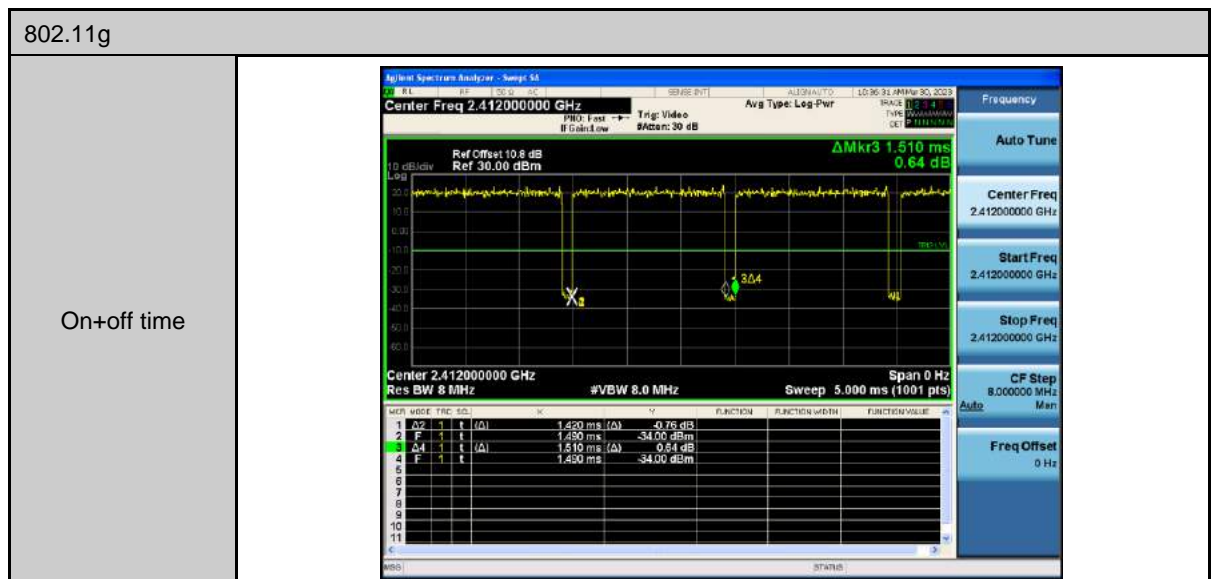
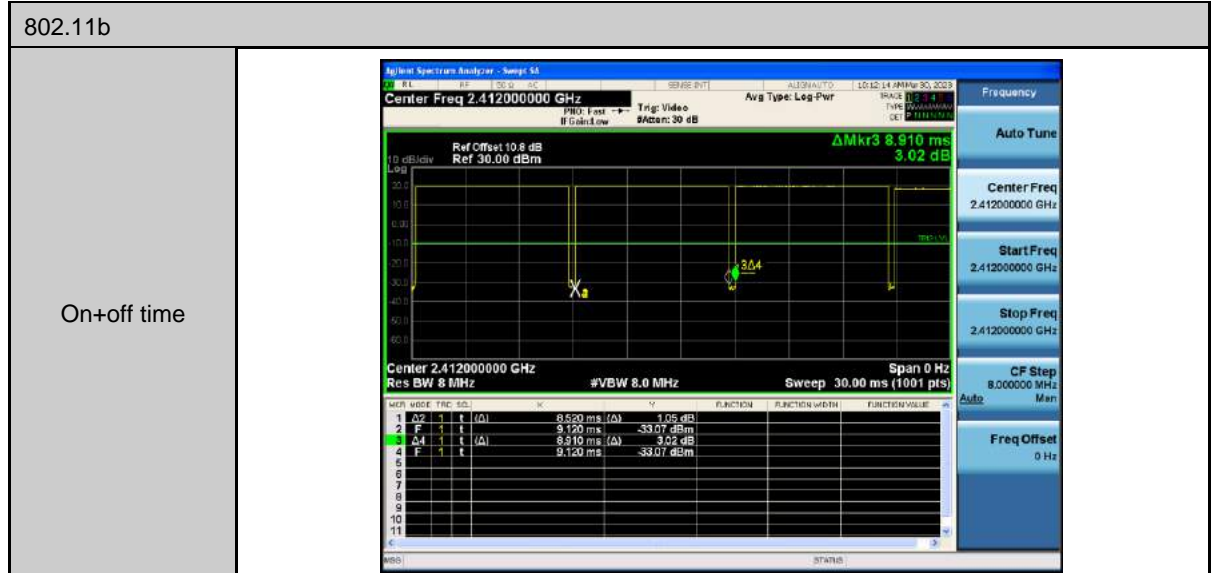


Appendix B. Test Plots

Duty cycle



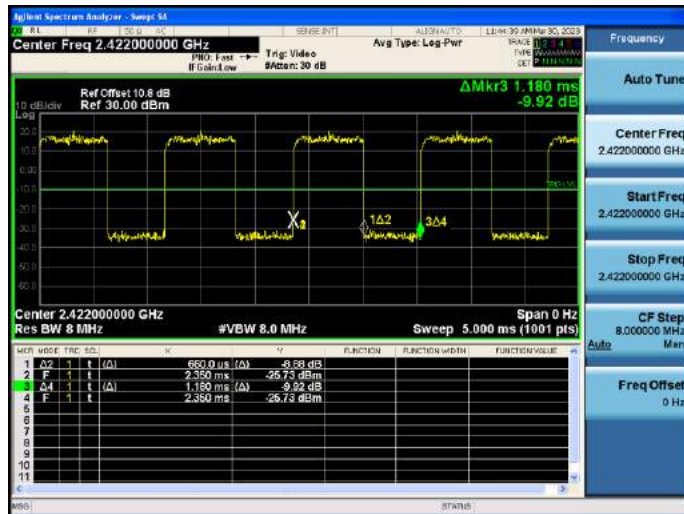
802.11n HT20

On+off time



802.11n HT40

On+off time



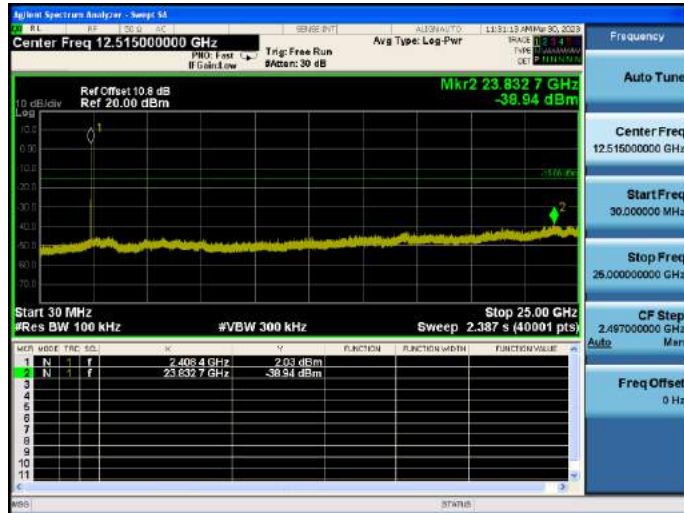
Out of Band Conducted Spurious Emission

802.11b_ANT-0																									
2412 MHz	<table border="1"> <thead> <tr> <th>MN</th> <th>MODE</th> <th>FREQ (GHz)</th> <th>PK</th> <th>VAL</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>2412.8 GHz</td> <td>1</td> <td>-43.88 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>23,900.1 GHz</td> <td>1</td> <td>-38.13 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2412.8 GHz	1	-43.88 dBm				2	N	23,900.1 GHz	1	-38.13 dBm			
MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																		
1	N	2412.8 GHz	1	-43.88 dBm																					
2	N	23,900.1 GHz	1	-38.13 dBm																					
2437 MHz	<table border="1"> <thead> <tr> <th>MN</th> <th>MODE</th> <th>FREQ (GHz)</th> <th>PK</th> <th>VAL</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>2435.9 GHz</td> <td>1</td> <td>-43.83 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>23,940.8 GHz</td> <td>1</td> <td>-38.25 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2435.9 GHz	1	-43.83 dBm				2	N	23,940.8 GHz	1	-38.25 dBm			
MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																		
1	N	2435.9 GHz	1	-43.83 dBm																					
2	N	23,940.8 GHz	1	-38.25 dBm																					
2462 MHz	<table border="1"> <thead> <tr> <th>MN</th> <th>MODE</th> <th>FREQ (GHz)</th> <th>PK</th> <th>VAL</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>2463.3 GHz</td> <td>1</td> <td>-43.82 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>23,774.0 GHz</td> <td>1</td> <td>-38.69 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2463.3 GHz	1	-43.82 dBm				2	N	23,774.0 GHz	1	-38.69 dBm			
MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																		
1	N	2463.3 GHz	1	-43.82 dBm																					
2	N	23,774.0 GHz	1	-38.69 dBm																					

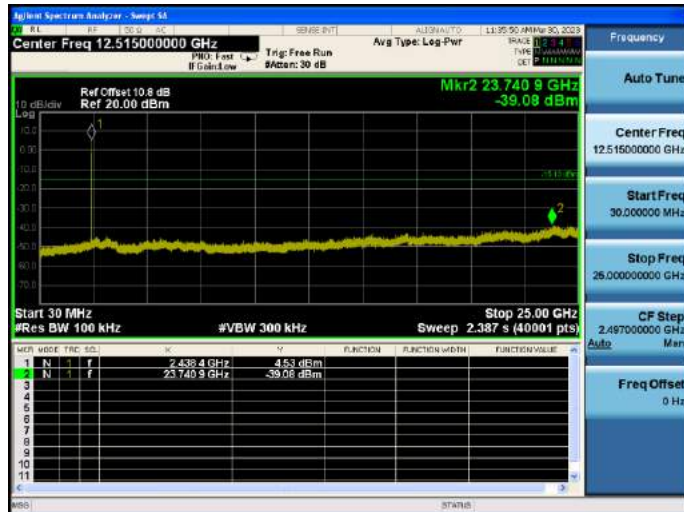
<p>802.11g_ANT-0</p> <p>2412 MHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54</p> <p>Center Freq 12.515000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Mkr2 23.898 2 GHz -37.29 dBm</p> <p>Start 30 MHz #Res BW 100 kHz</p> <p>Stop 25.00 GHz #VBW 300 kHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MN</th> <th>MODE</th> <th>FREQ (GHz)</th> <th>PK</th> <th>VAL</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>2412.0 GHz</td> <td>-37.29 dBm</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>23.898 2 GHz</td> <td>-37.29 dBm</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2412.0 GHz	-37.29 dBm					2	N	23.898 2 GHz	-37.29 dBm				
MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																		
1	N	2412.0 GHz	-37.29 dBm																						
2	N	23.898 2 GHz	-37.29 dBm																						
<p>2437 MHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54</p> <p>Center Freq 12.515000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Mkr2 23.827 7 GHz -38.34 dBm</p> <p>Start 30 MHz #Res BW 100 kHz</p> <p>Stop 25.00 GHz #VBW 300 kHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MN</th> <th>MODE</th> <th>FREQ (GHz)</th> <th>PK</th> <th>VAL</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>2437.4 GHz</td> <td>-38.34 dBm</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>23.827 7 GHz</td> <td>-38.34 dBm</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2437.4 GHz	-38.34 dBm					2	N	23.827 7 GHz	-38.34 dBm				
MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																		
1	N	2437.4 GHz	-38.34 dBm																						
2	N	23.827 7 GHz	-38.34 dBm																						
<p>2462 MHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54</p> <p>Center Freq 12.515000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Mkr2 24.553 7 GHz -39.00 dBm</p> <p>Start 30 MHz #Res BW 100 kHz</p> <p>Stop 25.00 GHz #VBW 300 kHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MN</th> <th>MODE</th> <th>FREQ (GHz)</th> <th>PK</th> <th>VAL</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>2462.0 GHz</td> <td>-39.00 dBm</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>24.553 7 GHz</td> <td>-39.00 dBm</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	2462.0 GHz	-39.00 dBm					2	N	24.553 7 GHz	-39.00 dBm				
MN	MODE	FREQ (GHz)	PK	VAL	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																		
1	N	2462.0 GHz	-39.00 dBm																						
2	N	24.553 7 GHz	-39.00 dBm																						

802.11n HT20_ANT-0

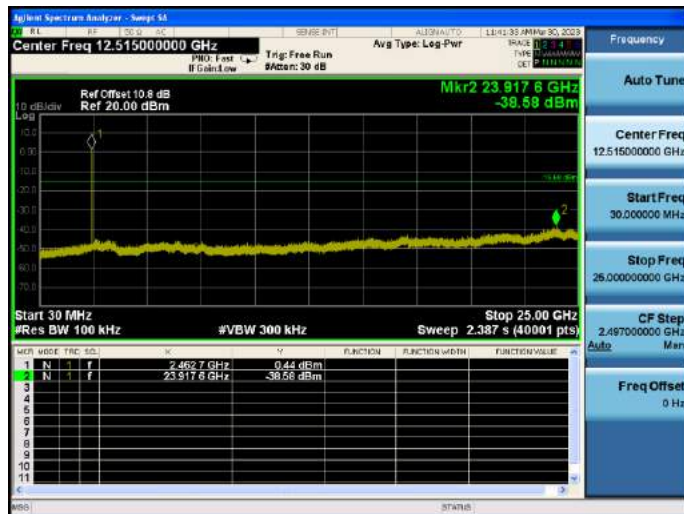
2412 MHz



2437 MHz

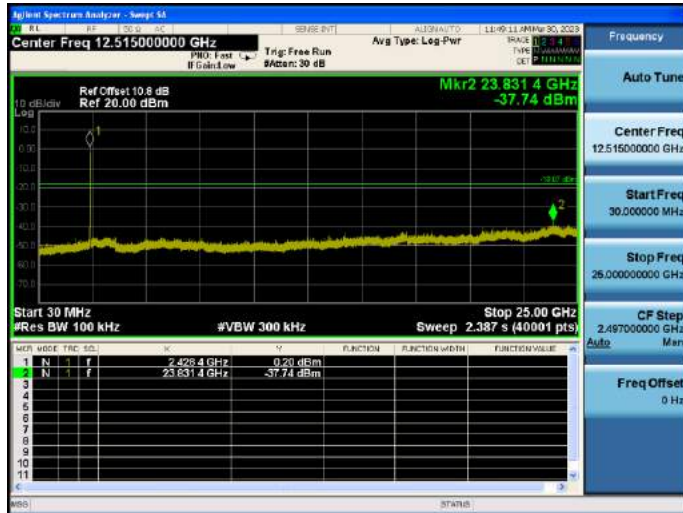


2462 MHz

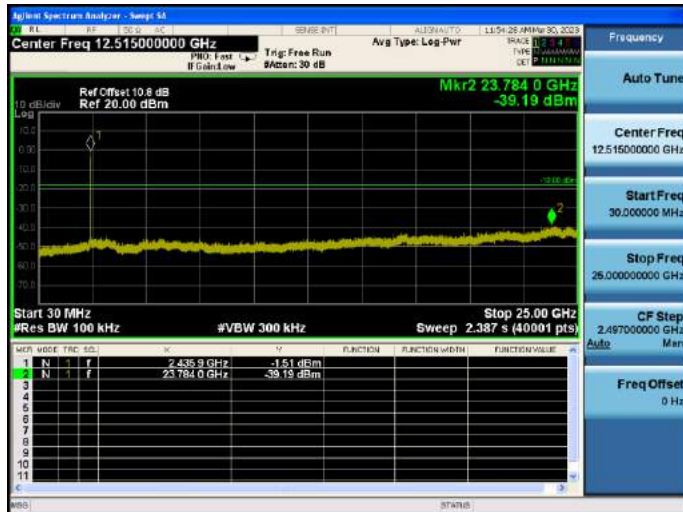


802.11n HT40_ANT-0

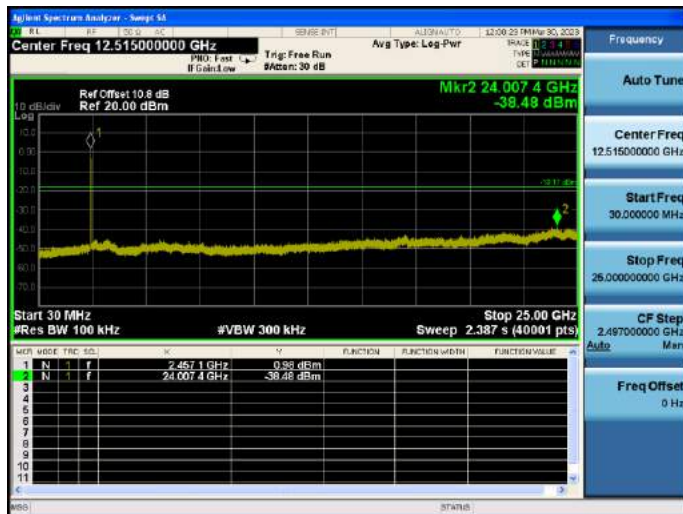
2422 MHz



2437 MHz



2452 MHz



Reference level

802.11b_ANT-0	
2412 MHz	<p>Agilent Spectrum Analyzer - Sweep 54 Center Freq 2.41200000 GHz Ref Offset 10.0 dB Ref 20.00 dBm Mkr1 2.413 009 GHz 6.18 dBm Center 2.412000 GHz #Res BW 100 kHz #VBW 300 kHz Span 14.41 MHz Sweep 1.400 ms (1001 pts)</p>
2437 MHz	<p>Agilent Spectrum Analyzer - Sweep 54 Center Freq 2.43700000 GHz Ref Offset 10.0 dB Ref 20.00 dBm Mkr1 2.436 501 GHz 6.46 dBm Center 2.437000 GHz #Res BW 100 kHz #VBW 300 kHz Span 15.11 MHz Sweep 1.467 ms (1001 pts)</p>
2462 MHz	<p>Agilent Spectrum Analyzer - Sweep 54 Center Freq 2.46200000 GHz Ref Offset 10.0 dB Ref 20.00 dBm Mkr1 2.463 495 GHz 6.07 dBm Center 2.462000 GHz #Res BW 100 kHz #VBW 300 kHz Span 14.37 MHz Sweep 1.400 ms (1001 pts)</p>

<p>802.11g_ANT-0</p> <p>2412 MHz</p>	
<p>2437 MHz</p>	
<p>2462 MHz</p>	

802.11n HT20_ANT-0	
2412 MHz	
2437 MHz	
2462 MHz	

802.11n HT40_ANT-0

2422 MHz



2437 MHz



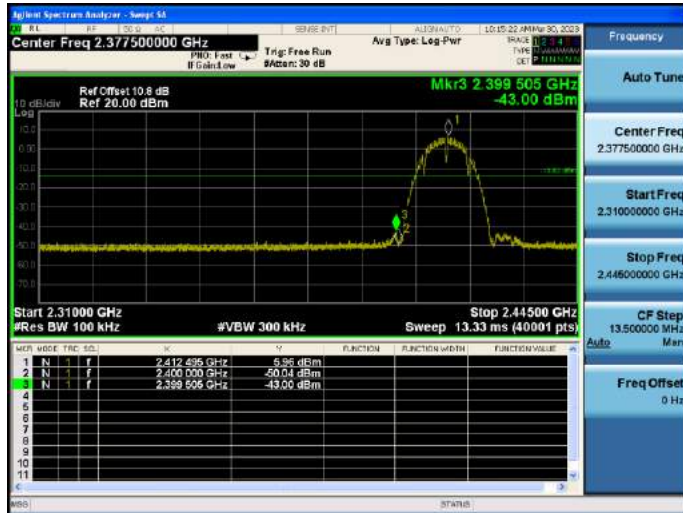
2452 MHz



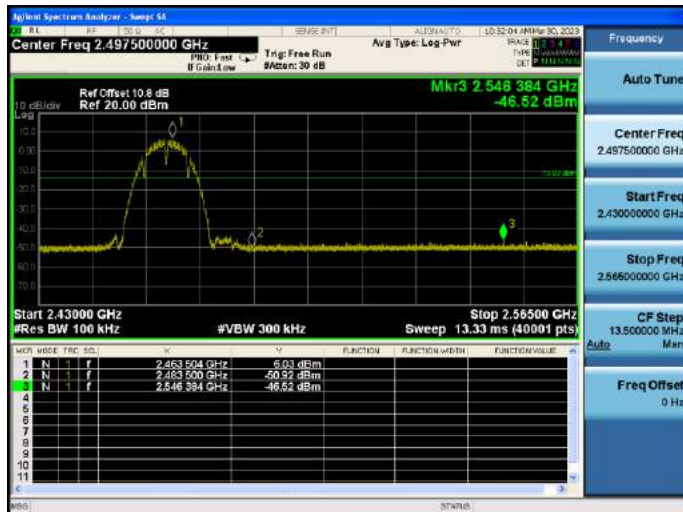
Conducted Band Edge

802.11b_ANT-0

2412 MHz

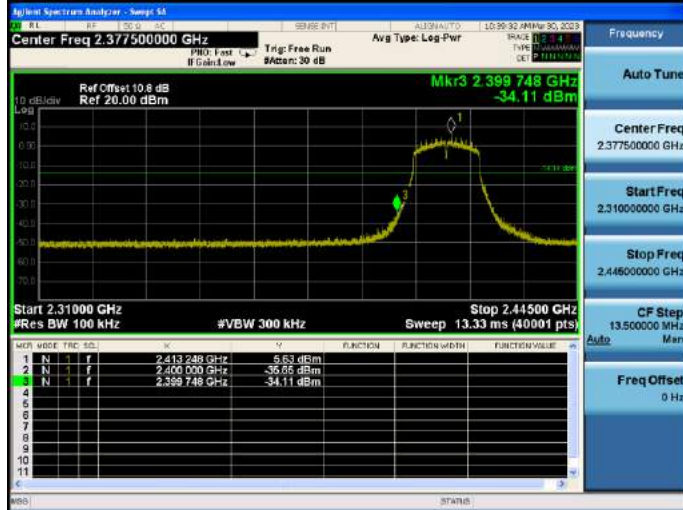


2462 MHz

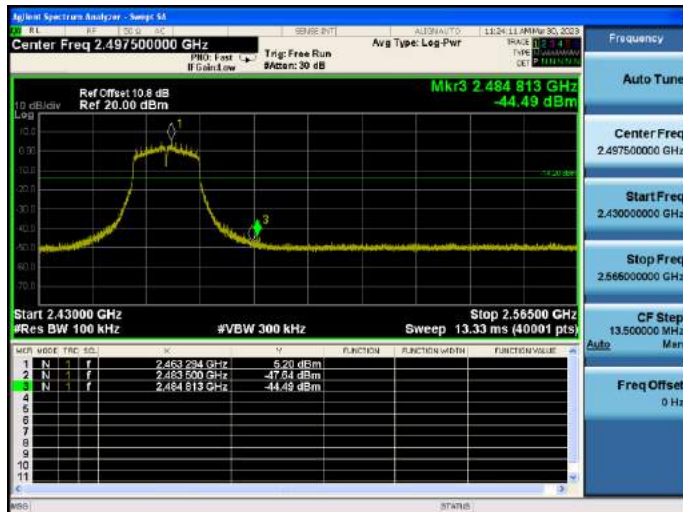


802.11g_ANT-0

2412 MHz

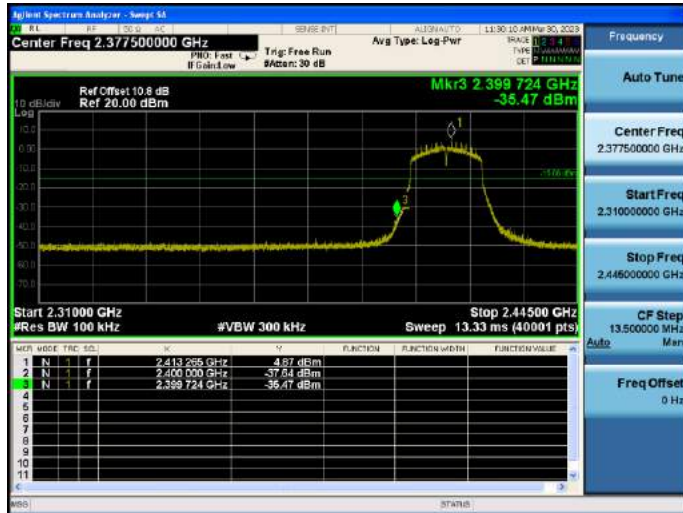


2462 MHz

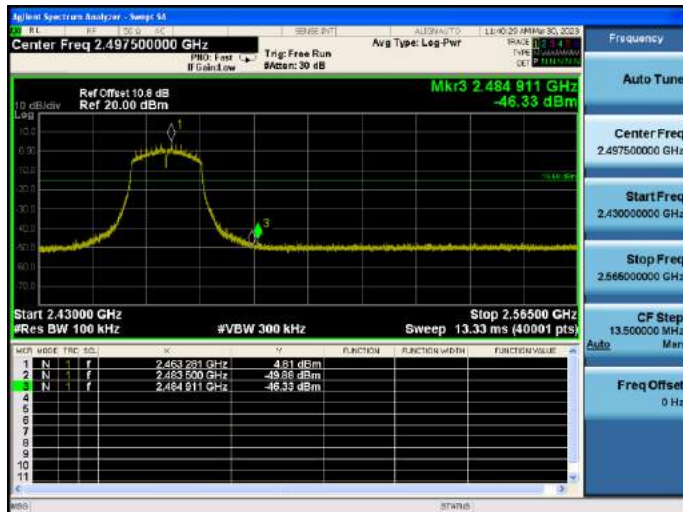


802.11n HT20_ANT-0

2412 MHz

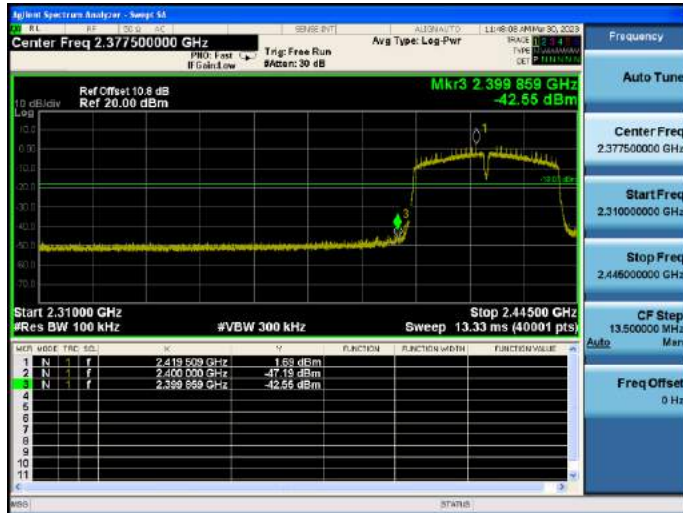


2462 MHz



802.11n HT40_ANT-0

2422 MHz



2452 MHz



6 dB Bandwidth

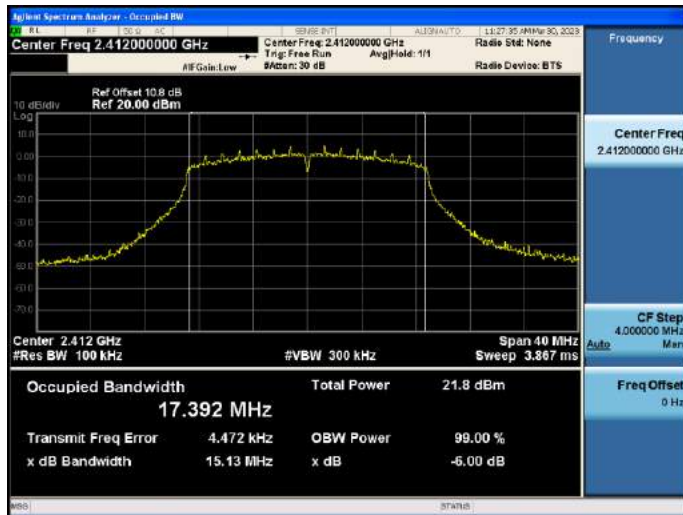
802.11b_ANT-0

<p>2412 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 14.014 MHz</p> <p>Total Power: 22.5 dBm</p> <p>Transmit Freq Error: 11.513 kHz</p> <p>x dB Bandwidth: 9.608 MHz</p>
<p>2437 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 14.007 MHz</p> <p>Total Power: 22.8 dBm</p> <p>Transmit Freq Error: 14.966 kHz</p> <p>x dB Bandwidth: 10.07 MHz</p>
<p>2462 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 13.996 MHz</p> <p>Total Power: 22.5 dBm</p> <p>Transmit Freq Error: 8.156 kHz</p> <p>x dB Bandwidth: 9.582 MHz</p>

802.11g_ANT-0	
2412 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 16.241 MHz</p> <p>Total Power 22.8 dBm</p> <p>Transmit Freq Error 3.728 kHz</p> <p>x dB Bandwidth 15.15 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
2437 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 16.239 MHz</p> <p>Total Power 22.8 dBm</p> <p>Transmit Freq Error 7.711 kHz</p> <p>x dB Bandwidth 15.12 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
2462 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 16.244 MHz</p> <p>Total Power 22.8 dBm</p> <p>Transmit Freq Error 12.700 kHz</p> <p>x dB Bandwidth 15.12 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>

802.11n HT20_ANT-0

2412 MHz



2437 MHz

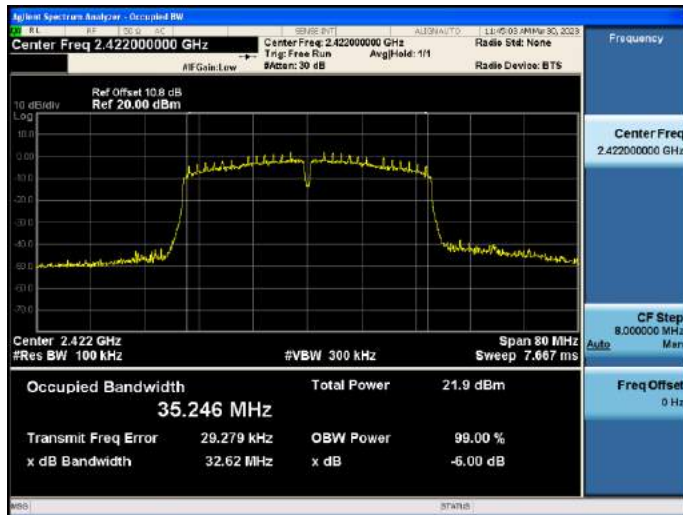


2462 MHz

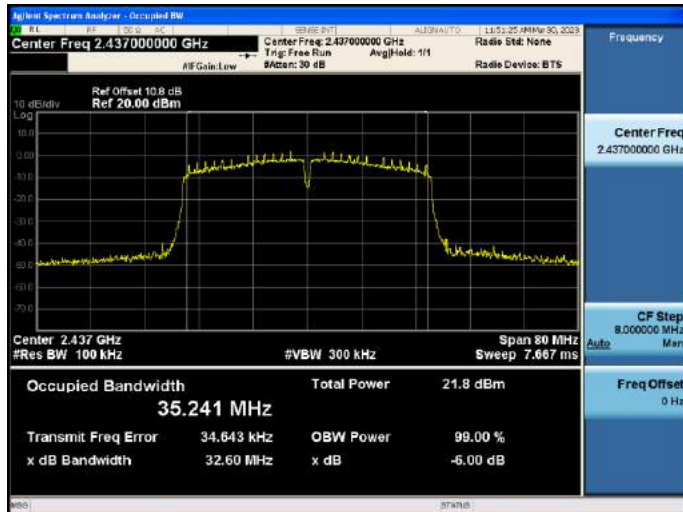


802.11n HT40_ANT-0

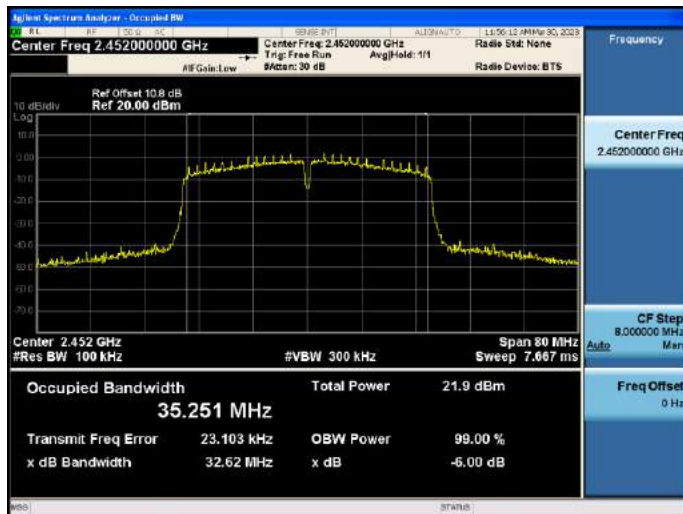
2422 MHz



2437 MHz



2452 MHz



99% Occupied Bandwidth

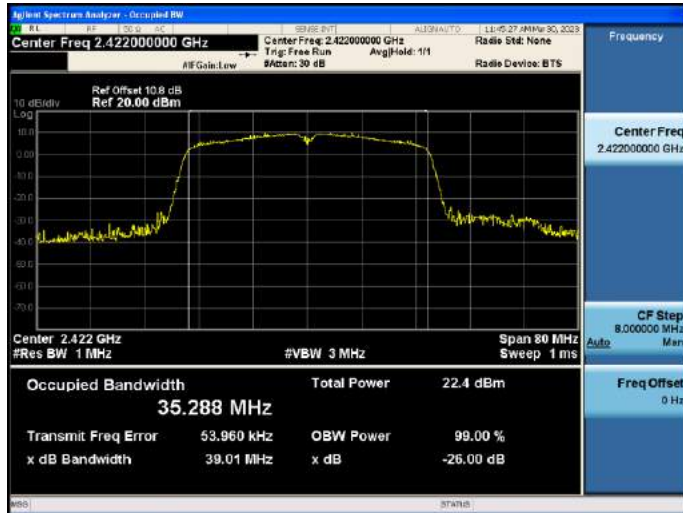
802.11b_ANT-0																			
2412 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>19.0 dBm</td> </tr> <tr> <td>14.011 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>18.374 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>17.43 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	19.0 dBm	14.011 MHz			Transmit Freq Error	OBW Power	99.00 %	18.374 kHz			x dB Bandwidth	x dB	-26.00 dB	17.43 MHz		
Occupied Bandwidth	Total Power	19.0 dBm																	
14.011 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
18.374 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
17.43 MHz																			
2437 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>19.4 dBm</td> </tr> <tr> <td>13.998 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>20.608 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>17.41 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	19.4 dBm	13.998 MHz			Transmit Freq Error	OBW Power	99.00 %	20.608 kHz			x dB Bandwidth	x dB	-26.00 dB	17.41 MHz		
Occupied Bandwidth	Total Power	19.4 dBm																	
13.998 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
20.608 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
17.41 MHz																			
2462 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>19.1 dBm</td> </tr> <tr> <td>13.990 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>17.585 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>17.42 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	19.1 dBm	13.990 MHz			Transmit Freq Error	OBW Power	99.00 %	17.585 kHz			x dB Bandwidth	x dB	-26.00 dB	17.42 MHz		
Occupied Bandwidth	Total Power	19.1 dBm																	
13.990 MHz																			
Transmit Freq Error	OBW Power	99.00 %																	
17.585 kHz																			
x dB Bandwidth	x dB	-26.00 dB																	
17.42 MHz																			

802.11g_ANT-0	
2412 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 16.403 MHz Total Power 22.7 dBm</p> <p>Transmit Freq Error 7.027 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 20.04 MHz x dB -26.00 dB</p>
2437 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 16.377 MHz Total Power 22.7 dBm</p> <p>Transmit Freq Error 16.436 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 20.08 MHz x dB -26.00 dB</p>
2462 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 16.406 MHz Total Power 22.6 dBm</p> <p>Transmit Freq Error 17.781 kHz OBW Power 99.00 %</p> <p>x dB Bandwidth 20.59 MHz x dB -26.00 dB</p>

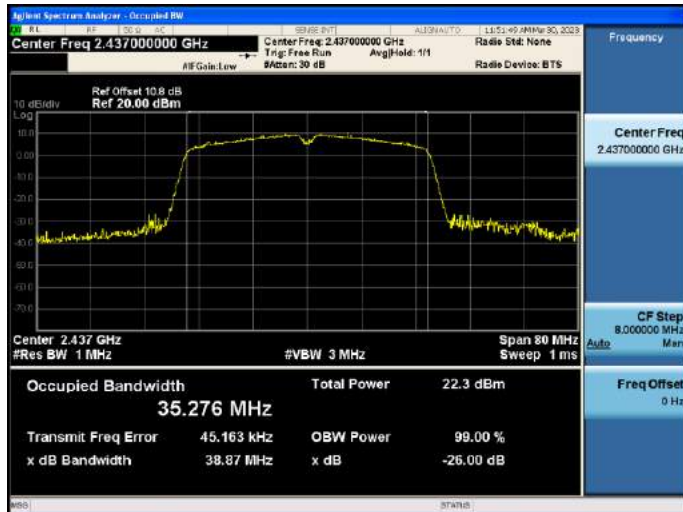
802.11n HT20_ANT-0	
2412 MHz	
2437 MHz	
2462 MHz	

802.11n HT40_ANT-0

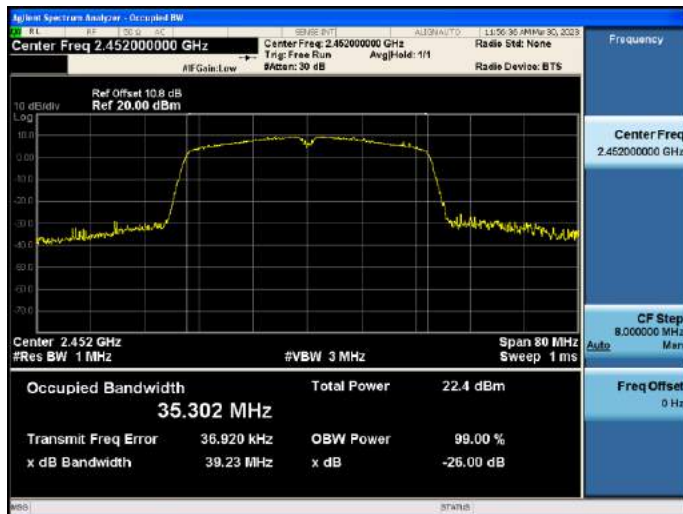
2422 MHz



2437 MHz



2452 MHz



Maximum Power Spectral Density

802.11b_ANT-0	
2412 MHz	
2437 MHz	
2462 MHz	

802.11g_ANT-0	
2412 MHz	<p>Agilent Spectrum Analyzer - Sweep 54</p> <p>Center Freq 2.41200000 GHz</p> <p>Mkr1 2.413 863 GHz -8.825 dBm</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 22.72 MHz Sweep 2.396 s (1001 pts)</p>
2437 MHz	<p>Agilent Spectrum Analyzer - Sweep 54</p> <p>Center Freq 2.43700000 GHz</p> <p>Mkr1 2.437 885 GHz -8.452 dBm</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 22.69 MHz Sweep 2.392 s (1001 pts)</p>
2462 MHz	<p>Agilent Spectrum Analyzer - Sweep 54</p> <p>Center Freq 2.46200000 GHz</p> <p>Mkr1 2.461 365 GHz -8.646 dBm</p> <p>Ref Offset 10.8 dB Ref 20.00 dBm</p> <p>Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 22.68 MHz Sweep 2.391 s (1001 pts)</p>

802.11n HT20_ANT-0

2412 MHz



2437 MHz

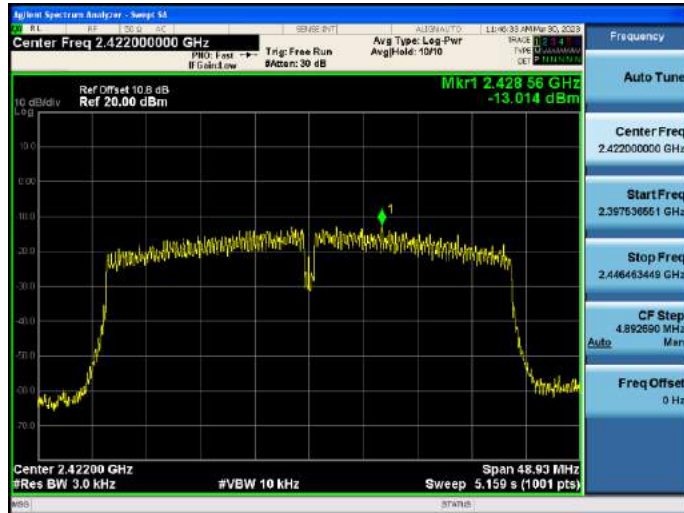


2462 MHz



802.11n HT40_ANT-0

2422 MHz



2437 MHz



2452 MHz

