

4.4. Band Edge Measurement

4.4.1. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

This device can be implement MIMO function, so the limit of spurious emissions needs to be reduced by $10 * \log(\text{Numbers}_{\text{Ant}})$ according to FCC KDB 662911 D01 guidance.

The limit is adjusted to $-13 \text{ dBm} - 10 * \log(4) = -19.02 \text{ dBm}$

4.4.2. Test Procedure Used

KDB 971168 D01v03r01 - Section 6.1

ANSI C63.26-2015 - Section 5.7.1

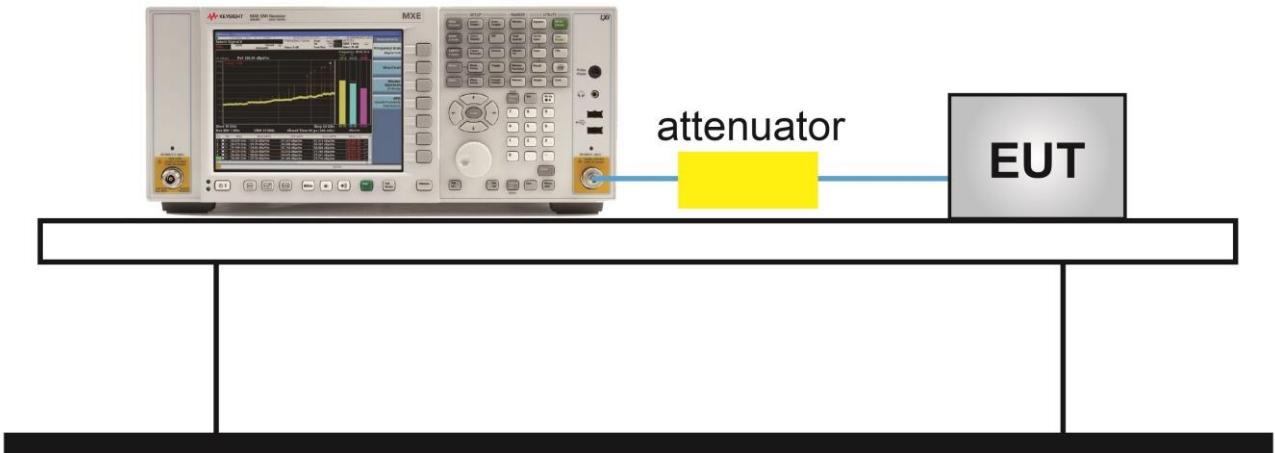
4.4.3. Test Setting

1. Set the analyzer frequency to Bottom or Top channel.
1. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
2. VBW $\geq 3 * \text{RBW}$
3. Sweep time = auto
4. Detector = power averaging (rms)
5. Set sweep trigger to “free run”
6. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple.

To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

4.4.4. Test Setup

Spectrum Analyzer



4.4.5. Test Result

Product	B25 4T4R 160W Radio Unit	Test Engineer	Eric Xu
Test Site	WZ-TR3	Test Date	2021/12/27 ~ 2021/12/28
Test Configuration	LTE Band 25 (Dual Carrier), QPSK		

Adjacent 1MHz band to the licensee's frequency block

Frequency (MHz)	Channel Bandwidth (MHz)	Max Band Edge (dBm)				Limit (dBm)	Result
		Ant 1	Ant 2	Ant 3	Ant 4		
1932.5 + 1937.5	5 + 5	-25.50	-25.85	-25.11	-25.37	≤ -19.02	Pass
1987.5 + 1992.5	5 + 5	-23.24	-23.46	-23.47	-23.88	≤ -19.02	Pass
1932.5 + 1940.0	5 + 10	-22.67	-23.61	-22.44	-23.12	≤ -19.02	Pass
1982.5 + 1990.0	5 + 10	-28.27	-28.24	-29.21	-28.97	≤ -19.02	Pass
1937.5 + 1955.0	15 + 20	-24.46	-25.37	-25.45	-23.76	≤ -19.02	Pass
1967.5 + 1985.0	15 + 20	-27.86	-28.89	-27.76	-28.45	≤ -19.02	Pass
1940.0 + 1960.0	20 + 20	-28.81	-28.06	-26.16	-28.69	≤ -19.02	Pass
1965.0 + 1985.0	20 + 20	-27.19	-27.73	-27.46	-27.85	≤ -19.02	Pass
1932.5 + 1992.5	5 + GAP55 + 5	-22.98	-24.53	-24.38	-22.69	≤ -19.02	Pass
1932.5 + 1992.5	5 + GAP55 + 5	-20.68	-22.09	-22.25	-21.76	≤ -19.02	Pass
1932.5 + 1990.0	5 + GAP50 + 10	-22.30	-23.07	-23.18	-21.70	≤ -19.02	Pass
1932.5 + 1990.0	5 + GAP50 + 10	-28.04	-28.92	-29.57	-27.48	≤ -19.02	Pass
1937.5 + 1985.0	15 + GAP30 + 20	-24.29	-25.83	-25.77	-25.99	≤ -19.02	Pass
1937.5 + 1985.0	15 + GAP30 + 20	-27.13	-26.32	-26.89	-26.86	≤ -19.02	Pass
1940.0 + 1985.0	20 + GAP25 + 20	-28.26	-28.77	-28.07	-28.36	≤ -19.02	Pass
1940.0 + 1985.0	20 + GAP25 + 20	-26.07	-26.80	-25.39	-25.82	≤ -19.02	Pass

Outside 1MHz band to the licensee's frequency block

Frequency (MHz)	Channel Bandwidth (MHz)	Max Band Edge (dBm)				Limit (dBm)	Result
		Ant 1	Ant 2	Ant 3	Ant 4		
1932.5 + 1937.5	5 + 5	-22.44	-20.94	-19.97	-21.90	≤ -19.02	Pass
1987.5 + 1992.5	5 + 5	-21.47	-21.81	-22.26	-20.87	≤ -19.02	Pass
1932.5 + 1940.0	5 + 10	-22.55	-20.94	-20.50	-23.05	≤ -19.02	Pass
1982.5 + 1990.0	5 + 10	-21.90	-22.06	-24.16	-22.67	≤ -19.02	Pass
1937.5 + 1955.0	15 + 20	-22.86	-23.45	-23.31	-26.02	≤ -19.02	Pass
1967.5 + 1985.0	15 + 20	-24.97	-26.25	-25.04	-25.29	≤ -19.02	Pass
1940.0 + 1960.0	20 + 20	-25.75	-24.77	-24.05	-26.32	≤ -19.02	Pass
1965.0 + 1985.0	20 + 20	-24.70	-25.52	-25.12	-25.91	≤ -19.02	Pass
1932.5 + 1992.5	5 + GAP55 + 5	-22.83	-21.71	-21.17	-19.54	≤ -19.02	Pass
1932.5 + 1992.5	5 + GAP55 + 5	-20.87	-21.14	-20.74	-19.48	≤ -19.02	Pass
1932.5 + 1990.0	5 + GAP50 + 10	-23.48	-23.10	-22.87	-21.09	≤ -19.02	Pass
1932.5 + 1990.0	5 + GAP50 + 10	-22.68	-22.70	-23.89	-21.60	≤ -19.02	Pass
1937.5 + 1985.0	15 + GAP30 + 20	-25.44	-25.11	-24.67	-24.79	≤ -19.02	Pass
1937.5 + 1985.0	15 + GAP30 + 20	-23.78	-24.05	-24.20	-24.27	≤ -19.02	Pass
1940.0 + 1985.0	20 + GAP25 + 20	-25.06	-26.07	-25.51	-25.77	≤ -19.02	Pass
1940.0 + 1985.0	20 + GAP25 + 20	-23.68	-24.36	-24.21	-23.22	≤ -19.02	Pass

