



## 8. On Time, Duty Cycle and Measurement methods

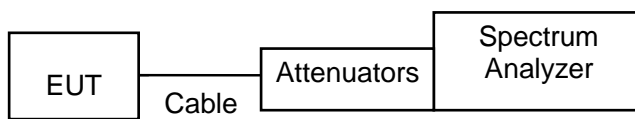
### 8.1 Test Limit

None; for reporting purposes only.

### 8.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.6  
Zero-Span Spectrum Analyzer Method.

### 8.3 Test Setup Layout

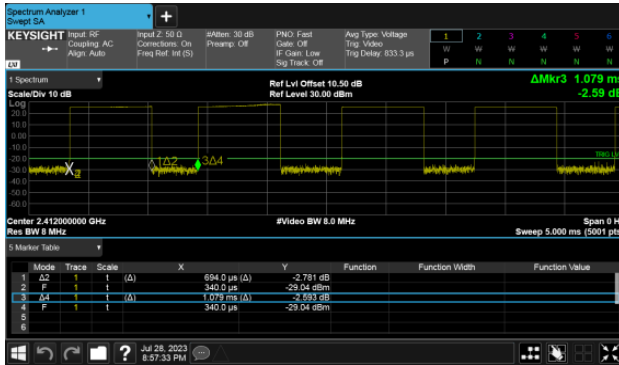


### 8.4 Test Result and Data

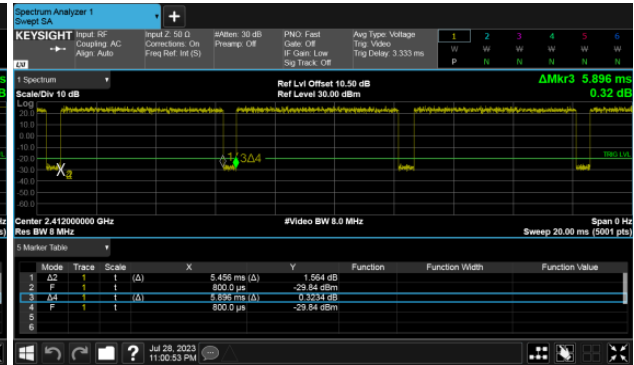
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
11b,1M	0.69	1.08	64.32%
11g,6M	1.98	2.08	95.20%
11ax HE20	5.46	5.90	92.54%
11ax HE40	5.46	5.95	91.73%



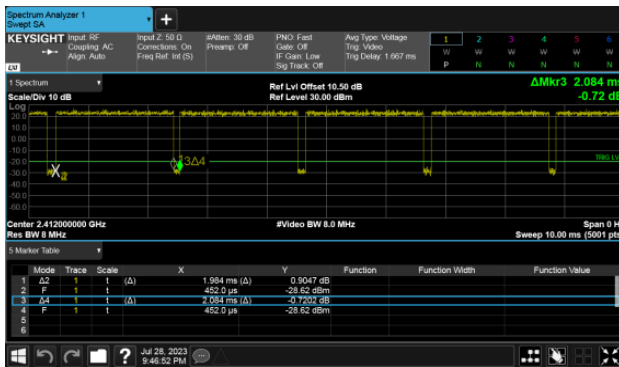
Modulation Type: 802.11b(1Mbps)



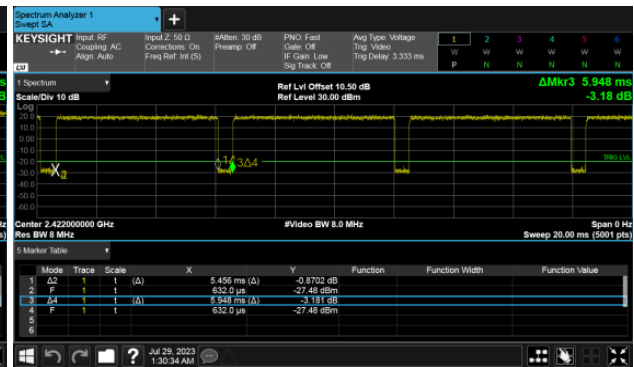
Modulation Type: 802.11ax HE20 (7.3Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11ax HE40 (14.6Mbps)





### 9. 6dB Bandwidth Measurement Data

#### 9.1 Test Limit

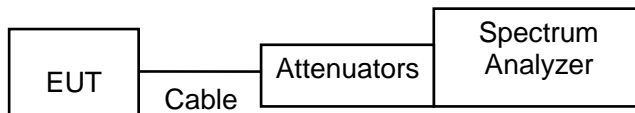
The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 9.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.8

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.
- c. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- d. The 6dB Bandwidth was measured and recorded.

#### 9.3 Test Setup Layout



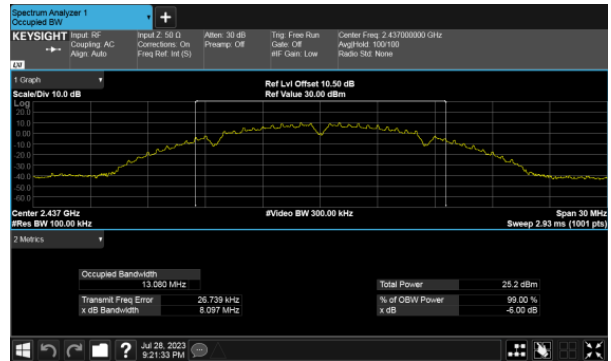
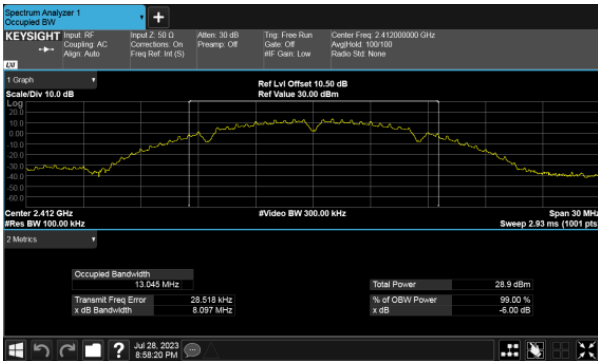
#### 9.4 Test Result and Data

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (KHz)
			ANT A	ANT B	
11b	1	2412	8.10	8.10	0.5
	6	2437	8.10	8.09	0.5
	11	2462	8.08	8.10	0.5
11g	1	2412	15.10	15.11	0.5
	6	2437	15.12	15.12	0.5
	11	2462	15.11	15.09	0.5
11ax HE20	1	2412	15.13	15.08	0.5
	6	2437	15.12	15.11	0.5
	11	2462	15.15	15.11	0.5
11ax HE40	3	2422	32.60	35.04	0.5
	6	2437	35.08	33.85	0.5
	9	2452	35.09	35.08	0.5



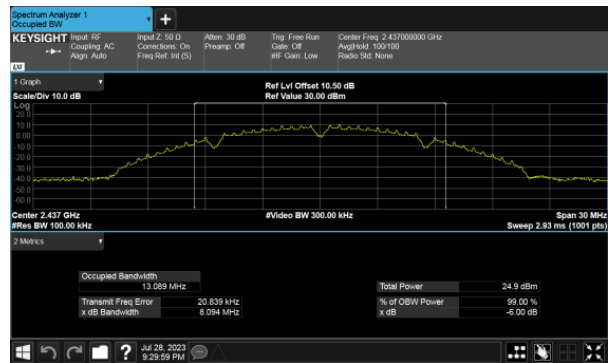
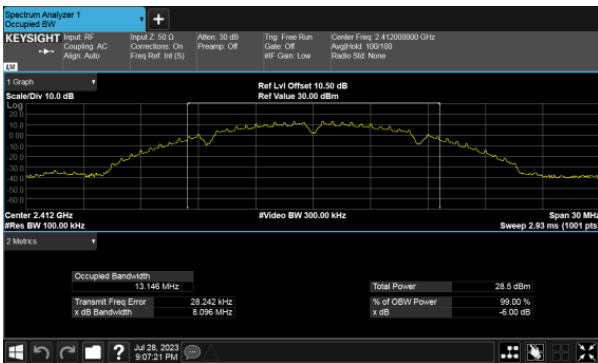
Modulation Type: 802.11b CH01  
ANT A

Modulation Type: 802.11b CH06  
ANT A



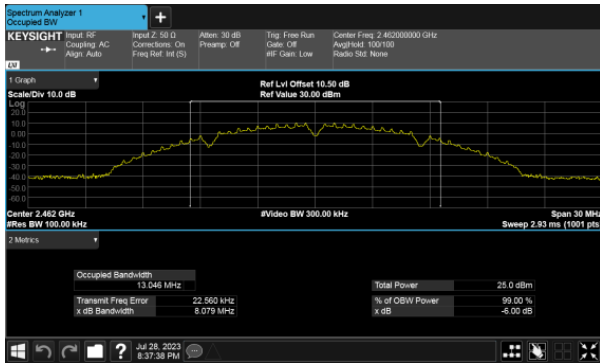
ANT B

ANT B

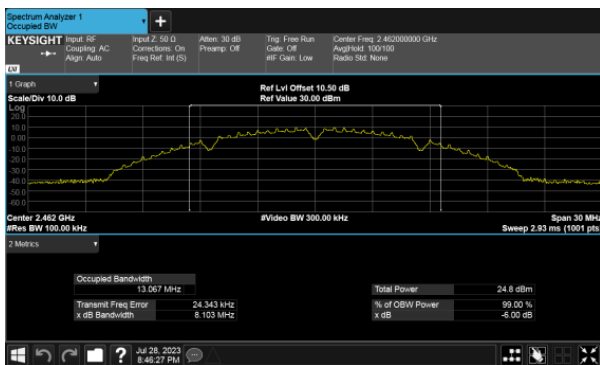




Modulation Type: 802.11b CH11  
ANT A



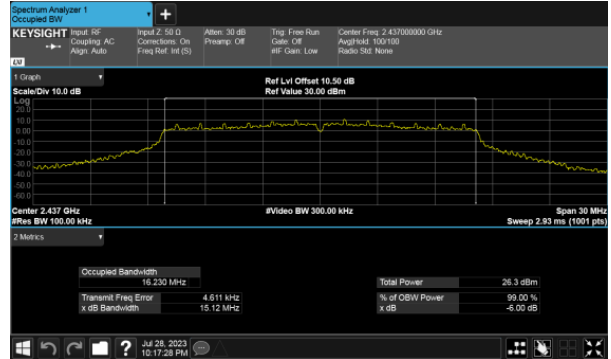
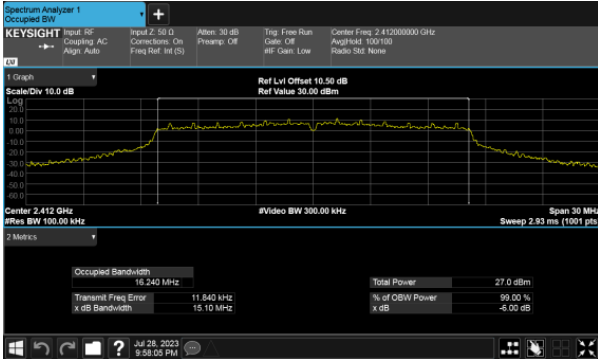
ANT B





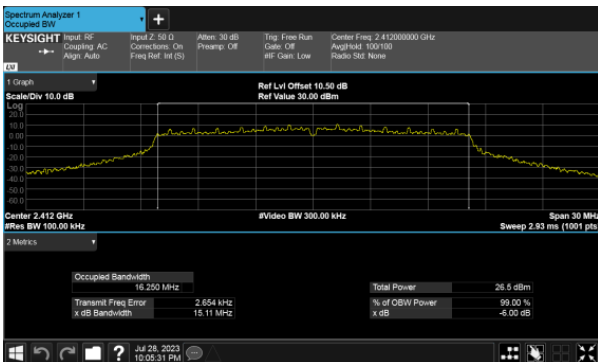
Modulation Type: 802.11g CH01  
ANT A

Modulation Type: 802.11g CH06  
ANT A



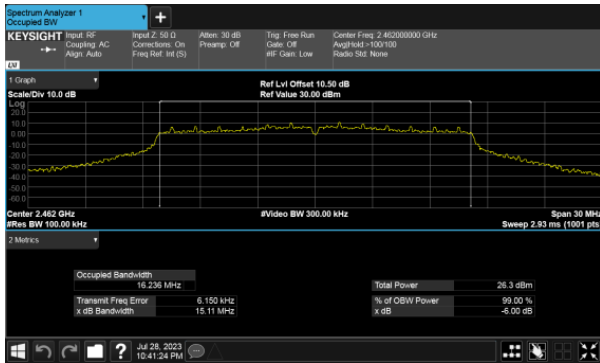
ANT B

ANT B

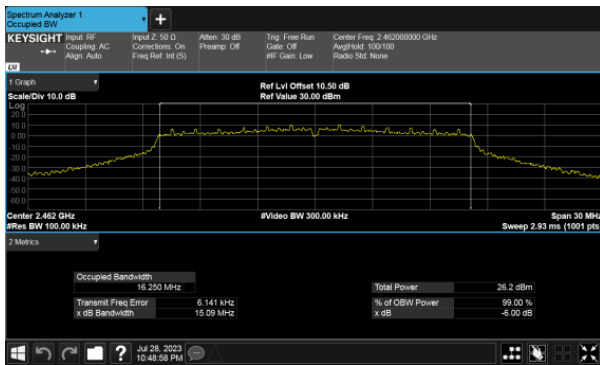




Modulation Type: 802.11g CH11  
ANT A

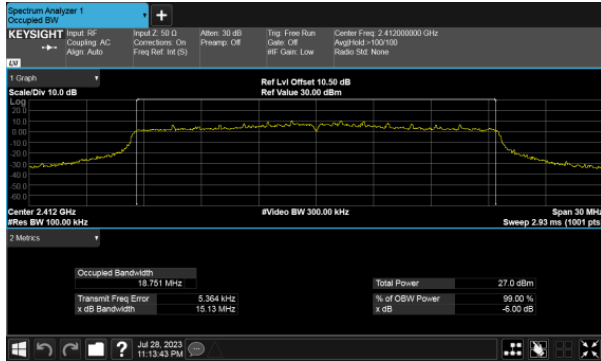


ANT B

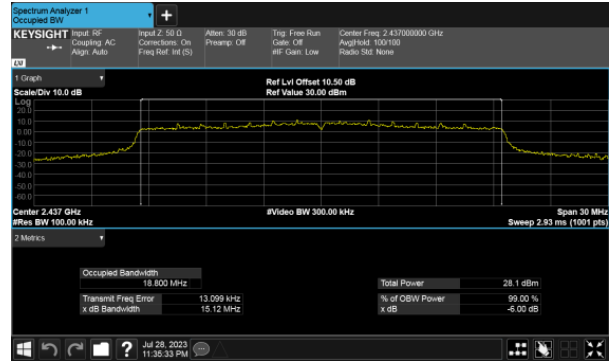




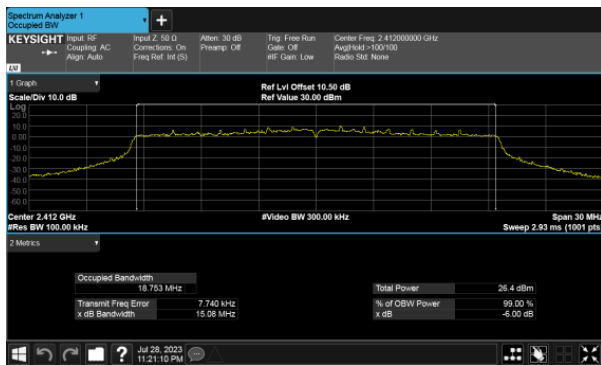
Modulation Type: 802.11ax HE20 CH01  
ANT A



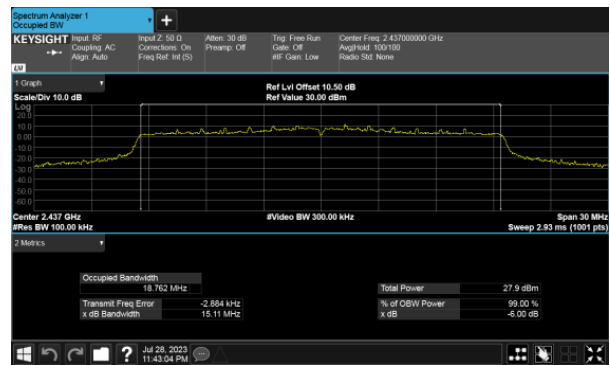
Modulation Type: 802.11ax HE20 CH06  
ANT A



ANT B



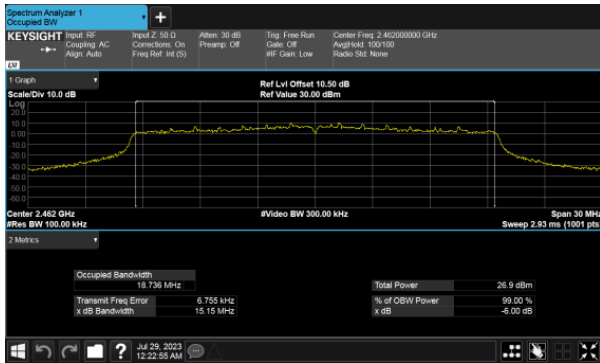
ANT B



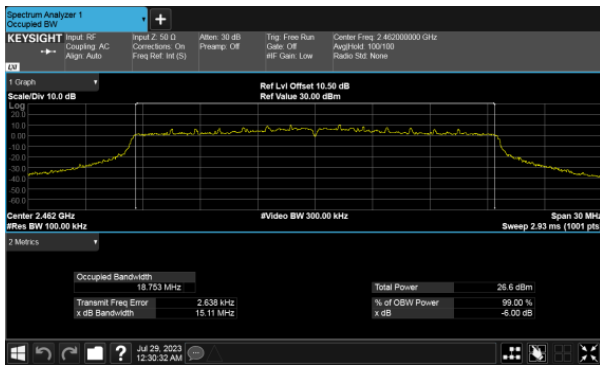




Modulation Type: 802.11ax HE20 CH11  
ANT A



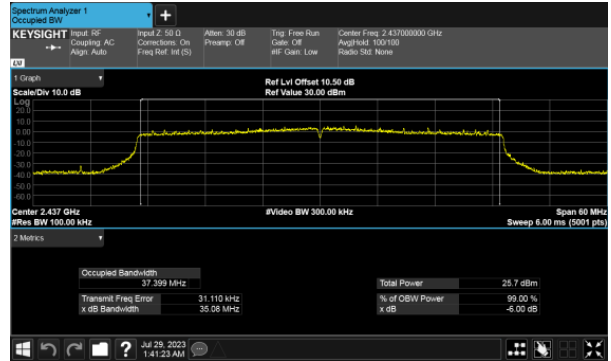
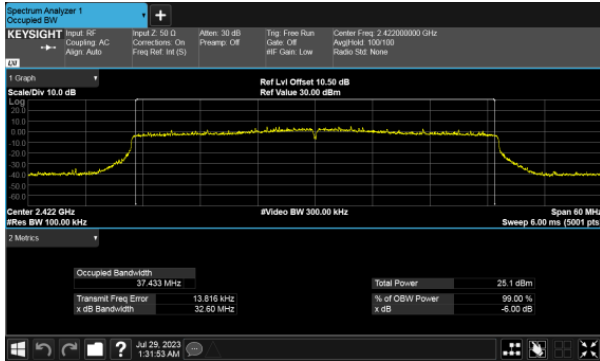
ANT B





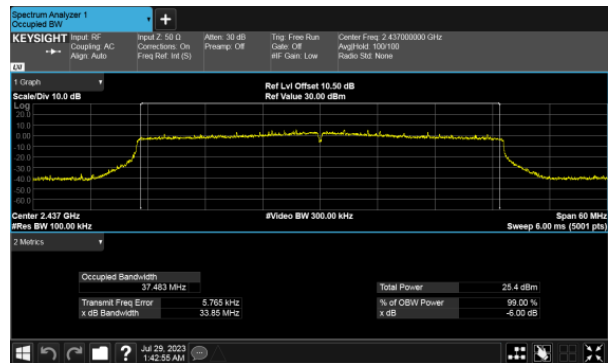
Modulation Type: 802.11ax HE40 CH03  
ANT A

Modulation Type: 802.11ax HE40 CH06  
ANT A



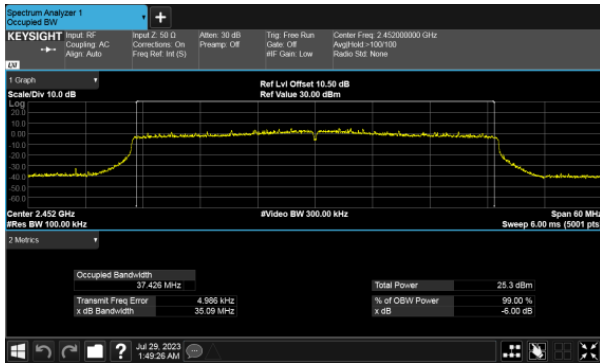
ANT B

ANT B





Modulation Type: 802.11ax HE40 CH09  
ANT A



ANT B





## 10. Maximum Average Output Power

### 10.1 Test Limit

The Maximum Average Output Power Measurement is 30dBm.

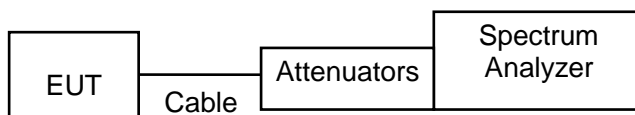
If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

### 10.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.9.2.3.2

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

### 10.3 Test Setup Layout





### 10.4 Test Result and Data

Non-beamforming							
Modulation Mode	CH	Frequency (MHz)	Conducted (AV) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Power Limit (dBm)
			ANT A	ANT B			
11b	1	2412	21.31	21.48	24.41	275.812	30.00
	6	2437	17.98	17.82	20.91	123.340	30.00
	11	2462	17.85	17.64	20.76	119.030	30.00
11g	1	2412	19.83	19.55	22.70	186.318	30.00
	6	2437	19.09	18.87	21.99	158.186	30.00
	11	2462	19.28	18.99	22.15	163.973	30.00
11ax HE20	1	2412	18.93	18.74	21.85	152.980	30.00
	6	2437	20.23	20.02	23.14	205.900	30.00
	11	2462	18.85	18.76	21.82	151.898	30.00
11ax HE40	3	2422	17.48	17.23	20.37	108.820	30.00
	6	2437	18.23	18.11	21.18	131.242	30.00
	9	2452	17.63	17.40	20.53	112.897	30.00

Beamforming							
Modulation Mode	CH	Frequency (MHz)	Conducted (AV) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Power Limit (dBm)
			ANT A	ANT B			
11ax HE20	1	2412	18.93	18.74	21.85	152.980	29.69
	6	2437	20.23	20.02	23.14	205.900	29.69
	11	2462	18.85	18.76	21.82	151.898	29.69
11ax HE40	3	2422	17.48	17.23	20.37	108.820	29.69
	6	2437	18.23	18.11	21.18	131.242	29.69
	9	2452	17.63	17.40	20.53	112.897	29.69



## 11. Power Spectral Density

### 11.1 Test Limit

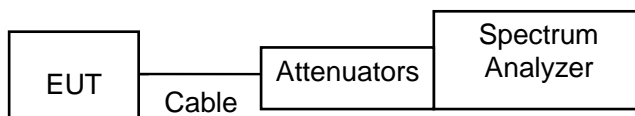
The Maximum of Power Spectral Density Measurement is 8dBm.

If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

### 11.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.10.1.

### 11.3 Test Setup Layout



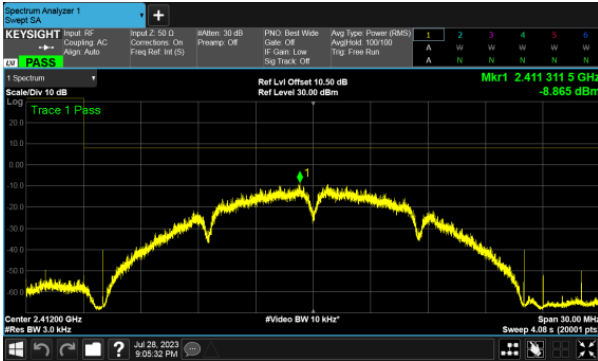
### 11.4 Test Result and Data

Modulation Type	CH	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT A	ANT B				
11b	1	2412	-8.865	-8.6	-5.72	1.92	-3.80	7.69
	6	2437	-12.431	-12.666	-9.54	1.92	-7.62	7.69
	11	2462	-12.21	-12.293	-9.24	1.92	-7.32	7.69
11g	1	2412	-11.366	-11.865	-8.60	0.21	-8.39	7.69
	6	2437	-12.129	-12.406	-9.25	0.21	-9.04	7.69
	11	2462	-11.326	-12.09	-8.68	0.21	-8.47	7.69
11ax HE20	1	2412	-15.12	-15.242	-12.17	0.34	-11.83	7.69
	6	2437	-13.965	-14.028	-10.99	0.34	-10.65	7.69
	11	2462	-15.14	-15.169	-12.14	0.34	-11.80	7.69

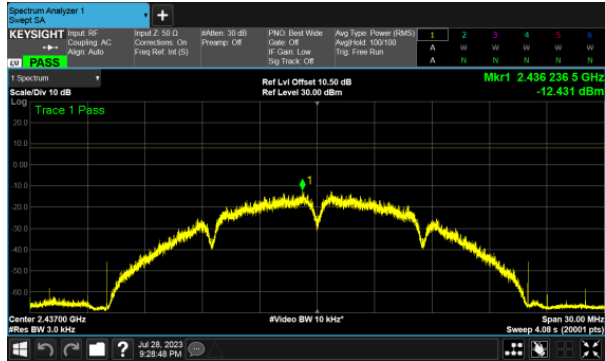
Modulation Type	CH	Frequency (MHz)	Maximum Power Density of 100KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT A	ANT B				
11ax HE40	3	2422	-4.93	-5.709	-2.29	0.37	-1.92	7.69
	6	2437	-4.343	-4.563	-1.44	0.37	-1.07	7.69
	9	2452	-5.046	-5.258	-2.14	0.37	-1.77	7.69



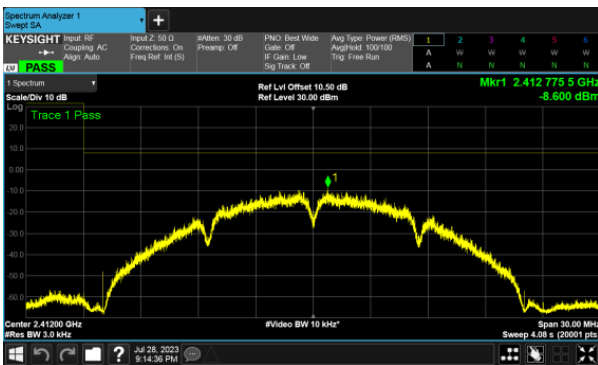
Modulation Type: 802.11b CH01  
ANT A



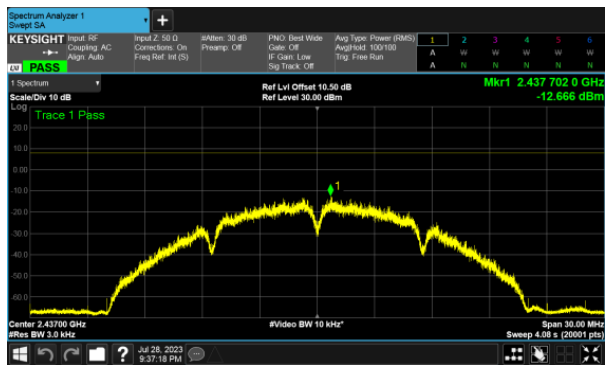
Modulation Type: 802.11b CH06  
ANT A



ANT B

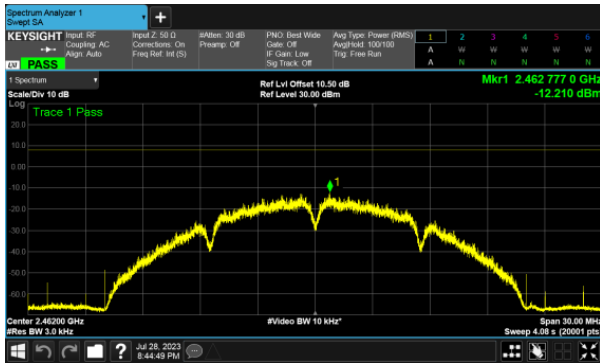


ANT B

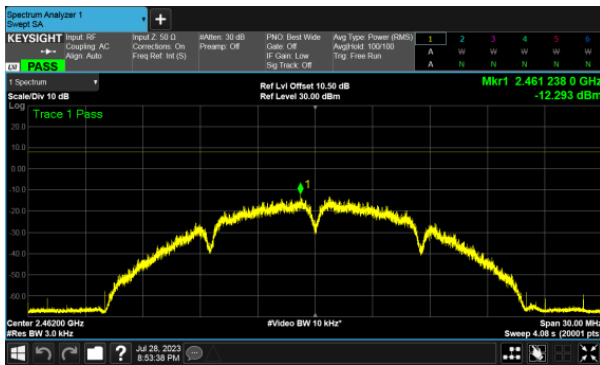




Modulation Type: 802.11b CH11  
ANT A



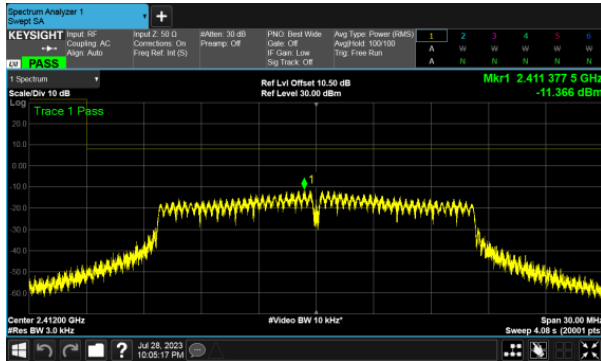
ANT B



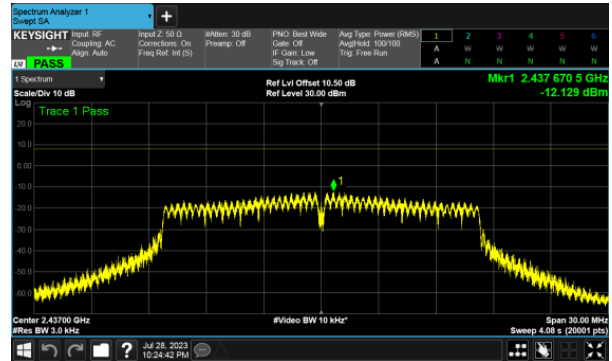




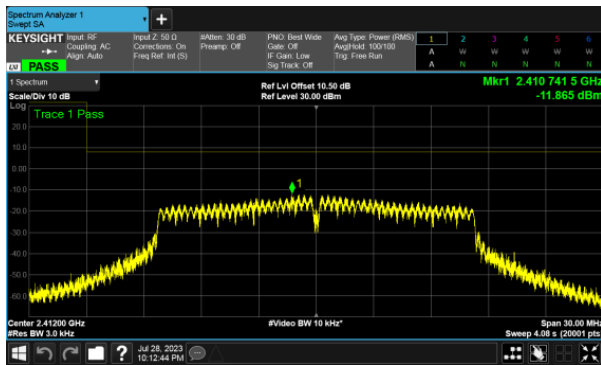
Modulation Type: 802.11g CH01  
ANT A



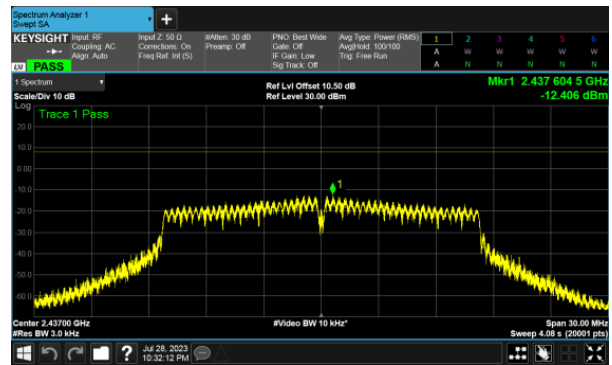
Modulation Type: 802.11g CH06  
ANT A



ANT B

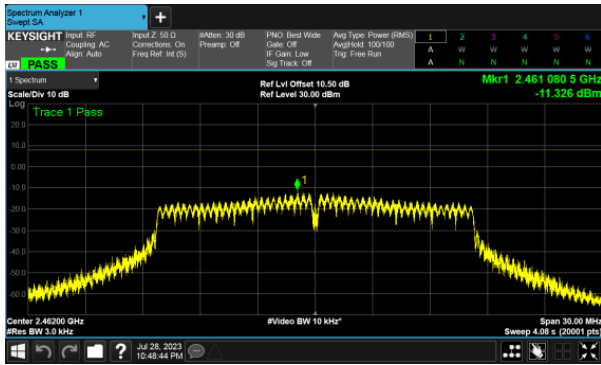


ANT B

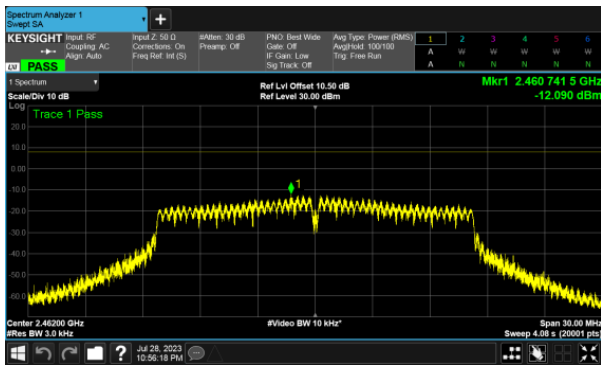




Modulation Type: 802.11g CH11  
ANT A



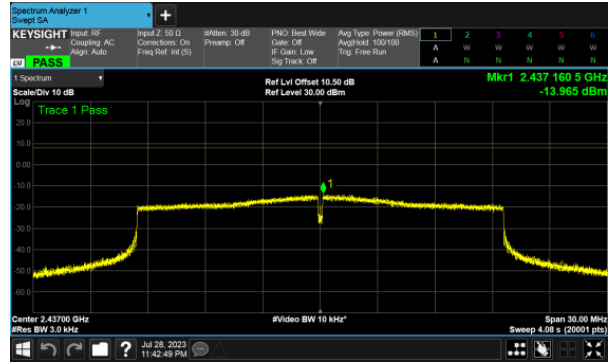
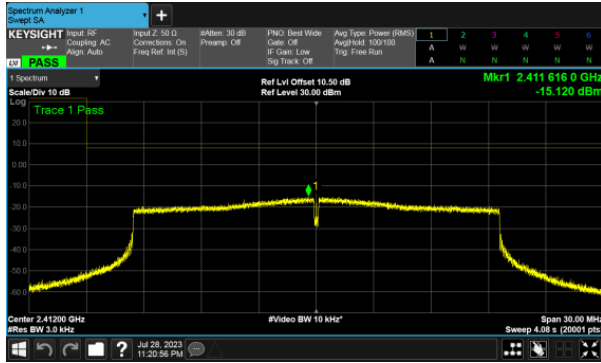
ANT B





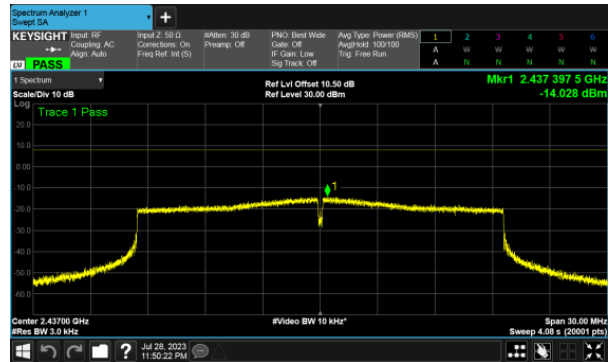
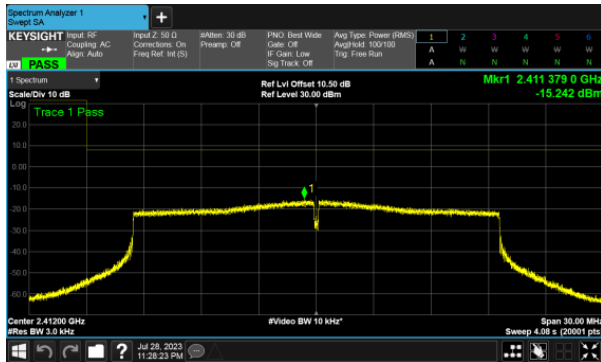
Modulation Type: 802.11ax HE20 CH01  
ANT A

Modulation Type: 802.11ax HE20 CH06  
ANT A



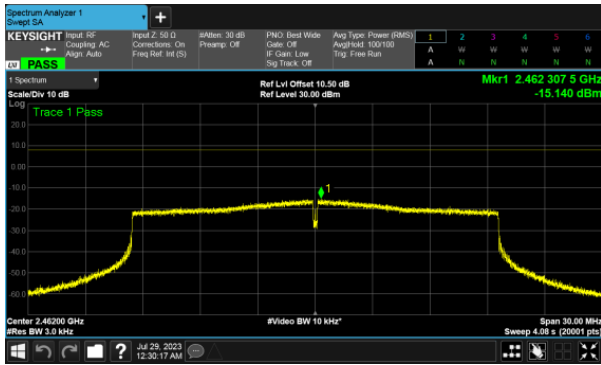
ANT B

ANT B

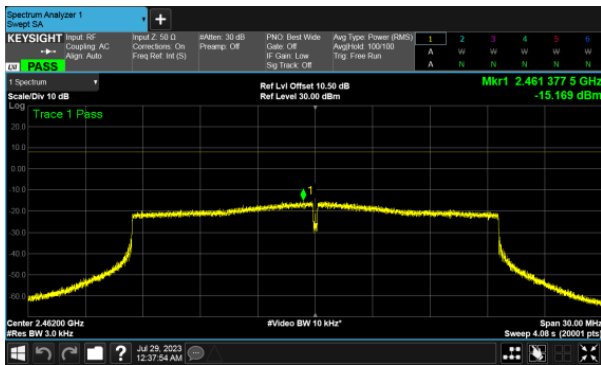




Modulation Type: 802.11ax HE20 CH11  
ANT A

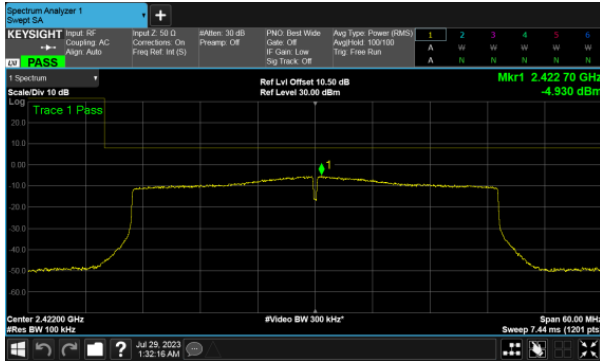


ANT B

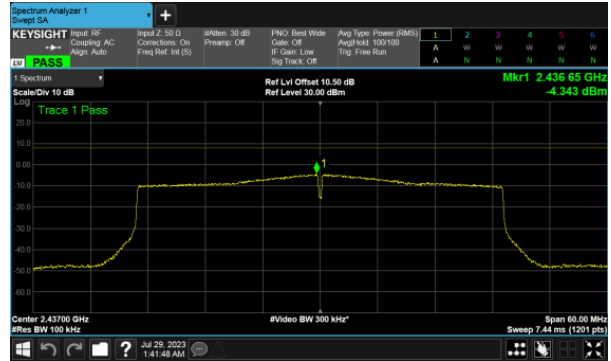




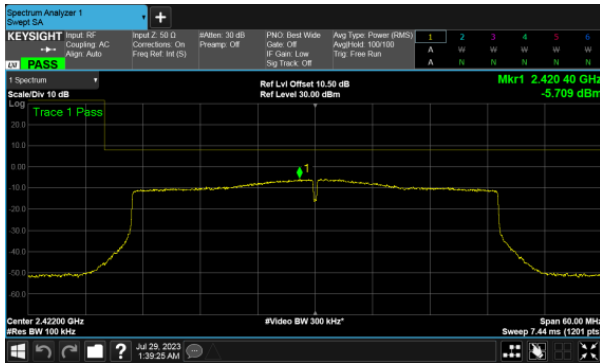
Modulation Type: 802.11ax HE40 CH03  
ANT A



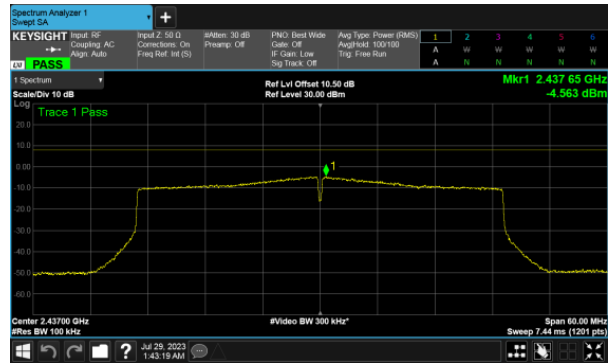
Modulation Type: 802.11ax HE40 CH06  
ANT A



ANT B

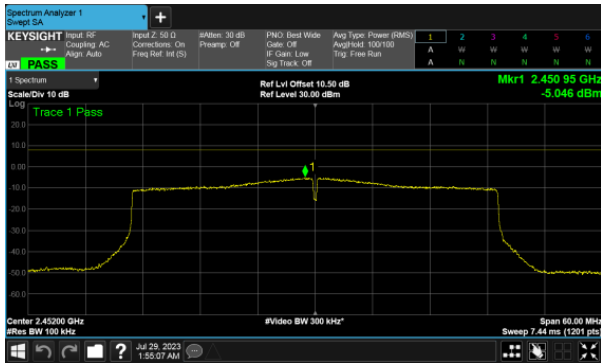


ANT B





Modulation Type: 802.11ax HE40 CH09  
ANT A



ANT B

