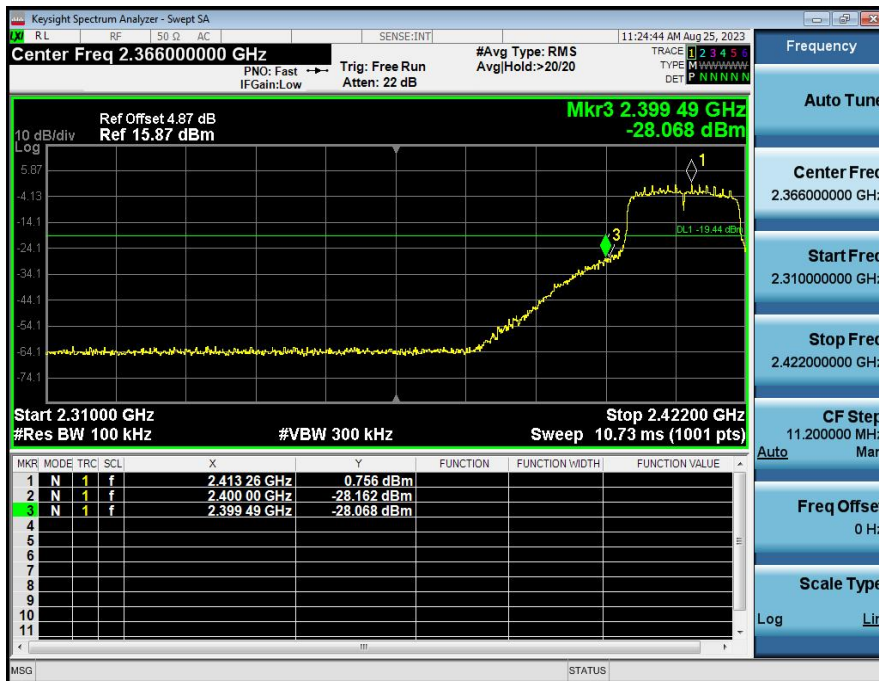
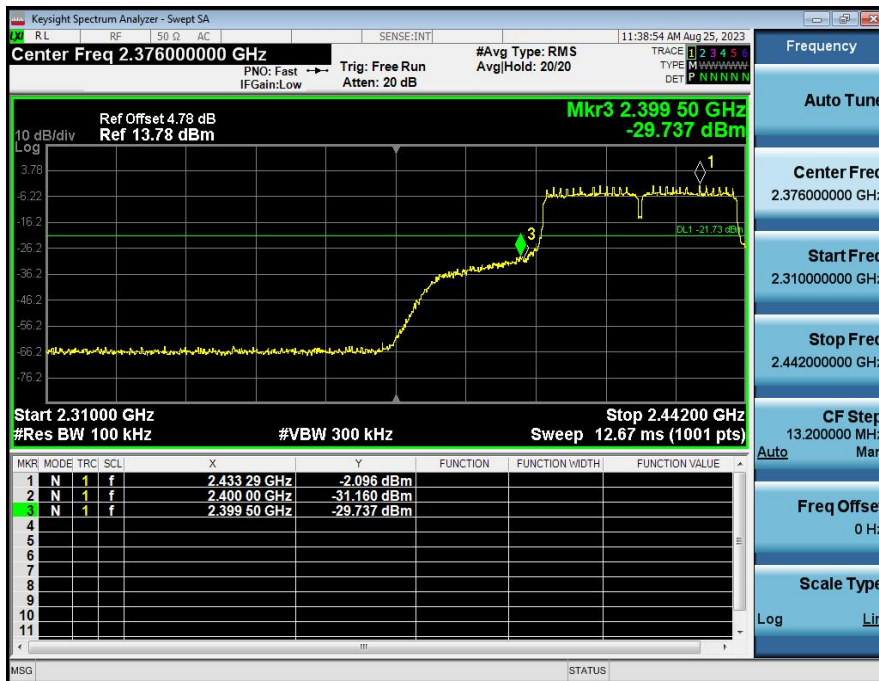


802.11n 20



802.11n 40



## 9 6dB&99% Bandwidth Measurement

Test Requirement : FCC CFR47 Part 15 Section 15.247, [RSS-GEN §6.7& RSS-247 §5.2](#)

Test Method : ANSI C63.10:2013

Test Limit : Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 9.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz for -6dB Occupy Bandwidth  
RBW = 1%-5% OBW, VBW = 3\*RBW for 99% Occupy Bandwidth

### 9.2 Test Result

Test CH	-6dB Occupy Bandwidth (MHz)					Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Limit(KHz)	
Lowest	8.59	15.83	16.73	36.03	>500	Pass
Middle	8.13	16.09	16.97	35.61		
Highest	8.61	16.09	17.02	35.39		

Test CH	99% Occupy Bandwidth (MHz)					Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Limit(KHz)	
Lowest	11.982	17.541	17.819	36.858	/	Pass
Middle	11.950	18.141	17.936	36.432		
Highest	12.041	17.936	18.133	36.379		

-6dB Occupy Bandwidth  
802.11b Low Channel



802.11b Middle Channel



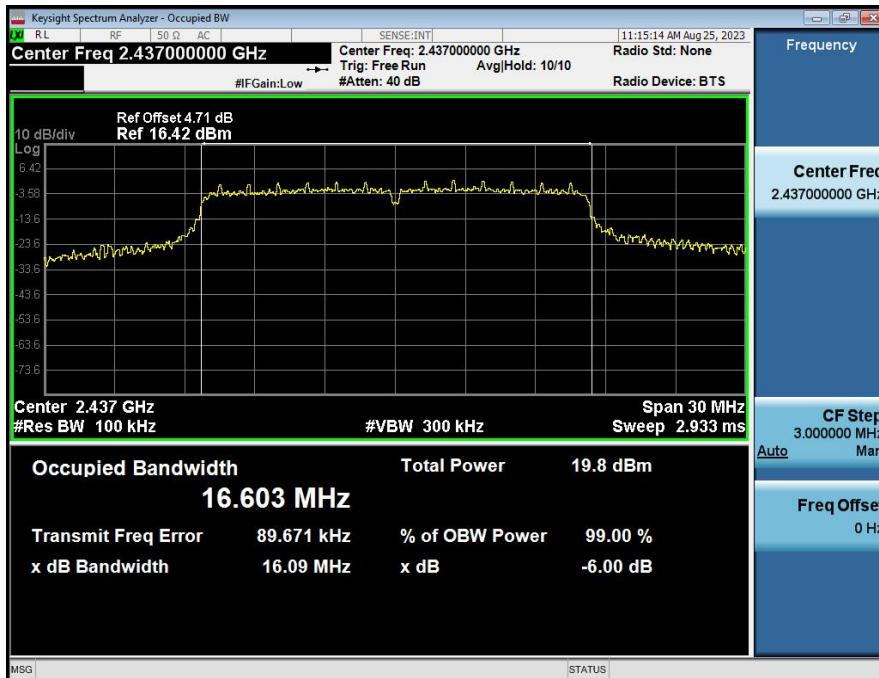
## 802.11b High Channel



## 802.11g Low Channel



## 802.11g Middle Channel



## 802.11g High Channel





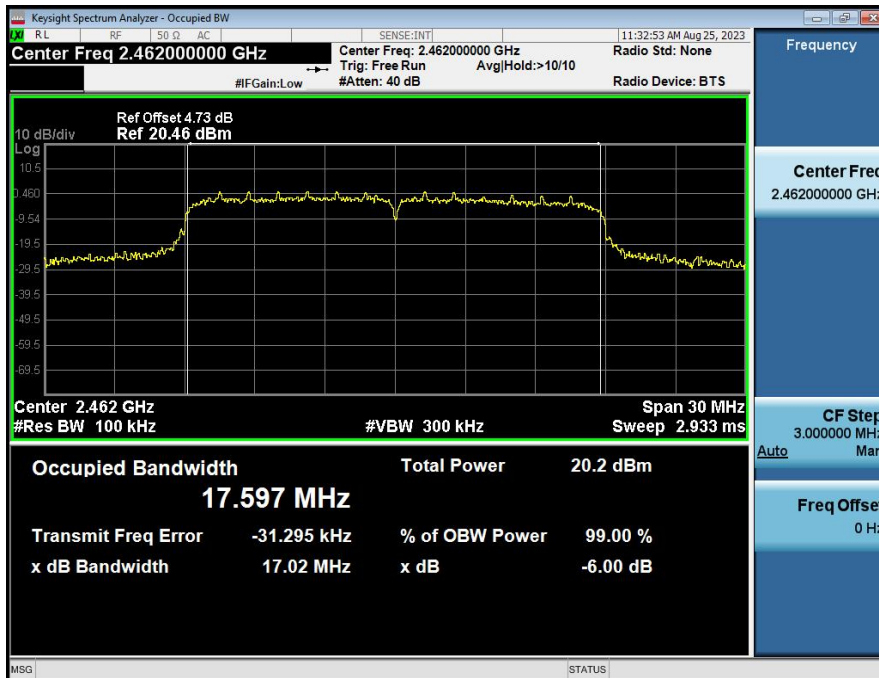
## 802.11n20 Low Channel



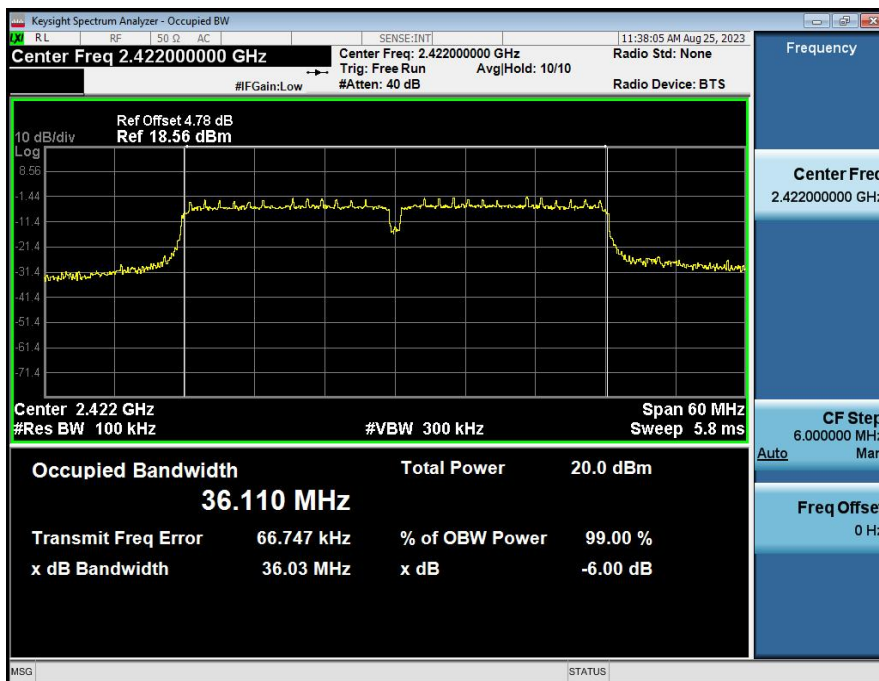
## 802.11n20 Middle Channel



## 802.11n20 High Channel

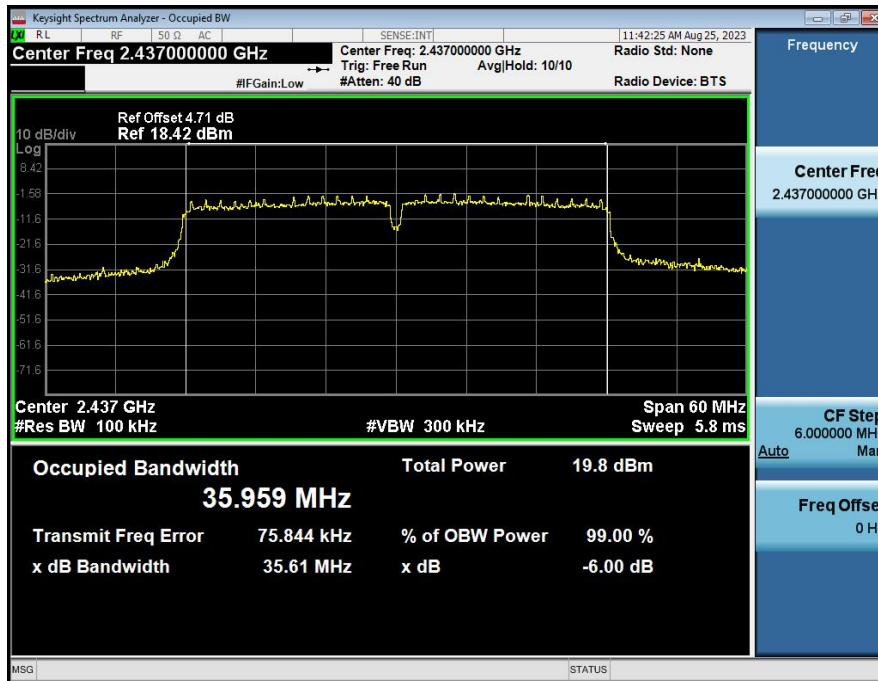


## 802.11n40 Low Channel

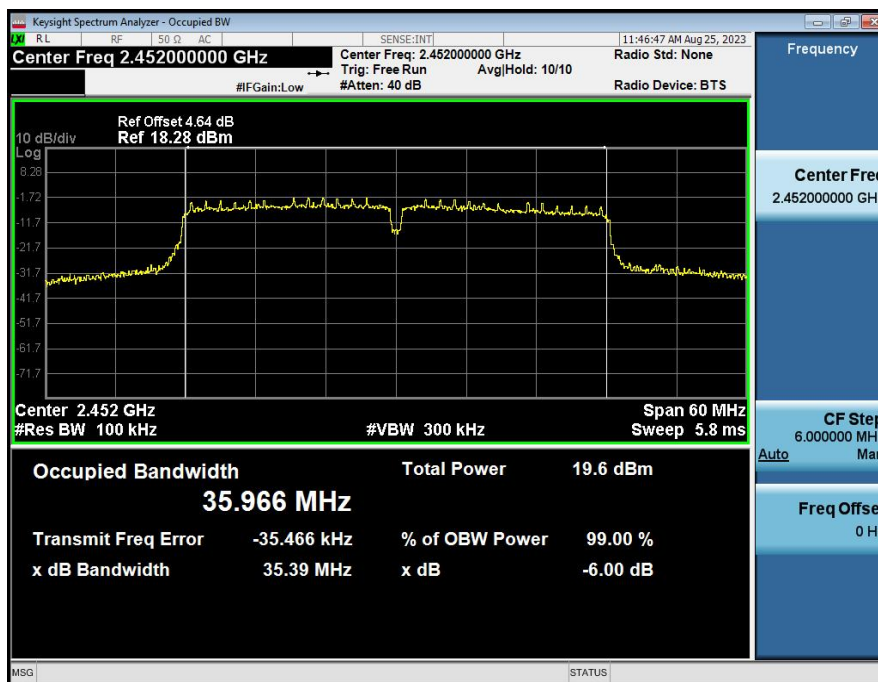




## 802.11n40 Middle Channel



## 802.11n40 High Channel



99% Occupy Bandwidth  
802.11b Low Channel



802.11b Middle Channel



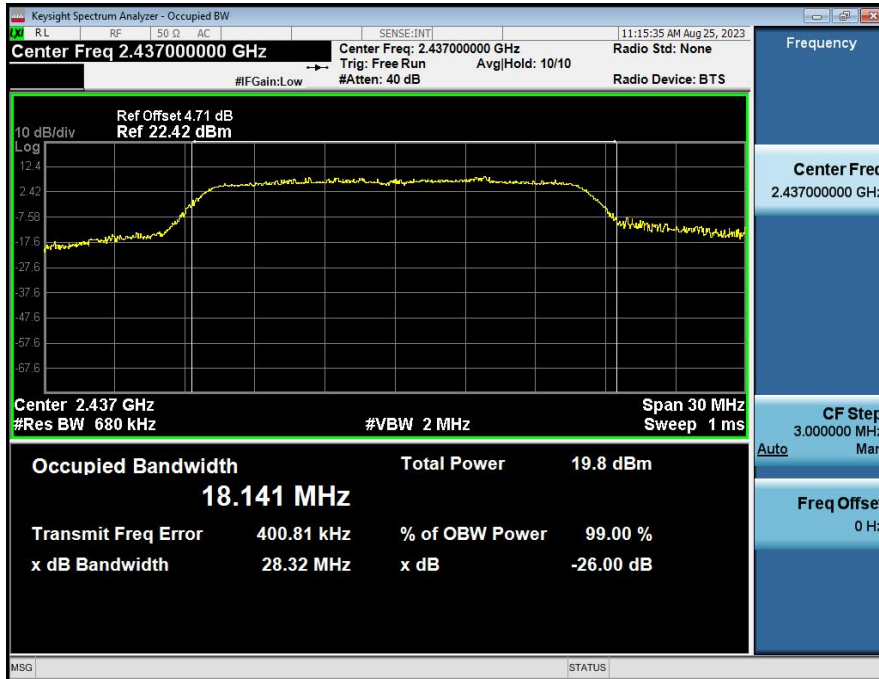
## 802.11b High Channel



## 802.11g Low Channel



## 802.11g Middle Channel



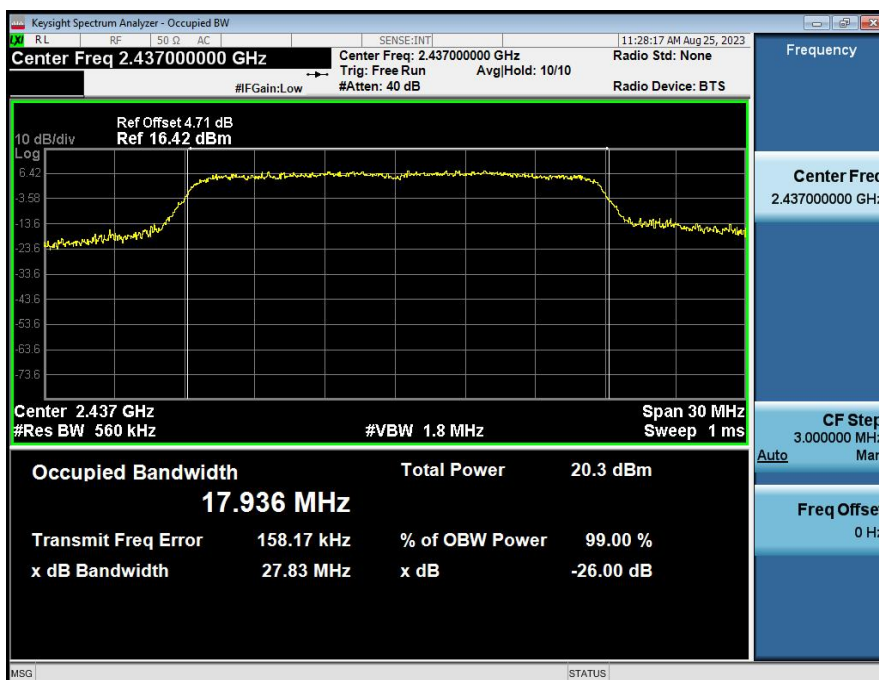
## 802.11g High Channel



## 802.11n20 Low Channel



## 802.11n20 Middle Channel





## 802.11n20 High Channel

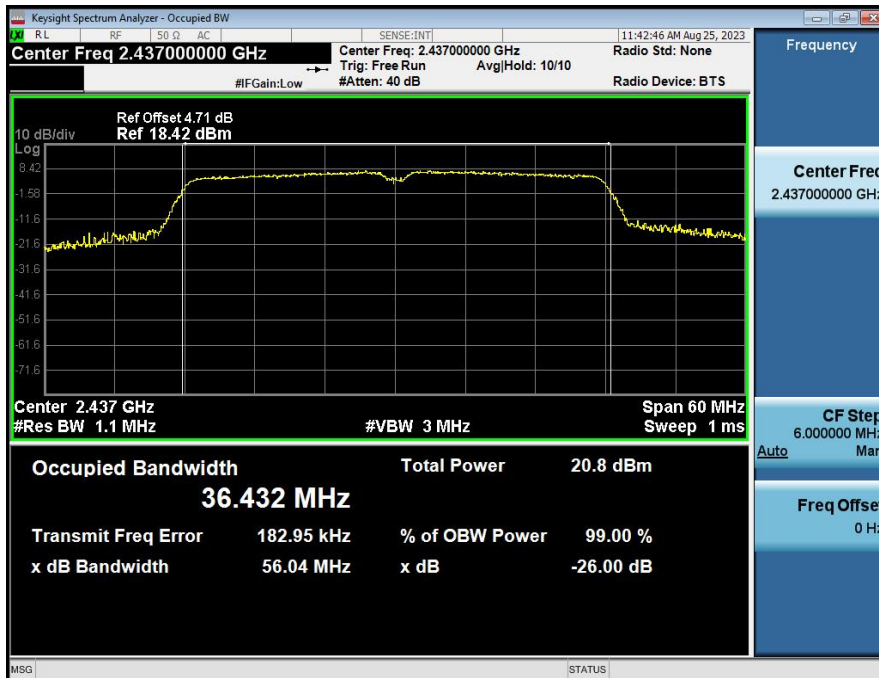


## 802.11n40 Low Channel

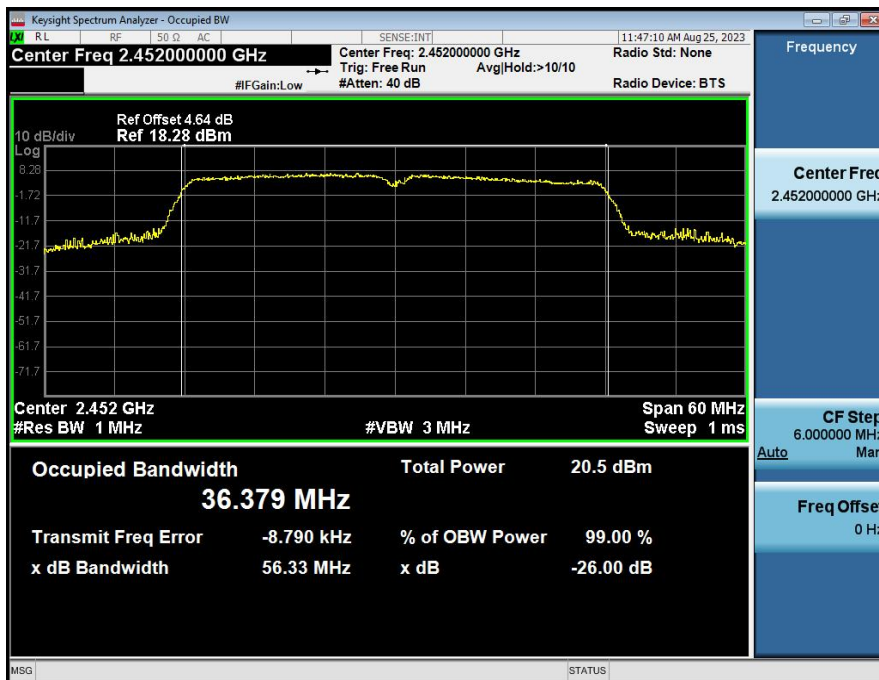




## 802.11n40 Middle Channel



## 802.11n40 High Channel



## 10 Maximum Peak Output Power

- Test Requirement : FCC CFR47 Part 15 Section 15.247, RSS-247 § 5.4
- Test Method : ANSI C63.10:2013
- Test Limit : Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.
- RSS-247 § 5.4(d)  
For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

### 10.1 Test Procedure

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

### 10.2 Test Result

	Maximum Peak Output Power (dBm)				Limit
	802.11b	802.11g	802.11n20	802.11n40	
Low Channel	18.21	17.33	17.31	16.77	1W(30dBm)
Middle Channel	18.35	17.64	17.67	16.41	1W(30dBm)
High Channel	18.49	17.97	17.95	16.37	1W(30dBm)
	EIRP (dBm)				Limit
Low Channel	21.10	20.22	20.20	19.66	4W(36dBm)
Middle Channel	21.24	20.53	20.56	19.30	4W(36dBm)
High Channel	21.38	20.86	20.84	19.26	4W(36dBm)

Note:

1. For power test the duty cycle is 100% in continuous transmitting mode;
2. TX means Transmit, RX means Receive.

## 11 Power Spectral density

- Test Requirement : FCC CFR47 Part 15 Section 15.247, RSS-247 §5.2
- Test Method : ANSI C63.10:2013
- Test Limit : Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 11.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz, Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

### 11.2 Test Result

	Power Spectral density (dBm/3kHz)				Limit
	802.11b	802.11g	802.11n20	802.11n40	
Low Channel	-8.24	-12.90	-13.53	-17.14	8dBm/3kHz
Middle Channel	-7.27	-12.82	-12.15	-16.94	8dBm/3kHz
High Channel	-7.88	-11.27	-12.53	-16.32	8dBm/3kHz

## 802.11b Low Channel



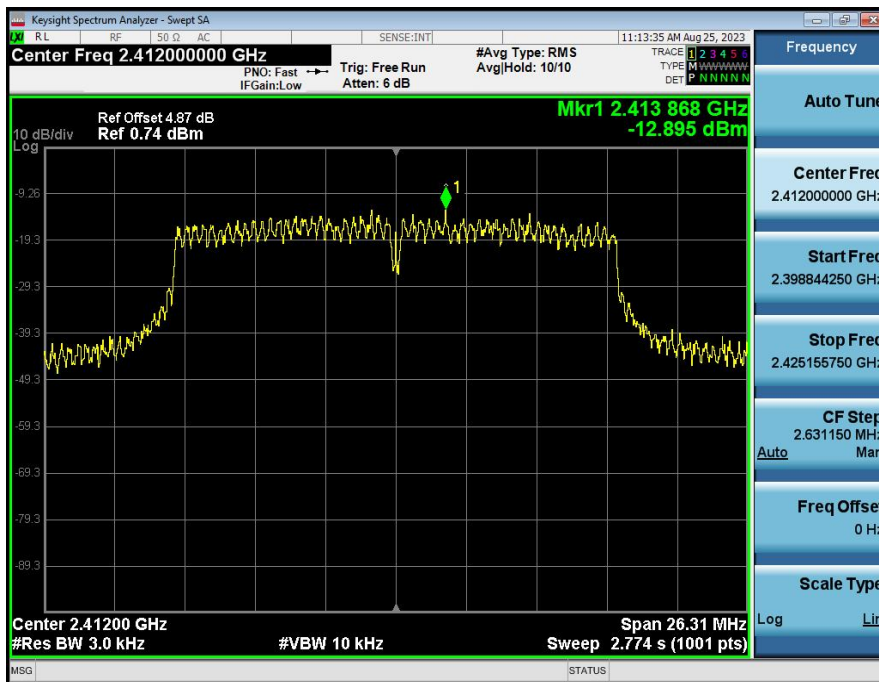
## 802.11b Middle Channel



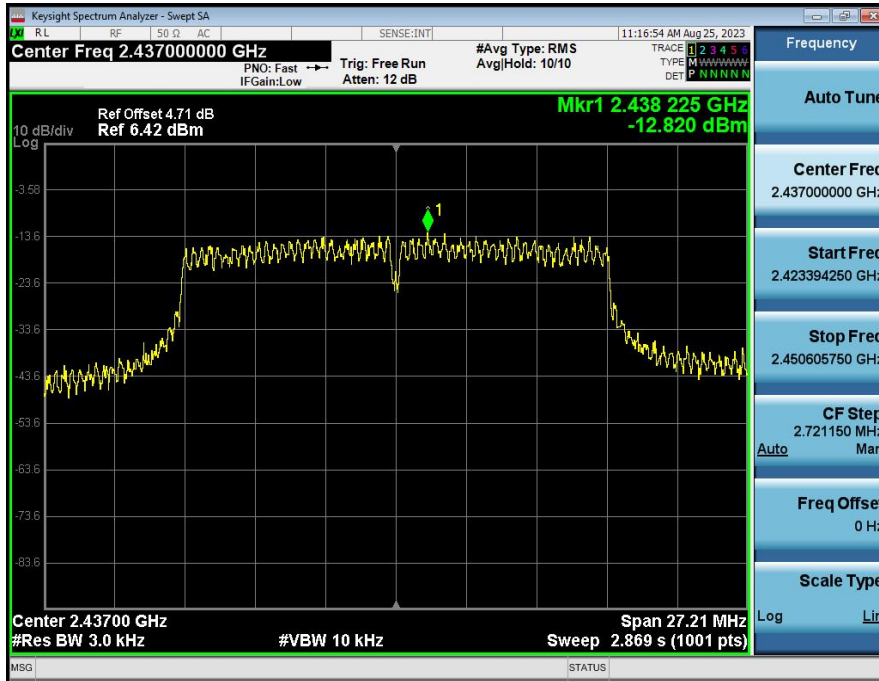
## 802.11b High Channel



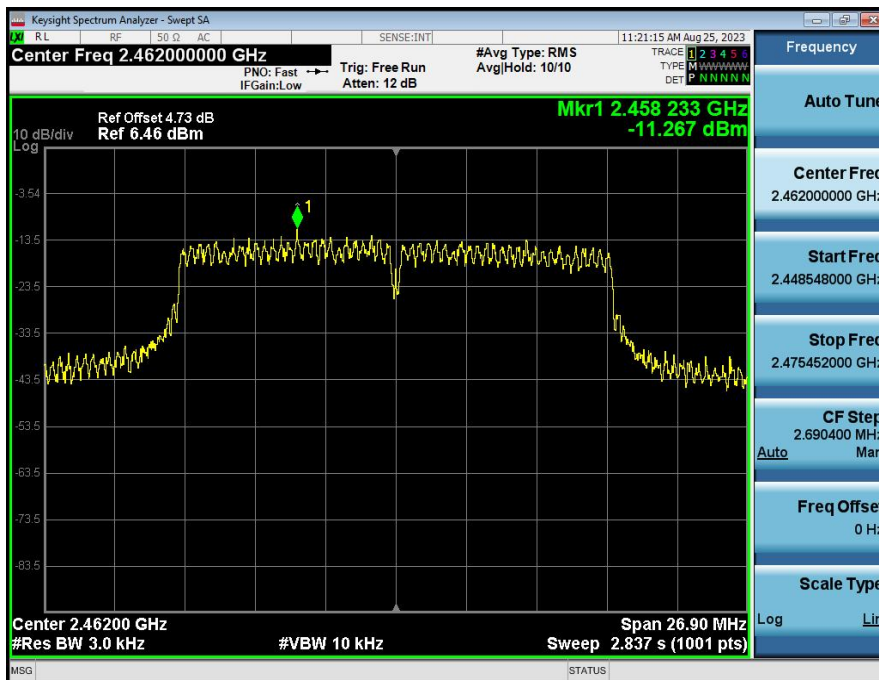
## 802.11g Low Channel



## 802.11g Middle Channel

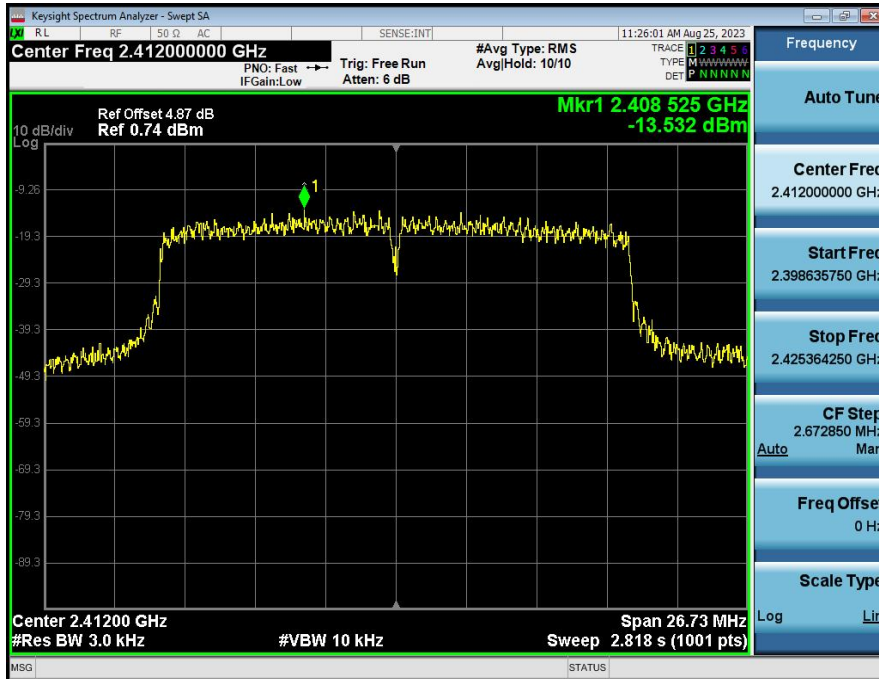


## 802.11g High Channel





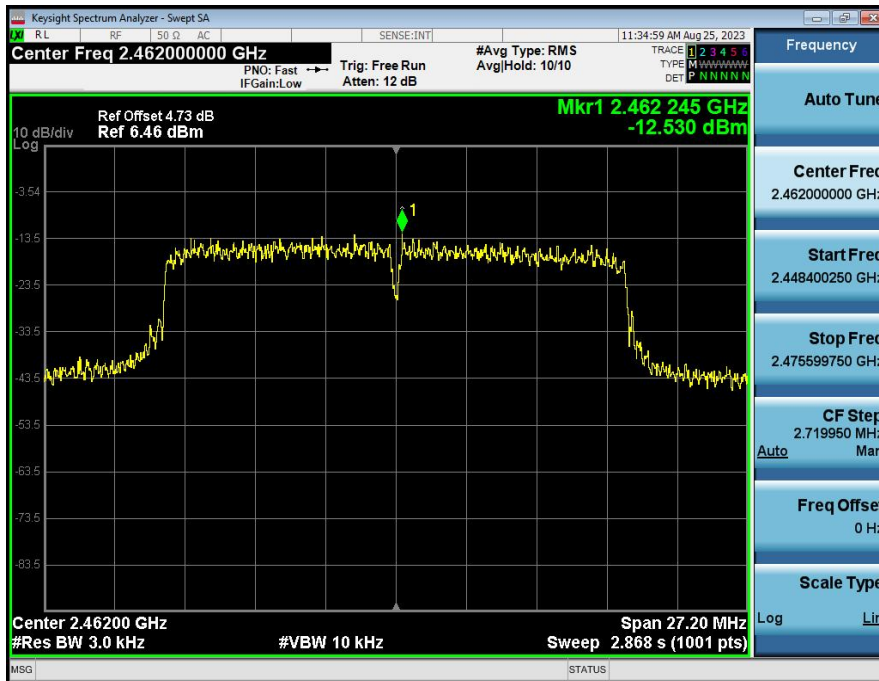
## 802.11n20 Low Channel



## 802.11n20 Middle Channel



## 802.11n20 High Channel



## 802.11n40 Low Channel

