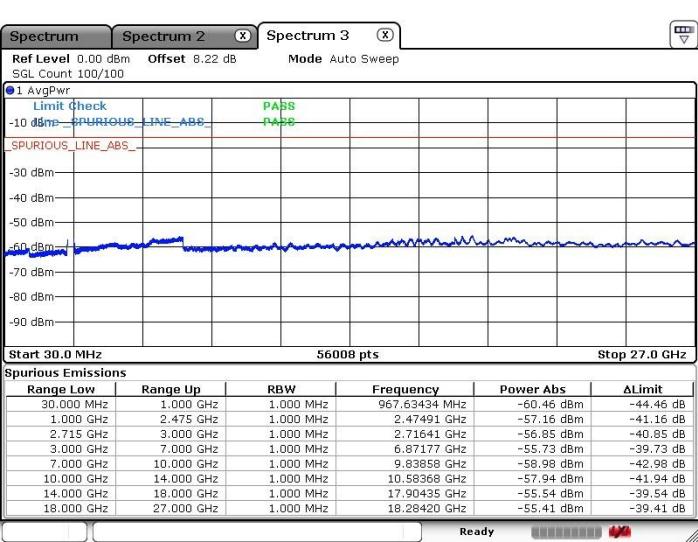
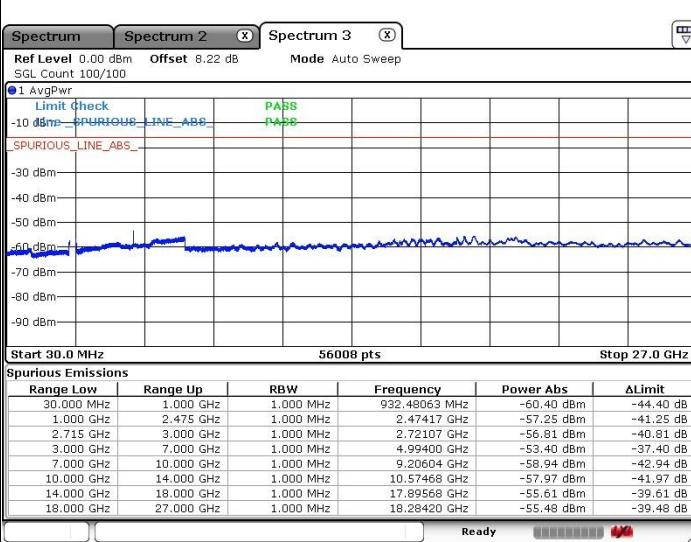




## LTE Band 41 / 15MHz

## Lowest Channel / 64QAM

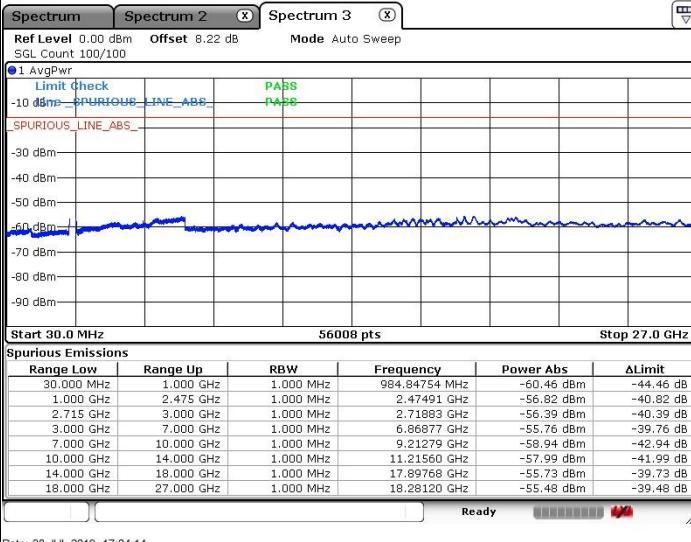
## Middle Channel / 64QAM



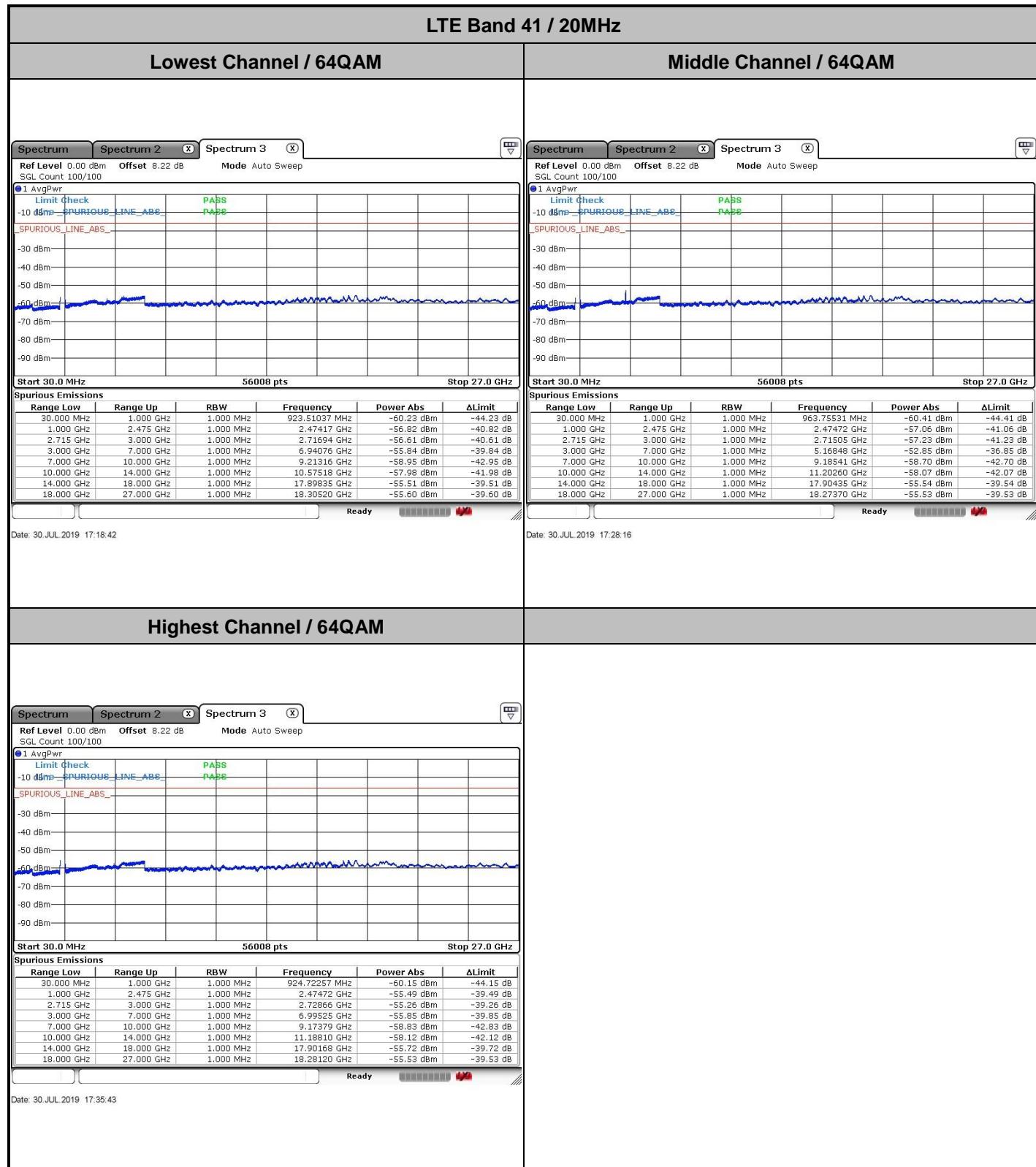
Date: 30.JUL.2019 16:45:22

Date: 30.JUL.2019 16:55:34

## Highest Channel / 64QAM



Date: 30.JUL.2019 17:04:14





### A.2.7 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	0.0007	PASS
40	Normal Voltage	0.0021	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0009	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0014	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0005	

**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.3 MIMO Antenna 2

### A.3.1 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	18.74	18.25	17.98	33.01	Pass
20	1	99		18.84	20.06	19.13		
20	18	0		18.47	18.88	18.06		
20	18	82		18.02	19.46	18.41		
20	100	0		17.85	18.28	18.39		
20	1	0	16-QAM	18.59	18.96	17.98	33.01	Pass
20	1	99		18.68	20.11	19.29		
20	18	0		18.39	18.89	18.07		
20	18	82		17.92	19.46	18.38		
20	100	0		17.83	18.09	18.39		
20	1	0	64-QAM	18.57	18.53	18.14	33.01	Pass
20	1	99		18.49	19.91	19.51		
20	18	0		18.37	18.64	18.08		
20	18	82		17.90	18.95	18.42		
20	100	0		17.81	18.18	18.41		
15	1	0	QPSK	19.01	19.19	18.54	33.01	Pass
15	1	74		18.03	19.01	20.23		
15	16	0		17.49	17.67	17.06		
15	16	59		17.61	17.69	19.31		
15	75	0		17.64	17.91	18.61		
15	1	0	16-QAM	18.55	18.69	18.49	33.01	Pass
15	1	74		18.14	18.98	20.26		
15	16	0		17.46	17.46	16.99		
15	16	59		17.48	17.71	19.07		
15	75	0		17.63	17.89	18.49		
15	1	0	64-QAM	18.79	19.19	18.72	33.01	Pass
15	1	74		18.31	19.27	20.06		
15	16	0		17.46	17.51	17.02		
15	16	59		17.54	17.77	19.12		
15	75	0		17.65	17.87	18.52		

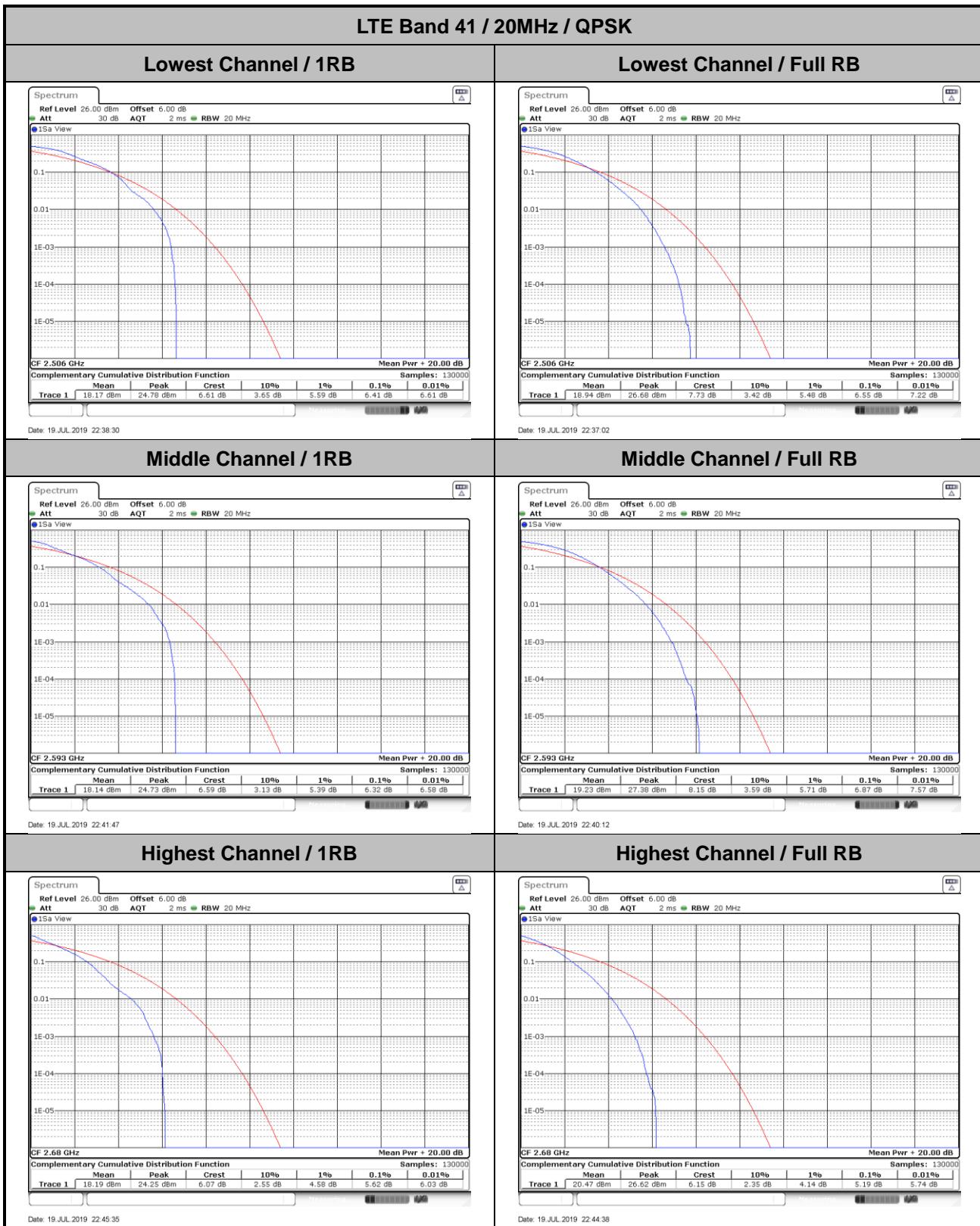


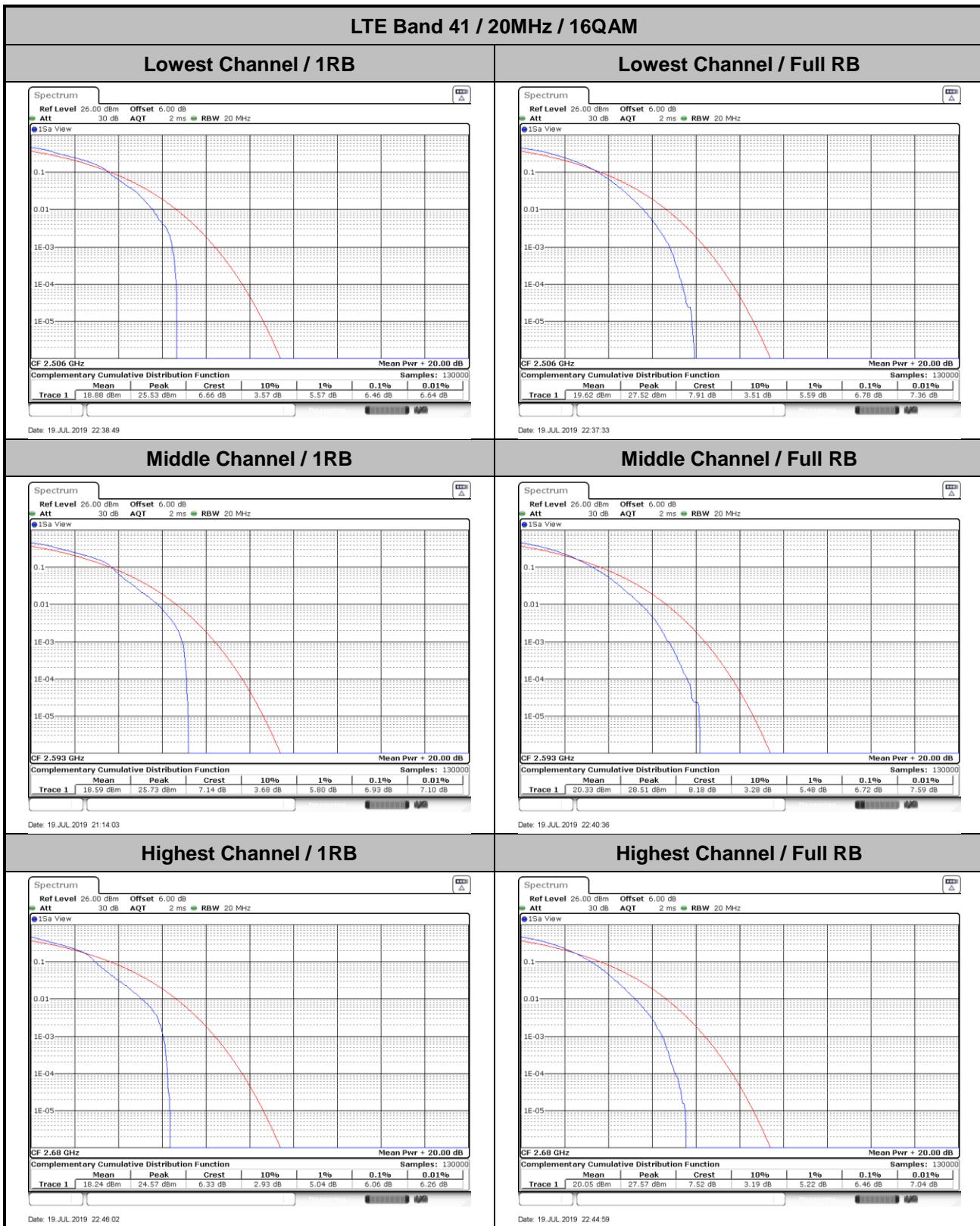
LTE Band 41 Maximum Average Power [dBm]							Limit [dBm]	Test Result
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest		
10	1	0	QPSK	18.74	18.65	18.13	33.01	Pass
10	1	49		18.11	19.56	18.92		
10	12	0		18.54	18.83	18.43		
10	12	38		17.83	19.04	18.36		
10	50	0		18.05	18.20	18.79		
10	1	0		18.62	18.97	18.09		
10	1	49	16-QAM	18.08	19.39	18.88	33.01	Pass
10	12	0		18.46	18.76	18.39		
10	12	38		17.75	19.06	18.29		
10	50	0		18.03	18.26	18.65		
10	1	0		18.85	19.28	18.44		
10	1	49		18.07	19.83	19.03		
10	12	0	64-QAM	18.47	18.74	18.56	33.01	Pass
10	12	38		17.76	19.01	17.90		
10	50	0		18.07	18.19	18.84		
5	1	0	QPSK	18.32	17.47	18.66	33.01	Pass
5	1	24		17.56	18.04	17.47		
5	8	0		18.94	18.37	19.66		
5	8	17		17.52	18.61	18.31		
5	25	0		17.98	18.51	18.94		
5	1	0	16-QAM	18.57	17.44	18.82	33.01	Pass
5	1	24		17.46	18.09	17.34		
5	8	0		18.77	17.89	19.67		
5	8	17		17.39	18.59	18.26		
5	25	0		17.95	18.58	18.86		
5	1	0	64-QAM	18.43	17.74	19.01	33.01	Pass
5	1	24		17.74	18.42	17.54		
5	8	0		18.86	18.31	19.56		
5	8	17		17.36	18.61	18.29		
5	25	0		17.86	18.55	18.88		

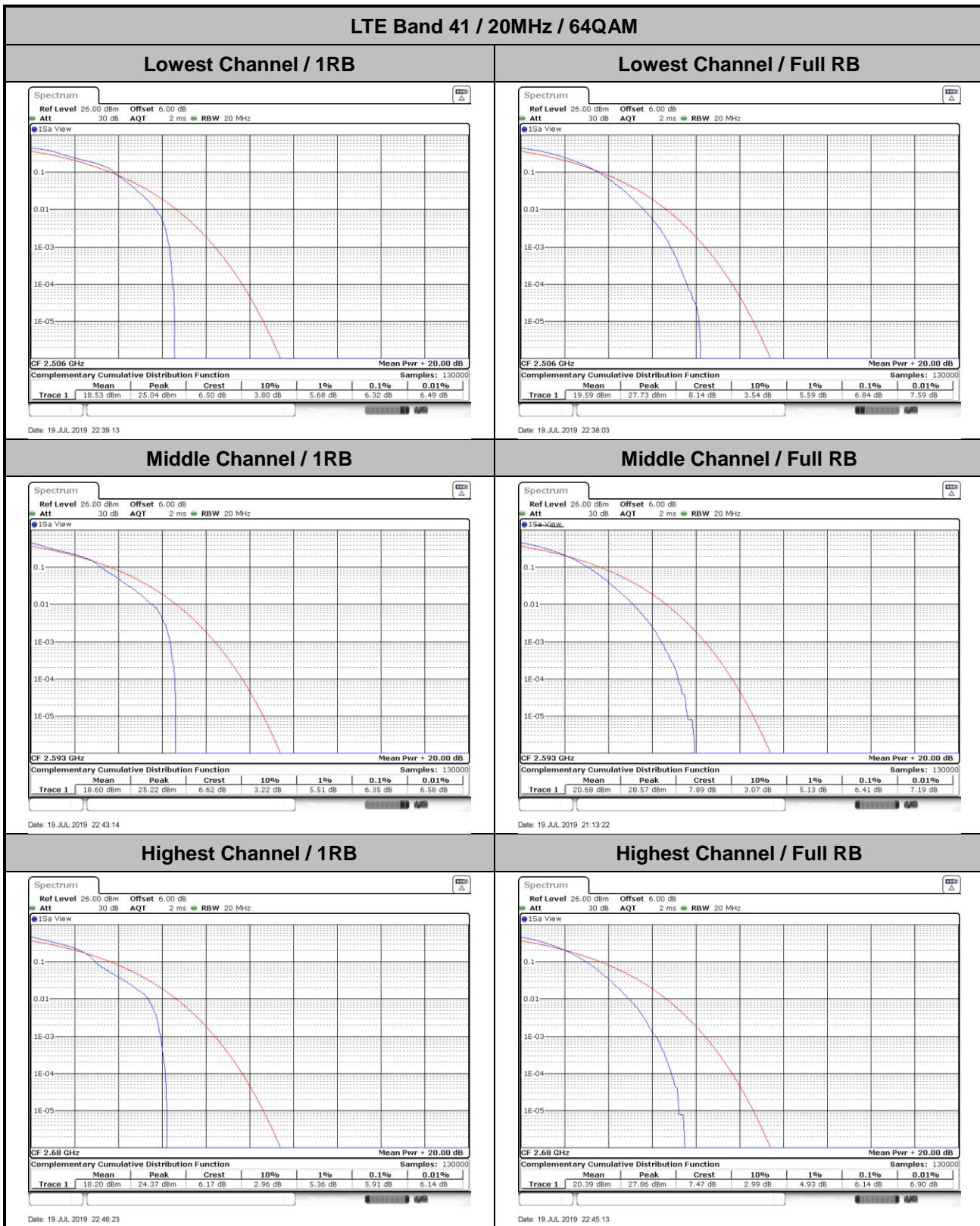


### A.3.2 Peak-to-Average Ratio

Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.41	6.55	6.46	6.78	PASS
Middle CH	6.32	6.87	6.93	6.72	
Highest CH	5.62	5.19	6.06	6.46	
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.32	6.84			PASS
Middle CH	6.35	6.41			
Highest CH	5.91	6.14			



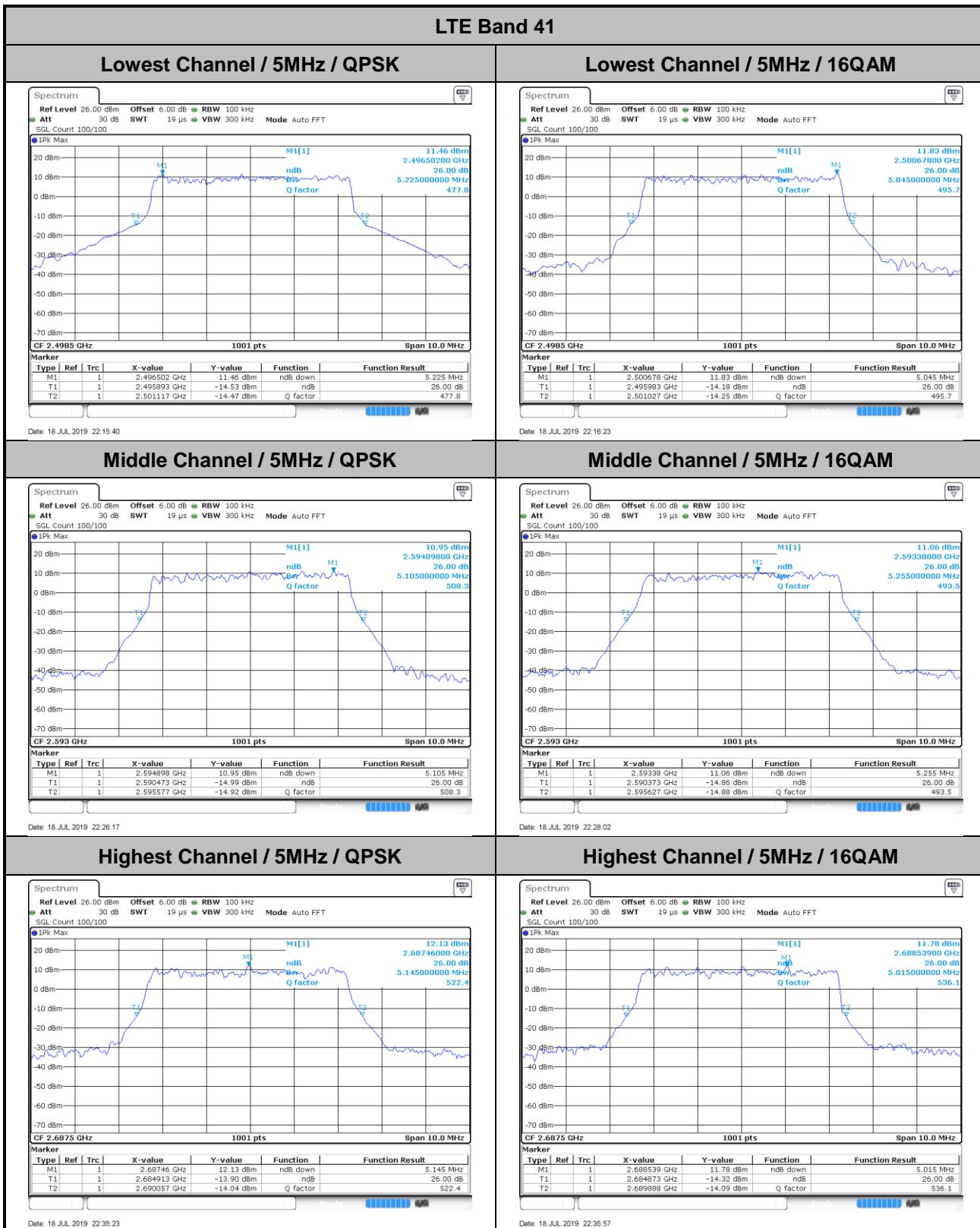


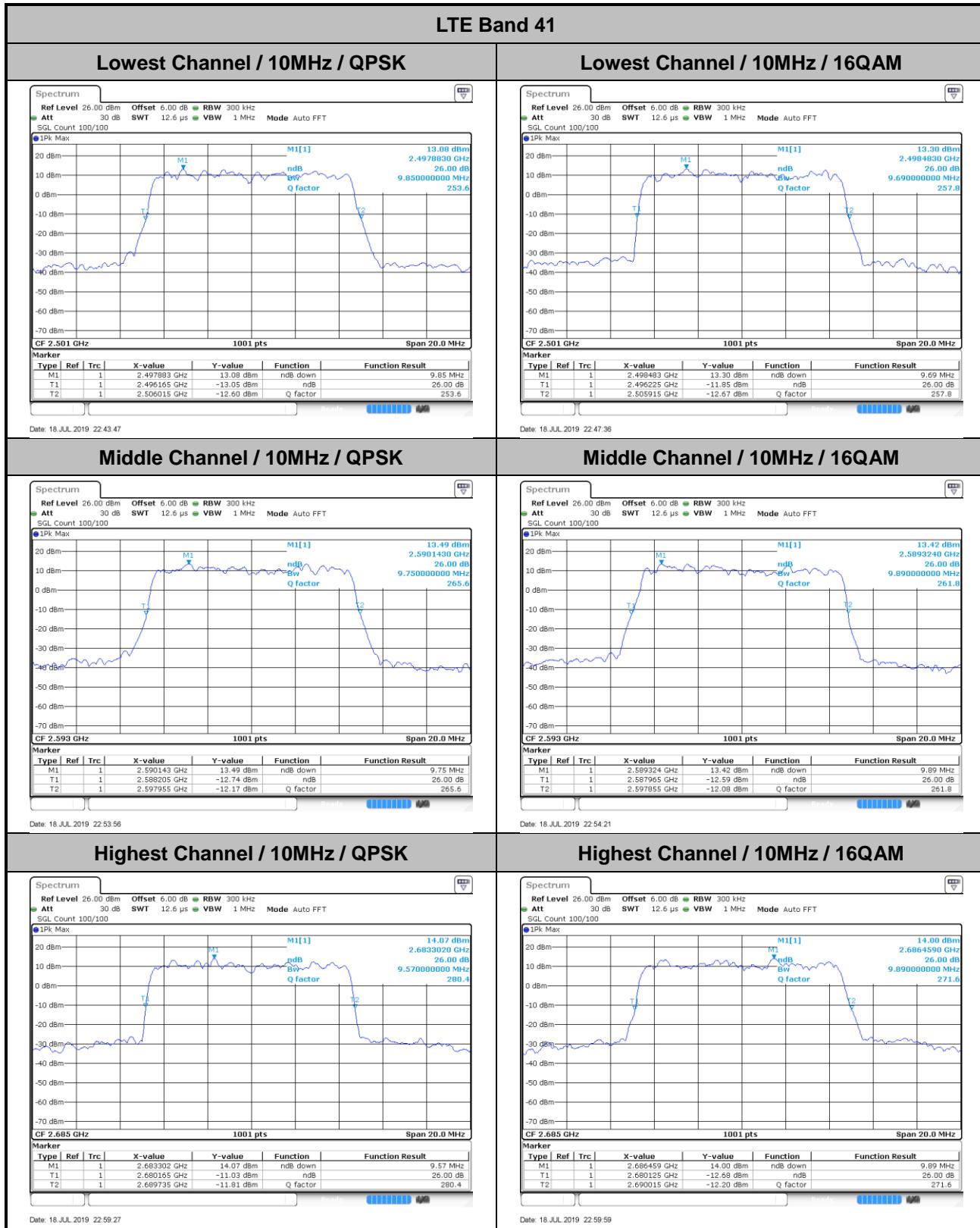


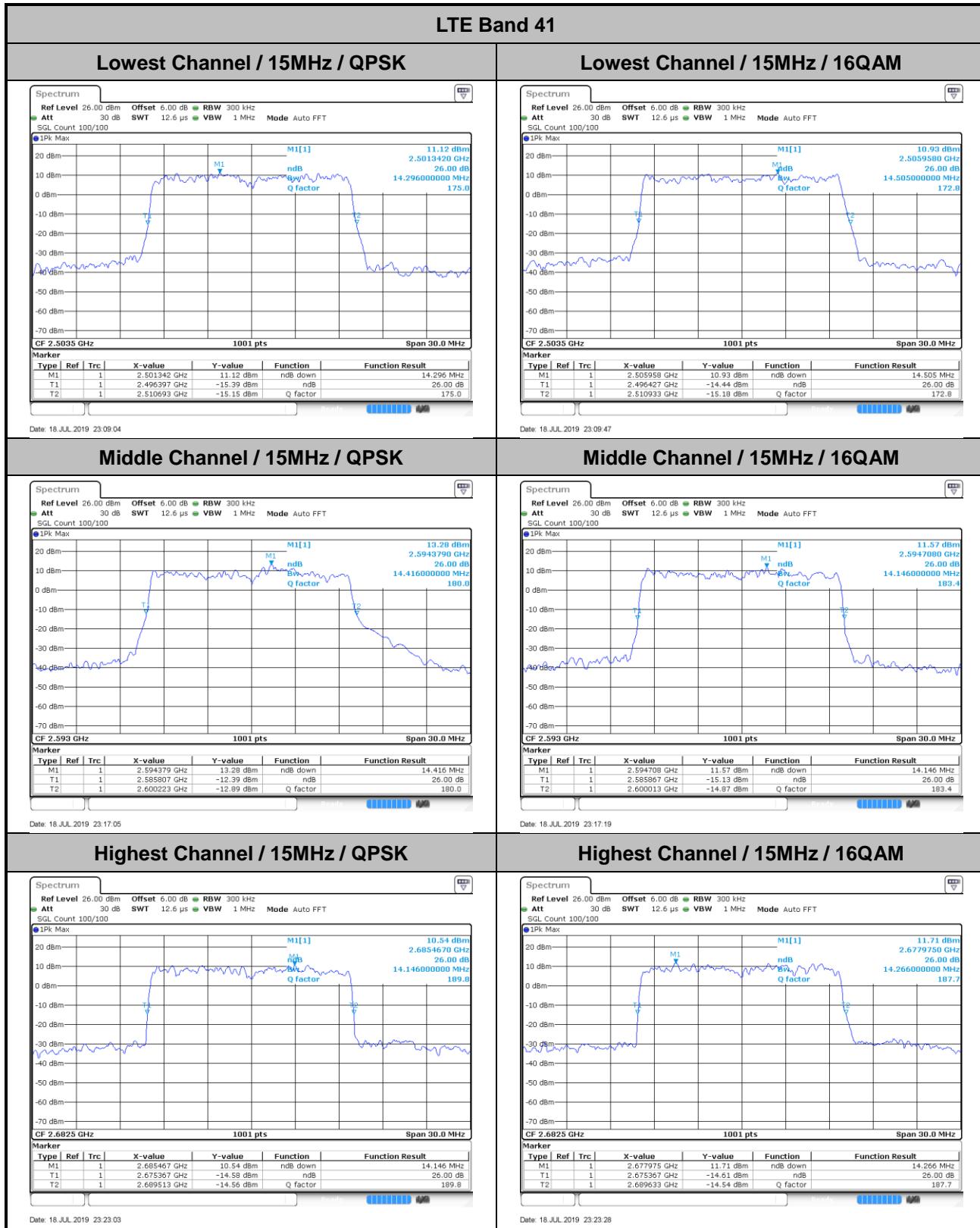


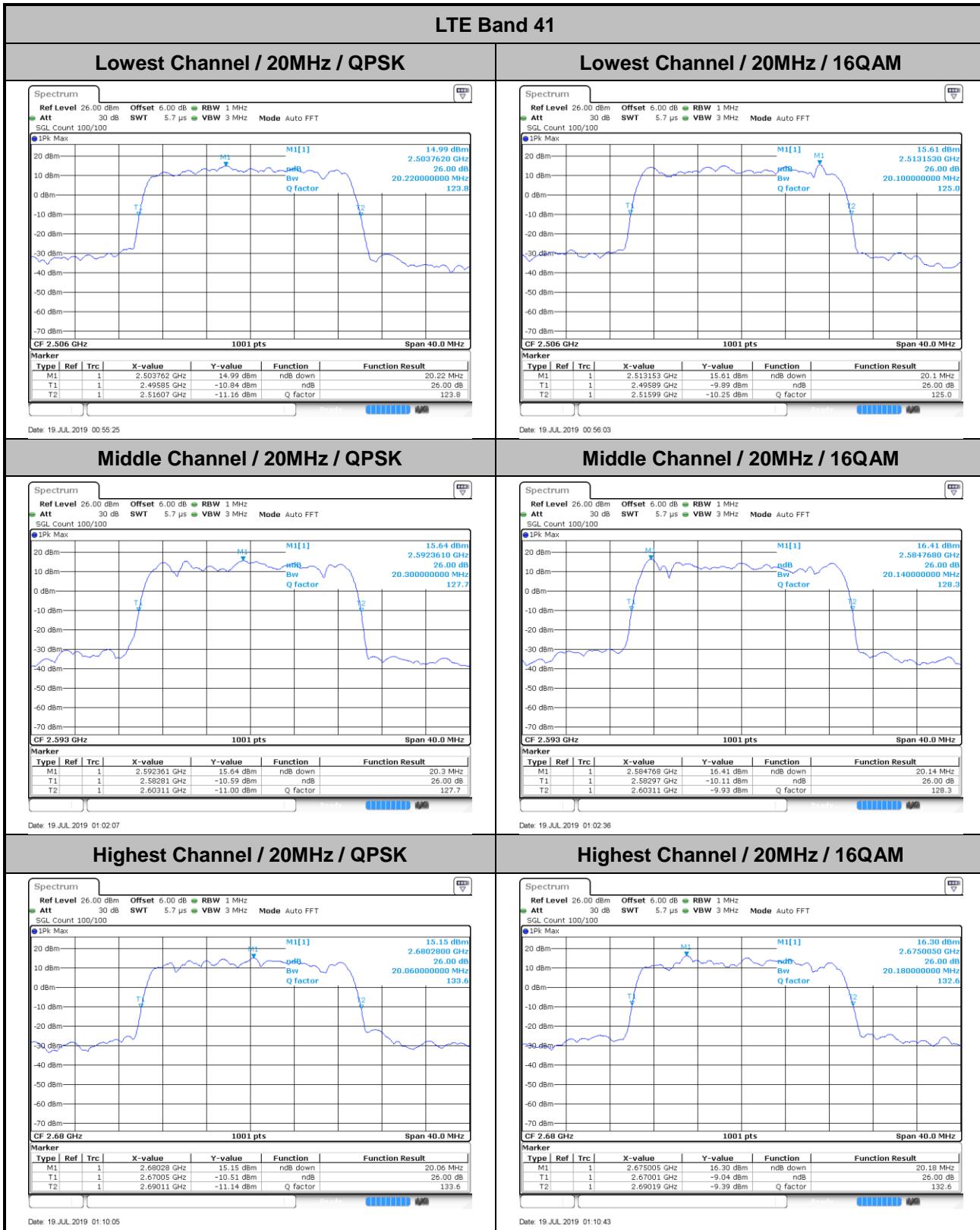
## A.3.3 26dB Bandwidth

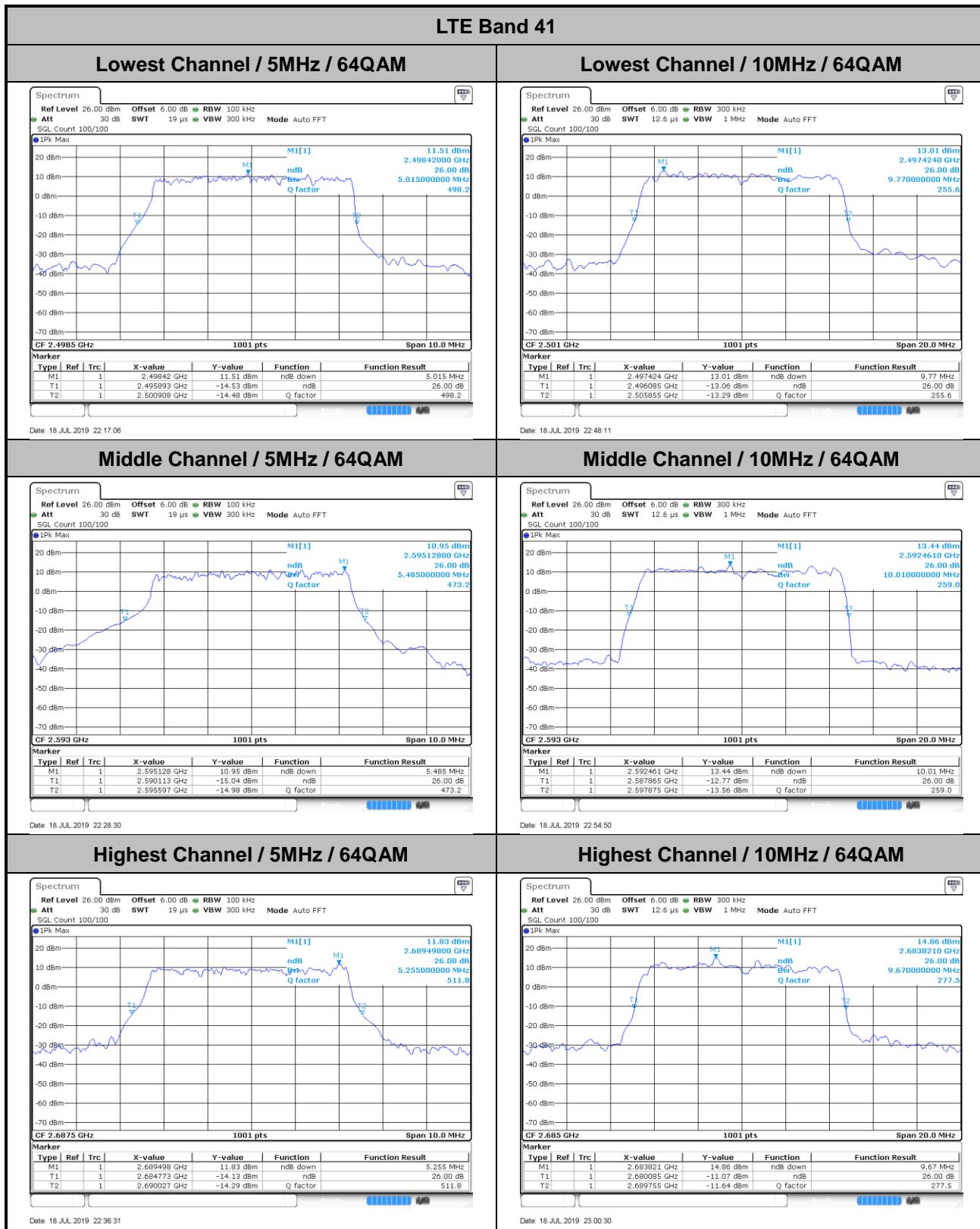
Mode	LTE Band 41 : 26dB BW(MHz)											
	5MHz		10MHz		15MHz		20MHz		5MHz	10MHz	15MHz	20MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	5.225	5.045	9.850	9.690	14.296	14.505	20.220	20.100	5.015	9.770	14.206	20.140
Middle CH	5.105	5.255	9.750	9.890	14.416	14.146	20.300	20.140	5.485	10.01	14.565	20.100
Highest CH	5.145	5.015	9.570	9.890	14.146	14.266	20.060	20.180	5.255	9.670	14.116	20.140

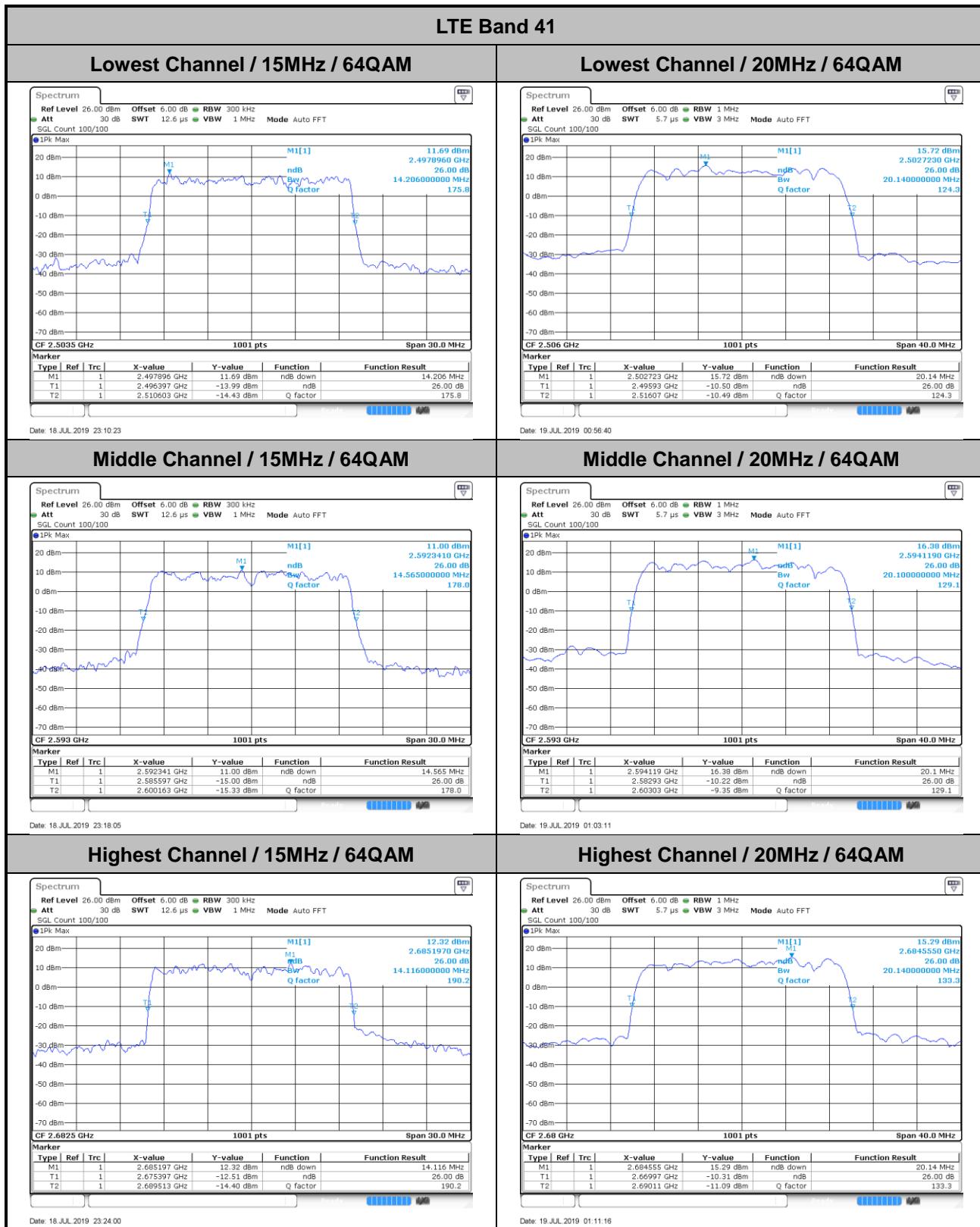














### A.3.4 Occupied Bandwidth

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	4.46	4.48	8.99	9.07	13.46	13.49	18.46	18.34	4.51	9.07	13.46	18.26
Middle CH	4.53	4.46	9.01	9.05	13.61	13.49	18.42	18.26	4.50	9.03	13.46	18.42
Highest CH	4.52	4.50	8.99	8.99	13.43	13.40	18.18	18.26	4.51	9.01	13.43	18.30

