

Conclusion: Pass





A.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10 clause 6.4 &6.5 & 6.6 Measurement Limit:

Standard	Limit	
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power	

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission	Field strength	Field strength	Measurement distance
(MHz)	(uV/m)	(dBuV/m)	(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Frequency (MHz)	Field strength(µV/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Note: When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor.

Test setup

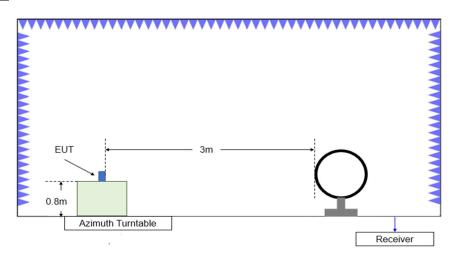


Fig.A.6.2.1 Test Site Diagram (9kHz-30MHz)





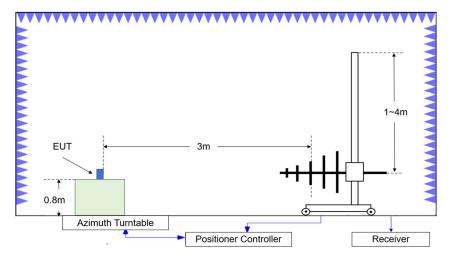


Fig.A.6.2.2 Test Site Diagram (30MHz-1GHz)

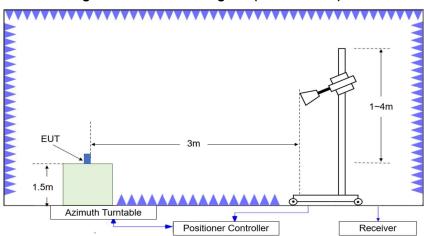


Fig.A.6.2.3 Test Site Diagram (1GHz-40GHz)

Test Procedure

Radiated unwanted emissions from the EUT were measured according to ANSI C63.10. Test setting

Frequency of emission	RBW/VBW	Sweep Time(s)
(MHz)		
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

Calculation

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result=P_{Mea}+A_{Rpl=} P_{Mea}+Cable Loss+Antenna Factor





Note

- 1. The EUT is operating at its maximum duty cycle and its maximum power control level.
- 2. Investigation has been done on all modes and modulations/data rates. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.
- 3. Spurious emissions for all channels were investigated and almost the same below 1GHz. According to FCC 47 CFR §15.31, emission levels are not report much lower than the limit by over 20dB
- 4. Measurement frequencies were performed from 9 kHz to the 10th harmonic of highest fundamental frequency.
- 5. The measurements were performed separately in chain1, chain2, and MIMO (chain1+chain2), and only the worst cases are shown in this section.
- 6. 802.11ax support full RU and partial RU, both full RU and partial RU are tested and worst cases are shown in this report.

Measurement Results:

EUT ID: UT29a

802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHzL	Fig.A.6.2.1	Р
602.11b	11	2.45GHz~2.50GHzH	Fig.A.6.2.2	Р

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
	1	2.31GHz~2.43GHzL	Fig.A.6.2.3	Р
802.11g	10	2.45GHz~2.50GHzH	Fig.A.6.2.4	Р
	11	2.45GHz~2.50GHzH	Fig.A.6.2.5	Р

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
000 11p	1	2.31GHz~2.43GHzL	Fig.A.6.2.6	Р
802.11n	10	2.45GHz~2.50GHzH	Fig.A.6.2.7	
(HT20)	11	2.45GHz~2.50GHzH	Fig.A.6.2.8	Р

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n	3	2.31GHz~2.43GHzL	Fig.A.6.2.4	Р
(HT40)	9	2.45GHz~2.50GHzH	Fig.A.6.2.5	Р

802.11ax-HE20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n	1	2.31GHz~2.43GHzL	Fig.A.6.2.4	Р
(HT20)	11	2.45GHz~2.50GHzH	Fig.A.6.2.5	Р