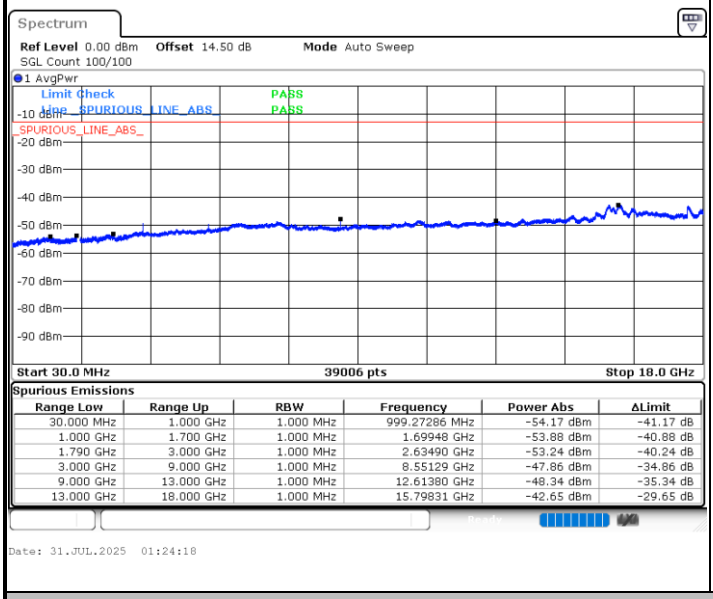
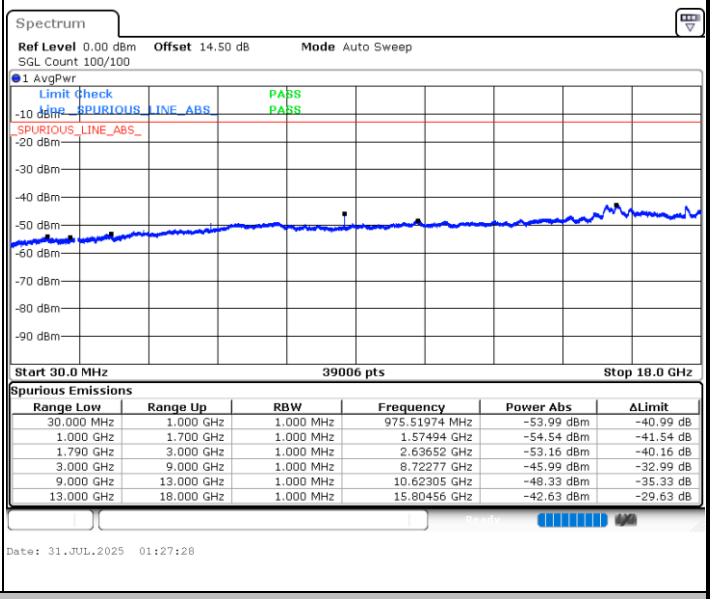
Conducted Spurious Emission

LTE Band 66 / 1.4MHz

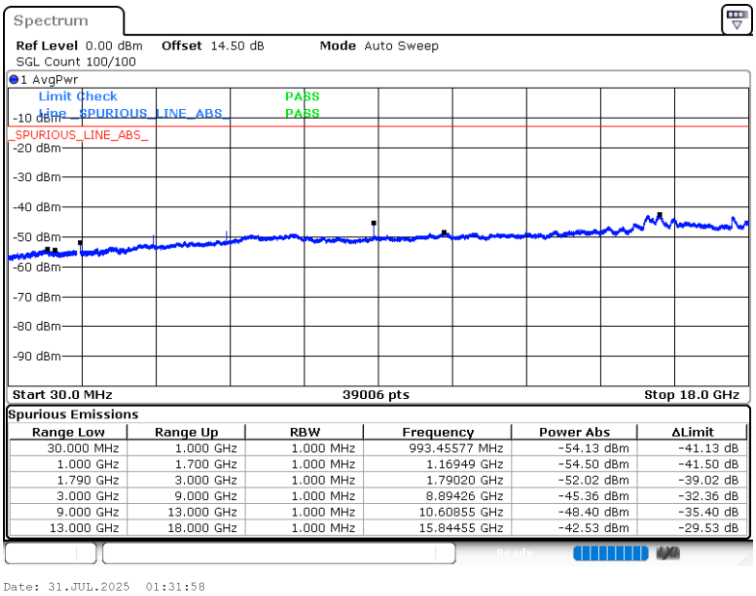
Lowest Channel / QPSK



Middle Channel / QPSK

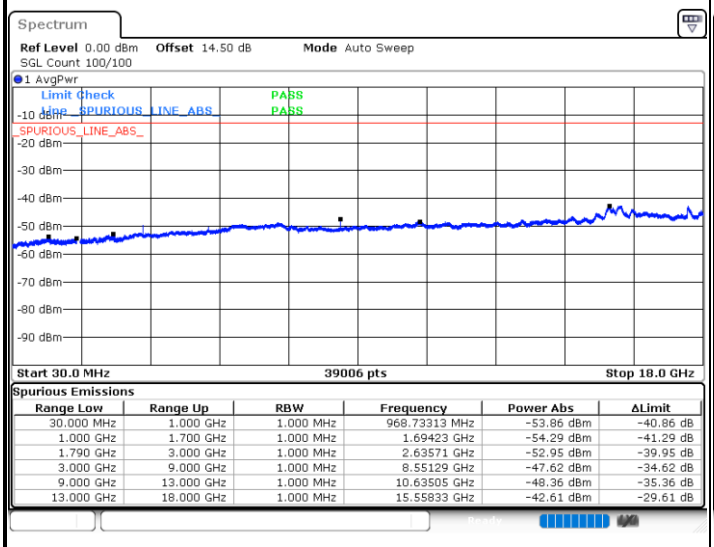


Highest Channel / QPSK



LTE Band 66 / 3MHz

Lowest Channel / QPSK

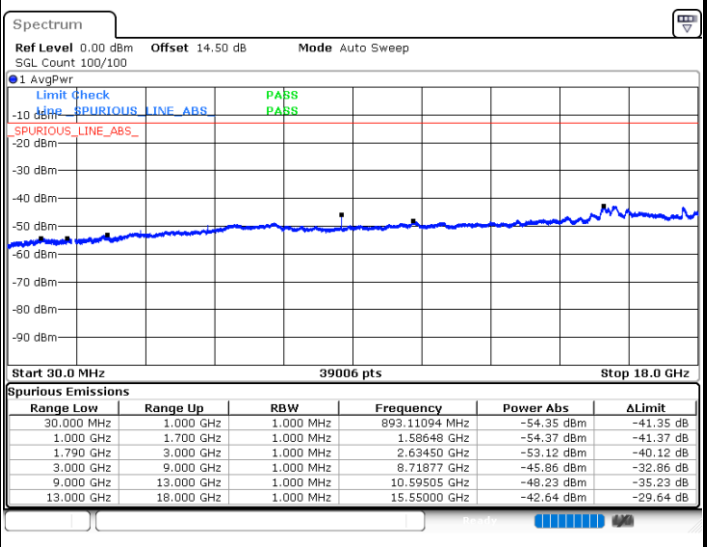


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	968.73313 MHz	-53.86 dBm	-40.86 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69423 GHz	-54.29 dBm	-41.29 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63571 GHz	-52.95 dBm	-39.95 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.55129 GHz	-47.62 dBm	-34.62 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63505 GHz	-48.36 dBm	-35.36 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.55833 GHz	-42.61 dBm	-29.61 dB

Date: 31.JUL.2025 01:38:01

Middle Channel / QPSK

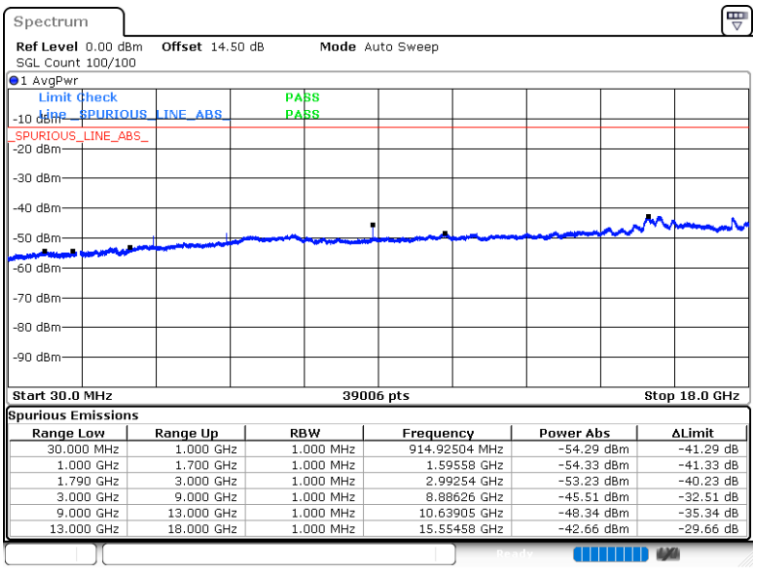


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	893.11094 MHz	-54.35 dBm	-41.35 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.58648 GHz	-54.37 dBm	-41.37 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63450 GHz	-53.12 dBm	-40.12 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.71877 GHz	-45.86 dBm	-32.86 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59505 GHz	-48.23 dBm	-35.23 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.55000 GHz	-42.64 dBm	-29.64 dB

Date: 31.JUL.2025 01:41:11

Highest Channel / QPSK



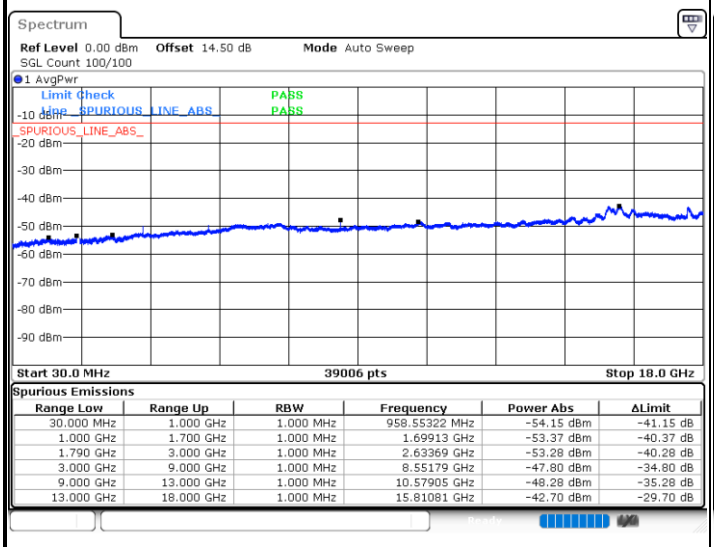
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	914.92504 MHz	-54.29 dBm	-41.29 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59558 GHz	-54.33 dBm	-41.33 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.99254 GHz	-53.23 dBm	-40.23 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.88626 GHz	-45.51 dBm	-32.51 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63905 GHz	-48.34 dBm	-35.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.55458 GHz	-42.66 dBm	-29.66 dB

Date: 31.JUL.2025 01:47:50

LTE Band 66 / 5MHz

Lowest Channel / QPSK

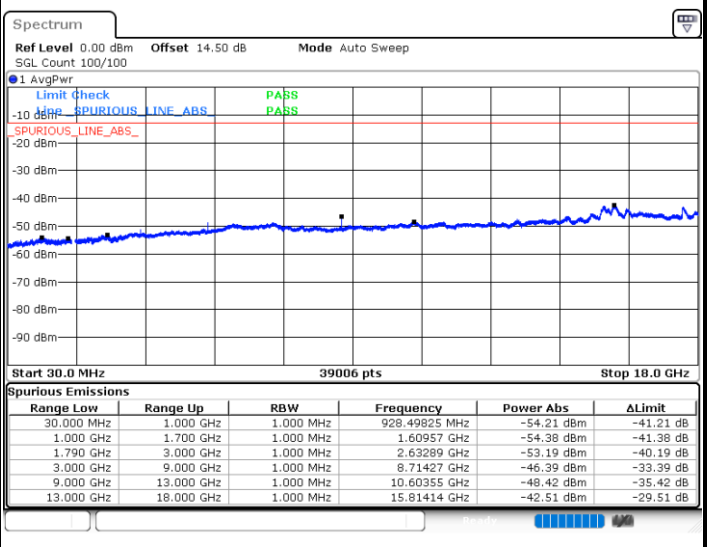


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	958.55322 MHz	-54.15 dBm	-41.15 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69913 GHz	-53.37 dBm	-40.37 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63369 GHz	-53.28 dBm	-40.28 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.55179 GHz	-47.80 dBm	-34.80 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.57905 GHz	-48.28 dBm	-35.28 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.81081 GHz	-42.70 dBm	-29.70 dB

Date: 31.JUL.2025 01:51:43

Middle Channel / QPSK

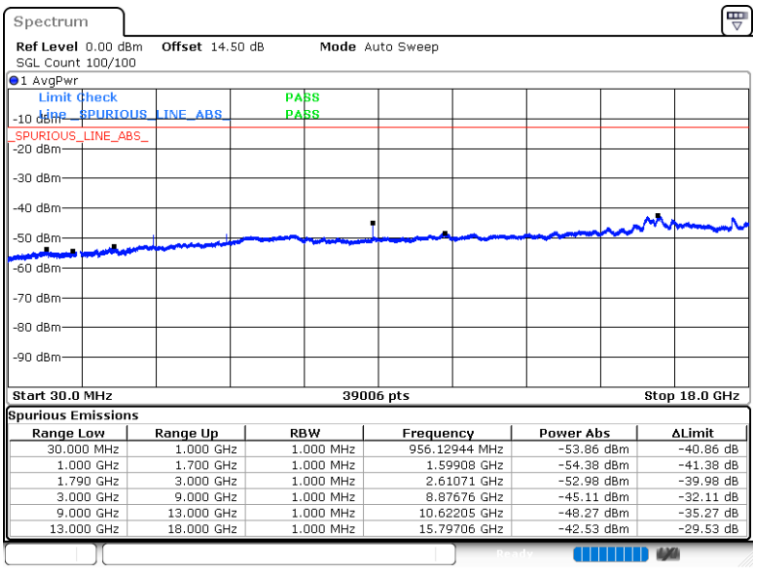


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	928.49825 MHz	-54.21 dBm	-41.21 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.60957 GHz	-54.38 dBm	-41.38 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63289 GHz	-53.19 dBm	-40.19 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.71427 GHz	-46.39 dBm	-33.39 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60355 GHz	-48.42 dBm	-35.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.81414 GHz	-42.51 dBm	-29.51 dB

Date: 31.JUL.2025 01:54:53

Highest Channel / QPSK



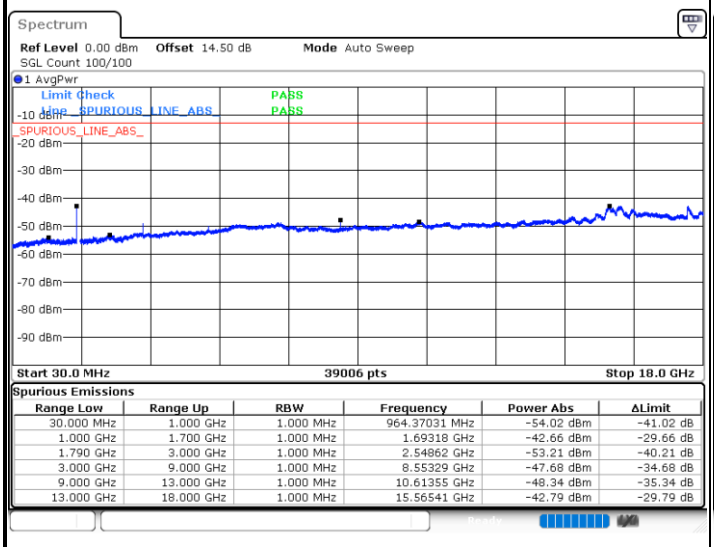
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	956.12944 MHz	-53.86 dBm	-40.86 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59908 GHz	-54.38 dBm	-41.38 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.61071 GHz	-52.98 dBm	-39.98 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.87676 GHz	-45.11 dBm	-32.11 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.62205 GHz	-48.27 dBm	-35.27 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.79706 GHz	-42.53 dBm	-29.53 dB

Date: 31.JUL.2025 02:01:37

LTE Band 66 / 10MHz

Lowest Channel / QPSK

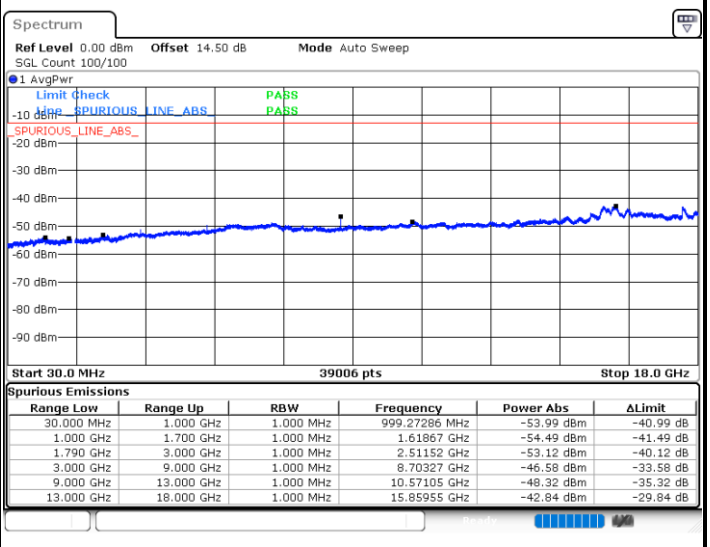


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	964.37031 MHz	-54.02 dBm	-41.02 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69318 GHz	-42.66 dBm	-29.66 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.54862 GHz	-53.21 dBm	-40.21 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.55329 GHz	-47.68 dBm	-34.68 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.61355 GHz	-48.34 dBm	-35.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.56541 GHz	-42.79 dBm	-29.79 dB

Date: 31.JUL.2025 02:07:39

Middle Channel / QPSK

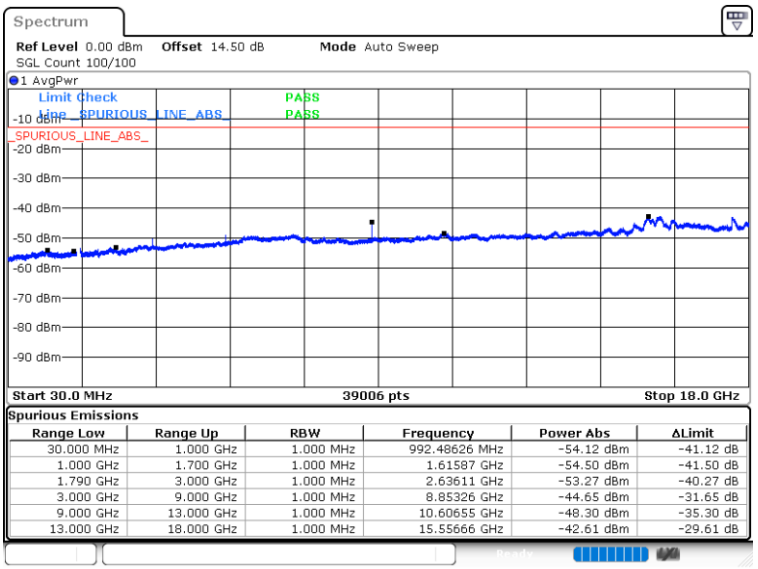


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	999.27286 MHz	-53.99 dBm	-40.99 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61867 GHz	-54.49 dBm	-41.49 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.51152 GHz	-53.12 dBm	-40.12 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.70327 GHz	-46.58 dBm	-33.58 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.57105 GHz	-48.32 dBm	-35.32 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.85955 GHz	-42.84 dBm	-29.84 dB

Date: 31.JUL.2025 02:08:40

Highest Channel / QPSK



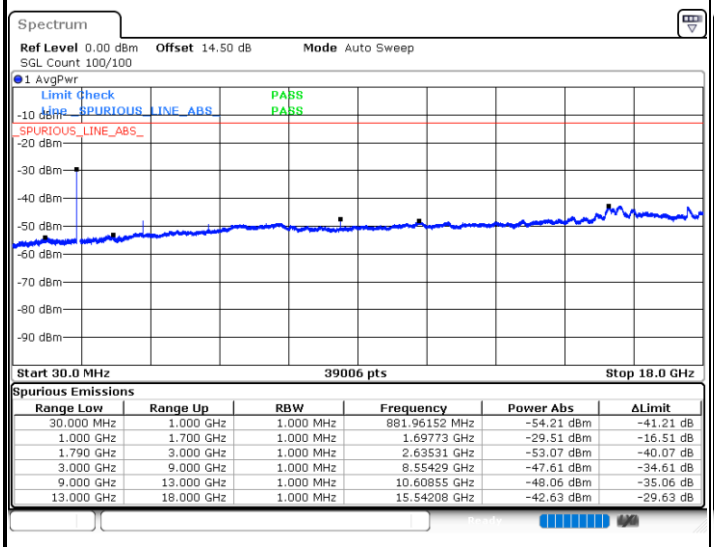
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	992.48626 MHz	-54.12 dBm	-41.12 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.61587 GHz	-54.50 dBm	-41.50 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63611 GHz	-53.27 dBm	-40.27 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.85326 GHz	-44.65 dBm	-31.65 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60655 GHz	-48.30 dBm	-35.30 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.55666 GHz	-42.61 dBm	-29.61 dB

Date: 31.JUL.2025 02:15:20

LTE Band 66 / 15MHz

Lowest Channel / QPSK

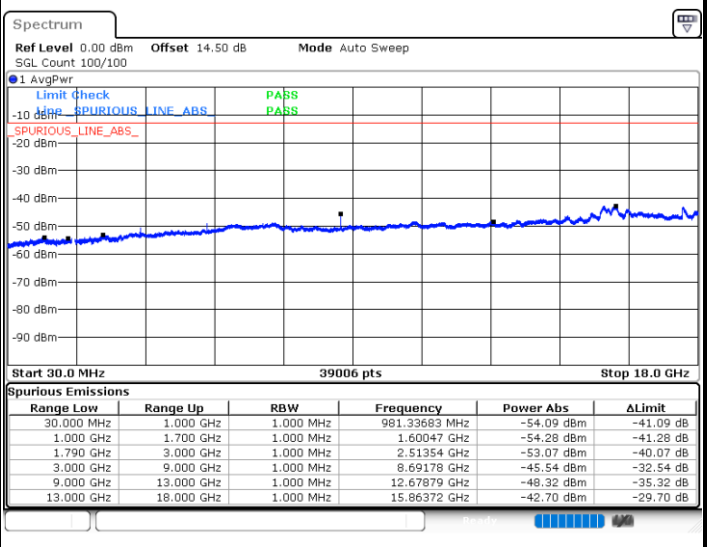


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	881.96152 MHz	-54.21 dBm	-41.21 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69773 GHz	-29.51 dBm	-16.51 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63531 GHz	-53.07 dBm	-40.07 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.55429 GHz	-47.61 dBm	-34.61 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60855 GHz	-48.06 dBm	-35.06 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.54208 GHz	-42.63 dBm	-29.63 dB

Date: 31.JUL.2025 02:21:24

Middle Channel / QPSK

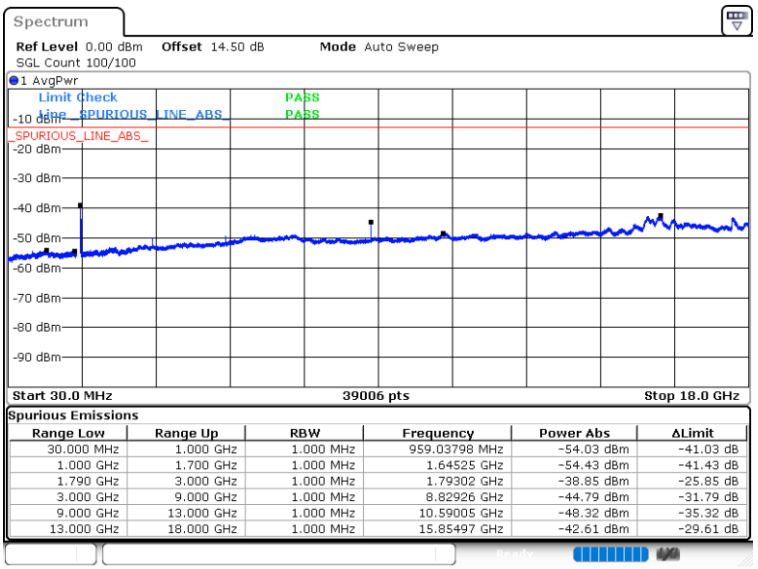


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	981.33683 MHz	-54.09 dBm	-41.09 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.60047 GHz	-54.28 dBm	-41.28 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.51354 GHz	-53.07 dBm	-40.07 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.69178 GHz	-45.54 dBm	-32.54 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.67879 GHz	-48.32 dBm	-35.32 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.86372 GHz	-42.70 dBm	-29.70 dB

Date: 31.JUL.2025 02:22:25

Highest Channel / QPSK



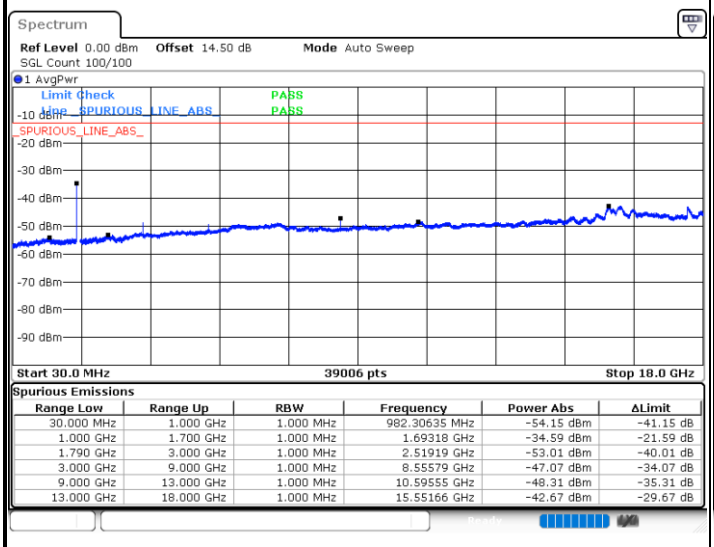
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	959.03798 MHz	-54.03 dBm	-41.03 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64525 GHz	-54.43 dBm	-41.43 dB
1.790 GHz	3.000 GHz	1.000 MHz	1.79302 GHz	-38.85 dBm	-25.85 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.82926 GHz	-44.79 dBm	-31.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59005 GHz	-48.32 dBm	-35.32 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.85497 GHz	-42.61 dBm	-29.61 dB

Date: 31.JUL.2025 02:29:04

LTE Band 66 / 20MHz

Lowest Channel / QPSK

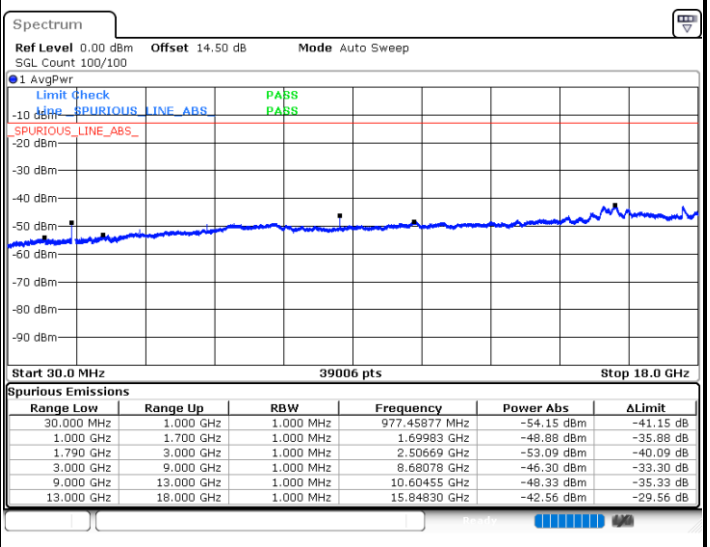


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	982.30635 MHz	-54.15 dBm	-41.15 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69318 GHz	-34.59 dBm	-21.59 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.51919 GHz	-53.01 dBm	-40.01 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.55579 GHz	-47.07 dBm	-34.07 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59555 GHz	-48.31 dBm	-35.31 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.55166 GHz	-42.67 dBm	-29.67 dB

Date: 31.JUL.2025 02:35:07

Middle Channel / QPSK

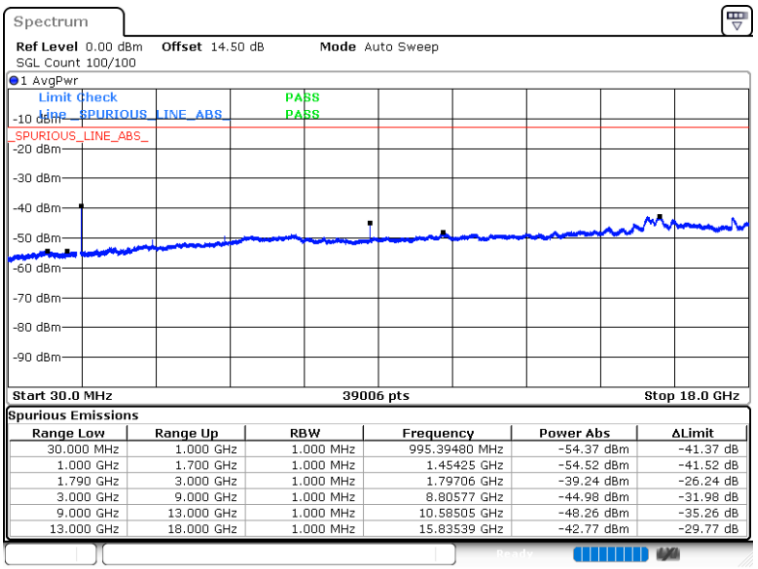


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	977.45877 MHz	-54.15 dBm	-41.15 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-48.88 dBm	-35.88 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.50669 GHz	-53.09 dBm	-40.09 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.68078 GHz	-46.30 dBm	-33.30 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60455 GHz	-48.33 dBm	-35.33 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.84830 GHz	-42.56 dBm	-29.56 dB

Date: 31.JUL.2025 02:36:08

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	995.39480 MHz	-54.37 dBm	-41.37 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.45425 GHz	-54.52 dBm	-41.52 dB
1.790 GHz	3.000 GHz	1.000 MHz	1.79706 GHz	-39.24 dBm	-26.24 dB
3.000 GHz	9.000 GHz	1.000 MHz	8.80577 GHz	-44.98 dBm	-31.98 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58505 GHz	-48.26 dBm	-35.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.83539 GHz	-42.77 dBm	-29.77 dB

Date: 31.JUL.2025 02:44:11

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	0.0025	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0026	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0001	

Note:

1. Normal Voltage = 3.91 V.; Battery End Point (BEP) = 3.7 V.; Maximum Voltage = 4.3 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Wenbo Xiao	Temperature :	22~25℃
		Relative Humidity :	48~52%

Pre-scanned harmonic for the different antennas, we choose the worst antenna mode to perform final test and record in the report.

LTE Band 2 / 20MHz / QPSK / ANT13									
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)
Middle	3742	-60.88	-13	-47.88	-78.97	-67.63	5.85	12.60	H
	5613	-58.96	-13	-45.96	-80.97	-64.76	7.30	13.10	H
	7484	-55.04	-13	-42.04	-80.99	-58.19	8.35	11.50	H
	3742	-61.27	-13	-48.27	-79.28	-68.02	5.85	12.60	V
	5613	-59.23	-13	-46.23	-81.43	-65.03	7.30	13.10	V
	7484	-55.35	-13	-42.35	-81.29	-58.50	8.35	11.50	V

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

LTE Band 26 / 15MHz / QPSK / ANT13									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1649.5	-56.40	-13	-43.40	-65.91	-59.65	4.00	9.40	H
	2474.25	-62.73	-13	-49.73	-76.63	-66.30	4.88	10.60	H
	3299	-61.77	-13	-48.77	-77.83	-66.70	5.52	12.60	H
	1649.5	-54.59	-13	-41.59	-63.84	-57.84	4.00	9.40	V
	2474.25	-61.53	-13	-48.53	-75.40	-65.10	4.88	10.60	V
	3299	-62.18	-13	-49.18	-78.05	-67.11	5.52	12.60	V

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

LTE Band 66 / 20MHz / QPSK / ANT13									
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)
Middle	3492	-54.25	-13	-41.25	-71.23	-61.10	5.65	12.50	H
	5238	-57.02	-13	-44.02	-78.48	-62.69	7.13	12.80	H
	6984	-56.14	-13	-43.14	-81.67	-59.54	8.40	11.80	H
	8730	-43.94	-13	-30.94	-73.11	-46.79	8.75	11.60	H
	3492	-53.48	-13	-40.48	-70.43	-60.33	5.65	12.50	V
	5238	-57.58	-13	-44.58	-79.21	-63.25	7.13	12.80	V
	6984	-55.87	-13	-42.87	-81.86	-59.27	8.40	11.80	V
	8730	-49.27	-13	-36.27	-77.56	-52.12	8.75	11.60	V

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