

**802.11n\_HT20**  
Low channel



Middle channel



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High channel



802.11n\_HT40

Low channel



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Middle channel



High channel

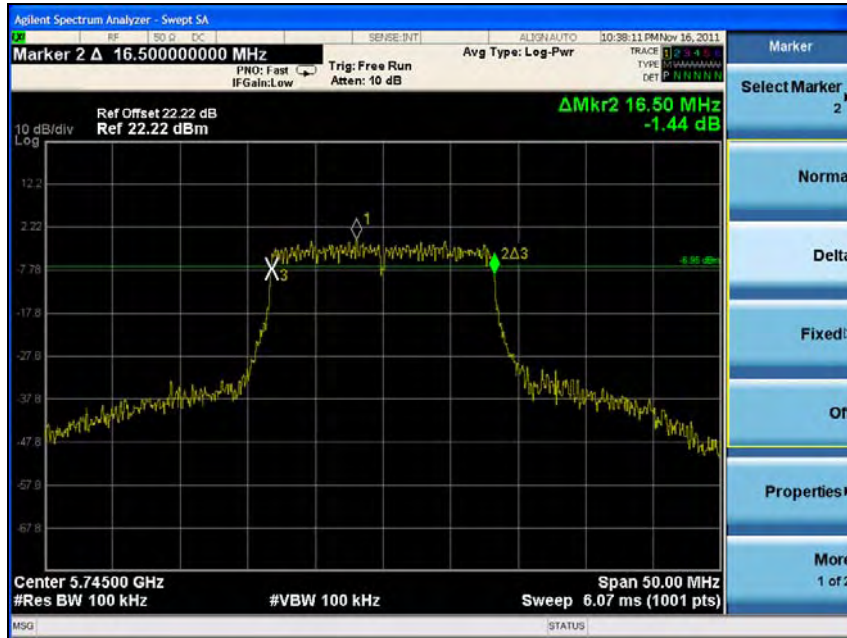


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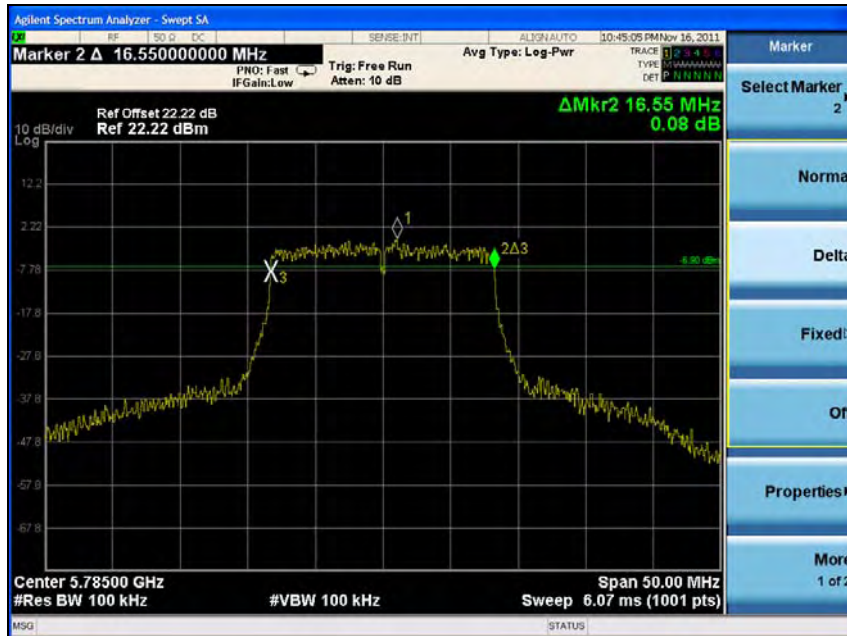
5.8GHz

802.11a

Low channel



Middle channel



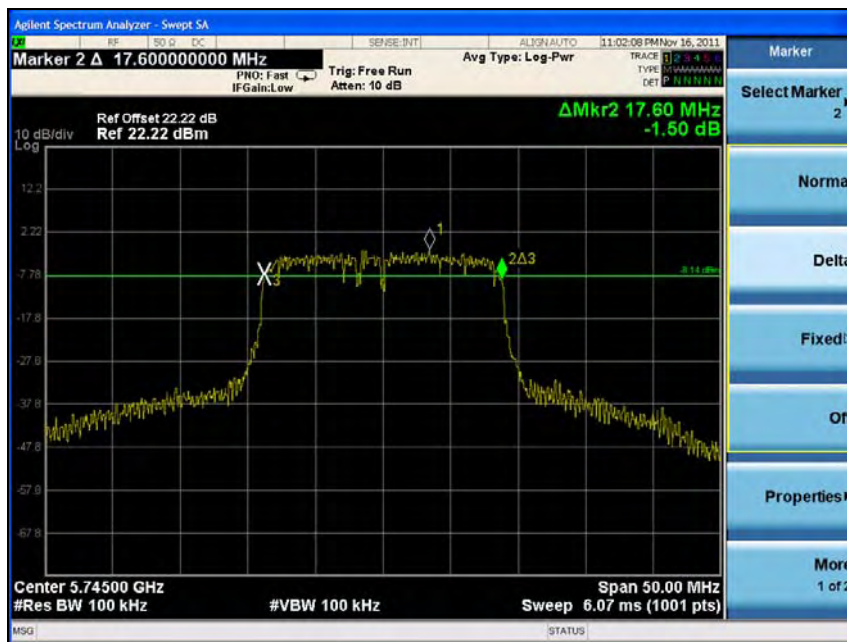
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High channel



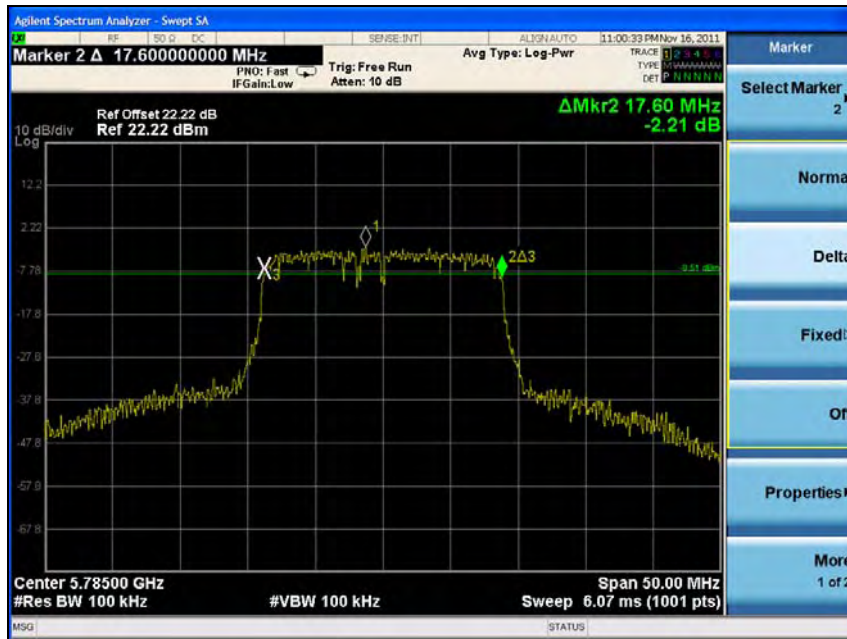
802.11n\_HT20

Low channel

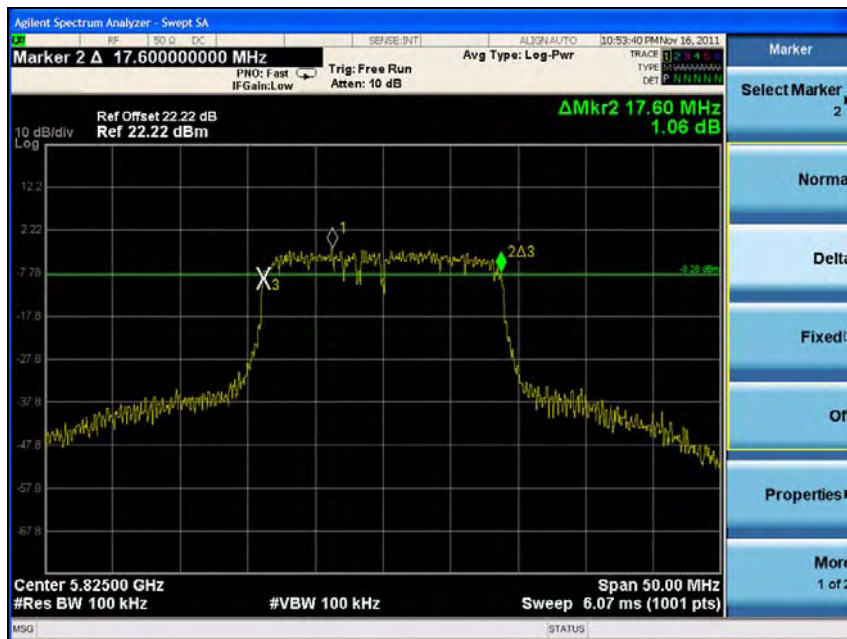


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Middle channel



High channel



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## 802.11n\_HT40

### Low channel



### High channel



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ANT1

2.4 GHz

802.11b

Low channel



Middle channel



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High channel



802.11g

Low channel

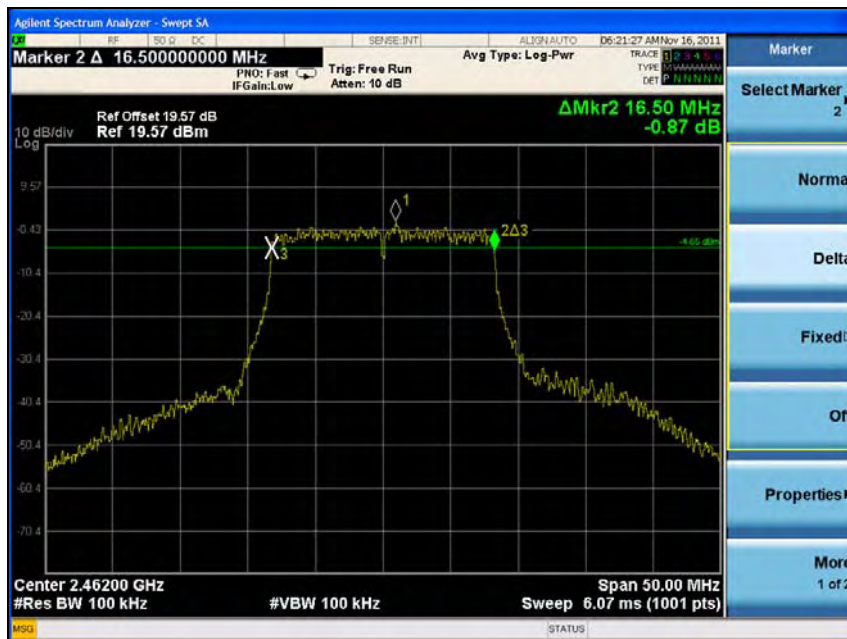


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Middle channel



High channel

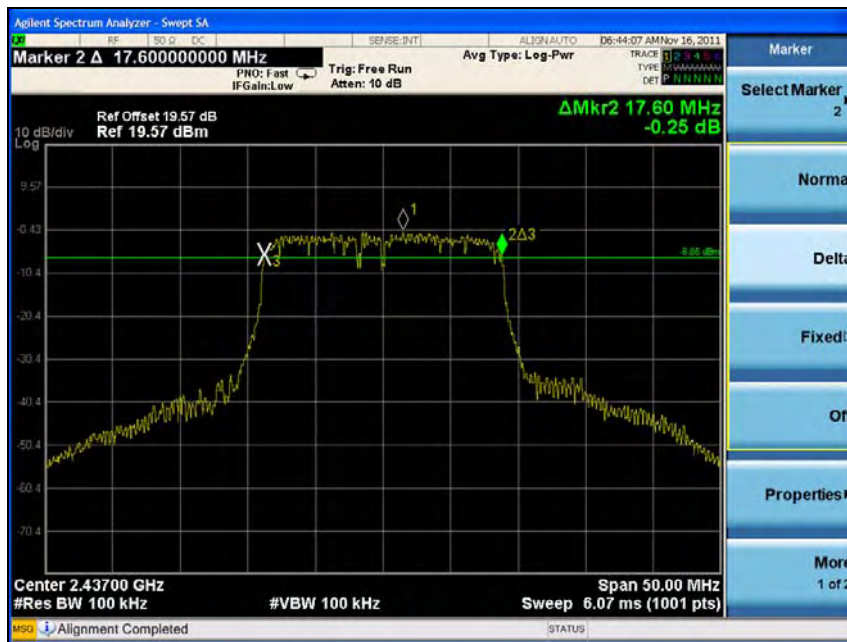


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**802.11n\_HT20**  
Low channel



Middle channel



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High channel



802.11n\_HT40

Low channel



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Middle channel



High channel

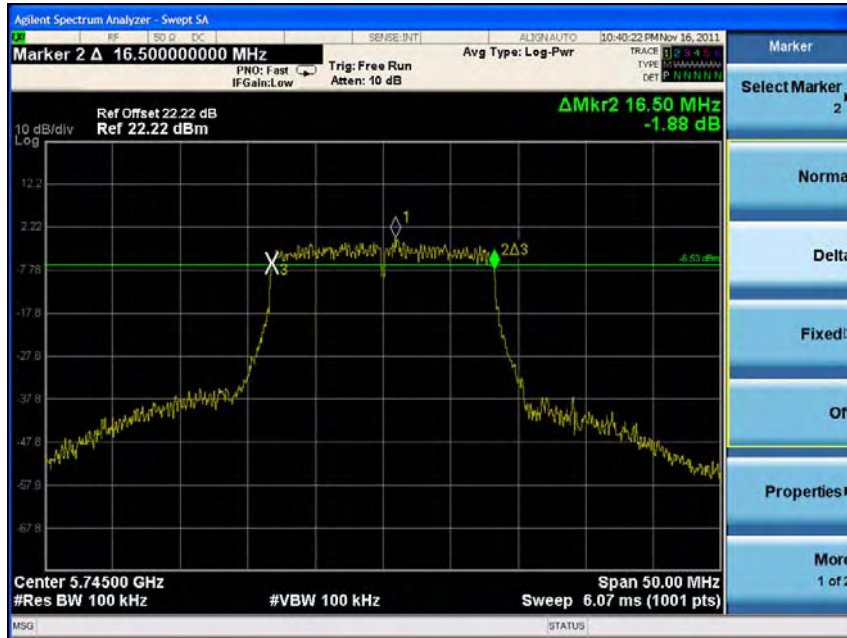


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5.8GHz

802.11a

Low channel

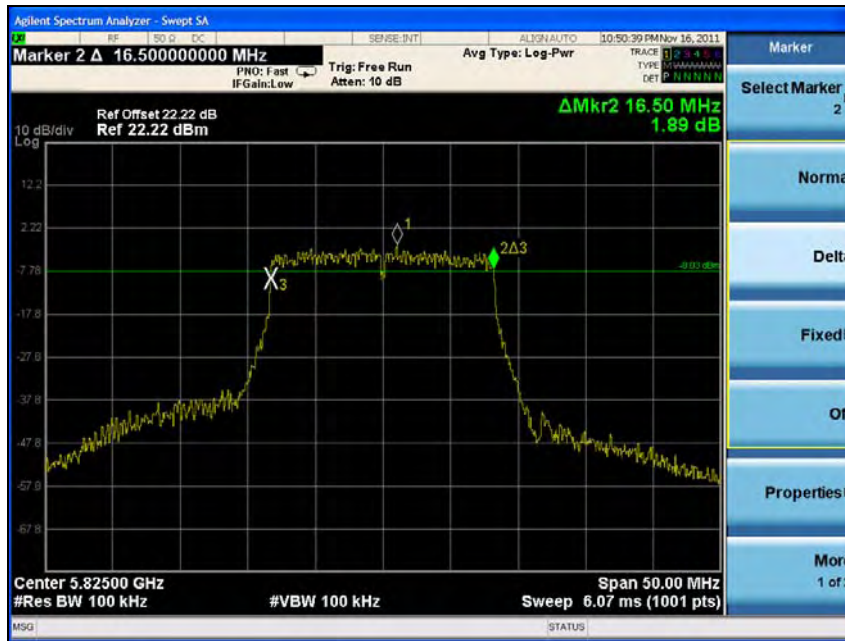


Middle channel



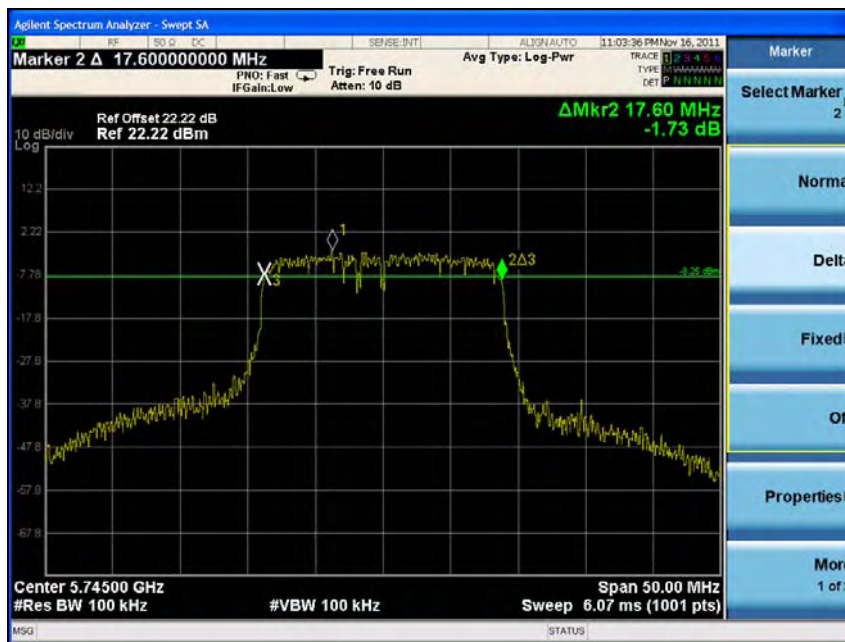
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High channel



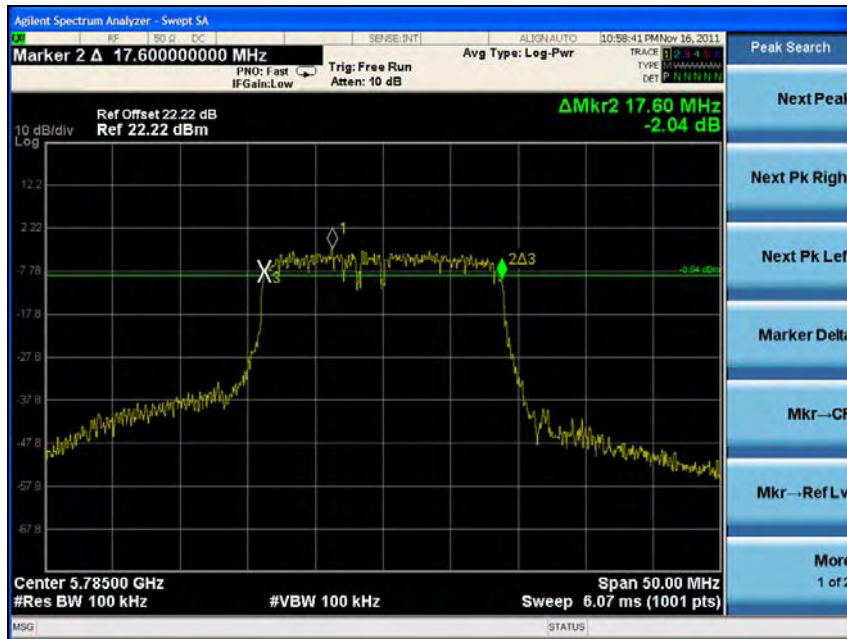
802.11n\_HT20

Low channel

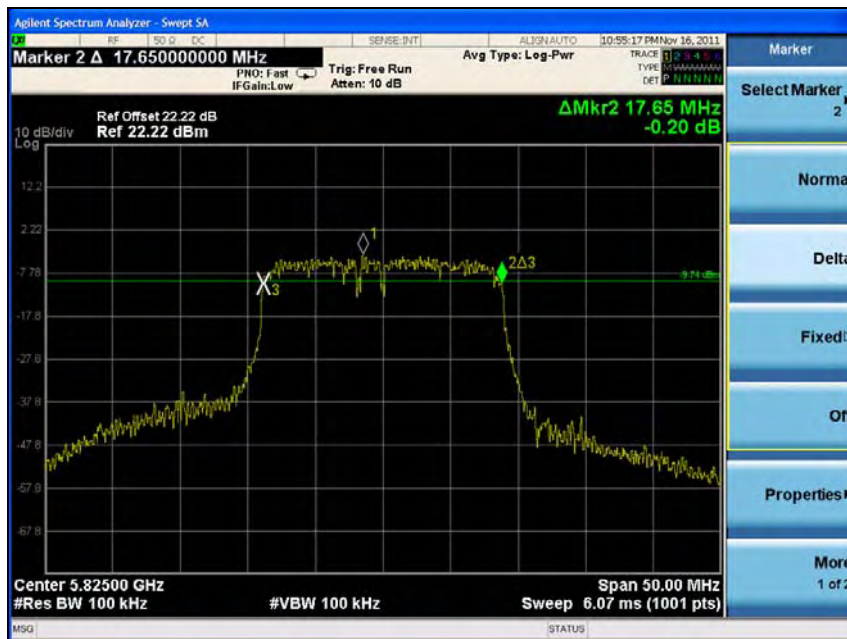


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Middle channel



High channel



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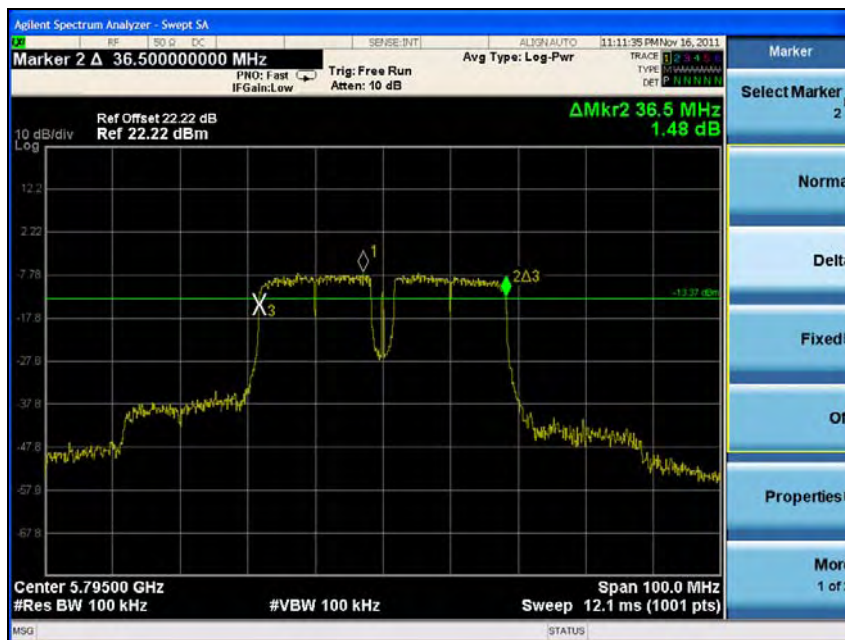


## 802.11n\_HT40

### Low channel



### High channel



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**99% Bandwidth**

**ANT0**

**2.4 GHz**

**802.11b**

**Low channel**



**Middle channel**



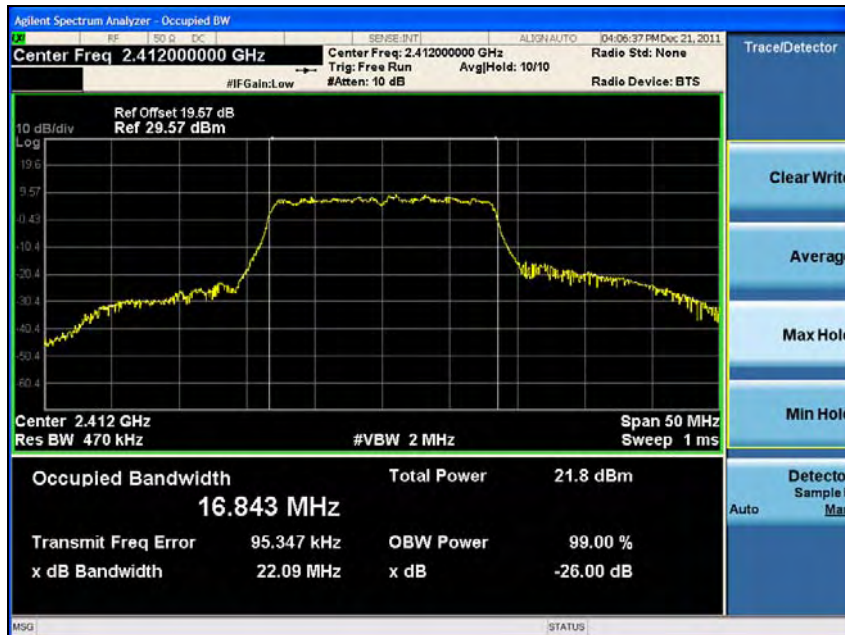
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## High channel



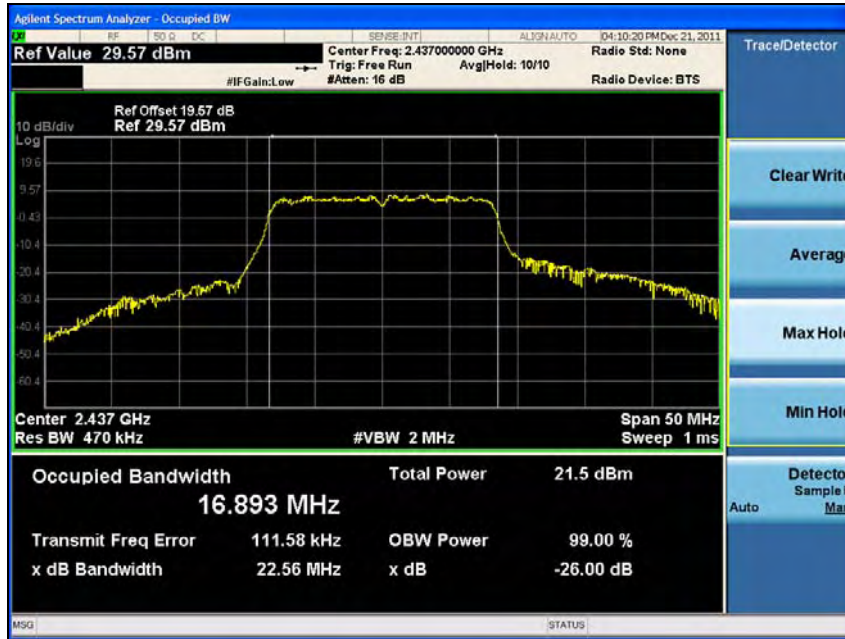
## 802.11g

## Low channel

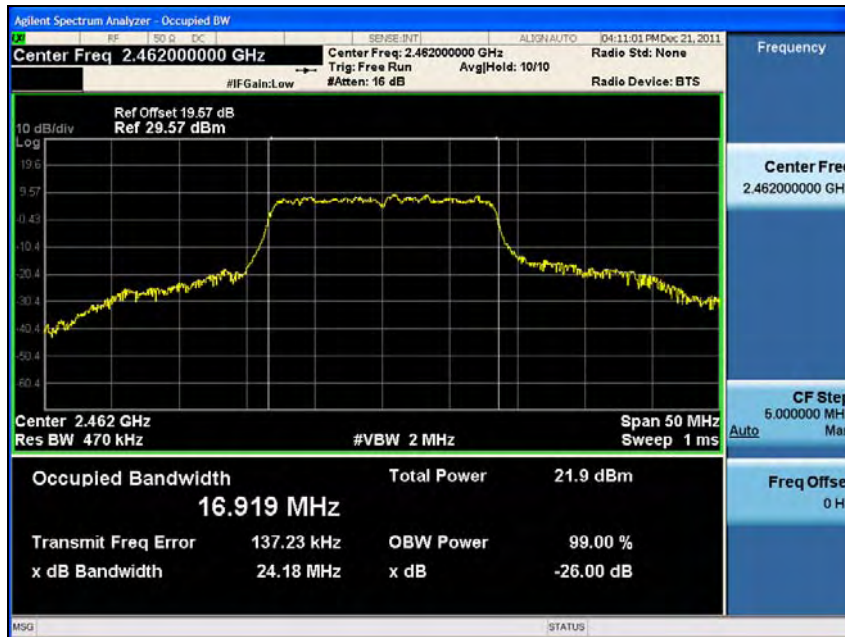


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Middle channel

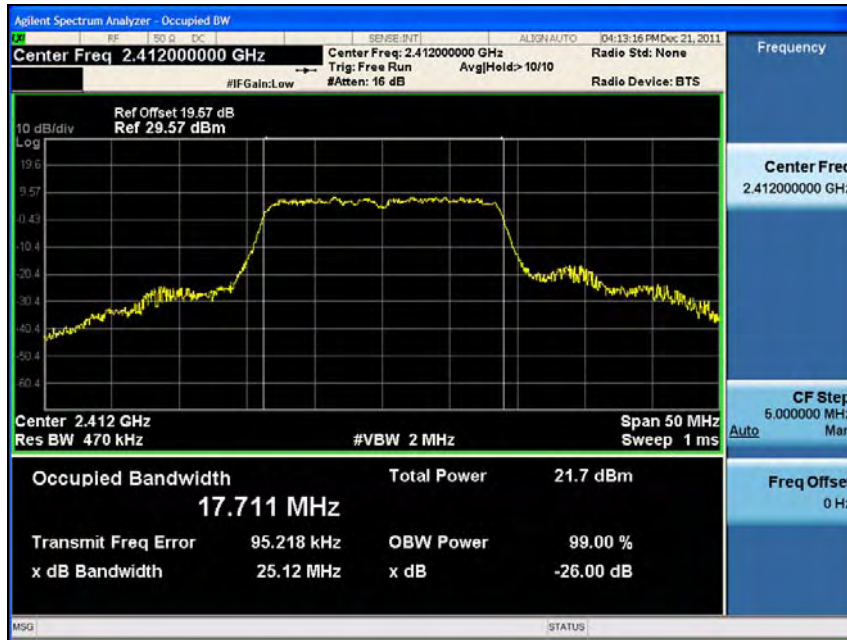


High channel

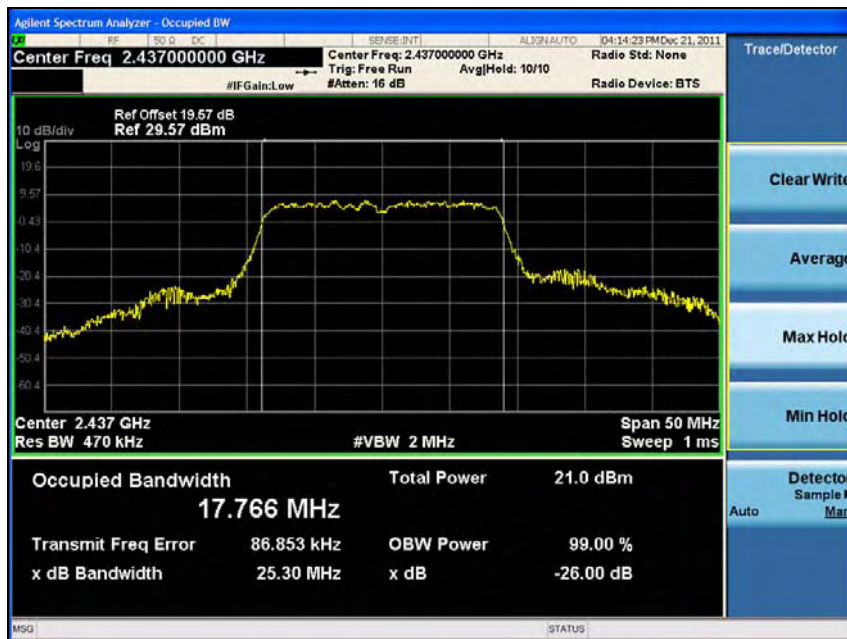


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**802.11n\_HT20**  
Low channel



Middle channel



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## High channel



## 802.11n\_HT40

### Low channel

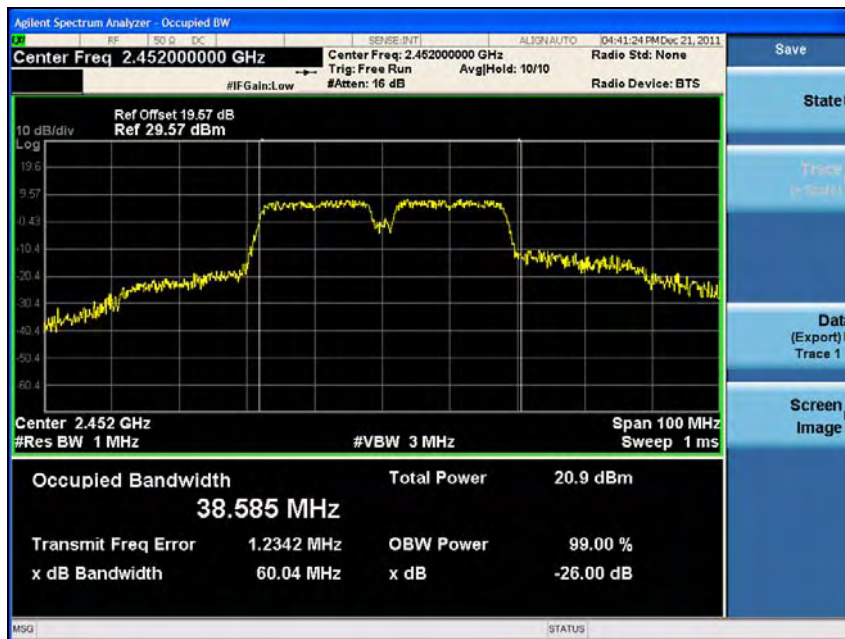


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Middle channel



High channel



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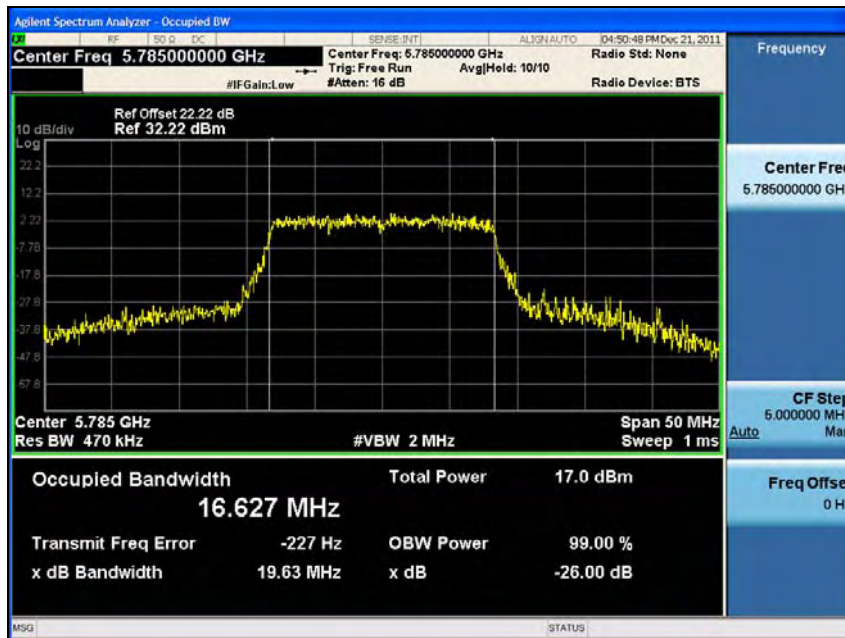
5.8GHz

802.11a

Low channel



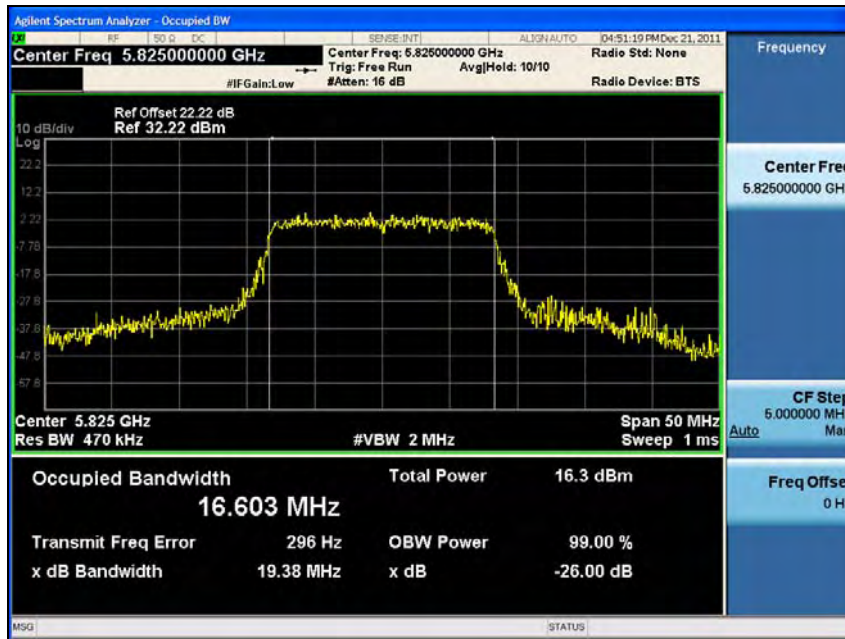
Middle channel



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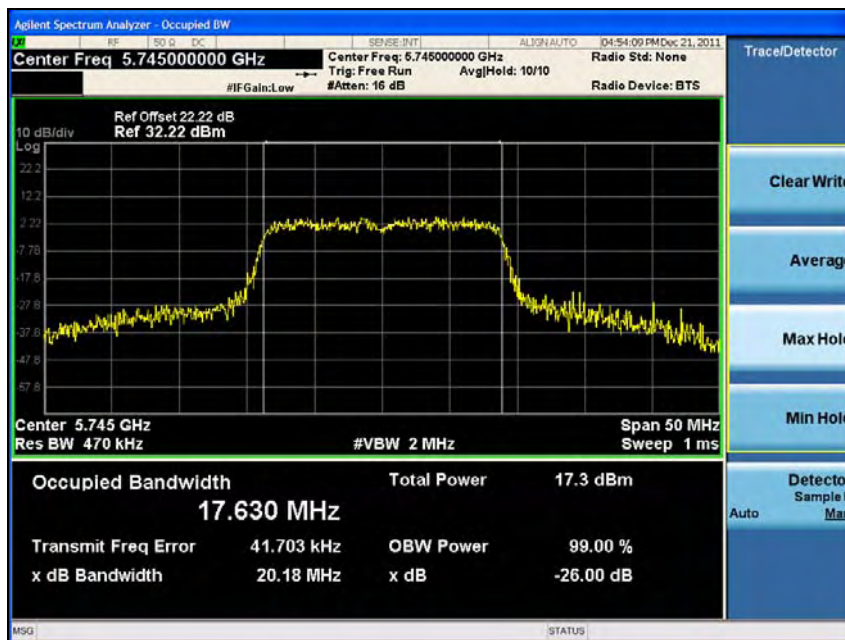


## High channel



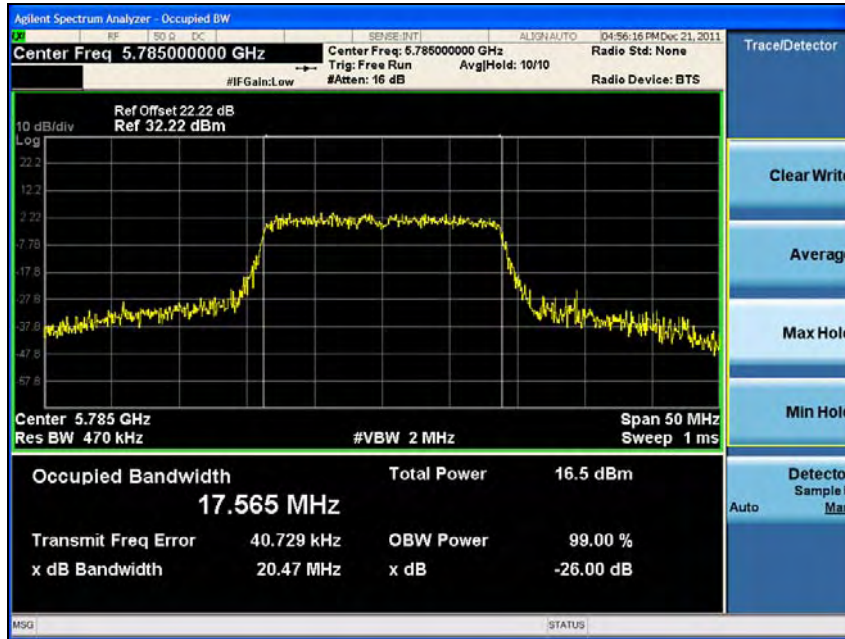
## 802.11n\_HT20

### Low channel

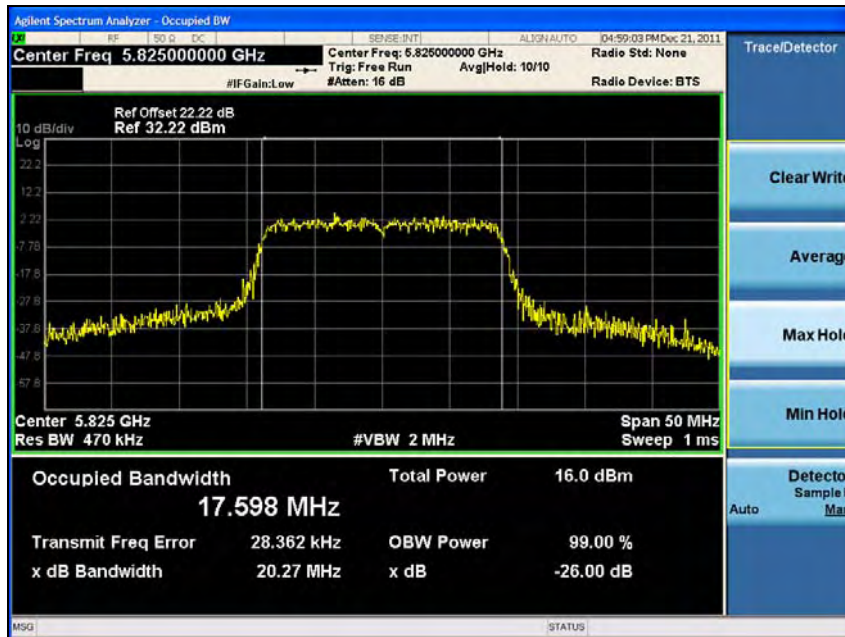


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Middle channel



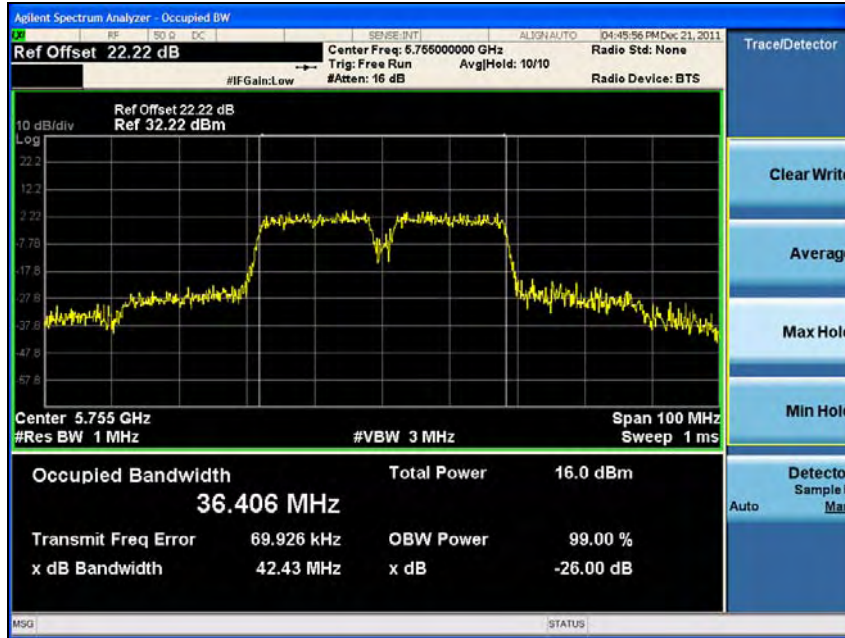
High channel



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## 802.11n\_HT40

Low channel



High channel



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**ANT1**

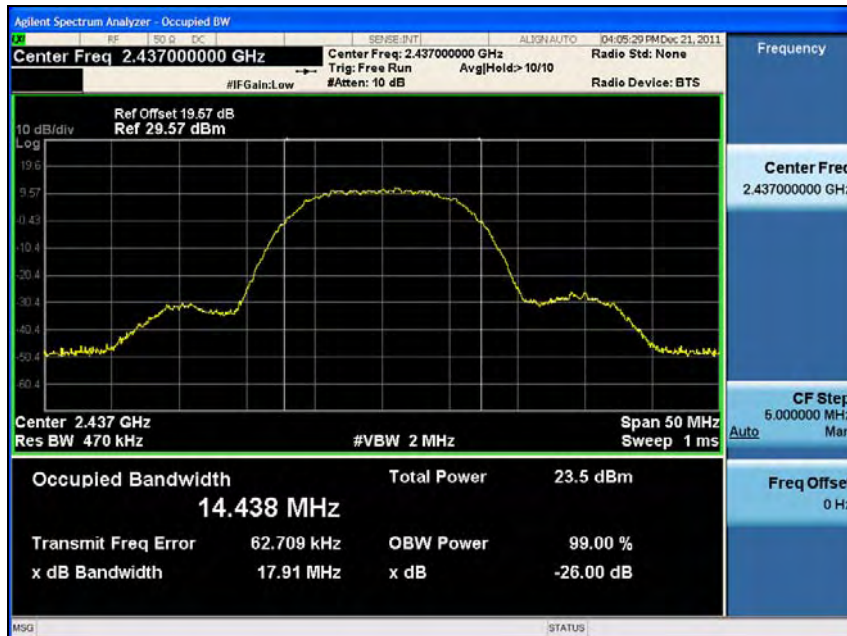
**2.4 GHz**

**802.11b**

**Low channel**



**Middle channel**



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High channel



802.11g

Low channel



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Middle channel

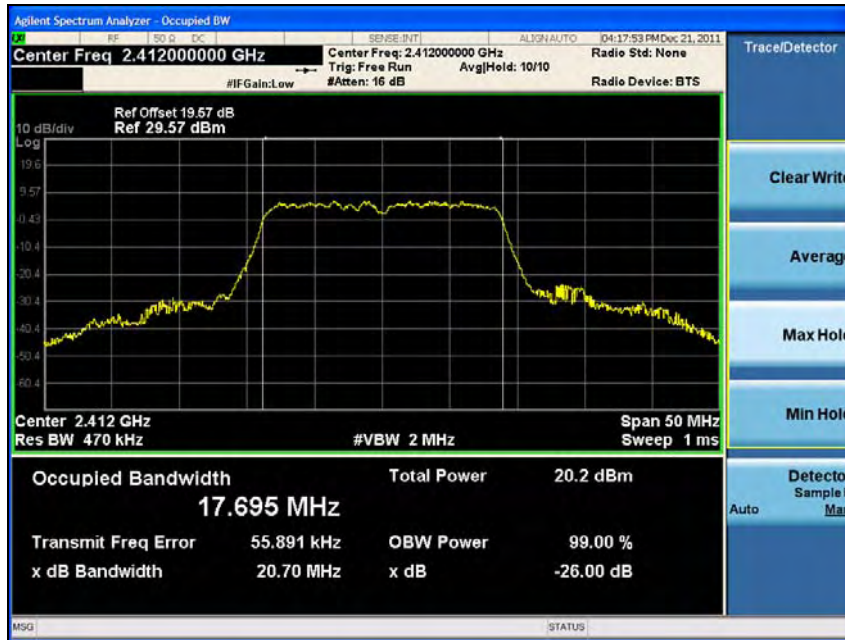


High channel



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**802.11n\_HT20**  
Low channel



Middle channel



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High channel



802.11n\_HT40

Low channel



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Middle channel



High channel



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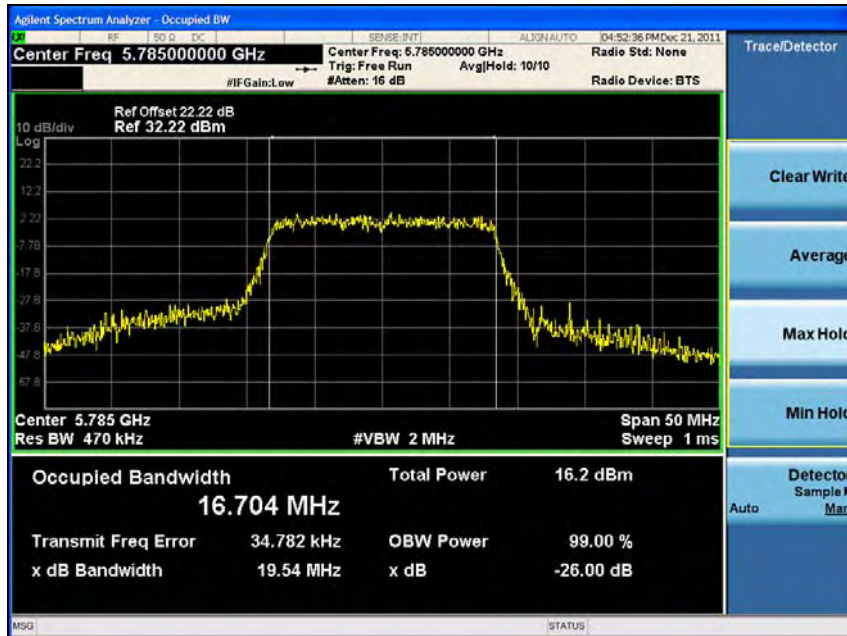
5.8GHz

802.11a

Low channel

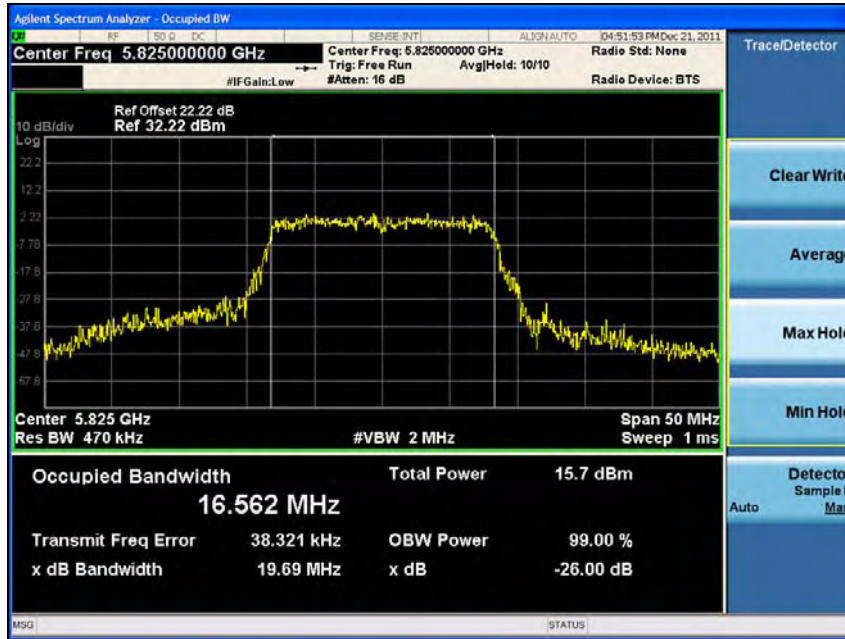


Middle channel



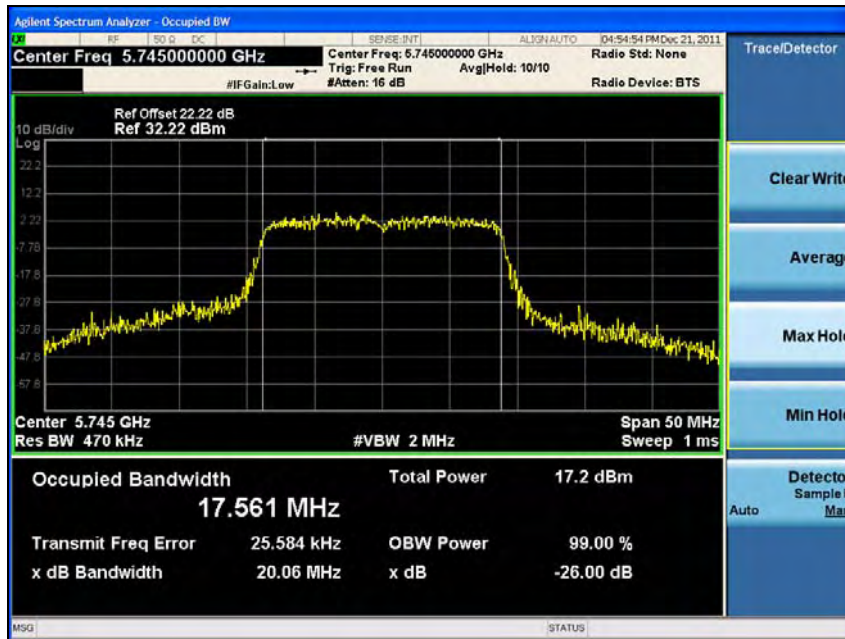
The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report cannot be reproduced, except in full, without prior written permission of the Company.

High channel



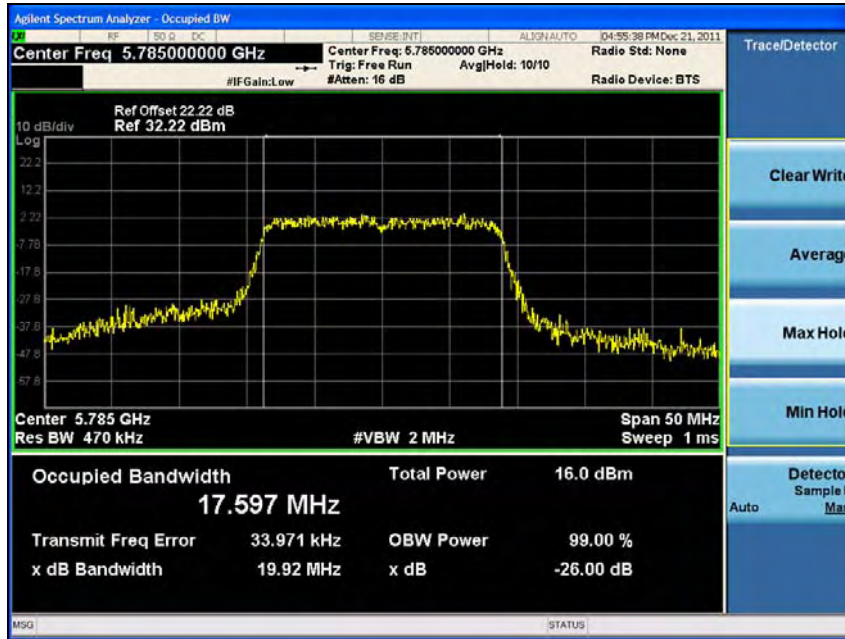
802.11n\_HT20

Low channel

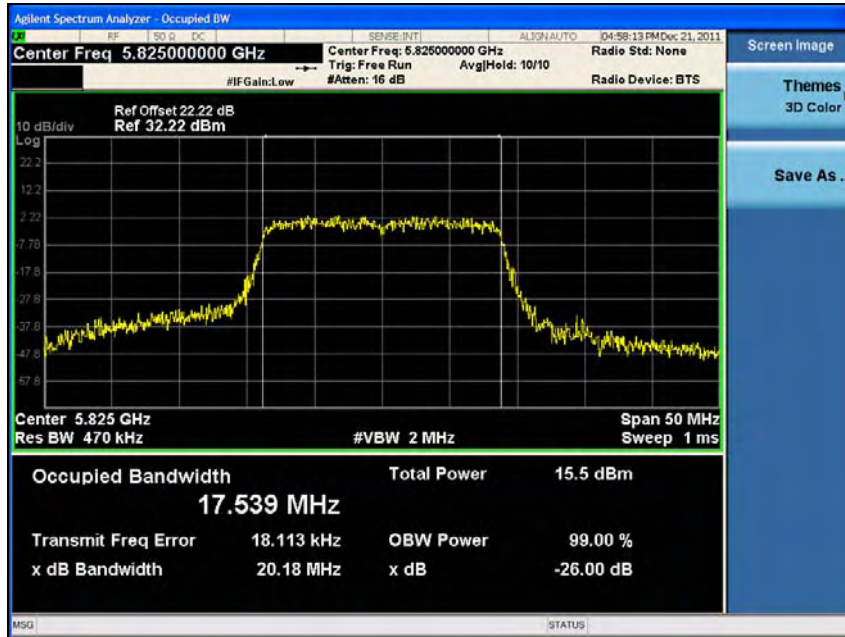


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Middle channel



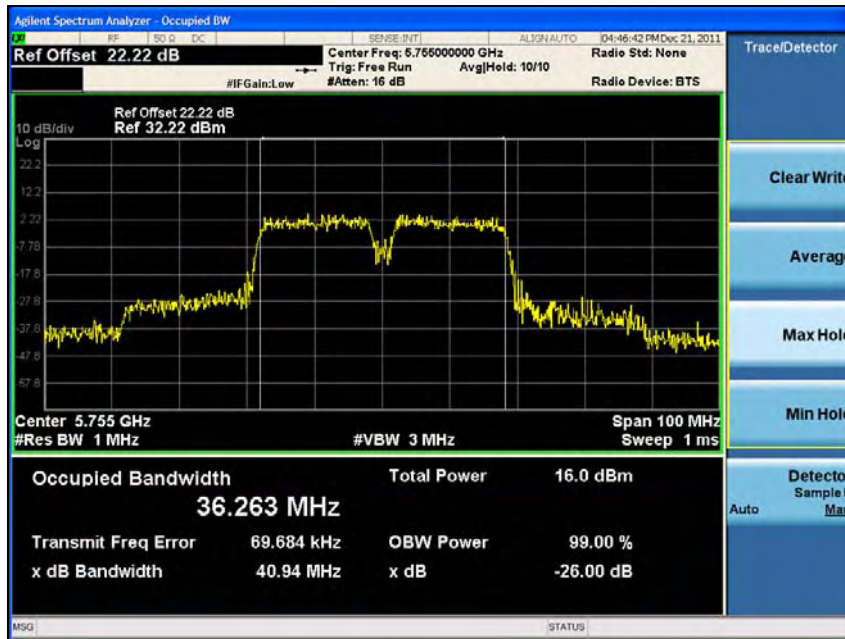
High channel



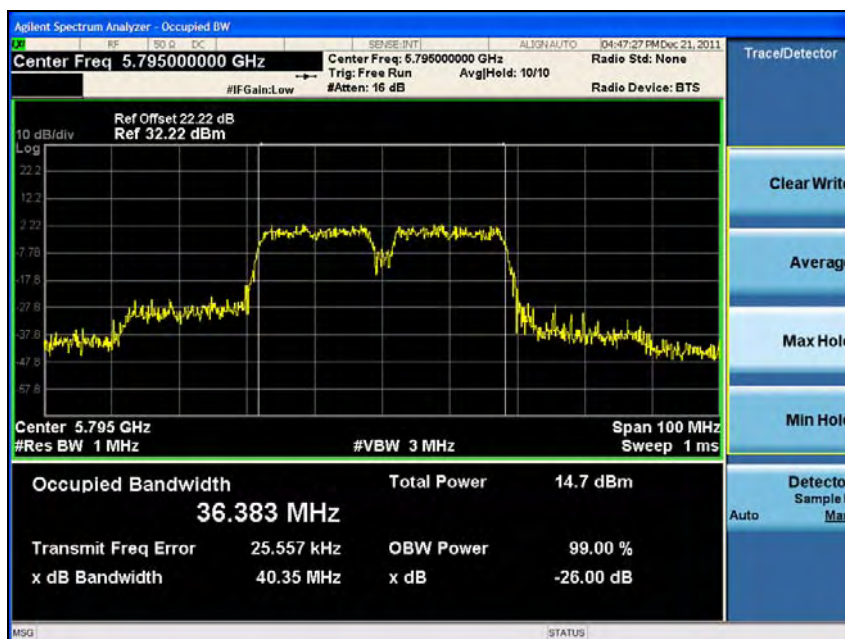
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## 802.11n\_HT40

### Low channel



### High channel



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## 5. Maximum peak output power measurement

### 5.1. Test setup

#### 5.1.1. 11a/b/g/n-H20



#### 5.1.2. 11n-H40



### 5.2. Limit

According to §15.247(b)(3), for systems using digital modulation in the 902 ~ 928 MHz, 2 400 ~2 483.5 MHz, and 5 725 ~ 5 850 MHz band: 1 Watt. As an alternative to a peak power measurement, compliance with the one watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antenna elements. The average must not include any intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

According to §15.247(b)(4), the conducted output power limit specified in paragraph(b) of this section is based on the use of antenna with directional gains that do not exceed 6 dBi. Except as shown in paragraph(c) of this section, if transmitting antenna of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraph (b)(1), (b)(2), and (b)(3) of this section , as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 5.3. Test procedure

#### 5.3.1. 11a/b/g/n-H20

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to power sensor

#### 5.3.2. 11n-H40

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the Spectrum analyzer as RBW = 1 MHz, VBW ≥ 3 MHz, Span = Auto, Channel BW = 26 dB BW.
4. Use sample detector mode and trace average 100 traces in power averaging mode.

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## 5.4. Test result

Ambient temperature : (24 ± 2) °C  
 Relative humidity : 49 % R.H.

### 5.4.1. 11a/b/g/n-H20

Operation Mode	Antenna	Channel	Channel Frequency (MHz)	Attenuator + Cable offset (dB)	Peak Power Measured (dB m)	Peak Power Limit (dB m)
DSSS 802.11b	ANT0	Low	2 412	19.43	20.18	30
		Middle	2 437		19.62	
		High	2 462		19.94	
	ANT1	Low	2 412		19.32	
		Middle	2 437		19.35	
		High	2 462		19.57	
OFDM 802.11g	ANT0	Low	2 412	24.64		
		Middle	2 437	24.37		
		High	2 462	24.51		
	ANT1	Low	2 412	23.56		
		Middle	2 437	23.59		
		High	2 462	23.71		
OFDM 802.11n_HT20	ANT0	Low	2 412	24.63		
		Middle	2 437	24.41		
		High	2 462	24.46		
	ANT1	Low	2 412	23.33		
		Middle	2 437	23.53		
		High	2 462	23.82		
	ANT0+ANT1 (Calculated)	Low	2 412	27.04		
		Middle	2 437	27.00		
		High	2 462	27.16		

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Operation Mode	Antenna	Channel	Channel Frequency (MHz)	Attenuator + Cable offset (dB)	Peak Power Limit (dB m)	Peak Power Limit (dB m)
OFDM 802.11a	ANT0	Low	5 745	22.06	20.33	30
		Middle	5 785		20.92	
		High	5 825		20.77	
	ANT1	Low	5 745		21.65	
		Middle	5 785		20.99	
		High	5 825		20.65	
OFDM 802.11n_HT20	ANT0	Low	5 745		20.23	
		Middle	5 785		20.49	
		High	5 825		20.21	
	ANT1	Low	5 745	21.32		
		Middle	5 785	21.05		
		High	5 825	20.38		
	ANT0+ANT1 (Calculated)	Low	5 745	23.82		
		Middle	5 785	23.79		
		High	5 825	23.31		

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