5.8. Radiated Spurious Emission Measurement

5.8.1.Test Limit

Out of band emissions: The powerof any emission outside of theauthorized operating frequency ranges must be attenuated below the transmitting power (P) by a factorof at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

E (dBμV/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 82.3dBμV/m.

5.8.2.Test Procedure

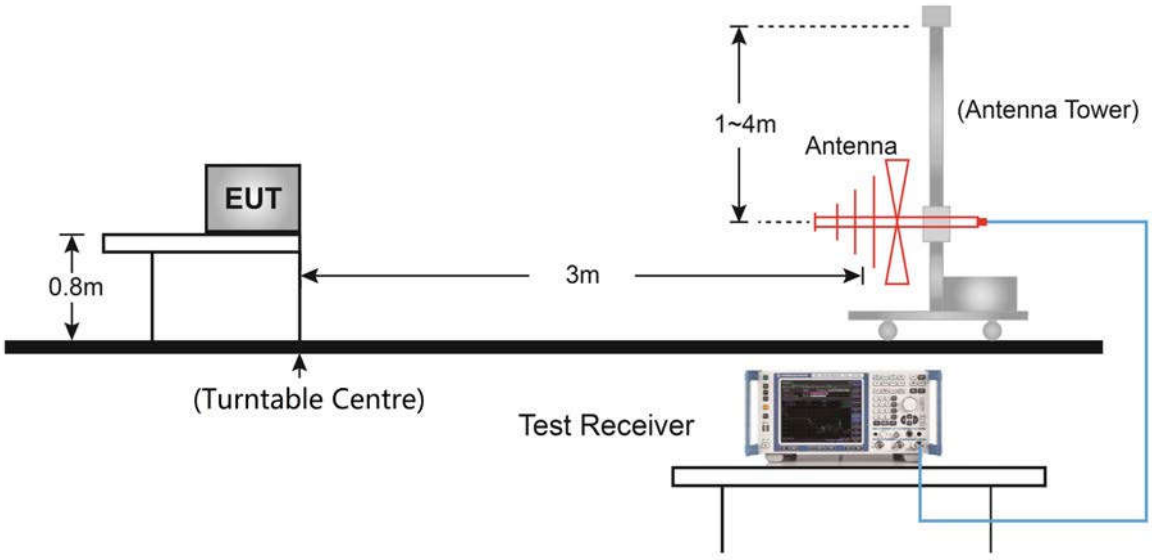
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.8.3.Test Setting

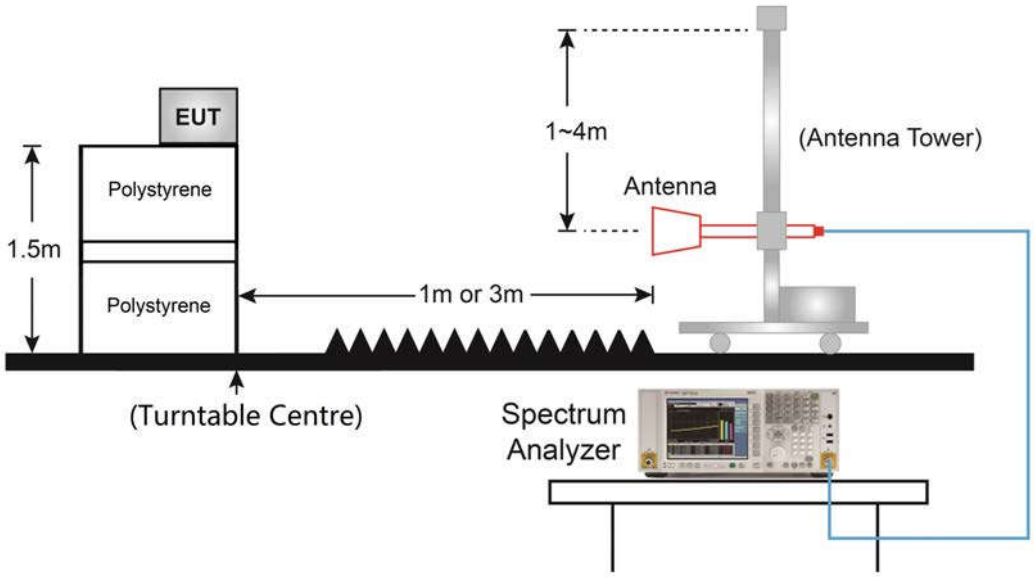
1. RBW = 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

5.8.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.8.5.Test Result

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2021/11/13
Test Band	WCDMA Band II		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
69.29	21.91	15.70	37.61	82.30	-44.69	Peak	Horizontal
999.03	2.62	30.02	32.64	82.30	-49.66	Peak	Horizontal
30.97	18.65	16.53	35.18	82.30	-47.12	Peak	Vertical
928.71	2.56	29.95	32.51	82.30	-49.79	Peak	Vertical
14319.50	46.84	1.57	48.41	82.30	-33.89	Peak	Horizontal
17898.00	45.99	5.18	51.17	82.30	-31.13	Peak	Horizontal
14634.00	46.10	1.90	48.00	82.30	-34.30	Peak	Vertical
17464.50	44.96	4.95	49.91	82.30	-32.39	Peak	Vertical
Middle Channel							
68.80	20.76	15.80	36.56	82.30	-45.74	Peak	Horizontal
924.83	2.42	29.87	32.29	82.30	-50.01	Peak	Horizontal
30.97	20.09	16.53	36.62	82.30	-45.68	Peak	Vertical
66.86	19.06	16.19	35.25	82.30	-47.05	Peak	Vertical
16402.00	45.23	4.31	49.54	82.30	-32.76	Peak	Horizontal
17770.50	45.36	5.61	50.97	82.30	-31.33	Peak	Horizontal
14039.00	46.81	0.98	47.79	82.30	-34.51	Peak	Vertical
17804.50	45.38	5.33	50.71	82.30	-31.59	Peak	Vertical
High Channel							
69.77	21.83	15.60	37.43	82.30	-44.87	Peak	Horizontal
332.64	14.93	19.53	34.46	82.30	-47.84	Peak	Horizontal
30.97	18.99	16.53	35.52	82.30	-46.78	Peak	Vertical
67.83	18.15	16.00	34.15	82.30	-48.15	Peak	Vertical
15450.00	46.21	3.00	49.21	82.30	-33.09	Peak	Horizontal
17413.50	45.31	4.75	50.06	82.30	-32.24	Peak	Horizontal
16155.50	44.96	3.99	48.95	82.30	-33.35	Peak	Vertical
18000.00	45.62	5.63	51.25	82.30	-31.05	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m). Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)							

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2021/11/13
Test Band	WCDMA Band IV		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
30.97	19.99	16.53	36.52	82.30	-45.78	Peak	Horizontal
67.83	19.61	16.00	35.61	82.30	-46.69	Peak	Horizontal
30.49	20.19	16.45	36.64	82.30	-45.66	Peak	Vertical
66.86	19.44	16.19	35.63	82.30	-46.67	Peak	Vertical
16835.50	45.53	4.39	49.92	82.30	-32.38	Peak	Horizontal
17813.00	45.41	5.19	50.60	82.30	-31.70	Peak	Horizontal
16045.00	45.77	3.32	49.09	82.30	-33.21	Peak	Vertical
17490.00	45.47	5.06	50.53	82.30	-31.77	Peak	Vertical
Middle Channel							
69.77	18.55	15.60	34.15	82.30	-48.15	Peak	Horizontal
962.17	2.37	30.01	32.38	82.30	-49.92	Peak	Horizontal
30.97	19.59	16.53	36.12	82.30	-46.18	Peak	Vertical
67.83	20.01	16.00	36.01	82.30	-46.29	Peak	Vertical
16733.50	45.37	4.38	49.75	82.30	-32.55	Peak	Horizontal
17915.00	45.44	5.36	50.80	82.30	-31.50	Peak	Horizontal
16776.00	44.78	4.84	49.62	82.30	-32.68	Peak	Vertical
17983.00	45.20	5.53	50.73	82.30	-31.57	Peak	Vertical
High Channel							
67.83	18.02	16.00	34.02	82.30	-48.28	Peak	Horizontal
984.48	2.98	29.81	32.79	82.30	-49.51	Peak	Horizontal
30.97	19.82	16.53	36.35	82.30	-45.95	Peak	Vertical
67.35	19.98	16.10	36.08	82.30	-46.22	Peak	Vertical
16929.00	45.20	4.63	49.83	82.30	-32.47	Peak	Horizontal
17966.00	45.09	5.43	50.52	82.30	-31.78	Peak	Horizontal
16470.00	45.29	4.60	49.89	82.30	-32.41	Peak	Vertical
17949.00	44.84	5.40	50.24	82.30	-32.06	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m). Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)							

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2021/11/13
Test Band	WCDMA Band V		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
759.93	22.73	28.32	51.05	82.30	-31.25	Peak	Horizontal
940.83	22.32	30.06	52.38	82.30	-29.92	Peak	Horizontal
906.88	22.86	29.44	52.30	82.30	-30.00	Peak	Vertical
999.52	22.19	30.00	52.19	82.30	-30.11	Peak	Vertical
4332.00	51.10	-9.37	41.73	82.30	-40.57	Peak	Horizontal
16461.50	45.19	4.43	49.62	82.30	-32.68	Peak	Horizontal
16453.00	45.20	4.26	49.46	82.30	-32.84	Peak	Vertical
17464.50	44.98	4.95	49.93	82.30	-32.37	Peak	Vertical
Middle Channel							
766.23	21.46	28.43	49.89	82.30	-32.41	Peak	Horizontal
951.50	22.30	30.16	52.46	82.30	-29.84	Peak	Horizontal
749.26	21.43	27.99	49.42	82.30	-32.88	Peak	Vertical
993.70	22.19	29.88	52.07	82.30	-30.23	Peak	Vertical
5292.50	51.44	-9.04	42.40	82.30	-39.90	Peak	Horizontal
17498.50	44.99	5.01	50.00	82.30	-32.30	Peak	Horizontal
16130.00	45.56	3.23	48.79	82.30	-33.51	Peak	Vertical
17515.50	45.97	4.92	50.89	82.30	-31.41	Peak	Vertical
High Channel							
933.56	21.79	30.02	51.81	82.30	-30.49	Peak	Horizontal
984.48	21.08	29.81	50.89	82.30	-31.41	Peak	Horizontal
892.82	23.64	29.18	52.82	82.30	-29.48	Peak	Vertical
972.84	21.60	29.92	51.52	82.30	-30.78	Peak	Vertical
16402.00	45.12	4.31	49.43	82.30	-32.87	Peak	Horizontal
17991.50	45.08	5.58	50.66	82.30	-31.64	Peak	Horizontal
15739.00	46.12	3.33	49.45	82.30	-32.85	Peak	Vertical
17532.50	45.10	4.99	50.09	82.30	-32.21	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

6. CONCLUSION

The data collected relate only the item(s) tested and show that unit is compliance with FCC Rules.

The End

Appendix A - Test Setup Photograph

Refer to “2110RSU053-UT” file.

Appendix B - EUT Photograph

Refer to “2110RSU053-UE” file.