



# Appendix A

## 20dB bandwidth measurement

According to FCC Part 15.247 (a) (1)



## Modulation: $\pi/4$ -DQPSK Channel 0 (2402MHz)





# Channel 40 (2442MHz)

Agilent
R T

**Ch Freq** 2.442 GHz **Trig** Free

Occupied Bandwidth

**Freq/Channel**

**Center Freq**  
2.44200000 GHz

**Start Freq**  
2.44100000 GHz

**Stop Freq**  
2.44300000 GHz

**CF Step**  
200.000000 kHz  
Auto Man

**Freq Offset**  
0.00000000 Hz

**Signal Track**  
On Off

Ref 20 dBm #Atten 30 dB

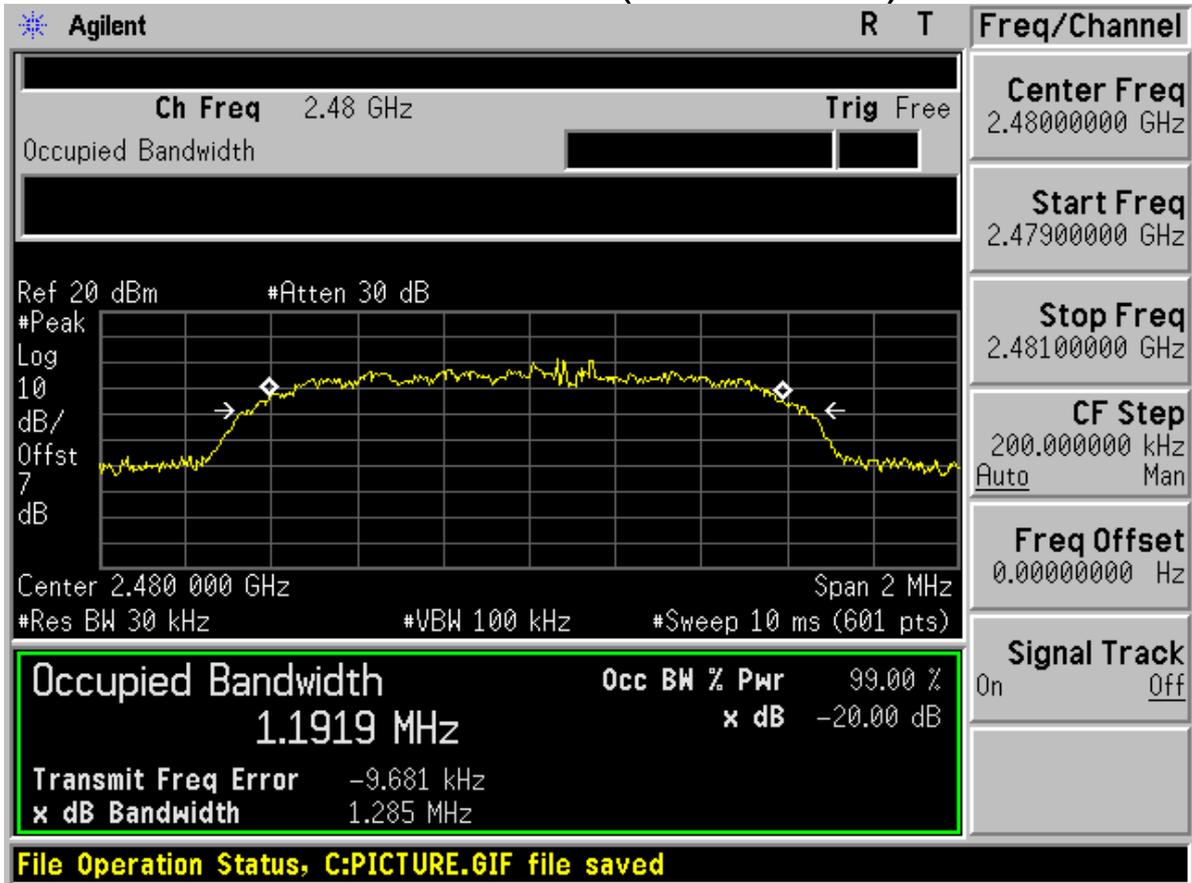
Center 2.442 000 GHz Span 2 MHz  
 #Res BW 30 kHz #VBW 100 kHz #Sweep 10 ms (601 pts)

<b>Occupied Bandwidth</b>	<b>Occ BW % Pwr</b> 99.00 %
1.1852 MHz	x dB -20.00 dB
<b>Transmit Freq Error</b> -10.704 kHz	
<b>x dB Bandwidth</b> 1.280 MHz	

**File Operation Status, C:PICTURE.GIF file saved**

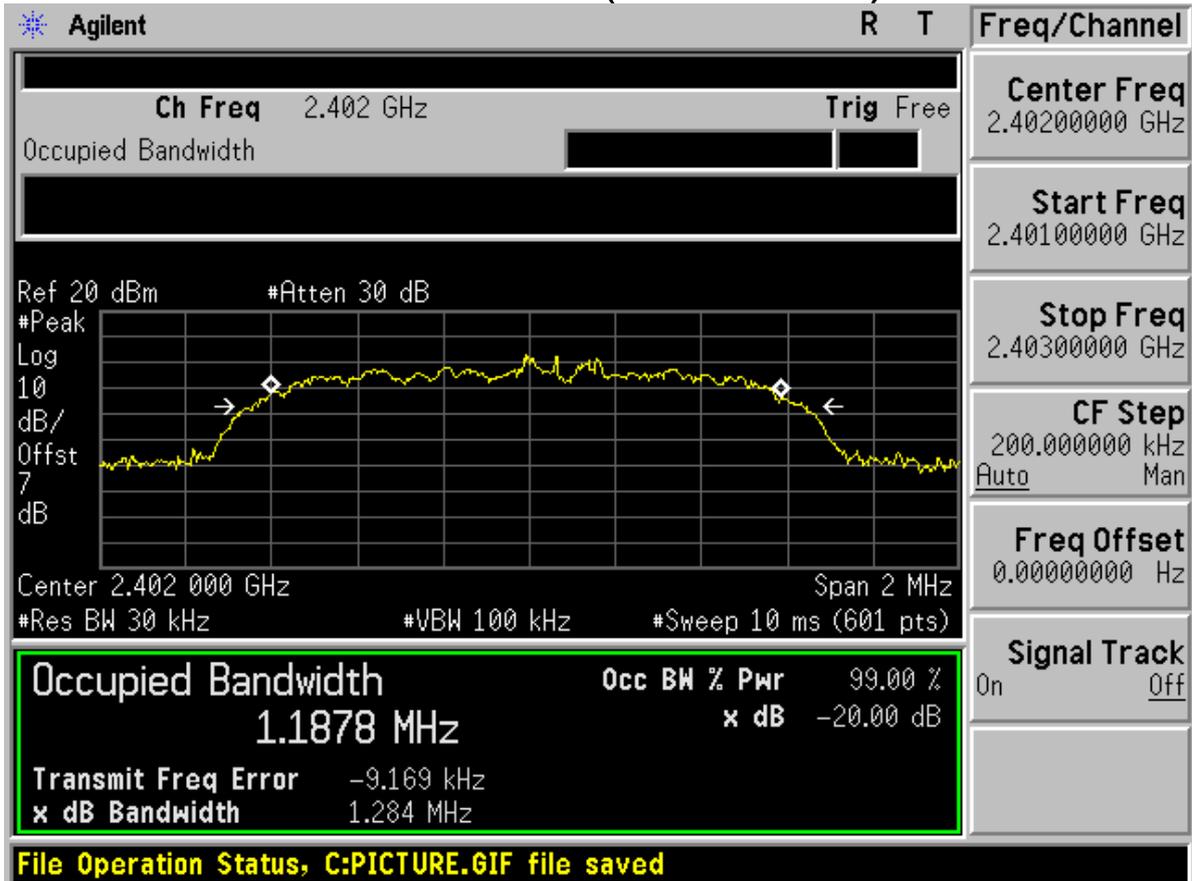


## Channel 78 (2480MHz)



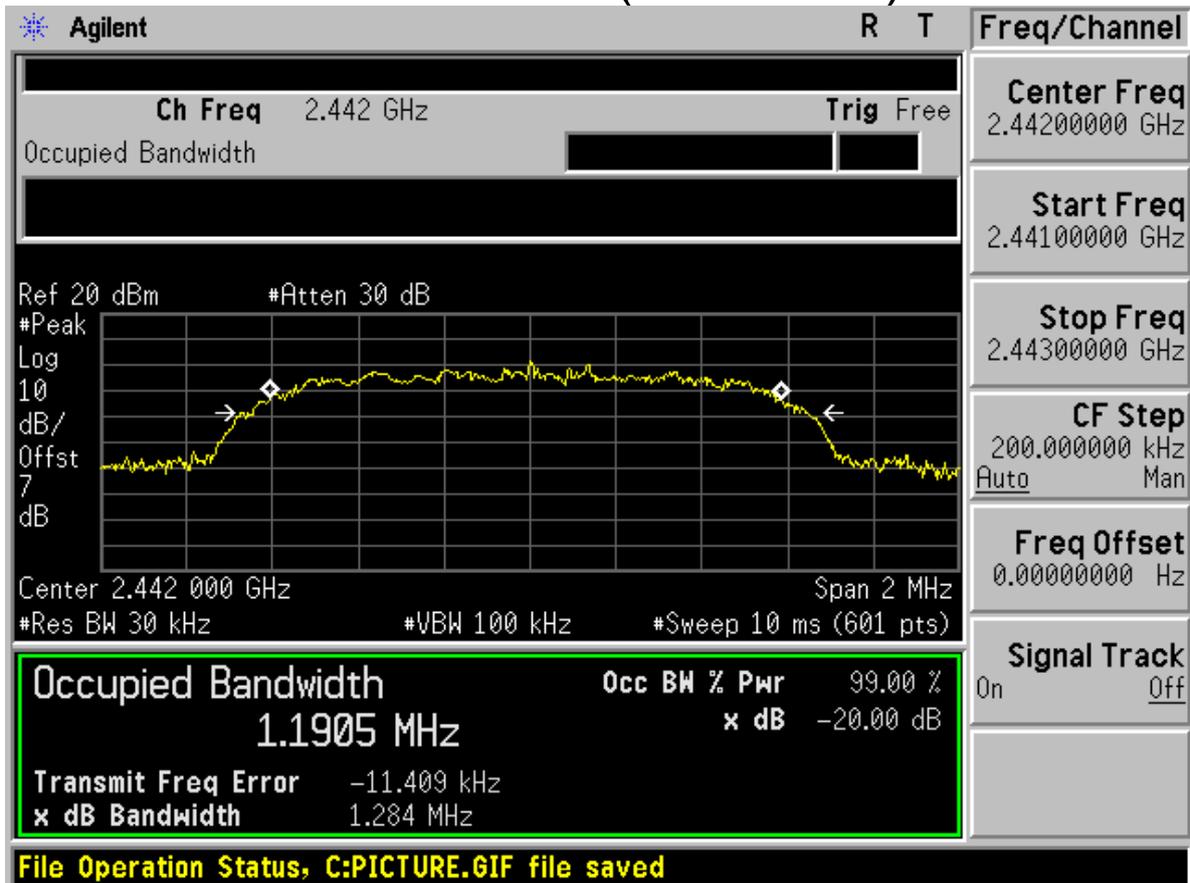


## Modulation: 8DPSK Channel 0 (2402MHz)



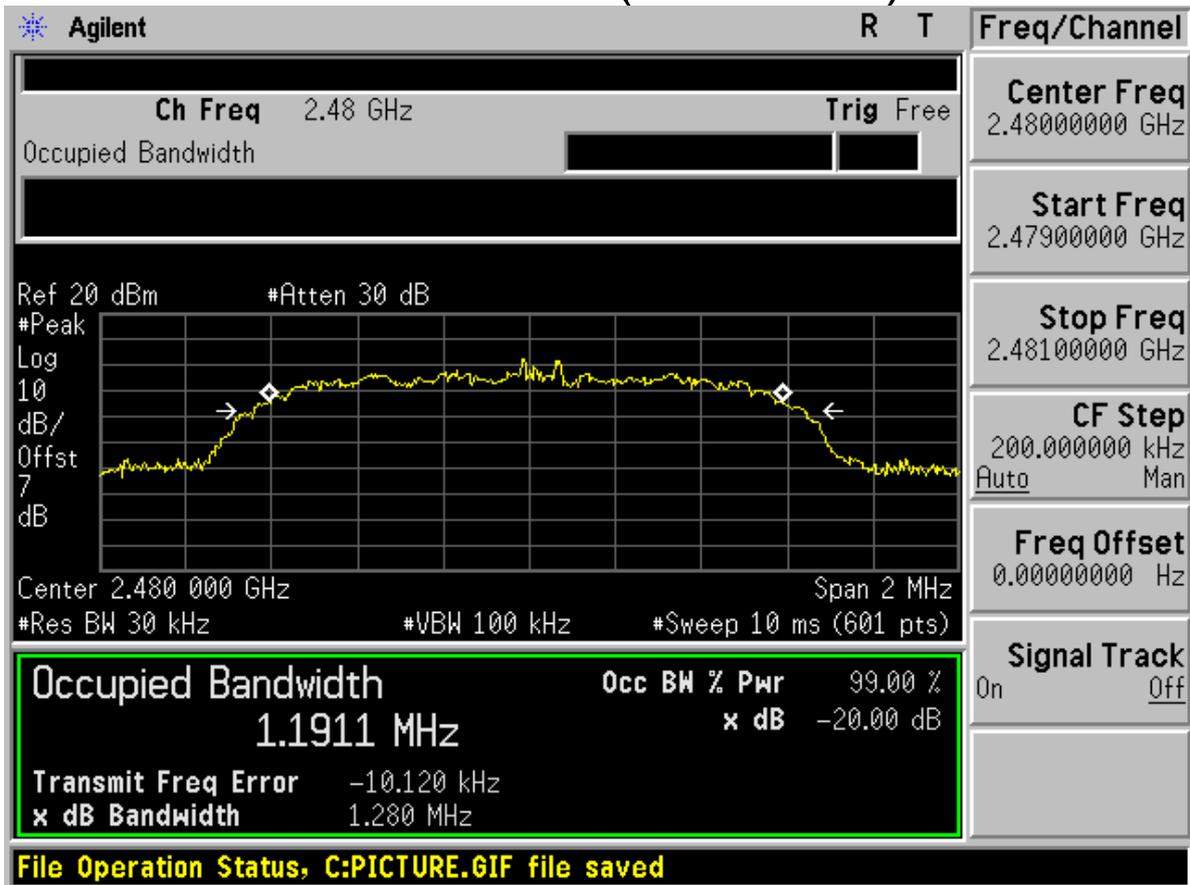


## Channel 40 (2442MHz)





## Channel 78 (2480MHz)





## **Appendix B**

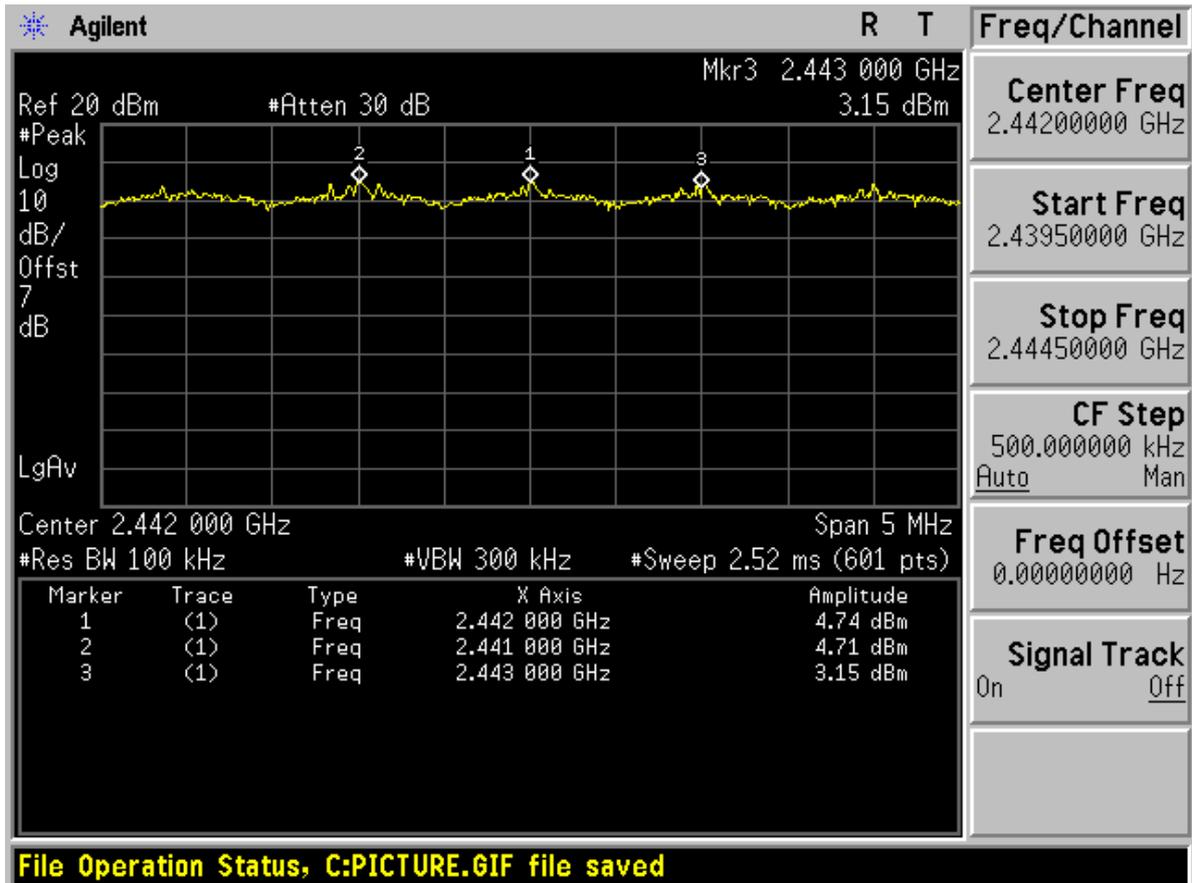
# Carrier frequency separation measurement

According to FCC Part 15.247 (a) (1)



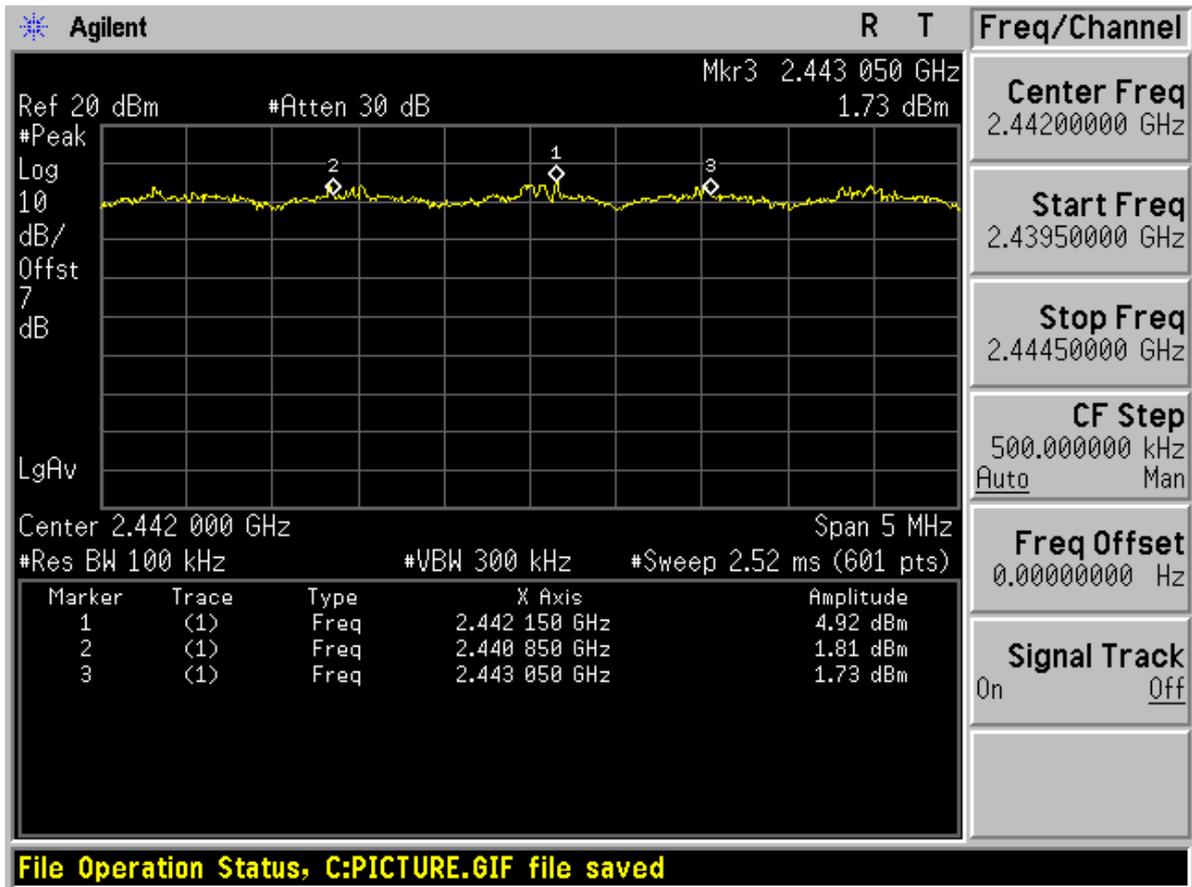
Modulation:  $\pi/4$ -DQPSK

Centred at Channel 40





## Modulation: 8DPSK Centred at Channel 40





## Appendix C

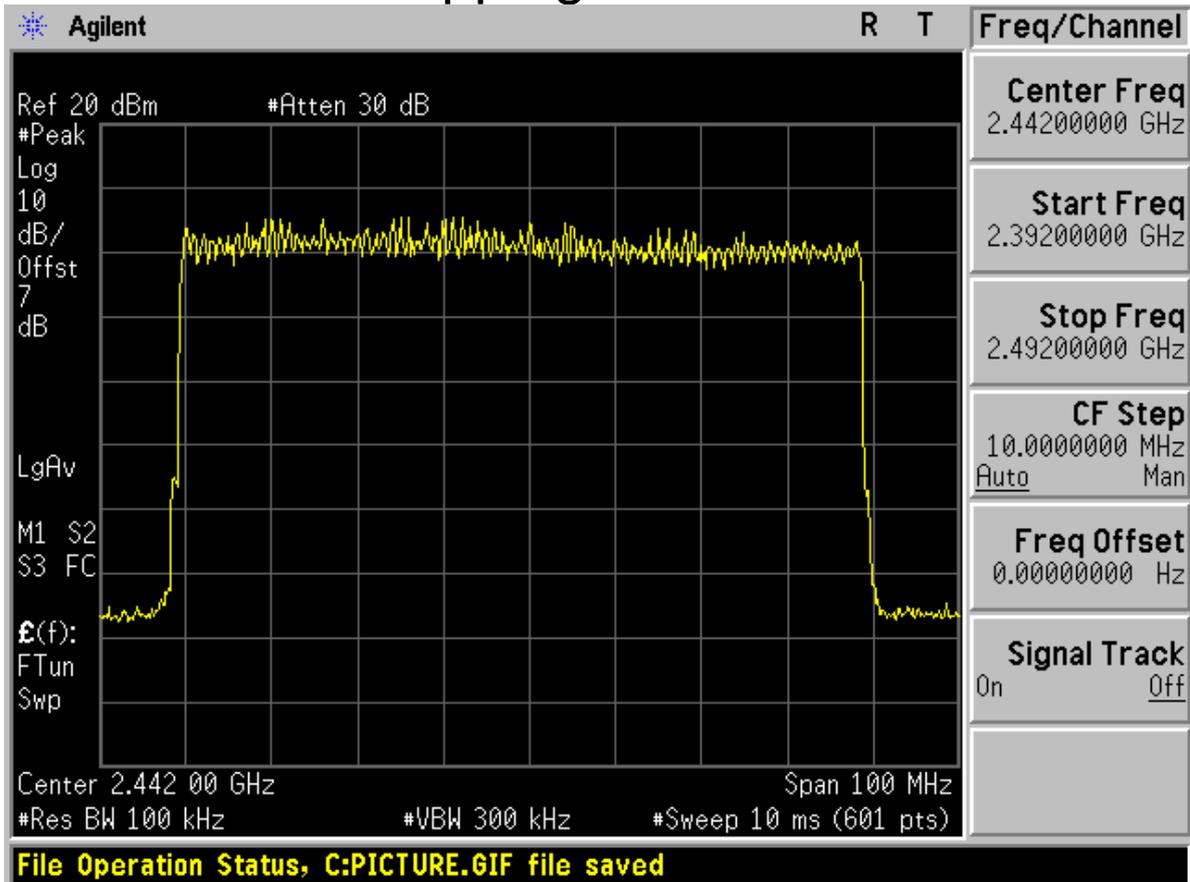
# Number of hopping channel

According to FCC Part 15.247 (a) (1) iii



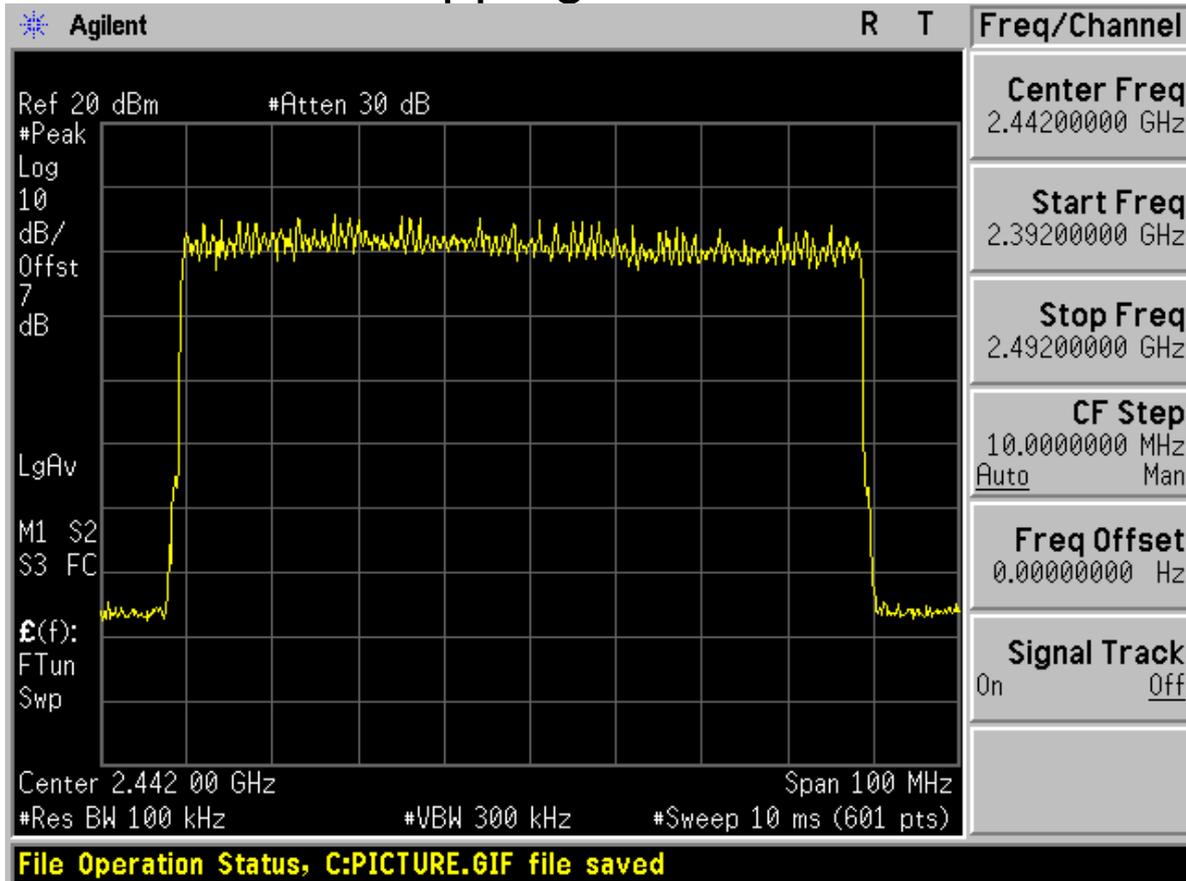
Modulation:  $\pi/4$ -DQPSK

Total hopping channels = 79





## Modulation: 8DPSK Total hopping channels = 79





# Appendix D

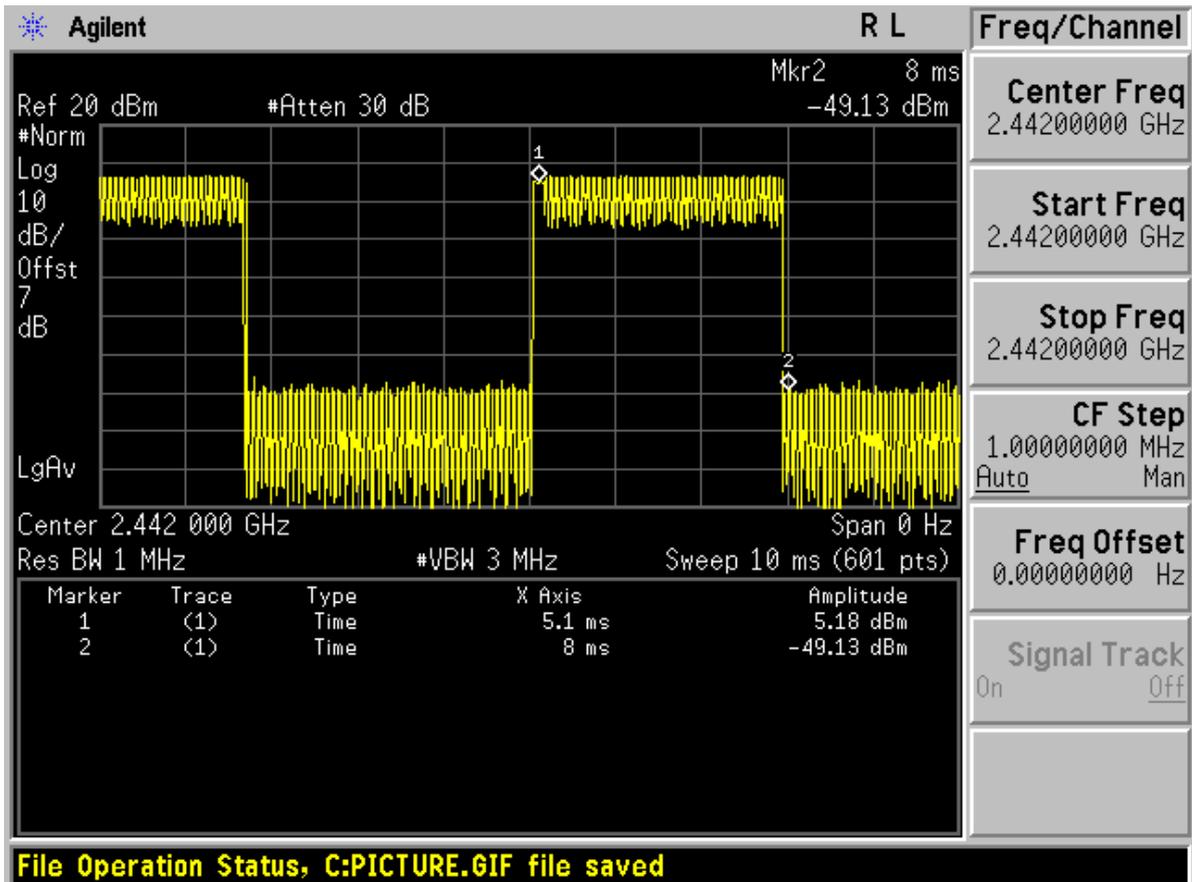
## Time of occupancy

According to FCC Part 15.247 (a) (1) iii



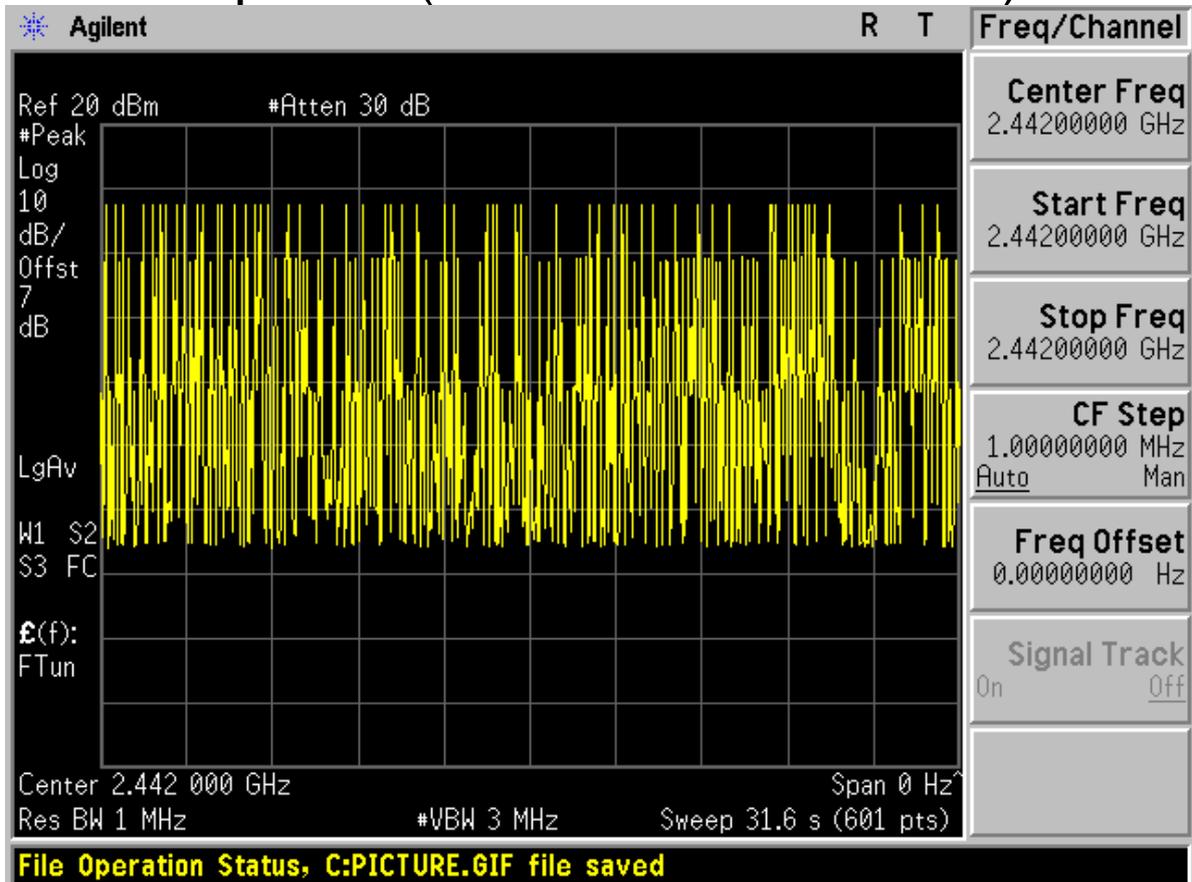
# Modulation: $\pi/4$ -DQPSK

## A burst (One time slot)





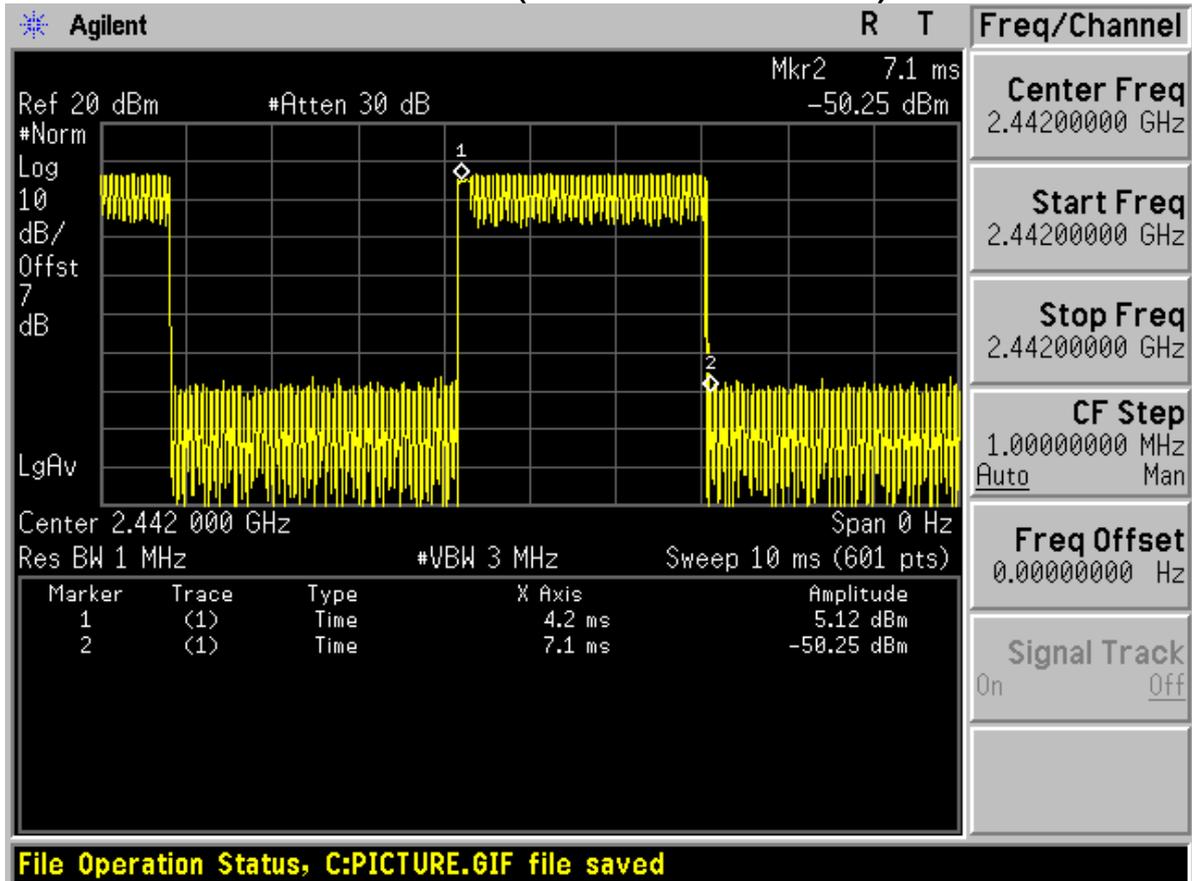
## A period (Less than 106.7 burst)





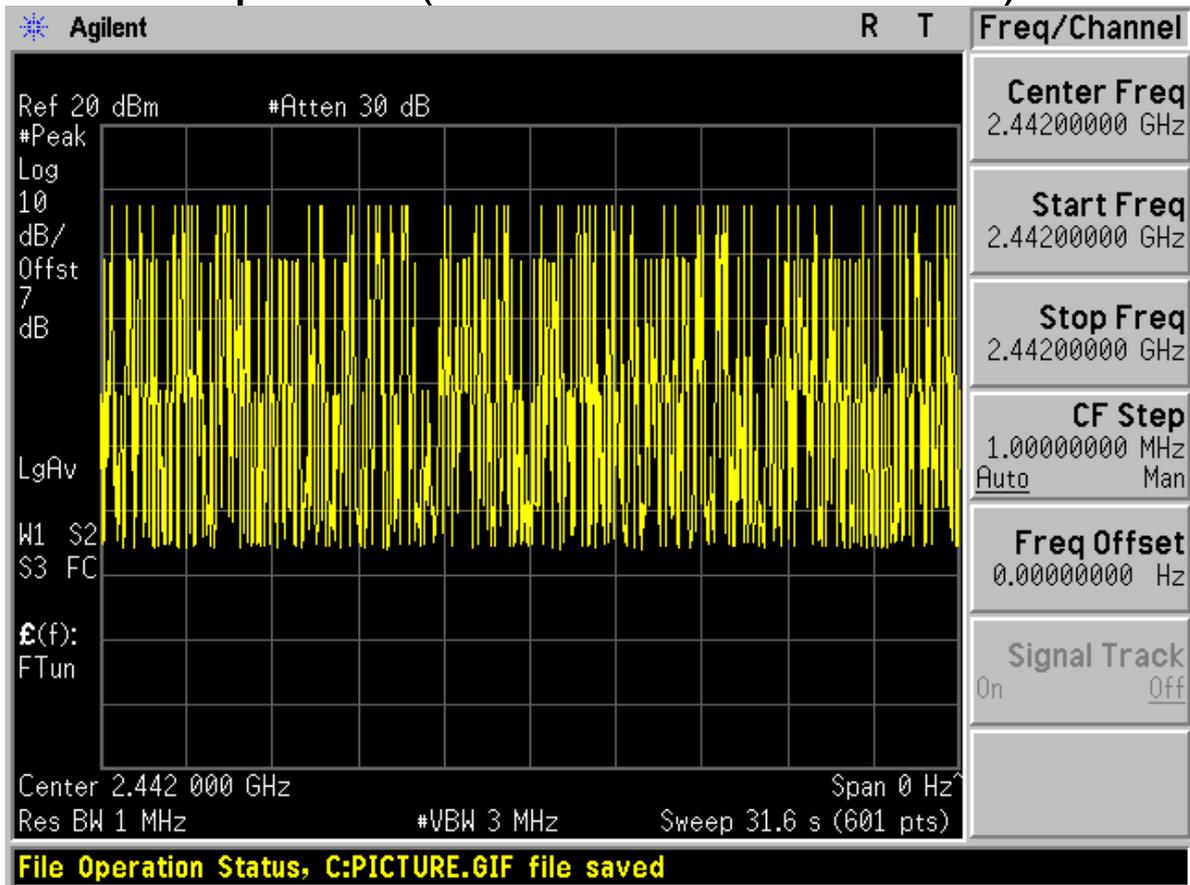
## Modulation: 8DPSK

### A burst (One time slot)





## A period (Less than 106.7 burst)





# Appendix E

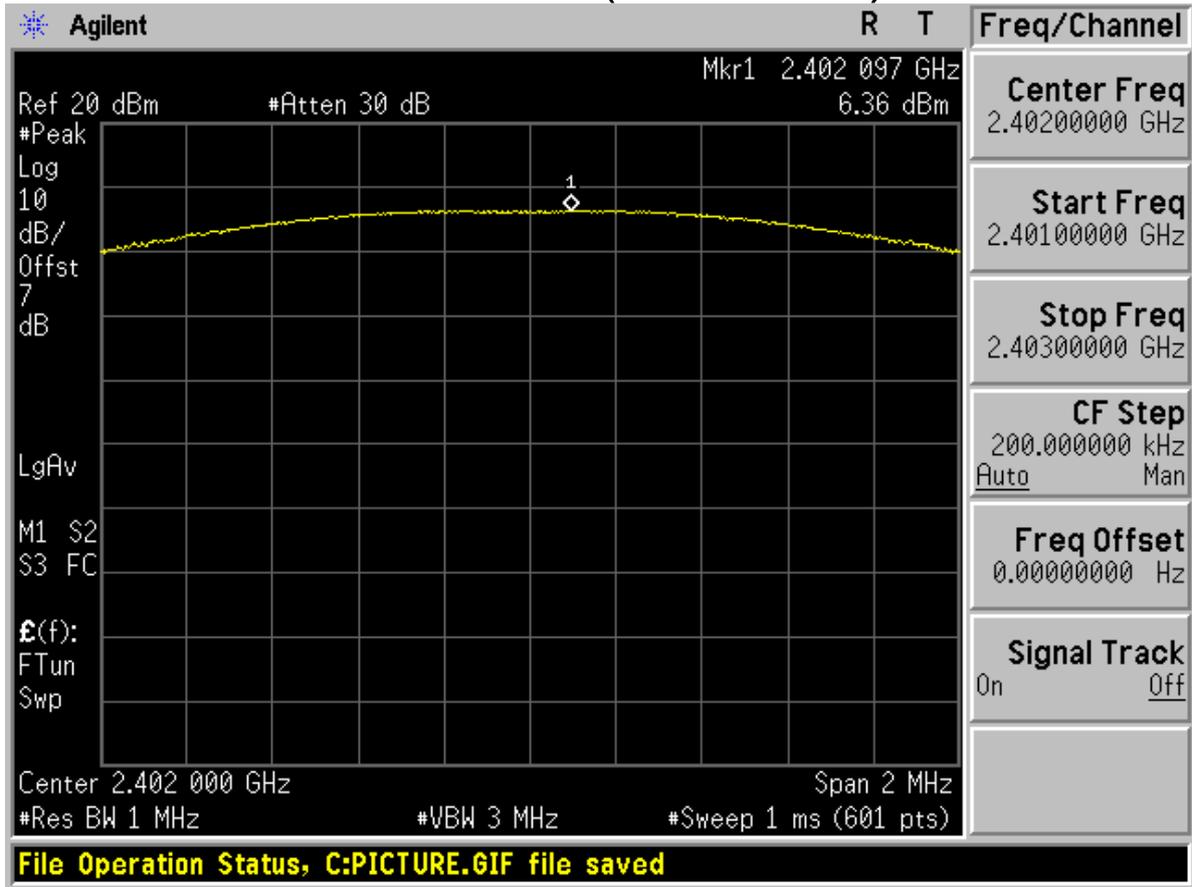
## Peak output power

According to FCC Part 15.247 (b) (1)



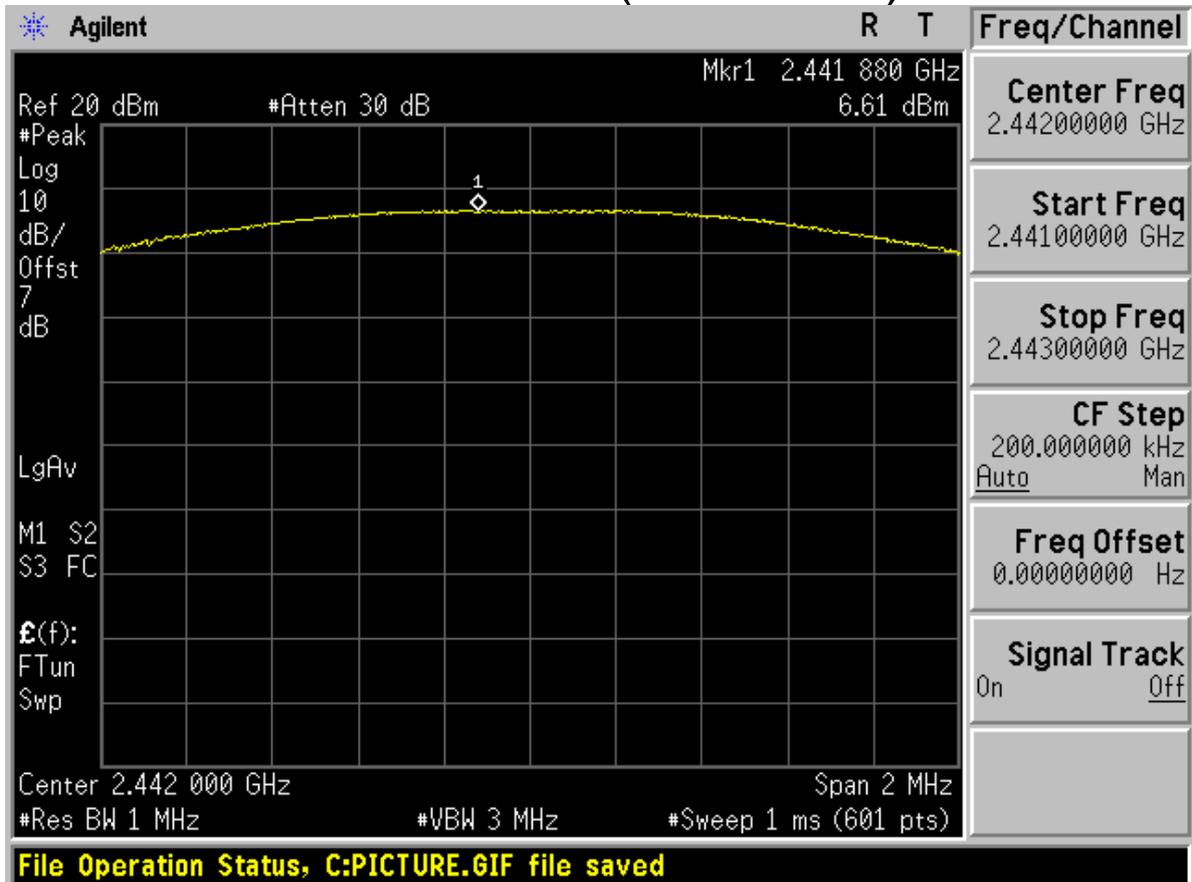
Modulation:  $\pi/4$ -DQPSK

Channel 0 (2402MHz)



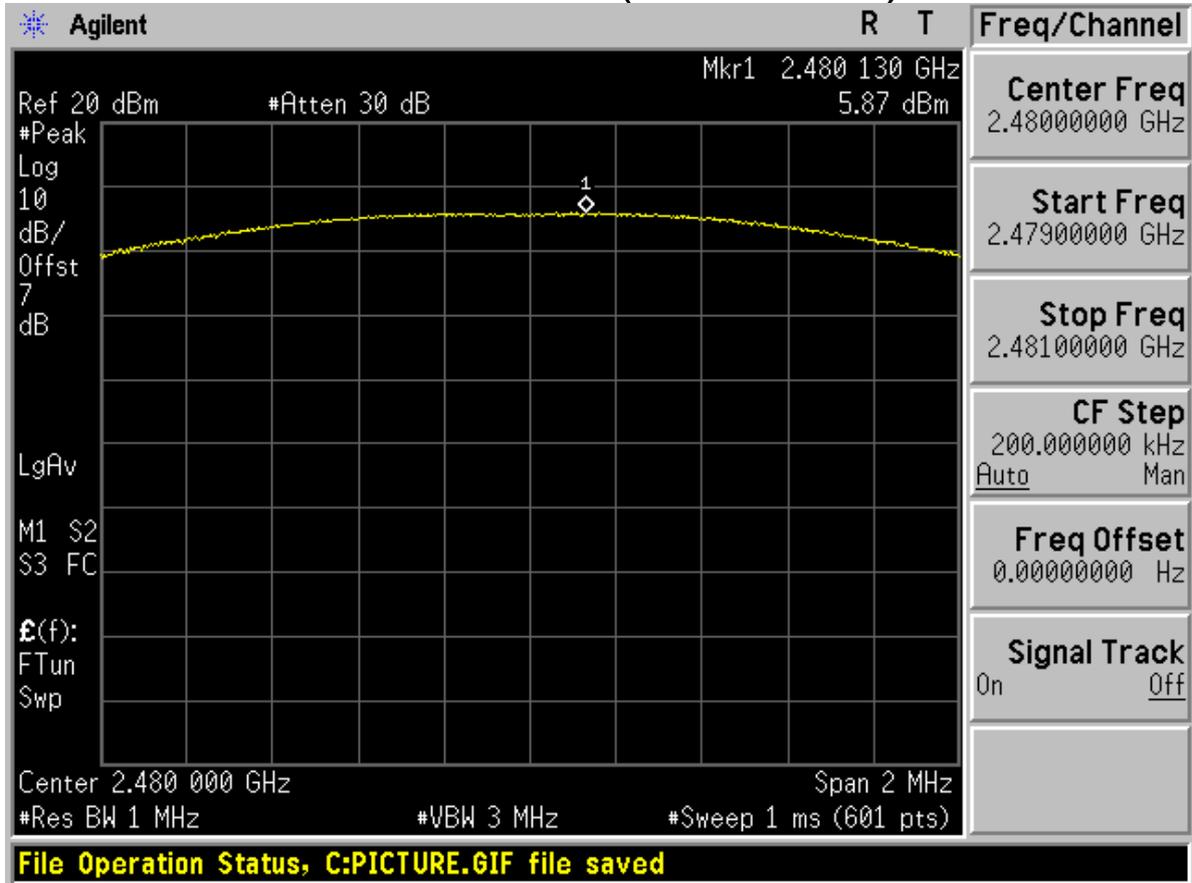


# Channel 40 (2442MHz)



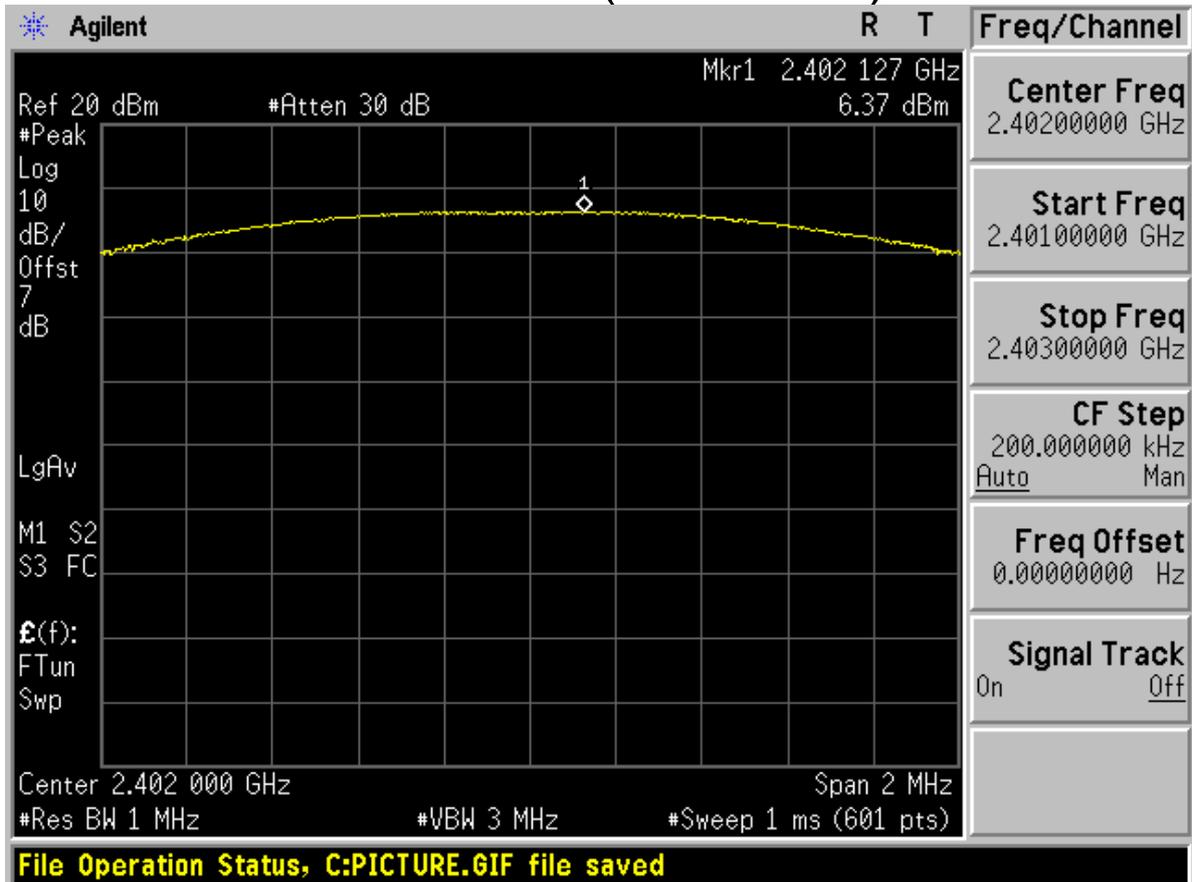


# Channel 78 (2480MHz)



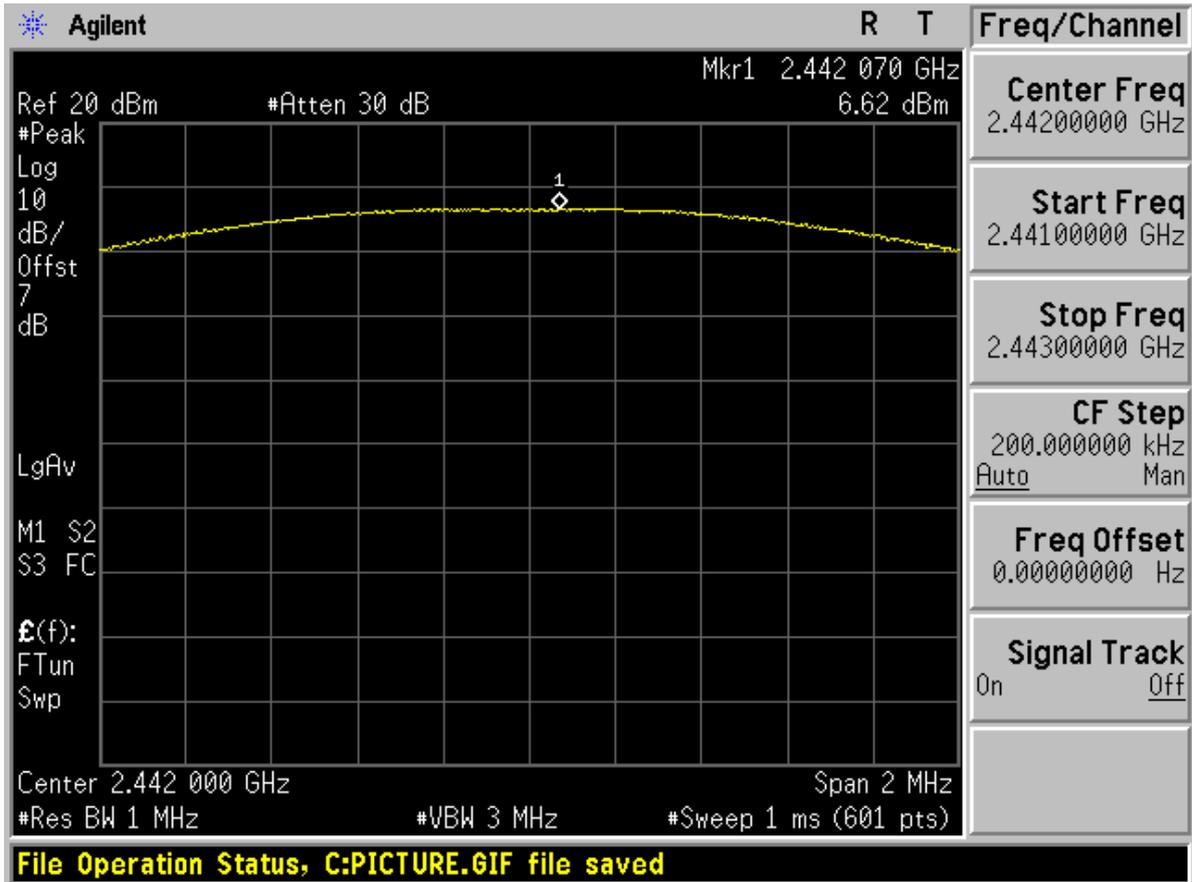


## Modulation: 8DPSK Channel 0 (2402MHz)



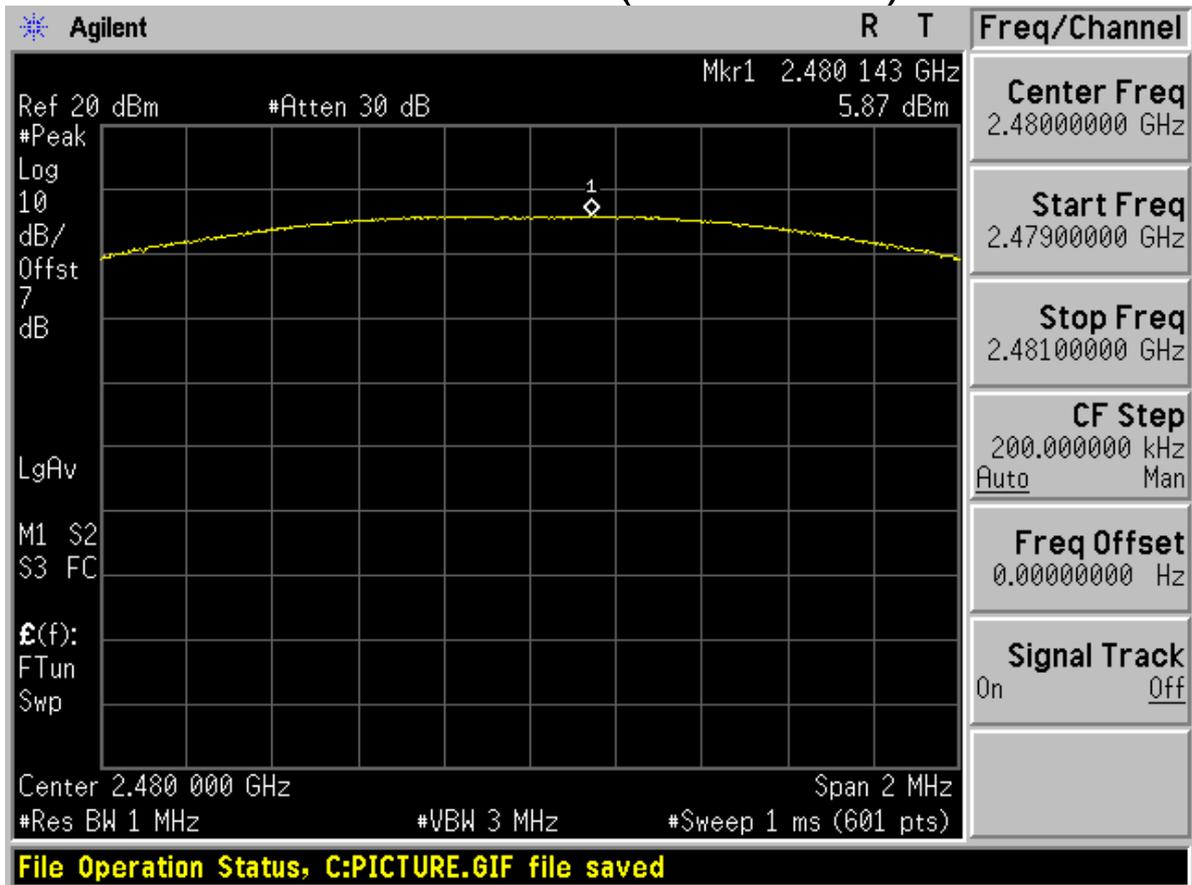


## Channel 40 (2442MHz)





## Channel 78 (2480MHz)





# Appendix F

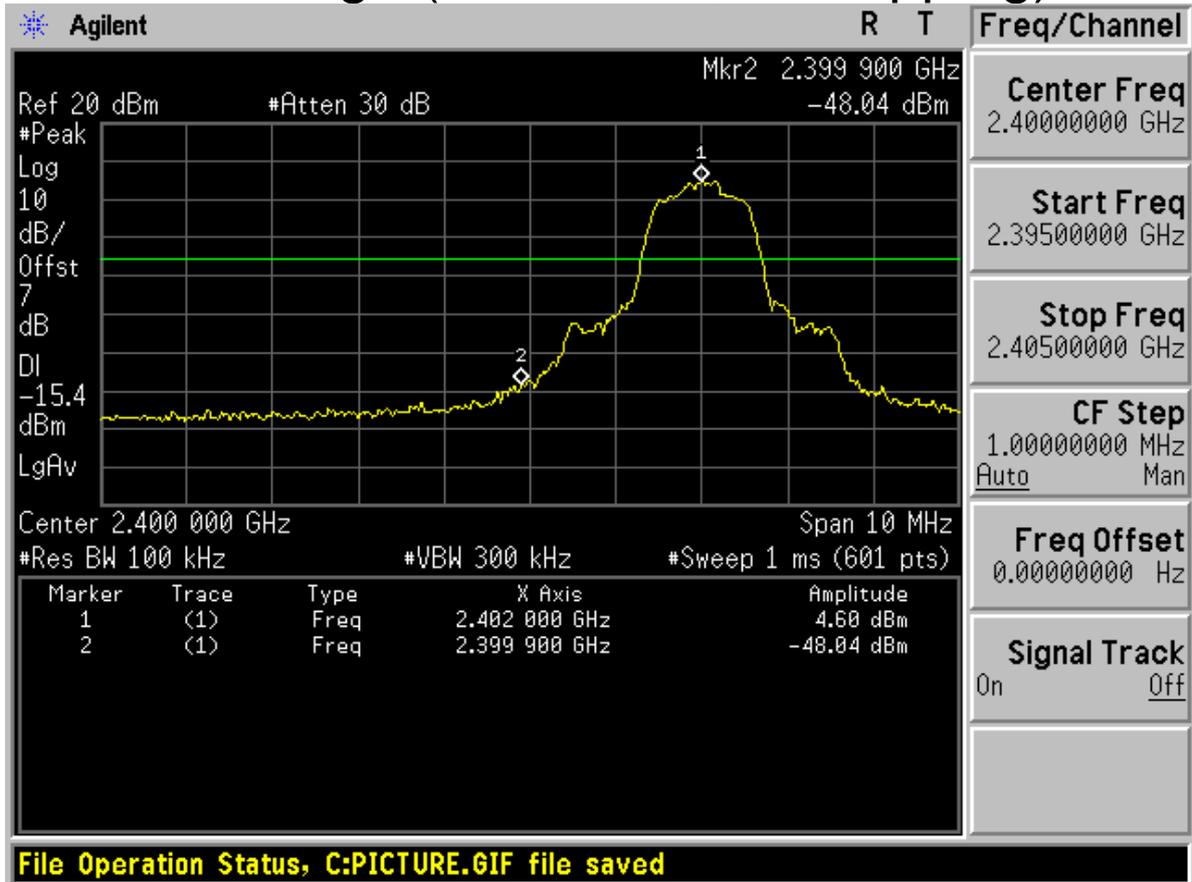
## Band edge spurious emission

According to FCC Part 15.247 (d)



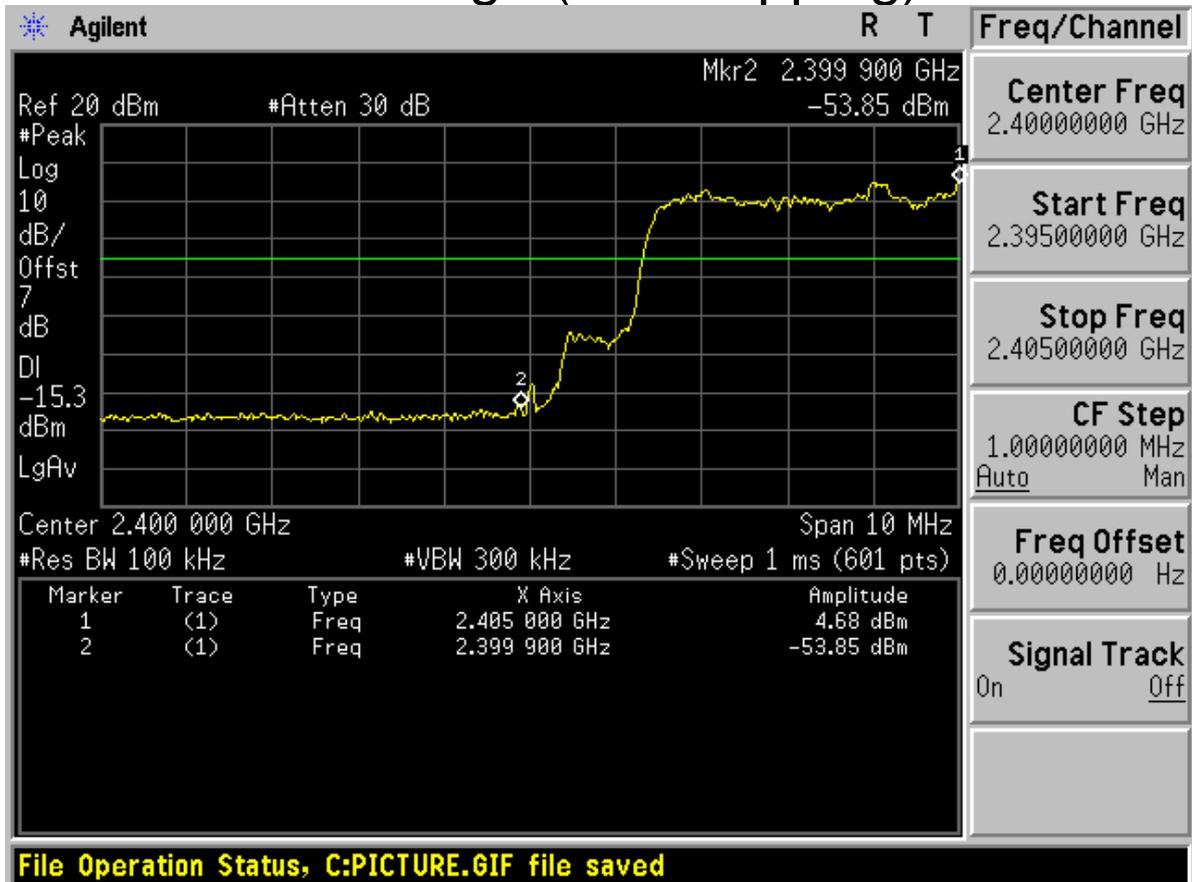
Modulation:  $\pi/4$ -DQPSK

Low edge (Channel 0, no hopping)



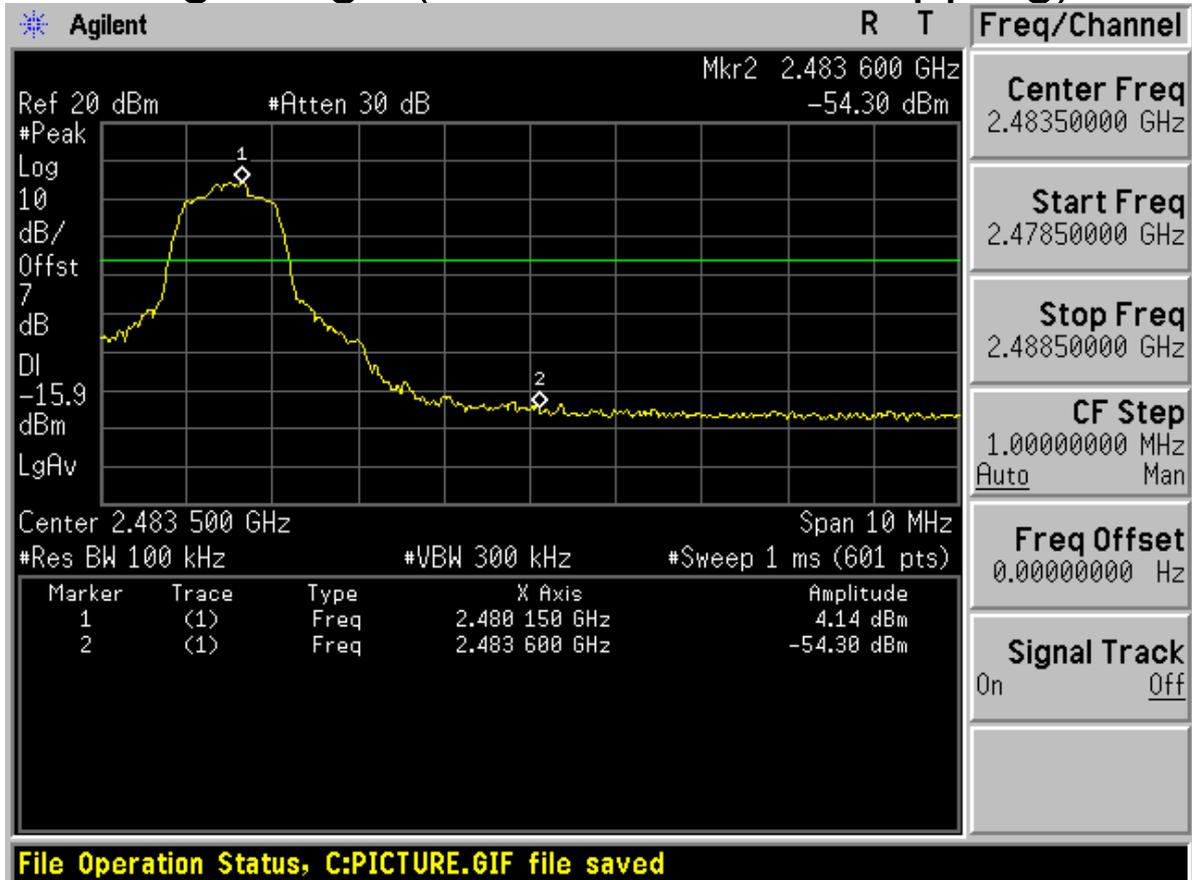


## Low edge (with hopping)



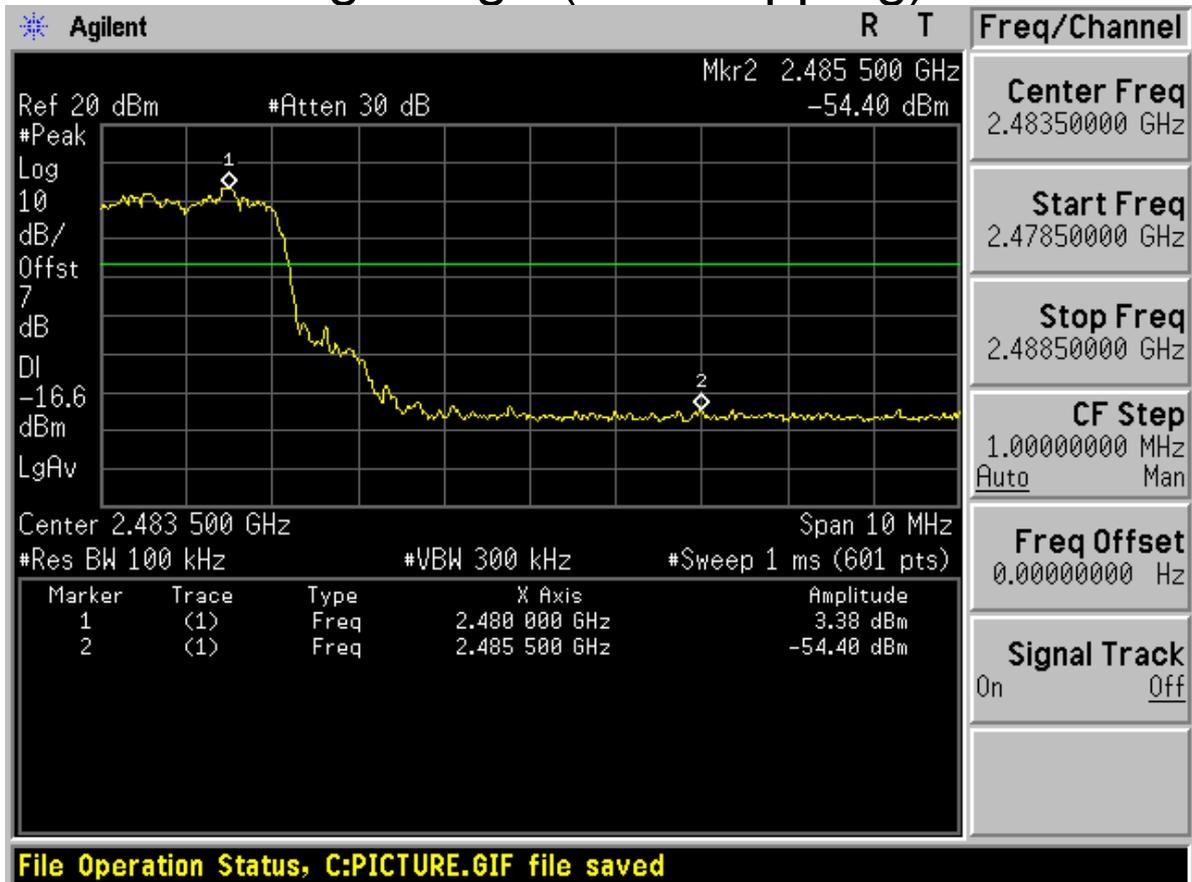


# High edge (Channel 78, no hopping)



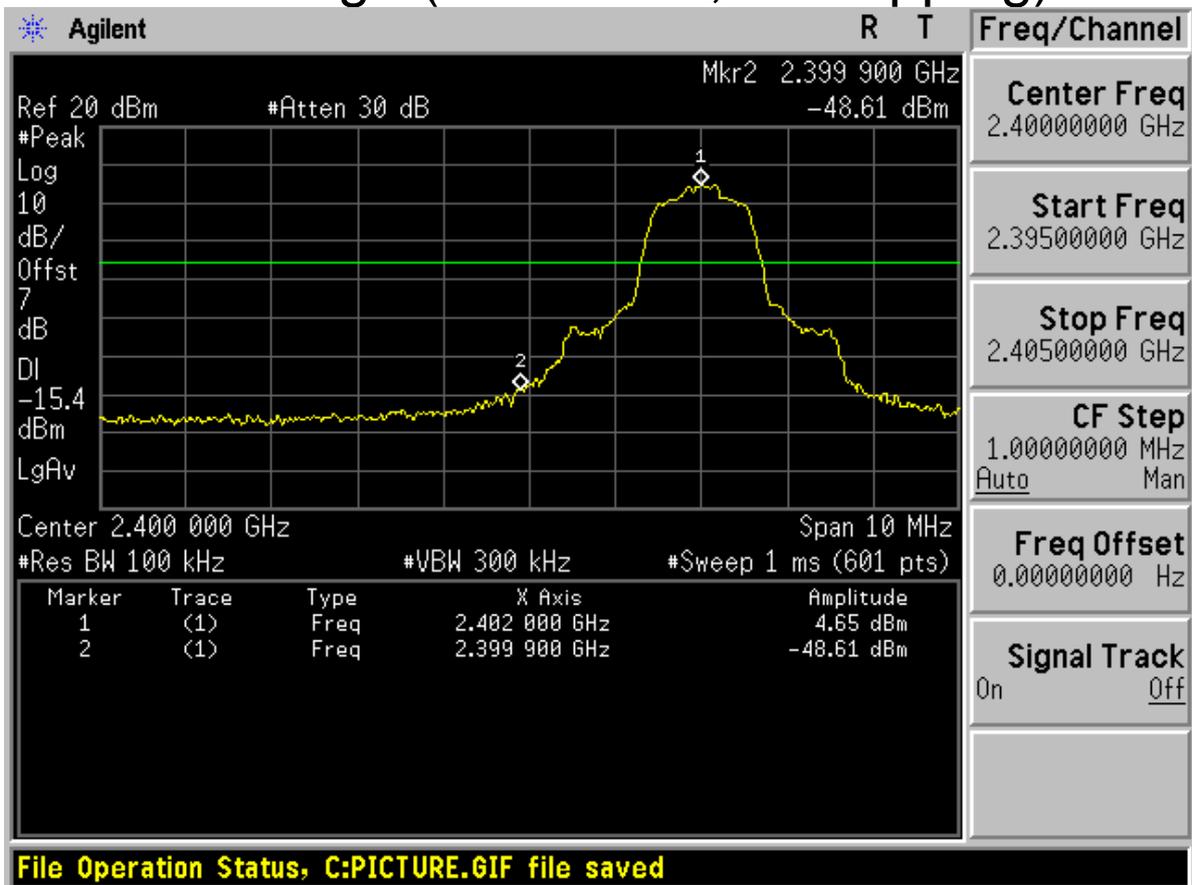


## High edge (with hopping)



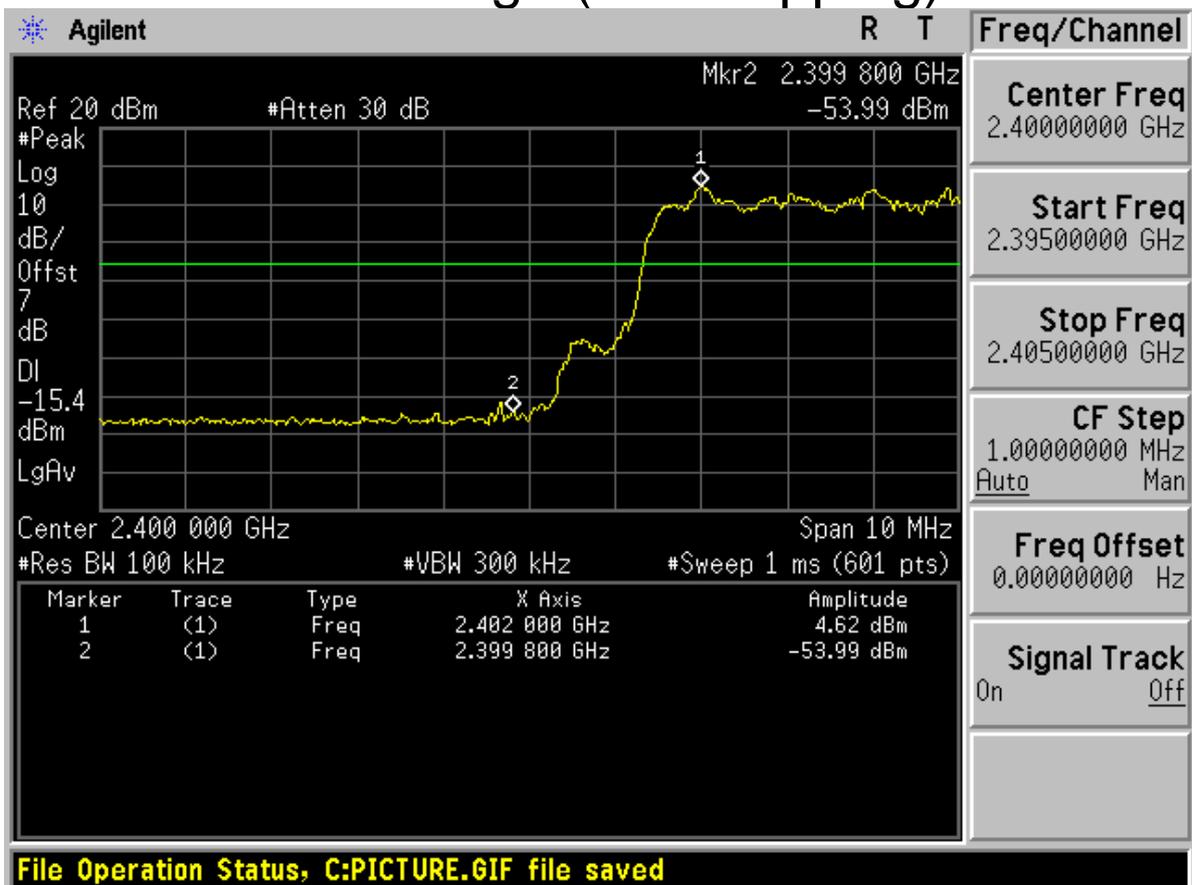


## Modulation: 8DPSK Low edge (Channel 0, no hopping)



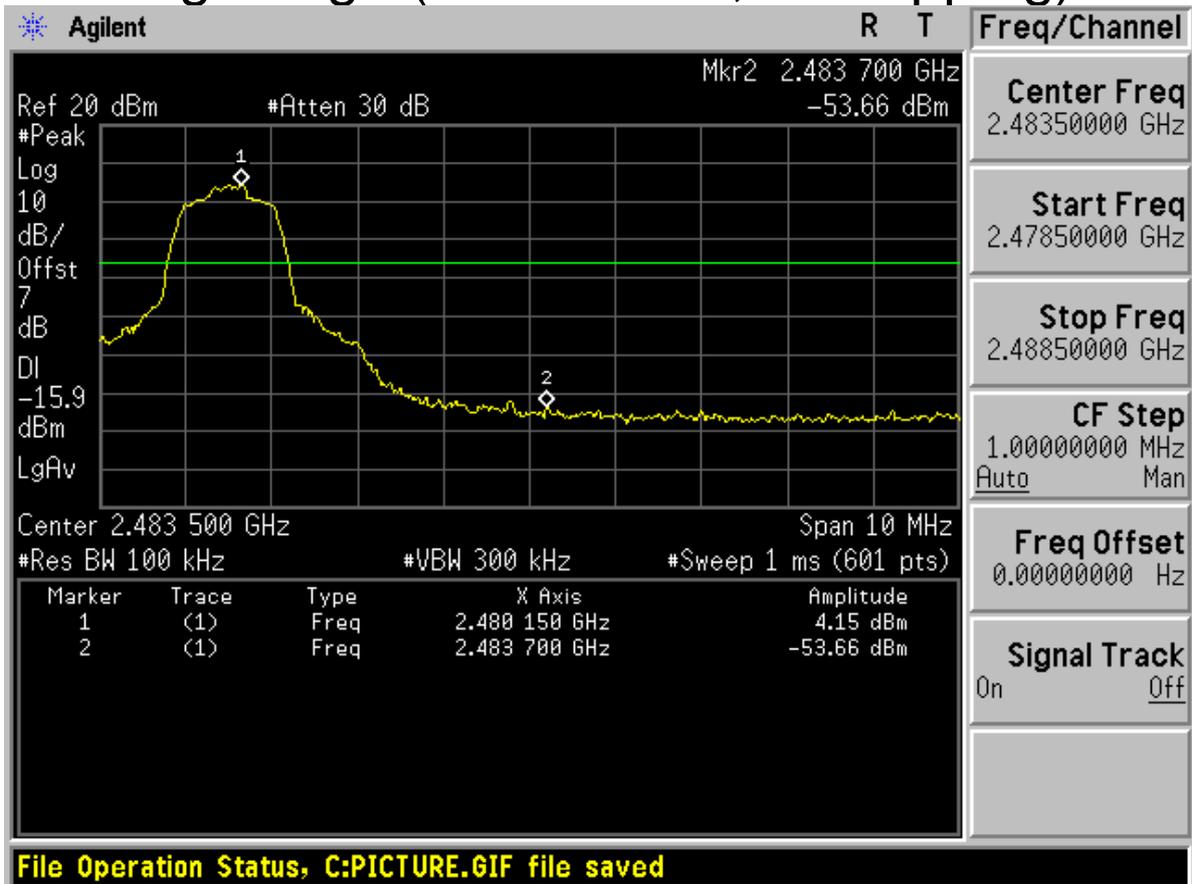


## Low edge (with hopping)



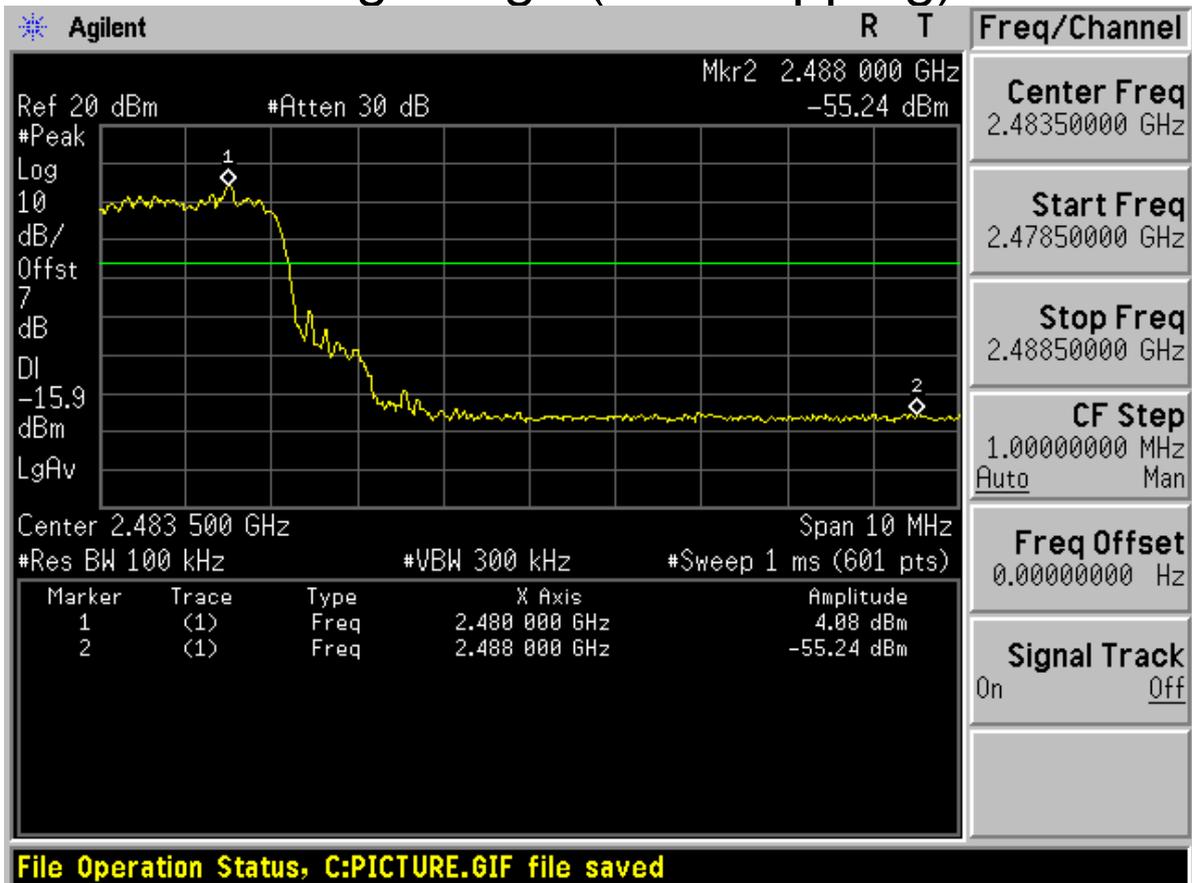


## High edge (Channel 78, no hopping)





## High edge (with hopping)





# Appendix G

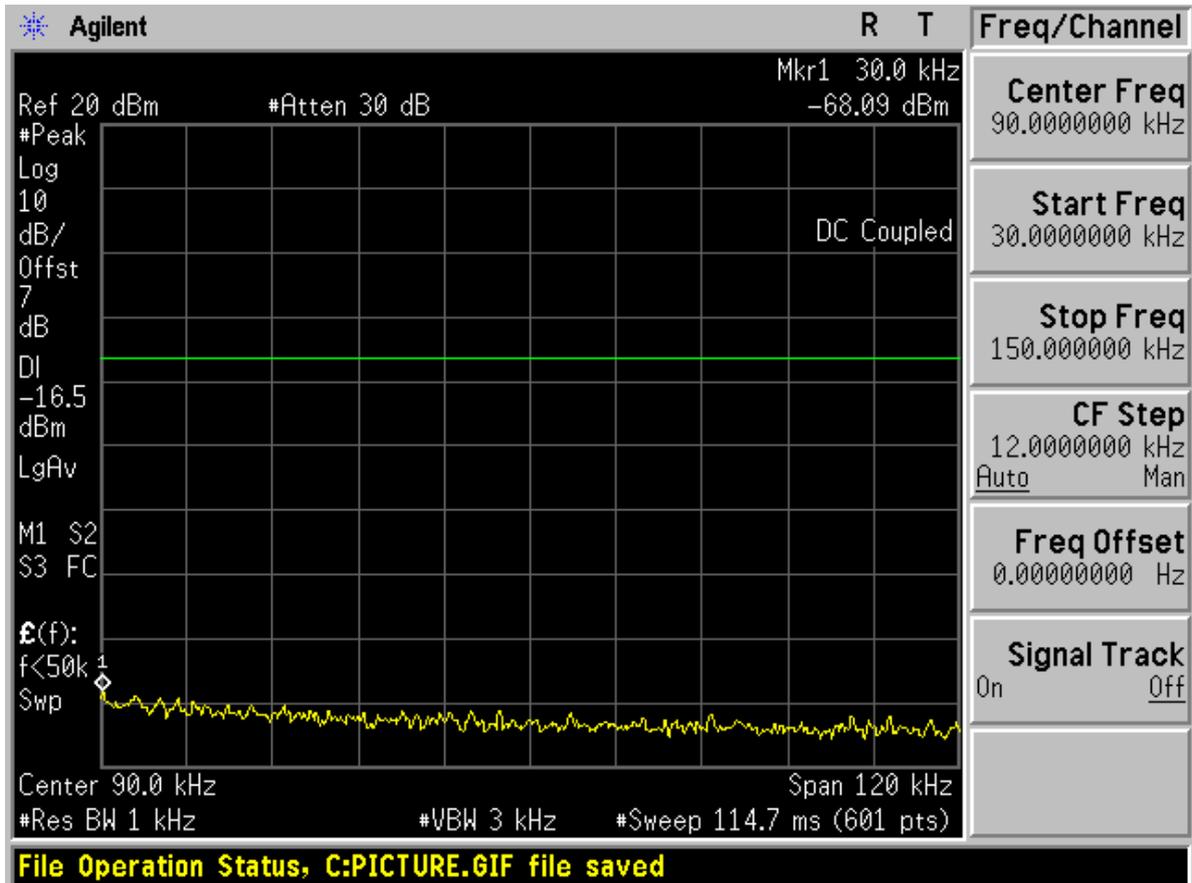
## Conducted RF spurious

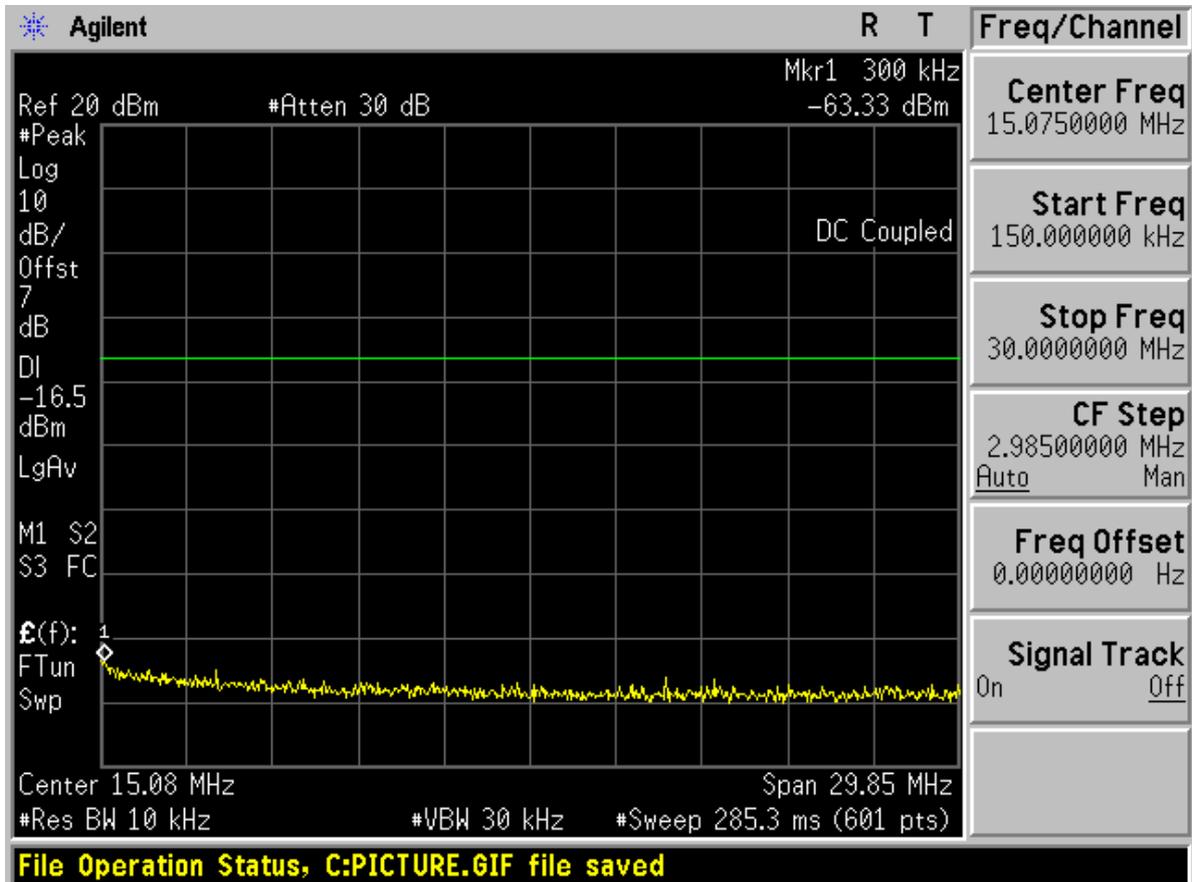
According to FCC Part 15.247 (d)

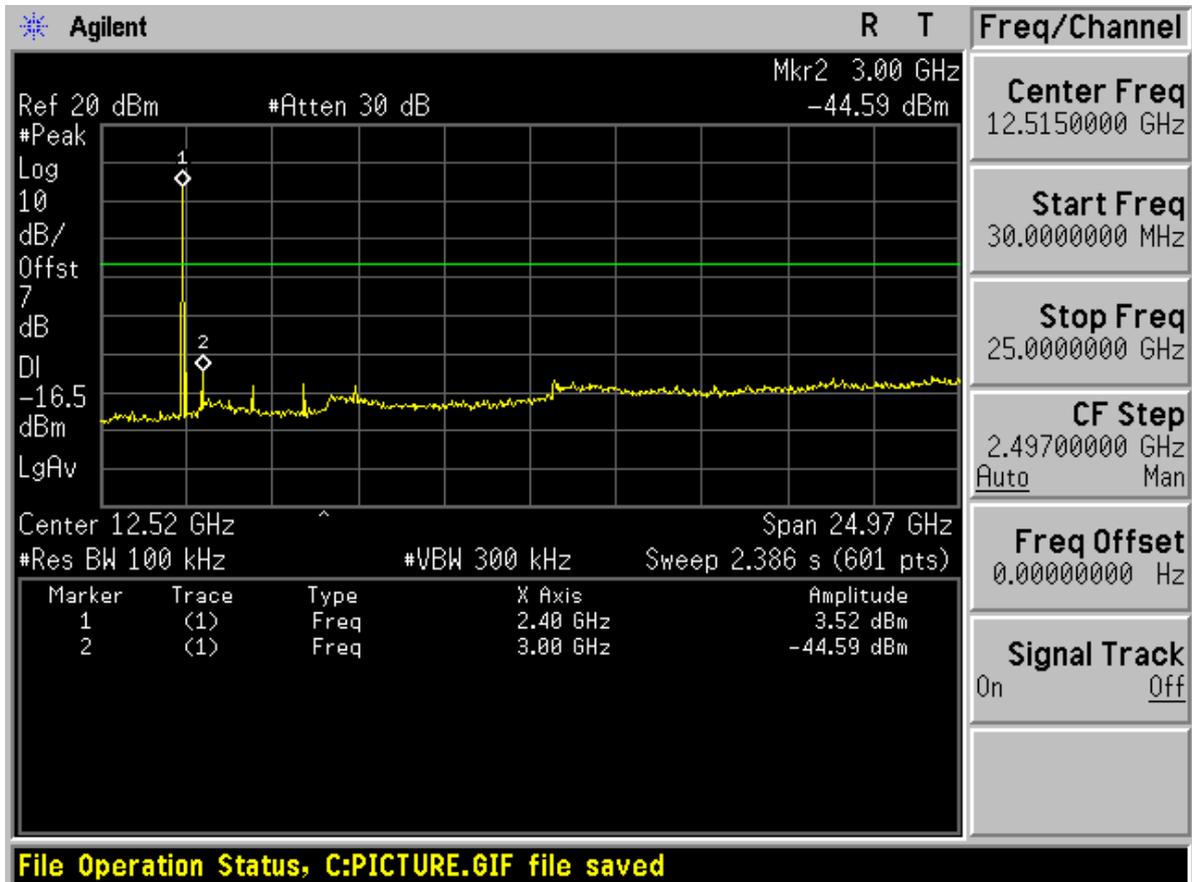


Modulation:  $\pi/4$ -DQPSK

## Channel 0

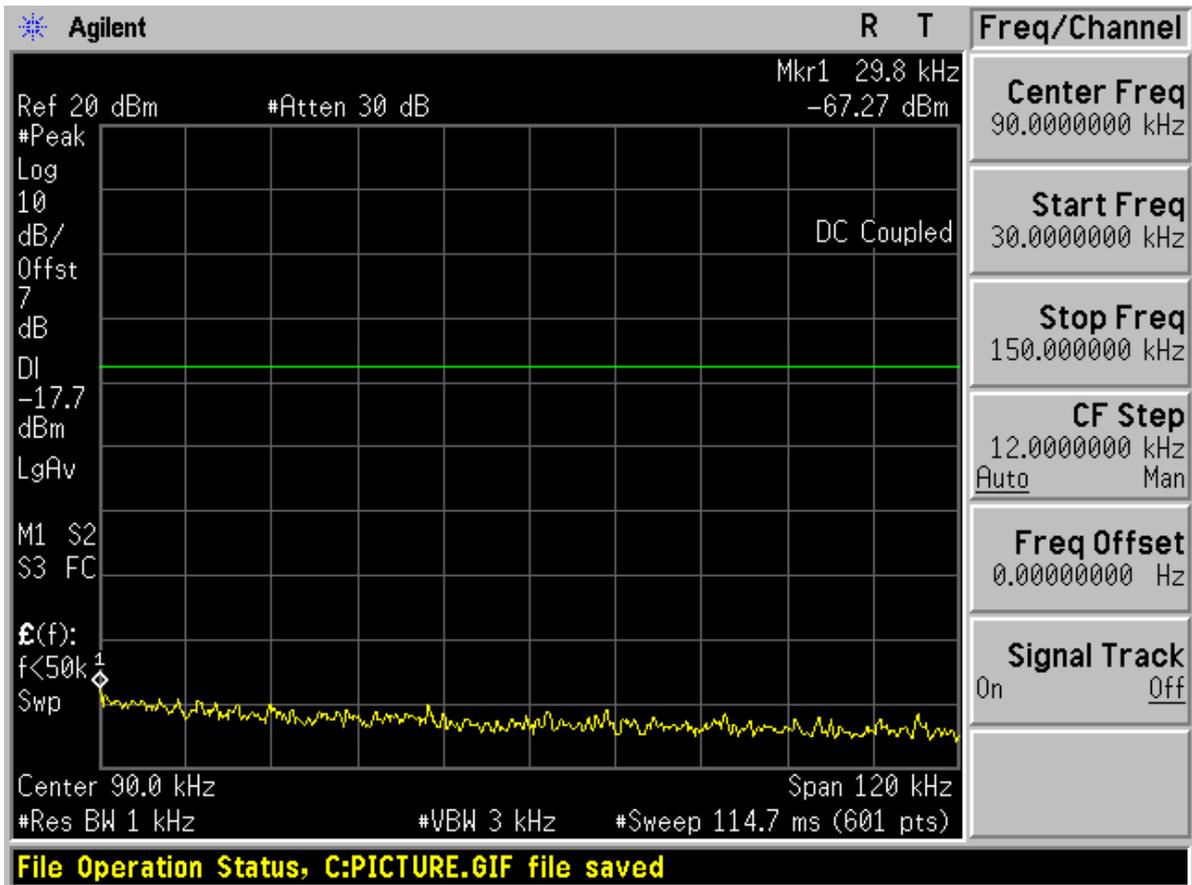


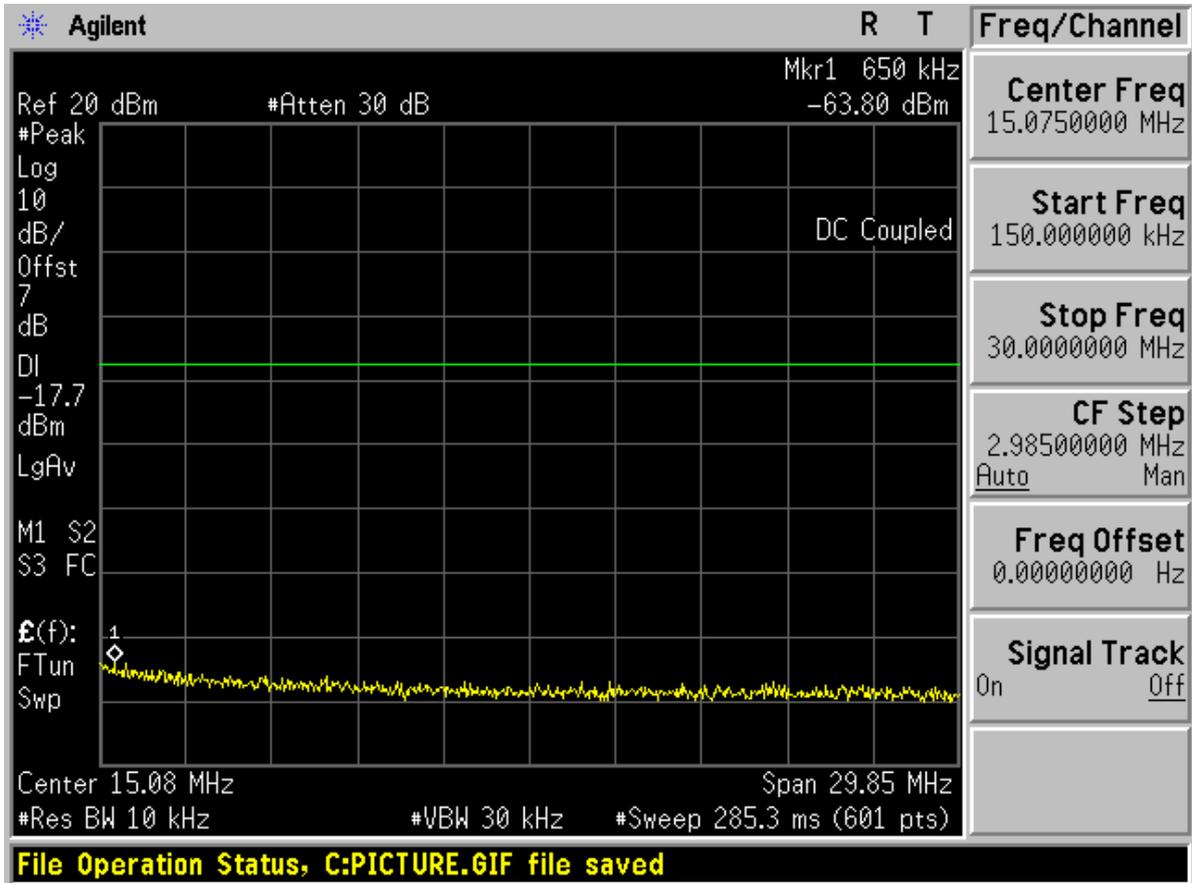


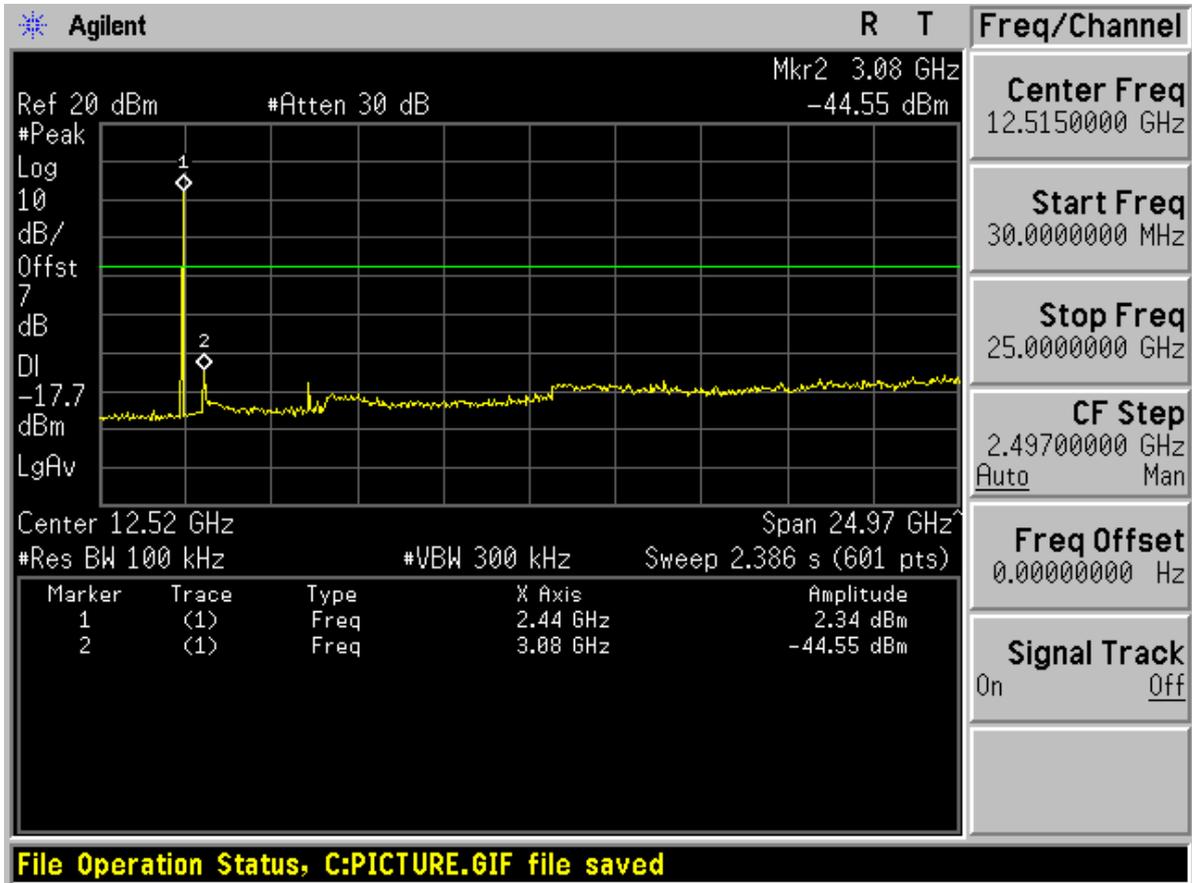




## Channel 40

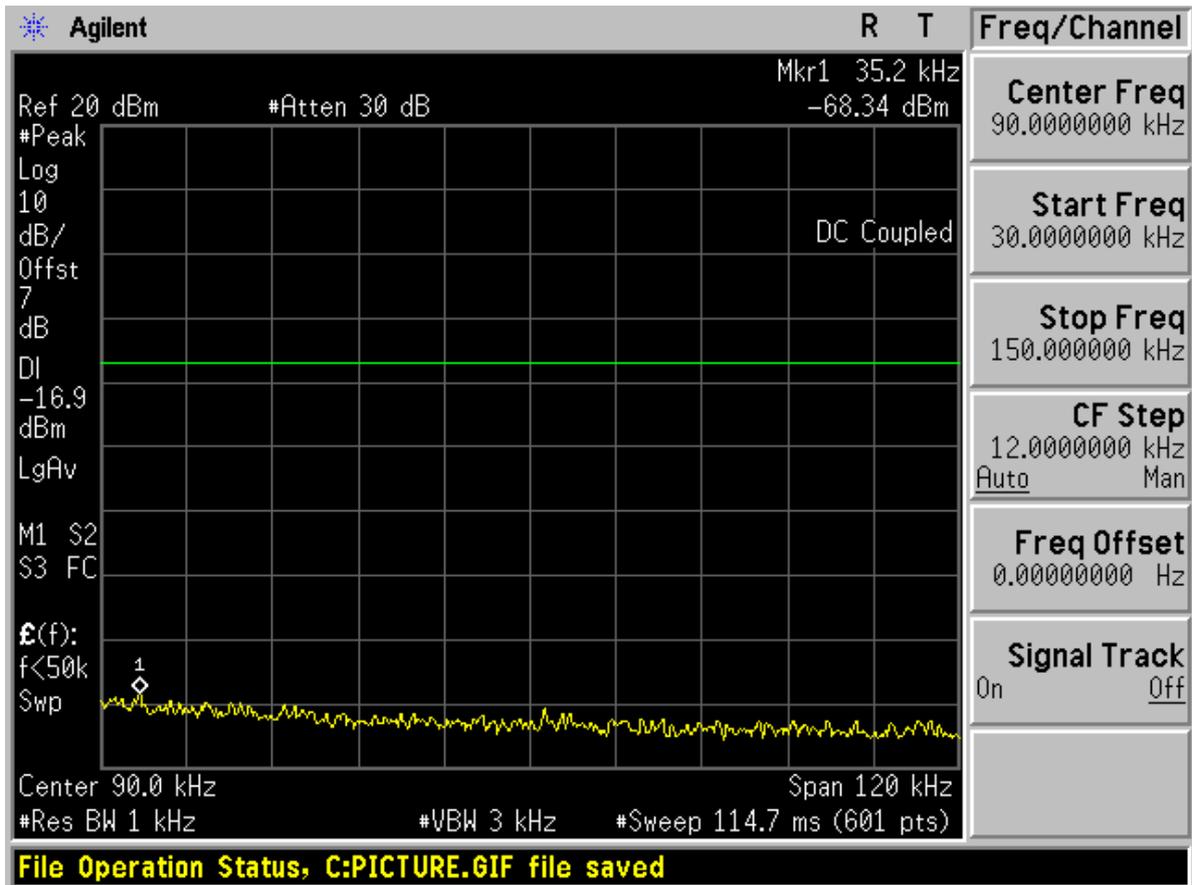


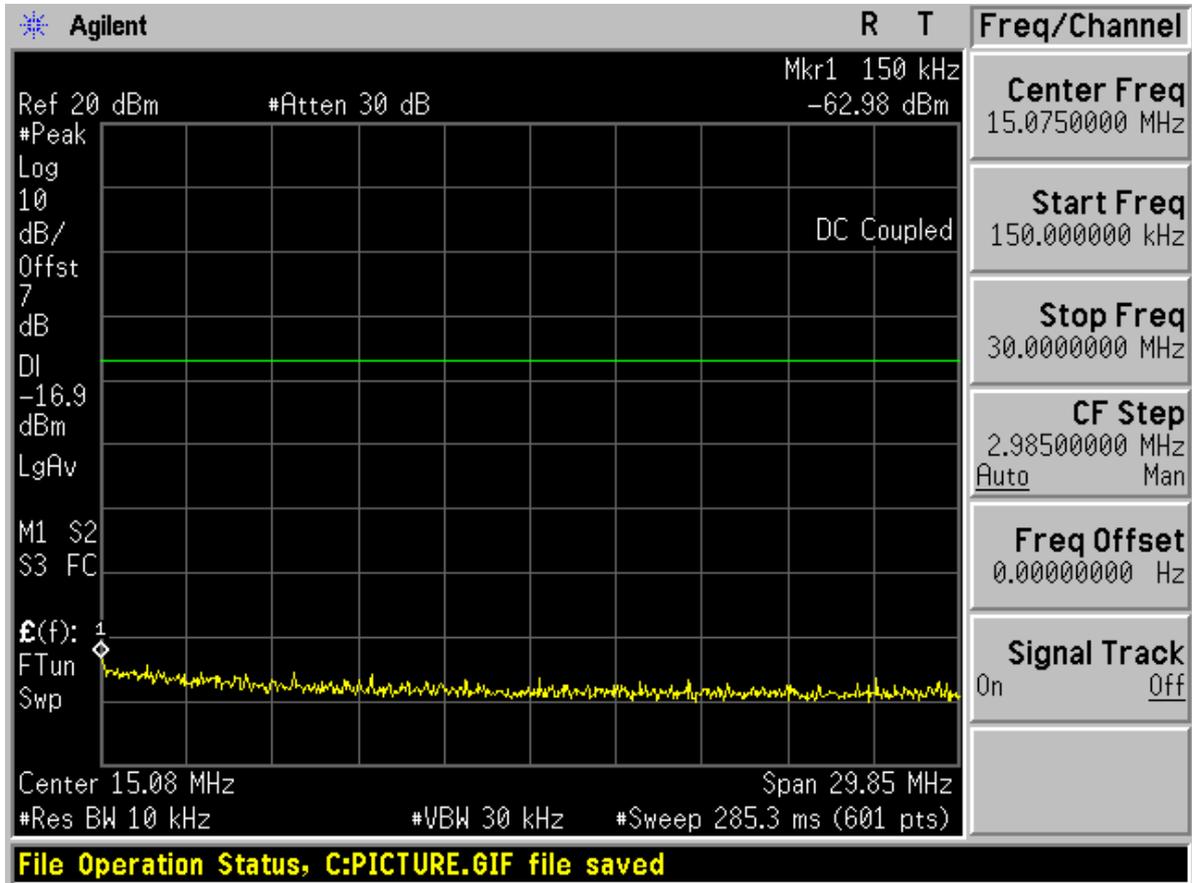


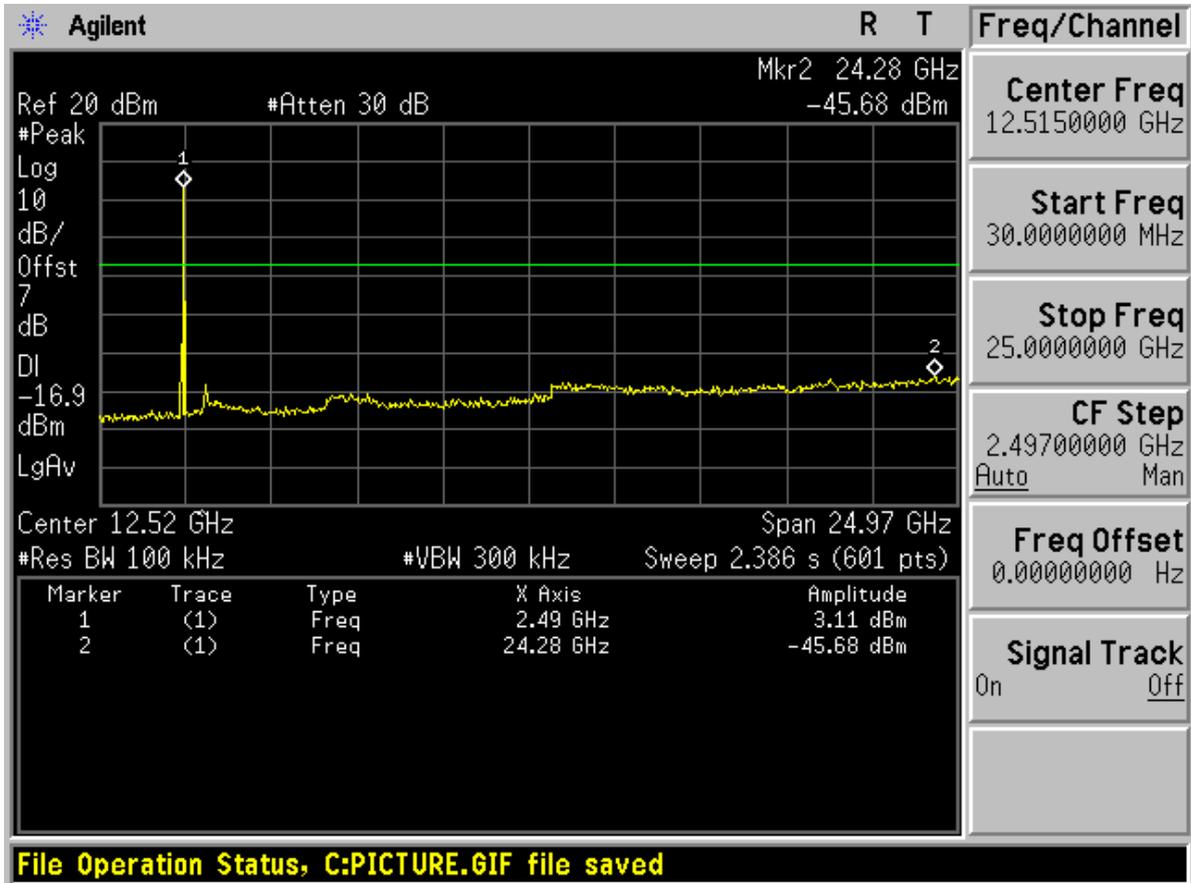




# Channel 78

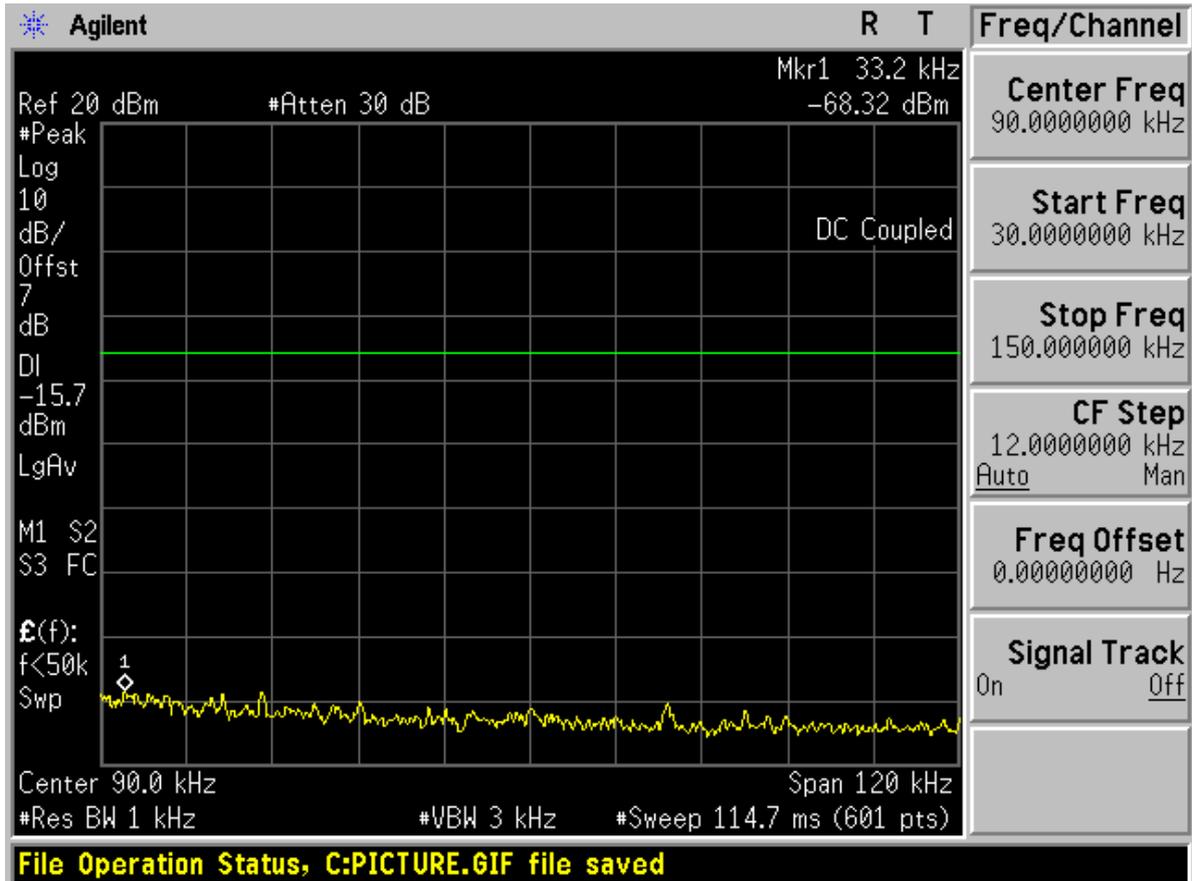


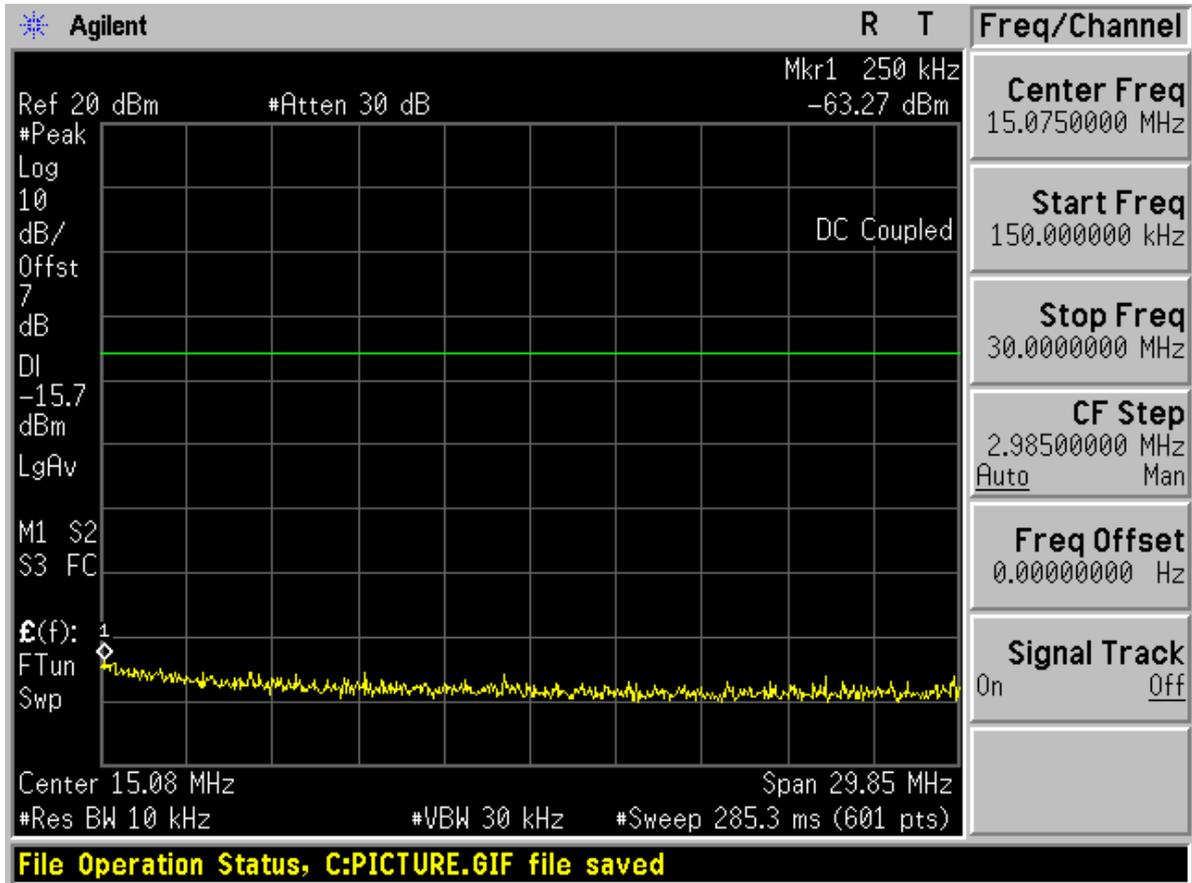


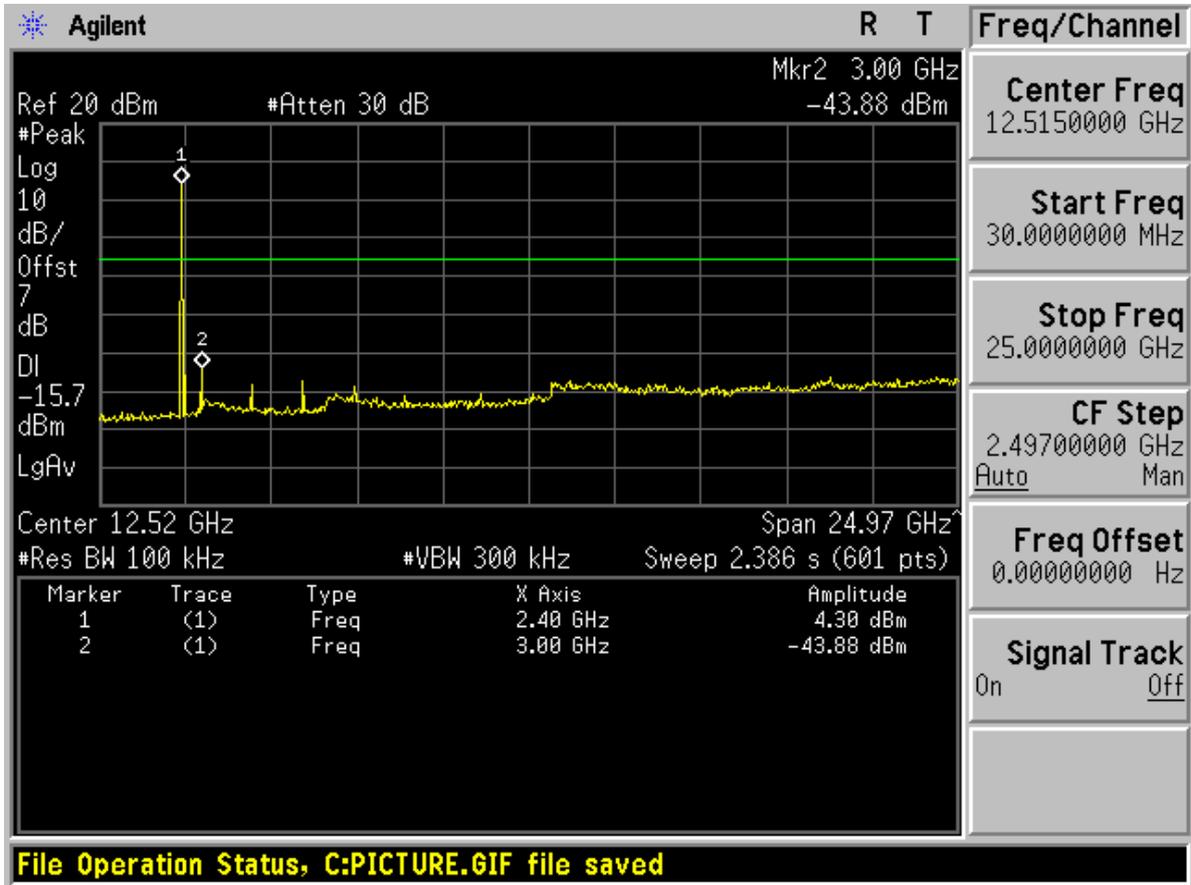




## Modulation: 8DPSK Channel 0

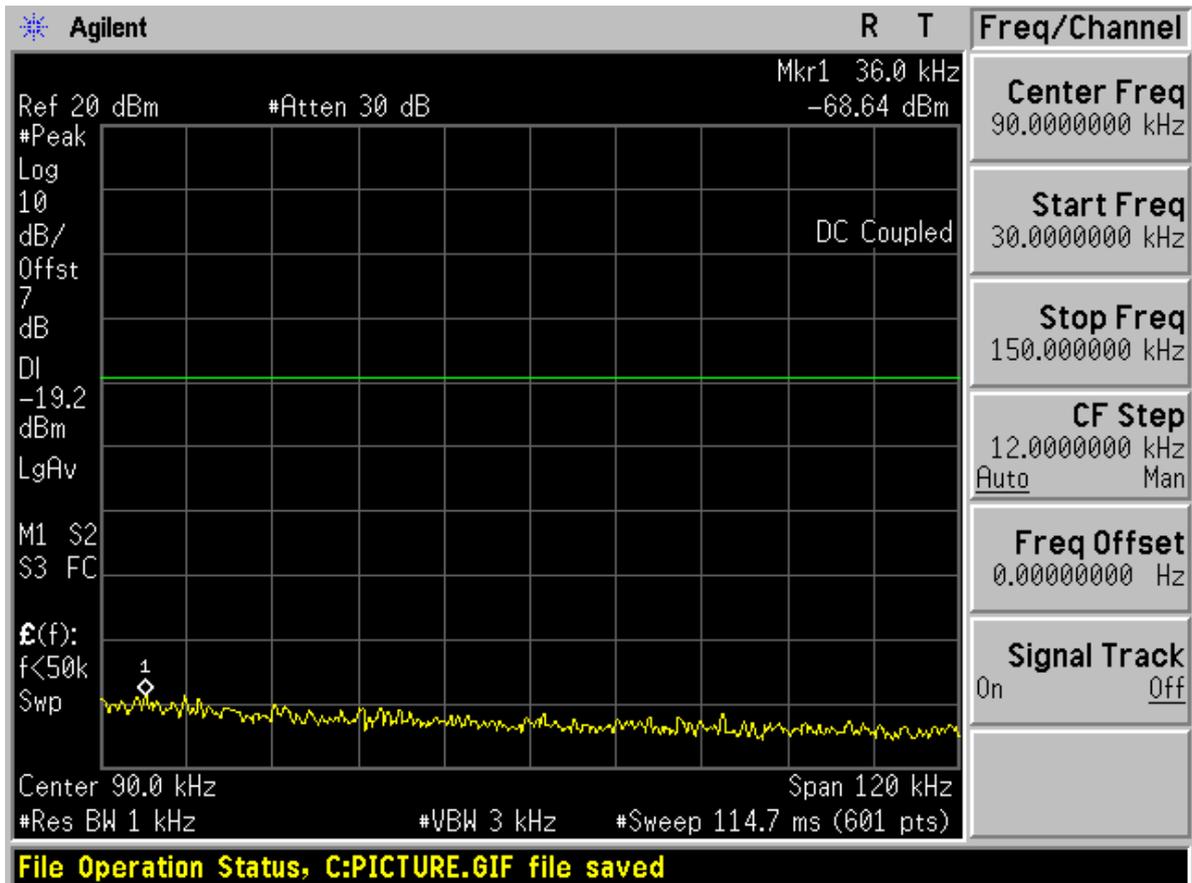


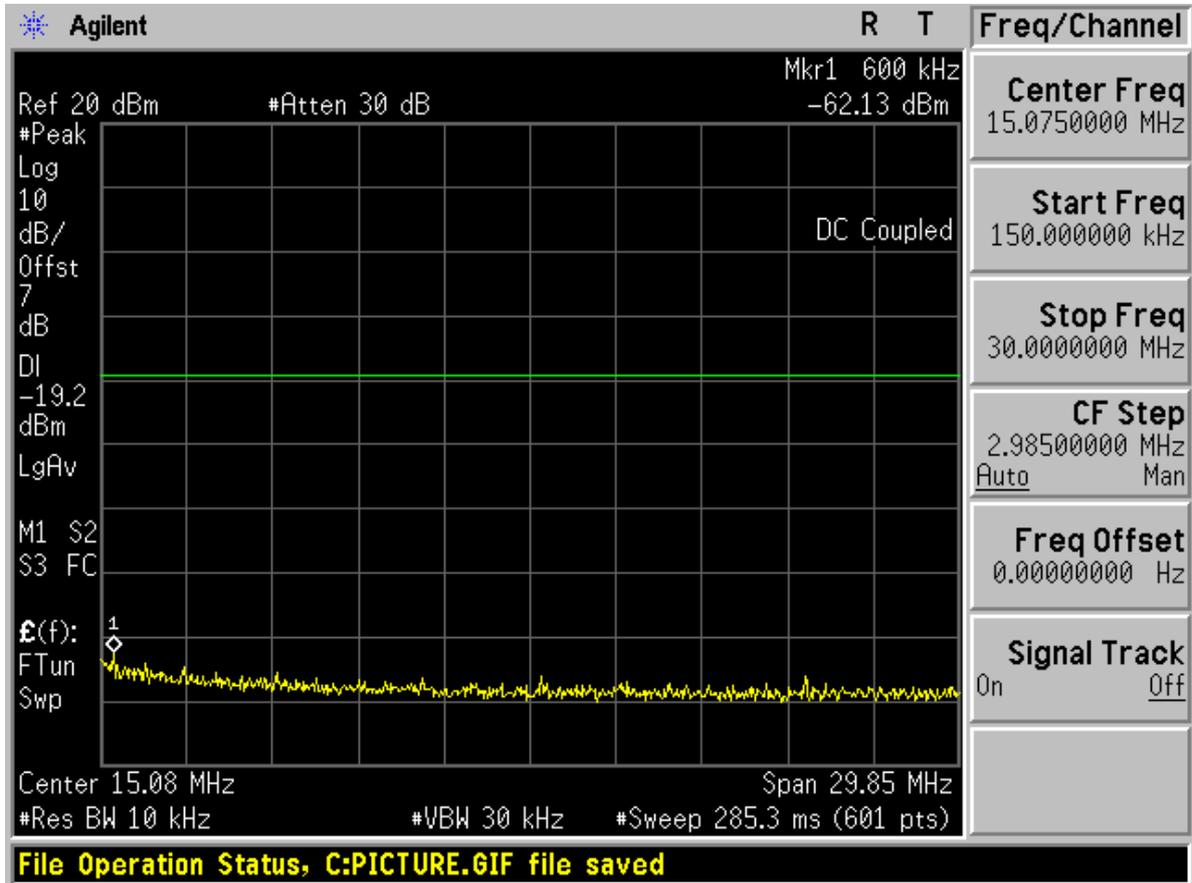


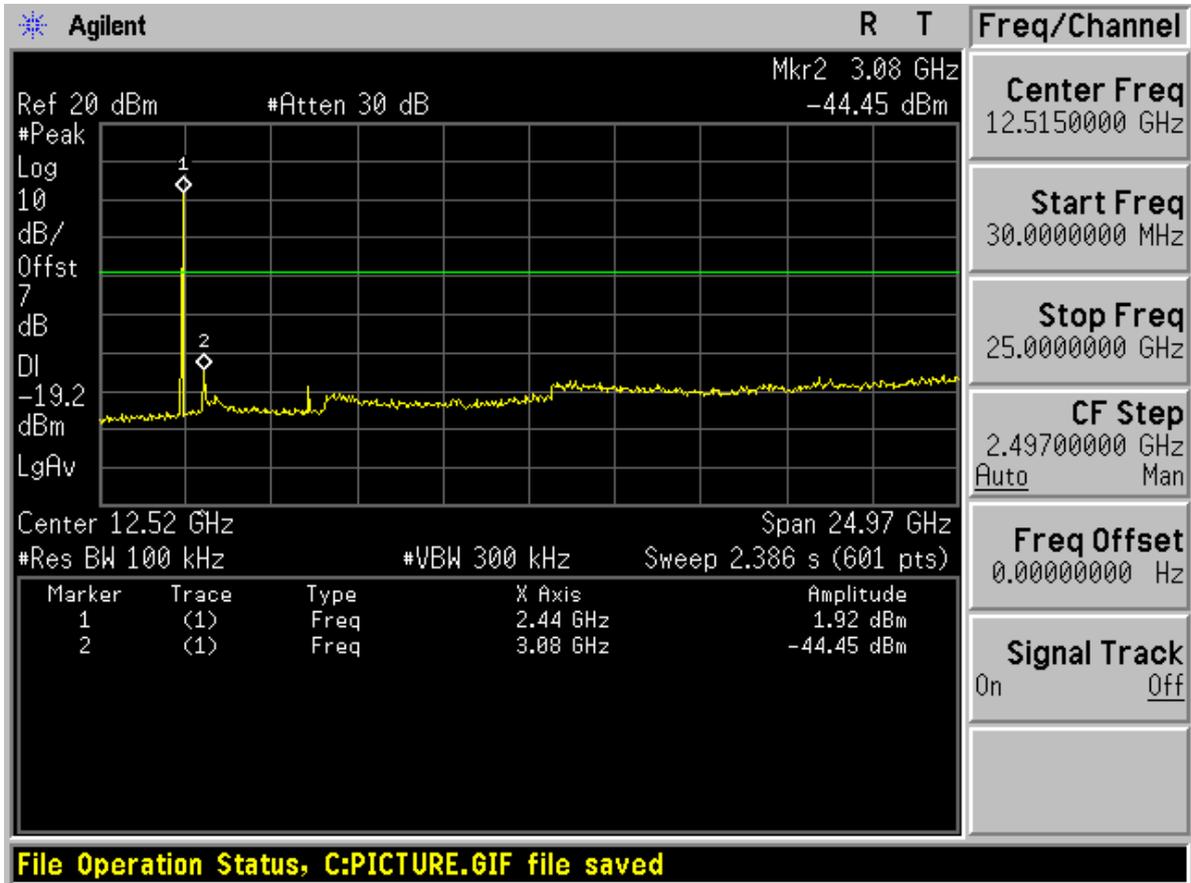




## Channel 40

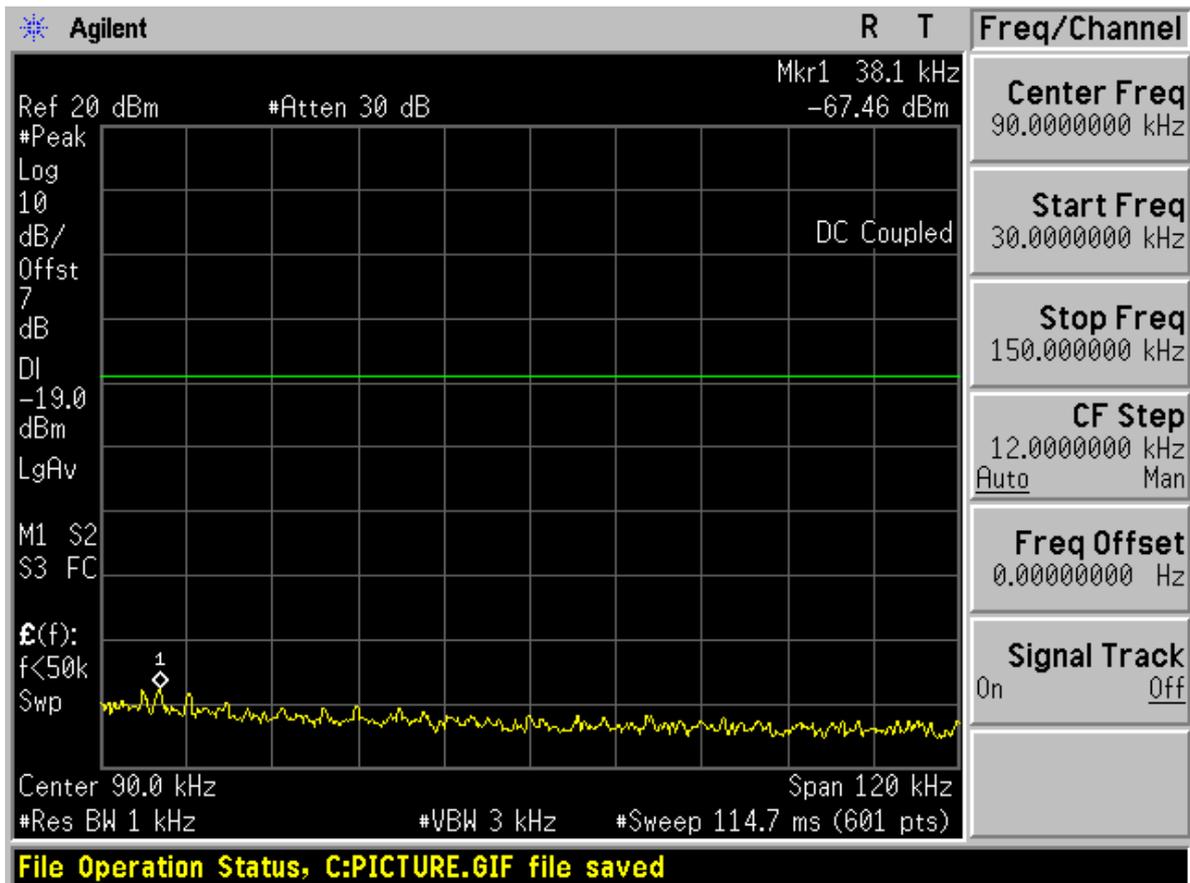


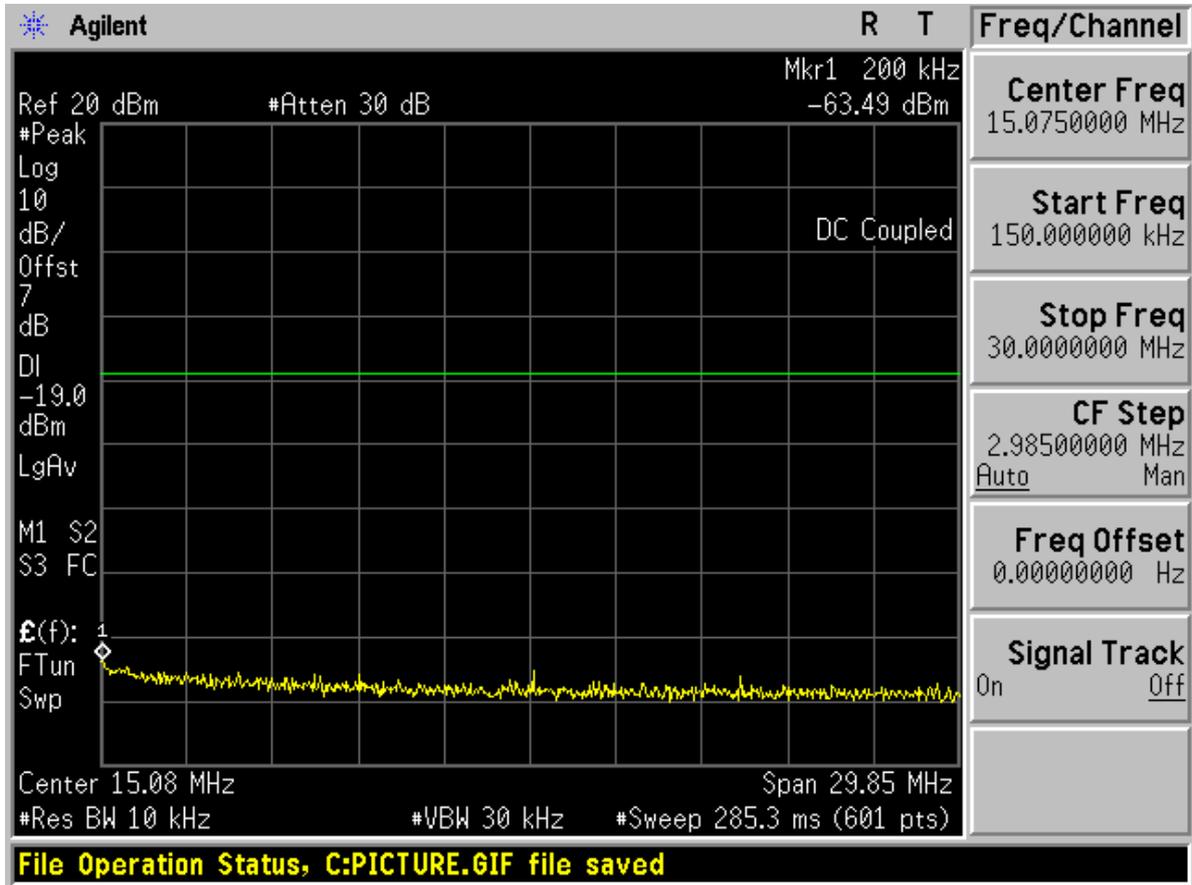


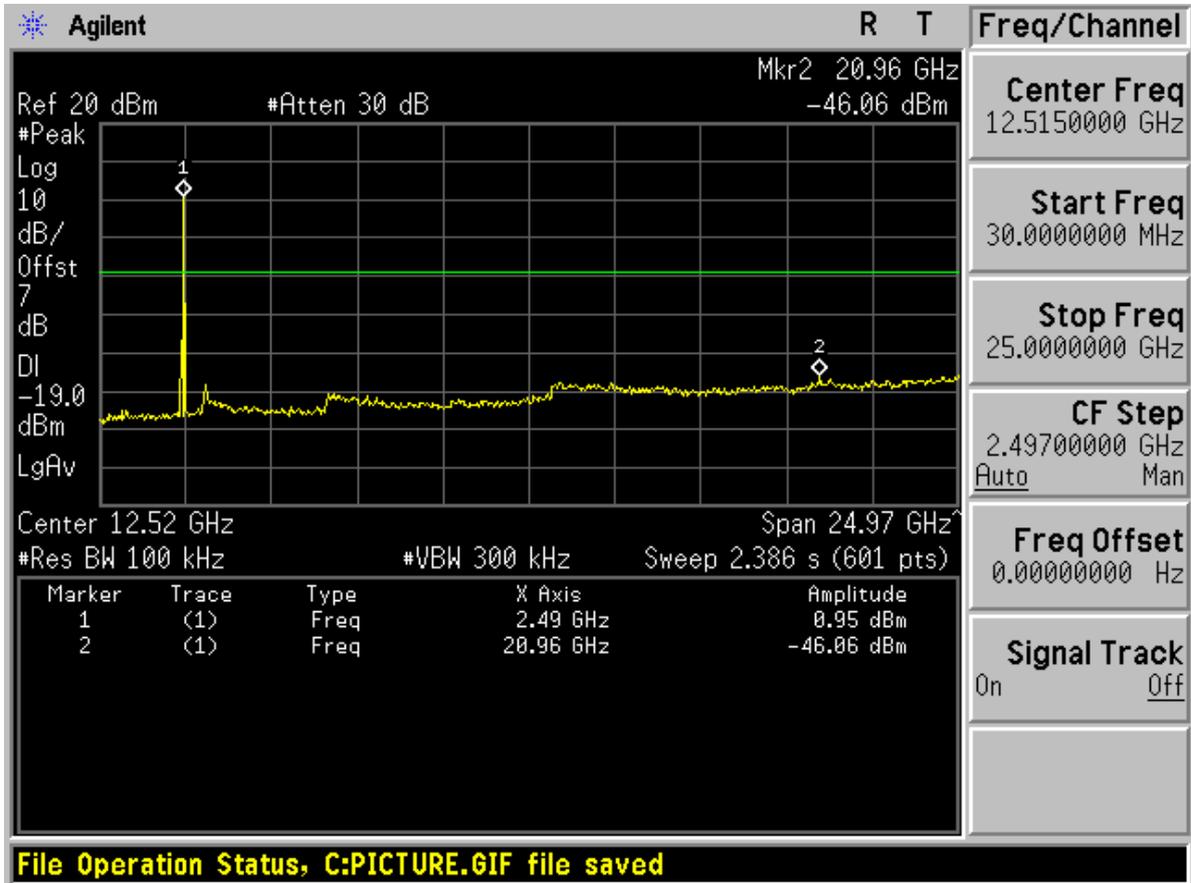




## Channel 78









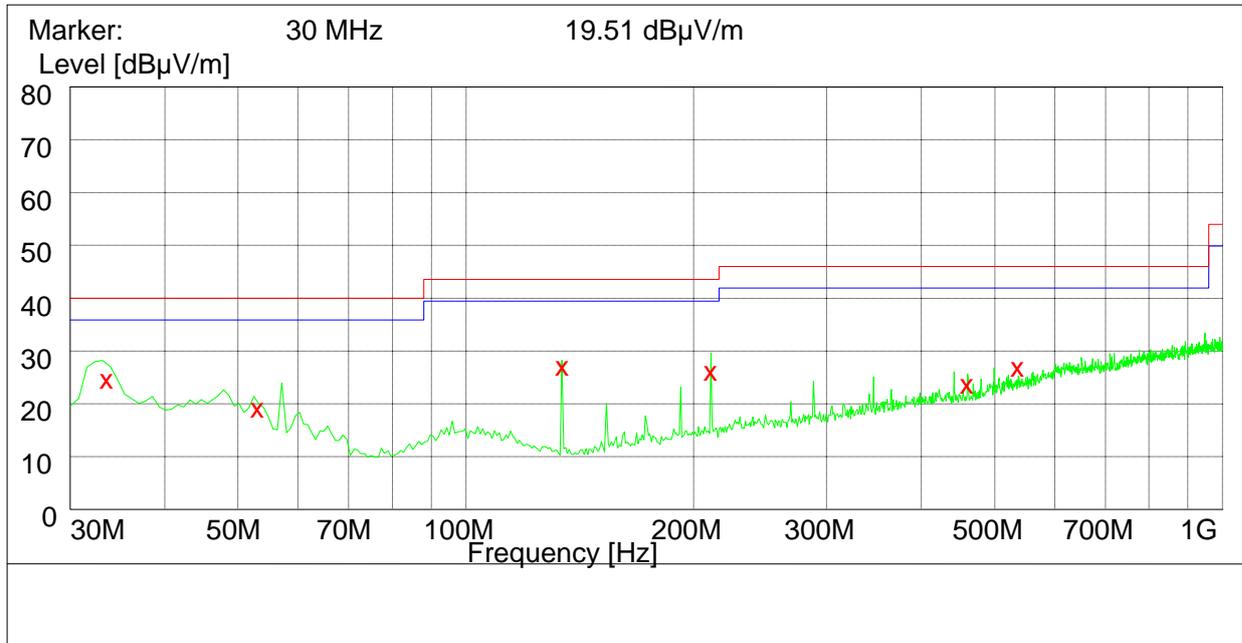
# Appendix H

## Radiated spurious emission

According to FCC Part 15.247 (d) & 15.205 & 15.209



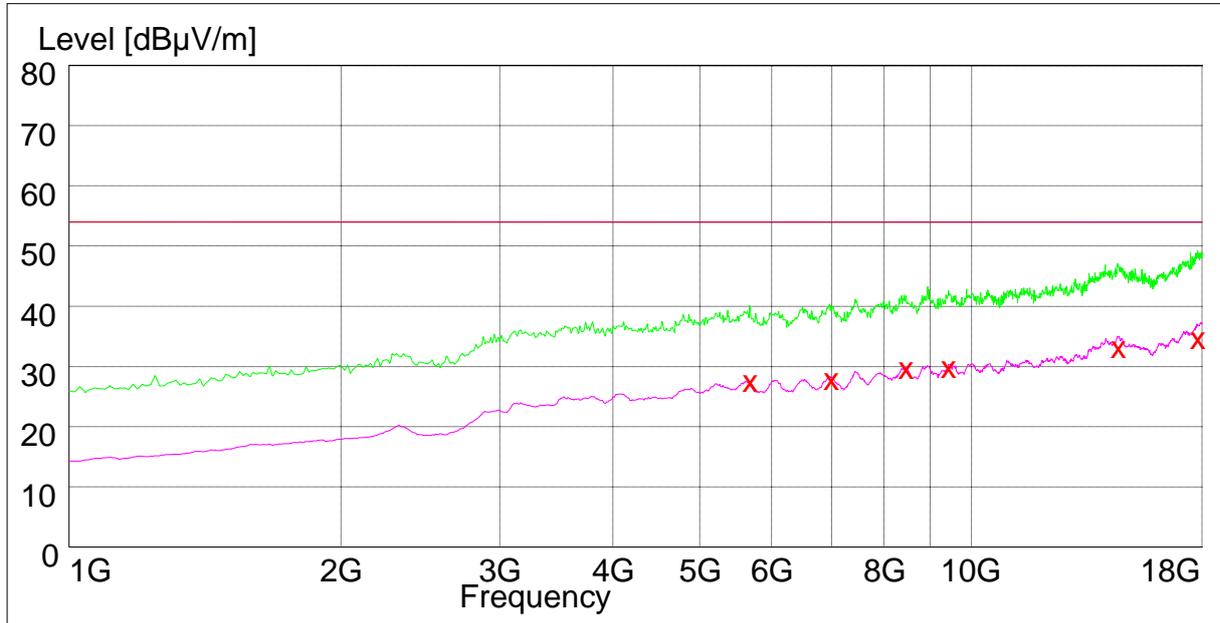
## Channel 0 30MHz to 1GHz



Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Plarization
33.578000	26.10	11.7	40.0	13.9	101.0	201.00	VERTICAL
53.123000	20.60	12.7	40.0	19.4	125.0	532.00	VERTICAL
134.504000	28.60	9.0	43.5	14.9	121.0	251.00	VERTICAL
211.200000	27.70	12.6	43.5	15.8	121.0	212.00	VERTICAL
460.500000	25.10	19.1	46.0	20.9	107.0	30.00	VERTICAL
537.214000	28.30	21.1	46.0	17.7	101.0	254.00	VERTICAL



## 1GHz to 18GHz



Note: Signal suppressed with a 2.4 GHz band rejection filter

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
5681.400000	26.40	-2.1	54.0	27.6	193.0	288.00	HORIZONTAL
6984.500000	28.90	0.2	54.0	25.1	100.0	56.00	HORIZONTAL
8456.800000	30.00	3.0	54.0	24.0	100.0	22.00	VERTICAL
9424.500000	30.80	4.8	54.0	24.2	115.0	237.00	HORIZONTAL
14525.000000	34.60	12.3	54.0	19.4	112.0	124.00	HORIZONTAL
17800.500000	36.10	16.0	54.0	17.9	110.0	102.00	VERTICAL



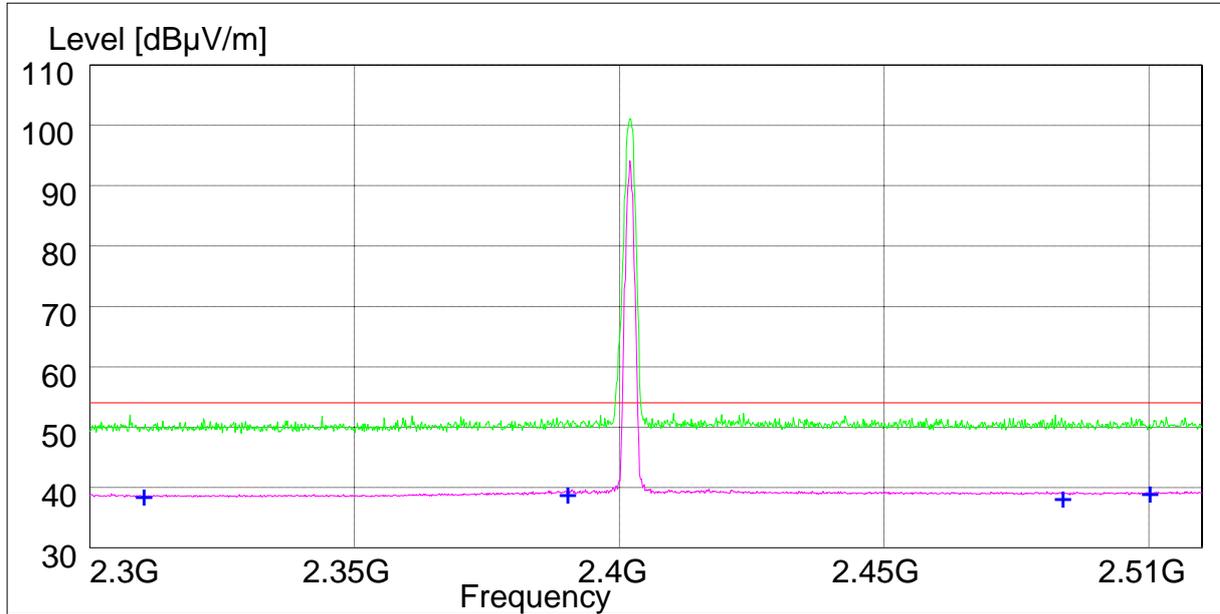
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## 18GHz to 26GHz

Note: No peak found in pre- test.



## 2.30GHz to 2.51GHz

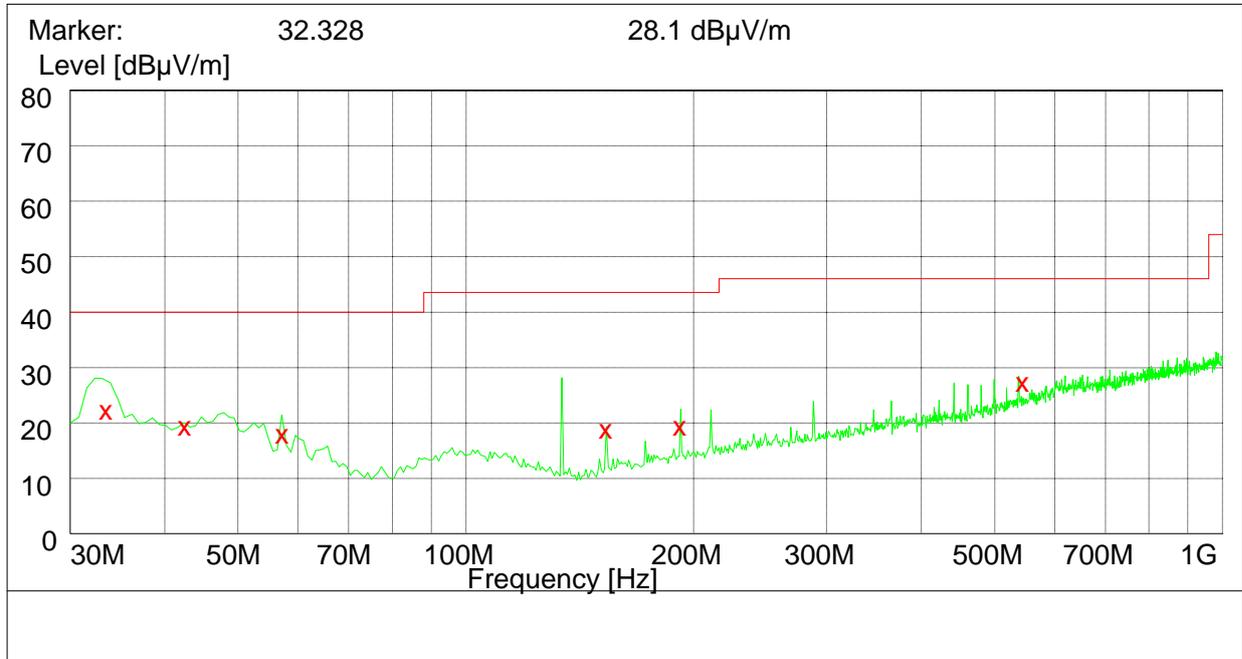


Note: The highest peak exceeds the limit line is carrier frequency.

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2310.000000	39.50	33.3	54.0	14.5	102.0	310.00	HORIZONTAL
2390.000000	39.60	33.5	54.0	14.4	122.0	237.00	HORIZONTAL
2483.500000	39.20	33.7	54.0	14.8	107.0	107.00	HORIZONTAL
2500.000000	38.50	33.5	54.0	15.5	105.0	227.00	HORIZONTAL



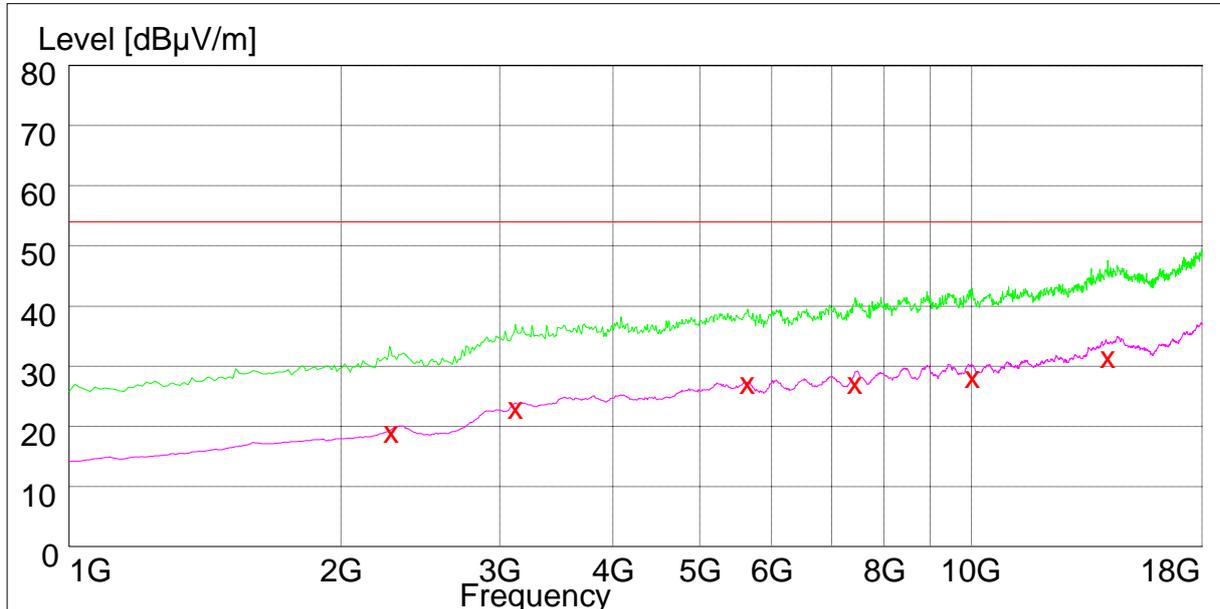
## Channel 40 30MHz to 1GHz



Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
33.510000	23.60	11.7	40.0	16.4	125.0	125.00	VERTICAL
42.592000	20.70	13.1	40.0	19.3	103.0	143.00	VERTICAL
57.325000	19.30	12.7	40.0	20.7	125.0	276.00	VERTICAL
153.541000	20.10	9.1	43.5	23.4	143.0	221.00	VERTICAL
192.145000	20.70	10.9	43.5	22.8	109.0	209.00	VERTICAL
545.521000	28.70	21.3	46.0	17.3	103.0	274.00	VERTICAL



## 1GHz to 18GHz



Note: Signal suppressed with a 2.4 GHz band rejection filter

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2272.120000	19.50	-11.8	54.0	34.5	111.0	125.00	VERTICAL
3124.124000	23.50	-8.6	54.0	30.5	102.0	124.00	VERTICAL
5642.700000	27.10	-2.2	54.0	26.9	102.0	123.00	HORIZONTAL
7427.400000	28.60	1.2	54.0	25.4	156.0	257.00	VERTICAL
10010.800000	29.70	5.1	54.0	24.3	163.0	11.00	VERTICAL
14147.700000	32.90	11.3	54.0	21.1	169.0	359.00	HORIZONTAL



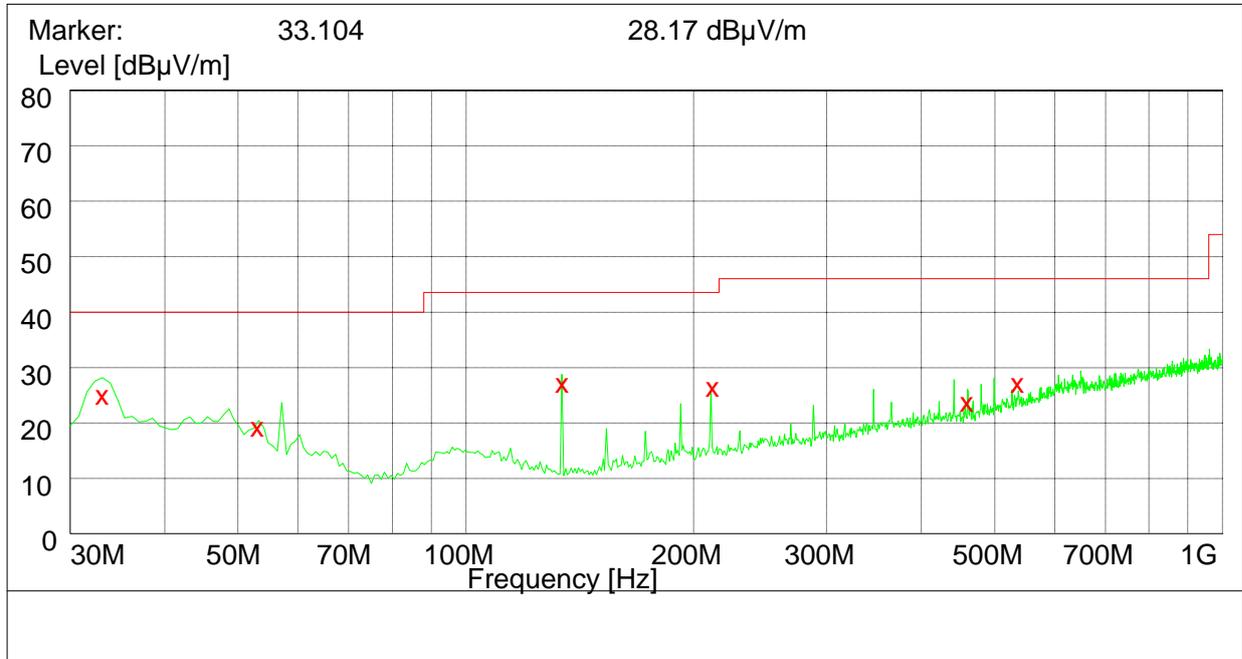
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## 18GHz to 26GHz

Note: No peak found in pre- test.



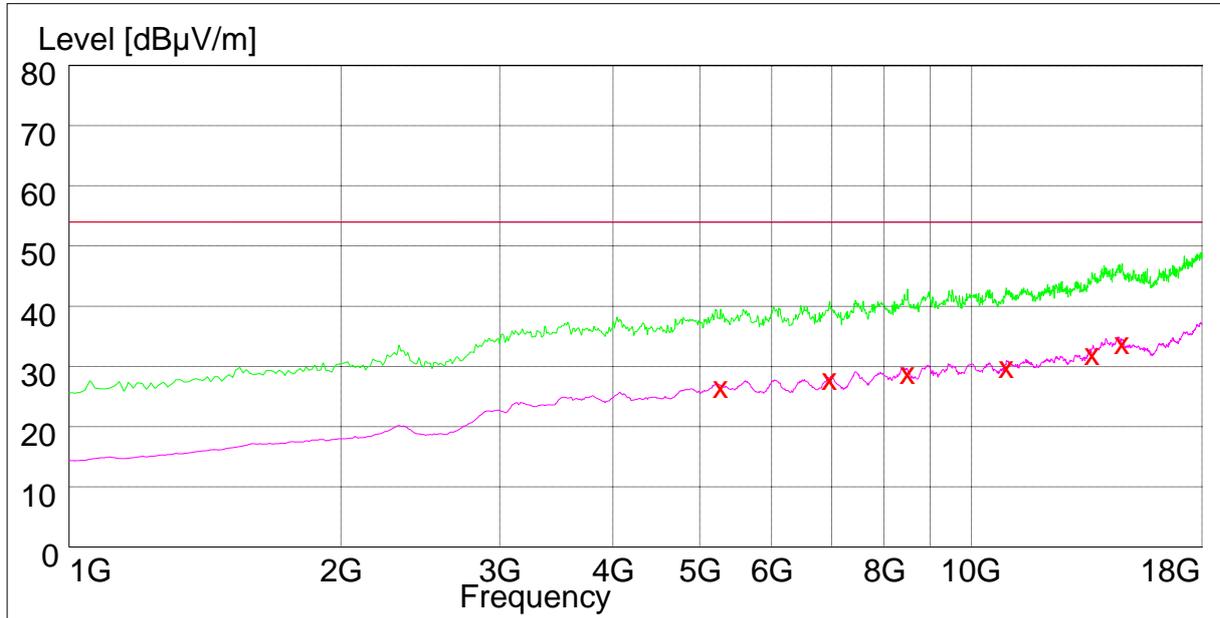
## Channel 78 30MHz to 1GHz



Frequency MHz	Level dB $\mu$ V/m	Transd dB	Limit dB $\mu$ V/m	Margin dB	Height cm	Azimuth deg	Polarization
33.147000	26.20	11.7	40.0	13.8	151.0	151.00	VERTICAL
53.152000	20.60	12.7	40.0	19.4	125.0	32.00	VERTICAL
134.500000	28.60	9.0	43.5	14.9	101.0	151.00	VERTICAL
212.500000	27.70	12.6	43.5	15.8	101.0	12.00	VERTICAL
460.500000	25.10	19.1	46.0	20.9	107.0	30.00	VERTICAL
537.100000	28.40	21.1	46.0	17.6	151.0	204.00	VERTICAL



## 1GHz to 18GHz



Note: Signal suppressed with a 2.4 GHz band rejection filter

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
5,268.942000	26.90	-2.8	54.0	27.1	140.0	218.00	HORIZONTAL
6,953.342000	27.90	0.1	54.0	26.1	114.0	155.00	HORIZONTAL
8,487.142000	29.20	3.0	54.0	24.8	120.0	101.00	HORIZONTAL
10,921.542000	30.20	6.5	54.0	23.8	145.0	172.00	VERTICAL
13,591.642000	32.70	10.2	54.0	21.3	107.0	207.00	VERTICAL
14,675.642000	34.10	11.8	54.0	19.9	156.0	75.00	VERTICAL



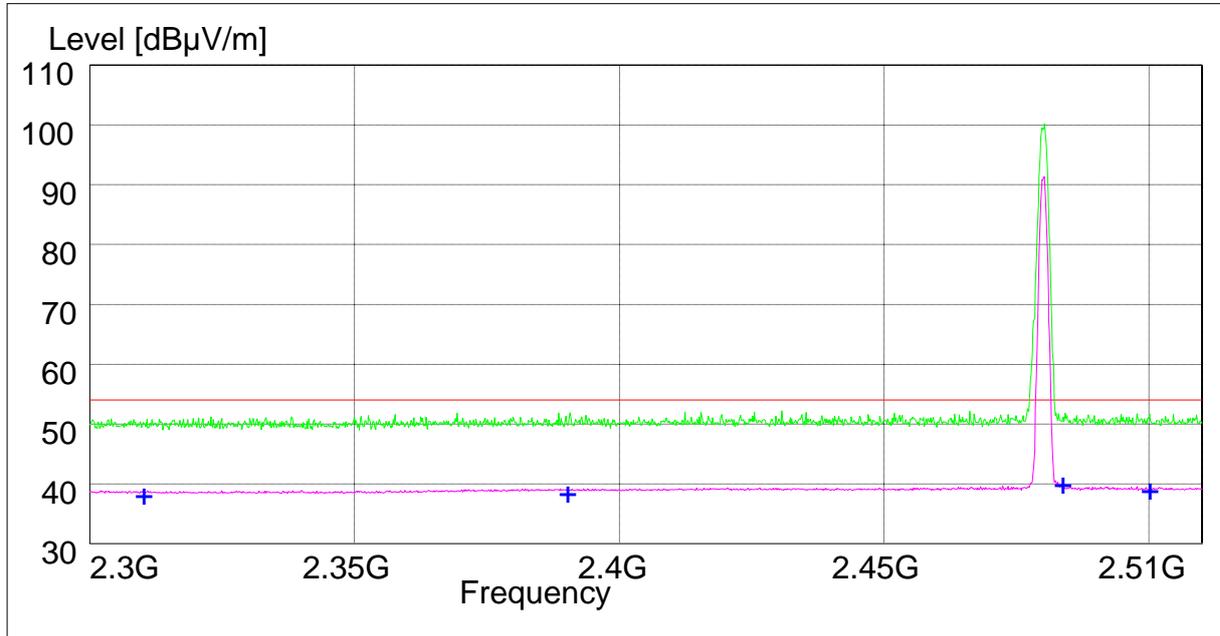
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## 18GHz to 26GHz

Note: No peak found in pre- test.



## 2.30GHz to 2.51GHz



Note: The highest peak exceeds the limit line is carrier frequency.

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2310.000000	39.40	33.3	54.0	14.7	182.0	58.00	VERTICAL
2390.000000	39.60	33.5	54.0	14.4	122.0	18.00	VERTICAL
2483.500000	39.80	33.7	54.0	14.2	102.0	208.00	VERTICAL
2500.000000	39.60	33.8	54.0	14.4	142.0	308.00	VERTICAL



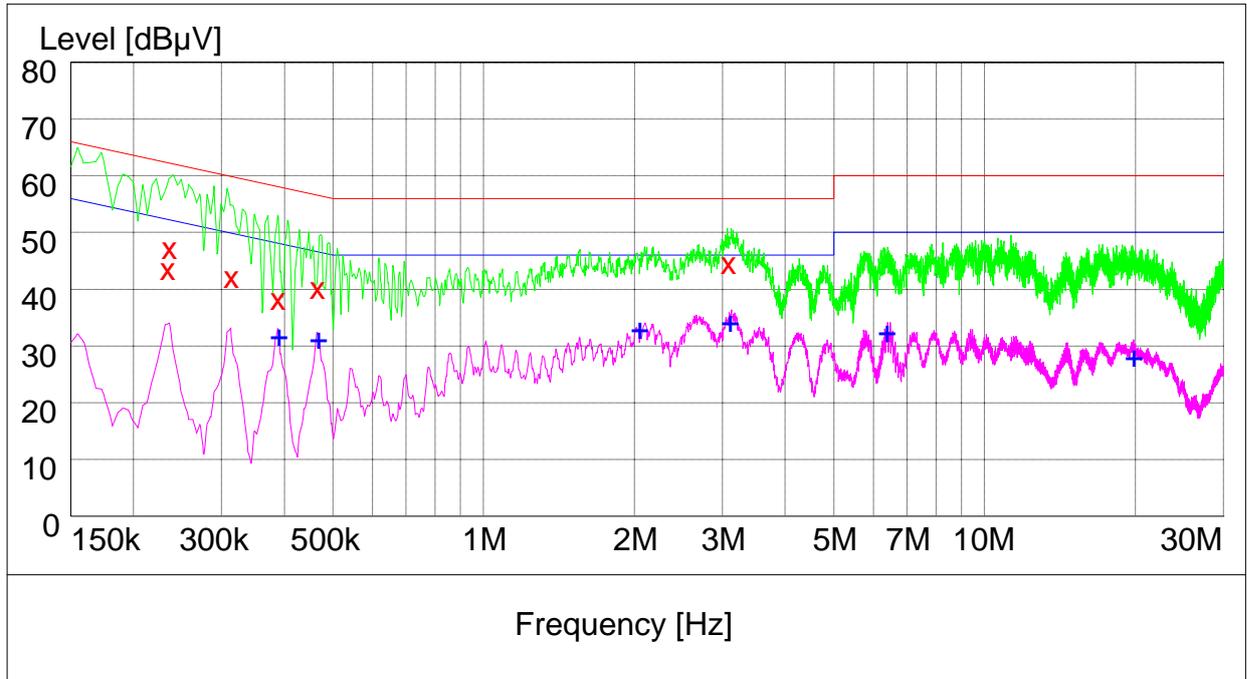
# Appendix I

## Conducted Emission at Power Port

According to FCC Part 15.207



## Channel 40



### MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.234000	44.40	10.0	62	17.6	N	GND
0.236000	47.90	10.0	62	14.1	N	GND
0.314000	43.70	10.0	60	16.3	N	GND
0.388000	39.20	10.0	58	18.8	N	GND
0.466000	40.10	10.1	57	16.9	N	GND
3.086000	45.60	10.2	56	10.4	N	GND

### MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.388000	32.90	10.0	48	15.1	N	GND
0.466000	32.50	10.1	47	14.5	N	GND
2.040000	34.20	10.1	46	11.8	N	GND
3.096000	35.50	10.2	46	10.5	N	GND
6.354000	33.70	10.2	50	16.3	N	GND
19.774000	29.40	10.4	50	20.6	N	GND