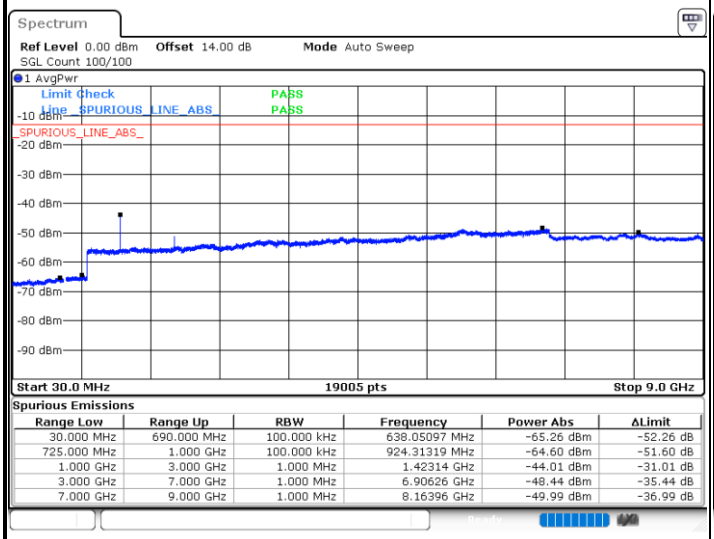
LTE Band 12 / 5MHz

Highest Channel / QPSK

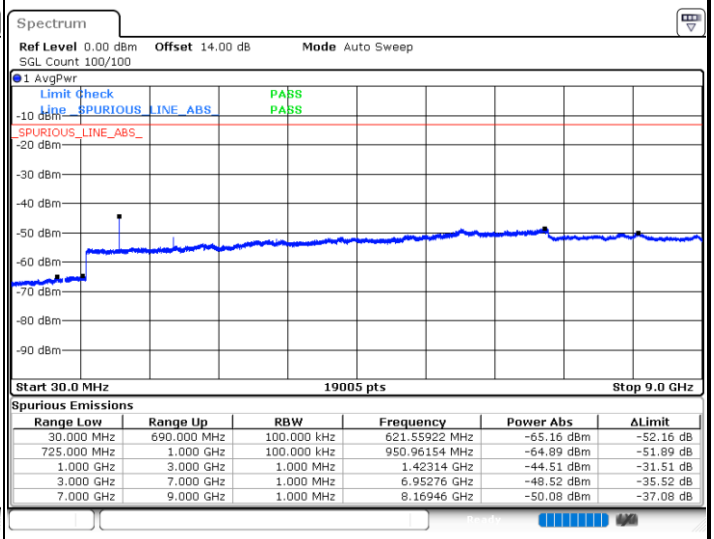


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	638.05097 MHz	-65.26 dBm	-52.26 dB
725.000 MHz	1.000 GHz	100.000 kHz	924.31319 MHz	-64.60 dBm	-51.60 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-44.01 dBm	-31.01 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90626 GHz	-48.44 dBm	-35.44 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16396 GHz	-49.99 dBm	-36.99 dB

Date: 12.SEP.2020 06:26:02

Highest Channel / 16QAM



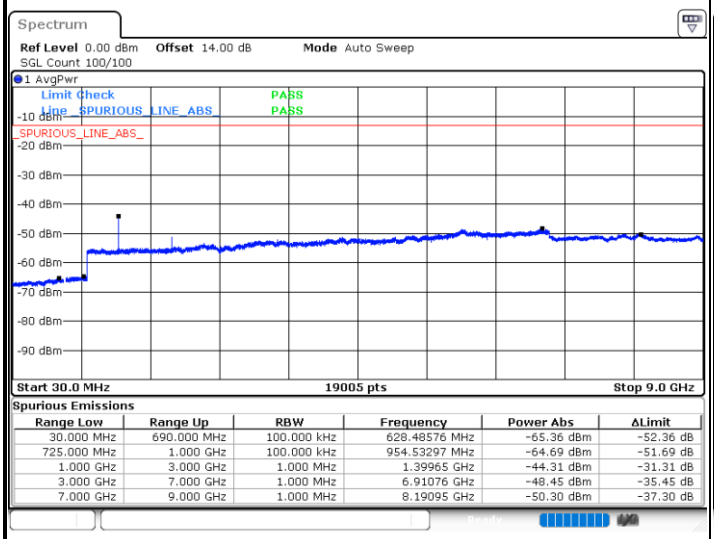
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	621.55922 MHz	-65.16 dBm	-52.16 dB
725.000 MHz	1.000 GHz	100.000 kHz	950.96154 MHz	-64.89 dBm	-51.89 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-44.51 dBm	-31.51 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.95276 GHz	-48.52 dBm	-35.52 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16946 GHz	-50.08 dBm	-37.08 dB

Date: 12.SEP.2020 06:26:51

LTE Band 12 / 10MHz

Lowest Channel / QPSK

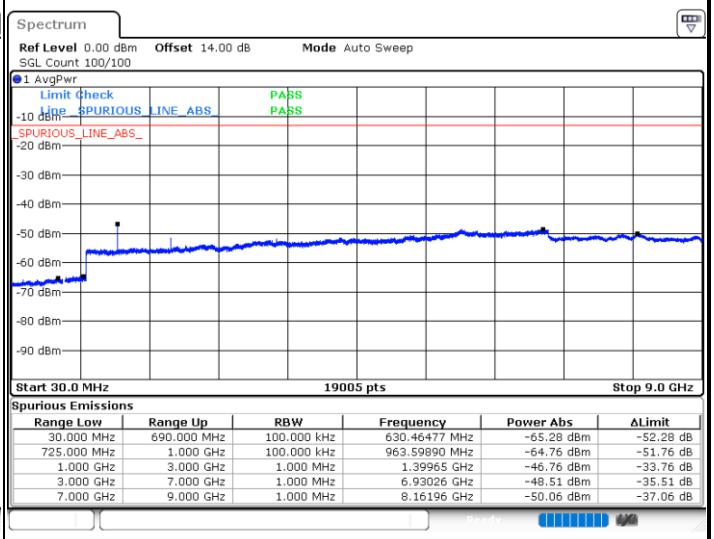


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	628.48576 MHz	-65.36 dBm	-52.36 dB
725.000 MHz	1.000 GHz	100.000 kHz	954.53297 MHz	-64.69 dBm	-51.69 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-44.31 dBm	-31.31 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91076 GHz	-48.45 dBm	-35.45 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.19095 GHz	-50.30 dBm	-37.30 dB

Date: 12.SEP.2020 07:40:38

Lowest Channel / 16QAM



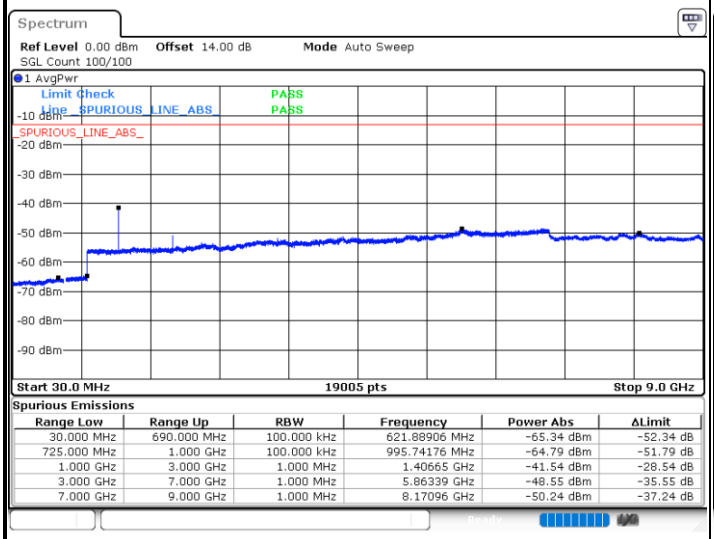
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	630.46477 MHz	-65.28 dBm	-52.28 dB
725.000 MHz	1.000 GHz	100.000 kHz	963.59890 MHz	-64.76 dBm	-51.76 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-46.76 dBm	-33.76 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93026 GHz	-48.51 dBm	-35.51 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16196 GHz	-50.06 dBm	-37.06 dB

Date: 12.SEP.2020 07:53:00

LTE Band 12 / 10MHz

Middle Channel / QPSK

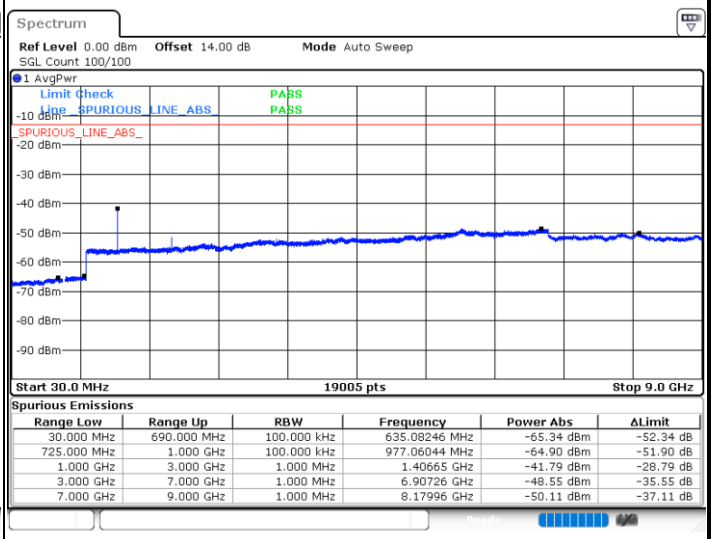


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	621.88906 MHz	-65.34 dBm	-52.34 dB
725.000 MHz	1.000 GHz	100.000 kHz	995.74176 MHz	-64.79 dBm	-51.79 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.40665 GHz	-41.54 dBm	-28.54 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.86339 GHz	-48.55 dBm	-35.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.17096 GHz	-50.24 dBm	-37.24 dB

Date: 12.SEP.2020 06:55:08

Middle Channel / 16QAM

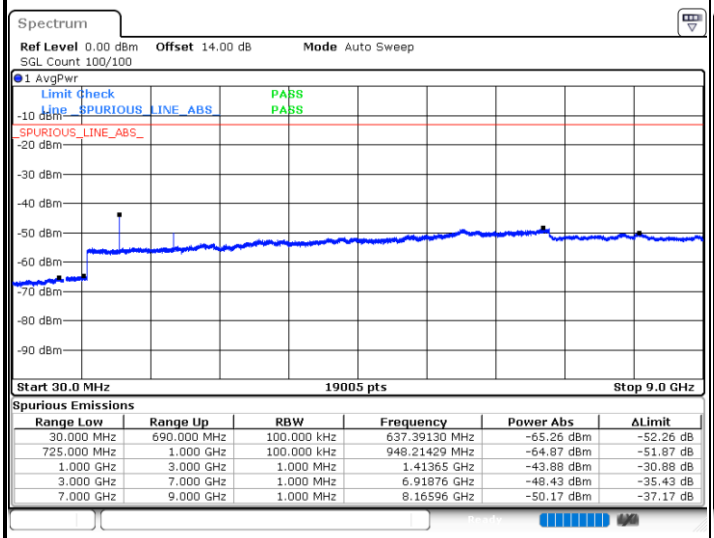


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	635.08246 MHz	-65.34 dBm	-52.34 dB
725.000 MHz	1.000 GHz	100.000 kHz	977.06044 MHz	-64.90 dBm	-51.90 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.40665 GHz	-41.79 dBm	-28.79 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.90726 GHz	-48.55 dBm	-35.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.17996 GHz	-50.11 dBm	-37.11 dB

Date: 12.SEP.2020 06:53:14

Highest Channel / QPSK

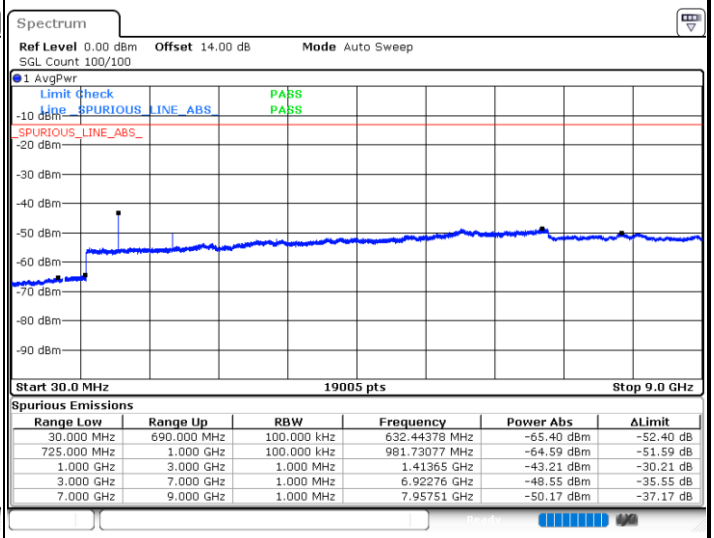


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	637.39130 MHz	-65.26 dBm	-52.26 dB
725.000 MHz	1.000 GHz	100.000 kHz	948.21429 MHz	-64.87 dBm	-51.87 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41365 GHz	-43.88 dBm	-30.88 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91876 GHz	-48.43 dBm	-35.43 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16596 GHz	-50.17 dBm	-37.17 dB

Date: 12.SEP.2020 08:17:36

Highest Channel / 16QAM



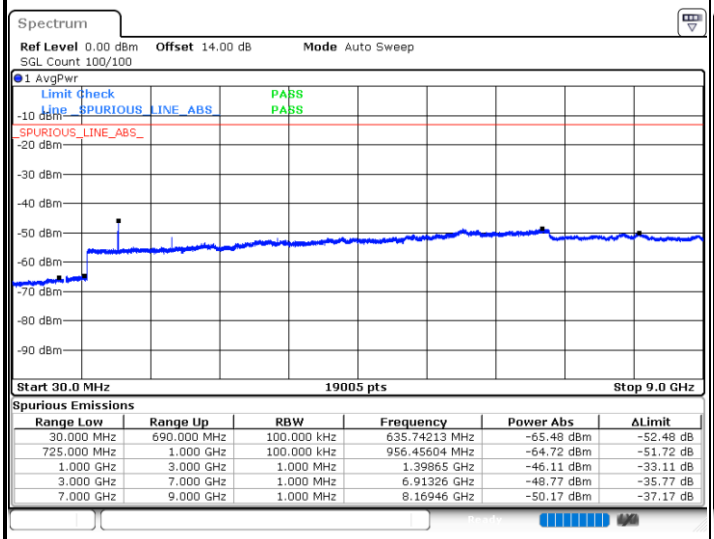
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	632.44378 MHz	-65.40 dBm	-52.40 dB
725.000 MHz	1.000 GHz	100.000 kHz	981.73077 MHz	-64.59 dBm	-51.59 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41365 GHz	-43.21 dBm	-30.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92276 GHz	-48.55 dBm	-35.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.95751 GHz	-50.17 dBm	-37.17 dB

Date: 12.SEP.2020 08:16:13

LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM

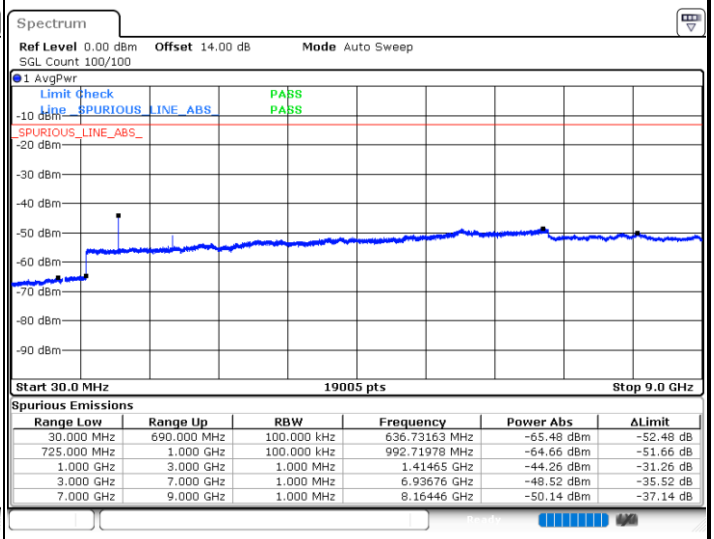


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	635.74213 MHz	-65.48 dBm	-52.48 dB
725.000 MHz	1.000 GHz	100.000 kHz	956.45604 MHz	-64.72 dBm	-51.72 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39865 GHz	-46.11 dBm	-33.11 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91326 GHz	-48.77 dBm	-35.77 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16946 GHz	-50.17 dBm	-37.17 dB

Date: 12.SEP.2020 03:46:31

Middle Channel / 64QAM

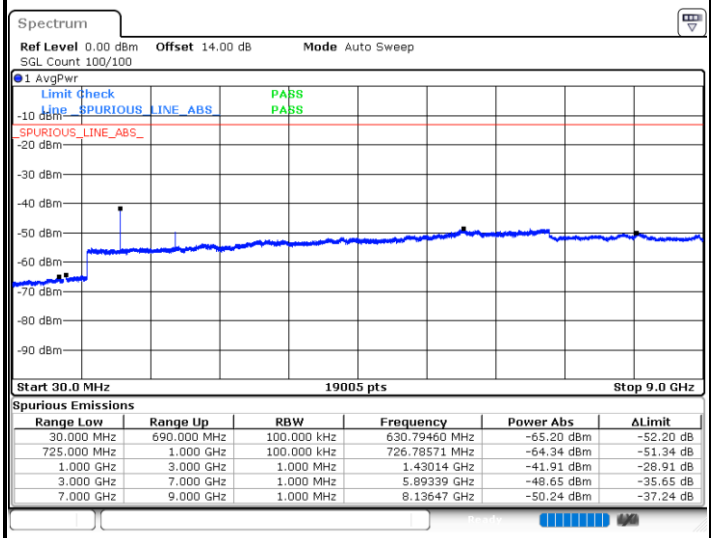


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	636.73163 MHz	-65.48 dBm	-52.48 dB
725.000 MHz	1.000 GHz	100.000 kHz	992.71978 MHz	-64.66 dBm	-51.66 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41465 GHz	-44.26 dBm	-31.26 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93676 GHz	-48.52 dBm	-35.52 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16446 GHz	-50.14 dBm	-37.14 dB

Date: 12.SEP.2020 02:58:30

Highest Channel / 64QAM



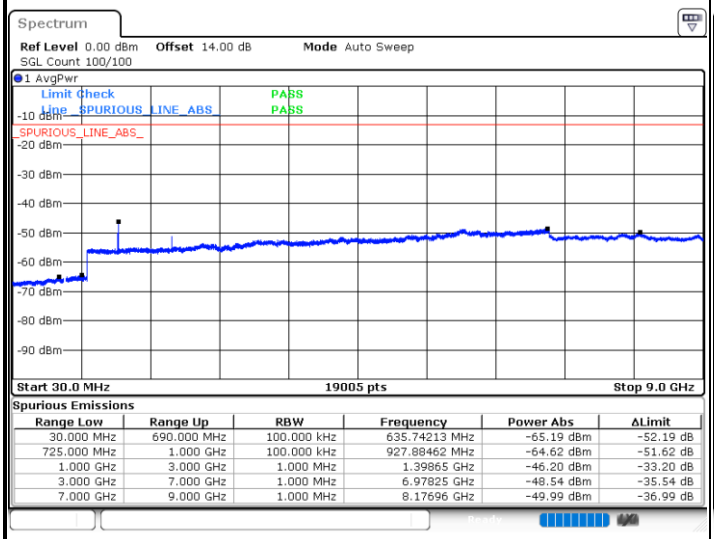
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	630.79460 MHz	-65.20 dBm	-52.20 dB
725.000 MHz	1.000 GHz	100.000 kHz	726.78571 MHz	-64.34 dBm	-51.34 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.43014 GHz	-41.91 dBm	-28.91 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.89339 GHz	-48.65 dBm	-35.65 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.13647 GHz	-50.24 dBm	-37.24 dB

Date: 12.SEP.2020 04:13:35

LTE Band 12 / 3MHz

Lowest Channel / 64QAM

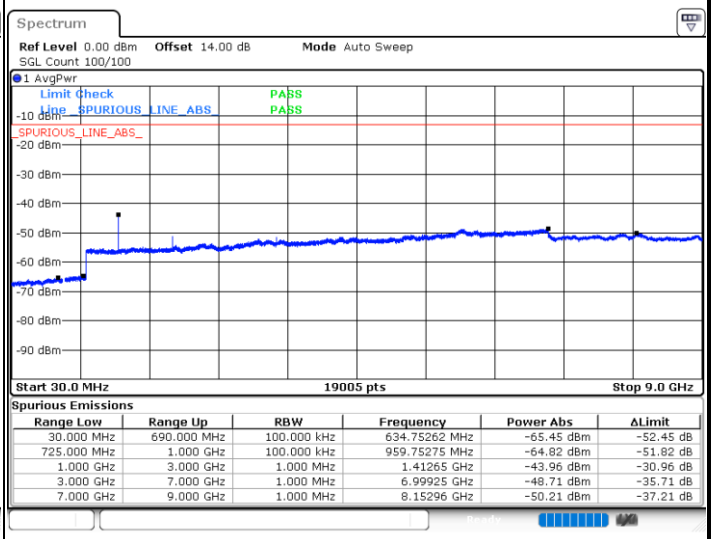


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	635.74213 MHz	-65.19 dBm	-52.19 dB
725.000 MHz	1.000 GHz	100.000 kHz	927.88462 MHz	-64.62 dBm	-51.62 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39865 GHz	-46.20 dBm	-33.20 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97825 GHz	-48.54 dBm	-35.54 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.17696 GHz	-49.99 dBm	-36.99 dB

Date: 12.SEP.2020 04:38:10

Middle Channel / 64QAM

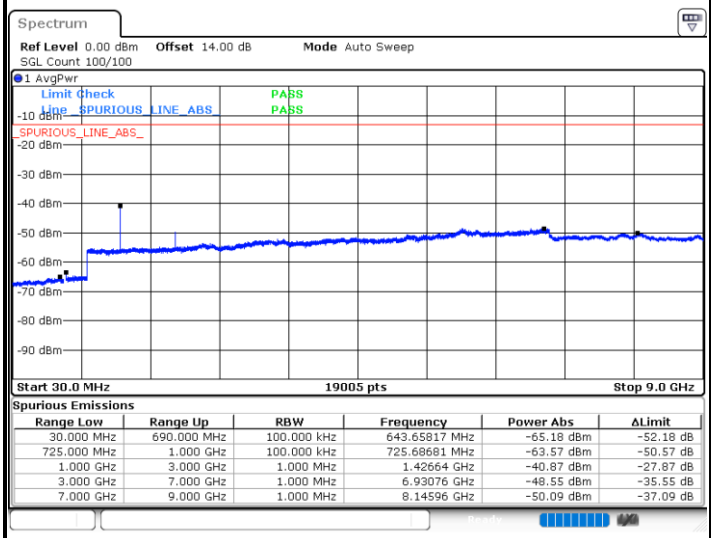


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	634.75262 MHz	-65.45 dBm	-52.45 dB
725.000 MHz	1.000 GHz	100.000 kHz	959.75275 MHz	-64.82 dBm	-51.82 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41265 GHz	-43.96 dBm	-30.96 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99925 GHz	-48.71 dBm	-35.71 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.15296 GHz	-50.21 dBm	-37.21 dB

Date: 12.SEP.2020 04:28:52

Highest Channel / 64QAM



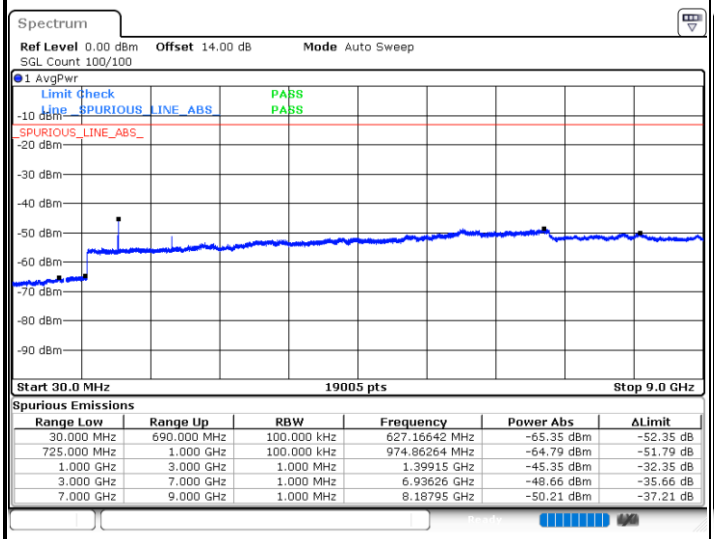
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	643.65817 MHz	-65.18 dBm	-52.18 dB
725.000 MHz	1.000 GHz	100.000 kHz	725.68681 MHz	-63.57 dBm	-50.57 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42664 GHz	-40.87 dBm	-27.87 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93076 GHz	-48.55 dBm	-35.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.14596 GHz	-50.09 dBm	-37.09 dB

Date: 12.SEP.2020 05:51:28

LTE Band 12 / 5MHz

Lowest Channel / 64QAM

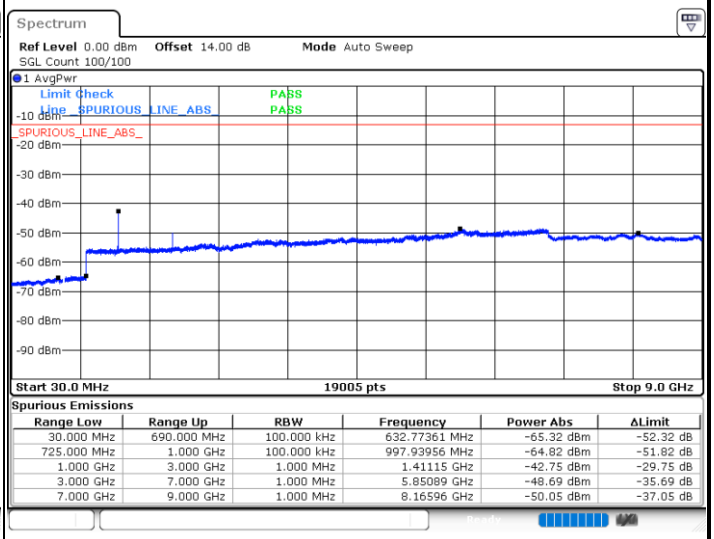


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	627.16642 MHz	-65.35 dBm	-52.35 dB
725.000 MHz	1.000 GHz	100.000 kHz	974.86264 MHz	-64.79 dBm	-51.79 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39915 GHz	-45.35 dBm	-32.35 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93626 GHz	-48.66 dBm	-35.66 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.18795 GHz	-50.21 dBm	-37.21 dB

Date: 12.SEP.2020 06:11:23

Middle Channel / 64QAM

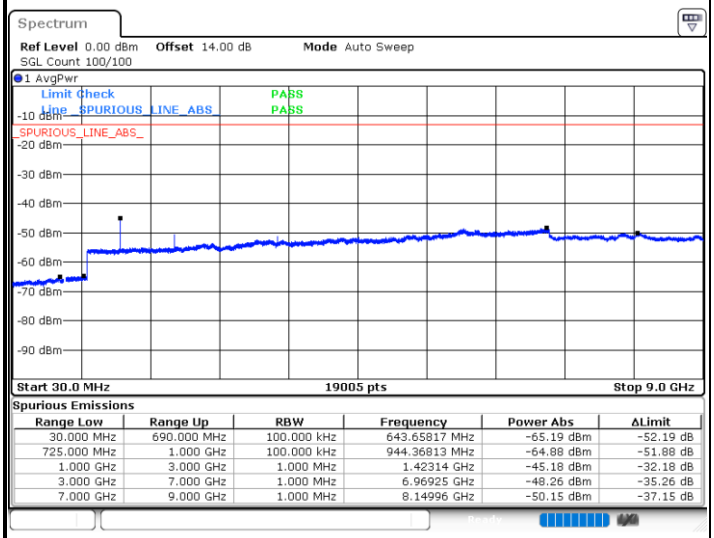


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	632.77361 MHz	-65.32 dBm	-52.32 dB
725.000 MHz	1.000 GHz	100.000 kHz	997.93956 MHz	-64.82 dBm	-51.82 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41115 GHz	-42.75 dBm	-29.75 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.85089 GHz	-48.69 dBm	-35.69 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.16596 GHz	-50.05 dBm	-37.05 dB

Date: 12.SEP.2020 05:59:24

Highest Channel / 64QAM



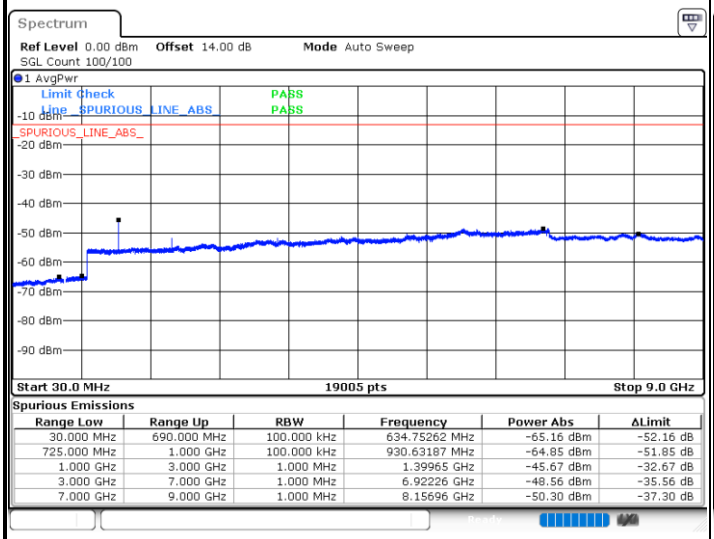
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	643.65817 MHz	-65.19 dBm	-52.19 dB
725.000 MHz	1.000 GHz	100.000 kHz	944.36813 MHz	-64.88 dBm	-51.88 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.42314 GHz	-45.18 dBm	-32.18 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96925 GHz	-48.26 dBm	-35.26 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.14996 GHz	-50.15 dBm	-37.15 dB

Date: 12.SEP.2020 06:29:26

LTE Band 12 / 10MHz

Lowest Channel / 64QAM

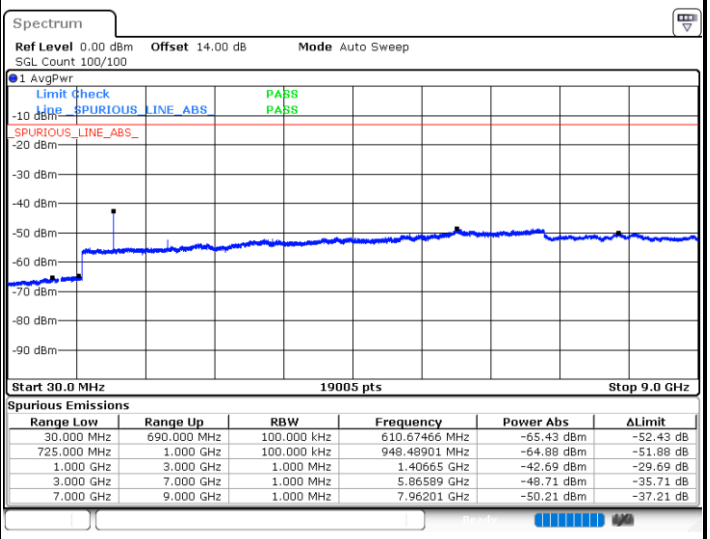


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	634.75262 MHz	-65.16 dBm	-52.16 dB
725.000 MHz	1.000 GHz	100.000 kHz	930.63187 MHz	-64.85 dBm	-51.85 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.39965 GHz	-45.67 dBm	-32.67 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.92226 GHz	-48.56 dBm	-35.56 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.15696 GHz	-50.30 dBm	-37.30 dB

Date: 12.SEP.2020 07:55:35

Middle Channel / 64QAM

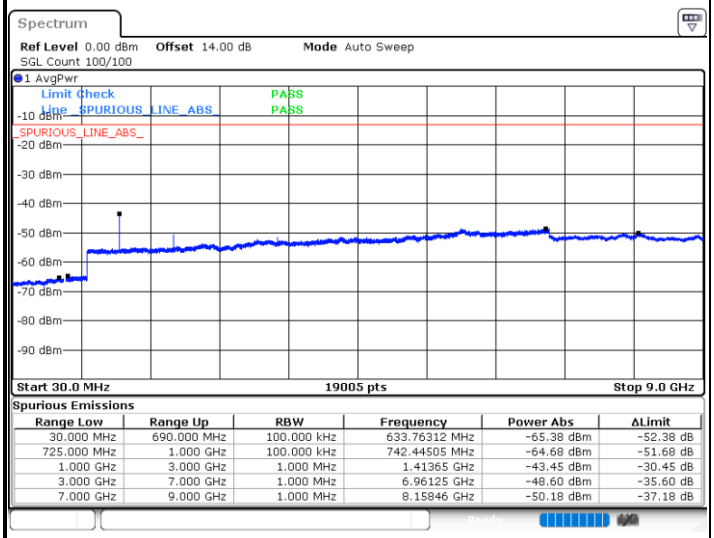


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	610.67466 MHz	-65.43 dBm	-52.43 dB
725.000 MHz	1.000 GHz	100.000 kHz	948.48901 MHz	-64.88 dBm	-51.88 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.40665 GHz	-42.69 dBm	-29.69 dB
3.000 GHz	7.000 GHz	1.000 MHz	5.86589 GHz	-48.71 dBm	-35.71 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.96201 GHz	-50.21 dBm	-37.21 dB

Date: 12.SEP.2020 06:49:25

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	690.000 MHz	100.000 kHz	633.76312 MHz	-65.38 dBm	-52.38 dB
725.000 MHz	1.000 GHz	100.000 kHz	742.44505 MHz	-64.68 dBm	-51.68 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.41365 GHz	-43.45 dBm	-30.45 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96125 GHz	-48.60 dBm	-35.60 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.15846 GHz	-50.18 dBm	-37.18 dB

Date: 12.SEP.2020 08:14:55

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0006	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0042	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0031	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0030	
20	Maximum Voltage	0.0033	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

Note:

1. Normal Voltage =4.0 V.；Battery End Point (BEP) =3.7 V.；Maximum Voltage =4.0 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 5 / 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)
Middle	1664	-67.11	-13	-54.11	-70.35	1.11	6.50	H
	2496	-66.18	-13	-53.18	-68.80	1.43	6.20	H
	3330	-64.83	-13	-51.83	-69.27	1.71	8.30	H
	1664	-67.18	-13	-54.18	-70.42	1.11	6.50	V
	2496	-65.99	-13	-52.99	-68.61	1.43	6.20	V
	3330	-64.49	-13	-51.49	-68.93	1.71	8.30	V

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

LTE Band 12 / 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)
Middle	1406	-68.59	-13	-55.59	-75.56	1.58	10.70	H
	2108	-66.27	-13	-53.27	-74.52	2.102	12.50	H
	2812	-65.81	-13	-52.81	-74.70	2.856	13.90	H
	3516	-63.94	-13	-50.94	-72.40	2.689	13.30	H
	1406	-69.14	-13	-56.14	-76.11	1.58	10.70	V
	2108	-67.40	-13	-54.40	-75.65	2.10	12.50	V
	2812	-65.71	-13	-52.71	-74.60	2.86	13.90	V
	3516	-64.15	-13	-51.15	-72.61	2.69	13.30	V

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