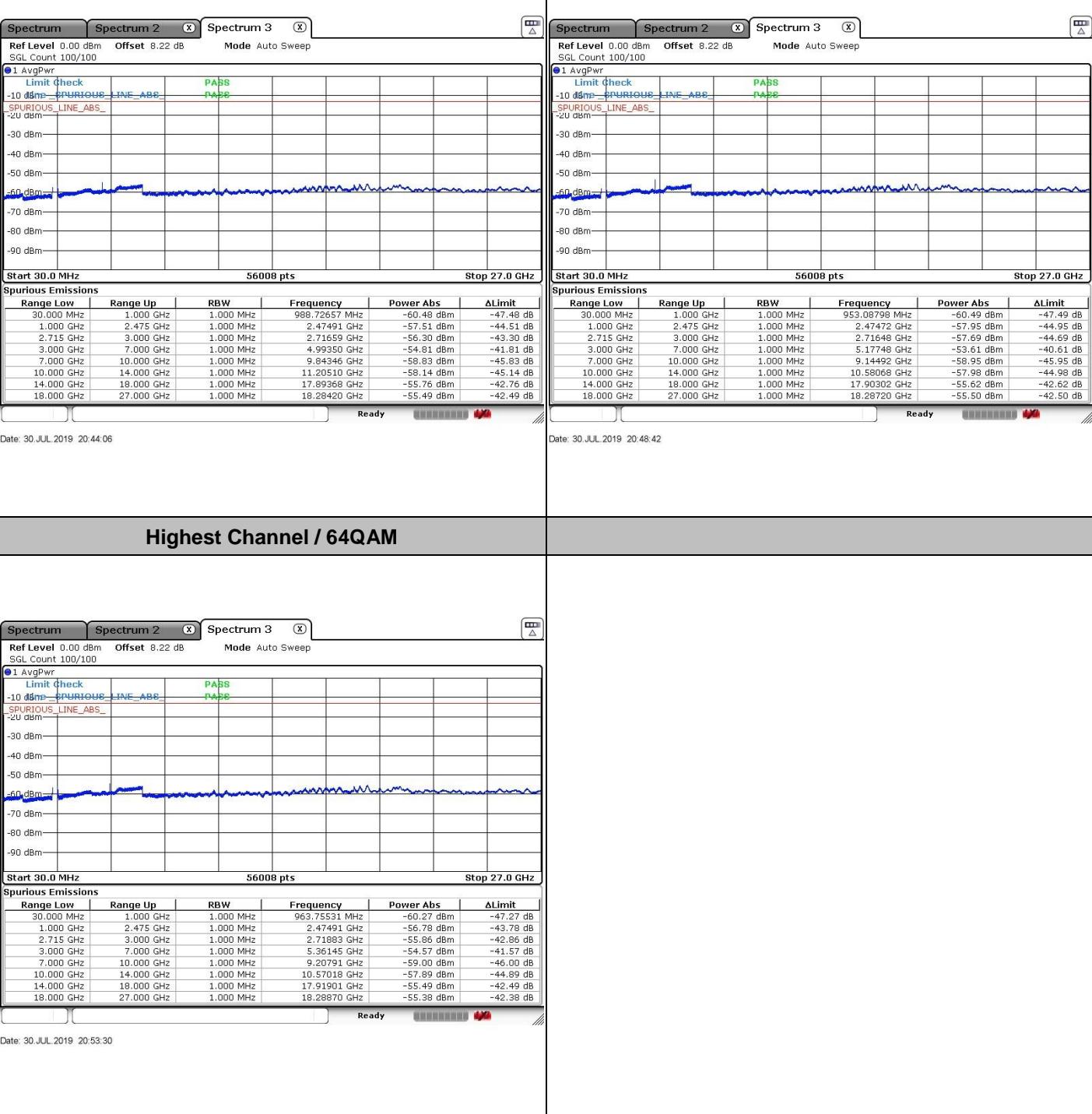




## LTE Band 41 / 10MHz

## Lowest Channel / 64QAM

## Middle Channel / 64QAM

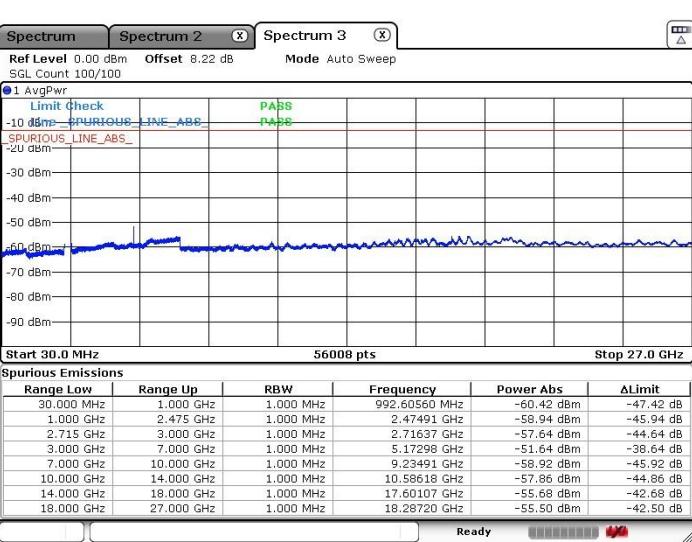
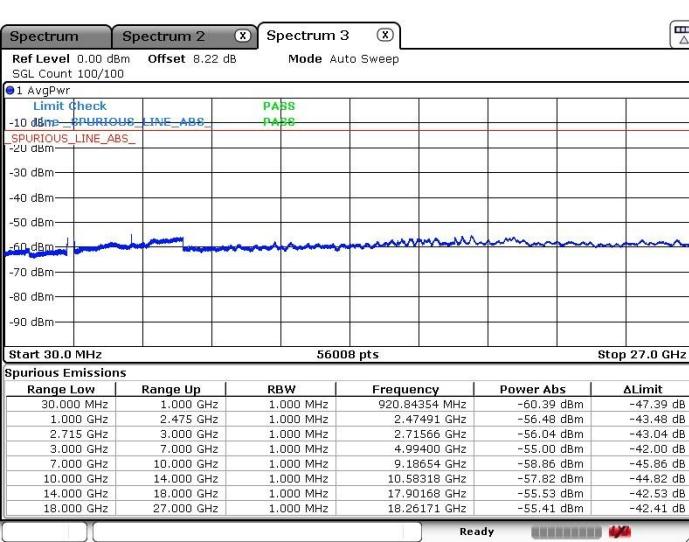




## LTE Band 41 / 15MHz

## Lowest Channel / 64QAM

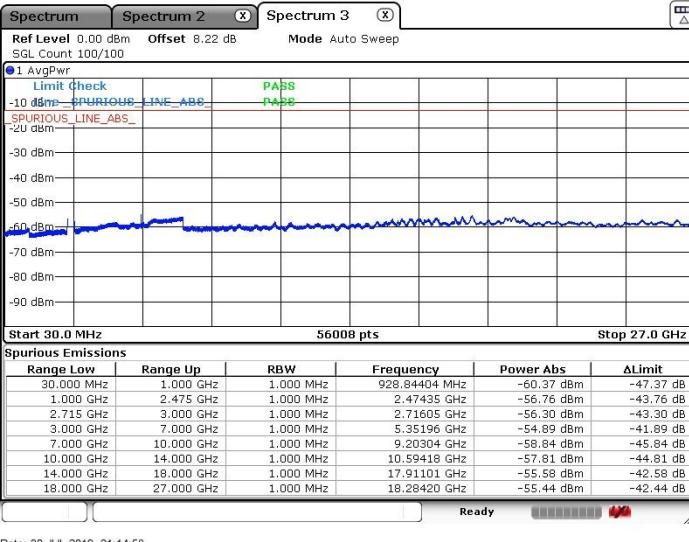
## Middle Channel / 64QAM



Date: 30.JUL.2019 21:06:32

Date: 30.JUL.2019 21:10:50

## Highest Channel / 64QAM



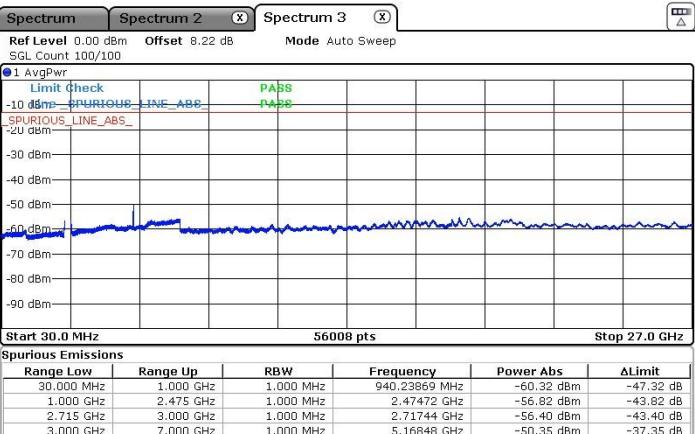
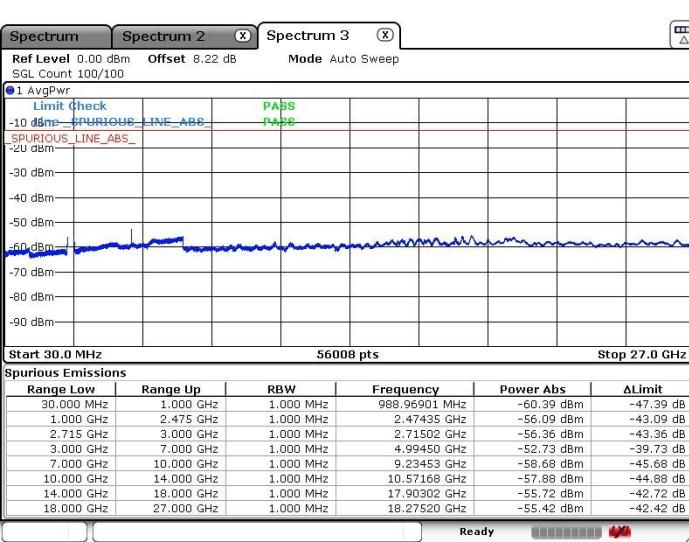
Date: 30.JUL.2019 21:14:58



## LTE Band 41 / 20MHz

## Lowest Channel / 64QAM

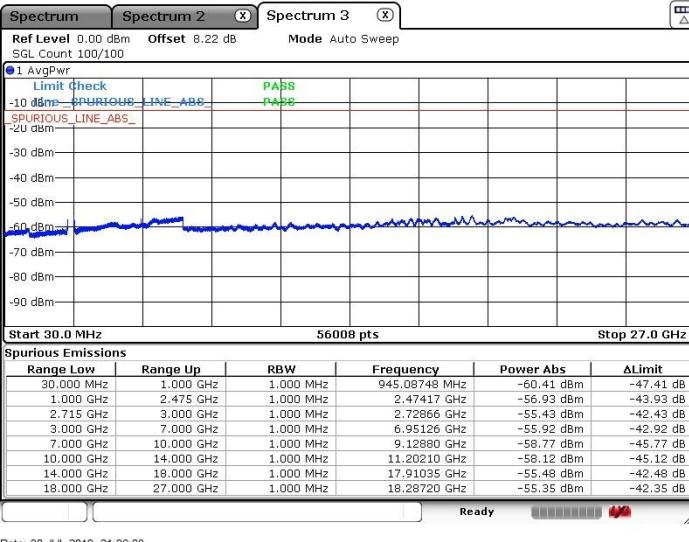
## Middle Channel / 64QAM



Date: 30.JUL.2019 21:28:07

Date: 30.JUL.2019 21:32:19

## Highest Channel / 64QAM



Date: 30.JUL.2019 21:36:08



### A.1.7 Frequency Stability

Test Conditions		LTE Band 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0022	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0007	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0009	
20	Battery End Point	0.0010	

**Note:**

1. Normal Voltage =120 V. ; Battery End Point (BEP) =90 V. ; Maximum Voltage =264 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## A.2 MIMO Antenna 1

### A.2.1 Conducted Output Power(Average power)

LTE Band 41 Maximum Average Power [dBm]							Limit [dBm]	Test Result
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest		
20	1	0	QPSK	19.01	18.53	18.43	33.01	Pass
20	1	99		18.58	18.58	18.67		
20	18	0		18.59	18.01	18.22		
20	18	82		18.11	18.35	18.28		
20	100	0		17.99	18.16	18.36		
20	1	0		18.76	18.48	19.41		
20	1	99	16-QAM	18.49	18.52	18.56	33.01	Pass
20	18	0		18.57	17.97	18.18		
20	18	82		18.10	18.31	18.24		
20	100	0		17.99	18.12	18.29		
20	1	0		19.04	18.71	18.68		
20	1	99	64-QAM	18.79	18.77	18.54	33.01	Pass
20	18	0		18.56	17.93	18.16		
20	18	82		18.05	18.28	18.21		
20	100	0		17.96	18.09	18.32		
15	1	0		18.21	18.03	18.38		
15	1	74	QPSK	17.89	18.33	18.31	33.01	Pass
15	16	0		17.60	17.71	17.91		
15	16	59		17.97	18.16	18.19		
15	75	0		17.77	17.95	18.13		
15	1	0		18.07	17.96	18.21		
15	1	74	16-QAM	17.82	18.23	18.18	33.01	Pass
15	16	0		17.57	17.66	17.86		
15	16	59		17.94	18.15	18.17		
15	75	0		17.76	17.91	18.14		
15	1	0		18.32	18.24	18.49		
15	1	74	64-QAM	18.11	18.56	18.42	33.01	Pass
15	16	0		17.61	17.70	17.91		
15	16	59		17.94	18.17	18.16		
15	75	0		17.72	17.90	18.11		

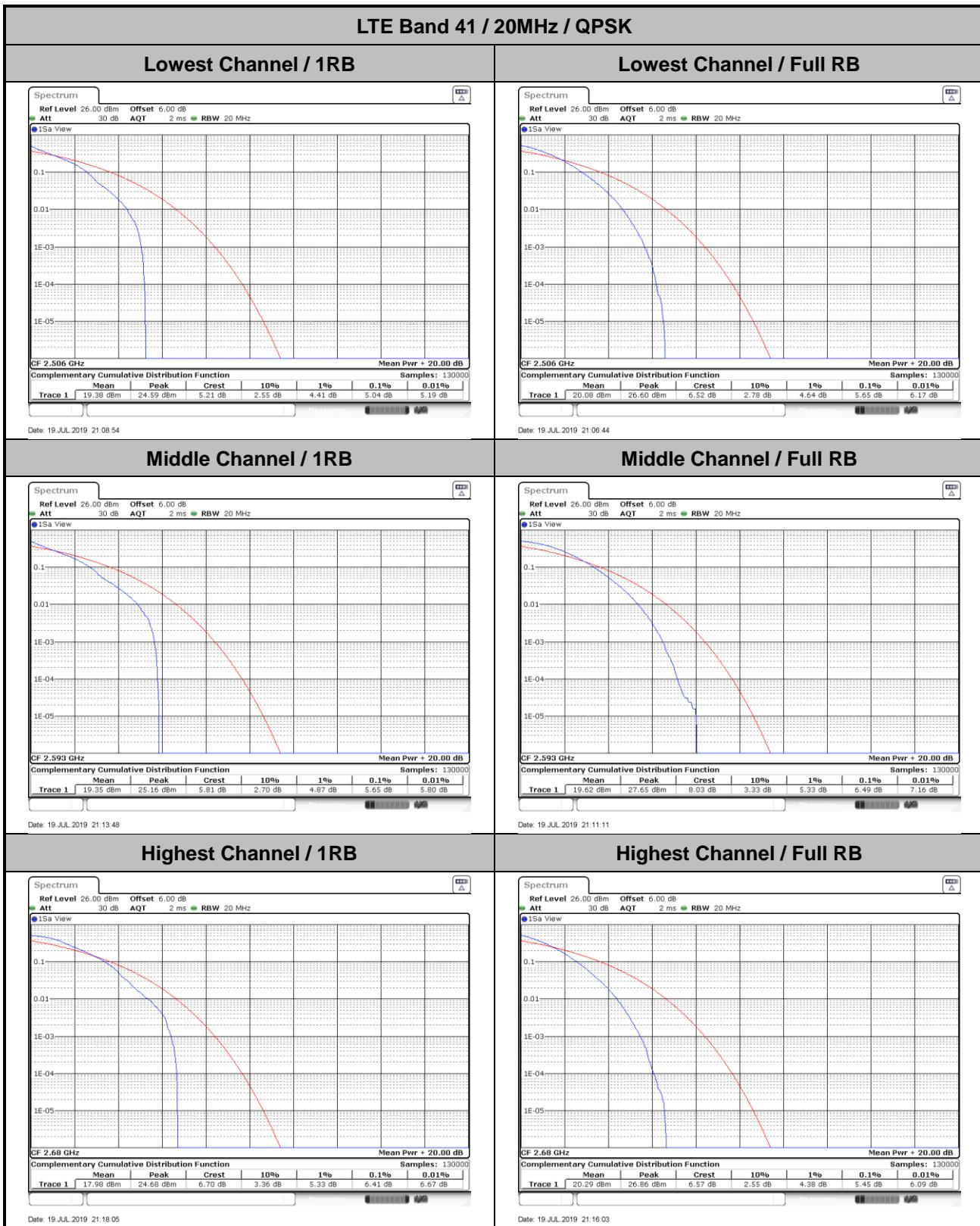


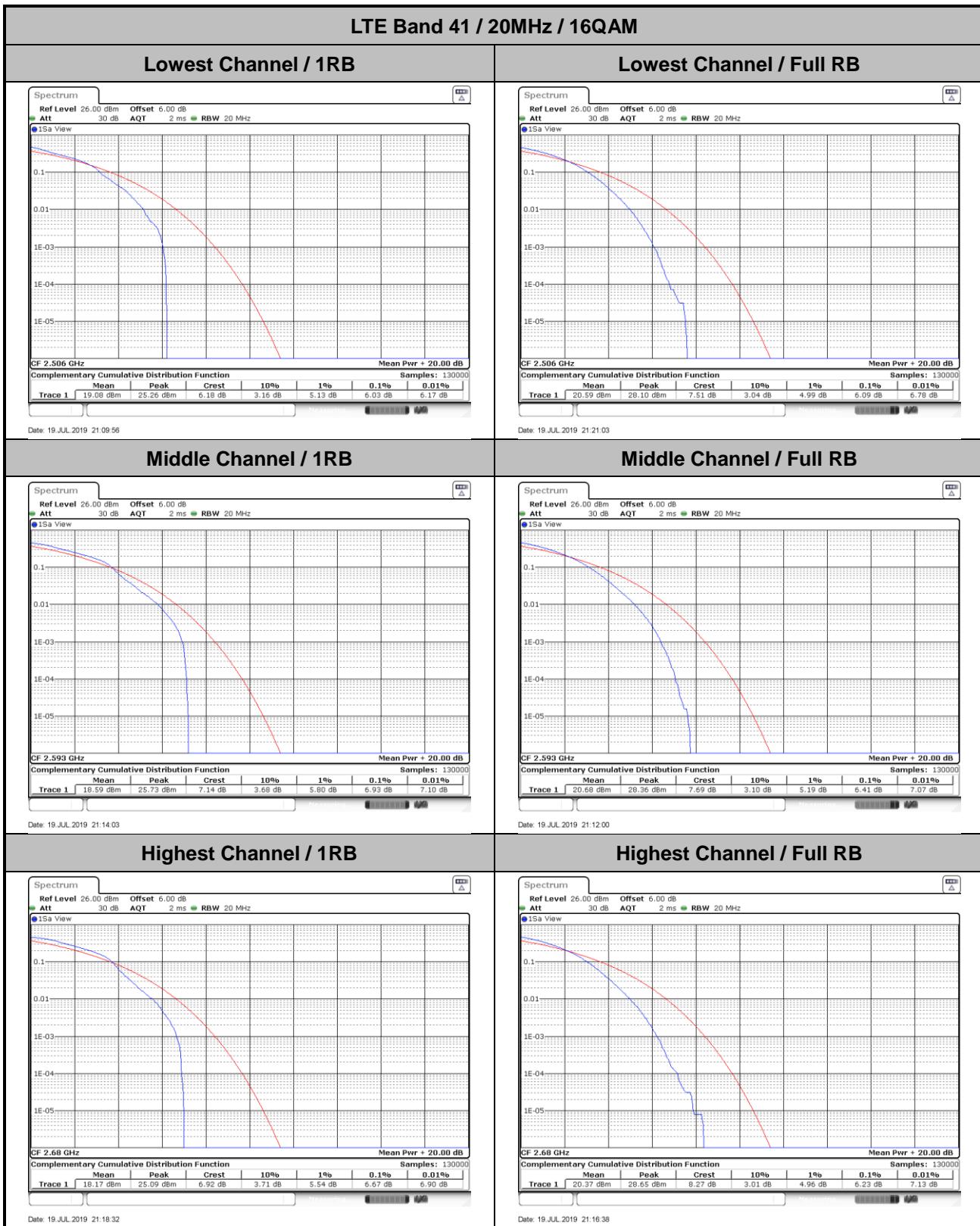
LTE Band 41 Maximum Average Power [dBm]							Limit [dBm]	Test Result
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest		
10	1	0	QPSK	18.67	18.61	18.28	33.01	Pass
10	1	49		18.55	18.72	18.58		
10	12	0		18.49	18.40	18.22		
10	12	38		18.21	18.48	18.25		
10	50	0		18.15	18.19	18.41		
10	1	0		18.66	18.53	18.24		
10	1	49	16-QAM	18.51	18.64	18.56	33.01	Pass
10	12	0		18.45	18.33	18.14		
10	12	38		18.17	18.46	18.21		
10	50	0		18.07	18.18	18.39		
10	1	0		18.94	18.83	18.62		
10	1	49		18.87	18.94	18.81		
10	12	0	64-QAM	18.47	18.37	18.16	33.01	Pass
10	12	38		18.19	18.47	18.22		
10	50	0		18.07	18.12	18.36		
5	1	0		18.54	18.15	18.07		
5	1	24		17.88	17.97	18.29		
5	8	0		18.69	18.43	18.49		
5	8	17	QPSK	17.78	17.88	18.28	33.01	Pass
5	25	0		18.07	17.89	18.08		
5	1	0		18.41	18.02	17.93		
5	1	24		17.76	17.86	18.19		
5	8	0		18.63	18.29	18.36		
5	8	17		18.57	17.77	18.22		
5	25	0	16-QAM	18.09	17.81	18.01	33.01	Pass
5	1	0		18.71	18.38	17.99		
5	1	24		18.05	18.18	18.59		
5	8	0		18.82	18.31	18.37		
5	8	17		17.69	17.79	18.25		
5	25	0		18.01	17.78	18.06		

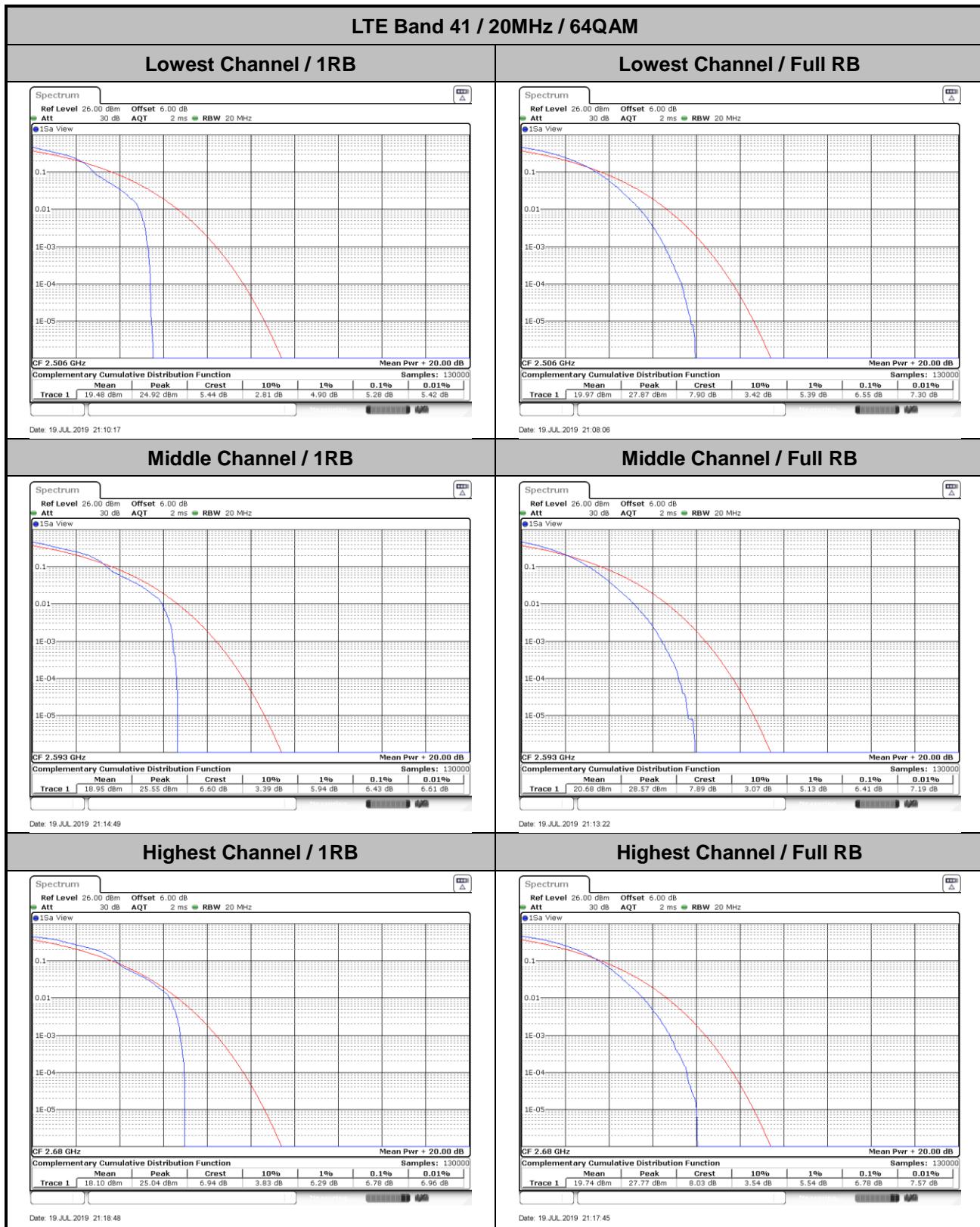
**A.2.2 Peak-to-Average Ratio**

Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.04	5.65	6.03	6.09	PASS
Middle CH	5.65	6.49	6.93	6.41	
Highest CH	6.41	5.45	6.67	6.23	

Mode	LTE Band 41 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.28	6.55			PASS
Middle CH	6.43	6.41			
Highest CH	6.78	6.78			



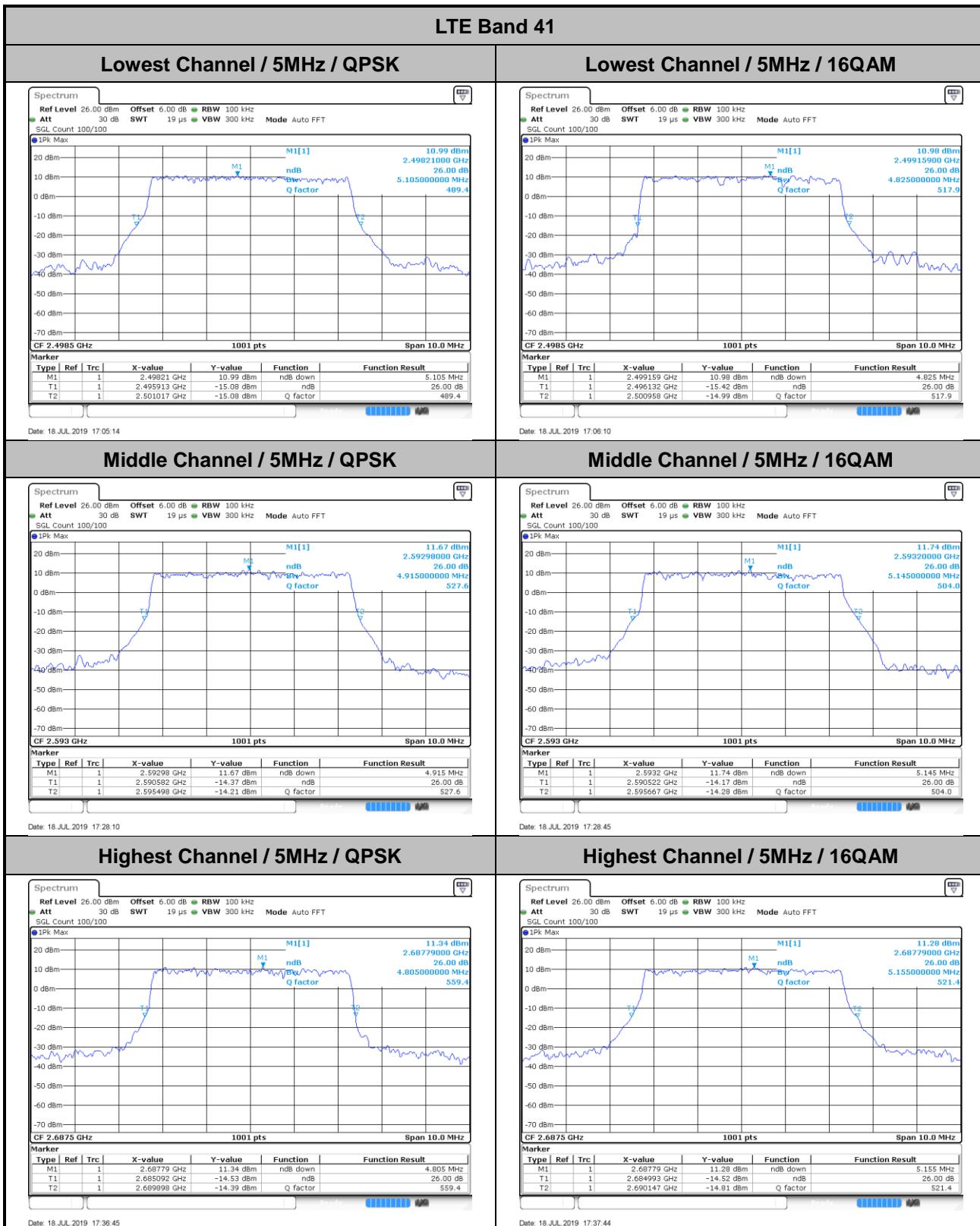


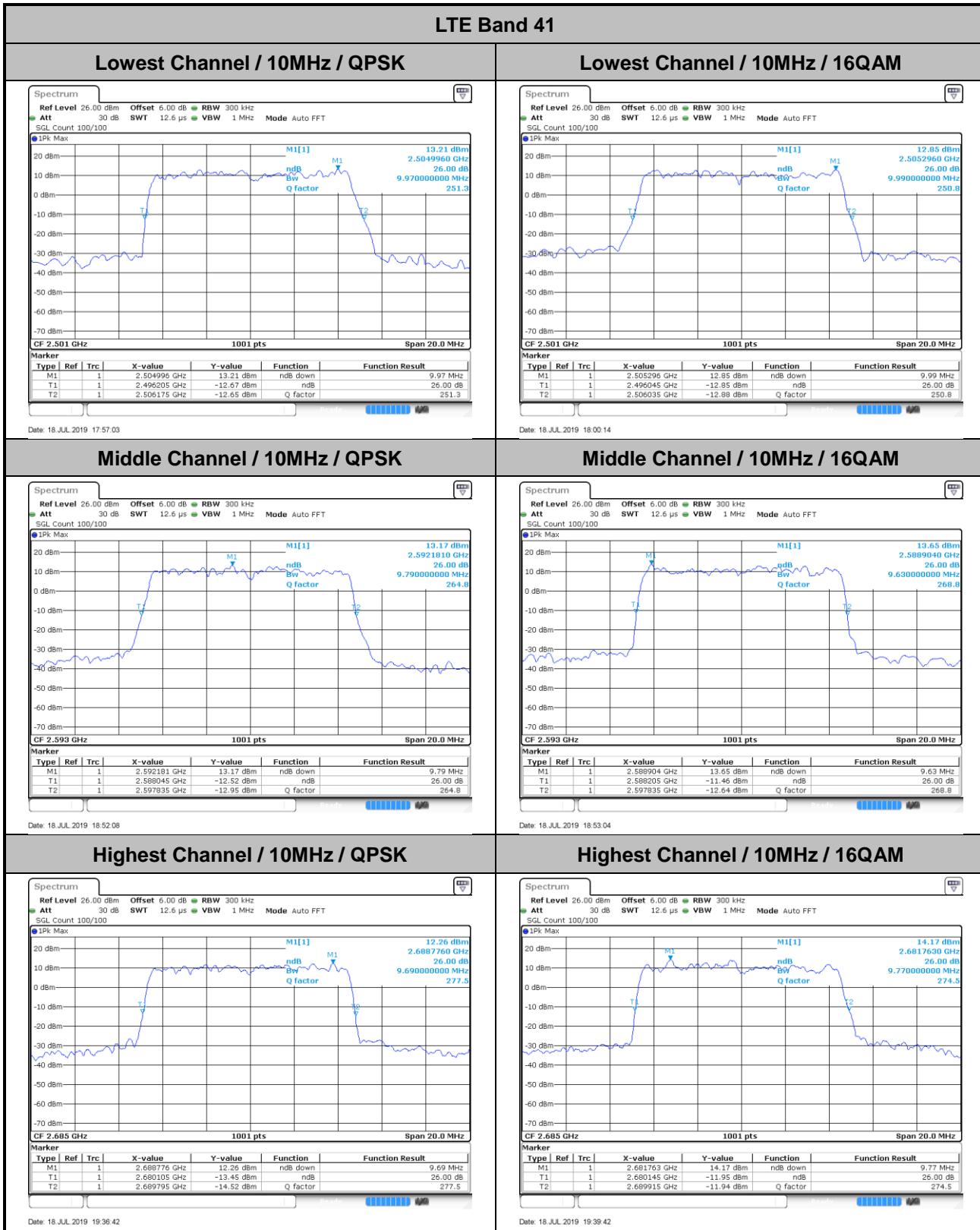


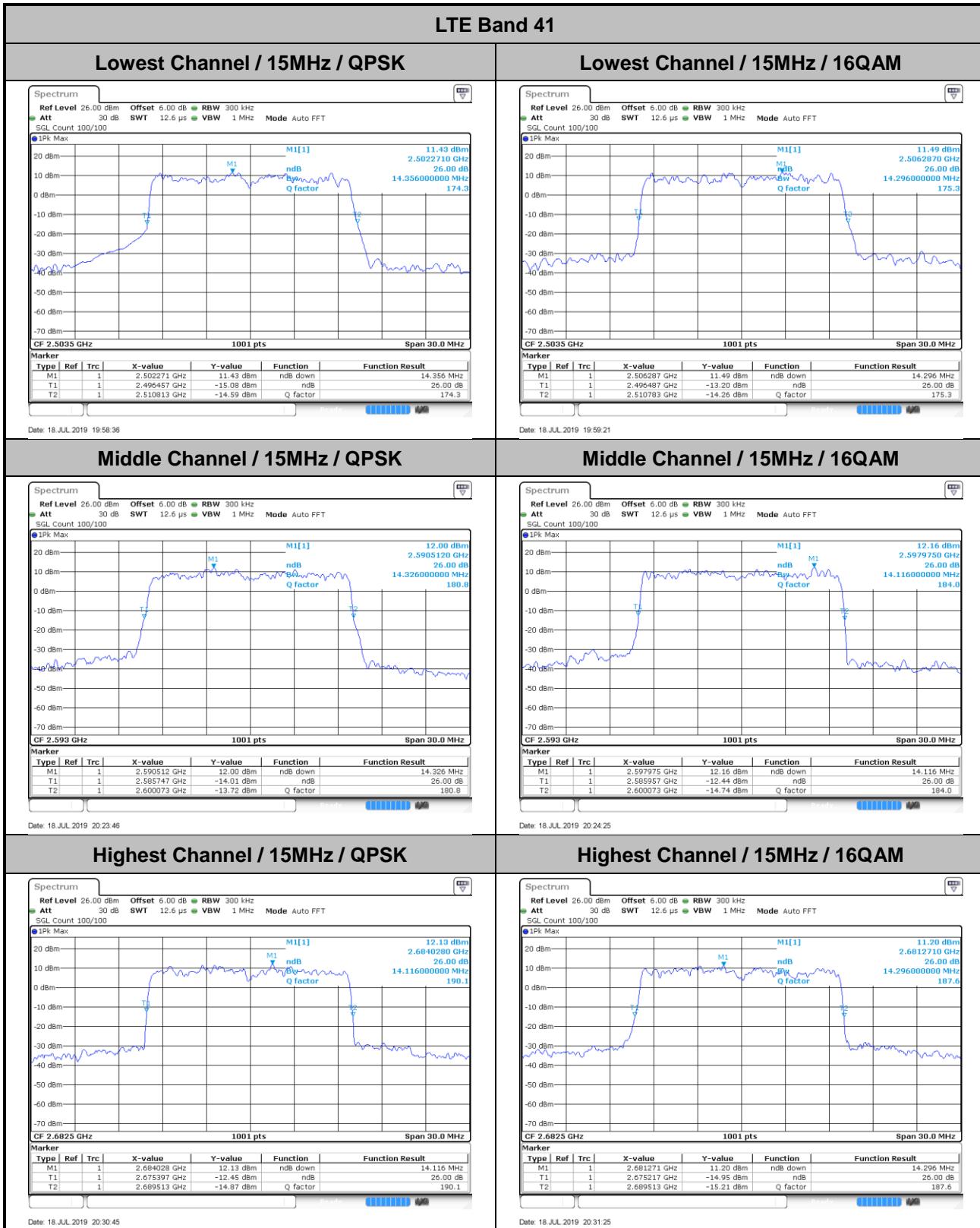


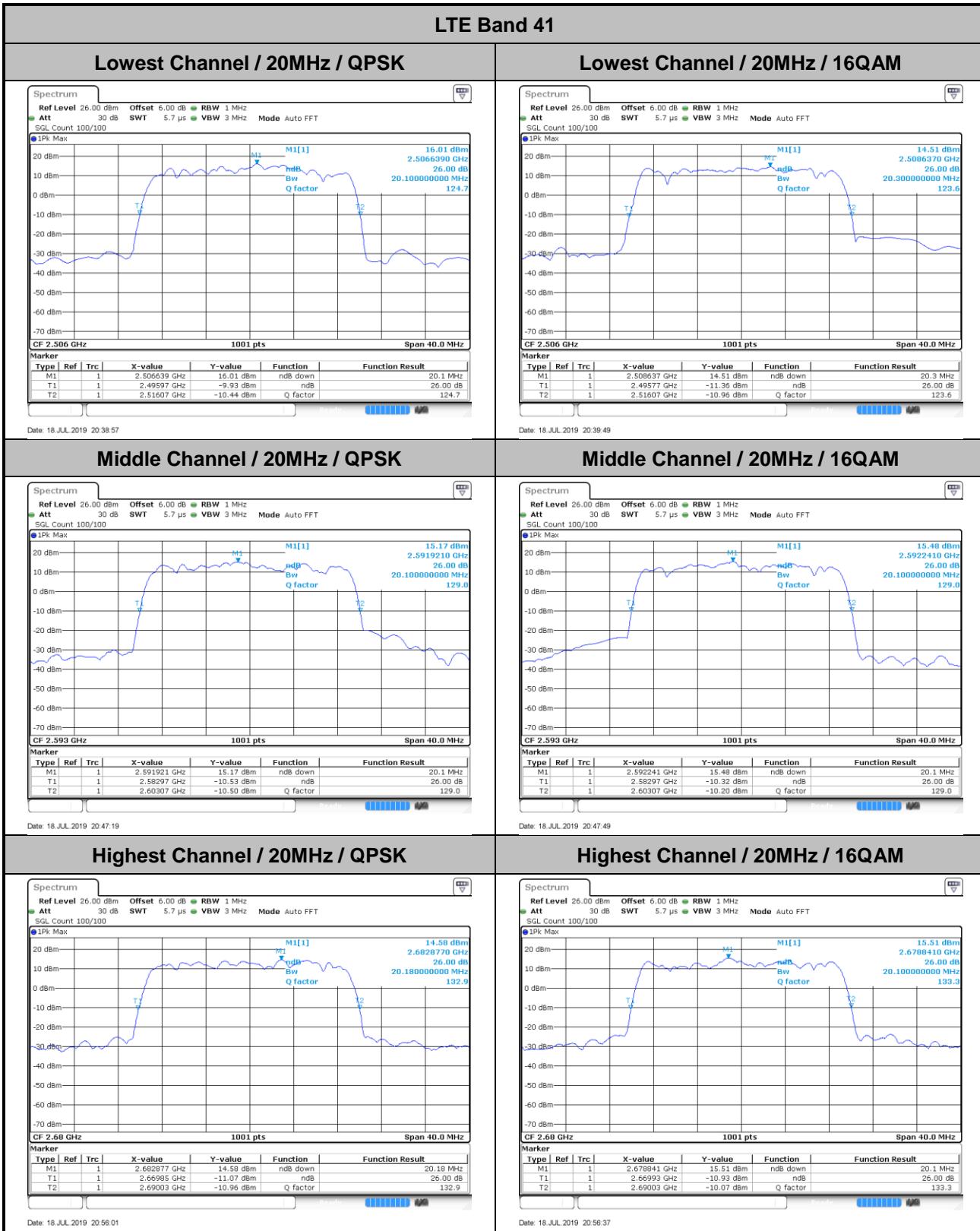
## A.2.3 26dB Bandwidth

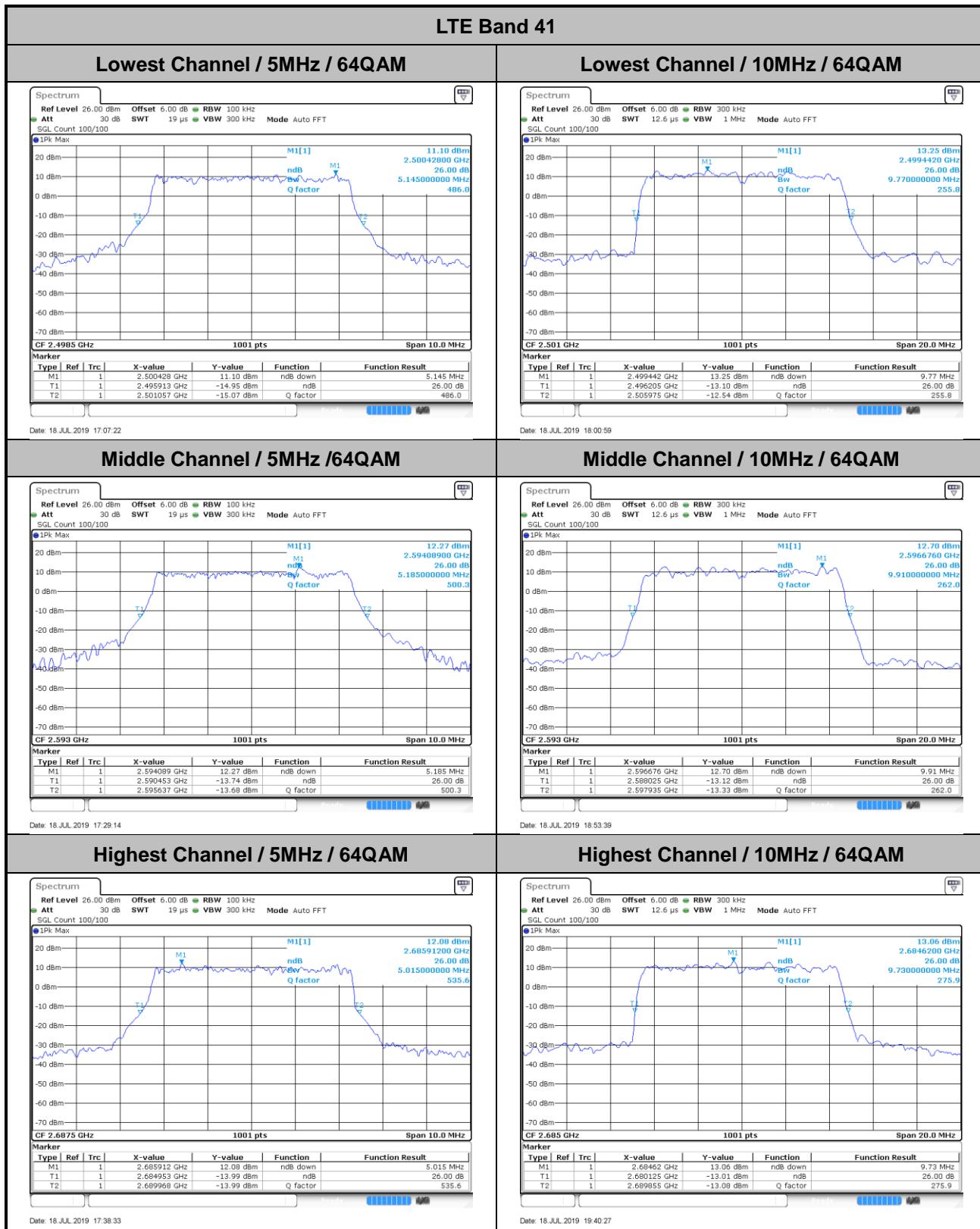
Mode	LTE Band 41 : 26dB BW(MHz)											
	5MHz		10MHz		15MHz		20MHz		5MHz	10MHz	15MHz	20MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	5.105	4.825	9.970	9.990	14.356	14.296	20.100	20.300	5.145	9.770	14.326	20.100
Middle CH	4.915	5.145	9.790	9.630	14.326	14.116	20.100	20.100	5.185	9.910	14.326	20.420
Highest CH	4.805	5.155	9.690	9.770	14.116	14.296	20.180	20.100	5.015	9.730	14.176	20.220

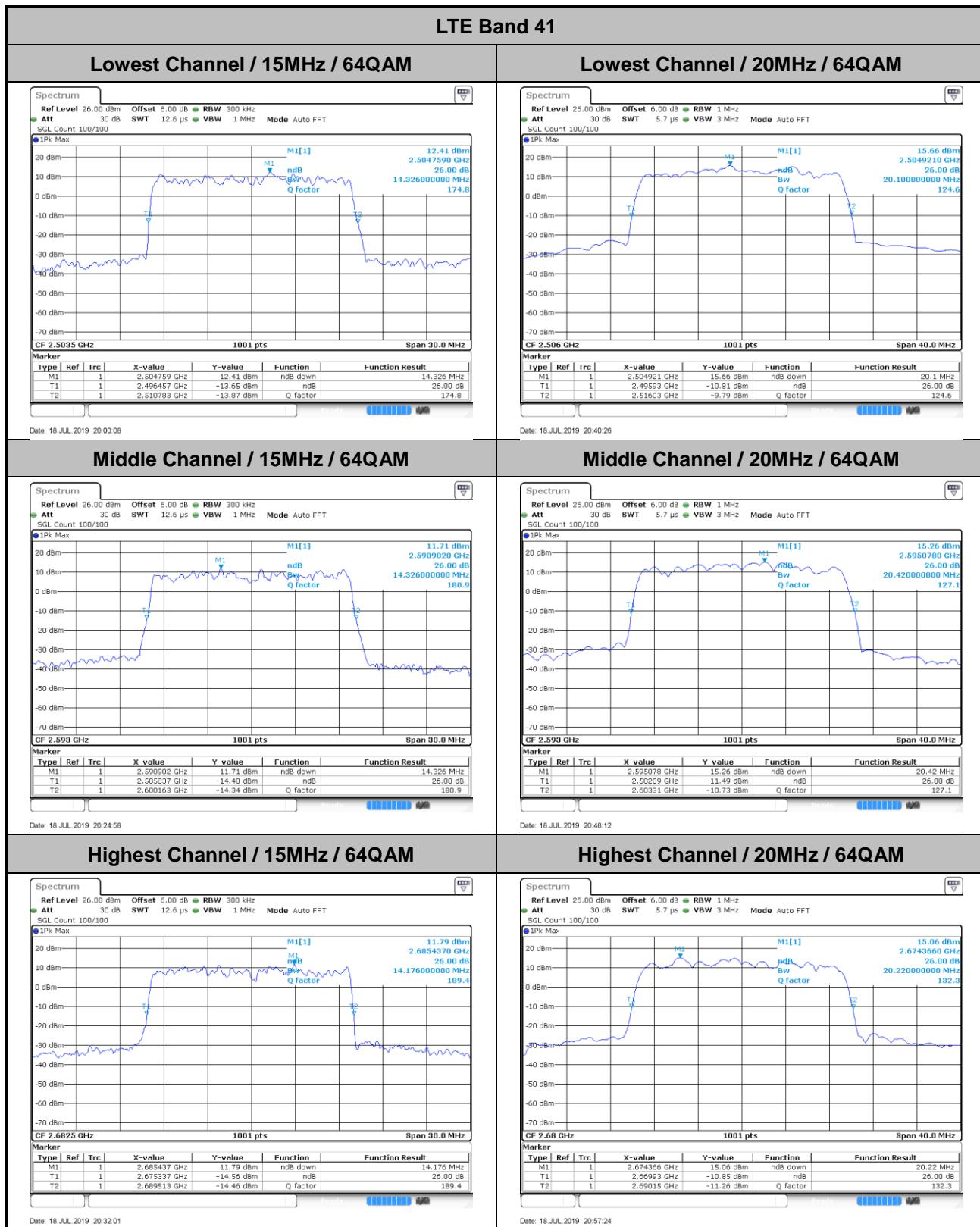








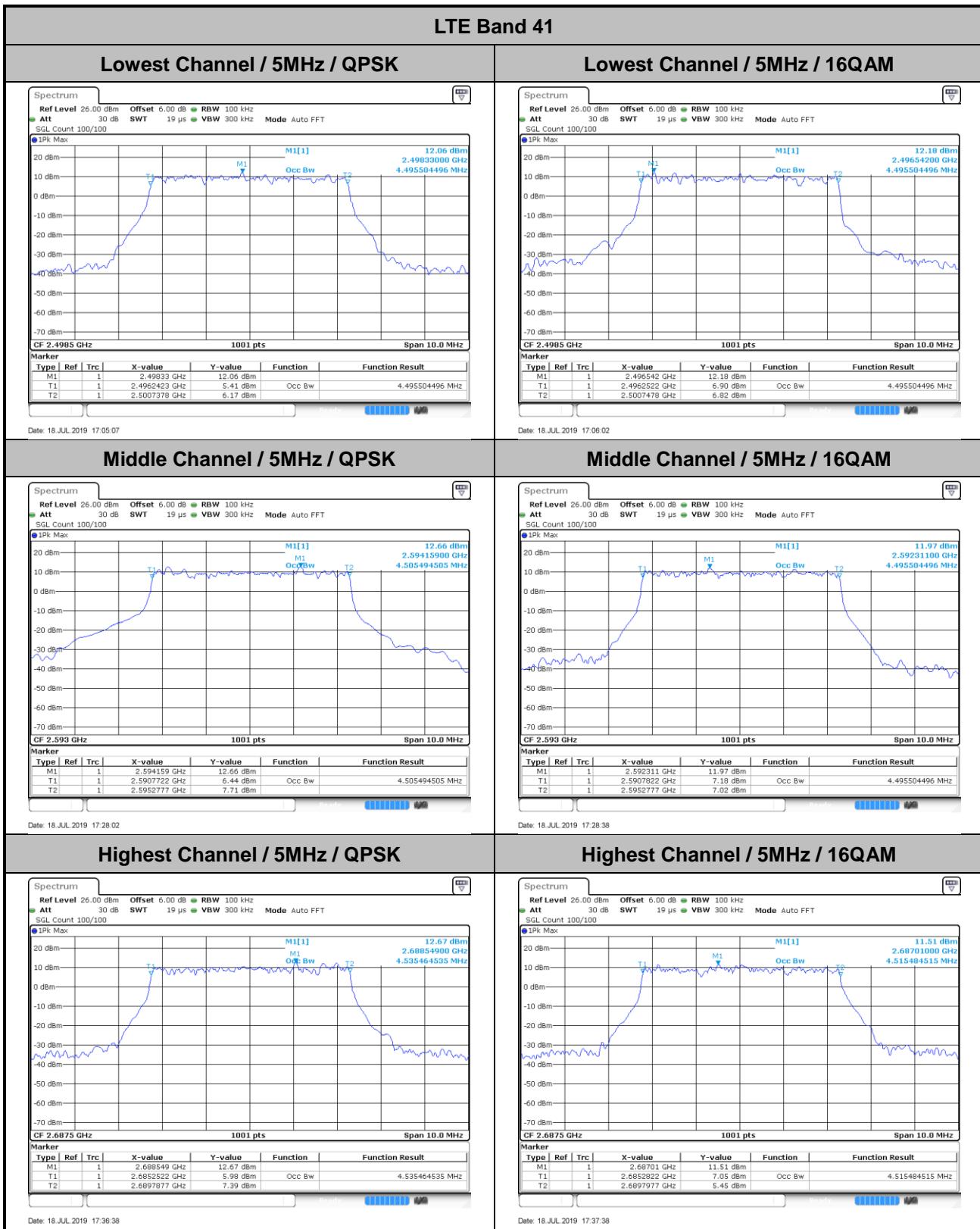


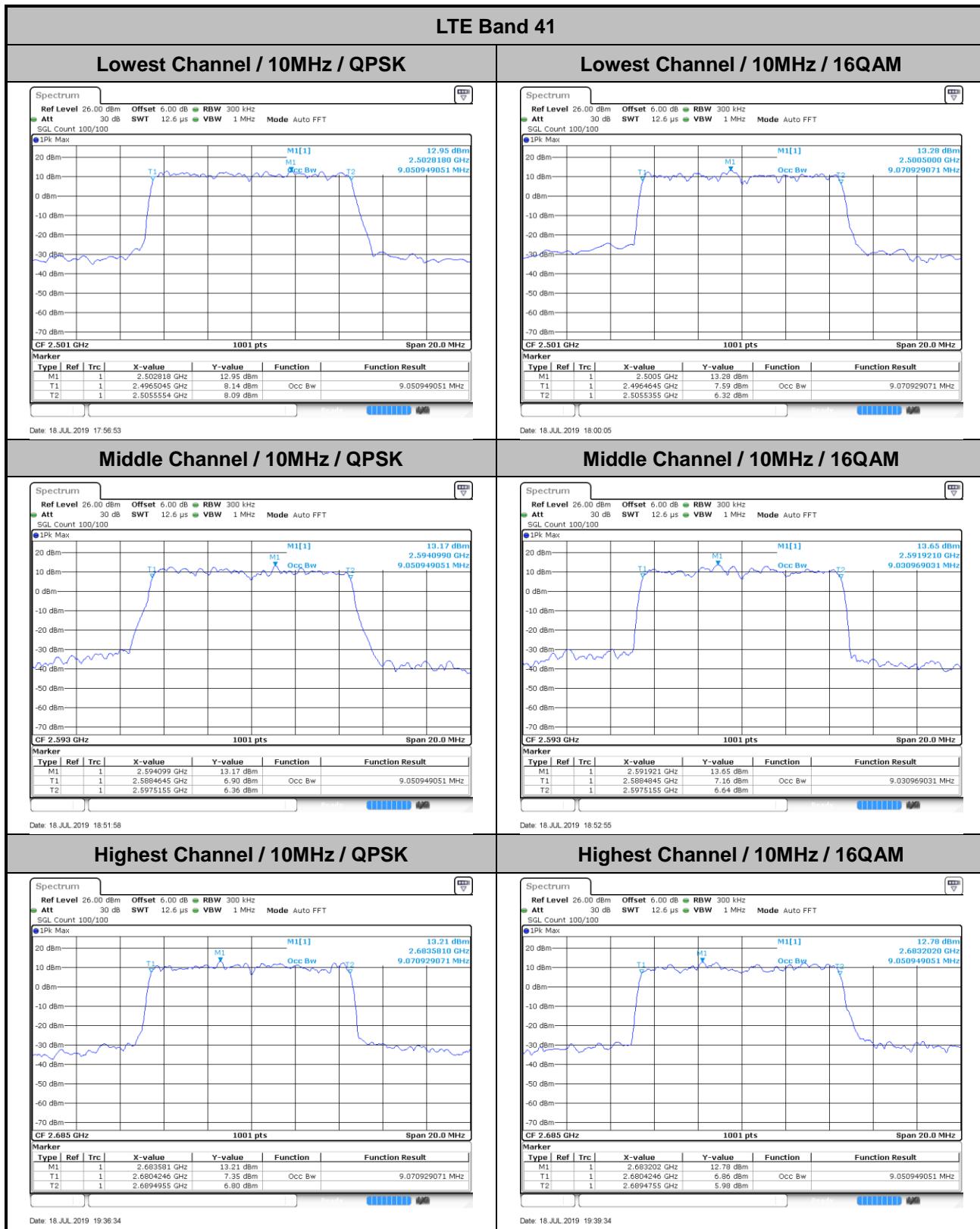


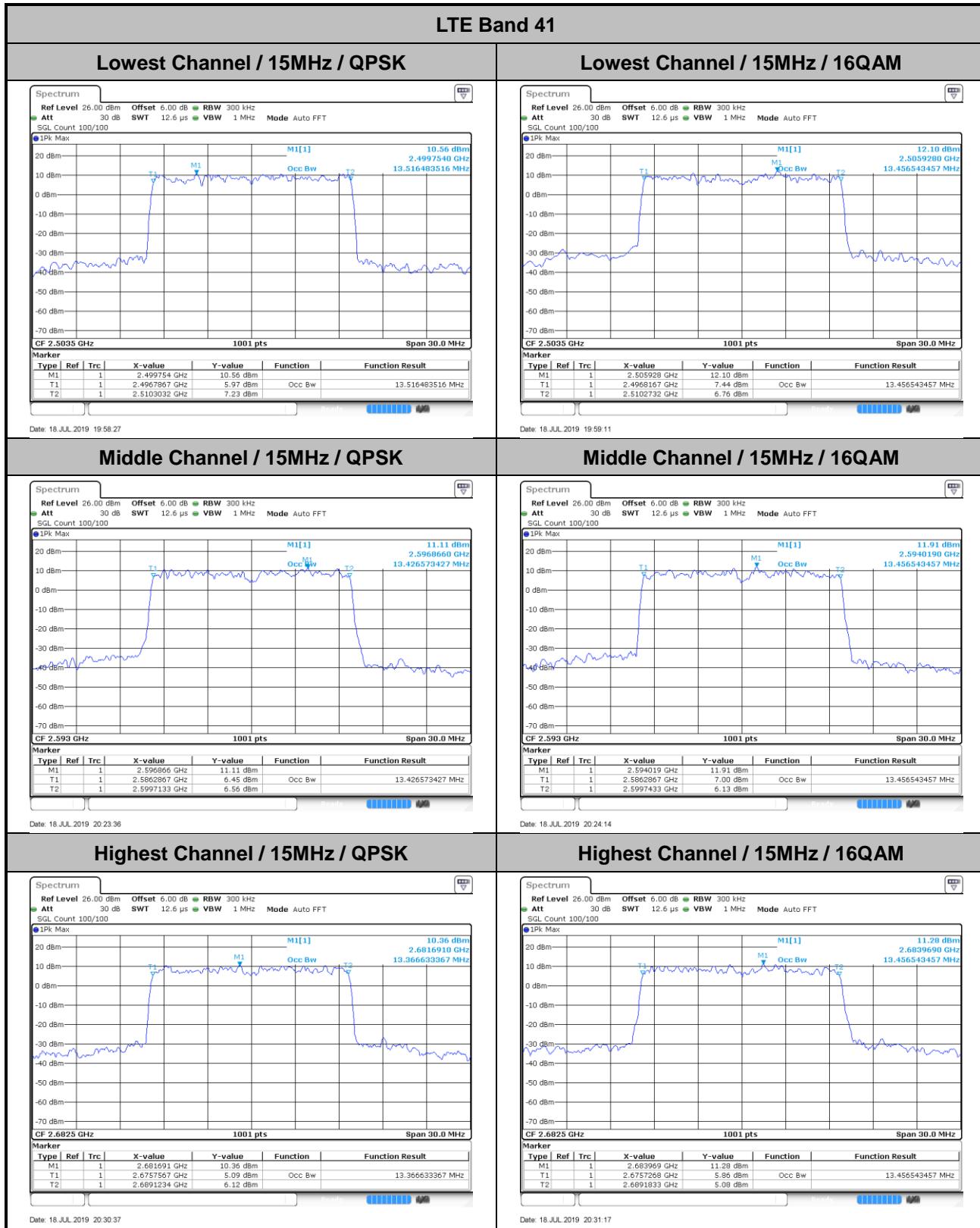


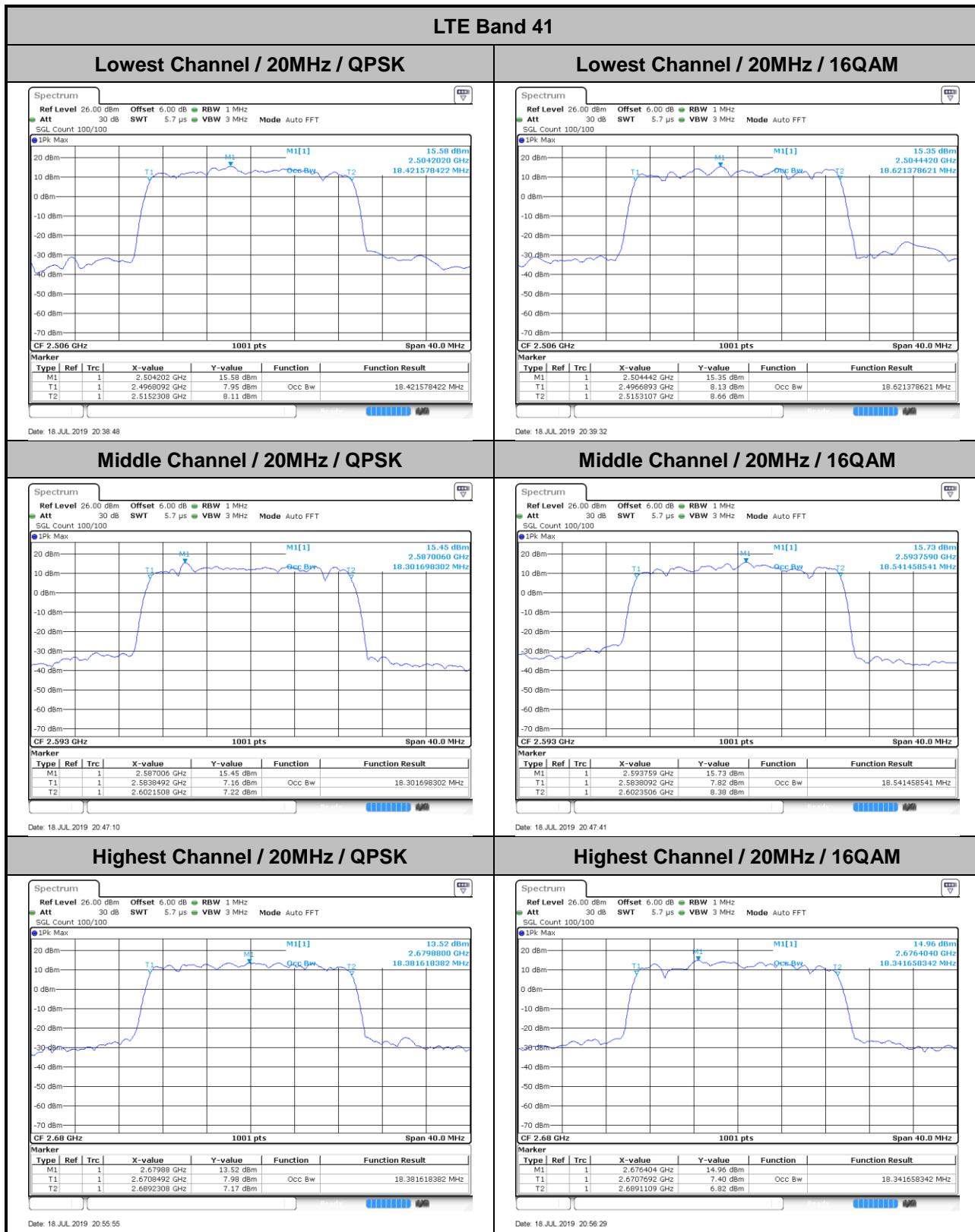
#### A.2.4 Occupied Bandwidth

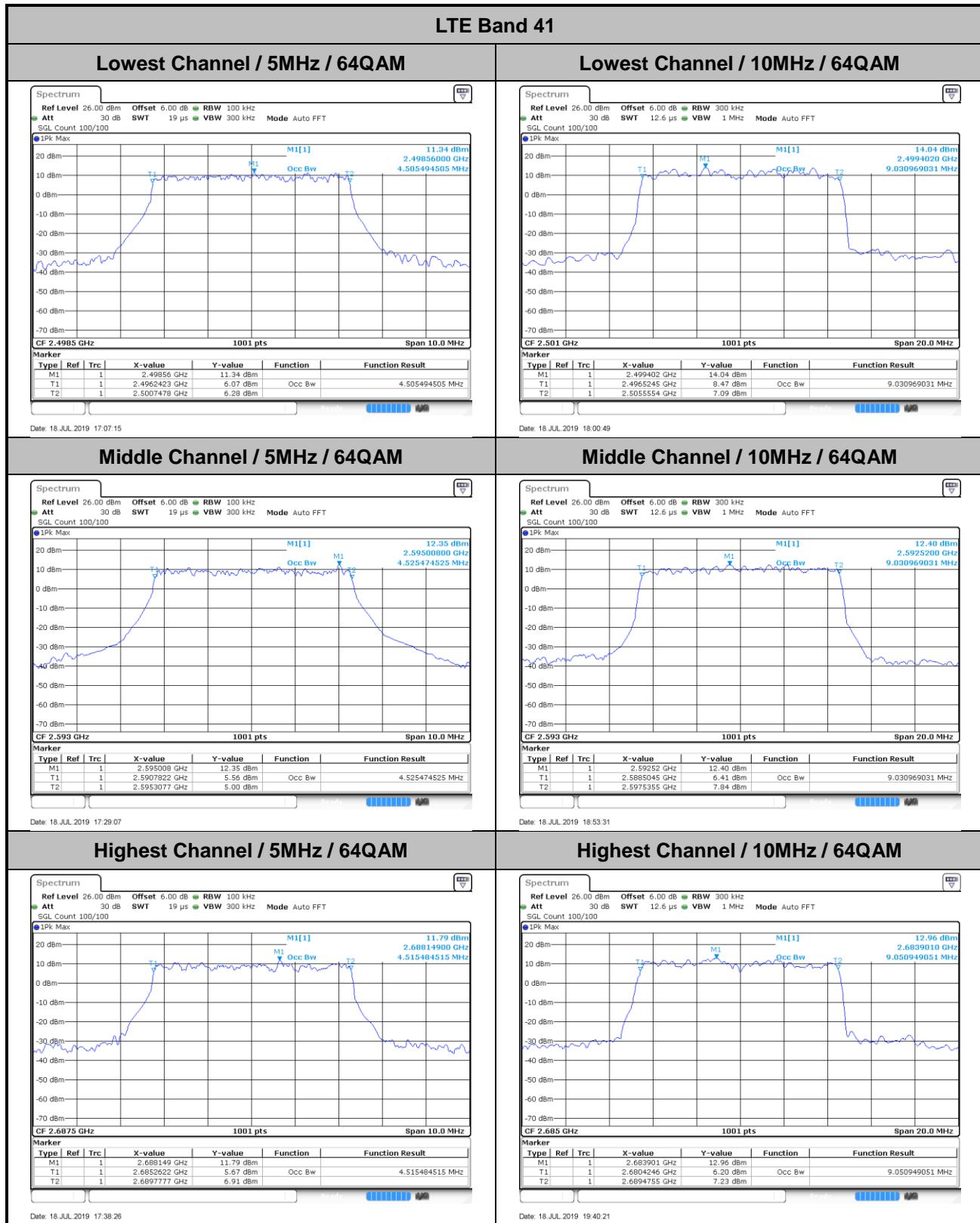
Mode	LTE Band 41 : 99%OBW(MHz)											
	5MHz		10MHz		15MHz		20MHz		5MHz	10MHz	15MHz	20MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	4.50	4.50	9.05	9.07	13.52	13.46	18.42	18.62	4.51	9.03	13.43	18.50
Middle CH	4.51	4.50	9.05	9.03	13.43	13.46	18.30	18.54	4.53	9.03	13.40	18.18
Highest CH	4.54	4.52	9.07	9.05	13.37	13.46	18.38	18.34	4.52	9.05	13.40	18.50

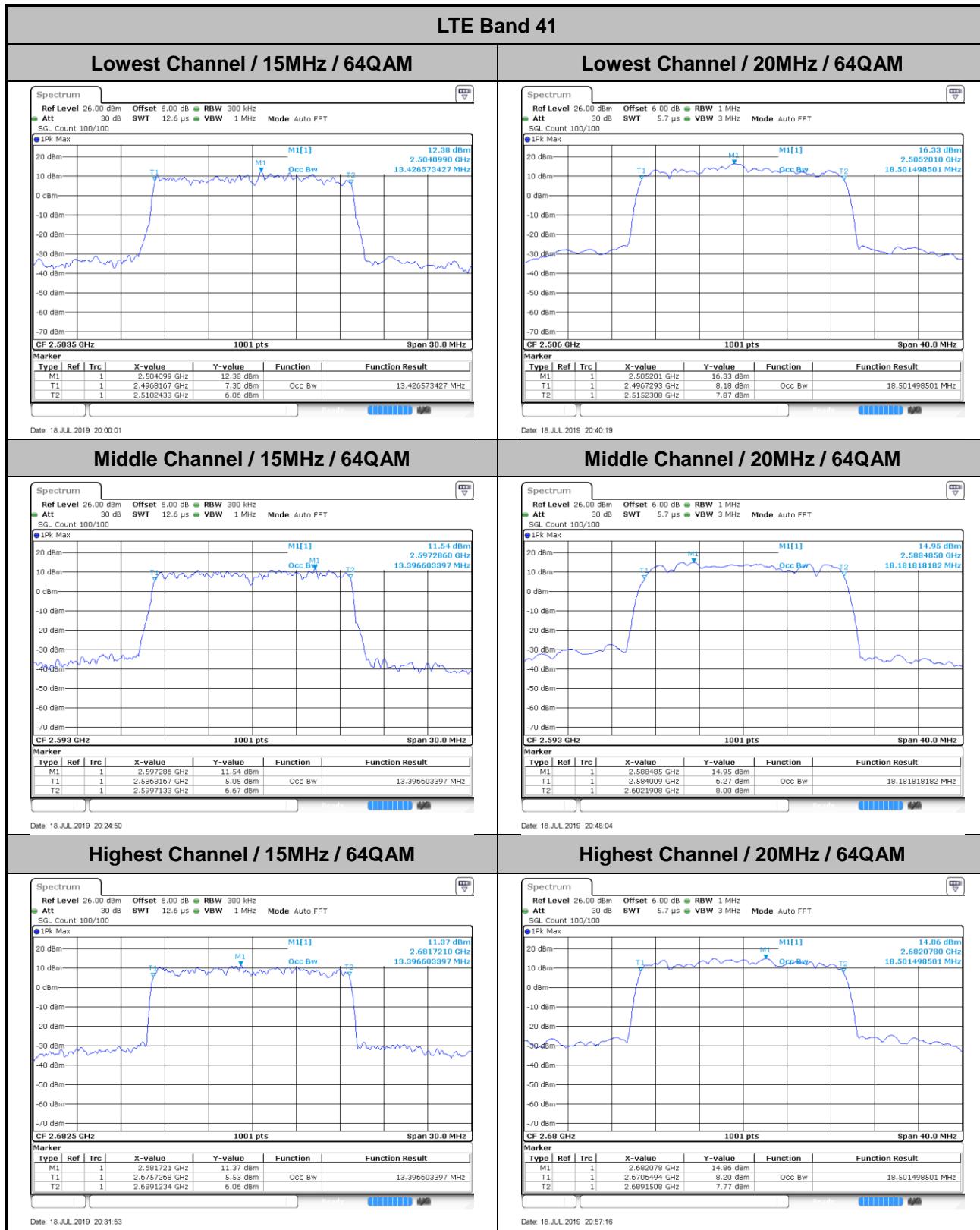












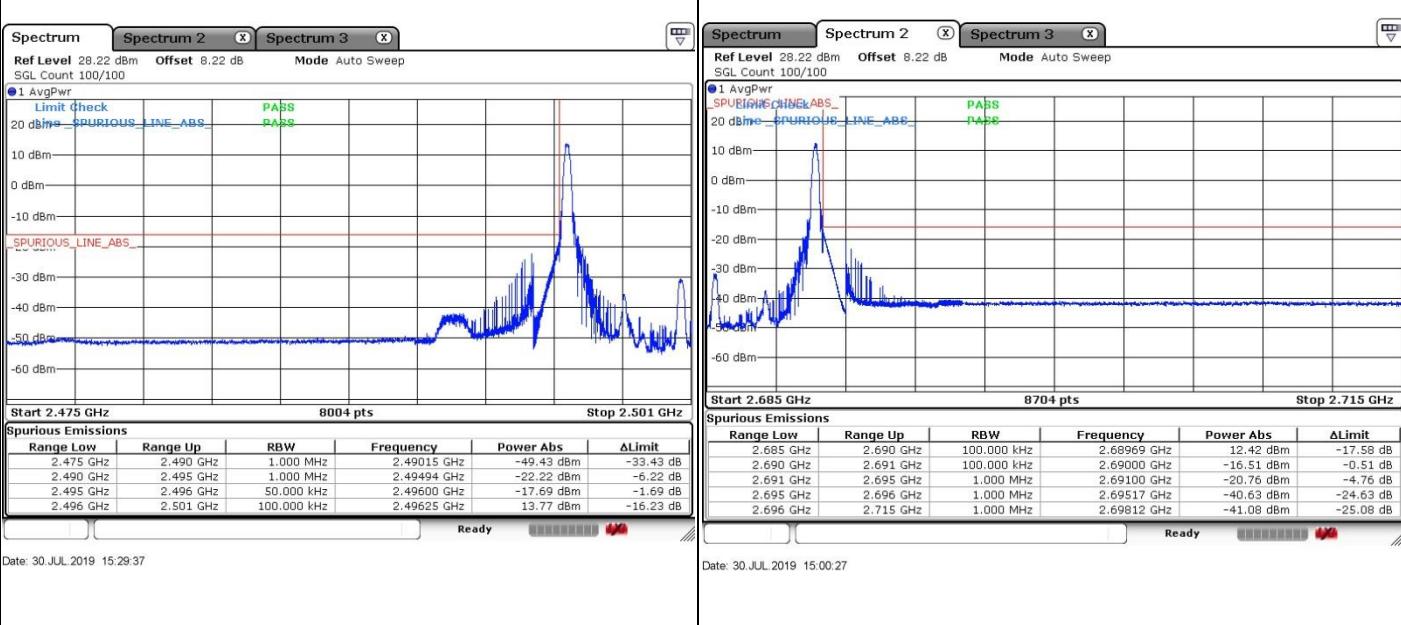


## A.2.5 Conducted Band Edge

## LTE Band 41 / 5MHz / QPSK

## Lowest Band Edge / 1 RB

## Highest Band Edge / 1 RB



## Lowest Band Edge / Full RB

## Highest Band Edge / Full RB

