12. SPURIOUS RF CONDUCTED EMISSIONS

12.1 Block Diagram Of Test Setup

12.2 Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2)For transmitters operating in the 5.725-5.85 GHz band(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge..

12.3 Test procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. 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.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. 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.
5. Repeat above procedures until all measured frequencies were complete.

12.4 Test Result

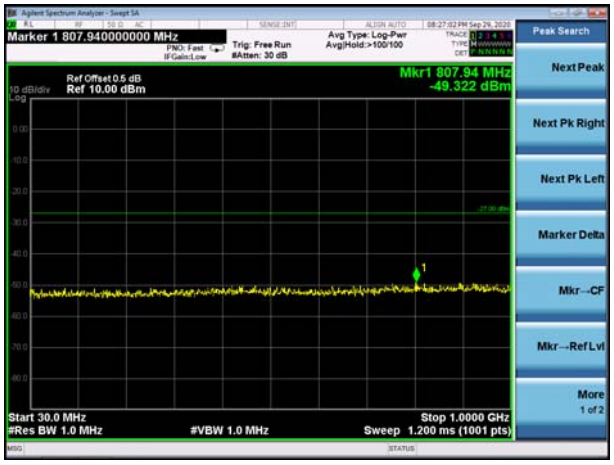
Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

About:26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

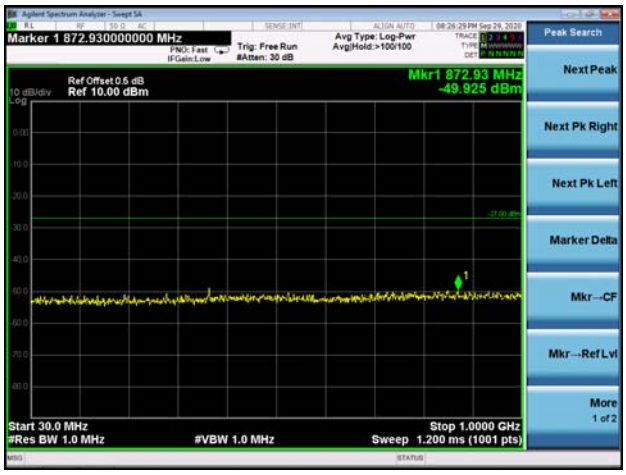
5.1G

Test Plot

802.11a on channel 36

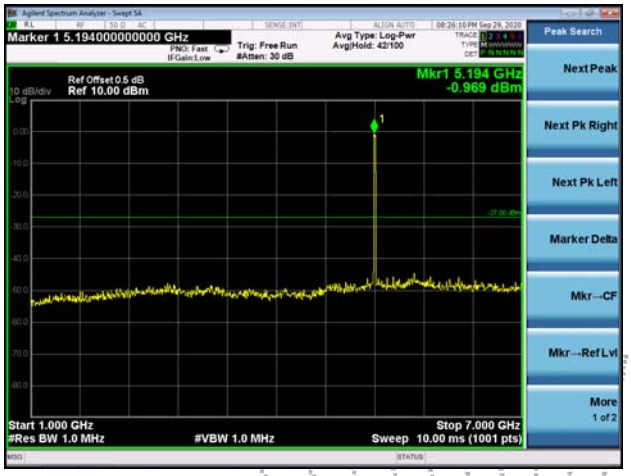


802.11a on channel 40



802.11a on channel 36

802.11a on channel 40

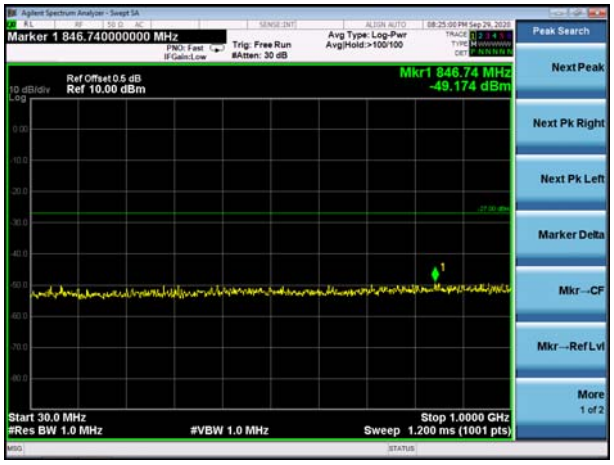


802.11a on channel 36

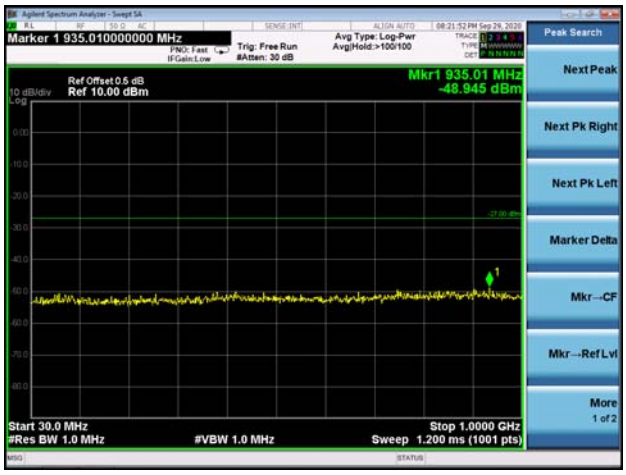
802.11a on channel 40

Test Plot

802.11a on channel 48

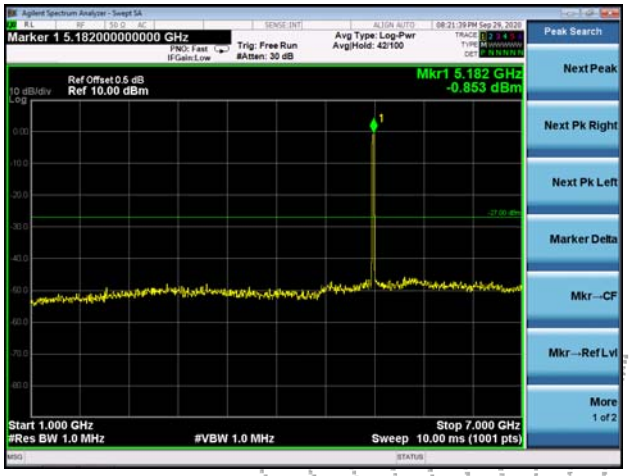


802.11n20 on channel 36



802.11a on channel 48

802.11n20 on channel 36

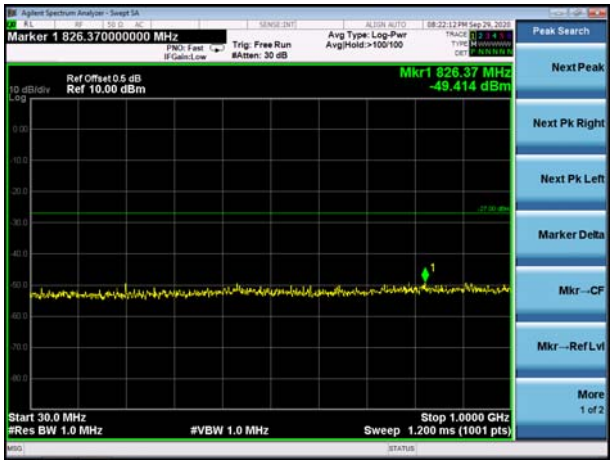


802.11a on channel 48

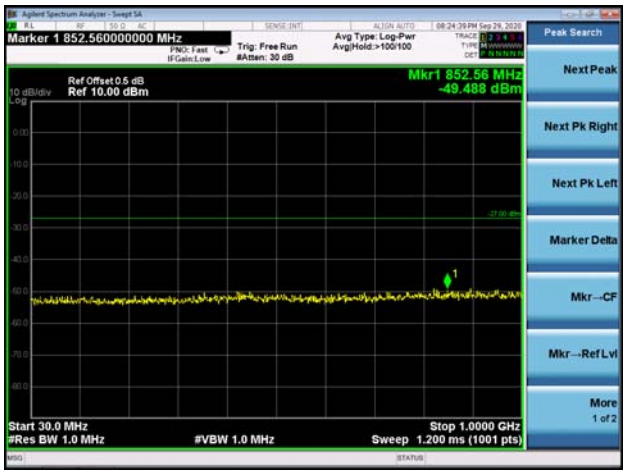
802.11n20 on channel 36

Test Plot

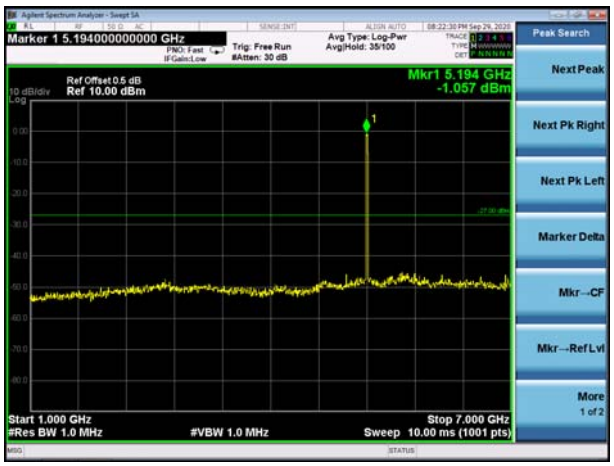
802.11n20 on channel 40



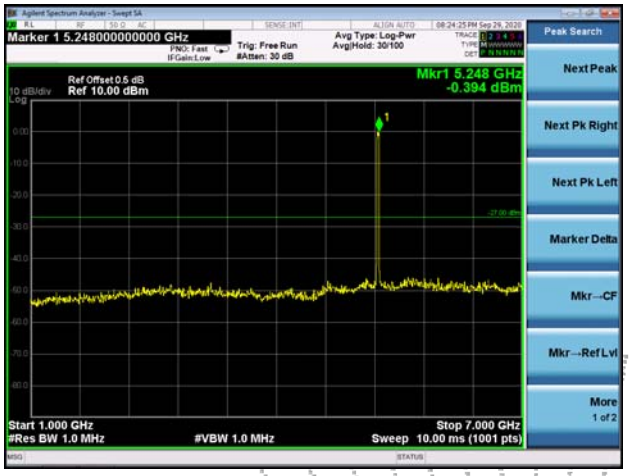
802.11n20 on channel 48



802.11n20 on channel 40



802.11n20 on channel 48

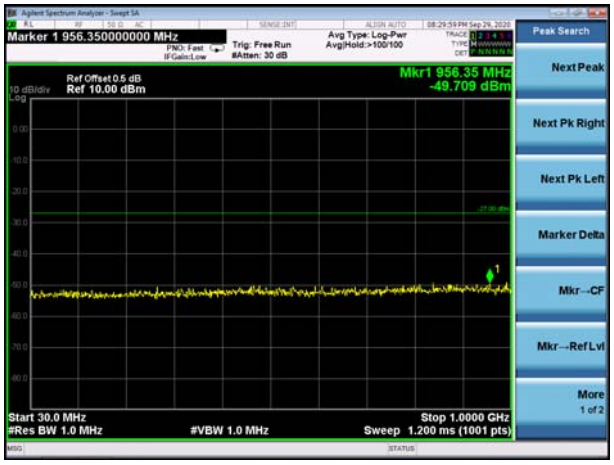


802.11n20 on channel 40

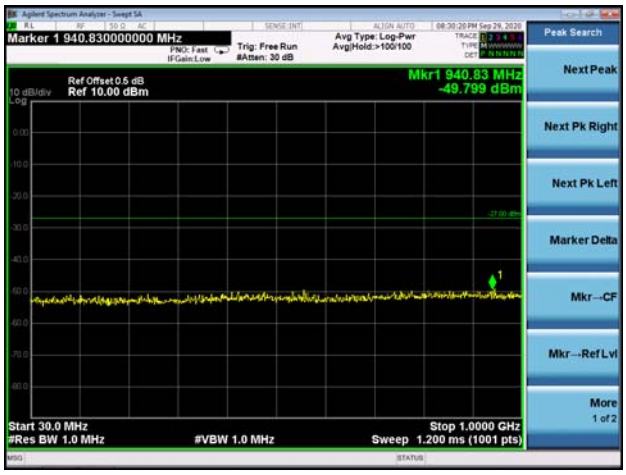
802.11n20 on channel 48

Test Plot

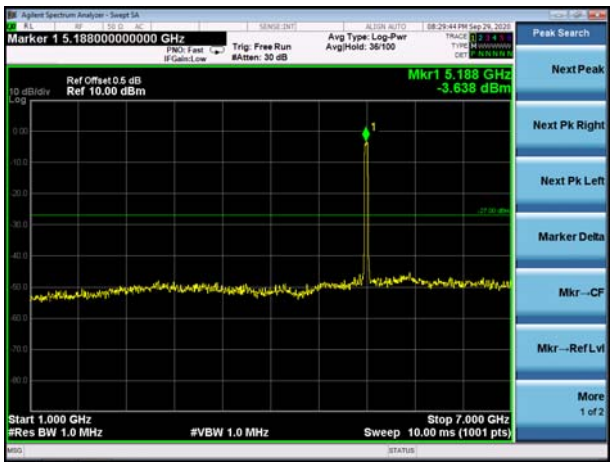
802.11n40 on channel 38



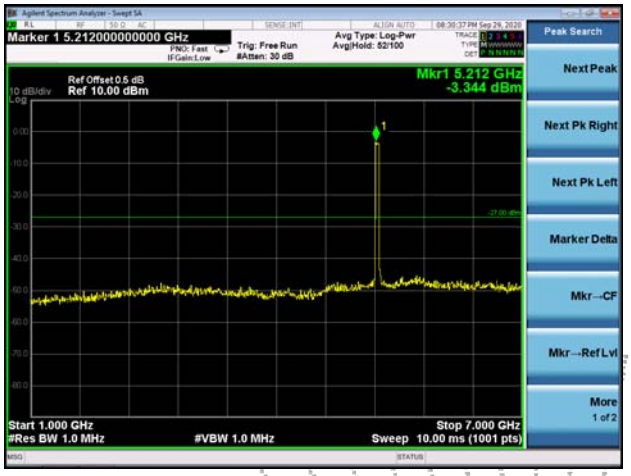
802.11n40 on channel 46



802.11n40 on channel 38



802.11n40 on channel 46

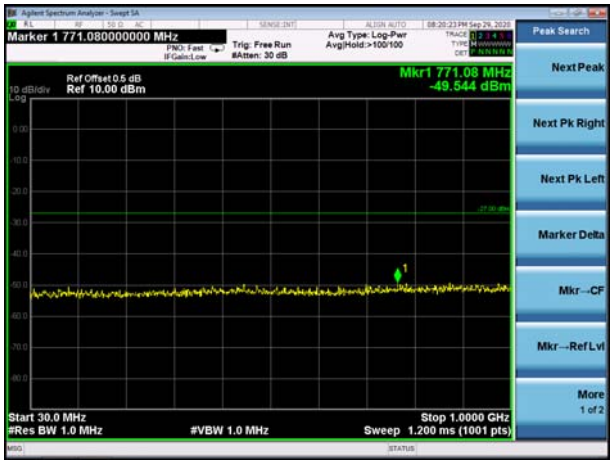


802.11n40 on channel 38

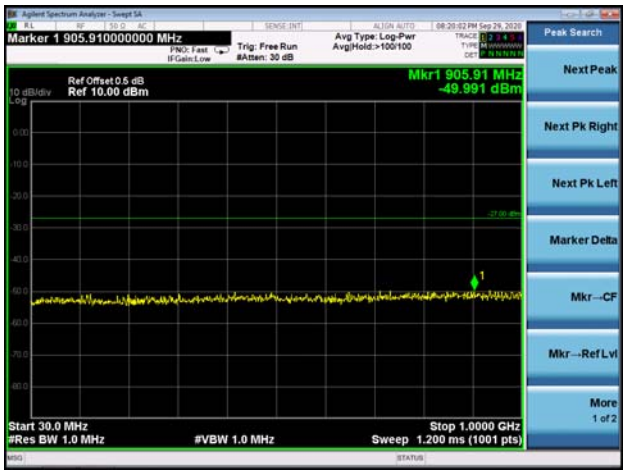
802.11n40 on channel 46

Test Plot

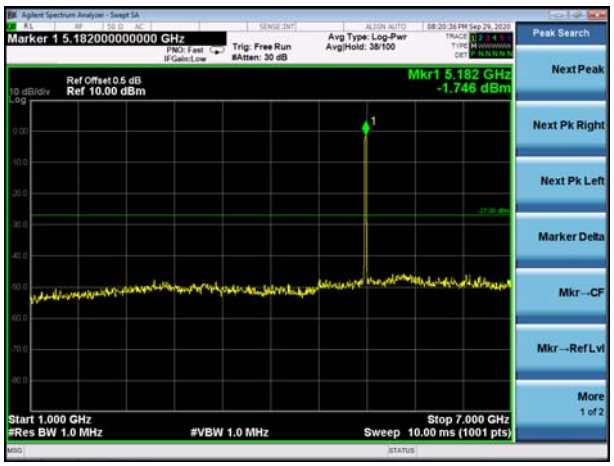
802.11ac20 on channel 36



802.11ac20 on channel 40



802.11ac20 on channel 36



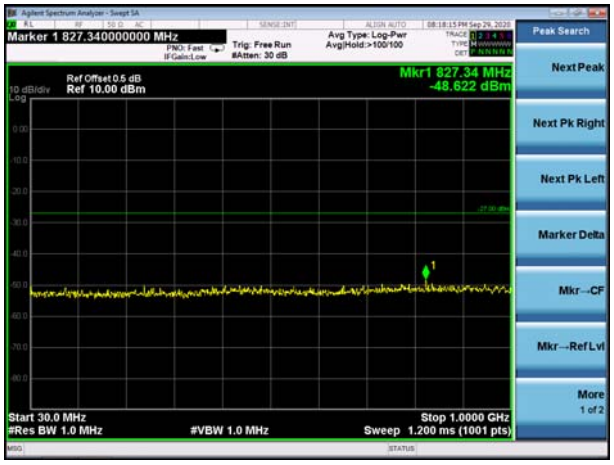
802.11ac20 on channel 40

802.11ac20 on channel 36

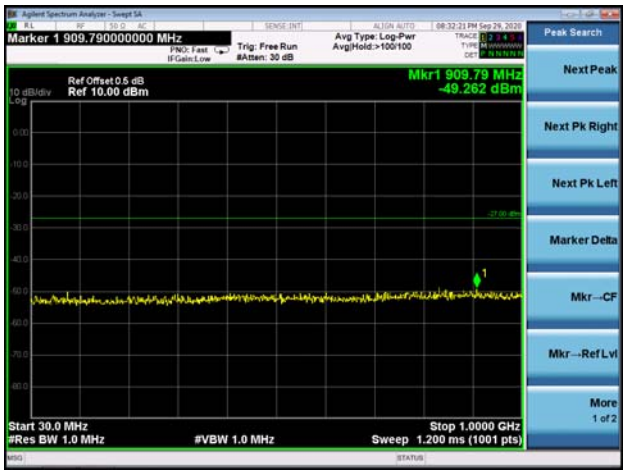
802.11ac20 on channel 40

Test Plot

802.11ac20 on channel 48

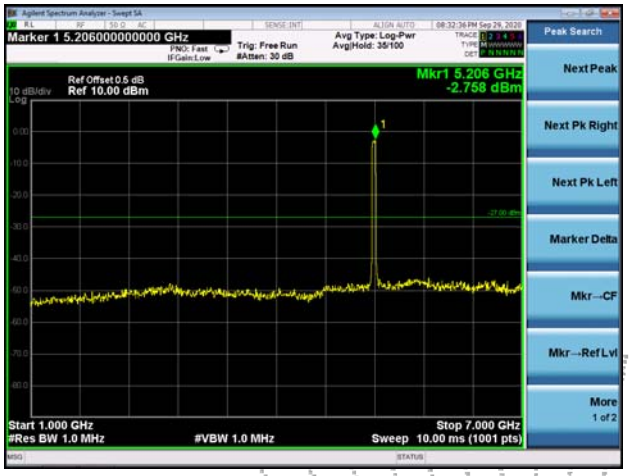


802.11ac40 on channel 38



802.11ac20 on channel 48

802.11ac40 on channel 38

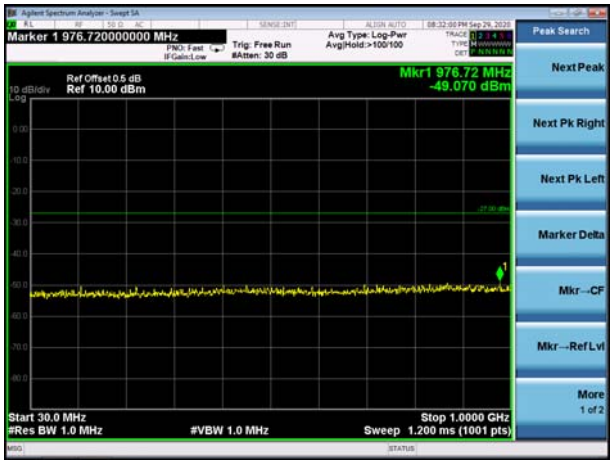


802.11ac20 on channel 48

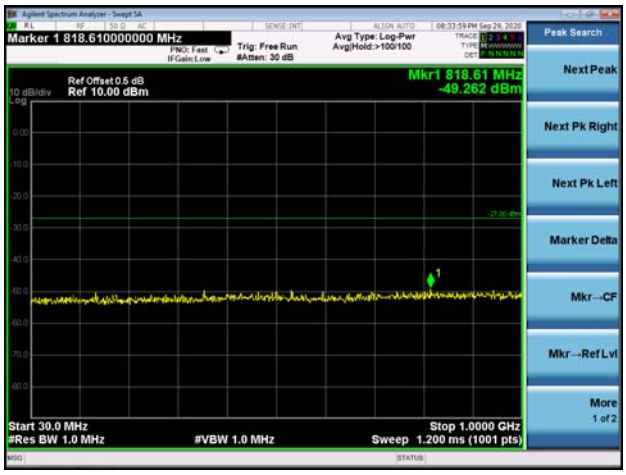
802.11ac40 on channel 38

Test Plot

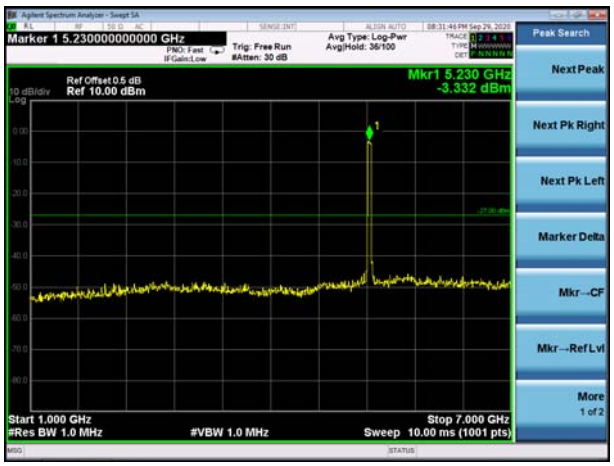
802.11ac40 on channel 46



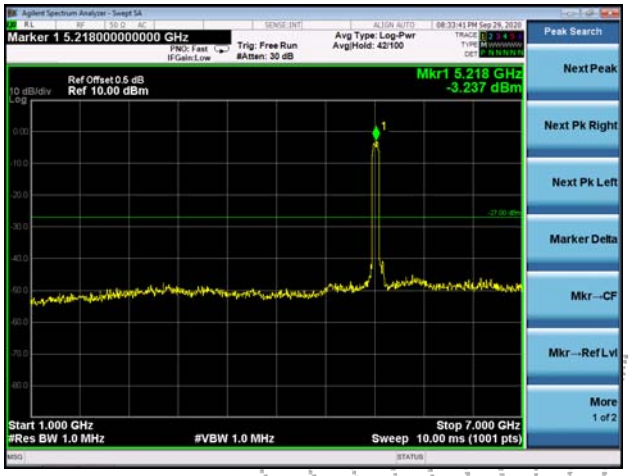
802.11ac80 on channel 42



802.11 ac40 on channel 46



802.11 ac80 on channel 42



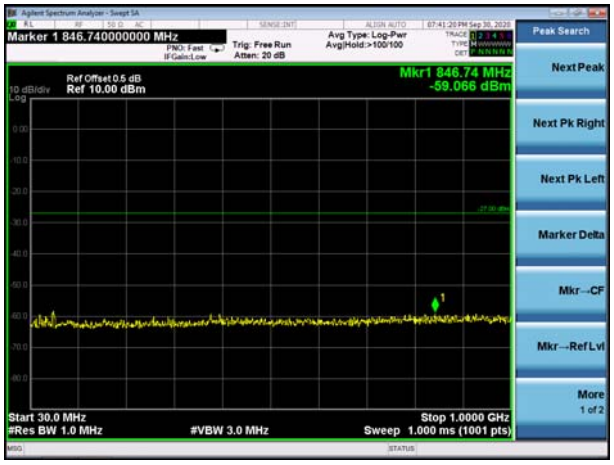
802.11 ac40 on channel 46

802.11 ac80 on channel 42

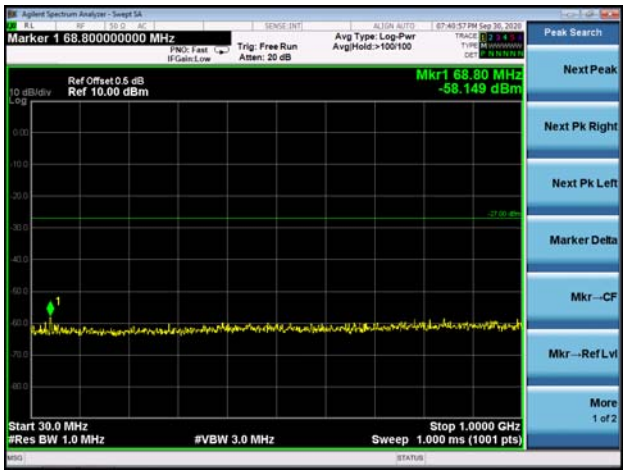
5.8G

Test Plot

802.11a on channel 149



802.11a on channel 157



802.11a on channel 149

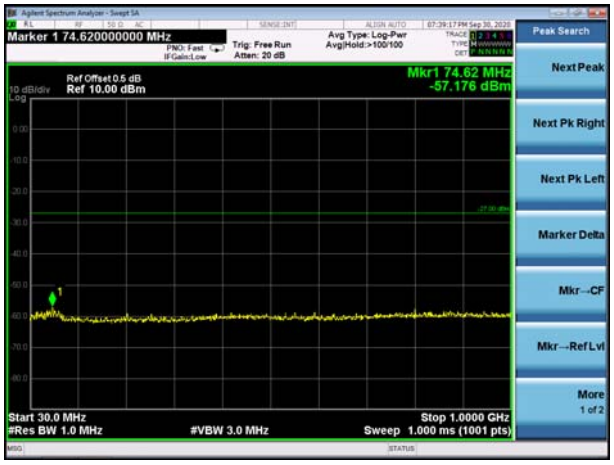
802.11a on channel 157

802.11a on channel 149

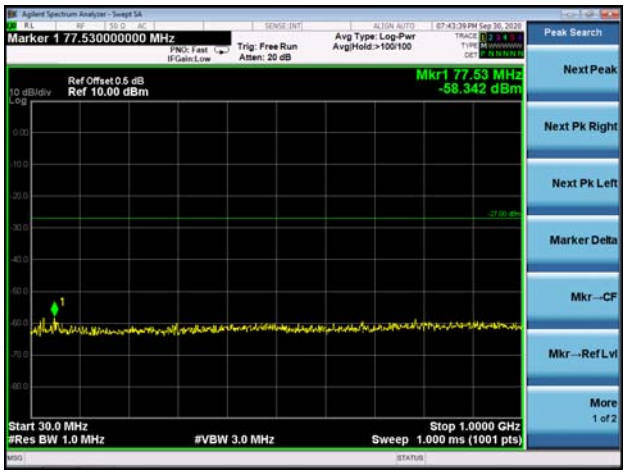
802.11a on channel 157

Test Plot

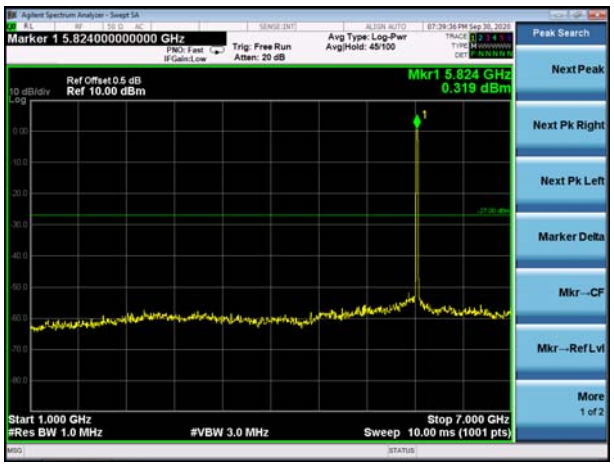
802.11a on channel 165



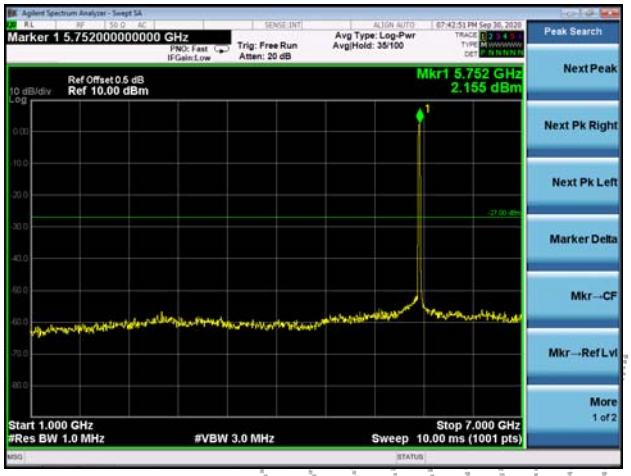
802.11n20 on channel 149



802.11a on channel 165



802.11n20 on channel 149

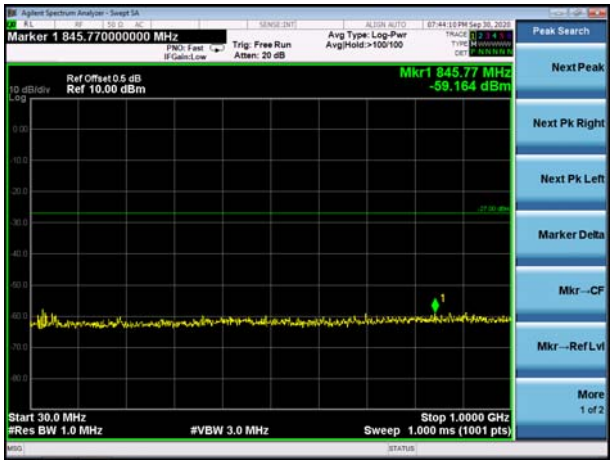


802.11a on channel 165

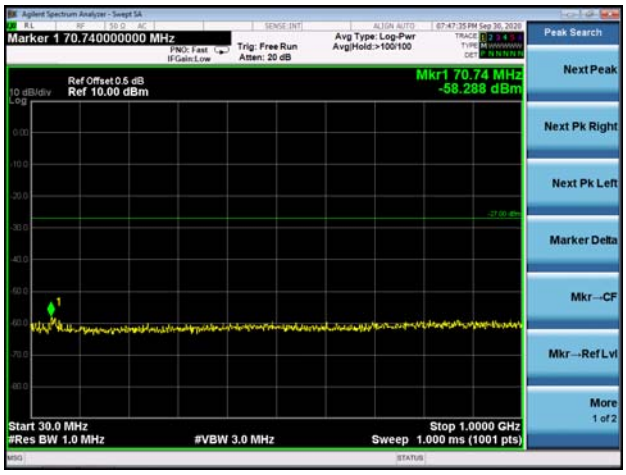
802.11n20 on channel 149

Test Plot

802.11n20 on channel 157

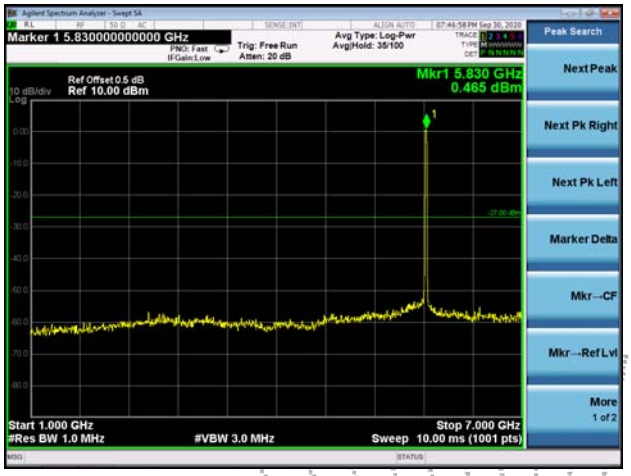


802.11n20 on channel 165



802.11n20 on channel 157

802.11n20 on channel 165

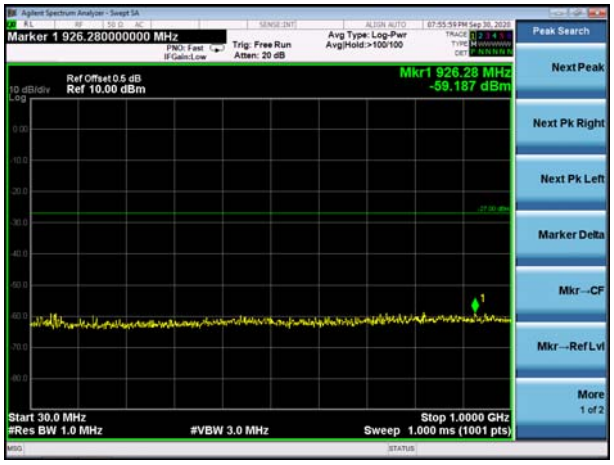


802.11n20 on channel 157

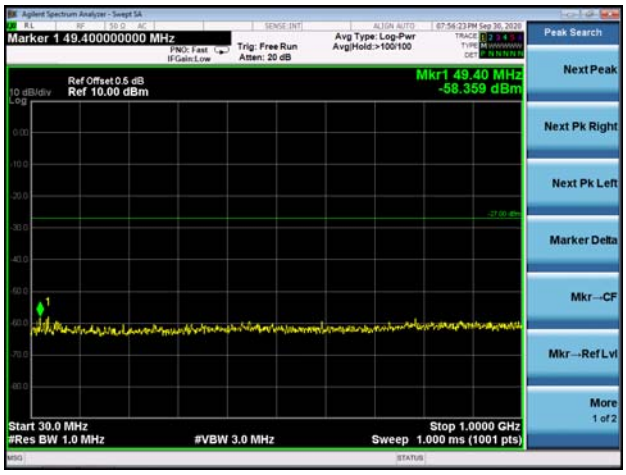
802.11n20 on channel 165

Test Plot

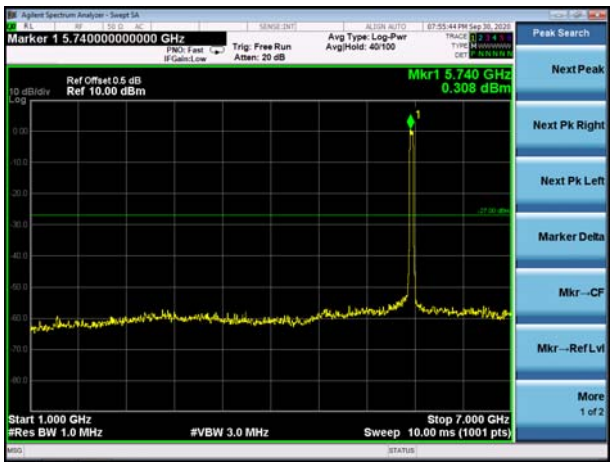
802.11n40 on channel 151



802.11n40 on channel 159



802.11n40 on channel 151



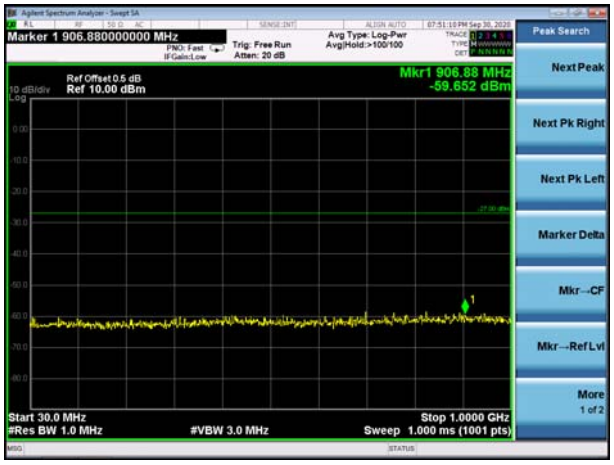
802.11n40 on channel 159

802.11n40 on channel 151

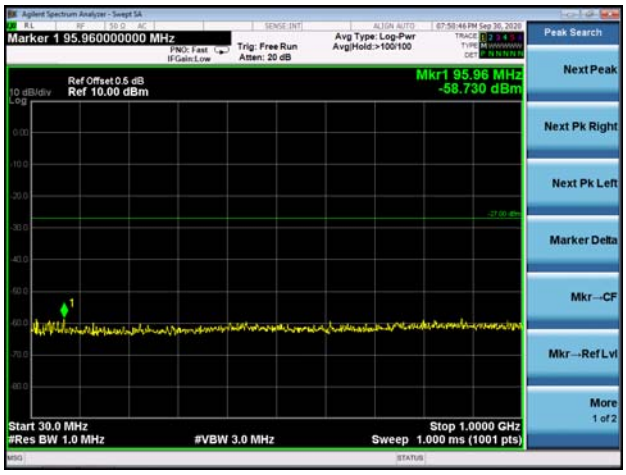
802.11n40 on channel 159

Test Plot

802.11ac20 on channel 149

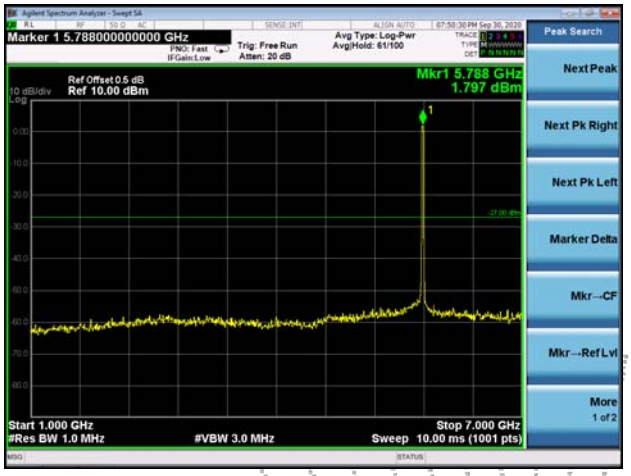


802.11ac20 on channel 157



802.11ac20 on channel 149

802.11ac20 on channel 157

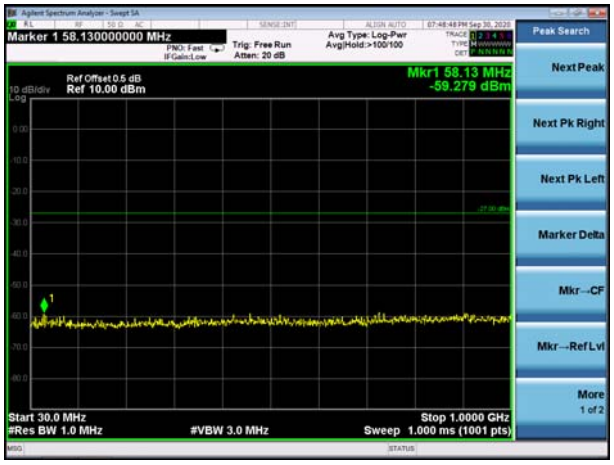


802.11ac20 on channel 149

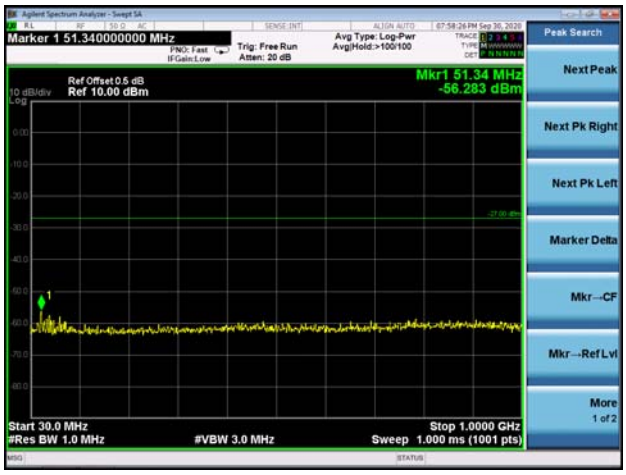
802.11ac20 on channel 157

Test Plot

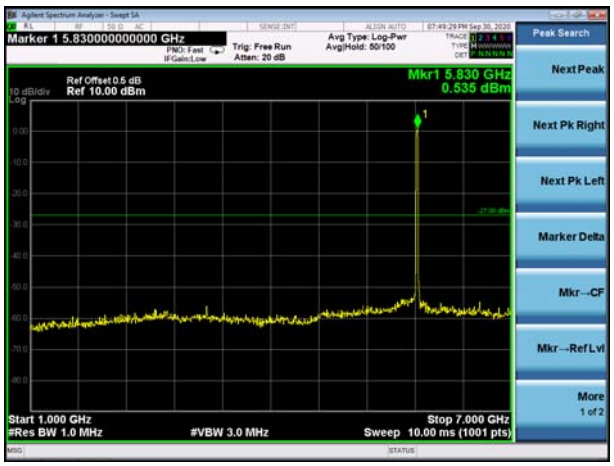
802.11ac20 on channel 165



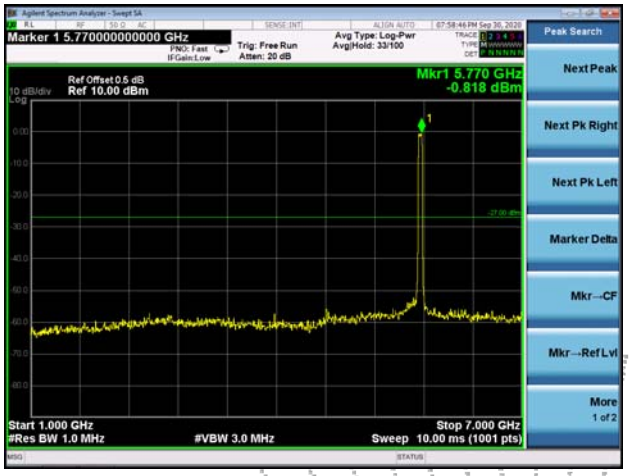
802.11ac40 on channel 151



802.11ac20 on channel 165



802.11ac40 on channel 151

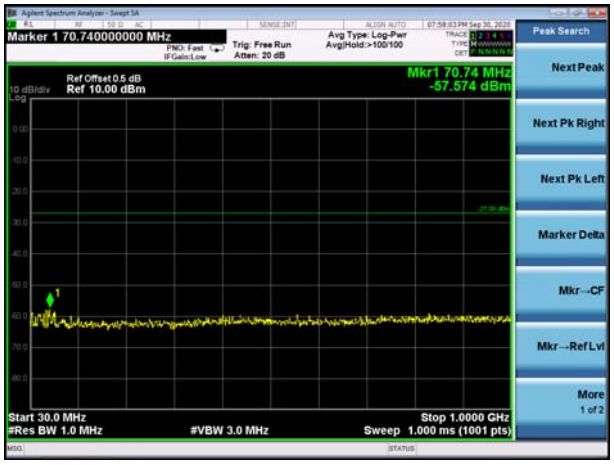


802.11ac20 on channel 165

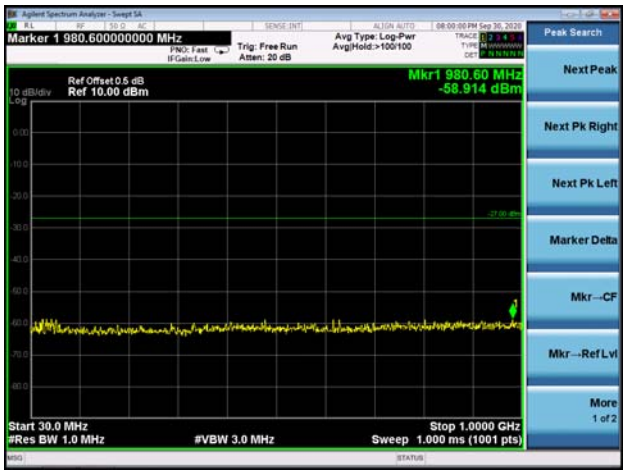
802.11ac40 on channel 151

Test Plot

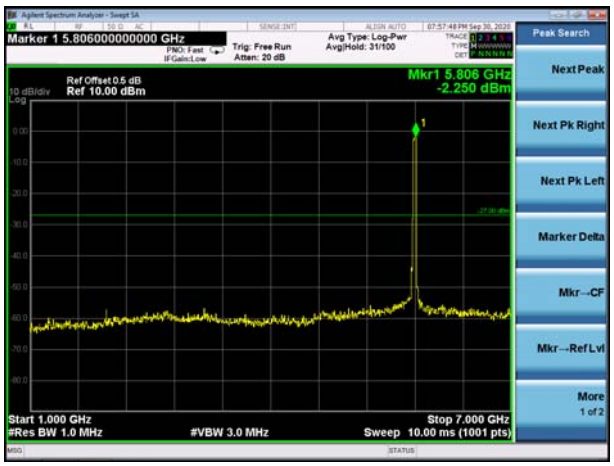
802.11ac40 on channel 159



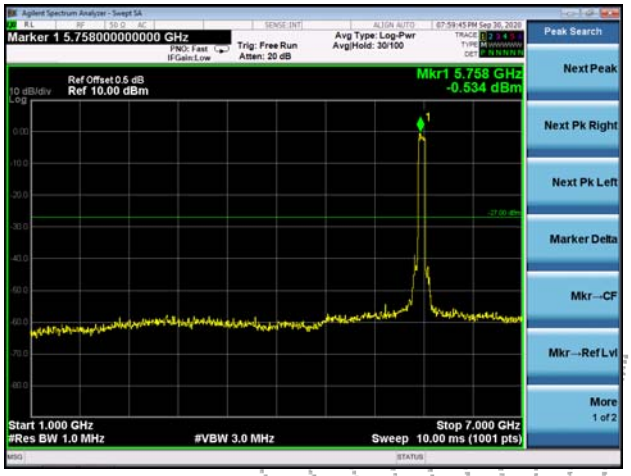
802.11ac80 on channel 155



802.11 ac40 on channel 159



802.11 ac80 on channel 155



802.11 ac40 on channel 159

802.11 ac80 on channel 155

13. ANTENNA REQUIREMENT

14.1 Limit

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

14.2 EUT ANTENNA

The EUT antenna is Internal Antenna (antenna gain:1dBi). It comply with the standard requirement.

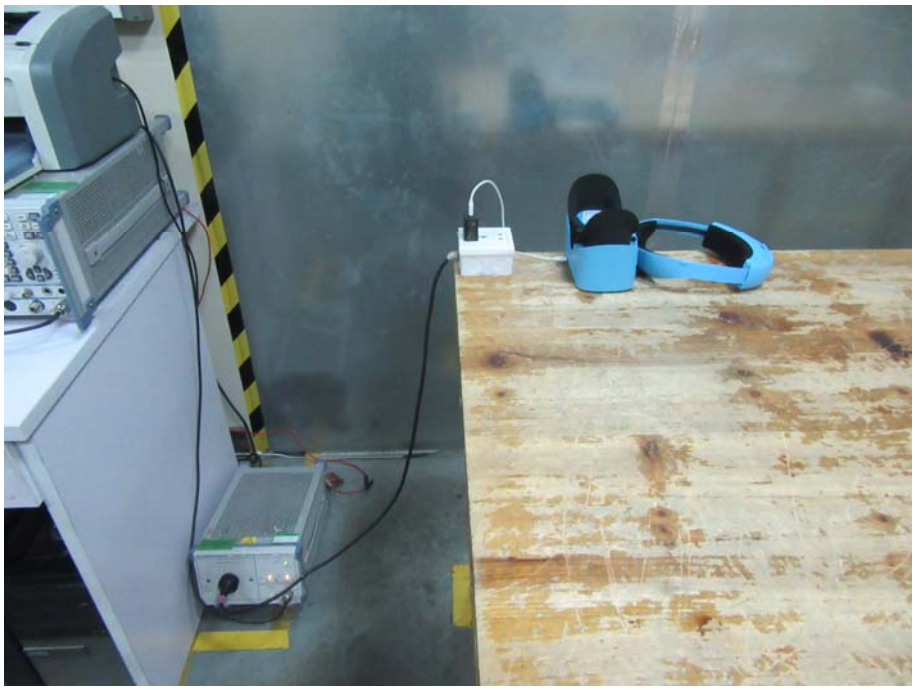
14. EUT PHOTOGRAPHS

EUT Photo 1

EUT Photo 2

15. EUT TEST SETUP PHOTOGRAPHS

Conducted emissions



Radiated Measurement Photos

STATEMENT

1.The equipment lists are traceable to the national reference standards.

2.The test report can not be partially copied unless prior written approval is issued from our lab.

3.The test report is invalid without stamp of laboratory.

4.The test report is invalid without signature of person(s) testing and authorizing.

5.The test process and test result is only related to the Unit Under Test.

6.The quality system of our laboratory is in accordance with ISO/IEC17025.

7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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