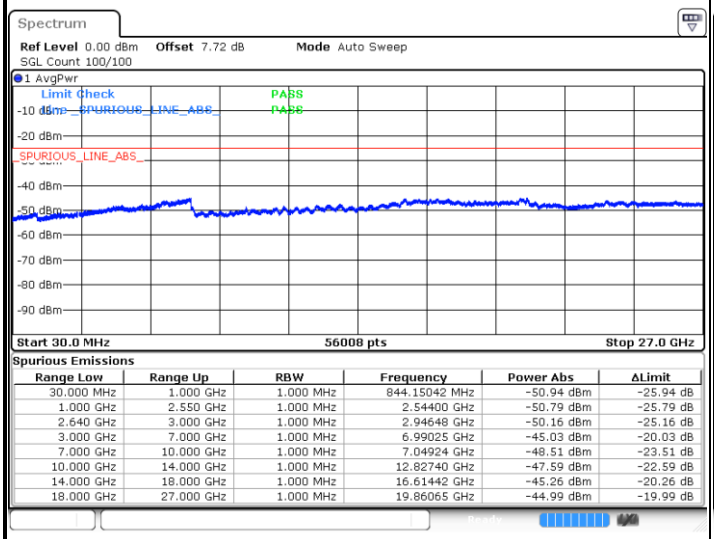
LTE Band 38 / 5MHz

Lowest Channel / 64QAM

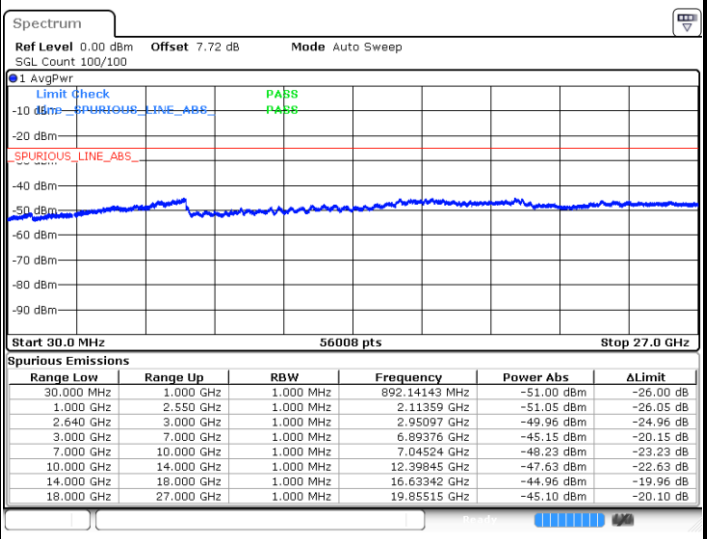


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	844.15042 MHz	-50.94 dBm	-25.94 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.54400 GHz	-50.79 dBm	-25.79 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.94648 GHz	-50.16 dBm	-25.16 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99025 GHz	-45.03 dBm	-20.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04924 GHz	-48.51 dBm	-23.51 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.82740 GHz	-47.59 dBm	-22.59 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.61442 GHz	-45.26 dBm	-20.26 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.86065 GHz	-44.99 dBm	-19.99 dB

Date: 4.SEP.2019 22:44:45

Middle Channel / 64QAM

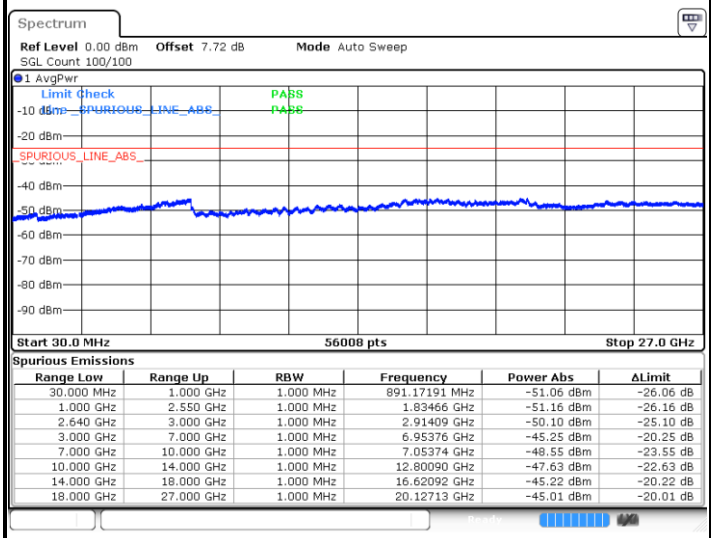


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	892.14143 MHz	-51.00 dBm	-26.00 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.11359 GHz	-51.05 dBm	-26.05 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.95097 GHz	-49.96 dBm	-24.96 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.89376 GHz	-45.15 dBm	-20.15 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04524 GHz	-48.23 dBm	-23.23 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.39845 GHz	-47.63 dBm	-22.63 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.63342 GHz	-44.96 dBm	-19.96 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.85515 GHz	-45.10 dBm	-20.10 dB

Date: 4.SEP.2019 22:47:27

Highest Channel / 64QAM



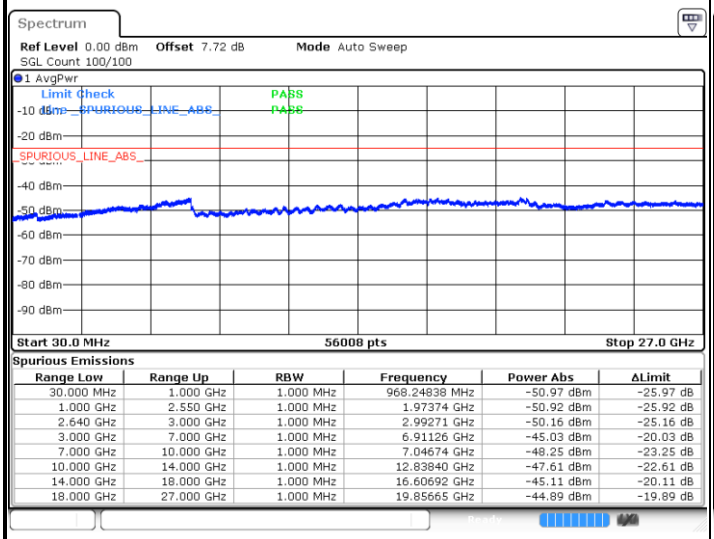
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	891.17191 MHz	-51.06 dBm	-26.06 dB
1.000 GHz	2.550 GHz	1.000 MHz	1.83466 GHz	-51.16 dBm	-26.16 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.91409 GHz	-50.10 dBm	-25.10 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.95376 GHz	-45.25 dBm	-20.25 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.05374 GHz	-48.55 dBm	-23.55 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.80090 GHz	-47.63 dBm	-22.63 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.62092 GHz	-45.22 dBm	-20.22 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.12713 GHz	-45.01 dBm	-20.01 dB

Date: 4.SEP.2019 22:50:08

LTE Band 38 / 10MHz

Lowest Channel / 64QAM

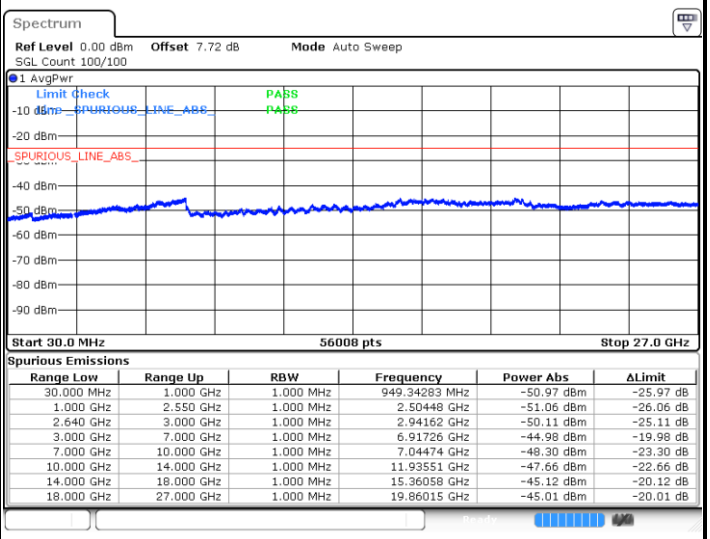


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	968.24838 MHz	-50.97 dBm	-25.97 dB
1.000 GHz	2.550 GHz	1.000 MHz	1.97374 GHz	-50.92 dBm	-25.92 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.99271 GHz	-50.16 dBm	-25.16 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91126 GHz	-45.03 dBm	-20.03 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04674 GHz	-48.25 dBm	-23.25 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.83840 GHz	-47.61 dBm	-22.61 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.60692 GHz	-45.11 dBm	-20.11 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.85665 GHz	-44.89 dBm	-19.89 dB

Date: 4.SEP.2019 23:09:16

Middle Channel / 64QAM

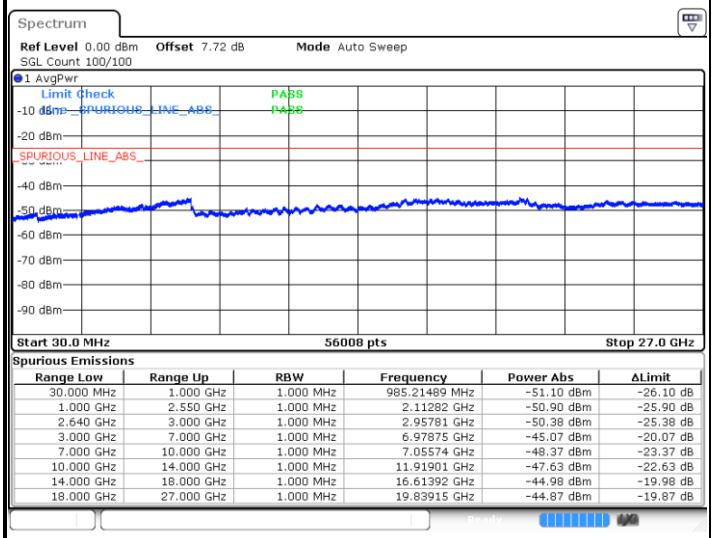


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	949.34283 MHz	-50.97 dBm	-25.97 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.50448 GHz	-51.06 dBm	-26.06 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.94162 GHz	-50.11 dBm	-25.11 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.91726 GHz	-44.98 dBm	-19.98 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04474 GHz	-48.30 dBm	-23.30 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.93551 GHz	-47.66 dBm	-22.66 dB
14.000 GHz	18.000 GHz	1.000 MHz	15.36058 GHz	-45.12 dBm	-20.12 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.86015 GHz	-45.01 dBm	-20.01 dB

Date: 4.SEP.2019 23:11:57

Highest Channel / 64QAM



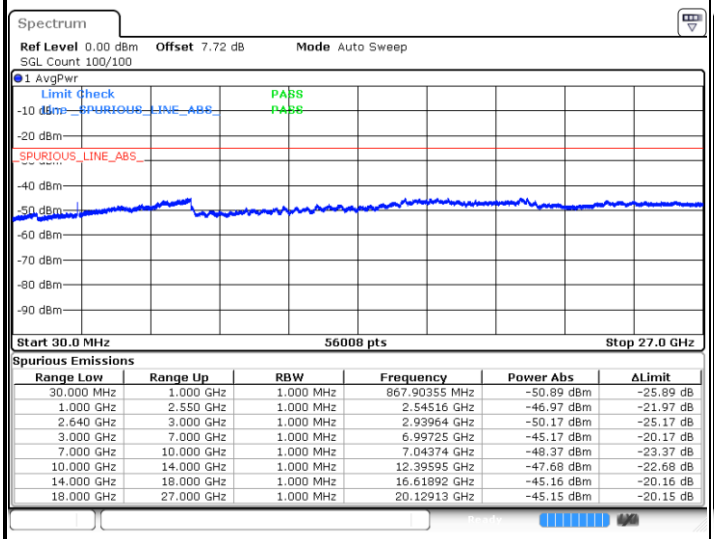
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	985.21489 MHz	-51.10 dBm	-26.10 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.11282 GHz	-50.90 dBm	-25.90 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.95781 GHz	-50.38 dBm	-25.38 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97875 GHz	-45.07 dBm	-20.07 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.05574 GHz	-48.37 dBm	-23.37 dB
10.000 GHz	14.000 GHz	1.000 MHz	11.91901 GHz	-47.63 dBm	-22.63 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.61392 GHz	-44.98 dBm	-19.98 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.83915 GHz	-44.87 dBm	-19.87 dB

Date: 4.SEP.2019 23:14:38

LTE Band 38 / 15MHz

Lowest Channel / 64QAM

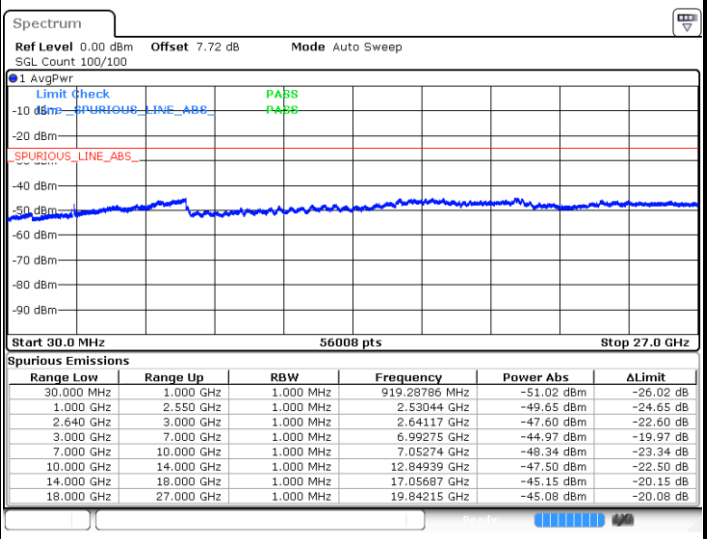


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	867.90355 MHz	-50.89 dBm	-25.89 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.54516 GHz	-46.97 dBm	-21.97 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.93964 GHz	-50.17 dBm	-25.17 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99725 GHz	-45.17 dBm	-20.17 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04374 GHz	-48.37 dBm	-23.37 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.39595 GHz	-47.68 dBm	-22.68 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.61892 GHz	-45.16 dBm	-20.16 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.12913 GHz	-45.15 dBm	-20.15 dB

Date: 4.SEP.2019 23:30:43

Middle Channel / 64QAM

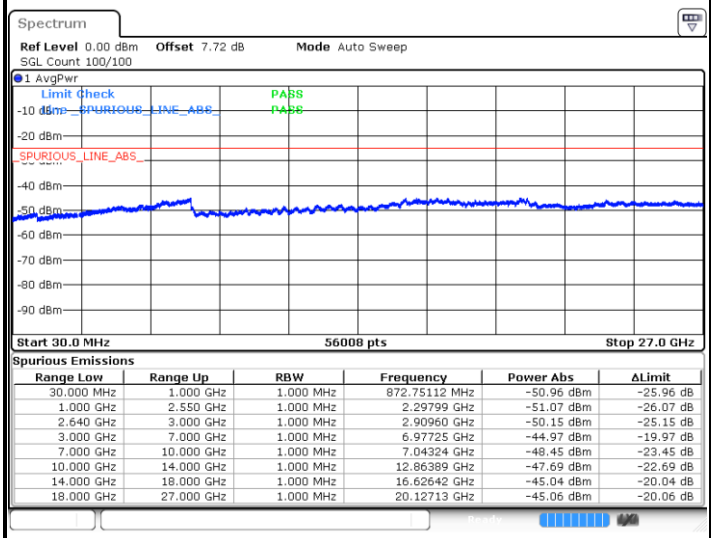


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	919.28786 MHz	-51.02 dBm	-26.02 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.53044 GHz	-49.65 dBm	-24.65 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.64117 GHz	-47.60 dBm	-22.60 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.99275 GHz	-44.97 dBm	-19.97 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.05274 GHz	-48.34 dBm	-23.34 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.84939 GHz	-47.50 dBm	-22.50 dB
14.000 GHz	18.000 GHz	1.000 MHz	17.05687 GHz	-45.15 dBm	-20.15 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.84215 GHz	-45.08 dBm	-20.08 dB

Date: 4.SEP.2019 23:33:24

Highest Channel / 64QAM



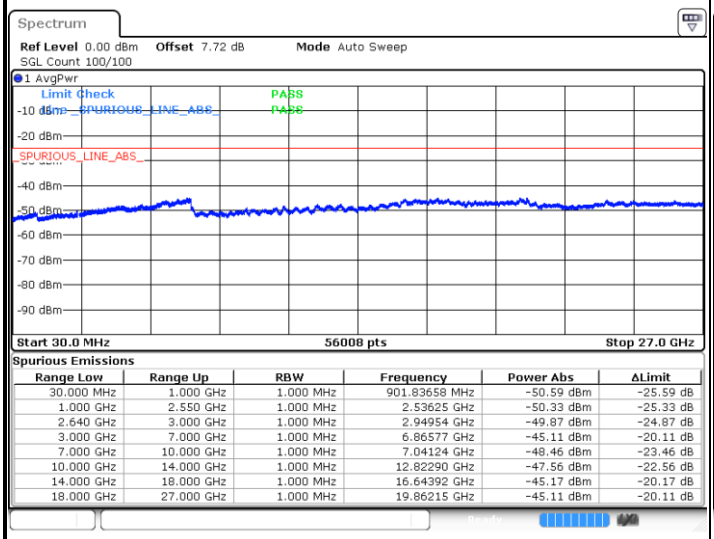
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	872.75112 MHz	-50.96 dBm	-25.96 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.29799 GHz	-51.07 dBm	-26.07 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.90960 GHz	-50.15 dBm	-25.15 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97725 GHz	-44.97 dBm	-19.97 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04324 GHz	-48.45 dBm	-23.45 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.86389 GHz	-47.69 dBm	-22.69 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.62642 GHz	-45.04 dBm	-20.04 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.12713 GHz	-45.06 dBm	-20.06 dB

Date: 4.SEP.2019 23:36:05

LTE Band 38 / 20MHz

Lowest Channel / 64QAM

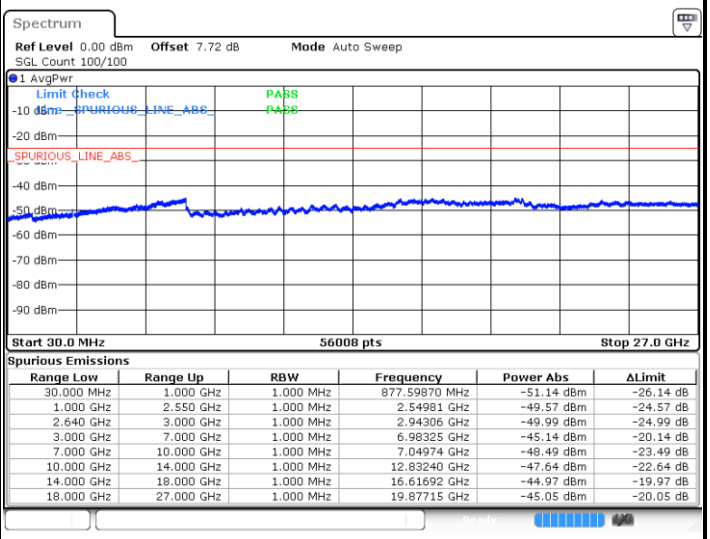


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	901.83658 MHz	-50.59 dBm	-25.59 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.53625 GHz	-50.33 dBm	-25.33 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.94954 GHz	-49.87 dBm	-24.87 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.86577 GHz	-45.11 dBm	-20.11 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04124 GHz	-48.46 dBm	-23.46 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.82290 GHz	-47.56 dBm	-22.56 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.64392 GHz	-45.17 dBm	-20.17 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.86215 GHz	-45.11 dBm	-20.11 dB

Date: 4.SEP.2019 23:52:10

Middle Channel / 64QAM

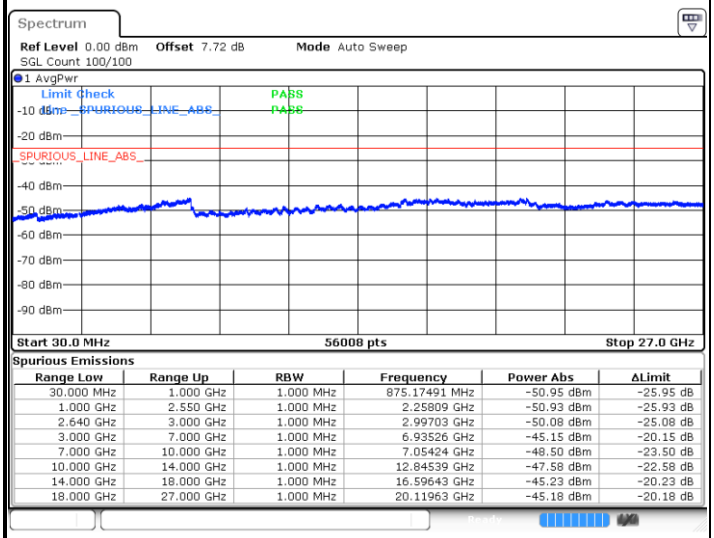


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	877.59870 MHz	-51.14 dBm	-26.14 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.54981 GHz	-49.57 dBm	-24.57 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.94306 GHz	-49.99 dBm	-24.99 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.98325 GHz	-45.14 dBm	-20.14 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.04974 GHz	-48.49 dBm	-23.49 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.83240 GHz	-47.64 dBm	-22.64 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.61692 GHz	-44.97 dBm	-19.97 dB
18.000 GHz	27.000 GHz	1.000 MHz	19.87715 GHz	-45.05 dBm	-20.05 dB

Date: 4.SEP.2019 23:54:51

Highest Channel / 64QAM



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	875.17491 MHz	-50.95 dBm	-25.95 dB
1.000 GHz	2.550 GHz	1.000 MHz	2.25809 GHz	-50.93 dBm	-25.93 dB
2.640 GHz	3.000 GHz	1.000 MHz	2.99703 GHz	-50.08 dBm	-25.08 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.93526 GHz	-45.15 dBm	-20.15 dB
7.000 GHz	10.000 GHz	1.000 MHz	7.05424 GHz	-48.50 dBm	-23.50 dB
10.000 GHz	14.000 GHz	1.000 MHz	12.84539 GHz	-47.58 dBm	-22.58 dB
14.000 GHz	18.000 GHz	1.000 MHz	16.59643 GHz	-45.23 dBm	-20.23 dB
18.000 GHz	27.000 GHz	1.000 MHz	20.11963 GHz	-45.18 dBm	-20.18 dB

Date: 4.SEP.2019 23:57:32

Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0001	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0051	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0056	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0060	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.1 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	PASS
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0029	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0007	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0021	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.1 V.

2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0004	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0040	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0052	
0	Normal Voltage	0.0057	
-10	Normal Voltage	0.0050	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0058	
20	Maximum Voltage	0.0049	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

Note: Normal Voltage =3.8 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.1 V.

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0024	PASS
40	Normal Voltage	0.0026	
30	Normal Voltage	0.0002	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0025	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.1 V.

2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Test Conditions		LTE Band 38 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0022	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0025	
0	Normal Voltage	0.0019	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0002	
-30	Normal Voltage	0.0006	
20	Maximum Voltage	0.0022	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0028	

Note:

1. Normal Voltage =3.8 V.；Battery End Point (BEP) =3.6 V.；Maximum Voltage =4.1 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 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)
Middle	3741	-53.31	-13	-40.31	-65.57	2.641	14.90	H
	5613	-43.13	-13	-30.13	-54.99	2.94	14.80	H
	7488	-50.24	-13	-37.24	-60.01	3.39	13.16	H
	3741	-52.35	-13	-39.35	-64.61	2.64	14.90	V
	5613	-43.05	-13	-30.05	-54.91	2.94	14.80	V
	7488	-49.34	-13	-36.34	-59.11	3.39	13.16	V

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

LTE Band 4 / 20MHz / 16QAM								
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	3447	-41.18	-13	-28.18	-51.92	2.604	13.34	H
	5172	-56.07	-13	-43.07	-66.58	3.011	13.52	H
	6900	-52.66	-13	-39.66	-62.86	3.271	13.47	H
	3447	-45.65	-13	-32.65	-56.39	2.604	13.34	V
	5172	-55.99	-13	-42.99	-66.50	3.011	13.52	V
	6900	-52.09	-13	-39.09	-62.29	3.271	13.47	V

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

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	-57.17	-13	-44.17	-64.14	1.58	10.70	H
	2496	-44.64	-13	-31.64	-52.89	2.102	12.50	H
	3330	-62.94	-13	-49.94	-71.83	2.856	13.90	H
	4158	-57.68	-13	-44.68	-66.14	2.689	13.30	H
	1664	-60.49	-13	-47.49	-67.46	1.58	10.70	V
	2496	-55.13	-13	-42.13	-63.38	2.10	12.50	V
	3330	-63.29	-13	-50.29	-72.18	2.86	13.90	V
	4158	-58.98	-13	-45.98	-67.44	2.69	13.30	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	-56.82	-25	-31.82	-67.03	3.03	13.24	H
	7580	-45.88	-25	-20.88	-55.33	3.56	13.01	H
	10100	-55.85	-25	-30.85	-65.37	3.92	13.44	H
	5052	-56.81	-25	-31.81	-67.02	3.03	13.24	V
	7580	-46.69	-25	-21.69	-56.14	3.56	13.01	V
	10100	-49.92	-25	-24.92	-59.44	3.92	13.44	V

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

LTE Band 38 / 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	5172	-55.68	-25	-30.68	-65.89	3.03	13.24	H
	7760	-48.04	-25	-23.04	-57.49	3.56	13.01	H
	10340	-50.08	-25	-25.08	-59.60	3.92	13.44	H
	5172	-56.58	-25	-31.58	-66.79	3.03	13.24	V
	7760	-49.67	-25	-24.67	-59.12	3.56	13.01	V
	10340	-49.06	-25	-24.06	-58.58	3.92	13.44	V

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