

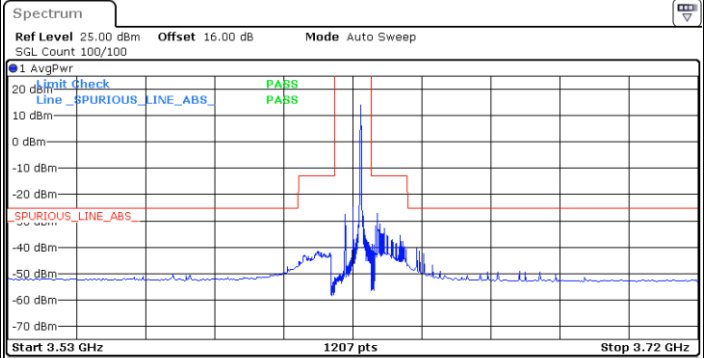
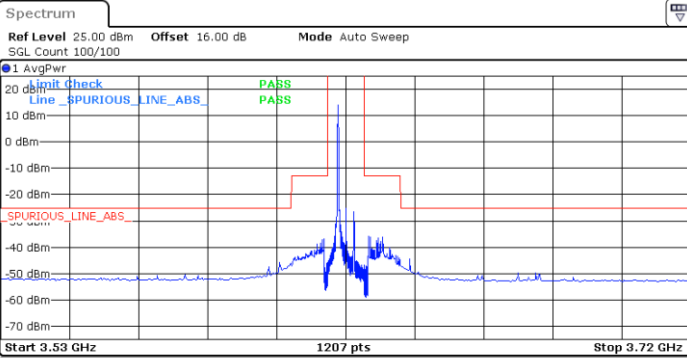


LTE Band 48 / 5MHz

256QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.610 GHz	1.000 MHz	3.60662 GHz	-45.66 dBm	-20.66 dB
3.610 GHz	3.619 GHz	1.000 MHz	3.61896 GHz	-36.74 dBm	-23.74 dB
3.619 GHz	3.620 GHz	50.000 kHz	3.61992 GHz	-46.00 dBm	-33.00 dB
3.620 GHz	3.630 GHz	100.000 kHz	3.62286 GHz	14.00 dBm	-16.00 dB
3.630 GHz	3.631 GHz	50.000 kHz	3.63002 GHz	-46.81 dBm	-33.81 dB
3.631 GHz	3.640 GHz	1.000 MHz	3.63131 GHz	-35.84 dBm	-22.84 dB
3.640 GHz	3.720 GHz	1.000 MHz	3.64259 GHz	-44.59 dBm	-19.59 dB

Spurious Emissions

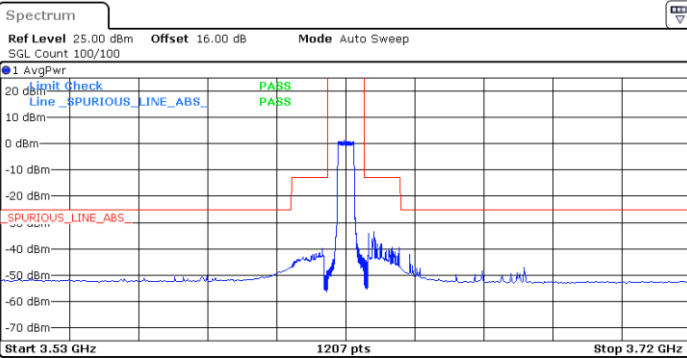
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.610 GHz	1.000 MHz	3.60980 GHz	-47.46 dBm	-22.46 dB
3.610 GHz	3.619 GHz	1.000 MHz	3.61530 GHz	-41.31 dBm	-28.31 dB
3.619 GHz	3.620 GHz	50.000 kHz	3.61996 GHz	-51.98 dBm	-38.98 dB
3.620 GHz	3.630 GHz	100.000 kHz	3.62717 GHz	14.12 dBm	-15.88 dB
3.630 GHz	3.631 GHz	50.000 kHz	3.63040 GHz	-38.74 dBm	-25.74 dB
3.631 GHz	3.640 GHz	1.000 MHz	3.63167 GHz	-27.30 dBm	-14.30 dB
3.640 GHz	3.720 GHz	1.000 MHz	3.64259 GHz	-40.37 dBm	-15.37 dB

Date: 20.SEP.2022 23:23:03

Date: 20.SEP.2022 23:28:58

Middle Channel / FullIRB

N/A



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.610 GHz	1.000 MHz	3.60980 GHz	-47.02 dBm	-22.02 dB
3.610 GHz	3.619 GHz	1.000 MHz	3.61860 GHz	-39.64 dBm	-26.64 dB
3.619 GHz	3.620 GHz	50.000 kHz	3.61978 GHz	-48.40 dBm	-35.40 dB
3.620 GHz	3.630 GHz	100.000 kHz	3.62455 GHz	1.28 dBm	-28.72 dB
3.630 GHz	3.631 GHz	50.000 kHz	3.63002 GHz	-43.67 dBm	-30.67 dB
3.631 GHz	3.640 GHz	1.000 MHz	3.63265 GHz	-33.59 dBm	-20.59 dB
3.640 GHz	3.720 GHz	1.000 MHz	3.64259 GHz	-42.27 dBm	-17.27 dB

Date: 20.SEP.2022 23:25:58

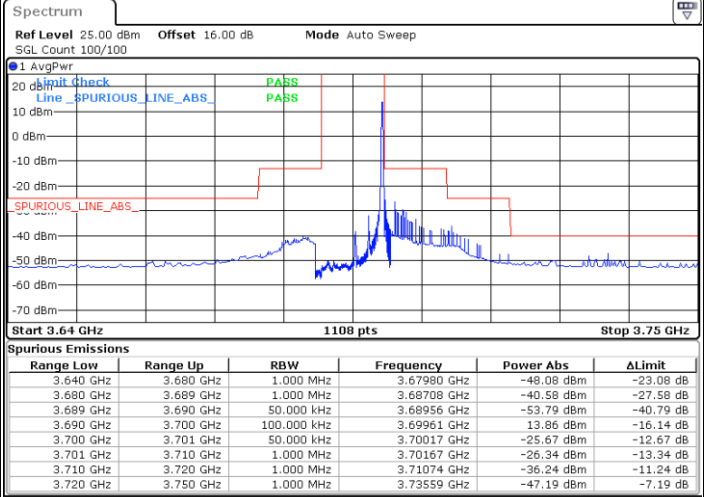
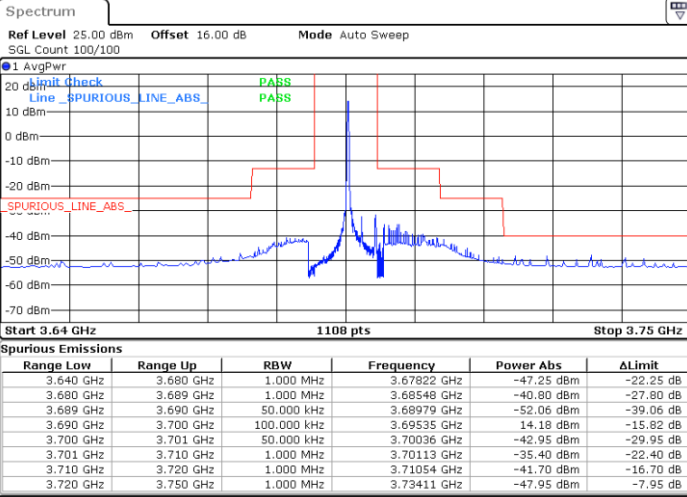


LTE Band 48 / 5MHz

256QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

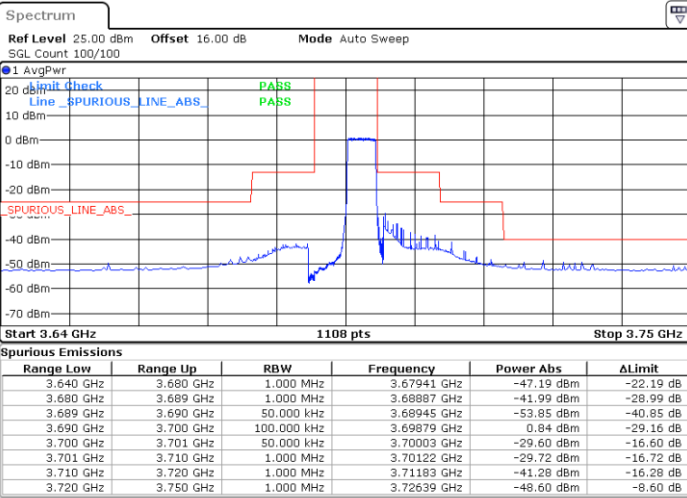


Date: 20.SEP.2022 23:24:01

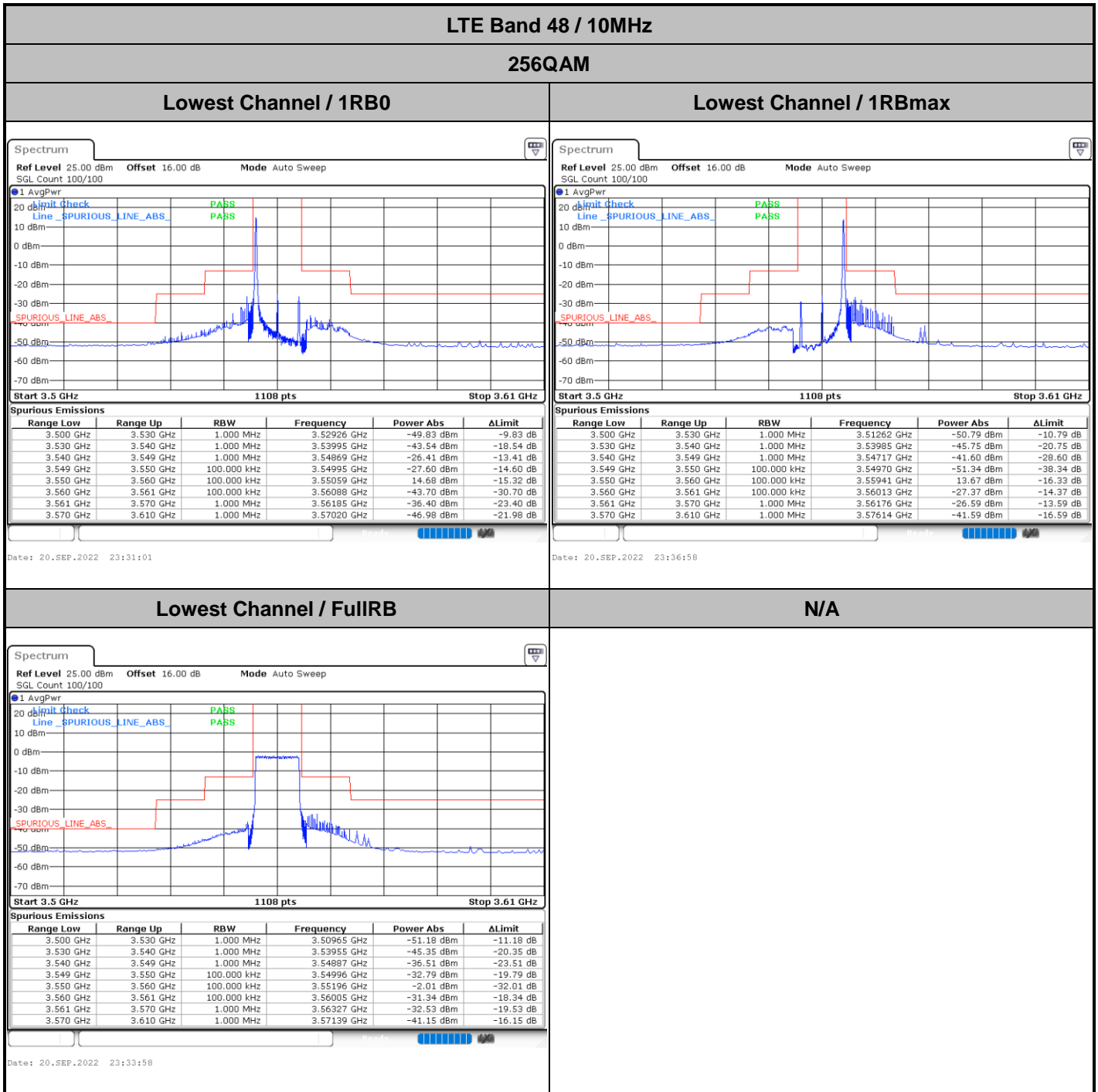
Date: 20.SEP.2022 23:29:57

Highest Channel / FullIRB

N/A



Date: 20.SEP.2022 23:26:57



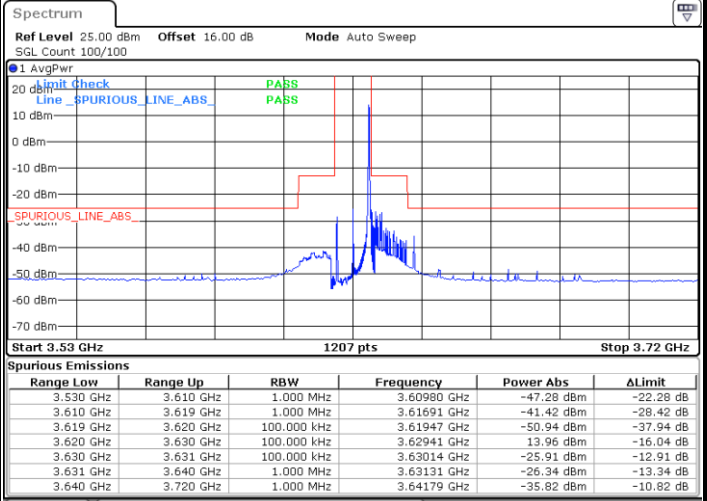
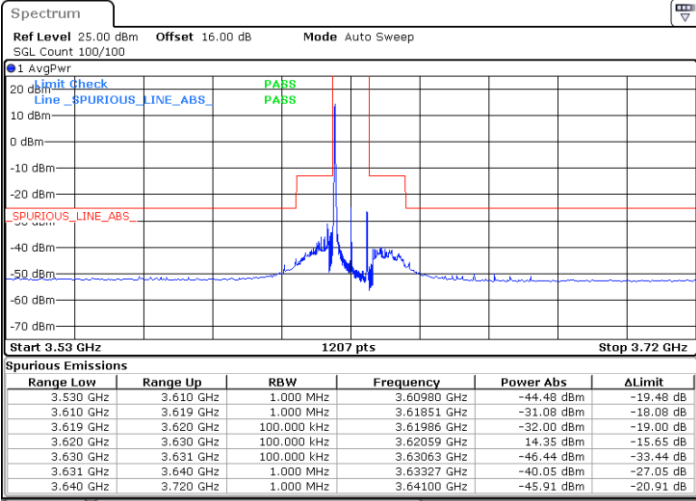


LTE Band 48 / 10MHz

256QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax

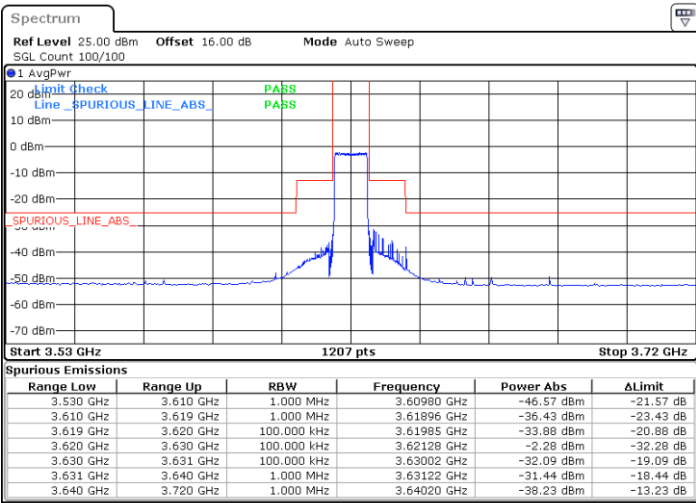


Date: 20.SEP.2022 23:32:00

Date: 20.SEP.2022 23:37:57

Middle Channel / FullIRB

N/A



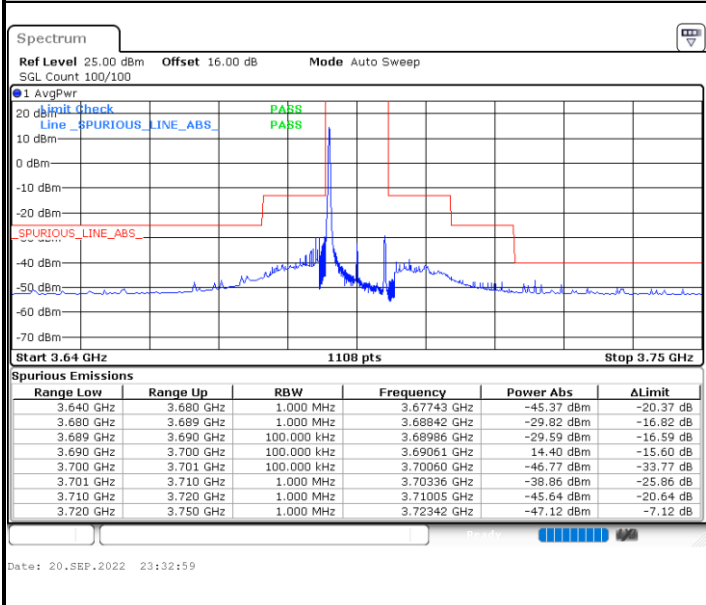
Date: 20.SEP.2022 23:34:57



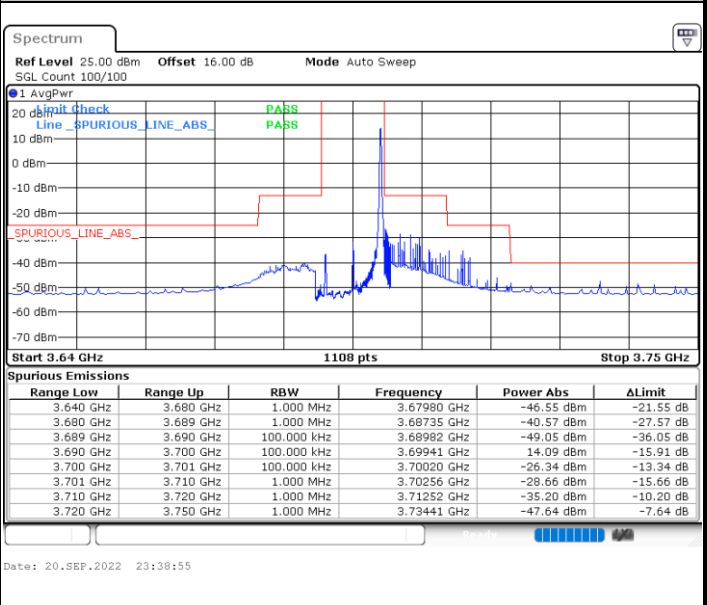
LTE Band 48 / 10MHz

256QAM

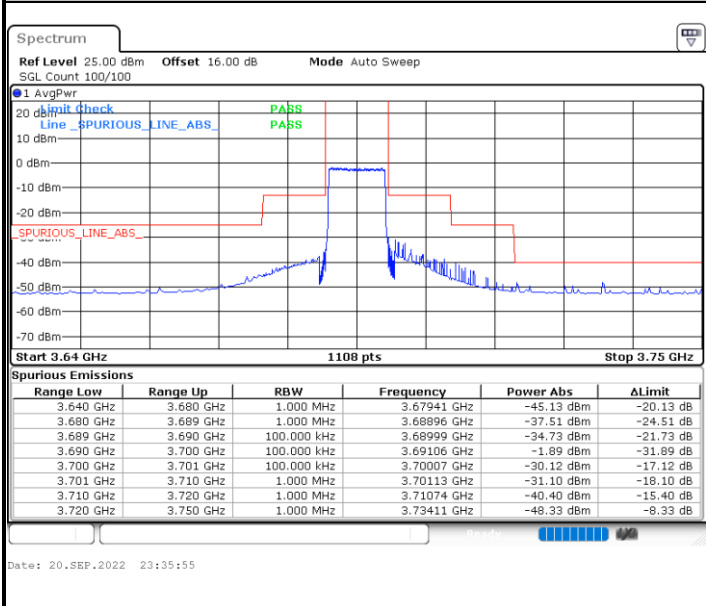
Highest Channel / 1RB0



Highest Channel / 1RBmax



Highest Channel / FullIRB



N/A

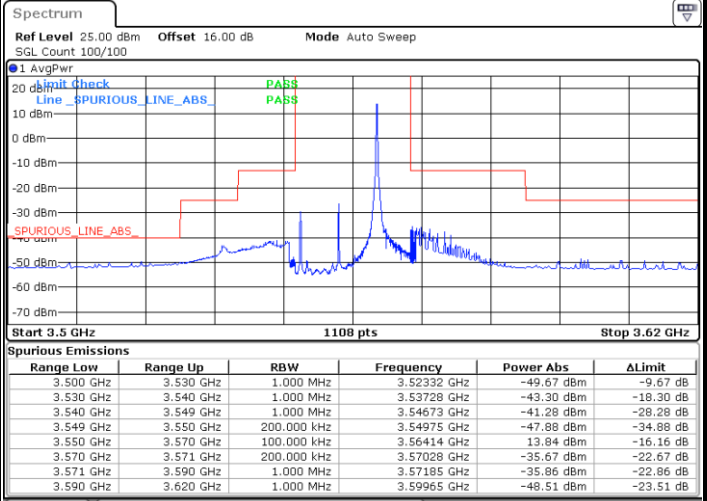
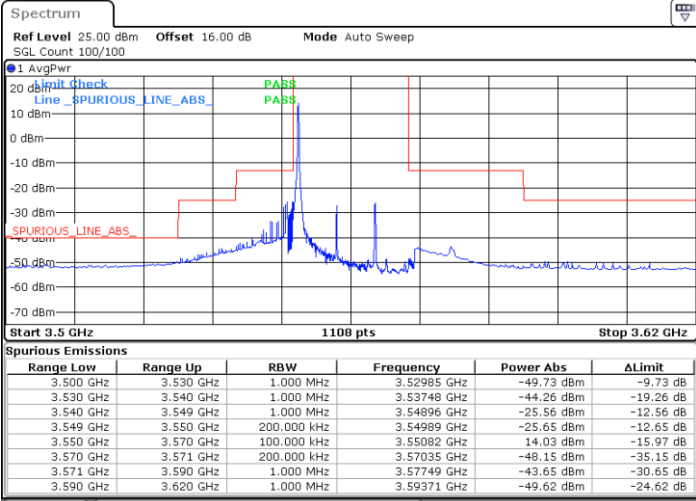


LTE Band 48 / 15MHz

256QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

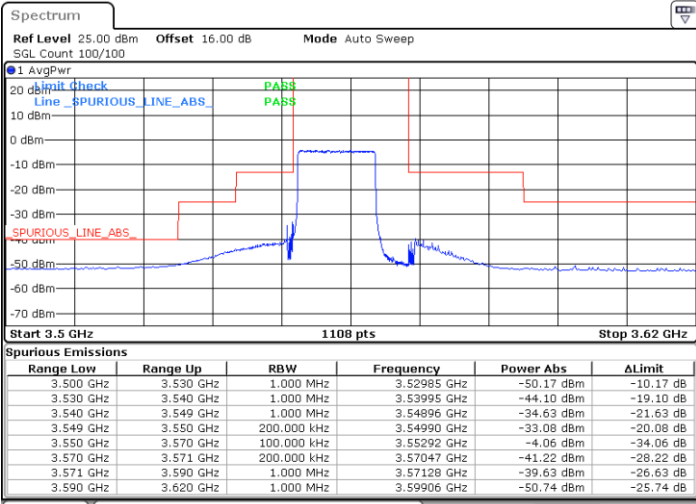


Date: 20.SEP.2022 23:40:00

Date: 20.SEP.2022 23:45:53

Lowest Channel / FullIRB

N/A



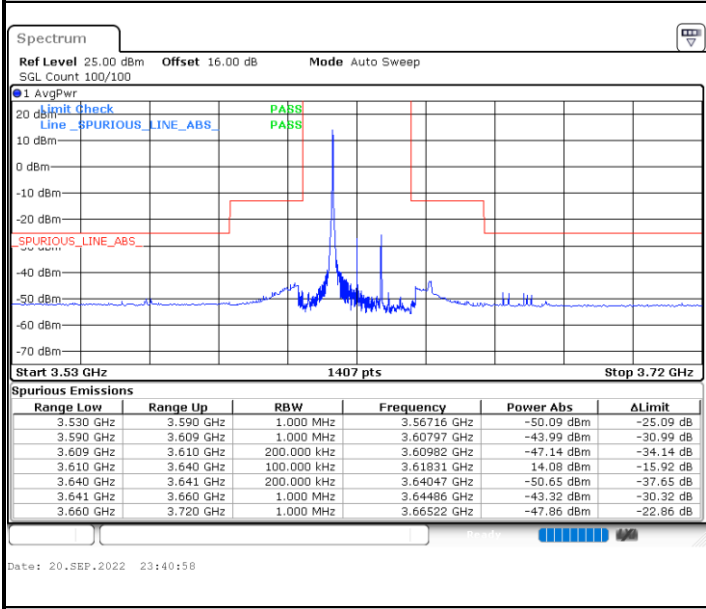
Date: 20.SEP.2022 23:42:56



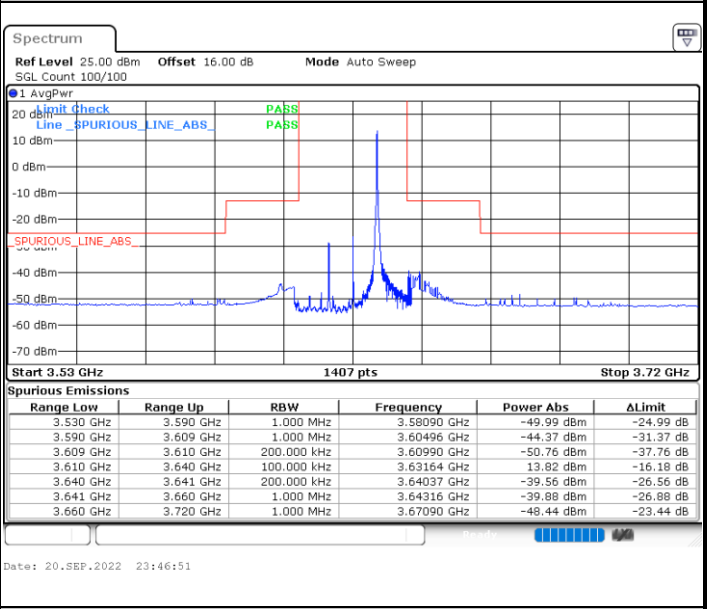
LTE Band 48 / 15MHz

256QAM

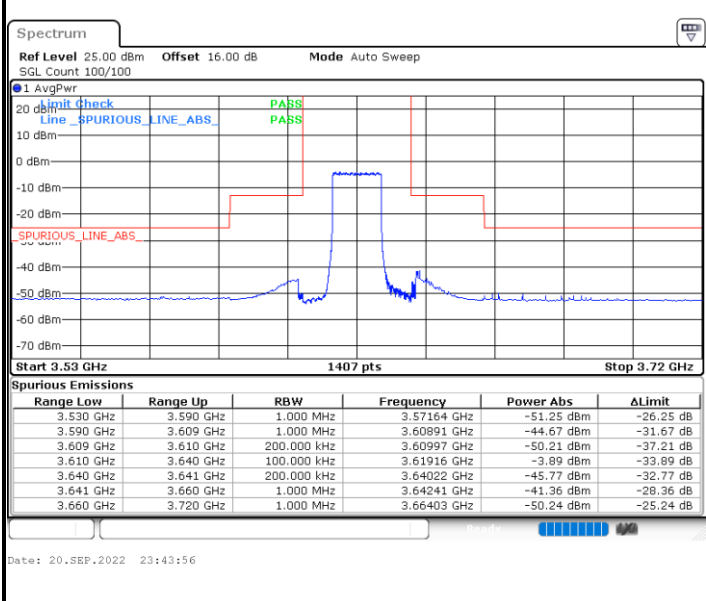
Middle Channel / 1RB0



Middle Channel / 1RBmax



Middle Channel / FullIRB



N/A

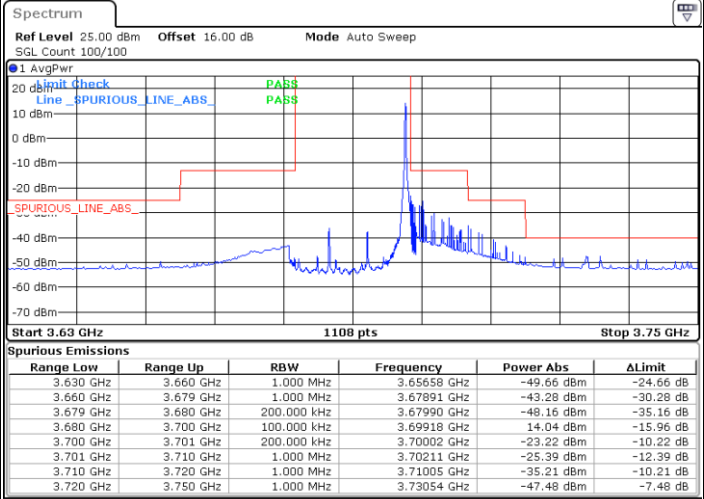
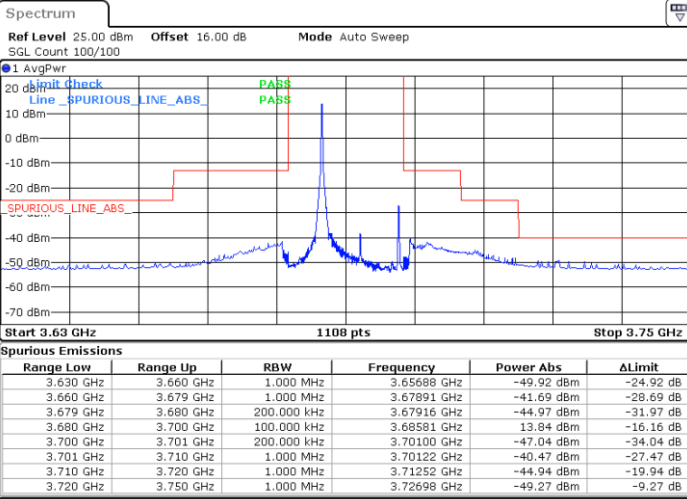


LTE Band 48 / 15MHz

256QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

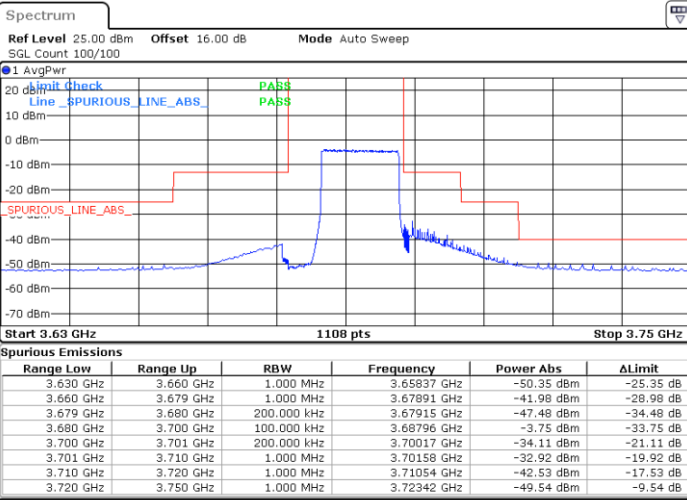


Date: 20.SEP.2022 23:41:57

Date: 20.SEP.2022 23:47:49

Highest Channel / FullIRB

N/A



Date: 20.SEP.2022 23:44:55

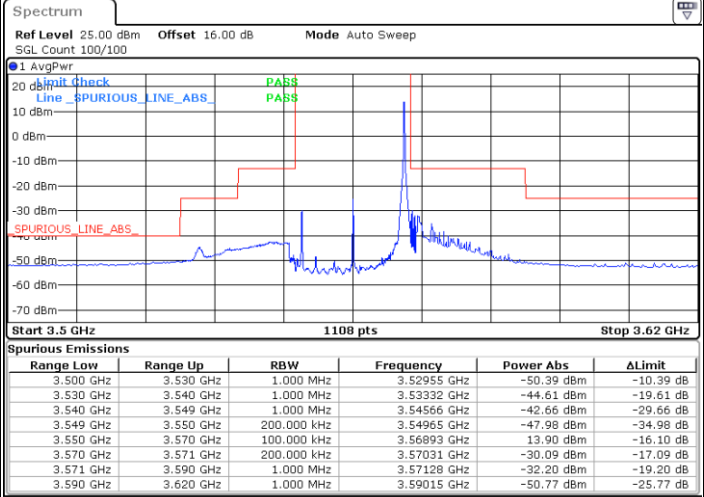
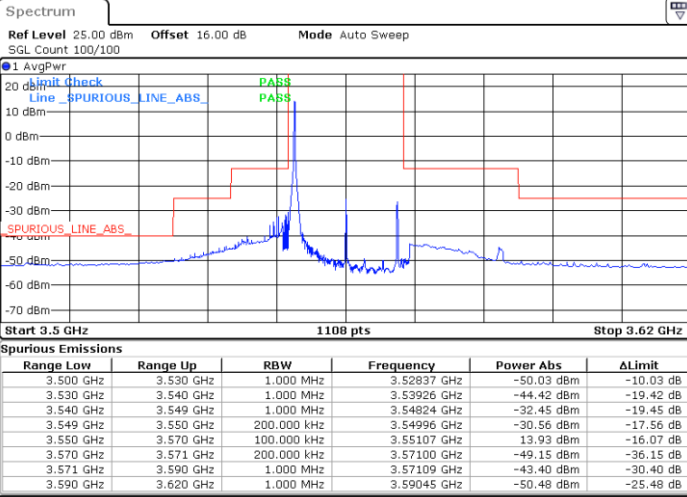


LTE Band 48 / 20MHz

256QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

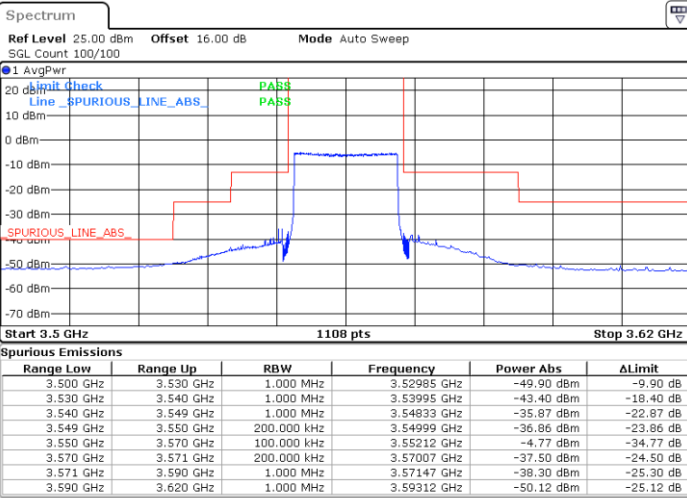


Date: 20.SEP.2022 23:51:48

Date: 20.SEP.2022 23:54:48

Lowest Channel / FullIRB

N/A



Date: 20.SEP.2022 23:48:53

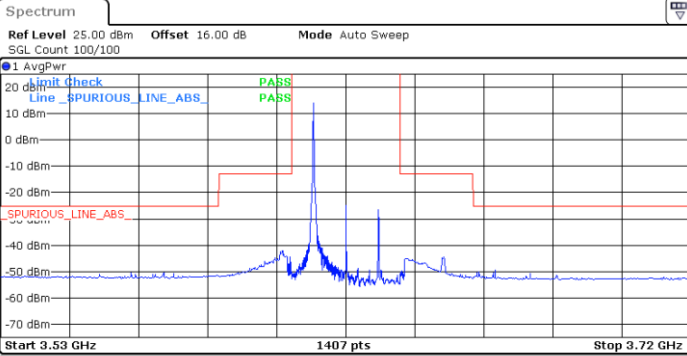


LTE Band 48 / 20MHz

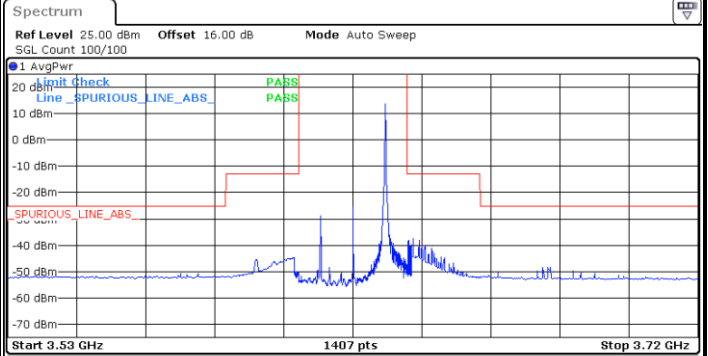
256QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.56597 GHz	-50.40 dBm	-25.40 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60740 GHz	-42.14 dBm	-29.14 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60967 GHz	-44.42 dBm	-31.42 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.61611 GHz	13.99 dBm	-16.01 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64033 GHz	-49.68 dBm	-36.68 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.65182 GHz	-44.46 dBm	-31.46 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66612 GHz	-49.32 dBm	-24.32 dB



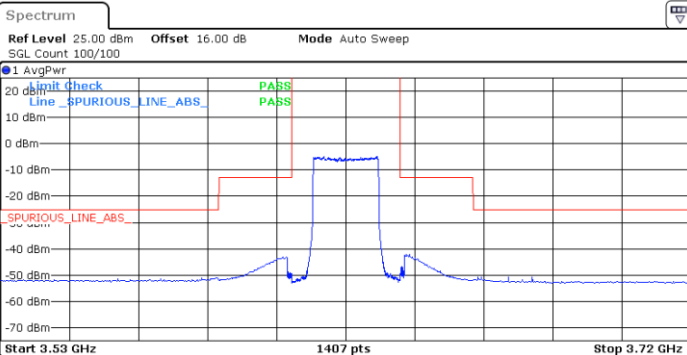
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58239 GHz	-50.72 dBm	-25.72 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60872 GHz	-44.64 dBm	-31.64 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60986 GHz	-49.99 dBm	-36.99 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.63394 GHz	13.75 dBm	-16.25 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64041 GHz	-38.20 dBm	-25.20 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64147 GHz	-37.57 dBm	-24.57 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.67925 GHz	-48.35 dBm	-23.35 dB

Date: 20.SEP.2022 23:52:46

Date: 20.SEP.2022 23:55:47

Middle Channel / FullIRB

N/A



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.530 GHz	3.590 GHz	1.000 MHz	3.58955 GHz	-51.03 dBm	-26.03 dB
3.590 GHz	3.609 GHz	1.000 MHz	3.60872 GHz	-42.96 dBm	-29.96 dB
3.609 GHz	3.610 GHz	200.000 kHz	3.60904 GHz	-48.85 dBm	-35.85 dB
3.610 GHz	3.640 GHz	100.000 kHz	3.61891 GHz	-4.81 dBm	-34.81 dB
3.640 GHz	3.641 GHz	200.000 kHz	3.64032 GHz	-46.68 dBm	-33.68 dB
3.641 GHz	3.660 GHz	1.000 MHz	3.64260 GHz	-42.13 dBm	-29.13 dB
3.660 GHz	3.720 GHz	1.000 MHz	3.66970 GHz	-50.64 dBm	-25.64 dB

Date: 20.SEP.2022 23:49:51

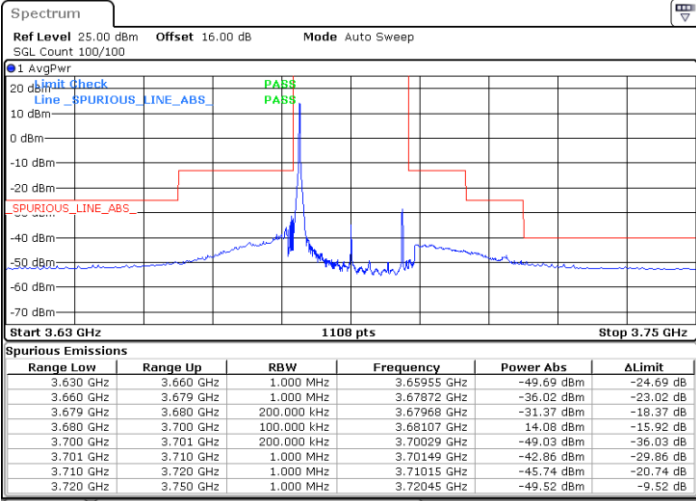


LTE Band 48 / 20MHz

256QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax

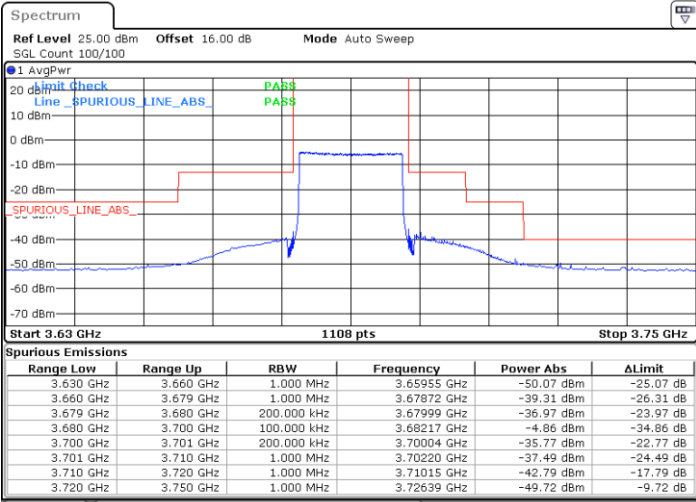


Date: 20.SEP.2022 23:53:45

Date: 20.SEP.2022 23:56:45

Highest Channel / FullIRB

N/A



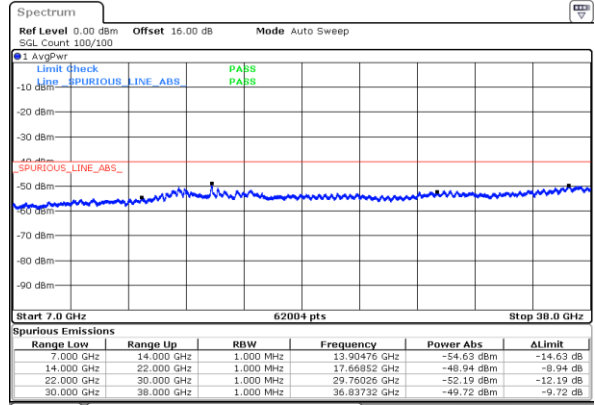
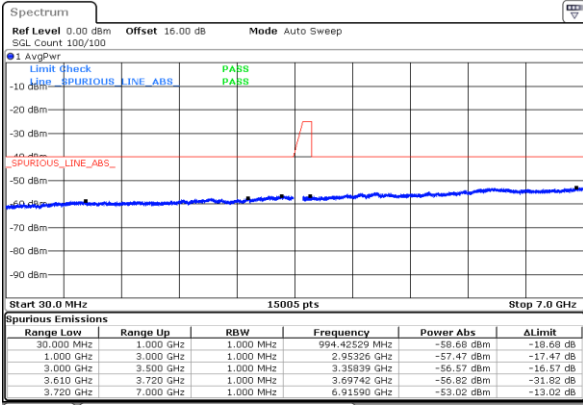
Date: 20.SEP.2022 23:50:49



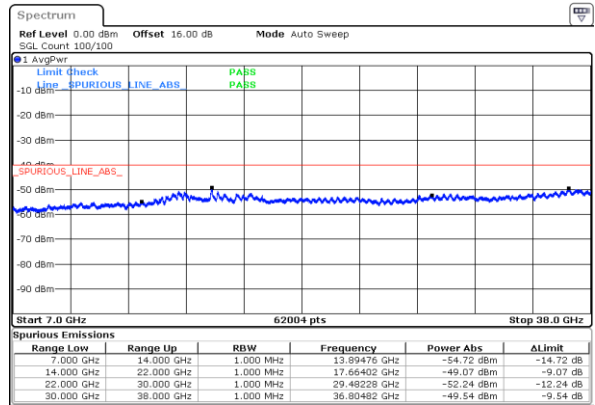
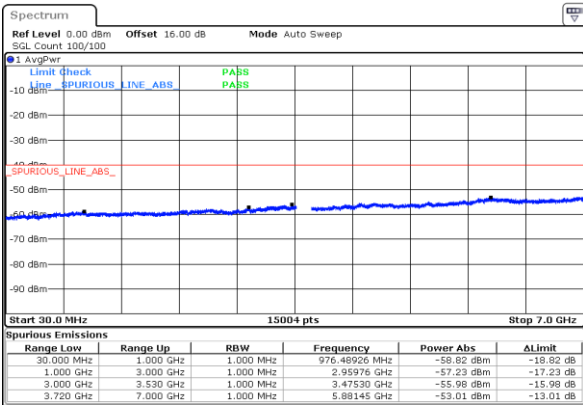
Conducted Spurious Emission

LTE Band 48 / 5MHz

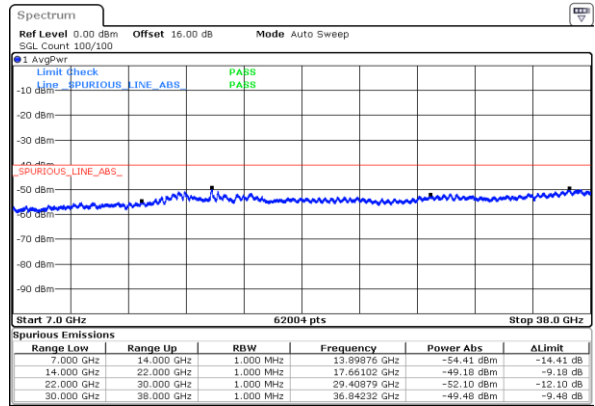
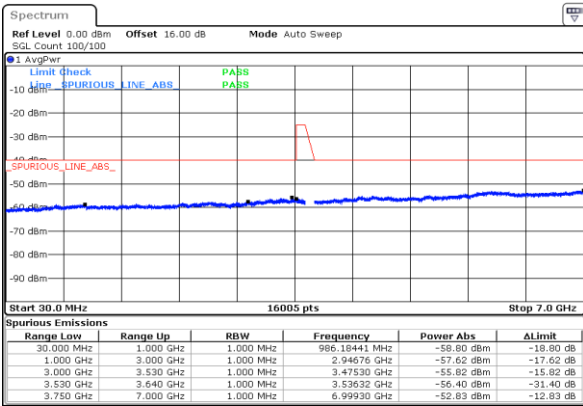
Lowest Channel / QPSK



Middle Channel / QPSK



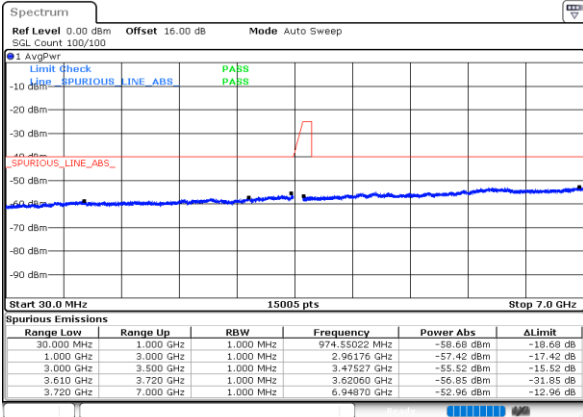
Highest Channel / QPSK



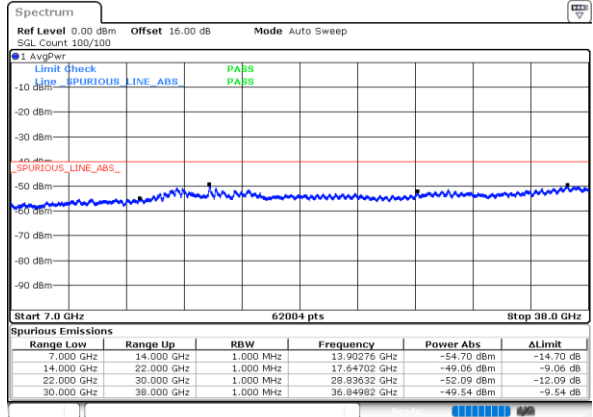


LTE Band 48 / 10MHz

Lowest Channel / QPSK

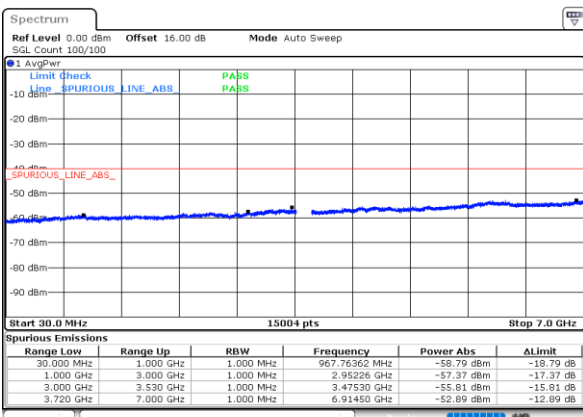


Date: 21.SEP.2022 00:48:20

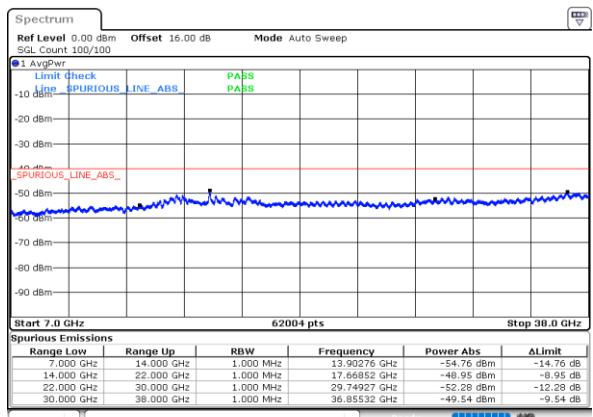


Date: 21.SEP.2022 01:06:26

Middle Channel / QPSK

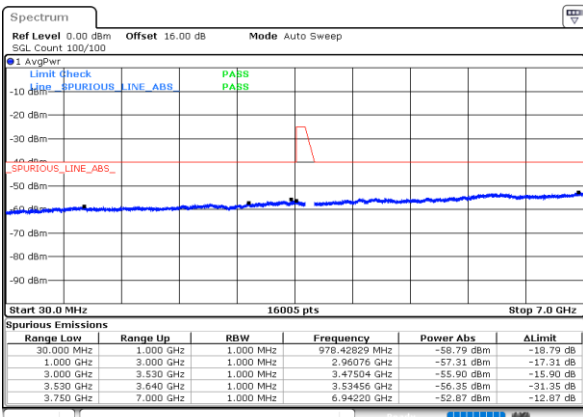


Date: 21.SEP.2022 00:49:40

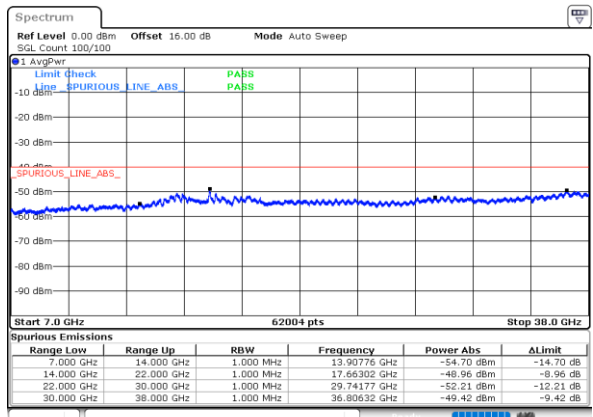


Date: 21.SEP.2022 01:07:55

Highest Channel / QPSK



Date: 21.SEP.2022 00:51:17

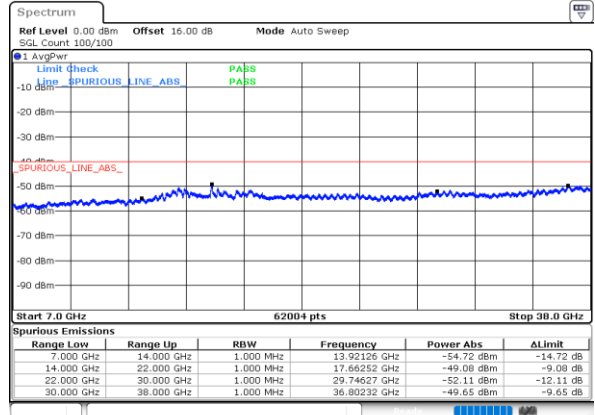
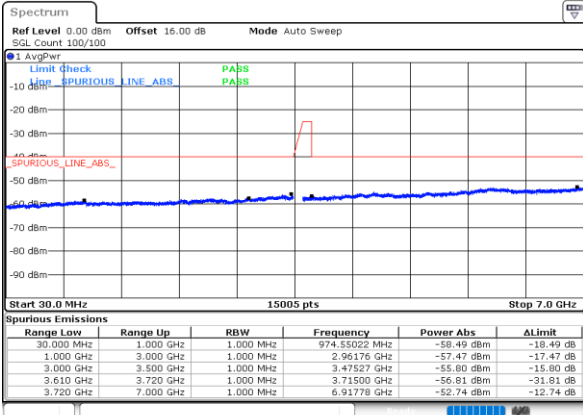


Date: 21.SEP.2022 01:09:24

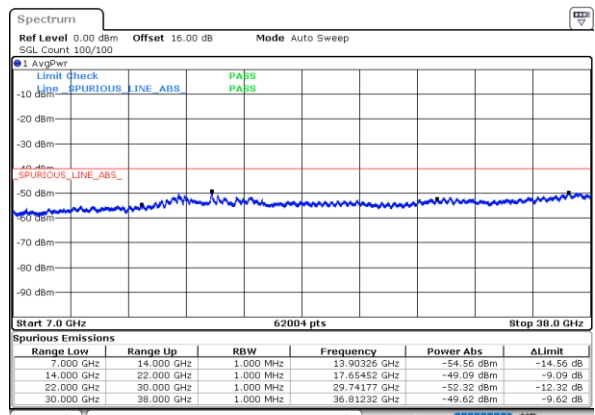
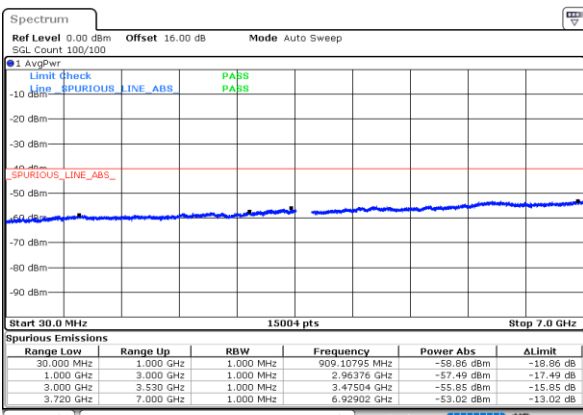


LTE Band 48 / 15MHz

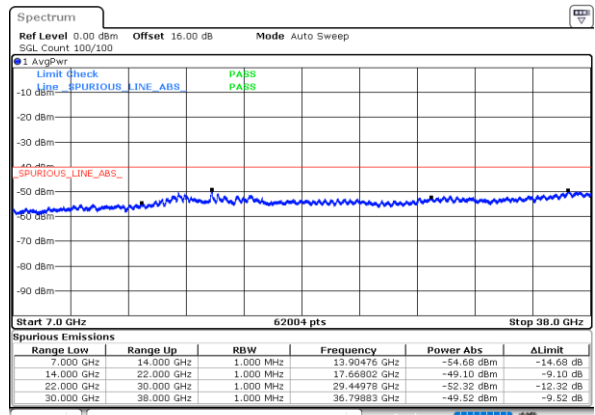
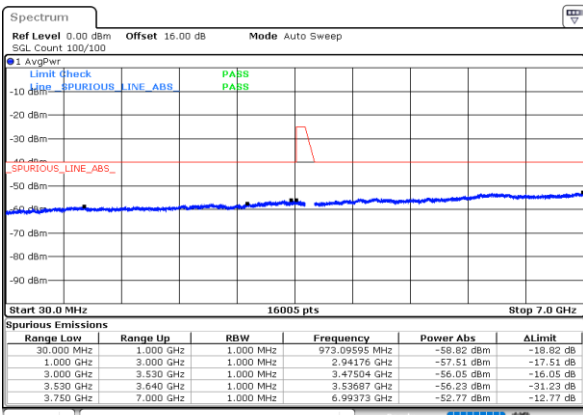
Lowest Channel / QPSK



Middle Channel / QPSK



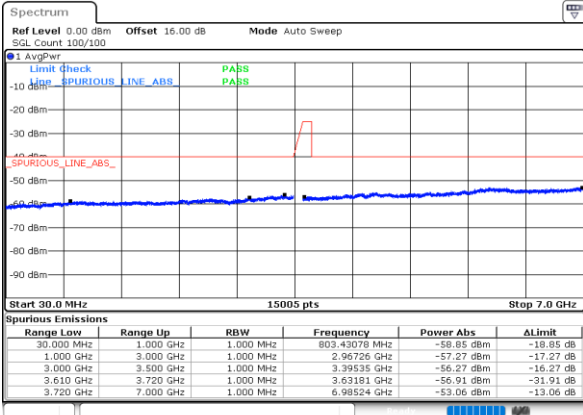
Highest Channel / QPSK



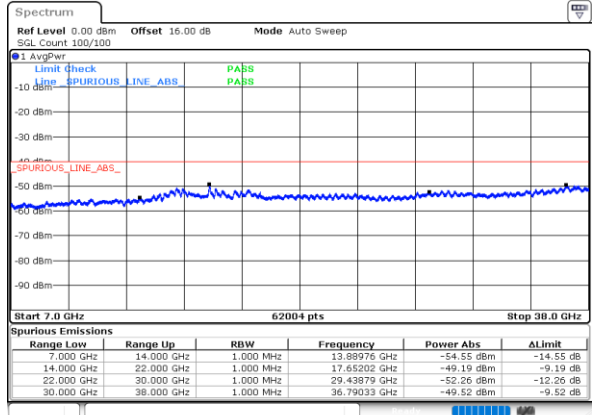


LTE Band 48 / 20MHz

Lowest Channel / QPSK

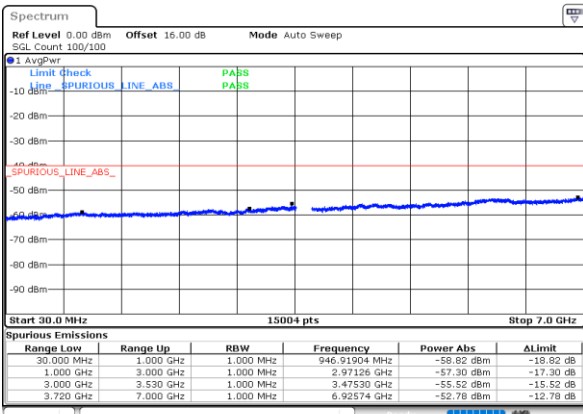


Date: 21.SEP.2022 00:57:21

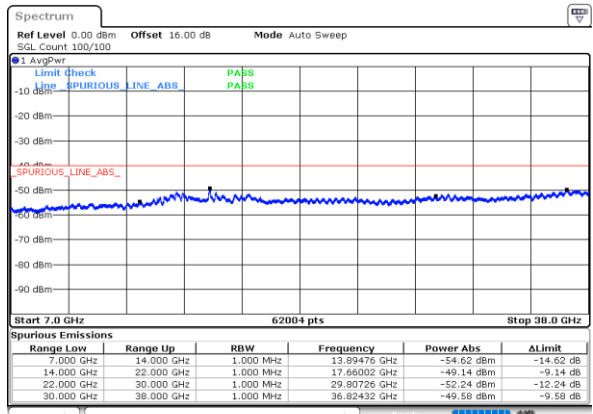


Date: 21.SEP.2022 01:15:32

Middle Channel / QPSK

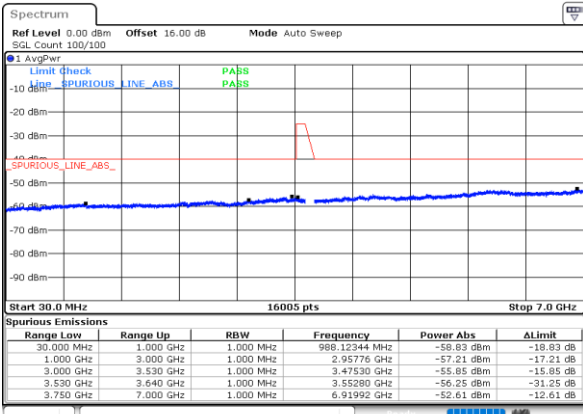


Date: 21.SEP.2022 00:58:50

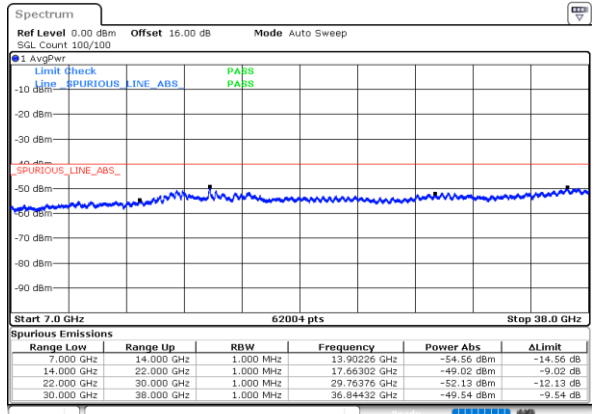


Date: 21.SEP.2022 01:17:01

Highest Channel / QPSK



Date: 21.SEP.2022 01:00:19



Date: 21.SEP.2022 01:18:29



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	0.0002	PASS
40	Normal Voltage	0.0030	
30	Normal Voltage	0.0022	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0029	
-10	Normal Voltage	0.0032	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0007	

Note:

- 1. Normal Voltage = 3.85 V. ; Battery End Point (ACLRP) = 3.60 V. ; Maximum Voltage = 4.45 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

<Primary Antenna>

<Ant. 6>

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	7102	-58.14	-40	-18.14	-55.26	-67.84	1.84	11.55	H
	10653	-54.60	-40	-14.60	-56.2	-63.07	2.23	10.71	H
	14205	-50.09	-40	-10.09	-57.82	-59.72	2.65	12.28	H
	21307	-62.50	-40	-22.50	-75.87	-77.35	3.32	18.17	H
	24858	-59.32	-40	-19.32	-76.6	-74.09	3.71	18.49	H
	28409	-56.38	-40	-16.38	-75.89	-71.85	3.99	19.45	H
	7102	-56.68	-40	-16.68	-54.04	-66.38	1.84	11.55	V
	10653	-54.61	-40	-14.61	-55.8	-63.08	2.23	10.71	V
	14205	-49.99	-40	-9.99	-57.59	-59.62	2.65	12.28	V
	21307	-62.50	-40	-22.50	-75.87	-77.35	3.32	18.17	V
	24858	-59.32	-40	-19.32	-76.6	-74.09	3.71	18.49	V
	28409	-56.38	-40	-16.38	-75.89	-71.85	3.99	19.45	V
Middle	7232	-58.37	-40	-18.37	-55.84	-67.83	1.86	11.32	H
	10848	-52.37	-40	-12.37	-54.36	-60.75	2.22	10.59	H
	14464	-49.91	-40	-9.91	-57.88	-59.41	2.62	12.12	H
	18080	-61.58	-40	-21.58	-72.06	-75.95	3.23	17.60	H
	21697	-60.72	-40	-20.72	-74.88	-75.89	3.43	18.60	H
	25313	-59.04	-40	-19.04	-76.36	-74.04	3.78	18.78	H
									H
	7232	-57.50	-40	-17.50	-55.32	-66.96	1.86	11.32	V
	10848	-48.51	-40	-8.51	-50.27	-56.89	2.22	10.59	V
	14464	-49.66	-40	-9.66	-58.07	-59.16	2.62	12.12	V
	18080	-61.95	-40	-21.95	-72.13	-76.32	3.23	17.60	V
	21697	-61.37	-40	-21.37	-75.2	-76.54	3.43	18.60	V
25313	-59.14	-40	-19.14	-76.17	-74.14	3.78	18.78	V	



Highest	7360	-56.61	-40	-16.61	-54.4	-66.07	1.92	11.38	H
	11043	-53.02	-40	-13.02	-55.44	-61.35	2.22	10.55	H
	14724	-49.96	-40	-9.96	-58.04	-59.96	2.59	12.59	H
	18405	-62.14	-40	-22.14	-72.93	-76.50	3.24	17.60	H
	22087	-61.53	-40	-21.53	-76.1	-76.90	3.52	18.88	H
	25768	-58.90	-40	-18.90	-76.56	-74.07	3.88	19.05	H
									H
	7360	-56.68	-40	-16.68	-54.62	-66.14	1.92	11.38	V
	11043	-47.45	-40	-7.45	-49.8	-55.78	2.22	10.55	V
	14724	-48.56	-40	-8.56	-57.6	-58.56	2.59	12.59	V
	18405	-62.30	-40	-22.30	-72.86	-76.66	3.24	17.60	V
	22087	-62.04	-40	-22.04	-76.23	-77.41	3.52	18.88	V
	25768	-59.11	-40	-19.11	-76.48	-74.28	3.88	19.05	V
									V

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



<ASDIV Antenna>

<Ant. 2>

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	7102	-57.57	-40	-17.57	-54.69	-67.27	1.84	11.55	H
	10653	-53.22	-40	-13.22	-54.82	-61.69	2.23	10.71	H
	14205	-49.01	-40	-9.01	-57.74	-58.64	2.65	12.28	H
	21307	-62.68	-40	-22.68	-76.05	-77.53	3.32	18.17	H
	24858	-59.10	-40	-19.10	-76.38	-73.87	3.71	18.49	H
	28409	-56.67	-40	-16.67	-76.18	-72.14	3.99	19.45	H
									H
	7102	-56.06	-40	-16.06	-53.42	-65.76	1.84	11.55	V
	10653	-54.49	-40	-14.49	-55.68	-62.96	2.23	10.71	V
	14205	-50.08	-40	-10.08	-57.68	-59.71	2.65	12.28	V
	21307	-62.71	-40	-22.71	-75.77	-77.56	3.32	18.17	V
	24858	-59.89	-40	-19.89	-76.85	-74.66	3.71	18.49	V
	28409	-57.04	-40	-17.04	-76.13	-72.51	3.99	19.45	V
									V
Middle	7232	-58.26	-40	-18.26	-55.73	-67.72	1.86	11.32	H
	10848	-52.90	-40	-12.90	-54.89	-61.28	2.22	10.59	H
	14464	-50.22	-40	-10.22	-58.19	-59.72	2.62	12.12	H
	18080	-61.54	-40	-21.54	-72.02	-75.91	3.23	17.60	H
	21697	-61.34	-40	-21.34	-75.5	-76.51	3.43	18.60	H
	25313	-59.64	-40	-19.64	-76.96	-74.64	3.78	18.78	H
									H
	7232	-57.27	-40	-17.27	-56.09	-66.73	1.86	11.32	V
	10848	-53.85	-40	-13.85	-55.61	-62.23	2.22	10.59	V
	14464	-49.58	-40	-9.58	-57.99	-59.08	2.62	12.12	V
	18080	-62.07	-40	-22.07	-72.25	-76.44	3.23	17.60	V
	21697	-61.49	-40	-21.49	-75.32	-76.66	3.43	18.60	V
	25313	-59.52	-40	-19.52	-76.55	-74.52	3.78	18.78	V



Highest	7360	-56.38	-40	-16.38	-54.17	-65.84	1.92	11.38	H
	11043	-53.75	-40	-13.75	-56.17	-62.08	2.22	10.55	H
	14724	-50.39	-40	-10.39	-58.47	-60.39	2.59	12.59	H
	18405	-62.56	-40	-22.56	-73.35	-76.92	3.24	17.60	H
	22087	-61.45	-40	-21.45	-76.02	-76.82	3.52	18.88	H
	25768	-58.79	-40	-18.79	-76.45	-73.96	3.88	19.05	H
									H
	7360	-56.35	-40	-16.35	-54.29	-65.81	1.92	11.38	V
	11043	-53.26	-40	-13.26	-55.61	-61.59	2.22	10.55	V
	14724	-48.60	-40	-8.60	-57.64	-58.60	2.59	12.59	V
	18405	-62.52	-40	-22.52	-73.08	-76.88	3.24	17.60	V
	22087	-61.89	-40	-21.89	-76.08	-77.26	3.52	18.88	V
	25768	-58.95	-40	-18.95	-76.32	-74.12	3.88	19.05	V
									V

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

————THE END————