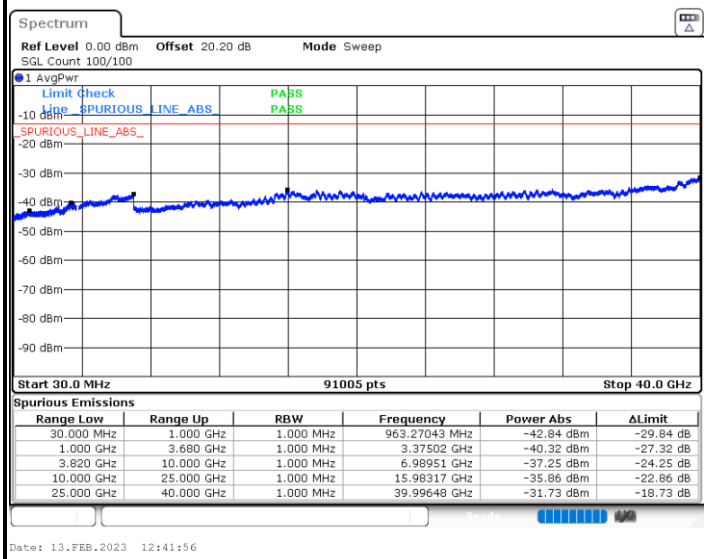
Conducted Spurious Emission

FR1 n78 / 10MHz / CP OFDM / QPSK

Lowest Channel / 1RB1

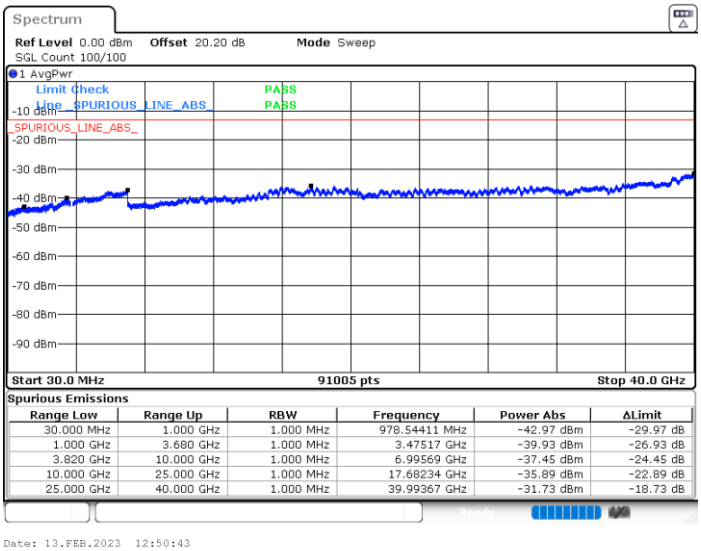


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	963.27043 MHz	-42.84 dBm	-29.84 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.37502 GHz	-40.32 dBm	-27.32 dB
3.820 GHz	10.000 GHz	1.000 MHz	6.98951 GHz	-37.25 dBm	-24.25 dB
10.000 GHz	25.000 GHz	1.000 MHz	15.98317 GHz	-35.86 dBm	-22.86 dB
25.000 GHz	40.000 GHz	1.000 MHz	39.99648 GHz	-31.73 dBm	-18.73 dB

Date: 13.FEB.2023 12:41:56

Middle Channel / 1RB1

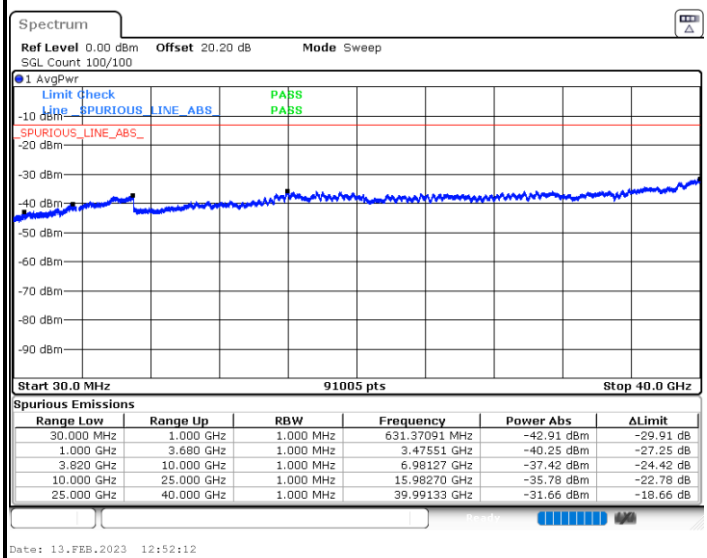


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	978.54411 MHz	-42.97 dBm	-29.97 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.47517 GHz	-39.93 dBm	-26.93 dB
3.820 GHz	10.000 GHz	1.000 MHz	6.99569 GHz	-37.45 dBm	-24.45 dB
10.000 GHz	25.000 GHz	1.000 MHz	17.68234 GHz	-35.89 dBm	-22.89 dB
25.000 GHz	40.000 GHz	1.000 MHz	39.99367 GHz	-31.73 dBm	-18.73 dB

Date: 13.FEB.2023 12:50:43

Highest Channel / 1RB1



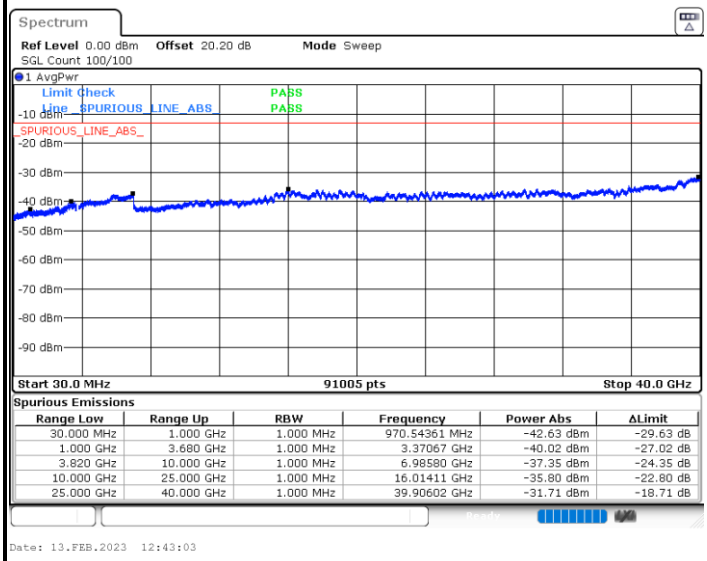
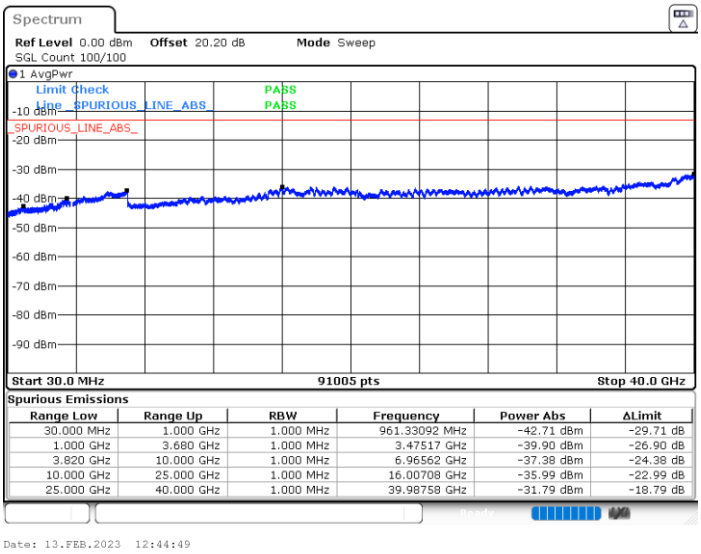
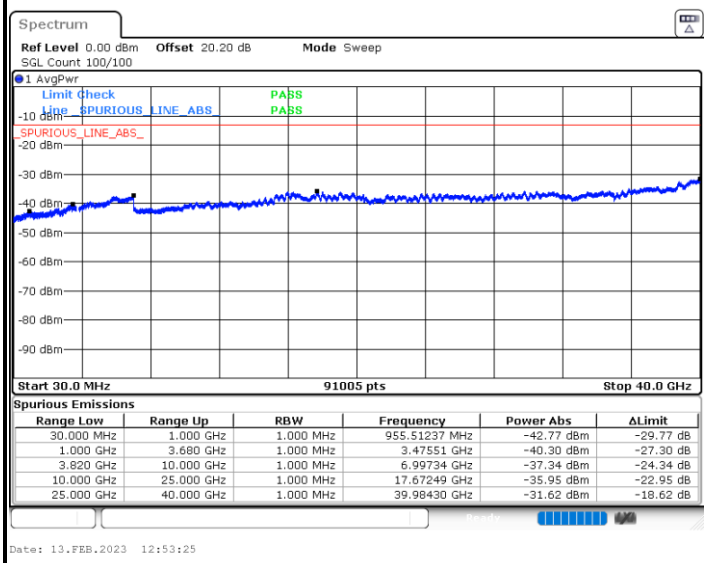
Spurious Emissions

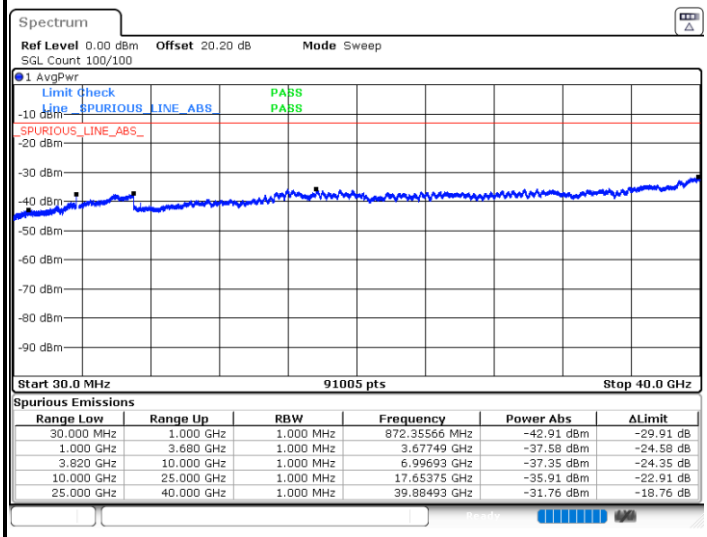
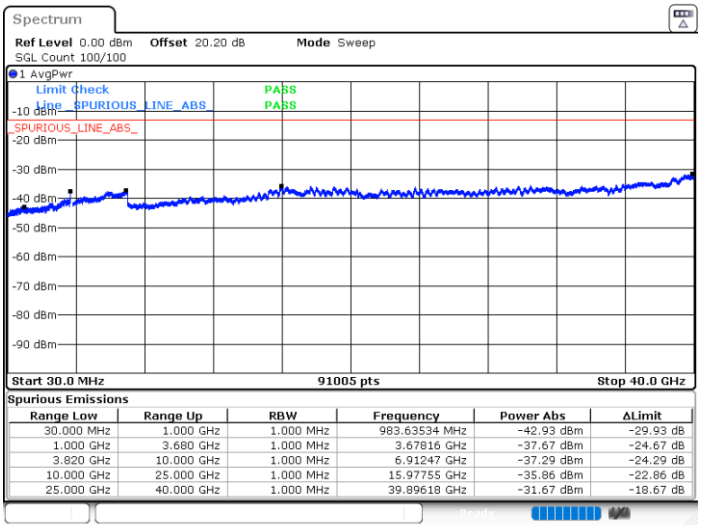
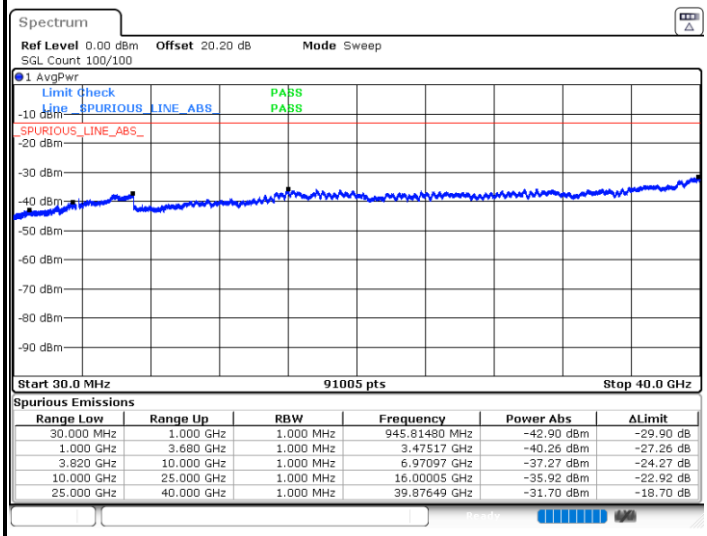
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	631.37091 MHz	-42.91 dBm	-29.91 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.47551 GHz	-40.25 dBm	-27.25 dB
3.820 GHz	10.000 GHz	1.000 MHz	6.98127 GHz	-37.42 dBm	-24.42 dB
10.000 GHz	25.000 GHz	1.000 MHz	15.98270 GHz	-35.78 dBm	-22.78 dB
25.000 GHz	40.000 GHz	1.000 MHz	39.99133 GHz	-31.66 dBm	-18.66 dB

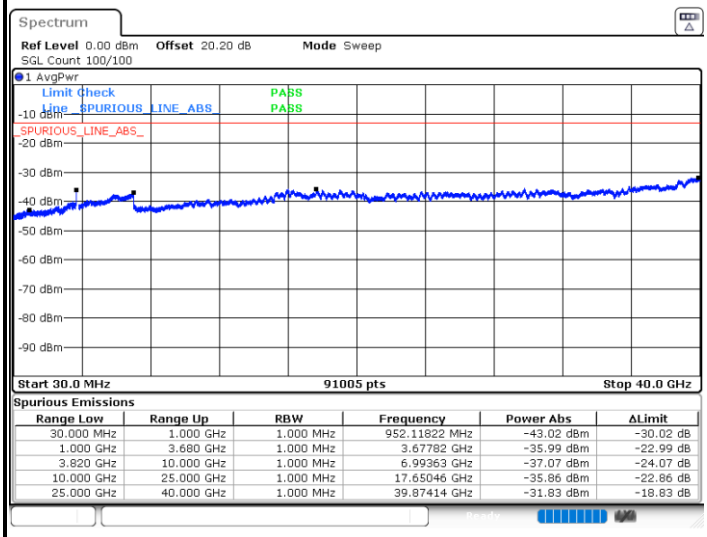
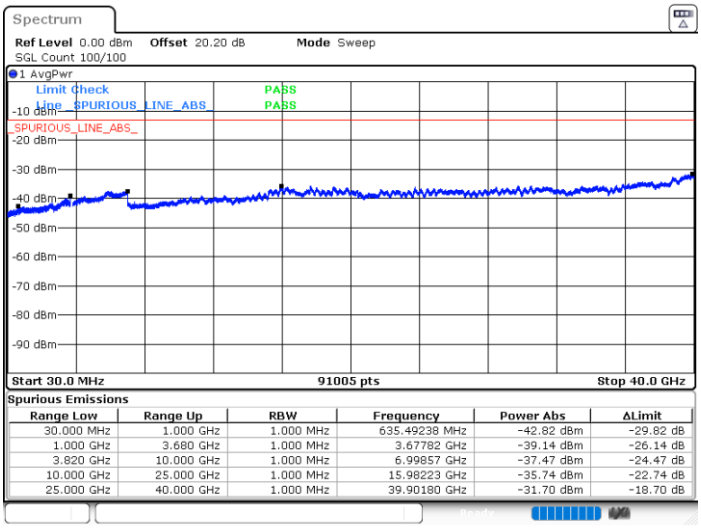
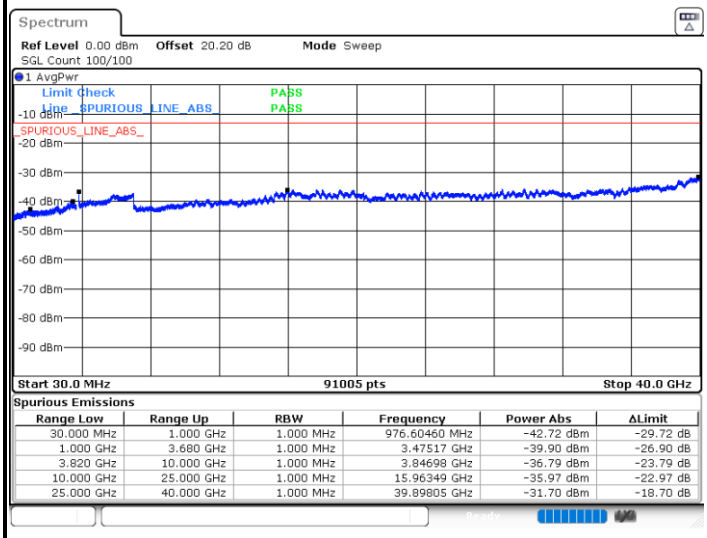
Date: 13.FEB.2023 12:52:12

NA

NA

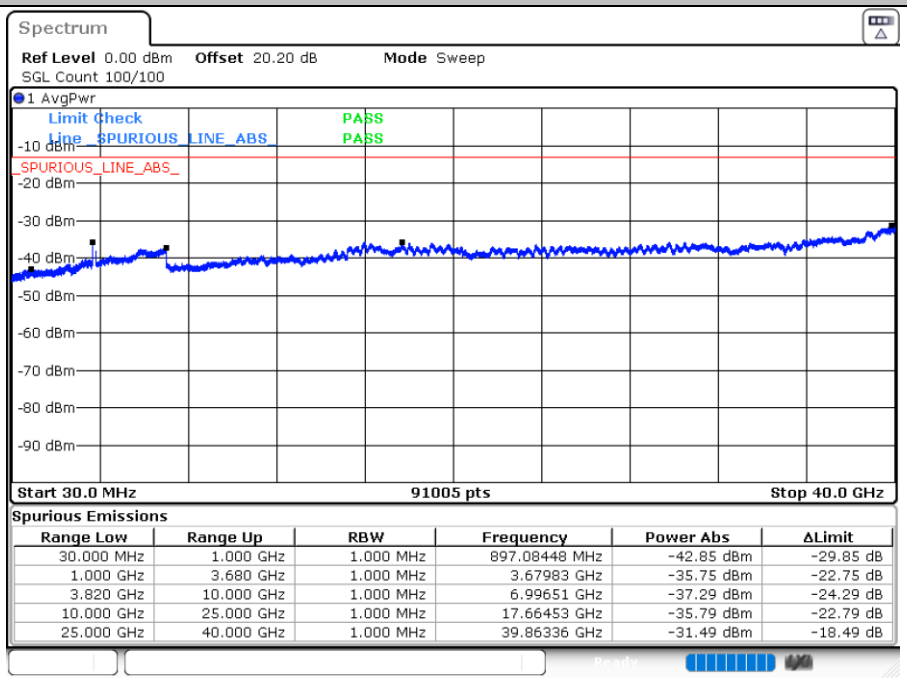
FR1 n78 / 10MHz / CP OFDM /16QAM	
Lowest Channel / 1RB1	**Middle Channel / 1RB1**
	
Highest Channel / 1RB1	**NA**
	**NA**

FR1 n78 /50MHz / CP OFDM / QPSK	
Lowest Channel / 1RB1	**Middle Channel / 1RB1**
	
Highest Channel / 1RB1	**NA**
	**NA**

FR1 n78 /50MHz / CP OFDM /16QAM	
Lowest Channel / 1RB1	**Middle Channel / 1RB1**
	
Highest Channel / 1RB1	**NA**
	**NA**

FR1 n78 / 100MHz / CP OFDM /QPSK

Middle Channel / 1RB1



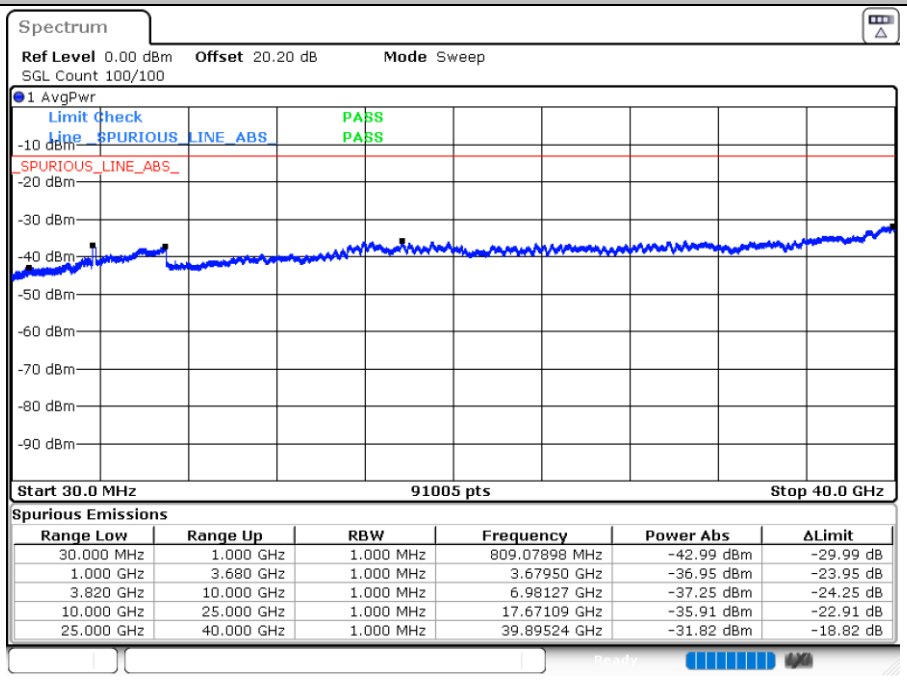
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	897.08448 MHz	-42.85 dBm	-29.85 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.67983 GHz	-35.75 dBm	-22.75 dB
3.820 GHz	10.000 GHz	1.000 MHz	6.99651 GHz	-37.29 dBm	-24.29 dB
10.000 GHz	25.000 GHz	1.000 MHz	17.66453 GHz	-35.79 dBm	-22.79 dB
25.000 GHz	40.000 GHz	1.000 MHz	39.86336 GHz	-31.49 dBm	-18.49 dB

Date: 13.FEB.2023 14:38:52

FR1 n78 / 100MHz / CP OFDM / 16QAM

Middle Channel / 1RB1



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	809.07898 MHz	-42.99 dBm	-29.99 dB
1.000 GHz	3.680 GHz	1.000 MHz	3.67950 GHz	-36.95 dBm	-23.95 dB
3.820 GHz	10.000 GHz	1.000 MHz	6.98127 GHz	-37.25 dBm	-24.25 dB
10.000 GHz	25.000 GHz	1.000 MHz	17.67109 GHz	-35.91 dBm	-22.91 dB
25.000 GHz	40.000 GHz	1.000 MHz	39.89524 GHz	-31.82 dBm	-18.82 dB

Date: 13.FEB.2023 14:37:11

Frequency Stability

Test Conditions		FR1 n78 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0078	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0035	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0031	
-10	Normal Voltage	0.0046	
-20	Normal Voltage	0.0011	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0035	
20	Normal Voltage	0.0026	
20	Battery End Point	0.0031	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Carry Xu	Temperature :	23~25℃
		Relative Humidity :	41~42%

n77 SA / NR 100MHz / QPSK / Ant.0								
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	7416	-63.19	-13	-50.19	-73.40	3.03	13.24	H
	11112	-61.00	-13	-48.00	-70.45	3.56	13.01	H
	14820	-59.59	-13	-46.59	-69.11	3.92	13.44	H
	7416	-63.19	-13	-50.19	-73.40	3.03	13.24	V
	11112	-60.89	-13	-47.89	-70.34	3.56	13.01	V
	14820	-59.34	-13	-46.34	-68.86	3.92	13.44	V
Middle	7596	-63.05	-13	-50.05	-73.26	3.03	13.24	H
	11388	-60.75	-13	-47.75	-70.20	3.56	13.01	H
	15180	-59.37	-13	-46.37	-68.89	3.92	13.44	H
	7596	-62.82	-13	-49.82	-73.03	3.03	13.24	V
	11388	-60.81	-13	-47.81	-70.26	3.56	13.01	V
	15180	-59.15	-13	-46.15	-68.67	3.92	13.44	V
Highest	7776	-62.71	-13	-49.71	-72.92	3.03	13.24	H
	11652	-60.21	-13	-47.21	-69.66	3.56	13.01	H
	15540	-59.14	-13	-46.14	-68.66	3.92	13.44	H
	7776	-62.47	-13	-49.47	-72.68	3.03	13.24	V
	11652	-60.17	-13	-47.17	-69.62	3.56	13.01	V
	15540	-59.07	-13	-46.07	-68.59	3.92	13.44	V

n78 SA / NR 100MHz / QPSK / Ant.0								
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	7410	-63.29	-13	-50.29	-73.50	3.03	13.24	H
	11112	-61.11	-13	-48.11	-70.56	3.56	13.01	H
	14820	-59.98	-13	-46.98	-69.50	3.92	13.44	H
	7410	-63.56	-13	-50.56	-73.77	3.03	13.24	V
	11112	-61.32	-13	-48.32	-70.77	3.56	13.01	V
	14820	-59.93	-13	-46.93	-69.45	3.92	13.44	V

EN-DC_7A_n77A / LTE 20MHz + NR 100MHz / QPSK / LTE ANT 7+ NR ANT 0								
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	7416	-63.22	-13	-50.22	-73.43	3.03	13.24	H
	11112	-60.86	-13	-47.86	-70.31	3.56	13.01	H
	14820	-59.30	-13	-46.30	-68.82	3.92	13.44	H
	7416	-63.31	-13	-50.31	-73.52	3.03	13.24	V
	11112	-60.82	-13	-47.82	-70.27	3.56	13.01	V
	14820	-59.01	-13	-46.01	-68.53	3.92	13.44	V
Middle	7596	-62.75	-13	-49.75	-72.96	3.03	13.24	H
	11388	-60.83	-13	-47.83	-70.28	3.56	13.01	H
	15180	-58.80	-13	-45.80	-68.32	3.92	13.44	H
	7596	-63.00	-13	-50.00	-73.21	3.03	13.24	V
	11388	-61.14	-13	-48.14	-70.59	3.56	13.01	V
	15180	-59.07	-13	-46.07	-68.59	3.92	13.44	V
Highest	7776	-62.69	-13	-49.69	-72.90	3.03	13.24	H
	11652	-60.16	-13	-47.16	-69.61	3.56	13.01	H
	15540	-59.14	-13	-46.14	-68.66	3.92	13.44	H
	7776	-62.74	-13	-49.74	-72.95	3.03	13.24	V
	11652	-60.34	-13	-47.34	-69.79	3.56	13.01	V
	15540	-58.65	-13	-45.65	-68.17	3.92	13.44	V

EN-DC_7A_n78A / LTE 20MHz + NR 100MHz / QPSK / LTE ANT 7+ NR ANT 0								
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	7410	-63.38	-13	-50.38	-73.59	3.03	13.24	H
	11112	-61.05	-13	-48.05	-70.50	3.56	13.01	H
	14820	-59.83	-13	-46.83	-69.35	3.92	13.44	H
	7410	-63.59	-13	-50.59	-73.80	3.03	13.24	V
	11112	-61.24	-13	-48.24	-70.69	3.56	13.01	V
	14820	-59.98	-13	-46.98	-69.50	3.92	13.44	V

n77 UL MIMO / NR 100+100MHz / QPSK / ANT 0+6								
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	7416	-64.07	-13	-51.07	-74.28	3.03	13.24	H
	11112	-61.22	-13	-48.22	-70.67	3.56	13.01	H
	14820	-59.72	-13	-46.72	-69.24	3.92	13.44	H
	7416	-63.87	-13	-50.87	-74.08	3.03	13.24	V
	11112	-61.10	-13	-48.10	-70.55	3.56	13.01	V
	14820	-59.72	-13	-46.72	-69.24	3.92	13.44	V
Middle	7596	-63.32	-13	-50.32	-73.53	3.03	13.24	H
	11388	-60.78	-13	-47.78	-70.23	3.56	13.01	H
	15180	-59.59	-13	-46.59	-69.11	3.92	13.44	H
	7596	-63.05	-13	-50.05	-73.26	3.03	13.24	V
	11388	-60.84	-13	-47.84	-70.29	3.56	13.01	V
	15180	-59.89	-13	-46.89	-69.41	3.92	13.44	V
Highest	7776	-62.02	-13	-49.02	-72.23	3.03	13.24	H
	11652	-60.22	-13	-47.22	-69.67	3.56	13.01	H
	15540	-59.50	-13	-46.50	-69.02	3.92	13.44	H
	7776	-62.42	-13	-49.42	-72.63	3.03	13.24	V
	11652	-60.36	-13	-47.36	-69.81	3.56	13.01	V
	15540	-59.10	-13	-46.10	-68.62	3.92	13.44	V

n78 UL MIMO / NR 100+100MHz / QPSK / ANT 0+6								
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	7410	-63.54	-13	-50.54	-73.75	3.03	13.24	H
	11112	-61.23	-13	-48.23	-70.68	3.56	13.01	H
	14820	-59.76	-13	-46.76	-69.28	3.92	13.44	H
	7410	-63.60	-13	-50.60	-73.81	3.03	13.24	V
	11112	-61.56	-13	-48.56	-71.01	3.56	13.01	V
	14820	-59.88	-13	-46.88	-69.40	3.92	13.44	V

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