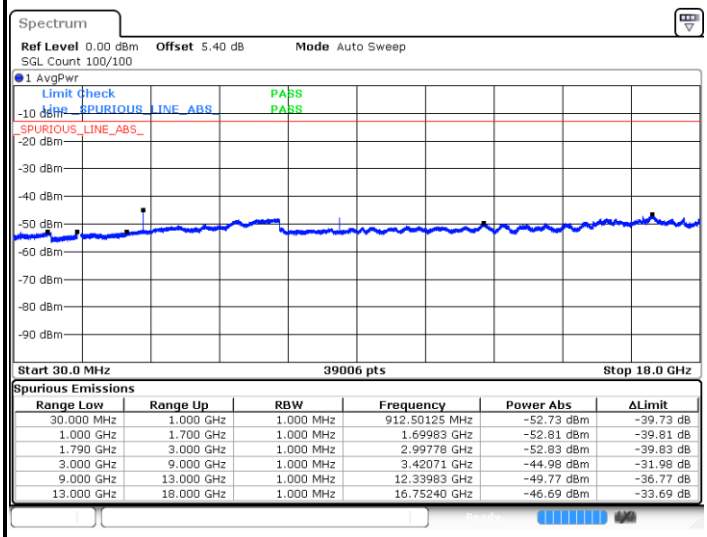
LTE Band 66 / 3MHz

Lowest Channel / QPSK

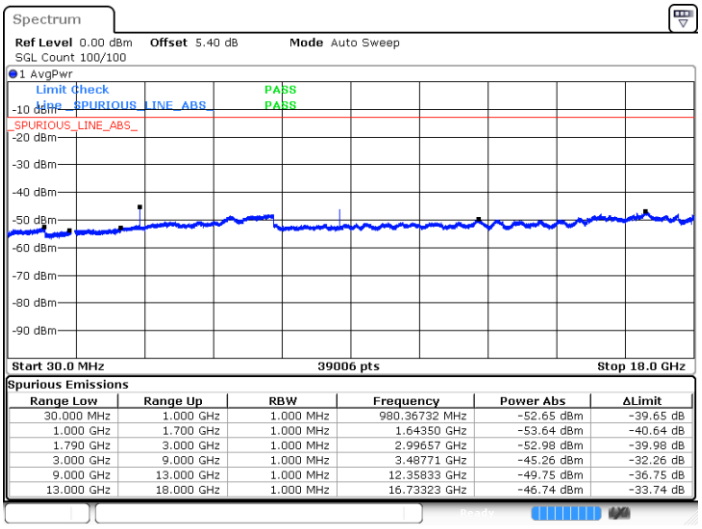


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	912.50125 MHz	-52.73 dBm	-39.73 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-52.81 dBm	-39.81 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99778 GHz	-52.83 dBm	-39.83 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42071 GHz	-44.98 dBm	-31.98 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.33983 GHz	-49.77 dBm	-36.77 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.75240 GHz	-46.69 dBm	-33.69 dB

Date: 4.JUN.2022 09:53:32

Middle Channel / QPSK

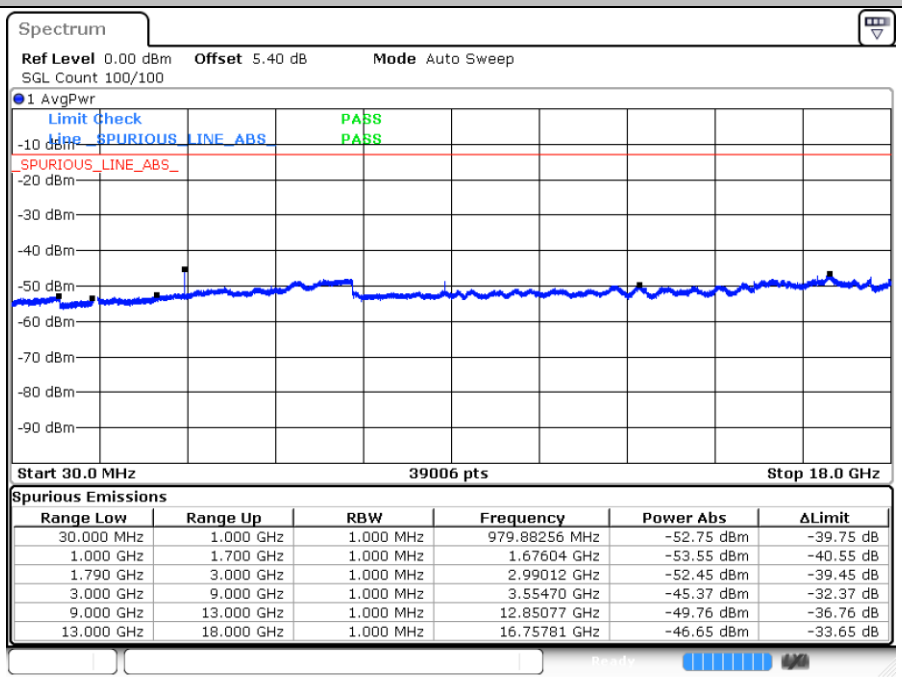


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	980.36732 MHz	-52.65 dBm	-39.65 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64350 GHz	-53.64 dBm	-40.64 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99657 GHz	-52.98 dBm	-39.98 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.48771 GHz	-45.26 dBm	-32.26 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.35833 GHz	-49.75 dBm	-36.75 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.73323 GHz	-46.74 dBm	-33.74 dB

Date: 4.JUN.2022 10:03:50

Highest Channel / QPSK



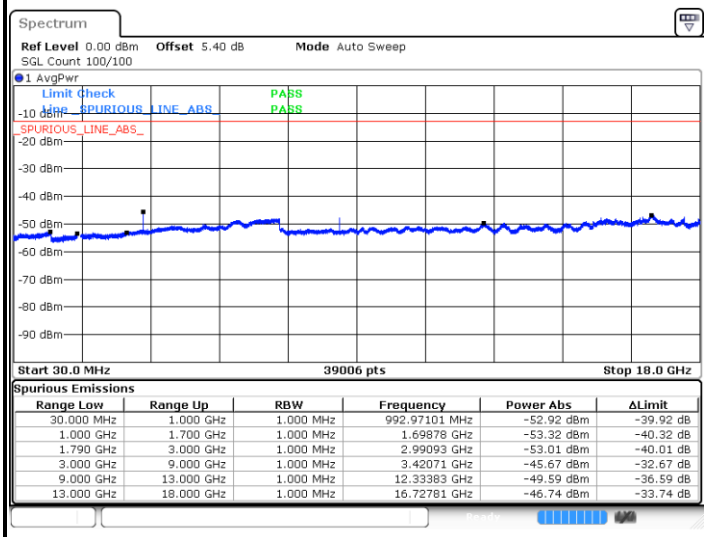
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	979.88256 MHz	-52.75 dBm	-39.75 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67604 GHz	-53.55 dBm	-40.55 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99012 GHz	-52.45 dBm	-39.45 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.55470 GHz	-45.37 dBm	-32.37 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.85077 GHz	-49.76 dBm	-36.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.75781 GHz	-46.65 dBm	-33.65 dB

Date: 4.JUN.2022 10:05:10

LTE Band 66 / 5MHz

Lowest Channel / QPSK

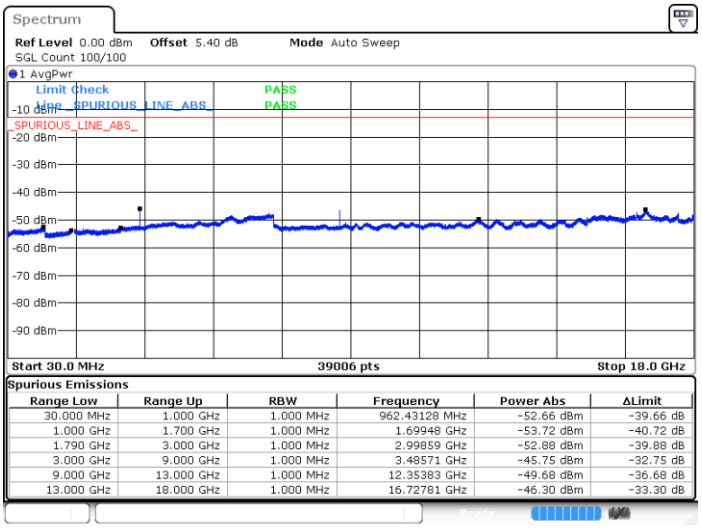


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	992.97101 MHz	-52.92 dBm	-39.92 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69878 GHz	-53.32 dBm	-40.32 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99093 GHz	-53.01 dBm	-40.01 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42071 GHz	-45.67 dBm	-32.67 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.33383 GHz	-49.59 dBm	-36.59 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.72781 GHz	-46.74 dBm	-33.74 dB

Date: 4.JUN.2022 10:15:29

Middle Channel / QPSK

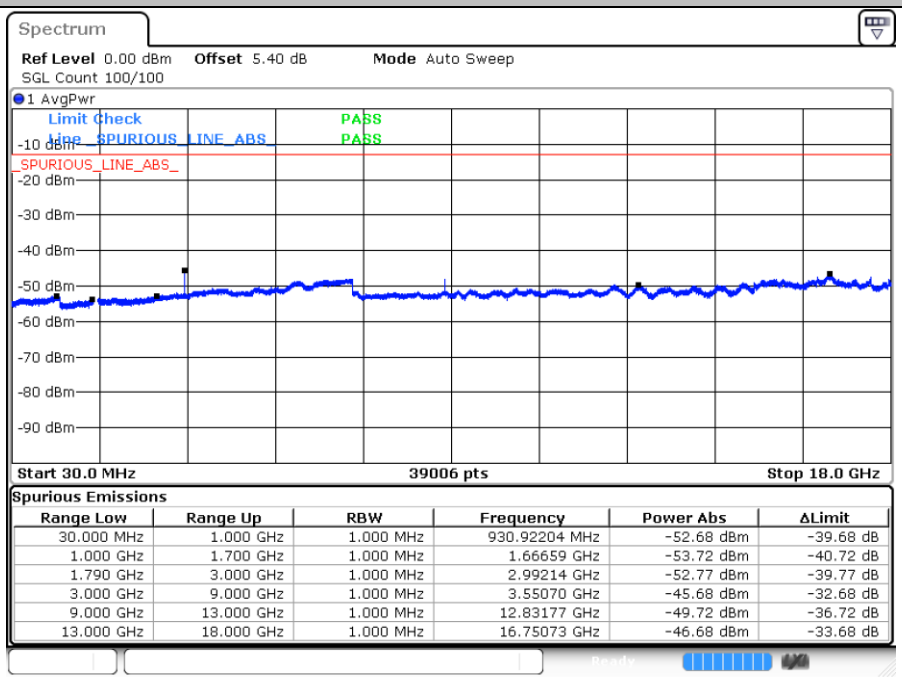


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	962.43128 MHz	-52.66 dBm	-39.66 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69948 GHz	-53.72 dBm	-40.72 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99859 GHz	-52.88 dBm	-39.88 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.48571 GHz	-45.75 dBm	-32.75 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.35383 GHz	-49.68 dBm	-36.68 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.72781 GHz	-46.30 dBm	-33.30 dB

Date: 4.JUN.2022 10:25:46

Highest Channel / QPSK



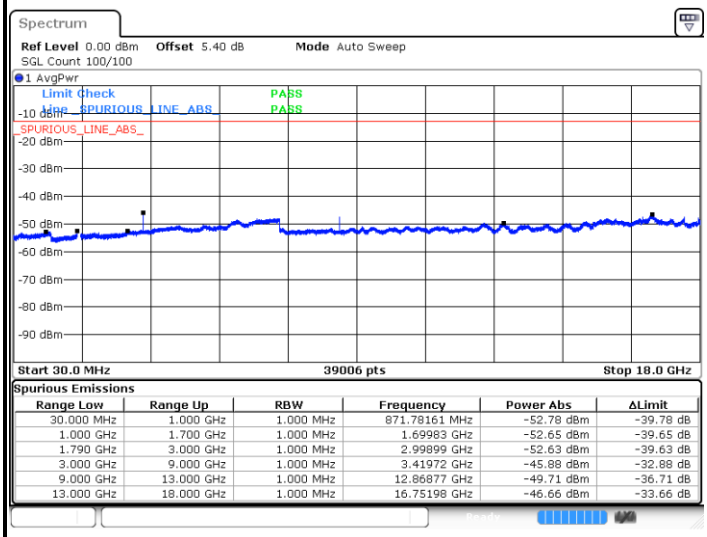
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	930.92204 MHz	-52.68 dBm	-39.68 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66659 GHz	-53.72 dBm	-40.72 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99214 GHz	-52.77 dBm	-39.77 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.55070 GHz	-45.68 dBm	-32.68 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.83177 GHz	-49.72 dBm	-36.72 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.75073 GHz	-46.68 dBm	-33.68 dB

Date: 4.JUN.2022 10:27:06

LTE Band 66 / 10MHz

Lowest Channel / QPSK

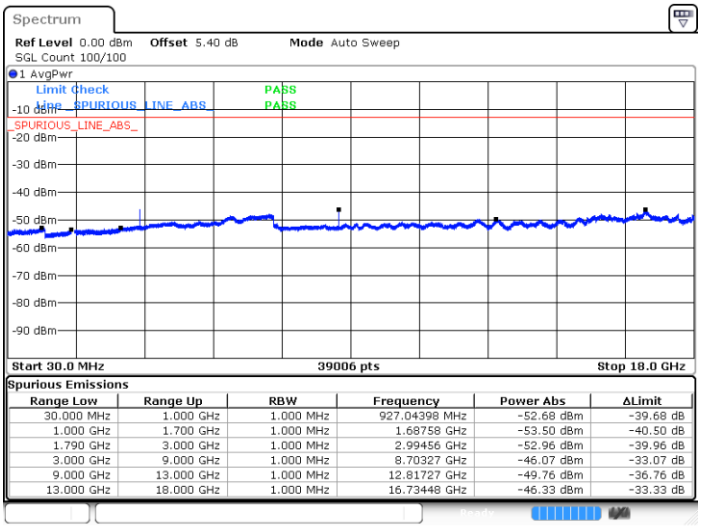


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	871.78161 MHz	-52.78 dBm	-39.78 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-52.65 dBm	-39.65 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99899 GHz	-52.63 dBm	-39.63 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.41972 GHz	-45.88 dBm	-32.88 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.86877 GHz	-49.71 dBm	-36.71 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.75198 GHz	-46.66 dBm	-33.66 dB

Date: 4.JUN.2022 10:37:38

Middle Channel / QPSK

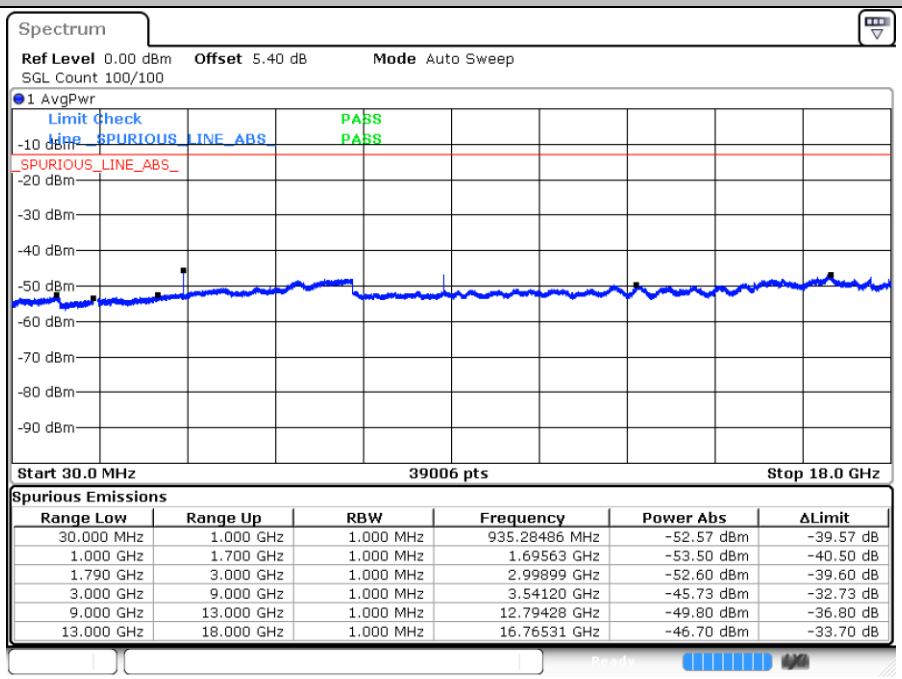


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	927.04398 MHz	-52.68 dBm	-39.68 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68758 GHz	-53.50 dBm	-40.50 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99456 GHz	-52.96 dBm	-39.96 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.70327 GHz	-46.07 dBm	-33.07 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.81727 GHz	-49.76 dBm	-36.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.73448 GHz	-46.33 dBm	-33.33 dB

Date: 4.JUN.2022 10:47:55

Highest Channel / QPSK



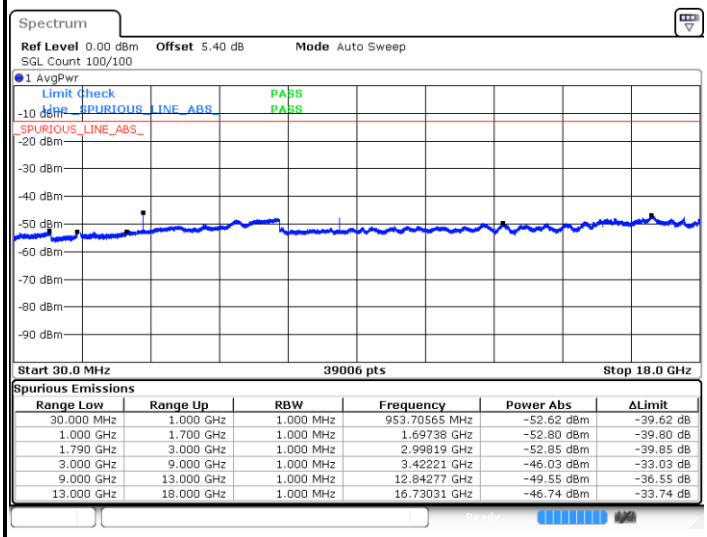
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	935.28486 MHz	-52.57 dBm	-39.57 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69563 GHz	-53.50 dBm	-40.50 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99899 GHz	-52.60 dBm	-39.60 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.54120 GHz	-45.73 dBm	-32.73 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.79428 GHz	-49.80 dBm	-36.80 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.76531 GHz	-46.70 dBm	-33.70 dB

Date: 4.JUN.2022 10:49:15

LTE Band 66 / 15MHz

Lowest Channel / QPSK

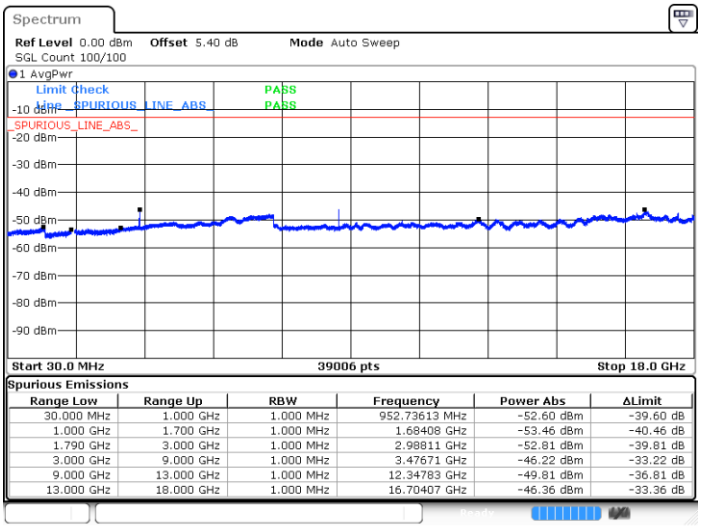


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	953.70565 MHz	-52.62 dBm	-39.62 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69738 GHz	-52.80 dBm	-39.80 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99819 GHz	-52.85 dBm	-39.85 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42221 GHz	-46.03 dBm	-33.03 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.84277 GHz	-49.55 dBm	-36.55 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.73031 GHz	-46.74 dBm	-33.74 dB

Date: 4.JUN.2022 10:59:33

Middle Channel / QPSK

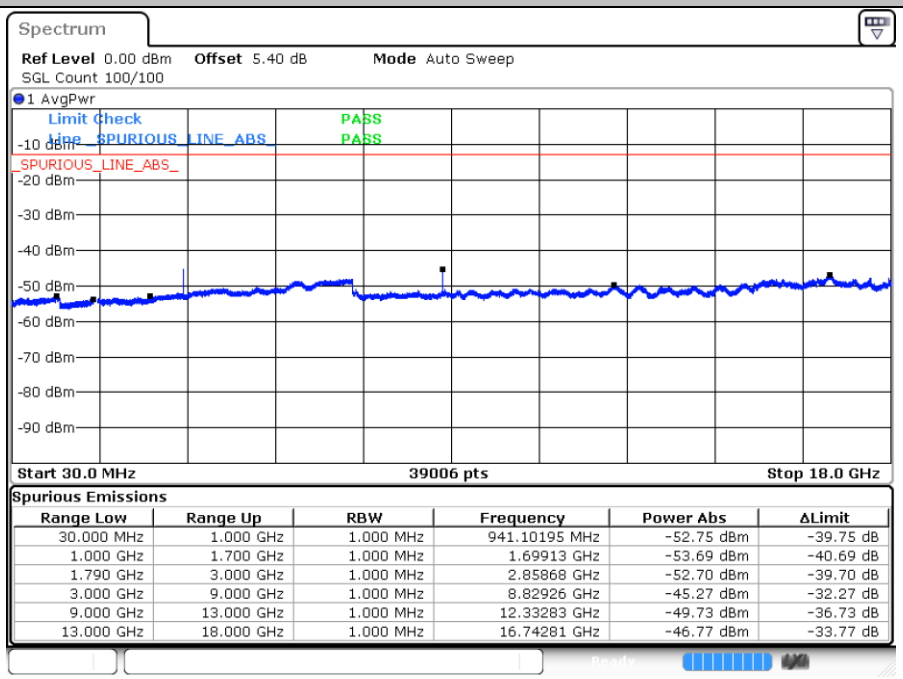


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	952.73613 MHz	-52.60 dBm	-39.60 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68408 GHz	-53.46 dBm	-40.46 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.98811 GHz	-52.81 dBm	-39.81 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.47671 GHz	-46.22 dBm	-33.22 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.34783 GHz	-49.81 dBm	-36.81 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.70407 GHz	-46.36 dBm	-33.36 dB

Date: 4.JUN.2022 11:09:51

Highest Channel / QPSK



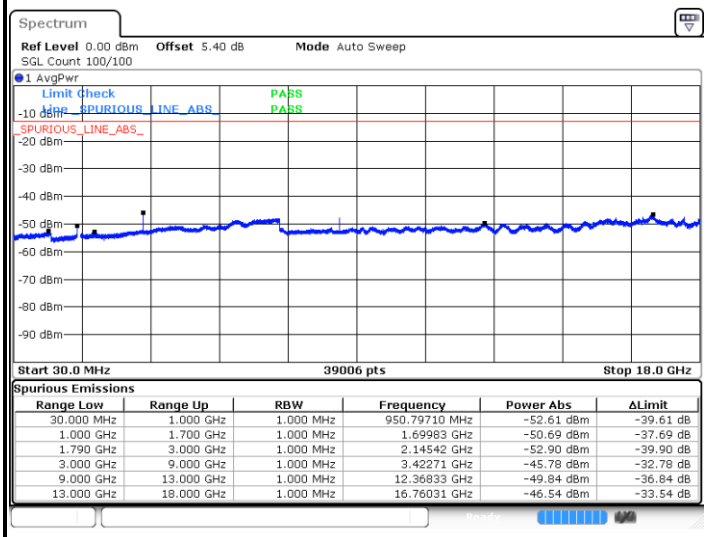
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	941.10195 MHz	-52.75 dBm	-39.75 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69913 GHz	-53.69 dBm	-40.69 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.85868 GHz	-52.70 dBm	-39.70 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.82926 GHz	-45.27 dBm	-32.27 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.33283 GHz	-49.73 dBm	-36.73 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.74281 GHz	-46.77 dBm	-33.77 dB

Date: 4.JUN.2022 11:11:11

LTE Band 66 / 20MHz

Lowest Channel / QPSK

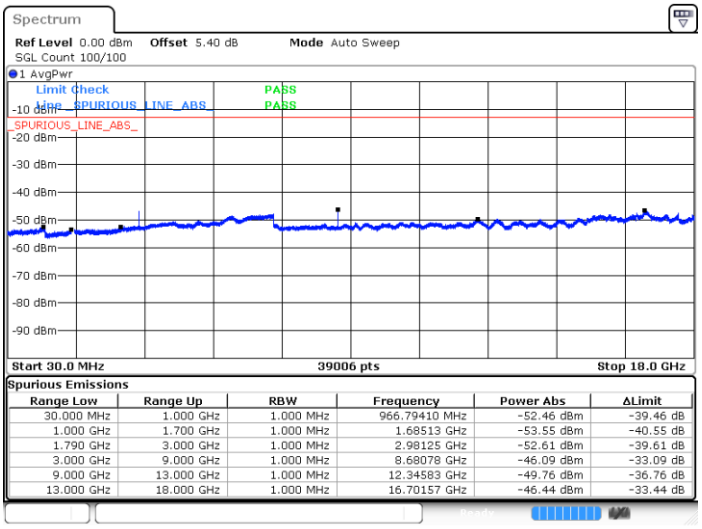


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.79710 MHz	-52.61 dBm	-39.61 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-50.69 dBm	-37.69 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.14542 GHz	-52.90 dBm	-39.90 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42271 GHz	-45.78 dBm	-32.78 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.36833 GHz	-49.84 dBm	-36.84 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.76031 GHz	-46.54 dBm	-33.54 dB

Date: 4.JUN.2022 11:21:29

Middle Channel / QPSK

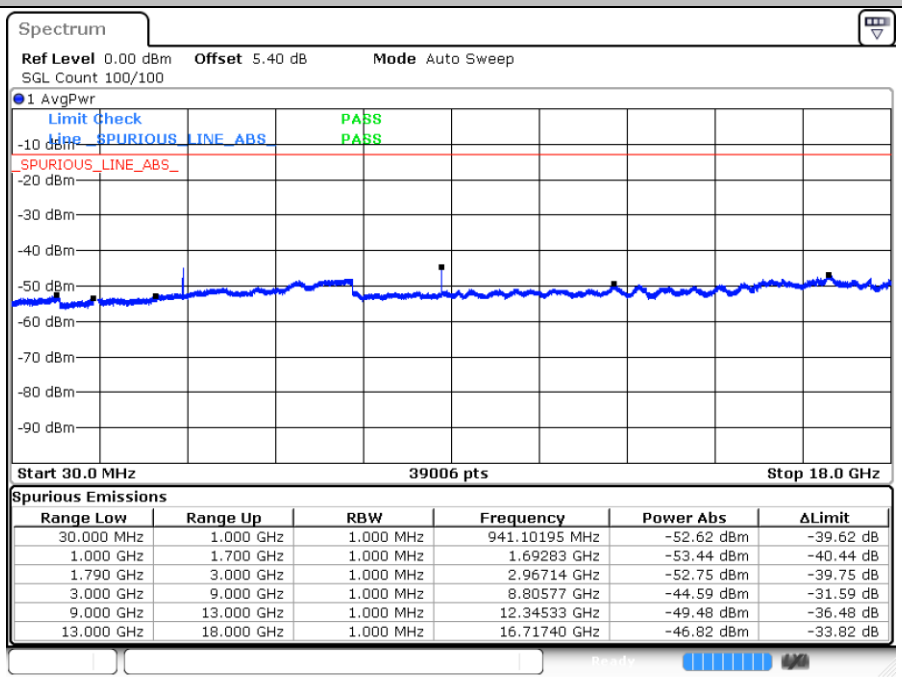


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	966.79410 MHz	-52.46 dBm	-39.46 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68513 GHz	-53.55 dBm	-40.55 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.98125 GHz	-52.61 dBm	-39.61 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.68078 GHz	-46.09 dBm	-33.09 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.34583 GHz	-49.76 dBm	-36.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.70157 GHz	-46.44 dBm	-33.44 dB

Date: 4.JUN.2022 11:31:47

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	941.10195 MHz	-52.62 dBm	-39.62 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69283 GHz	-53.44 dBm	-40.44 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.96714 GHz	-52.75 dBm	-39.75 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.80577 GHz	-44.59 dBm	-31.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.34533 GHz	-49.48 dBm	-36.48 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.71740 GHz	-46.82 dBm	-33.82 dB

Date: 4.JUN.2022 11:33:07

Frequency Stability

Test Conditions		LTE Band 66 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0010	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0022	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0034	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0015	
20	Battery End Point	0.0007	

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Chris Chen	Temperature :	23~25℃
		Relative Humidity :	41~42%

LTE Band 2 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-55.62	-13	-42.62	-67.88	2.641	14.90	H
	5553	-46.96	-13	-33.96	-58.82	2.94	14.80	H
	7404	-48.60	-13	-35.60	-58.37	3.39	13.16	H
	3702	-56.09	-13	-43.09	-68.35	2.64	14.90	V
	5553	-48.69	-13	-35.69	-60.55	2.94	14.80	V
	7404	-48.21	-13	-35.21	-57.98	3.39	13.16	V
Middle	3741	-56.82	-13	-43.82	-69.08	2.64	14.90	H
	5613	-54.52	-13	-41.52	-66.38	2.94	14.80	H
	7488	-52.20	-13	-39.20	-61.97	3.39	13.16	H
	3741	-53.80	-13	-40.80	-66.06	2.64	14.90	V
	5613	-55.37	-13	-42.37	-67.23	2.94	14.80	V
	7488	-52.10	-13	-39.10	-61.87	3.39	13.16	V
Highest	3783	-52.17	-13	-39.17	-64.43	2.64	14.90	H
	5673	-46.32	-13	-33.32	-58.18	2.94	14.80	H
	7560	-48.83	-13	-35.83	-58.60	3.39	13.16	H
	3783	-55.33	-13	-42.33	-67.59	2.64	14.90	V
	5673	-47.42	-13	-34.42	-59.28	2.94	14.80	V
	7560	-48.89	-13	-35.89	-58.66	3.39	13.16	V

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

LTE Band 5 / 10MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-64.90	-13	-51.90	-71.87	1.58	10.70	H
	2472	-60.65	-13	-47.65	-68.90	2.102	12.50	H
	3296	-60.18	-13	-47.18	-69.07	2.856	13.90	H
	1648	-64.19	-13	-51.19	-71.16	1.58	10.70	V
	2472	-58.92	-13	-45.92	-67.17	2.10	12.50	V
	3296	-59.54	-13	-46.54	-68.43	2.86	13.90	V
Middle	1664	-66.40	-13	-53.40	-73.37	1.58	10.70	H
	2496	-61.05	-13	-48.05	-69.30	2.102	12.50	H
	3328	-60.14	-13	-47.14	-69.03	2.856	13.90	H
	1664	-65.06	-13	-52.06	-72.03	1.58	10.70	V
	2496	-59.21	-13	-46.21	-67.46	2.10	12.50	V
	3328	-60.16	-13	-47.16	-69.05	2.86	13.90	V
Highest	1680	-64.02	-13	-51.02	-70.99	1.58	10.70	H
	2520	-59.02	-13	-46.02	-67.27	2.102	12.50	H
	3360	-60.02	-13	-47.02	-68.91	2.856	13.90	H
	1680	-64.09	-13	-51.09	-71.06	1.58	10.70	V
	2520	-59.19	-13	-46.19	-67.44	2.10	12.50	V
	3360	-60.62	-13	-47.62	-69.51	2.86	13.90	V

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

LTE Band 17 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1408	-67.10	-13	-54.10	-74.07	1.58	10.70	H
	2112	-60.42	-13	-47.42	-68.67	2.102	12.50	H
	2816	-58.85	-13	-45.85	-67.74	2.856	13.90	H
	1408	-66.65	-13	-53.65	-73.62	1.58	10.70	V
	2112	-61.02	-13	-48.02	-69.27	2.10	12.50	V
	2816	-58.75	-13	-45.75	-67.64	2.86	13.90	V
Middle	1408	-66.71	-13	-53.71	-73.68	1.58	10.70	H
	2120	-60.91	-13	-47.91	-69.16	2.102	12.50	H
	2824	-59.40	-13	-46.40	-68.29	2.856	13.90	H
	1408	-66.91	-13	-53.91	-73.88	1.58	10.70	V
	2120	-60.17	-13	-47.17	-68.42	2.10	12.50	V
	2824	-59.74	-13	-46.74	-68.63	2.86	13.90	V
Highest	1416	-66.83	-13	-53.83	-73.80	1.58	10.70	H
	2120	-60.17	-13	-47.17	-68.42	2.102	12.50	H
	2824	-59.30	-13	-46.30	-68.19	2.856	13.90	H
	1416	-66.57	-13	-53.57	-73.54	1.58	10.70	V
	2120	-60.53	-13	-47.53	-68.78	2.10	12.50	V
	2824	-59.32	-13	-46.32	-68.21	2.86	13.90	V

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

LTE Band 66 / 20MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3423	-55.74	-13	-42.74	-66.48	2.604	13.34	H
	5133	-51.32	-13	-38.32	-61.83	3.011	13.52	H
	6840	-49.46	-13	-36.46	-59.66	3.271	13.47	H
	3423	-55.66	-13	-42.66	-66.40	2.604	13.34	V
	5133	-53.13	-13	-40.13	-63.64	3.011	13.52	V
	6840	-49.94	-13	-36.94	-60.14	3.271	13.47	V
Middle	3471	-55.71	-13	-42.71	-66.45	2.604	13.34	H
	5208	-50.01	-13	-37.01	-60.52	3.011	13.52	H
	6948	-49.19	-13	-36.19	-59.39	3.271	13.47	H
	3471	-55.21	-13	-42.21	-65.95	2.604	13.34	V
	5208	-52.11	-13	-39.11	-62.62	3.011	13.52	V
	6948	-49.01	-13	-36.01	-59.21	3.271	13.47	V
Highest	3522	-55.51	-13	-42.51	-66.25	2.604	13.34	H
	5283	-51.18	-13	-38.18	-61.69	3.011	13.52	H
	7044	-48.99	-13	-35.99	-59.19	3.271	13.47	H
	3522	-55.53	-13	-42.53	-66.27	2.604	13.34	V
	5283	-51.42	-13	-38.42	-61.93	3.011	13.52	V
	7044	-49.08	-13	-36.08	-59.28	3.271	13.47	V

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