



## Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0023	PASS
40	Normal Voltage	0.0102	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0037	
-10	Normal Voltage	0.0024	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0041	
20	Maximum Voltage	0.0058	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

**Note:**

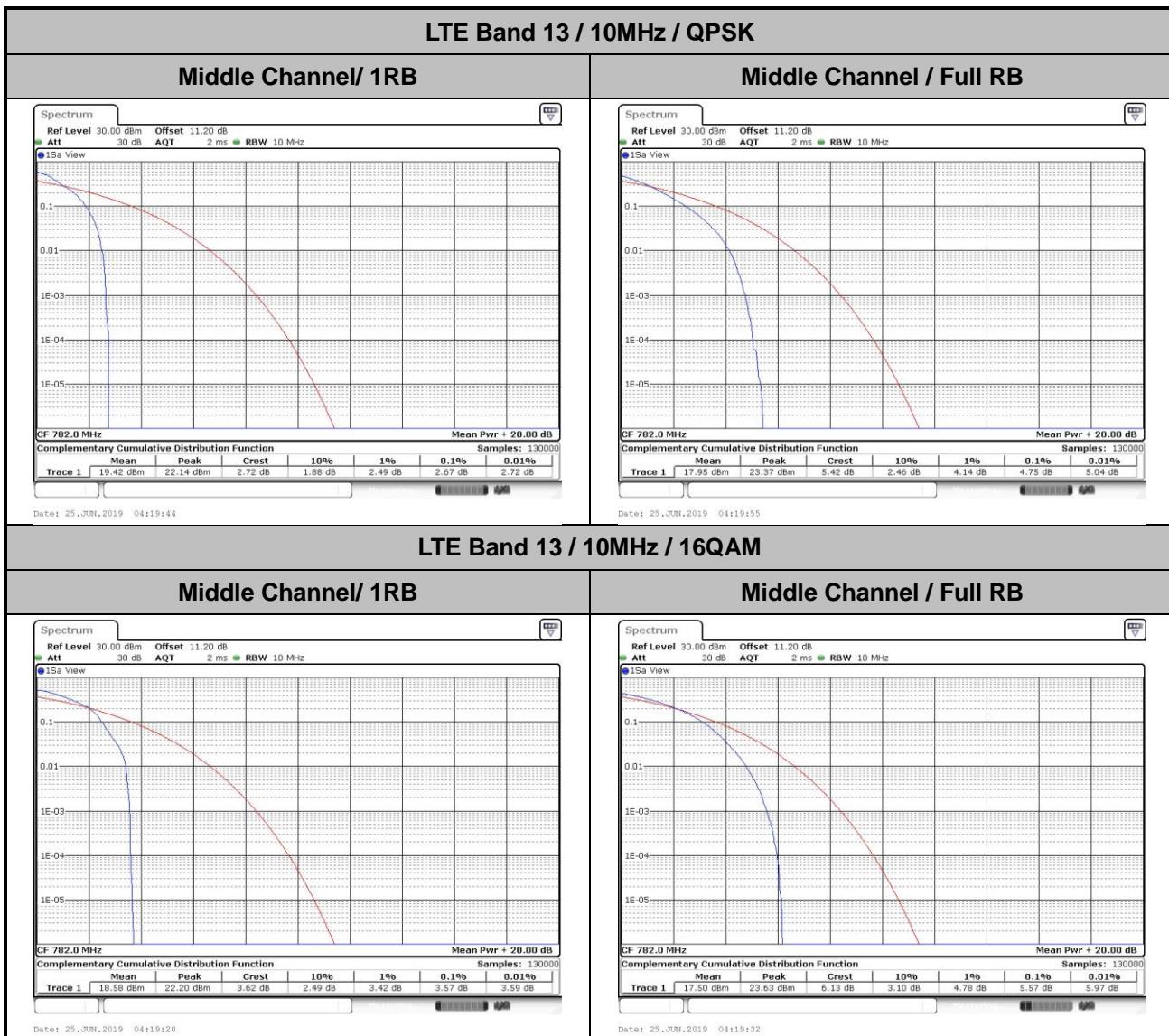
1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.8 V. ; Maximum Voltage =8.8 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 13

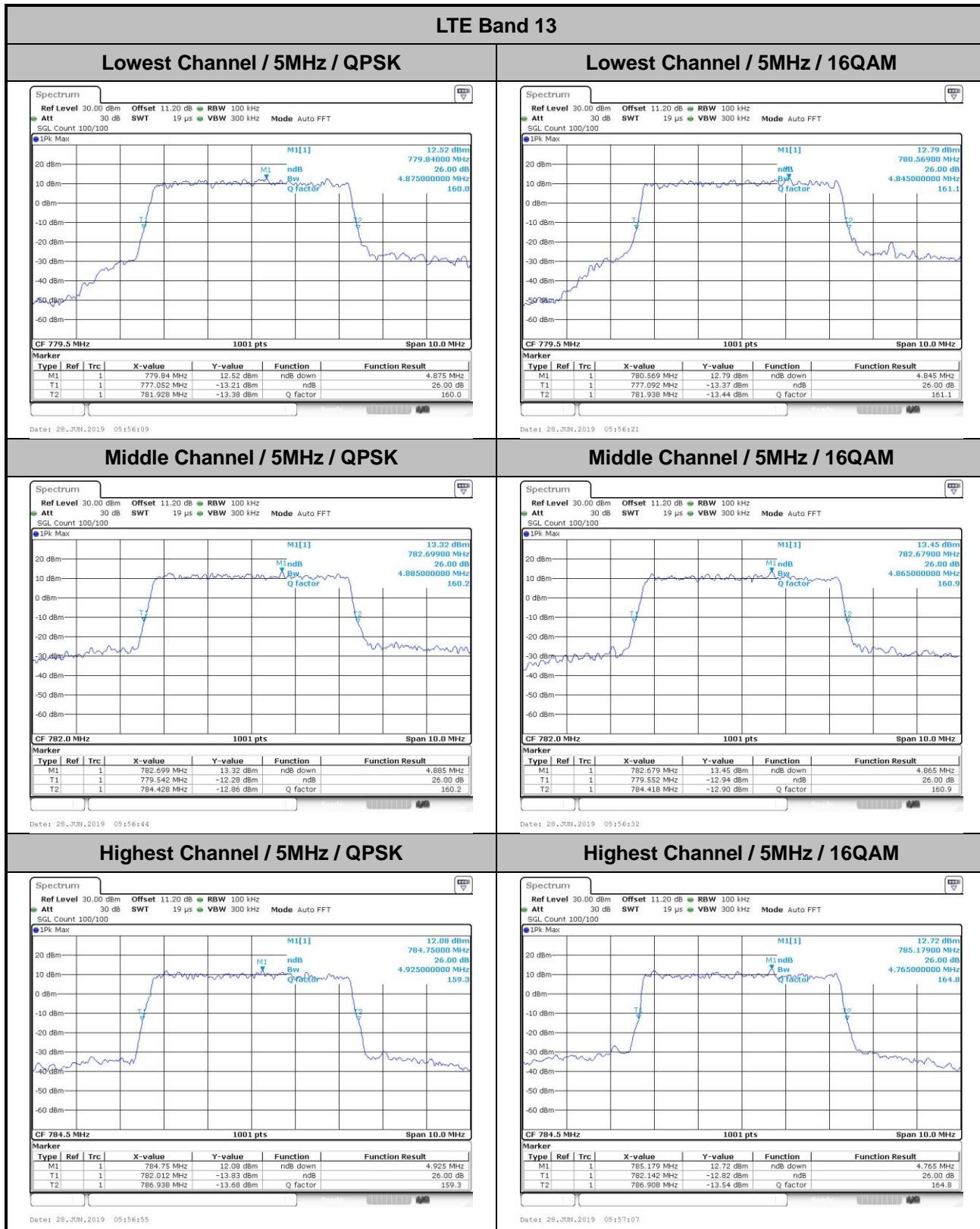
### Peak-to-Average Ratio

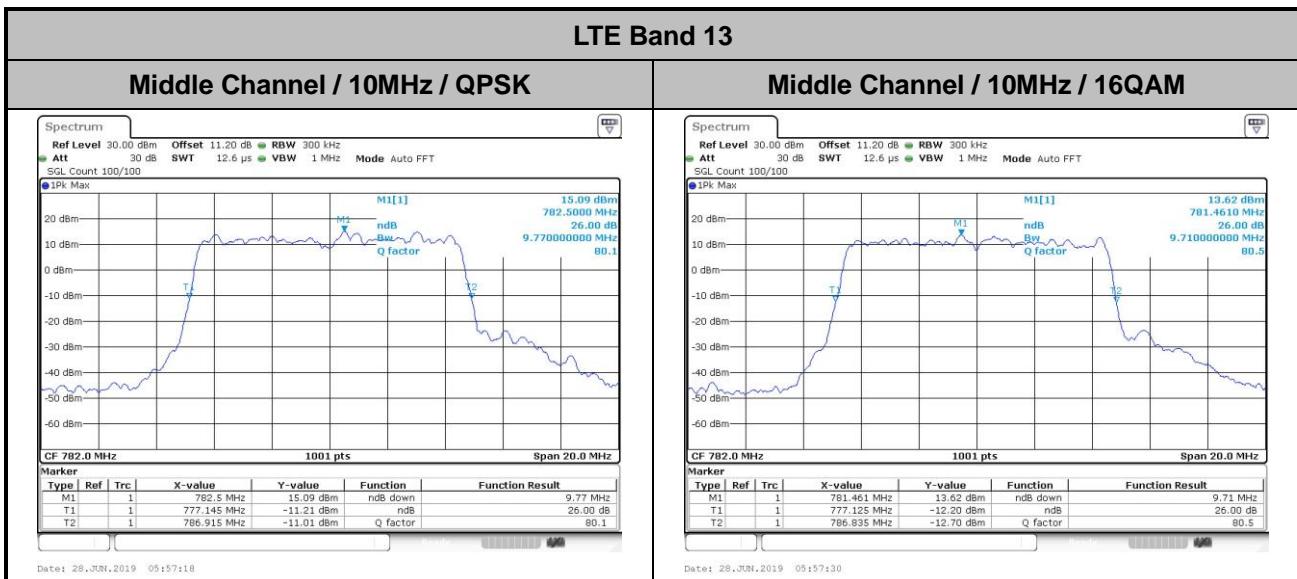
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	
Middle CH	2.67	4.75	3.57	5.57	PASS
Highest CH	-	-	-	-	



**26dB Bandwidth**

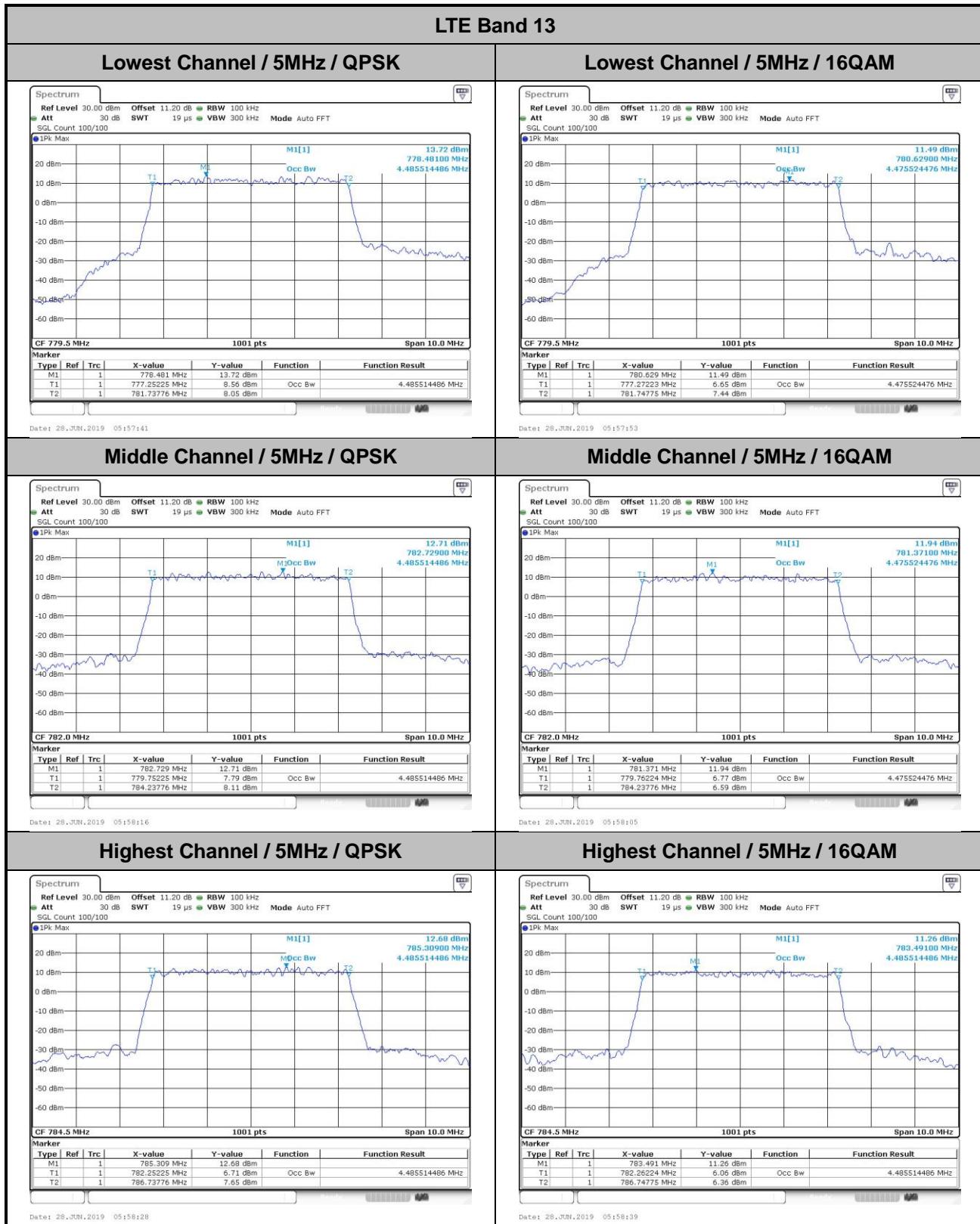
Mode BW Mod.	LTE Band 13 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.87	4.84	-	-	-	-	-	-
Middle CH	-	-	-	-	4.88	4.86	9.77	9.71	-	-	-	-
Highest CH	-	-	-	-	4.92	4.76	-	-	-	-	-	-

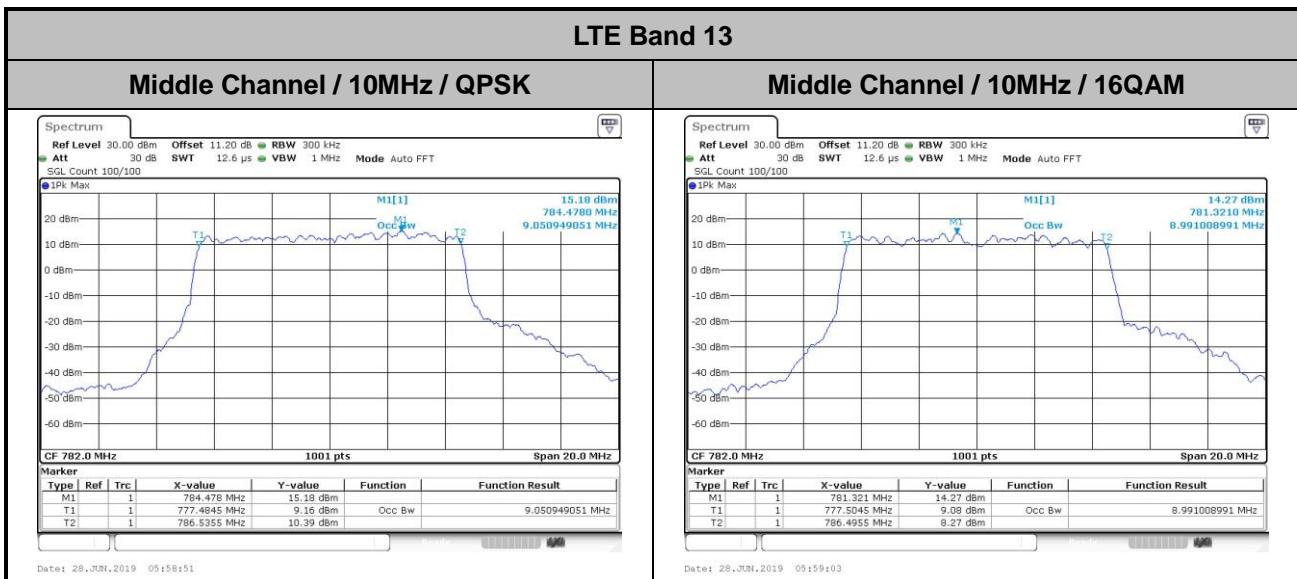




**Occupied Bandwidth**

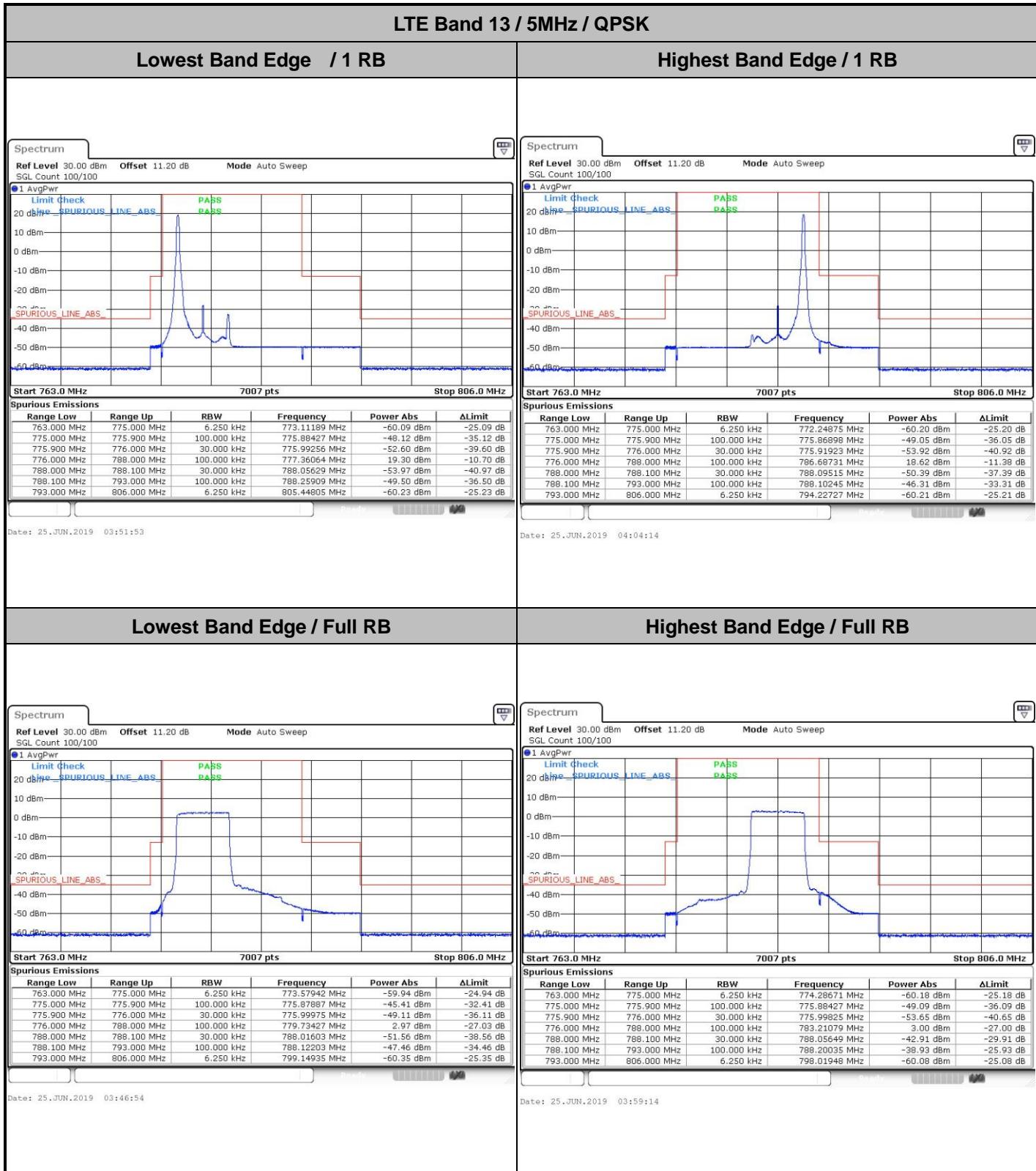
Mode BW Mod.	LTE Band 13 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.47	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	4.47	9.05	8.99	-	-	-	-
Highest CH	-	-	-	-	4.48	4.48	-	-	-	-	-	-

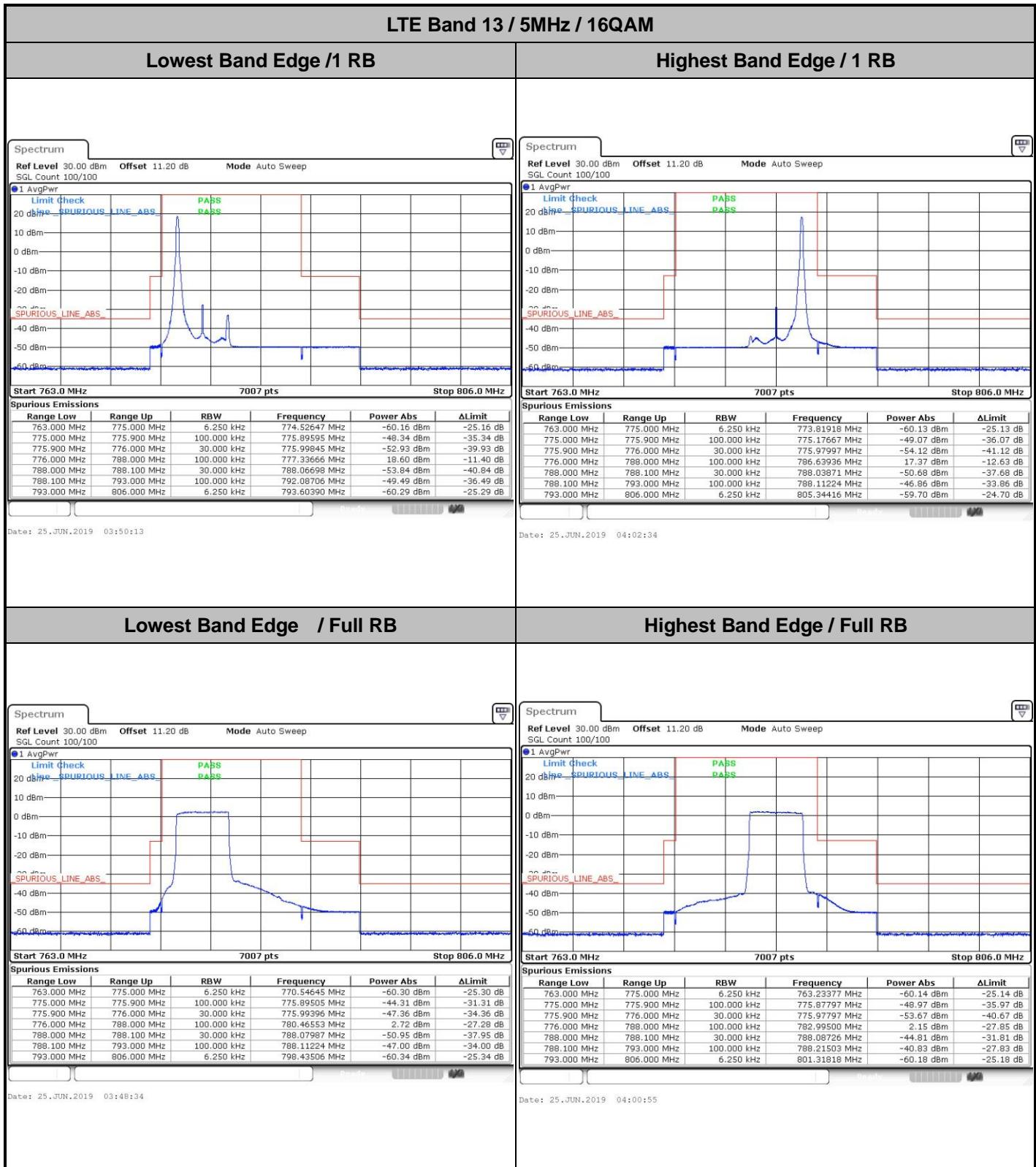


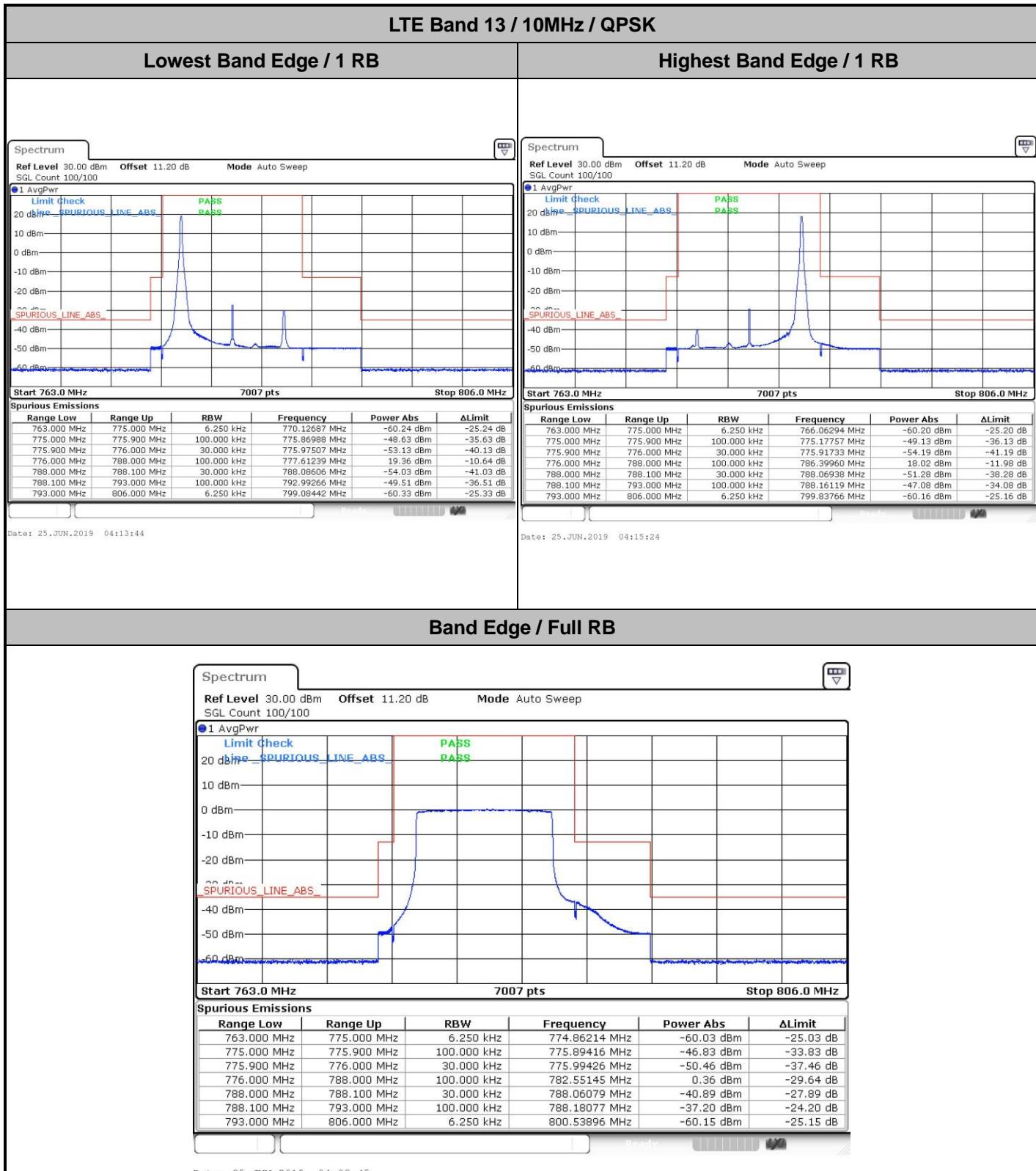


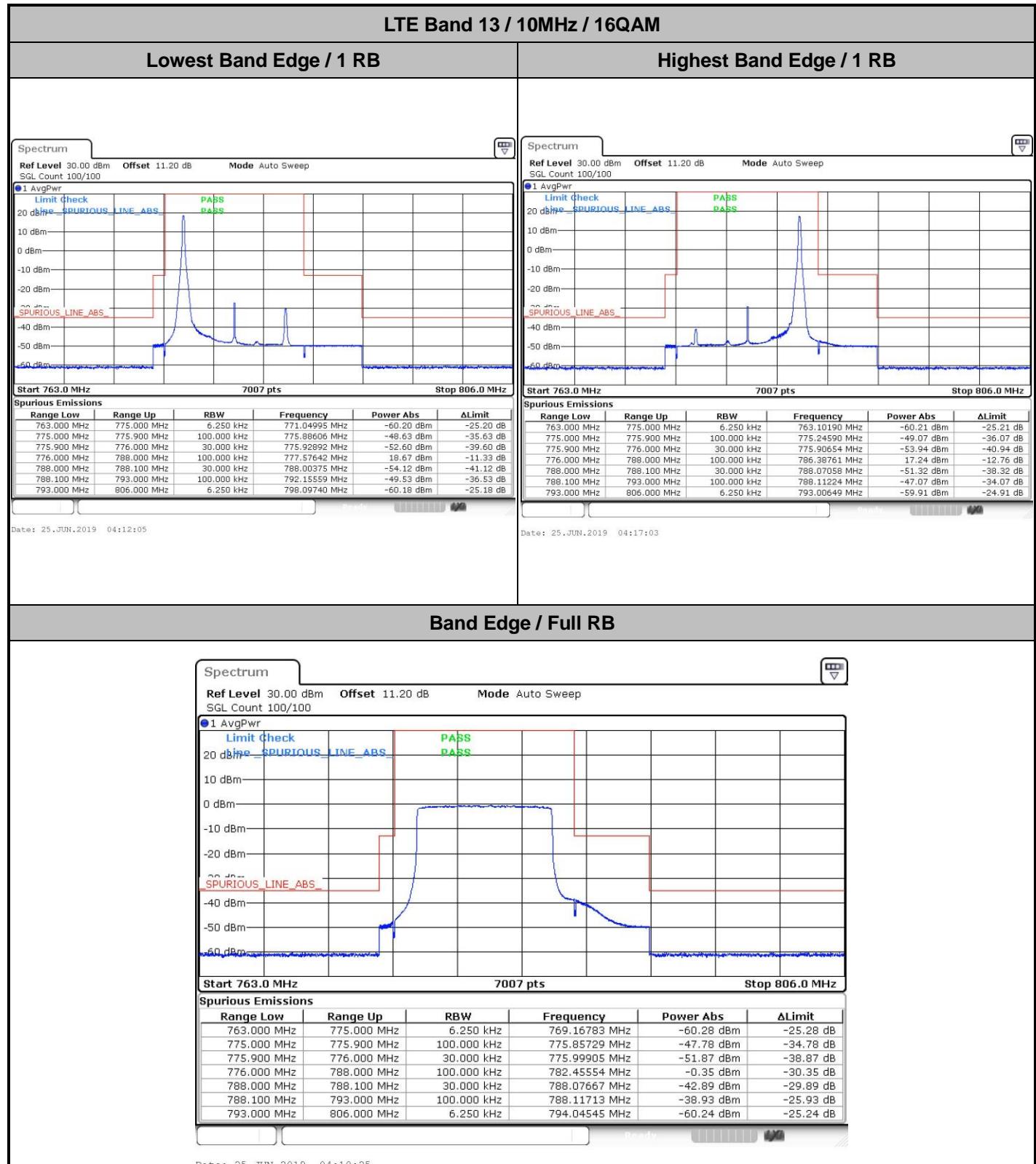


## Conducted Band Edge









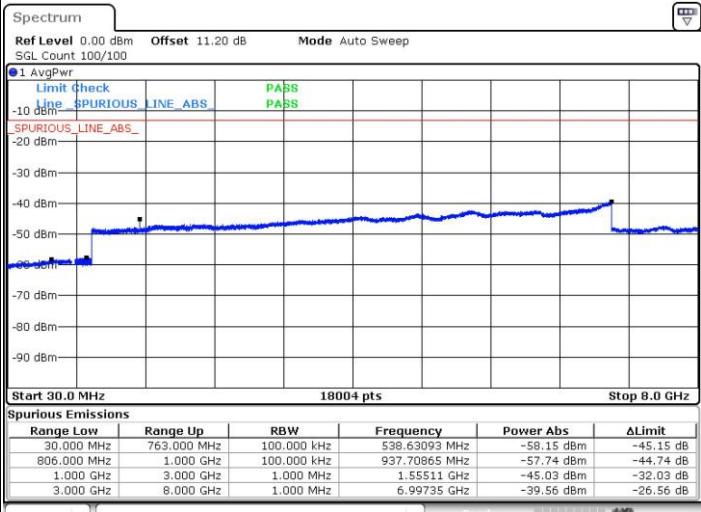
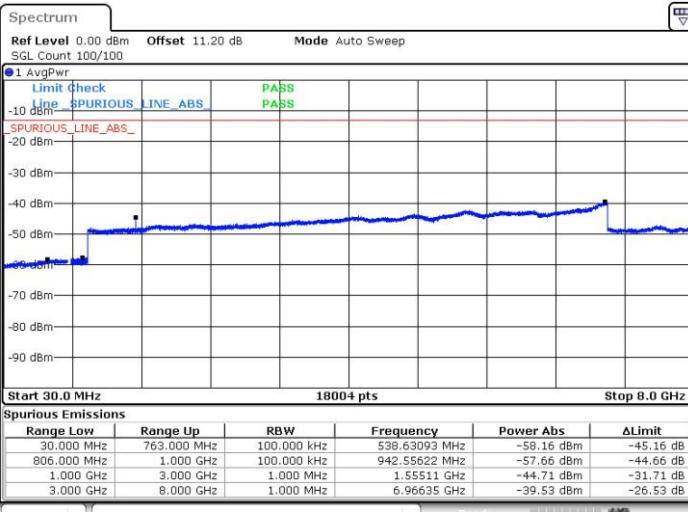


## Conducted Spurious Emission

### LTE Band 13 / 5MHz

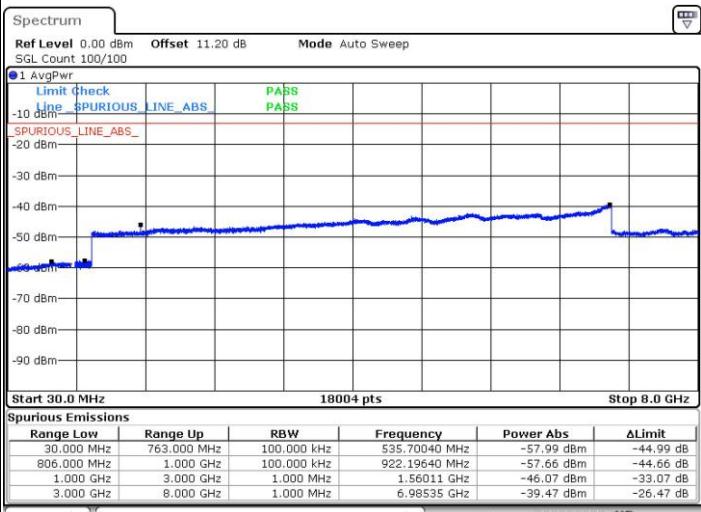
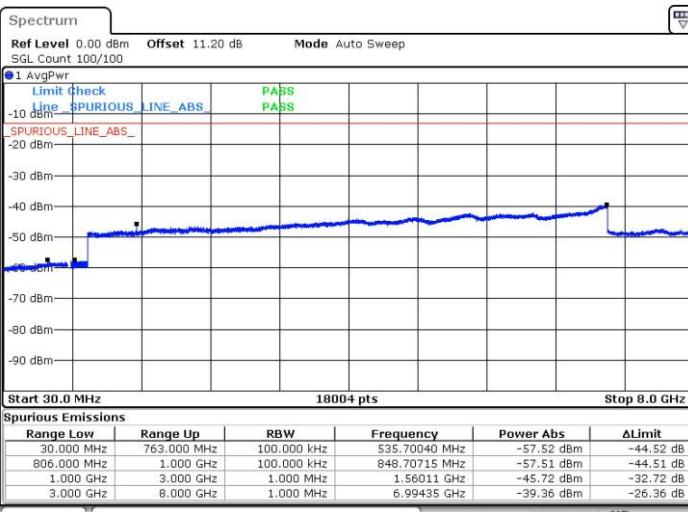
#### Lowest Channel / QPSK

#### Lowest Channel / 16QAM



#### Middle Channel / QPSK

#### Middle Channel / 16QAM

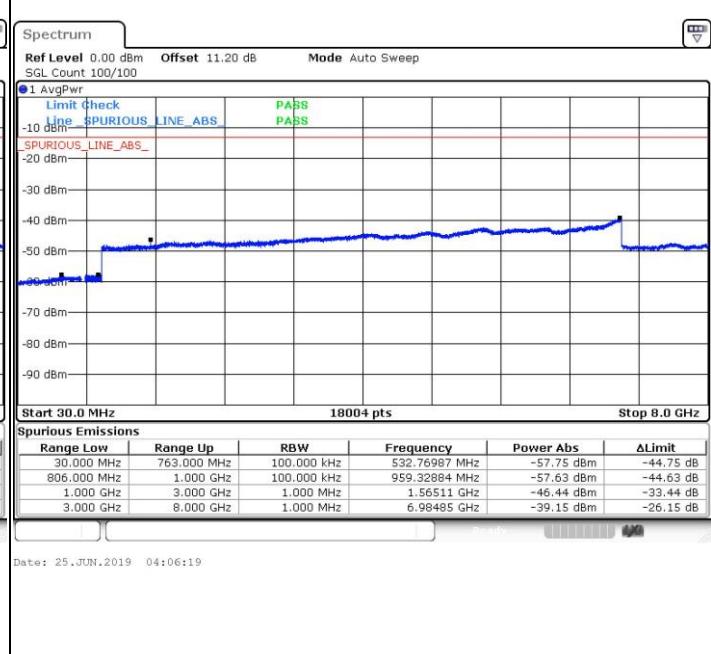
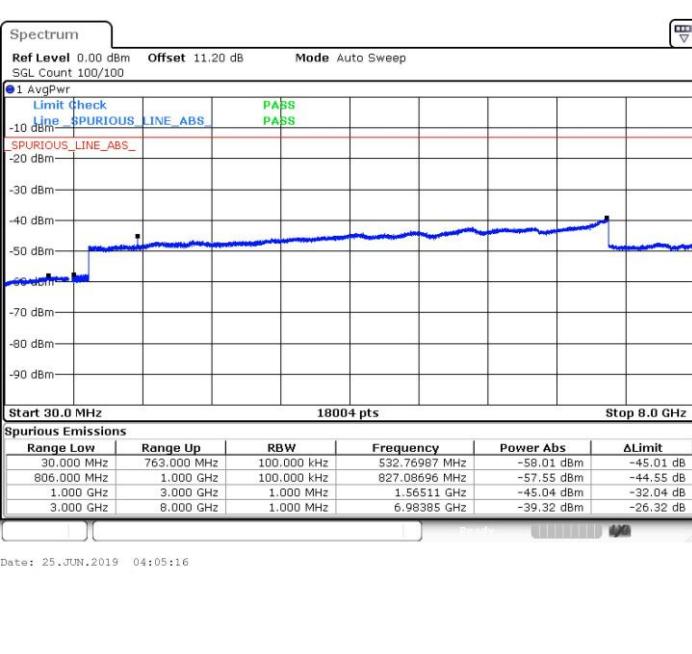




## LTE Band 13 / 5MHz

## Highest Channel / QPSK

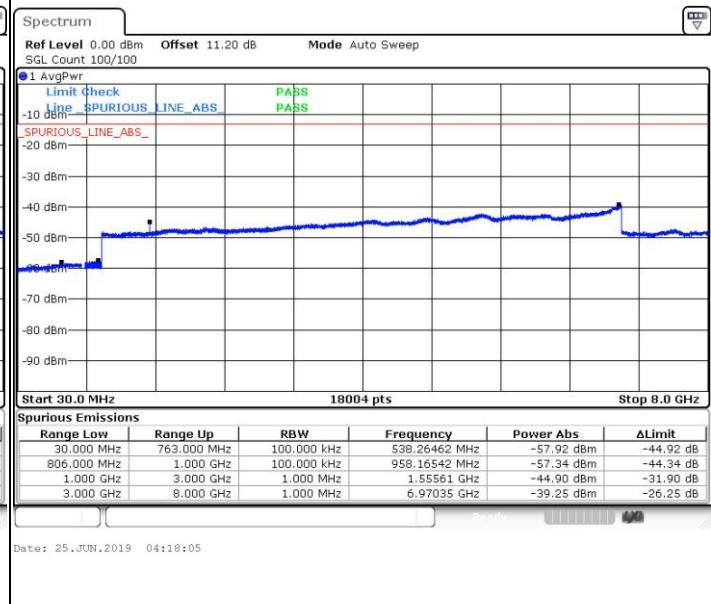
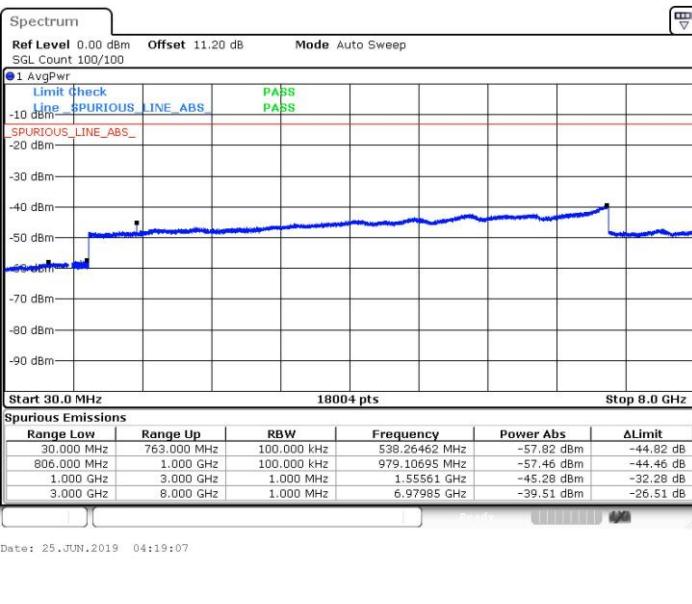
## Highest Channel / 16QAM



## LTE Band 13 / 10MHz

## Middle Channel / QPSK

## Middle Channel / 16QAM





## Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0036	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0033	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0046	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0036	
-30	Normal Voltage	0.0037	
20	Maximum Voltage	0.0087	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0090	

**Note:**

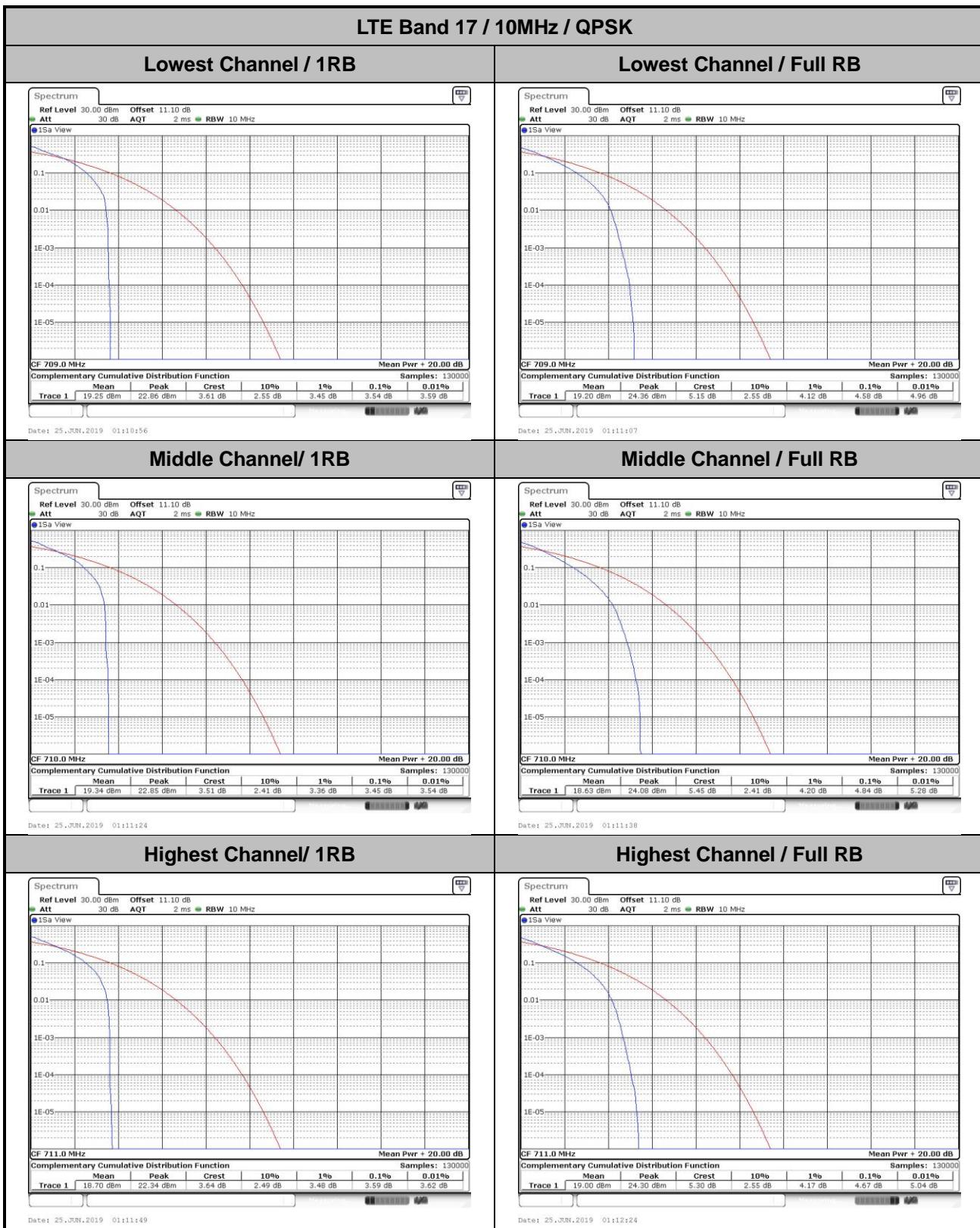
1. Normal Voltage =7.7 V. ; Battery End Point (BEP) =6.8 V. ; Maximum Voltage =8.8 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

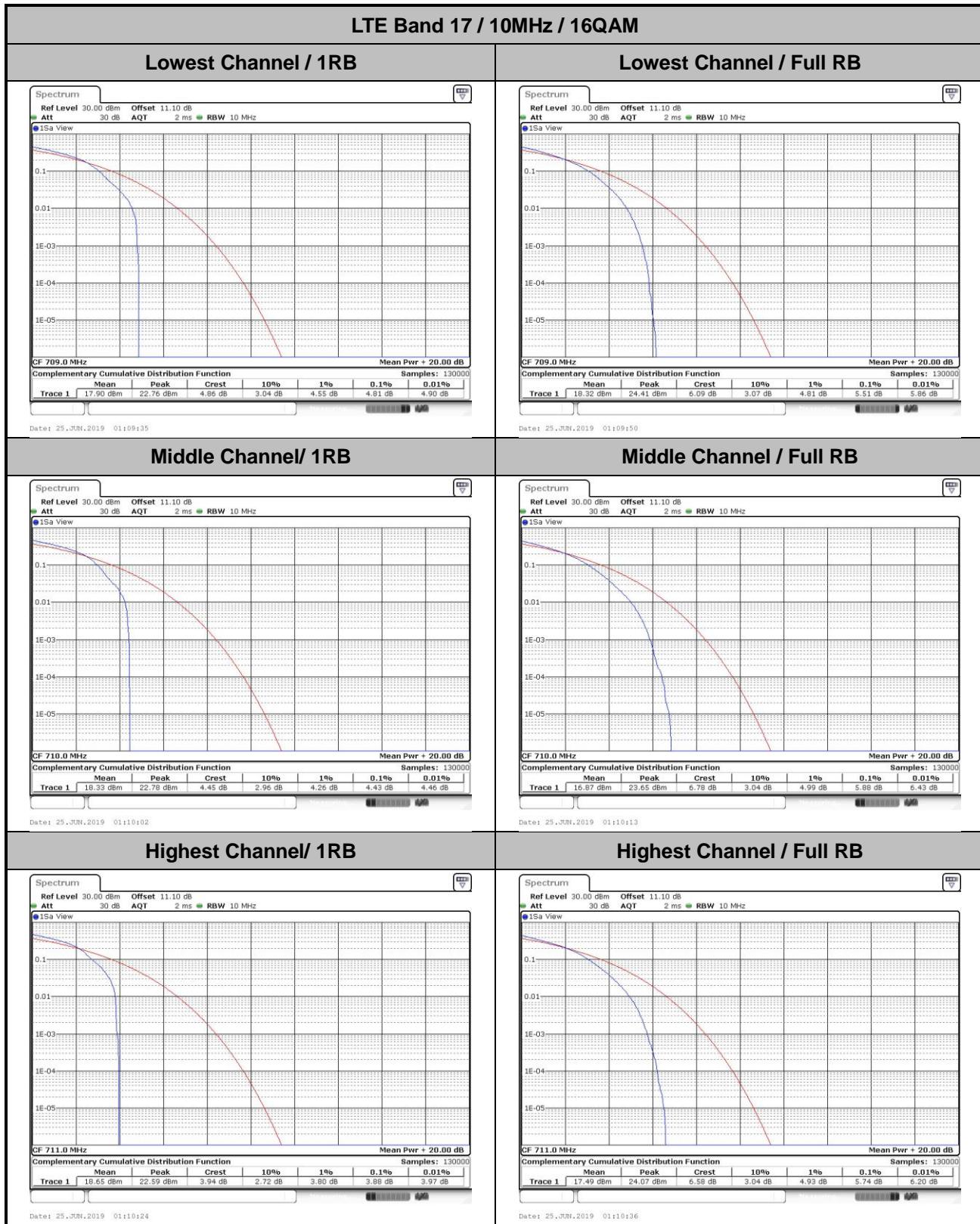


## LTE Band 17

### Peak-to-Average Ratio

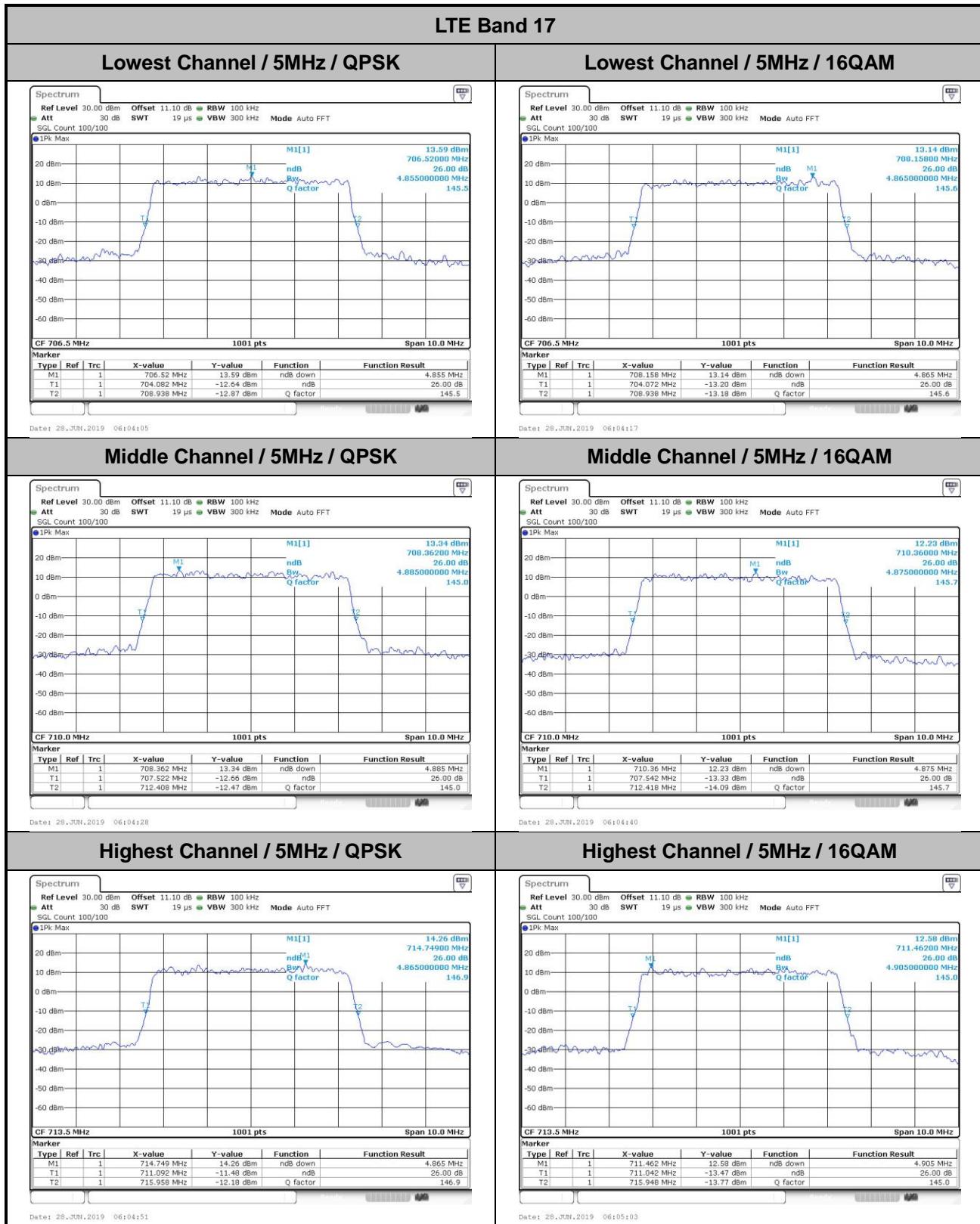
Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.58	4.81	5.51	PASS
Middle CH	3.45	4.84	4.43	5.88	
Highest CH	3.59	4.67	3.88	5.74	





**26dB Bandwidth**

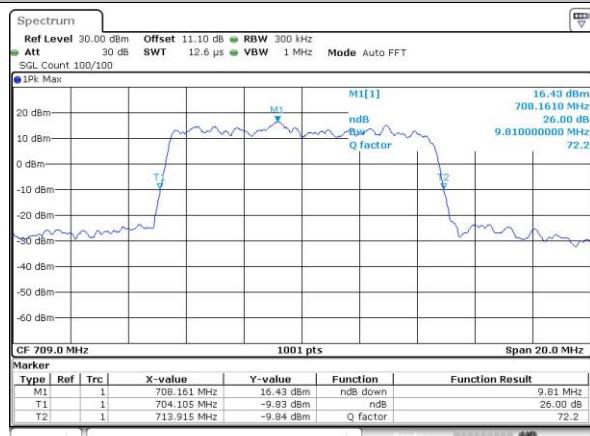
Mode BW Mod.	LTE Band 17 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.85	4.86	9.81	9.63	-	-	-	-
Middle CH	-	-	-	-	4.88	4.87	9.73	9.77	-	-	-	-
Highest CH	-	-	-	-	4.86	4.9	9.75	9.71	-	-	-	-





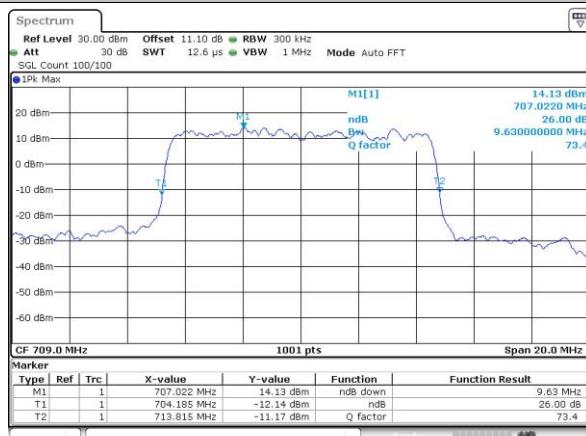
## LTE Band 17

## Lowest Channel / 10MHz / QPSK



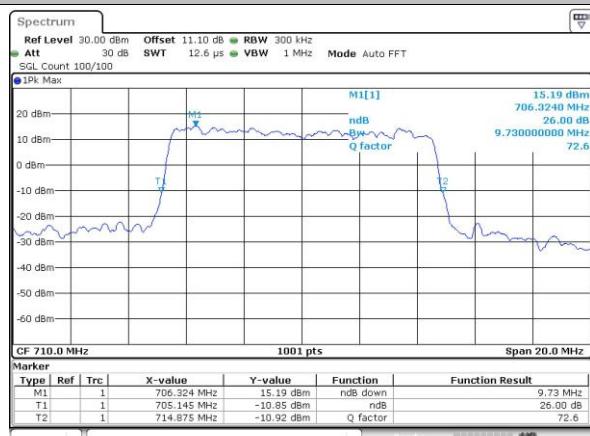
Date: 28.JUN.2019 06:05:14

## Lowest Channel / 10MHz / 16QAM



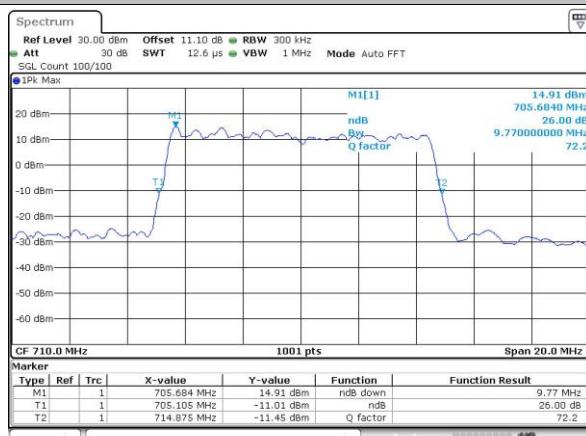
Date: 28.JUN.2019 06:05:26

## Middle Channel / 10MHz / QPSK



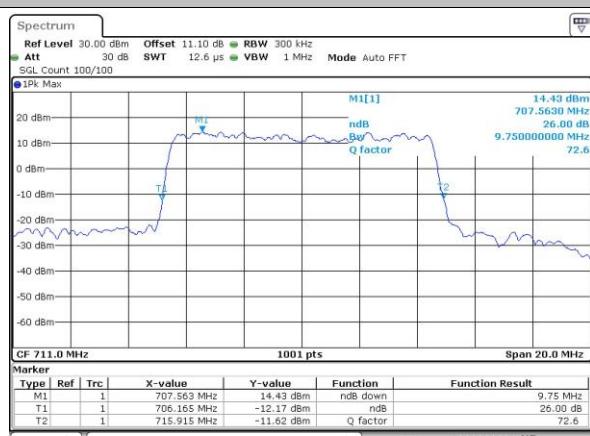
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## Middle Channel / 10MHz / 16QAM



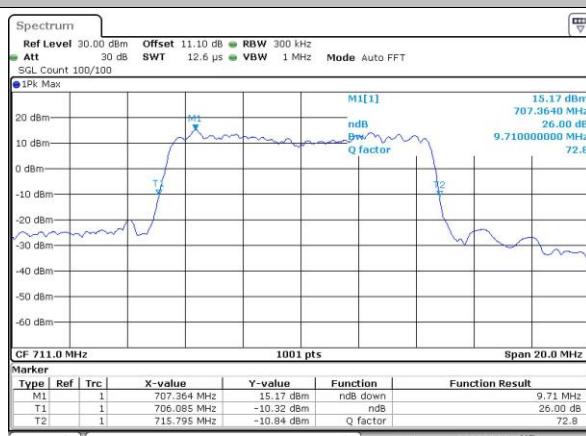
Date: 28.JUN.2019 06:05:48

## Highest Channel / 10MHz / QPSK



Date: 28.JUN.2019 06:06:00

## Highest Channel / 10MHz / 16QAM



Date: 28.JUN.2019 06:06:12

**Occupied Bandwidth**

Mode BW Mod.	LTE Band 17 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.48	8.95	9.03	-	-	-	-
Middle CH	-	-	-	-	4.46	4.48	8.95	9.05	-	-	-	-
Highest CH	-	-	-	-	4.48	4.49	9.07	9.05	-	-	-	-