



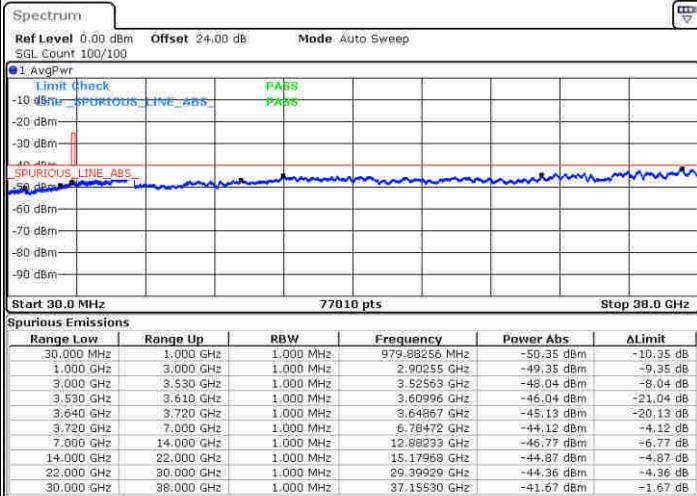
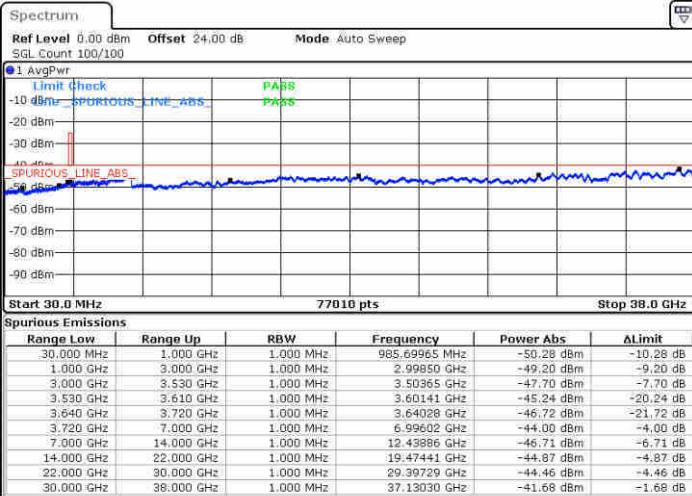


LTE Band 48 / 10MHz

64QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax

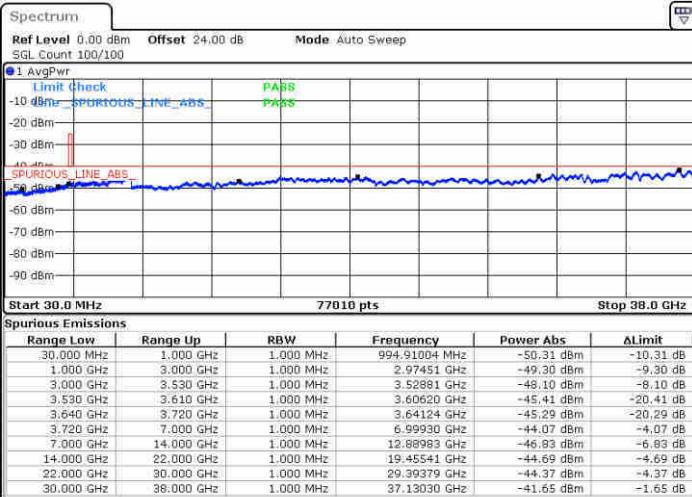


Date: 15.FEB.2020 01:23:00

Date: 15.FEB.2020 01:27:58

Middle Channel / FullRB

N/A



Date: 15.FEB.2020 01:31:23

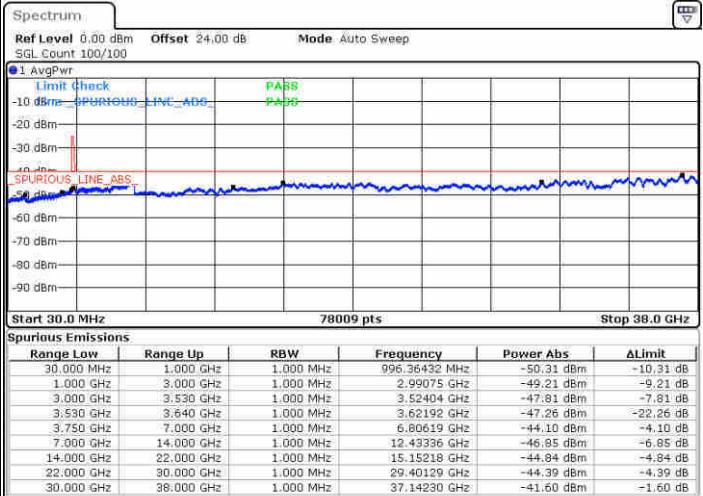
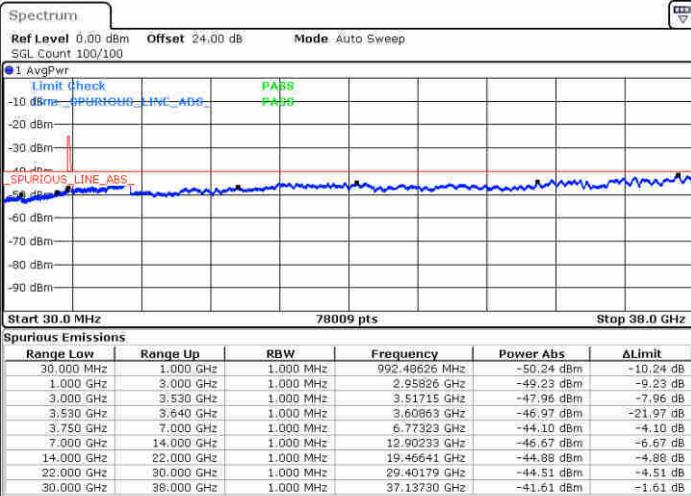


LTE Band 48 / 10MHz

64QAM

Highest Channel / 1RB0

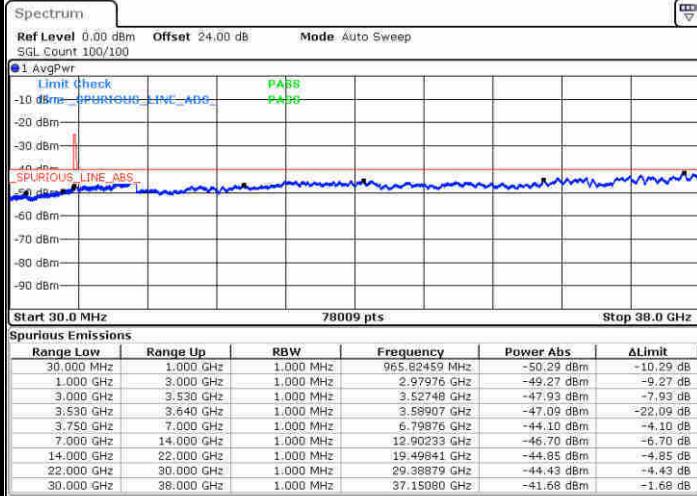
Highest Channel / 1RBmax



Date: 15.FEB.2020 02:03:42

Date: 15.FEB.2020 02:10:38

Highest Channel / FullRB



Date: 15.FEB.2020 02:13:23

N/A

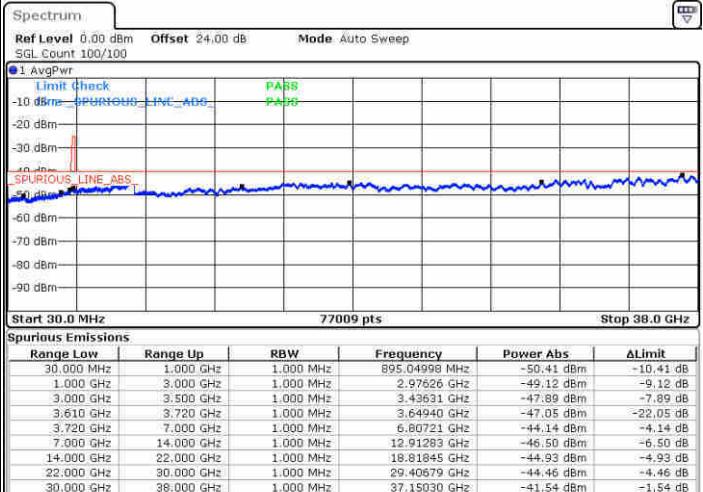
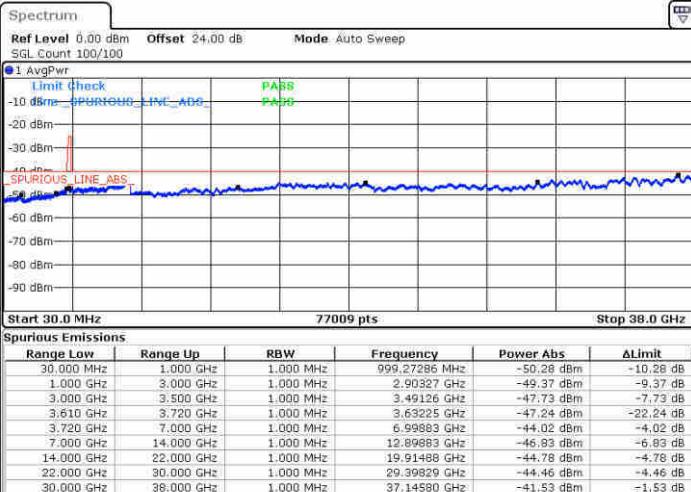


LTE Band 48 / 15MHz

64QAM

Lowest Channel / 1RB0

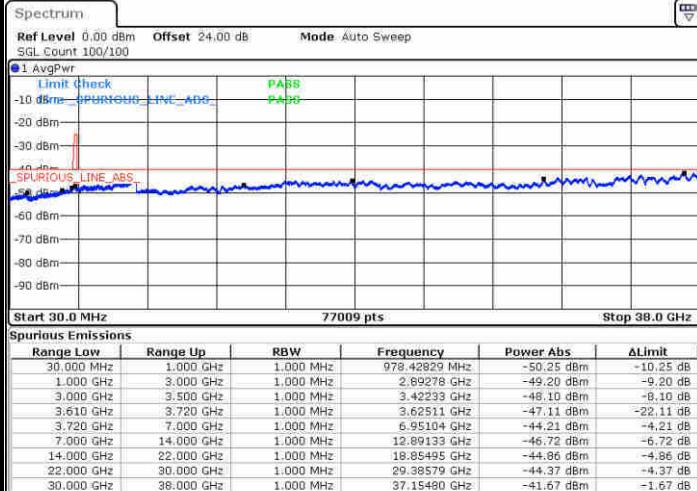
Lowest Channel / 1RBmax



Date: 15.FEB.2020 03:16:30

Date: 15.FEB.2020 03:29:40

Lowest Channel / FullRB



Date: 15.FEB.2020 03:31:59

N/A

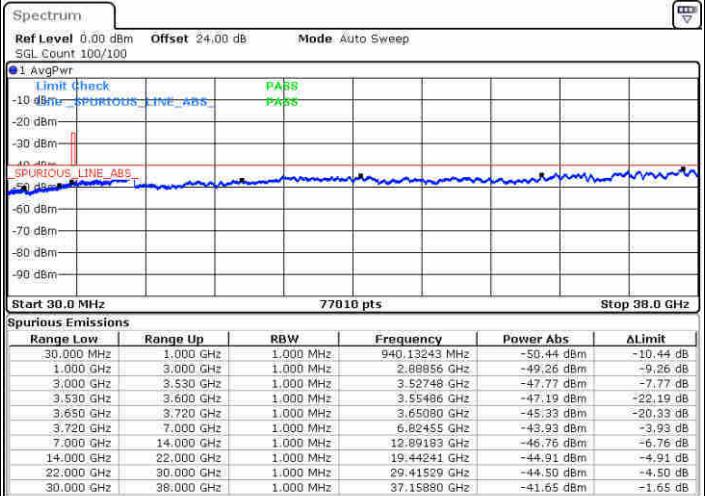
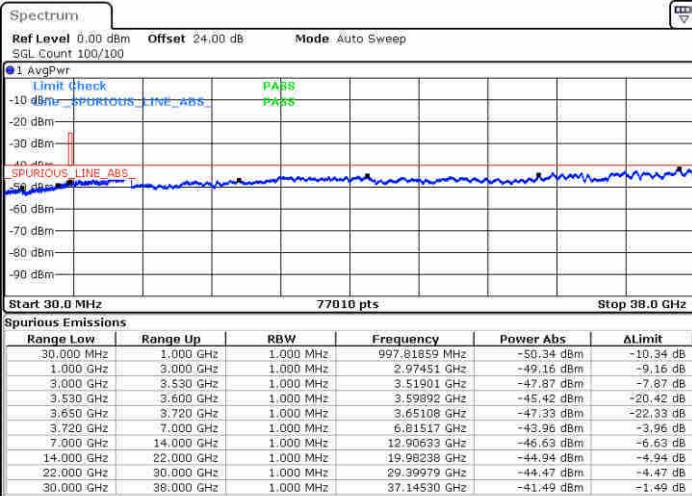


LTE Band 48 / 15MHz

64QAM

Middle Channel / 1RB0

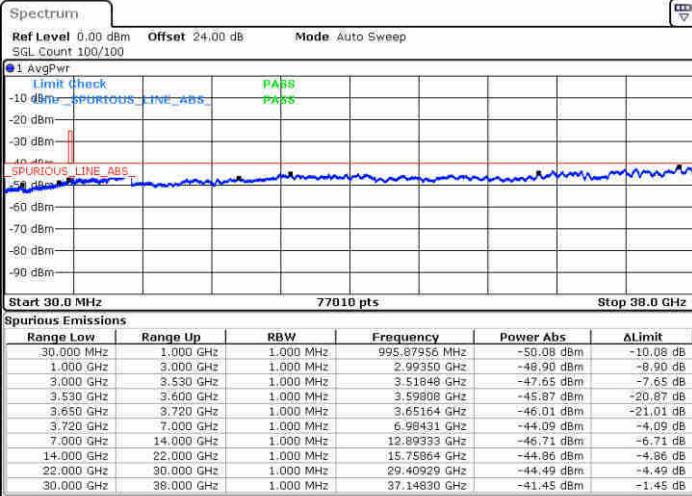
Middle Channel / 1RBmax



Date: 15.FEB.2020 04:34:43

Date: 15.FEB.2020 04:43:17

Middle Channel / FullRB



Date: 15.FEB.2020 04:50:41

N/A

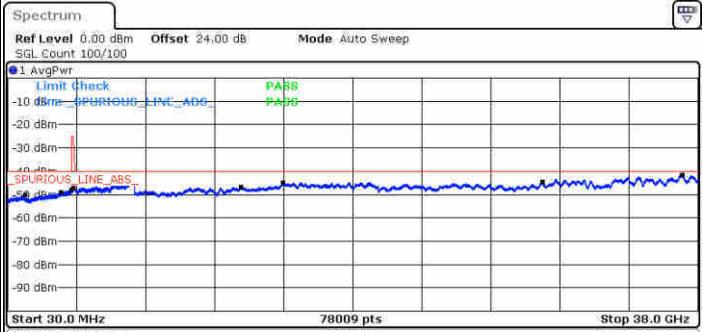
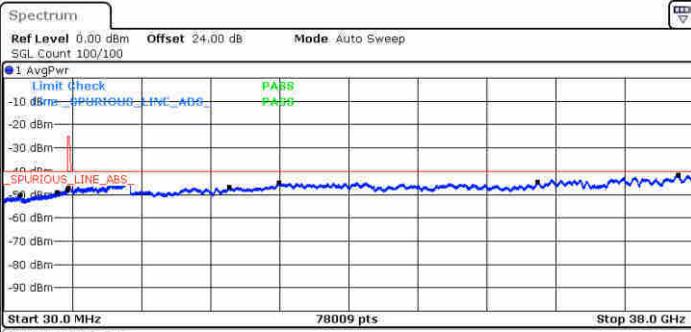


LTE Band 48 / 15MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



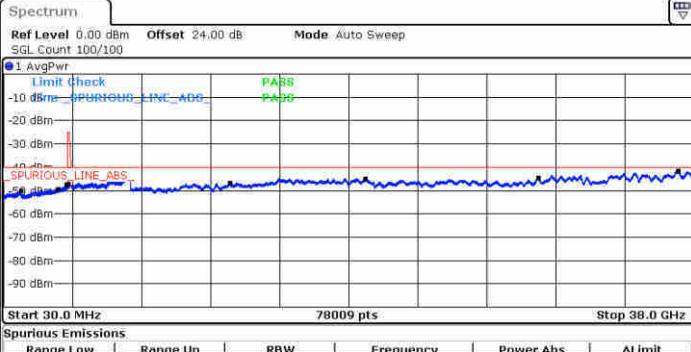
Spurious Emissions					
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	962.91604 MHz	-50.15 dBm	-10.15 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.97576 GHz	-49.16 dBm	-9.16 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.52219 GHz	-47.81 dBm	-7.81 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.60285 GHz	-47.16 dBm	-22.16 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.80201 GHz	-44.14 dBm	-4.14 dB
7.000 GHz	14.000 GHz	1.000 MHz	12.43786 GHz	-46.69 dBm	-6.69 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.15968 GHz	-44.87 dBm	-4.87 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.39679 GHz	-44.52 dBm	-4.52 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.14680 GHz	-41.55 dBm	-1.55 dB

Spurious Emissions					
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	989.09295 MHz	-50.35 dBm	-10.35 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96826 GHz	-49.10 dBm	-9.10 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.52907 GHz	-47.90 dBm	-7.90 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.62280 GHz	-47.07 dBm	-22.07 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.96681 GHz	-43.98 dBm	-3.98 dB
7.000 GHz	14.000 GHz	1.000 MHz	12.86483 GHz	-46.72 dBm	-6.72 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.17718 GHz	-44.85 dBm	-4.85 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.42559 GHz	-44.46 dBm	-4.46 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.13730 GHz	-41.58 dBm	-1.58 dB

Date: 15.FEB.2020 05:36:56

Date: 15.FEB.2020 05:40:39

Highest Channel / FullIRB



Spurious Emissions					
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	992.48626 MHz	-50.20 dBm	-10.20 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99825 GHz	-49.29 dBm	-9.29 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.50312 GHz	-47.72 dBm	-7.72 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.60445 GHz	-47.02 dBm	-22.02 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.96495 GHz	-44.12 dBm	-4.12 dB
7.000 GHz	14.000 GHz	1.000 MHz	12.45486 GHz	-46.81 dBm	-6.81 dB
14.000 GHz	22.000 GHz	1.000 MHz	19.94438 GHz	-44.80 dBm	-4.80 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.44178 GHz	-44.55 dBm	-4.55 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.13680 GHz	-41.51 dBm	-1.51 dB

Date: 15.FEB.2020 05:42:57

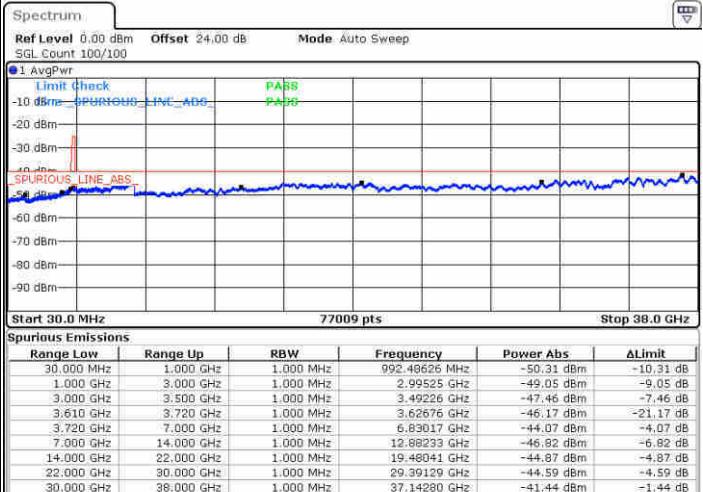
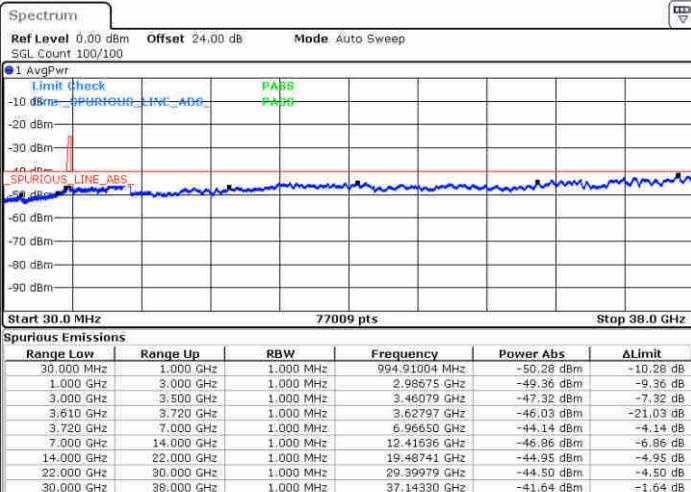


LTE Band 48 / 20MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

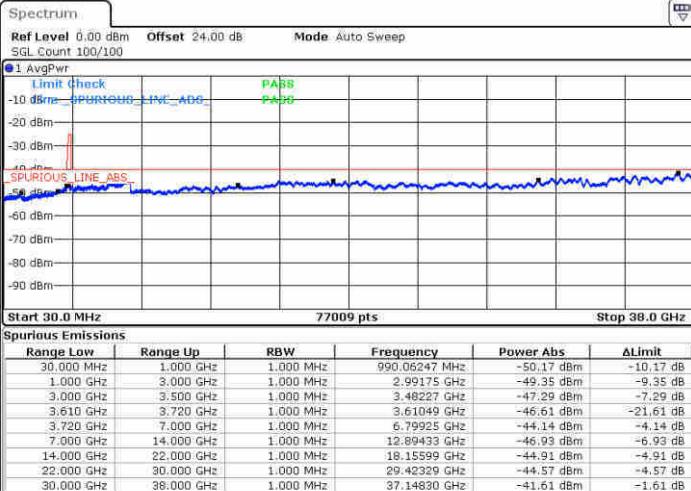


Date: 14/FEB/2020 05:30:03

Date: 14/FEB/2020 05:35:37

Lowest Channel / FullRB

N/A



Date: 14/FEB/2020 05:42:06



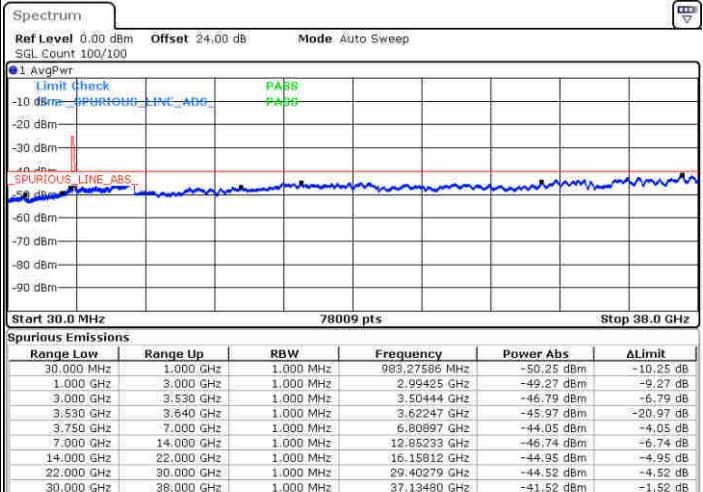
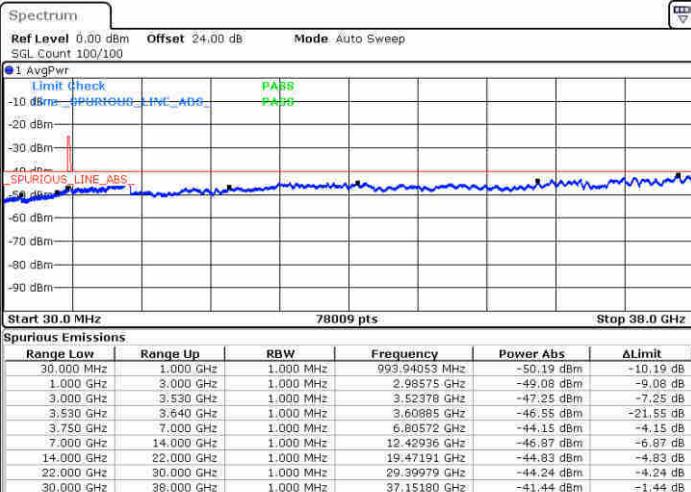


LTE Band 48 / 20MHz

64QAM

Highest Channel / 1RB0

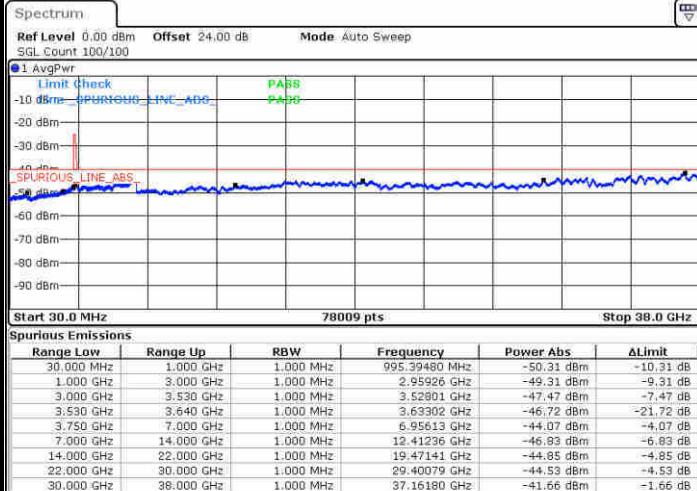
Highest Channel / 1RBmax



Date: 14/FEB/2020 03:10:33

Date: 14/FEB/2020 03:14:07

Highest Channel / FullIRB



Date: 14/FEB/2020 03:07:06

N/A



Frequency Stability

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0031	PASS
40	Normal Voltage	0.0037	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0025	
-30	Normal Voltage	0.0015	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0001	

Note:

1. Normal Voltage =110 V. ; Battery End Point (BEP) =100 V. ; Maximum Voltage =120 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



EIRP Power Density

Mode	LTE Band 48 : Conducted Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	13.88	13.7	12.2	11.9	10.61	10.37	8.96	8.53
Middle CH	-	-	-	-	13.13	13.55	12.16	11.23	10.6	10.32	8.77	8.66
Highest CH	-	-	-	-	13.93	14.09	12.22	11.84	10.66	11.18	10.3	8.93

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	28.88	28.7	27.2	26.9	25.61	25.37	23.96	23.53
Middle CH	-	-	-	-	28.13	28.55	27.16	26.23	25.6	25.32	23.77	23.66
Highest CH	-	-	-	-	28.93	29.09	27.22	26.84	25.66	26.18	25.3	23.93

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	28.53	-	27.11	-	25.81	-	22.88	-
Middle CH	-	-	-	-	28.45	-	26.37	-	25.72	-	23.59	-
Highest CH	-	-	-	-	28.84	-	27.6	-	25.7	-	24.8	-

Antenna Gain	15 dBi											
Limit	37dBm / MHz											
Result	Pass											



LTE Band 48 / 5MHz

Lowest Channel / 5MHz / Full / QPSK



Date: 14 FEB 2020 06:00:42

Lowest Channel / 5MHz / Full / 16QAM



Date: 14 FEB 2020 06:04:28

Middle Channel / 5MHz / Full / QPSK



Date: 14 FEB 2020 06:43:18

Middle Channel / 5MHz / Full / 16QAM



Date: 14 FEB 2020 06:54:45

Highest Channel / 5MHz / Full / QPSK



Date: 14 FEB 2020 07:21:34

Highest Channel / 5MHz / Full / 16QAM

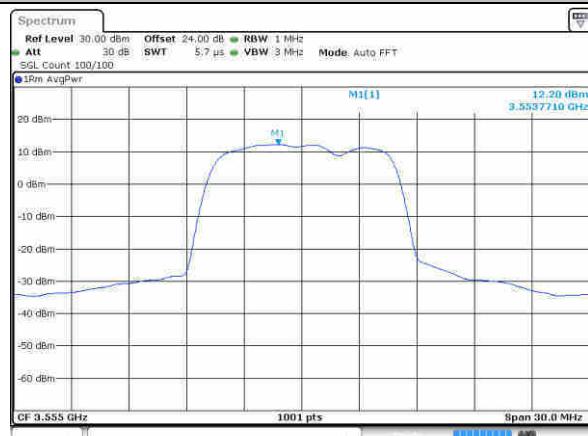


Date: 14 FEB 2020 07:54:58



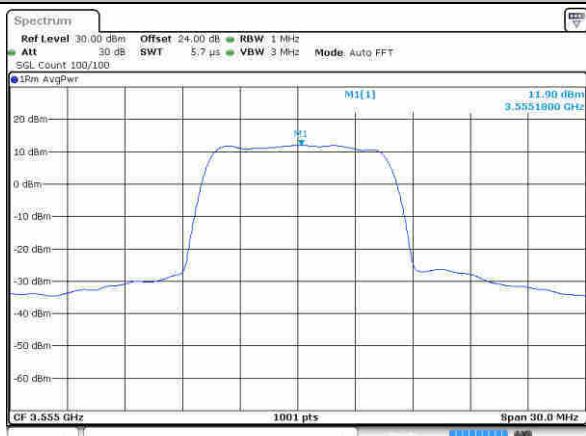
LTE Band 48 / 10MHz

Lowest Channel / 10MHz / Full / QPSK



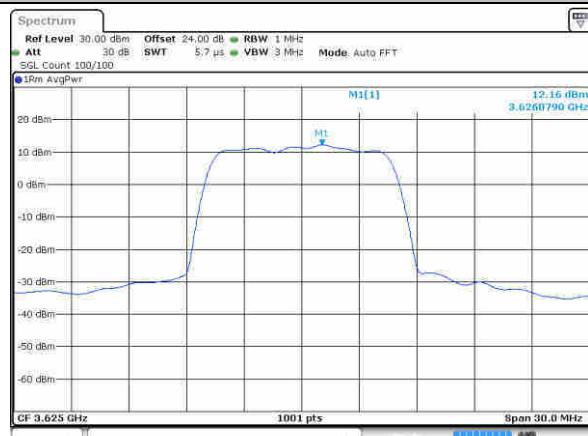
Date: 16 FEB 2020 03:44:09

Lowest Channel / 10MHz / Full / 16QAM



Date: 16 FEB 2020 03:45:58

Middle Channel / 10MHz / Full / QPSK



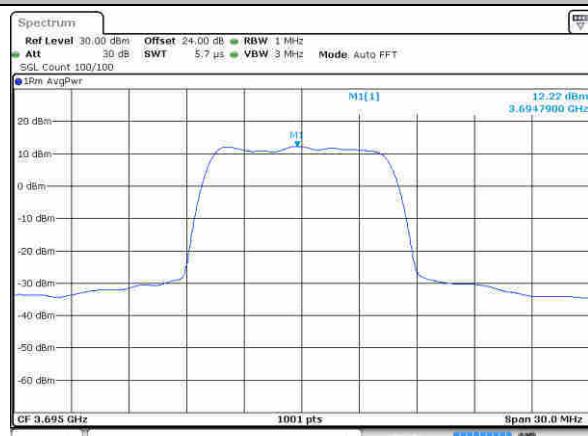
Date: 16 FEB 2020 03:49:00

Middle Channel / 10MHz / Full / 16QAM



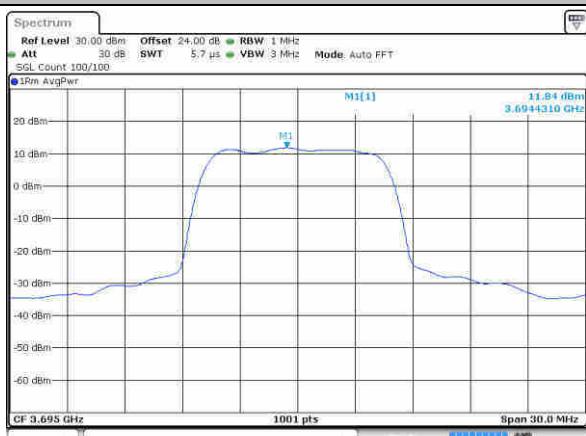
Date: 16 FEB 2020 03:49:21

Highest Channel / 10MHz / Full / QPSK



Date: 16 FEB 2020 03:52:17

Highest Channel / 10MHz / Full / 16QAM

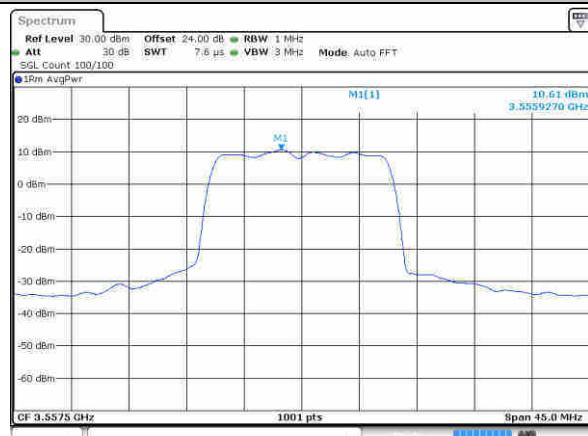


Date: 16 FEB 2020 03:53:14



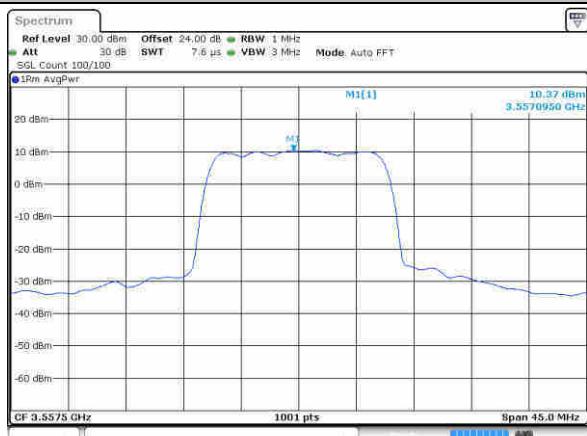
LTE Band 48 / 15MHz

Lowest Channel / 15MHz / Full / QPSK



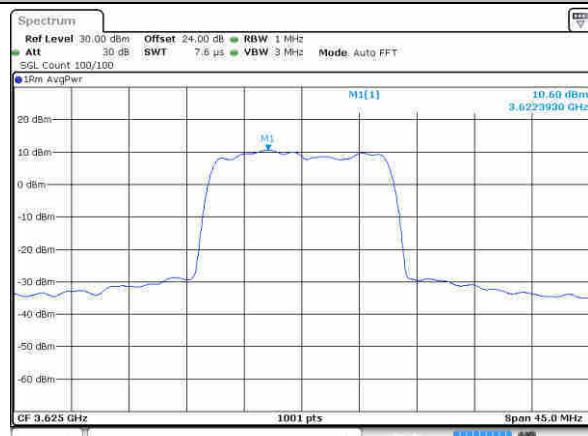
Date: 16 FEB 2020 03:58:03

Lowest Channel / 15MHz / Full / 16QAM



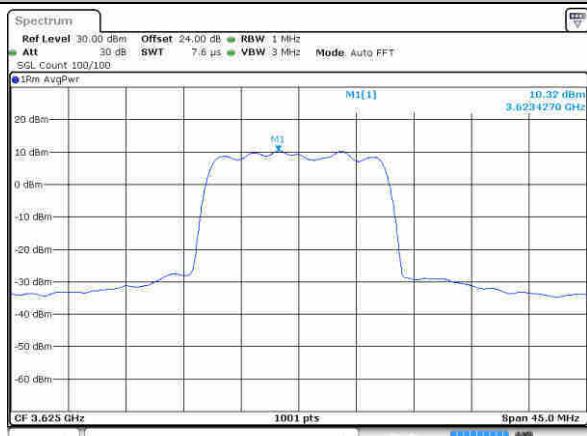
Date: 16 FEB 2020 03:58:51

Middle Channel / 15MHz / Full / QPSK



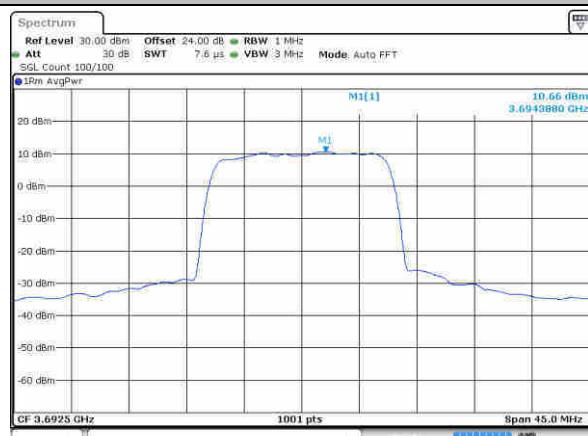
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Middle Channel / 15MHz / Full / 16QAM



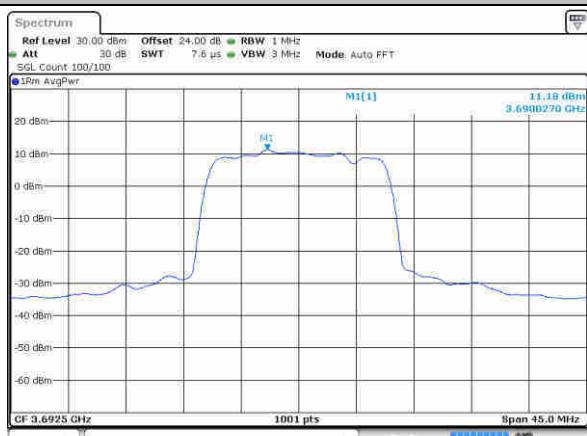
Date: 16 FEB 2020 03:59:55

Highest Channel / 15MHz / Full / QPSK



Date: 16 FEB 2020 04:02:14

Highest Channel / 15MHz / Full / 16QAM

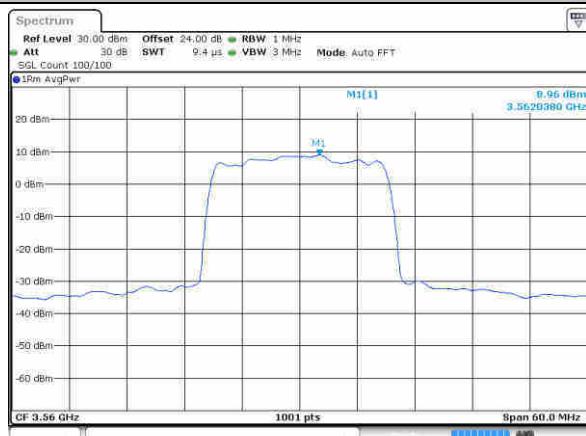


Date: 16 FEB 2020 04:02:31



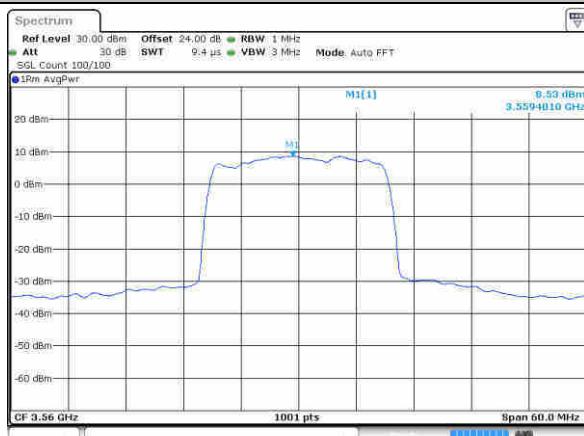
LTE Band 48 / 20MHz

Lowest Channel / 20MHz / Full / QPSK



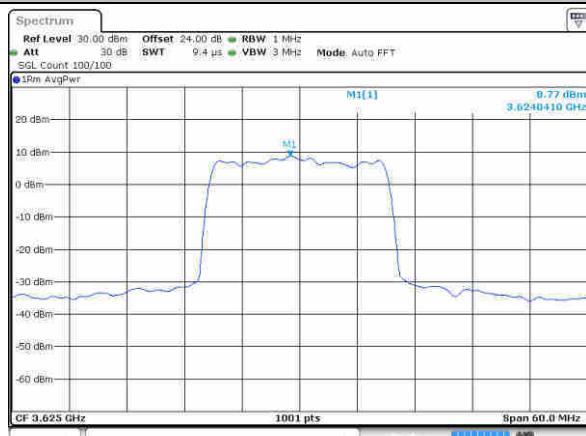
Date: 14 FEB 2020 05:15:18

Lowest Channel / 20MHz / Full / 16QAM



Date: 14 FEB 2020 05:18:20

Middle Channel / 20MHz / Full / QPSK



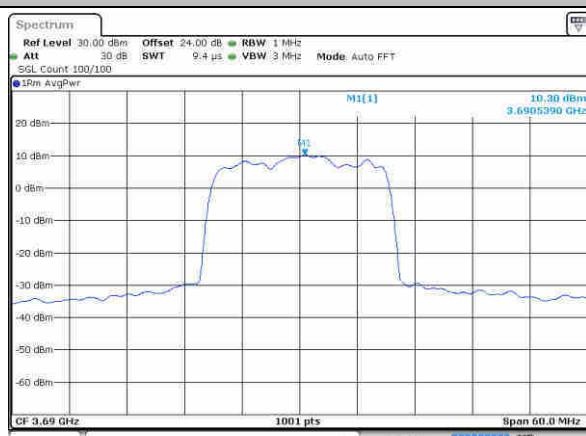
Date: 14 FEB 2020 04:07:29

Middle Channel / 20MHz / Full / 16QAM



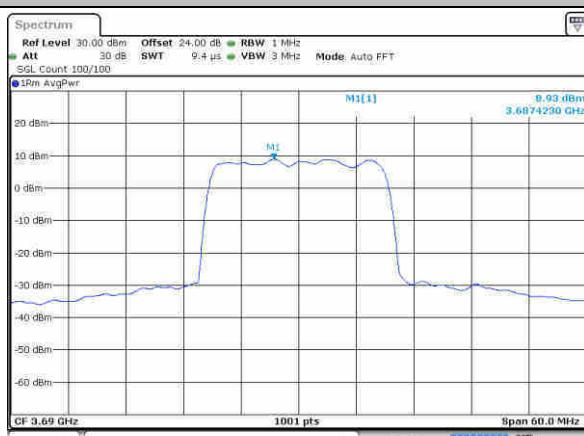
Date: 14 FEB 2020 04:13:44

Highest Channel / 20MHz / Full / QPSK

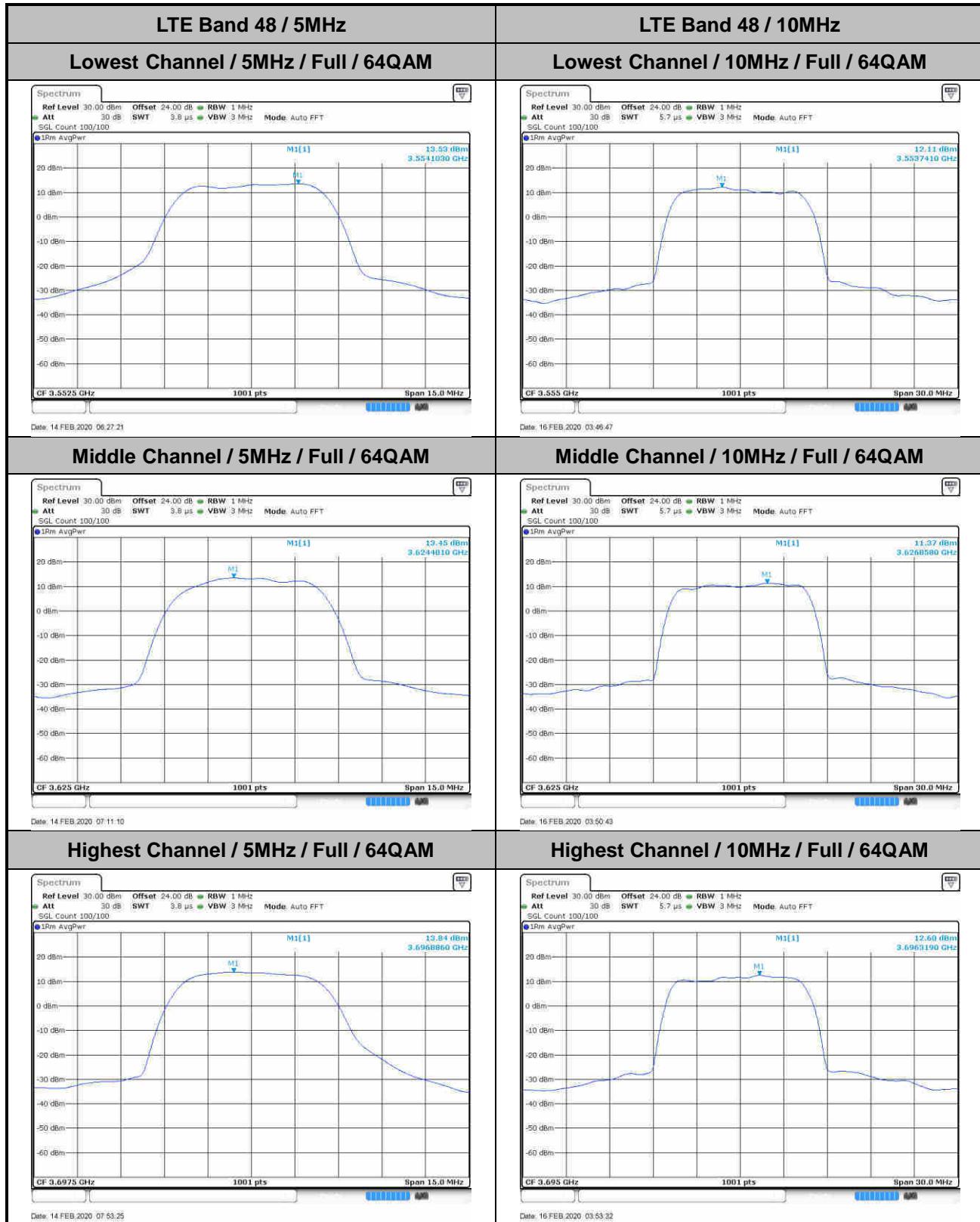


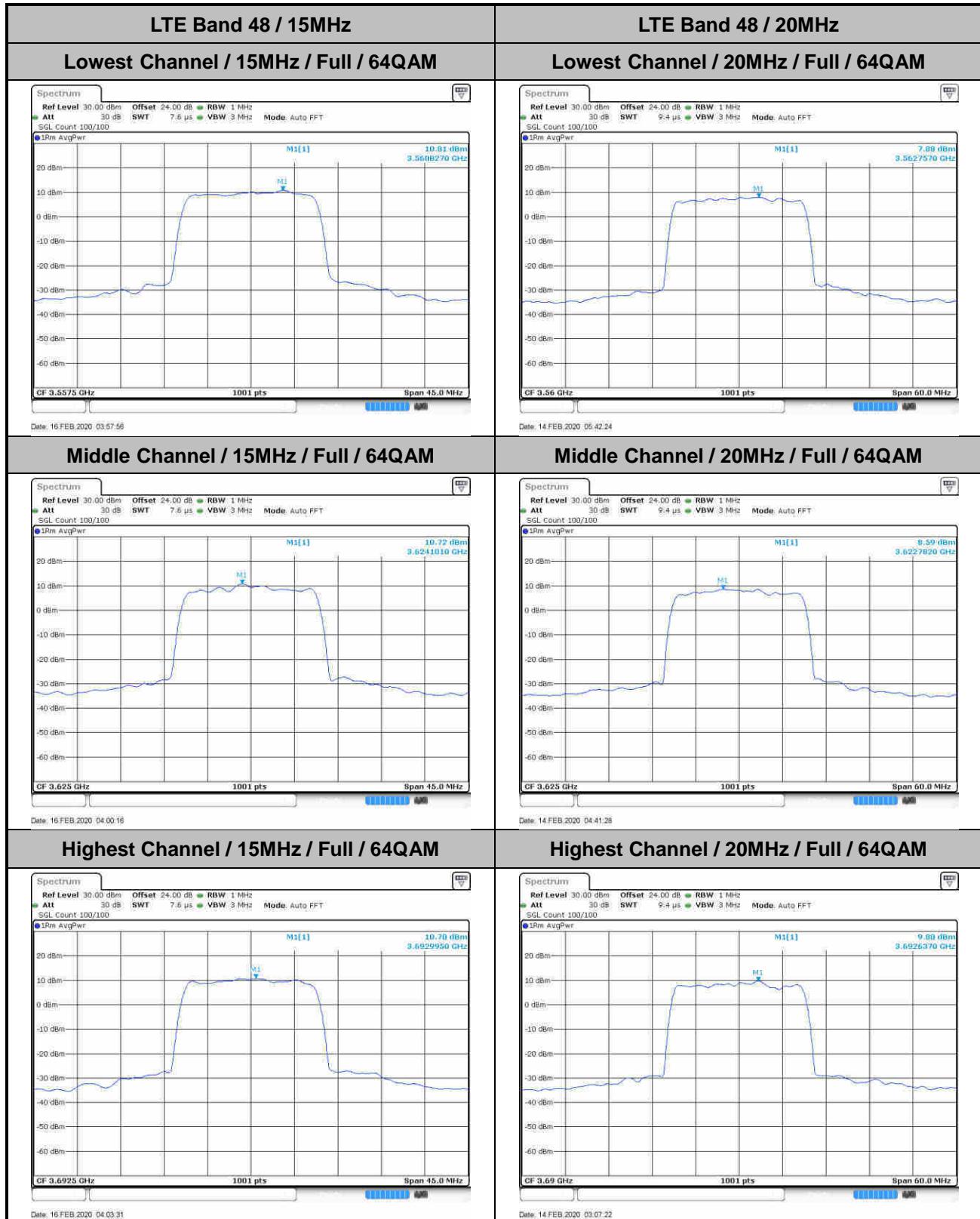
Date: 14 FEB 2020 03:29:11

Highest Channel / 20MHz / Full / 16QAM



Date: 14 FEB 2020 03:24:54



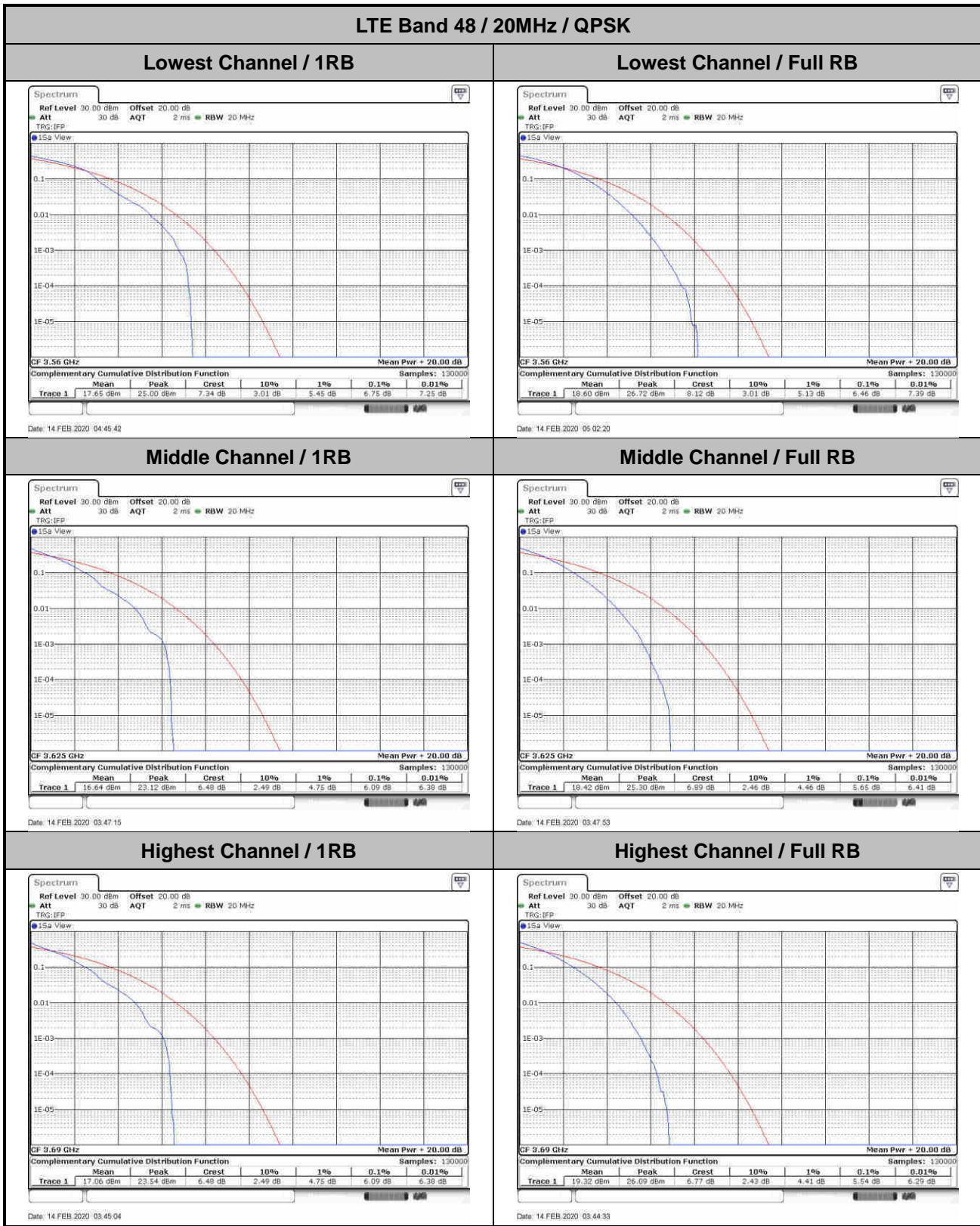


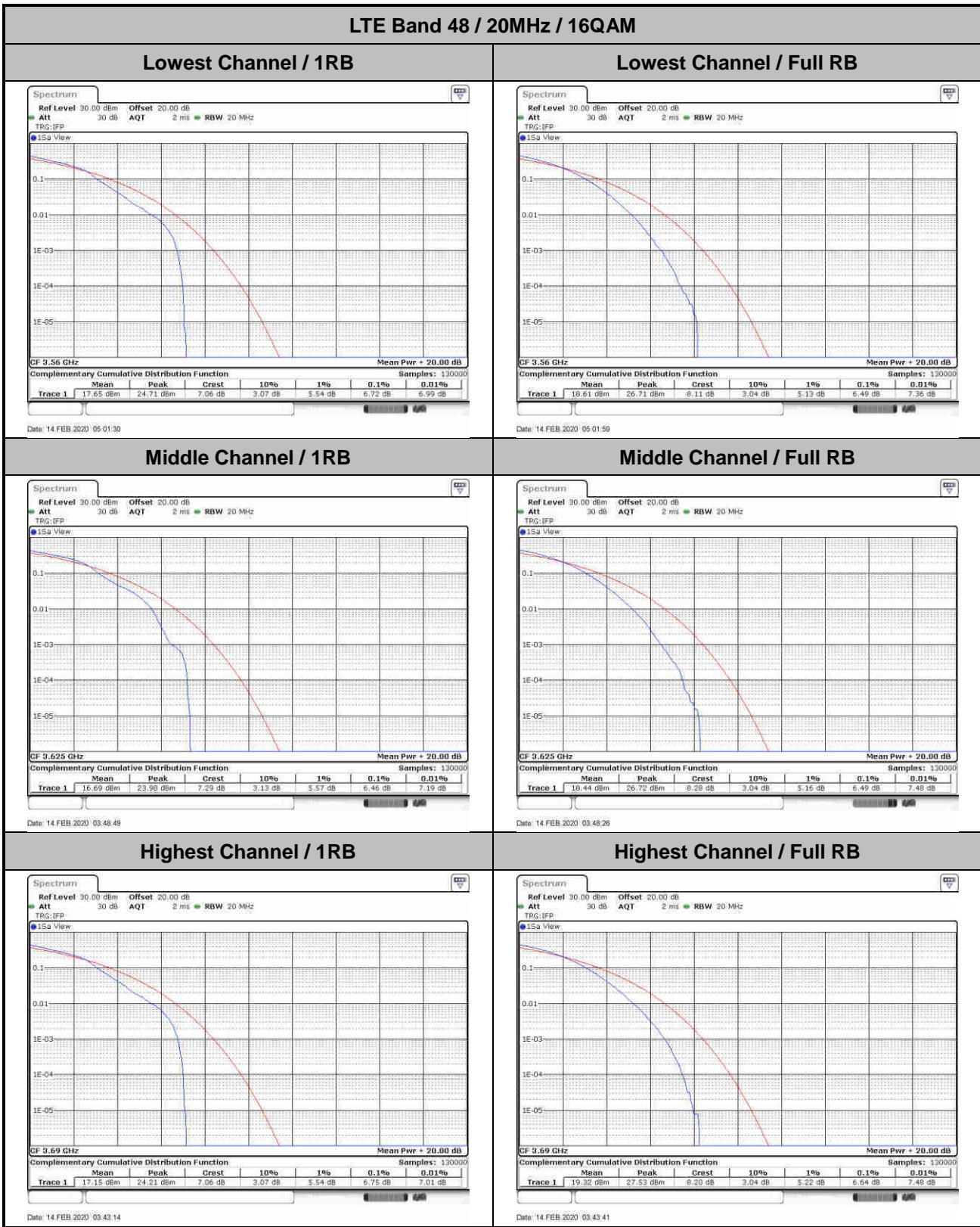


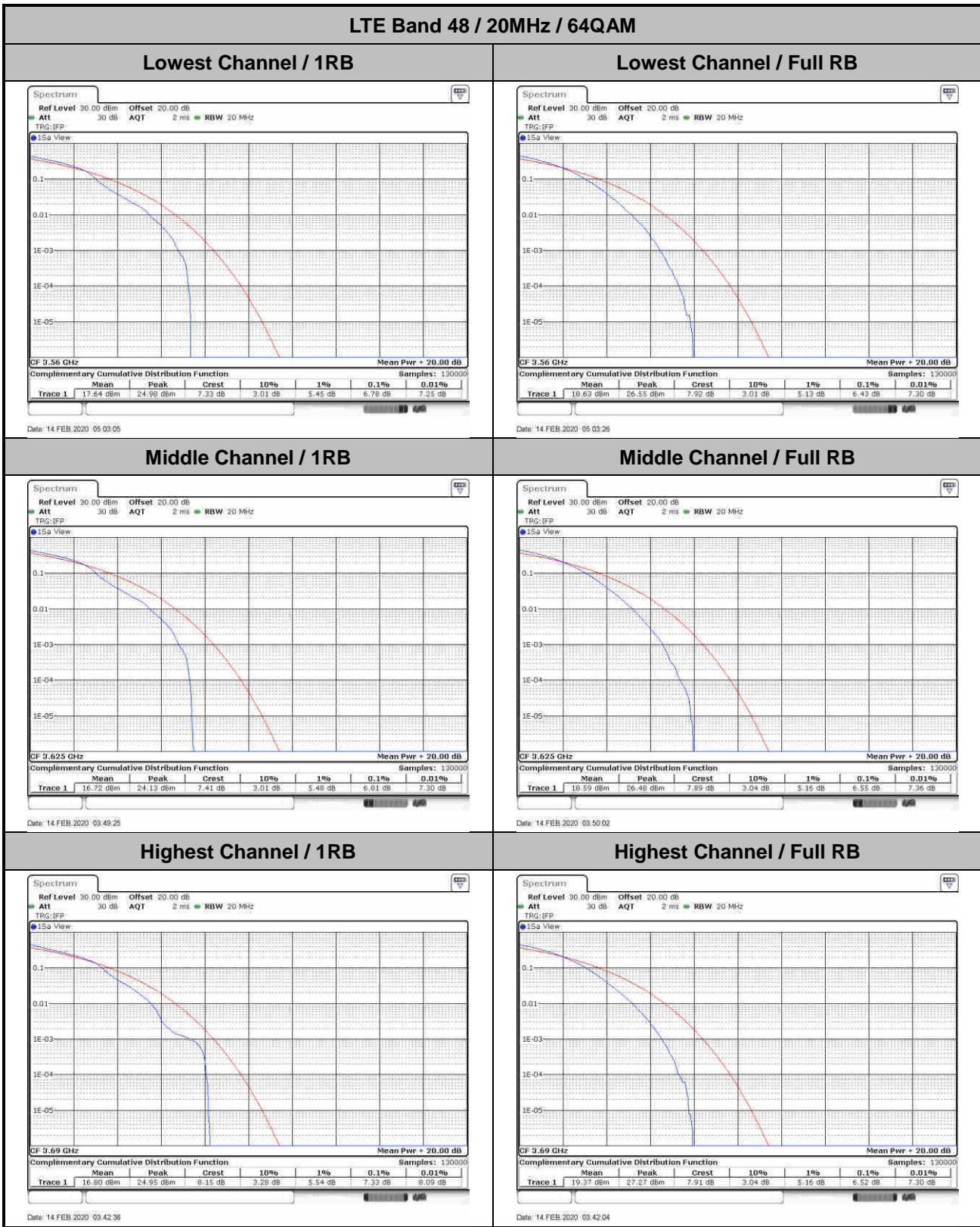
MIMO <Ant. 1>

Peak-to-Average Ratio

Mode	LTE Band 48 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.75	6.46	6.72	6.49	PASS
Middle CH	6.09	5.65	6.46	6.49	
Highest CH	6.09	5.54	6.75	6.64	
Mode	LTE Band 48 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.78	6.43	-	-	PASS
Middle CH	6.81	6.55	-	-	
Highest CH	7.33	6.52	-	-	

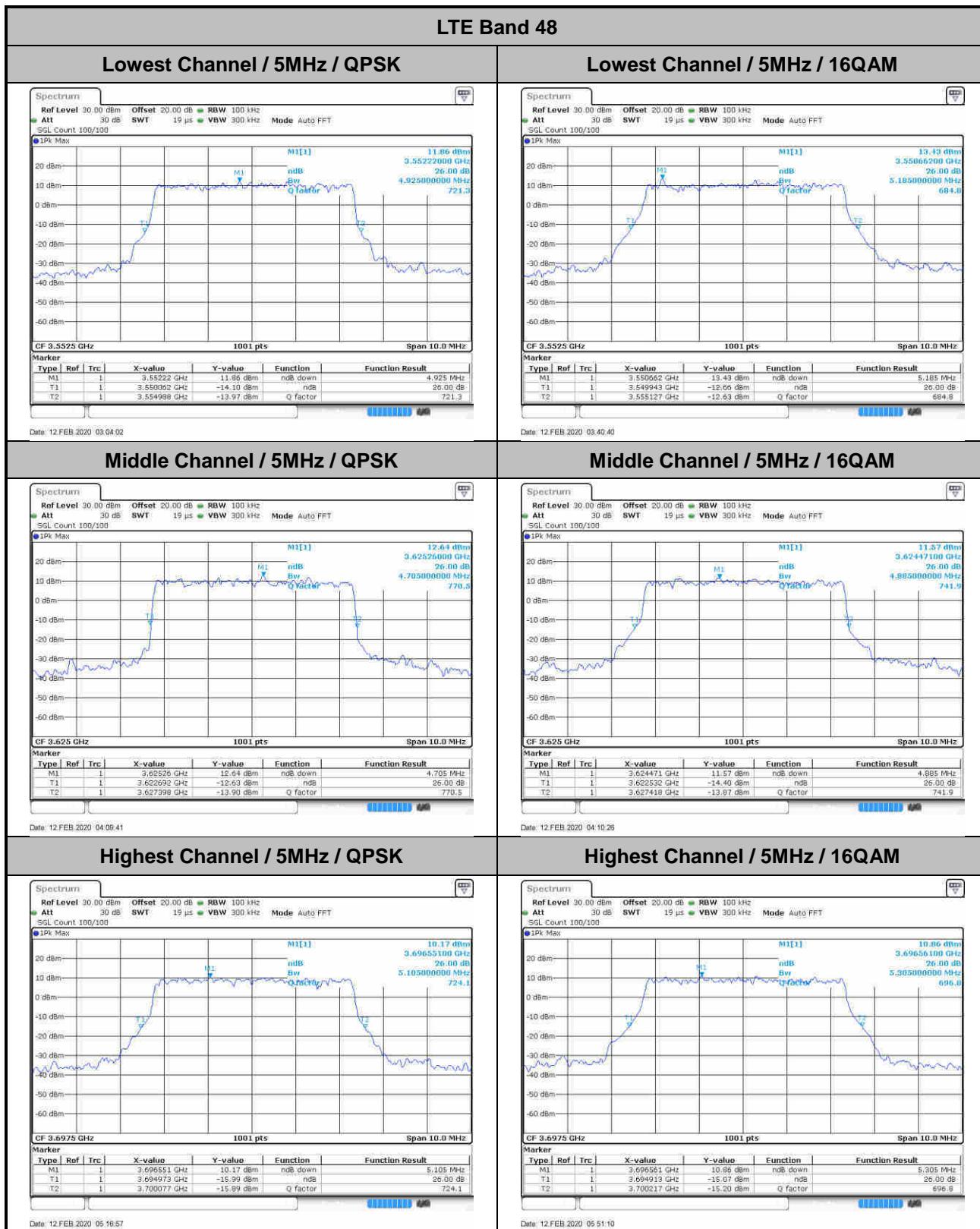


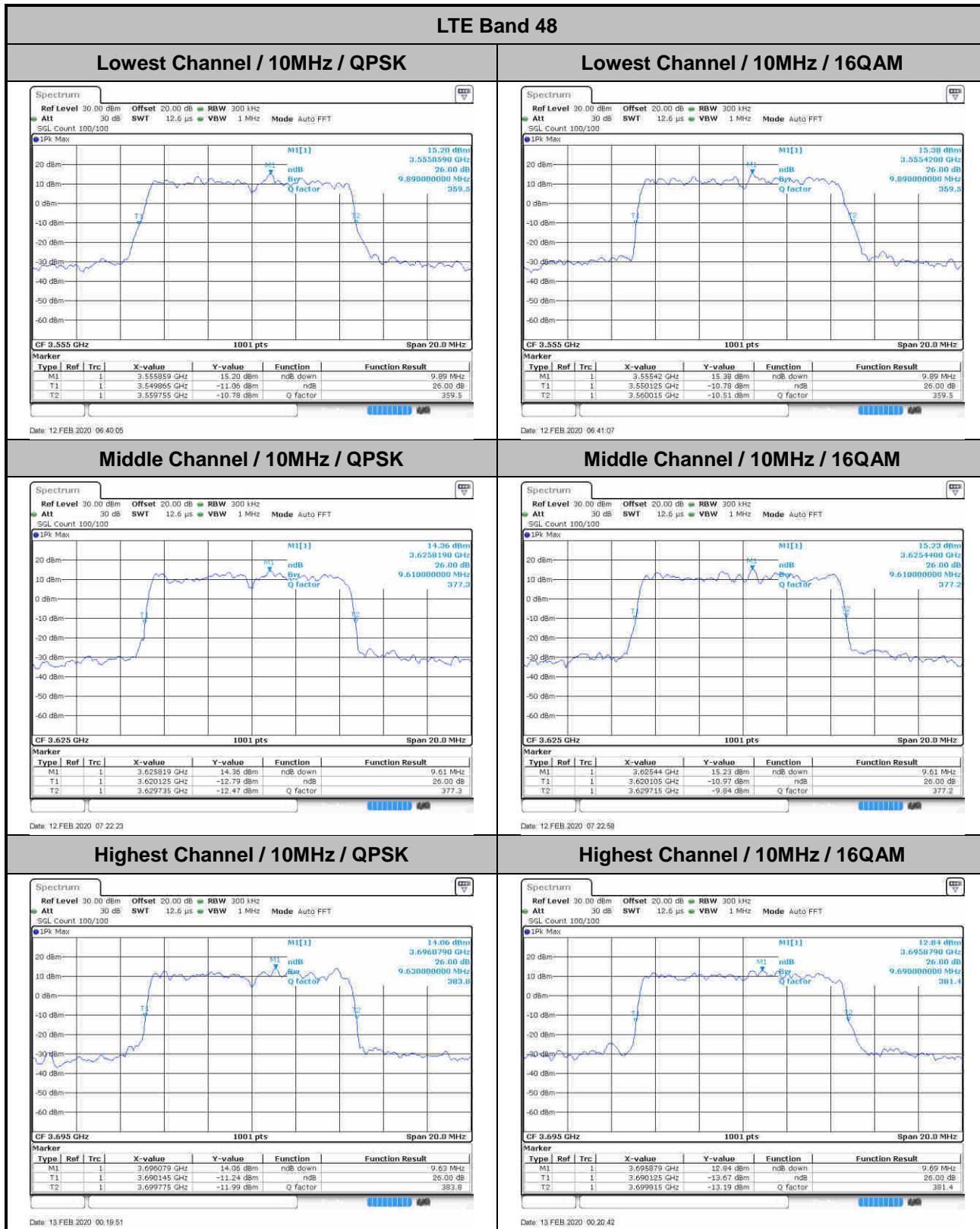


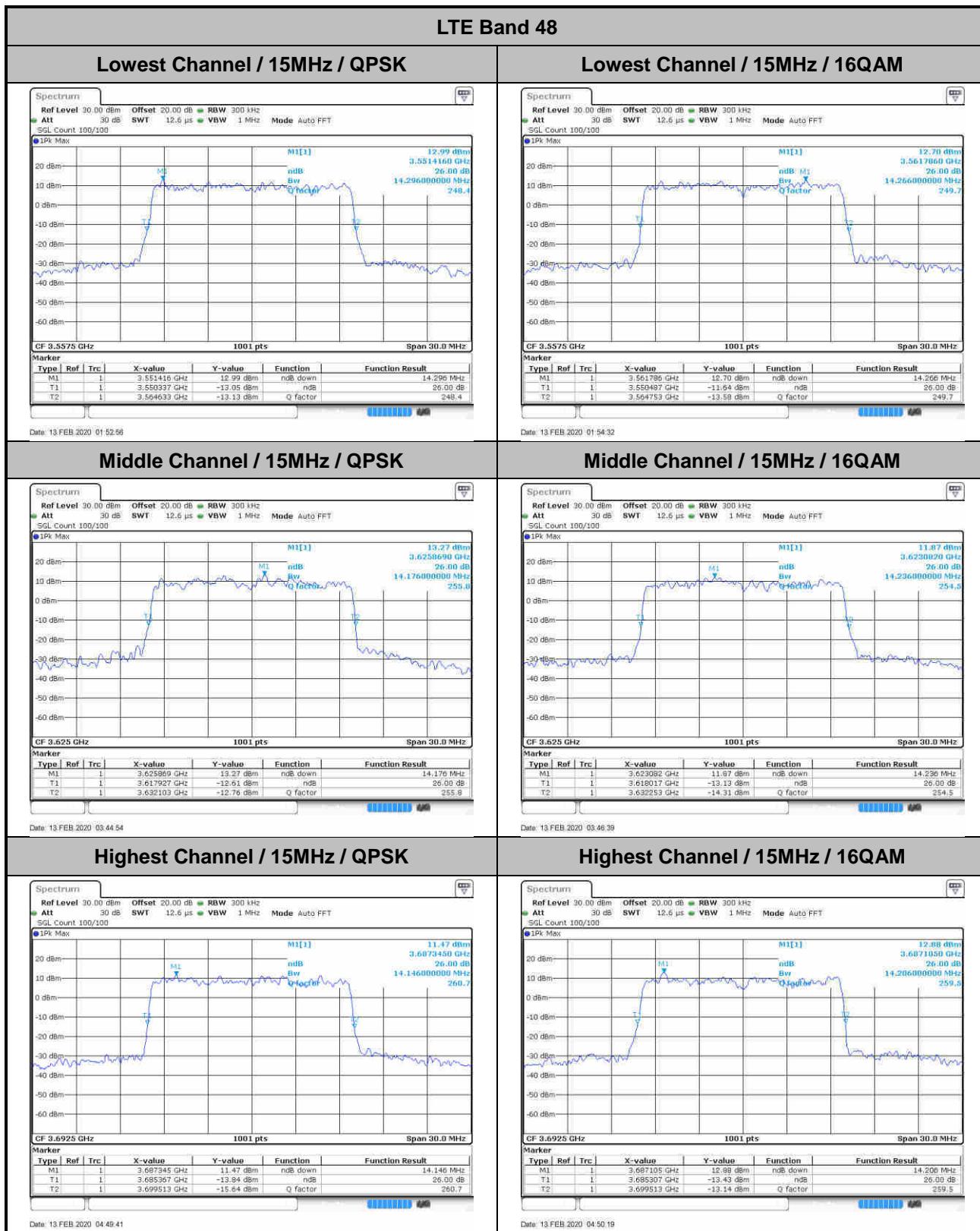


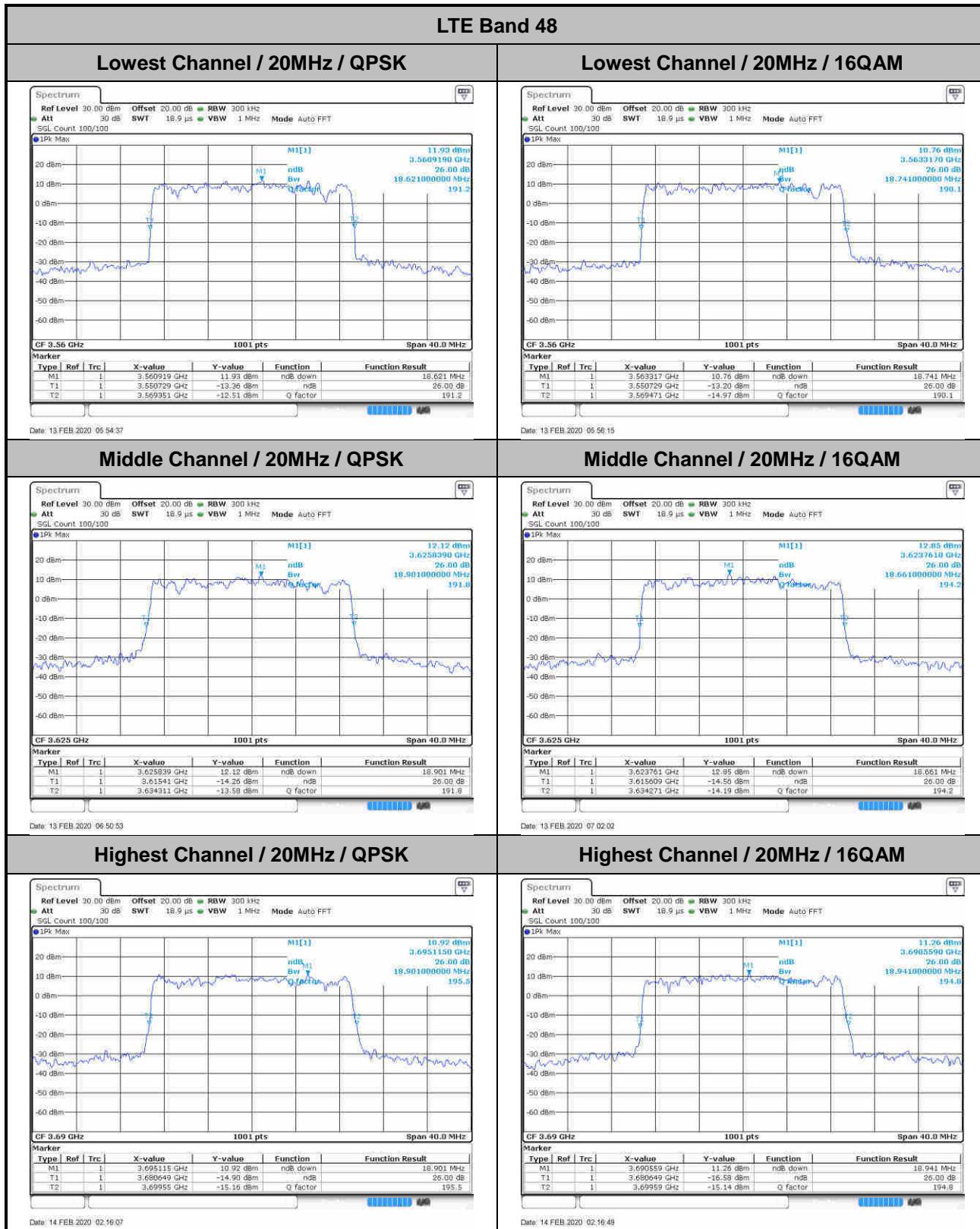
**26dB Bandwidth**

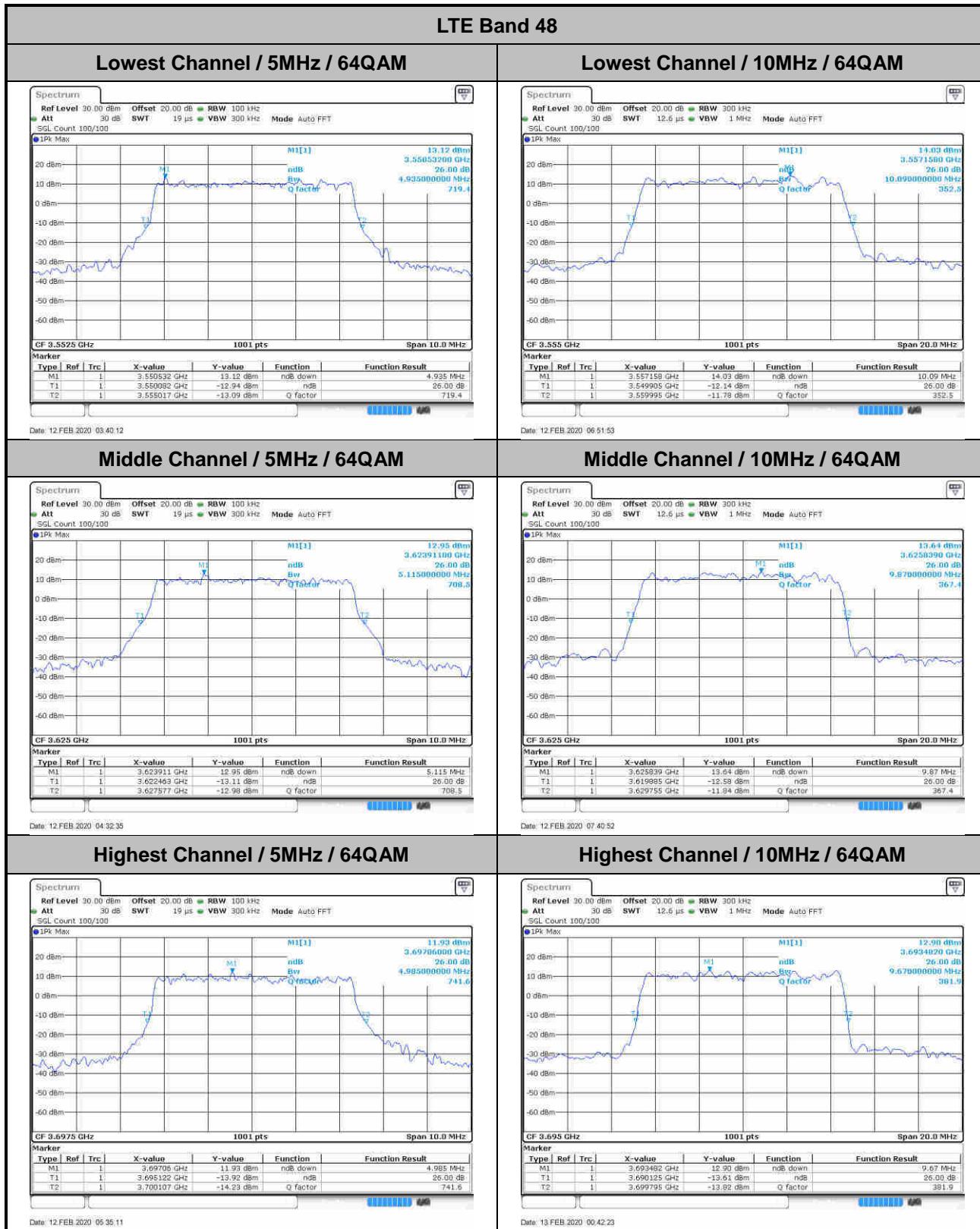
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.93	5.19	9.89	9.89	14.30	14.27	18.62	18.74
Middle CH	-	-	-	-	4.71	4.89	9.61	9.61	14.18	14.24	18.90	18.66
Highest CH	-	-	-	-	5.11	5.31	9.63	9.69	14.15	14.21	18.90	18.94
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.94	-	10.09	-	14.48	-	18.90	-
Middle CH	-	-	-	-	5.12	-	9.87	-	14.15	-	18.66	-
Highest CH	-	-	-	-	4.99	-	9.67	-	14.12	-	18.82	-

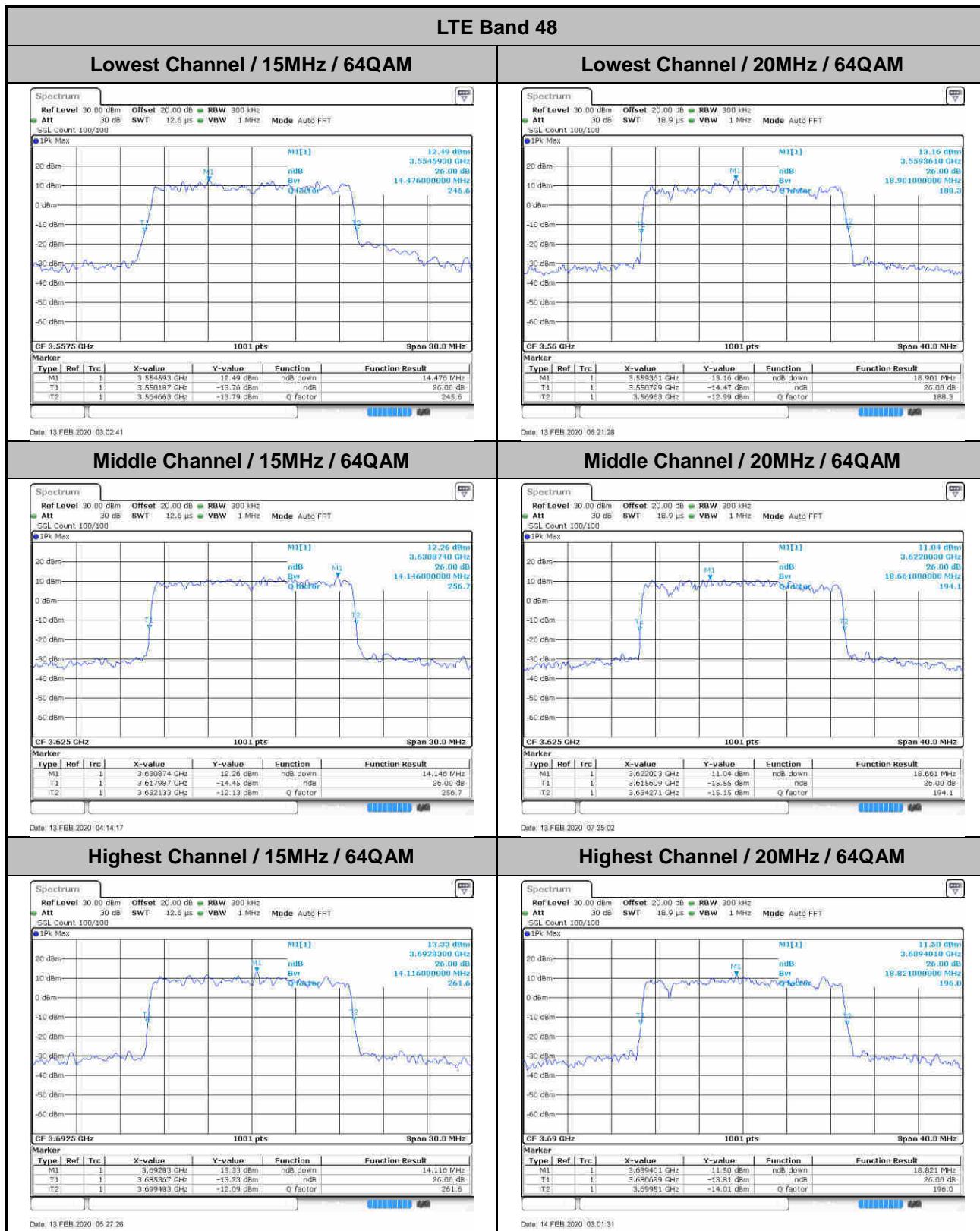






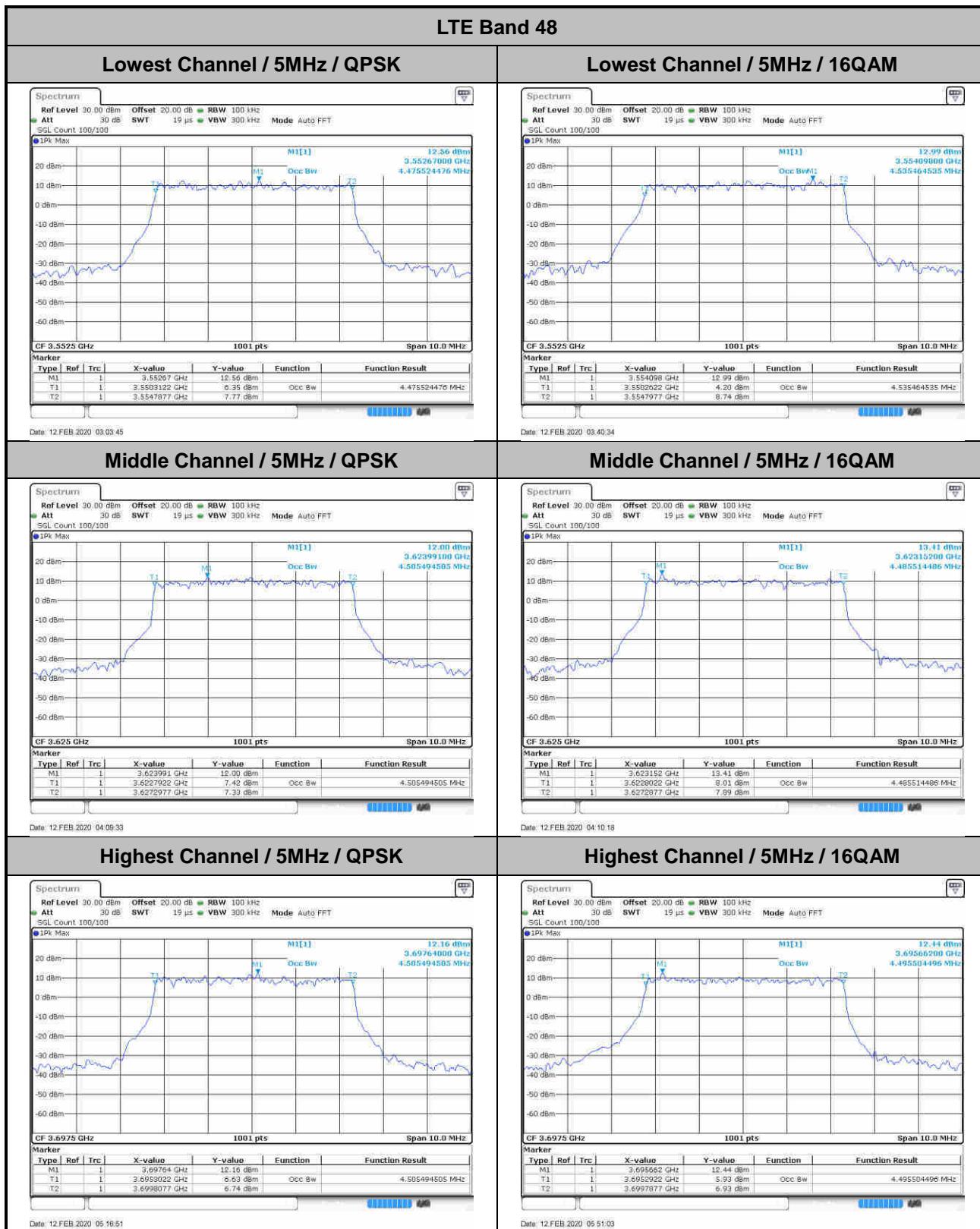


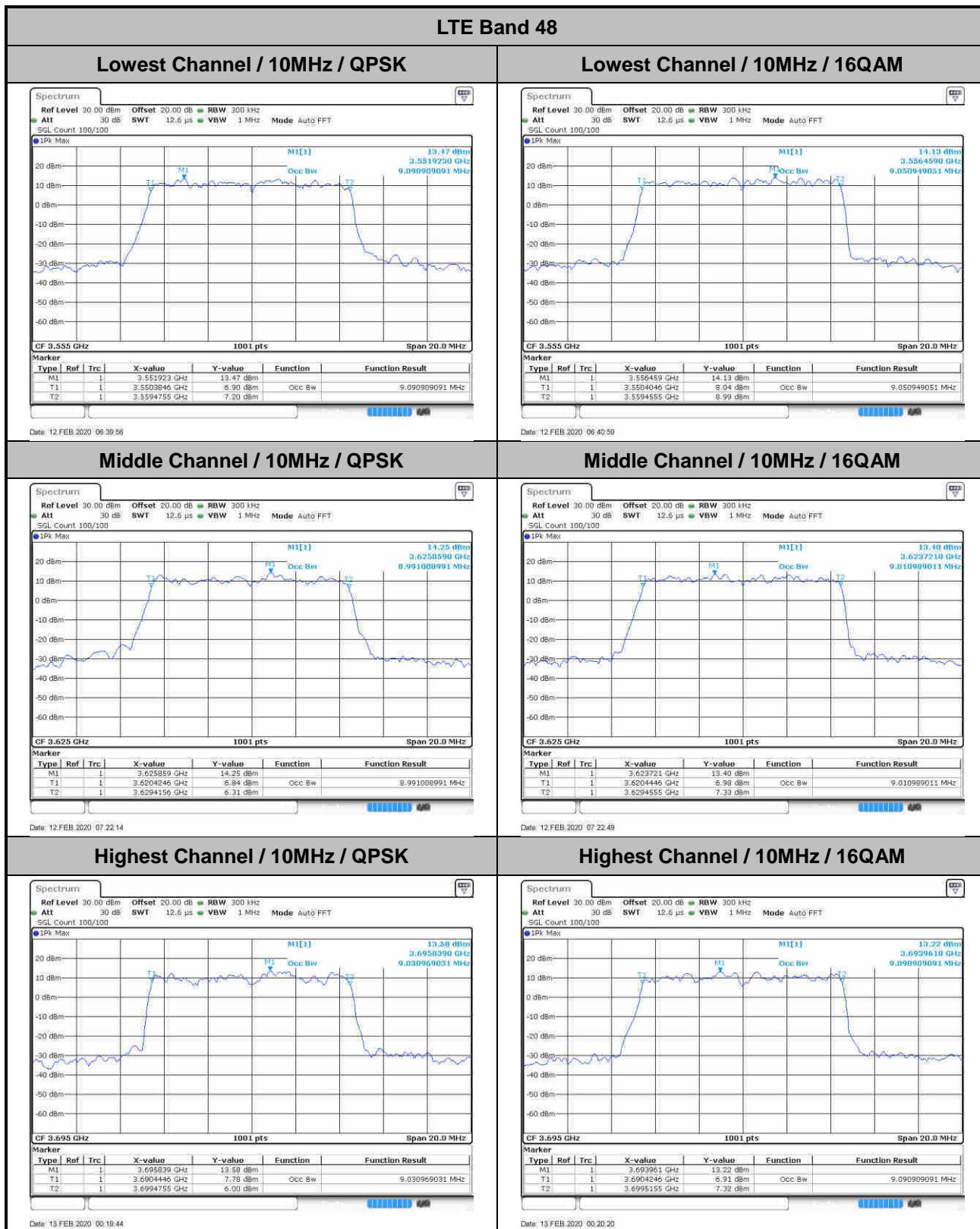


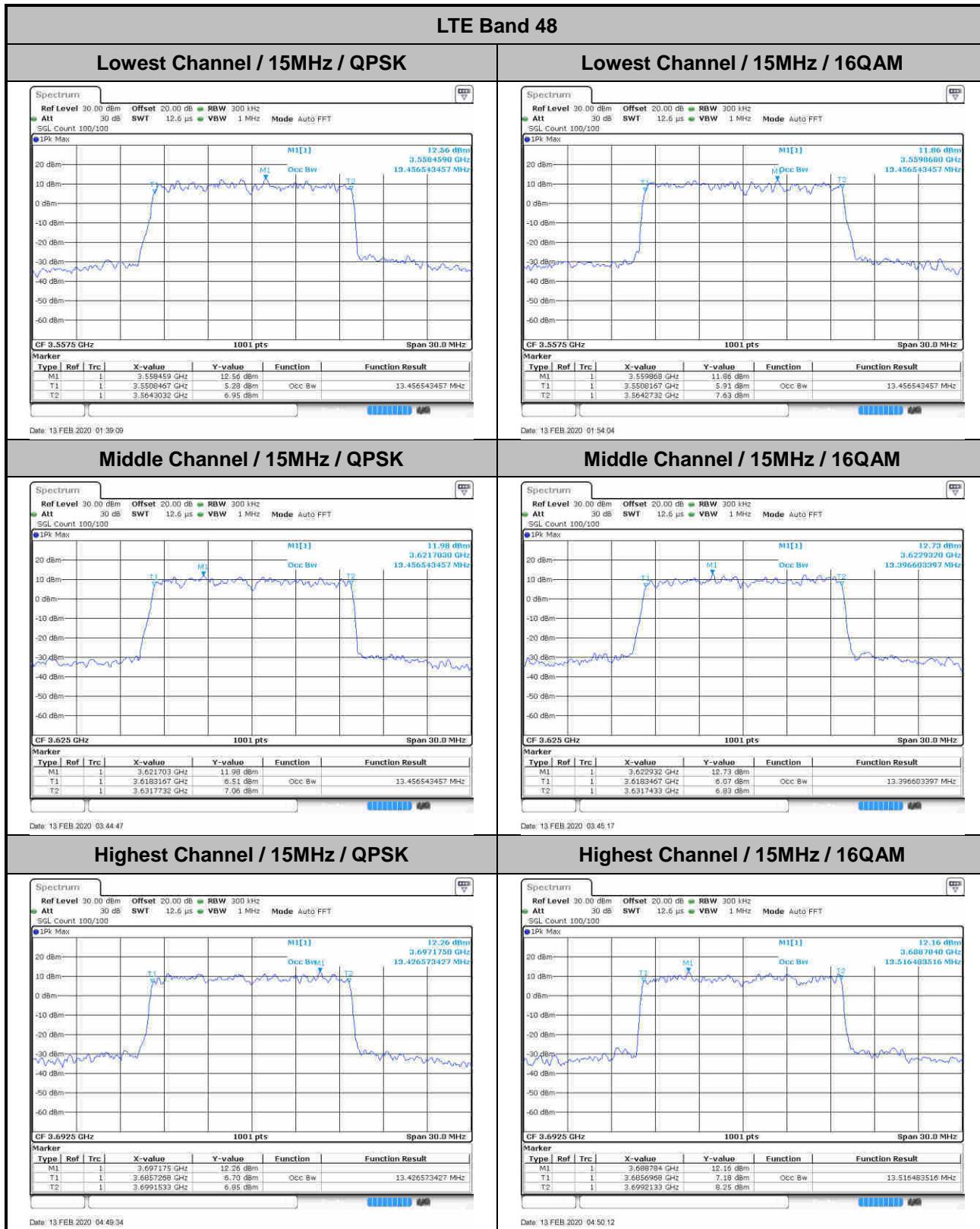


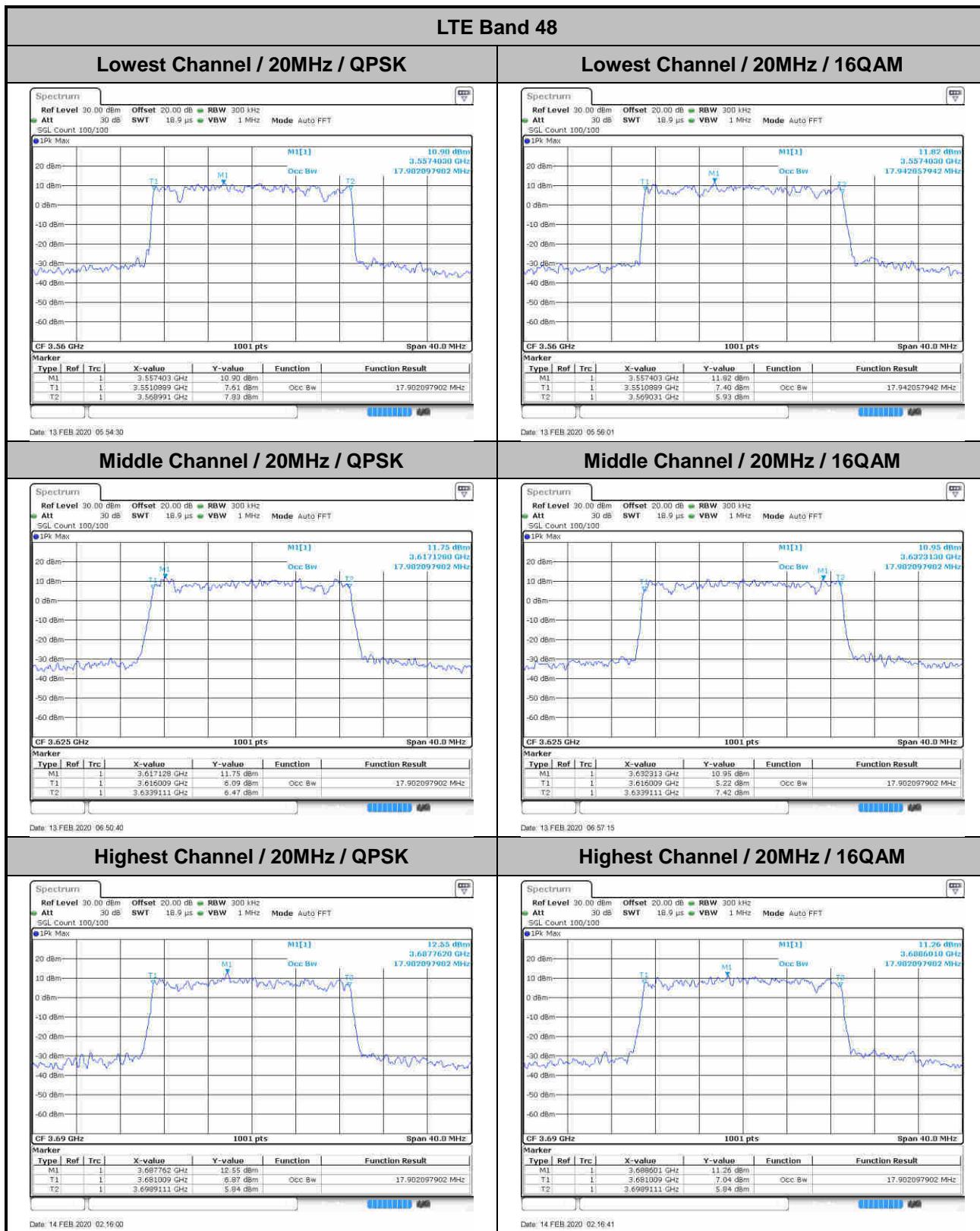
**Occupied Bandwidth**

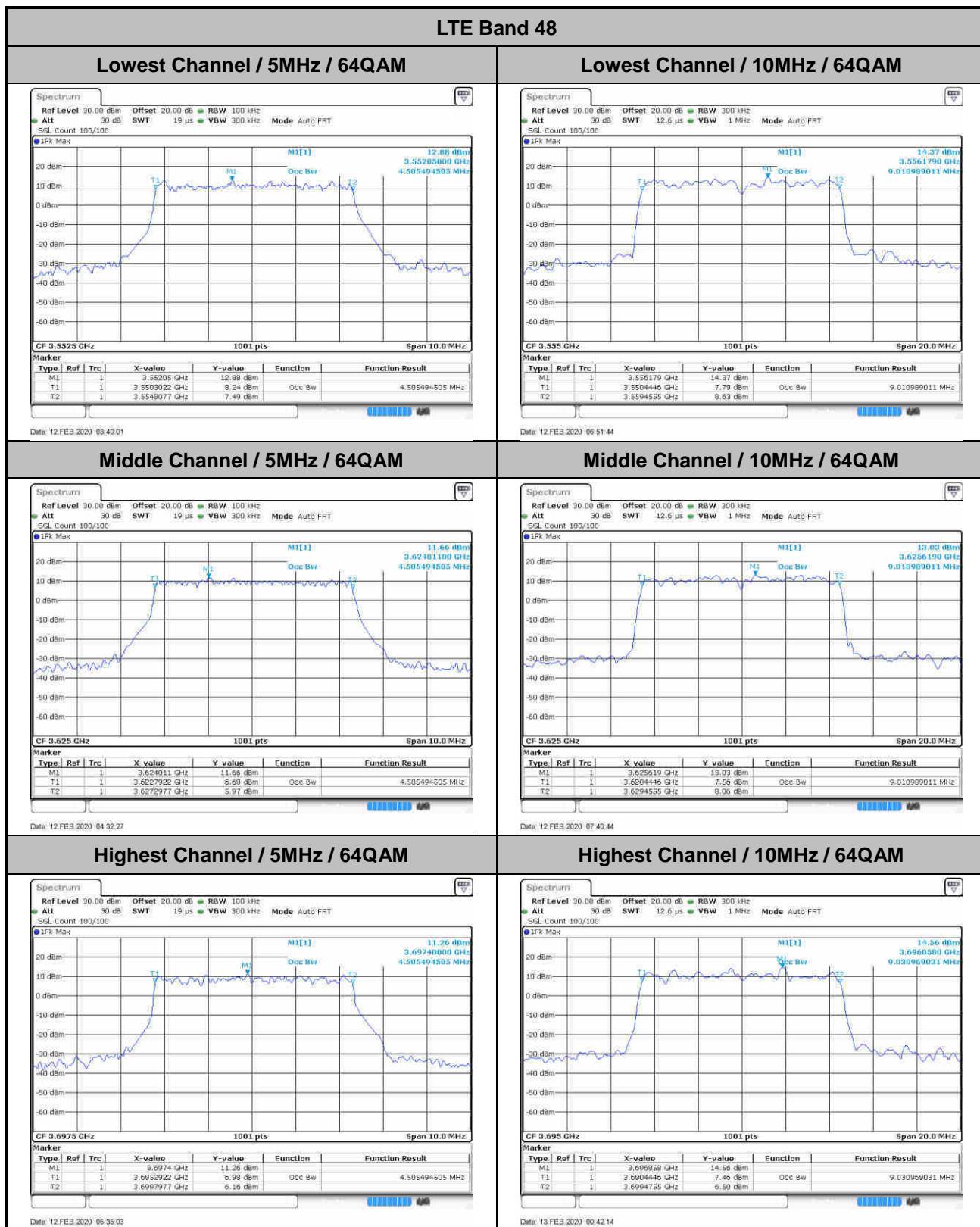
Mode	LTE Band 48 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.54	9.09	9.05	13.46	13.46	17.90	17.94
Middle CH	-	-	-	-	4.51	4.49	8.99	9.01	13.46	13.40	17.90	17.90
Highest CH	-	-	-	-	4.51	4.50	9.03	9.09	13.43	13.52	17.90	17.90
Mode	LTE Band 48 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.51	-	9.01	-	13.46	-	17.94	-
Middle CH	-	-	-	-	4.51	-	9.01	-	13.43	-	17.90	-
Highest CH	-	-	-	-	4.51	-	9.03	-	13.40	-	17.78	-

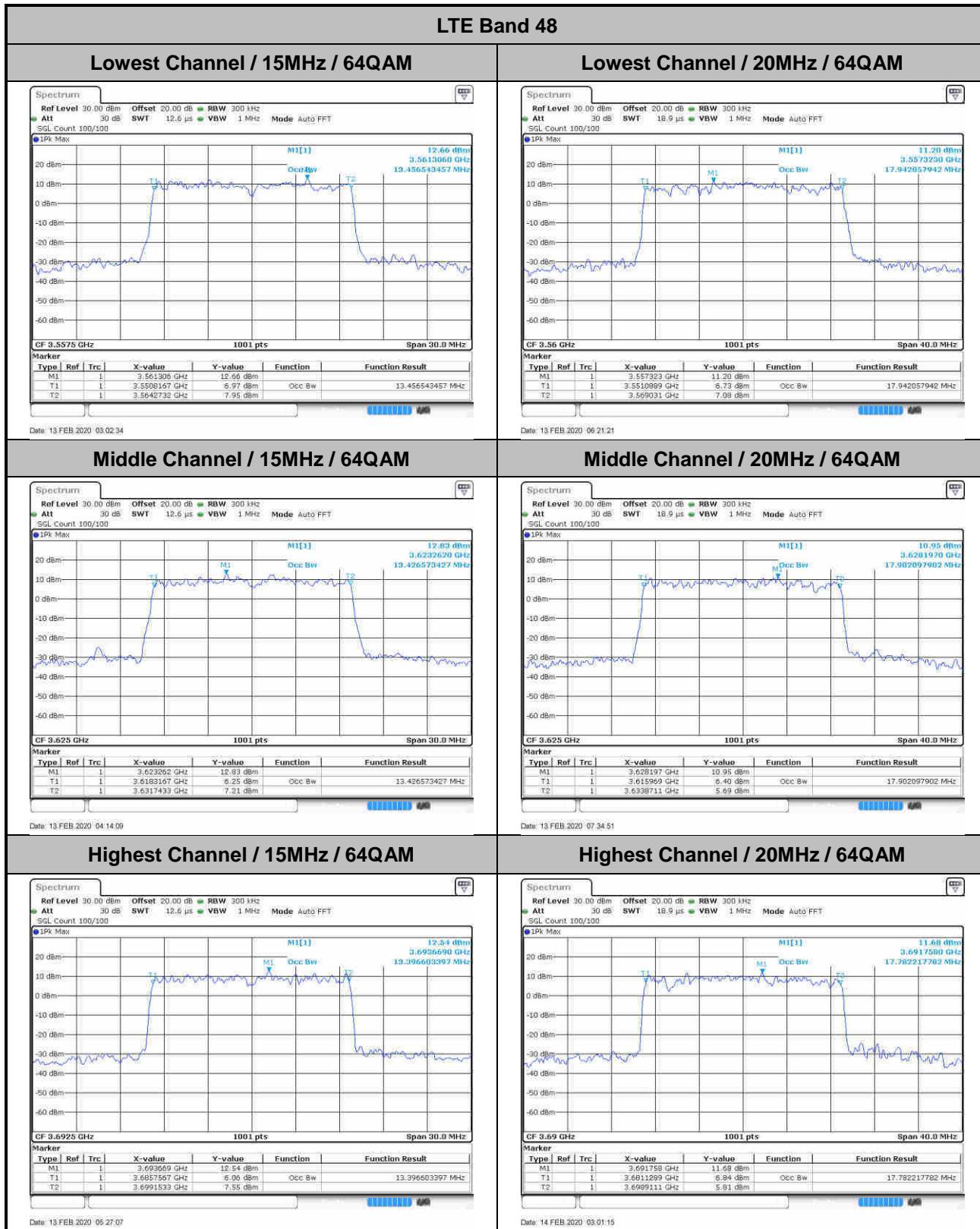














Conducted Band Edge

