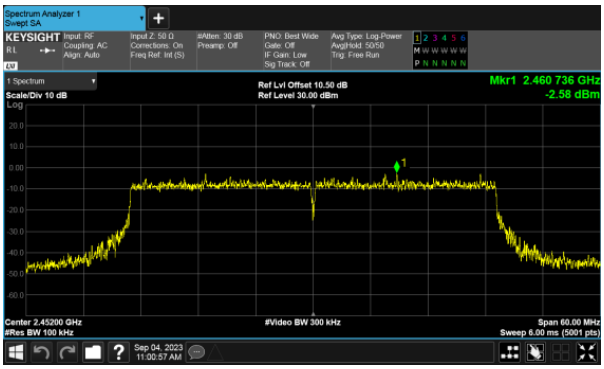
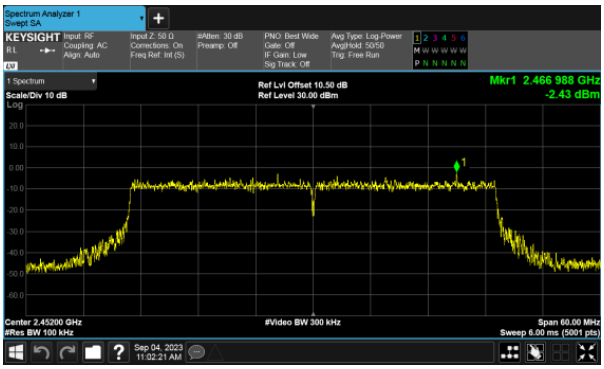
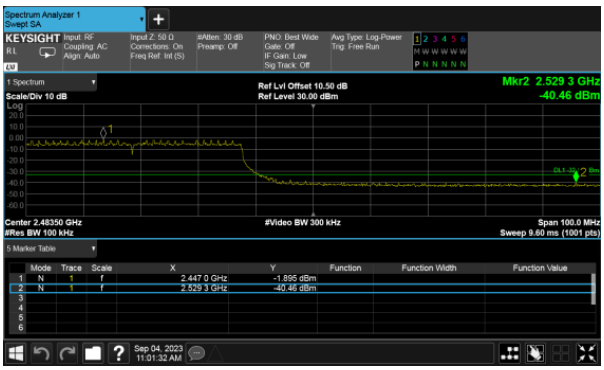
Non-Beamforming
Modulation Type: 802.11ax HE40 CH09

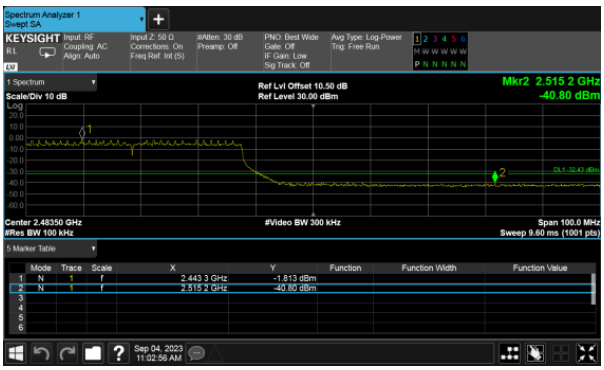
ANT A

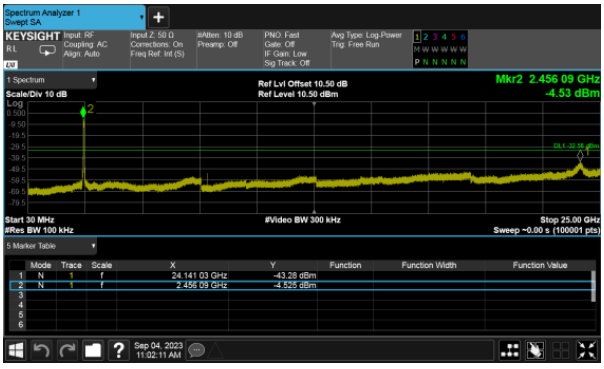


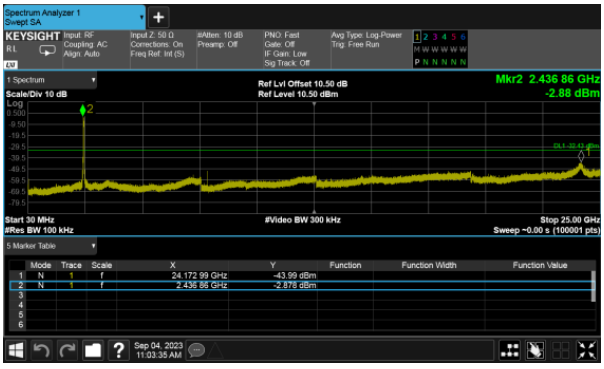
ANT B











8. On Time, Duty Cycle and Measurement methods

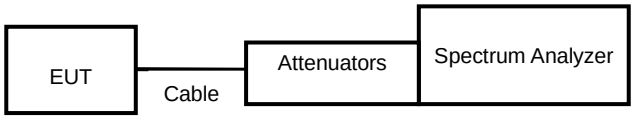
8.1 Test Limit

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.

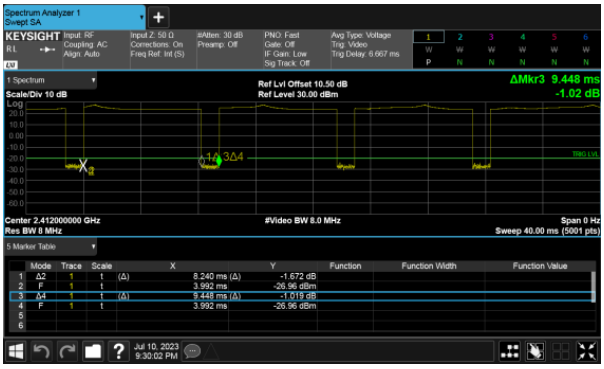
8.3 Test Setup Layout



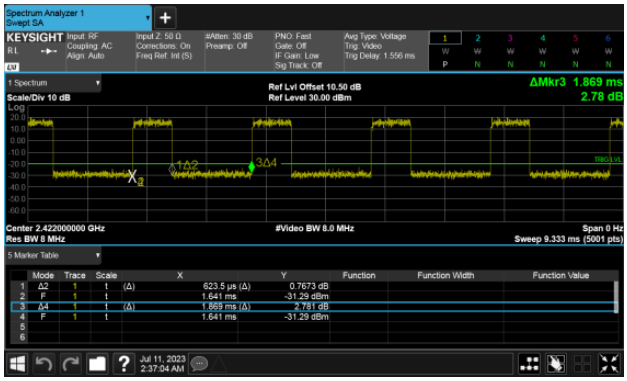
8.4 Test Result and Data

Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
11b,1M	8.24	9.45	87.21%
11g,6M	1.37	2.61	52.37%
11ax HE20	1.18	2.42	48.57%
11ax HE40	0.62	1.87	33.36%

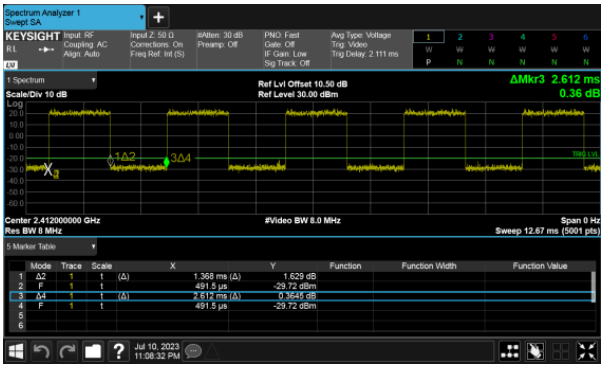
Modulation Type: 802.11b(1Mbps)



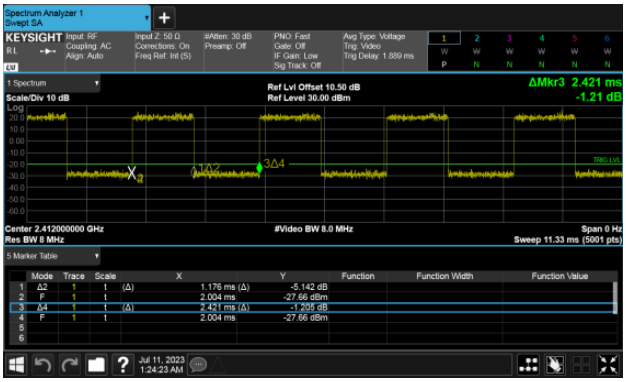
Modulation Type: 802.11ax HE40 (14.6Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11ax HE20 (7.3Mbps)



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

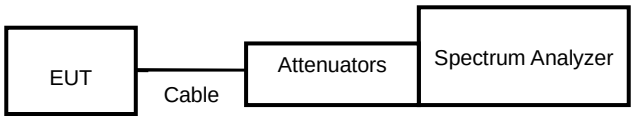
a. The transmitter output was connected to the spectrum analyzer.

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



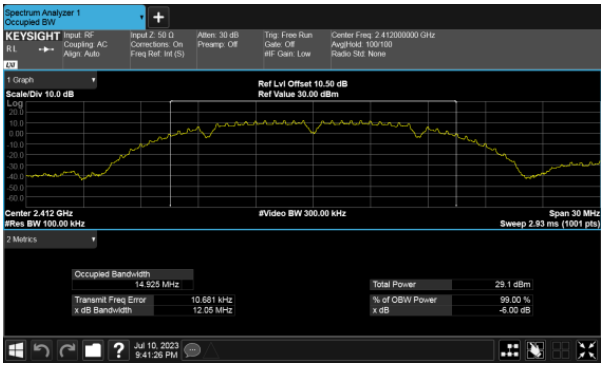
9.4 Test Result and Data

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT A	ANT B	
11b	1	2412	11.10	12.05	0.5
	6	2437	12.03	12.04	0.5
	11	2462	11.10	12.05	0.5
11g	1	2412	16.33	16.36	0.5
	6	2437	16.33	16.36	0.5
	11	2462	16.33	16.36	0.5
11ax HE20	1	2412	18.94	18.98	0.5
	6	2437	18.99	18.99	0.5
	11	2462	18.93	18.99	0.5
11ax HE40	3	2422	38.07	38.07	0.5
	6	2437	37.97	38.06	0.5
	9	2452	37.96	37.94	0.5

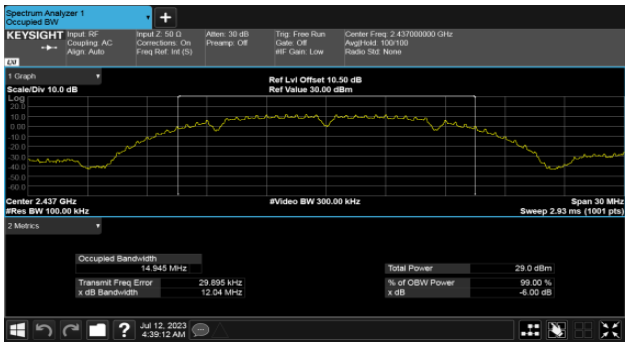
6dB Bandwidth
Modulation Type: 802.11b CH01
ANT A

Modulation Type: 802.11b CH06
ANT A

ANT B



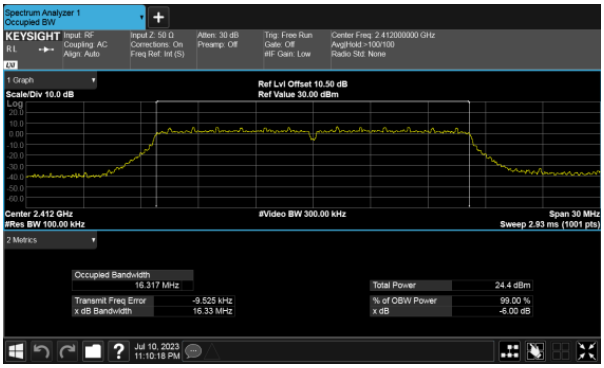
ANT B



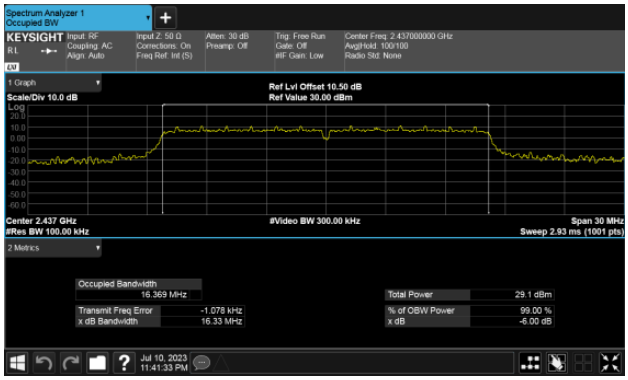
6dB Bandwidth
Modulation Type: 802.11b CH11
ANT A

ANT B

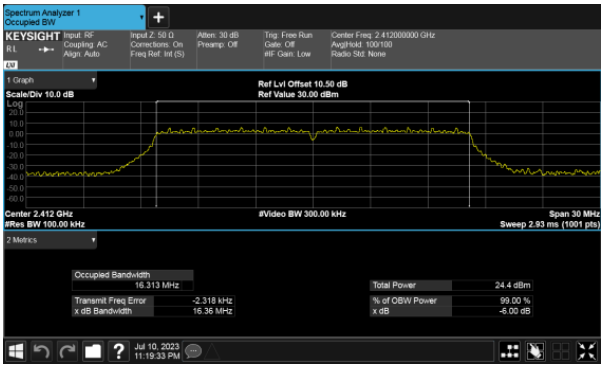
6dB Bandwidth
Modulation Type: 802.11g CH01
ANT A



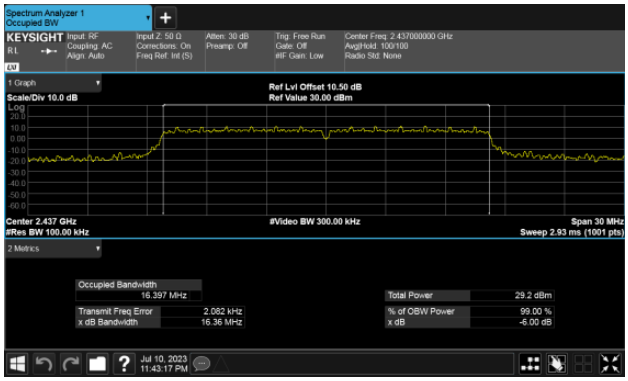
Modulation Type: 802.11g CH06
ANT A



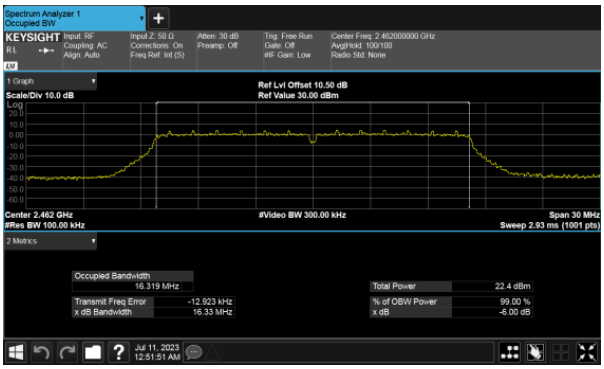
ANT B



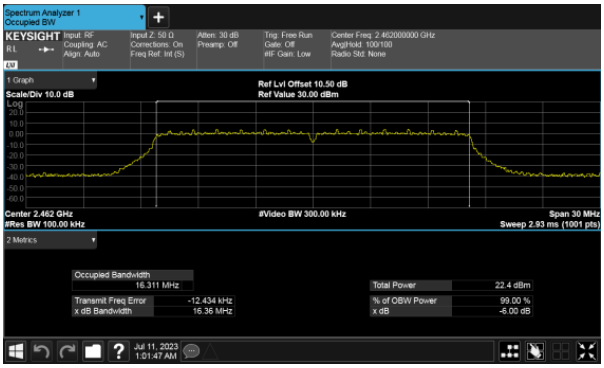
ANT B



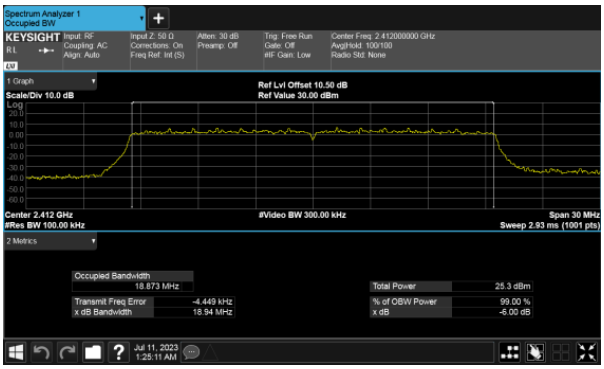
6dB Bandwidth
Modulation Type: 802.11g CH11
ANT A



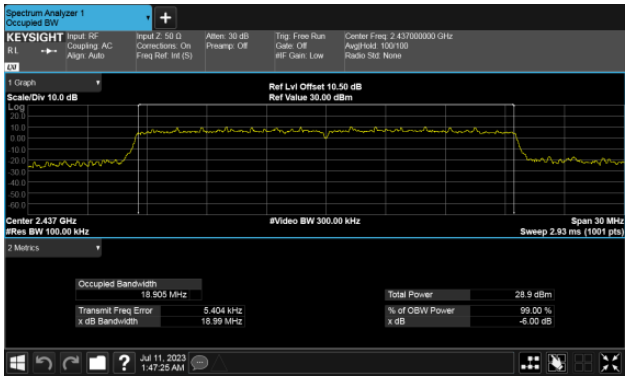
ANT B



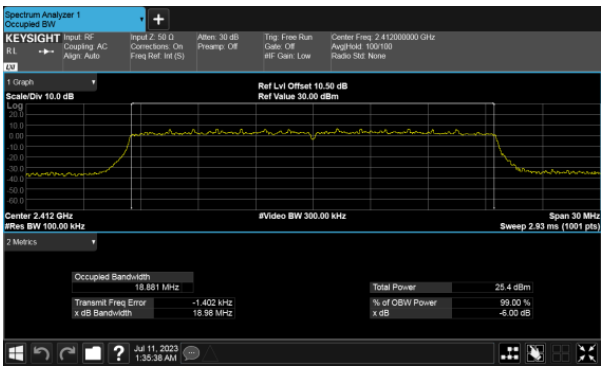
6dB Bandwidth
Modulation Type: 802.11ax HE20 CH01
ANT A



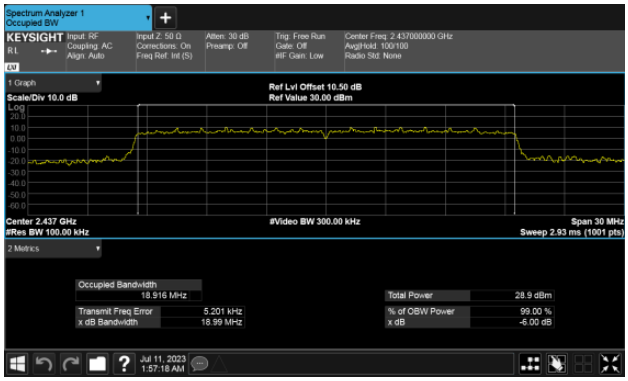
Modulation Type: 802.11ax HE20 CH06
ANT A



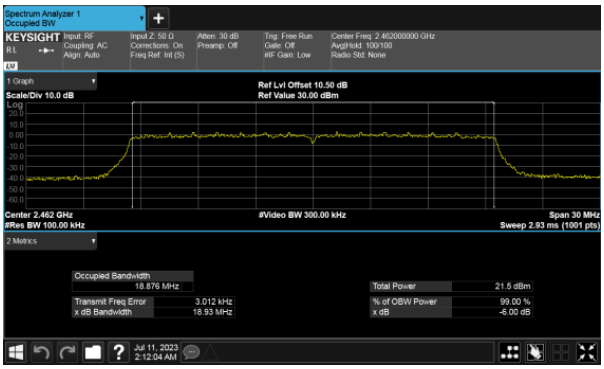
ANT B



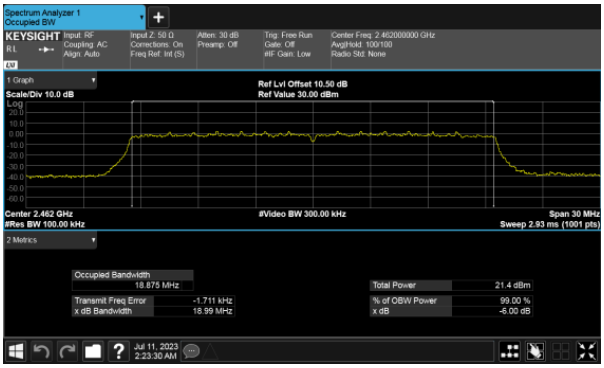
ANT B



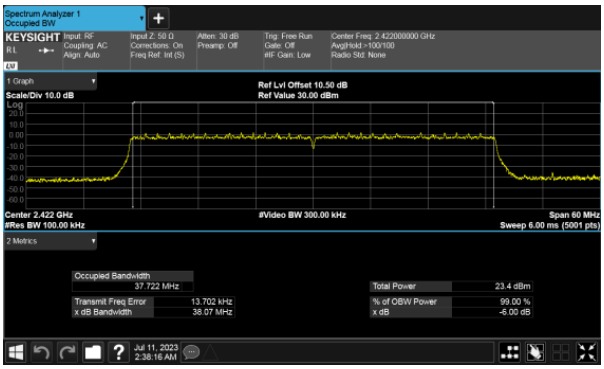
6dB Bandwidth
Modulation Type: 802.11ax HE20 CH11
ANT A



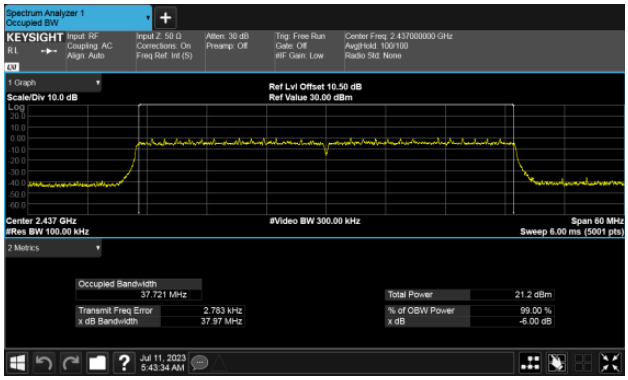
ANT B



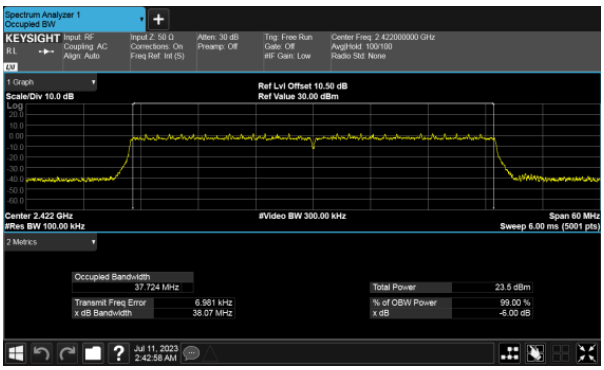
6dB Bandwidth
Modulation Type: 802.11ax HE40 CH03
ANT A



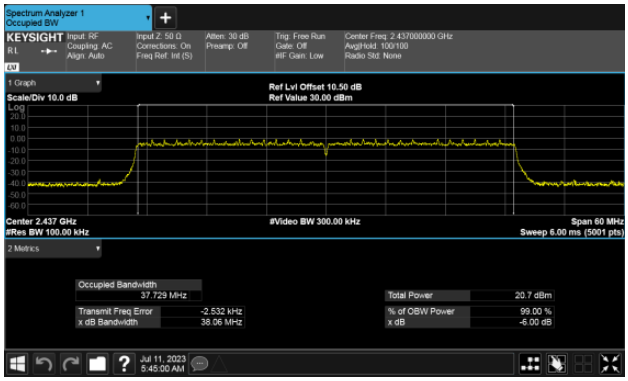
Modulation Type: 802.11ax HE40 CH06
ANT A



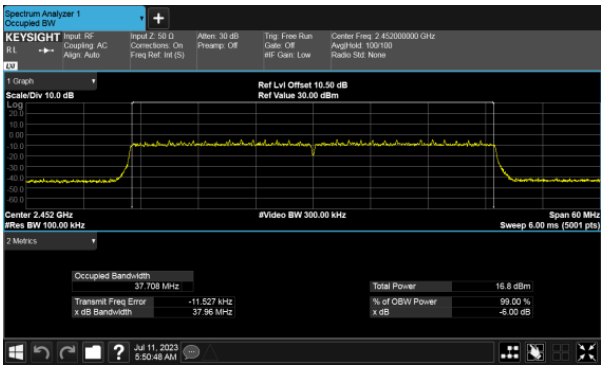
ANT B



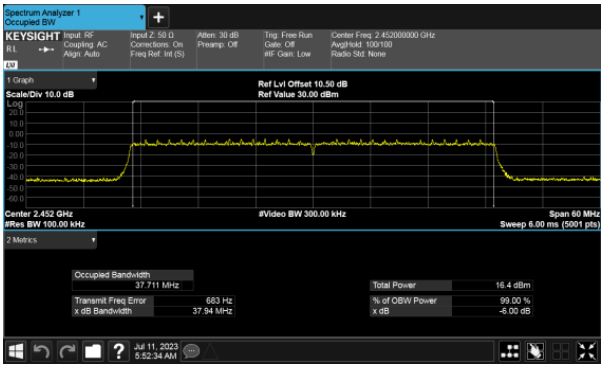
ANT B



6dB Bandwidth
Modulation Type: 802.11ax HE40 CH09
ANT A



ANT B



10. Maximum Average Output Power

10.1 Test Limit

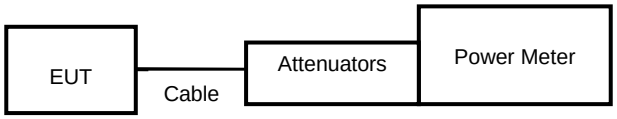
The Maximum Average Output Power Measurement is 30dBm.
If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

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

Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Powe Limit (dBm)
				ANT A	ANT B			
12.5	11b	1	2412	12.69	12.65	15.68	36.986	30.00
12.5		6	2437	12.56	12.61	15.60	36.269	30.00
12.5		11	2462	12.49	12.54	15.53	35.689	30.00
12.5	11g	1	2412	12.92	13.19	16.07	40.433	30.00
12.5		6	2437	12.83	13.11	15.98	39.651	30.00
12.5		11	2462	12.66	12.61	15.65	36.689	30.00
12.5	11ax HE20	1	2412	13.06	13.04	16.06	40.367	30.00
12.5		6	2437	13.17	13.12	16.16	41.261	30.00
12.5		11	2462	12.63	12.77	15.71	37.247	30.00
12.5	11ax HE40	3	2422	13.17	13.09	16.14	41.120	30.00
12.5		6	2437	13.18	12.99	16.10	40.704	30.00
12.5		9	2452	13.09	13.05	16.08	40.554	30.00

11. Power Spectral Density

11.1 Test Limit

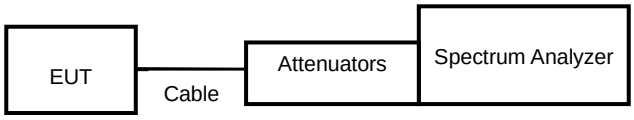
The Maximum of Power Spectral Density Measurement is 8dBm.

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

11.3 Test Setup Layout

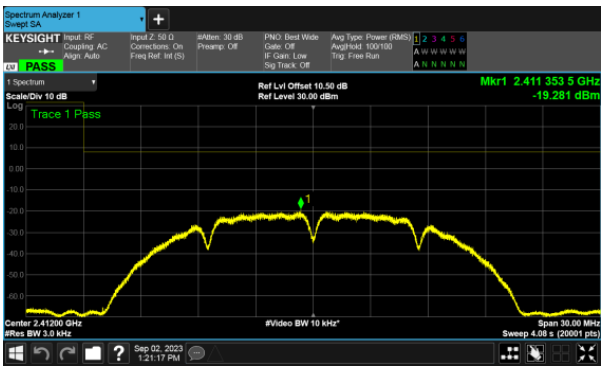


11.4 Test Result and Data

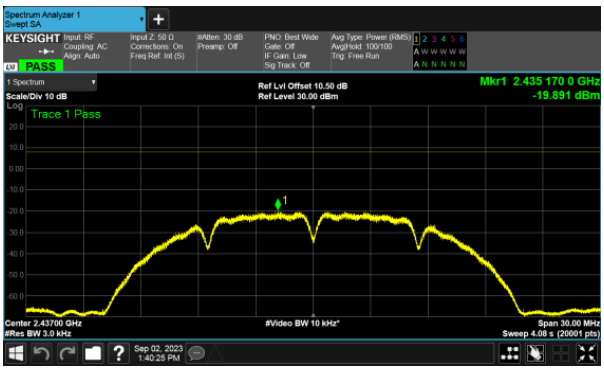
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT A	ANT B				
11b	1	2412	-19.281	-19.996	-16.61	0.59	-16.02	8.00
	6	2437	-19.891	-19.292	-16.57	0.59	-15.98	8.00
	11	2462	-19.984	-19.675	-16.82	0.59	-16.23	8.00
11g	1	2412	-22.301	-22.187	-19.23	2.81	-16.42	8.00
	6	2437	-22.626	-22.581	-19.59	2.81	-16.78	8.00
	11	2462	-22.592	-23.051	-19.81	2.81	-17.00	8.00
11ax HE20	1	2412	-21.312	-21.279	-18.29	3.14	-15.15	8.00
	6	2437	-21.865	-21.884	-18.86	3.14	-15.72	8.00
	11	2462	-22.203	-21.666	-18.92	3.14	-15.78	8.00

Modulation Type	Channel	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	-14.91	-14.952	-11.92	4.77	-7.15	8.00
	6	2437	-15.229	-15.362	-12.28	4.77	-7.51	8.00
	9	2452	-14.809	-15.195	-11.99	4.77	-7.22	8.00

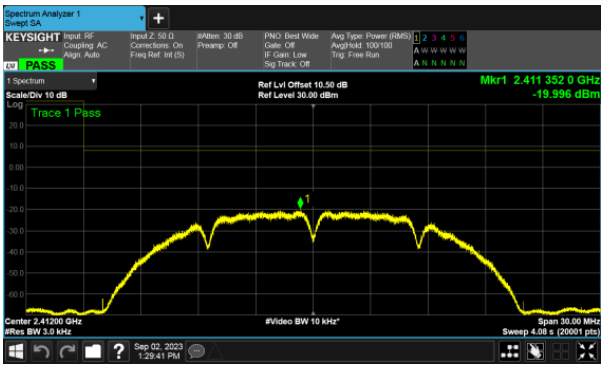
Modulation Type: 802.11b CH01
ANT A



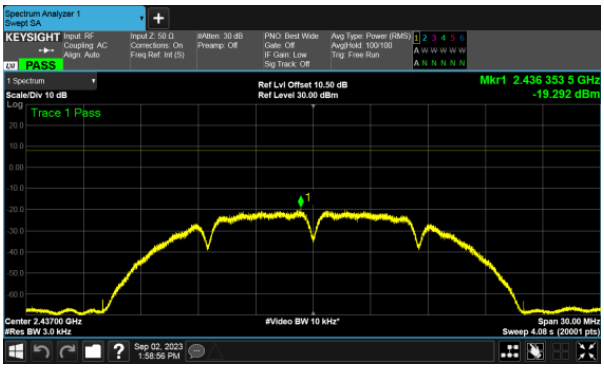
Modulation Type: 802.11b CH06
ANT A



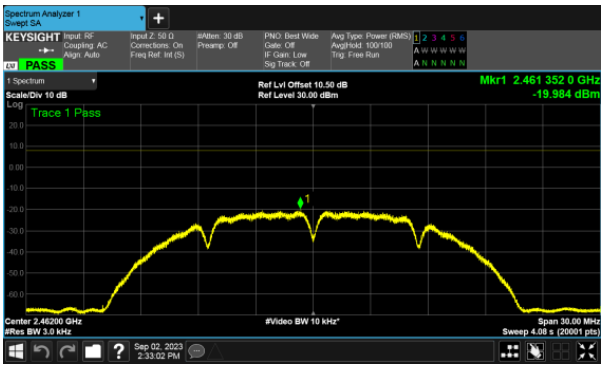
ANT B



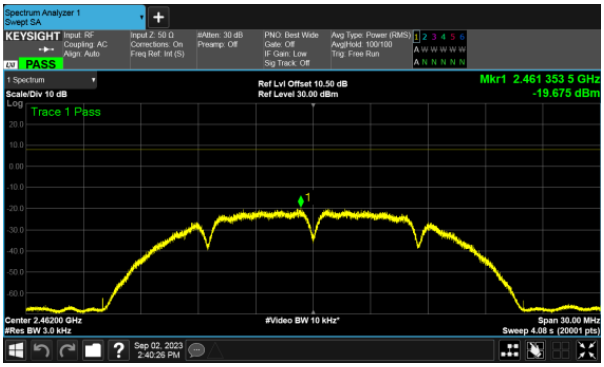
ANT B



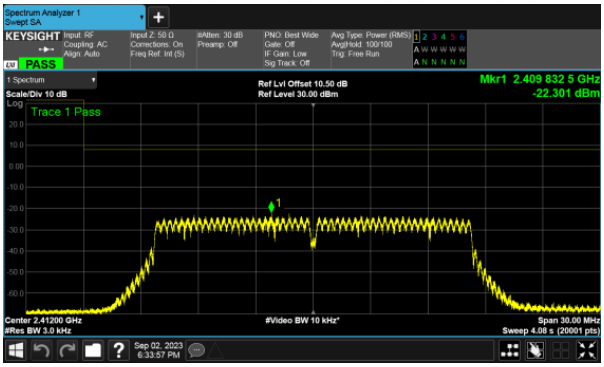
Modulation Type: 802.11b CH11
ANT A



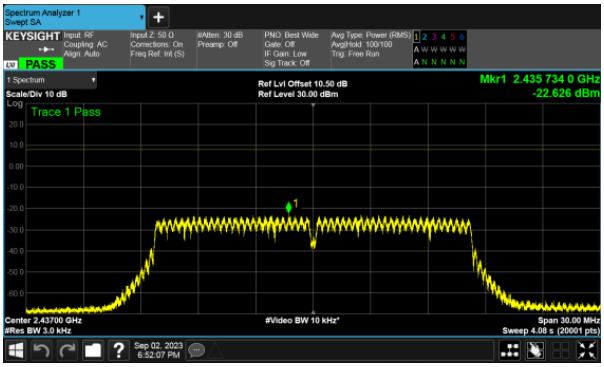
ANT B



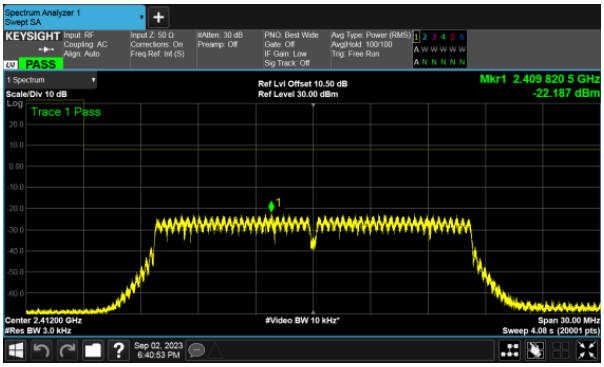
Modulation Type: 802.11g CH01
ANT A



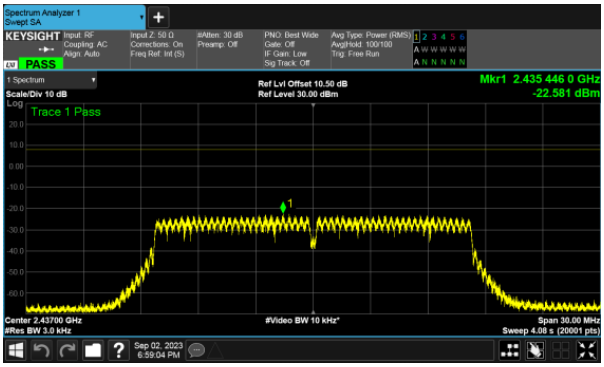
Modulation Type: 802.11g CH06
ANT A



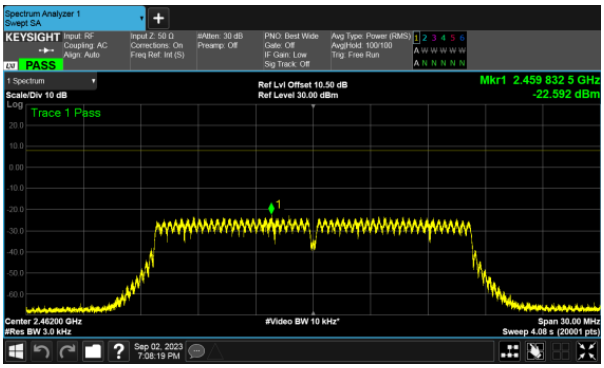
ANT B



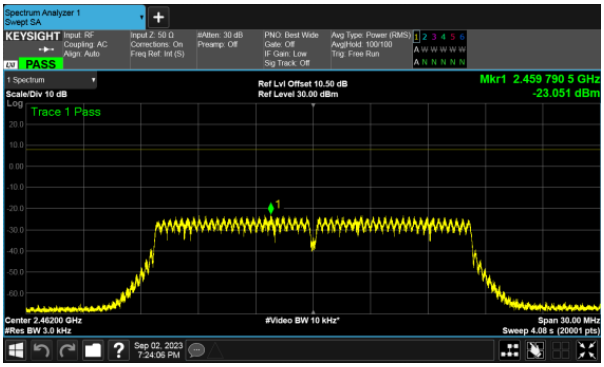
ANT B



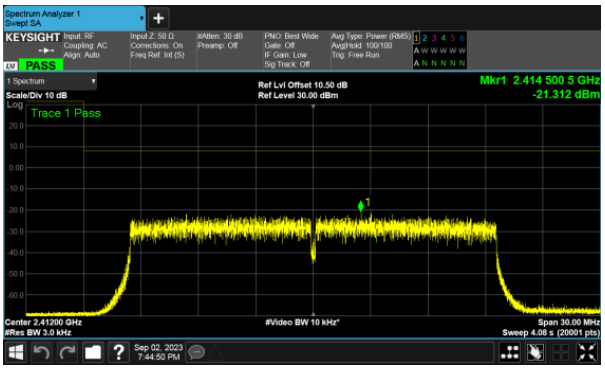
Modulation Type: 802.11g CH11
ANT A



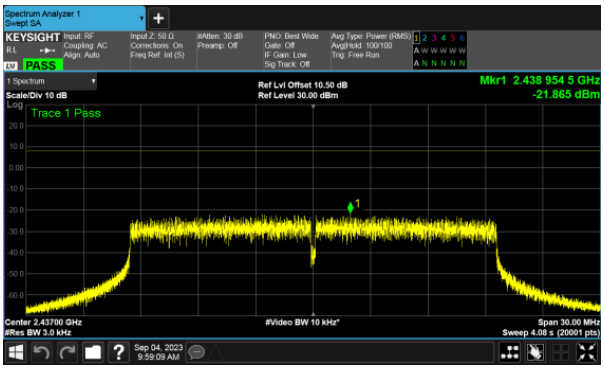
ANT B



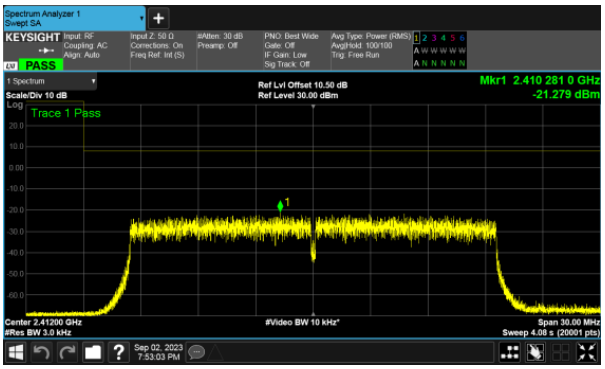
Modulation Type: 802.11ax HE20 CH01
ANT A



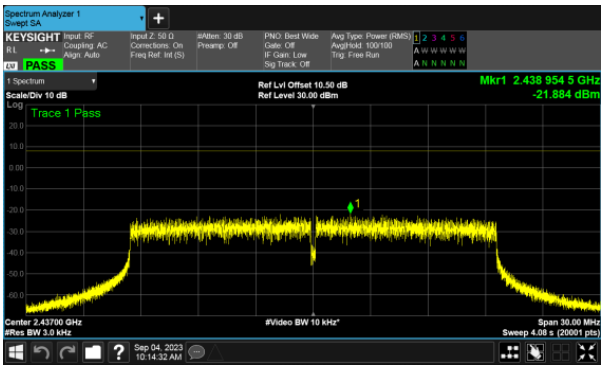
Modulation Type: 802.11ax HE20 CH06
ANT A



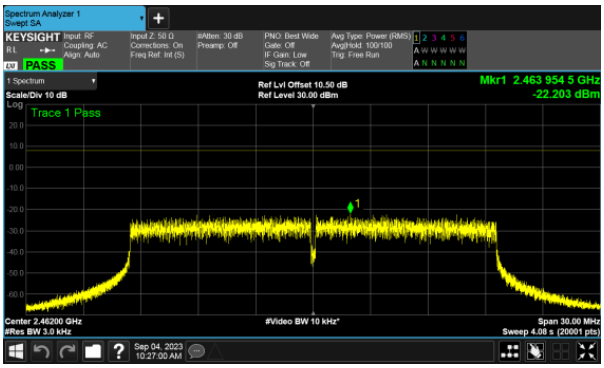
ANT B



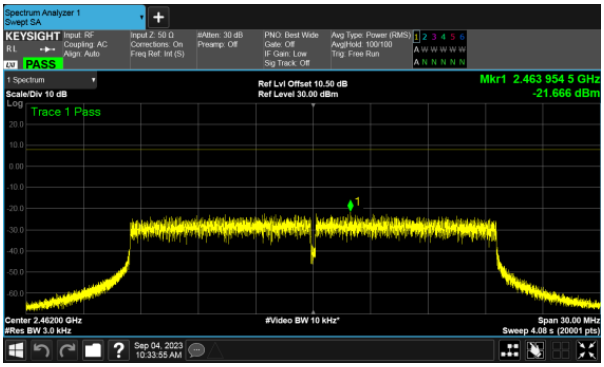
ANT B



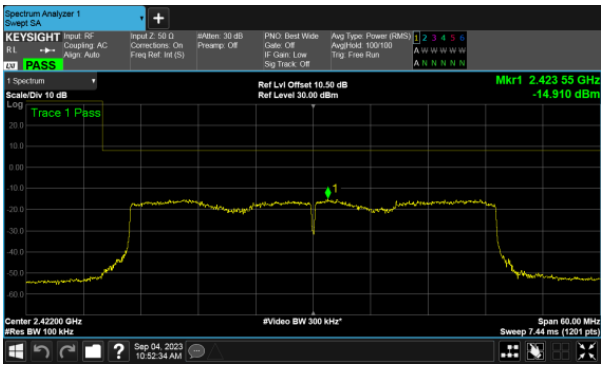
Modulation Type: 802.11ax HE20 CH11
ANT A



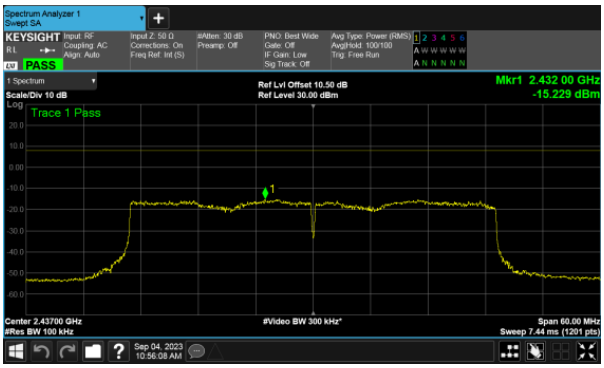
ANT B



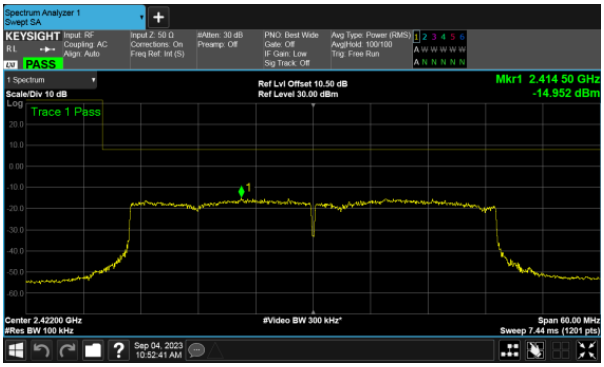
Modulation Type: 802.11ax HE40 CH03
ANT A



Modulation Type: 802.11ax HE40 CH06
ANT A



ANT B



ANT B