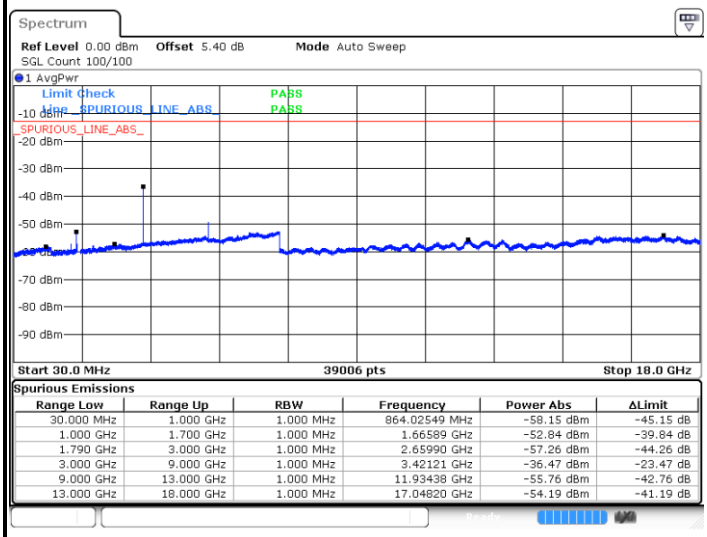
FR1 B12_N66 / 10MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

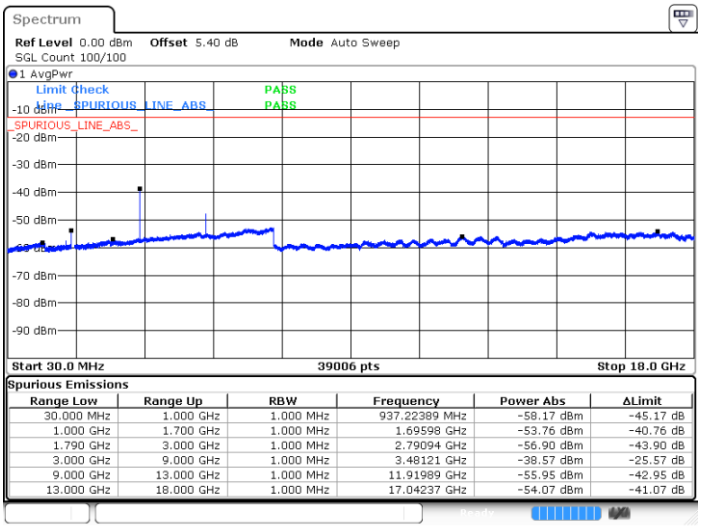


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	864.02549 MHz	-58.15 dBm	-45.15 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66589 GHz	-52.84 dBm	-39.84 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.65990 GHz	-57.26 dBm	-44.26 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42121 GHz	-36.47 dBm	-23.47 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.93438 GHz	-55.76 dBm	-42.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.04820 GHz	-54.19 dBm	-41.19 dB

Date: 18.JUN.2022 05:57:30

Middle Channel / 1RB1

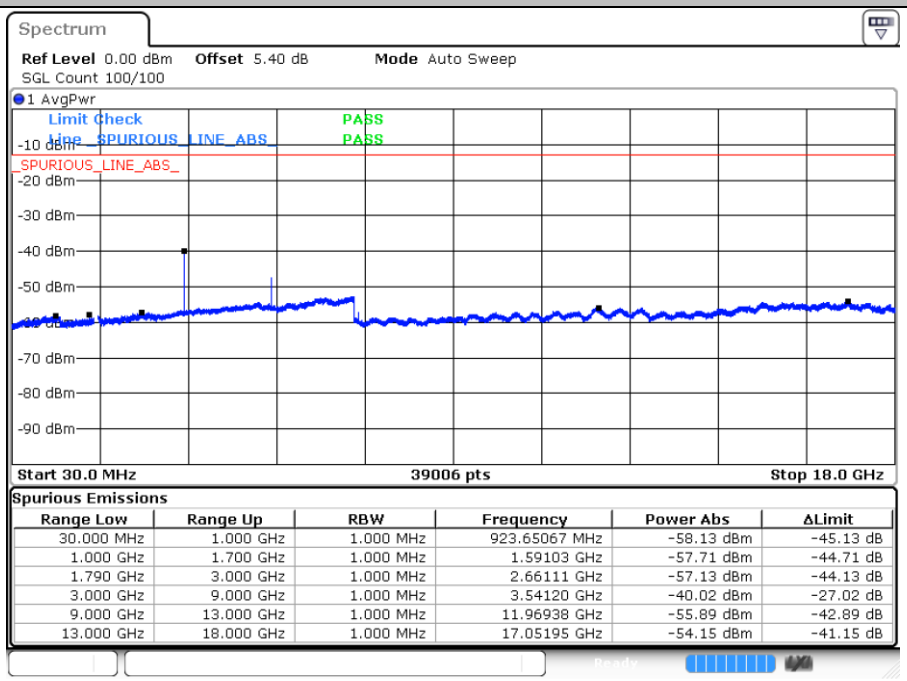


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	937.22389 MHz	-58.17 dBm	-45.17 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69598 GHz	-53.76 dBm	-40.76 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.79094 GHz	-56.90 dBm	-43.90 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.48121 GHz	-38.57 dBm	-25.57 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.91989 GHz	-55.95 dBm	-42.95 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.04237 GHz	-54.07 dBm	-41.07 dB

Date: 18.JUN.2022 05:58:53

Highest Channel / 1RB1



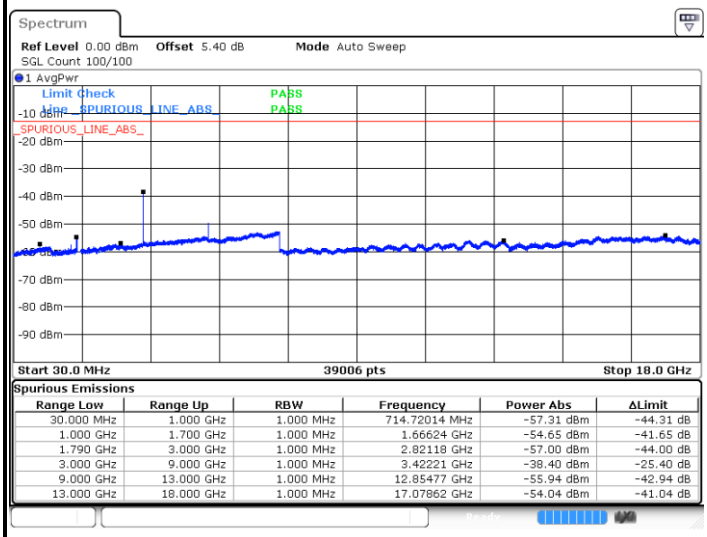
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	923.65067 MHz	-58.13 dBm	-45.13 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59103 GHz	-57.71 dBm	-44.71 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.66111 GHz	-57.13 dBm	-44.13 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.54120 GHz	-40.02 dBm	-27.02 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.96938 GHz	-55.89 dBm	-42.89 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.05195 GHz	-54.15 dBm	-41.15 dB

Date: 18.JUN.2022 06:08:56

FR1 B12_N66 / 30MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB1

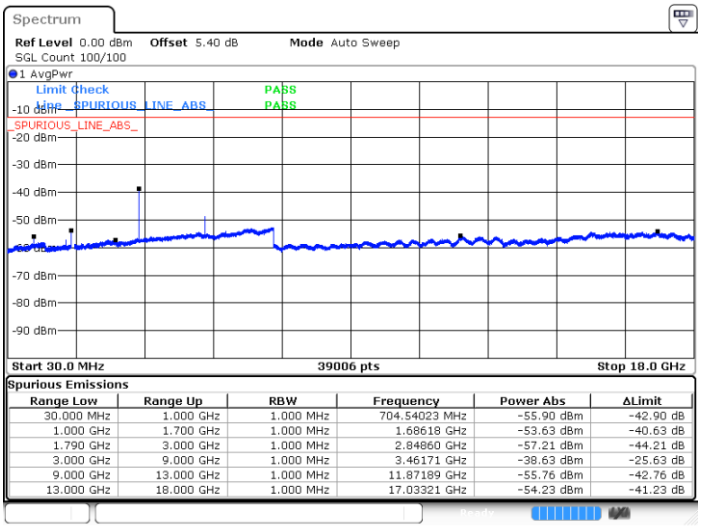


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	714.72014 MHz	-57.31 dBm	-44.31 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66624 GHz	-54.65 dBm	-41.65 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.82118 GHz	-57.00 dBm	-44.00 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42221 GHz	-38.40 dBm	-25.40 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.85477 GHz	-55.94 dBm	-42.94 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.07862 GHz	-54.04 dBm	-41.04 dB

Date: 18.JUN.2022 06:56:15

Middle Channel / 1RB1

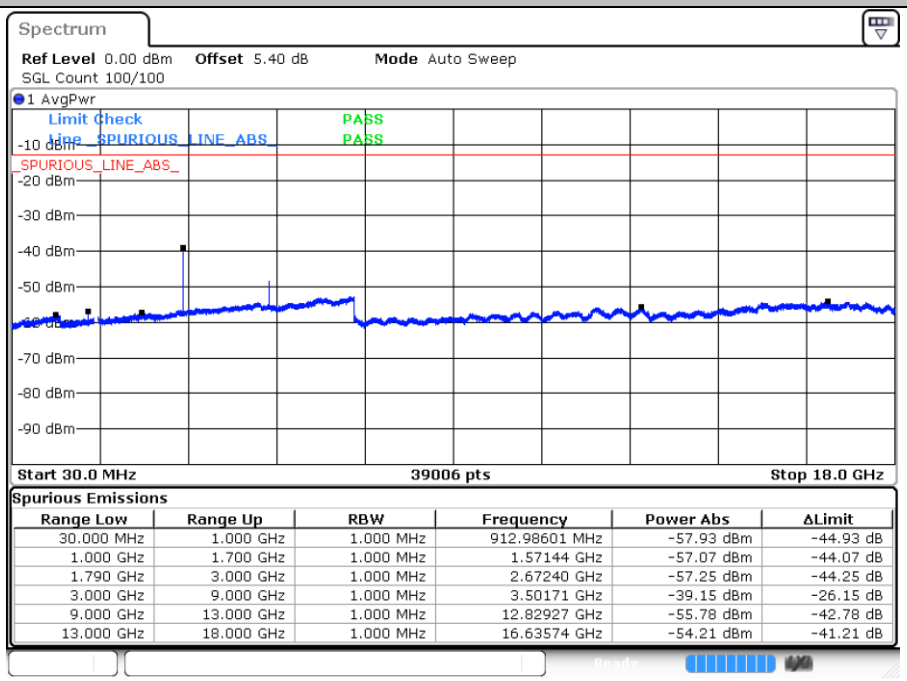


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	704.54023 MHz	-55.90 dBm	-42.90 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68618 GHz	-53.63 dBm	-40.63 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.84860 GHz	-57.21 dBm	-44.21 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.46171 GHz	-38.63 dBm	-25.63 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.87189 GHz	-55.76 dBm	-42.76 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.03321 GHz	-54.23 dBm	-41.23 dB

Date: 18.JUN.2022 06:59:48

Highest Channel / 1RB1



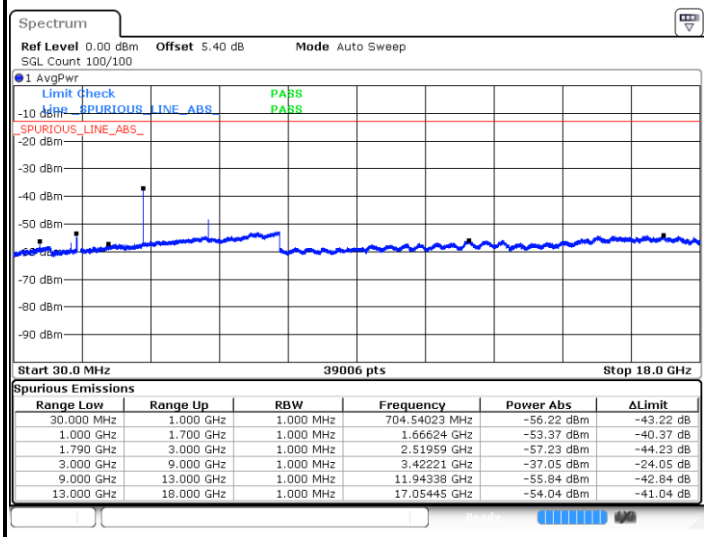
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	912.98601 MHz	-57.93 dBm	-44.93 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.57144 GHz	-57.07 dBm	-44.07 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.67240 GHz	-57.25 dBm	-44.25 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.50171 GHz	-39.15 dBm	-26.15 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.82927 GHz	-55.78 dBm	-42.78 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.63574 GHz	-54.21 dBm	-41.21 dB

Date: 18.JUN.2022 07:15:02

FR1 B12_N66 / 30MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB1

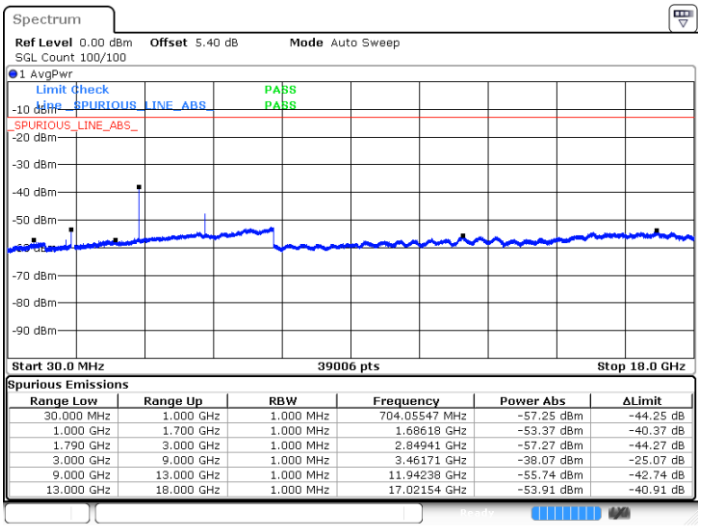


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	704.54023 MHz	-56.22 dBm	-43.22 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66624 GHz	-53.37 dBm	-40.37 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.51959 GHz	-57.23 dBm	-44.23 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42221 GHz	-37.05 dBm	-24.05 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.94338 GHz	-55.84 dBm	-42.84 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.05445 GHz	-54.04 dBm	-41.04 dB

Date: 18.JUN.2022 06:57:13

Middle Channel / 1RB1

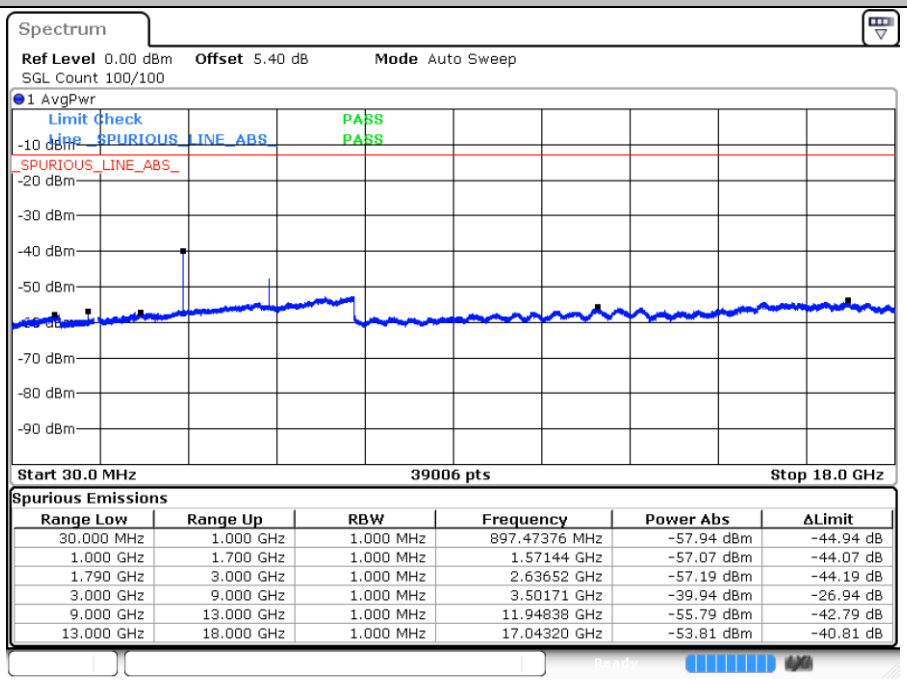


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	704.05547 MHz	-57.25 dBm	-44.25 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68618 GHz	-53.37 dBm	-40.37 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.84941 GHz	-57.27 dBm	-44.27 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.46171 GHz	-38.07 dBm	-25.07 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.94238 GHz	-55.74 dBm	-42.74 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.02154 GHz	-53.91 dBm	-40.91 dB

Date: 18.JUN.2022 06:58:36

Highest Channel / 1RB1



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	897.47376 MHz	-57.94 dBm	-44.94 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.57144 GHz	-57.07 dBm	-44.07 dB
1.790 GHz	3.000 GHz	1.000 MHz	2.63652 GHz	-57.19 dBm	-44.19 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.50171 GHz	-39.94 dBm	-26.94 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.94838 GHz	-55.79 dBm	-42.79 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.04320 GHz	-53.81 dBm	-40.81 dB

Date: 18.JUN.2022 07:17:59

Frequency Stability

Test Conditions		FR1 B12_N66 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0038	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0008	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.45 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

n66 / NR 20MHz / QPSK / ANT0(NR)								
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)
Lowest	3441	-58.27	-13	-45.27	-69.01	2.604	13.34	H
	5163	-54.60	-13	-41.60	-65.11	3.011	13.52	H
	6888	-54.14	-13	-41.14	-64.34	3.271	13.47	H
	3441	-58.05	-13	-45.05	-68.79	2.604	13.34	V
	5163	-54.62	-13	-41.62	-65.13	3.011	13.52	V
	6888	-54.15	-13	-41.15	-64.35	3.271	13.47	V
Middle	3471	-58.37	-13	-45.37	-69.11	2.604	13.34	H
	5208	-54.90	-13	-41.90	-65.41	3.011	13.52	H
	6948	-54.08	-13	-41.08	-64.28	3.271	13.47	H
	3471	-58.36	-13	-45.36	-69.10	2.604	13.34	V
	5208	-55.37	-13	-42.37	-65.88	3.011	13.52	V
	6948	-53.97	-13	-40.97	-64.17	3.271	13.47	V
Highest	3501	-57.50	-13	-44.50	-68.24	2.604	13.34	H
	5253	-55.58	-13	-42.58	-66.09	3.011	13.52	H
	7008	-53.35	-13	-40.35	-63.55	3.271	13.47	H
	3501	-58.20	-13	-45.20	-68.94	2.604	13.34	V
	5253	-55.52	-13	-42.52	-66.03	3.011	13.52	V
	7008	-53.34	-13	-40.34	-63.54	3.271	13.47	V

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

EN-DC_71A_n66A / LTE 20MHz + NR 20MHz / QPSK / ANT0(LTE) & ANT2(NR)								
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)
Lowest	3441	-57.29	-13	-44.29	-68.03	2.604	13.34	H
	5163	-52.87	-13	-39.87	-63.38	3.011	13.52	H
	6888	-53.70	-13	-40.70	-63.90	3.271	13.47	H
	3441	-58.53	-13	-45.53	-69.27	2.604	13.34	V
	5163	-53.13	-13	-40.13	-63.64	3.011	13.52	V
	6888	-53.71	-13	-40.71	-63.91	3.271	13.47	V
Middle	3471	-58.05	-13	-45.05	-68.79	2.604	13.34	H
	5208	-53.32	-13	-40.32	-63.83	3.011	13.52	H
	6948	-54.12	-13	-41.12	-64.32	3.271	13.47	H
	3471	-58.62	-13	-45.62	-69.36	2.604	13.34	V
	5208	-54.27	-13	-41.27	-64.78	3.011	13.52	V
	6948	-53.79	-13	-40.79	-63.99	3.271	13.47	V
Highest	3501	-57.63	-13	-44.63	-68.37	2.604	13.34	H
	5253	-55.24	-13	-42.24	-65.75	3.011	13.52	H
	7008	-54.05	-13	-41.05	-64.25	3.271	13.47	H
	3501	-58.48	-13	-45.48	-69.22	2.604	13.34	V
	5253	-55.55	-13	-42.55	-66.06	3.011	13.52	V
	7008	-53.78	-13	-40.78	-63.98	3.271	13.47	V

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

n7 / NR 50MHz / QPSK / ANT0(NR)								
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)
Lowest	5000	-62.12	-25	-37.12	-72.33	3.03	13.24	H
	7500	-53.15	-25	-28.15	-62.60	3.56	13.01	H
	10000	-61.97	-25	-36.97	-71.49	3.92	13.44	H
	5000	-62.69	-25	-37.69	-72.90	3.03	13.24	V
	7500	-56.54	-25	-31.54	-65.99	3.56	13.01	V
	10000	-61.99	-25	-36.99	-71.51	3.92	13.44	V
Middle	5025	-61.49	-25	-36.49	-71.70	3.03	13.24	H
	7540	-53.70	-25	-28.70	-63.15	3.56	13.01	H
	10051	-61.86	-25	-36.86	-71.38	3.92	13.44	H
	5025	-62.30	-25	-37.30	-72.51	3.03	13.24	V
	7540	-54.81	-25	-29.81	-64.26	3.56	13.01	V
	10051	-62.03	-25	-37.03	-71.55	3.92	13.44	V
Highest	5045	-59.82	-25	-34.82	-70.03	3.03	13.24	H
	7570	-57.53	-25	-32.53	-66.98	3.56	13.01	H
	10090	-61.06	-25	-36.06	-70.58	3.92	13.44	H
	5045	-61.34	-25	-36.34	-71.55	3.03	13.24	H
	7570	-58.88	-25	-33.88	-68.33	3.56	13.01	V
	10090	-61.36	-25	-36.36	-70.88	3.92	13.44	V
	5045	-59.82	-25	-34.82	-70.03	3.03	13.24	V
	7570	-57.53	-25	-32.53	-66.98	3.56	13.01	V

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

EN-DC_12A_n7A / LTE 10MHz + NR 20MHz / QPSK / ANT0(LTE) & ANT2(NR)								
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)
Lowest	5000	-62.94	-25	-37.94	-73.15	3.03	13.24	H
	7504	-62.50	-25	-37.50	-71.95	3.56	13.01	H
	10000	-61.61	-25	-36.61	-71.13	3.92	13.44	H
	5000	-61.97	-25	-36.97	-72.18	3.03	13.24	V
	7504	-54.10	-25	-29.10	-63.55	3.56	13.01	V
	10000	-61.67	-25	-36.67	-71.19	3.92	13.44	V
Middle	5052	-63.02	-25	-38.02	-73.23	3.03	13.24	H
	7580	-62.60	-25	-37.60	-72.05	3.56	13.01	H
	10100	-61.14	-25	-36.14	-70.66	3.92	13.44	H
	5052	-63.32	-25	-38.32	-73.53	3.03	13.24	V
	7580	-62.30	-25	-37.30	-71.75	3.56	13.01	V
	10100	-61.59	-25	-36.59	-71.11	3.92	13.44	V
Highest	5104	-63.42	-25	-38.42	-73.63	3.03	13.24	H
	7652	-58.80	-25	-33.80	-68.25	3.56	13.01	H
	10200	-60.89	-25	-35.89	-70.41	3.92	13.44	H
	5104	-63.12	-25	-38.12	-73.33	3.03	13.24	V
	7652	-54.44	-25	-29.44	-63.89	3.56	13.01	V
	10200	-61.11	-25	-36.11	-70.63	3.92	13.44	V

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

N38 / NR 40MHz / QPSK / ANT0(NR)								
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)
Lowest	5144	-63.85	-25	-38.85	-74.06	3.03	13.24	H
	7712	-56.37	-25	-31.37	-65.82	3.56	13.01	H
	10280	-61.25	-25	-36.25	-70.77	3.92	13.44	H
	5144	-62.12	-25	-37.12	-72.33	3.03	13.24	V
	7712	-55.49	-25	-30.49	-64.94	3.56	13.01	V
	10280	-61.68	-25	-36.68	-71.20	3.92	13.44	V
Middle	5154	-64.07	-25	-39.07	-74.28	3.03	13.24	H
	7733	-57.54	-25	-32.54	-66.99	3.56	13.01	H
	10310	-61.63	-25	-36.63	-71.15	3.92	13.44	H
	5154	-63.54	-25	-38.54	-73.75	3.03	13.24	V
	7733	-59.36	-25	-34.36	-68.81	3.56	13.01	V
	10310	-61.72	-25	-36.72	-71.24	3.92	13.44	V
Highest	5165	-64.10	-25	-39.10	-74.31	3.03	13.24	H
	7750	-54.37	-25	-29.37	-63.82	3.56	13.01	H
	10330	-61.37	-25	-36.37	-70.89	3.92	13.44	H
	5165	-64.13	-25	-39.13	-74.34	3.03	13.24	V
	7750	-56.01	-25	-31.01	-65.46	3.56	13.01	V
	10330	-61.70	-25	-36.70	-71.22	3.92	13.44	V

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

EN-DC_71A_n38A / LTE 20MHz + NR 40MHz / QPSK / ANT0(LTE) & ANT2(NR)								
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)
Lowest	5144	-63.55	-25	-38.55	-73.76	3.03	13.24	H
	7712	-62.44	-25	-37.44	-71.89	3.56	13.01	H
	10280	-61.37	-25	-36.37	-70.89	3.92	13.44	H
	5144	-63.80	-25	-38.80	-74.01	3.03	13.24	V
	7712	-62.41	-25	-37.41	-71.86	3.56	13.01	V
	10280	-61.64	-25	-36.64	-71.16	3.92	13.44	V
Middle	5154	-51.85	-25	-26.85	-62.06	3.03	13.24	H
	7735	-62.73	-25	-37.73	-72.18	3.56	13.01	H
	10310	-61.18	-25	-36.18	-70.70	3.92	13.44	H
	5154	-49.84	-25	-24.84	-60.05	3.03	13.24	V
	7735	-62.66	-25	-37.66	-72.11	3.56	13.01	V
	10310	-61.35	-25	-36.35	-70.87	3.92	13.44	V
Highest	5165	-63.99	-25	-38.99	-74.20	3.03	13.24	H
	7750	-62.69	-25	-37.69	-72.14	3.56	13.01	H
	10330	-61.04	-25	-36.04	-70.56	3.92	13.44	H
	5165	-63.86	-25	-38.86	-74.07	3.03	13.24	V
	7750	-62.62	-25	-37.62	-72.07	3.56	13.01	V
	10330	-61.49	-25	-36.49	-71.01	3.92	13.44	V

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

n41 / NR 100MHz / QPSK / ANT0(NR)								
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)
Lowest	4996	-61.57	-25	-36.57	-71.78	3.03	13.24	H
	7492	-60.41	-25	-35.41	-69.86	3.56	13.01	H
	10000	-61.33	-25	-36.33	-70.85	3.92	13.44	H
	4996	-62.99	-25	-37.99	-73.20	3.03	13.24	V
	7492	-51.39	-25	-26.39	-60.84	3.56	13.01	V
	10000	-61.76	-25	-36.76	-71.28	3.92	13.44	V
Middle	5095	-62.75	-25	-37.75	-72.96	3.03	13.24	H
	7635	-61.08	-25	-36.08	-70.53	3.56	13.01	H
	10190	-60.78	-25	-35.78	-70.30	3.92	13.44	H
	5095	-62.73	-25	-37.73	-72.94	3.03	13.24	V
	7635	-52.96	-25	-27.96	-62.41	3.56	13.01	V
	10190	-61.23	-25	-36.23	-70.75	3.92	13.44	V
Highest	5192	-63.94	-25	-38.94	-74.15	3.03	13.24	H
	7776	-58.16	-25	-33.16	-67.61	3.56	13.01	H
	10380	-61.03	-25	-36.03	-70.55	3.92	13.44	H
	5192	-63.81	-25	-38.81	-74.02	3.03	13.24	V
	7776	-48.75	-25	-23.75	-58.20	3.56	13.01	V
	10380	-61.39	-25	-36.39	-70.91	3.92	13.44	V

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

EN-DC_12A_n41A / LTE 10MHz + NR 100MHz / QPSK / ANT0(LTE) & ANT2(NR)								
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)
Lowest	4996	-63.50	-25	-38.50	-73.71	3.03	13.24	H
	7492	-49.47	-25	-24.47	-58.92	3.56	13.01	H
	10000	-61.93	-25	-36.93	-71.45	3.92	13.44	H
	4996	-61.04	-25	-36.04	-71.25	3.03	13.24	V
	7492	-48.03	-25	-23.03	-57.48	3.56	13.01	V
	10000	-61.69	-25	-36.69	-71.21	3.92	13.44	V
Middle	5088	-63.60	-25	-38.60	-73.81	3.03	13.24	H
	7632	-52.06	-25	-27.06	-61.51	3.56	13.01	H
	10190	-60.81	-25	-35.81	-70.33	3.92	13.44	H
	5088	-62.11	-25	-37.11	-72.32	3.03	13.24	V
	7632	-46.43	-25	-21.43	-55.88	3.56	13.01	V
	10190	-61.22	-25	-36.22	-70.74	3.92	13.44	V
Highest	5184	-63.23	-25	-38.23	-73.44	3.03	13.24	H
	7772	-50.06	-25	-25.06	-59.51	3.56	13.01	H
	10380	-60.83	-25	-35.83	-70.35	3.92	13.44	H
	5184	-61.66	-25	-36.66	-71.87	3.03	13.24	V
	7772	-47.42	-25	-22.42	-56.87	3.56	13.01	V
	10380	-61.27	-25	-36.27	-70.79	3.92	13.44	V

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