

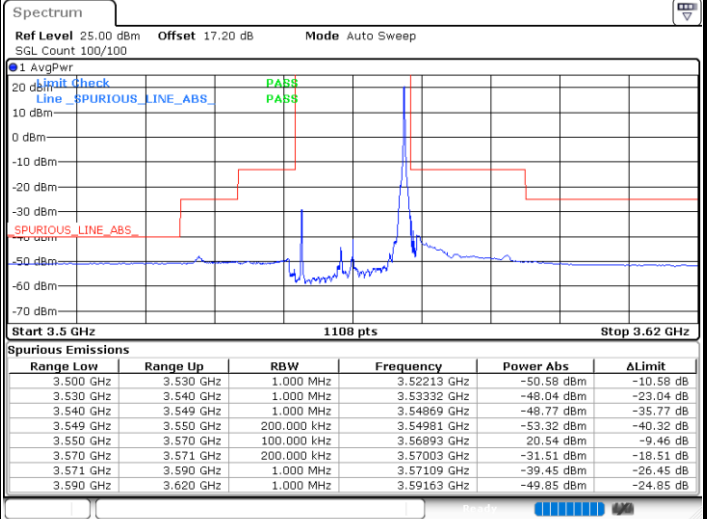
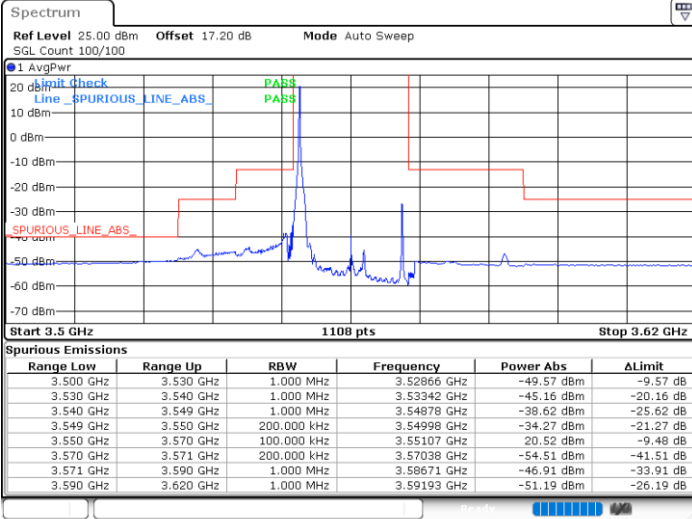


LTE Band 48 / 20MHz

16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

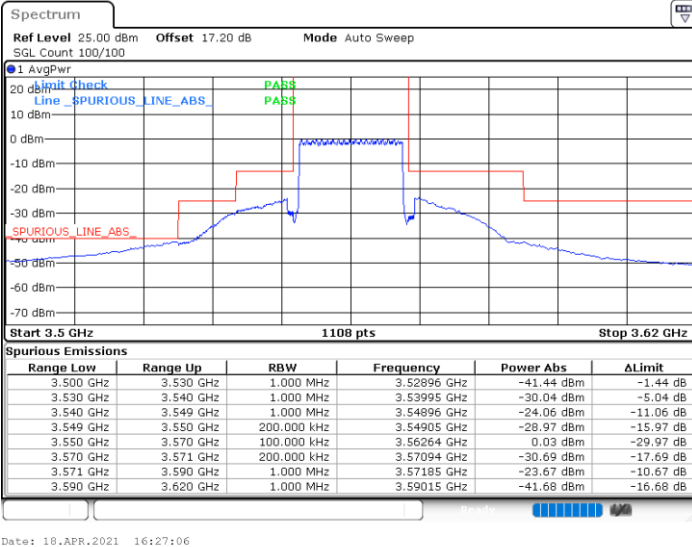


Date: 18.APR.2021 16:31:44

Date: 18.APR.2021 16:36:22

Lowest Channel / FullIRB

N/A



Date: 18.APR.2021 16:27:06

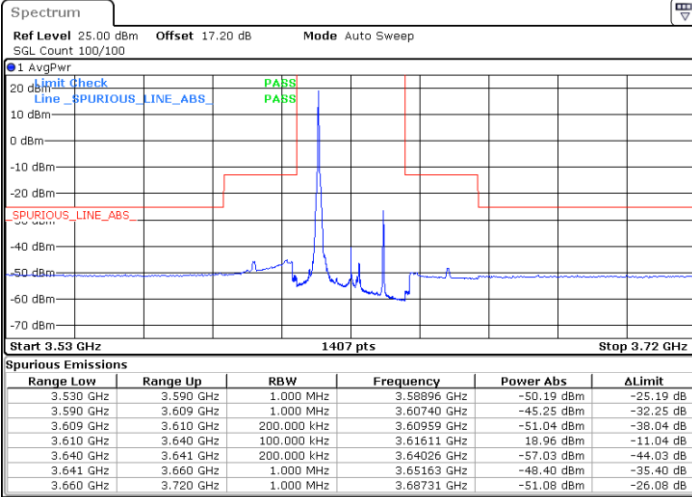


LTE Band 48 / 20MHz

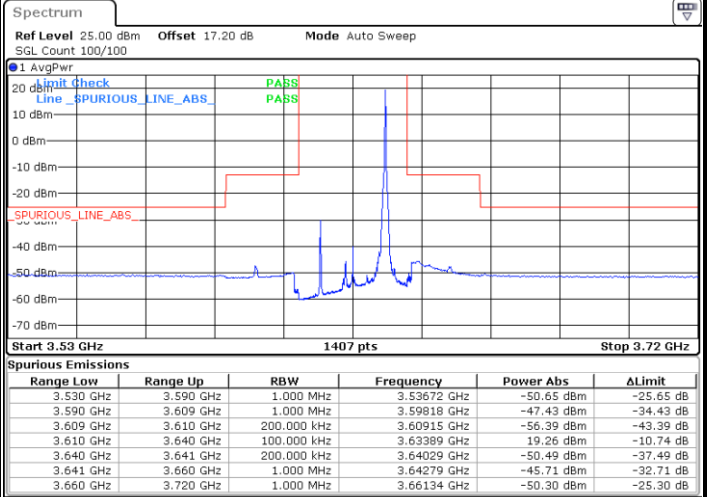
16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



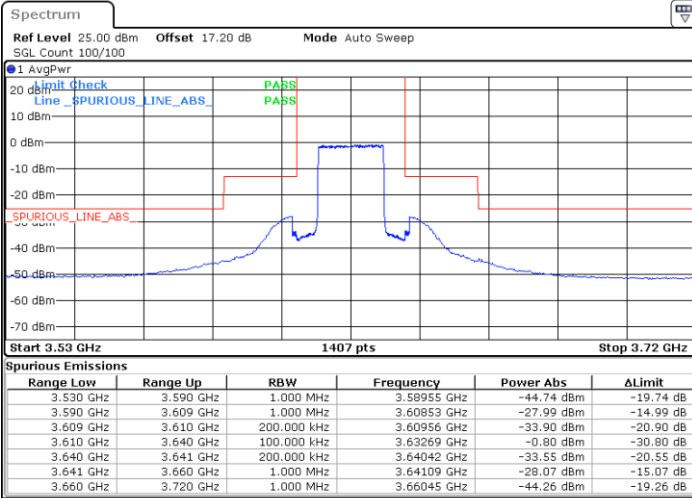
Date: 18.APR.2021 16:33:16



Date: 18.APR.2021 16:37:54

Middle Channel / FullIRB

N/A



Date: 18.APR.2021 16:28:38

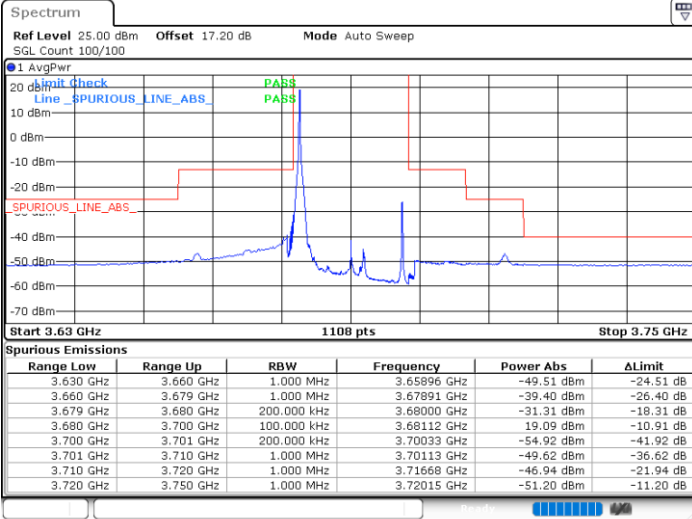


LTE Band 48 / 20MHz

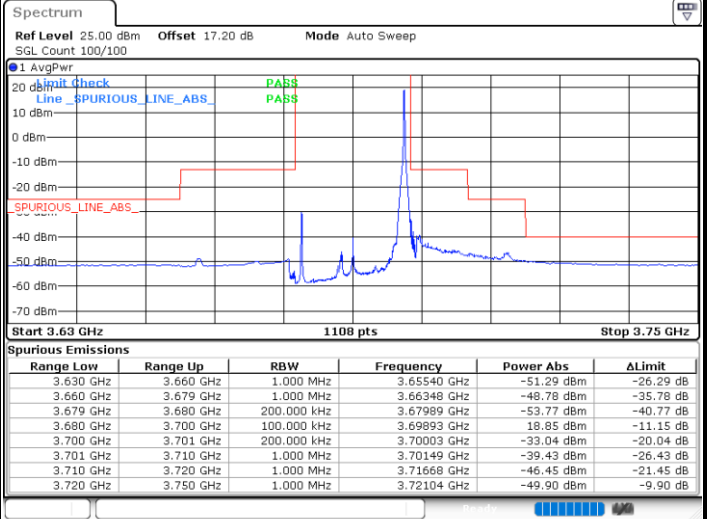
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



Date: 18.APR.2021 16:34:48



Date: 18.APR.2021 16:39:26

Highest Channel / FullIRB

N/A



Date: 18.APR.2021 16:30:10

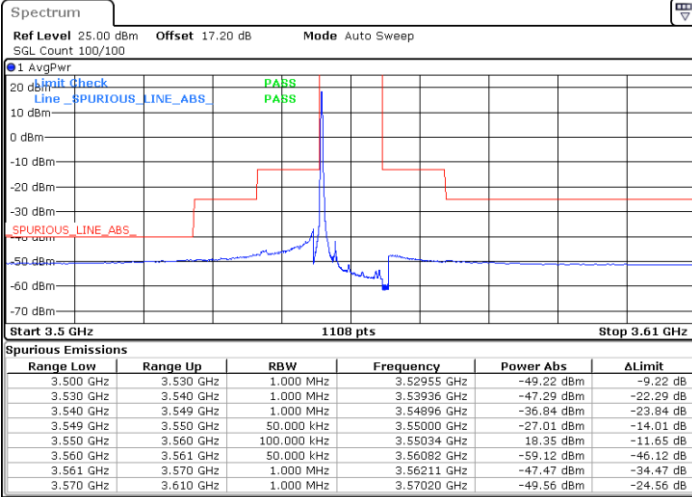


LTE Band 48 / 5MHz

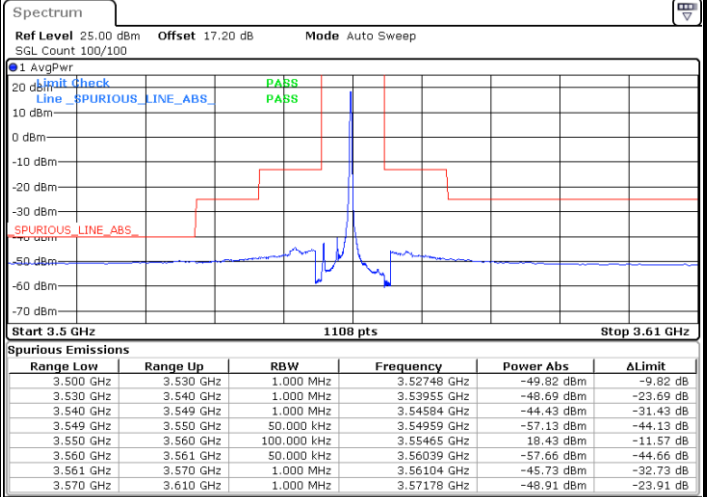
64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



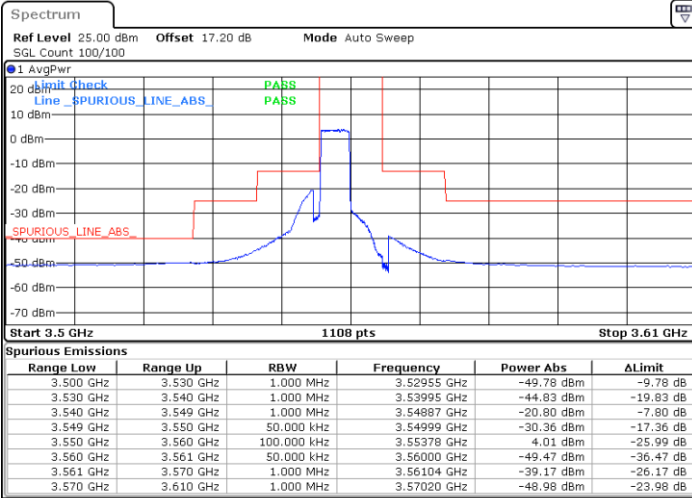
Date: 18.APR.2021 16:42:45



Date: 18.APR.2021 16:51:59

Lowest Channel / FullIRB

N/A



Date: 18.APR.2021 16:47:22

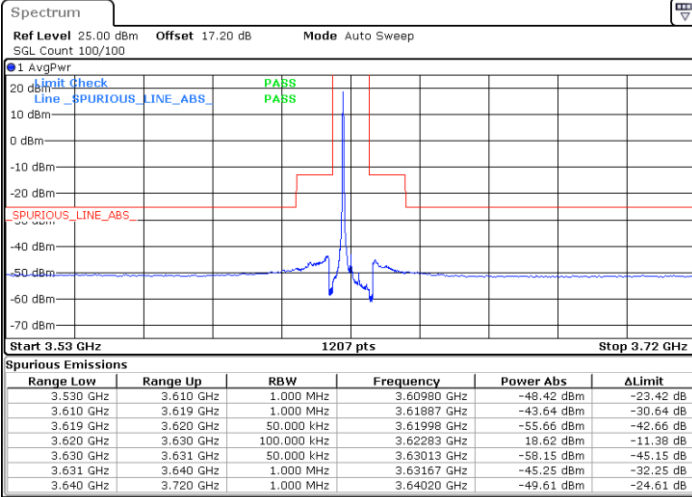


LTE Band 48 / 5MHz

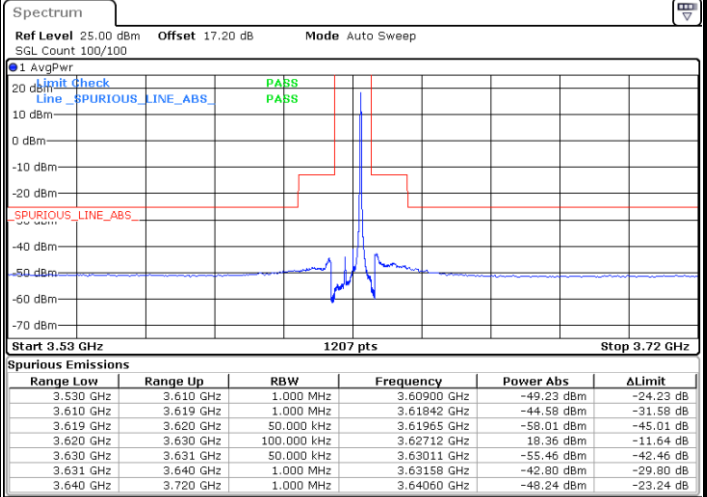
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



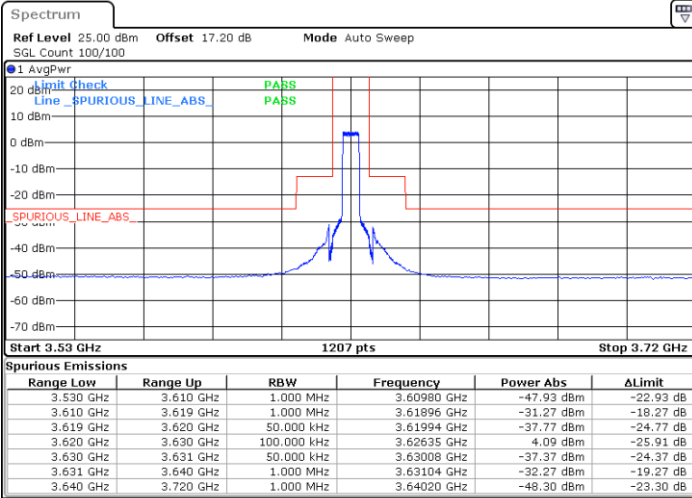
Date: 18.APR.2021 16:43:16



Date: 18.APR.2021 16:52:30

Middle Channel / FullIRB

N/A



Date: 18.APR.2021 16:47:53

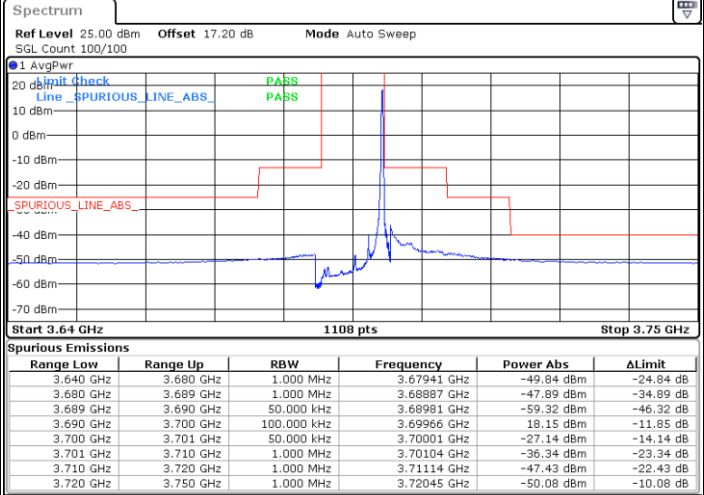
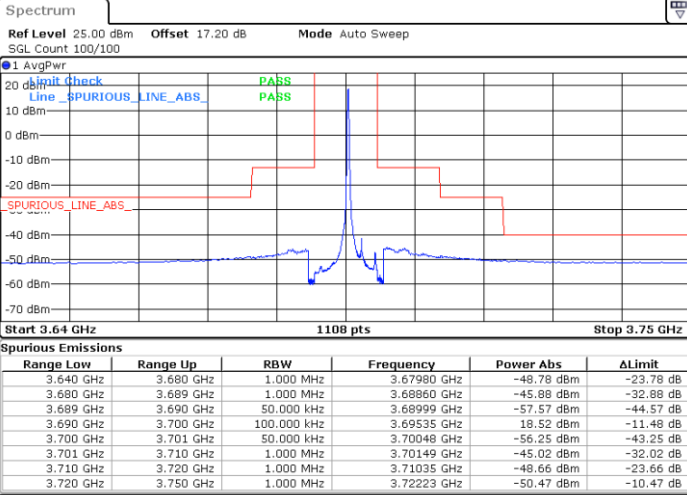


LTE Band 48 / 5MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

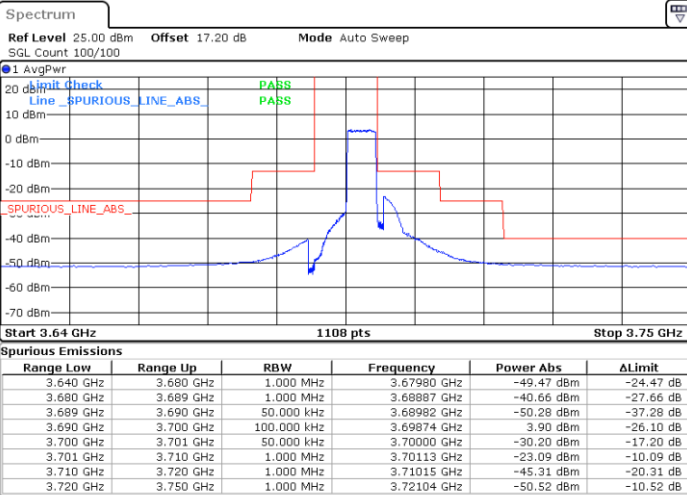


Date: 18.APR.2021 16:45:49

Date: 18.APR.2021 16:55:03

Highest Channel / FullIRB

N/A



Date: 18.APR.2021 16:50:26

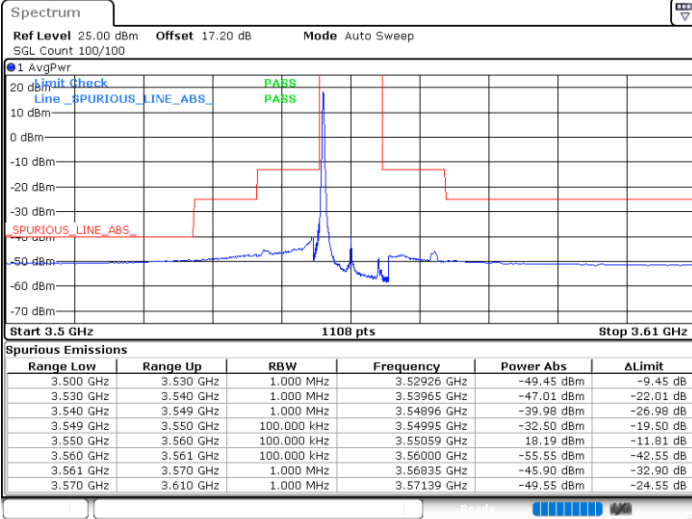


LTE Band 48 / 10MHz

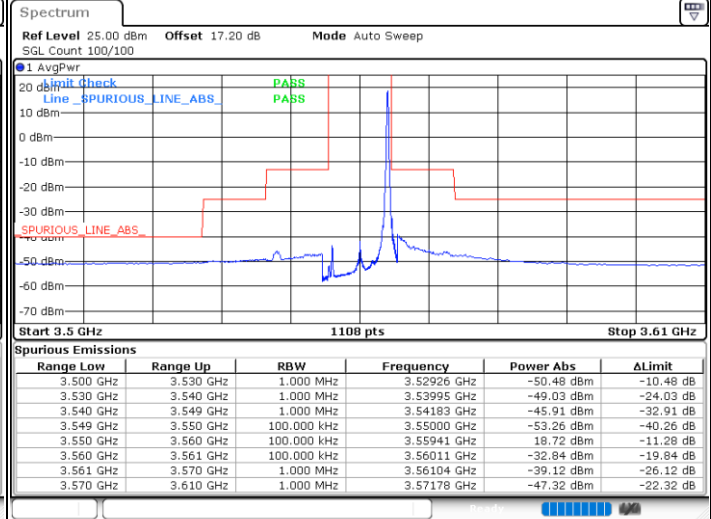
64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



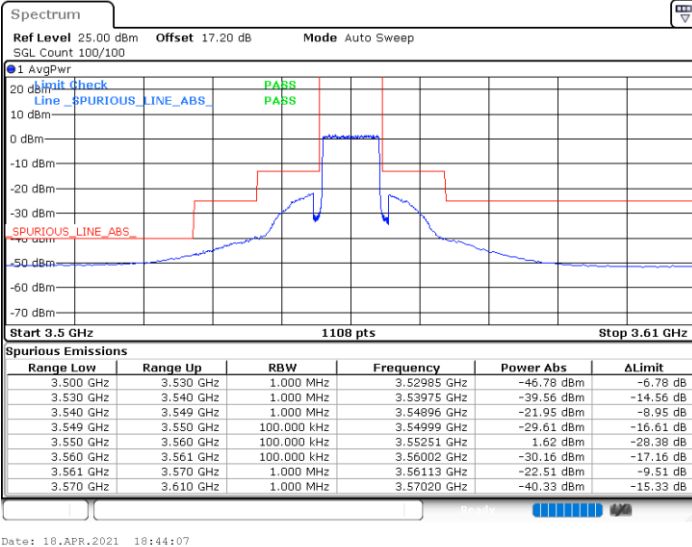
Date: 18.APR.2021 16:55:34



Date: 18.APR.2021 18:48:43

Lowest Channel / FullIRB

N/A



Date: 18.APR.2021 18:44:07

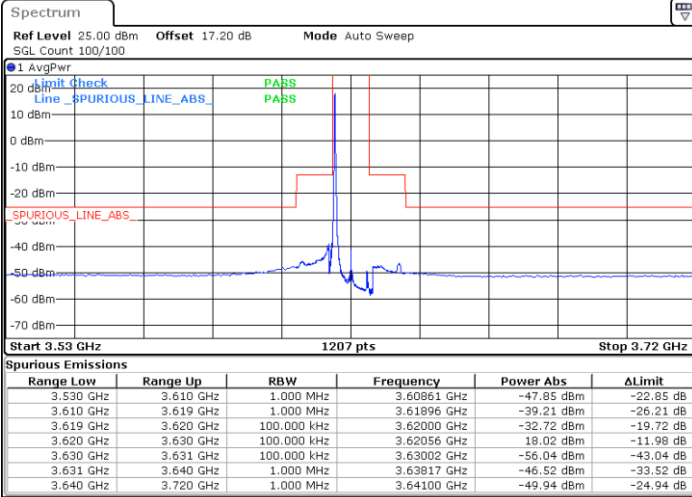


LTE Band 48 / 10MHz

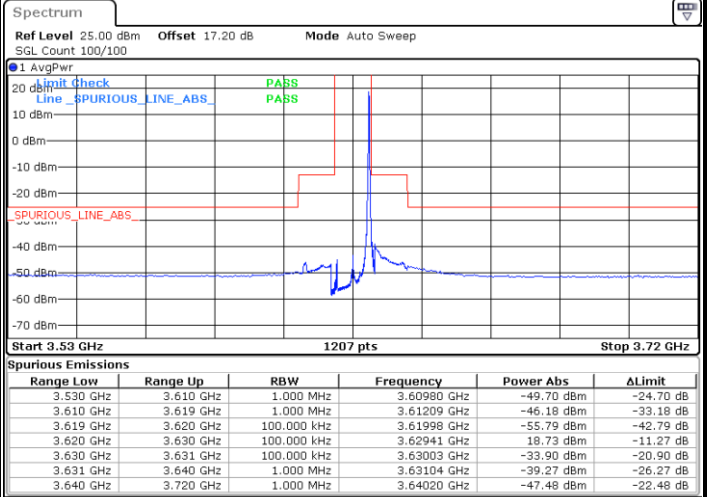
64QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax



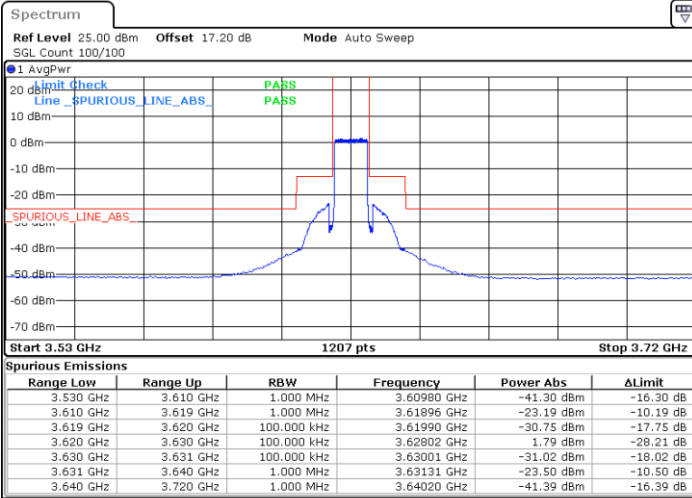
Date: 18.APR.2021 16:58:08



Date: 18.APR.2021 18:51:17

Middle Channel / FullIRB

N/A



Date: 18.APR.2021 18:46:40



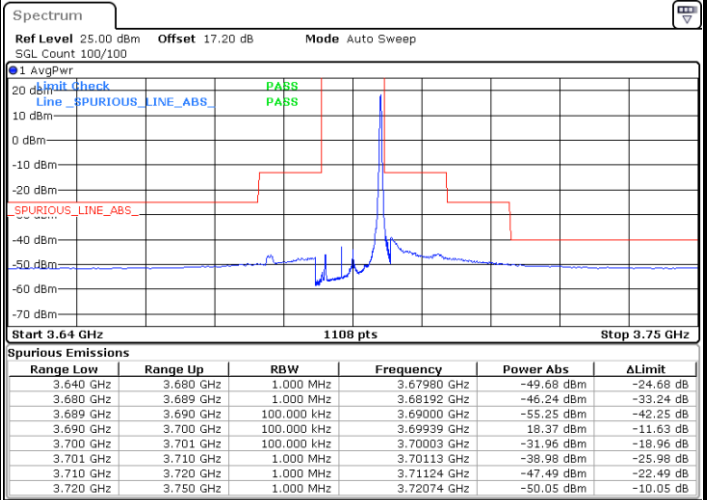
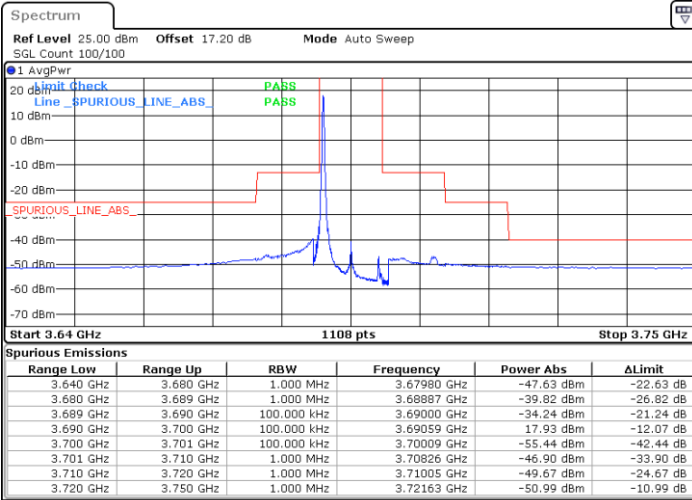


LTE Band 48 / 10MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

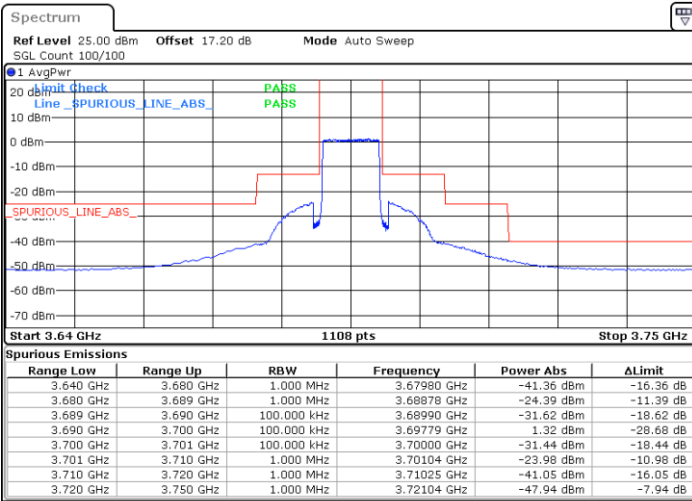


Date: 18.APR.2021 16:58:38

Date: 18.APR.2021 18:51:47

Highest Channel / FullIRB

N/A



Date: 18.APR.2021 18:47:10

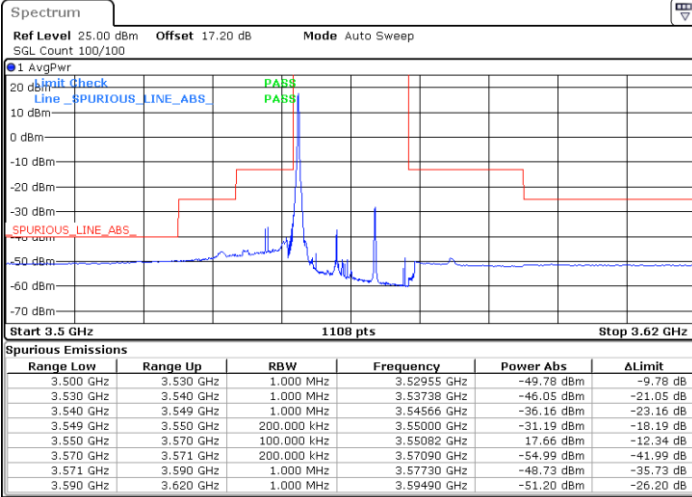


LTE Band 48 / 15MHz

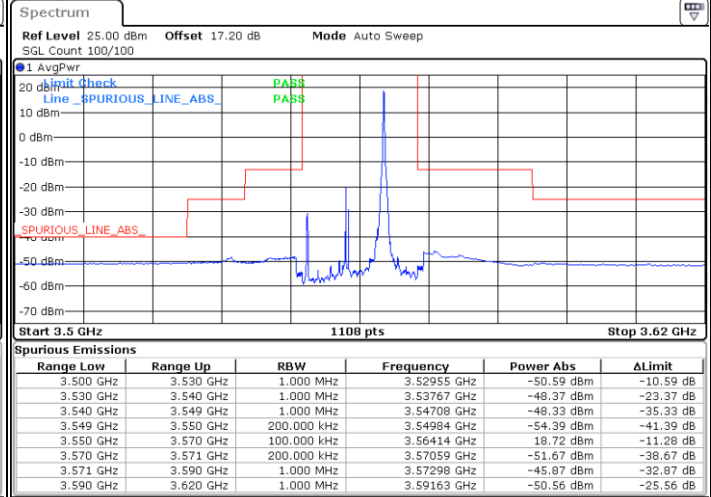
64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



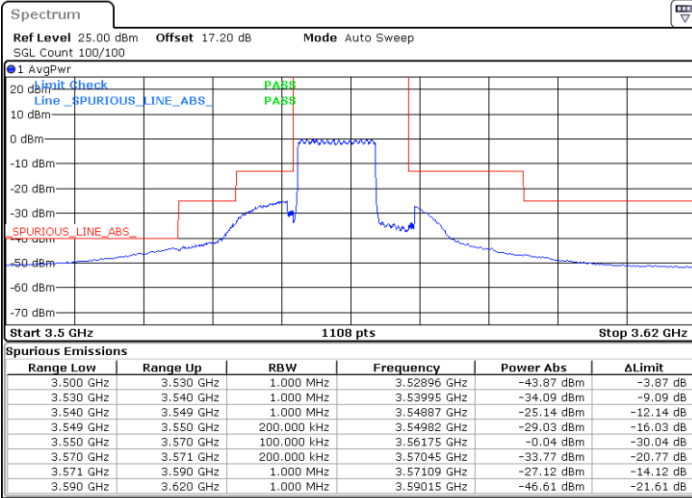
Date: 18.APR.2021 16:13:45



Date: 18.APR.2021 16:22:58

Lowest Channel / FullIRB

N/A



Date: 18.APR.2021 16:18:21

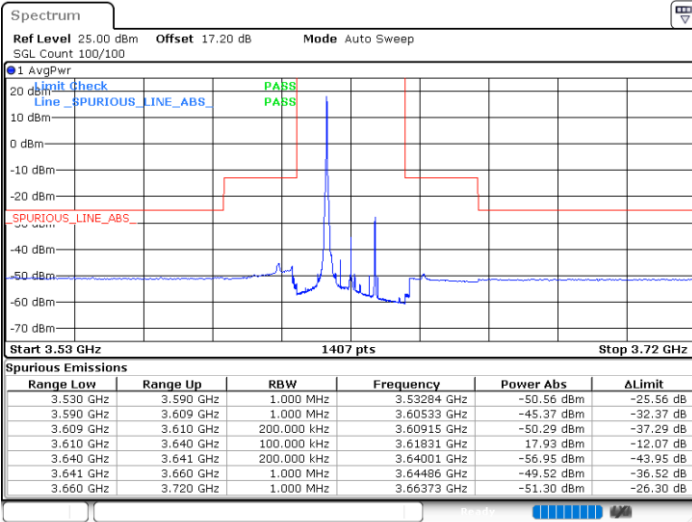


LTE Band 48 / 15MHz

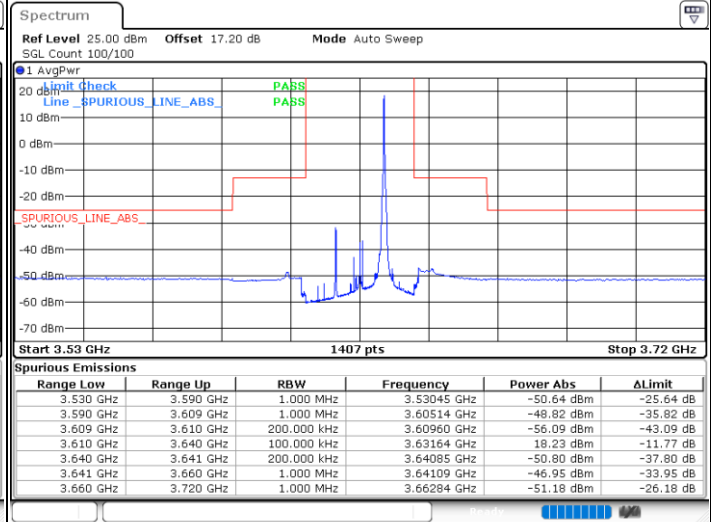
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



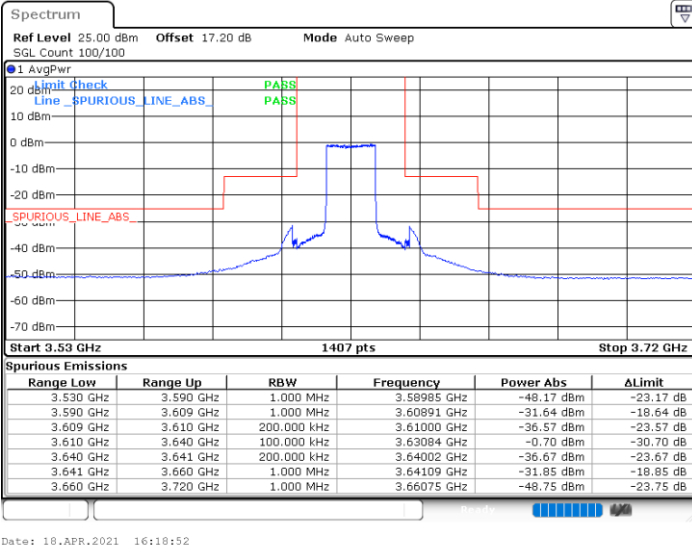
Date: 18.APR.2021 16:14:15



Date: 18.APR.2021 16:23:28

Middle Channel / FullIRB

N/A



Date: 18.APR.2021 16:18:52

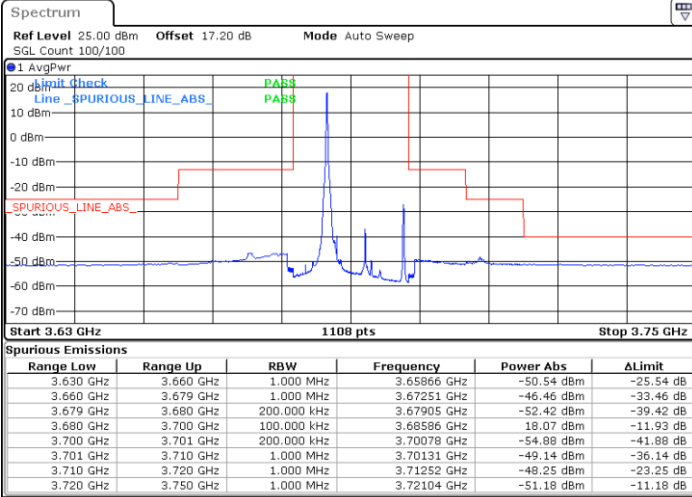


LTE Band 48 / 15MHz

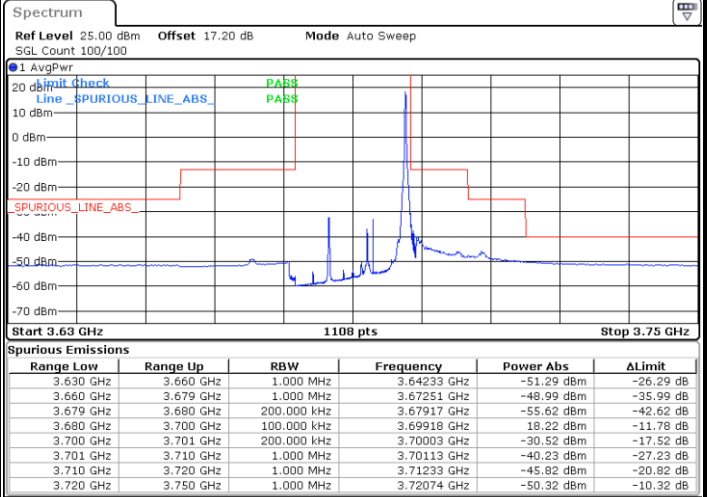
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



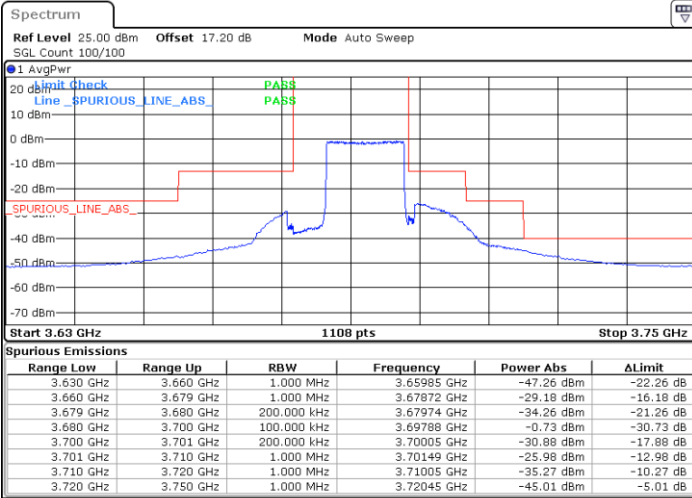
Date: 18.APR.2021 16:16:48



Date: 18.APR.2021 16:26:02

Highest Channel / FullIRB

N/A



Date: 18.APR.2021 16:21:25

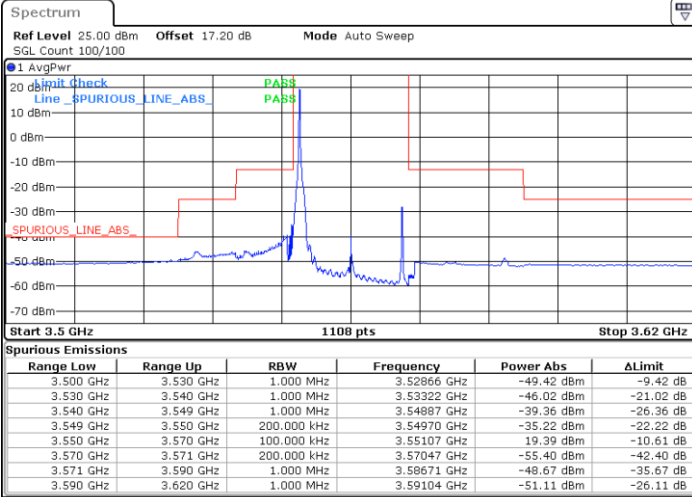


LTE Band 48 / 20MHz

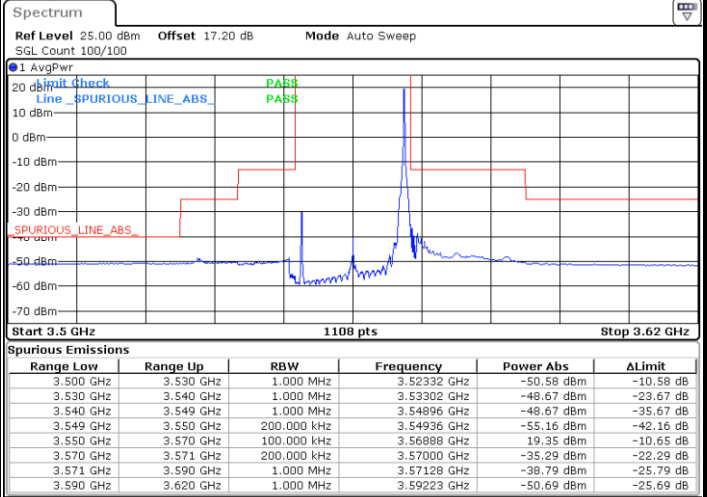
64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



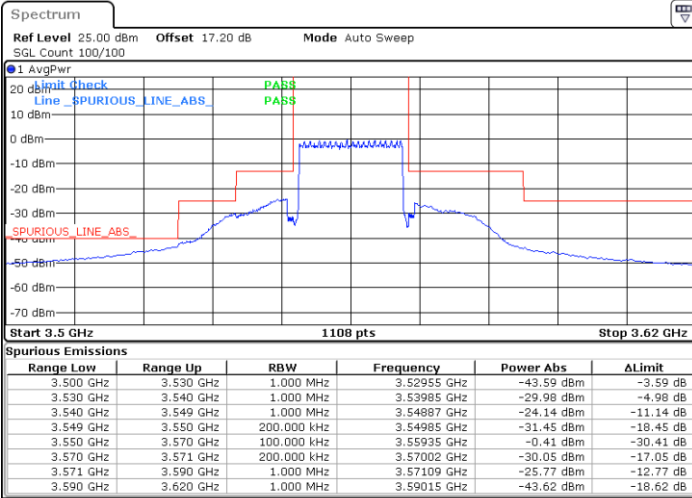
Date: 18.APR.2021 16:31:13



Date: 18.APR.2021 16:35:51

Lowest Channel / FullIRB

N/A



Date: 18.APR.2021 16:26:34

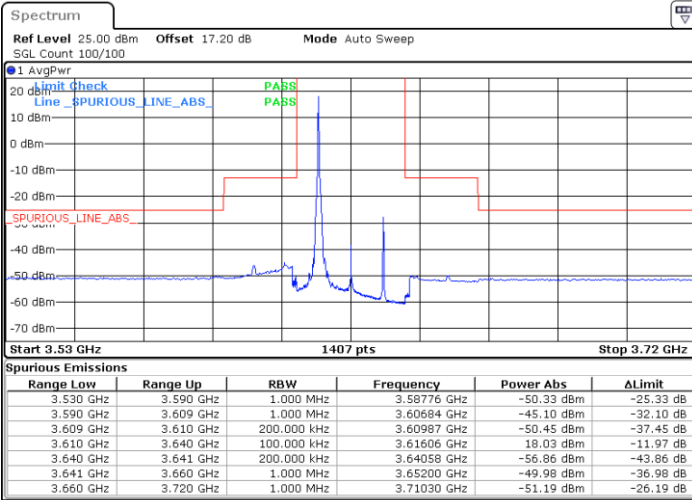


LTE Band 48 / 20MHz

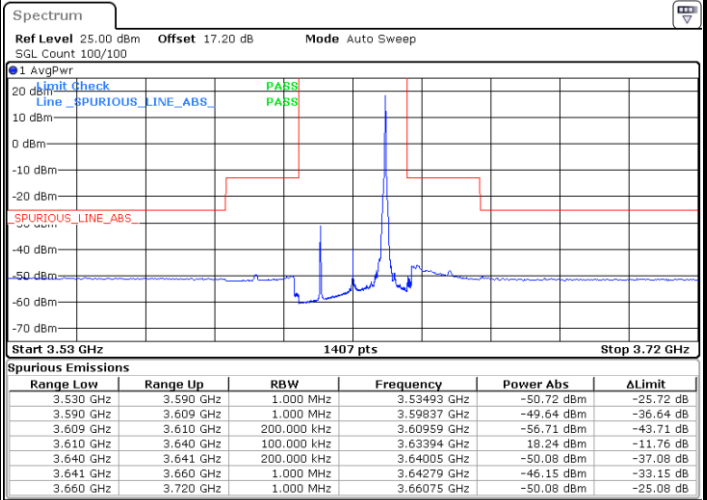
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



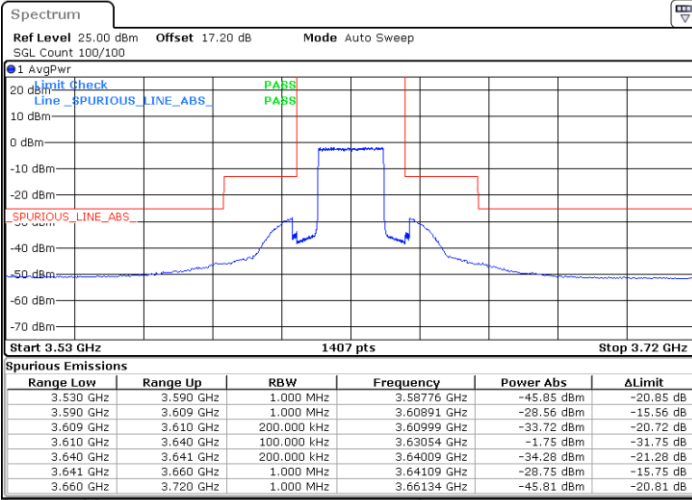
Date: 18.APR.2021 16:33:47



Date: 18.APR.2021 16:38:24

Middle Channel / FullIRB

N/A



Date: 18.APR.2021 16:29:09

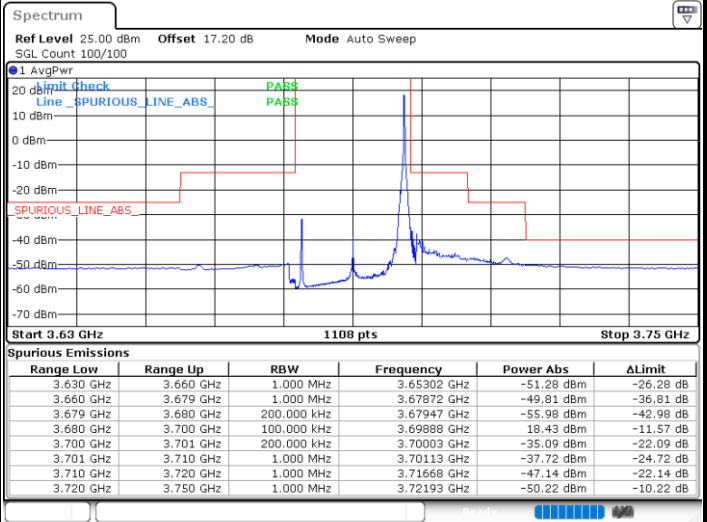
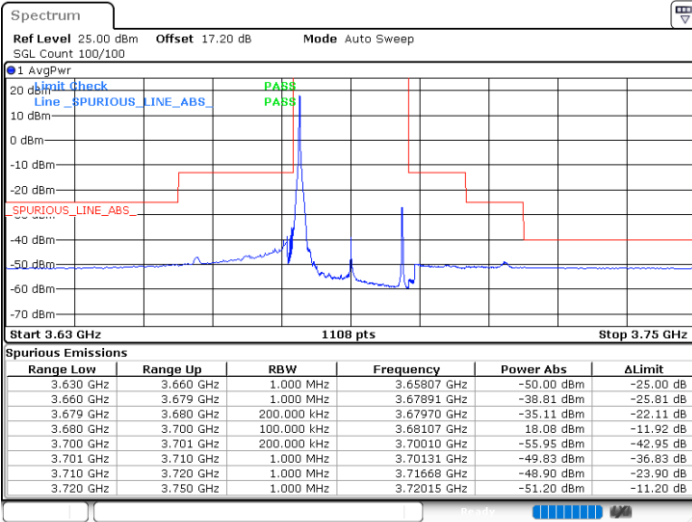


LTE Band 48 / 20MHz

64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

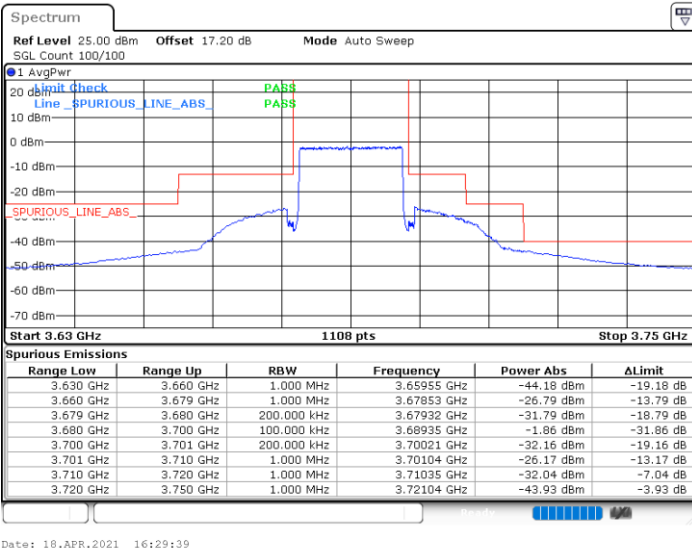


Date: 18.APR.2021 16:34:17

Date: 18.APR.2021 16:38:55

Highest Channel / FullIRB

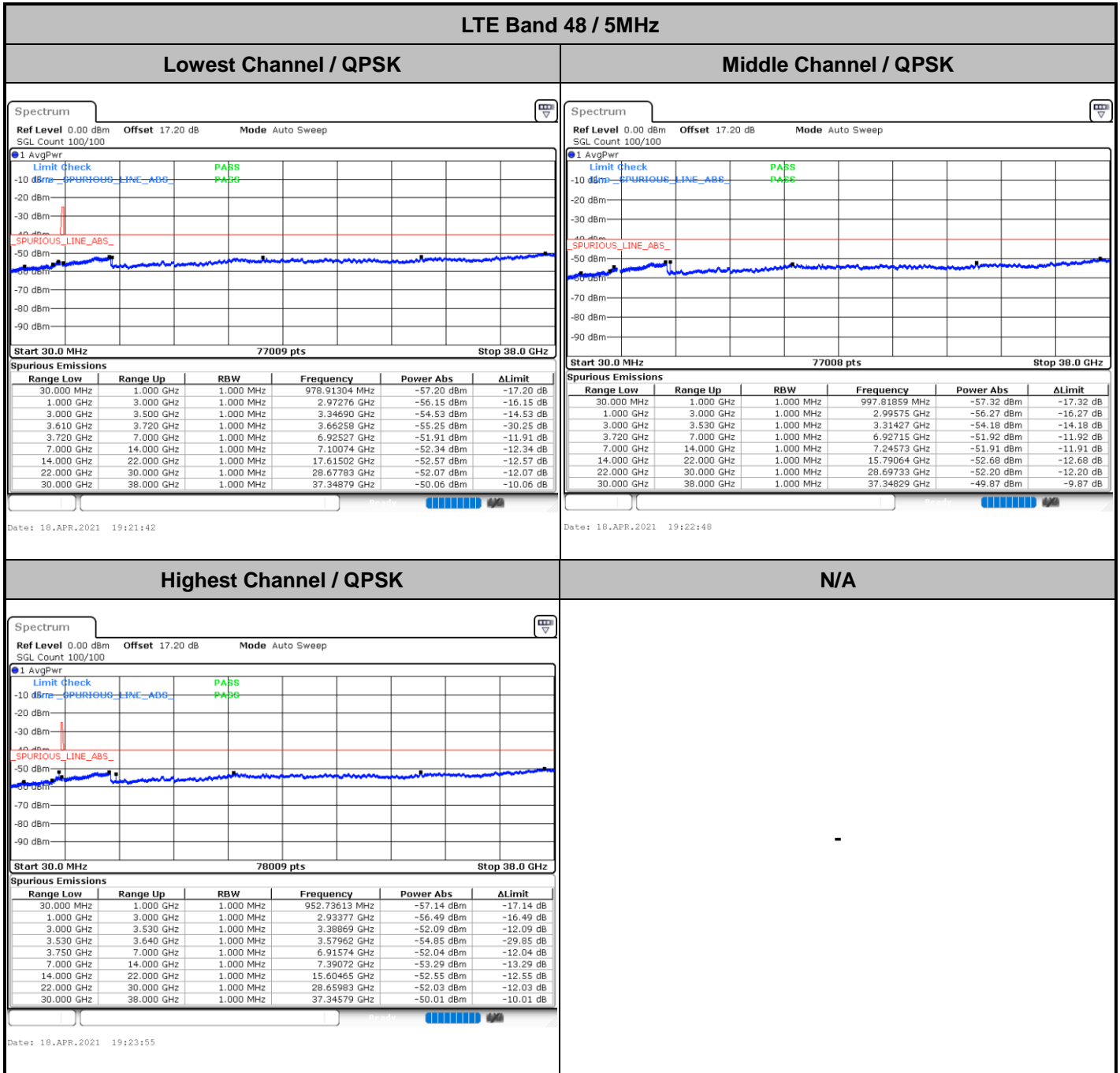
N/A



Date: 18.APR.2021 16:29:39



# Conducted Spurious Emission



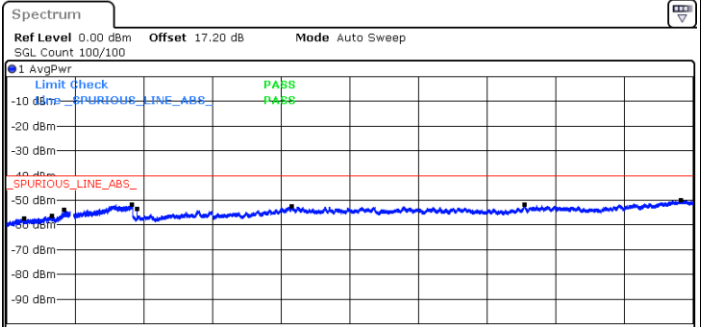
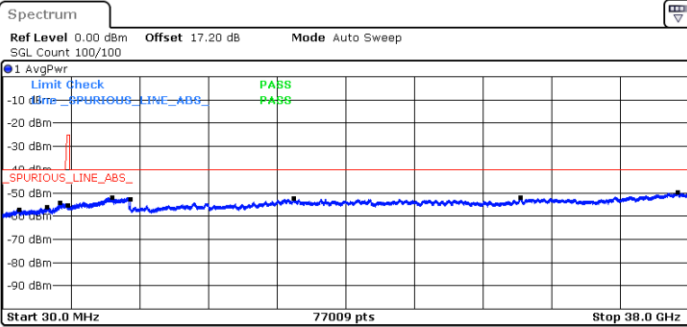




LTE Band 48 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Start 30.0 MHz 77009 pts Stop 38.0 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	957.09895 MHz	-57.15 dBm	-17.15 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.48138 GHz	-56.24 dBm	-16.24 dB
3.000 GHz	3.500 GHz	1.000 MHz	3.22552 GHz	-54.36 dBm	-14.36 dB
3.610 GHz	3.720 GHz	1.000 MHz	3.61577 GHz	-55.30 dBm	-30.30 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.09462 GHz	-51.92 dBm	-11.92 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.10124 GHz	-52.63 dBm	-12.63 dB
14.000 GHz	22.000 GHz	1.000 MHz	16.10962 GHz	-52.50 dBm	-12.50 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.65183 GHz	-52.18 dBm	-12.18 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.35629 GHz	-49.89 dBm	-9.89 dB

Start 30.0 MHz 77008 pts Stop 38.0 GHz

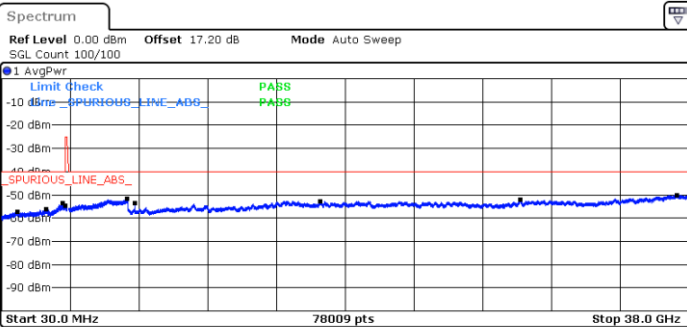
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	980.85207 MHz	-57.40 dBm	-17.40 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.51987 GHz	-56.28 dBm	-16.28 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.22580 GHz	-53.89 dBm	-13.89 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.93371 GHz	-51.80 dBm	-11.80 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.24123 GHz	-53.56 dBm	-13.56 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.78164 GHz	-52.63 dBm	-12.63 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.68133 GHz	-51.91 dBm	-11.91 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.33429 GHz	-49.85 dBm	-9.85 dB

Date: 18.APR.2021 19:25:01

Date: 18.APR.2021 19:26:07

Highest Channel / QPSK

N/A



Start 30.0 MHz 78009 pts Stop 38.0 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	915.89455 MHz	-57.38 dBm	-17.38 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.50487 GHz	-56.29 dBm	-16.29 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.38366 GHz	-53.73 dBm	-13.73 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.53335 GHz	-54.67 dBm	-29.67 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.93153 GHz	-51.62 dBm	-11.62 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.38122 GHz	-53.55 dBm	-13.55 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.60052 GHz	-52.68 dBm	-12.68 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.68933 GHz	-51.89 dBm	-11.89 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.34279 GHz	-50.07 dBm	-10.07 dB

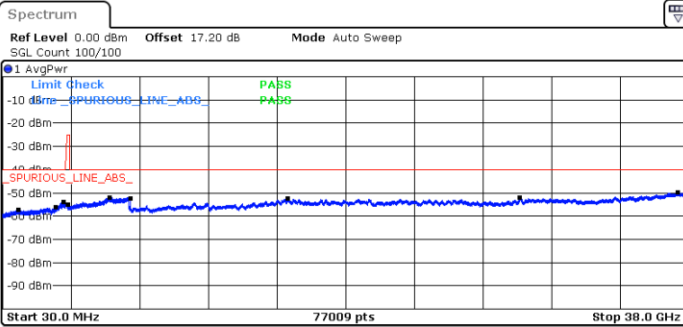
Date: 18.APR.2021 19:27:14



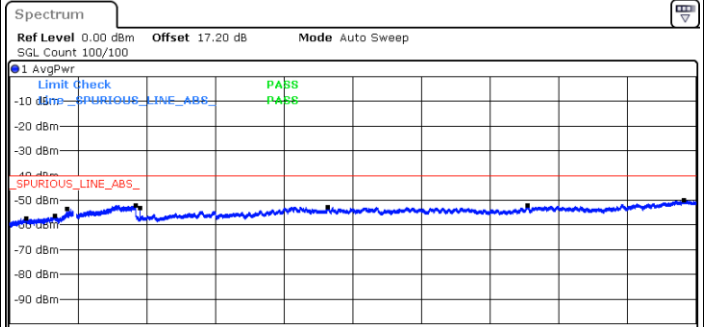
LTE Band 48 / 15MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	882.44628 MHz	-57.32 dBm	-17.32 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.94226 GHz	-56.34 dBm	-16.34 dB
3.000 GHz	3.500 GHz	1.000 MHz	3.37937 GHz	-53.97 dBm	-13.97 dB
3.610 GHz	3.720 GHz	1.000 MHz	3.62313 GHz	-55.08 dBm	-30.08 dB
3.720 GHz	7.000 GHz	1.000 MHz	5.95172 GHz	-51.94 dBm	-11.94 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.10174 GHz	-52.57 dBm	-12.57 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.80964 GHz	-52.61 dBm	-12.61 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.64983 GHz	-52.04 dBm	-12.04 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.37379 GHz	-49.96 dBm	-9.96 dB



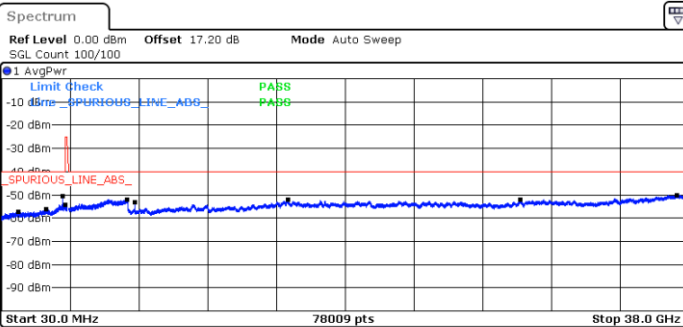
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	954.19040 MHz	-57.43 dBm	-17.43 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.50887 GHz	-56.32 dBm	-16.32 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.22606 GHz	-53.47 dBm	-13.47 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.99227 GHz	-51.94 dBm	-11.94 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.23723 GHz	-53.33 dBm	-13.33 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.60152 GHz	-52.74 dBm	-12.74 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.66633 GHz	-52.14 dBm	-12.14 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.34679 GHz	-49.85 dBm	-9.85 dB

Date: 18.APR.2021 19:28:21

Date: 18.APR.2021 19:29:26

Highest Channel / QPSK

N/A



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	940.13243 MHz	-57.18 dBm	-17.18 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.49588 GHz	-56.36 dBm	-16.36 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.37863 GHz	-50.38 dBm	-10.38 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.53258 GHz	-54.39 dBm	-29.39 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.94545 GHz	-51.88 dBm	-11.88 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.37172 GHz	-53.11 dBm	-13.11 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.82414 GHz	-52.21 dBm	-12.21 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.66683 GHz	-52.20 dBm	-12.20 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.33129 GHz	-50.07 dBm	-10.07 dB

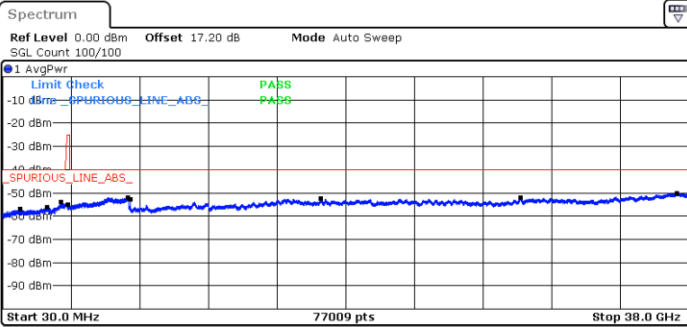
Date: 18.APR.2021 19:30:33



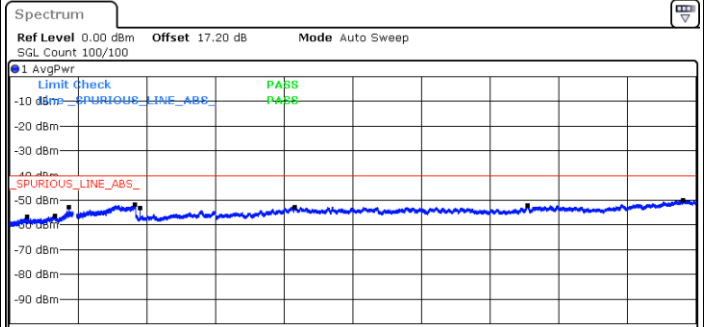
LTE Band 48 / 20MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	973.58071 MHz	-57.11 dBm	-17.11 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.50337 GHz	-56.23 dBm	-16.23 dB
3.000 GHz	3.500 GHz	1.000 MHz	3.24401 GHz	-53.97 dBm	-13.97 dB
3.610 GHz	3.720 GHz	1.000 MHz	3.61412 GHz	-54.93 dBm	-29.93 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.97072 GHz	-52.00 dBm	-12.00 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.10224 GHz	-52.98 dBm	-12.98 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.61502 GHz	-52.41 dBm	-12.41 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.66183 GHz	-51.92 dBm	-11.92 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.32679 GHz	-50.05 dBm	-10.05 dB



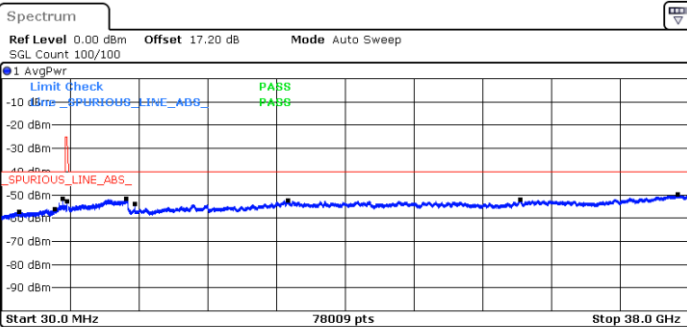
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	979.39780 MHz	-56.79 dBm	-16.79 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.51037 GHz	-56.27 dBm	-16.27 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.30897 GHz	-52.85 dBm	-12.85 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.93980 GHz	-51.59 dBm	-11.59 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.23223 GHz	-53.09 dBm	-13.09 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.80664 GHz	-52.67 dBm	-12.67 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.65733 GHz	-52.15 dBm	-12.15 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.30179 GHz	-50.04 dBm	-10.04 dB

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Highest Channel / QPSK

N/A



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	987.15392 MHz	-57.47 dBm	-17.47 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.97376 GHz	-56.15 dBm	-16.15 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.37413 GHz	-51.82 dBm	-11.82 dB
3.530 GHz	3.640 GHz	1.000 MHz	3.63720 GHz	-52.71 dBm	-27.71 dB
3.750 GHz	7.000 GHz	1.000 MHz	6.90135 GHz	-51.79 dBm	-11.79 dB
7.000 GHz	14.000 GHz	1.000 MHz	7.36222 GHz	-54.08 dBm	-14.08 dB
14.000 GHz	22.000 GHz	1.000 MHz	15.83064 GHz	-52.43 dBm	-12.43 dB
22.000 GHz	30.000 GHz	1.000 MHz	28.68733 GHz	-52.20 dBm	-12.20 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.35579 GHz	-49.97 dBm	-9.97 dB

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**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	0.0011	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0022	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0014	
-10	Normal Voltage	0.0024	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0014	
20	Battery End Point	0.0007	

**Note:**

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.67 V. ; Maximum Voltage =4.26 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



## Appendix B. Test Results of Radiated Test

<Main>

### LTE Band 48

LTE Band 48 20MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7102	-55.95	-40	-15.95	-51.99	-65.91	1.78	11.74	H
	10653	-57.12	-40	-17.12	-54.71	-65.55	2.47	10.90	H
	14204	-54.88	-40	-14.88	-57.73	-63.72	2.87	11.71	H
	21306	-52.85	-40	-12.85	-74.67	-69.57	1.98	18.70	H
	24857	-51.83	-40	-11.83	-76.59	-67.84	2.07	18.07	H
	28408	-50.70	-40	-10.70	-76.01	-67.94	2.32	19.56	H
									H
	7102	-58.20	-40	-18.20	-53.85	-68.16	1.78	11.74	V
	10653	-55.96	-40	-15.96	-53.3	-64.39	2.47	10.90	V
	14204	-54.83	-40	-14.83	-57.41	-63.67	2.87	11.71	V
	21306	-54.02	-40	-14.02	-75.7	-70.74	1.98	18.70	V
	24857	-51.00	-40	-11.00	-76.97	-67.01	2.07	18.07	V
	28408	-49.09	-40	-9.09	-76.22	-66.33	2.32	19.56	V
									V
Middle	7232	-58.00	-40	-18.00	-54.17	-67.68	1.85	11.53	H
	10848	-57.64	-40	-17.64	-55.52	-65.97	2.57	10.90	H
	14464	-55.52	-40	-15.52	-58.12	-63.75	2.85	11.09	H
	18080	-46.48	-40	-6.48	-64.42	-62.71	1.76	17.98	H
	21696	-54.81	-40	-14.81	-76.21	-71.60	1.99	18.78	H
	25312	-51.35	-40	-11.35	-76.55	-67.95	2.14	18.74	H
									H
	7232	-59.36	-40	-19.36	-55.26	-69.04	1.85	11.53	V
	10848	-57.84	-40	-17.84	-55.51	-66.17	2.57	10.90	V
	14464	-56.45	-40	-16.45	-58.22	-64.68	2.85	11.09	V
	18080	-50.65	-40	-10.65	-67.66	-66.88	1.76	17.98	V
	21696	-54.29	-40	-14.29	-75.68	-71.08	1.99	18.78	V
	25312	-50.29	-40	-10.29	-76.75	-66.89	2.14	18.74	V
									V



LTE Band 48 20MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	7362	-51.32	-40	-11.32	-47.3	-60.73	1.92	11.32	H
	11043	-55.67	-40	-15.67	-53.91	-63.99	2.63	10.95	H
	14724	-54.44	-40	-14.44	-58.09	-63.24	2.91	11.72	H
	18405	-47.71	-40	-7.71	-65.99	-63.76	1.87	17.92	H
	22086	-54.79	-40	-14.79	-76.7	-71.58	2.08	18.87	H
	25767	-49.86	-40	-9.86	-75.74	-66.88	2.03	19.05	H
									H
	7362	-57.48	-40	-17.48	-53.28	-66.89	1.92	11.32	V
	11043	-56.85	-40	-16.85	-54.93	-65.17	2.63	10.95	V
	14724	-56.16	-40	-16.16	-58.14	-64.96	2.91	11.72	V
	18405	-50.12	-40	-10.12	-67.52	-66.17	1.87	17.92	V
	22086	-54.46	-40	-14.46	-76.37	-71.25	2.08	18.87	V
	25767	-49.38	-40	-9.38	-76.45	-66.40	2.03	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

————THE END————