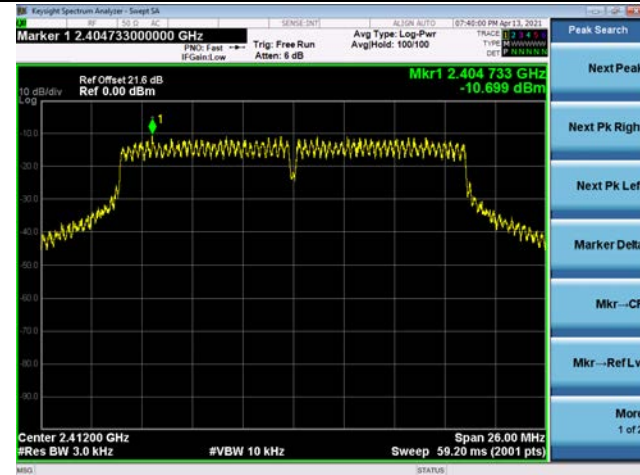


802.11n-HT20 – PK PSD -Scan Antenna

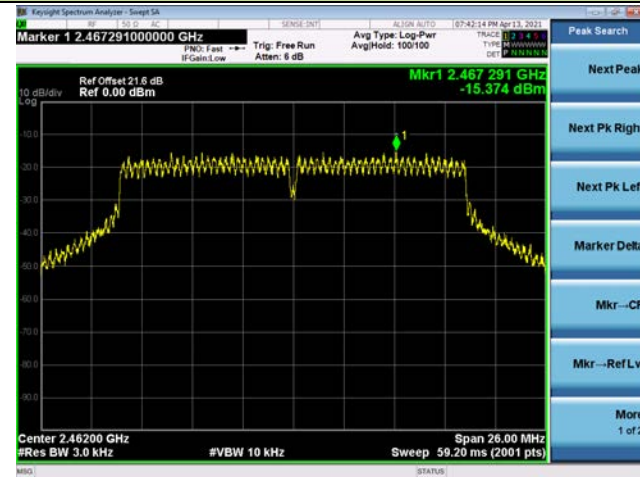
Channel 01 (2412MHz)



Channel 06 (2437MHz)

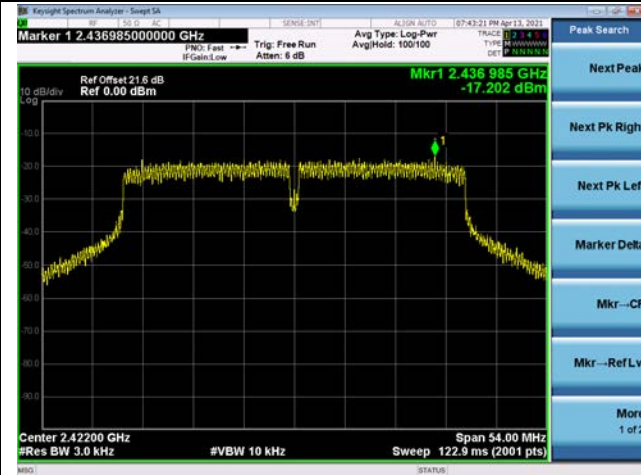


Channel 11 (2462MHz)



802.11n-HT40 – PK PSD -Scan Antenna

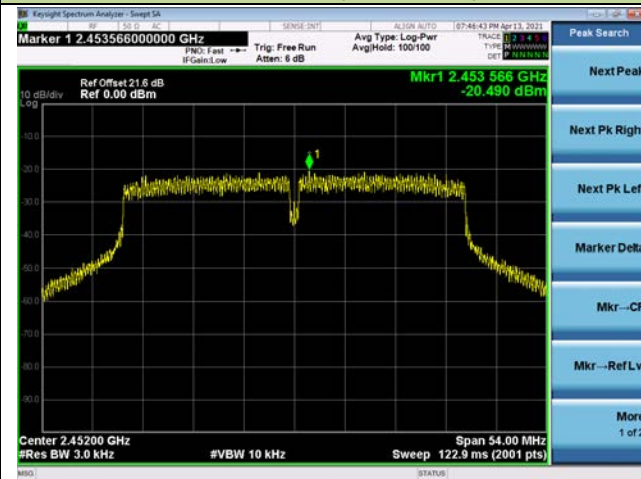
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



## **6.5. Conducted Band Edge and Out-of-Band Emissions**

### **6.5.1. Test Limit**

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

### **6.5.2. Test Procedure Used**

ANSI C63.10-2013 - Section 11.11

### **6.5.3. Test Setting**

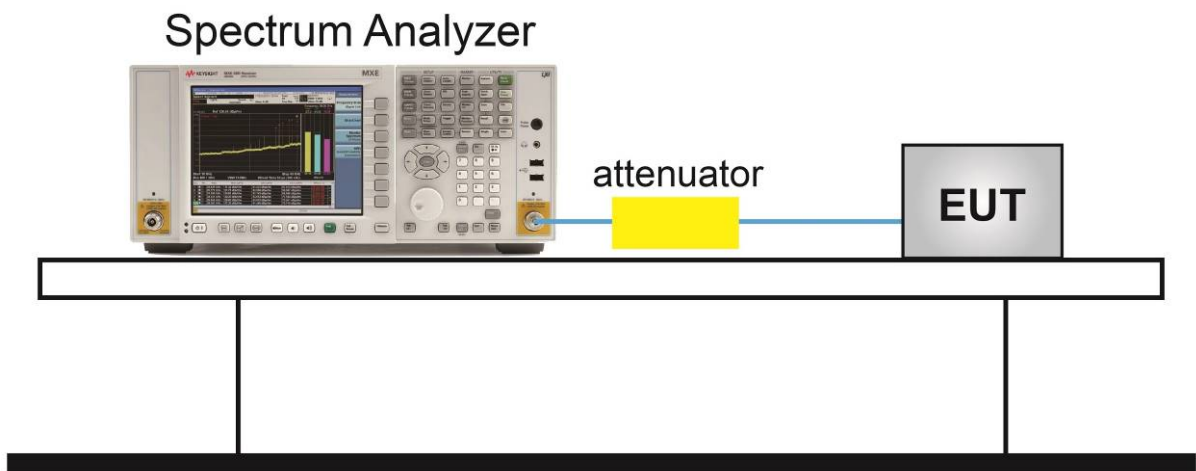
#### **Reference level measurement**

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to  $\geq 1.5$  times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW  $\geq 3 \times$  RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

#### **Emission level measurement**

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

### 6.5.4. Test Setup



**6.5.5. Test Result**

Test Site	SR2	Test Engineer	Peter
Test Date	2021/04/12		

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1Mbps	01	2412	30dBc	Pass
802.11b	1Mbps	06	2437	30dBc	Pass
802.11b	1Mbps	11	2462	30dBc	Pass
802.11g	6Mbps	01	2412	30dBc	Pass
802.11g	6Mbps	06	2437	30dBc	Pass
802.11g	6Mbps	11	2462	30dBc	Pass
802.11n-HT20	MCS0	01	2412	30dBc	Pass
802.11n-HT20	MCS0	06	2437	30dBc	Pass
802.11n-HT20	MCS0	11	2462	30dBc	Pass
802.11n-HT40	MCS0	03	2422	30dBc	Pass
802.11n-HT40	MCS0	06	2437	30dBc	Pass
802.11n-HT40	MCS0	09	2452	30dBc	Pass
802.11ax-HE20	MCS0	01	2412	30dBc	Pass
802.11ax-HE20	MCS0	06	2437	30dBc	Pass
802.11ax-HE20	MCS0	11	2462	30dBc	Pass
802.11ax-HE40	MCS0	03	2422	30dBc	Pass
802.11ax-HE40	MCS0	06	2437	30dBc	Pass
802.11ax-HE40	MCS0	09	2452	30dBc	Pass

Test Site	SR2	Test Engineer	Peter
Test Mode	Scan Antenna	Test Date	2021/04/13

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1Mbps	01	2412	20dBc	Pass
802.11b	1Mbps	06	2437	20dBc	Pass
802.11b	1Mbps	11	2462	20dBc	Pass
802.11g	6Mbps	01	2412	20dBc	Pass
802.11g	6Mbps	06	2437	20dBc	Pass
802.11g	6Mbps	11	2462	20dBc	Pass
802.11n-HT20	MCS0	01	2412	20dBc	Pass
802.11n-HT20	MCS0	06	2437	20dBc	Pass
802.11n-HT20	MCS0	11	2462	20dBc	Pass
802.11n-HT40	MCS0	03	2422	20dBc	Pass
802.11n-HT40	MCS0	06	2437	20dBc	Pass
802.11n-HT40	MCS0	09	2452	20dBc	Pass

802.11b Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 01 (2412MHz)

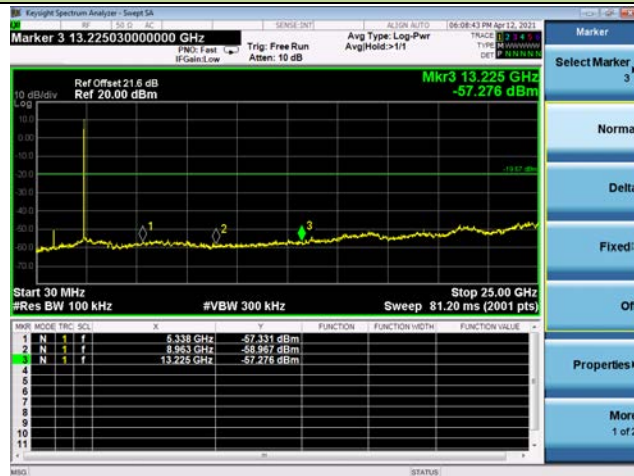
100kHz PSD Reference Level



Low Band Edge

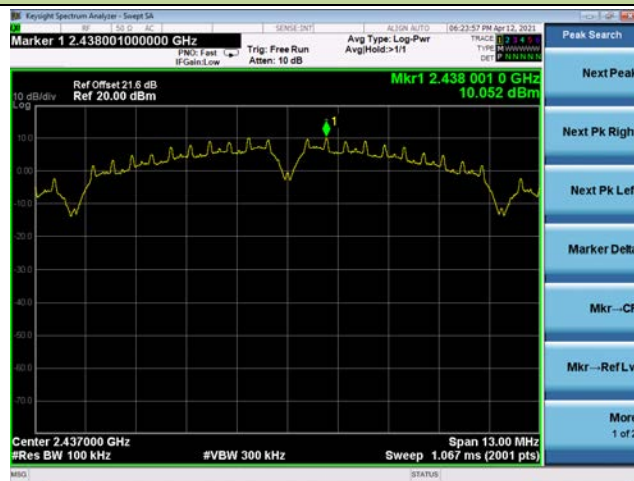


Spurious Emission

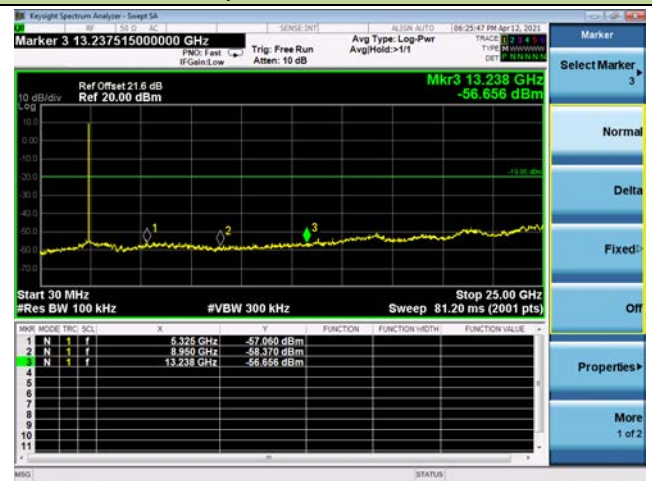


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

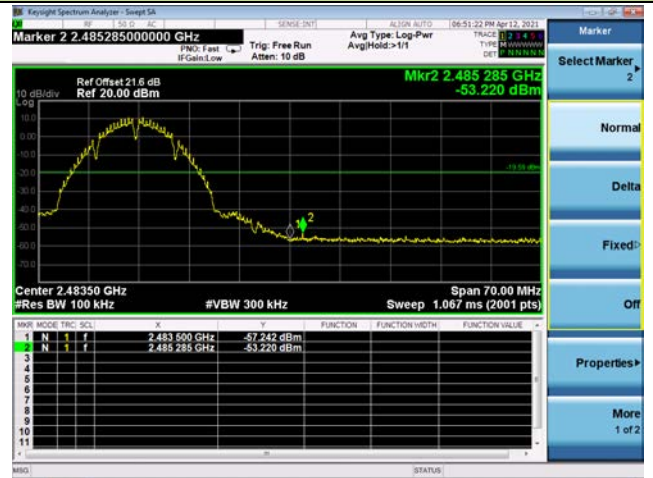


802.11b Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3  
 Channel 11 (2462MHz)

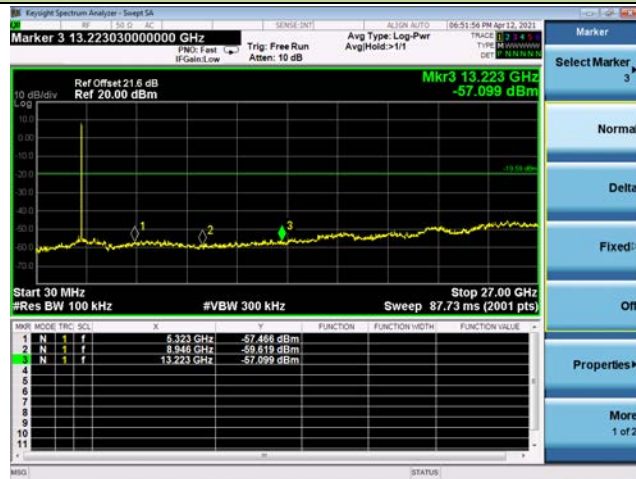
100kHz PSD Reference Level



High Band Edge



Spurious Emission





802.11g Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 01 (2412MHz)

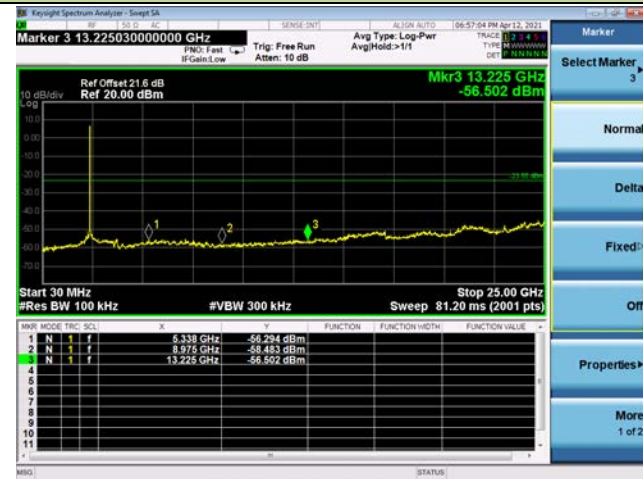
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

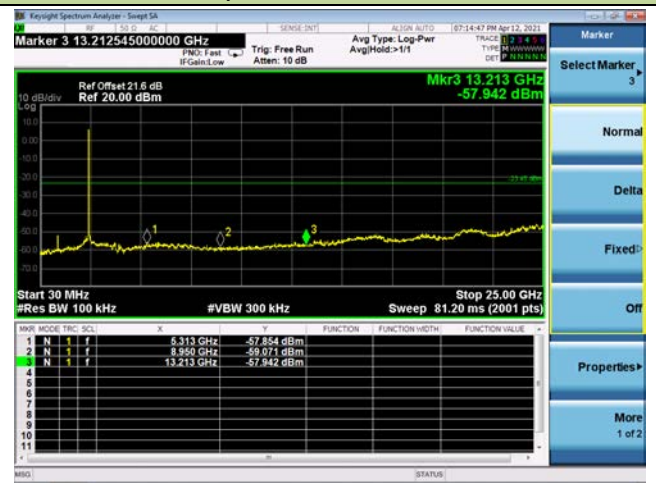


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

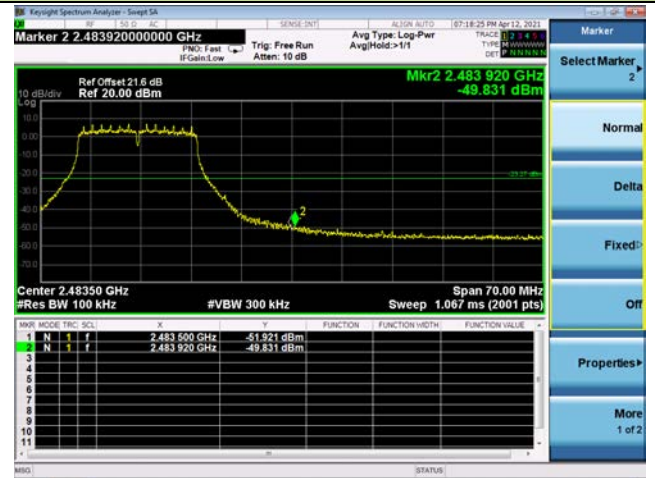


802.11g Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3  
Channel 11 (2462MHz)

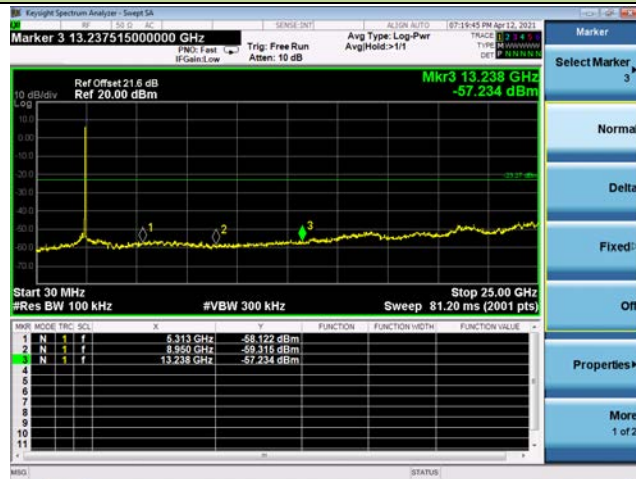
100kHz PSD Reference Level



High Band Edge



Spurious Emission



802.11n-HT20 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 01 (2412MHz)

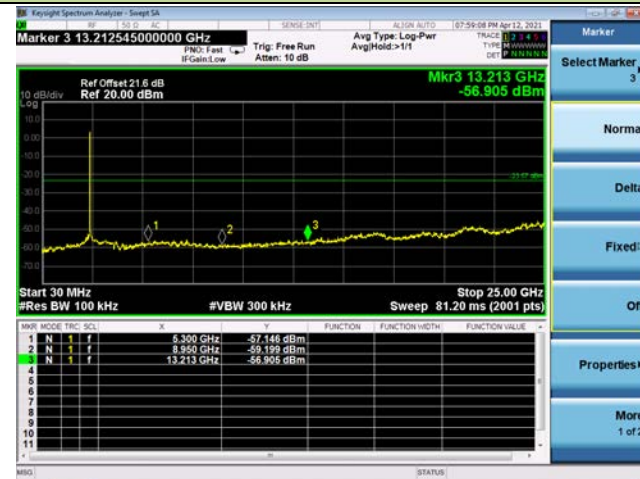
100kHz PSD Reference Level



Low Band Edge

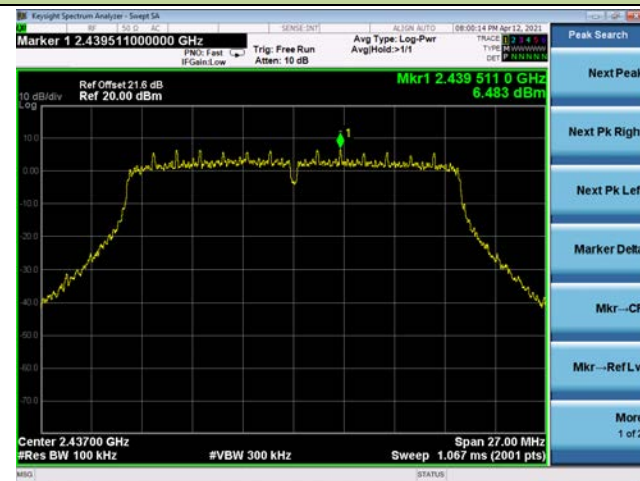


Spurious Emission

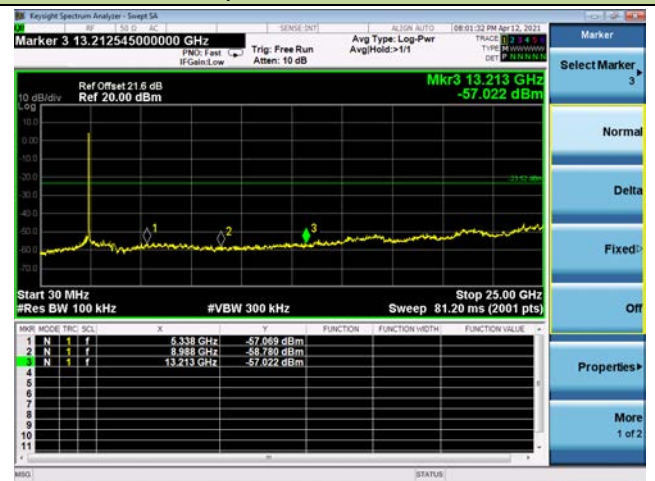


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

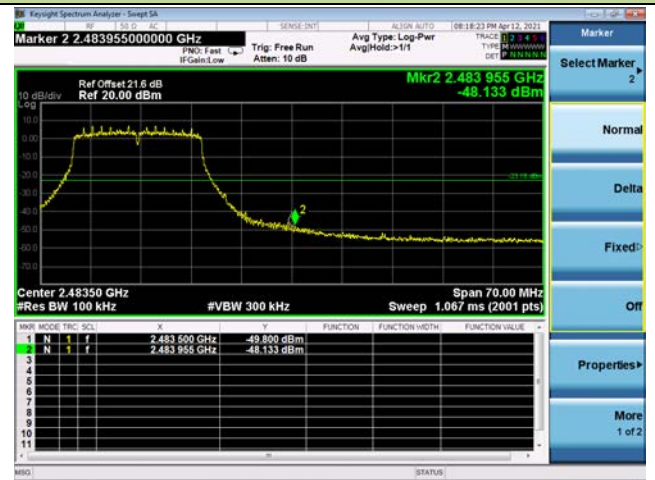


802.11n-HT20 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3  
Channel 11 (2462MHz)

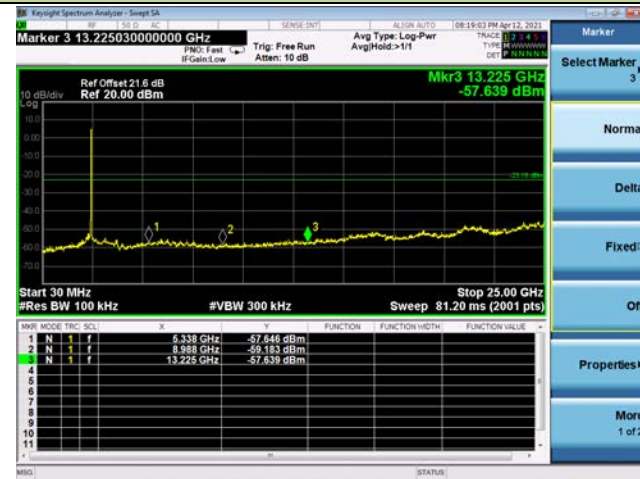
100kHz PSD Reference Level



High Band Edge



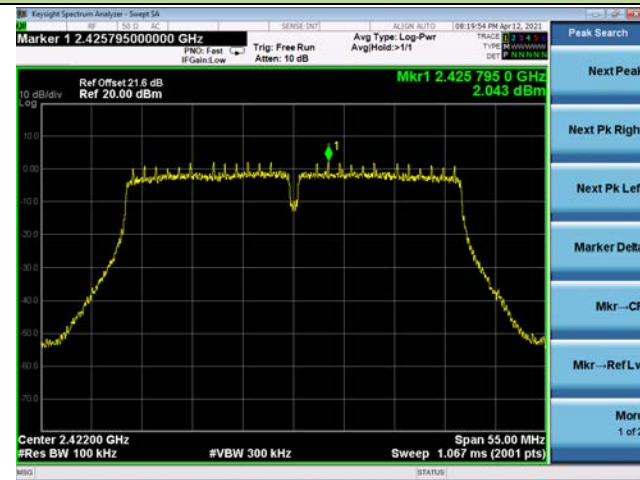
Spurious Emission



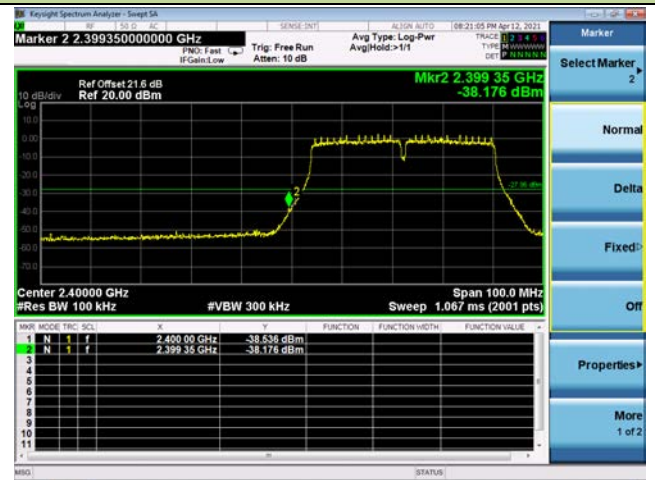
802.11n-HT40 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 03 (2422MHz)

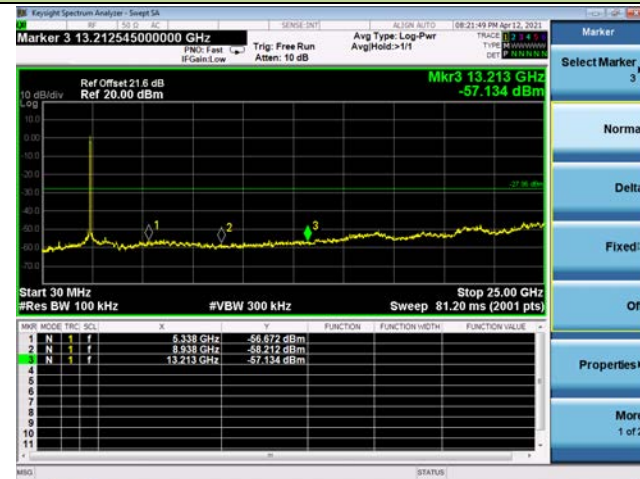
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

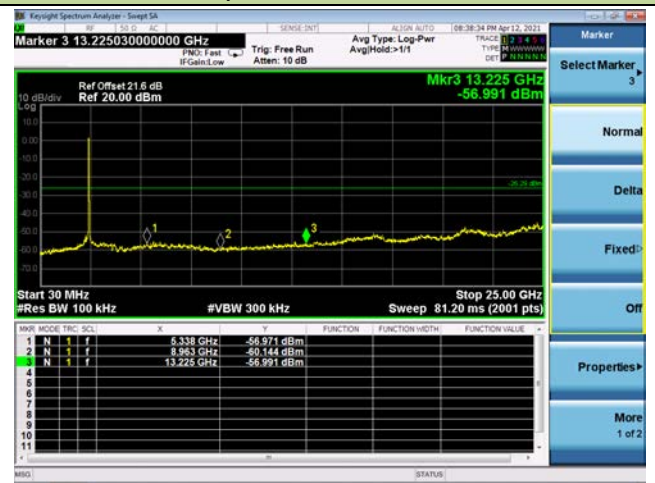


Channel 06 (2437MHz)

100kHz PSD Reference Level



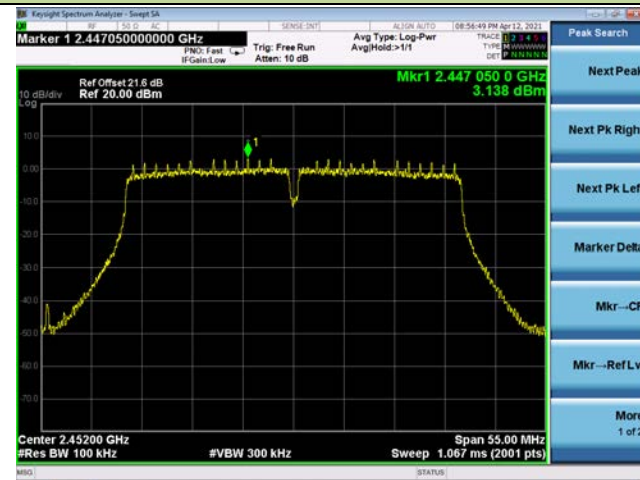
Spurious Emission



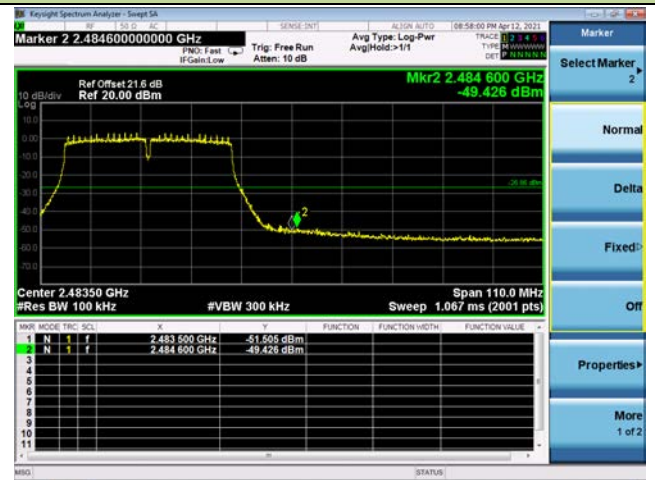
802.11n-HT40 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 09 (2452MHz)

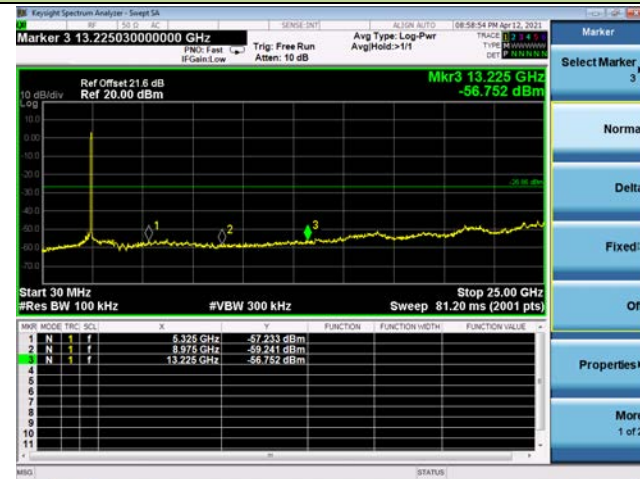
100kHz PSD Reference Level



High Band Edge



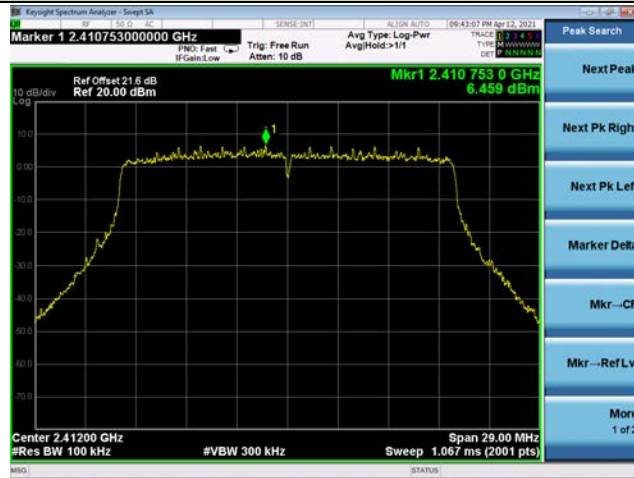
Spurious Emission



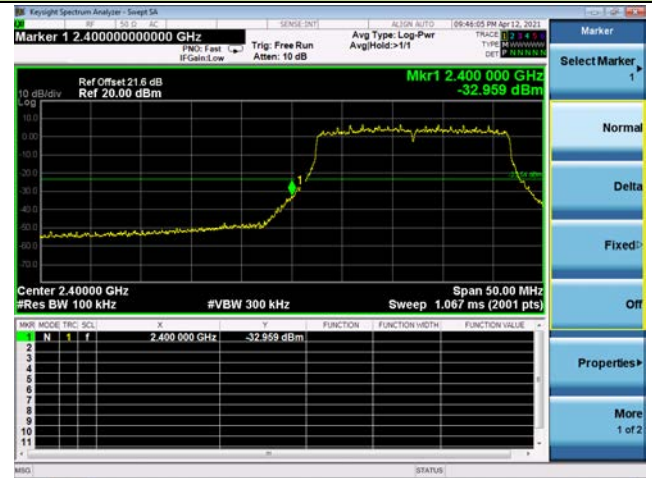
802.11ax-HE20 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 01 (2412MHz)

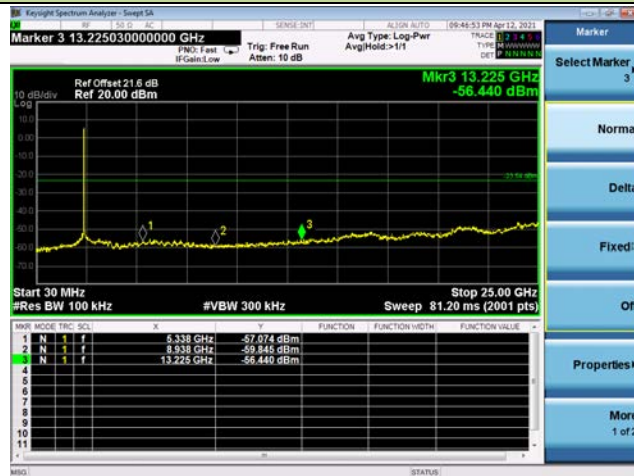
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

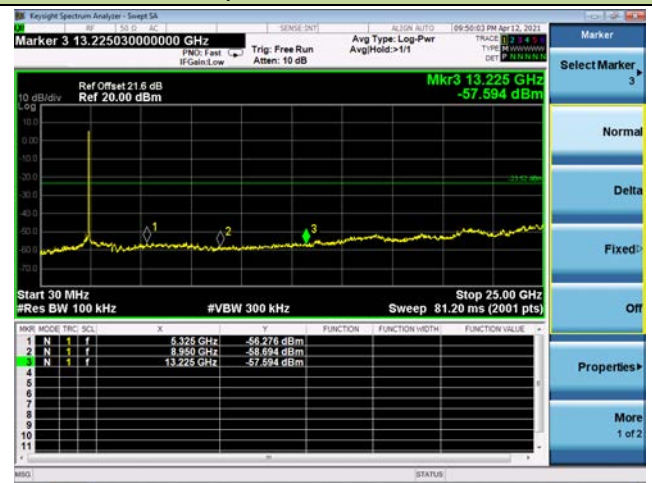


Channel 06 (2437MHz)

100kHz PSD Reference Level

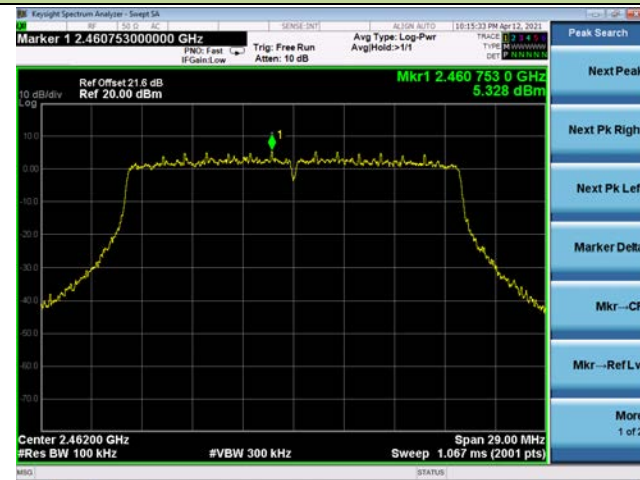


Spurious Emission

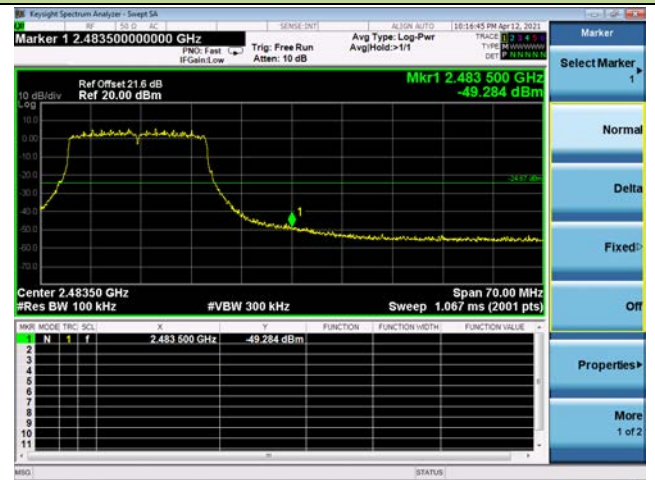


802.11ax-HE20 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3  
 Channel 11 (2462MHz)

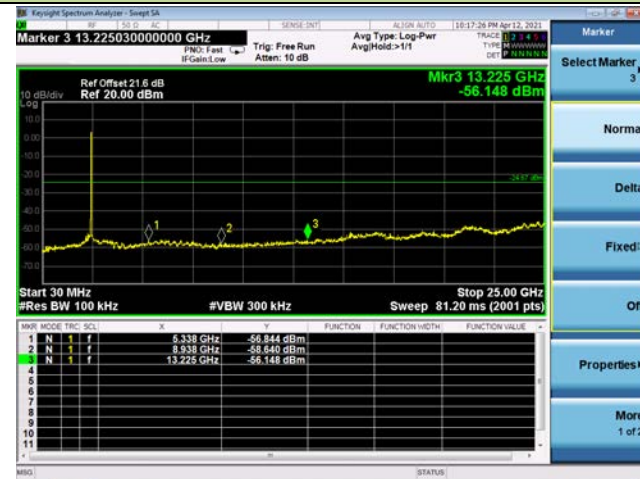
100kHz PSD Reference Level



High Band Edge



Spurious Emission





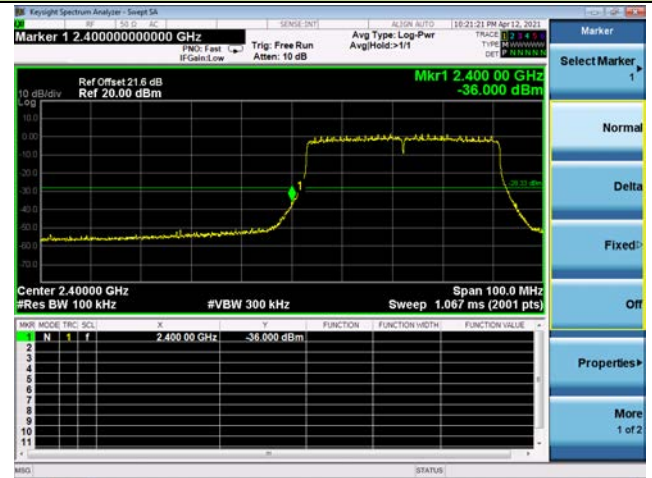
802.11ax-HE40 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 03 (2422MHz)

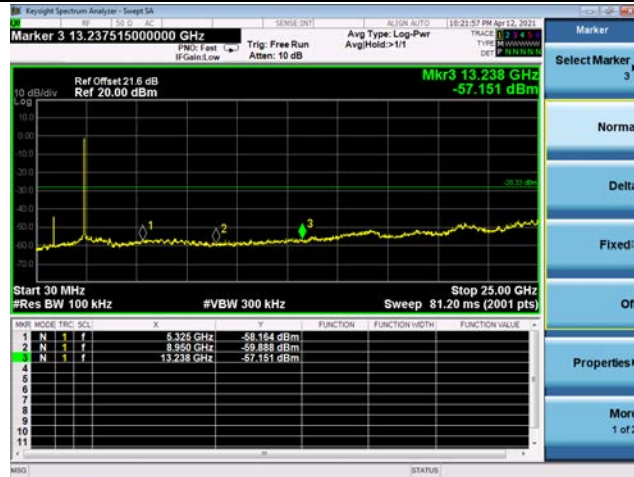
100kHz PSD Reference Level



Low Band Edge

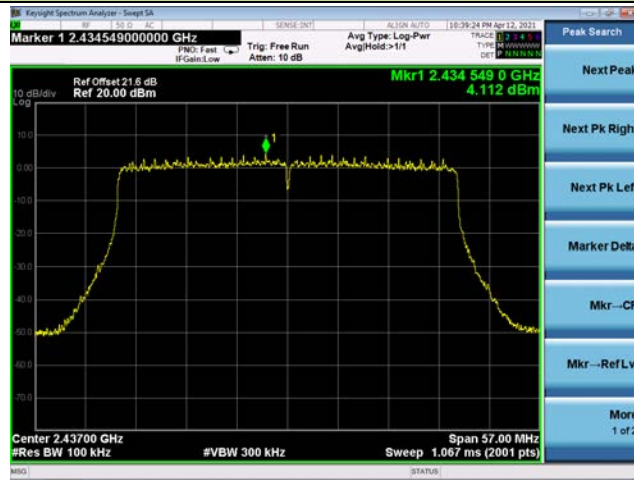


Spurious Emission

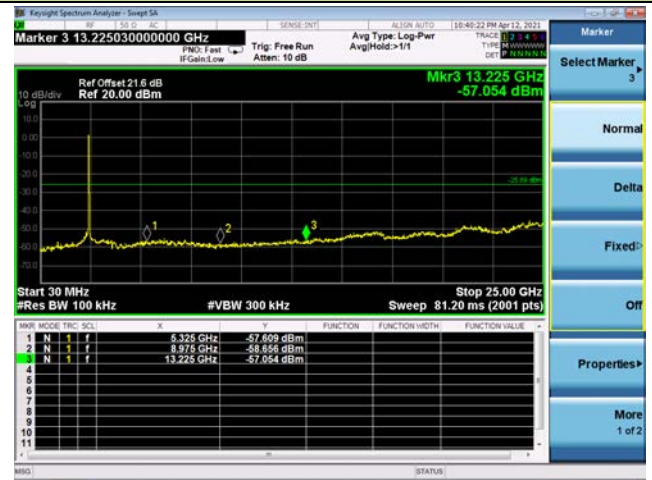


Channel 06 (2437MHz)

100kHz PSD Reference Level



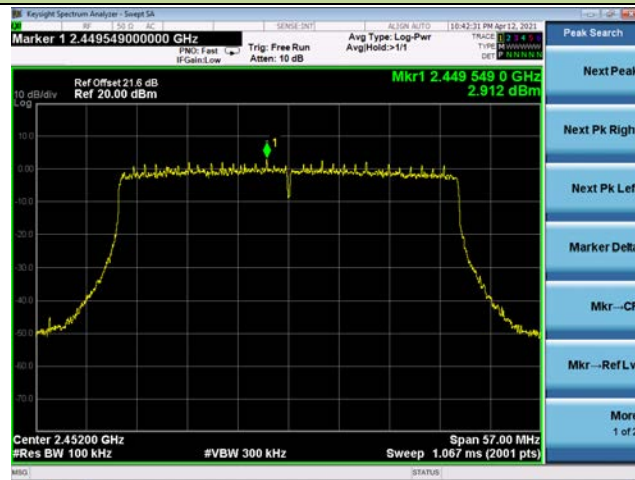
Spurious Emission



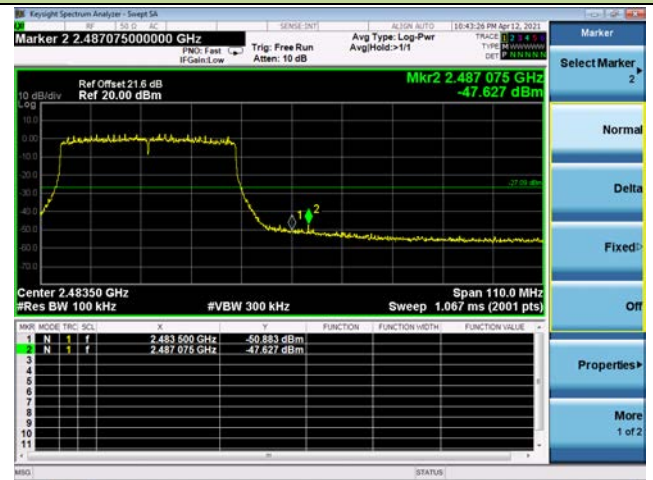
802.11ax-HE40 Out-of-Band Emissions - Ant 0/ Ant 0+1+2+3

Channel 09 (2452MHz)

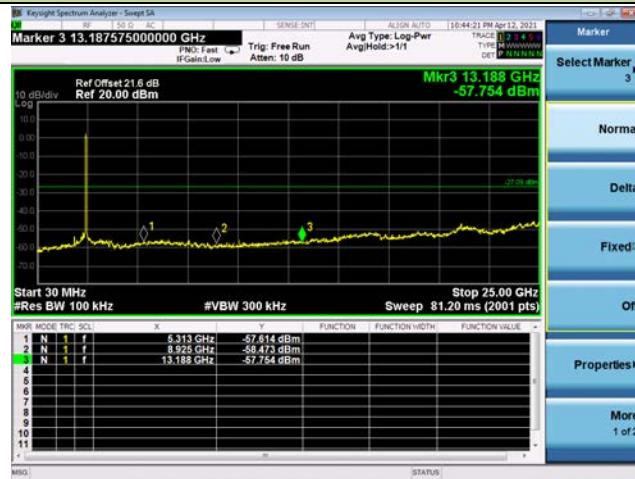
100kHz PSD Reference Level



High Band Edge



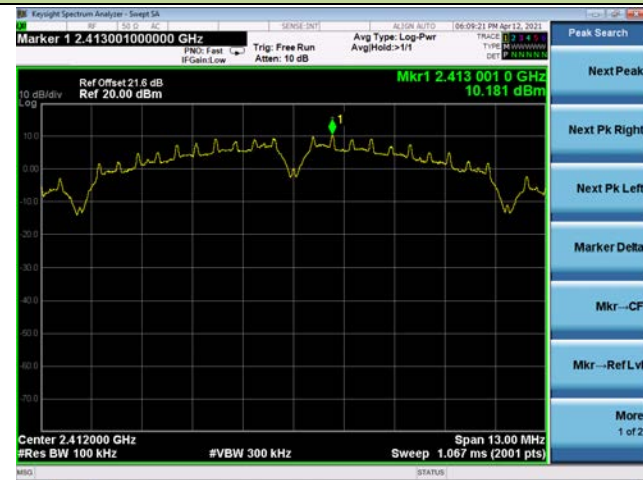
Spurious Emission



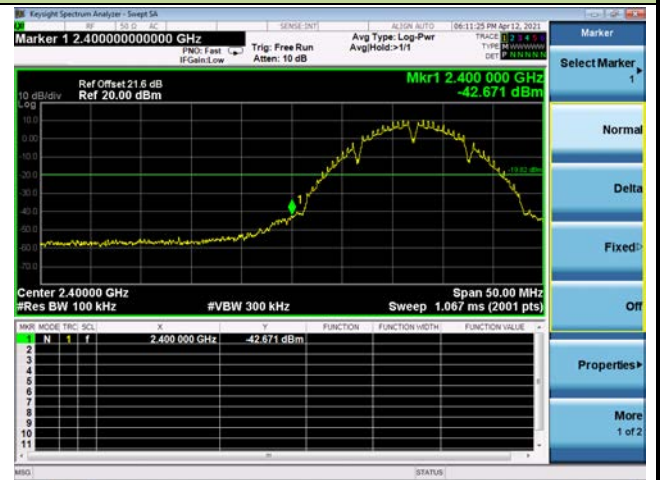
802.11b Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

Channel 01 (2412MHz)

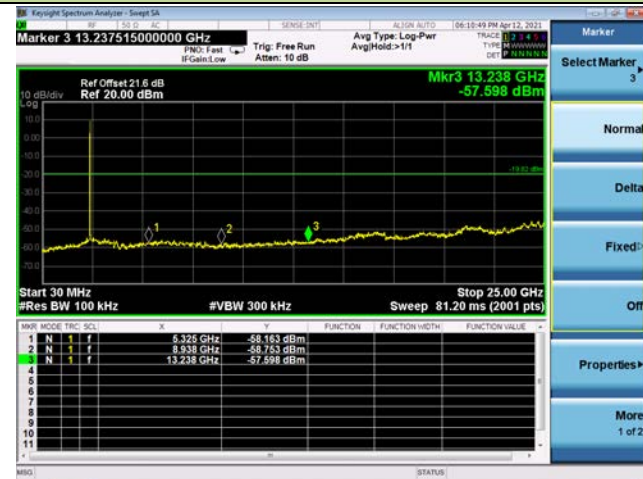
100kHz PSD Reference Level



Low Band Edge

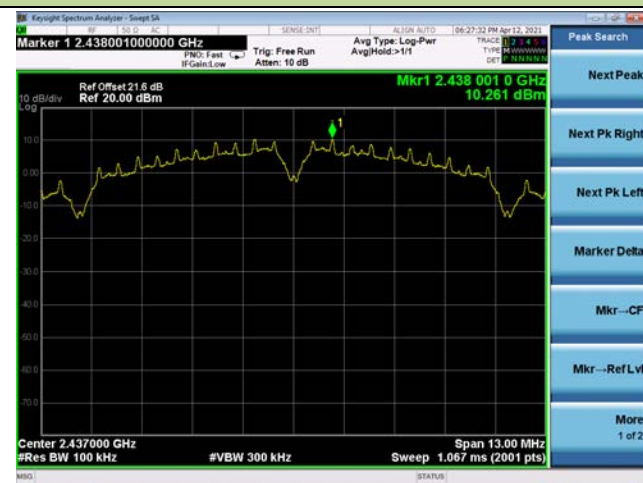


Spurious Emission

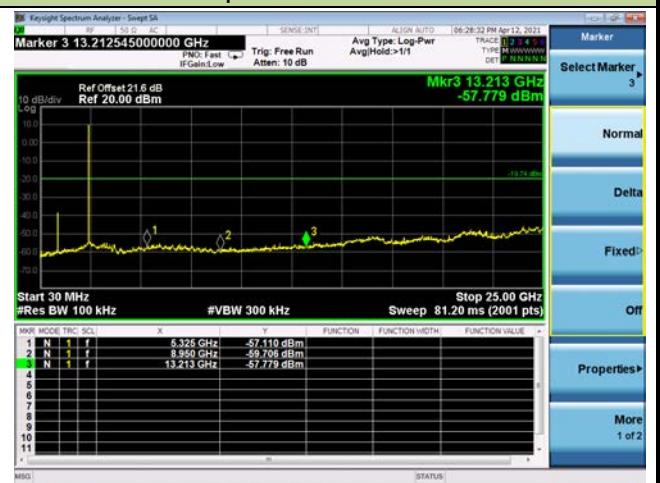


Channel 06 (2437MHz)

100kHz PSD Reference Level

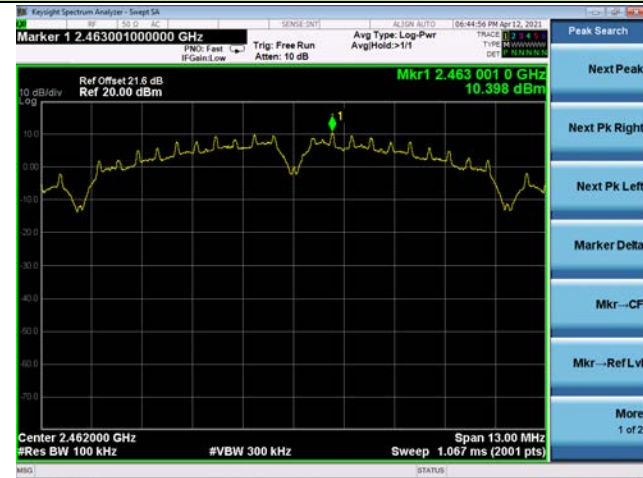


Spurious Emission

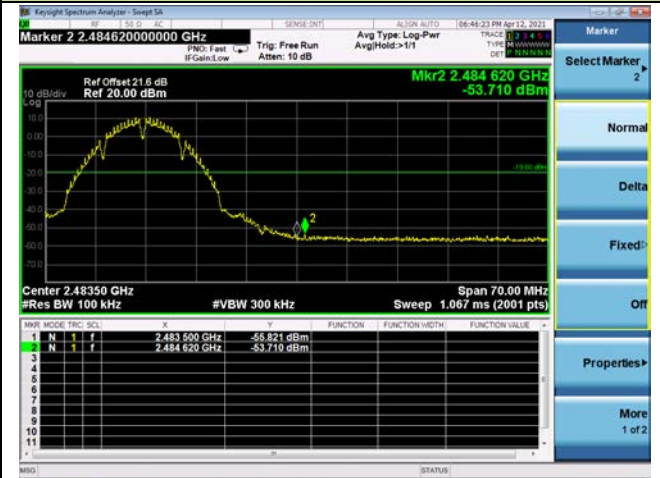


802.11b Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3  
Channel 11 (2462MHz)

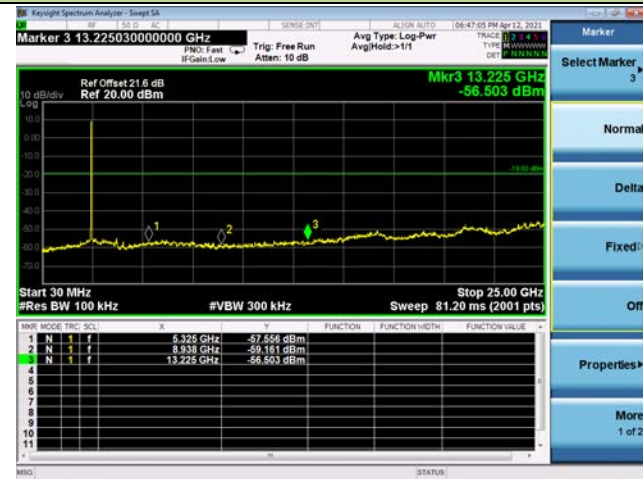
100kHz PSD Reference Level



High Band Edge



Spurious Emission



802.11g Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

Channel 01 (2412MHz)

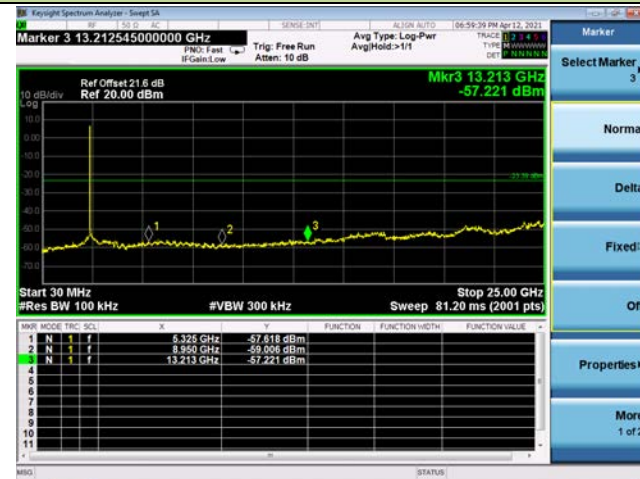
100kHz PSD Reference Level



Low Band Edge

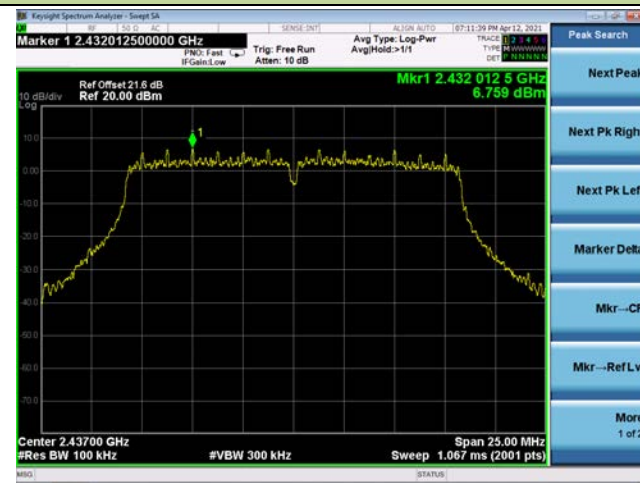


Spurious Emission

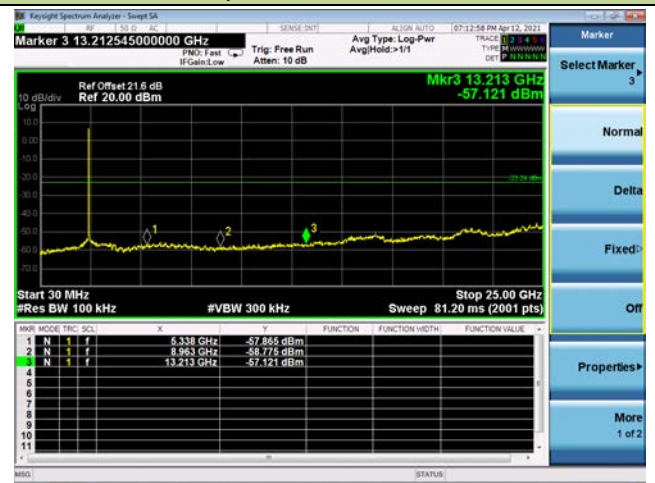


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission



802.11g Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3  
Channel 11 (2462MHz)

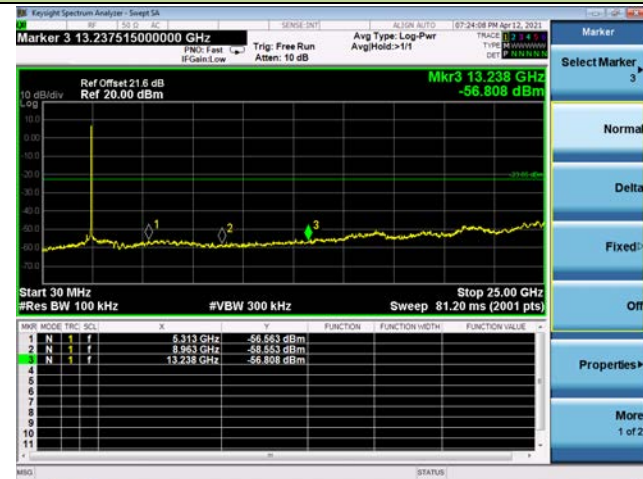
100kHz PSD Reference Level



High Band Edge



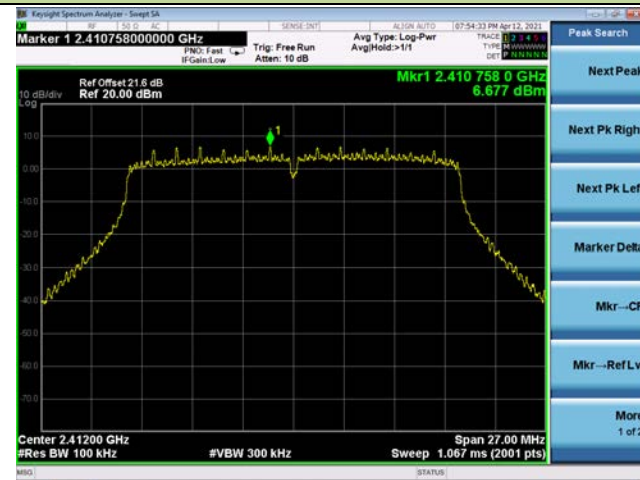
Spurious Emission



802.11n-HT20 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

Channel 01 (2412MHz)

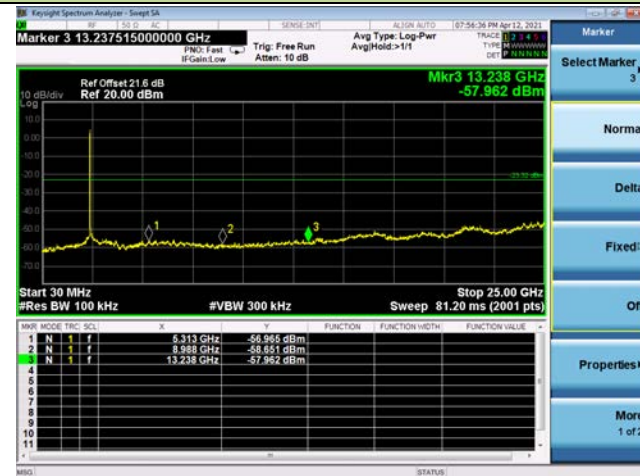
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

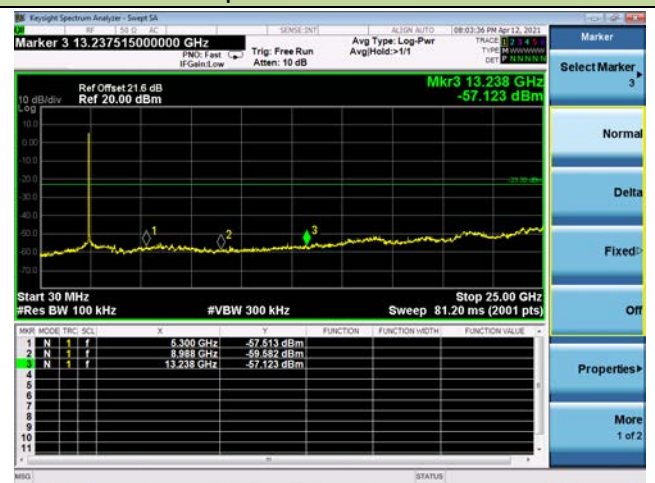


Channel 06 (2437MHz)

100kHz PSD Reference Level

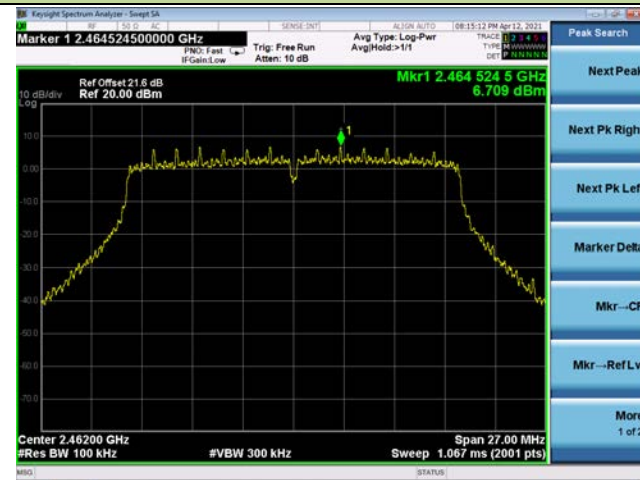


Spurious Emission

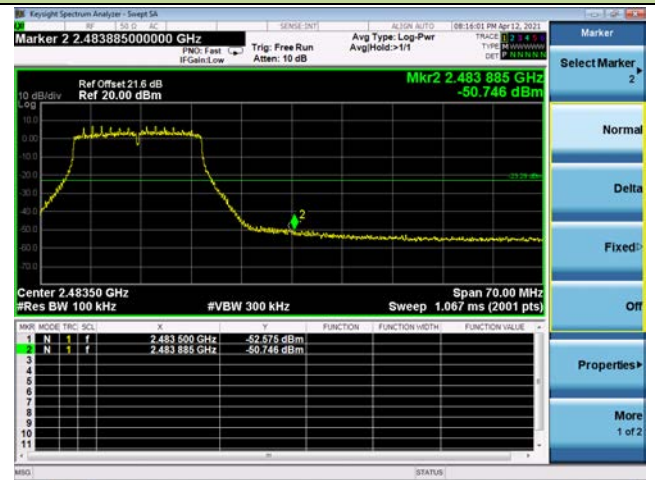


802.11n-HT20 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3  
 Channel 11 (2462MHz)

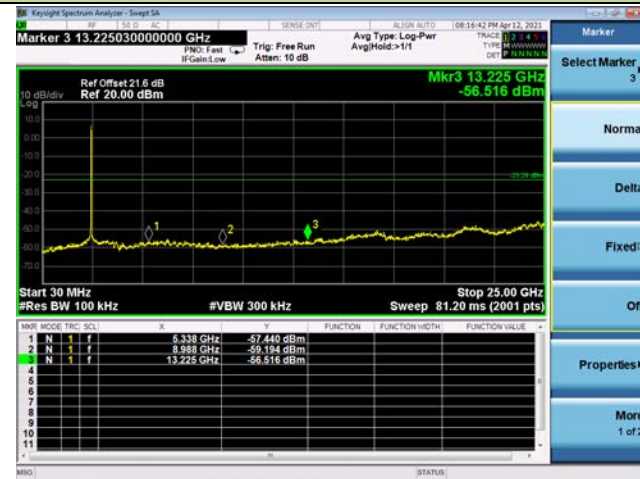
100kHz PSD Reference Level



High Band Edge



Spurious Emission

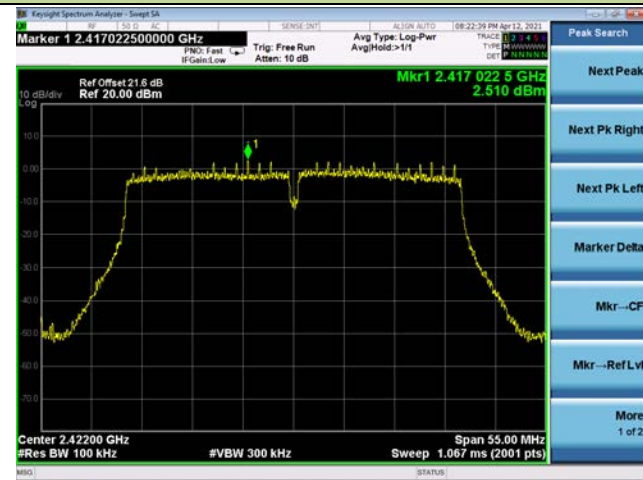




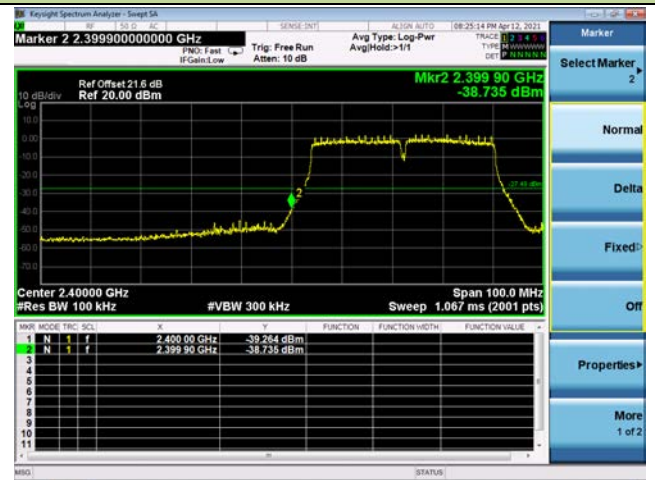
802.11n-HT40 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

Channel 03 (2422MHz)

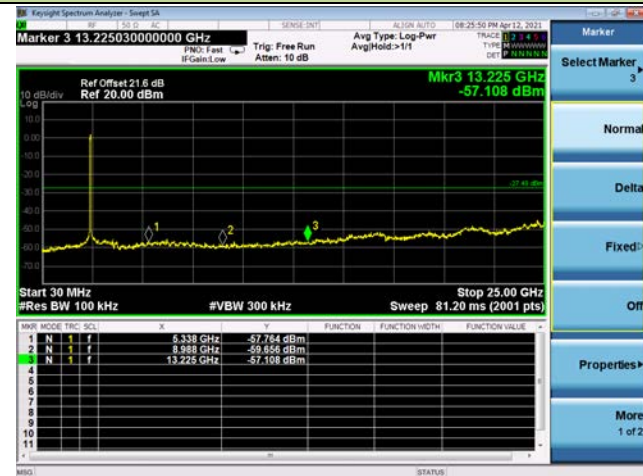
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

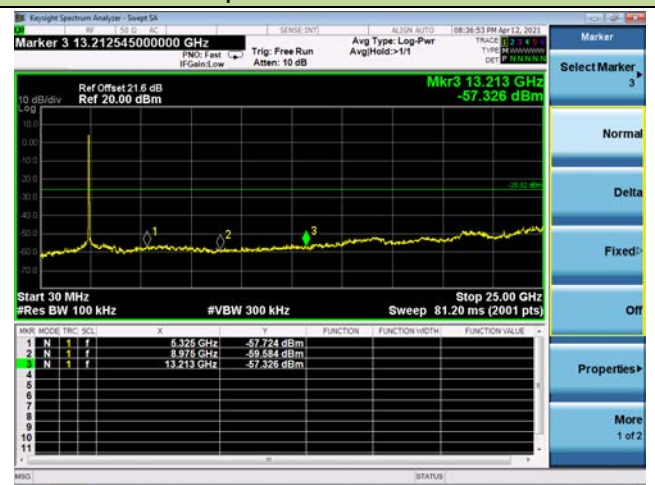


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission



802.11n-HT40 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

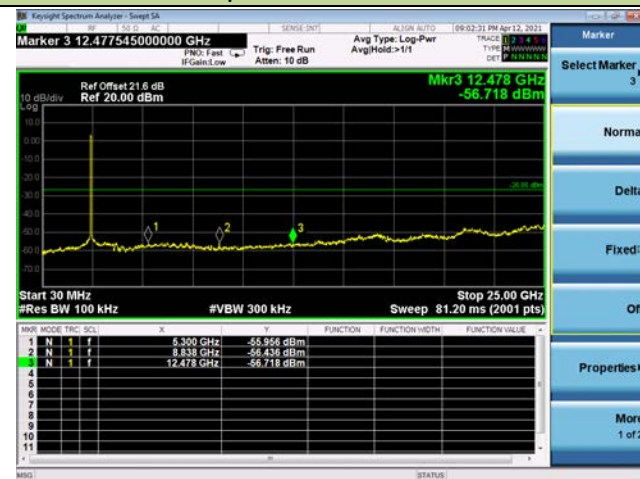
Channel 09 (2452MHz)

100kHz PSD Reference Level

High Band Edge



Spurious Emission



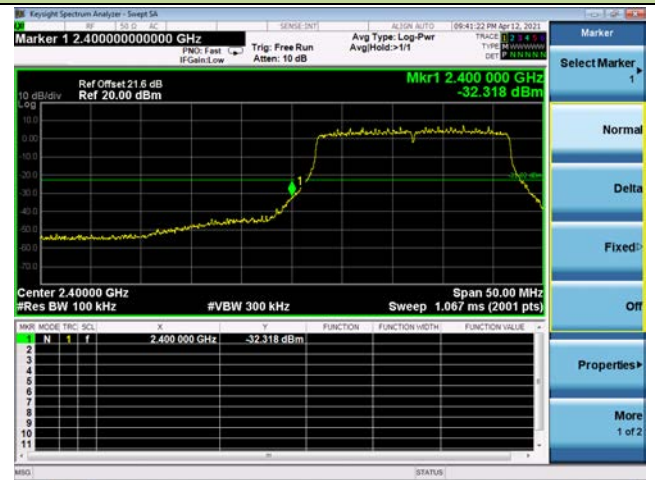
802.11ax-HE20 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

Channel 01 (2412MHz)

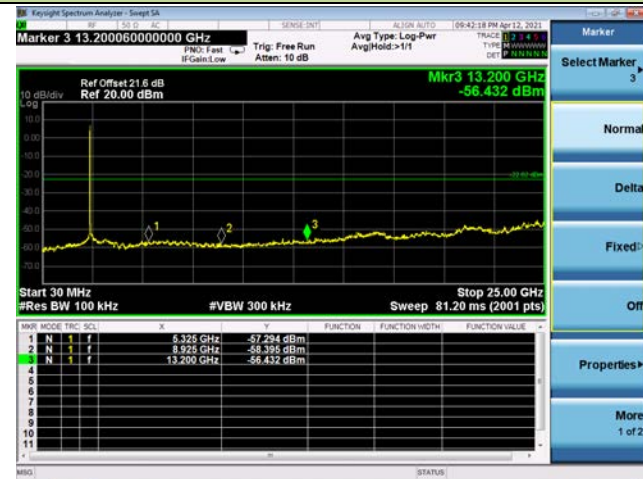
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

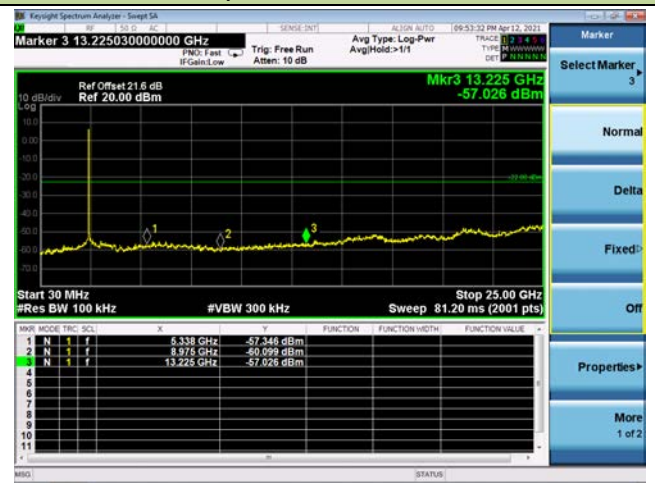


Channel 06 (2437MHz)

100kHz PSD Reference Level

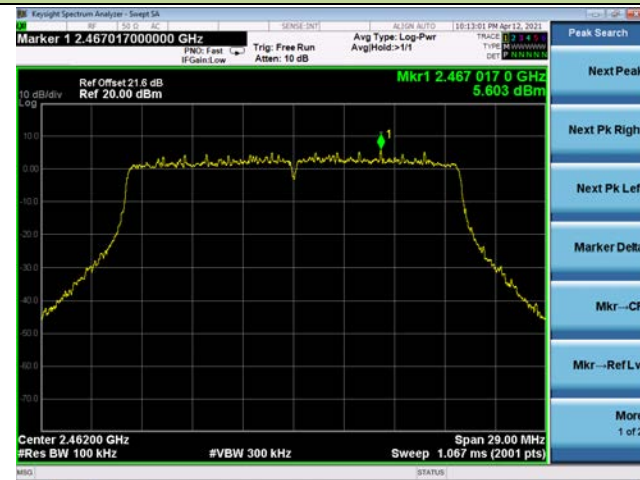


Spurious Emission

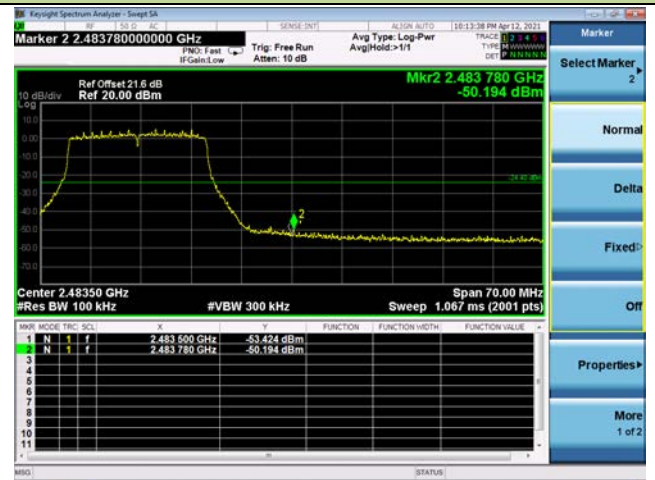


802.11ax-HE20 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3  
 Channel 11 (2462MHz)

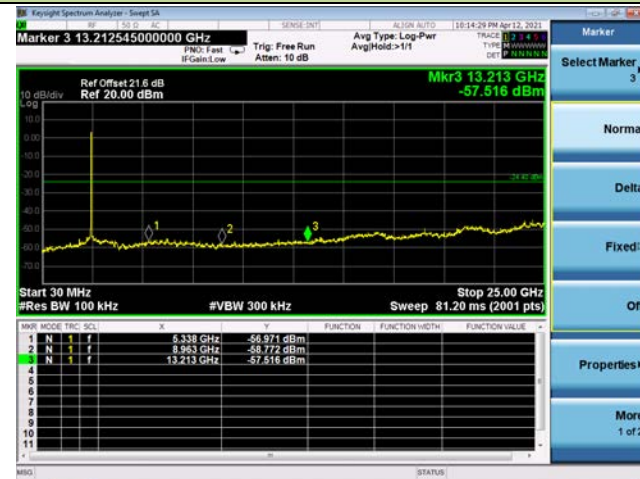
100kHz PSD Reference Level



High Band Edge



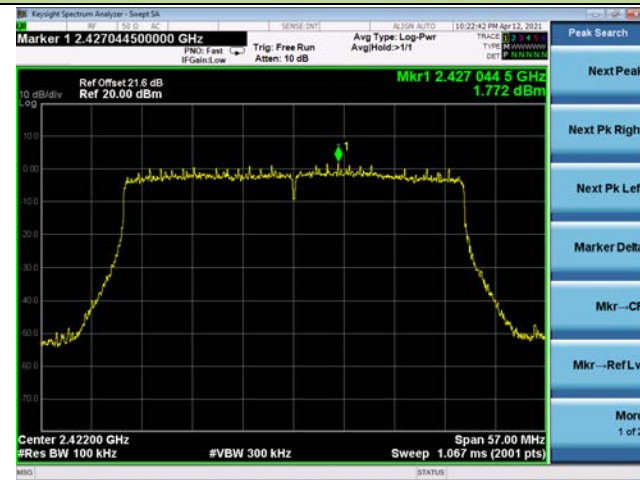
Spurious Emission



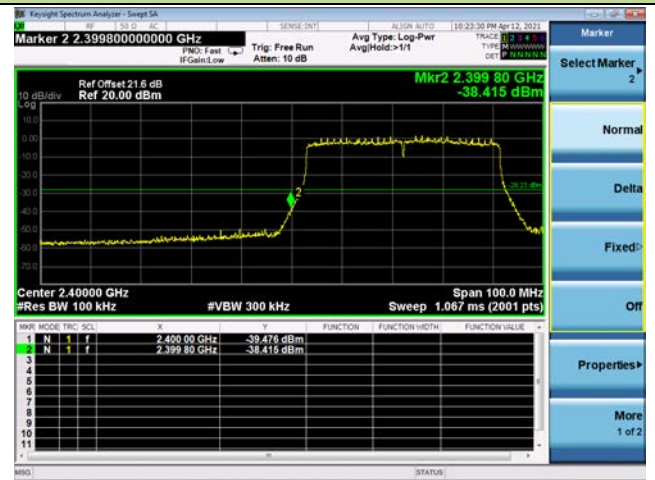
802.11ax-HE40 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

Channel 03 (2422MHz)

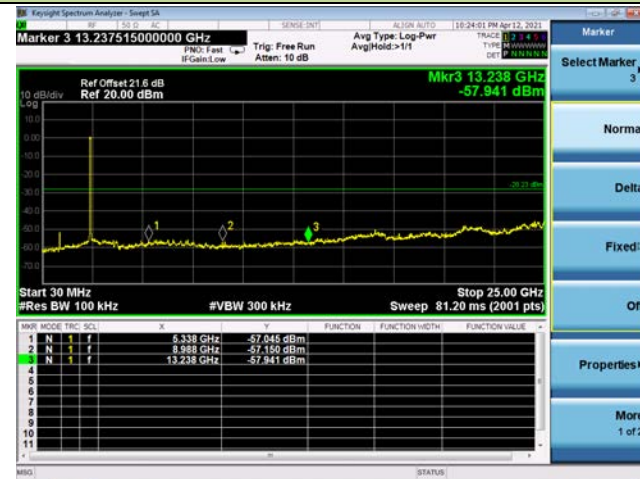
100kHz PSD Reference Level



Low Band Edge

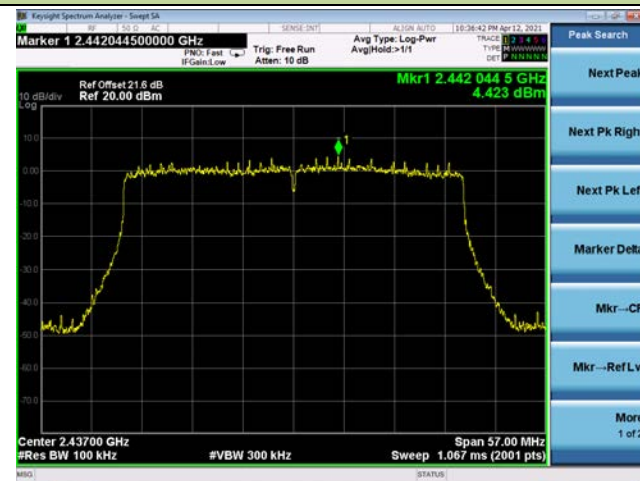


Spurious Emission

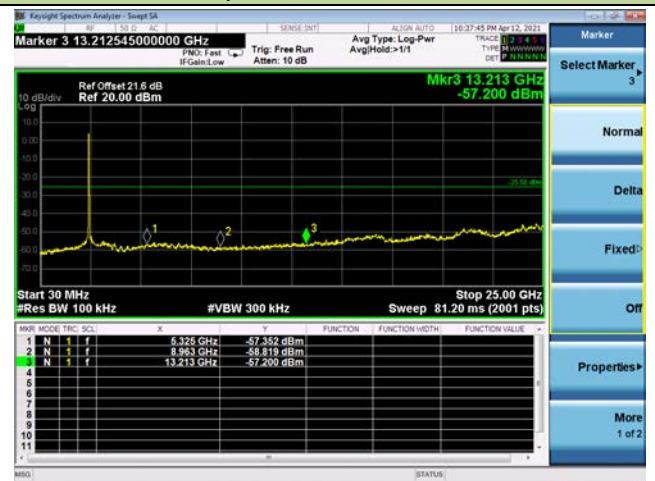


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

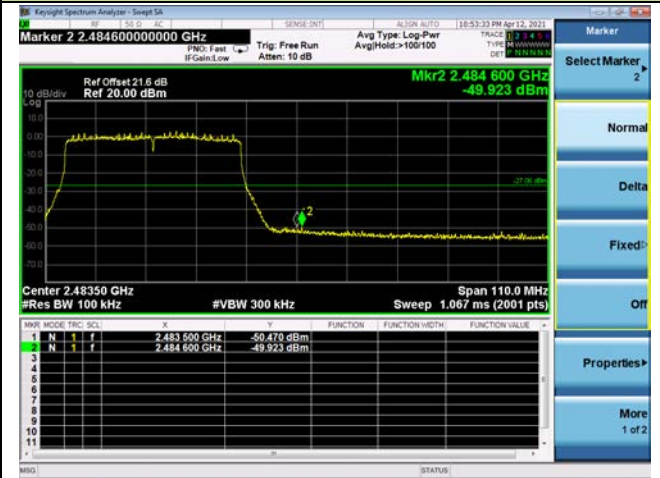


802.11ax-HE40 Out-of-Band Emissions - Ant 1/ Ant 0+1+2+3

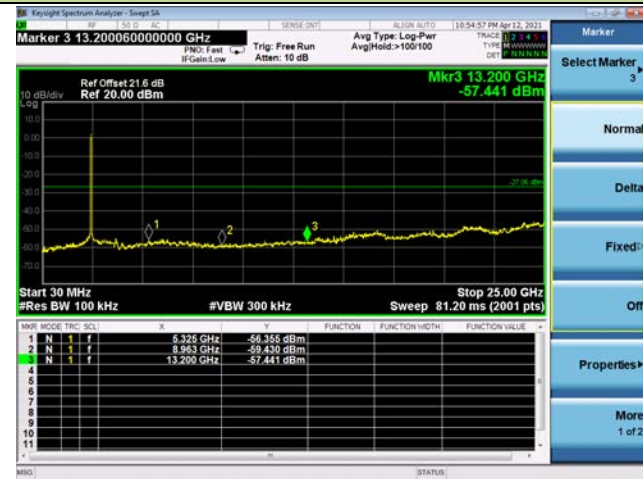
Channel 09 (2452MHz)

100kHz PSD Reference Level

High Band Edge



Spurious Emission



802.11b Out-of-Band Emissions - Ant 2/ Ant 0+1+2+3

Channel 01 (2412MHz)

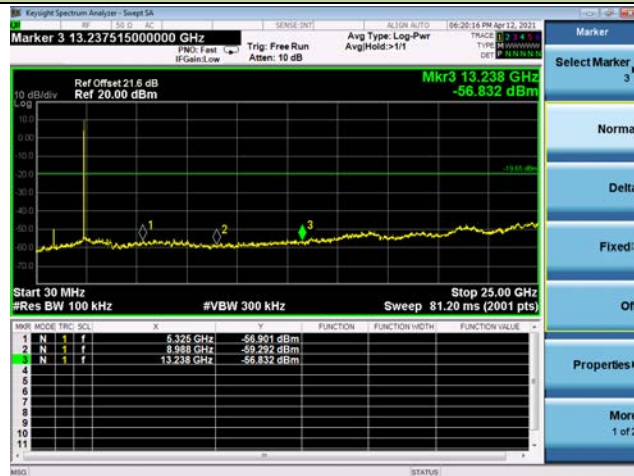
100kHz PSD Reference Level



Low Band Edge



Spurious Emission

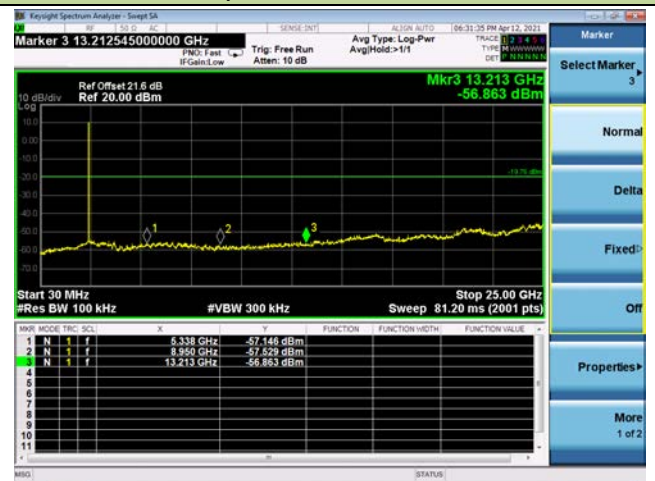


Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

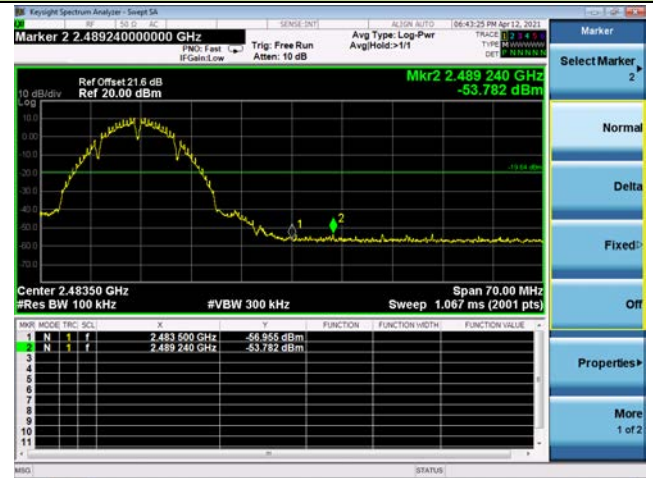


802.11b Out-of-Band Emissions - Ant 2/ Ant 0+1+2+3  
 Channel 11 (2462MHz)

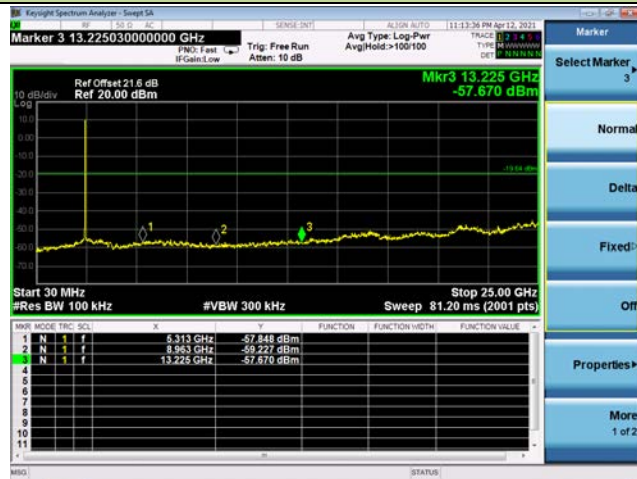
100kHz PSD Reference Level



High Band Edge



Spurious Emission





### 802.11g Out-of-Band Emissions - Ant 2/ Ant 0+1+2+3

#### Channel 01 (2412MHz)

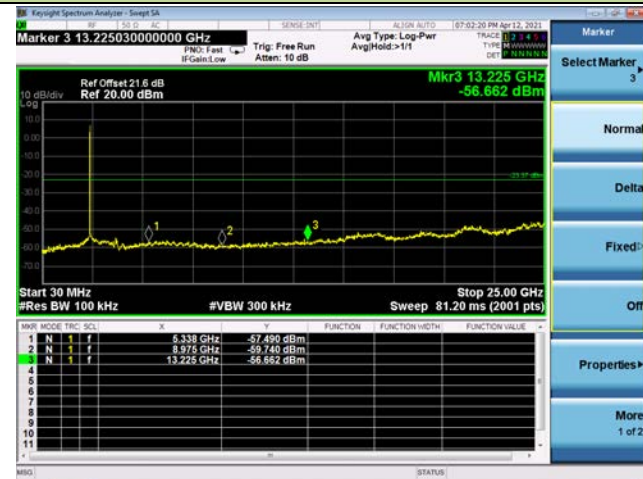
##### 100kHz PSD Reference Level



##### Low Band Edge



##### Spurious Emission

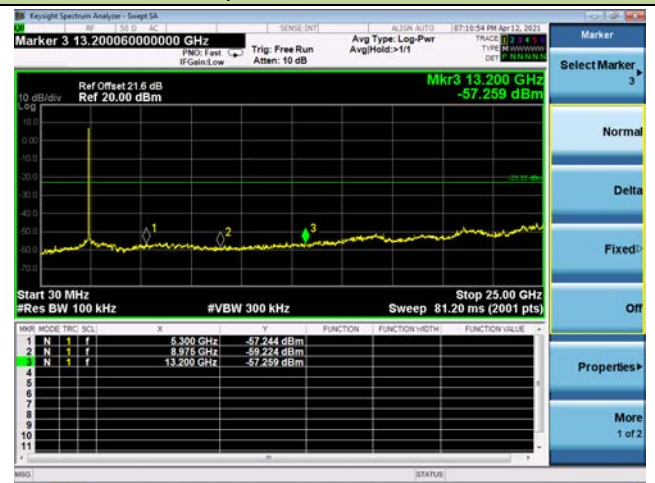


#### Channel 06 (2437MHz)

##### 100kHz PSD Reference Level

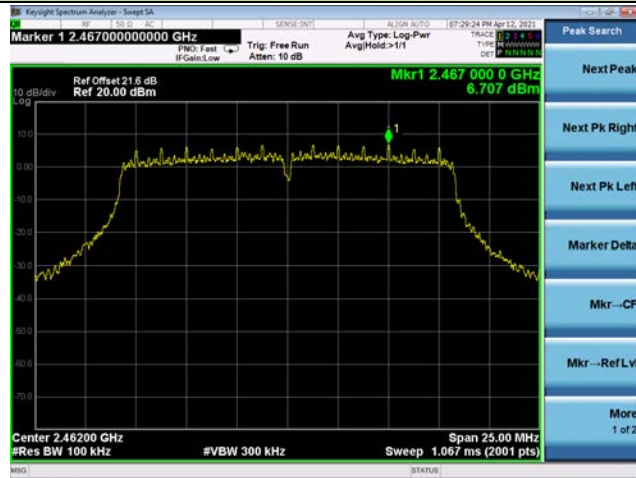


##### Spurious Emission

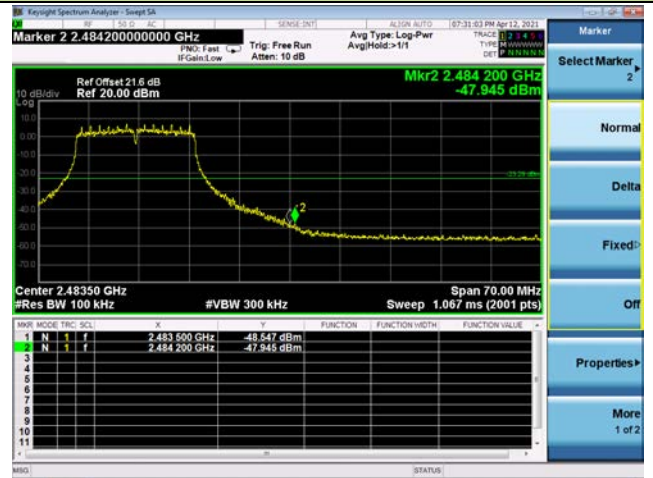


802.11g Out-of-Band Emissions - Ant 2/ Ant 0+1+2+3  
 Channel 11 (2462MHz)

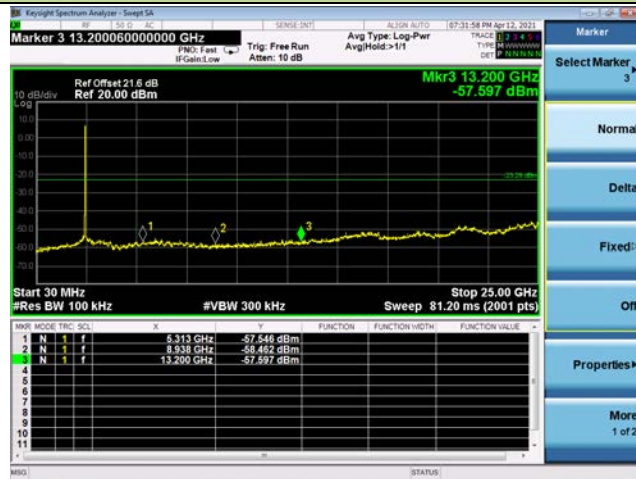
100kHz PSD Reference Level



High Band Edge



Spurious Emission



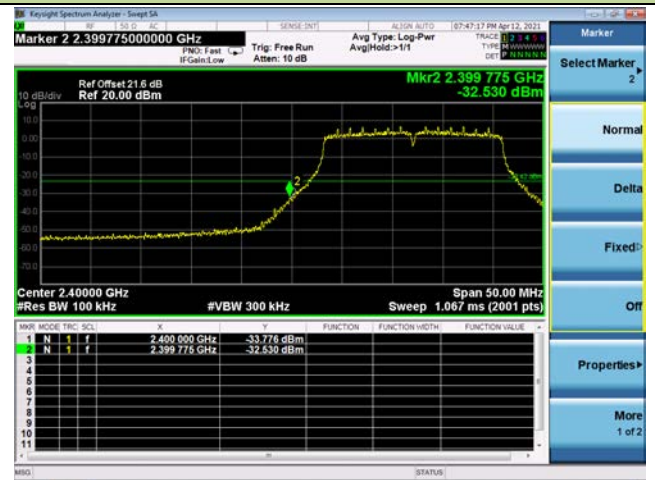
802.11n-HT20 Out-of-Band Emissions - Ant 2/ Ant 0+1+2+3

Channel 01 (2412MHz)

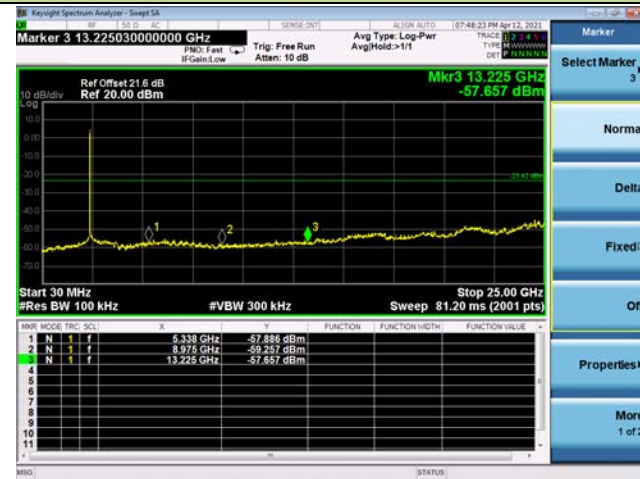
100kHz PSD Reference Level



Low Band Edge

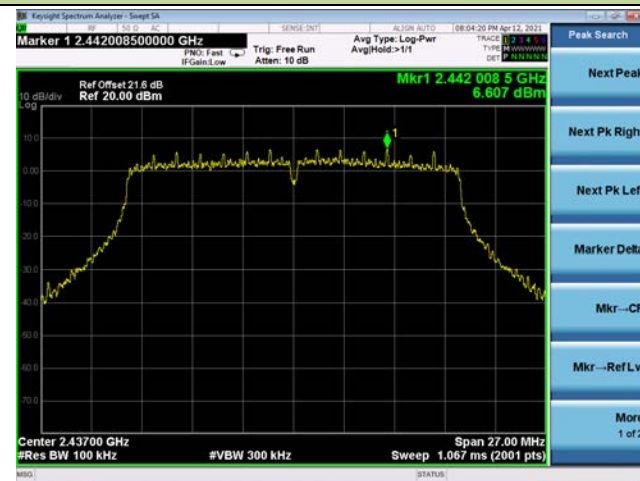


Spurious Emission



Channel 06 (2437MHz)

100kHz PSD Reference Level



Spurious Emission

