

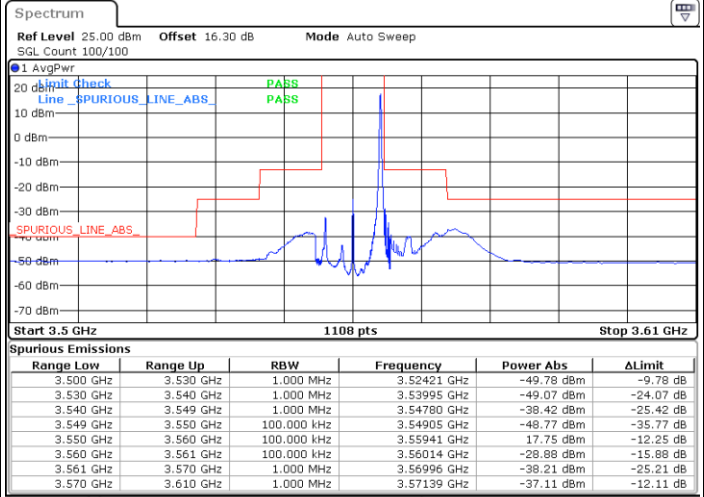
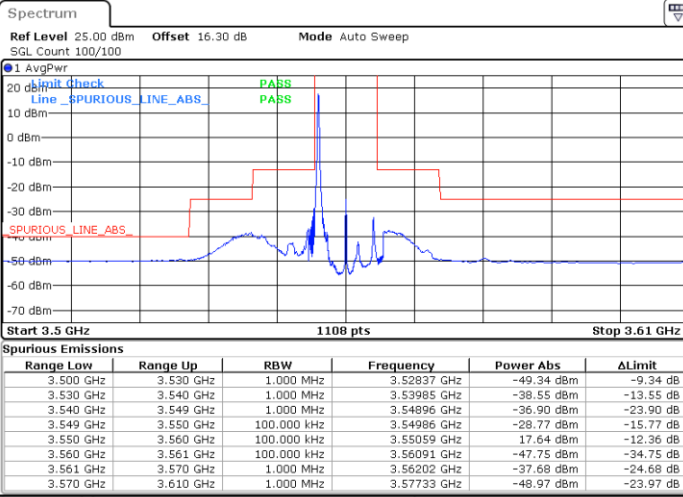


LTE Band 48 / 10MHz

QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

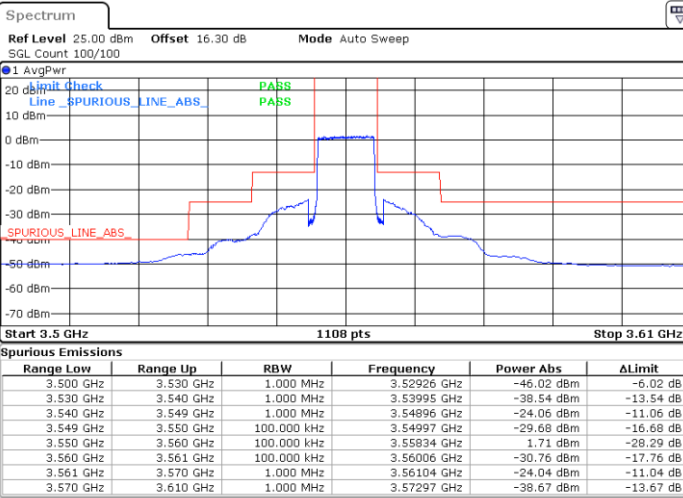


Date: 25.MAY.2022 19:55:07

Date: 25.MAY.2022 20:07:44

Lowest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:01:26

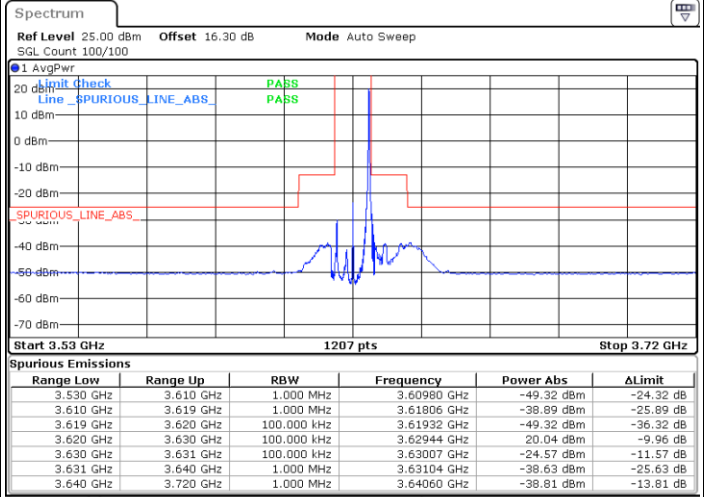
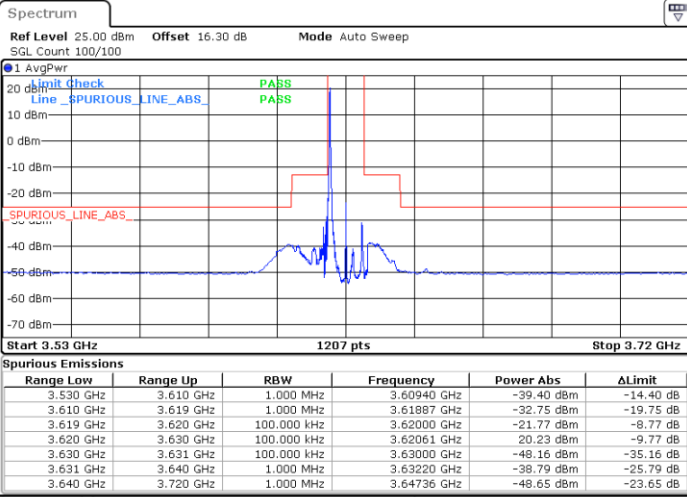


LTE Band 48 / 10MHz

QPSK

MiddleChannel / 1RB0

Middle Channel / 1RBmax

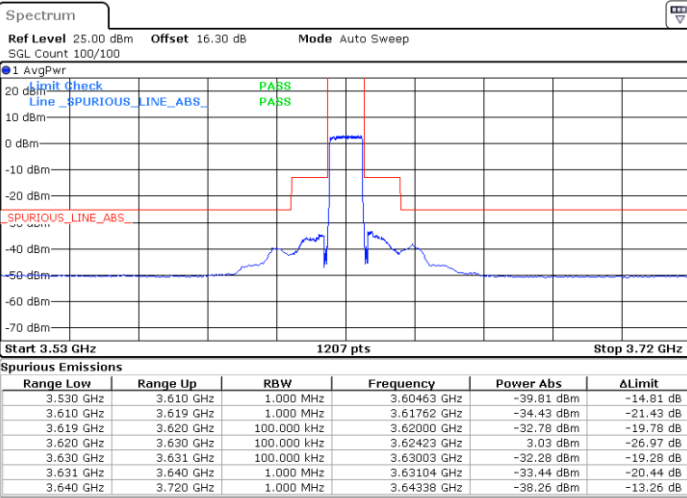


Date: 25.MAY.2022 19:56:09

Date: 25.MAY.2022 20:08:47

Middle Channel / FullIRB

N/A



Date: 25.MAY.2022 20:02:29

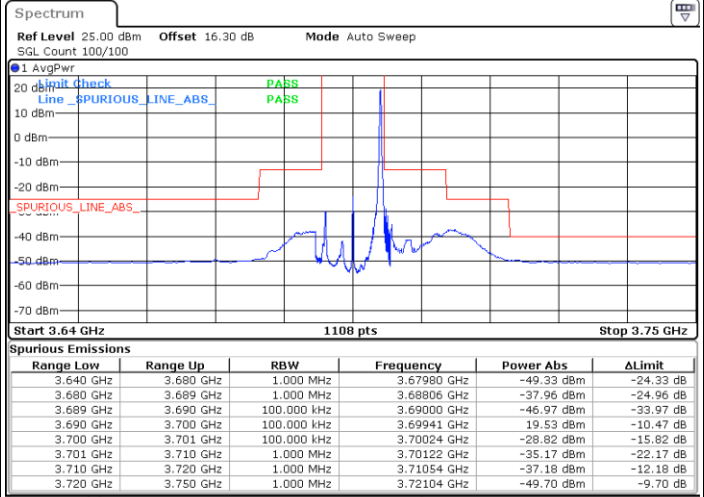
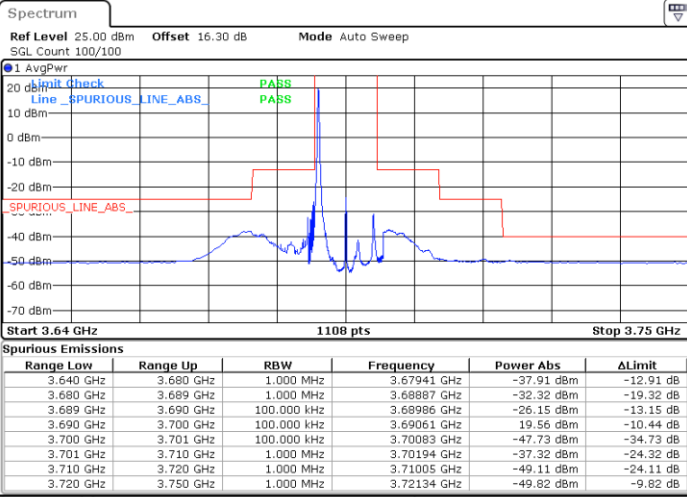


LTE Band 48 / 10MHz

QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax

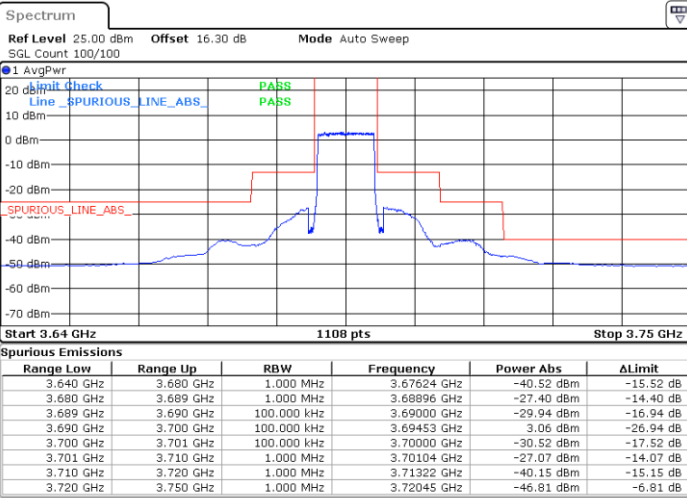


Date: 25.MAY.2022 19:59:18

Date: 25.MAY.2022 20:11:56

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:05:37

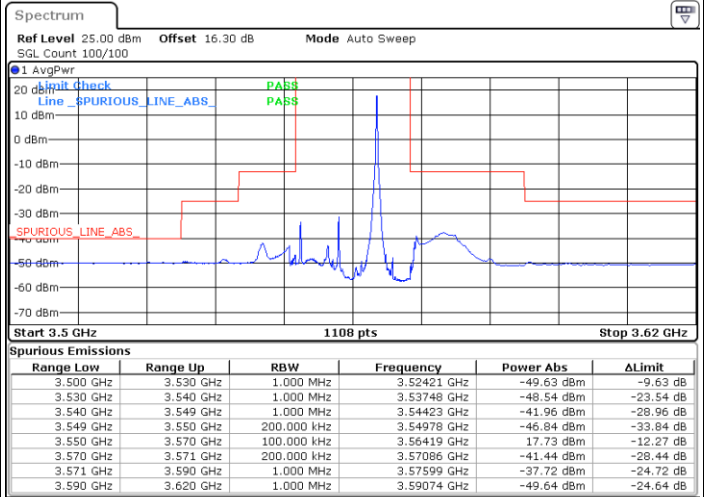
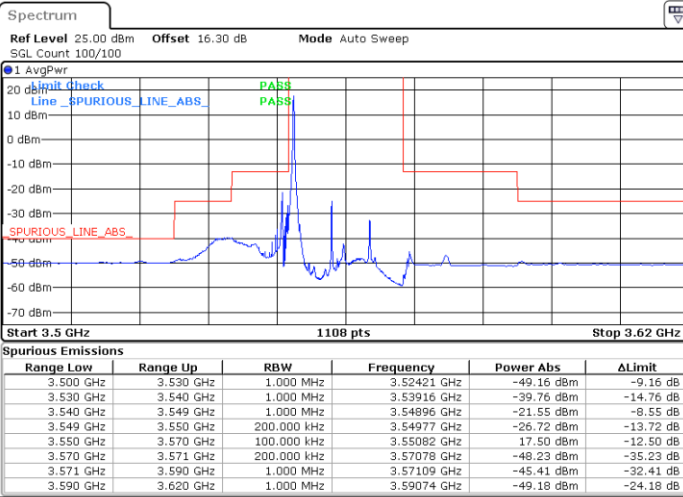


LTE Band 48 / 15MHz

QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

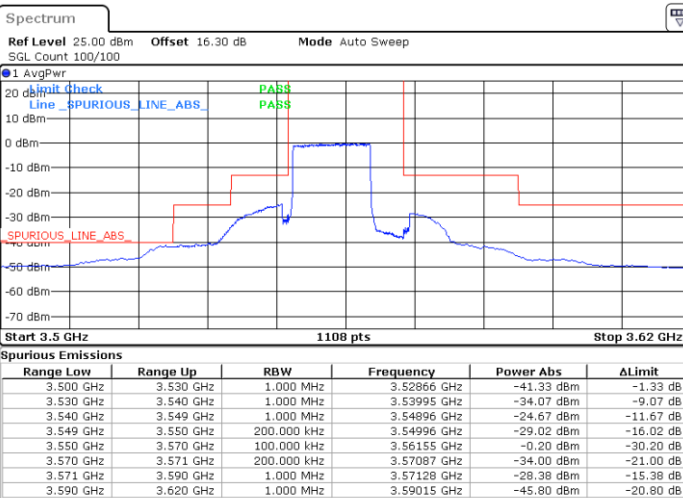


Date: 25.MAY.2022 20:26:16

Date: 25.MAY.2022 20:39:33

Lowest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:33:16

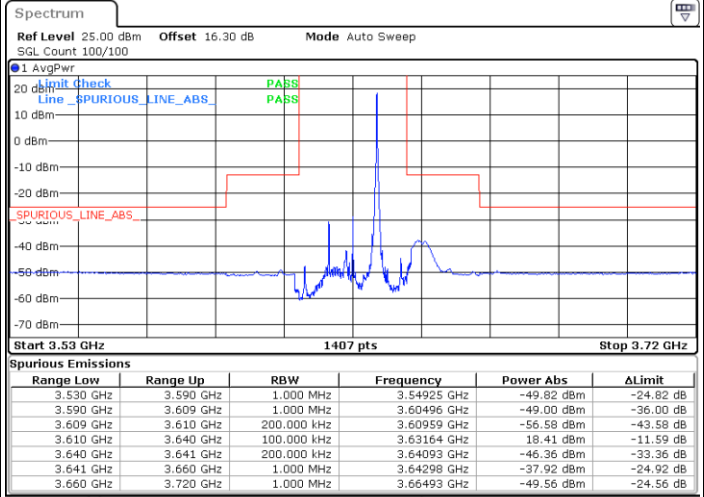
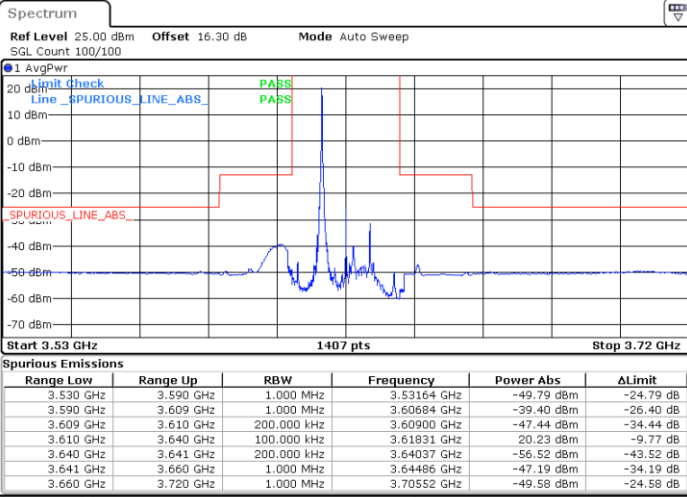


LTE Band 48 / 15MHz

QPSK

Middle Channel / 1RB0

Middle Channel / 1RBmax

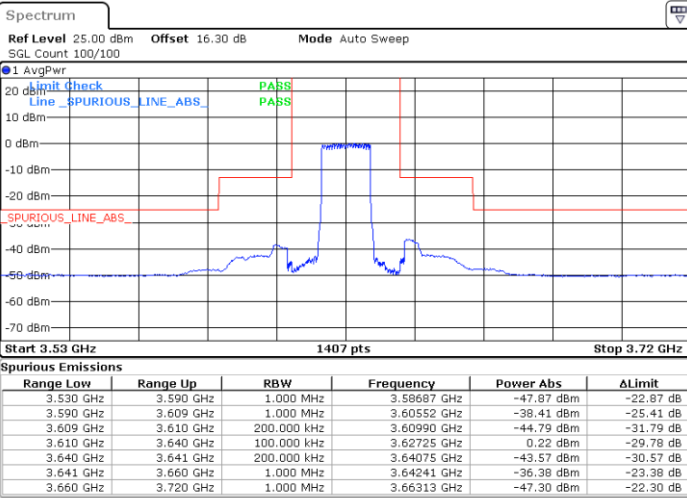


Date: 25.MAY.2022 20:29:23

Date: 25.MAY.2022 20:42:41

Middle Channel / FullIRB

N/A



Date: 25.MAY.2022 20:36:24

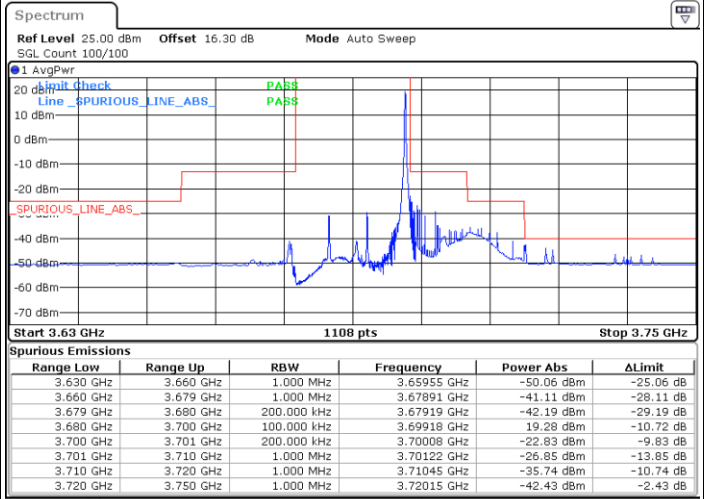
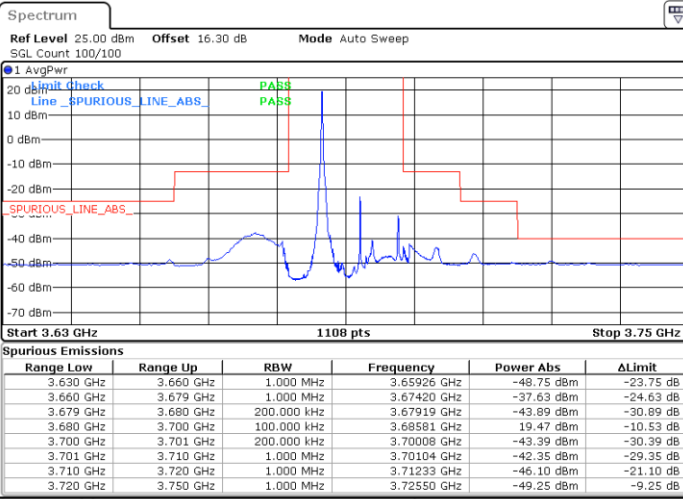


LTE Band 48 / 15MHz

QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax

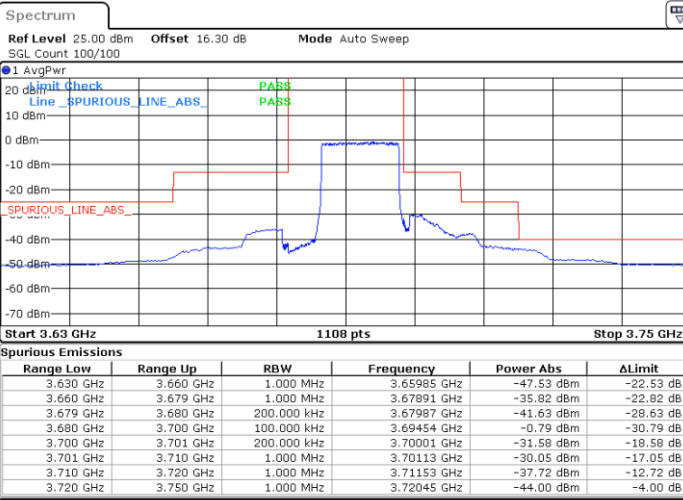


Date: 25.MAY.2022 20:30:26

Date: 25.MAY.2022 20:43:43

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:37:27

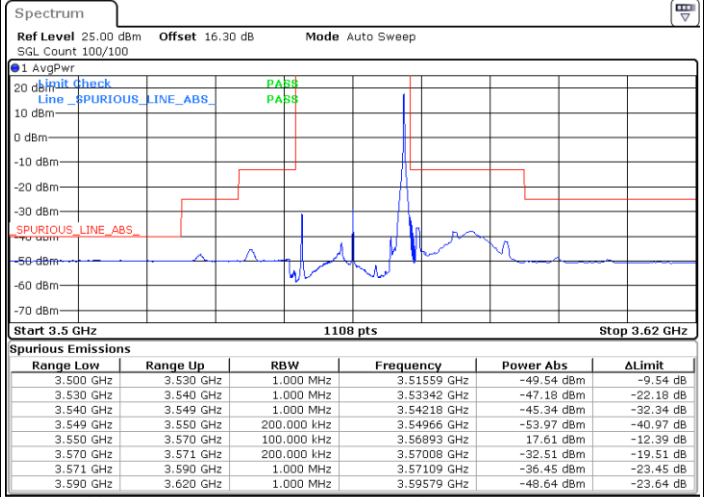
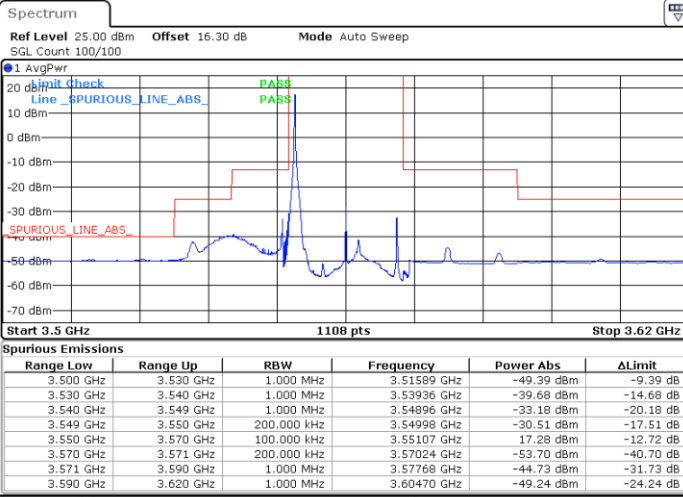


LTE Band 48 / 20MHz

QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

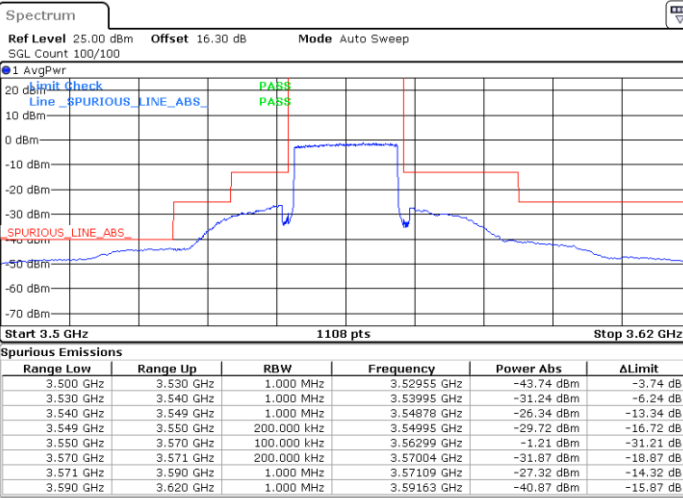


Date: 25.MAY.2022 21:06:05

Date: 25.MAY.2022 21:12:22

Lowest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:59:48

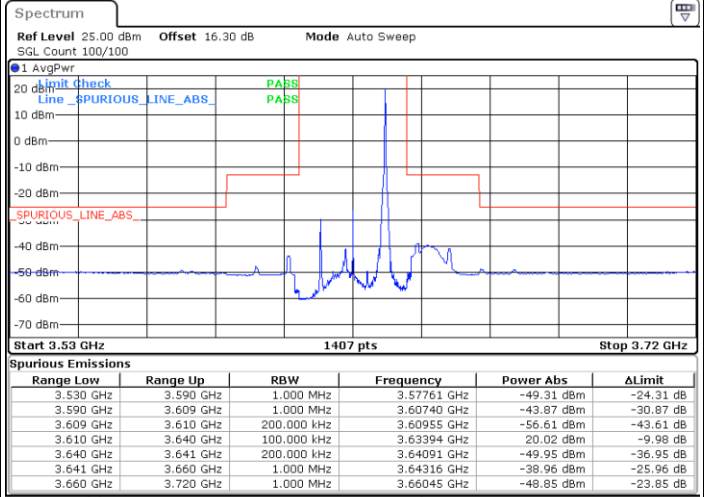
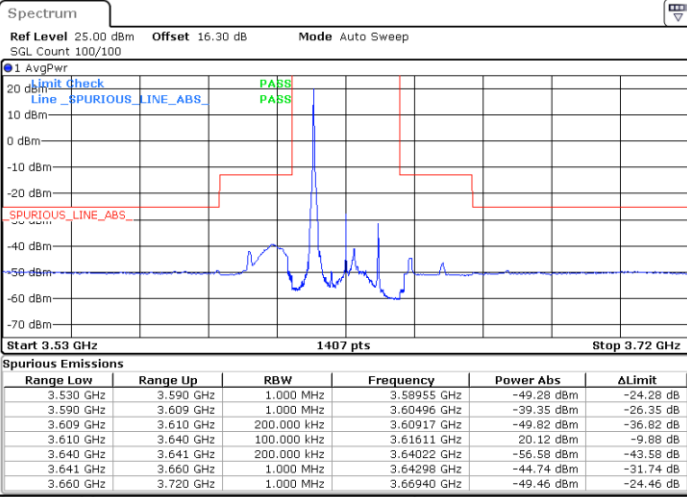


LTE Band 48 / 20MHz

QPSK

Middle Channel / 1RB0

Middle Channel / 1RBmax

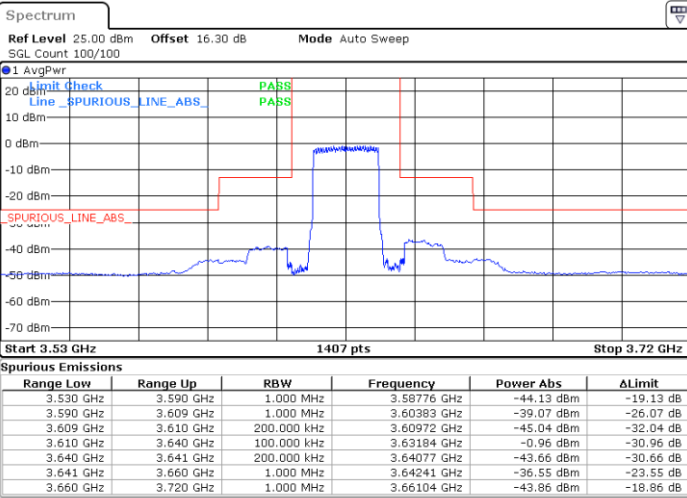


Date: 25.MAY.2022 21:07:08

Date: 25.MAY.2022 21:13:24

Middle Channel / FullIRB

N/A



Date: 25.MAY.2022 21:00:51



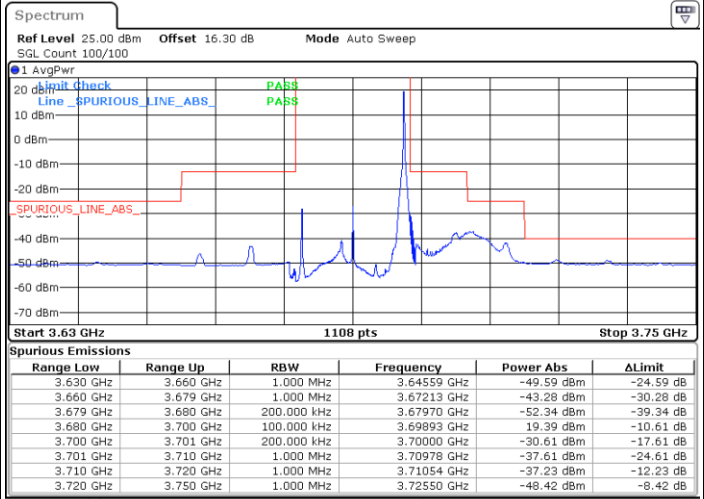
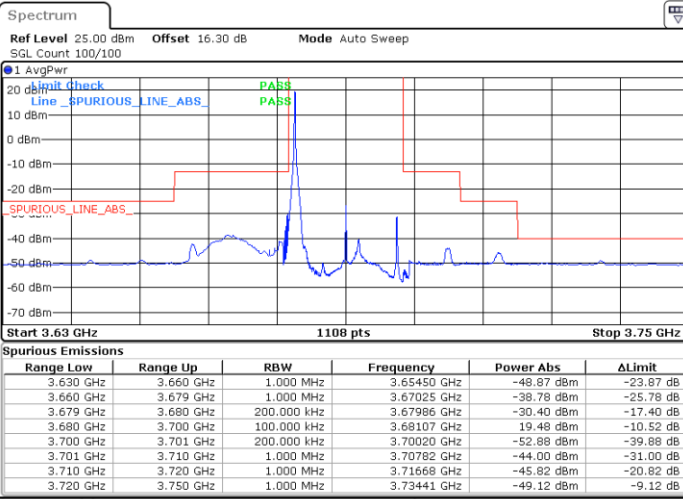


LTE Band 48 / 20MHz

QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax

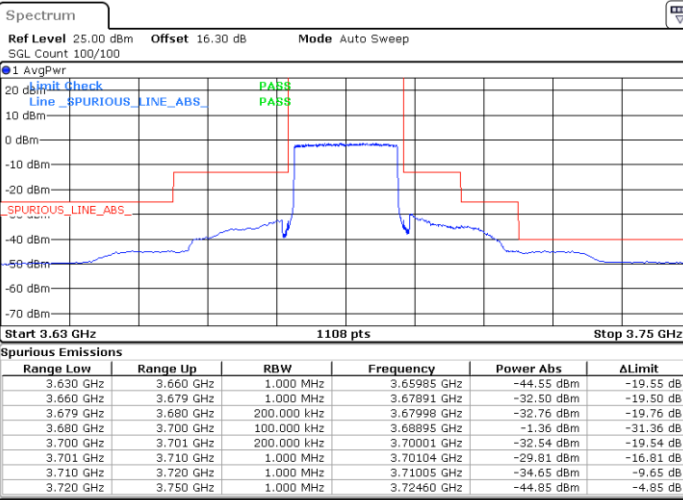


Date: 25.MAY.2022 21:10:15

Date: 25.MAY.2022 21:16:32

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 21:03:58

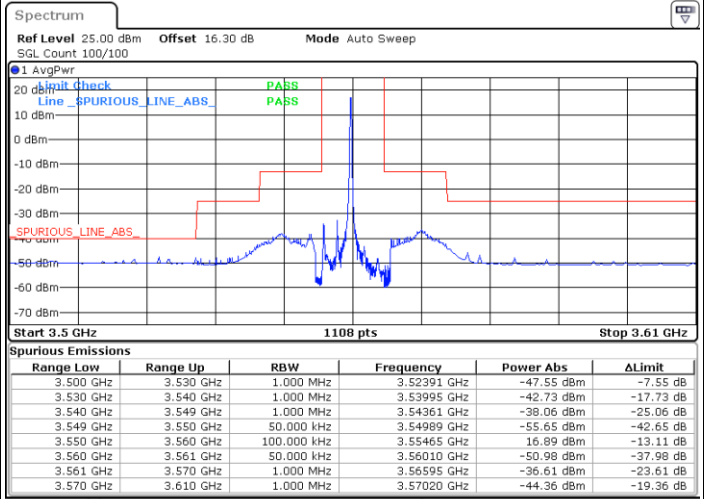
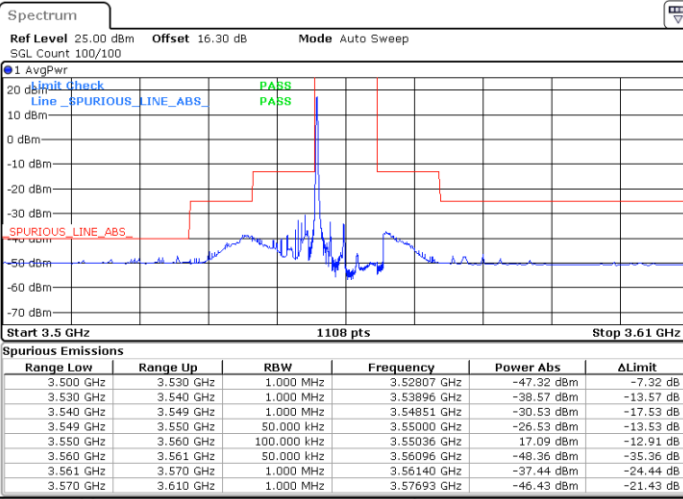


LTE Band 48 / 5MHz

16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

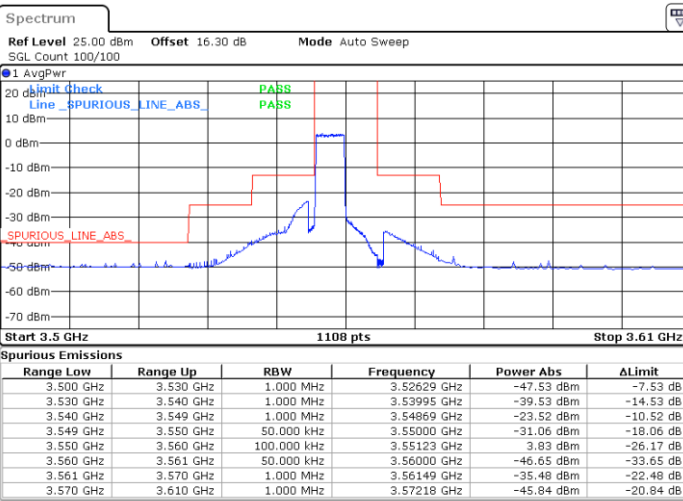


Date: 25.MAY.2022 19:21:06

Date: 25.MAY.2022 19:33:44

Lowest Channel / FullIRB

N/A



Date: 25.MAY.2022 19:27:25

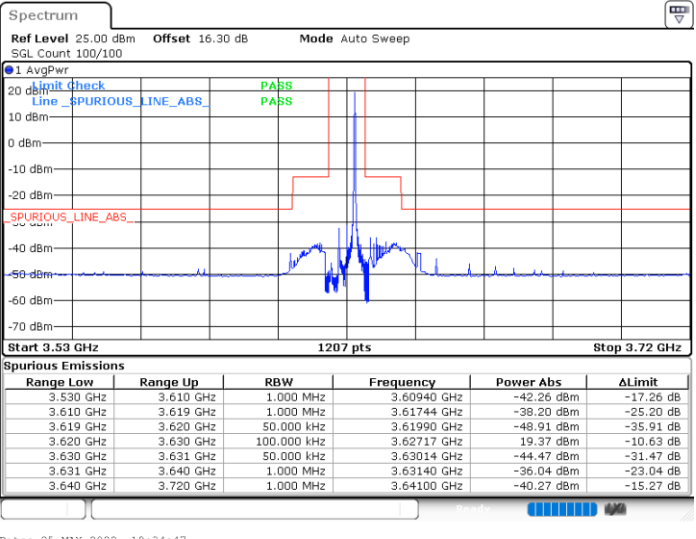
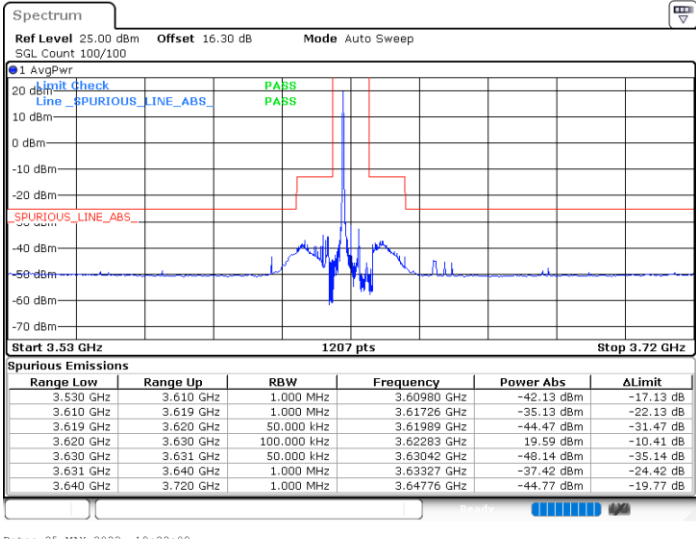


LTE Band 48 / 5MHz

16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

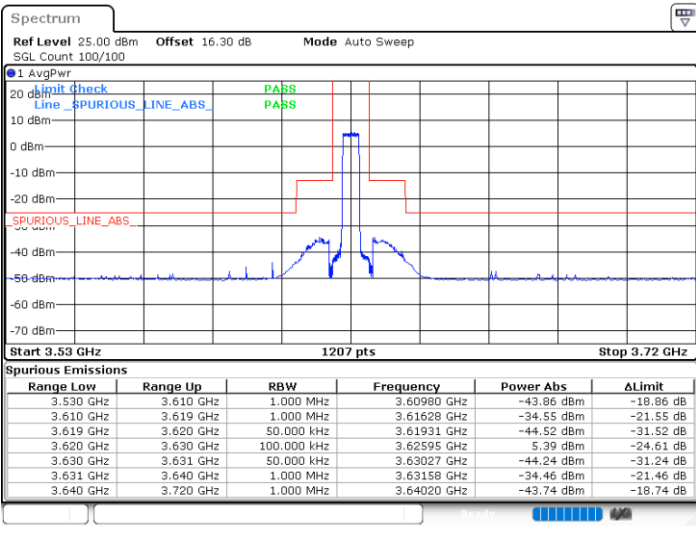


Date: 25.MAY.2022 19:22:09

Date: 25.MAY.2022 19:34:47

Middle Channel / FullIRB

N/A



Date: 25.MAY.2022 19:28:28

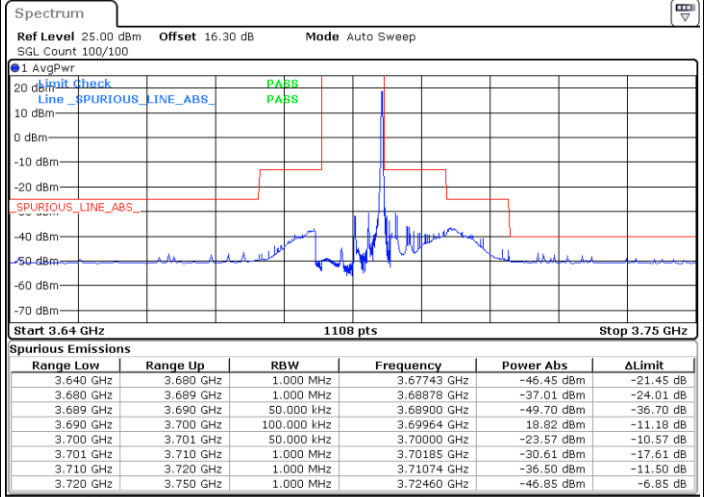
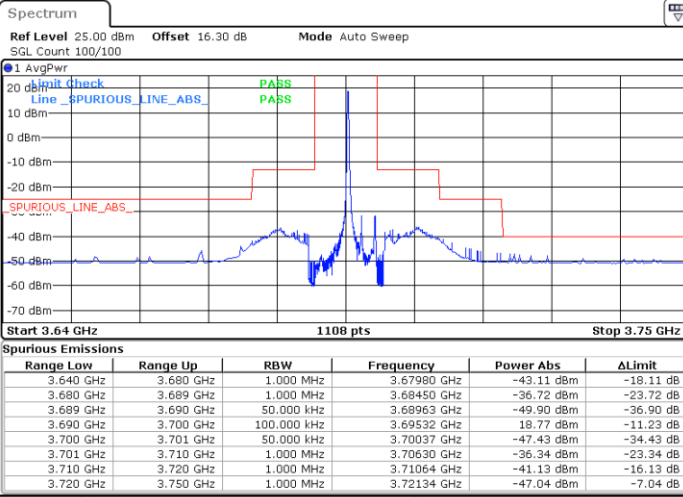


LTE Band 48 / 5MHz

16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

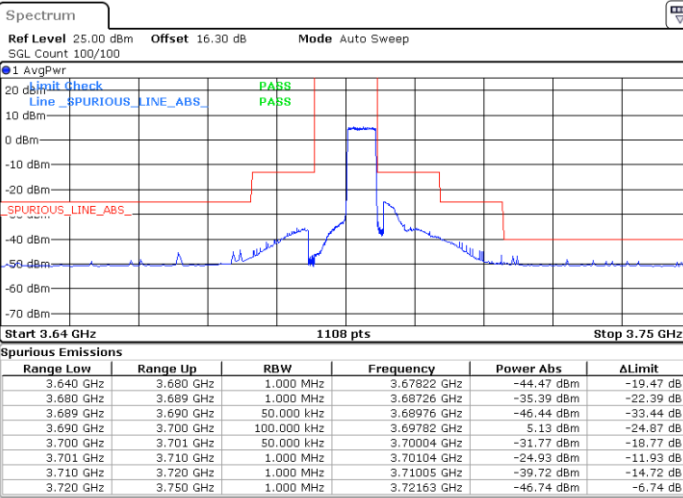


Date: 25.MAY.2022 19:25:17

Date: 25.MAY.2022 19:37:55

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 19:31:36

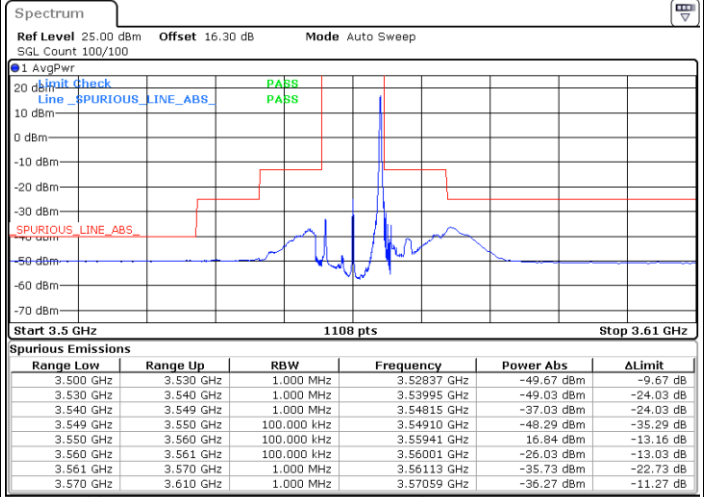
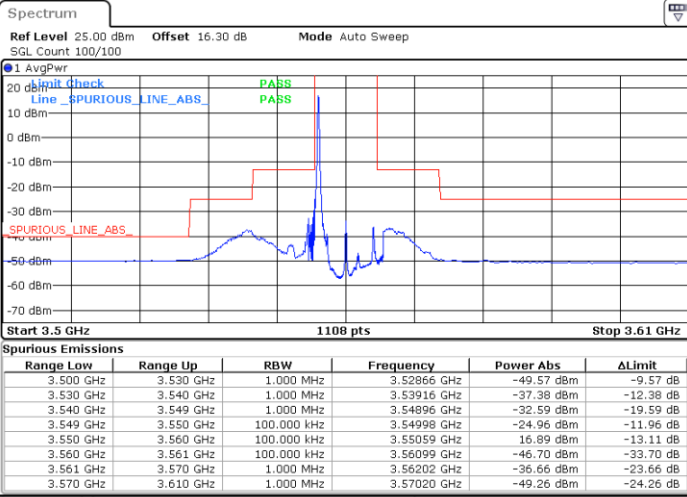


LTE Band 48 / 10MHz

16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

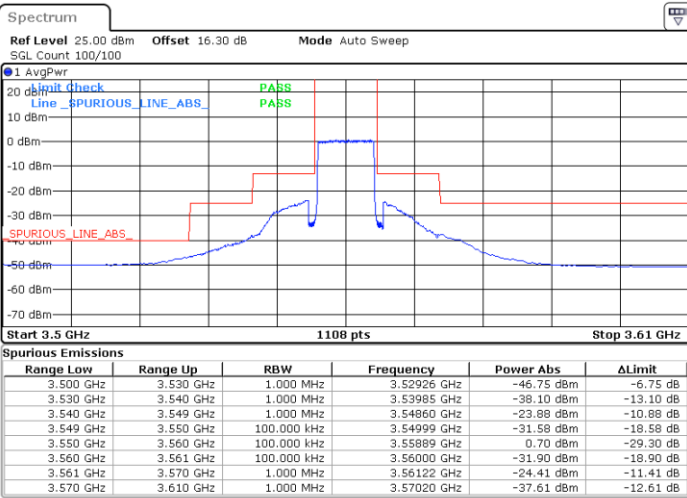


Date: 25.MAY.2022 19:52:19

Date: 25.MAY.2022 20:06:41

Lowest Channel / FullIRB

N/A



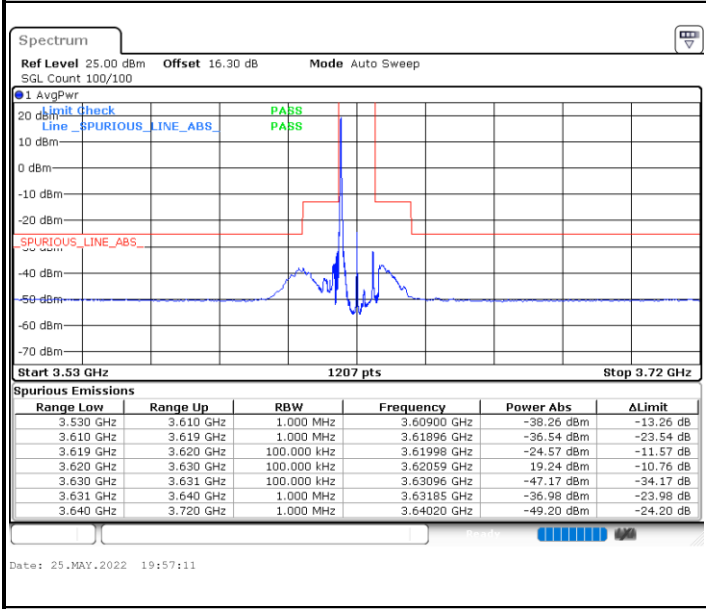
Date: 25.MAY.2022 20:00:23



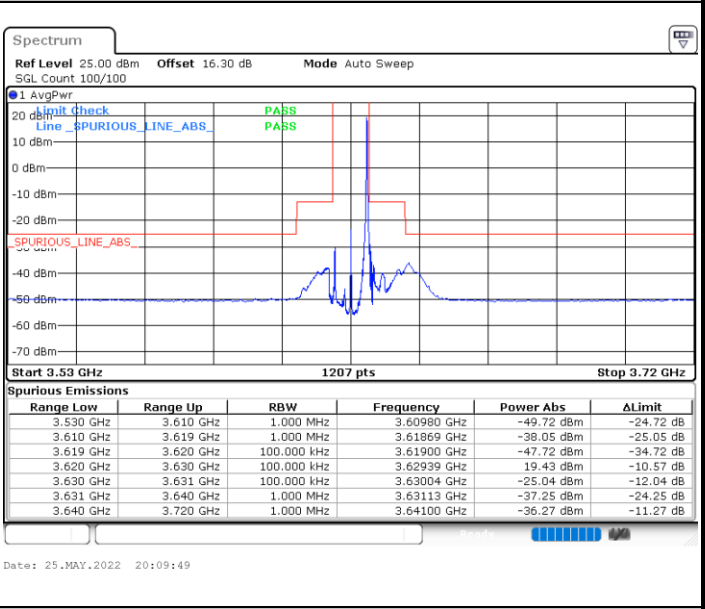
LTE Band 48 / 10MHz

16QAM

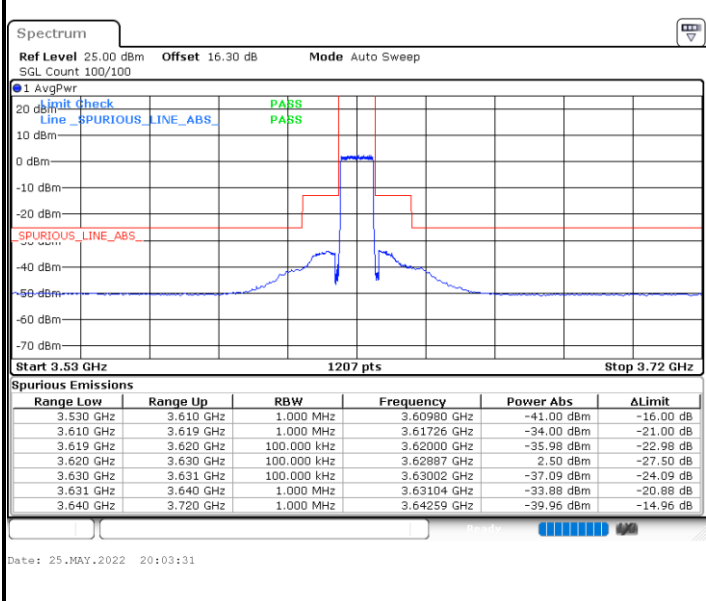
MiddleChannel / 1RB0



Middle Channel / 1RBmax



Middle Channel / FullIRB



N/A



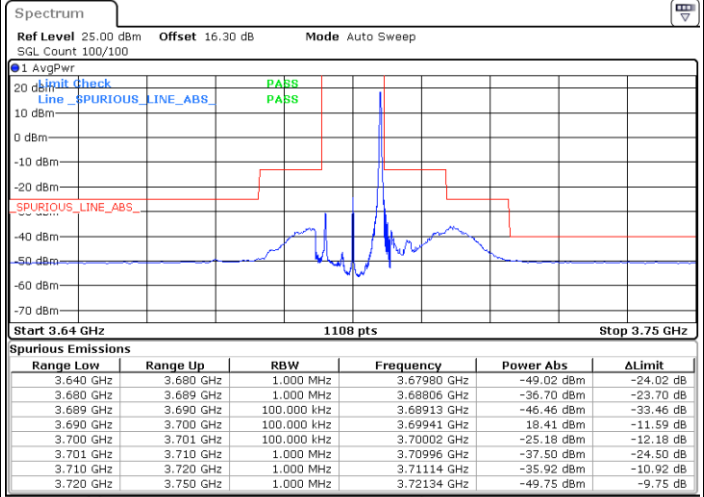
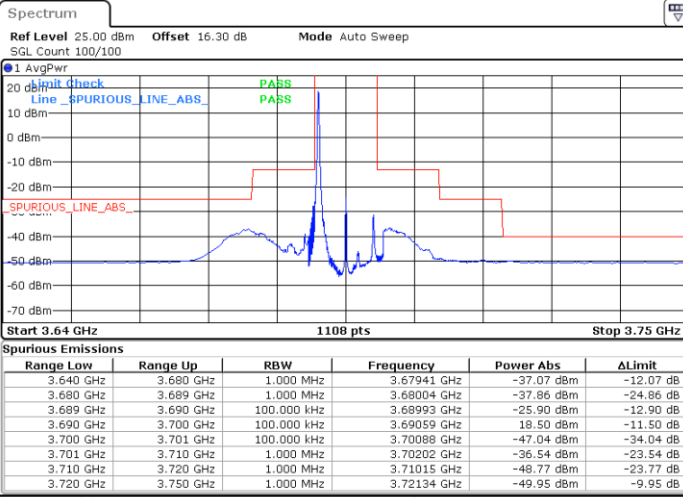


LTE Band 48 / 10MHz

16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

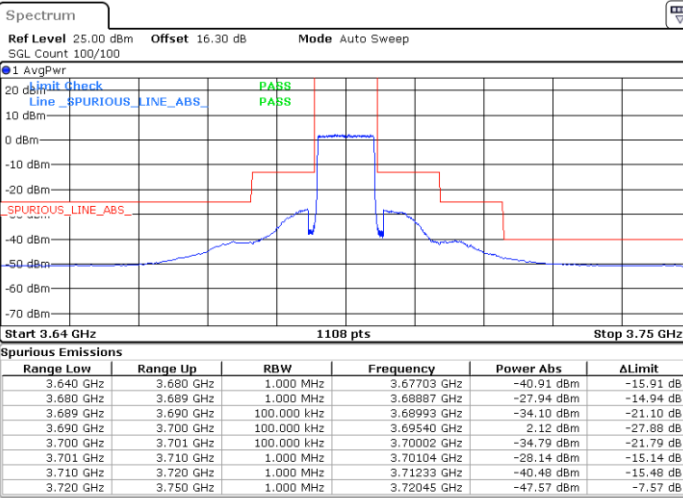


Date: 25.MAY.2022 19:58:14

Date: 25.MAY.2022 20:10:52

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:04:33

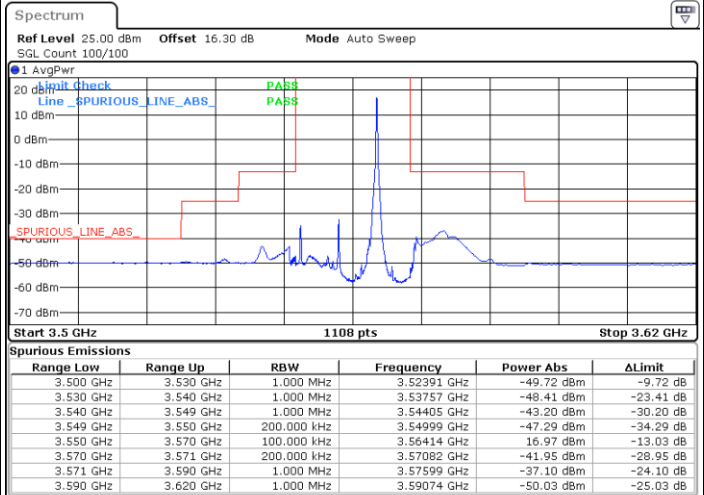
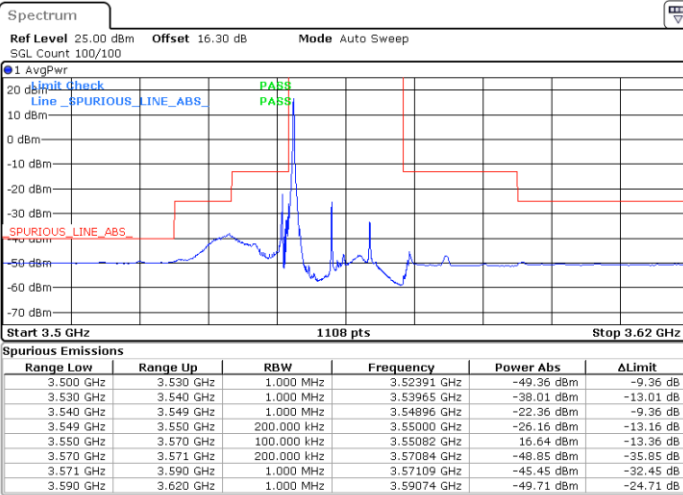


LTE Band 48 / 15MHz

16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

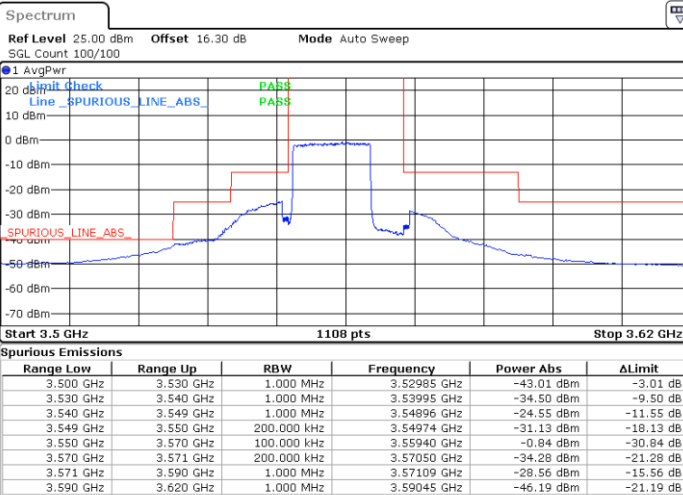


Date: 25.MAY.2022 20:27:19

Date: 25.MAY.2022 20:40:36

Lowest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:34:19



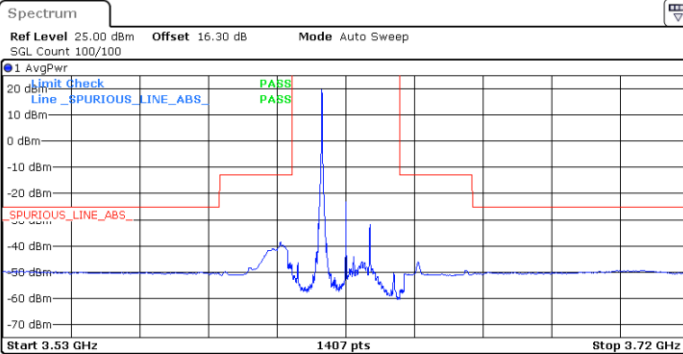


LTE Band 48 / 15MHz

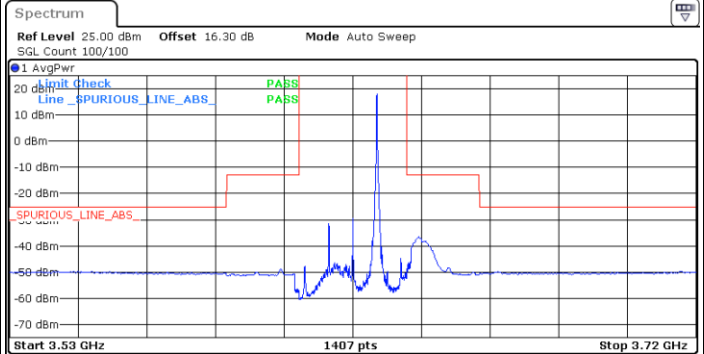
16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.53403 GHz	-49.50 dBm	-24.50 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60702 GHz	-38.62 dBm	-25.62 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60955 GHz	-46.57 dBm	-33.57 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.61836 GHz	19.60 dBm	-10.40 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64069 GHz	-56.69 dBm	-43.69 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64504 GHz	-46.24 dBm	-33.24 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.70463 GHz	-49.32 dBm	-24.32 dB



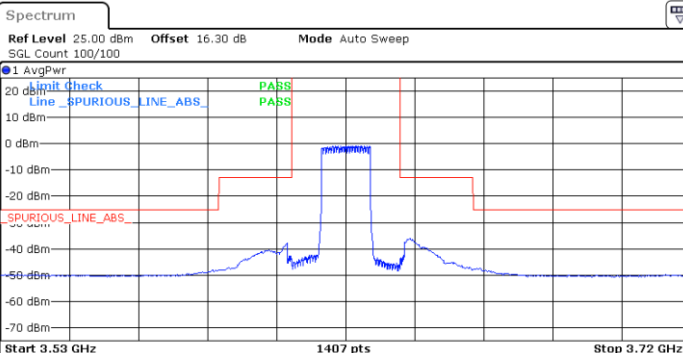
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.53881 GHz	-49.74 dBm	-24.74 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60514 GHz	-48.85 dBm	-35.85 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60963 GHz	-56.35 dBm	-43.35 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.63164 GHz	18.15 dBm	-11.85 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64088 GHz	-46.21 dBm	-33.21 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64316 GHz	-36.51 dBm	-23.51 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.71597 GHz	-49.86 dBm	-24.86 dB

Date: 25.MAY.2022 20:28:21

Date: 25.MAY.2022 20:41:38

Middle Channel / FullIRB

N/A



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58925 GHz	-48.11 dBm	-23.11 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60891 GHz	-37.91 dBm	-24.91 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60930 GHz	-42.78 dBm	-29.78 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.62790 GHz	-0.79 dBm	-30.79 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64082 GHz	-42.33 dBm	-29.33 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64279 GHz	-36.22 dBm	-23.22 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66194 GHz	-47.46 dBm	-22.46 dB

Date: 25.MAY.2022 20:35:22

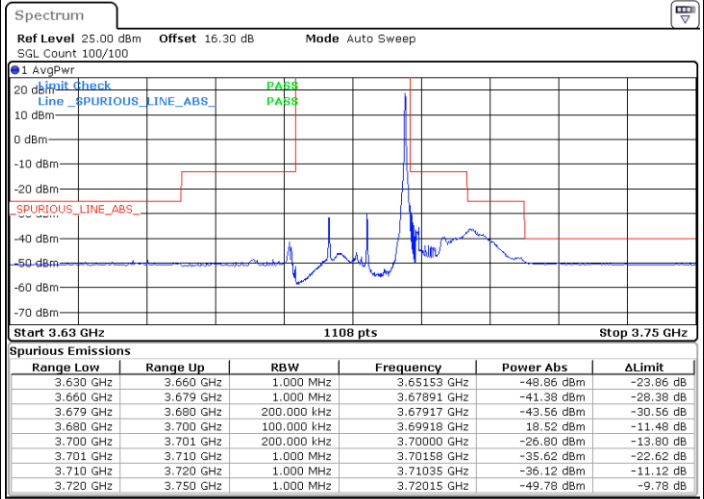
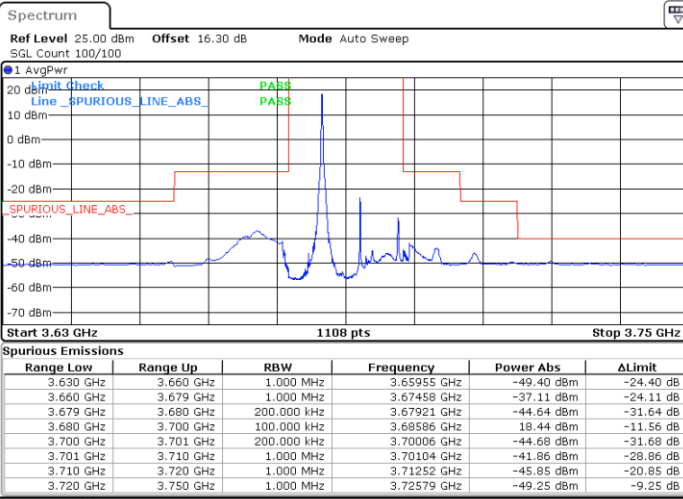


LTE Band 48 / 15MHz

16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

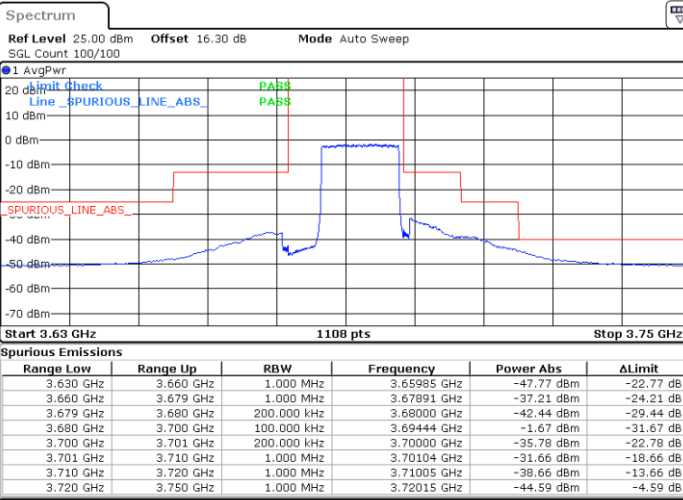


Date: 25.MAY.2022 20:31:29

Date: 25.MAY.2022 20:44:46

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:38:30

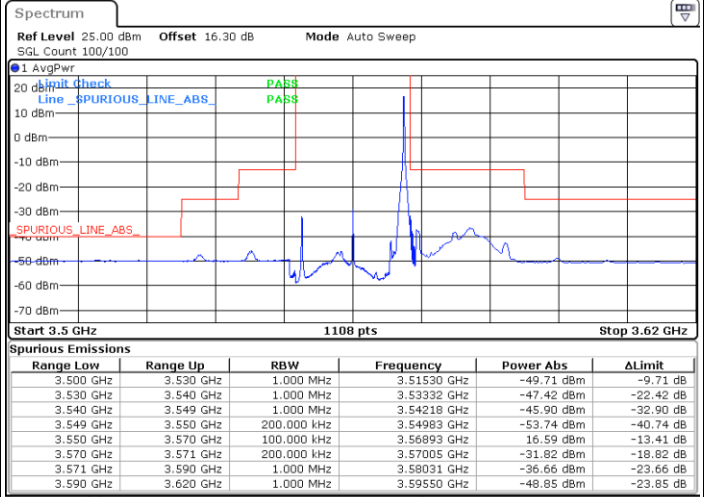
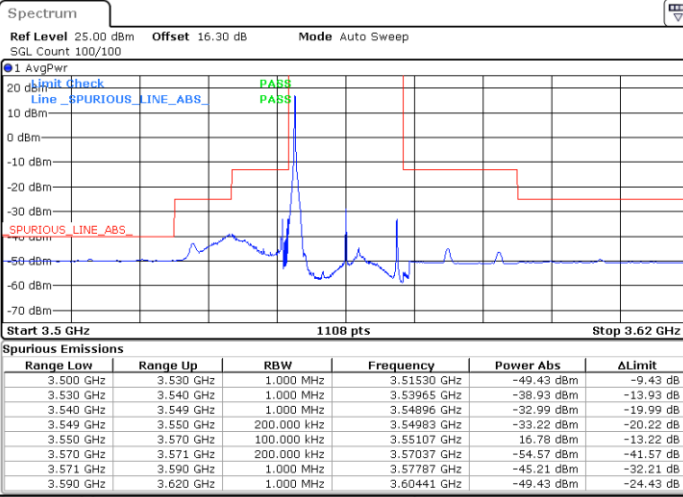


LTE Band 48 / 20MHz

16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

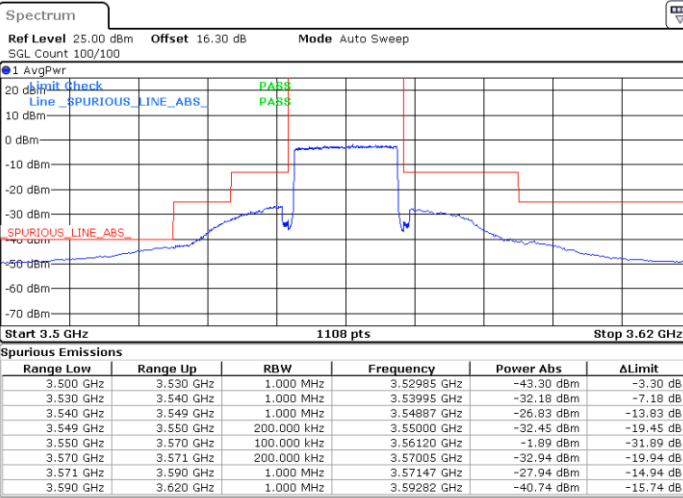


Date: 25.MAY.2022 21:05:02

Date: 25.MAY.2022 21:11:18

Lowest Channel / FullIRB

N/A



Date: 25.MAY.2022 20:58:45

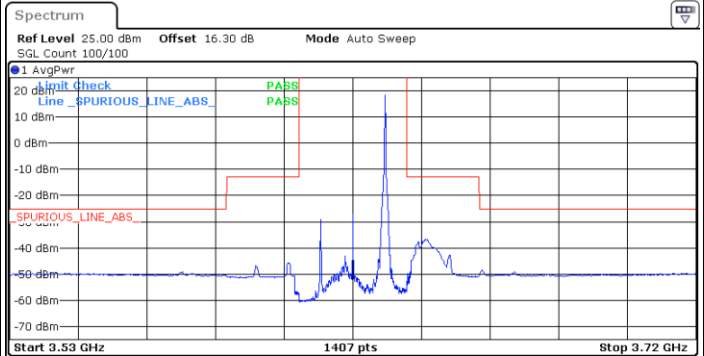
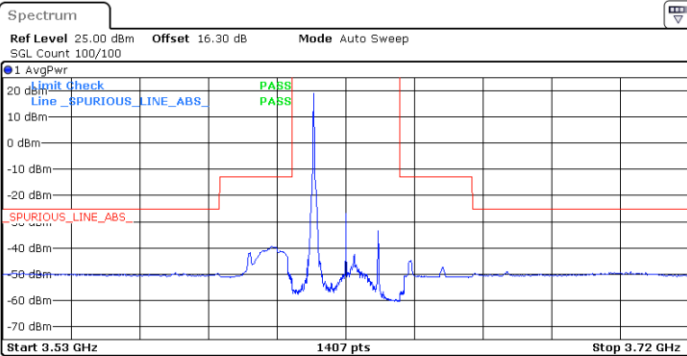


LTE Band 48 / 20MHz

16QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.57791 GHz	-49.56 dBm	-24.56 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60439 GHz	-39.38 dBm	-26.38 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60900 GHz	-49.24 dBm	-36.24 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.61611 GHz	19.17 dBm	-10.83 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64098 GHz	-56.45 dBm	-43.45 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64298 GHz	-44.93 dBm	-31.93 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66970 GHz	-49.22 dBm	-24.22 dB

Spurious Emissions

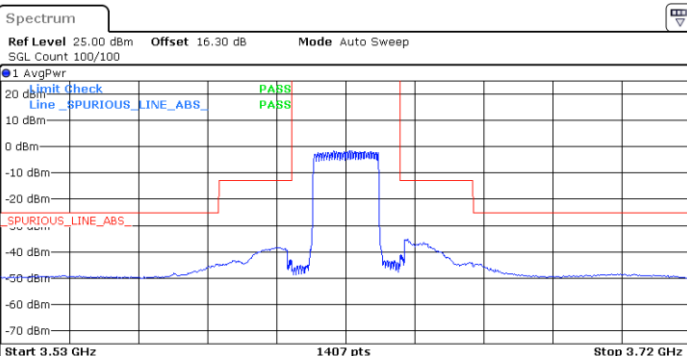
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.57791 GHz	-49.20 dBm	-24.20 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60721 GHz	-45.62 dBm	-32.62 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60949 GHz	-56.60 dBm	-43.60 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.63389 GHz	18.35 dBm	-11.65 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64096 GHz	-49.00 dBm	-36.00 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64504 GHz	-36.81 dBm	-23.81 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66075 GHz	-48.52 dBm	-23.52 dB

Date: 25.MAY.2022 21:08:10

Date: 25.MAY.2022 21:14:26

Middle Channel / FullIRB

N/A



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58955 GHz	-44.65 dBm	-19.65 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60546 GHz	-38.30 dBm	-25.30 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60960 GHz	-43.12 dBm	-30.12 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.62595 GHz	-1.61 dBm	-31.61 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64009 GHz	-41.07 dBm	-28.07 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64203 GHz	-35.28 dBm	-22.28 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66194 GHz	-44.74 dBm	-19.74 dB

Date: 25.MAY.2022 21:01:53

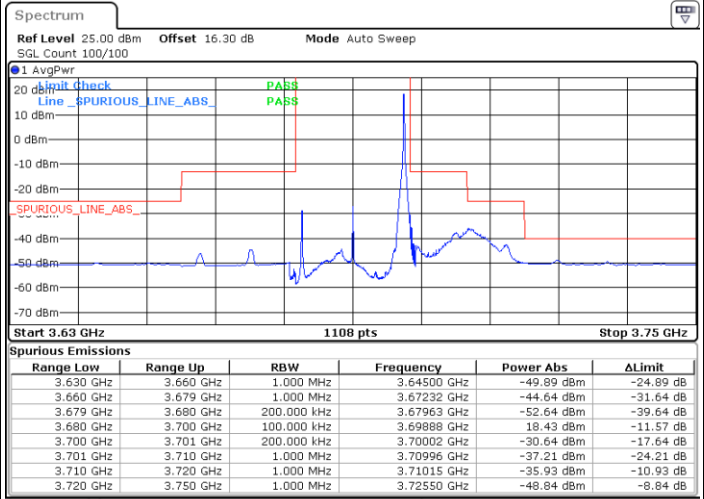
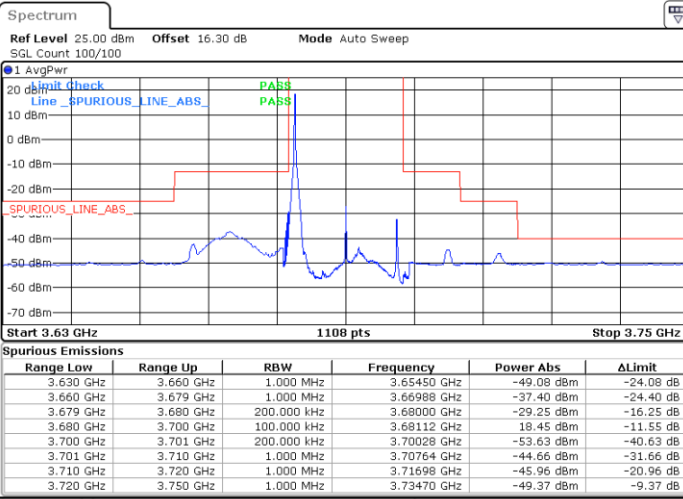


LTE Band 48 / 20MHz

16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

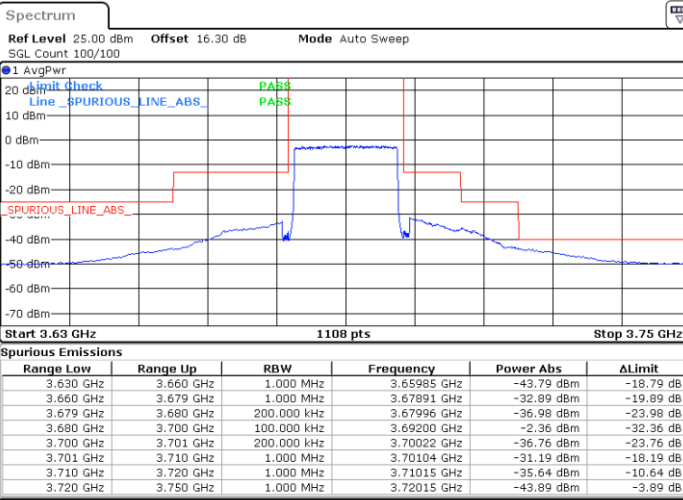


Date: 25.MAY.2022 21:09:12

Date: 25.MAY.2022 21:15:29

Highest Channel / FullIRB

N/A



Date: 25.MAY.2022 21:02:55

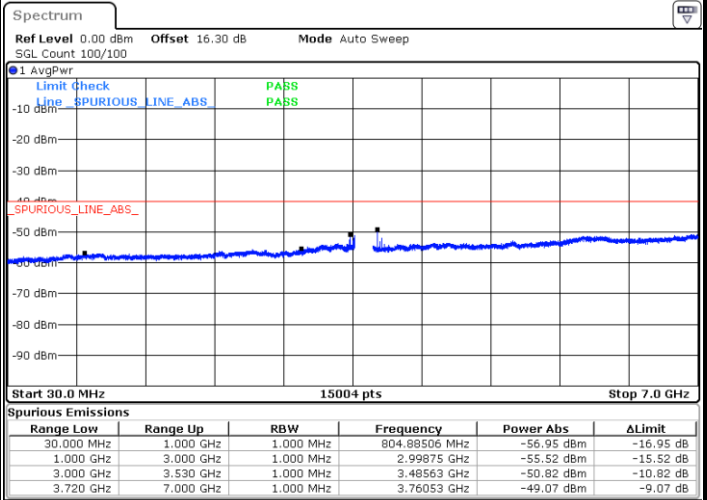
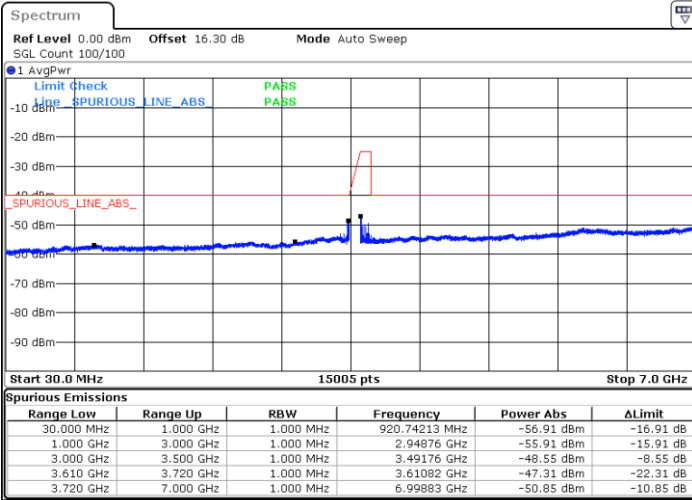


# Conducted Spurious Emission

## LTE Band 48 / 5MHz

### Lowest Channel / QPSK

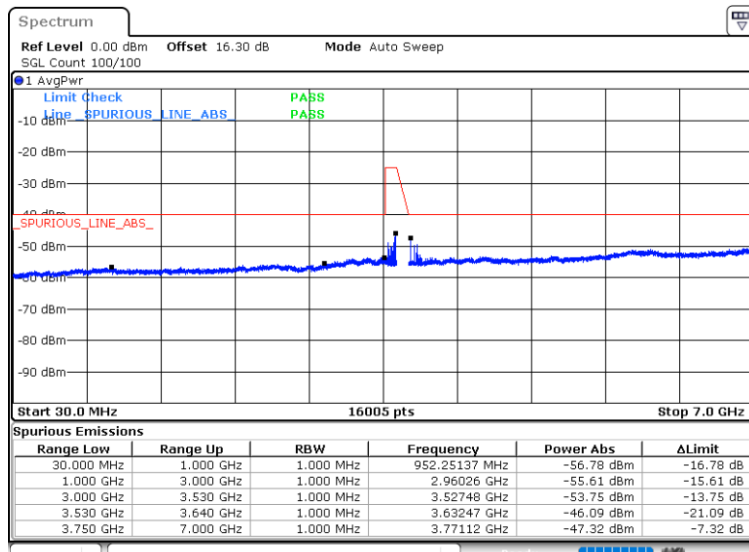
### Middle Channel / QPSK



Date: 25.MAY.2022 21:50:48

Date: 25.MAY.2022 21:52:01

### Highest Channel / QPSK

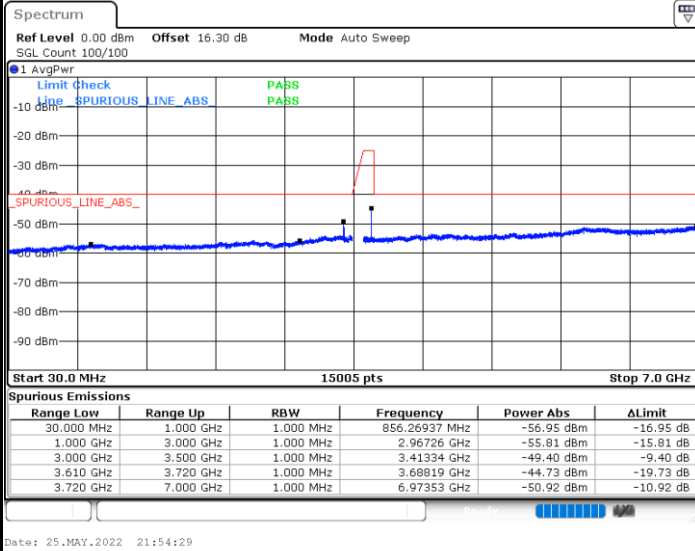


Date: 25.MAY.2022 21:53:14

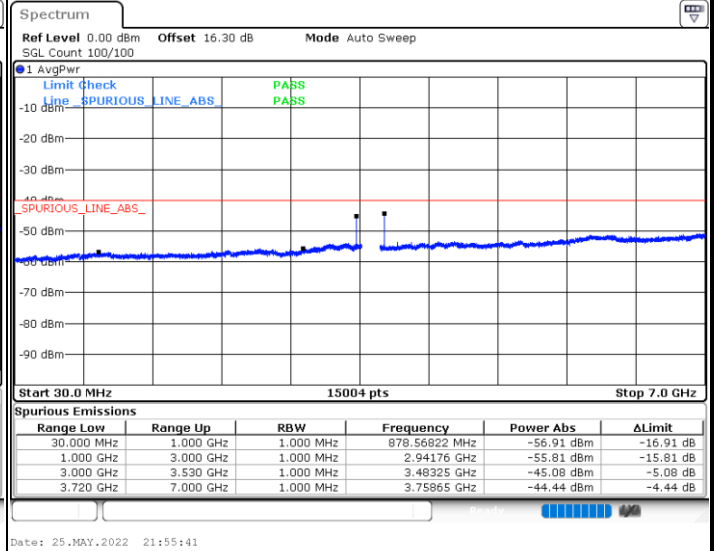


LTE Band 48 / 10MHz

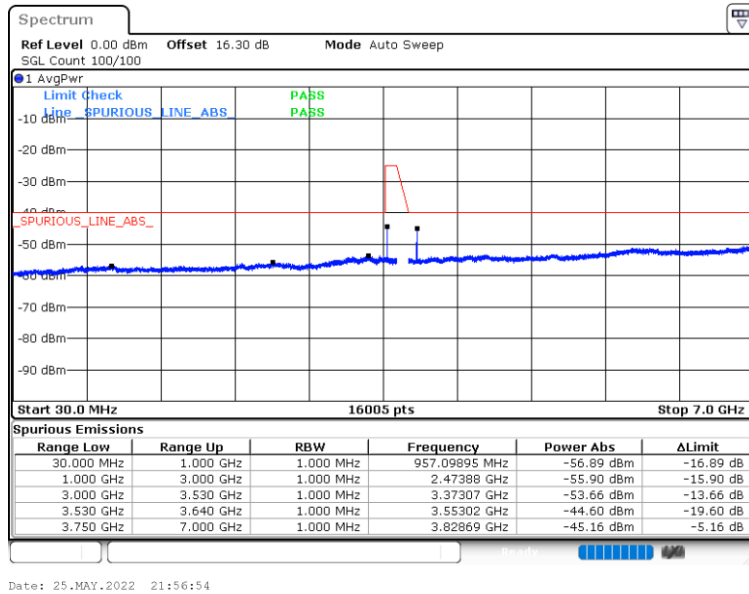
Lowest Channel / QPSK



Middle Channel / QPSK



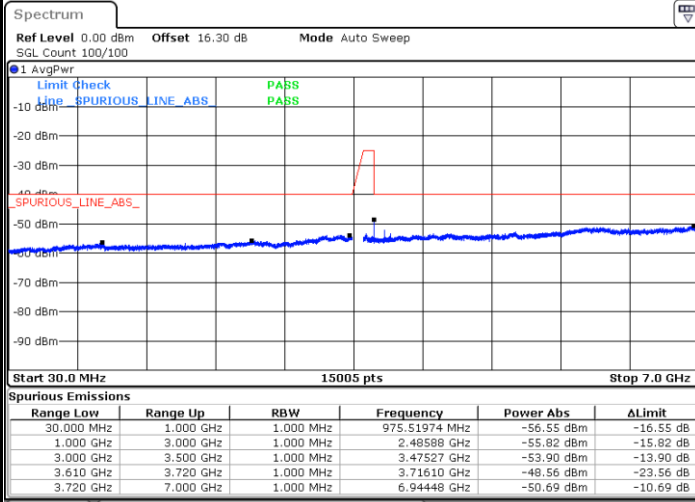
Highest Channel / QPSK





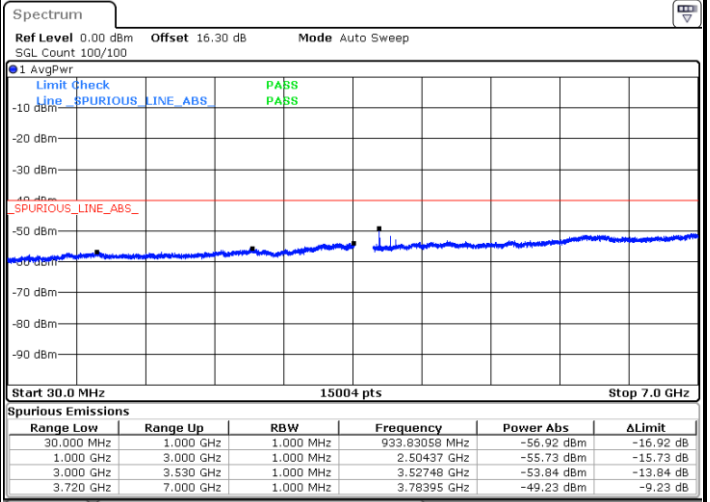
LTE Band 48 / 15MHz

Lowest Channel / QPSK



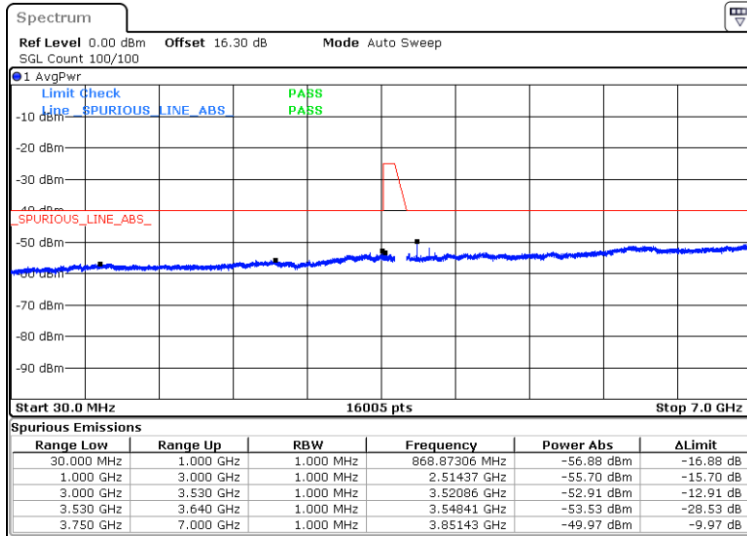
Date: 25.MAY.2022 21:59:17

Middle Channel / QPSK



Date: 25.MAY.2022 22:00:29

Highest Channel / QPSK



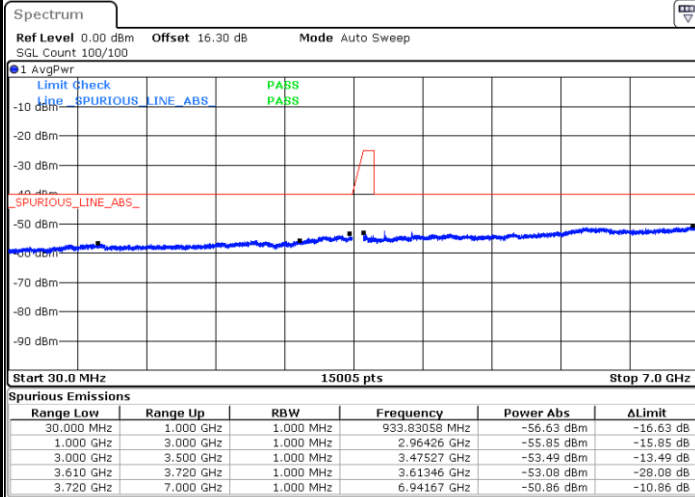
Date: 25.MAY.2022 22:01:42





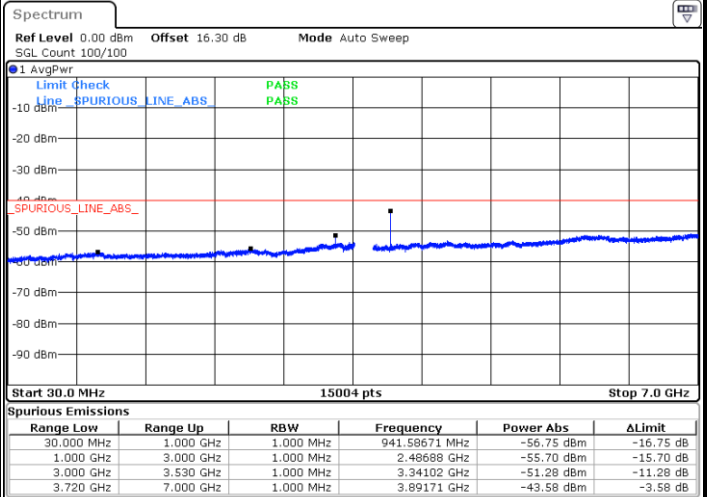
LTE Band 48 / 20MHz

Lowest Channel / QPSK



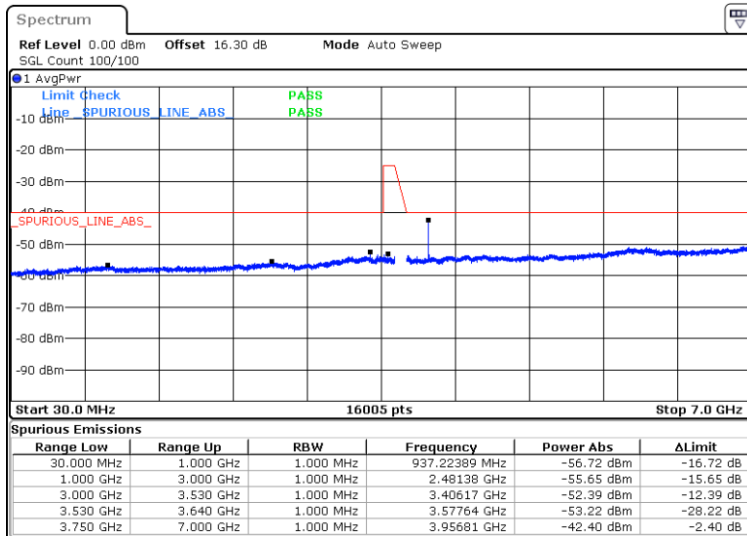
Date: 25.MAY.2022 22:02:56

Middle Channel / QPSK



Date: 25.MAY.2022 22:04:09

Highest Channel / QPSK



Date: 25.MAY.2022 22:05:22



### 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	0.0015	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0015	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0030	
-10	Normal Voltage	0.0022	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0028	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0002	

**Note:**

1. Normal Voltage = 7.5 V. ; Battery End Point (ACLRP) = 6.0 V. ; Maximum Voltage = 8.6 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# Appendix B. Test Results of Radiated Test

<EUT with Battery 1>

## LTE Band 48

LTE Band 48 / 20MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7100	-55.69	-40	-15.69	-53.82	-65.40	1.84	11.55	H
	10653	-52.66	-40	-12.66	-55.26	-61.13	2.23	10.71	H
	14205	-43.53	-40	-3.53	-52.26	-53.16	2.65	12.28	H
	21306	-62.30	-40	-22.30	-75.16	-77.15	3.32	18.17	H
	24857	-58.58	-40	-18.58	-76.87	-73.35	3.71	18.49	H
	28408	-56.17	-40	-16.17	-76.74	-71.64	3.99	19.46	H
									H
	7100	-54.80	-40	-14.80	-53.17	-64.51	1.84	11.55	V
	10653	-52.72	-40	-12.72	-54.92	-61.19	2.23	10.71	V
	14205	-42.71	-40	-2.71	-51.32	-52.34	2.65	12.28	V
	21306	-62.71	-40	-22.71	-75.27	-77.56	3.32	18.17	V
	24857	-58.87	-40	-18.87	-76.84	-73.64	3.71	18.49	V
	28408	-56.40	-40	-16.40	-76.55	-71.87	3.99	19.46	V
									V



Middle	7230	-56.62	-40	-16.62	-55.09	-66.08	1.86	11.32	H
	10850	-51.11	-40	-11.11	-54.09	-59.48	2.22	10.59	H
	14462	-43.74	-40	-3.74	-52.71	-53.24	2.62	12.12	H
	18080	-60.96	-40	-20.96	-70.64	-75.33	3.23	17.60	H
	21696	-60.31	-40	-20.31	-74.05	-75.48	3.42	18.60	H
	25312	-58.59	-40	-18.59	-77.07	-73.59	3.77	18.77	H
									H
	7230	-55.14	-40	-15.14	-53.96	-64.60	1.86	11.32	V
	10850	-51.18	-40	-11.18	-53.95	-59.55	2.22	10.59	V
	14462	-44.11	-40	-4.11	-53.51	-53.61	2.62	12.12	V
	18080	-61.82	-40	-21.82	-71.2	-76.19	3.23	17.60	V
	21696	-60.95	-40	-20.95	-74.35	-76.12	3.42	18.60	V
	25312	-58.01	-40	-18.01	-76.2	-73.01	3.77	18.77	V
									V
Highest	7360	-55.52	-40	-15.52	-54.3	-64.98	1.92	11.38	H
	11045	-51.90	-40	-11.90	-55.32	-60.24	2.22	10.55	H
	14724	-47.49	-40	-7.49	-56.58	-57.49	2.59	12.59	H
	18405	-62.51	-40	-22.51	-72.88	-76.87	3.24	17.60	H
	22086	-61.18	-40	-21.18	-75.47	-76.55	3.52	18.88	H
	25770	-58.66	-40	-18.66	-77.41	-73.83	3.88	19.05	H
									H
	7360	-54.84	-40	-14.84	-53.77	-64.30	1.92	11.38	V
	11045	-51.66	-40	-11.66	-55.01	-60.00	2.22	10.55	V
	14724	-46.62	-40	-6.62	-56.66	-56.62	2.59	12.59	V
	18405	-62.56	-40	-22.56	-72.7	-76.92	3.24	17.60	V
	22086	-61.78	-40	-21.78	-75.68	-77.15	3.52	18.88	V
	25770	-58.42	-40	-18.42	-76.88	-73.59	3.88	19.05	V
									V

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



<EUT with Battery 2>

LTE Band 48 / 20MHz / QPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7100	-55.49	-40	-15.49	-53.62	-65.20	1.84	11.55	H
	10653	-52.80	-40	-12.80	-55.4	-61.27	2.23	10.71	H
	14205	-42.42	-40	-2.42	-51.15	-52.05	2.65	12.28	H
	21306	-62.88	-40	-22.88	-75.74	-77.73	3.32	18.17	H
	24857	-58.66	-40	-18.66	-76.95	-73.43	3.71	18.49	H
	28408	-56.20	-40	-16.20	-76.77	-71.67	3.99	19.46	H
									H
	7100	-55.25	-40	-15.25	-53.62	-64.96	1.84	11.55	V
	10653	-53.19	-40	-13.19	-55.38	-61.66	2.23	10.71	V
	14205	-40.98	-40	-0.98	-49.59	-50.61	2.65	12.28	V
	21306	-62.88	-40	-22.88	-75.44	-77.73	3.32	18.17	V
	24857	-58.71	-40	-18.71	-76.68	-73.48	3.71	18.49	V
	28408	-56.60	-40	-16.60	-76.75	-72.07	3.99	19.46	V
									V

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

————THE END————