7. 6dB Bandwidth Test

7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	Apr. 28,14	1 Year
2.	Spectrum	Agilent	N9030A	MY51380221	Oct.29, 14	1Year
3.	Attenuator (20dB)	Agilent	8491B	MY39262165	Apr. 28,14	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	Apr. 28,14	1 Year

7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

7.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300KHz RBW and 1MHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.4.Test Results

5MHz

EUT: 2.4GHz 300Mbps 12dBi Outdoor CPE		
M/N: CPE220		
Test date:2015-01-05	Pressure: 101.4±1. 0kpa	Humidity: 52.1±3. 0 %
Tested by:Donjon_Huang	Test site: RF site	Temperature:21.5±0. 6 ℃

Test Mode	CH	-6dB bandwidth (MHz)		Limit (KHz)
		ANT1	ANT2	
11b	CH1	2.578	2.572	>500
	CH6	2.579	2.579	>500
	CH11	2.577	2.580	>500
11g	CH1	4.145	4.146	>500
	CH6	4.146	4.143	>500
	CH11	4.147	4.143	>500
11n HT20	CH1	4.468	4.464	>500
	CH6	4.462	4.466	>500
	CH11	4.452	4.461	>500
Conclusion：PASS				

10MHz

EUT: 2.4GHz 300Mbps 12dBi Outdoor CPE		
M/N: CPE220		
Test date:2015-01-05	Pressure: 102.3±1.0kpa	Humidity: 51.8±3.0 %
Tested by:Donjon_Huang	Test site: RF site	Temperature:20.1±0.6 ℃

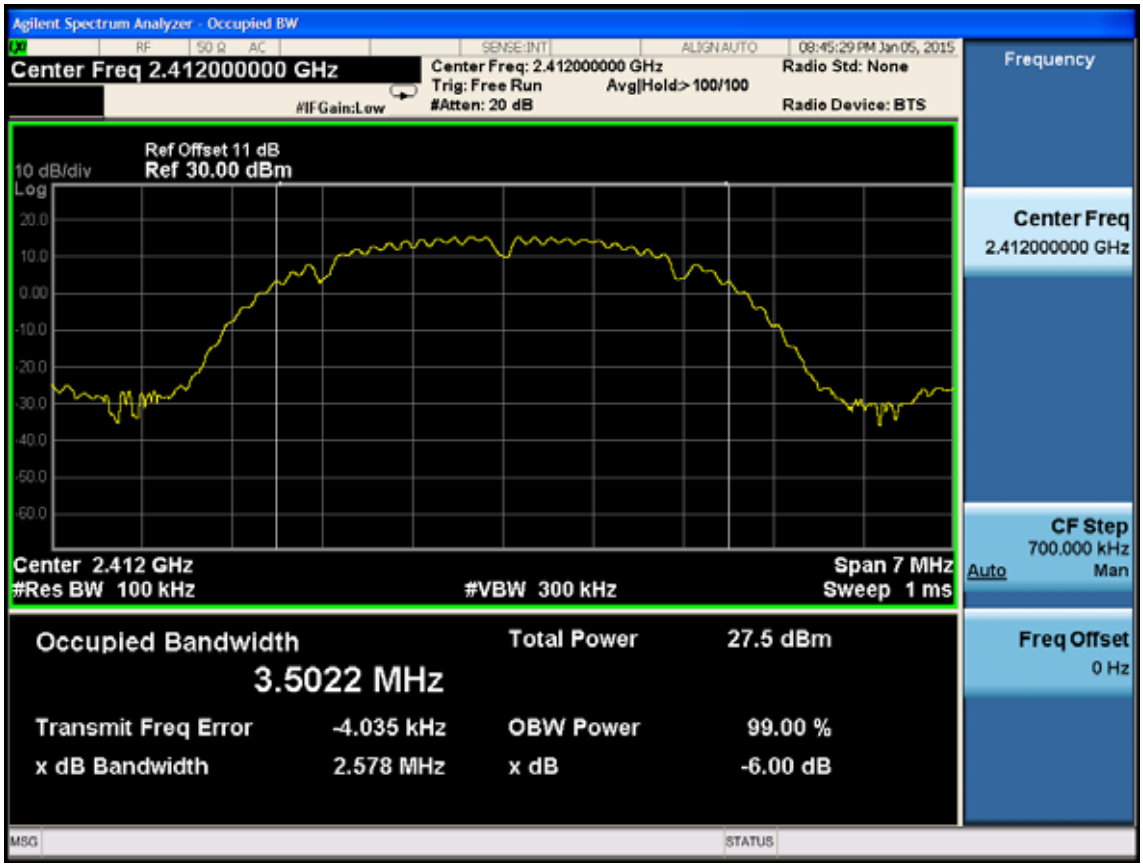
Test Mode	CH	6dB bandwidth（MHz）		Limit (KHz)
		ANT1	ANT2	
11b	CH1	5.101	5.099	>500
	CH6	5.101	5.100	>500
	CH11	5.100	5.099	>500
11g	CH1	8.222	8.215	>500
	CH6	8.221	8.219	>500
	CH11	8.214	8.210	>500
11n HT20	CH1	8.821	8.828	>500
	CH6	8.813	8.819	>500
	CH11	8.826	8.818	>500
Conclusion：PASS				

20MHz

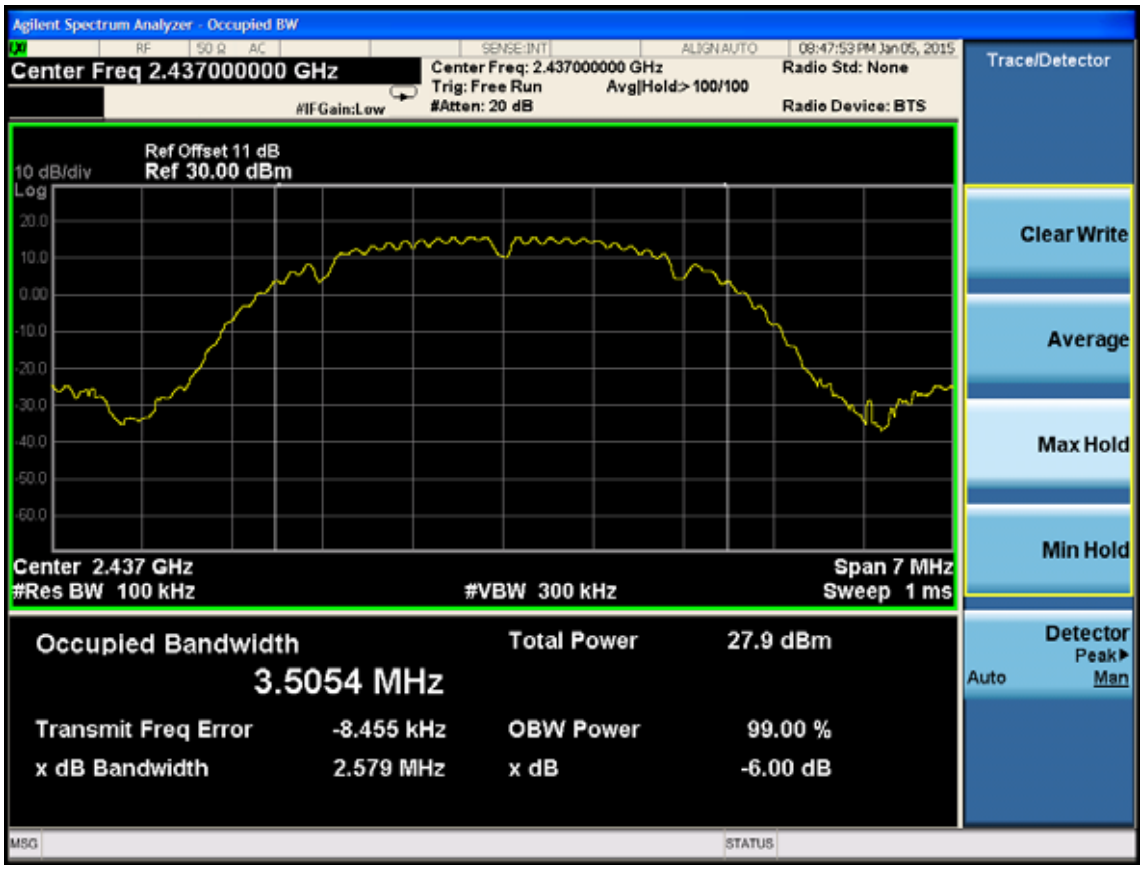
EUT: 2.4GHz 300Mbps 12dBi Outdoor CPE		
M/N: CPE220		
Test date:2015-01-05	Pressure: 102.1±1.0kpa	Humidity: 51.4±3.0 %
Tested by:Donjon_Huang	Test site: RF site	Temperature:20.3±0.6 ℃

Test Mode	CH	-6dB bandwidth（MHz）		Limit (KHz)
		ANT1	ANT2	
11b	CH1	10.11	10.11	>500
	CH6	10.10	10.11	>500
	CH11	10.11	10.11	>500
11g	CH1	16.36	16.39	>500
	CH6	16.38	16.39	>500
	CH11	16.39	16.38	>500
11n HT20	CH1	17.59	17.59	>500
	CH6	17.60	17.60	>500
	CH11	17.59	17.59	>500
11n HT40	CH3	36.50	36.56	>500
	CH6	36.46	36.60	>500
	CH9	36.52	36.66	>500
Conclusion：PASS				

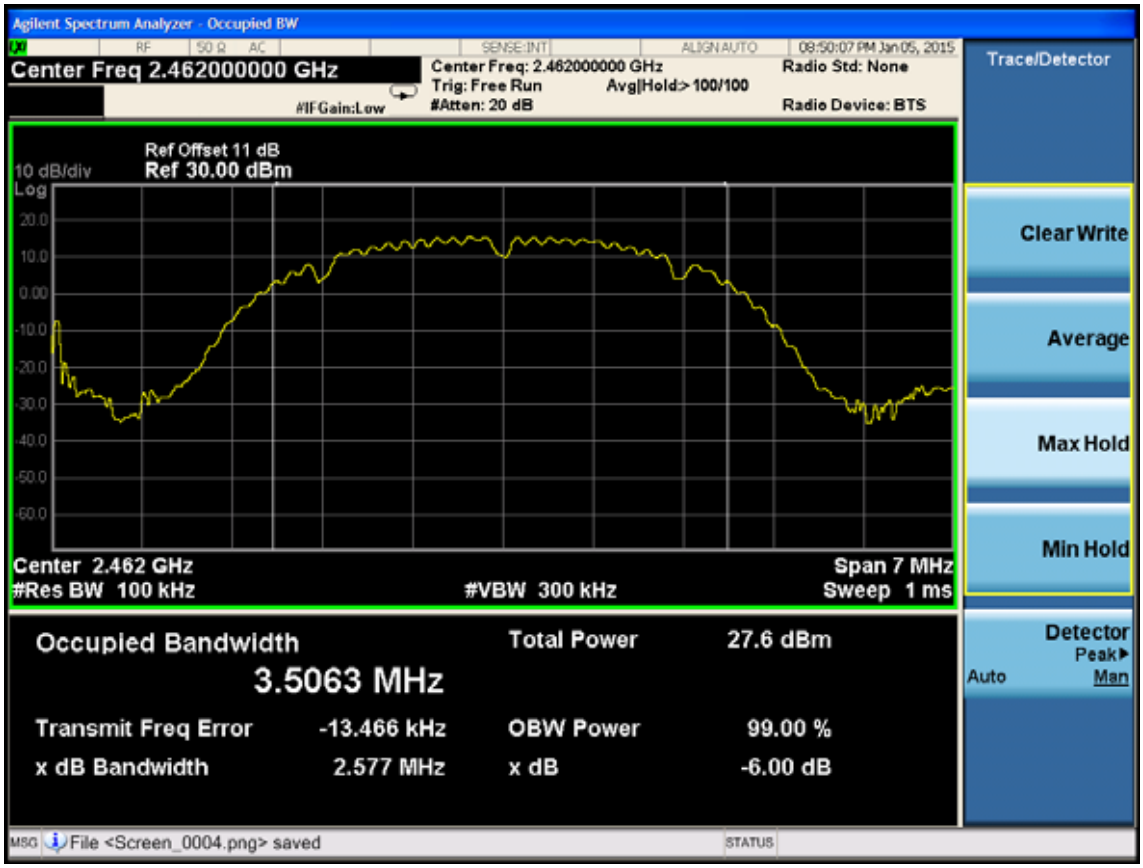
5MHz Antenna 1
Test Mode: IEEE 802.11b
Test CH1: 2412MHz



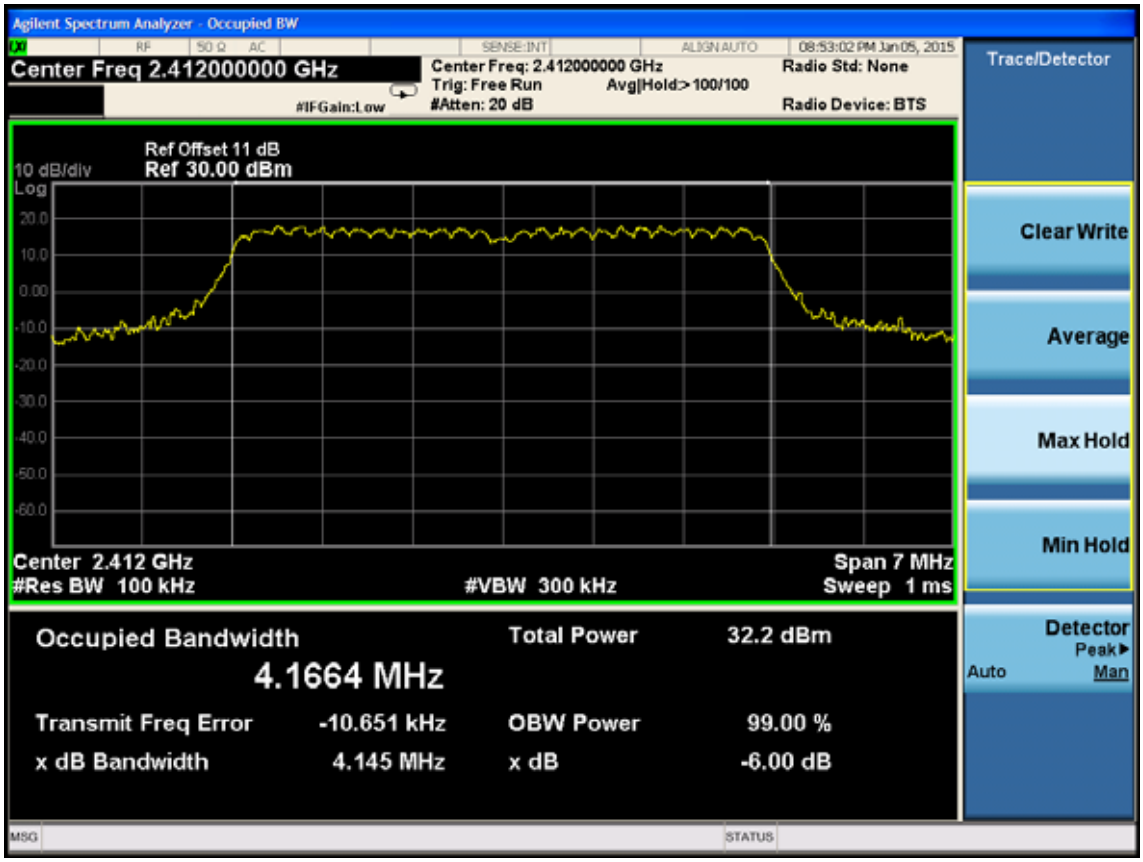
Test CH6: 2437MHz



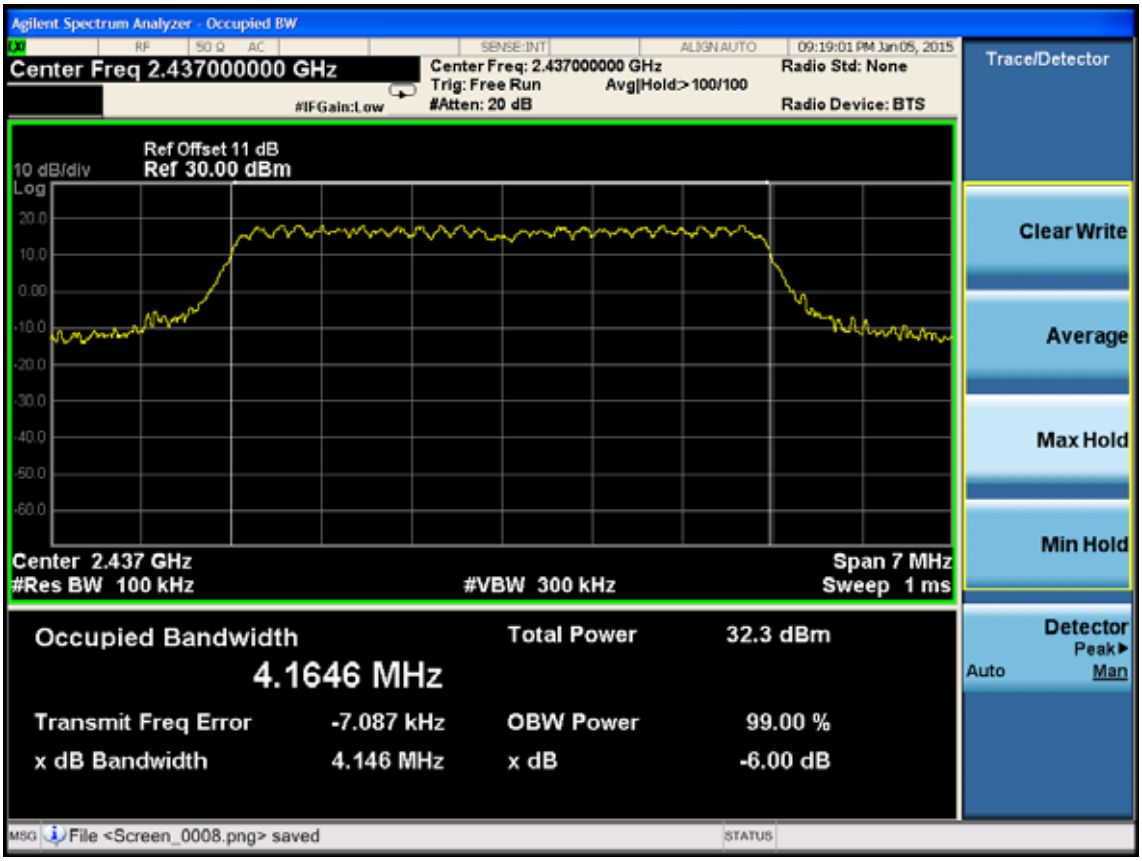
Test CH11: 2462MHz



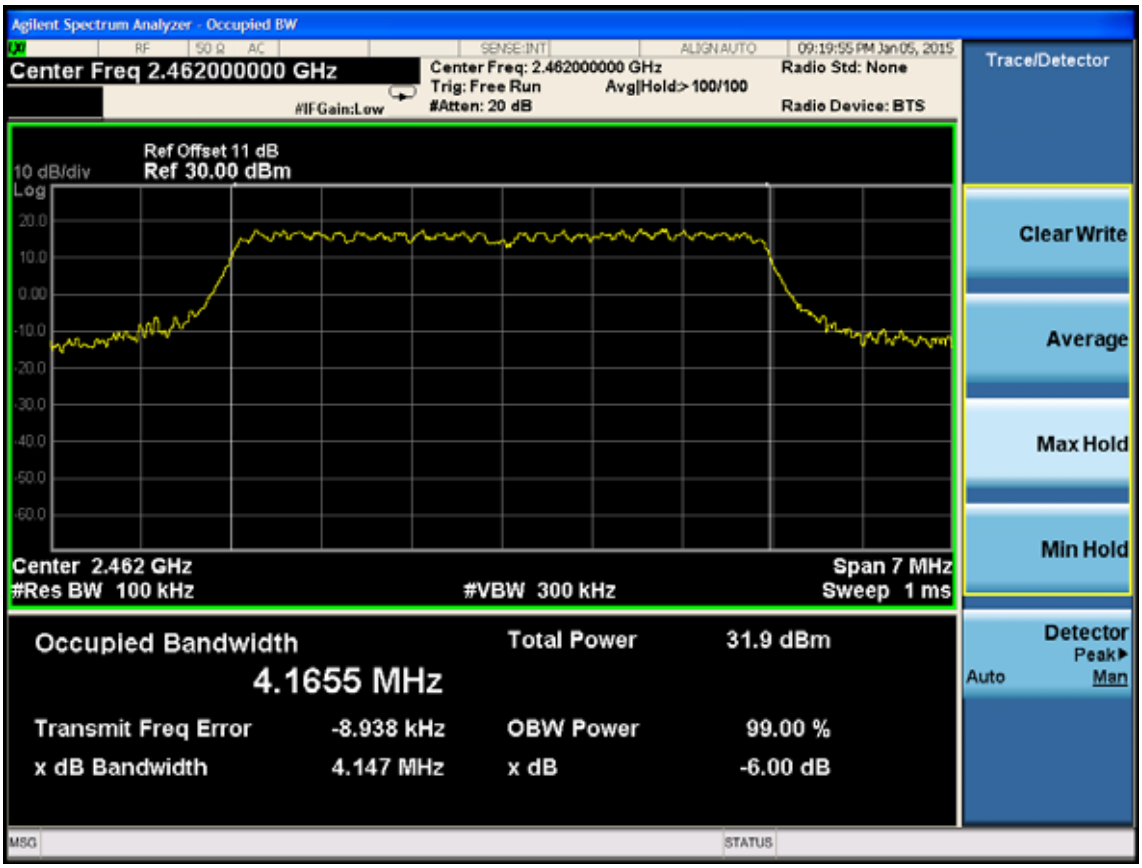
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



Test CH6: 2437MHz

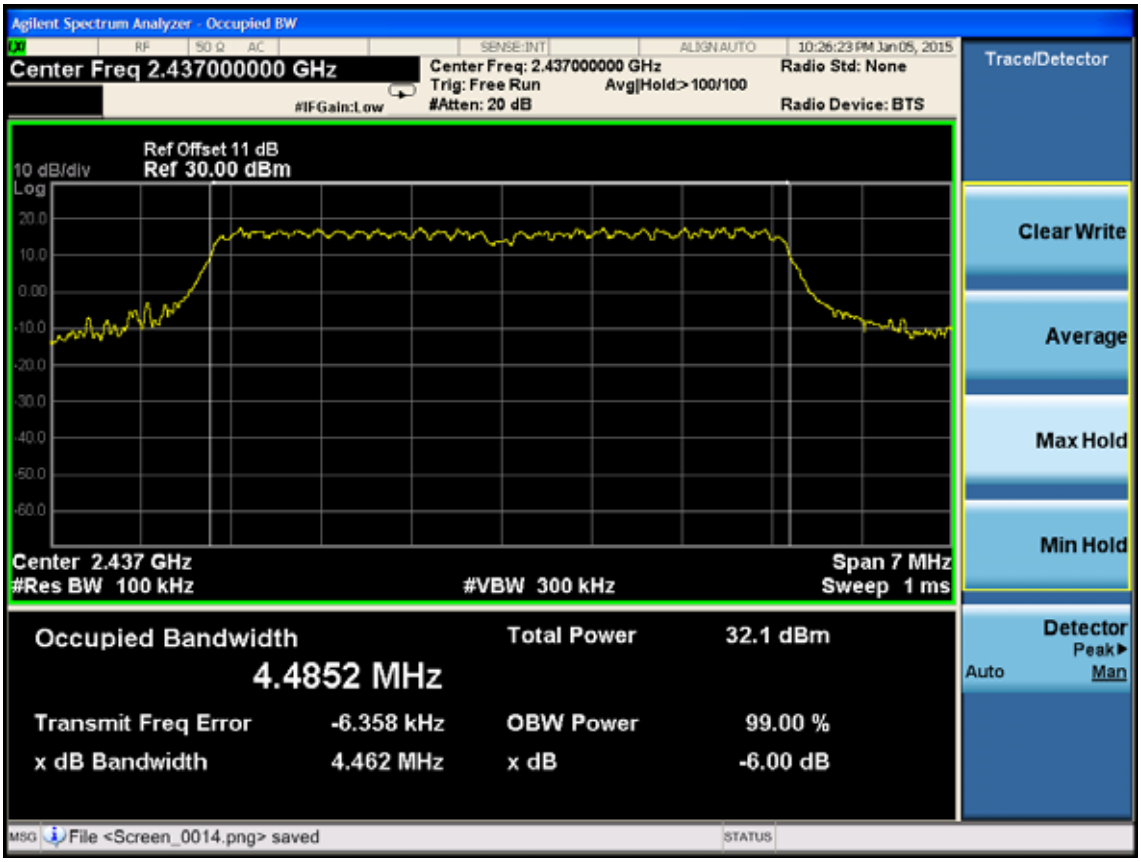


Test CH11: 2462MHz

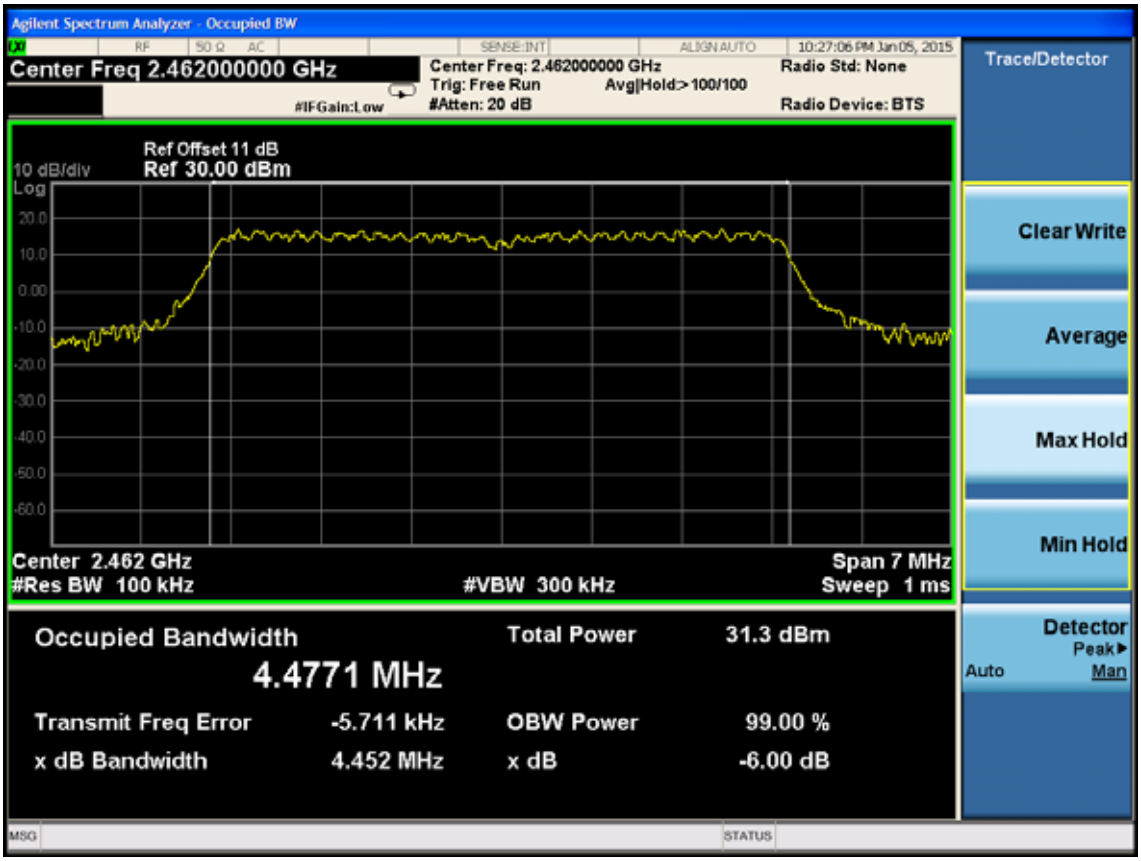


Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz

Test CH6: 2437MHz



Test CH11: 2462MHz



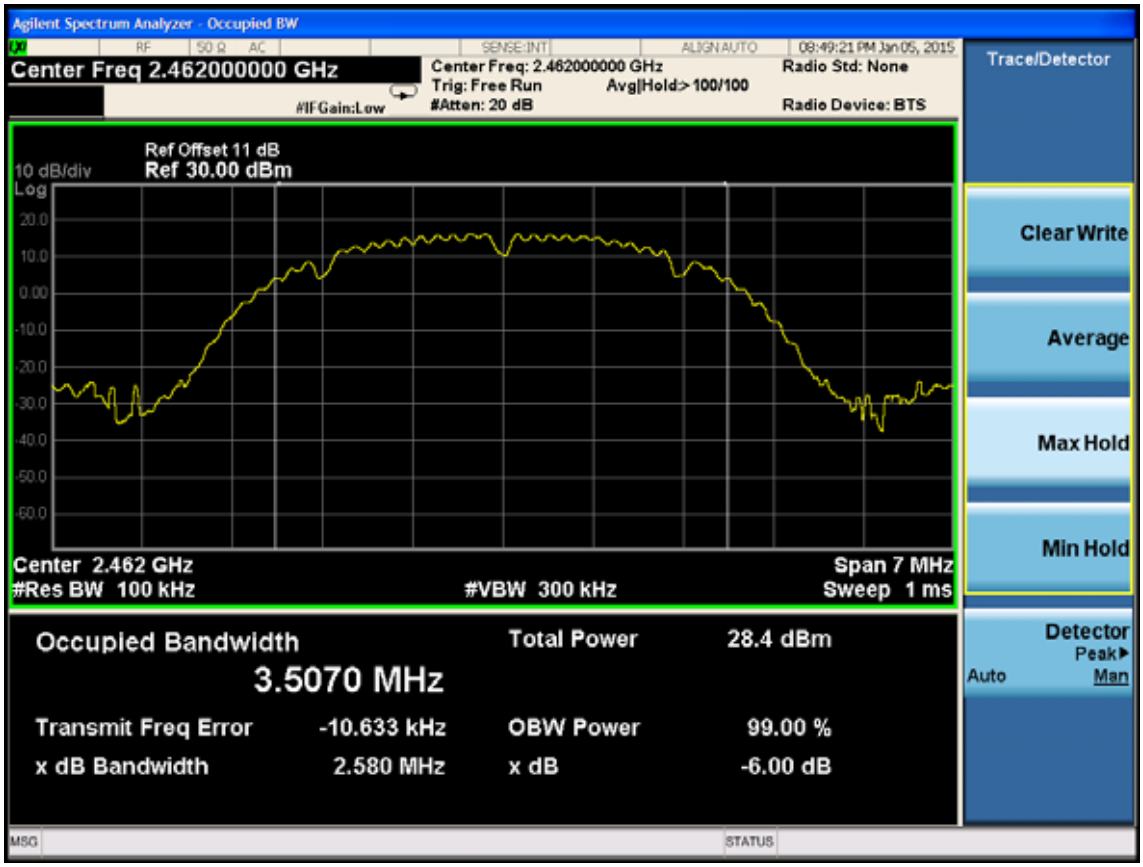
5MHz Antenna 2

Test Mode: IEEE 802.11b

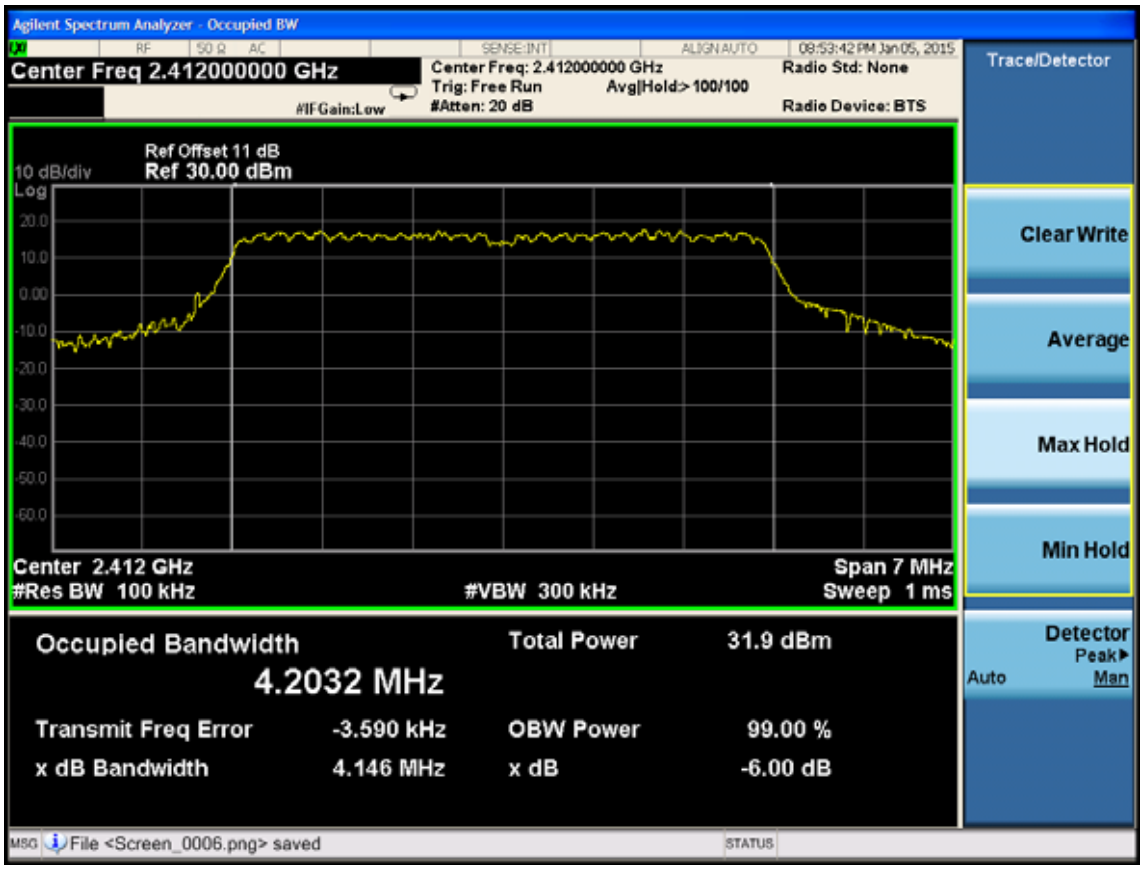
Test CH1: 2412MHz

Test CH6: 2437MHz

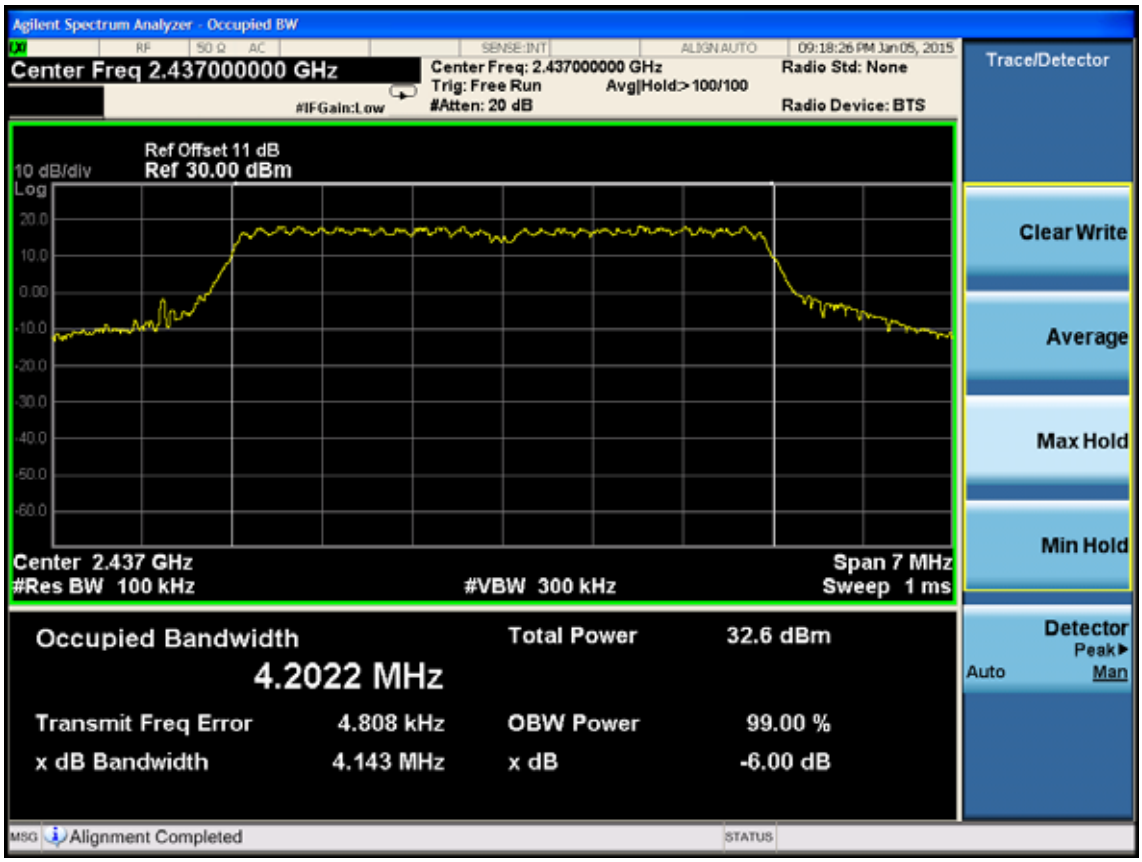
Test CH11: 2462MHz



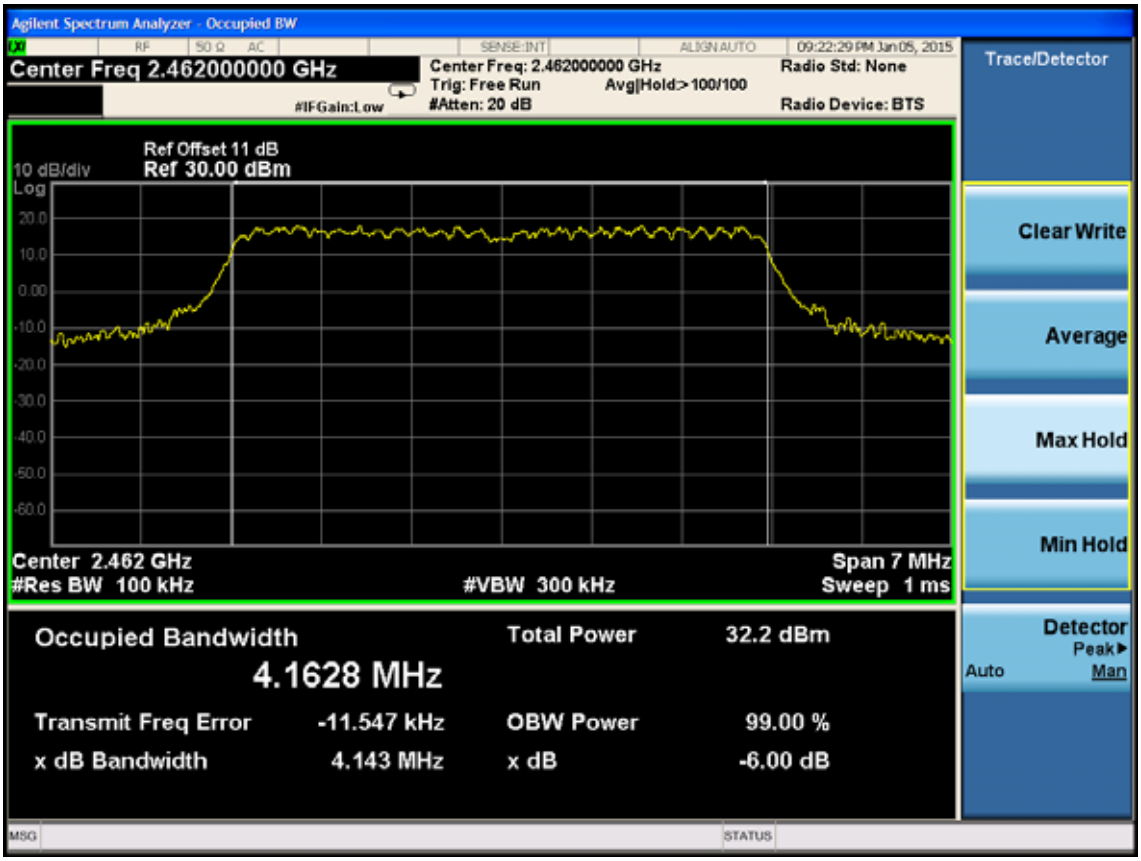
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



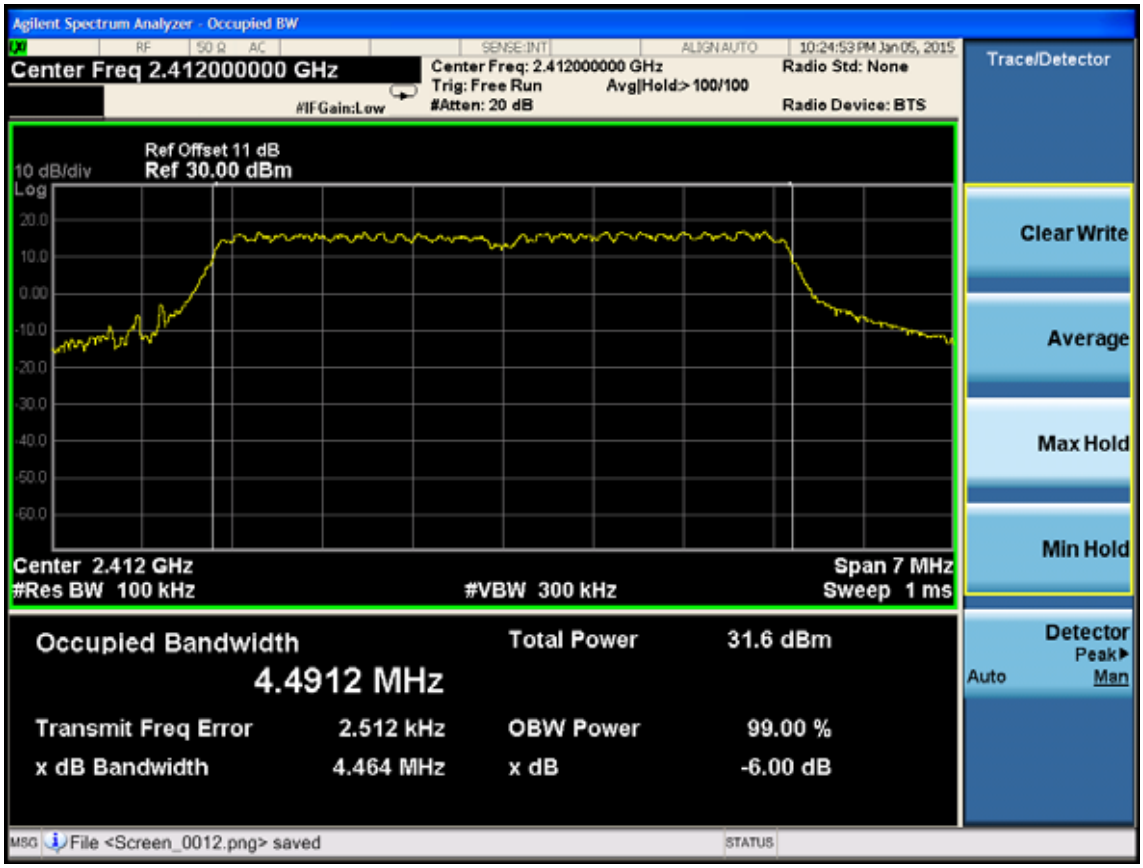
Test CH6: 2437MHz



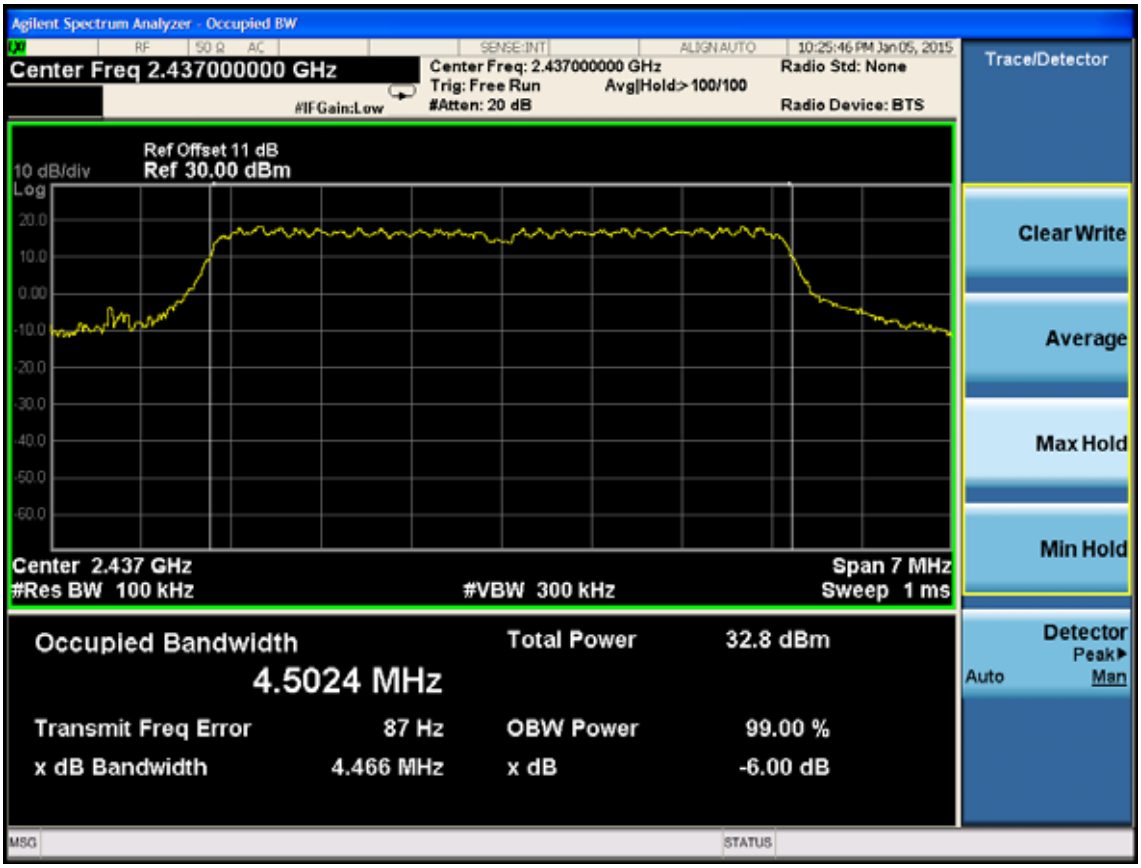
Test CH11: 2462MHz



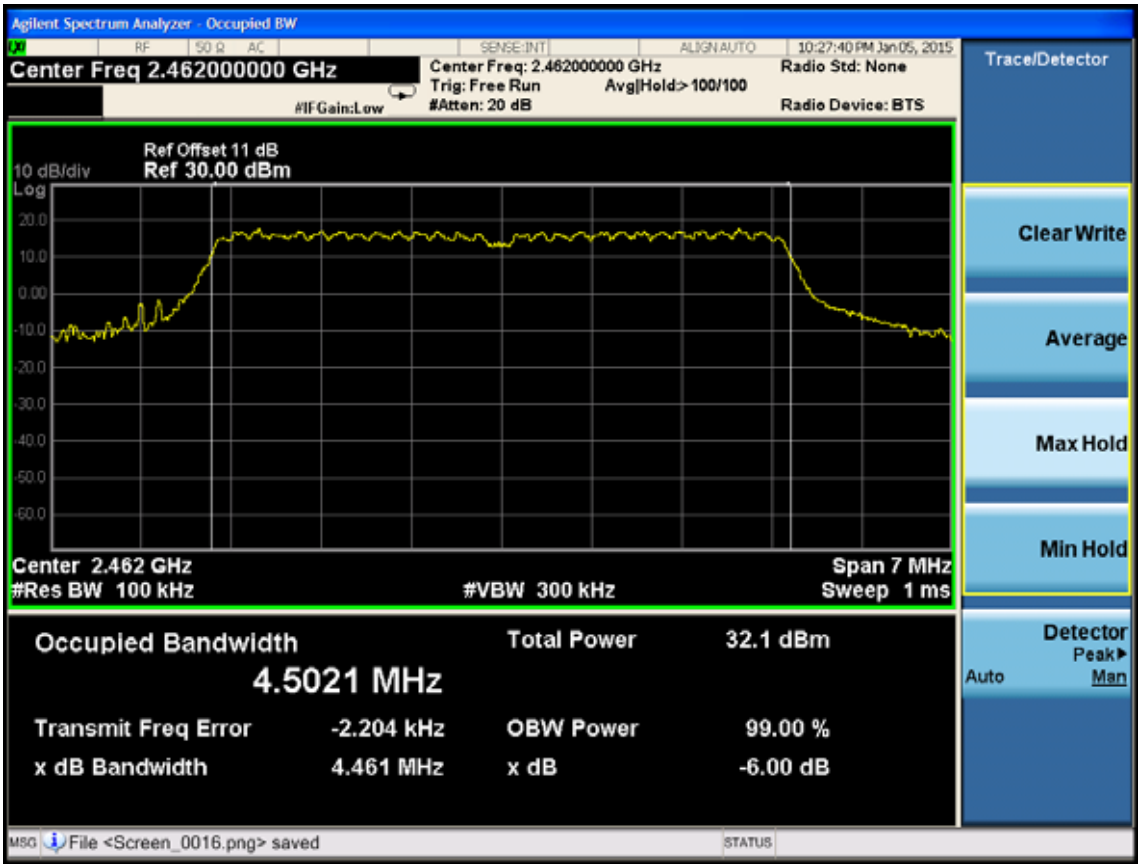
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



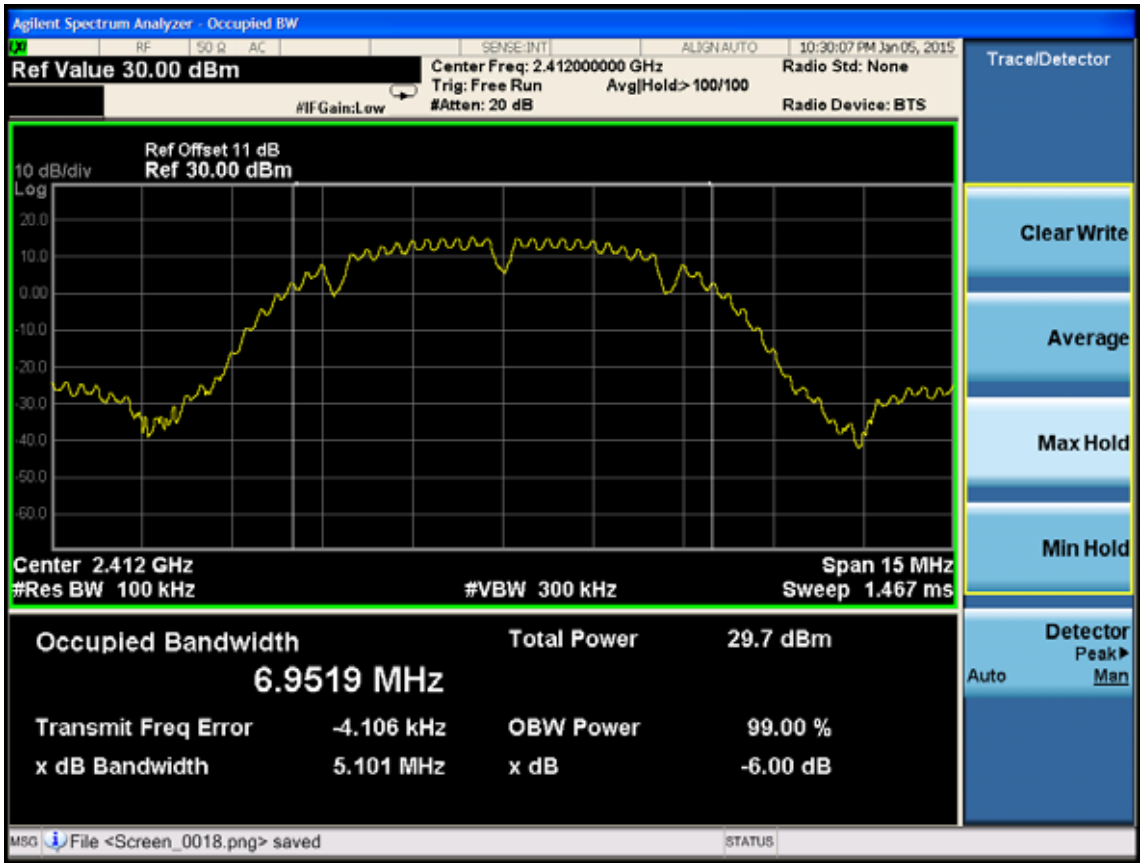
Test CH6: 2437MHz



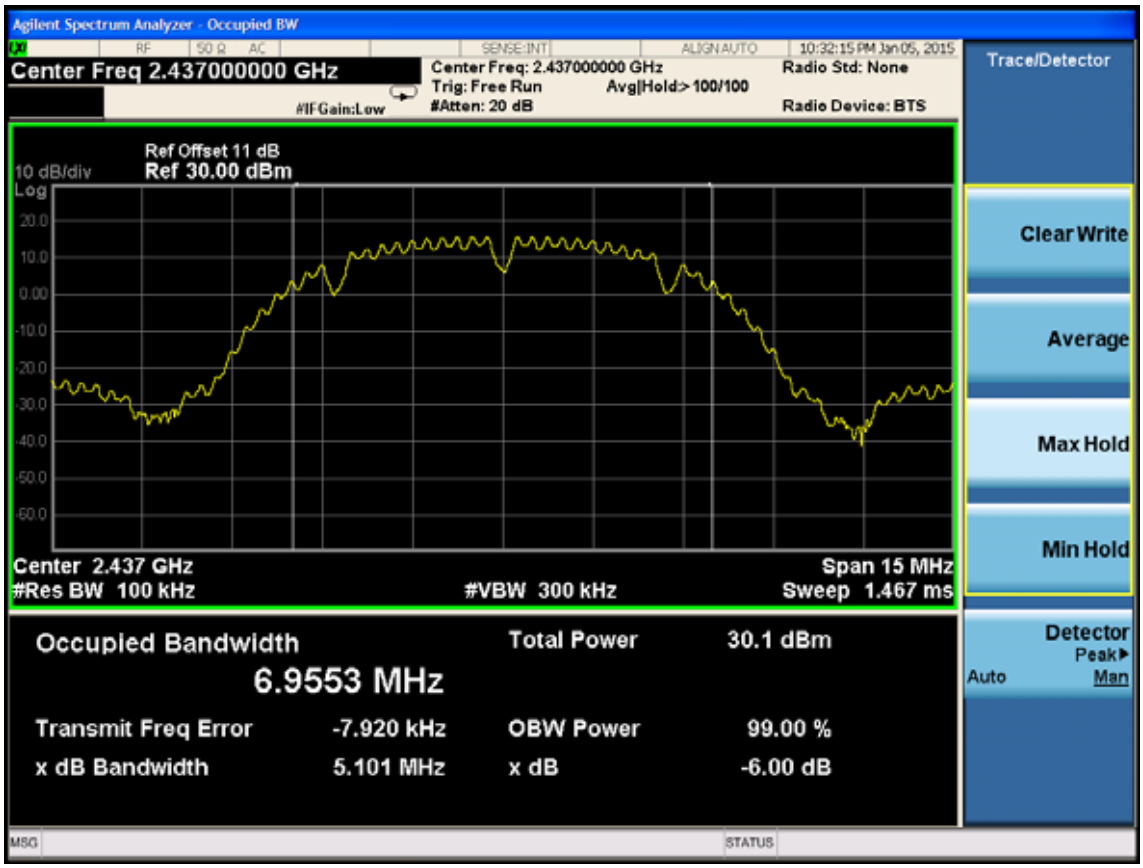
Test CH11: 2462MHz



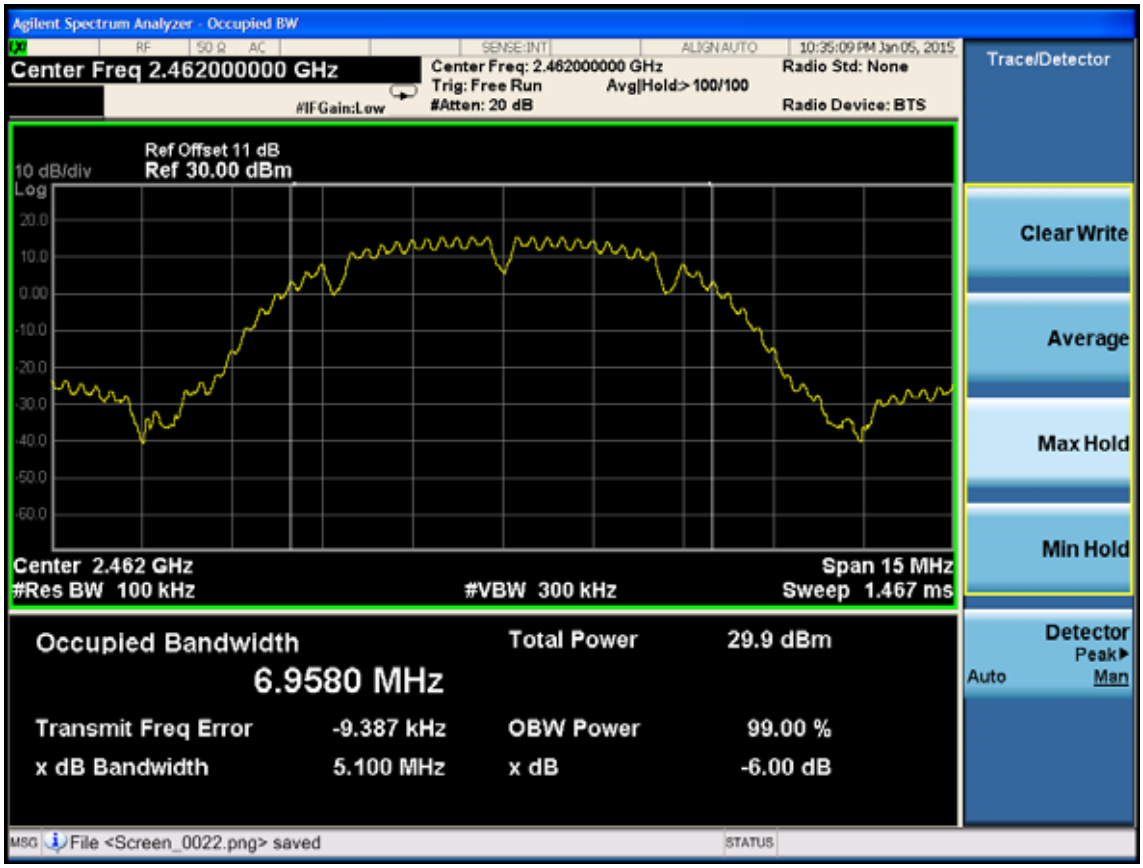
10MHz Antenna 1
Test Mode: IEEE 802.11b
Test CH1: 2412MHz



Test CH6: 2437MHz

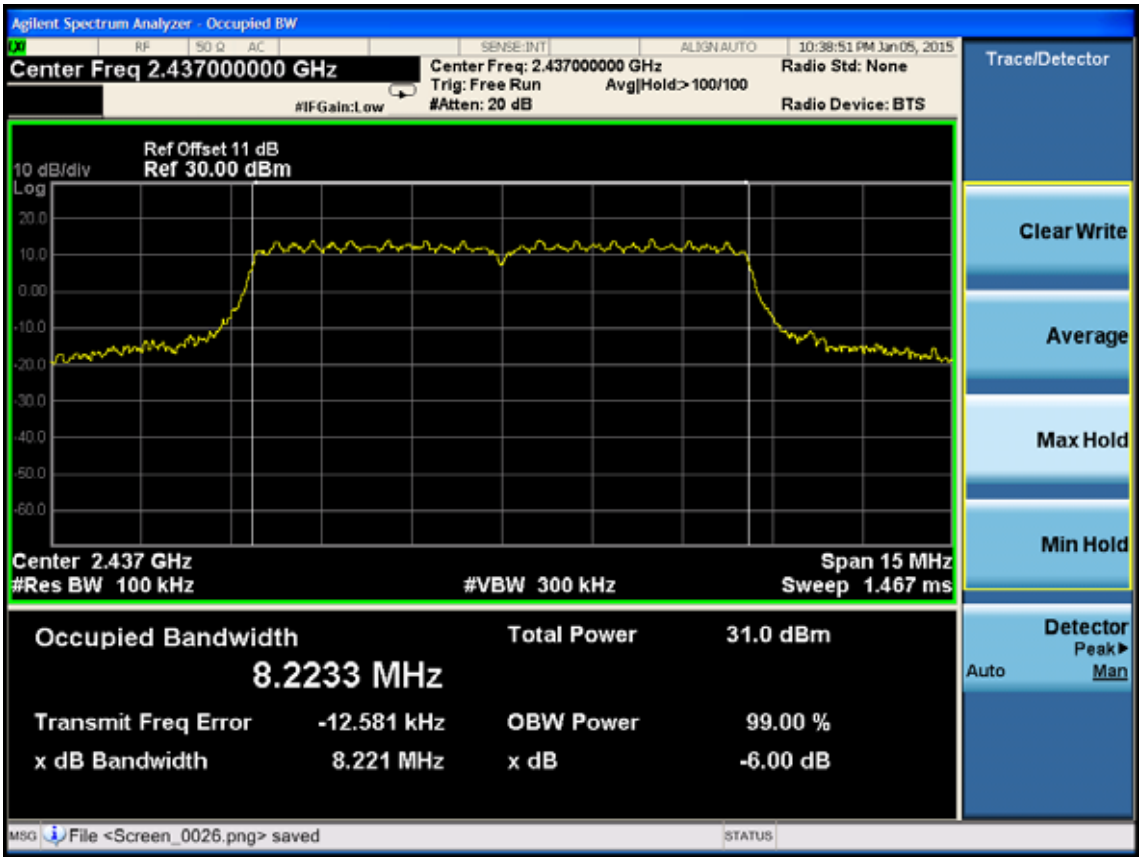


Test CH11: 2462MHz

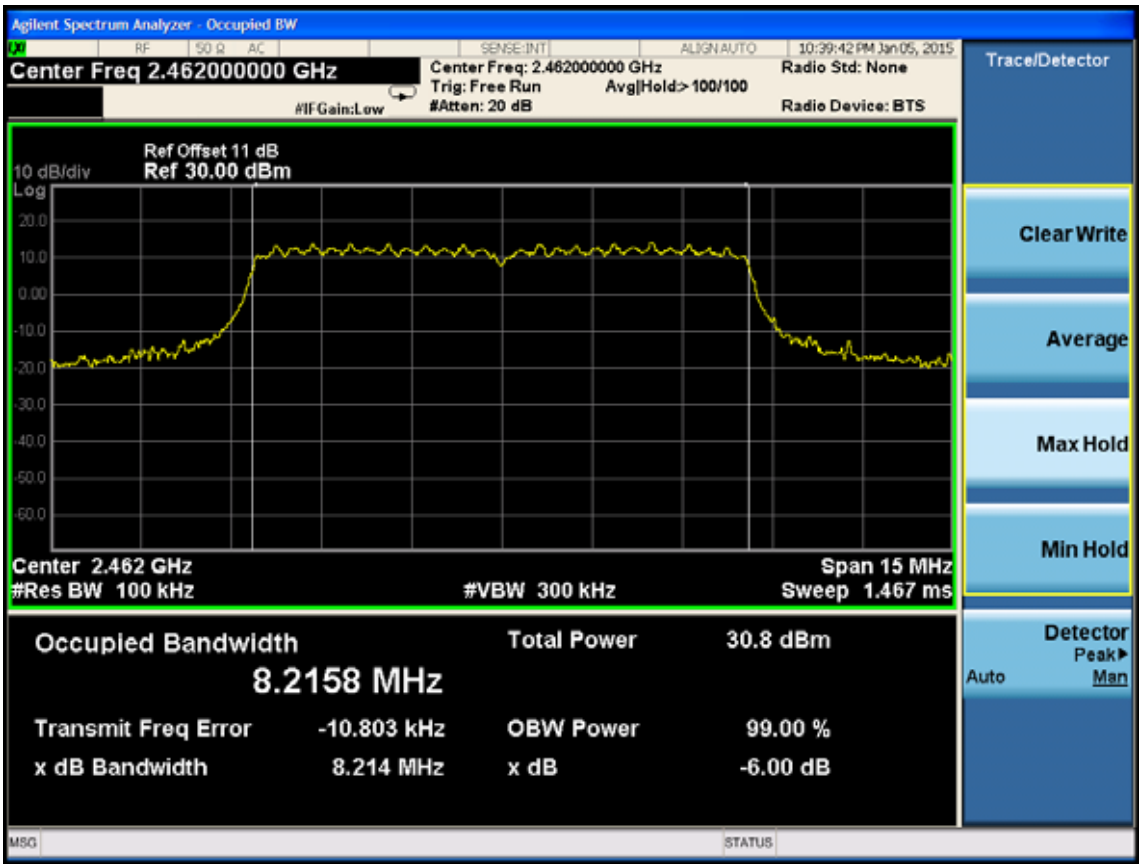


Test Mode: IEEE 802.11g
Test CH1: 2412MHz

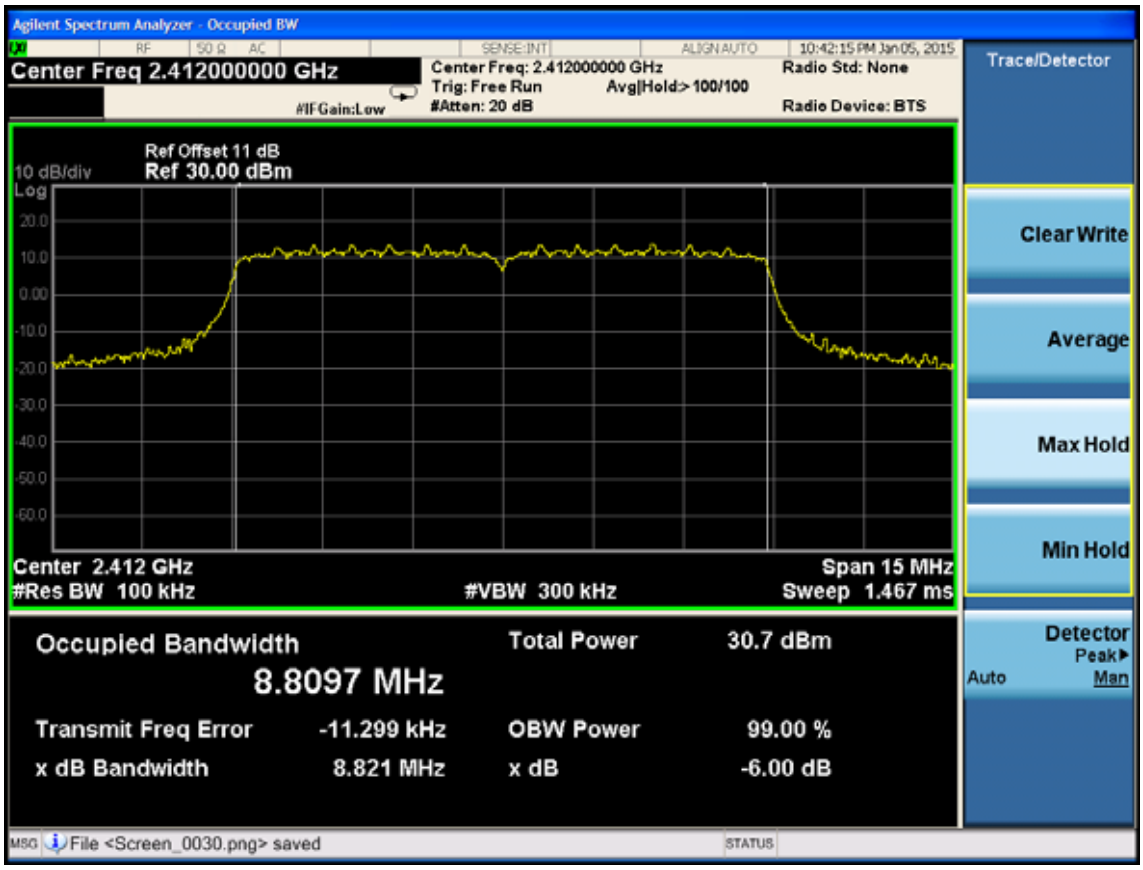
Test CH6: 2437MHz



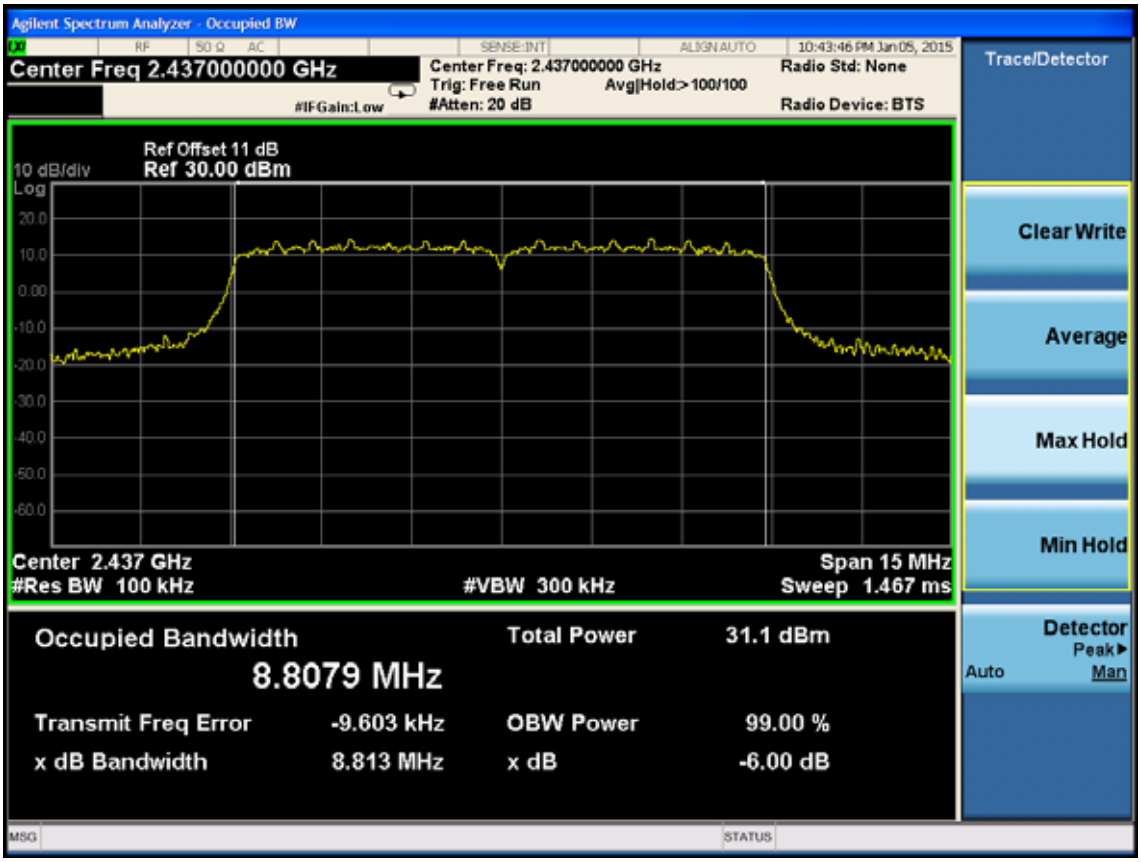
Test CH11: 2462MHz



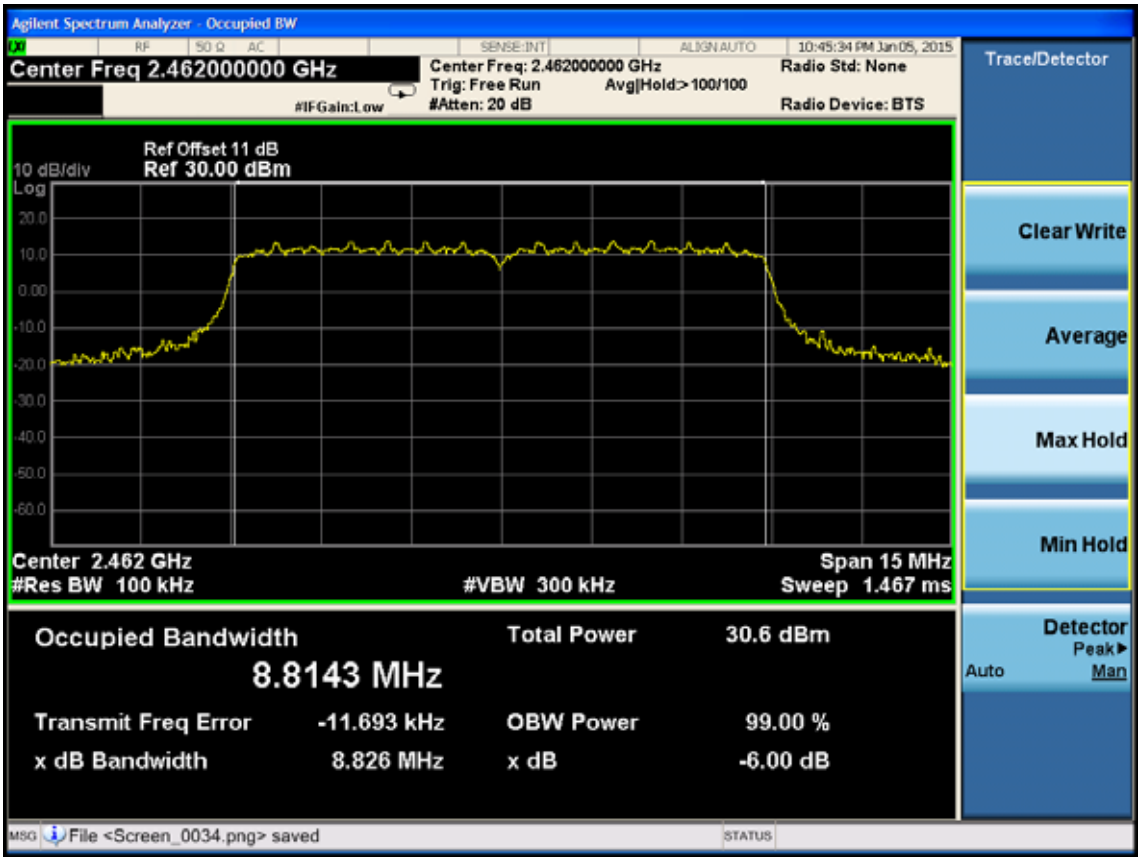
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

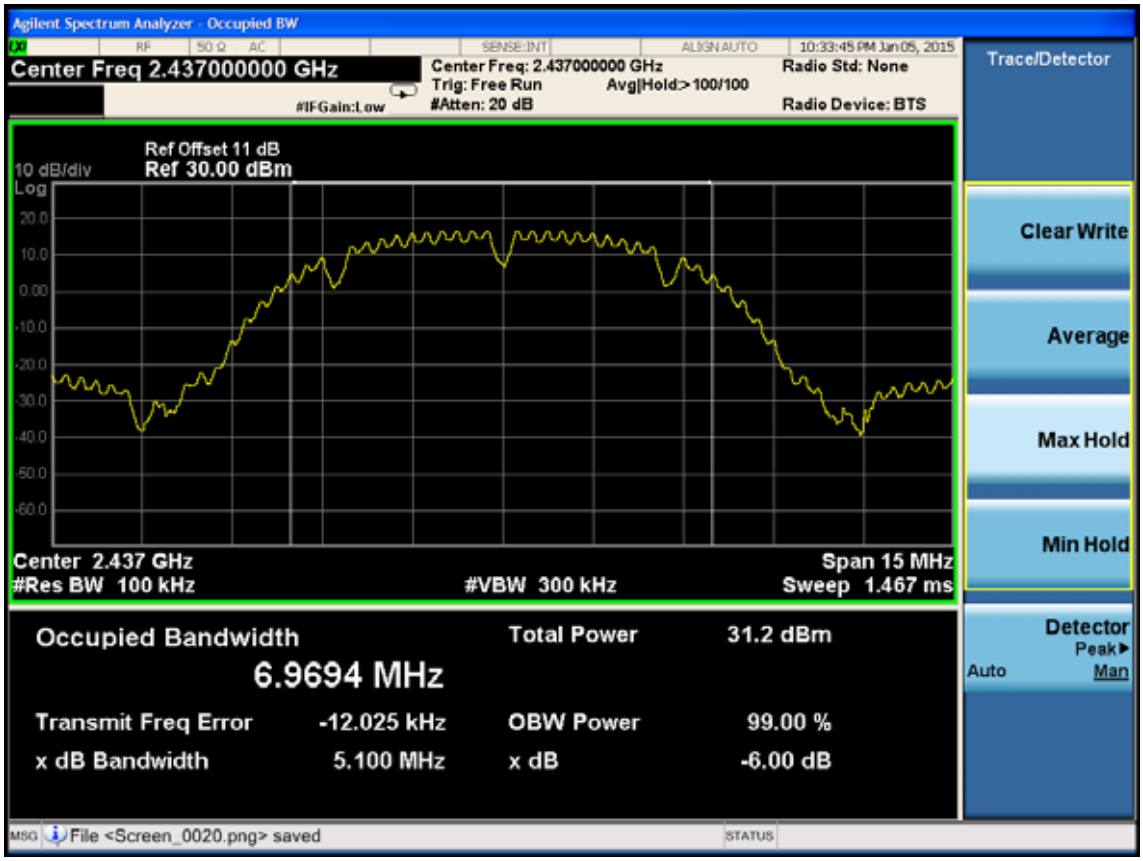


10MHz Antenna 2

Test Mode: IEEE 802.11b

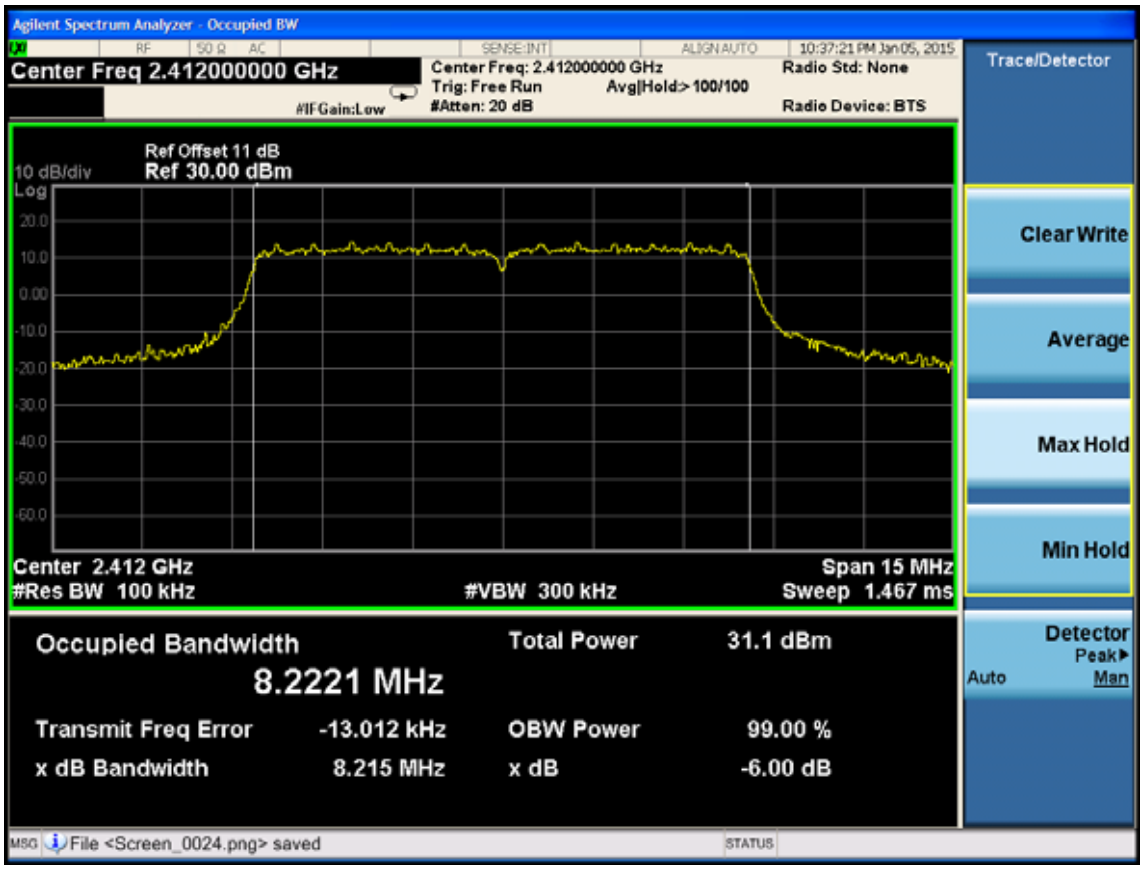
Test CH1: 2412MHz

Test CH6: 2437MHz

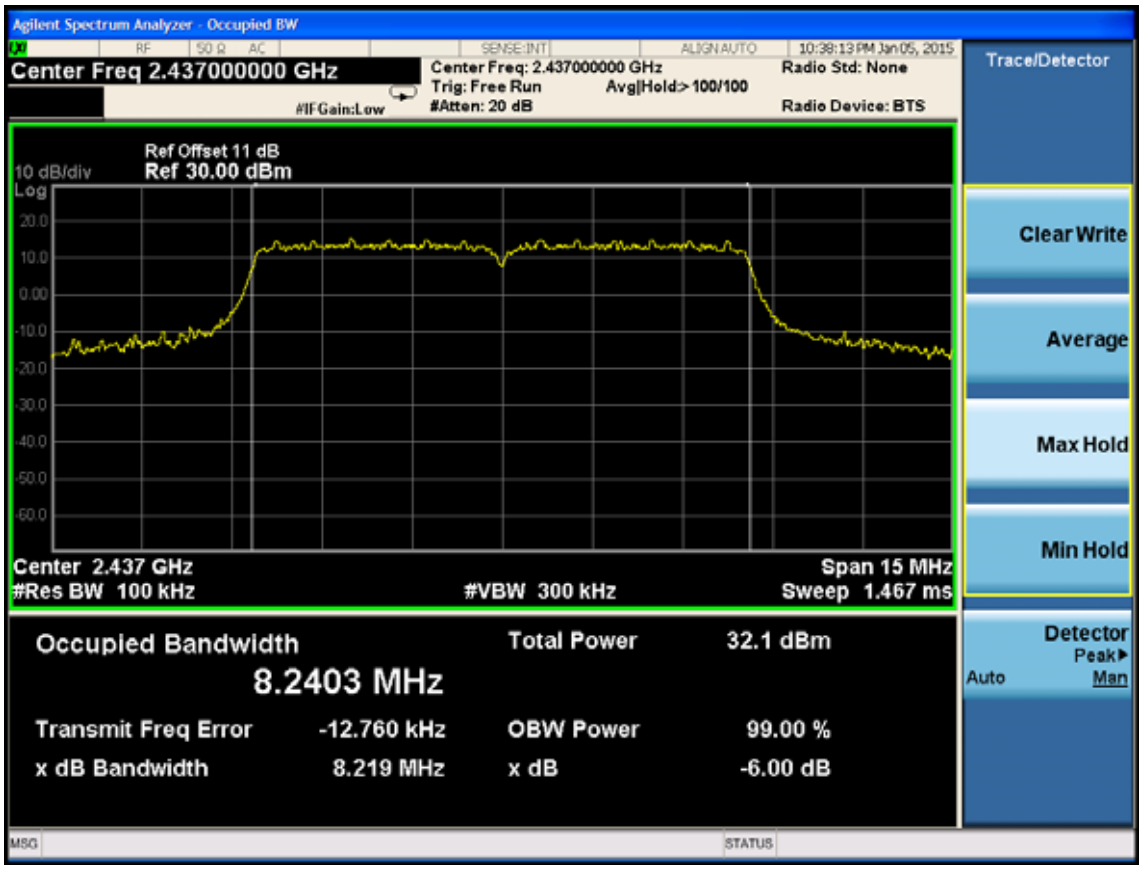


Test CH11: 2462MHz

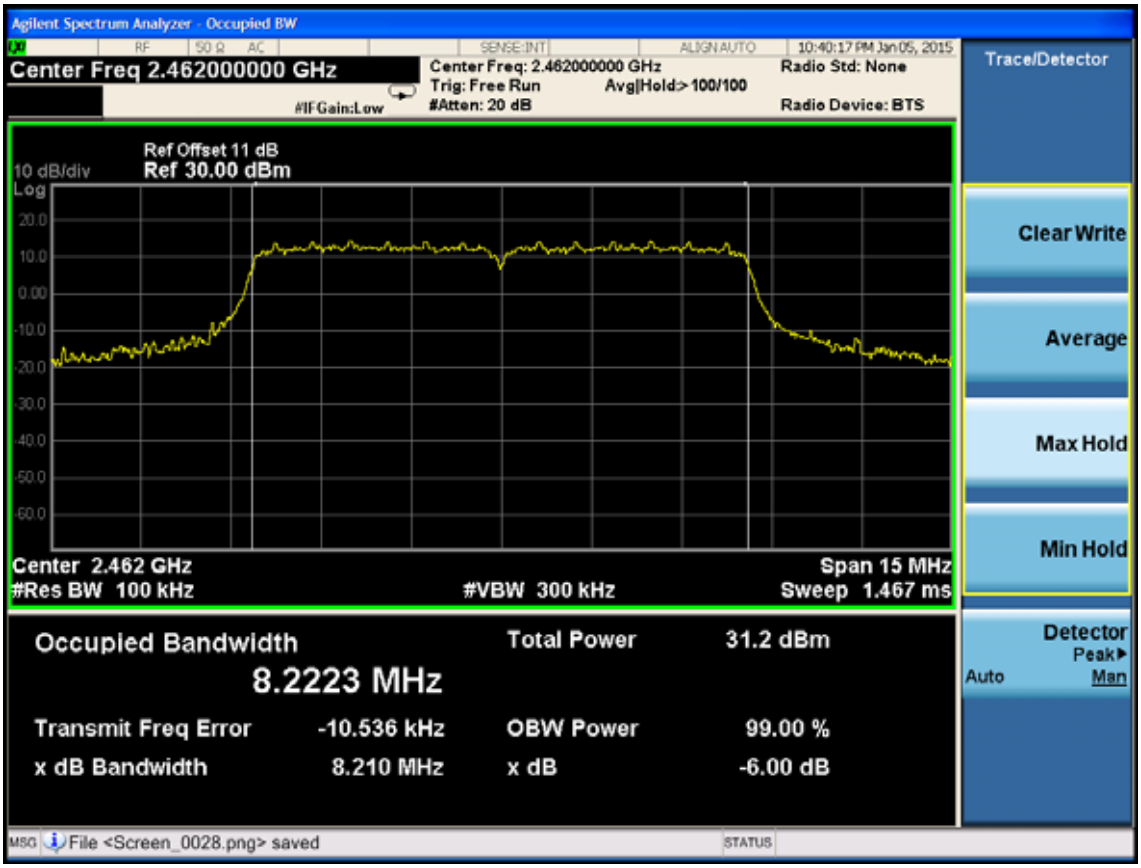
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



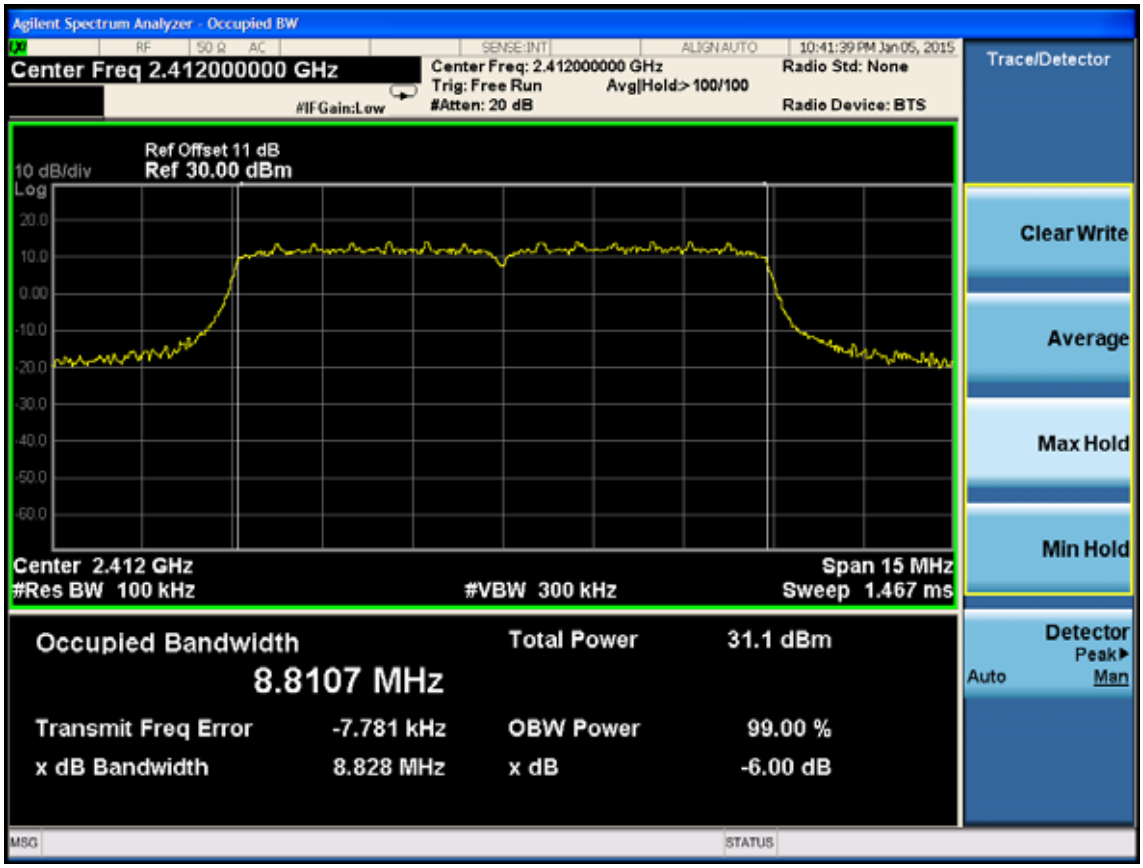
Test CH6: 2437MHz



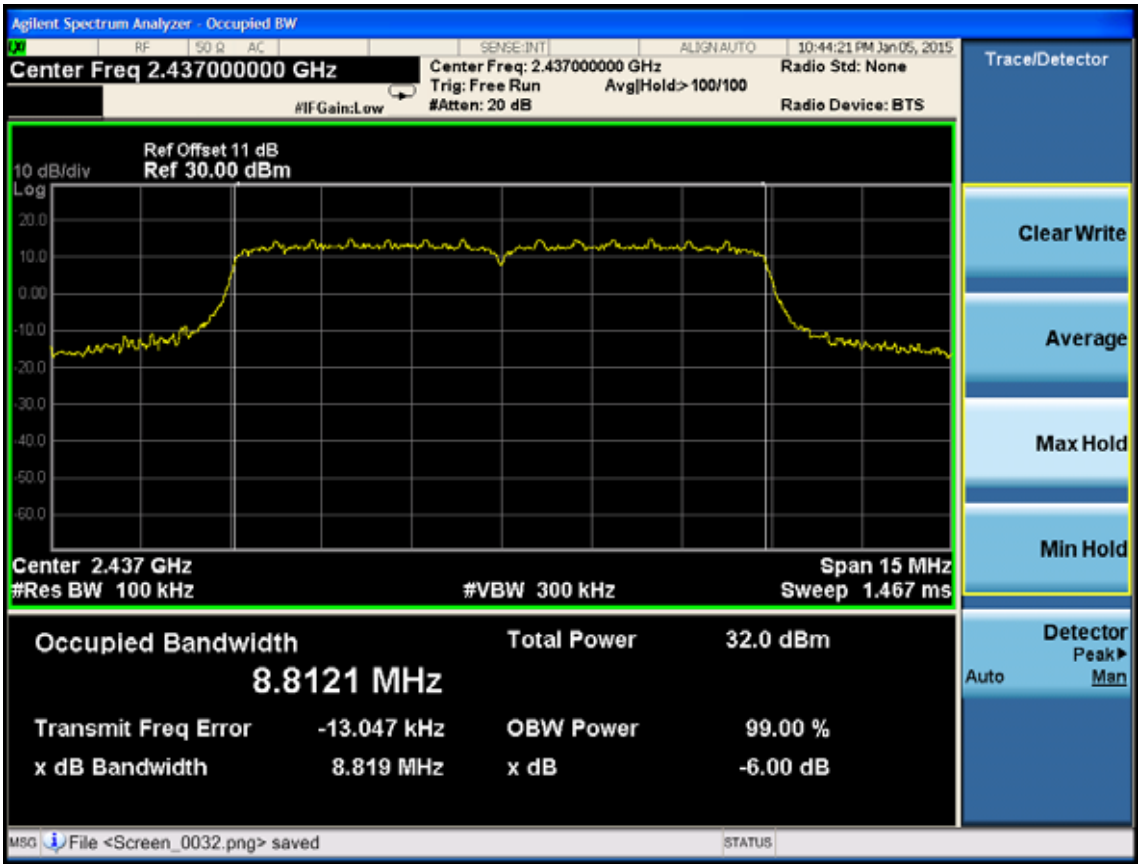
Test CH11: 2462MHz



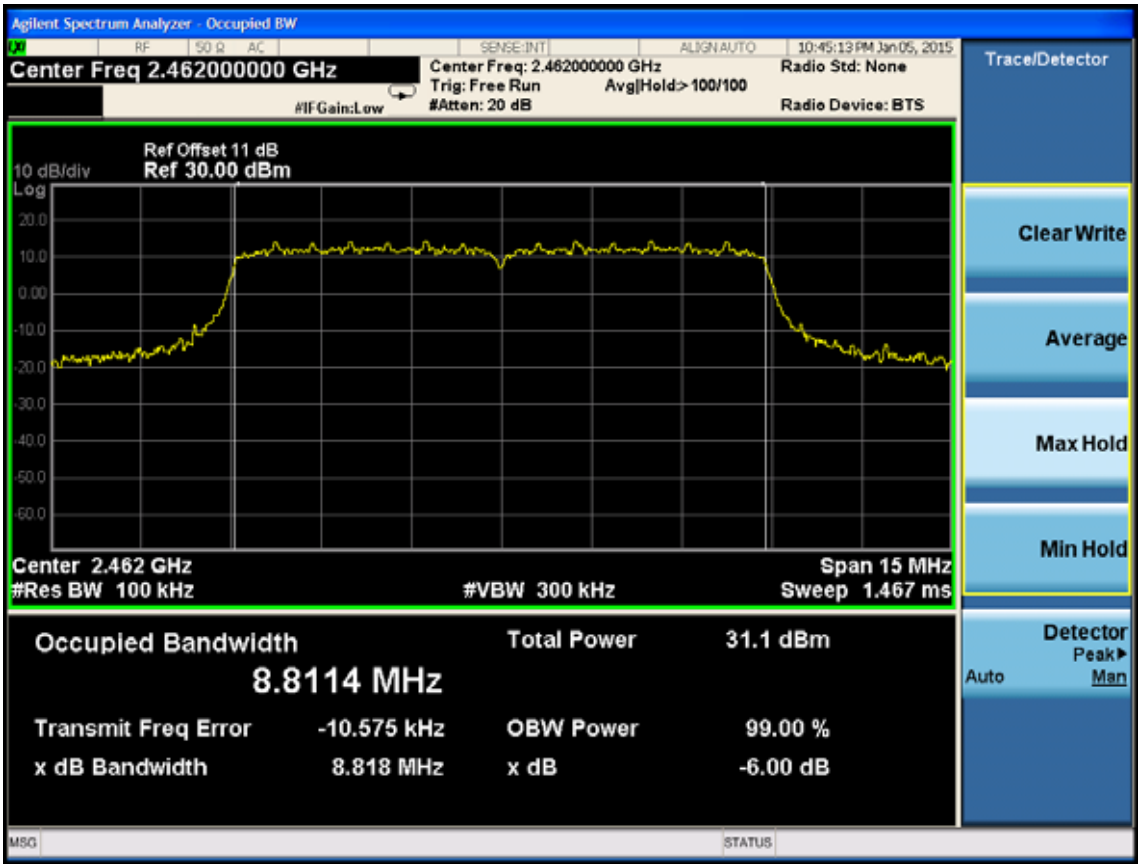
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



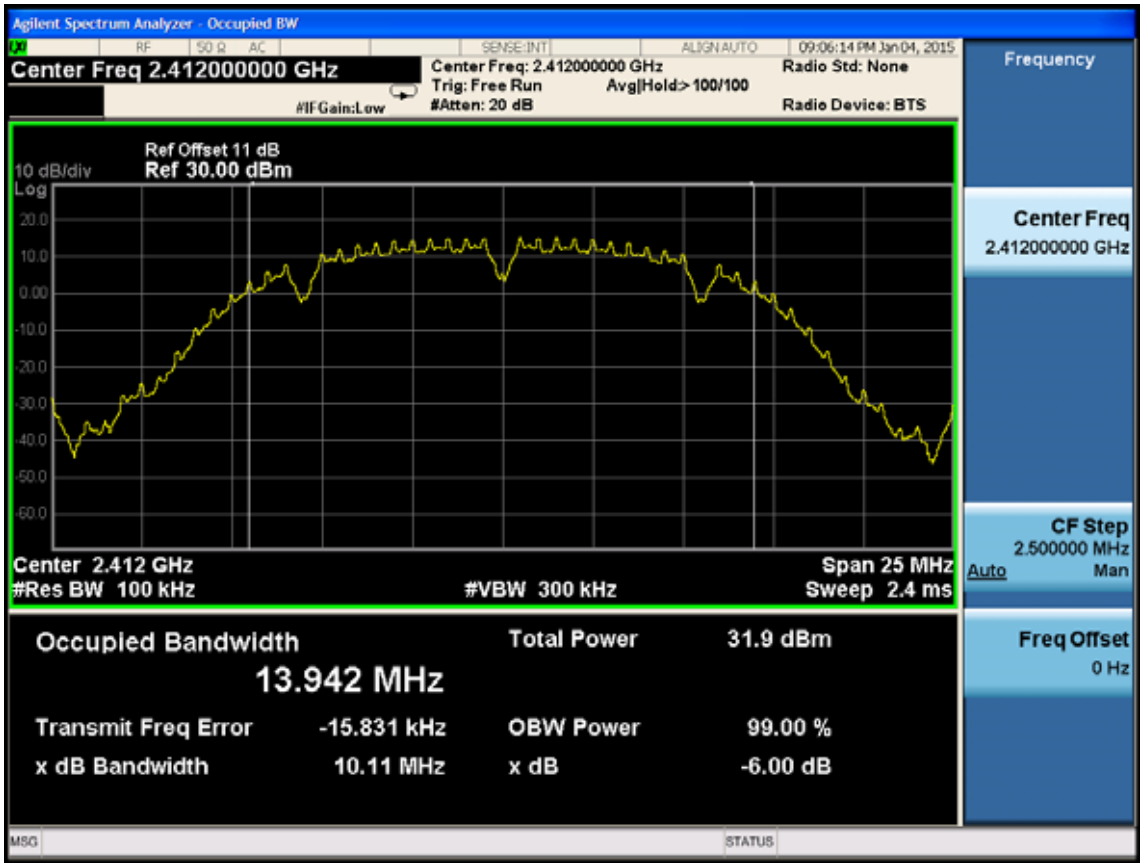
Test CH6: 2437MHz



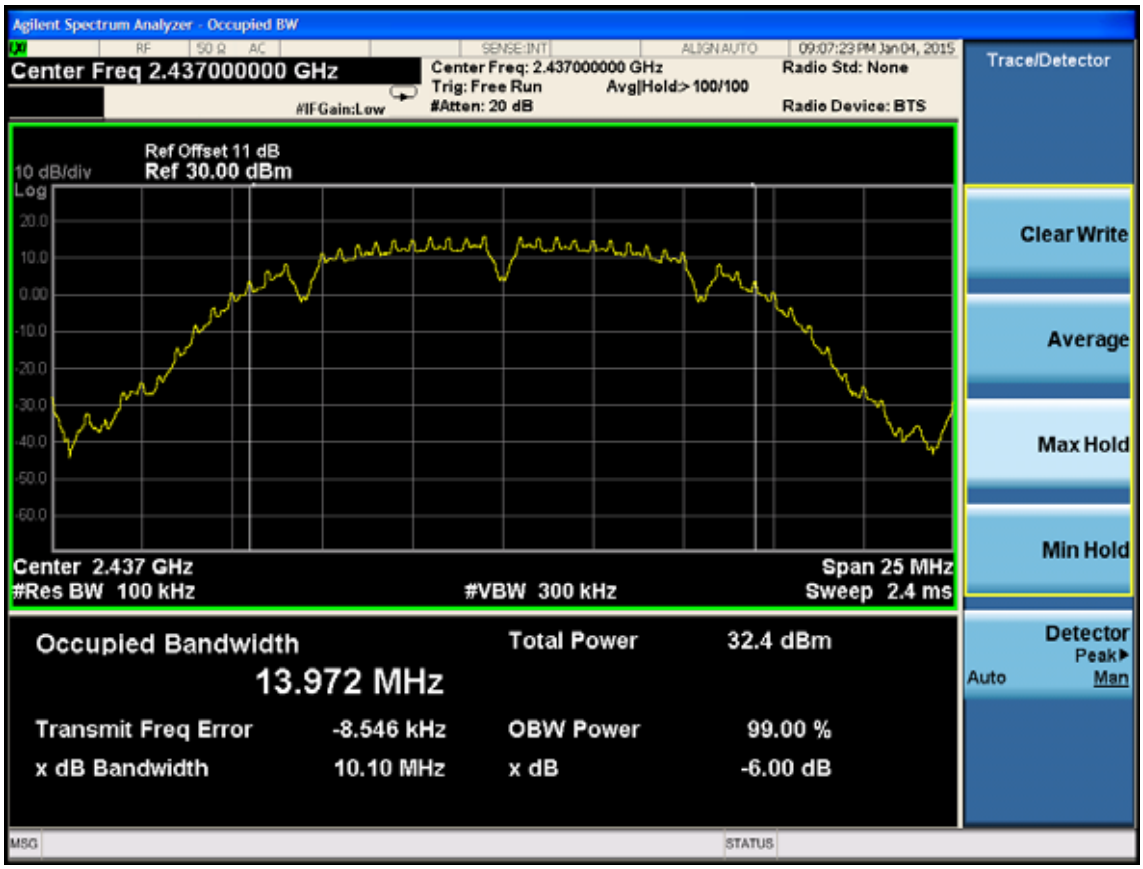
Test CH11: 2462MHz



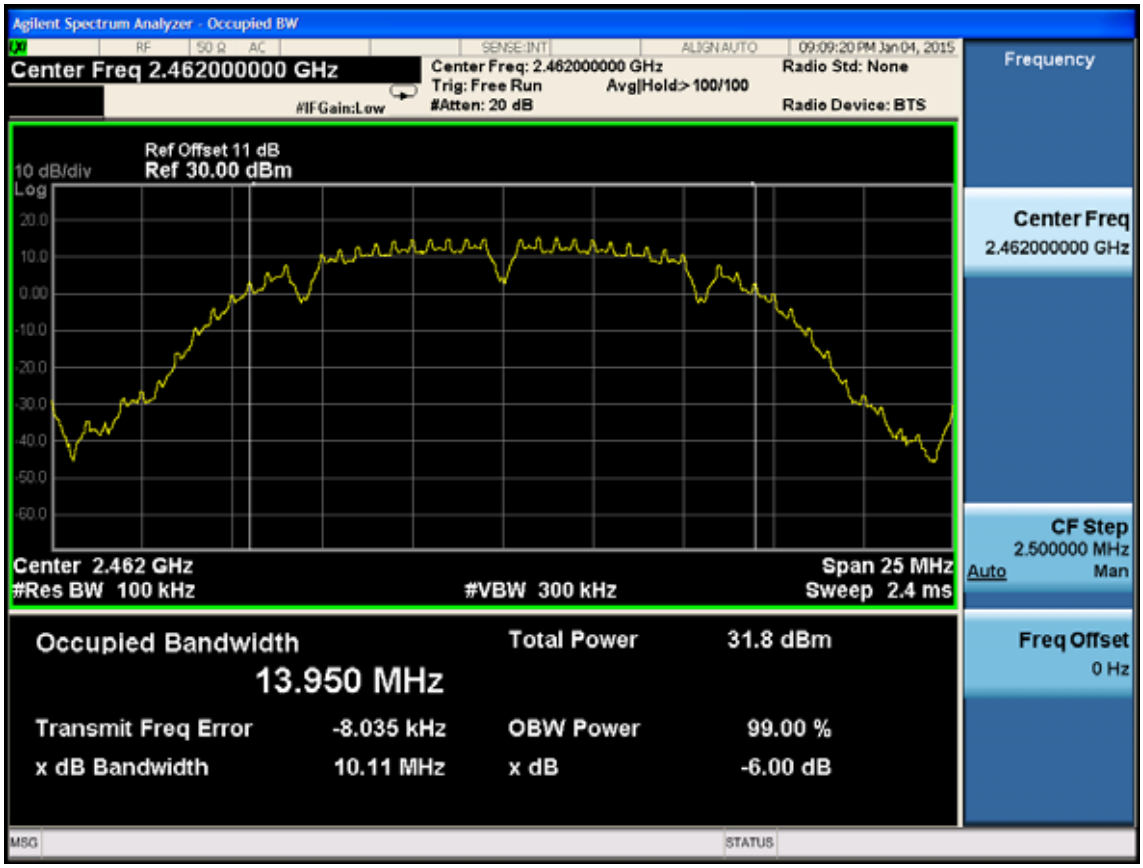
20MHz Antenna 1
Test Mode: IEEE 802.11b
Test CH1: 2412MHz



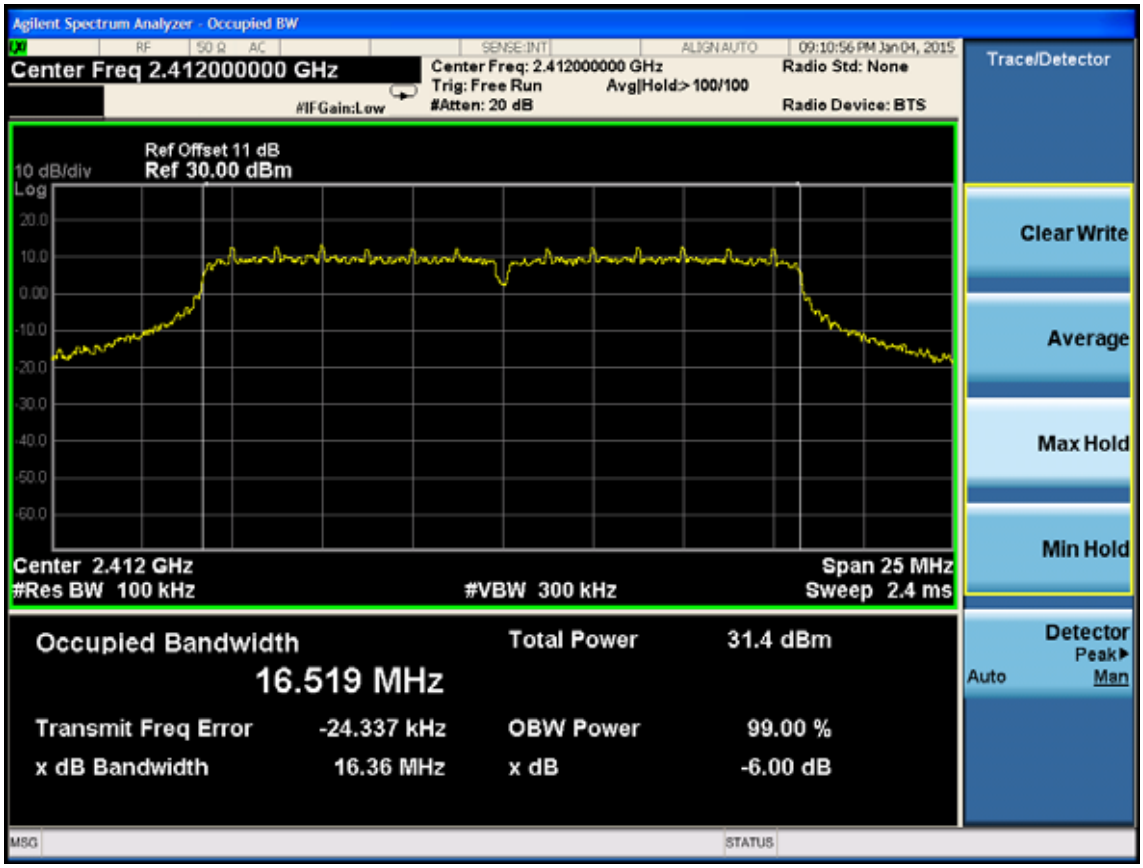
Test CH6: 2437MHz



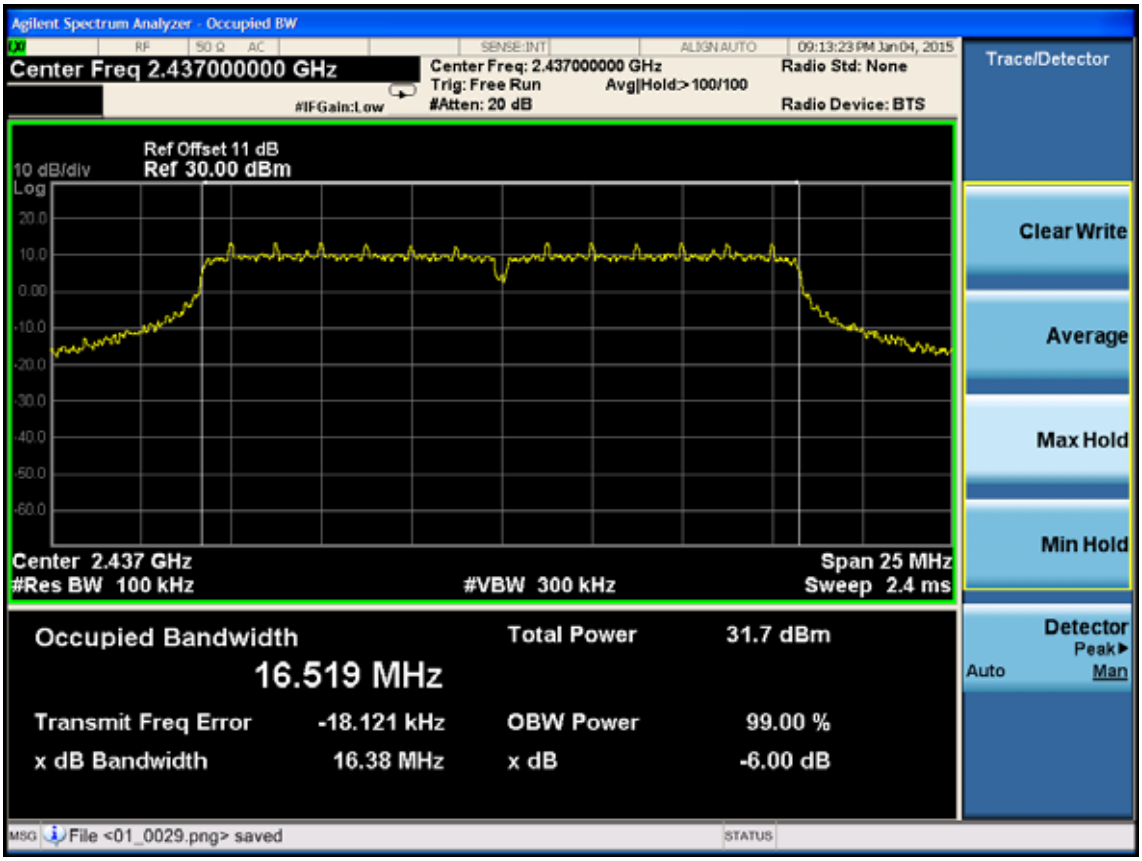
Test CH11: 2462MHz



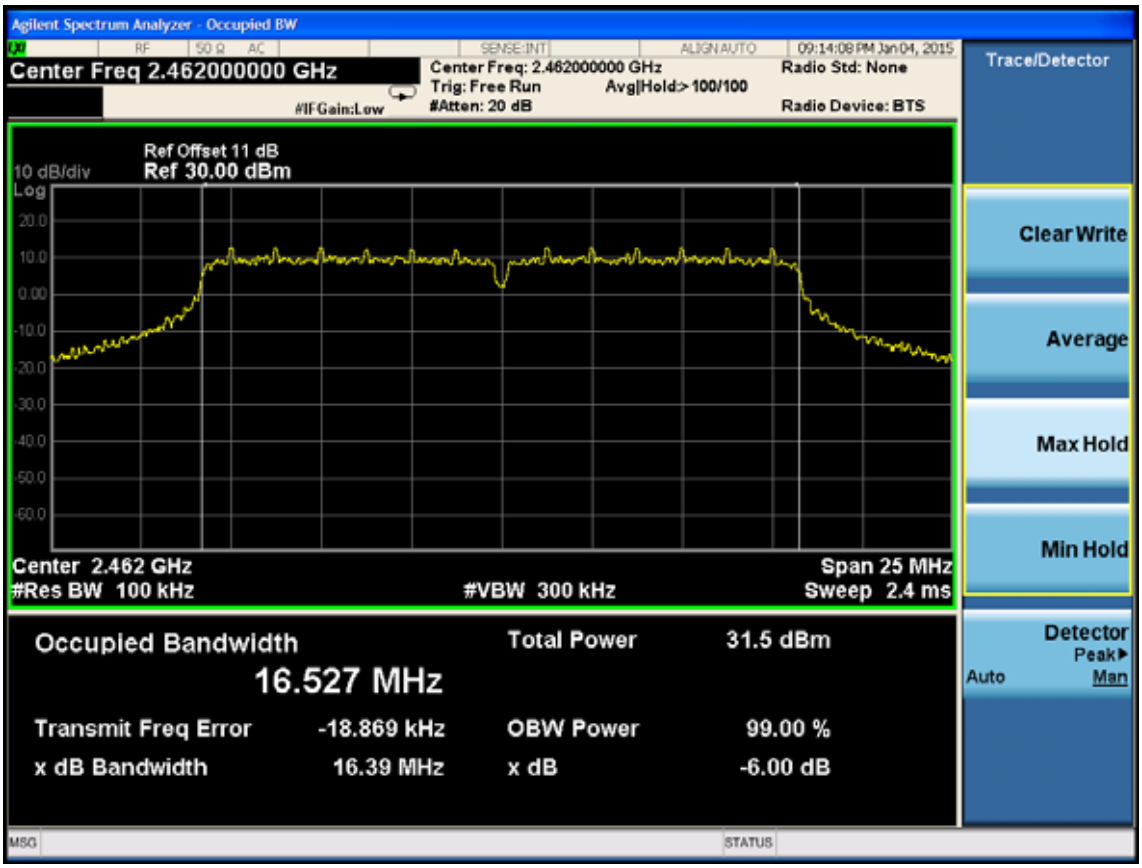
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



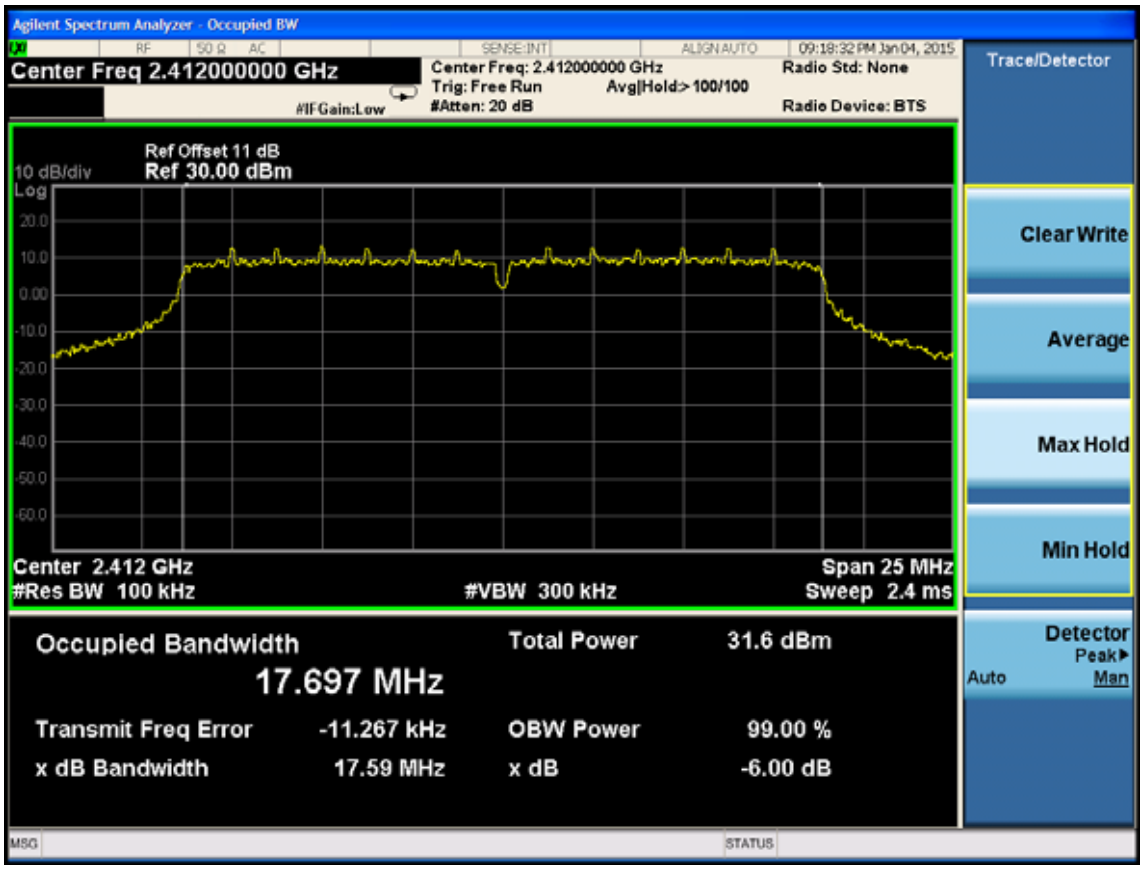
Test CH6: 2437MHz



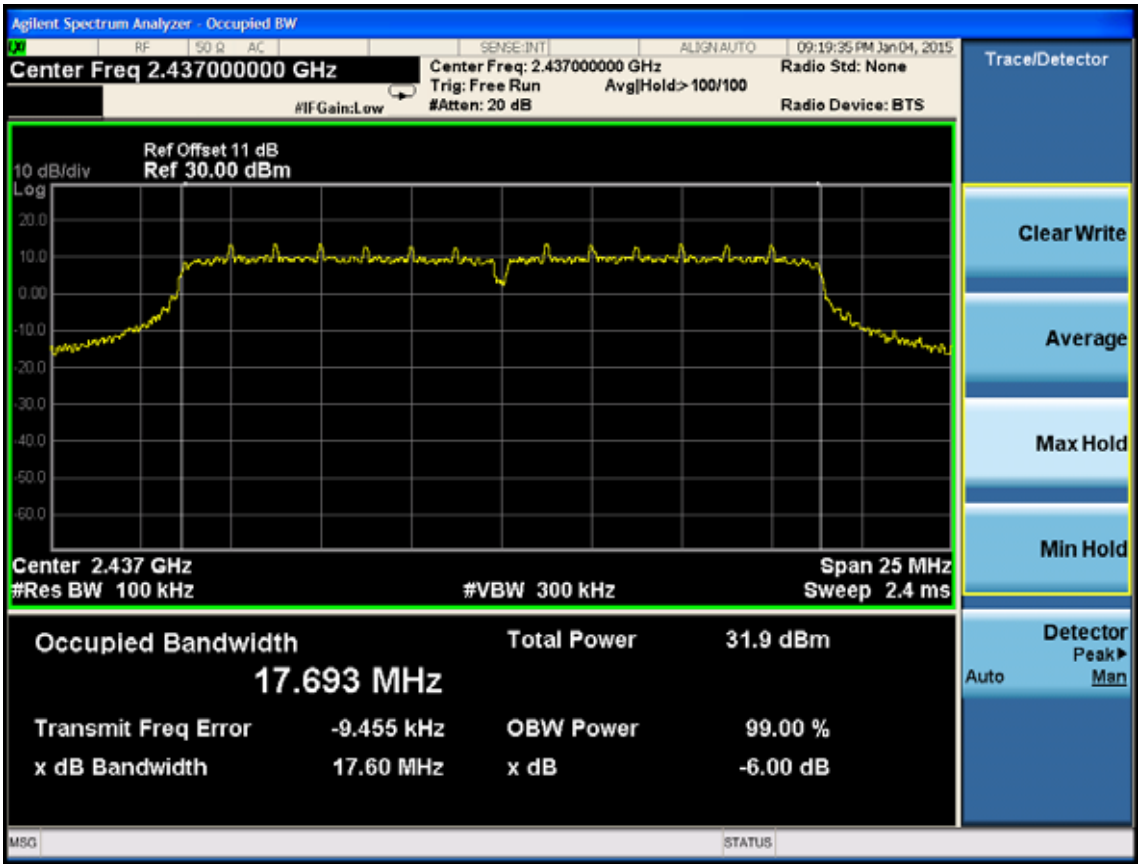
Test CH11: 2462MHz



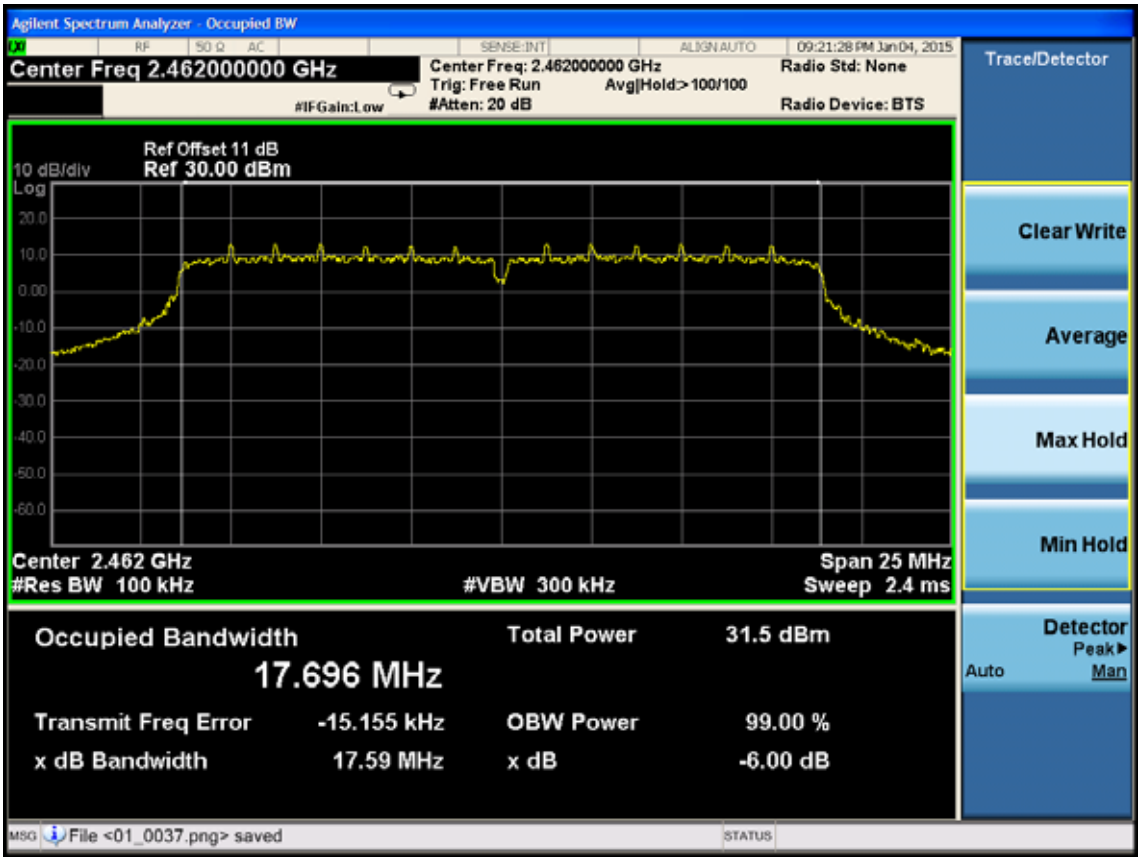
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



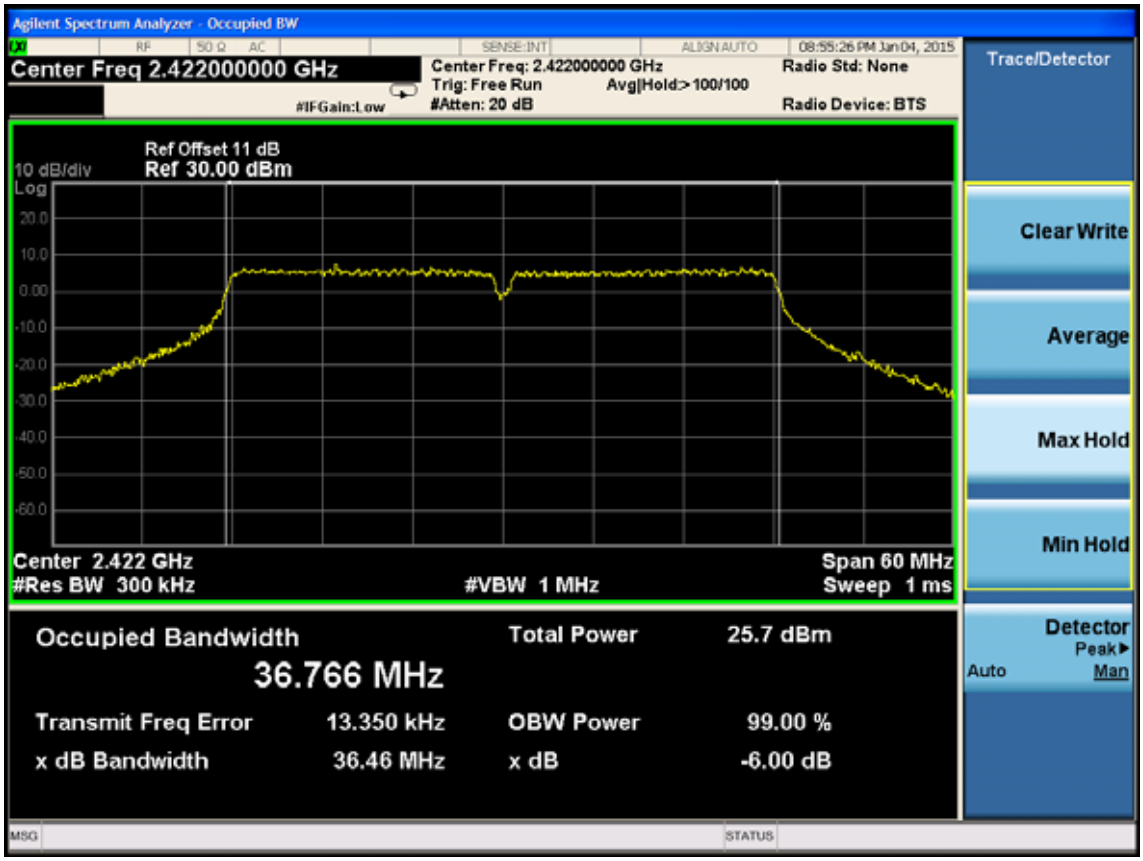
Test CH6: 2437MHz



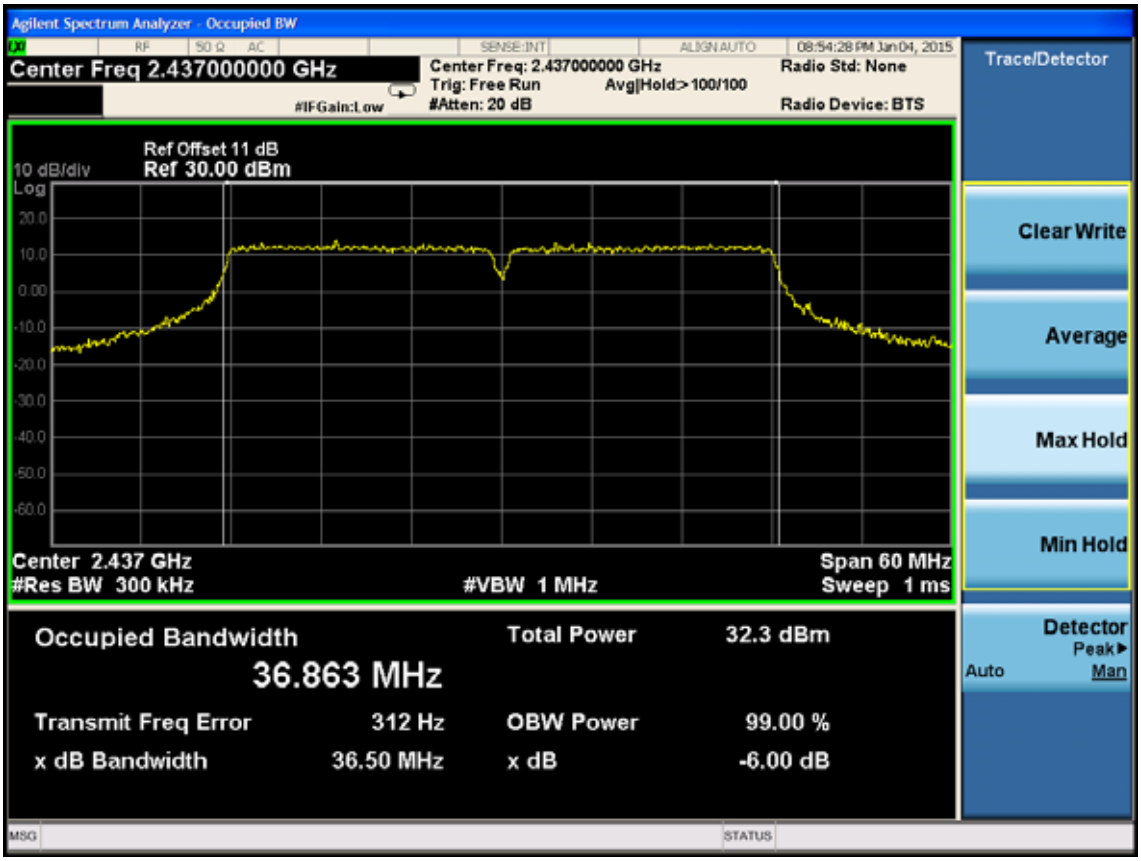
Test CH11: 2462MHz



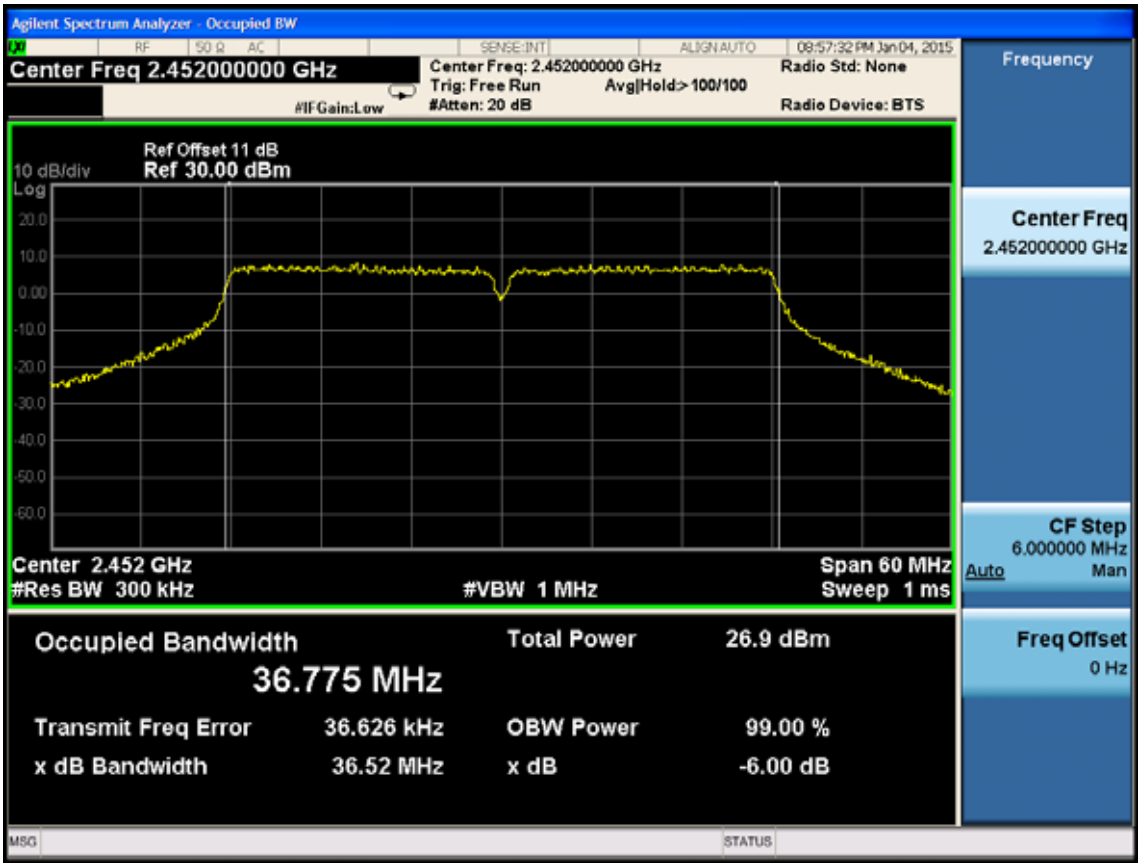
Test Mode: IEEE 802.11n HT40
Test CH1: 2422MHz



Test CH4: 2437MHz



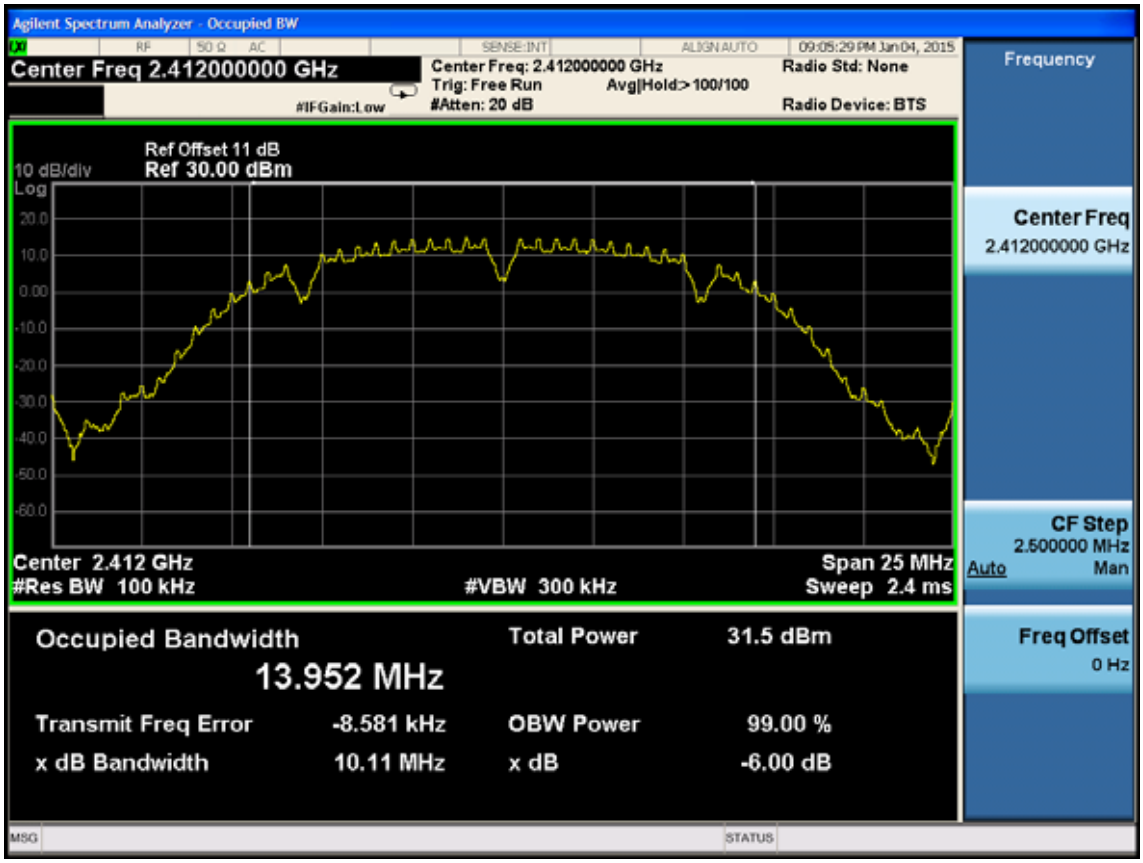
Test CH7: 2452MHz



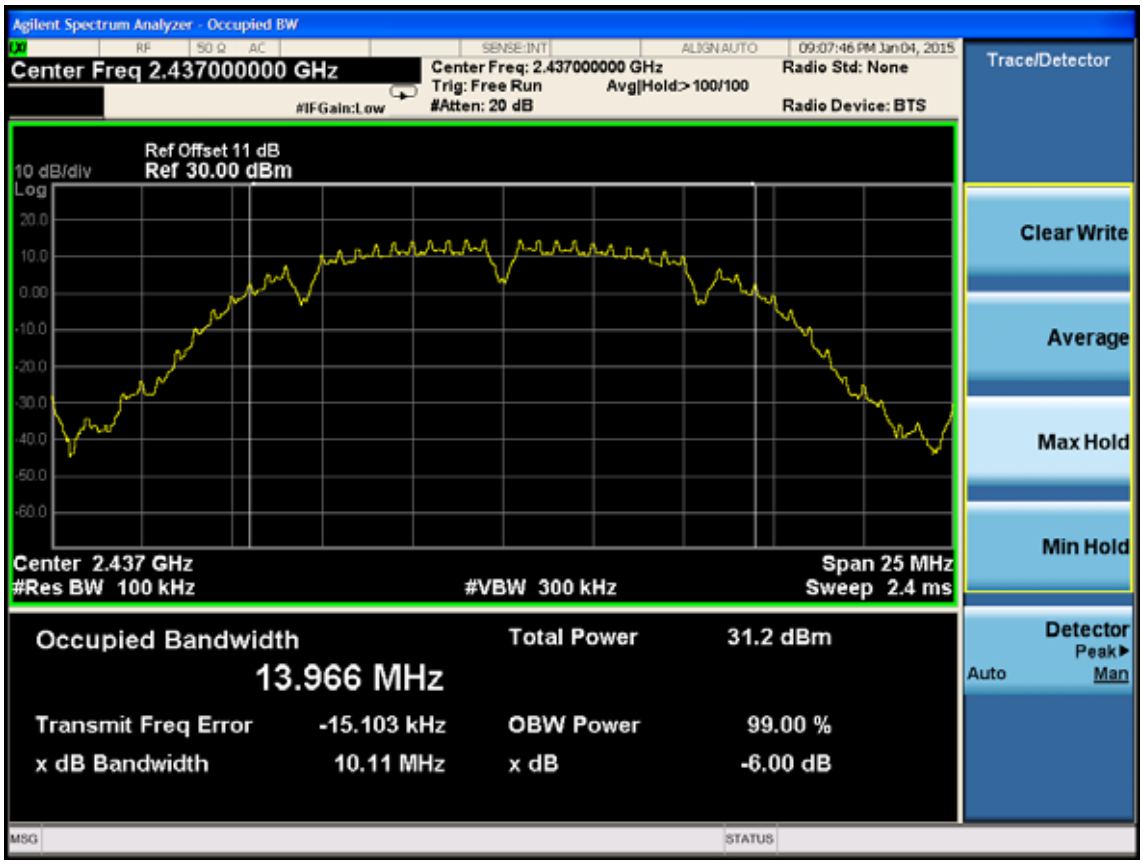
20MHz Antenna 2

Test Mode: IEEE 802.11b

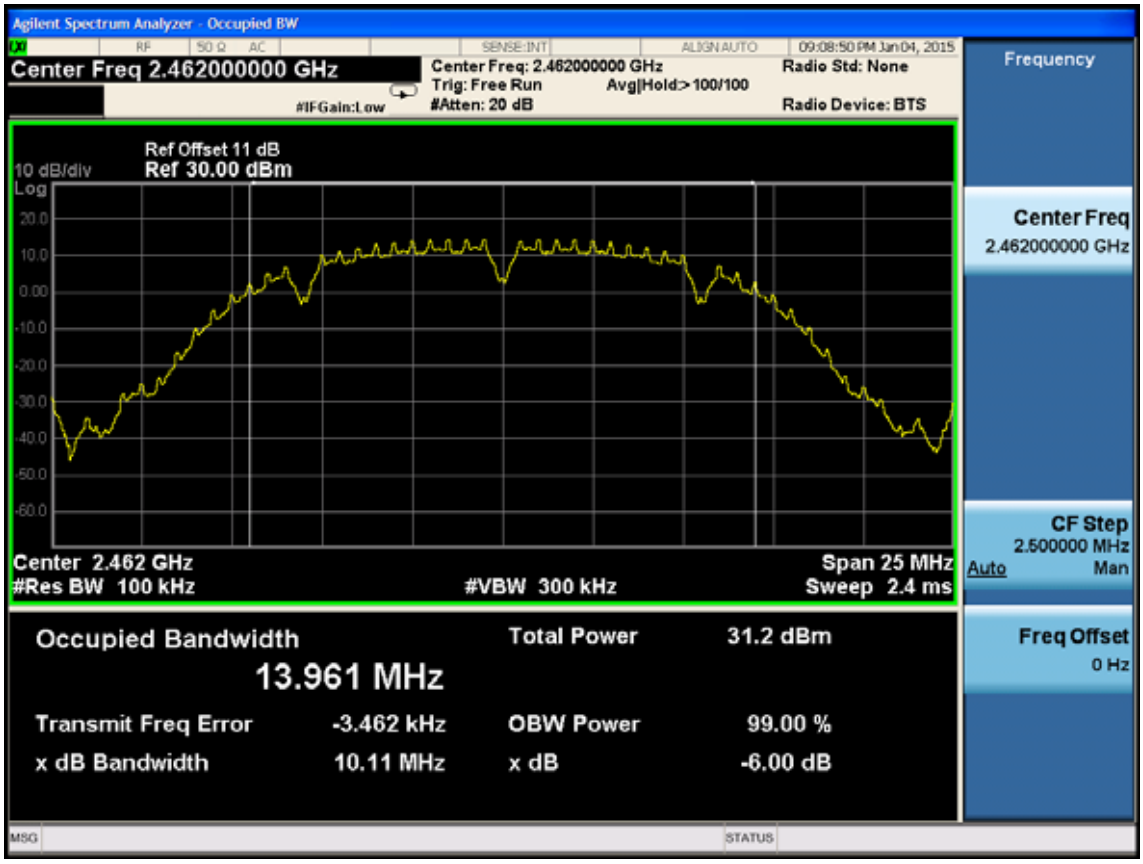
Test CH1: 2412MHz



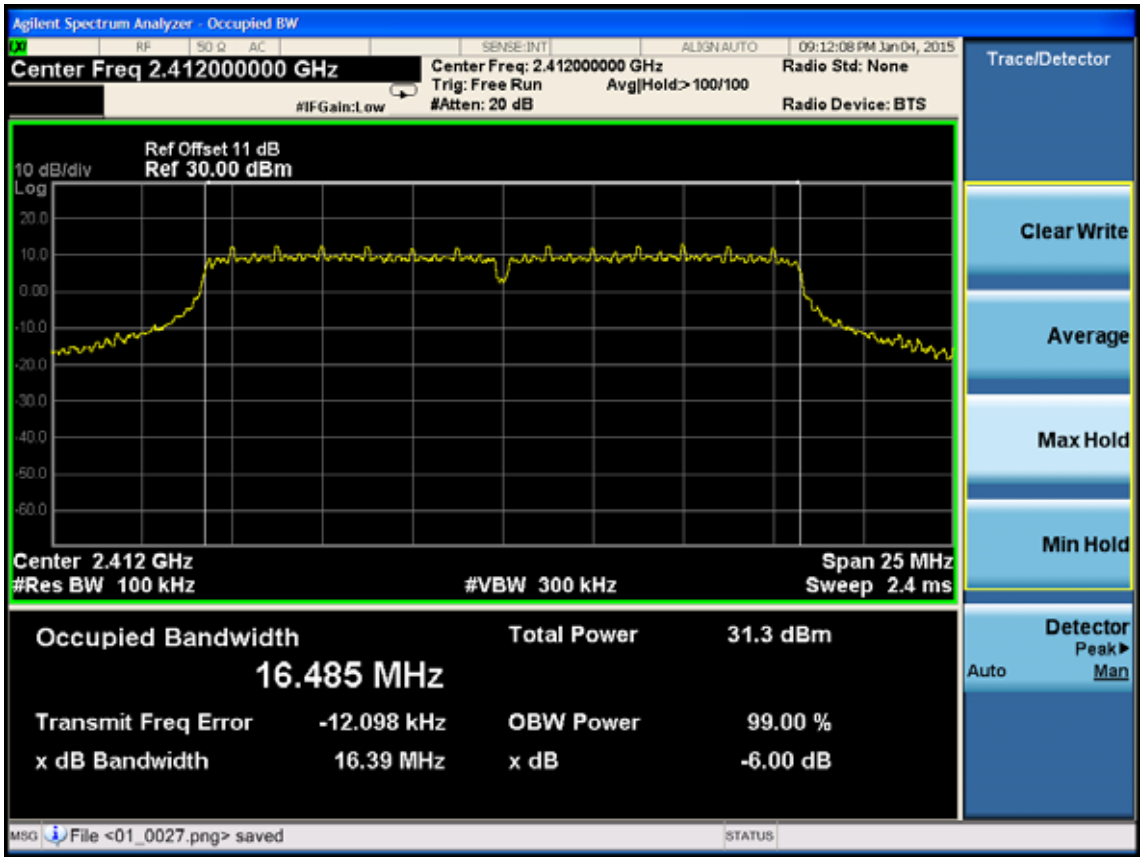
Test CH6: 2437MHz



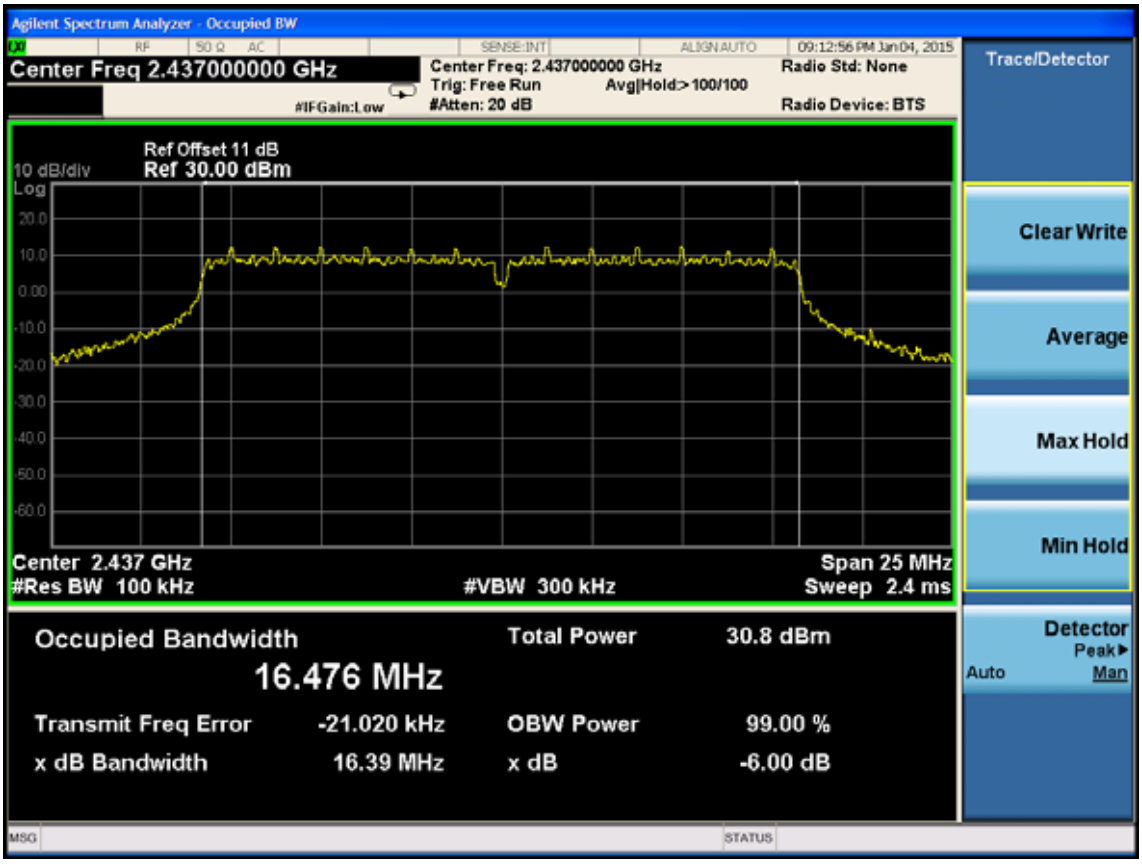
Test CH11: 2462MHz



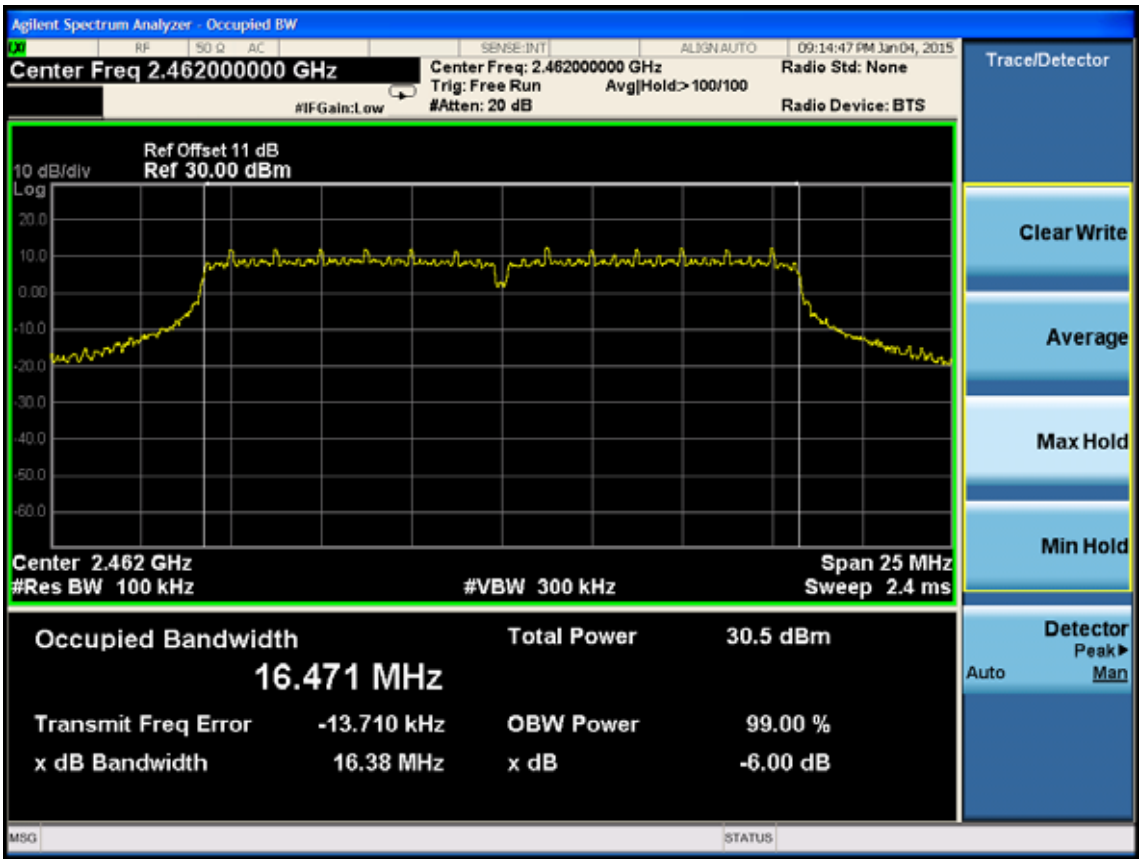
Test Mode: IEEE 802.11g
Test CH1: 2412MHz



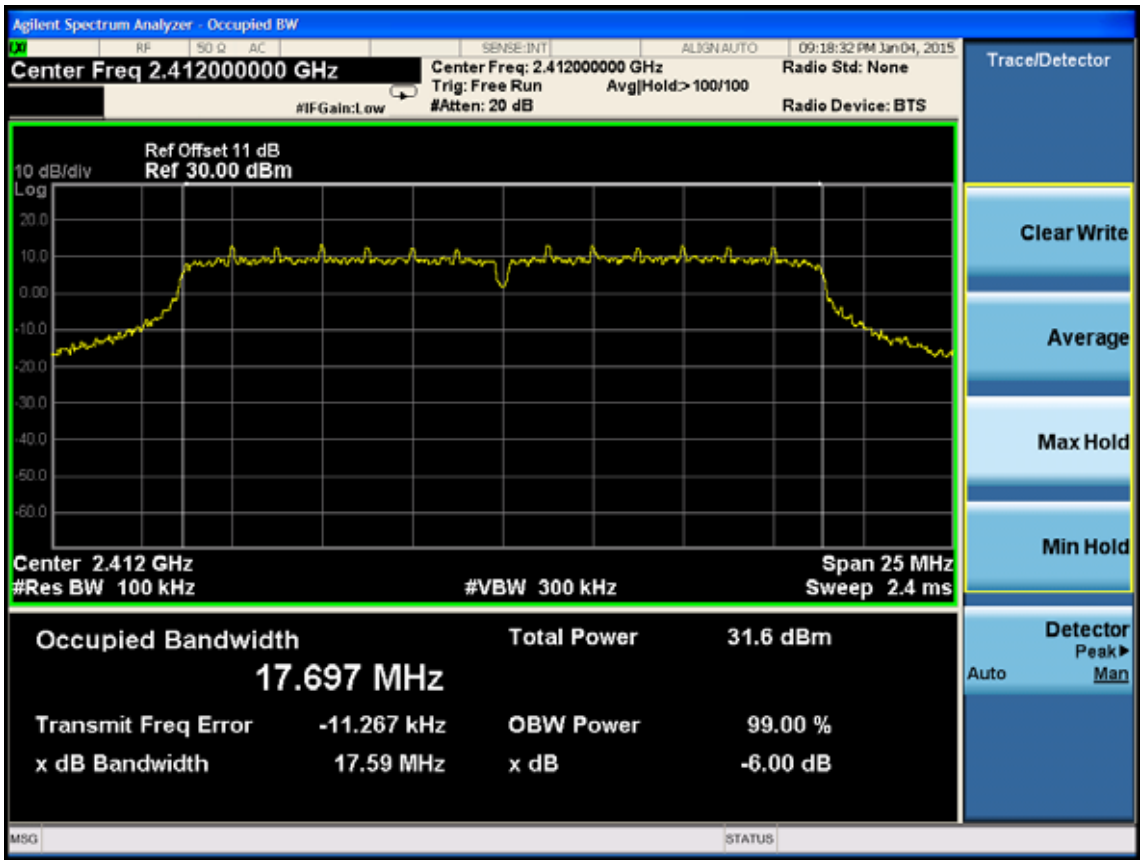
Test CH6: 2437MHz



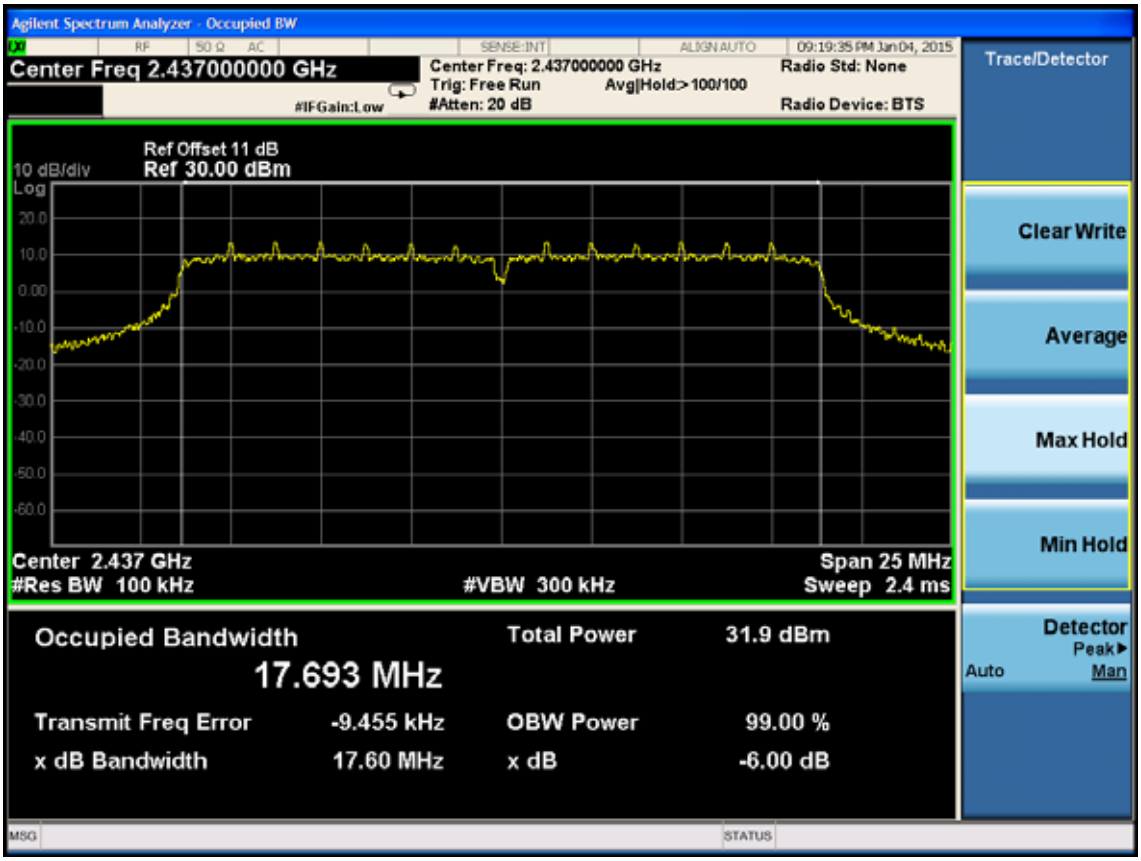
Test CH11: 2462MHz



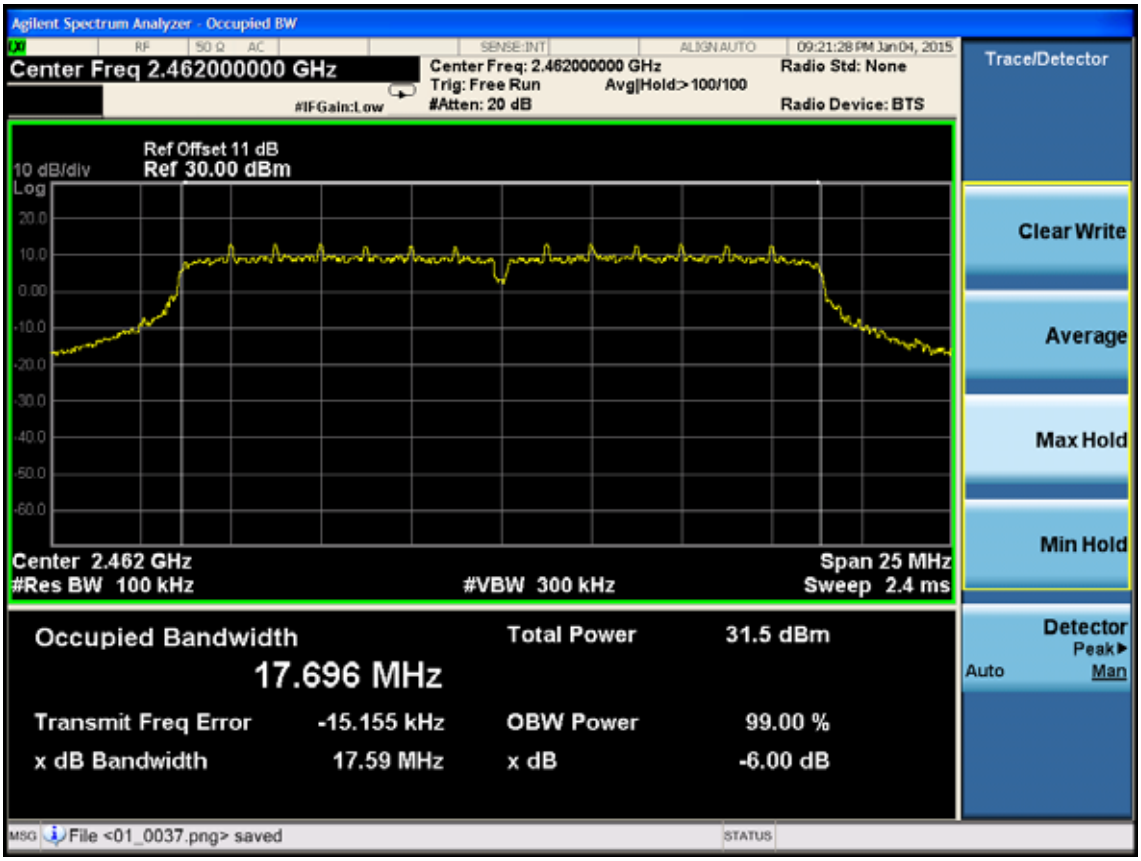
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz



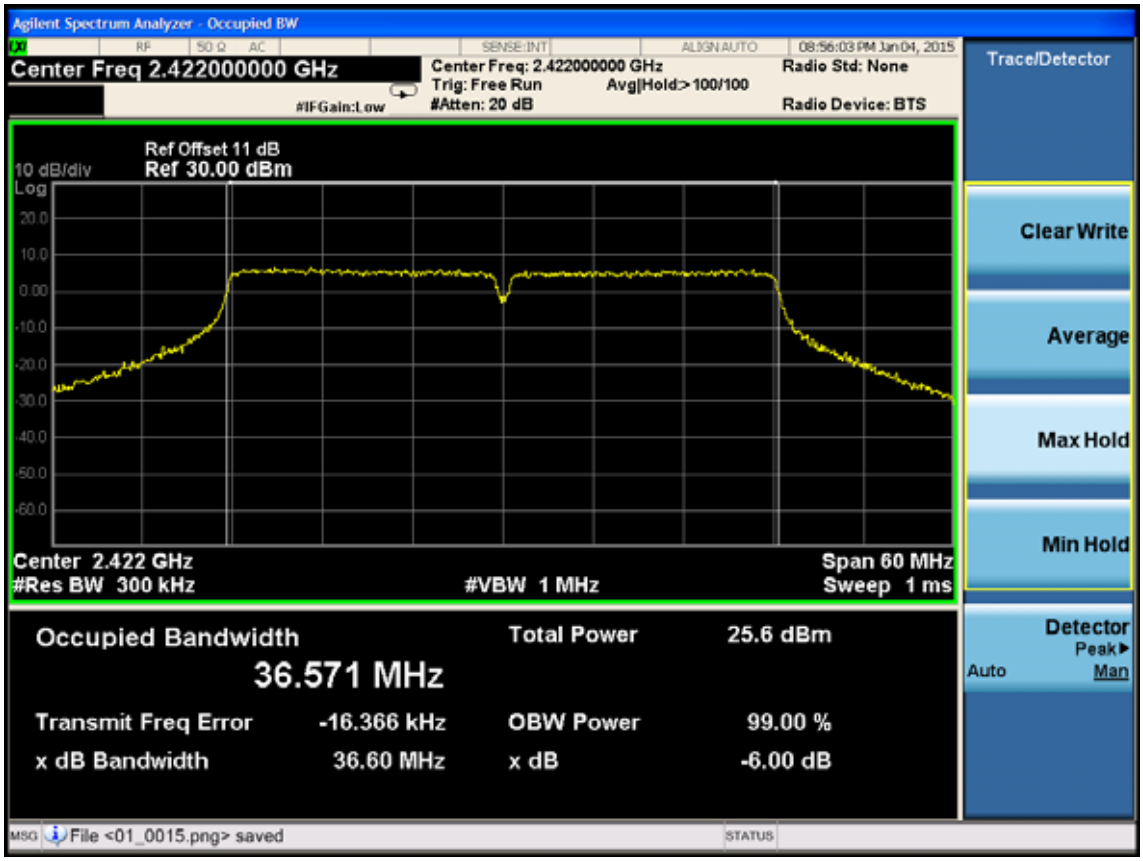
Test CH6: 2437MHz



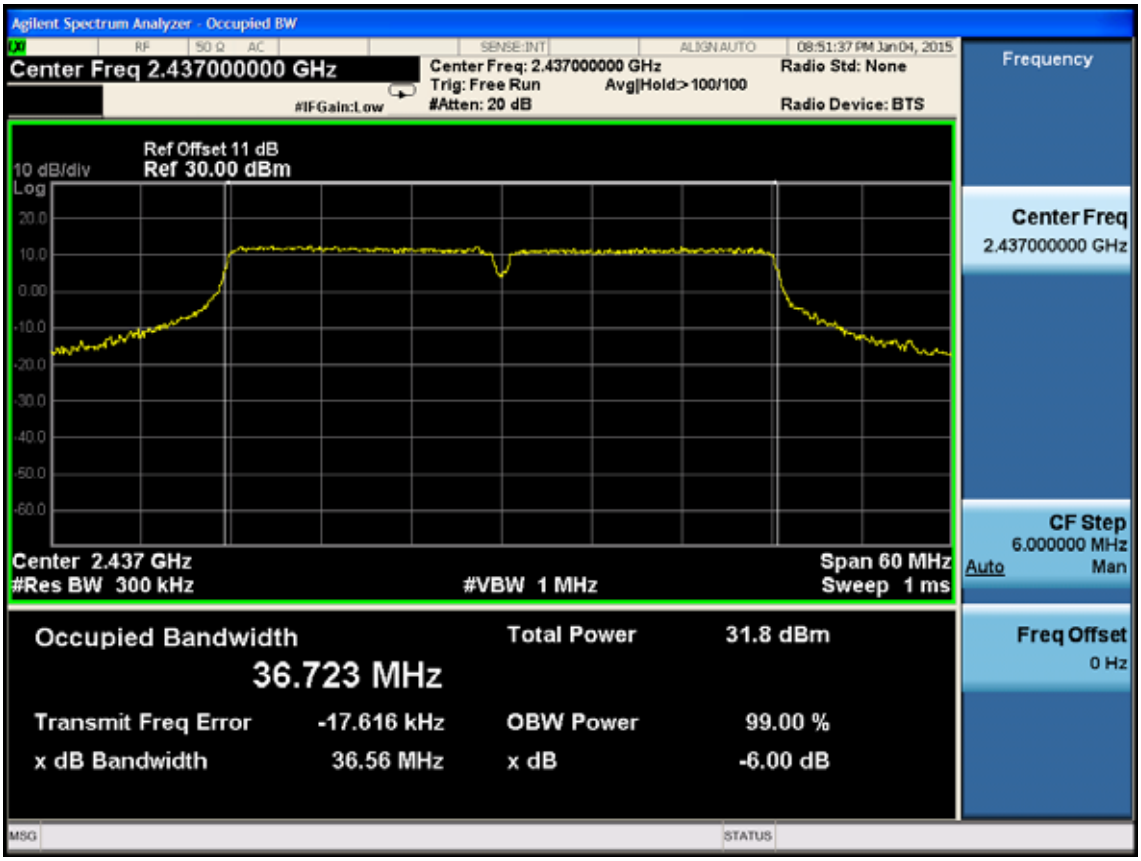
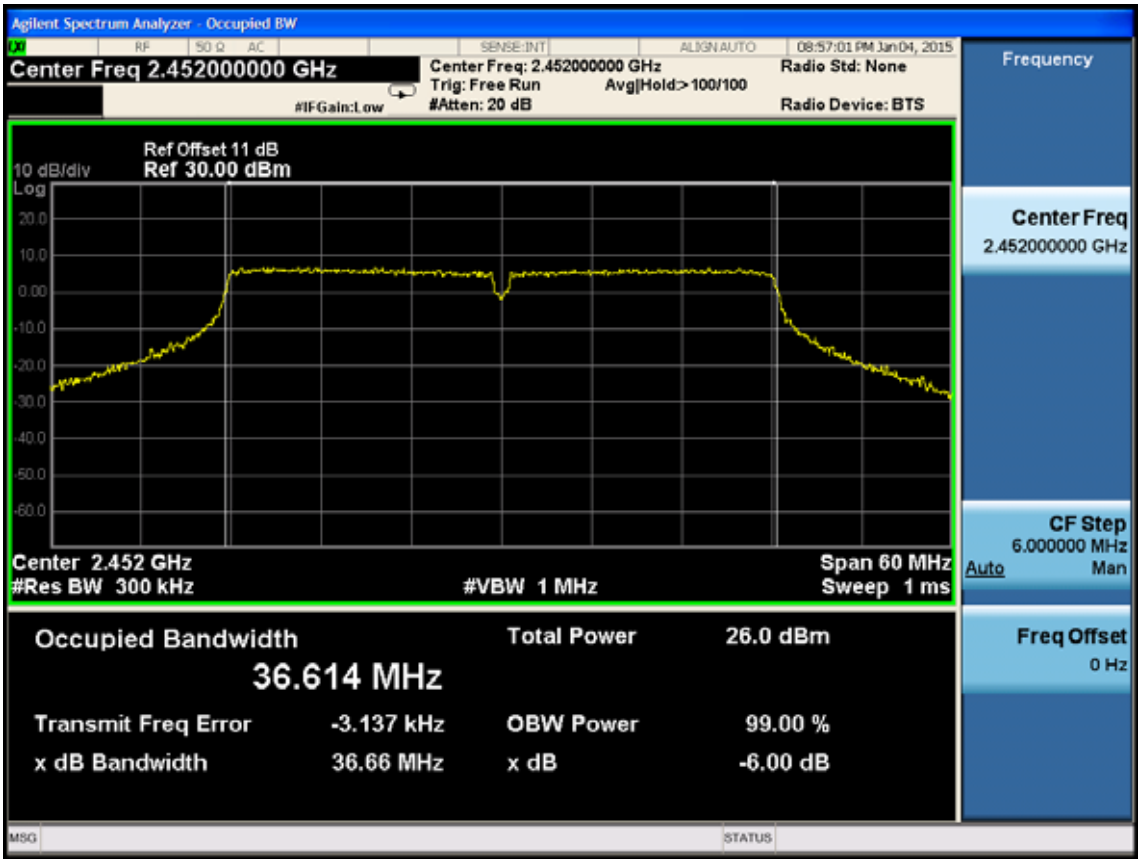
Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT40
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz