

5.8 Conducted Band Edge

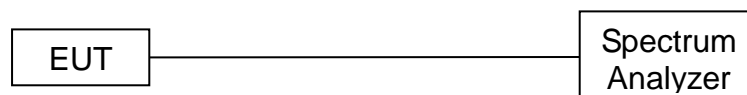
5.8.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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)).

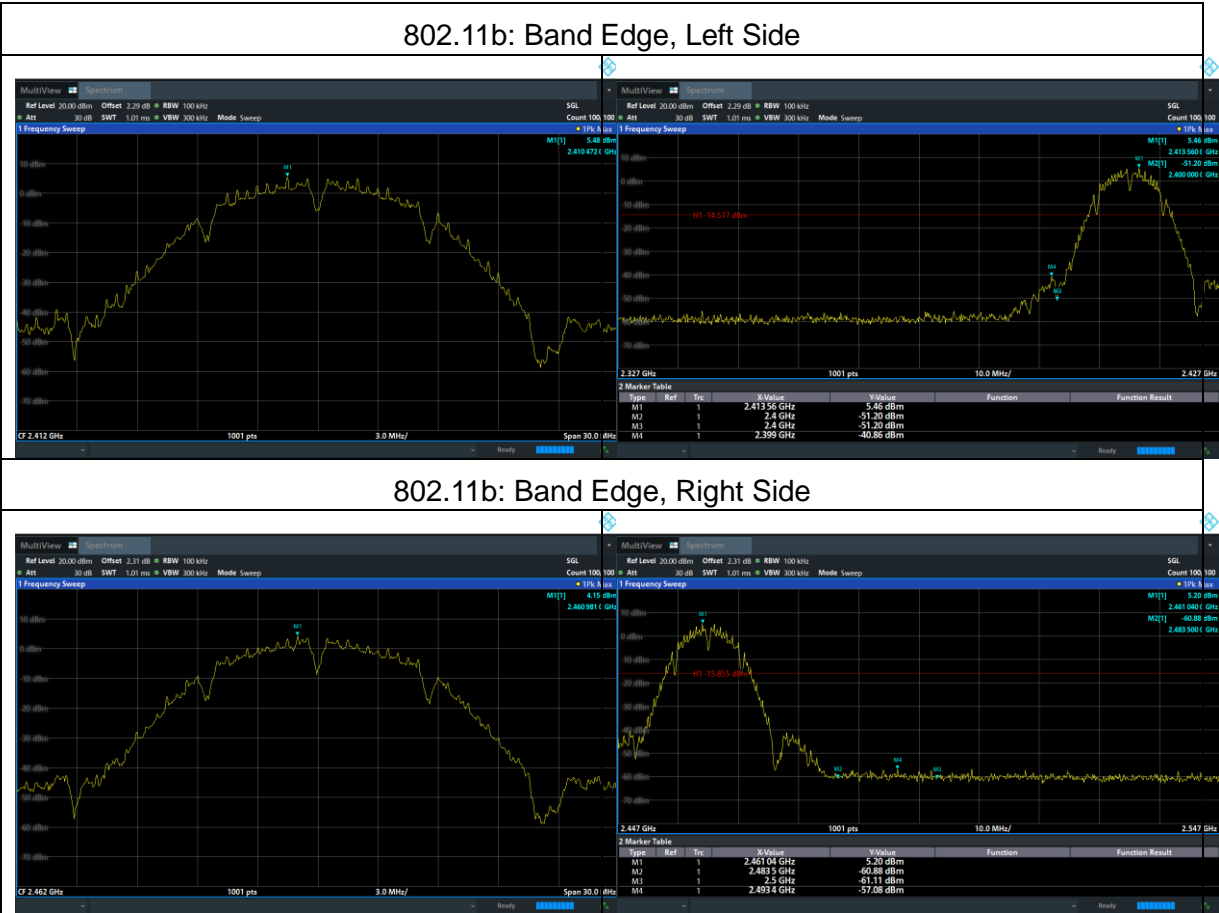
5.8.2 Test Procedure

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- Repeat above procedures until all measured frequencies were complete.

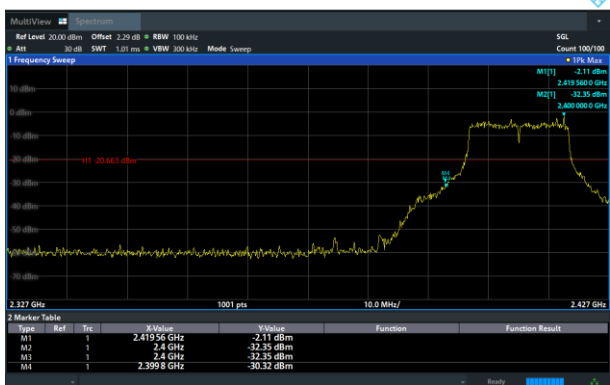
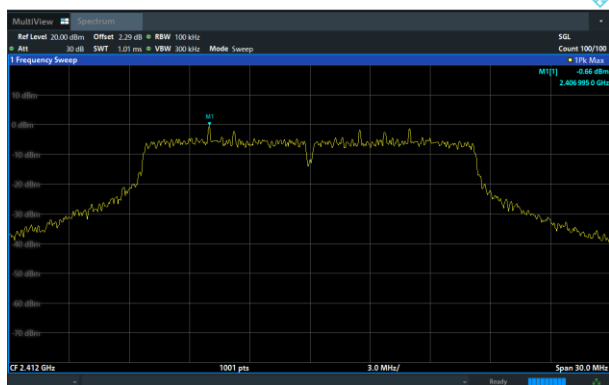
5.8.3 Test Setup



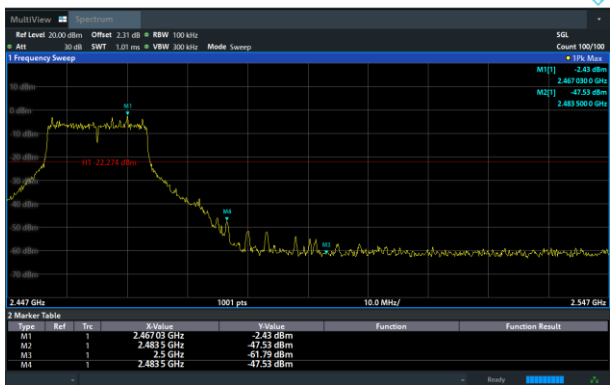
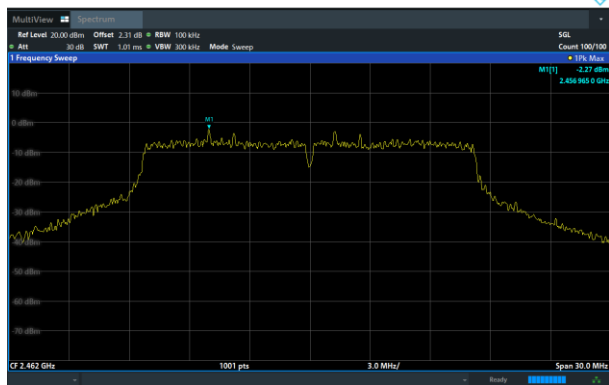
5.8.4 Test Results



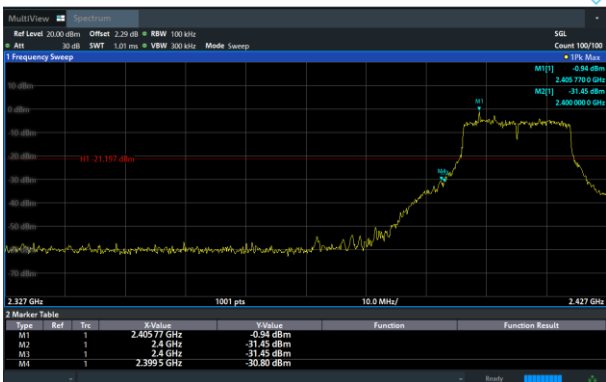
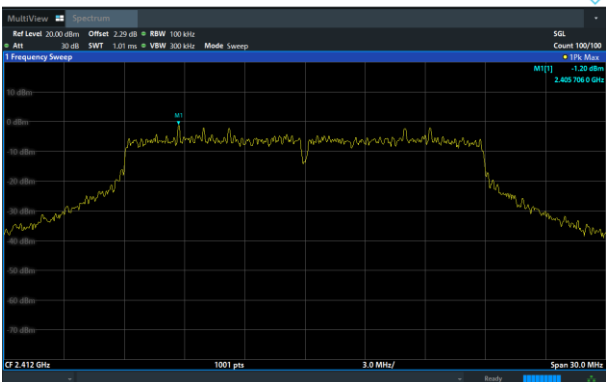
802.11g: Band Edge, Left Side



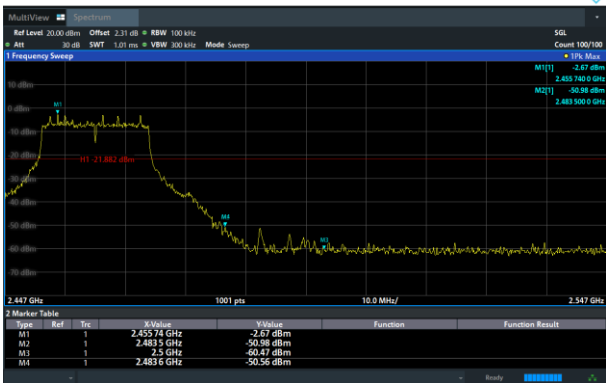
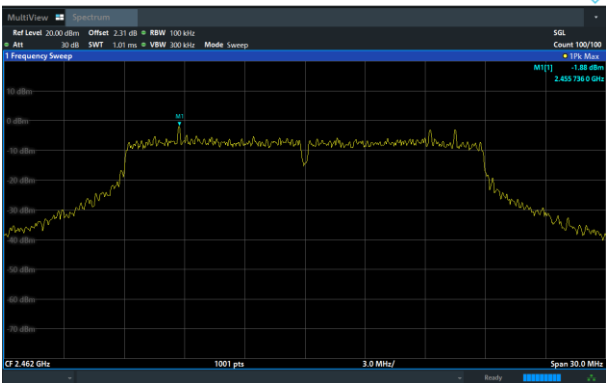
802.11g: Band Edge, Right Side



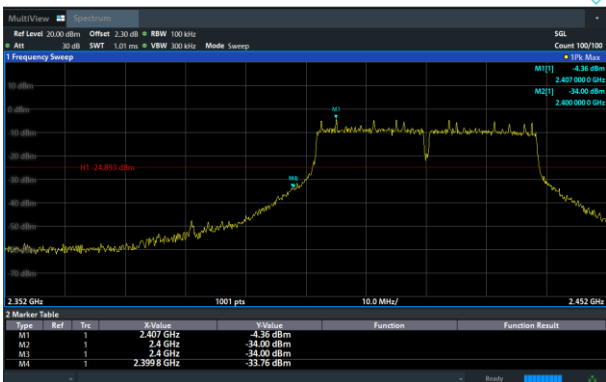
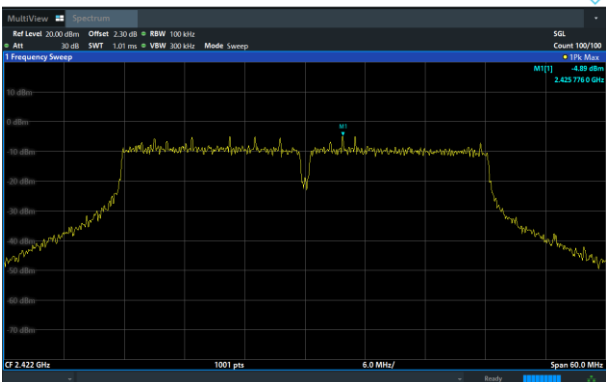
802.11n20: Band Edge, Left Side



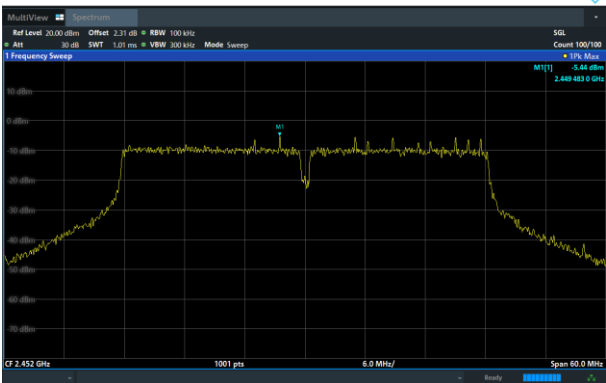
802.11n20: Band Edge, Right Side



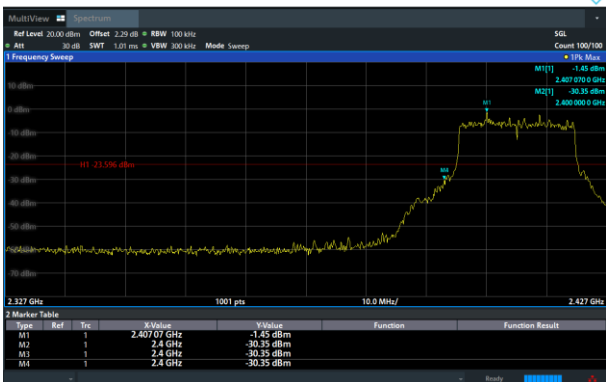
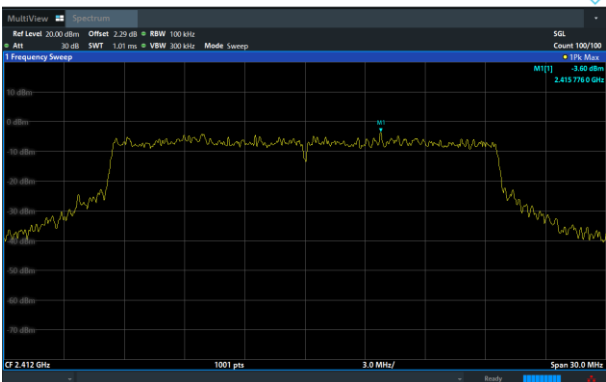
802.11n40: Band Edge, Left Side



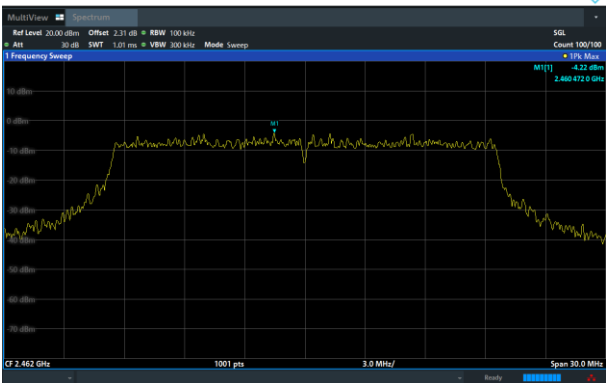
802.11n40: Band Edge, Right Side



802.11ax20: Band Edge, Left Side



802.11ax20: Band Edge, Right Side



802.11ax40: Band Edge, Left Side



802.11ax40: Band Edge, Right Side



5.9 Spurious RF Conducted Emissions

5.9.1 Limit

Below -20dB of the highest emission level in operating band.

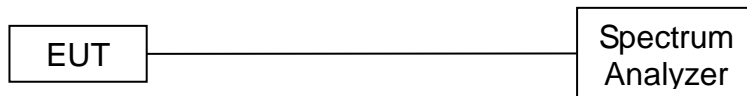
5.9.2 Measuring Instruments

The Measuring equipment is listed in the section 4 of this test report.

5.9.3 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW=300kHz to measure the peak field strength, and measure frequency range from 9kHz to 26.5GHz.

5.9.4 Test Setup



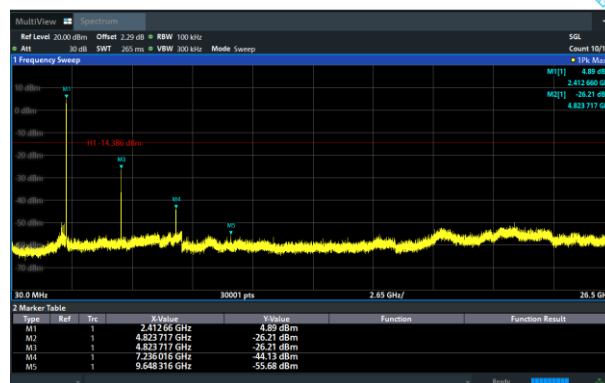
5.9.5 Test Results

Note:

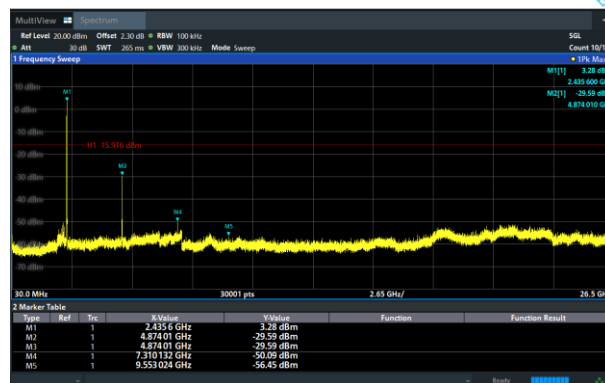
1: The measurement frequency range is from 9kHz to the 10th harmonic of the fundamental frequency; The lowest, middle and highest channels are tested to verify the spurious emissions and band edge measurement data.

2: The three modulated high, medium and low channels have been tested. The report only shows the worst mode. The worst mode is 802.11b CH01/06/11.

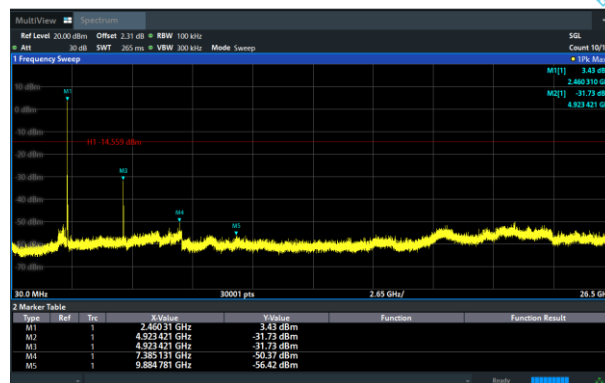
802.11b on Channel 01



802.11b on Channel 06



802.11b on Channel 11



6 Photographs of the Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



7 Photographs of the EUT

Please refer to report HB20240808003E-01 for product photos.

***** **END OF REPORT** *****