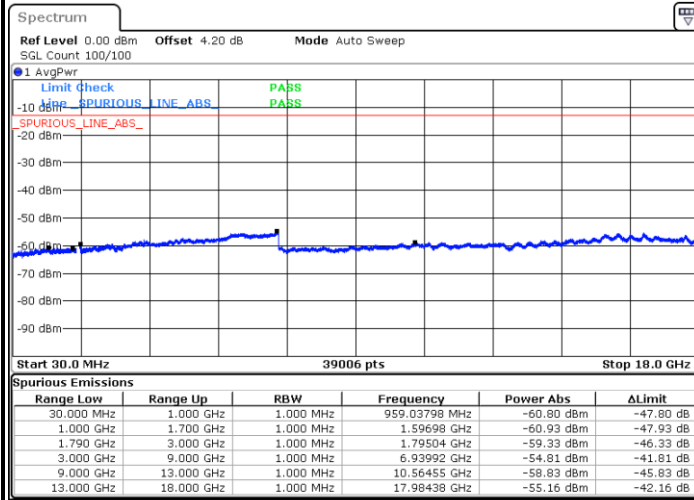




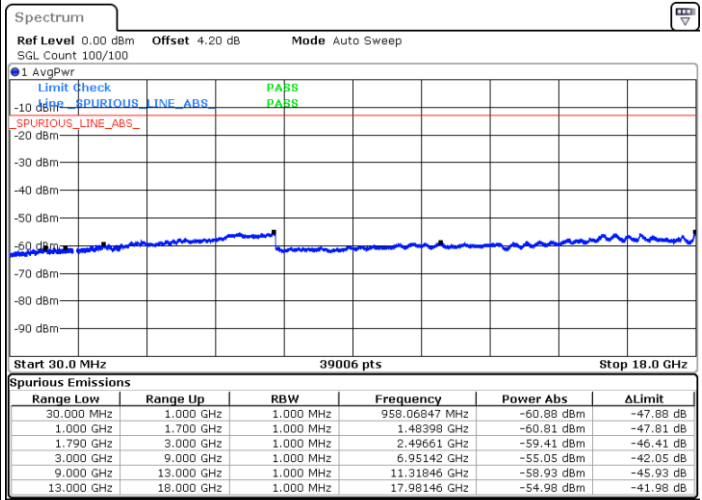
FR1 n66 / 20MHz / DFT-S OFDM / BPSK

Lowest Channel / 1RB



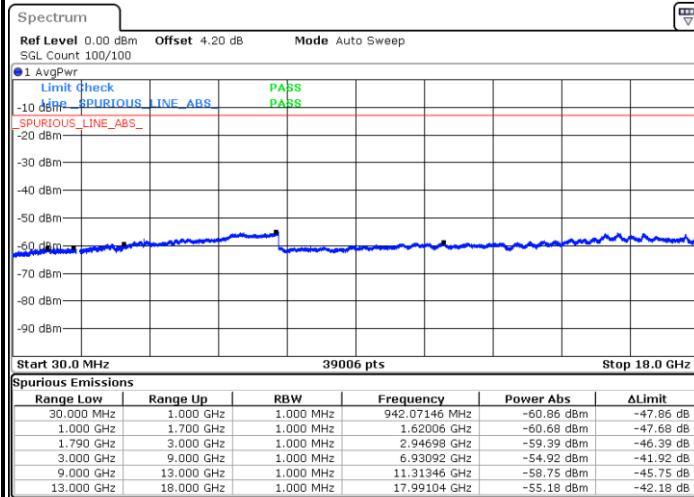
Date: 18.DEC.2020 00:30:59

Middle Channel / 1RB



Date: 18.DEC.2020 01:00:52

Highest Channel / 1RB

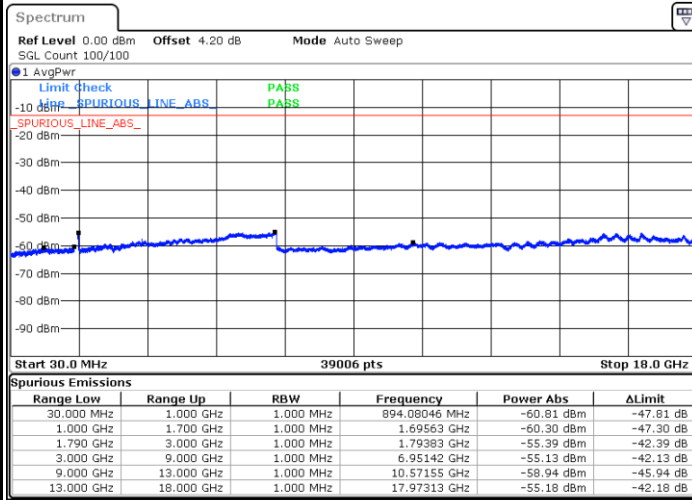


Date: 18.DEC.2020 01:06:34



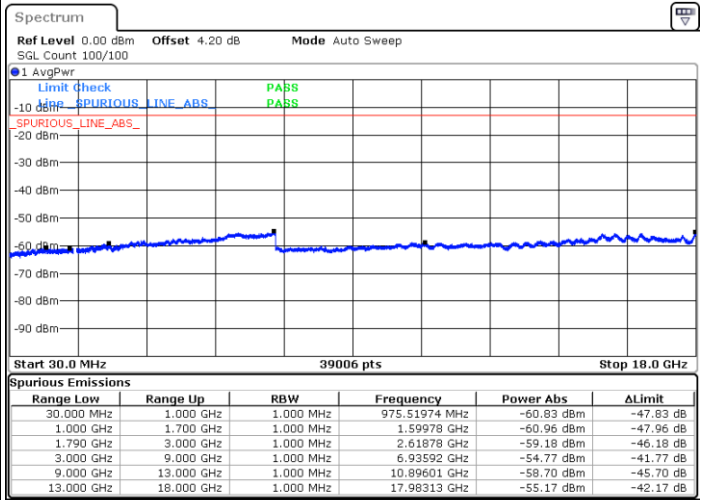
FR1 n66 / 20MHz / DFT-S OFDM / QPSK

Lowest Channel / 1RB



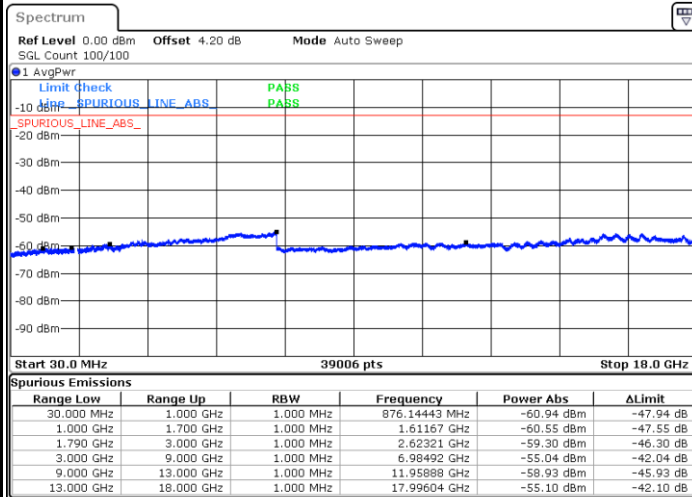
Date: 18.DEC.2020 00:28:32

Middle Channel / 1RB



Date: 18.DEC.2020 01:04:09

Highest Channel / 1RB



Date: 18.DEC.2020 01:05:15

**Frequency Stability**

Test Conditions		NR n66 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Within Band
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0019	
20(Ref.)	Normal Voltage	0.0013	
10	Normal Voltage	0.0018	
0	Normal Voltage	0.0022	
-10	Normal Voltage	0.0015	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0029	
20	Maximum Voltage	0.0019	
20	Normal Voltage	0.0013	
20	Battery End Point	0.0025	

Note:

1. Normal Voltage =7.74 V. ; Battery End Point (BEP) =7.2 V. ; Maximum Voltage =8.9 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission_NSA mode

Bottom Antenna

EN-DC_5A_n2A / LTE 10MHz + NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n2 Lowest	3701.50	-60.60	-13	-47.60	-75.14	-67.36	5.82	12.58	H
	5552.25	-60.20	-13	-47.20	-77.73	-65.92	7.28	13.00	H
	7403.00	-54.46	-13	-41.46	-77.17	-57.62	8.32	11.48	H
	3701.50	-60.57	-13	-47.57	-75.4	-67.33	5.82	12.58	V
	5552.25	-59.92	-13	-46.92	-77.5	-65.64	7.28	13.00	V
	7403.00	-54.54	-13	-41.54	-77.3	-57.70	8.32	11.48	V
LTE Band5 Lowest	1664.08	-65.97	-13	-52.97	-72.22	-69.22	4.00	9.40	H
	2496.27	-63.11	-13	-50.11	-73.40	-66.68	4.88	10.60	H
	3328.36	-63.18	-13	-50.18	-75.35	-68.11	5.52	12.60	H
	1664.08	-66.30	-13	-53.30	-72.32	-69.55	4.00	9.40	V
	2496.27	-61.10	-13	-48.10	-71.73	-64.67	4.88	10.60	V
	3328.36	-62.82	-13	-49.82	-75.40	-67.75	5.52	12.60	V
NR n2 Middle	3741.50	-60.91	-13	-47.91	-75.54	-67.66	5.85	12.60	H
	5612.25	-59.99	-13	-46.99	-77.71	-65.79	7.30	13.10	H
	7483.00	-54.63	-13	-41.63	-77.04	-57.78	8.35	11.50	H
	3741.50	-60.47	-13	-47.47	-75.31	-67.22	5.85	12.60	V
	5612.25	-60.00	-13	-47.00	-77.63	-65.80	7.30	13.10	V
	7483.00	-55.03	-13	-42.03	-77.38	-58.18	8.35	11.50	V
LTE Band5 Middle	1664.08	-66.41	-13	-53.41	-72.66	-71.81	4.00	9.40	H
	2496.27	-63.72	-13	-50.72	-74.01	-69.44	4.88	10.60	H
	3328.36	-63.29	-13	-50.29	-75.46	-70.37	5.52	12.60	H
	1664.08	-67.18	-13	-54.18	-73.2	-72.58	4.00	9.40	V
	2496.27	-63.72	-13	-50.72	-74.35	-69.44	4.88	10.60	V
	3328.36	-63.05	-13	-50.05	-75.63	-70.13	5.52	12.60	V
NR n2 Highest	3781.50	-60.79	-13	-47.79	-75.49	-67.53	5.88	12.62	H
	5672.25	-59.79	-13	-46.79	-77.65	-65.60	7.32	13.13	H
	7563.00	-55.31	-13	-42.31	-77.52	-58.47	8.38	11.54	H
	3781.50	-60.67	-13	-47.67	-72.53	-67.41	5.88	12.62	V
	5672.25	-59.92	-13	-46.92	-74.01	-65.73	7.32	13.13	V
	7563.00	-55.33	-13	-42.33	-75.24	-58.49	8.38	11.54	V
LTE Band5 Highest	1664.08	-66.31	-13	-53.31	-72.56	-69.56	4.00	9.40	H
	2496.27	-64.02	-13	-51.02	-74.31	-67.59	4.88	10.60	H
	3328.36	-63.04	-13	-50.04	-75.21	-67.97	5.52	12.60	H
	1664.08	-66.51	-13	-53.51	-72.53	-69.76	4.00	9.40	V
	2496.27	-63.38	-13	-50.38	-74.01	-66.95	4.88	10.60	V
	3328.36	-62.66	-13	-49.66	-75.24	-67.59	5.52	12.60	V

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



EN-DC 2A_n5A / LTE 20MHz + NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n5 Lowest	1650.3	-67.31	-13	-54.31	-73.60	-70.54	3.98	9.36	H
	2475.45	-64.38	-13	-51.38	-74.72	-67.93	4.85	10.55	H
	3300.6	-63.54	-13	-50.54	-75.93	-68.47	5.50	12.58	H
	1650.3	-67.83	-13	-54.83	-74.00	-71.06	3.98	9.36	V
	2475.45	-63.36	-13	-50.36	-74.06	-66.91	4.85	10.55	V
	3300.6	-62.98	-13	-49.98	-75.82	-67.91	5.50	12.58	V
LTE Band2 Lowest	3742.18	-61.16	-13	-48.16	-75.79	-67.91	5.85	12.60	H
	5613.27	-60.19	-13	-47.19	-77.91	-65.99	7.30	13.10	H
	7484.36	-55.01	-13	-42.01	-77.42	-58.16	8.35	11.50	H
	3742.18	-61.09	-13	-48.09	-75.93	-67.84	5.85	12.60	V
	5613.27	-60.40	-13	-47.40	-78.03	-66.20	7.30	13.10	V
	7484.36	-54.83	-13	-41.83	-77.17	-57.98	8.35	11.50	V
NR n5 Middle	1655.3	-64.20	-13	-51.20	-70.48	-67.45	4.00	9.40	H
	2482.95	-63.08	-13	-50.08	-73.40	-66.65	4.88	10.60	H
	3310.6	-63.48	-13	-50.48	-75.80	-68.41	5.52	12.60	H
	1655.3	-66.88	-13	-53.88	-73.00	-70.13	4.00	9.40	V
	2482.95	-60.53	-13	-47.53	-71.20	-64.10	4.88	10.60	V
	3310.6	-63.06	-13	-50.06	-75.82	-67.99	5.52	12.60	V
LTE Band2 Middle	3742.18	-61.44	-13	-48.44	-76.07	-68.19	5.85	12.60	H
	5613.27	-60.11	-13	-47.11	-77.83	-65.91	7.30	13.10	H
	7484.36	-55.28	-13	-42.28	-77.69	-58.43	8.35	11.50	H
	3742.18	-61.22	-13	-48.22	-76.06	-67.97	5.85	12.60	V
	5613.27	-59.97	-13	-46.97	-77.6	-65.77	7.30	13.10	V
	7484.36	-55.08	-13	-42.08	-77.42	-58.23	8.35	11.50	V
NR n5 Highest	1660.3	-67.29	-13	-54.29	-73.55	-70.46	4.10	9.42	H
	2490.45	-64.38	-13	-51.38	-74.68	-67.96	4.90	10.63	H
	3320.6	-63.72	-13	-50.72	-75.96	-68.64	5.55	12.62	H
	1660.3	-67.20	-13	-54.20	-73.27	-70.37	4.10	9.42	V
	2490.45	-63.70	-13	-50.70	-74.34	-67.28	4.90	10.63	V
	3320.6	-63.13	-13	-50.13	-75.79	-68.05	5.55	12.62	V
LTE Band2 Highest	3742.18	-61.33	-13	-48.33	-75.96	-68.08	5.85	12.60	H
	5613.27	-60.18	-13	-47.18	-77.90	-65.98	7.30	13.10	H
	7484.36	-55.27	-13	-42.27	-77.68	-58.42	8.35	11.50	H
	3742.18	-61.20	-13	-48.20	-76.04	-67.95	5.85	12.60	V
	5613.27	-60.28	-13	-47.28	-77.91	-66.08	7.30	13.10	V
	7484.36	-55.20	-13	-42.20	-77.54	-58.35	8.35	11.50	V

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



EN-DC_12A_n25A / LTE 10MHz + NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n25 Lowest	3701.50	-61.25	-13	-48.25	-75.79	-68.01	5.82	12.58	H
	5552.25	-60.49	-13	-47.49	-78.02	-66.21	7.28	13.00	H
	7403.00	-55.20	-13	-42.20	-77.91	-58.36	8.32	11.48	H
	3701.50	-61.11	-13	-48.11	-75.94	-67.87	5.82	12.58	V
	5552.25	-60.58	-13	-47.58	-78.16	-66.30	7.28	13.00	V
	7403.00	-55.28	-13	-42.28	-78.04	-58.44	8.32	11.48	V
LTE Band12 Lowest	1406	-63.83	-13	-50.83	-71.91	-67.08	4.00	9.40	H
	2109	-63.47	-13	-50.47	-73.23	-67.04	4.88	10.60	H
	2812	-62.54	-13	-49.54	-74.56	-67.47	5.52	12.60	H
	1406	-62.61	-13	-49.61	-70.77	-65.86	4.00	9.40	V
	2109	-63.38	-13	-50.38	-73.51	-66.95	4.88	10.60	V
	2812	-61.98	-13	-48.98	-74.24	-66.91	5.52	12.60	V
NR n25 Middle	3746.5	-61.18	-13	-48.18	-75.81	-67.93	5.85	12.60	H
	5619.75	-60.20	-13	-47.20	-77.92	-66.00	7.30	13.10	H
	7493	-55.37	-13	-42.37	-77.72	-58.52	8.35	11.50	H
	3746.5	-60.87	-13	-47.87	-75.71	-67.62	5.85	12.60	V
	5619.75	-60.35	-13	-47.35	-77.98	-66.15	7.30	13.10	V
	7493	-55.39	-13	-42.39	-77.66	-58.54	8.35	11.50	V
LTE Band12 Middle	1406	-63.95	-13	-50.95	-72.03	-67.20	4.00	9.40	H
	2109	-63.46	-13	-50.46	-73.22	-67.03	4.88	10.60	H
	2812	-62.56	-13	-49.56	-74.58	-67.49	5.52	12.60	H
	1406	-63.89	-13	-50.89	-72.05	-67.14	4.00	9.40	V
	2109	-63.89	-13	-50.89	-74.02	-67.46	4.88	10.60	V
	2812	-62.30	-13	-49.30	-74.56	-67.23	5.52	12.60	V
NR n25 Highest	3791.36	-60.99	-13	-47.99	-75.70	-67.73	5.88	12.62	H
	5687.04	-59.93	-13	-46.93	-77.84	-65.74	7.32	13.13	H
	7582.72	-55.59	-13	-42.59	-77.77	-58.75	8.38	11.54	H
	3791.36	-60.66	-13	-47.66	-75.49	-67.40	5.88	12.62	V
	5687.04	-59.86	-13	-46.86	-77.78	-65.67	7.32	13.13	V
	7582.72	-55.37	-13	-42.37	-77.34	-58.53	8.38	11.54	V
LTE Band12 Highest	1406	-63.69	-13	-50.69	-71.77	-66.94	4.00	9.40	H
	2109	-63.88	-13	-50.88	-73.64	-67.45	4.88	10.60	H
	2812	-62.68	-13	-49.68	-74.70	-67.61	5.52	12.60	H
	1406	-63.99	-13	-50.99	-72.15	-67.24	4.00	9.40	V
	2109	-63.40	-13	-50.40	-73.53	-66.97	4.88	10.60	V
	2812	-62.08	-13	-49.08	-74.34	-67.01	5.52	12.60	V

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



EN-DC_2A_n66A / LTE 20MHz + NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
NR n66 Lowest	3421.50	-63.02	-13	-50.02	-75.27	-69.90	5.60	12.48	H
	5132.25	-59.02	-13	-46.02	-76.51	-64.70	7.10	12.78	H
	6843.00	-56.84	-13	-43.84	-77.29	-60.23	8.38	11.77	H
	3421.50	-62.53	-13	-49.53	-75.34	-69.41	5.60	12.48	V
	5132.25	-59.36	-13	-46.36	-76.79	-65.04	7.10	12.78	V
	6843.00	-57.32	-13	-44.32	-77.52	-60.71	8.38	11.77	V
LTE Band2 Lowest	3742.18	-60.43	-13	-47.43	-75.06	-67.18	5.85	12.60	H
	5613.27	-59.34	-13	-46.34	-77.06	-65.14	7.30	13.10	H
	7484.36	-54.20	-13	-41.20	-76.61	-57.35	8.35	11.50	H
	3742.18	-60.34	-13	-47.34	-75.18	-67.09	5.85	12.60	V
	5613.27	-59.79	-13	-46.79	-77.42	-65.59	7.30	13.10	V
	7484.36	-54.41	-13	-41.41	-76.75	-57.56	8.35	11.50	V
NR n66 Middle	3471.50	-62.95	-13	-49.95	-75.77	-69.80	5.65	12.50	H
	5207.25	-60.02	-13	-47.02	-77.49	-65.69	7.13	12.80	H
	6943.00	-57.06	-13	-44.06	-77.97	-60.46	8.40	11.80	H
	3471.50	-62.53	-13	-49.53	-75.89	-69.38	5.65	12.50	V
	5207.25	-60.29	-13	-47.29	-77.71	-65.96	7.13	12.80	V
	6943.00	-56.94	-13	-43.94	-77.89	-60.34	8.40	11.80	V
LTE Band2 Middle	3742	-60.82	-13	-47.82	-75.45	-67.57	5.85	12.60	H
	5613	-60.32	-13	-47.32	-78.04	-66.12	7.30	13.10	H
	7484	-55.50	-13	-42.50	-77.91	-58.65	8.35	11.50	H
	3742	-60.78	-13	-47.78	-75.62	-67.53	5.85	12.60	V
	5613	-59.98	-13	-46.98	-77.61	-65.78	7.30	13.10	V
	7484	-55.55	-13	-42.55	-77.89	-58.70	8.35	11.50	V
NR n66 Highest	3522.36	-62.17	-13	-49.17	-75.57	-69.01	5.68	12.52	H
	5283.54	-60.80	-13	-47.80	-77.76	-66.47	7.15	12.82	H
	7044.72	-56.16	-13	-43.16	-77.50	-59.59	8.42	11.85	H
	3522.36	-61.42	-13	-48.42	-75.35	-68.26	5.68	12.52	V
	5283.54	-61.01	-13	-48.01	-78.02	-66.68	7.15	12.82	V
	7044.72	-55.66	-13	-42.66	-77.17	-59.09	8.42	11.85	V
LTE Band2 Highest	3742.18	-60.69	-13	-47.69	-75.32	-67.44	5.85	12.60	H
	5613.27	-60.08	-13	-47.08	-77.80	-65.88	7.30	13.10	H
	7484.36	-54.91	-13	-41.91	-77.32	-58.06	8.35	11.50	H
	3742.18	-60.75	-13	-47.75	-75.59	-67.50	5.85	12.60	V
	5613.27	-60.31	-13	-47.31	-77.94	-66.11	7.30	13.10	V
	7484.36	-55.01	-13	-42.01	-77.35	-58.16	8.35	11.50	V

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

**Radiated Spurious Emission_SA mode****Bottom Antenna**

5G NR n2 / NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3701.50	-55.18	-13	-42.18	-78.18	-61.94	5.82	12.58	H
	5552.25	-55.12	-13	-42.12	-79.53	-60.84	7.28	13.00	H
	7403.00	-52.68	-13	-39.68	-79.43	-55.84	8.32	11.48	H
	3701.50	-52.94	-13	-39.94	-77.63	-59.70	5.82	12.58	V
	5552.25	-54.94	-13	-41.94	-79.78	-60.66	7.28	13.00	V
	7403.00	-52.70	-13	-39.70	-79.42	-55.86	8.32	11.48	V
Middle	3741.50	-55.34	-13	-42.34	-78.23	-62.09	5.85	12.60	H
	5612.25	-55.18	-13	-42.18	-79.46	-60.98	7.30	13.10	H
	7483.00	-53.23	-13	-40.23	-79.69	-56.38	8.35	11.50	H
	3741.50	-52.72	-13	-39.72	-77.62	-59.47	5.85	12.60	V
	5612.25	-54.42	-13	-41.42	-79.55	-60.22	7.30	13.10	V
	7483.00	-53.33	-13	-40.33	-79.77	-56.48	8.35	11.50	V
Highest	3781.50	-54.96	-13	-41.96	-78.19	-61.70	5.88	12.62	H
	5672.25	-54.81	-13	-41.81	-79.13	-60.62	7.32	13.13	H
	7563.00	-53.19	-13	-40.19	-79.33	-56.35	8.38	11.54	H
	3781.50	-53.17	-13	-40.17	-77.89	-59.91	5.88	12.62	V
	5672.25	-54.29	-13	-41.29	-78.9	-60.10	7.32	13.13	V
	7563.00	-53.20	-13	-40.20	-79.33	-56.36	8.38	11.54	V

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



5G NR n25 / NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3701.46	-53.13	-13	-40.13	-67.67	-59.89	5.82	12.58	H
	5552.19	-58.95	-13	-45.95	-76.48	-64.67	7.28	13.00	H
	7402.92	-55.10	-13	-42.10	-77.81	-58.26	8.32	11.48	H
	3701.46	-56.56	-13	-43.56	-71.39	-63.32	5.82	12.58	V
	5552.19	-53.77	-13	-40.77	-71.35	-59.49	7.28	13.00	V
	7402.92	-54.79	-13	-41.79	-77.55	-57.95	8.32	11.48	V
Middle	3746.46	-60.78	-13	-47.78	-75.41	-67.53	5.85	12.60	H
	5619.69	-59.38	-13	-46.38	-77.10	-65.18	7.30	13.10	H
	7492.92	-54.95	-13	-41.95	-77.31	-58.10	8.35	11.50	H
	3746.46	-60.94	-13	-47.94	-75.78	-67.69	5.85	12.60	V
	5619.69	-57.42	-13	-44.42	-75.05	-63.22	7.30	13.10	V
	7492.92	-55.30	-13	-42.30	-77.58	-58.45	8.35	11.50	V
Highest	3791.46	-59.25	-13	-46.25	-73.96	-65.99	5.88	12.62	H
	5687.19	-59.64	-13	-46.64	-77.56	-65.45	7.32	13.13	H
	7582.92	-55.32	-13	-42.32	-77.50	-58.48	8.38	11.54	H
	3791.46	-59.12	-13	-46.12	-73.95	-65.86	5.88	12.62	V
	5687.19	-57.56	-13	-44.56	-75.48	-63.37	7.32	13.13	V
	7582.92	-55.43	-13	-42.43	-77.4	-58.59	8.38	11.54	V

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



5G NR n66 / NR 20MHz / QPSK DFT-s-OFDM									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3421	-57.29	-13	-44.29	-77.87	-64.17	5.60	12.48	H
	5131.5	-54.85	-13	-41.85	-78.54	-60.53	7.10	12.78	H
	6842	-53.67	-13	-40.67	-79.28	-57.06	8.38	11.77	H
	3421	-56.28	-13	-43.28	-78.06	-63.16	5.60	12.48	V
	5131.5	-53.97	-13	-40.97	-78.4	-59.65	7.10	12.78	V
	6842	-51.58	-13	-38.58	-79.02	-54.97	8.38	11.77	V
Middle	3471	-57.02	-13	-44.02	-78.97	-63.87	5.65	12.50	H
	5206.5	-54.63	-13	-41.63	-78.79	-60.30	7.13	12.80	H
	6942	-53.51	-13	-40.51	-79.22	-56.91	8.40	11.80	H
	3471	-56.59	-13	-43.59	-78.34	-63.44	5.65	12.50	V
	5206.5	-54.68	-13	-41.68	-79.11	-60.35	7.13	12.80	V
	6942	-52.66	-13	-39.66	-79.1	-56.06	8.40	11.80	V
Highest	3521	-57.12	-13	-44.12	-79.45	-63.96	5.68	12.52	H
	5281.5	-55.43	-13	-42.43	-79.87	-61.10	7.15	12.82	H
	7042	-53.24	-13	-40.24	-79.12	-56.67	8.42	11.85	H
	3521	-56.41	-13	-43.41	-79.14	-63.25	5.68	12.52	V
	5281.5	-55.68	-13	-42.68	-79.91	-61.35	7.15	12.82	V
	7042	-52.09	-13	-39.09	-78.48	-55.52	8.42	11.85	V

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