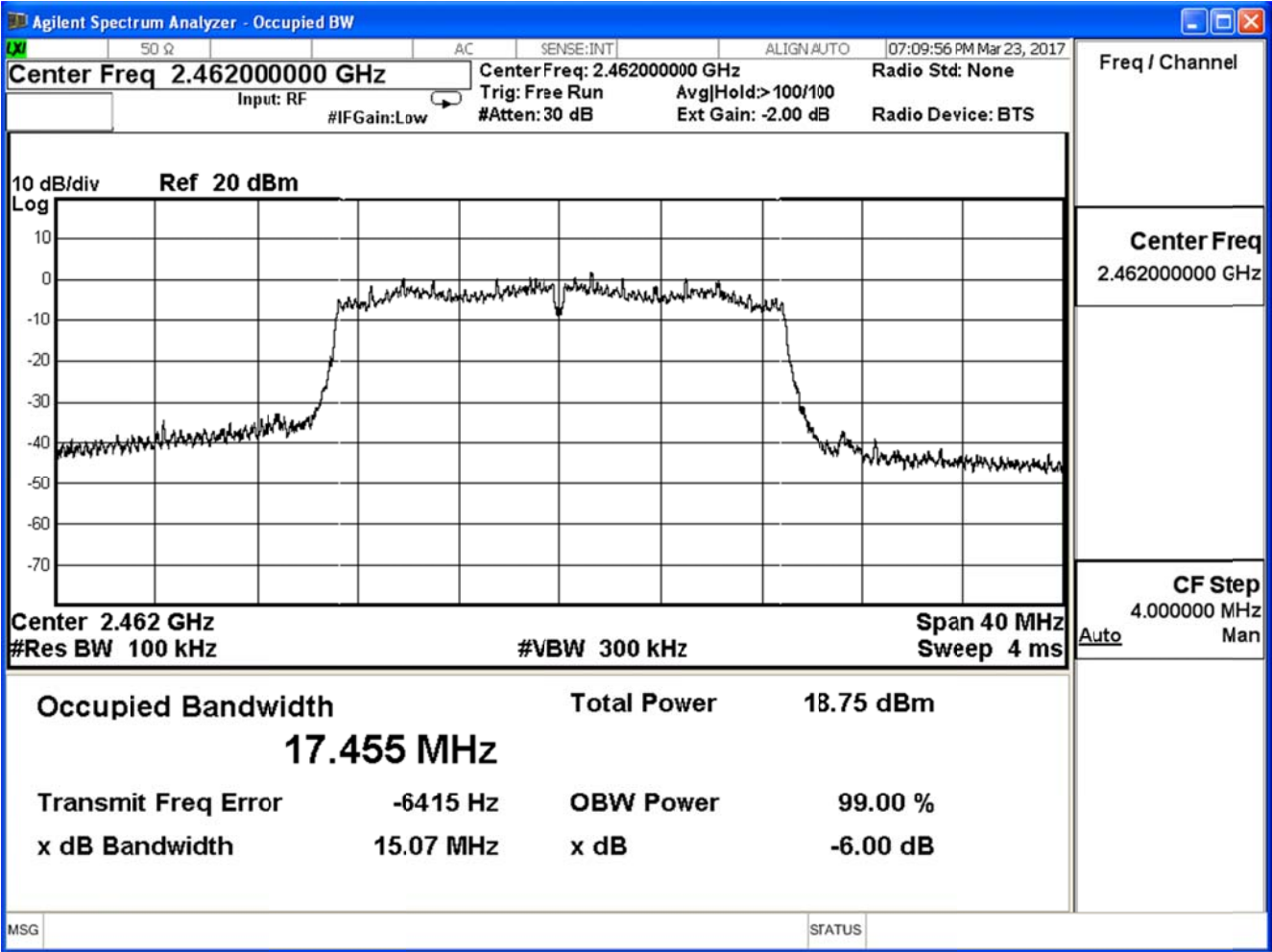


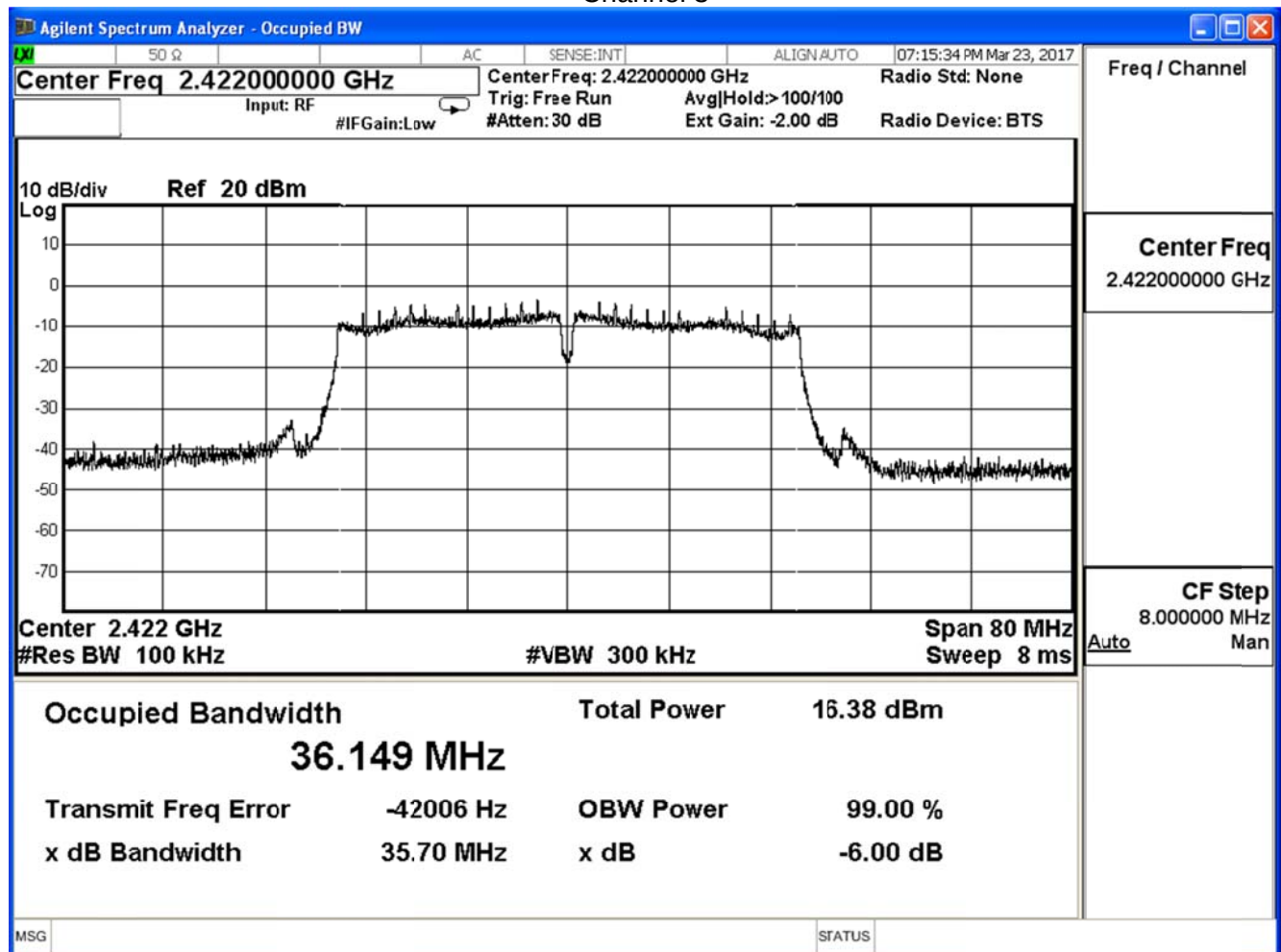
Channel 11



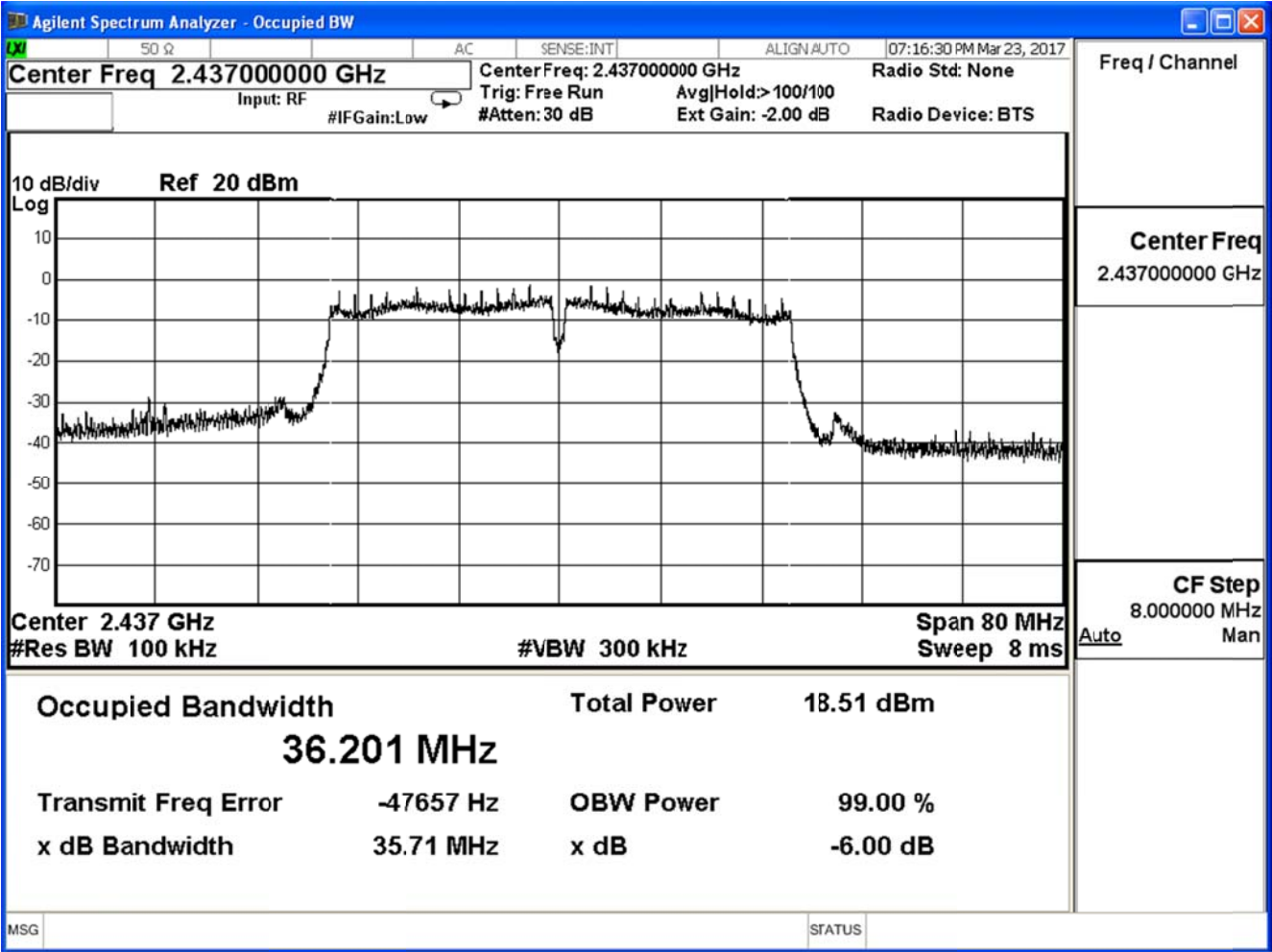
Product	UHD551-L		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Tx MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE 802.11n_40M (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
3	2422	35.700	≥ 0.5	Pass
6	2437	35.710	≥ 0.5	Pass
9	2452	35.730	≥ 0.5	Pass

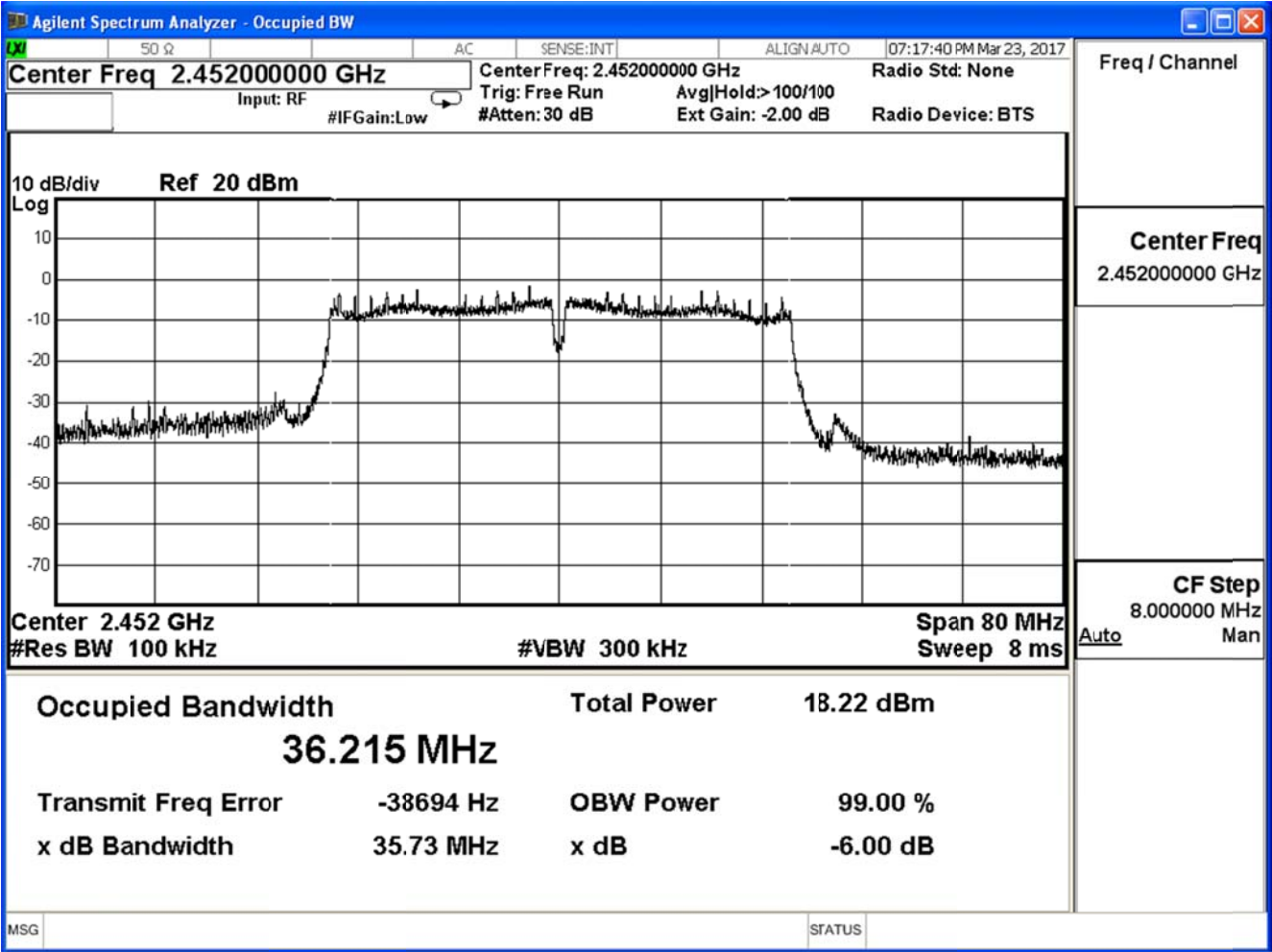
Channel 3



Channel 6



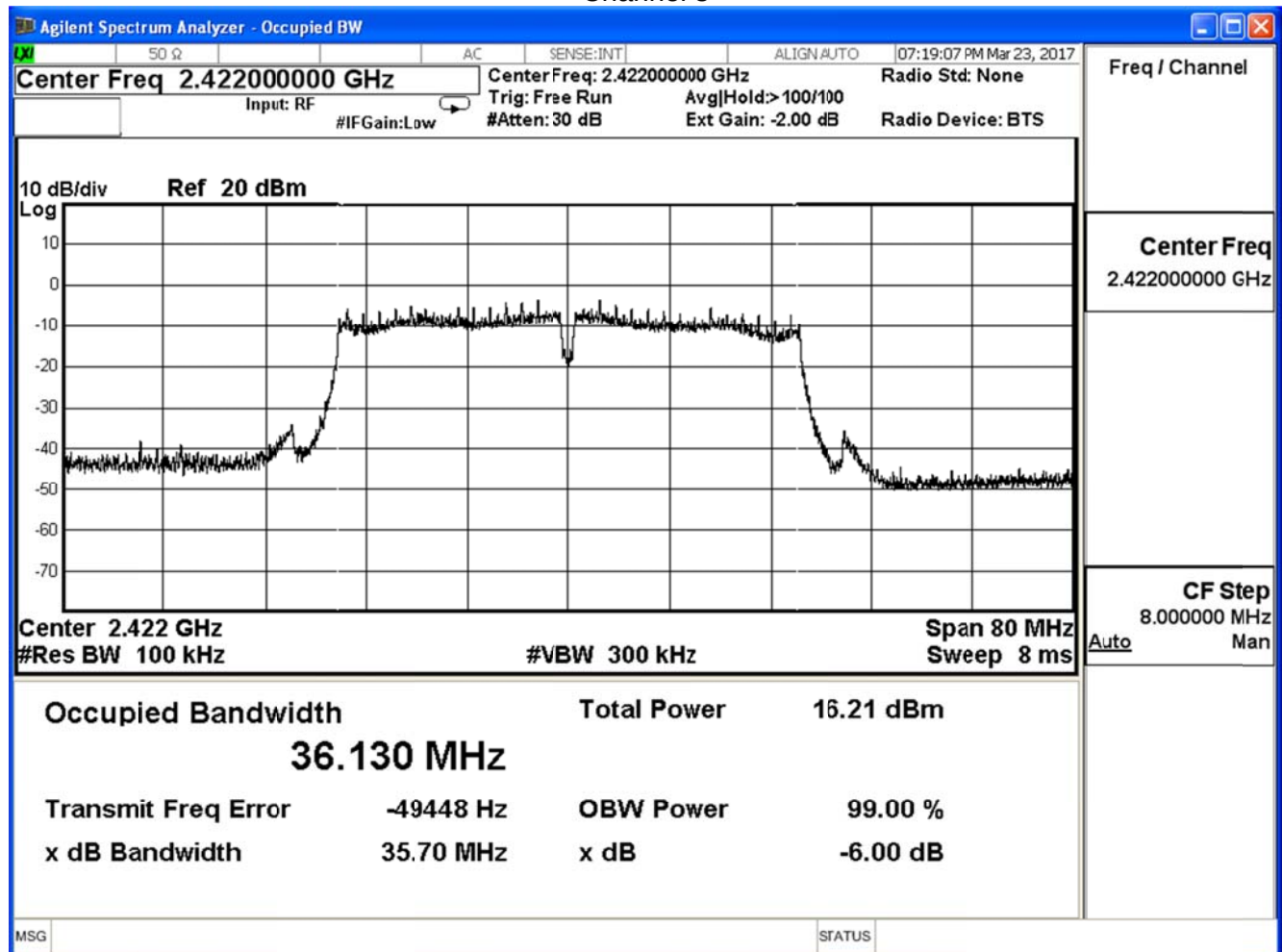
Channel 9



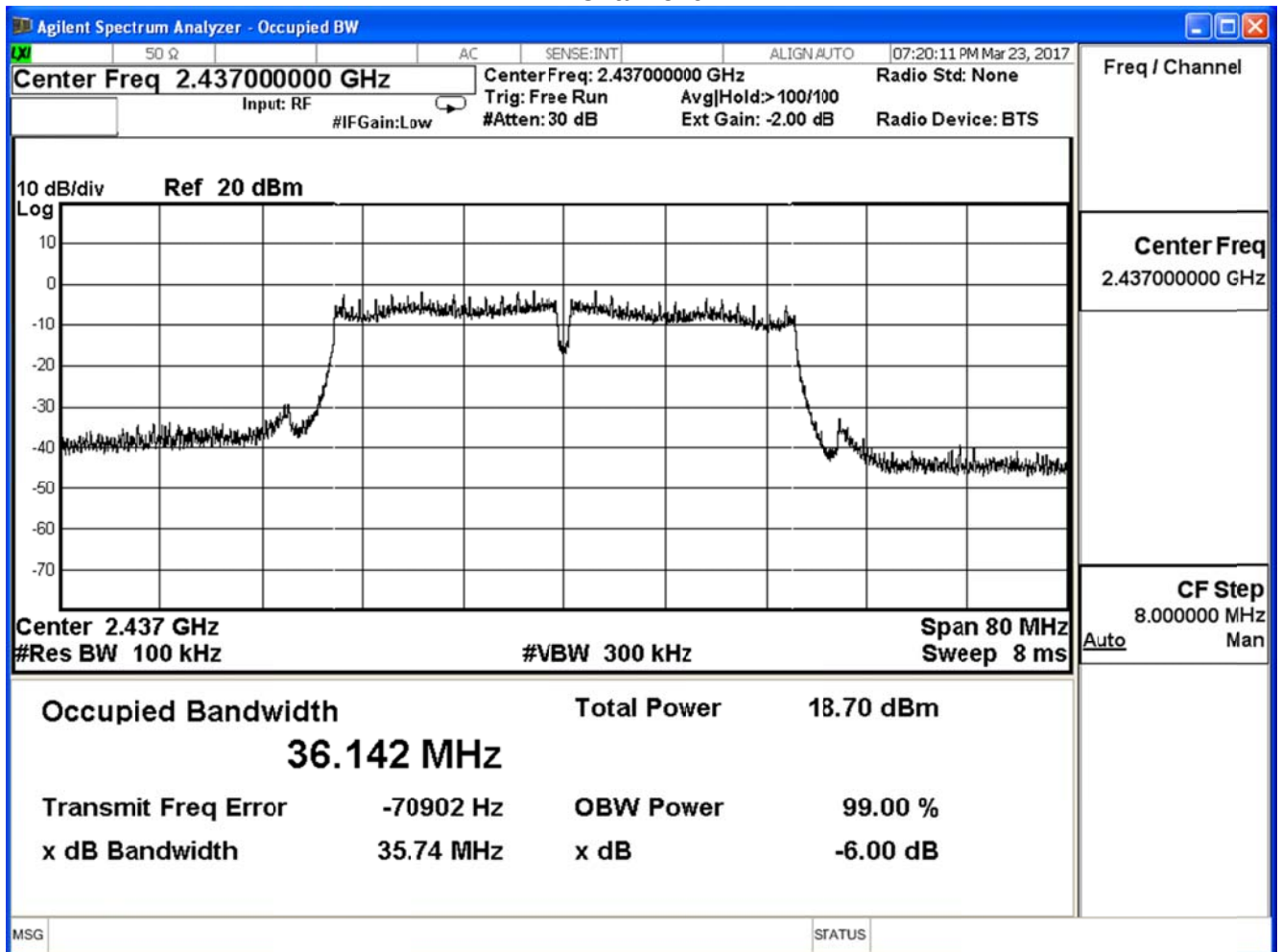
Product	UHD551-L		
Test Item	DTS Bandwidth		
Test Mode	Mode 2: Tx_MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE 802.11n_40M (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
3	2422	35.700	≥ 0.5	Pass
6	2437	35.740	≥ 0.5	Pass
9	2452	36.340	≥ 0.5	Pass

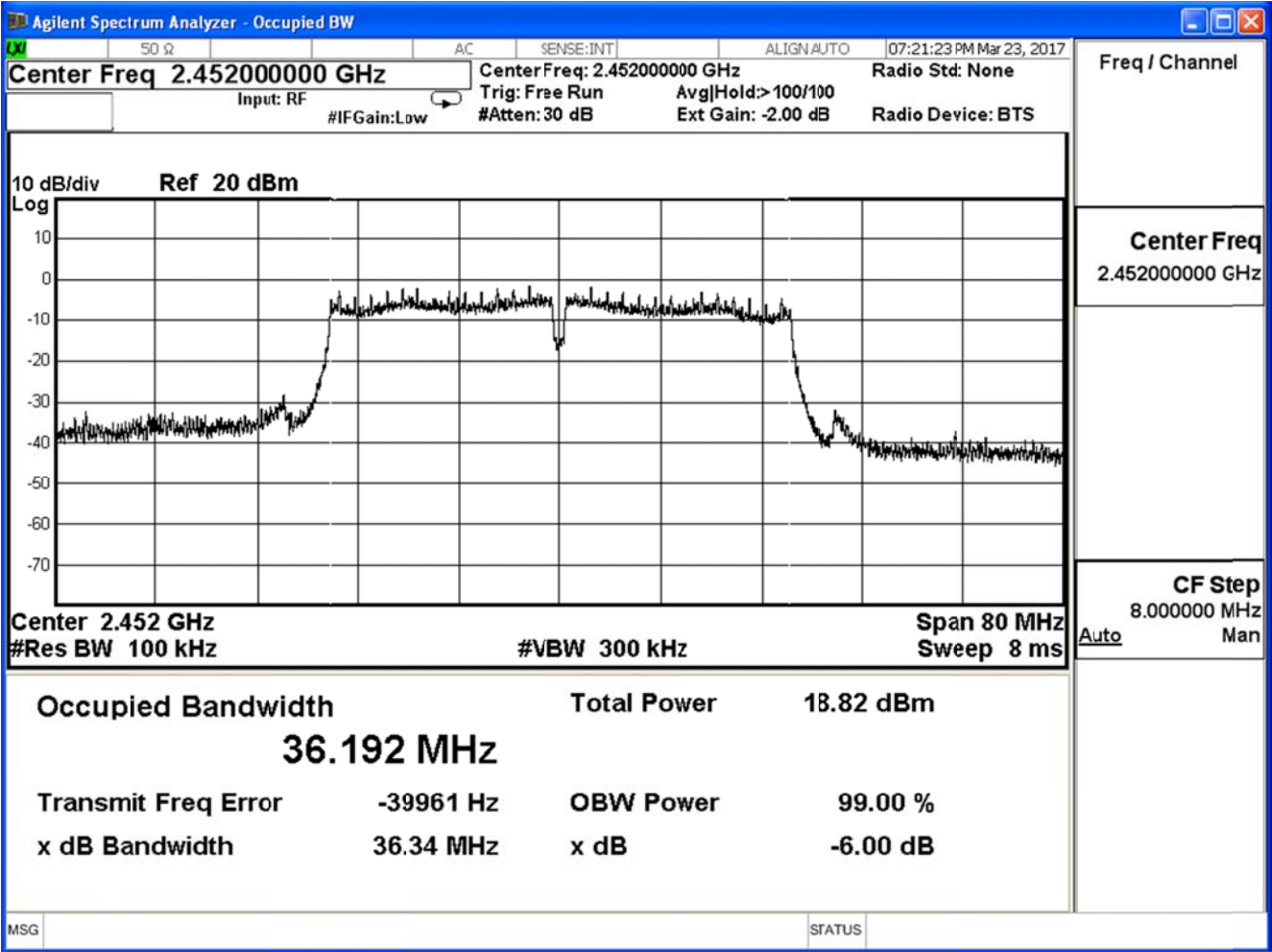
Channel 3



Channel 6



Channel 9



8. Occupied Bandwidth

8.1. Test Equipment

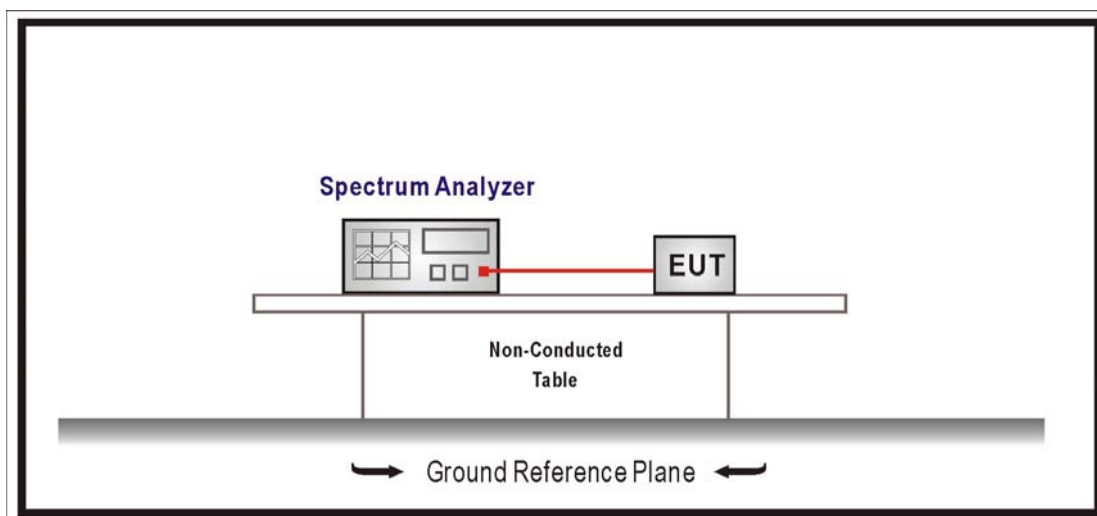
The following test equipments are used during the test:

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

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

8.2. Test Setup



8.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 v03r05 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the OBW, Set the VBW $\geq 3 \times$ RBW, Sweep Time=Auto.

8.4. Limits

NA

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

8.6. Uncertainty

The measurement uncertainty is defined as ± 150 Hz

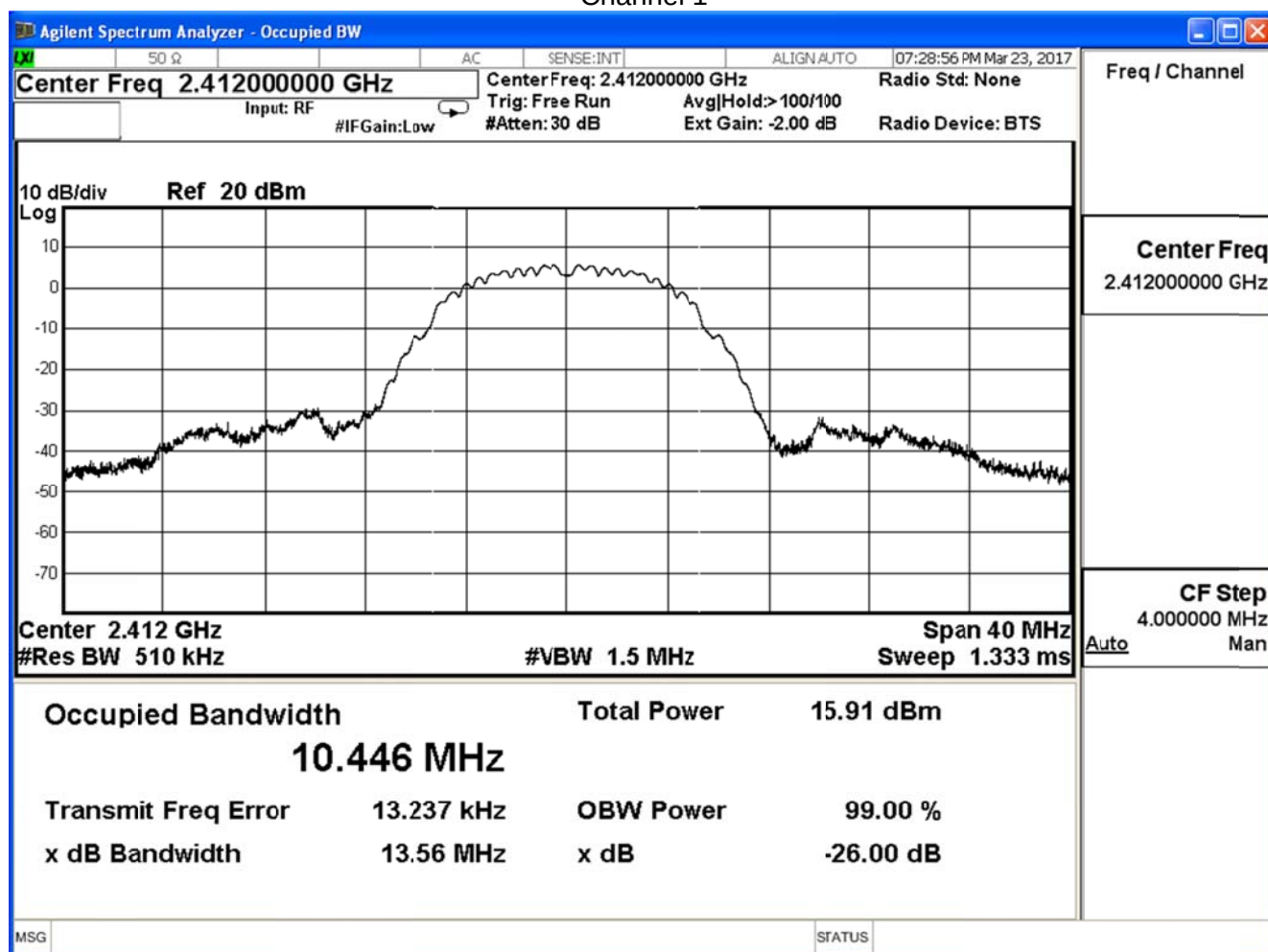
8.7. Test Result

Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

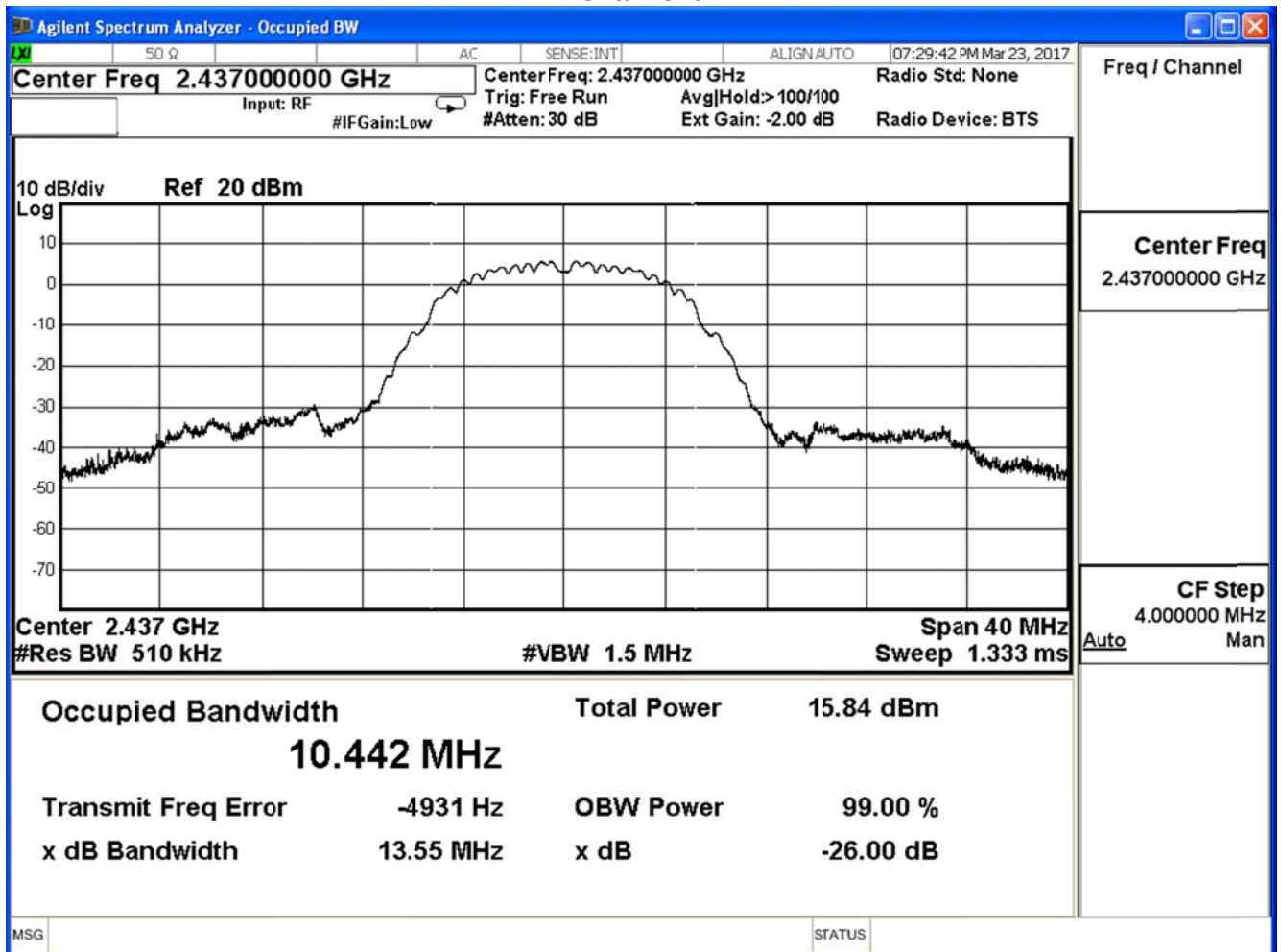
802.11 b (ANT 0)

Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	10.446	--	Pass
6	2437	10.442	--	Pass
11	2462	10.454	--	Pass

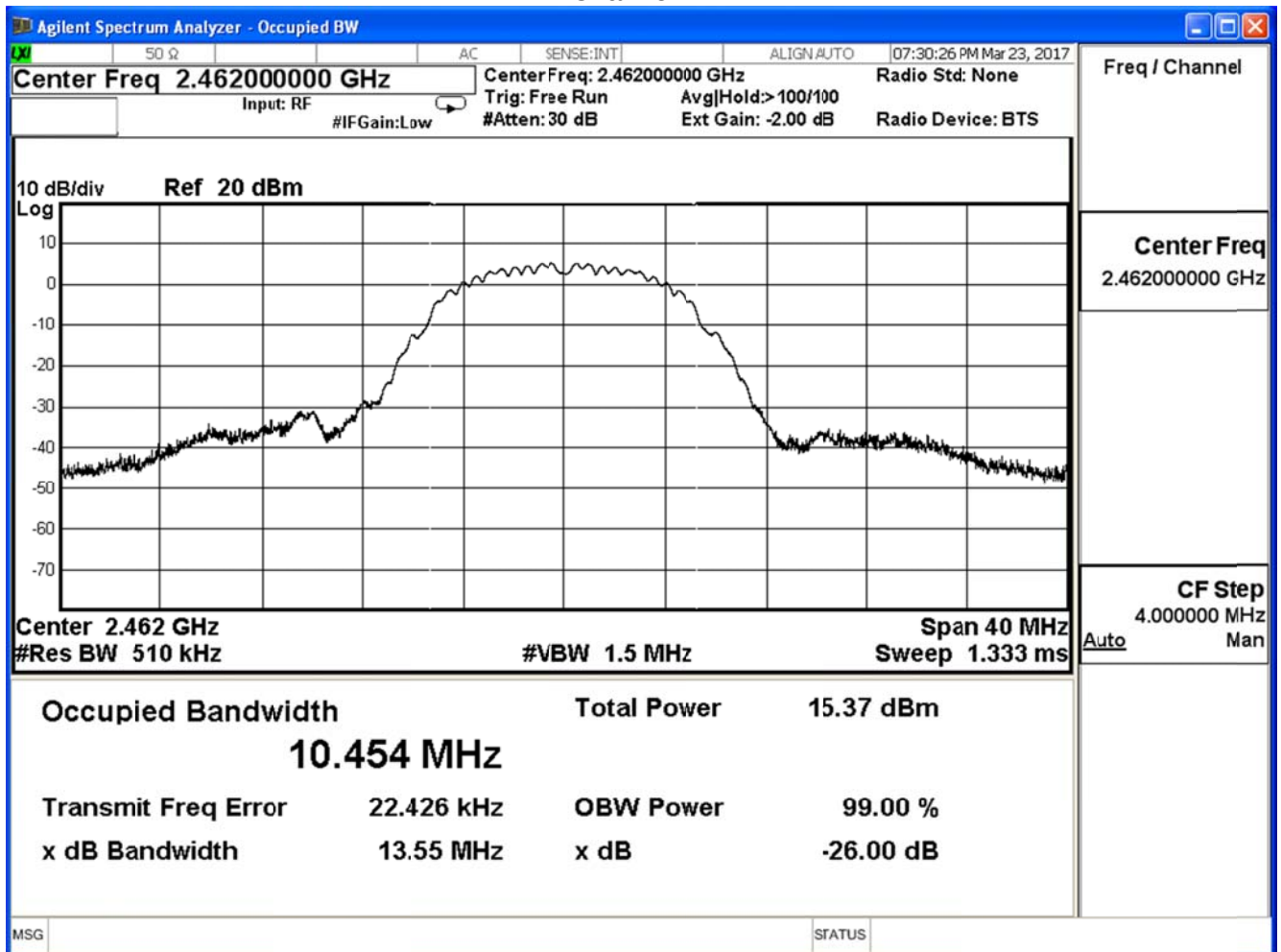
Channel 1



Channel 6



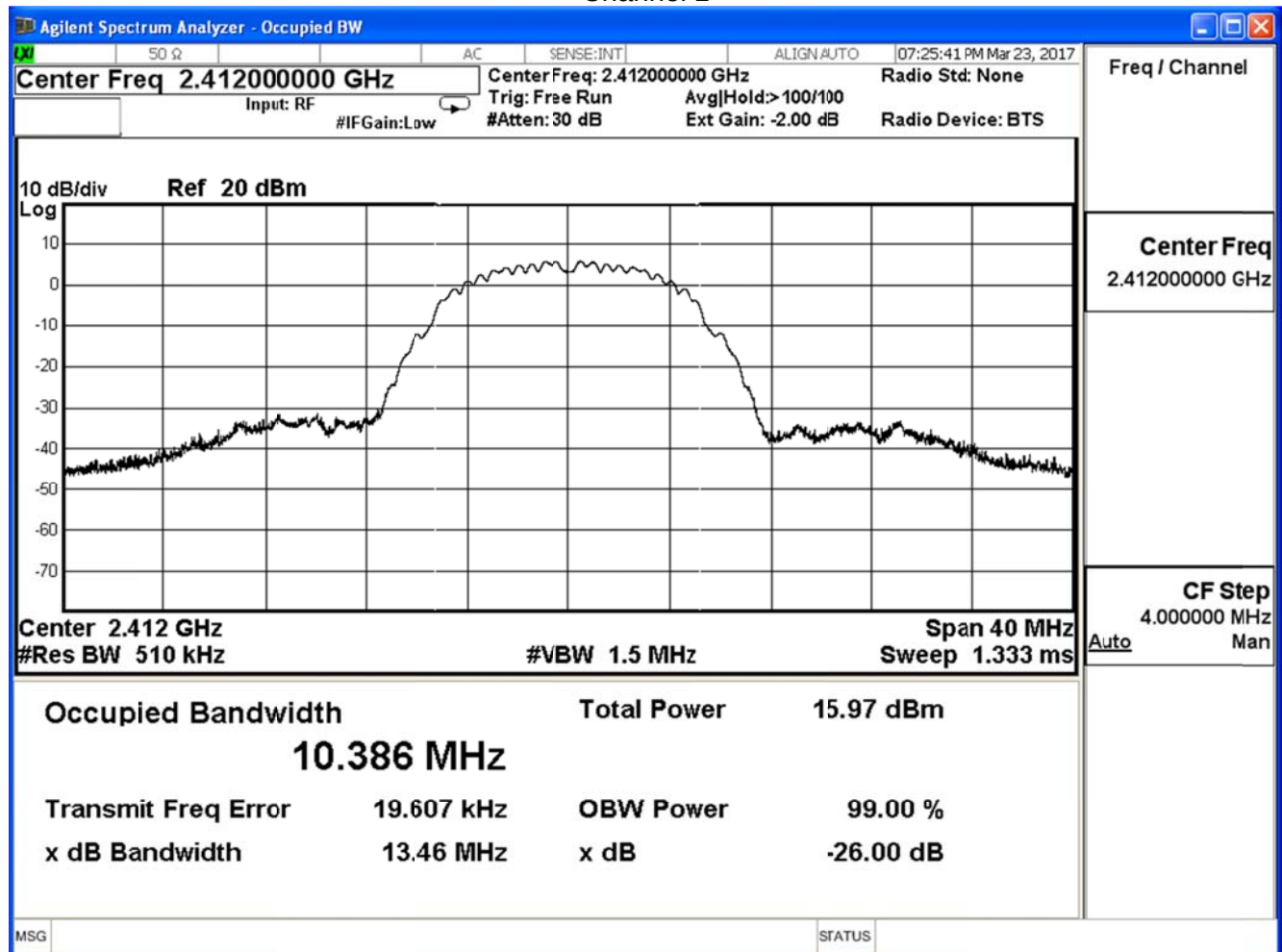
Channel 11



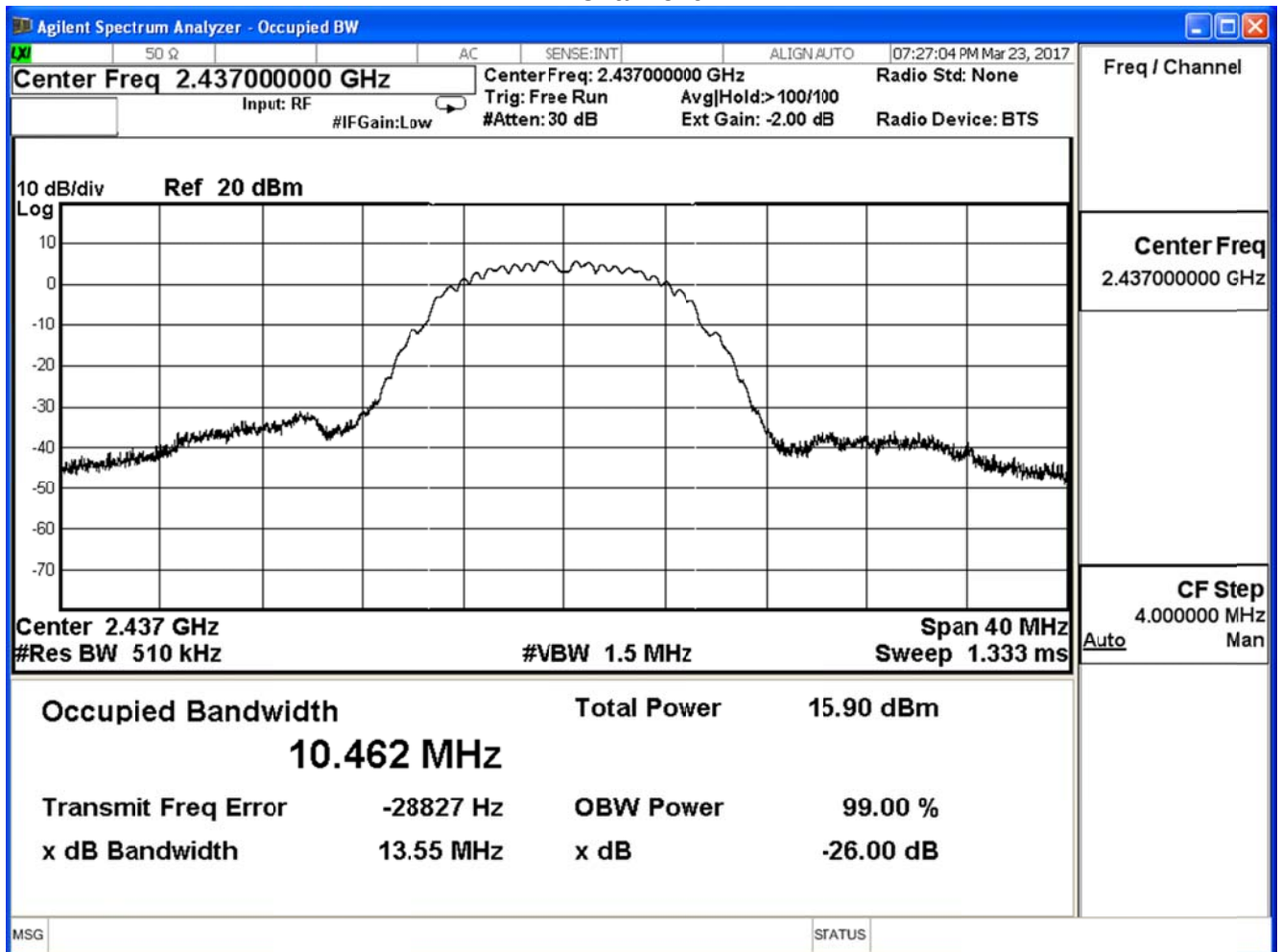
Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

802.11 b (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	10.386	--	Pass
6	2437	10.462	--	Pass
11	2462	10.468	--	Pass

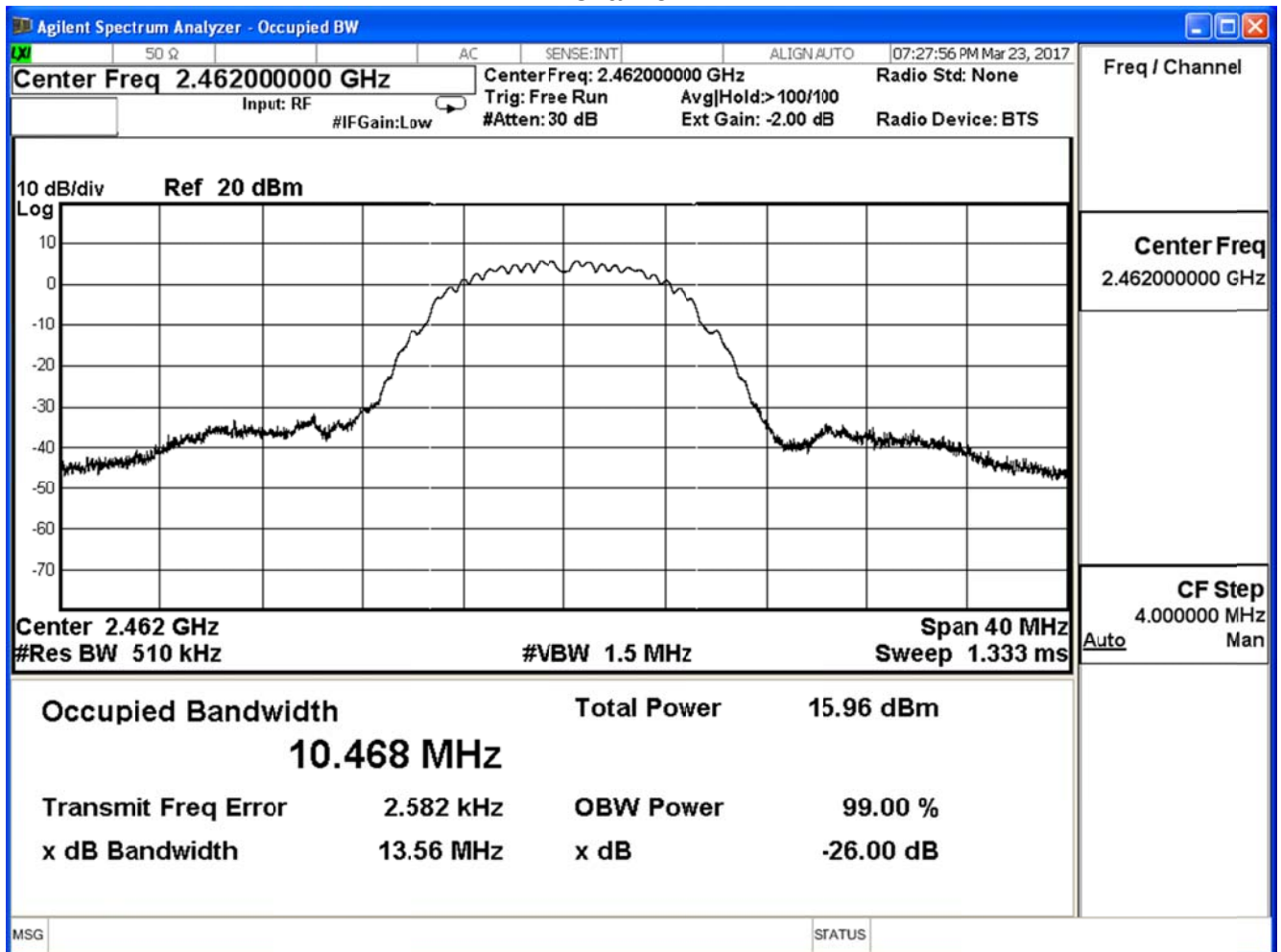
Channel 1



Channel 6



Channel 11

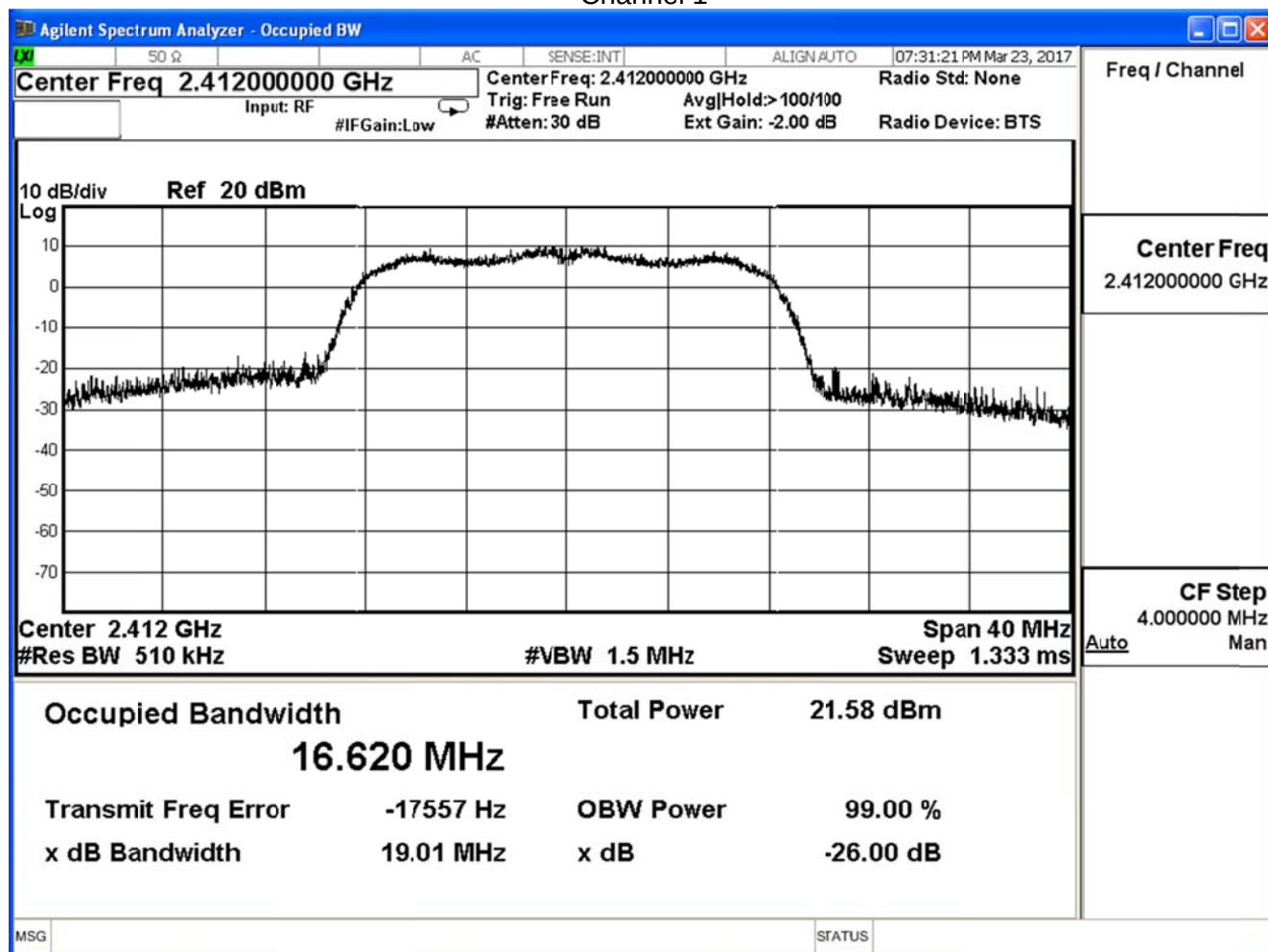


Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

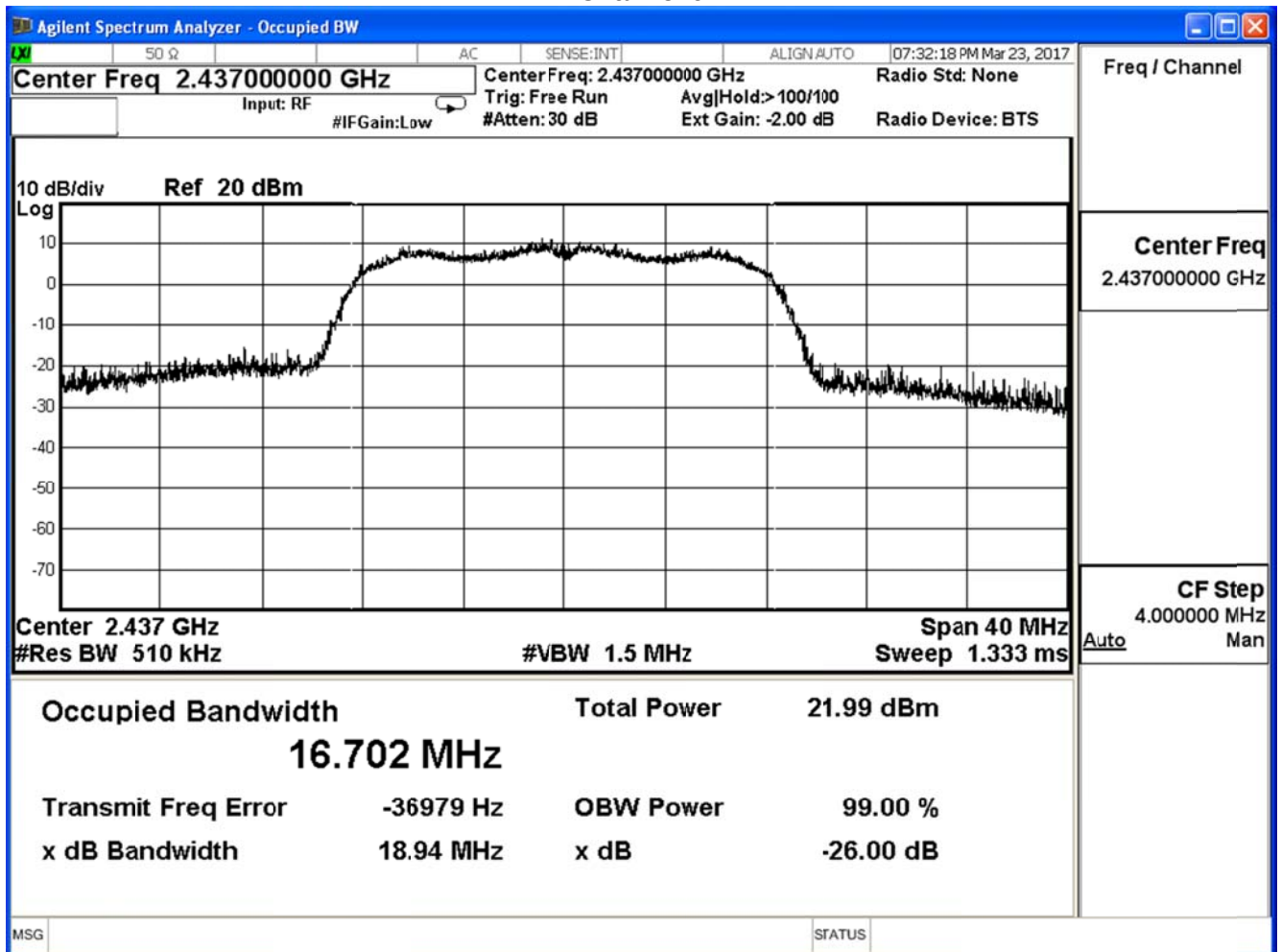
802.11 g (ANT 0)

Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	16.620	--	Pass
6	2437	16.702	--	Pass
11	2462	16.734	--	Pass

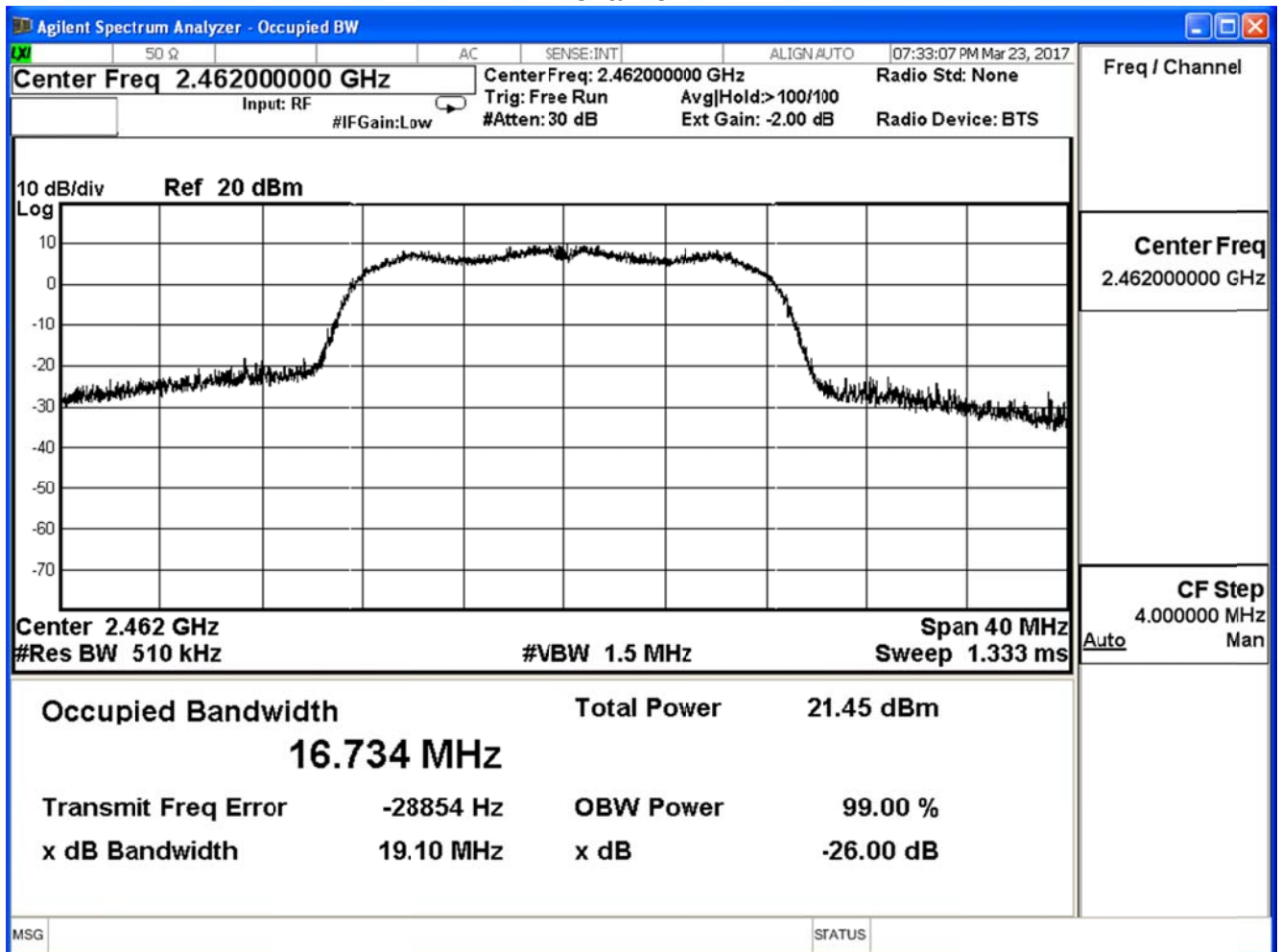
Channel 1



Channel 6



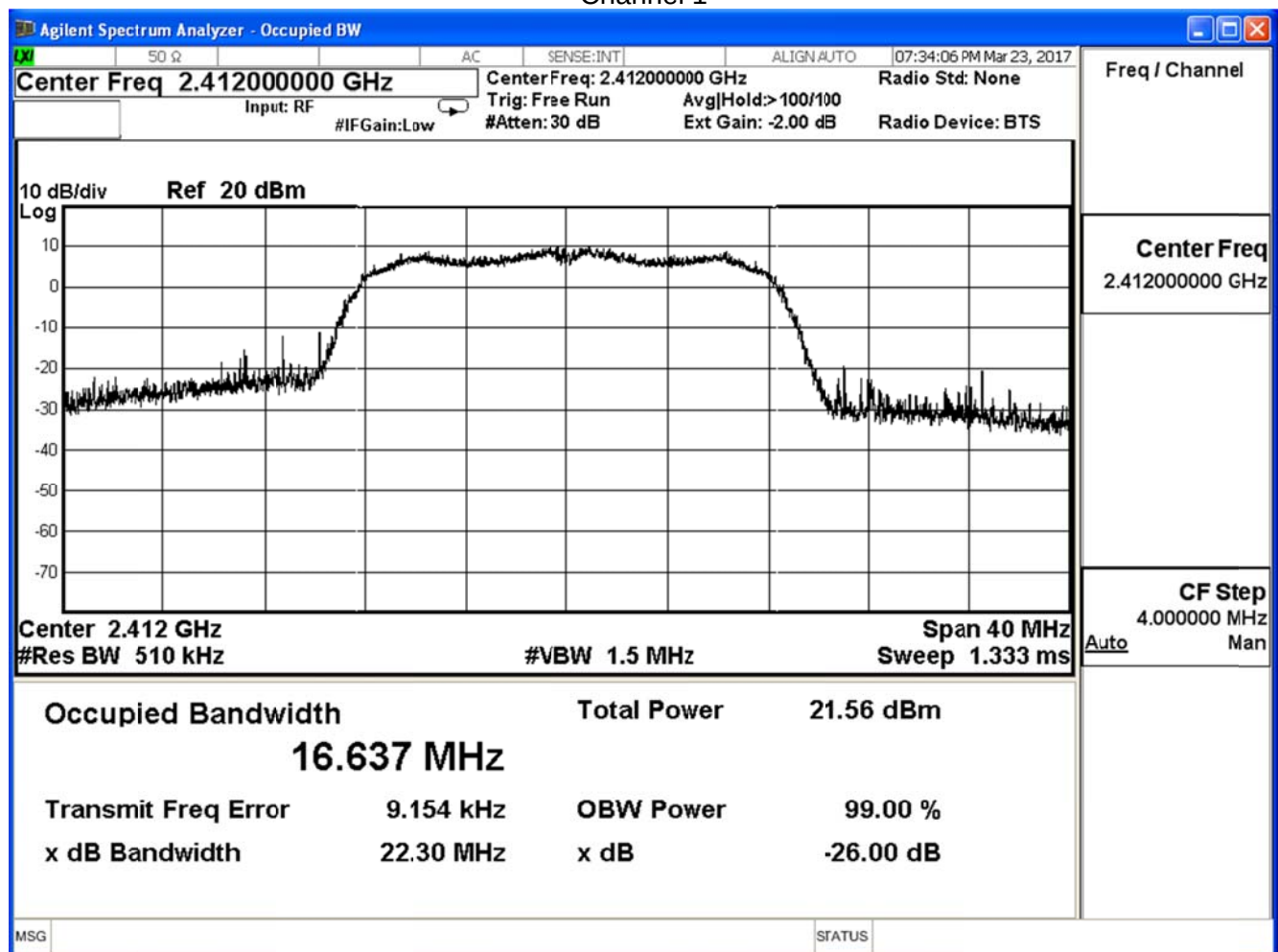
Channel 11



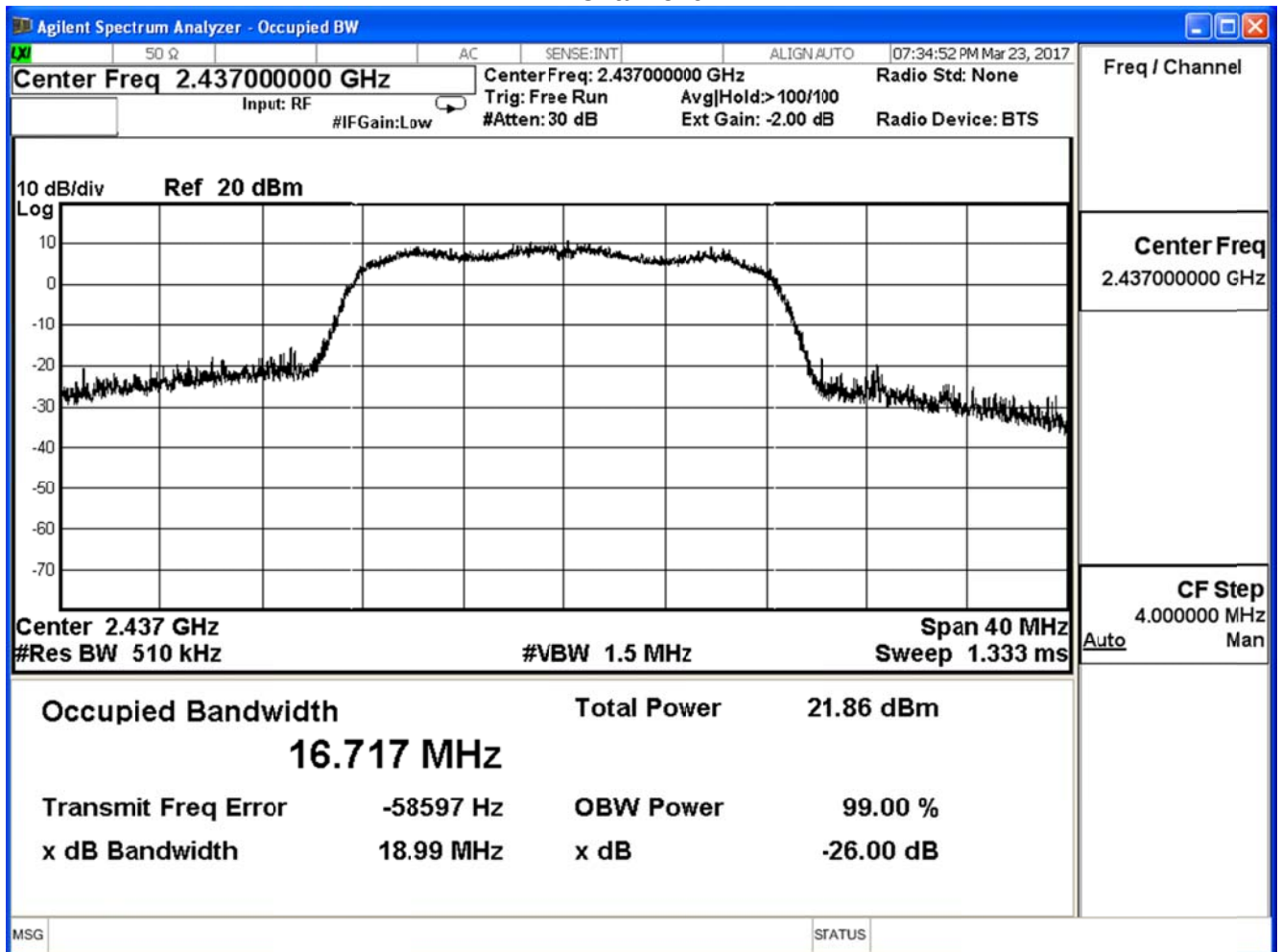
Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

802.11 g (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	16.637	--	Pass
6	2437	16.717	--	Pass
11	2462	16.678	--	Pass

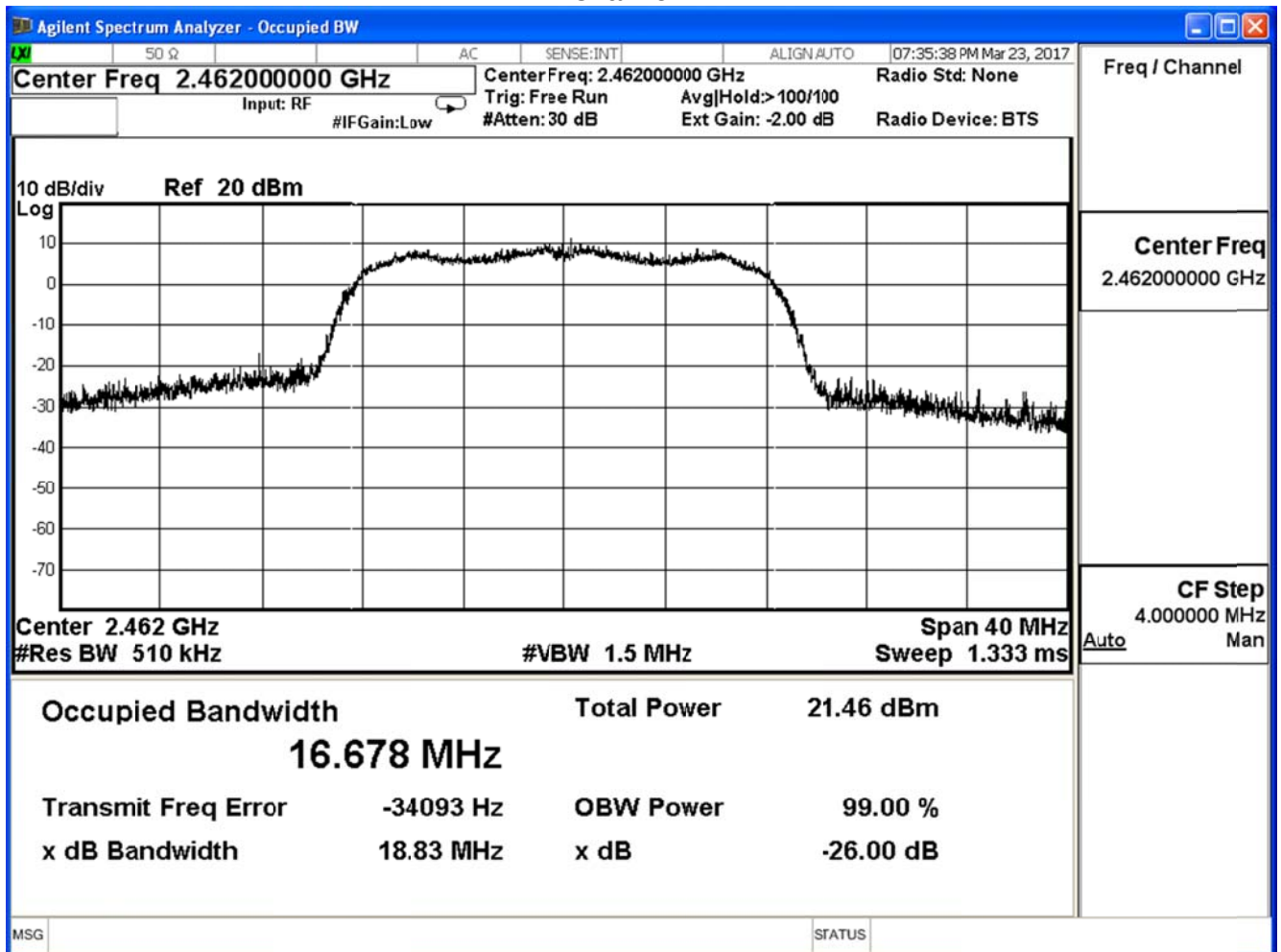
Channel 1



Channel 6



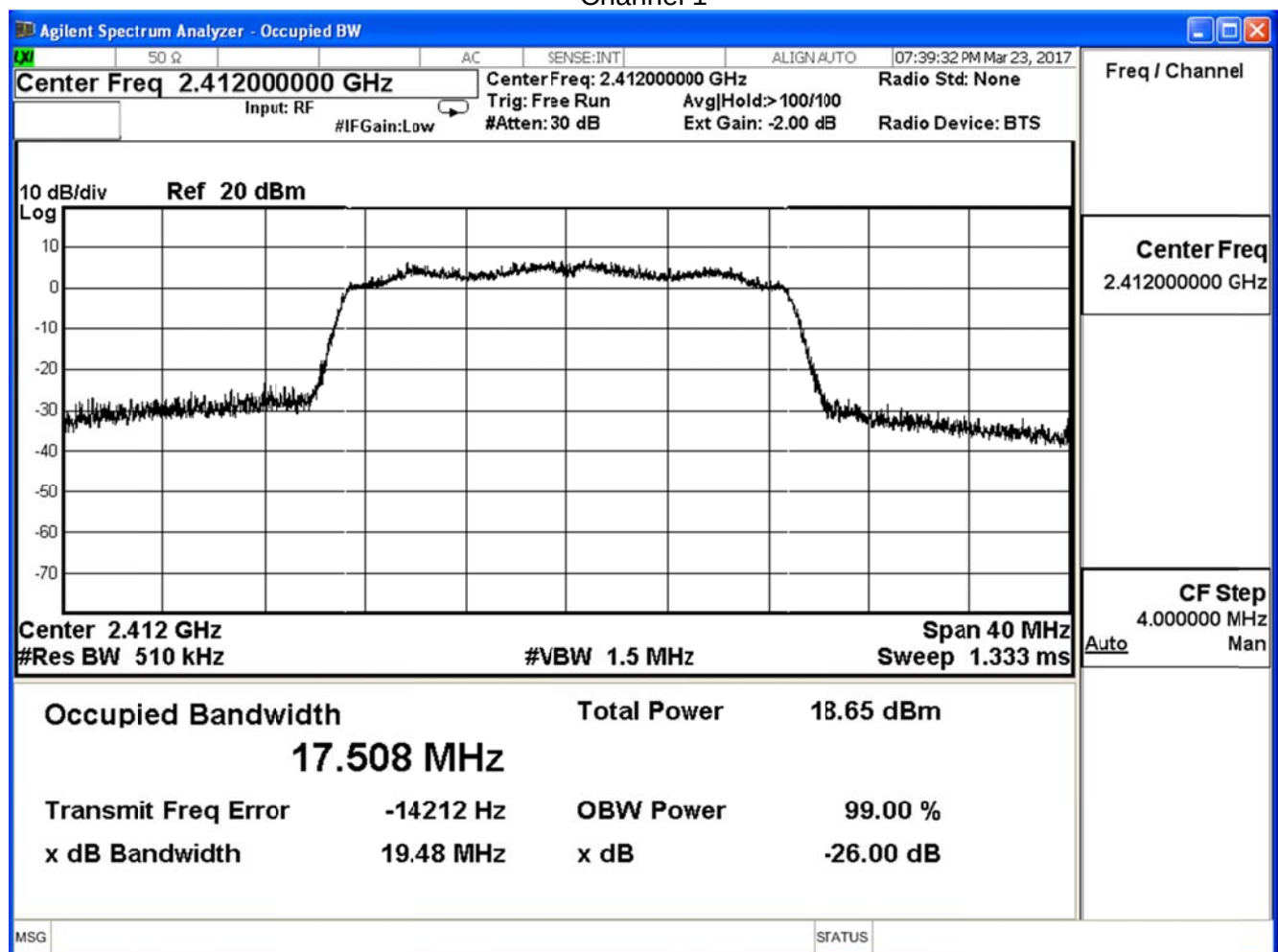
Channel 11



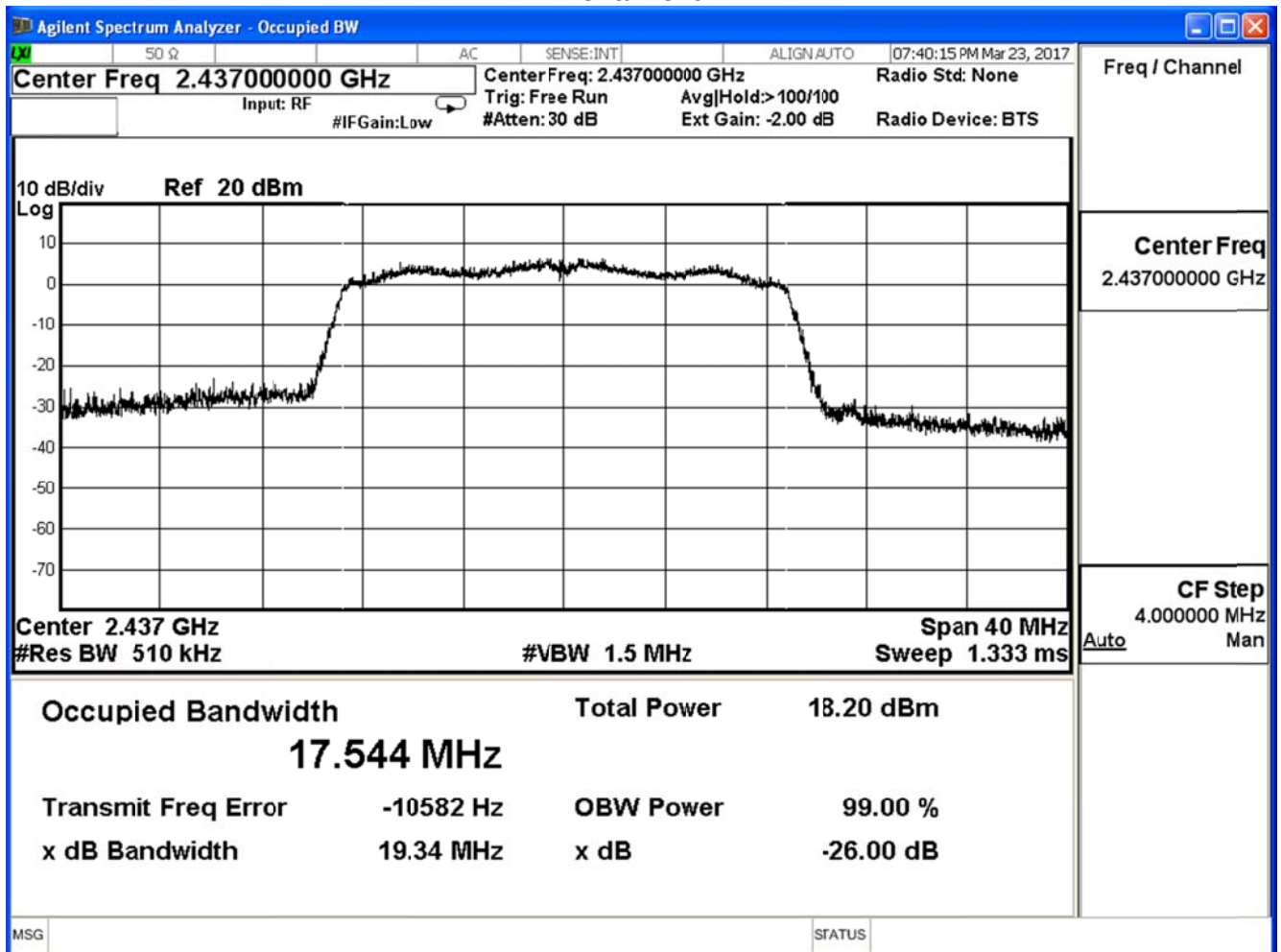
Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Tx_MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE802.11n 20MHz (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level(MHz)	Limit (MHz)	Result
1	2412	17.508	--	Pass
6	2437	17.544	--	Pass
11	2462	17.511	--	Pass

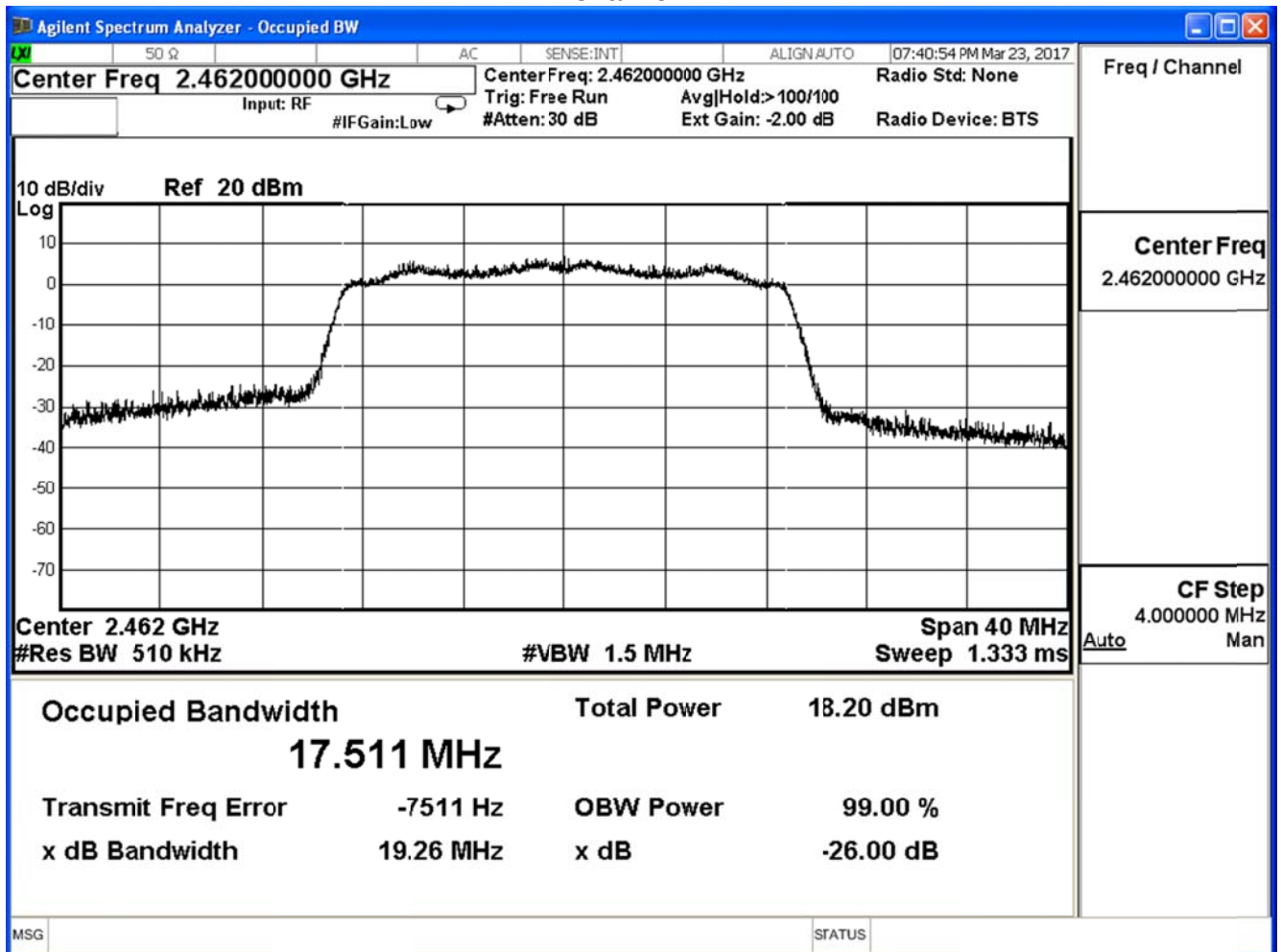
Channel 1



Channel 6



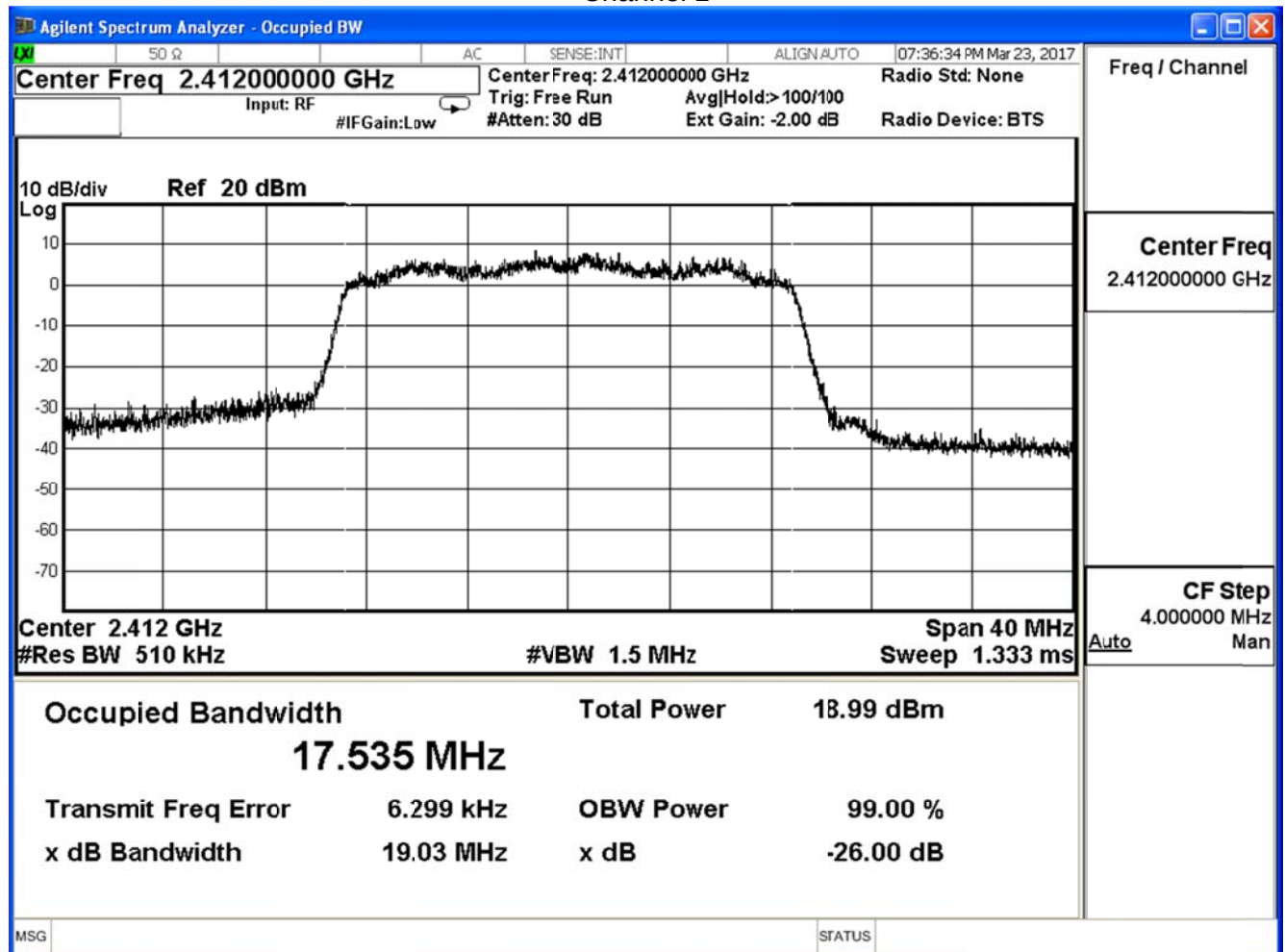
Channel 11



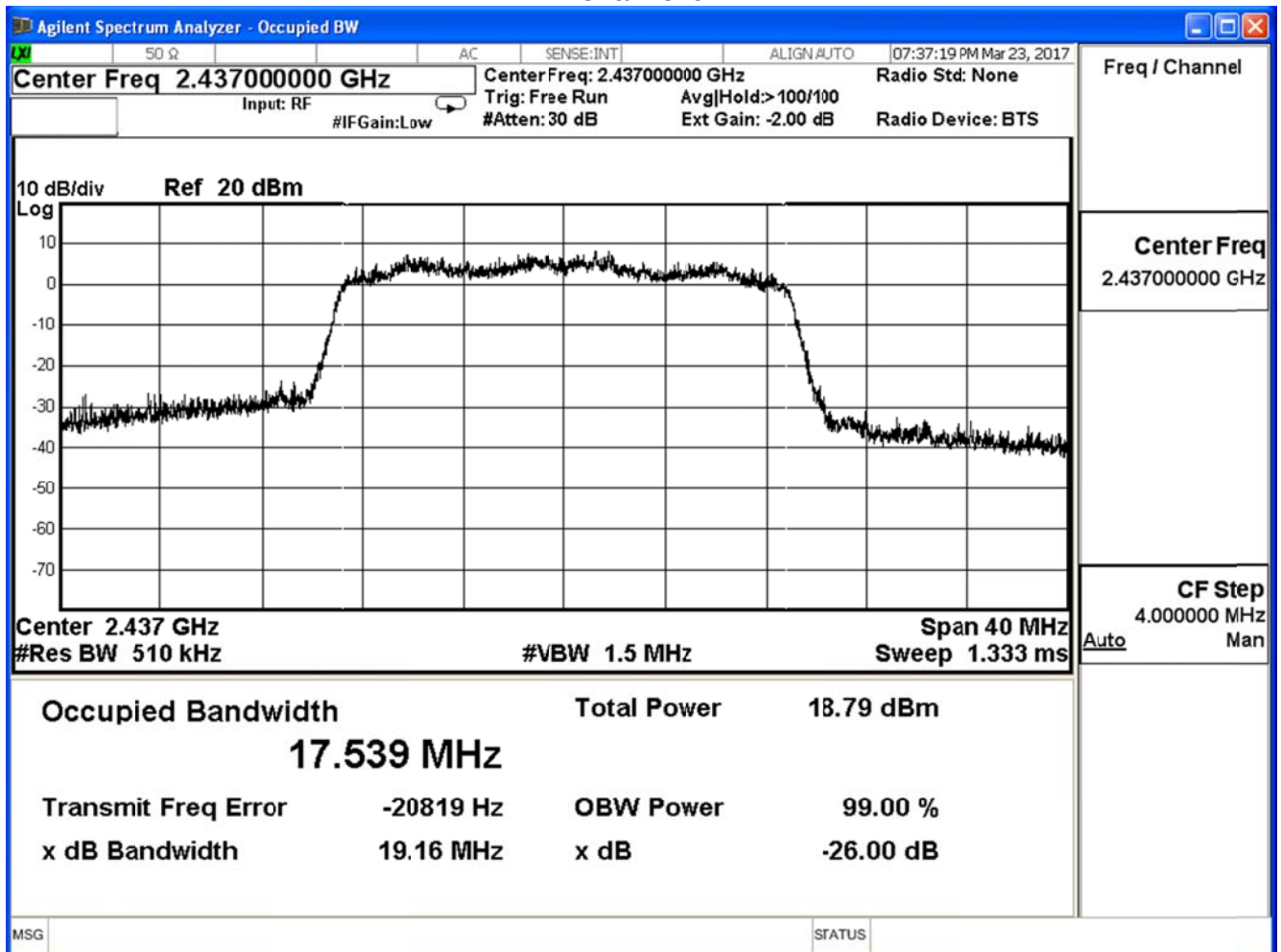
Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Tx_MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE802.11n 20MHz (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
1	2412	17.535	--	Pass
6	2437	17.539	--	Pass
11	2462	17.529	--	Pass

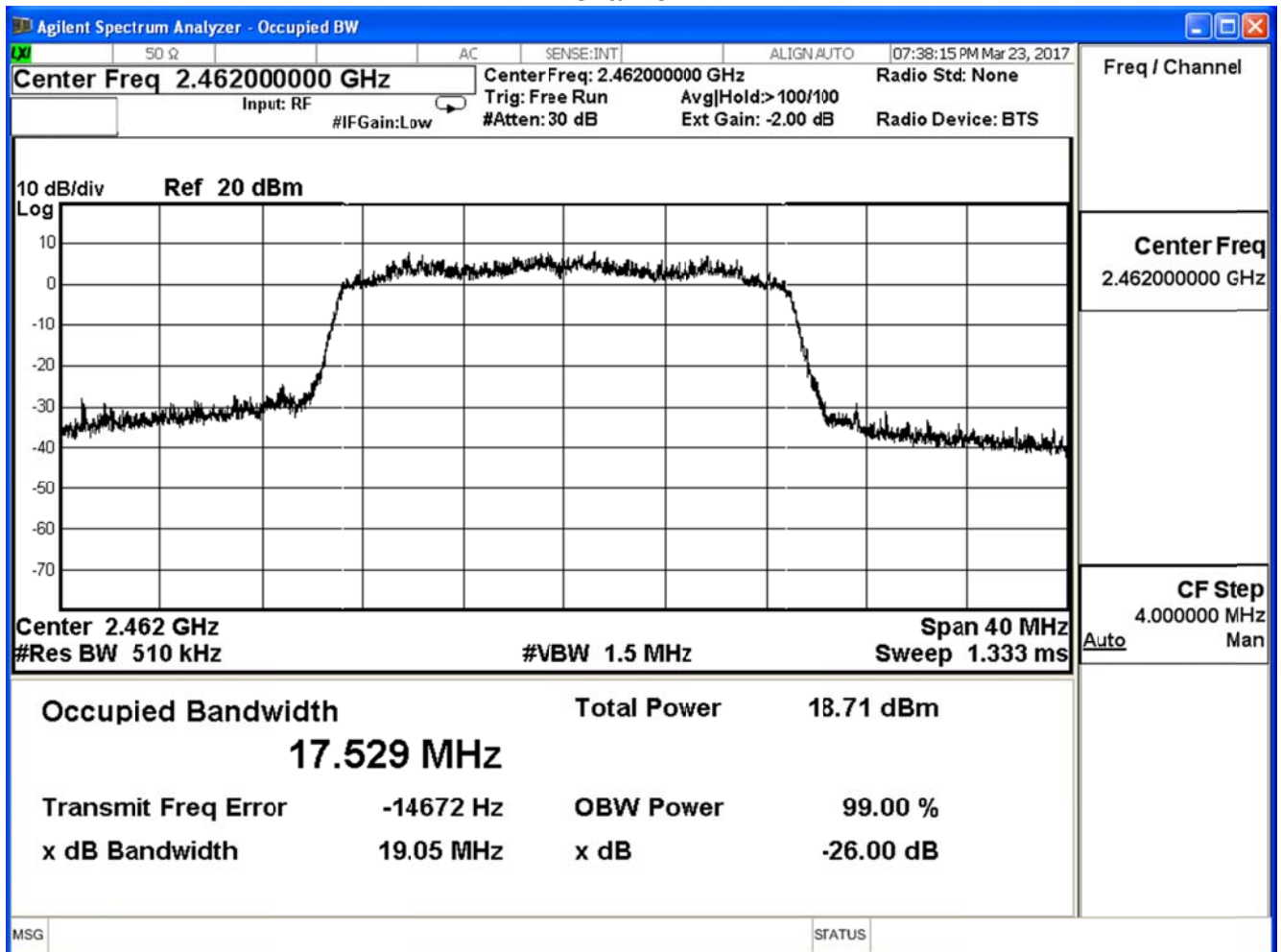
Channel 1



Channel 6



Channel 11

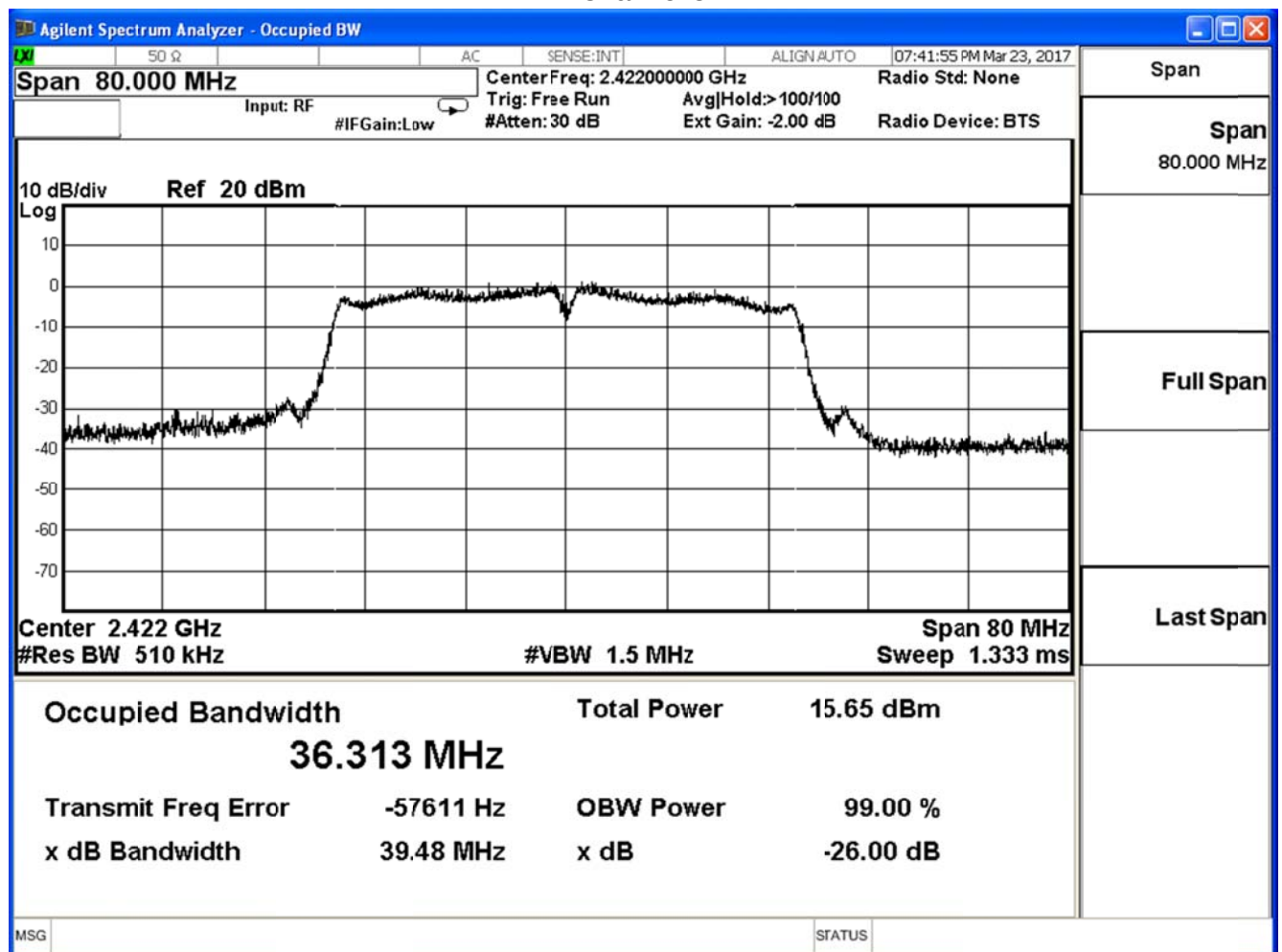


Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Tx MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

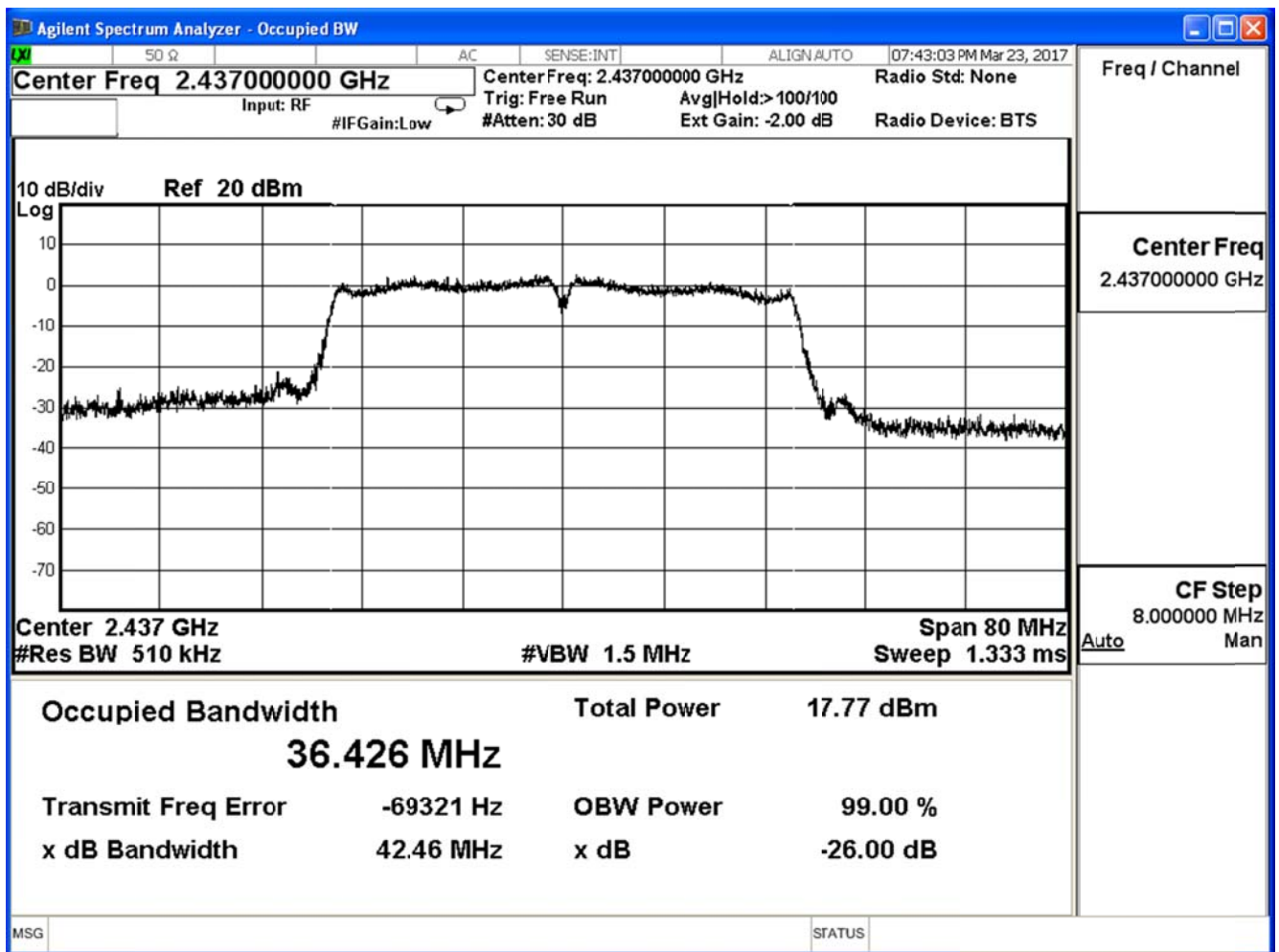
IEEE802.11n 40MHz (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
3	2422	36.313	--	Pass
6	2437	36.426	--	Pass
9	2452	36.511	--	Pass

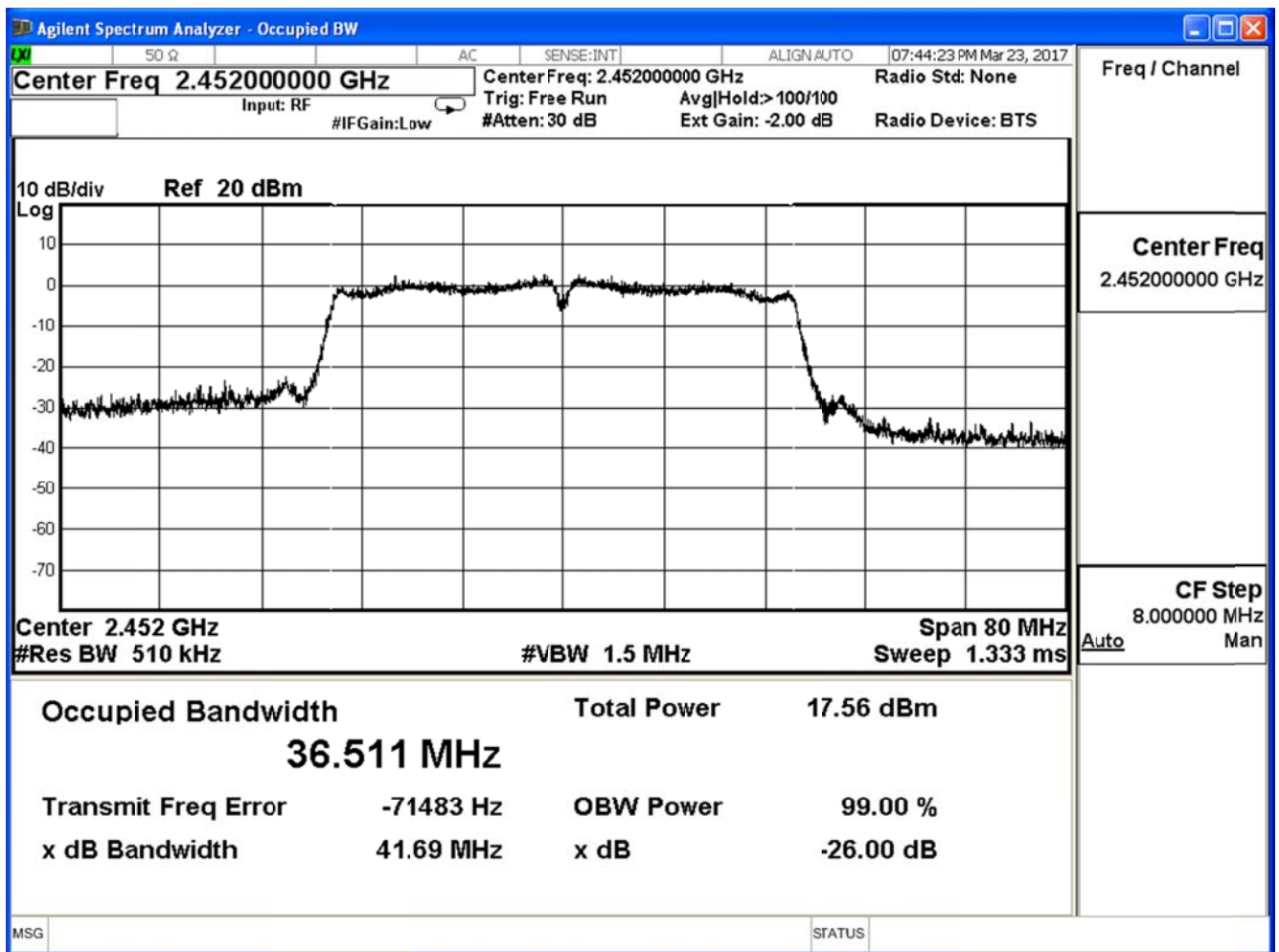
Channel 3



Channel 6



Channel 9

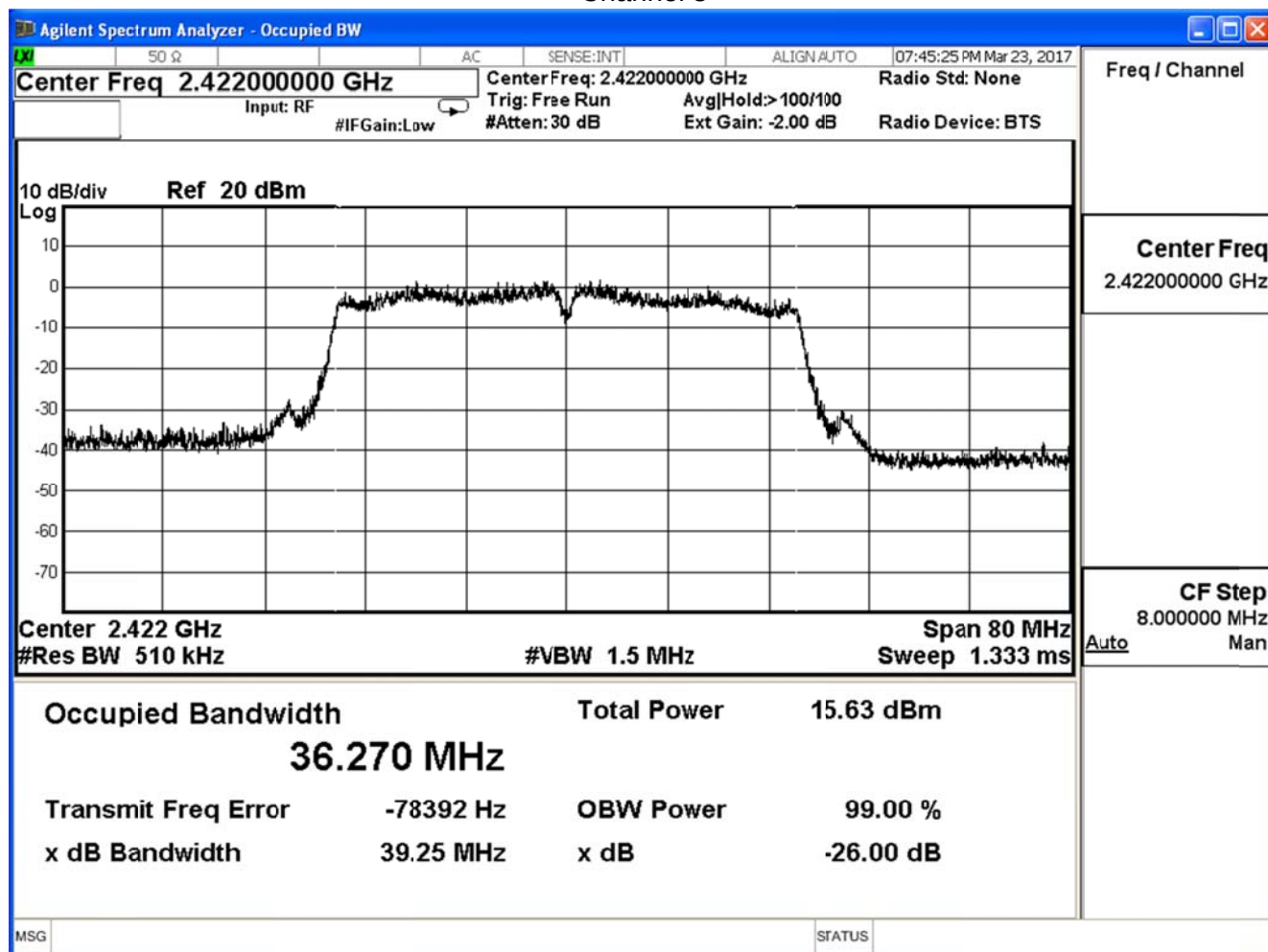


Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Tx_MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

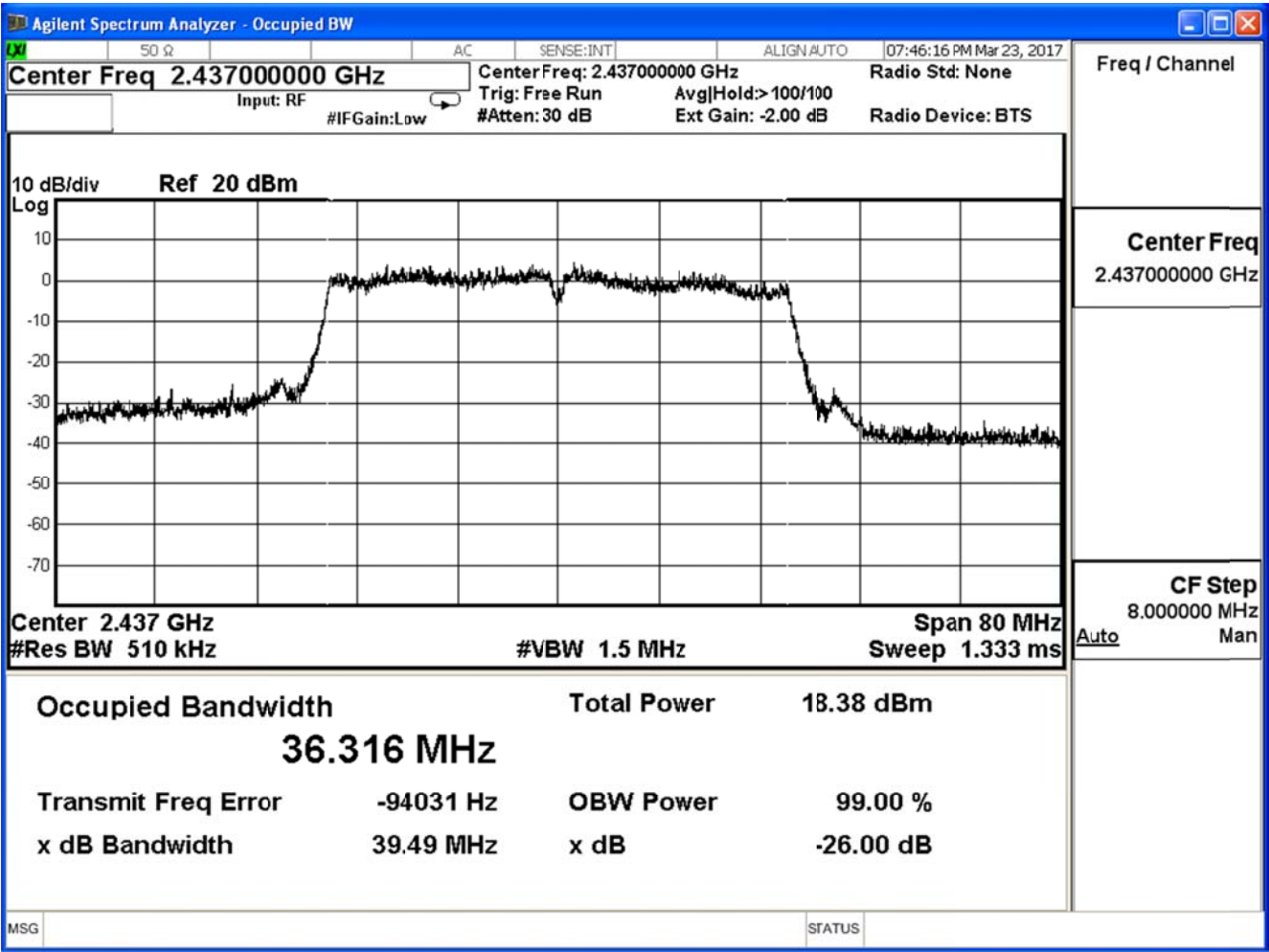
IEEE802.11n 40MHz (ANT 1)

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
3	2422	36.270	--	Pass
6	2437	36.316	--	Pass
9	2452	36.396	--	Pass

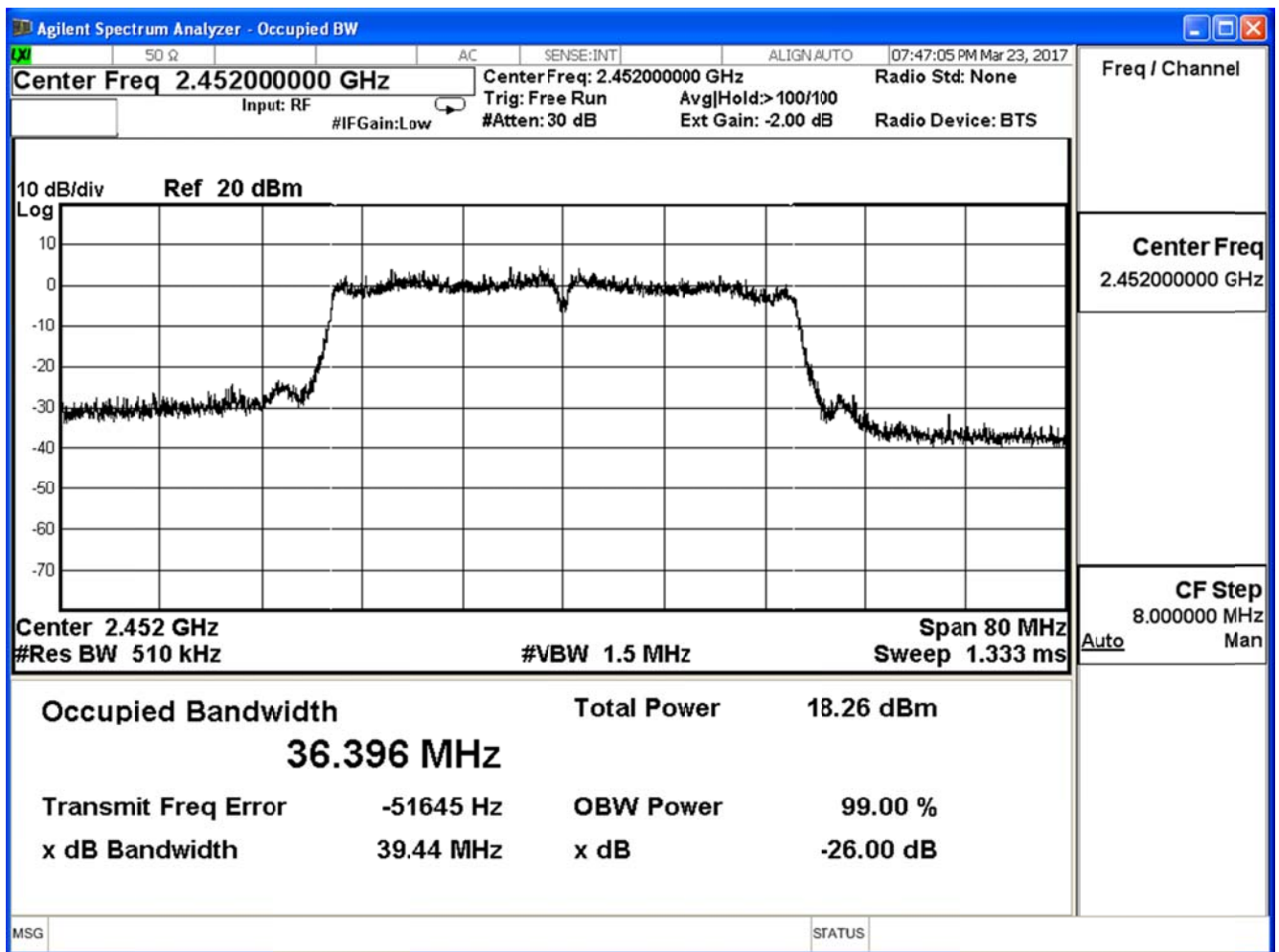
Channel 3



Channel 6



Channel 9



9. Power Density

9.1. Test Equipment

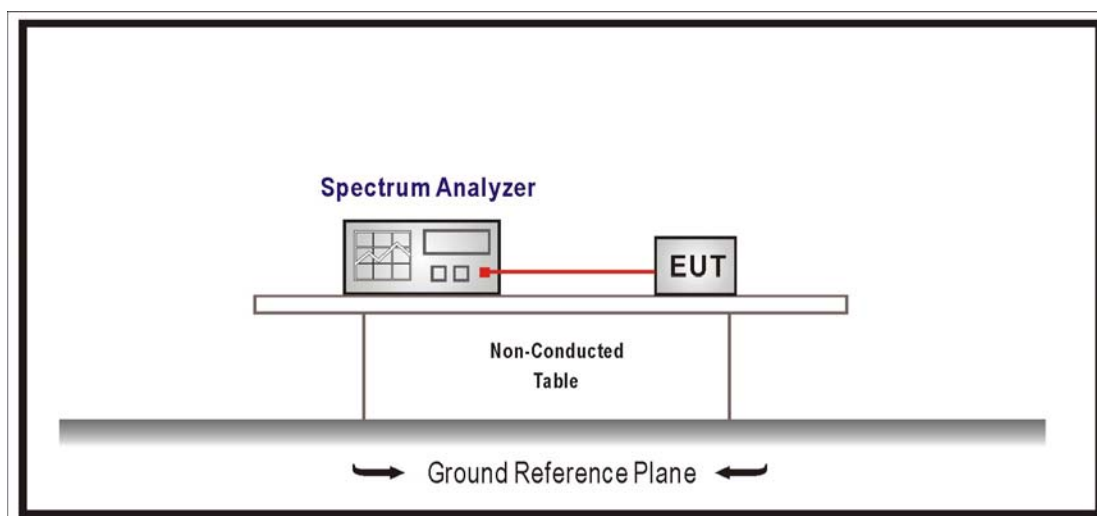
The following test equipment is used during the test:

Power Density / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

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

9.2. Test Setup



9.3. 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.

9.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure section 10.2 of KDB558074v03r05 for compliance to FCC 47CFR 15.247 requirements. Set 3KHz $\leq$ RBW $\leq$ 100 kHz, Set VBW $\geq$ 3xRBW, Sweep time=Auto, Set Peak detector.

9.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

9.6. Uncertainty

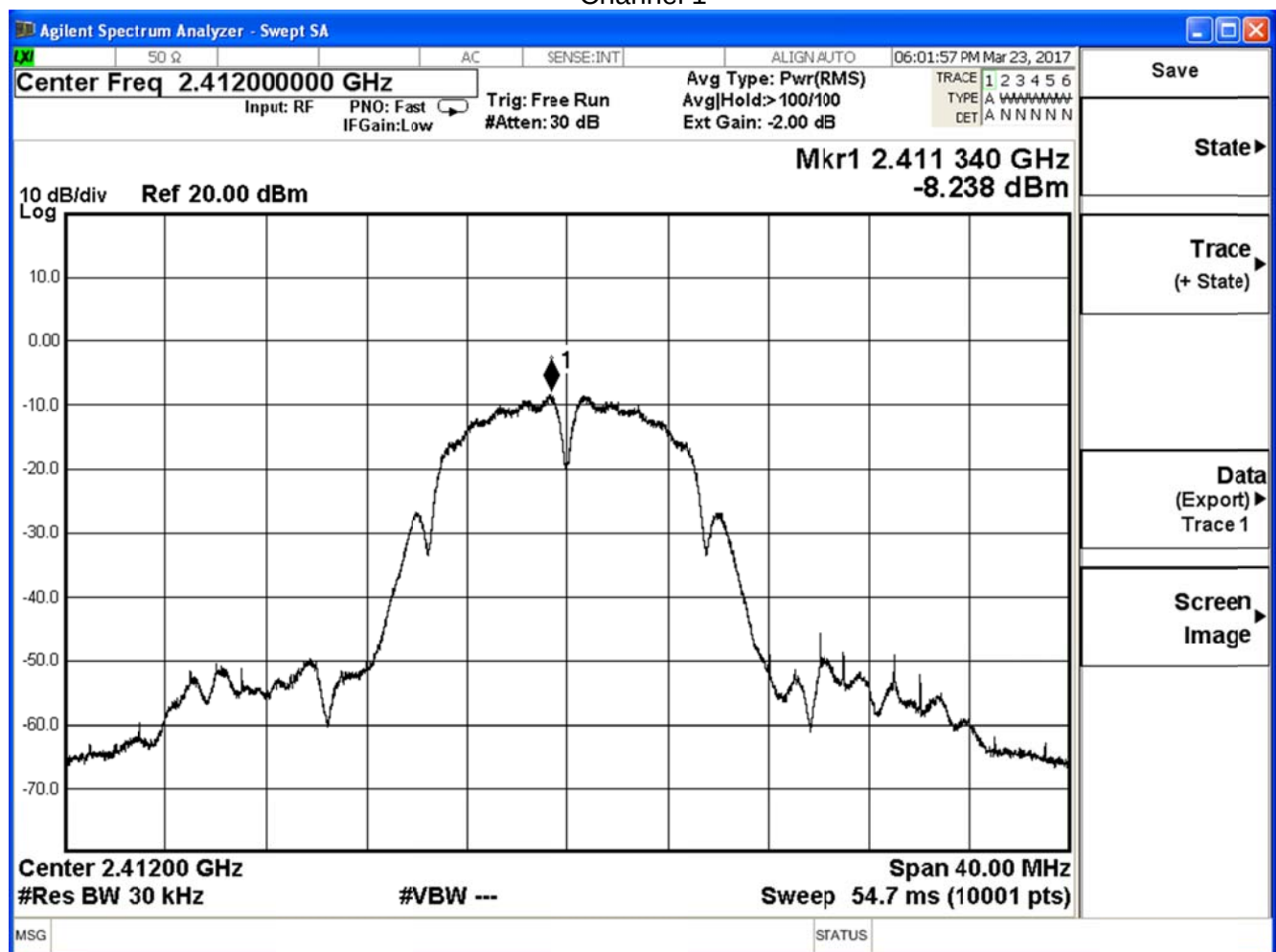
The measurement uncertainty is defined as ± 1.27 dB.

9.7. Test Result

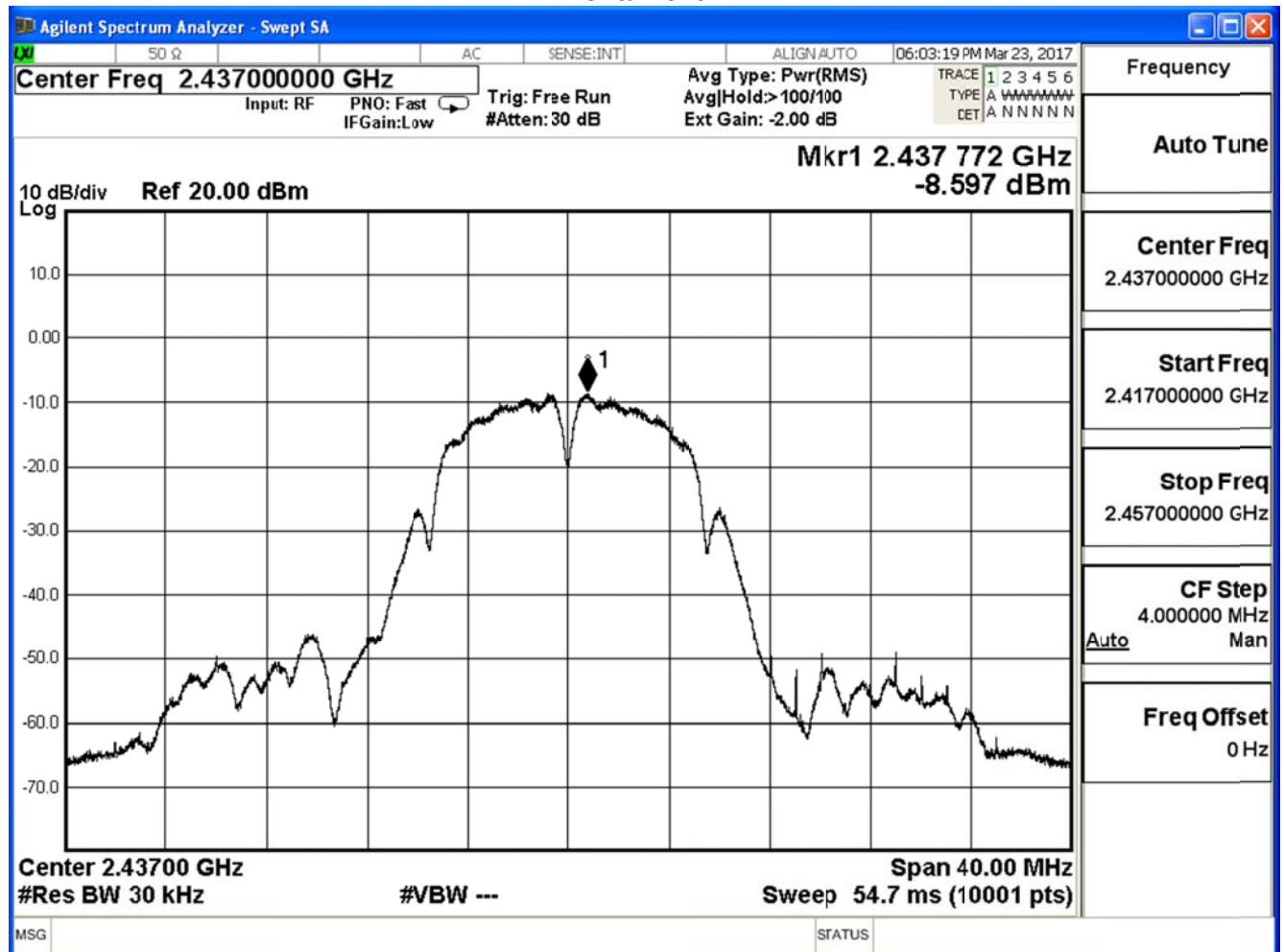
Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE 802.11b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-8.238	≤ 8	Pass
6	2437	-8.597	≤ 8	Pass
11	2462	-8.665	≤ 8	Pass

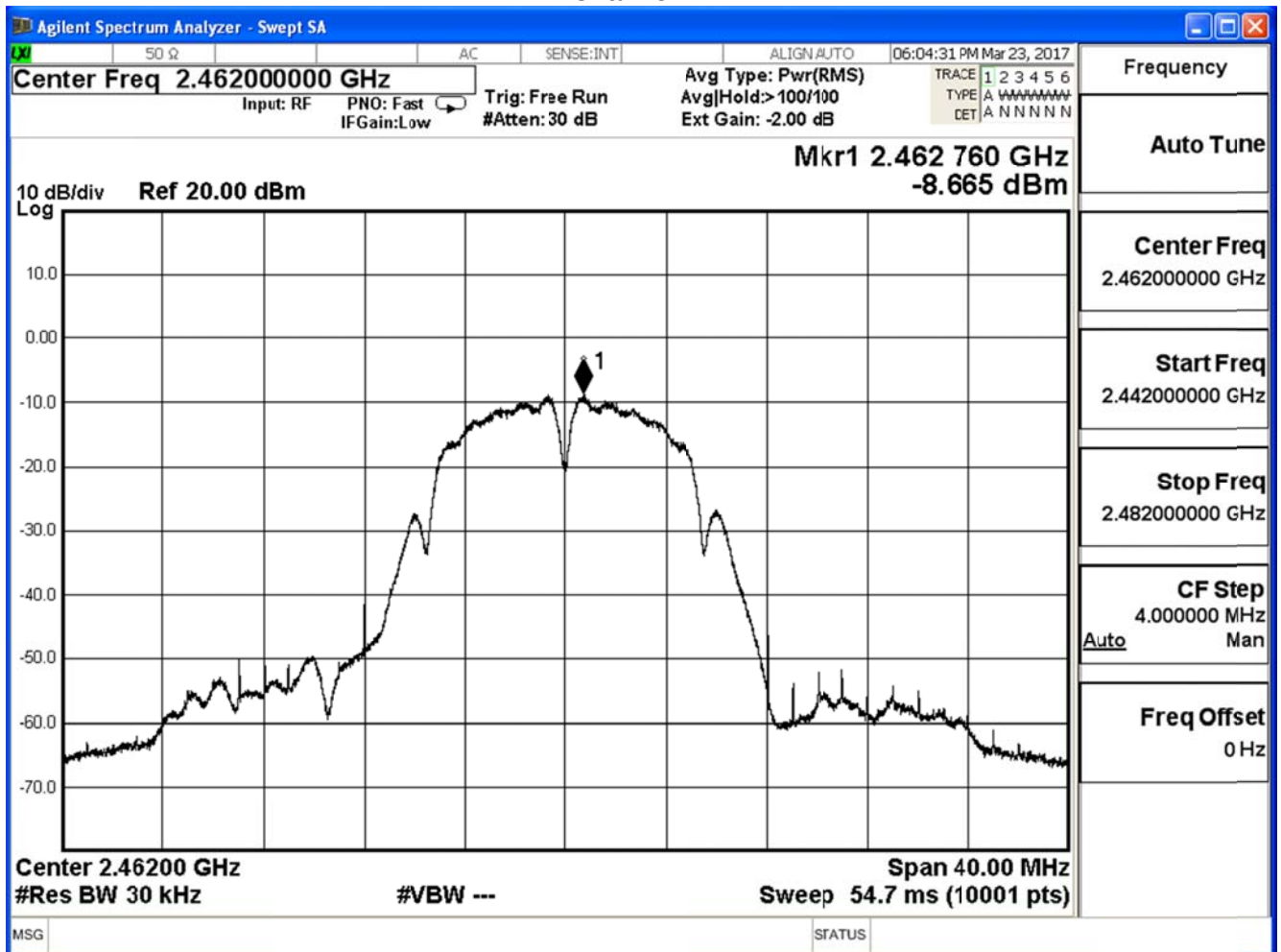
Channel 1



Channel 6



Channel 11

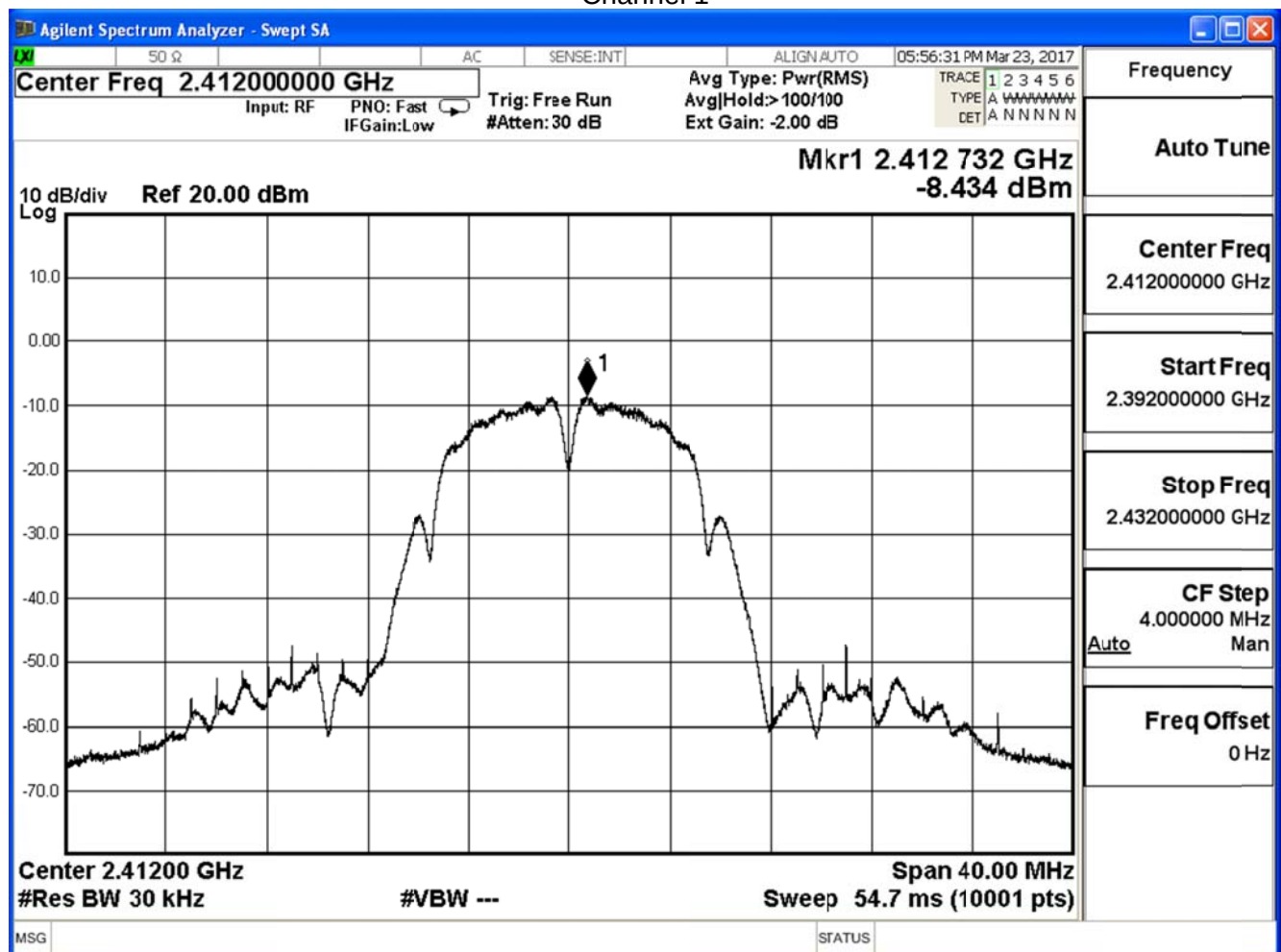


Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

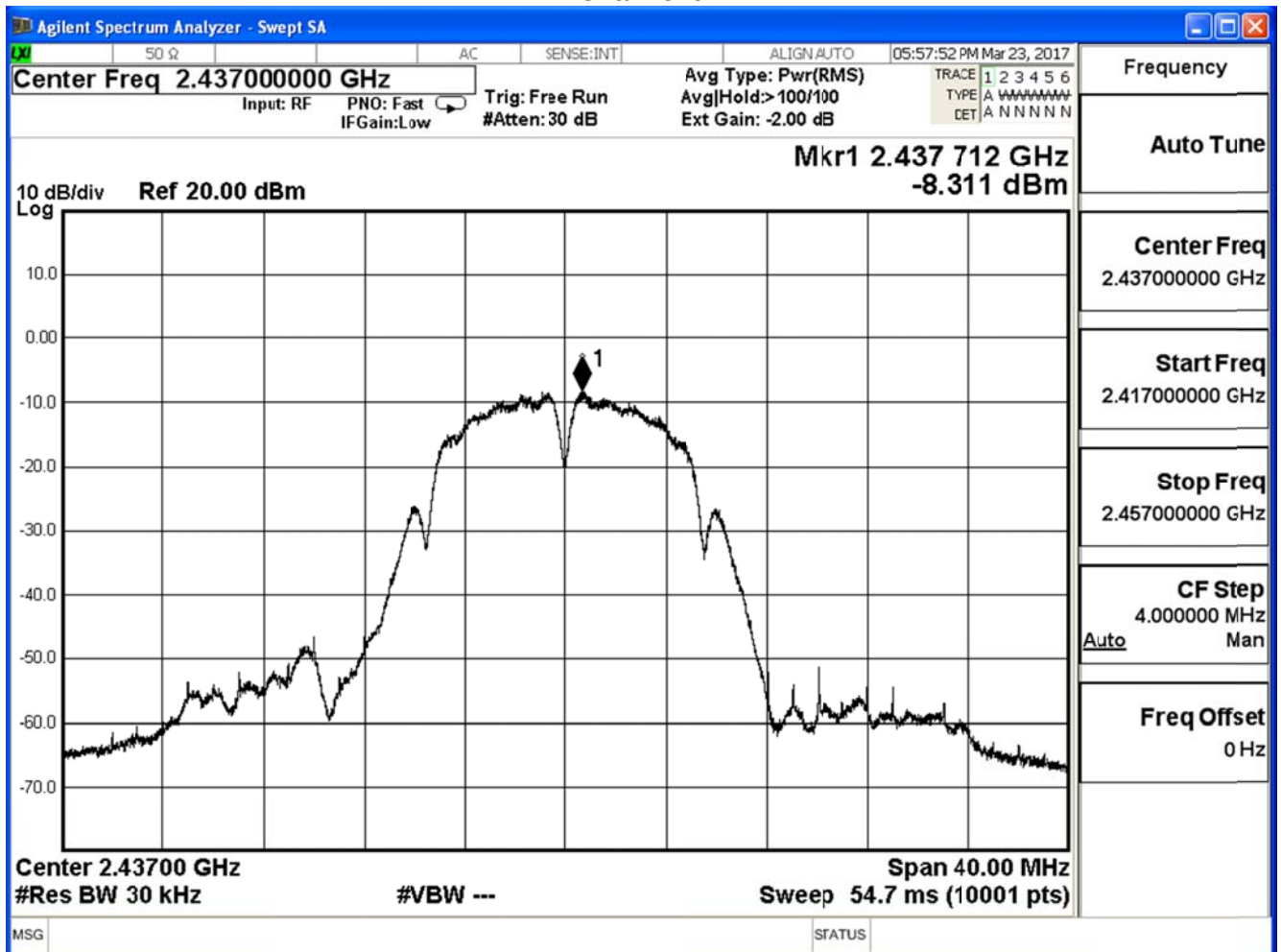
IEEE 802.11b (ANT 1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-8.434	≤ 8	Pass
6	2437	-8.311	≤ 8	Pass
11	2462	-8.549	≤ 8	Pass

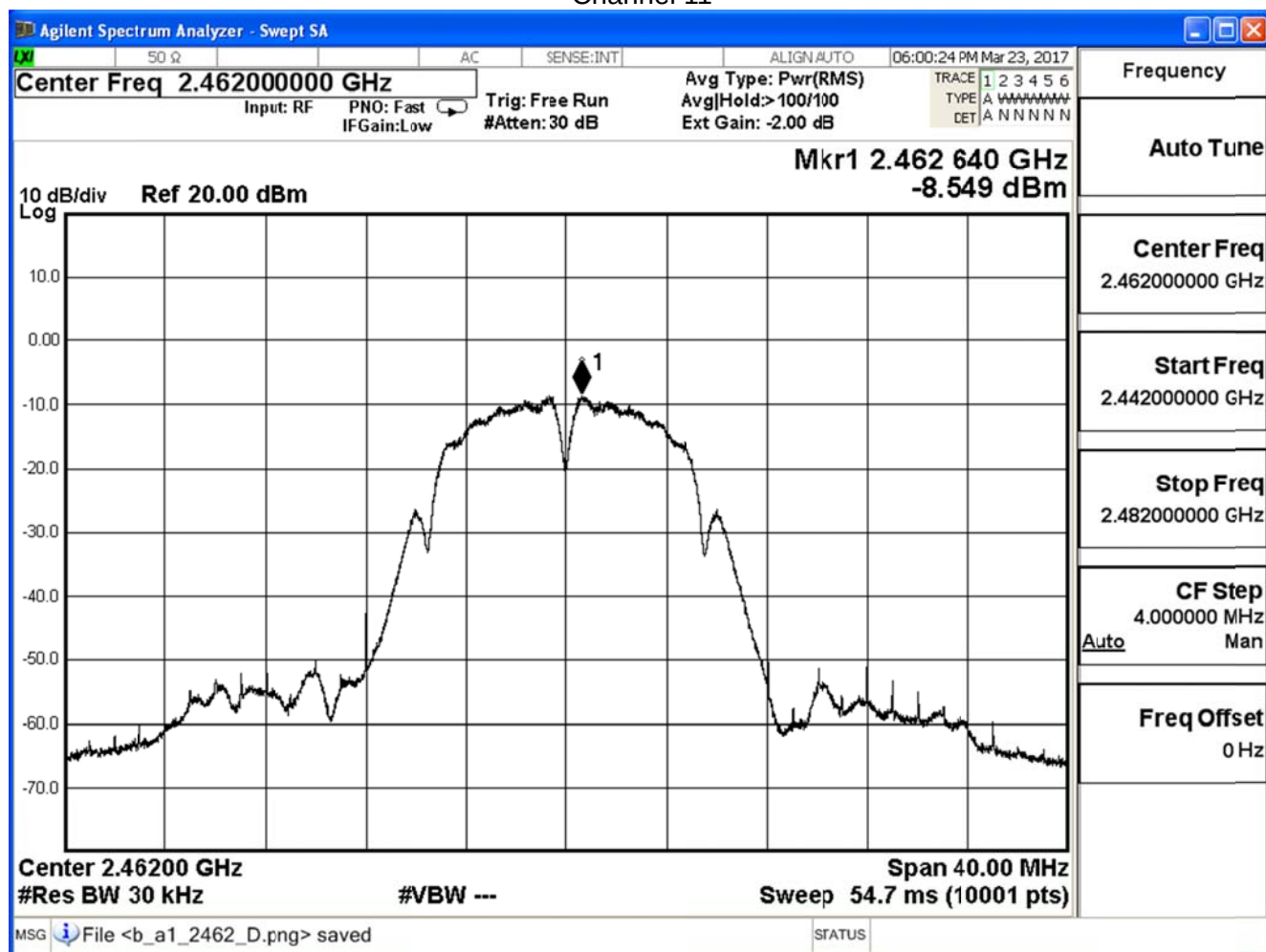
Channel 1



Channel 6



Channel 11

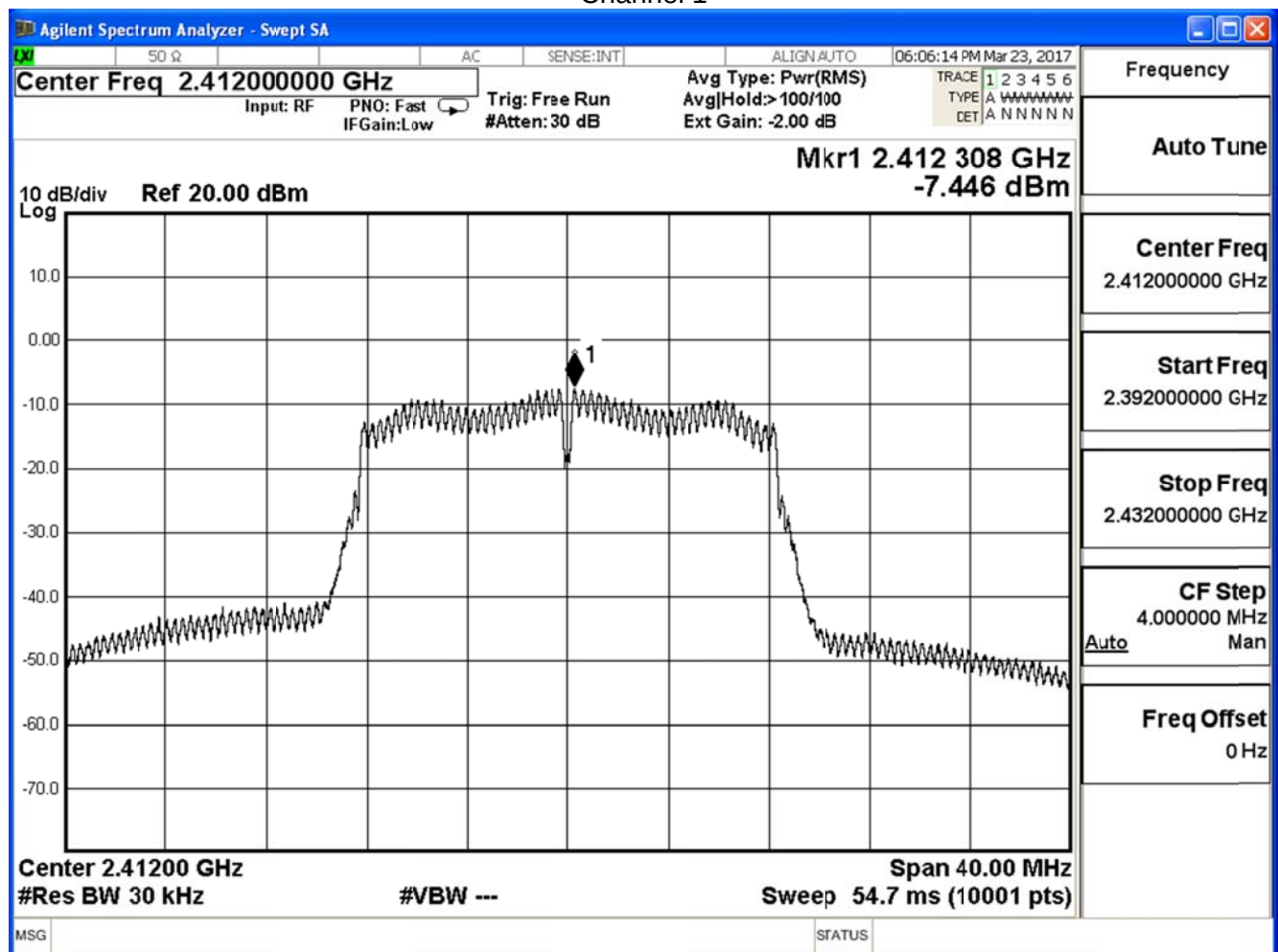


Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

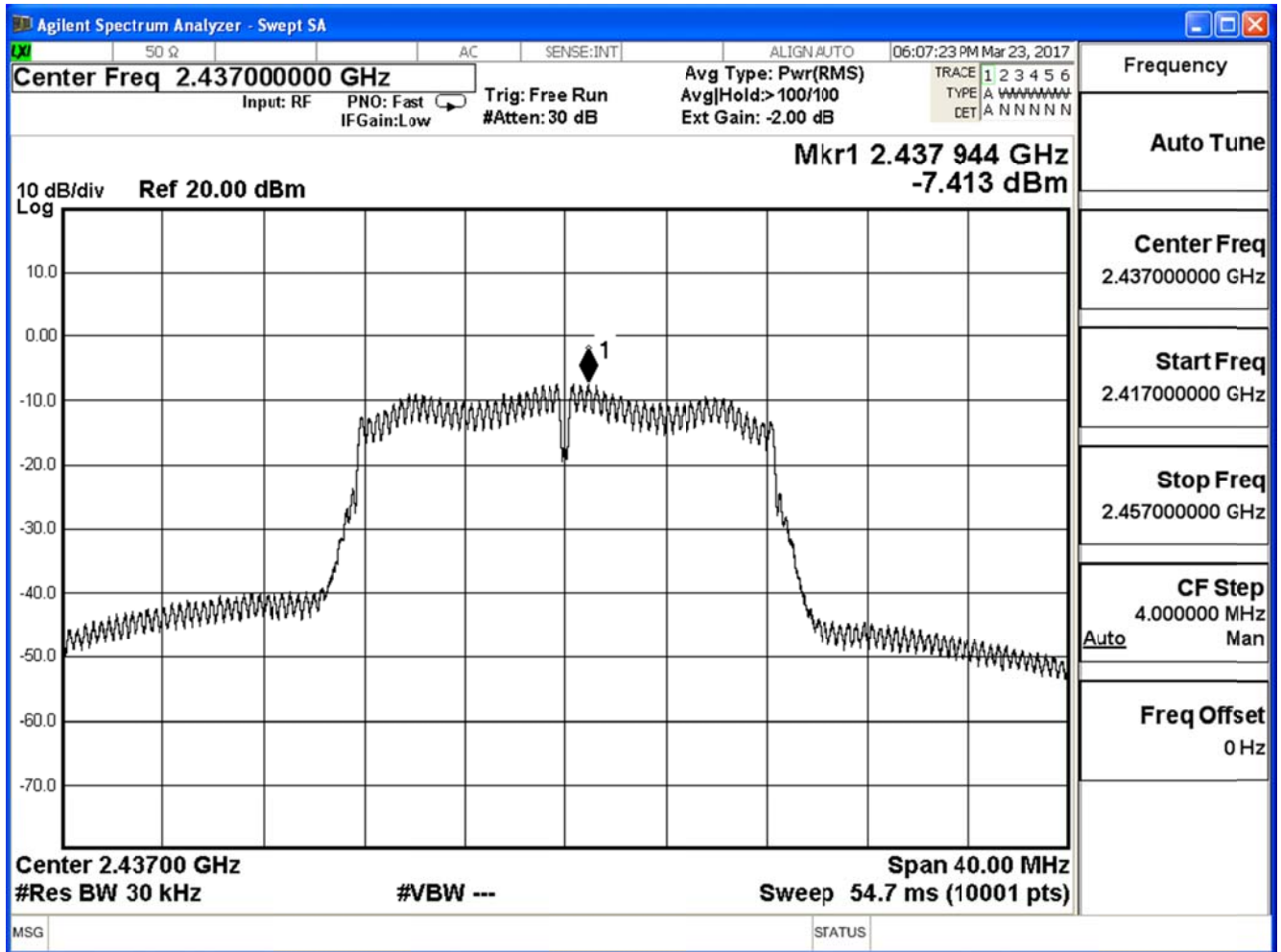
IEEE 802.11g (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-7.446	≤ 8	Pass
6	2437	-7.413	≤ 8	Pass
11	2462	-7.813	≤ 8	Pass

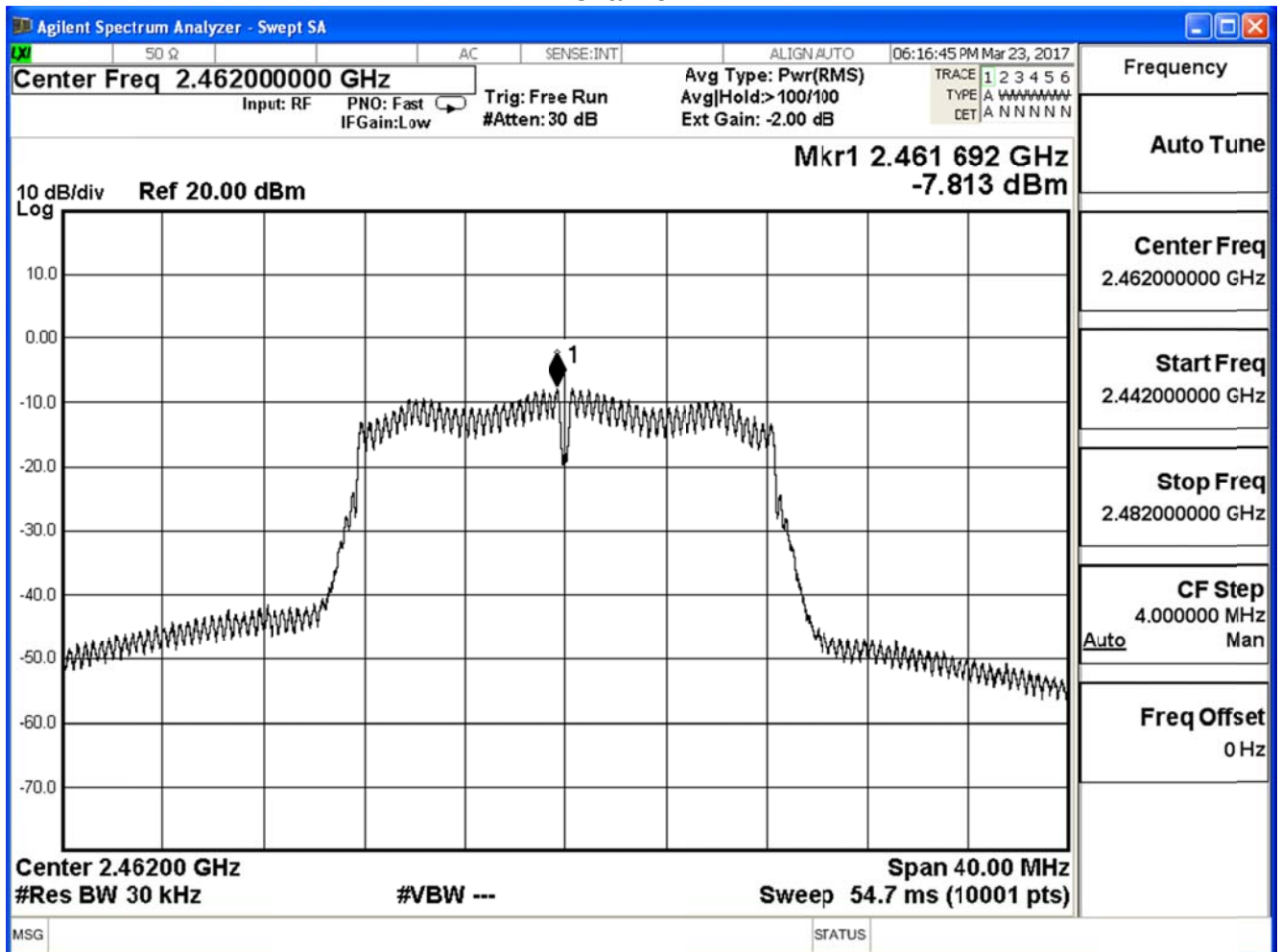
Channel 1



Channel 6



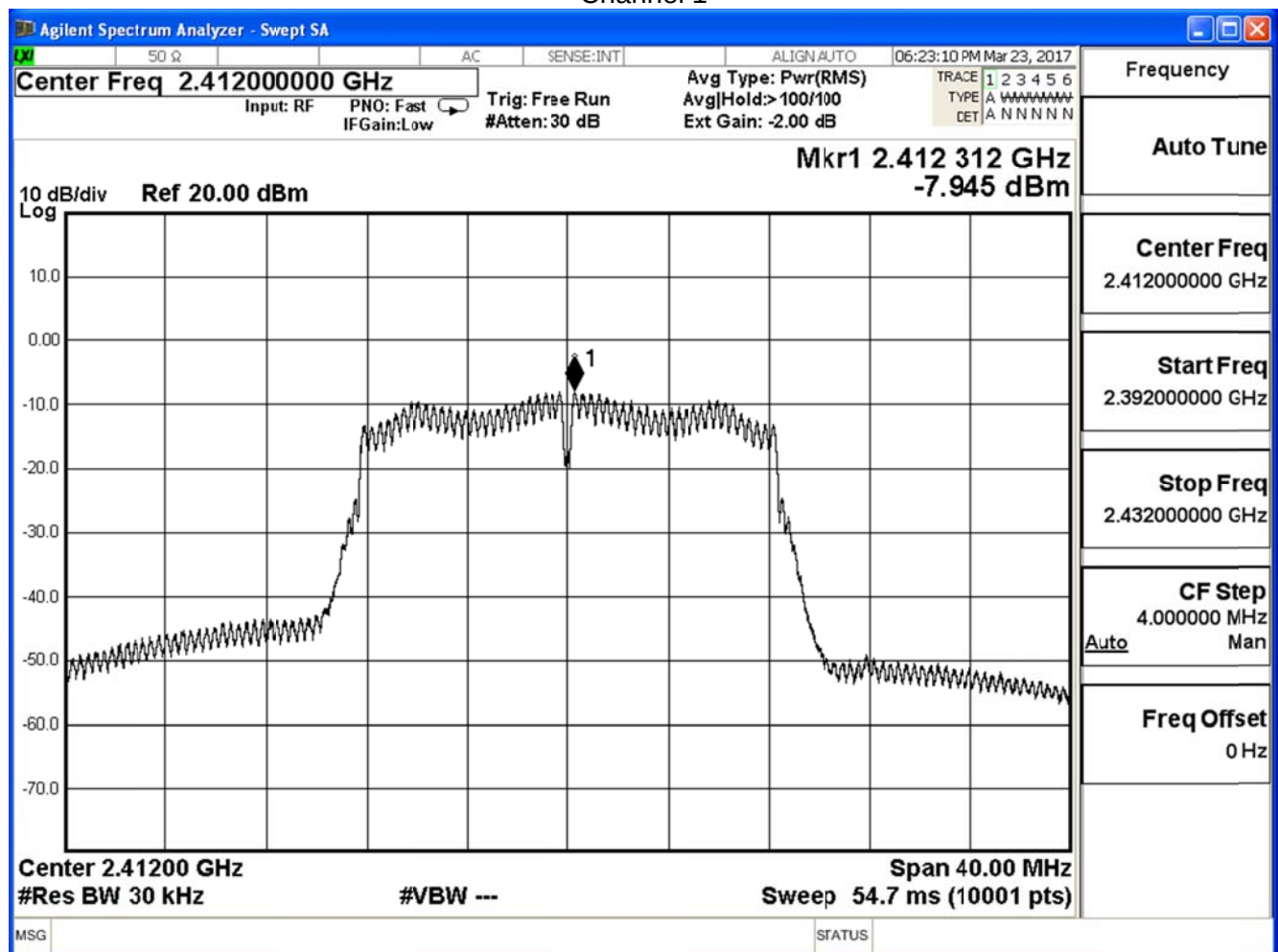
Channel 11



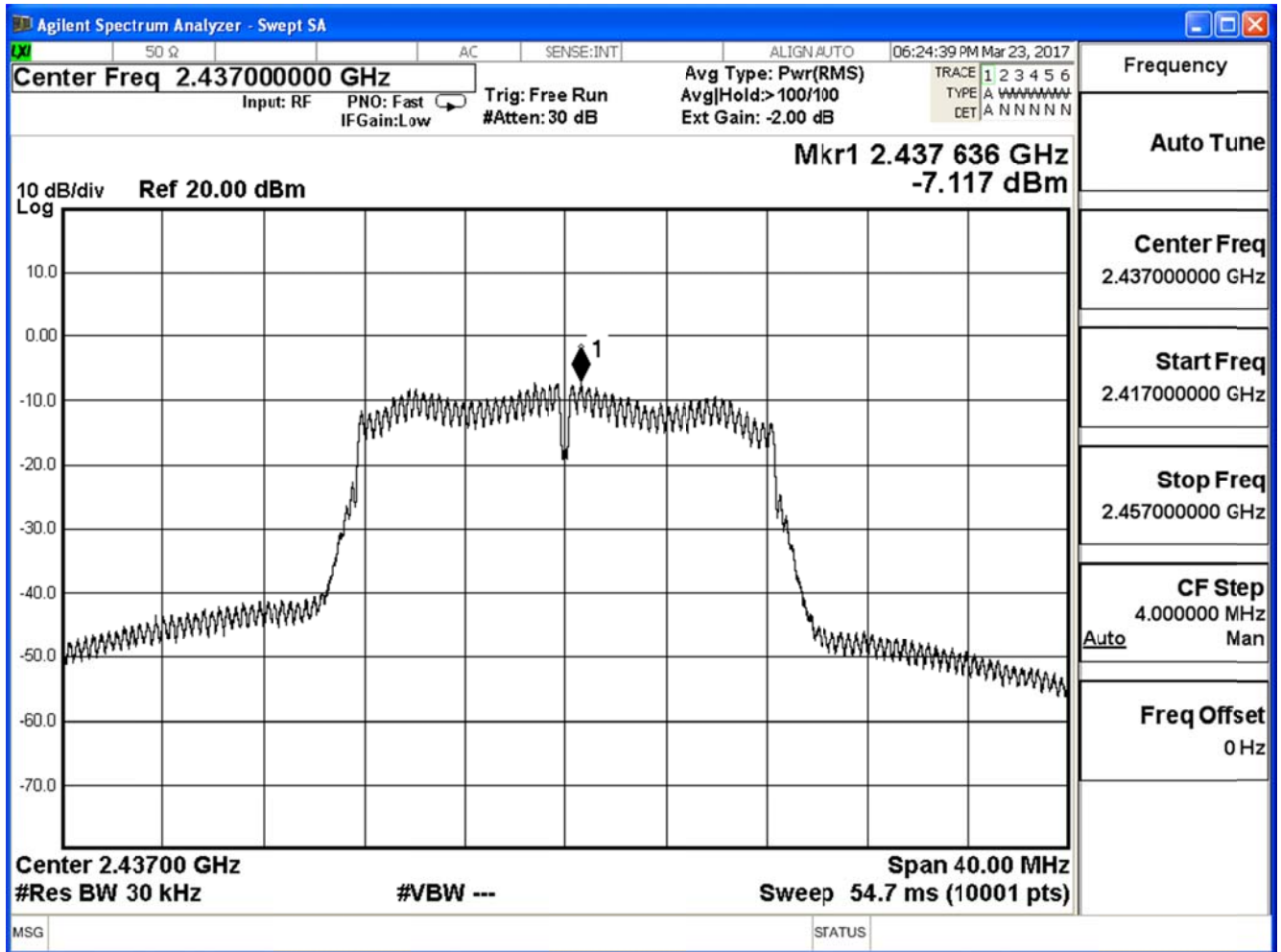
Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 1: Tx_SISO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE 802.11g (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-7.945	≤ 8	Pass
6	2437	-7.117	≤ 8	Pass
11	2462	-7.859	≤ 8	Pass

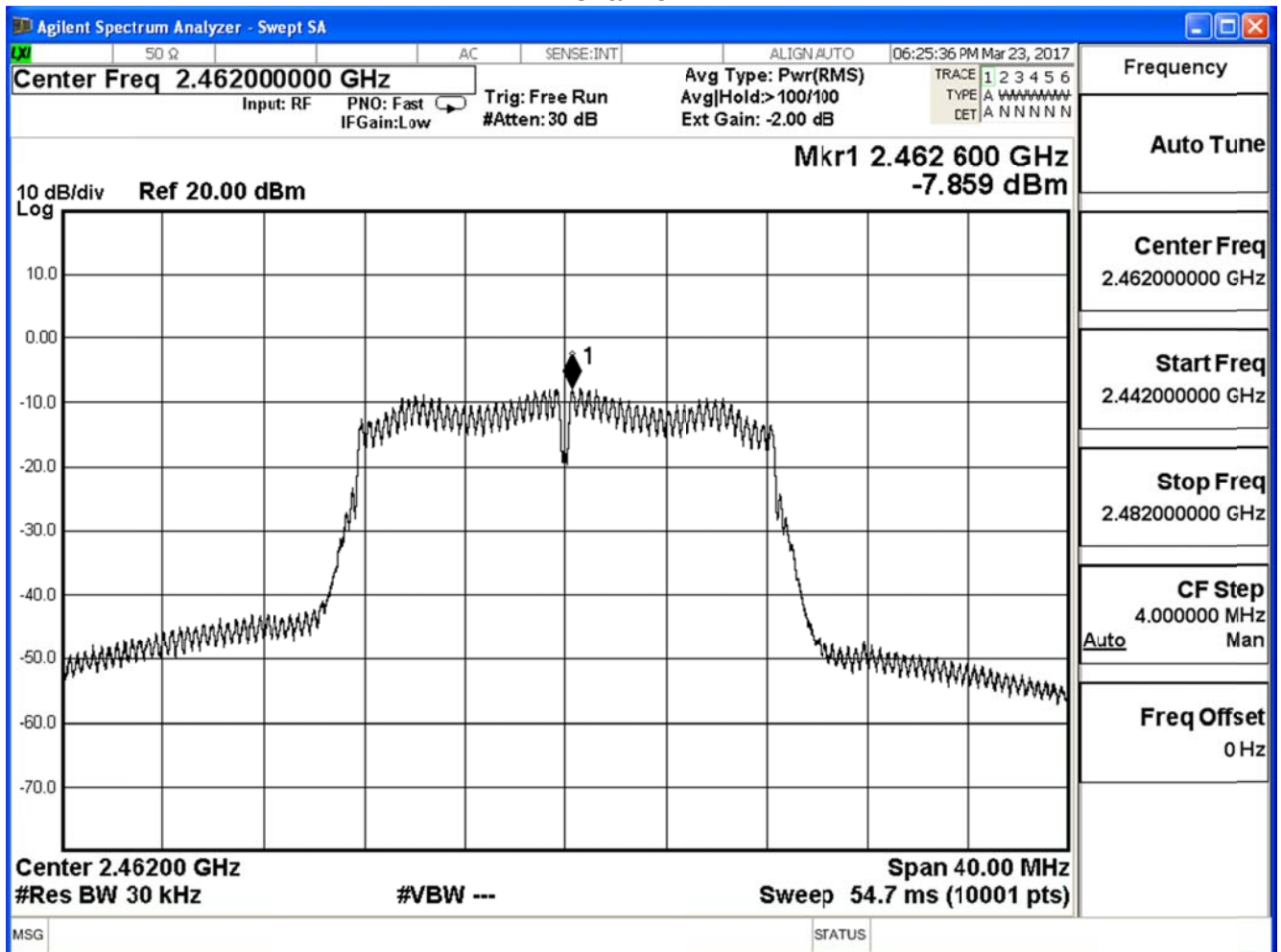
Channel 1



Channel 6



Channel 11



Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 2: Tx MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

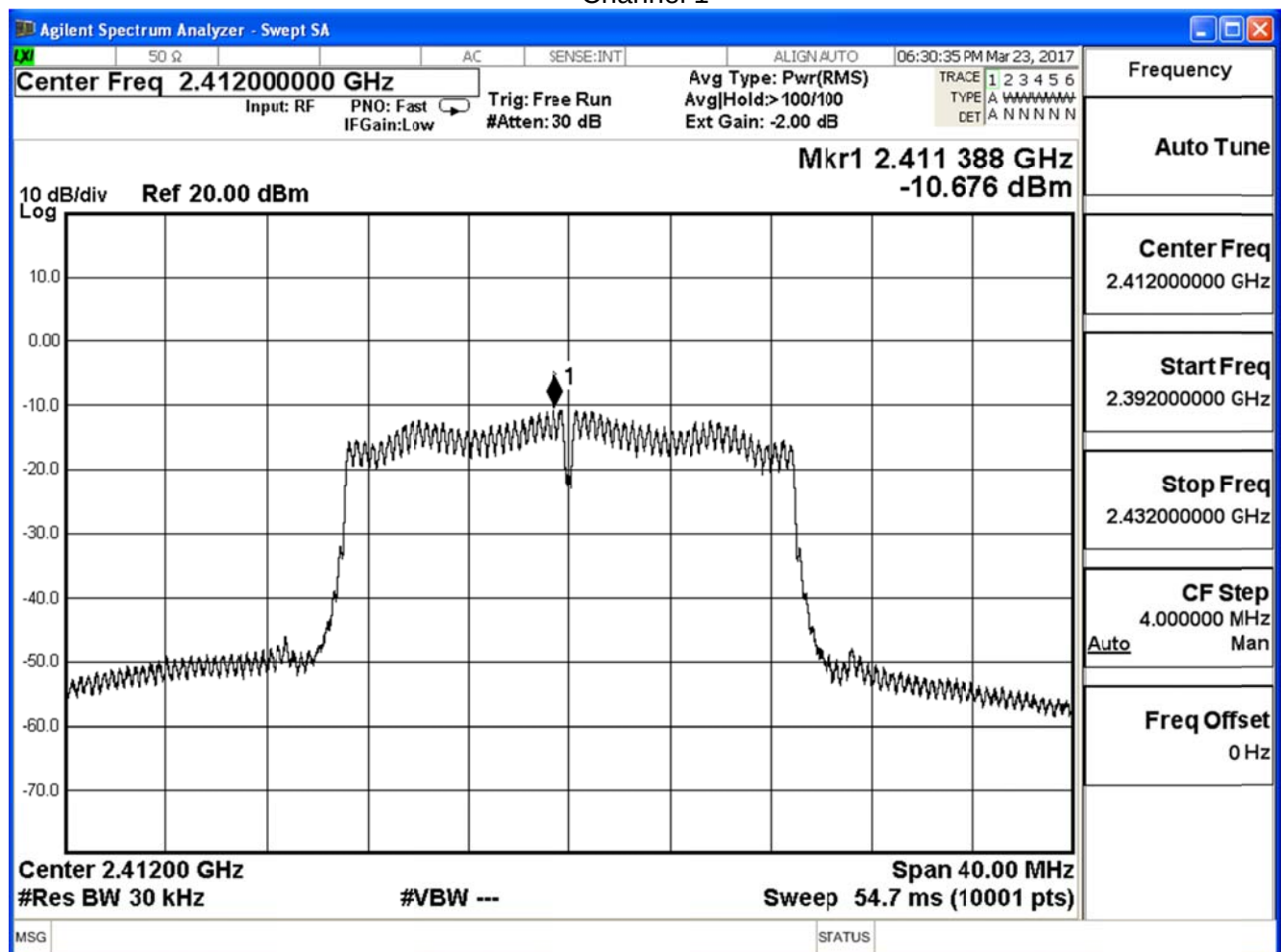
IEEE802.11n 20MHz (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-10.676	≤ 6.49	Pass
6	2437	-10.557	≤ 6.49	Pass
11	2462	-10.771	≤ 6.49	Pass

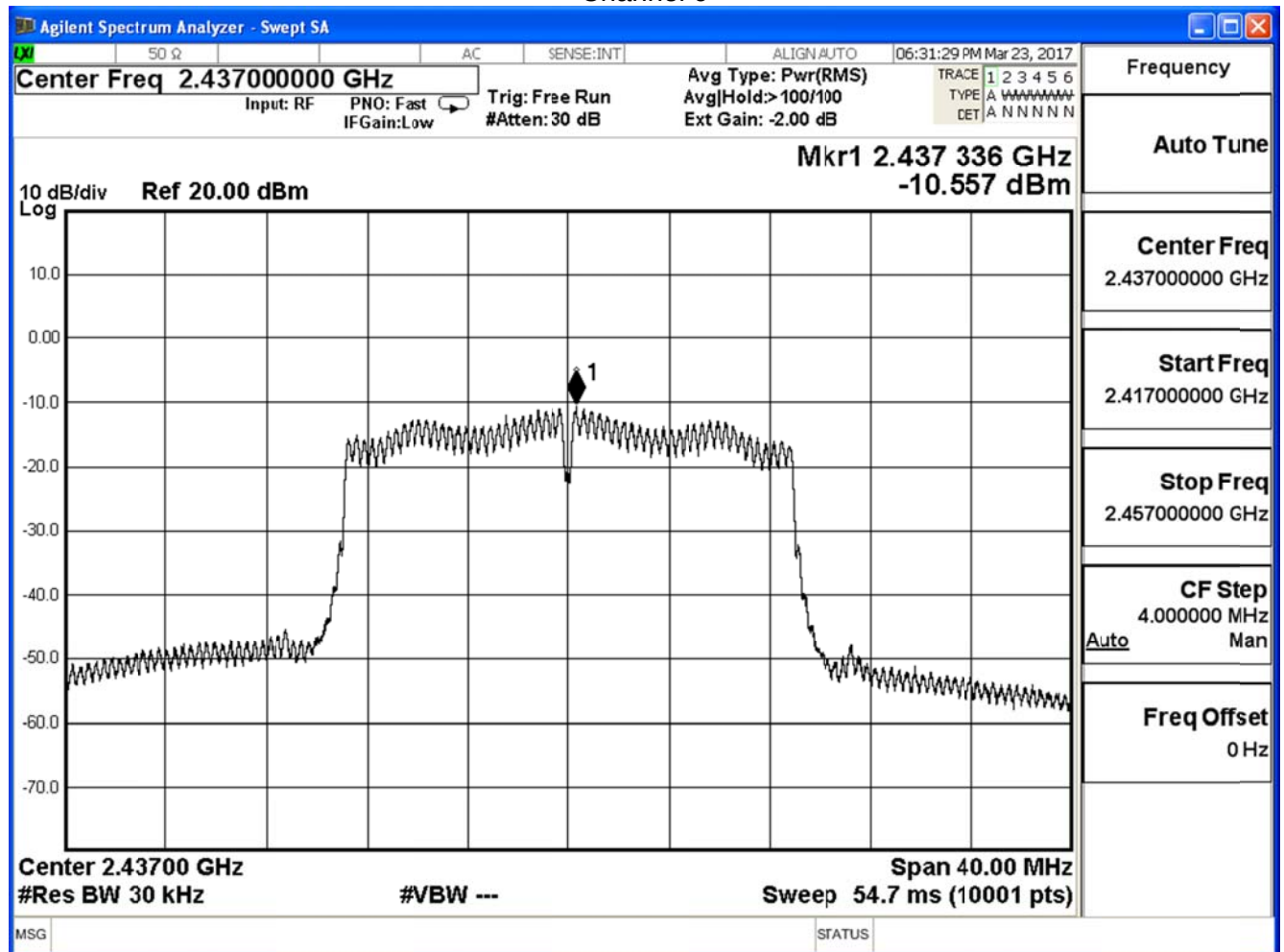
Direction antenna = $4.5 + 10\log(2) = 4.5 + 3.01 = 7.51$ dBi

Limit = $8 \text{ dBm} - (7.51 - 6) = 6.49 \text{ dBm}$

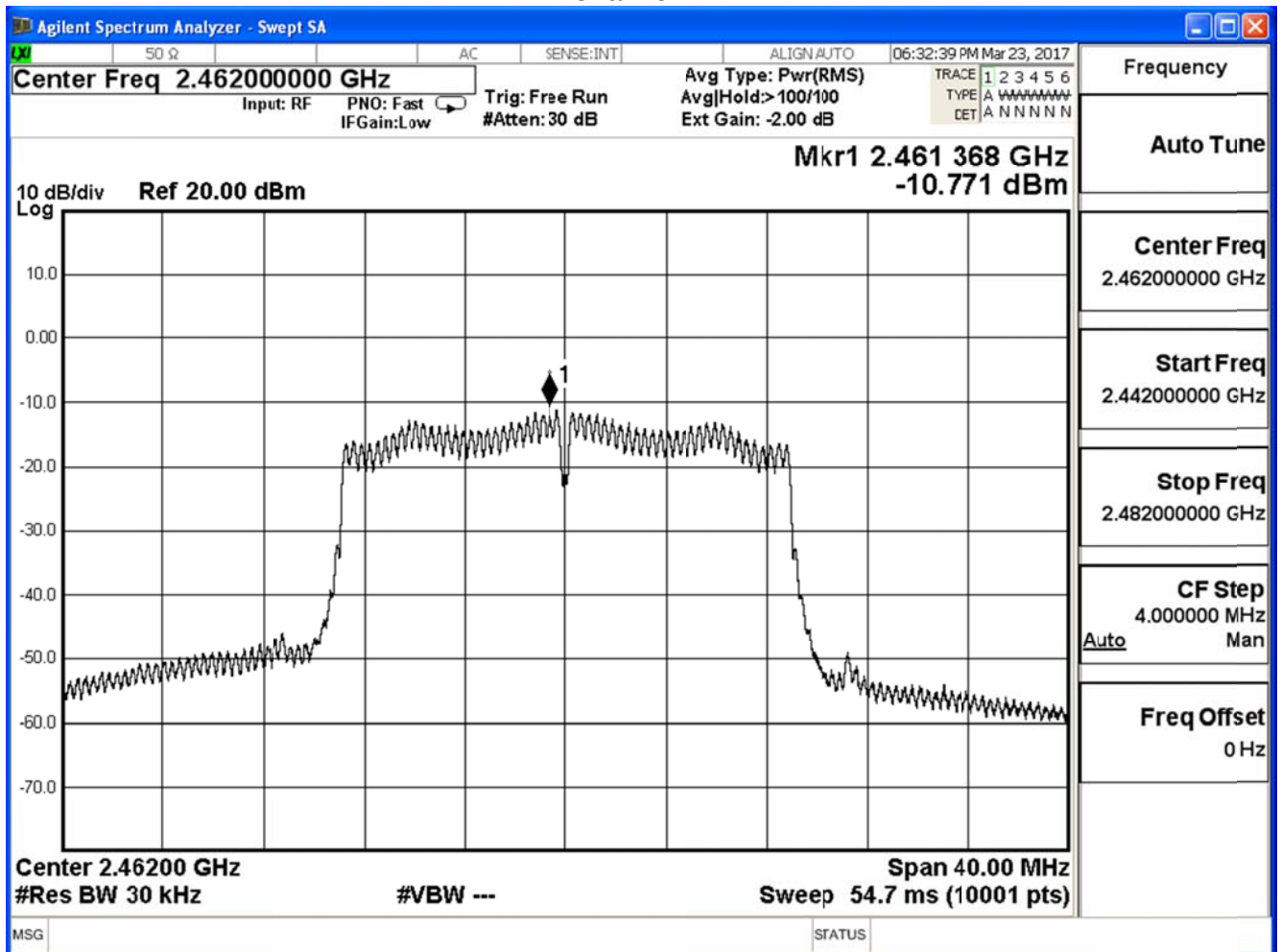
Channel 1



Channel 6



Channel 11



Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 2: Tx MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

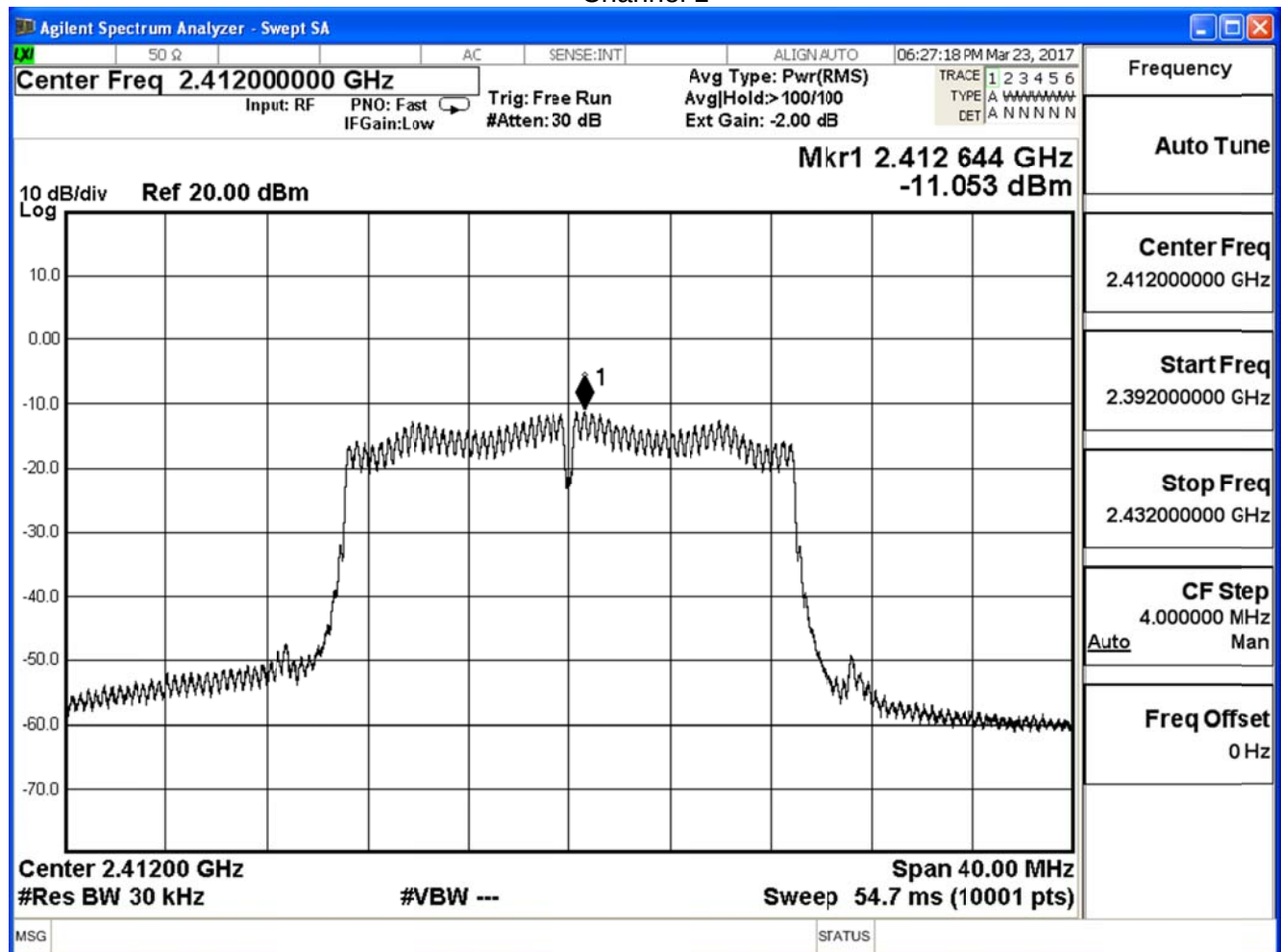
IEEE802.11n 20MHz (ANT 1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-11.053	≤ 6.49	Pass
6	2437	-11.130	≤ 6.49	Pass
11	2462	-11.286	≤ 6.49	Pass

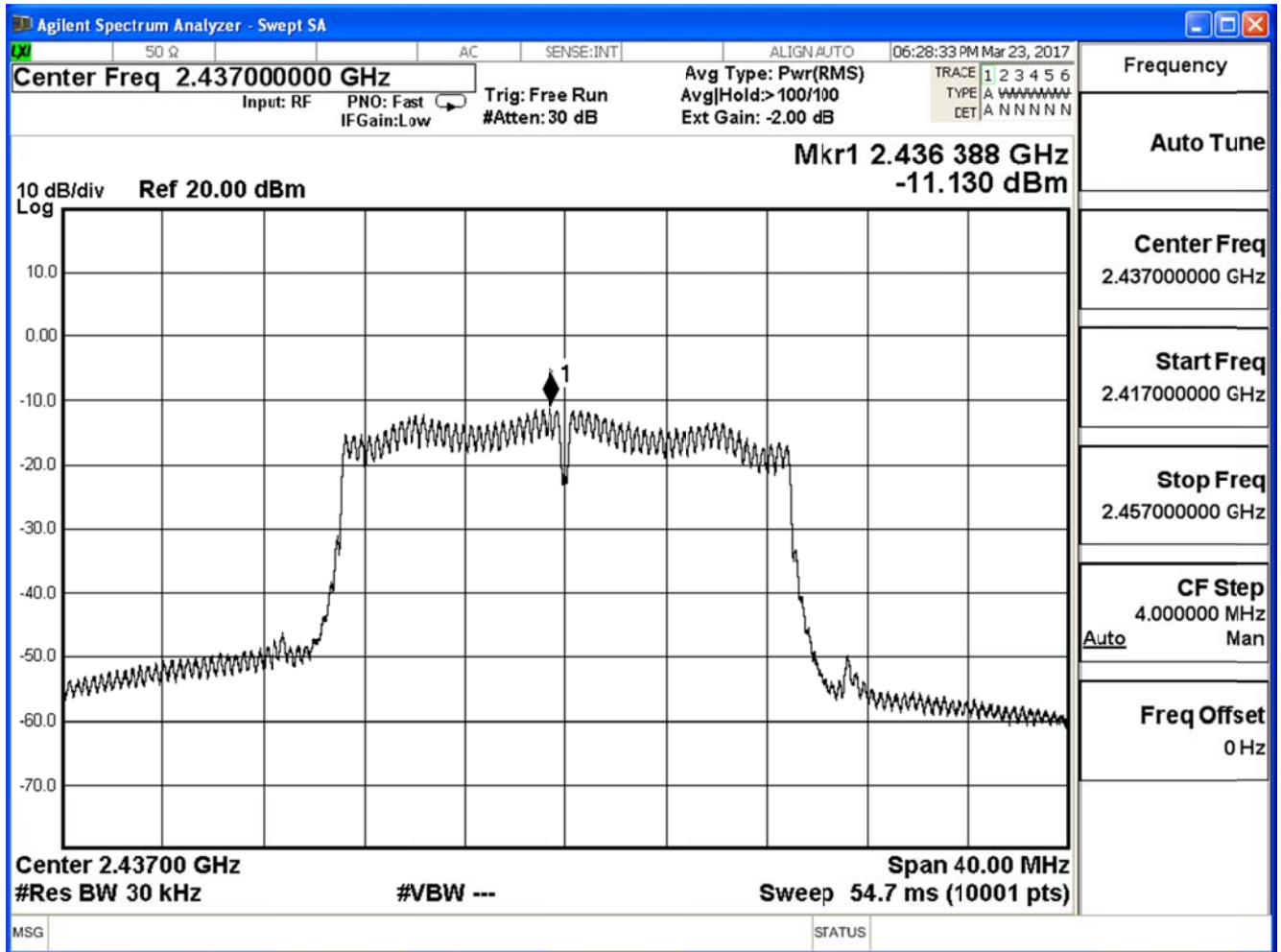
Direction antenna = $4.5 + 10\log(2) = 4.5 + 3.01 = 7.51$ dBi

Limit = $8 \text{ dBm} - (7.51 - 6) = 6.49$ dBm

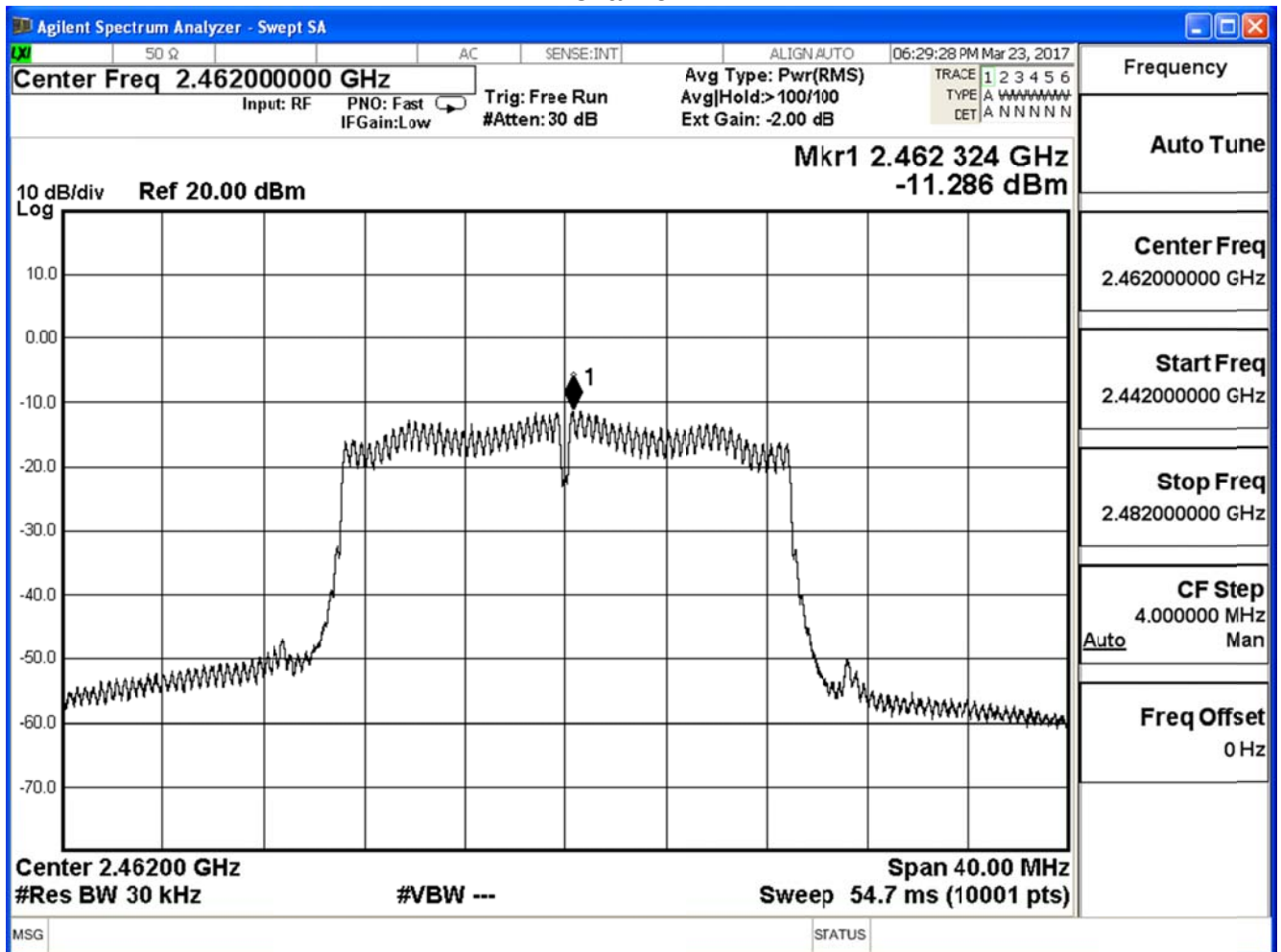
Channel 1



Channel 6



Channel 11



Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 2: Tx MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE802.11n 20MHz (ANT 0+1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-7.850	≤ 6.49	Pass
6	2437	-7.824	≤ 6.49	Pass
11	2462	-8.011	≤ 6.49	Pass

Direction antenna = $4.5 + 10\log(2) = 4.5 + 3.01 = 7.51$ dBi

Limit = $8 \text{ dBm} - (7.51 - 6) = 6.49 \text{ dBm}$

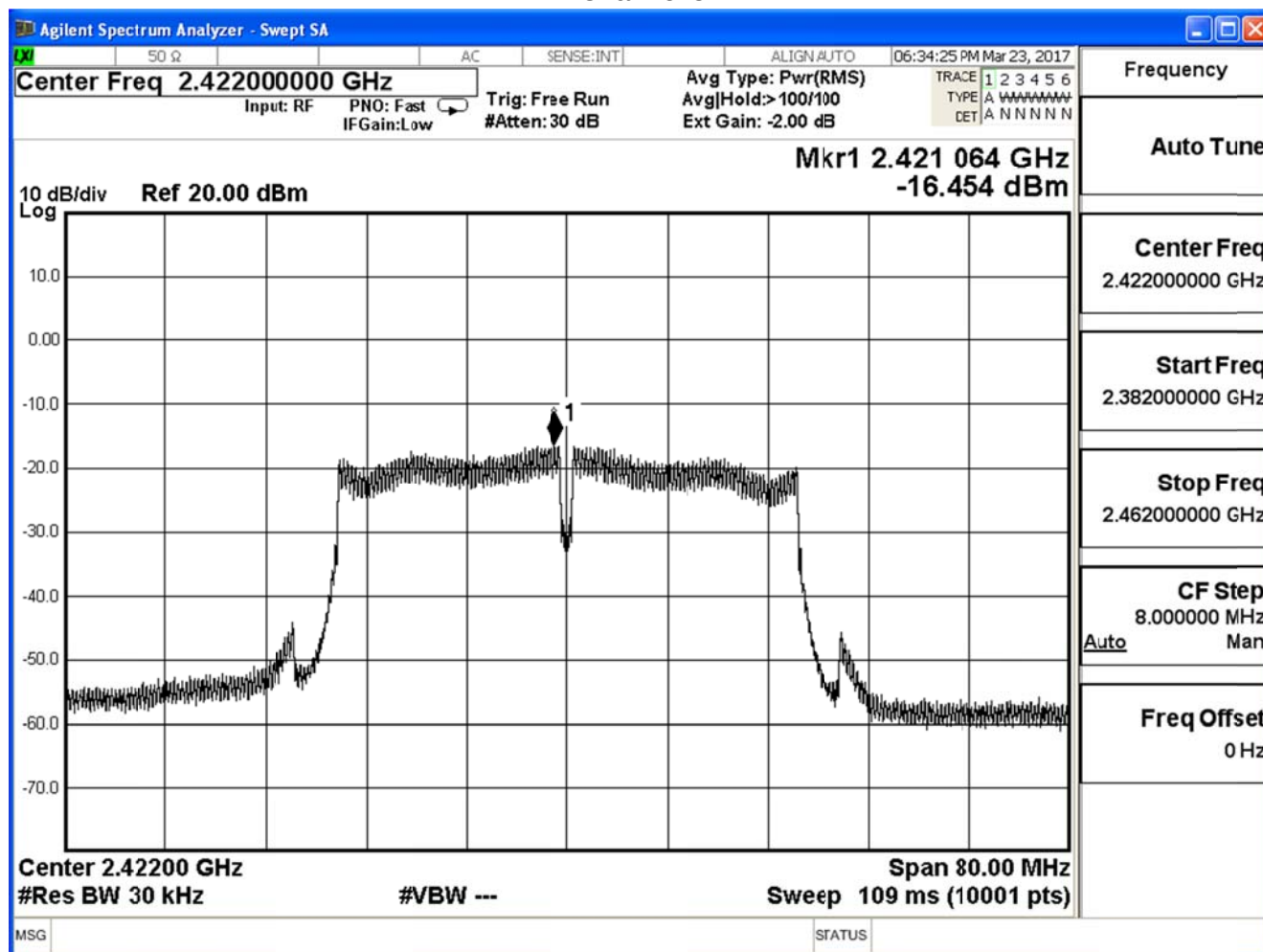
Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 2: Tx_MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE802.11n 40MHz (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	-16.454	≤ 6.49	Pass
6	2437	-14.711	≤ 6.49	Pass
9	2452	-15.156	≤ 6.49	Pass

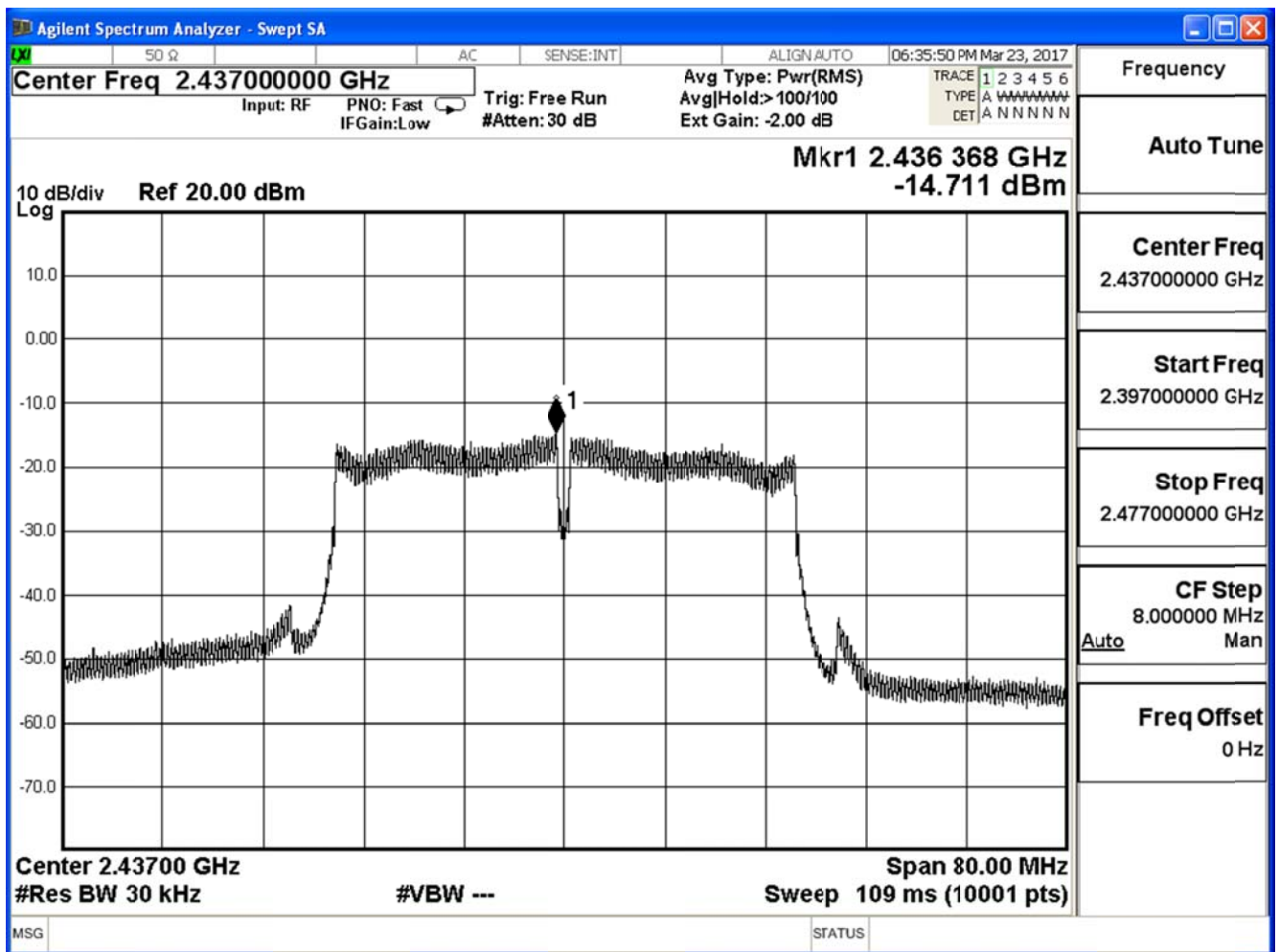
Direction antenna = $4.5 + 10\log(2) = 4.5 + 3.01 = 7.51$ dBi

$$\text{Limit} = 8 \text{ dBm} - (7.51 - 6) = 6.49 \text{ dBm}$$

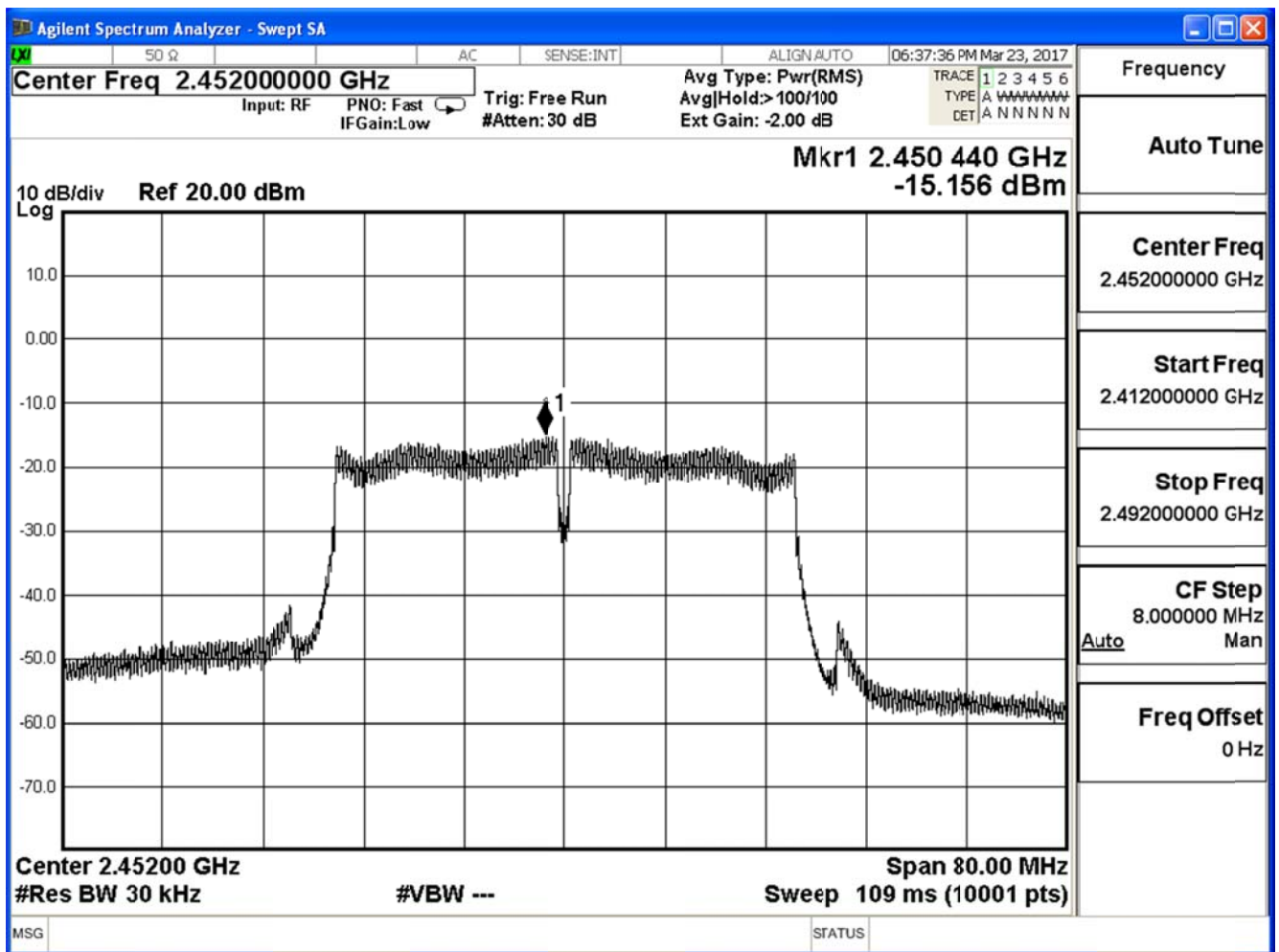
Channel 3



Channel 6



Channel 9



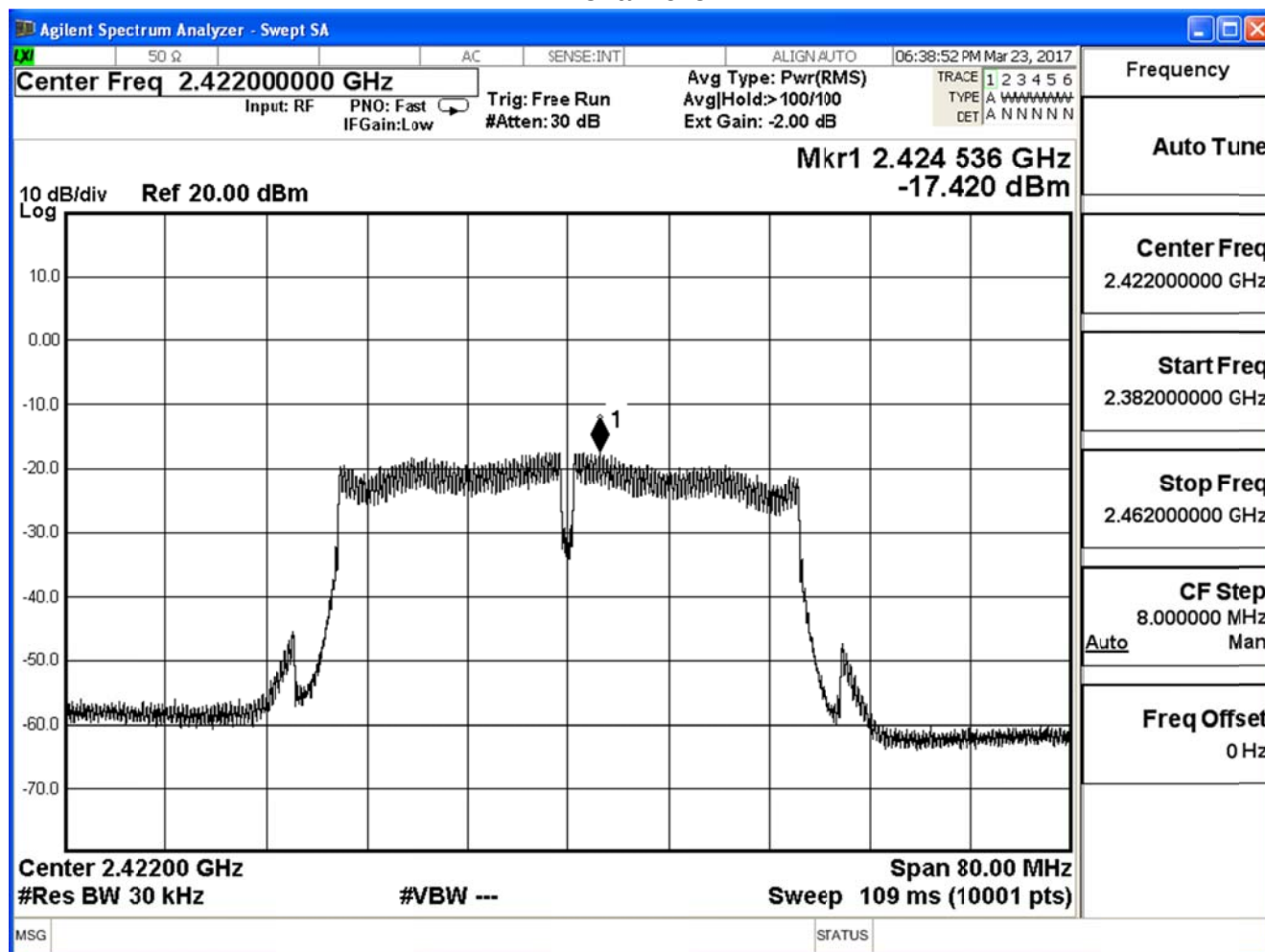
Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 2: Tx_MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE802.11n 40MHz (ANT 1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	-17.420	≤ 6.49	Pass
6	2437	-14.691	≤ 6.49	Pass
9	2452	-15.102	≤ 6.49	Pass

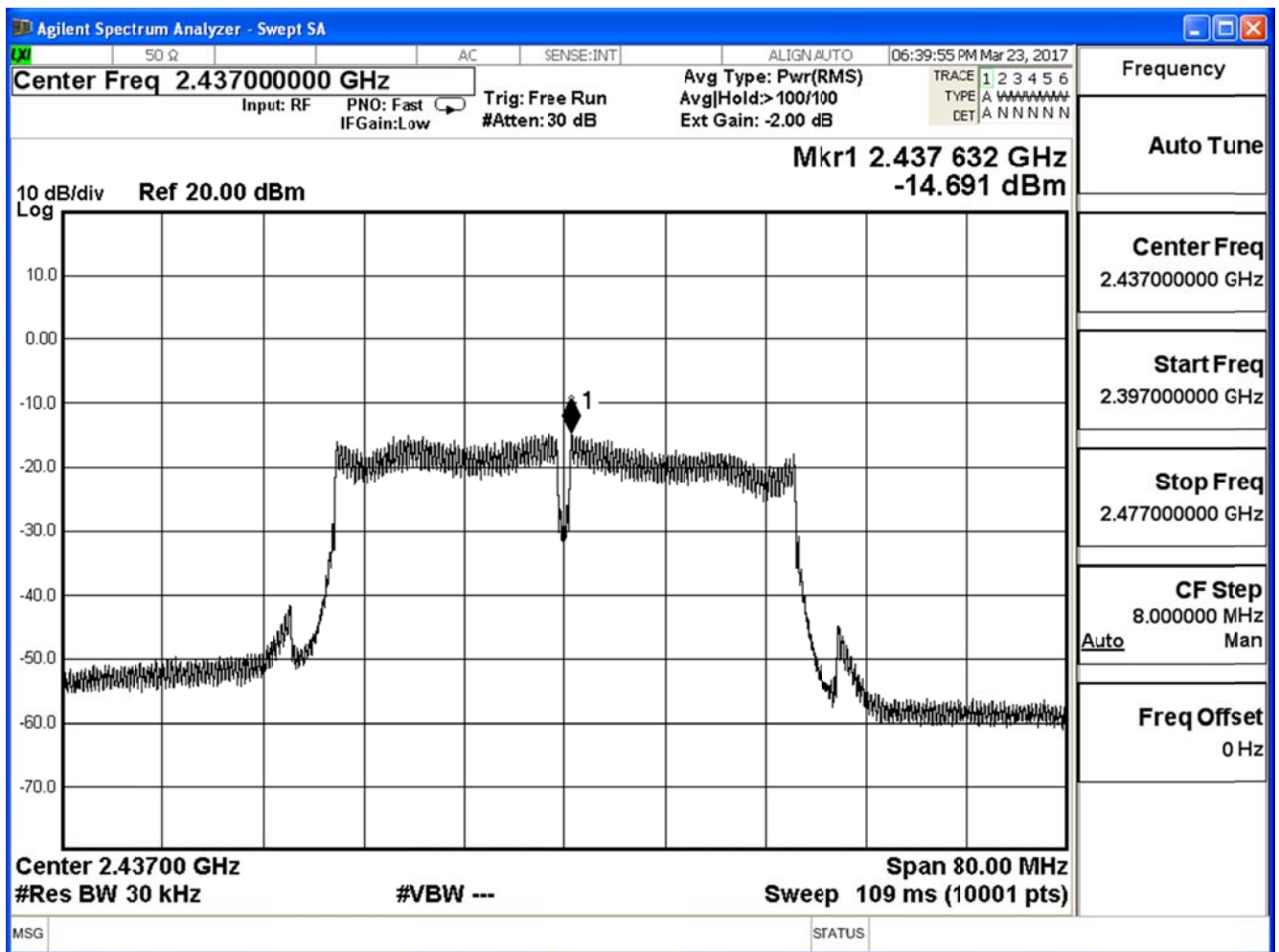
$$\text{Direction antenna} = 4.5 + 10\log(2) = 4.5 + 3.01 = 7.51 \text{ dBi}$$

Limit = 8 dBm -(7.51-6)= 6.49 dBm

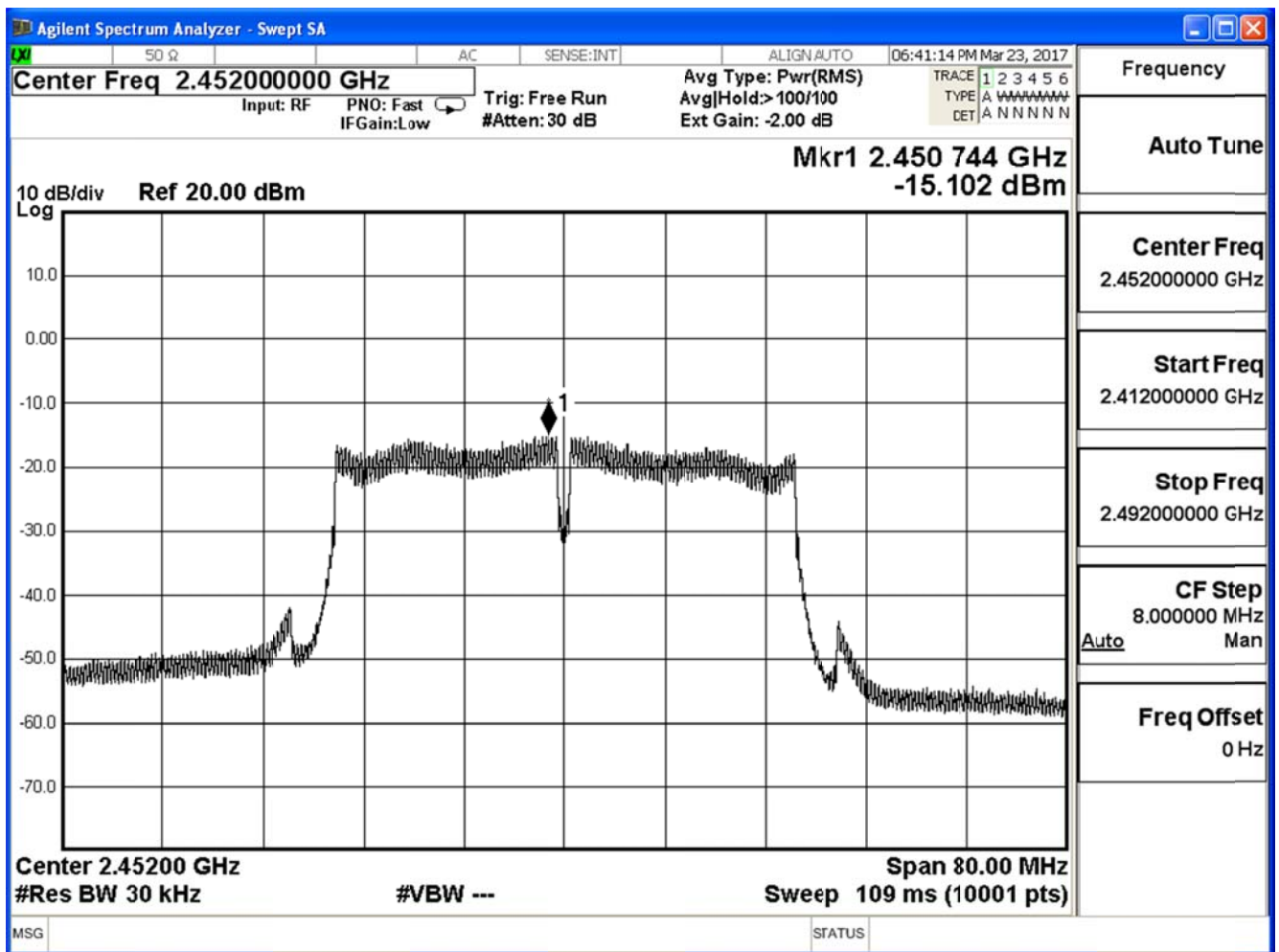
Channel 3



Channel 6



Channel 9



Product	UHD551-L		
Test Item	Power Density		
Test Mode	Mode 2: Tx MIMO Mode		
Date of Test	2017/03/23	Test Site	SR10-H

IEEE802.11n 40MHz (ANT 0+1)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	-13.900	≤ 6.49	Pass
6	2437	-11.691	≤ 6.49	Pass
9	2452	-12.119	≤ 6.49	Pass

Direction antenna $= 4.5 + 10\log(2) = 4.5 + 3.01 = 7.51$ dBi

Limit = 8 dBm $-(7.51-6) = 6.49$ dBm