

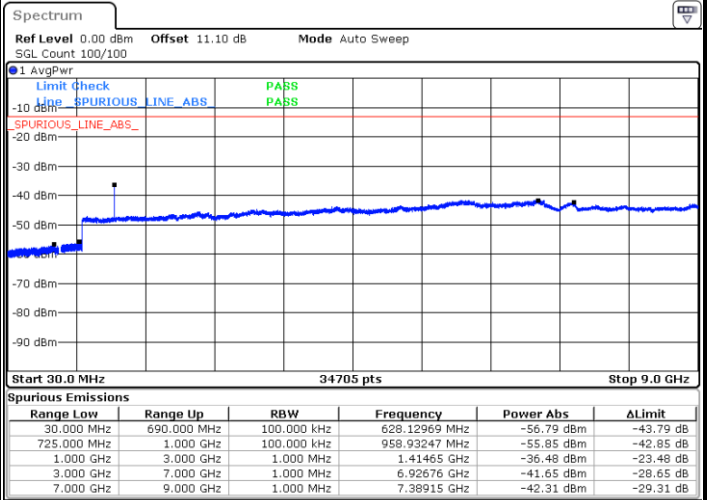
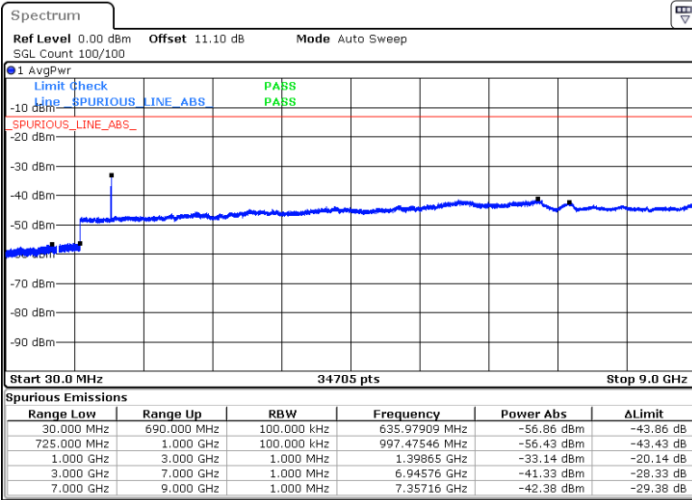


Conducted Spurious Emission

LTE Band 12 / 1.4MHz

Lowest Channel / QPSK

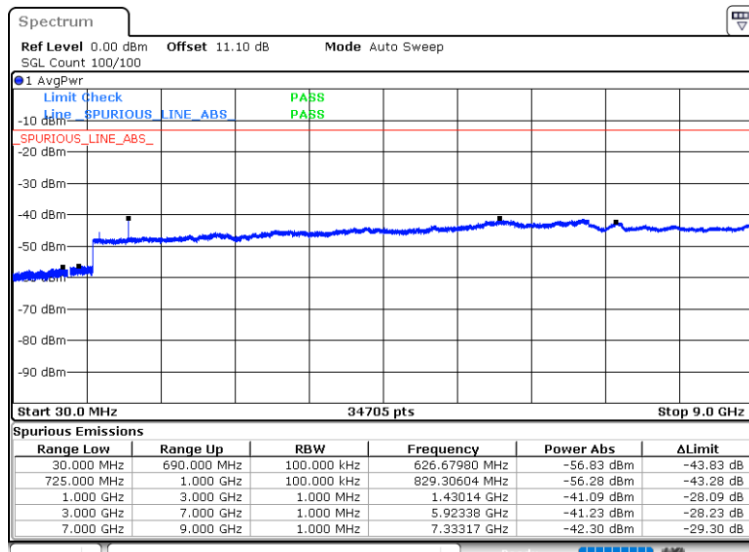
Middle Channel / QPSK



Date: 12.NOV.2021 21:57:33

Date: 12.NOV.2021 21:59:50

Highest Channel / QPSK



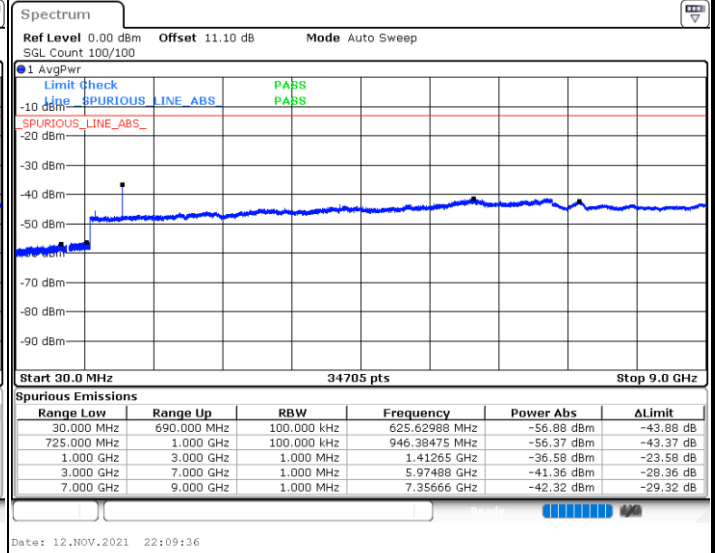
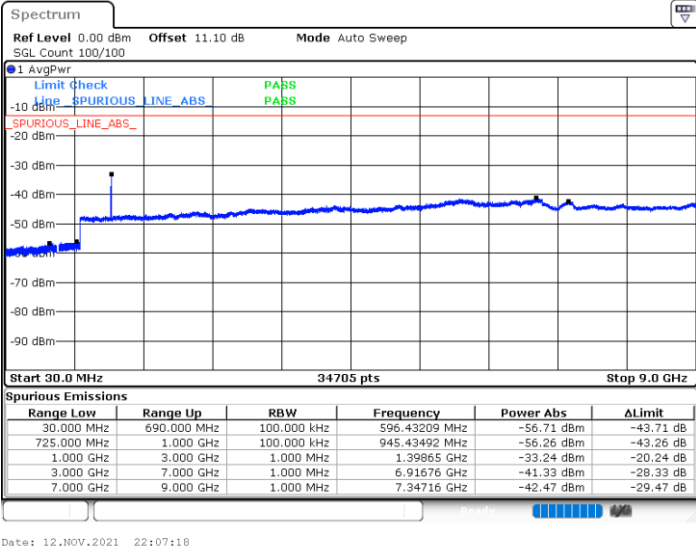
Date: 12.NOV.2021 22:03:38



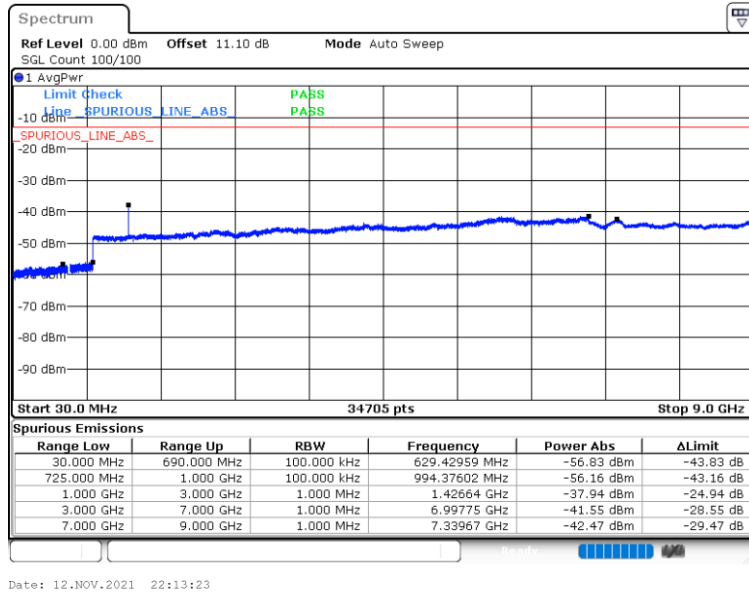
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

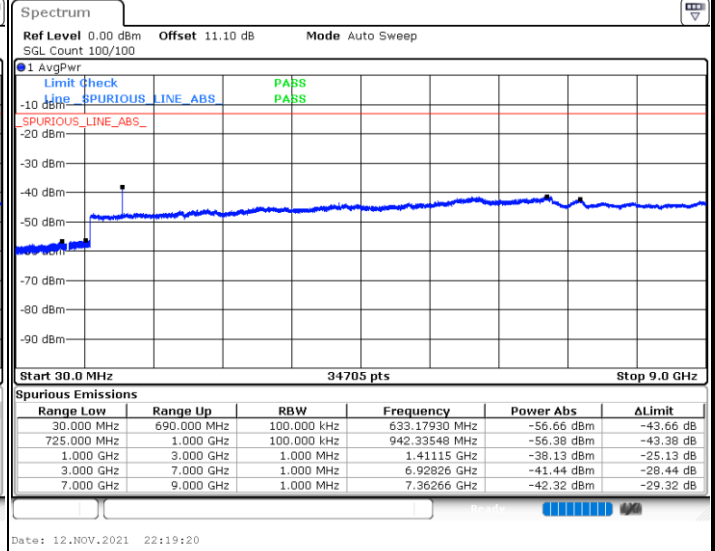
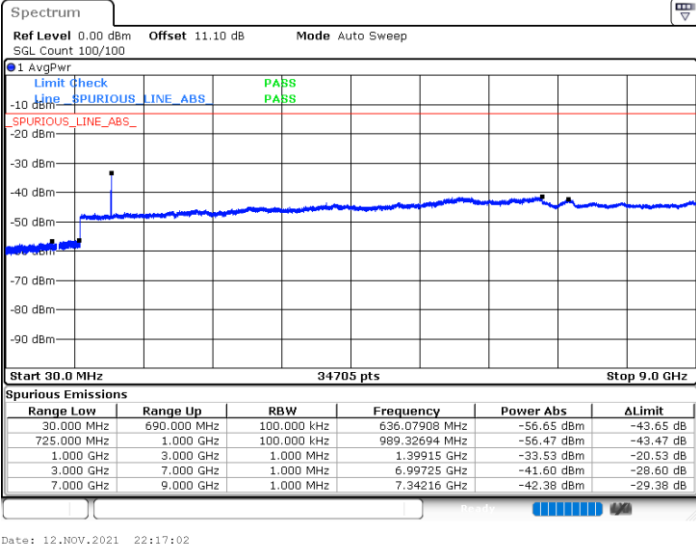




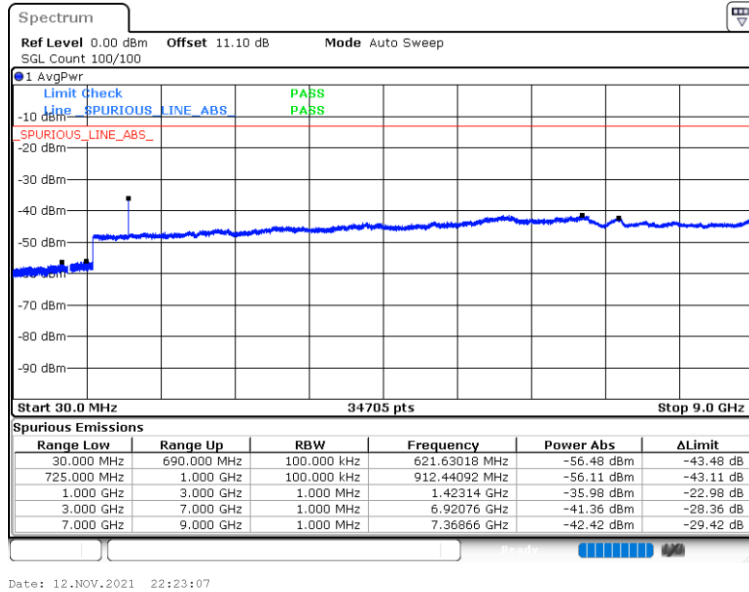
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

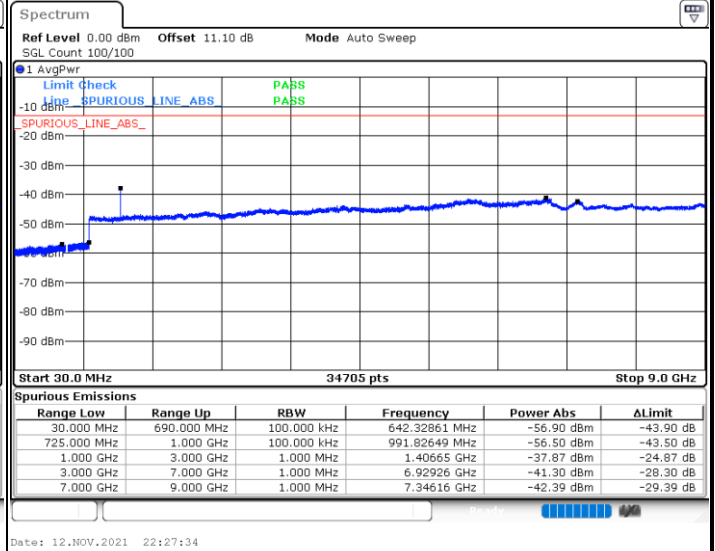
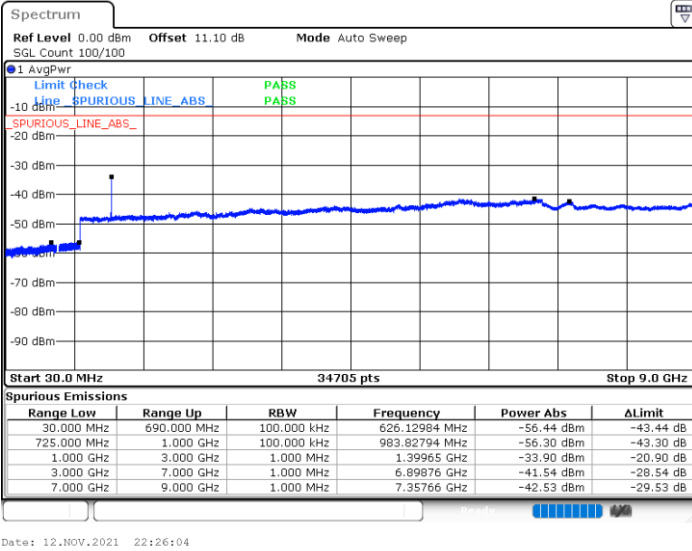




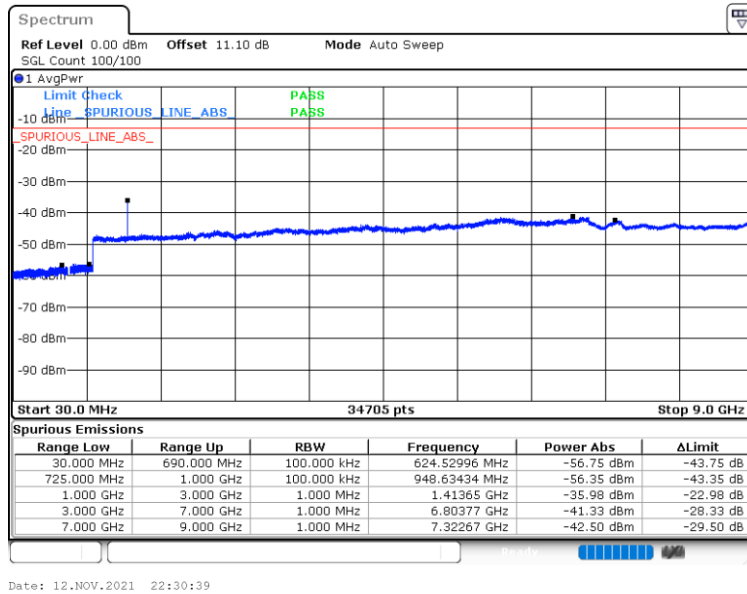
LTE Band 12 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK





Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0157	PASS
40	Normal Voltage	0.0082	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0182	
0	Normal Voltage	0.0073	
-10	Normal Voltage	0.0031	
-20	Normal Voltage	0.0079	
-30	Normal Voltage	0.0071	
20	Maximum Voltage	0.0059	
20	Normal Voltage	0.0133	
20	Battery End Point	0.0058	

Note:

- 1. Normal Voltage =12 V. ; Battery End Point (BEP) =11.4 V. ; Maximum Voltage =12.6 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

LTE Band 2

LTE Band 2 / 20MHz / QPSK									
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	3702	-52.04	-13	-39.04	-70.49	-56.44	7.50	11.90	H
	5553	-42.55	-13	-29.55	-65.02	-45.86	9.19	12.49	H
	7404	-53.62	-13	-40.62	-80.18	-54.16	10.68	11.22	H
									H
									H
									H
									H
	3702	-47.94	-13	-34.94	-65.99	-52.34	7.50	11.90	V
	5553	-40.61	-13	-27.61	-63.03	-43.92	9.19	12.49	V
	7404	-52.31	-13	-39.31	-78.22	-52.85	10.68	11.22	V
									V
									V
									V
									V
Middle	3742	-53.63	-13	-40.63	-72.29	-57.90	7.55	11.82	H
	5613	-47.34	-13	-34.34	-70	-50.44	9.24	12.35	H
	7484	-51.82	-13	-38.82	-78.35	-52.55	10.74	11.47	H
									H
									H
									H
	3742	-49.49	-13	-36.49	-67.81	-53.76	7.55	11.82	V
	5613	-44.96	-13	-31.96	-67.6	-48.06	9.24	12.35	V
	7484	-50.02	-13	-37.02	-76.78	-50.75	10.74	11.47	V
									V
									V
									V



Highest	3782	-51.94	-13	-38.94	-70.81	-56.02	7.59	11.67	H
	5673	-46.28	-13	-33.28	-69.19	-49.09	9.30	12.11	H
	7564	-52.85	-13	-39.85	-79.48	-53.75	10.80	11.70	H
									H
									H
									H
									H
	3782	-47.32	-13	-34.32	-65.9	-51.40	7.59	11.67	V
	5673	-41.02	-13	-28.02	-64.02	-43.83	9.30	12.11	V
	7564	-49.95	-13	-36.95	-76.85	-50.85	10.80	11.70	V
									V
									V
									V
									V

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



LTE Band 4

LTE Band 4 / 20MHz / QPSK									
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	3422	-51.60	-13	-38.60	-68.97	-55.91	7.17	11.48	H
	5133	-45.14	-13	-32.14	-67.01	-47.91	8.82	11.60	H
	6844	-54.72	-13	-41.72	-80.05	-55.65	10.26	11.19	H
	8555	-56.88	-13	-43.88	-84.35	-56.49	11.50	11.11	H
									H
									H
									H
	3422	-53.34	-13	-40.34	-70.52	-57.65	7.17	11.48	V
	5133	-47.73	-13	-34.73	-69.55	-50.50	8.82	11.60	V
	6844	-50.20	-13	-37.20	-76.35	-51.13	10.26	11.19	V
	8555	-55.08	-13	-42.08	-82.59	-54.69	11.50	11.11	V
									V
									V
									V
Middle	3447	-45.69	-13	-32.69	-63.07	-50.17	7.19	11.68	H
	5170	-46.26	-13	-33.26	-68.18	-49.18	8.86	11.78	H
	6894	-49.85	-13	-36.85	-75.27	-50.93	10.30	11.38	H
	8617	-56.50	-13	-43.50	-83.95	-56.13	11.53	11.17	H
									H
									H
									H
	3447	-47.79	-13	-34.79	-65.05	-52.27	7.19	11.68	V
	5170	-46.18	-13	-33.18	-68.03	-49.10	8.86	11.78	V
	6894	-43.71	-13	-30.71	-69.92	-44.79	10.30	11.38	V
	8617	-53.79	-13	-40.79	-80.54	-53.42	11.53	11.17	V
									V
									V
									V



Highest	3472	-46.77	-13	-33.77	-64.17	-51.34	7.22	11.79	H
	5208	-47.47	-13	-34.47	-69.43	-50.50	8.89	11.92	H
	6944	-49.69	-13	-36.69	-75.19	-50.84	10.34	11.49	H
	8680	-56.63	-13	-43.63	-84.22	-56.15	11.58	11.10	H
									H
									H
									H
	3472	-48.34	-13	-35.34	-65.69	-52.91	7.22	11.79	V
	5208	-48.41	-13	-35.41	-70.3	-51.44	8.89	11.92	V
	6944	-43.40	-13	-30.40	-69.67	-44.55	10.34	11.49	V
	8680	-54.46	-13	-41.46	-81.88	-53.98	11.58	11.10	V
									V
									V
									V

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



LTE Band 5

LTE Band 5 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (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	1649	-56.78	-13	-43.78	-66.73	-59.20	4.92	9.49	H
	2473	-55.27	-13	-42.27	-68.3	-57.55	6.07	10.50	H
	3298	-62.07	-13	-49.07	-78.82	-63.98	7.03	11.10	H
	4122	-56.54	-13	-43.54	-76.28	-58.24	7.95	11.80	H
									H
									H
									H
	1649	-59.95	-13	-46.95	-69.67	-62.37	4.92	9.49	V
	2473	-55.42	-13	-42.42	-68.4	-57.70	6.07	10.50	V
	3298	-62.37	-13	-49.37	-78.87	-64.28	7.03	11.10	V
	4122	-57.27	-13	-44.27	-77.02	-58.97	7.95	11.80	V
									V
									V
									V
Middle	1664	-53.70	-13	-40.70	-63.65	-56.19	4.95	9.58	H
	2496	-56.59	-13	-43.59	-69.7	-58.84	6.10	10.50	H
	3328	-62.49	-13	-49.49	-79.2	-64.43	7.06	11.16	H
	4160	-59.20	-13	-46.20	-79.07	-60.87	7.98	11.80	H
									H
									H
									H
	1664	-54.07	-13	-41.07	-63.8	-56.56	4.95	9.58	V
	2496	-56.39	-13	-43.39	-69.41	-58.64	6.10	10.50	V
	3328	-62.34	-13	-49.34	-78.8	-64.28	7.06	11.16	V
	4160	-59.70	-13	-46.70	-79.64	-61.37	7.98	11.80	V
									V
									V
									V
								V	



Highest	1679	-55.50	-13	-42.50	-65.47	-58.06	4.97	9.67	H
	2518	-55.22	-13	-42.22	-68.46	-57.44	6.13	10.50	H
	3358	-60.95	-13	-47.95	-77.62	-62.92	7.10	11.22	H
	4197	-57.11	-13	-44.11	-77.1	-58.75	8.01	11.80	H
									H
									H
									H
	1679	-58.14	-13	-45.14	-67.89	-60.70	4.97	9.67	V
	2518	-55.57	-13	-42.57	-68.71	-57.79	6.13	10.50	V
	3358	-60.75	-13	-47.75	-77.17	-62.72	7.10	11.22	V
	4197	-60.50	-13	-47.50	-80.63	-62.14	8.01	11.80	V
									V
									V
									V

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



LTE Band 12

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (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	1399	-46.66	-13	-33.66	-56.34	-47.97	4.14	7.59	H
	2098	-38.79	-13	-25.79	-50.90	-40.48	5.56	9.41	H
	2798	-64.28	-13	-51.28	-79.08	-66.36	6.47	10.70	H
	3497	-48.02	-13	-35.02	-64.72	-50.51	7.25	11.89	H
	4197	-49.88	-13	-36.88	-69.87	-51.52	8.01	11.80	H
	4897	-57.61	-13	-44.61	-78.96	-58.54	8.61	11.69	H
									H
	1399	-44.18	-13	-31.18	-53.71	-45.49	4.14	7.59	V
	2098	-38.27	-13	-25.27	-50.34	-39.96	5.56	9.41	V
	2798	-64.32	-13	-51.32	-78.90	-66.40	6.47	10.70	V
	3497	-52.76	-13	-39.76	-69.47	-55.25	7.25	11.89	V
	4197	-54.41	-13	-41.41	-74.54	-56.05	8.01	11.80	V
	4897	-60.34	-13	-47.34	-81.71	-61.27	8.61	11.69	V
									V
Middle	1406	-43.44	-13	-30.44	-53.13	-44.79	4.14	7.64	H
	2109	-48.24	-13	-35.24	-60.40	-49.93	5.58	9.42	H
	2812	-61.40	-13	-48.40	-76.27	-63.47	6.48	10.70	H
	3515	-42.17	-13	-29.17	-58.94	-44.65	7.27	11.90	H
	4218	-42.67	-13	-29.67	-62.73	-44.30	8.02	11.80	H
	4921	-53.06	-13	-40.06	-74.47	-53.85	8.63	11.57	H
									H
	1406	-40.63	-13	-27.63	-50.18	-41.98	4.14	7.64	V
	2109	-51.11	-13	-38.11	-63.21	-52.80	5.58	9.42	V
	2812	-60.88	-13	-47.88	-75.52	-62.95	6.48	10.70	V
	3515	-47.97	-13	-34.97	-64.68	-50.45	7.27	11.90	V
	4218	-47.12	-13	-34.12	-67.28	-48.75	8.02	11.80	V
	4921	-59.20	-13	-46.20	-80.62	-59.99	8.63	11.57	V
									V



Highest	1413	-41.43	-13	-28.43	-51.13	-42.81	4.15	7.68	H
	2119	-47.57	-13	-34.57	-59.77	-49.27	5.59	9.44	H
	2826	-62.21	-13	-49.21	-77.18	-64.26	6.50	10.70	H
	3532	-42.35	-13	-29.35	-59.21	-44.81	7.29	11.90	H
	4239	-43.17	-13	-30.17	-63.30	-44.78	8.04	11.80	H
	4946	-51.81	-13	-38.81	-73.28	-52.43	8.66	11.42	H
									H
	1413	-38.88	-13	-25.88	-48.45	-40.26	4.15	7.68	V
	2119	-48.21	-13	-35.21	-60.34	-49.91	5.59	9.44	V
	2826	-59.88	-13	-46.88	-74.60	-61.93	6.50	10.70	V
	3532	-48.30	-13	-35.30	-65.00	-50.76	7.29	11.90	V
	4239	-48.23	-13	-35.23	-68.41	-49.84	8.04	11.80	V
	4946	-58.61	-13	-45.61	-80.09	-59.23	8.66	11.42	V
									V

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