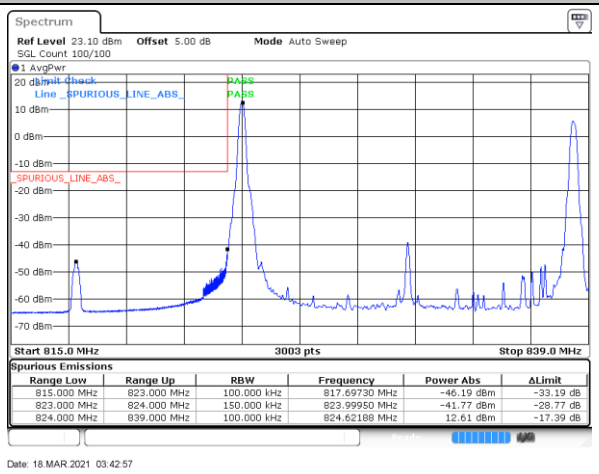
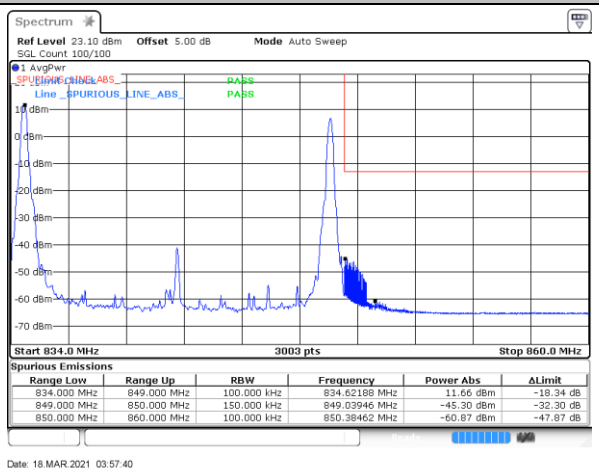
LTE Band 5B / 10MHz+5MHz

64QAM

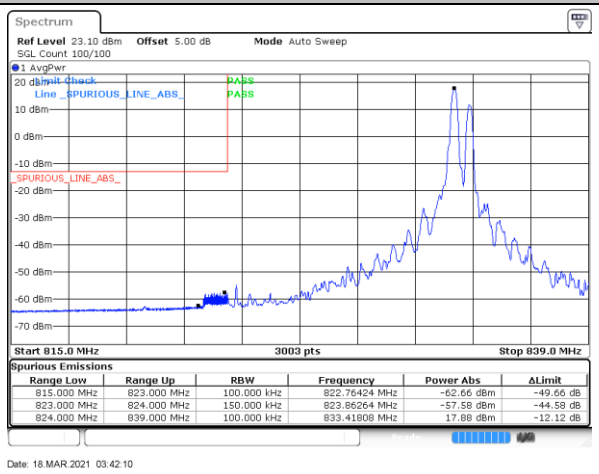
Lowest Band Edge / 1RB0 and 1RB24



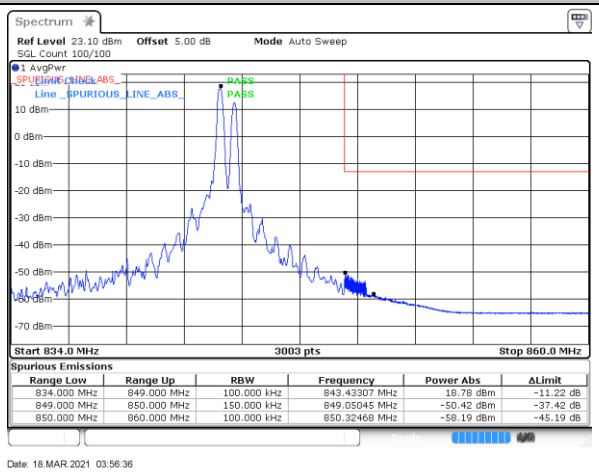
Highest Band Edge / 1RB0 and 1RB24



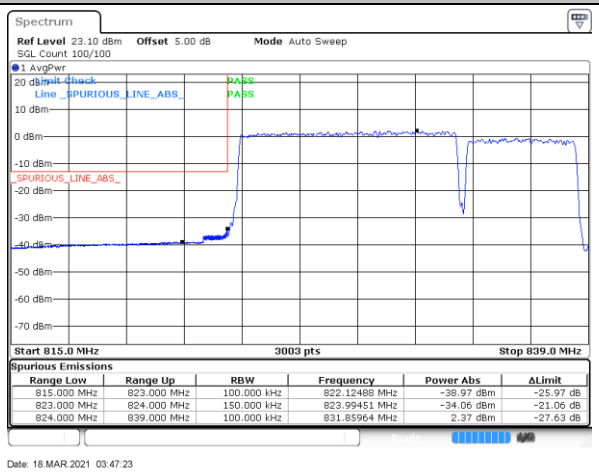
Lowest Band Edge / 1RB49 and 1RB0



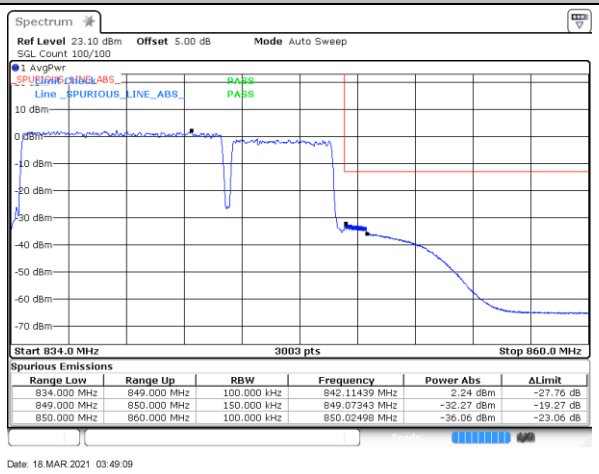
Highest Band Edge / 1RB49 and 1RB0



Lowest Band Edge / Full RB



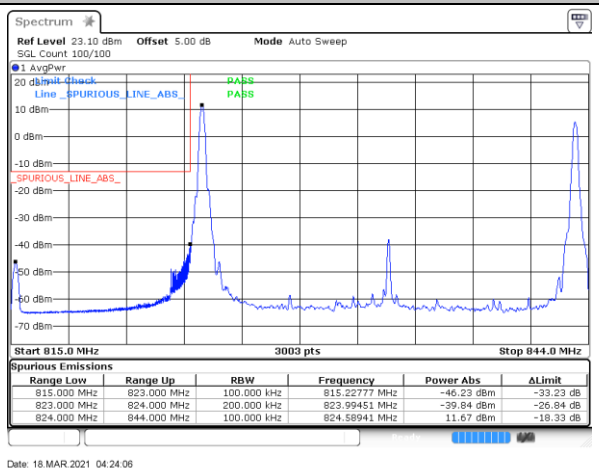
Highest Band Edge / Full RB



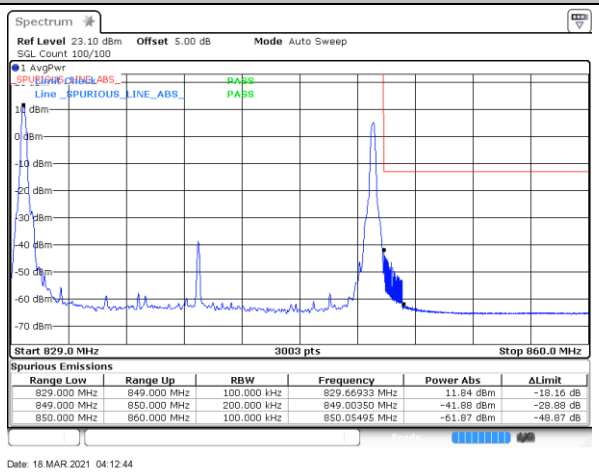
LTE Band 5B / 10MHz+10MHz

64QAM

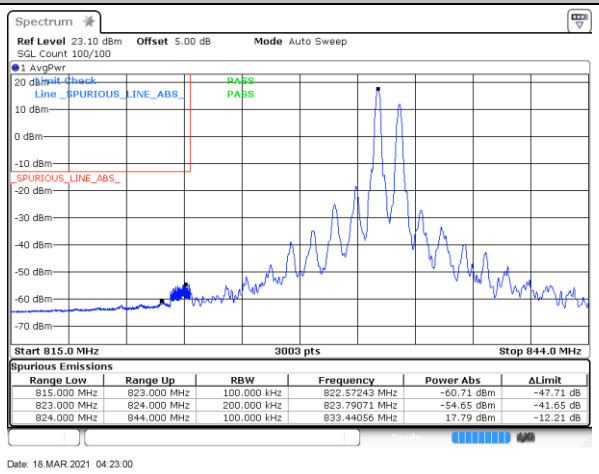
Lowest Band Edge / 1RB0 and 1RB49



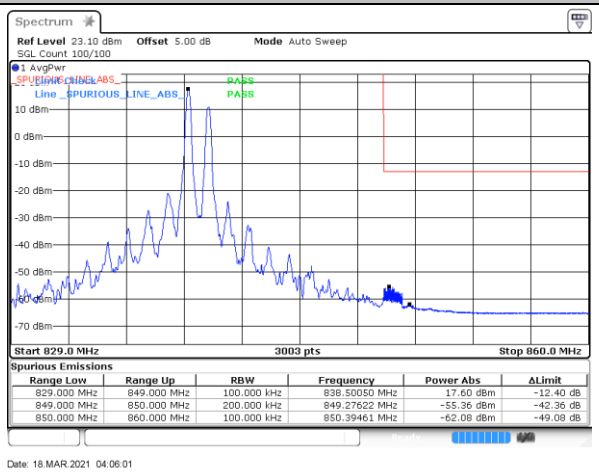
Highest Band Edge / 1RB0 and 1RB49



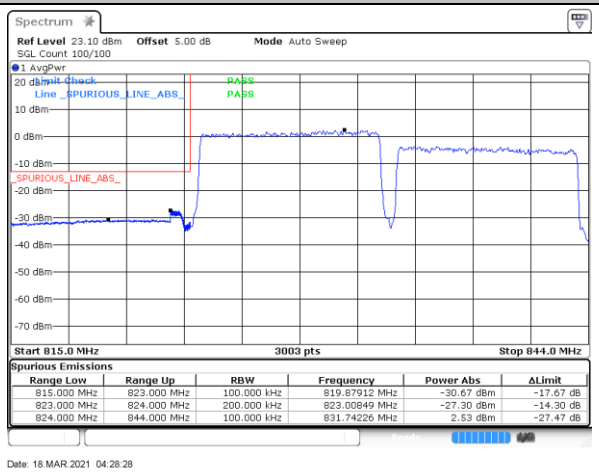
Lowest Band Edge / 1RB49 and 1RB0



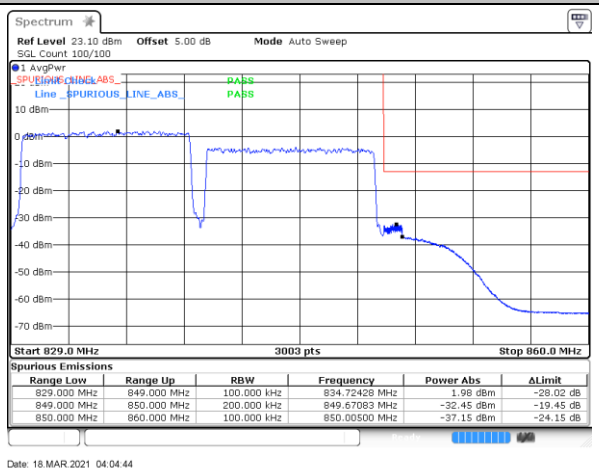
Highest Band Edge / 1RB49 and 1RB0



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

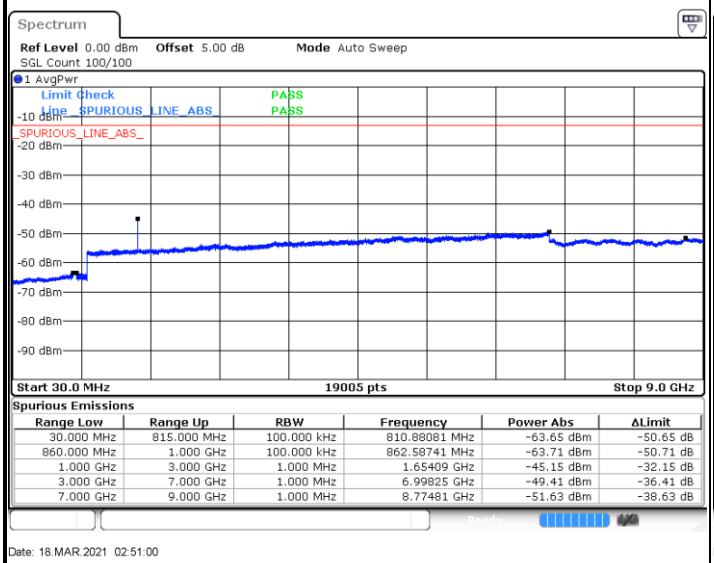


Conducted Spurious Emission

LTE Band 5B / 3MHz+5MHz

QPSK

Lowest Channel / 1RB14 and 1RB0

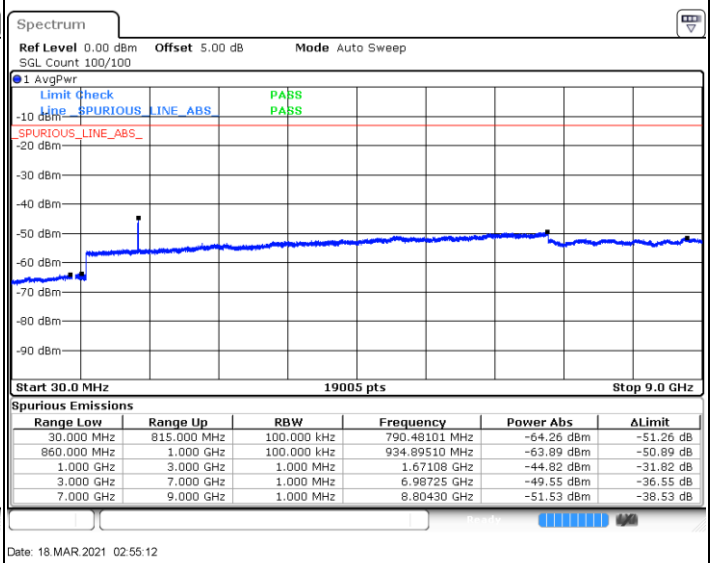


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	810.88081 MHz	-63.65 dBm	-50.65 dB
860.000 MHz	1.000 GHz	100.000 kHz	862.58741 MHz	-63.71 dBm	-50.71 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65409 GHz	-45.15 dBm	-32.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99825 GHz	-49.41 dBm	-36.41 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.77481 GHz	-51.63 dBm	-38.63 dB

Date: 18.MAR.2021 02:51:00

Middle Channel / 1RB14 and 1RB0

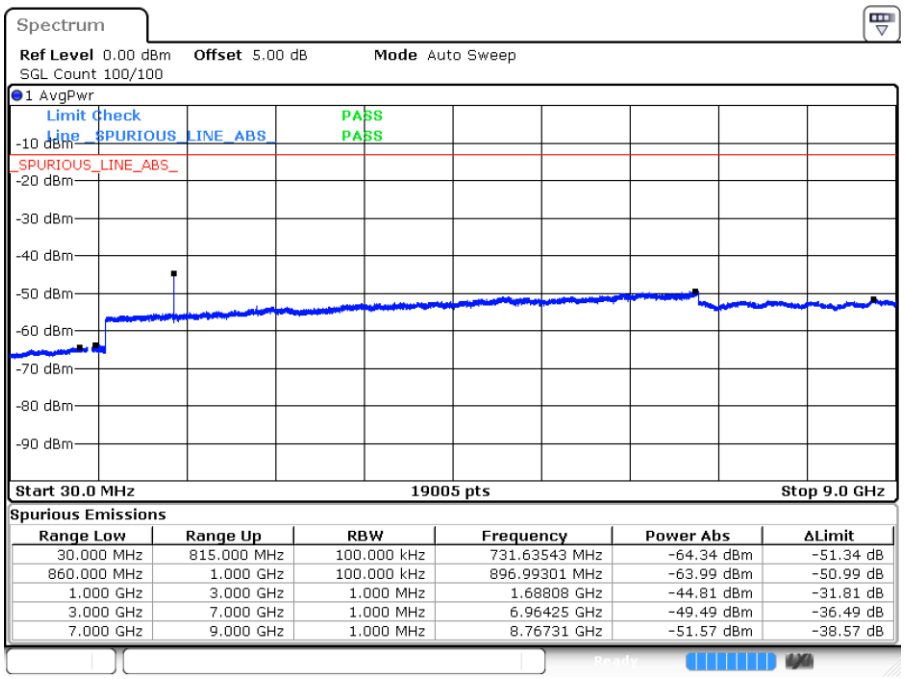


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	790.48101 MHz	-64.26 dBm	-51.26 dB
860.000 MHz	1.000 GHz	100.000 kHz	934.89510 MHz	-63.89 dBm	-50.89 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67108 GHz	-44.82 dBm	-31.82 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98725 GHz	-49.55 dBm	-36.55 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.80430 GHz	-51.53 dBm	-38.53 dB

Date: 18.MAR.2021 02:55:12

Highest Channel / 1RB14 and 1RB0



Spurious Emissions

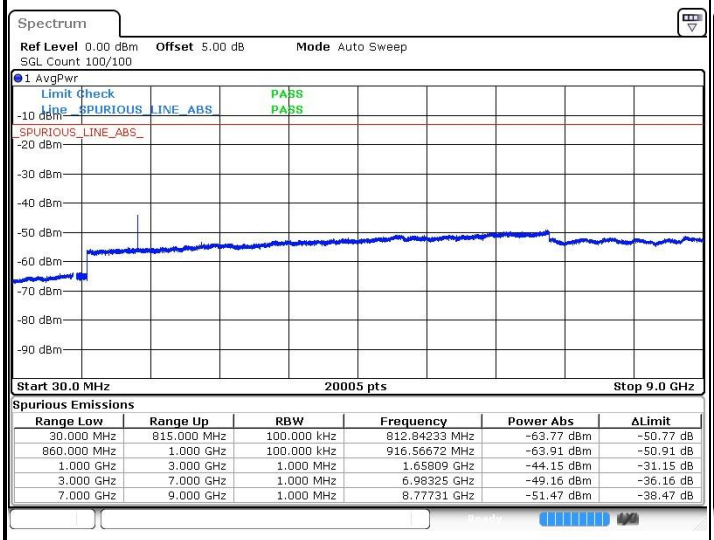
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	731.63543 MHz	-64.34 dBm	-51.34 dB
860.000 MHz	1.000 GHz	100.000 kHz	896.99301 MHz	-63.99 dBm	-50.99 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68808 GHz	-44.81 dBm	-31.81 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96425 GHz	-49.49 dBm	-36.49 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.76731 GHz	-51.57 dBm	-38.57 dB

Date: 18.MAR.2021 02:56:35

LTE Band 5B / 5MHz+3MHz

QPSK

Lowest Channel / 1RB24 and 1RB0

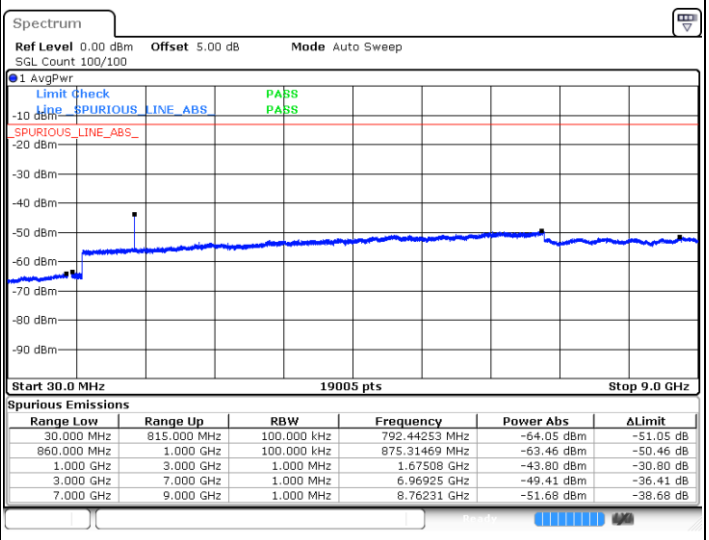


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	812.84233 MHz	-63.77 dBm	-50.77 dB
860.000 MHz	1.000 GHz	100.000 kHz	916.56672 MHz	-63.91 dBm	-50.91 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65809 GHz	-44.15 dBm	-31.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98325 GHz	-49.16 dBm	-36.16 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.77731 GHz	-51.47 dBm	-38.47 dB

Date: 18.MAR.2021 01:52:04

Middle Channel / 1RB24 and 1RB0

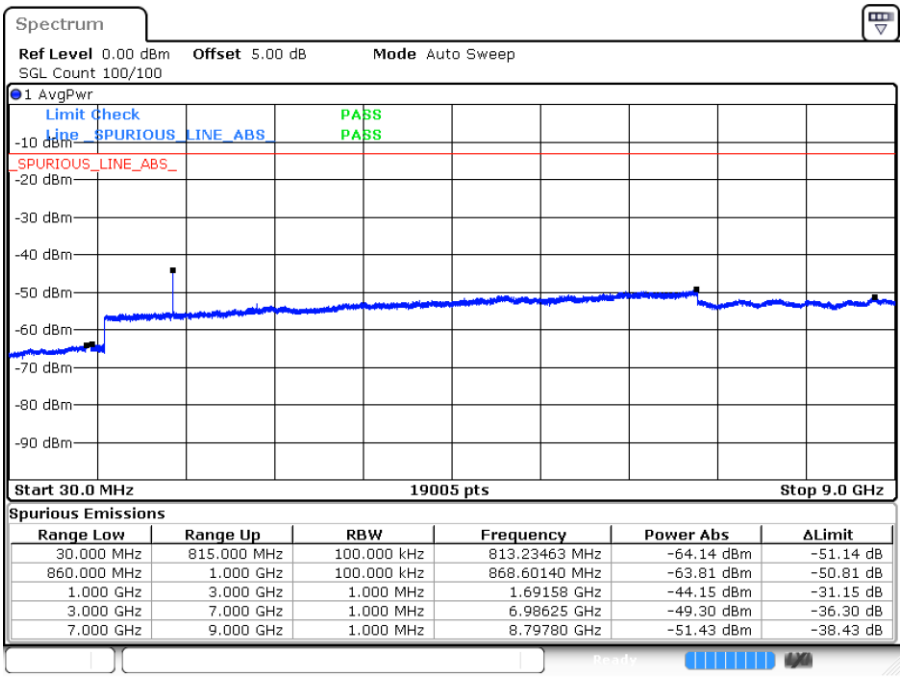


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	792.44253 MHz	-64.05 dBm	-51.05 dB
860.000 MHz	1.000 GHz	100.000 kHz	875.31469 MHz	-63.46 dBm	-50.46 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67508 GHz	-43.80 dBm	-30.80 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96925 GHz	-49.41 dBm	-36.41 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.76231 GHz	-51.68 dBm	-38.68 dB

Date: 18.MAR.2021 02:28:56

Highest Channel / 1RB24 and 1RB0



Spurious Emissions

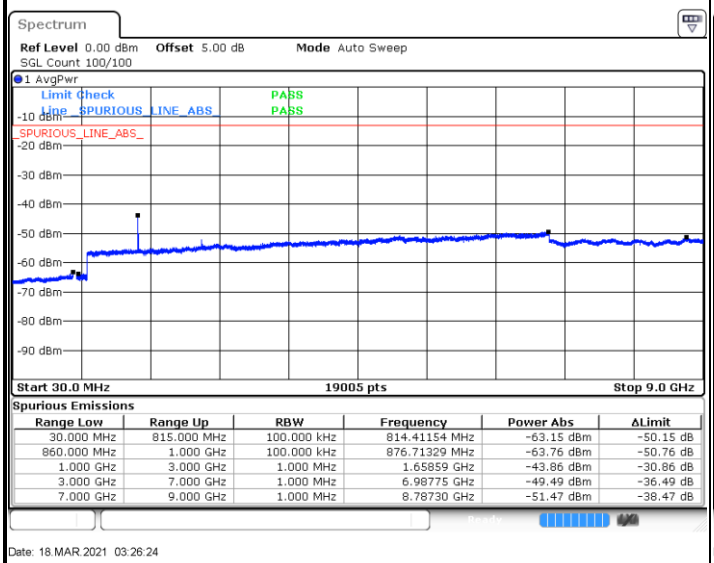
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	813.23463 MHz	-64.14 dBm	-51.14 dB
860.000 MHz	1.000 GHz	100.000 kHz	868.60140 MHz	-63.81 dBm	-50.81 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.69158 GHz	-44.15 dBm	-31.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98625 GHz	-49.30 dBm	-36.30 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.79780 GHz	-51.43 dBm	-38.43 dB

Date: 18.MAR.2021 02:30:41

LTE Band 5B / 5MHz+10MHz

QPSK

Lowest Channel / 1RB24 and 1RB0

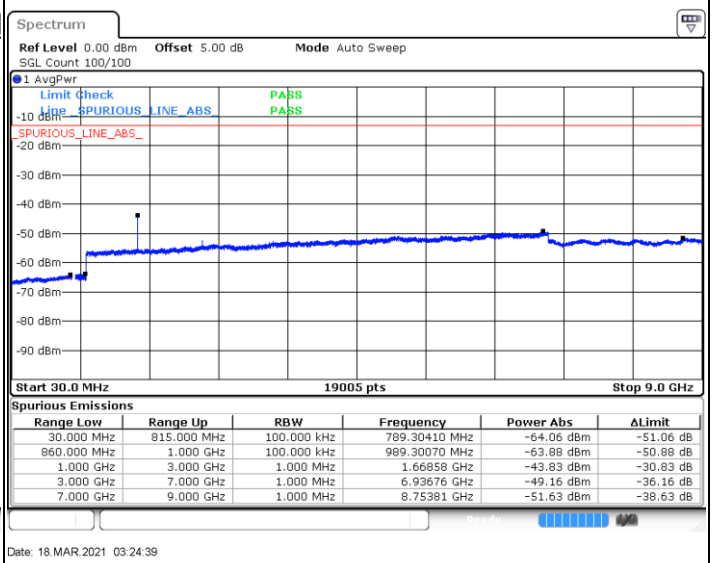


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-63.15 dBm	-50.15 dB
860.000 MHz	1.000 GHz	100.000 kHz	876.71329 MHz	-63.76 dBm	-50.76 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65859 GHz	-43.86 dBm	-30.86 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98775 GHz	-49.49 dBm	-36.49 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.78730 GHz	-51.47 dBm	-38.47 dB

Date: 18.MAR.2021 03:26:24

Middle Channel / 1RB24 and 1RB0

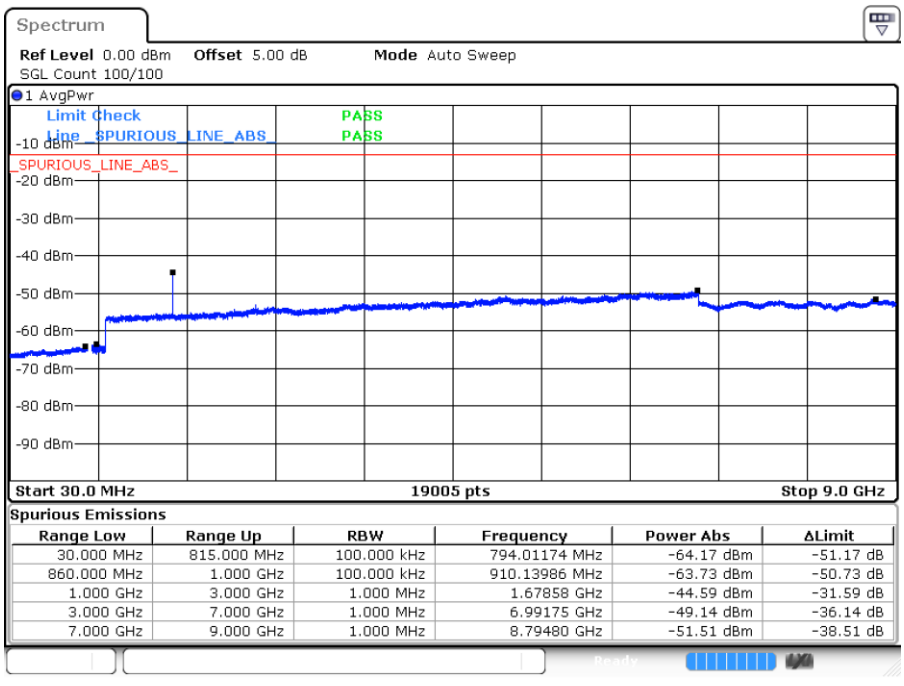


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	789.30410 MHz	-64.06 dBm	-51.06 dB
860.000 MHz	1.000 GHz	100.000 kHz	989.30070 MHz	-63.88 dBm	-50.88 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66858 GHz	-43.83 dBm	-30.83 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93676 GHz	-49.16 dBm	-36.16 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.75381 GHz	-51.63 dBm	-38.63 dB

Date: 18.MAR.2021 03:24:39

Highest Channel / 1RB24 and 1RB0



Spurious Emissions

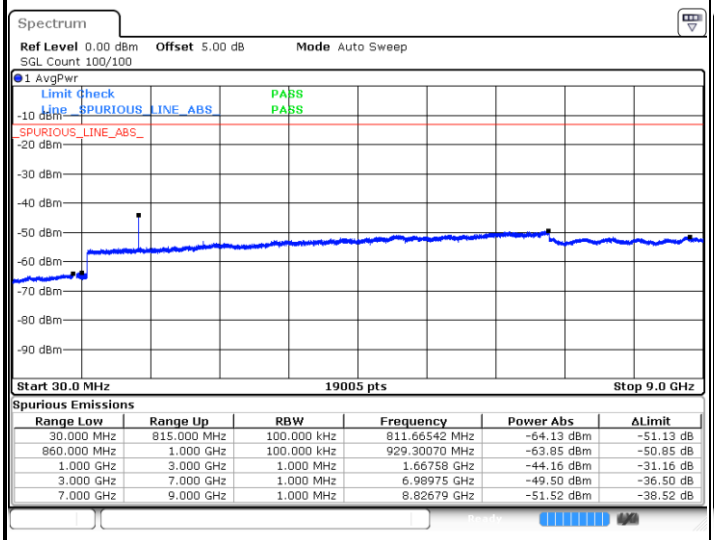
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	794.01174 MHz	-64.17 dBm	-51.17 dB
860.000 MHz	1.000 GHz	100.000 kHz	910.13986 MHz	-63.73 dBm	-50.73 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67858 GHz	-44.59 dBm	-31.59 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99175 GHz	-49.14 dBm	-36.14 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.79480 GHz	-51.51 dBm	-38.51 dB

Date: 18.MAR.2021 03:11:46

LTE Band 5B / 10MHz+5MHz

QPSK

Lowest Channel / 1RB49 and 1RB0

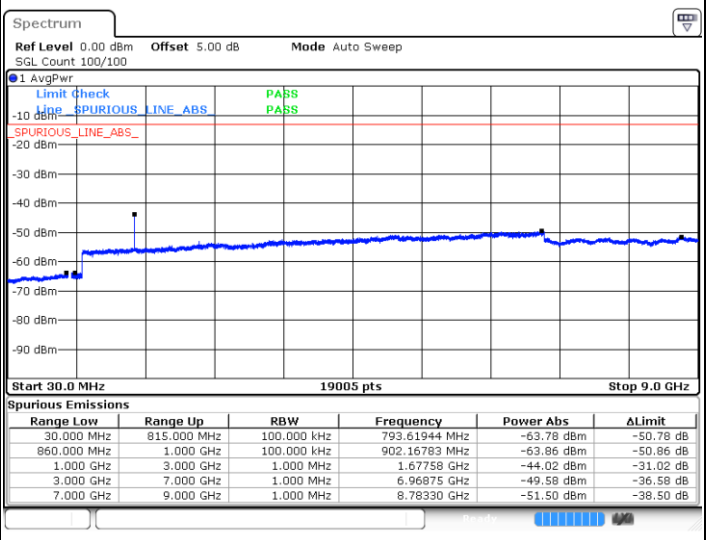


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	811.66542 MHz	-64.13 dBm	-51.13 dB
860.000 MHz	1.000 GHz	100.000 kHz	929.30070 MHz	-63.85 dBm	-50.85 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66758 GHz	-44.16 dBm	-31.16 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98975 GHz	-49.50 dBm	-36.50 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.82679 GHz	-51.52 dBm	-38.52 dB

Date: 18.MAR.2021 03:39:52

Middle Channel / 1RB49 and 1RB0

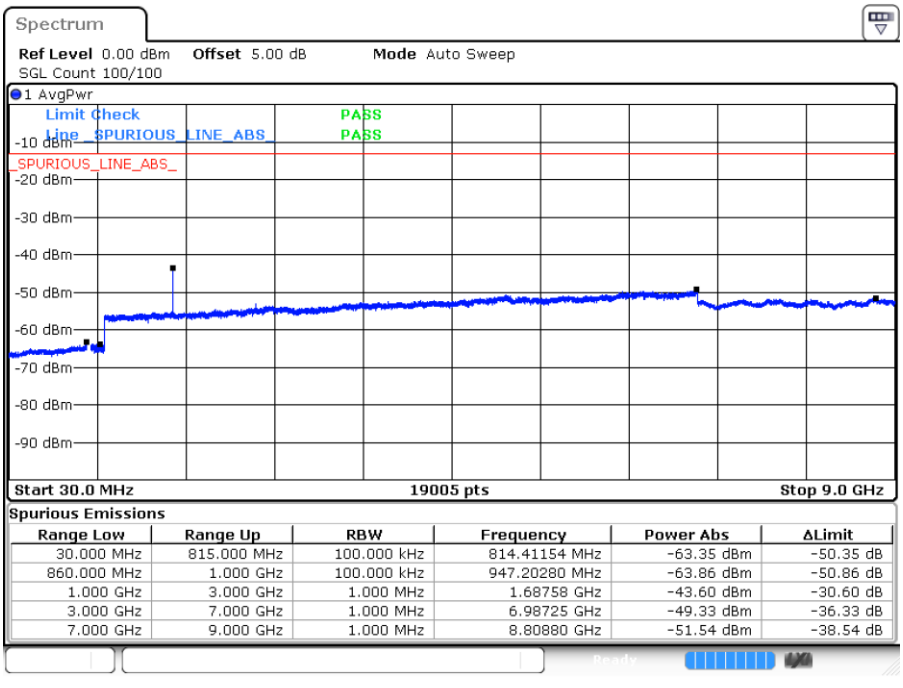


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	793.61944 MHz	-63.78 dBm	-50.78 dB
860.000 MHz	1.000 GHz	100.000 kHz	902.16783 MHz	-63.86 dBm	-50.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67758 GHz	-44.02 dBm	-31.02 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96875 GHz	-49.58 dBm	-36.58 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.78330 GHz	-51.50 dBm	-38.50 dB

Date: 18.MAR.2021 03:38:02

Highest Channel / 1RB49 and 1RB0



Spurious Emissions

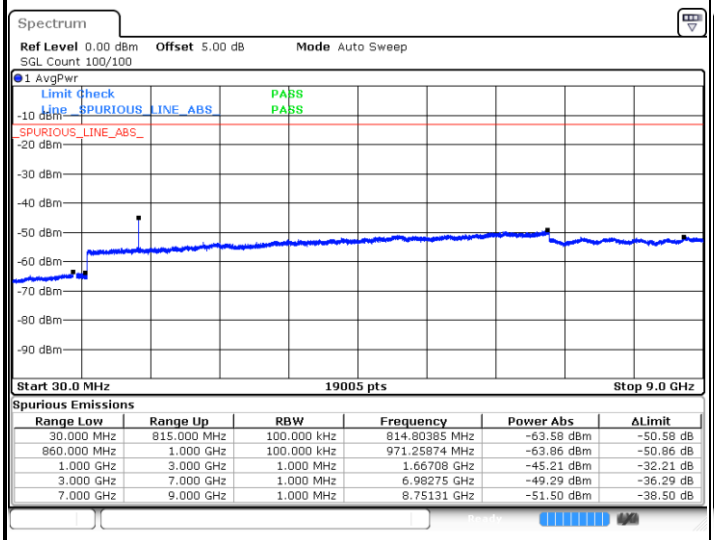
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.41154 MHz	-63.35 dBm	-50.35 dB
860.000 MHz	1.000 GHz	100.000 kHz	947.20280 MHz	-63.86 dBm	-50.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68758 GHz	-43.60 dBm	-30.60 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98725 GHz	-49.33 dBm	-36.33 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.80880 GHz	-51.54 dBm	-38.54 dB

Date: 18.MAR.2021 03:54:17

LTE Band 5B / 10MHz+10MHz

QPSK

Lowest Channel / 1RB49 and 1RB0

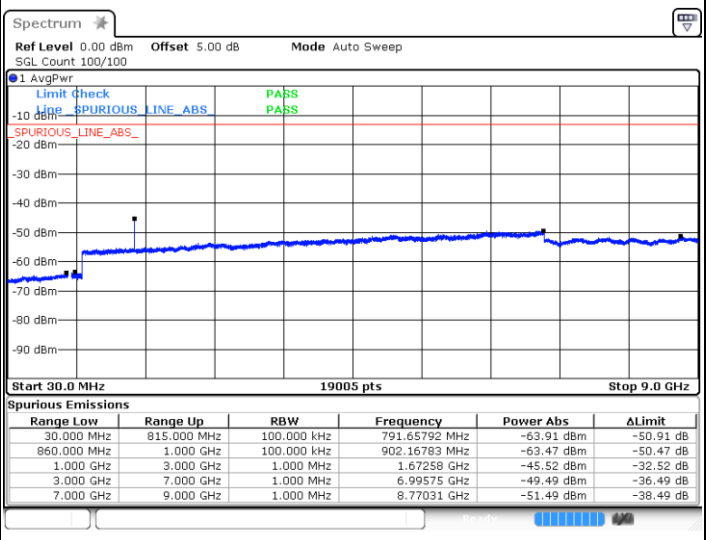


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.80385 MHz	-63.58 dBm	-50.58 dB
860.000 MHz	1.000 GHz	100.000 kHz	971.25874 MHz	-63.86 dBm	-50.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66708 GHz	-45.21 dBm	-32.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98275 GHz	-49.29 dBm	-36.29 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.75131 GHz	-51.50 dBm	-38.50 dB

Date: 18.MAR.2021 04:19:37

Middle Channel / 1RB49 and 1RB0

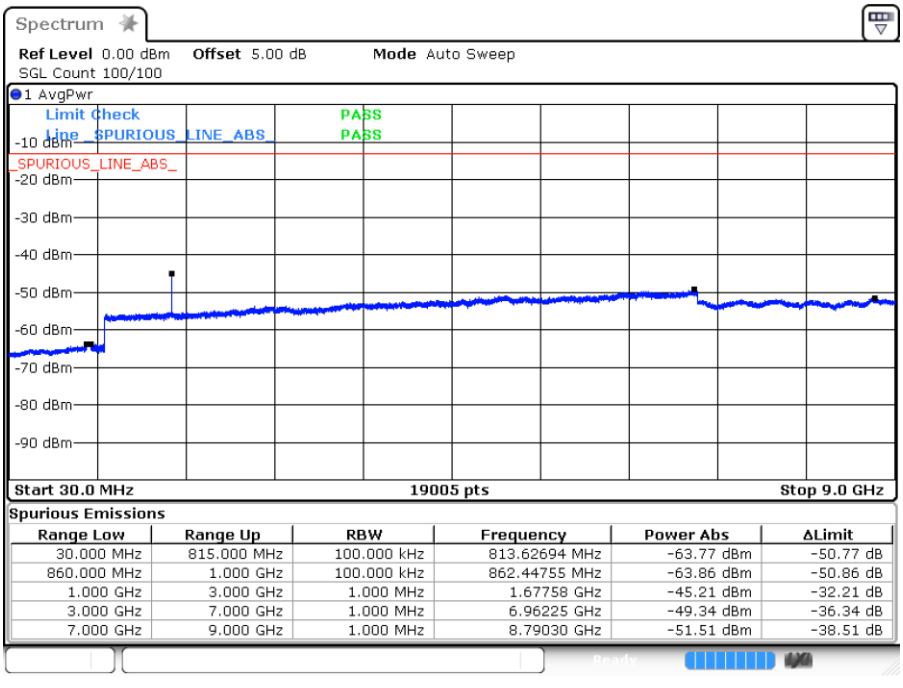


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	791.65792 MHz	-63.91 dBm	-50.91 dB
860.000 MHz	1.000 GHz	100.000 kHz	902.16783 MHz	-63.47 dBm	-50.47 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67258 GHz	-45.52 dBm	-32.52 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99575 GHz	-49.49 dBm	-36.49 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.77031 GHz	-51.49 dBm	-38.49 dB

Date: 18.MAR.2021 04:17:50

Highest Channel / 1RB49 and 1RB0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	813.62694 MHz	-63.77 dBm	-50.77 dB
860.000 MHz	1.000 GHz	100.000 kHz	862.44755 MHz	-63.86 dBm	-50.86 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.67758 GHz	-45.21 dBm	-32.21 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.96225 GHz	-49.34 dBm	-36.34 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.79030 GHz	-51.51 dBm	-38.51 dB

Date: 18.MAR.2021 04:08:59

Frequency Stability

Test Conditions		LTE Band 5B (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz+10MHZ	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0016	PASS
40	Normal Voltage	0.0010	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0005	
20	Battery End Point	0.0003	

Note:

1. Normal Voltage =3.8V.；Battery End Point (BEP) =3.4 V.；Maximum Voltage =4.4 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 / 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)
Middle	1664	-65.93	-13	-52.93	-72.90	1.58	10.70	H
	2496	-57.32	-13	-44.32	-65.57	2.102	12.50	H
	3330	-60.84	-13	-47.84	-69.73	2.856	13.90	H
	1664	-65.07	-13	-52.07	-72.04	1.58	10.70	V
	2496	-51.60	-13	-38.60	-59.85	2.10	12.50	V
	3330	-60.75	-13	-47.75	-69.64	2.86	13.90	V

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

LTE Band 7 / 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	5052	-42.86	-25	-17.86	-53.07	3.03	13.24	H
	7580	-59.55	-25	-34.55	-69.00	3.56	13.01	H
	10100	-51.94	-25	-26.94	-61.46	3.92	13.44	H
	12630	-55.79	-25	-30.79	-65.71	4.44	14.36	H
	15160	-57.12	-25	-32.12	-67.49	4.77	15.14	H
	17680	-53.99	-25	-28.99	-64.50	4.79	15.30	H
	5052	-51.22	-25	-26.22	-61.43	3.03	13.24	V
	7580	-61.38	-25	-36.38	-70.83	3.56	13.01	V
	10100	-57.29	-25	-32.29	-66.81	3.92	13.44	V
	12630	-57.18	-25	-32.18	-67.10	4.44	14.36	V
	15160	-57.59	-25	-32.59	-67.96	4.77	15.14	V
	17680	-57.10	-25	-32.10	-67.61	4.79	15.30	V

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

LTE Band 12 / 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)
Middle	1406	-65.74	-13	-52.74	-72.71	1.58	10.70	H
	2110	-54.71	-13	-41.71	-62.96	2.102	12.50	H
	2812	-59.96	-13	-46.96	-68.85	2.856	13.90	H
	1406	-66.21	-13	-53.21	-73.18	1.58	10.70	V
	2110	-57.61	-13	-44.61	-65.86	2.10	12.50	V
	2812	-59.81	-13	-46.81	-68.70	2.86	13.90	V

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

LTE Band 13 / 5MHz / 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)
Middle	1560	-66.66	-42.15	-24.51	-69.29	1.09	5.87	H
	2340	-62.50	-13	-49.50	-64.90	1.37	5.92	H
	3120	-60.24	-13	-47.24	-64.13	1.64	7.68	H
	1560	-65.74	-42.15	-23.59	-68.37	1.09	5.87	V
	2340	-60.59	-13	-47.59	-62.99	1.37	5.92	V
	3120	-60.31	-13	-47.31	-64.20	1.64	7.68	V

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

LTE Band 13 / 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)
Middle	1556	-64.15	-13	-51.15	-66.78	1.09	5.87	H
	2332	-61.38	-13	-48.38	-63.78	1.37	5.92	H
	3108	-60.27	-13	-47.27	-64.16	1.64	7.68	H
	1556	-62.71	-13	-49.71	-65.34	1.09	5.87	V
	2332	-59.43	-13	-46.43	-61.83	1.37	5.92	V
	3108	-59.91	-13	-46.91	-63.80	1.64	7.68	V

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

LTE Band 5B_CA / 10MHz + 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)
Middle	1654	-65.67	-13	-52.67	-72.64	1.58	10.70	H
	2482	-61.06	-13	-48.06	-69.31	2.102	12.50	H
	3306	-60.27	-13	-47.27	-69.16	2.856	13.90	H
	1654	-64.72	-13	-51.72	-71.69	1.58	10.70	V
	2482	-59.04	-13	-46.04	-67.29	2.10	12.50	V
	3306	-60.59	-13	-47.59	-69.48	2.86	13.90	V

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