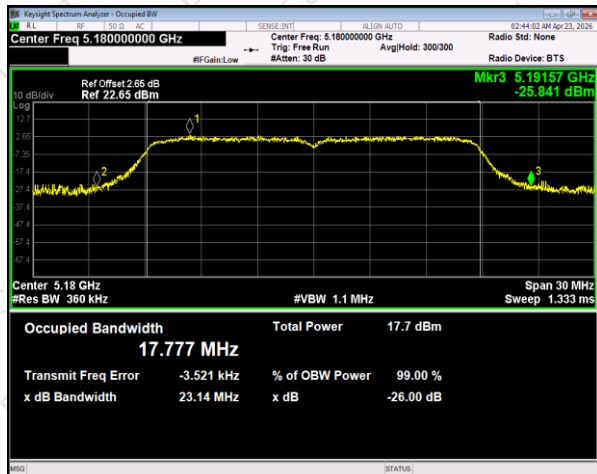


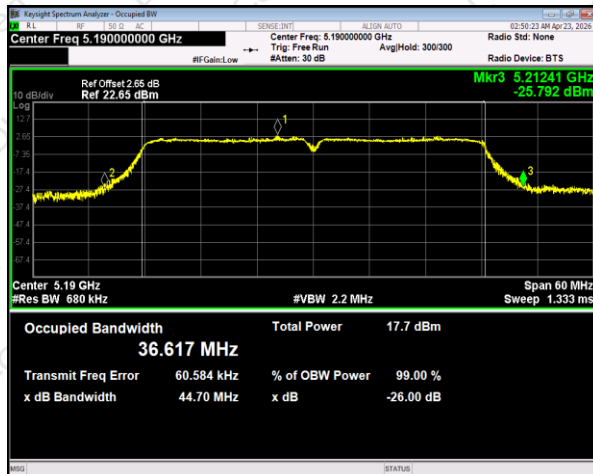


5.2G Test plot

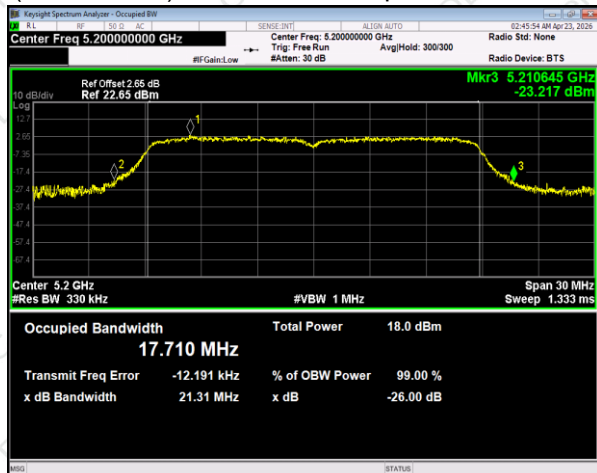
(802.11 ac20) 26dB Bandwidth plot on channel 36



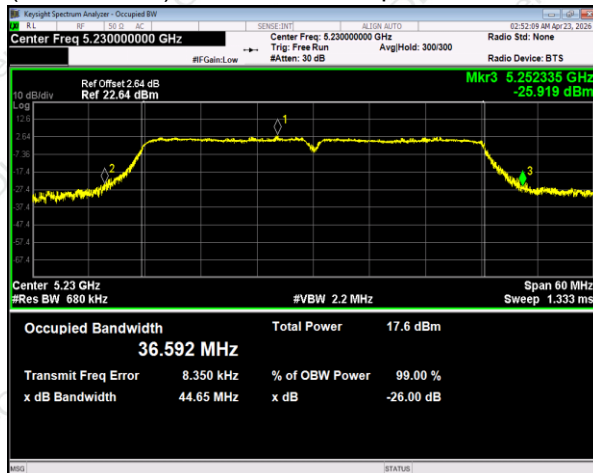
(802.11 ac40) 26dB Bandwidth plot on channel 38



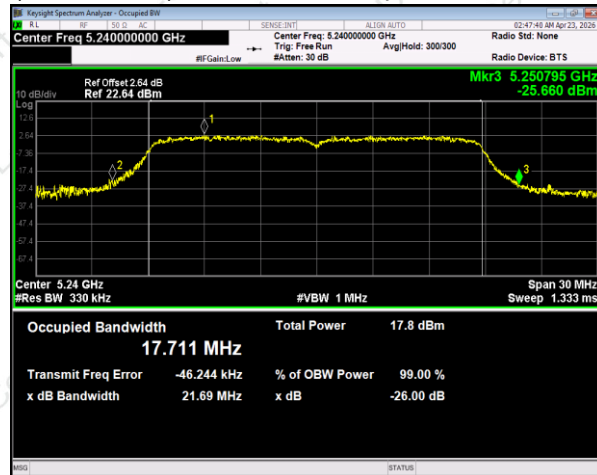
(802.11 ac20) 26dB Bandwidth plot on channel 40



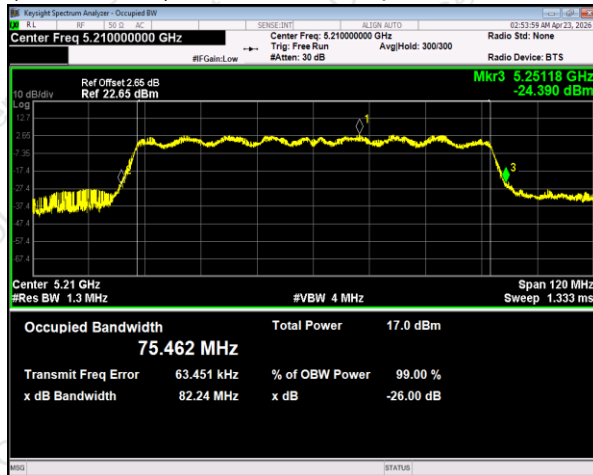
(802.11 ac40) 26dB Bandwidth plot on channel 46



(802.11 ac20) 26dB Bandwidth plot on channel 48



(802.11 ac80) 26dB Bandwidth plot on channel 42



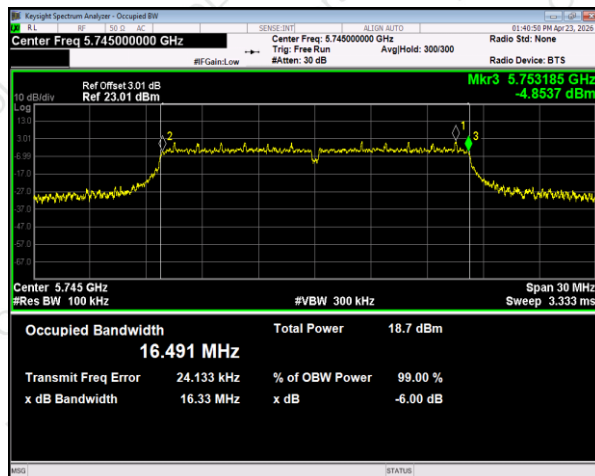


Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Band :	5.8G		

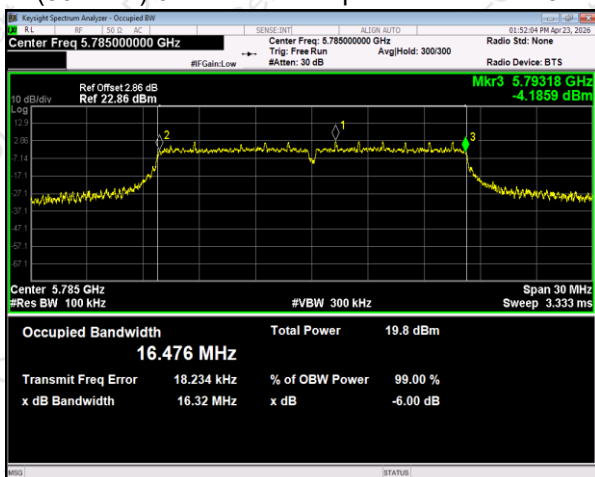
5.8G				
Test Mode	Test Channel (MHz)	6dB Occupied Bandwidth (MHz)	Limit(KHz)	Result
802.11a	5745	16.33	>500	Pass
	5785	16.32		
	5825	16.34		
802.11n20	5745	17.26	>500	Pass
	5785	17.23		
	5825	17.24		
802.11n40	5755	35.51	>500	Pass
	5795	35.40		
802.11ac20	5745	17.14	>500	Pass
	5785	17.13		
	5825	17.07		
802.11ac40	5755	35.57	>500	Pass
	5795	35.53		
802.11ac80	5775	75.38	>500	Pass

**5.8G Test plot**

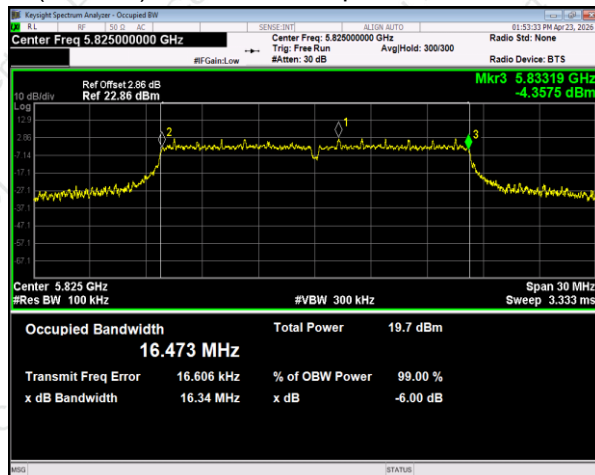
(802.11a) 6dB Bandwidth plot on channel 149



(802.11a) 6dB Bandwidth plot on channel 157



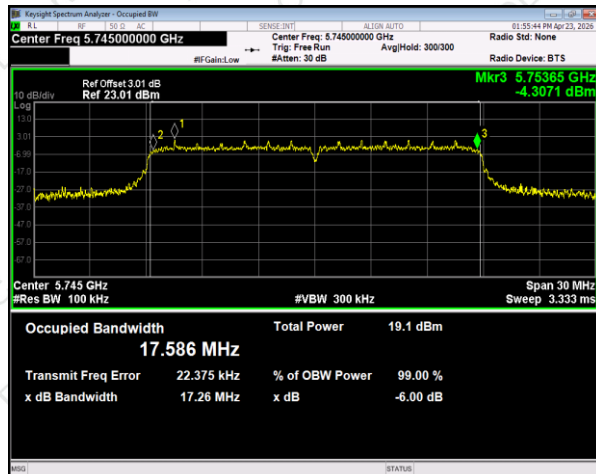
(802.11a) 6dB Bandwidth plot on channel 165



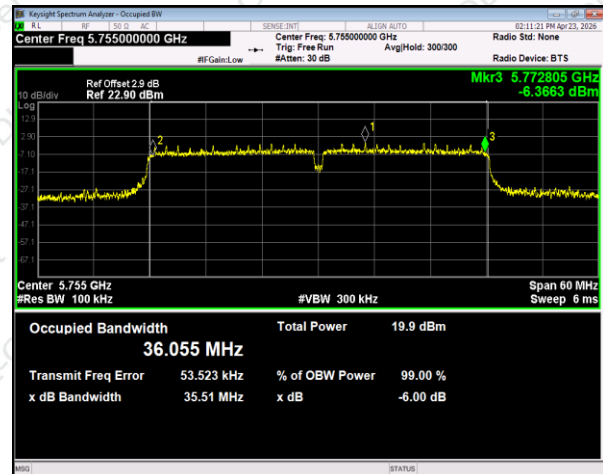


5.8G Test plot

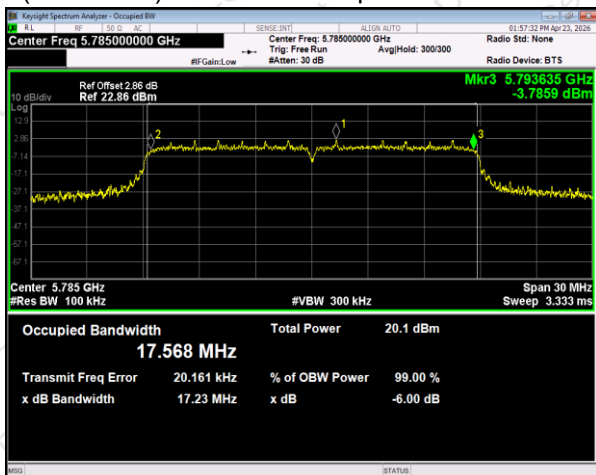
(802.11n20) 6dB Bandwidth plot on channel 149



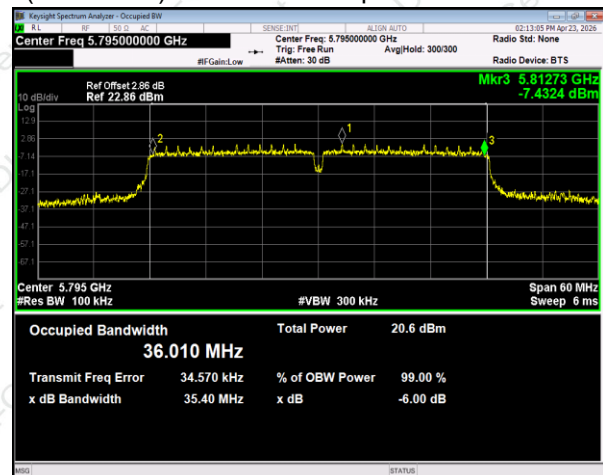
(802.11n40) 6dB Bandwidth plot on channel 151



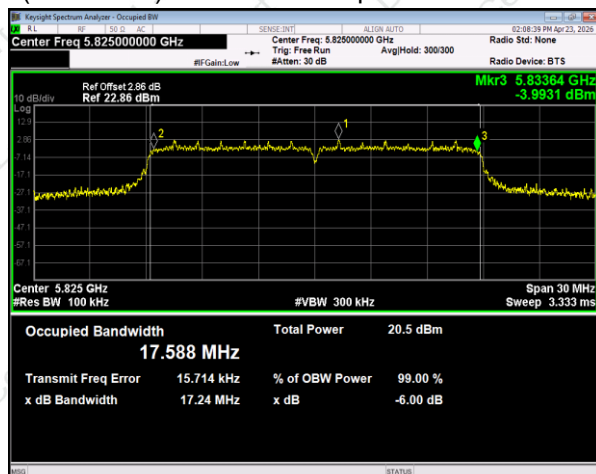
(802.11n20) 6dB Bandwidth plot on channel 157



(802.11n40) 6dB Bandwidth plot on channel 159



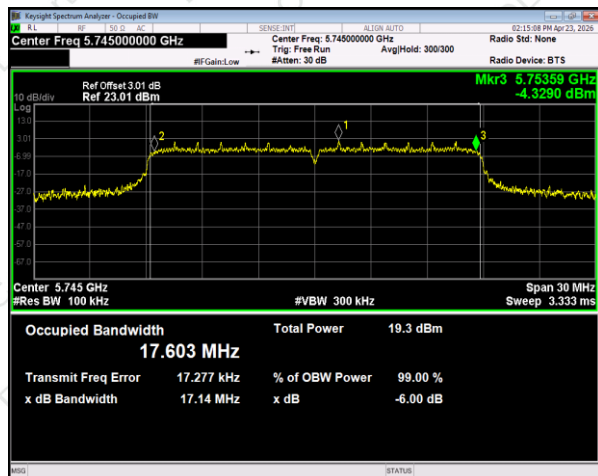
(802.11n20) 6dB Bandwidth plot on channel 165



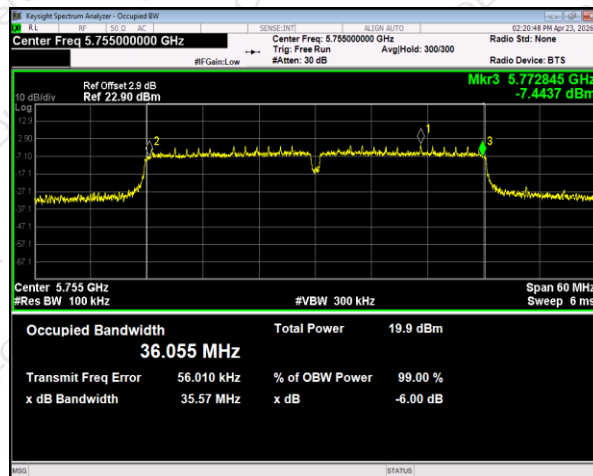


5.8G Test plot

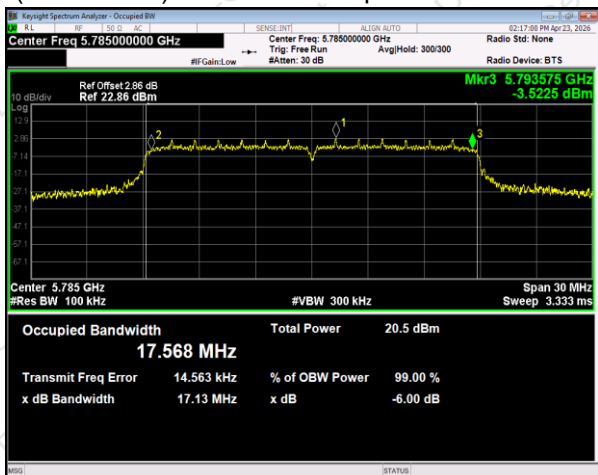
(802.11ac20) 6dB Bandwidth plot on channel 149



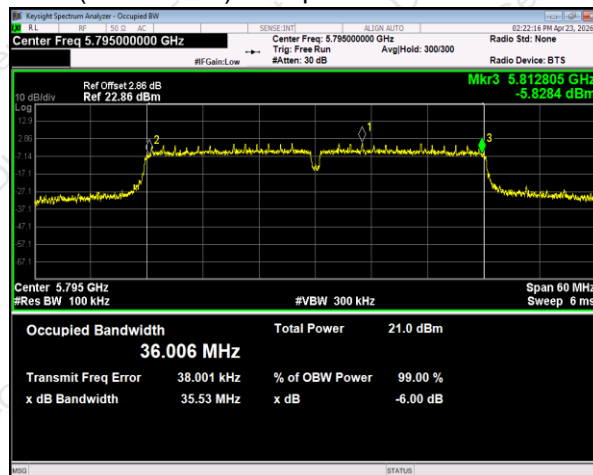
(802.11ac40) PSD plot on channel 151



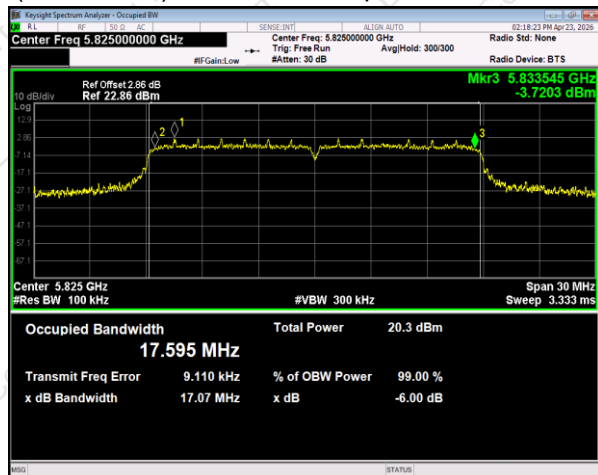
(802.11ac20) 6dB Bandwidth plot on channel 157



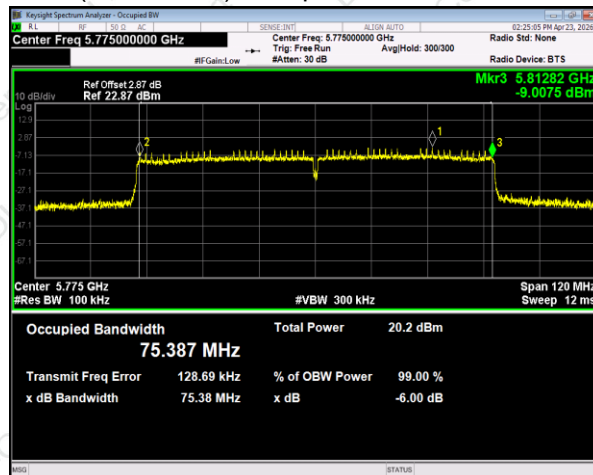
(802.11ac40) PSD plot on channel 159



(802.11ac20) 6dB Bandwidth plot on channel 165



(802.11ac80) PSD plot on channel 155





7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 PPLIED PROCEDURES / LIMIT

According to FCC §15.407

The maximum conducted output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

7.2 TEST PROCEDURE

Method PM is Measurement using an RF average power meter. The procedure for this method is as follows:

- Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
 - The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
 - At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
 - The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- If the transmitter does not transmit continuously, measure the duty cycle D of the transmitter output signal as described in 12.2.
- Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
- Correct the measurement in dBm by adding $[10 \log (1 / D)]$, where D is the duty cycle {e.g., $[10 \log (1 / 0.25)]$, if the duty cycle is 25%}.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 7.4 Unless otherwise a special operating condition is specified in the follows during the testing.



7.6 TEST RESULTS

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Band :	5.2G		

802.11 a Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH36	5180	15.63	0.19	15.82	23.98	Pass
CH40	5200	16.05	0.19	16.24	23.98	Pass
CH48	5240	15.55	0.19	15.74	23.98	Pass
802.11 n20 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH36	5180	13.53	0.2	13.73	23.98	Pass
CH40	5200	13.74	0.2	13.94	23.98	Pass
CH48	5240	13.36	0.2	13.56	23.98	Pass
802.11 n40 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH38	5190	12.54	0.33	12.87	23.98	Pass
CH46	5230	12.47	0.33	12.80	23.98	Pass
802.11 ac20 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH36	5180	11.3	0.17	11.47	23.98	Pass
CH40	5200	11.86	0.17	12.03	23.98	Pass
CH48	5240	11.58	0.17	11.75	23.98	Pass
802.11 ac40 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH38	5190	11.06	0.33	11.39	23.98	Pass
CH46	5230	11.06	0.33	11.39	23.98	Pass
802.11 ac80 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH42	5210	9.15	0.63	9.78	23.98	Pass
Note: duty cycle Factor see page 83						



Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Band :	5.8G		

802.11 a Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH149	5745	11.83	0.45	12.28	30	Pass
CH157	5785	12.90	0.45	13.35	30	Pass
CH165	5825	12.88	0.45	13.33	30	Pass
802.11 n20 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH149	5745	11.75	0.50	12.25	30	Pass
CH157	5785	12.85	0.50	13.35	30	Pass
CH165	5825	13.15	0.50	13.65	30	Pass
802.11 n40 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH151	5755	11.73	1.00	12.73	30	Pass
CH159	5795	12.76	1.00	13.76	30	Pass
802.11 ac20 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH149	5745	11.96	0.49	12.45	30	Pass
CH157	5785	13.12	0.49	13.61	30	Pass
CH165	5825	13.02	0.49	13.51	30	Pass
802.11 ac40 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH151	5755	12.11	0.94	13.05	30	Pass
CH159	5795	12.83	0.94	13.77	30	Pass
802.11 ac80 Mode						
Test Channel	Frequency (MHz)	Output power (dBm)	duty cycle Factor (dB)	Total power (dBm)	Limit (dBm)	Result
CH155	5775	11.7	1.81	13.51	30	Pass
Note: duty cycle Factor see page 87						



8. OUT OF BAND EMISSIONS

8.1 APPLICABLE STANDARD

According to FCC §15.407(b)

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)

(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.

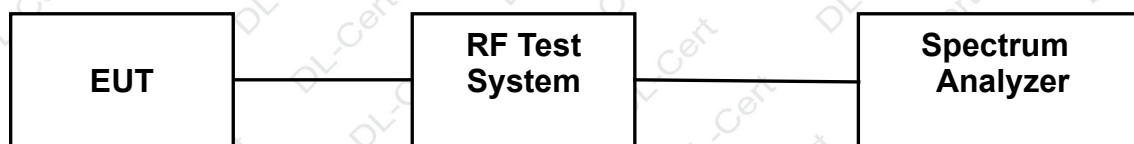
8.2 TEST PROCEDURE

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.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 8.4 Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULTS



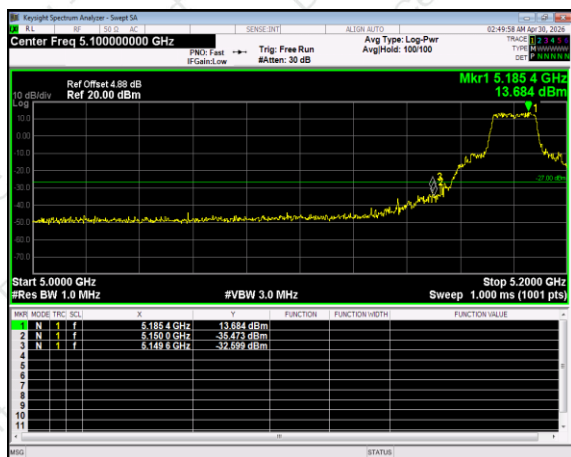
Shenzhen DL Testing Technology Co., Ltd.

Report No.: DLE-260417007R

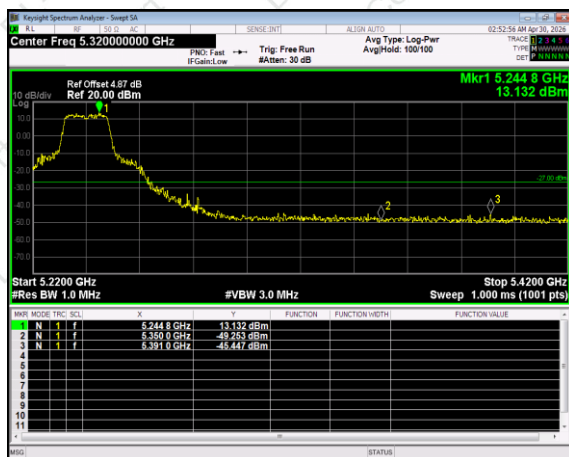
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1012 hPa	Test Voltage:	AC 120V/60Hz
Test band:	5.2G	Antenna gain:	2.23dBi

5.180~5.240 GHz

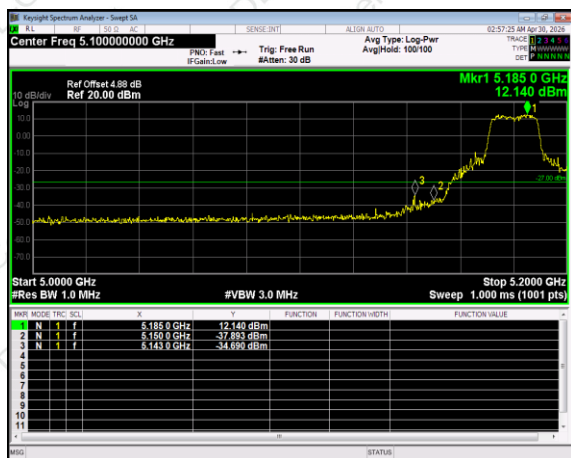
(802.11a) Band Edge, Left Side



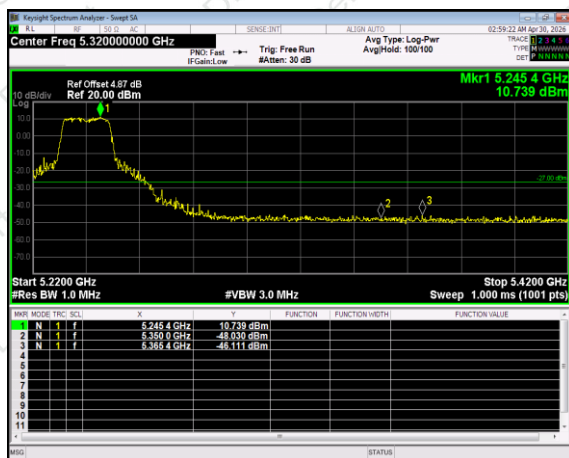
(802.11a) Band Edge, Right Side



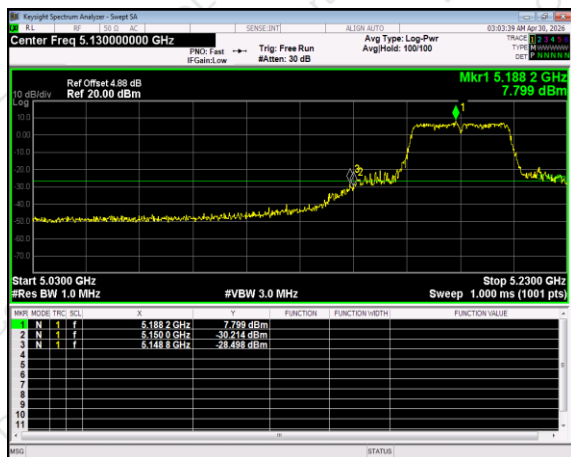
(802.11n20) Band Edge, Left Side



(802.11n20) Band Edge, Right Side



(802.11n40) Band Edge, Left Side

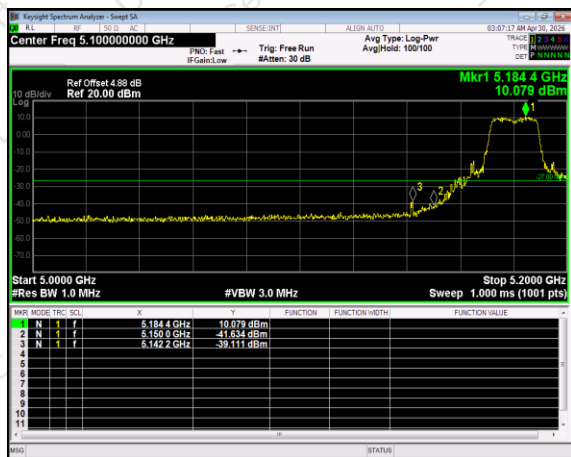


(802.11n40) Band Edge, Right Side





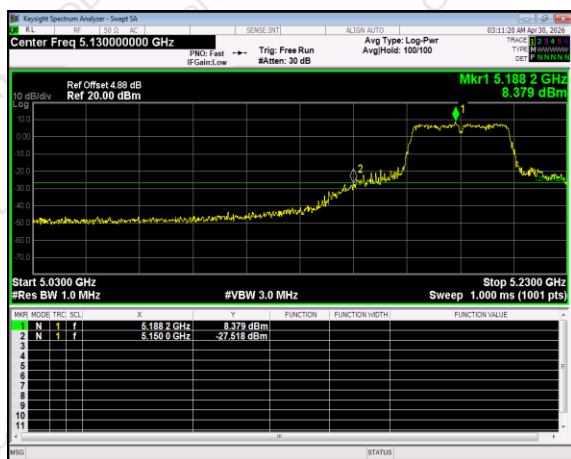
(802.11ac20) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side



(802.11ac40) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side



(802.11ac80) Band Edge

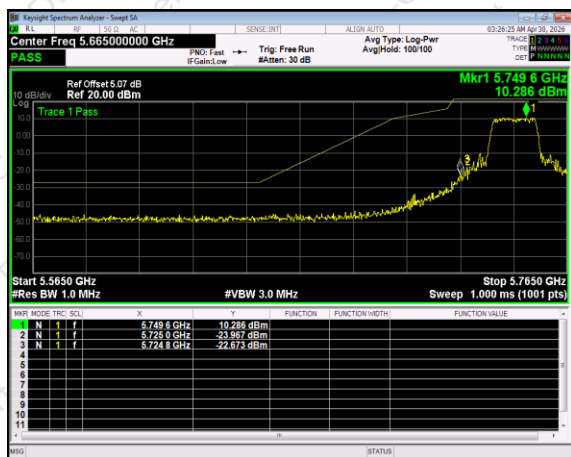




Temperature:	26°C	Relative Humidity:	54%
Pressure:	1012 hPa	Test Voltage:	AC 120V/60Hz
Test band:	5.8G	Antenna gain:	2.06dBi

5.745~5.825 GHz

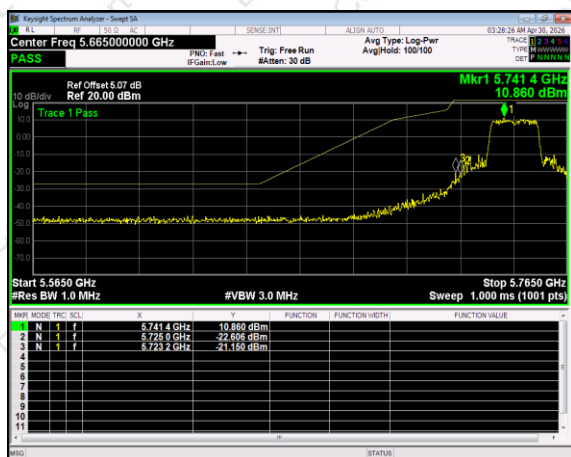
(802.11a) Band Edge, Left Side



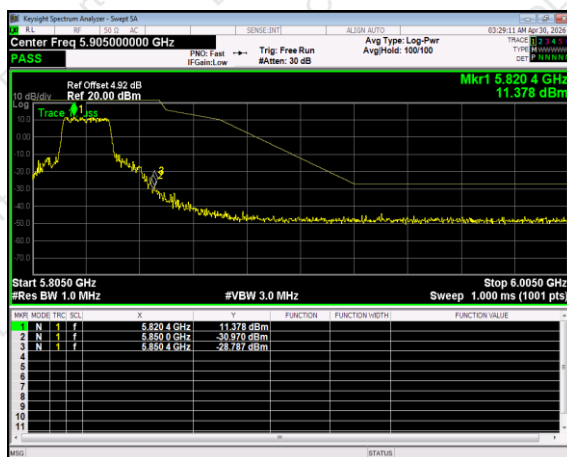
(802.11a) Band Edge, Right Side



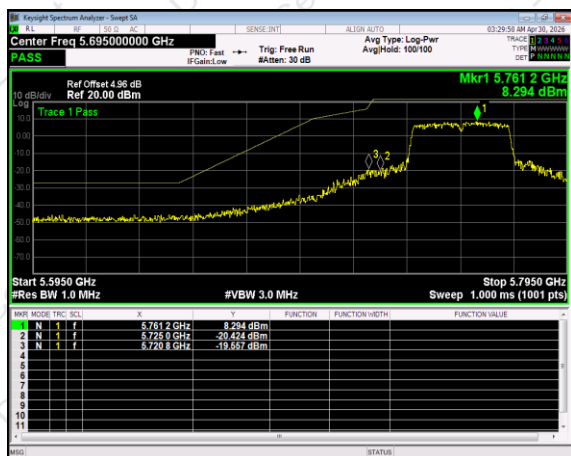
(802.11n20) Band Edge, Left Side



(802.11n20) Band Edge, Right Side



(802.11n40) Band Edge, Left Side

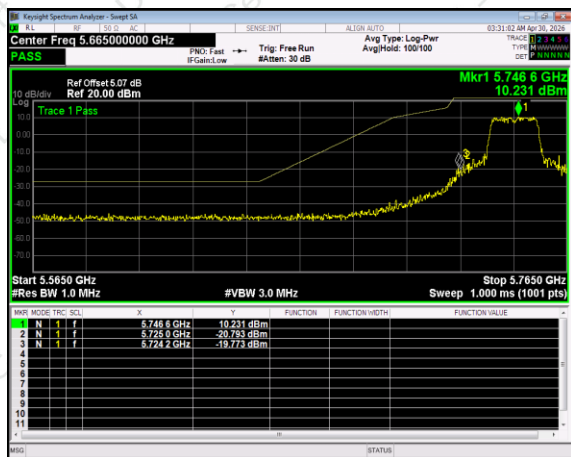


(802.11n40) Band Edge, Right Side





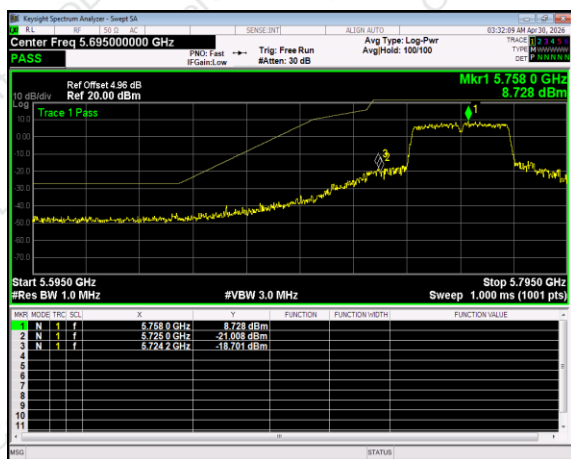
(802.11ac20) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side



(802.11ac40) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side



(802.11ac80) Band Edge





9. Frequency Stability Measurement

9.1 LIMIT

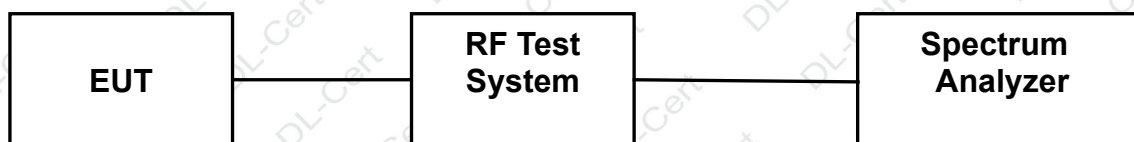
Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

9.2 TEST PROCEDURES

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 106$ ppm and the limit is less than ± 20 ppm (IEEE 802.11n specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is $-20^\circ\text{C} \sim 70^\circ\text{C}$.

9.3 TEST SETUP LAYOUT



9.4 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously un-modulation transmitting mode.

9.5 TEST RESULTS

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Band :	5.2G & 5.8G		
Note: All channels have been tested, and only the worst test data is recorded in this report.			

**5.2G:**

802.11a

Reference Frequency(Middle Channel): 5180MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Measured Frequency	Deviation (ppm)
-20	12	5179.977	-4.440
-10	12	5179.976	-4.565
10	12	5179.989	-2.217
20	12	5179.975	-4.814
30	12	5179.973	-5.297
40	12	5179.983	-3.274
50	12	5179.983	-3.290
60	12	5179.982	-3.414
70	12	5179.987	-2.511

802.11 n20

Reference Frequency(Middle Channel): 5180 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Measured Frequency	Deviation (ppm)
-20	12	5179.988	-2.372
-10	12	5179.988	-2.273
10	12	5179.976	-4.691
20	12	5179.979	-3.989
30	12	5179.974	-5.009
40	12	5179.973	-5.167
50	12	5179.981	-3.590
60	12	5179.985	-2.990
70	12	5179.985	-2.990



802.11n40

Reference Frequency(Middle Channel): 5190MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5189.971	-5.534
-10	12	5189.977	-4.335
10	12	5189.972	-5.452
20	12	5189.971	-5.495
30	12	5189.983	-3.226
40	12	5189.990	-1.963
50	12	5189.986	-2.624
60	12	5189.971	-5.599
70	12	5189.984	-3.100

802.11ac20

Reference Frequency(Middle Channel): 5180MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5189.973	-5.185
-10	12	5189.984	-3.011
10	12	5189.976	-4.716
20	12	5189.987	-2.551
30	12	5189.983	-3.183
40	12	5189.985	-2.965
50	12	5189.983	-3.230
60	12	5189.980	-3.820
70	12	5189.983	-3.365



802.11 ac40

Reference Frequency(Middle Channel): 5190 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5189.980	-3.921
-10	12	5189.967	-6.298
10	12	5189.983	-3.232
20	12	5189.971	-5.606
30	12	5189.986	-2.713
40	12	5189.980	-3.946
50	12	5189.980	-3.813
60	12	5189.972	-5.483
70	12	5189.982	-3.512

802.11ac80

Reference Frequency(Middle Channel): 5210MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5209.985	-2.828
-10	12	5209.983	-3.340
10	12	5209.988	-2.209
20	12	5209.984	-3.033
30	12	5209.990	-1.968
40	12	5209.986	-2.672
50	12	5209.981	-3.665
60	12	5209.981	-3.726
70	12	5209.988	-2.307

**So, Frequency Stability Versus Input Voltage is:**

802.11a

Reference Frequency(Middle Channel): 5180 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5179.974	-4.939
40	12	5179.989	-2.066
70	12	5179.981	-3.704

802.11n20

Reference Frequency(Middle Channel): 5180 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5179.977	-4.386
40	12	5179.975	-4.780
70	12	5179.985	-2.962

802.11n40

Reference Frequency(Middle Channel): 5190 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5189.988	-2.288
40	12	5189.986	-2.750
70	12	5189.974	-4.925

802.11ac20

Reference Frequency(Middle Channel): 5180 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5179.974	-4.939
40	12	5179.989	-2.066
70	12	5179.981	-3.704



802.11ac40

Reference Frequency(Middle Channel): 5190 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5189.988	-2.288
40	12	5189.986	-2.750
70	12	5189.974	-4.925

802.11ac80

Reference Frequency(Middle Channel): 5210 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5209.987	-2.481
40	12	5209.982	-3.362
70	12	5209.982	-3.506

**5.8G:**

802.11a

Reference Frequency(Middle Channel): 5745MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5744.973	-4.644
-10	12	5744.965	-6.107
10	12	5744.967	-5.683
20	12	5744.967	-5.705
30	12	5744.979	-3.628
40	12	5744.962	-6.687
50	12	5744.951	-8.515
60	12	5744.975	-4.315
70	12	5744.977	-4.043

802.11n20

Reference Frequency(Middle Channel): 5745MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5754.965	-6.141
-10	12	5754.959	-7.100
10	12	5754.971	-5.006
20	12	5754.979	-3.655
30	12	5754.968	-5.494
40	12	5754.975	-4.410
50	12	5754.979	-3.663
60	12	5754.976	-4.147
70	12	5754.968	-5.534



802.11n40

Reference Frequency(Middle Channel): 5755MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5774.986	-2.339
-10	12	5774.979	-3.570
10	12	5774.971	-4.990
20	12	5774.983	-2.980
30	12	5774.988	-2.057
40	12	5774.986	-2.396
50	12	5774.976	-4.148
60	12	5774.986	-2.400
70	12	5774.971	-5.001

802.11ac20

Reference Frequency(Middle Channel): 5745 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5744.973	-4.723
-10	12	5744.978	-3.752
10	12	5744.967	-5.719
20	12	5744.954	-8.068
30	12	5744.979	-3.732
40	12	5744.976	-4.214
50	12	5744.963	-6.479
60	12	5744.974	-4.589
70	12	5744.974	-4.522



802.11ac40

Reference Frequency(Middle Channel): 5755MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5754.979	-3.655
-10	12	5754.956	-7.614
10	12	5754.973	-4.638
20	12	5754.975	-4.424
30	12	5754.979	-3.594
40	12	5754.966	-5.884
50	12	5754.962	-6.549
60	12	5754.969	-5.453
70	12	5754.977	-4.058

802.11ac80

Reference Frequency(Middle Channel): 5775MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF	Deviation (ppm)
-20	12	5774.971	-5.032
-10	12	5774.983	-2.909
10	12	5774.988	-2.128
20	12	5774.986	-2.406
30	12	5774.985	-2.648
40	12	5774.983	-2.915
50	12	5774.990	-1.747
60	12	5774.971	-5.032
70	12	5774.980	-3.475

**So, Frequency Stability Versus Input Voltage is:**

802.11a

Reference Frequency(Middle Channel): 5745 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5744.980	-3.525
40	12	5744.953	-8.221
70	12	5744.967	-5.726

802.11n20

Reference Frequency(Middle Channel): 5745 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5744.966	-5.924
40	12	5744.978	-3.801
70	12	5744.961	-6.743

802.11n40

Reference Frequency(Middle Channel): 5755 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5754.976	-4.175
40	12	5754.960	-7.022
70	12	5754.979	-3.691

802.11ac20

Reference Frequency(Middle Channel): 5745 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5744.965	-6.039
40	12	5744.960	-6.927
70	12	5744.968	-5.539



802.11ac40

Reference Frequency(Middle Channel): 5755 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5754.980	-3.514
40	12	5754.960	-6.960
70	12	5754.976	-4.145

802.11ac80

Reference Frequency(Middle Channel): 5775 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency	Deviation (ppm)
-20	12	5774.974	-4.549
40	12	5774.973	-4.641
70	12	5774.979	-3.706



10. DUTY CYCLE

10.1 APPLIED PROCEDURES / LIMIT

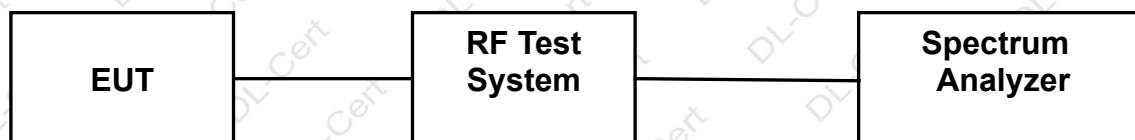
Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.
- b) The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
 - 1) Set the center frequency of the instrument to the center frequency of the transmission.
 - 2) Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.
 - 3) Set $VBW \geq RBW$. Set detector = peak or average.
 - 4) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \leq 16.7 \mu s$.)

10.2 DEVIATION FROM STANDARD

No deviation.

10.3 TEST SETUP



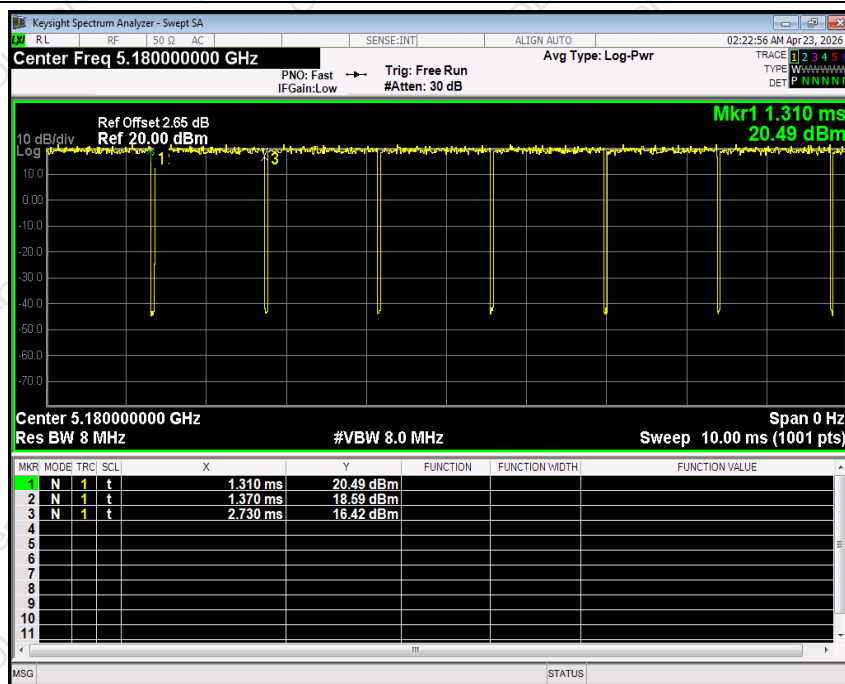


10.4 TEST RESULTS

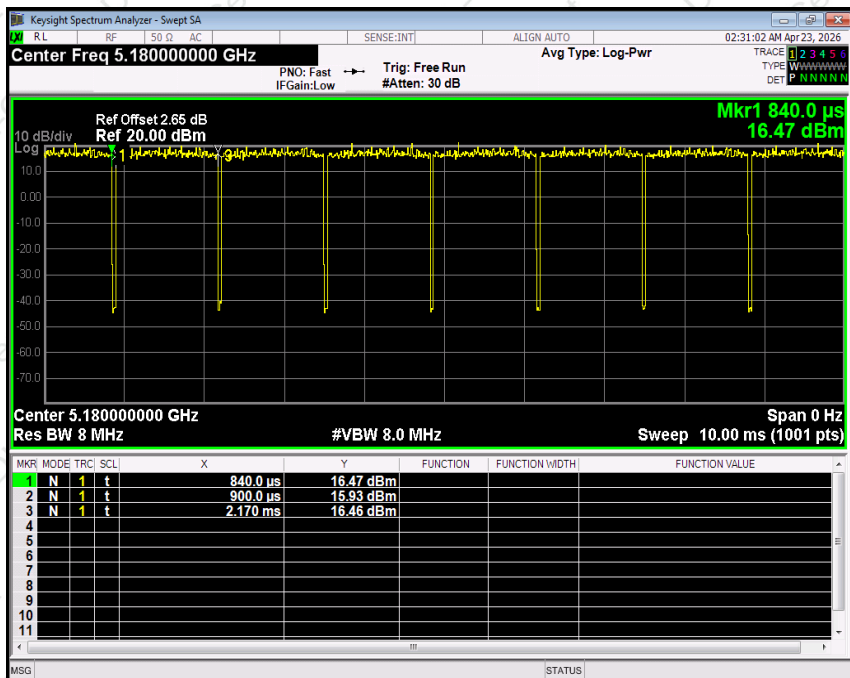
5.2G				
Mode	Frequency (MHz)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Result
802.11a	5180	95.77	0.19	Pass
802.11n20	5180	95.49	0.20	Pass
802.11n40	5190	92.65	0.33	Pass
802.11ac20	5180	96.21	0.17	Pass
802.11ac40	5190	92.75	0.33	Pass
802.11ac80	5210	86.49	0.63	Pass



802.11a

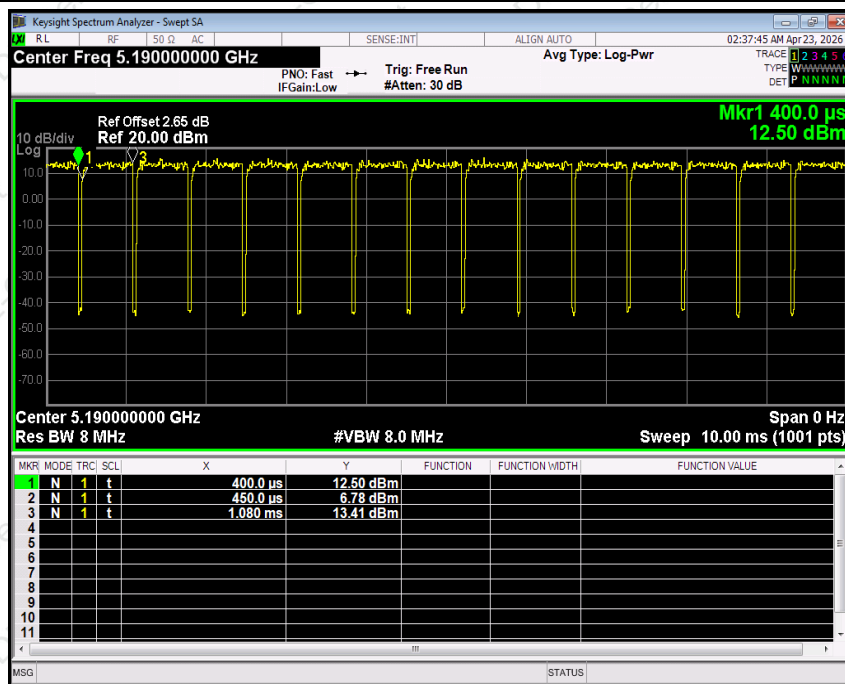


802.11n20

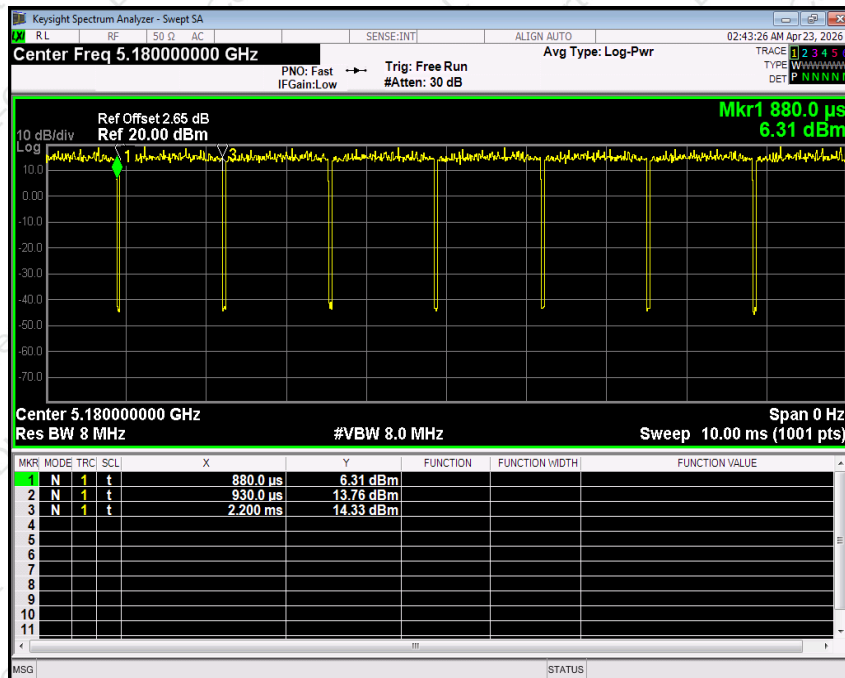




802.11n40

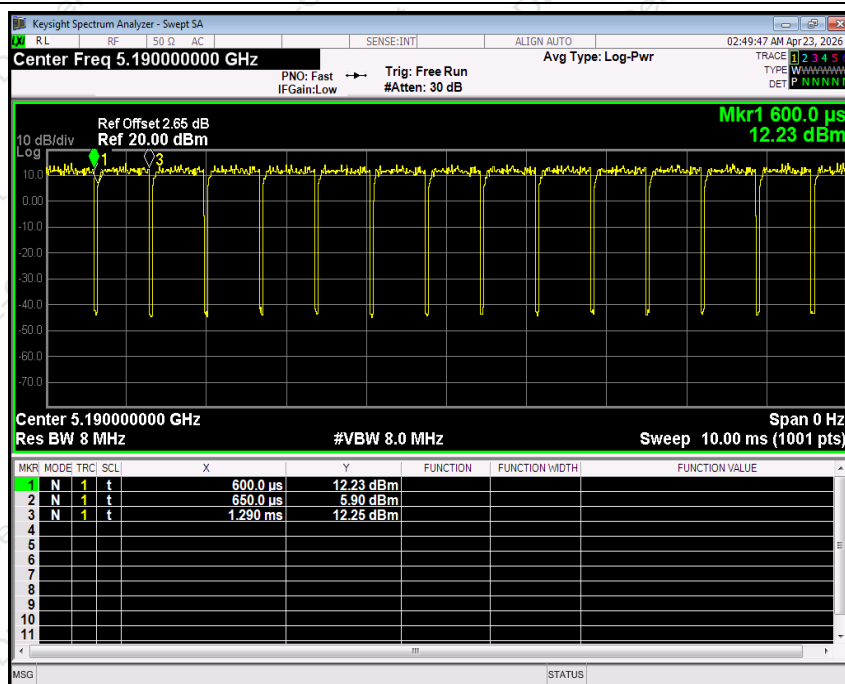


802.11ac20

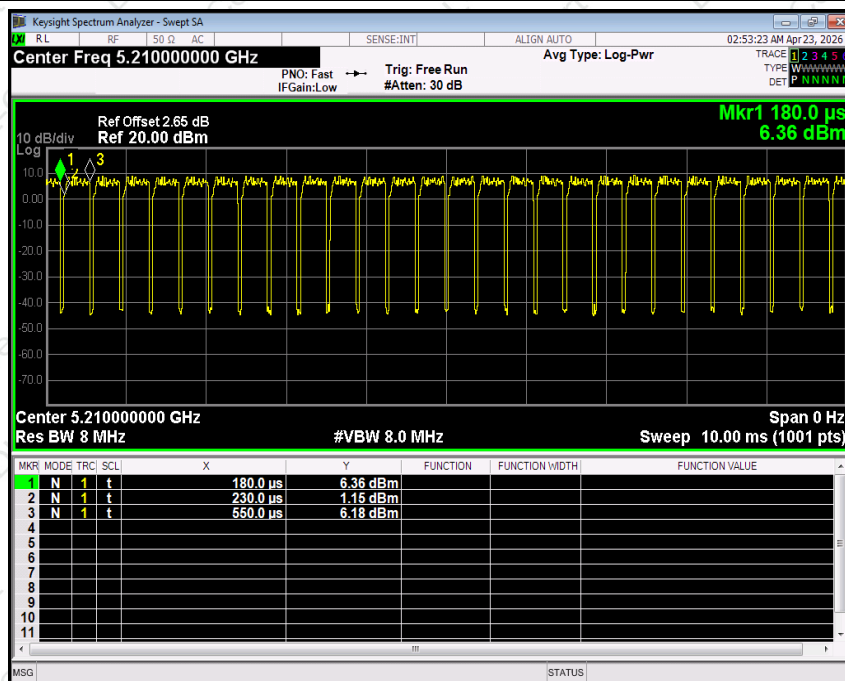




802.11ac40



802.11ac80



Note: All channel have been tested, and the report only reflects the worst case data.

Duty Cycle= Ton /Total*100%

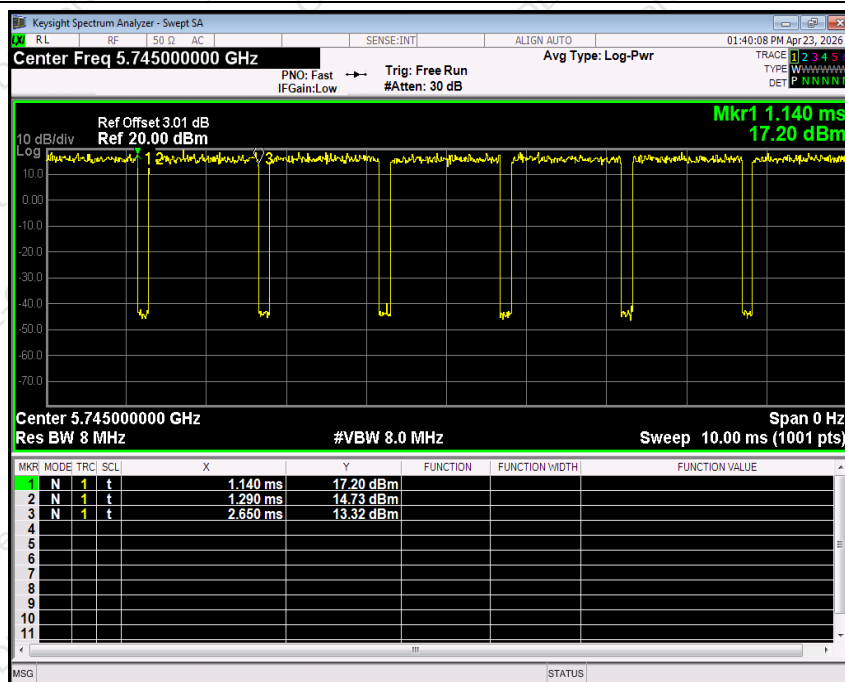
Duty Cycle Correction Factor = 10log (1/Duty Cycle)



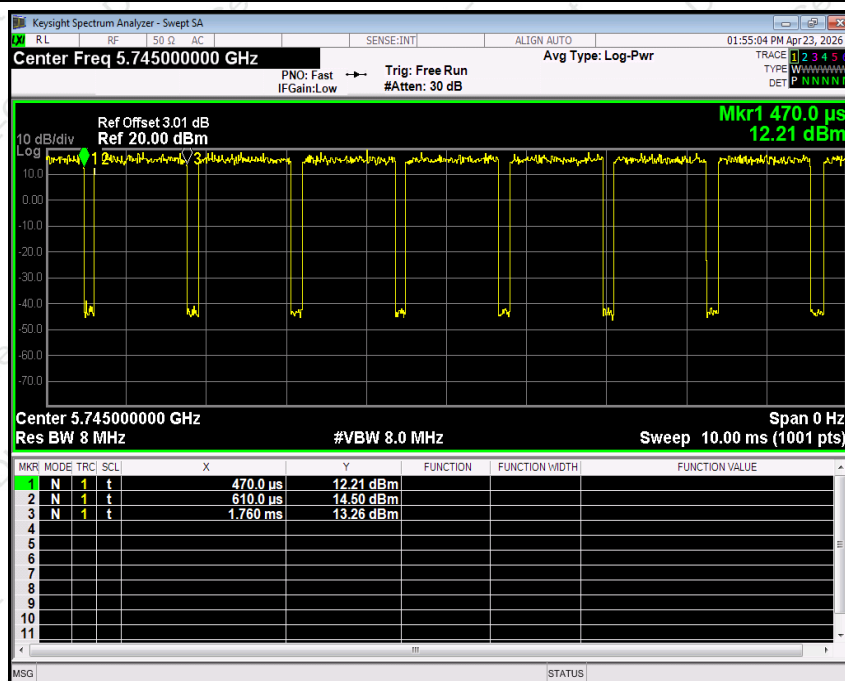
5.8G				
Mode	Frequency (MHz)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Result
802.11a	5745	90.07	0.45	Pass
802.11n20	5745	89.15	0.50	Pass
802.11n40	5755	79.45	1.00	Pass
802.11ac20	5745	89.23	0.49	Pass
802.11ac40	5755	80.56	0.94	Pass
802.11ac80	5775	65.91	1.81	Pass



802.11a

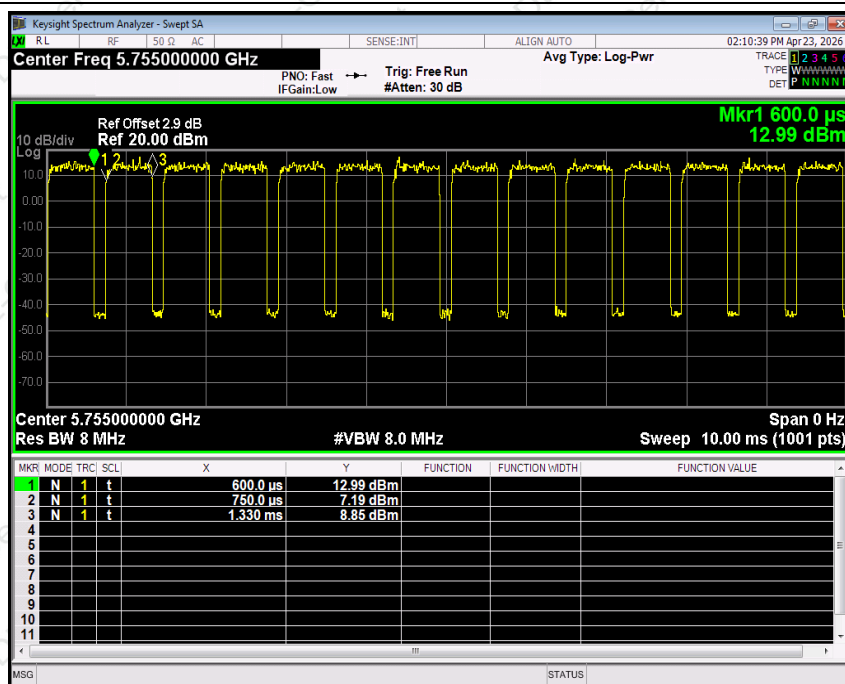


802.11n20

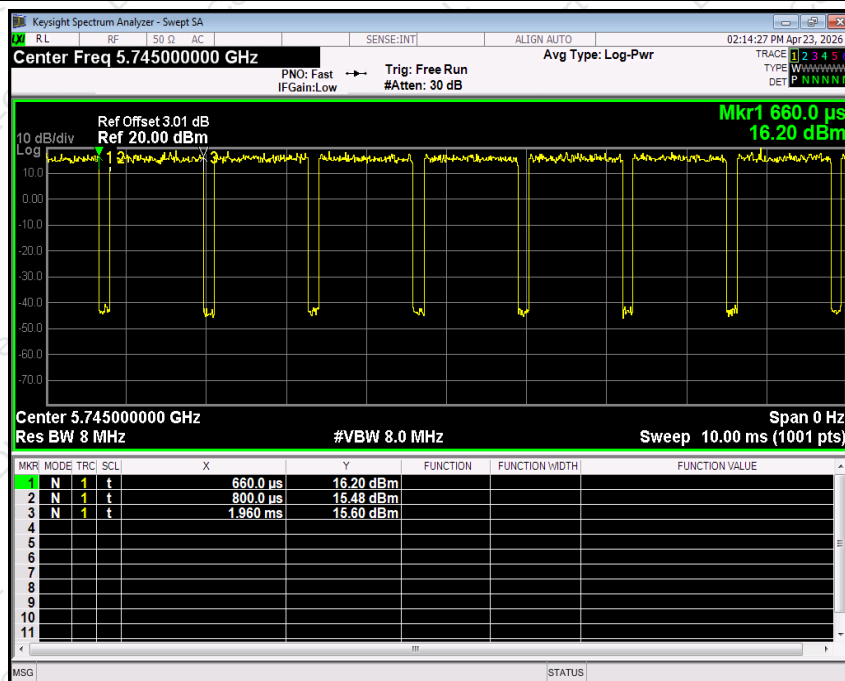




802.11n40

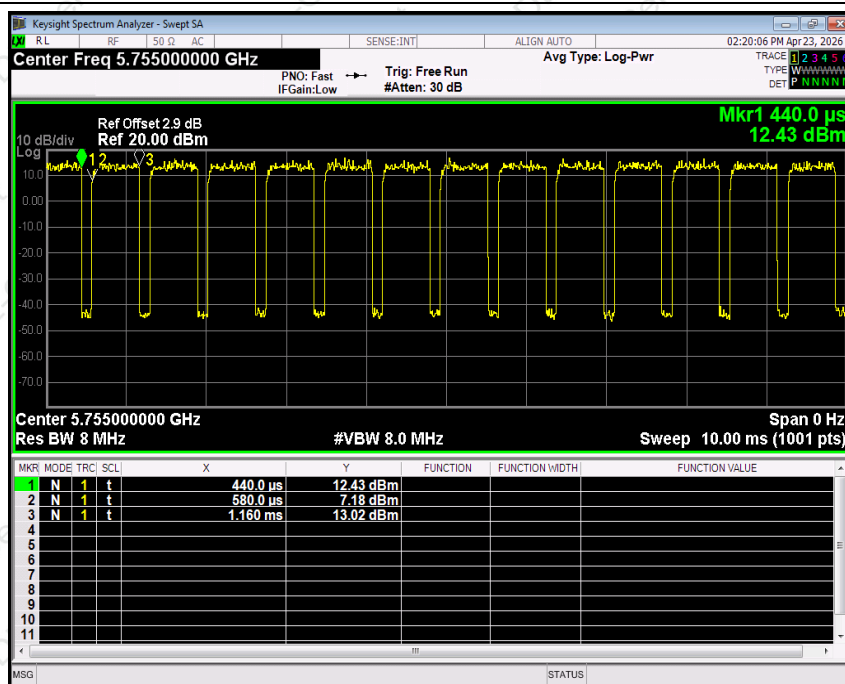


802.11ac20

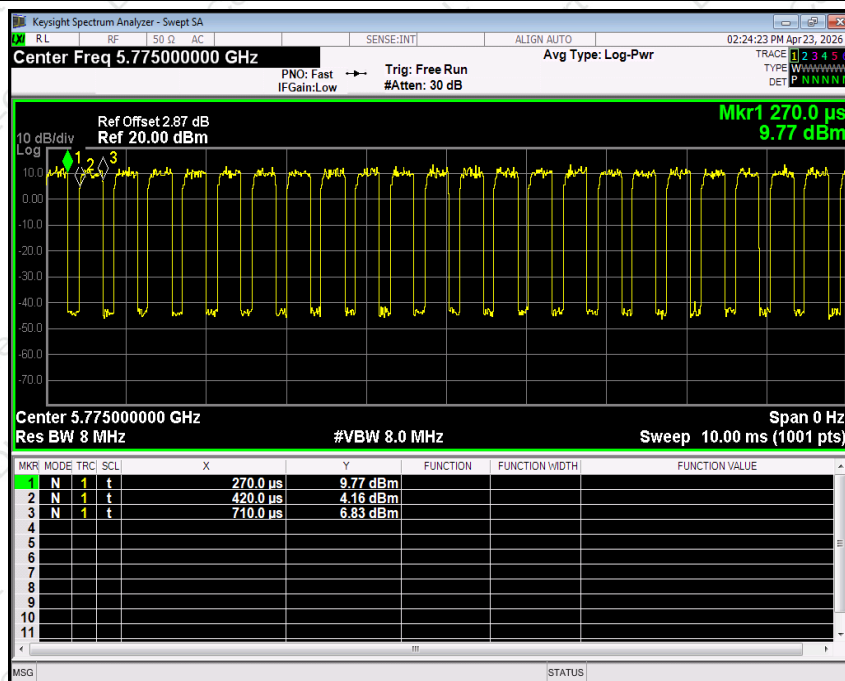




802.11ac40



802.11ac80



Note: All channel have been tested, and the report only reflects the worst case data.

Duty Cycle= Ton /Total*100%

Duty Cycle Correction Factor = 10log (1/Duty Cycle)

**11.ANTENNA REQUIREMENT**

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antenna is FPC antenna, the best case gain of the antenna is 2.23dBi (Max), reference to the appendix II for details	



12. TEST SETUP PHOTO

Reference to the appendix I for details.

13. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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