

8. Power Density

8.1. Test Equipment

The following test equipment is used during the test:

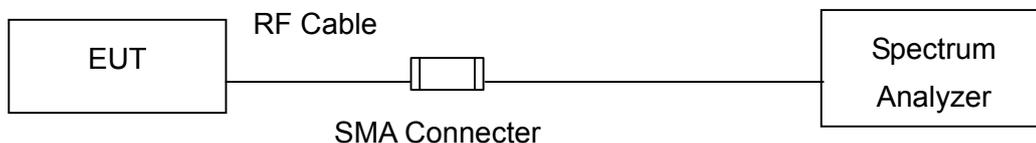
Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup

IEEE 802.11 b / g / n (20M / 40M) MODE



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Oct. 2012 KDB558074, Section 9.2 Measurement Procedure option2 for compliance to FCC 47CFR 15.247 requirements.

Set RBW= 100 kHz, Set VBW= 300 kHz, Sweep time=Auto, Set detector=Peak detector.

Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log (3 \text{ kHz}/100 \text{ kHz} = -15.2 \text{ dB})$.

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

8.6. Uncertainty

The measurement uncertainty is defined as $\pm 1.27\text{dB}$.

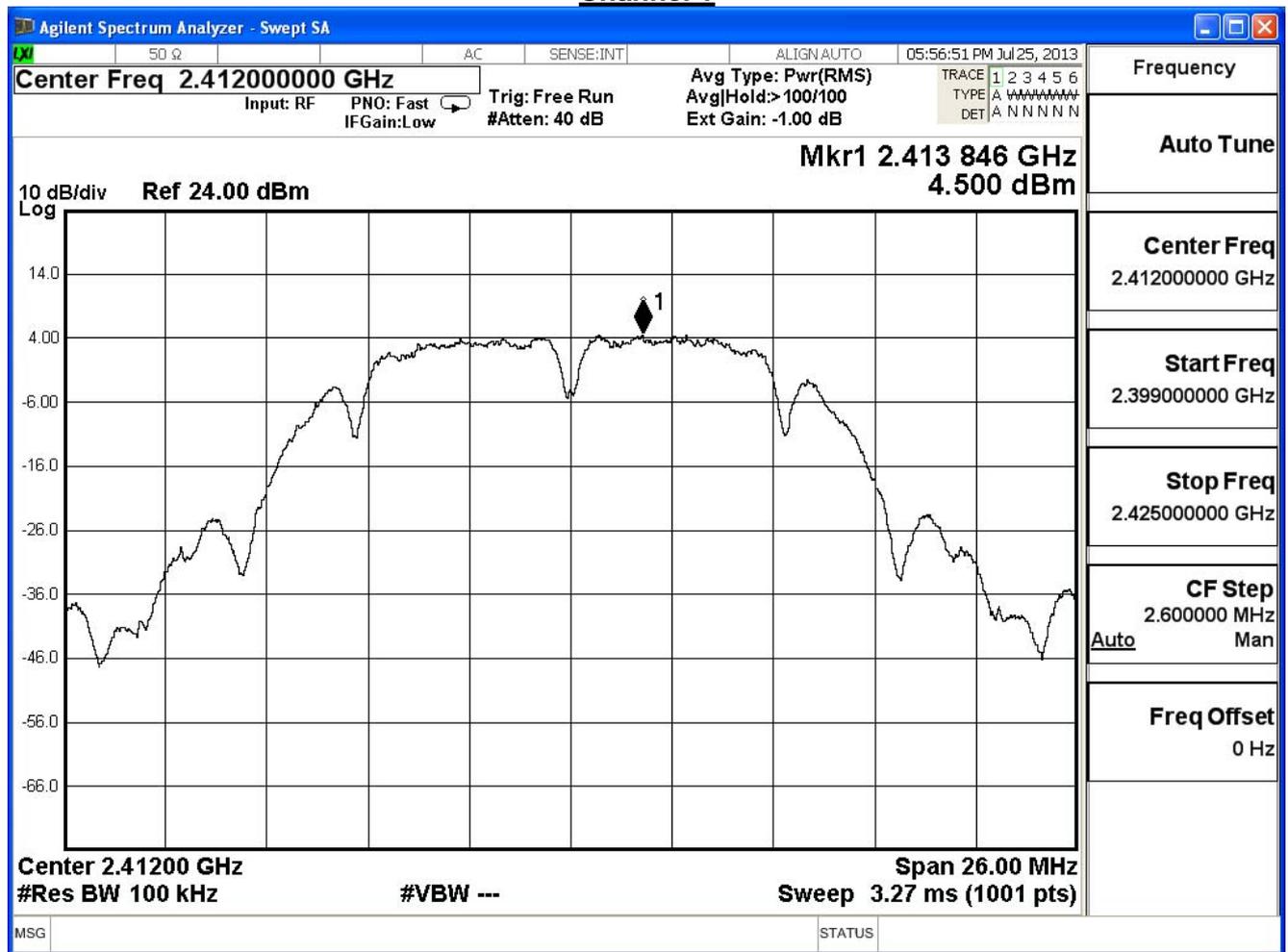
8.7. Test Result

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/08/26	Test Site	SR7

IEEE 802.11b (ANT 0)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	4.500	-10.700	≤ 8	Pass
6	2437	4.158	-11.042	≤ 8	Pass
11	2462	2.637	-12.563	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

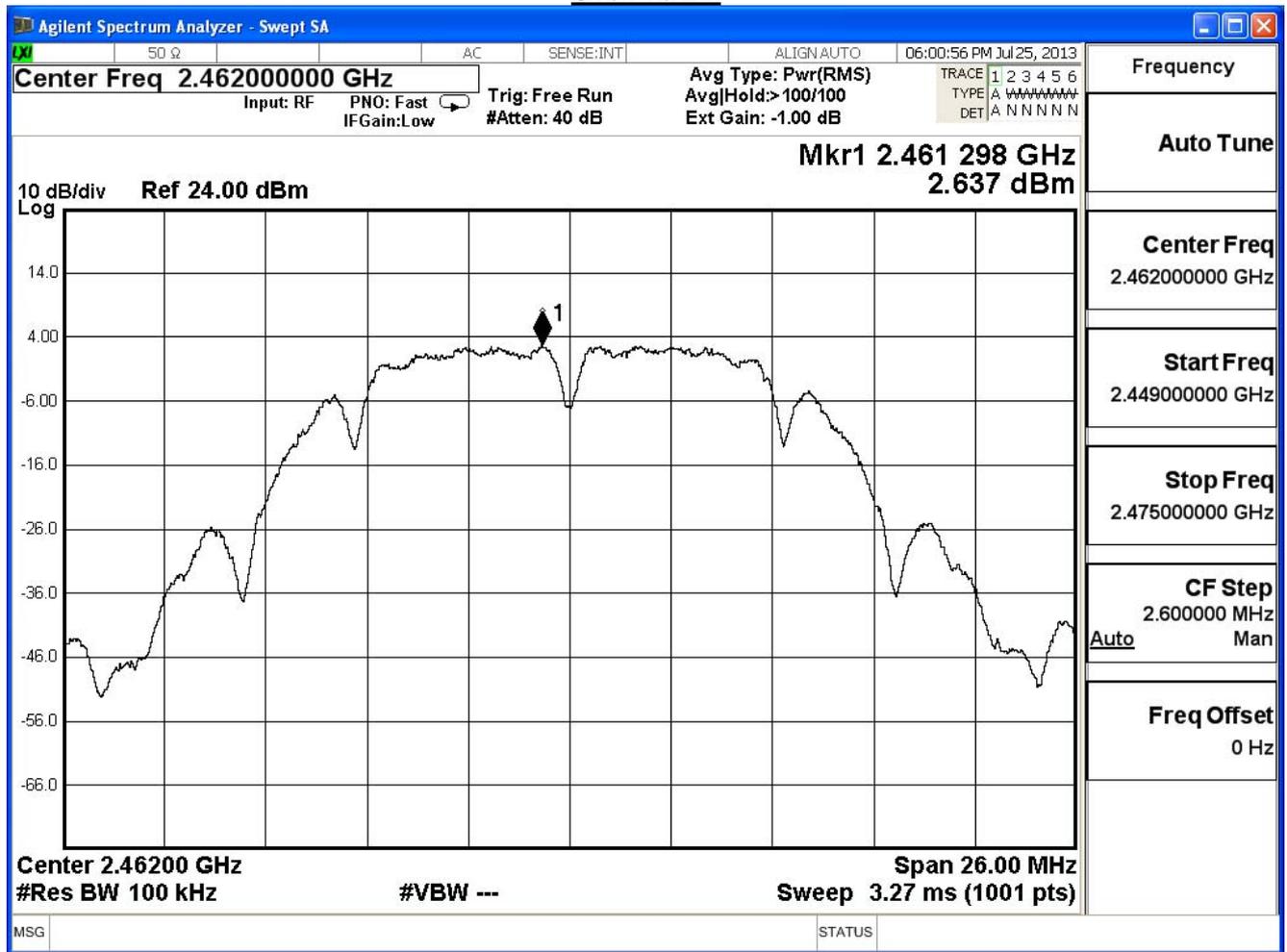
Channel 1



Channel 6



Channel 11

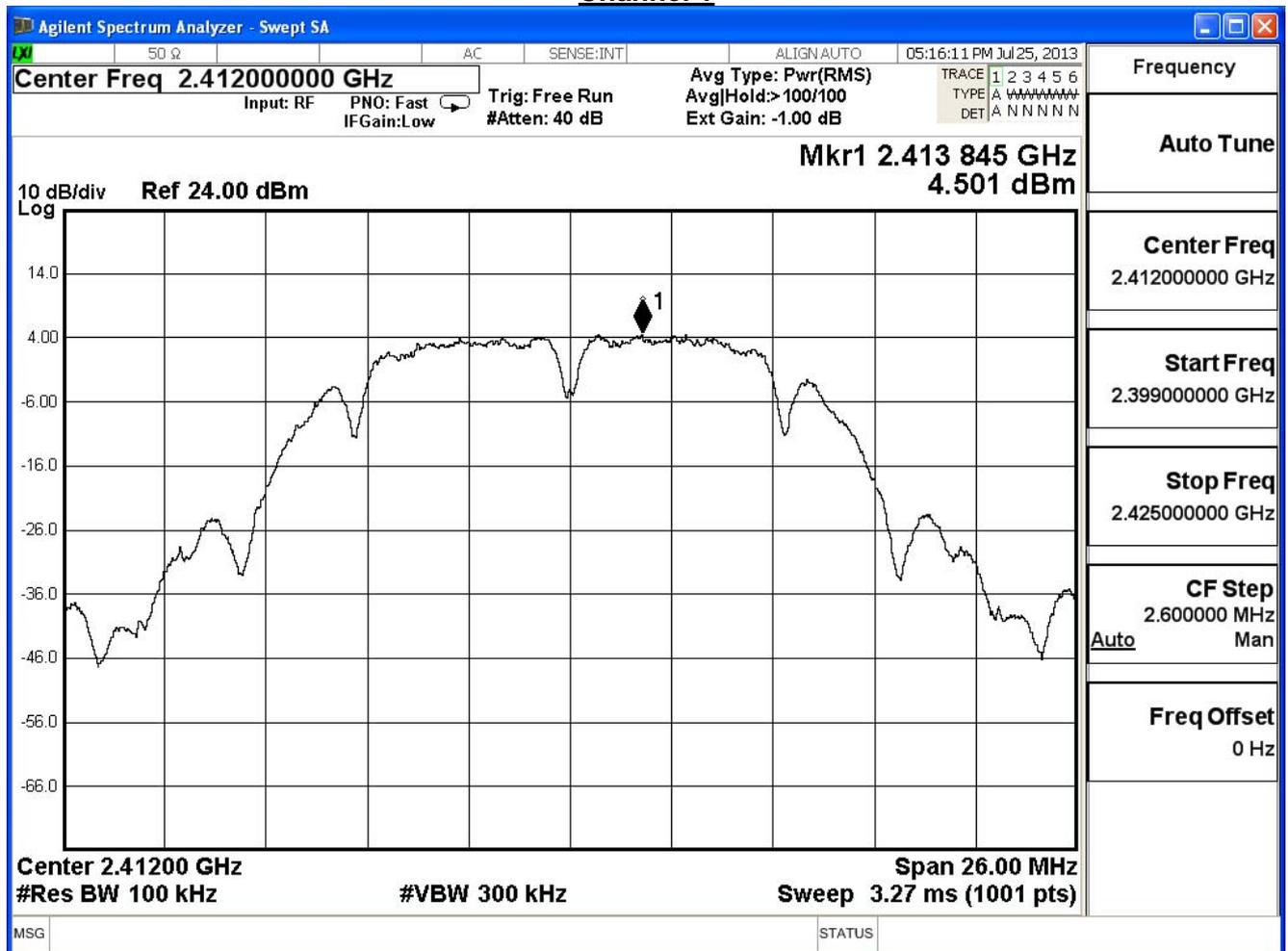


Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

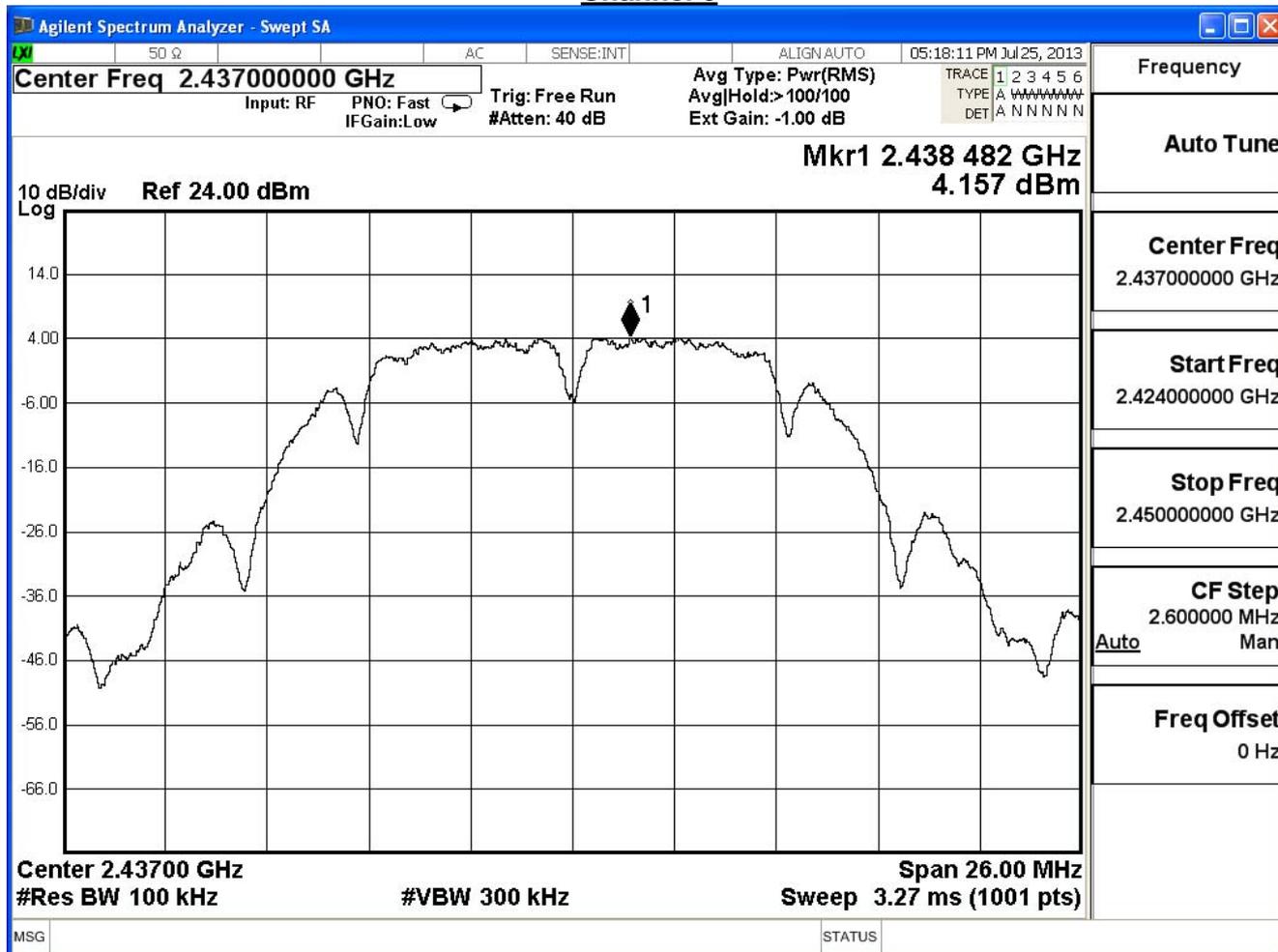
IEEE 802.11b (ANT 1)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	4.501	-10.699	≤ 8	Pass
6	2437	4.157	-11.043	≤ 8	Pass
11	2462	2.635	-12.565	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

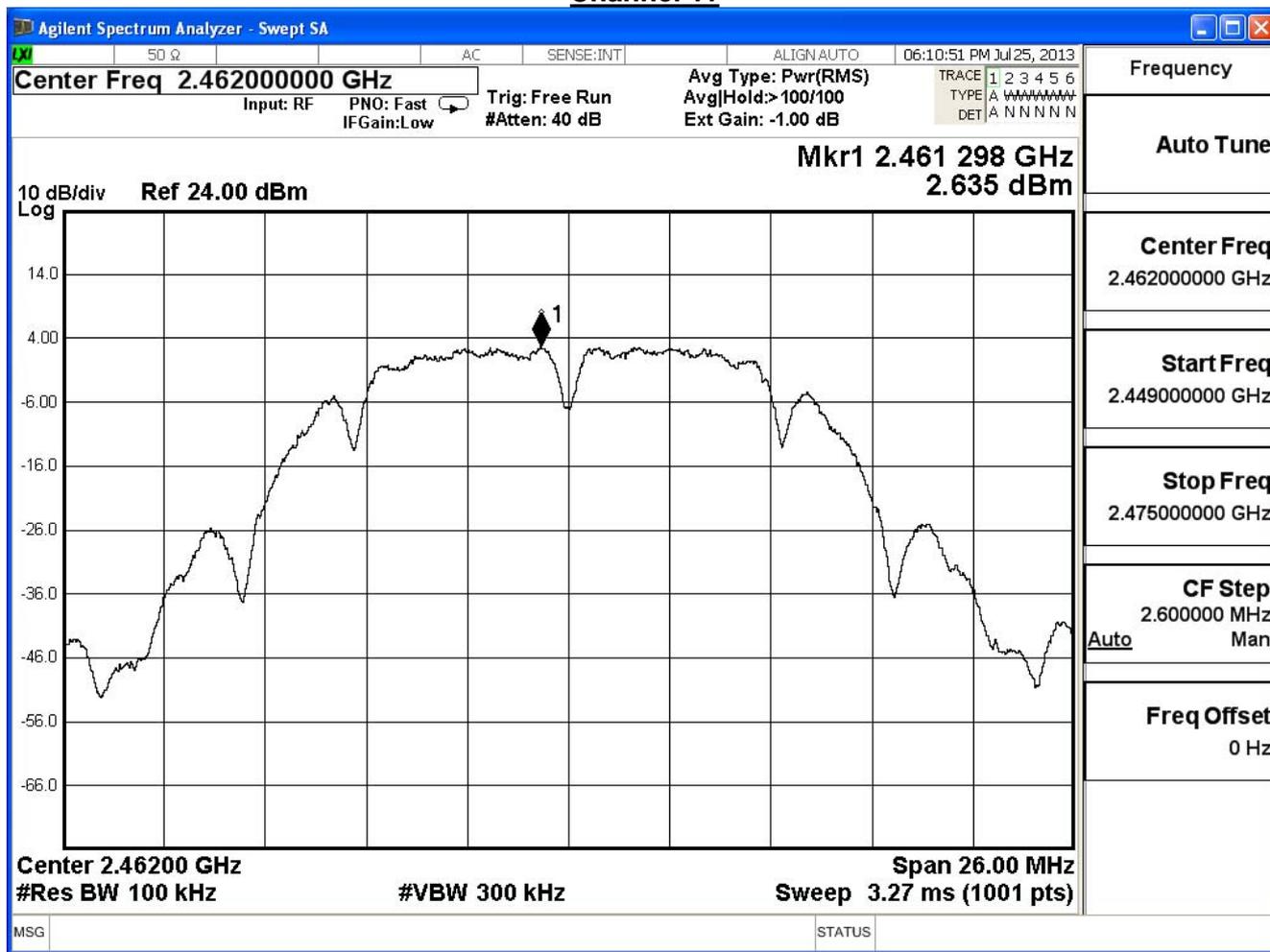
Channel 1



Channel 6



Channel 11



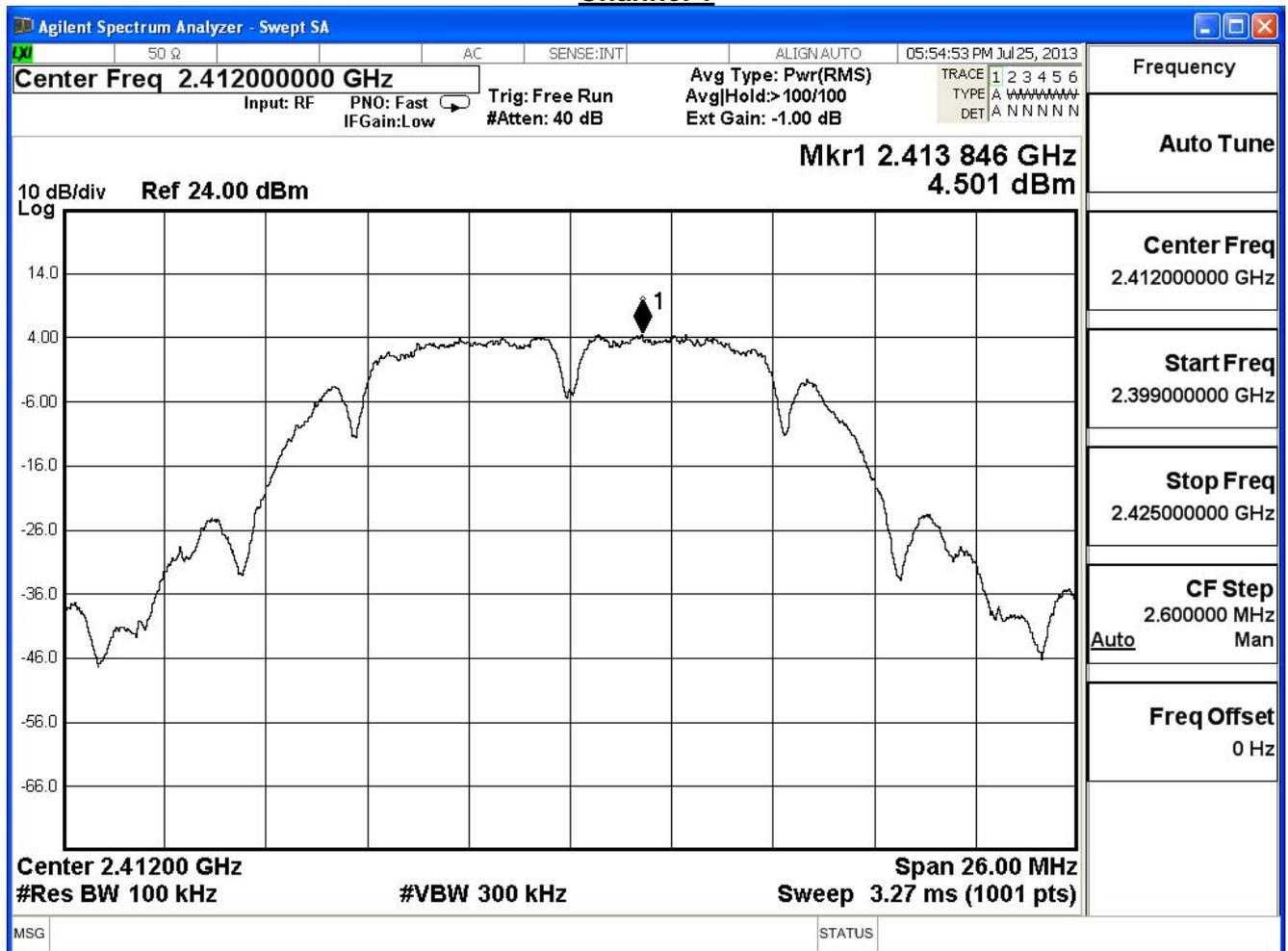
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11b (ANT 2)

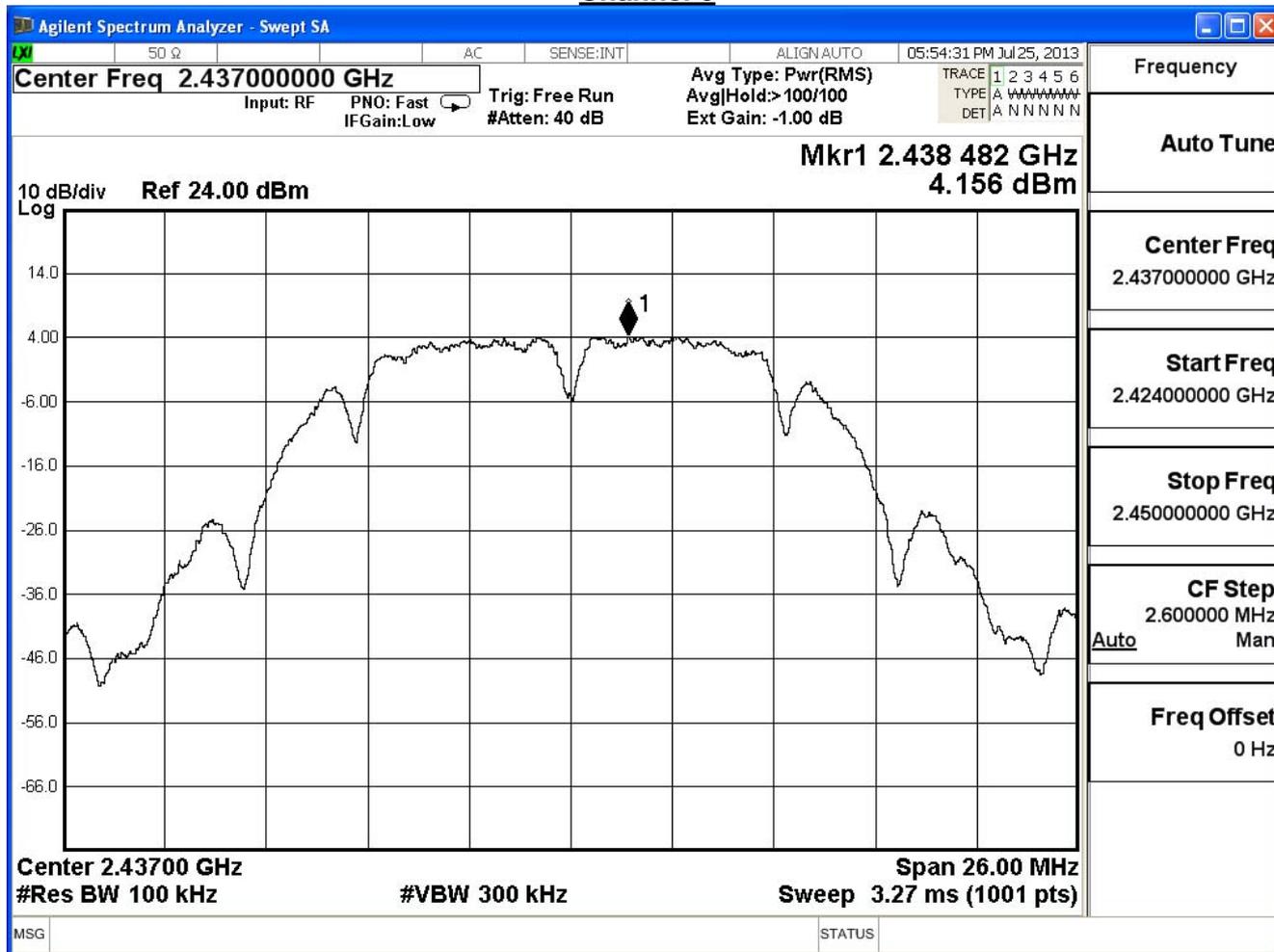
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	4.500	-10.700	≤ 8	Pass
6	2437	4.156	-11.044	≤ 8	Pass
11	2462	2.636	-12.564	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

Channel 1



Channel 6



Channel 11



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11b (ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-5.930	≤ 8	Pass
6	2437	-6.270	≤ 8	Pass
11	2462	-7.790	≤ 8	Pass

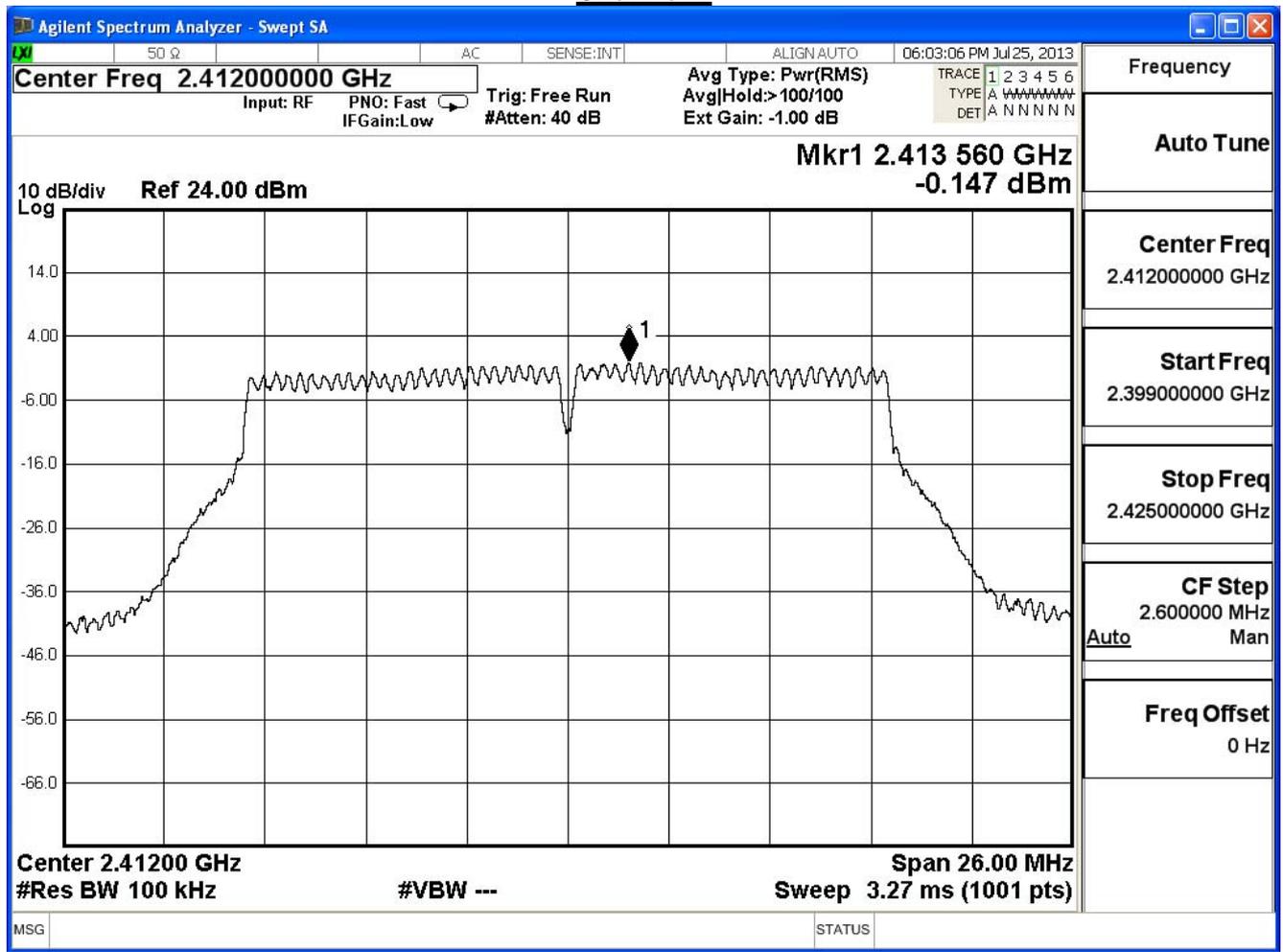
* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

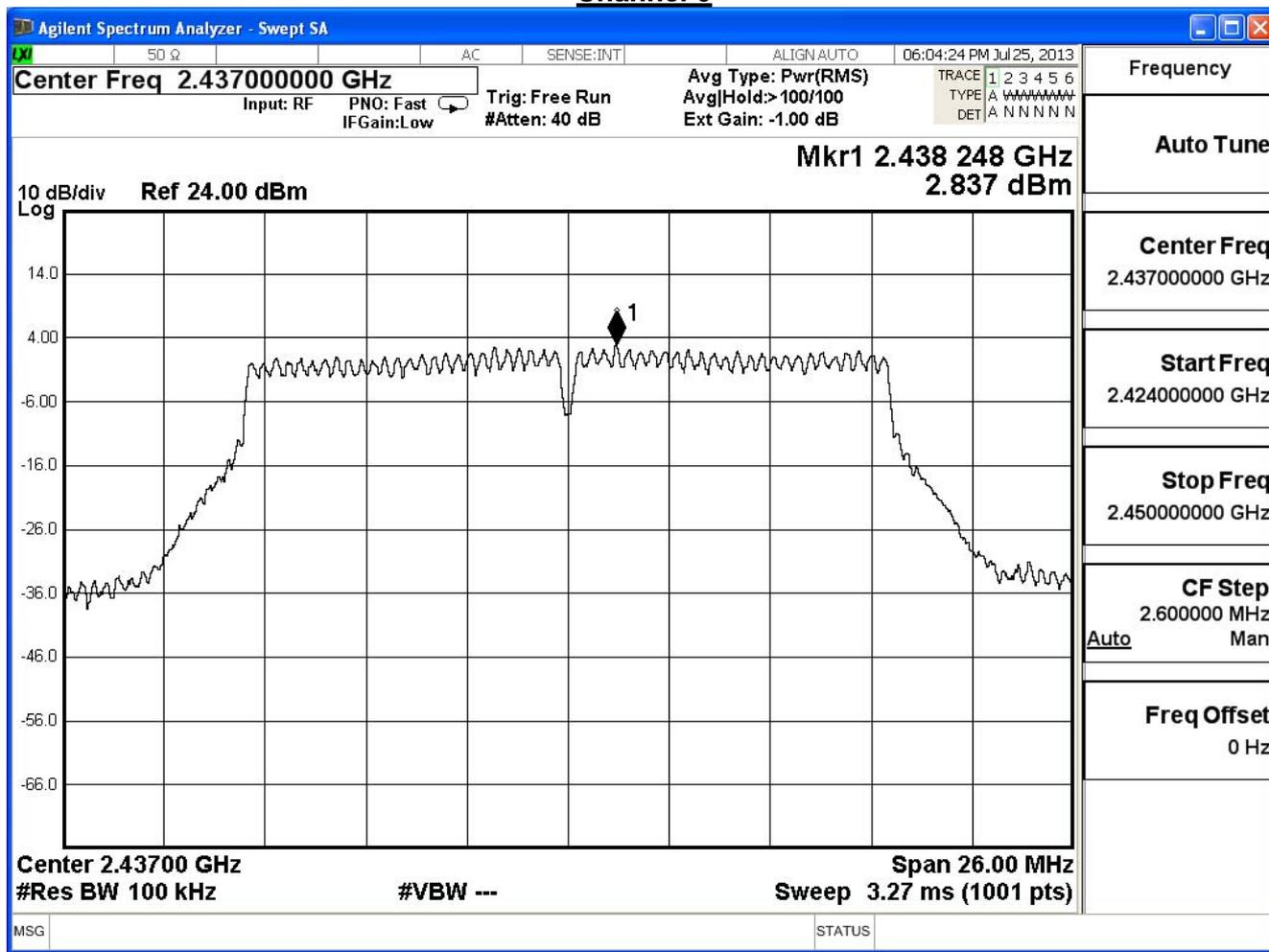
IEEE 802.11g (ANT 0)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-0.147	-15.347	≤ 8	Pass
6	2437	2.837	-12.363	≤ 8	Pass
11	2462	-1.772	-16.972	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

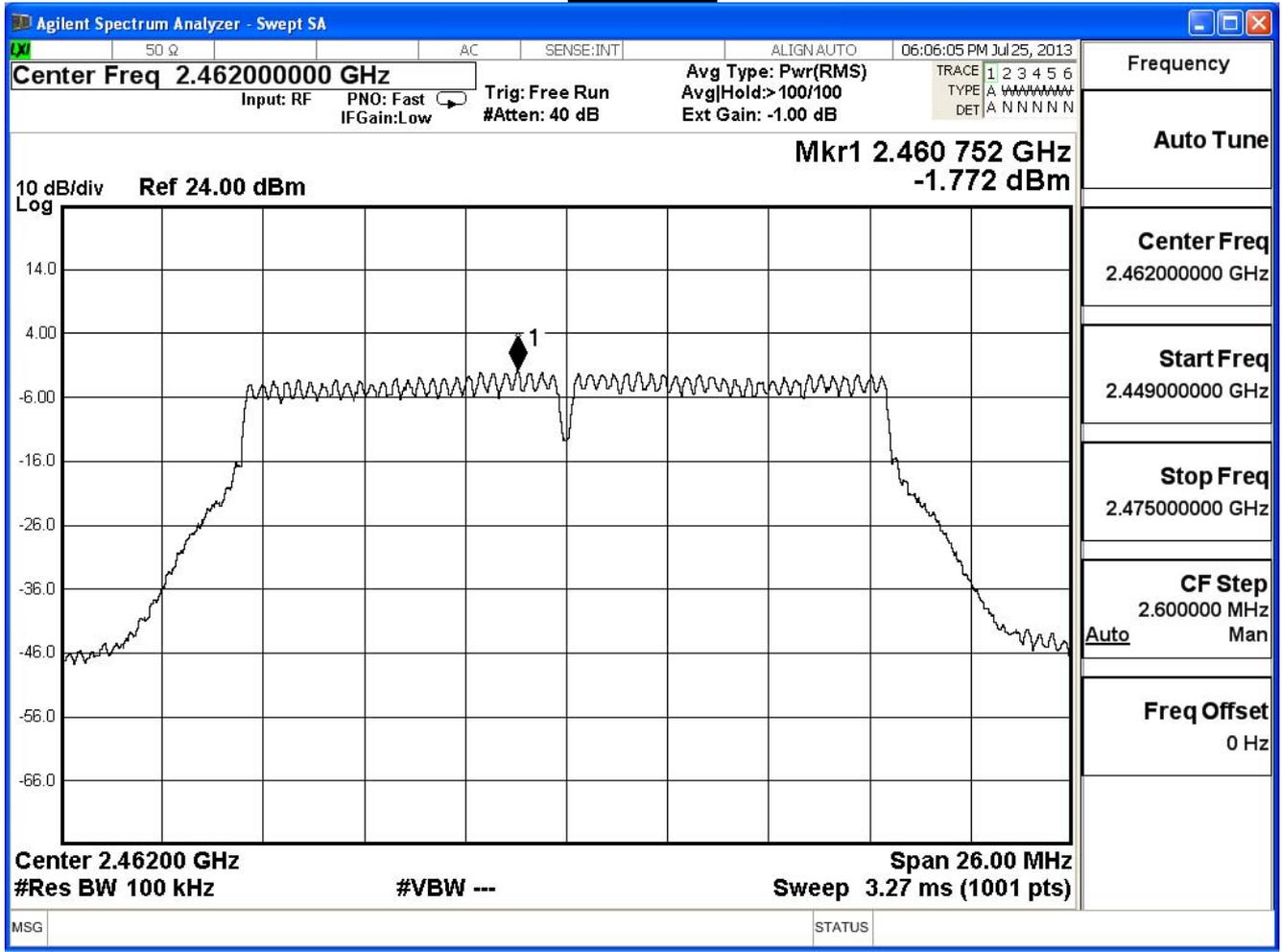
Channel 1



Channel 6



Channel 11



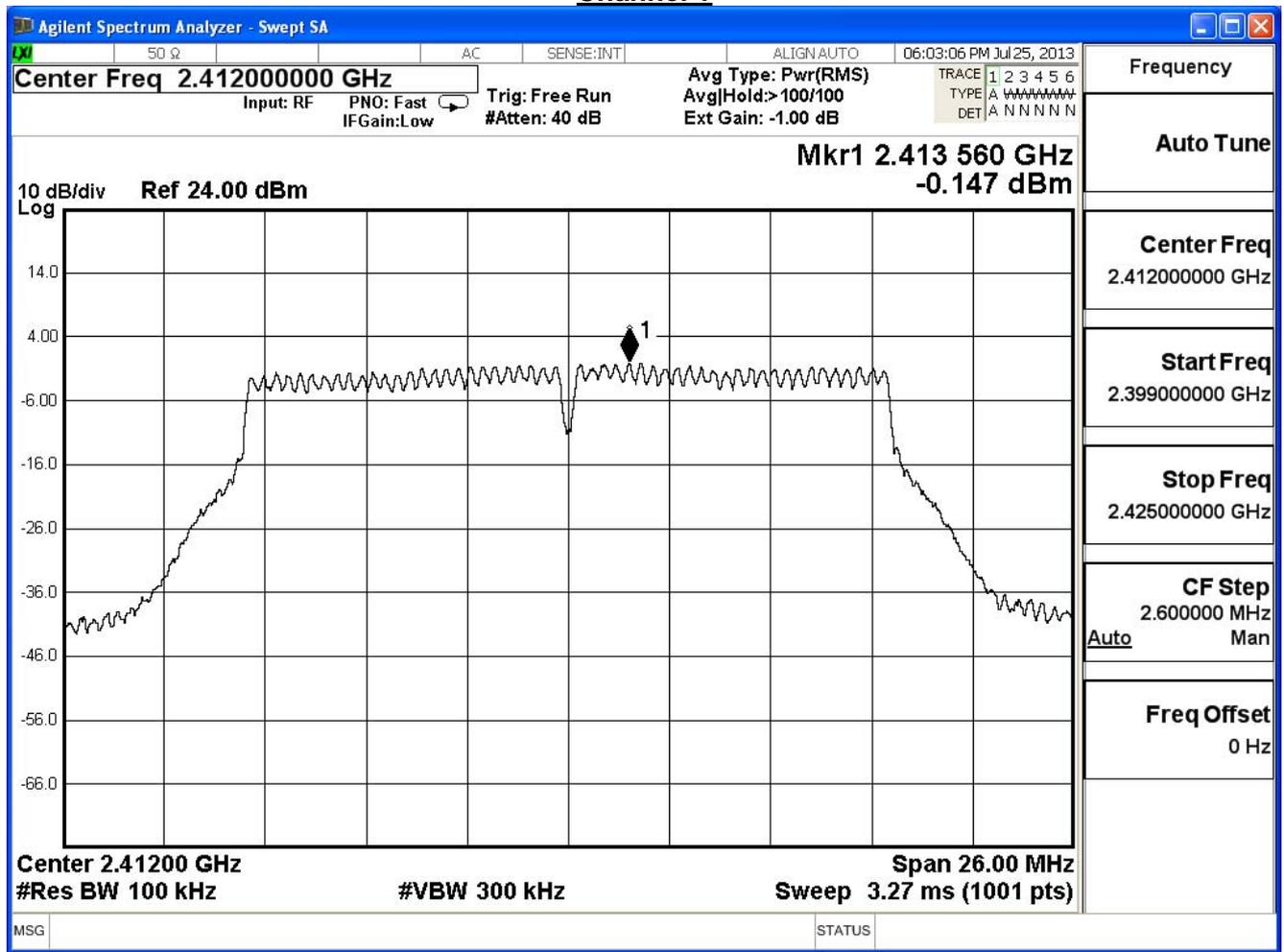
Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11g (ANT 1)

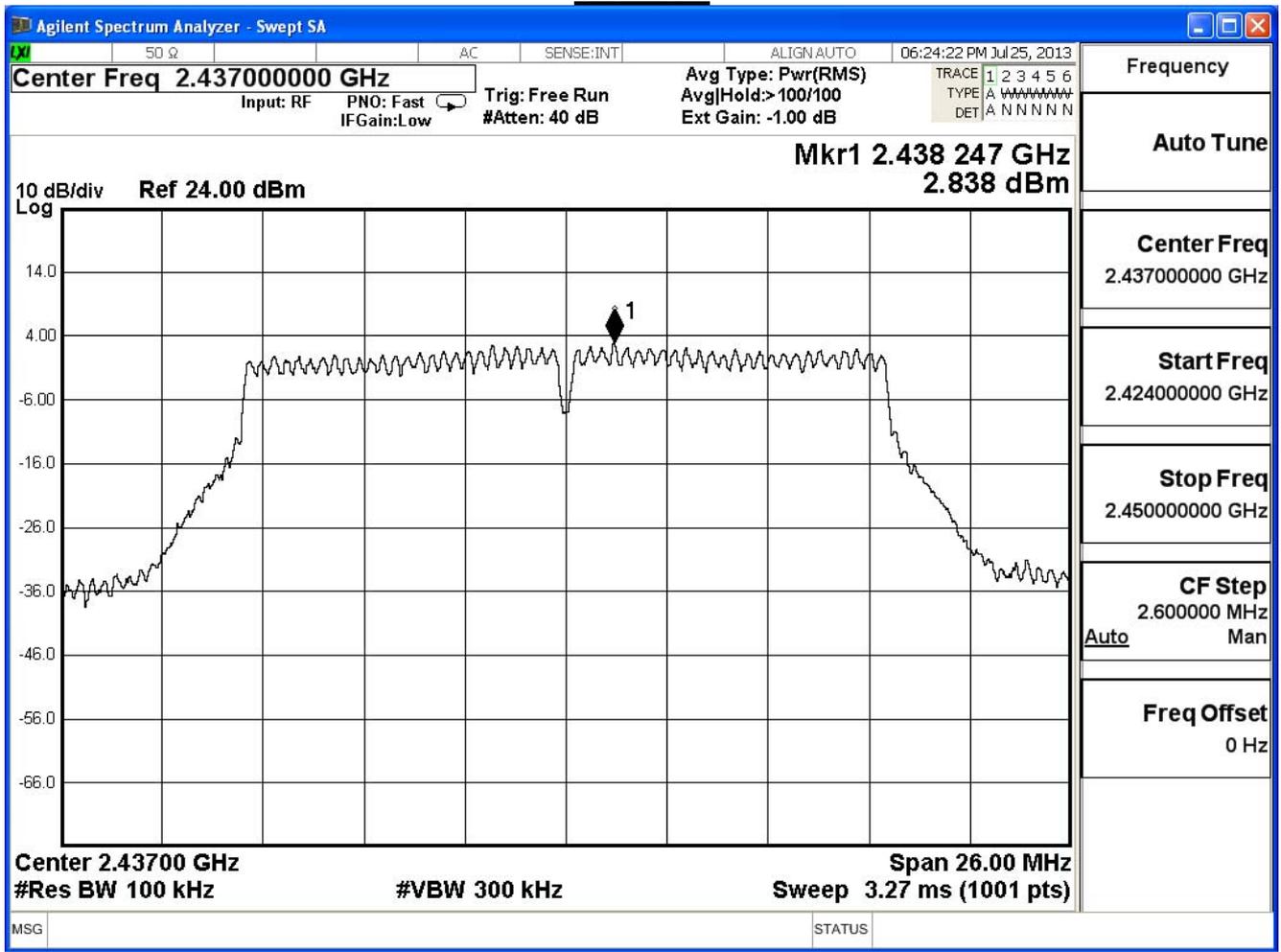
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-0.147	-15.347	≤ 8	Pass
6	2437	2.838	-12.362	≤ 8	Pass
11	2462	-1.774	-16.974	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

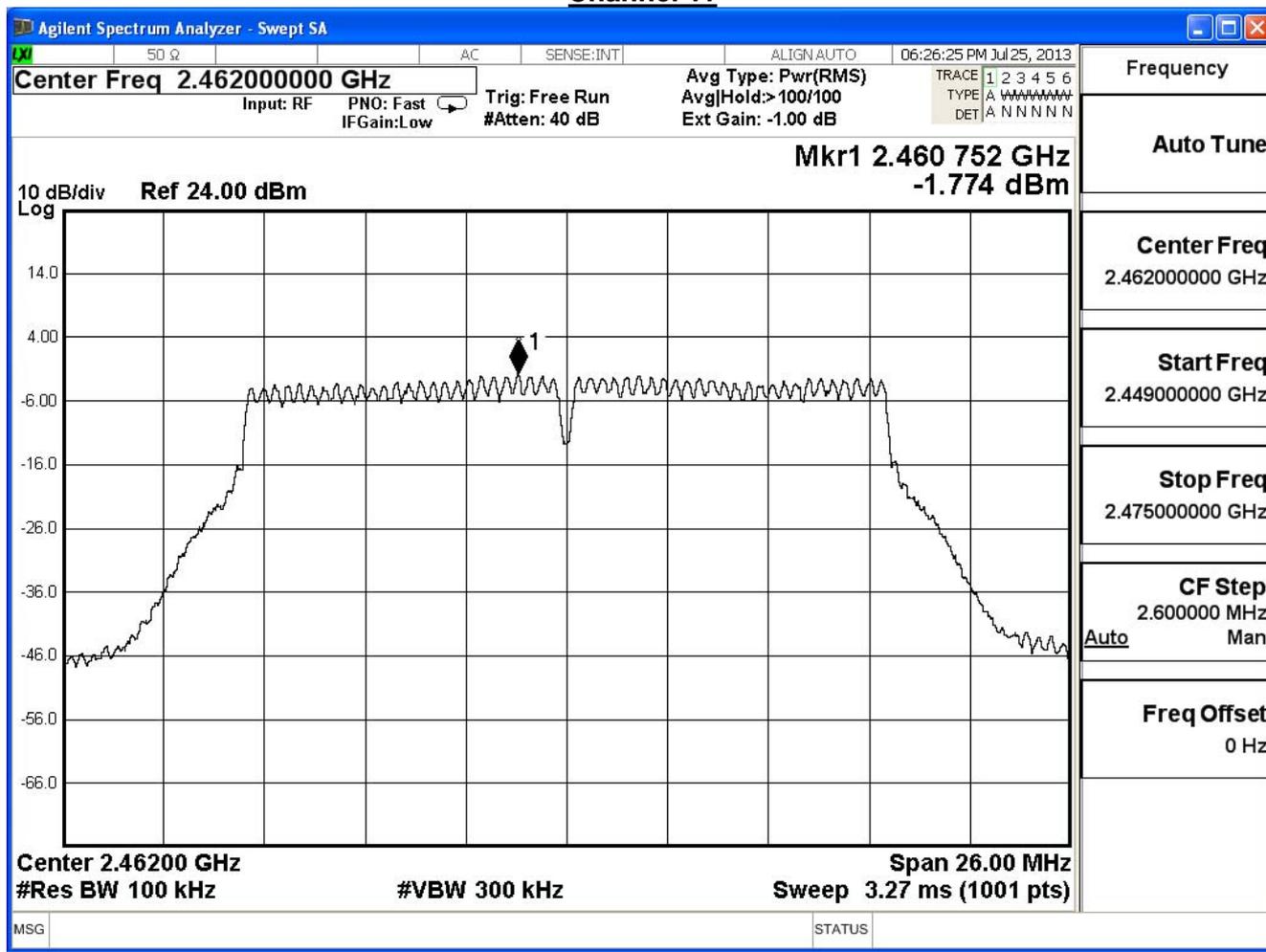
Channel 1



Channel 6



Channel 11

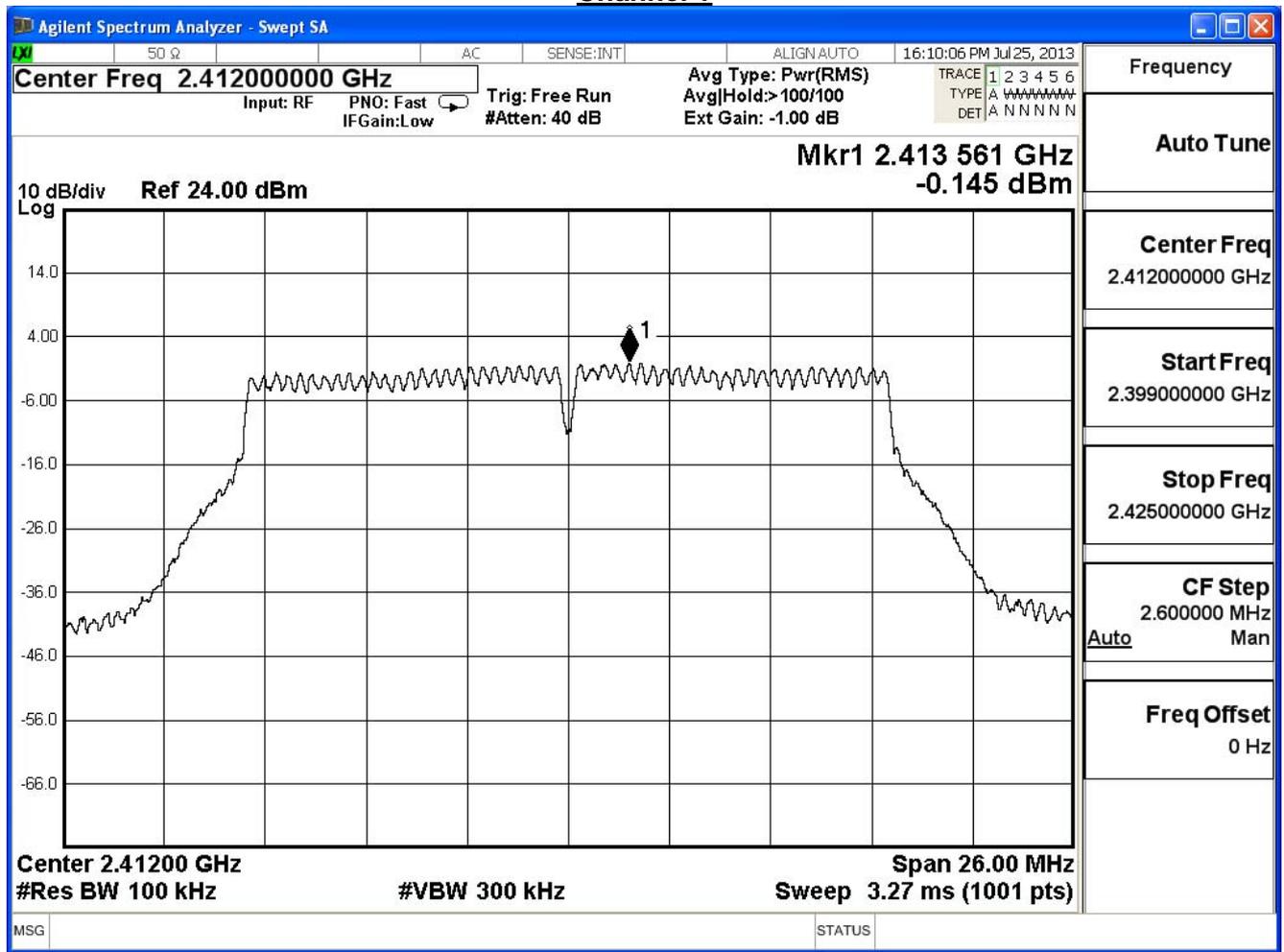


Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

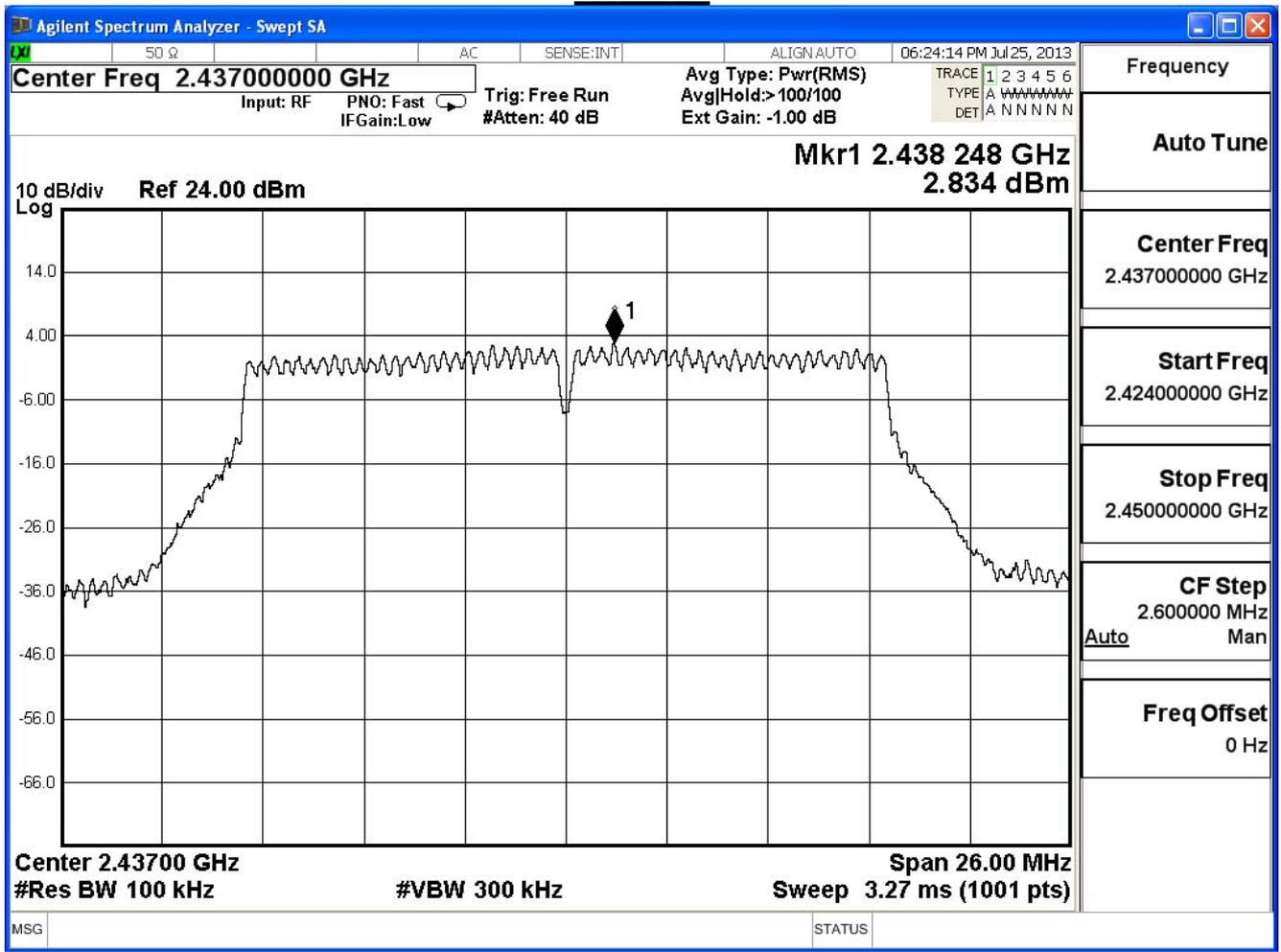
IEEE 802.11g (ANT 2)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-0.145	-15.345	≤ 8	Pass
6	2437	2.834	-12.366	≤ 8	Pass
11	2462	-1.775	-16.975	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

Channel 1



Channel 6



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11g (ANT 0+1+2)				
Channel No.	Frequency (MHz)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-10.580	≤ 8	Pass
6	2437	-7.590	≤ 8	Pass
11	2462	-12.200	≤ 8	Pass

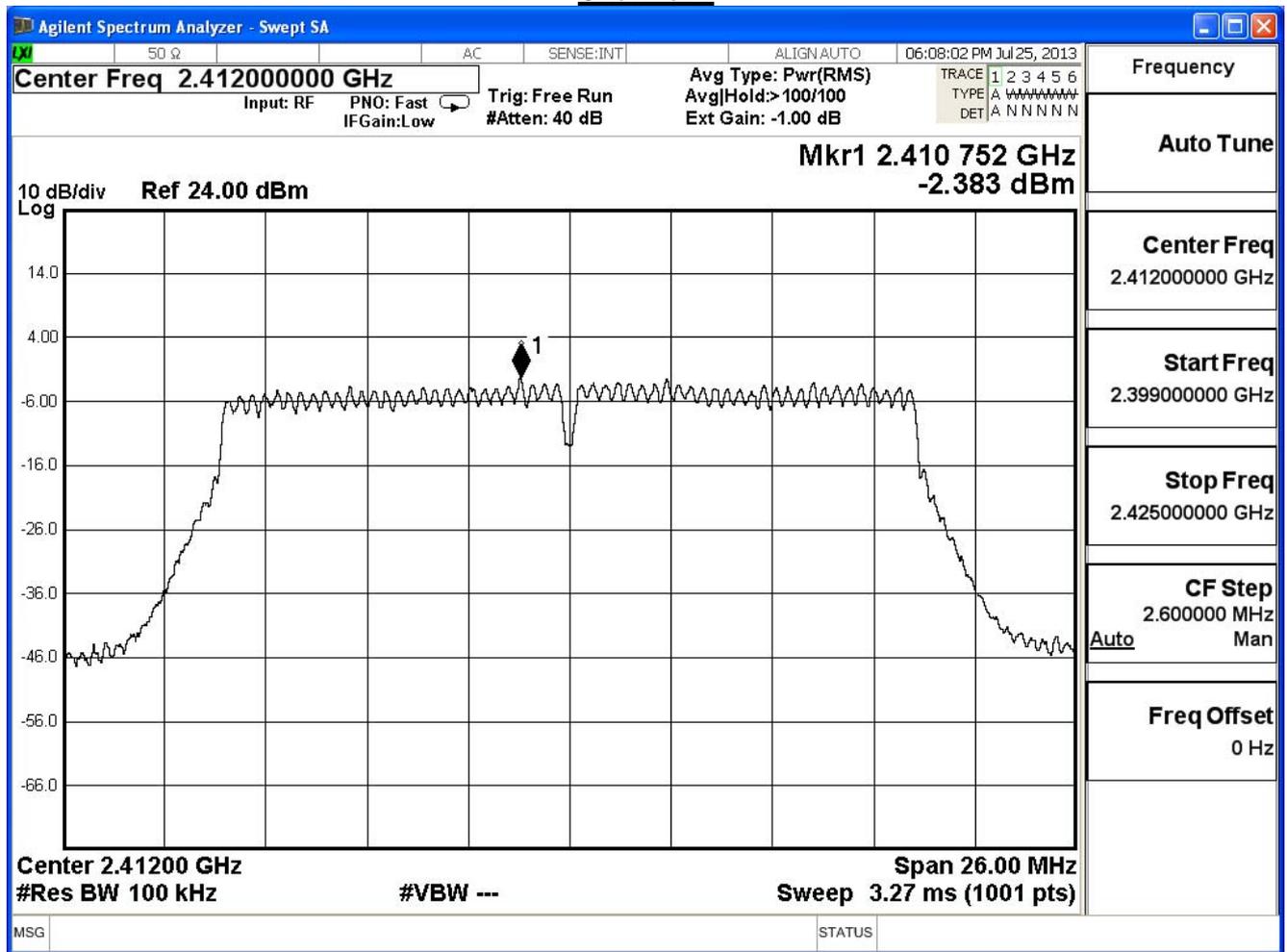
* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

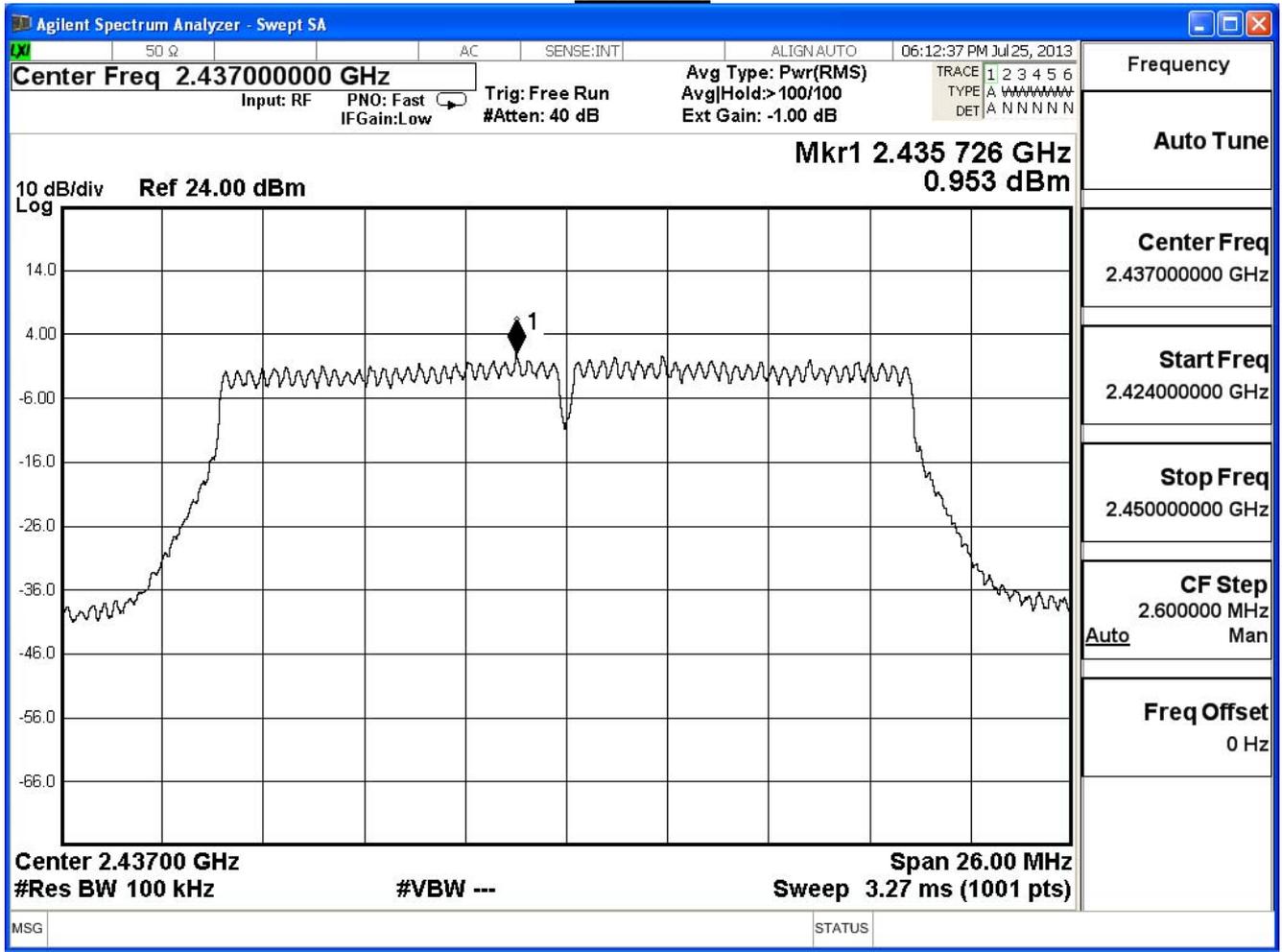
IEEE802.11n_20MHz_(ANT 0)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-2.383	-17.583	≤ 8	Pass
6	2437	0.953	-14.247	≤ 8	Pass
11	2462	-4.099	-19.299	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

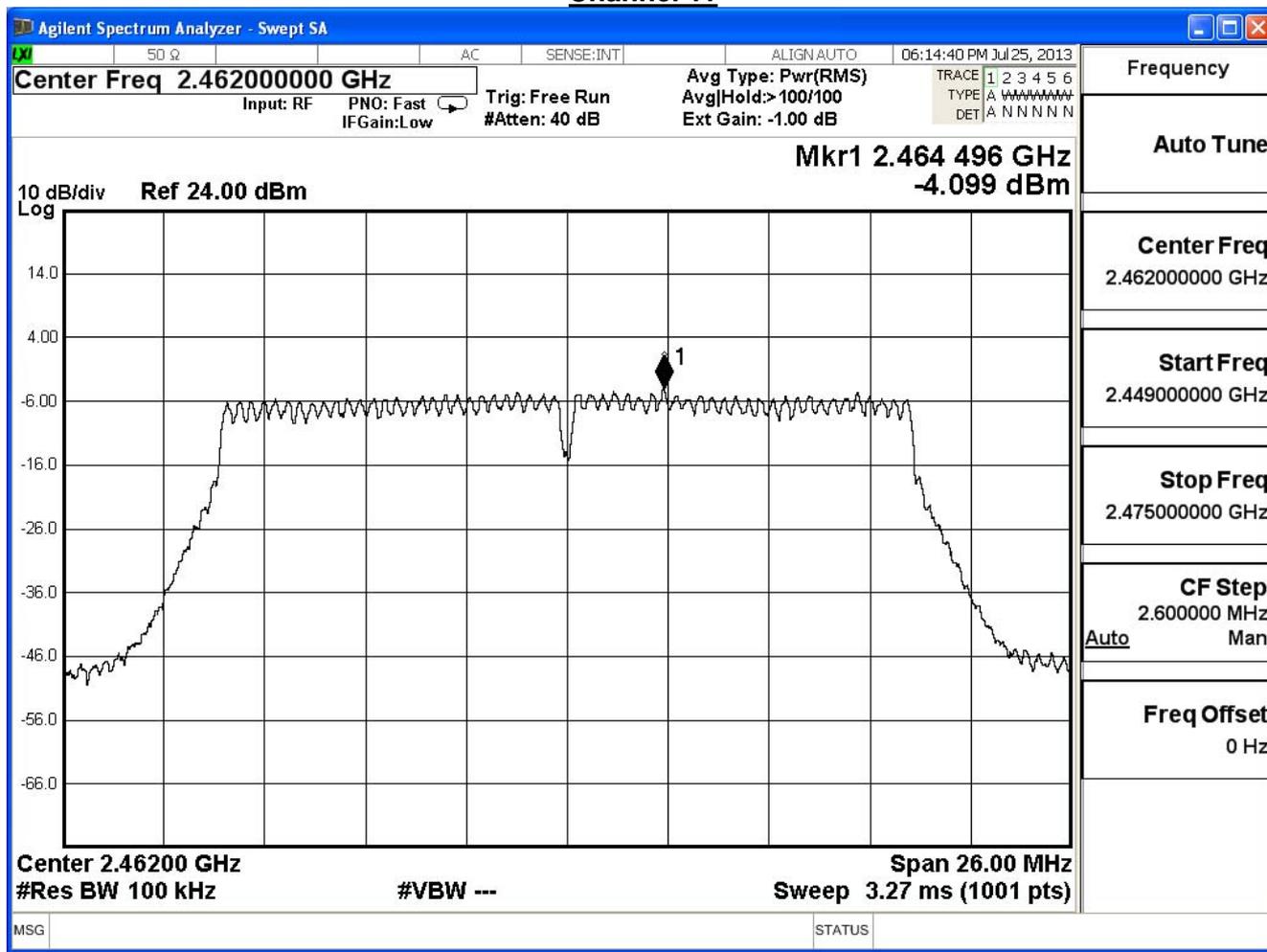
Channel 1



Channel 6



Channel 11

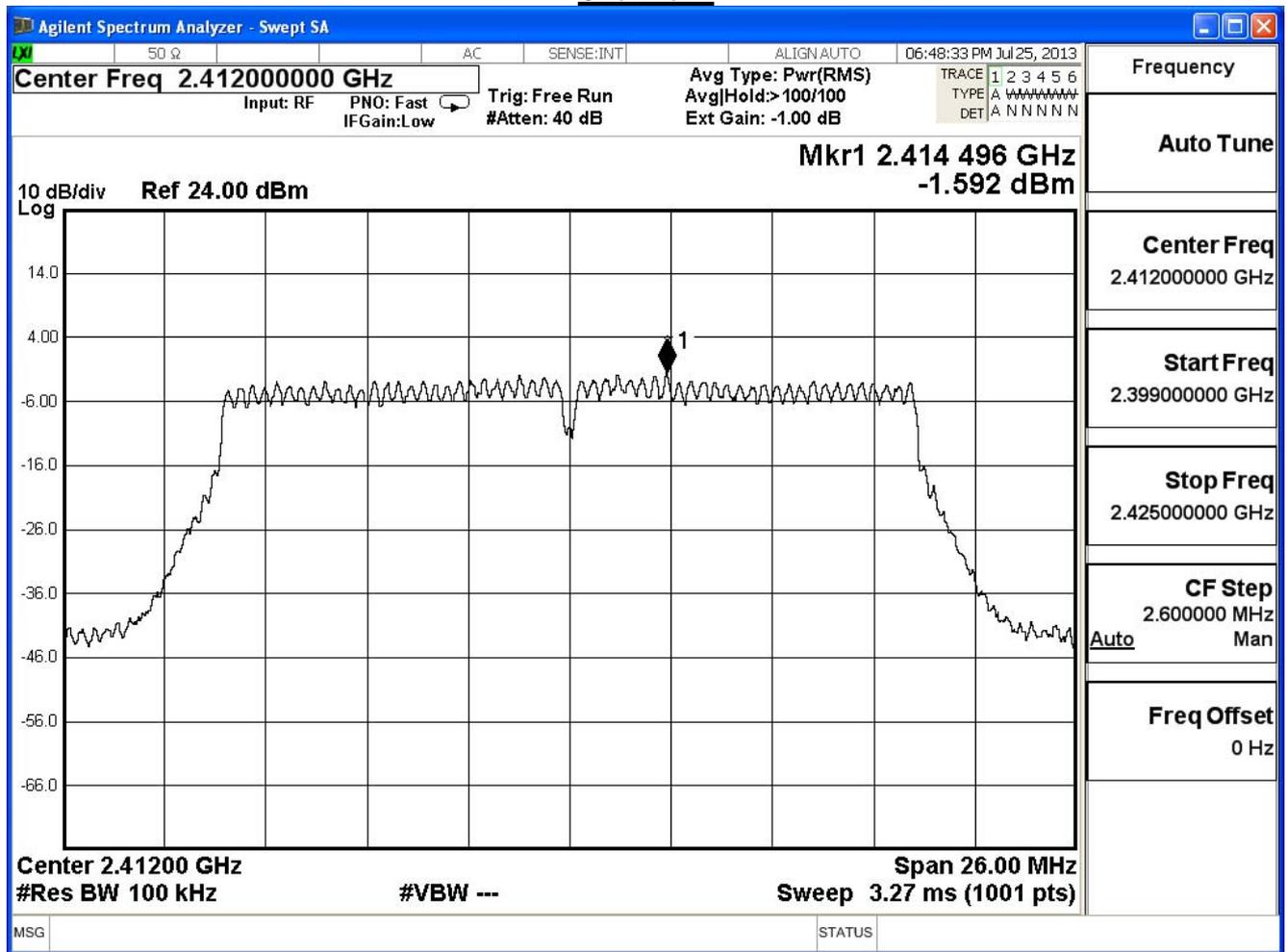


Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

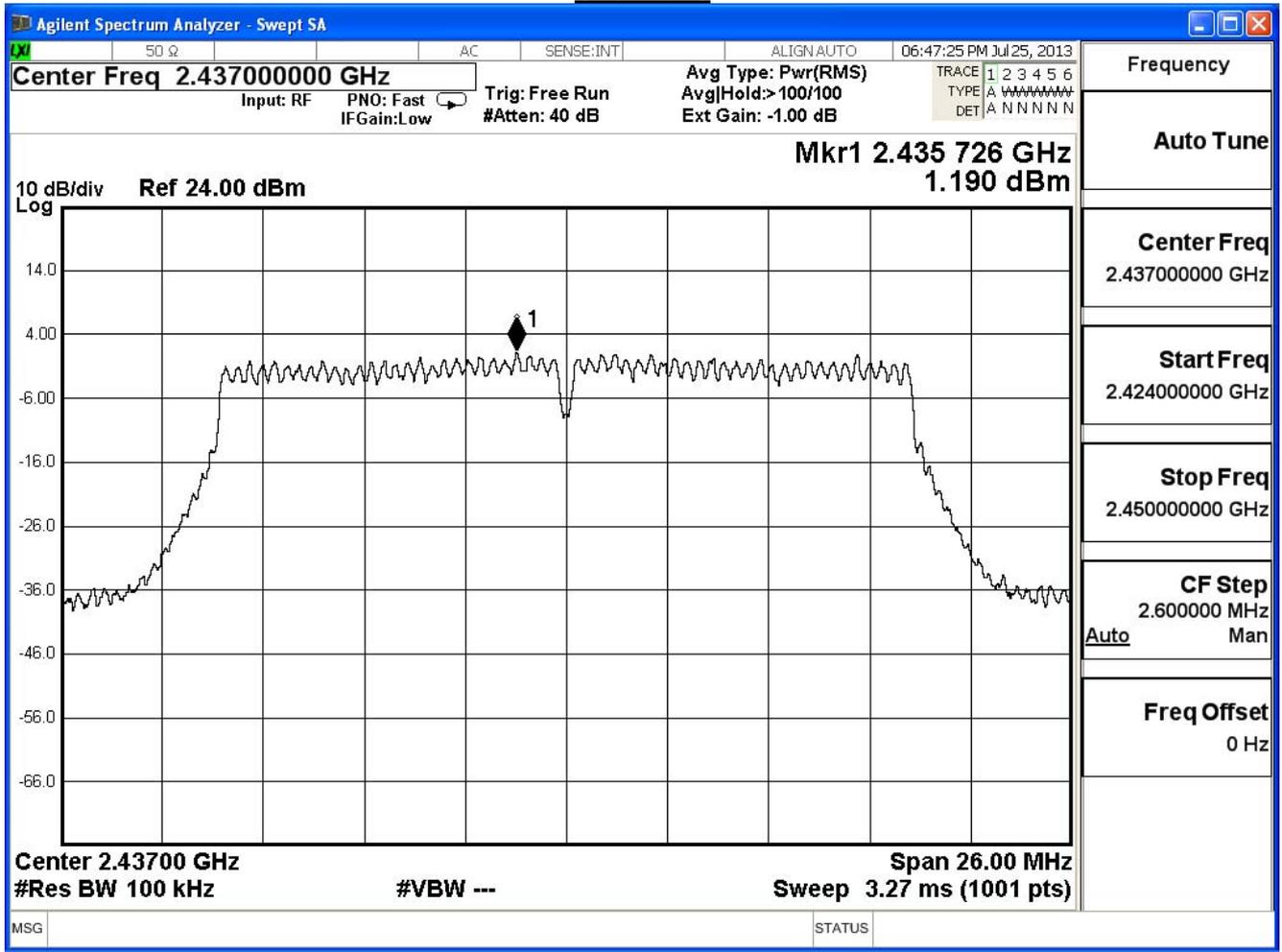
IEEE802.11n_20MHz_(ANT 1)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-1.592	-16.792	≤ 8	Pass
6	2437	1.190	-14.010	≤ 8	Pass
11	2462	-4.102	-19.302	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

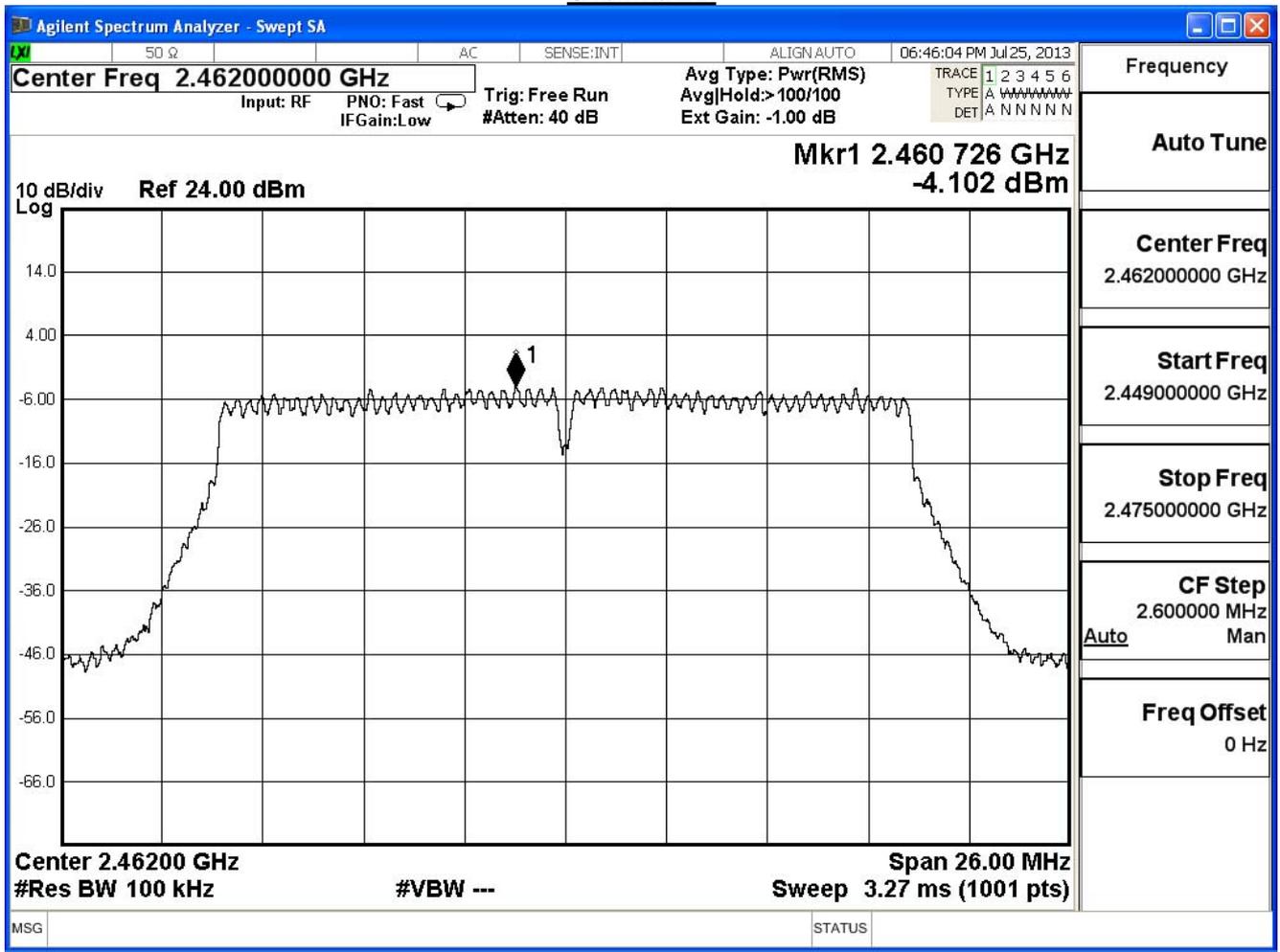
Channel 1



Channel 6



Channel 11

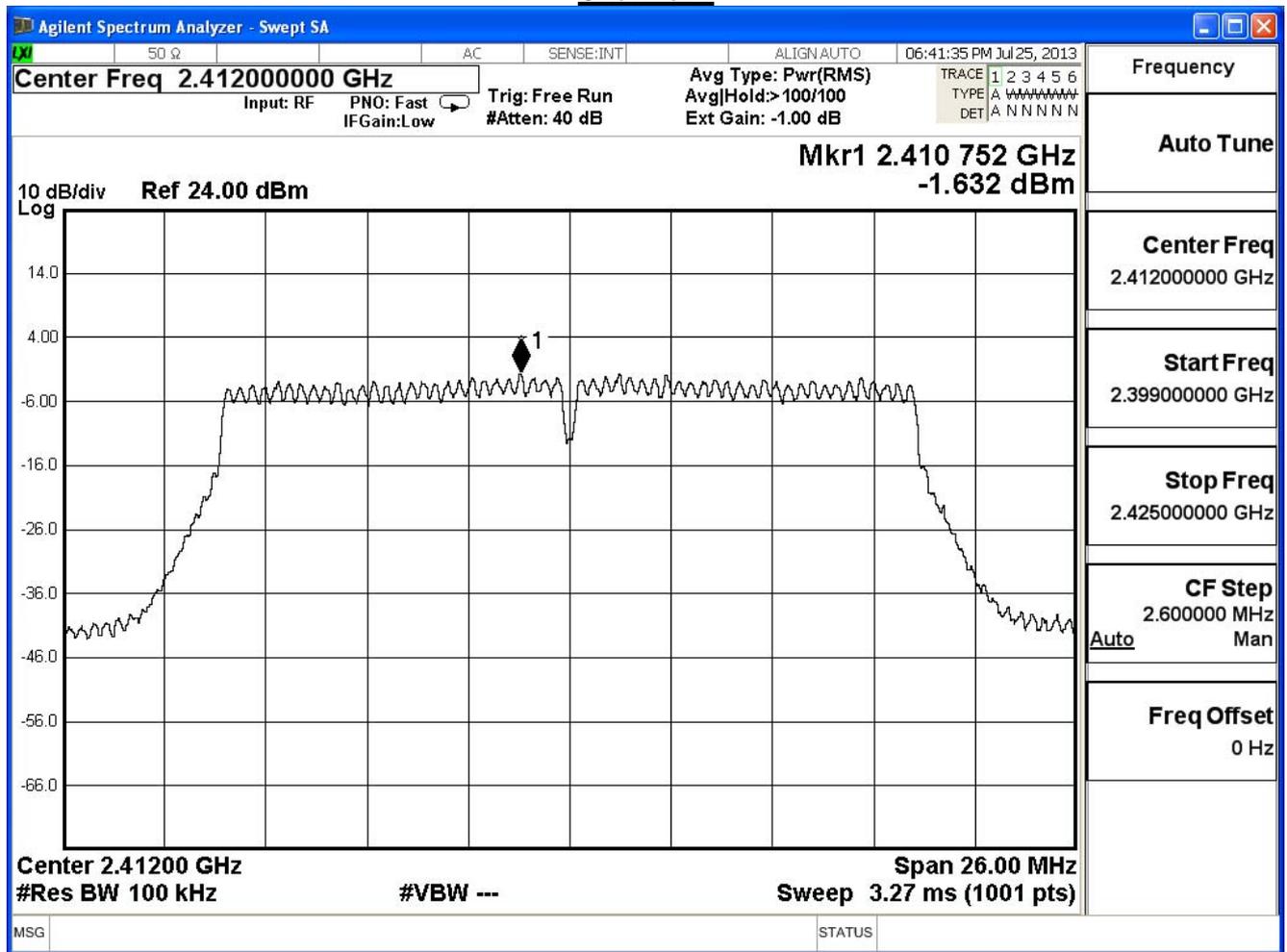


Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

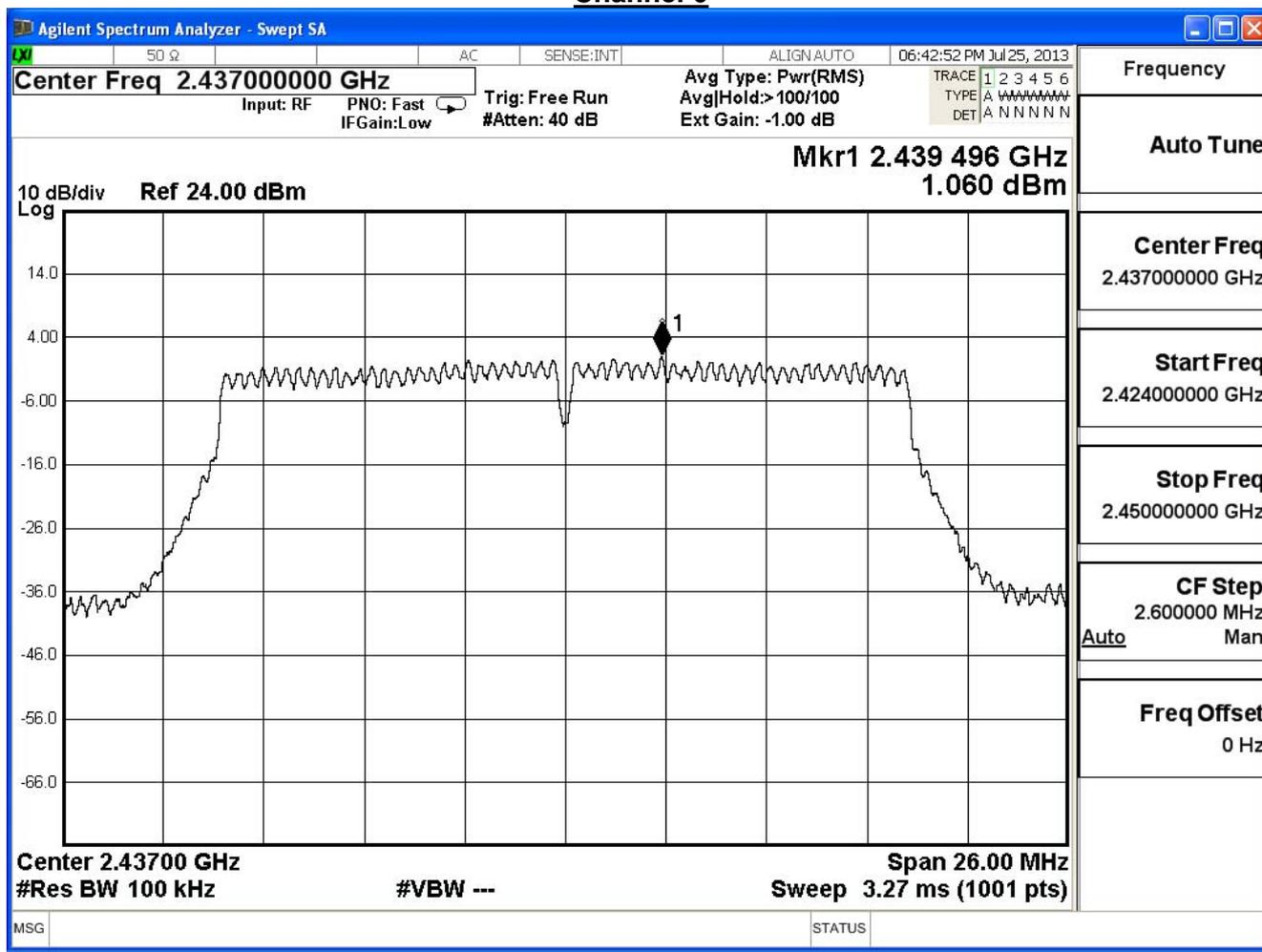
IEEE802.11n_20MHz_(ANT 2)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-1.632	-16.832	≤ 8	Pass
6	2437	1.060	-14.140	≤ 8	Pass
11	2462	-3.435	-18.635	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

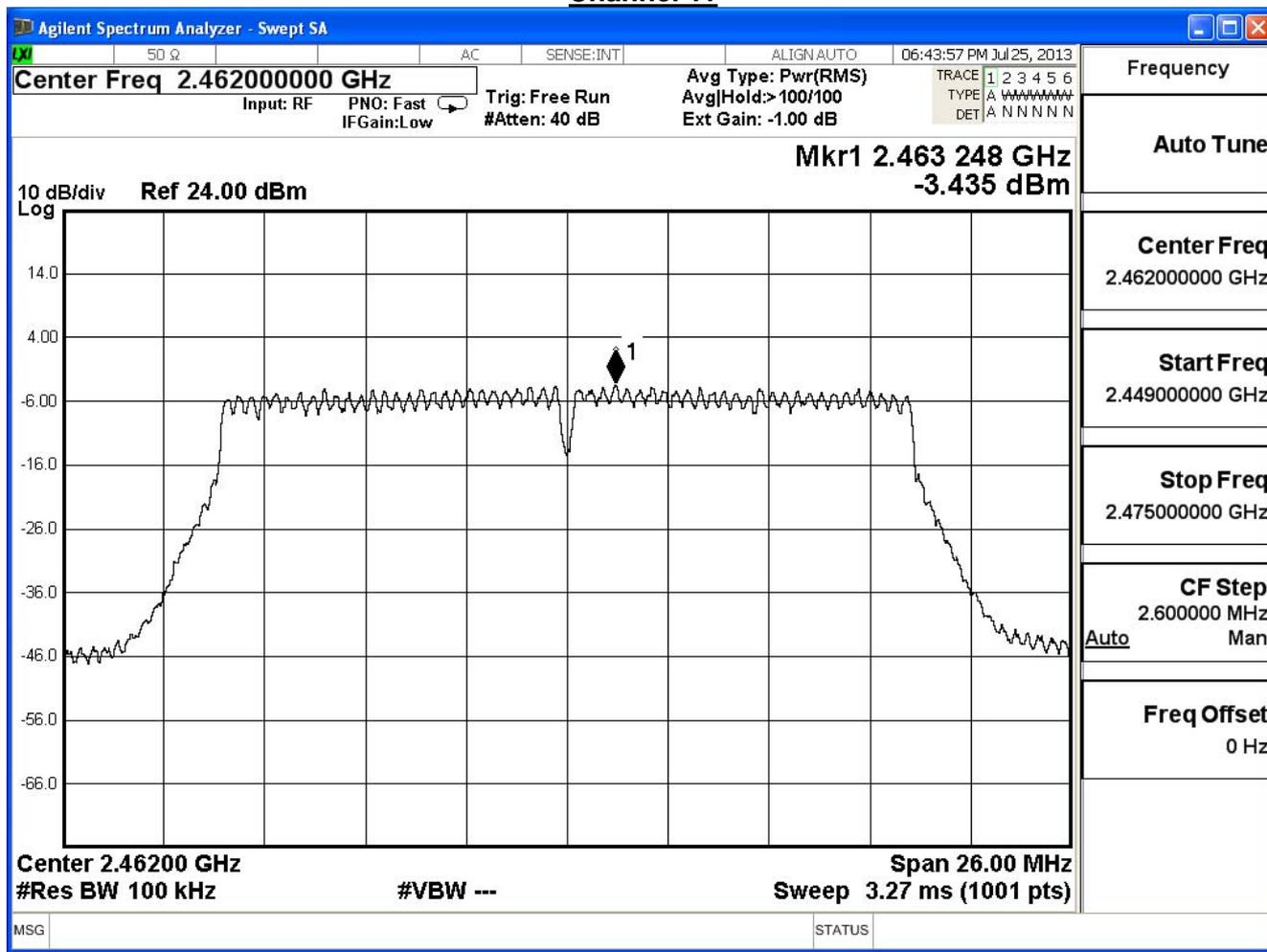
Channel 1



Channel 6



Channel 11



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE802.11n 20MHz(ANT 0+1+2)

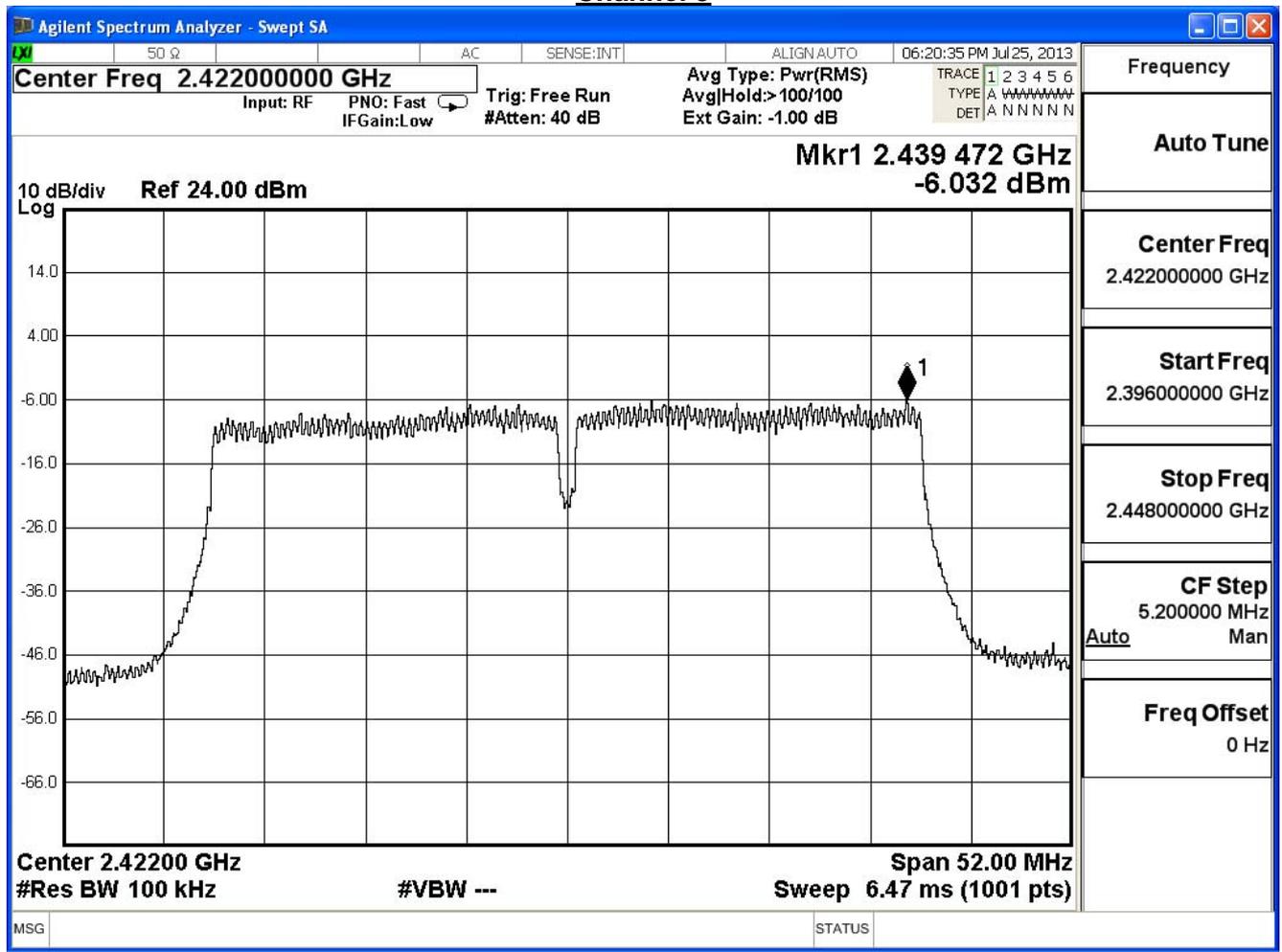
Channel No.	Frequency (MHz)	Measure Level(dBm)	Limit (dBm)	Result
1	2412	-12.28	≤ 8	Pass
6	2437	-9.36	≤ 8	Pass
11	2462	-14.30	≤ 8	Pass

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

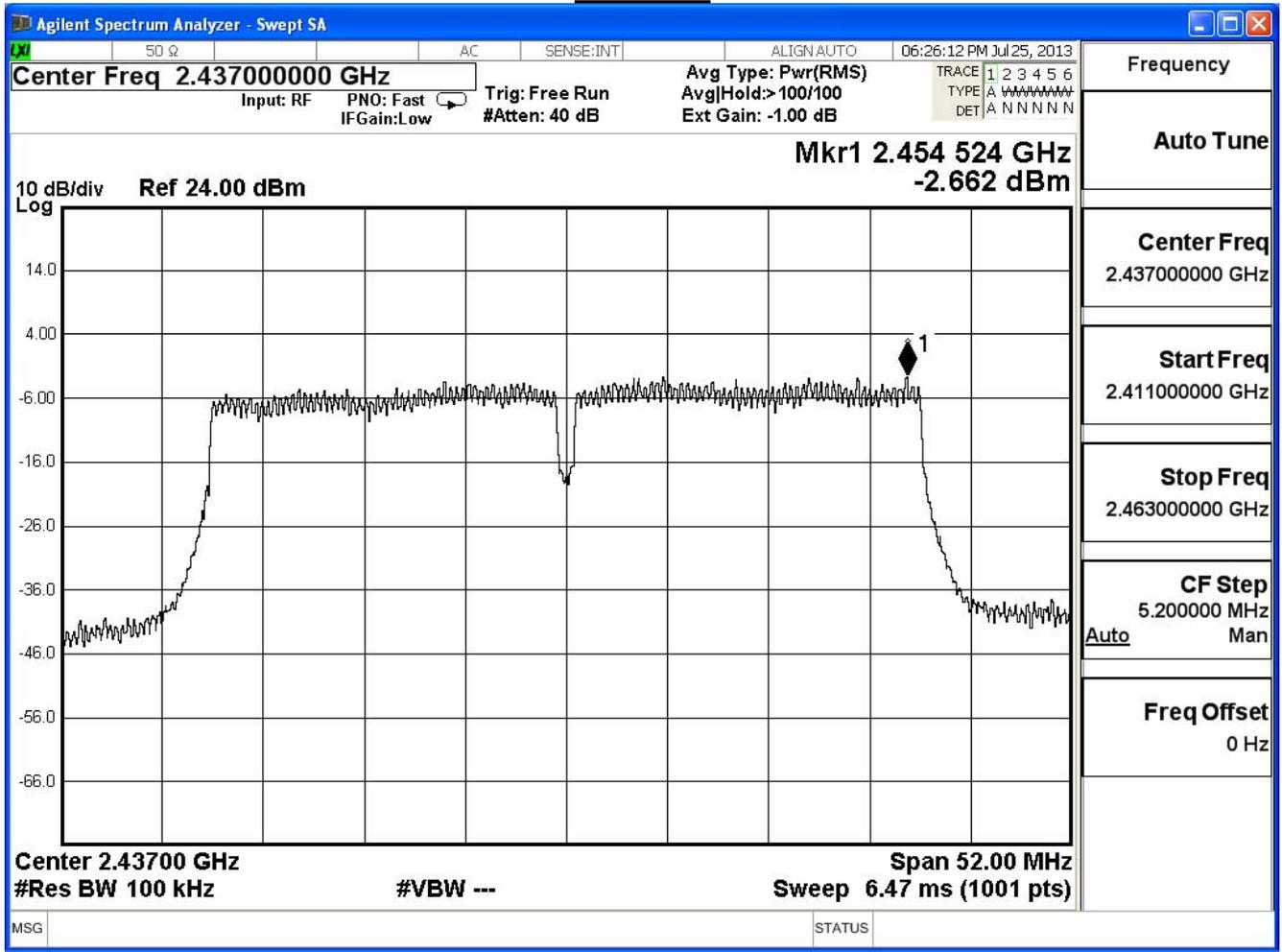
IEEE 802.11n_40MHz (ANT 0)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
3	2422	-6.032	-21.232	≤ 8	Pass
6	2437	-2.662	-17.862	≤ 8	Pass
9	2452	-8.542	-23.742	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

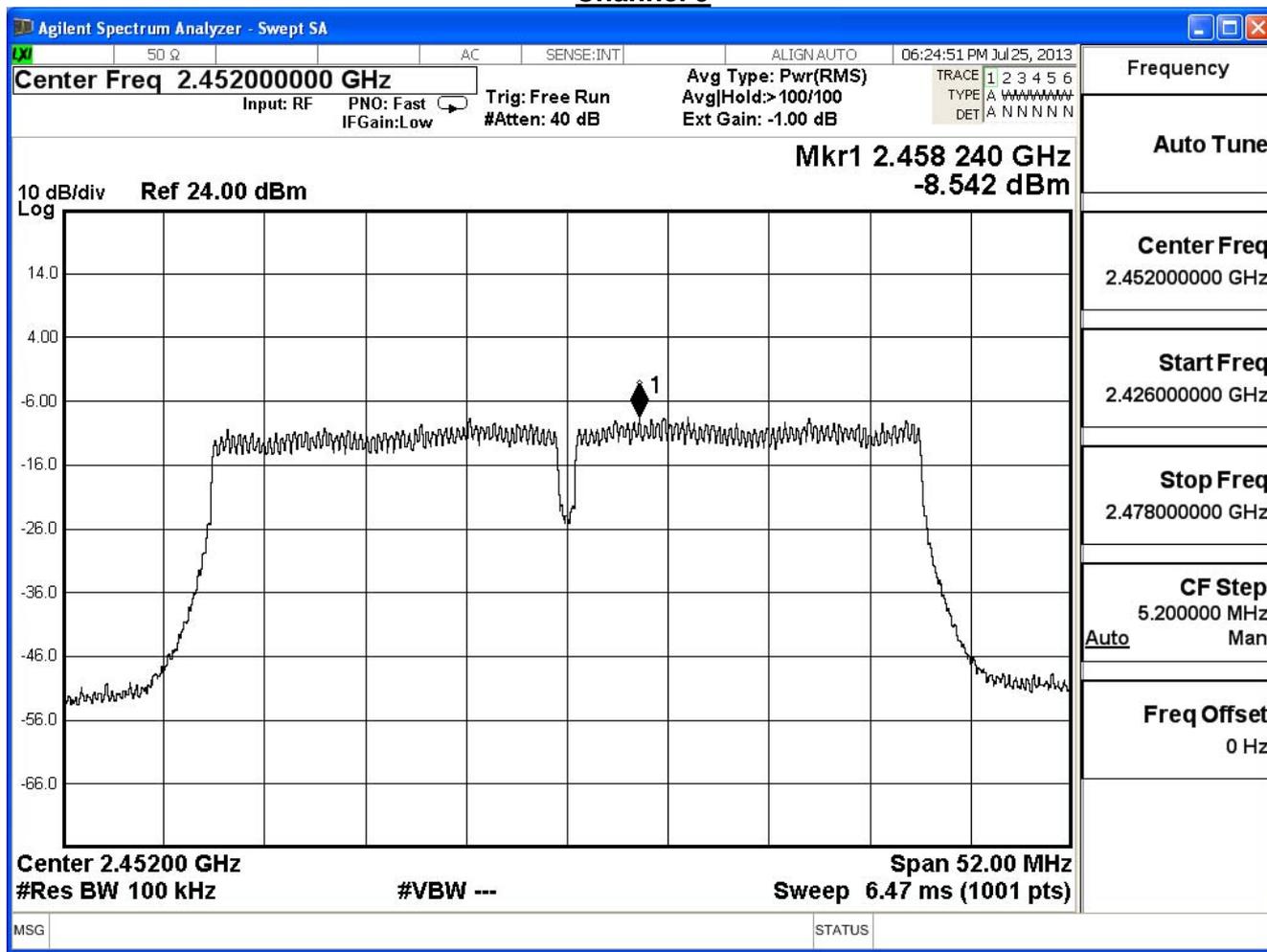
Channel 3



Channel 6



Channel 9

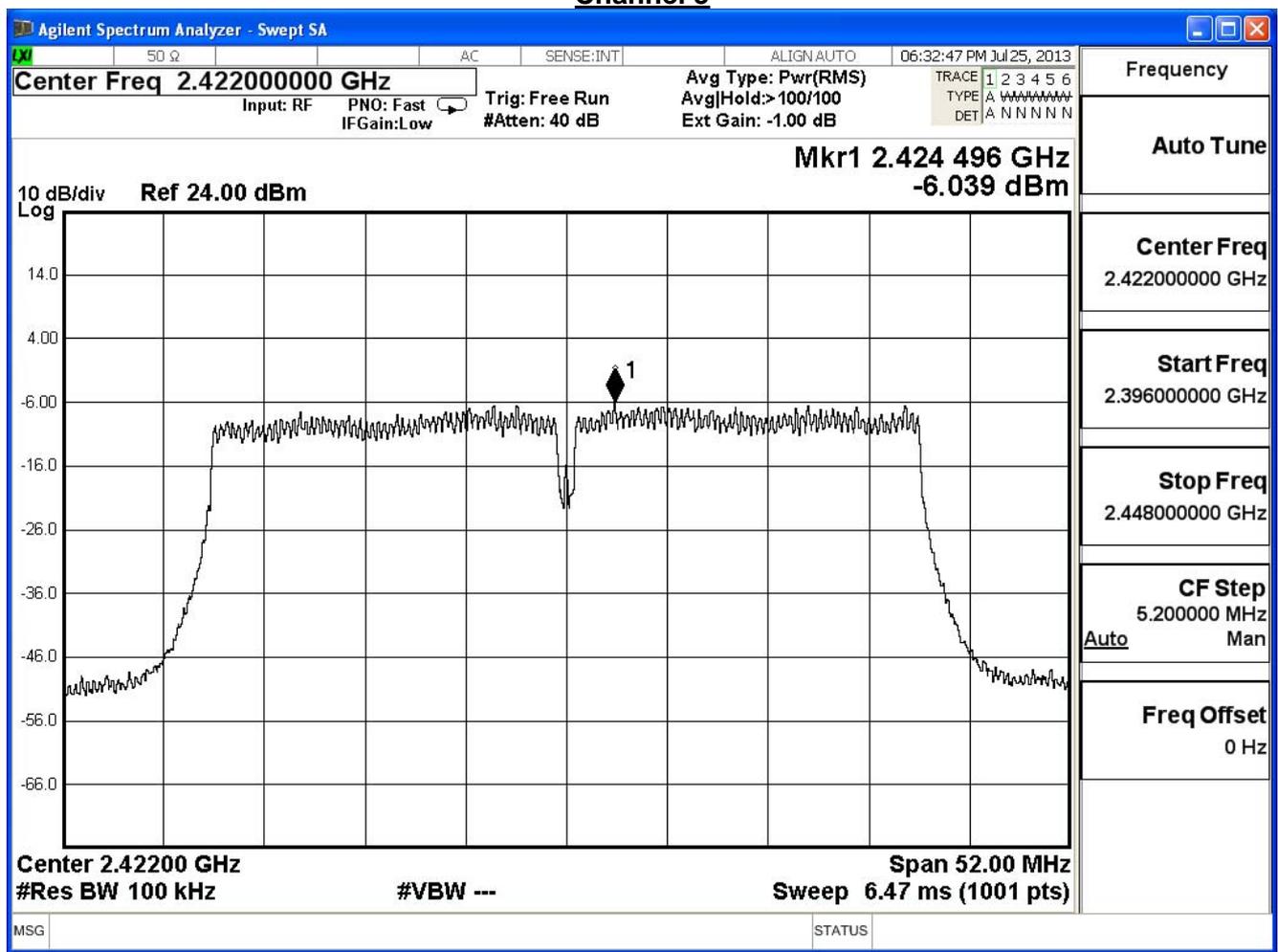


Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

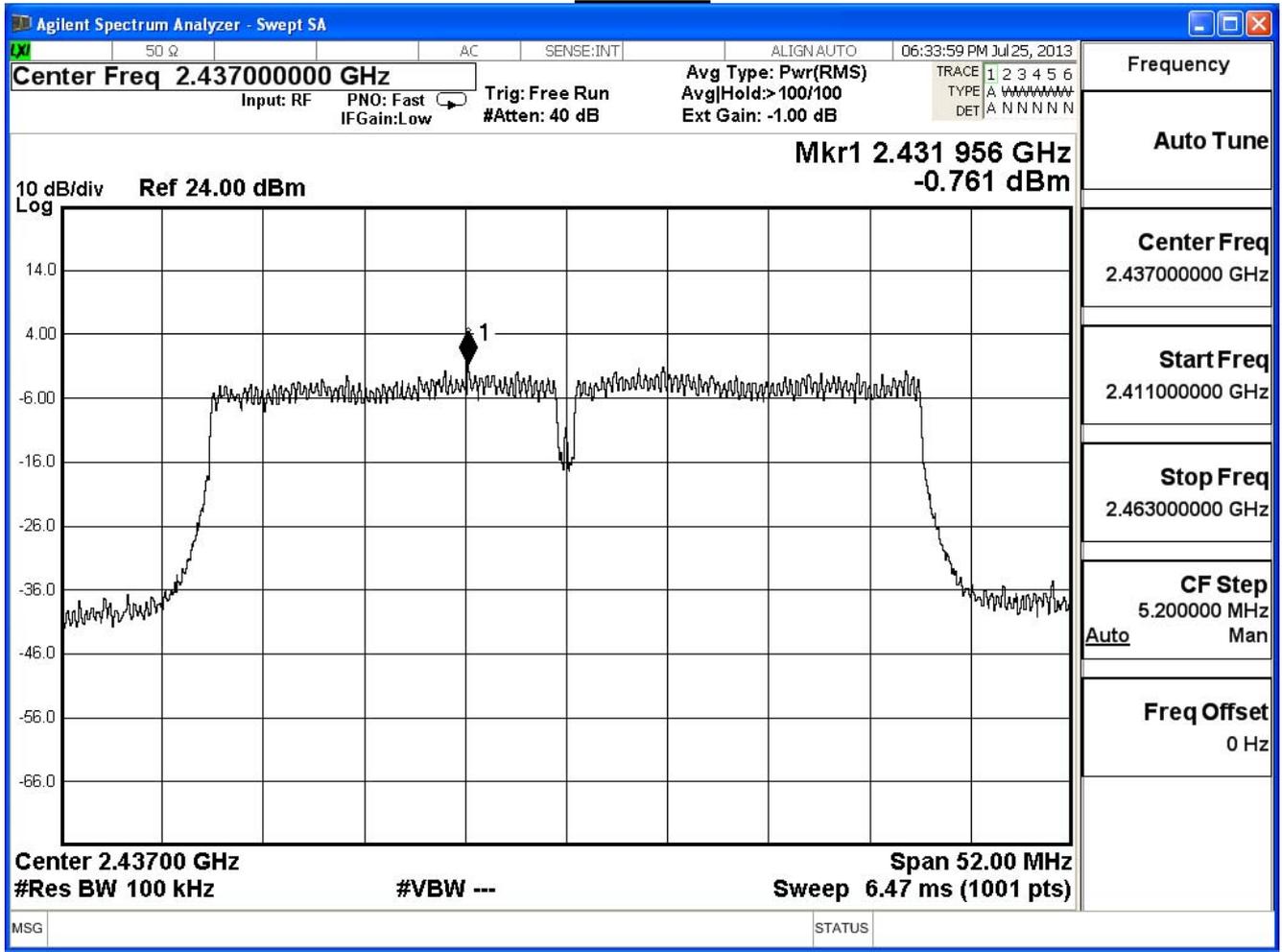
IEEE 802.11n_40MHz (ANT 1)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
3	2422	-6.039	-21.239	≤ 8	Pass
6	2437	-0.761	-15.961	≤ 8	Pass
9	2452	-7.776	-22.976	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

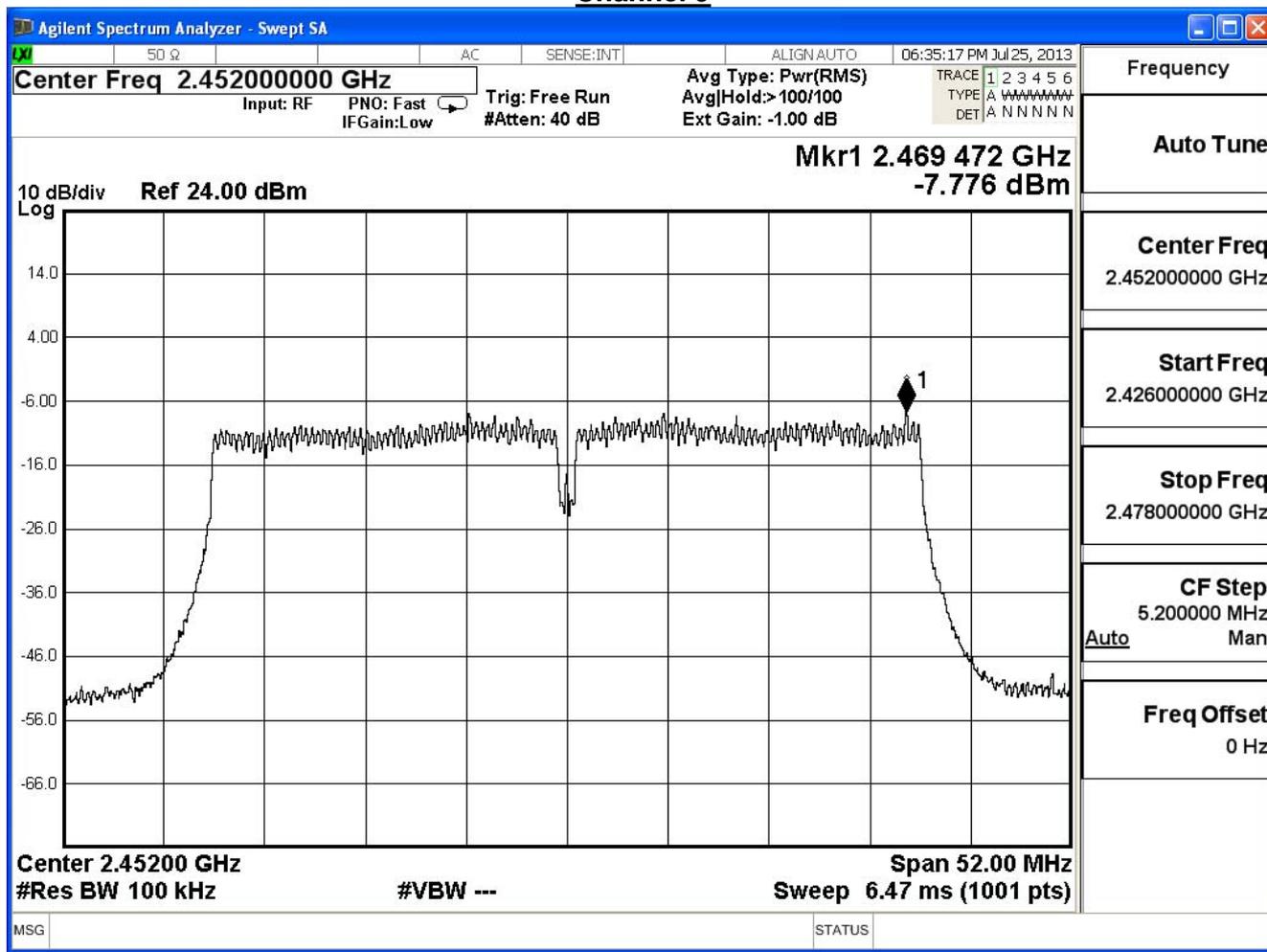
Channel 3



Channel 6



Channel 9

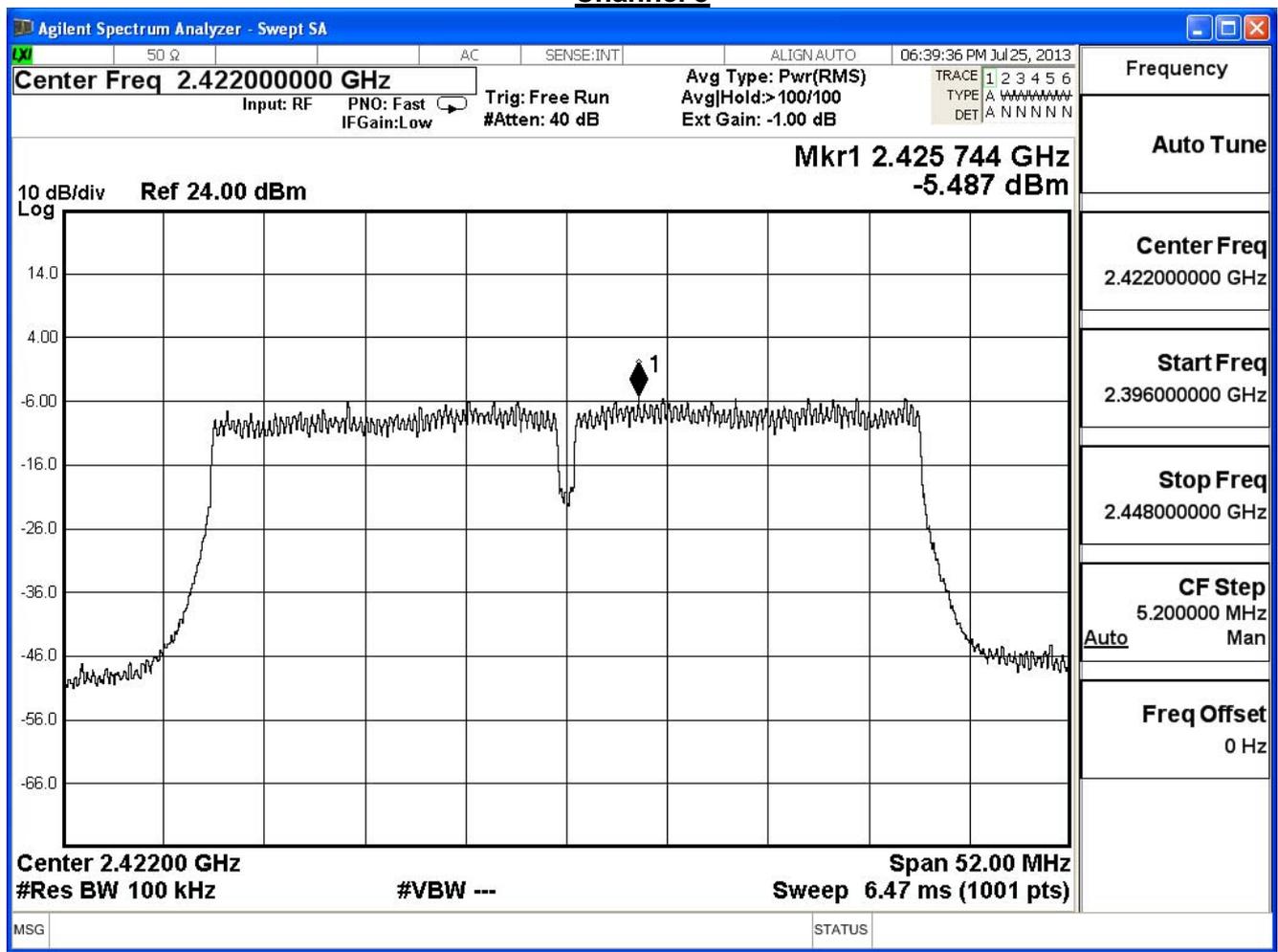


Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2013/07/31	Test Site	SR7

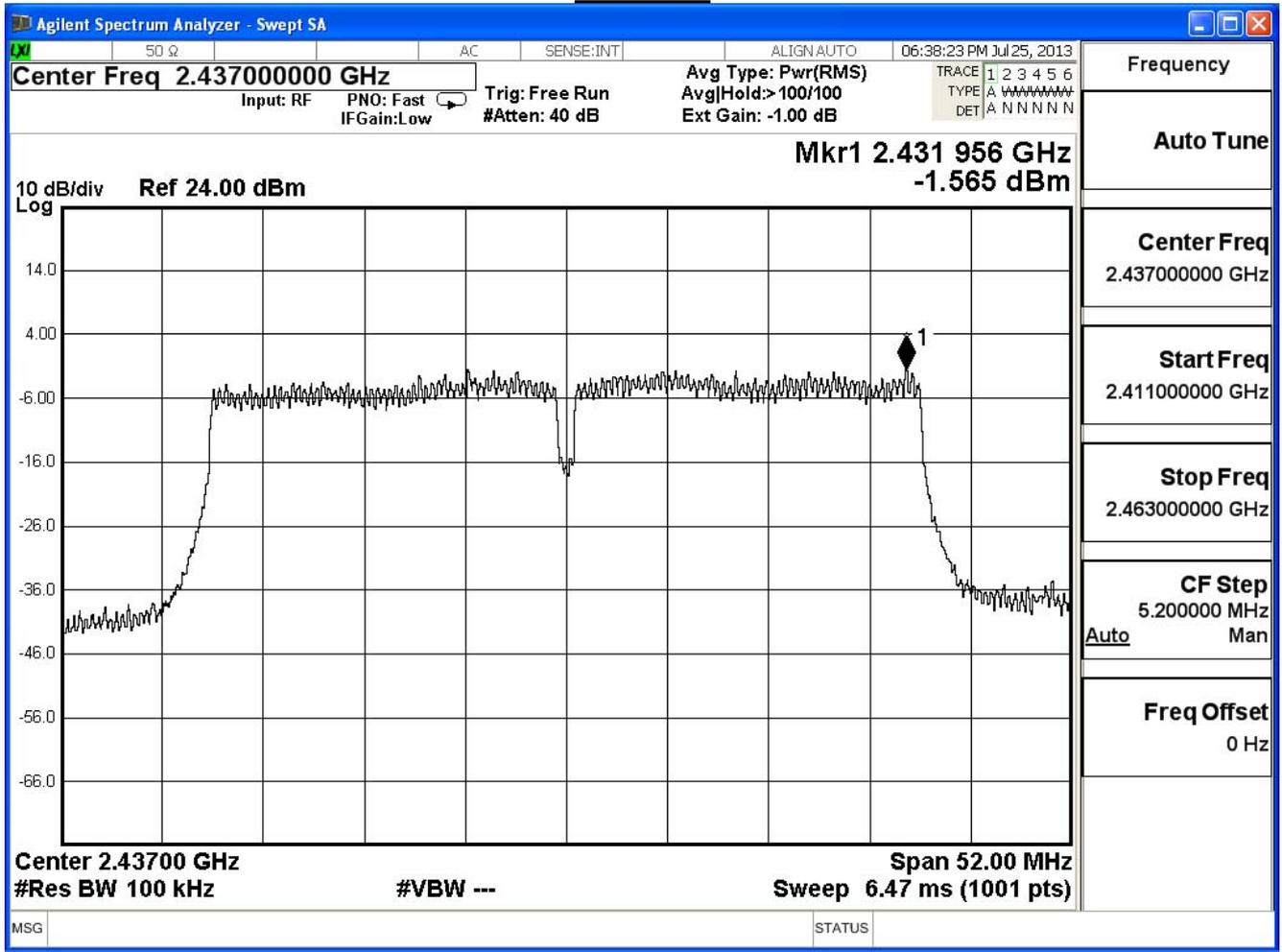
IEEE 802.11n_40MHz (ANT 2)					
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level(dBm)	Limit (dBm)	Result
3	2422	-5.487	-20.687	≤ 8	Pass
6	2437	-1.565	-16.765	≤ 8	Pass
9	2452	-7.156	-22.356	≤ 8	Pass

* Emission Level = Reading Level + BWCF = Reading Level + 10log(3kHz/100kHz)

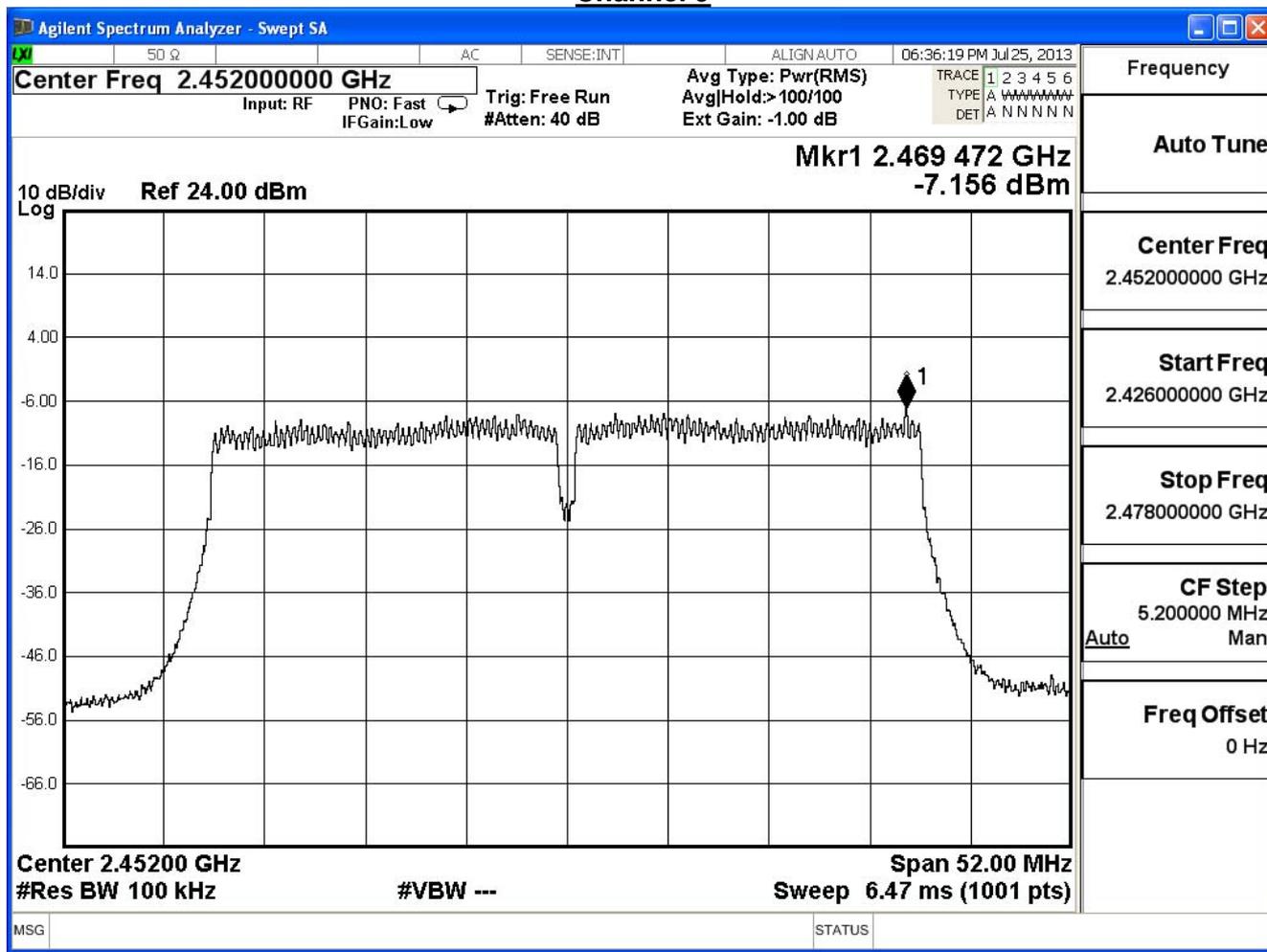
Channel 3



Channel 6



Channel 9



Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (CDD mode)		
Date of Test	2013/07/31	Test Site	SR7

IEEE802.11n 40MHz(ANT 0+1+2)

Channel No.	Frequency (MHz)	Measure Level(dBm)	Limit (dBm)	Result
3	2422	-16.27	≤ 8	Pass
6	2437	-12.02	≤ 8	Pass
9	2452	-18.22	≤ 8	Pass