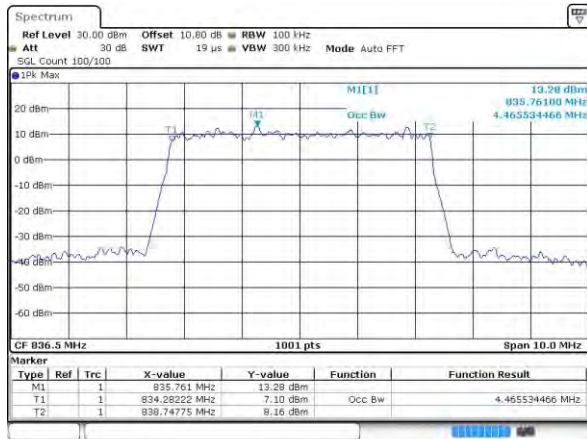
## Lowest Channel / 5MHz / 64QAM



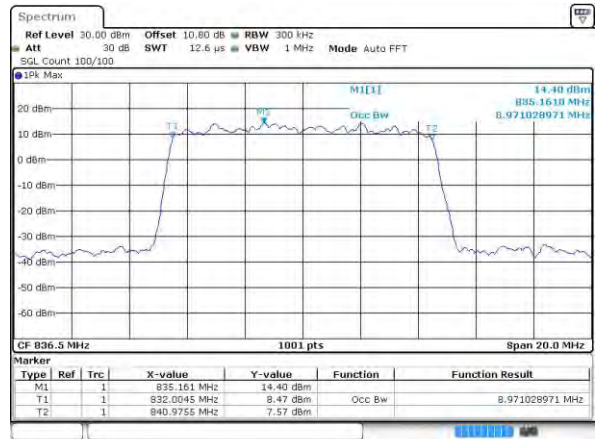
## Lowest Channel / 10MHz / 64QAM



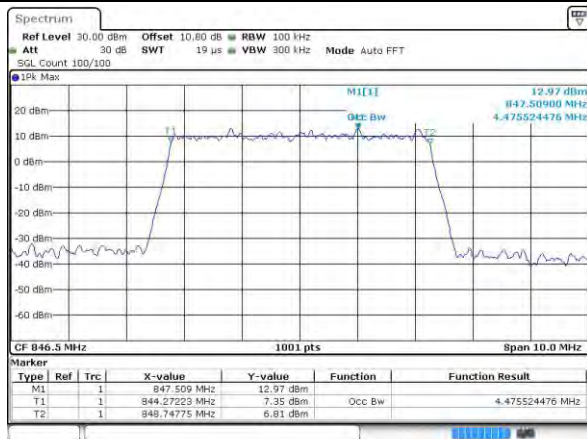
## Middle Channel / 5MHz / 64QAM



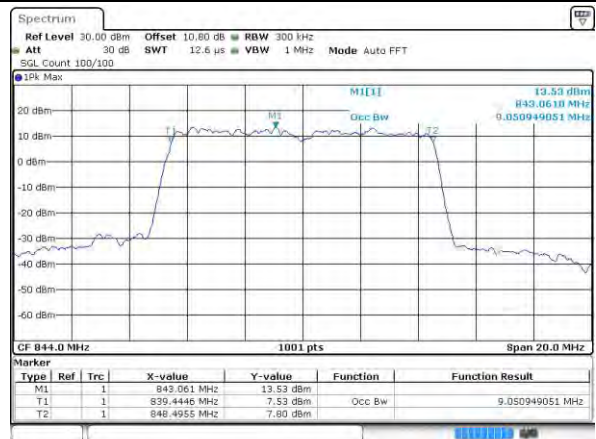
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



## Highest Channel / 10MHz / 64QAM





**Conducted Band Edge****LTE Band 5 / 1.4MHz / QPSK****Lowest Band Edge / 1RB****Highest Band Edge / 1RB****Lowest Band Edge / Full RB****Highest Band Edge / Full RB**