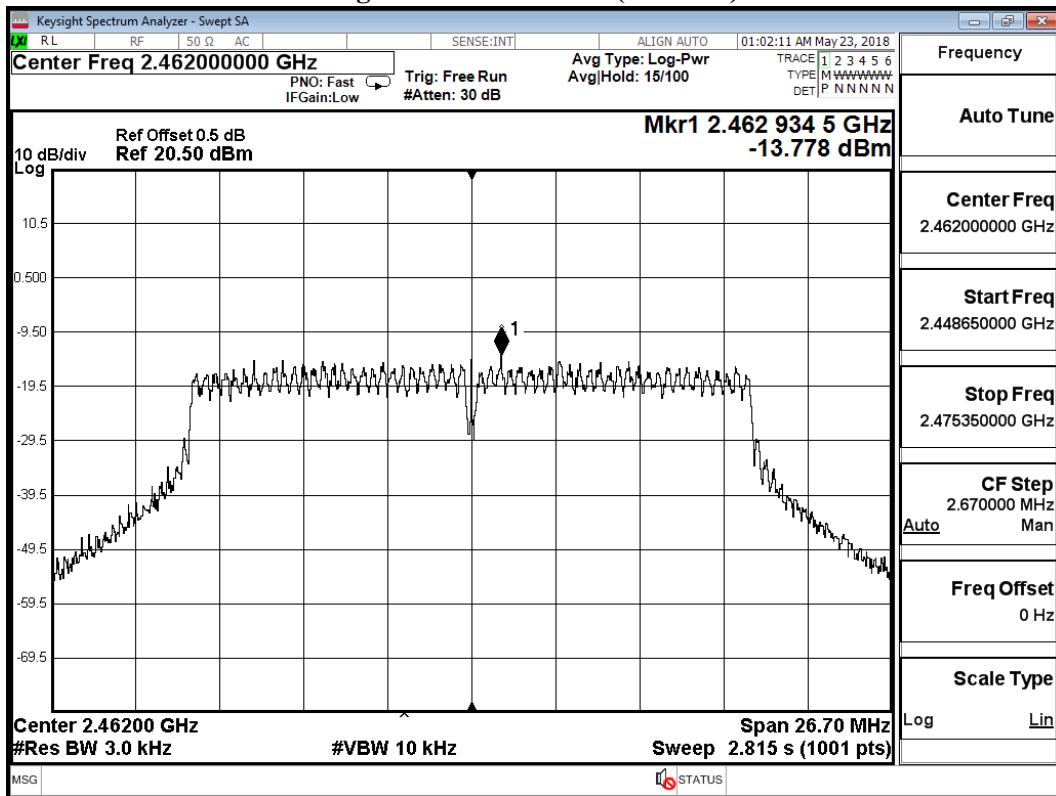


Figure Channel 11: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2422MHz) (Antenna No.17)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-14.377	-8.356	≤ 5dBm	Pass
B	-16.430	-10.409	≤ 5dBm	Pass
C	-17.327	-11.306	≤ 5dBm	Pass
D	-17.416	-11.395	≤ 5dBm	Pass

Note : The quantity $10 \cdot \log 4$ (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 3: (Chain A)

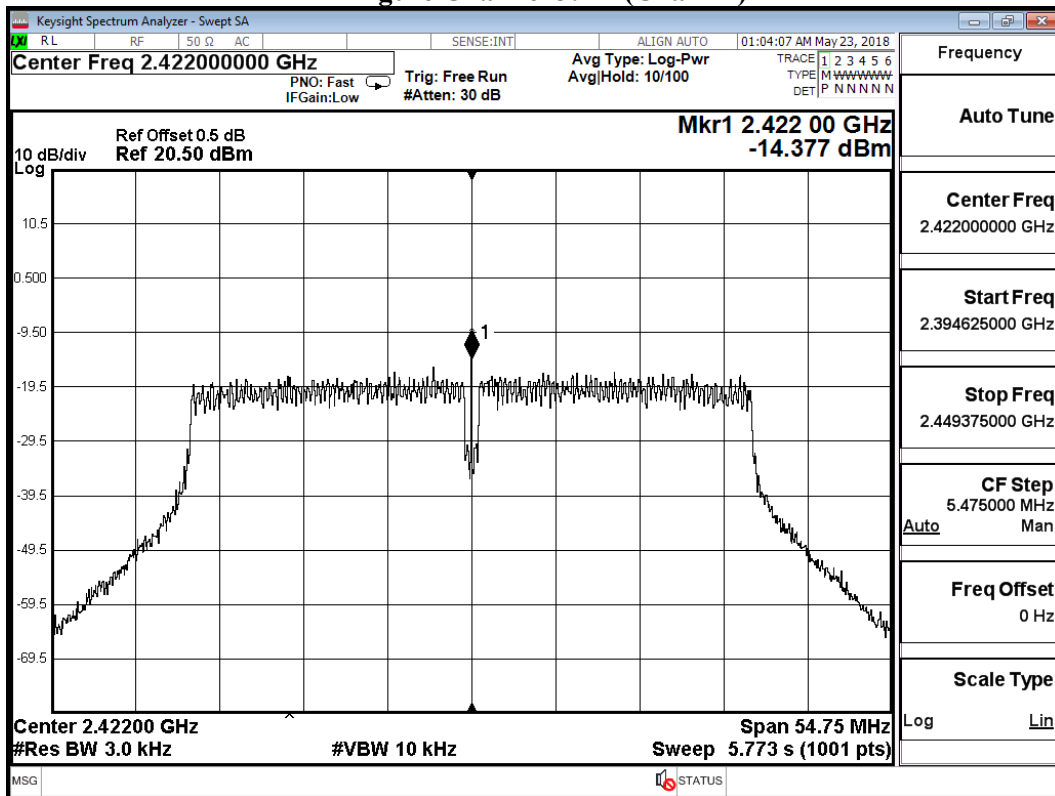


Figure Channel 3: (Chain B)

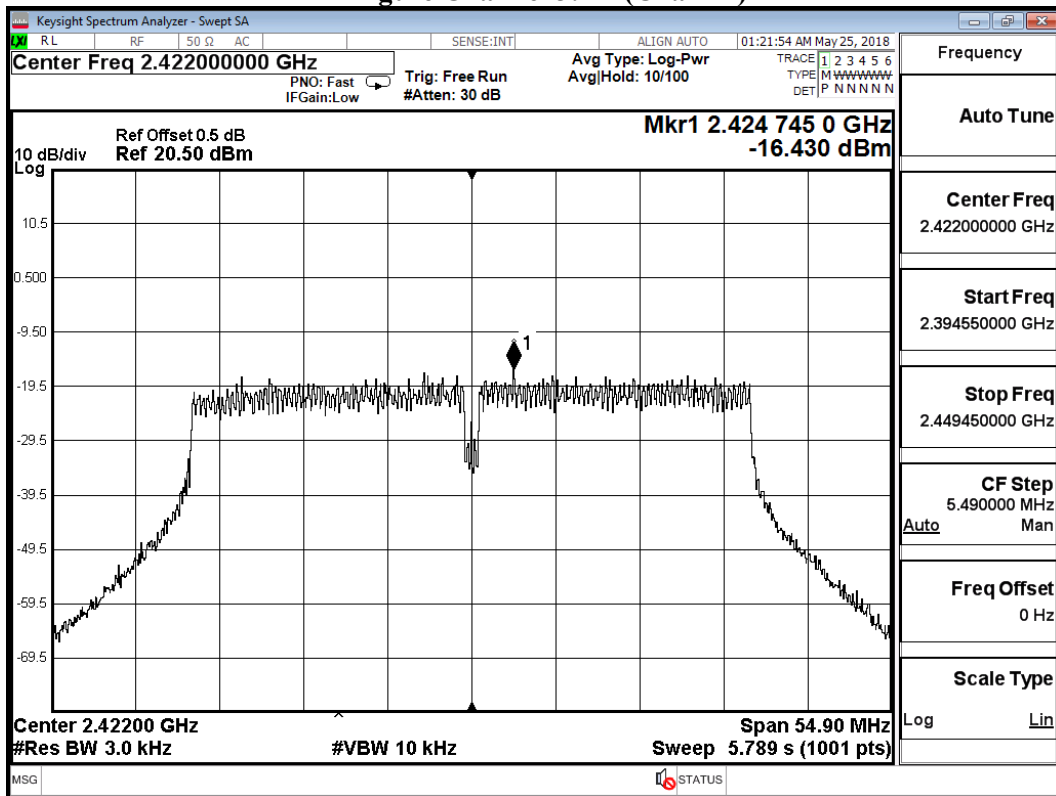


Figure Channel 3: (Chain C)

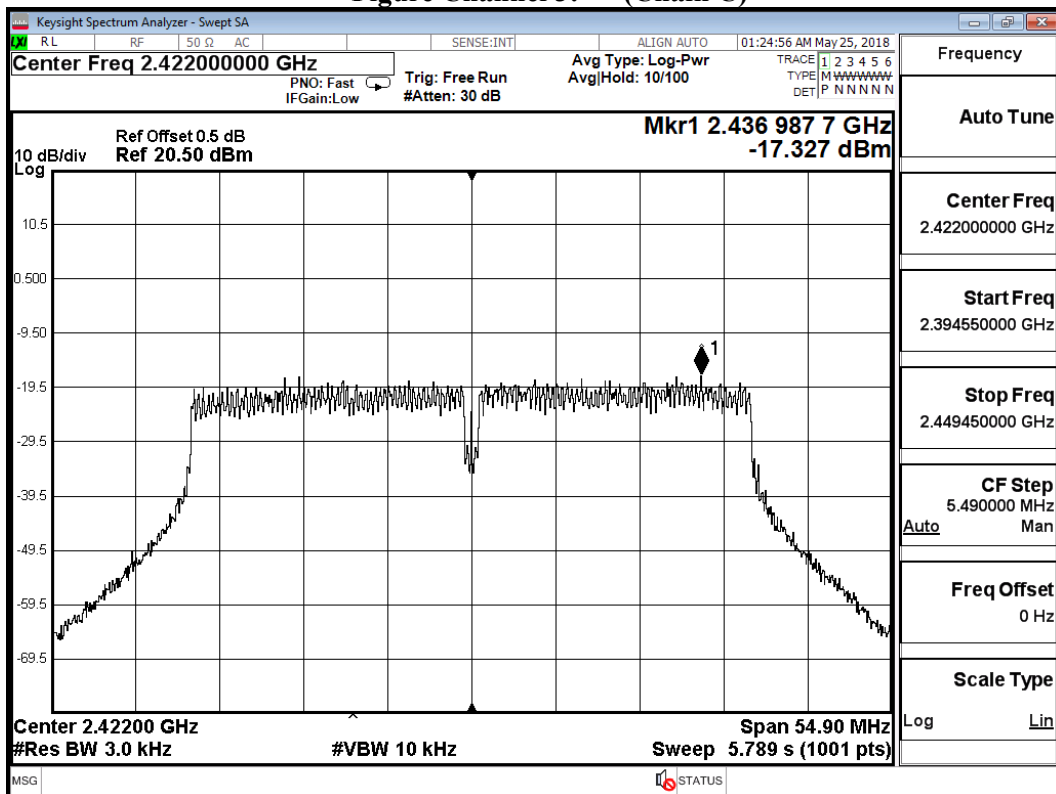
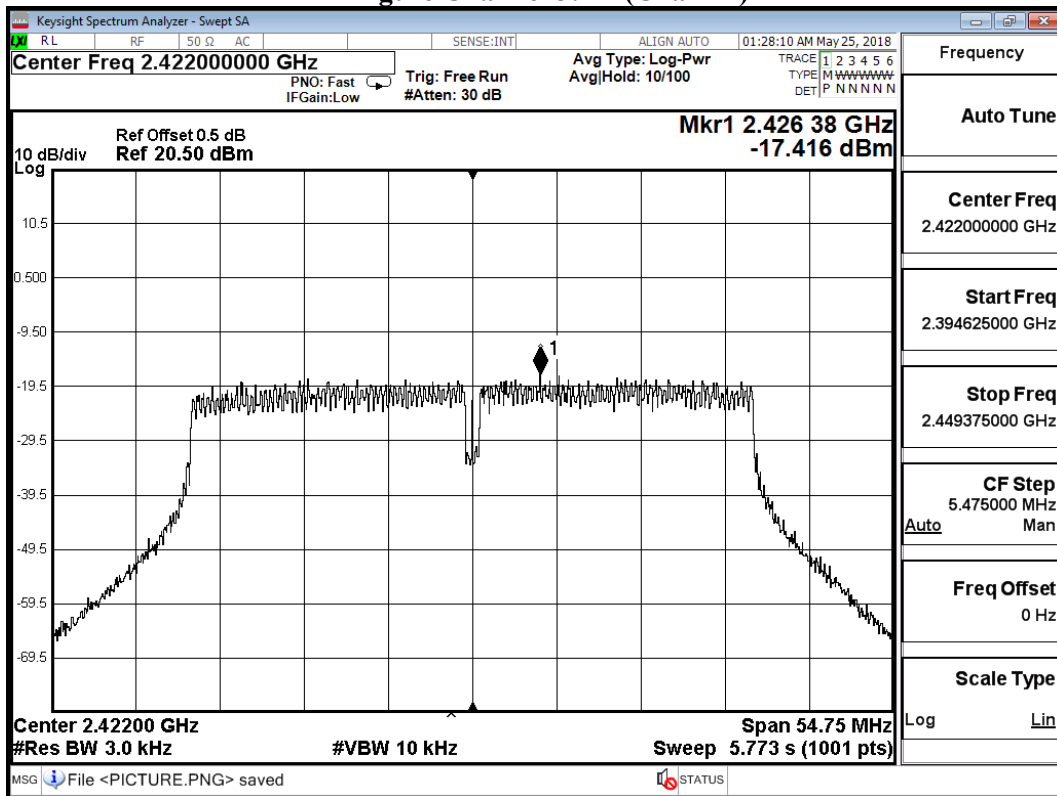


Figure Channel 3: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2437MHz) (Antenna No.17)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-12.228	-6.207	≤ 5dBm	Pass
B	-17.134	-11.113	≤ 5dBm	Pass
C	-17.072	-11.051	≤ 5dBm	Pass
D	-17.370	-11.349	≤ 5dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 6: (Chain A)

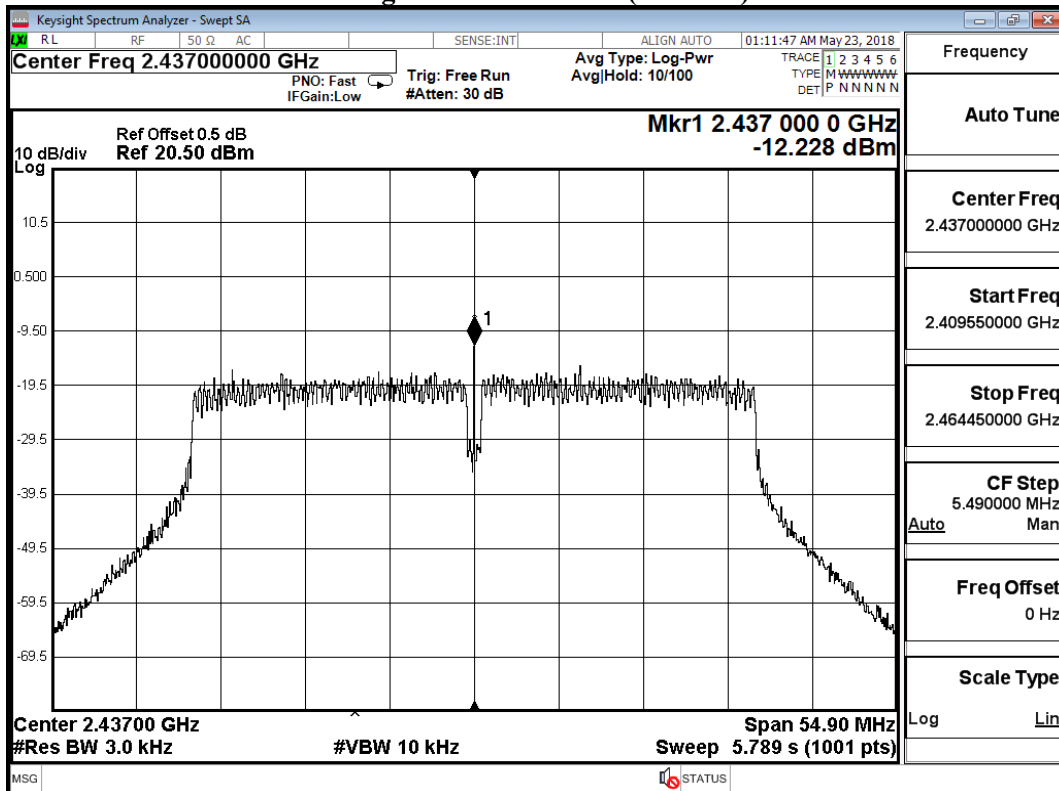


Figure Channel 6: (Chain B)

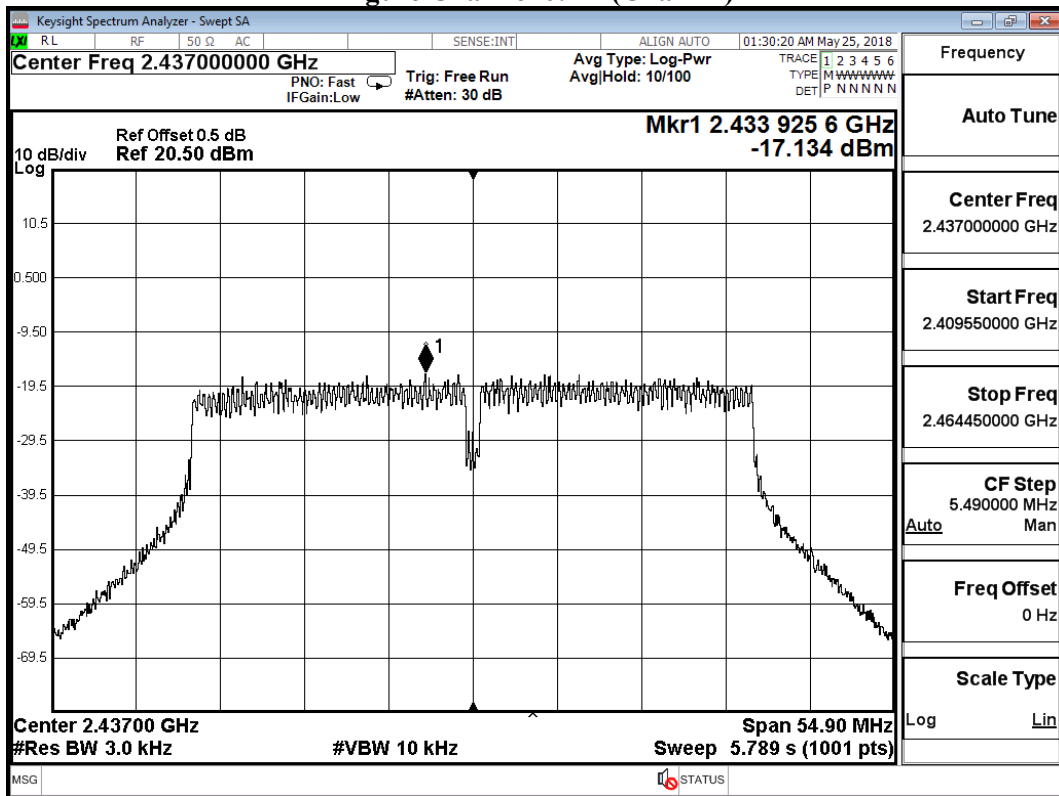


Figure Channel 6: (Chain C)

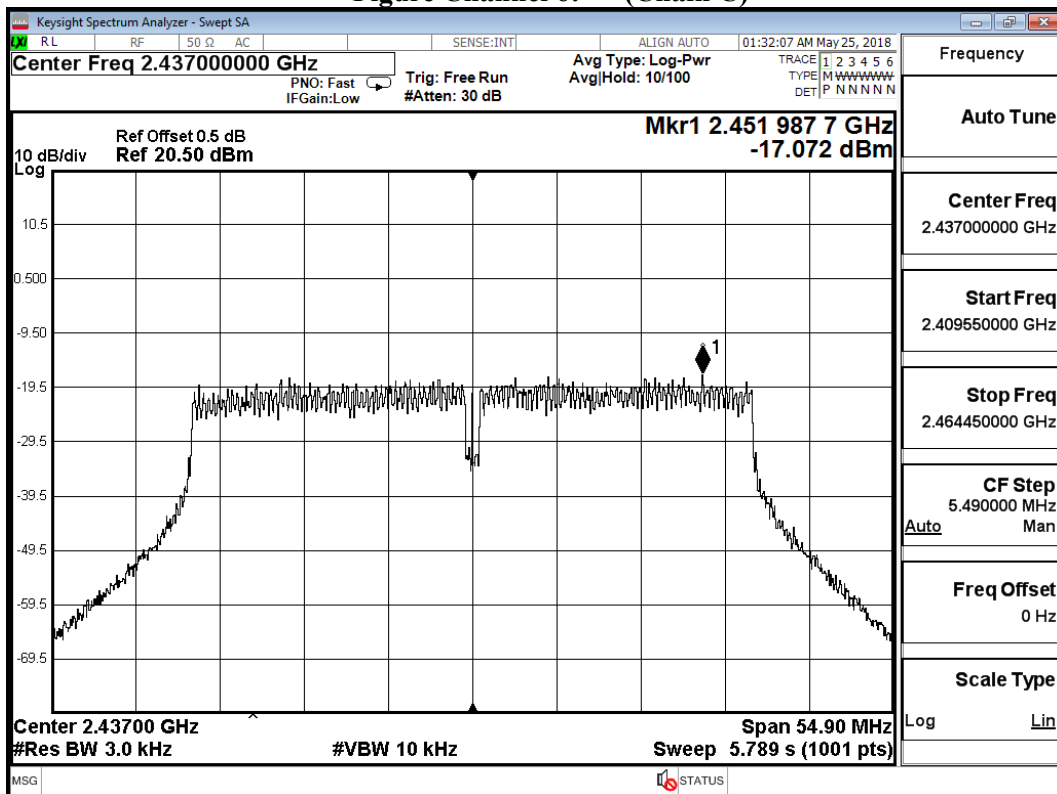
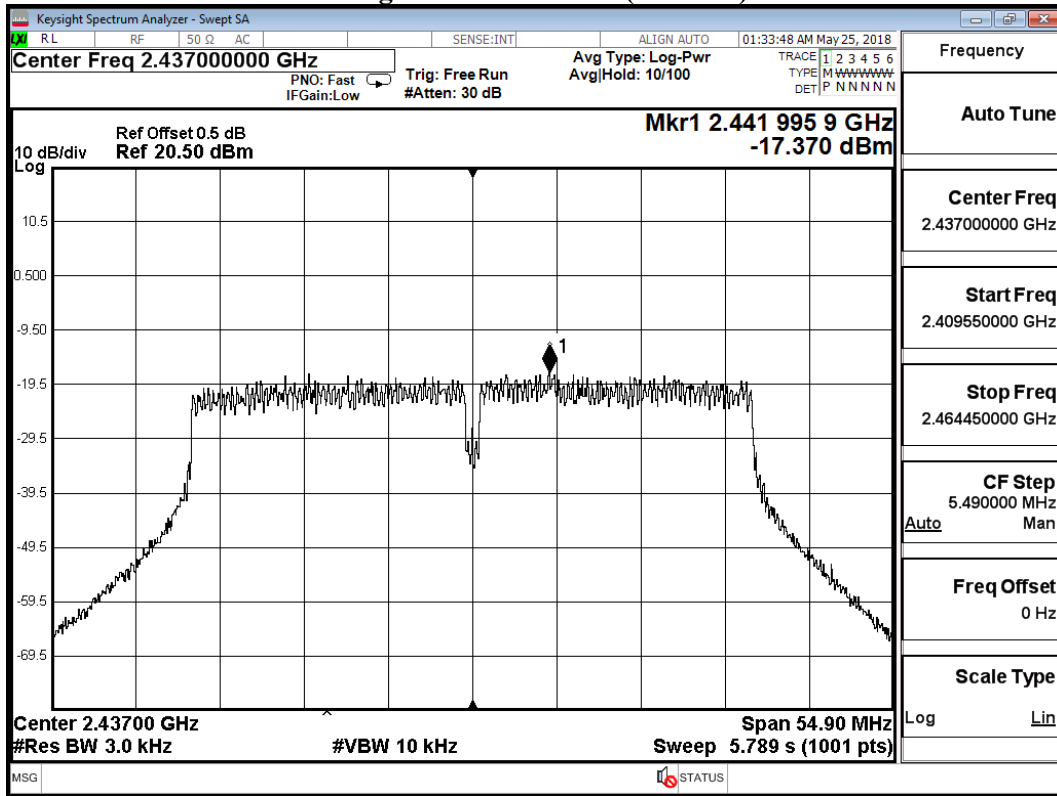


Figure Channel 6: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2452MHz) (Antenna No.17)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm) ¹	Limit	Result
A	-12.001	-5.980	≤ 5dBm	Pass
B	-16.672	-10.651	≤ 5dBm	Pass
C	-16.291	-10.270	≤ 5dBm	Pass
D	-16.601	-10.580	≤ 5dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 9: (Chain A)

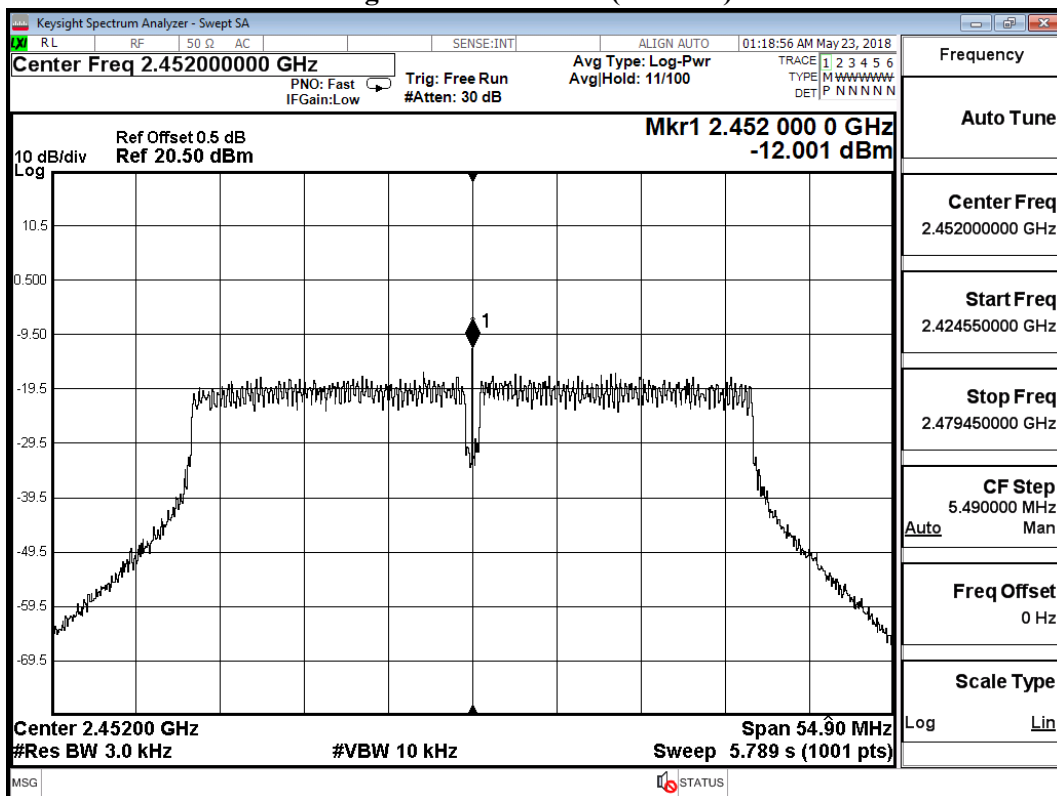


Figure Channel 9: (Chain B)

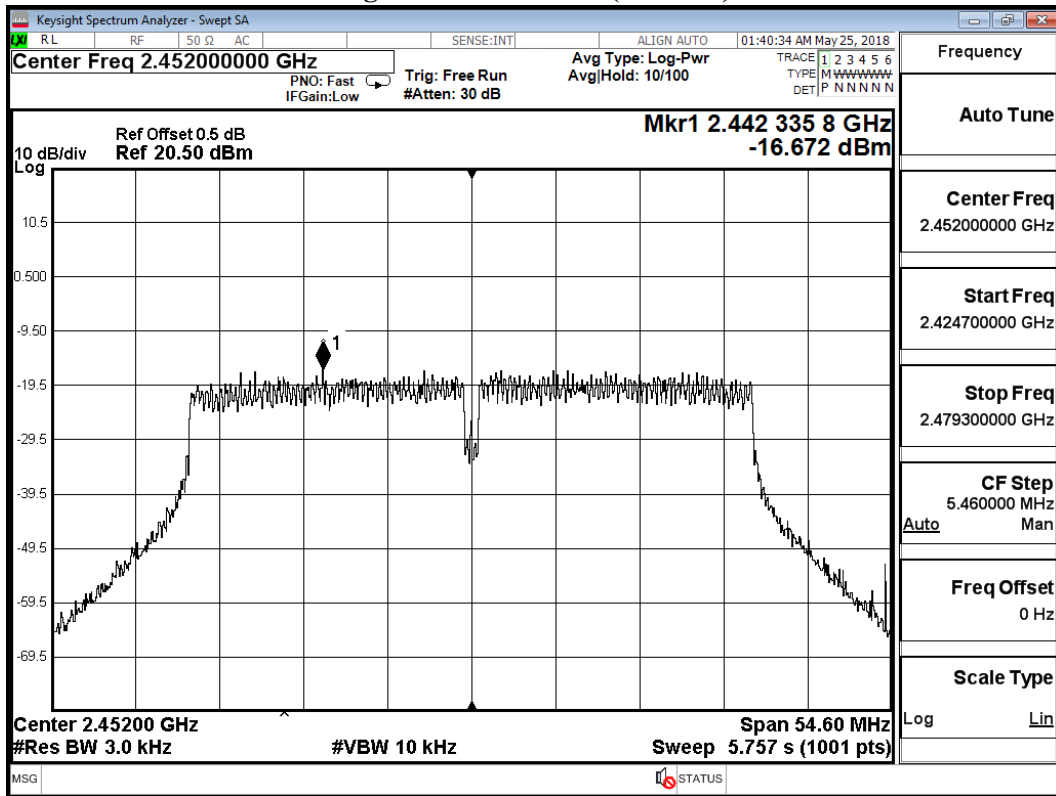


Figure Channel 9: (Chain C)

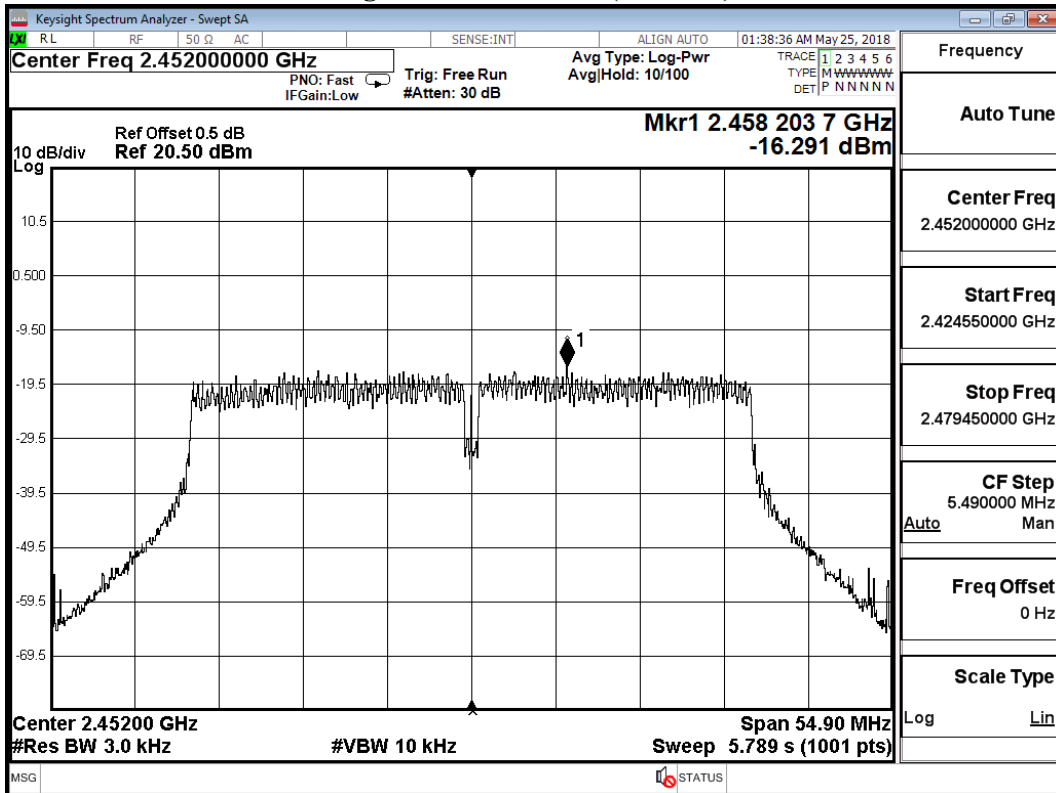
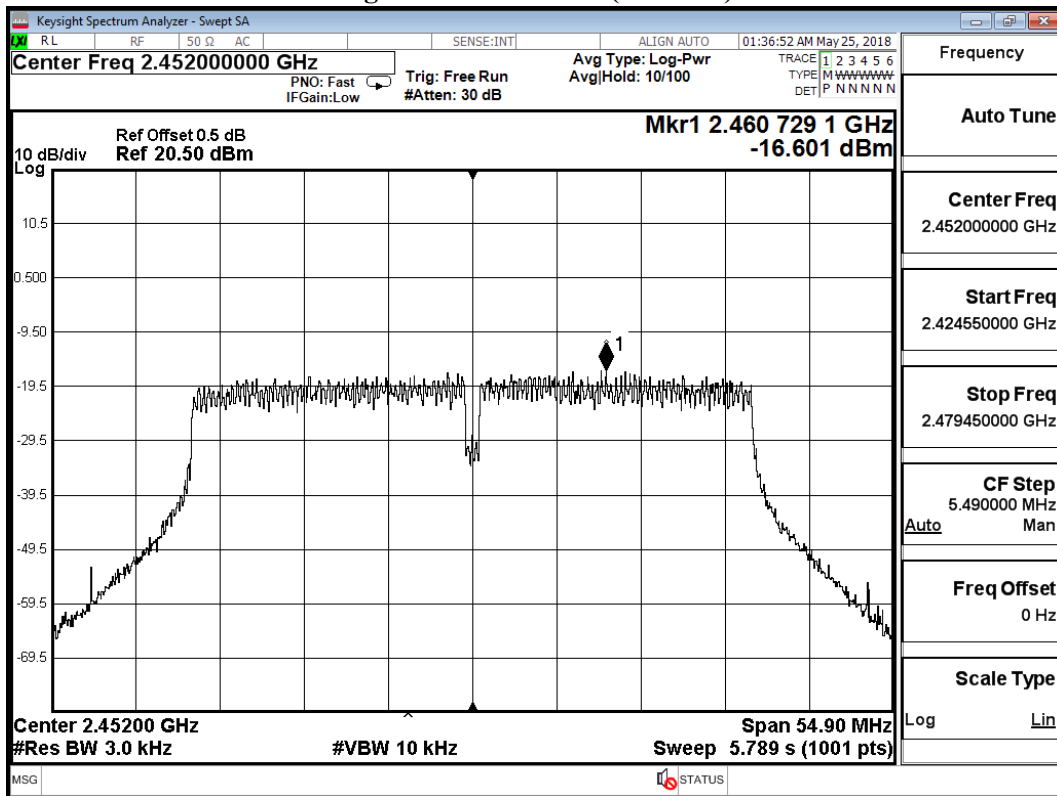


Figure Channel 9: (Chain D)

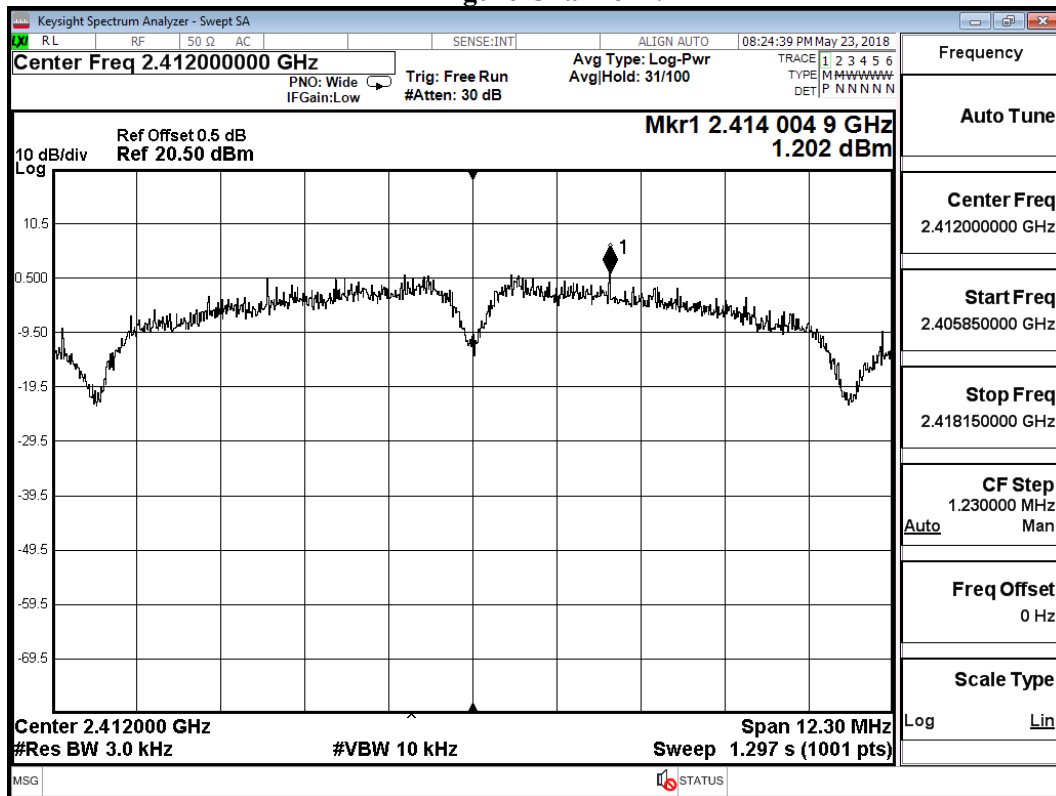


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (Antenna No.18)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	1.202	≤ 6dBm	Pass

Note: Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 1:

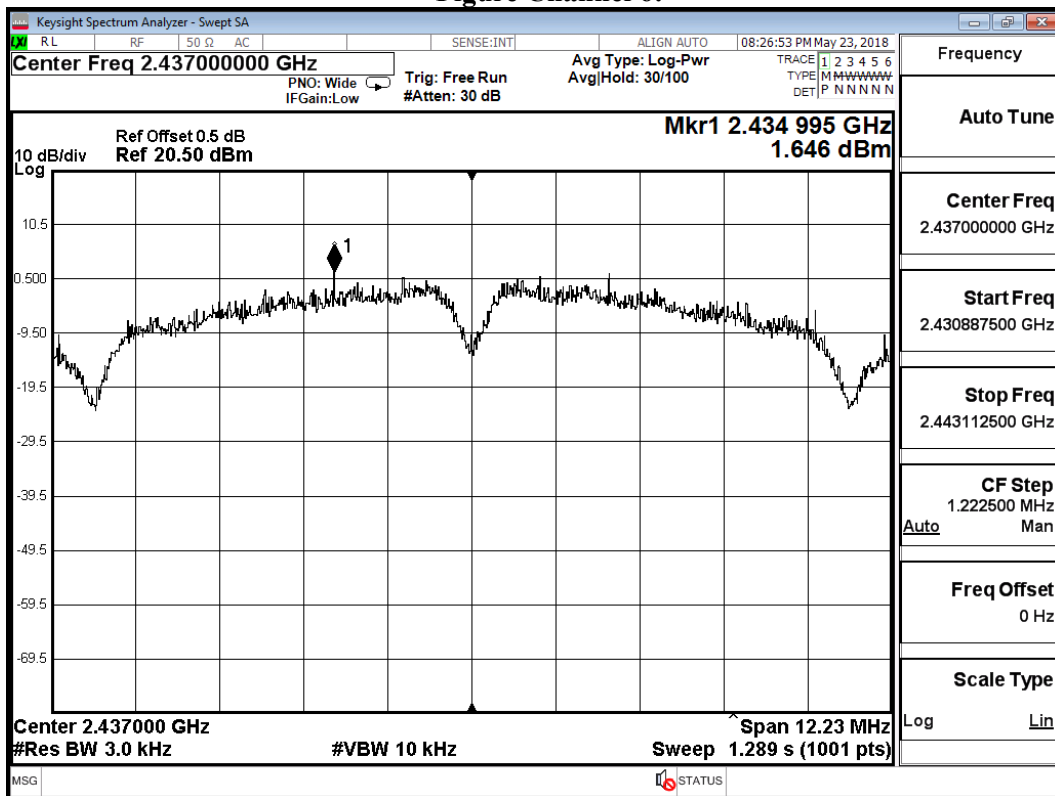


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz) (Antenna No.18)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
6	2437	1.646	≤6dBm	Pass

Note:Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 6:

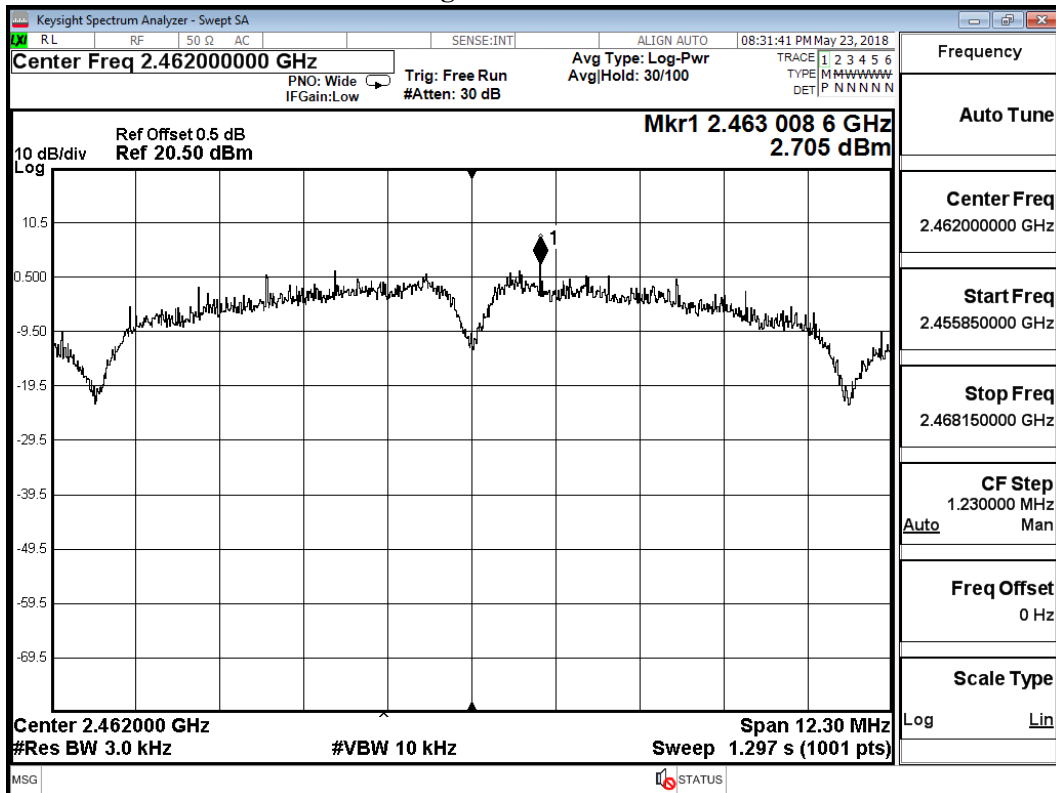


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (Antenna No.18)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
11	2462	2.705	≤ 6dBm	Pass

Note: Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 11:

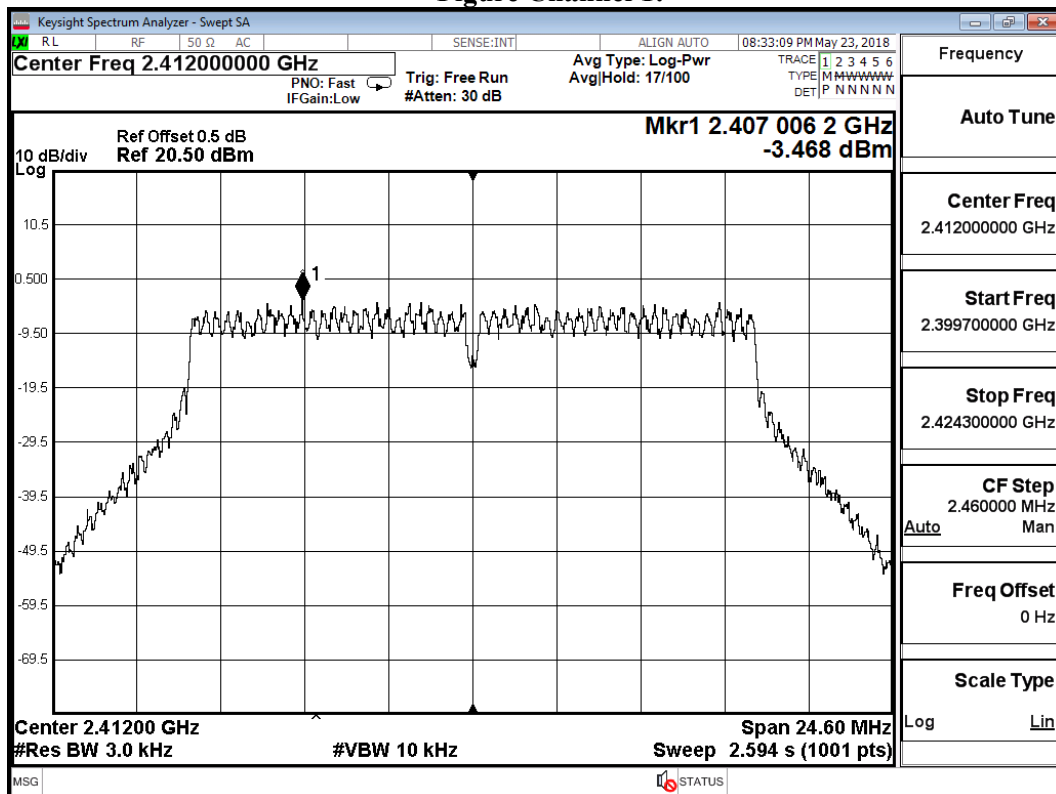


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (Antenna No.18)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-3.468	≤ 6dBm	Pass

Note: Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 1:

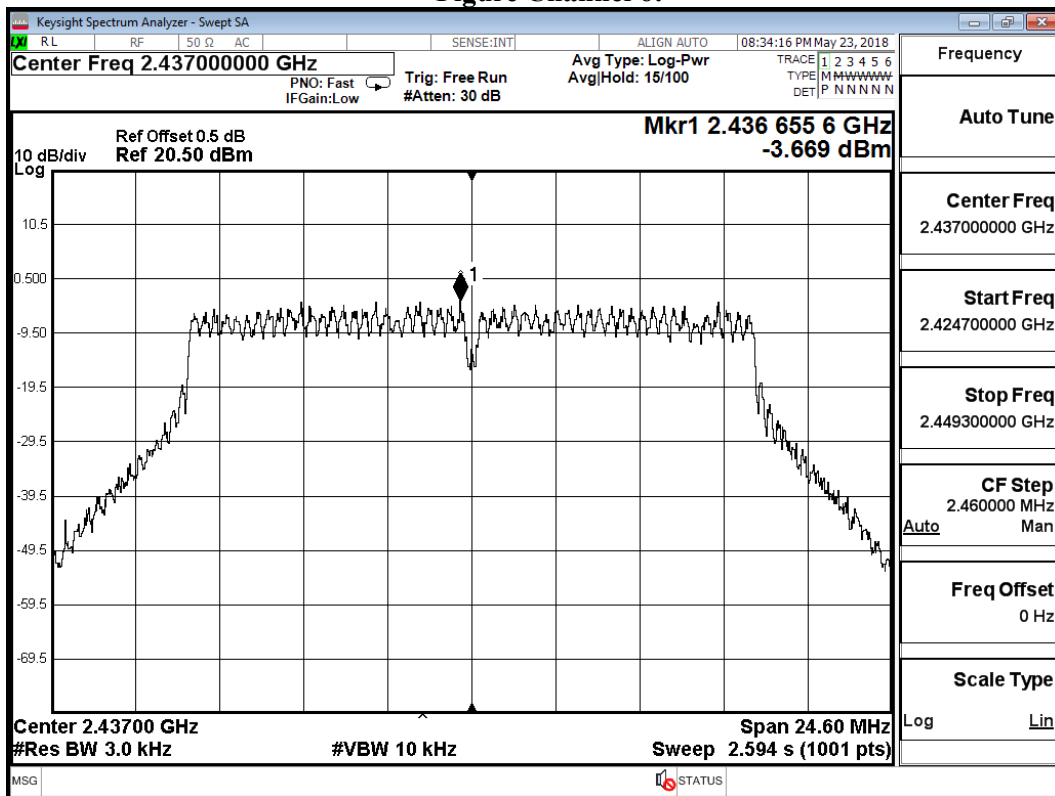


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (Antenna No.18)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
6	2437	-3.669	≤6dBm	Pass

Note:Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 6:



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (Antenna No.18)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
11	2462	-4.243	≤ 6dBm	Pass

Note: Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 11:

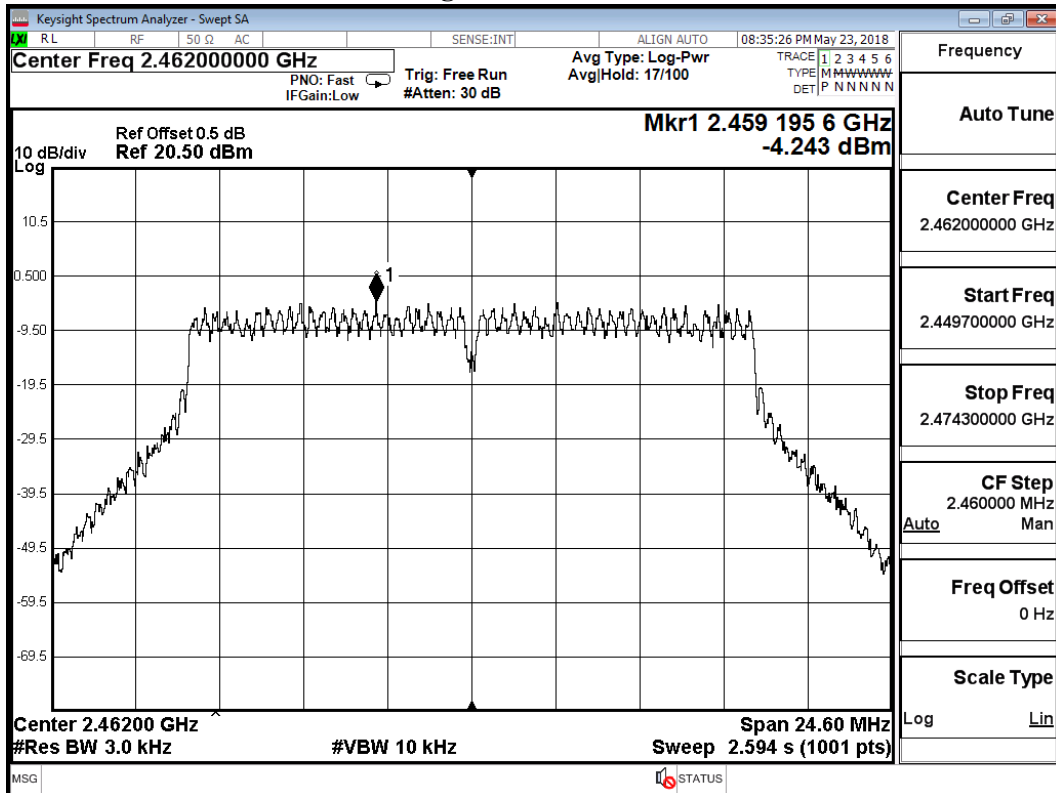


Figure Channel 1: (Chain B)

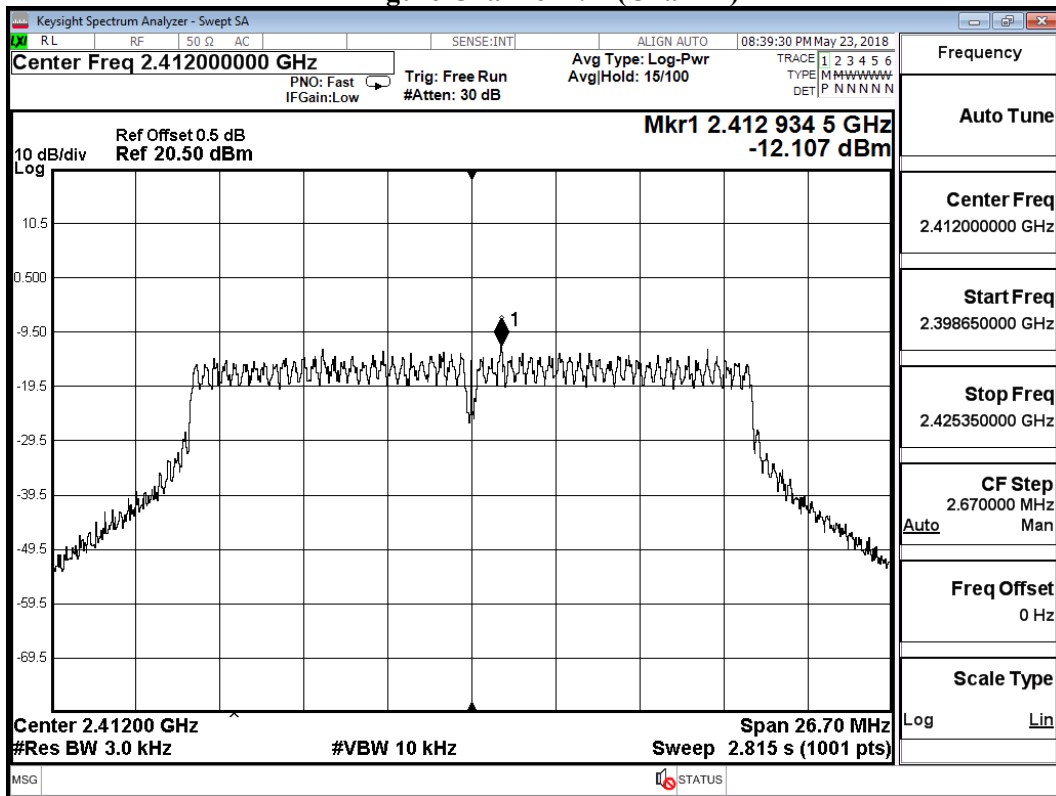


Figure Channel 1: (Chain C)

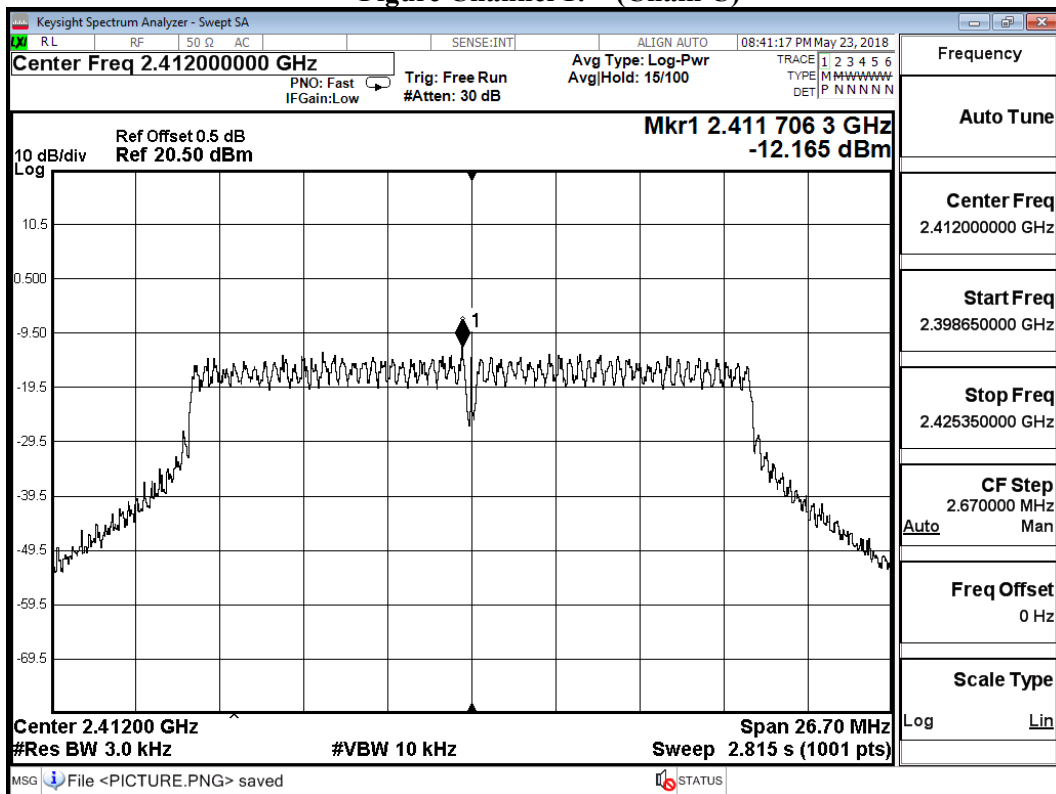
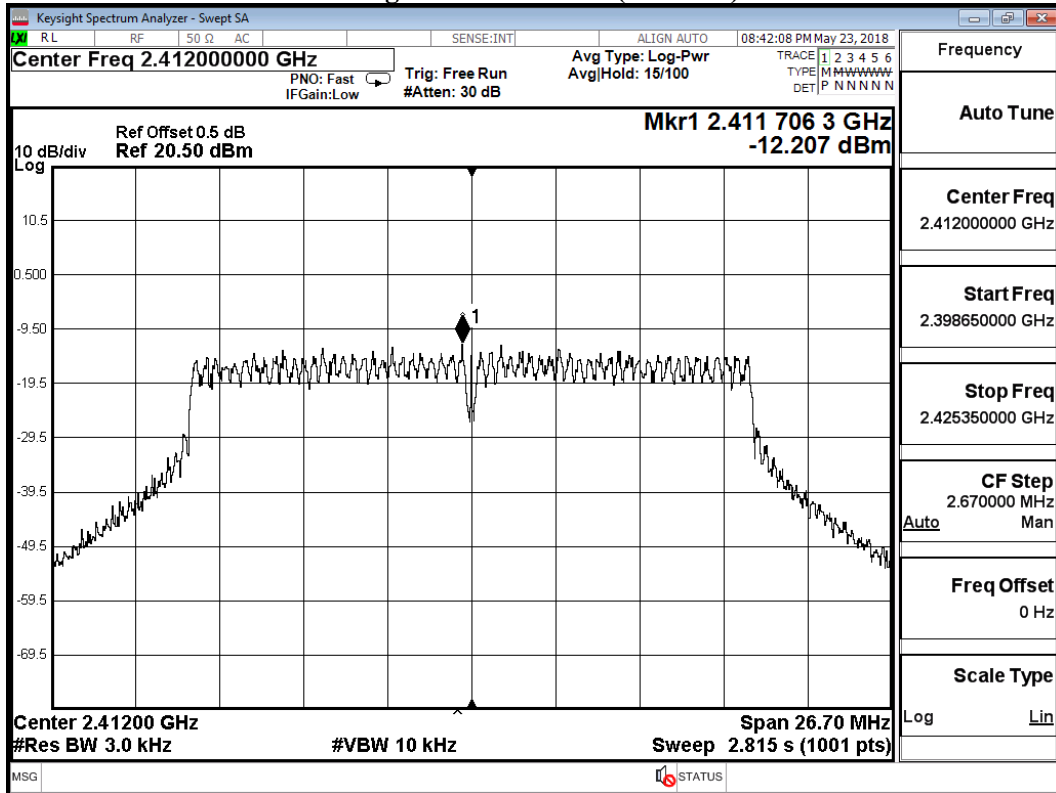


Figure Channel 1: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 3: Transmit (802.11n-20BW_28.8Mbps) (2437MHz) (Antenna No.18)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-12.592	-6.571	≤ 6dBm	Pass
B	-12.263	-6.242	≤ 6dBm	Pass
C	-11.980	-5.959	≤ 6dBm	Pass
D	-12.552	-6.531	≤ 6dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note:Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 6: (Chain A)

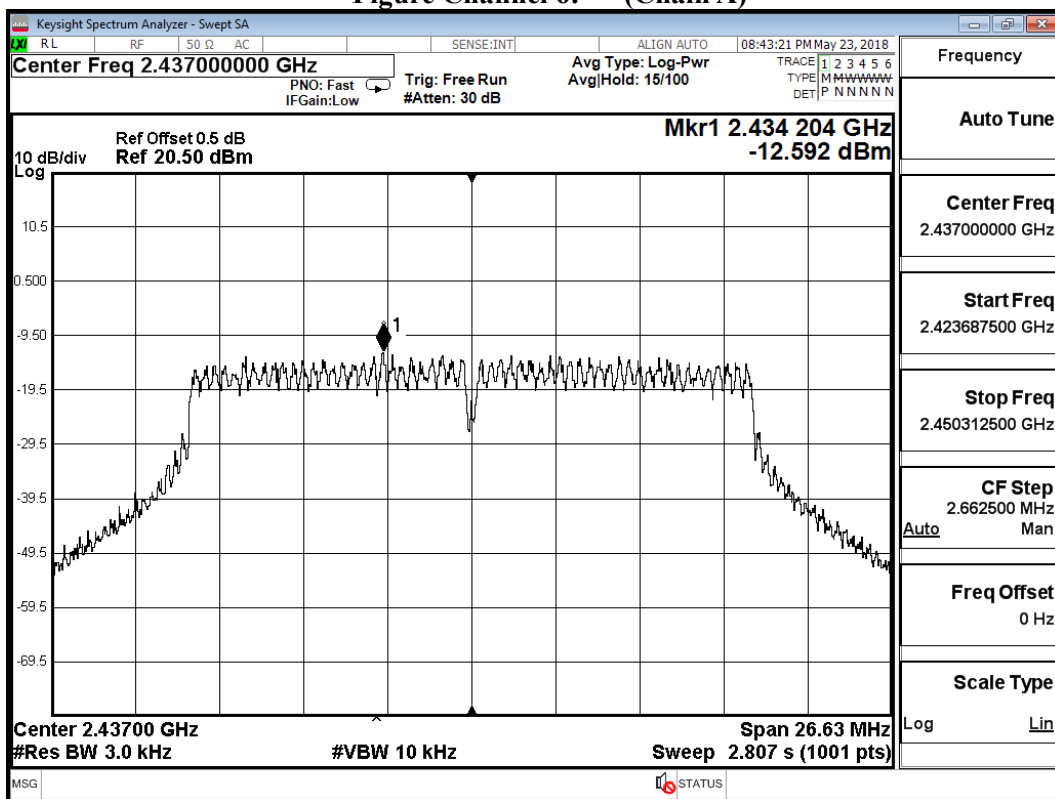


Figure Channel 6: (Chain B)

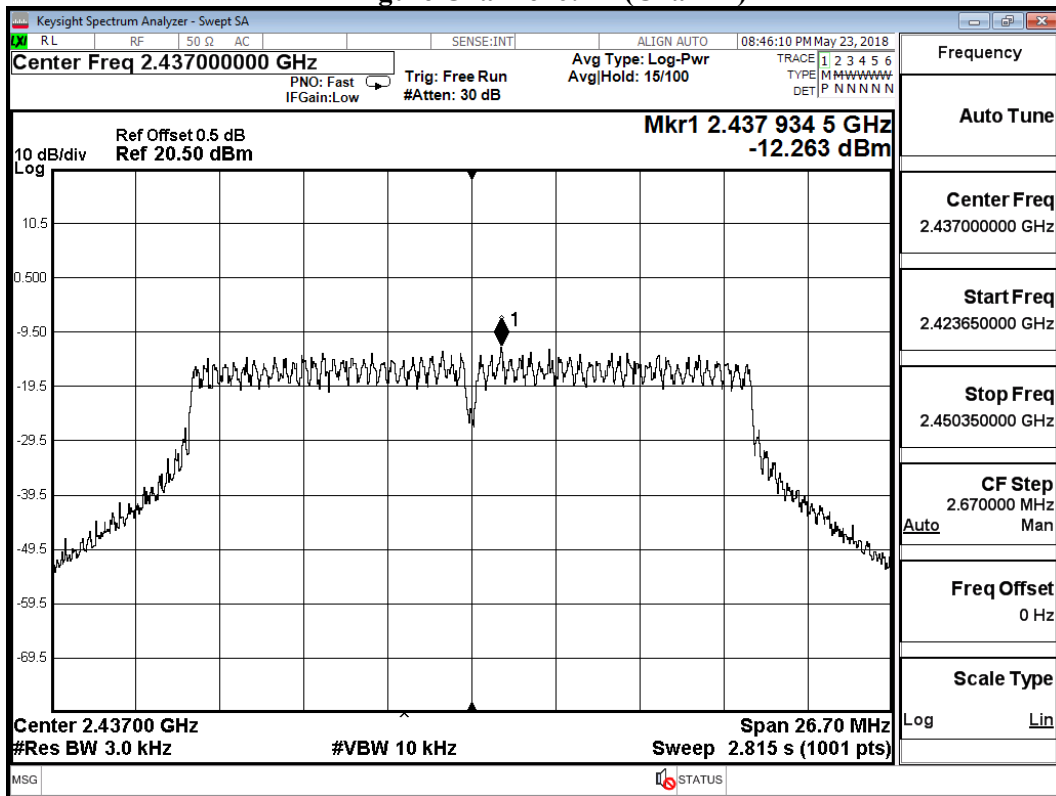


Figure Channel 6: (Chain C)

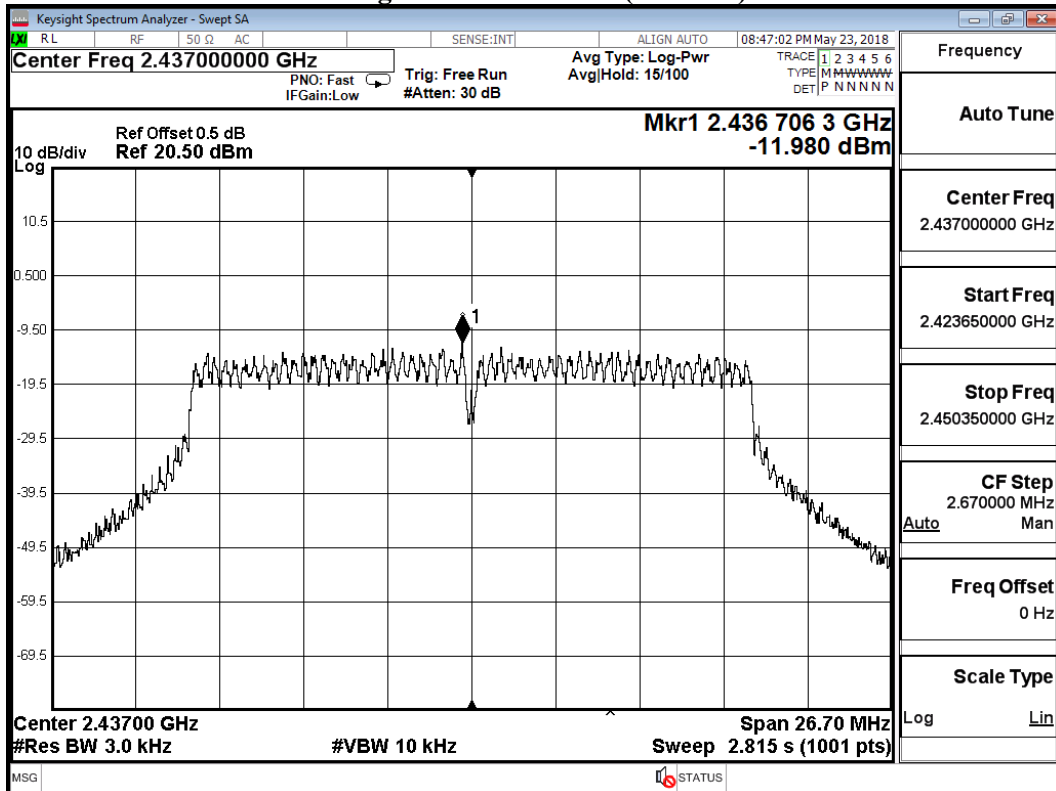
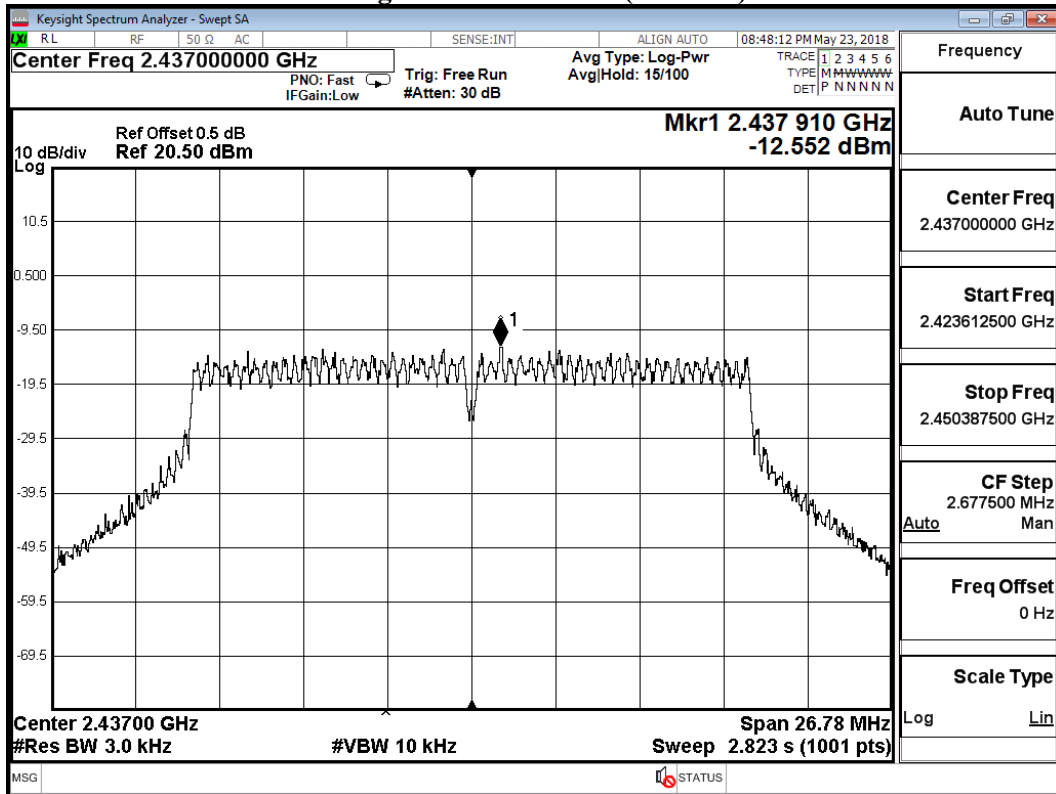


Figure Channel 6: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-20BW_28.8Mbps) (2462MHz) (Antenna No.18)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-11.822	-5.801	≤ 6dBm	Pass
B	-12.653	-6.632	≤ 6dBm	Pass
C	-11.826	-5.805	≤ 6dBm	Pass
D	-12.256	-6.235	≤ 6dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note:Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 11: (Chain A)

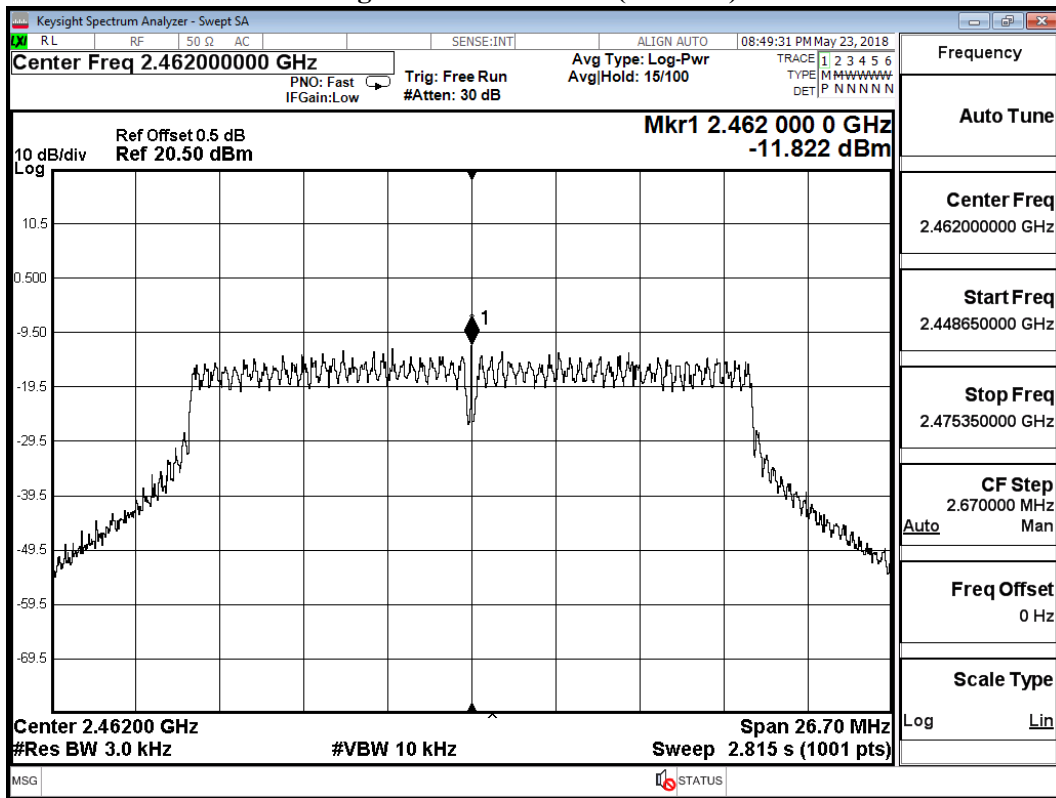


Figure Channel 11: (Chain B)

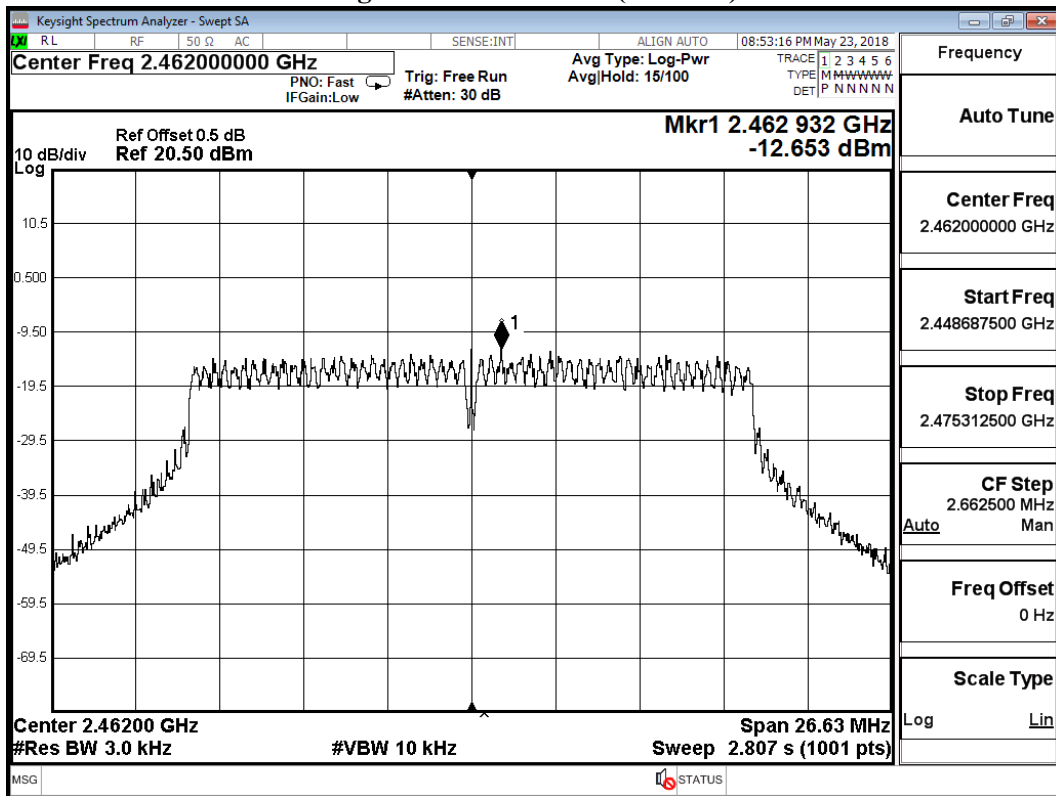


Figure Channel 11: (Chain C)

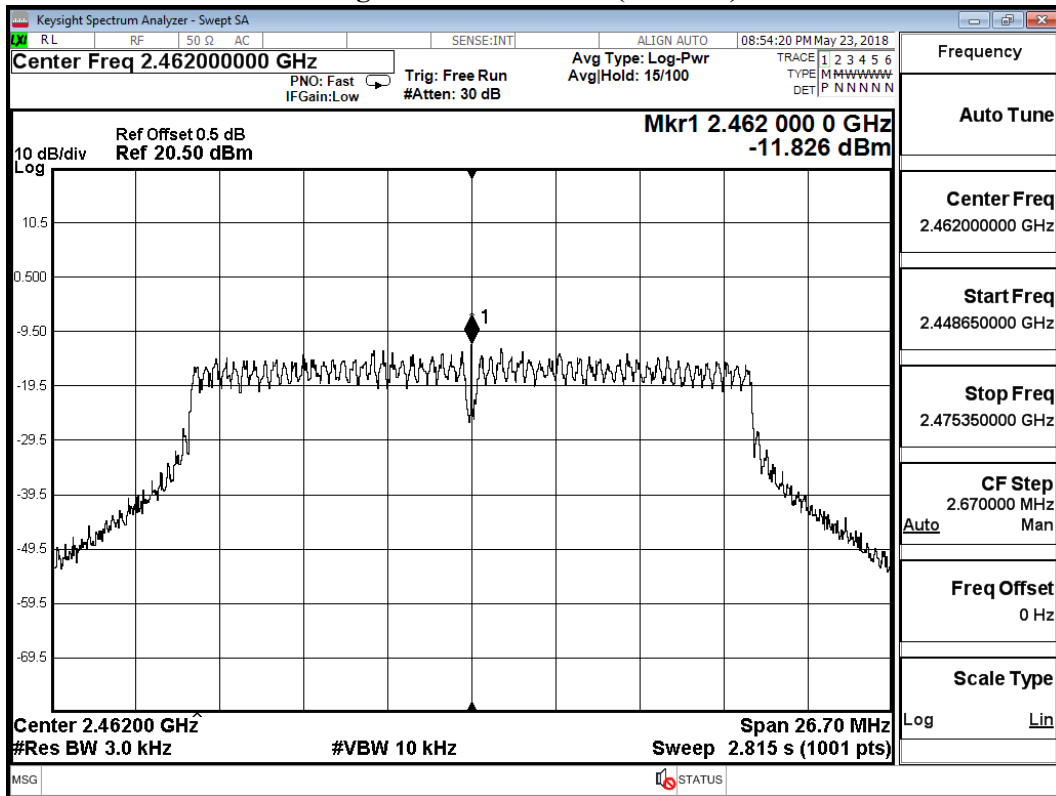
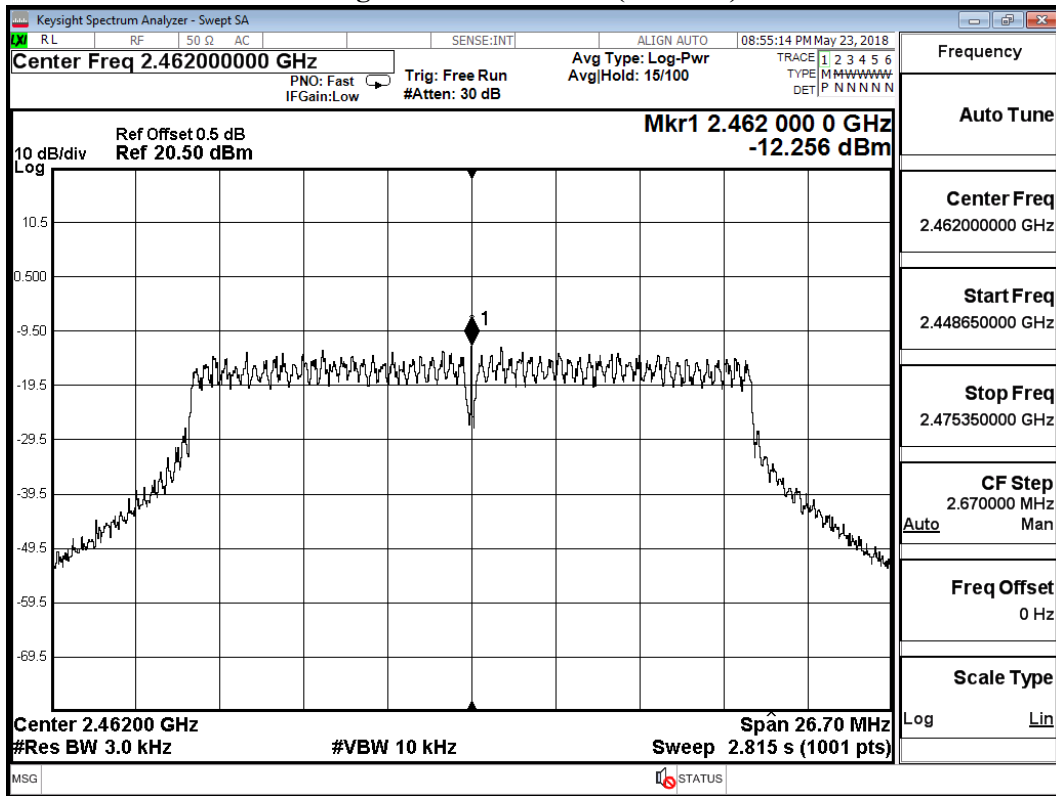


Figure Channel 11: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2422MHz) (Antenna No.18)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm) ¹	Limit	Result
A	-16.936	-10.915	≤ 6dBm	Pass
B	-16.801	-10.780	≤ 6dBm	Pass
C	-16.928	-10.907	≤ 6dBm	Pass
D	-16.879	-10.858	≤ 6dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 3: (Chain A)

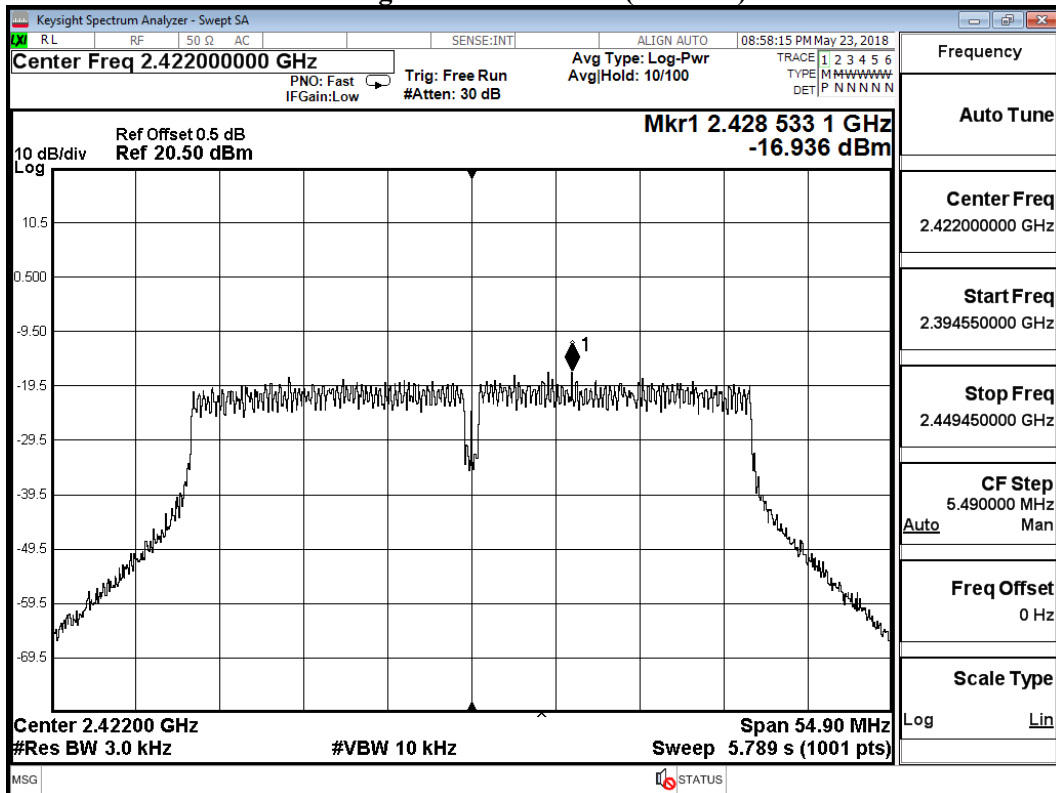


Figure Channel 3: (Chain B)

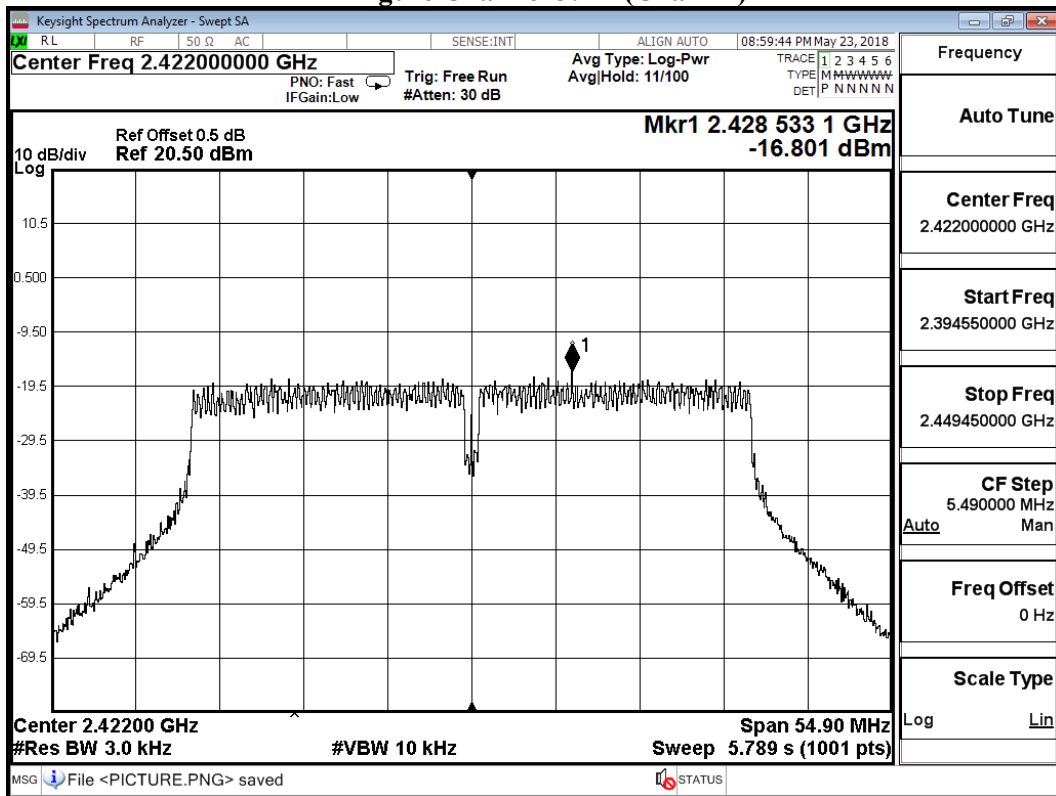


Figure Channel 3: (Chain C)

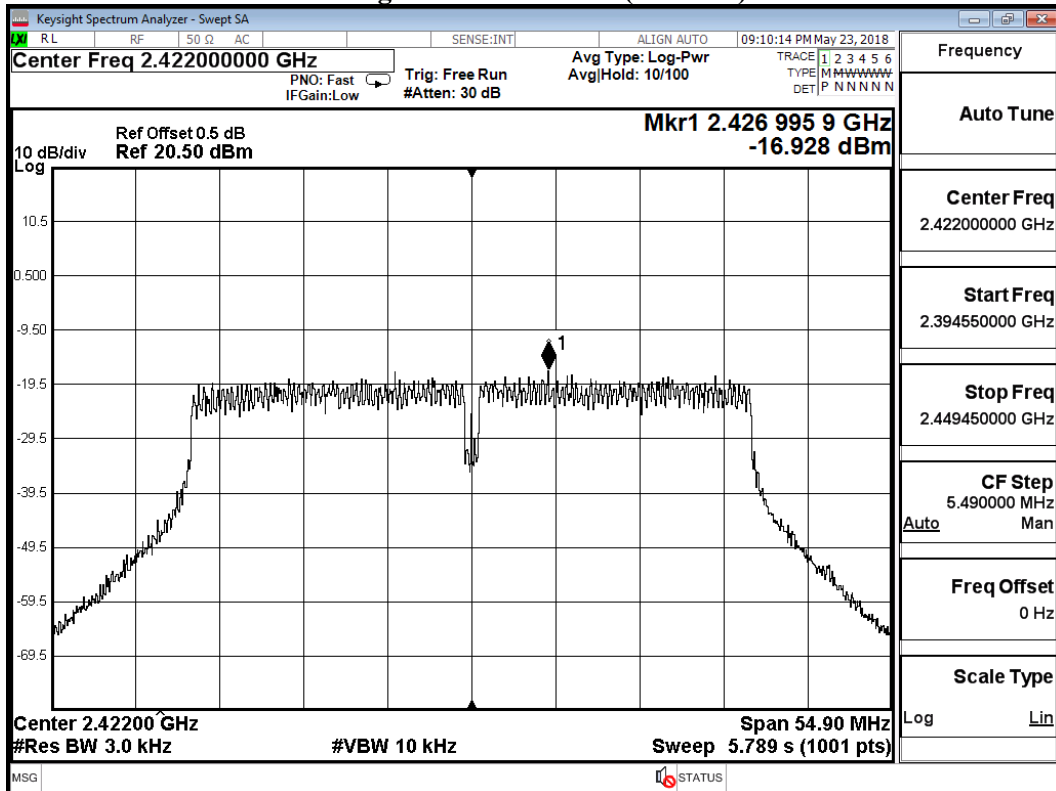
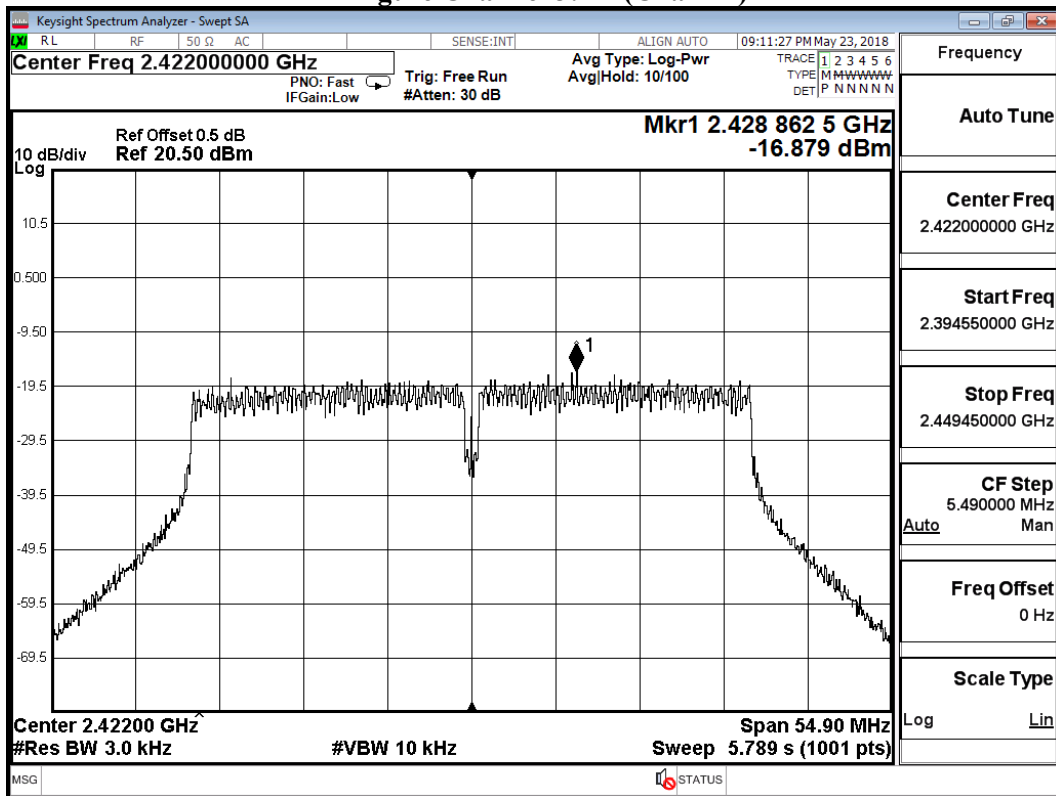


Figure Channel 3: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2437MHz) (Antenna No.18)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-17.346	-11.325	≤ 6dBm	Pass
B	-17.053	-11.032	≤ 6dBm	Pass
C	-17.049	-11.028	≤ 6dBm	Pass
D	-16.982	-10.961	≤ 6dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note:Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6

dB. Figure Channel 6: (Chain A)

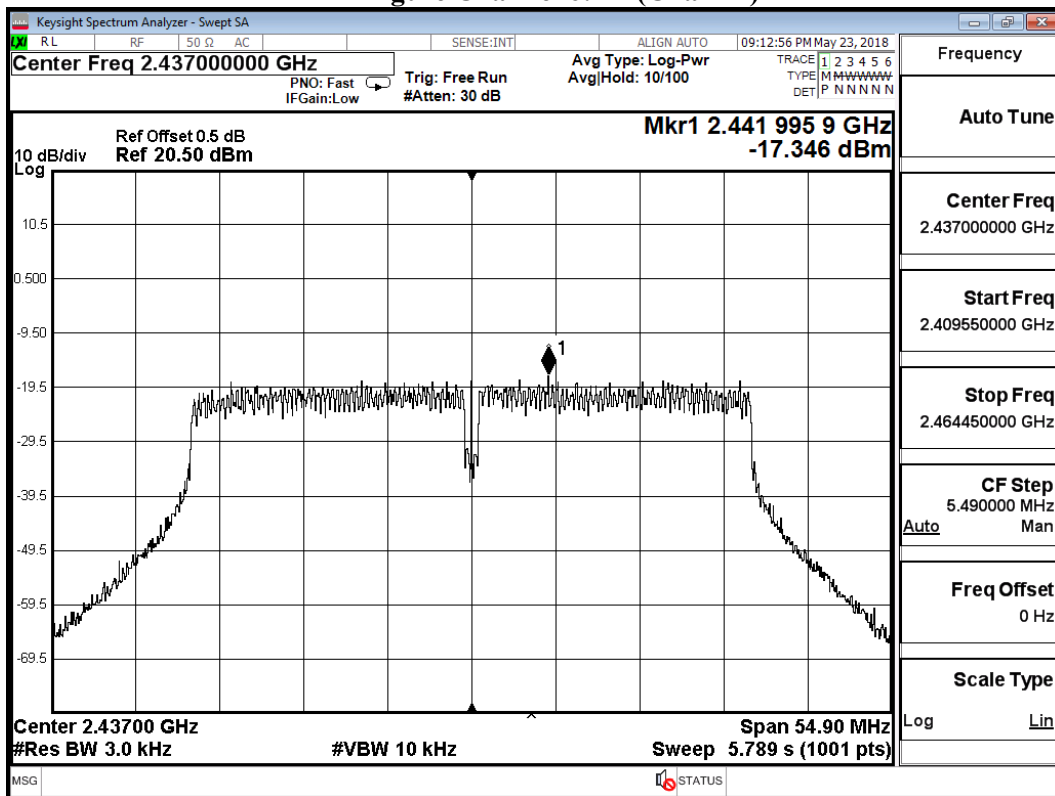


Figure Channel 6: (Chain B)

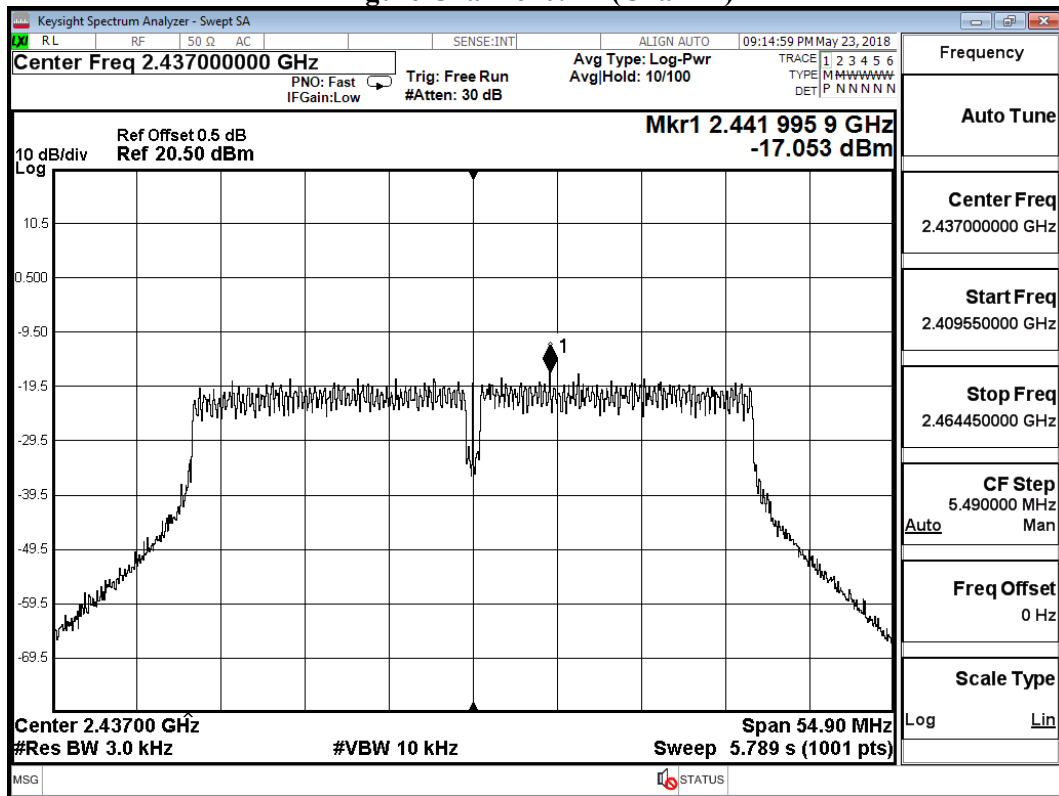


Figure Channel 6: (Chain C)

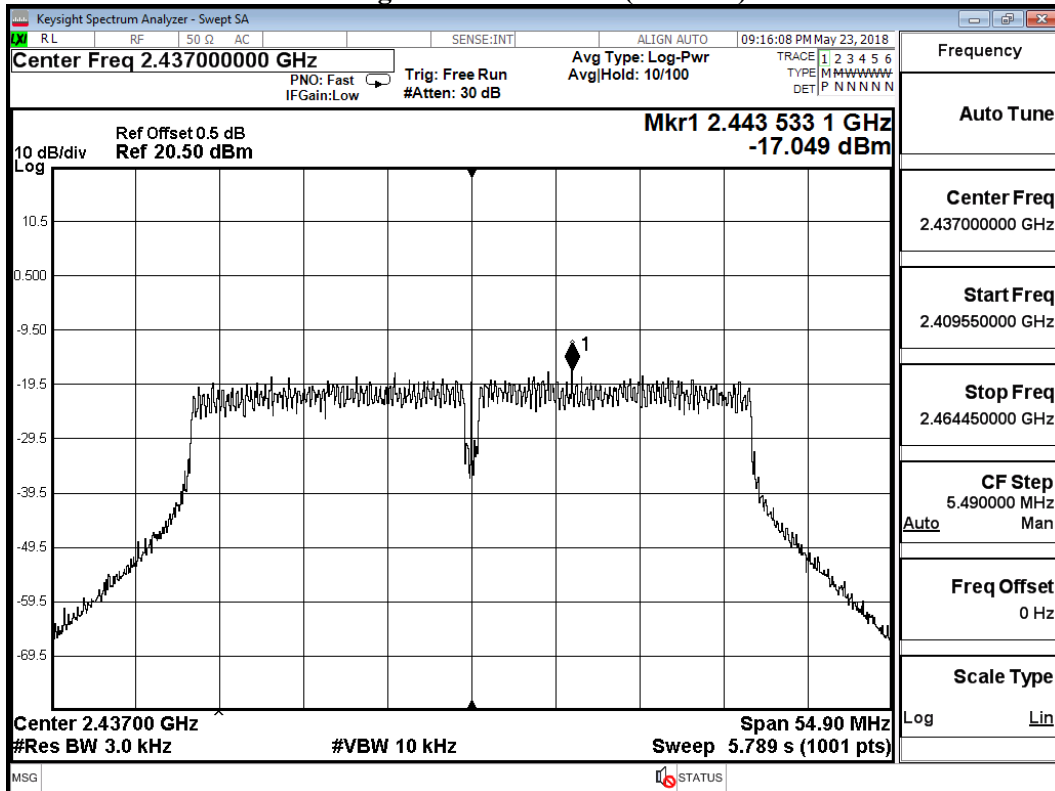
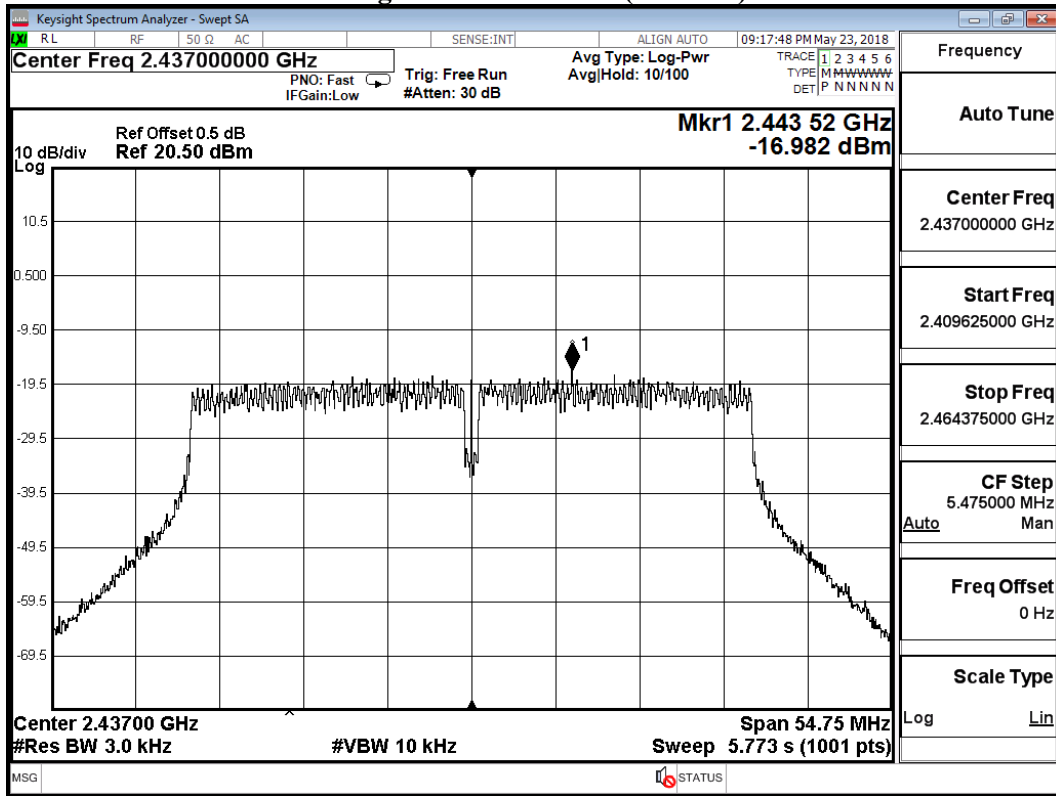


Figure Channel 6: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2452MHz) (Antenna No.18)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-17.760	-11.739	≤ 6dBm	Pass
B	-17.741	-11.720	≤ 6dBm	Pass
C	-18.176	-12.155	≤ 6dBm	Pass
D	-17.884	-11.863	≤ 6dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note:Fixed, point-to-point operations, the peak power spectral density of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Figure Channel 9: (Chain A)

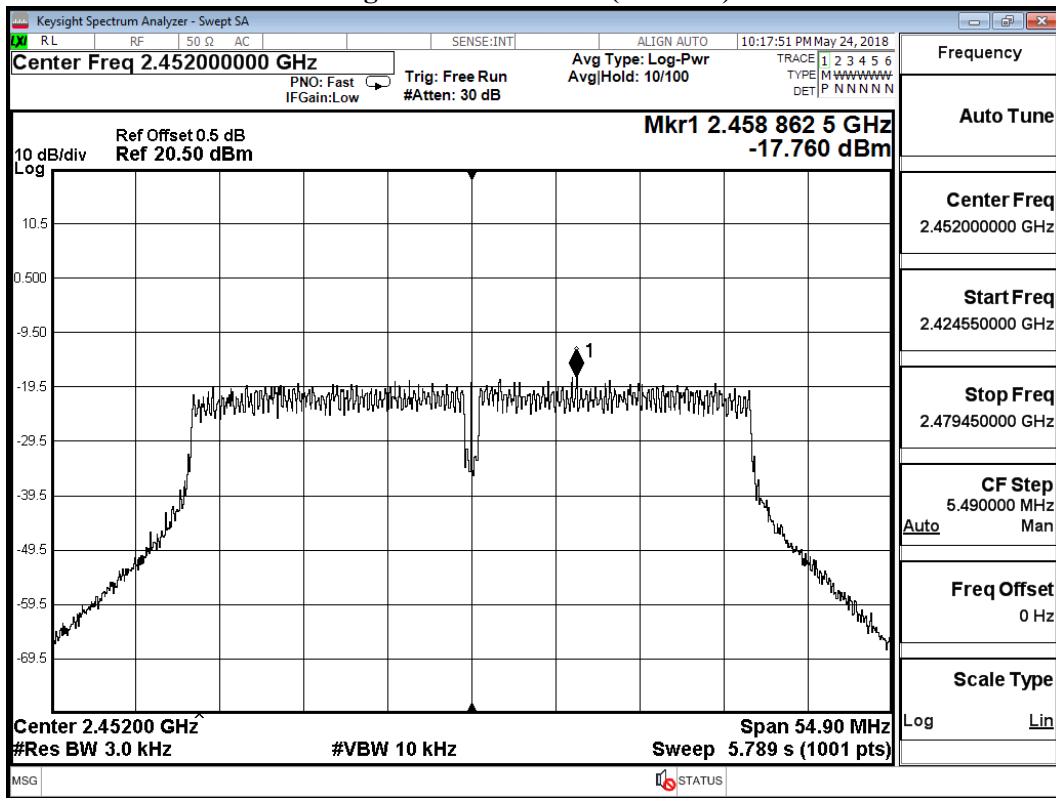


Figure Channel 9: (Chain B)

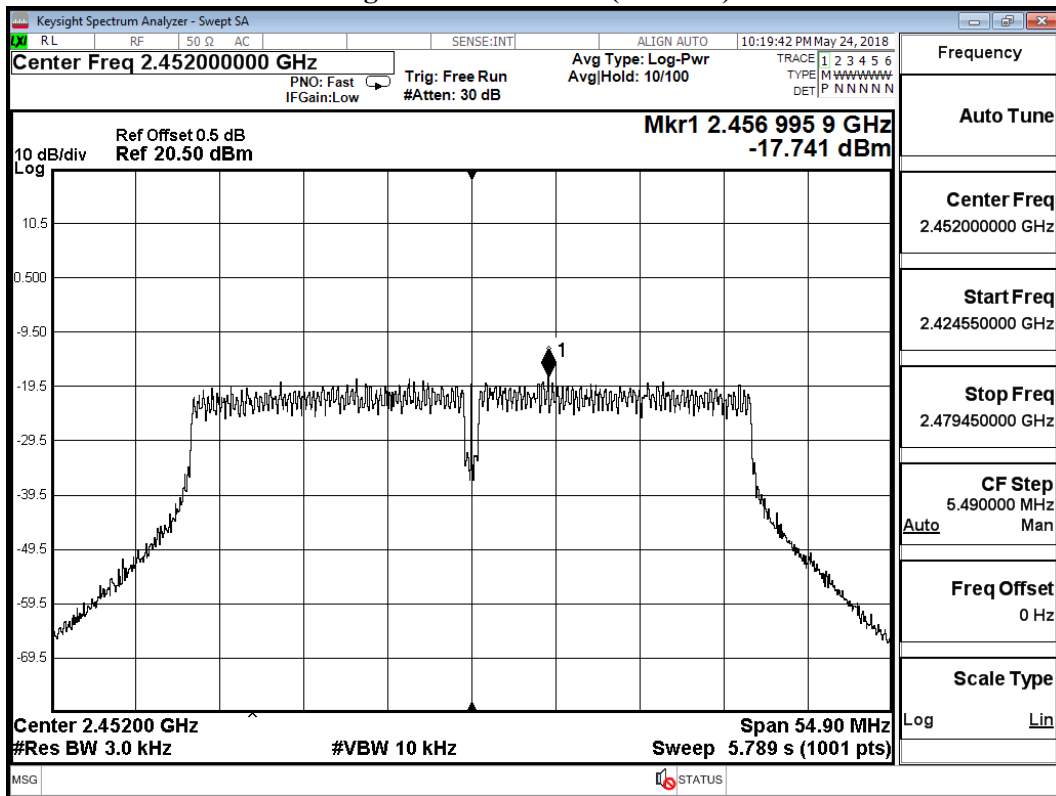


Figure Channel 9: (Chain C)

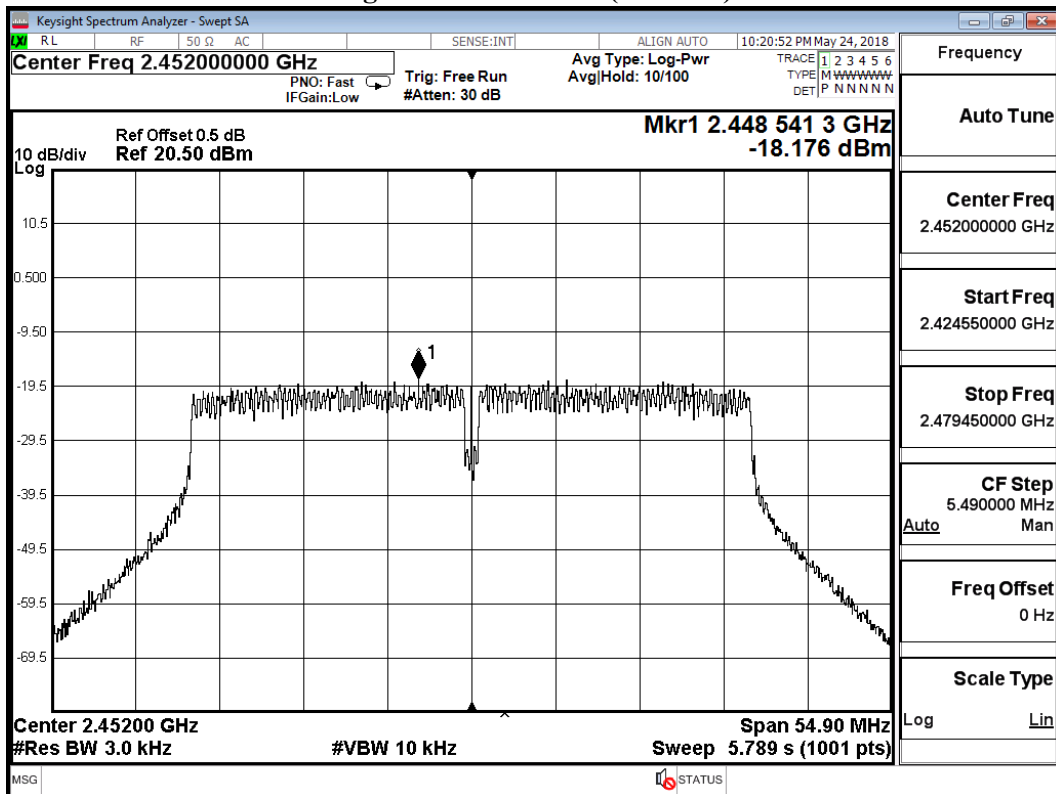
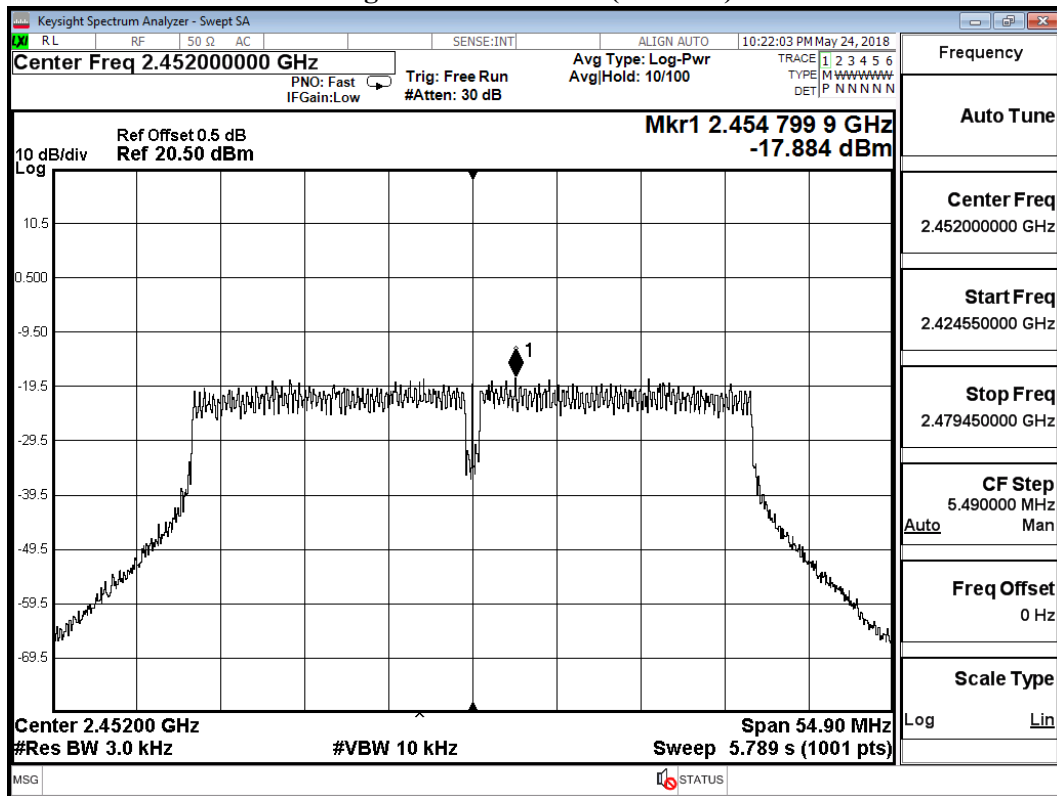


Figure Channel 9: (Chain D)

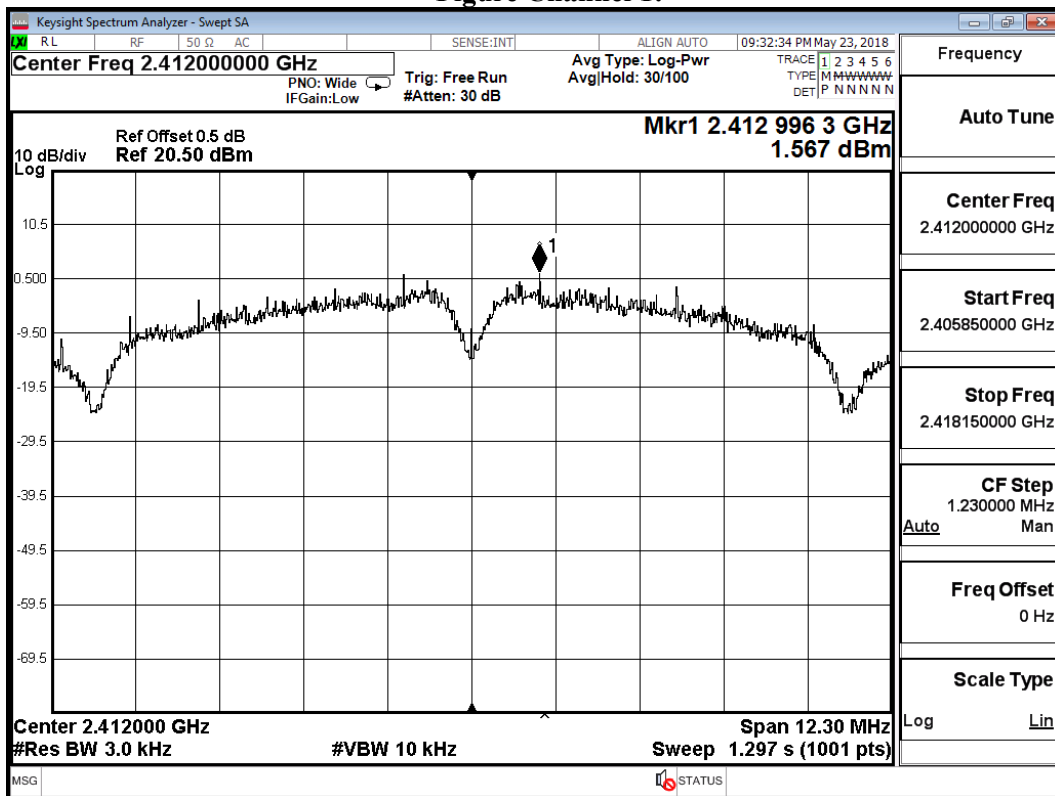


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	1.567	≤ 5.8dBm	Pass

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 1:

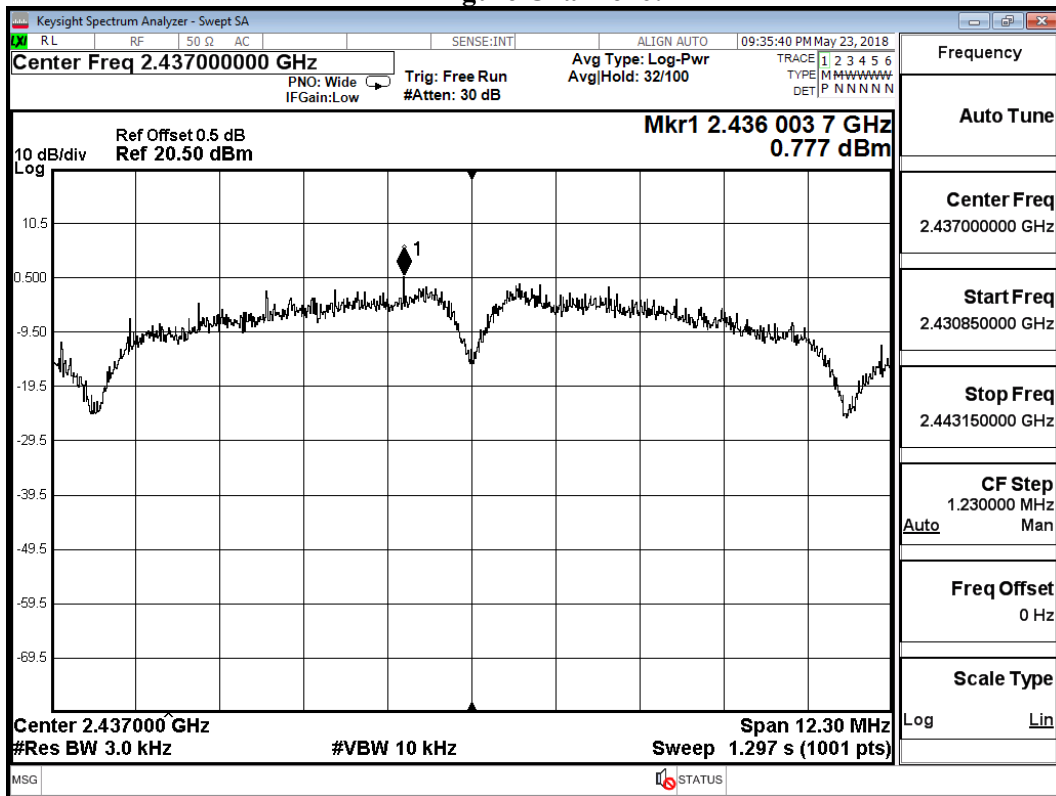


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
6	2437	0.777	≤ 5.8dBm	Pass

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 6:

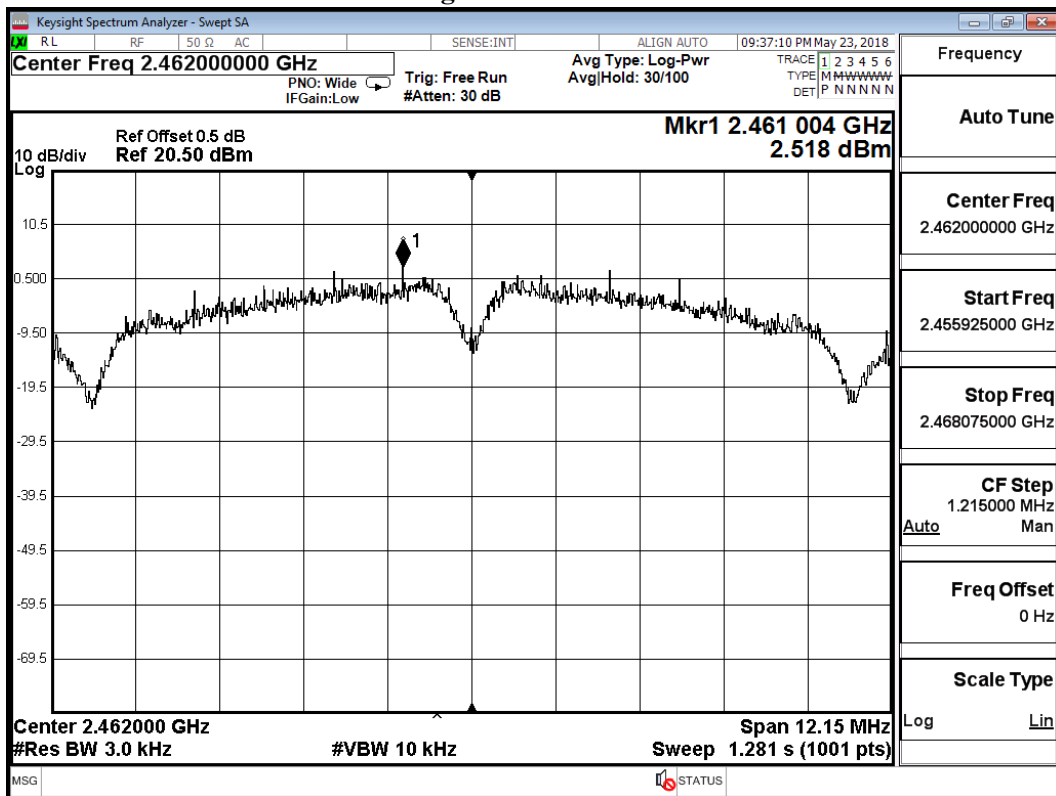


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
11	2462	2.518	≤ 5.8dBm	Pass

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 11:

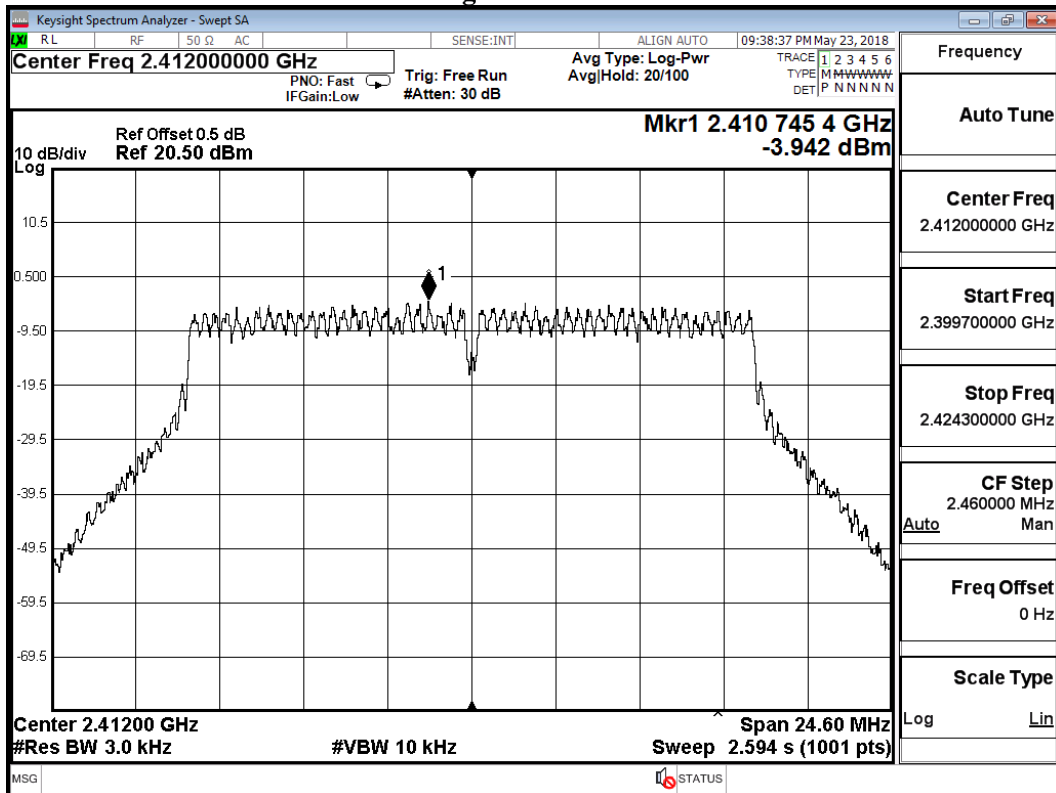


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-3.942	≤ 5.8dBm	Pass

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 1:

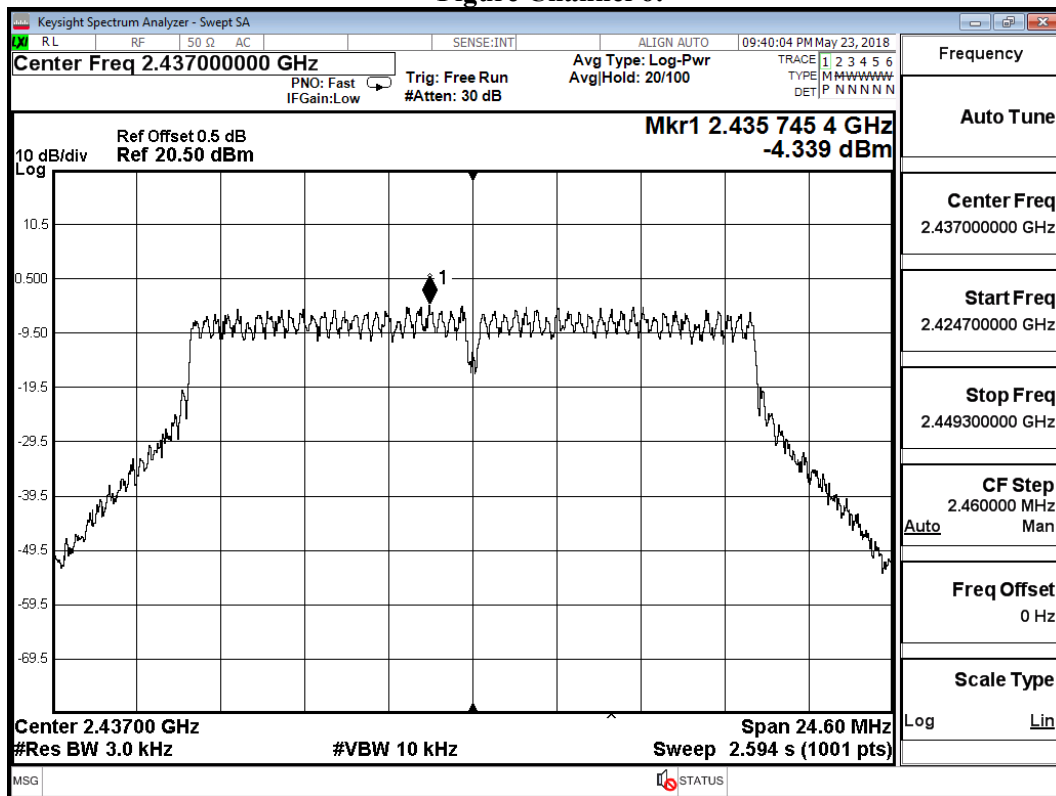


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
6	2437	-4.339	≤ 5.8dBm	Pass

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 6:

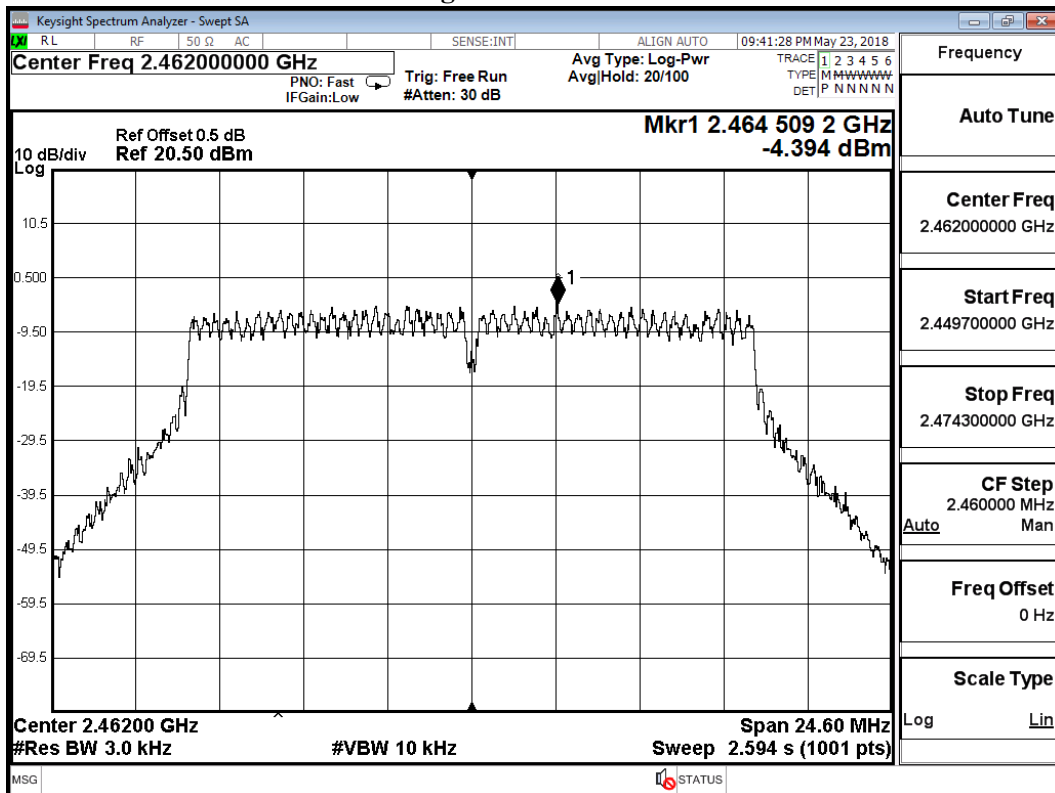


Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz) (Antenna No.19)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
11	2462	-4.394	≤ 5.8dBm	Pass

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 11:



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-20BW_28.8Mbps) (2412MHz) (Antenna No.19)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-12.009	-5.988	≤ 5.8dBm	Pass
B	-12.034	-6.013	≤ 5.8dBm	Pass
C	-12.465	-6.444	≤ 5.8dBm	Pass
D	-12.386	-6.365	≤ 5.8dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 1: (Chain A)

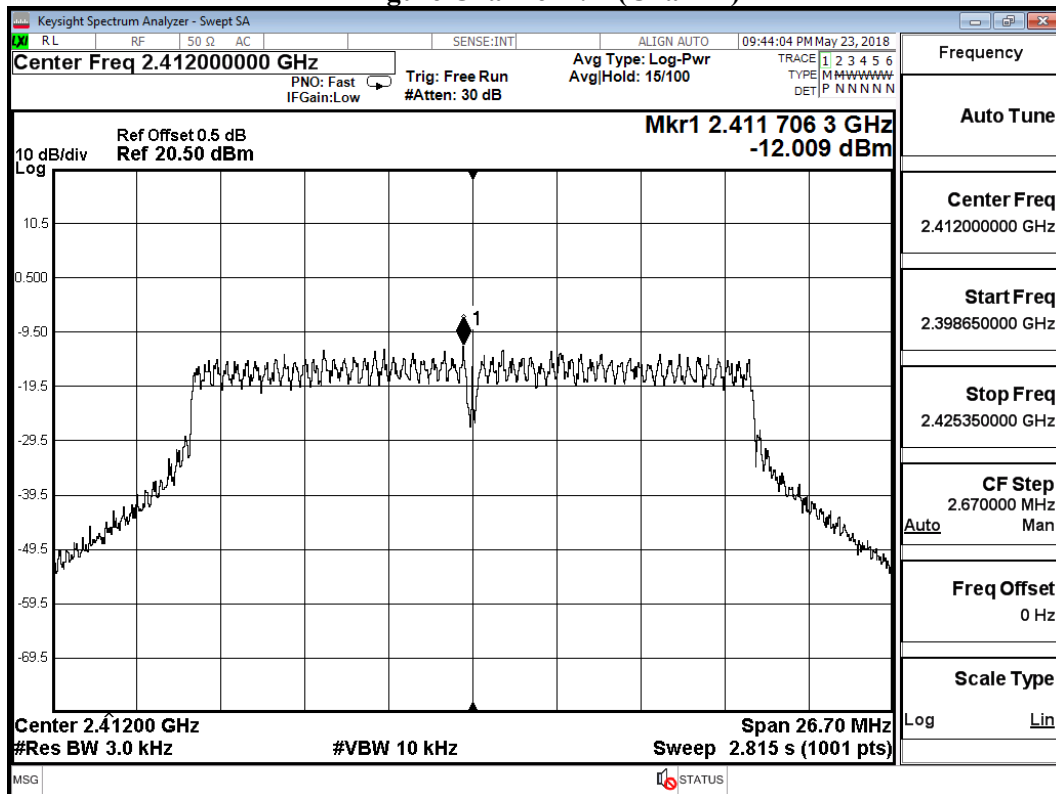


Figure Channel 1: (Chain B)

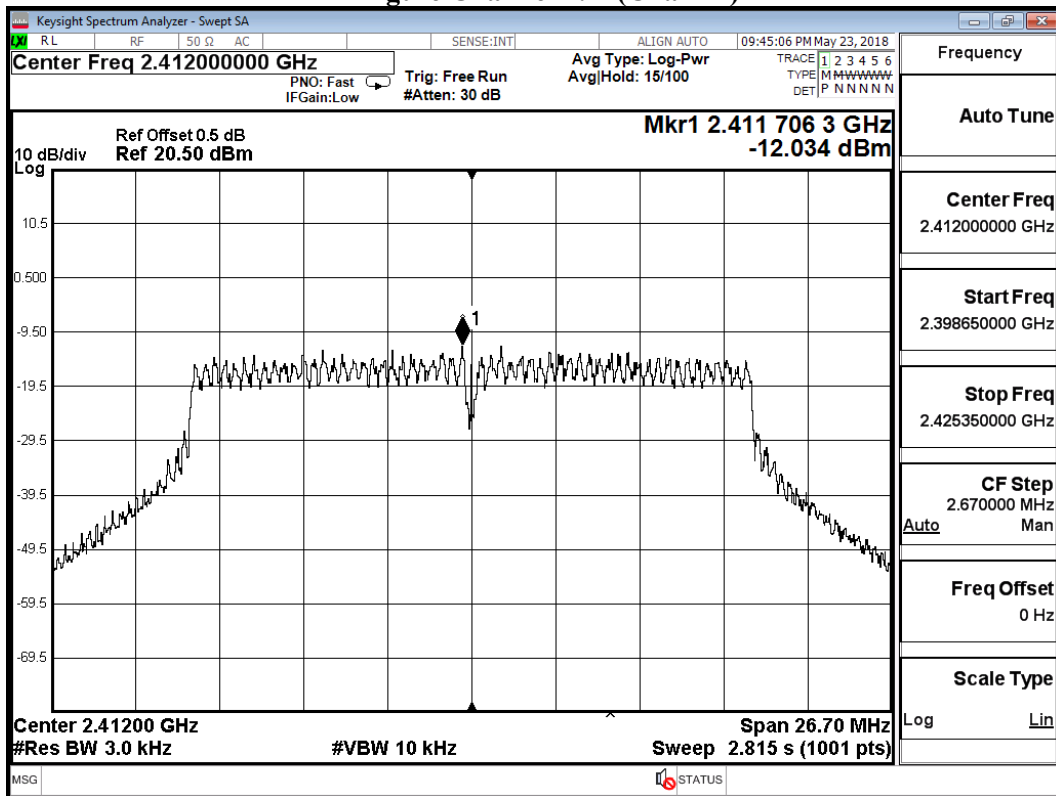


Figure Channel 1: (Chain C)

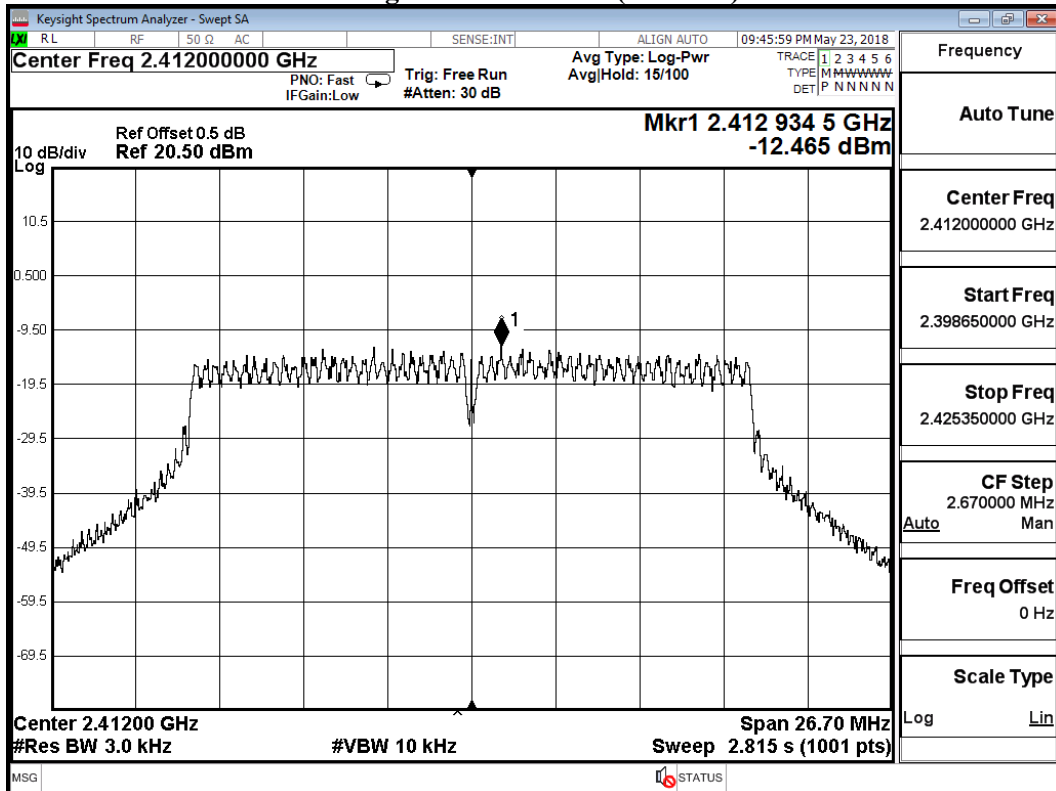
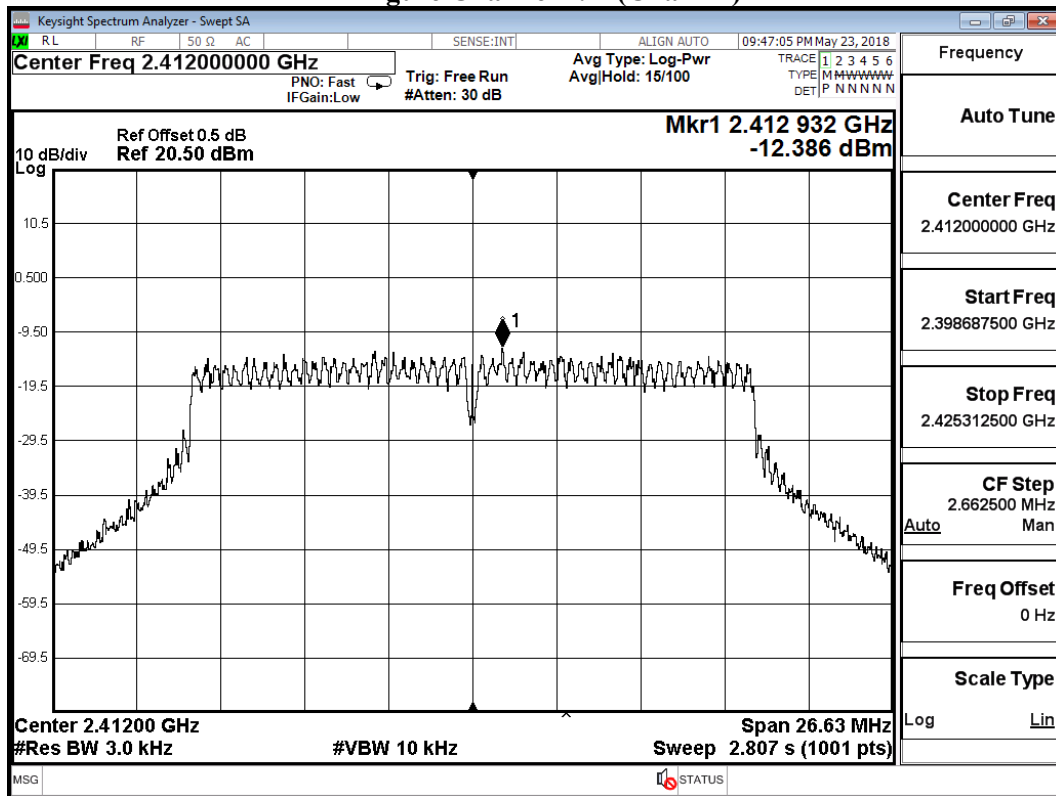


Figure Channel 1: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 3: Transmit (802.11n-20BW_28.8Mbps) (2437MHz) (Antenna No.19)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-12.668	-6.647	≤ 5.8dBm	Pass
B	-12.022	-6.001	≤ 5.8dBm	Pass
C	-12.609	-6.588	≤ 5.8dBm	Pass
D	-13.058	-7.037	≤ 5.8dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 6: (Chain A)

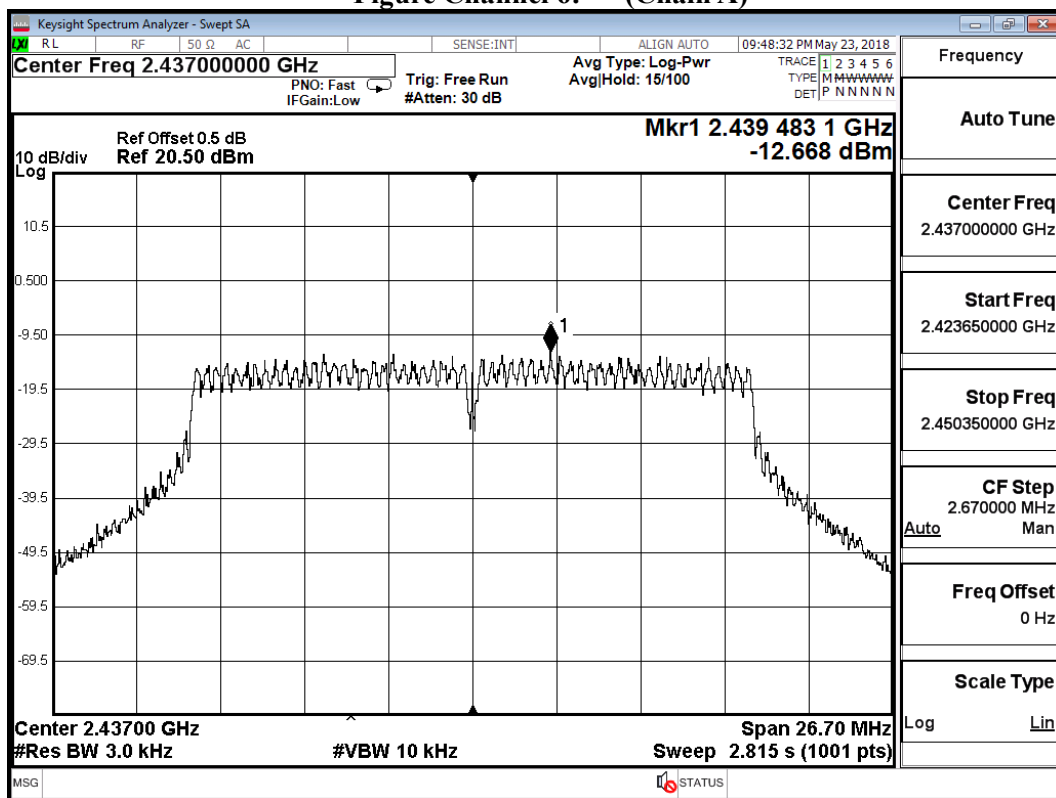


Figure Channel 6: (Chain B)

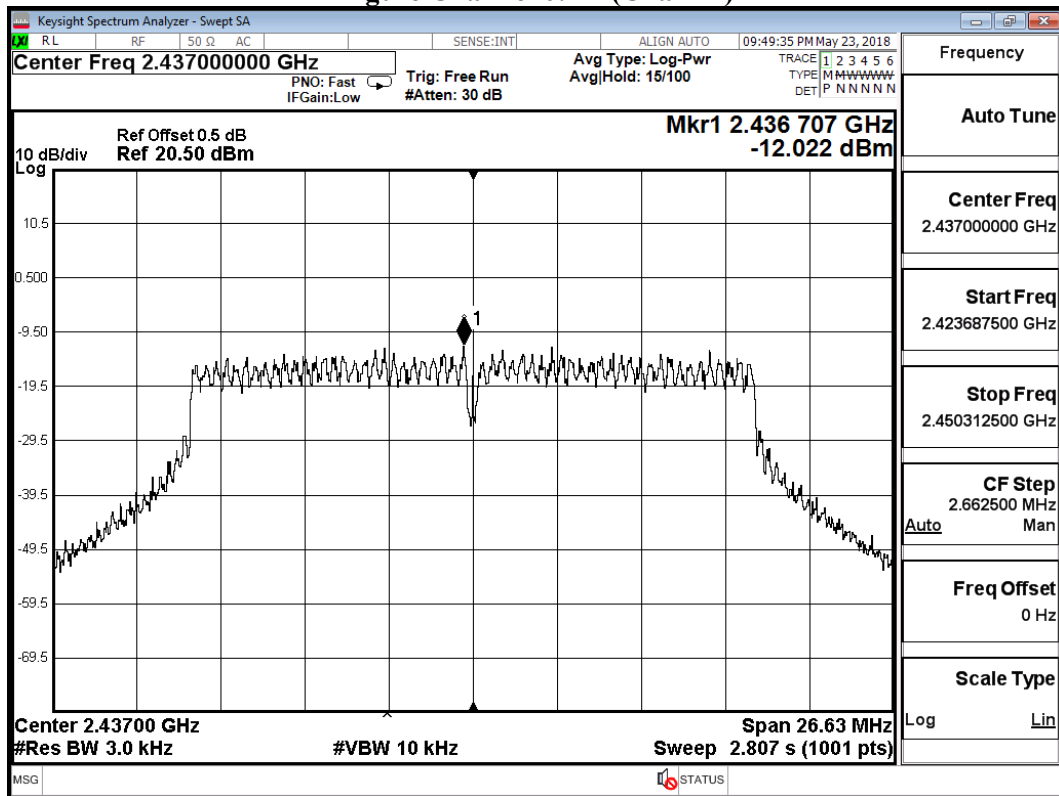


Figure Channel 6: (Chain C)

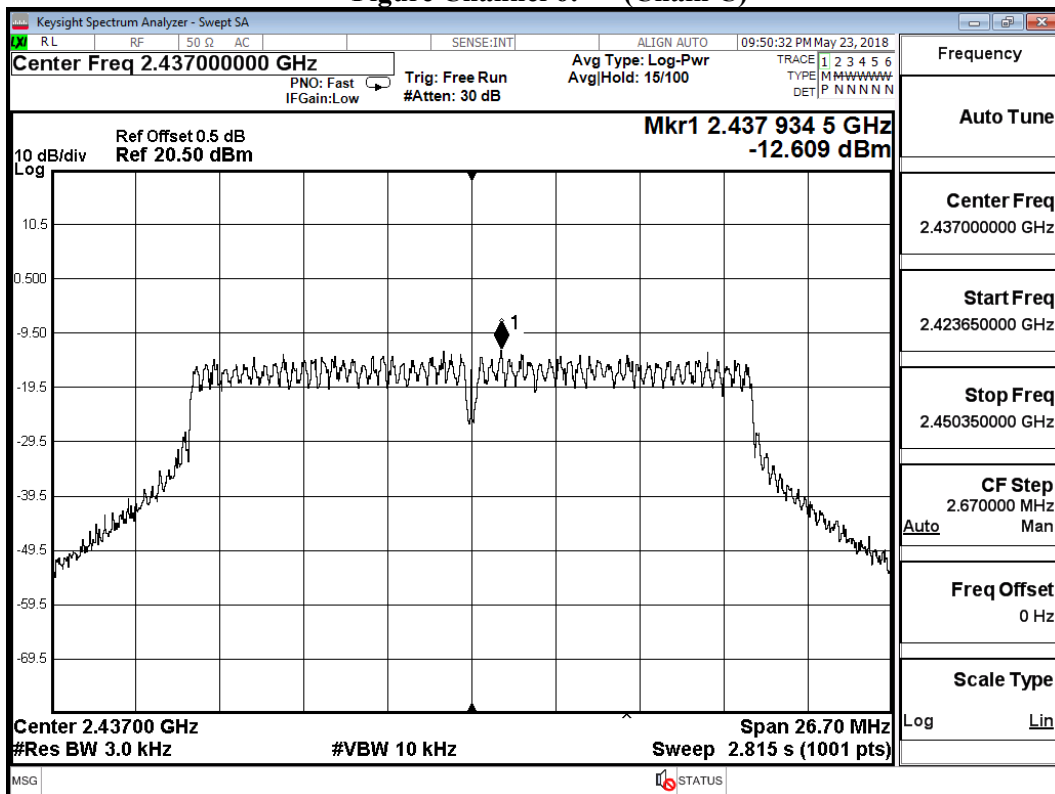
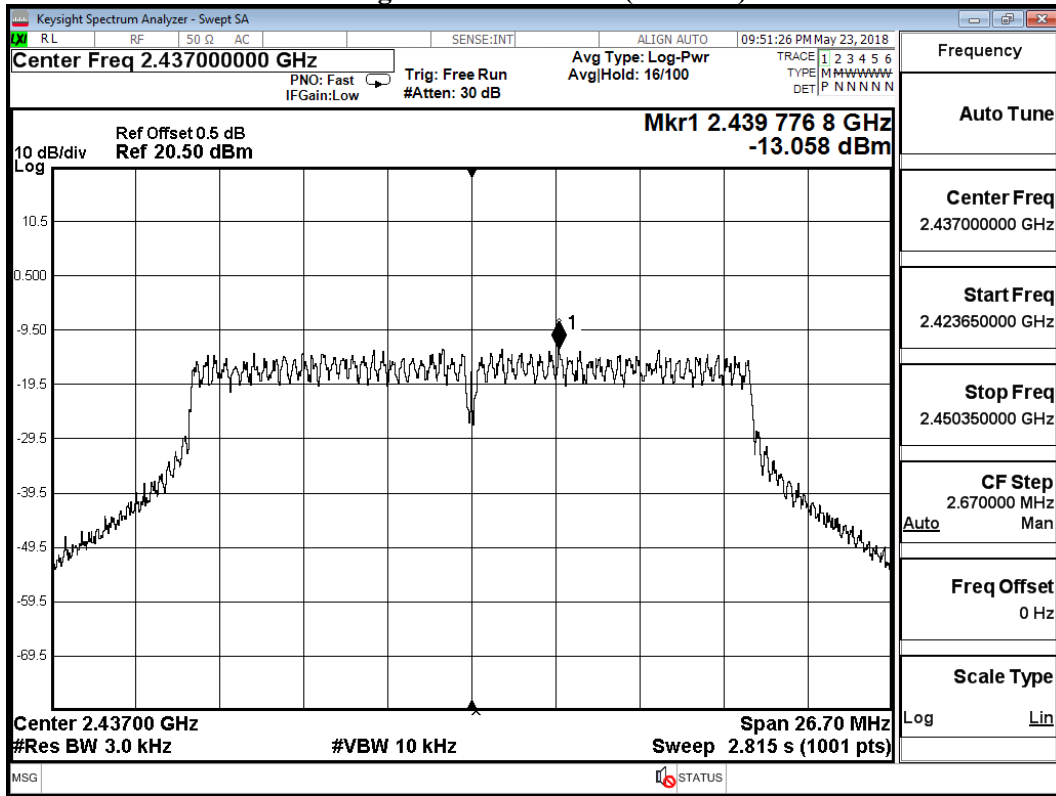


Figure Channel 6: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-20BW_28.8Mbps) (2462MHz) (Antenna No.19)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-12.275	-6.254	≤ 5.8dBm	Pass
B	-13.294	-7.273	≤ 5.8dBm	Pass
C	-13.044	-7.023	≤ 5.8dBm	Pass
D	-13.334	-7.313	≤ 5.8dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 11: (Chain A)

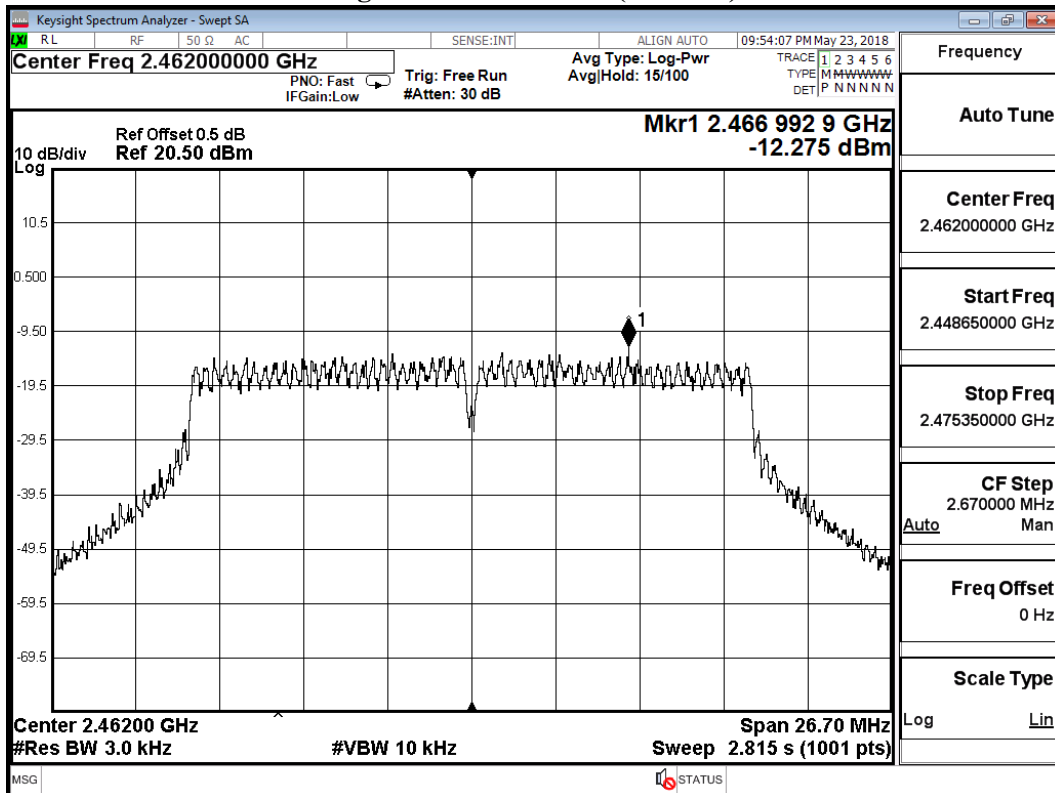


Figure Channel 11: (Chain B)

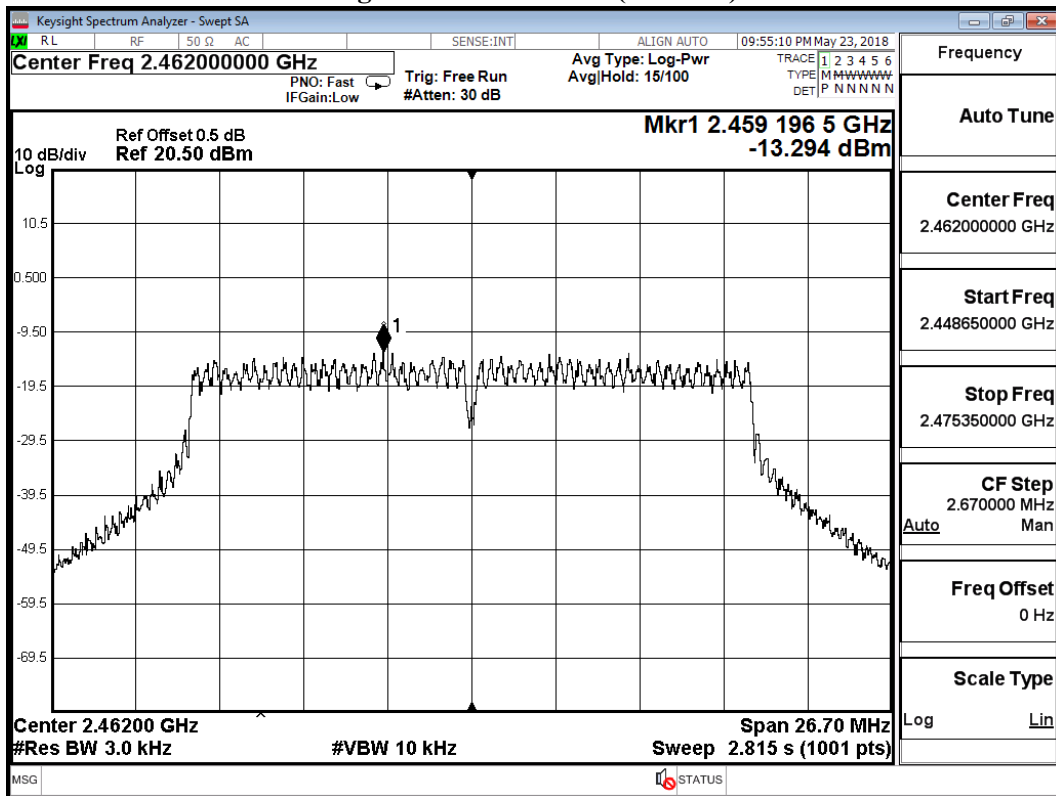


Figure Channel 11: (Chain C)

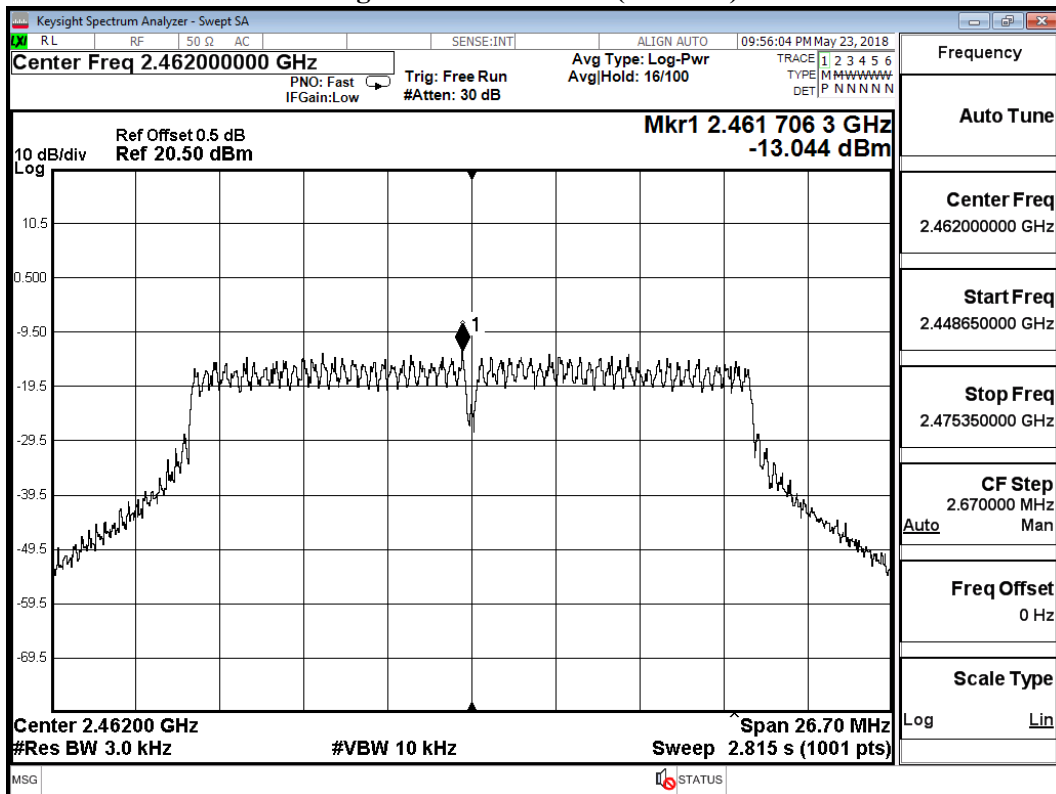


Figure Channel 11: (Chain D)

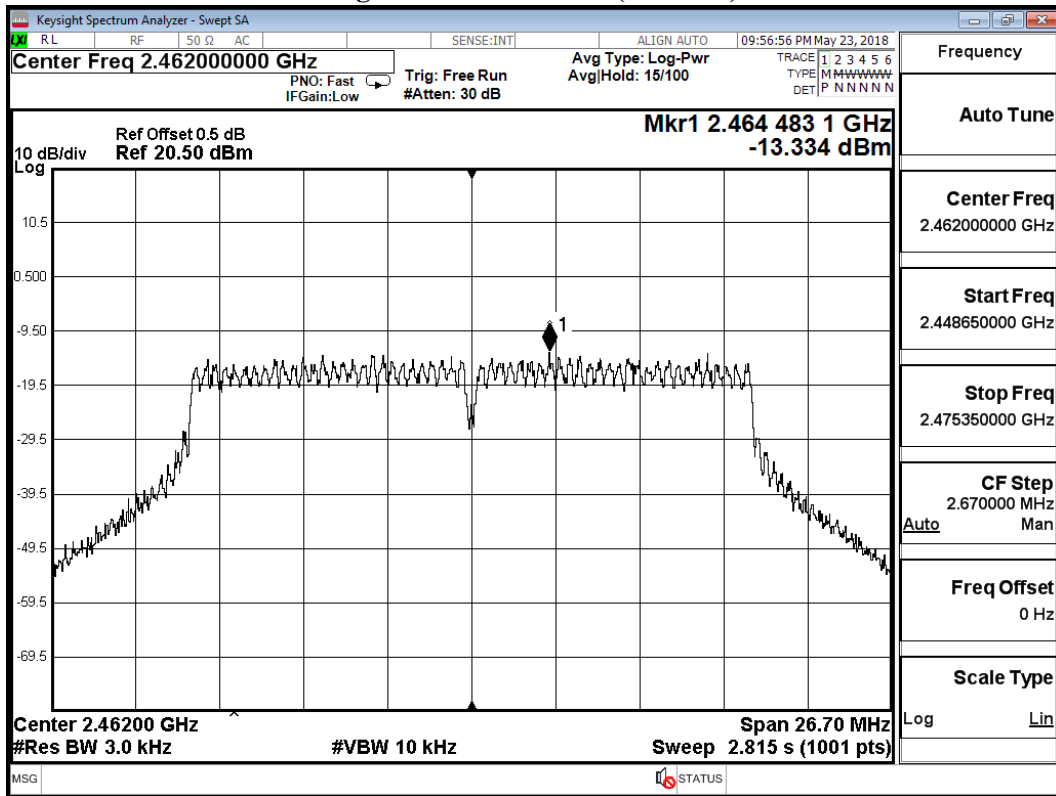


Figure Channel 3: (Chain B)

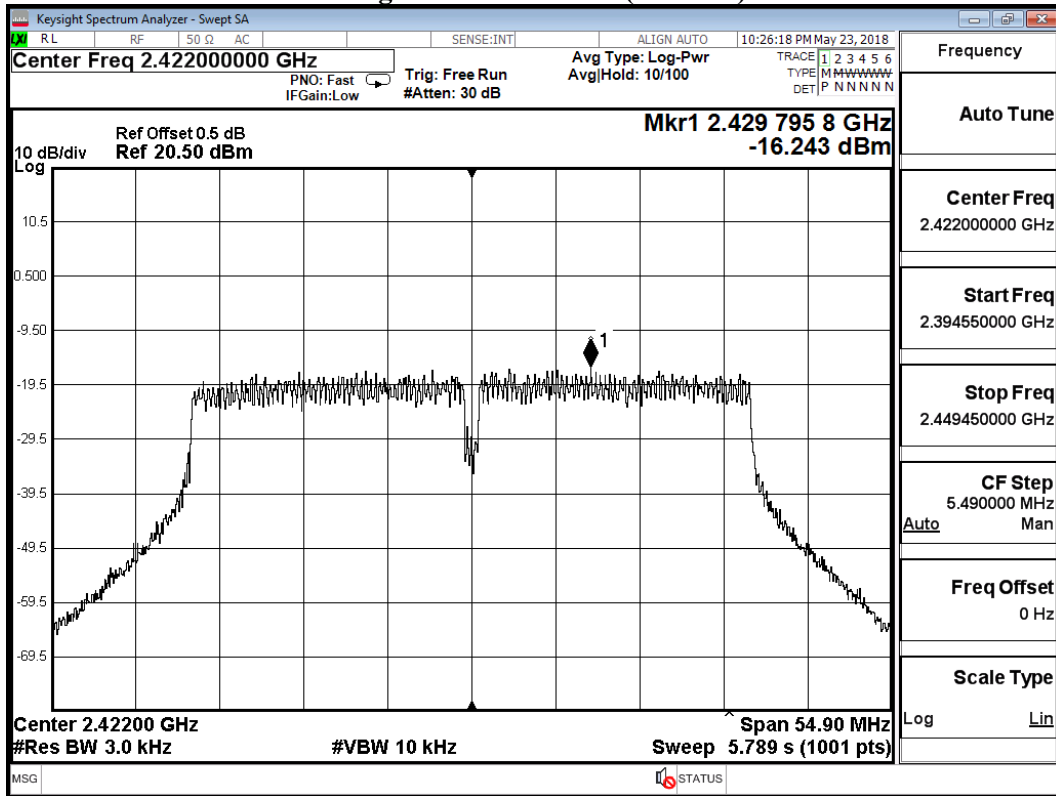


Figure Channel 3: (Chain C)

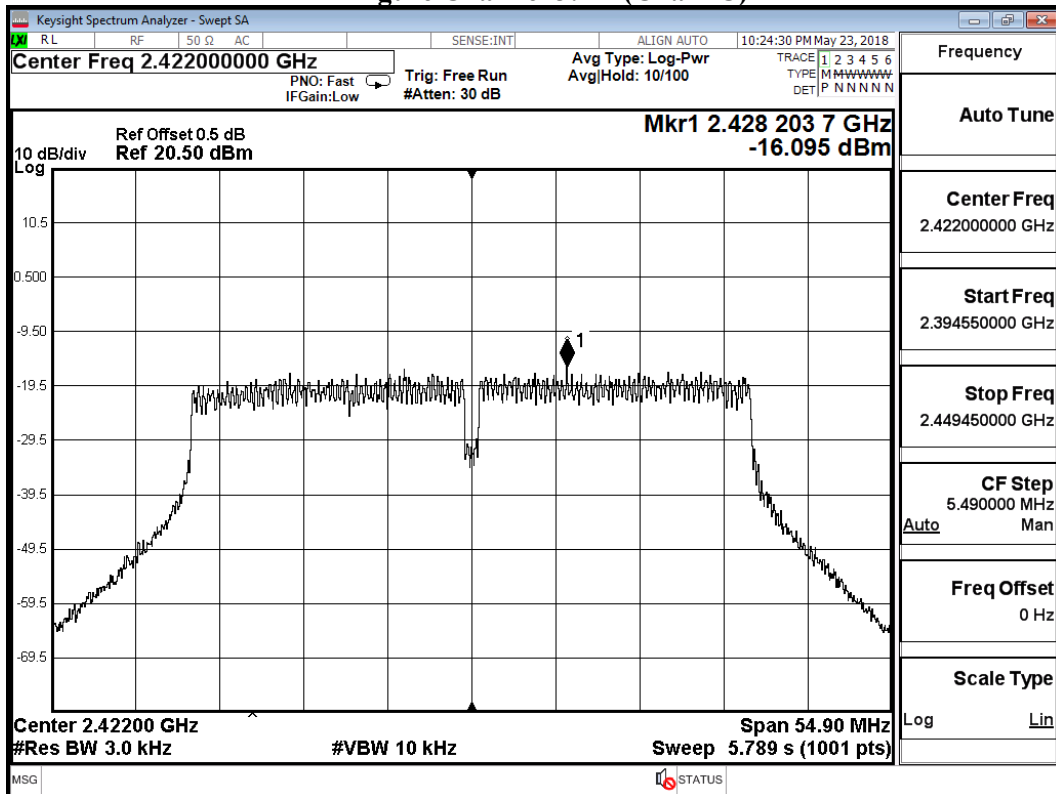
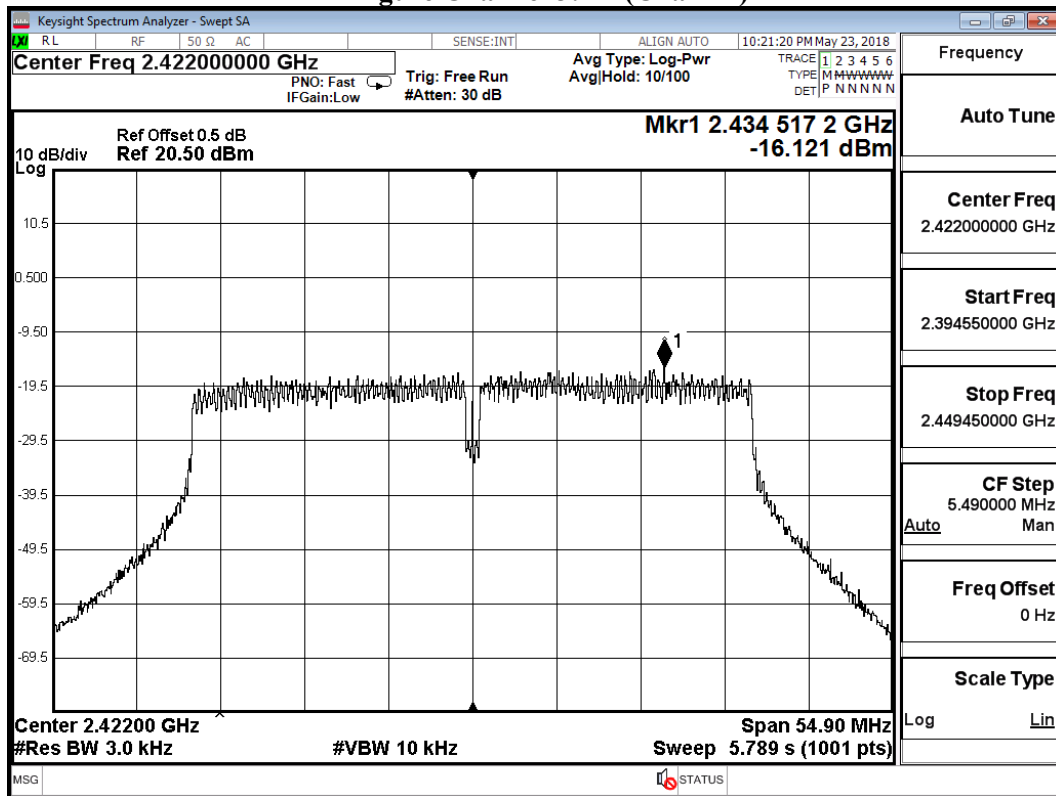


Figure Channel 3: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2437MHz) (Antenna No.19)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-14.633	-8.612	≤ 5.8dBm	Pass
B	-14.553	-8.532	≤ 5.8dBm	Pass
C	-15.200	-9.179	≤ 5.8dBm	Pass
D	-15.909	-9.888	≤ 5.8dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 6: (Chain A)

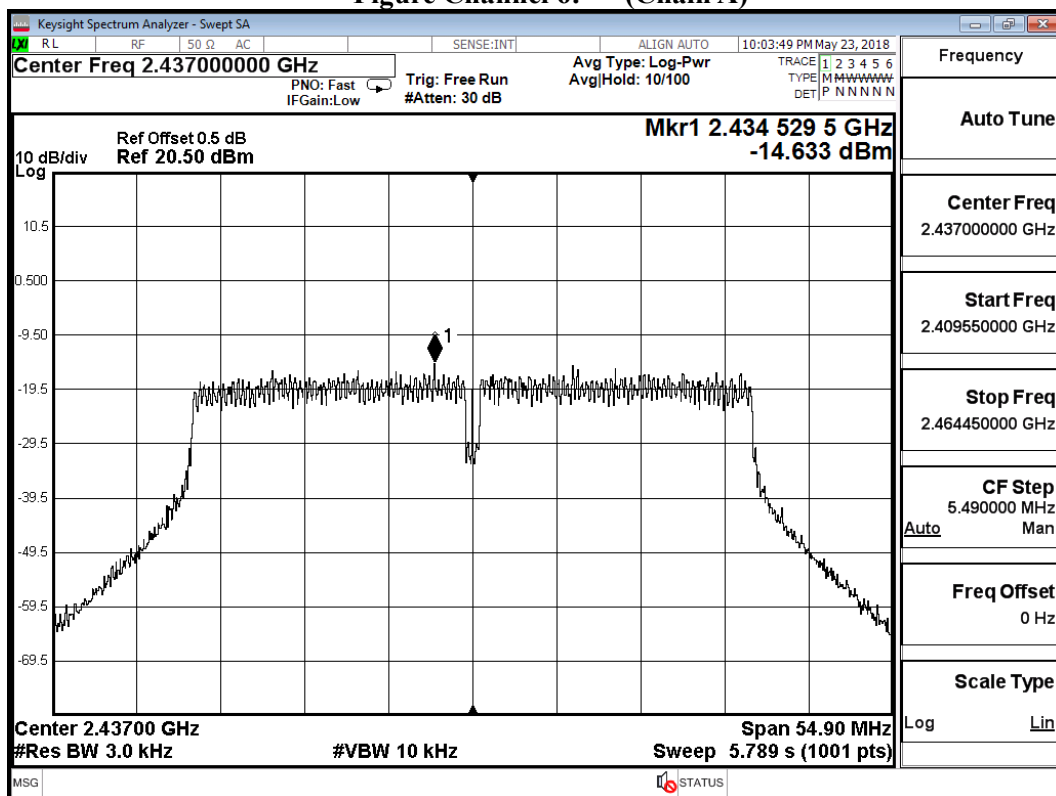


Figure Channel 6: (Chain B)

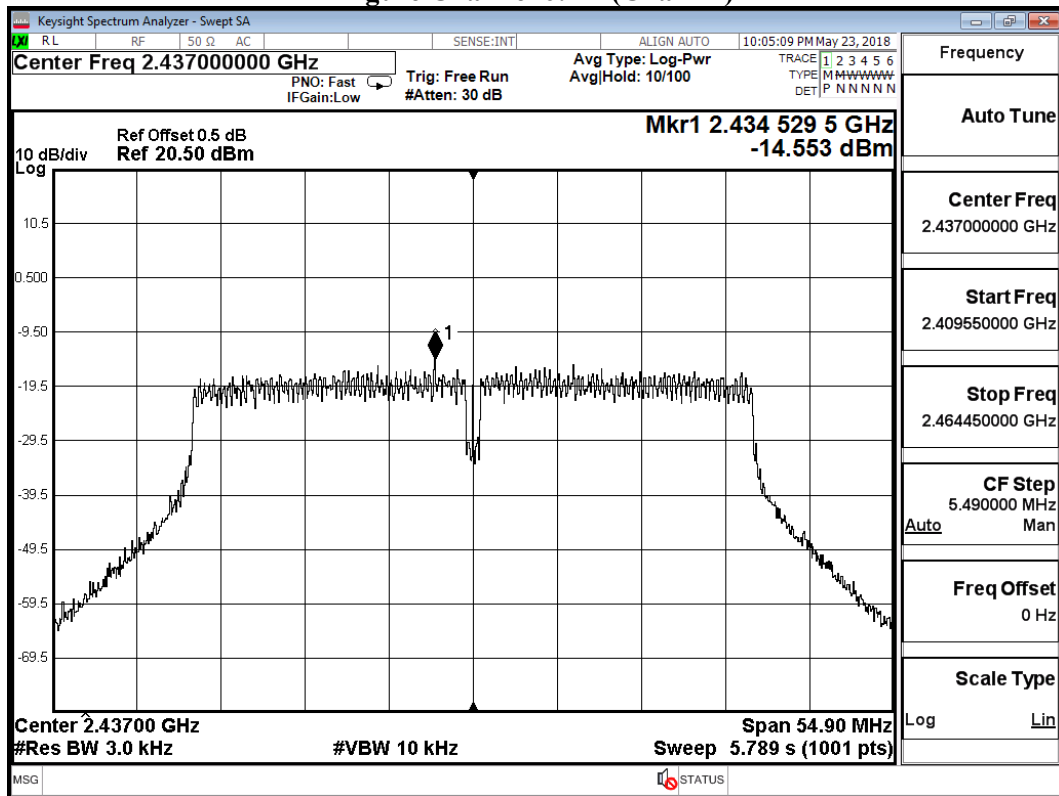


Figure Channel 6: (Chain C)

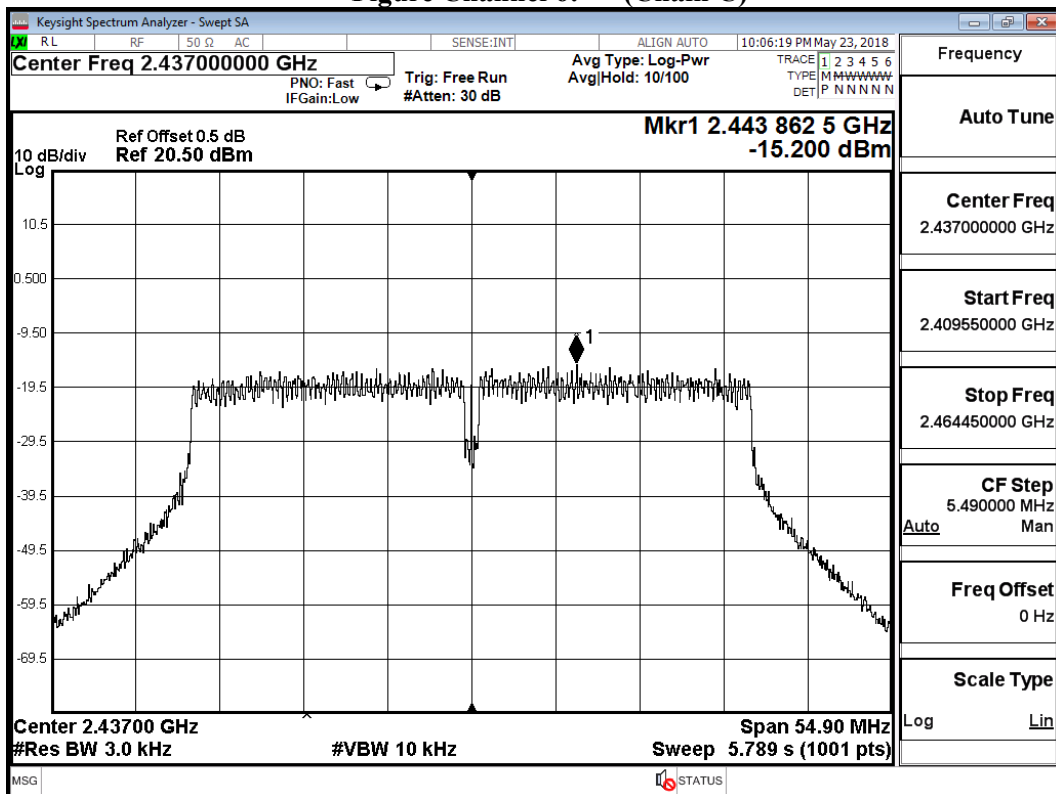
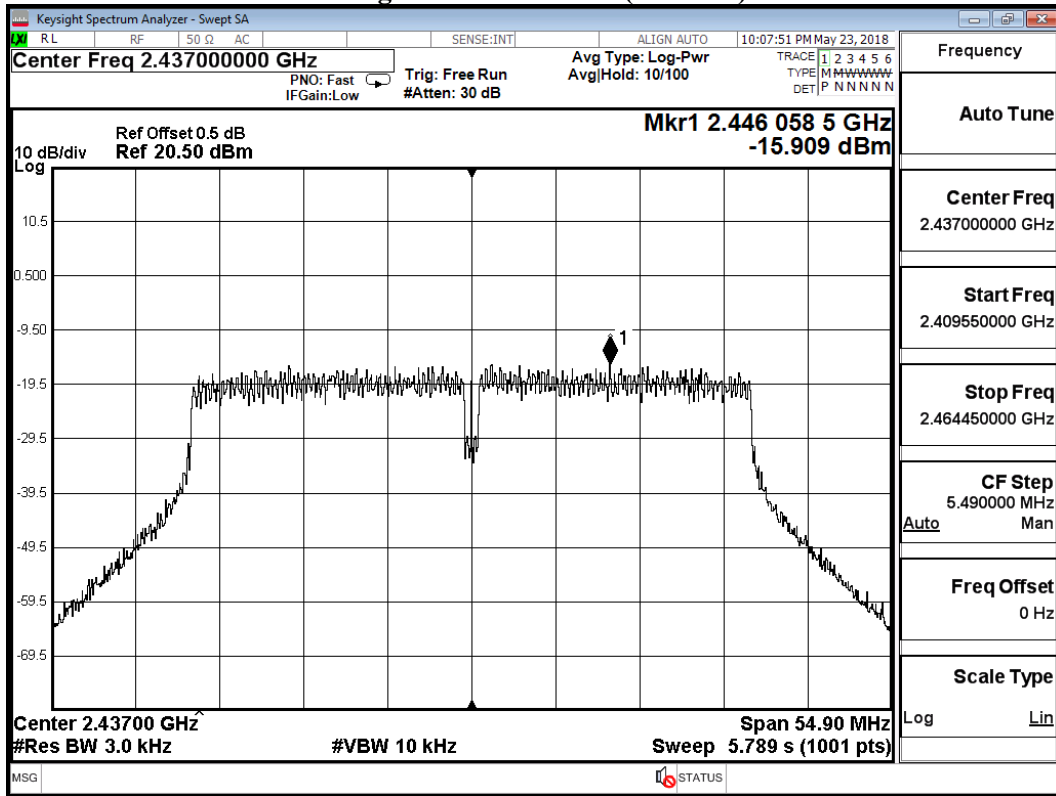


Figure Channel 6: (Chain D)



Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Power Density Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n-40BW_60Mbps) (2452MHz) (Antenna No.19)

CHAIN	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)1	Limit	Result
A	-11.744	-5.723	≤ 5.8dBm	Pass
B	-14.924	-8.903	≤ 5.8dBm	Pass
C	-16.093	-10.072	≤ 5.8dBm	Pass
D	-15.831	-9.810	≤ 5.8dBm	Pass

Note : The quantity 10*log 4 (four antennas) is added to the spectrum peak value according to document 662911 D01.

Note: The peak power spectral density shall be reduced by the amount in dB that the directional gain the antenna exceeds 6 dBi.

Figure Channel 9: (Chain A)

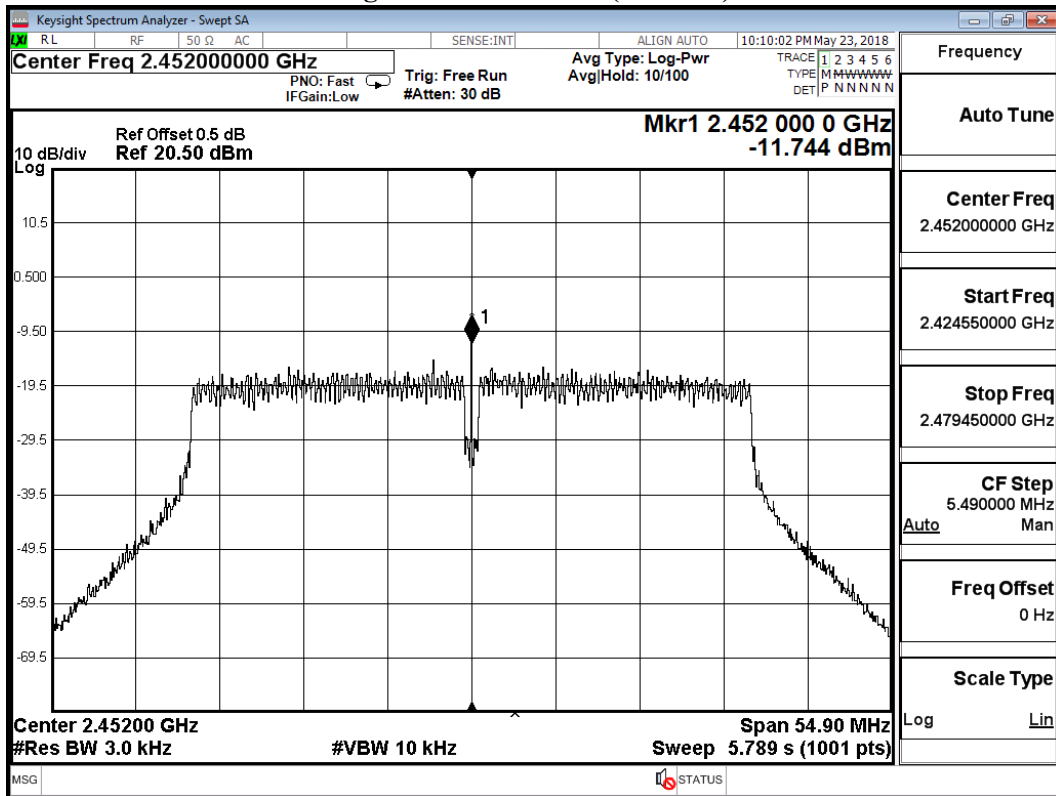


Figure Channel 9: (Chain B)

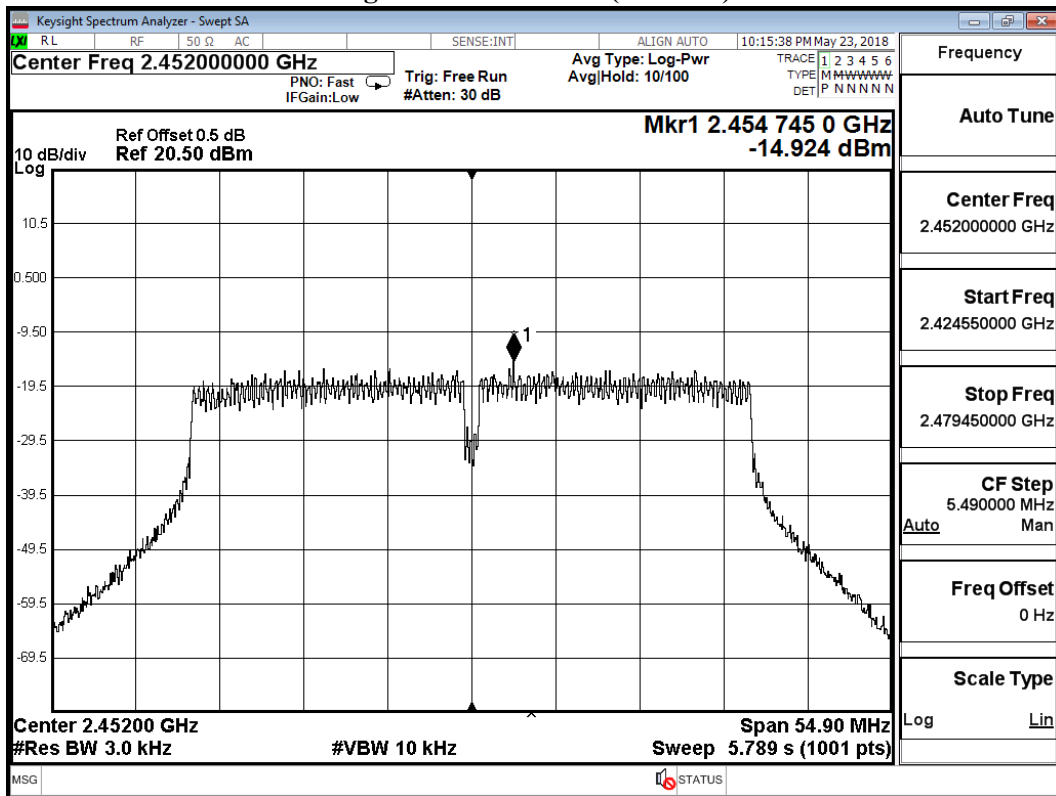


Figure Channel 9: (Chain C)

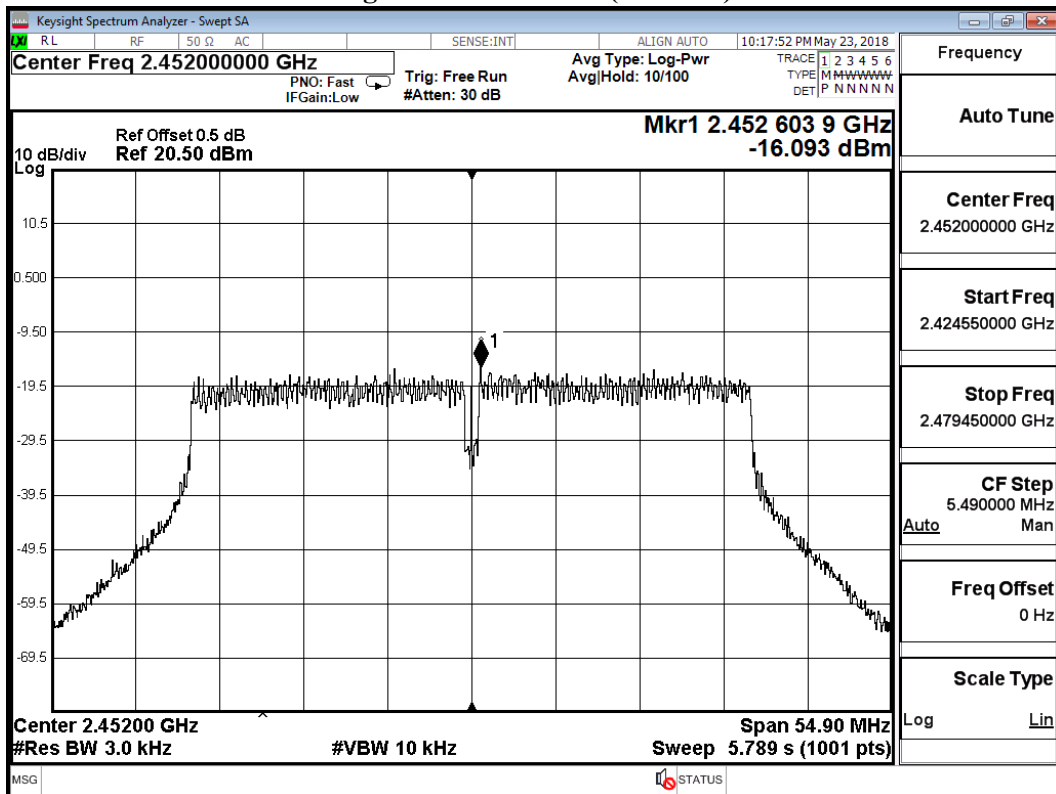
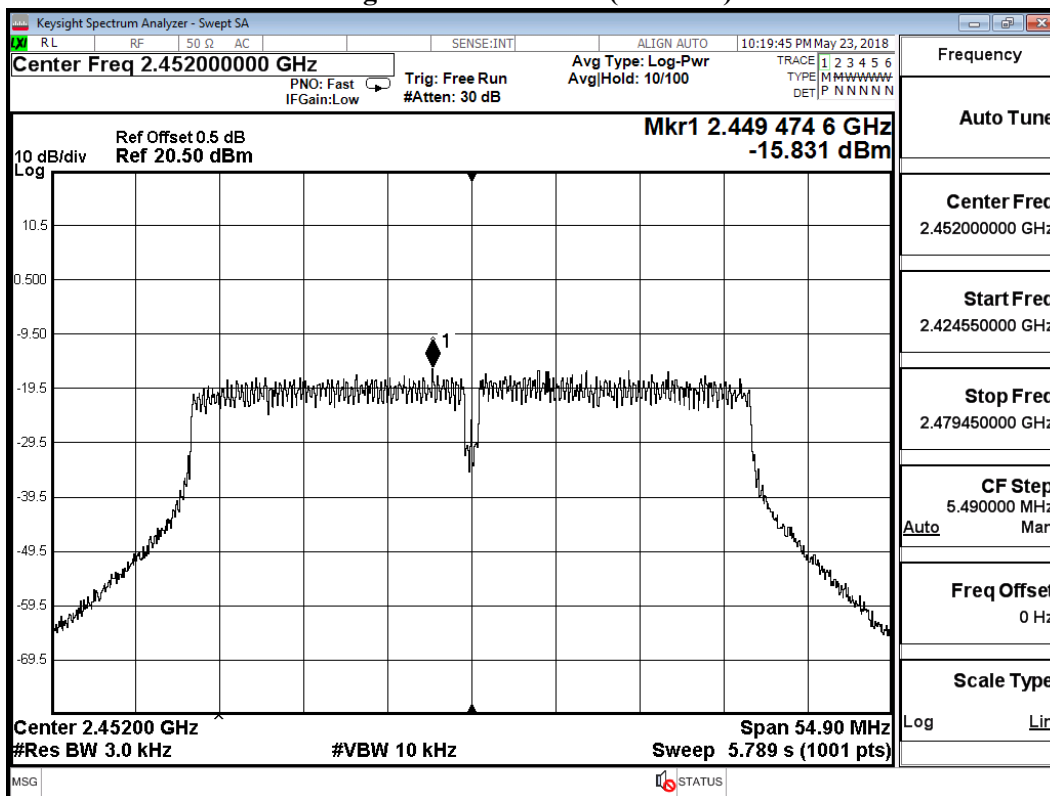
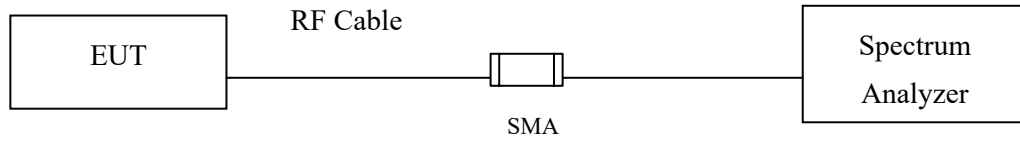


Figure Channel 9: (Chain D)



9. Duty Cycle

9.1. Test Setup



9.2. Test Procedure

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

9.3. Uncertainty

$\pm 2.31\text{msec}$

9.4. Test Result of Duty Cycle

Product : MOXA IEEE 802.11b/g/n 4*4 module
 Test Item : Duty Cycle
 Test Mode : Transmit

Duty Cycle Formula:

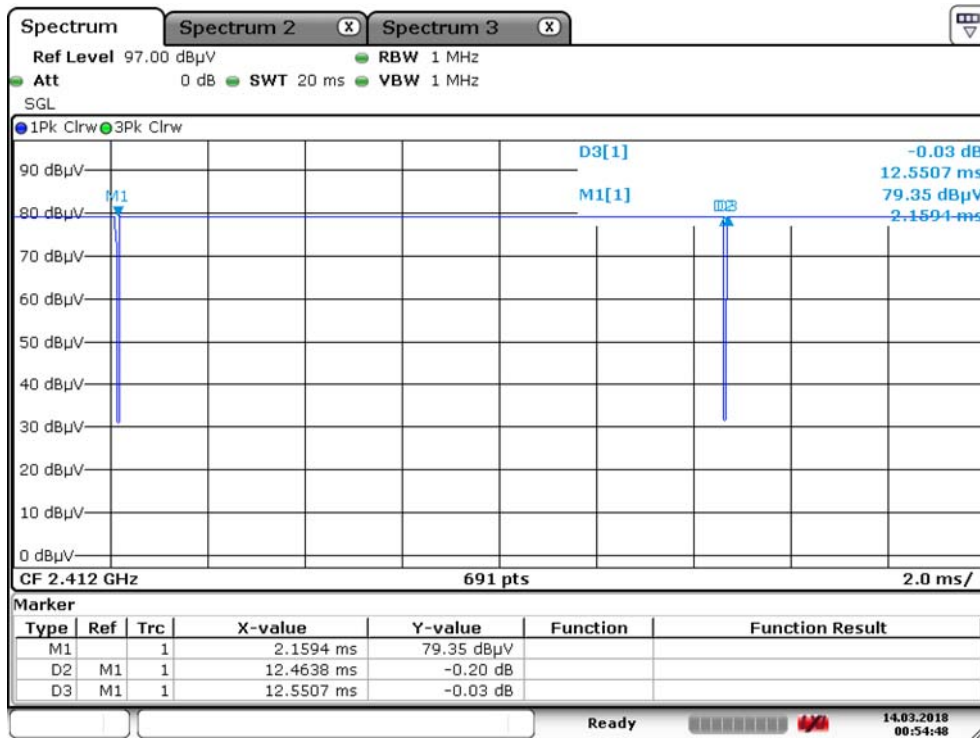
$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff})$$

$$\text{Duty Factor} = 10 \text{ Log} (1/\text{Duty Cycle})$$

Results:

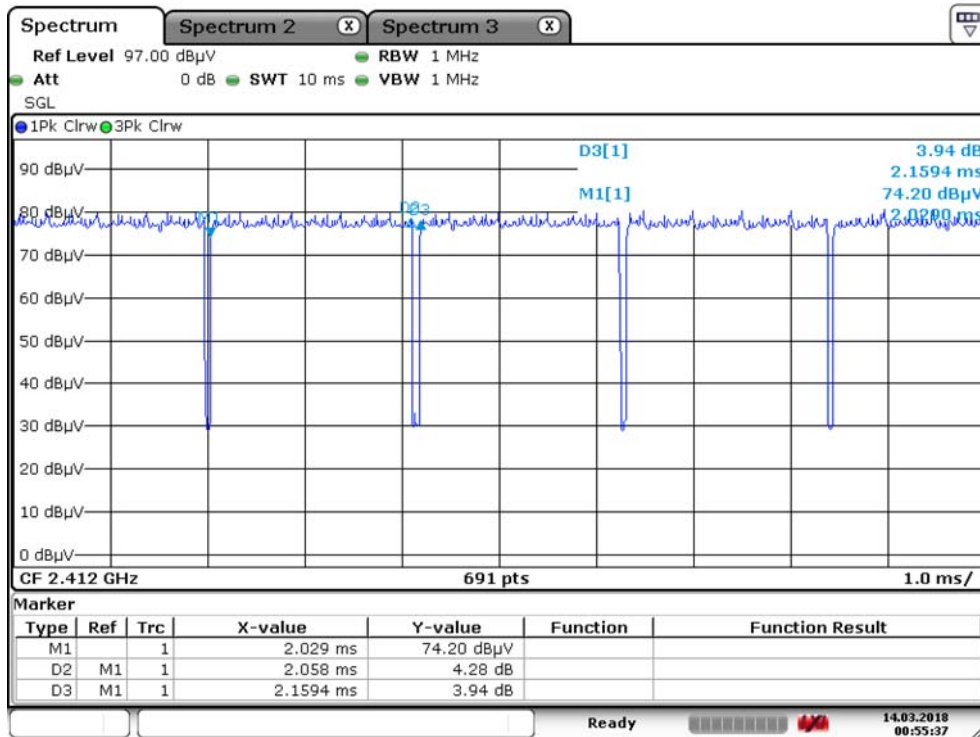
2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	12.4638	12.5507	99.31	0.03
802.11g	2.0580	2.1594	95.30	0.21
802.11n20	4.9855	5.0725	98.28	0.08
802.11n40	2.4058	2.4928	96.51	0.15

802.11b



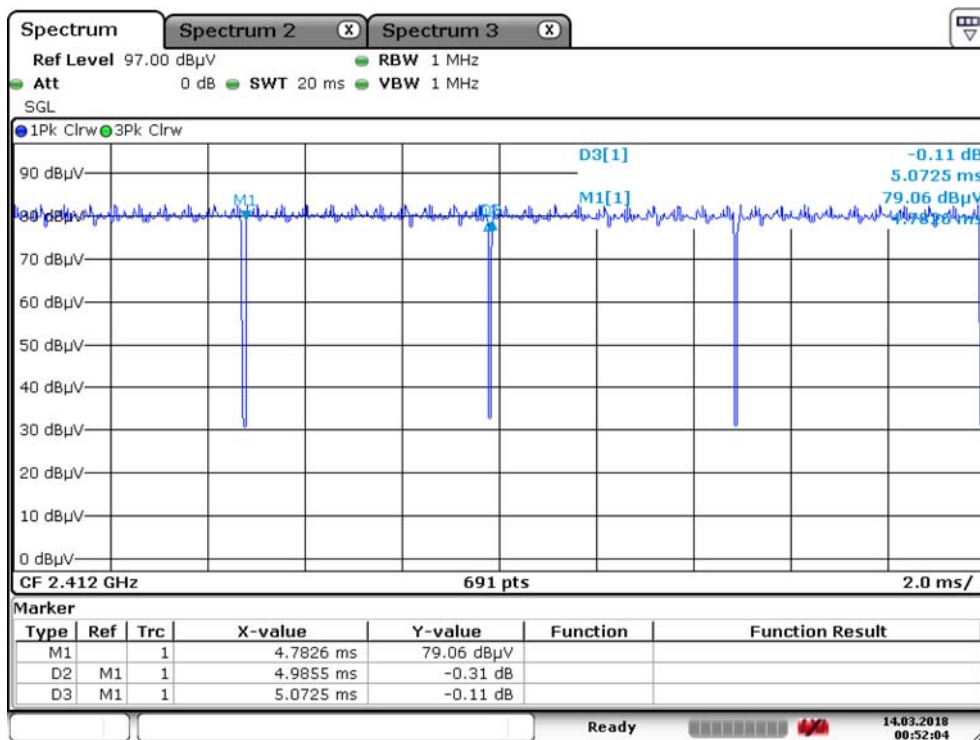
Date: 14.MAR.2018 00:54:48

802.11g



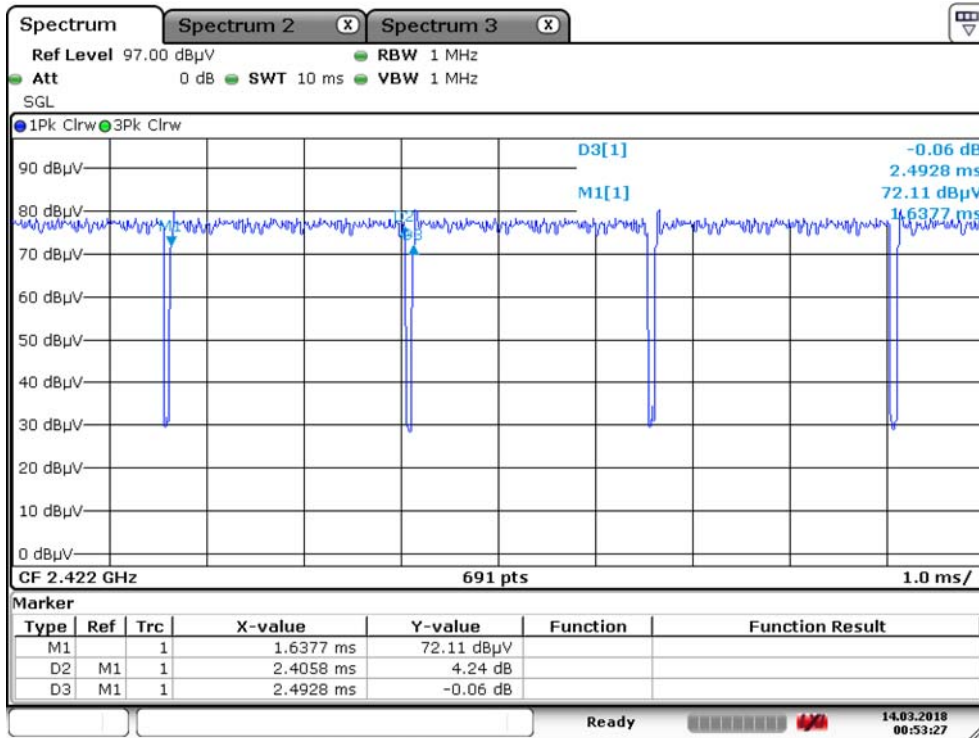
Date: 14.MAR.2018 00:55:37

802.11n20



Date: 14.MAR.2018 00:52:04

802.11n40



Date: 14.MAR.2018 00:53:28

10. EMI Reduction Method During Compliance Testing

No modification was made during testing.