



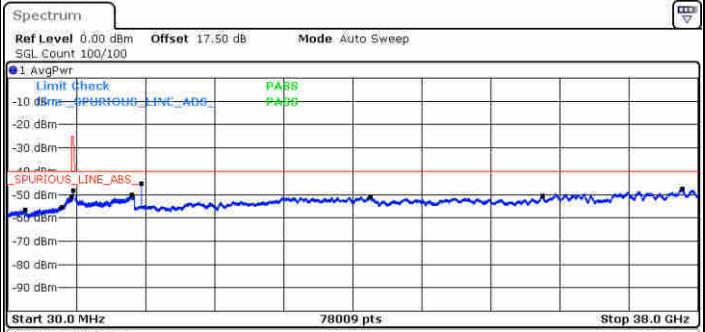
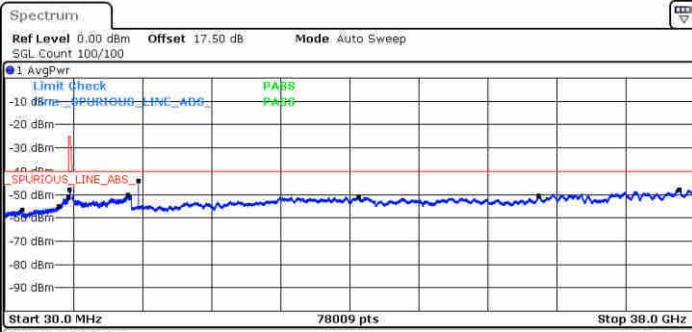


LTE Band 48 / 15MHz

16QAM

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	997.81859 MHz	-56.38 dBm	-16.38 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98775 GHz	-55.19 dBm	-15.19 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.51583 GHz	-51.35 dBm	-11.35 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.60896 GHz	-47.76 dBm	-22.76 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.79690 GHz	-50.24 dBm	-10.24 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.37172 GHz	-44.30 dBm	-4.30 dB
14.000 GHz	22.000 GHz	1.000 MHz	19.49141 GHz	-50.94 dBm	-10.94 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.41029 GHz	-50.67 dBm	-10.67 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.15280 GHz	-47.80 dBm	-7.80 dB

Spurious Emissions

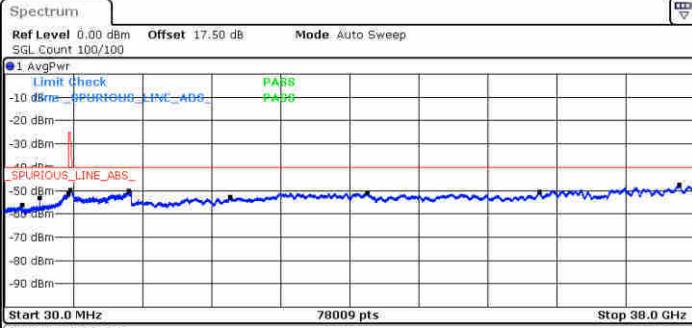
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	970.18741 MHz	-56.42 dBm	-16.42 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99525 GHz	-55.30 dBm	-15.30 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.52325 GHz	-50.88 dBm	-10.88 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.62236 GHz	-48.15 dBm	-23.15 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.84425 GHz	-50.25 dBm	-10.25 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.39822 GHz	-45.40 dBm	-5.40 dB
14.000 GHz	22.000 GHz	1.000 MHz	19.95588 GHz	-50.96 dBm	-10.96 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.42429 GHz	-50.71 dBm	-10.71 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.14130 GHz	-47.72 dBm	-7.72 dB

Date: 20.NOV.2019 15:41:51

Date: 20.NOV.2019 16:00:09

Highest Channel / FullIRB

N/A



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	989.09295 MHz	-56.25 dBm	-16.25 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.95381 GHz	-53.10 dBm	-13.10 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.51556 GHz	-51.24 dBm	-11.24 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.61500 GHz	-49.89 dBm	-24.89 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.84379 GHz	-50.18 dBm	-10.18 dB
7.000 GHz	14.000 GHz	1.000 MHz	12.42286 GHz	-52.87 dBm	-12.87 dB
14.000 GHz	22.000 GHz	1.000 MHz	19.95488 GHz	-50.97 dBm	-10.97 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.45128 GHz	-50.58 dBm	-10.58 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.15180 GHz	-47.56 dBm	-7.56 dB

Date: 20.NOV.2019 15:51:00



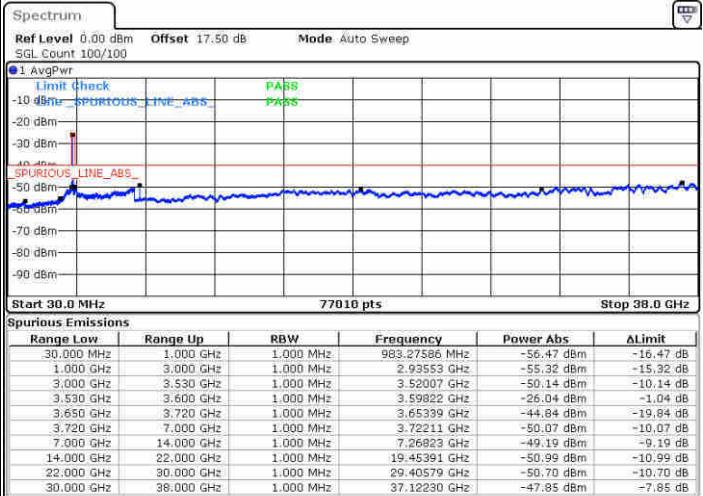
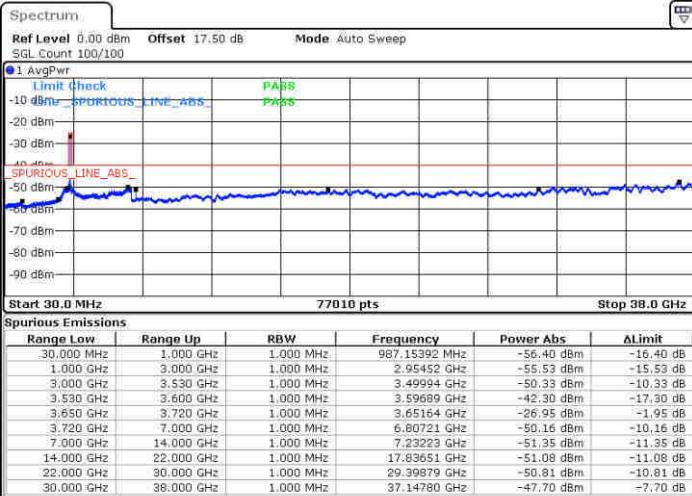


LTE Band 48 / 20MHz

16QAM

Middle Channel / 1RB0

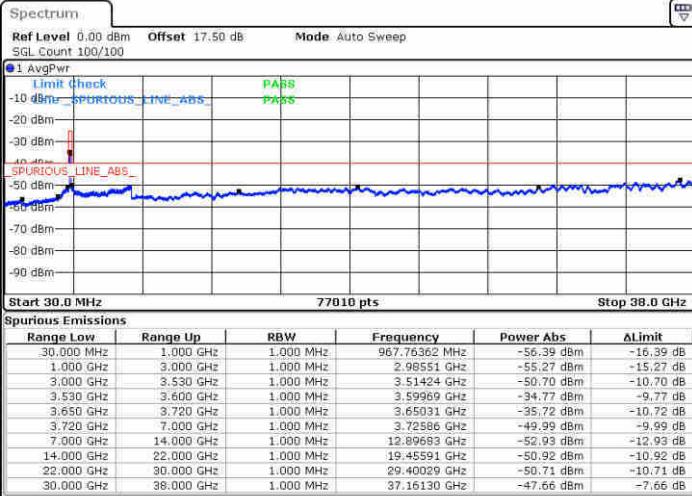
Middle Channel / 1RBmax



Date: 30 DEC 2019 11:00:56

Date: 30 DEC 2019 11:10:06

Middle Channel / FullRB



Date: 20 NOV 2019 16:06:16

N/A













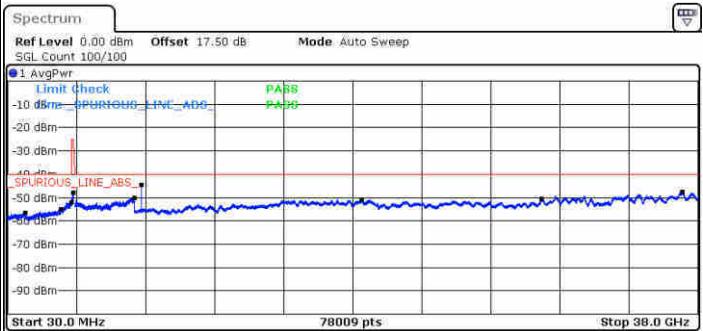
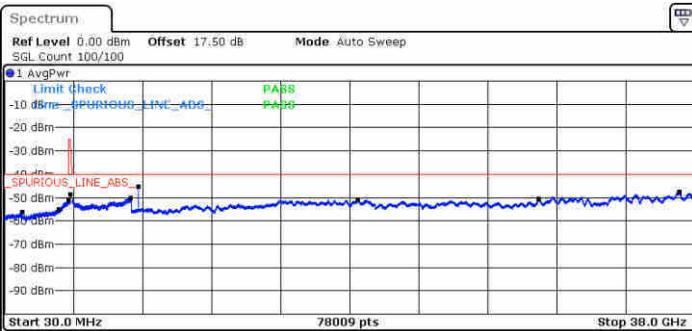


LTE Band 48 / 10MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



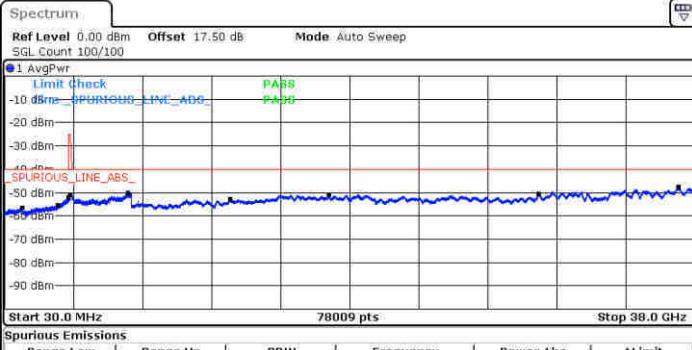
Spurious Emissions					
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	987.63969 MHz	-56.28 dBm	-16.28 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99325 GHz	-55.10 dBm	-15.10 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.52484 GHz	-51.08 dBm	-11.08 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.63324 GHz	-48.72 dBm	-23.72 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.96449 GHz	-50.22 dBm	-10.22 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.38122 GHz	-45.40 dBm	-5.40 dB
14.000 GHz	22.000 GHz	1.000 MHz	19.46991 GHz	-50.87 dBm	-10.87 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.40729 GHz	-50.69 dBm	-10.69 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.15830 GHz	-47.74 dBm	-7.74 dB

Spurious Emissions					
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	992.97101 MHz	-56.51 dBm	-16.51 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.98025 GHz	-55.10 dBm	-15.10 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.51556 GHz	-52.18 dBm	-12.18 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.62258 GHz	-47.97 dBm	-22.97 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.98445 GHz	-50.27 dBm	-10.27 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.39972 GHz	-44.67 dBm	-4.67 dB
14.000 GHz	22.000 GHz	1.000 MHz	19.47941 GHz	-51.06 dBm	-11.06 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.41629 GHz	-50.62 dBm	-10.62 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.13280 GHz	-47.73 dBm	-7.73 dB

Date: 20.NOV.2019 15:13:21

Date: 20.NOV.2019 15:31:39

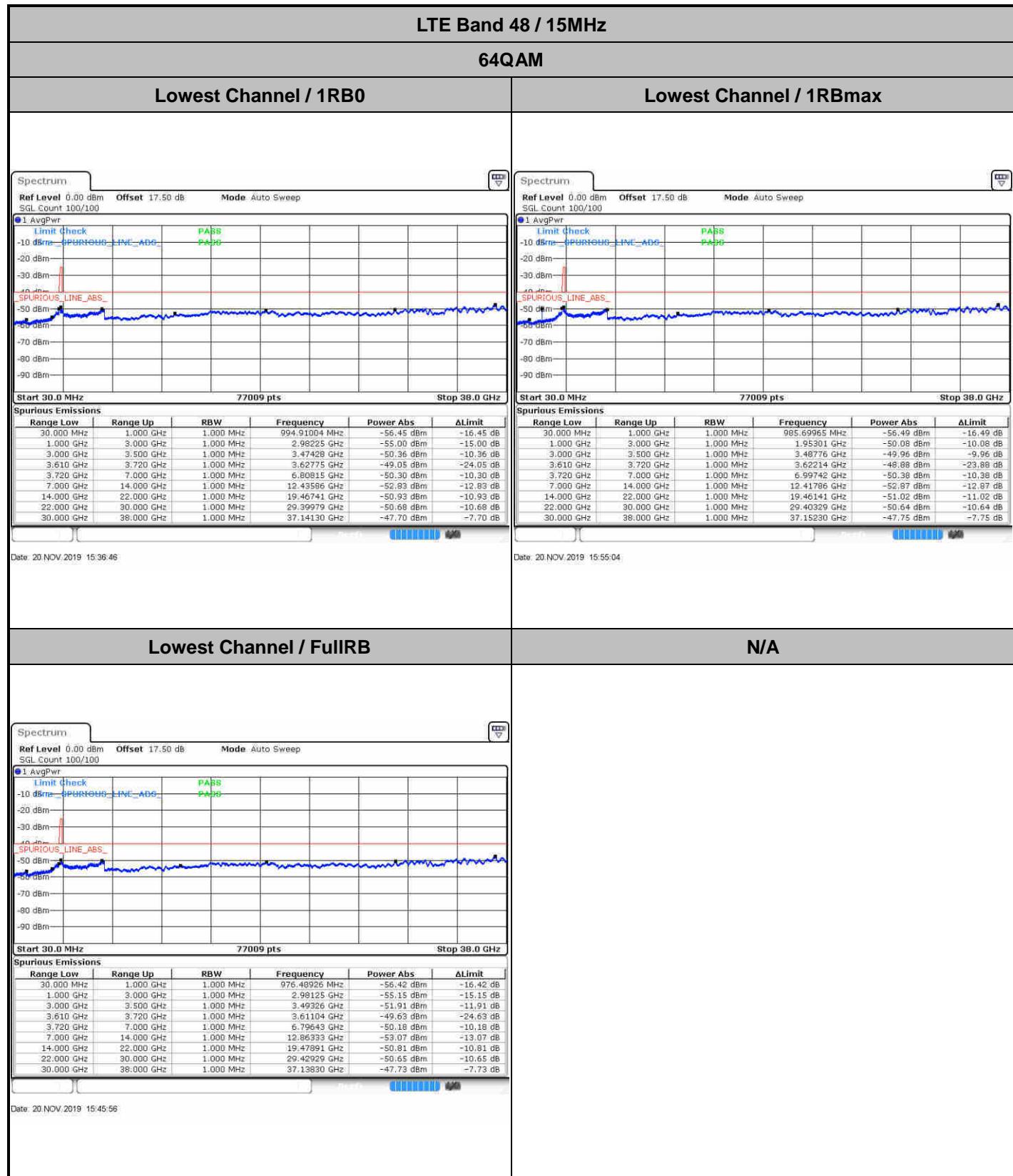
Highest Channel / FullIRB



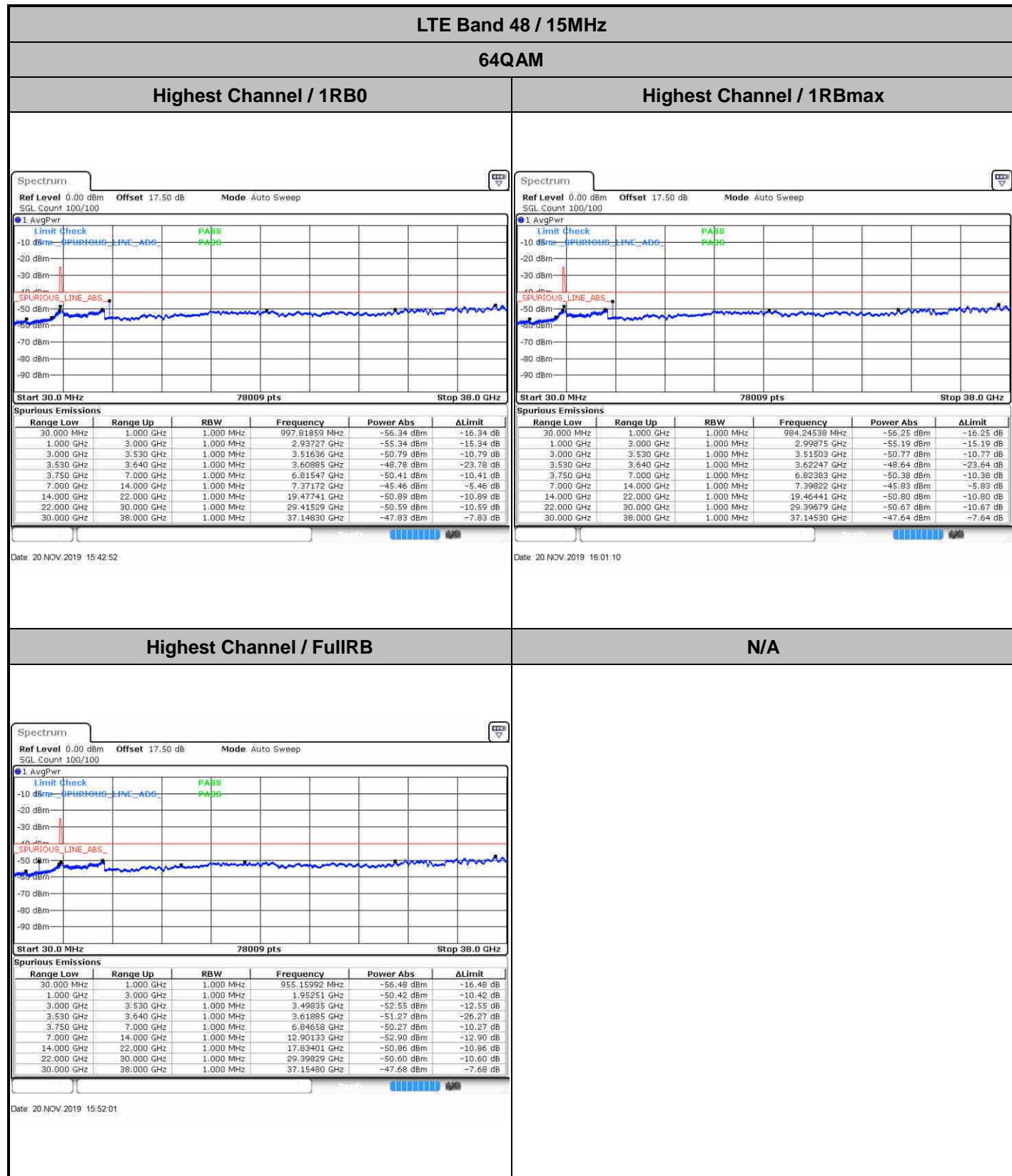
Spurious Emissions					
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	987.63969 MHz	-56.67 dBm	-16.67 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96576 GHz	-55.44 dBm	-15.44 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.52457 GHz	-52.23 dBm	-12.23 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.62071 GHz	-51.00 dBm	-26.00 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.80433 GHz	-50.29 dBm	-10.29 dB
7.000 GHz	14.000 GHz	1.000 MHz	12.40986 GHz	-52.89 dBm	-12.89 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.85051 GHz	-50.91 dBm	-10.91 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.40729 GHz	-50.44 dBm	-10.44 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.10481 GHz	-47.62 dBm	-7.62 dB

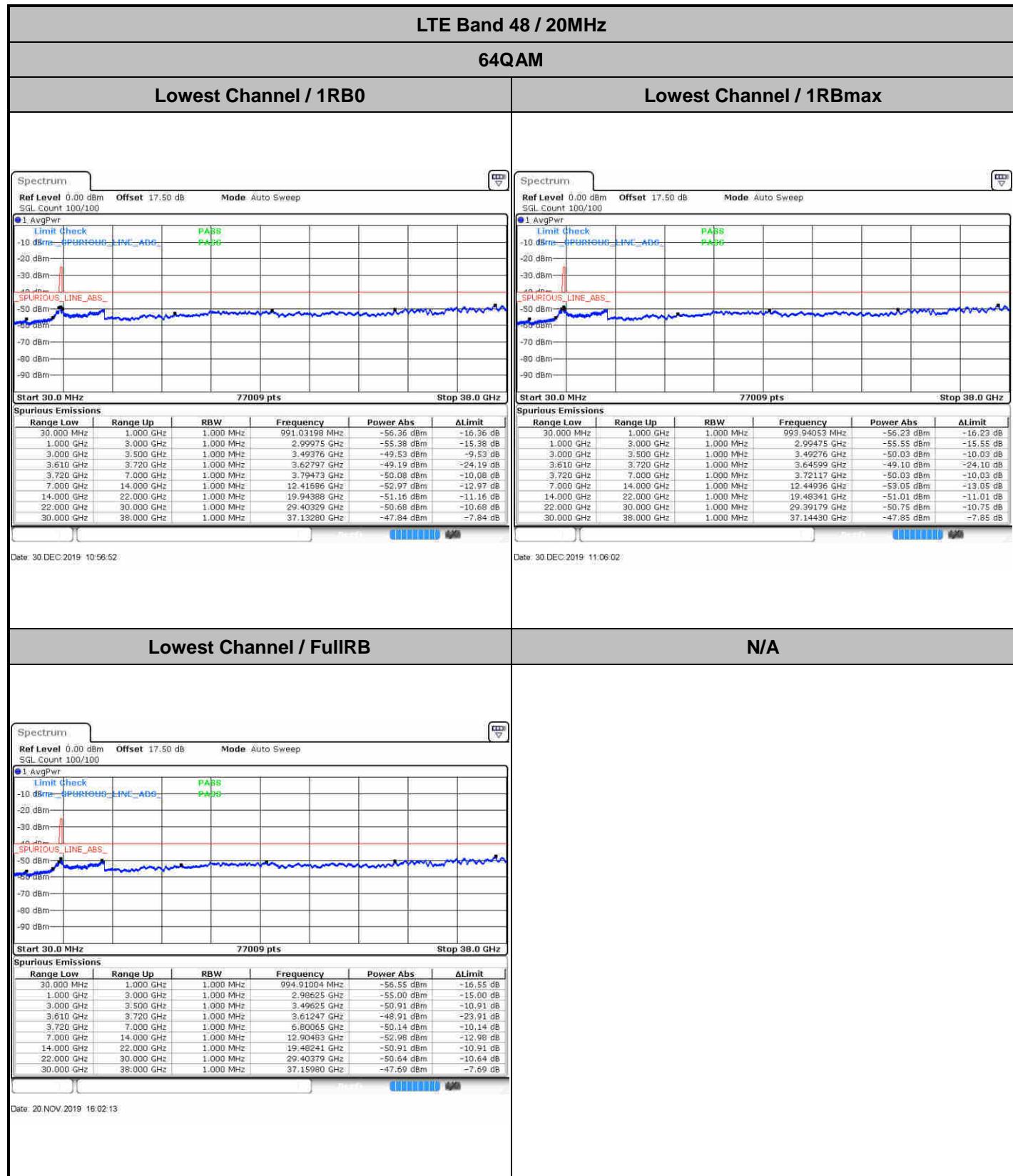
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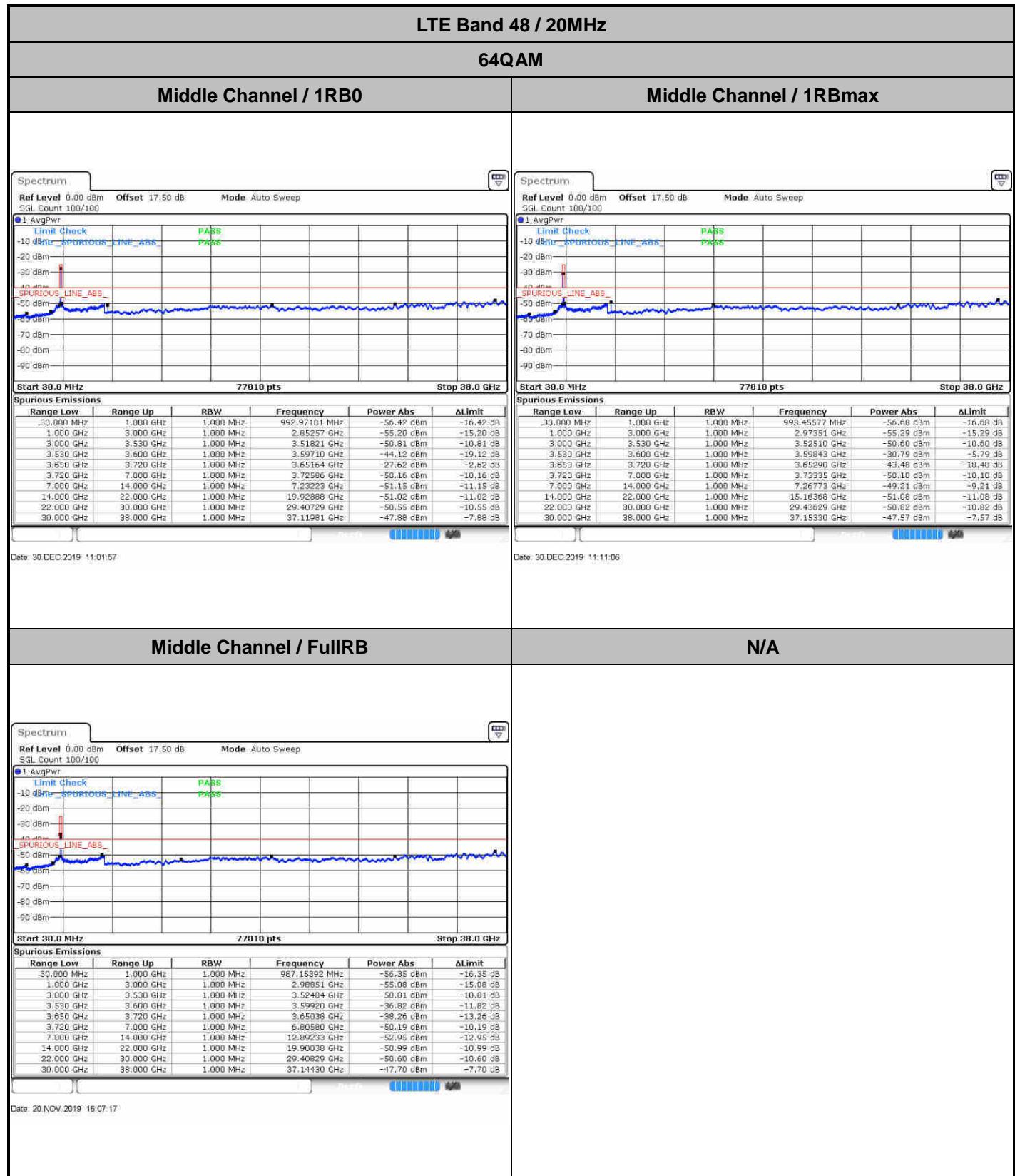
Date: 20.NOV.2019 15:31:39















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	0.0010	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0026	
-10	Normal Voltage	0.0025	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0023	

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)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	12.57	11.27	9.85	8.84	8.40	6.89	7.39	5.88
Middle CH	-	-	-	-	11.76	10.50	9.73	9.33	7.41	6.50	6.99	5.75
Highest CH	-	-	-	-	12.14	11.65	9.58	9.77	8.58	7.77	7.68	6.01

Mode	LTE Band 48 : Conducted Power Density (dBm/MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	10.35	-	8.14	-	6.41	-	4.96	-
Middle CH	-	-	-	-	10.33	-	7.21	-	5.79	-	4.00	-
Highest CH	-	-	-	-	11.22	-	8.71	-	6.70	-	5.63	-

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	27.57	26.27	24.85	23.84	23.40	21.89	22.39	20.88
Middle CH	-	-	-	-	26.76	25.50	24.73	24.33	22.41	21.50	21.99	20.75
Highest CH	-	-	-	-	27.14	26.65	24.58	24.77	23.58	22.77	22.68	21.01

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	25.35	-	23.14	-	21.41	-	19.96	-
Middle CH	-	-	-	-	25.33	-	22.21	-	20.79	-	19.00	-
Highest CH	-	-	-	-	26.22	-	23.71	-	21.70	-	20.63	-

Antenna Gain	15 dBi											
	37dBm / MHz											
Result	Pass											



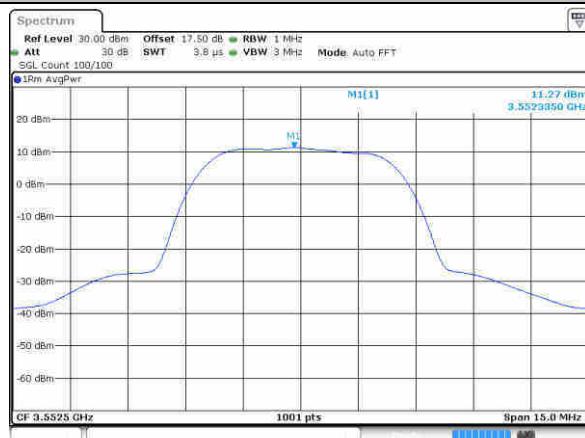
LTE Band 48 / 5MHz

Lowest Channel / 5MHz / Full / QPSK



Date: 17 JAN 2020 05:30:22

Lowest Channel / 5MHz / Full / 16QAM



Date: 17 JAN 2020 05:30:41

Middle Channel / 5MHz / Full / QPSK



Date: 17 JAN 2020 05:31:53

Middle Channel / 5MHz / Full / 16QAM



Date: 17 JAN 2020 05:31:35

Highest Channel / 5MHz / Full / QPSK

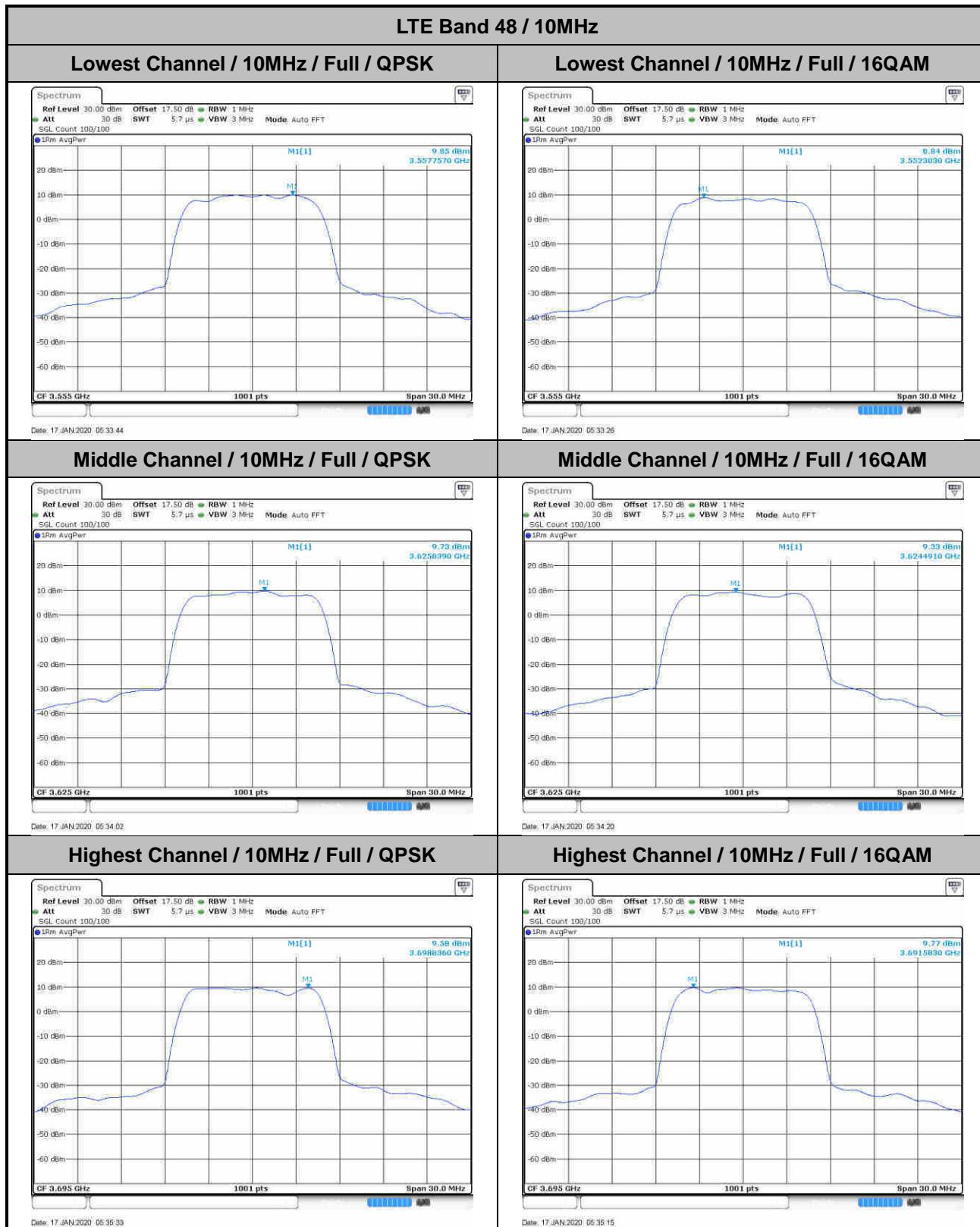


Date: 17 JAN 2020 05:32:11

Highest Channel / 5MHz / Full / 16QAM



Date: 17 JAN 2020 05:32:30





LTE Band 48 / 15MHz

Lowest Channel / 15MHz / Full / QPSK



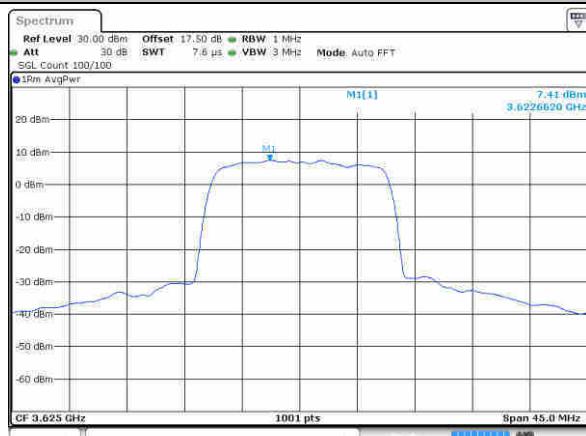
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Lowest Channel / 15MHz / Full / 16QAM



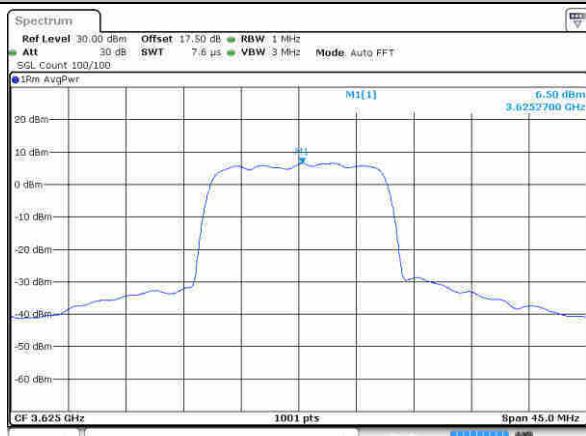
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Middle Channel / 15MHz / Full / QPSK



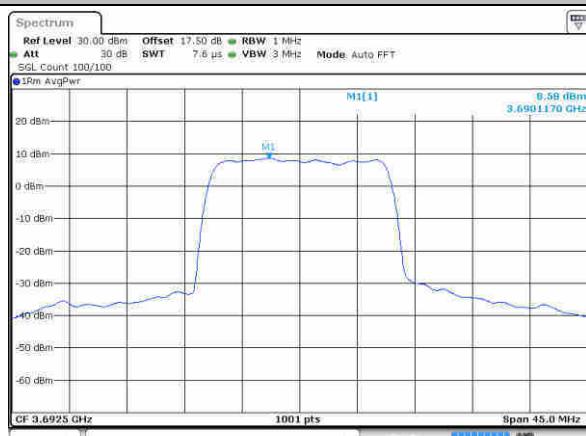
Date: 17 JAN 2020 05:37:23

Middle Channel / 15MHz / Full / 16QAM



Date: 17 JAN 2020 05:37:05

Highest Channel / 15MHz / Full / QPSK



Date: 17 JAN 2020 05:37:41

Highest Channel / 15MHz / Full / 16QAM

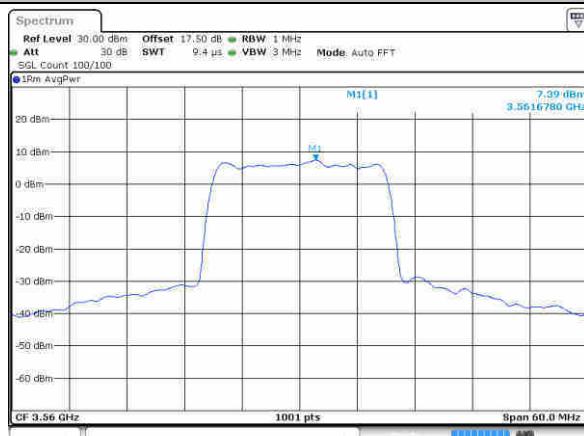


Date: 17 JAN 2020 05:38:00



LTE Band 48 / 20MHz

Lowest Channel / 20MHz / Full / QPSK



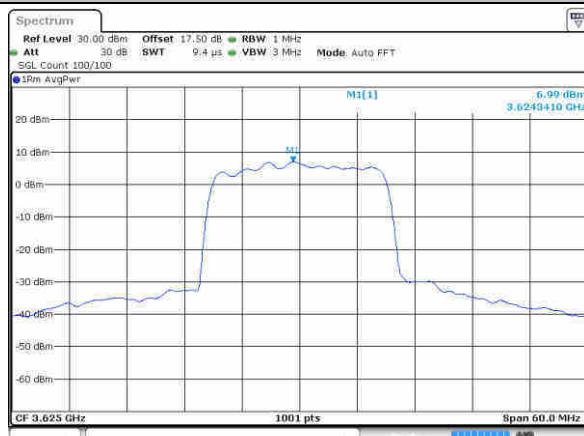
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Lowest Channel / 20MHz / Full / 16QAM



Date: 17 JAN 2020 05:38:55

Middle Channel / 20MHz / Full / QPSK



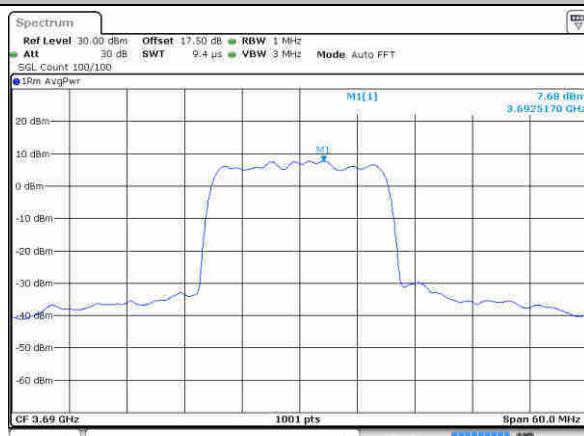
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Middle Channel / 20MHz / Full / 16QAM



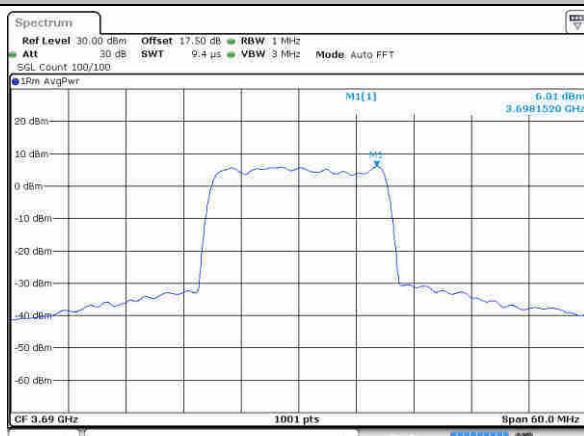
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Highest Channel / 20MHz / Full / QPSK

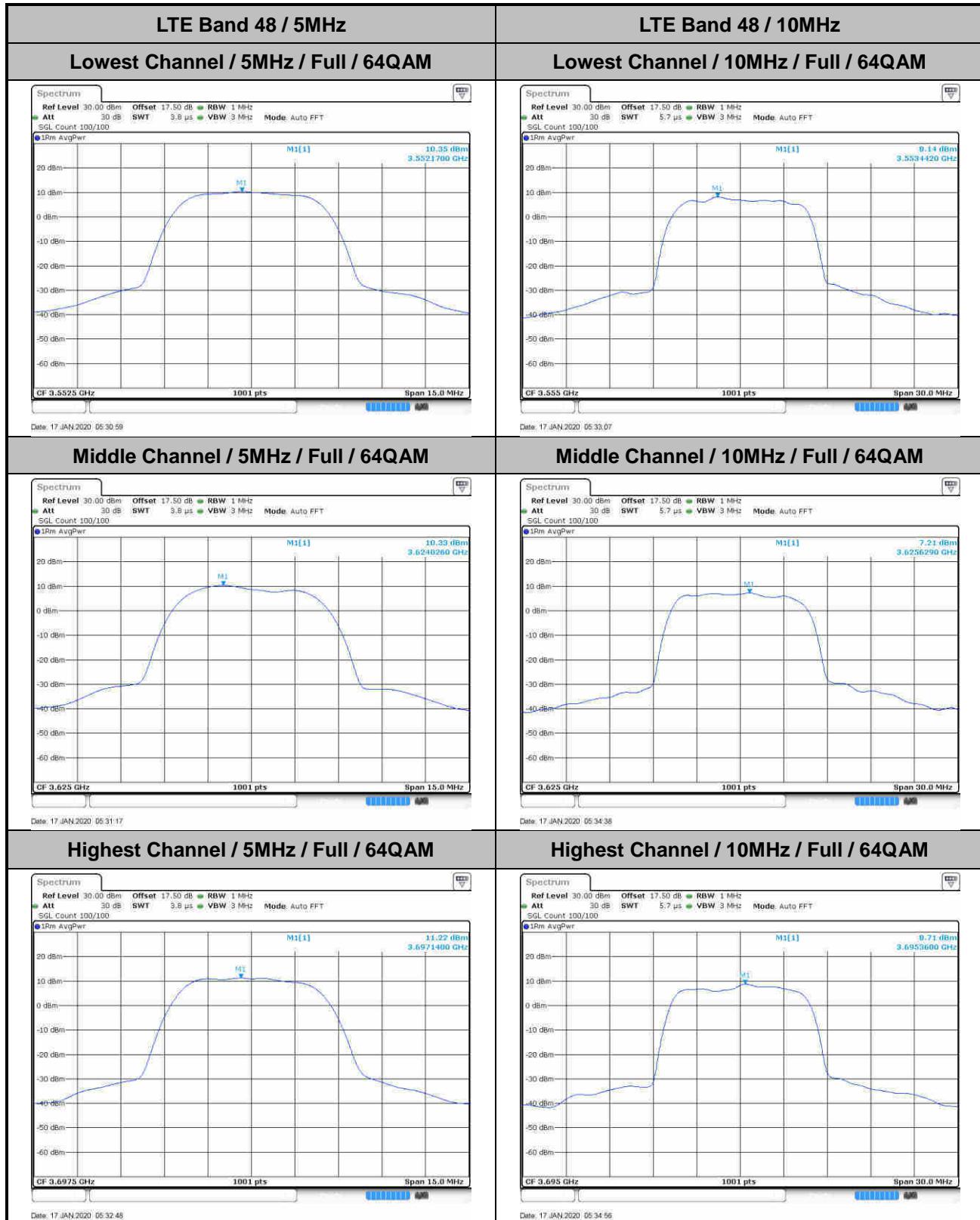


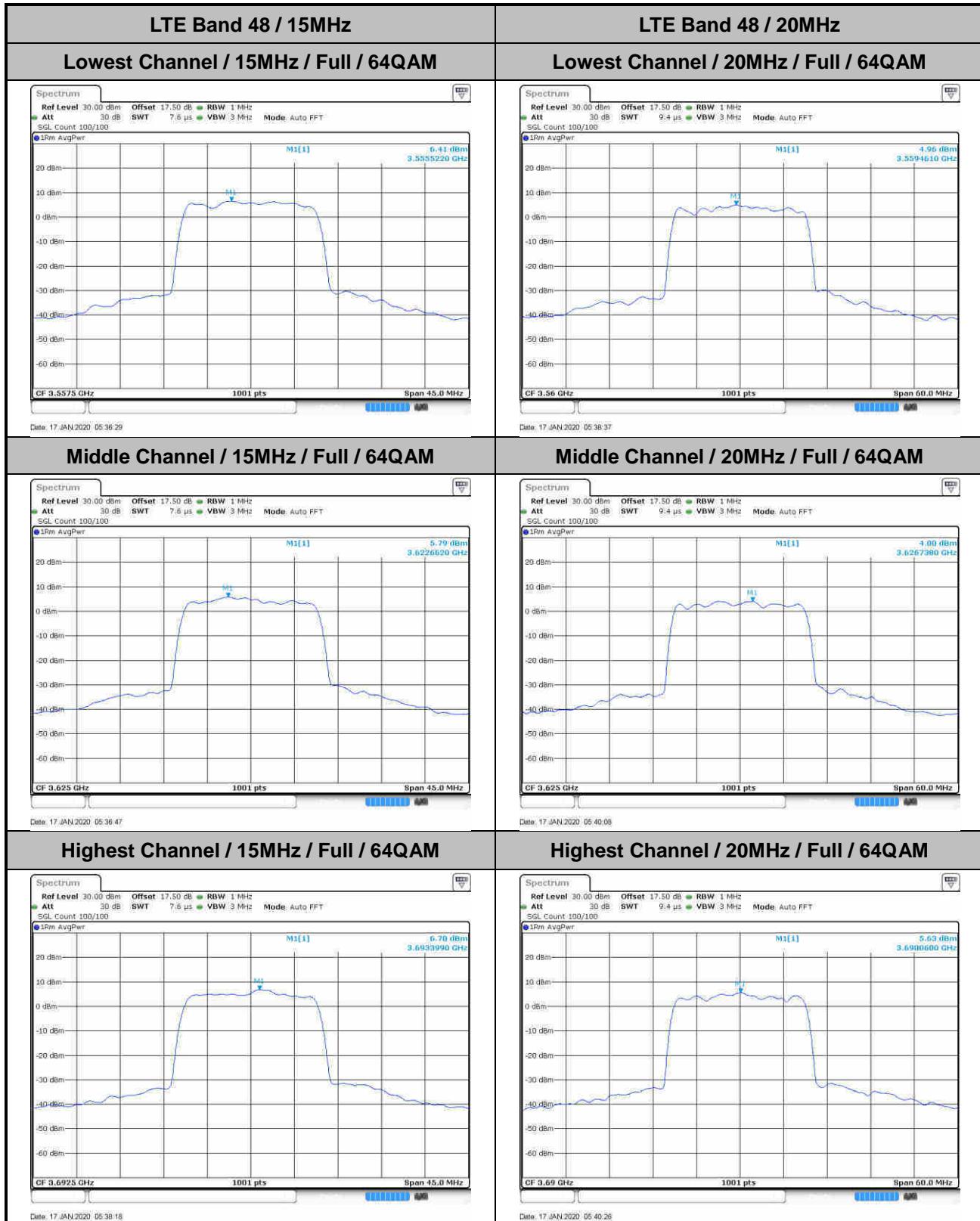
Date: 17 JAN 2020 05:41:03

Highest Channel / 20MHz / Full / 16QAM



Date: 17 JAN 2020 05:40:44



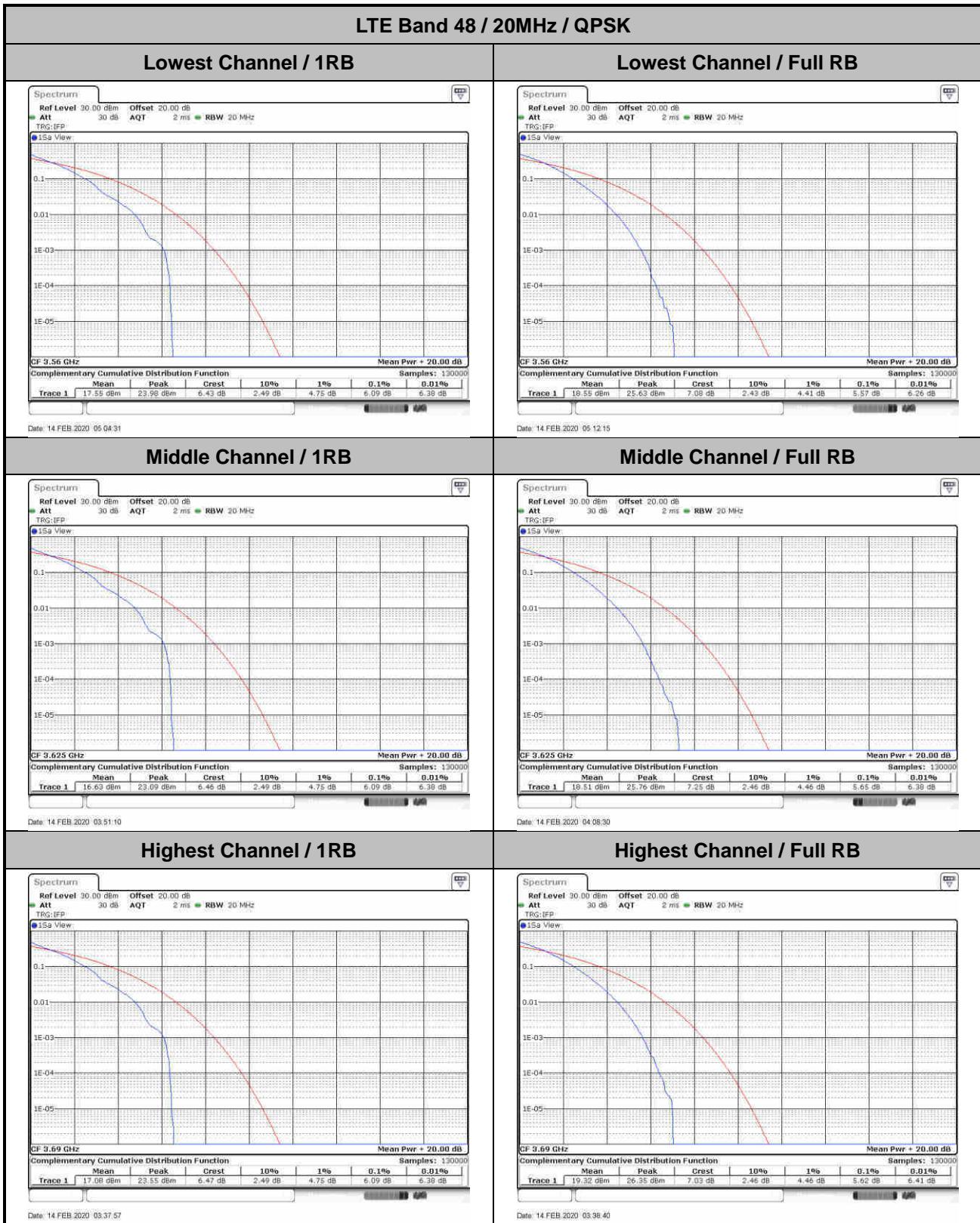


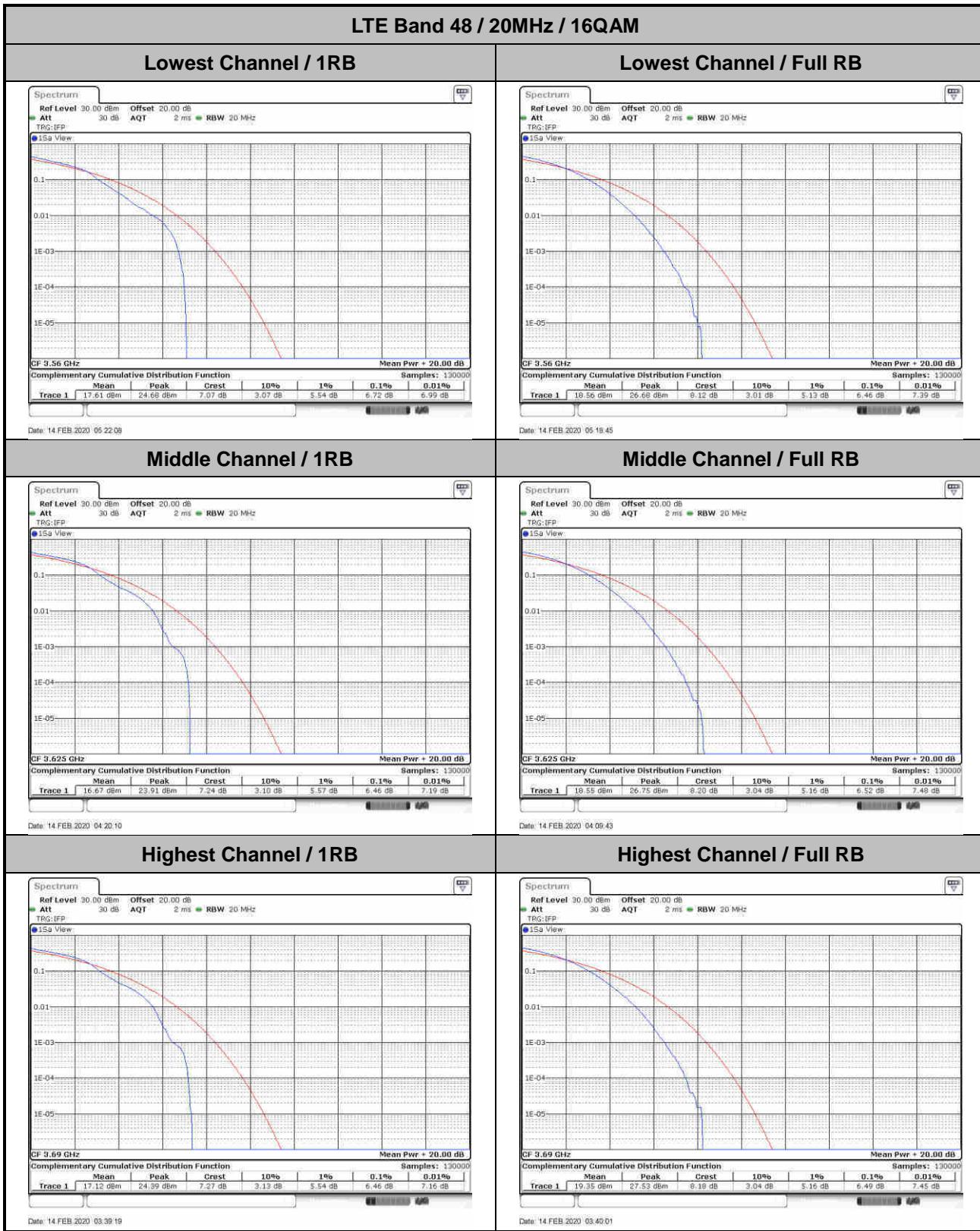


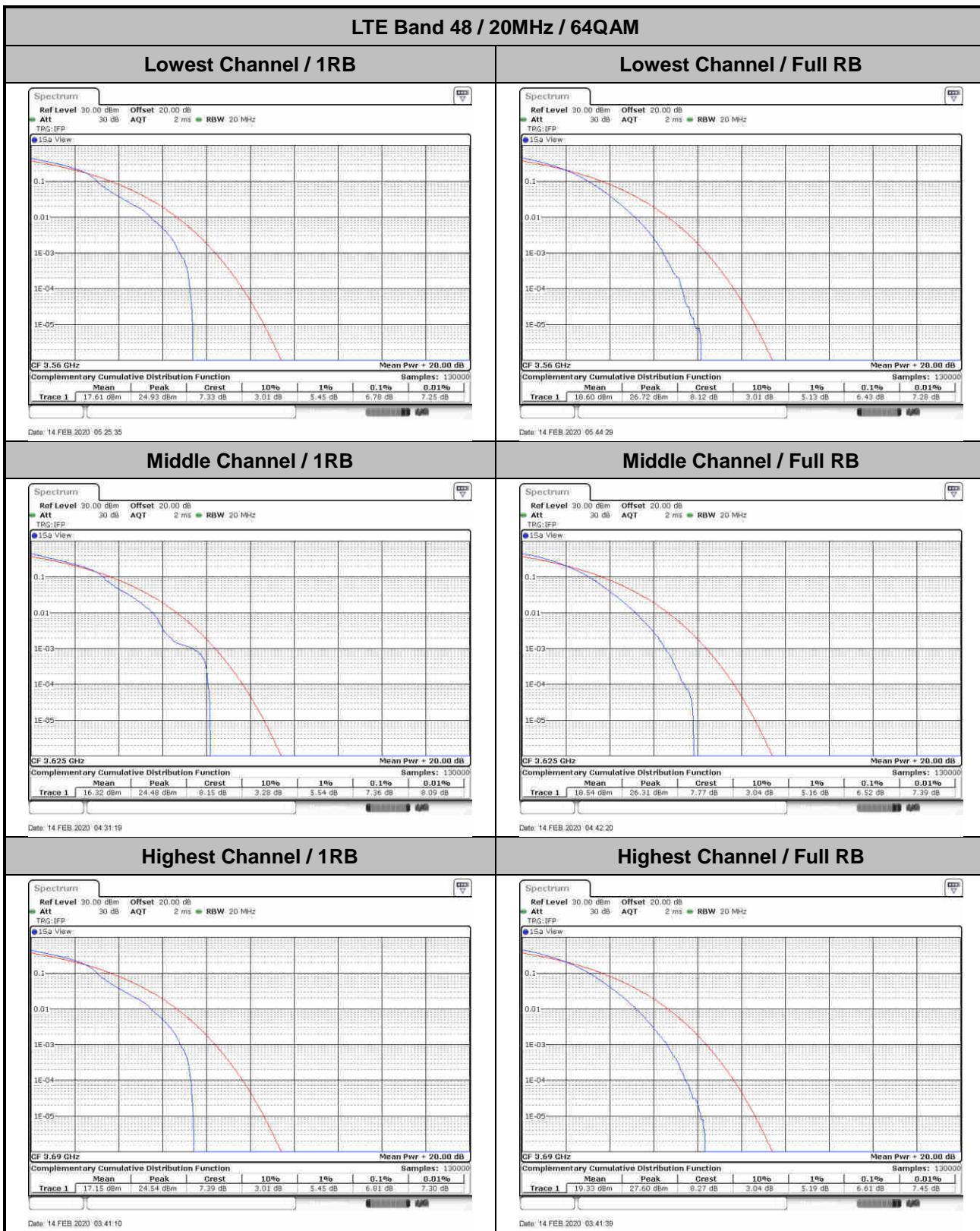
MIMO <Ant. 0>

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	6.09	5.57	6.72	6.46	PASS
Middle CH	6.09	5.65	6.46	6.52	
Highest CH	6.09	5.62	6.46	6.49	
Mode	LTE Band 48 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.78	6.43	-	-	PASS
Middle CH	7.36	6.52	-	-	
Highest CH	6.81	6.61	-	-	







**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	-	-	-	-	5.39	5.15	9.89	10.23	14.69	14.15	18.66	18.70
Middle CH	-	-	-	-	4.96	5.24	9.89	9.81	14.39	14.21	18.94	19.06
Highest CH	-	-	-	-	5.01	5.13	9.83	9.93	14.30	14.18	18.94	19.26
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	5.20	-	9.69	-	14.15	-	18.70	-
Middle CH	-	-	-	-	5.19	-	9.77	-	14.48	-	18.66	-
Highest CH	-	-	-	-	5.24	-	9.69	-	14.45	-	18.90	-

