



Appendix C

Occupied Bandwidth

According to FCC part 2.1049 & Part 27 Subpart C&M
According to IC RSS-Gen, §4.6



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Result Table

NOTE: All relevant operation modes have been tested, and the full RB data is included in this report.

Table 1 Measurement Results (LTE) BAND 17

Test Mode	Carrier Conf.	RF Ch.	Occupied Bandwidth [MHz]	Verdict
TM1	5 MHz	B	4.4634	Pass
		M	4.4677	Pass
		T	4.4603	Pass
	10 MHz	B	8.9376	Pass
		M	8.9573	Pass
		T	8.9378	Pass
TM2	5 MHz	B	4.4716	Pass
		M	4.4859	Pass
		T	4.4716	Pass
	10 MHz	B	8.9179	Pass
		M	8.9305	Pass
		T	8.9516	Pass



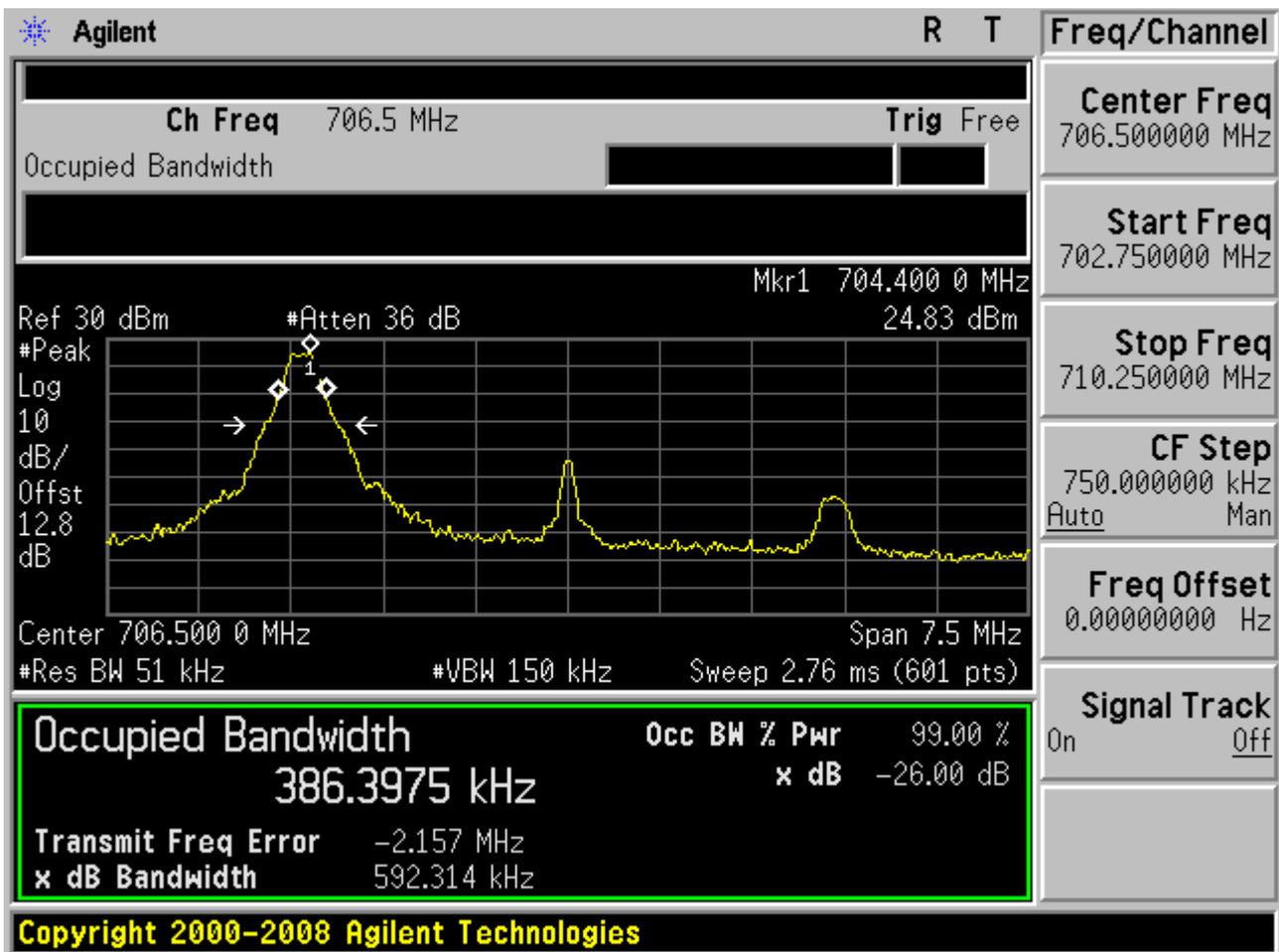
1 For Band 17

1.1 Test Mode=TM1

1.1.1 Channel Bandwidth = 5 MHz

1.1.1.1 Channel = B

1.1.1.1.1 QPSK/1RB # 0





1.1.1.1.2 QPSK/1RB # max

Agilent R T

Ch Freq 706.5 MHz **Trig** Free

Occupied Bandwidth [Bar]

Ref 30 dBm #Atten 36 dB

#Peak Mkr1 708.712 5 MHz

Log 24.35 dBm

10

dB/

Offst

12.8

dB

Center 706.500 0 MHz Span 7.5 MHz

#Res BW 51 kHz #VBW 150 kHz

Sweep 2.76 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
379.8071 kHz	x dB	-26.00 dB
Transmit Freq Error	2.151 MHz	
x dB Bandwidth	597.953 kHz	

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq
706.500000 MHz

Start Freq
702.750000 MHz

Stop Freq
710.250000 MHz

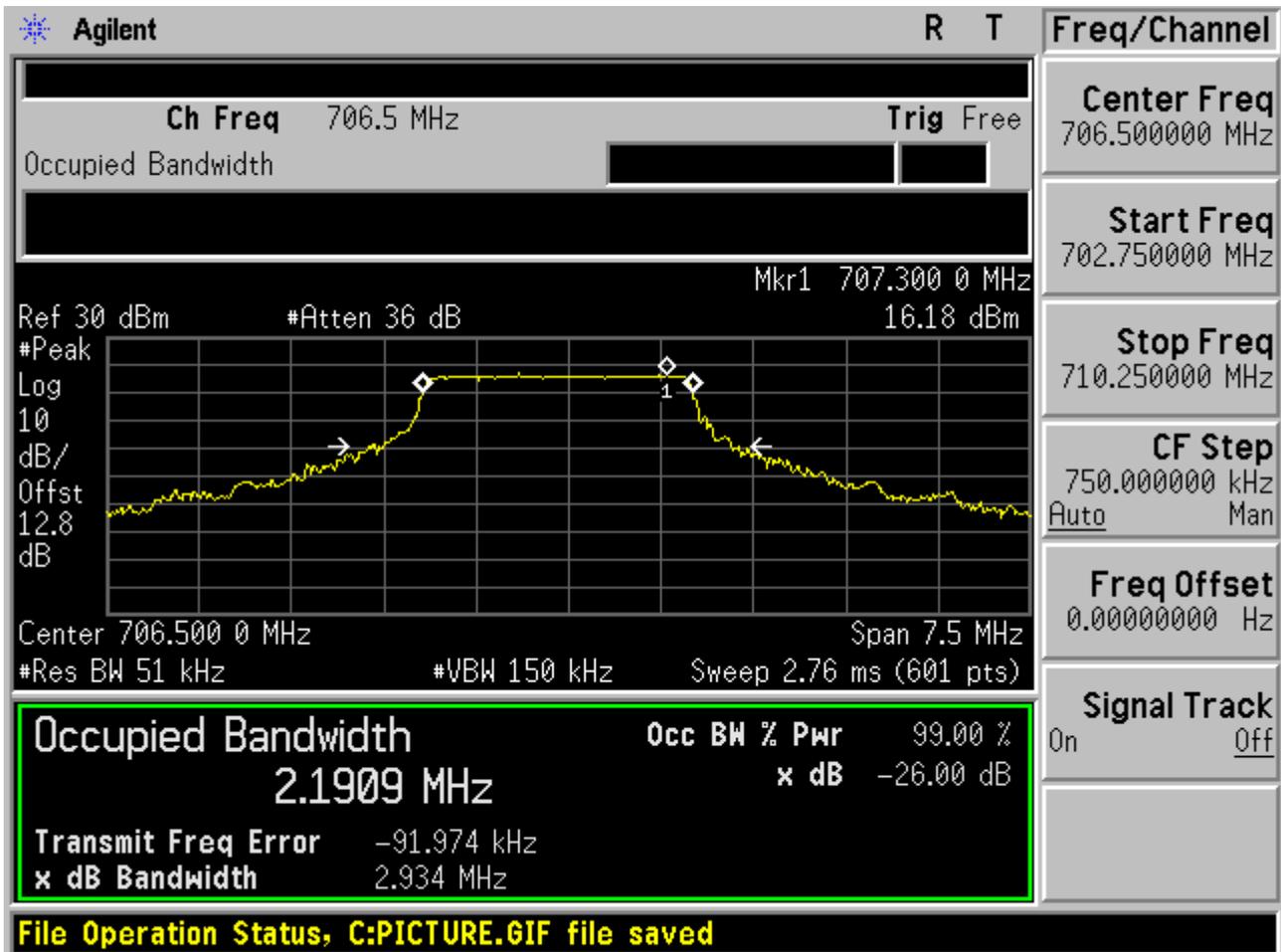
CF Step
750.000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

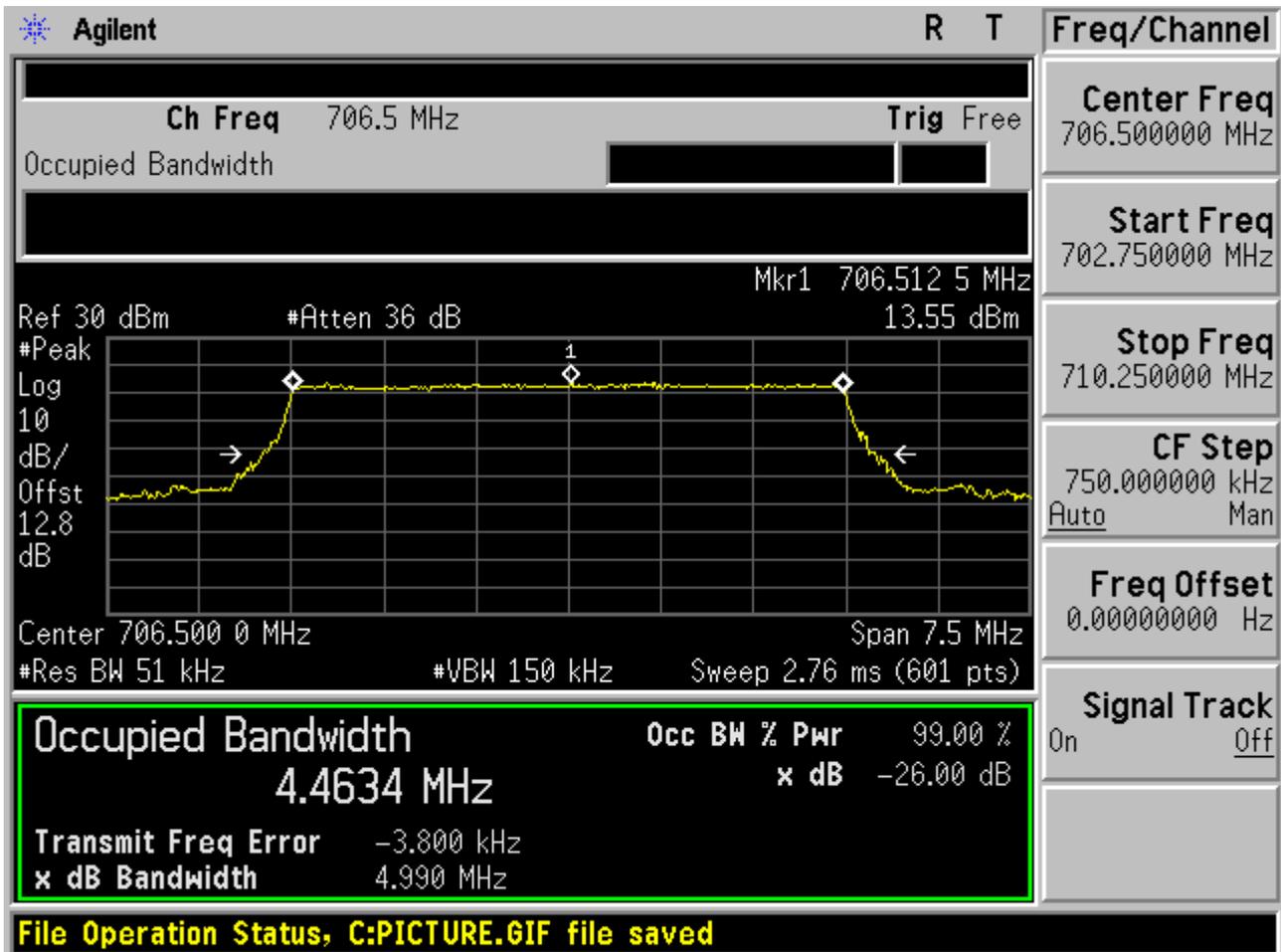


1.1.1.1.3 QPSK/non-1RB #mid/2





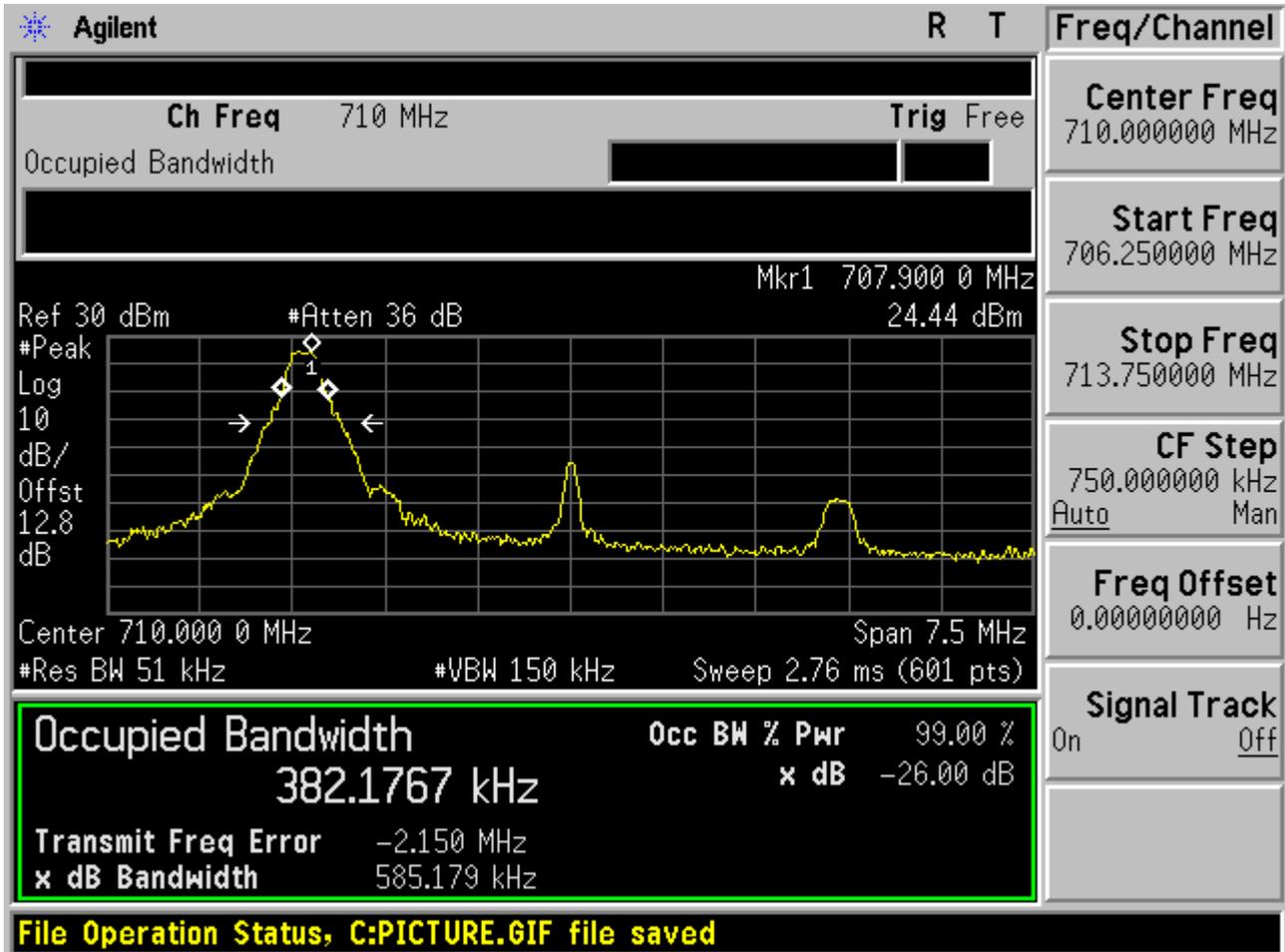
1.1.1.1.4 QPSK/full RBs



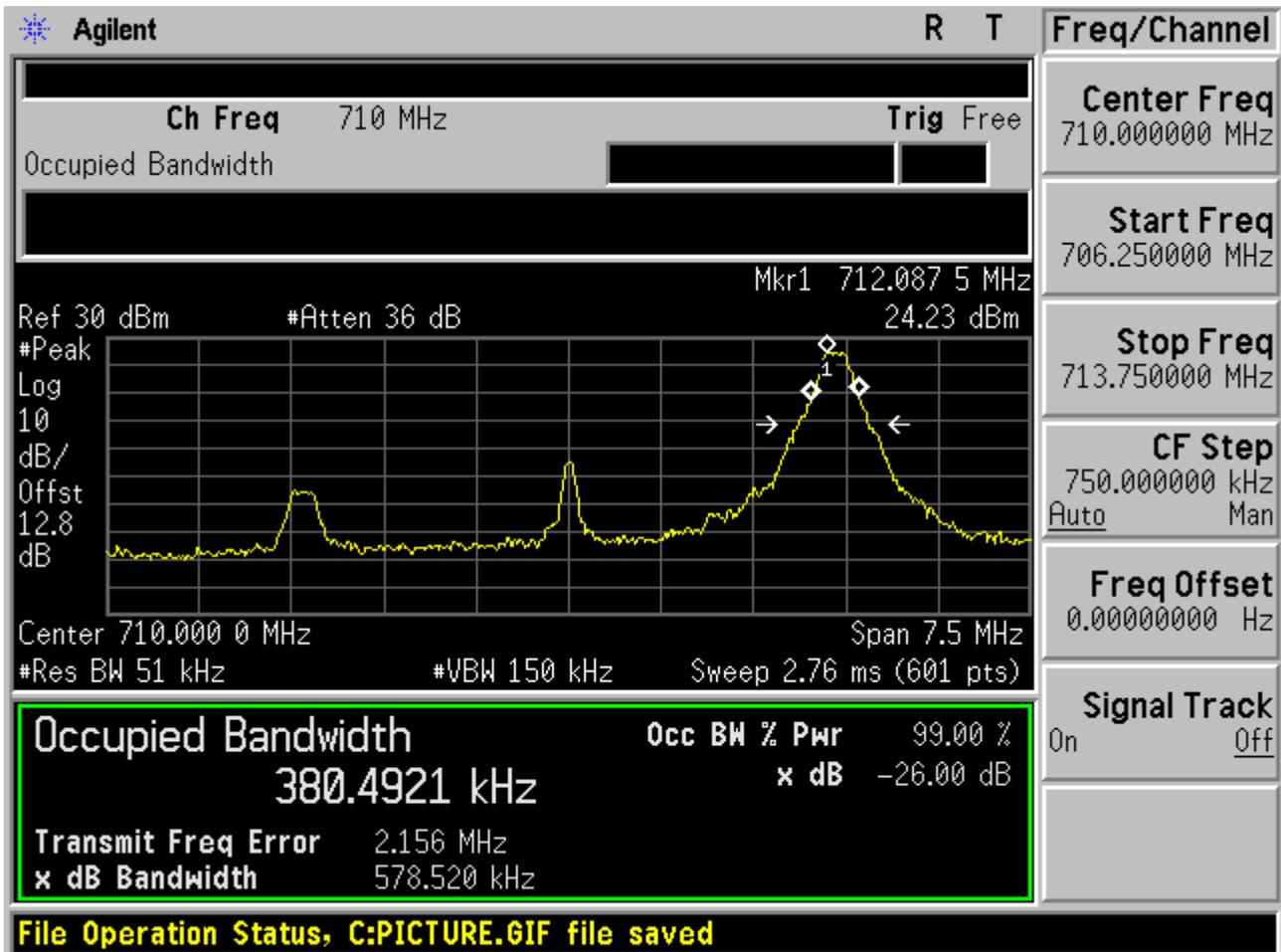


1.1.1.2 Channel =M

1.1.1.2.1 QPSK/1RB # 0



1.1.1.2.2 QPSK/1RB # max





1.1.1.2.3 QPSK/non-1RB #mid/2

Agilent R T

Ch Freq 710 MHz Trig Free

Occupied Bandwidth

Ref 30 dBm #Atten 36 dB Mkr1 709.512 5 MHz 17.97 dBm

Center 710.000 0 MHz Span 7.5 MHz

#Res BW 51 kHz #VBW 150 kHz Sweep 2.76 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
2.1985 MHz	x dB	-26.00 dB
Transmit Freq Error		-97.292 kHz
x dB Bandwidth		2.844 MHz

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq 710.000000 MHz

Start Freq 706.250000 MHz

Stop Freq 713.750000 MHz

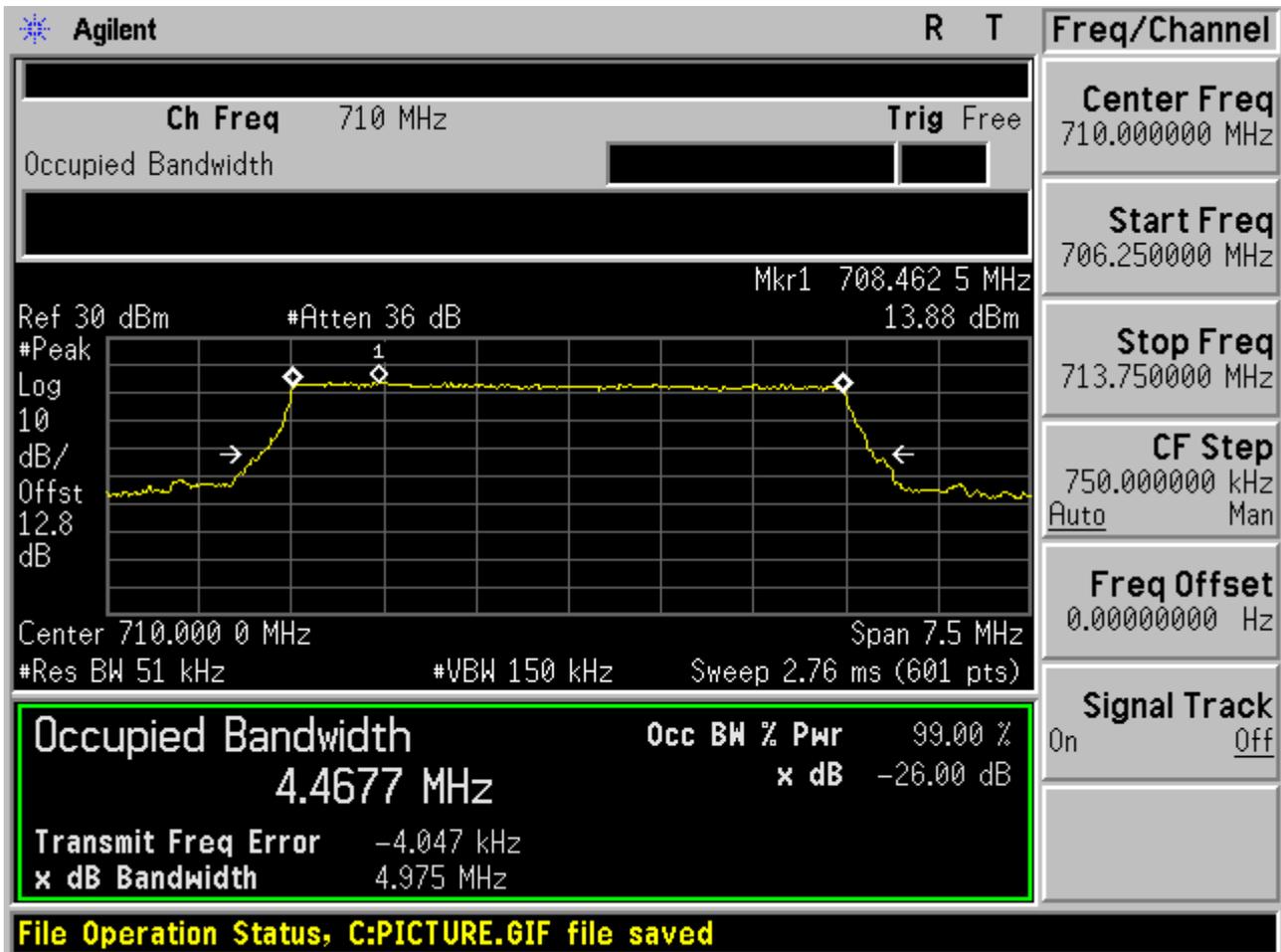
CF Step 750.000000 kHz Auto Man

Freq Offset 0.00000000 Hz

Signal Track On Off



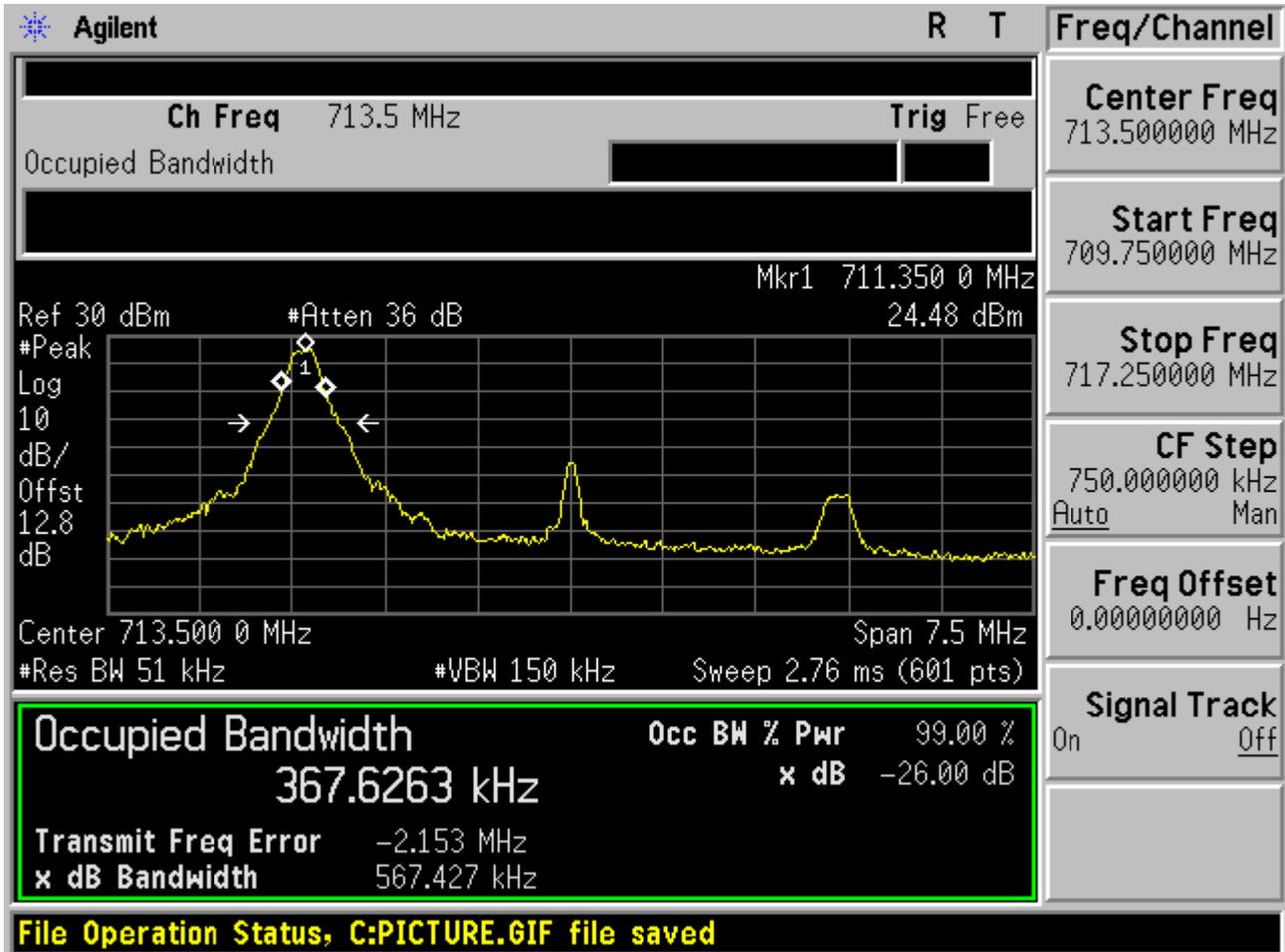
1.1.1.2.4 QPSK/full RBs





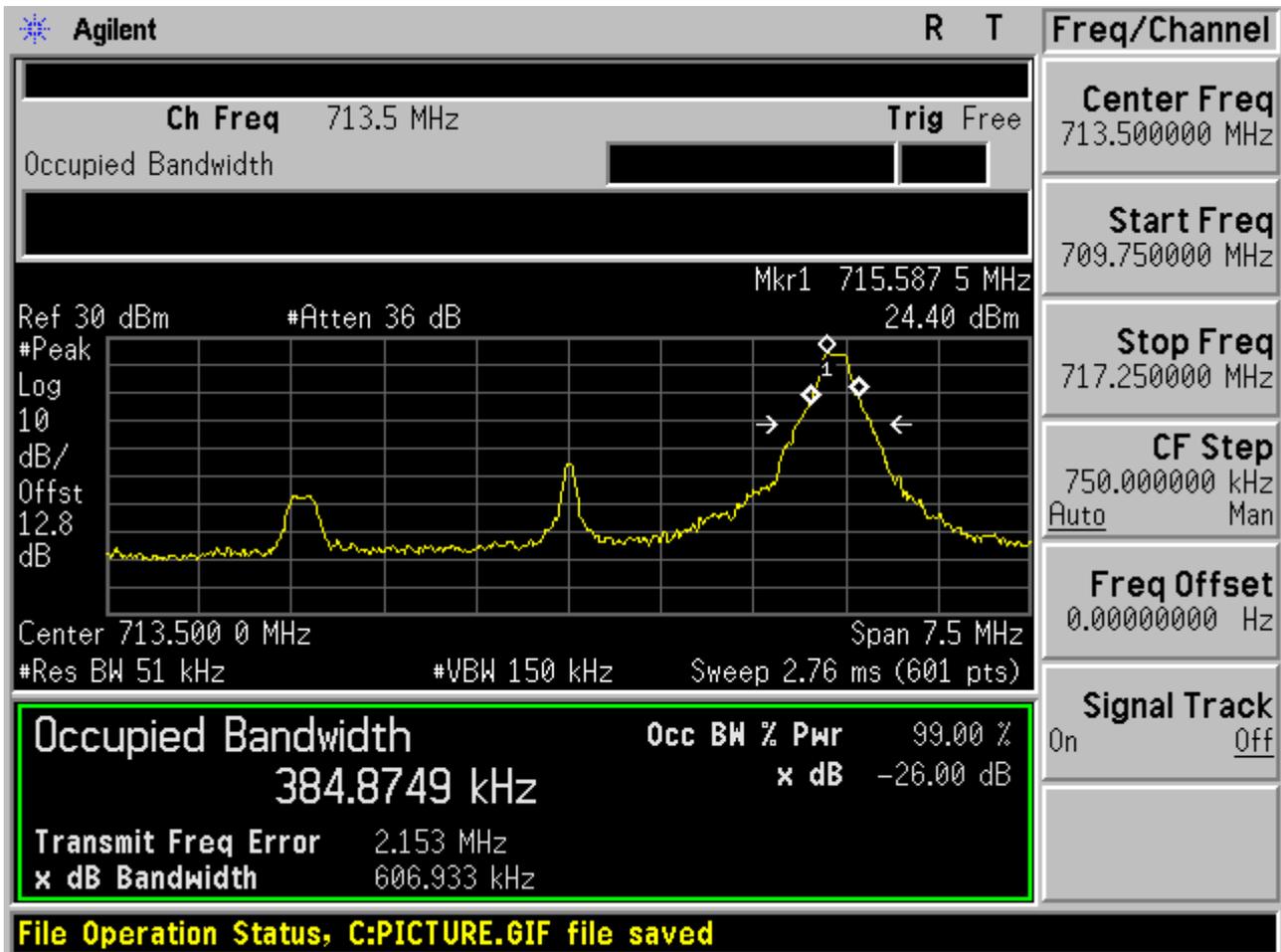
1.1.1.3 Channel =T

1.1.1.3.1 QPSK/1RB # 0

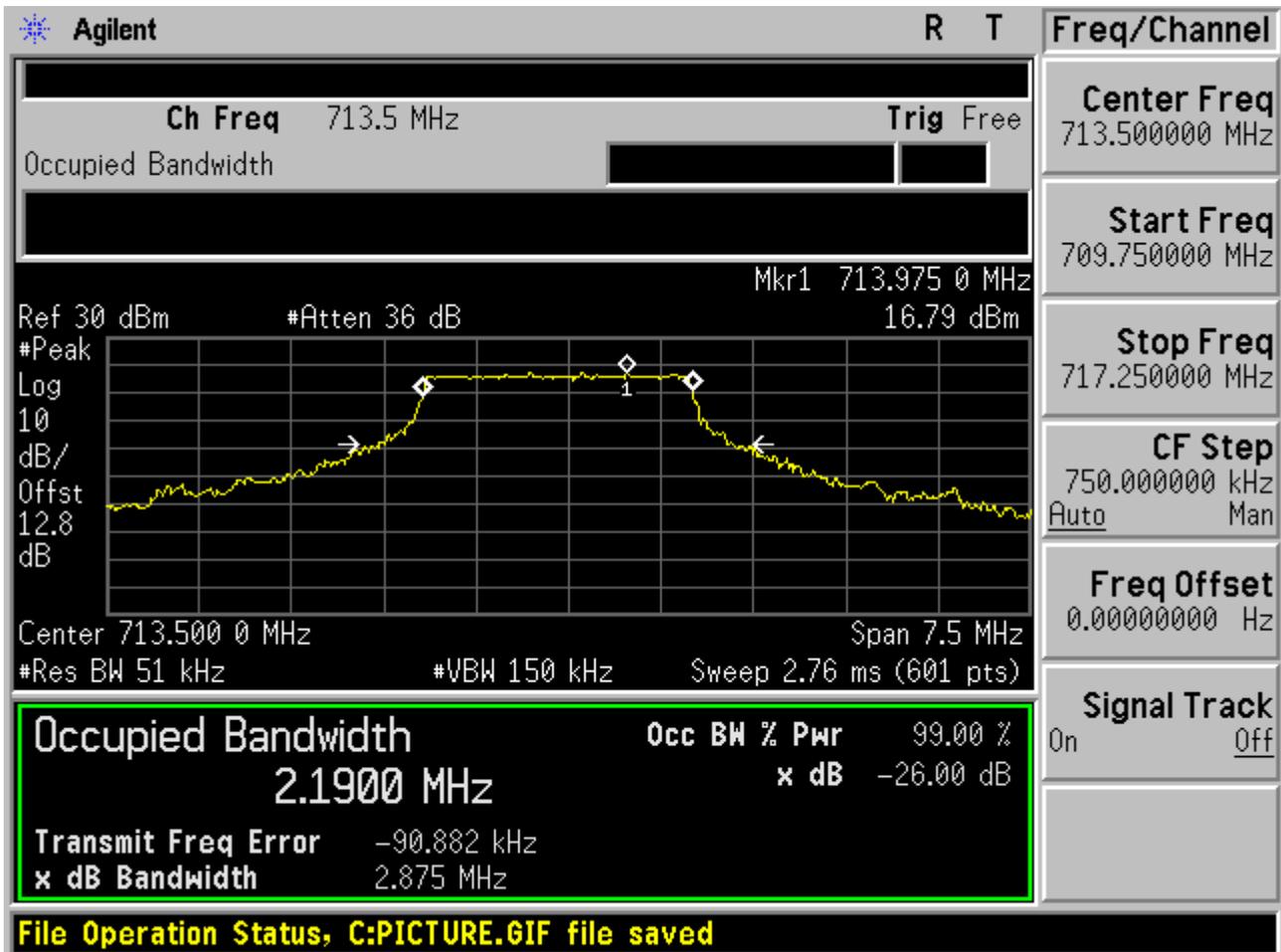




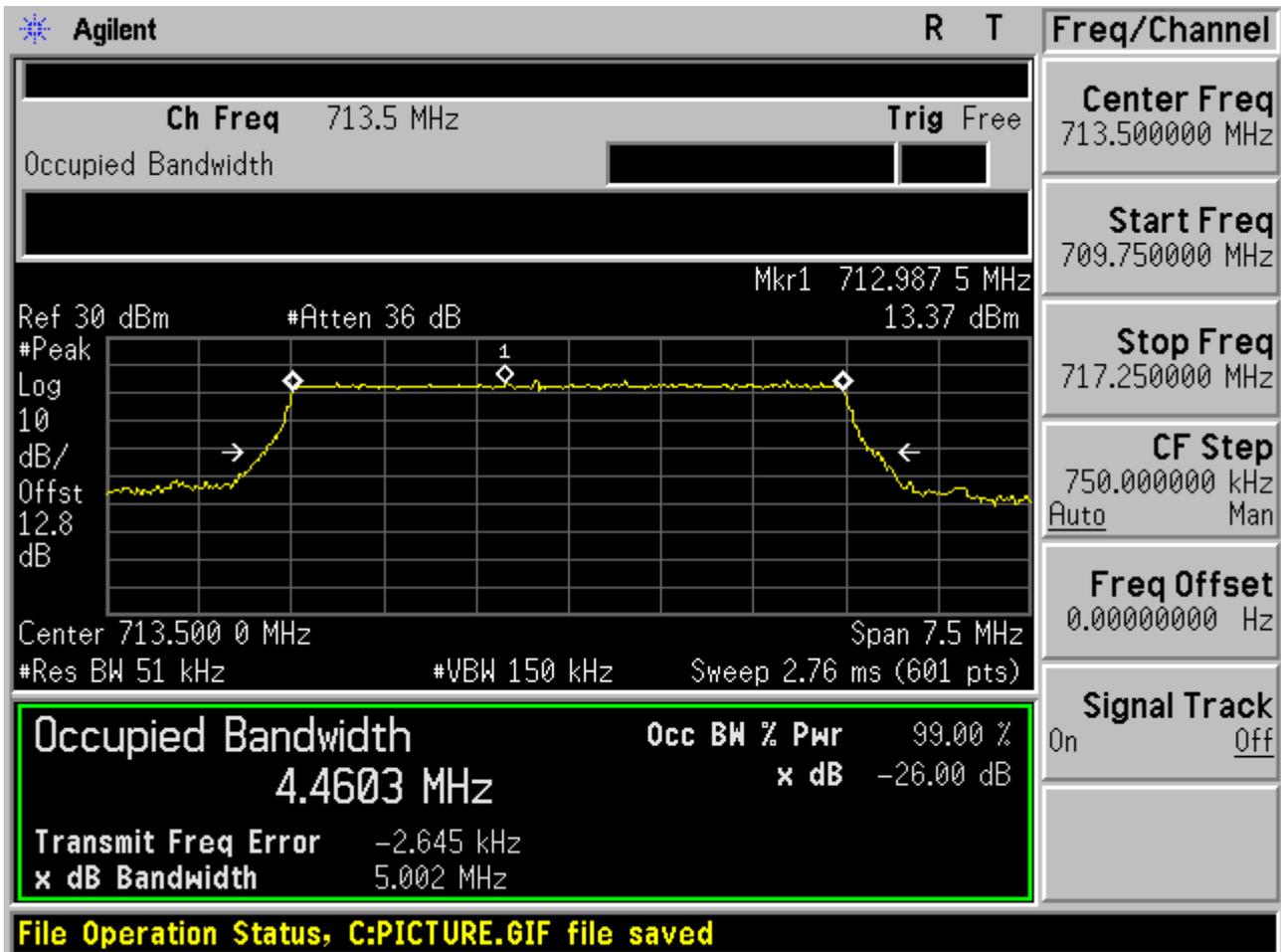
1.1.1.3.2 QPSK/1RB # max



1.1.1.3.3 QPSK/non-1RB #mid/2



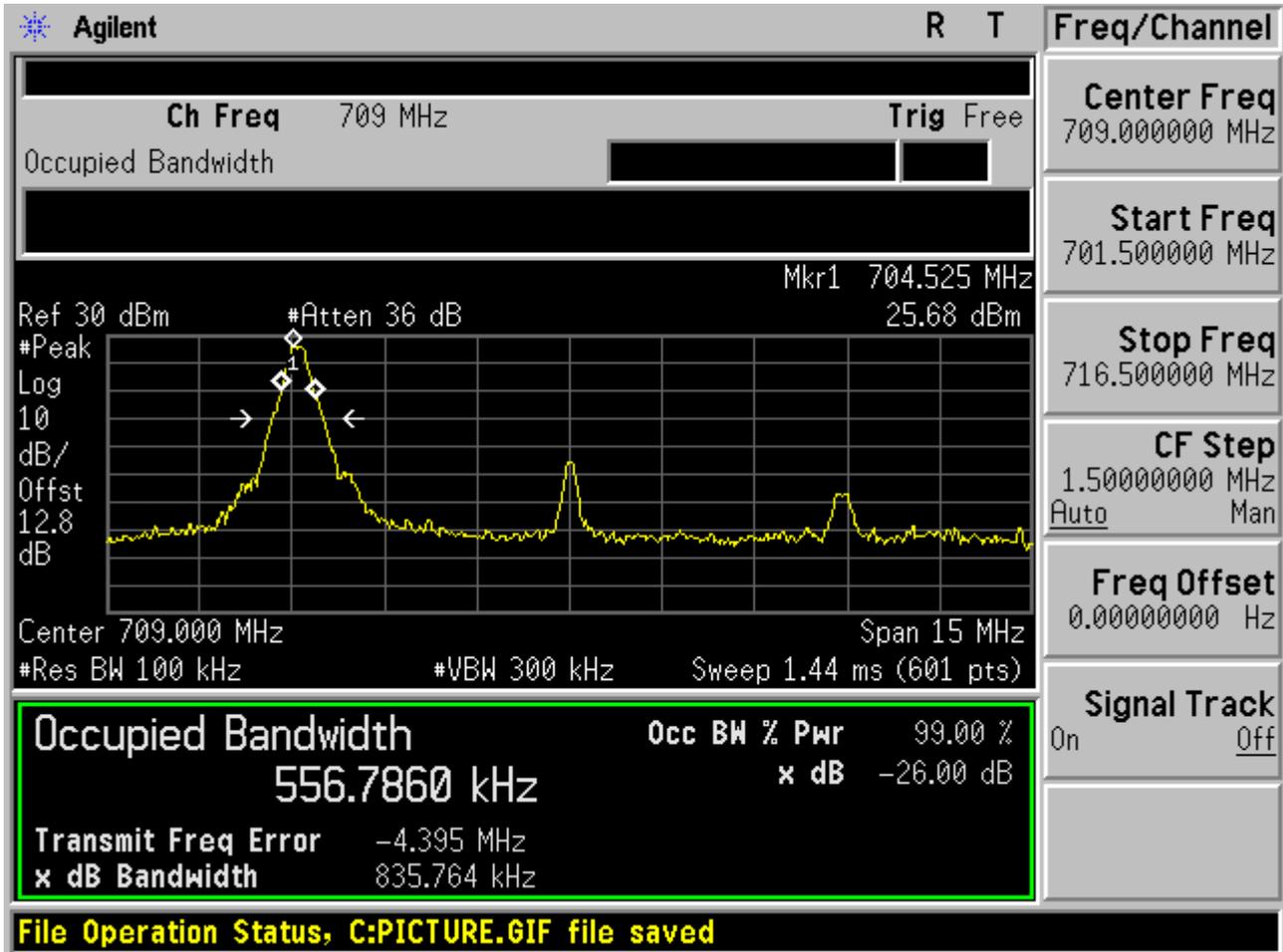
1.1.1.3.4 QPSK/full RBs

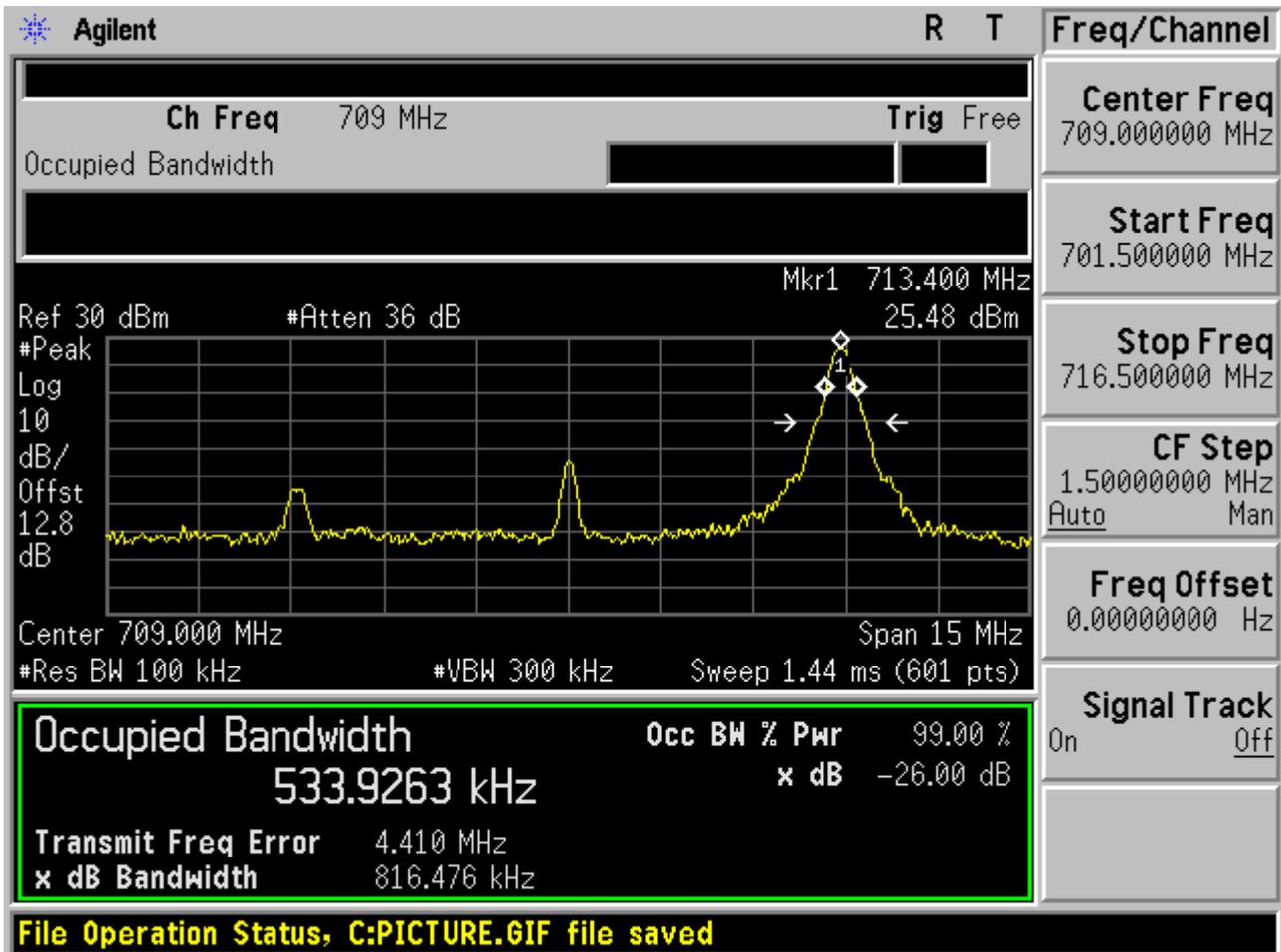


1.1.2 Channel Bandwidth = 10 MHz

1.1.2.1 Channel = B

1.1.2.1.1 QPSK/1RB # 0



1.1.2.1.2 QPSK/1RB # max


1.1.2.1.3 QPSK/non-1RB #mid/2

Agilent
R T

Ch Freq 709 MHz

Occupied Bandwidth

Trig Free

Mkr1 707.950 MHz
17.78 dBm

Ref 30 dBm #Atten 36 dB

Center 709.000 MHz Span 15 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.44 ms (601 pts)

Center Freq
709.000000 MHz

Start Freq
701.500000 MHz

Stop Freq
716.500000 MHz

CF Step
1.50000000 MHz
Auto Man

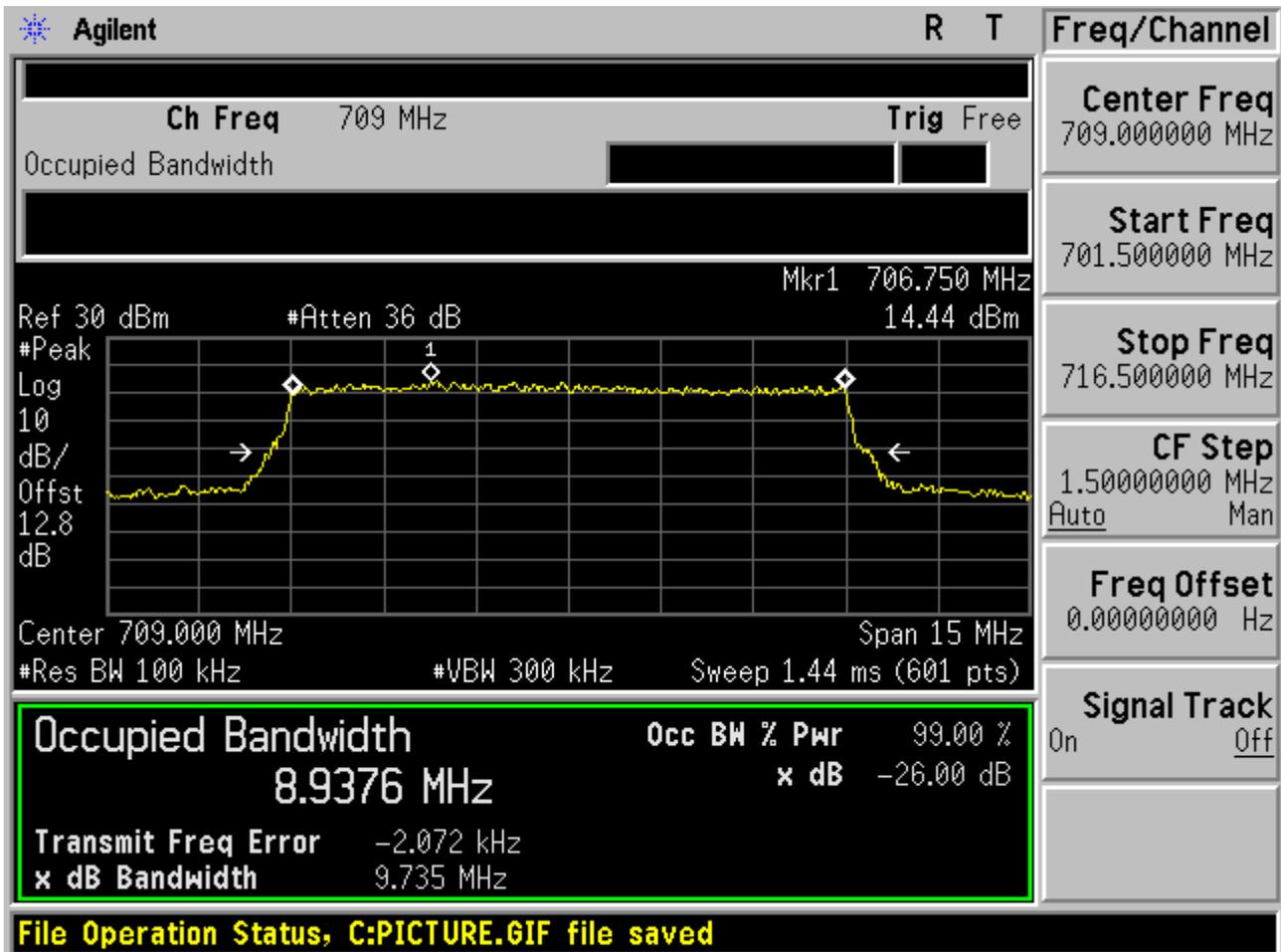
Freq Offset
0.00000000 Hz

Signal Track
On Off

Occupied Bandwidth	Occ BW % Pwr 99.00 %
4.5906 MHz	x dB -26.00 dB
Transmit Freq Error 75.729 kHz	
x dB Bandwidth 5.728 MHz	

File Operation Status, C:PICTURE.GIF file saved

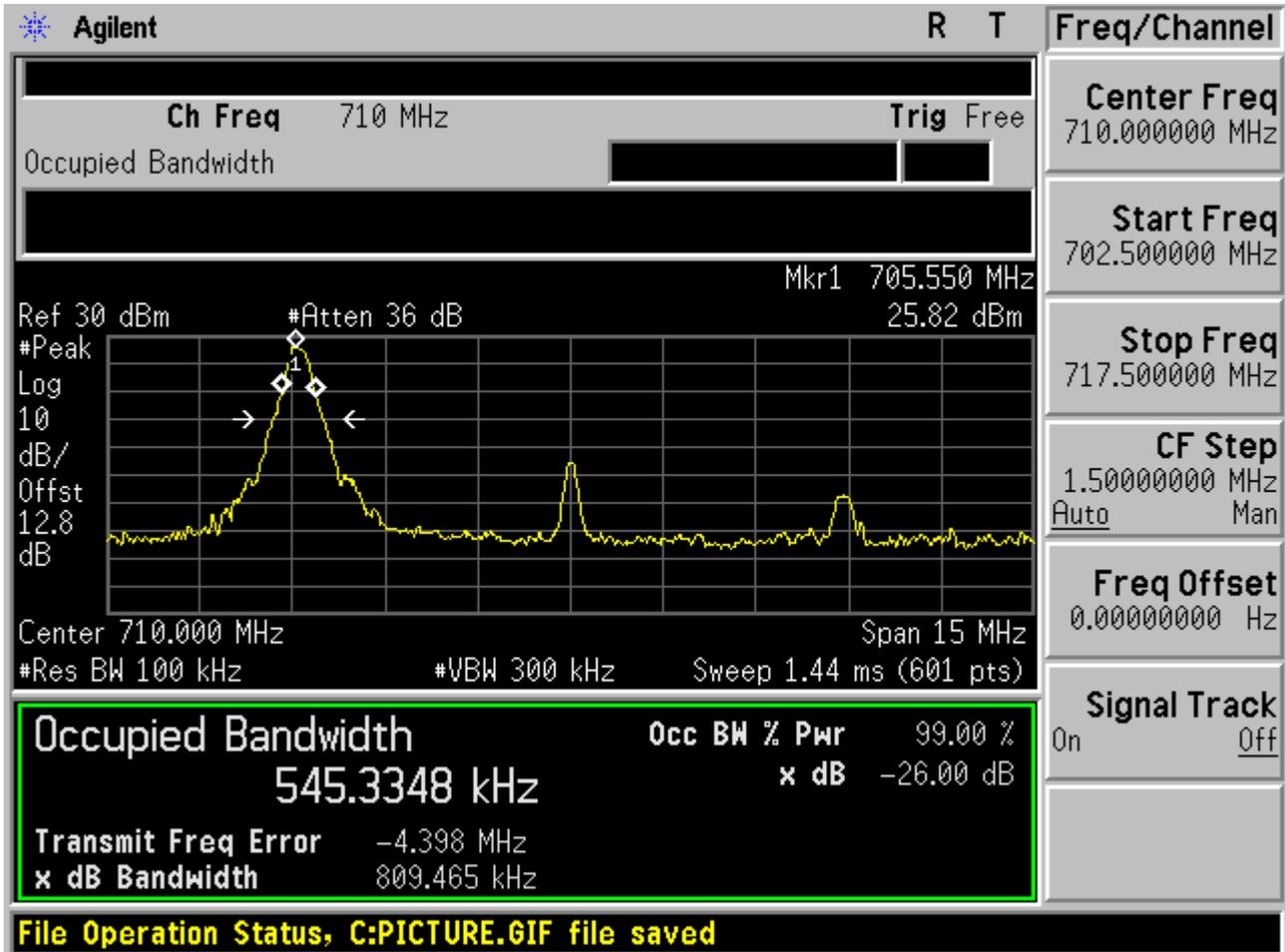
1.1.2.1.4 QPSK/full RBs



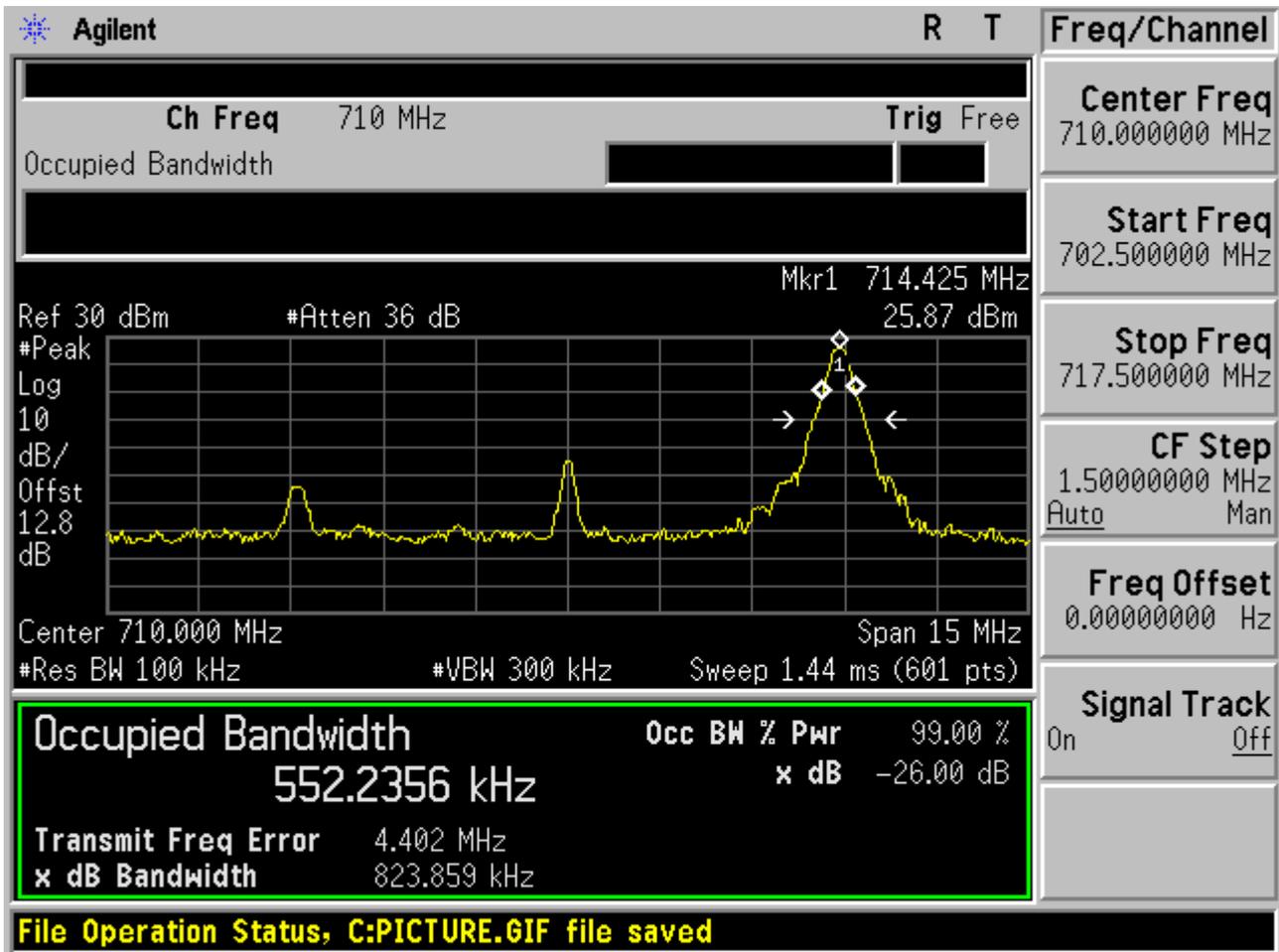


1.1.2.2 Channel =M

1.1.2.2.1 QPSK/1RB # 0



1.1.2.2.2 QPSK/1RB # max





1.1.2.2.3 QPSK/non-1RB #mid/2

Agilent R T

Ch Freq 710 MHz Trig Free

Occupied Bandwidth

Center Freq 710.000000 MHz

Start Freq 702.500000 MHz

Stop Freq 717.500000 MHz

CF Step 1.50000000 MHz Auto Man

Freq Offset 0.00000000 Hz

Signal Track On Off

Ref 30 dBm #Atten 36 dB Mkr1 710.525 MHz 16.02 dBm

Center 710.000 MHz Span 15 MHz

#Res BW 100 kHz #VBW 300 kHz Sweep 1.44 ms (601 pts)

Occupied Bandwidth 4.5688 MHz

Occ BW % Pwr 99.00 %

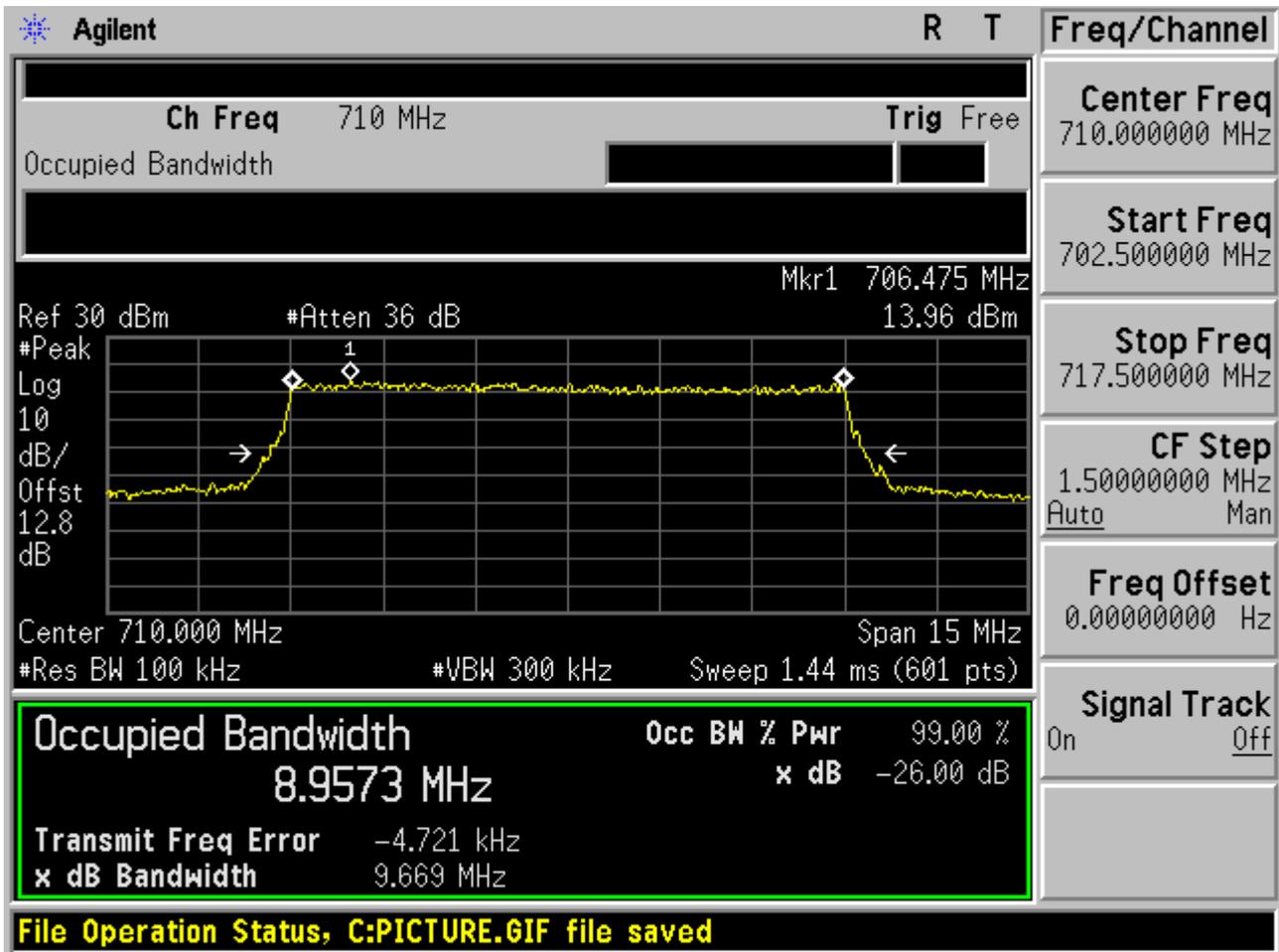
x dB -26.00 dB

Transmit Freq Error 77.173 kHz

x dB Bandwidth 6.002 MHz

File Operation Status, C:PICTURE.GIF file saved

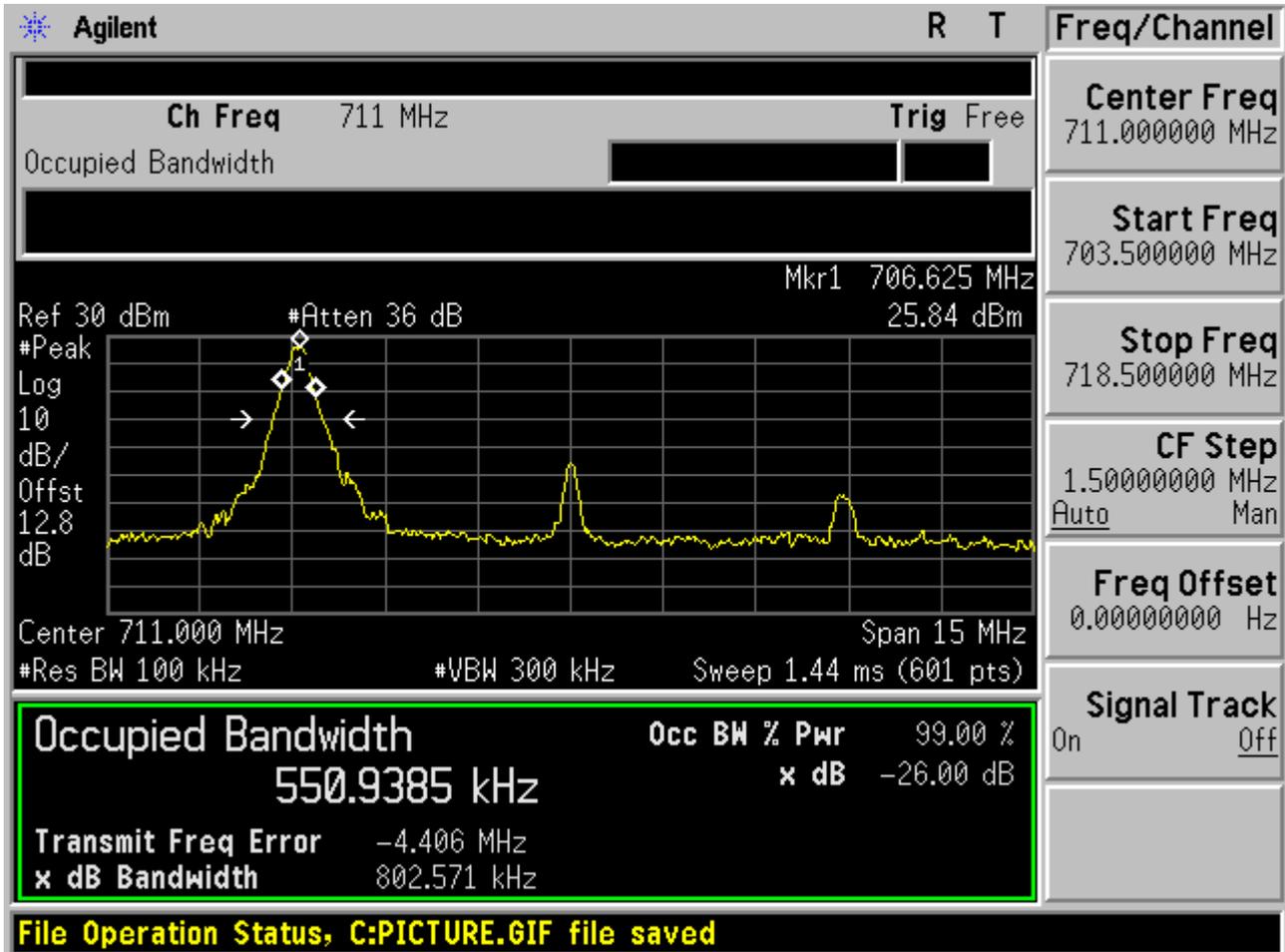
1.1.2.2.4 QPSK/full RBs



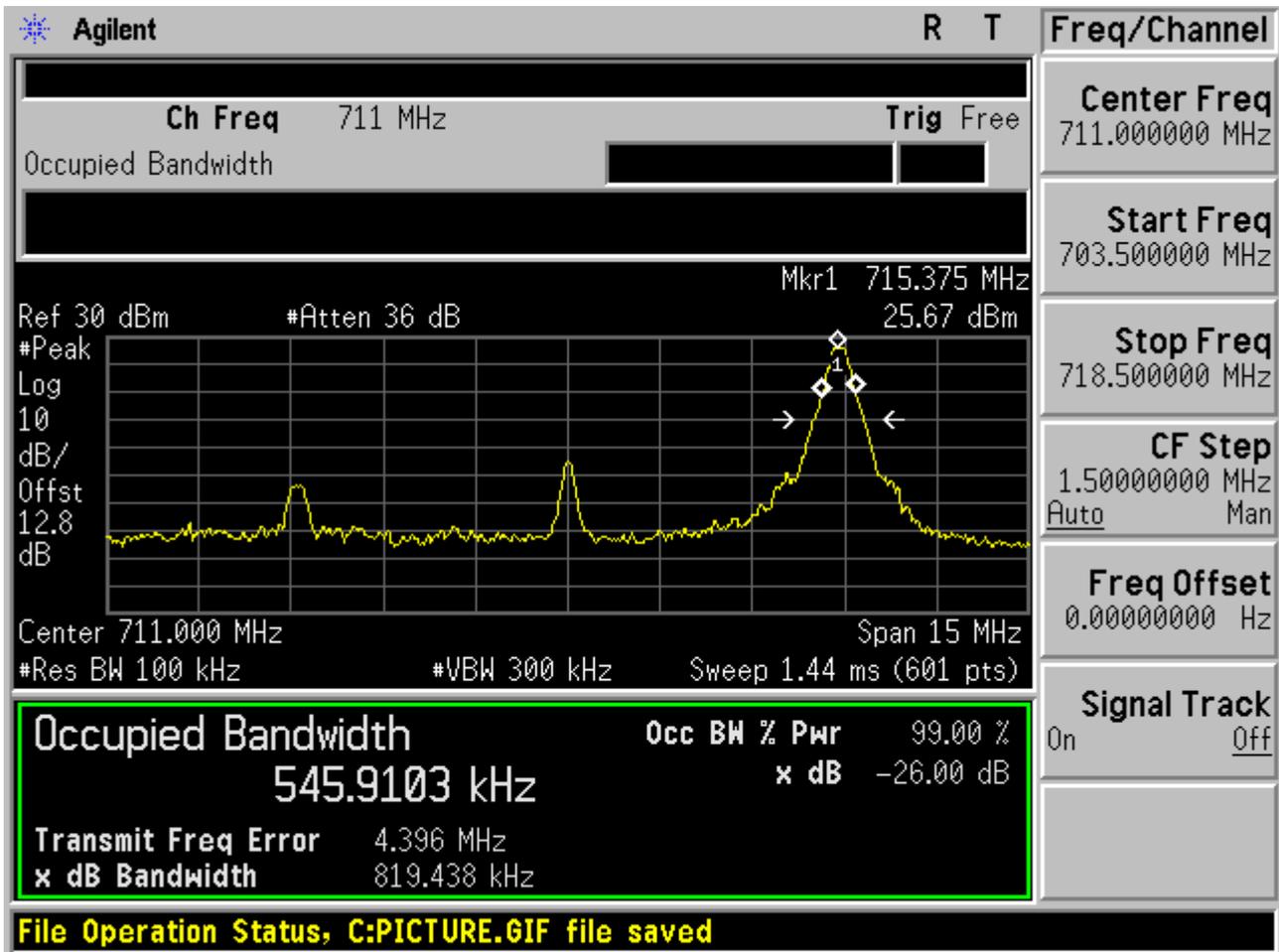


1.1.2.3 Channel =T

1.1.2.3.1 QPSK/1RB # 0



1.1.2.3.2 QPSK/1RB # max



1.1.2.3.3 QPSK/non-1RB #mid/2

Agilent
R T

Ch Freq 711 MHz **Trig** Free

Occupied Bandwidth

Center Freq
711.000000 MHz

Start Freq
703.500000 MHz

Stop Freq
718.500000 MHz

CF Step
1.50000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

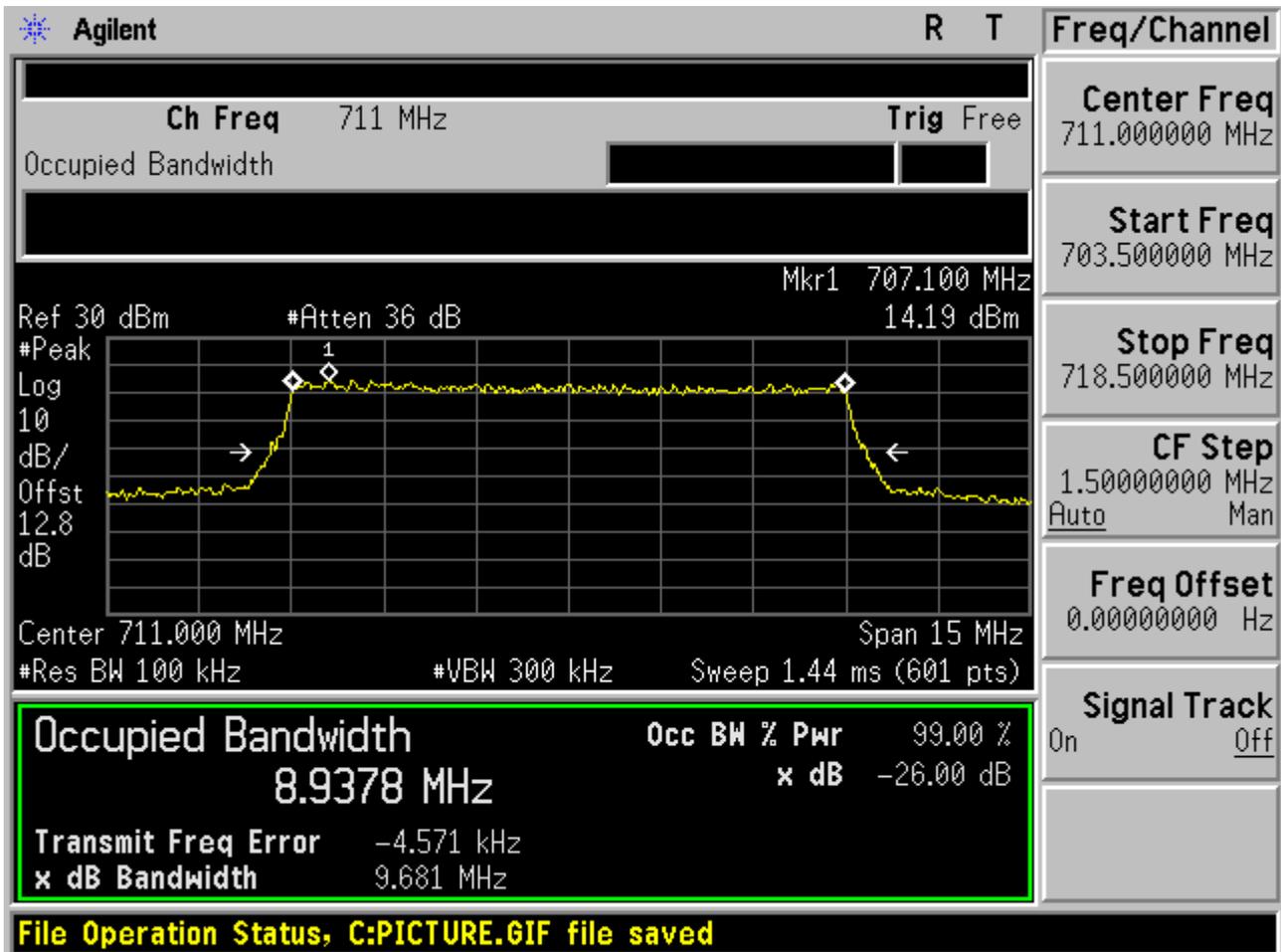
Ref 30 dBm #Atten 36 dB Mkr1 711.500 MHz 16.46 dBm

Center 711.000 MHz Span 15 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.44 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr 99.00 %
4.5952 MHz	x dB -26.00 dB
Transmit Freq Error 83.963 kHz	
x dB Bandwidth 6.293 MHz	

File Operation Status, C:PICTURE.GIF file saved

1.1.2.3.4 QPSK/full RBs



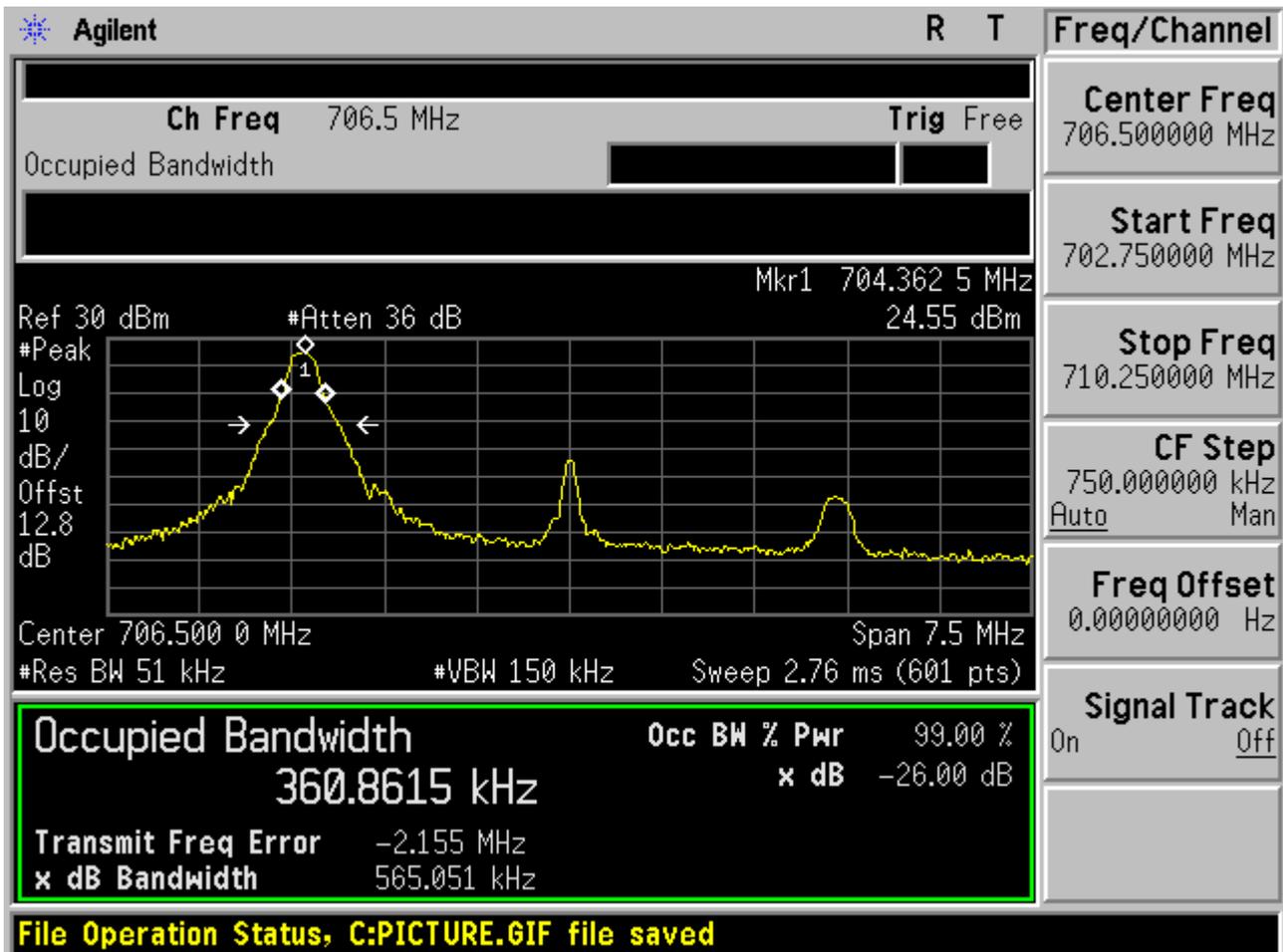


1.2 Test Mode=TM2

1.2.1 Channel Bandwidth = 5 MHz

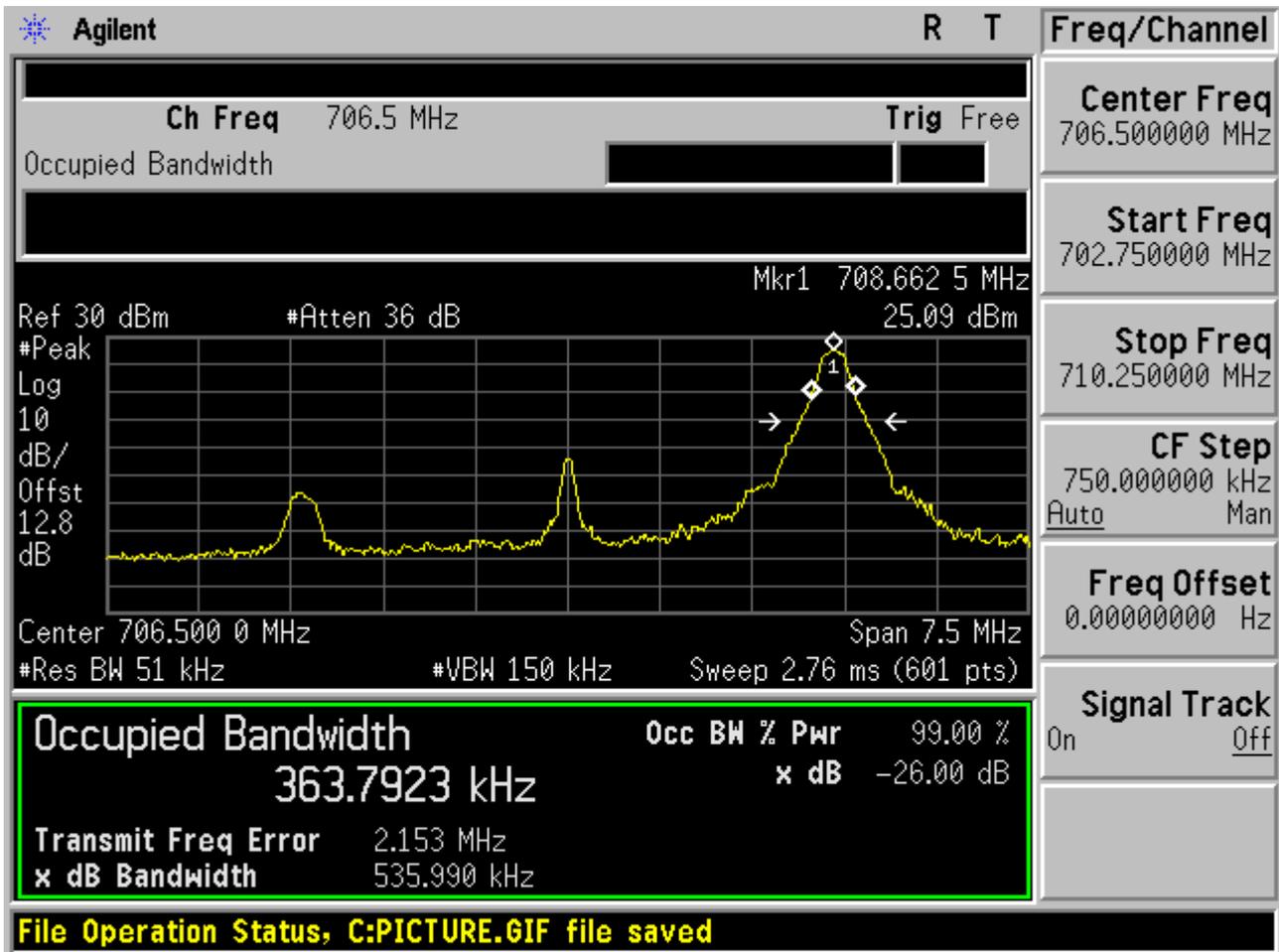
1.2.1.1 Channel =B

1.2.1.1.1 16QAM/1RB # 0





1.2.1.1.2 16QAM /1RB # max





1.2.1.1.3 16QAM /non-1RB #mid/2

Agilent R T

Ch Freq 706.5 MHz **Trig** Free

Occupied Bandwidth Mkr1 706.412 5 MHz

Ref 30 dBm #Atten 36 dB

#Peak 16.18 dBm

Log

Center 706.500 0 MHz Span 7.5 MHz

#Res BW 51 kHz #VBW 150 kHz

Sweep 2.76 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
2.1897 MHz	x dB	-26.00 dB
Transmit Freq Error		-85.252 kHz
x dB Bandwidth		2.837 MHz

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq
706.500000 MHz

Start Freq
702.750000 MHz

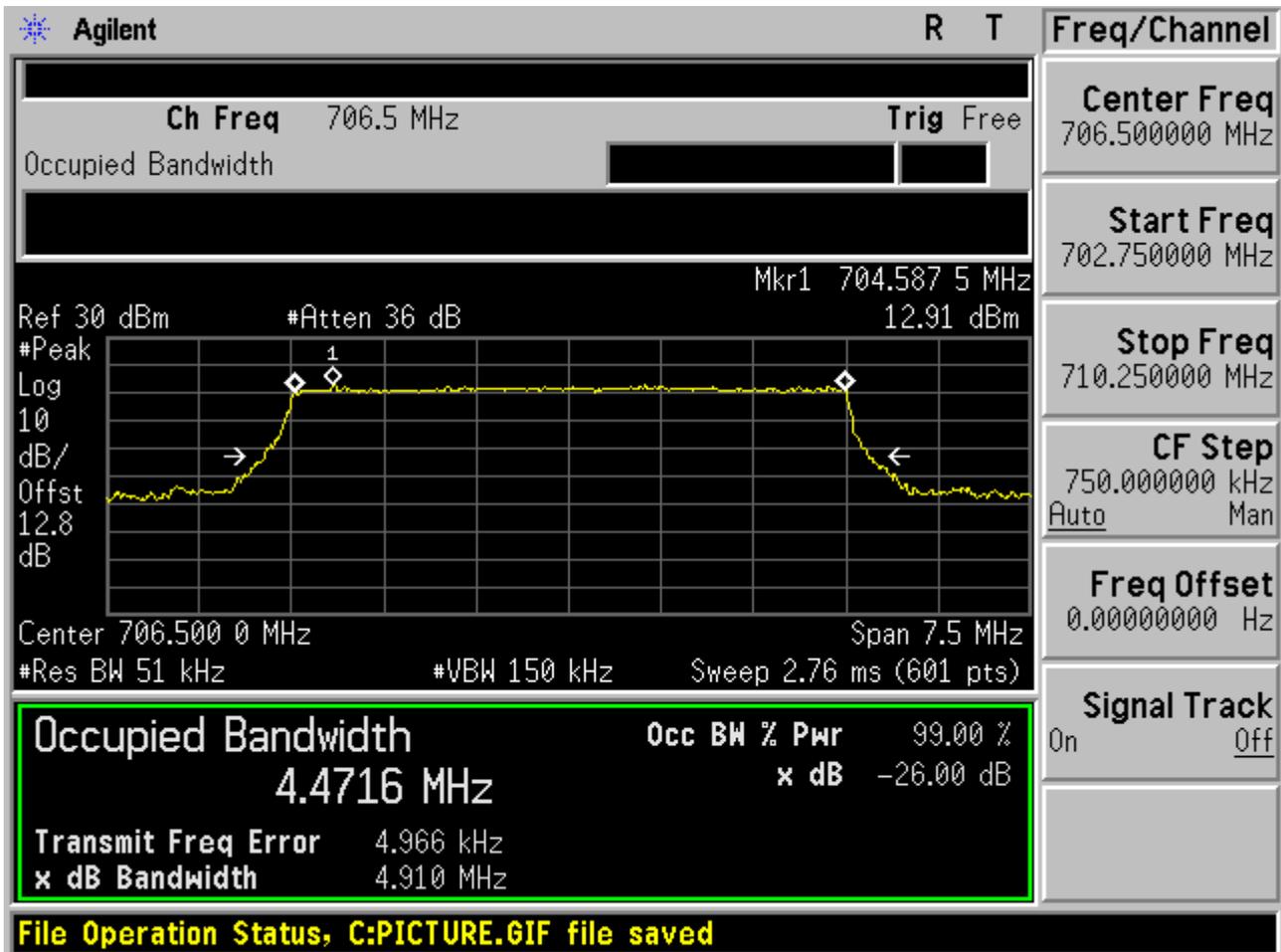
Stop Freq
710.250000 MHz

CF Step
750.000000 kHz
Auto Man

Freq Offset
0.00000000 Hz

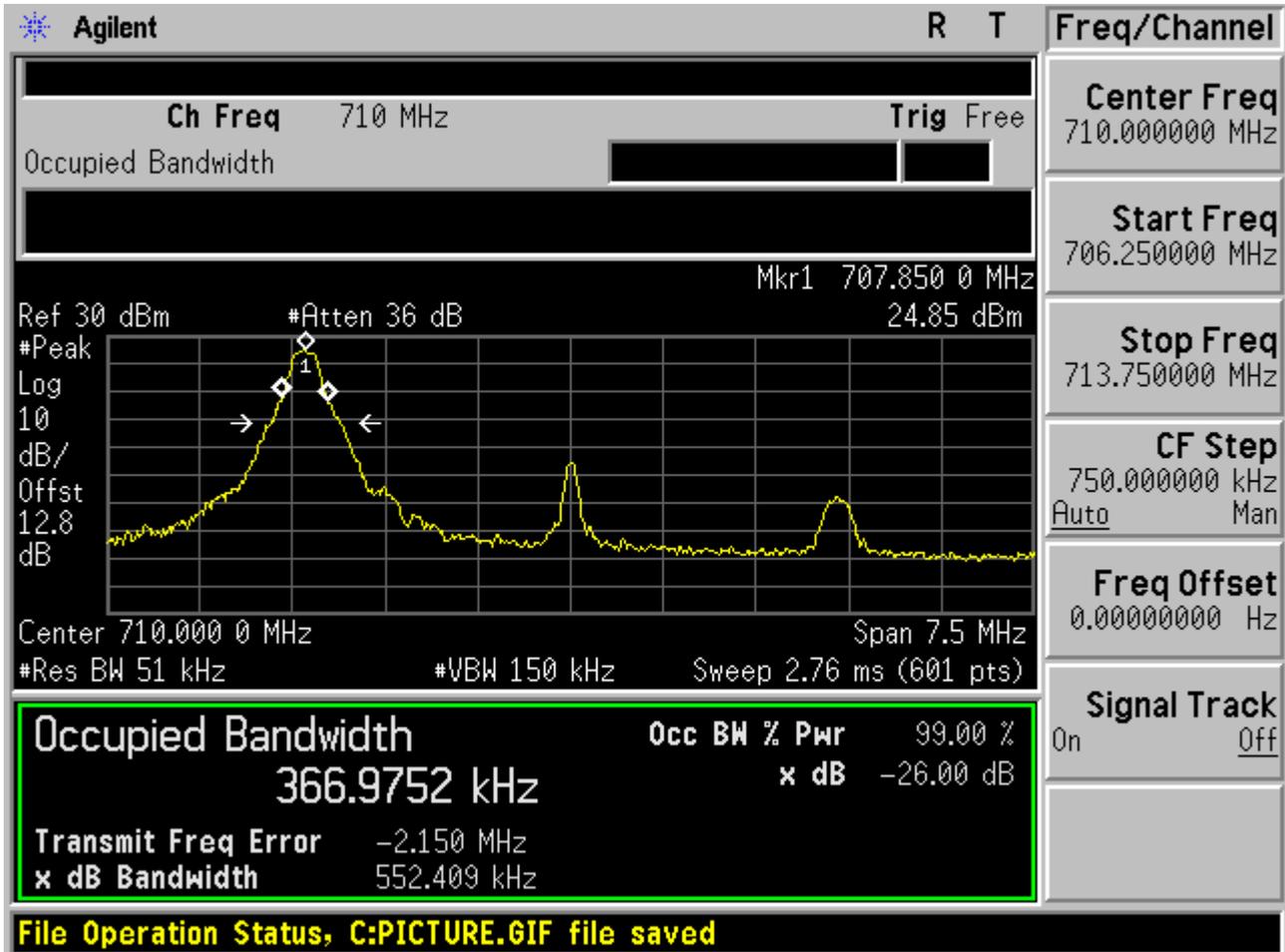
Signal Track
On Off

1.2.1.1.4 16QAM /full RBs

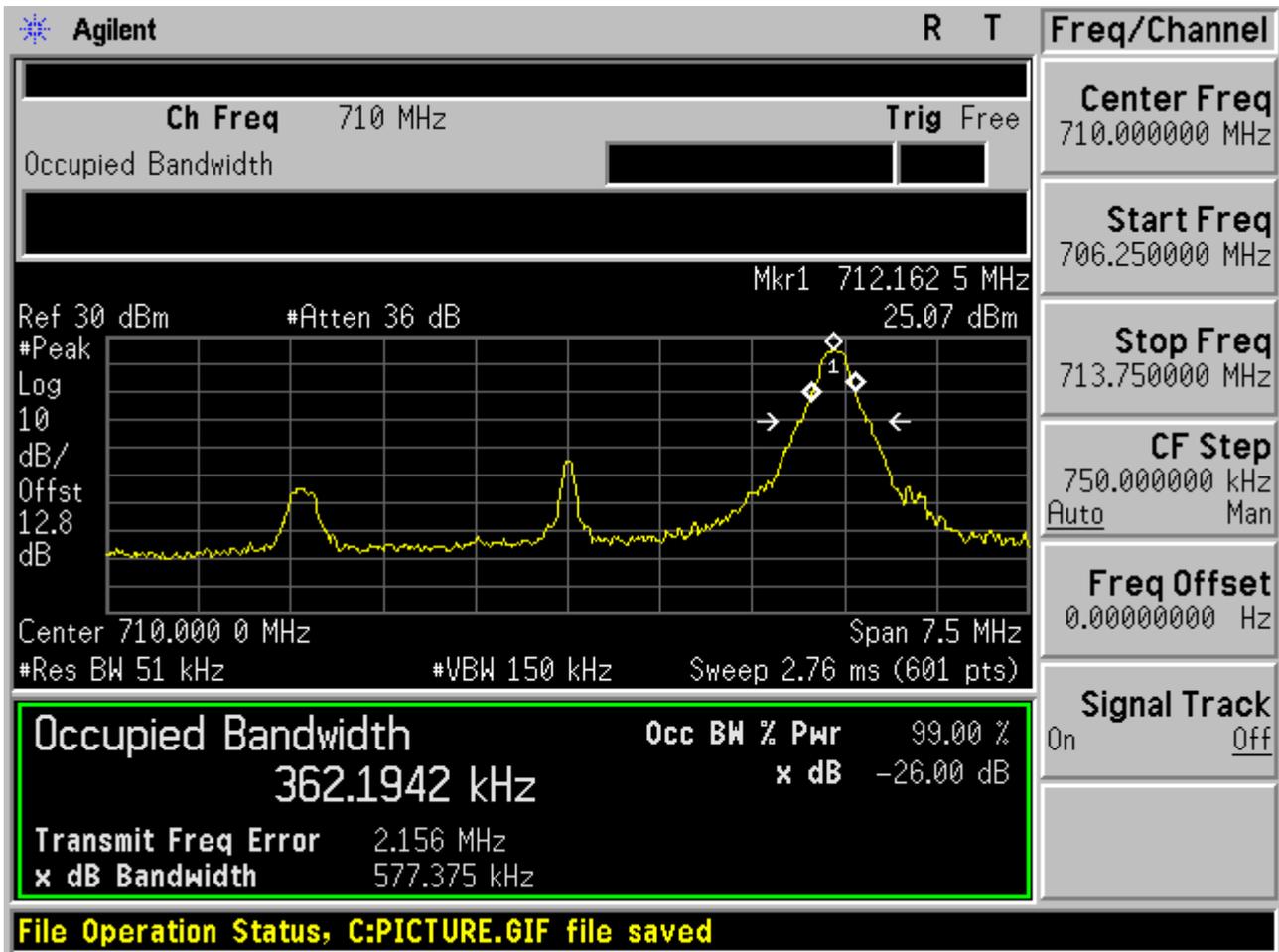


1.2.1.2 Channel =M

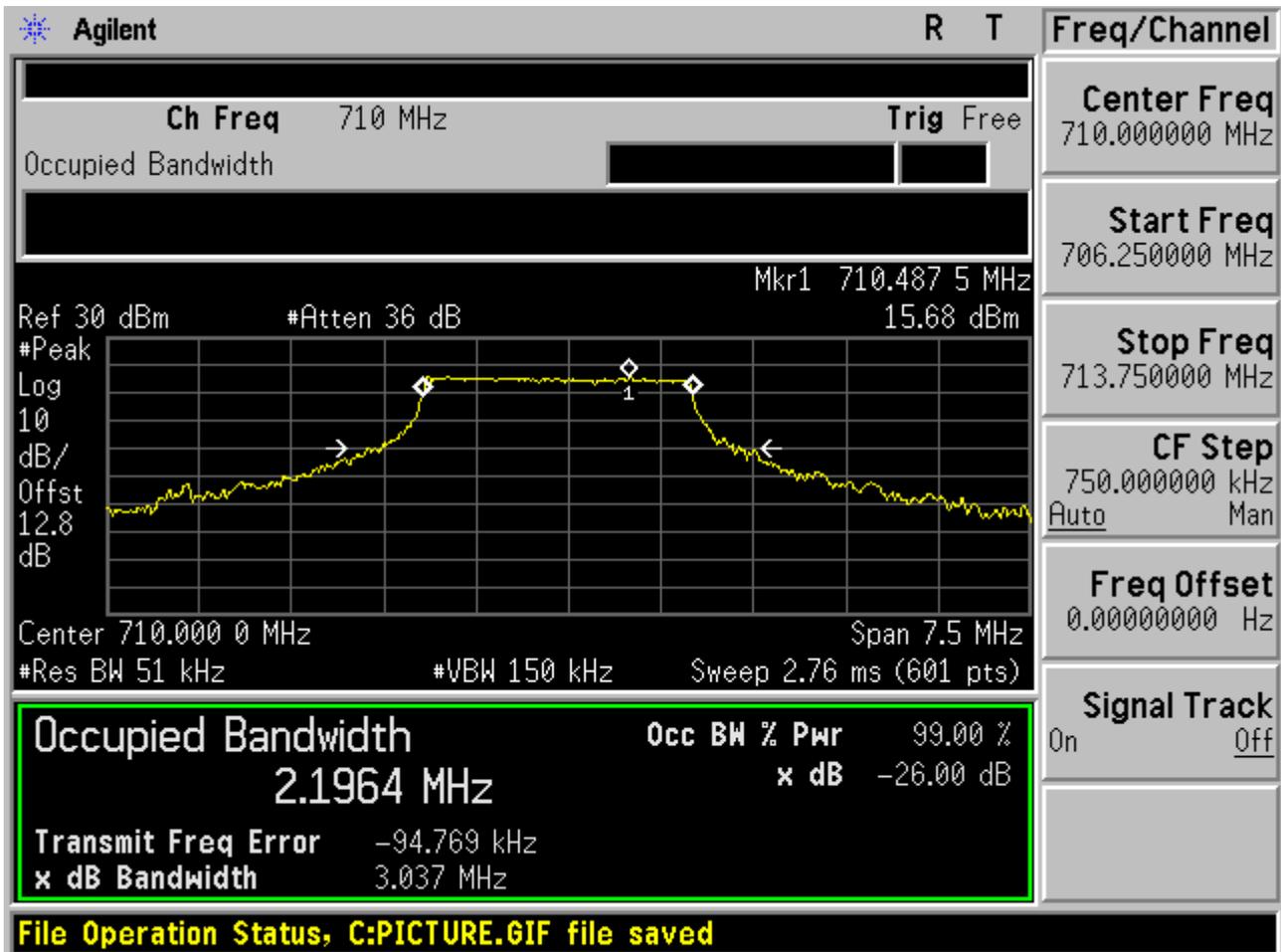
1.2.1.2.1 16QAM/1RB # 0



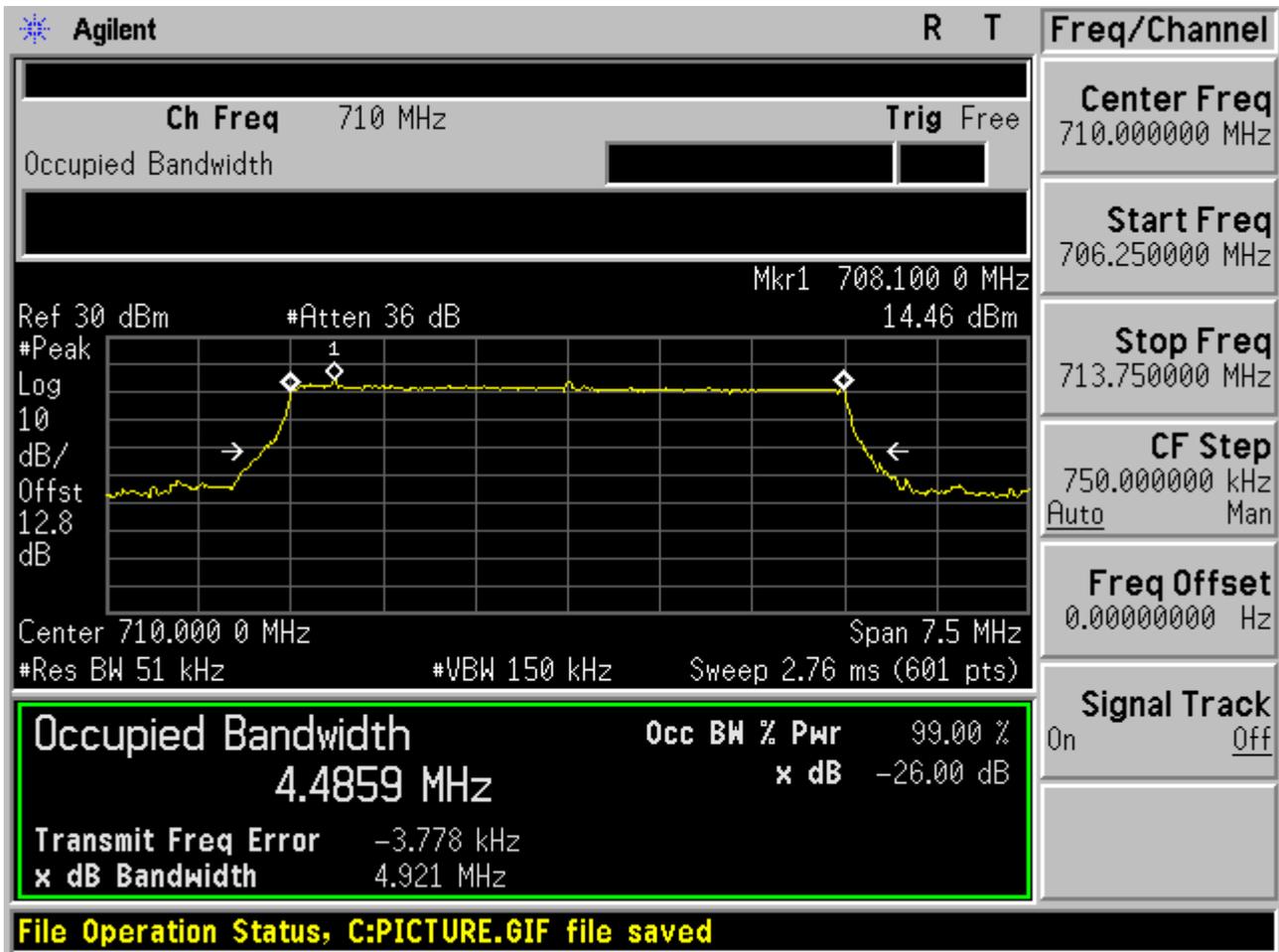
1.2.1.2.2 16QAM /1RB # max



1.2.1.2.3 16QAM /non-1RB #mid/2

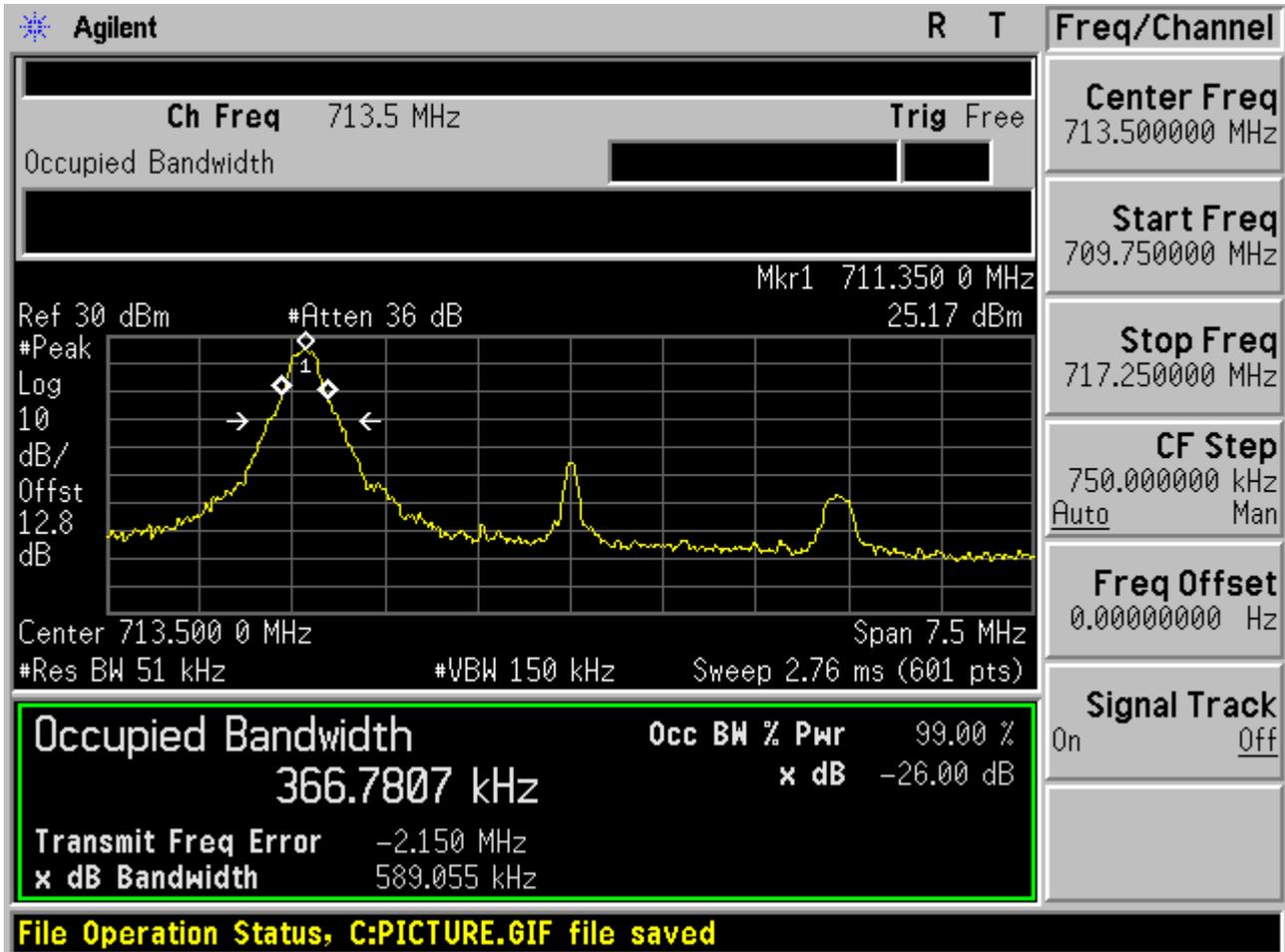


1.2.1.2.4 16QAM /full RBs



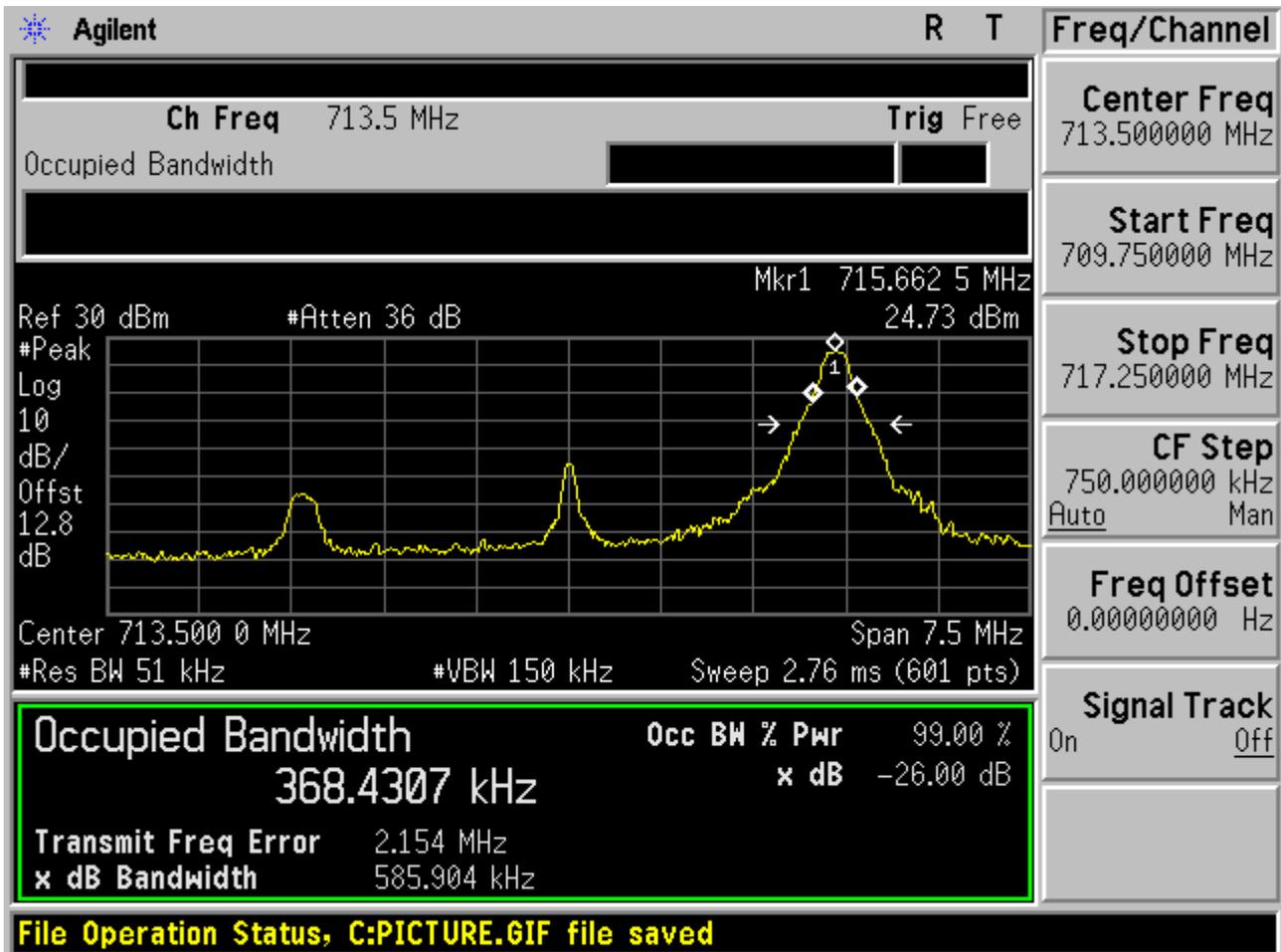
1.2.1.3 Channel =T

1.2.1.3.1 16QAM/1RB # 0

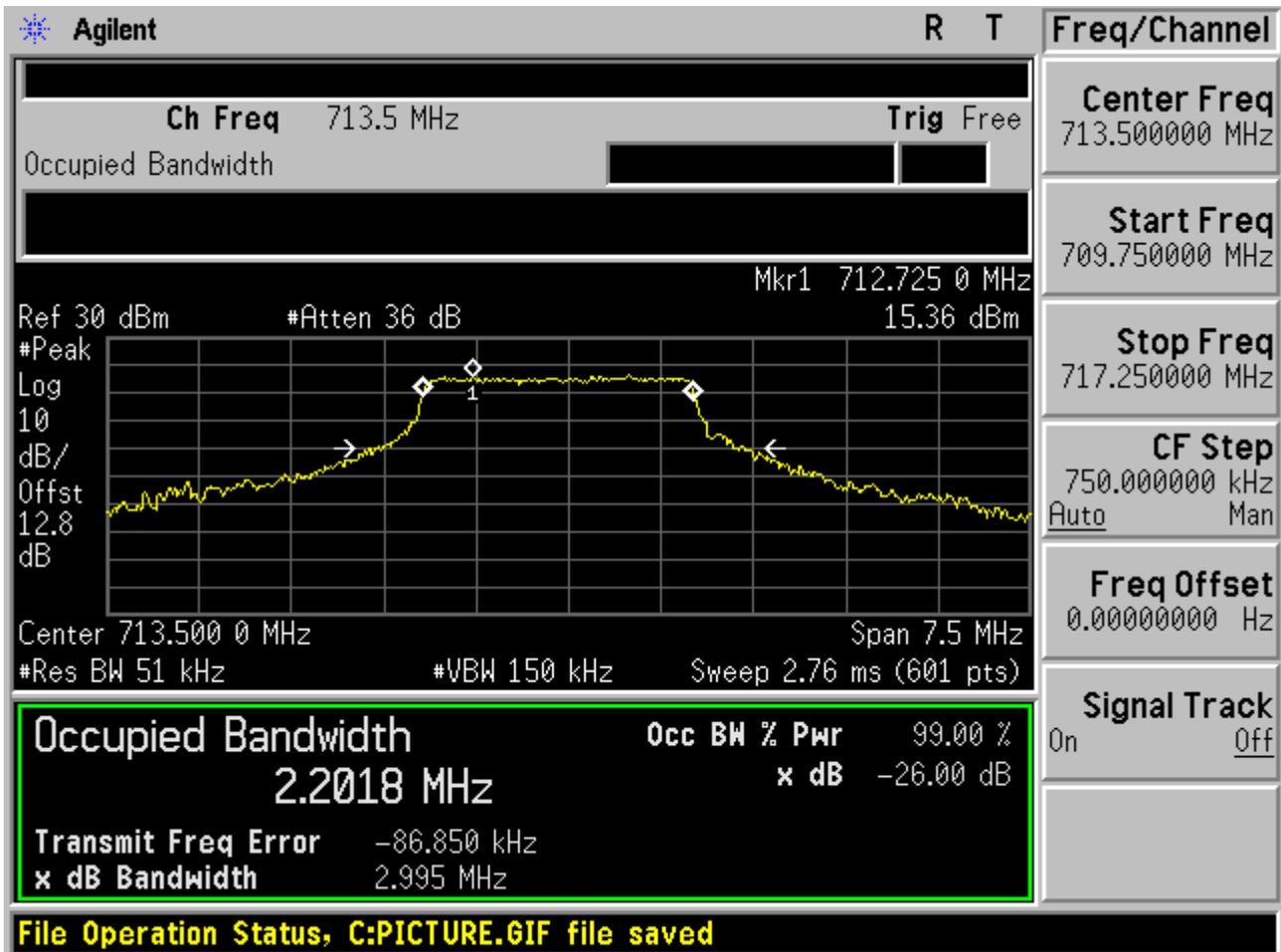




1.2.1.3.2 16QAM /1RB # max



1.2.1.3.3 16QAM /non-1RB #mid/2





1.2.1.3.4 16QAM /full RBs

Agilent R T

Ch Freq 713.5 MHz **Trig** Free

Occupied Bandwidth [Bar Graph]

Ref 30 dBm Mkr1 711.600 0 MHz

#Peak #Atten 36 dB

Log 13.80 dBm

10

dB/

Offst

12.8

dB

Center 713.500 0 MHz Span 7.5 MHz

#Res BW 51 kHz #VBW 150 kHz

Sweep 2.76 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
4.4716 MHz	x dB	-26.00 dB
Transmit Freq Error	3.229 kHz	
x dB Bandwidth	4.929 MHz	

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq
713.500000 MHz

Start Freq
709.750000 MHz

Stop Freq
717.250000 MHz

CF Step
750.000000 kHz
Auto Man

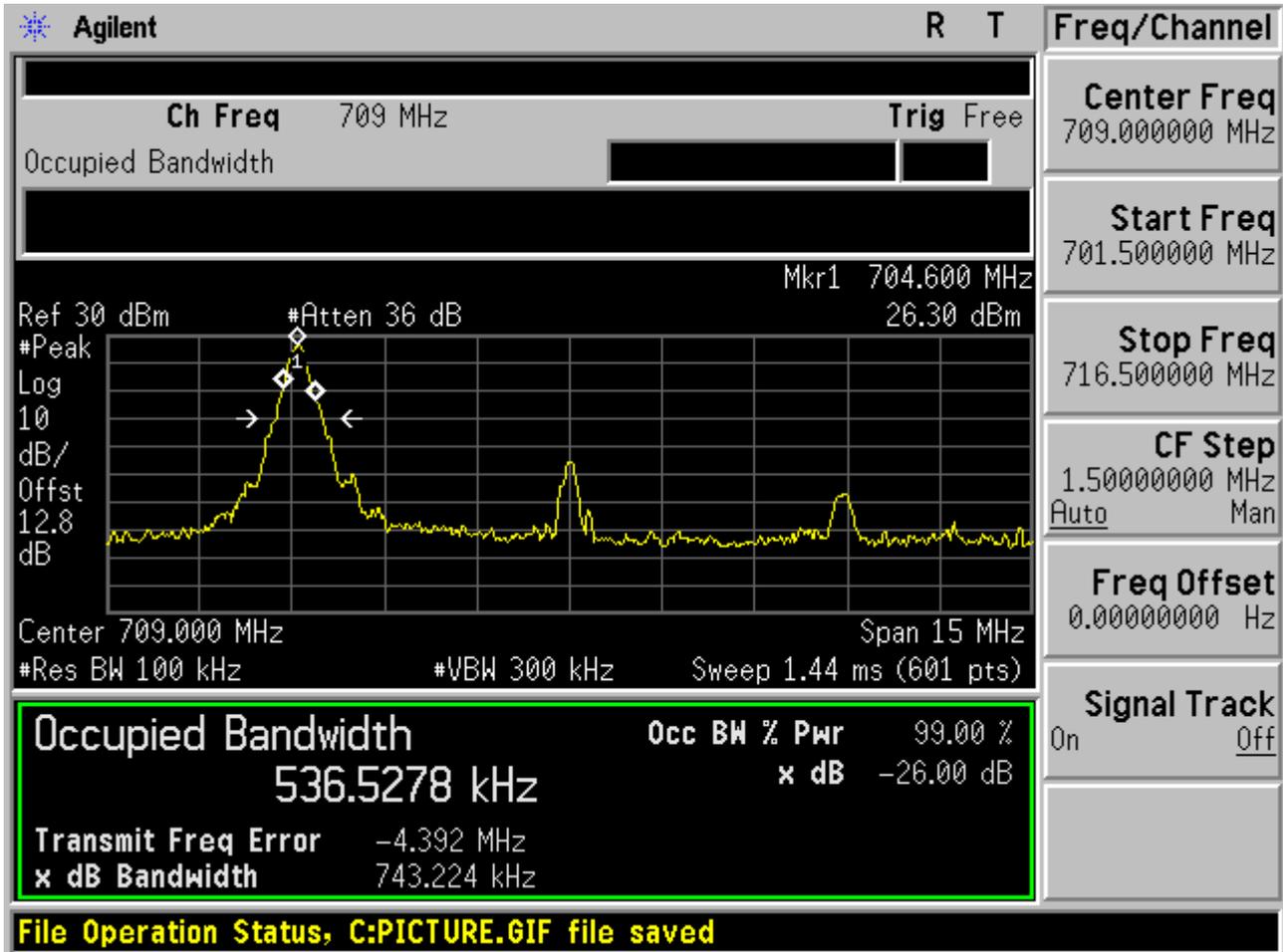
Freq Offset
0.00000000 Hz

Signal Track
On Off

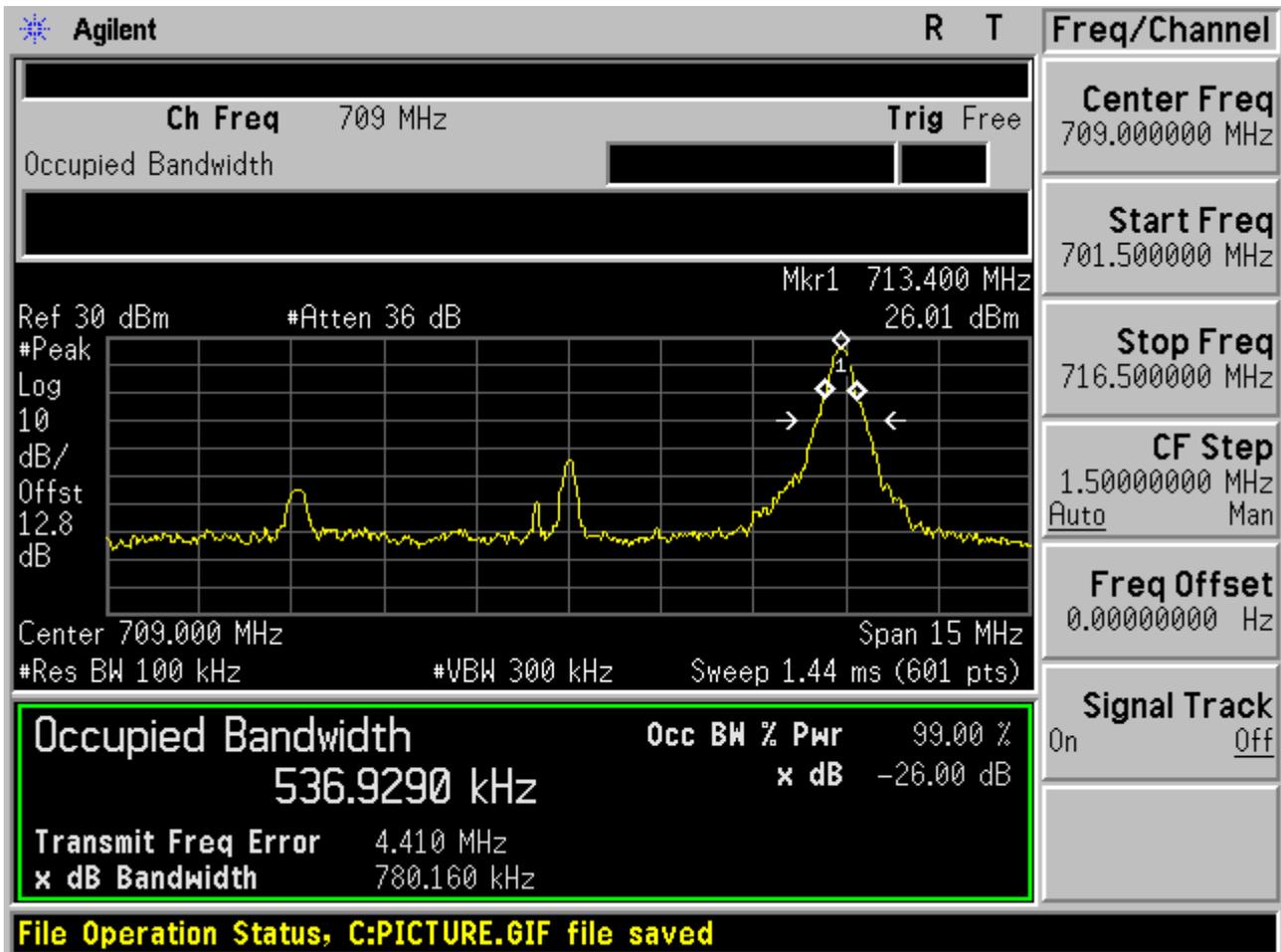
1.2.2 Channel Bandwidth = 10 MHz

1.2.2.1 Channel =B

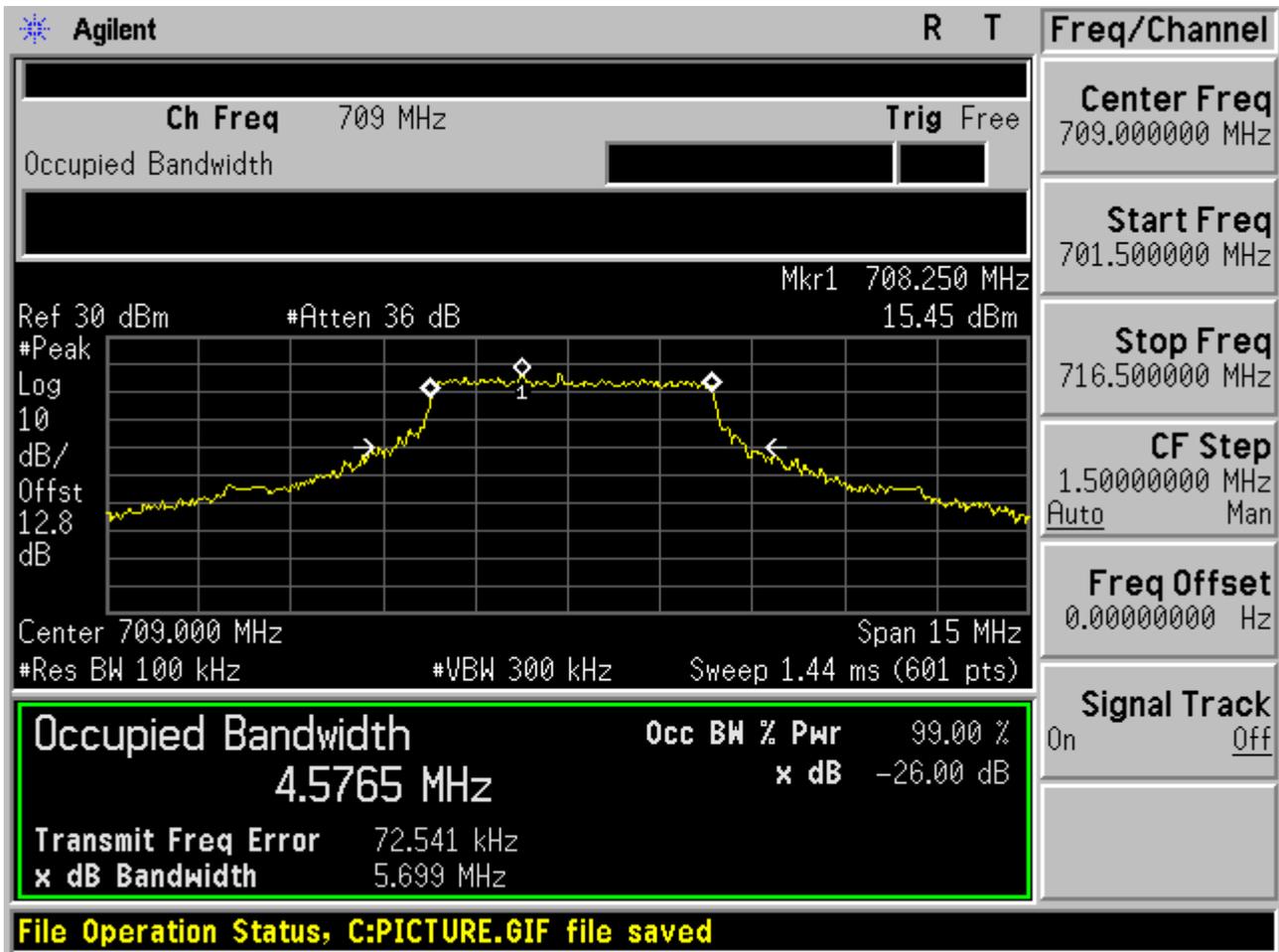
1.2.2.1.1 16QAM/1RB # 0



1.2.2.1.2 16QAM /1RB # max



1.2.2.1.3 16QAM /non-1RB #mid/2





1.2.2.1.4 16QAM /full RBs

Agilent R T

Ch Freq 709 MHz **Trig** Free

Occupied Bandwidth [Progress Bar]

Ref 30 dBm #Atten 36 dB

#Peak Mkr1 707.425 MHz

Log 13.15 dBm

10

dB/

Offst → ←

12.8

dB

Center 709.000 MHz Span 15 MHz

#Res BW 100 kHz #VBW 300 kHz

Sweep 1.44 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
8.9179 MHz	x dB	-26.00 dB
Transmit Freq Error	-4.806 kHz	
x dB Bandwidth	9.638 MHz	

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq
709.000000 MHz

Start Freq
701.500000 MHz

Stop Freq
716.500000 MHz

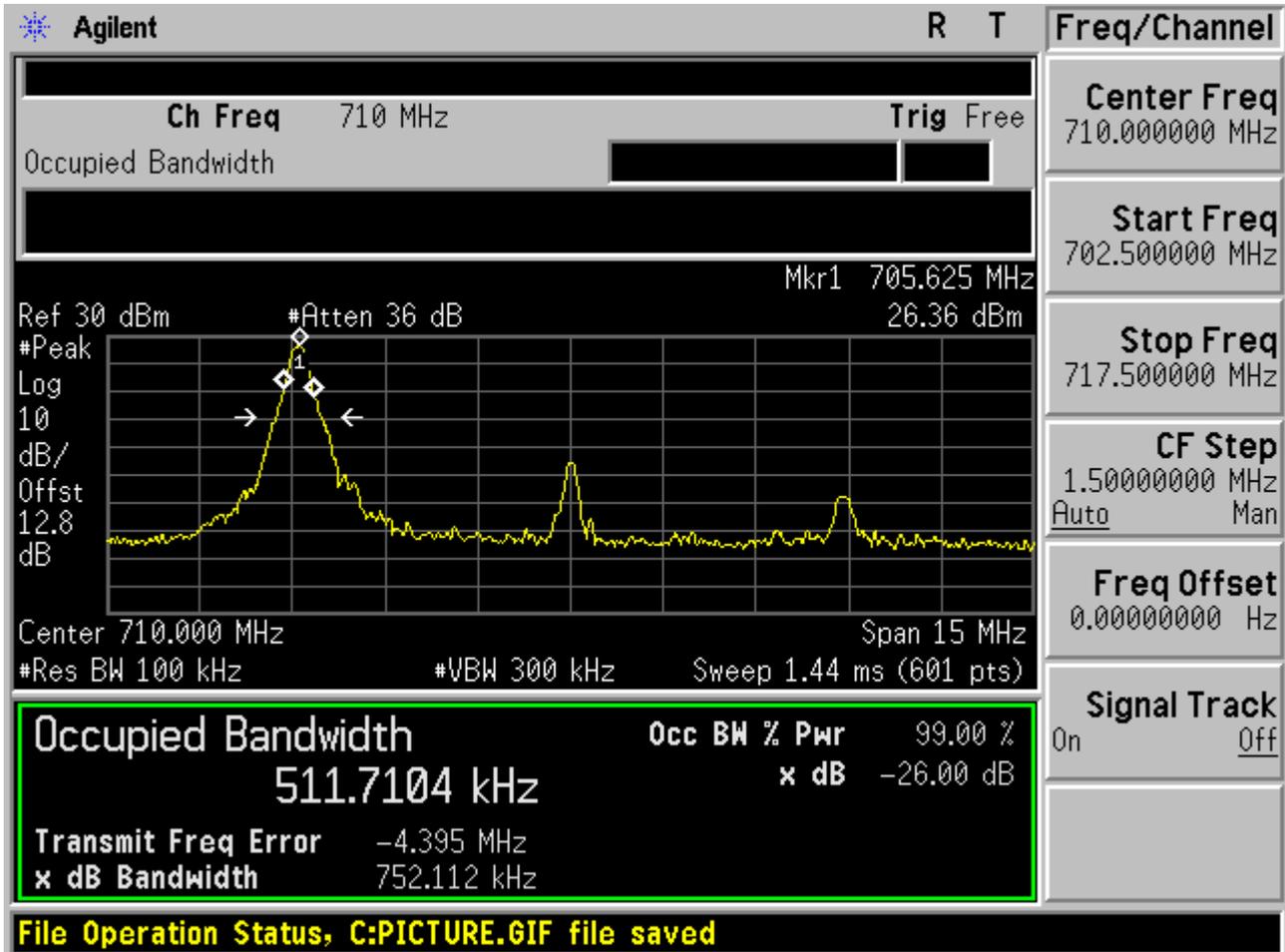
CF Step
1.50000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

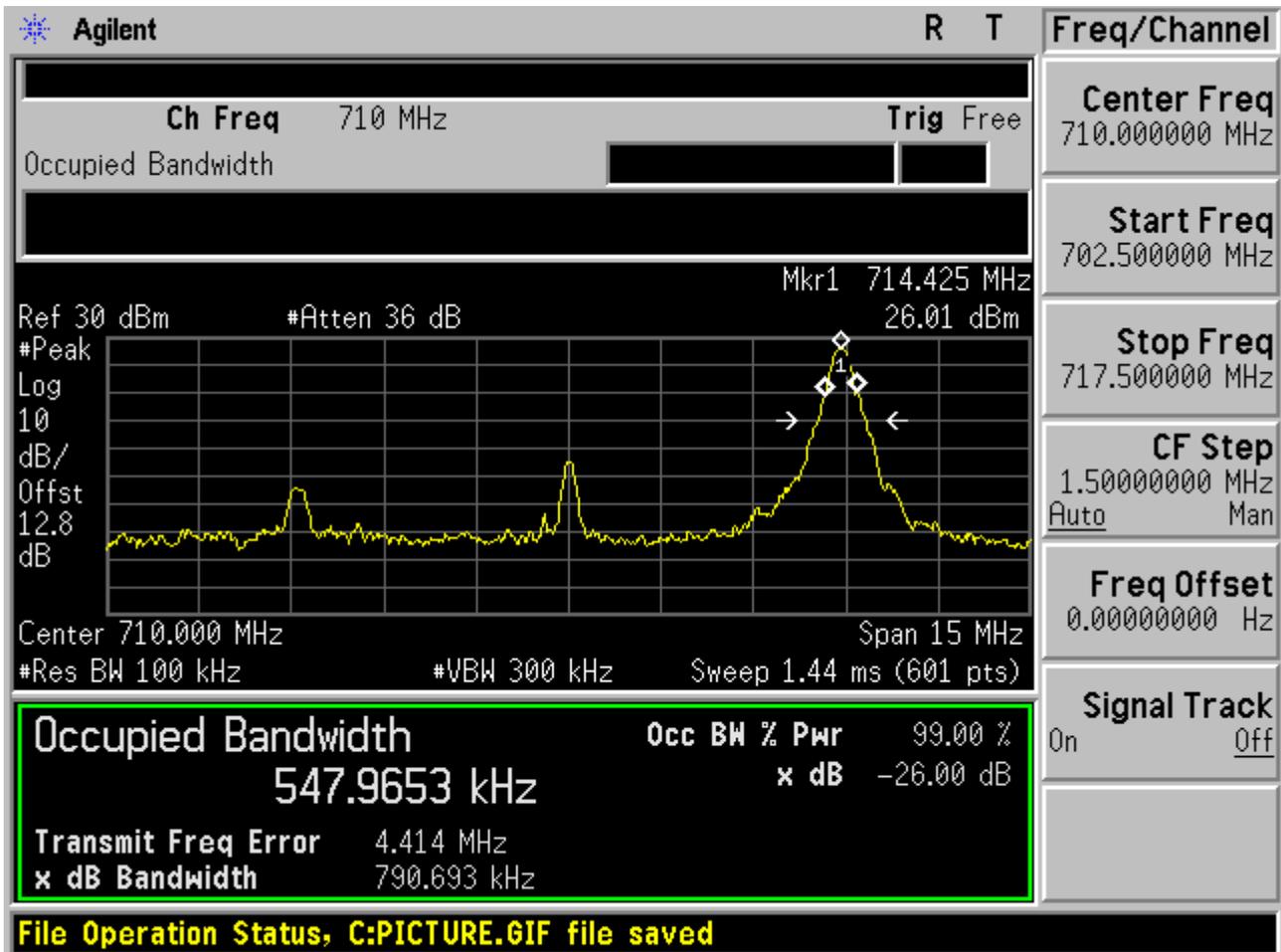
Signal Track
On Off

1.2.2.2 Channel =M

1.2.2.2.1 16QAM/1RB # 0



1.2.2.2.2 16QAM /1RB # max





1.2.2.2.3 16QAM /non-1RB #mid/2

Agilent R T

Ch Freq 710 MHz **Trig** Free

Occupied Bandwidth Mkr1 708.575 MHz

Ref 30 dBm #Atten 36 dB 15.70 dBm

#Peak

Log

10

dB/

Offst

12.8

dB

Center 710.000 MHz Span 15 MHz

#Res BW 100 kHz #VBW 300 kHz Sweep 1.44 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr 99.00 %
4.5962 MHz	x dB -26.00 dB
Transmit Freq Error 81.788 kHz	
x dB Bandwidth 6.050 MHz	

Freq/Channel

Center Freq
710.000000 MHz

Start Freq
702.500000 MHz

Stop Freq
717.500000 MHz

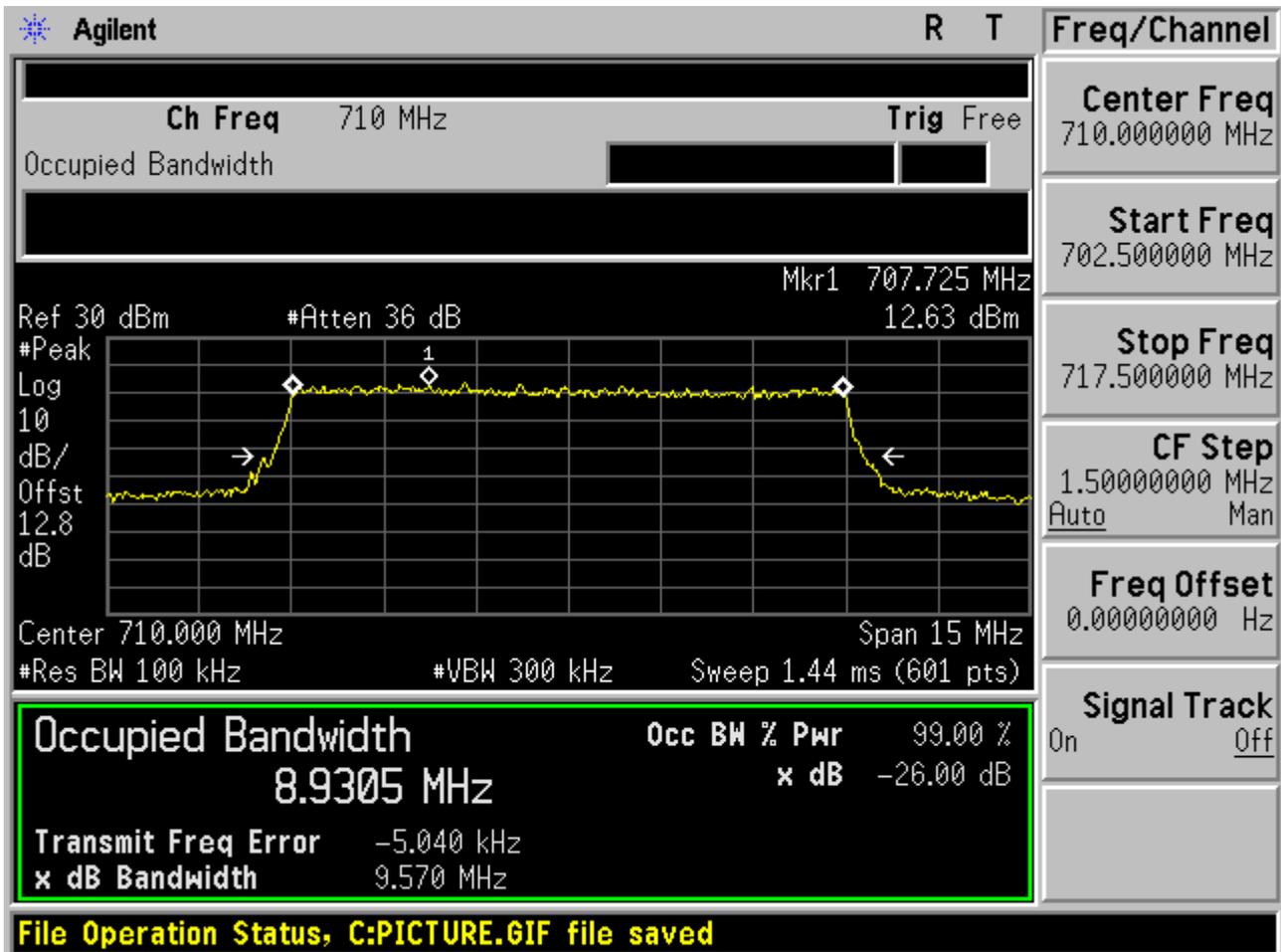
CF Step
1.50000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

File Operation Status, C:PICTURE.GIF file saved

1.2.2.2.4 16QAM /full RBs





1.2.2.3 Channel =T

1.2.2.3.1 16QAM/1RB # 0

Agilent R T

Ch Freq 711 MHz **Trig** Free

Occupied Bandwidth [] []

Ref 30 dBm #Atten 36 dB

#Peak Mkr1 706.625 MHz

Log 25.83 dBm

10

dB/

Offst

12.8

dB

Center 711.000 MHz Span 15 MHz

#Res BW 100 kHz #VBW 300 kHz

Sweep 1.44 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
535.6181 kHz	x dB	-26.00 dB
Transmit Freq Error	-4.397 MHz	
x dB Bandwidth	811.322 kHz	

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq
711.000000 MHz

Start Freq
703.500000 MHz

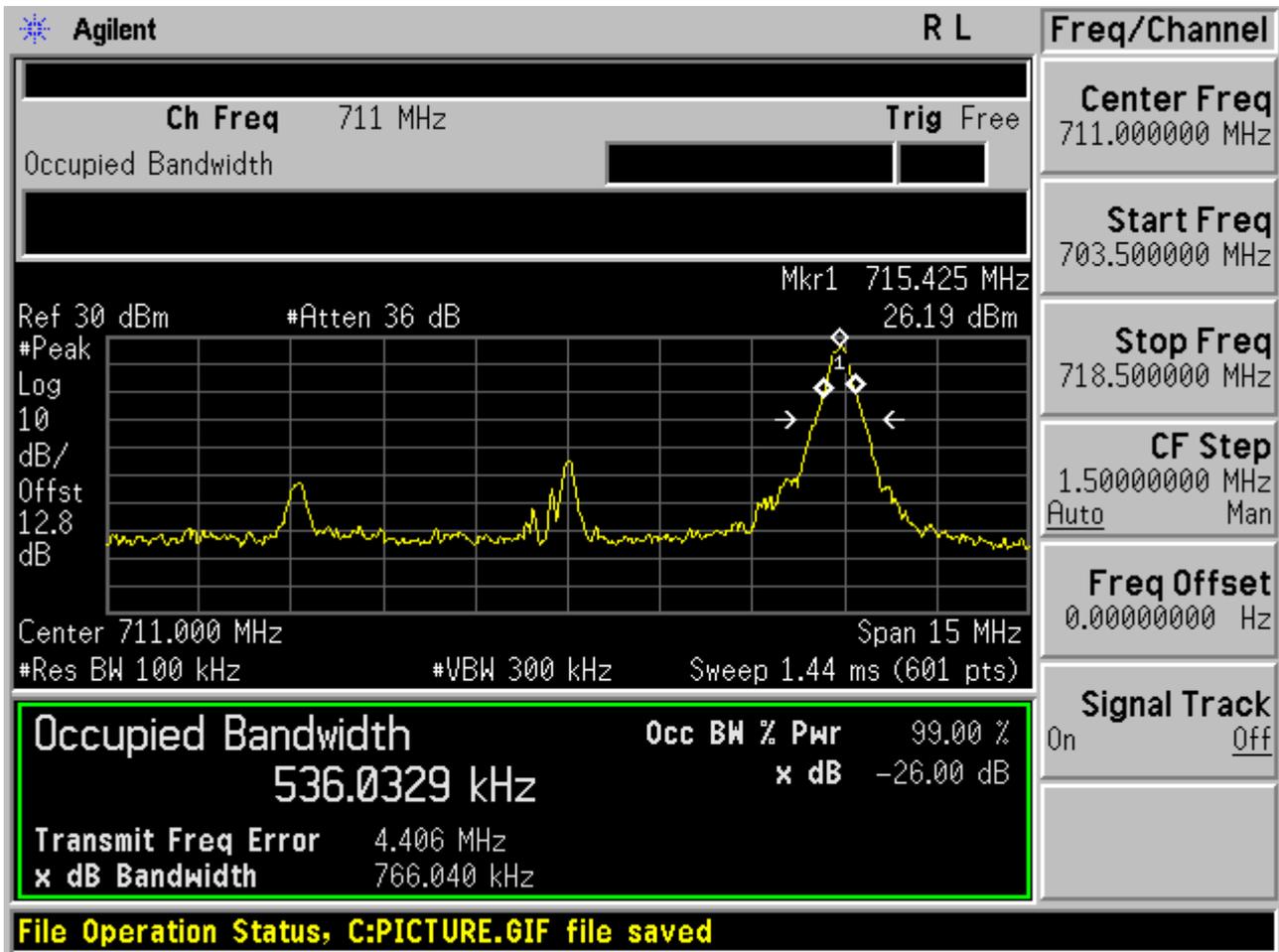
Stop Freq
718.500000 MHz

CF Step
1.50000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

1.2.2.3.2 16QAM /1RB # max





1.2.2.3.3 16QAM /non-1RB #mid/2

Agilent R T

Ch Freq 711 MHz **Trig** Free

Occupied Bandwidth Mkr1 710.875 MHz

Ref 30 dBm #Atten 36 dB 16.01 dBm

#Peak

Log

10

dB/

Offst

12.8

dB

Center 711.000 MHz Span 15 MHz

#Res BW 100 kHz #VBW 300 kHz Sweep 1.44 ms (601 pts)

Occupied Bandwidth	Occ BW % Pwr	99.00 %
4.5722 MHz	x dB	-26.00 dB
Transmit Freq Error	77.994 kHz	
x dB Bandwidth	6.122 MHz	

File Operation Status, C:PICTURE.GIF file saved

Freq/Channel

Center Freq
711.000000 MHz

Start Freq
703.500000 MHz

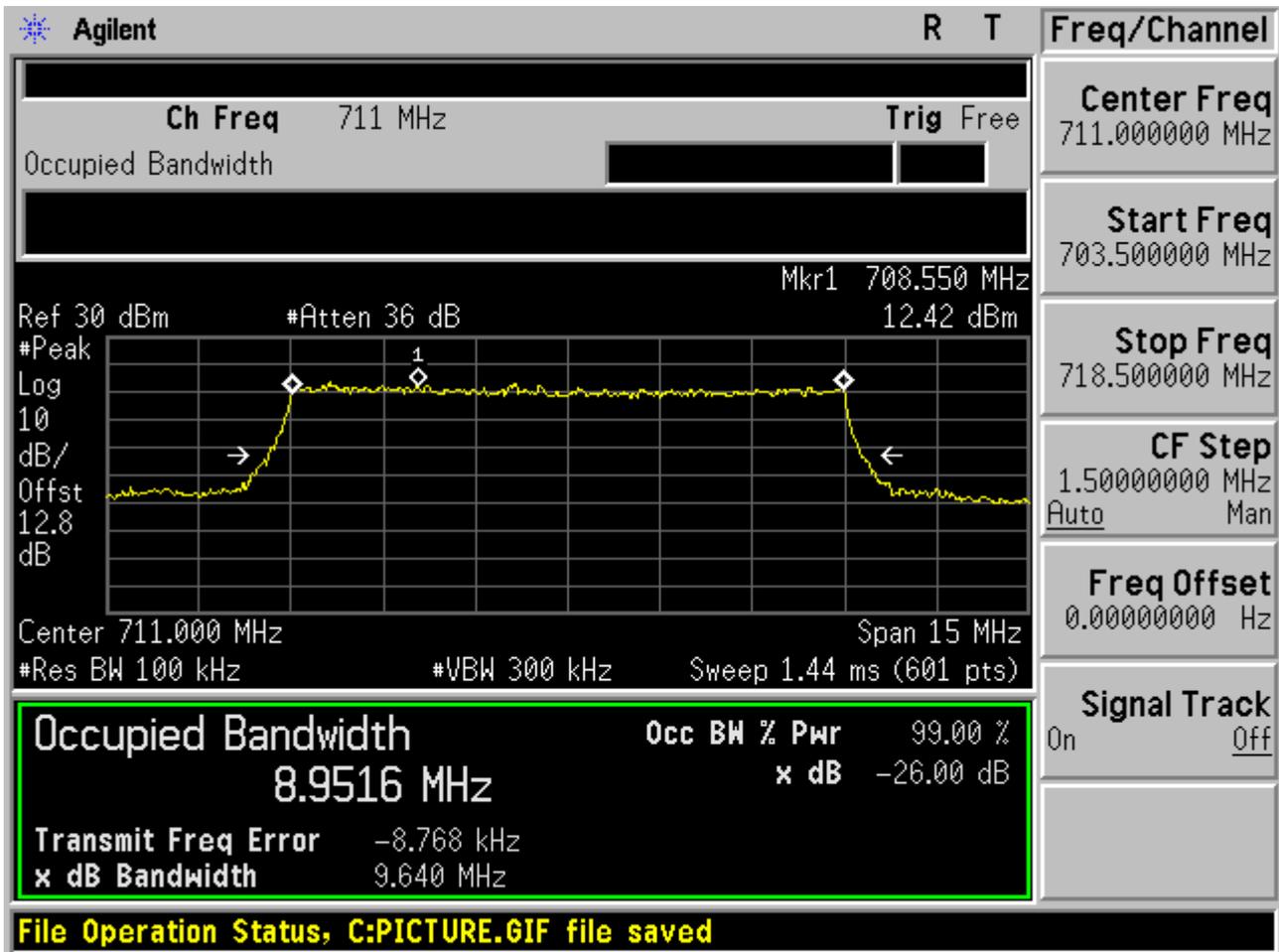
Stop Freq
718.500000 MHz

CF Step
1.50000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

1.2.2.3.4 16QAM /full RBs



-----END-----