

Figure Channel 09: (Chain A)

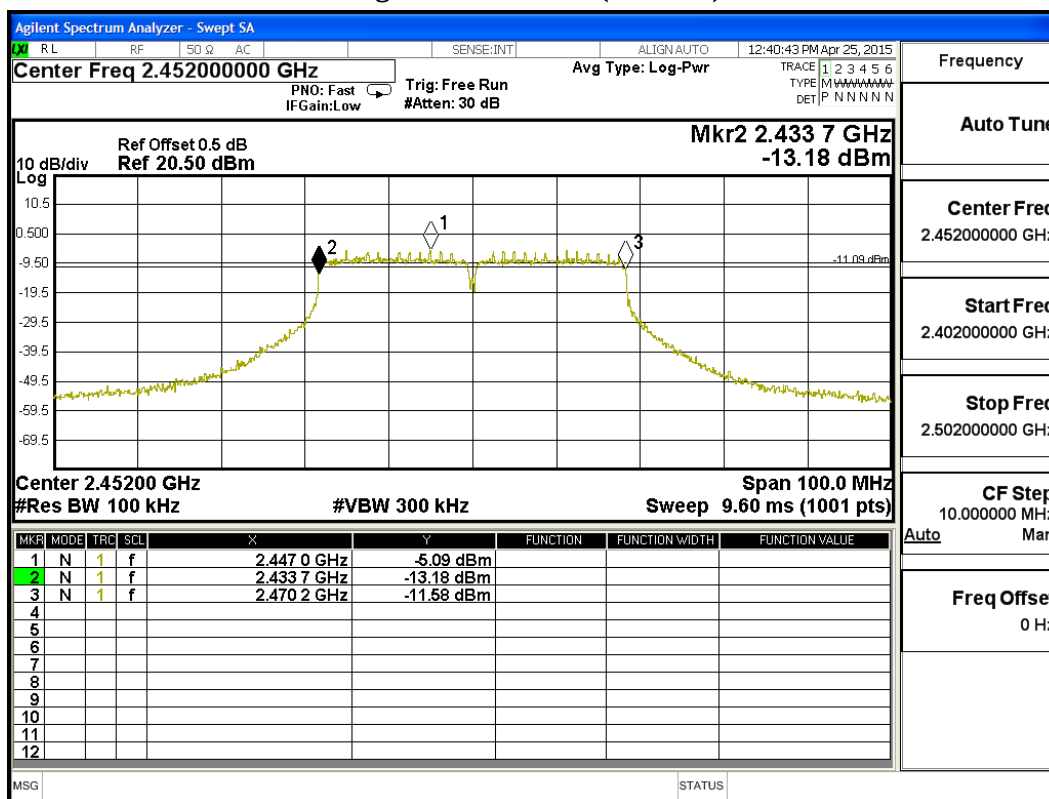


Figure Channel 03: (Chain B)

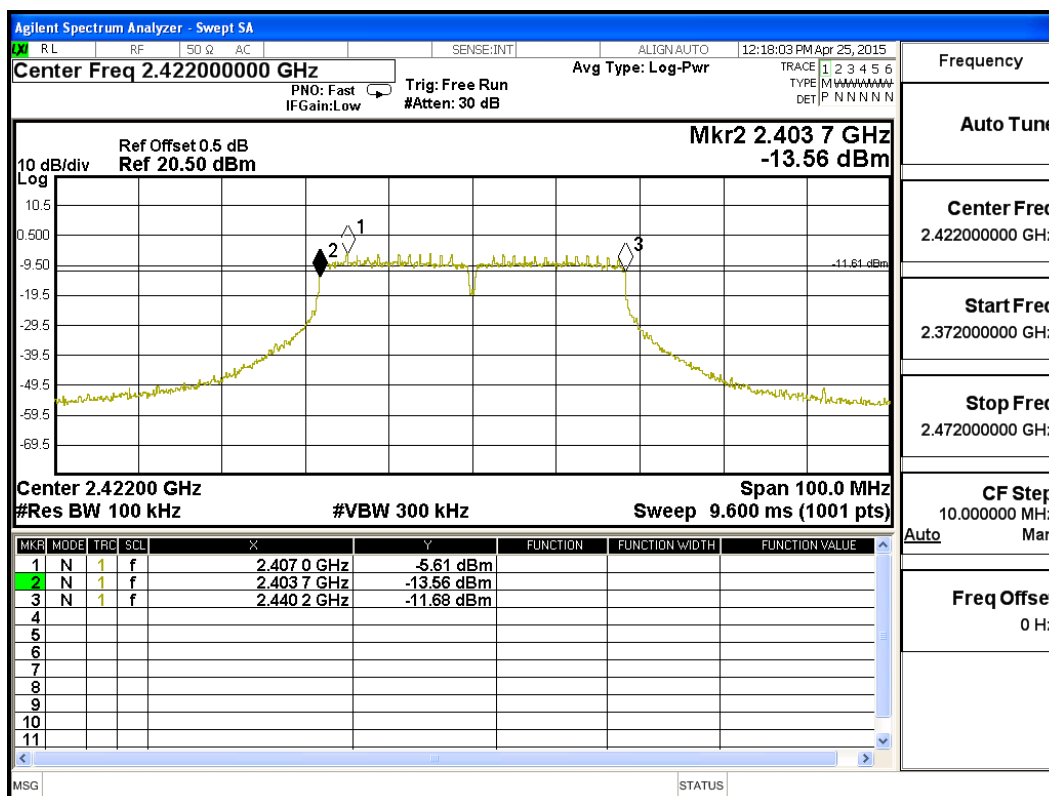


Figure Channel 06: (Chain B)

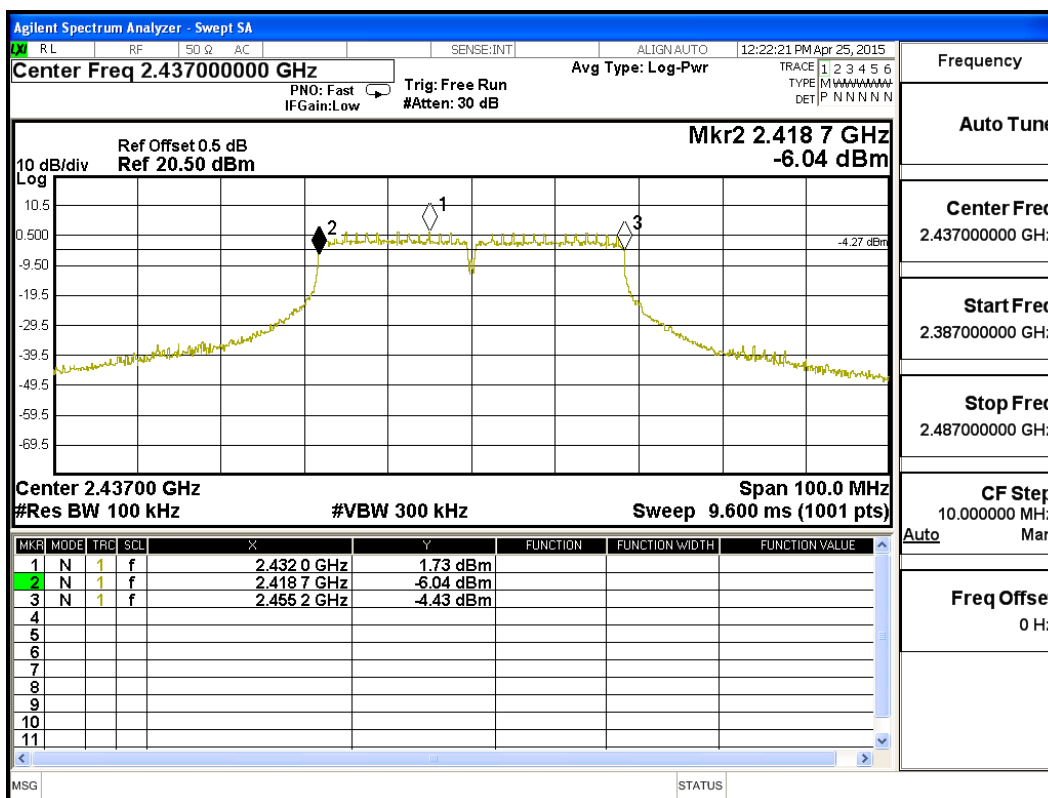


Figure Channel 09: (Chain B)

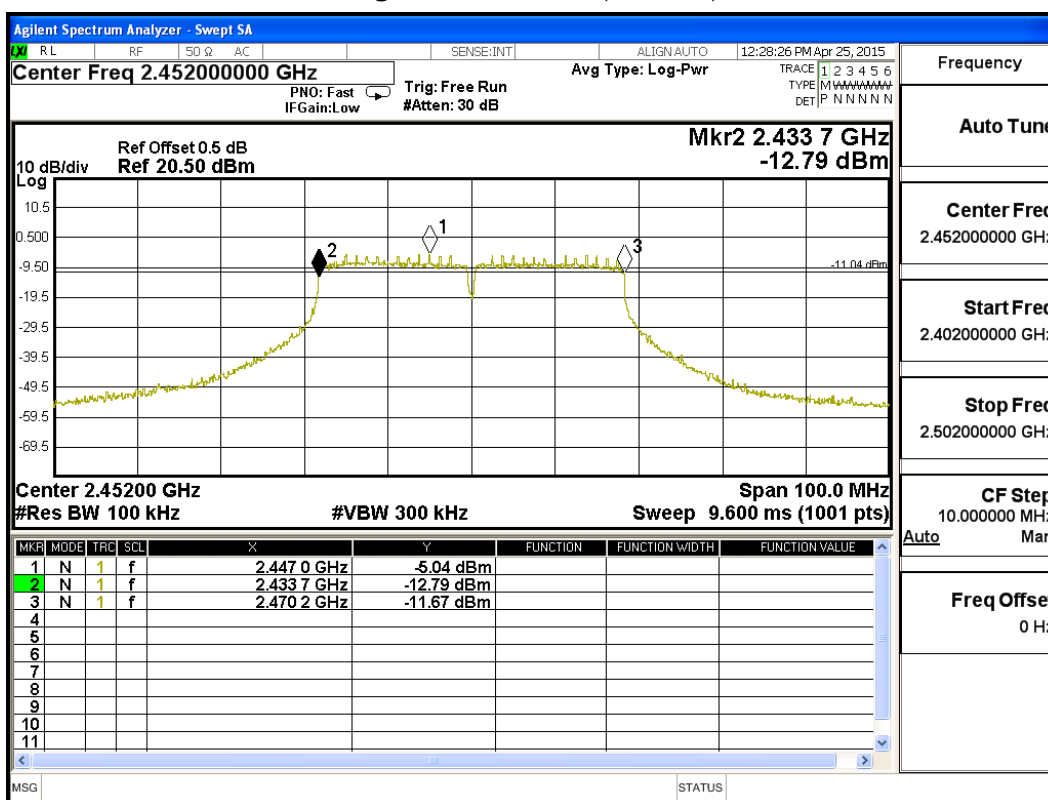


Figure Channel 03: (Chain C)

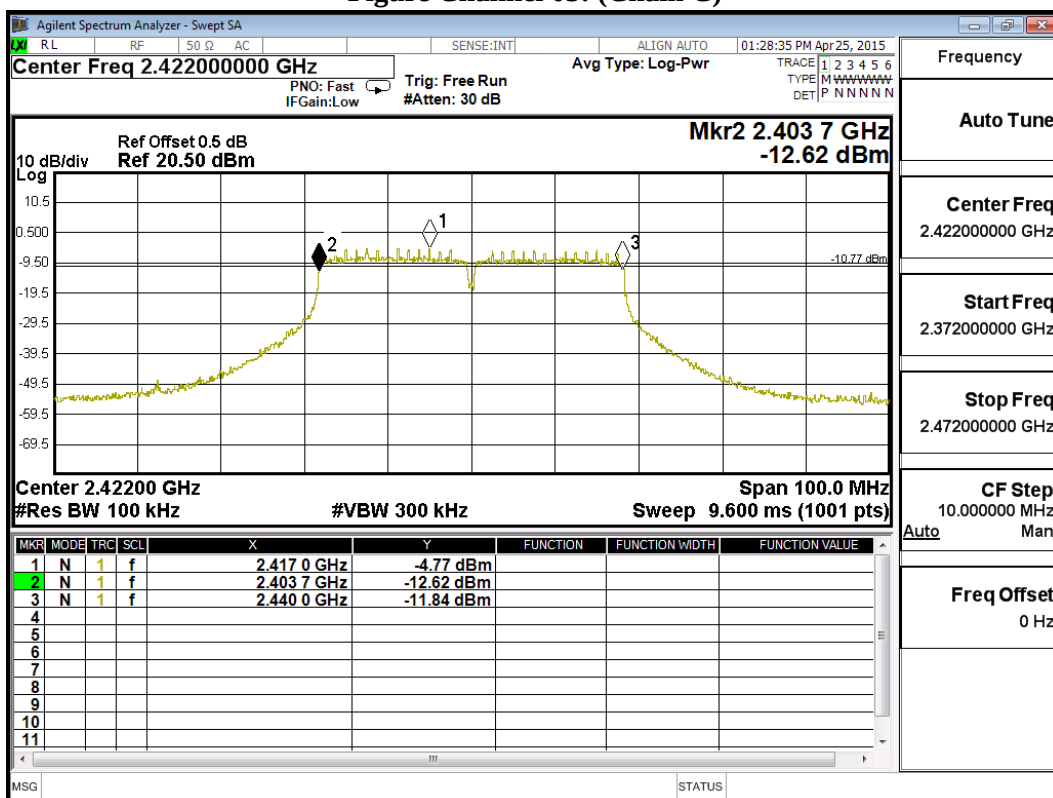


Figure Channel 06: (Chain C)

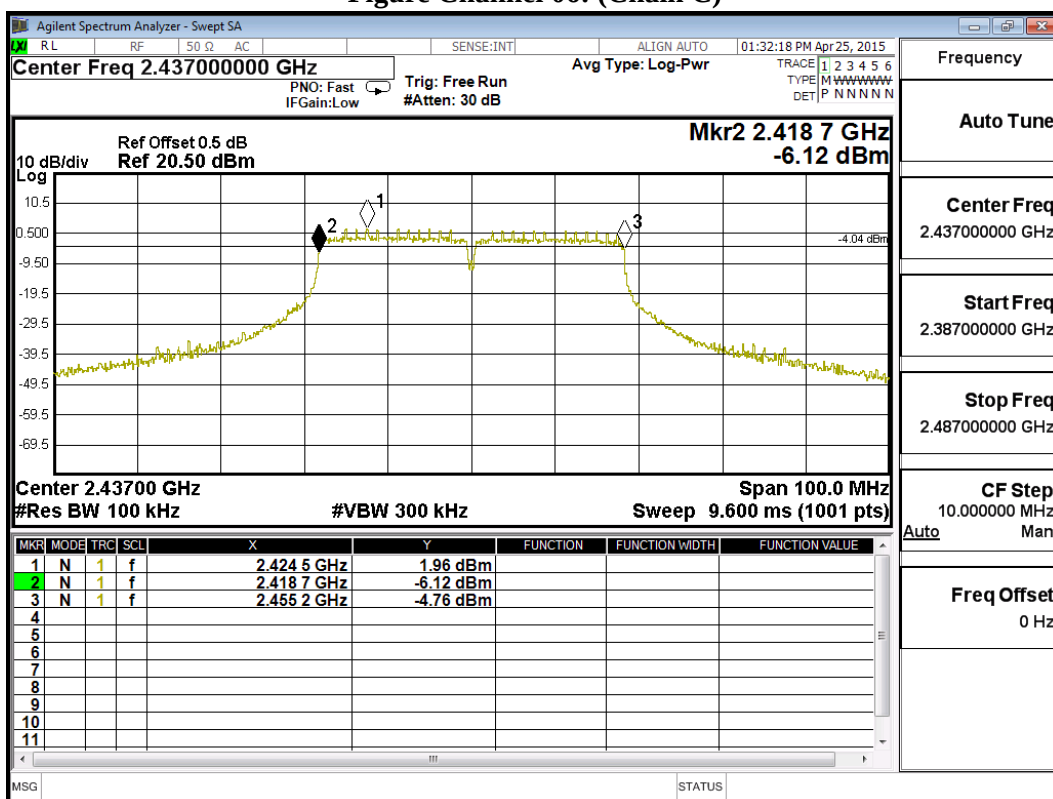
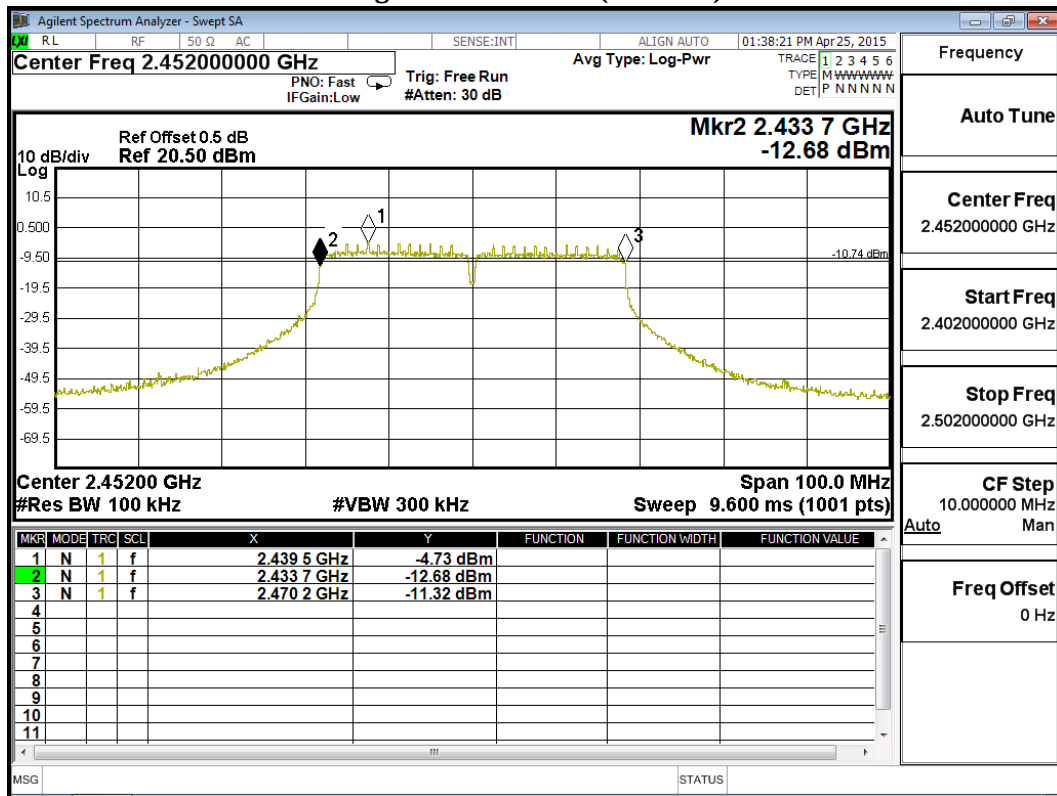


Figure Channel 09: (Chain C)



Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	A	2412	10200	>500	Pass
06	A	2437	10200	>500	Pass
11	A	2462	10200	>500	Pass
01	B	2412	10200	>500	Pass
06	B	2437	10200	>500	Pass
11	B	2462	10200	>500	Pass
01	C	2412	10200	>500	Pass
06	C	2437	10200	>500	Pass
11	C	2462	10200	>500	Pass

Figure Channel 01: (Chain A)

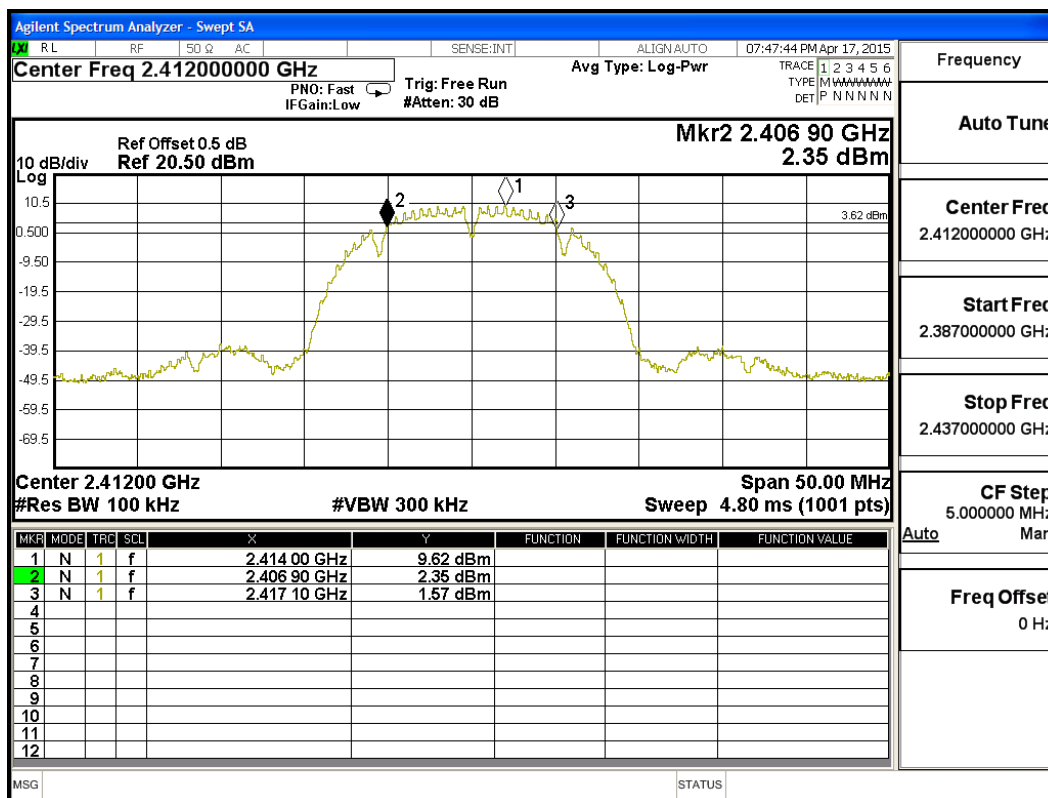


Figure Channel 06: (Chain A)

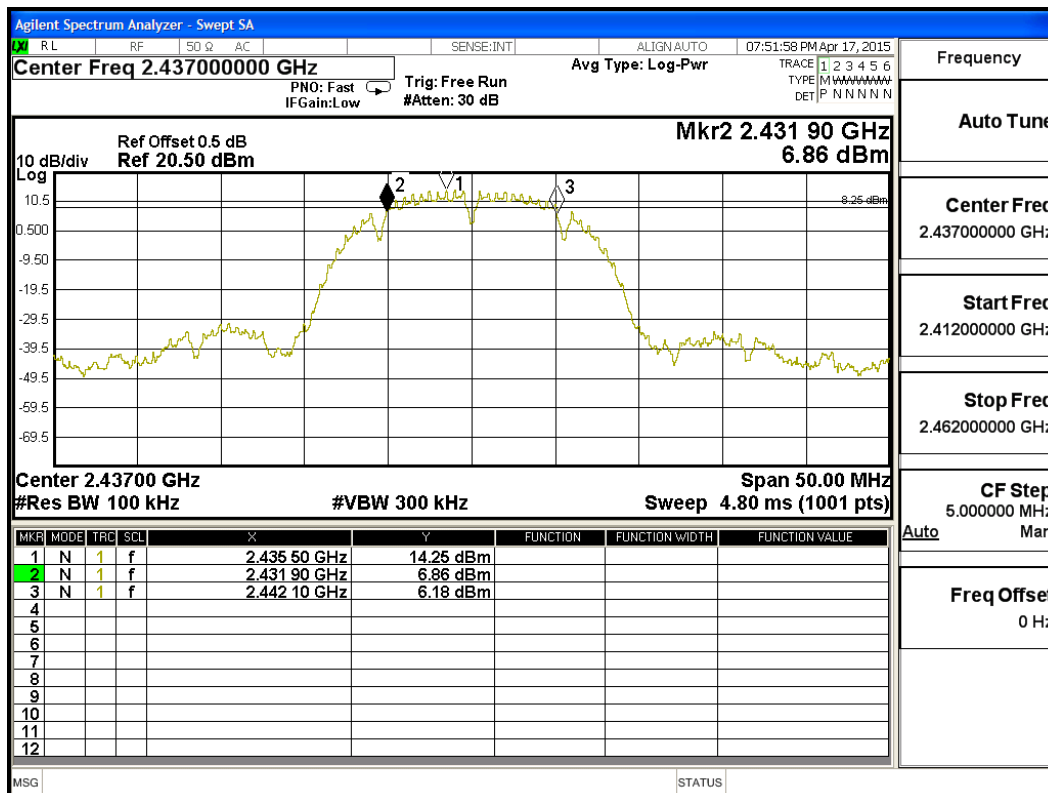


Figure Channel 11: (Chain A)

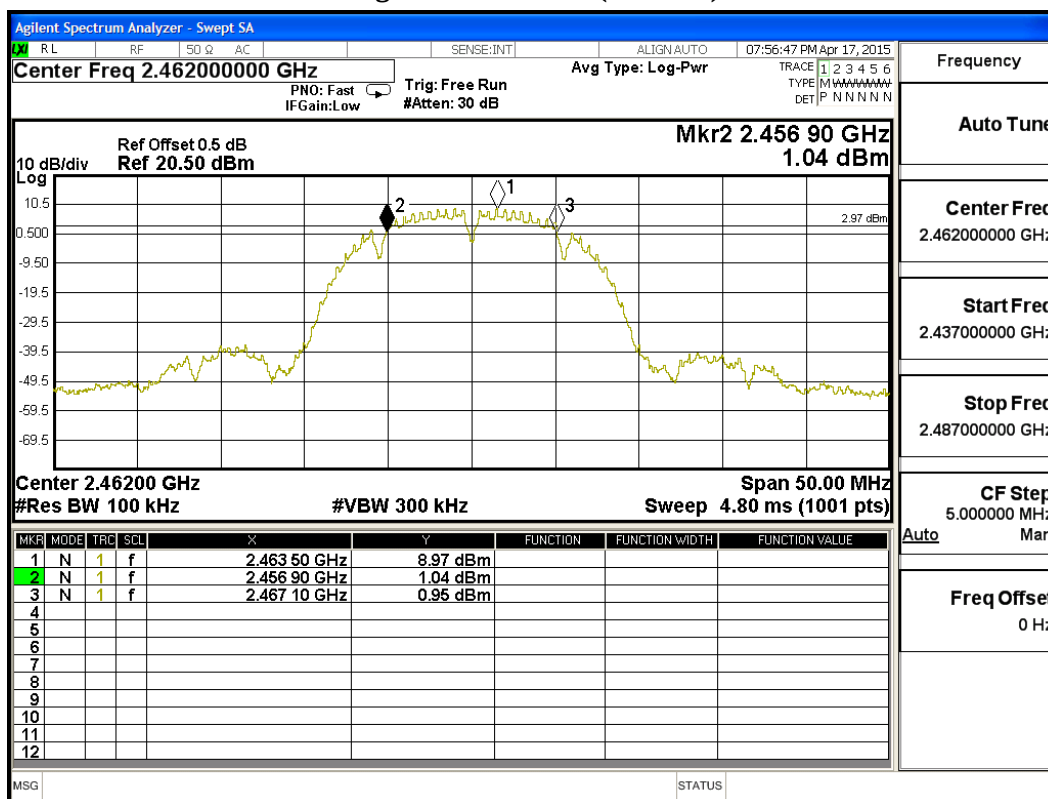


Figure Channel 01: (Chain B)

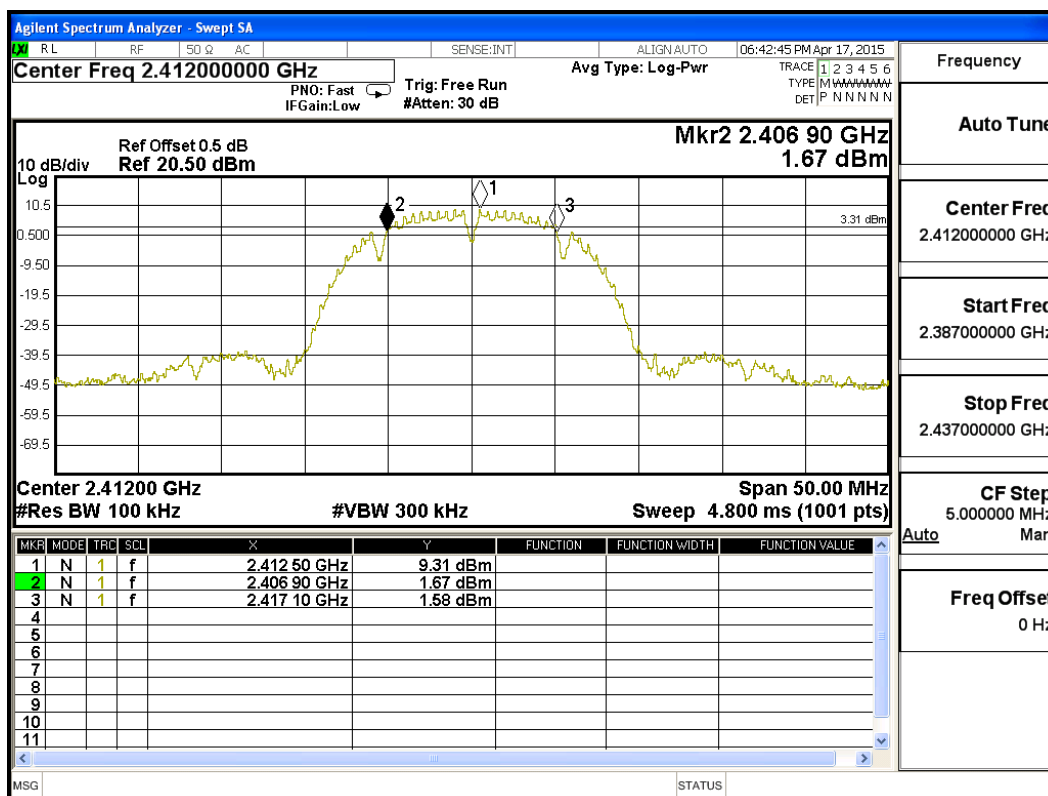


Figure Channel 06: (Chain B)

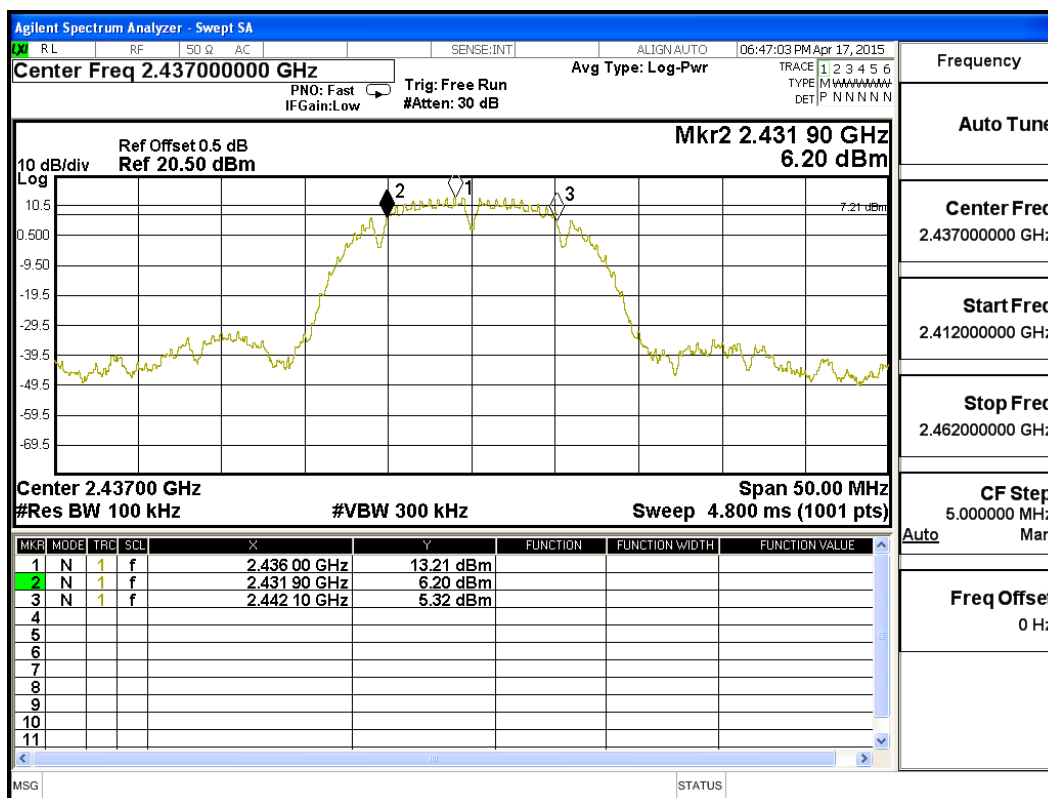


Figure Channel 11: (Chain B)

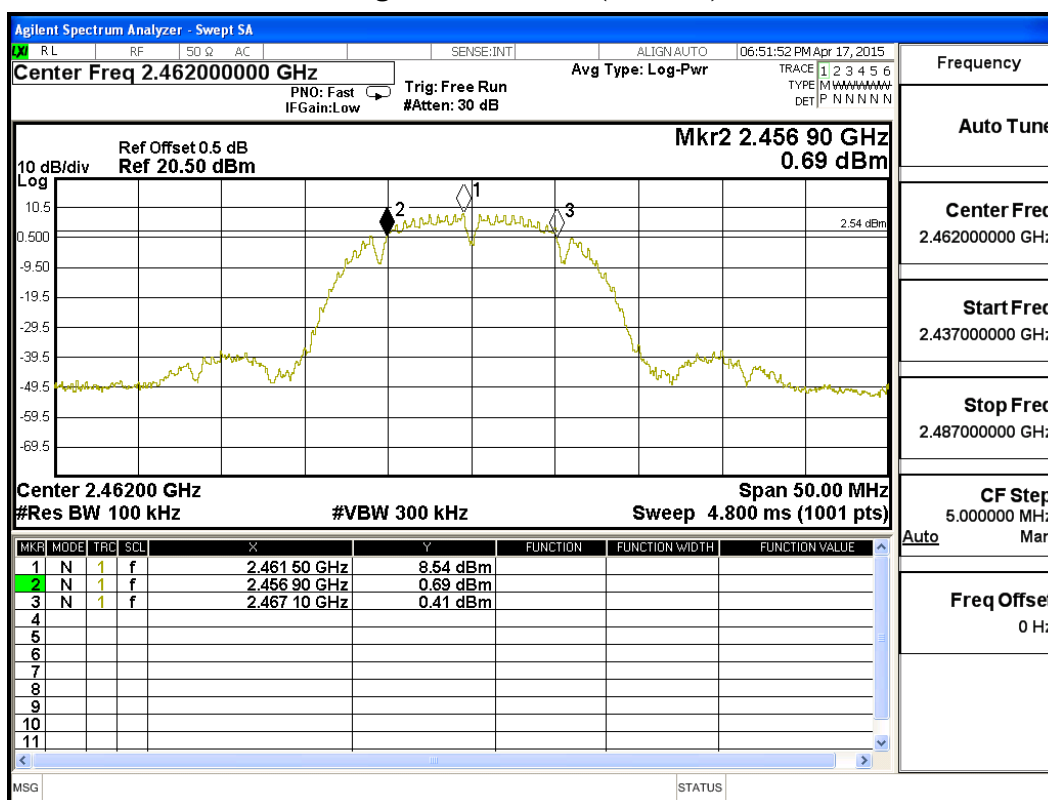


Figure Channel 01: (Chain C)

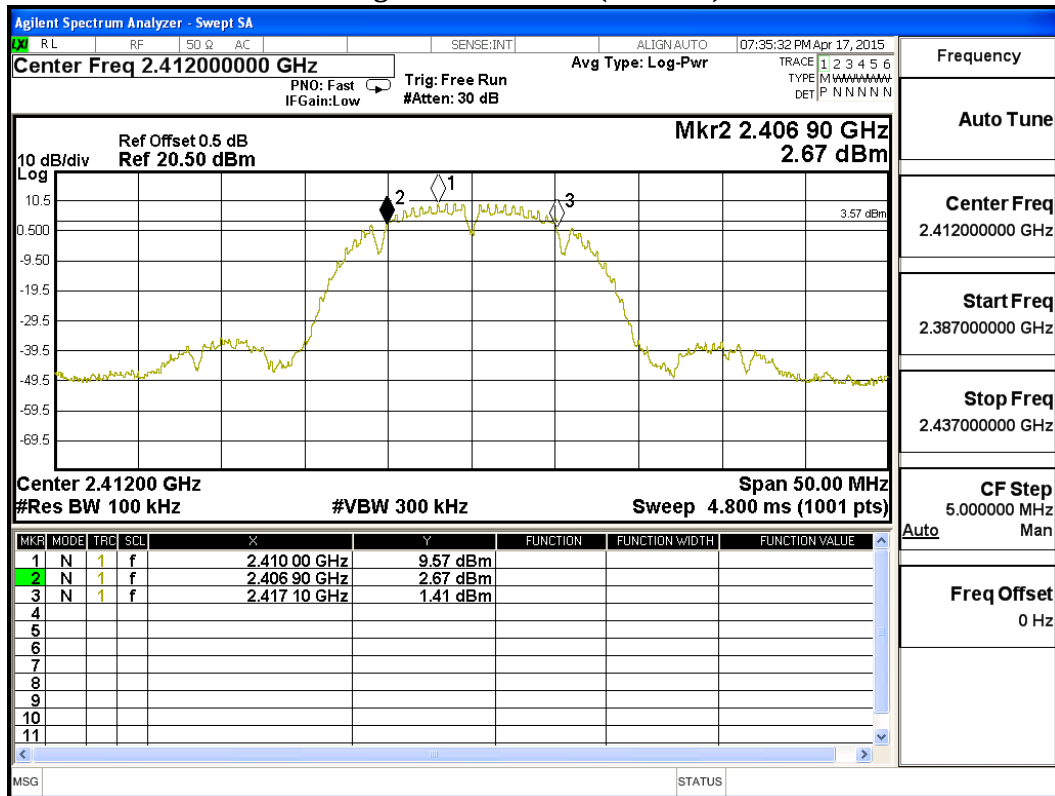
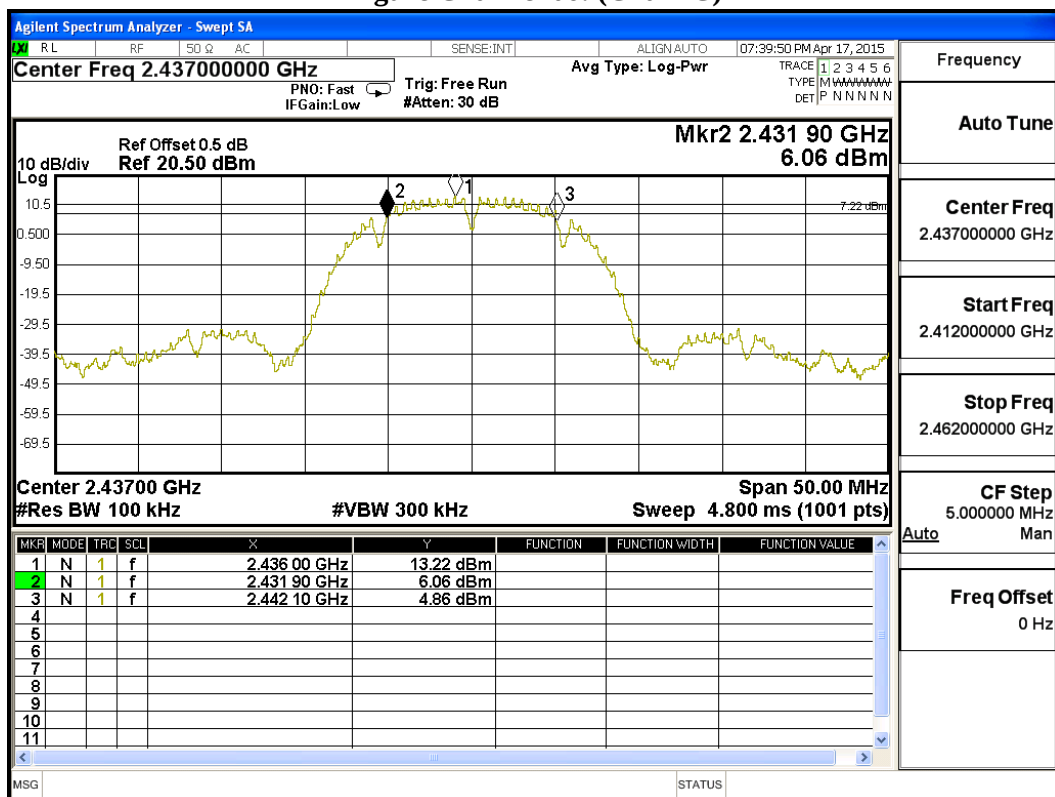
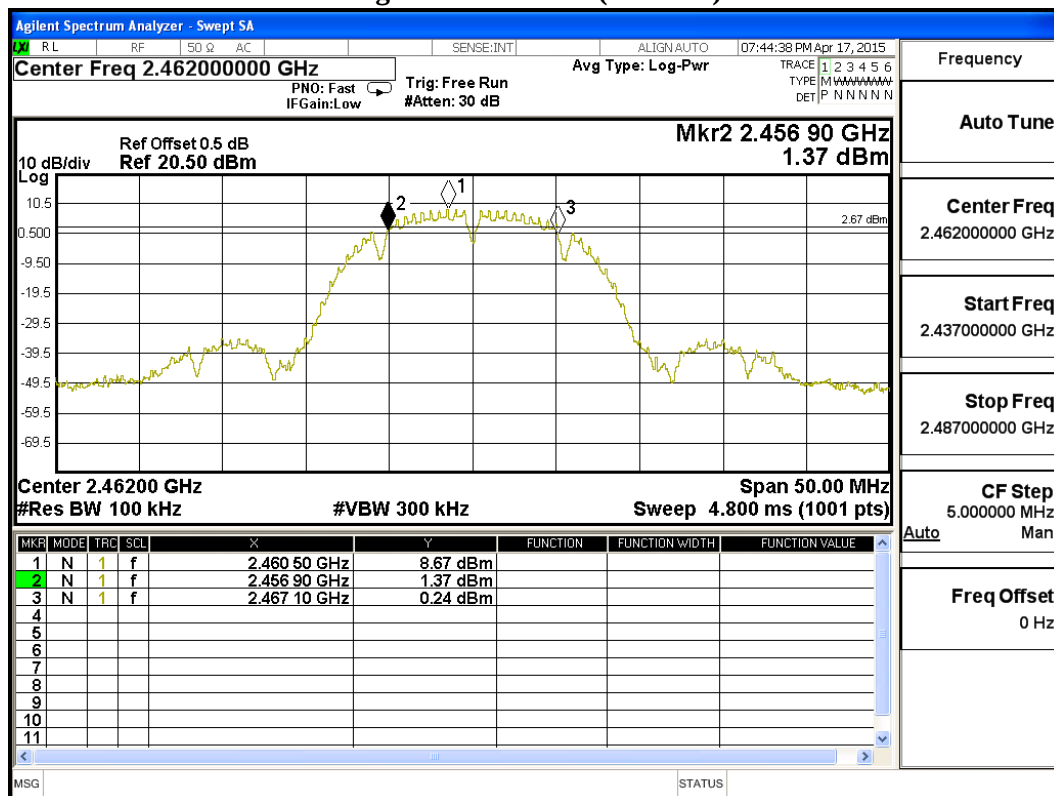


Figure Channel 06: (Chain C)





Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	A	2412	16500	>500	Pass
06	A	2437	16500	>500	Pass
11	A	2462	16550	>500	Pass
01	B	2412	16500	>500	Pass
06	B	2437	16550	>500	Pass
11	B	2462	16500	>500	Pass
01	C	2412	16500	>500	Pass
06	C	2437	16500	>500	Pass
11	C	2462	16500	>500	Pass

Figure Channel 01: (Chain A)

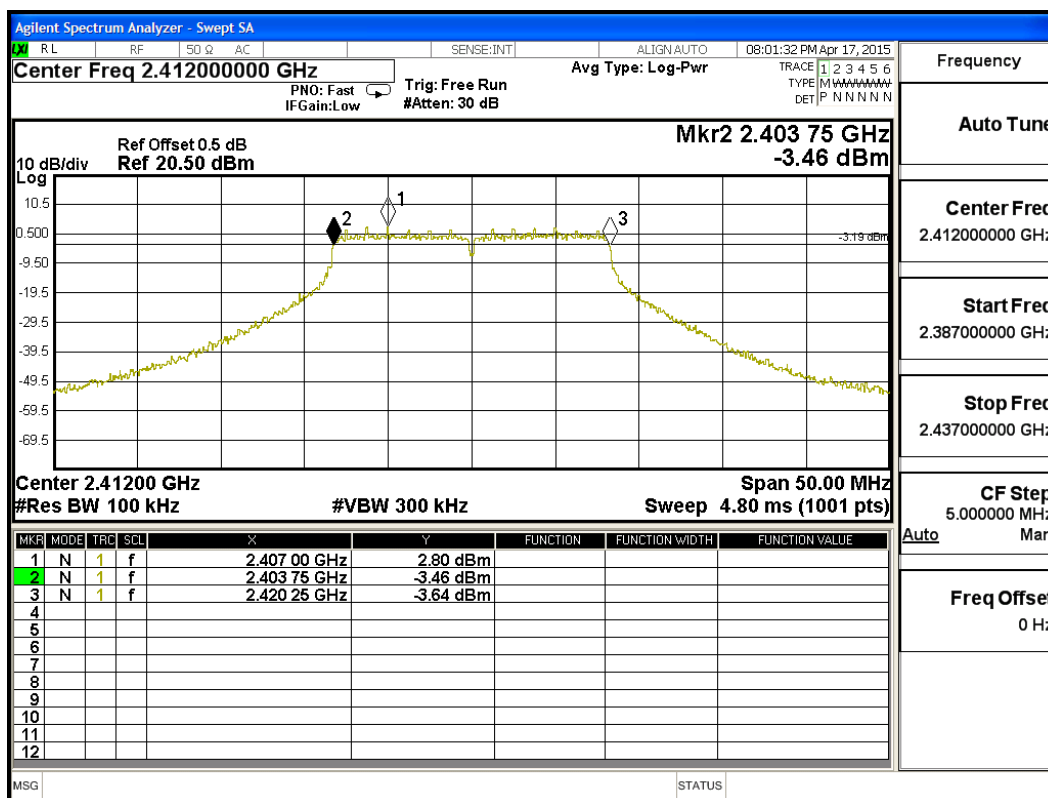


Figure Channel 06: (Chain A)

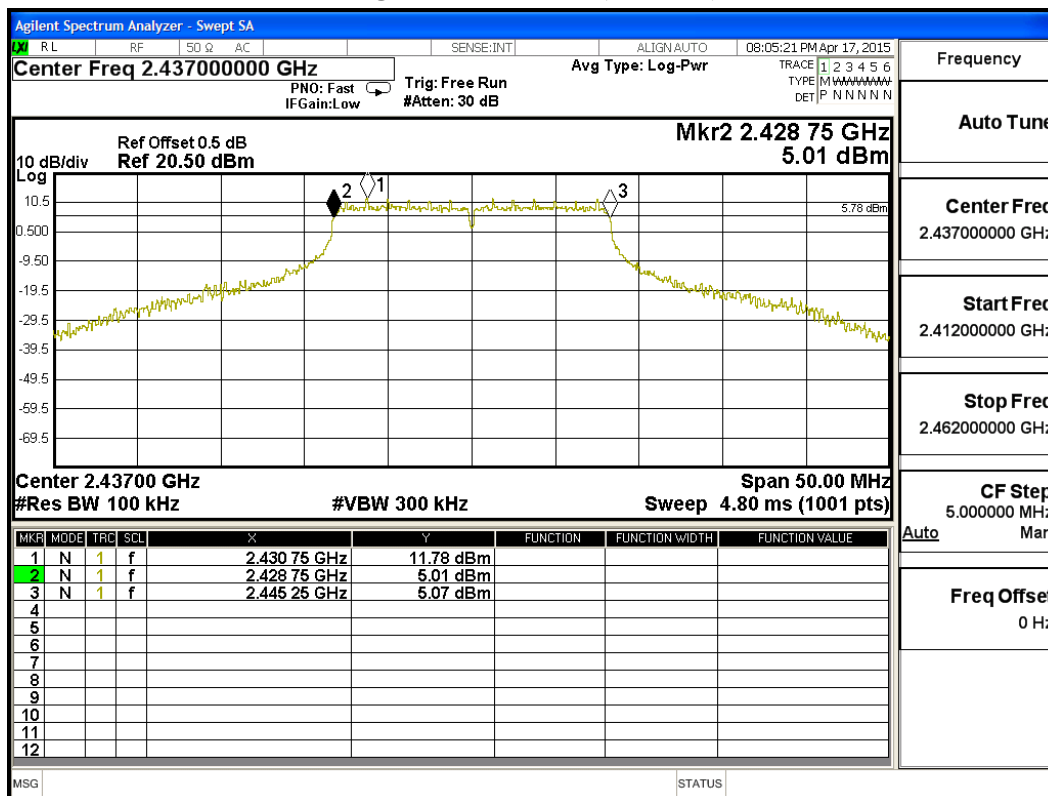


Figure Channel 11: (Chain A)

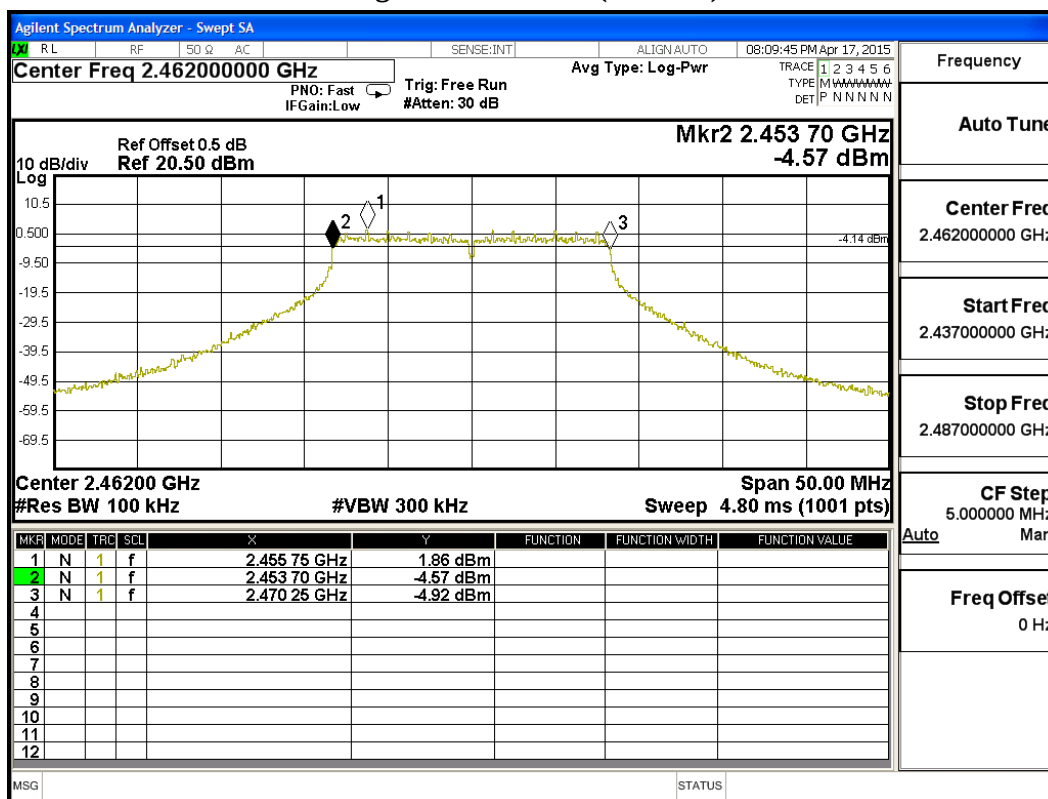


Figure Channel 01: (Chain B)

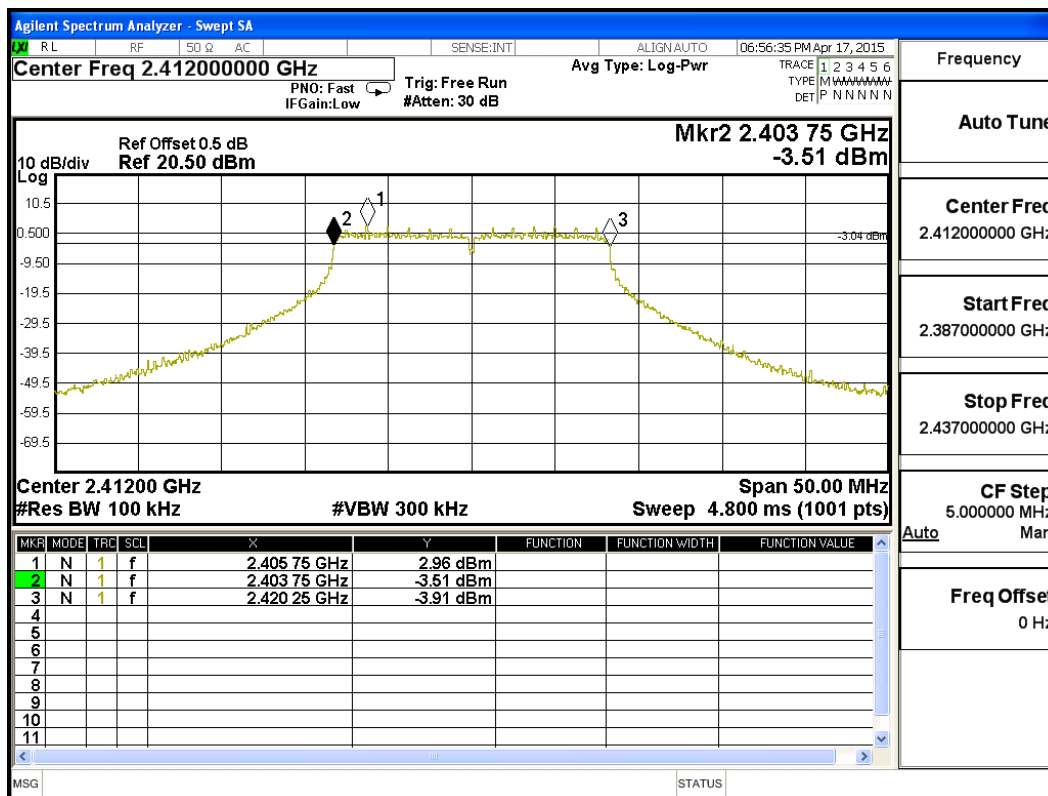


Figure Channel 06: (Chain B)

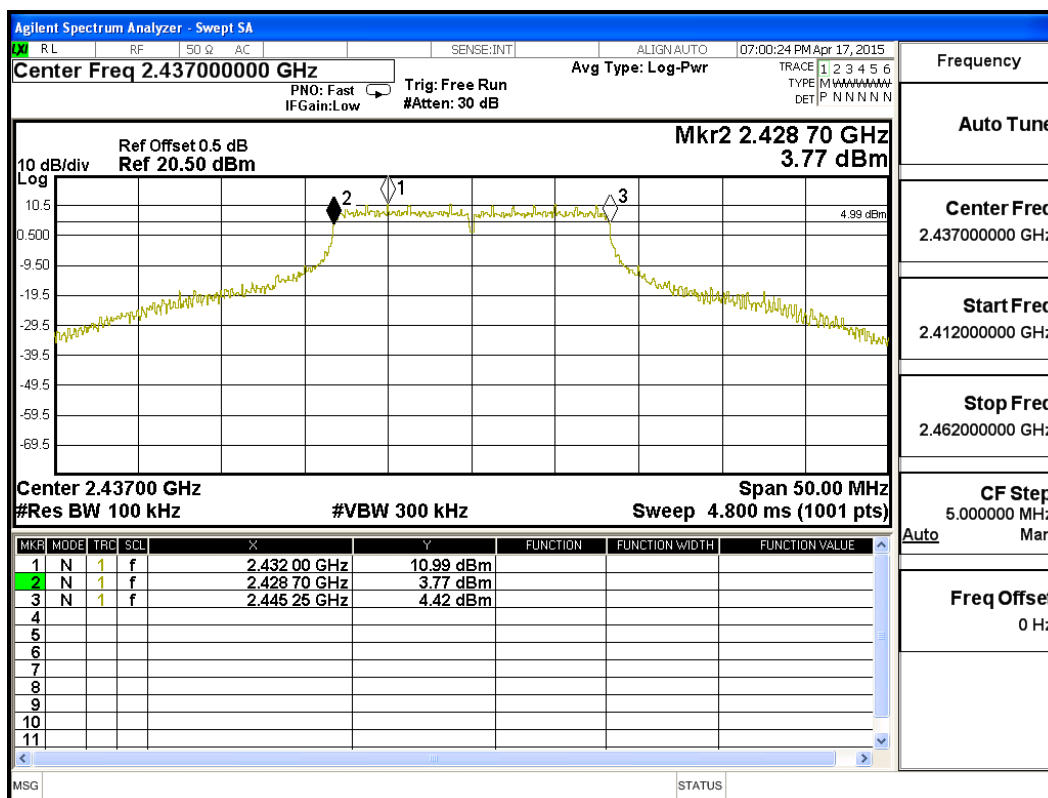


Figure Channel 11: (Chain B)

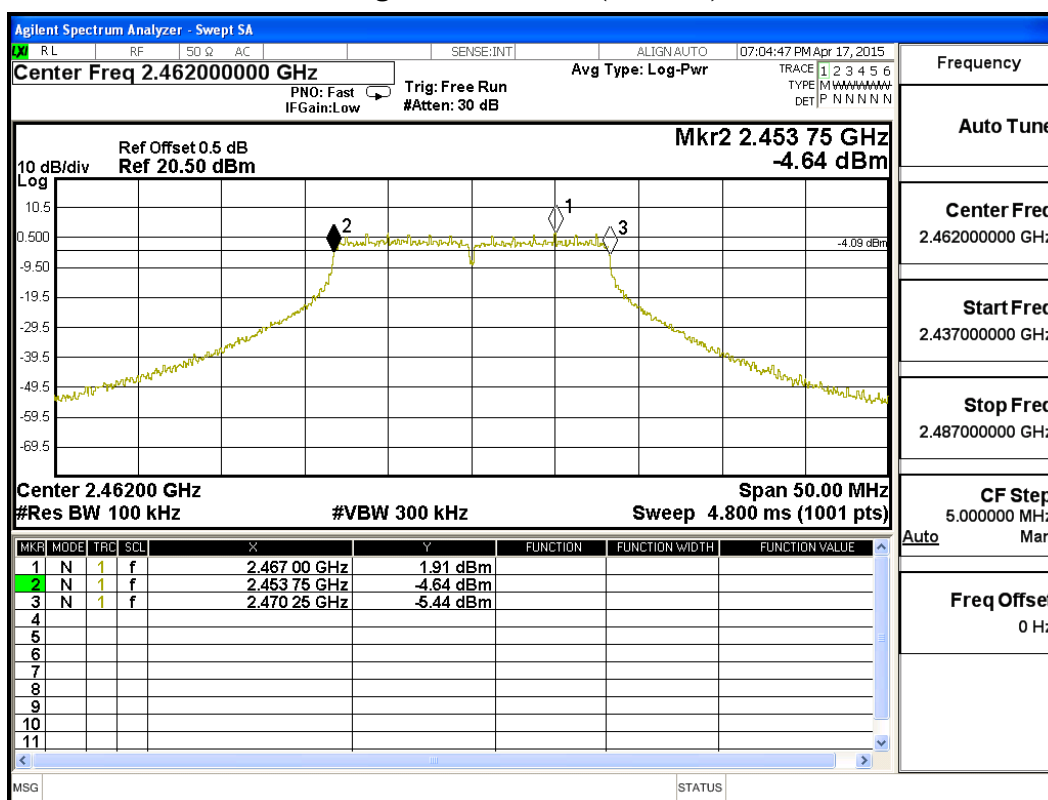


Figure Channel 01: (Chain C)

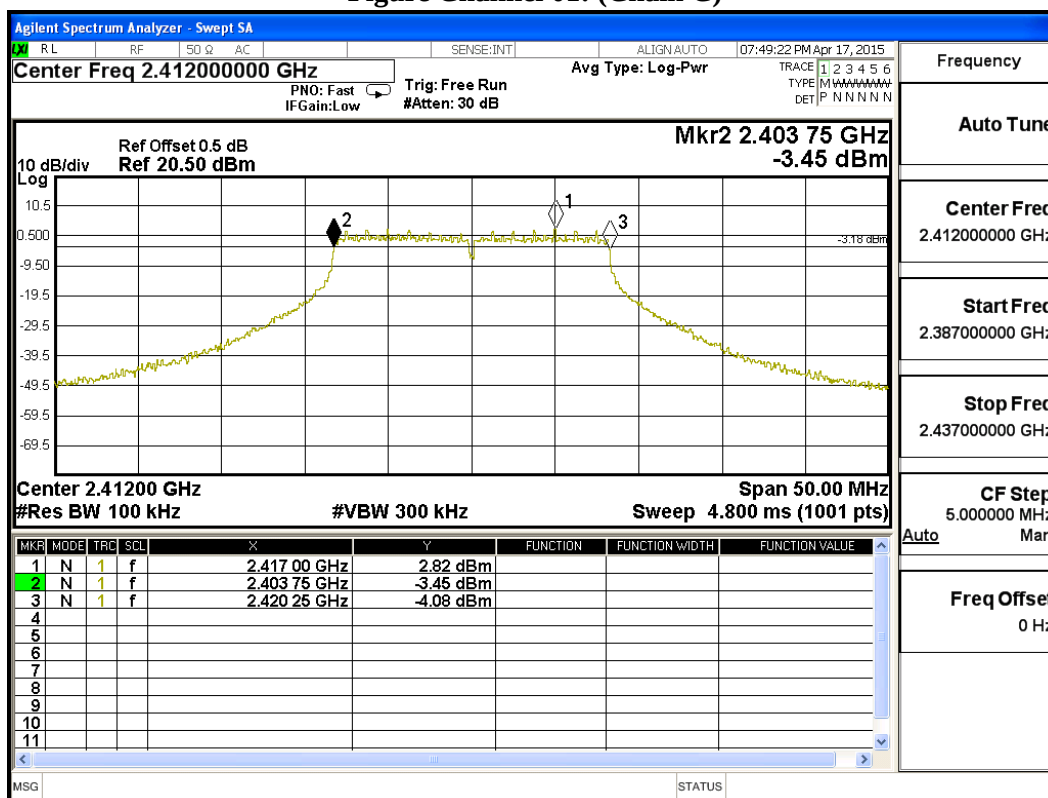


Figure Channel 06: (Chain C)

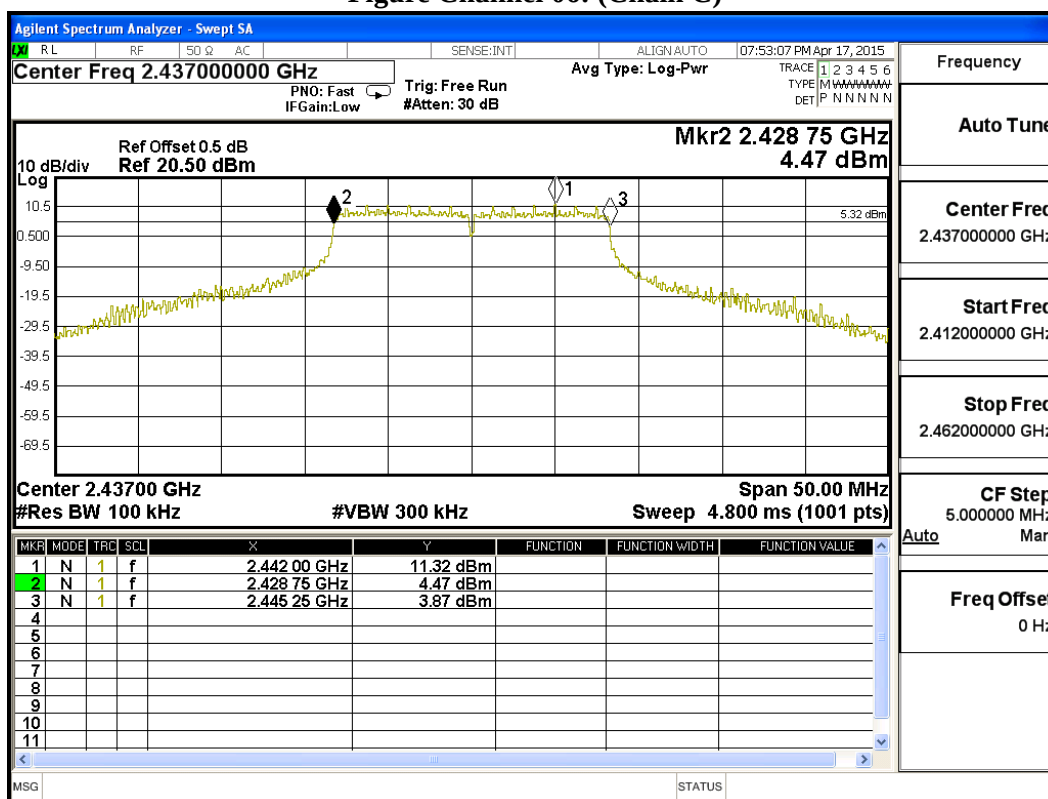
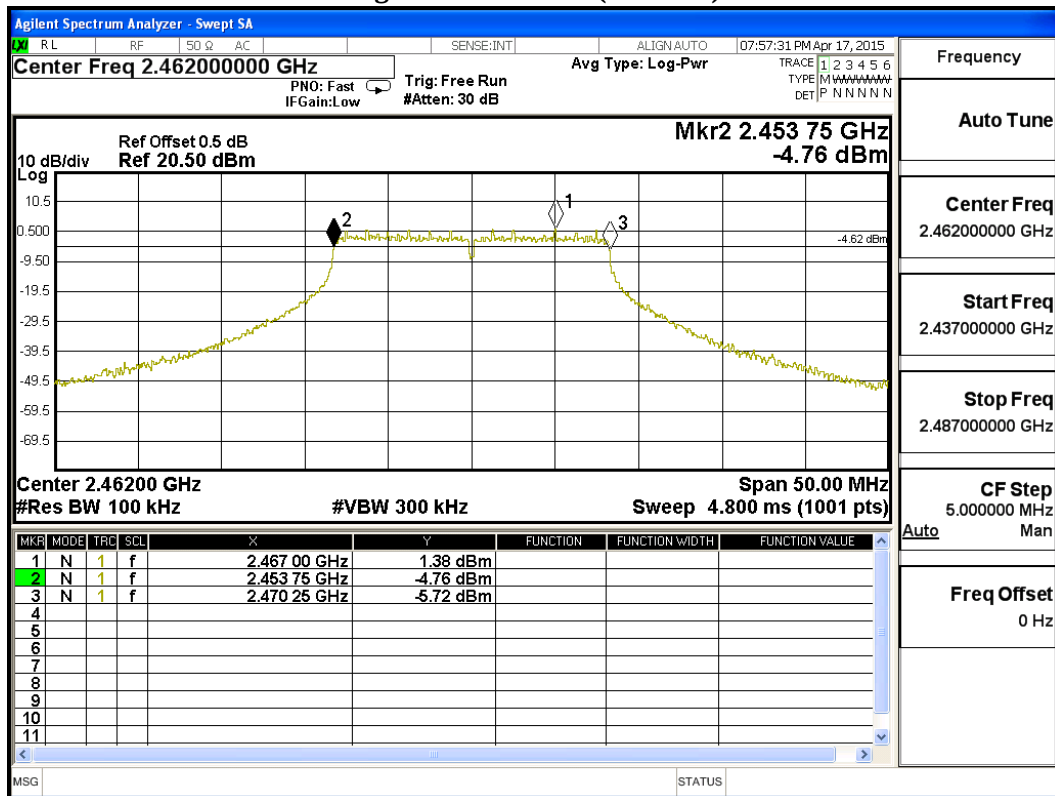


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	A	2412	17700	>500	Pass
06	A	2437	17700	>500	Pass
11	A	2462	17700	>500	Pass
01	B	2412	17700	>500	Pass
06	B	2437	17700	>500	Pass
11	B	2462	17700	>500	Pass
01	C	2412	17700	>500	Pass
06	C	2437	17700	>500	Pass
11	C	2462	17700	>500	Pass

Figure Channel 01: (Chain A)

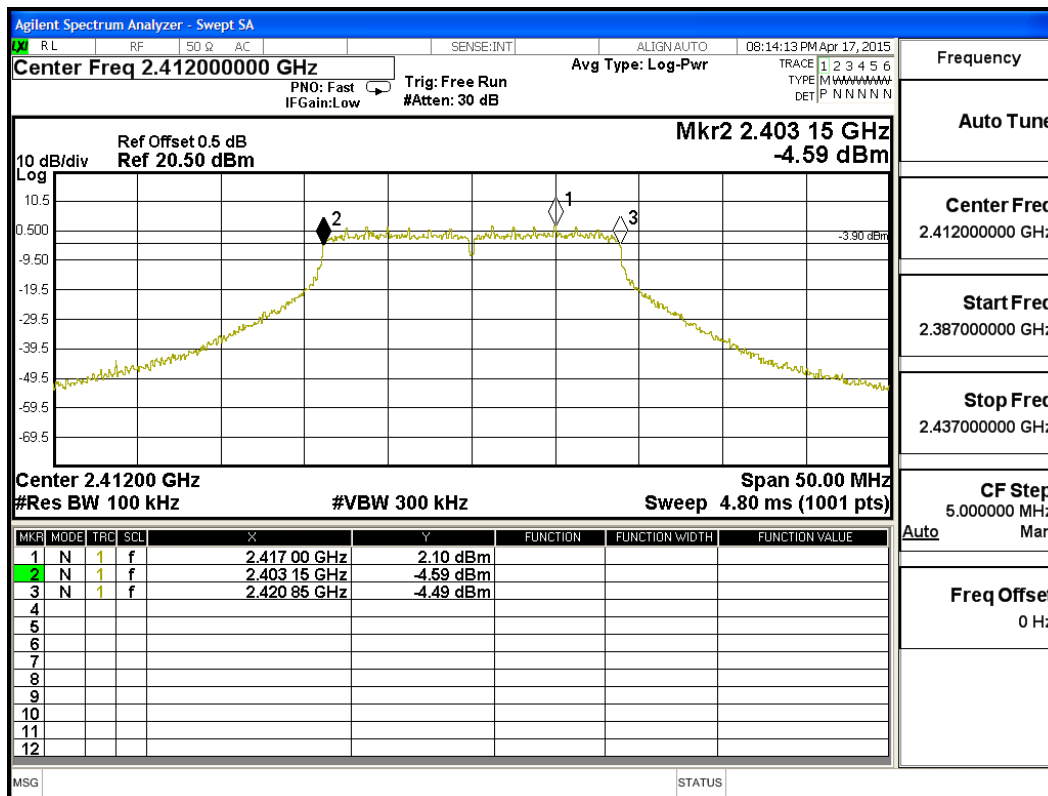


Figure Channel 06: (Chain A)

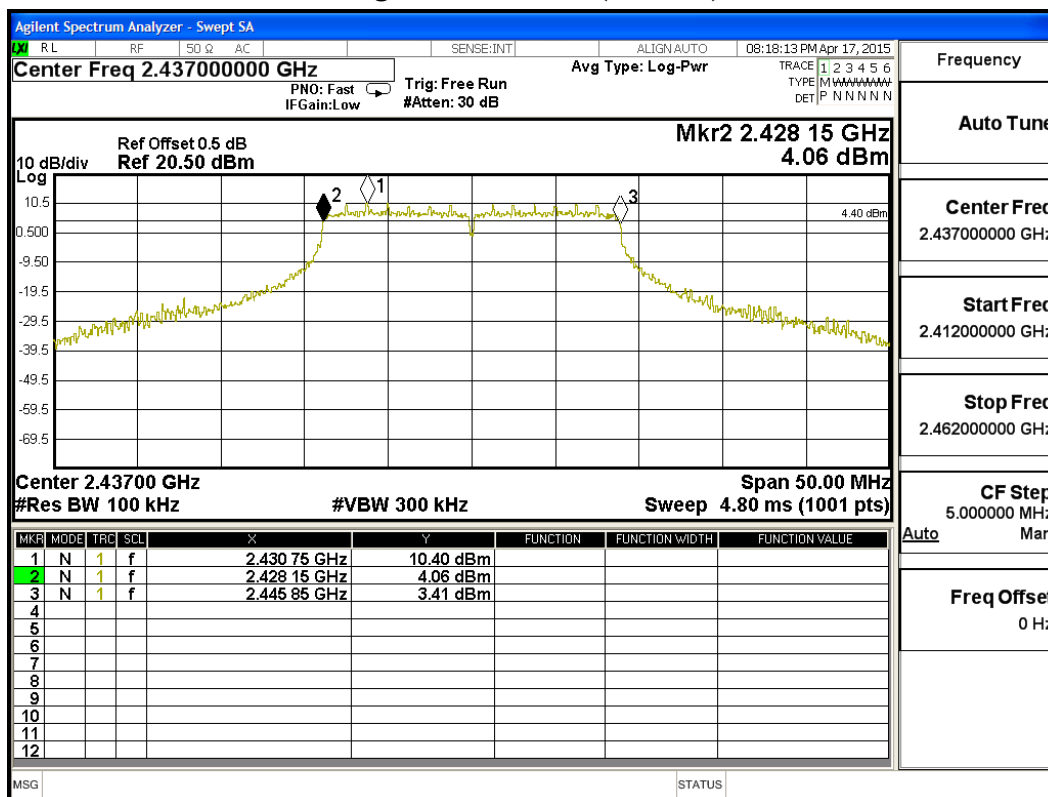


Figure Channel 11: (Chain A)

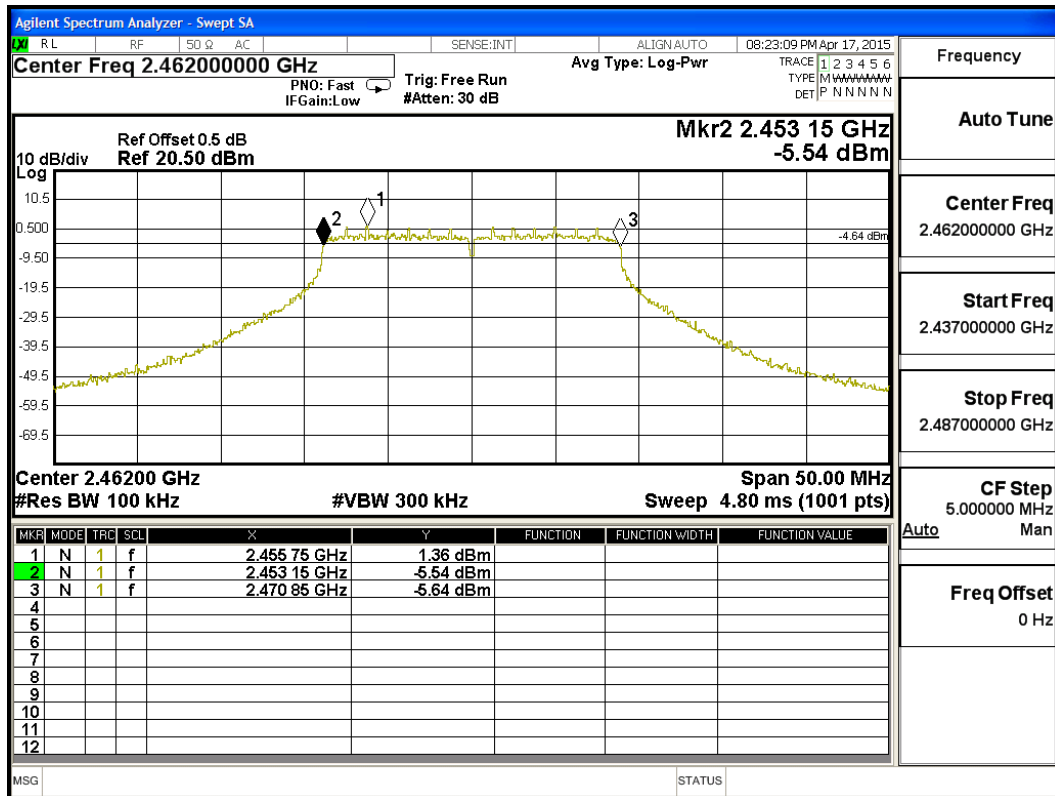


Figure Channel 01: (Chain B)

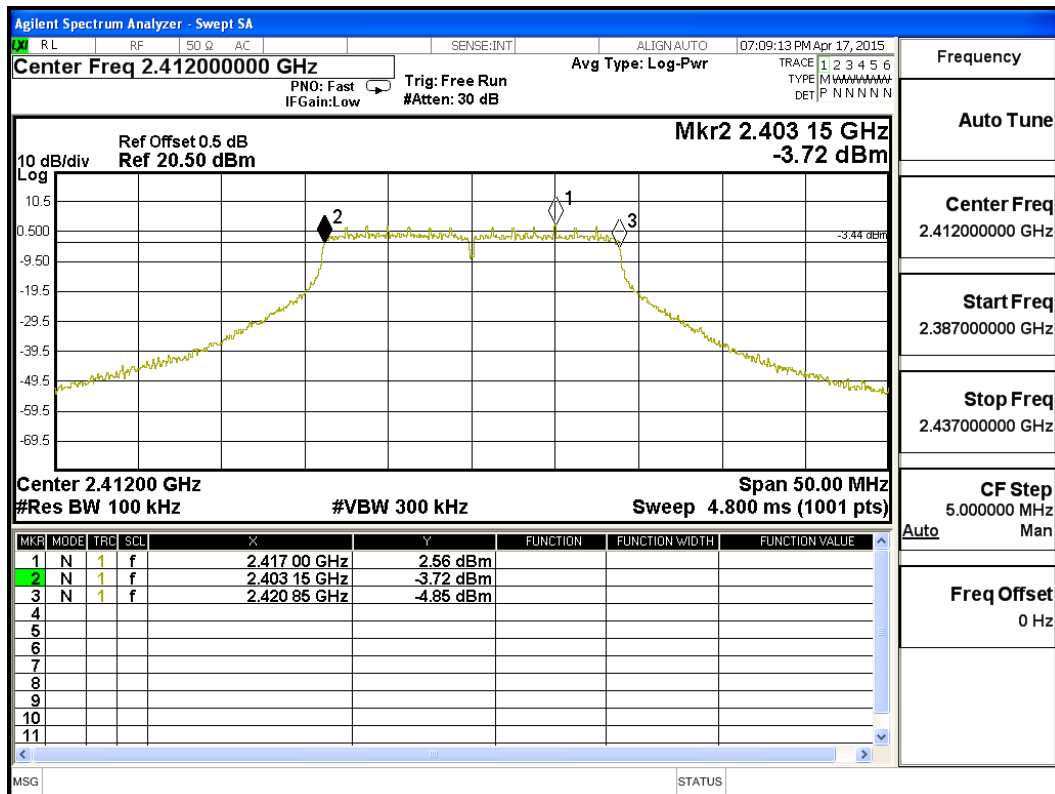


Figure Channel 06: (Chain B)

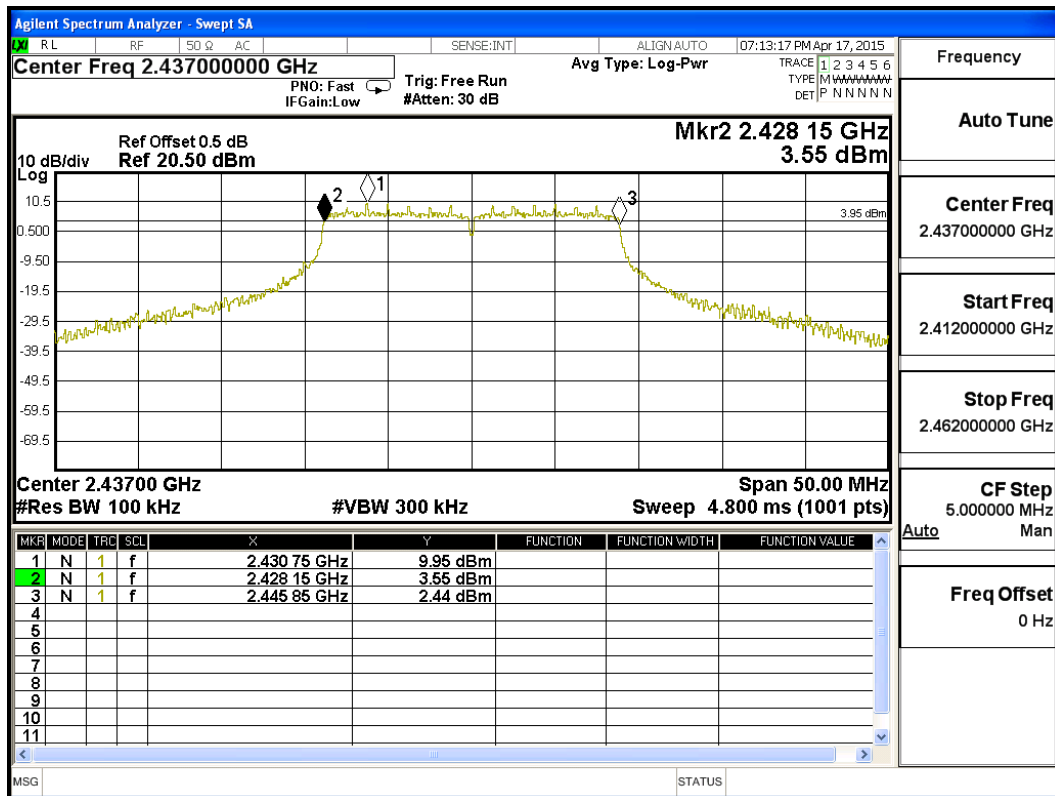


Figure Channel 11: (Chain B)

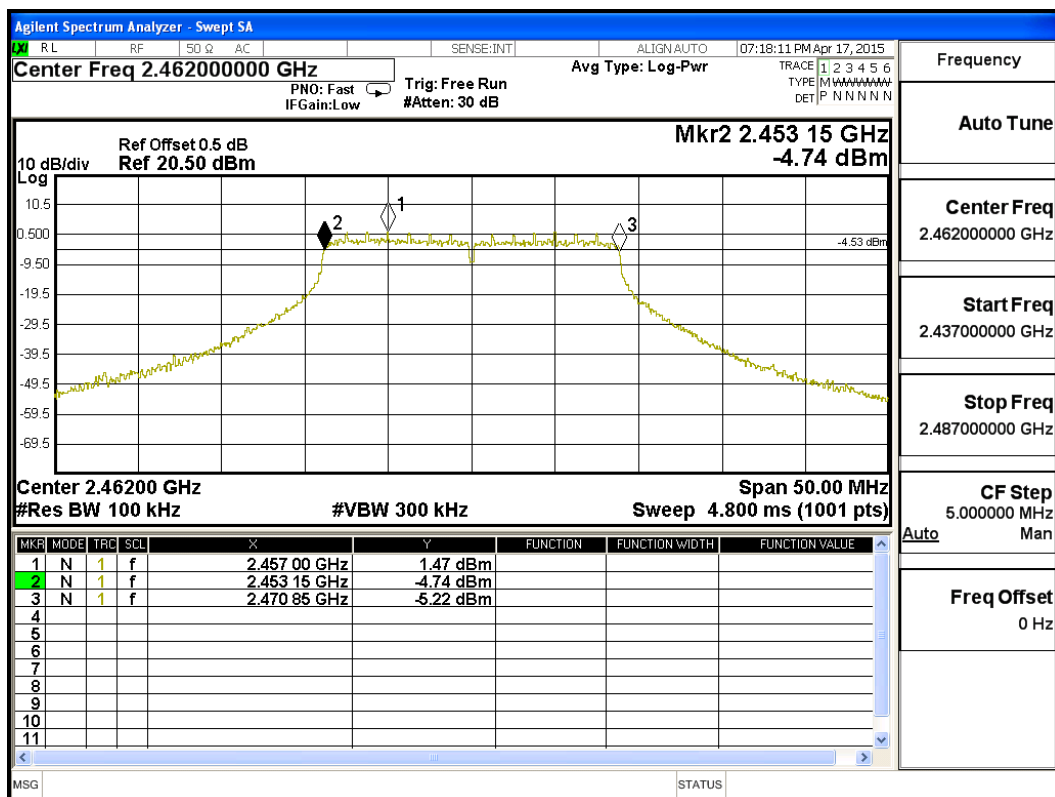


Figure Channel 01: (Chain C)

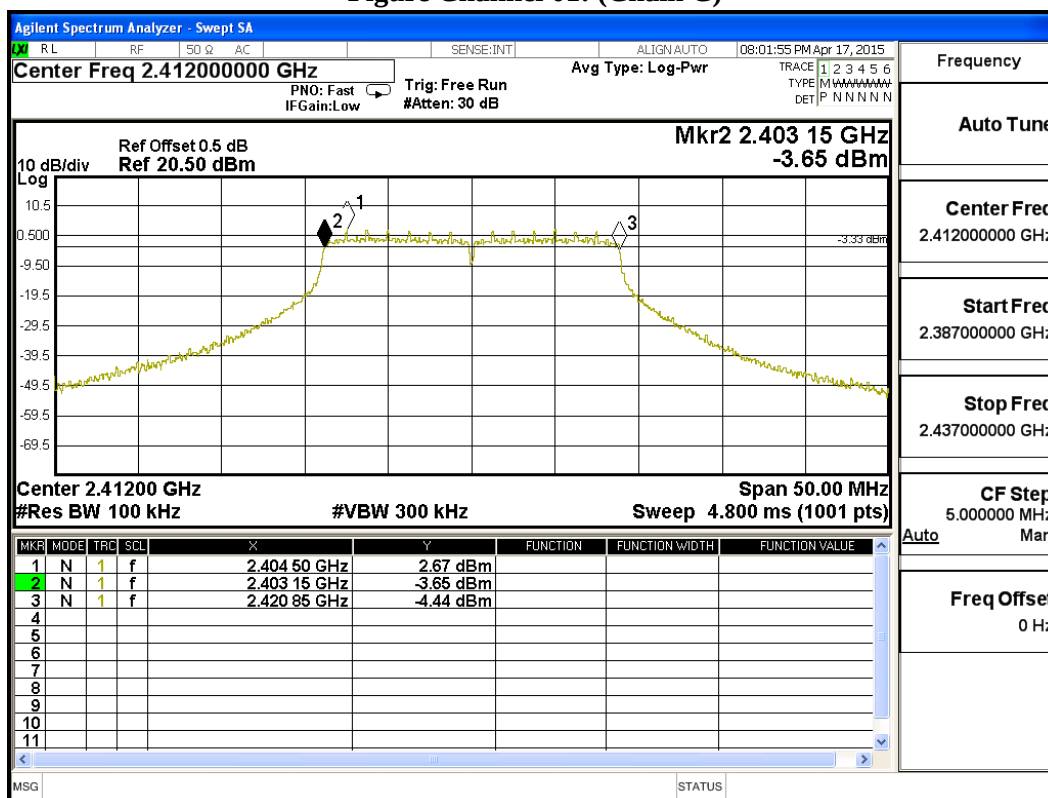
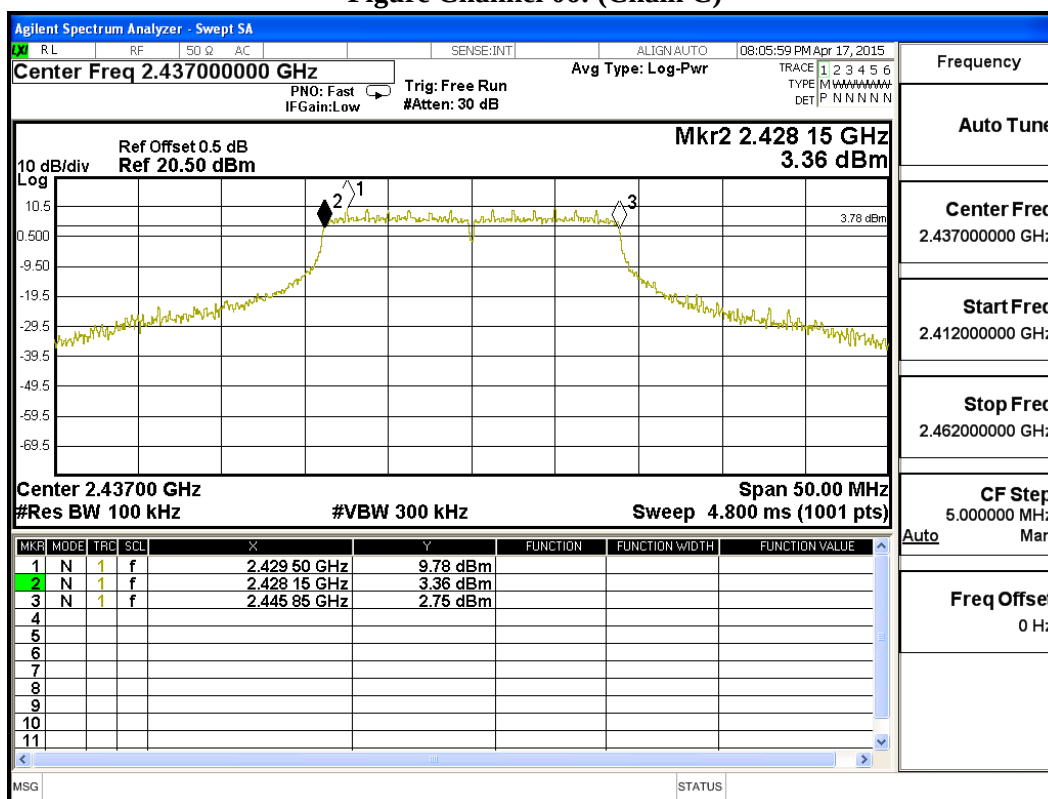


Figure Channel 06: (Chain C)



Agilent Spectrum Analyzer - Sweep SA

R/L	RF	SQ	AC	SENSE:INT	ALIGN:AUTO	08:10:54 PM Apr 17, 2015
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Center Freq 2.46200000 GHz Avg Type: Log-Pwr
 PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB

The spectrum plot displays a single peak centered at 2.462 GHz. The y-axis represents power in dBm, ranging from -69.5 to 10.5. The x-axis represents frequency in MHz, ranging from 2.437 to 2.487. A marker labeled 'Mkr2' points to the peak at 2.462 GHz.

MkR	FREQ	PWR
2	2.462 GHz	-4.99 dBm

Ref Offset 0.5 dB Ref 20.50 dBm **Mkr2 2.453 15 GHz -4.99 dBm**

Center 2.46200 GHz Span 50.00 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 4.800 ms (1001 pts)

MK/R	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	f	2.454 50 GHz	1.12 dBm			
2	N	f	f	2.463 15 GHz	-4.99 dBm			
3	N	f	f	2.470 85 GHz	-6.03 dBm			

Auto Tune Center Freq 2.46200000 GHz Start Freq 2.437000000 GHz Stop Freq 2.487000000 GHz CF Step 5.000000 MHz Man Freq Offset 0 Hz

Product : Access Point/Sensor
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

Channel No.	Chain	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	A	2422	36600	>500	Pass
06	A	2437	36600	>500	Pass
09	A	2452	36600	>500	Pass
03	B	2422	36500	>500	Pass
06	B	2437	36300	>500	Pass
09	B	2452	36500	>500	Pass
03	C	2422	36500	>500	Pass
06	C	2437	36600	>500	Pass
09	C	2452	36500	>500	Pass

Figure Channel 03: (Chain A)

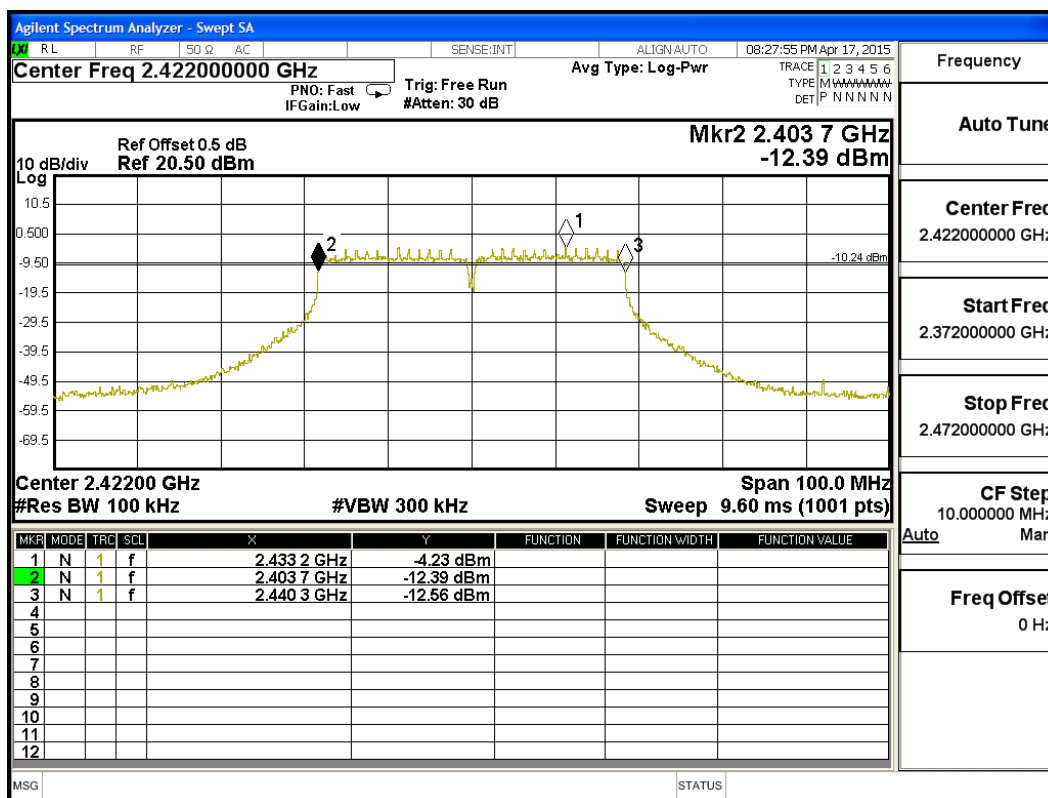


Figure Channel 06: (Chain A)

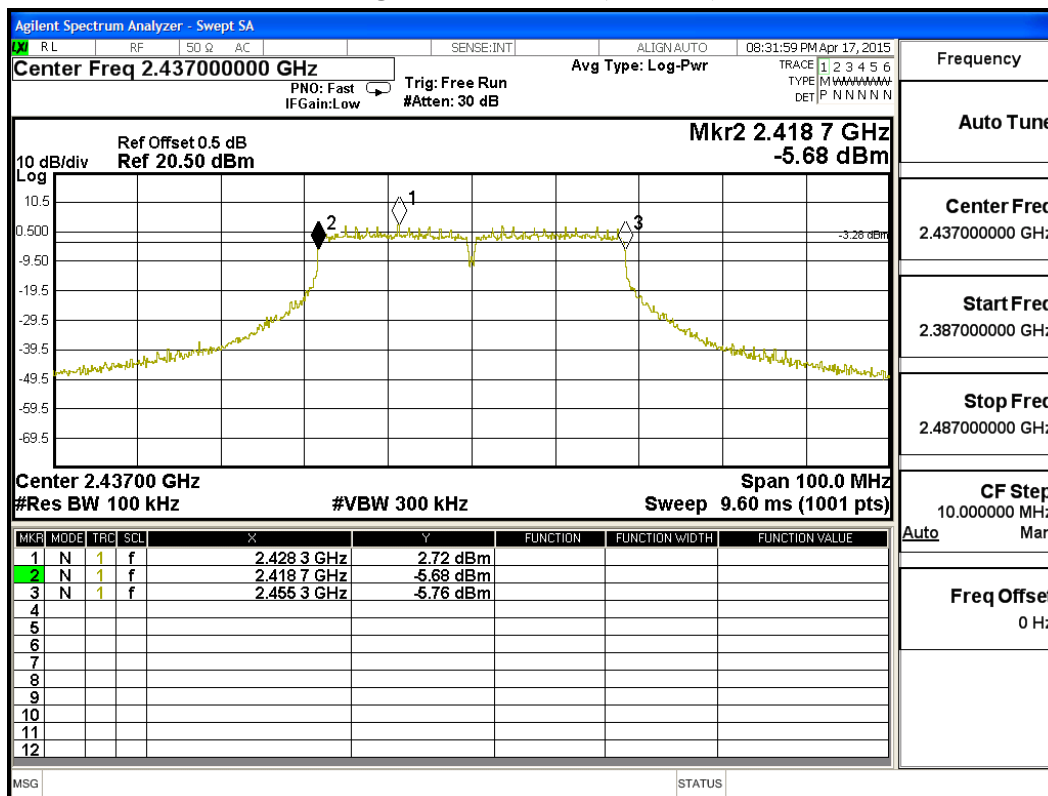


Figure Channel 09: (Chain A)

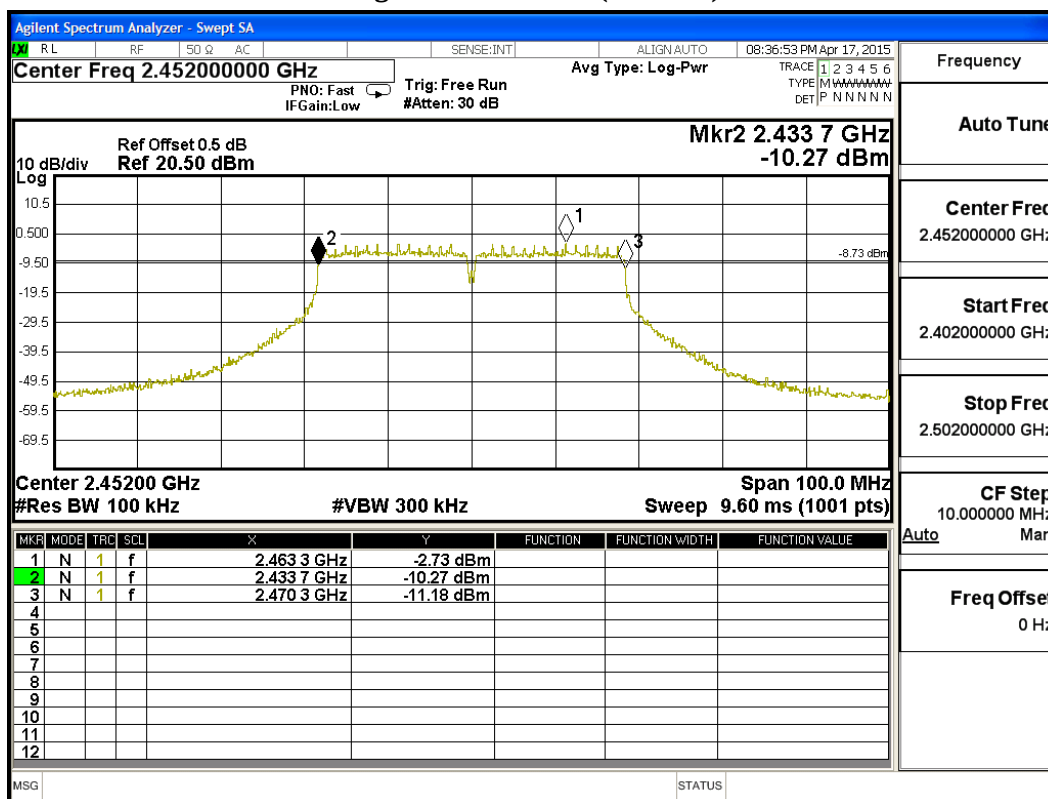


Figure Channel 03: (Chain B)

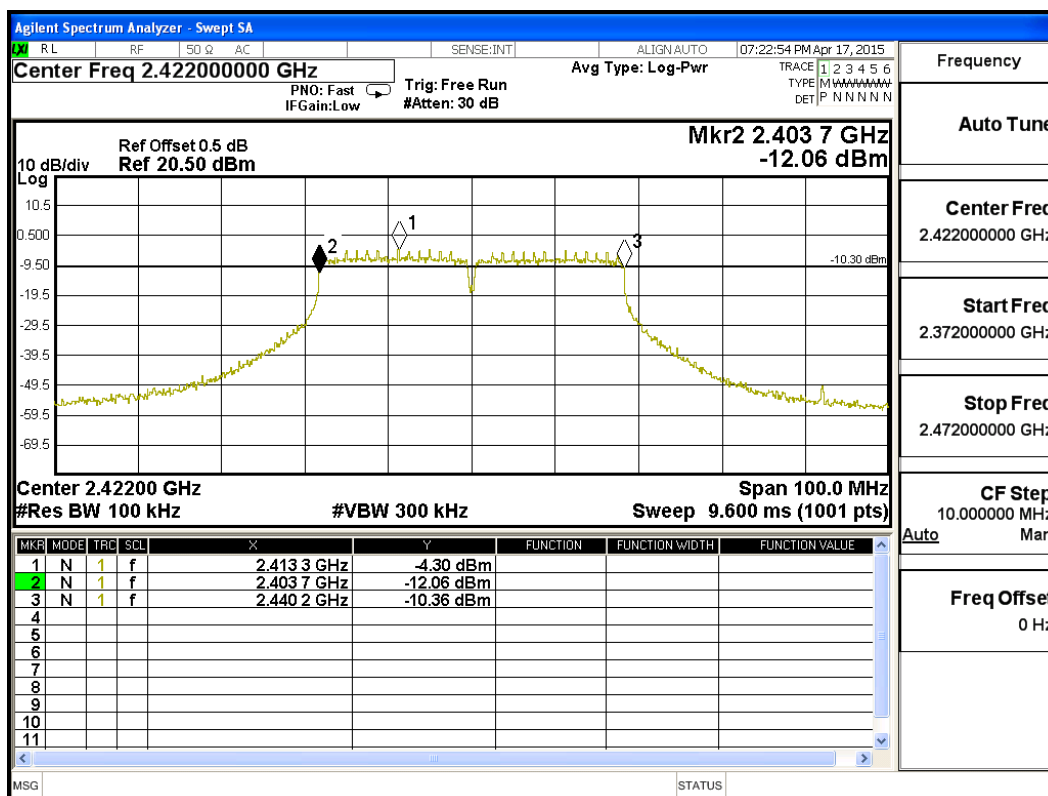


Figure Channel 06: (Chain B)

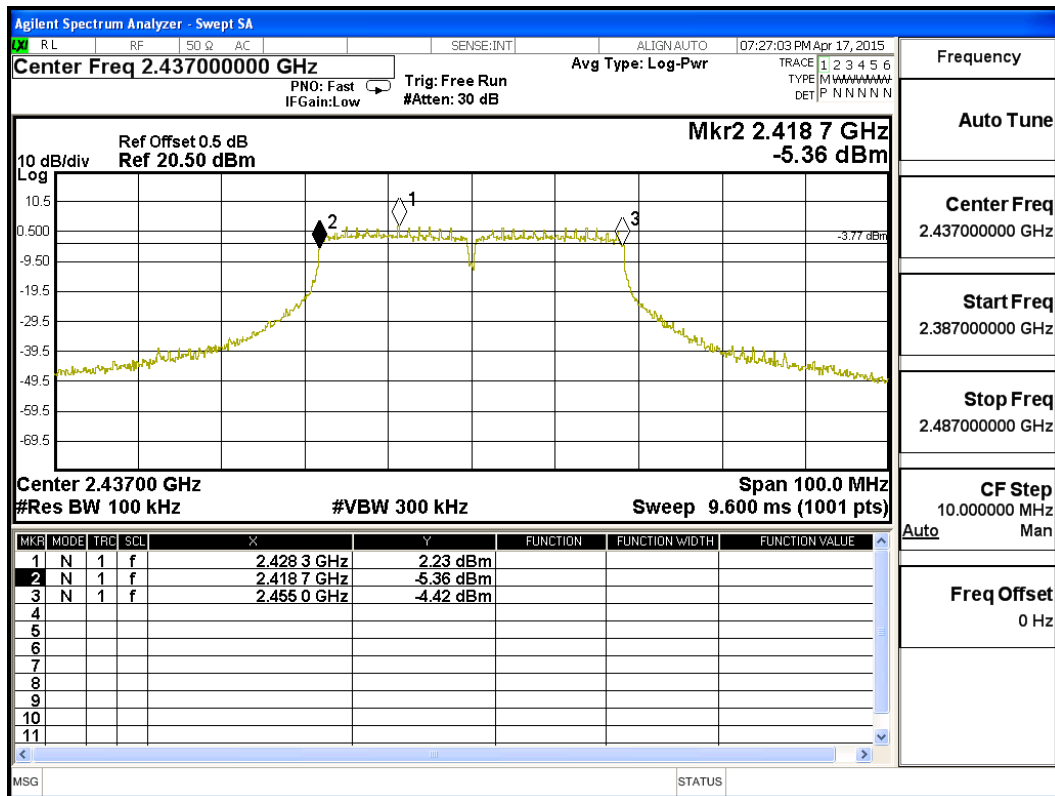


Figure Channel 09: (Chain B)

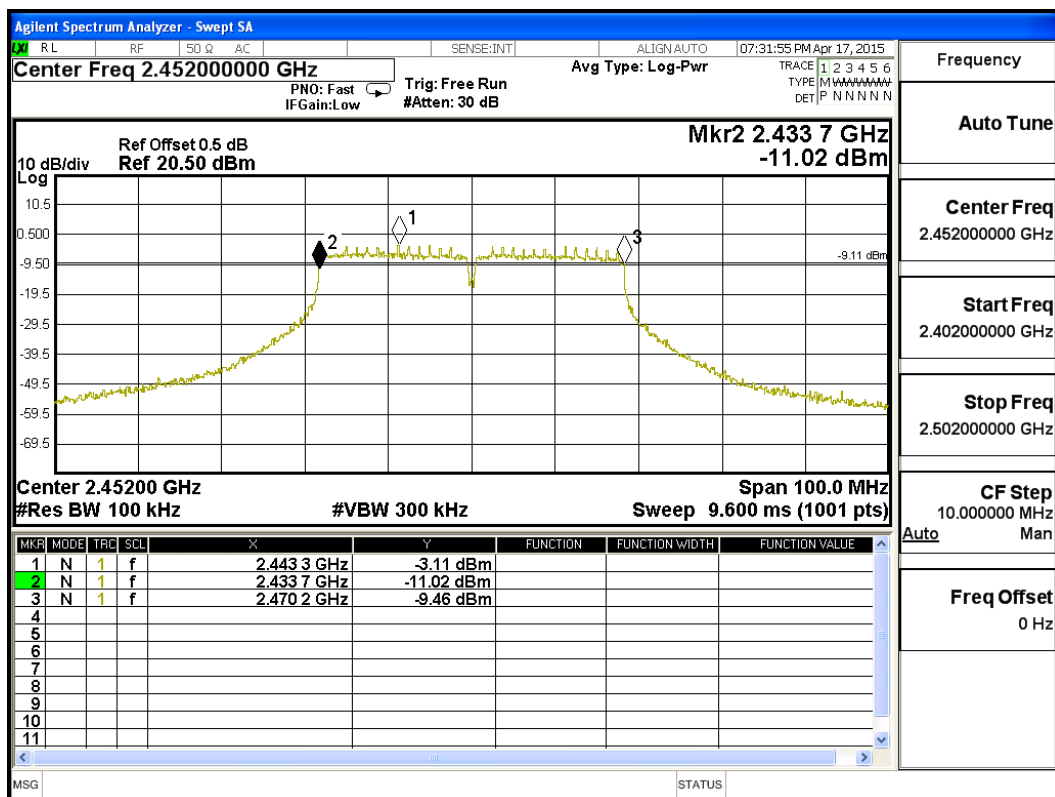


Figure Channel 03: (Chain C)

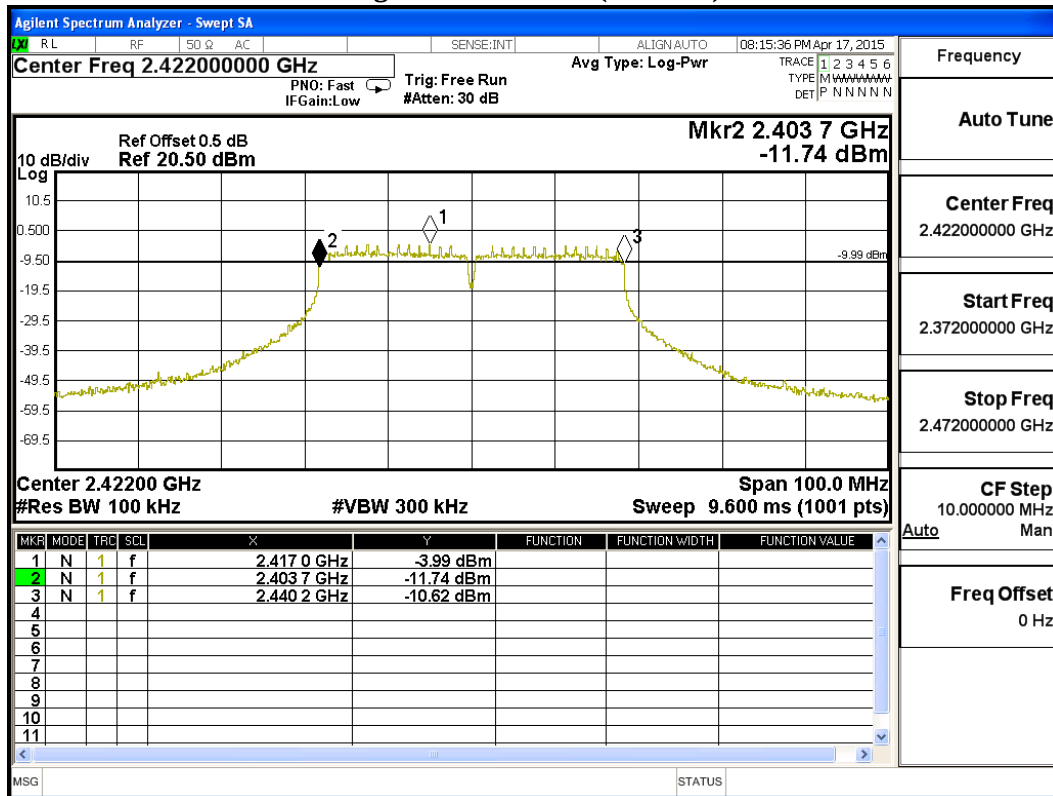
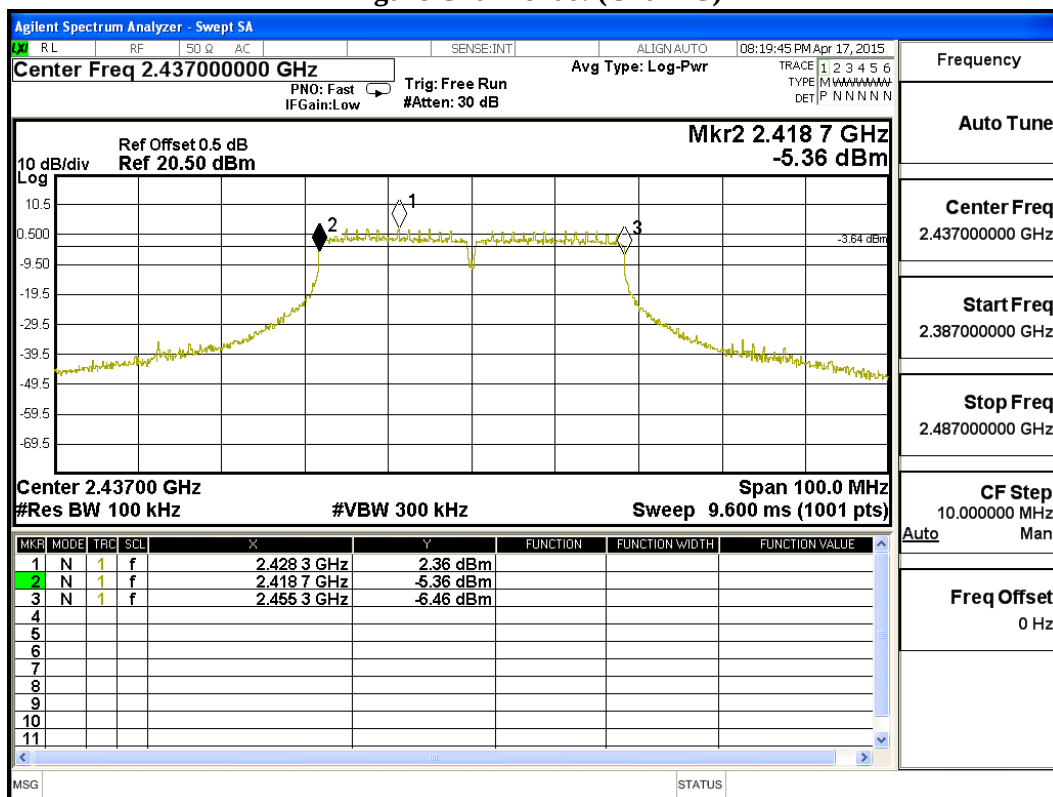


Figure Channel 06: (Chain C)



Agilent Spectrum Analyzer - Swept SA

RL RF SO Q AC SENSE:INT ALIGN:AUTO 08:24:38 PM Apr 17, 2015

Center Freq 2.45200000 GHz Avg Type: Log-Pwr

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB

Ref Offset 0.5 dB Ref 20.50 dBm Mkr2 2.433 7 GHz -10.96 dBm

MkR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.447 0 GHz	-3.00 dBm			
2	N	1	f	2.433 7 GHz	-10.96 dBm			
3	N	1	f	2.470 2 GHz	-9.00 dBm			

Center 2.45200 GHz Span 100.0 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

8. Power Density

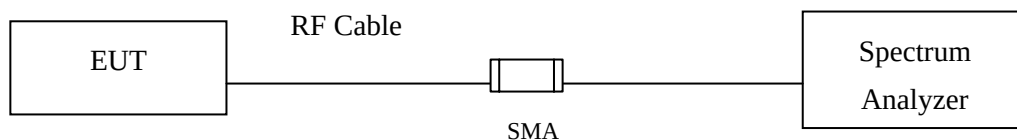
8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.5. Uncertainty

± 1.27 dB

8.6. Test Result of Power Density

Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (External Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
01	2412	A	-1.840	2.931	< 8dBm	Pass
01	2412	B	-2.070	2.701	< 8dBm	Pass
01	2412	C	-1.290	3.481	< 8dBm	Pass
06	2437	A	-0.423	4.348	< 8dBm	Pass
06	2437	B	-0.401	4.370	< 8dBm	Pass
06	2437	C	-0.273	4.498	< 8dBm	Pass
11	2462	A	-0.490	4.281	< 8dBm	Pass
11	2462	B	-1.130	3.641	< 8dBm	Pass
11	2462	C	-0.790	3.981	< 8dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)



Figure Channel 06: (Chain A)

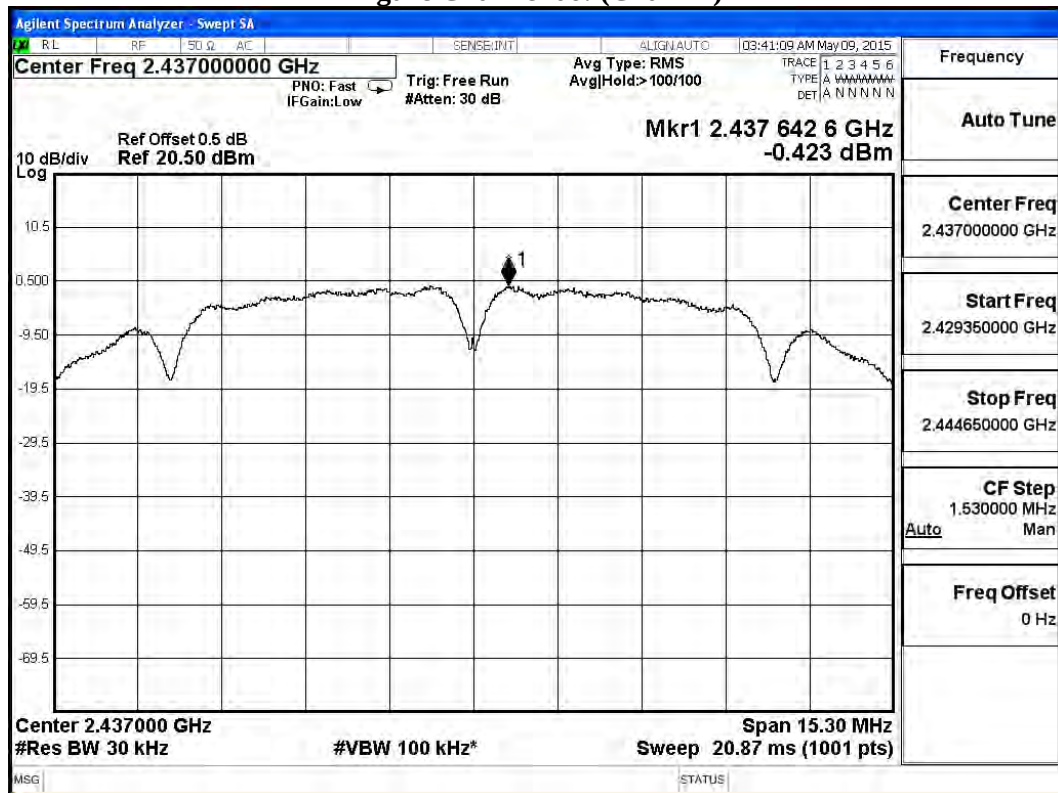


Figure Channel 11: (Chain A)

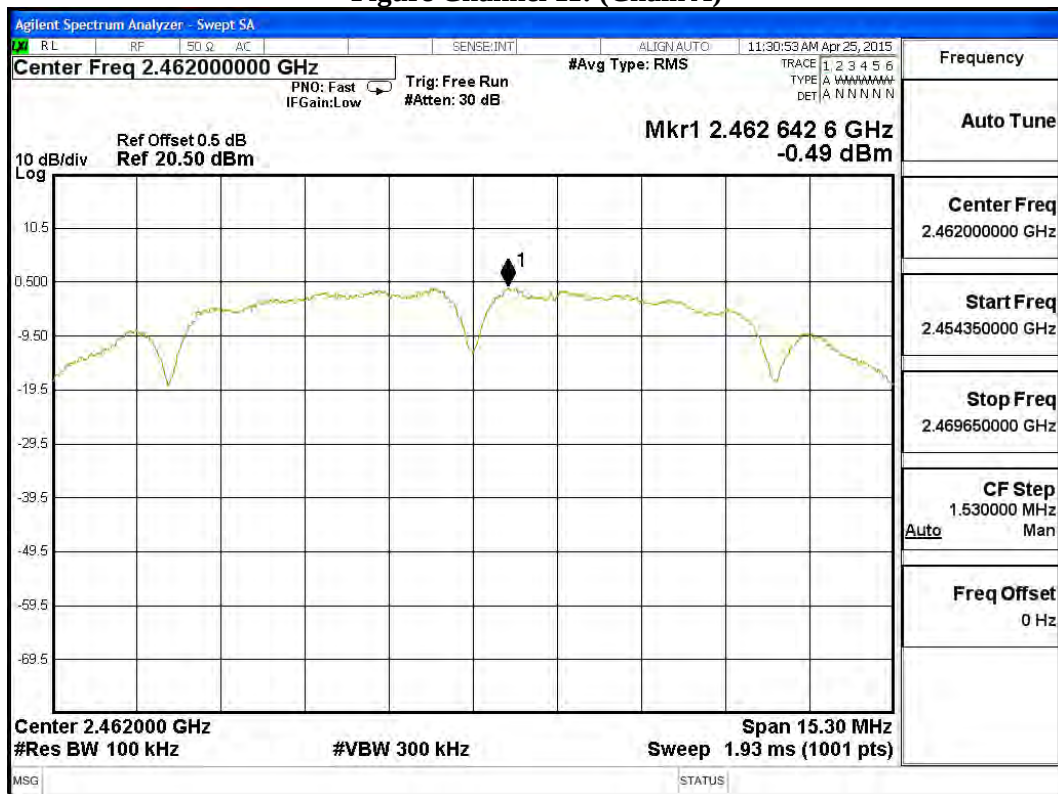


Figure Channel 01: (Chain B)

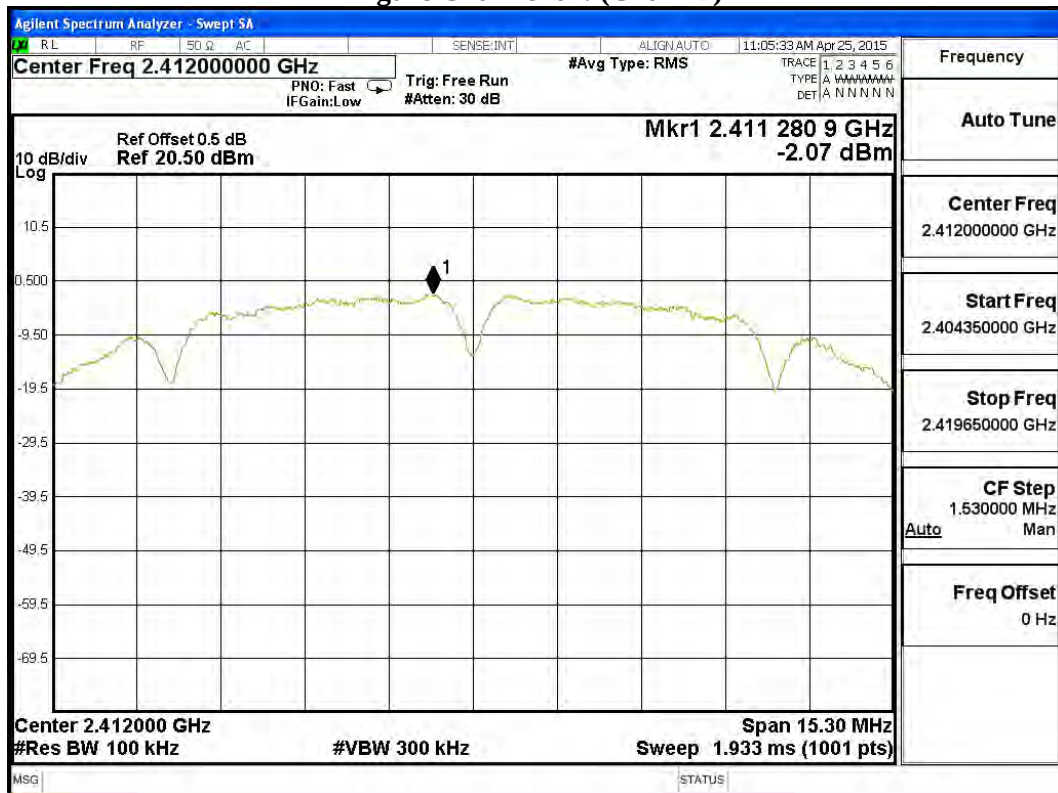


Figure Channel 06: (Chain B)

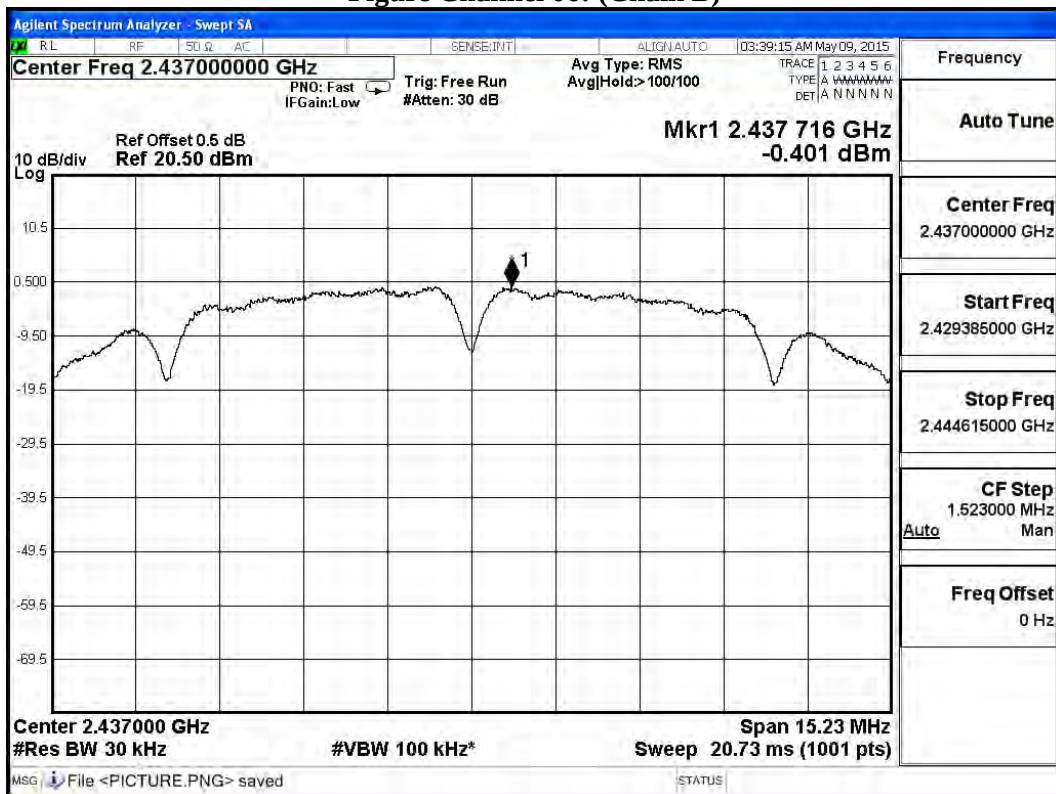


Figure Channel 11: (Chain B)

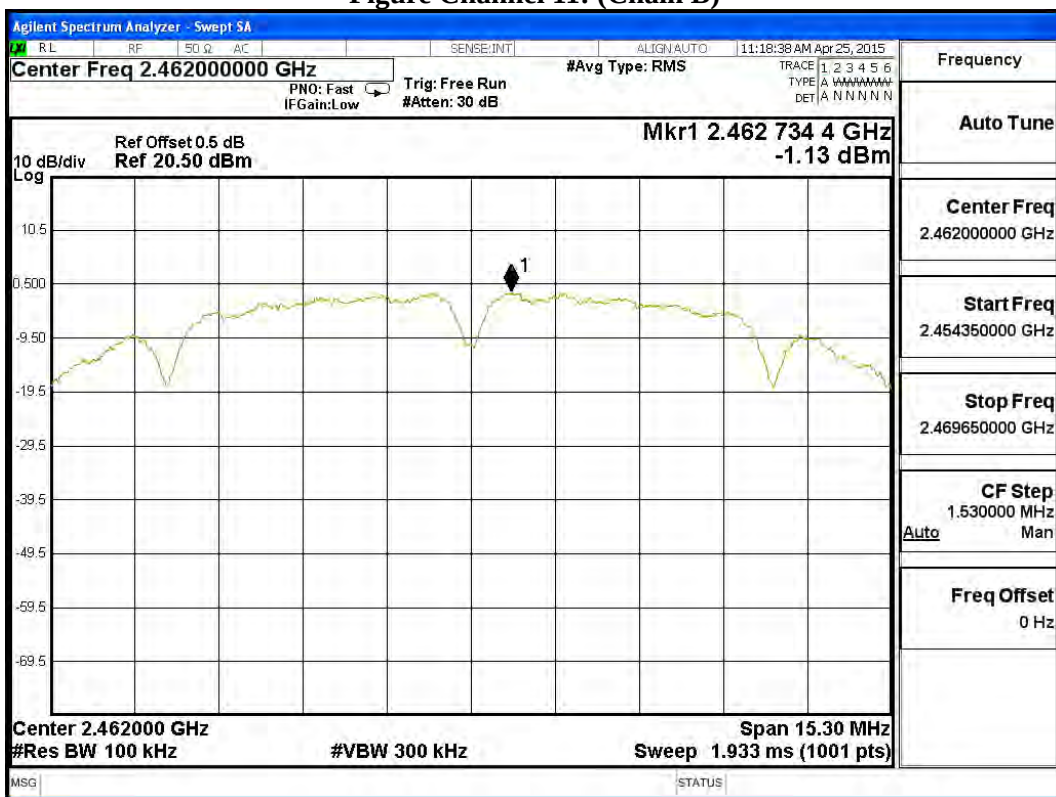


Figure Channel 01: (Chain C)

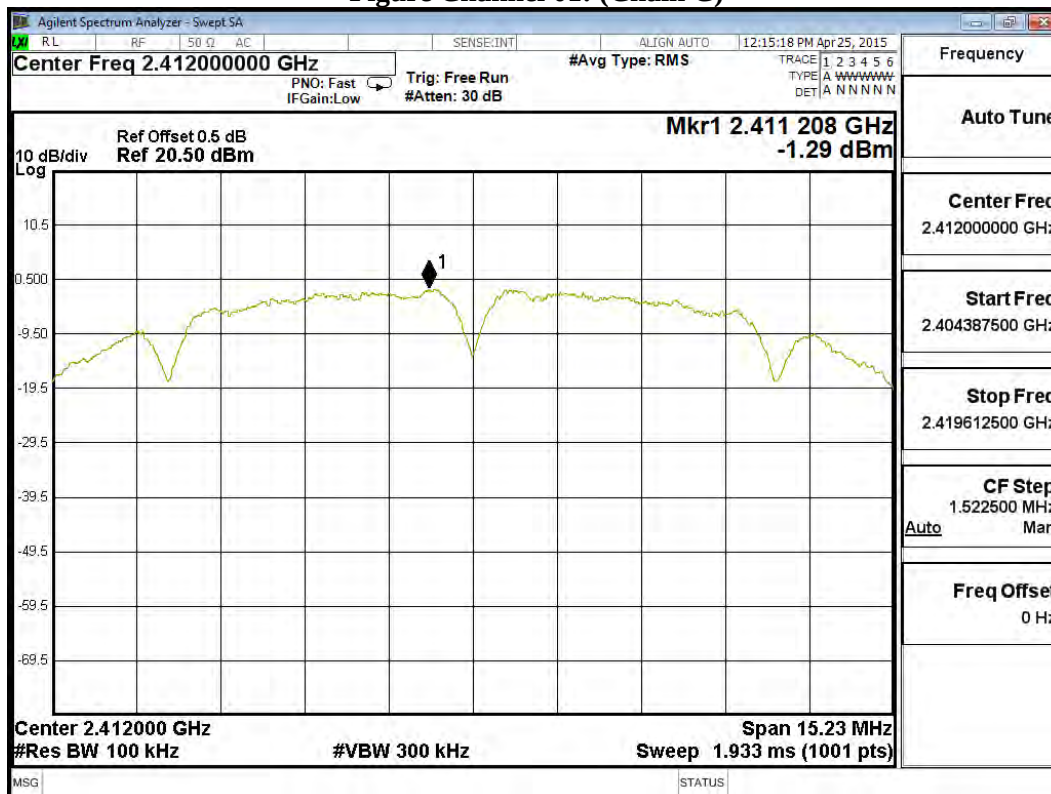


Figure Channel 06: (Chain C)

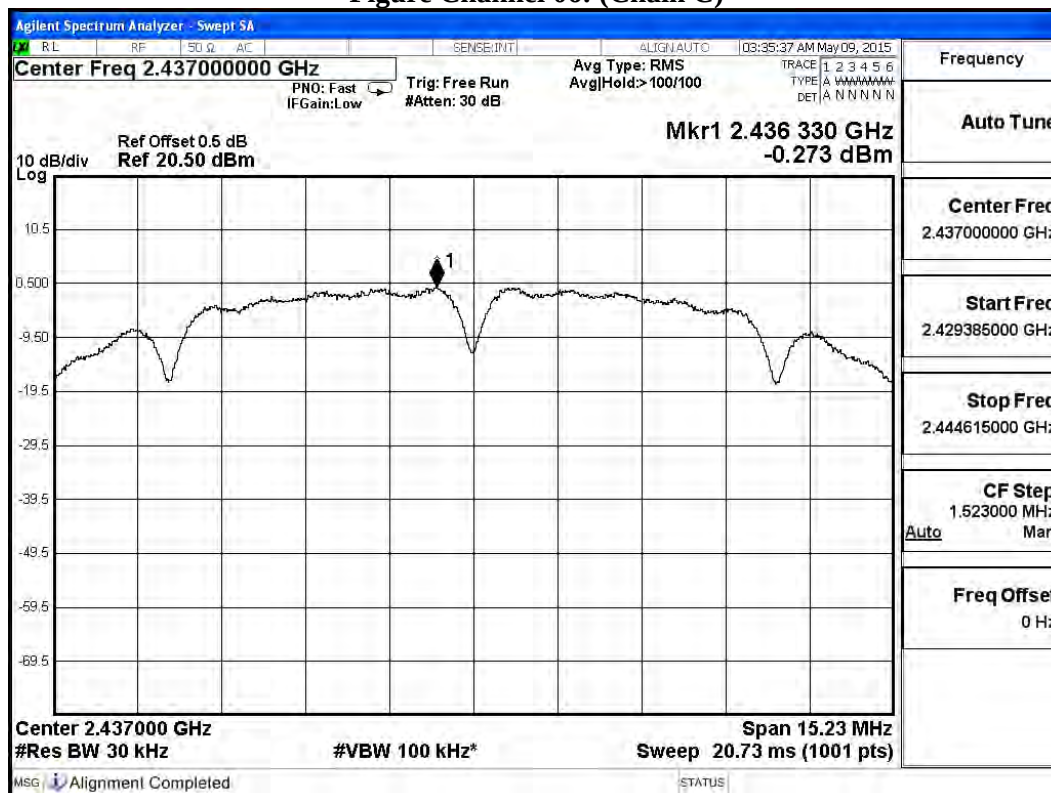
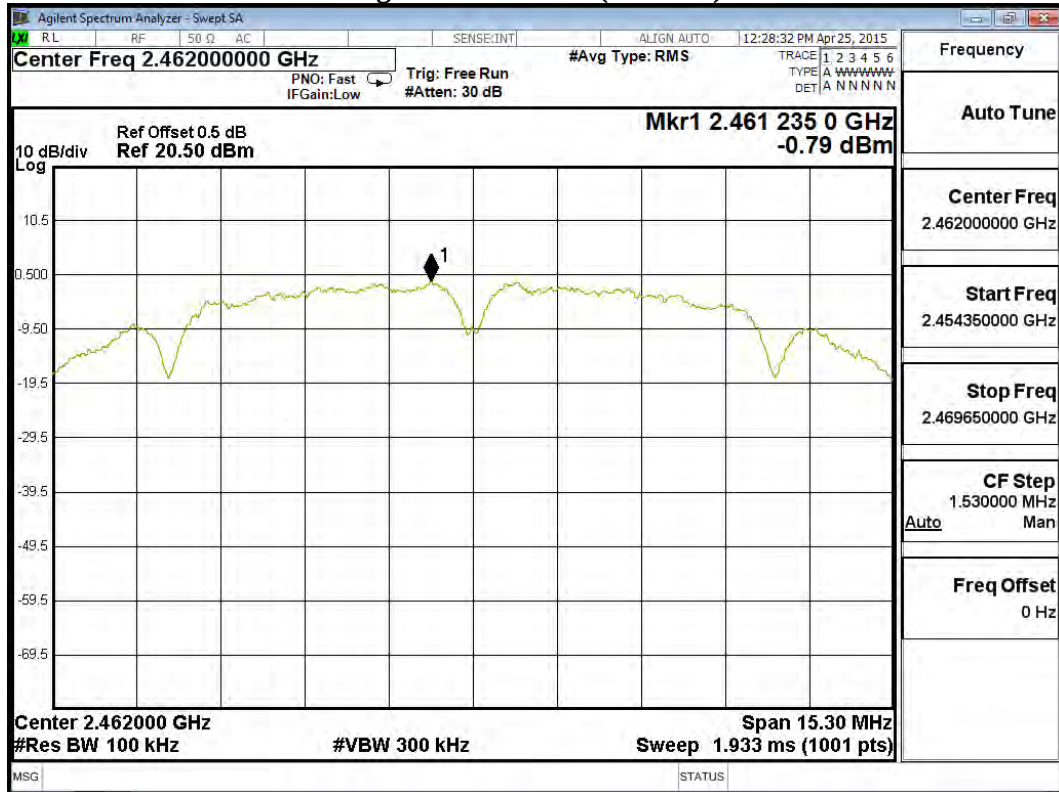


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (External Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
01	2412	A	-6.780	-2.009	< 8dBm	Pass
01	2412	B	-6.320	-1.549	< 8dBm	Pass
01	2412	C	-5.910	-1.139	< 8dBm	Pass
06	2437	A	1.550	6.321	< 8dBm	Pass
06	2437	B	1.880	6.651	< 8dBm	Pass
06	2437	C	1.570	6.341	< 8dBm	Pass
11	2462	A	-7.820	-3.049	< 8dBm	Pass
11	2462	B	-7.800	-3.029	< 8dBm	Pass
11	2462	C	-7.500	-2.729	< 8dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

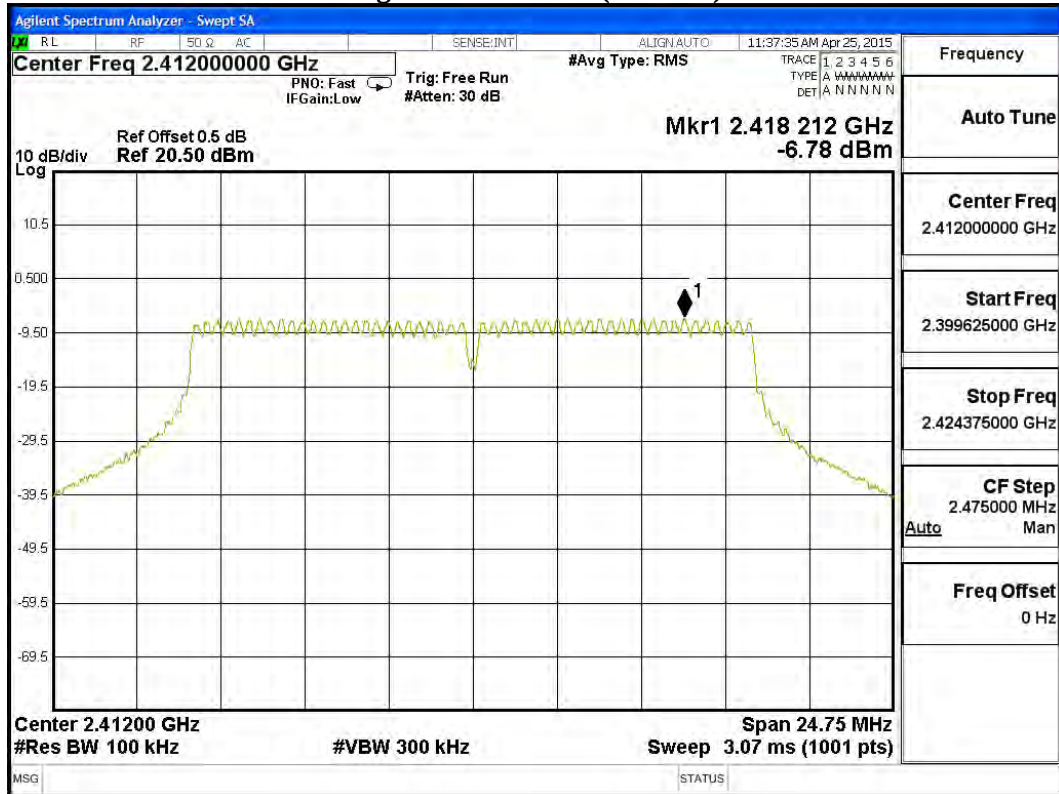


Figure Channel 06: (Chain A)

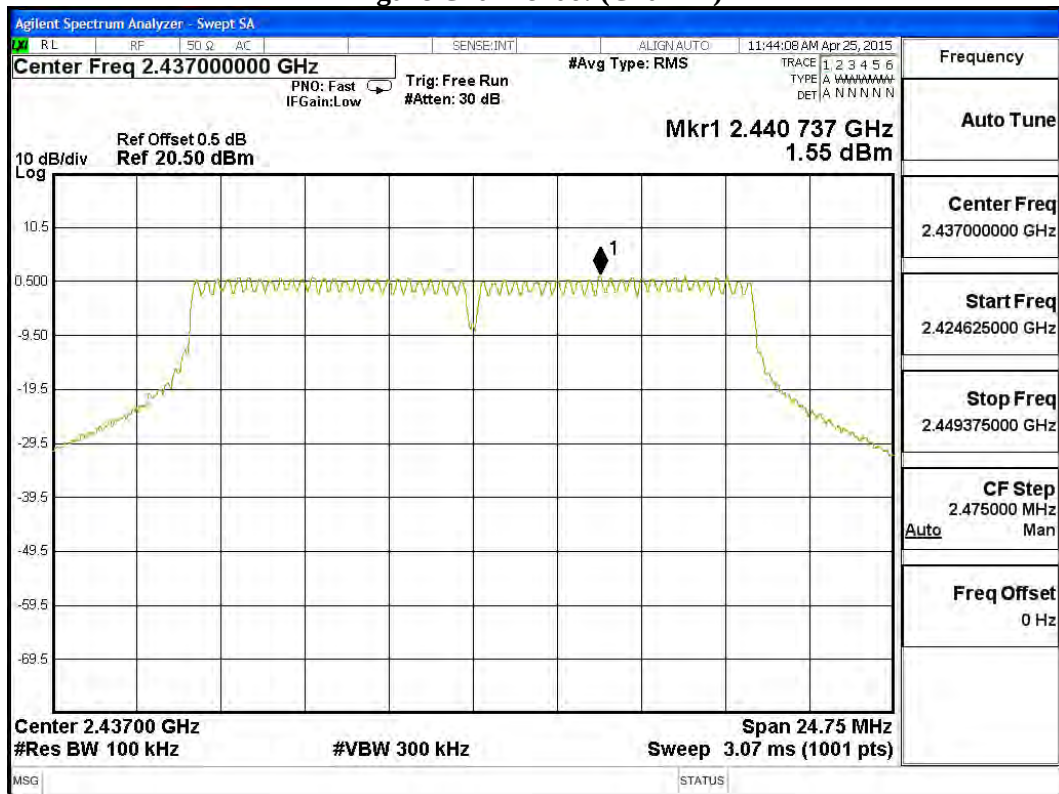


Figure Channel 11: (Chain A)



Figure Channel 01: (Chain B)

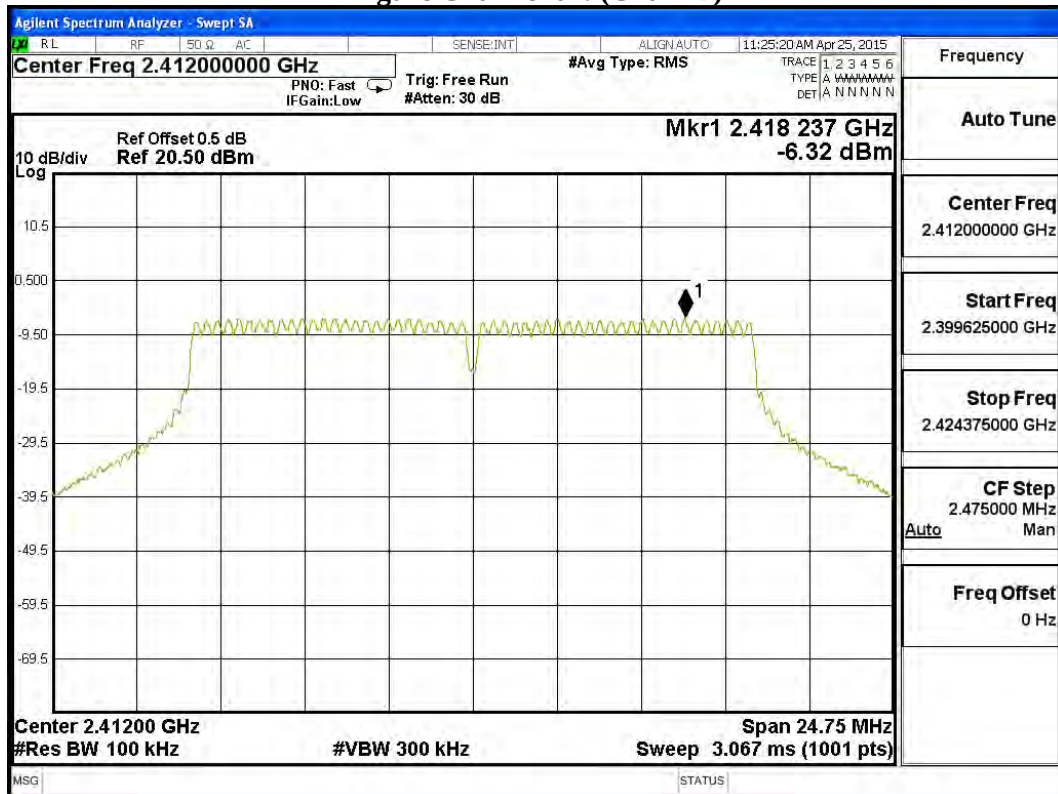


Figure Channel 06: (Chain B)

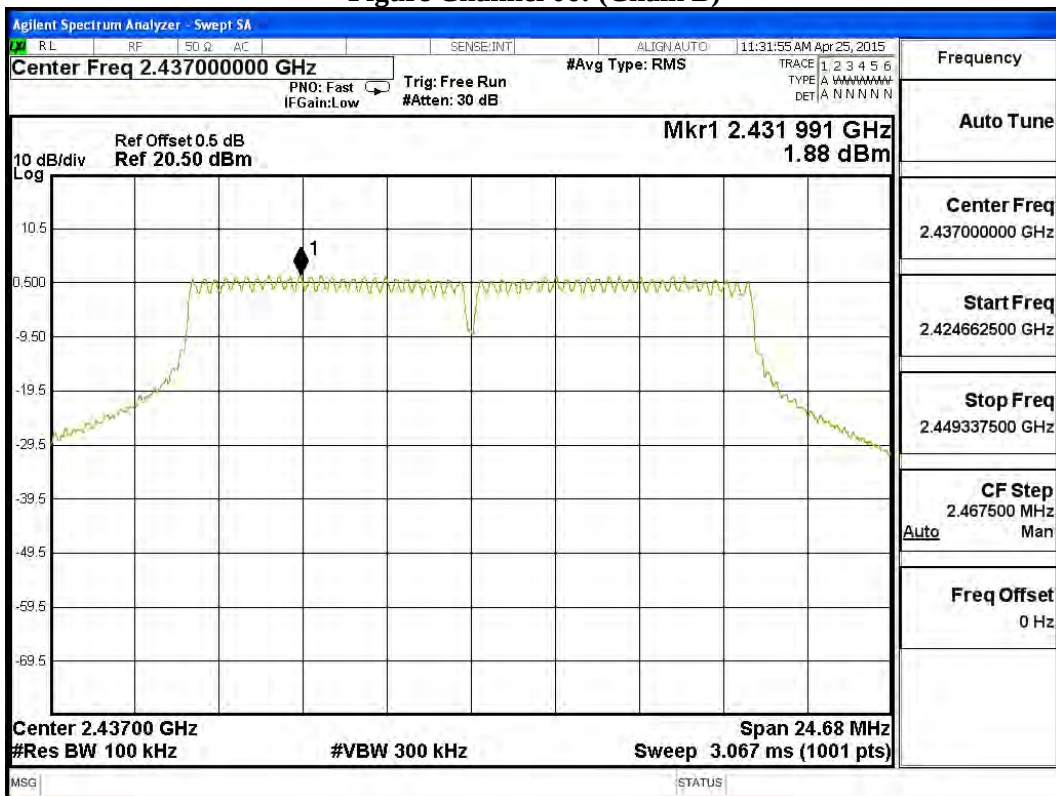


Figure Channel 11: (Chain B)

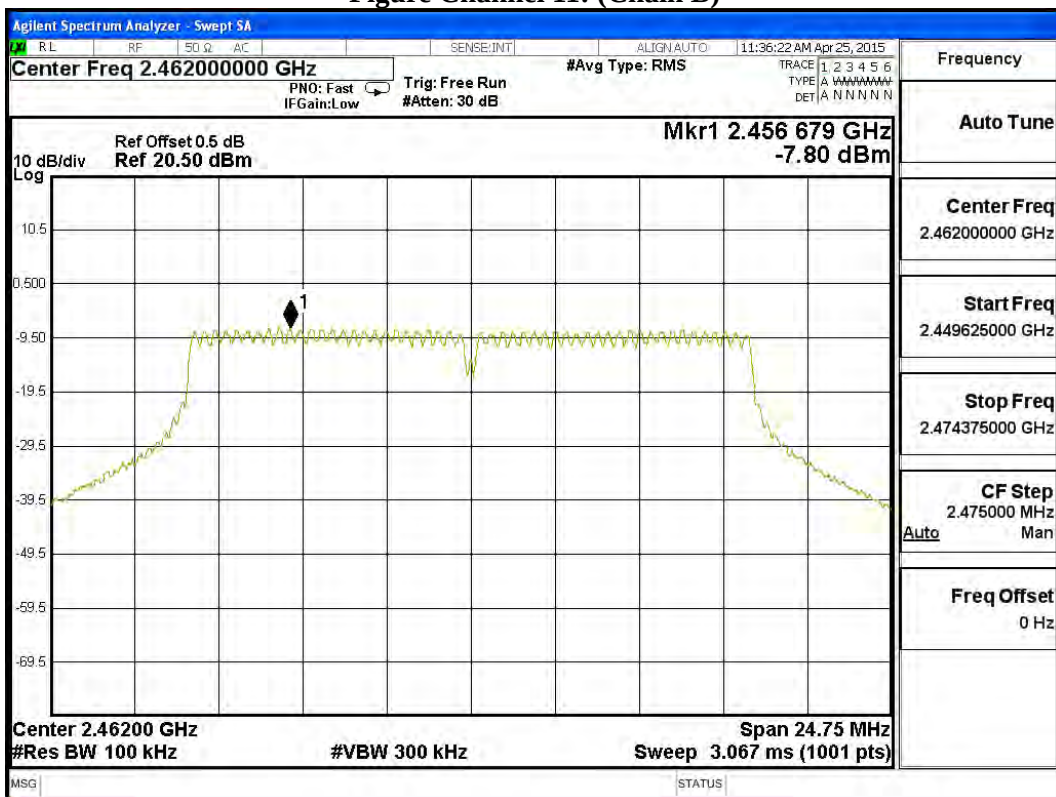


Figure Channel 01: (Chain C)

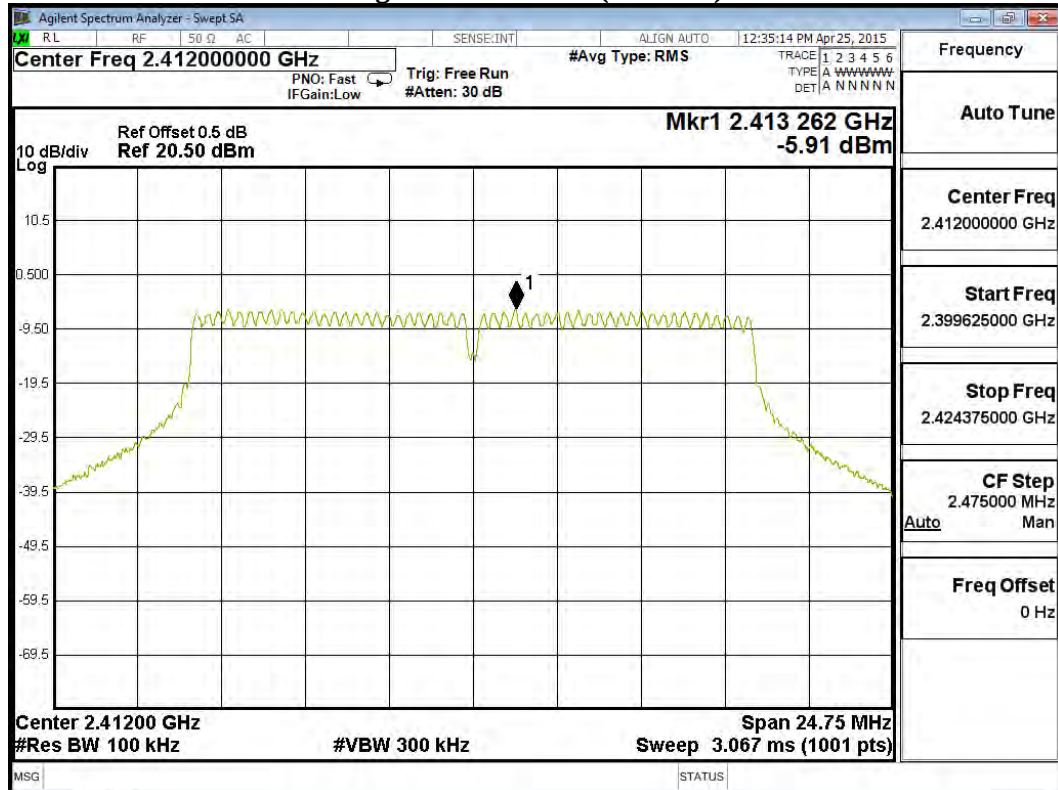


Figure Channel 06: (Chain C)

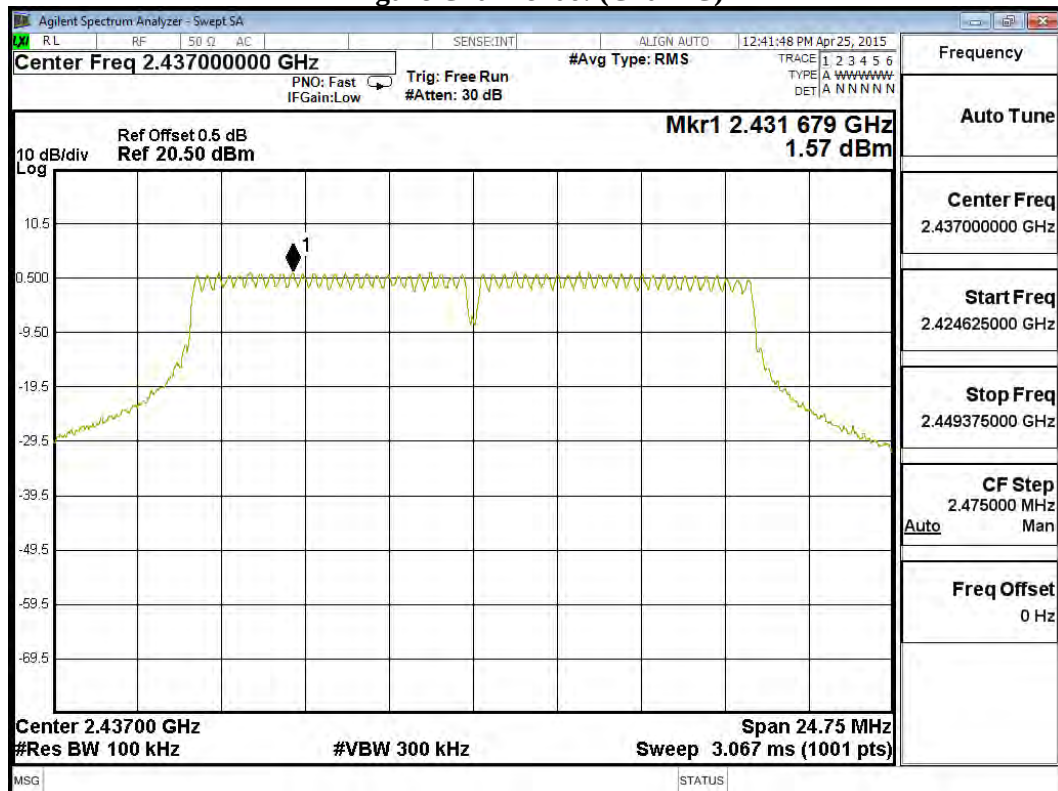
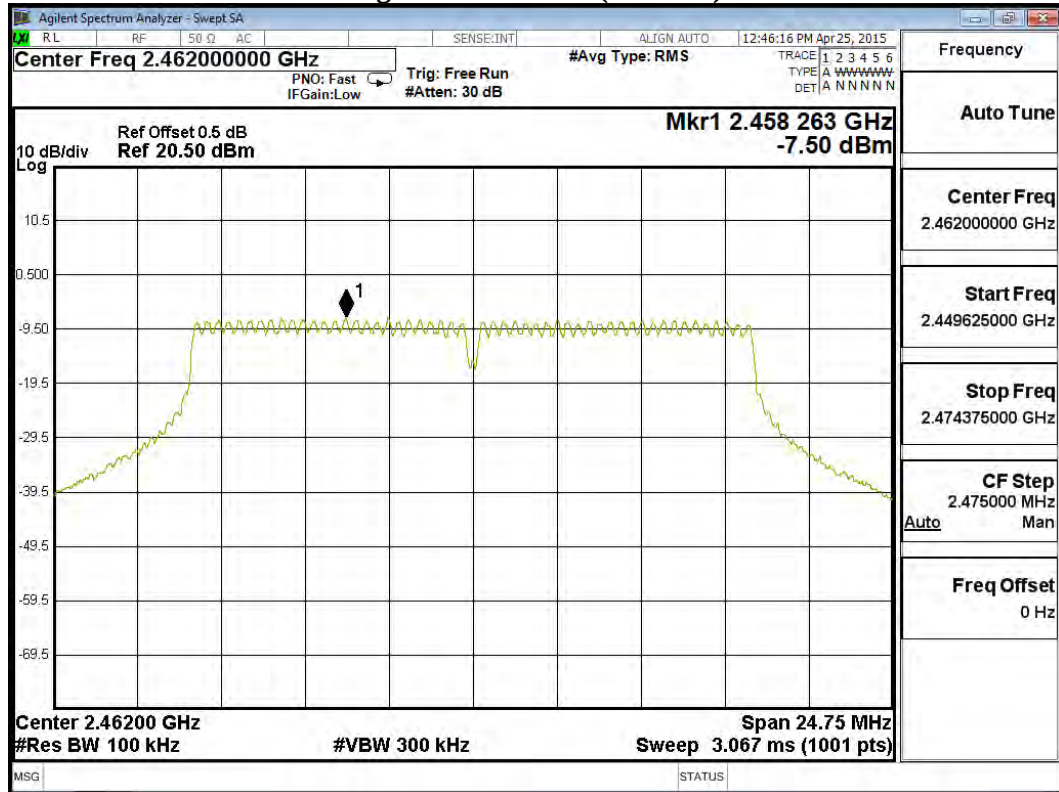


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (External Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
01	2412	A	-7.250	-2.479	< 8dBm	Pass
01	2412	B	-7.240	-2.469	< 8dBm	Pass
01	2412	C	-6.750	-1.979	< 8dBm	Pass
06	2437	A	1.410	6.181	< 8dBm	Pass
06	2437	B	2.020	6.791	< 8dBm	Pass
06	2437	C	1.790	6.561	< 8dBm	Pass
11	2462	A	-8.910	-4.139	< 8dBm	Pass
11	2462	B	-9.090	-4.319	< 8dBm	Pass
11	2462	C	-8.810	-4.039	< 8dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

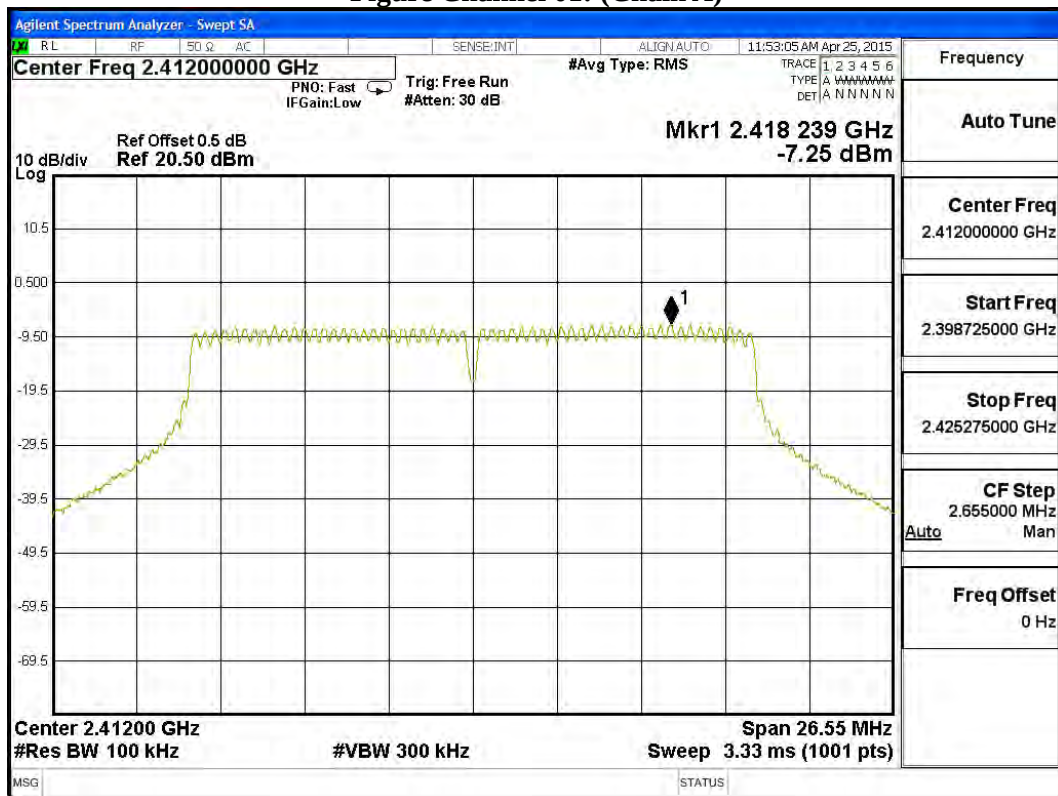


Figure Channel 06: (Chain A)

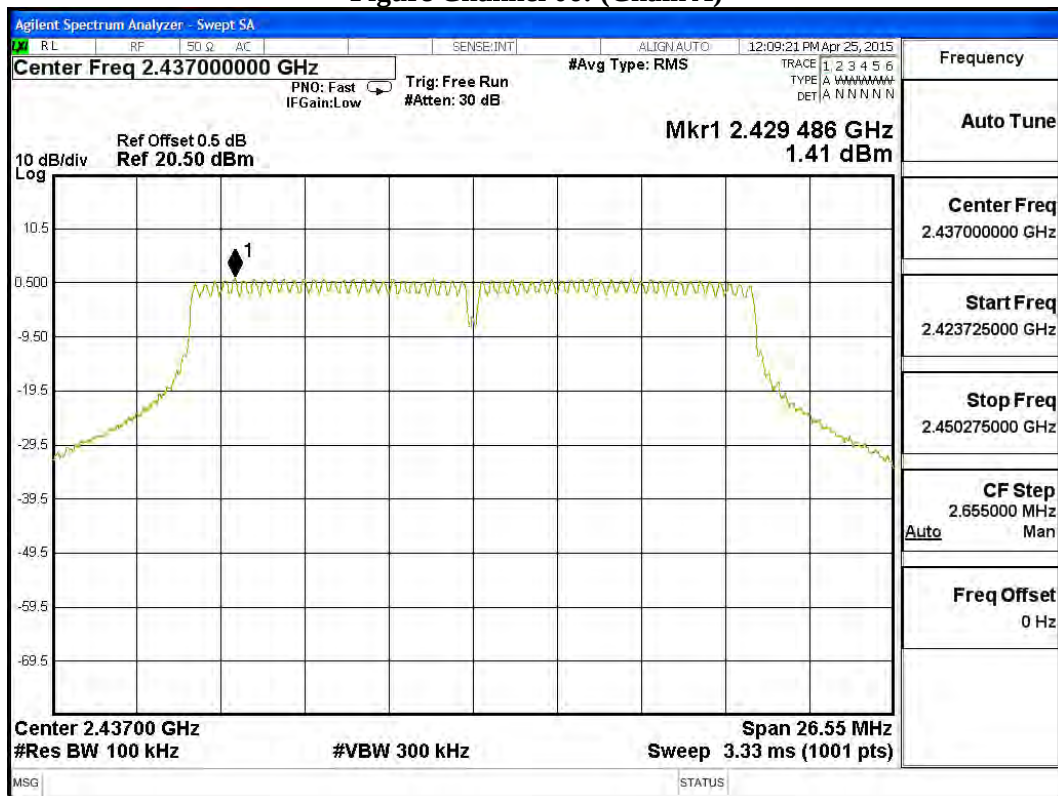


Figure Channel 11: (Chain A)

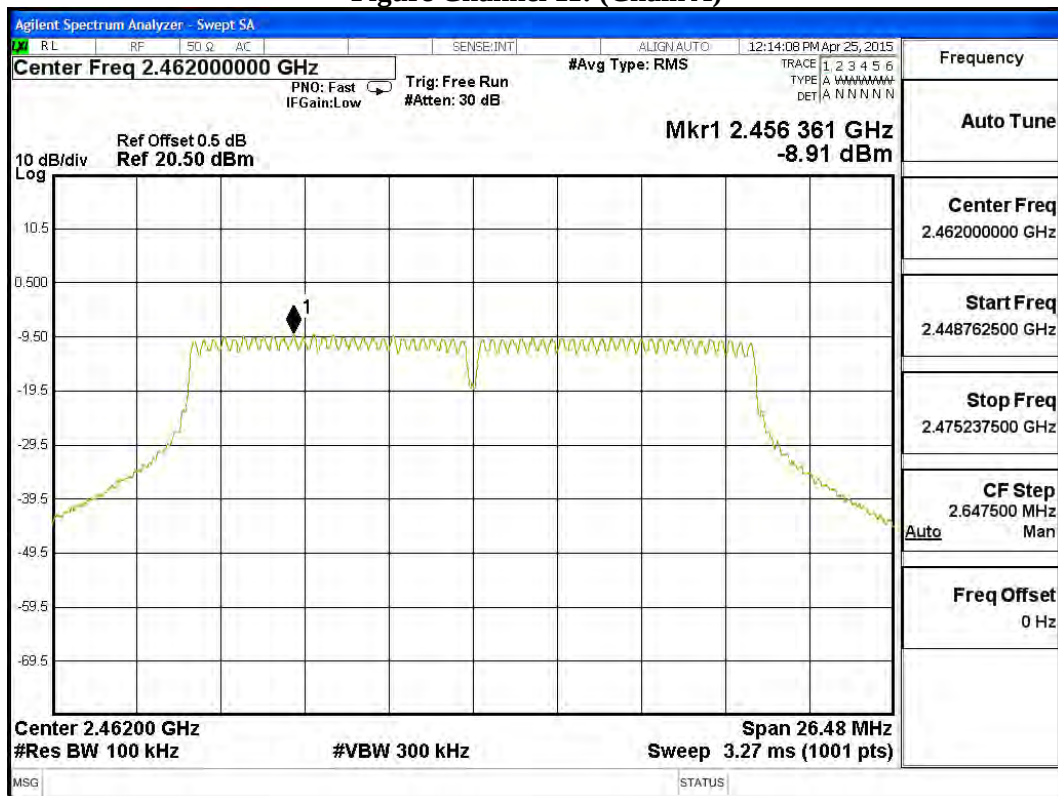


Figure Channel 01: (Chain B)

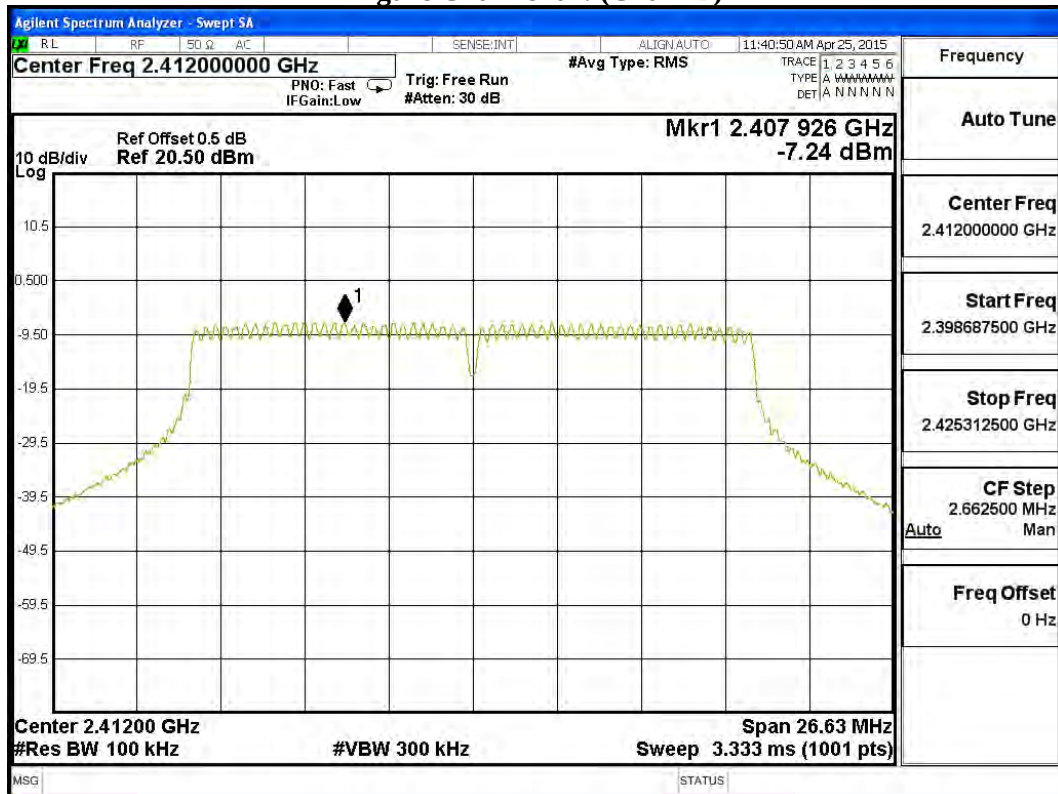


Figure Channel 06: (Chain B)

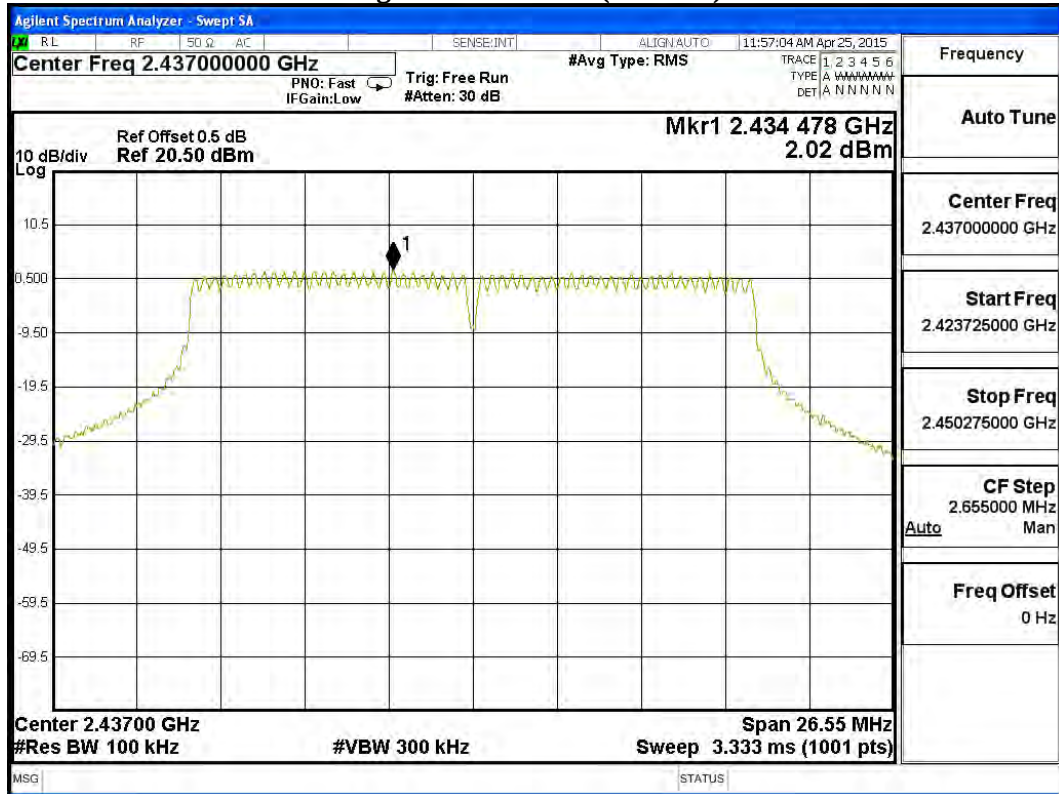


Figure Channel 11: (Chain B)

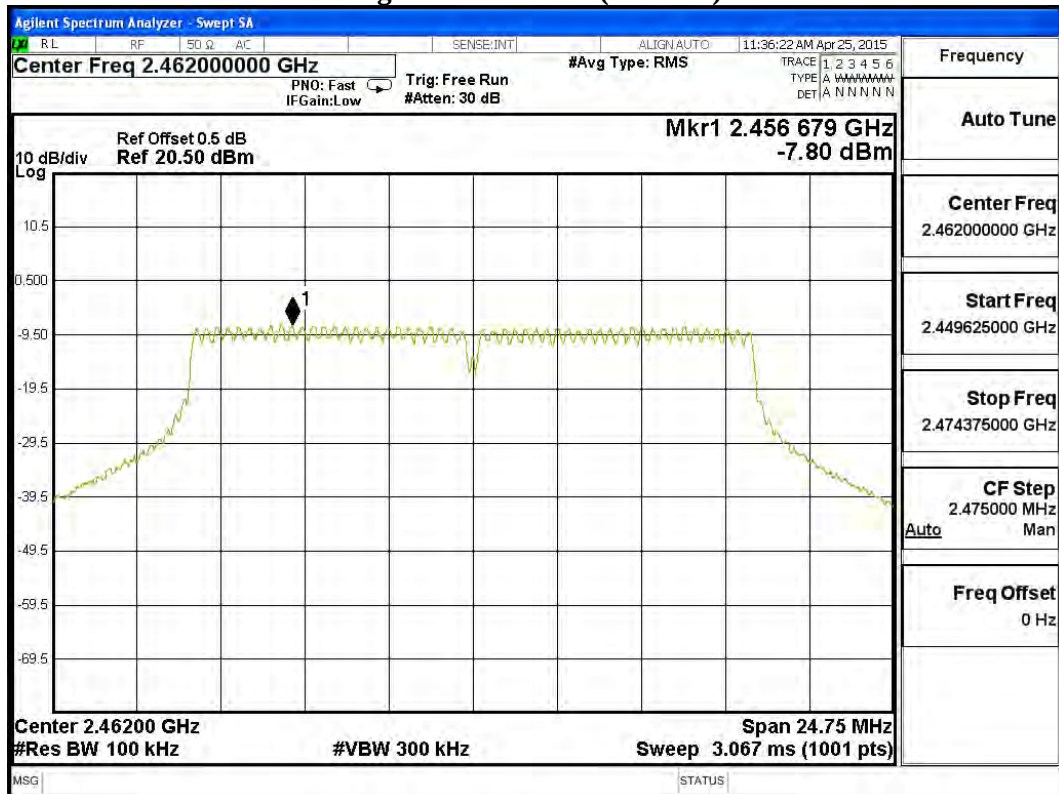


Figure Channel 01: (Chain C)

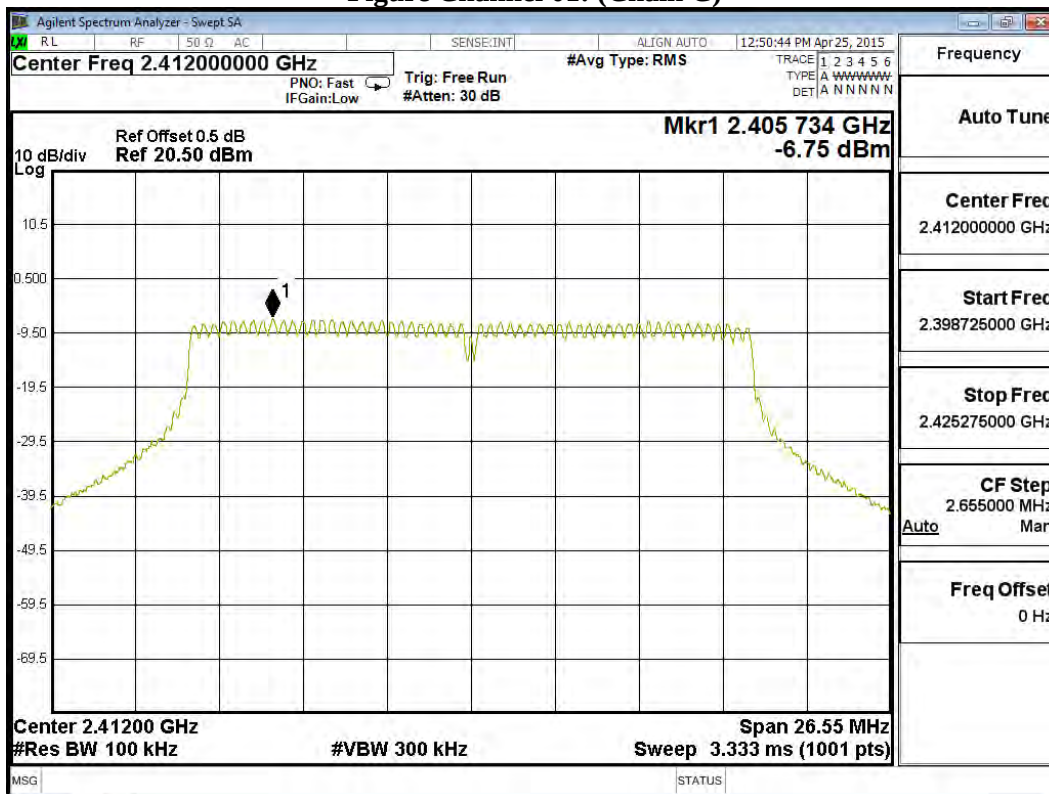


Figure Channel 06: (Chain C)

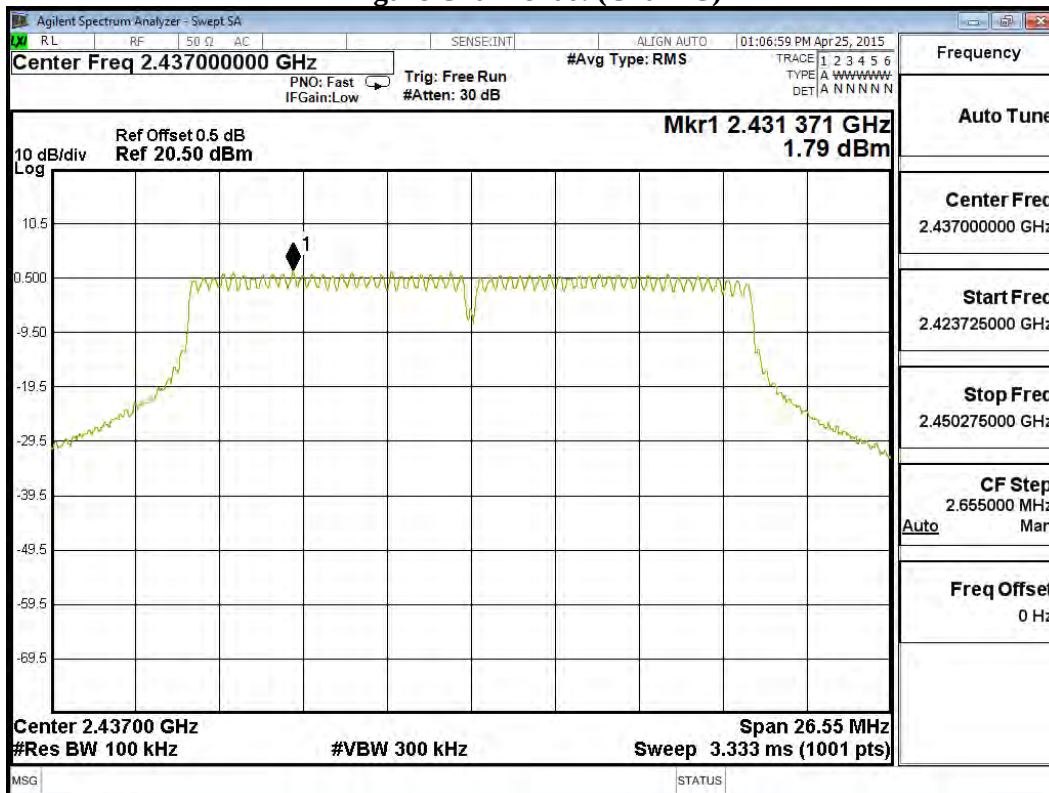
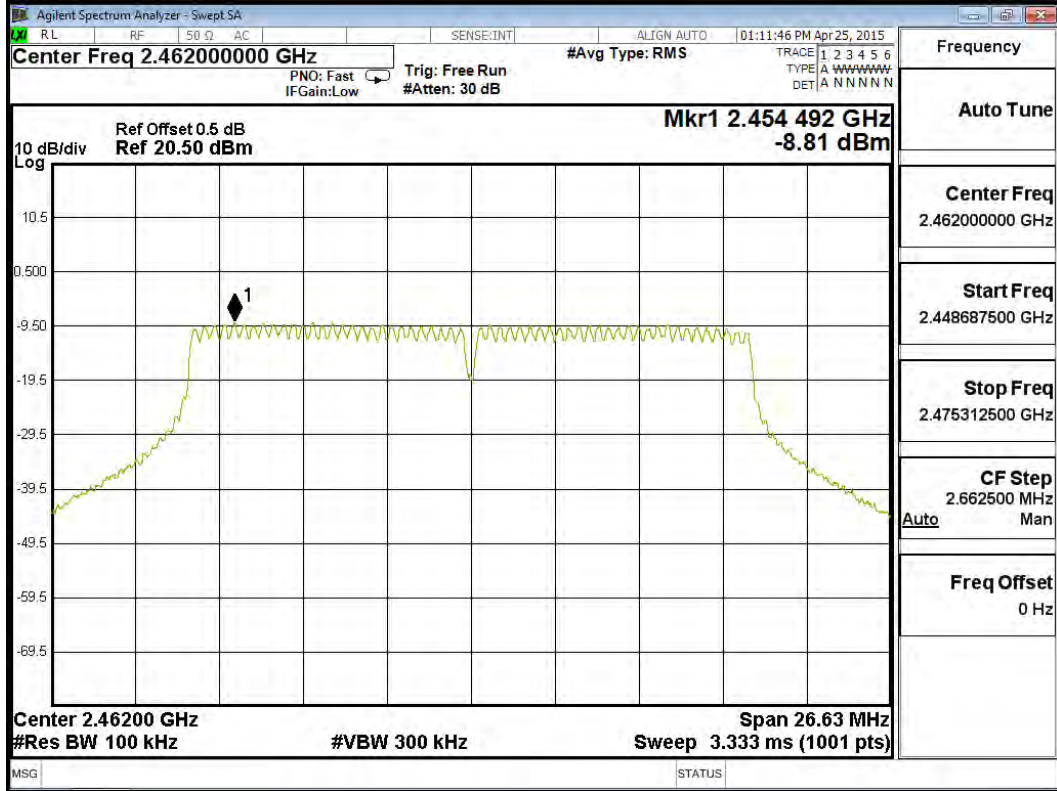


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (External Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
03	2422	A	-14.880	-10.109	< 8dBm	Pass
03	2422	B	-14.910	-10.139	< 8dBm	Pass
03	2422	C	-14.230	-9.459	< 8dBm	Pass
06	2437	A	-7.690	-2.919	< 8dBm	Pass
06	2437	B	-7.630	-2.859	< 8dBm	Pass
06	2437	C	-6.890	-2.119	< 8dBm	Pass
09	2452	A	-14.440	-9.669	< 8dBm	Pass
09	2452	B	-14.160	-9.389	< 8dBm	Pass
09	2452	C	-13.520	-8.749	< 8dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 03: (Chain A)



Figure Channel 06: (Chain A)

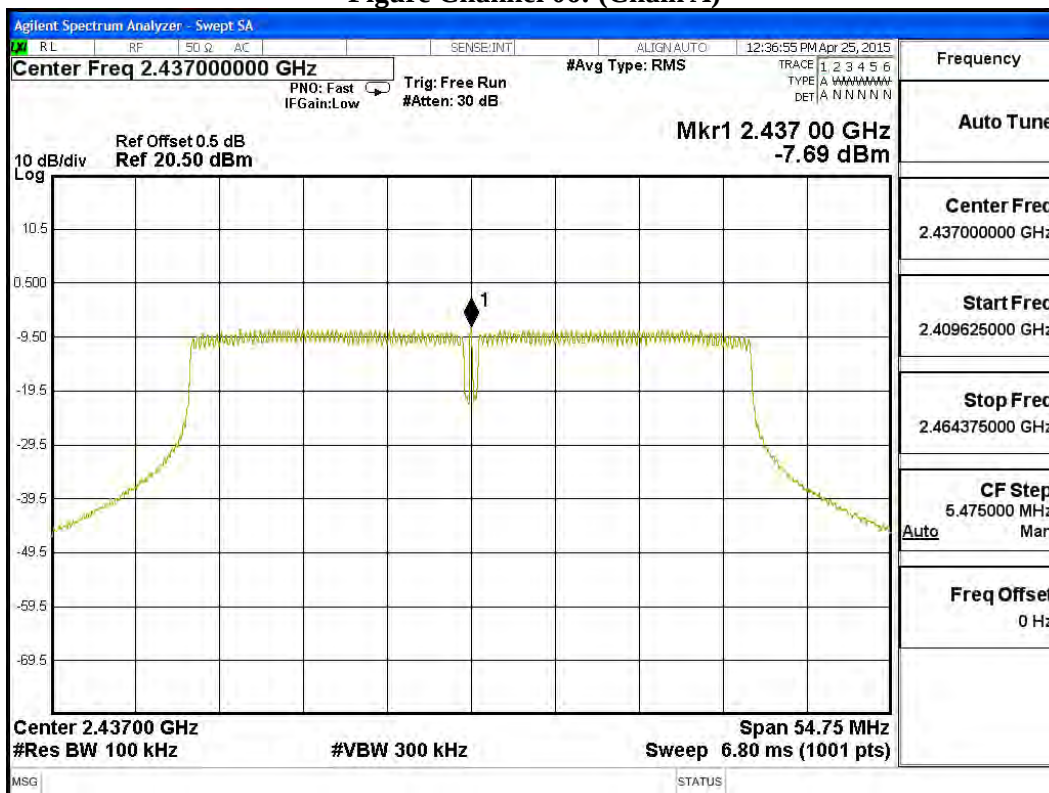


Figure Channel 09: (Chain A)

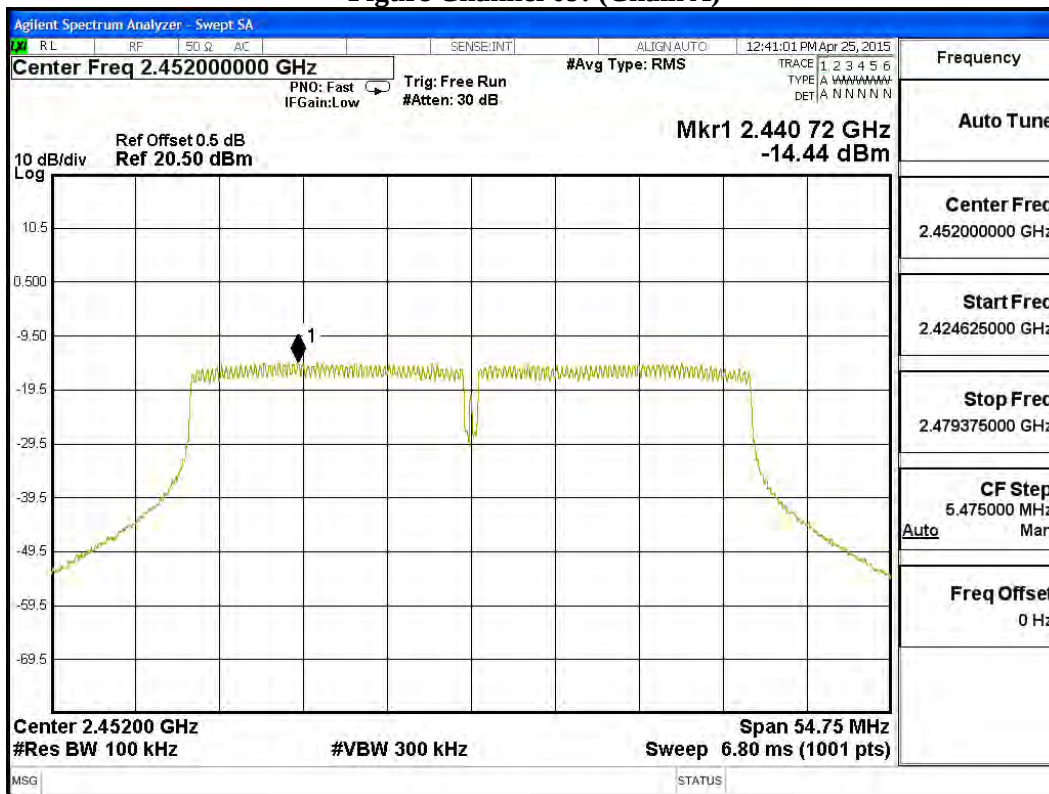


Figure Channel 03: (Chain B)

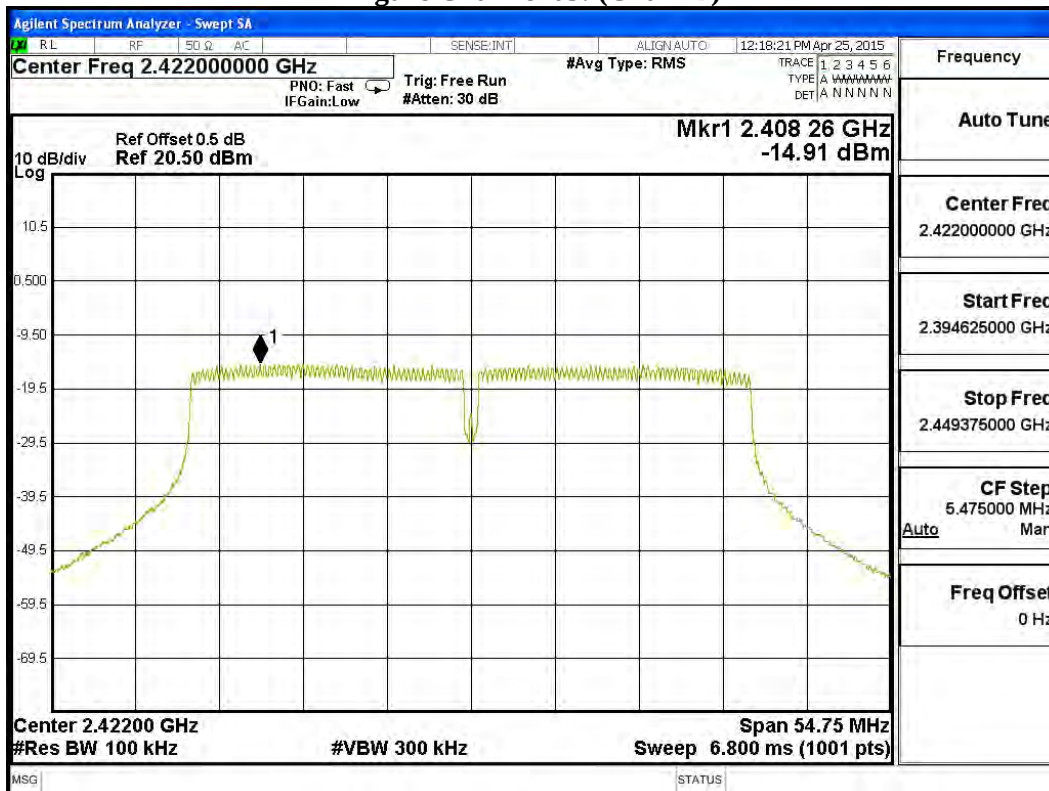


Figure Channel 06: (Chain B)

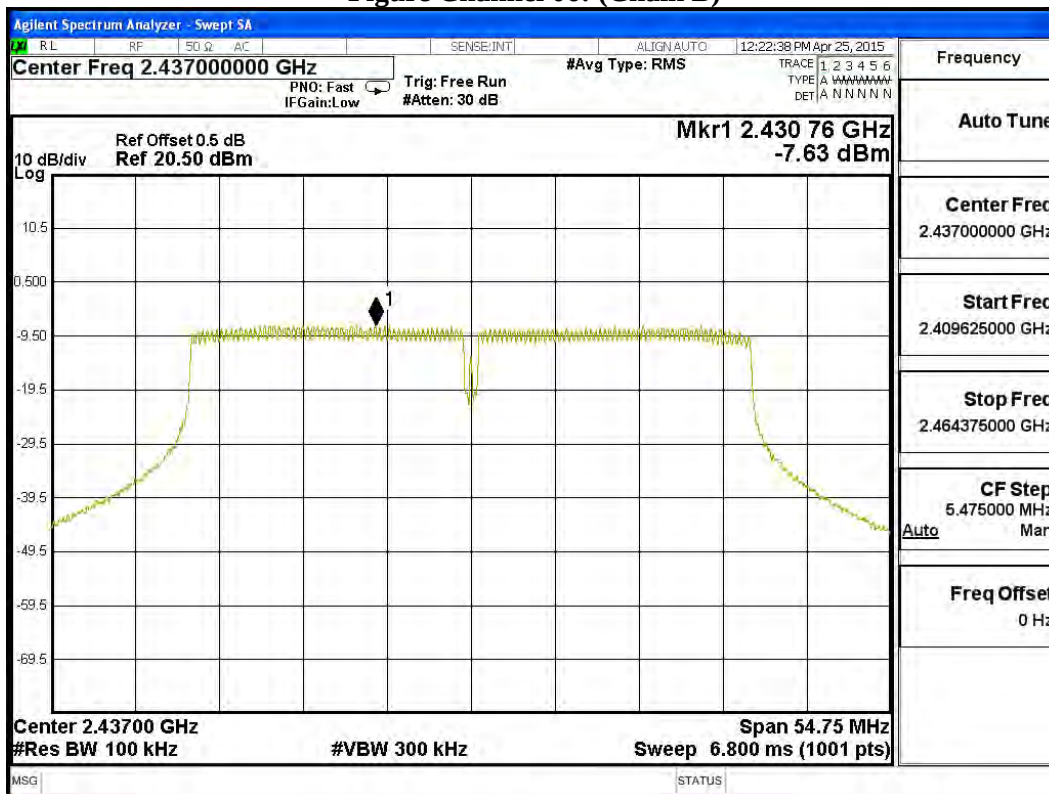


Figure Channel 09: (Chain B)

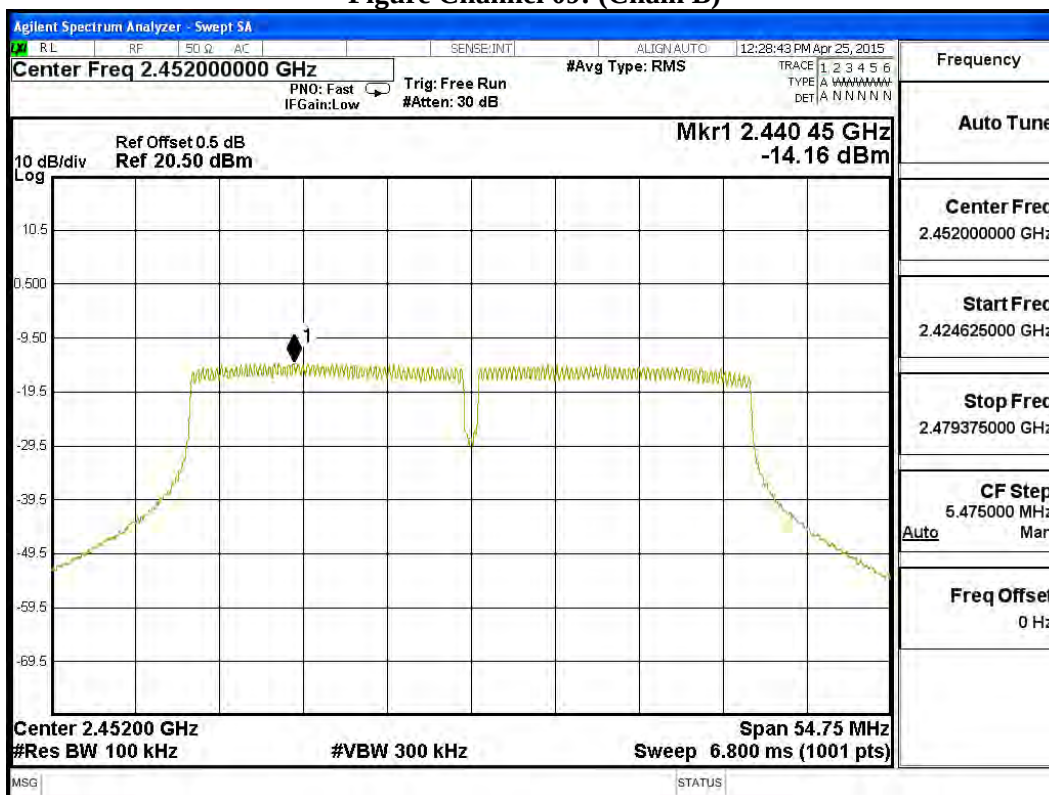


Figure Channel 03: (Chain C)

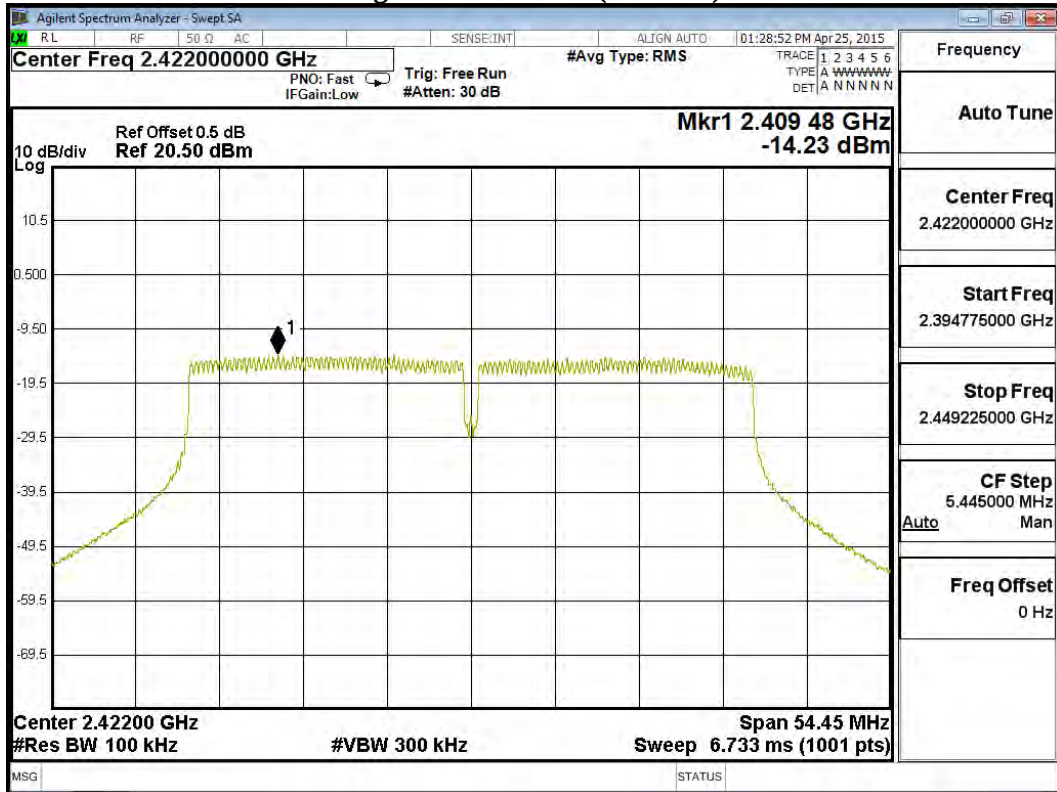


Figure Channel 06: (Chain C)

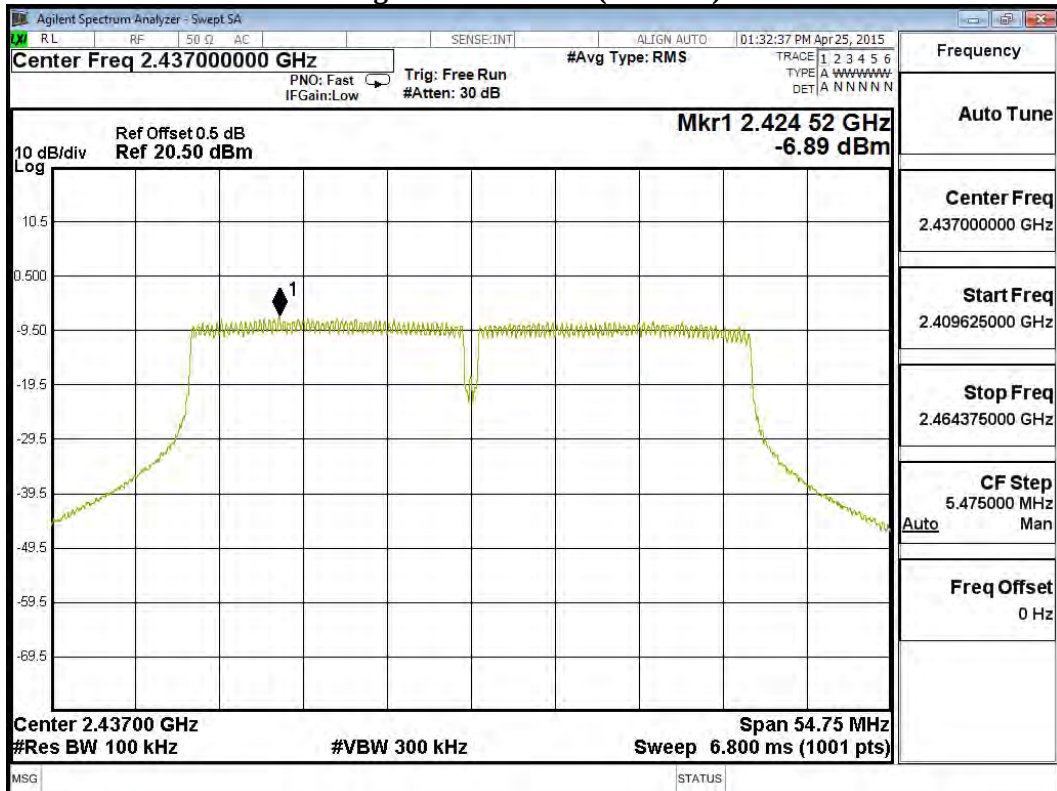
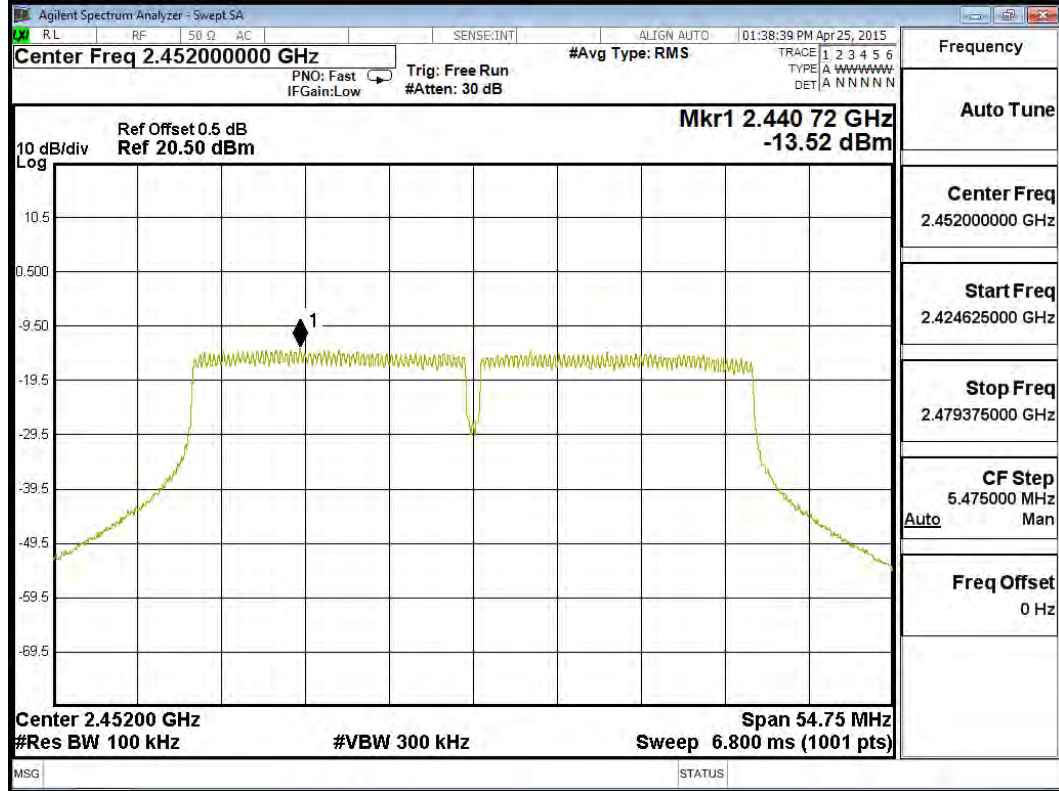


Figure Channel 09: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (Internal Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
01	2412	A	1.119	5.890	< 6.1dBm	Pass
01	2412	B	0.870	5.641	< 6.1dBm	Pass
01	2412	C	1.030	5.801	< 6.1dBm	Pass
06	2437	A	-0.051	4.720	< 6.1dBm	Pass
06	2437	B	-0.437	4.334	< 6.1dBm	Pass
06	2437	C	-0.034	4.737	< 6.1dBm	Pass
11	2462	A	0.500	5.271	< 6.1dBm	Pass
11	2462	B	0.160	4.931	< 6.1dBm	Pass
11	2462	C	-0.150	4.621	< 6.1dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

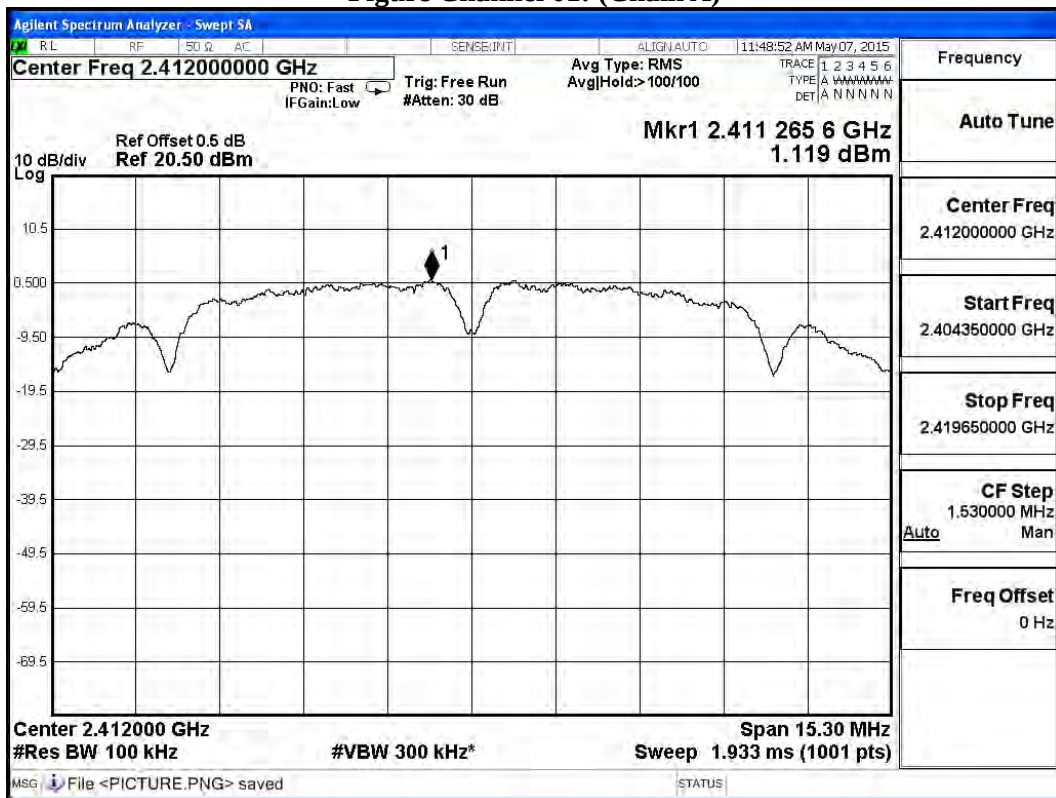


Figure Channel 06: (Chain A)

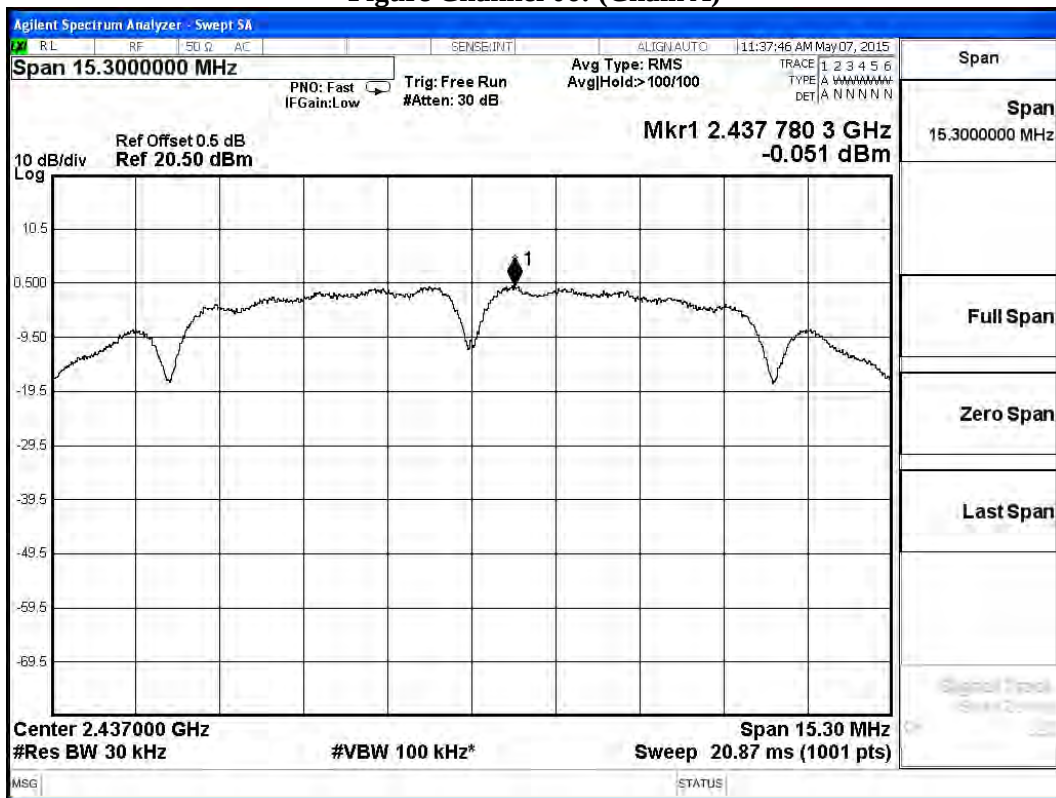


Figure Channel 11: (Chain A)

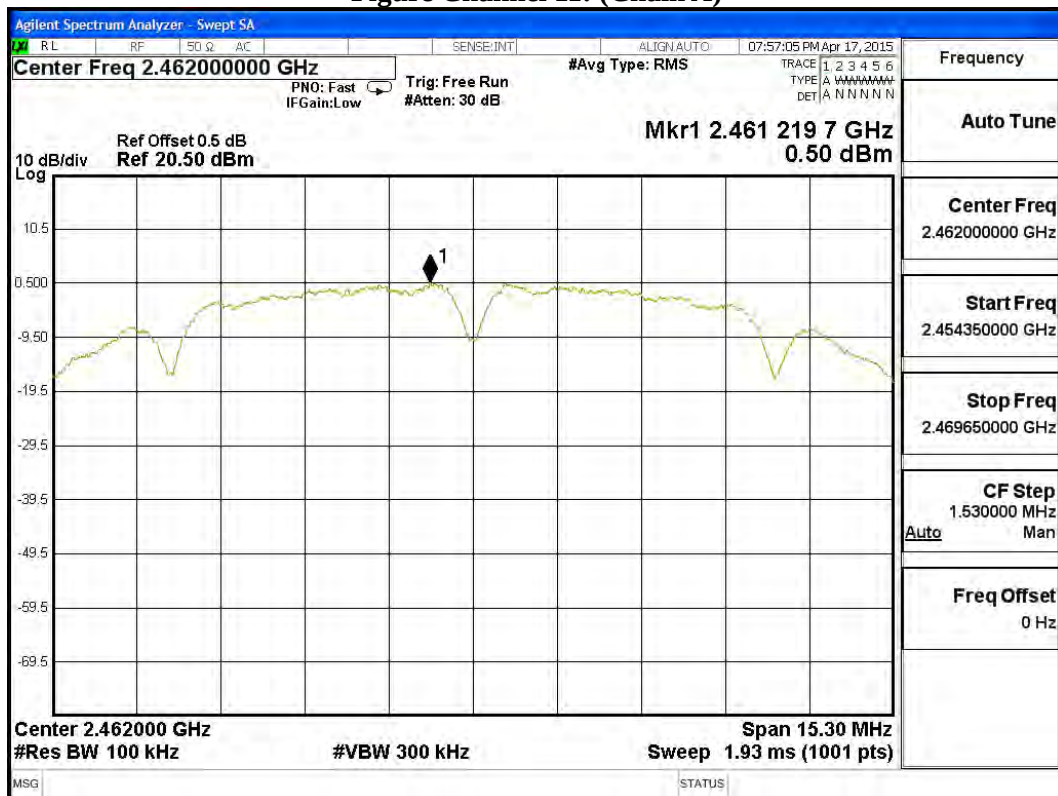


Figure Channel 01: (Chain B)

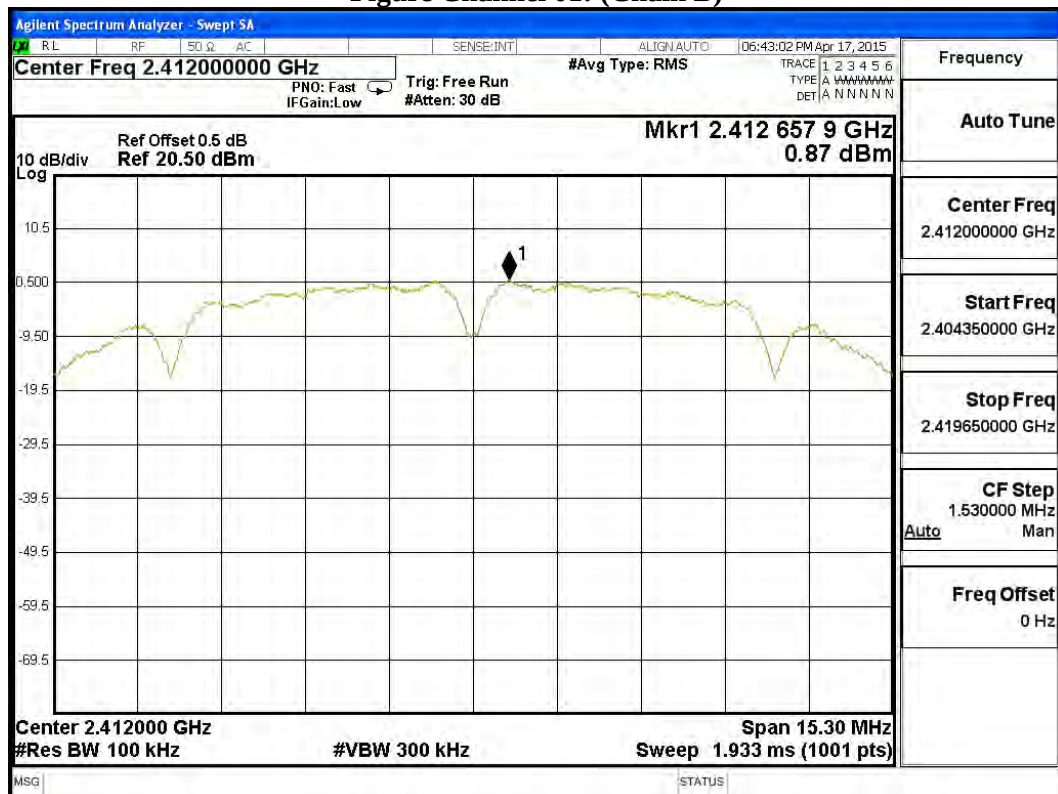


Figure Channel 06: (Chain B)

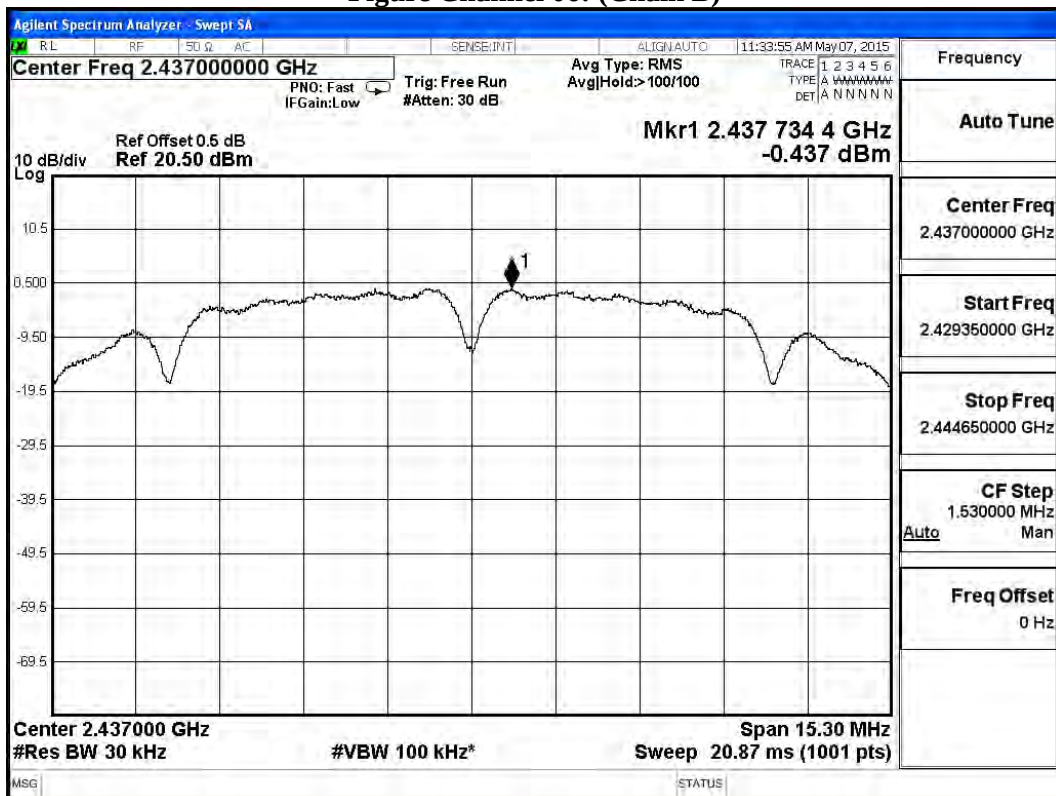


Figure Channel 11: (Chain B)

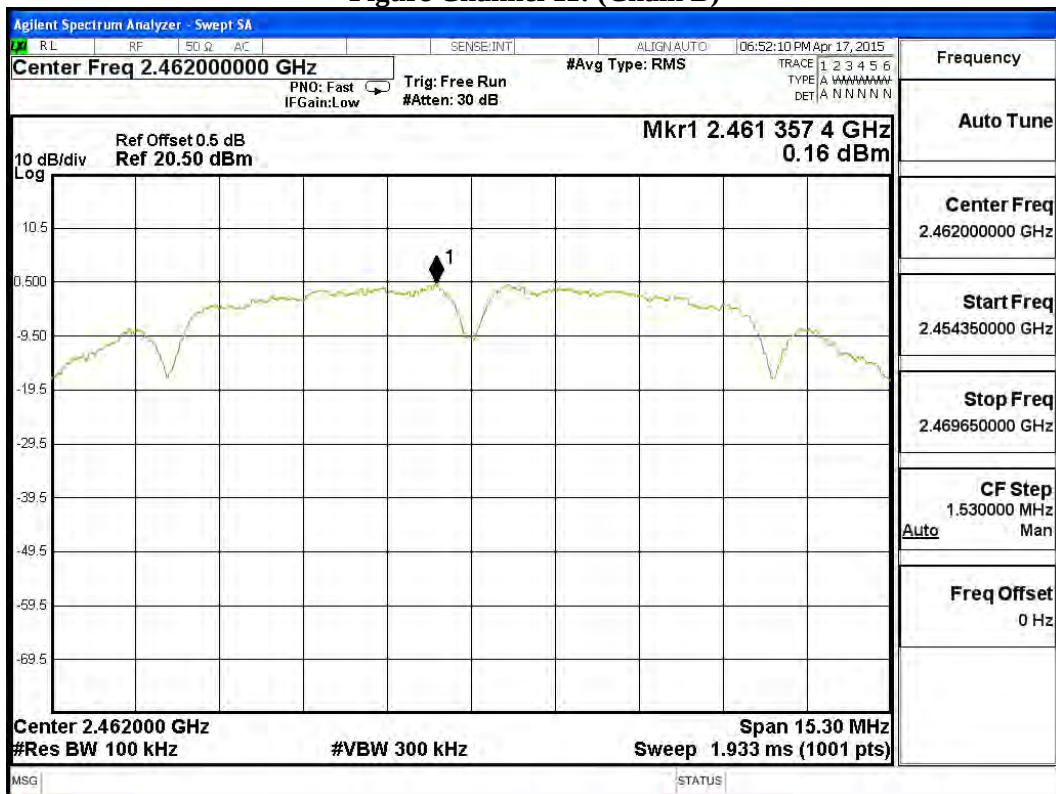


Figure Channel 01: (Chain C)

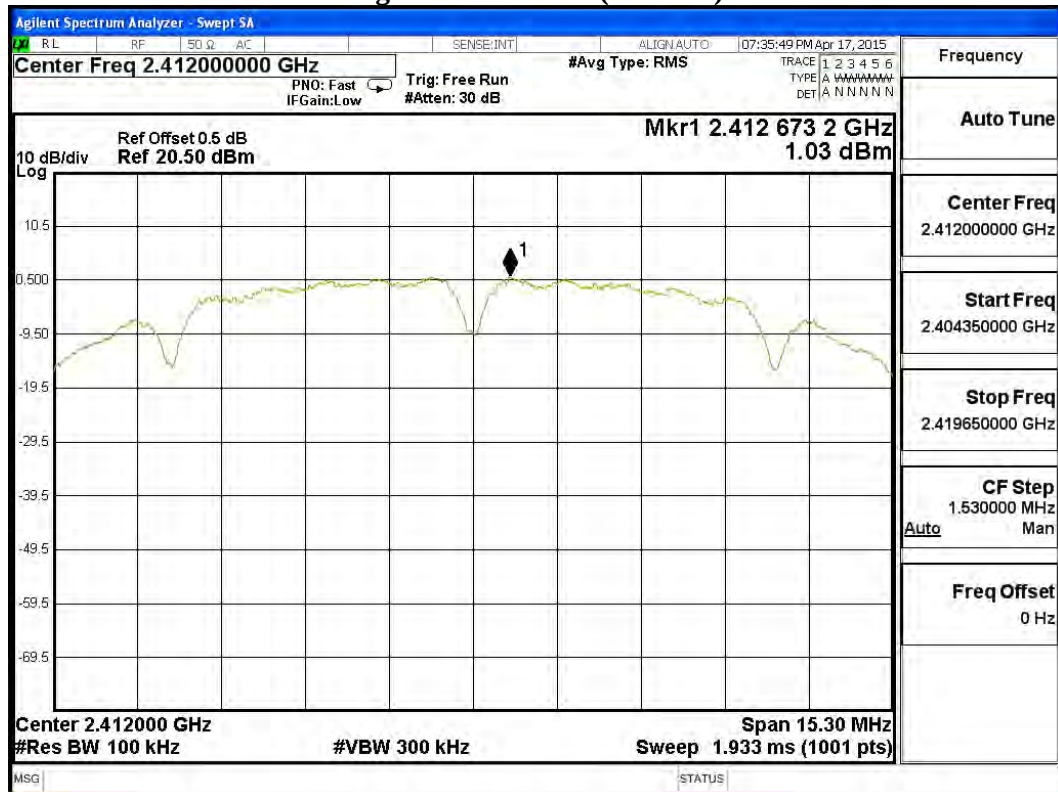


Figure Channel 06: (Chain C)

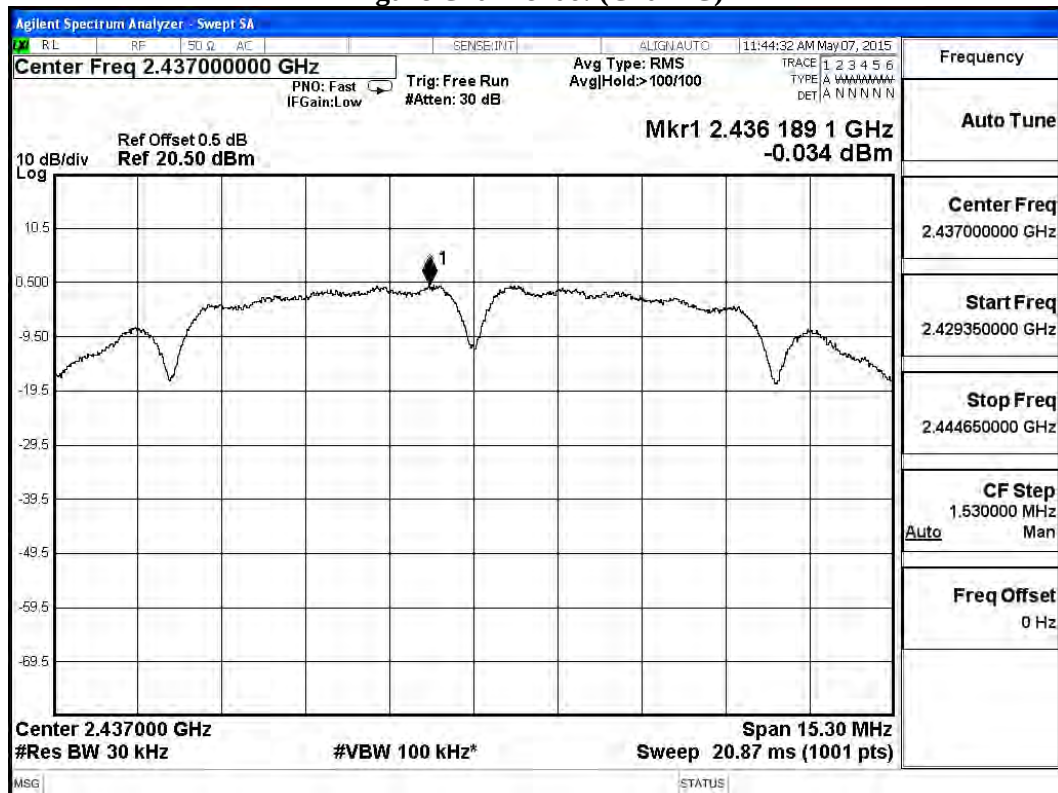
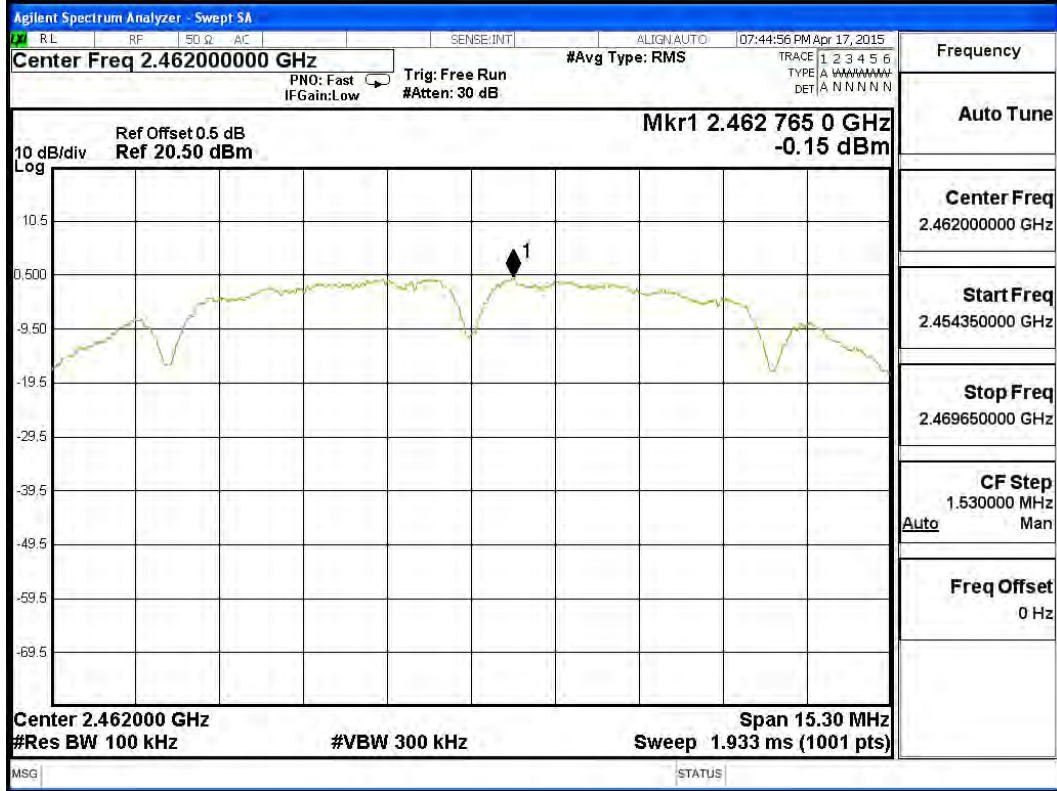


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (Internal Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
01	2412	A	-5.930	-1.159	< 6.1dBm	Pass
01	2412	B	-5.630	-0.859	< 6.1dBm	Pass
01	2412	C	-5.830	-1.059	< 6.1dBm	Pass
06	2437	A	-2.305	2.466	< 6.1dBm	Pass
06	2437	B	-2.588	2.183	< 6.1dBm	Pass
06	2437	C	-2.021	2.750	< 6.1dBm	Pass
11	2462	A	-6.990	-2.219	< 6.1dBm	Pass
11	2462	B	-6.760	-1.989	< 6.1dBm	Pass
11	2462	C	-7.240	-2.469	< 6.1dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

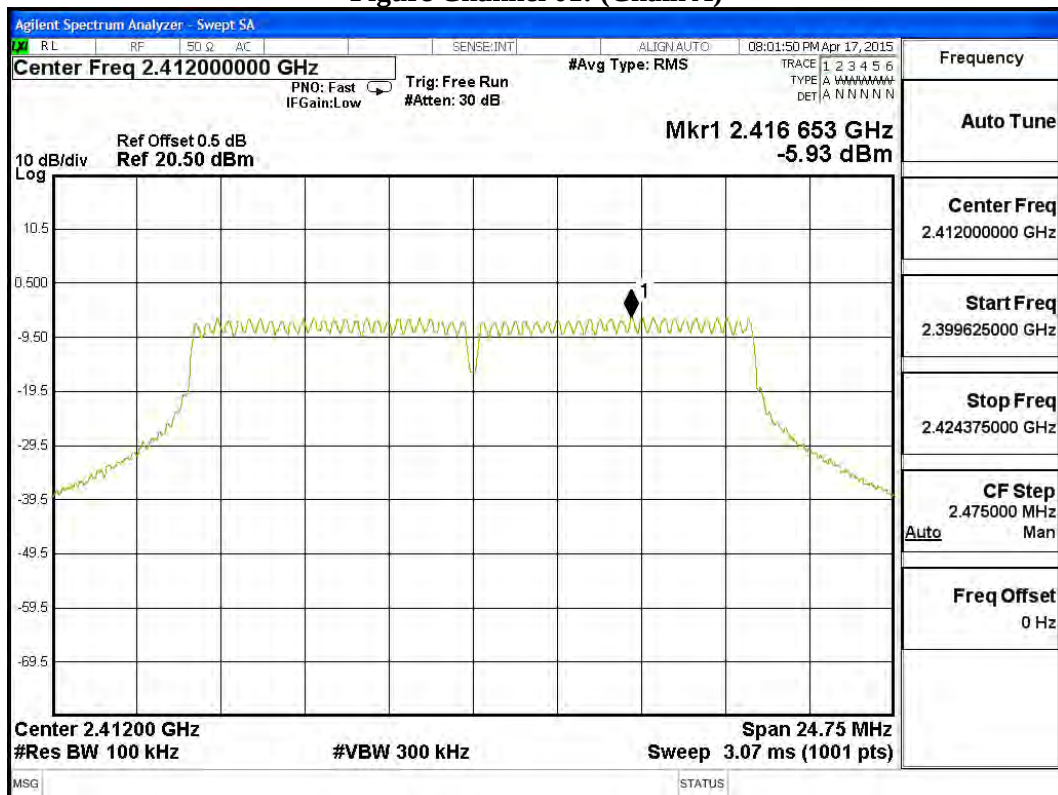


Figure Channel 06: (Chain A)

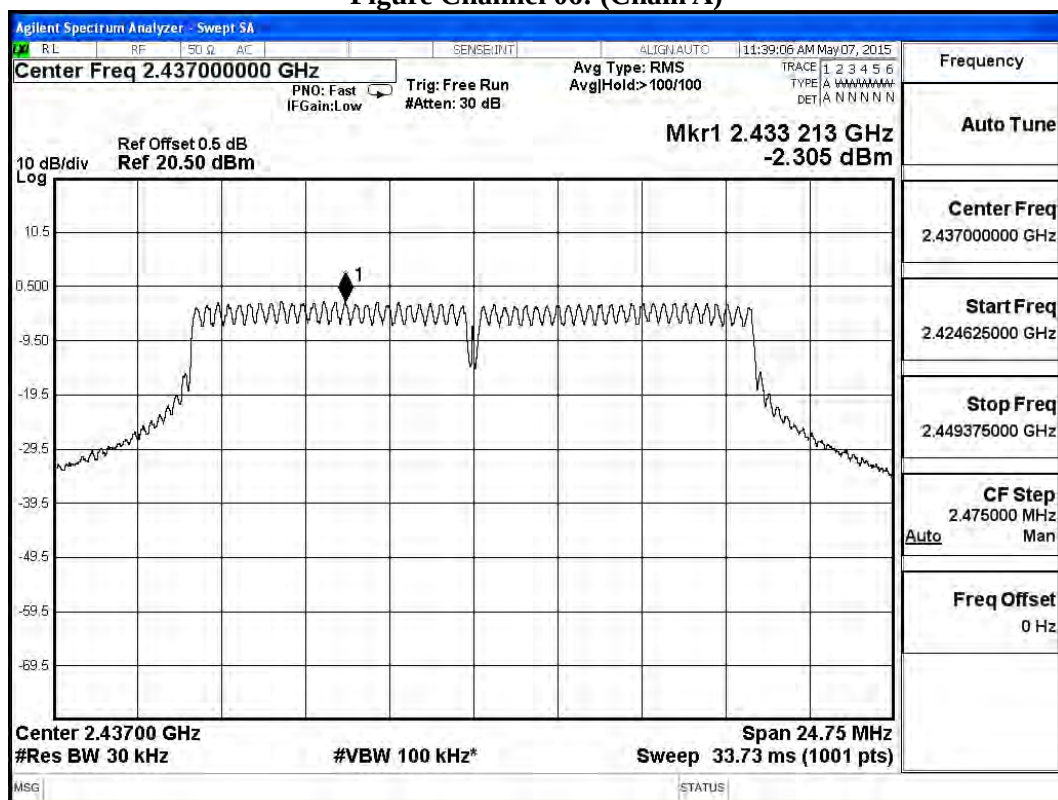


Figure Channel 11: (Chain A)



Figure Channel 01: (Chain B)

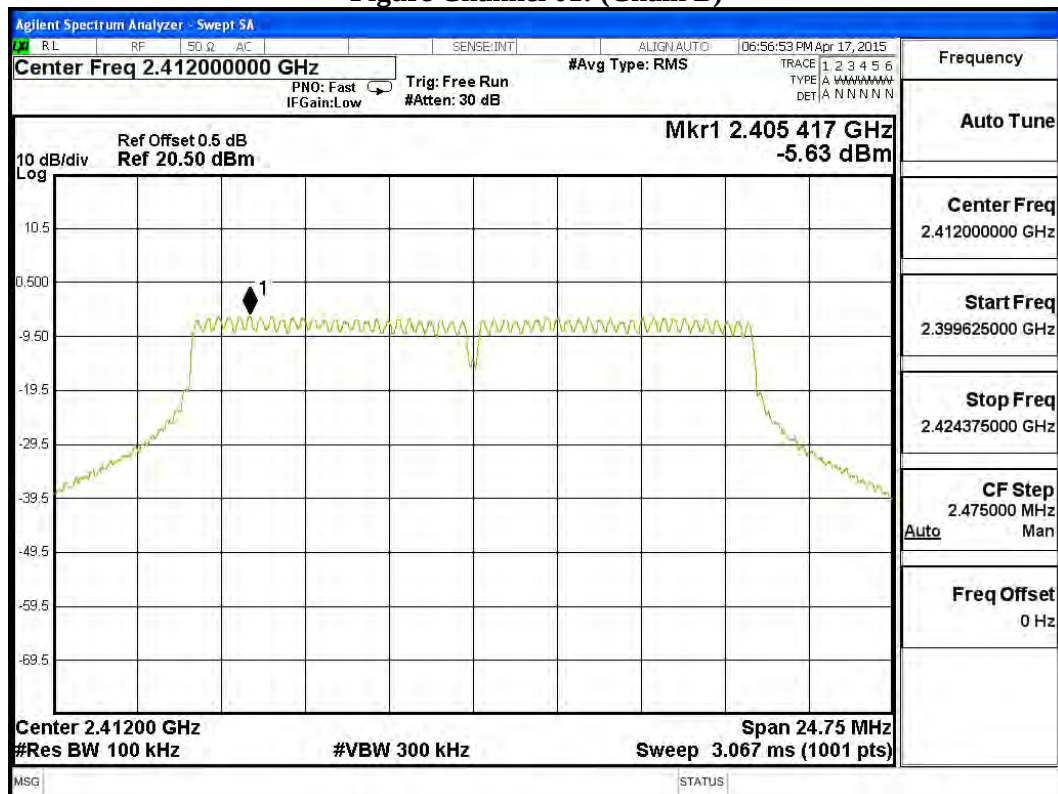


Figure Channel 06: (Chain B)

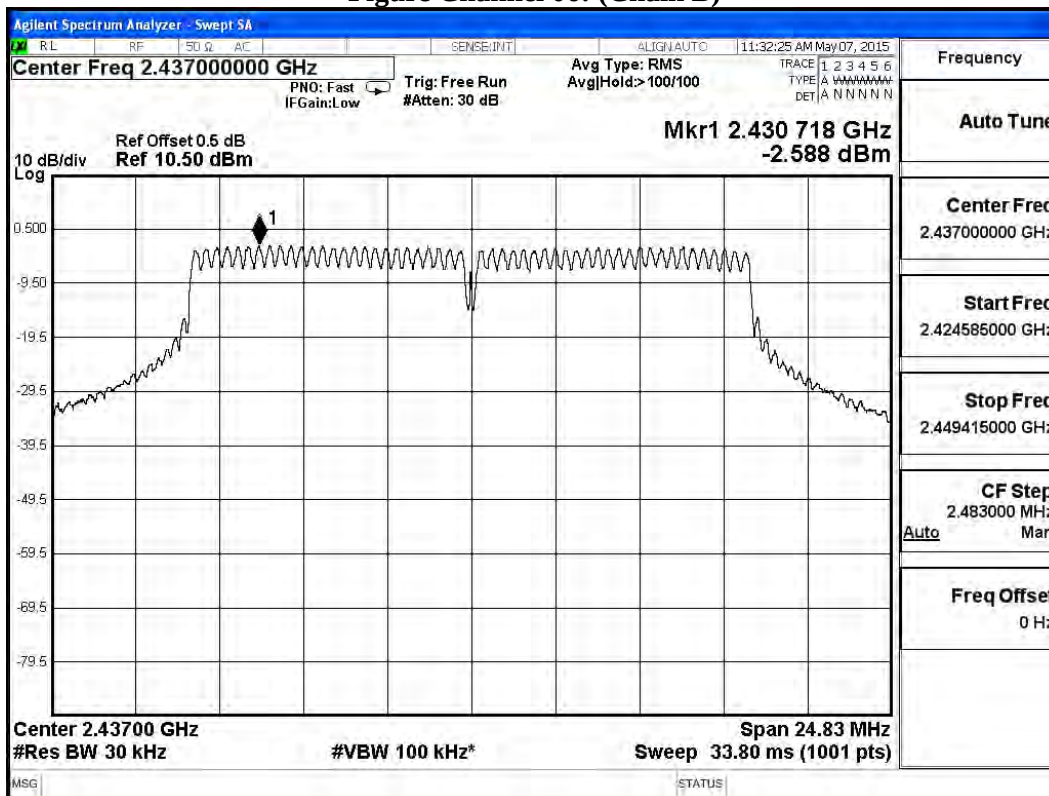


Figure Channel 11: (Chain B)

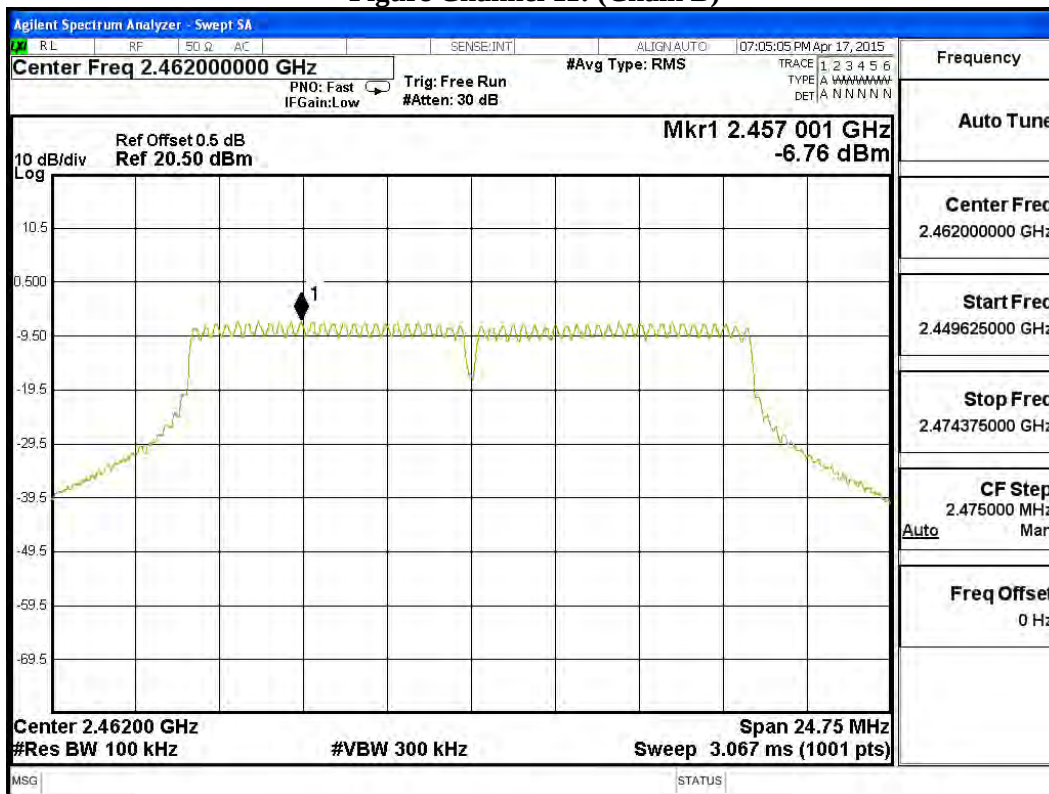


Figure Channel 01: (Chain C)

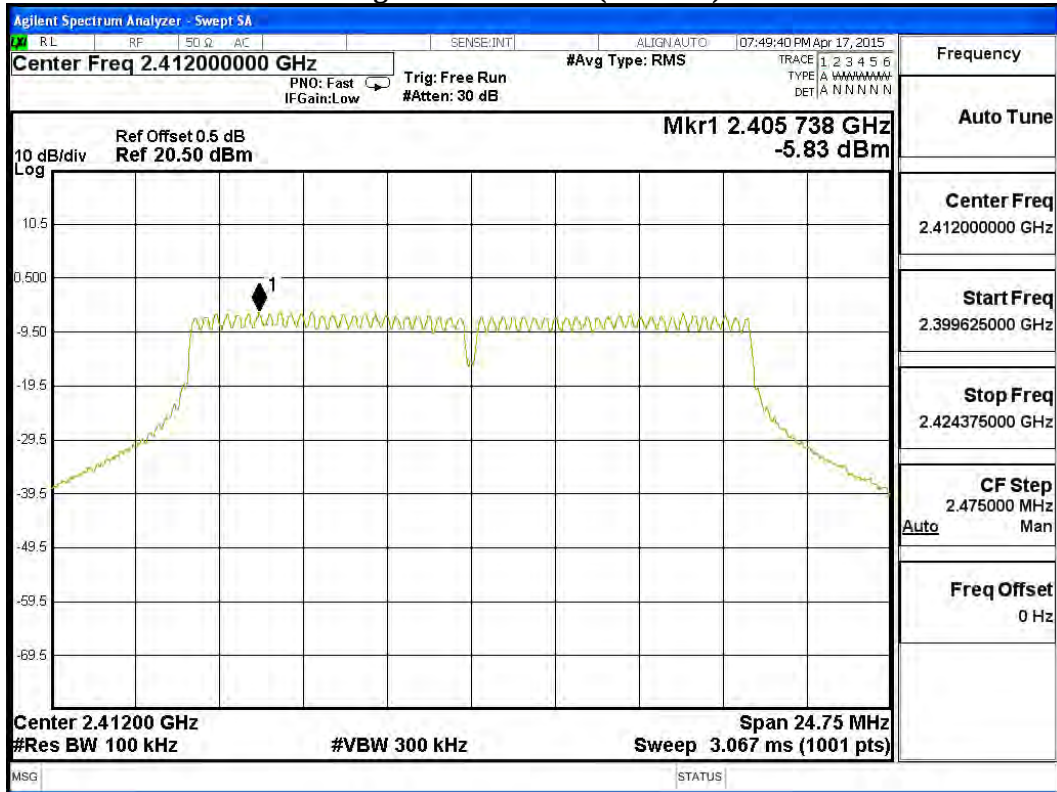


Figure Channel 06: (Chain C)

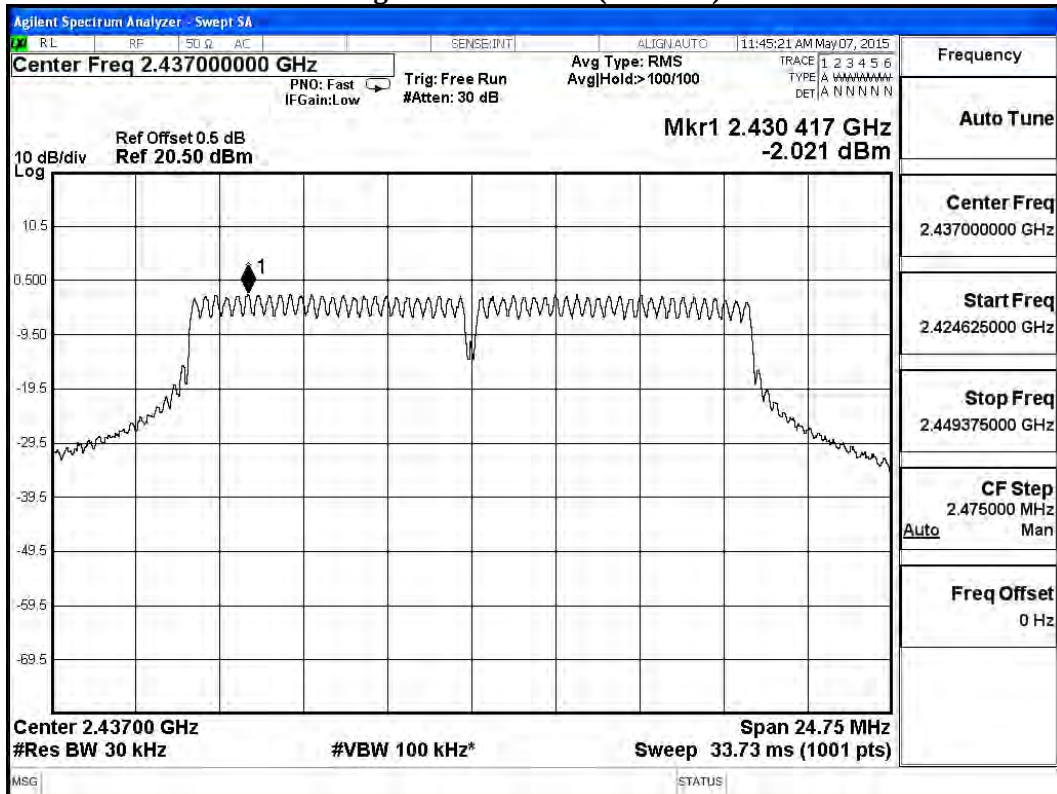
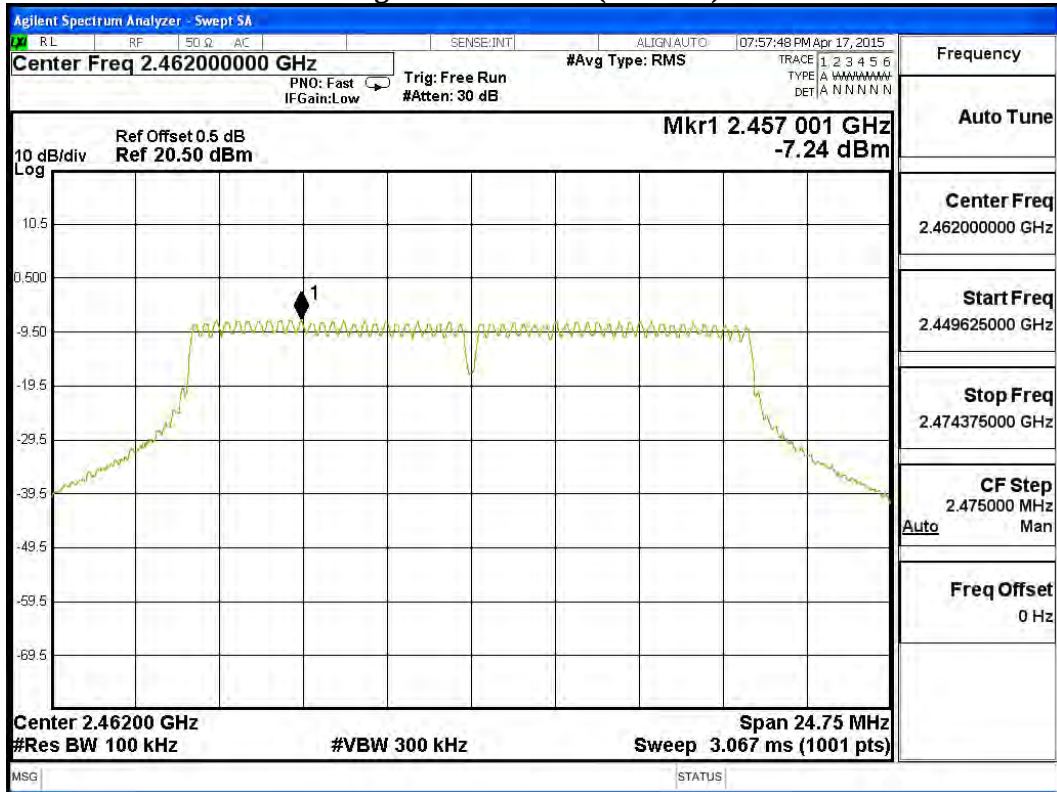


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n 21.7Mbps 20M-BW) (Internal Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
01	2412	A	-6.930	-2.159	< 6.1dBm	Pass
01	2412	B	-6.400	-1.629	< 6.1dBm	Pass
01	2412	C	-6.140	-1.369	< 6.1dBm	Pass
06	2437	A	-3.834	0.937	< 6.1dBm	Pass
06	2437	B	-3.925	0.846	< 6.1dBm	Pass
06	2437	C	-3.835	0.936	< 6.1dBm	Pass
11	2462	A	-7.650	-2.879	< 6.1dBm	Pass
11	2462	B	-7.360	-2.589	< 6.1dBm	Pass
11	2462	C	-7.880	-3.109	< 6.1dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 01: (Chain A)

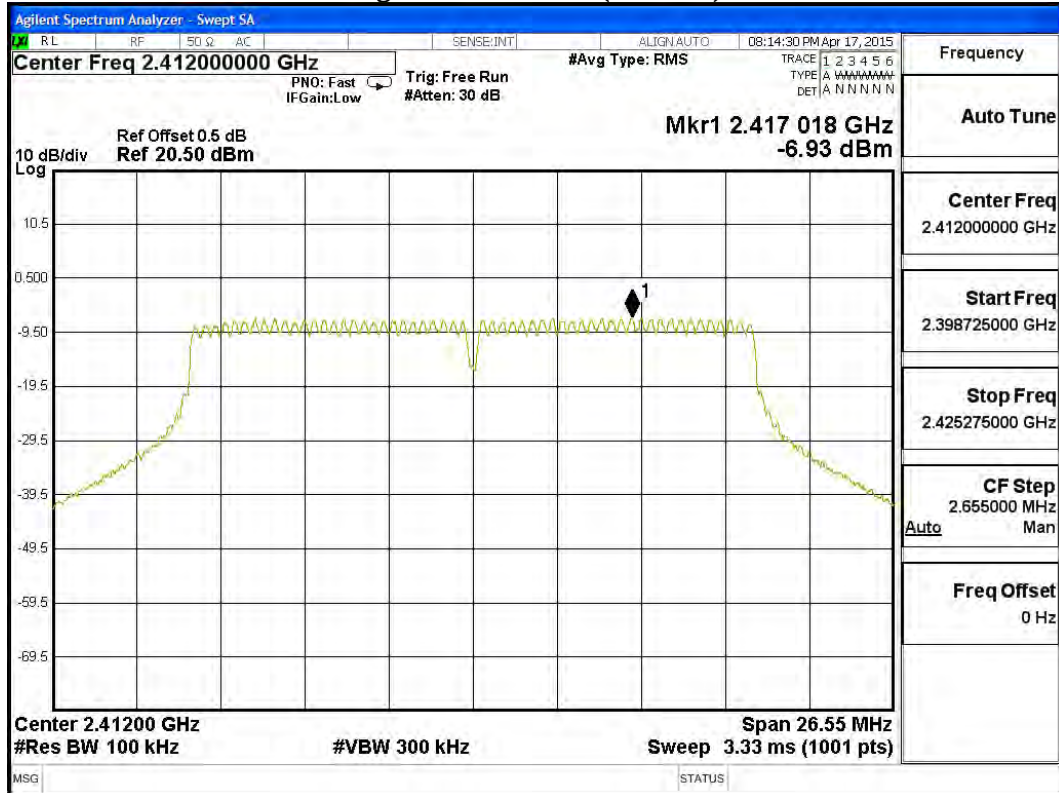


Figure Channel 06: (Chain A)

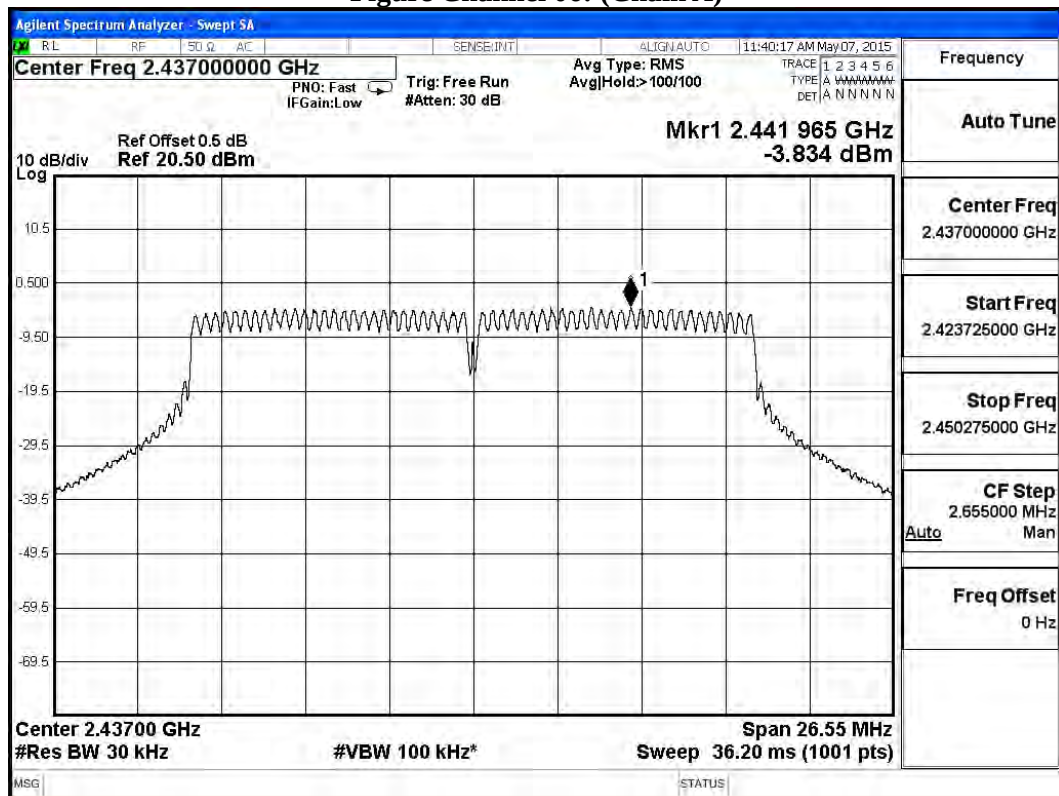


Figure Channel 11: (Chain A)



Figure Channel 01: (Chain B)

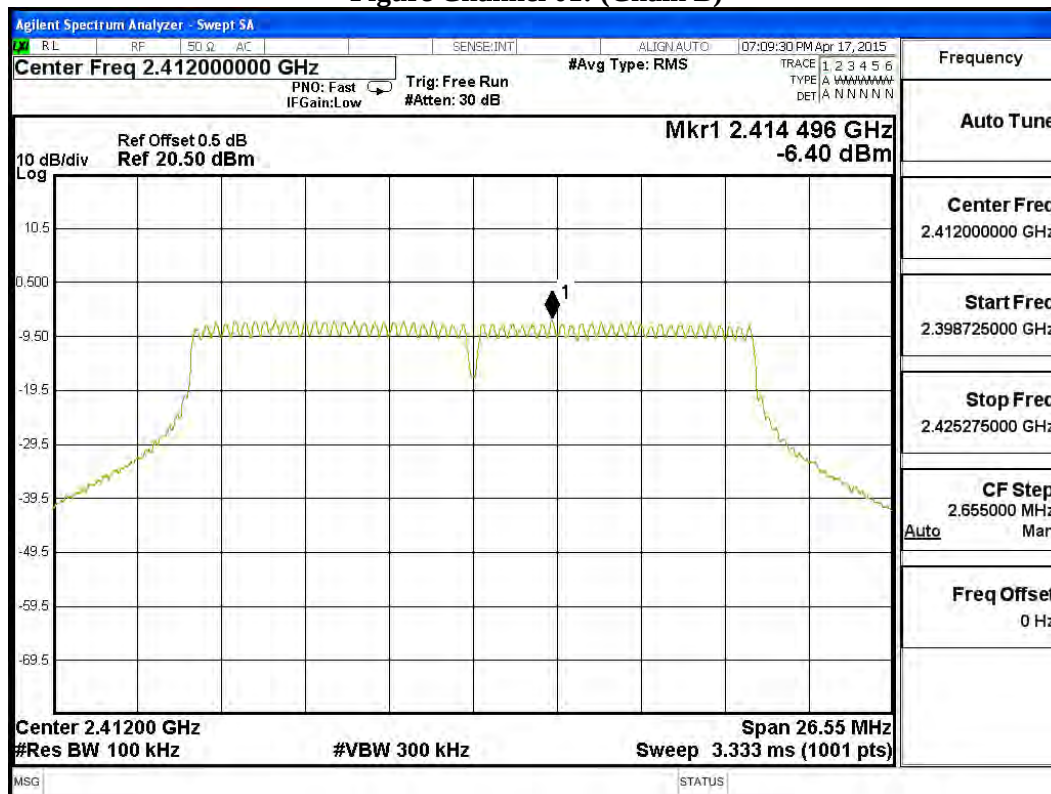


Figure Channel 06: (Chain B)

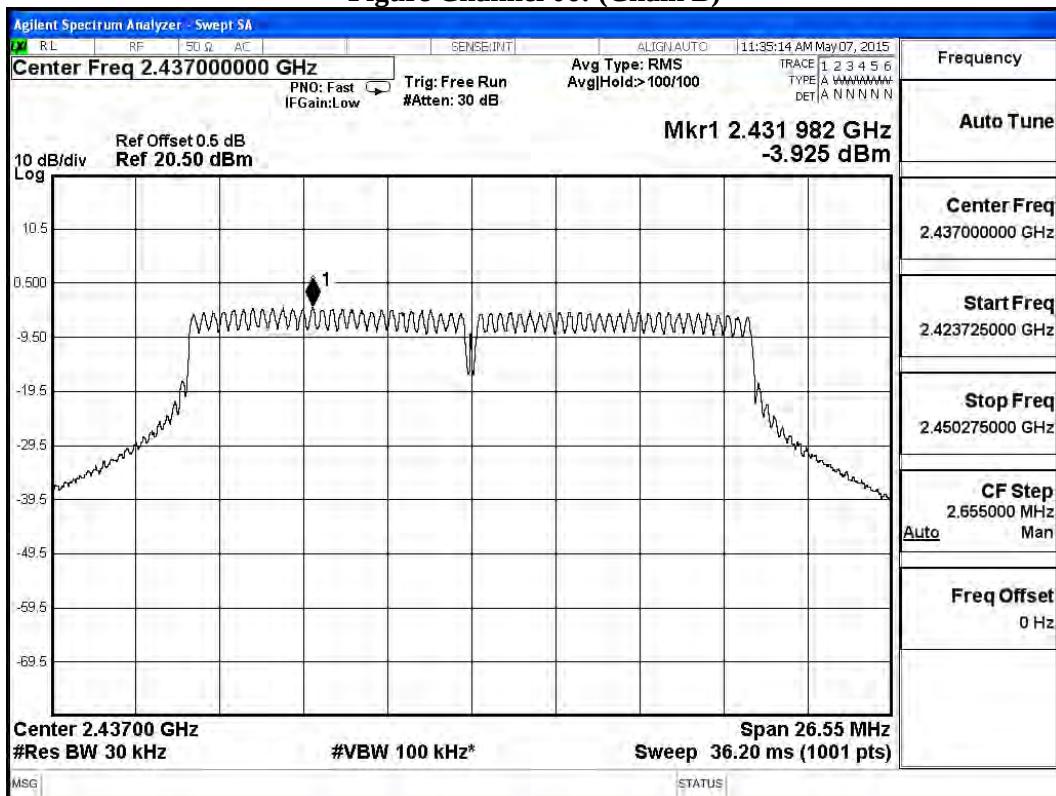


Figure Channel 11: (Chain B)

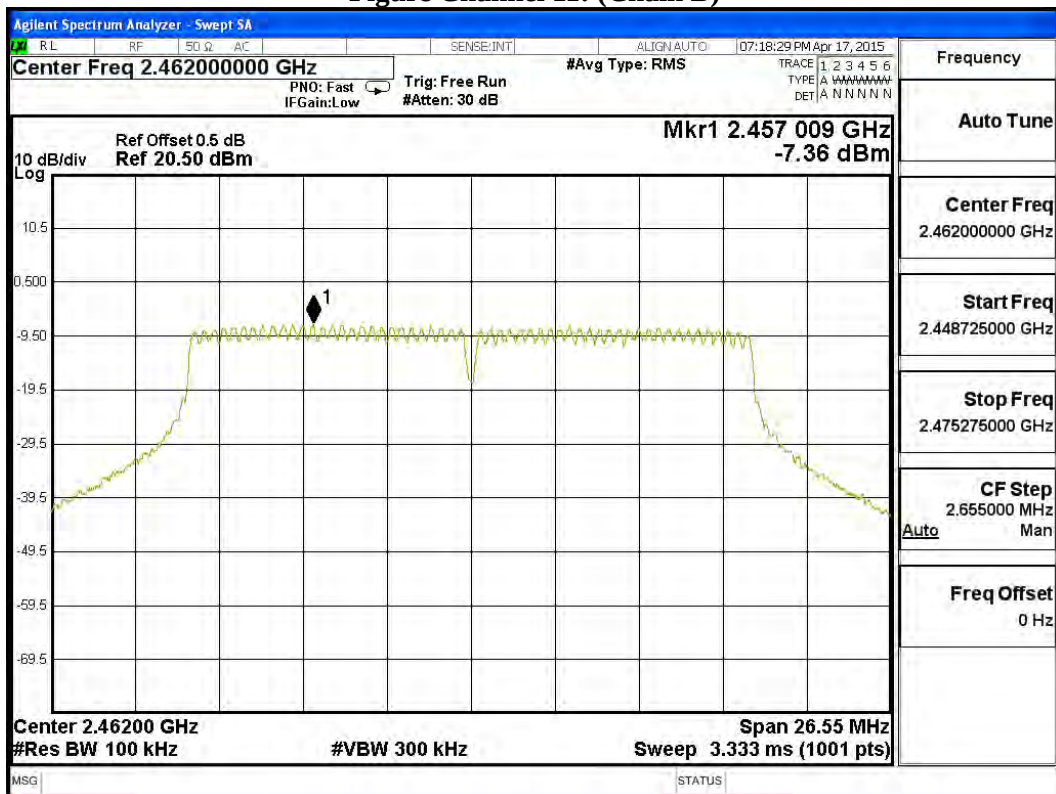


Figure Channel 01: (Chain C)

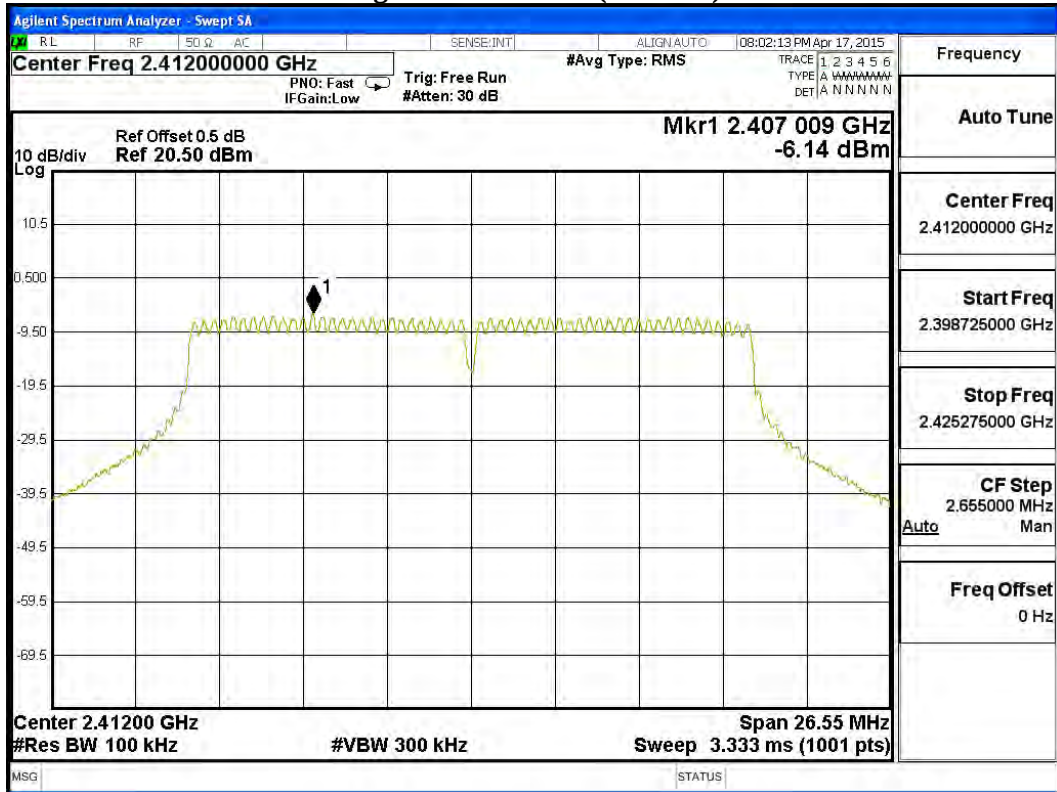


Figure Channel 06: (Chain C)

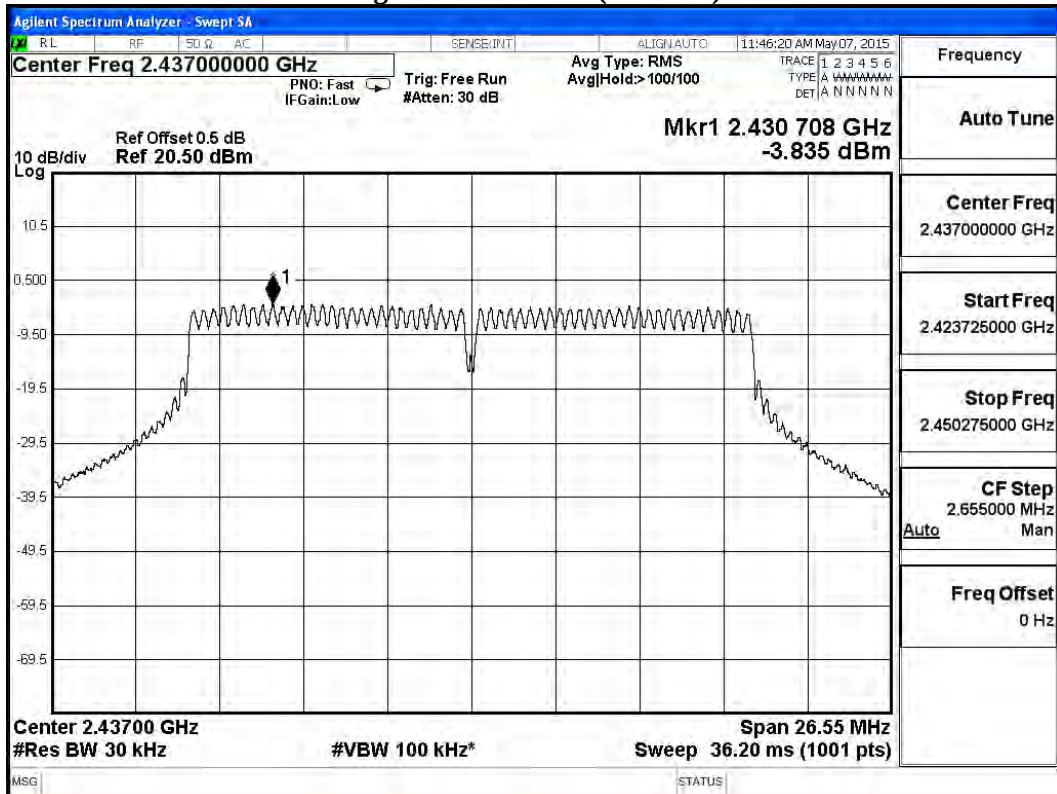
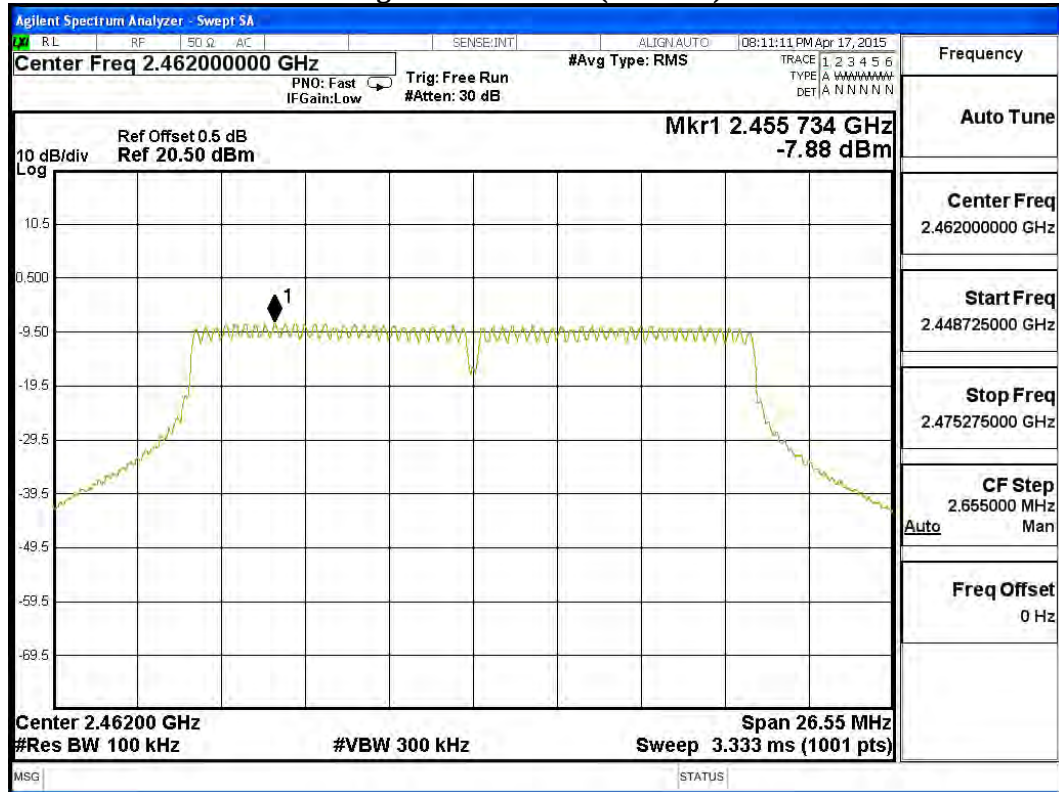


Figure Channel 11: (Chain C)



Product : Access Point/Sensor
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n 45Mbps 40M-BW) (Internal Antenna)

Channel No.	Frequency (MHz)	Chain (dBm)	PPSD (dBm)	Total PSD (dBm)	Limit (dBm)	Result
03	2422	A	-13.330	-8.559	< 6.1dBm	Pass
03	2422	B	-13.170	-8.399	< 6.1dBm	Pass
03	2422	C	-12.880	-8.109	< 6.1dBm	Pass
06	2437	A	-6.780	-2.009	< 6.1dBm	Pass
06	2437	B	-6.810	-2.039	< 6.1dBm	Pass
06	2437	C	-6.720	-1.949	< 6.1dBm	Pass
09	2452	A	-11.940	-7.169	< 6.1dBm	Pass
09	2452	B	-11.850	-7.079	< 6.1dBm	Pass
09	2452	C	-12.230	-7.459	< 6.1dBm	Pass

Note 1: The quantity $10 \cdot \log 3$ (two antennas) is added to the spectrum peak value according to document 662911 D01.

Figure Channel 03: (Chain A)

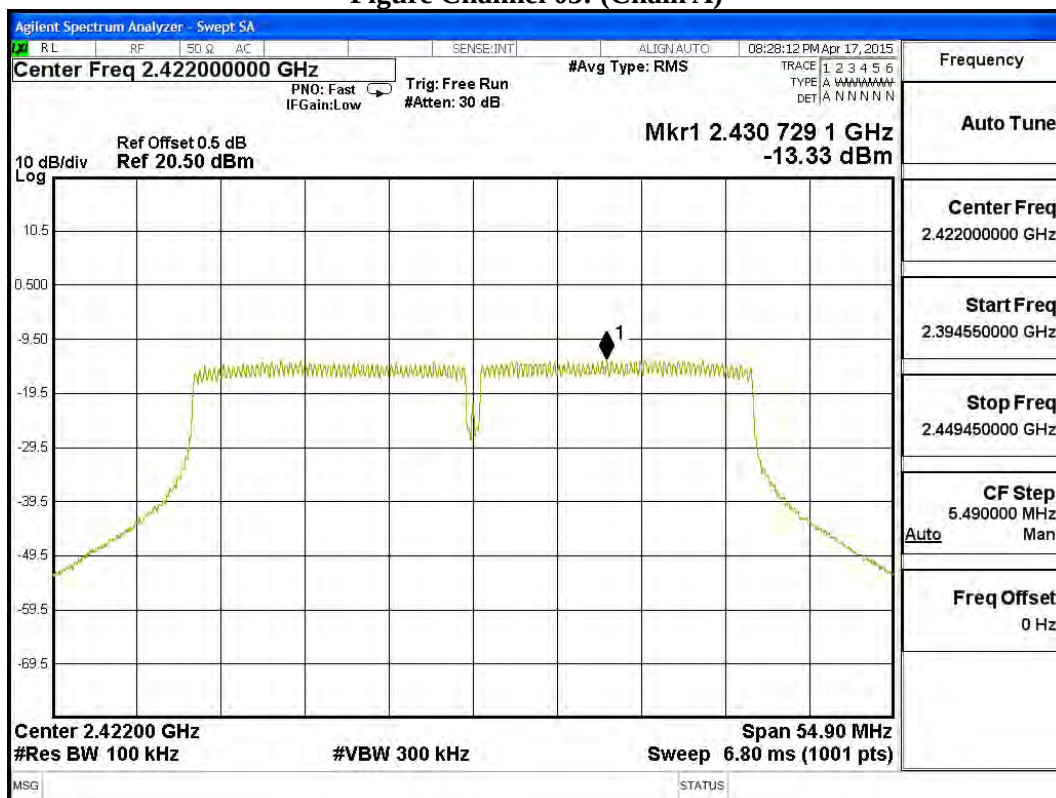


Figure Channel 06: (Chain A)

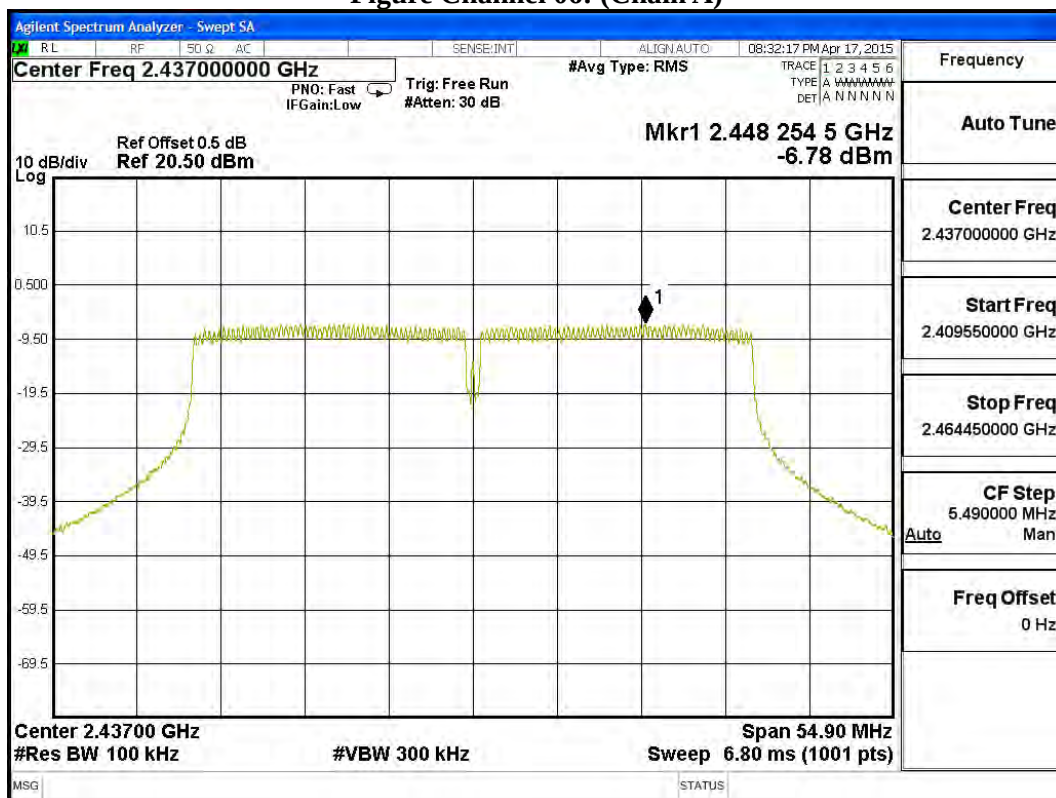


Figure Channel 09: (Chain A)

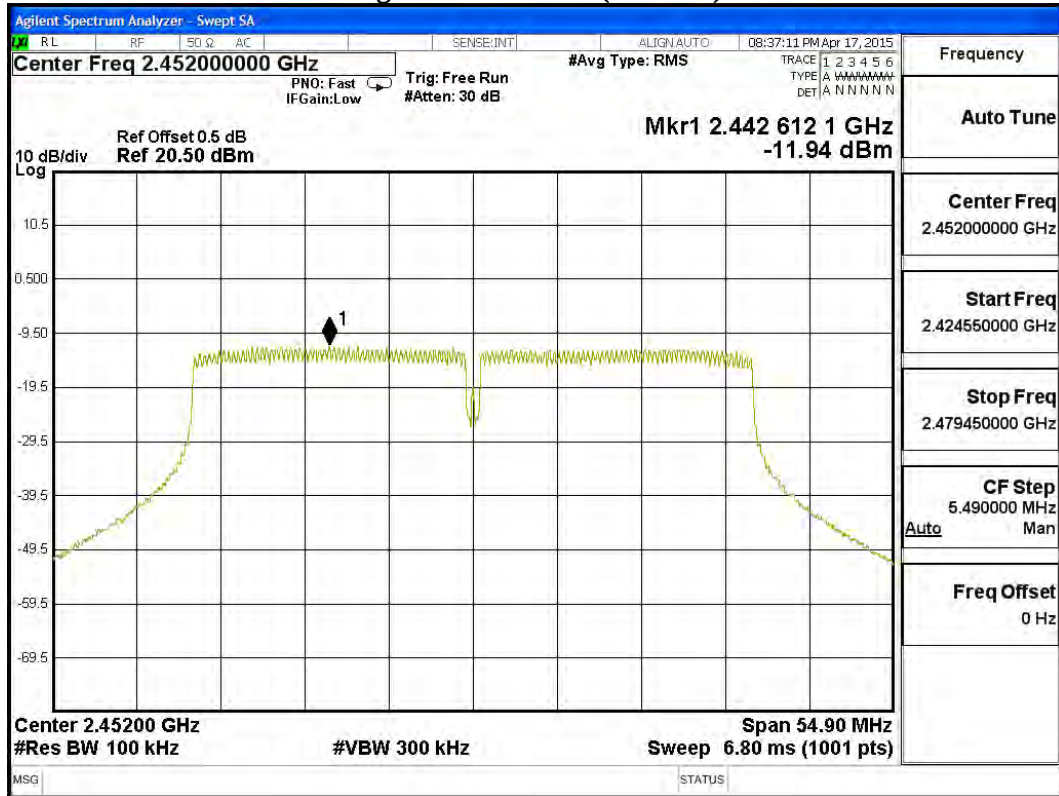


Figure Channel 03: (Chain B)

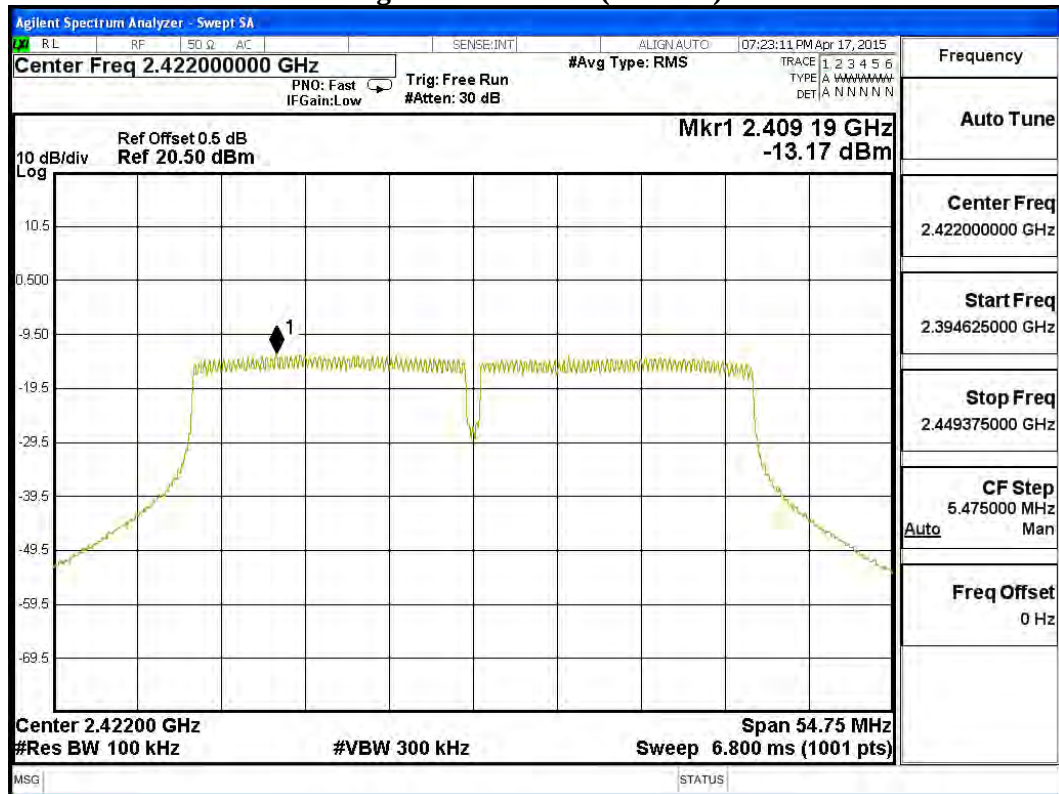


Figure Channel 06: (Chain B)

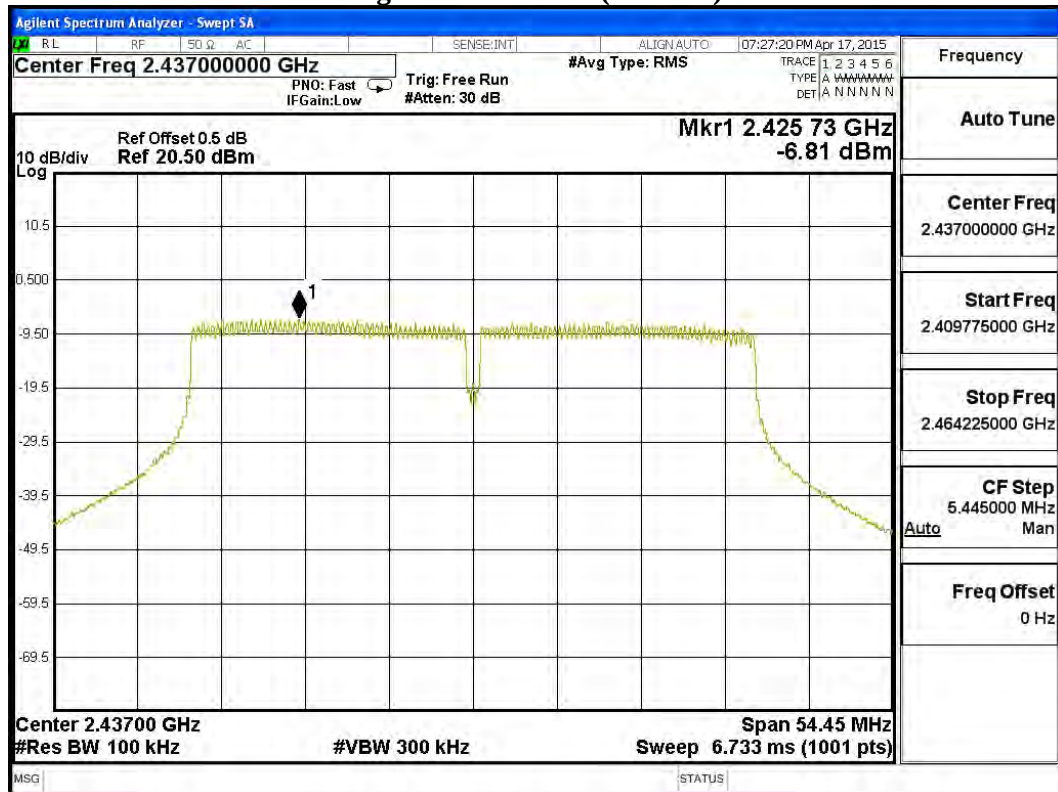


Figure Channel 09: (Chain B)

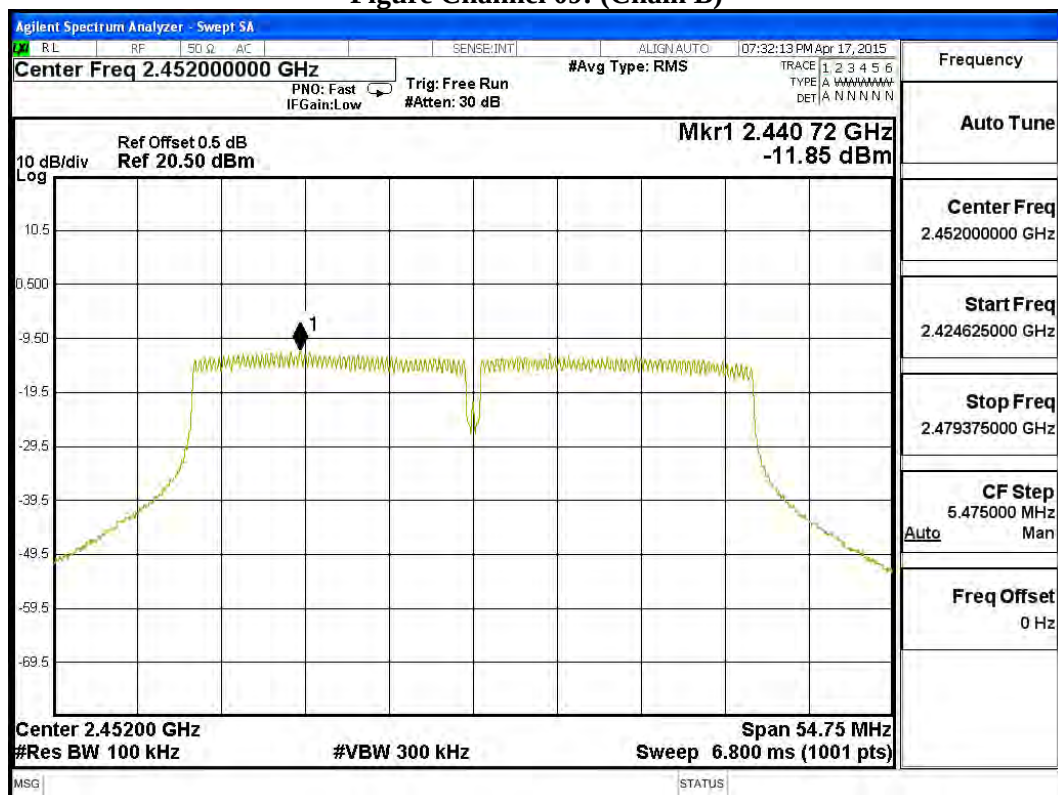


Figure Channel 03: (Chain C)

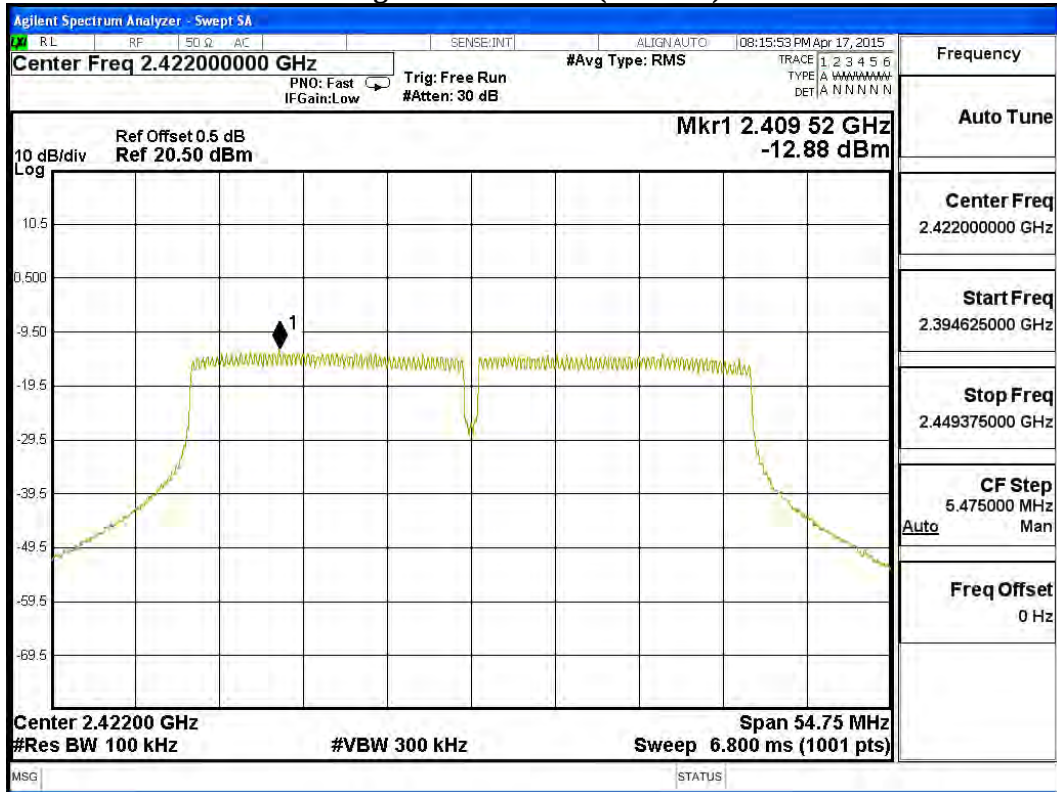


Figure Channel 06: (Chain C)

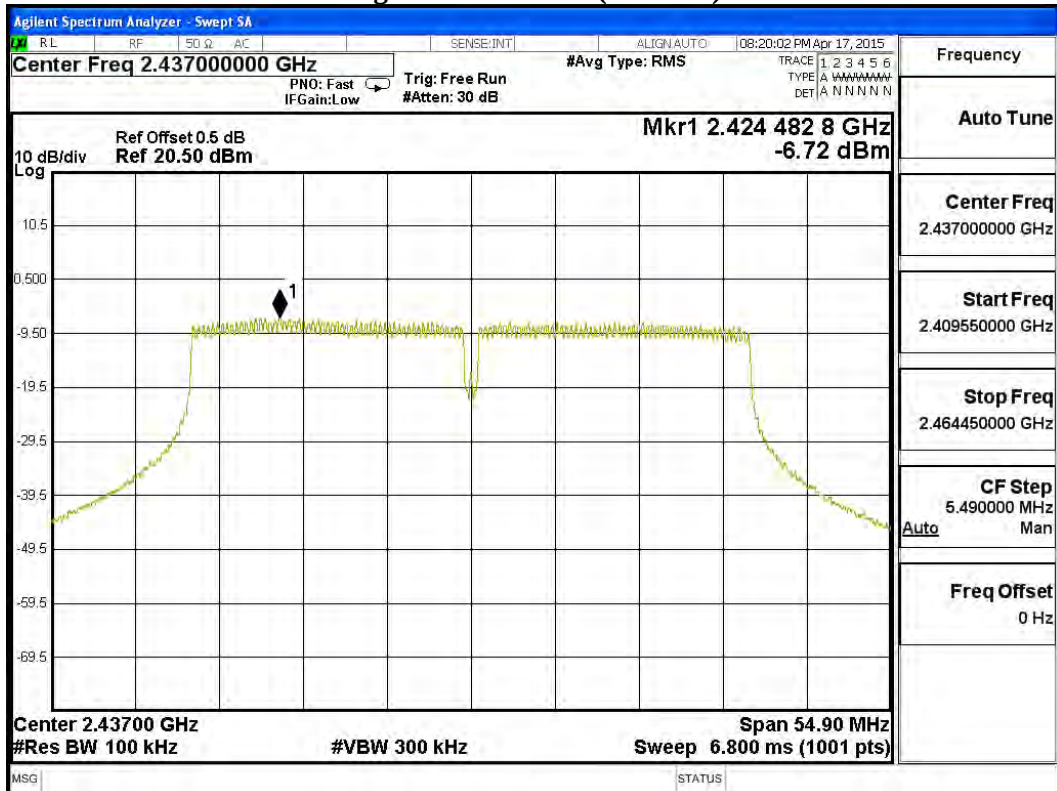
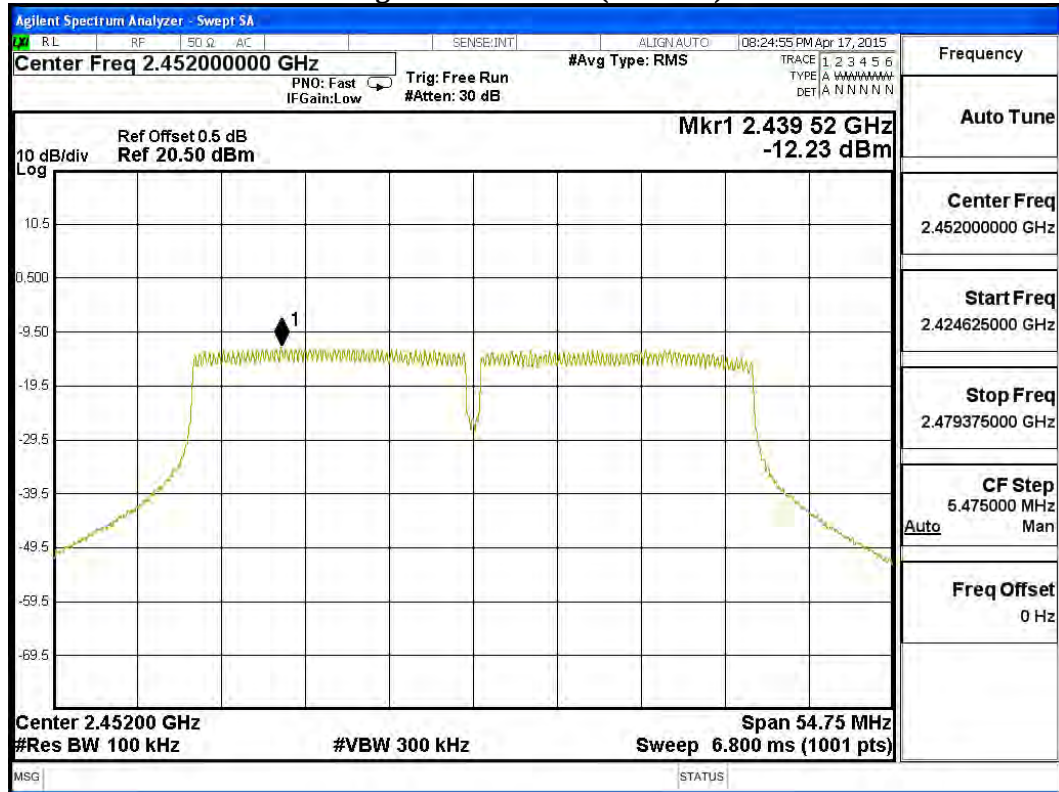


Figure Channel 09: (Chain C)



9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs