

Test plot

(802.11 n20) plot on channel 36



(802.11 n40) plot on channel 38



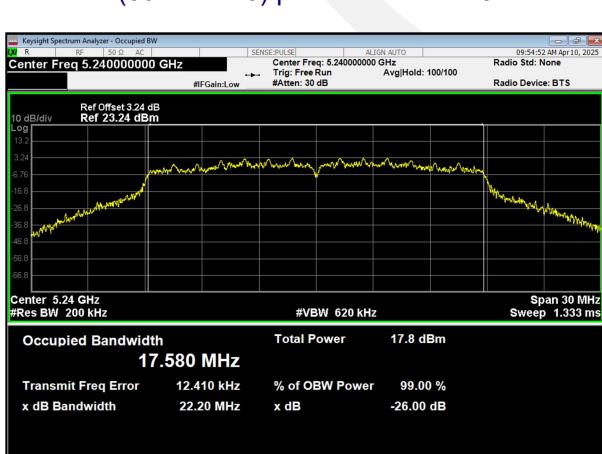
(802.11 n20) plot on channel 40



(802.11 n40) plot on channel 46



(802.11 n20) plot on channel 48



Test plot

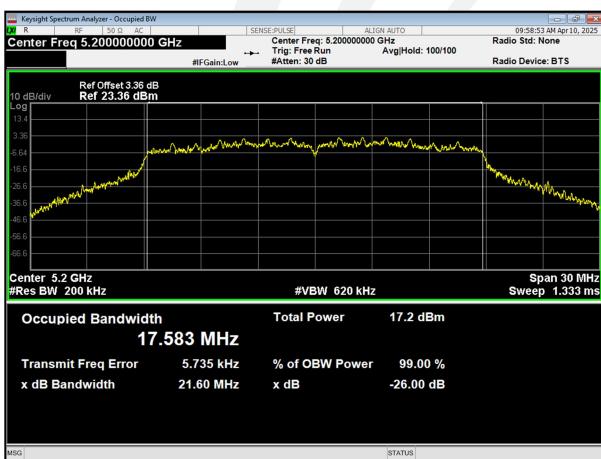
(802.11ac20) plot on channel 36



(802.11 ac40) plot on channel 42



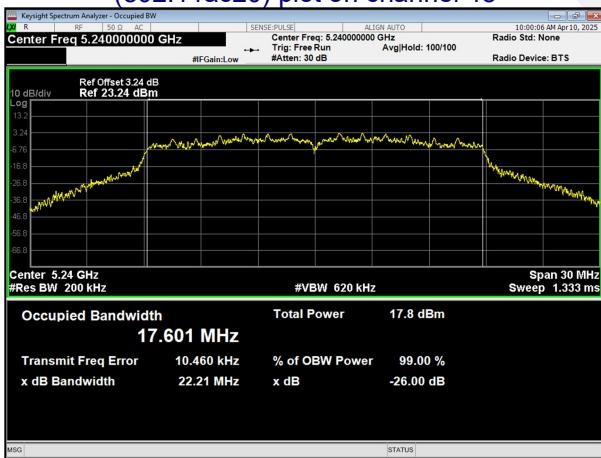
(802.11ac20) plot on channel 40



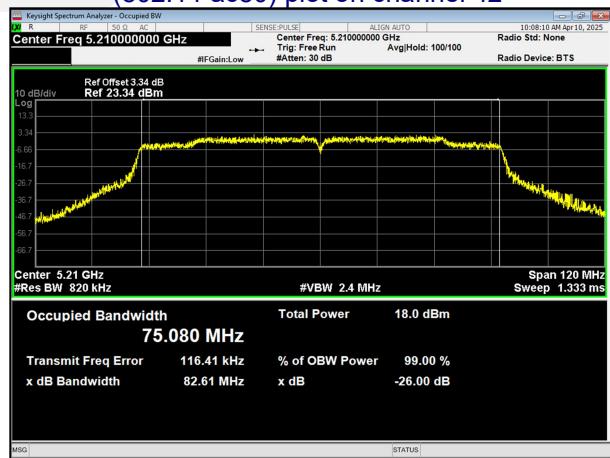
(802.11 ac40) plot on channel 42



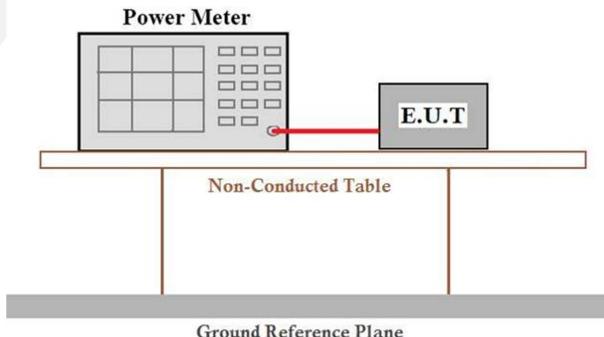
(802.11ac20) plot on channel 48



(802.11 ac80) plot on channel 42



4.4 Maximum Conducted Output Power

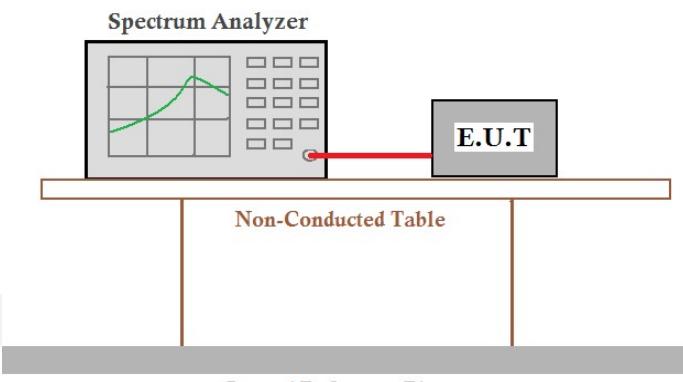
Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	<p>For the band 5.15-5.25GHz, 5.25-5.35GHz, 5.47-5.725GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 250mW.</p> <p>For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.</p> <p>If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p>
Test setup:	
Test procedure:	<p>Measurement using an RF average power meter</p> <p>(i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied</p> <ul style="list-style-type: none"> a) The EUT is configured to transmit continuously or to transmit with a constant duty cycle. b) At all times when the EUT is transmitting, it must be transmitting at its maximum power control level. c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five. <p>(ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section B).</p> <p>(iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.</p> <p>(iv) Adjust the measurement in dBm by adding $10 \log(1/x)$ where x is the duty cycle (e.g., $10\log(1/0.25)$ if the duty cycle is 25 percent).</p>
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data**Band 1 (5150-5250 MHz) SISO:**

Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	Limit (dBm)	Result
ANT1	802.11a	5180.00	10.409	1.03	11.439	24	Pass
ANT1	802.11a	5200.00	10.16	0	10.16	24	Pass
ANT1	802.11a	5240.00	10.719	0	10.719	24	Pass
ANT1	802.11n(HT20)	5180.00	10.584	0.87	11.454	24	Pass
ANT1	802.11n(HT20)	5200.00	10.333	0	10.333	24	Pass
ANT1	802.11n(HT20)	5240.00	10.924	0	10.924	24	Pass
ANT1	802.11ac(VHT20)	5180.00	10.593	1.06	11.653	24	Pass
ANT1	802.11ac(VHT20)	5200.00	10.786	0	10.786	24	Pass
ANT1	802.11ac(VHT20)	5240.00	10.552	1.18	11.732	24	Pass
ANT1	802.11n(HT40)	5190.00	10.273	0	10.273	24	Pass
ANT1	802.11n(HT40)	5230.00	10.869	0	10.869	24	Pass
ANT1	802.11ac(VHT40)	5190.00	10.353	0.97	11.323	24	Pass
ANT1	802.11ac(VHT40)	5230.00	10.669	0	10.669	24	Pass
ANT1	802.11ac(VHT80)	5210.00	10.749	1.18	11.929	24	Pass

Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
ANT1	802.11a	5180.00	78.95	1.03
ANT1	802.11n(HT20)	5180.00	81.82	0.87
ANT1	802.11n(HT40)	5190.00	78.26	1.06
ANT1	802.11ac(VHT20)	5180.00	76.19	1.18
ANT1	802.11ac(VHT40)	5190.00	80.00	0.97
ANT1	802.11ac(VHT80)	5210.00	76.19	1.18

4.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	$\leq 11.00 \text{dBm/MHz}$ for 5150MHz-5250MHz
Test setup:	
Test procedure:	<ol style="list-style-type: none"> 1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E2) for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power...". 2) Use the peak search function on the instrument to find the peak of the spectrum. 3) Make the following adjustments to the peak value of the spectrum, if applicable: <ul style="list-style-type: none"> a) If Method SA-2 or SA-2 Alternative was used, add $10 \log(1/x)$, where x is the duty cycle, to the peak of the spectrum. b) If Method SA-3 Alternative was used and the linear mode was used in step E2)g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging. 4) The result is the PSD.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass