



## Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0035	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0033	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0020	

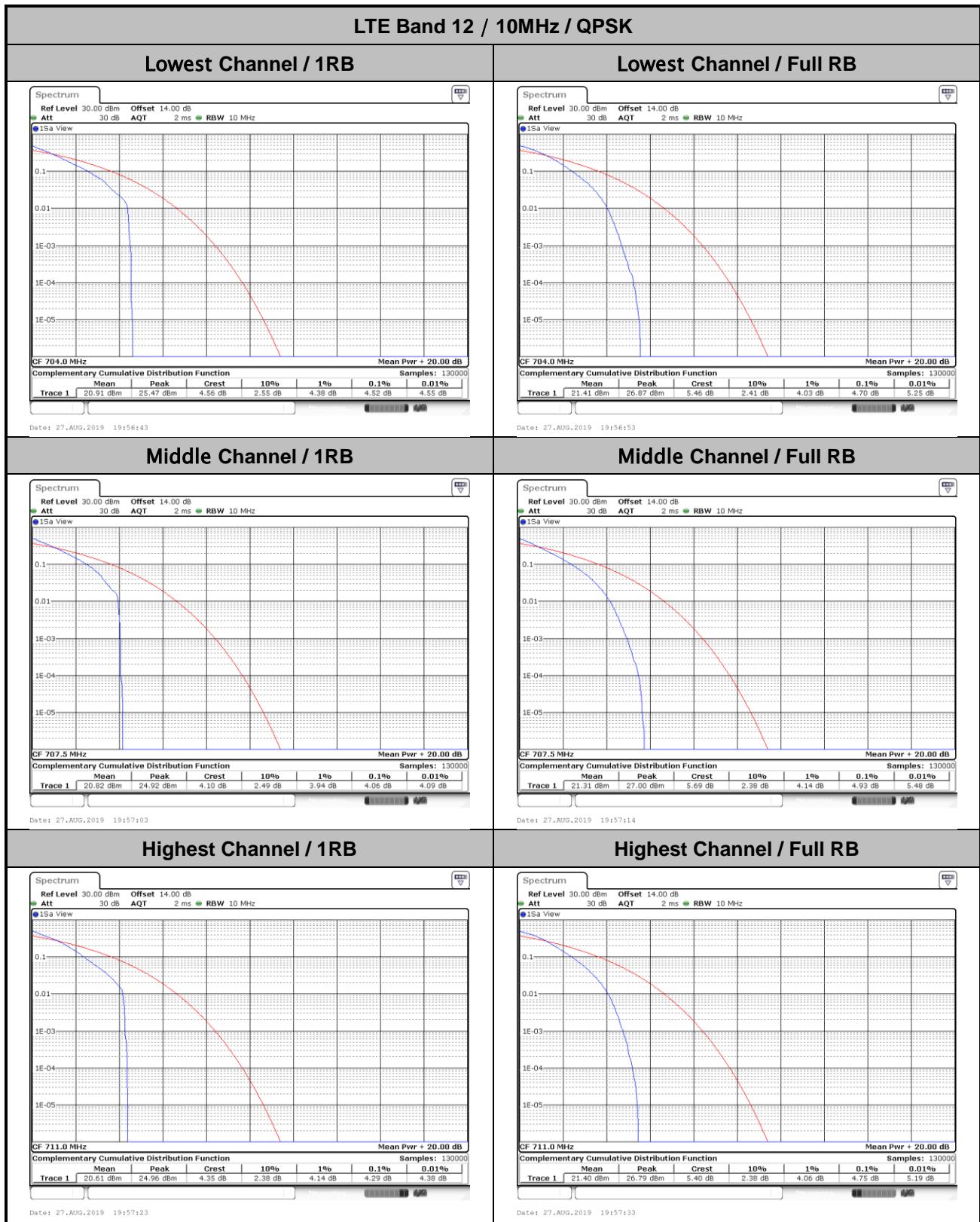
**Note:** Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.35 V.

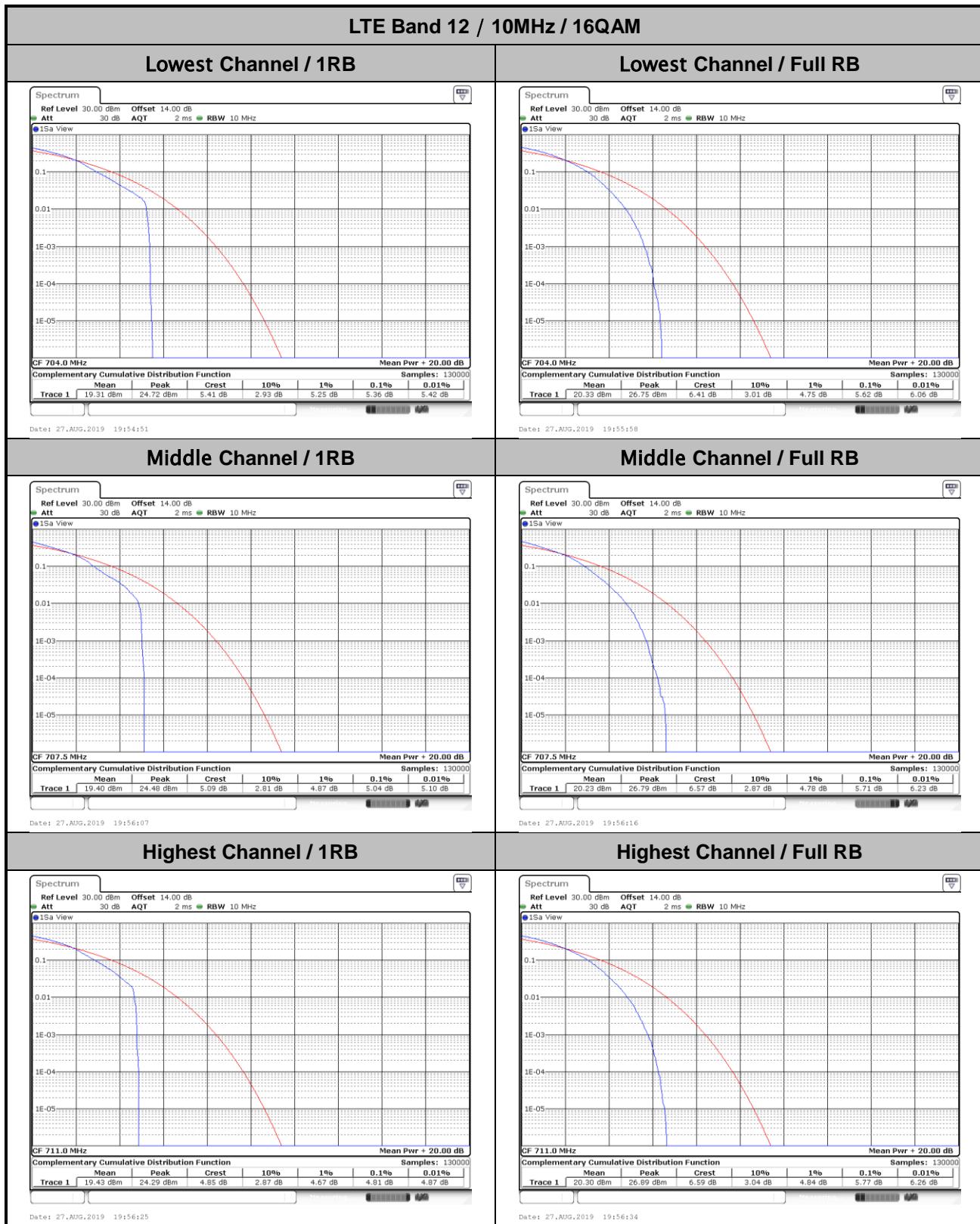


## LTE Band 12

### Peak-to-Average Ratio

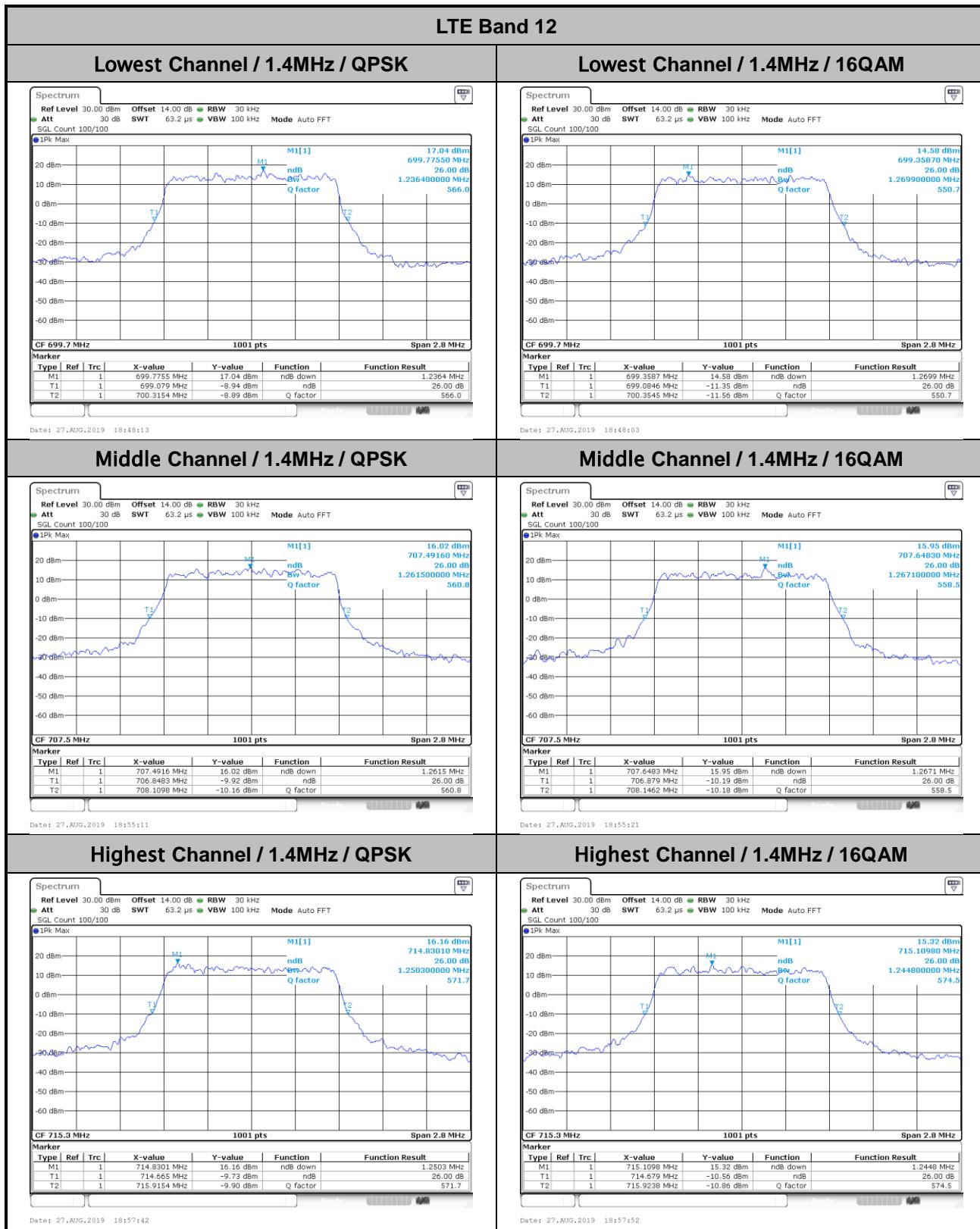
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.52	4.7	5.36	5.62	PASS
Middle CH	4.06	4.93	5.04	5.71	
Highest CH	4.29	4.75	4.81	5.77	

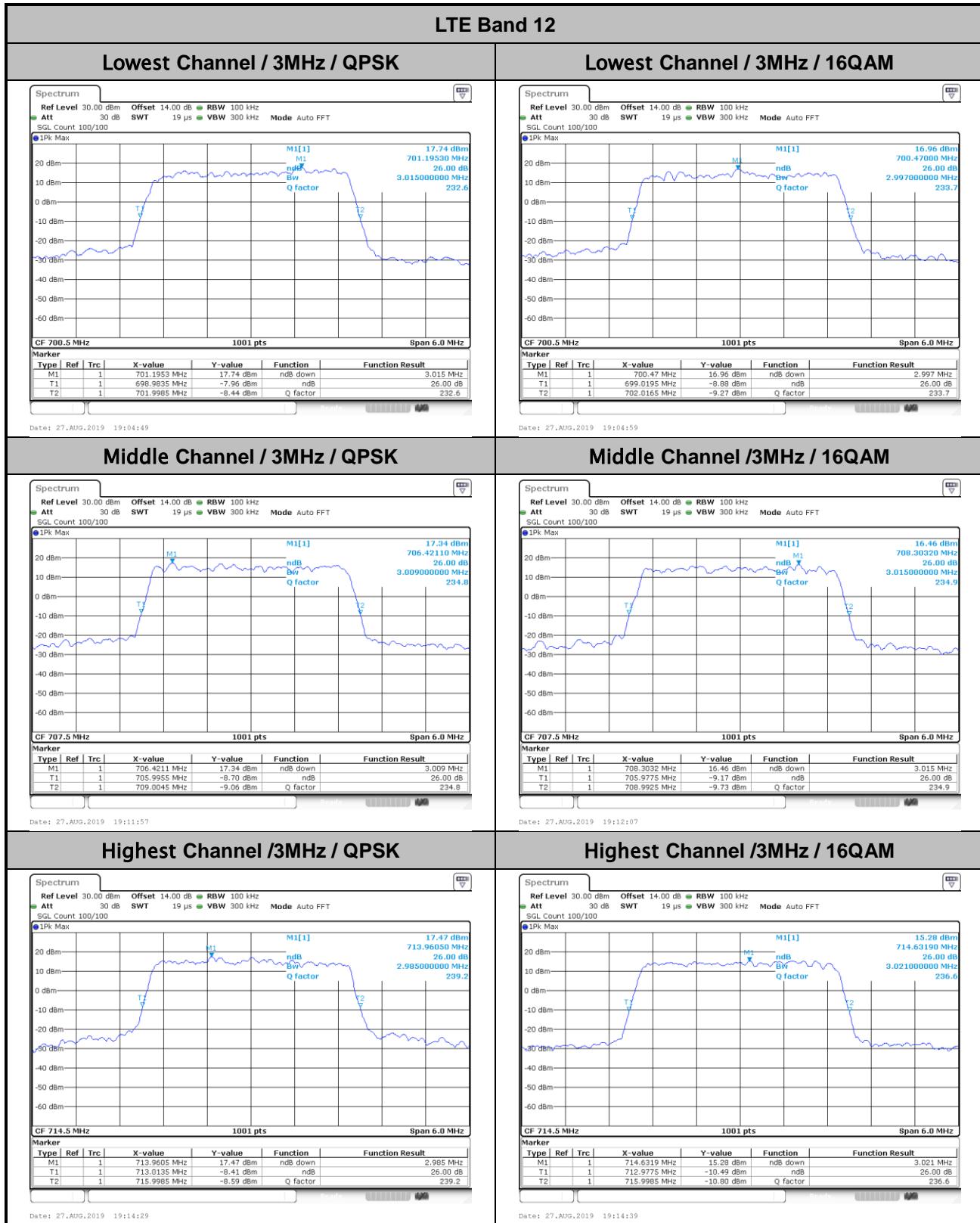


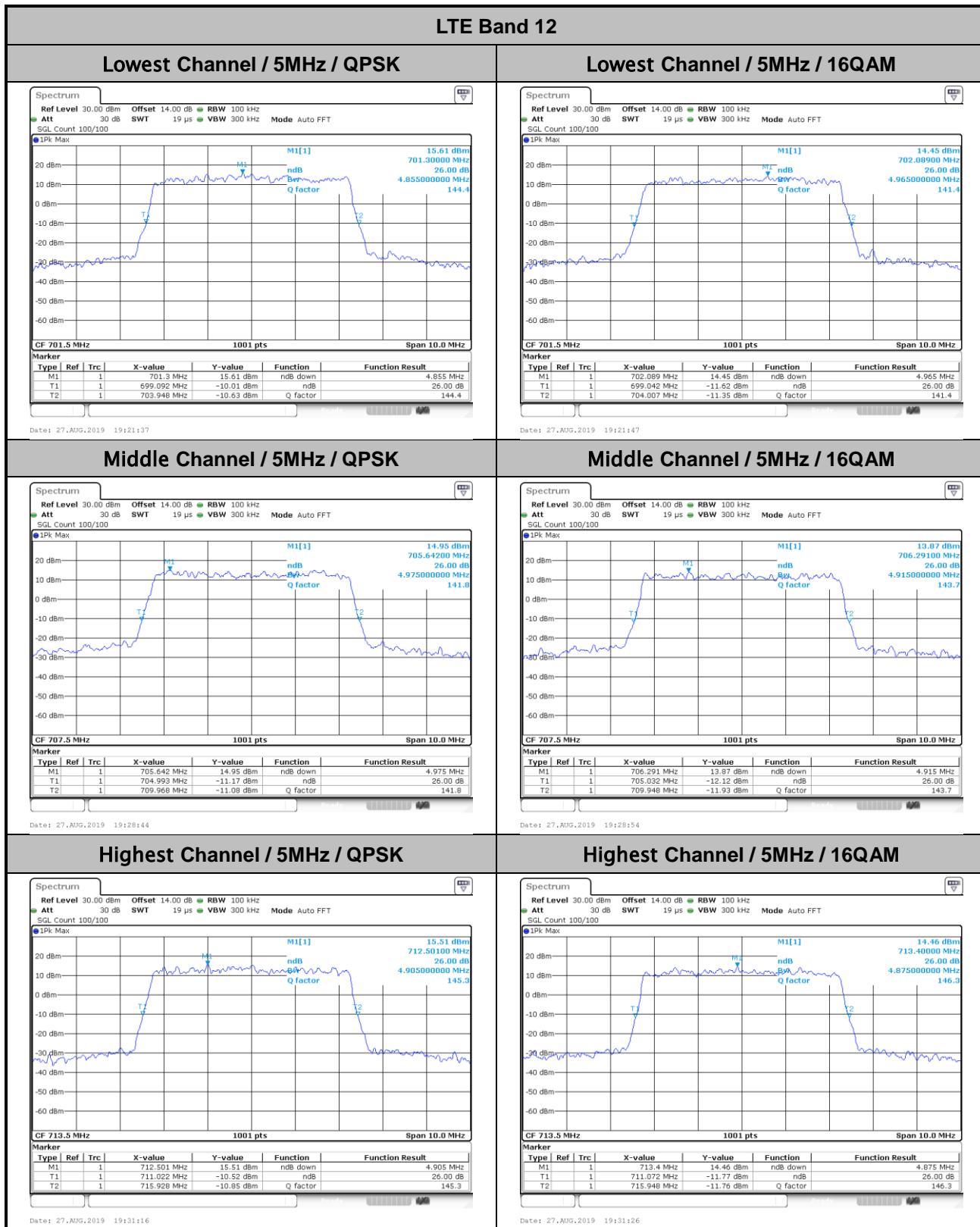


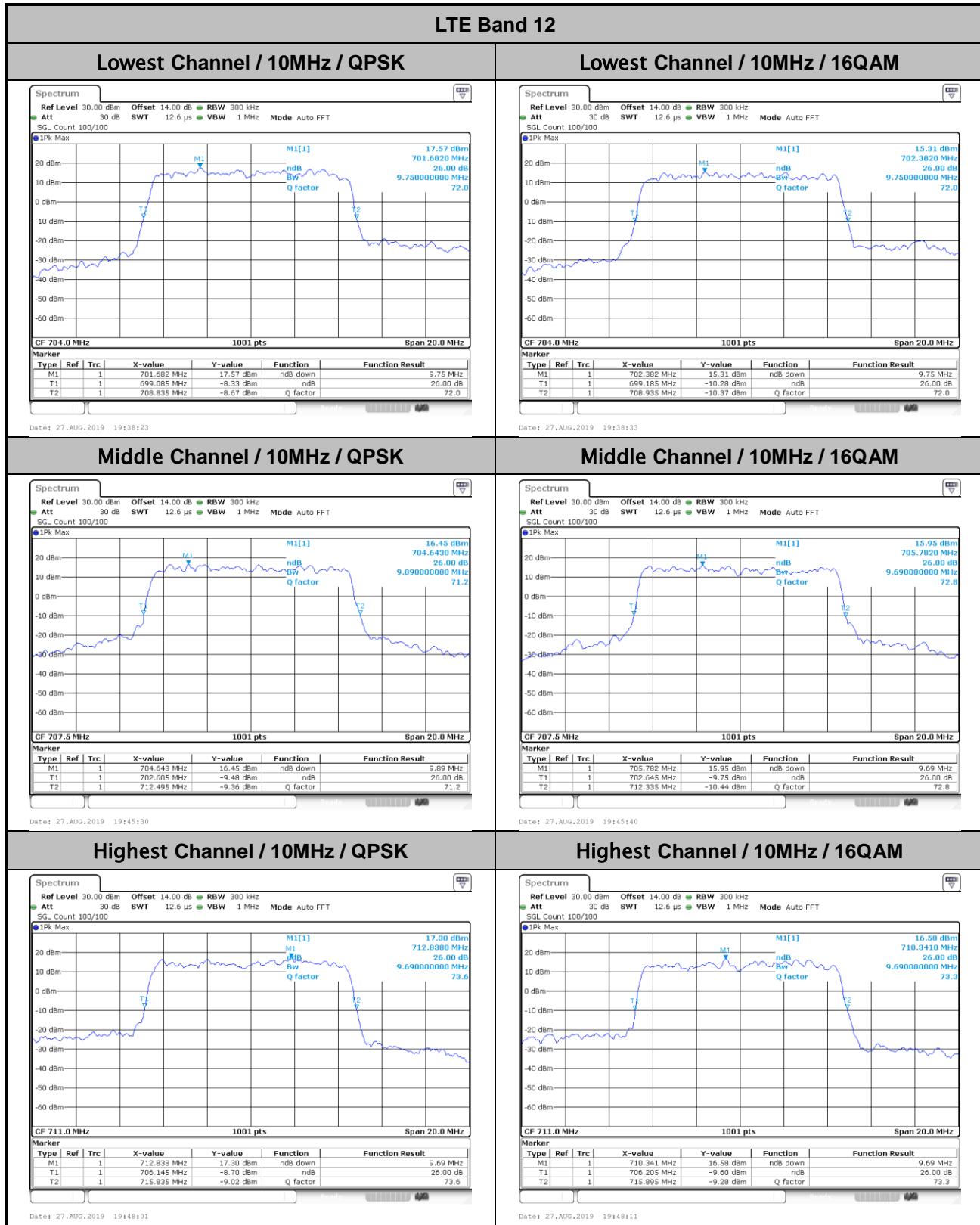
**26dB Bandwidth**

Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.236	1.27	3.015	2.997	4.855	4.965	9.75	9.75	-	-	-	-
Middle CH	1.262	1.267	3.009	3.015	4.975	4.915	9.89	9.69	-	-	-	-
Highest CH	1.25	1.245	2.985	3.021	4.905	4.875	9.69	9.69	-	-	-	-



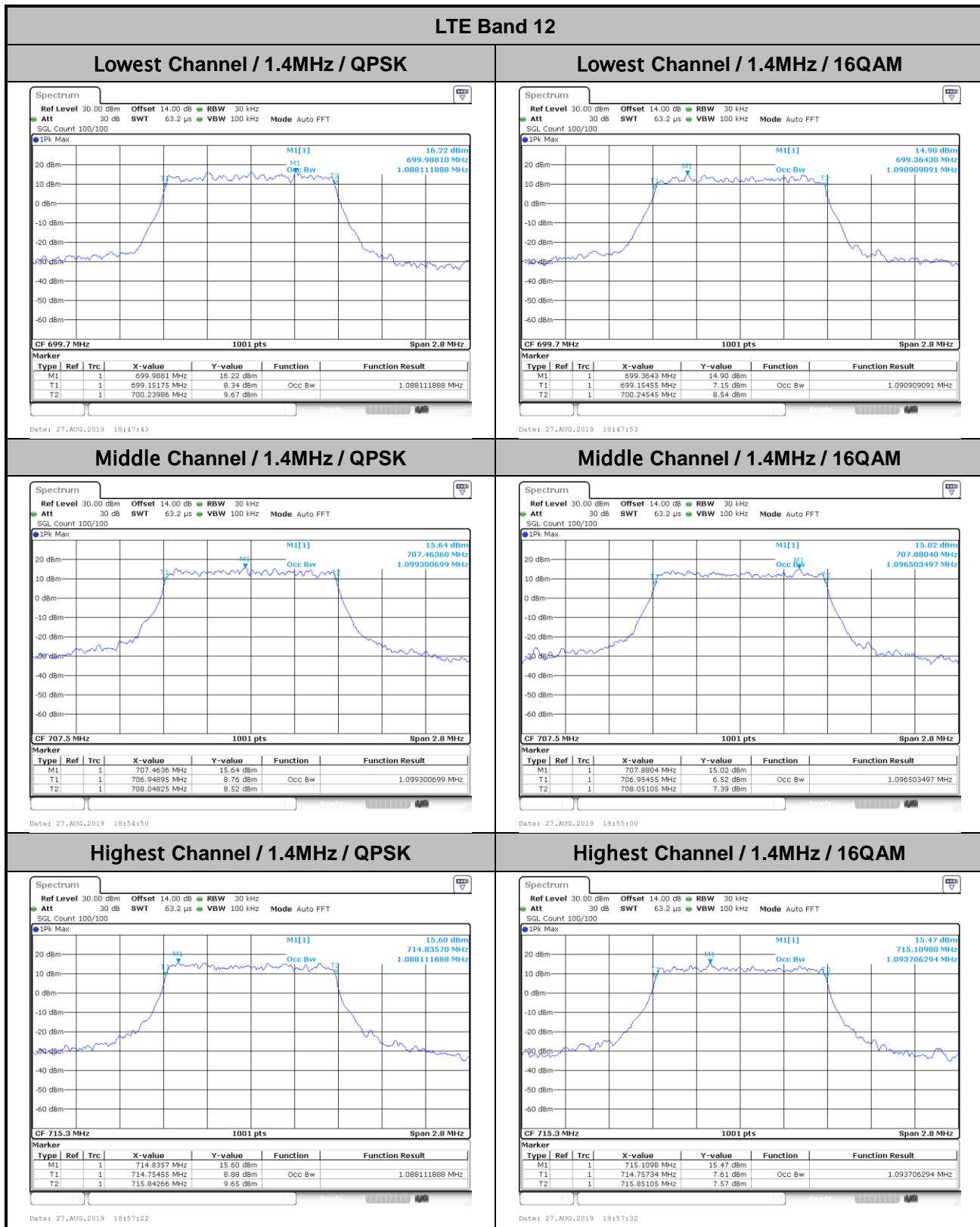


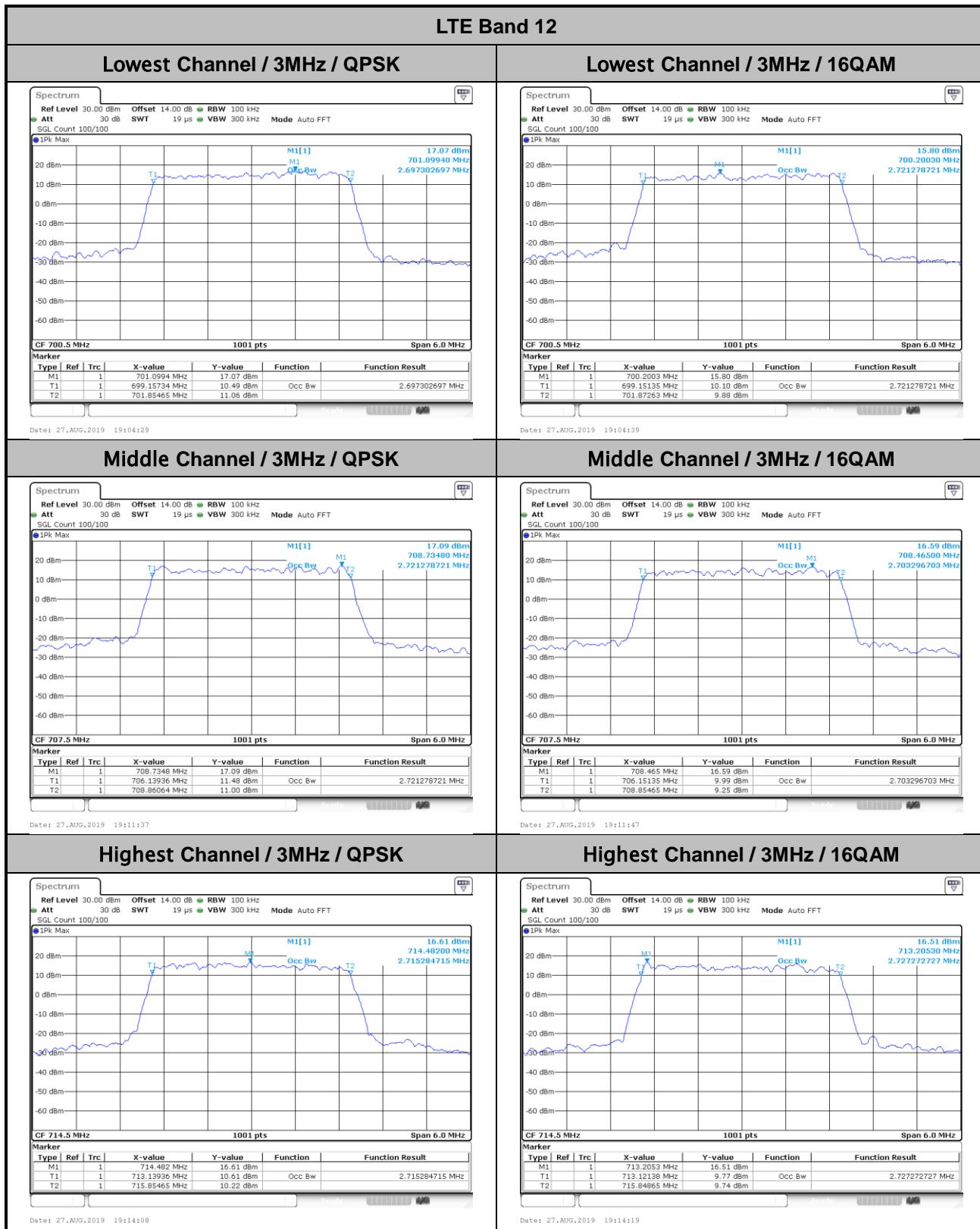


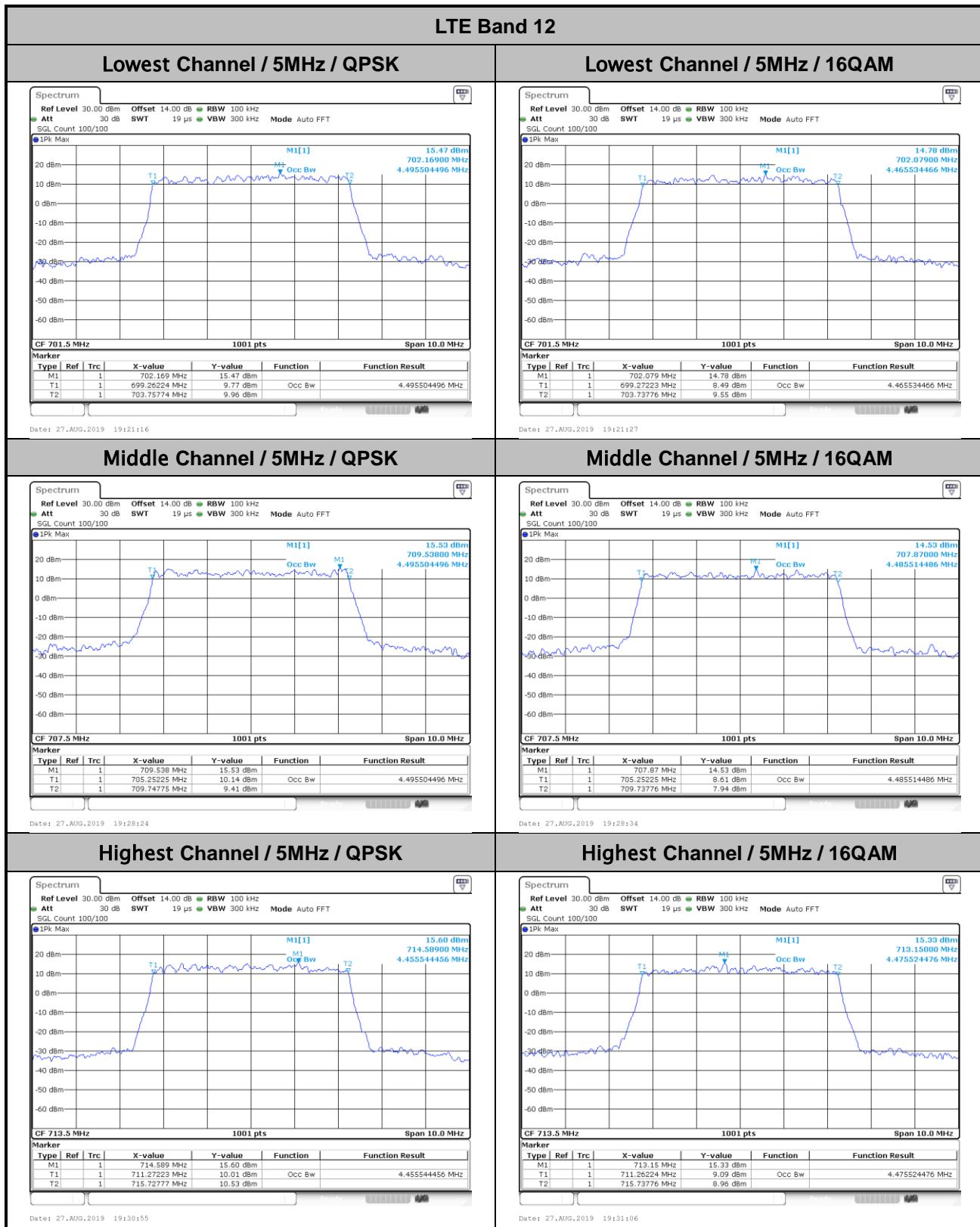


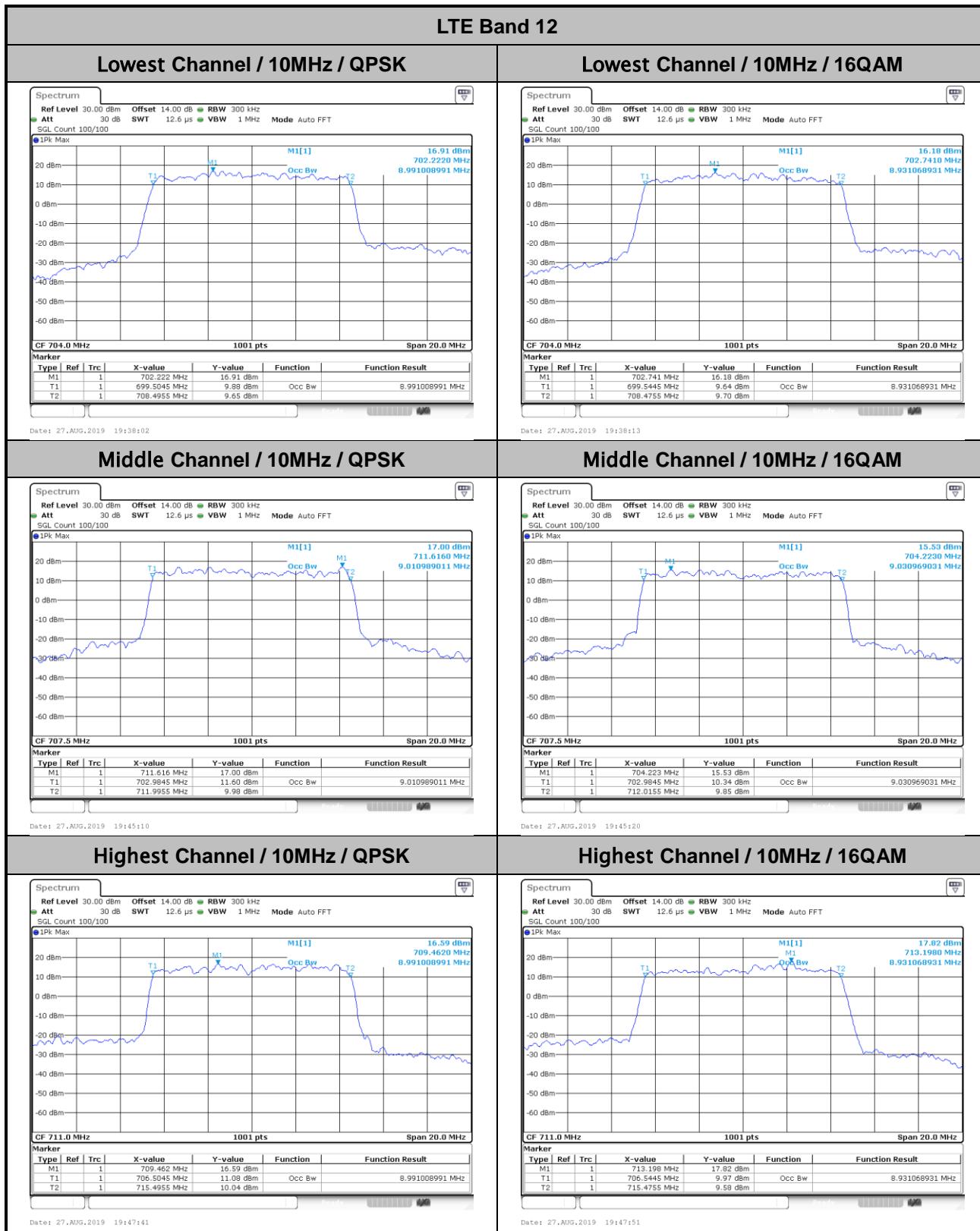
**Occupied Bandwidth**

Mode	LTE Band 12 : 99%OBW(MHz)											
	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	2.7	2.72	4.5	4.47	8.99	8.93	-	-	-	-
Middle CH	1.1	1.1	2.72	2.7	4.5	4.49	9.01	9.03	-	-	-	-
Highest CH	1.09	1.09	2.72	2.73	4.46	4.48	8.99	8.93	-	-	-	-



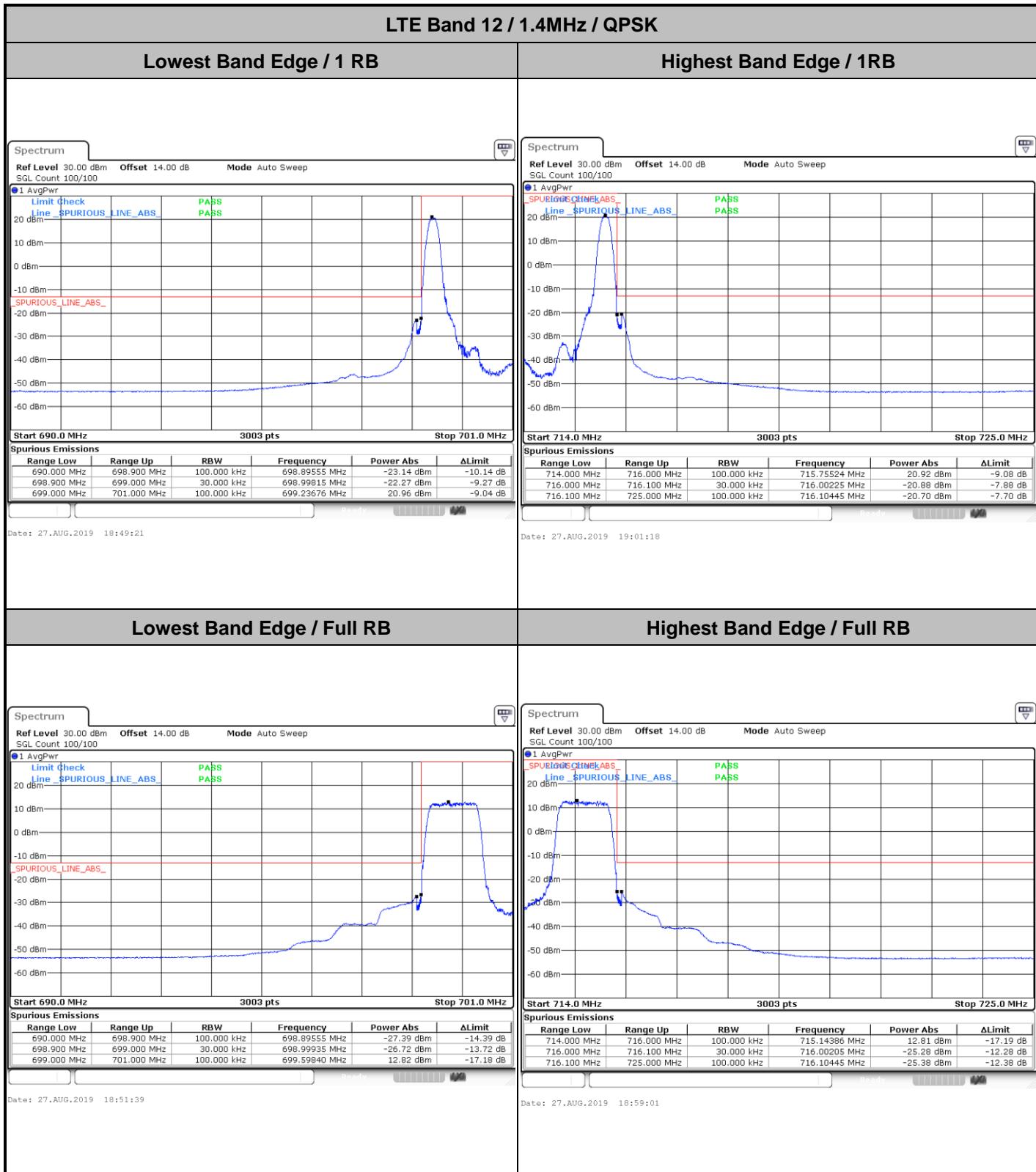


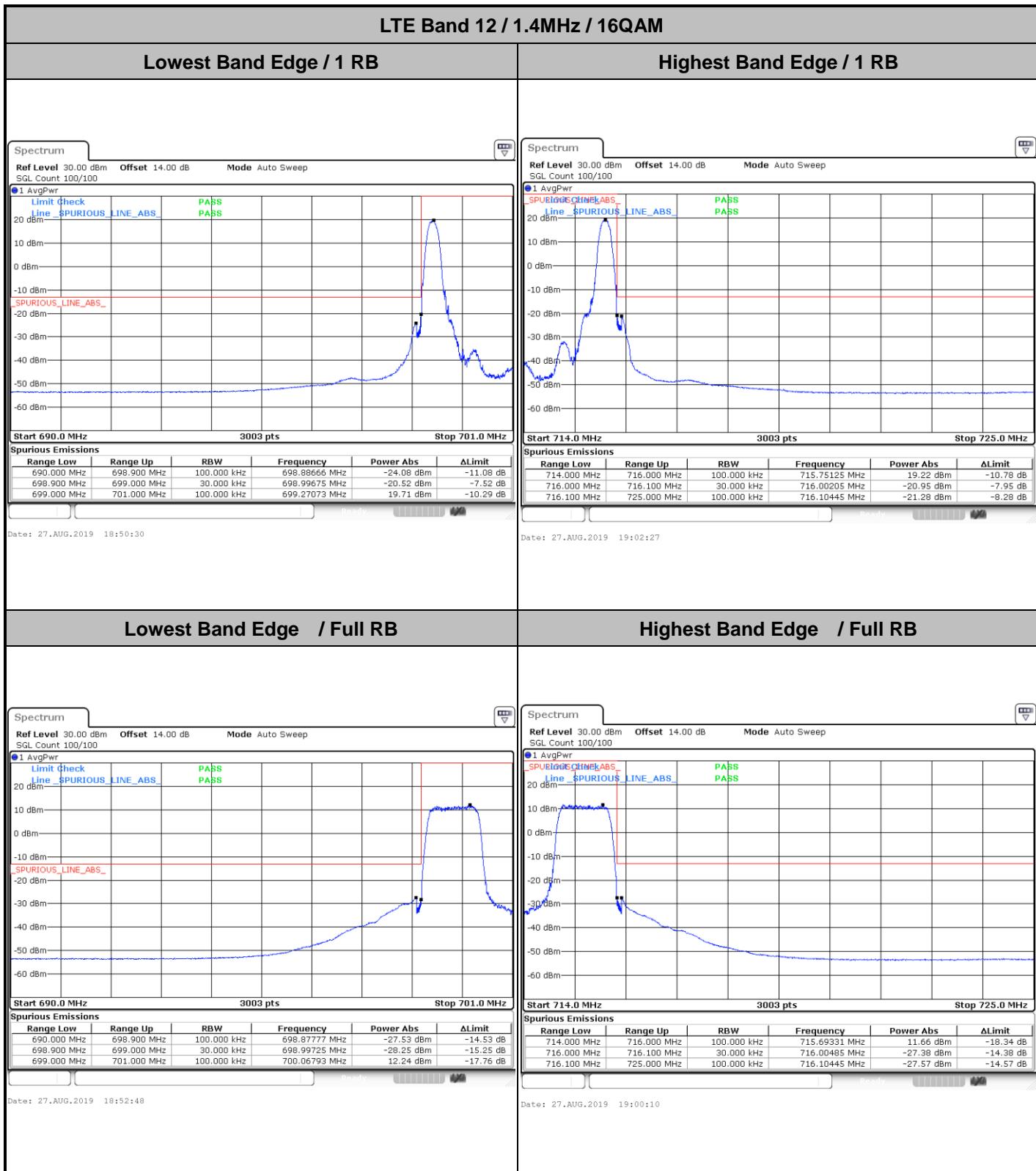


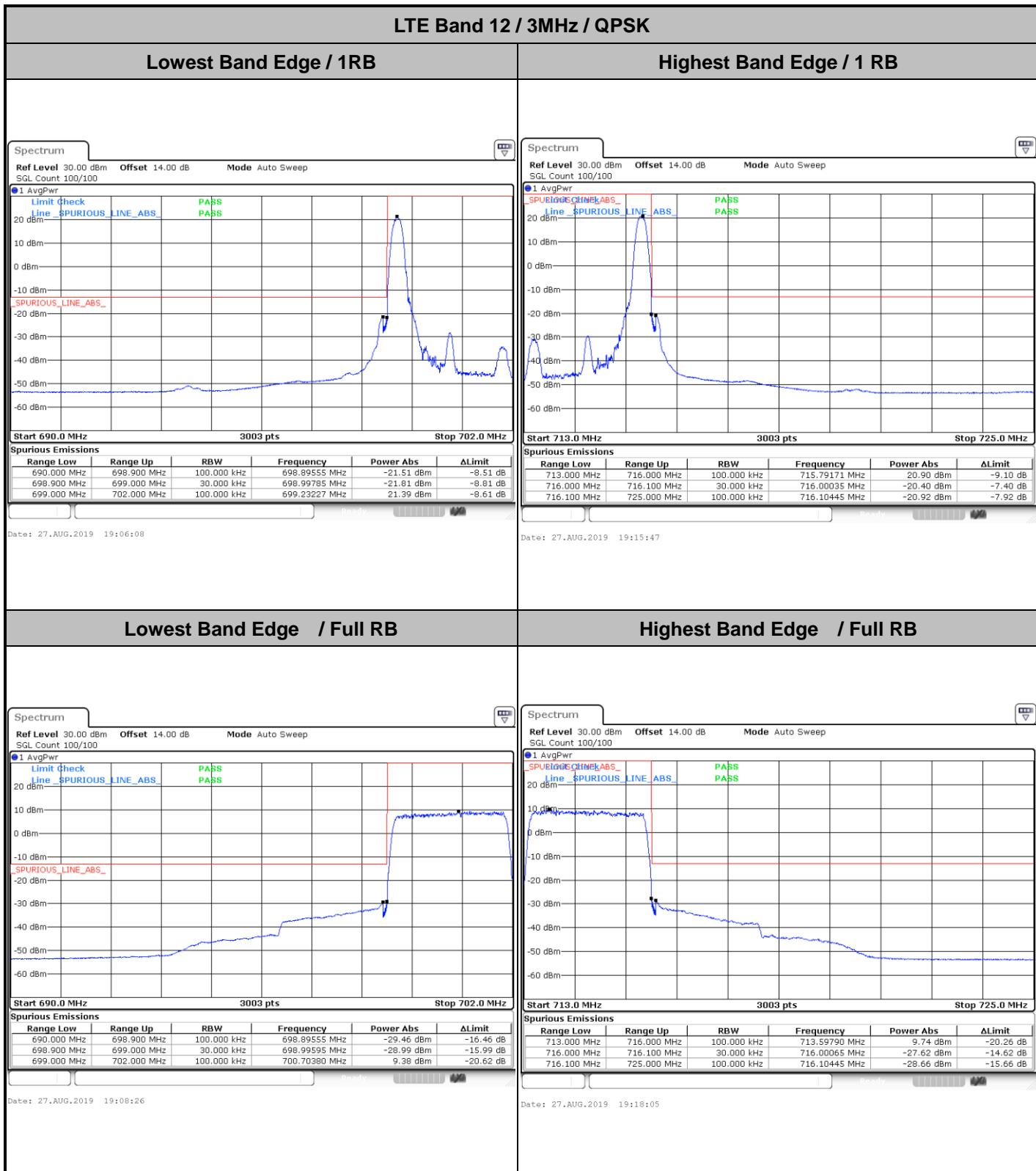


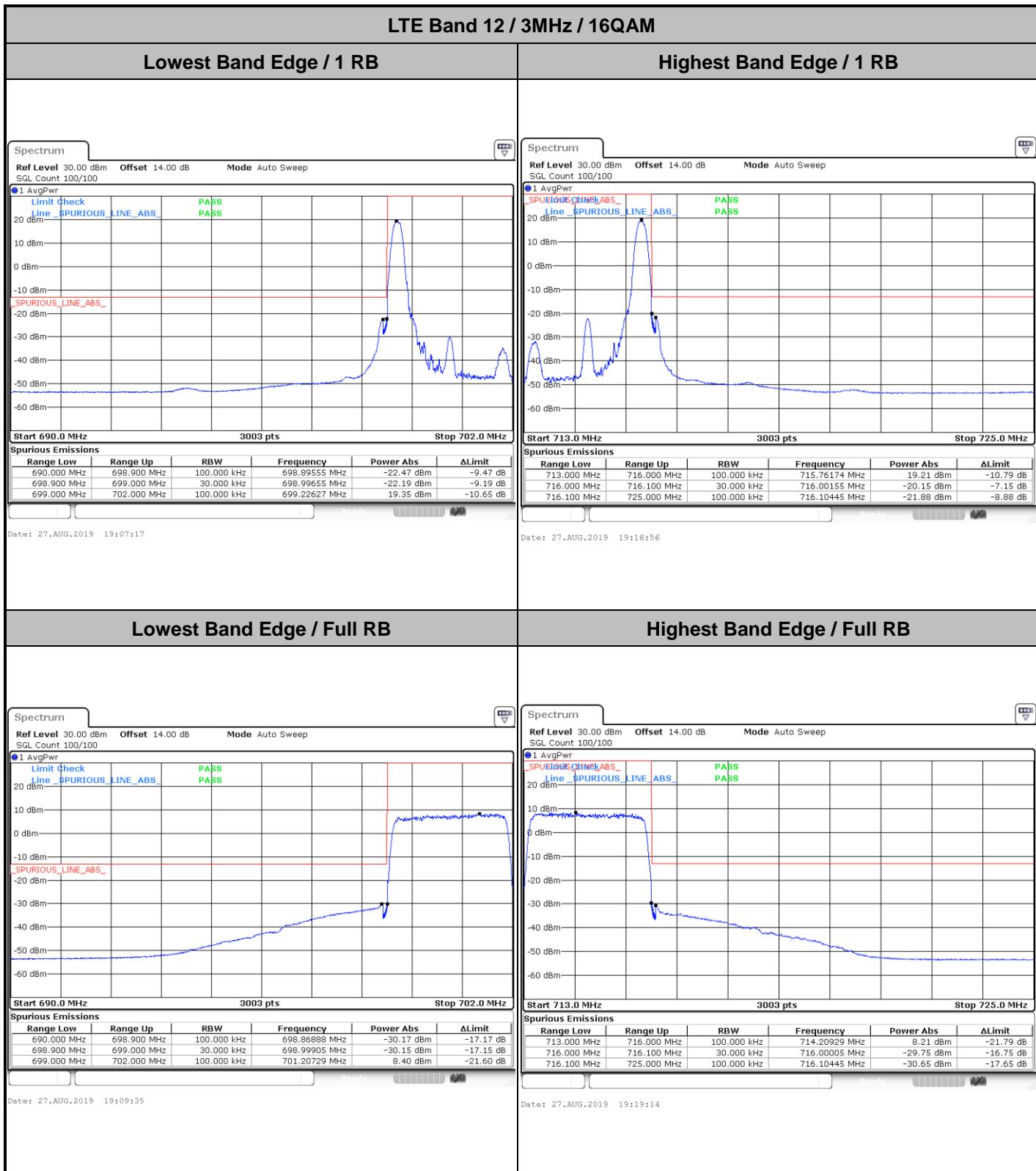


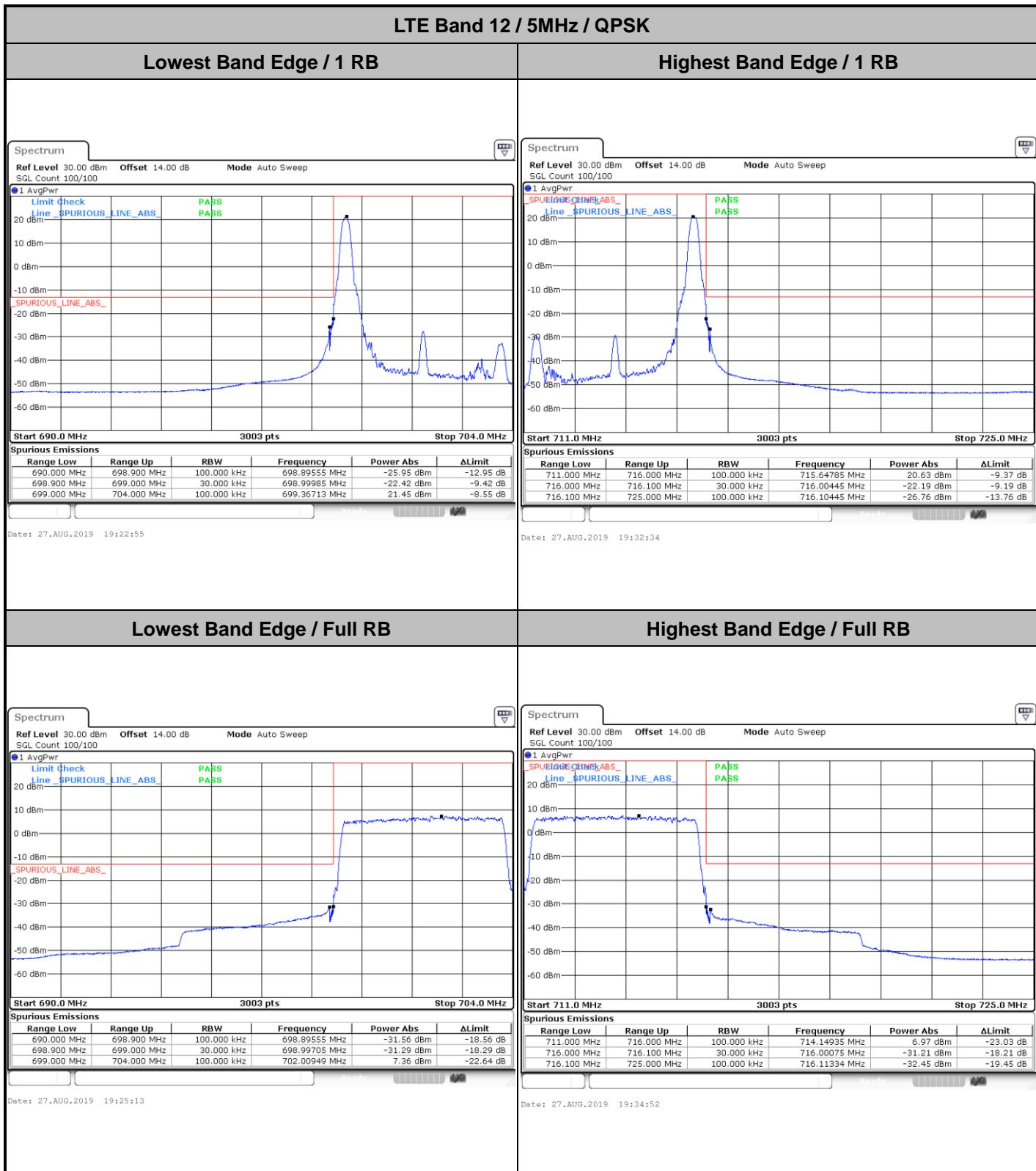
## Conducted Band Edge

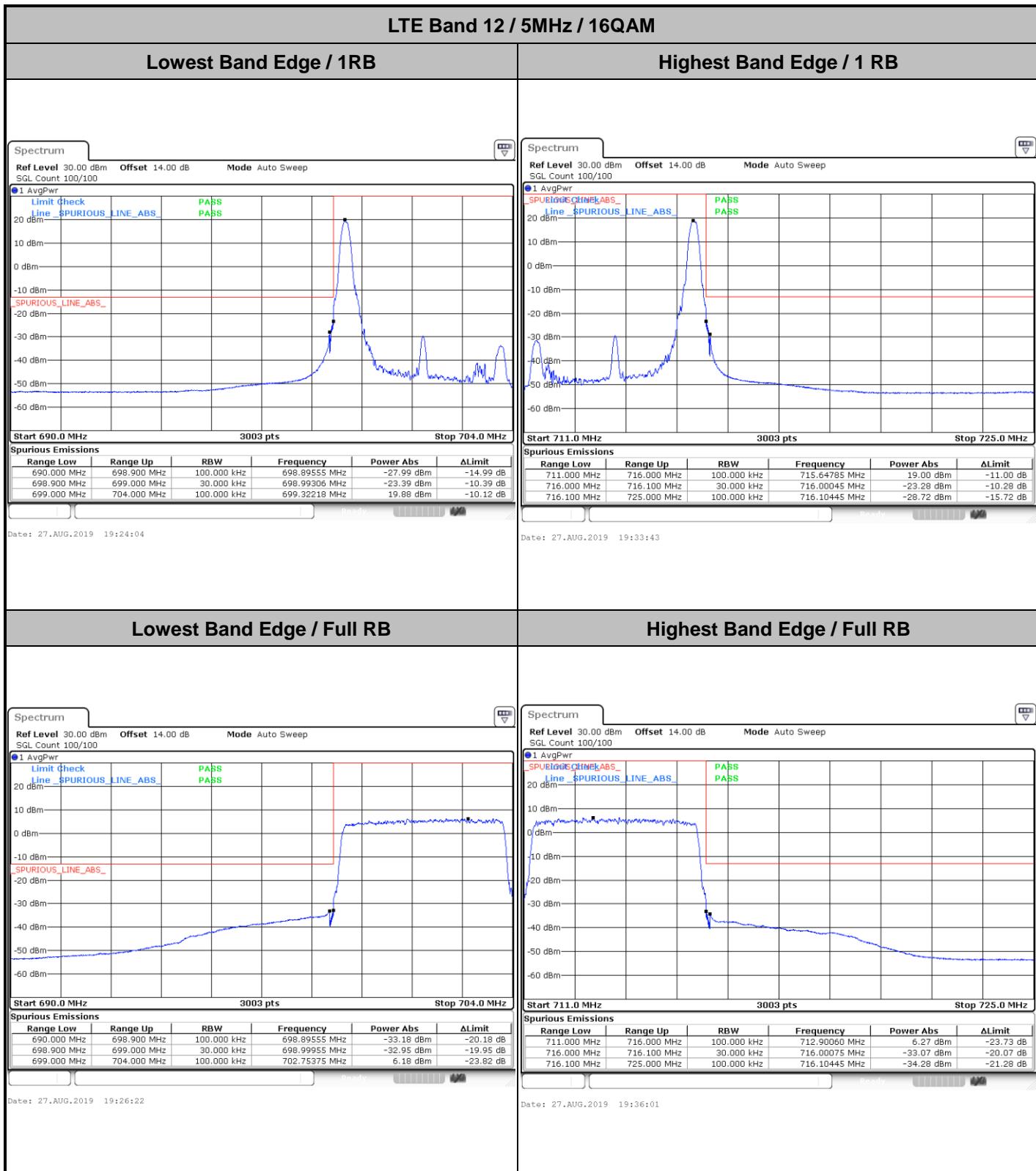


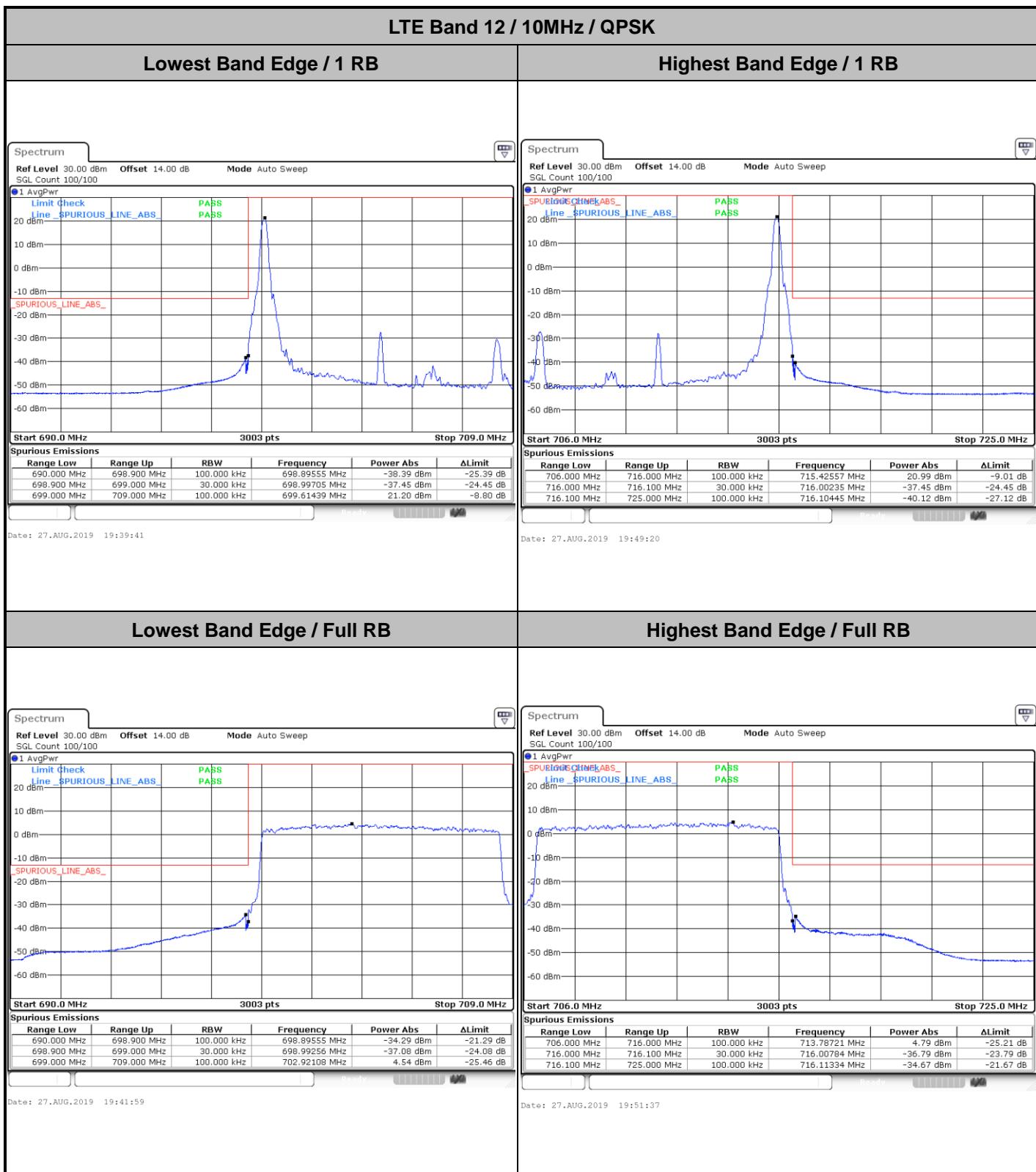


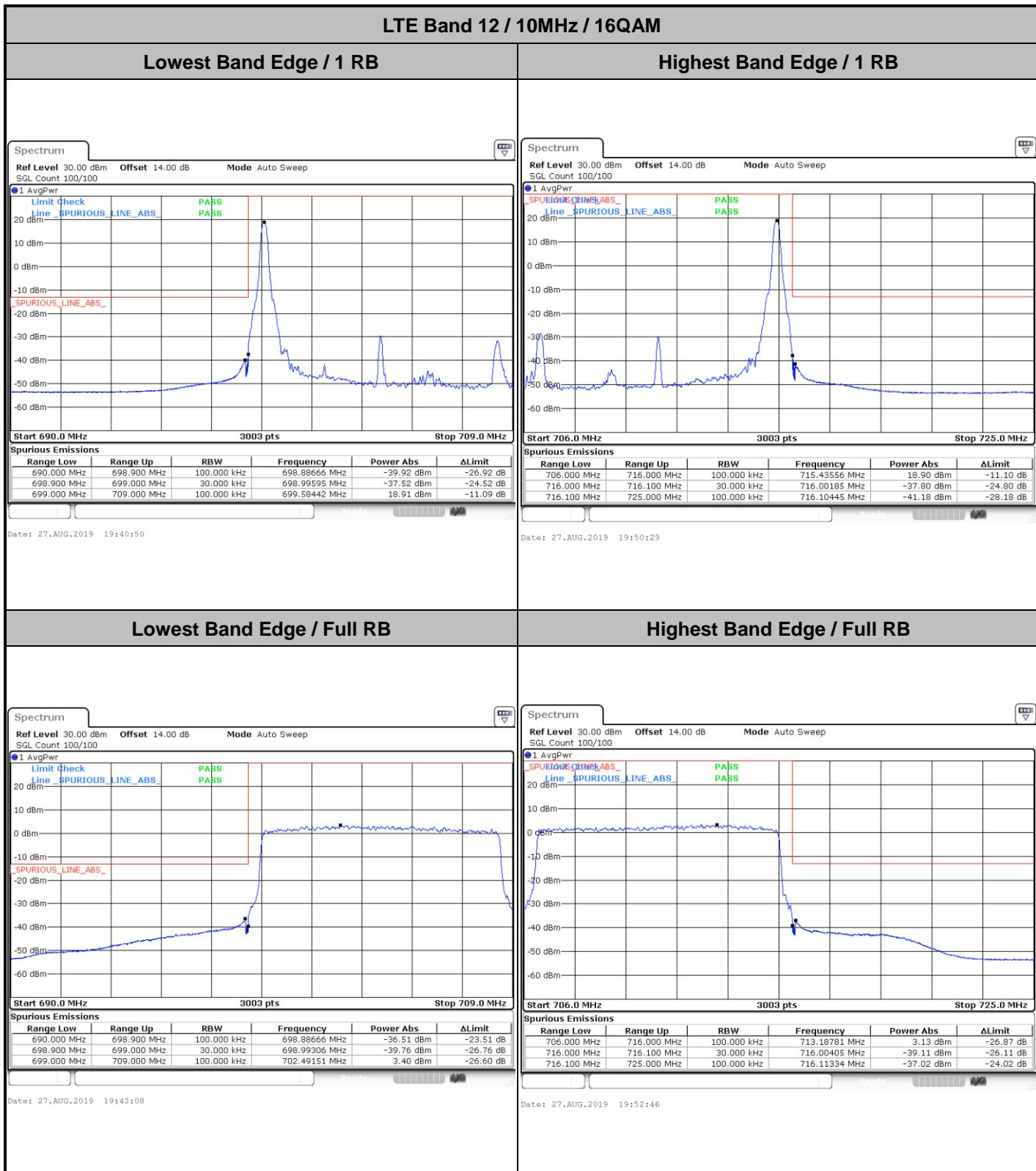












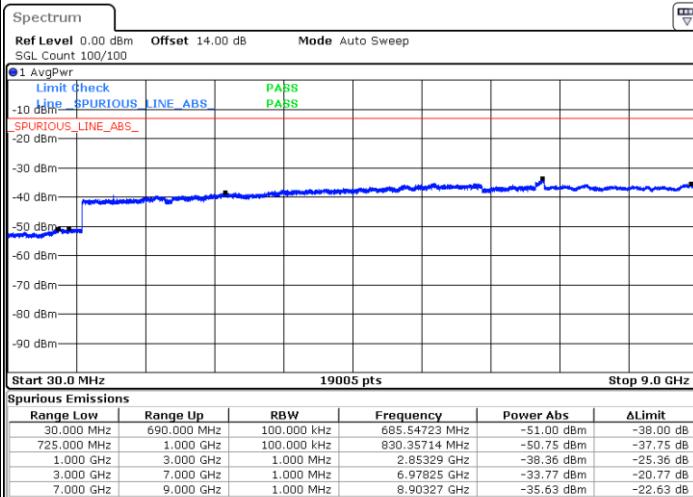
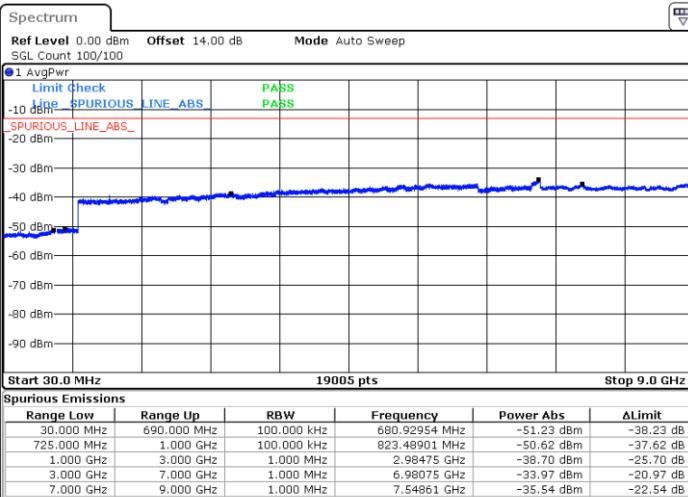


## Conducted Spurious Emission

### LTE Band 12 / 1.4MHz

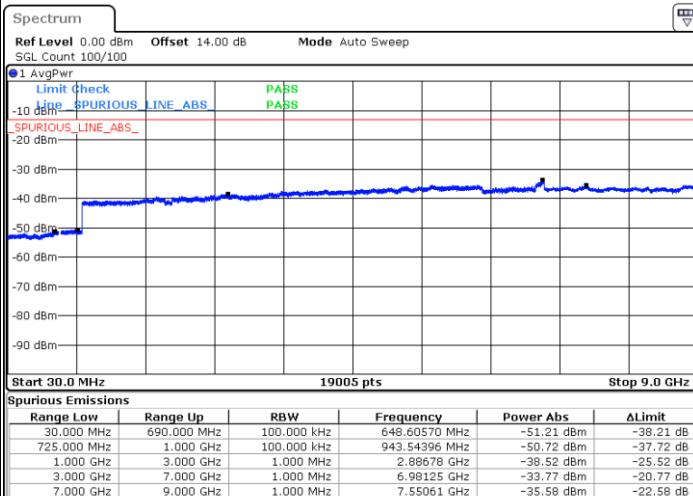
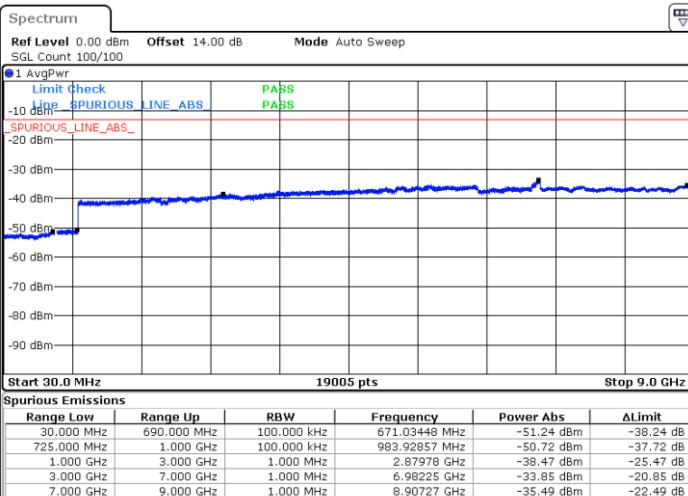
#### Lowest Channel / QPSK

#### Lowest Channel / 16QAM



#### Middle Channel / QPSK

#### Middle Channel / 16QAM

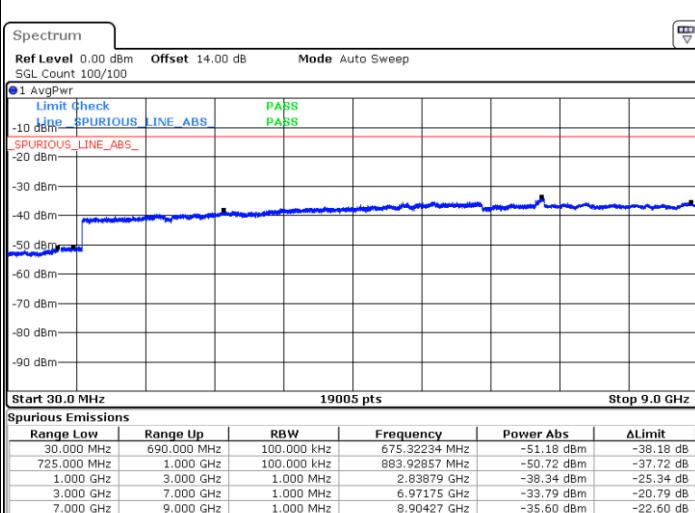
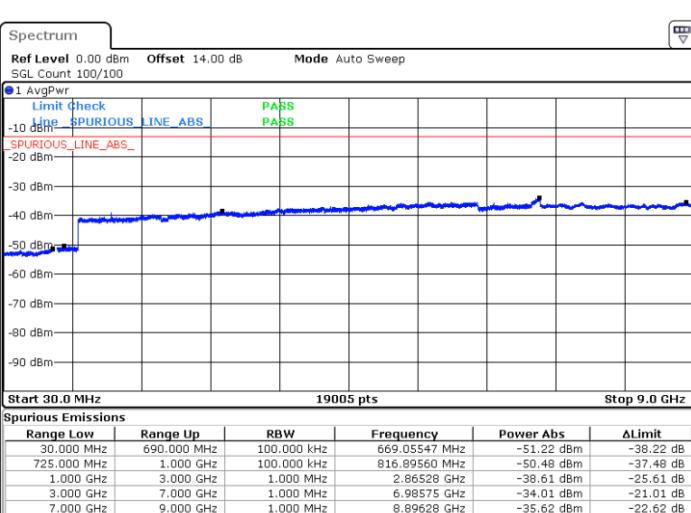




## LTE Band 12 / 1.4MHz

## Highest Channel / QPSK

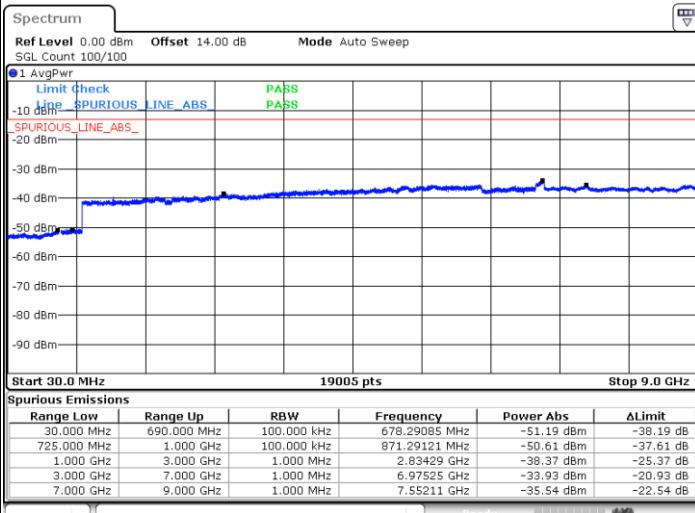
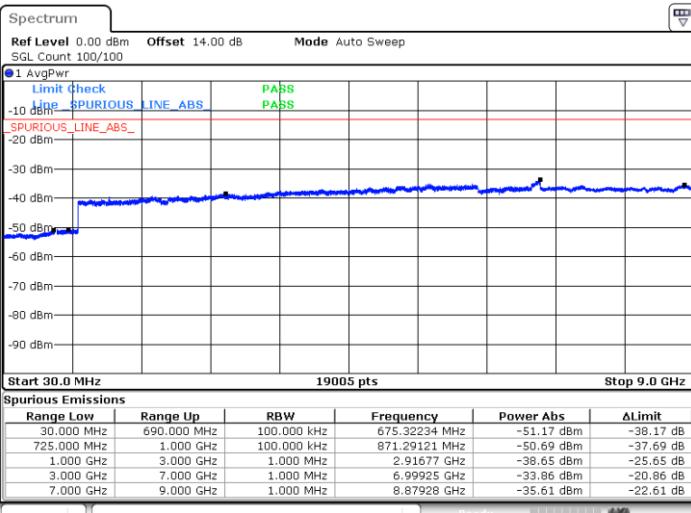
## Highest Channel / 16QAM

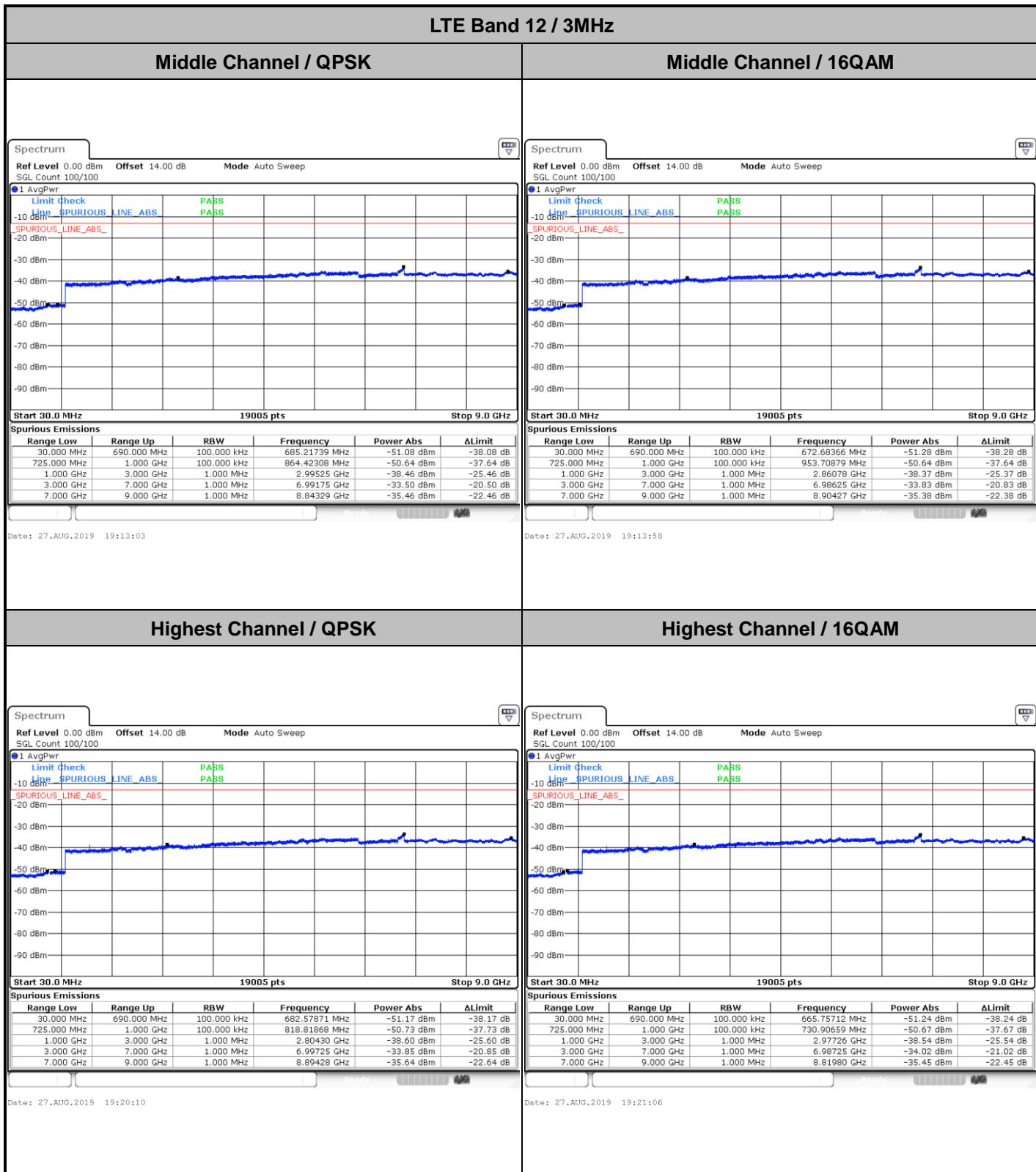


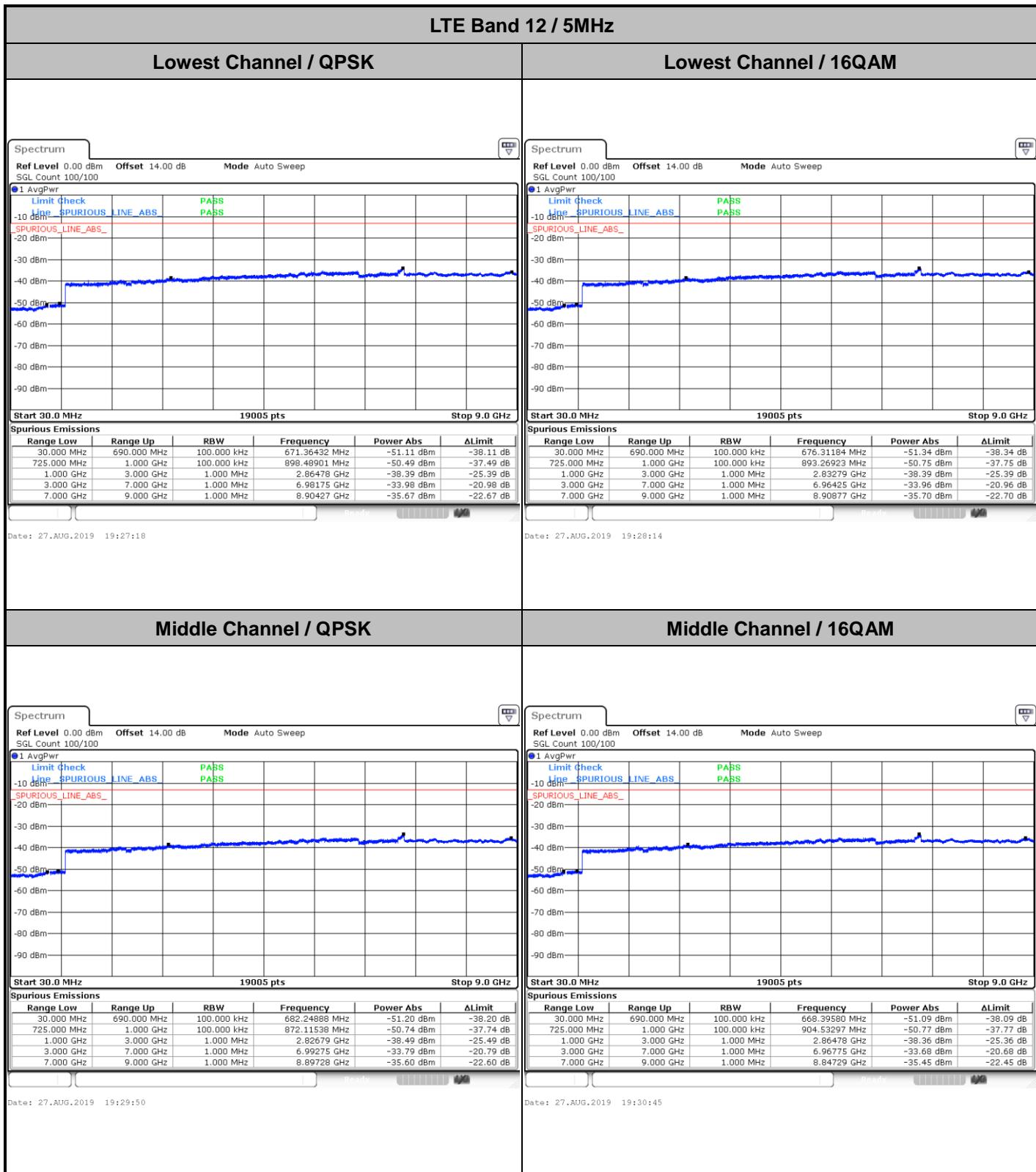
## LTE Band 12 / 3MHz

## Lowest Channel / QPSK

## Lowest Channel / 16QAM





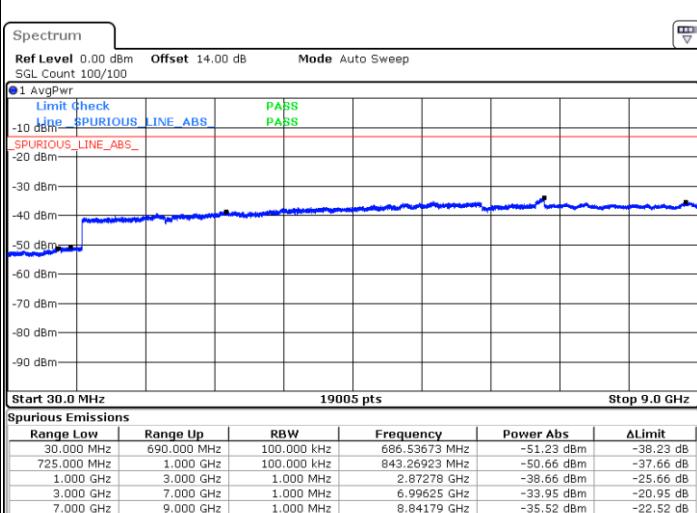
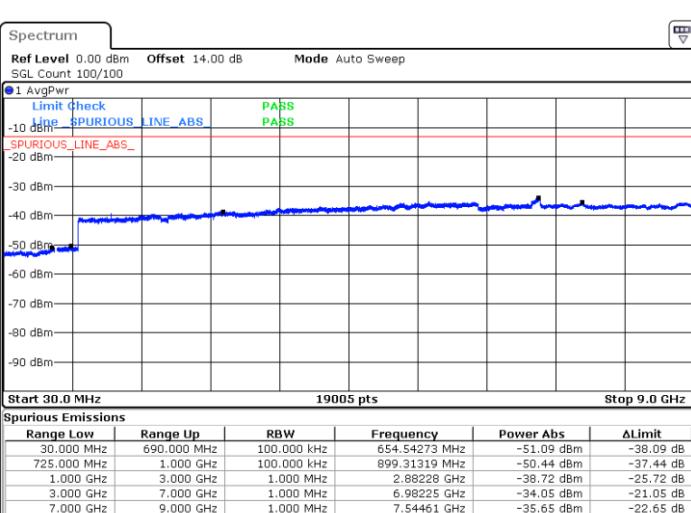




## LTE Band 12 / 5MHz

## Highest Channel / QPSK

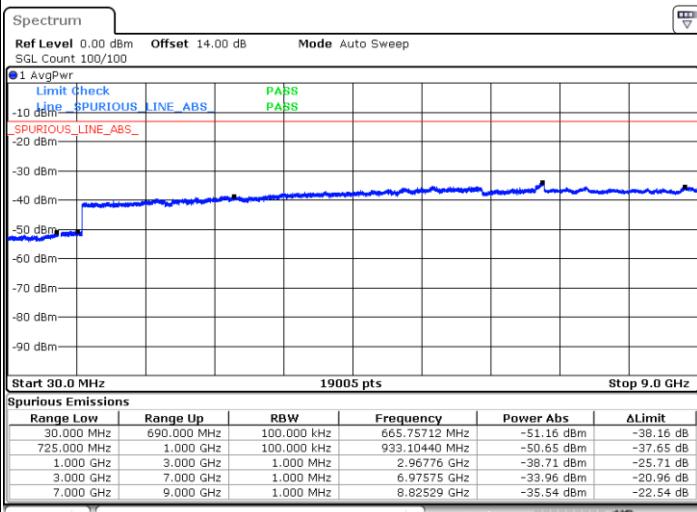
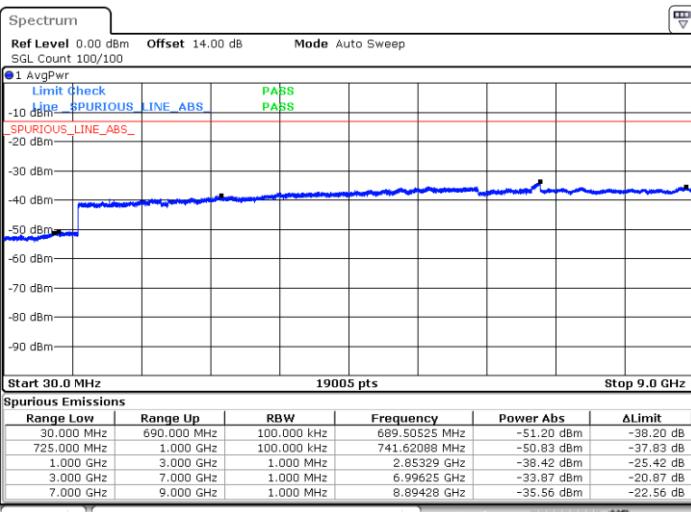
## Highest Channel / 16QAM

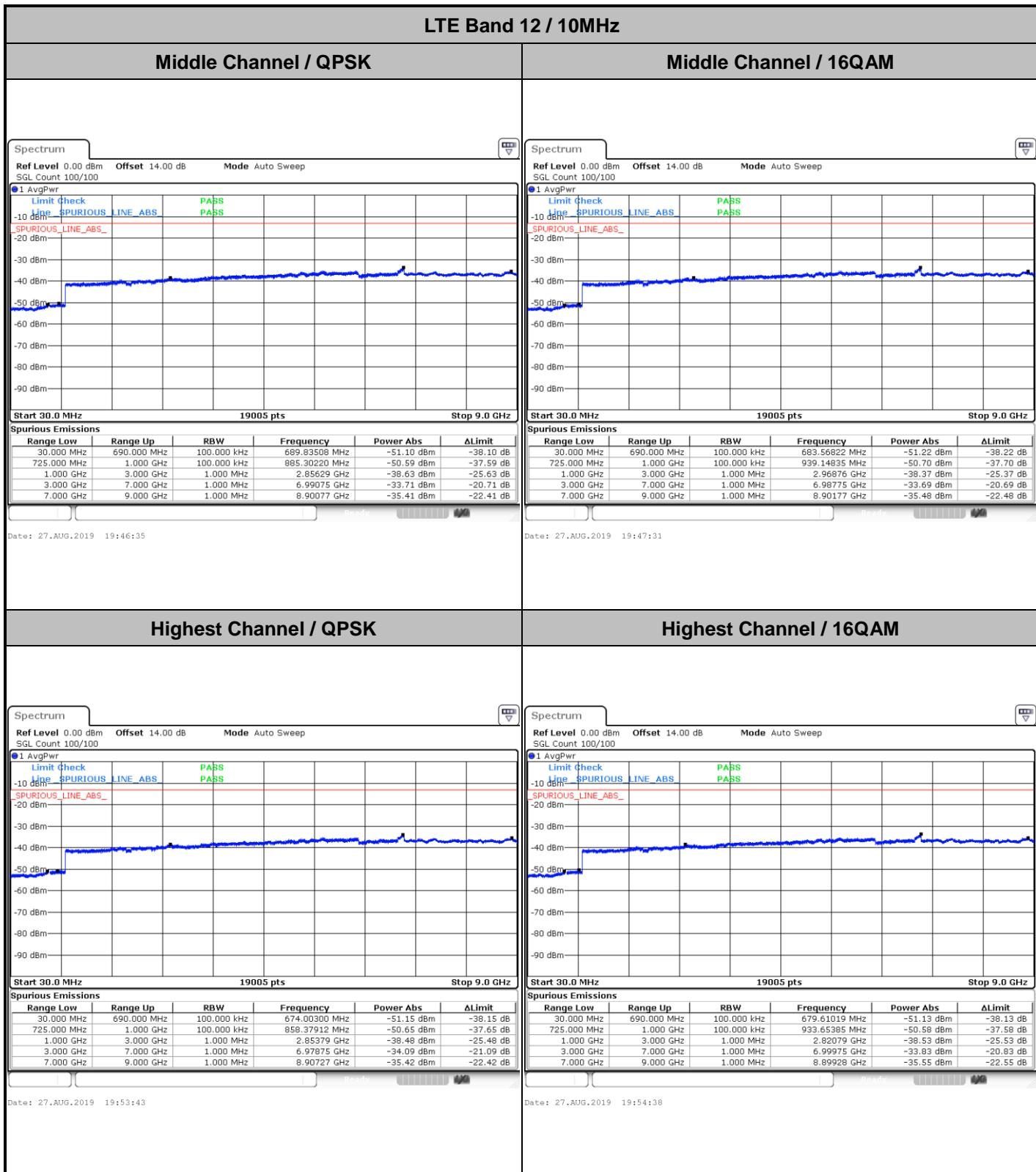


## LTE Band 12 / 10MHz

## Lowest Channel / QPSK

## Lowest Channel / 16QAM







## 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	0.0092	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0085	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0082	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.35 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	4.2	4.9	5.13	5.77	PASS
Highest CH	-	-	-	-	