



LTE Band 5

Conducted Output Power(Average power)

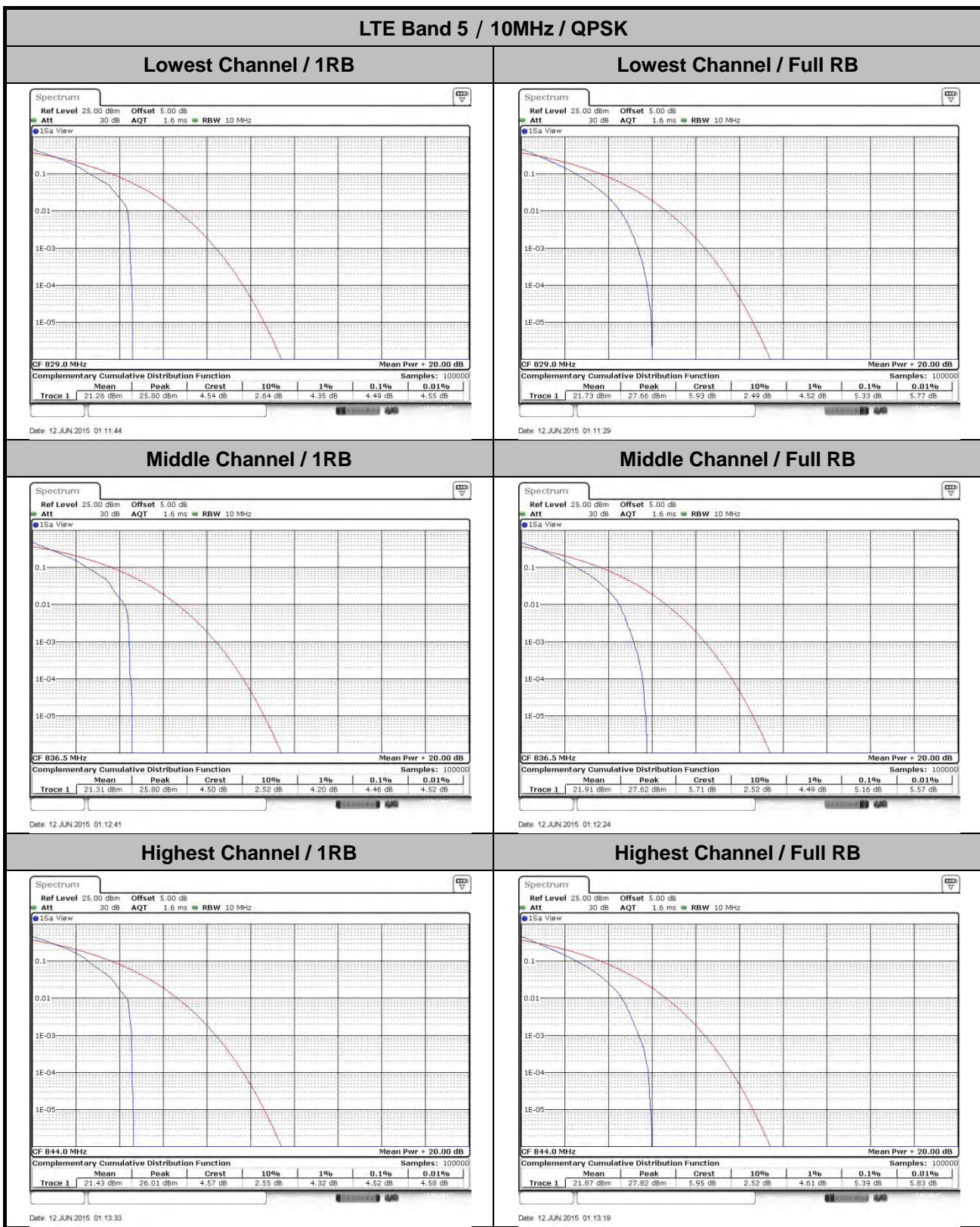
LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.87	22.92	23.16
1.4	1	2		23.00	22.91	23.10
1.4	1	5		22.91	22.78	22.93
1.4	3	0		22.90	22.93	23.22
1.4	3	1		23.00	22.90	23.18
1.4	3	2		23.05	22.90	23.21
1.4	6	0		22.05	22.06	22.07
1.4	1	0		22.11	22.25	22.36
1.4	1	2	16-QAM	22.07	22.15	22.28
1.4	1	5		22.19	22.26	22.35
1.4	3	0		22.03	22.08	22.24
1.4	3	1		22.10	22.11	22.13
1.4	3	2		22.17	22.04	22.18
1.4	6	0		20.97	20.91	21.05
3	1	0	QPSK	22.86	22.82	23.08
3	1	7		22.93	22.93	22.93
3	1	14		22.86	23.10	22.80
3	8	0		21.97	22.05	22.04
3	8	4		22.03	21.87	22.06
3	8	7		21.99	21.92	22.02
3	15	0		22.10	21.95	22.10
3	1	0		22.15	22.72	22.69
3	1	7	16-QAM	22.28	22.24	22.33
3	1	14		22.32	22.39	22.41
3	8	0		21.18	20.85	20.94
3	8	4		20.97	20.90	21.22
3	8	7		20.88	20.82	21.04
3	15	0		20.91	20.93	21.10

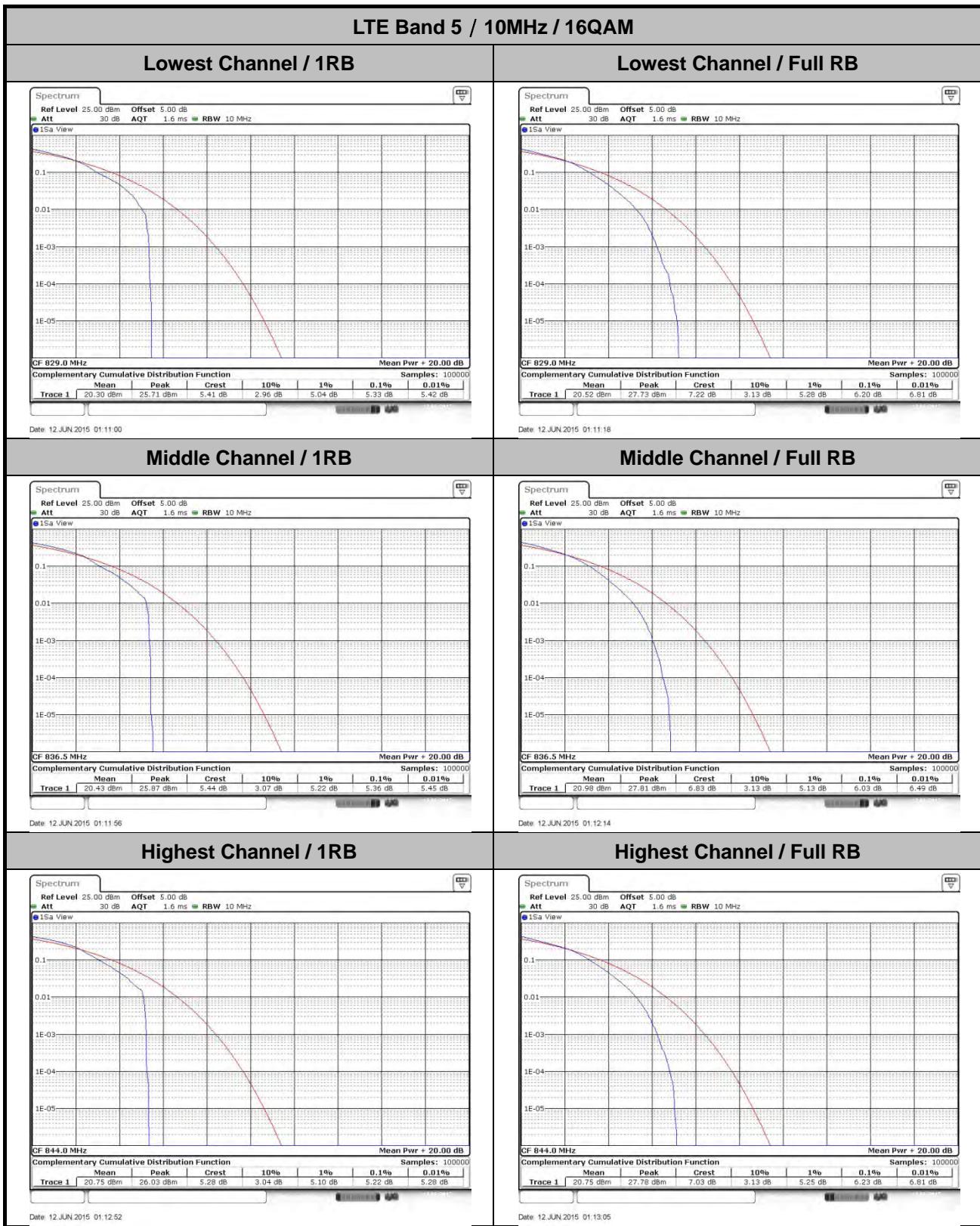


LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.11	23.11	22.87
	1	12		23.00	22.84	23.00
	1	24		22.75	22.81	22.83
	12	0		21.98	21.98	22.03
	12	6		22.03	21.90	21.99
	12	11		22.04	21.93	22.06
	25	0		22.04	21.93	21.94
5	1	0	16-QAM	22.79	22.21	22.26
	1	12		22.31	22.21	22.22
	1	24		22.21	22.29	22.20
	12	0		20.94	20.90	20.99
	12	6		20.99	20.77	20.88
	12	11		20.84	20.90	20.97
	25	0		20.98	20.95	20.80
10	1	0	QPSK	23.08	23.17	23.40
	1	24		22.97	22.85	22.94
	1	49		22.80	22.83	22.92
	25	0		21.99	21.95	22.07
	25	12		21.96	21.97	22.01
	25	24		22.04	22.04	21.96
	50	0		22.08	21.92	22.09
10	1	0	16-QAM	22.39	22.42	22.57
	1	24		22.26	22.14	22.22
	1	49		22.30	22.34	22.32
	25	0		21.04	21.07	20.91
	25	12		21.02	20.92	21.18
	25	24		20.98	20.99	21.05
	50	0		20.80	20.80	20.93

**Peak-to-Average Ratio**

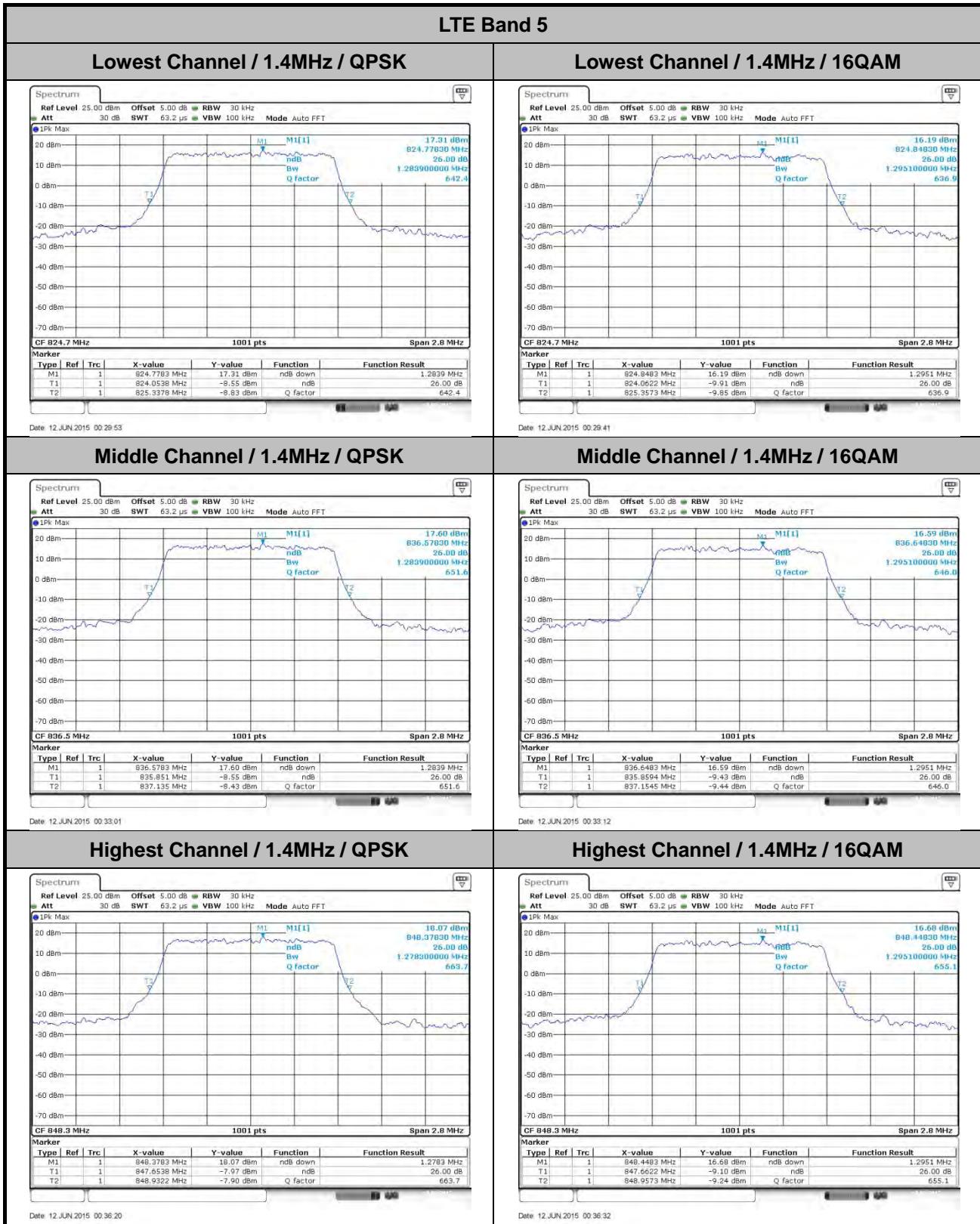
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	RB Size	Result
Lowest CH	4.49	5.33	5.33	6.20	PASS
Middle CH	4.46	5.16	5.36	6.03	
Highest CH	4.52	5.39	5.22	6.23	

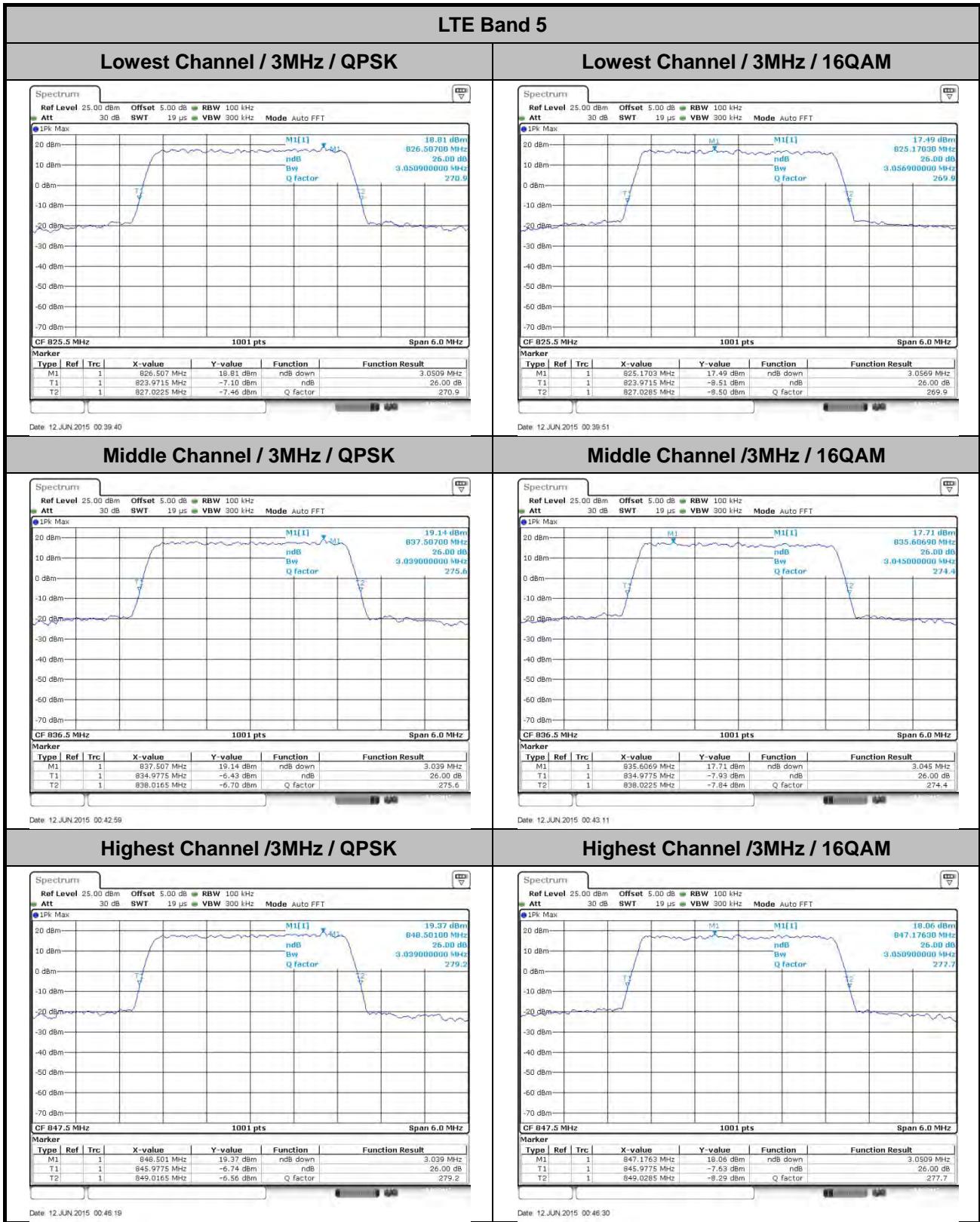


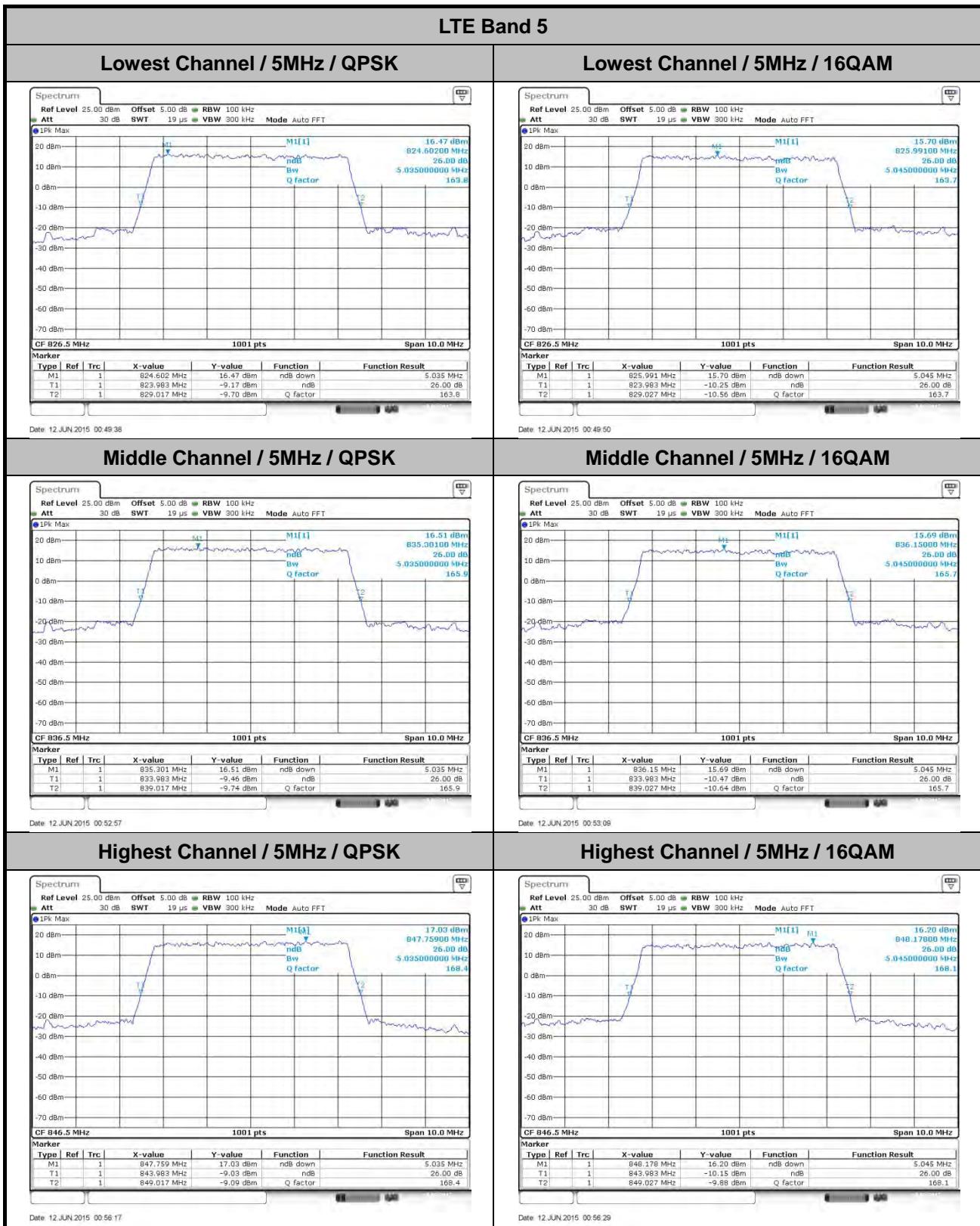


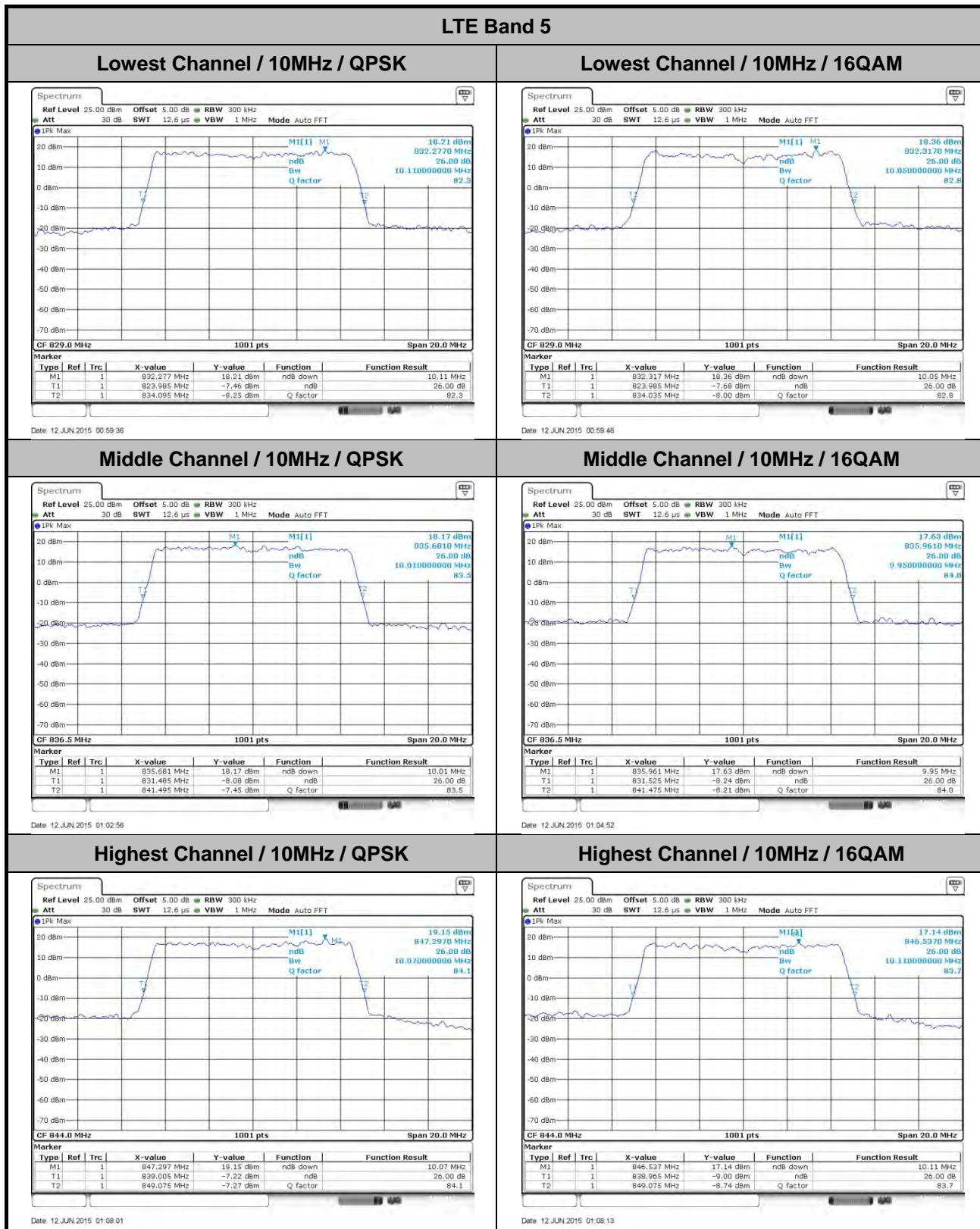
**26dB Bandwidth**

Mode	LTE Band 5 : 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	1.28	1.30	3.05	3.06	5.04	5.05	10.11	10.05	-	-	-	-
Middle CH	1.28	1.30	3.04	3.05	5.04	5.05	10.01	9.95	-	-	-	-
Highest CH	1.28	1.30	3.04	3.05	5.04	5.05	10.07	10.11	-	-	-	-



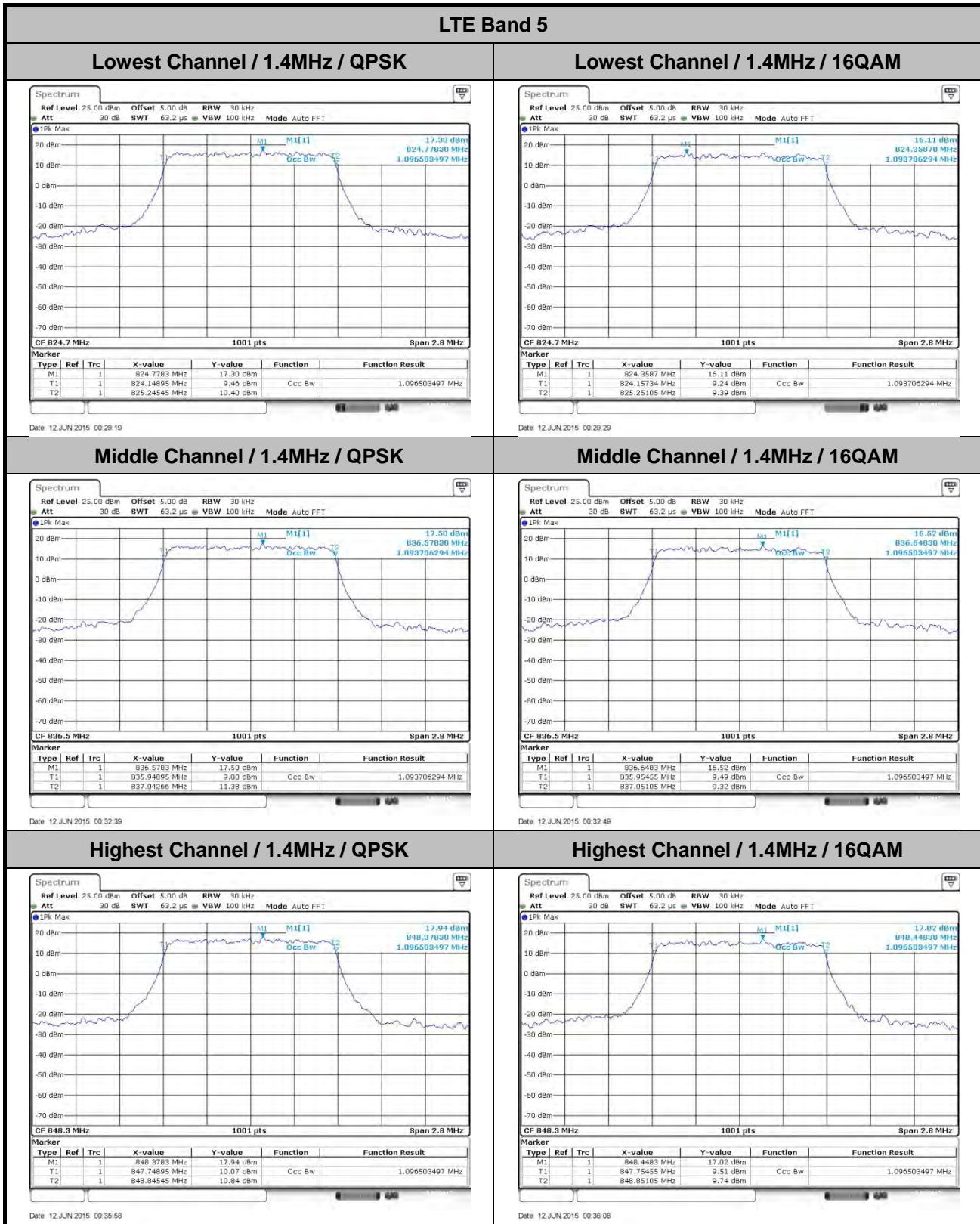




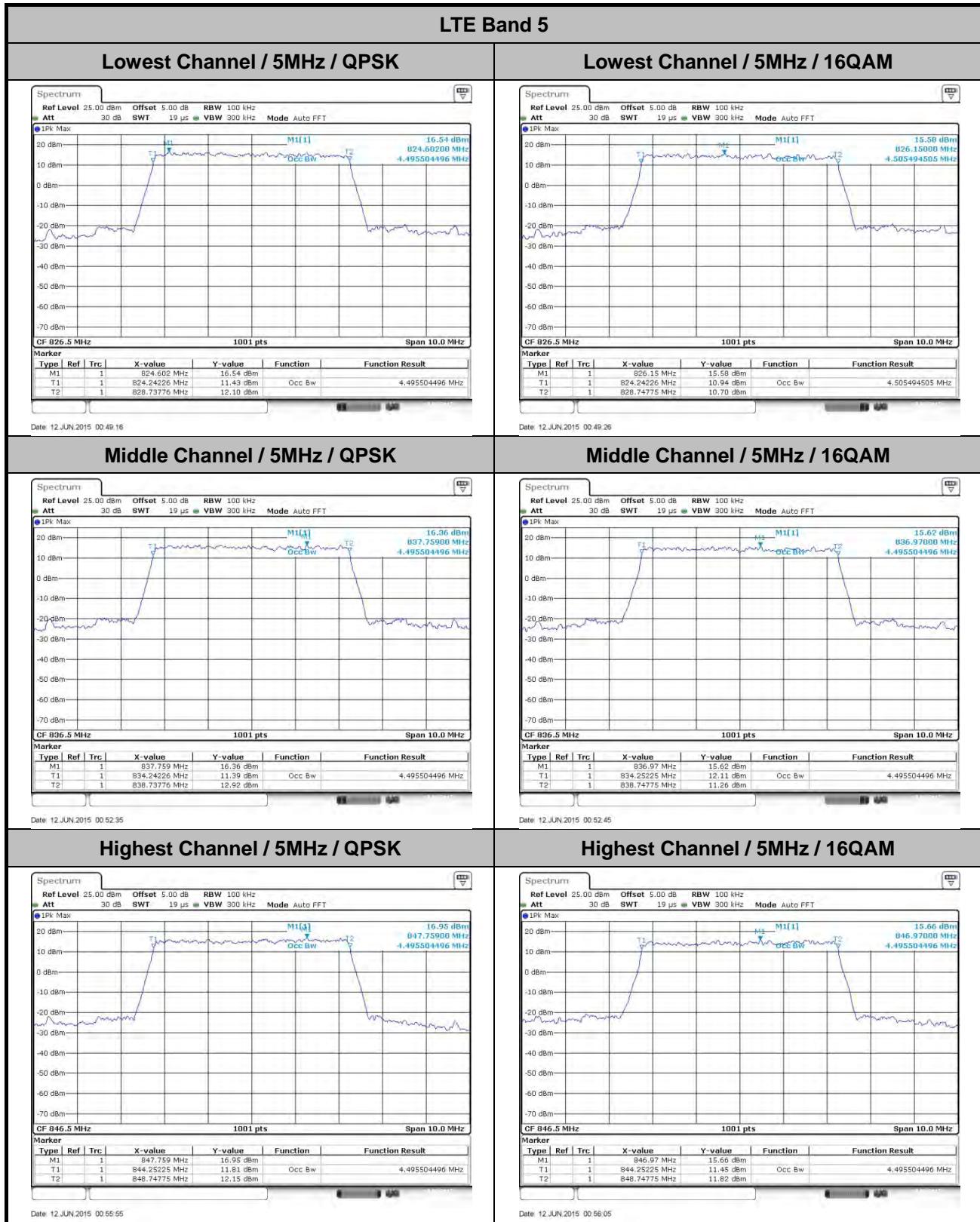


**Occupied Bandwidth**

Mode	LTE Band 5 : 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	1.10	1.09	2.72	2.73	4.50	4.51	9.09	9.09	-	-	-	-
Middle CH	1.09	1.10	2.73	2.72	4.50	4.50	9.05	9.01	-	-	-	-
Highest CH	1.10	1.10	2.72	2.73	4.50	4.50	9.09	9.05	-	-	-	-



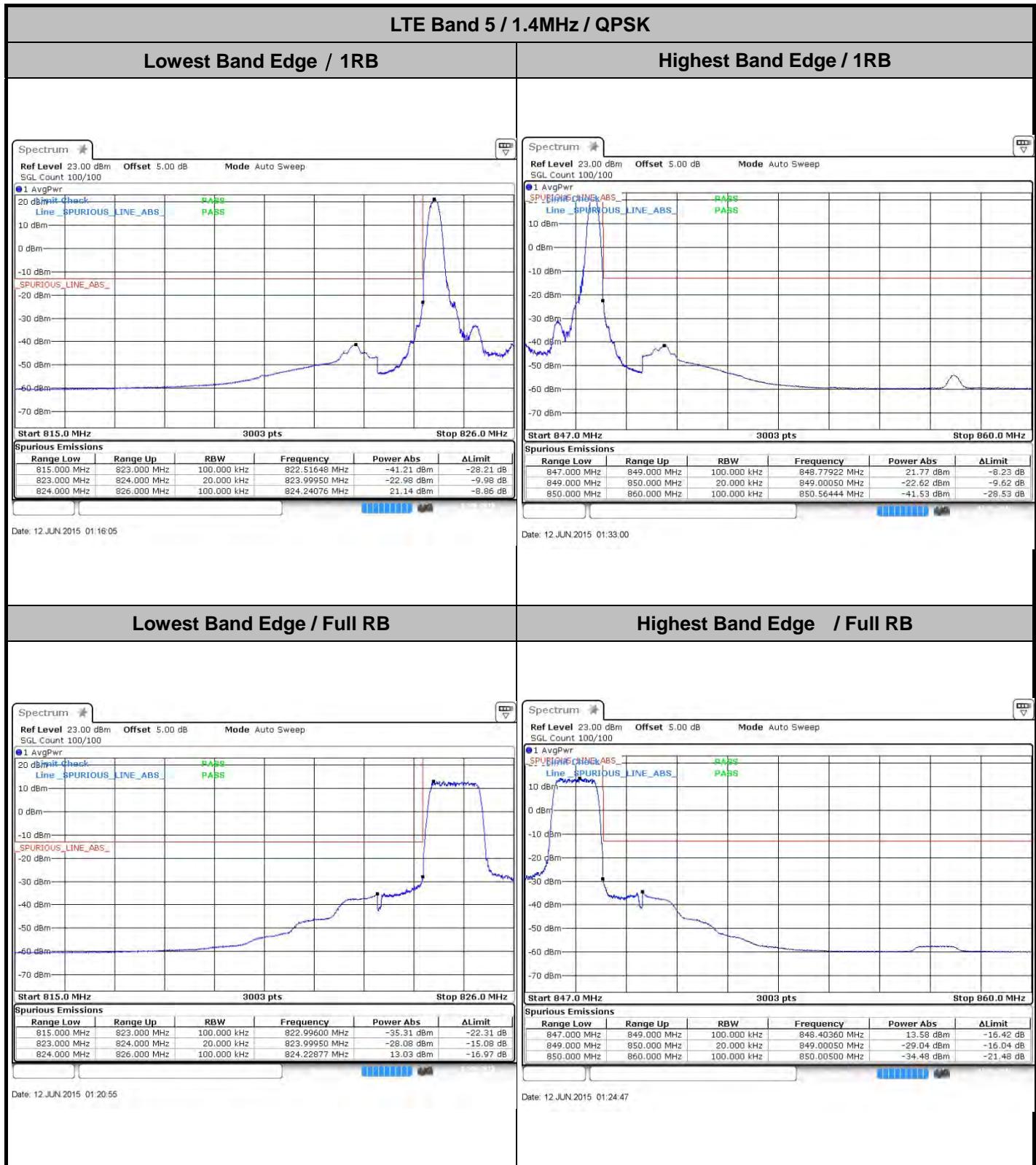


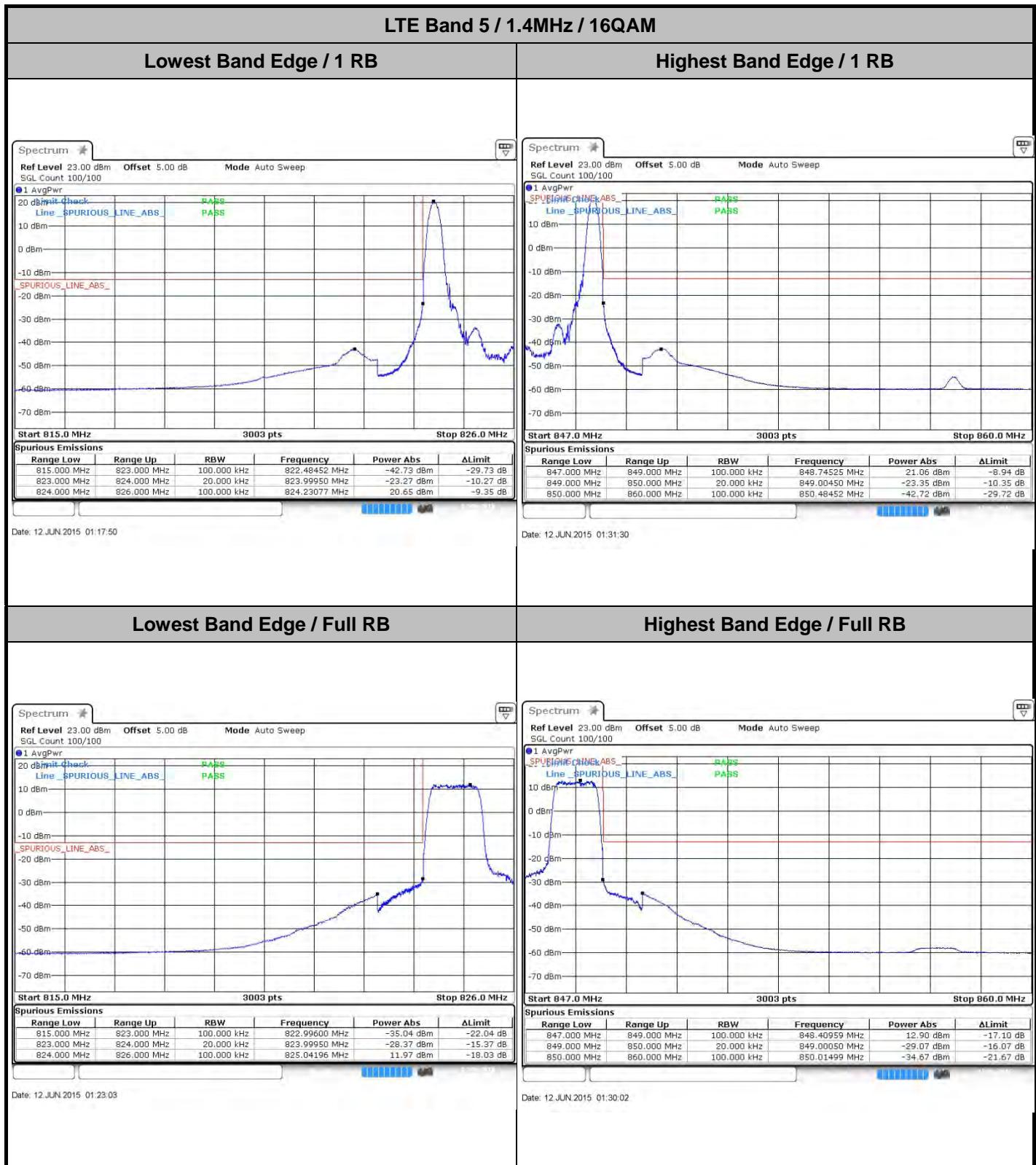


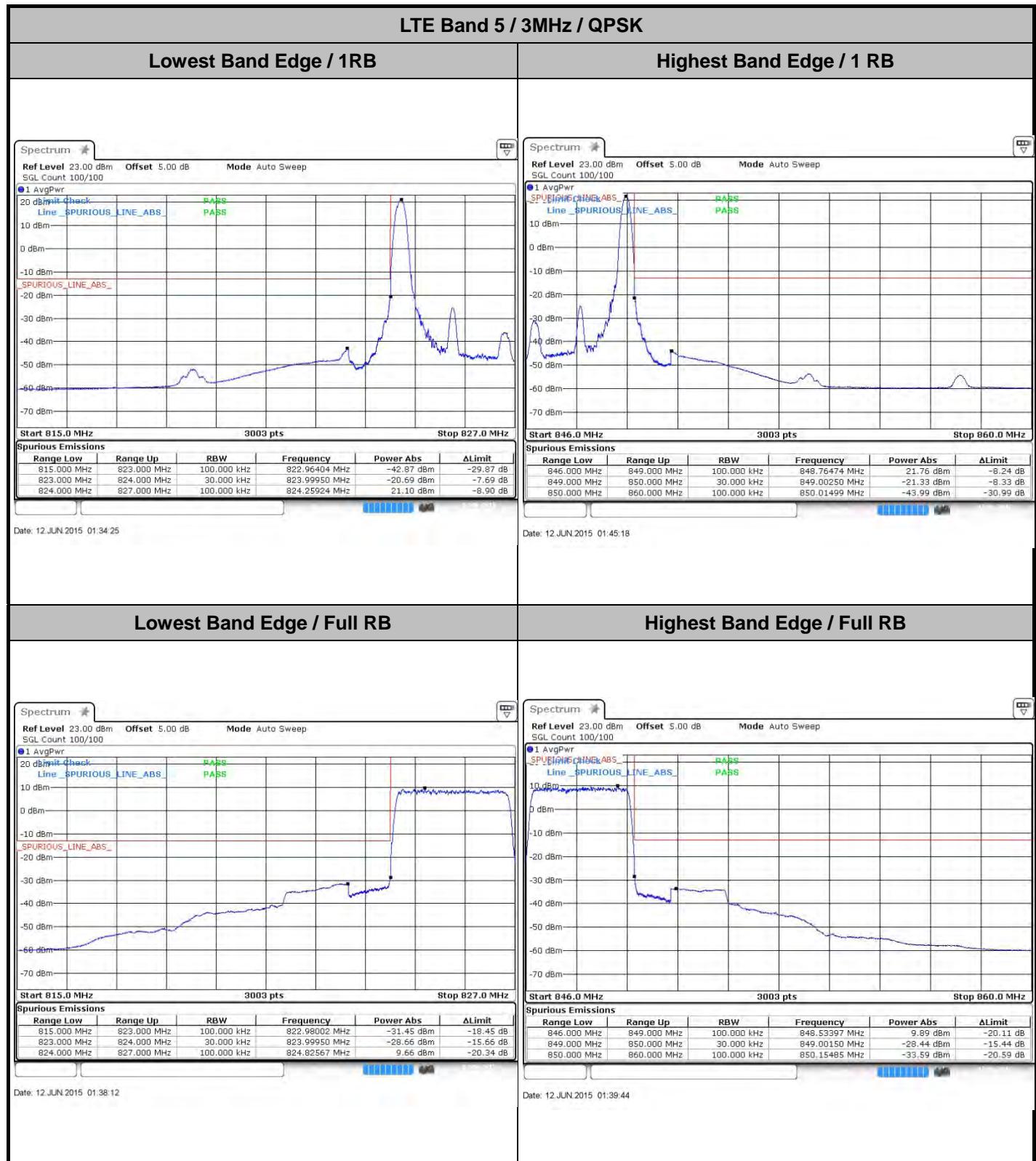


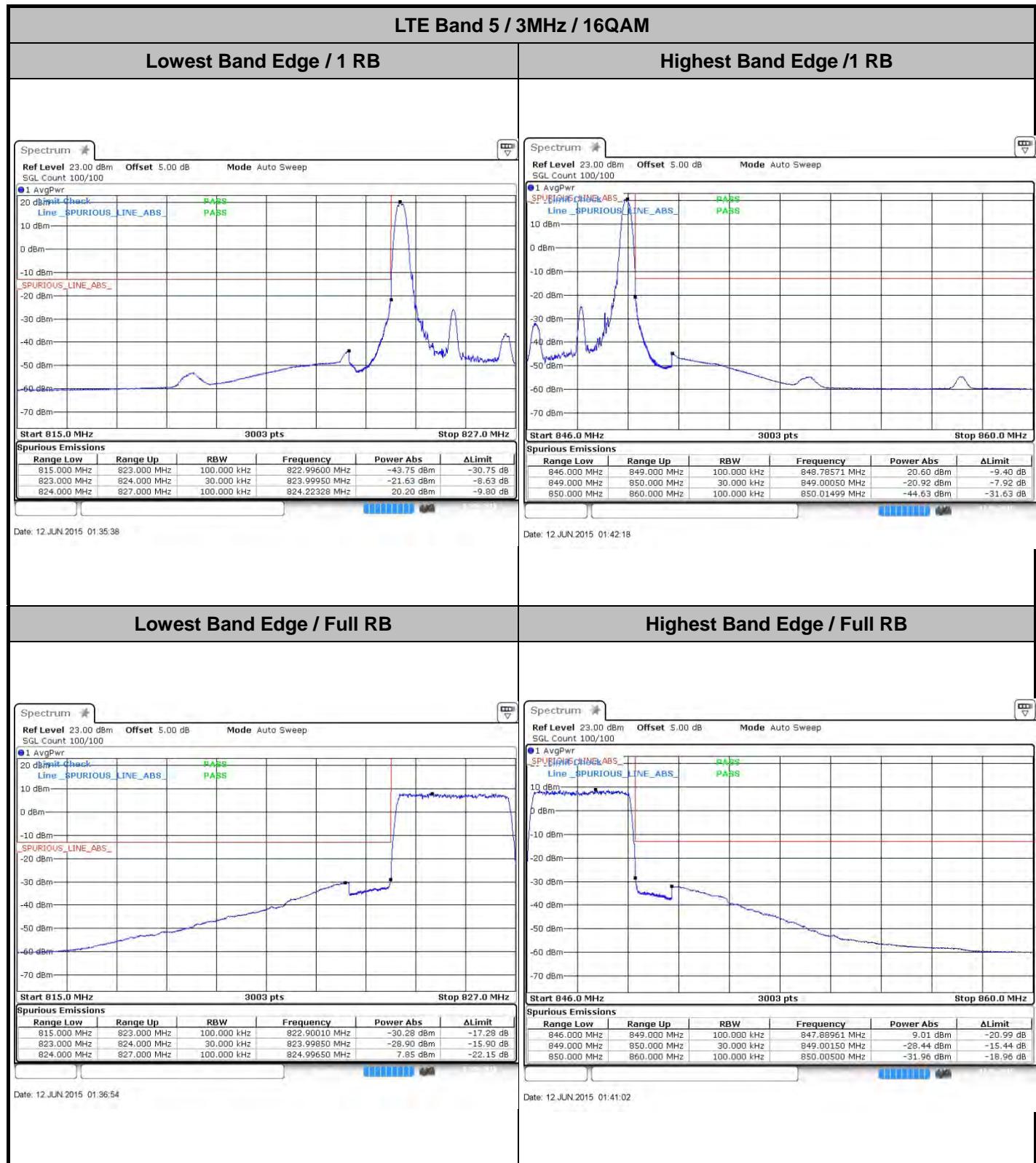


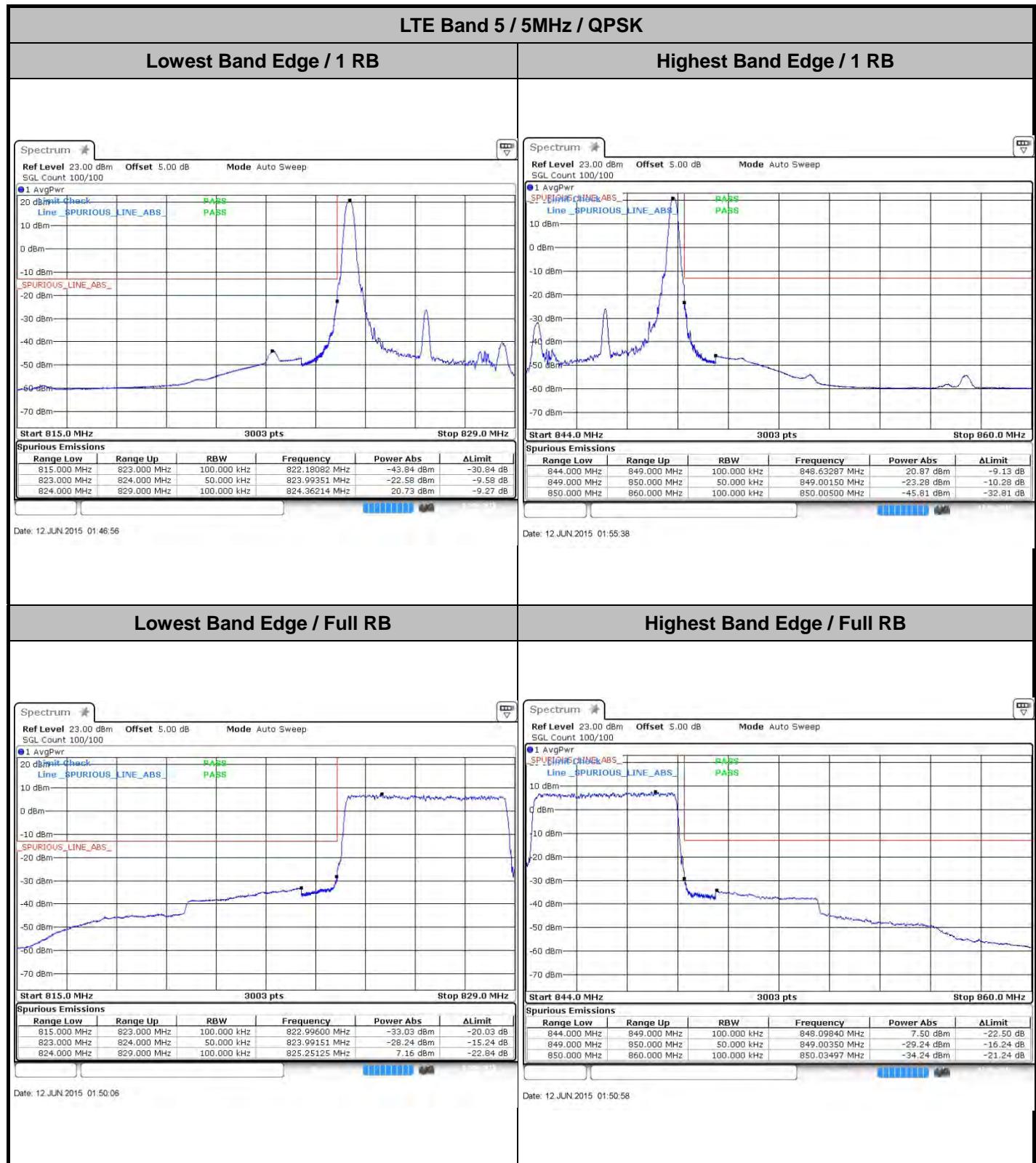
Conducted Band Edge

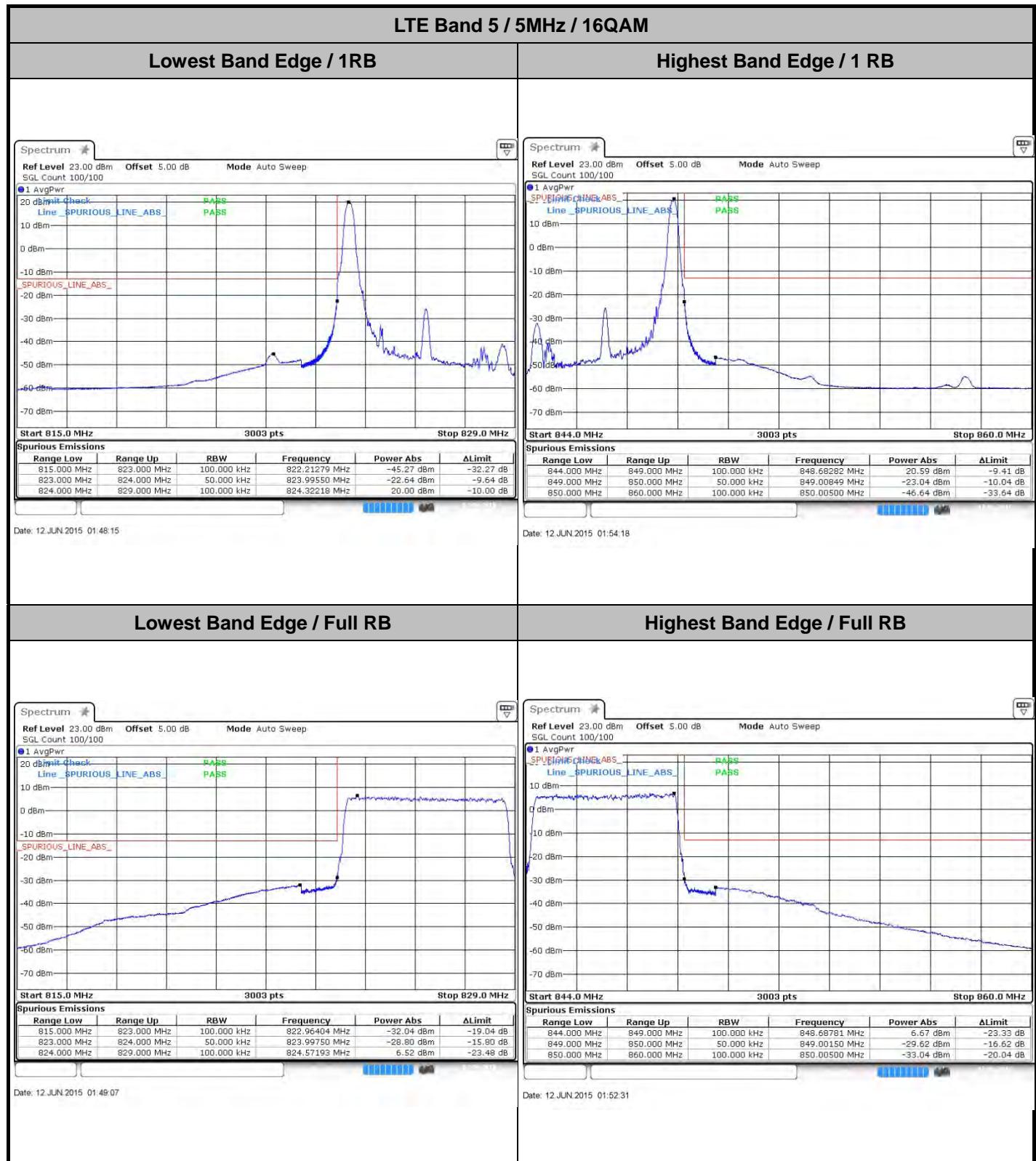


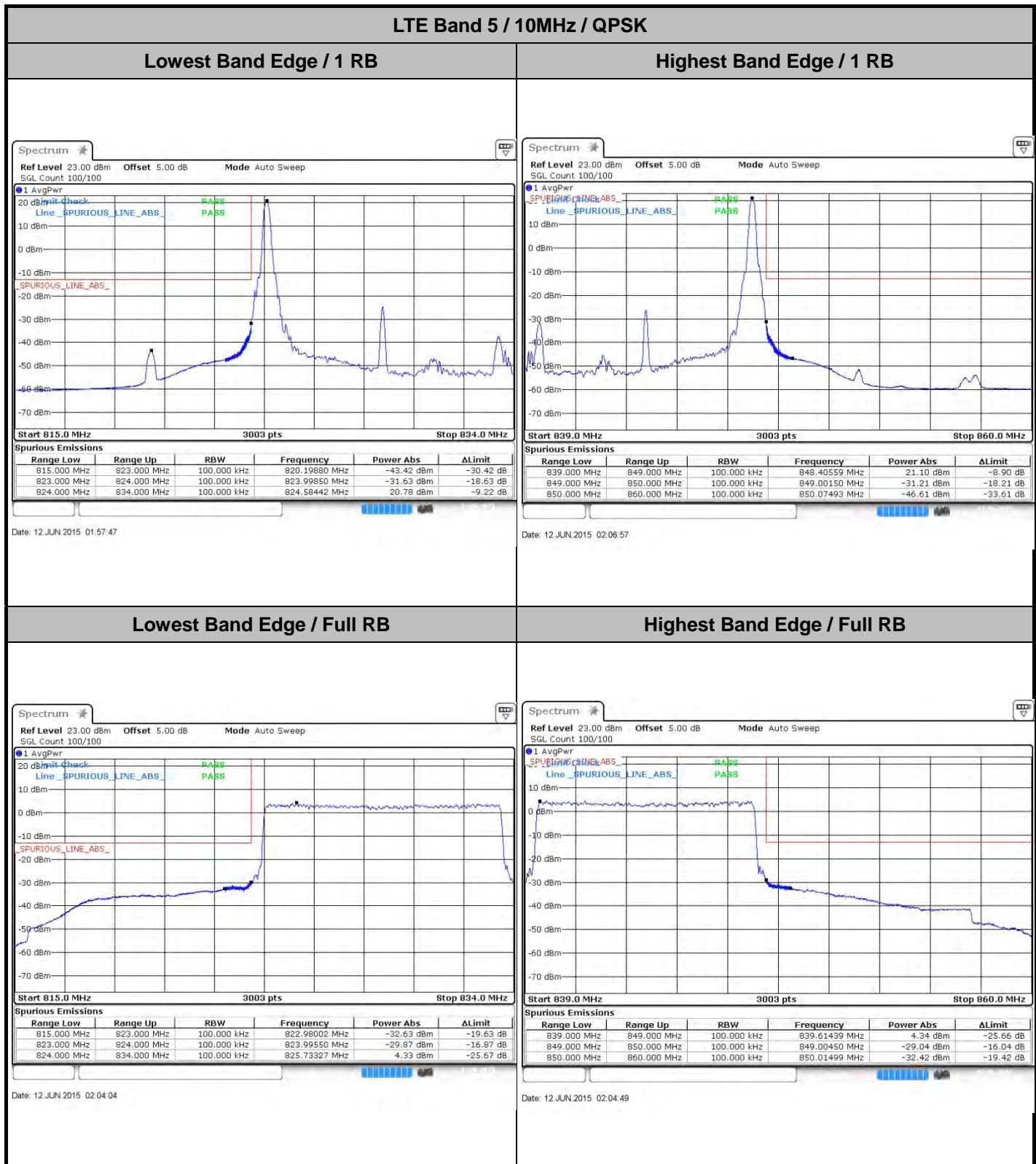


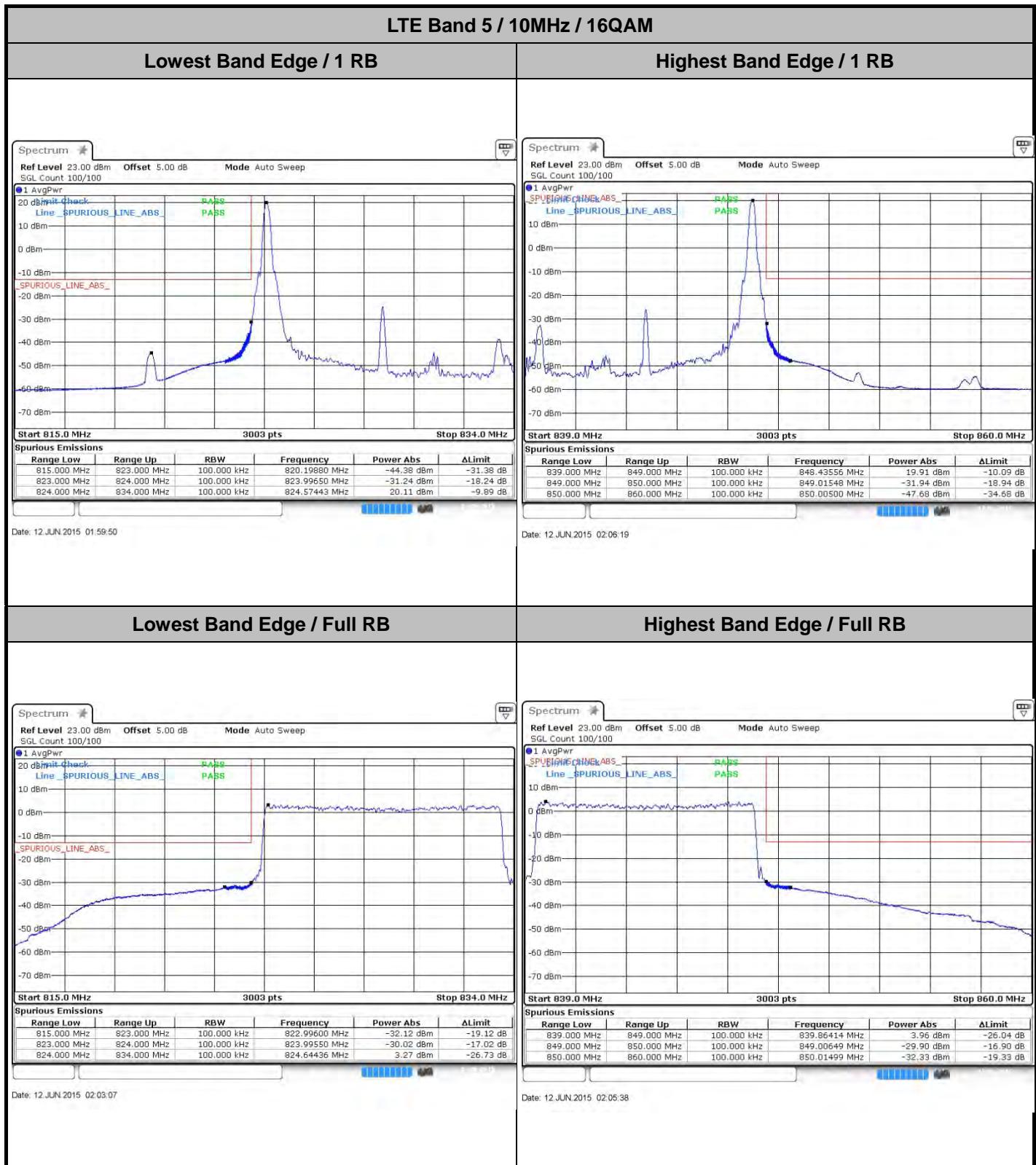












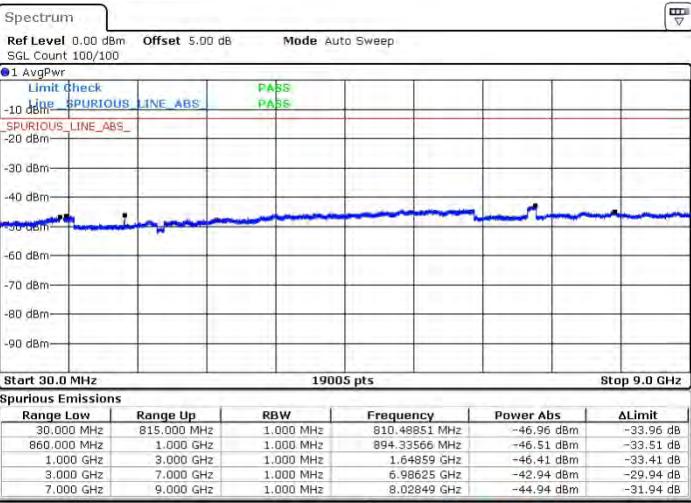
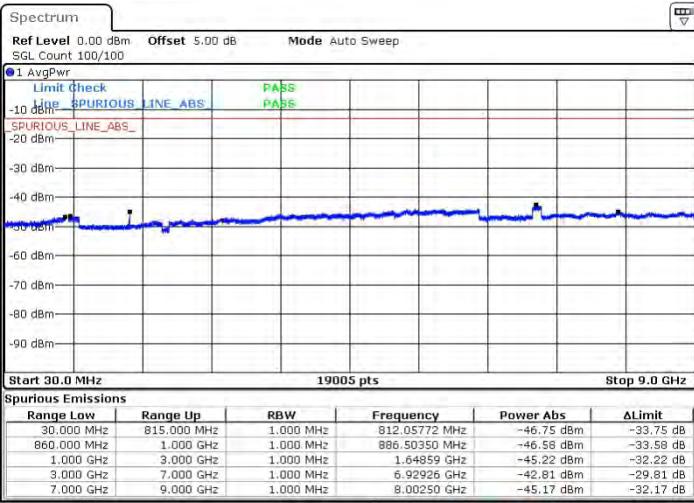


Conducted Spurious Emission

LTE Band 5 / 1.4MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

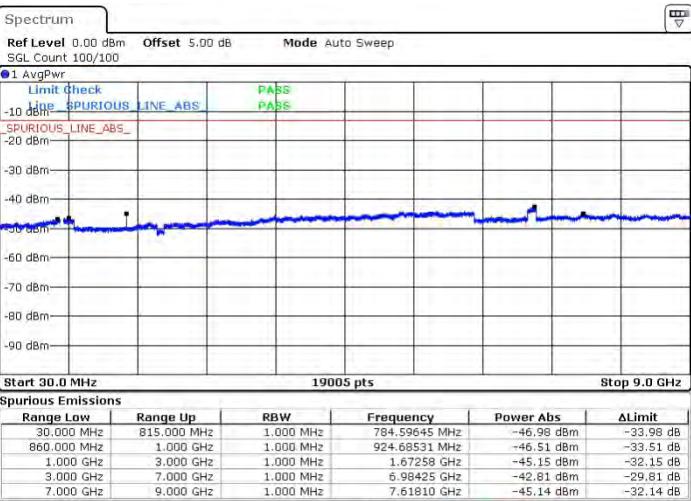
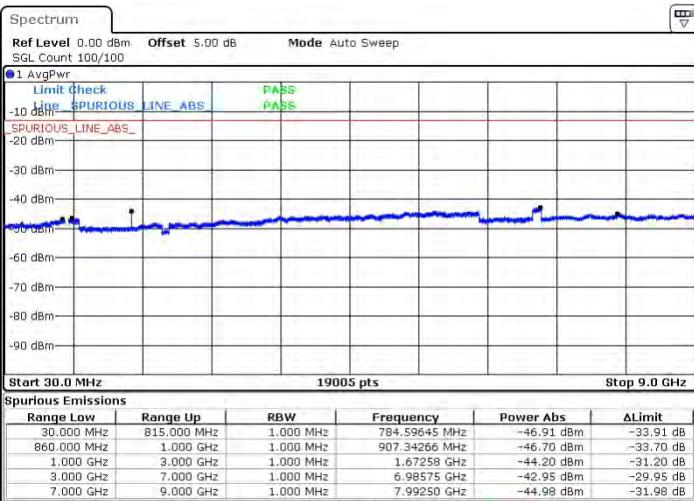


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Middle Channel / QPSK

Middle Channel / 16QAM



Date: 12 JUN 2015 00:34:20

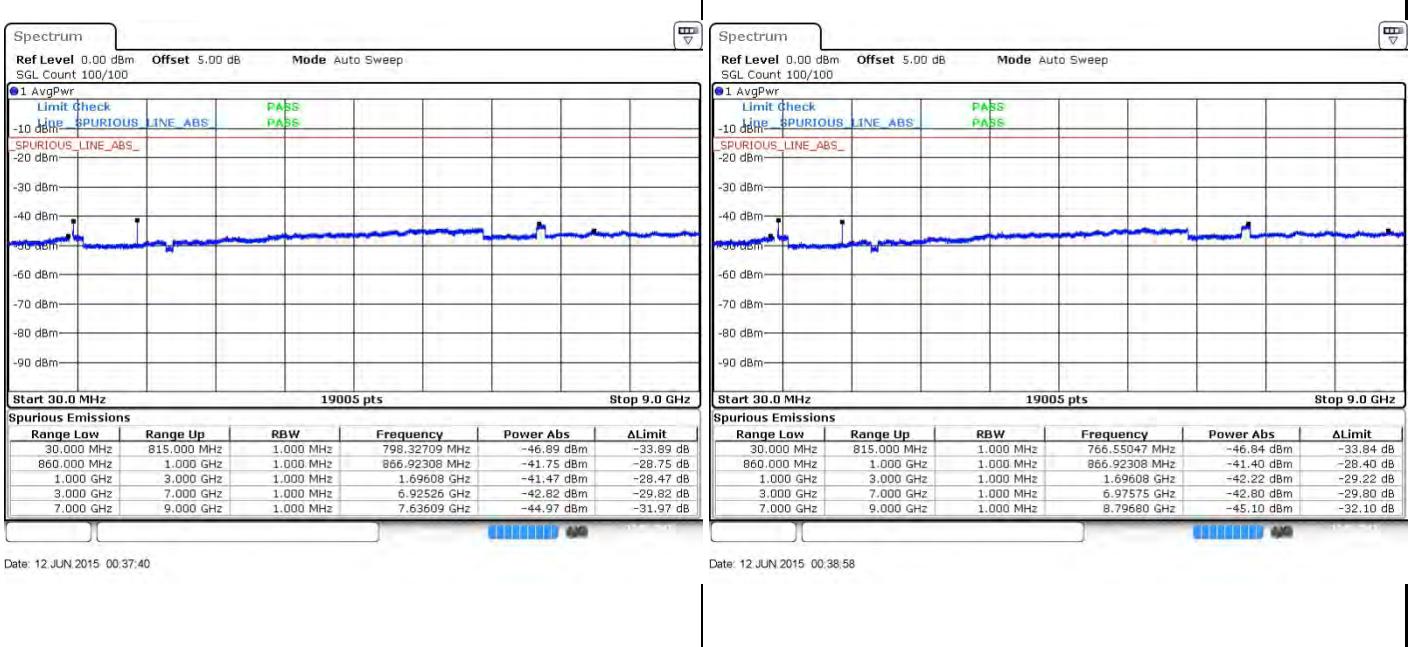
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LTE Band 5 / 1.4MHz

Highest Channel / QPSK

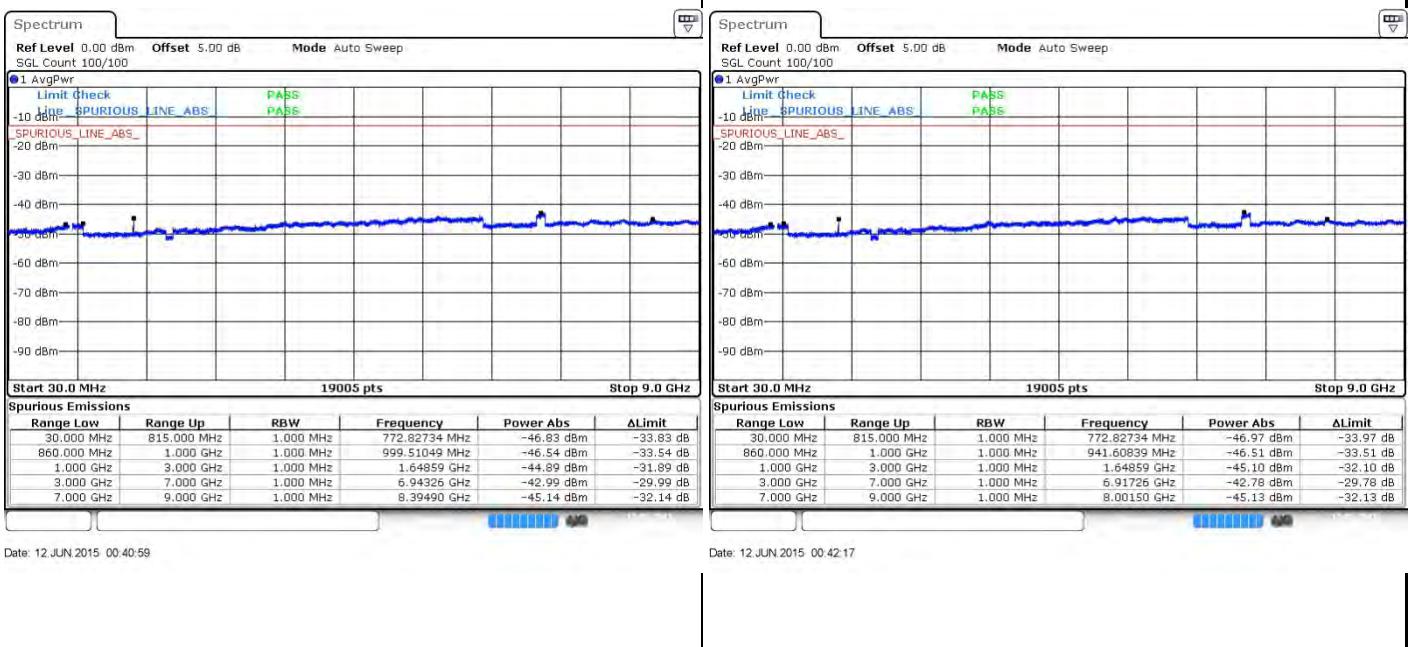
Highest Channel / 16QAM

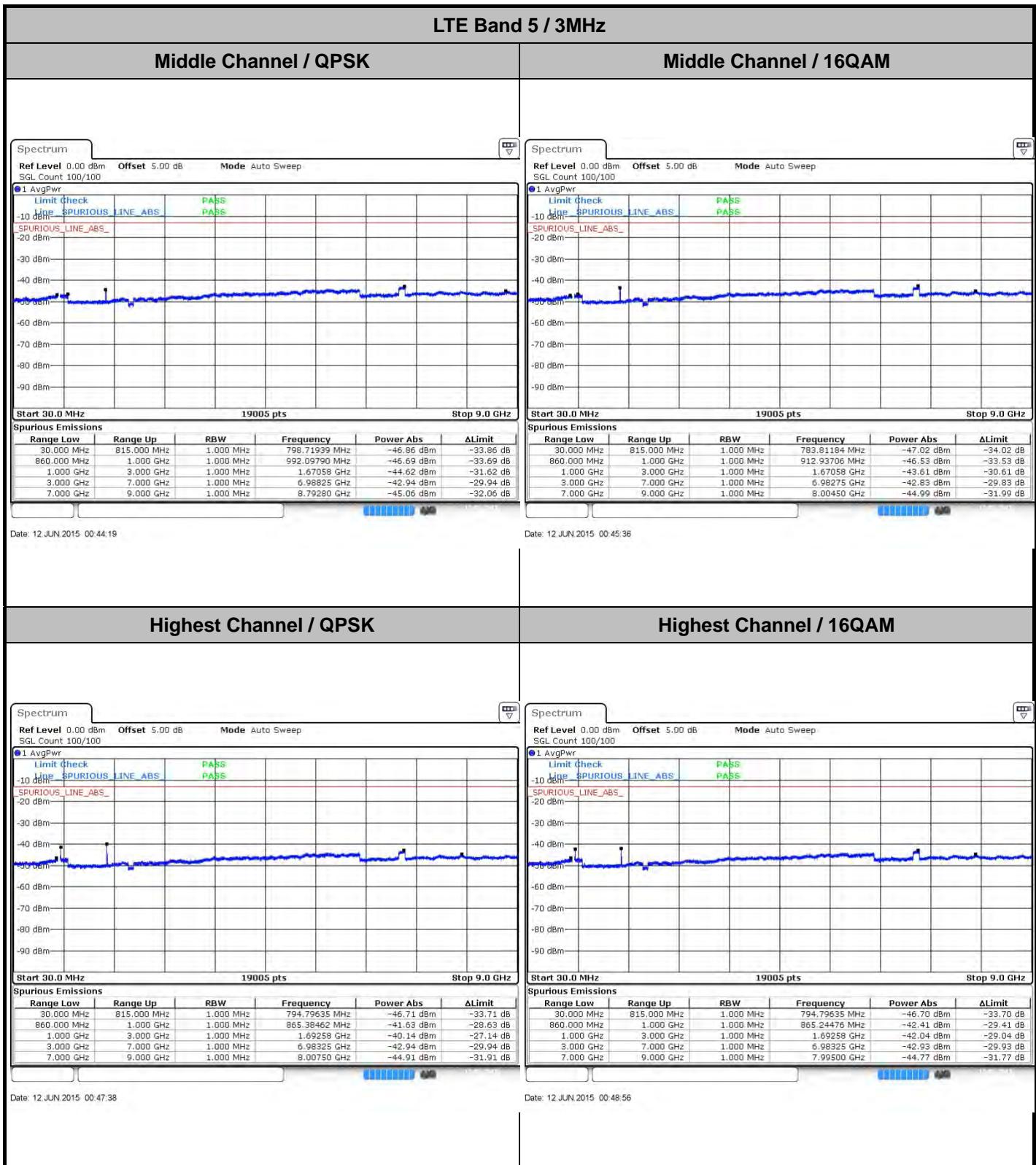


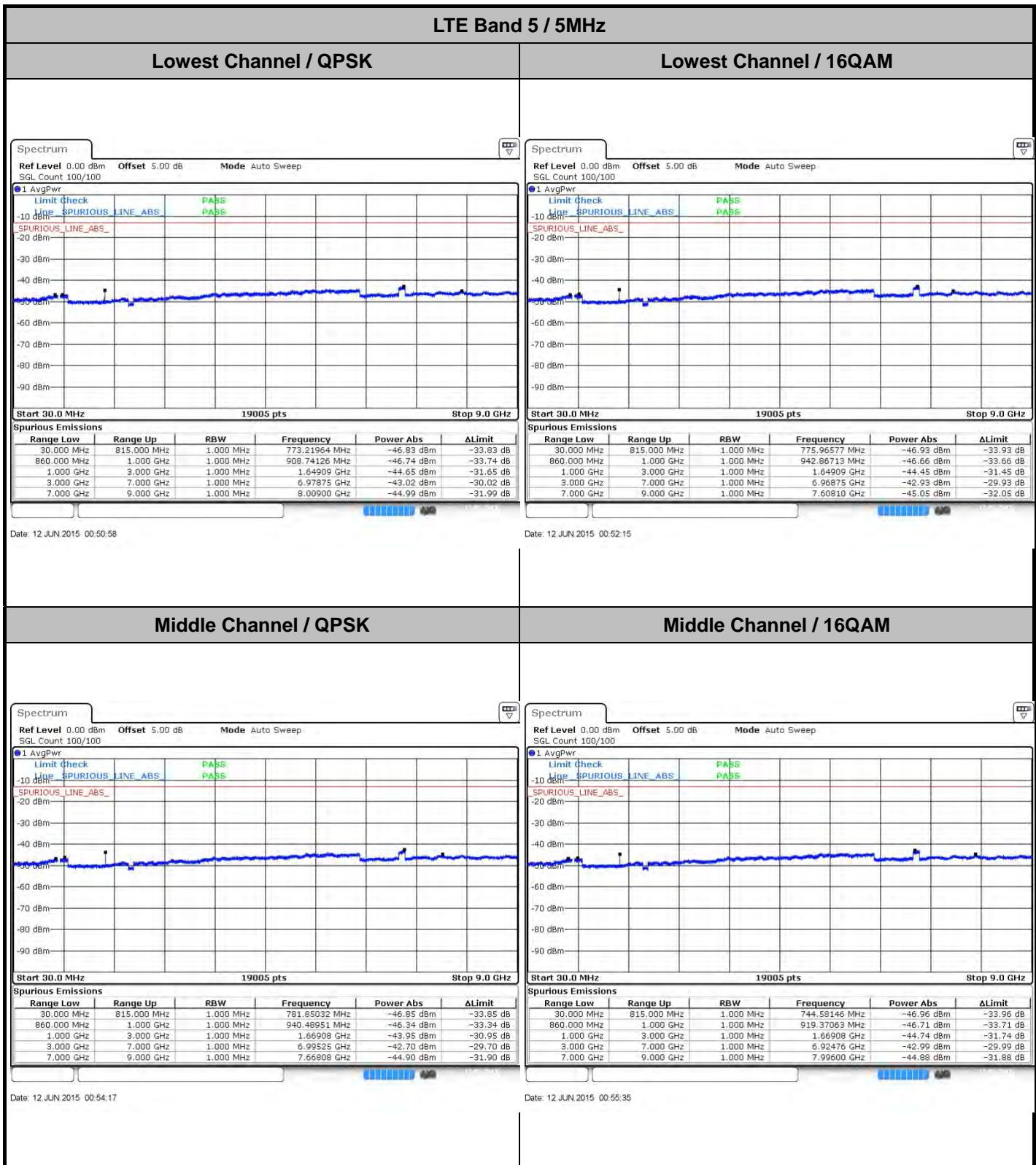
LTE Band 5 / 3MHz

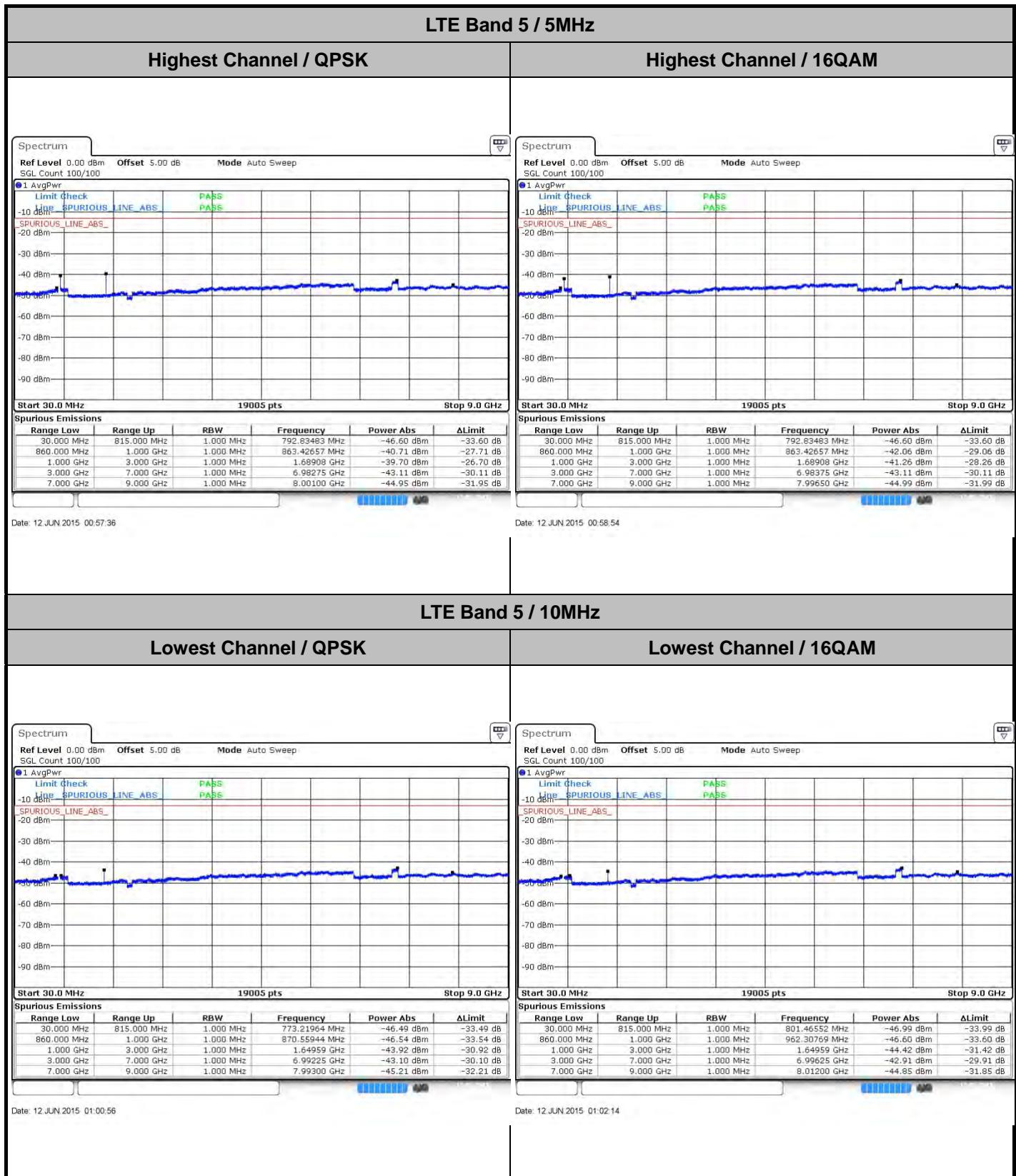
Lowest Channel / QPSK

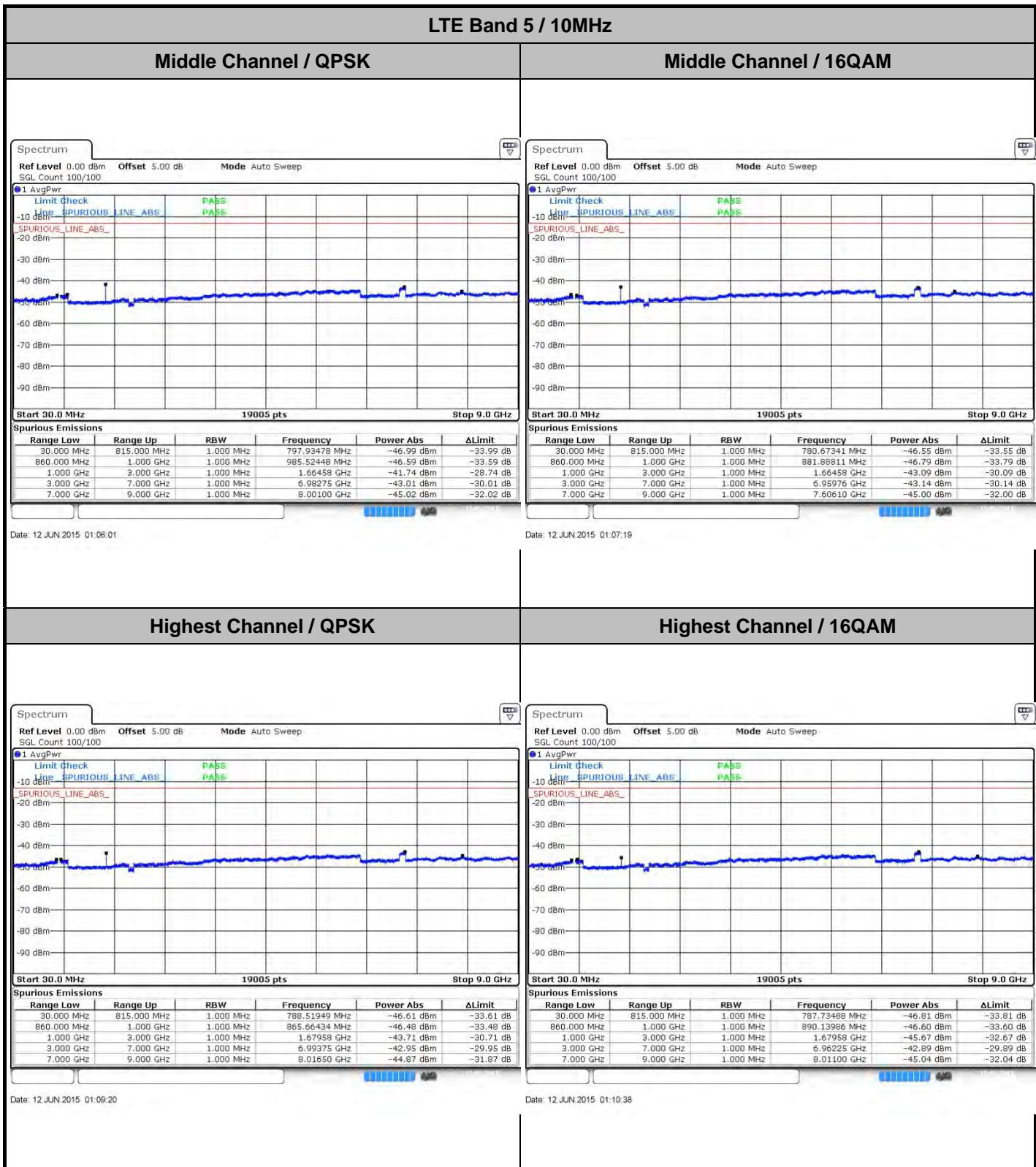
Lowest Channel / 16QAM













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	0.0191	PASS
40	Normal Voltage	0.0275	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0132	
0	Normal Voltage	0.0323	
-10	Normal Voltage	0.0430	
-20	Normal Voltage	0.0239	
-30	Normal Voltage	0.0251	
20	Maximum Voltage	0.0108	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0036	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



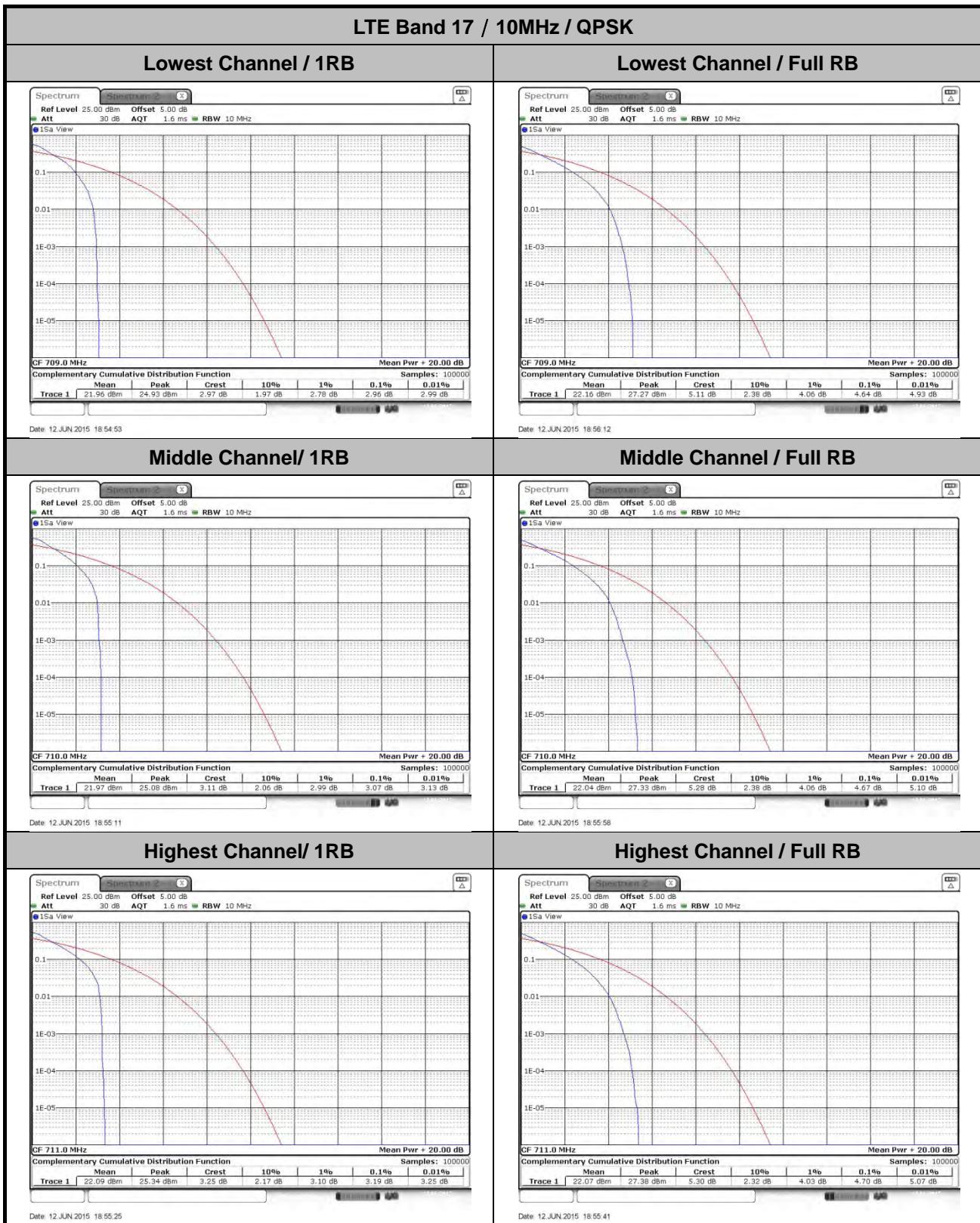
LTE Band 17

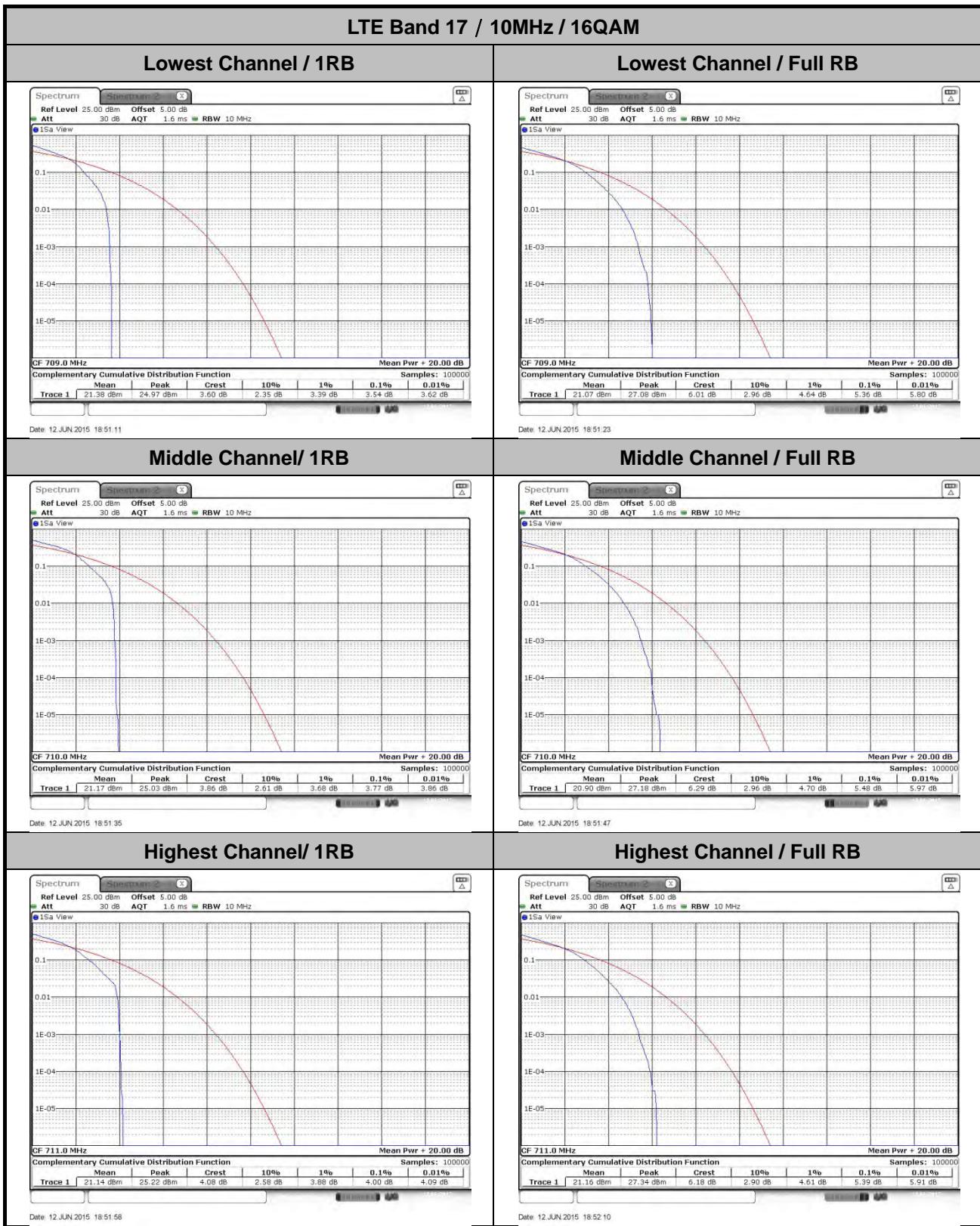
Conducted Output Power(Average power)

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.19	23.39	23.35
	1	12		23.26	23.22	23.43
	1	24		23.20	23.20	23.17
	12	0		22.25	22.34	22.33
	12	6		22.25	22.29	22.28
	12	11		22.22	22.24	22.26
	25	0		22.26	22.40	22.29
	1	0		22.87	22.73	22.68
5	1	12	16-QAM	22.54	22.56	22.15
	1	24		22.53	22.89	22.59
	12	0		21.20	21.34	21.20
	12	6		21.29	21.25	21.25
	12	11		21.25	21.22	21.25
	25	0		21.23	21.31	21.34
	1	0		23.44	23.29	23.41
	1	24		23.30	23.07	23.21
10	1	49	QPSK	23.07	23.28	23.25
	25	0		22.37	22.31	22.27
	25	12		22.22	22.27	22.26
	25	24		22.34	22.34	22.30
	50	0		22.34	22.33	22.24
	1	0		22.93	22.65	22.92
	1	24		22.54	22.47	22.60
	1	49		22.79	22.99	22.75
10	25	0	16-QAM	21.32	21.35	21.31
	25	12		21.31	21.31	21.25
	25	24		21.43	21.31	21.35
	50	0		21.37	21.47	21.32

**Peak-to-Average Ratio**

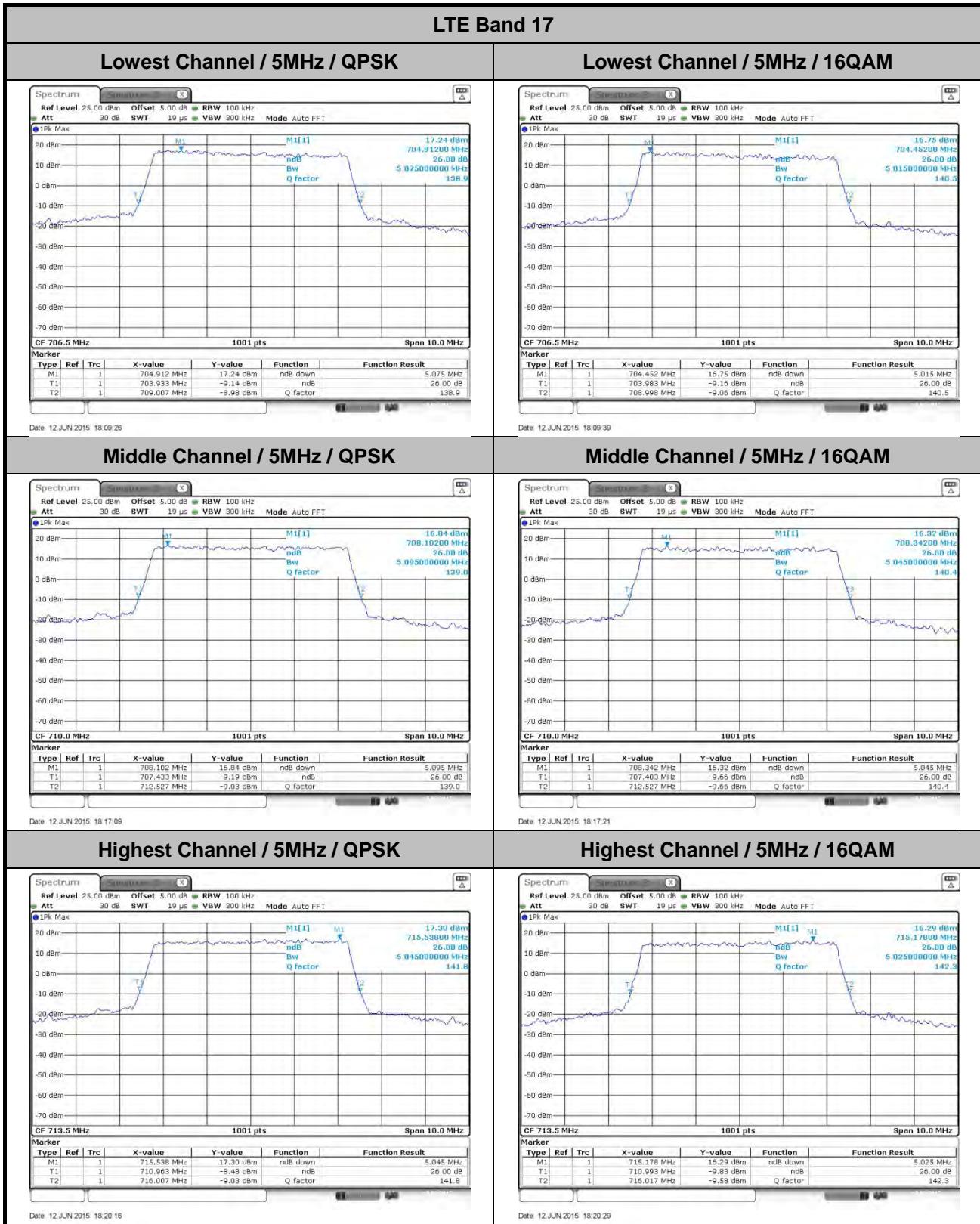
Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	RB Size	Result
Lowest CH	2.96	4.64	3.54	5.36	PASS
Middle CH	3.07	4.67	3.77	5.48	
Highest CH	3.19	4.70	4.00	5.39	

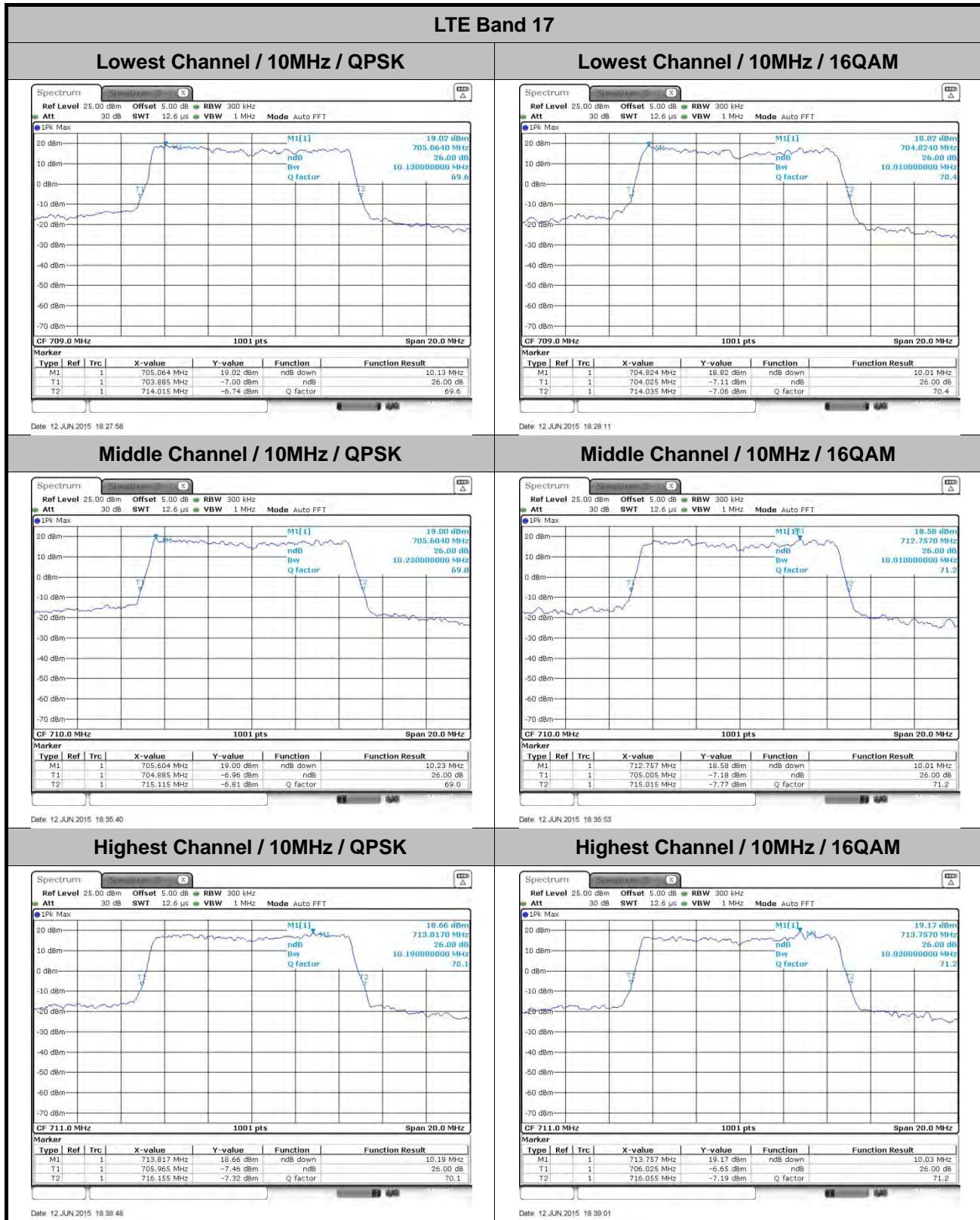




**26dB Bandwidth**

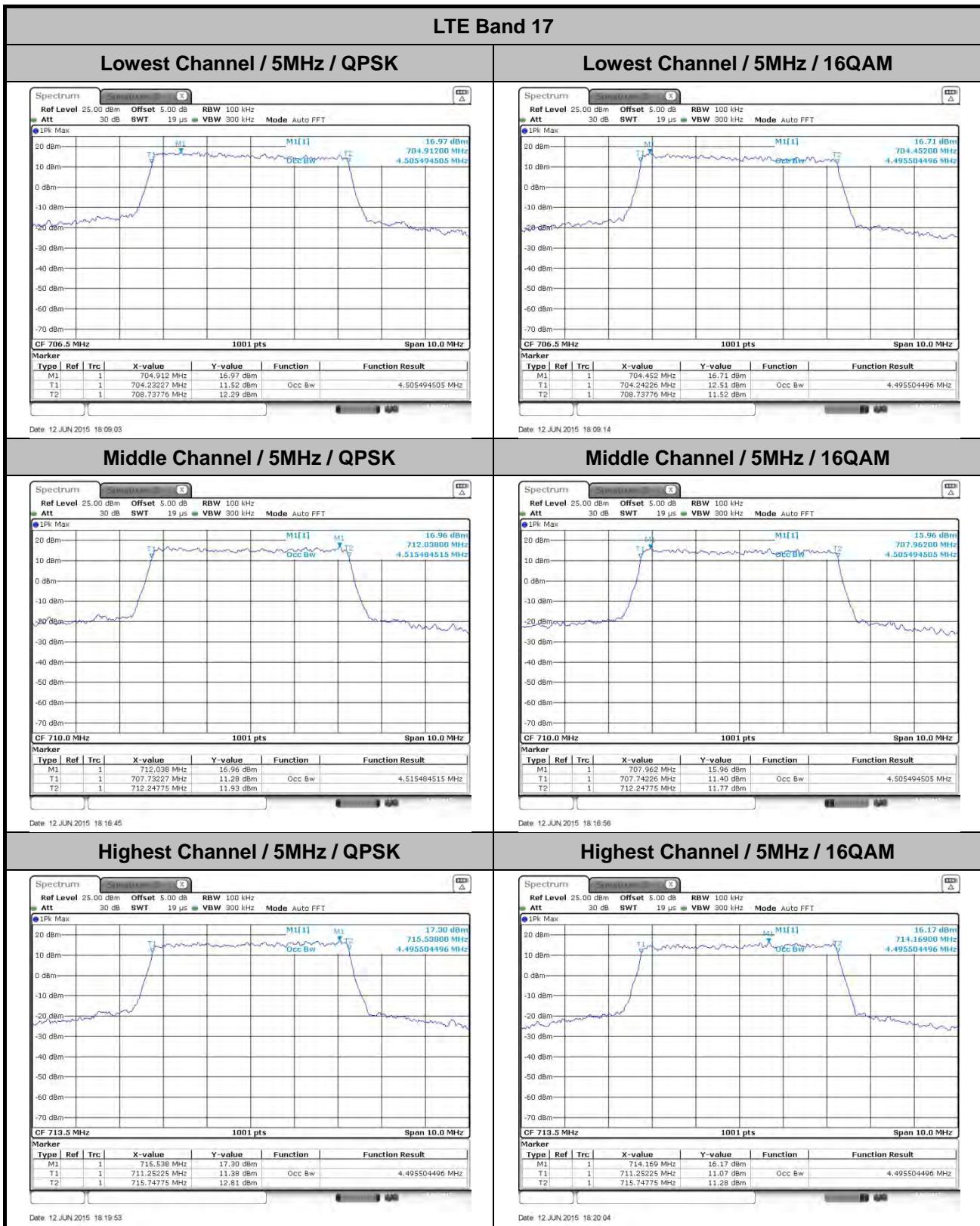
Mode	LTE Band 17 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	5.08	5.02	10.13	10.01	-	-	-	-
Middle CH	-	-	-	-	5.10	5.05	10.23	10.01	-	-	-	-
Highest CH	-	-	-	-	5.05	5.03	10.19	10.03	-	-	-	-

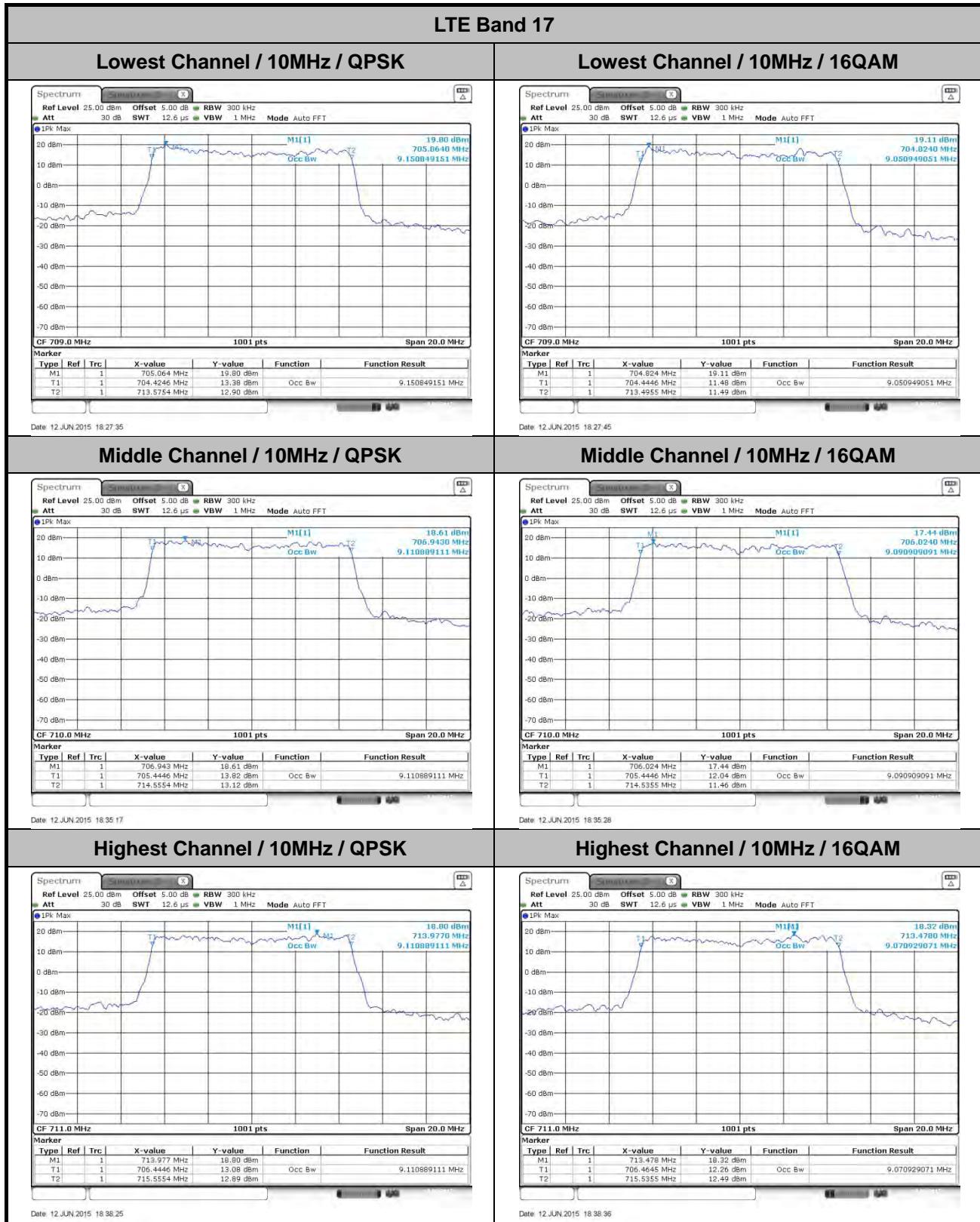




**Occupied Bandwidth**

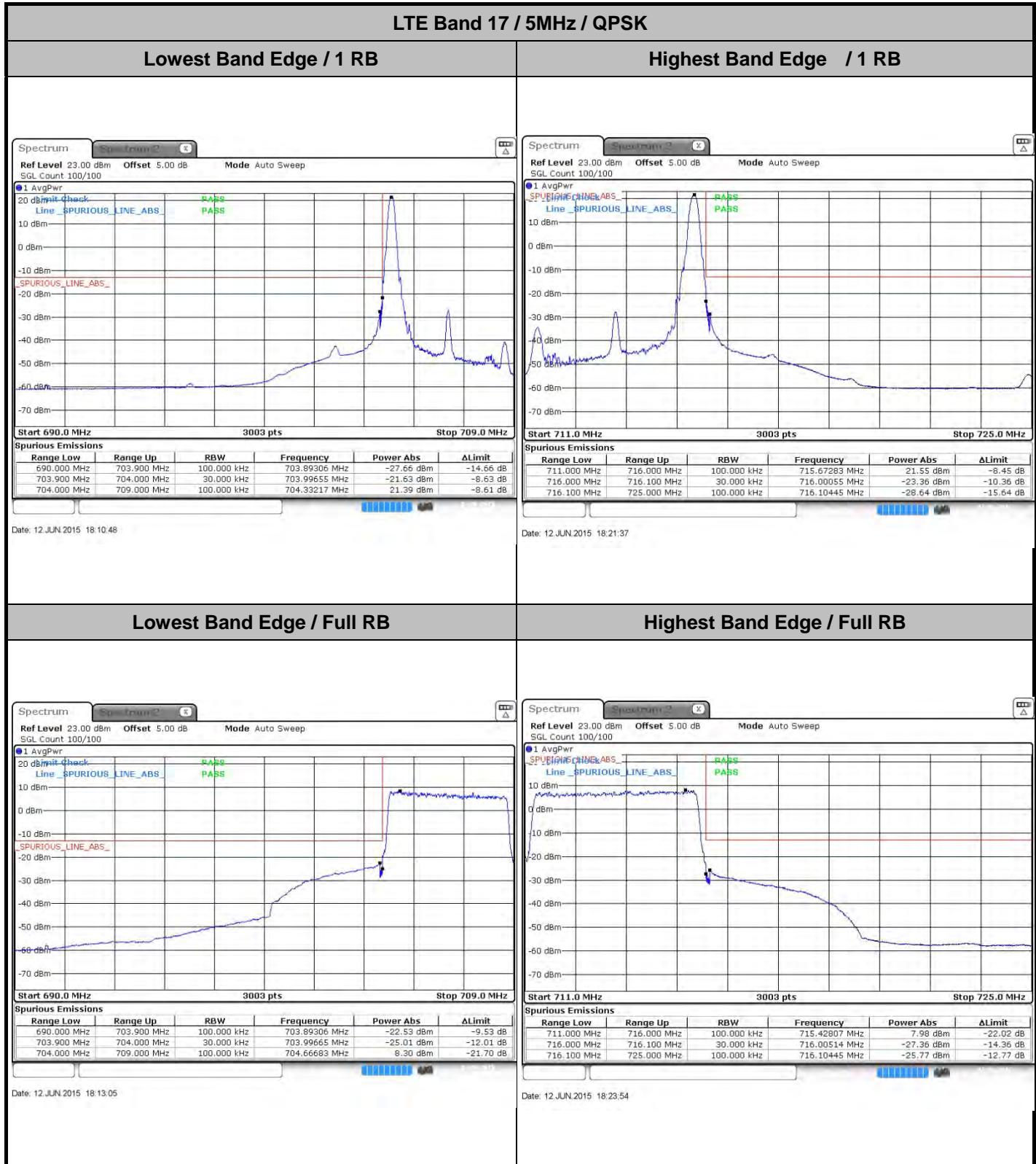
Mode	LTE Band 17 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.51	4.50	9.15	9.05	-	-	-	-
Middle CH	-	-	-	-	4.52	4.51	9.11	9.09	-	-	-	-
Highest CH	-	-	-	-	4.50	4.50	9.11	9.07	-	-	-	-

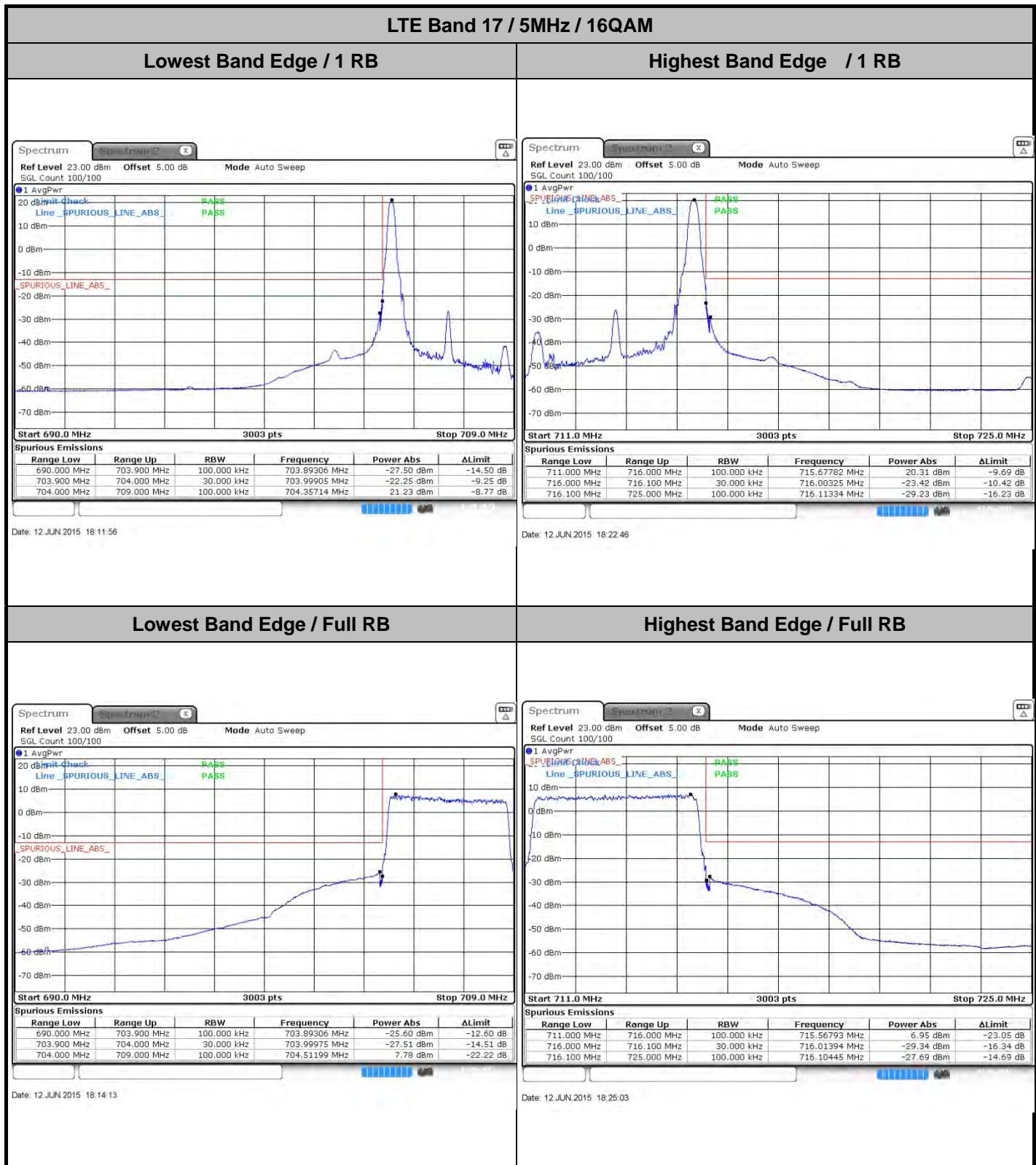


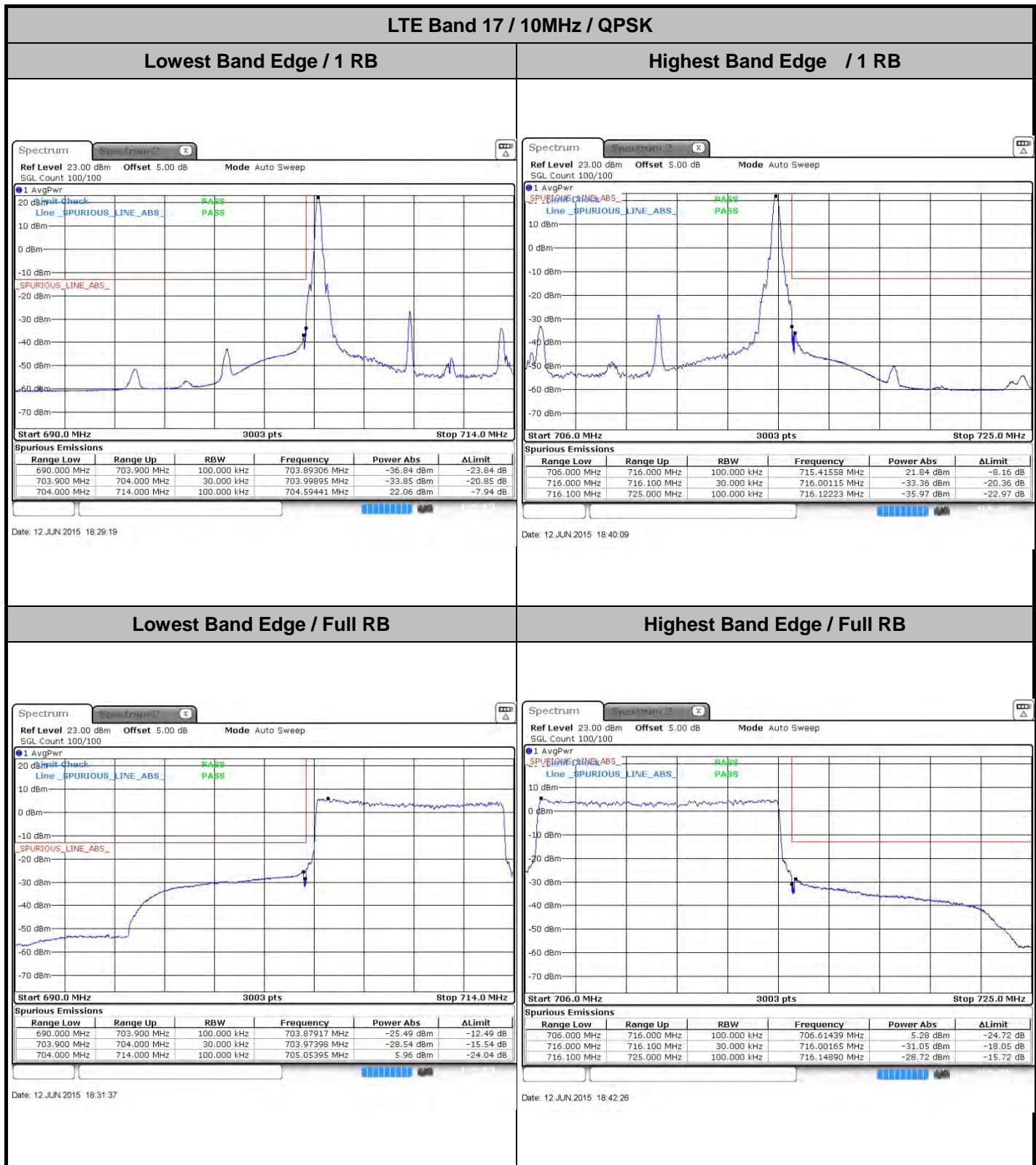


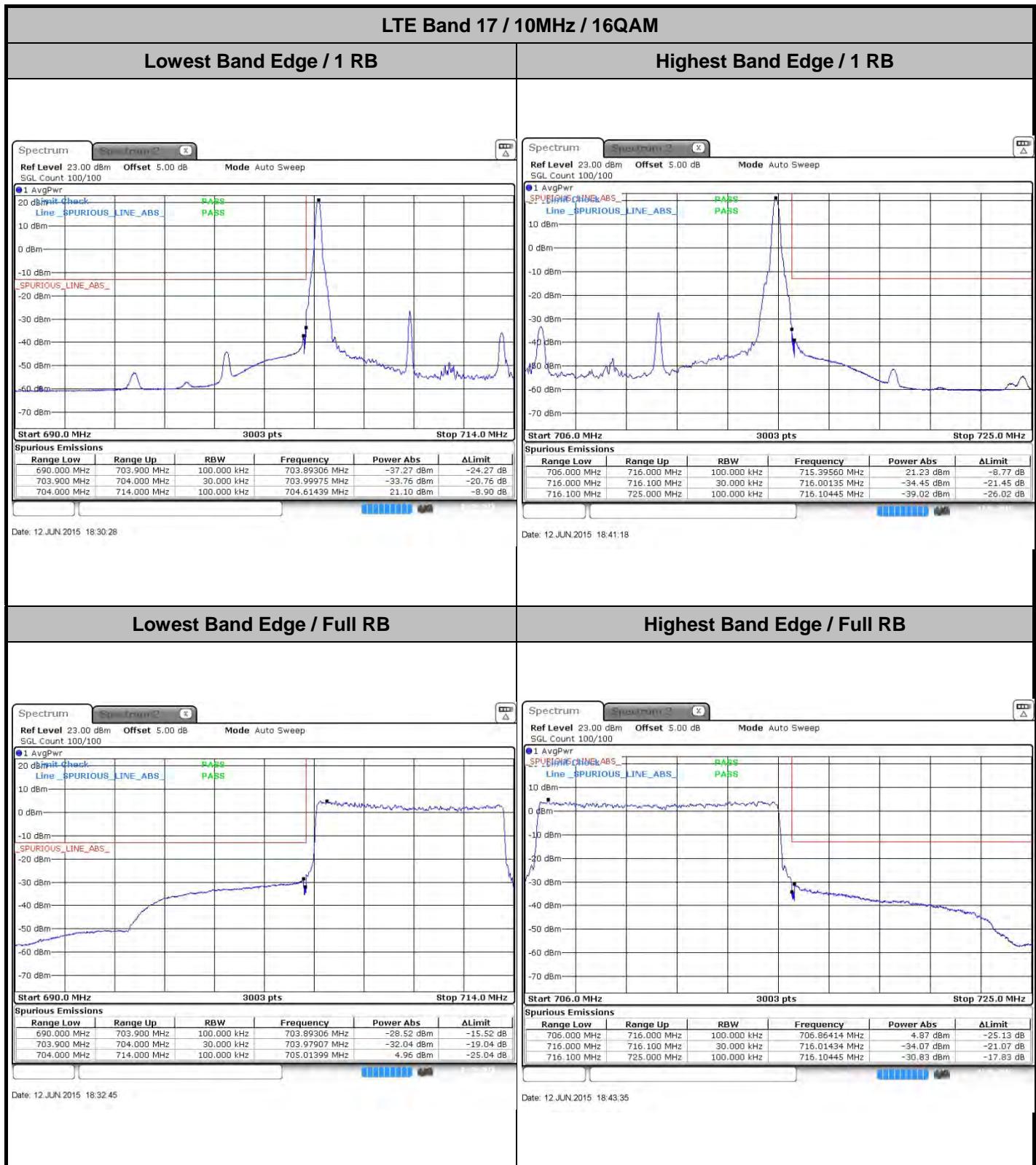


Conducted Band Edge









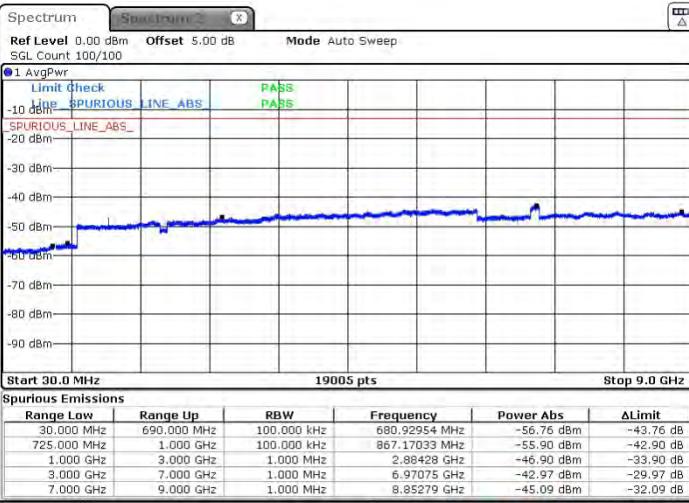
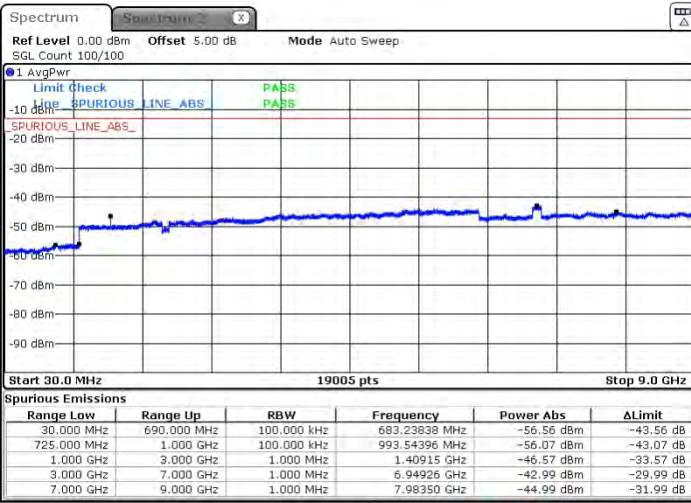


Conducted Spurious Emission

LTE Band 17 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

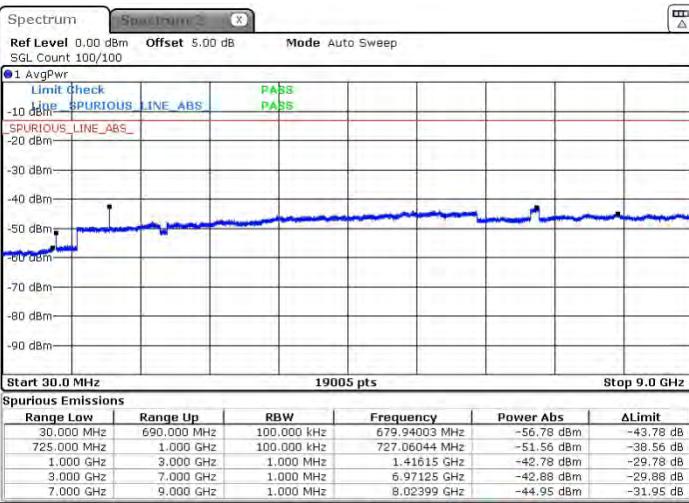
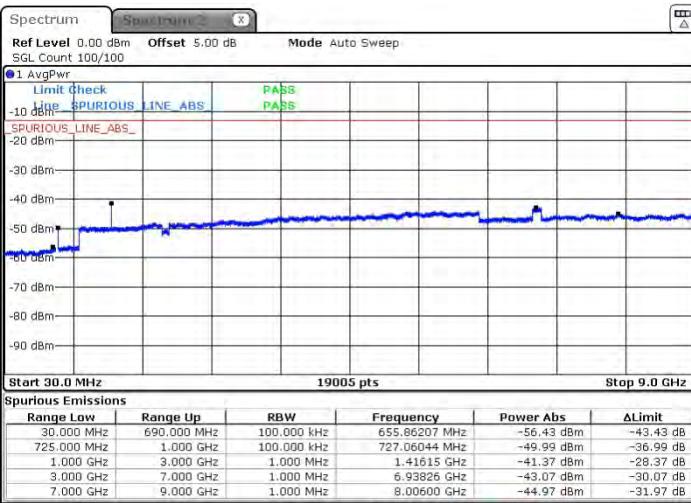


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Date: 12 JUN 2015 18:16:33

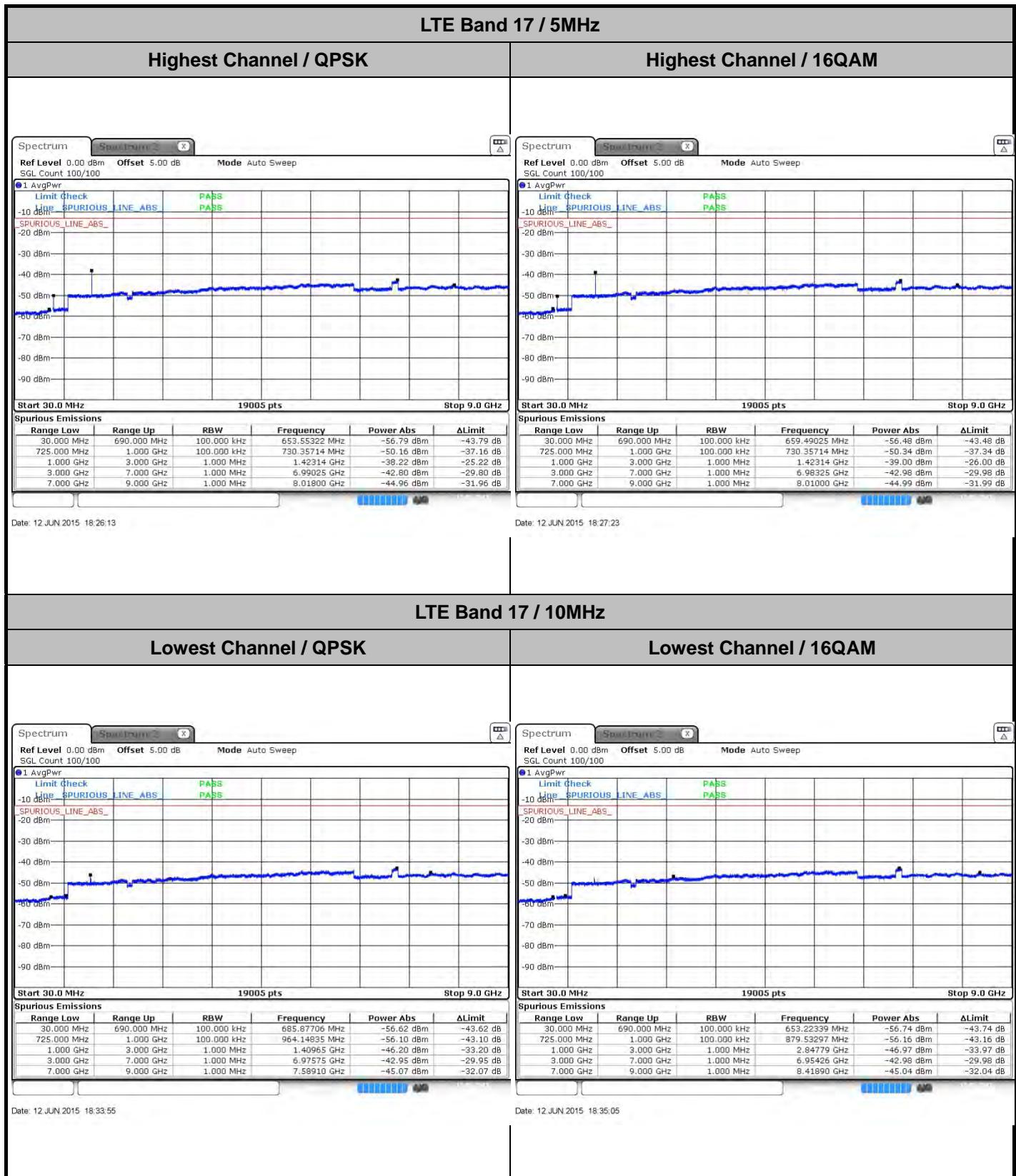
Middle Channel / QPSK

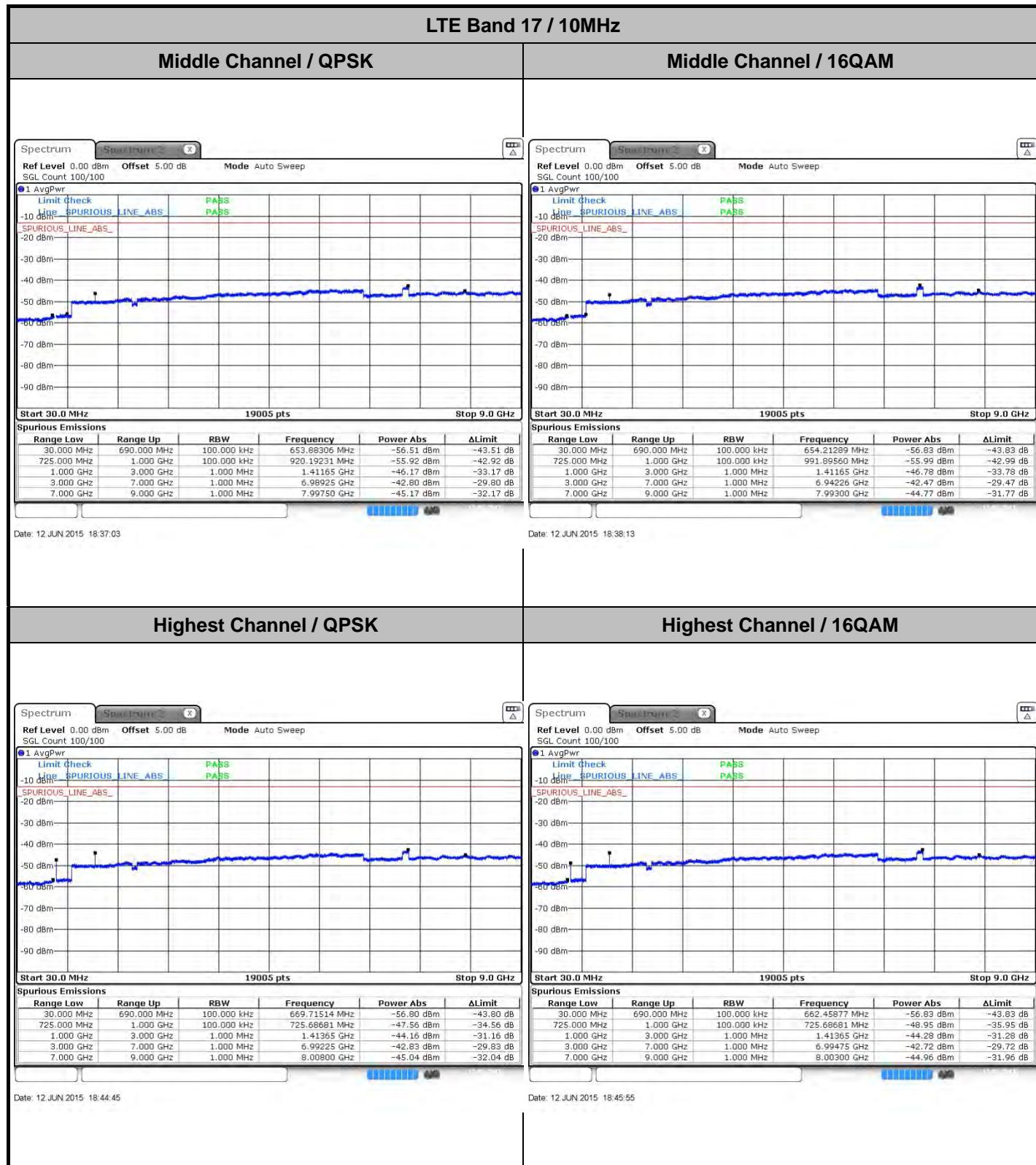
Middle Channel / 16QAM



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Frequency Stability

Test Conditions		LTE Band 17 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0025	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0027	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0041	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.