



## LTE Band 4

### Conducted Output Power(Average power)

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.85	23.76	23.55
1.4	1	2		23.87	24.00	23.64
1.4	1	5		23.76	23.80	23.52
1.4	3	0		23.85	23.72	23.67
1.4	3	1		23.89	23.80	23.80
1.4	3	2		23.77	23.91	23.71
1.4	6	0		22.84	22.84	22.59
1.4	1	0		23.12	23.15	22.79
1.4	1	2	16-QAM	22.96	23.08	22.89
1.4	1	5		23.04	22.68	22.91
1.4	3	0		22.92	23.04	22.75
1.4	3	1		22.90	23.00	22.78
1.4	3	2		22.99	23.03	22.79
1.4	6	0		21.67	21.72	21.59
3	1	0	QPSK	23.86	23.91	23.82
3	1	7		23.74	23.83	23.57
3	1	14		23.93	23.67	23.73
3	8	0		22.82	22.82	22.72
3	8	4		22.75	22.82	22.67
3	8	7		22.77	22.91	22.75
3	15	0		22.86	22.82	22.69
3	1	0		23.15	23.27	23.14
3	1	7	16-QAM	23.09	23.14	22.85
3	1	14		23.22	23.15	23.02
3	8	0		21.60	21.64	21.64
3	8	4		21.76	21.58	21.76
3	8	7		21.83	21.64	21.75
3	15	0		21.64	21.60	21.46



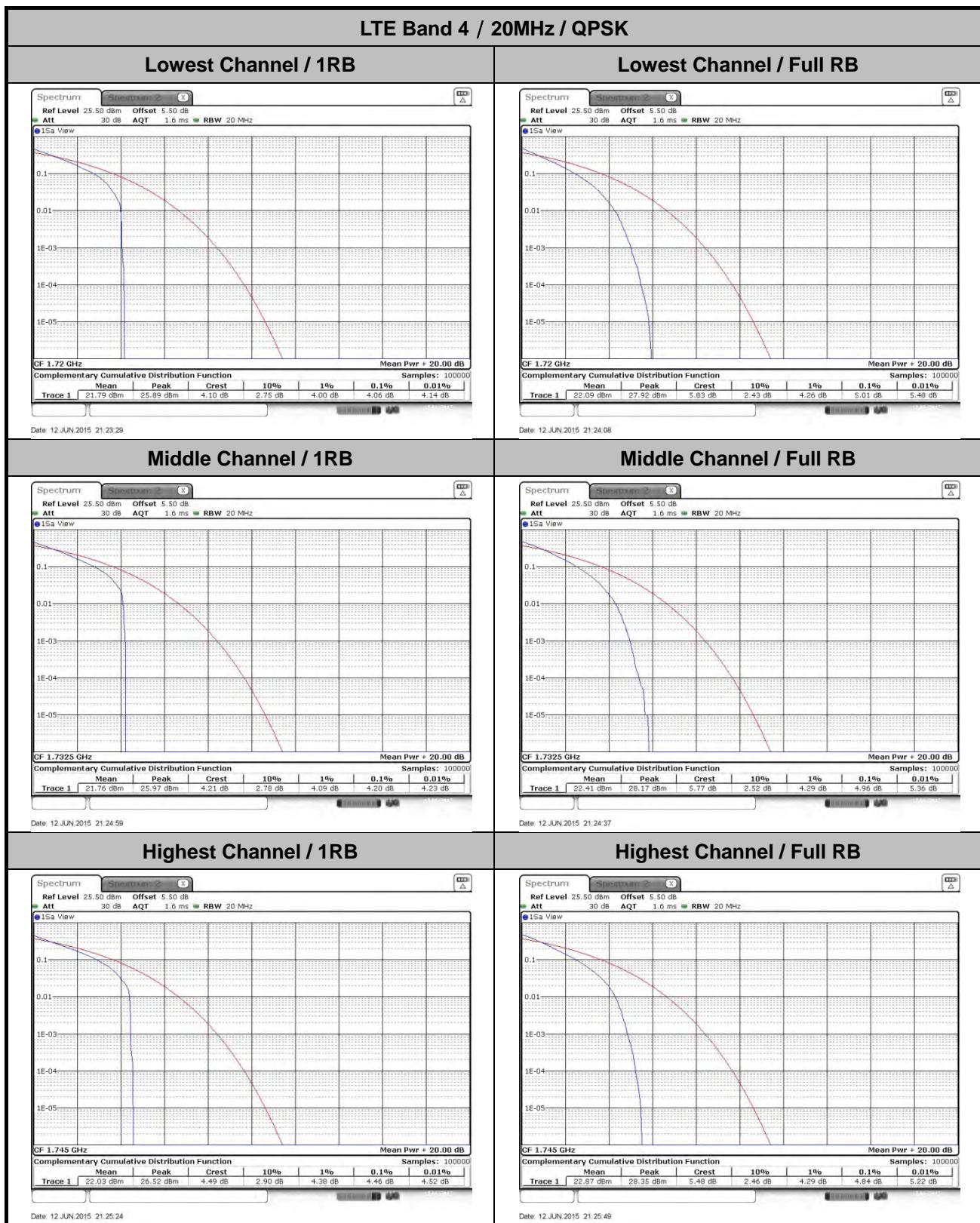
LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.76	23.85	23.52
	1	12		23.75	23.92	23.76
	1	24		23.73	23.69	23.65
	12	0		22.76	22.77	22.67
	12	6		22.72	22.85	22.69
	12	11		22.68	22.71	22.66
	25	0		22.80	22.84	22.80
5	1	0	16-QAM	23.05	23.02	23.03
	1	12		23.07	23.08	23.00
	1	24		22.98	23.06	22.80
	12	0		21.67	21.66	21.73
	12	6		21.60	21.74	21.68
	12	11		21.61	21.66	21.63
	25	0		21.83	21.77	21.68
10	1	0	QPSK	24.00	23.93	23.87
	1	24		23.76	23.75	23.68
	1	49		23.79	23.77	23.74
	25	0		22.87	22.76	22.79
	25	12		22.77	22.77	22.70
	25	24		22.66	22.88	22.71
	50	0		22.75	22.80	22.77
10	1	0	16-QAM	23.10	23.24	23.15
	1	24		23.00	23.04	22.94
	1	49		22.93	23.04	22.84
	25	0		21.78	21.68	21.81
	25	12		21.77	21.76	21.76
	25	24		21.72	21.76	21.77
	50	0		21.61	21.69	21.83

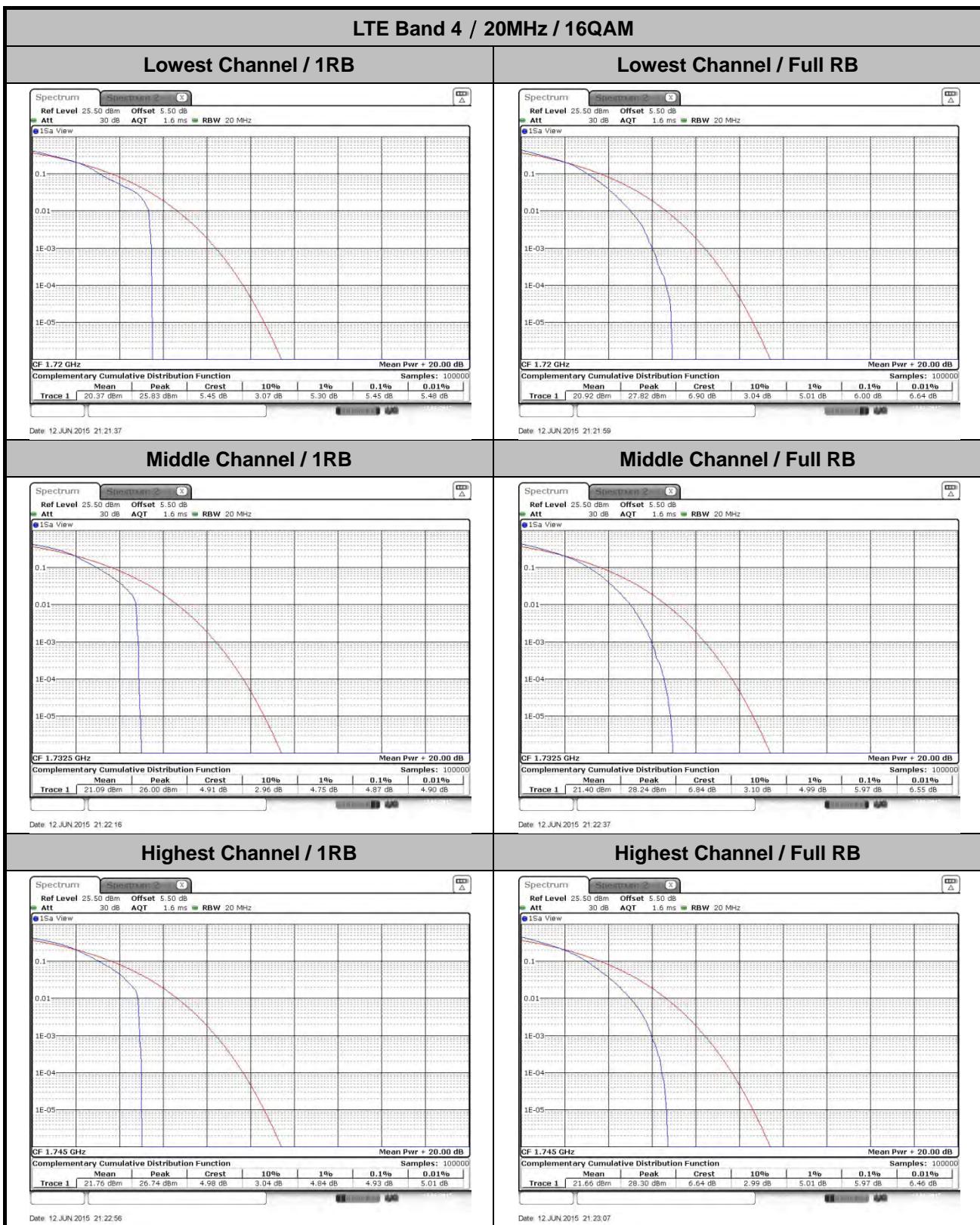


LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.97	23.99	23.79
	1	37		23.55	23.74	23.49
	1	74		23.85	23.58	23.53
	36	0		22.85	22.82	22.84
	36	18		22.72	22.78	22.75
	36	37		22.75	22.88	22.63
	75	0		22.88	22.83	22.72
15	1	0	16-QAM	23.23	23.41	23.09
	1	37		22.94	23.05	22.93
	1	74		23.07	22.88	22.82
	36	0		21.74	21.62	21.72
	36	18		21.63	21.77	21.72
	36	37		21.61	21.75	21.69
	75	0		21.68	21.72	21.73
20	1	0	QPSK	24.13	23.98	24.00
	1	49		23.82	23.94	23.71
	1	99		23.64	23.71	23.66
	50	0		22.71	22.85	22.84
	50	24		22.75	22.77	22.71
	50	49		22.73	22.70	22.66
	100	0		22.80	22.79	22.76
20	1	0	16-QAM	23.17	23.25	23.47
	1	49		23.02	23.03	22.89
	1	99		22.91	22.80	22.69
	50	0		21.77	21.66	21.67
	50	24		21.59	21.63	21.59
	50	49		21.71	21.68	21.51
	100	0		21.70	21.75	21.63

**Peak-to-Average Ratio**

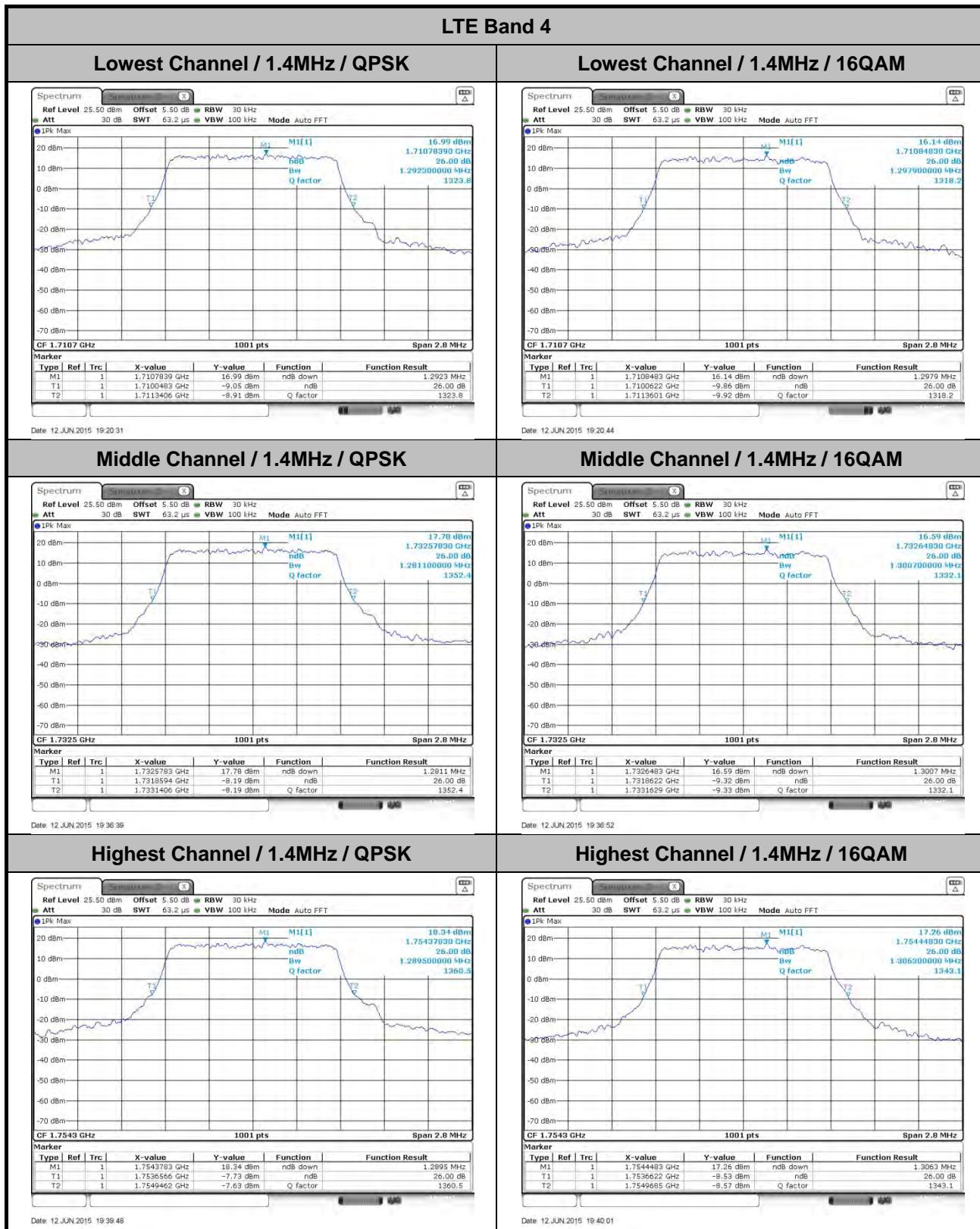
Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	RB Size	Result
Lowest CH	4.06	5.01	5.45	6.00	PASS
Middle CH	4.20	4.96	4.87	5.97	
Highest CH	4.46	4.84	4.93	5.97	

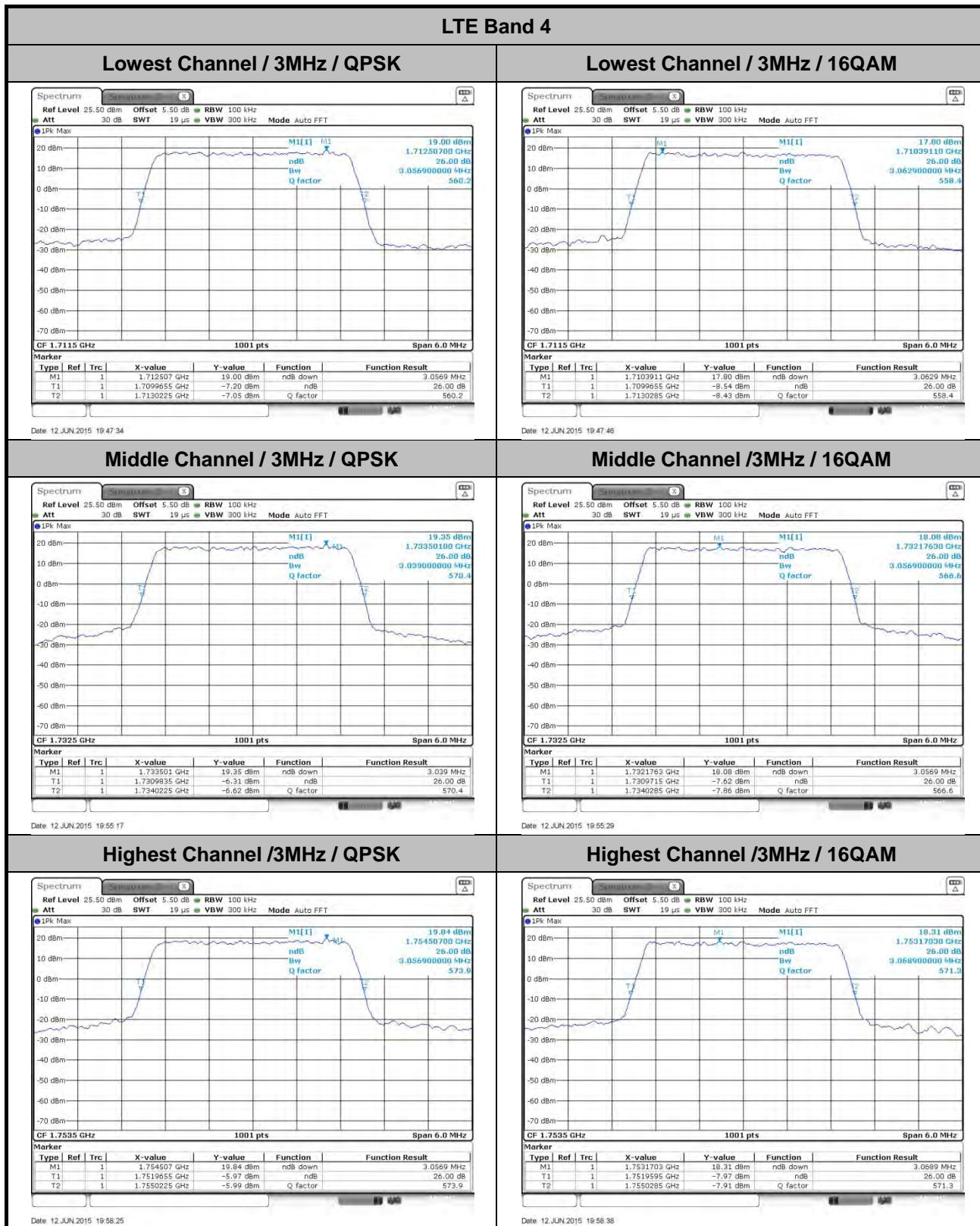


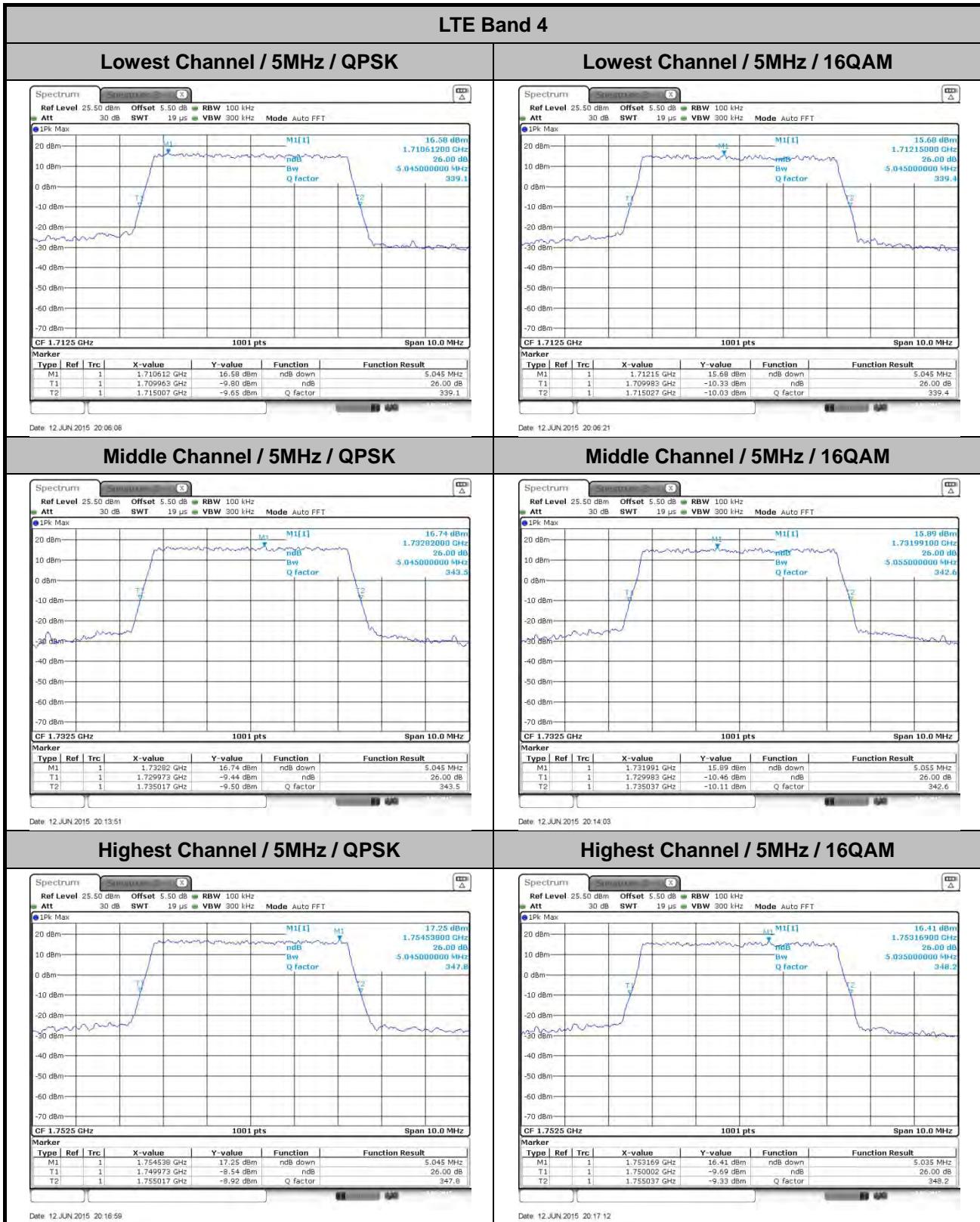


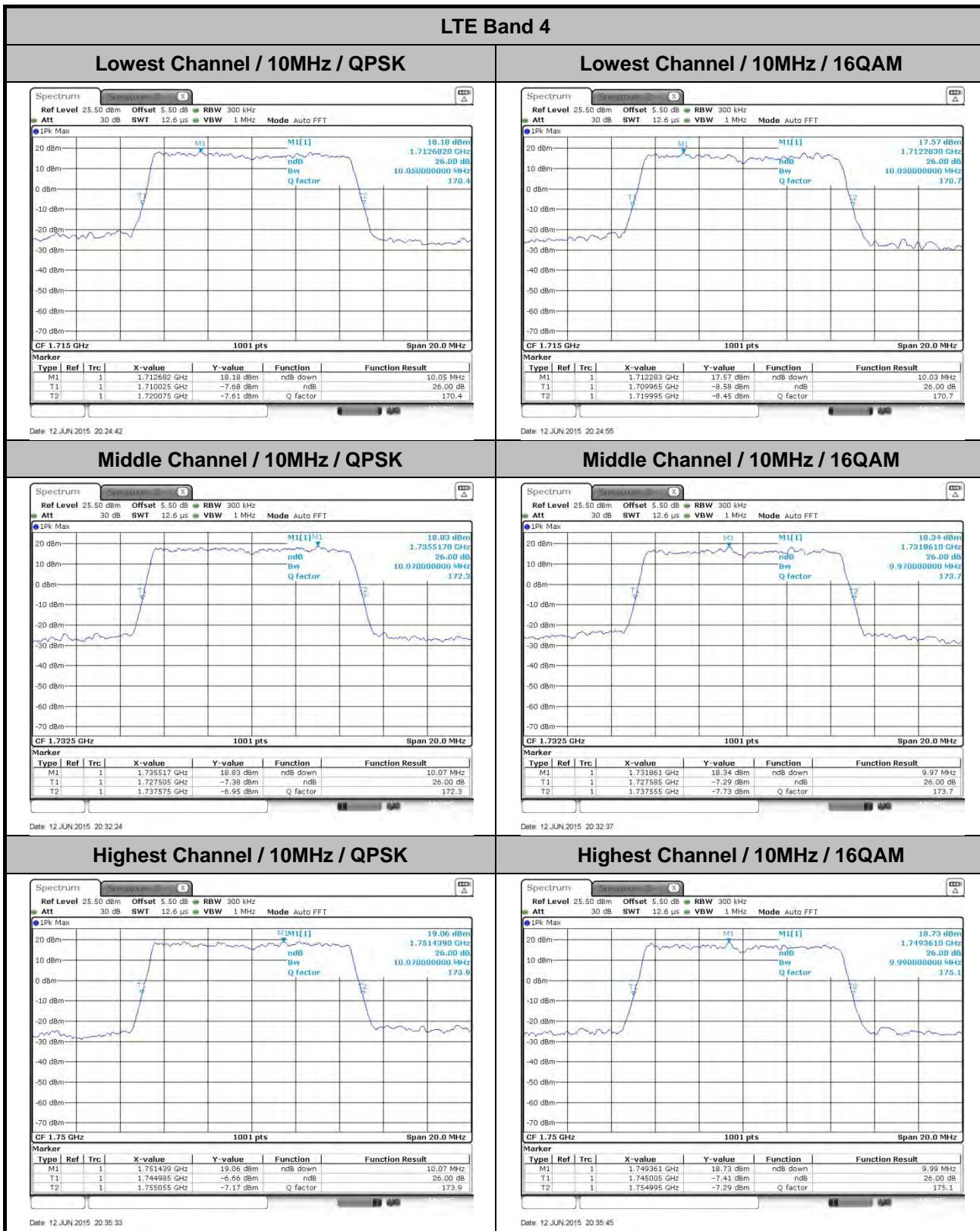
**26dB Bandwidth**

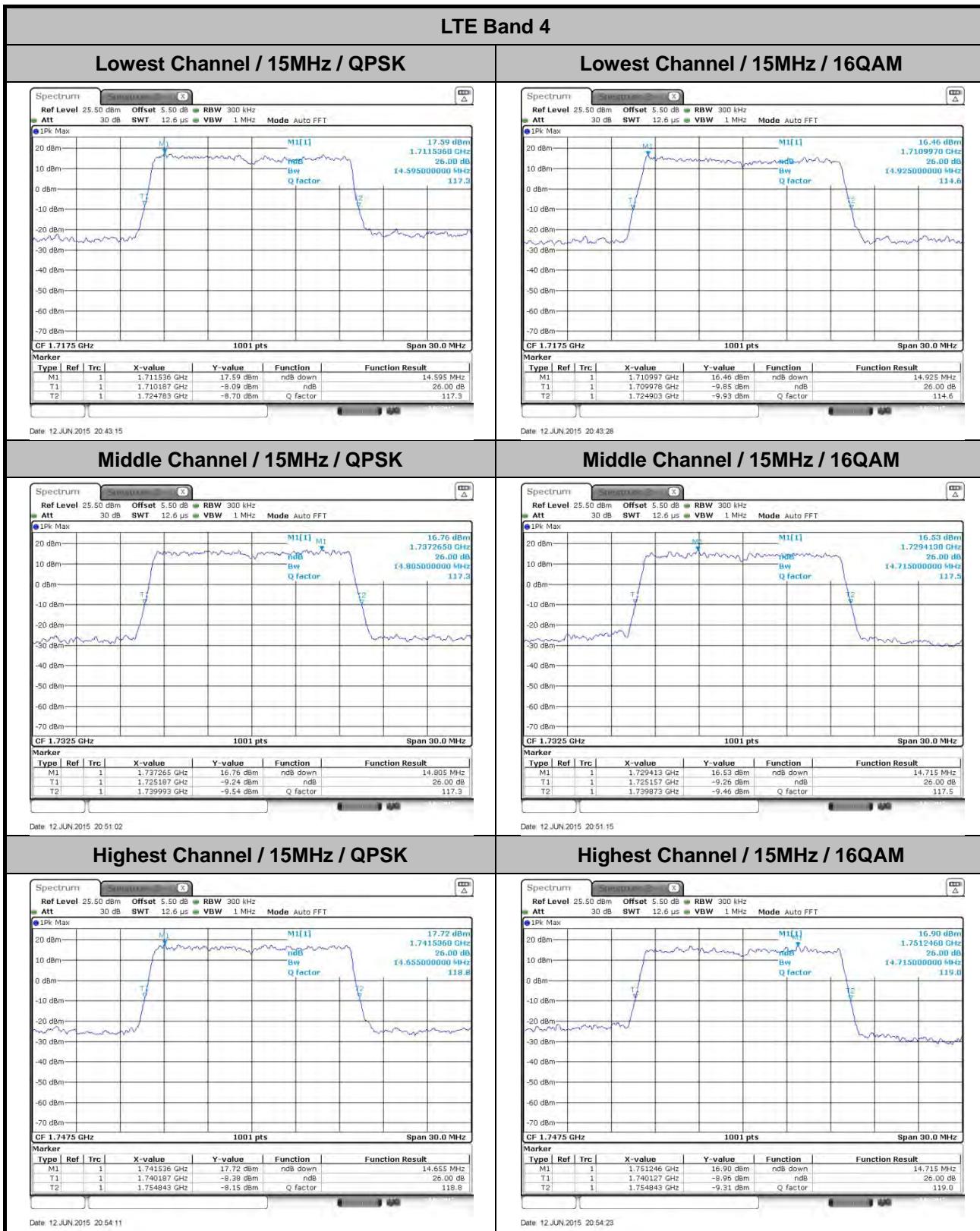
Mode	LTE Band 4 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.29	1.30	3.06	3.06	5.05	5.05	10.05	10.03	14.60	14.93	20.50	20.50
Middle CH	1.28	1.30	3.04	3.06	5.05	5.06	10.07	9.97	14.81	14.72	20.34	20.14
Highest CH	1.29	1.31	3.06	3.07	5.05	5.04	10.07	9.99	14.66	14.72	20.34	20.22

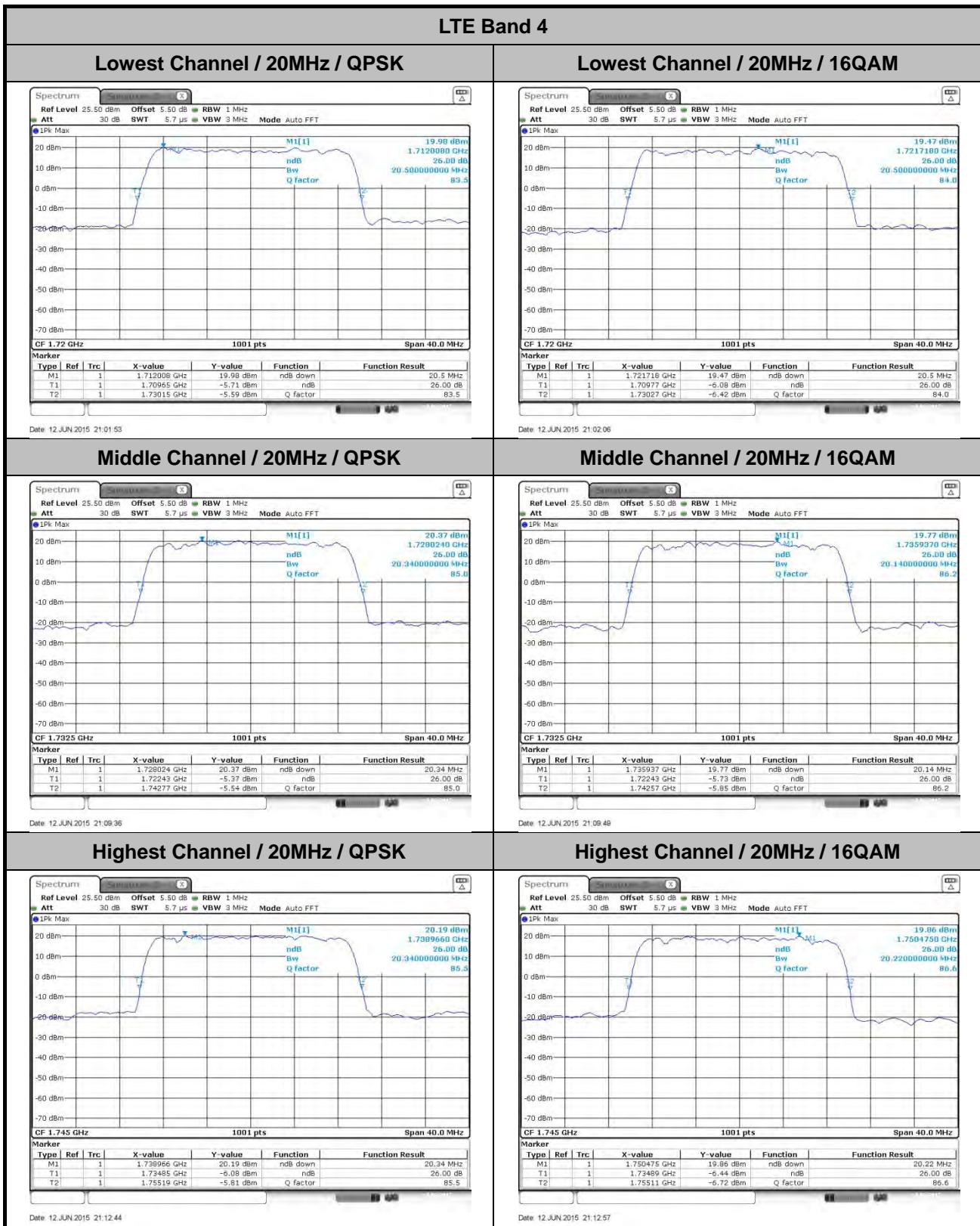






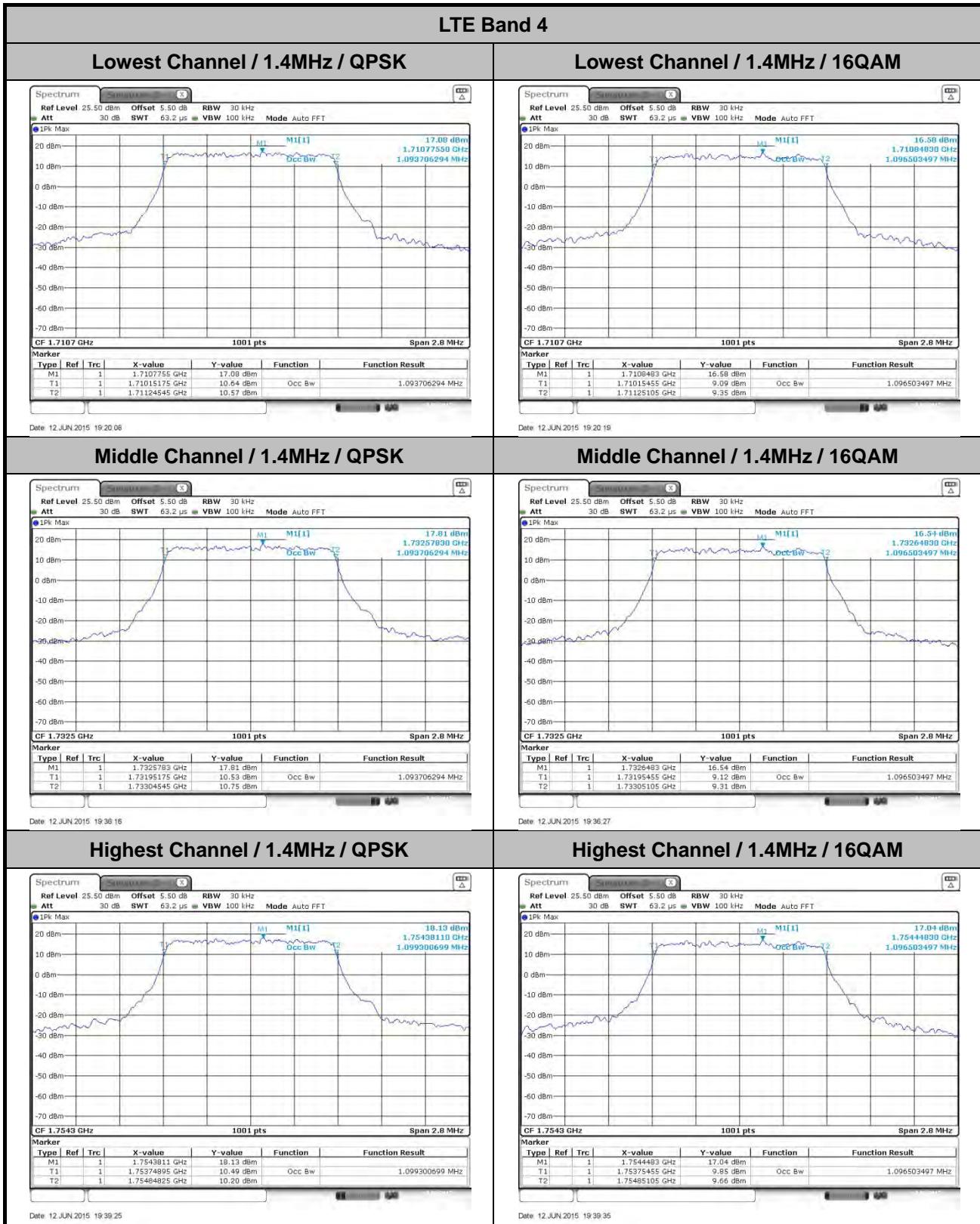




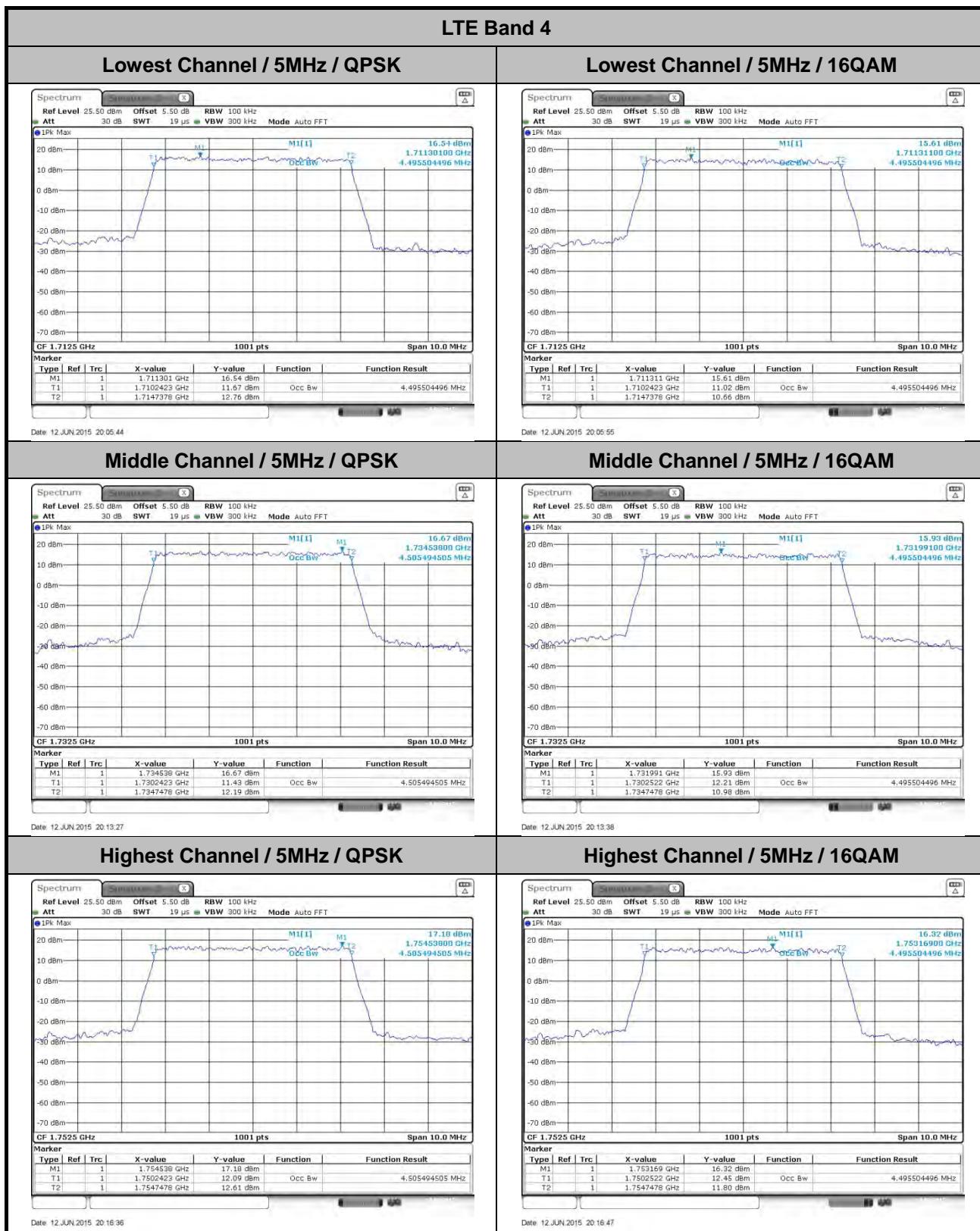


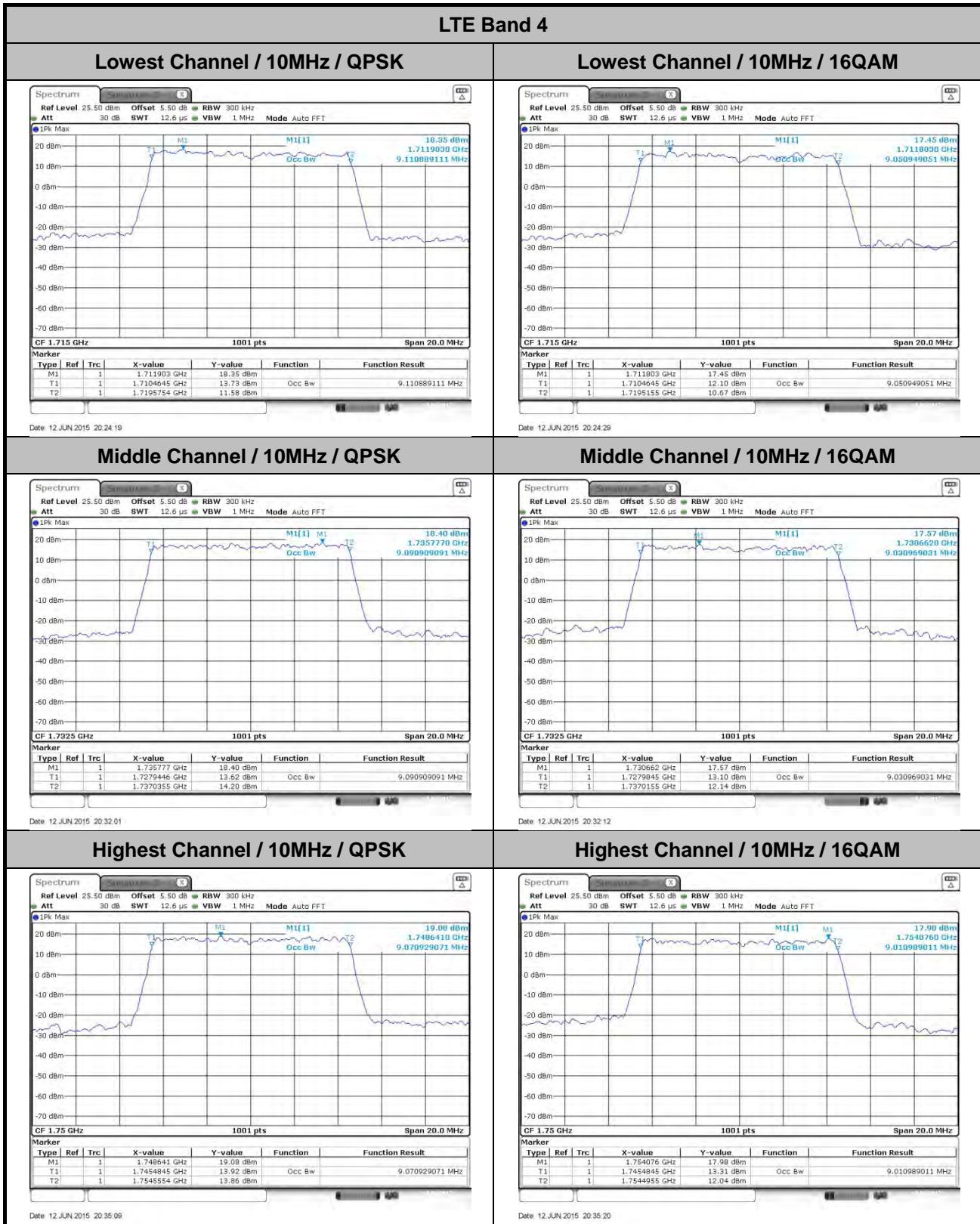
**Occupied Bandwidth**

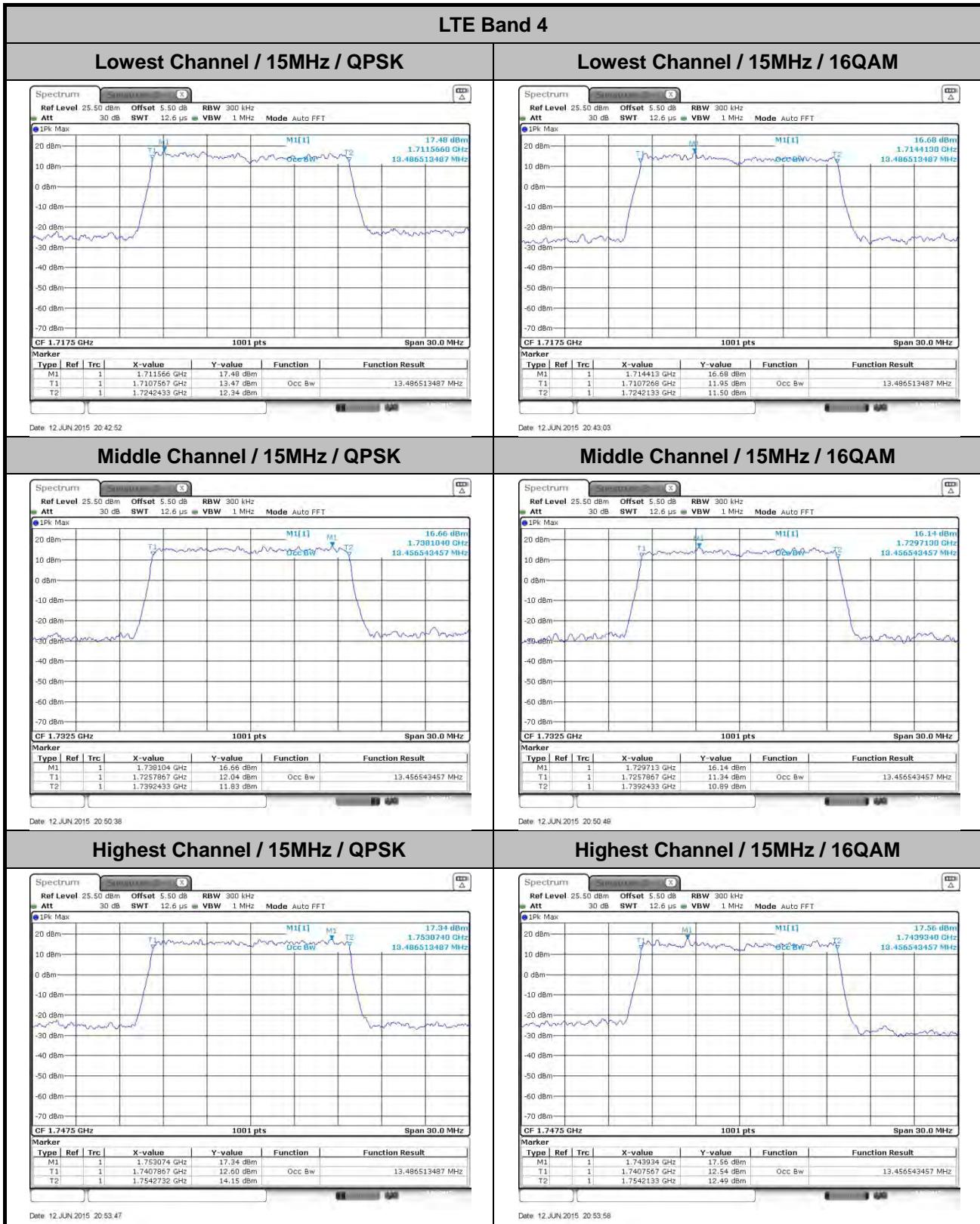
Mode	LTE Band 4 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.10	2.73	2.72	4.50	4.50	9.11	9.05	13.49	13.49	18.42	18.46
Middle CH	1.09	1.10	2.73	2.73	4.51	4.50	9.09	9.03	13.46	13.46	18.46	18.26
Highest CH	1.10	1.10	2.73	2.72	4.51	4.50	9.07	9.01	13.49	13.46	18.42	18.42

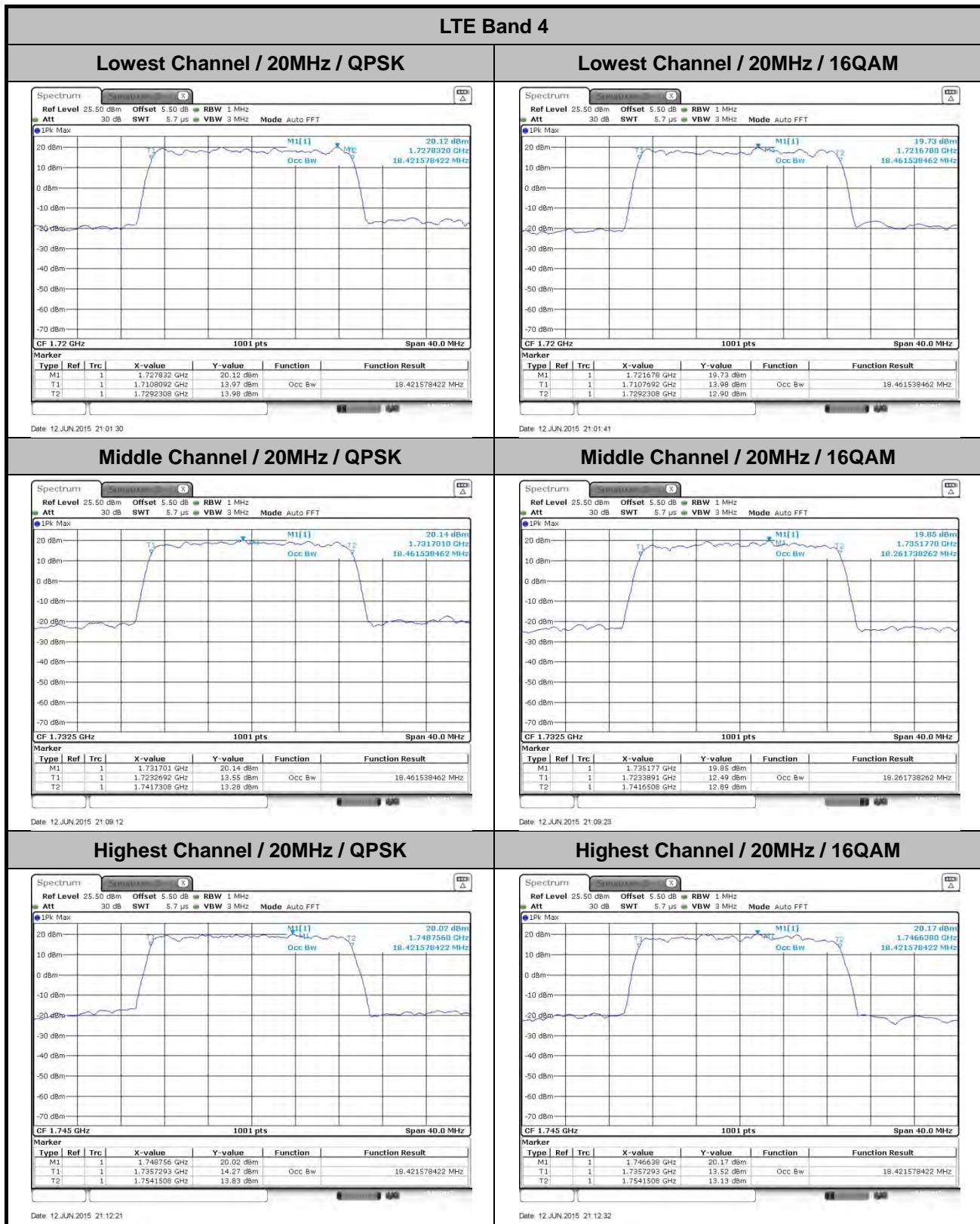






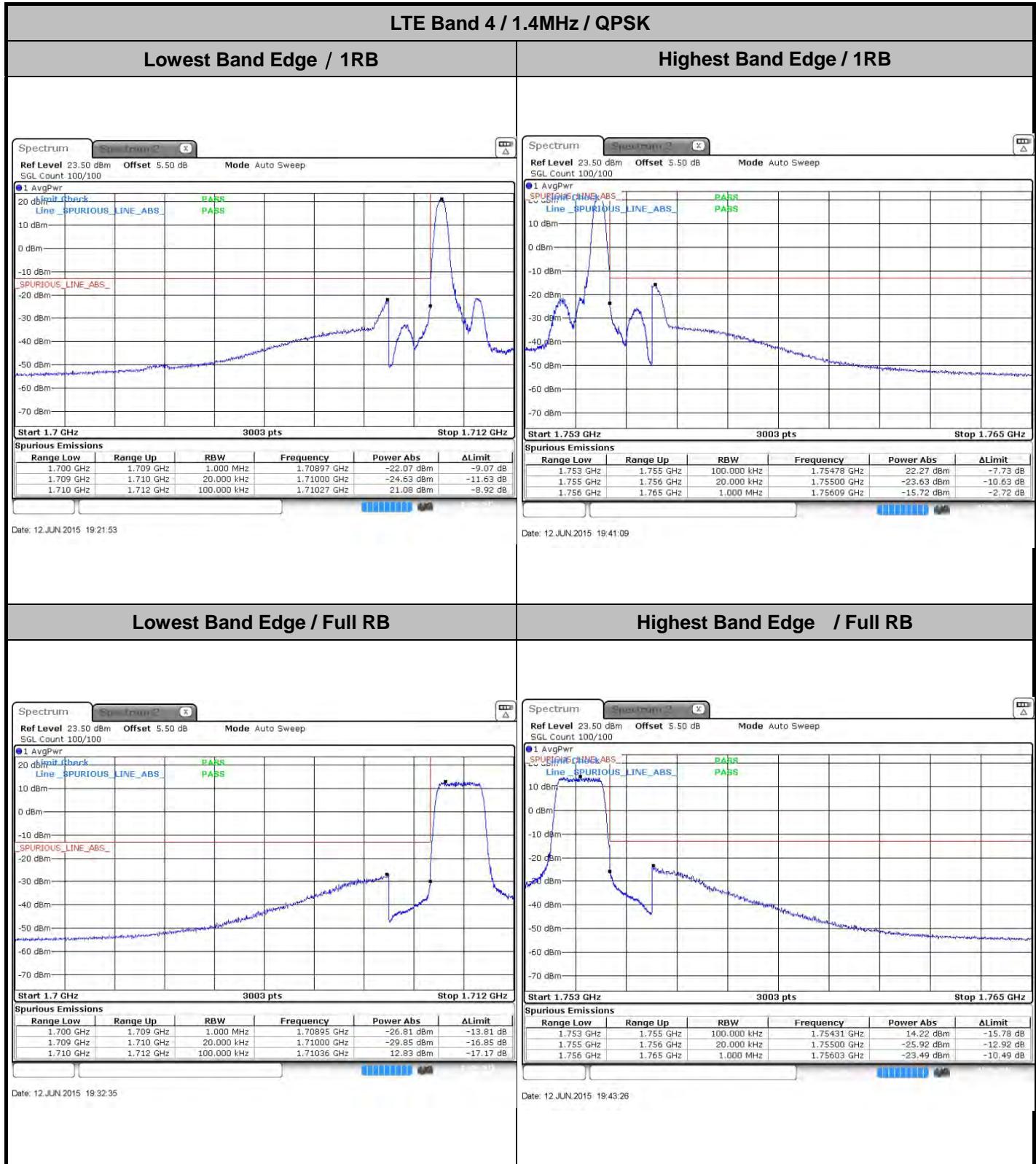


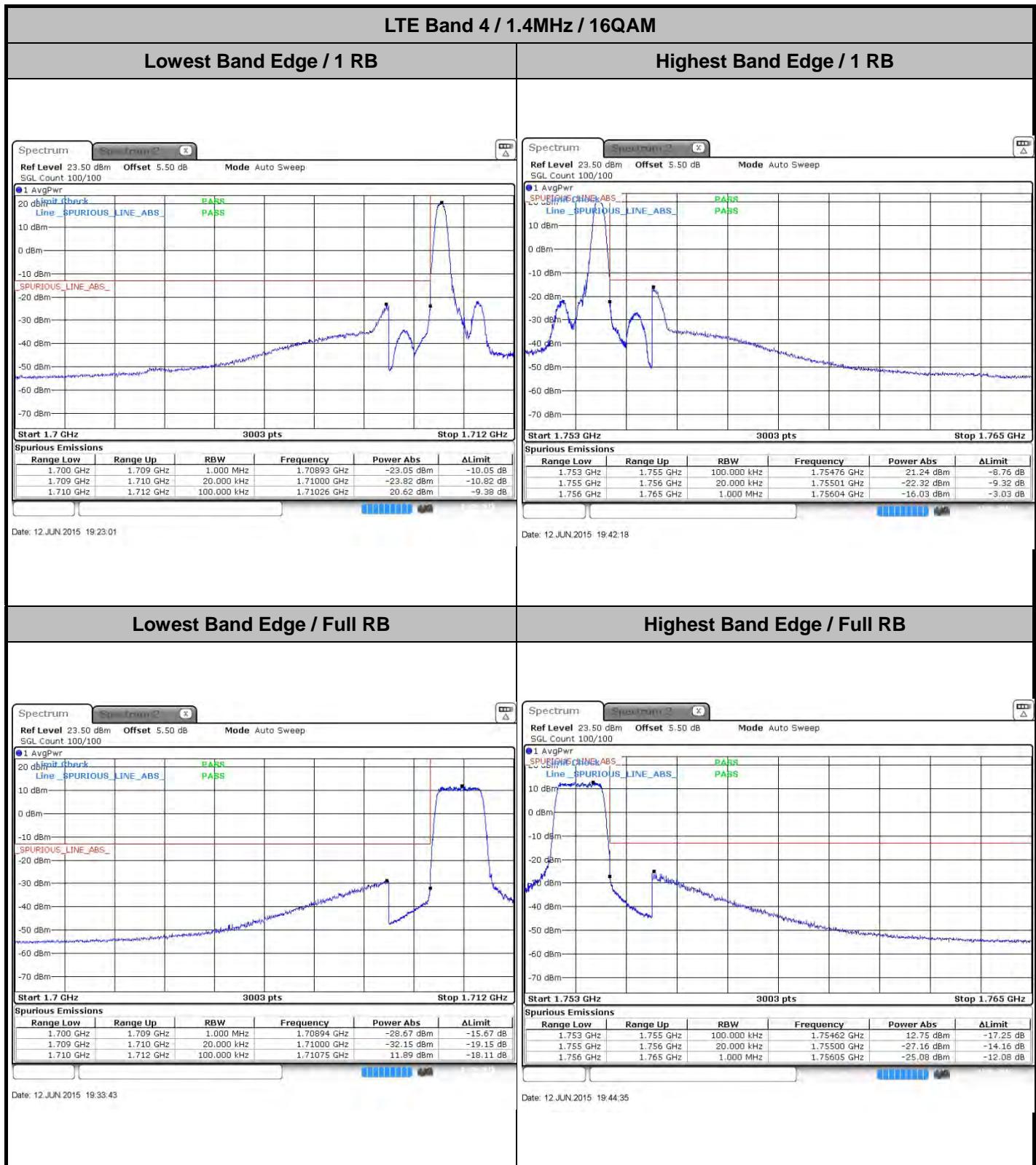


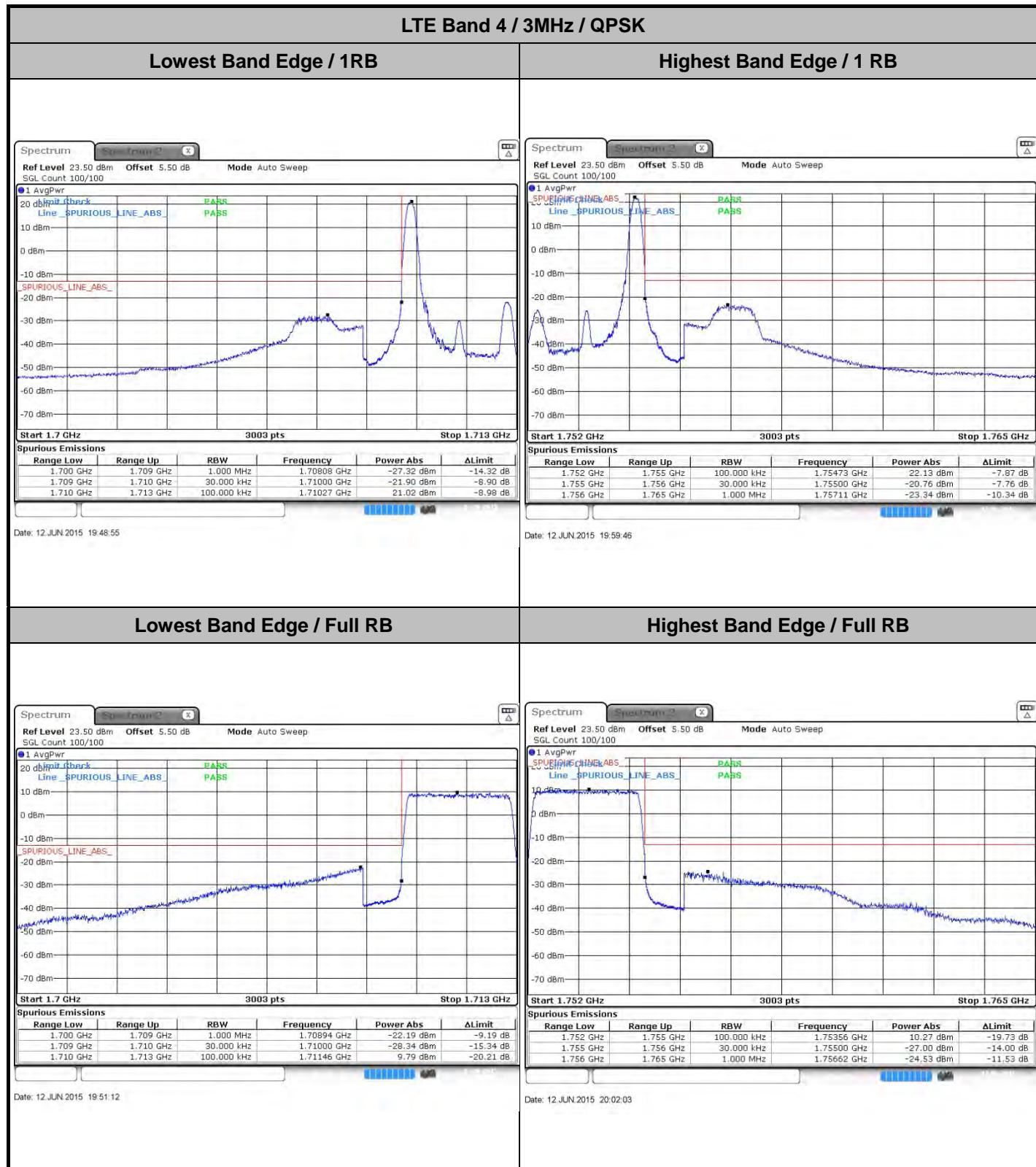


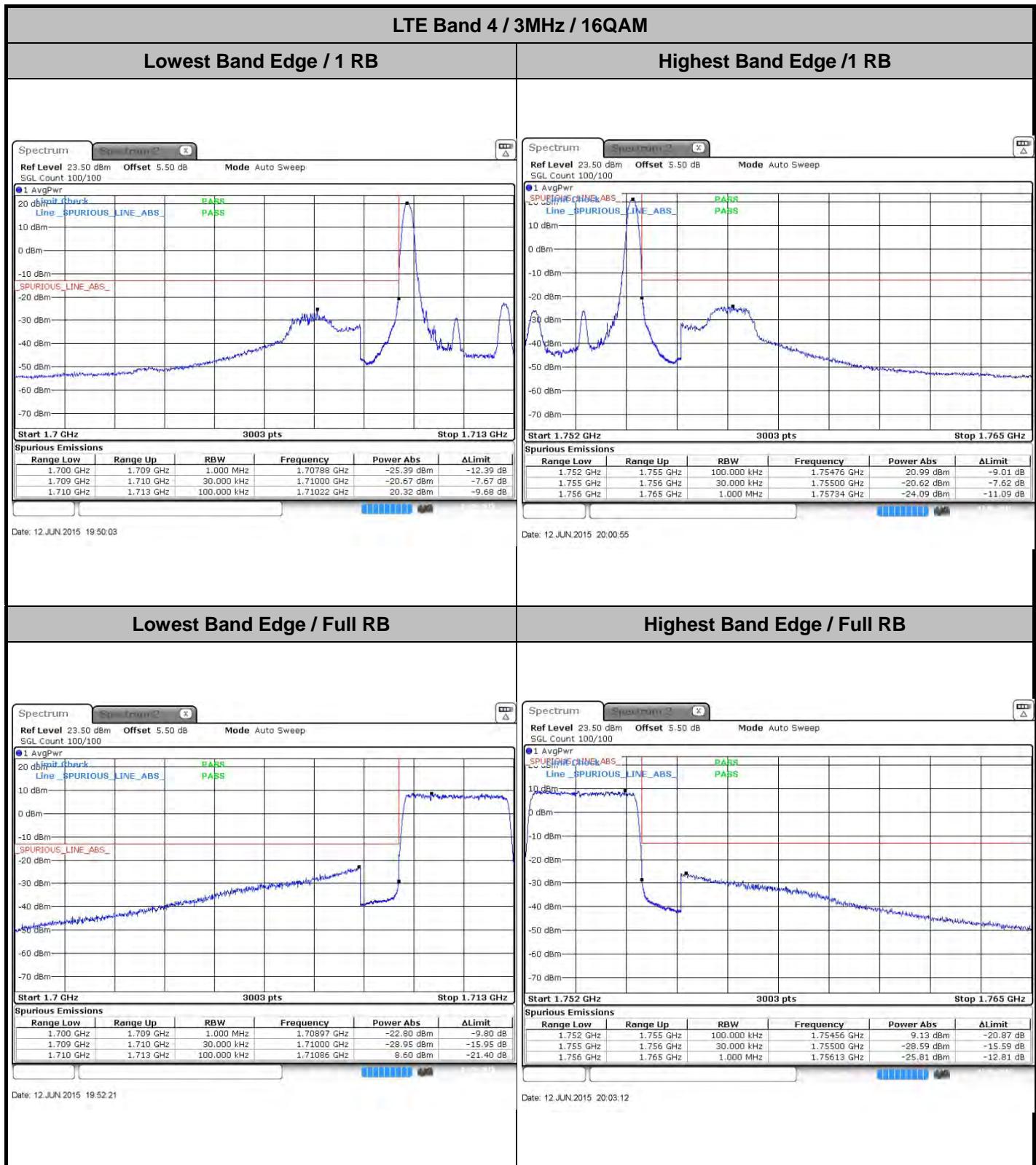


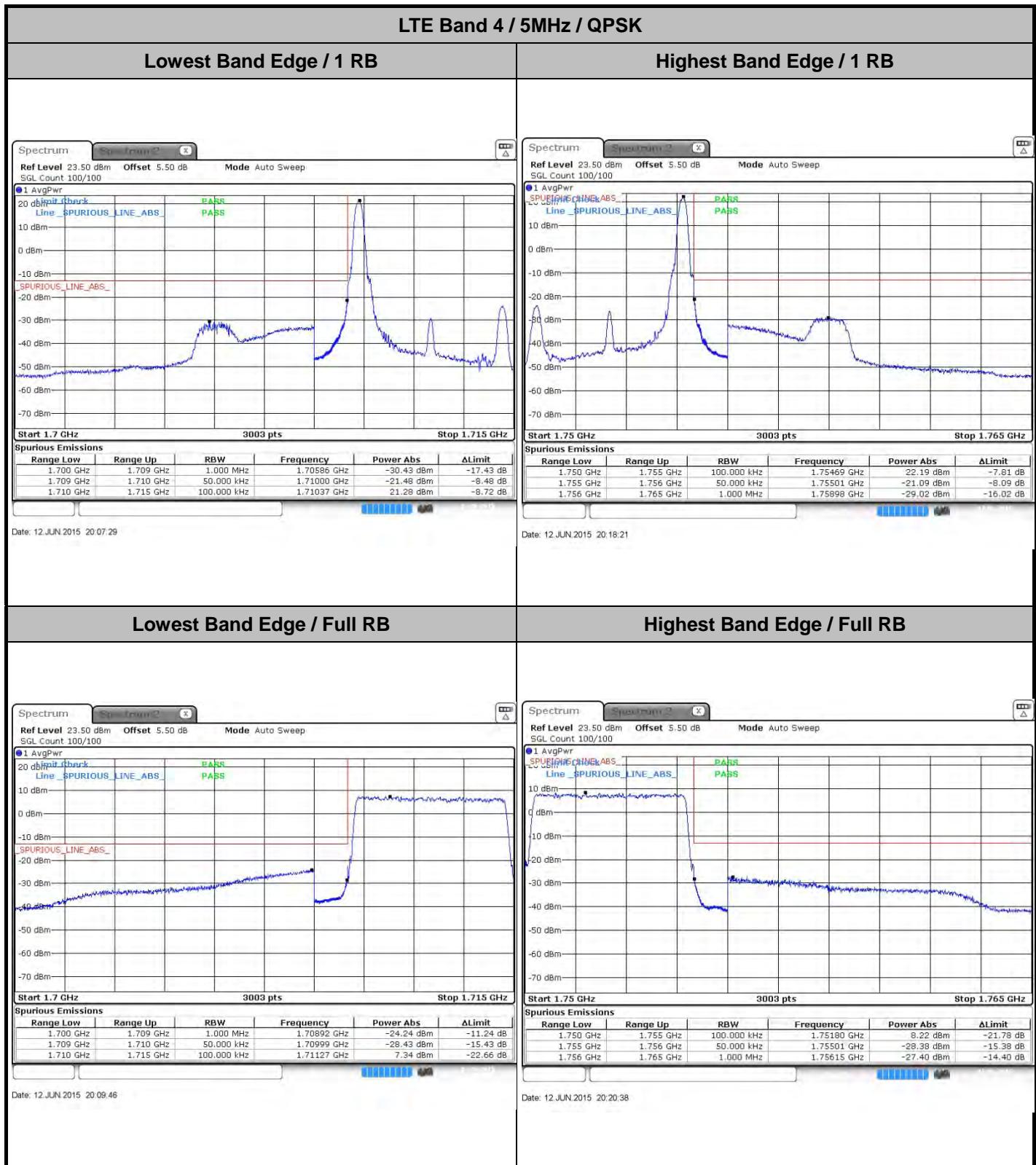
## Conducted Band Edge

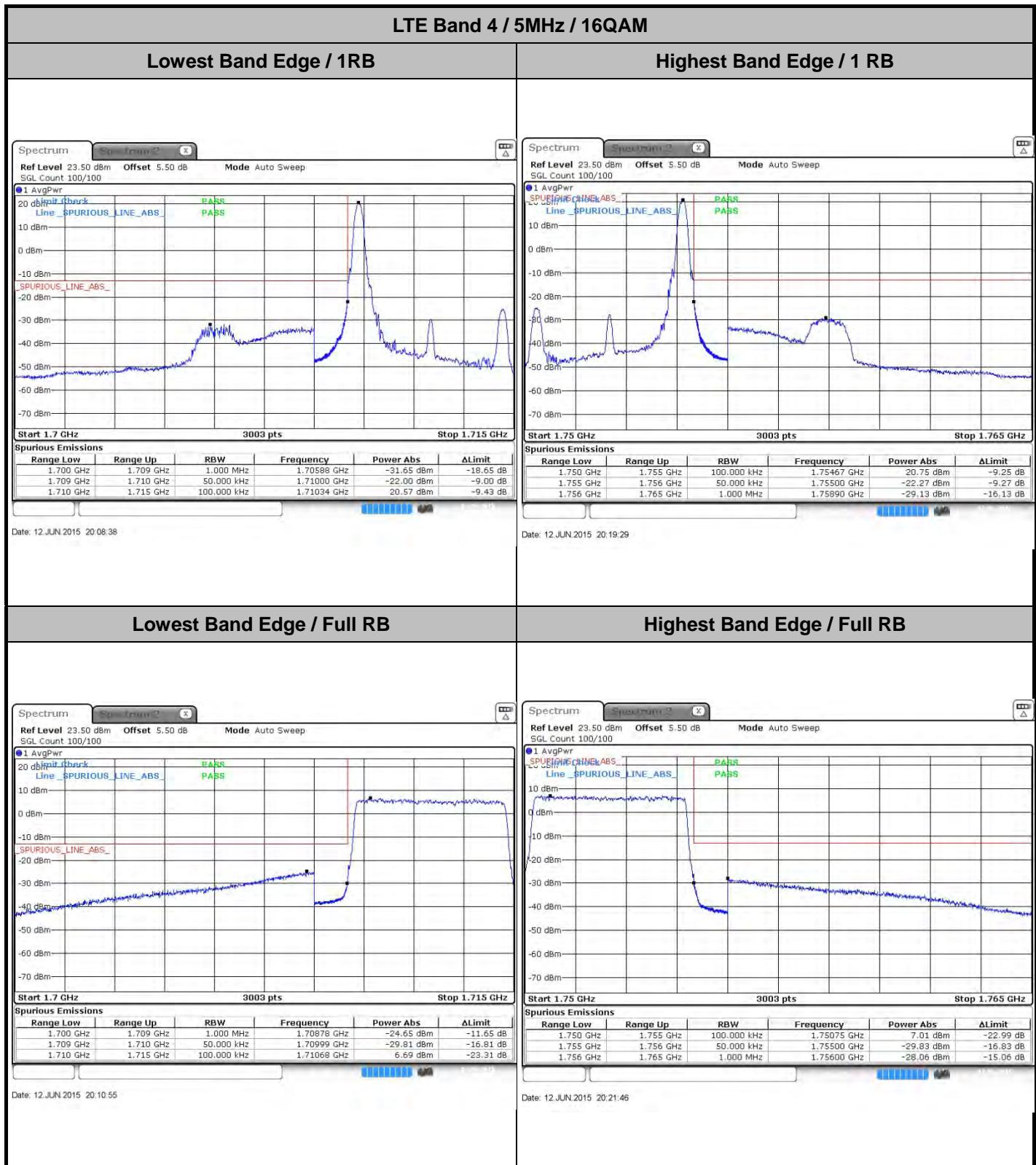


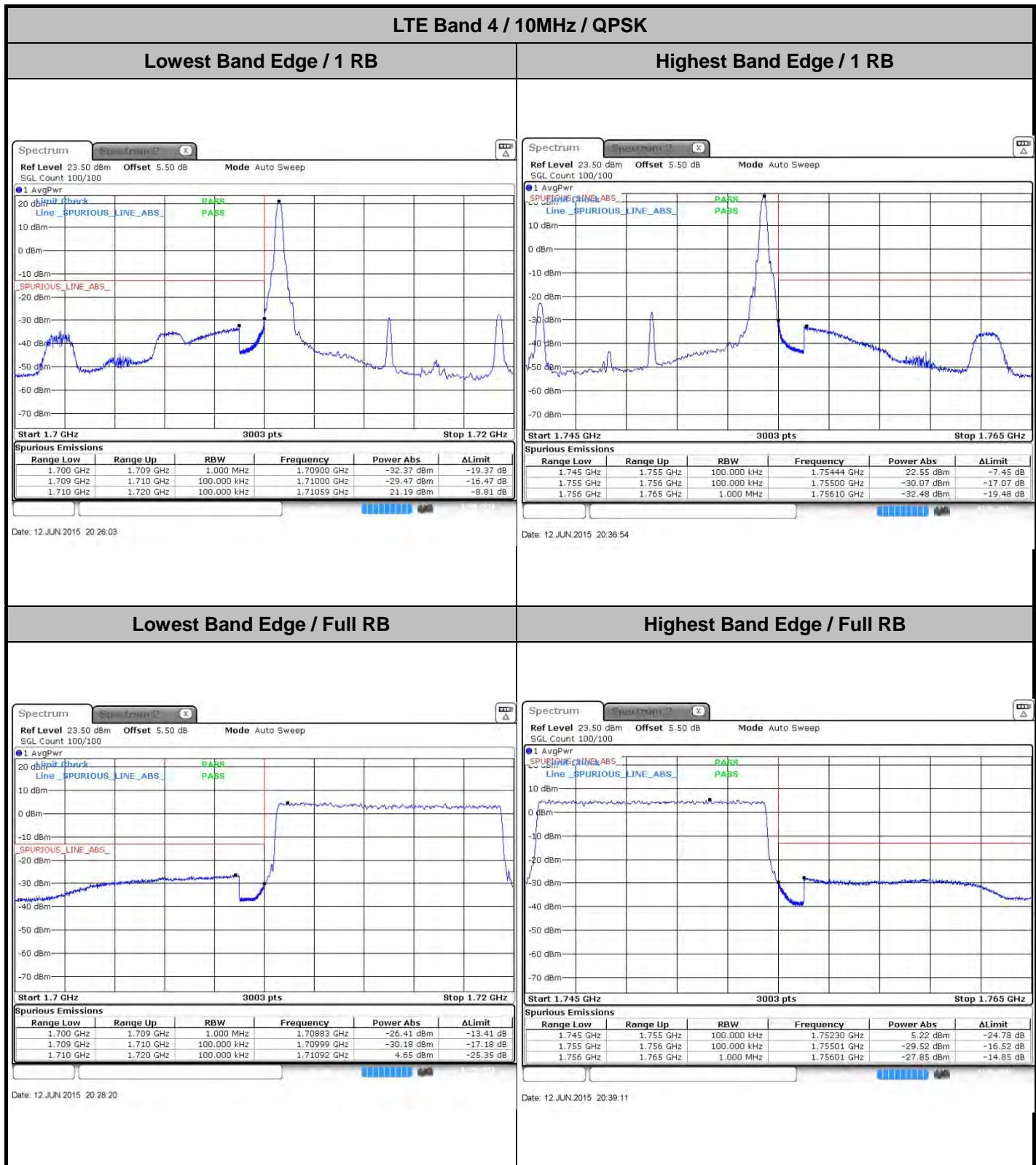


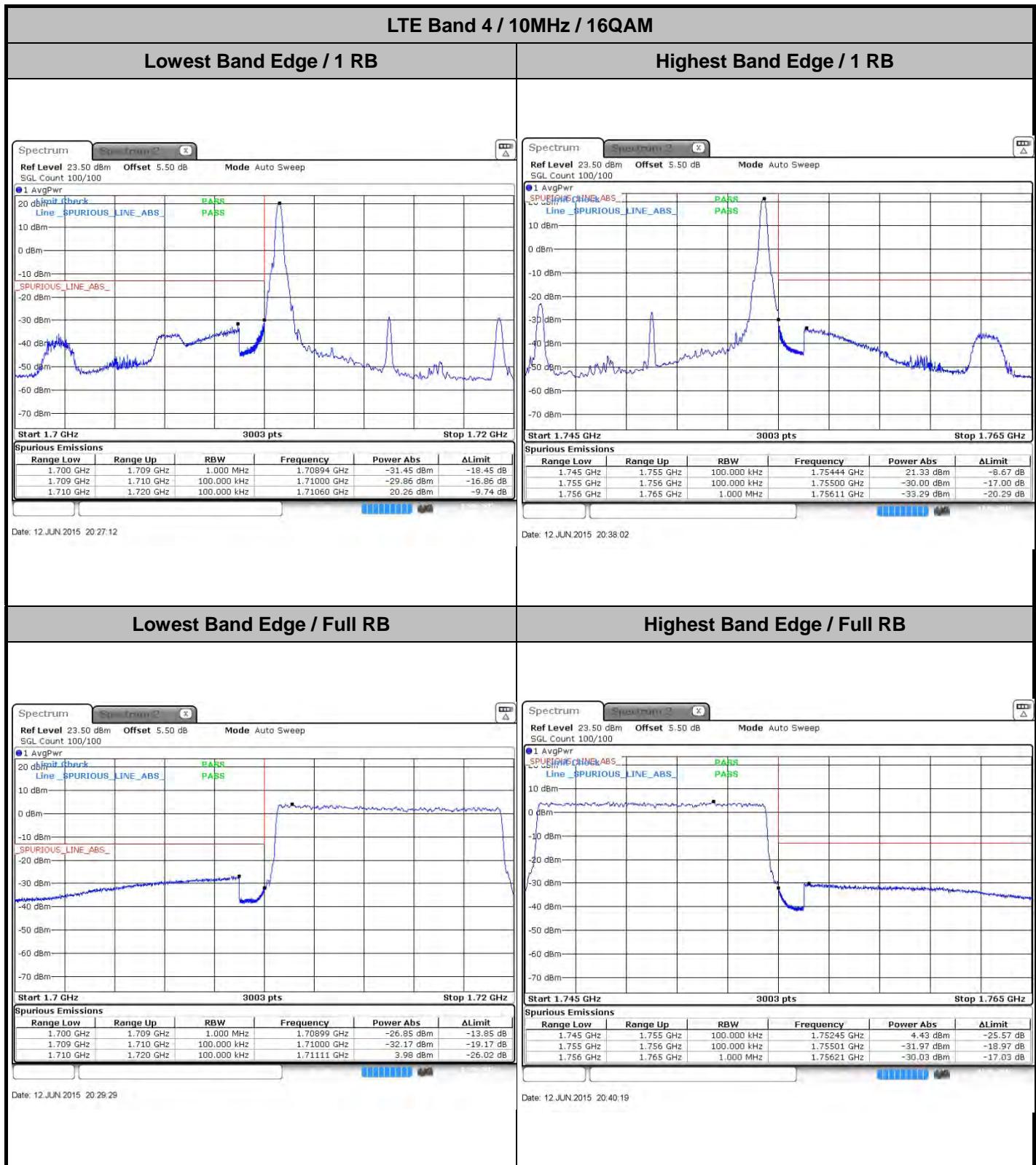


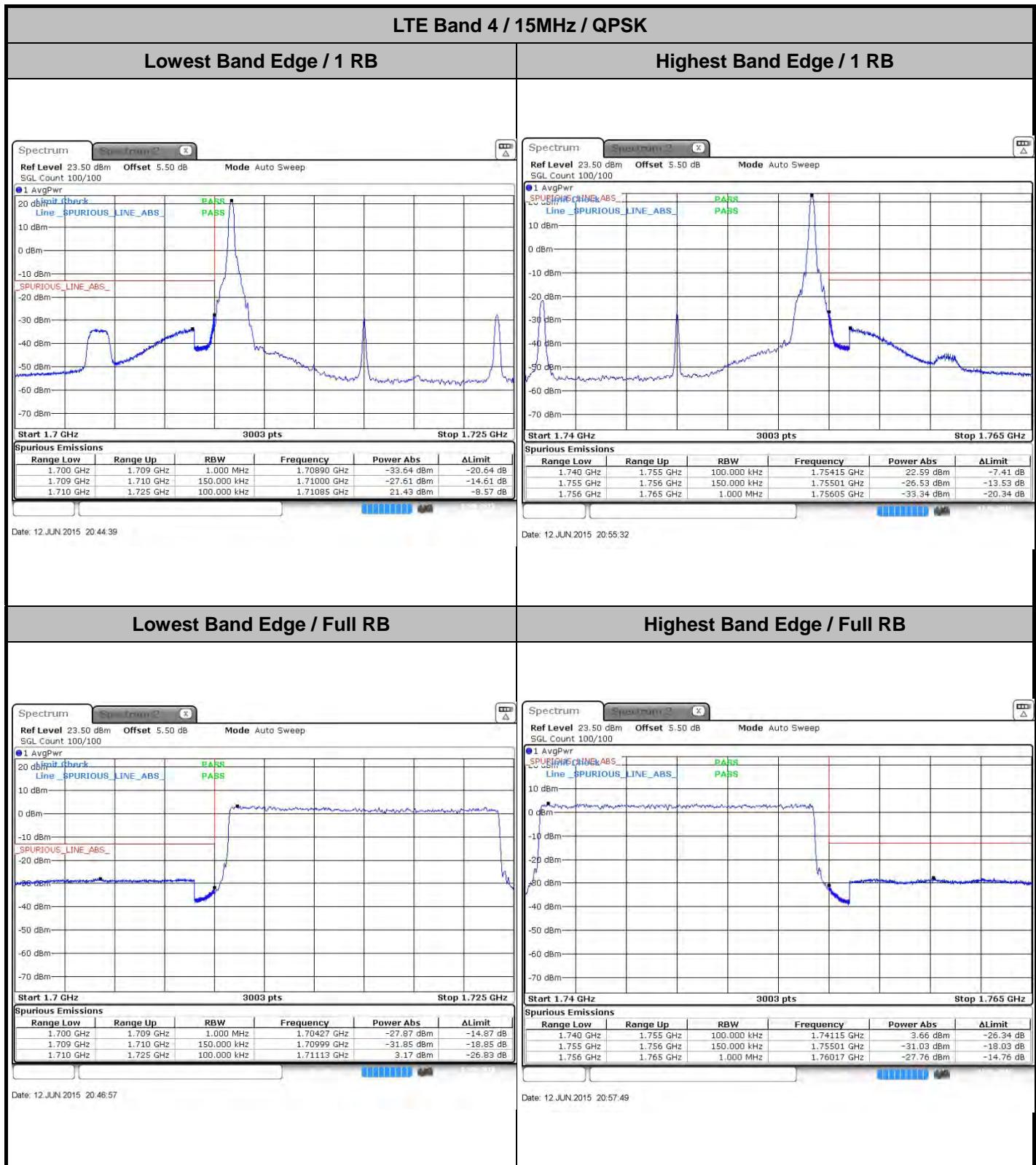


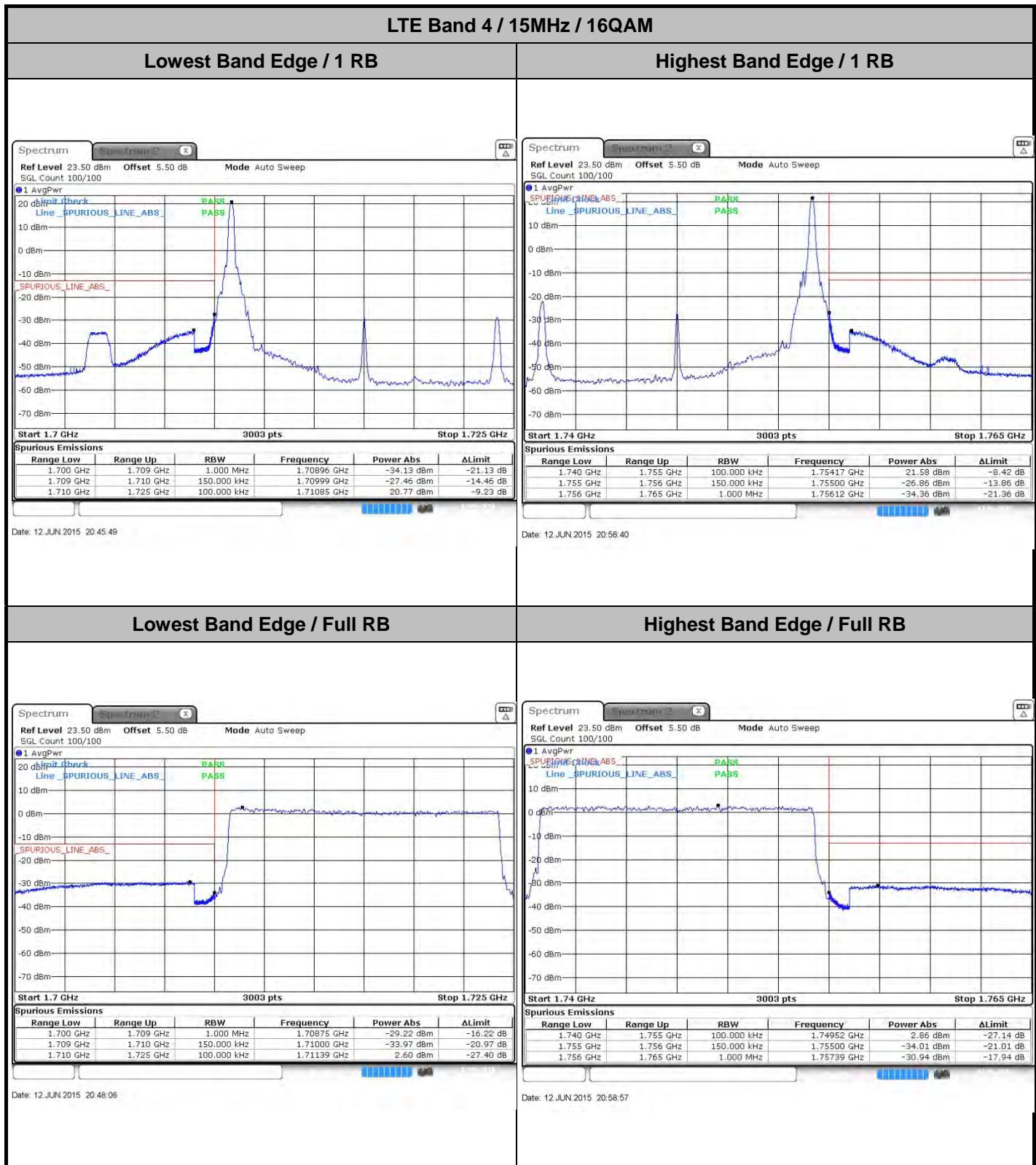


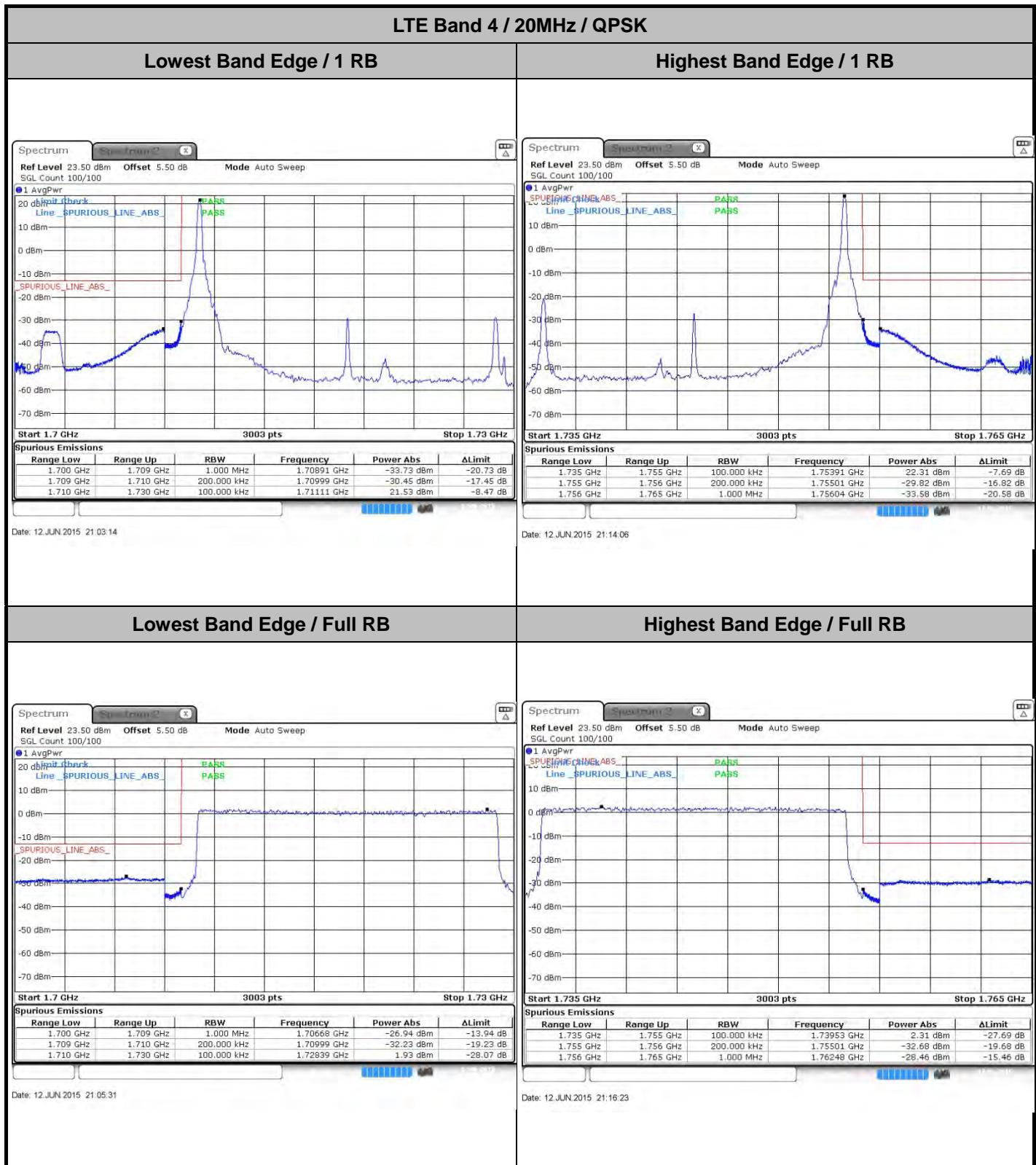


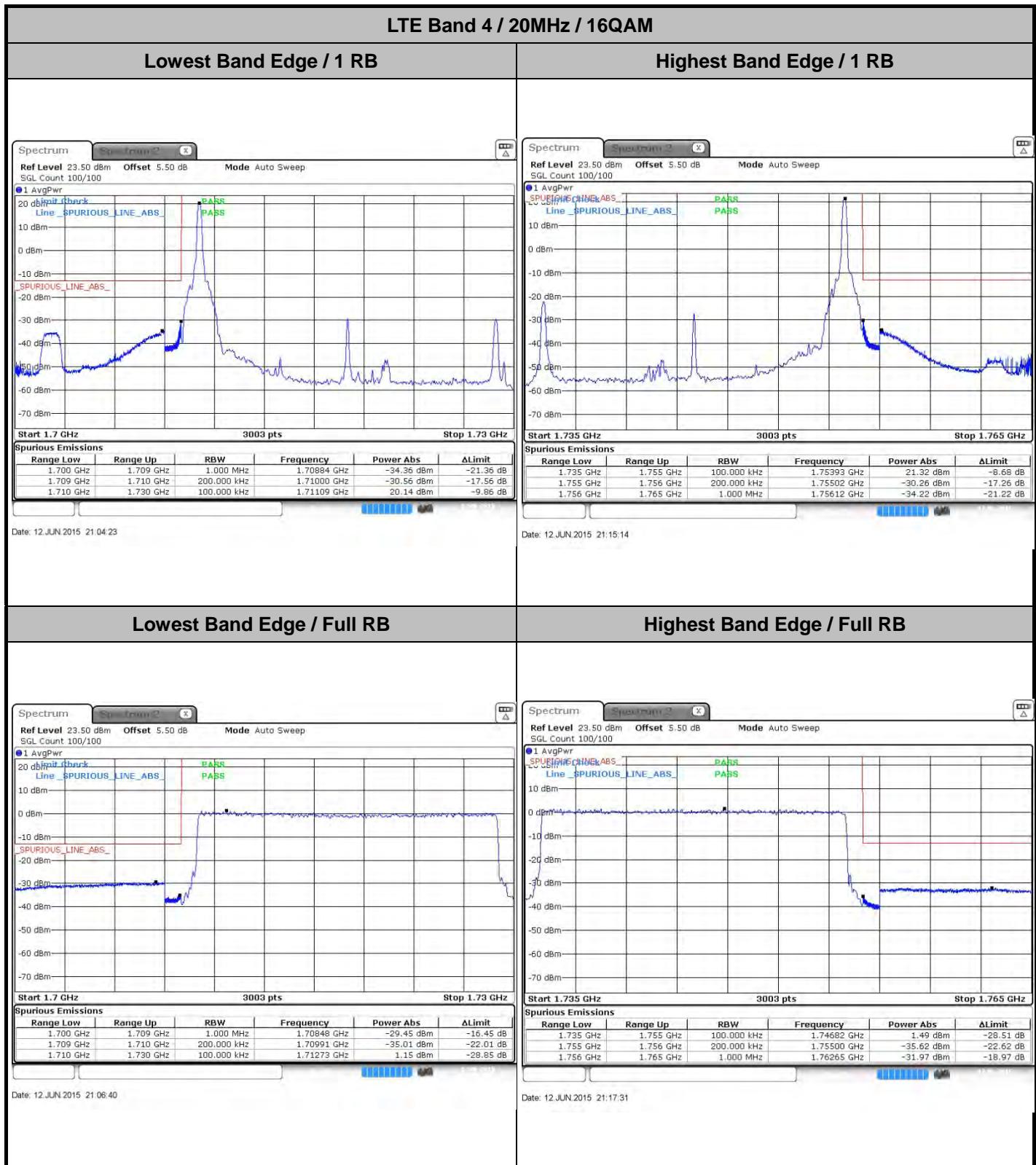












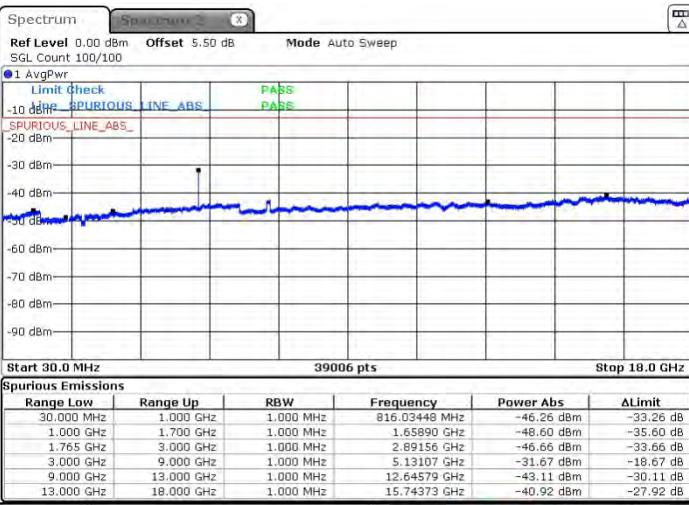
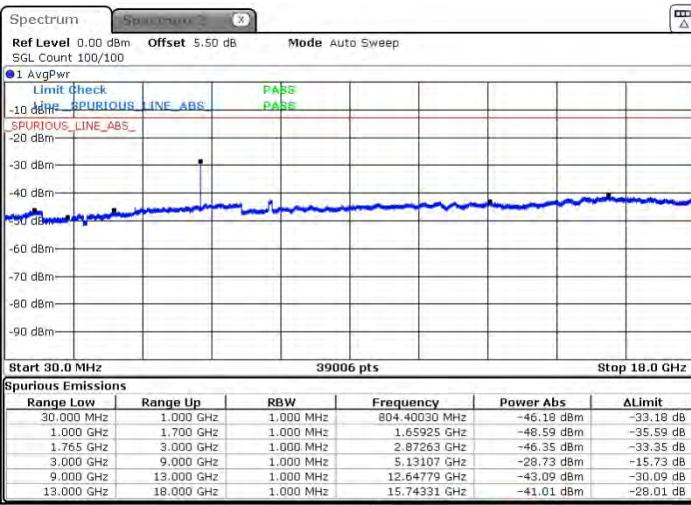


## Conducted Spurious Emission

### LTE Band 4 / 1.4MHz

#### Lowest Channel / QPSK

#### Lowest Channel / 16QAM

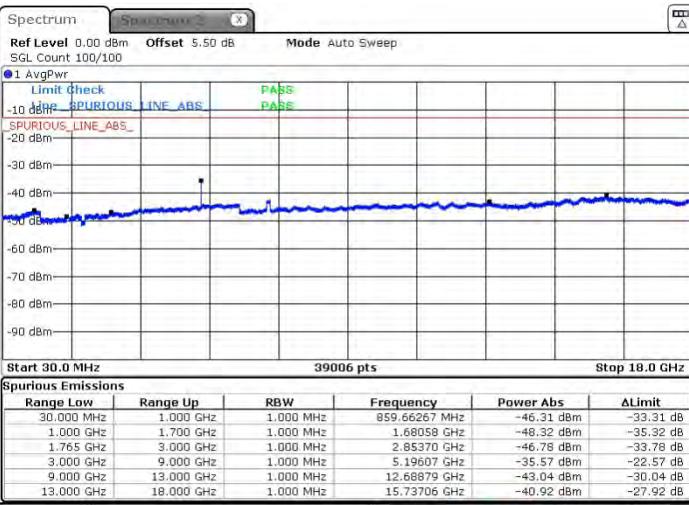
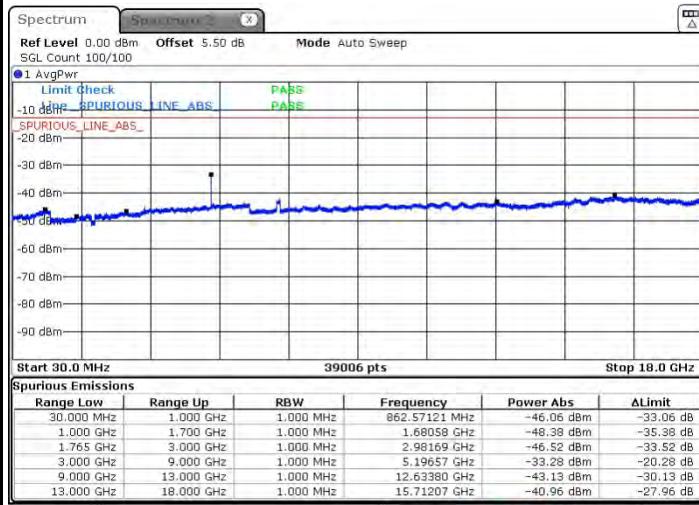


Date: 12 JUN 2015 19:34:53

Date: 12 JUN 2015 19:36:04

#### Middle Channel / QPSK

#### Middle Channel / 16QAM



Date: 12 JUN 2015 19:38:02

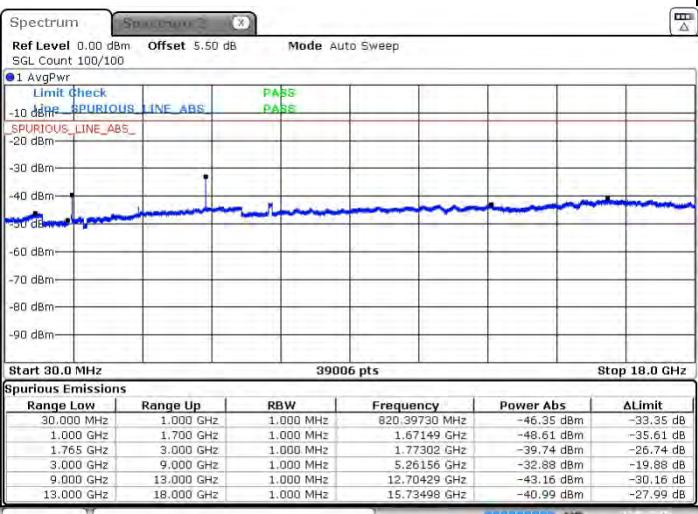
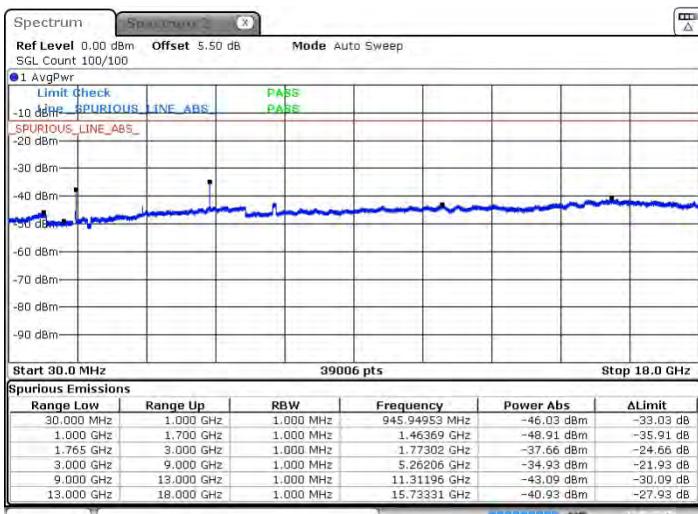
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## LTE Band 4 / 1.4MHz

## Highest Channel / QPSK

## Highest Channel / 16QAM

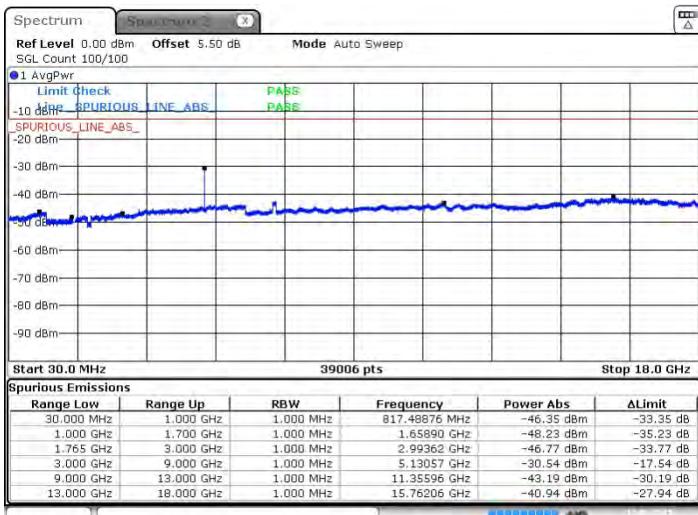


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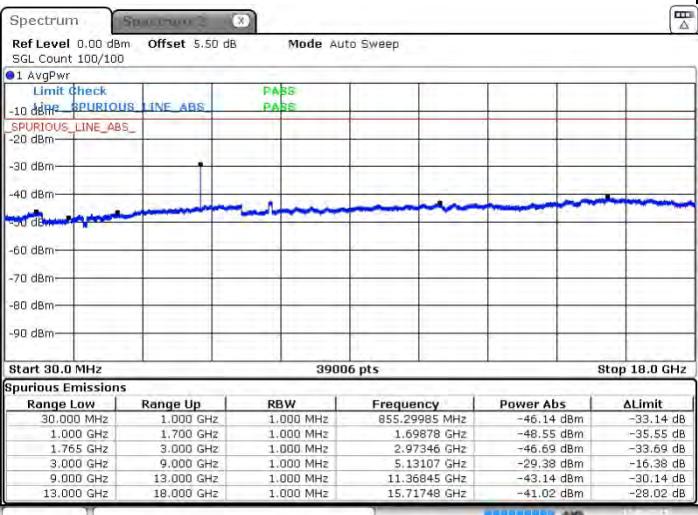
## LTE Band 4 / 3MHz

## Lowest Channel / QPSK

## Lowest Channel / 16QAM

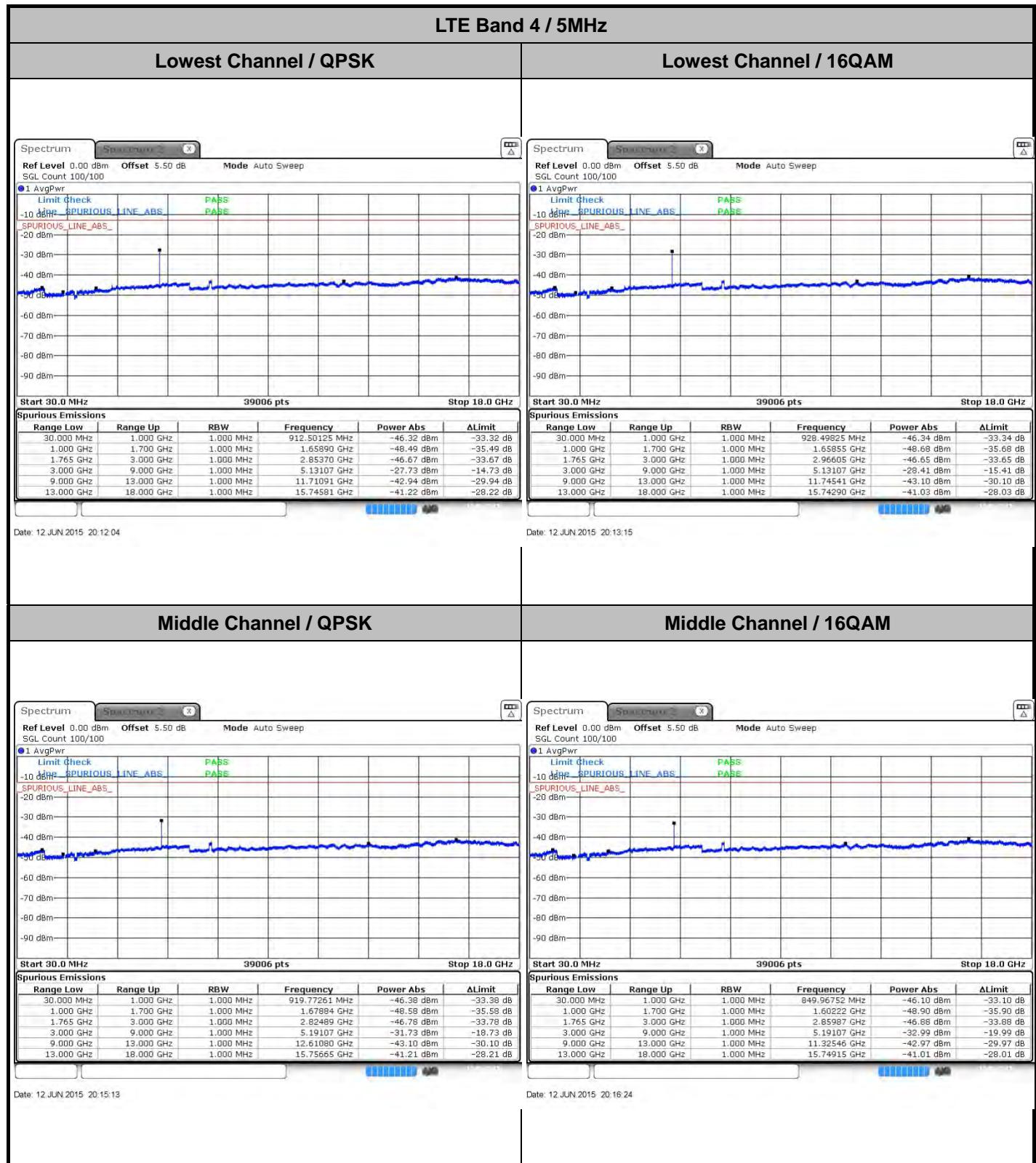


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Date: 12 JUN 2015 19:54:41



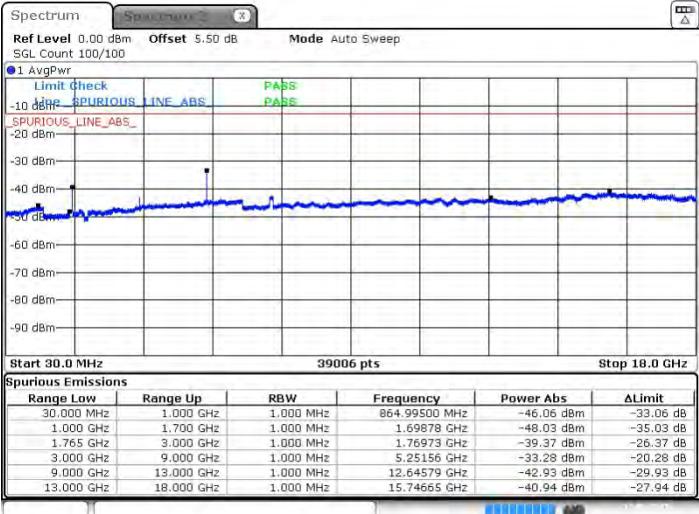
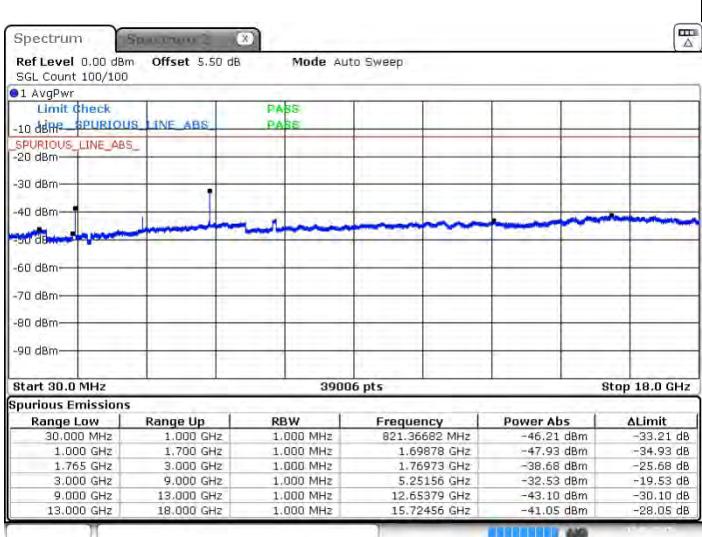




## LTE Band 4 / 5MHz

## Highest Channel / QPSK

## Highest Channel / 16QAM



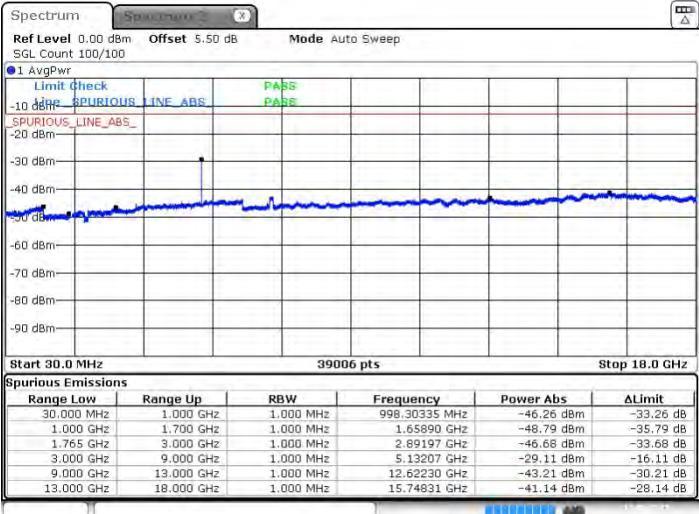
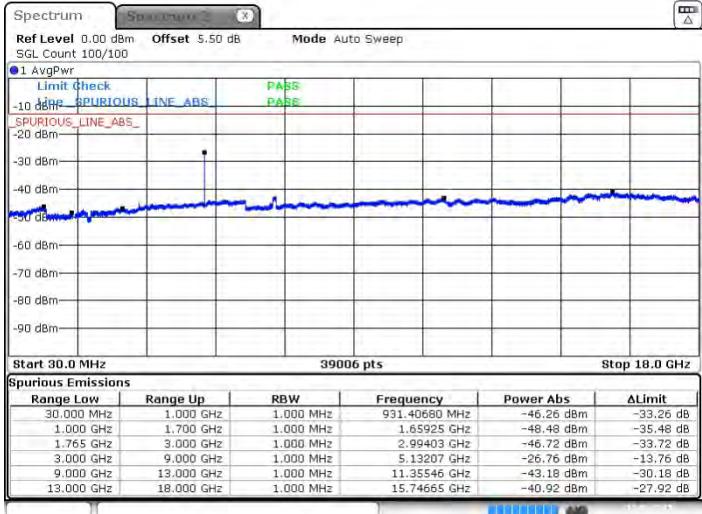
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Date: 12 JUN 2015 20:24:07

## LTE Band 4 / 10MHz

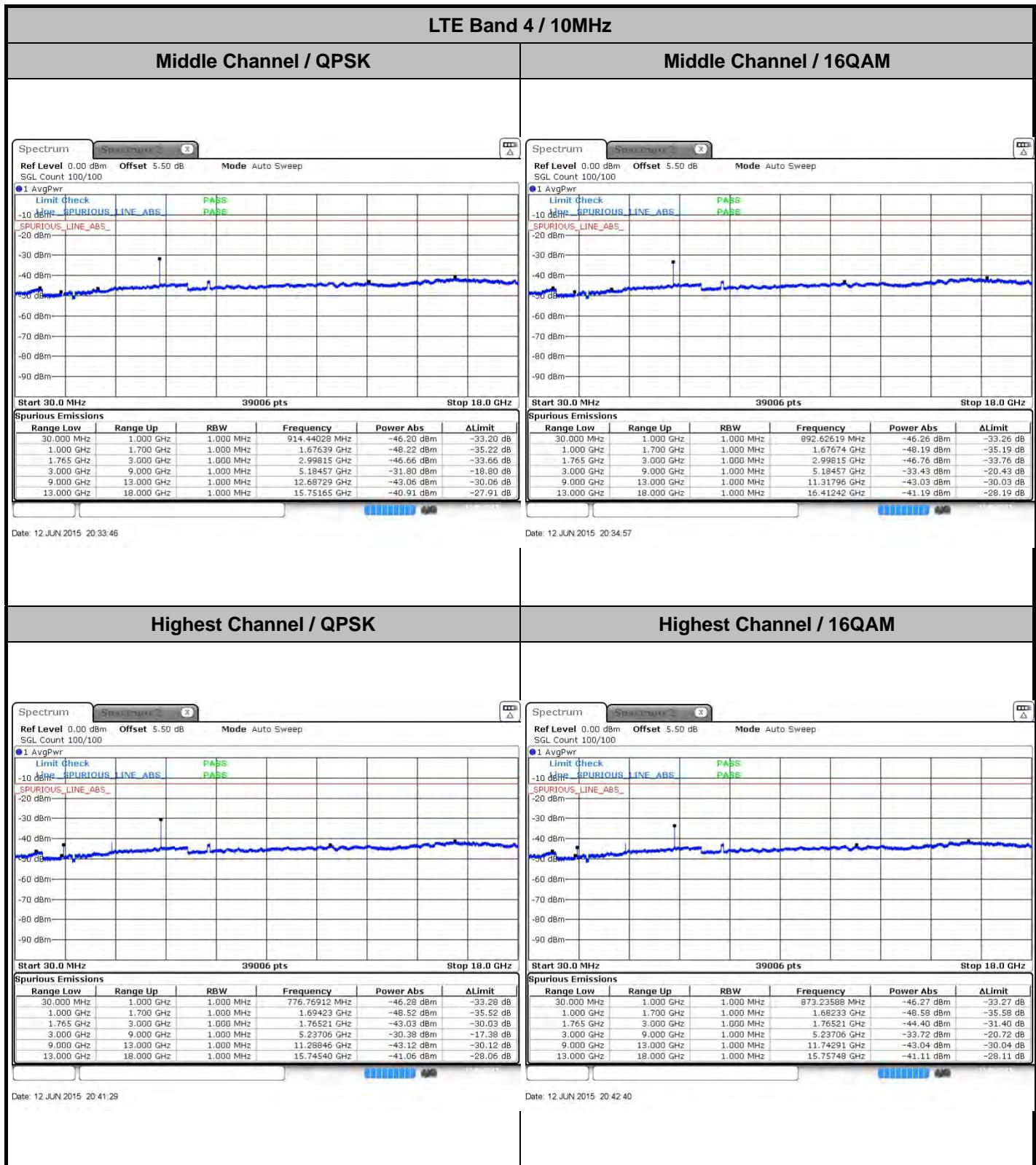
## Lowest Channel / QPSK

## Lowest Channel / 16QAM



Date: 12 JUN 2015 20:30:38

Date: 12 JUN 2015 20:31:49



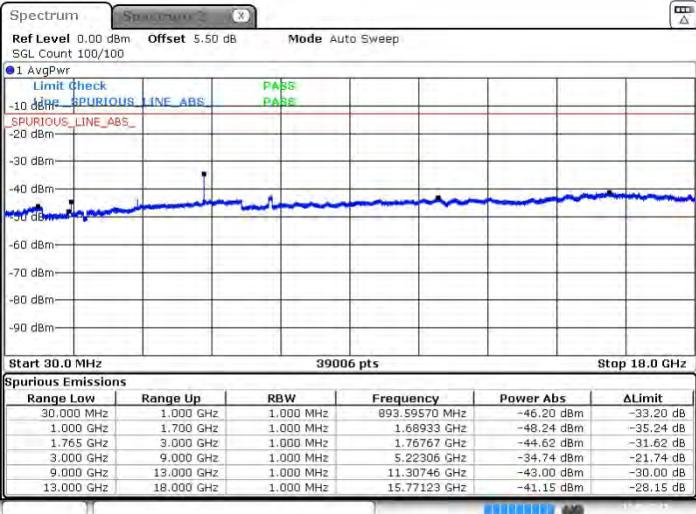
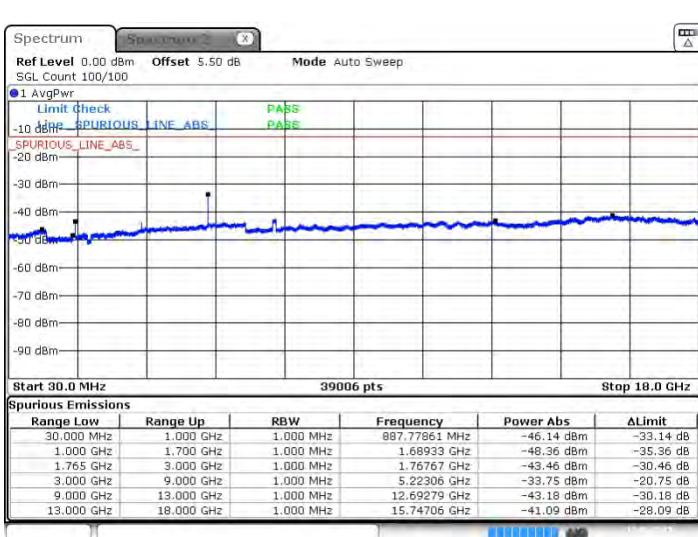




## LTE Band 4 / 15MHz

## Highest Channel / QPSK

## Highest Channel / 16QAM

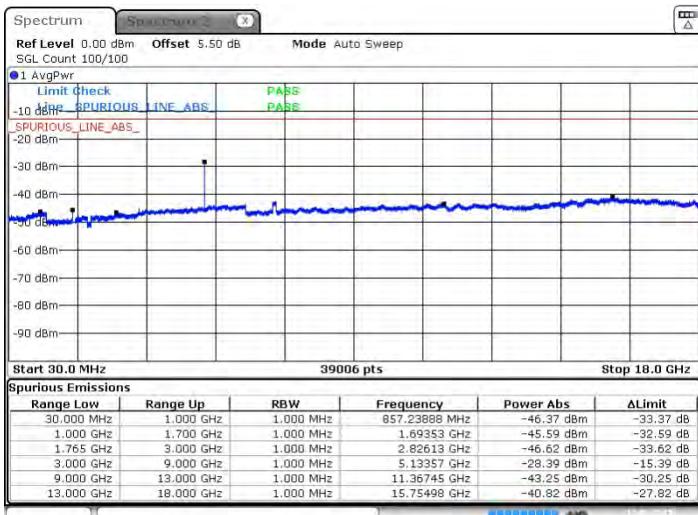


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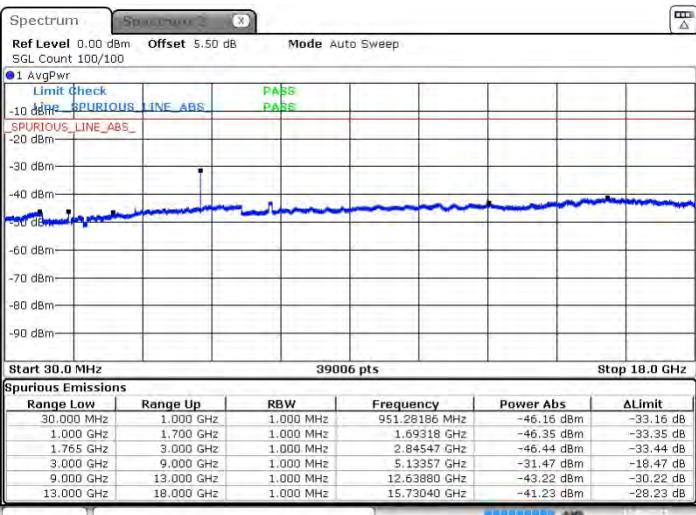
## LTE Band 4 / 20MHz

## Lowest Channel / QPSK

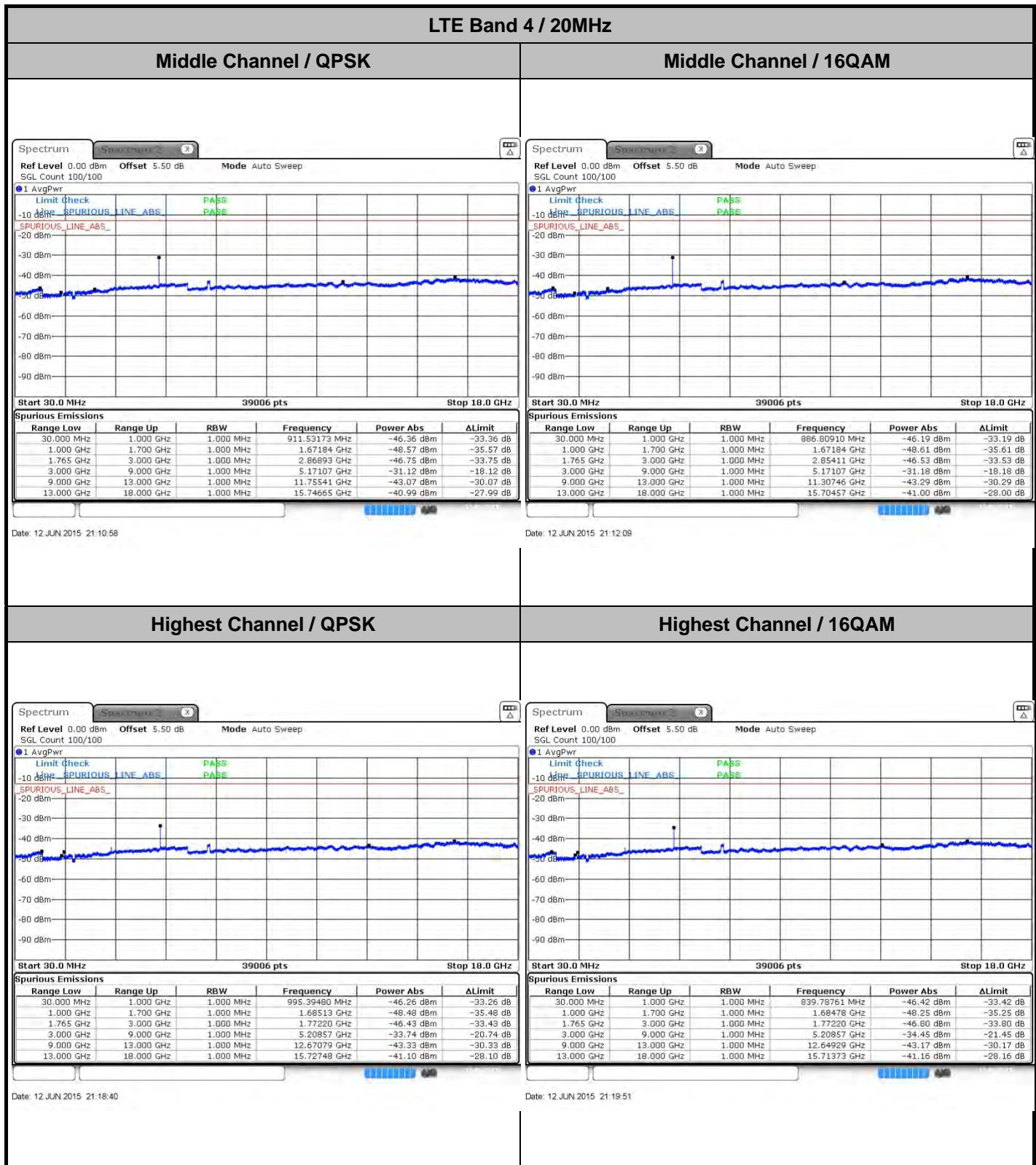
## Lowest Channel / 16QAM



Date: 12 JUN 2015 21:07:50



Date: 12 JUN 2015 21:09:00





## Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0127	PASS
40	Normal Voltage	0.0110	
30	Normal Voltage	0.0098	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0092	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0081	
20	Maximum Voltage	0.0095	
20	Normal Voltage	0.0035	
20	Battery End Point	0.0087	

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6V. ; 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.