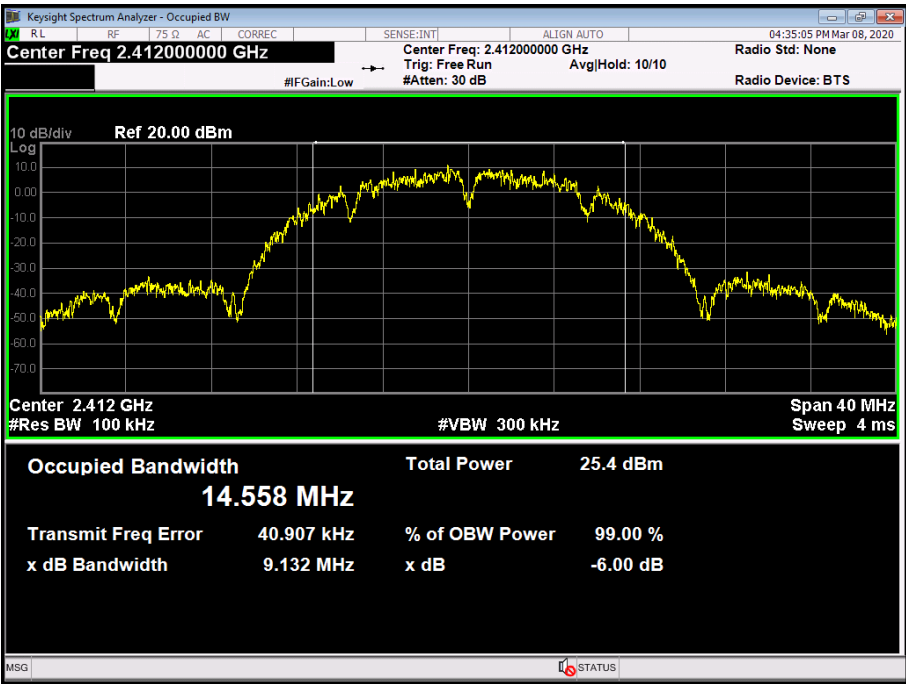
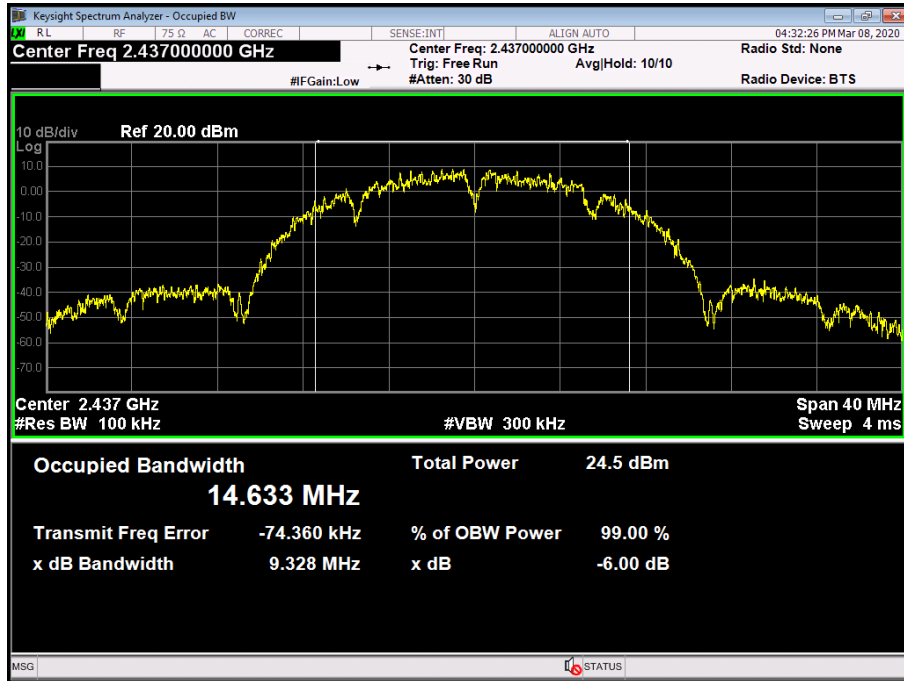


### Attachment D-- Bandwidth Test Data

Temperature:	25°C	Relative Humidity:	55%
Test Voltage:	AC 120V/60HZ		
Test Mode:	TX 802.11B Mode ANT. A		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	9.132	14.558	>=0.5
2437	9.328	14.633	
2462	9.152	14.738	
<b>802.11B Mode</b>			
<b>2412 MHz</b>			
			

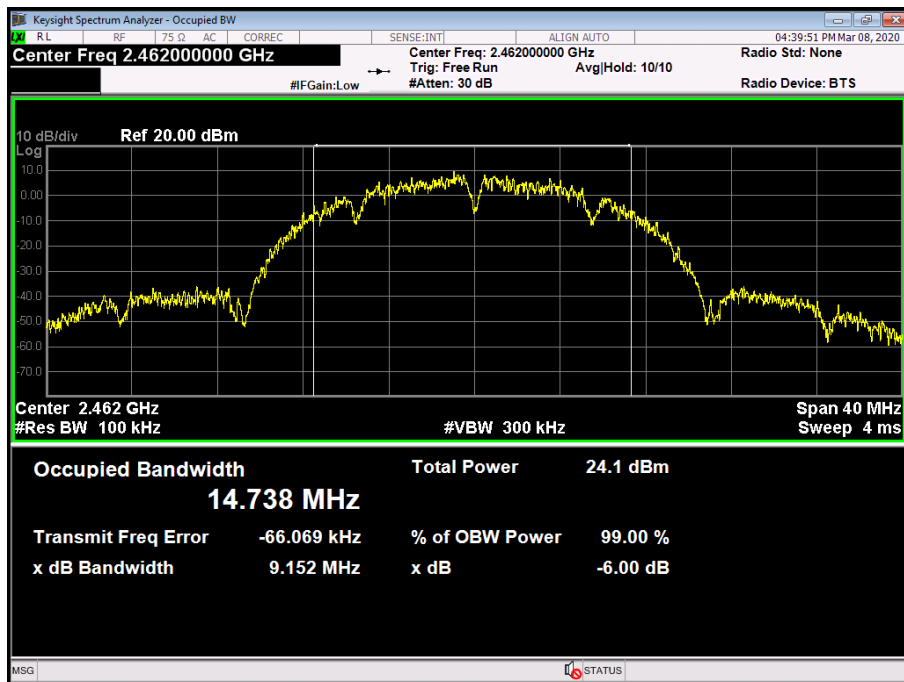
**802.11B Mode**

**2437 MHz**



**802.11B Mode**

**2462 MHz**

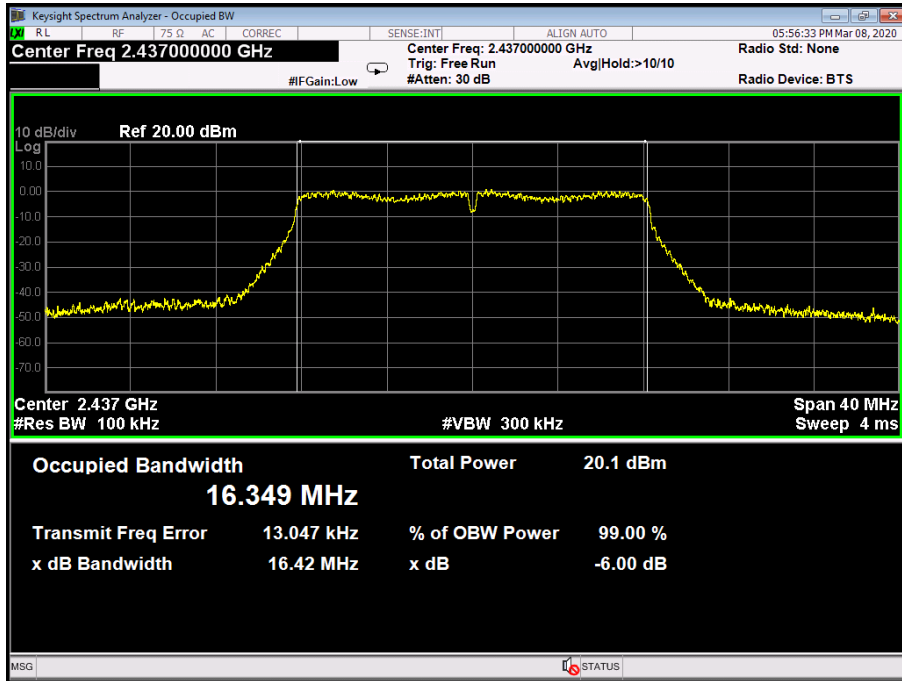


<b>Temperature:</b>	25°C	<b>Relative Humidity:</b>	55%																
<b>Test Voltage:</b>	AC 120V/60HZ																		
<b>Test Mode:</b>	TX 802.11G Mode ANT. A																		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)																
2412	16.42	16.350	>=0.5																
2437	16.42	16.349																	
2462	16.40	16.336																	
<b>802.11G Mode</b>																			
<b>2412 MHz</b>																			
<table border="1"> <tr> <td><b>Occupied Bandwidth</b></td> <td><b>Total Power</b></td> <td colspan="2"><b>20.3 dBm</b></td> </tr> <tr> <td><b>16.350 MHz</b></td> <td></td> <td colspan="2"></td> </tr> <tr> <td><b>Transmit Freq Error</b></td> <td><b>12.331 kHz</b></td> <td><b>% of OBW Power</b></td> <td><b>99.00 %</b></td> </tr> <tr> <td><b>x dB Bandwidth</b></td> <td><b>16.42 MHz</b></td> <td><b>x dB</b></td> <td><b>-6.00 dB</b></td> </tr> </table>				<b>Occupied Bandwidth</b>	<b>Total Power</b>	<b>20.3 dBm</b>		<b>16.350 MHz</b>				<b>Transmit Freq Error</b>	<b>12.331 kHz</b>	<b>% of OBW Power</b>	<b>99.00 %</b>	<b>x dB Bandwidth</b>	<b>16.42 MHz</b>	<b>x dB</b>	<b>-6.00 dB</b>
<b>Occupied Bandwidth</b>	<b>Total Power</b>	<b>20.3 dBm</b>																	
<b>16.350 MHz</b>																			
<b>Transmit Freq Error</b>	<b>12.331 kHz</b>	<b>% of OBW Power</b>	<b>99.00 %</b>																
<b>x dB Bandwidth</b>	<b>16.42 MHz</b>	<b>x dB</b>	<b>-6.00 dB</b>																



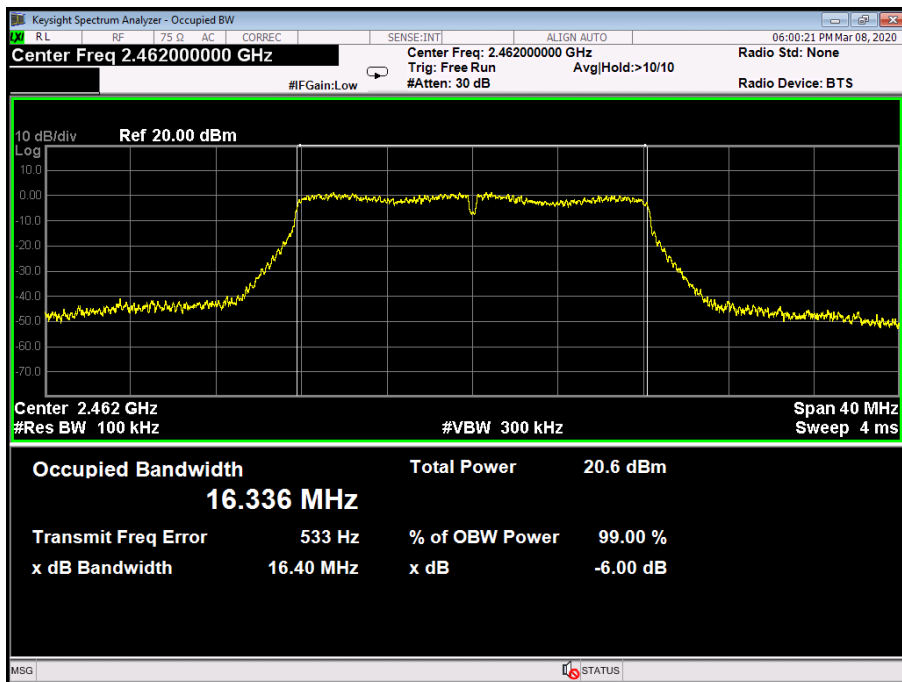
**802.11G Mode**

**2437 MHz**



**802.11G Mode**

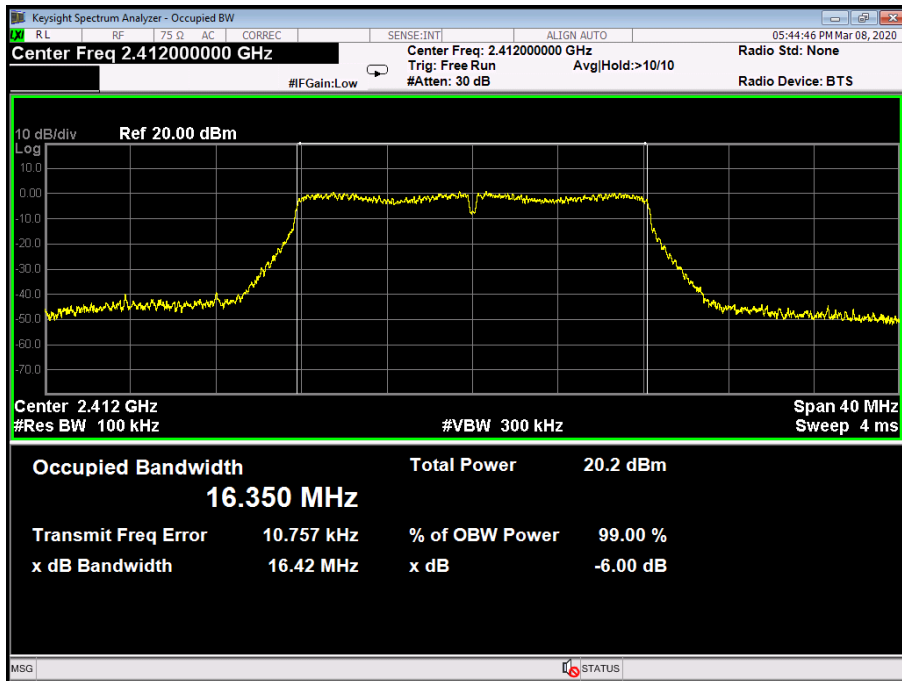
**2462 MHz**



<b>Temperature:</b>	25°C	<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	AC 120V/60HZ		
<b>Test Mode:</b>	TX 802.11G Mode ANT. B		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	16.42	16.350	>=0.5
2437	16.43	16.352	
2462	16.40	16.337	

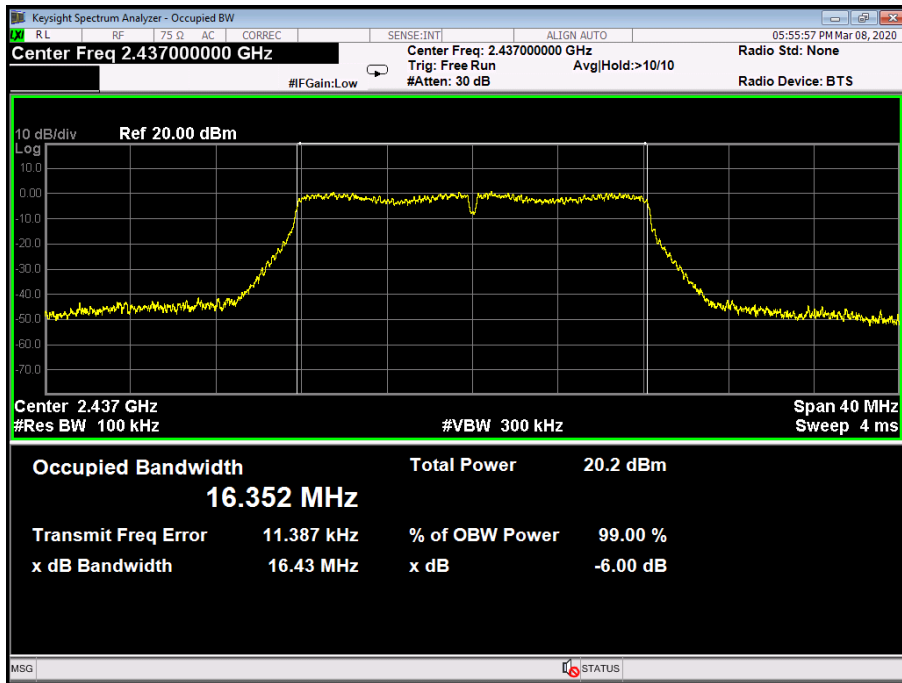
**802.11G Mode**

**2412 MHz**



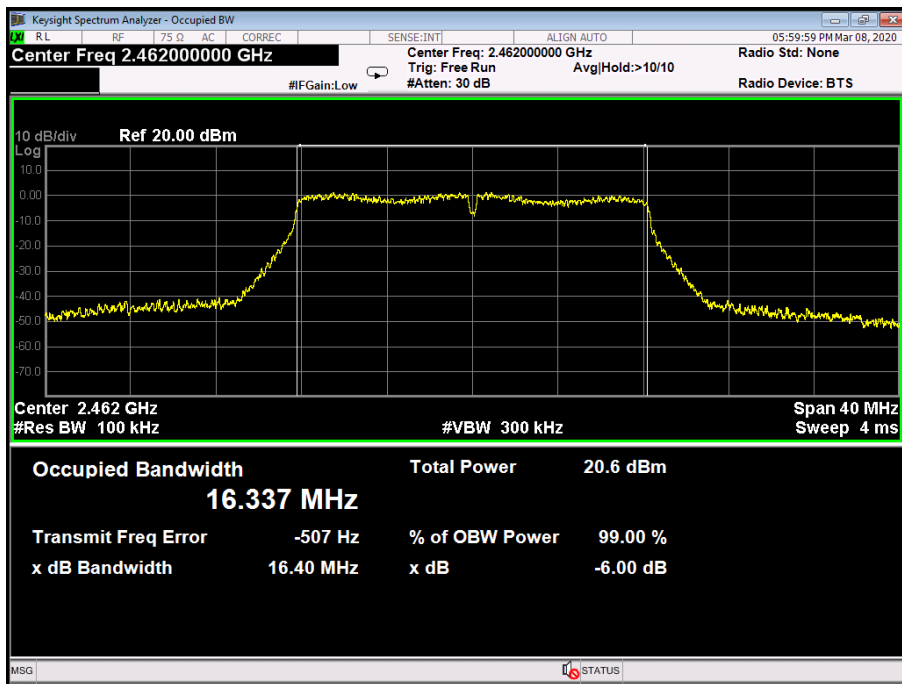
**802.11G Mode**

**2437 MHz**

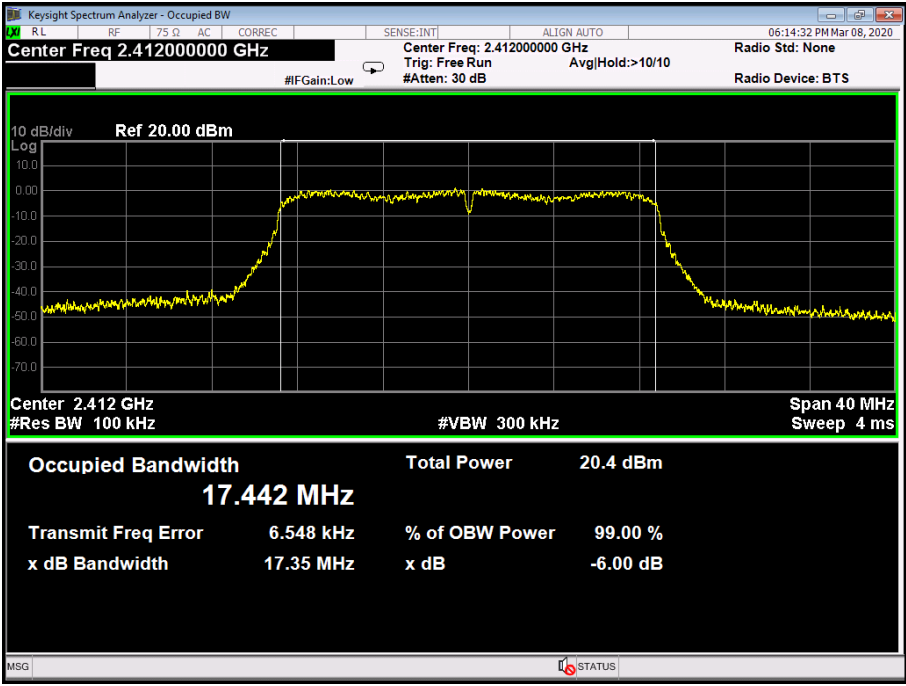


**802.11G Mode**

**2462 MHz**

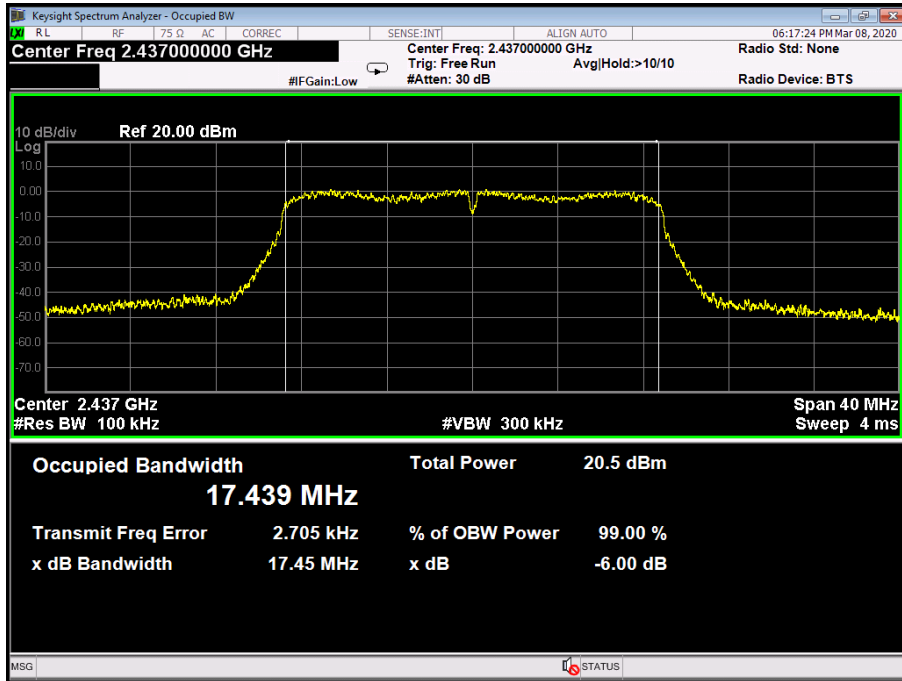




<b>Temperature:</b>	25°C	<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	AC 120V/60HZ		
<b>Test Mode:</b>	TX 802.11N(HT20) Mode ANT. A		
<b>Channel frequency (MHz)</b>	<b>6dB Bandwidth (MHz)</b>	<b>99% Bandwidth (MHz)</b>	<b>Limit (MHz)</b>
2412	17.35	17.442	≥0.5
2437	17.45	17.439	
2462	17.55	17.437	
<b>802.11N(HT20) Mode</b>			
<b>2412 MHz</b>			
			

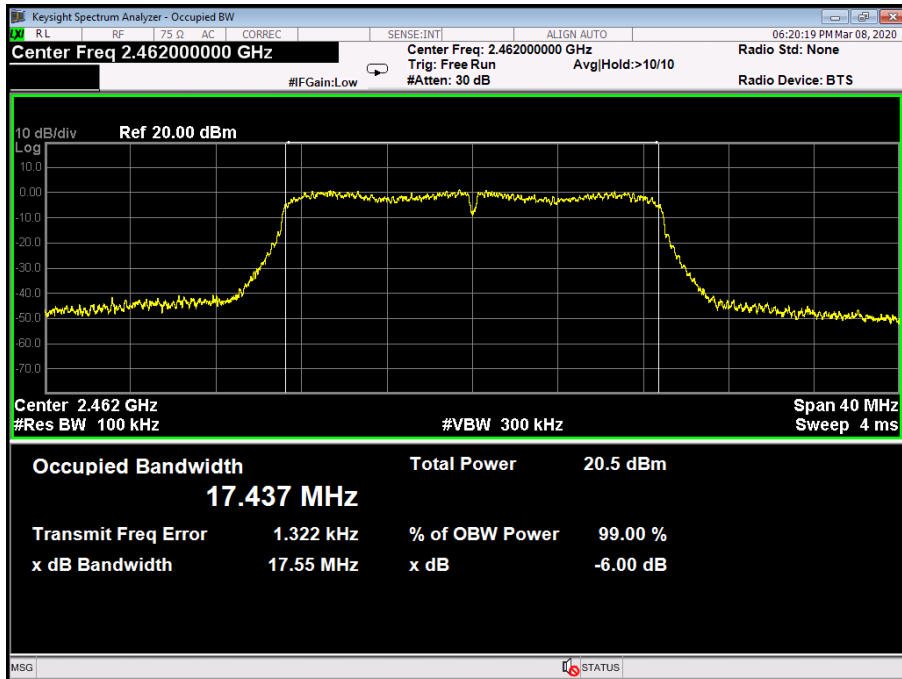
**802.11N(HT20) Mode**

**2437 MHz**

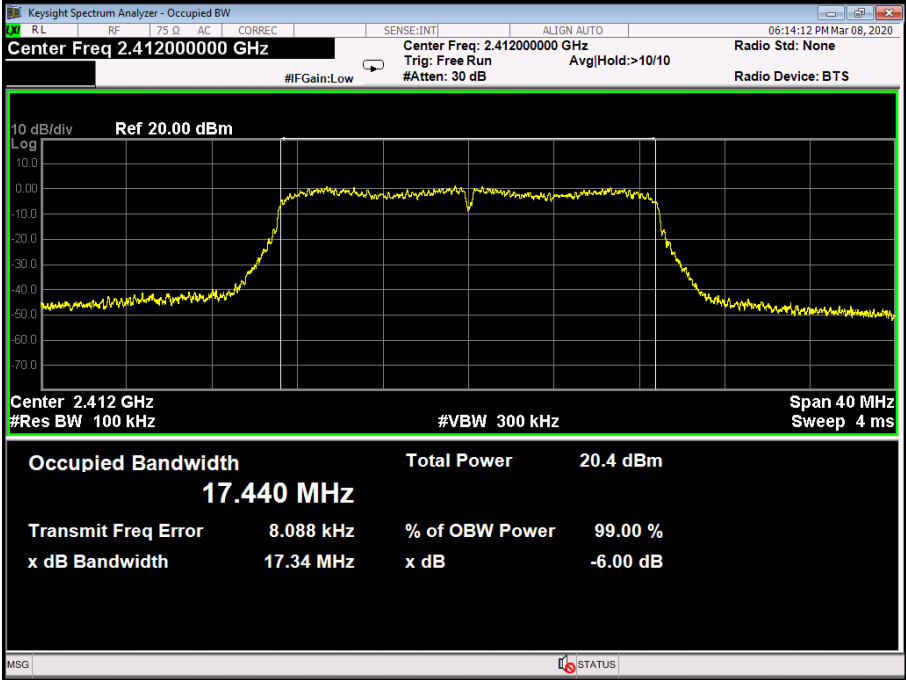


**802.11N(HT20) Mode**

**2462 MHz**

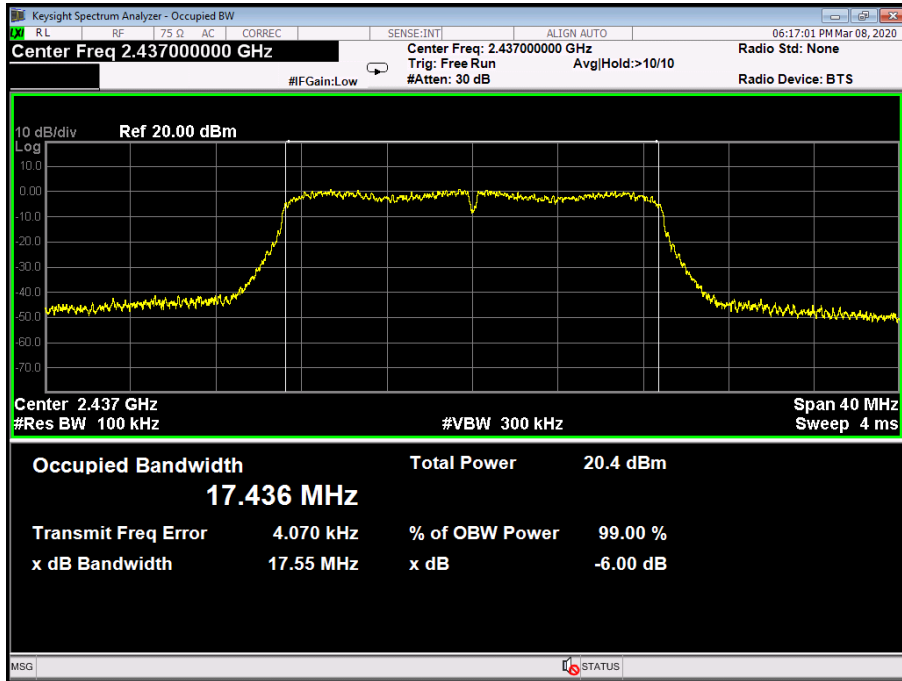




<b>Temperature:</b>	25°C	<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	AC 120V/60HZ		
<b>Test Mode:</b>	TX 802.11N(HT20) Mode ANT. B		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	17.34	17.440	≥0.5
2437	17.55	17.436	
2462	17.55	17.436	
<b>802.11N(HT20) Mode</b>			
<b>2412 MHz</b>			
			

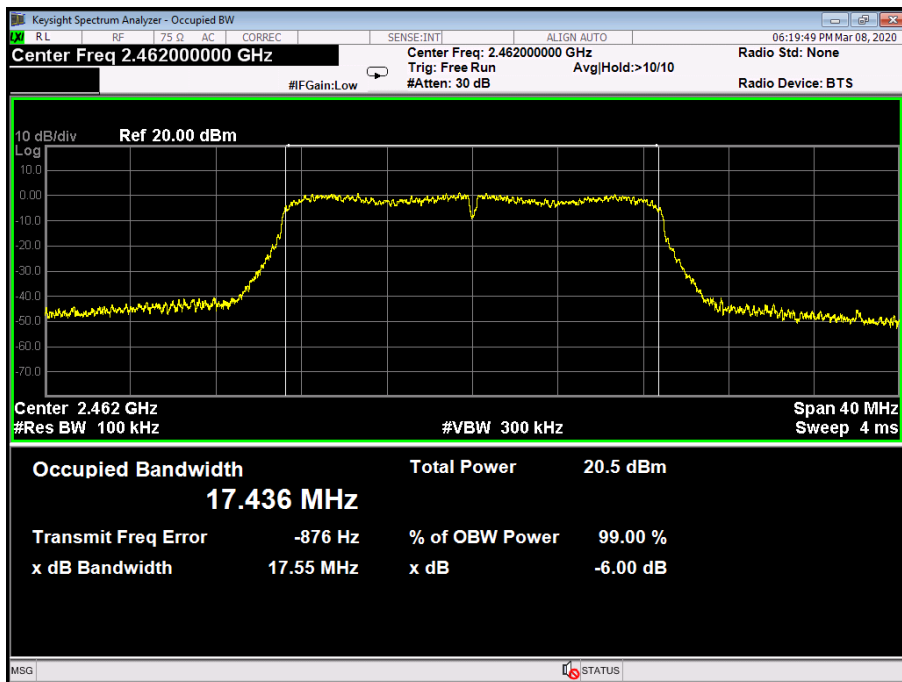
**802.11N(HT20) Mode**

**2437 MHz**



**802.11N(HT20) Mode**

**2462 MHz**

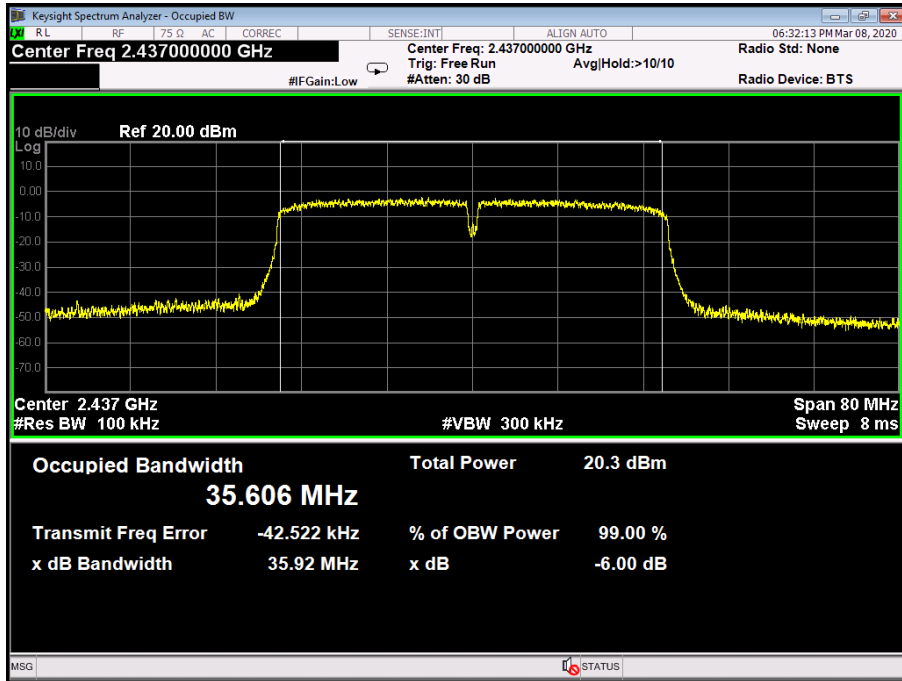


<b>Temperature:</b>	25°C	<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	AC 120V/60HZ		
<b>Test Mode:</b>	TX 802.11N(HT40) Mode ANT. A		
<b>Channel frequency (MHz)</b>	<b>6dB Bandwidth (MHz)</b>	<b>99% Bandwidth (MHz)</b>	<b>Limit (MHz)</b>
2422	35.93	35.626	≥0.5
2437	35.92	35.606	
2452	35.93	35.618	
<b>802.11N(HT40) Mode</b>			
<b>2422 MHz</b>			
<p>Keysight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.42200000 GHz</p> <p>Occupied Bandwidth: 35.626 MHz</p> <p>Total Power: 20.4 dBm</p> <p>Transmit Freq Error: -20.659 kHz</p> <p>x dB Bandwidth: 35.93 MHz</p>			



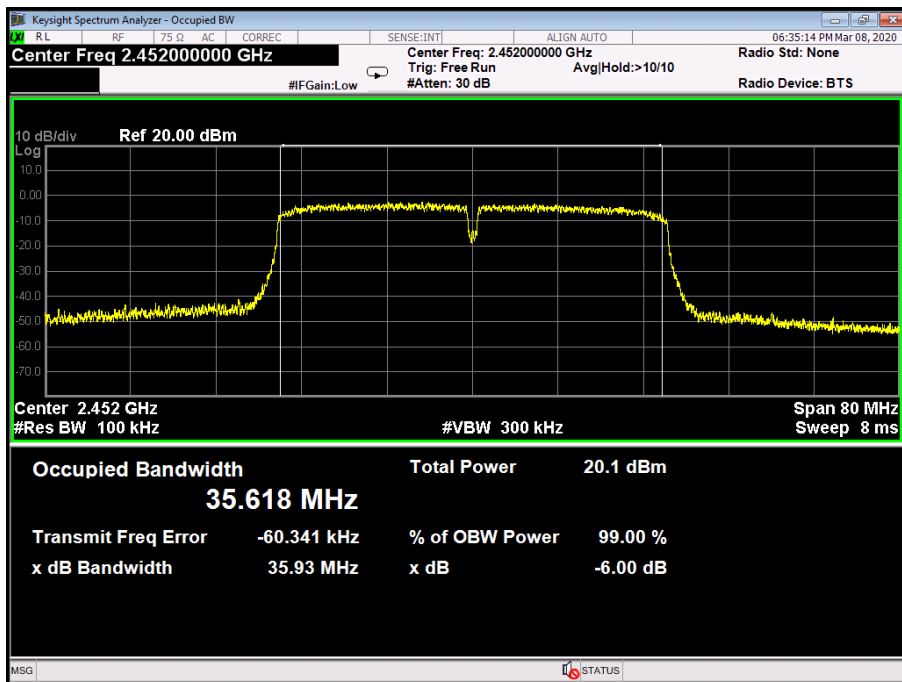
**802.11N(HT40) Mode**

**2437 MHz**



**802.11N(HT40) Mode**

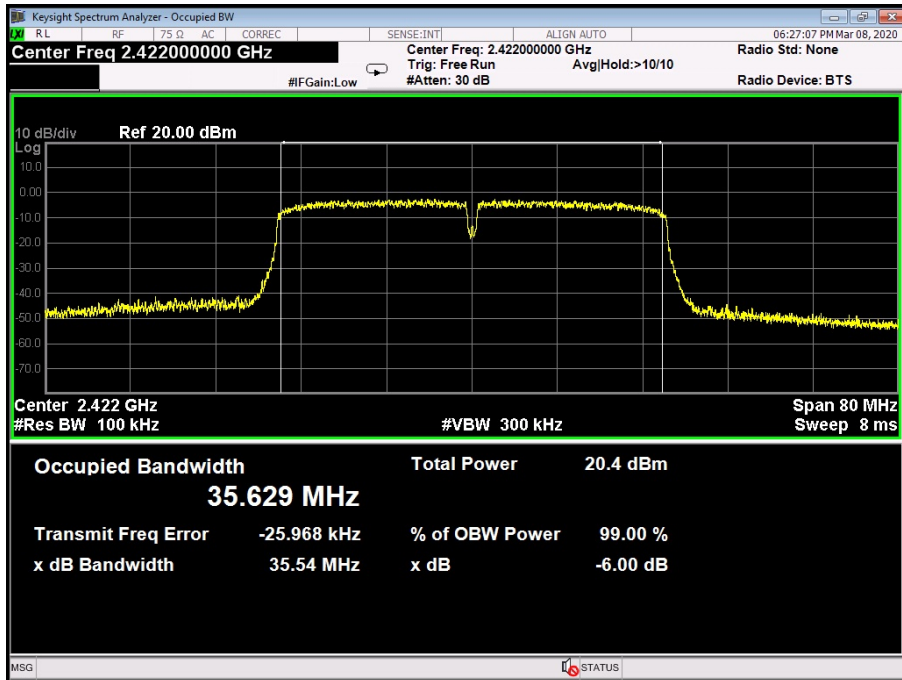
**2452 MHz**



<b>Temperature:</b>	25°C	<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	AC 120V/60HZ		
<b>Test Mode:</b>	TX 802.11N(HT40) Mode ANT. B		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2422	35.54	35.629	≥0.5
2437	35.68	35.611	
2452	35.94	35.617	

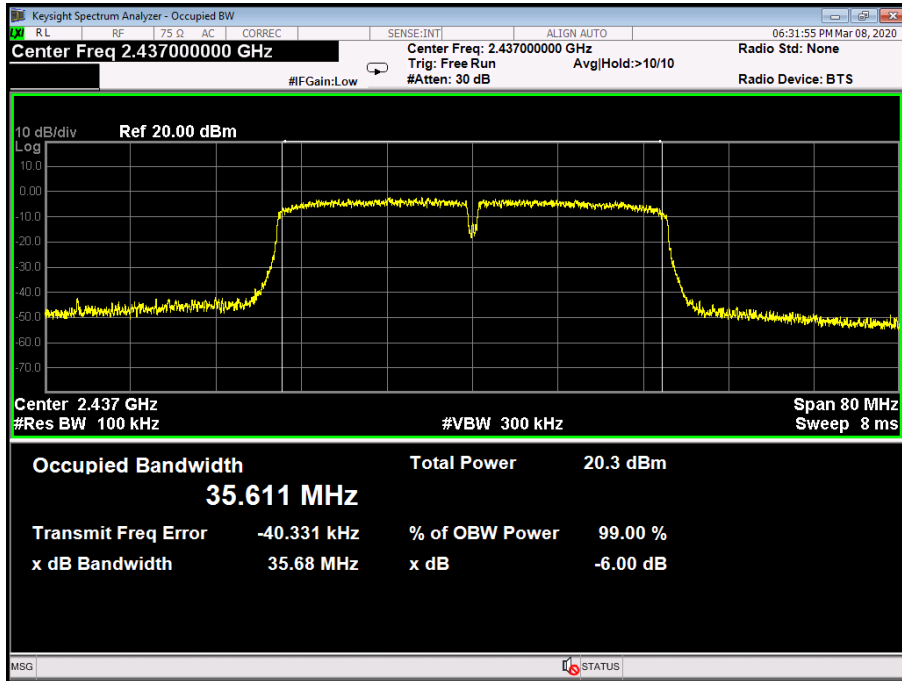
**802.11N(HT40) Mode**

**2422 MHz**



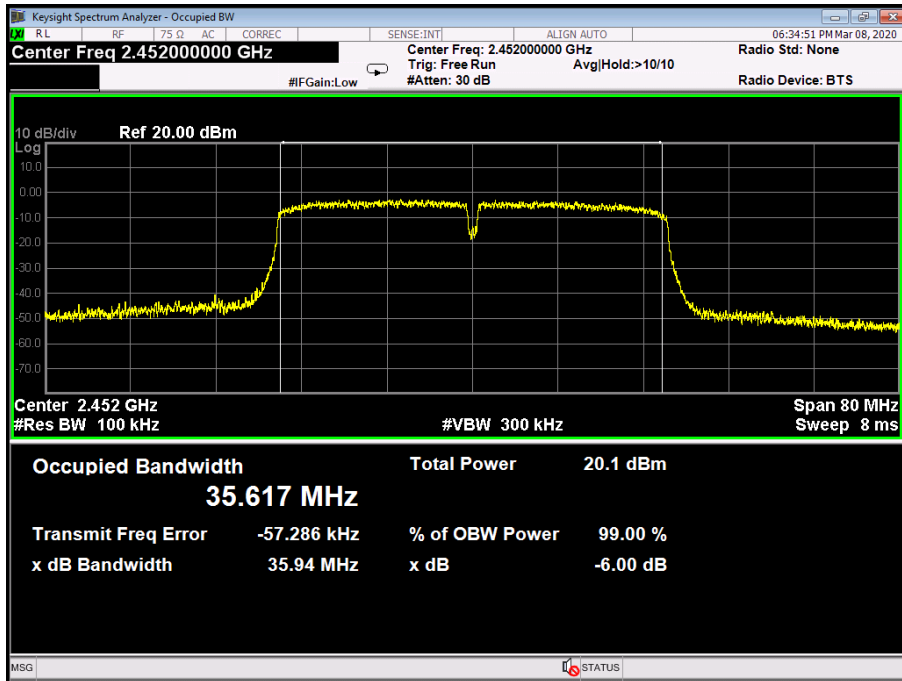
**802.11N(HT40) Mode**

**2437 MHz**



**802.11N(HT40) Mode**

**2452 MHz**





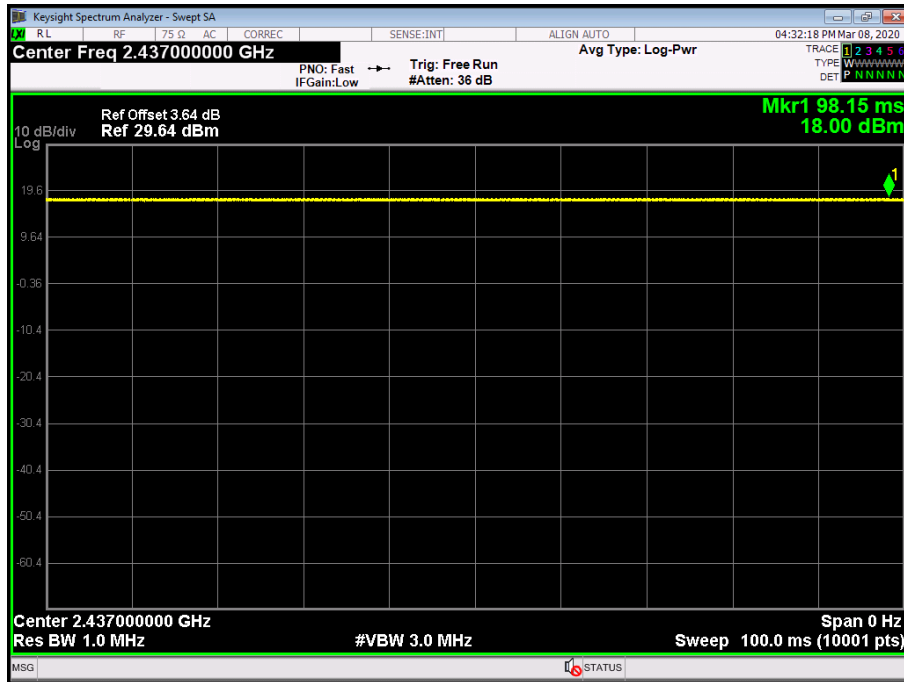
## Attachment E-- Peak Output Power Test Data

Conducted Power					
802.11b Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		Ant. A			
1	2412 MHz	28.93			30
6	2437 MHz	27.89			
11	2462 MHz	27.39			
802.11g Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		ANT. A.	ANT. B	Total	
1	2412 MHz	24.46	24.47	27.38	27.94
6	2437 MHz	24.26	24.39	27.34	
11	2462 MHz	24.52	24.50	27.52	
802.11n(HT20) Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		ANT. A.	ANT. B	Total	
1	2412 MHz	24.64	24.51	27.59	27.94
6	2437 MHz	24.34	24.41	27.39	
11	2462 MHz	24.58	24.45	27.53	
802.11n(HT40) Power					
Channel	Frequency	Conducted Power (dBm)			Max. Limit (dBm)
		ANT. A.	ANT. B	Total	
3	2422 MHz	24.58	24.32	27.46	27.94
6	2437 MHz	24.43	24.49	27.47	
9	2452 MHz	24.42	24.26	27.35	
<b>Note:</b> The ANT. A. and ANT. B will transmitting simultaneously for the 802.11g/n(HT20)/n(HT40) Mode, the T Directional Gain =Ant. Gain + 10*LOG(N <sub>ANT</sub> ) =8.06 dBi > 6 dBi. So P <sub>out</sub> = P <sub>limit</sub> -(G <sub>TX</sub> -6)=30-2.06=27.94dBm					

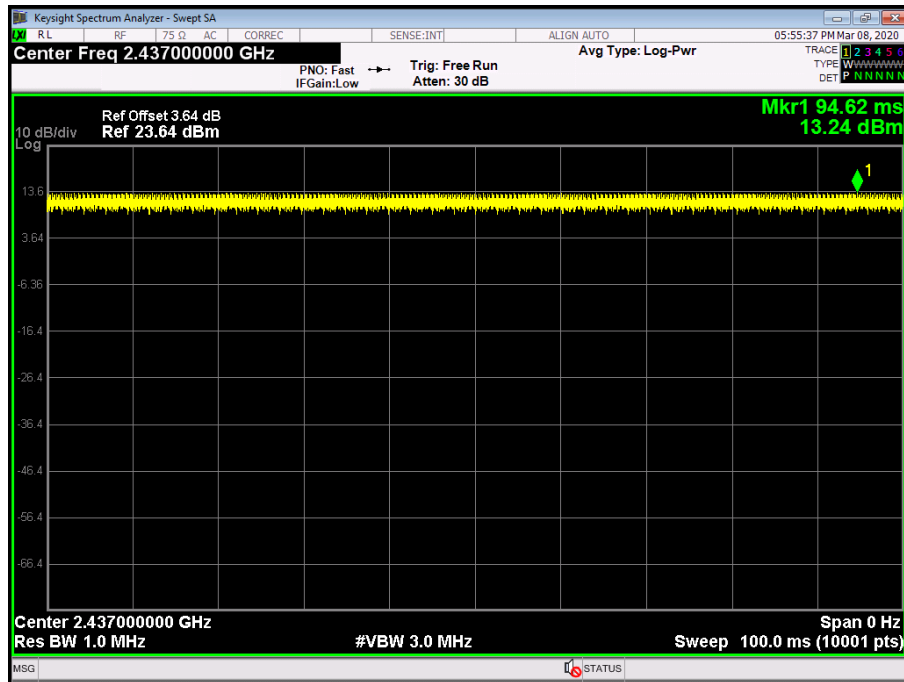
Duty Cycle		
Mode	Channel frequency (MHz)	Test Result
802.11b	2412	>98%
	2437	
	2462	
802.11g	2412	
	2437	
	2462	
802.11n (HT20)	2412	
	2437	
	2462	
802.11n (HT40)	2422	
	2437	
	2452	

Please see below plots

**802.11 B Mode 2437 MHz**

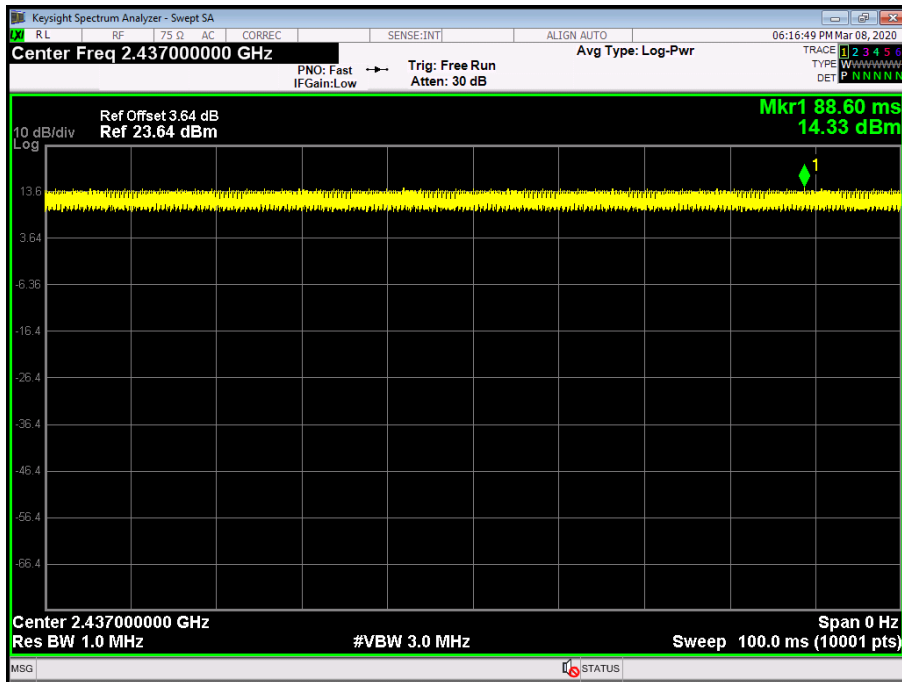


**802.11 G Mode 2437 MHz**

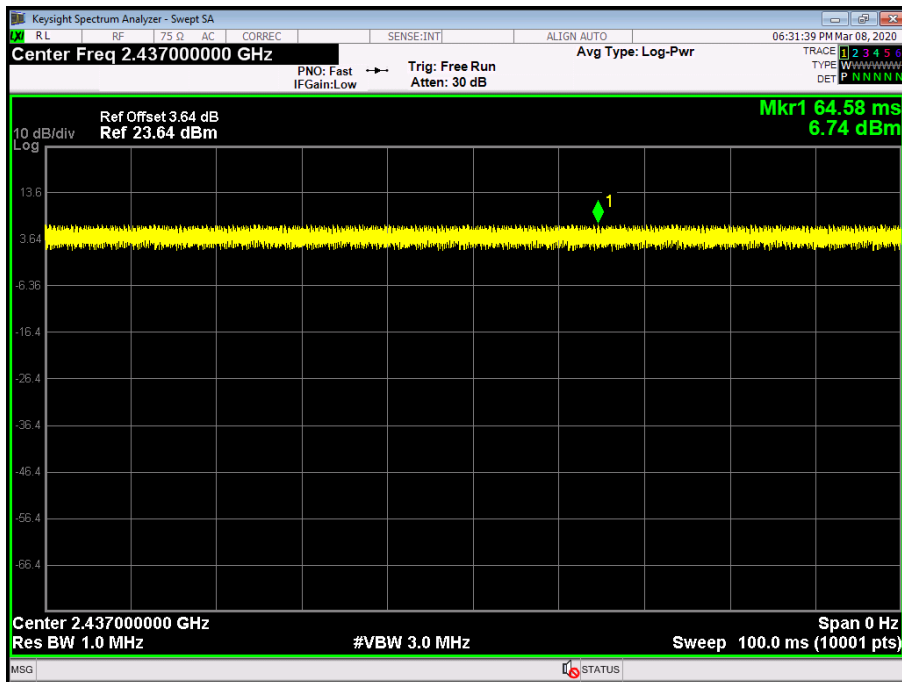




802.11 N(HT20) Mode 2437 MHz



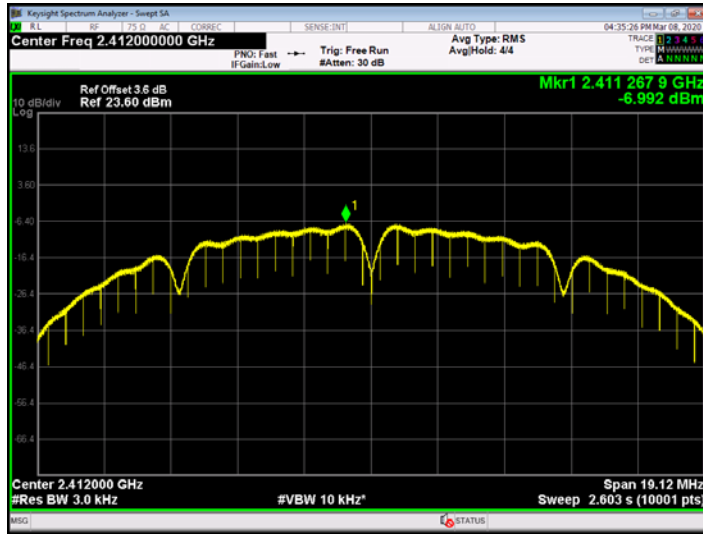
802.11 N(HT40) Mode 2437 MHz



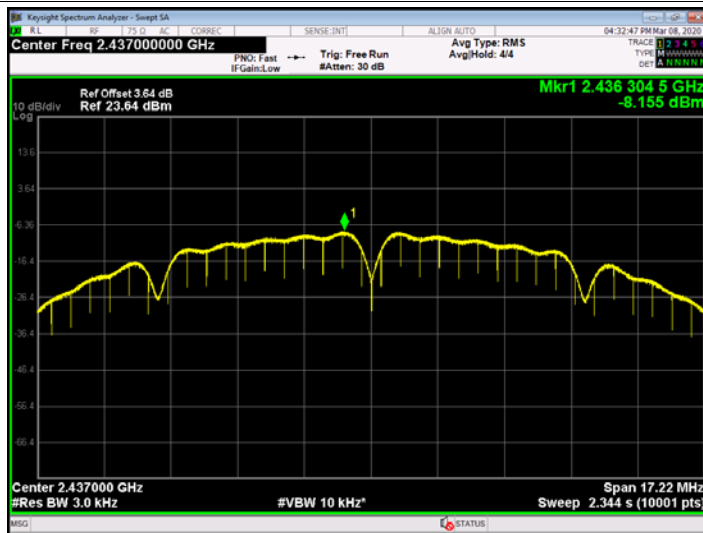
## Attachment F-- Power Spectral Density Test Data

802.11b Mode					
Channel	Frequency	Conducted PSD (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. A			
1	2412 MHz	-6.992			8
6	2437 MHz	-8.155			
11	2462 MHz	-8.428			
802.11g Mode					
Channel	Frequency	Conducted PSD (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. A	Ant. B	Total	
1	2412 MHz	-10.165	-9.11	<b>-6.595</b>	5.94
6	2437 MHz	-9.998	-9.586	<b>-6.776</b>	
11	2462 MHz	-9.666	-9.722	<b>-6.683</b>	
802.11n(HT20) Mode					
Channel	Frequency	Conducted PSD (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. A	Ant. B	Total	
1	2412 MHz	-9.275	-8.511	-5.865	5.94
6	2437 MHz	-8.834	-8.387	-5.594	
11	2462 MHz	-8.794	-8.571	-5.670	
802.11n(HT40) Mode					
Channel	Frequency	Conducted PSD (dBm/3KHz)			Max. Limit (dBm/3KHz)
		Ant. A	Ant. B	Total	
3	2422 MHz	-12.659	-12.666	-9.652	5.94
6	2437 MHz	-10.309	-12.240	-8.157	
9	2452 MHz	-10.404	-11.088	-7.722	
<b>Note:</b> The ANT. A. and ANT. B will transmitting simultaneously for the 802.11g/n(HT20)/n(HT40) Mode, the T Directional Gain =Ant. Gain + 10*LOG(N <sub>ANT</sub> ) =8.06 dBi > 6 dBi. So P <sub>out</sub> = P <sub>limit</sub> -(G <sub>TX</sub> -6)]=8-2.06=5.94dBm					
Test plots please refer to below pages:					

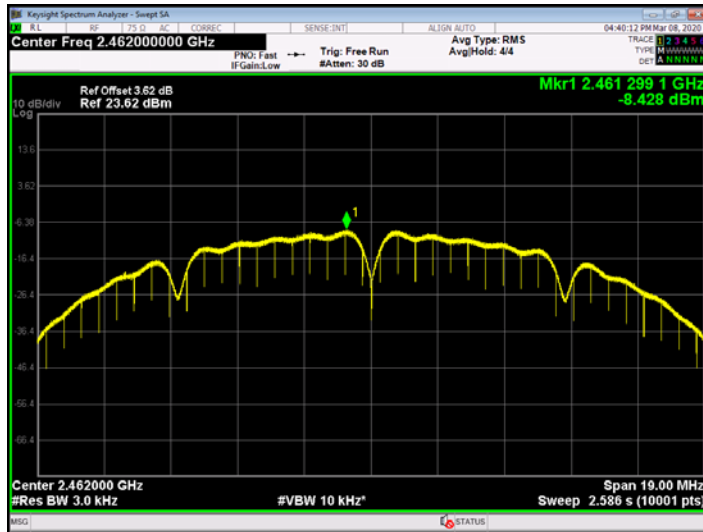
**802.11 b 2412 MHz**



**802.11 b 2437 MHz**

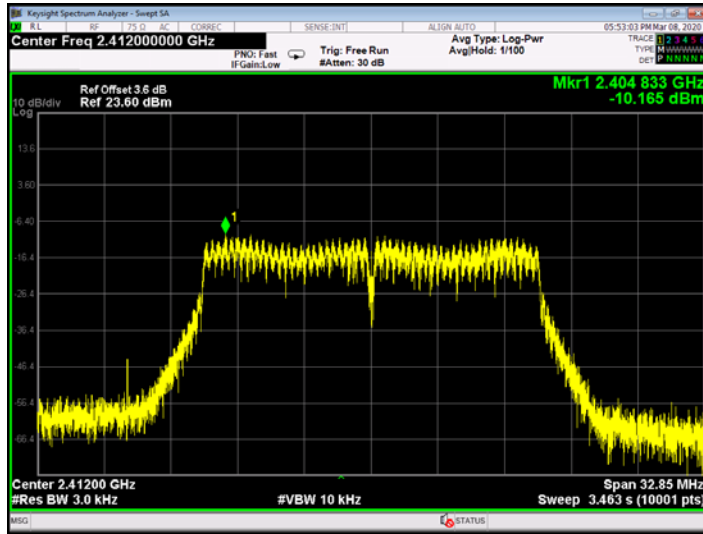


**802.11 b 2462MHz**

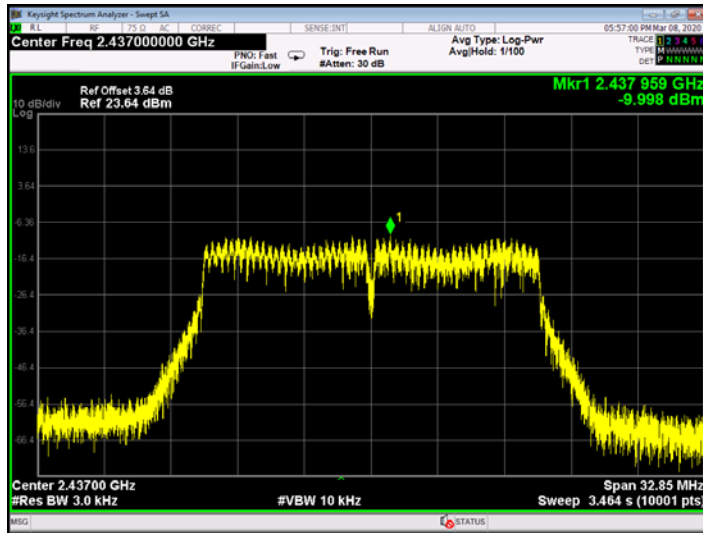




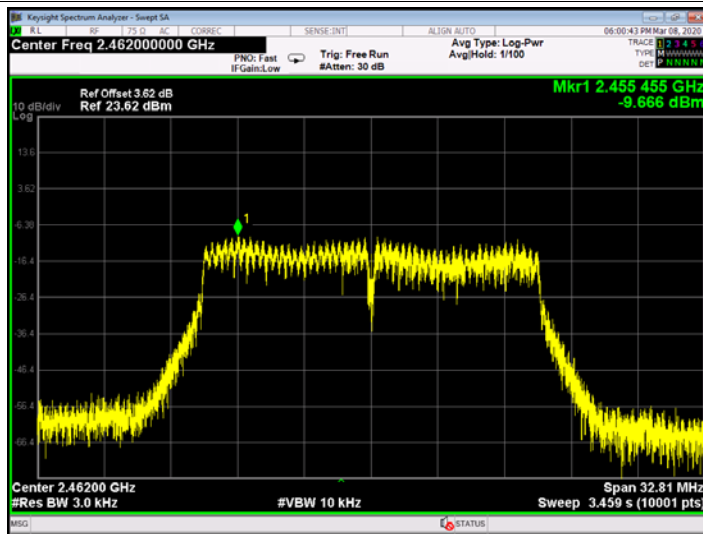
**802.11 g 2412 MHz (ANT. A)**



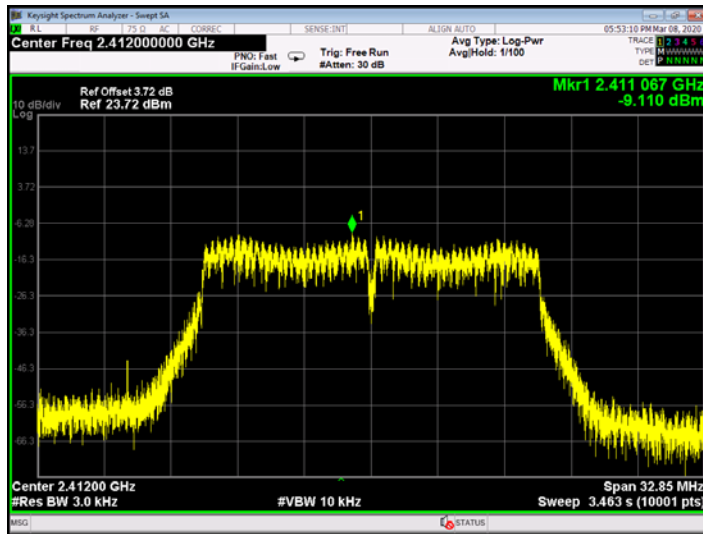
**802.11 g 2437 MHz (ANT. A)**



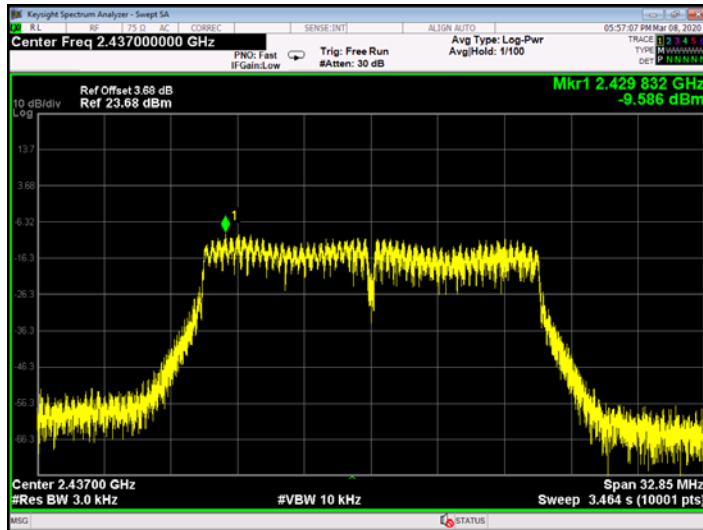
**802.11 g 2462MHz (ANT. A)**



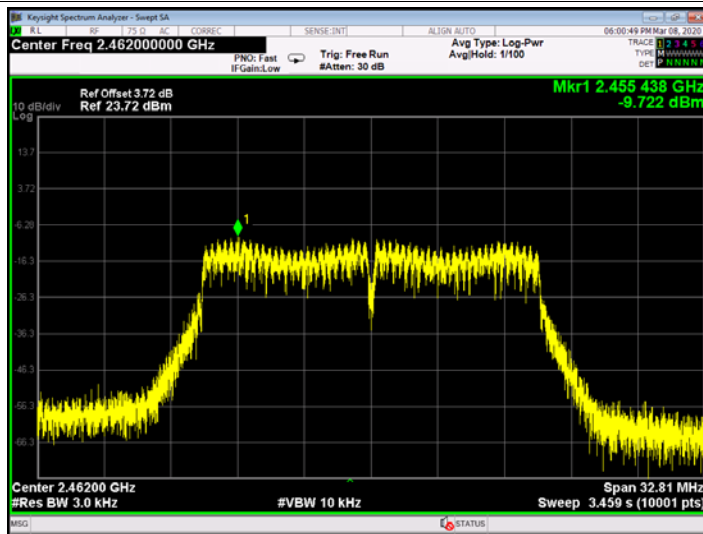
**802.11 g 2412 MHz (ANT. B)**



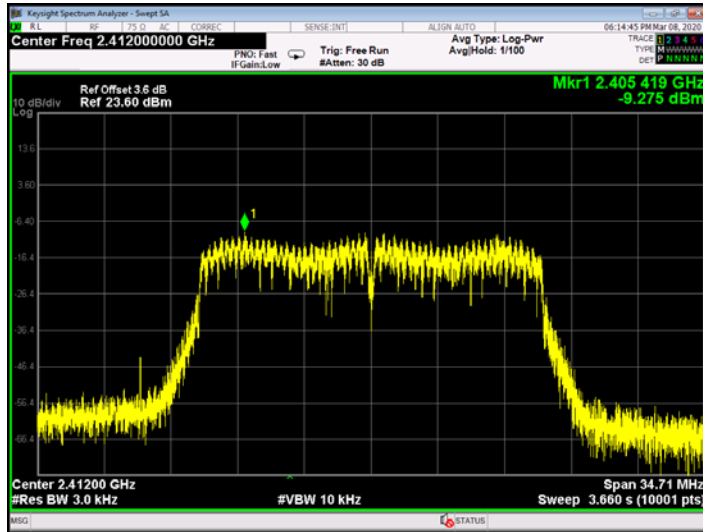
**802.11 g 2437 MHz (ANT. B)**



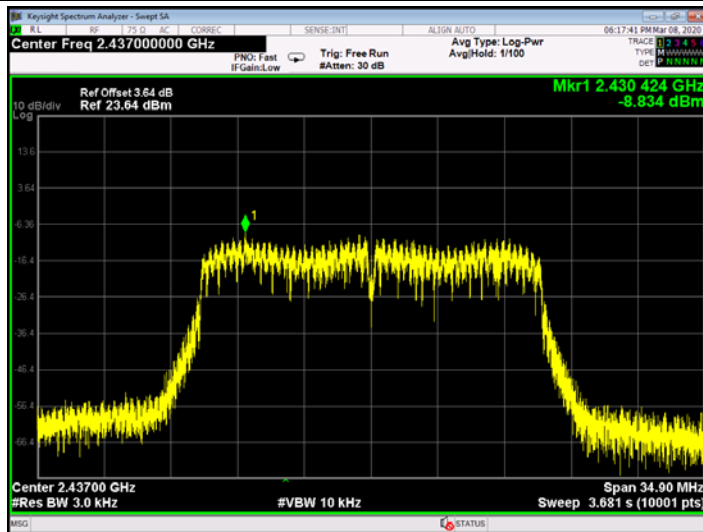
**802.11 g 2462 MHz (ANT. B)**



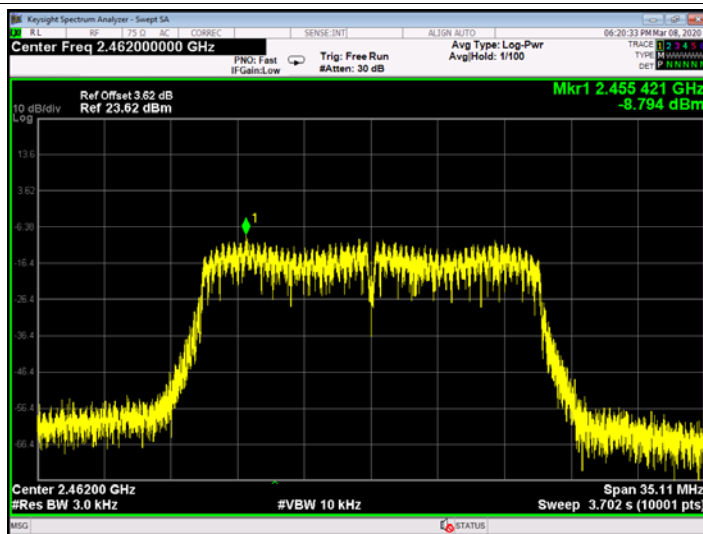
**802.11 n(HT20) 2412 MHz (ANT. A)**



**802.11 n(HT20) 2437 MHz (ANT. A)**

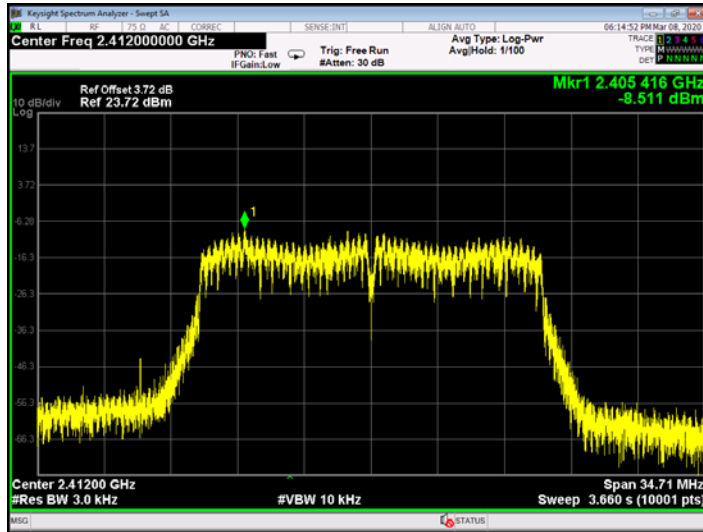


**802.11 n(HT20) 2462MHz (ANT. A)**

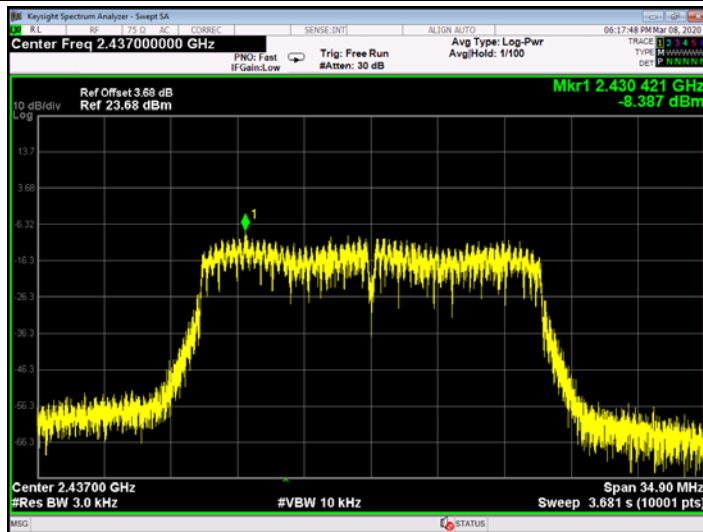




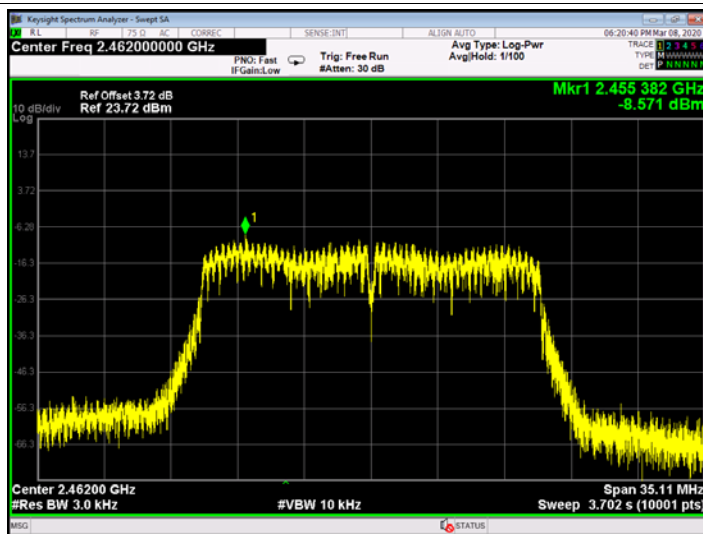
**802.11 n(HT20) 2412 MHz (ANT. B)**



**802.11 n(HT20) 2437 MHz (ANT. B)**



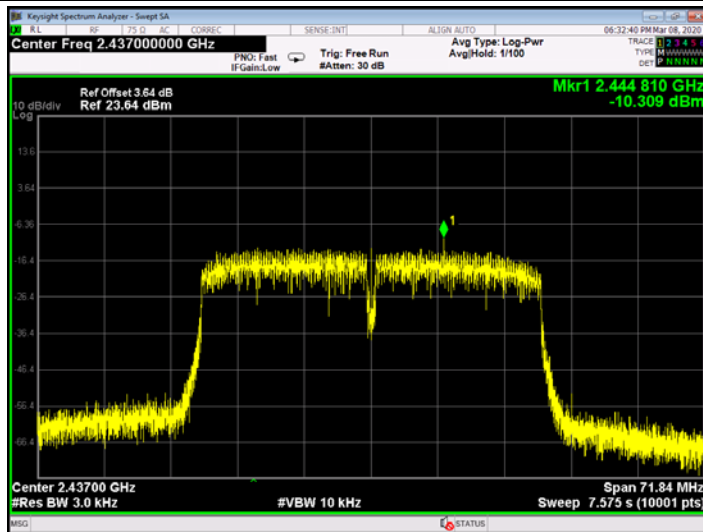
**802.11 n(HT20) 2462MHz (ANT. B)**



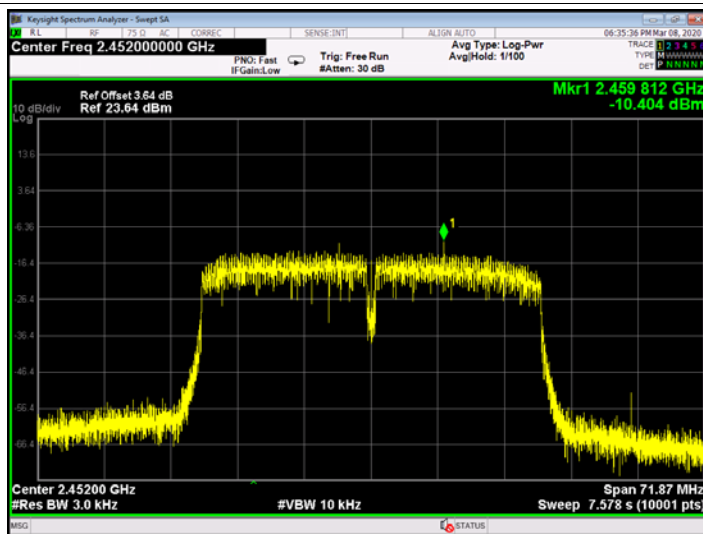
**802.11 n(HT40) 2422 MHz (ANT. A)**



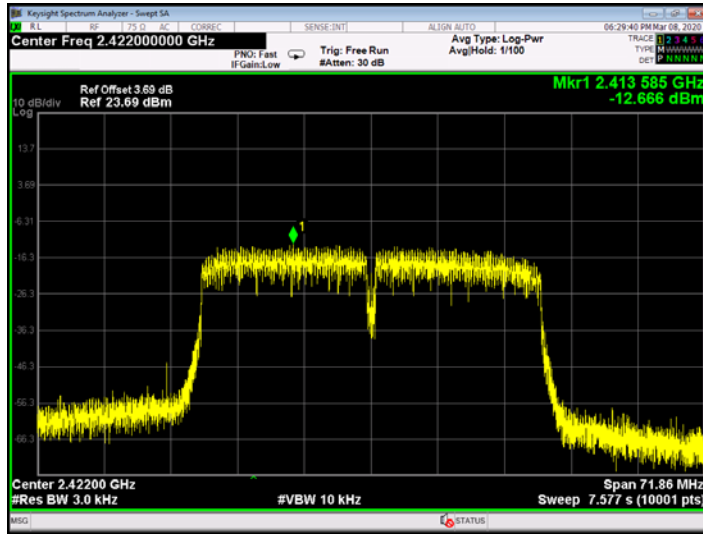
**802.11 n(HT40) 2437 MHz (ANT. A)**



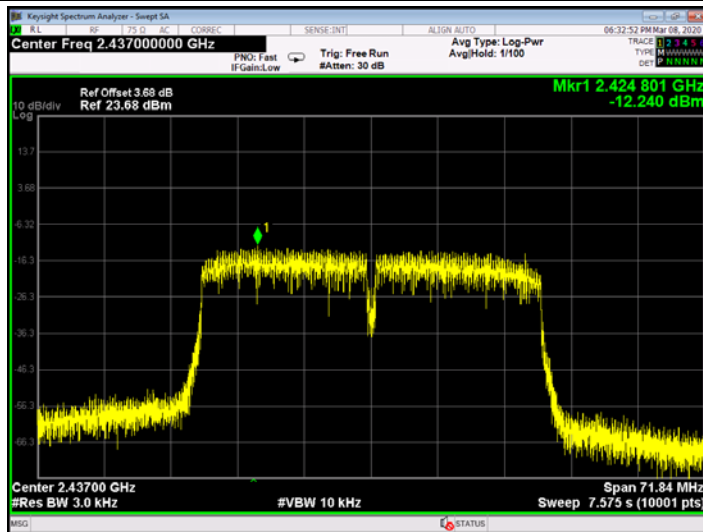
**802.11 n(HT40) 2452MHz (ANT. A)**



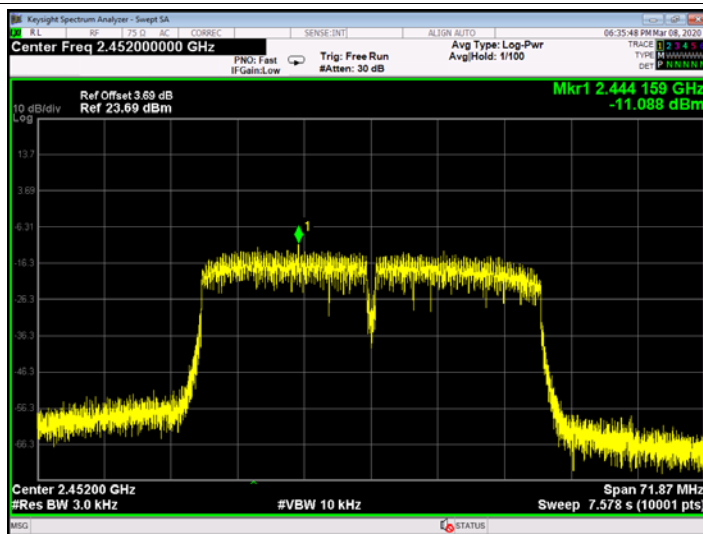
**802.11 n(HT40) 2422 MHz (ANT. B)**



**802.11 n(HT40) 2437 MHz (ANT. B)**



**802.11 n(HT40) 2452MHz (ANT. B)**



-----END OF REPORT-----