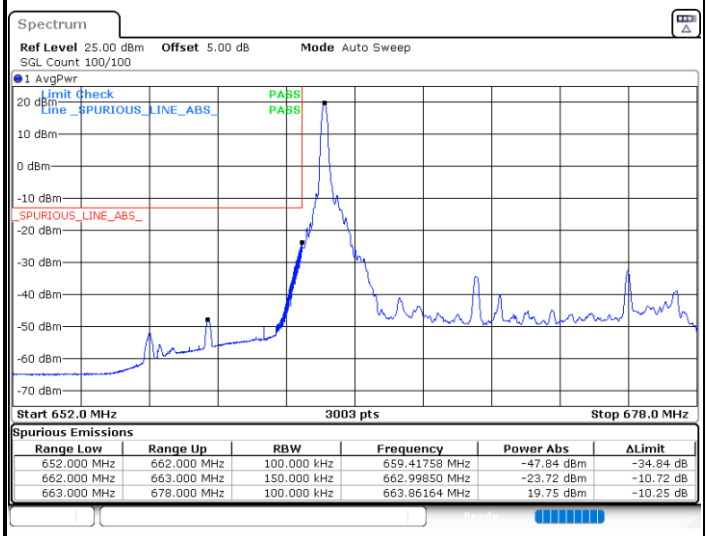
LTE Band 71 / 15MHz / QPSK

Lowest Band Edge / 1 RB

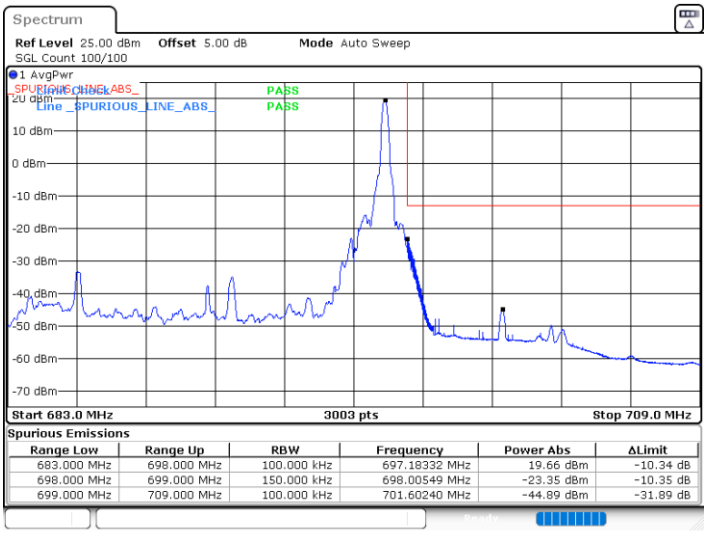


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
652.000 MHz	662.000 MHz	100.000 kHz	659.41758 MHz	-47.84 dBm	-34.84 dB
662.000 MHz	663.000 MHz	150.000 kHz	662.99850 MHz	-23.72 dBm	-10.72 dB
663.000 MHz	678.000 MHz	100.000 kHz	663.86164 MHz	19.75 dBm	-10.25 dB

Date: 27.SEP.2024 01:08:22

Highest Band Edge / 1 RB

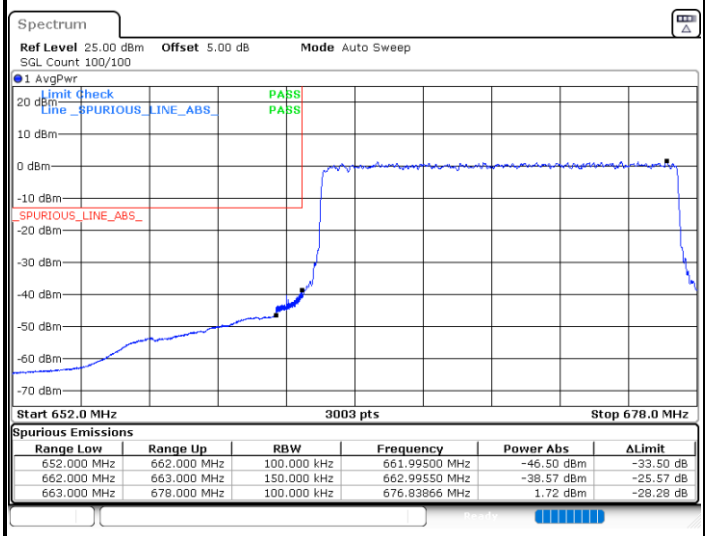


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
683.000 MHz	698.000 MHz	100.000 kHz	697.18332 MHz	19.66 dBm	-10.34 dB
698.000 MHz	699.000 MHz	150.000 kHz	698.00549 MHz	-23.35 dBm	-10.35 dB
699.000 MHz	709.000 MHz	100.000 kHz	701.60240 MHz	-44.89 dBm	-31.89 dB

Date: 27.SEP.2024 01:24:15

Lowest Band Edge / Full RB

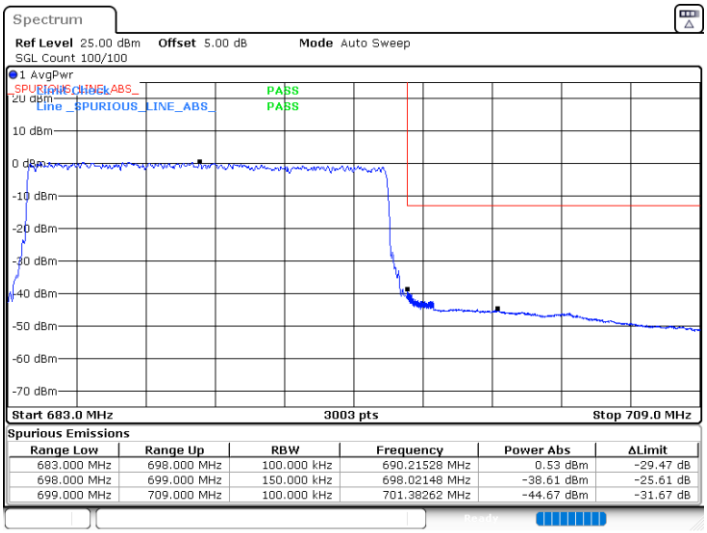


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
652.000 MHz	662.000 MHz	100.000 kHz	661.99500 MHz	-46.50 dBm	-33.50 dB
662.000 MHz	663.000 MHz	150.000 kHz	662.99550 MHz	-38.57 dBm	-25.57 dB
663.000 MHz	678.000 MHz	100.000 kHz	676.83866 MHz	1.72 dBm	-28.28 dB

Date: 27.SEP.2024 01:05:17

Highest Band Edge / Full RB



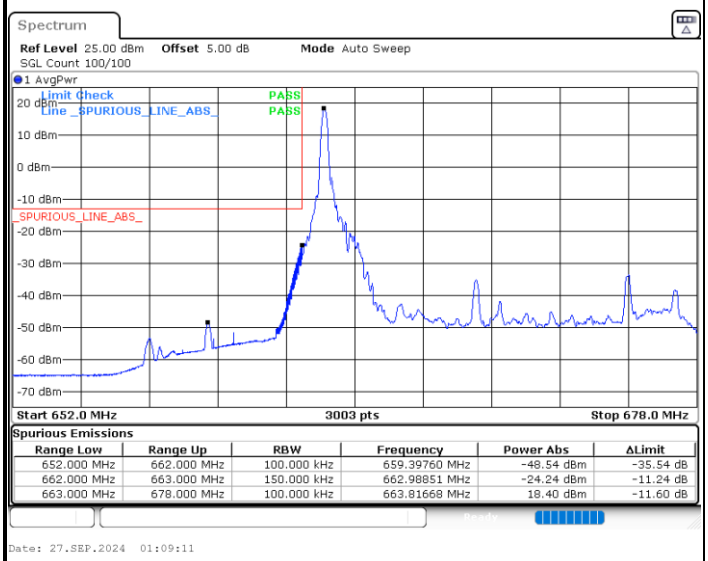
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
683.000 MHz	698.000 MHz	100.000 kHz	690.21528 MHz	0.53 dBm	-29.47 dB
698.000 MHz	699.000 MHz	150.000 kHz	698.02148 MHz	-38.61 dBm	-25.61 dB
699.000 MHz	709.000 MHz	100.000 kHz	701.38262 MHz	-44.67 dBm	-31.67 dB

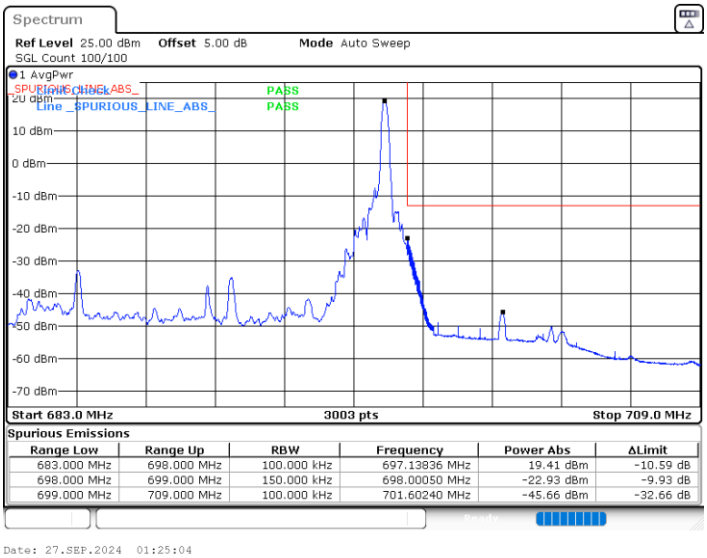
Date: 27.SEP.2024 01:27:23

LTE Band 71 / 15MHz / 16QAM

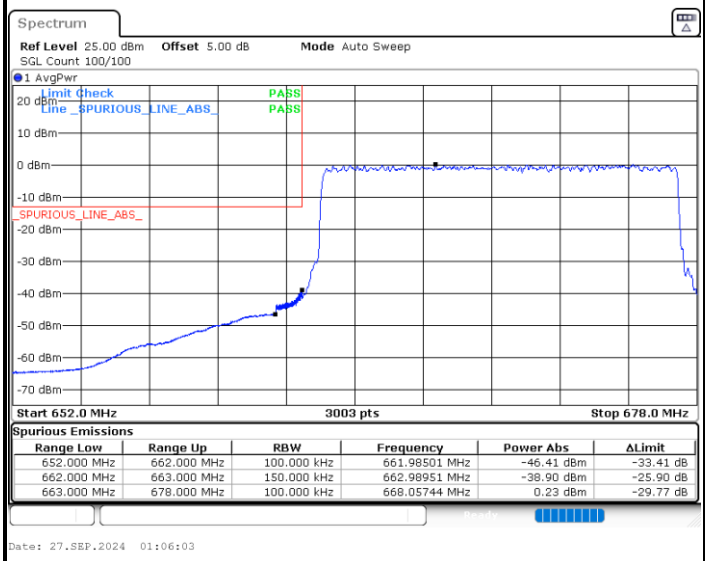
Lowest Band Edge / 1 RB



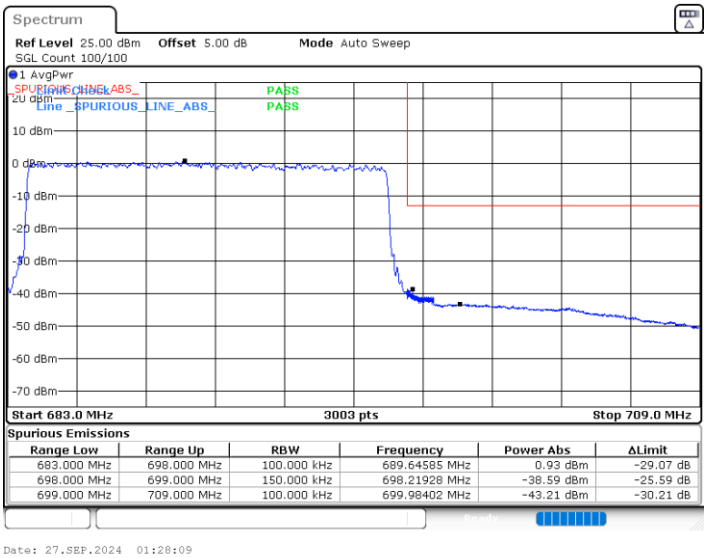
Highest Band Edge / 1 RB

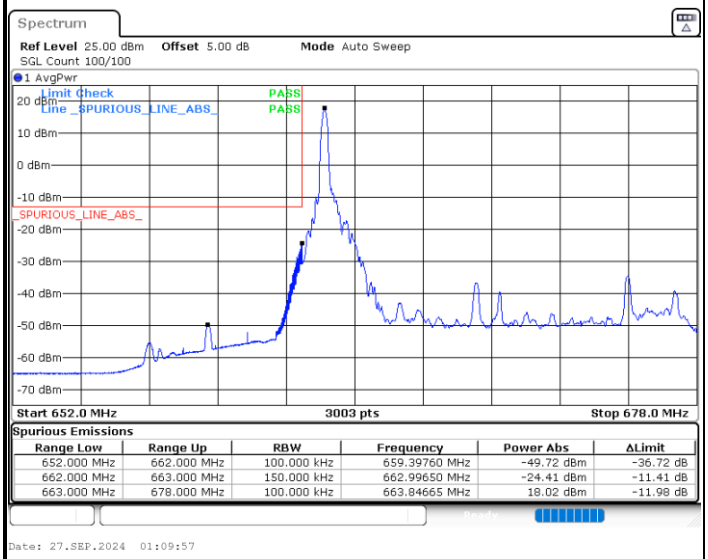
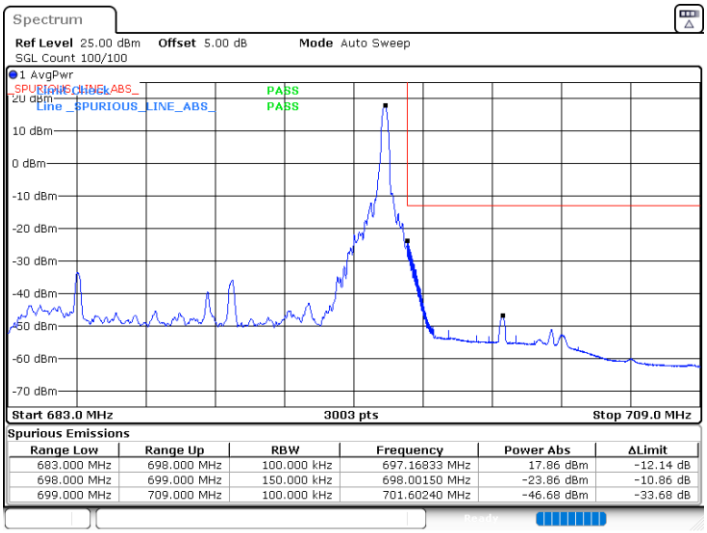
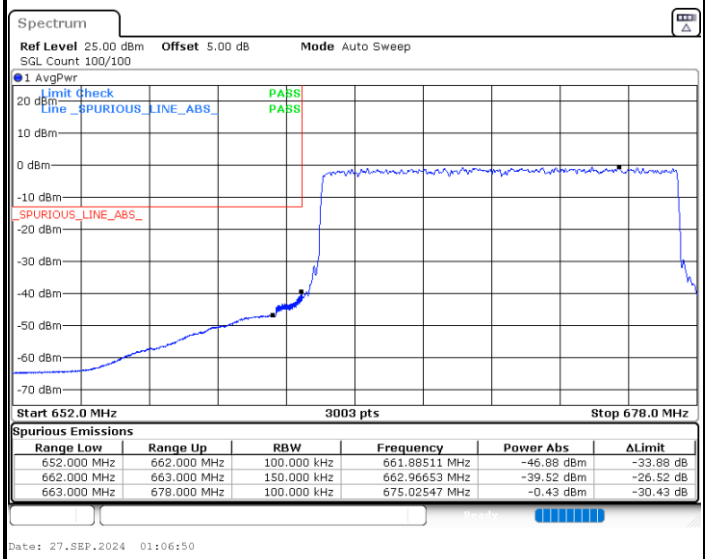
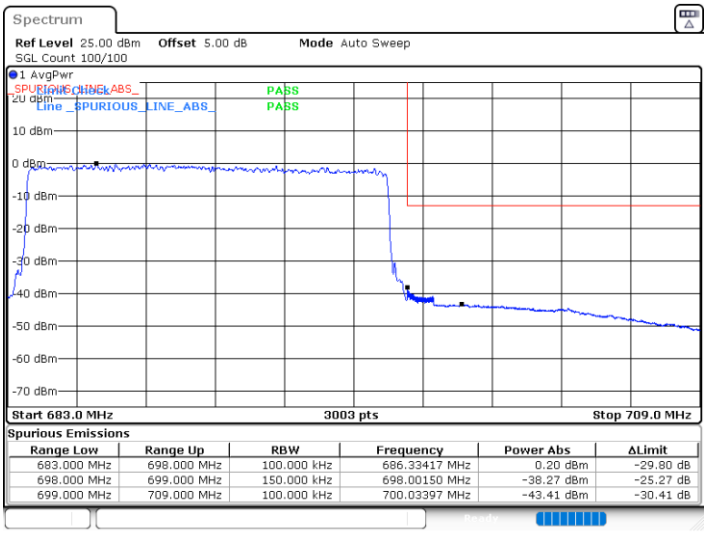


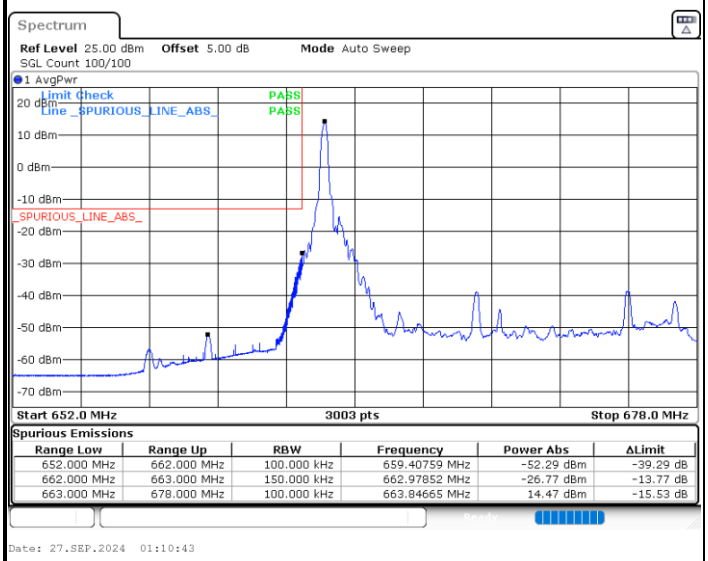
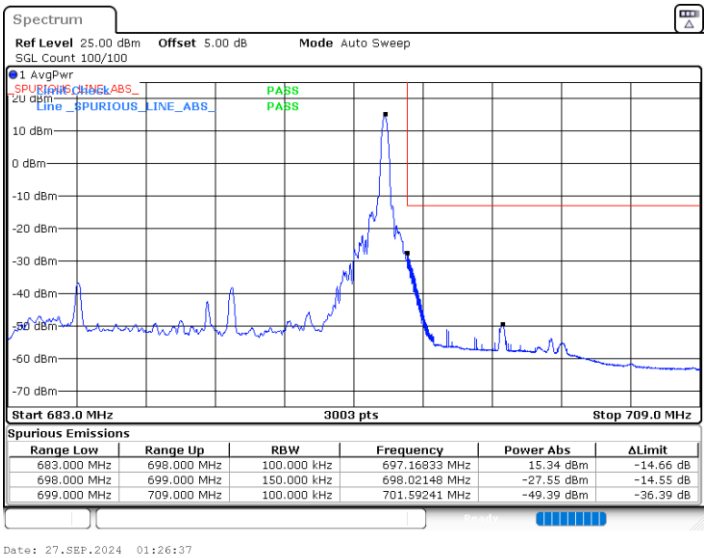
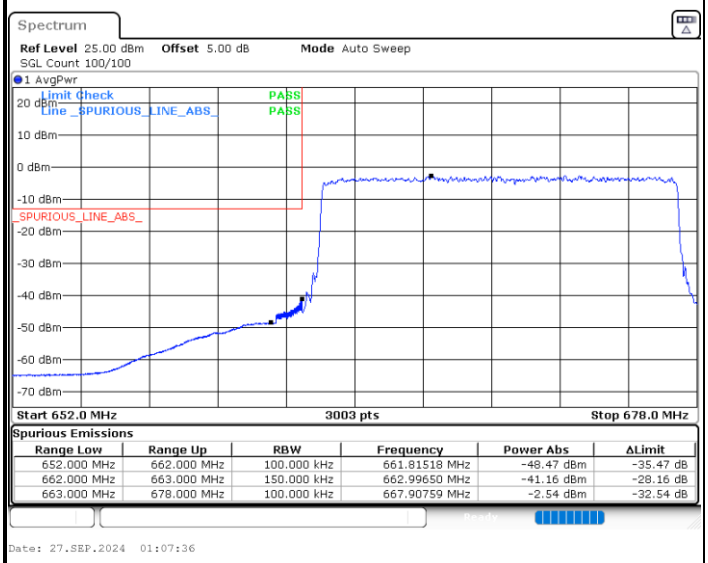
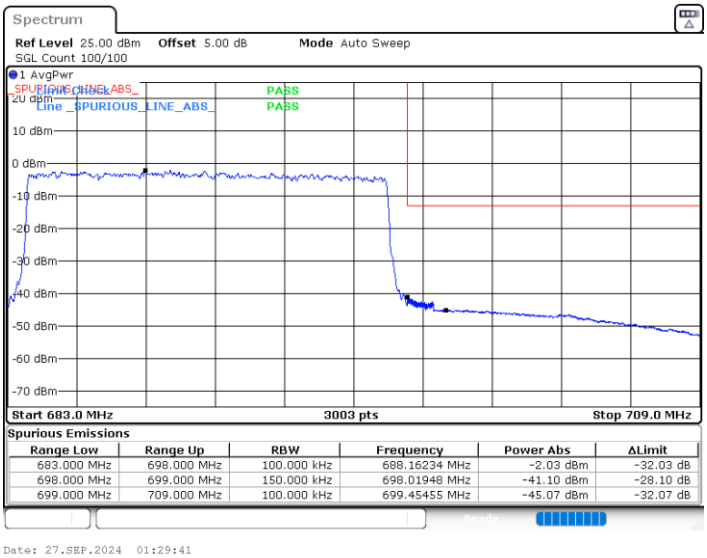
Lowest Band Edge / Full RB



Highest Band Edge / Full RB

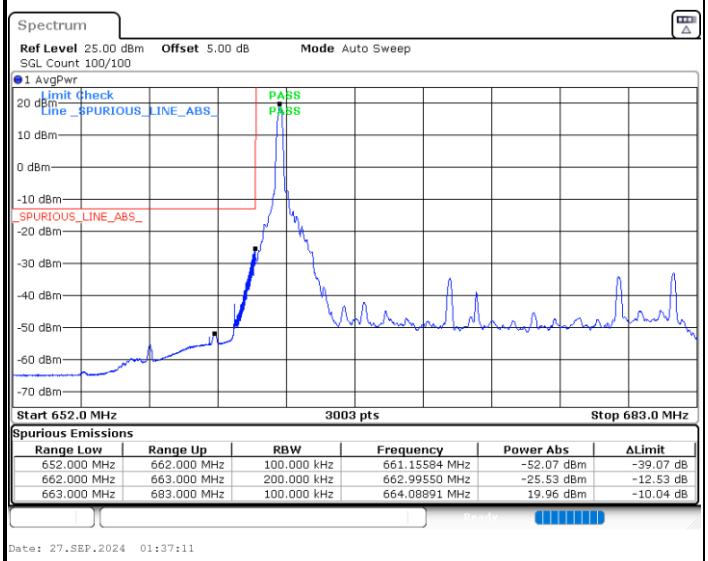


LTE Band 71 / 15MHz / 64QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

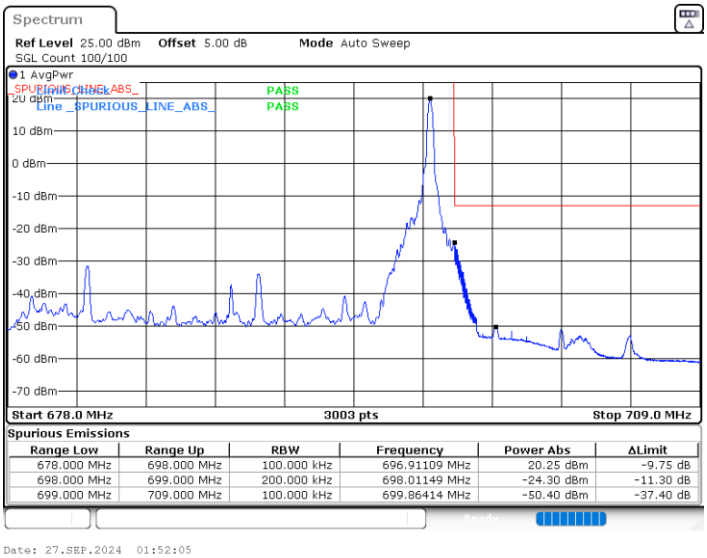
LTE Band 71 / 15MHz / 256QAM	
Lowest Band Edge / 1 RB	**Highest Band Edge / 1 RB**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

LTE Band 71 / 20MHz / QPSK

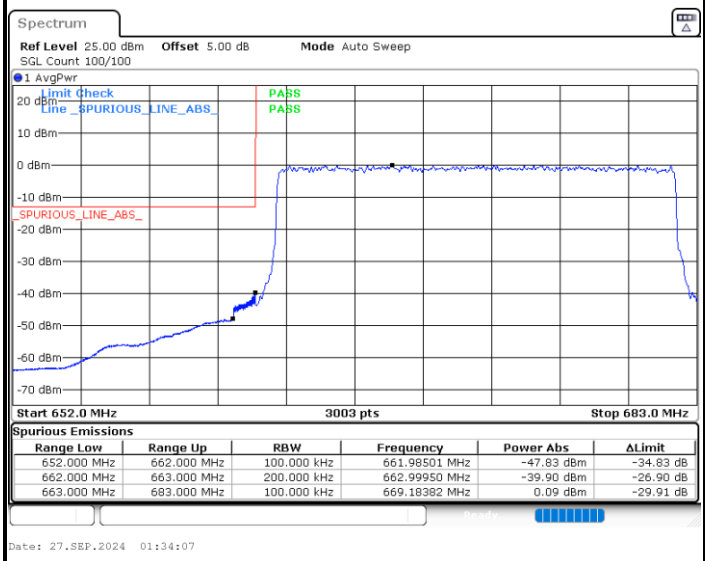
Lowest Band Edge / 1 RB



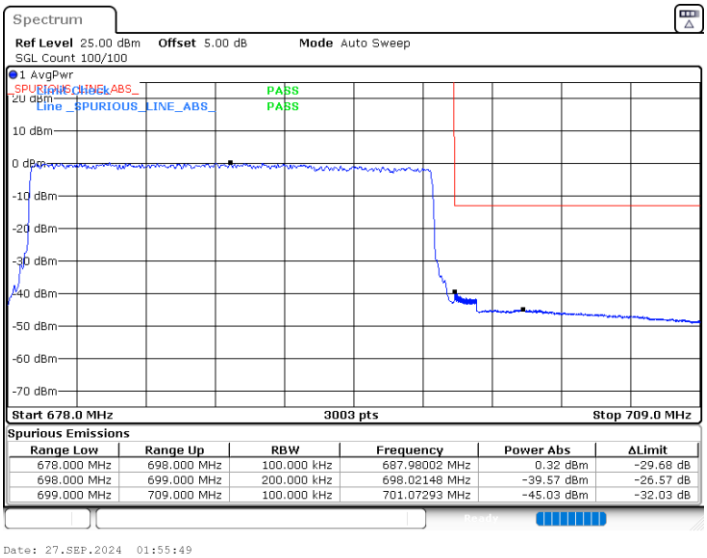
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

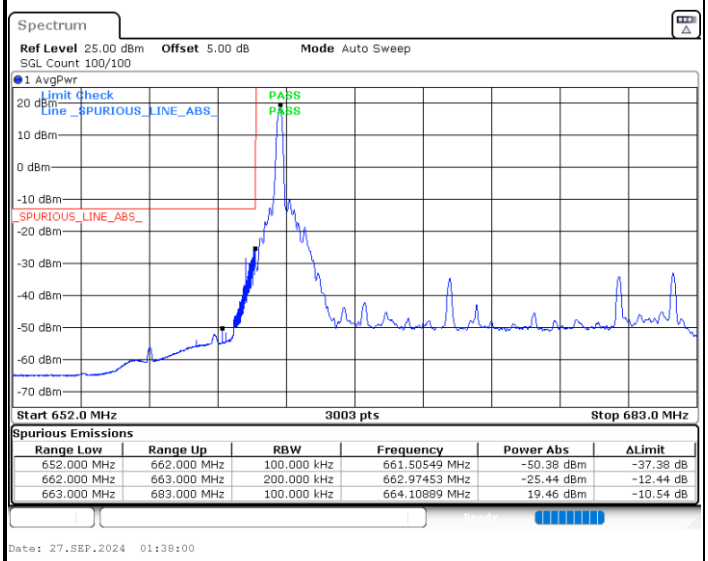


Highest Band Edge / Full RB

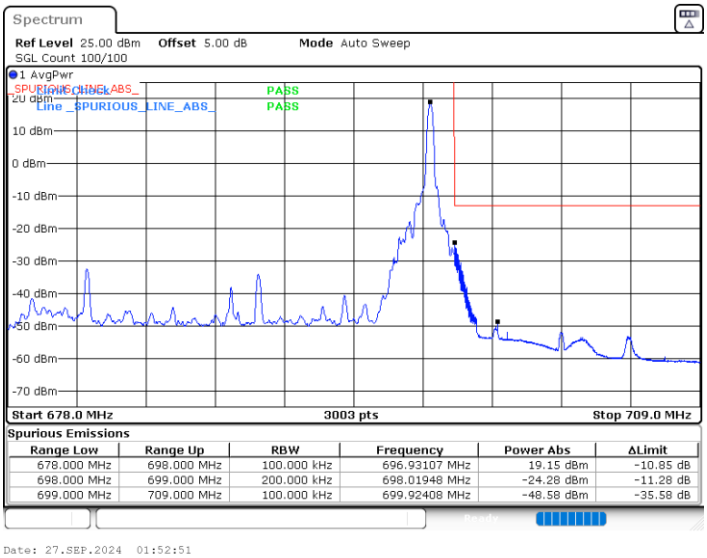


LTE Band 71 / 20MHz / 16QAM

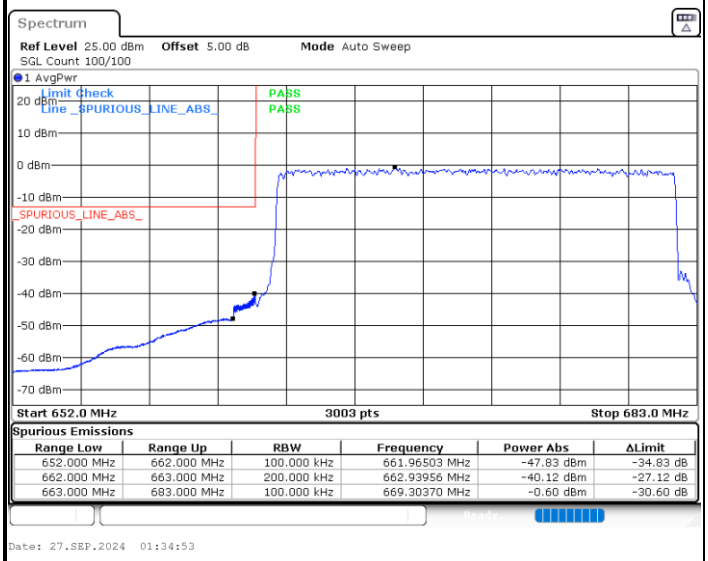
Lowest Band Edge /1 RB



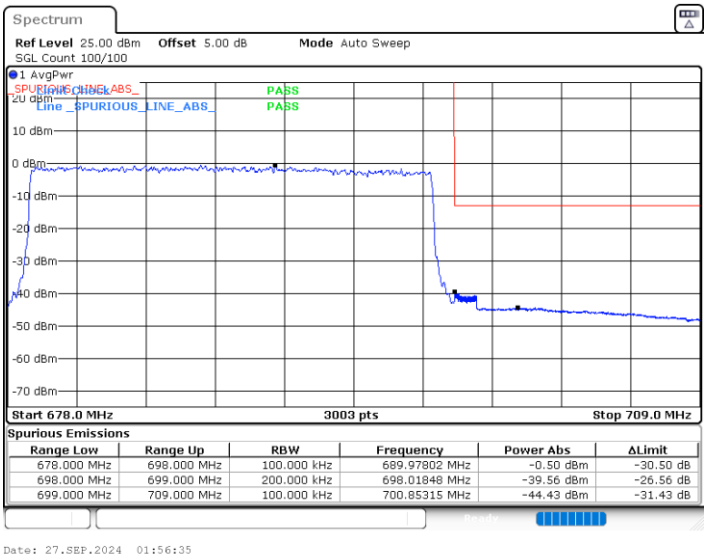
Highest Band Edge / 1RB



Lowest Band Edge / Full RB

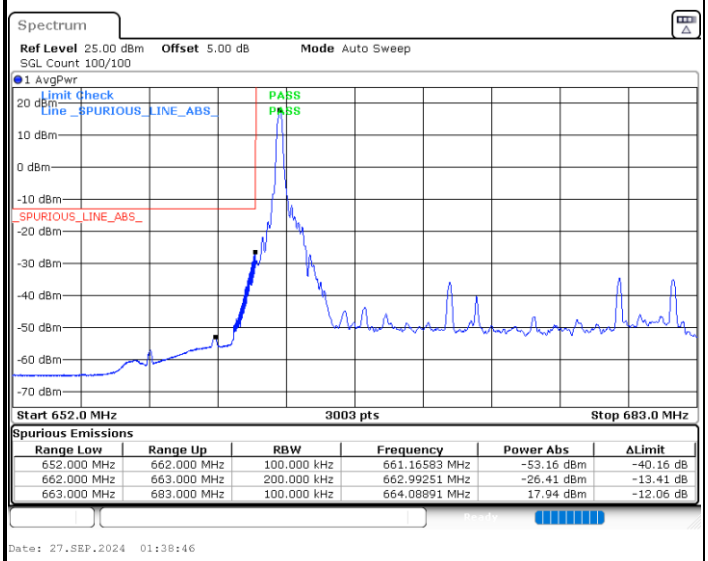


Highest Band Edge / Full RB

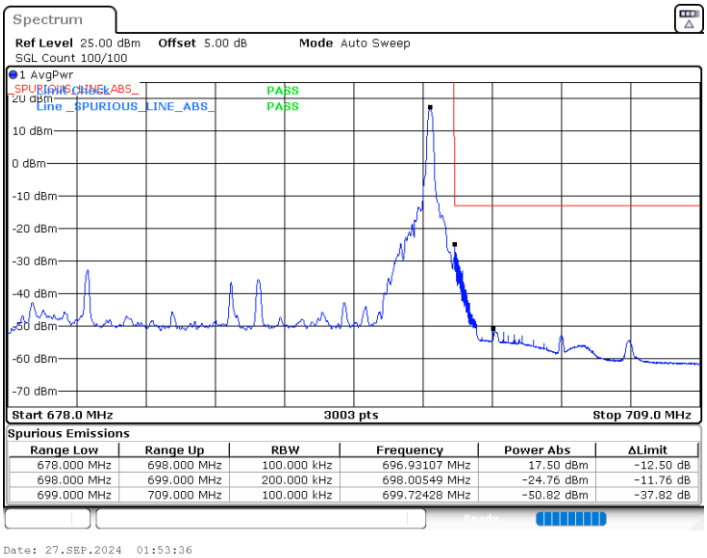


LTE Band 71 / 20MHz / 64QAM

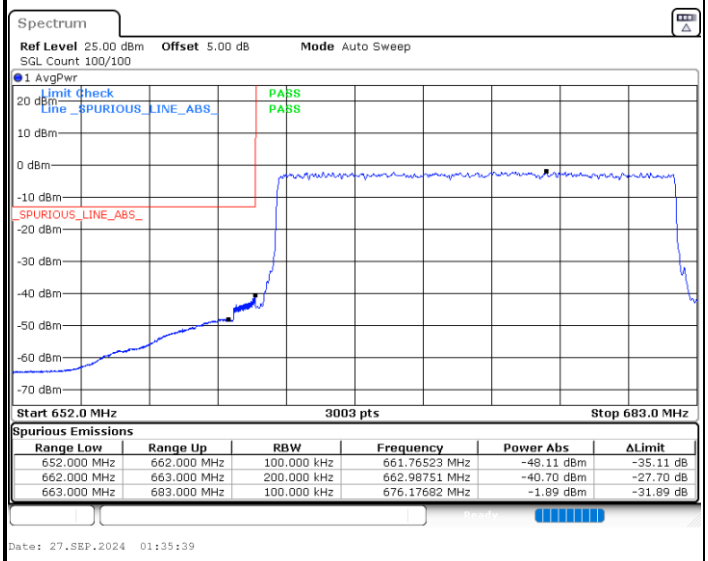
Lowest Band Edge / 1 RB



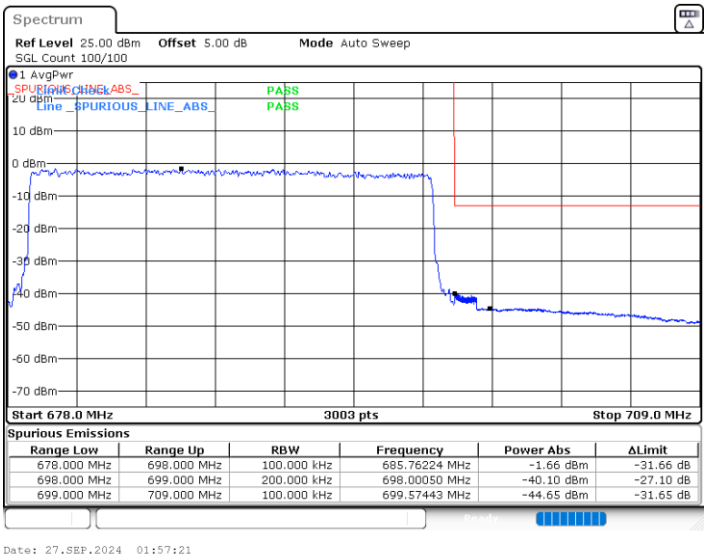
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

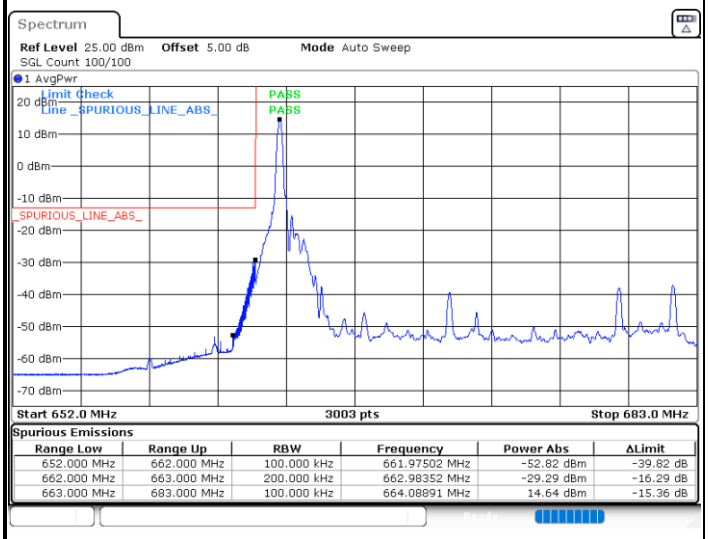


Highest Band Edge / Full RB



LTE Band 71 / 20MHz / 256QAM

Lowest Band Edge / 1 RB

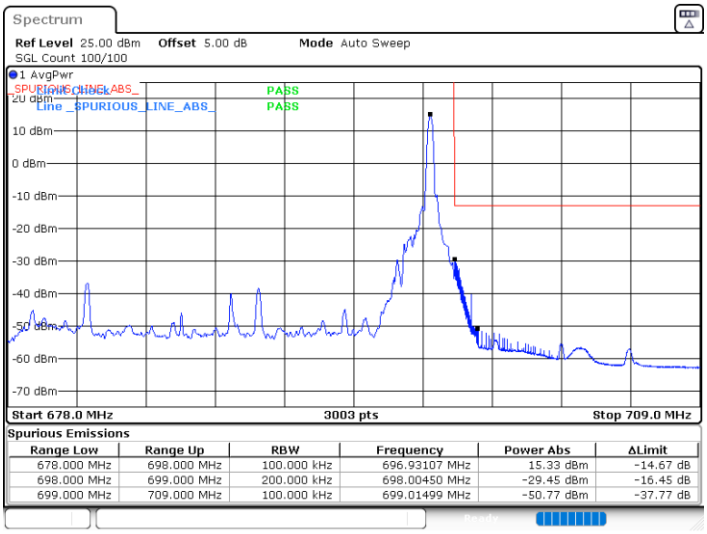


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
652.000 MHz	662.000 MHz	100.000 kHz	661.97502 MHz	-52.82 dBm	-39.82 dB
662.000 MHz	663.000 MHz	200.000 kHz	662.98352 MHz	-29.29 dBm	-16.29 dB
663.000 MHz	683.000 MHz	100.000 kHz	664.08891 MHz	14.64 dBm	-15.36 dB

Date: 27.SEP.2024 01:39:32

Highest Band Edge / 1 RB

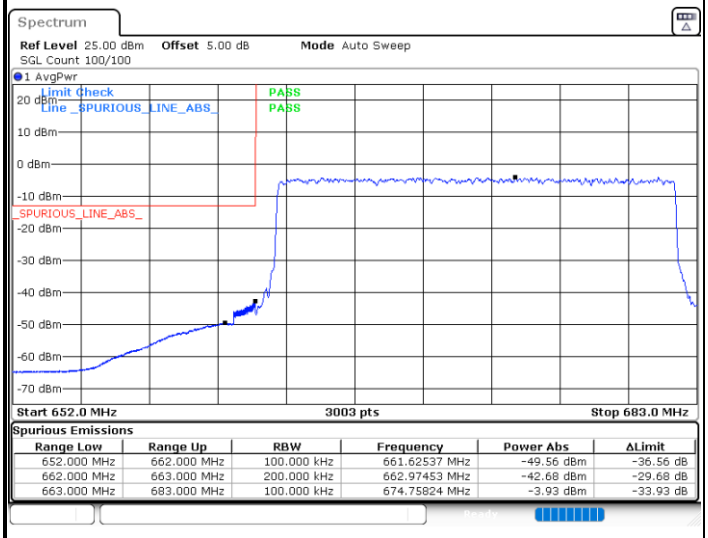


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
678.000 MHz	698.000 MHz	100.000 kHz	696.93107 MHz	15.33 dBm	-14.67 dB
698.000 MHz	699.000 MHz	200.000 kHz	698.00450 MHz	-29.45 dBm	-16.45 dB
699.000 MHz	709.000 MHz	100.000 kHz	699.01499 MHz	-50.77 dBm	-37.77 dB

Date: 27.SEP.2024 01:54:23

Lowest Band Edge / Full RB

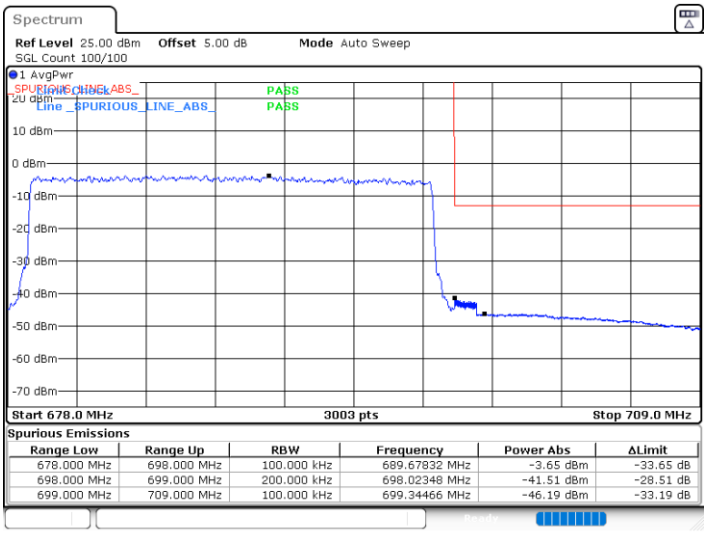


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
652.000 MHz	662.000 MHz	100.000 kHz	661.62537 MHz	-49.56 dBm	-36.56 dB
662.000 MHz	663.000 MHz	200.000 kHz	662.97453 MHz	-42.68 dBm	-29.68 dB
663.000 MHz	683.000 MHz	100.000 kHz	674.75824 MHz	-3.93 dBm	-33.93 dB

Date: 27.SEP.2024 01:36:25

Highest Band Edge / Full RB



Spurious Emissions

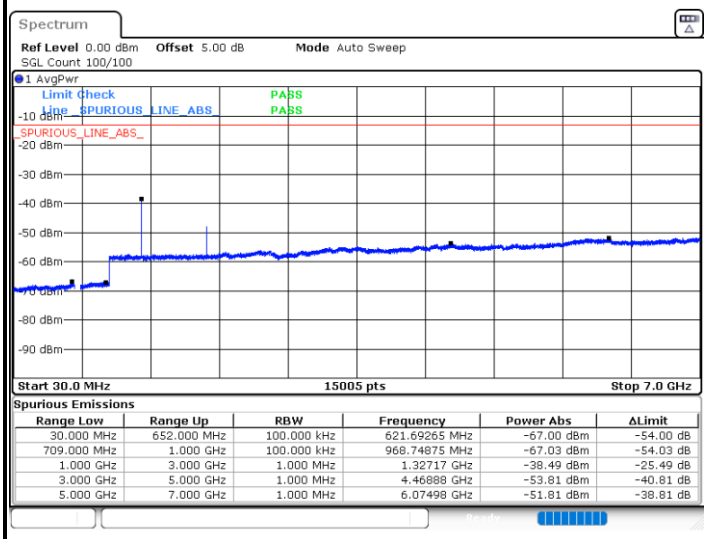
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
678.000 MHz	698.000 MHz	100.000 kHz	689.67832 MHz	-3.65 dBm	-33.65 dB
698.000 MHz	699.000 MHz	200.000 kHz	698.02348 MHz	-41.51 dBm	-28.51 dB
699.000 MHz	709.000 MHz	100.000 kHz	699.34466 MHz	-46.19 dBm	-33.19 dB

Date: 27.SEP.2024 01:58:08

Conducted Spurious Emission

LTE Band 71 / 5MHz

Lowest Channel / QPSK

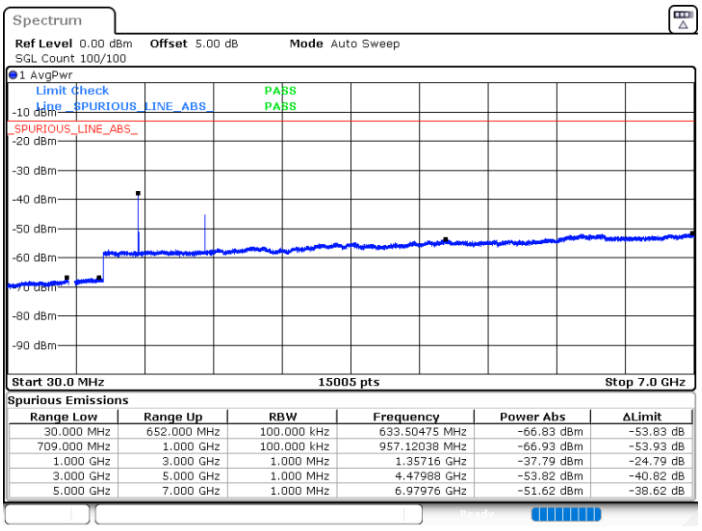


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	621.69265 MHz	-67.00 dBm	-54.00 dB
709.000 MHz	1.000 GHz	100.000 kHz	968.74875 MHz	-67.03 dBm	-54.03 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.32717 GHz	-38.49 dBm	-25.49 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.46888 GHz	-53.81 dBm	-40.81 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.07498 GHz	-51.81 dBm	-38.81 dB

Date: 26.SEP.2024 22:23:22

Middle Channel / QPSK

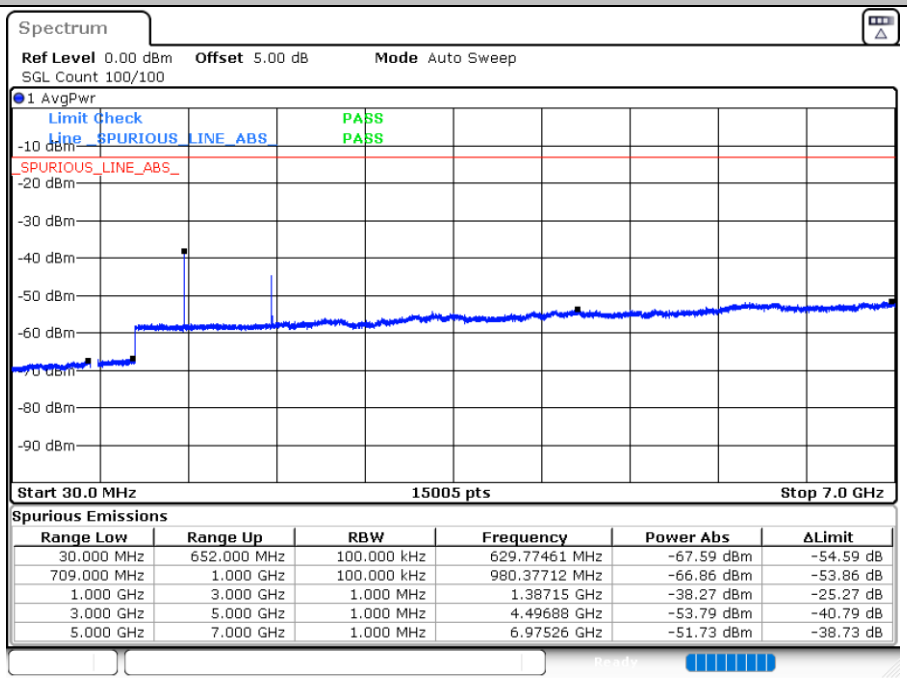


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	633.50475 MHz	-66.83 dBm	-53.83 dB
709.000 MHz	1.000 GHz	100.000 kHz	957.12038 MHz	-66.93 dBm	-53.93 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.35716 GHz	-37.79 dBm	-24.79 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.47988 GHz	-53.82 dBm	-40.82 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.97976 GHz	-51.62 dBm	-38.62 dB

Date: 26.SEP.2024 23:06:37

Highest Channel / QPSK



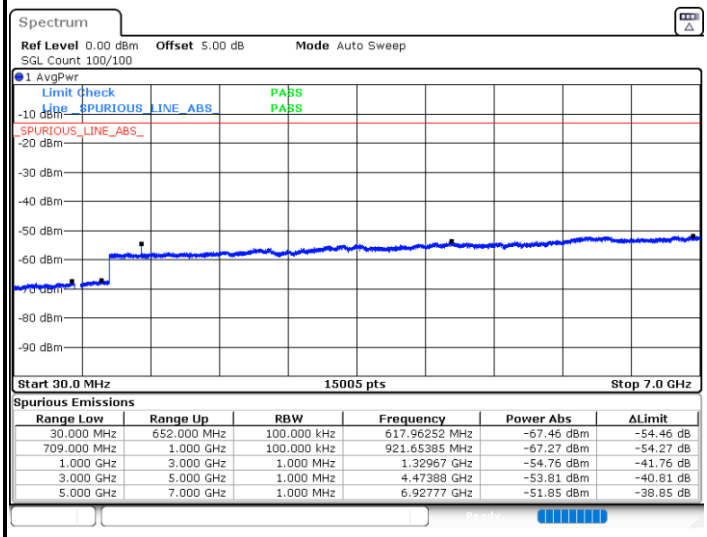
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	629.77461 MHz	-67.59 dBm	-54.59 dB
709.000 MHz	1.000 GHz	100.000 kHz	980.37712 MHz	-66.86 dBm	-53.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.38715 GHz	-38.27 dBm	-25.27 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.49688 GHz	-53.79 dBm	-40.79 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.97526 GHz	-51.73 dBm	-38.73 dB

Date: 26.SEP.2024 23:09:21

LTE Band 71 / 10MHz

Lowest Channel / QPSK

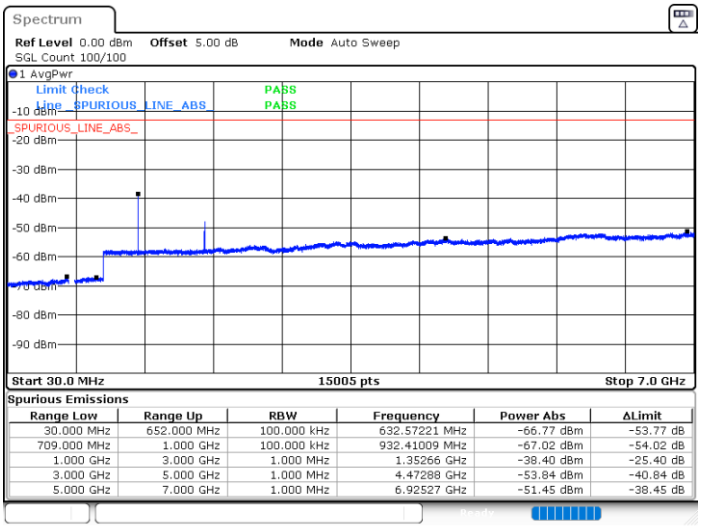


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	617.96252 MHz	-67.46 dBm	-54.46 dB
709.000 MHz	1.000 GHz	100.000 kHz	921.65385 MHz	-67.27 dBm	-54.27 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.32967 GHz	-54.76 dBm	-41.76 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.47388 GHz	-53.81 dBm	-40.81 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.92777 GHz	-51.85 dBm	-38.85 dB

Date: 27.SEP.2024 00:46:42

Middle Channel / QPSK

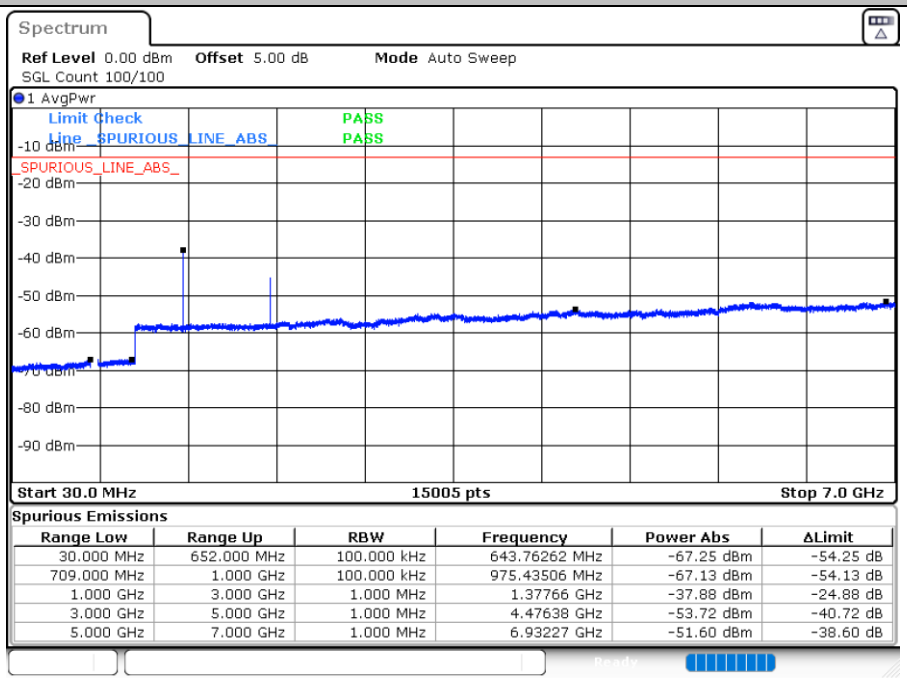


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	632.57221 MHz	-66.77 dBm	-53.77 dB
709.000 MHz	1.000 GHz	100.000 kHz	932.41009 MHz	-67.02 dBm	-54.02 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.35266 GHz	-38.40 dBm	-25.40 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.47288 GHz	-53.84 dBm	-40.84 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.92527 GHz	-51.45 dBm	-38.45 dB

Date: 27.SEP.2024 00:49:52

Highest Channel / QPSK



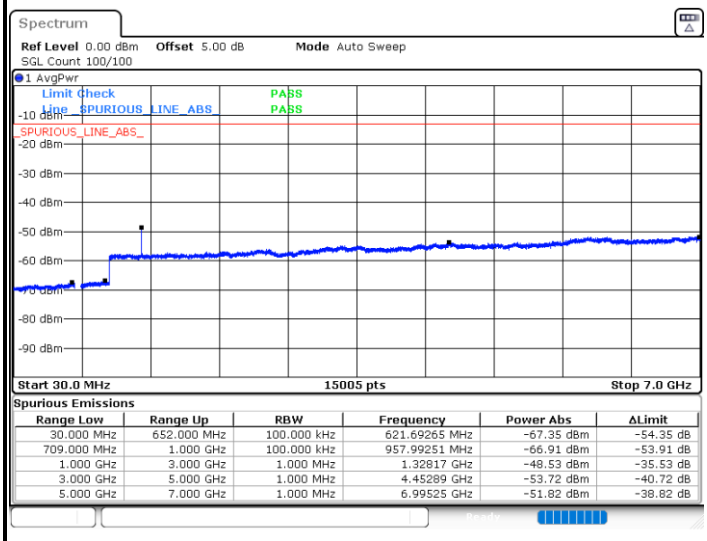
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	643.76262 MHz	-67.25 dBm	-54.25 dB
709.000 MHz	1.000 GHz	100.000 kHz	975.43506 MHz	-67.13 dBm	-54.13 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.37766 GHz	-37.88 dBm	-24.88 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.47638 GHz	-53.72 dBm	-40.72 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.93227 GHz	-51.60 dBm	-38.60 dB

Date: 27.SEP.2024 00:52:35

LTE Band 71 / 15MHz

Lowest Channel / QPSK

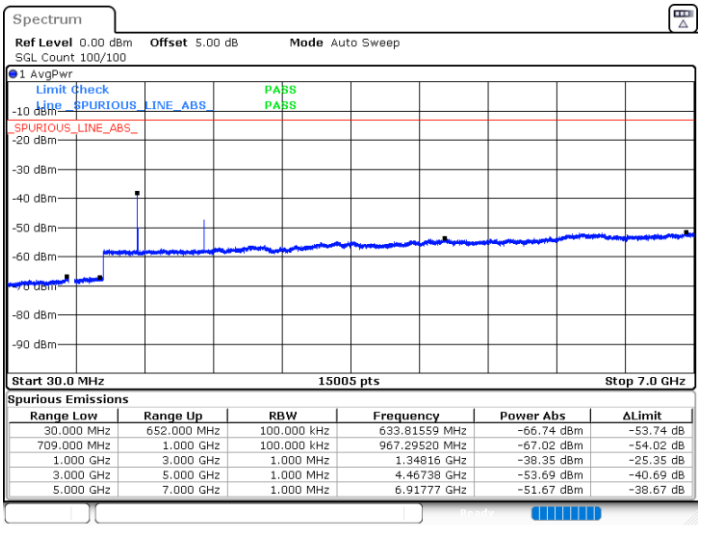


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	621.69265 MHz	-67.35 dBm	-54.35 dB
709.000 MHz	1.000 GHz	100.000 kHz	957.99251 MHz	-66.91 dBm	-53.91 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.32817 GHz	-48.53 dBm	-35.53 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.45289 GHz	-53.72 dBm	-40.72 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.99525 GHz	-51.82 dBm	-38.82 dB

Date: 27.SEP.2024 01:16:46

Middle Channel / QPSK

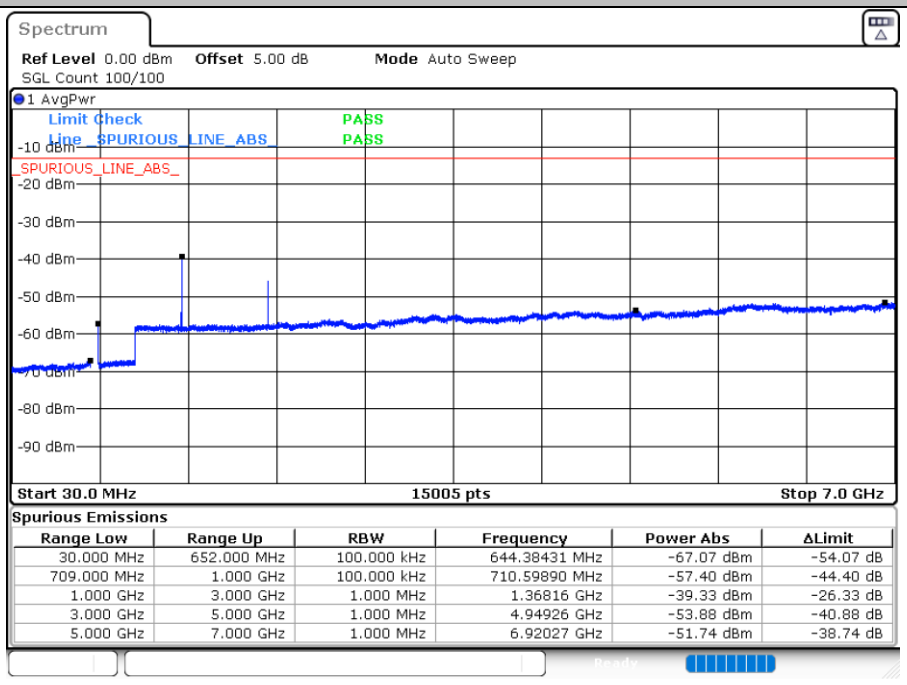


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	633.81559 MHz	-66.74 dBm	-53.74 dB
709.000 MHz	1.000 GHz	100.000 kHz	967.29520 MHz	-67.02 dBm	-54.02 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.34816 GHz	-38.35 dBm	-25.35 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.46738 GHz	-53.69 dBm	-40.69 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.91777 GHz	-51.67 dBm	-38.67 dB

Date: 27.SEP.2024 01:20:43

Highest Channel / QPSK



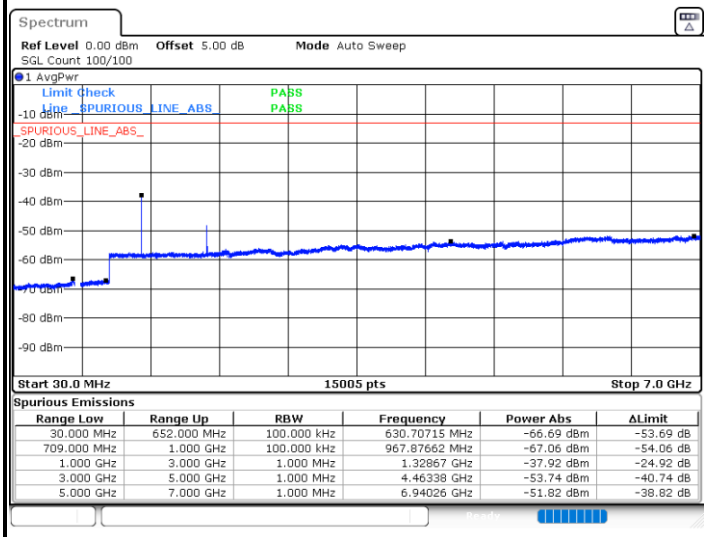
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	644.38431 MHz	-67.07 dBm	-54.07 dB
709.000 MHz	1.000 GHz	100.000 kHz	710.59890 MHz	-57.40 dBm	-44.40 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.36816 GHz	-39.33 dBm	-26.33 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.94926 GHz	-53.88 dBm	-40.88 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.92027 GHz	-51.74 dBm	-38.74 dB

Date: 27.SEP.2024 01:23:27

LTE Band 71 / 20MHz

Lowest Channel / QPSK

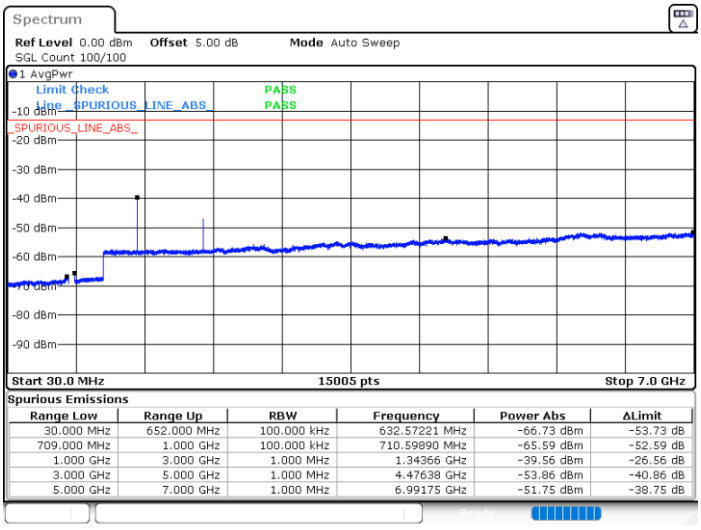


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	630.70715 MHz	-66.69 dBm	-53.69 dB
709.000 MHz	1.000 GHz	100.000 kHz	967.87662 MHz	-67.06 dBm	-54.06 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.32867 GHz	-37.92 dBm	-24.92 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.46338 GHz	-53.74 dBm	-40.74 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.94026 GHz	-51.82 dBm	-38.82 dB

Date: 27.SEP.2024 01:47:05

Middle Channel / QPSK

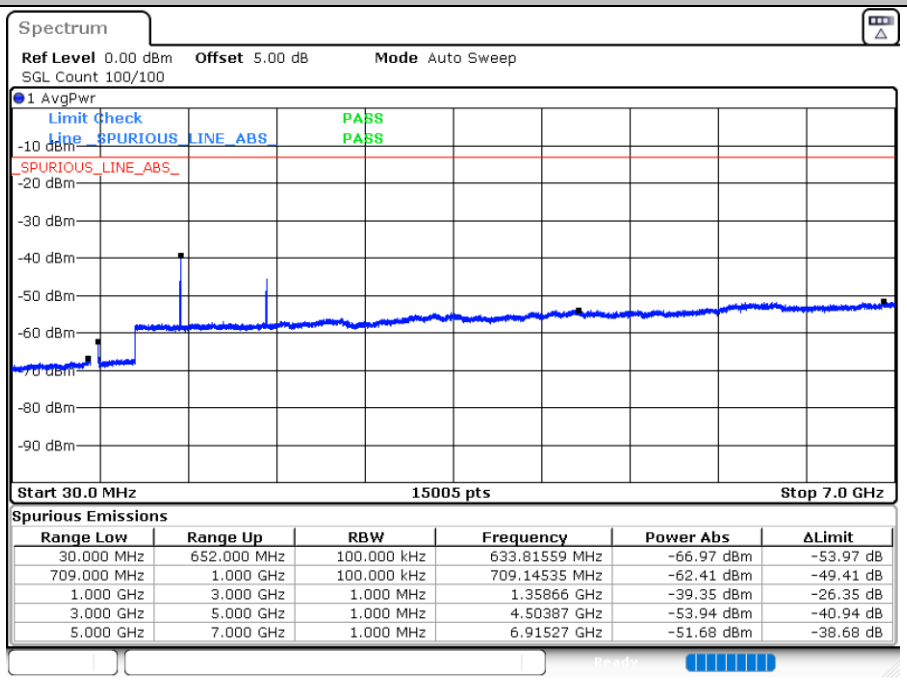


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	632.57221 MHz	-66.73 dBm	-53.73 dB
709.000 MHz	1.000 GHz	100.000 kHz	710.59890 MHz	-65.59 dBm	-52.59 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.34366 GHz	-39.56 dBm	-26.56 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.47638 GHz	-53.86 dBm	-40.86 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.99175 GHz	-51.75 dBm	-38.75 dB

Date: 27.SEP.2024 01:48:30

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	652.000 MHz	100.000 kHz	633.81559 MHz	-66.97 dBm	-53.97 dB
709.000 MHz	1.000 GHz	100.000 kHz	709.14535 MHz	-62.41 dBm	-49.41 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.35866 GHz	-39.35 dBm	-26.35 dB
3.000 GHz	5.000 GHz	1.000 MHz	4.50387 GHz	-53.94 dBm	-40.94 dB
5.000 GHz	7.000 GHz	1.000 MHz	6.91527 GHz	-51.68 dBm	-38.68 dB

Date: 27.SEP.2024 01:51:19

Frequency Stability

Test Conditions		LTE Band 71 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0019	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0033	
-10	Normal Voltage	0.0048	
-20	Normal Voltage	0.0064	
-30	Normal Voltage	0.0079	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0044	
20	Battery End Point	0.0038	

Note:

1. Normal Voltage =3.8V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.2 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 :	Bruce	Temperature :	23~25℃
		Relative Humidity :	41~42%

RSE pretest all the supported Antennas, only the worst results are shown in the report.

LTE Band 12 / 10MHz / QPSK / Ant.0								
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	1400	-55.58	-13	-42.58	-62.55	1.58	10.70	H
	2096	-51.67	-13	-38.67	-59.92	2.102	12.50	H
	2800	-55.21	-13	-42.21	-64.10	2.856	13.90	H
	1400	-59.07	-13	-46.07	-66.04	1.58	10.70	V
	2096	-58.24	-13	-45.24	-66.49	2.10	12.50	V
	2800	-59.04	-13	-46.04	-67.93	2.86	13.90	V
Middle	1408	-54.96	-13	-41.96	-61.93	1.58	10.70	H
	2112	-51.21	-13	-38.21	-59.46	2.102	12.50	H
	2816	-56.22	-13	-43.22	-65.11	2.856	13.90	H
	1408	-58.82	-13	-45.82	-65.79	1.58	10.70	V
	2112	-57.95	-13	-44.95	-66.20	2.10	12.50	V
	2816	-59.42	-13	-46.42	-68.31	2.86	13.90	V
Highest	1416	-56.21	-13	-43.21	-63.18	1.58	10.70	H
	2120	-51.77	-13	-38.77	-60.02	2.102	12.50	H
	2824	-56.88	-13	-43.88	-65.77	2.856	13.90	H
	1416	-58.71	-13	-45.71	-65.68	1.58	10.70	V
	2120	-57.60	-13	-44.60	-65.85	2.10	12.50	V
	2824	-59.15	-13	-46.15	-68.04	2.86	13.90	V

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

LTE Band 13 / 5MHz / QPSK / Ant.0								
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	1554	-50.98	-13	-37.98	-53.61	1.09	5.87	H
	2328	-56.52	-13	-43.52	-58.92	1.37	5.92	H
	3109	-58.97	-13	-45.97	-62.86	1.64	7.68	H
	1552	-53.28	-13	-40.28	-55.91	1.09	5.87	V
	2328	-56.11	-13	-43.11	-58.51	1.37	5.92	V
	3112	-59.17	-13	-46.17	-63.06	1.64	7.68	V
Middle	1560	-49.45	-42.15	-7.30	-52.08	1.09	5.87	H
	2339	-55.41	-13	-42.41	-57.81	1.37	5.92	H
	3120	-58.91	-13	-45.91	-62.80	1.64	7.68	H
	1560	-50.72	-42.15	-8.57	-53.35	1.09	5.87	V
	2339	-53.81	-13	-40.81	-56.21	1.37	5.92	V
	3120	-59.00	-13	-46.00	-62.89	1.64	7.68	V
Highest	1568	-48.78	-42.15	-6.63	-51.41	1.09	5.87	H
	2344	-56.21	-13	-43.21	-58.61	1.37	5.92	H
	3128	-59.13	-13	-46.13	-63.02	1.64	7.68	H
	1568	-49.77	-42.15	-7.62	-52.40	1.09	5.87	V
	2344	-55.17	-13	-42.17	-57.57	1.37	5.92	V
	3128	-59.39	-13	-46.39	-63.28	1.64	7.68	V

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

LTE Band 13 / 10MHz / QPSK / Ant.0								
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)
Middle	1555	-54.78	-13	-41.78	-57.41	1.09	5.87	H
	2332	-57.36	-13	-44.36	-59.76	1.37	5.92	H
	3110	-59.65	-13	-46.65	-63.54	1.64	7.68	H
	1555	-54.77	-13	-41.77	-57.40	1.09	5.87	V
	2332	-59.58	-13	-46.58	-61.98	1.37	5.92	V
	3110	-59.54	-13	-46.54	-63.43	1.64	7.68	V

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

LTE Band 71 / 20MHz / QPSK / Ant.0								
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	1328	-56.79	-13	-43.79	-58.54	1.02	4.92	H
	1992	-55.36	-13	-42.36	-57.33	1.27	5.39	H
	2656	-57.98	-13	-44.98	-60.91	1.49	6.57	H
	1328	-57.24	-13	-44.24	-58.99	1.02	4.92	V
	1992	-55.78	-13	-42.78	-57.75	1.27	5.39	V
	2656	-57.66	-13	-44.66	-60.59	1.49	6.57	V
Middle	1344	-56.63	-13	-43.63	-58.38	1.02	4.92	H
	2016	-50.61	-13	-37.61	-52.58	1.27	5.39	H
	2688	-55.24	-13	-42.24	-58.17	1.49	6.57	H
	1344	-56.85	-13	-43.85	-58.60	1.02	4.92	V
	2016	-55.69	-13	-42.69	-57.66	1.27	5.39	V
	2688	-55.21	-13	-42.21	-58.14	1.49	6.57	V
Highest	1360	-56.70	-13	-43.70	-58.45	1.02	4.92	H
	2040	-50.72	-13	-37.72	-52.69	1.27	5.39	H
	2712	-56.55	-13	-43.55	-59.48	1.49	6.57	H
	1360	-57.09	-13	-44.09	-58.84	1.02	4.92	V
	2040	-55.27	-13	-42.27	-57.24	1.27	5.39	V
	2712	-57.01	-13	-44.01	-59.94	1.49	6.57	V

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