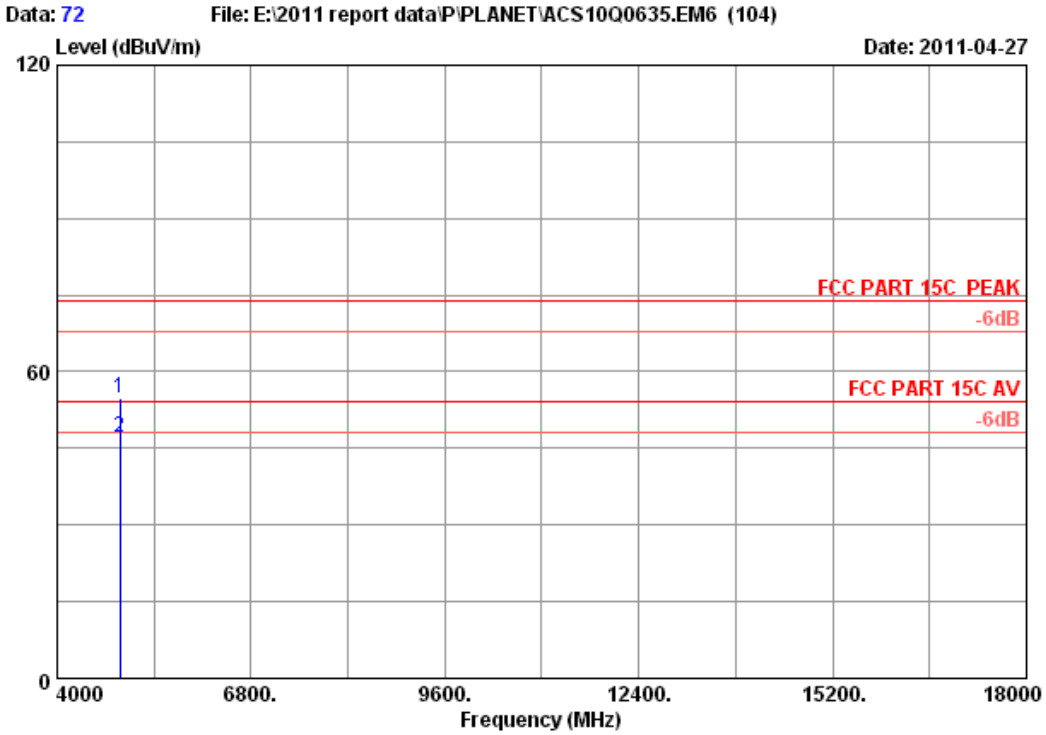


Site no. : 3m Chamber Data no. : 72
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4904.000	34.46	10.74	35.00	44.58	54.78	74.00	19.22	Peak
2	4904.000	34.46	10.74	35.00	37.10	47.30	54.00	6.70	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5. CONDUCTED SPURIOUS EMISSIONS

5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

5.2.Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

5.3.Test Procedure

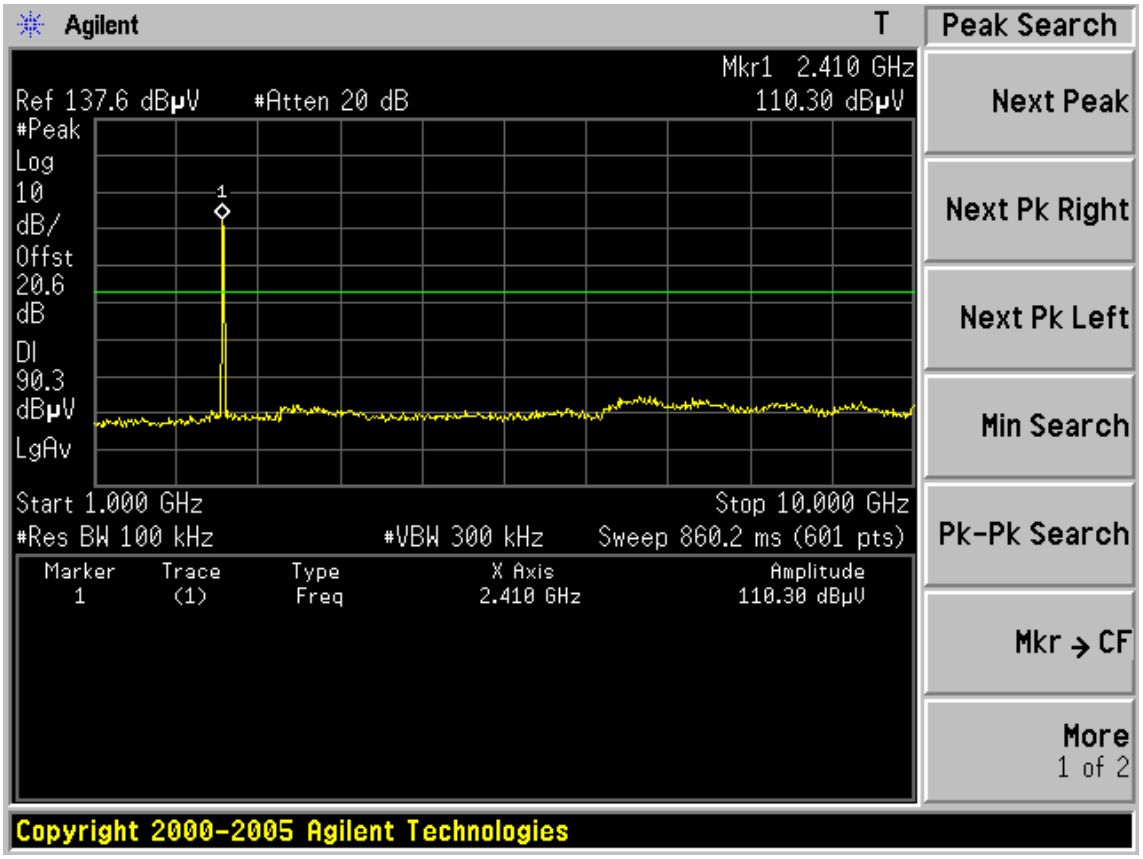
The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions detected.

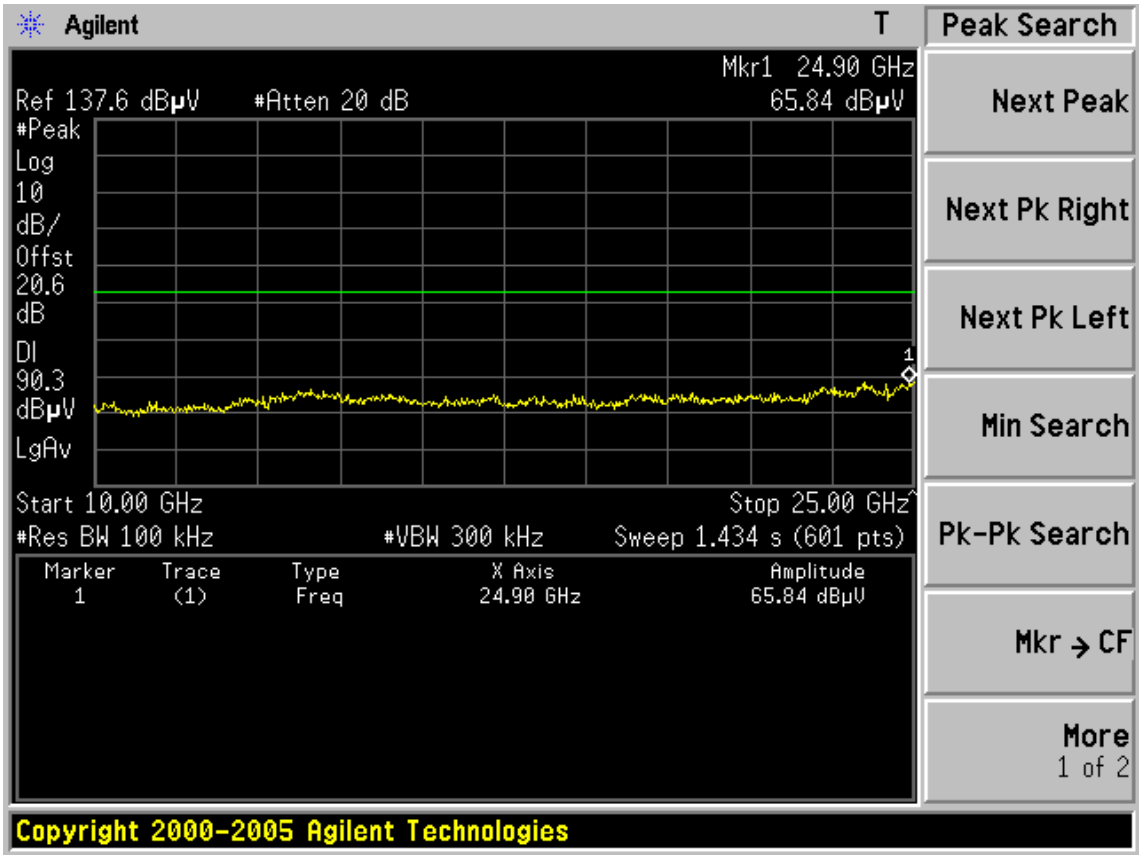
5.4.Test result

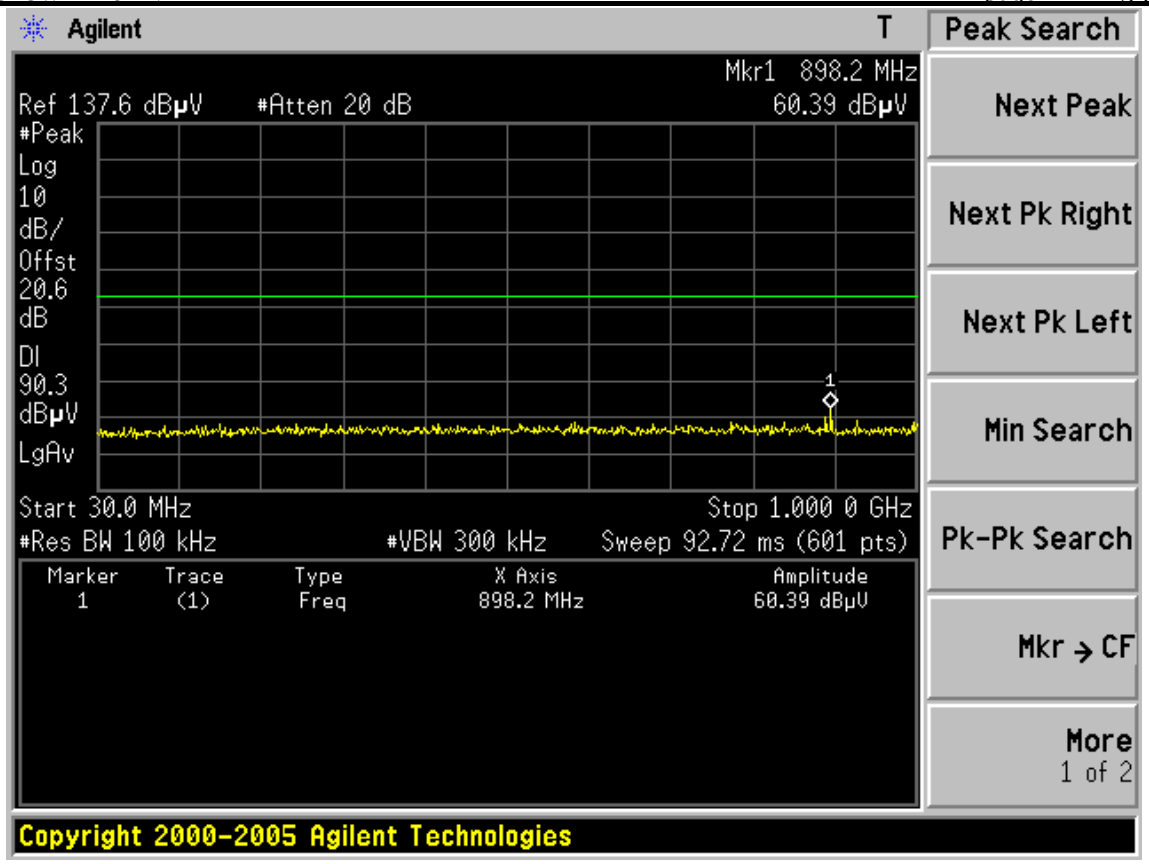
PASS (The testing data was attached in the next pages.)

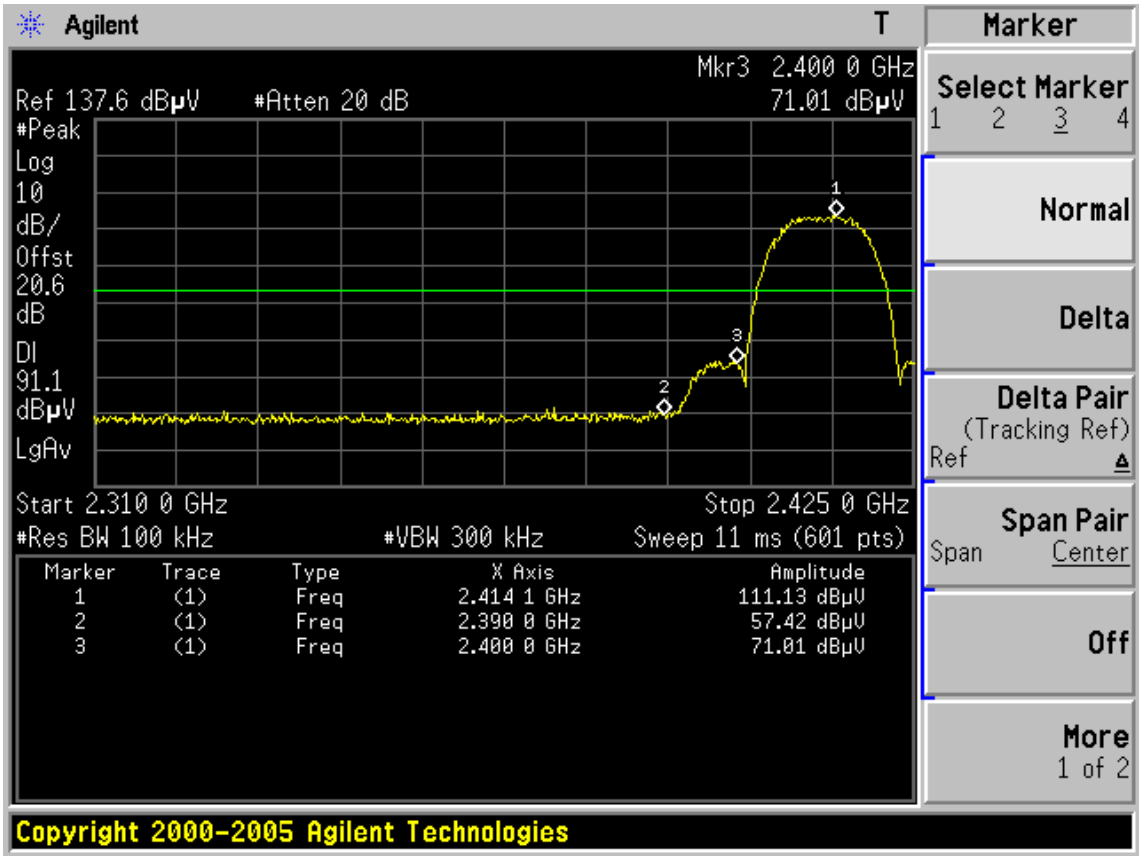
Test Mode: IEEE 802.11b TX

CH1

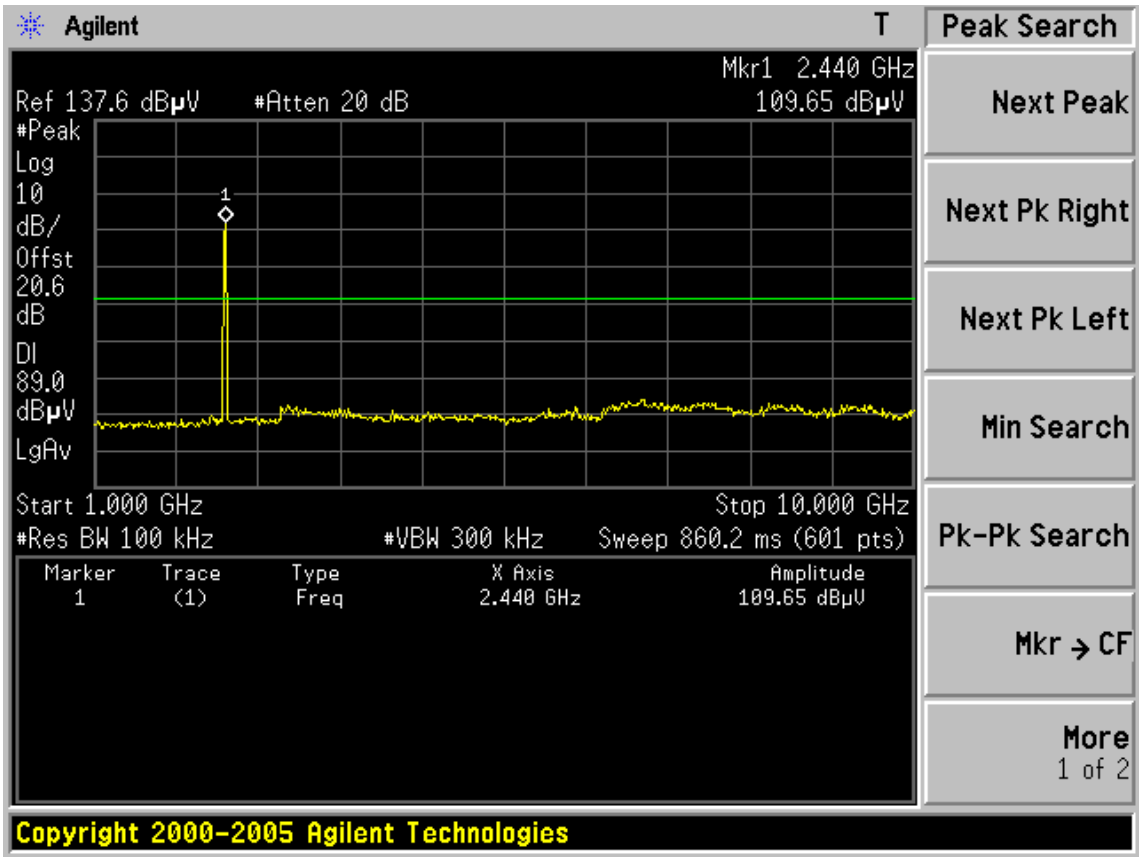


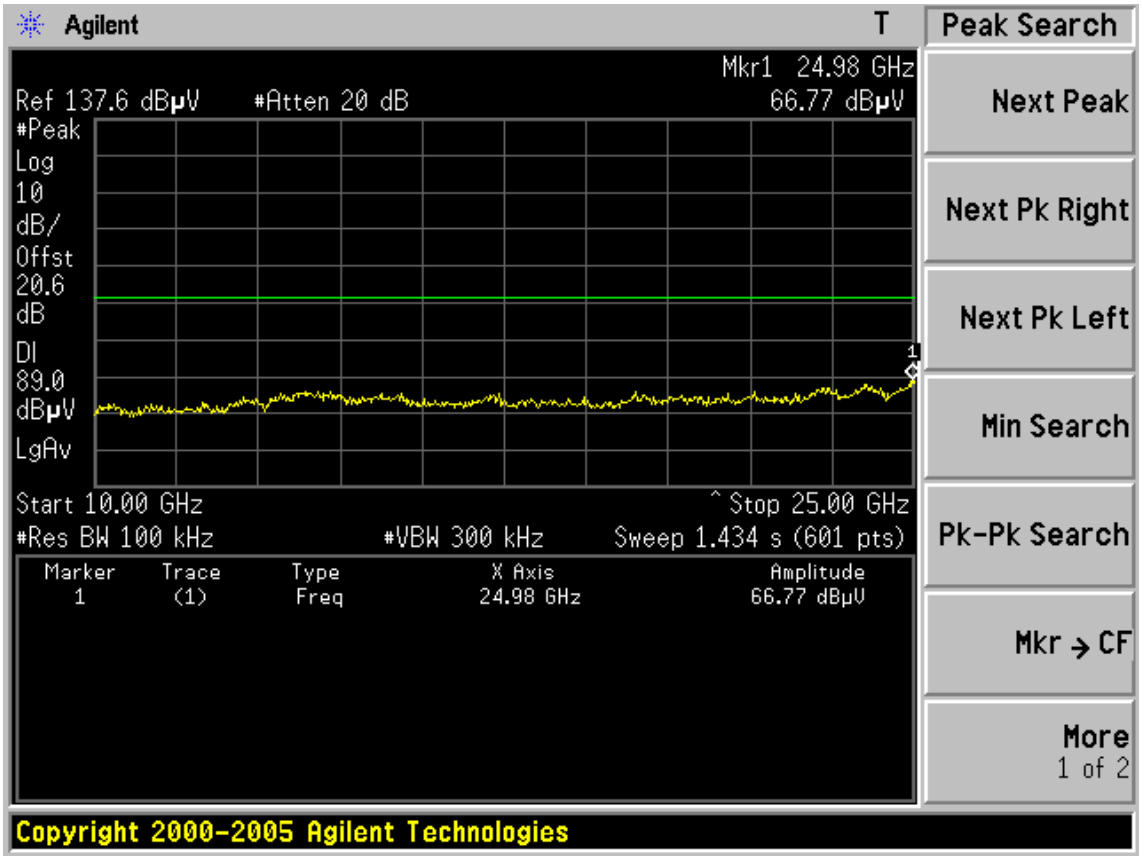


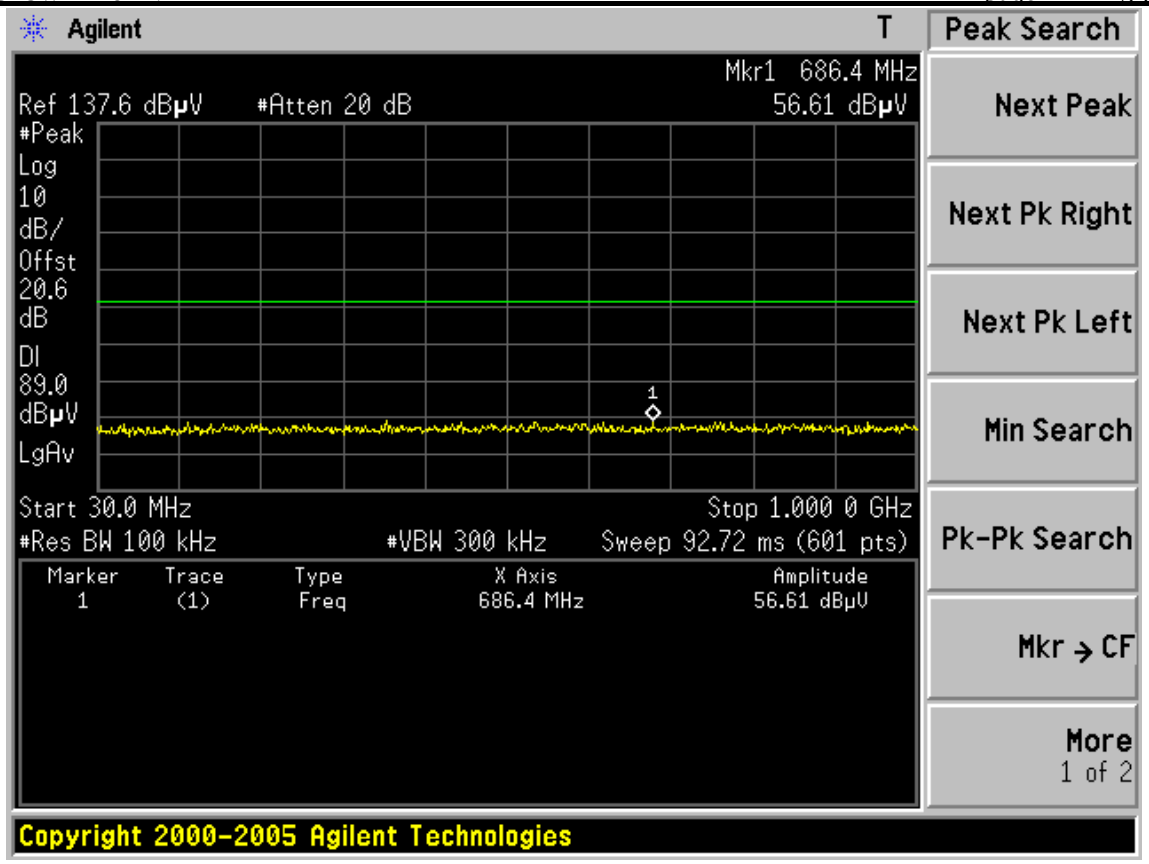

Agilent
T
Peak Search
Mkr1 898.2 MHz
Ref 137.6 dBµV
#Atten 20 dB
60.39 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
90.3
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 898.2 MHz 60.39 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies


Agilent
T
Marker
Mkr3 2.400 0 GHz
Ref 137.6 dBµV
#Atten 20 dB
71.01 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
91.1
dBµV
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Span Pair
Span Center
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.414 1 GHz 111.13 dBµV
2 (1) Freq 2.390 0 GHz 57.42 dBµV
3 (1) Freq 2.400 0 GHz 71.01 dBµV
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

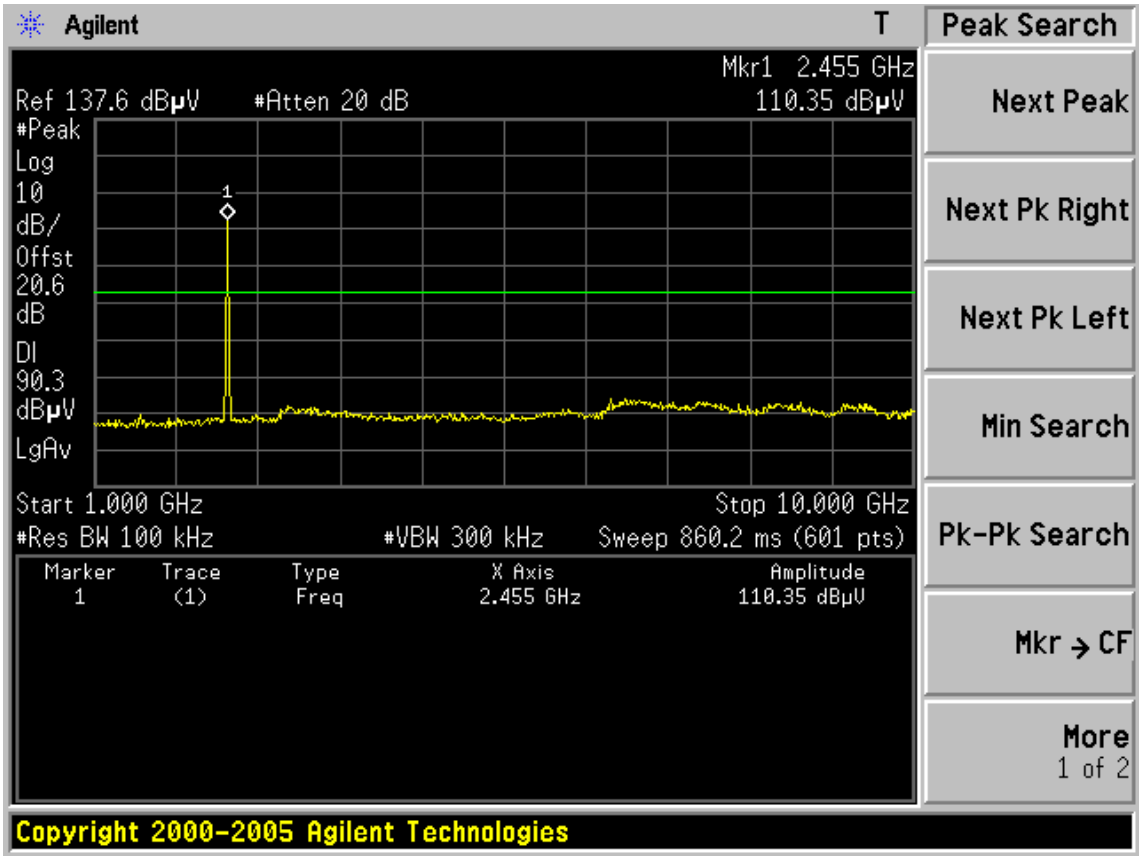
CH6

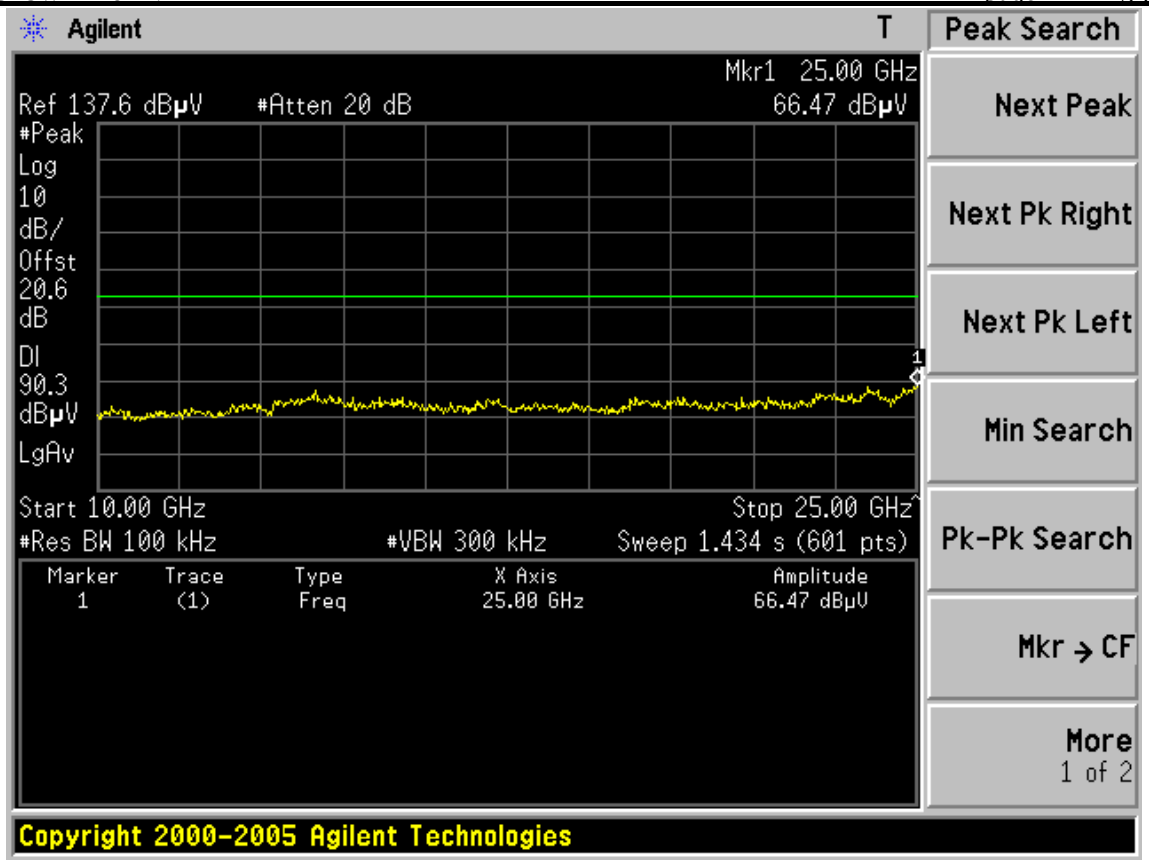

Agilent
T
Peak Search
Mkr1 2.440 GHz
Ref 137.6 dBµV
#Atten 20 dB
109.65 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
89.0
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz 109.65 dBµV
Copyright 2000-2005 Agilent Technologies

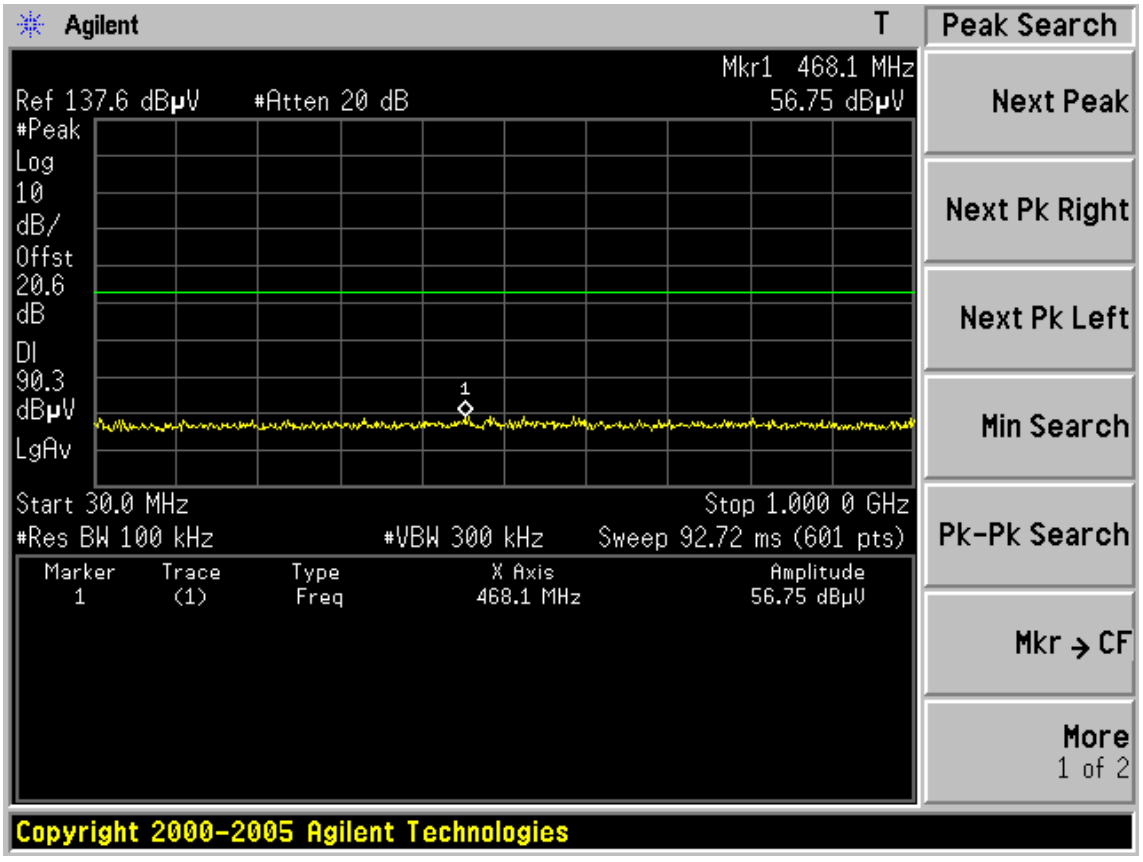

Agilent
T
Peak Search
Mkr1 24.98 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.77 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
89.0
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
^ Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.98 GHz 66.77 dBµV
Copyright 2000-2005 Agilent Technologies

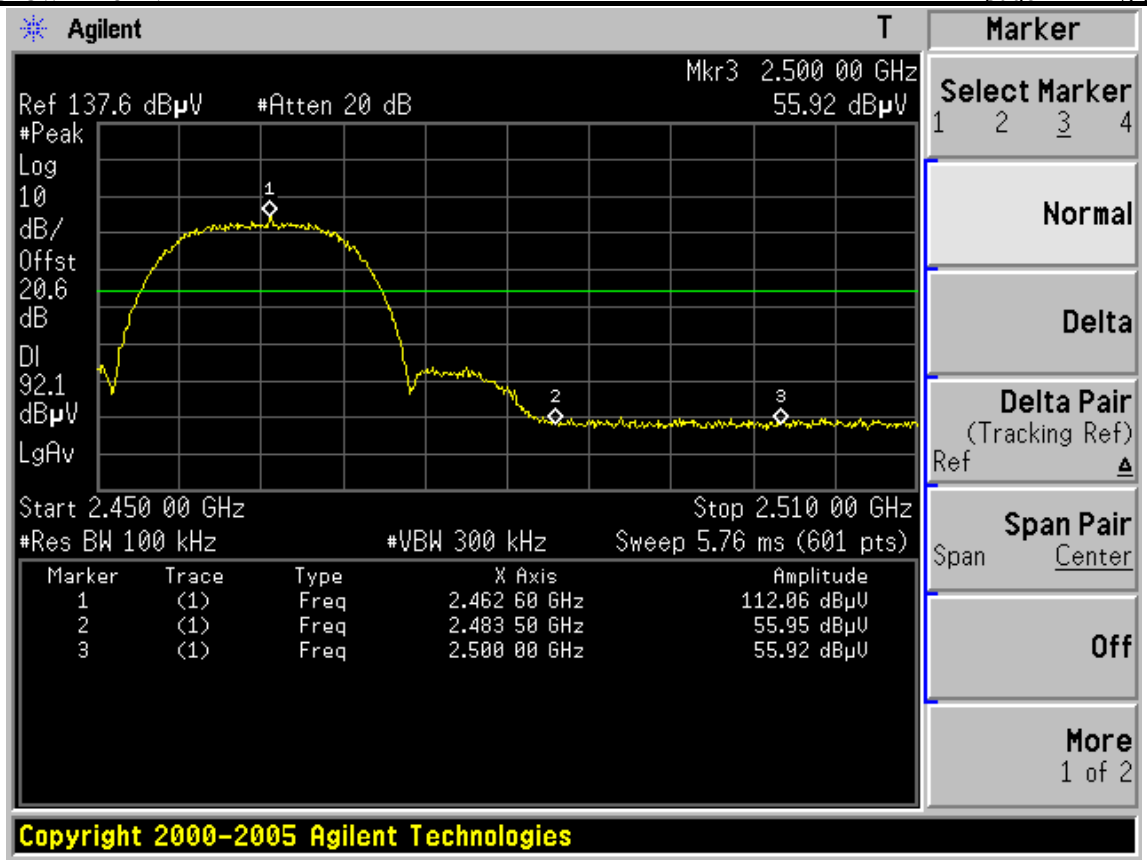

Agilent
T
Peak Search
Mkr1 686.4 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.61 dBµV
Next Peak
#Peak
Log
10
dB/
Offst
20.6
dB
Next Pk Right
Dl
89.0
dBµV
Next Pk Left
LgAv
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 686.4 MHz 56.61 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

CH11

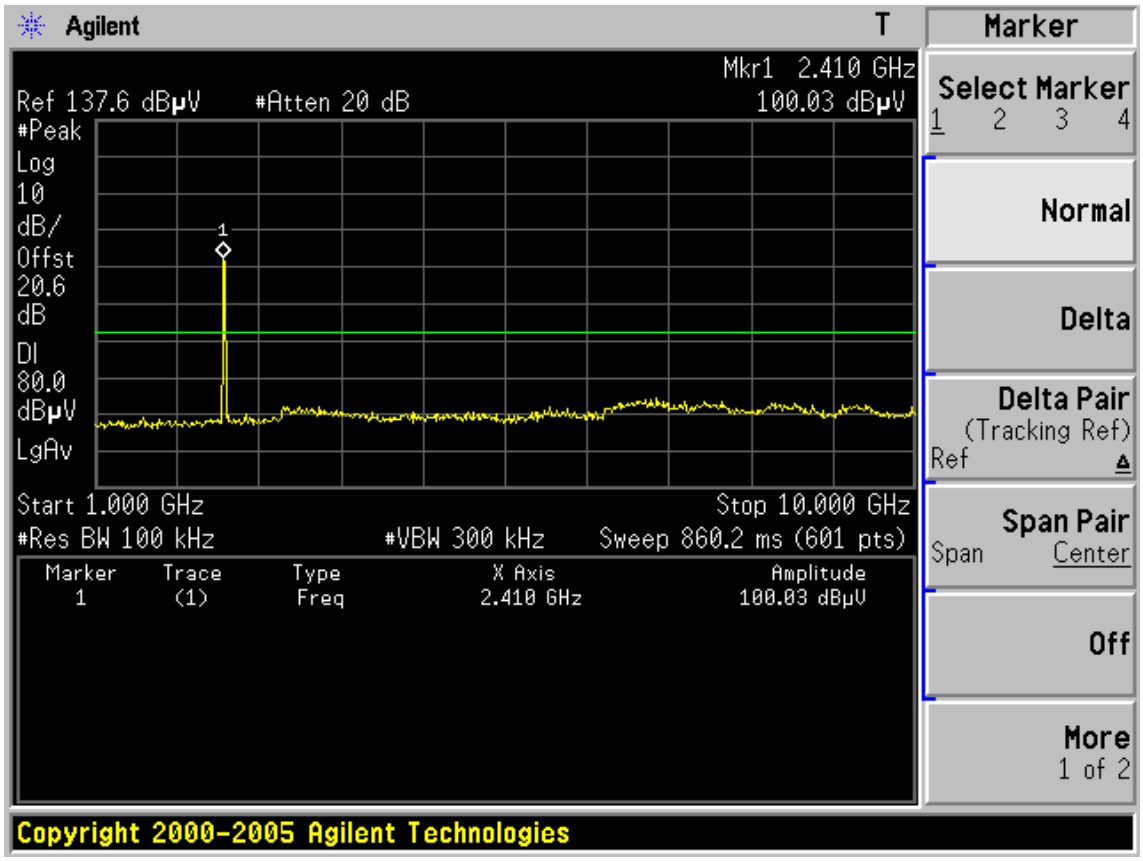

Agilent
T
Peak Search
Mkr1 2.455 GHz
Ref 137.6 dBµV
#Atten 20 dB
110.35 dBµV
Next Peak
#Peak
Log
10
dB/
Offst
20.6
dB
Next Pk Right
Dl
90.3
dBµV
Next Pk Left
LgAv
Min Search
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz 110.35 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

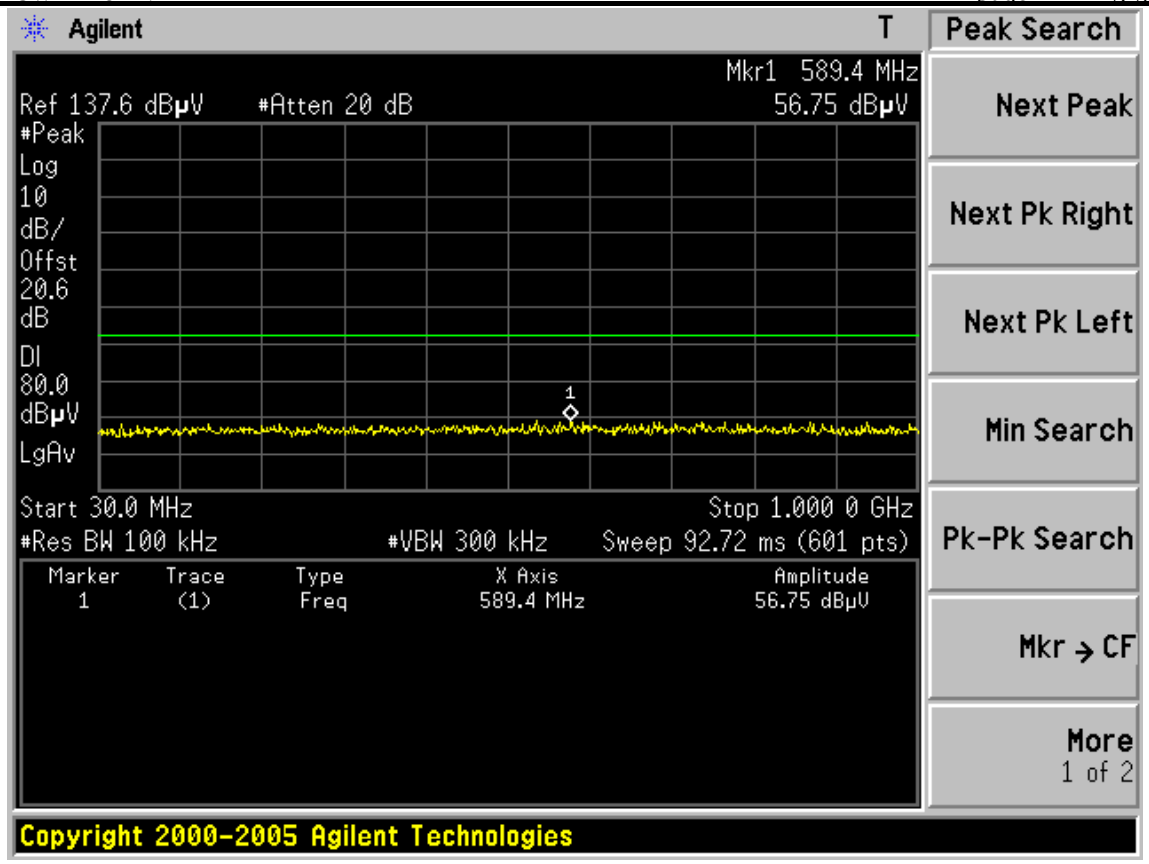

Agilent
T
Peak Search
Mkr1 25.00 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.47 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
90.3
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz 66.47 dBµV
Copyright 2000-2005 Agilent Technologies

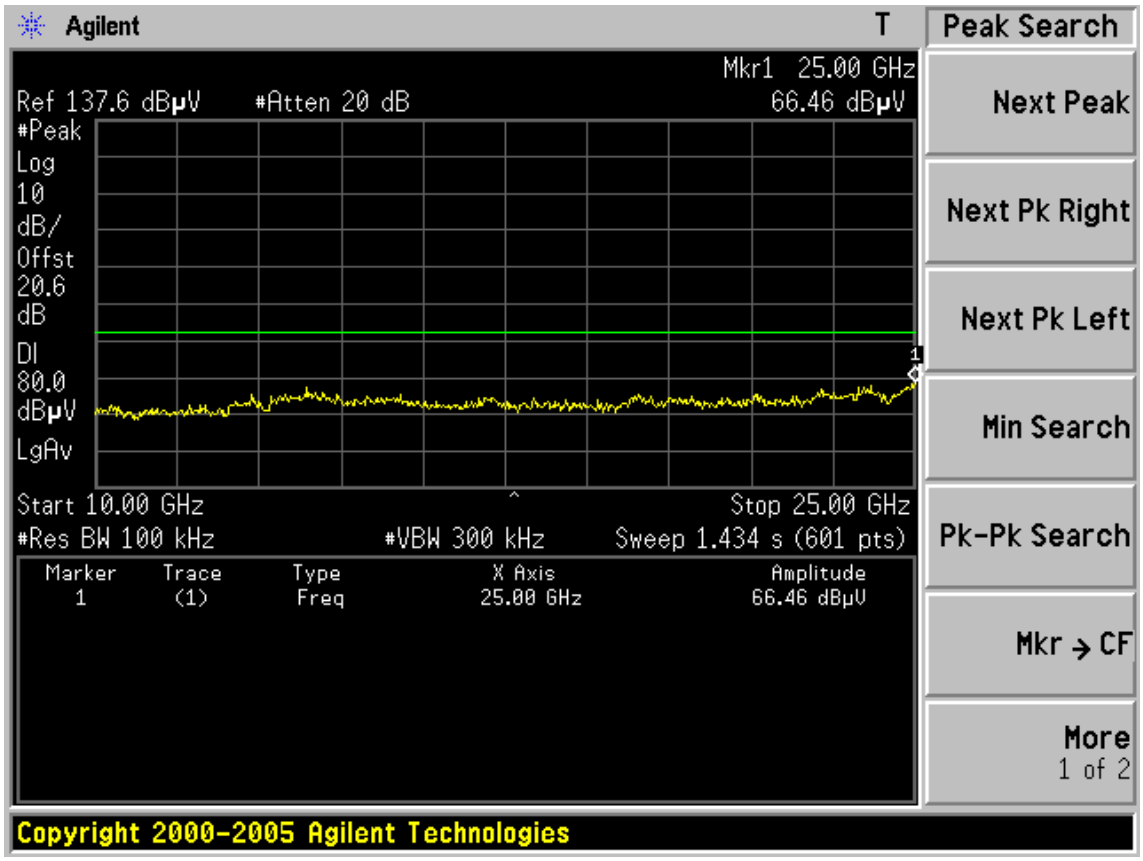

Agilent
T
Peak Search
Mkr1 468.1 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.75 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
90.3
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 468.1 MHz 56.75 dBµV
Copyright 2000-2005 Agilent Technologies

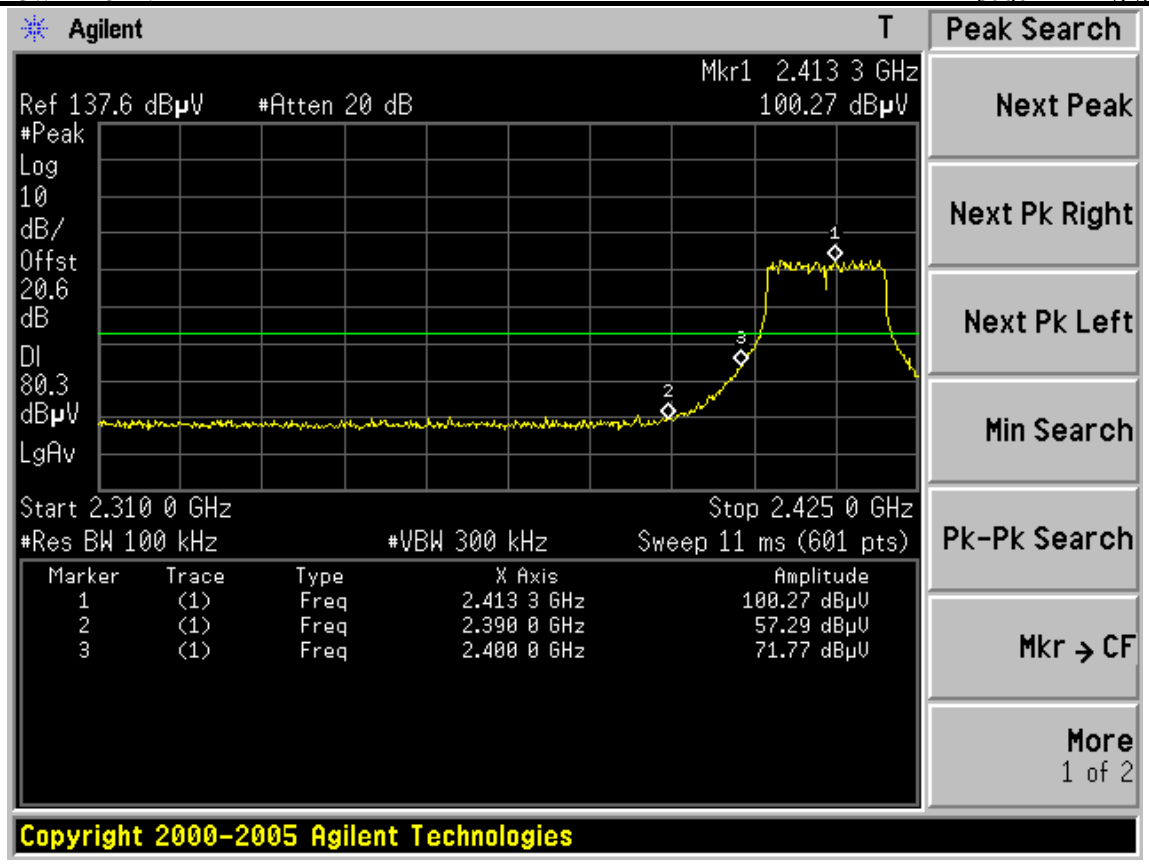


Test Mode: IEEE 802.11g TX
CH1

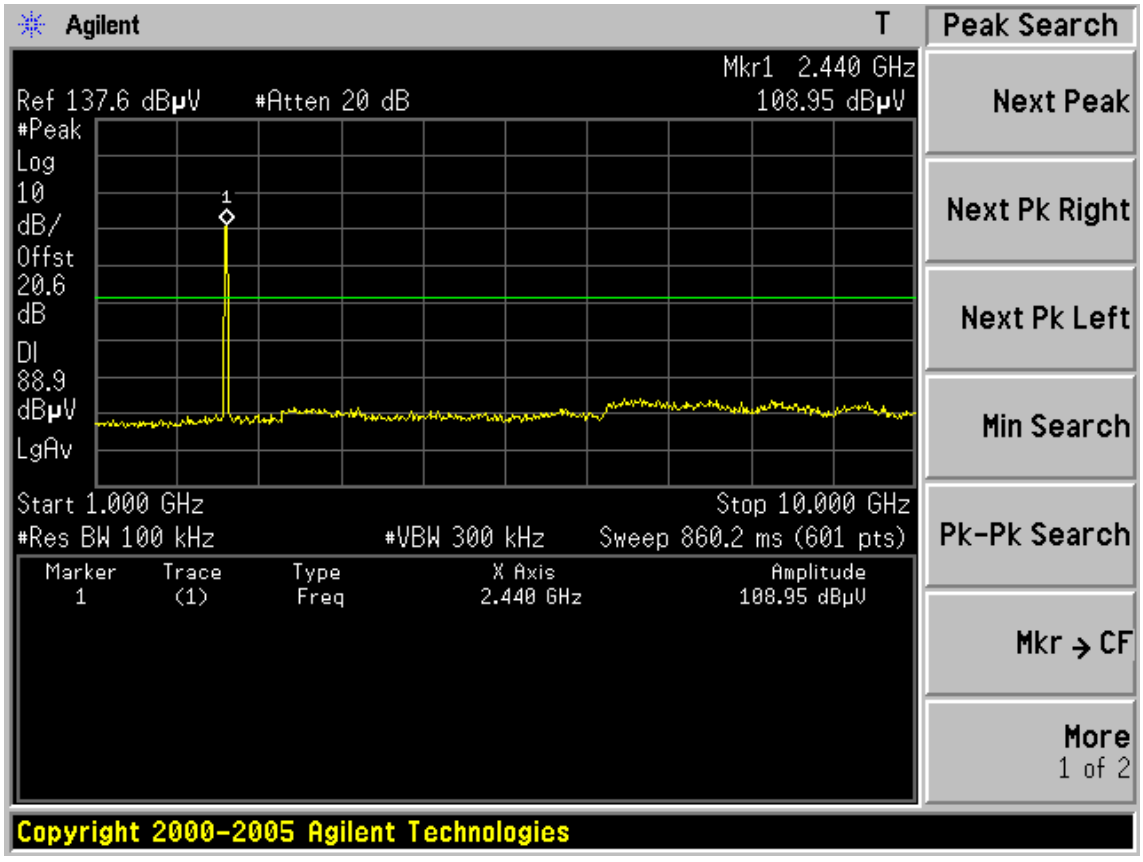


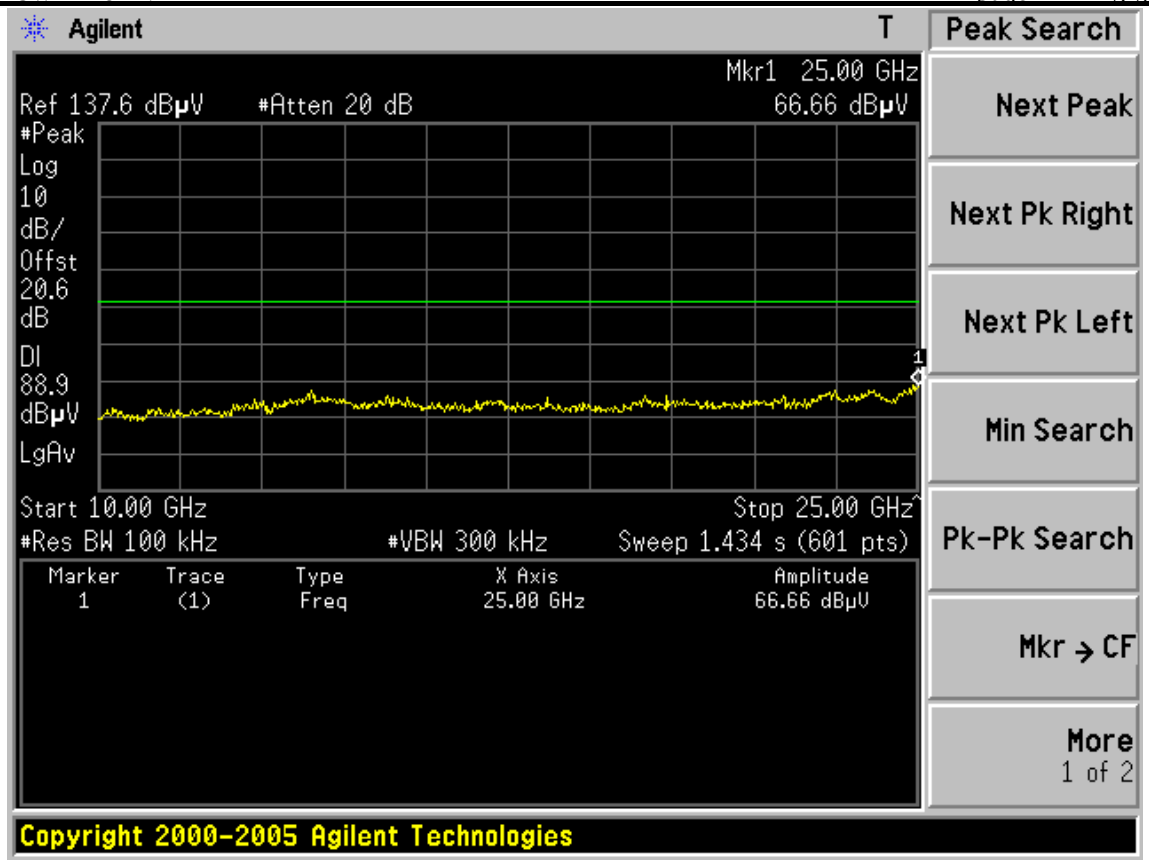

Agilent
T
Peak Search
Mkr1 589.4 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.75 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
80.0
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 589.4 MHz 56.75 dBµV
Copyright 2000-2005 Agilent Technologies

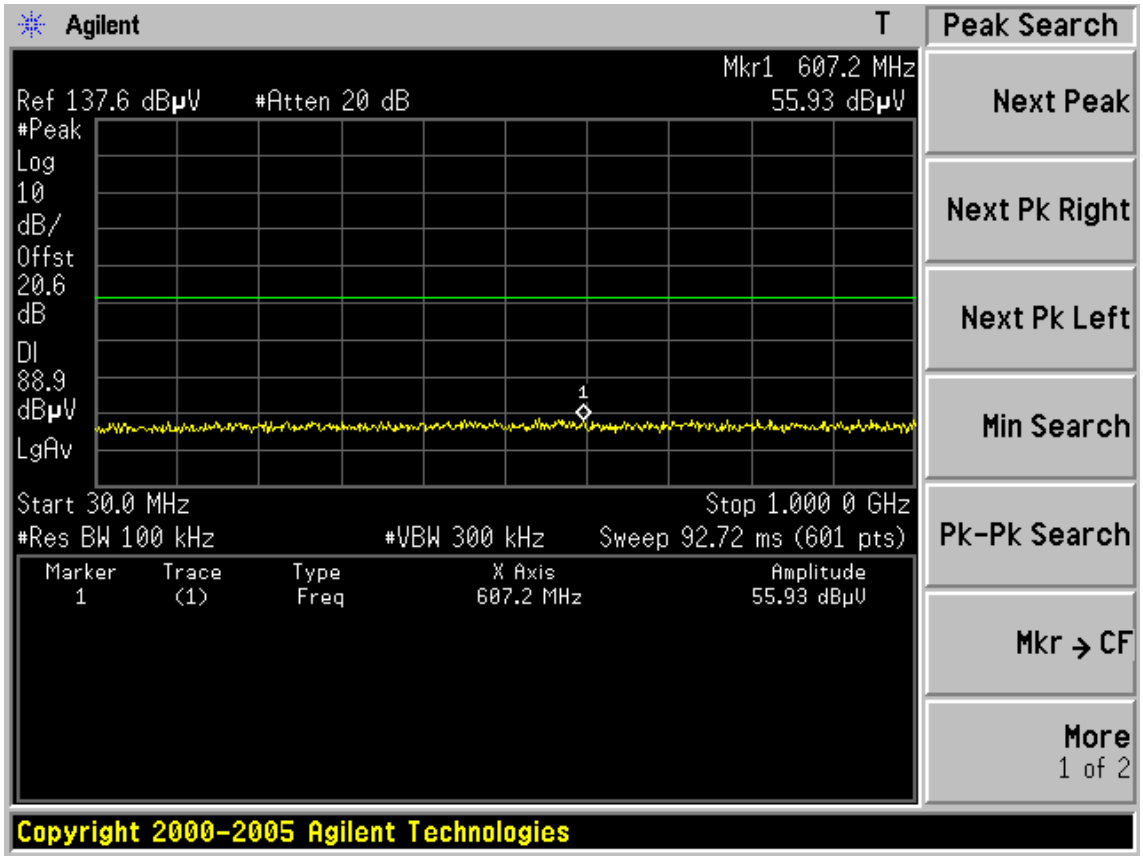

Agilent
T
Peak Search
Mkr1 25.00 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.46 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
80.0
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz 66.46 dBµV
Copyright 2000-2005 Agilent Technologies


Agilent
T
Peak Search
Mkr1 2.413 3 GHz
Ref 137.6 dBµV
#Atten 20 dB
100.27 dBµV
Next Peak
#Peak
Log
10
dB/
Offst
20.6
dB
Next Pk Right
Dl
80.3
dBµV
Next Pk Left
LgAv
Min Search
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.413 3 GHz 100.27 dBµV
2 (1) Freq 2.390 0 GHz 57.29 dBµV
3 (1) Freq 2.400 0 GHz 71.77 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

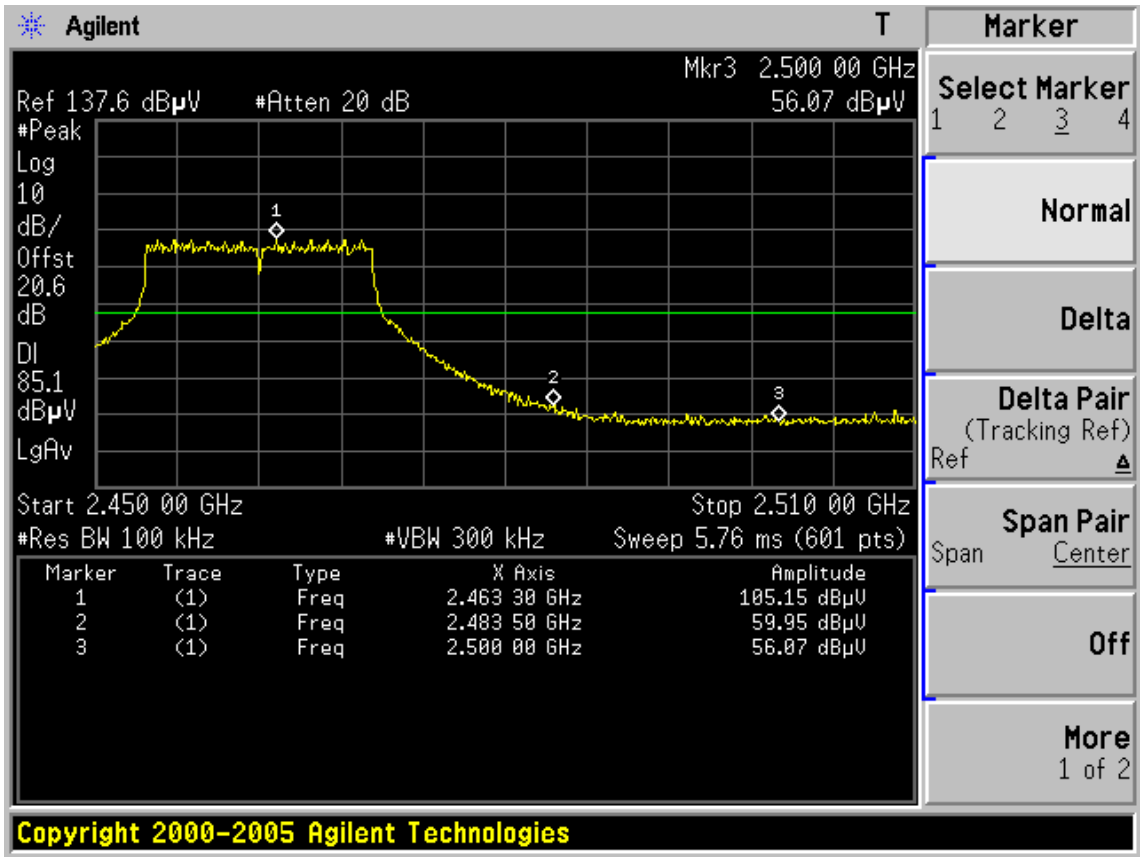
CH6

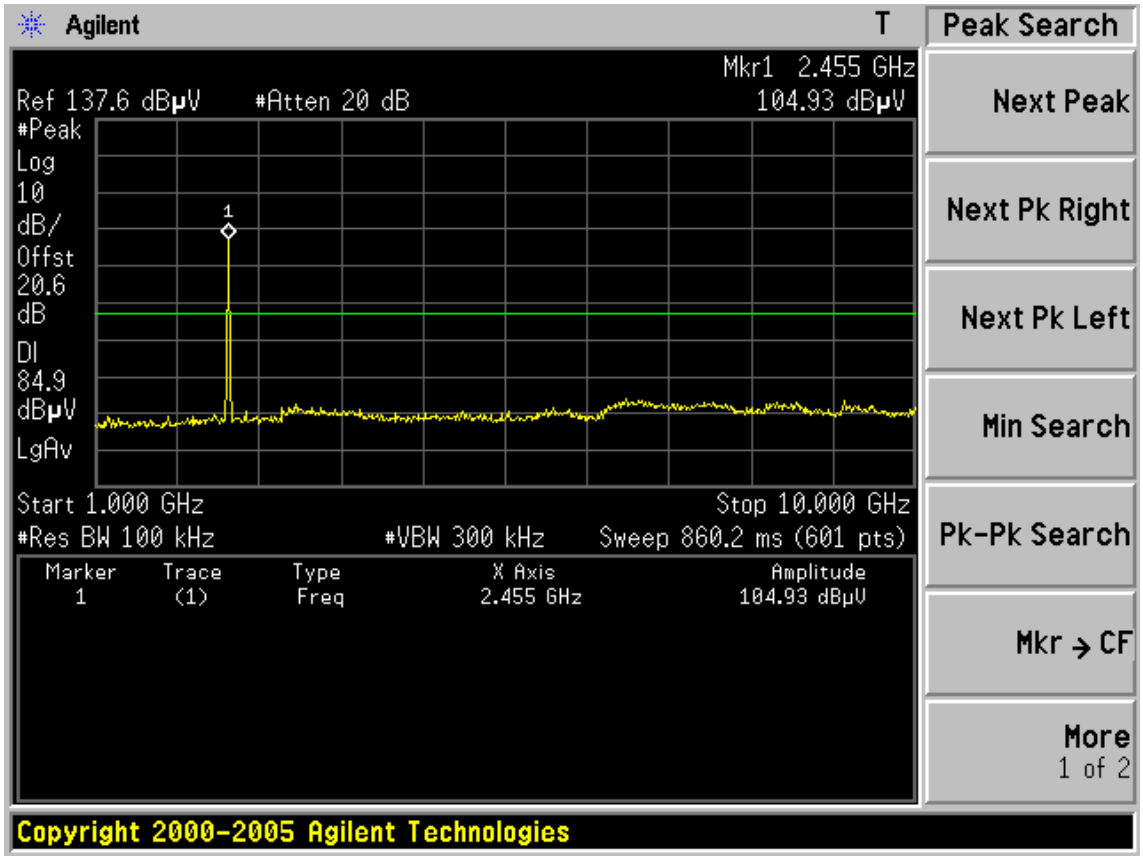

Agilent
T
Peak Search
Mkr1 2.440 GHz
Ref 137.6 dBµV
#Atten 20 dB
108.95 dBµV
Next Peak
#Peak
Log
10
dB/
Offst
20.6
dB
Next Pk Right
Dl
88.9
dBµV
Next Pk Left
LgAv
Min Search
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz 108.95 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

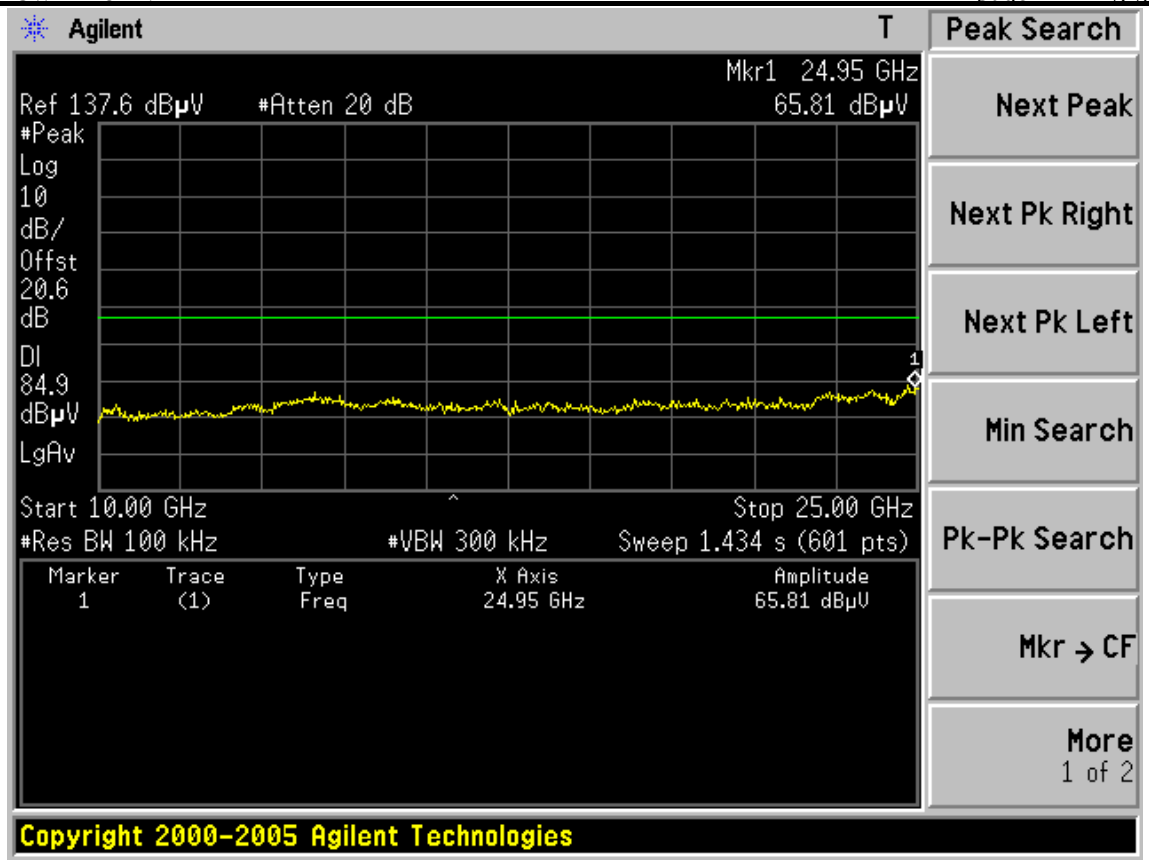

Agilent
T
Peak Search
Mkr1 25.00 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.66 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
88.9
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz 66.66 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

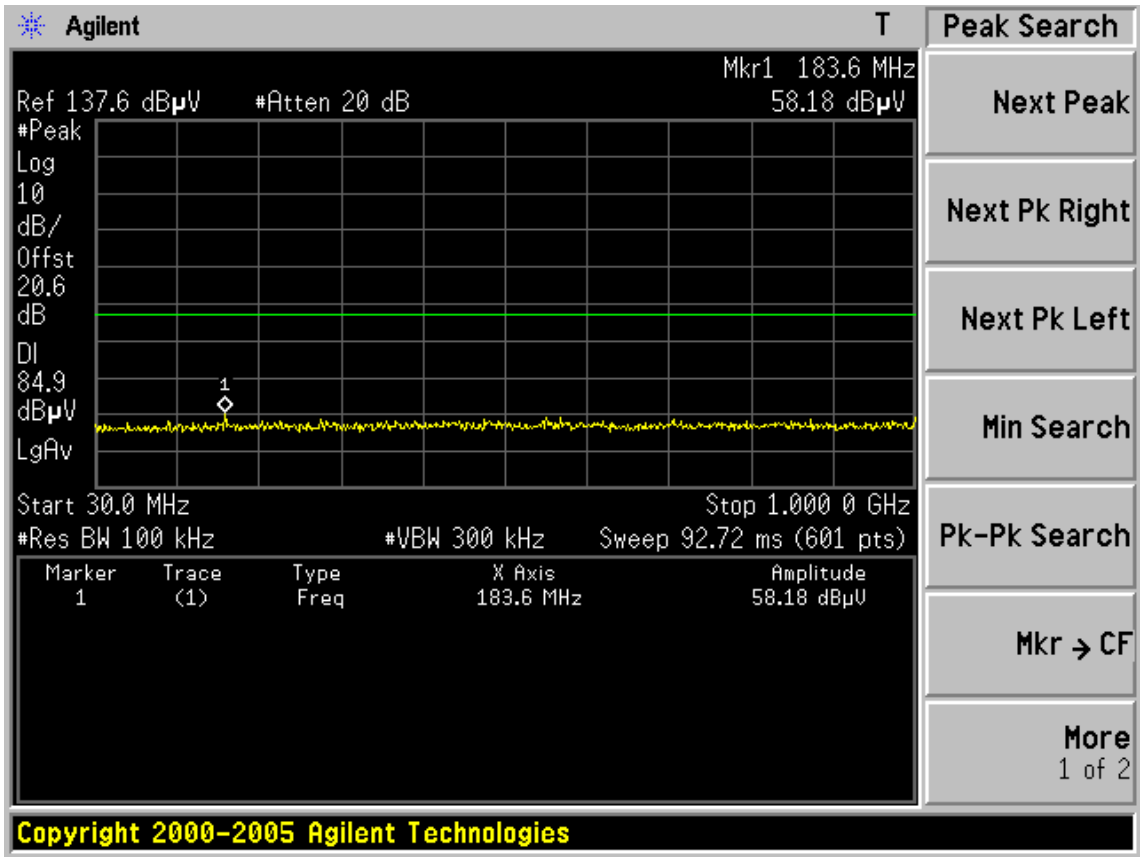

Agilent
T
Peak Search
Mkr1 607.2 MHz
Ref 137.6 dBµV
#Atten 20 dB
55.93 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
88.9
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 607.2 MHz 55.93 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

CH11


Agilent
T
Marker
Mkr3 2.500 00 GHz
Ref 137.6 dBµV
#Atten 20 dB
56.07 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
85.1
dBµV
LgAv
Start 2.450 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 5.76 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.463 30 GHz 105.15 dBµV
2 (1) Freq 2.483 50 GHz 59.95 dBµV
3 (1) Freq 2.500 00 GHz 56.07 dBµV
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

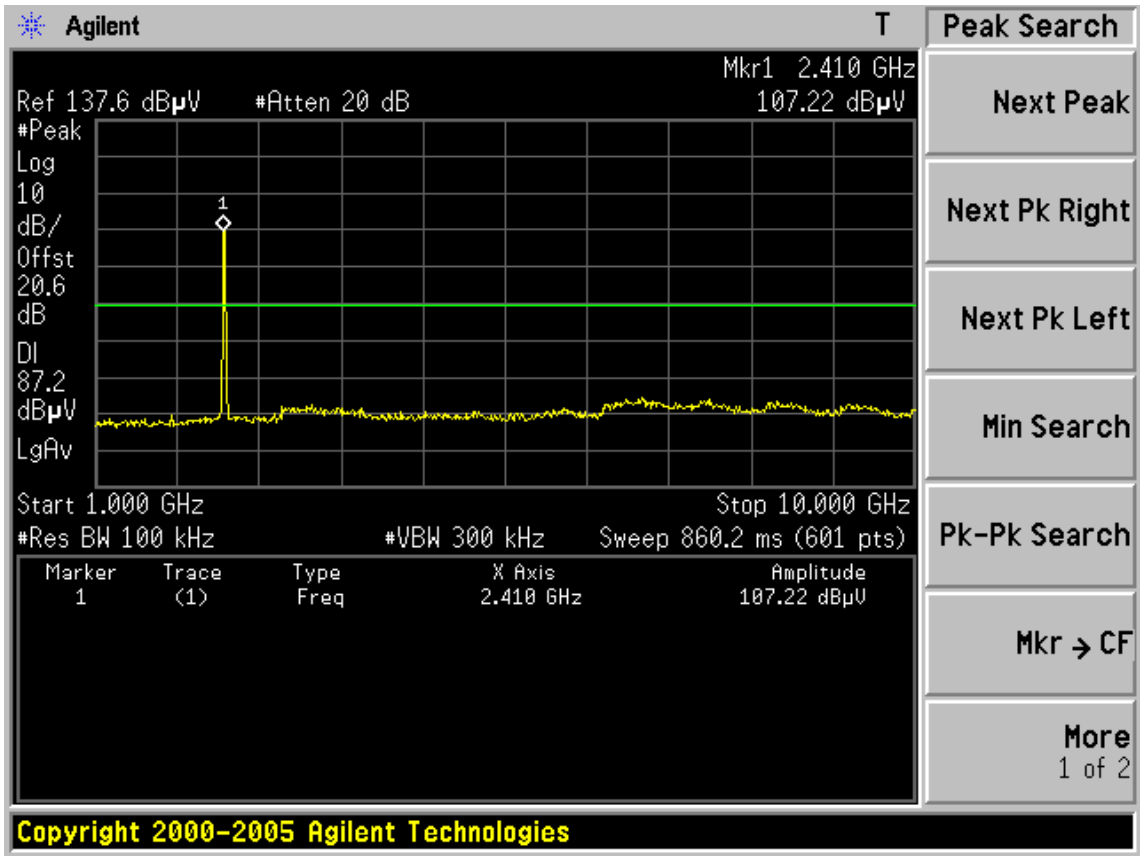

Agilent
T
Peak Search
Mkr1 2.455 GHz
Ref 137.6 dBµV
#Atten 20 dB
104.93 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
84.9
dBµV
LgAv
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz 104.93 dBµV
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

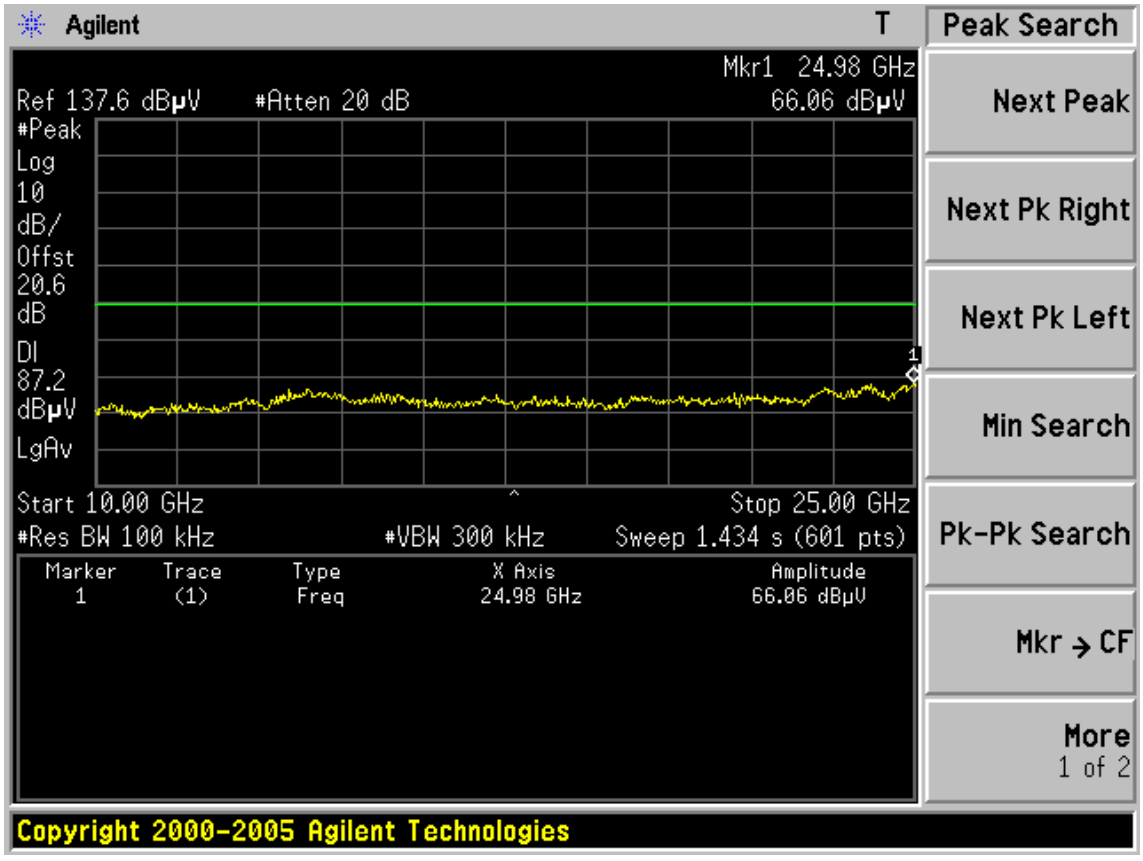

Agilent
T
Peak Search
Mkr1 24.95 GHz
Ref 137.6 dBµV
#Atten 20 dB
65.81 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
84.9
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.95 GHz 65.81 dBµV
Copyright 2000-2005 Agilent Technologies

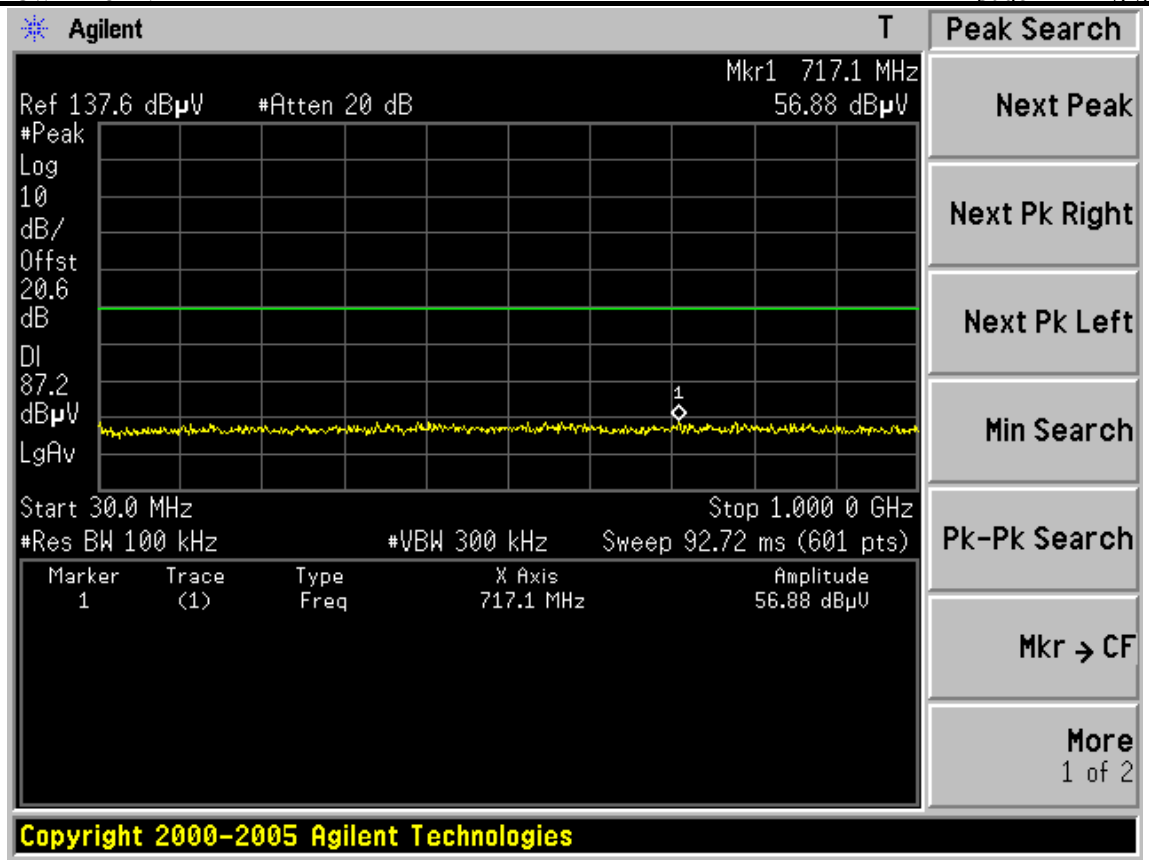

Agilent
T
Peak Search
Mkr1 183.6 MHz
Ref 137.6 dBµV
#Atten 20 dB
58.18 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
84.9
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 183.6 MHz 58.18 dBµV
Copyright 2000-2005 Agilent Technologies

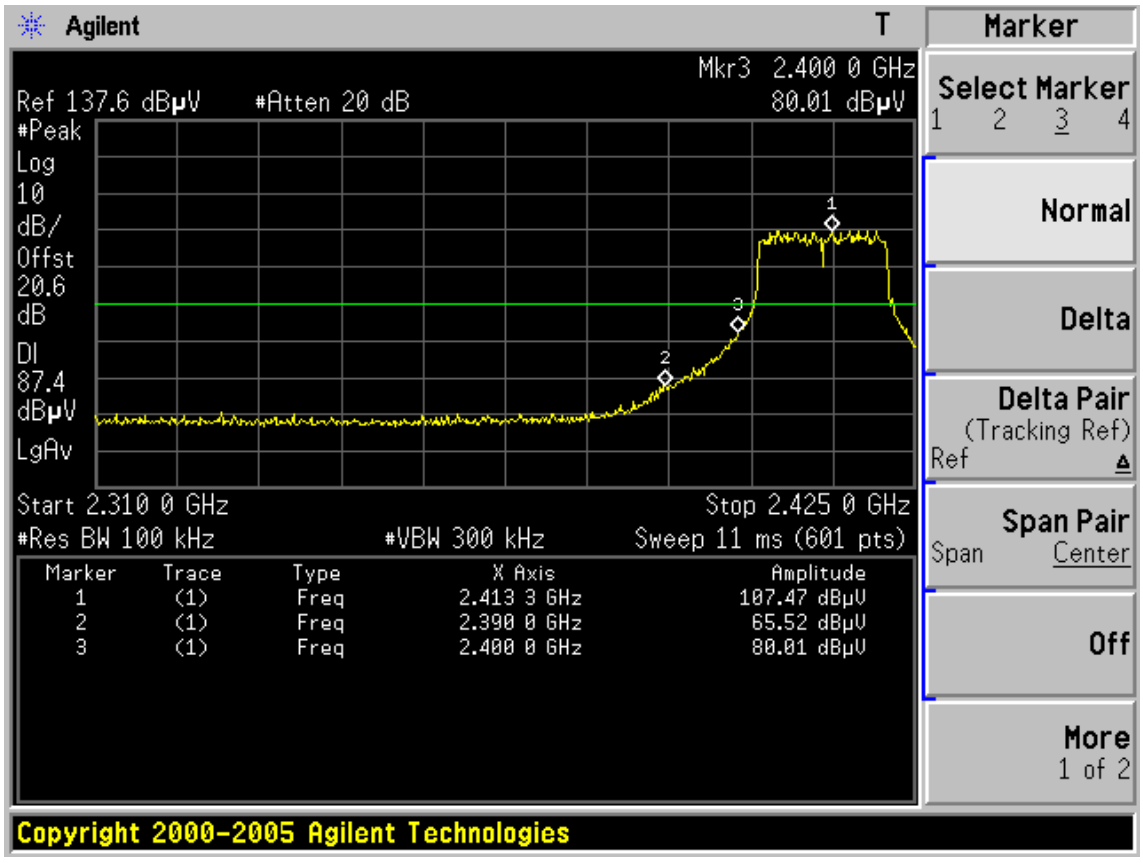
Test Mode: IEEE 802. 11n HT20 TX

CH1

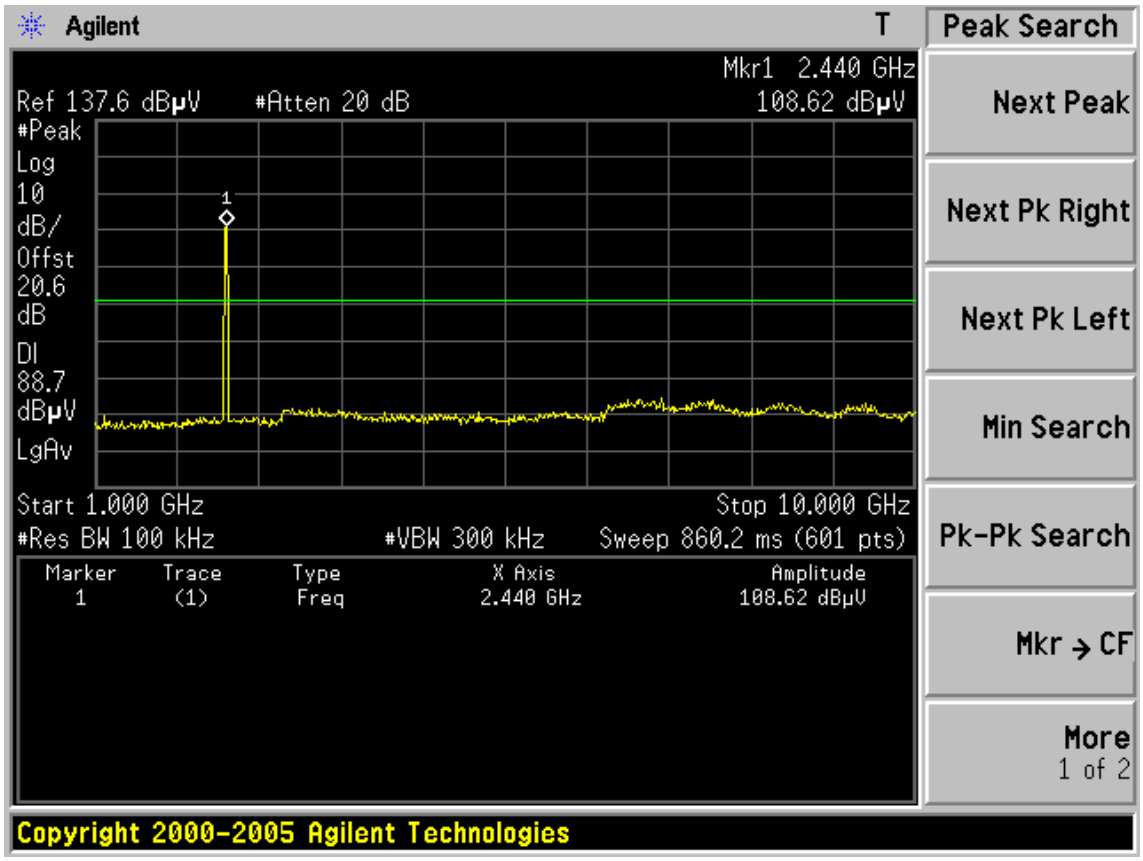


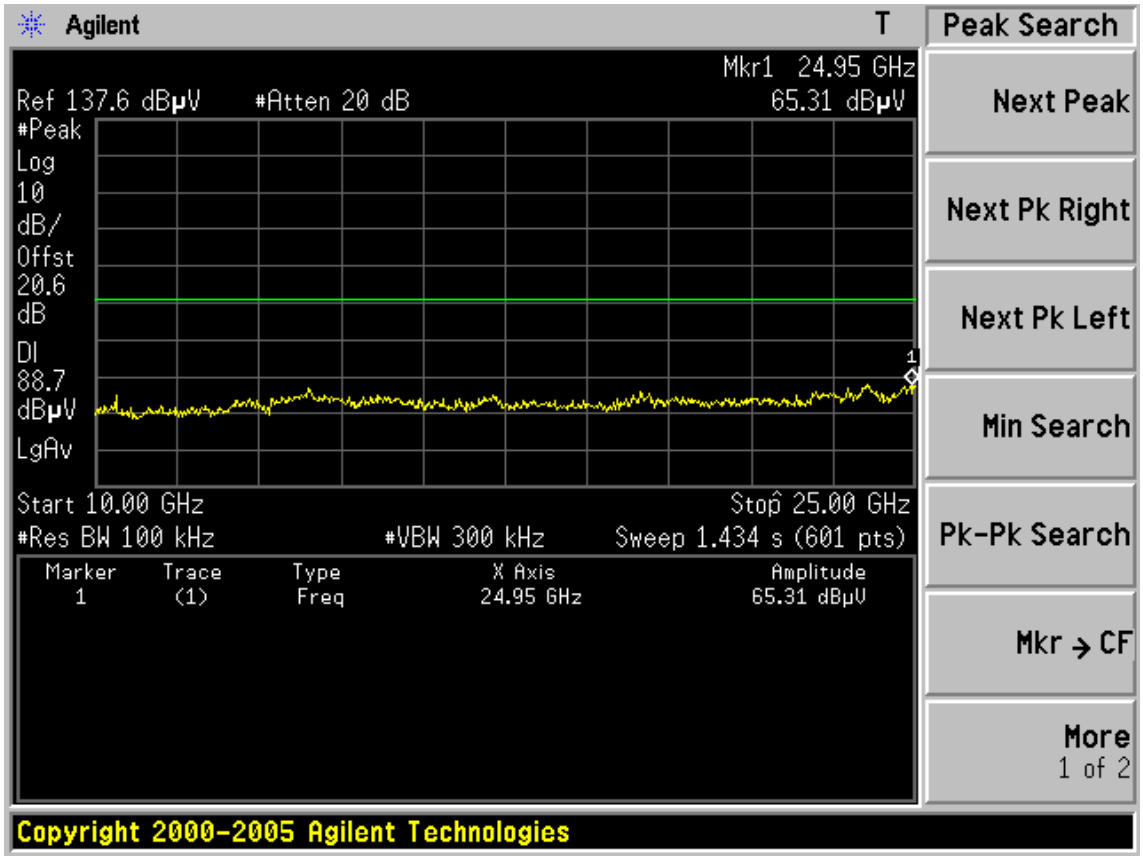


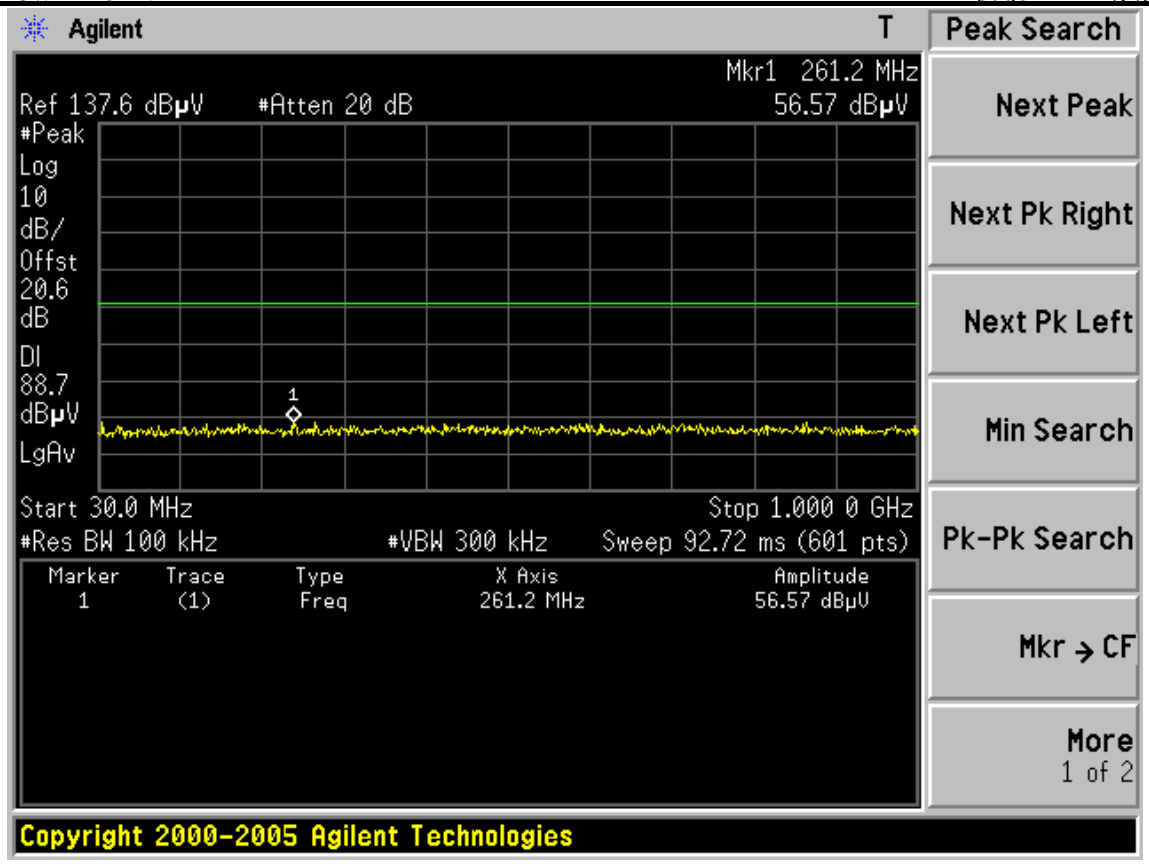

Agilent
T
Peak Search
Mkr1 717.1 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.88 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
87.2
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 717.1 MHz 56.88 dBµV
Copyright 2000-2005 Agilent Technologies


Agilent
T
Marker
Mkr3 2.400 0 GHz
Ref 137.6 dBµV
#Atten 20 dB
80.01 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
87.4
dBµV
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Start 2.310 0 GHz
Stop 2.425 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 11 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.413 3 GHz 107.47 dBµV
2 (1) Freq 2.390 0 GHz 65.52 dBµV
3 (1) Freq 2.400 0 GHz 80.01 dBµV
Copyright 2000-2005 Agilent Technologies

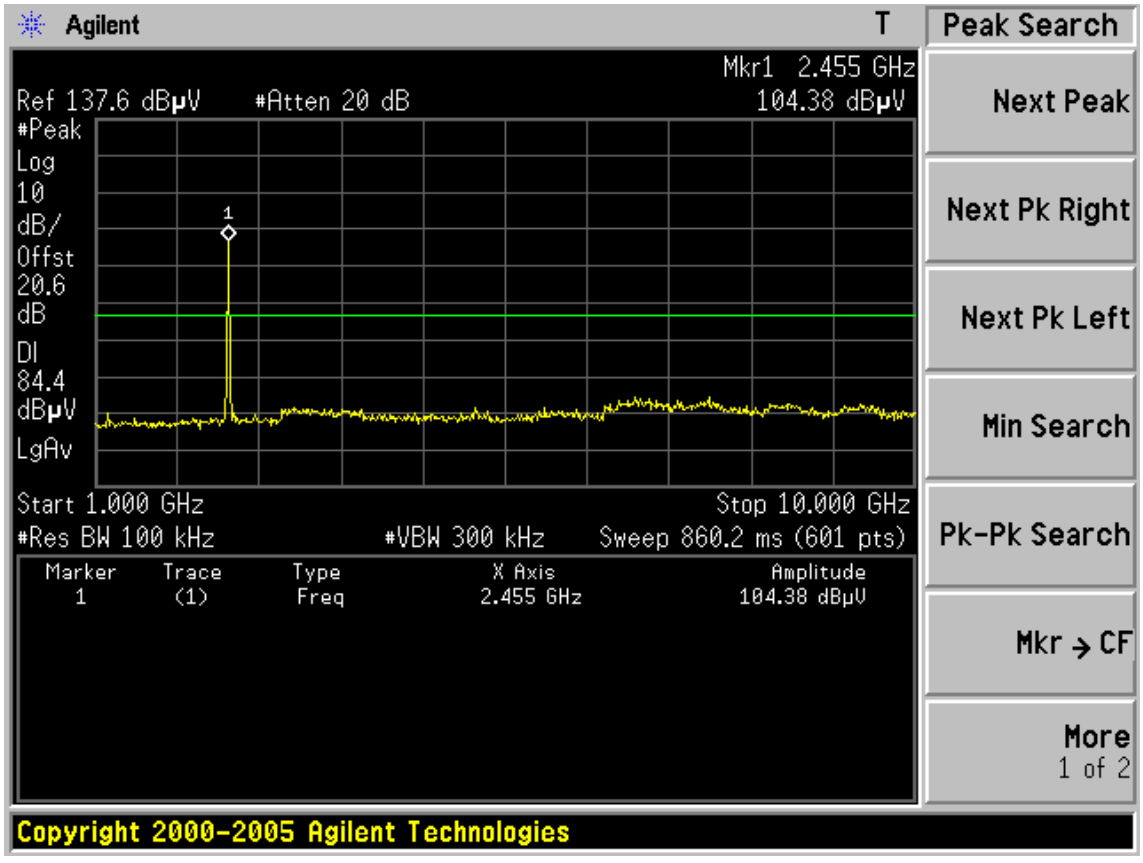
CH6

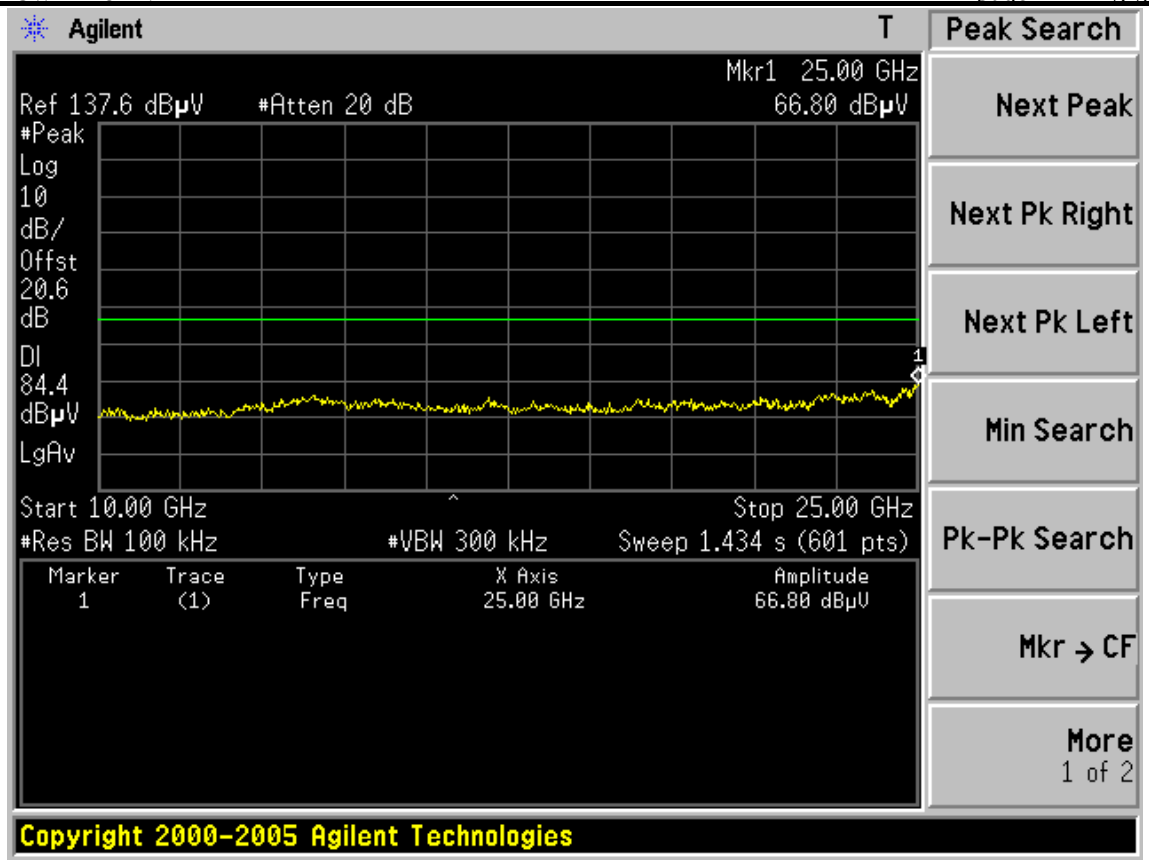

Agilent
T
Peak Search
Mkr1 2.440 GHz
Ref 137.6 dBµV
#Atten 20 dB
108.62 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
88.7
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz 108.62 dBµV
Copyright 2000-2005 Agilent Technologies

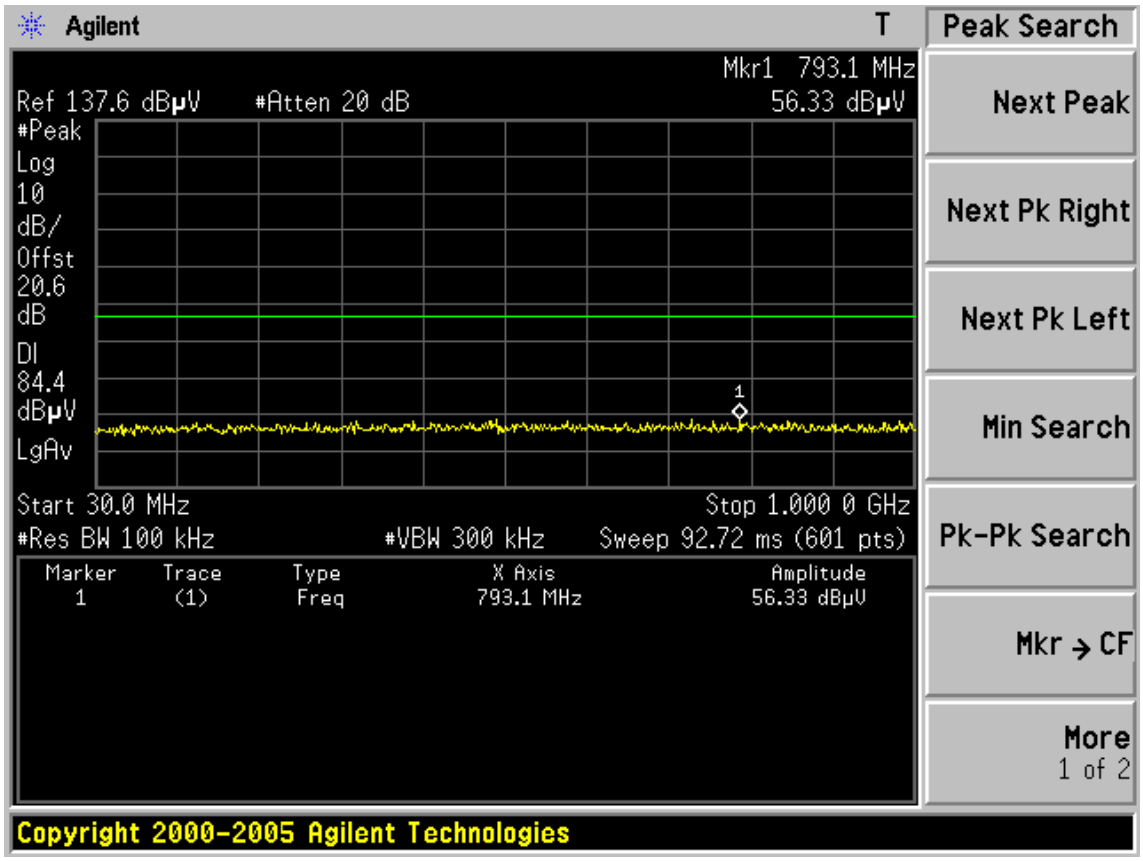

Agilent
T
Peak Search
Mkr1 24.95 GHz
Ref 137.6 dBµV
#Atten 20 dB
65.31 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
88.7
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.95 GHz 65.31 dBµV
Copyright 2000-2005 Agilent Technologies

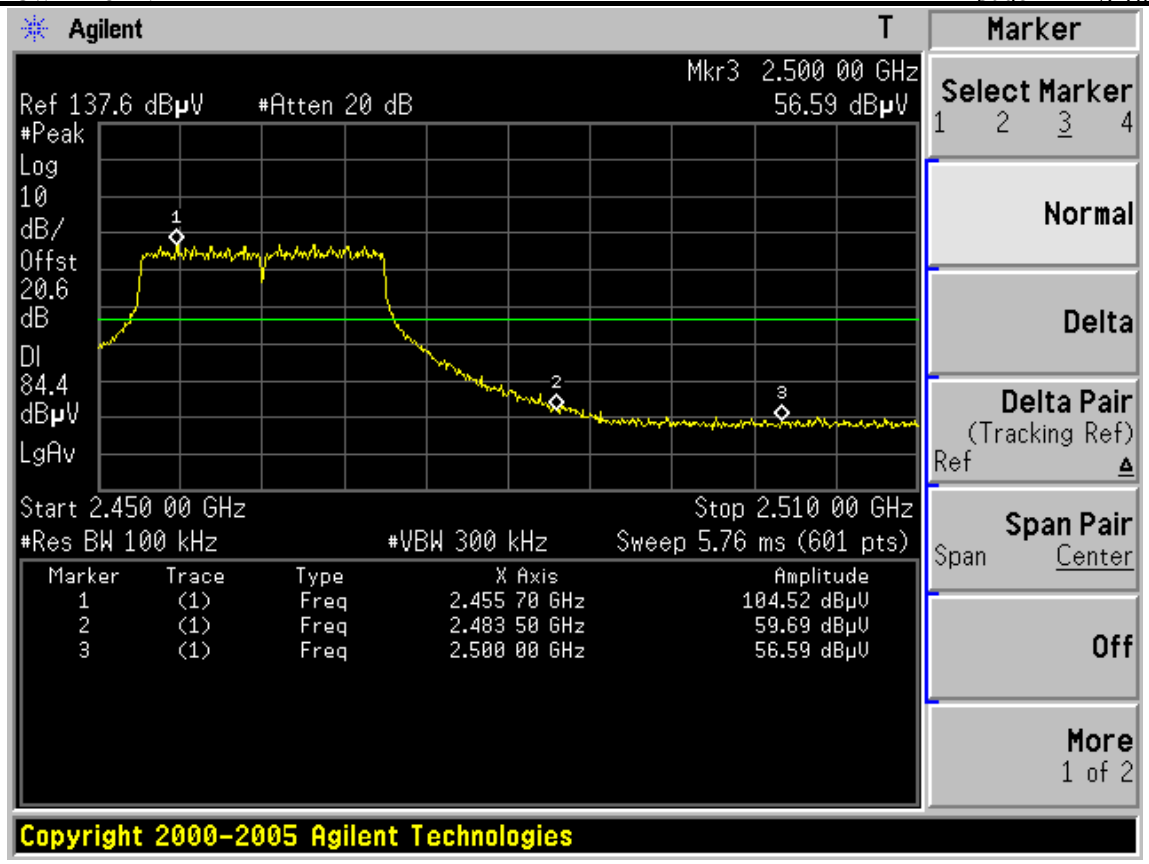

Agilent
T
Peak Search
Mkr1 261.2 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.57 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
88.7
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 261.2 MHz 56.57 dBµV
Copyright 2000-2005 Agilent Technologies

CH11

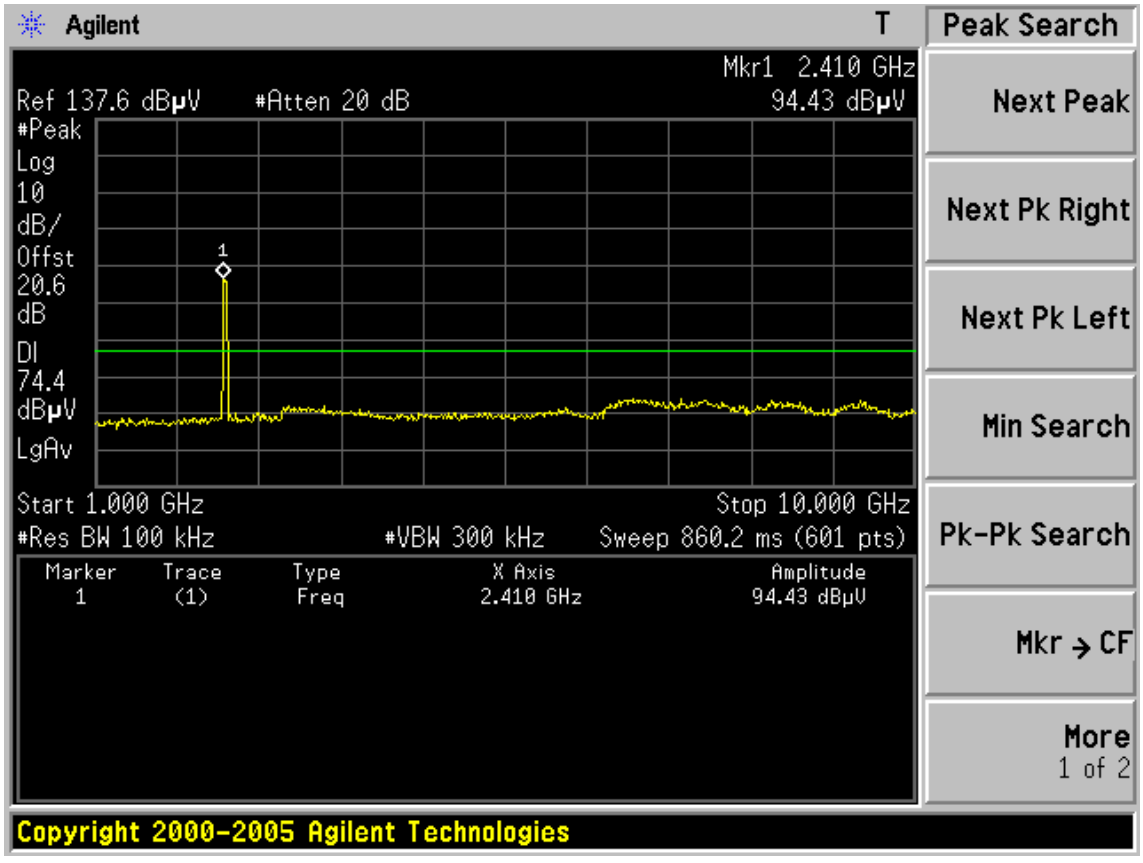

Agilent
T
Peak Search
Mkr1 2.455 GHz
Ref 137.6 dBµV
#Atten 20 dB
104.38 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
84.4
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz 104.38 dBµV
Copyright 2000-2005 Agilent Technologies

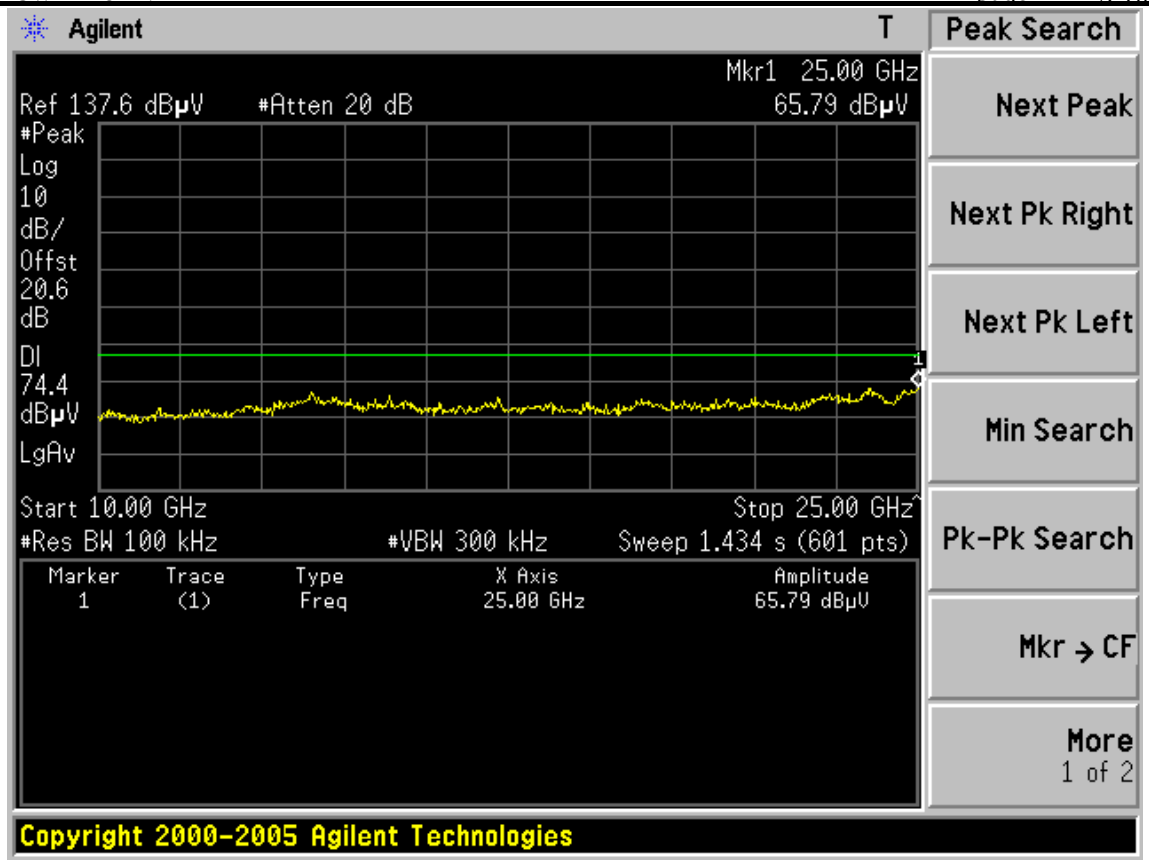

Agilent
T
Peak Search
Mkr1 25.00 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.80 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
84.4
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz 66.80 dBµV
Copyright 2000-2005 Agilent Technologies

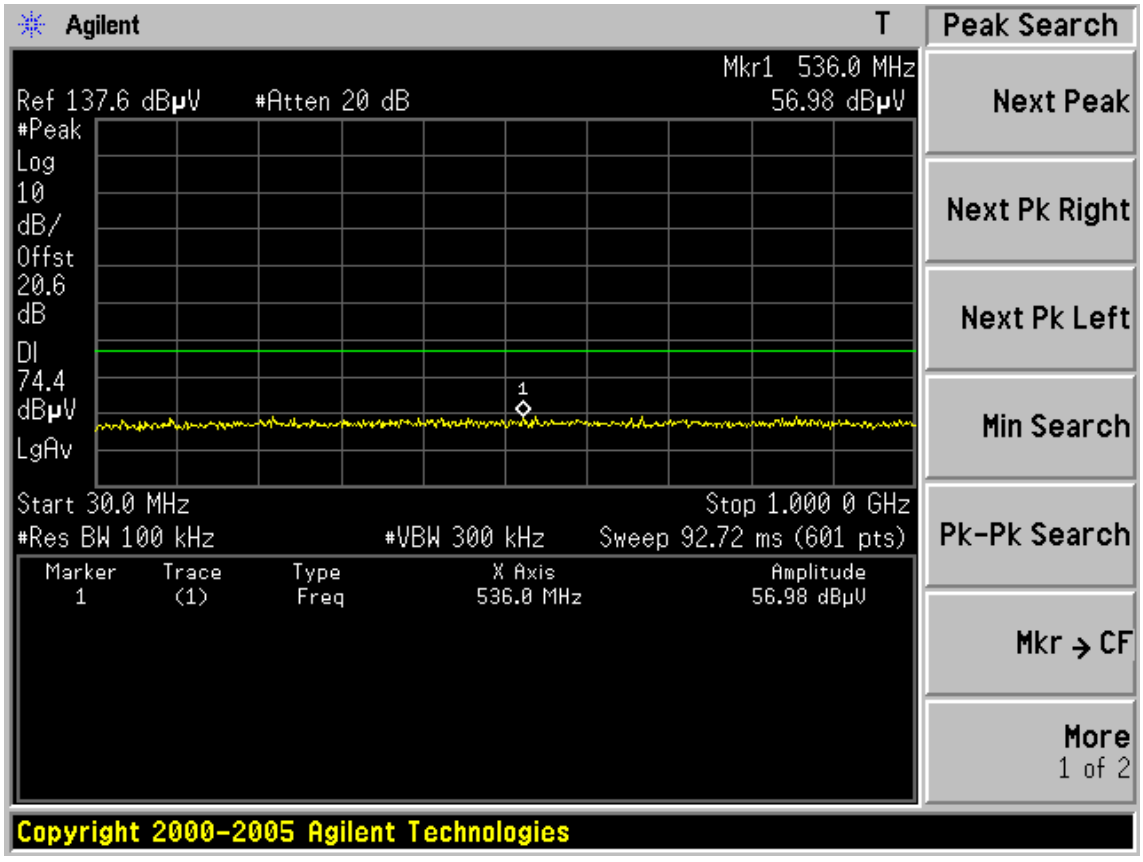

Agilent
T
Peak Search
Mkr1 793.1 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.33 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
84.4
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 793.1 MHz 56.33 dBµV
Copyright 2000-2005 Agilent Technologies

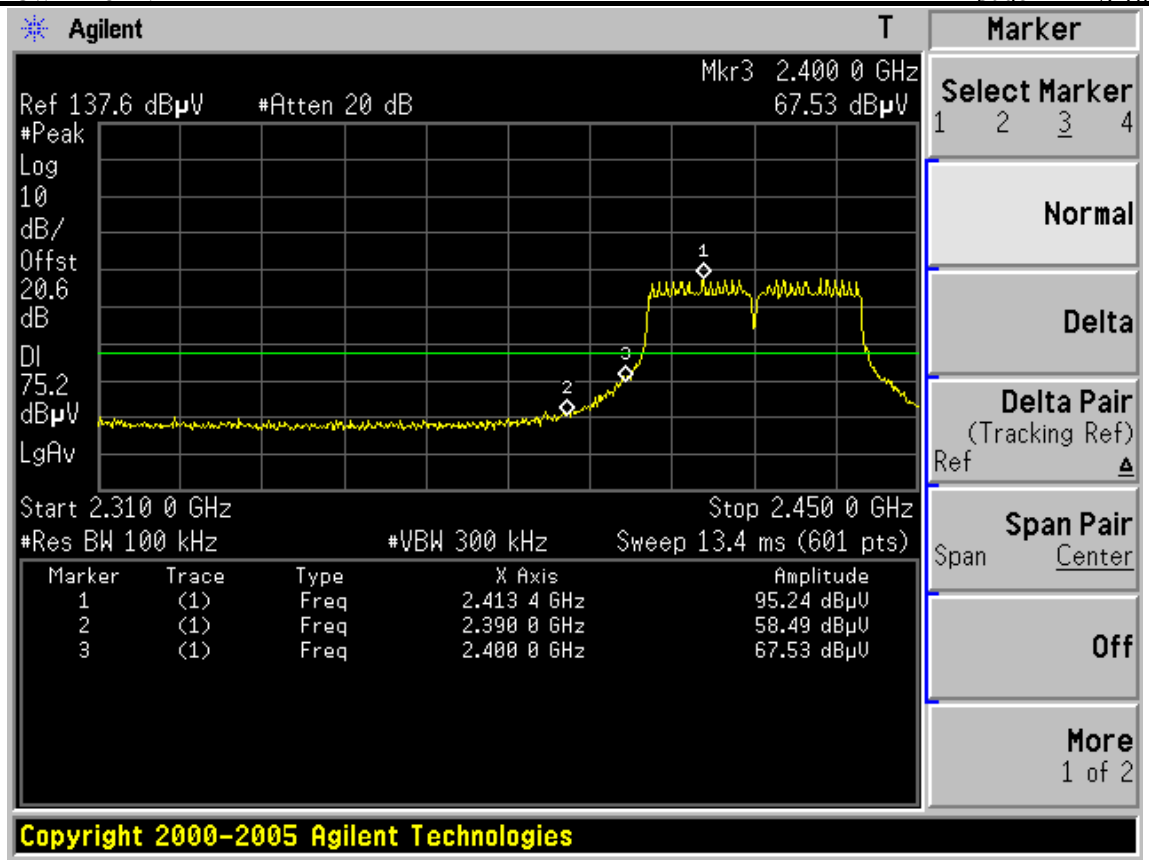


Test Mode: IEEE 802. 11n HT40TX
CH3

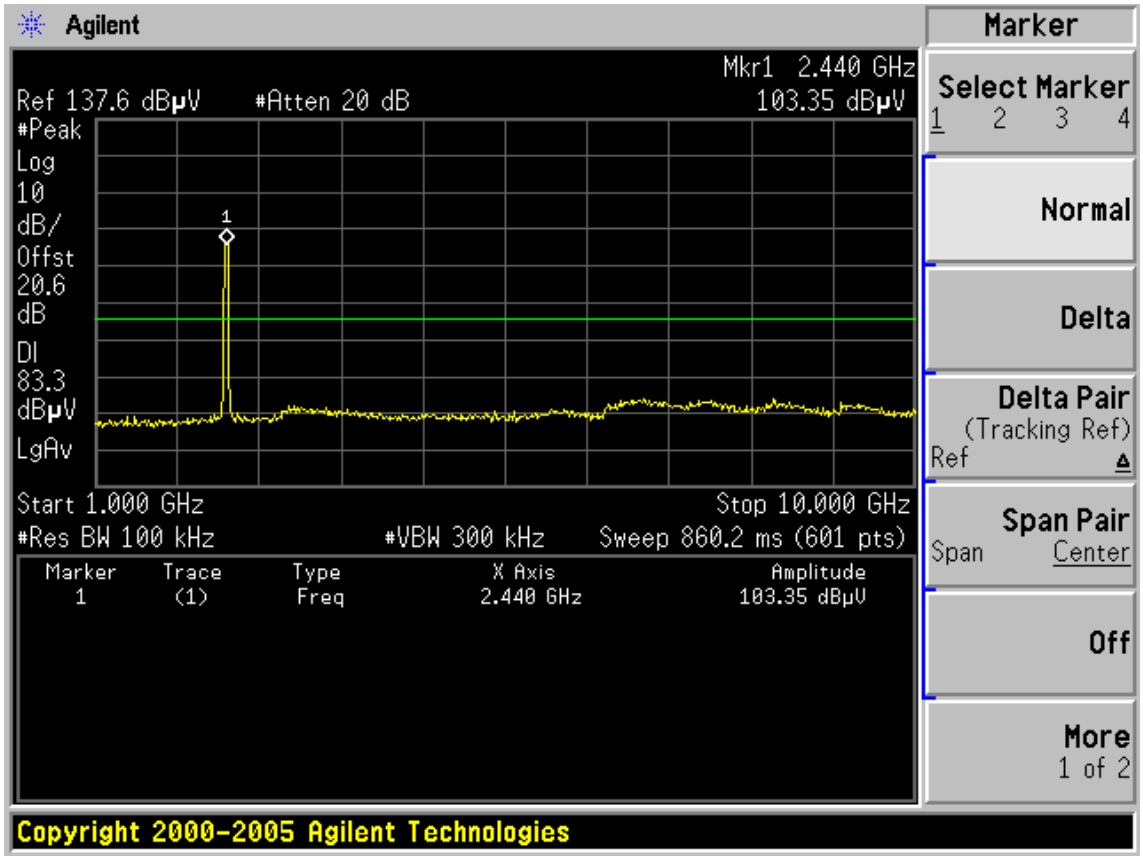


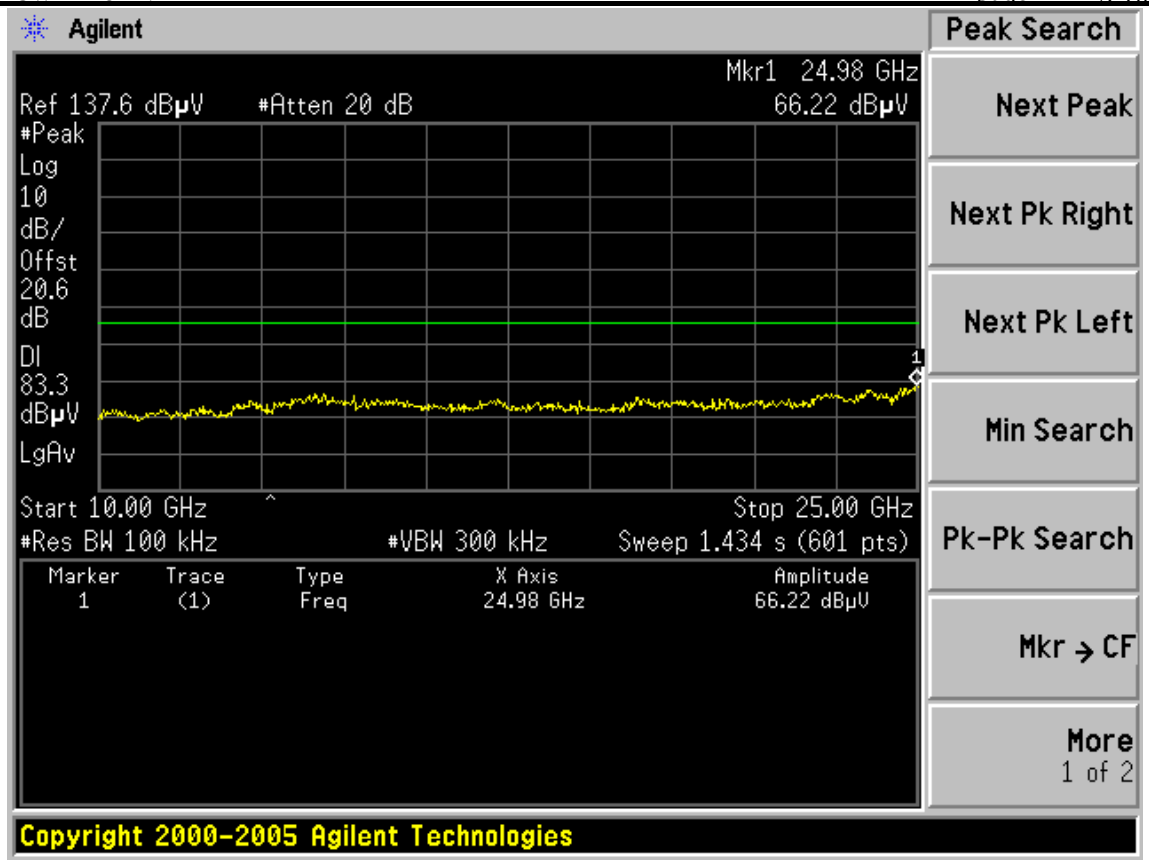

Agilent
T
Peak Search
Mkr1 25.00 GHz
Ref 137.6 dBµV
#Atten 20 dB
65.79 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
74.4
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 25.00 GHz 65.79 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

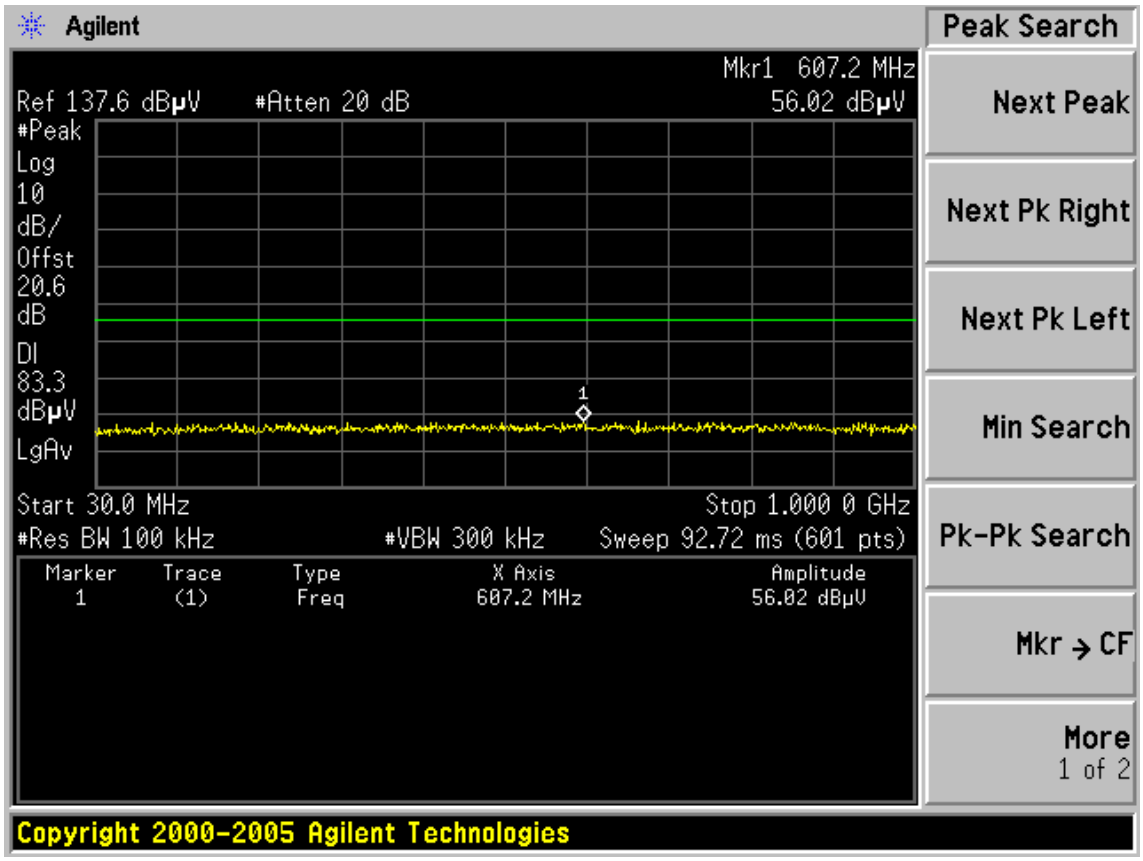

Agilent
T
Peak Search
Mkr1 536.0 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.98 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
74.4
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Pk-Pk Search
Marker Trace Type X Axis Amplitude
1 (1) Freq 536.0 MHz 56.98 dBµV
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies


Agilent
T
Marker
Mkr3 2.400 0 GHz
Ref 137.6 dBµV
#Atten 20 dB
67.53 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
75.2
dBµV
LgAv
Start 2.310 0 GHz
Stop 2.450 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 13.4 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.413 4 GHz 95.24 dBµV
2 (1) Freq 2.390 0 GHz 58.49 dBµV
3 (1) Freq 2.400 0 GHz 67.53 dBµV
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

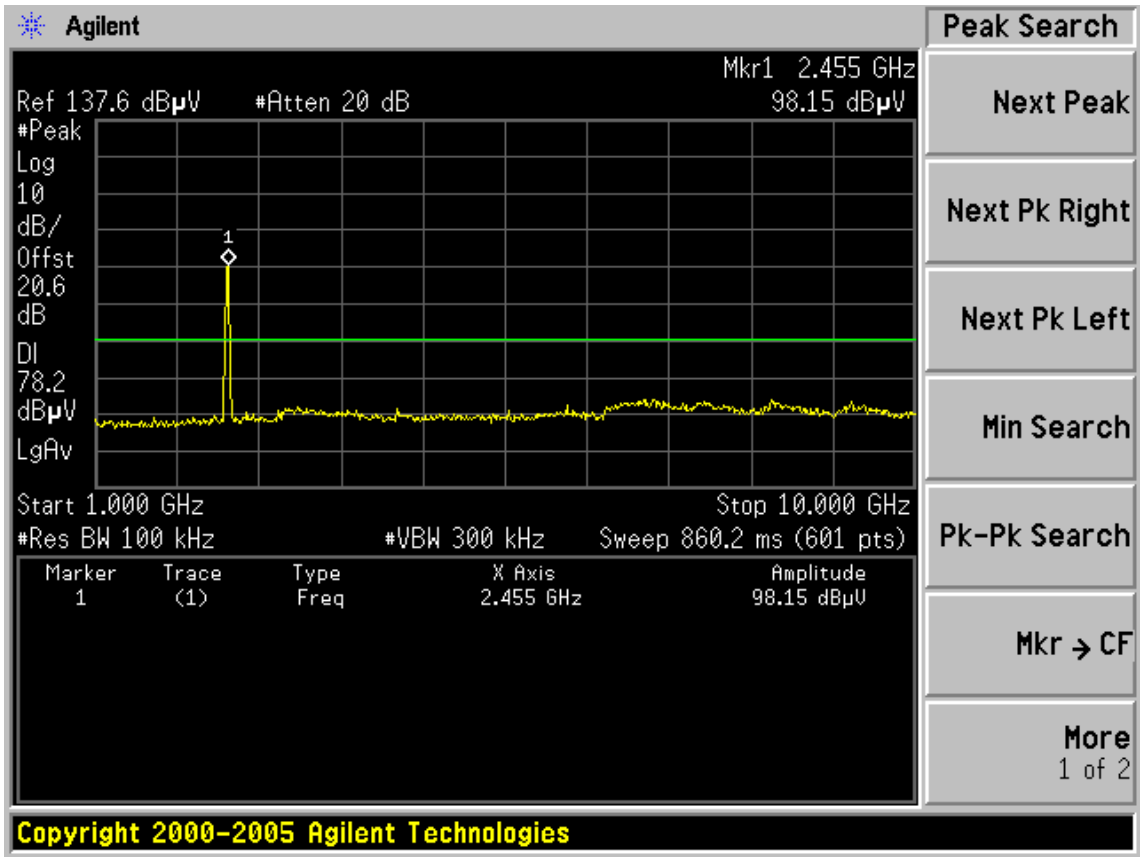
CH6

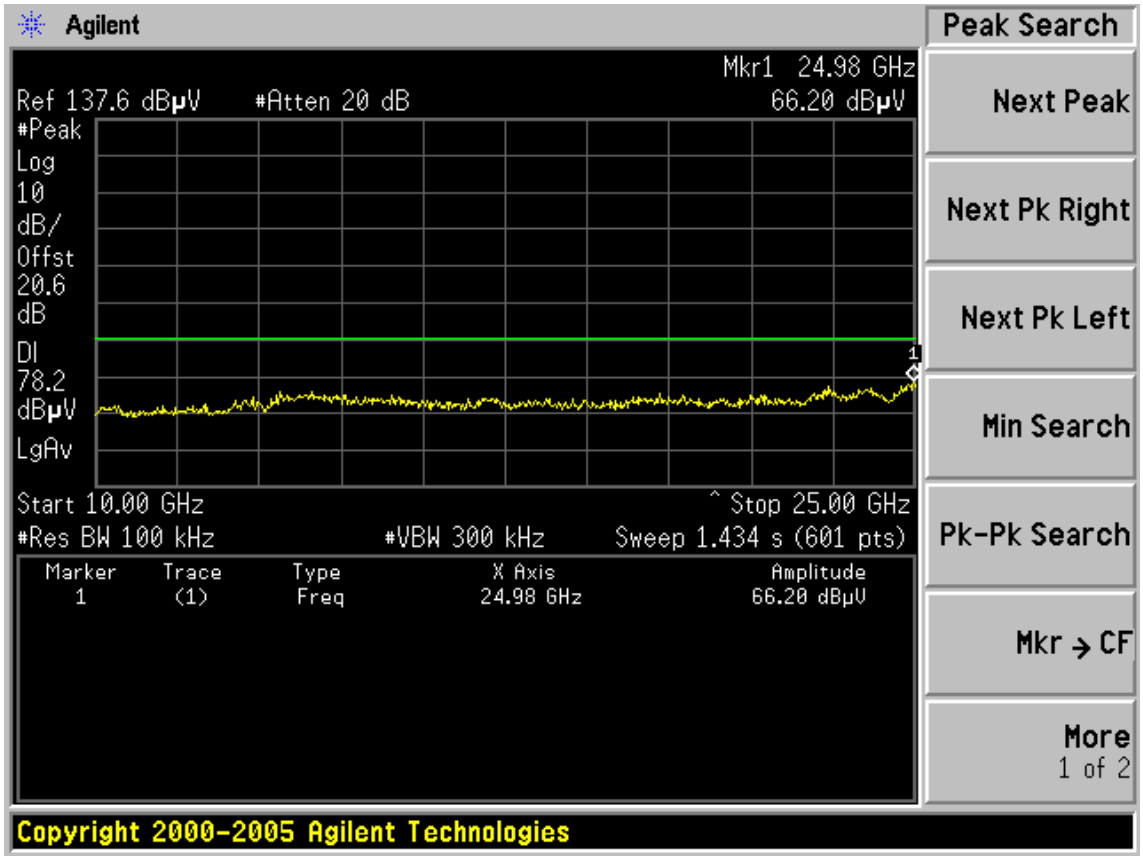

Agilent
Marker
Mkr1 2.440 GHz
Ref 137.6 dBµV
#Atten 20 dB
103.35 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
83.3
dBµV
LgAv
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.440 GHz 103.35 dBµV
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

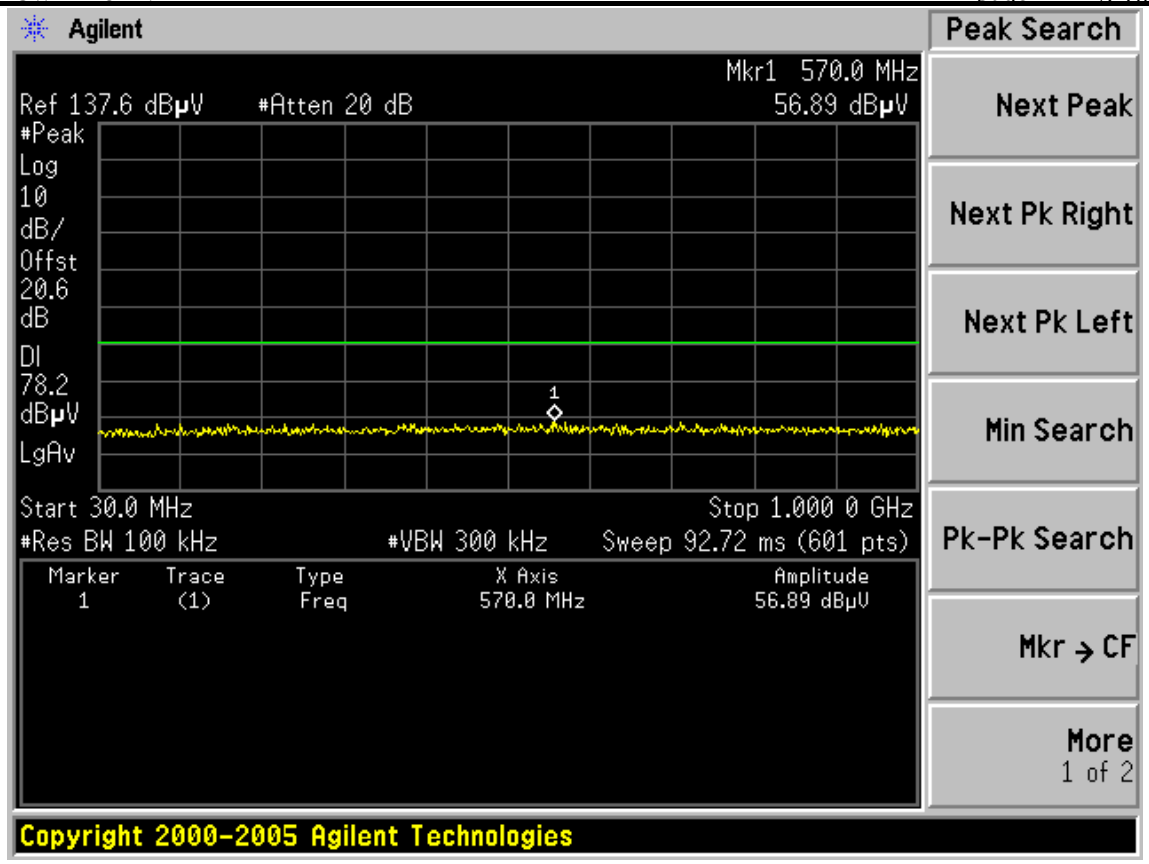

Agilent
Peak Search
Mkr1 24.98 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.22 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
83.3
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.98 GHz 66.22 dBµV
Copyright 2000-2005 Agilent Technologies

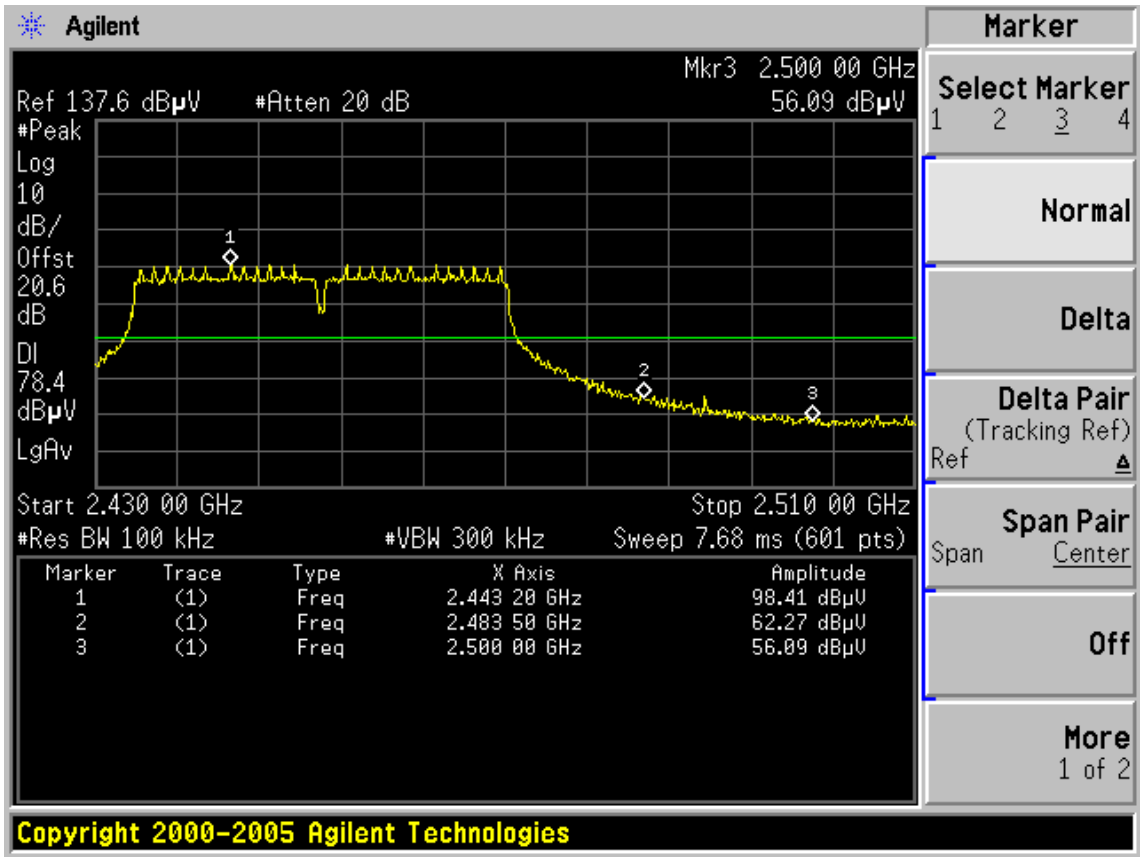

Agilent
Peak Search
Mkr1 607.2 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.02 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
83.3
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 607.2 MHz 56.02 dBµV
Copyright 2000-2005 Agilent Technologies

CH9


Agilent
Peak Search
Mkr1 2.455 GHz
Ref 137.6 dBµV
#Atten 20 dB
98.15 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
78.2
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 1.000 GHz
Stop 10.000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 860.2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.455 GHz 98.15 dBµV
Copyright 2000-2005 Agilent Technologies


Agilent
Peak Search
Mkr1 24.98 GHz
Ref 137.6 dBµV
#Atten 20 dB
66.20 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
78.2
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 10.00 GHz
Stop 25.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.434 s (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 24.98 GHz 66.20 dBµV
Copyright 2000-2005 Agilent Technologies


Agilent
Peak Search
Mkr1 570.0 MHz
Ref 137.6 dBµV
#Atten 20 dB
56.89 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
78.2
dBµV
LgAv
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Start 30.0 MHz
Stop 1.000 0 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 92.72 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 570.0 MHz 56.89 dBµV
Copyright 2000-2005 Agilent Technologies


Agilent
Marker
Mkr3 2.500 00 GHz
Ref 137.6 dBµV
#Atten 20 dB
56.09 dBµV
#Peak
Log
10
dB/
Offst
20.6
dB
Dl
78.4
dBµV
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Start 2.430 00 GHz
Stop 2.510 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 7.68 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.443 20 GHz 98.41 dBµV
2 (1) Freq 2.483 50 GHz 62.27 dBµV
3 (1) Freq 2.500 00 GHz 56.09 dBµV
Copyright 2000-2005 Agilent Technologies

6. BAND EDGE COMPLIANCE TEST

6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,10	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

6.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3.Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

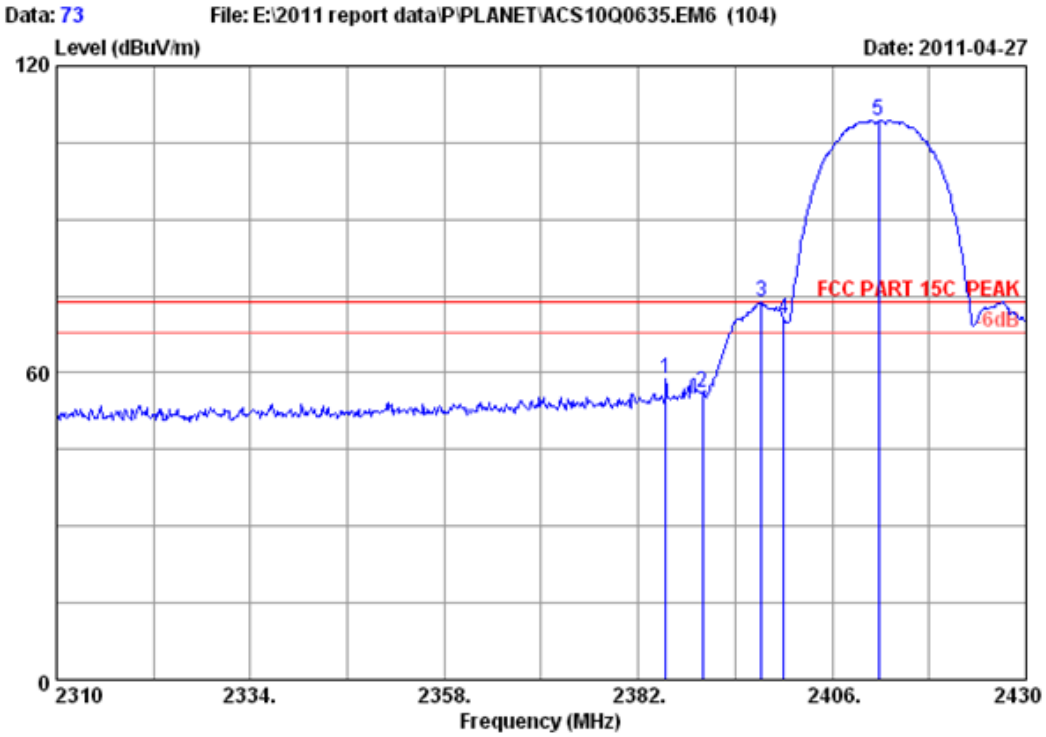
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

(a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
(b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

6.4.Test Results

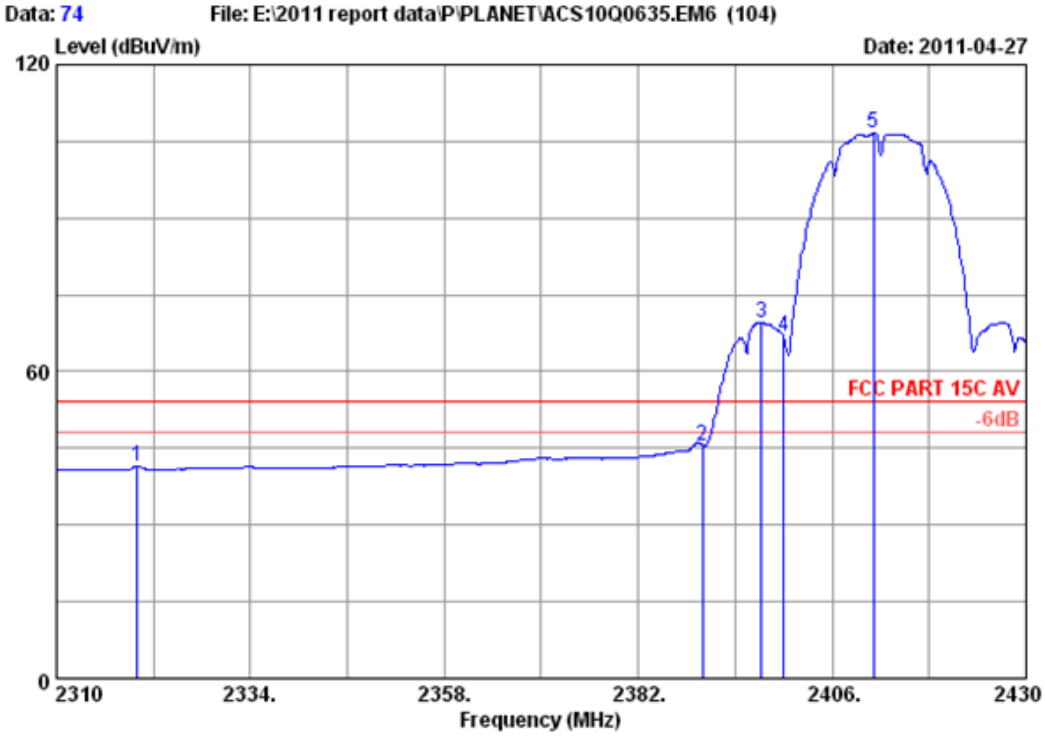
Pass (The testing data was attached in the next pages.)



Site no. : 3m Chamber Data no. : 73
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2385.360	29.43	7.39	36.62	58.76	58.96	74.00	15.04	Peak
2	2390.000	29.44	7.39	36.62	55.98	56.19	74.00	17.81	Peak
3	2397.240	29.44	7.39	36.62	73.52	73.73	74.00	0.27	Peak
4	2400.000	29.44	7.43	36.62	70.31	70.56	74.00	3.44	Peak
5	2411.760	29.45	7.43	36.62	109.10	109.36	74.00	-35.36	Peak

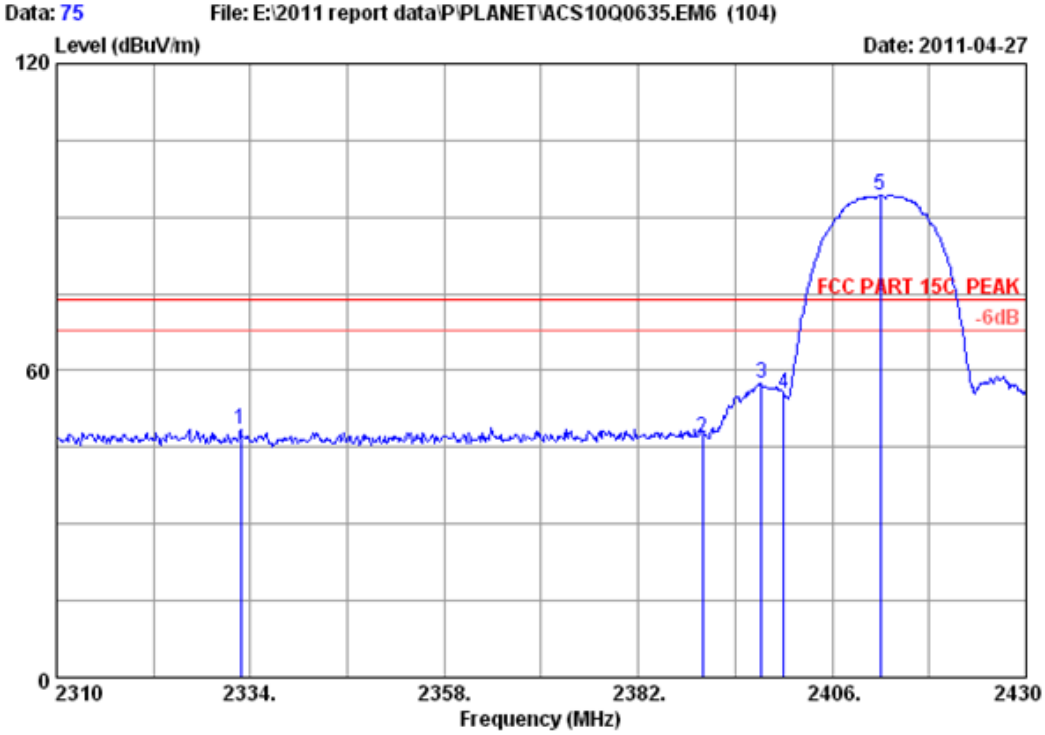
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 74
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2319.960	29.40	7.27	36.63	41.45	41.49	54.00	12.51	Average
2	2390.000	29.44	7.39	36.62	45.30	45.51	54.00	8.49	Average
3	2397.240	29.44	7.39	36.62	69.39	69.60	54.00	-15.60	Average
4	2400.000	29.44	7.43	36.62	66.63	66.88	54.00	-12.88	Average
5	2411.160	29.45	7.43	36.62	106.36	106.62	54.00	-52.62	Average

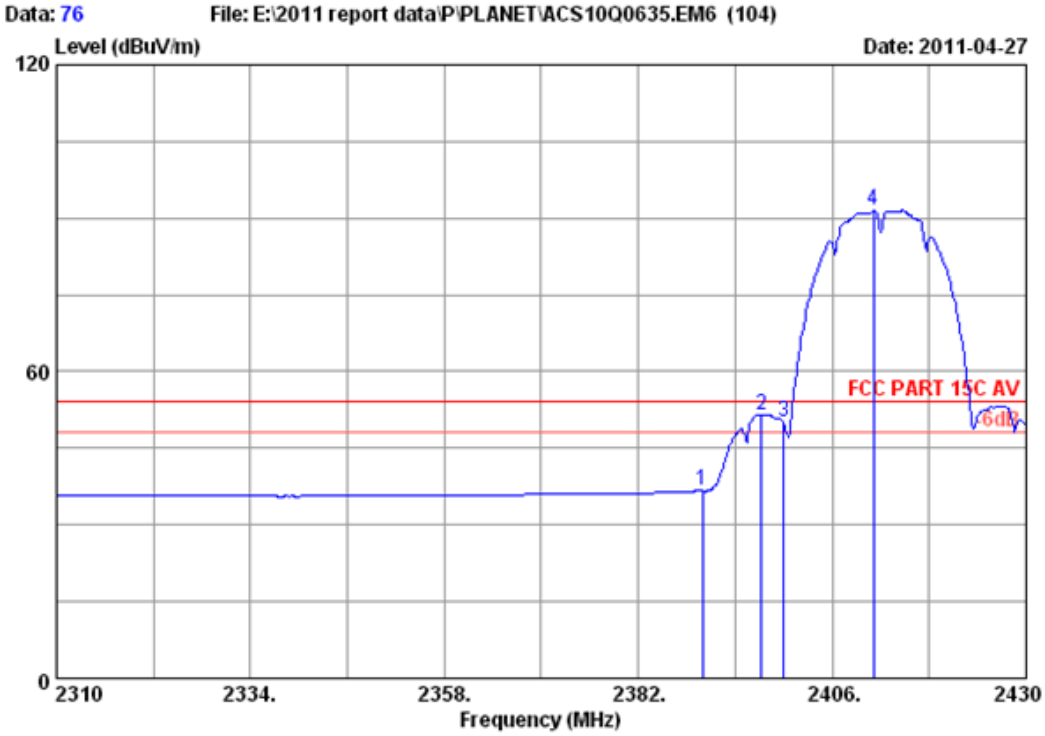
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 75
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2332.800	29.40	7.27	36.63	48.55	48.59	74.00	25.41	Peak
2	2390.000	29.44	7.39	36.62	46.55	46.76	74.00	27.24	Peak
3	2397.240	29.44	7.39	36.62	57.44	57.65	74.00	16.35	Peak
4	2400.000	29.44	7.43	36.62	55.13	55.38	74.00	18.62	Peak
5	2412.000	29.45	7.43	36.62	94.02	94.28	74.00	-20.28	Peak

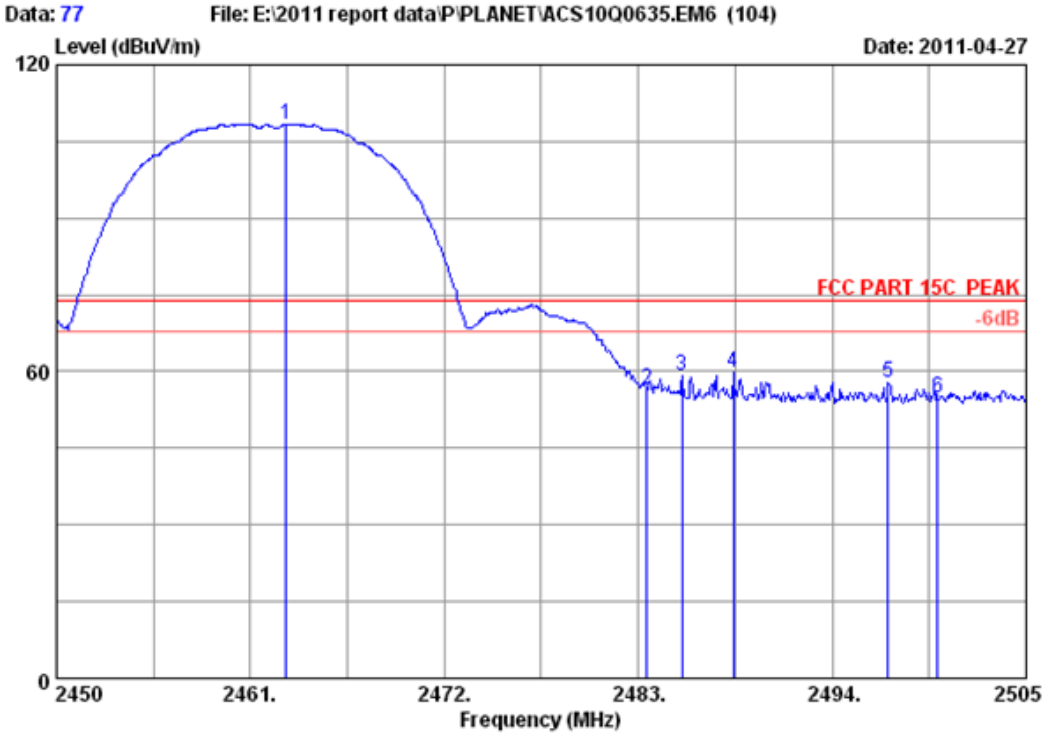
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 76
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	36.40	36.61	54.00	17.39	Average
2	2397.240	29.44	7.39	36.62	51.41	51.62	54.00	2.38	Average
3	2400.000	29.44	7.43	36.62	49.72	49.97	54.00	4.03	Average
4	2411.160	29.45	7.43	36.62	91.19	91.45	54.00	-37.45	Average

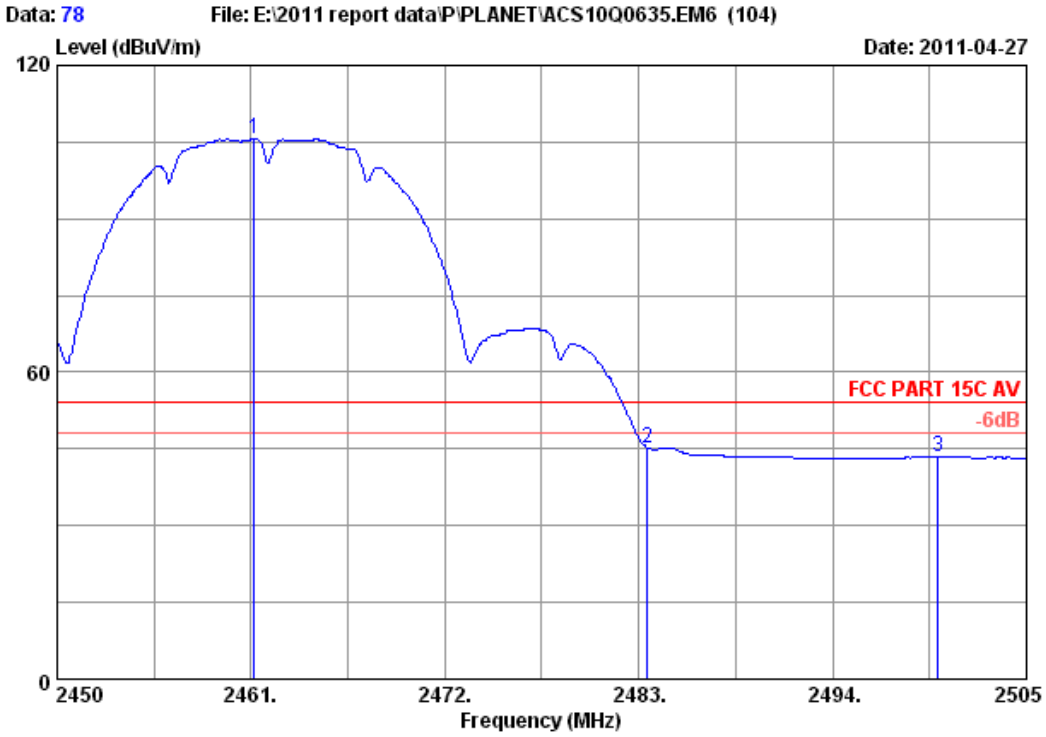
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 77
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.035	29.48	7.54	36.61	108.06	108.47	74.00	-34.47	Peak
2	2483.500	29.49	7.58	36.60	56.03	56.50	74.00	17.50	Peak
3	2485.475	29.49	7.58	36.60	58.85	59.32	74.00	14.68	Peak
4	2488.390	29.50	7.58	36.60	59.52	60.00	74.00	14.00	Peak
5	2497.190	29.50	7.58	36.60	57.36	57.84	74.00	16.16	Peak
6	2500.000	29.50	7.62	36.60	54.44	54.96	74.00	19.04	Peak

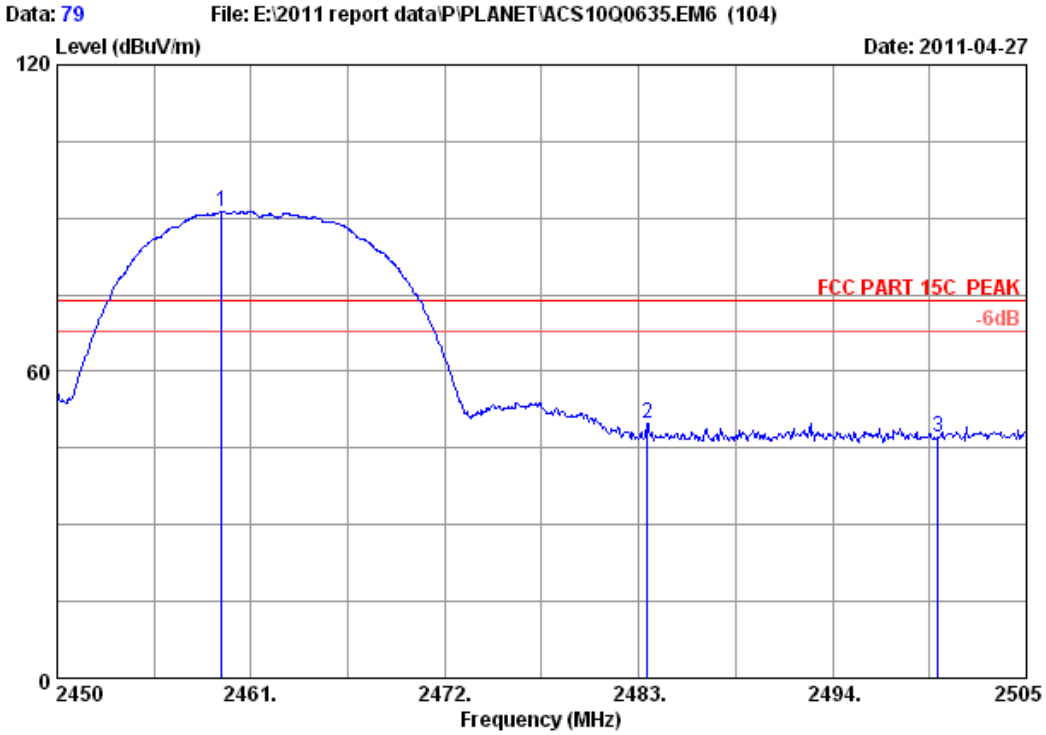
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 78
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.165	29.48	7.54	36.61	105.27	105.68	54.00	-51.68	Average
2	2483.500	29.49	7.58	36.60	44.73	45.20	54.00	8.80	Average
3	2500.000	29.50	7.62	36.60	42.82	43.34	54.00	10.66	Average

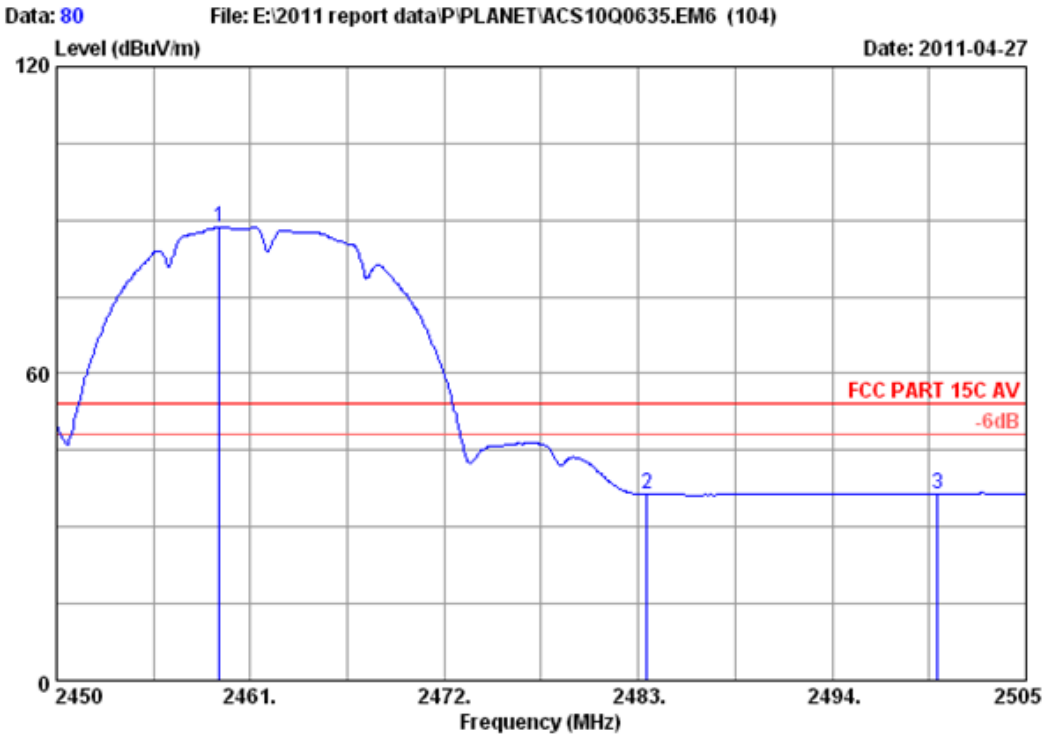
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 79
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.350	29.48	7.54	36.61	90.82	91.23	74.00	-17.23	Peak
2	2483.500	29.49	7.58	36.60	49.23	49.70	74.00	24.30	Peak
3	2500.000	29.50	7.62	36.60	46.72	47.24	74.00	26.76	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

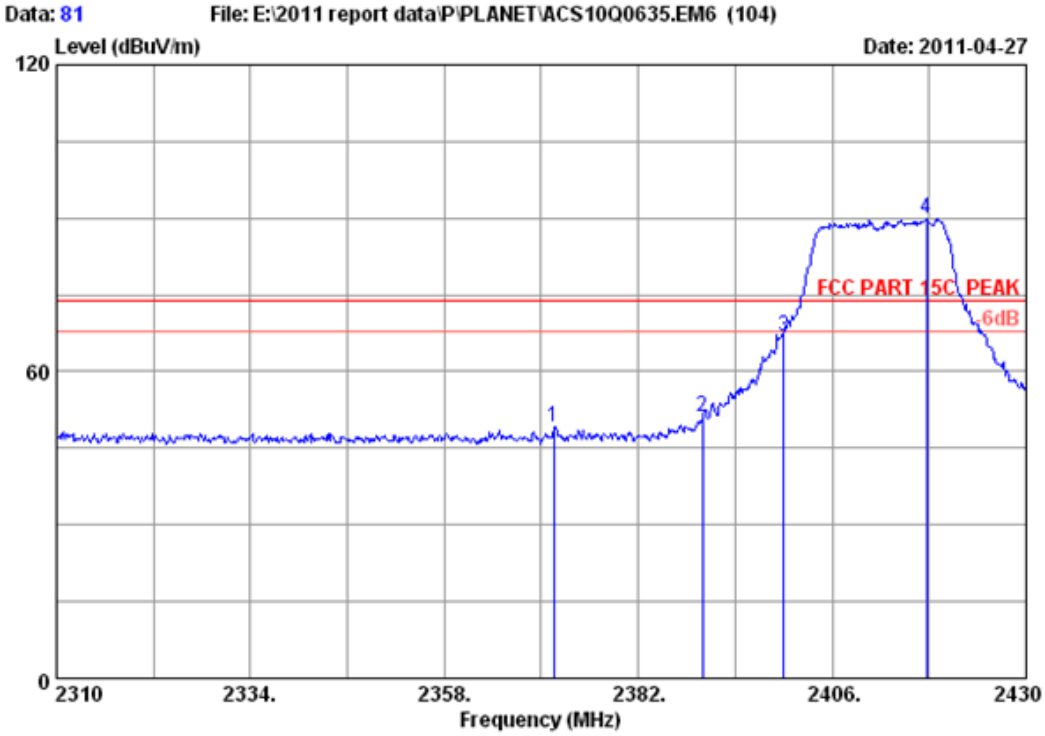



```
Site no.      : 3m Chamber                Data no. :  80
Dis. / Ant.   : 3m   3115(0911)           Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23*C/54%                  Engineer  : Leo-Li
EUT           : 150Mbps 802.11n Wireless Broadband Router
Power         : DC 9V From Adapter input AC 120V/60Hz
Test mode     : IEEE802.11b CH11 2462MHz Tx
M/N           : WNRT-617
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.240	29.48	7.54	36.61	88.27	88.68	54.00	-34.68	Average
2	2483.500	29.49	7.58	36.60	35.88	36.35	54.00	17.65	Average
3	2500.000	29.50	7.62	36.60	36.01	36.53	54.00	17.47	Average

Remarks:

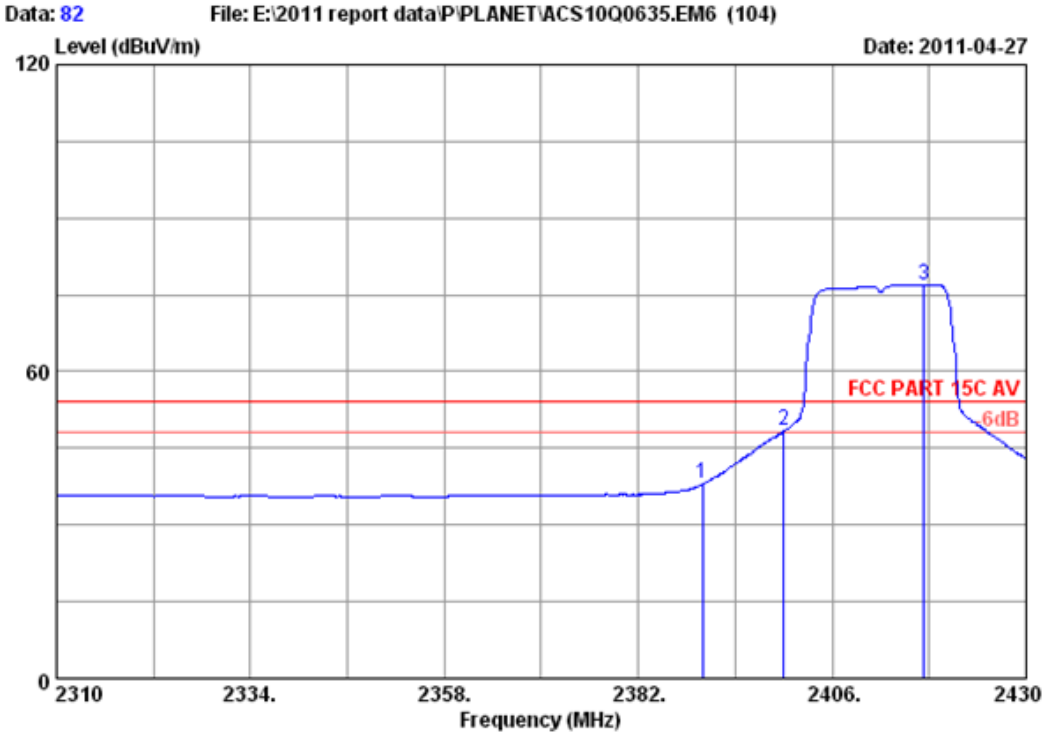
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 81
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2371.560	29.43	7.35	36.62	49.07	49.23	74.00	24.77	Peak
2	2390.000	29.44	7.39	36.62	50.99	51.20	74.00	22.80	Peak
3	2400.000	29.44	7.43	36.62	66.45	66.70	74.00	7.30	Peak
4	2417.640	29.45	7.43	36.61	89.62	89.89	74.00	-15.89	Peak

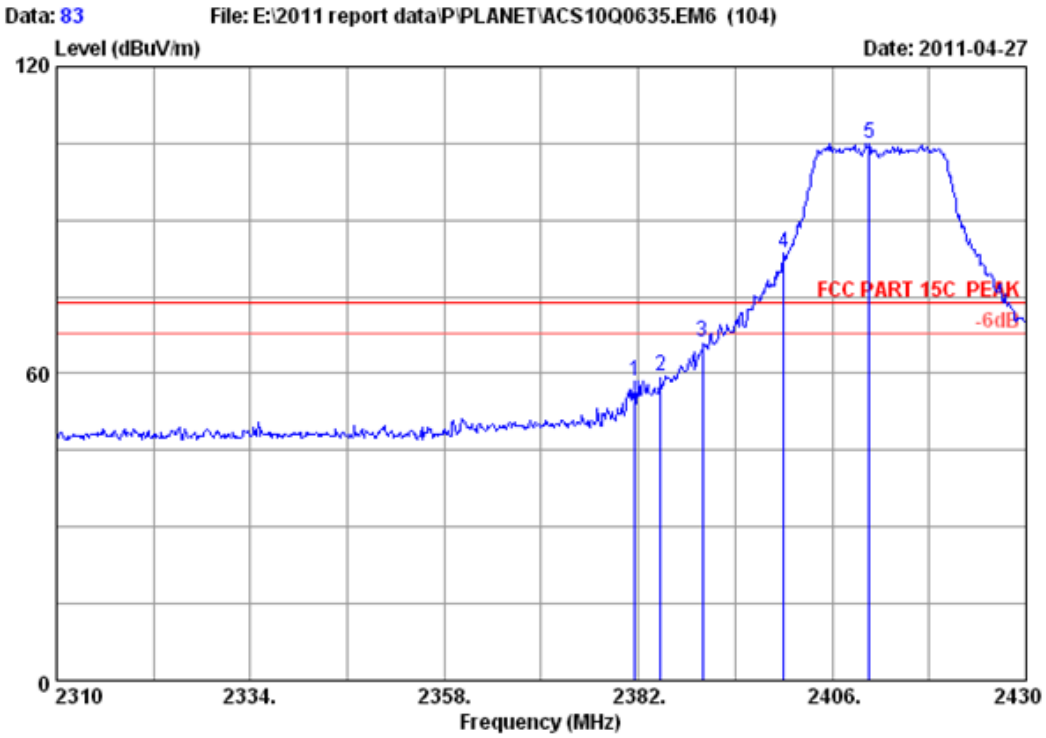
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 82
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	37.77	37.98	54.00	16.02	Average
2	2400.000	29.44	7.43	36.62	48.14	48.39	54.00	5.61	Average
3	2417.400	29.45	7.43	36.61	76.64	76.91	54.00	-22.91	Average

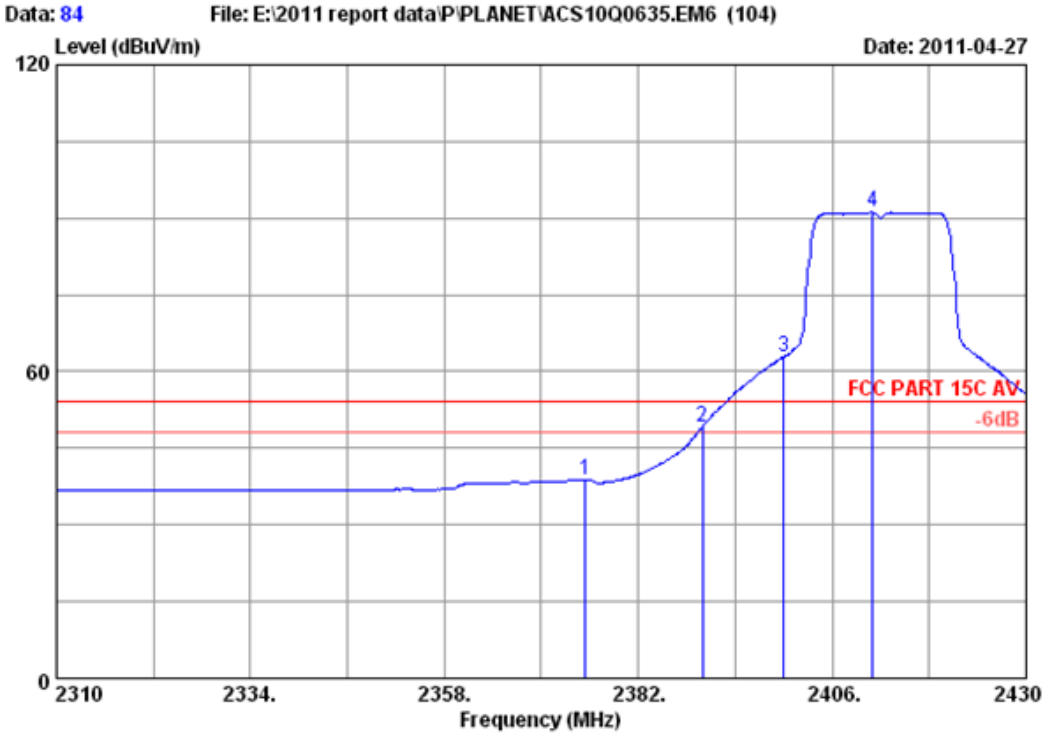
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 83
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2381.640	29.43	7.39	36.62	58.24	58.44	74.00	15.56	Peak
2	2384.760	29.43	7.39	36.62	59.22	59.42	74.00	14.58	Peak
3	2390.000	29.44	7.39	36.62	66.05	66.26	74.00	7.74	Peak
4	2400.000	29.44	7.43	36.62	83.29	83.54	74.00	-9.54	Peak
5	2410.560	29.45	7.43	36.62	104.76	105.02	74.00	-31.02	Peak

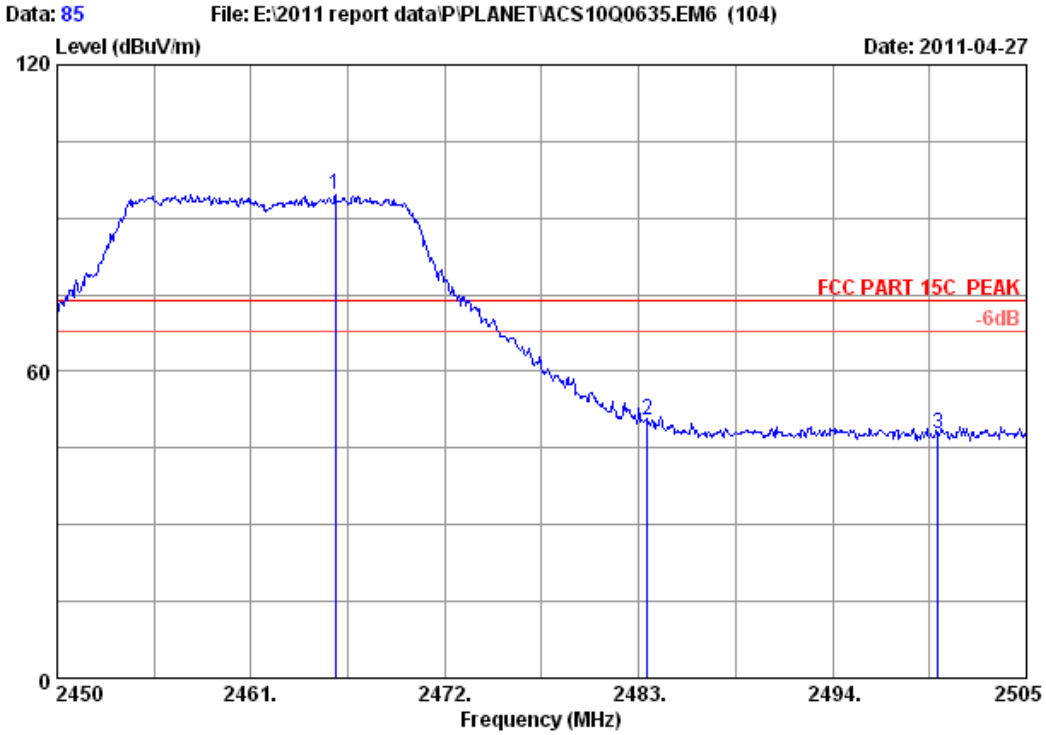
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 84
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2375.400	29.43	7.35	36.62	38.71	38.87	54.00	15.13	Average
2	2390.000	29.44	7.39	36.62	49.06	49.27	54.00	4.73	Average
3	2400.000	29.44	7.43	36.62	62.66	62.91	54.00	-8.91	Average
4	2411.040	29.45	7.43	36.62	90.87	91.13	54.00	-37.13	Average

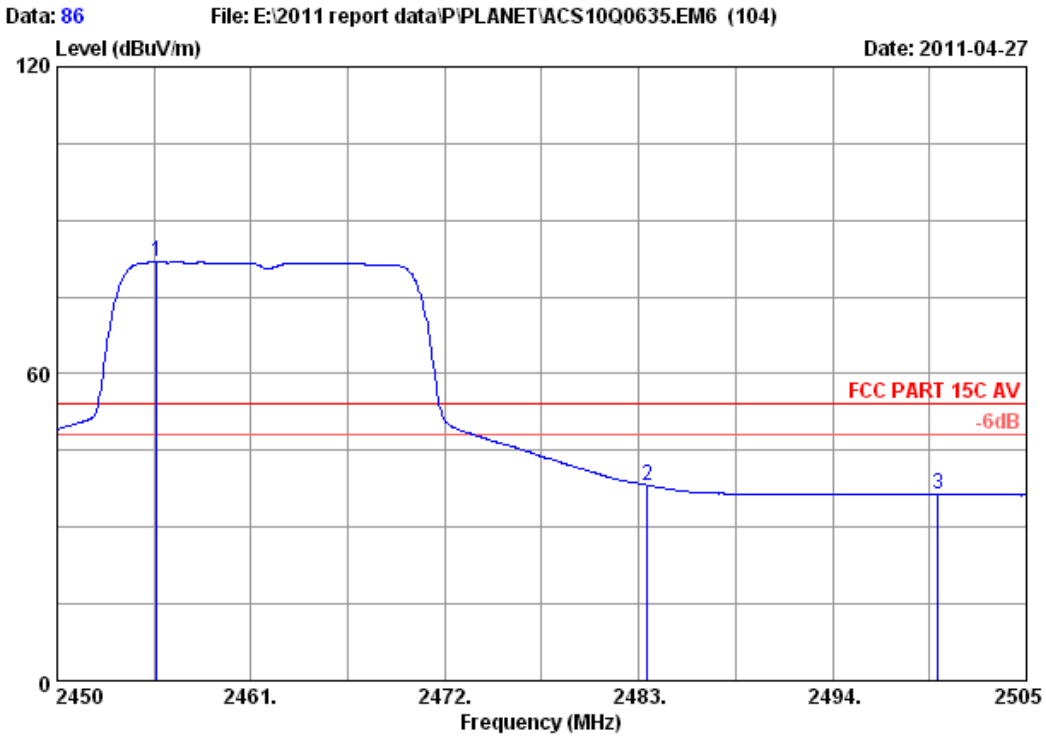
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 85
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.785	29.48	7.54	36.61	94.30	94.71	74.00	-20.71	Peak
2	2483.500	29.49	7.58	36.60	50.03	50.50	74.00	23.50	Peak
3	2500.000	29.50	7.62	36.60	47.29	47.81	74.00	26.19	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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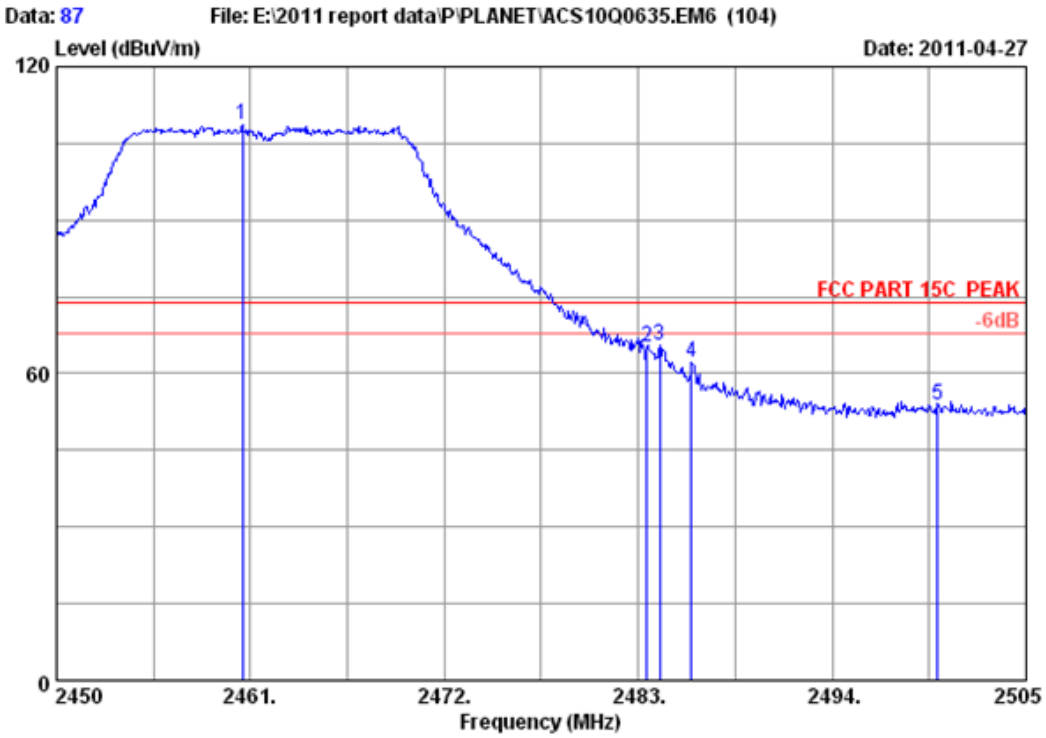
Site no.      : 3m Chamber                Data no. :  86
Dis. / Ant.   : 3m   3115(0911)           Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23*C/54%                  Engineer  : Leo-Li
EUT           : 150Mbps 802.11n Wireless Broadband Router
Power         : DC 9V From Adapter input AC 120V/60Hz
Test mode     : IEEE802.11g CH11 2462MHz Tx
M/N           : WNRT-617
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.665	29.48	7.50	36.61	81.47	81.84	54.00	-27.84	Average
2	2483.500	29.49	7.58	36.60	37.75	38.22	54.00	15.78	Average
3	2500.000	29.50	7.62	36.60	35.95	36.47	54.00	17.53	Average

Remarks:

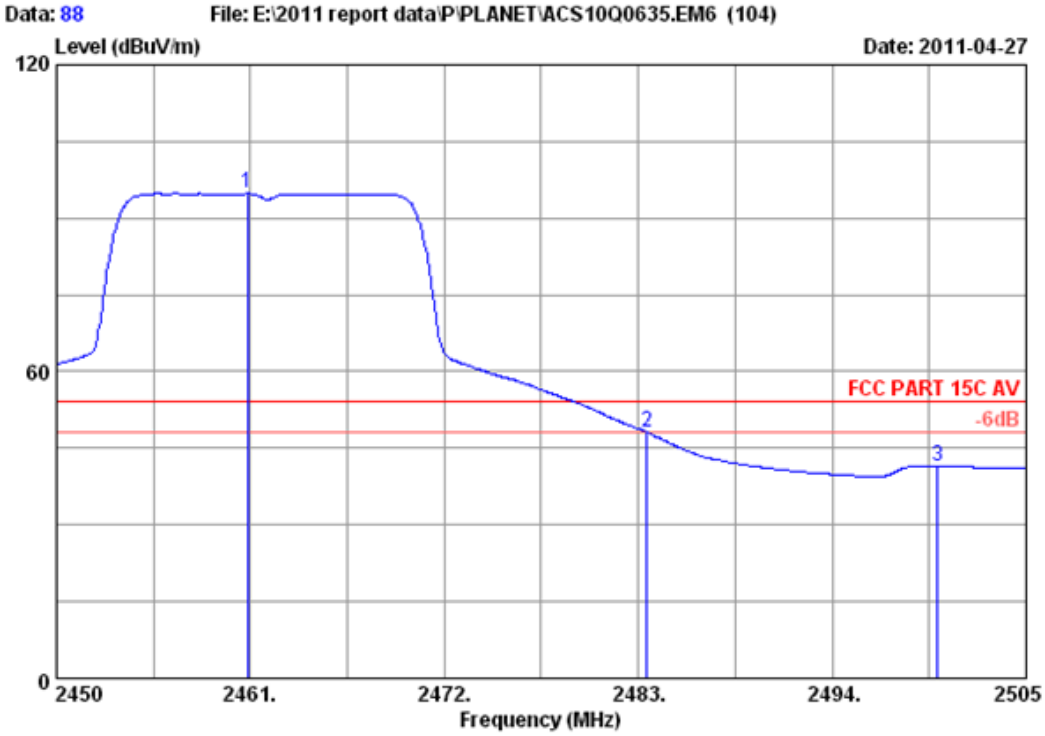
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 87
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.560	29.48	7.54	36.61	108.38	108.79	74.00	-34.79	Peak
2	2483.500	29.49	7.58	36.60	64.73	65.20	74.00	8.80	Peak
3	2484.210	29.49	7.58	36.60	64.88	65.35	74.00	8.65	Peak
4	2486.025	29.49	7.58	36.60	61.68	62.15	74.00	11.85	Peak
5	2500.000	29.50	7.62	36.60	53.38	53.90	74.00	20.10	Peak

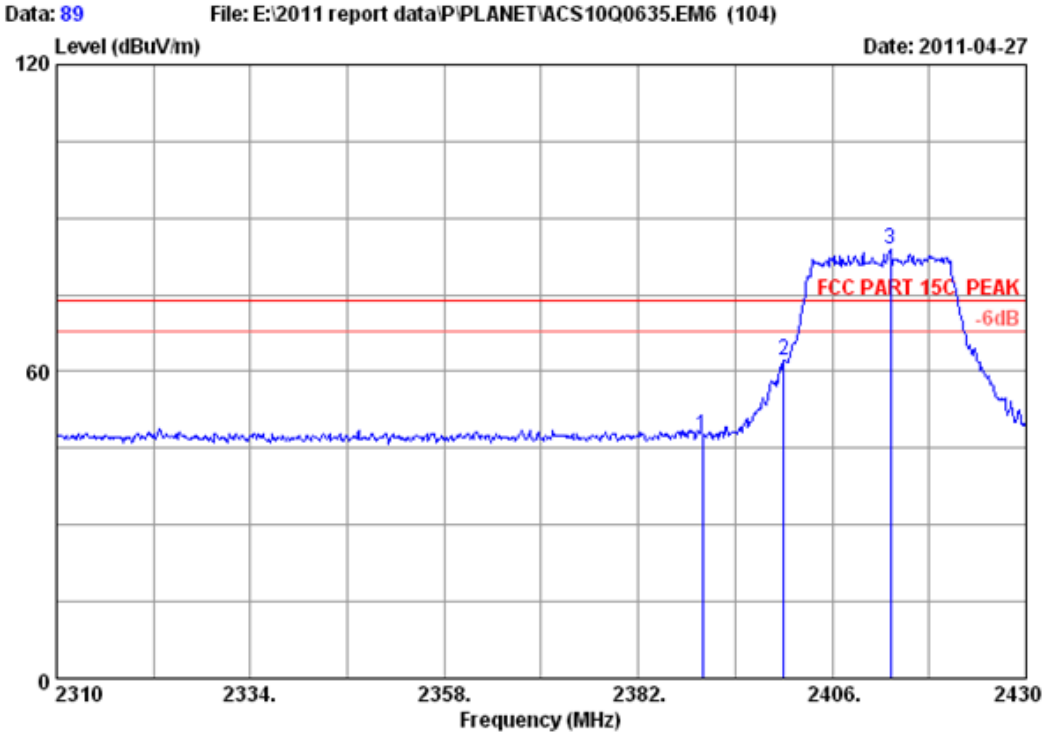
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 88
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.835	29.48	7.54	36.61	94.38	94.79	54.00	-40.79	Average
2	2483.500	29.49	7.58	36.60	47.65	48.12	54.00	5.88	Average
3	2500.000	29.50	7.62	36.60	40.97	41.49	54.00	12.51	Average

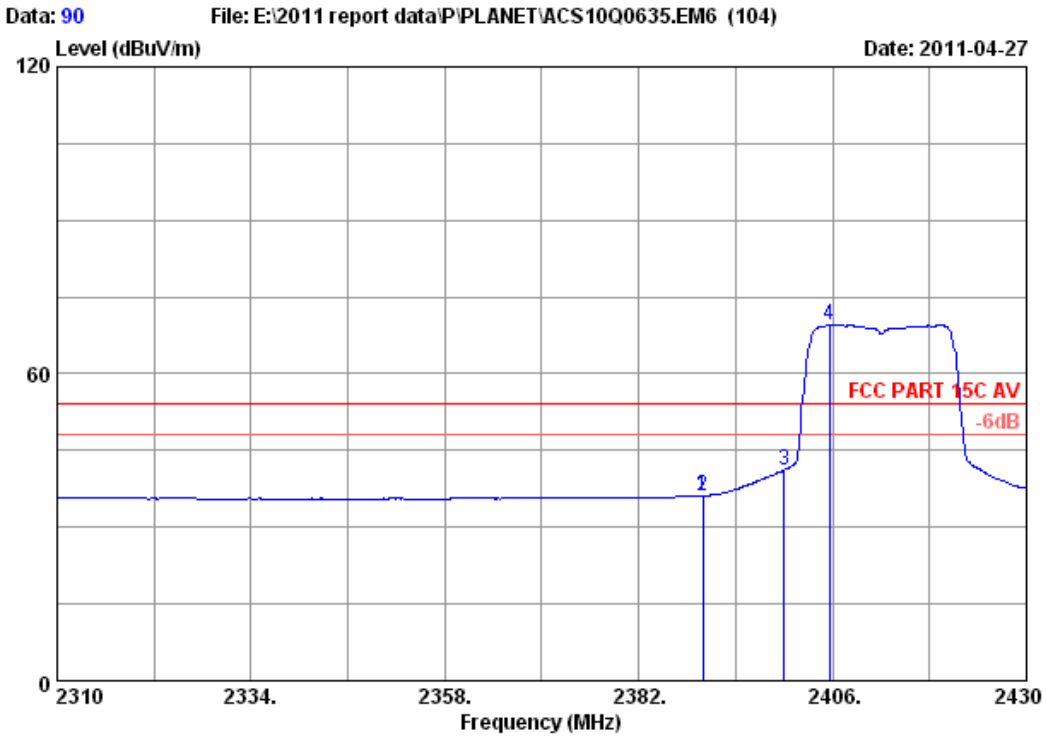
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 89
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	47.14	47.35	74.00	26.65	Peak
2	2400.000	29.44	7.43	36.62	62.03	62.28	74.00	11.72	Peak
3	2413.200	29.45	7.43	36.62	83.52	83.78	74.00	-9.78	Peak

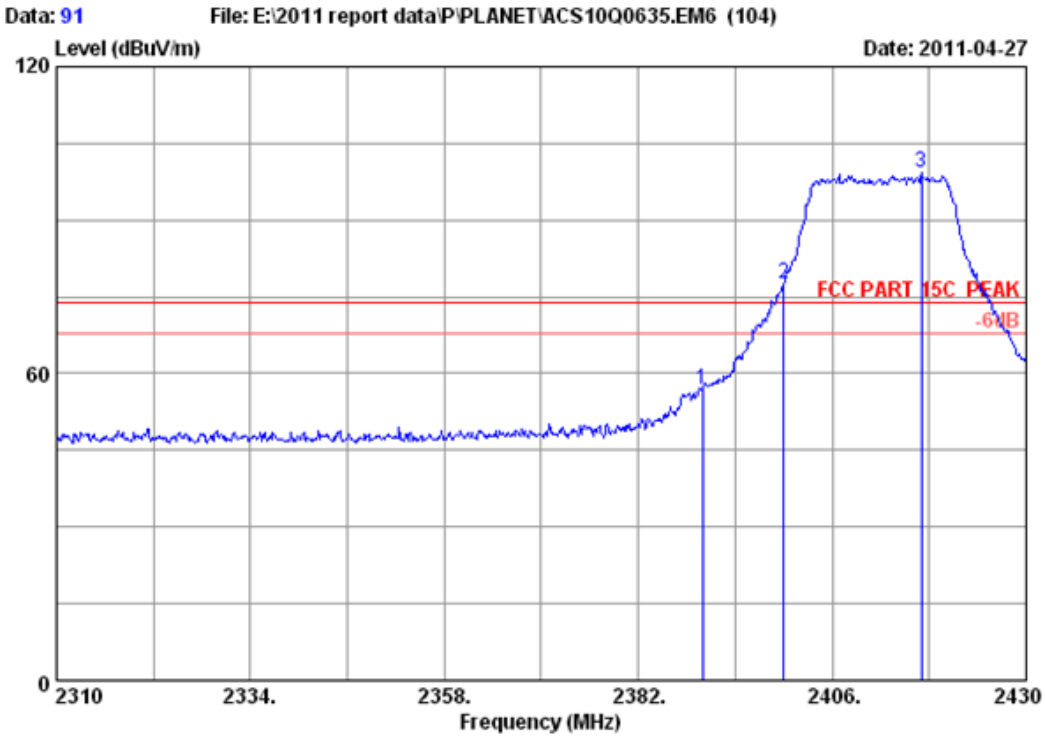
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 90
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	35.92	36.13	54.00	17.87	Average
2	2390.000	29.44	7.39	36.62	35.92	36.13	54.00	17.87	Average
3	2400.000	29.44	7.43	36.62	40.98	41.23	54.00	12.77	Average
4	2405.640	29.45	7.43	36.62	69.27	69.53	54.00	-15.53	Average

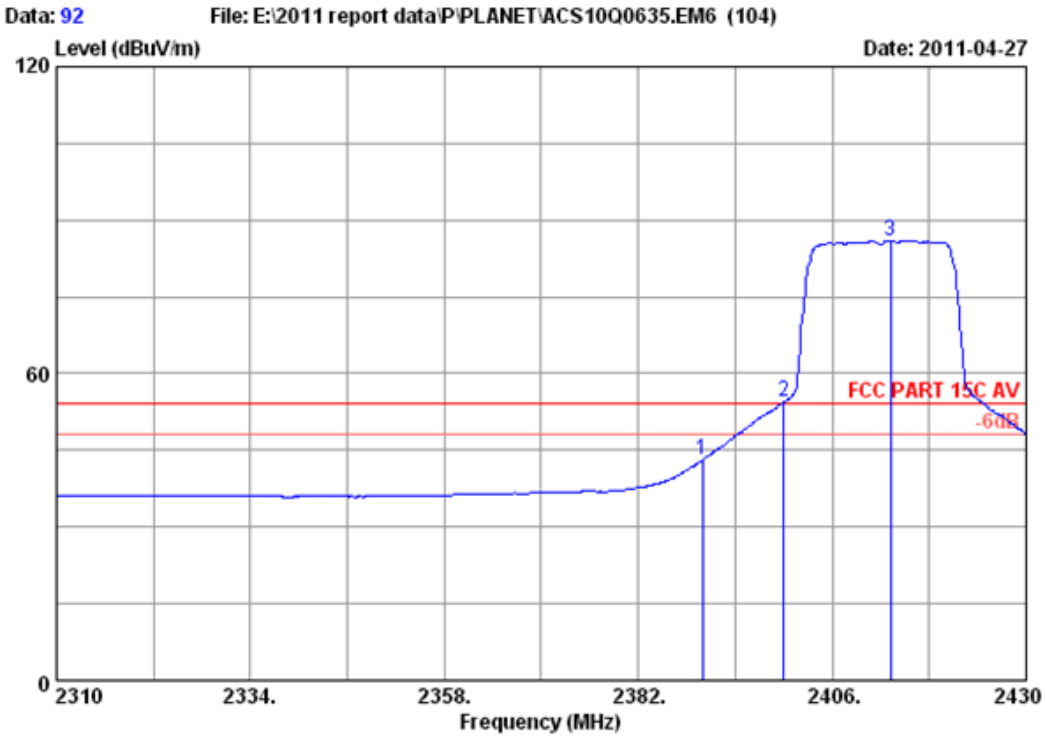
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 91
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	56.47	56.68	74.00	17.32	Peak
2	2400.000	29.44	7.43	36.62	77.14	77.39	74.00	-3.39	Peak
3	2417.040	29.45	7.43	36.61	99.08	99.35	74.00	-25.35	Peak

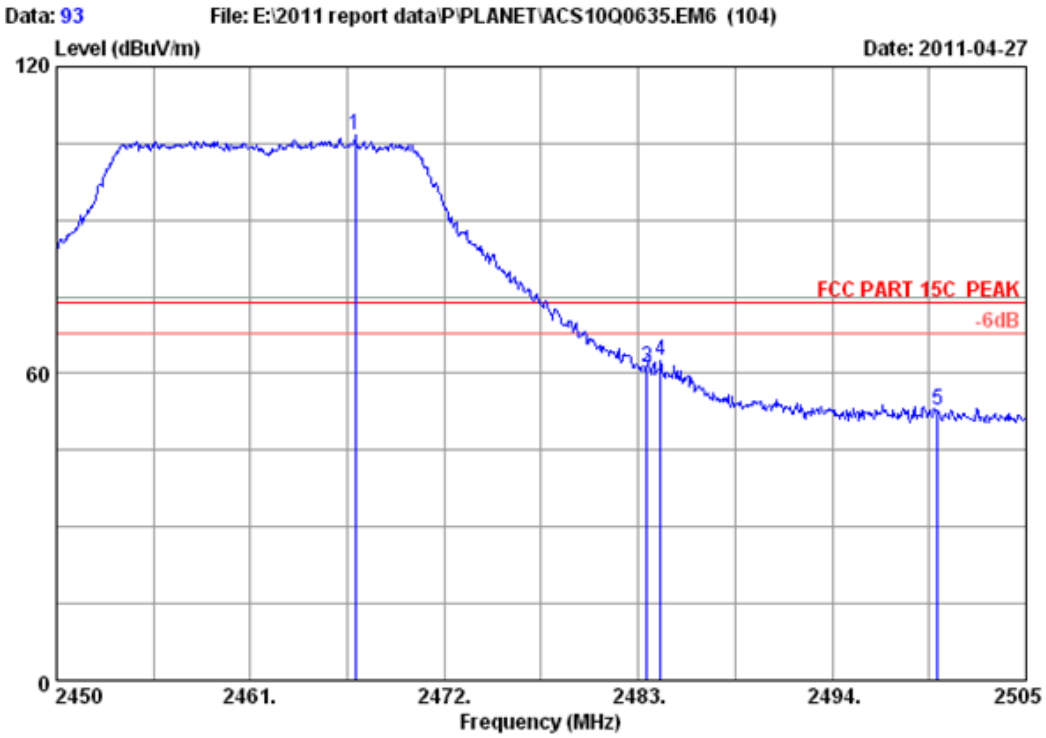
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 92
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	42.94	43.15	54.00	10.85	Average
2	2400.000	29.44	7.43	36.62	54.15	54.40	54.00	-0.40	Average
3	2413.200	29.45	7.43	36.62	85.74	86.00	54.00	-32.00	Average

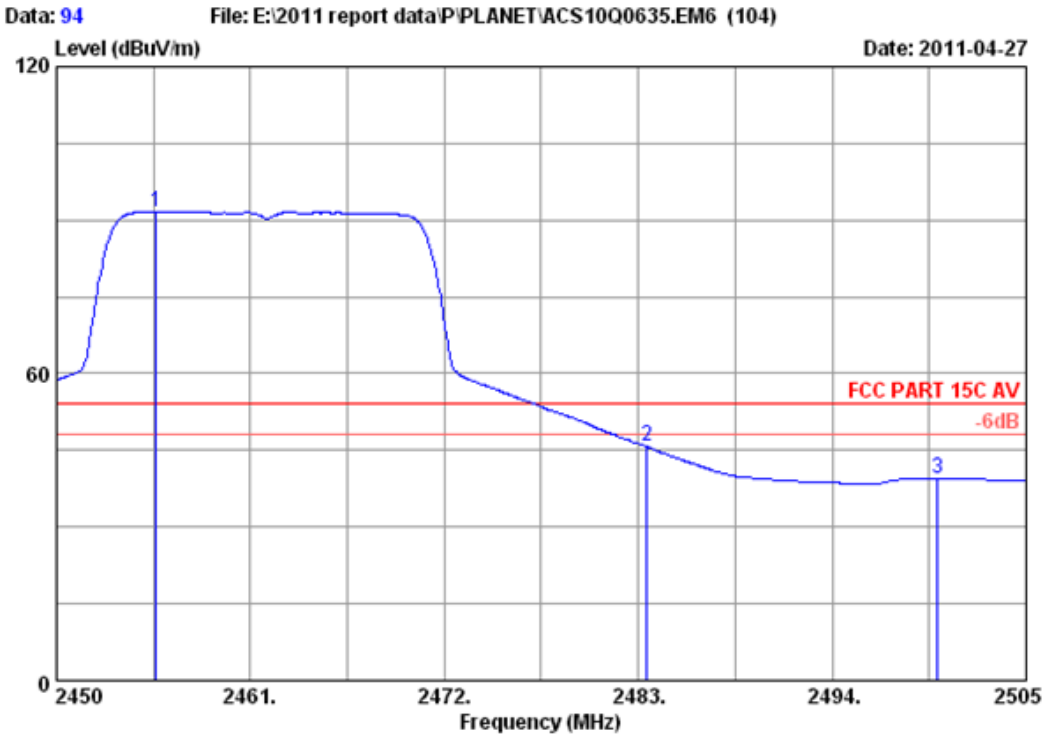
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 93
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2466.940	29.48	7.54	36.60	106.25	106.67	74.00	-32.67	Peak
2	2483.500	29.49	7.58	36.60	60.58	61.05	74.00	12.95	Peak
3	2483.500	29.49	7.58	36.60	60.58	61.05	74.00	12.95	Peak
4	2484.265	29.49	7.58	36.60	62.19	62.66	74.00	11.34	Peak
5	2500.000	29.50	7.62	36.60	52.13	52.65	74.00	21.35	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

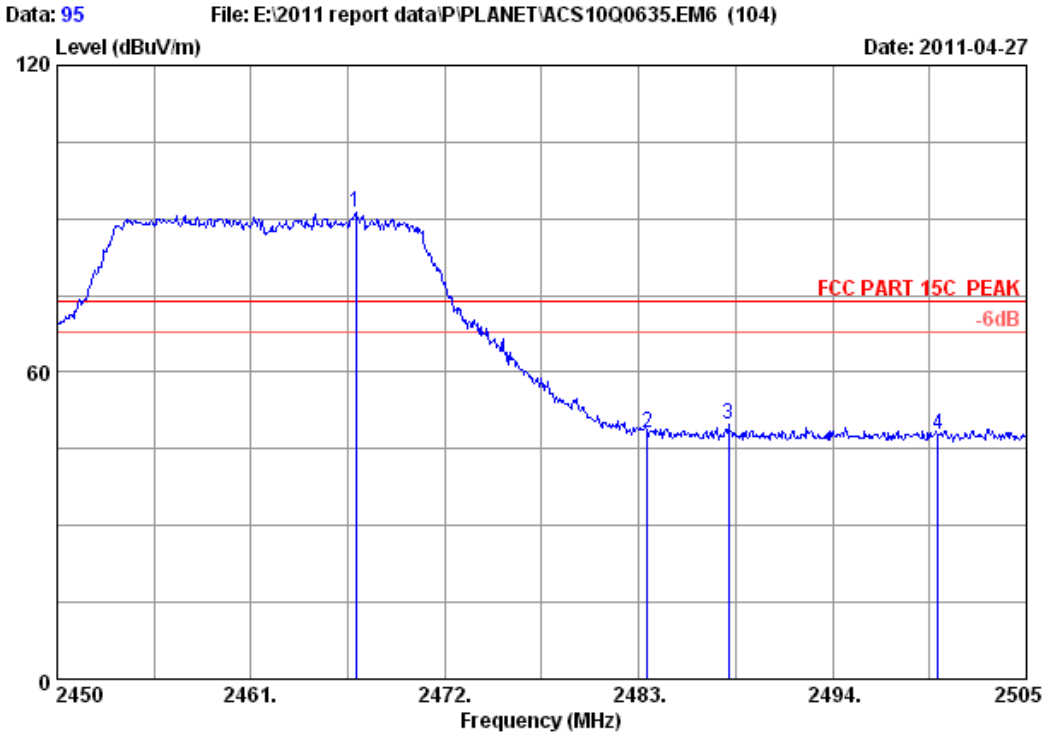



```
Site no.      : 3m Chamber                Data no. :  94
Dis. / Ant.   : 3m   3115(0911)           Ant. pol. : VERTICAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23*C/54%                  Engineer  : Leo-Li
EUT           : 150Mbps 802.11n Wireless Broadband Router
Power         : DC 9V From Adapter input AC 120V/60Hz
Test mode     : IEEE802.11nHT20 CH11 2462MHz Tx
M/N           : WNRT-617
```

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.665	29.48	7.50	36.61	91.34	91.71	54.00	-37.71	Average
2	2483.500	29.49	7.58	36.60	45.24	45.71	54.00	8.29	Average
3	2500.000	29.50	7.62	36.60	38.93	39.45	54.00	14.55	Average

Remarks:

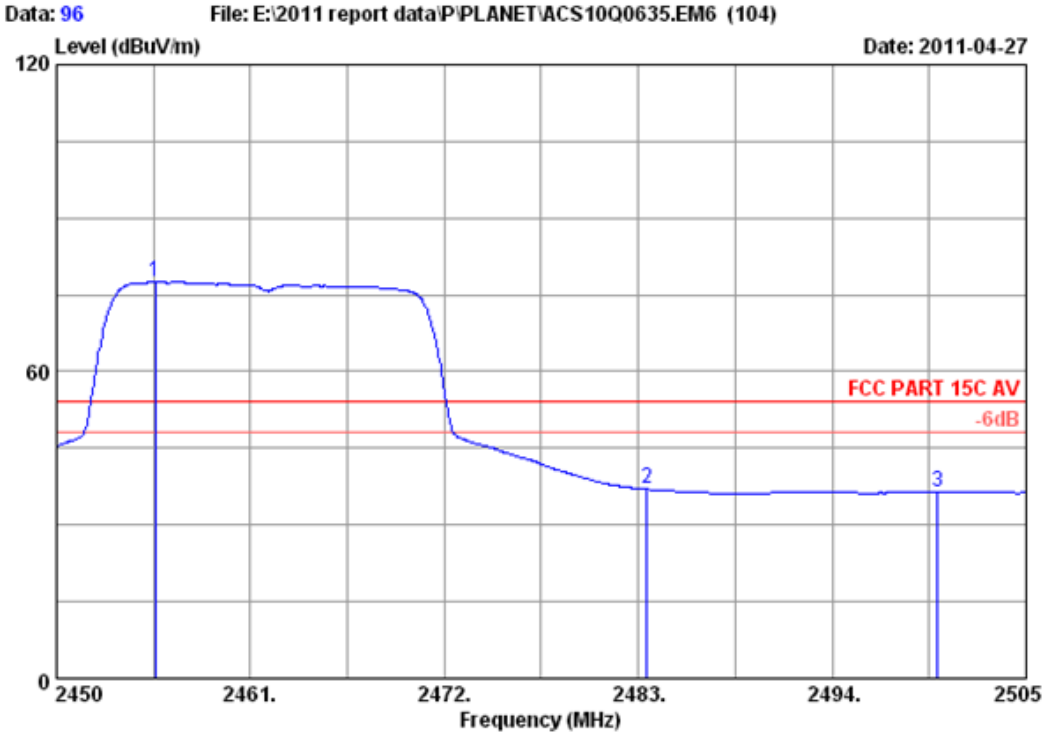
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 95
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2466.940	29.48	7.54	36.60	90.67	91.09	74.00	-17.09	Peak
2	2483.500	29.49	7.58	36.60	47.51	47.98	74.00	26.02	Peak
3	2488.115	29.50	7.58	36.60	49.20	49.68	74.00	24.32	Peak
4	2500.000	29.50	7.62	36.60	47.19	47.71	74.00	26.29	Peak

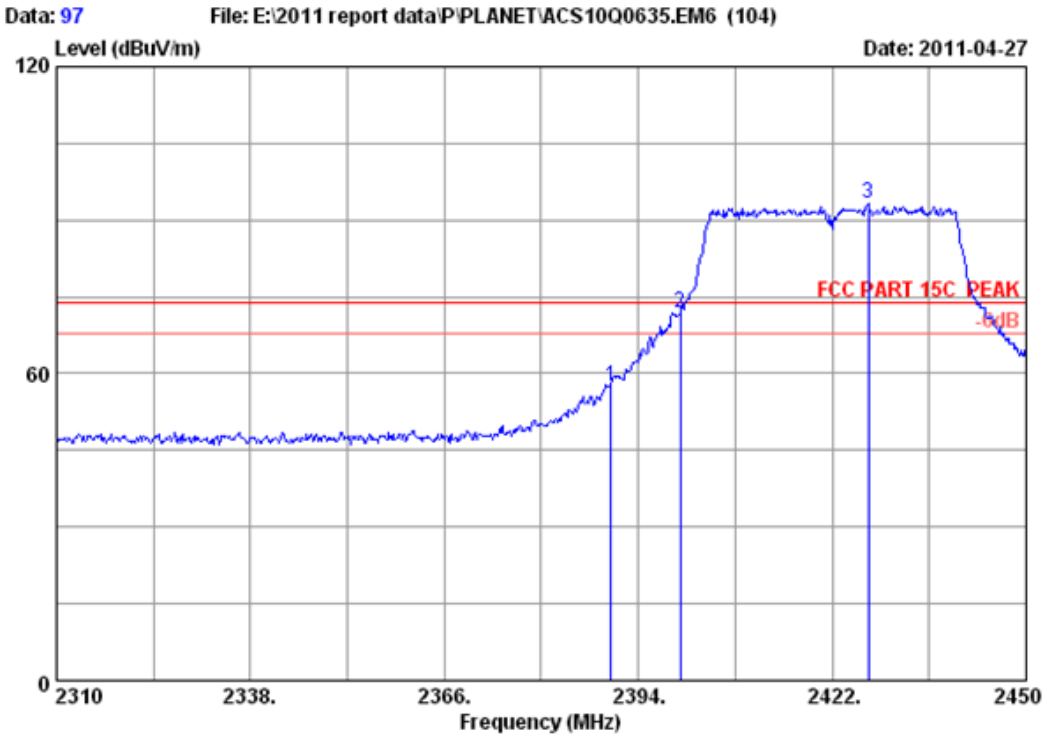
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 96
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.610	29.48	7.50	36.61	77.16	77.53	54.00	-23.53	Average
2	2483.500	29.49	7.58	36.60	36.50	36.97	54.00	17.03	Average
3	2500.000	29.50	7.62	36.60	35.76	36.28	54.00	17.72	Average

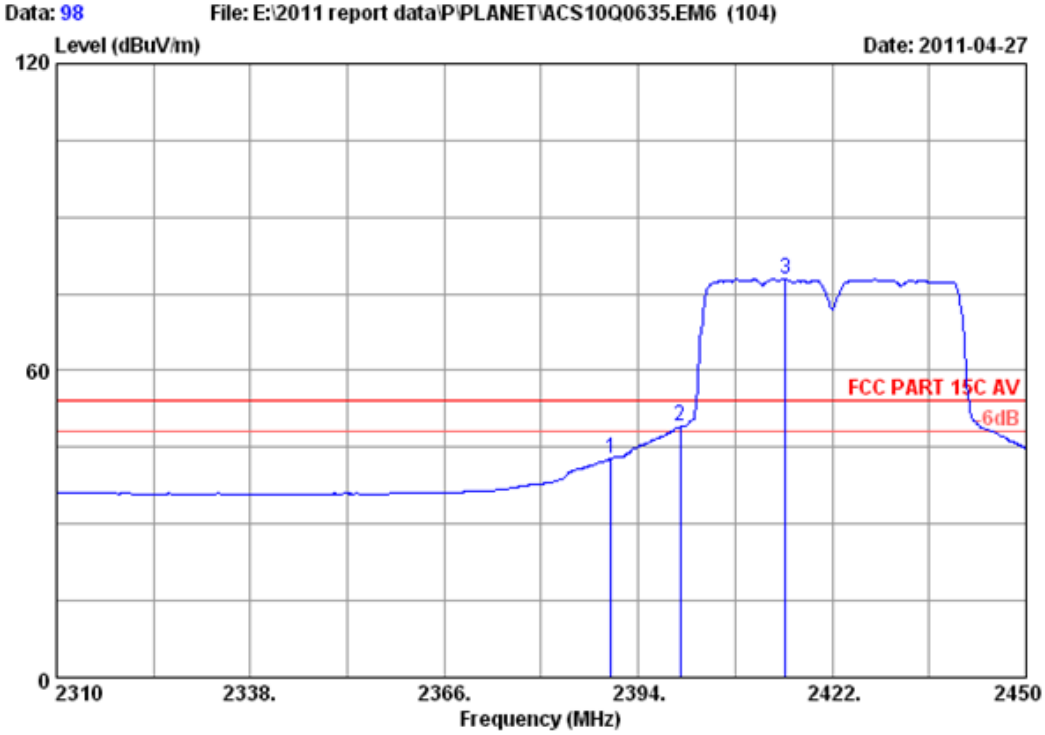
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 97
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	57.29	57.50	74.00	16.50	Peak
2	2400.000	29.44	7.43	36.62	71.46	71.71	74.00	2.29	Peak
3	2427.180	29.46	7.46	36.61	92.96	93.27	74.00	-19.27	Peak

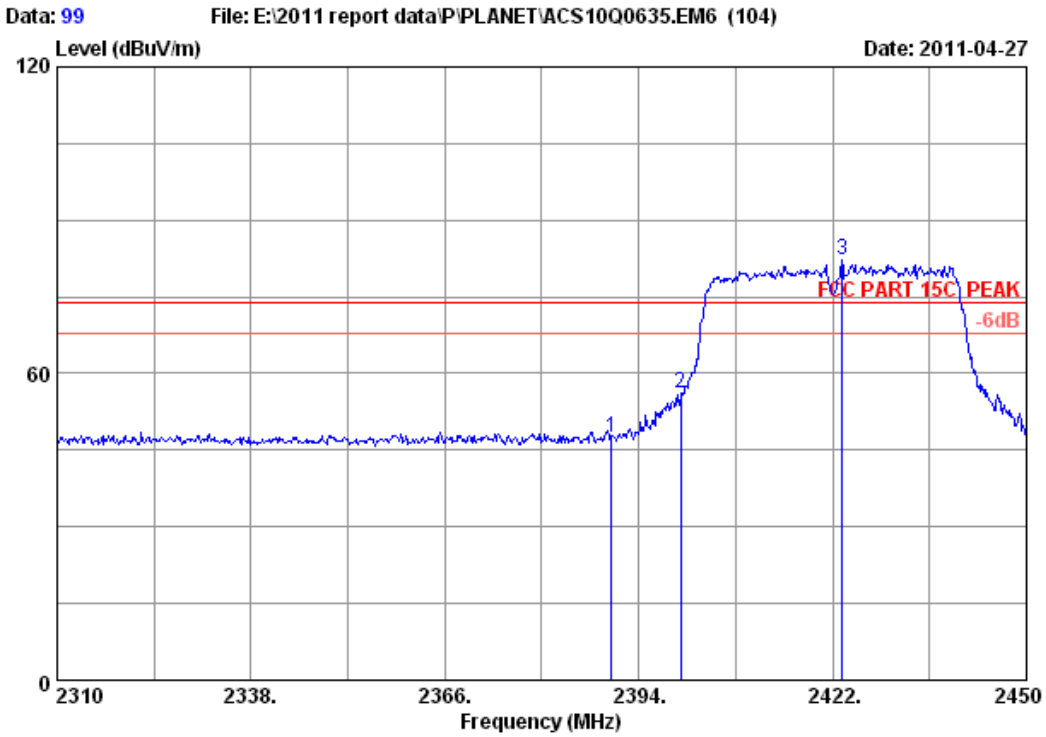
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 98
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	42.48	42.69	54.00	11.31	Average
2	2400.000	29.44	7.43	36.62	48.73	48.98	54.00	5.02	Average
3	2415.280	29.45	7.43	36.61	77.59	77.86	54.00	-23.86	Average

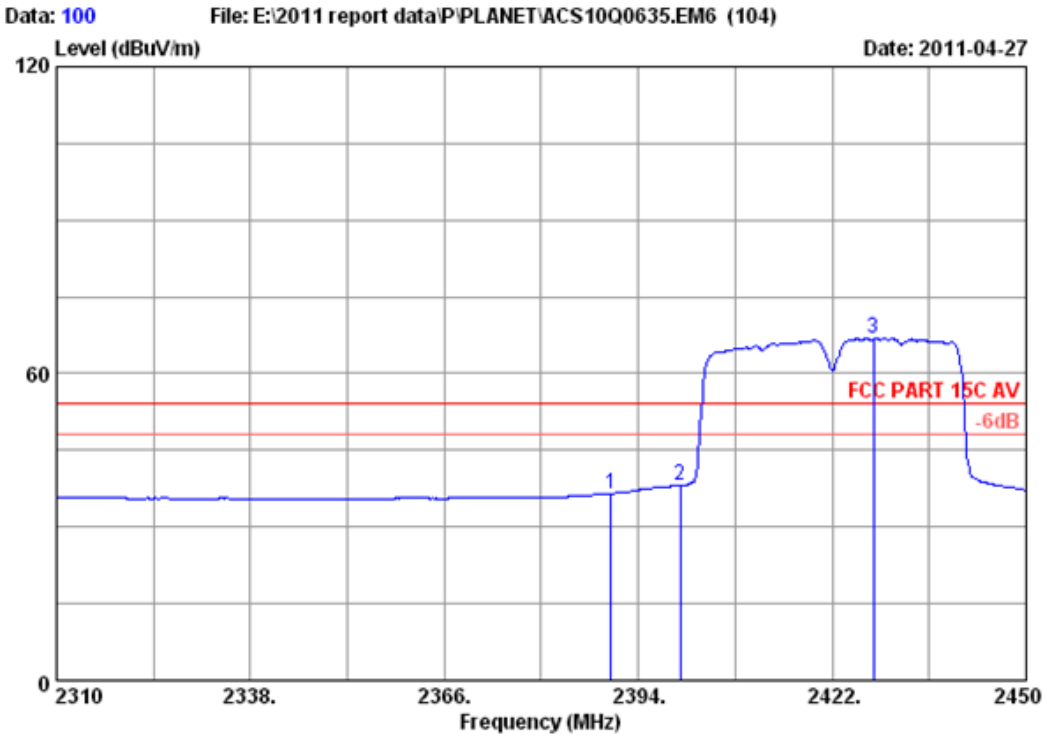
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 99
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	47.29	47.50	74.00	26.50	Peak
2	2400.000	29.44	7.43	36.62	55.88	56.13	74.00	17.87	Peak
3	2423.400	29.46	7.46	36.61	81.77	82.08	74.00	-8.08	Peak

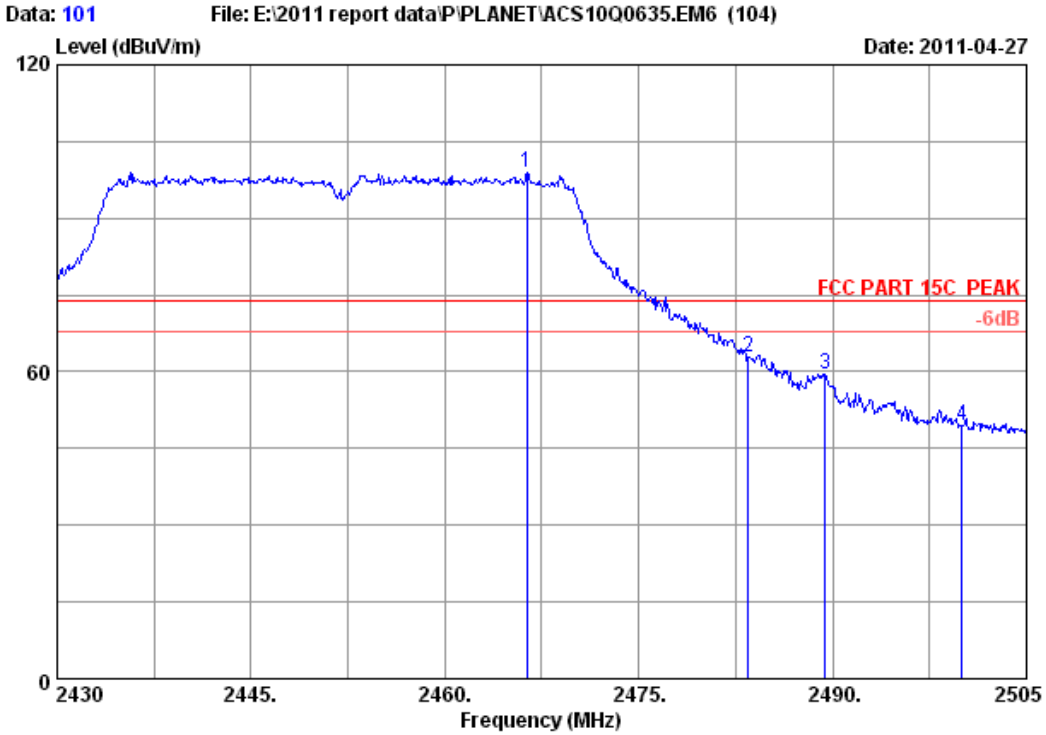
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 100
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	29.44	7.39	36.62	36.34	36.55	54.00	17.45	Average
2	2400.000	29.44	7.43	36.62	37.90	38.15	54.00	15.85	Average
3	2428.020	29.46	7.46	36.61	66.60	66.91	54.00	-12.91	Average

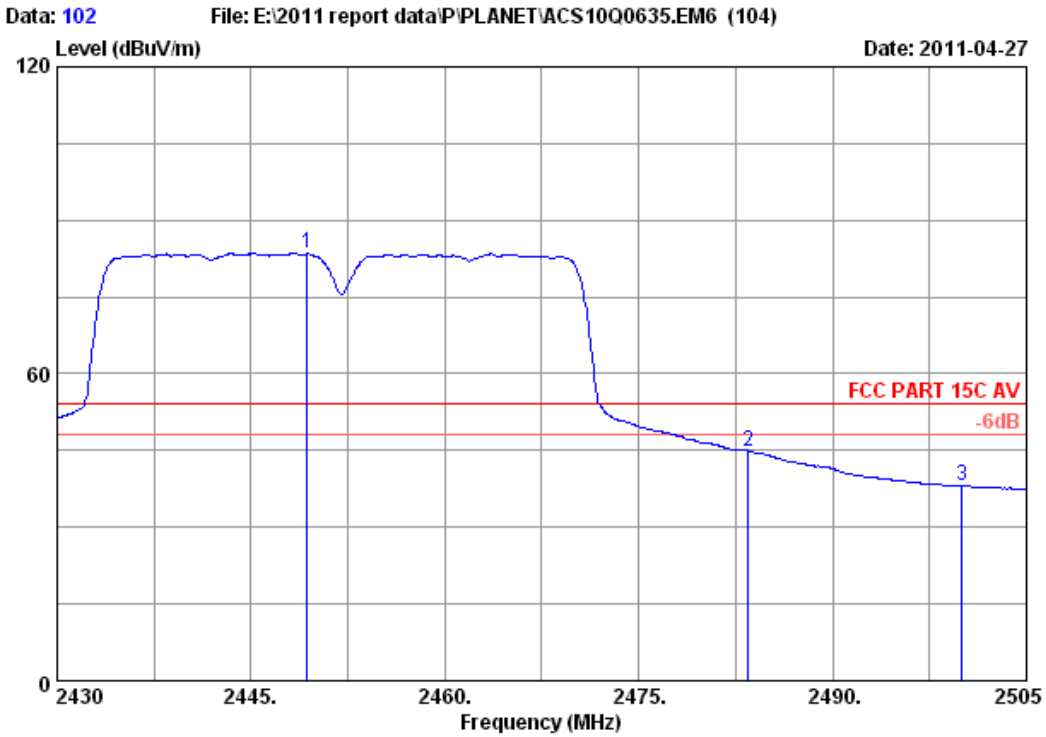
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 101
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2466.375	29.48	7.54	36.60	98.68	99.10	74.00	-25.10	Peak
2	2483.500	29.49	7.58	36.60	62.47	62.94	74.00	11.06	Peak
3	2489.400	29.50	7.58	36.60	59.18	59.66	74.00	14.34	Peak
4	2500.000	29.50	7.62	36.60	49.05	49.57	74.00	24.43	Peak

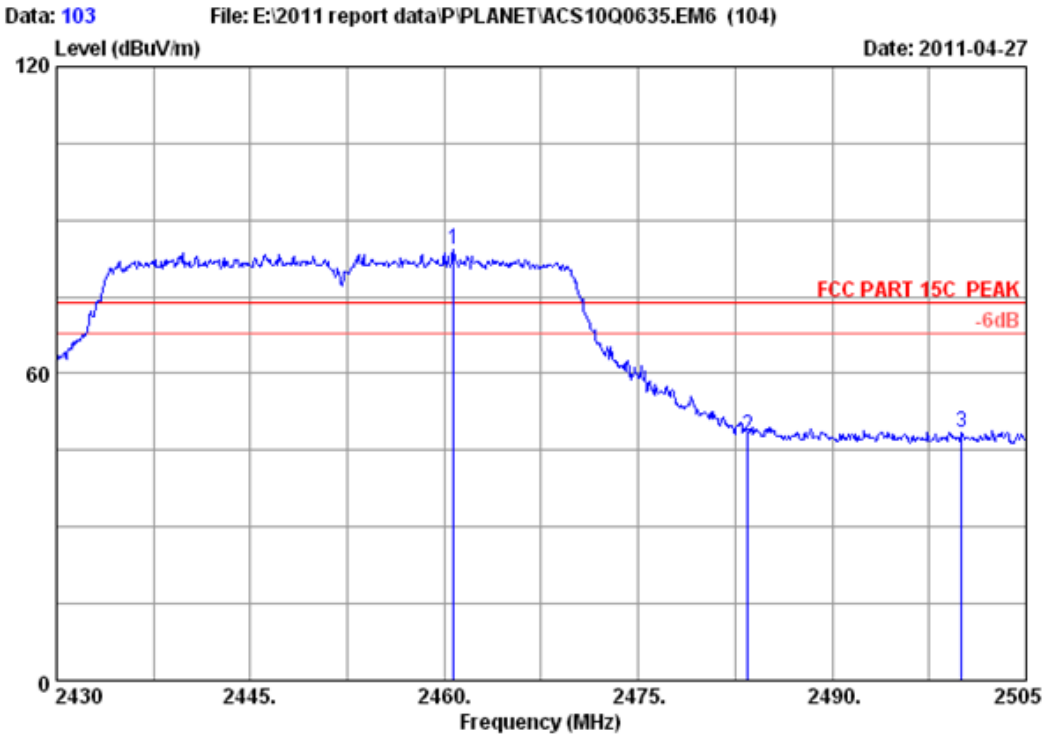
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 102
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2449.350	29.47	7.50	36.61	83.12	83.48	54.00	-29.48	Average
2	2483.500	29.49	7.58	36.60	44.46	44.93	54.00	9.07	Average
3	2500.000	29.50	7.62	36.60	37.50	38.02	54.00	15.98	Average

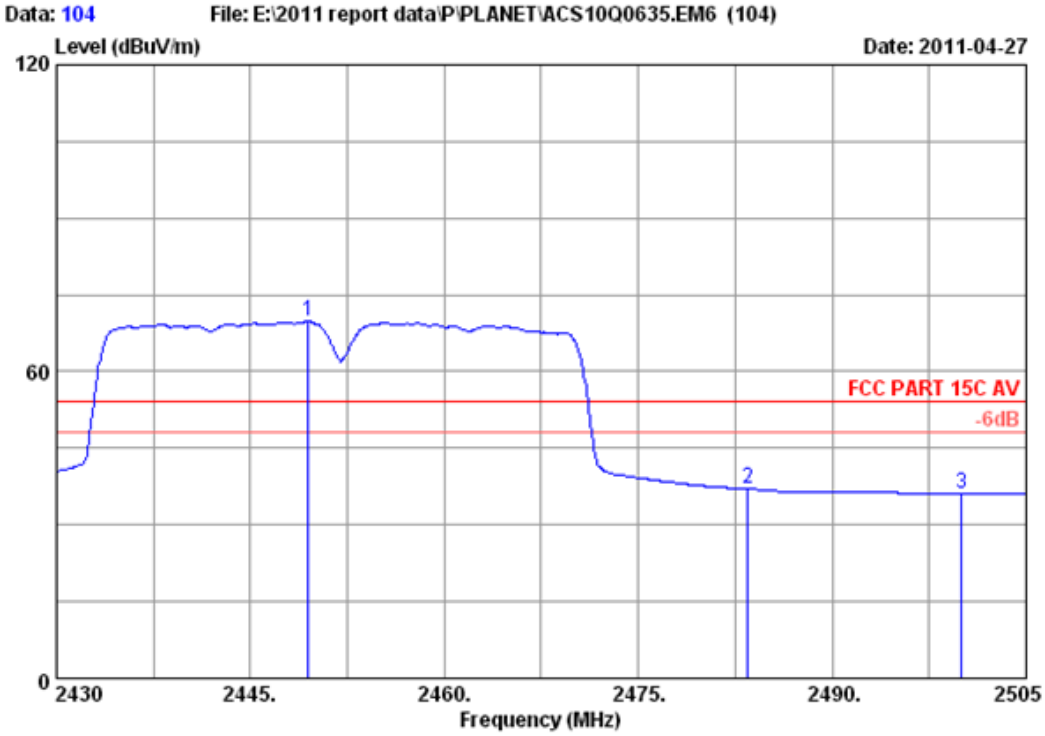
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 103
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.750	29.48	7.54	36.61	83.75	84.16	74.00	-10.16	Peak
2	2483.500	29.49	7.58	36.60	47.26	47.73	74.00	26.27	Peak
3	2500.000	29.50	7.62	36.60	47.89	48.41	74.00	25.59	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 104
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : 150Mbps 802.11n Wireless Broadband Router
Power : DC 9V From Adapter input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : WNRT-617

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2449.500	29.47	7.50	36.61	69.44	69.80	54.00	-15.80	Average
2	2483.500	29.49	7.58	36.60	36.56	37.03	54.00	16.97	Average
3	2500.000	29.50	7.62	36.60	35.70	36.22	54.00	17.78	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

7. 6dB Bandwidth Test

7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

7.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

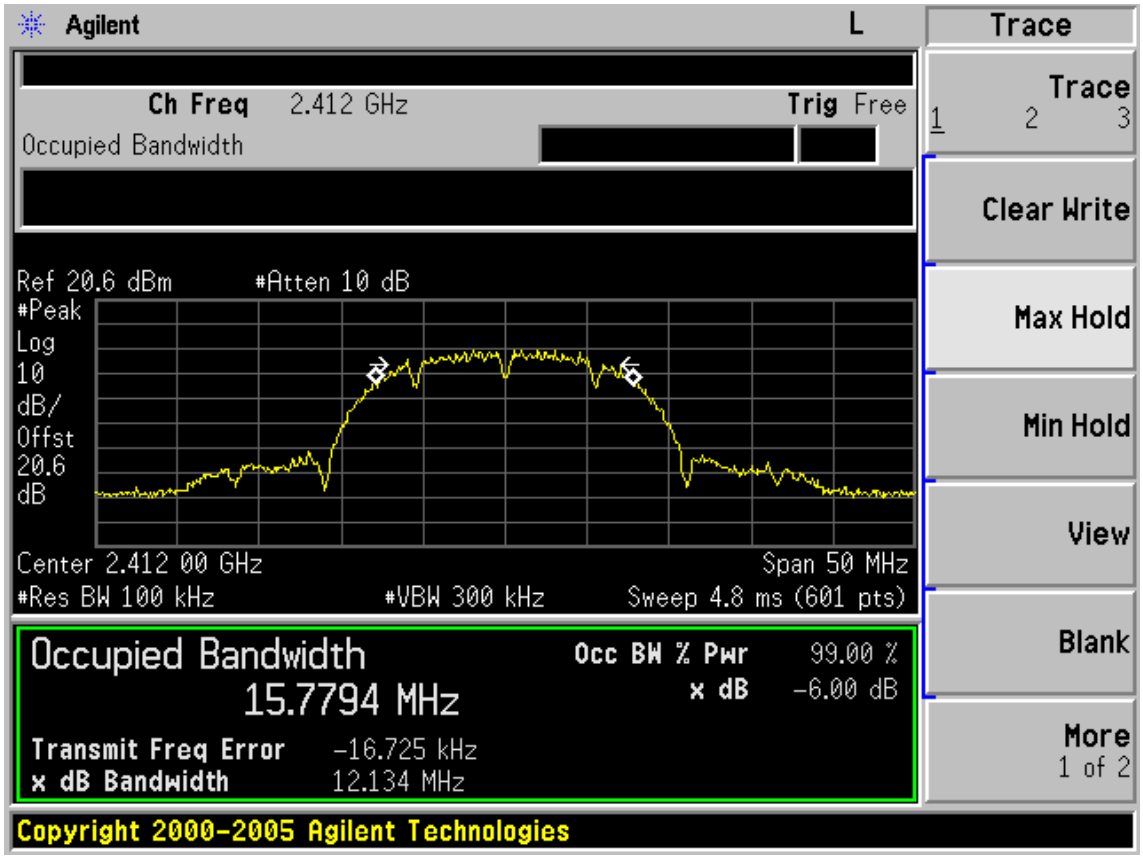
7.4.Test Results

EUT: 150Mbps 802.11n Wireless Broadband Router		
M/N: WNRT-617		
Test date:2011-04-25	Pressure: 100.6 kpa	Humidity: 60 %
Tested by: Sunny-lu	Test site: RF Site	Temperature：25 ℃

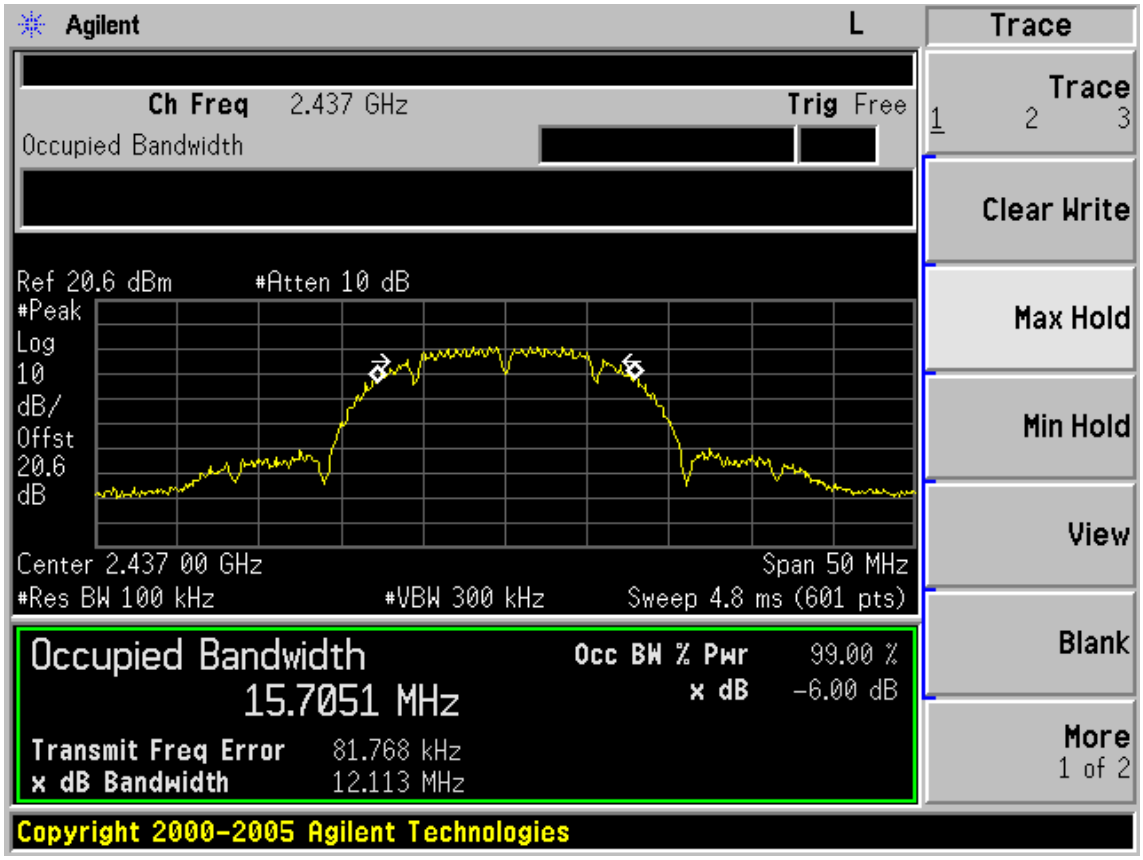
Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 5 dBi
Test Mode	CH	6dB bandwidth （MHz）	Limit (KHz)
11b	CH1	12.134	>500
	CH6	12.113	>500
	CH11	12.607	>500
11g	CH1	16.605	>500
	CH6	16.550	>500
	CH11	16.601	>500
11n HT20	CH1	17.780	>500
	CH6	17.751	>500
	CH11	17.752	>500
11n HT40	CH1	36.403	>500
	CH4	36.125	>500
	CH7	36.184	>500
Conclusion：PASS			

Test Mode: IEEE 802.11b TX

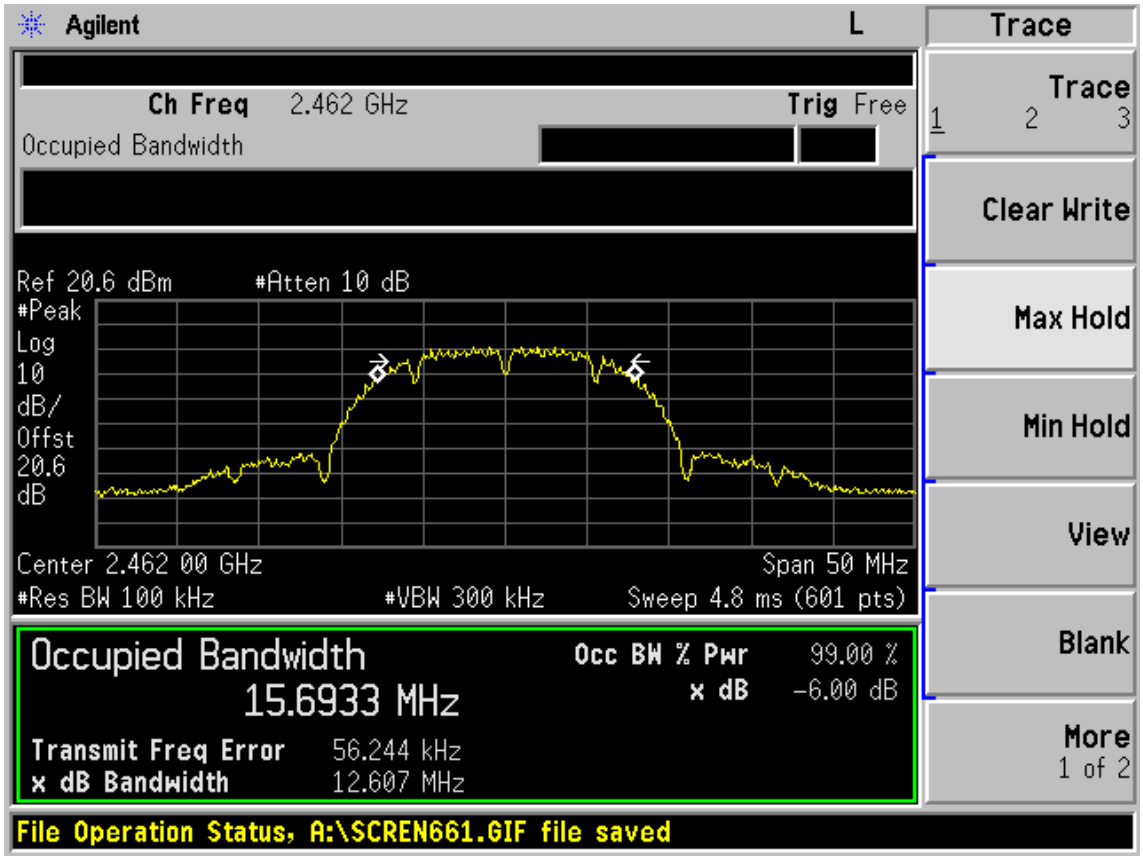
Test CH1: 2412MHz



Test CH6: 2437MHz

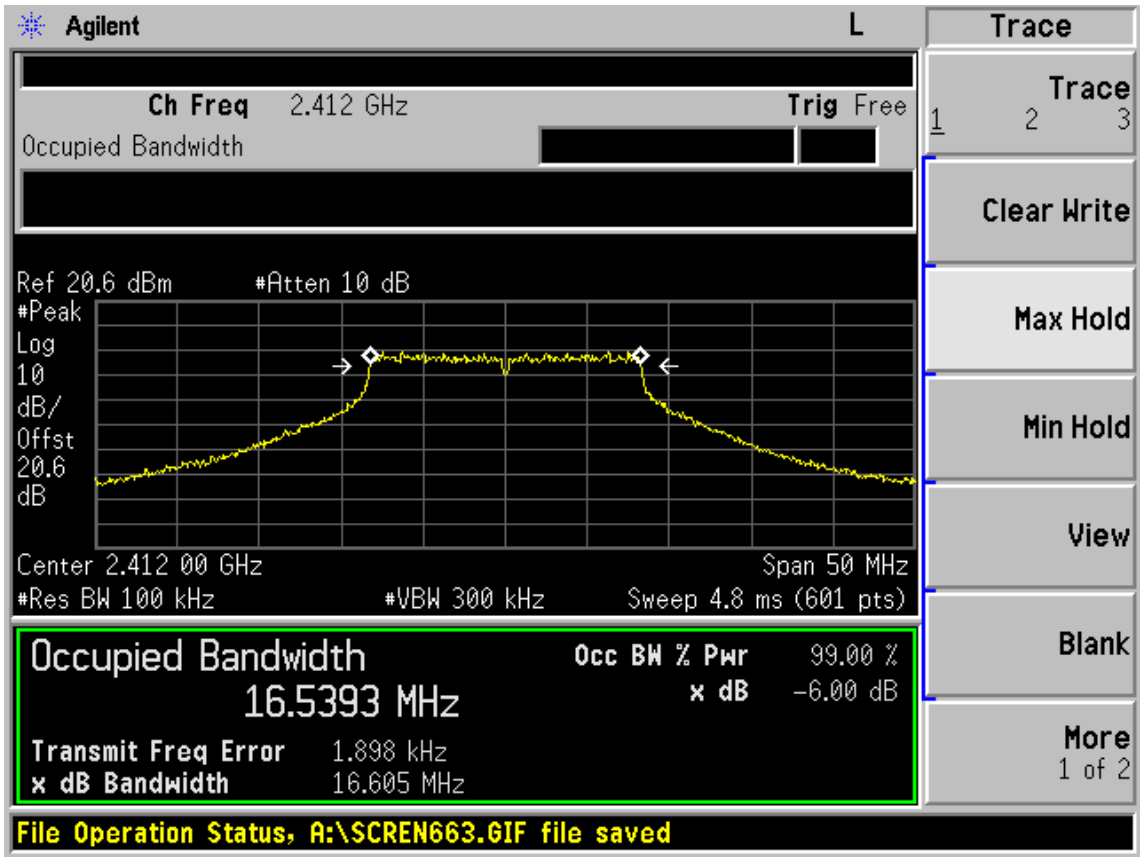


Test CH11: 2462MHz

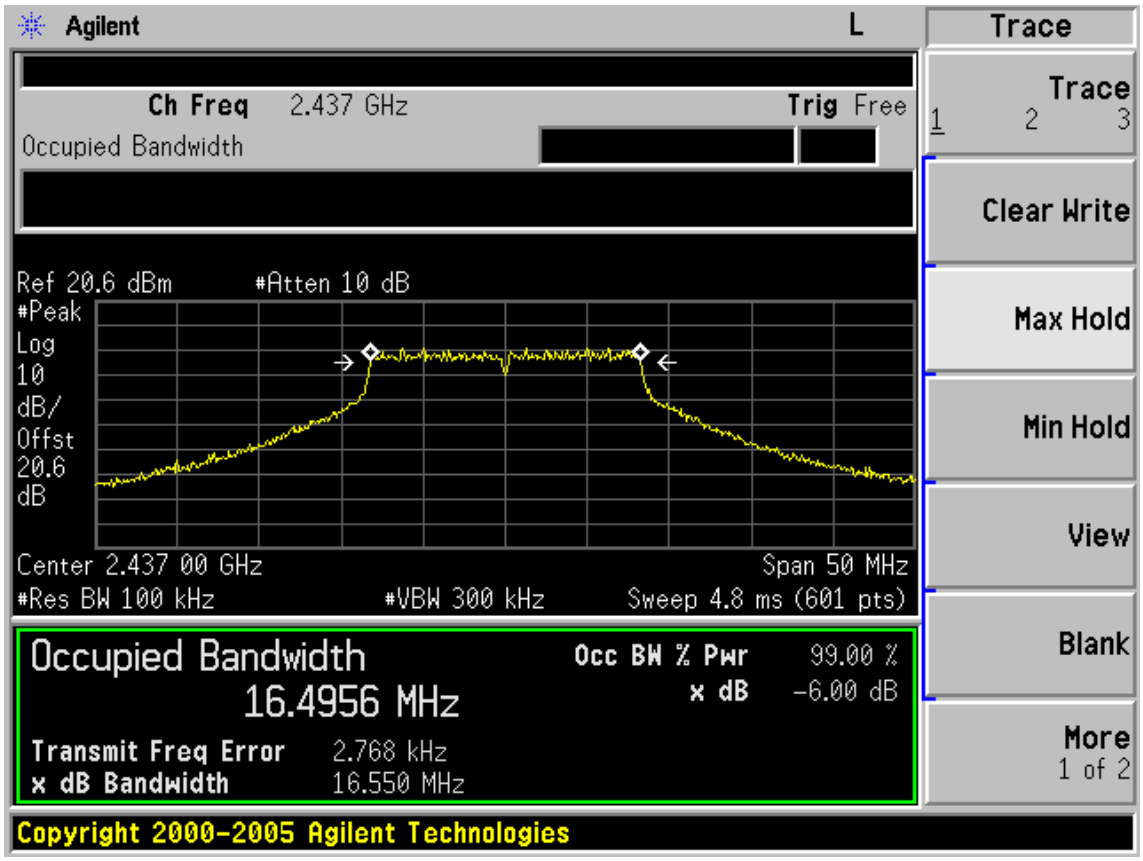


Test Mode: IEEE 802.11g TX

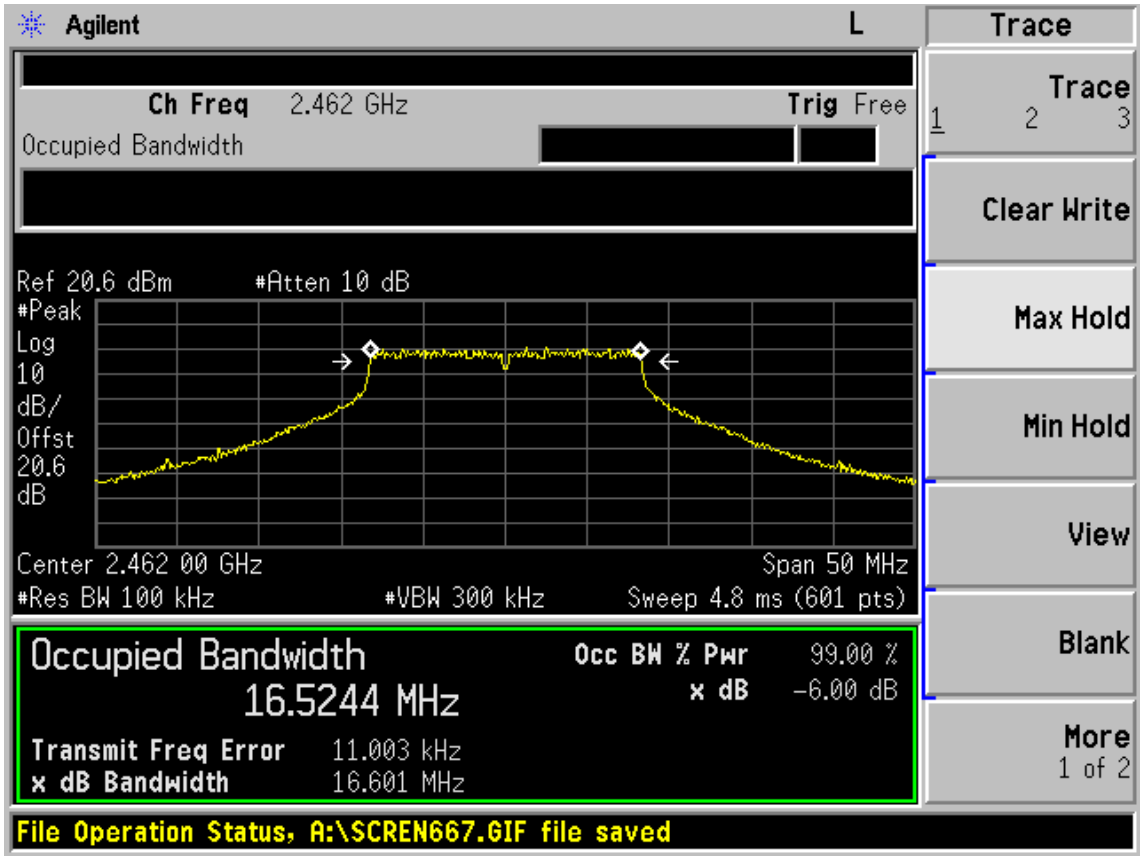
Test CH1: 2412MHz



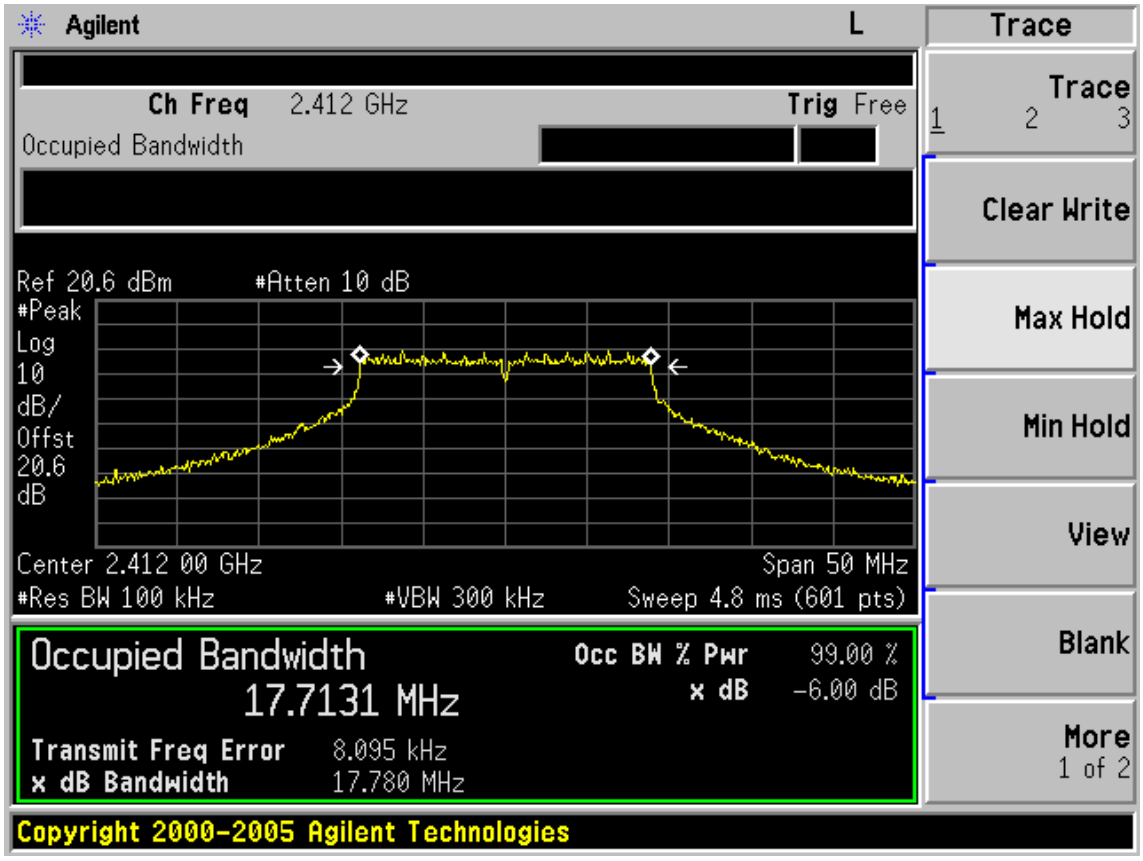
Test CH6: 2437MHz



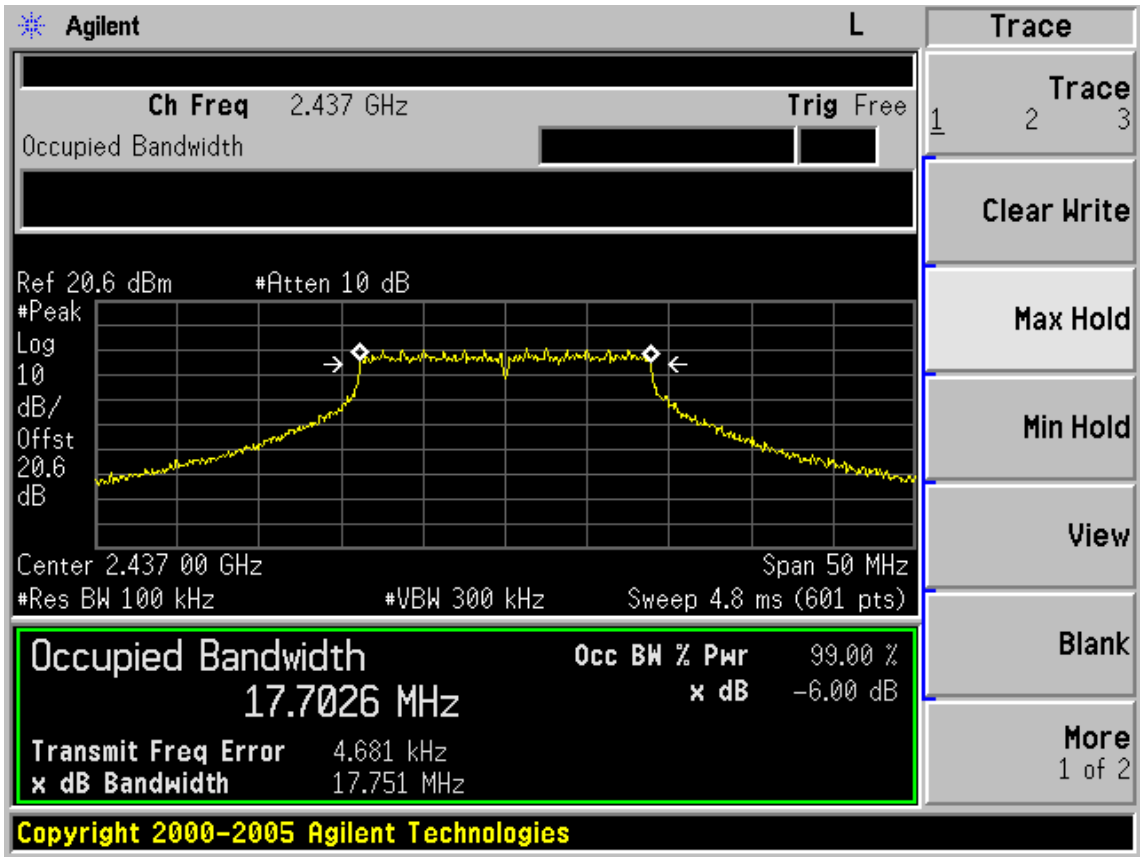
Test CH11: 2462MHz



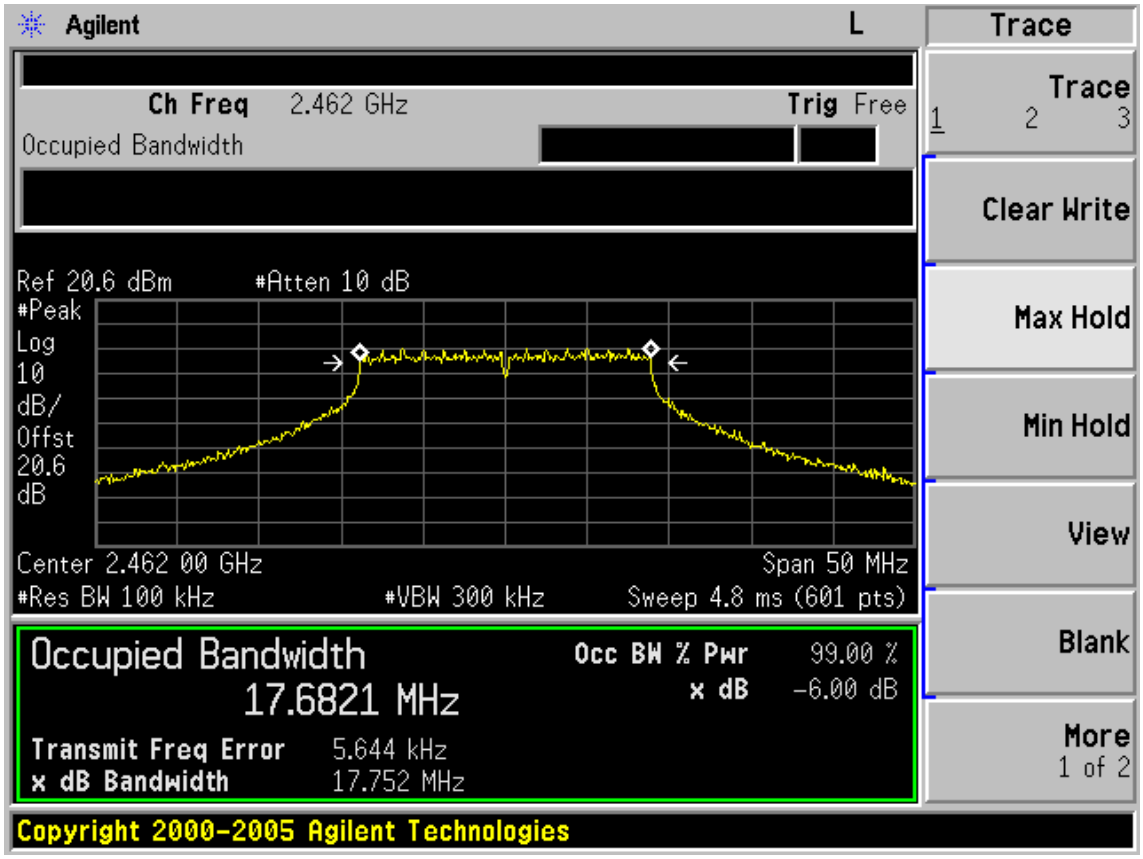
Test Mode: IEEE 802. 11n HT20TX
Test CH1: 2412MHz



Test CH6: 2437MHz

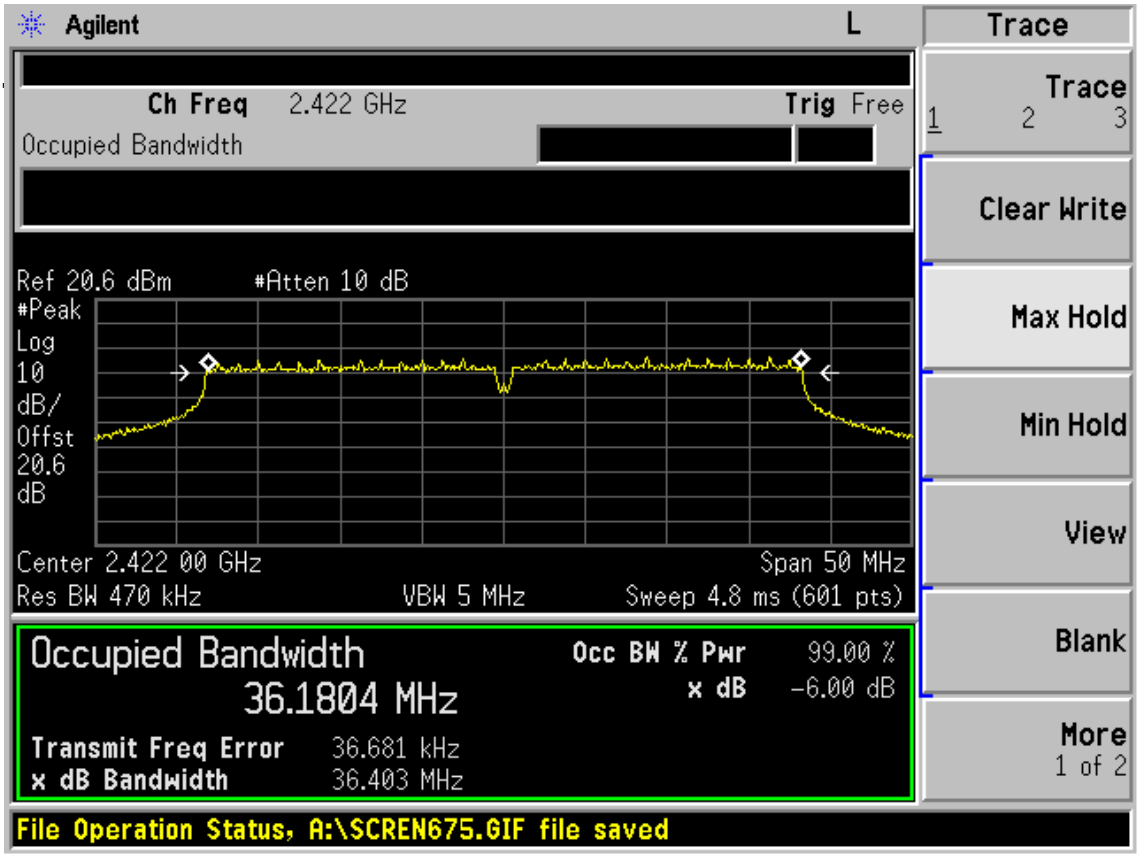


Test CH11: 2462MHz

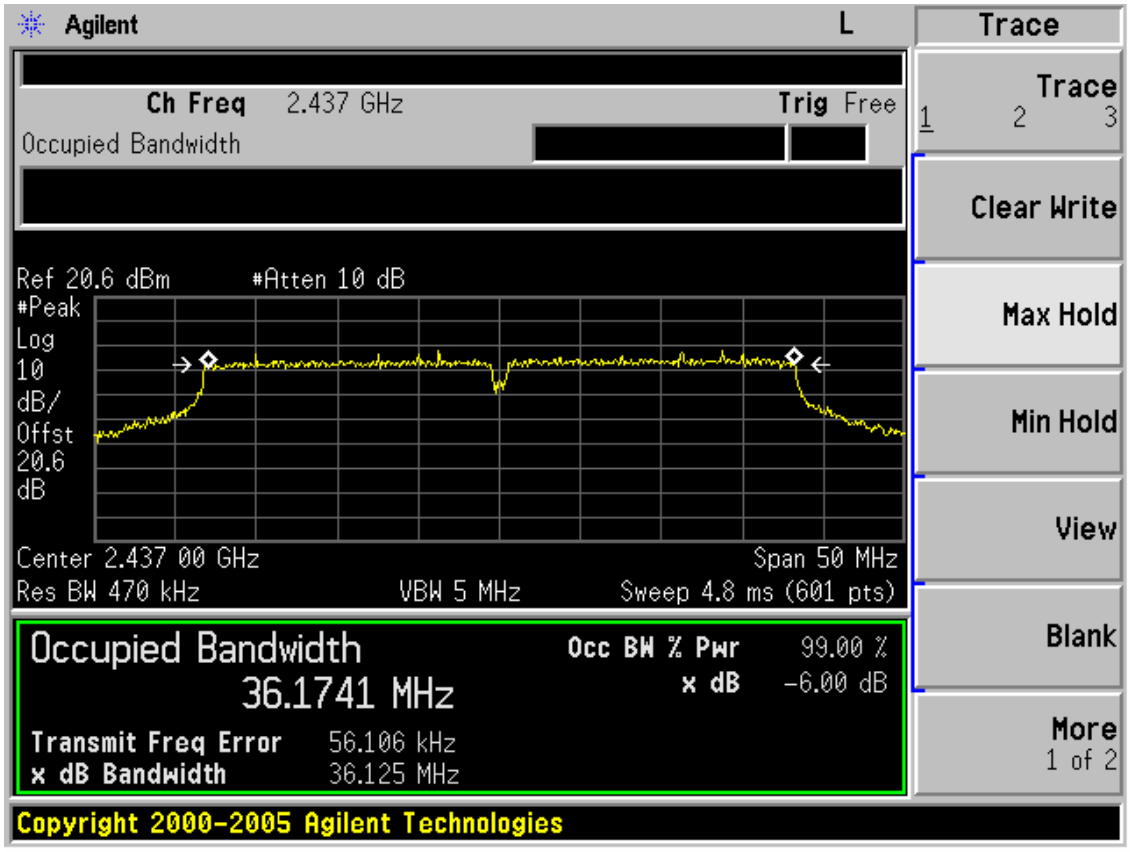


Test Mode: IEEE 802. 11n HT40TX

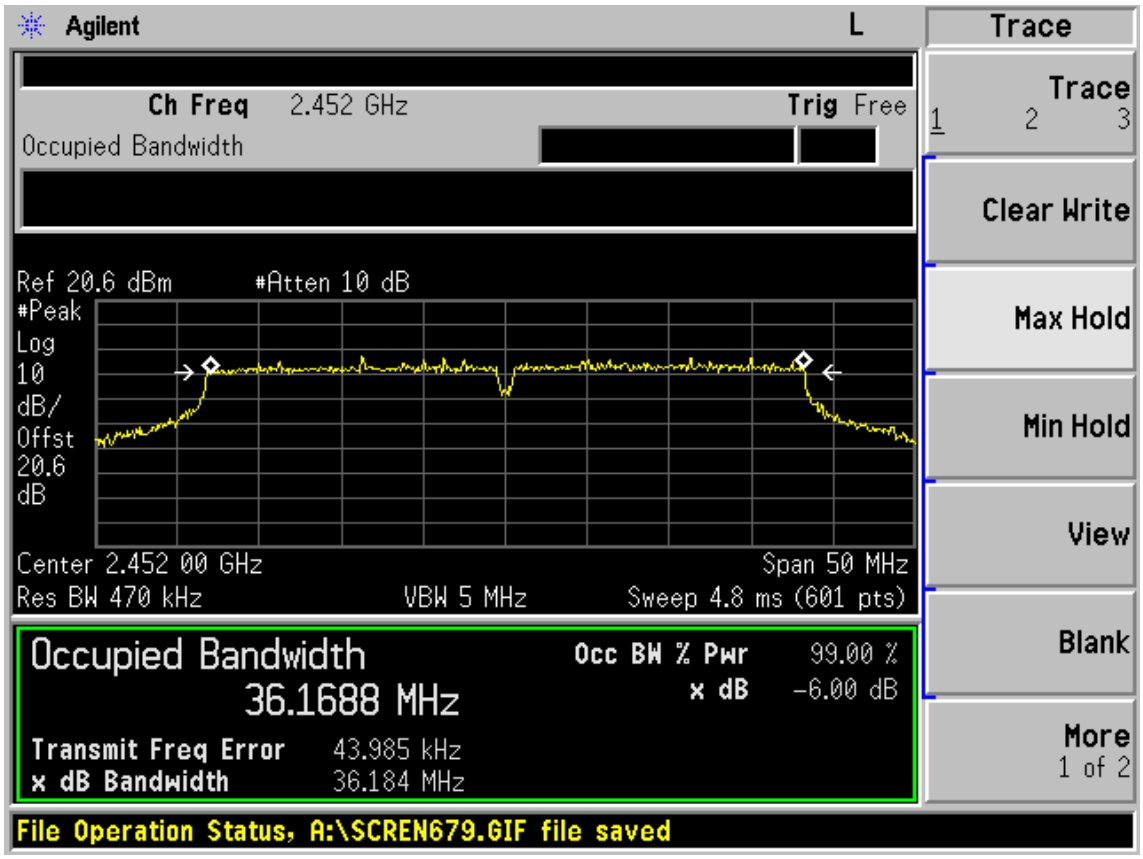
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



8. OUTPUT POWER TEST

8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Power meter	Anritsu	ML2487A	6K00002472	May.08,10	1Year
2.	Power sensor	Anritsu	MA2491A	0033005	May.08,10	1Year
3	Attenuator	Agilent	8491B	MY39262165	May.08,10	1 Year
4	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1Year

8.2.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

8.3.Test Procedure

1, Connected the EUT's antenna port to measure device by 20dB attenuator.

2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is 20MHz and above 6dB bandwidth of signal to measure out each test modes' PK output power.

3, For IEEE802.11n HT40 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So Bandwidth correction method according to ANSI C63.10 clause 6.10.2.1 part (c) was used:

1) Set the RBW=3MHz and VBW =8MHz
2) Turn averaging off
3) Set sweep to automatic
4) Set the span just large enough to capture the emission
5) Use a peak detector on max hold
6) Record the measured power
7) Calculate Output power of EUT use the formula:

Peak output power =measured power+ 10log[(6dB bandwidth of emission)/(analyzer RBW)]

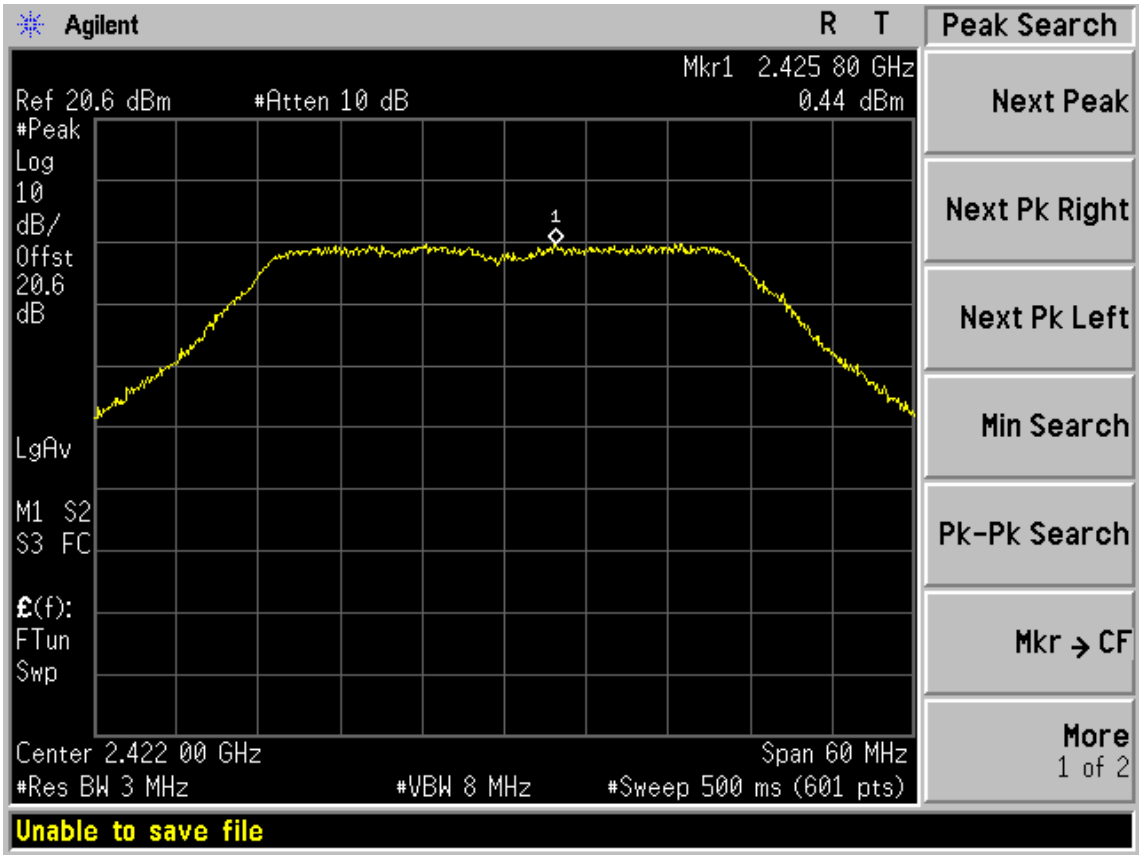
Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

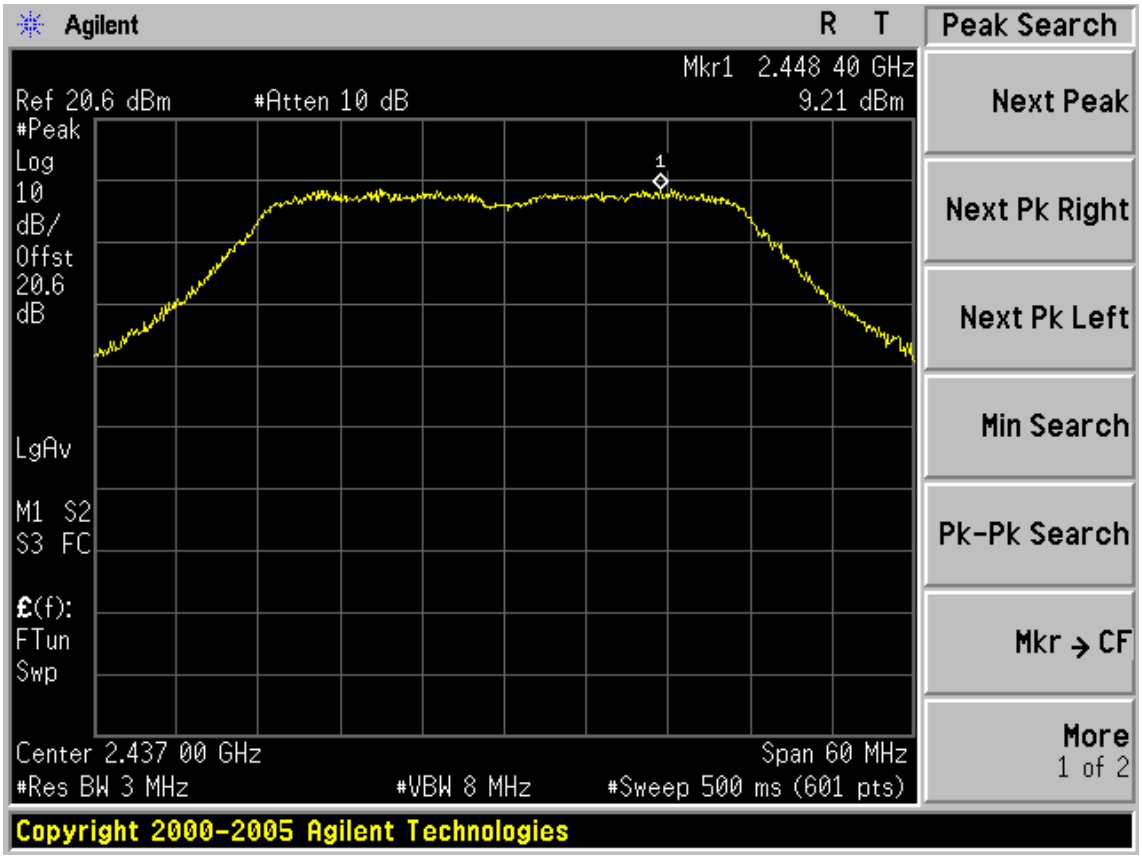
8.4.Test Results

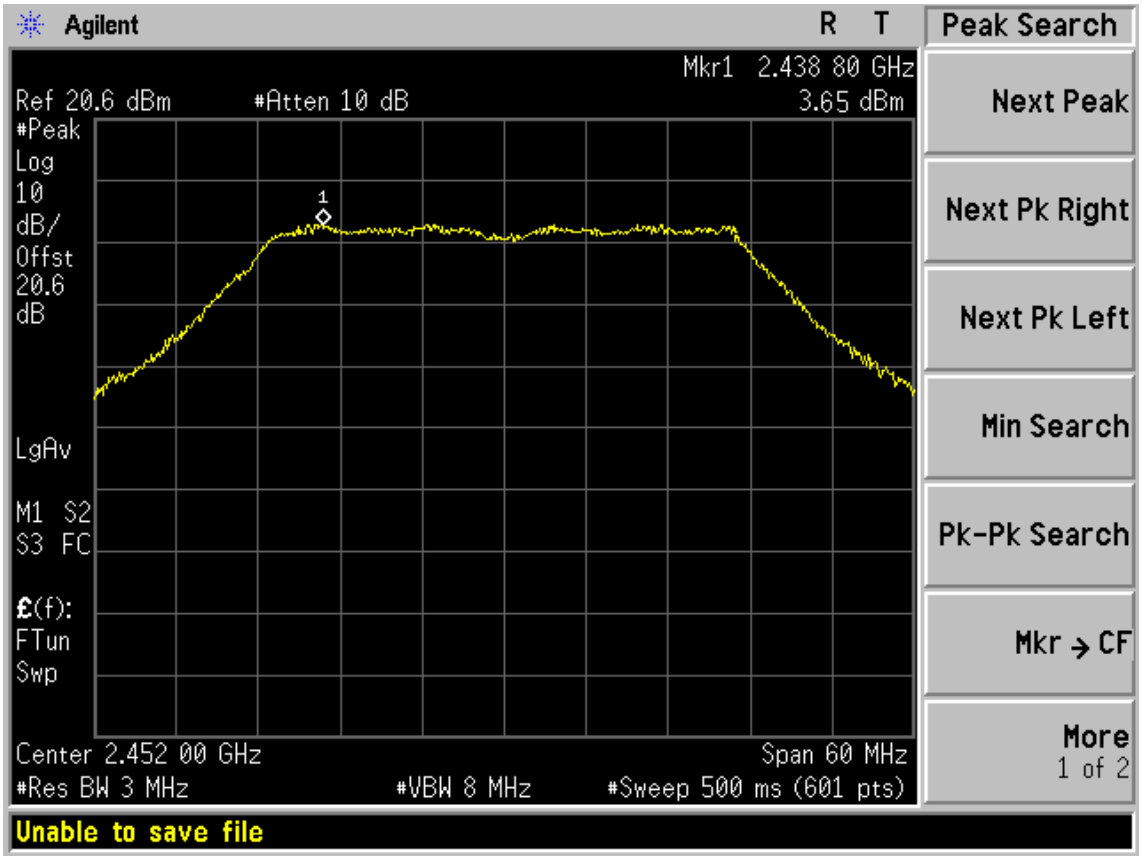
EUT: 150Mbps 802.11n Wireless Broadband Router		
M/N: WNRT-617		
Test date: 2011-03-17	Pressure: 100.2 kpa	Humidity: 58%
Tested by: Sunny-lu	Test site: RF Site	Temperature：24℃

Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 5 dBi
Test Mode	CH	Peak output Power （dBm）	Limit (dBm)
11b	CH1	19.27	30
	CH6	22.65	30
	CH11	20.60	30
11g	CH1	21.52	30
	CH6	20.81	30
	CH11	20.88	30
11n HT20	CH1	20.34	30
	CH6	21.97	30
	CH11	17.72	30

Mode	CH	Peak power (dBm/3MHz)	Peak output power (dBm)	Limit (dBm)
11n HT40	CH1	0.44	11.24	30
	CH4	9.21	20.01	30
	CH7	3.65	14.45	30
6dB Bandwidth for 11n HT40=36.18MHz				
11n HT40 Mode , BW Correction Factor=10log(36.18 /3)=10.8				
Conclusion：PASS				


Agilent
R T
Peak Search
Mkr1 2.425 80 GHz
Ref 20.6 dBm
#Atten 10 dB
0.44 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 2.422 00 GHz
Span 60 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Unable to save file


Agilent
R T
Peak Search
Mkr1 2.448 40 GHz
Ref 20.6 dBm
#Atten 10 dB
9.21 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Center 2.437 00 GHz
Span 60 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Copyright 2000-2005 Agilent Technologies


Agilent
R T
Peak Search
Mkr1 2.438 80 GHz
Ref 20.6 dBm
#Atten 10 dB
3.65 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
1
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center 2.452 00 GHz
Span 60 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Unable to save file

9. POWER SPECTRAL DENSITY TEST

9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	May.08, 10	1 Year
3.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08, 10	1Year

9.2.Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

9.3.Test Procedure

1, Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.

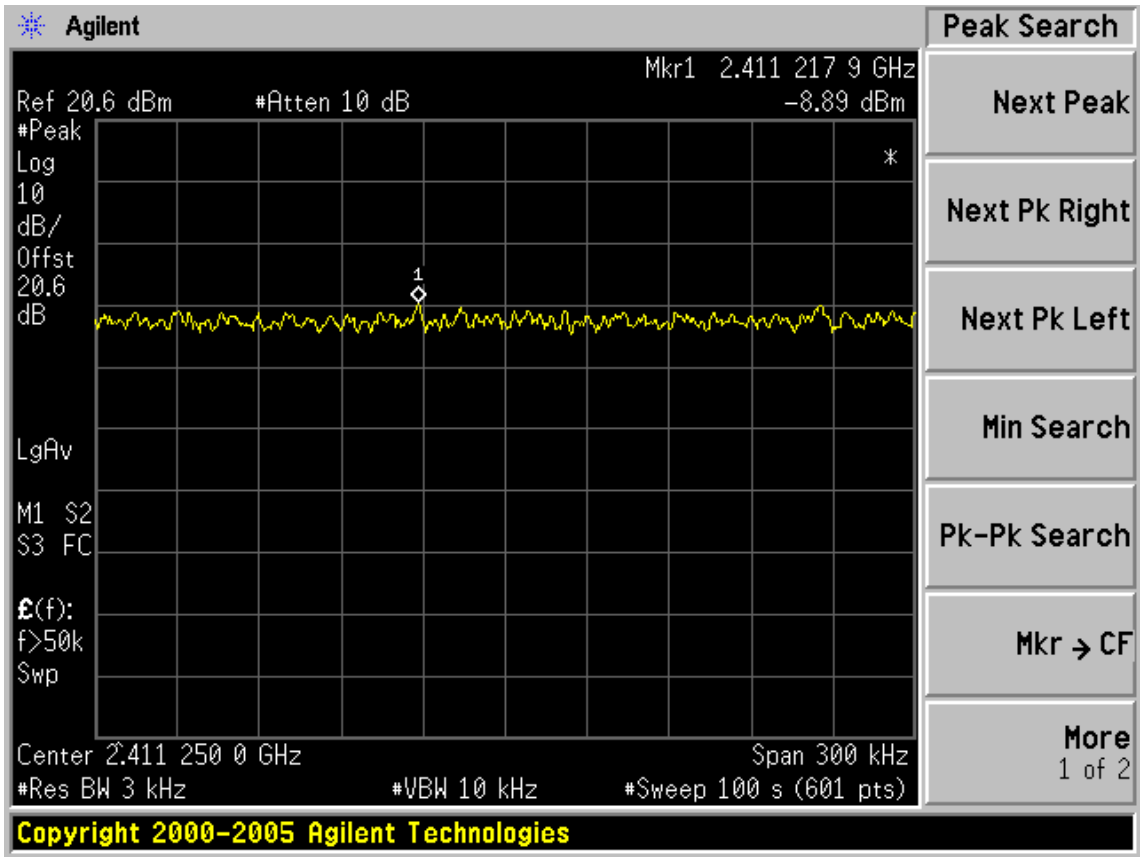
2, Follow the test procedure as described in ANSI C.10: 2009 Clause 6.11.2.3 to measure out each test modes and chain's power density with 3KHz.

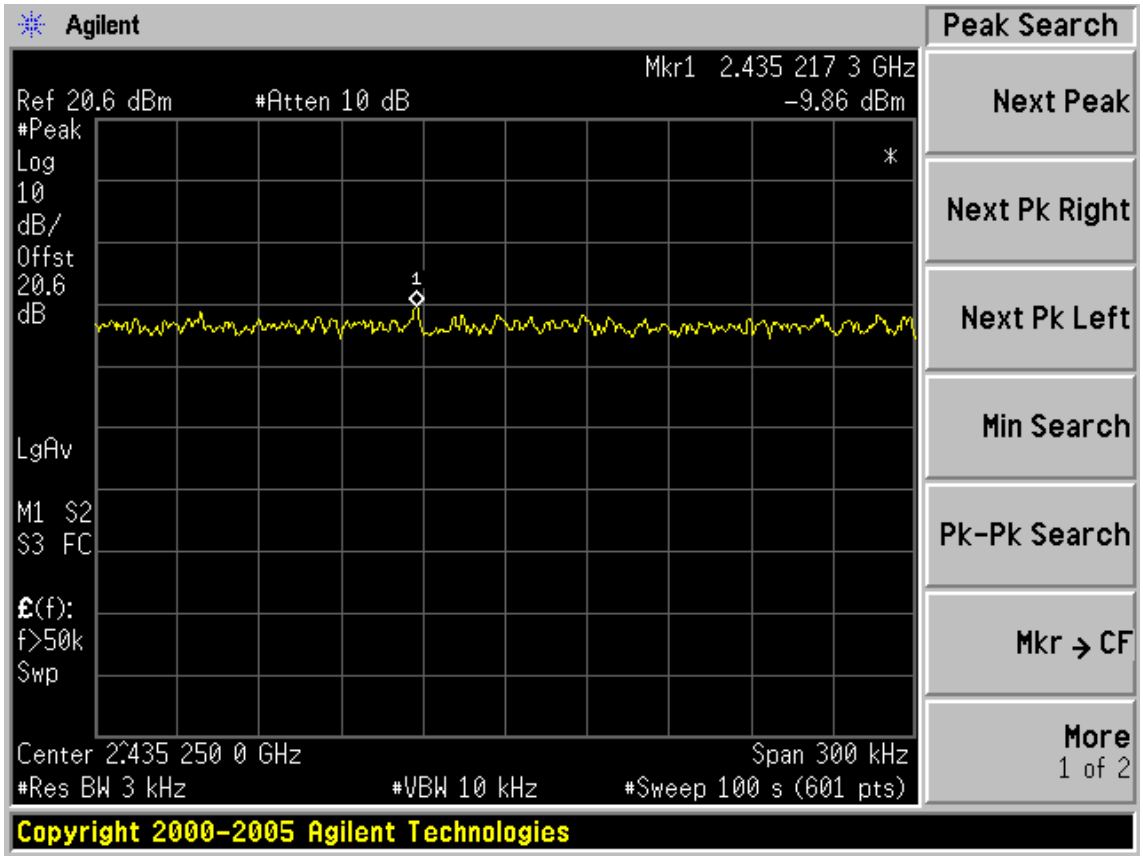
9.4.Test Results

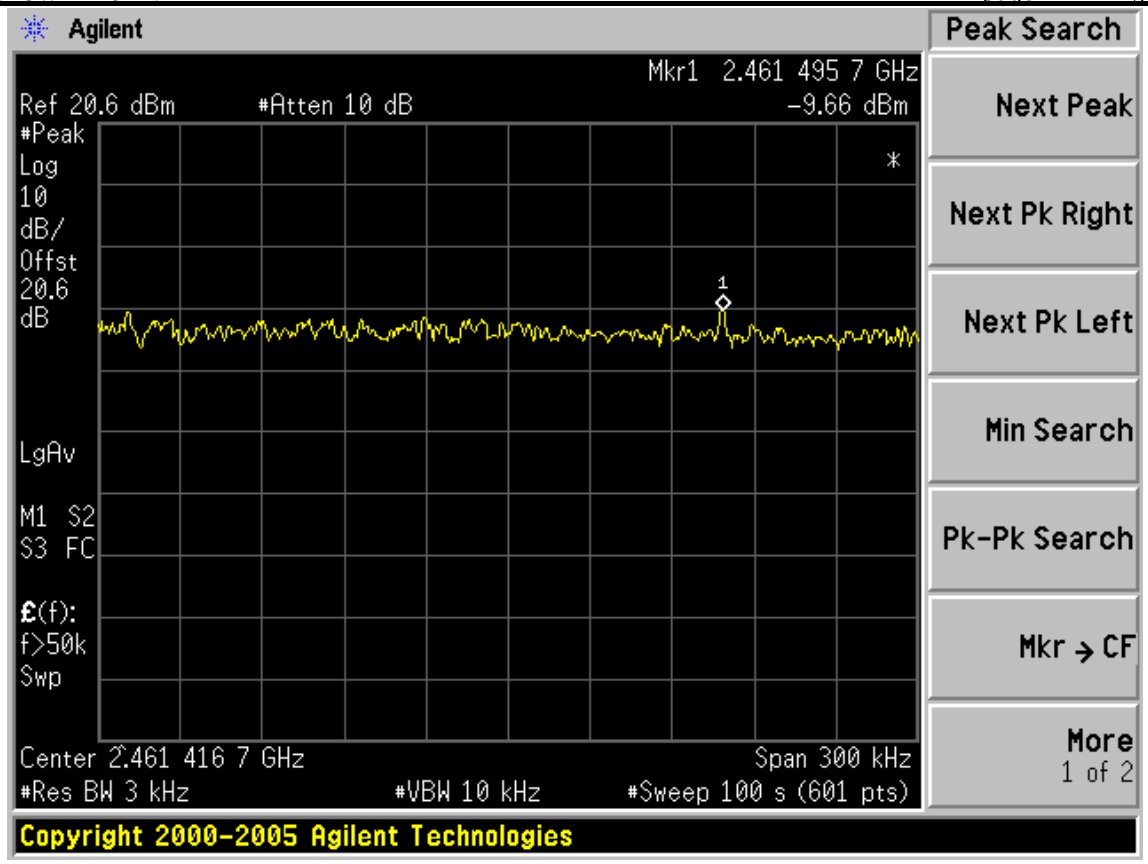
EUT: 150Mbps 802.11n Wireless Broadband Router		
M/N: WNRT-617		
Test date:2011-04-25	Pressure: 100.6 kpa	Humidity: 60 %
Tested by: Sunny-lu	Test site: RF Site	Temperature：25 ℃

Cable loss: 0.6 dB		Attenuator loss: 20 dB	Antenna Gain: 5dBi
Test Mode	CH	Power density （dBm/3KHz）	Limit (dBm/3KHz)
11b	CH1	-8.89	8
	CH6	-9.86	8
	CH11	-9.66	8
11g	CH1	-20.68	8
	CH6	-11.80	8
	CH11	-15.33	8
11n HT20	CH1	-13.95	8
	CH6	-12.78	8
	CH11	-16.17	8
11n HT40	CH1	-22.16	8
	CH4	-15.32	8
	CH7	-25.31	8
Conclusion：PASS			

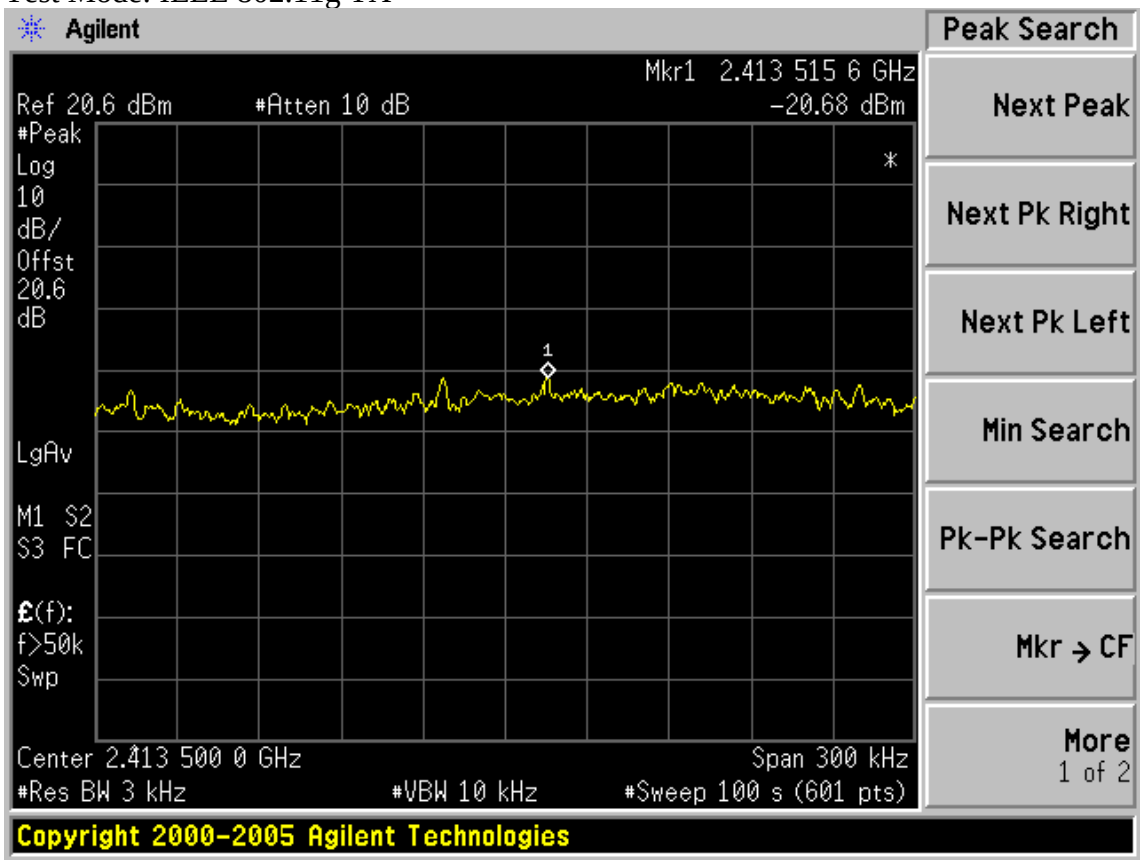
Test Mode: IEEE 802.11b TX

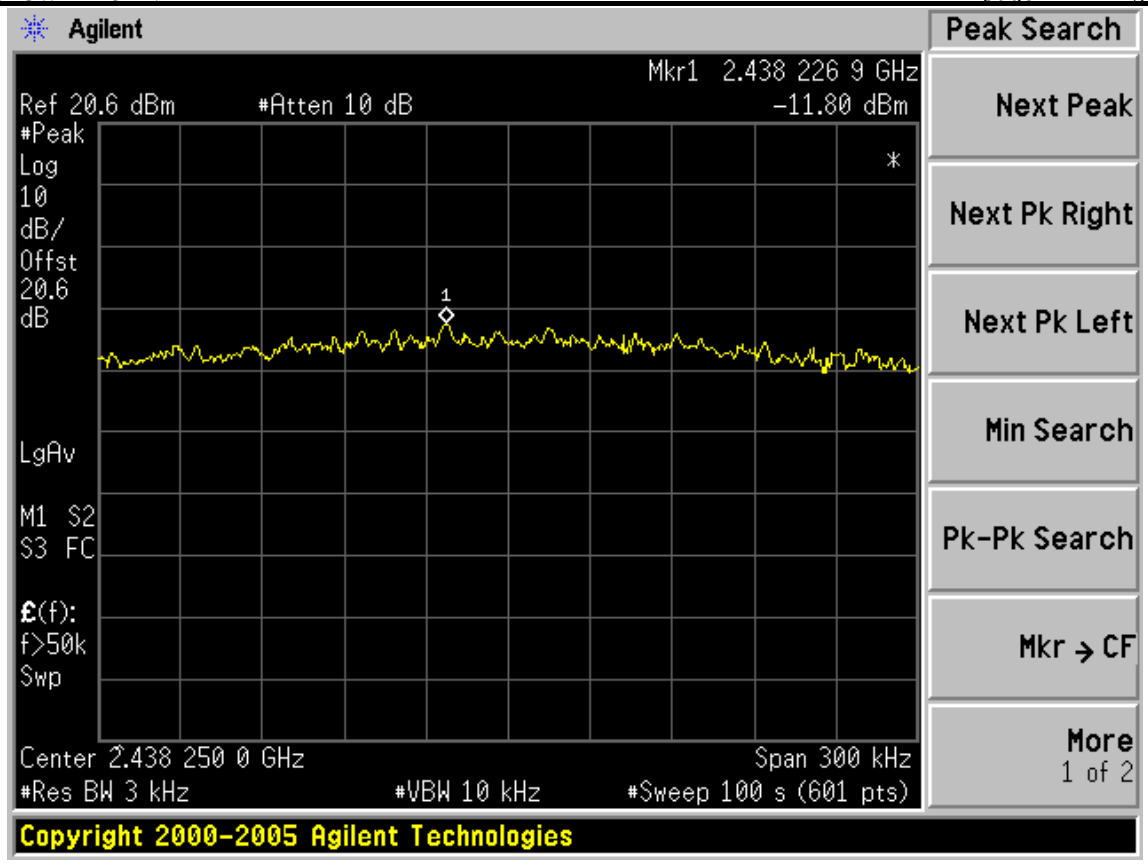






Test Mode: IEEE 802.11g TX




Agilent
Peak Search
Mkr1 2.438 226 9 GHz
Ref 20.6 dBm
#Atten 10 dB
-11.80 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.438 250 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 10 kHz
#Sweep 100 s (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
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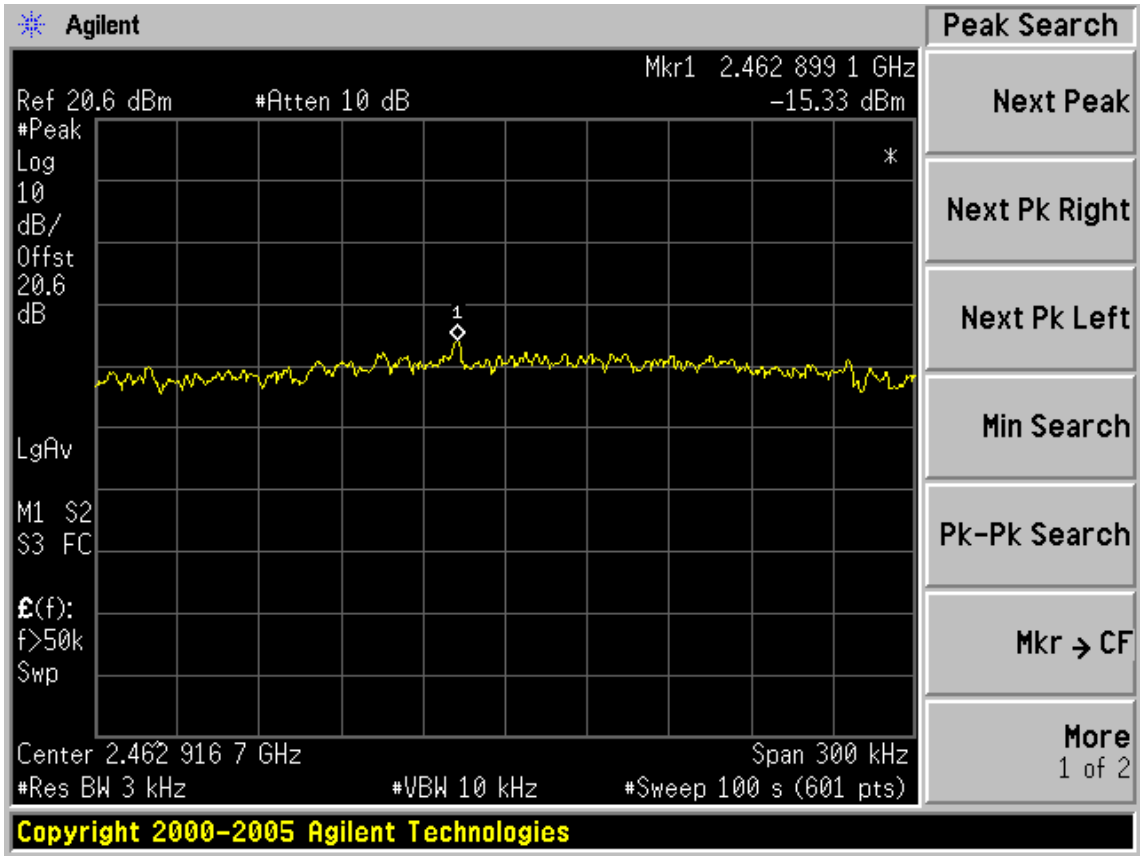
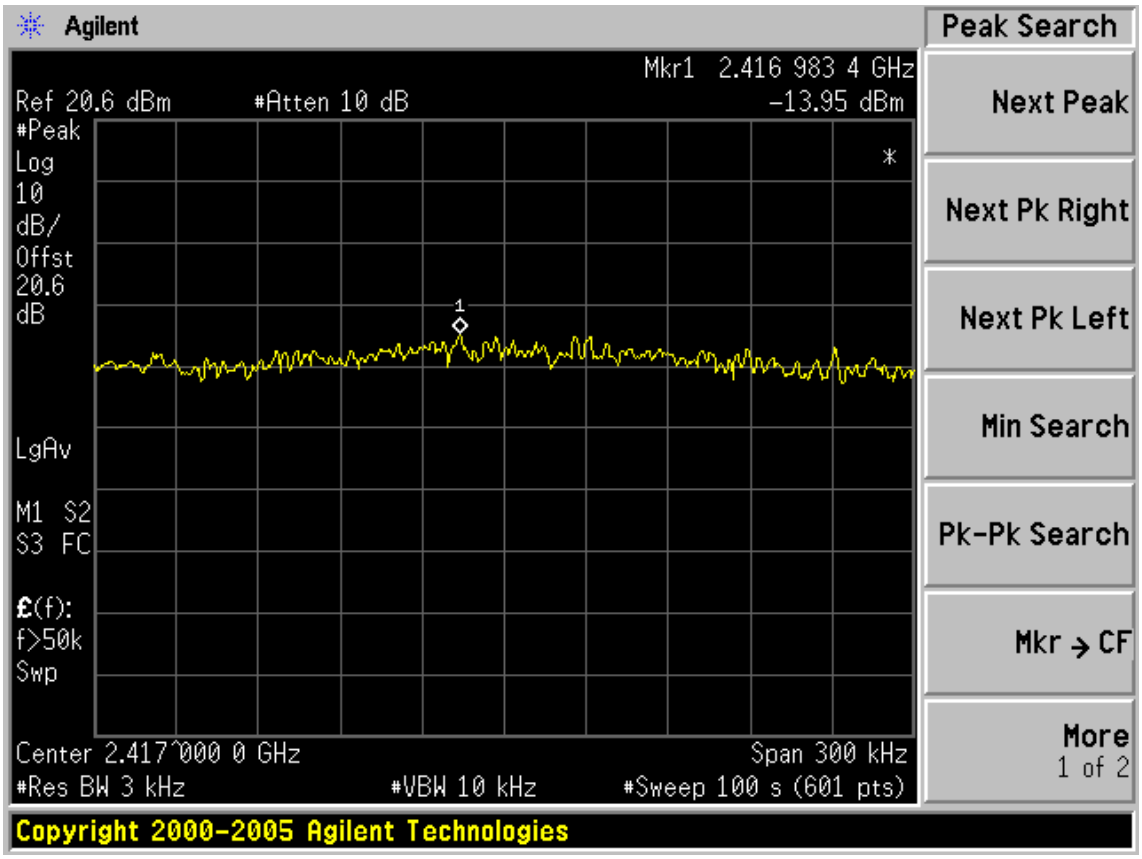
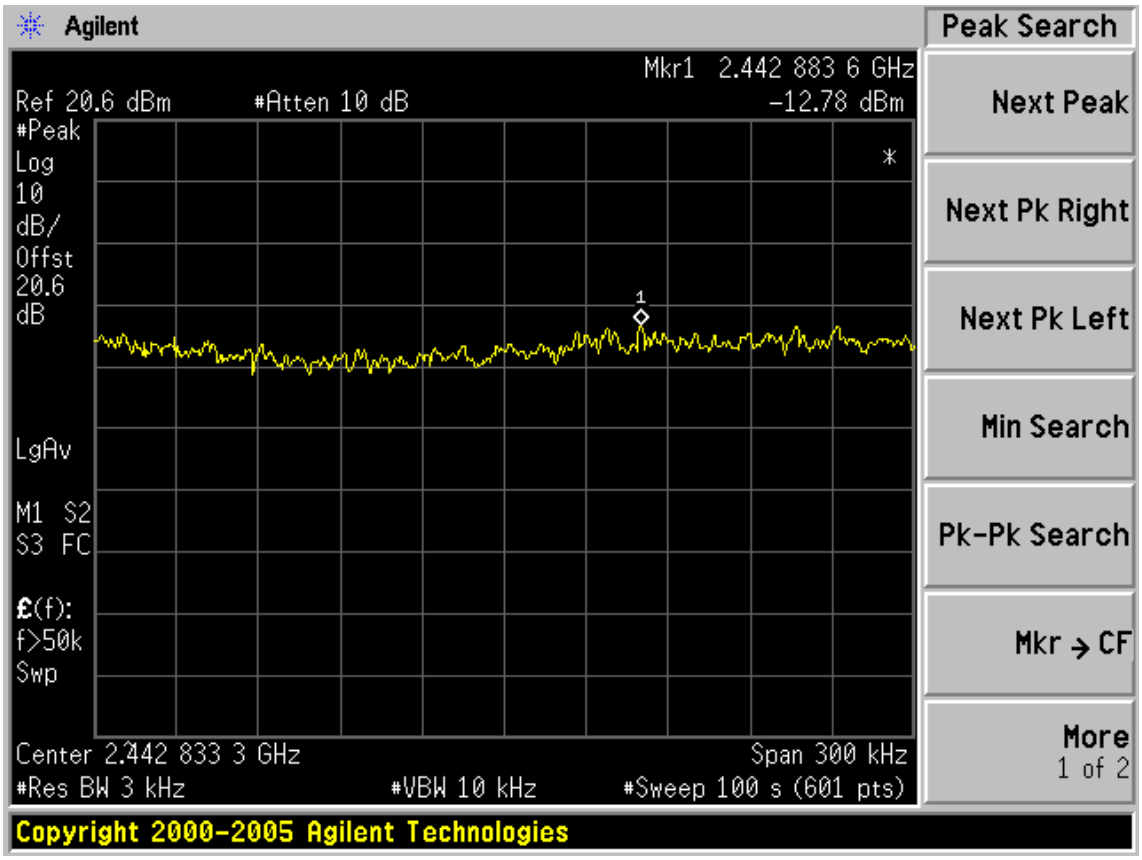
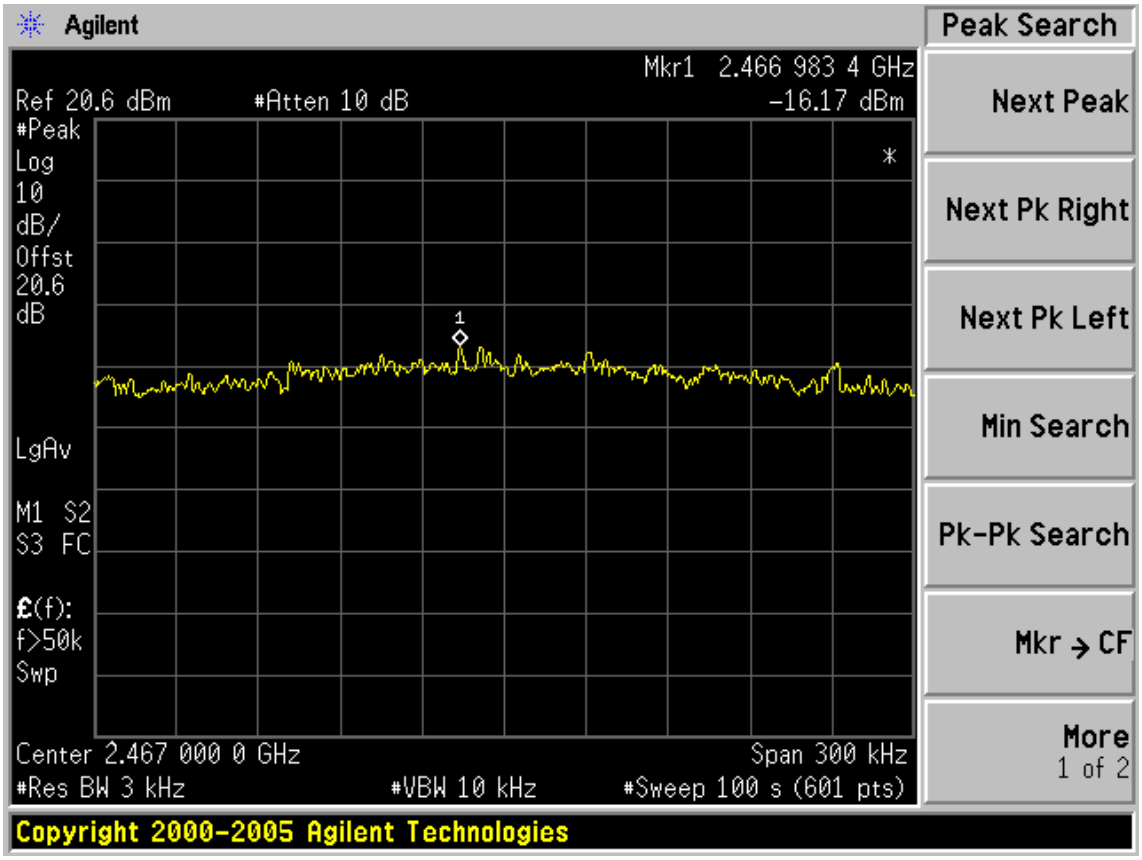

Agilent
Peak Search
Mkr1 2.462 899 1 GHz
Ref 20.6 dBm
#Atten 10 dB
-15.33 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.462 916 7 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 10 kHz
#Sweep 100 s (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Copyright 2000-2005 Agilent Technologies

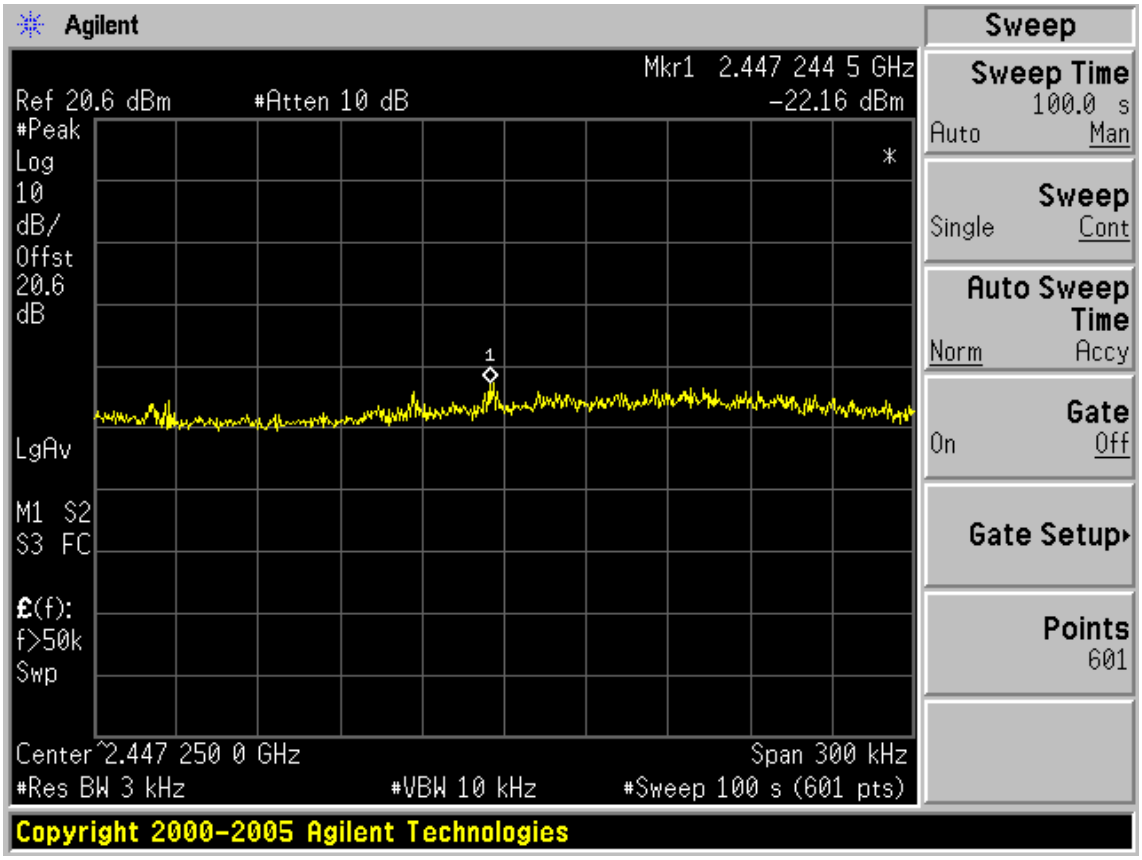
Test Mode: IEEE 802.11n HT20 TX

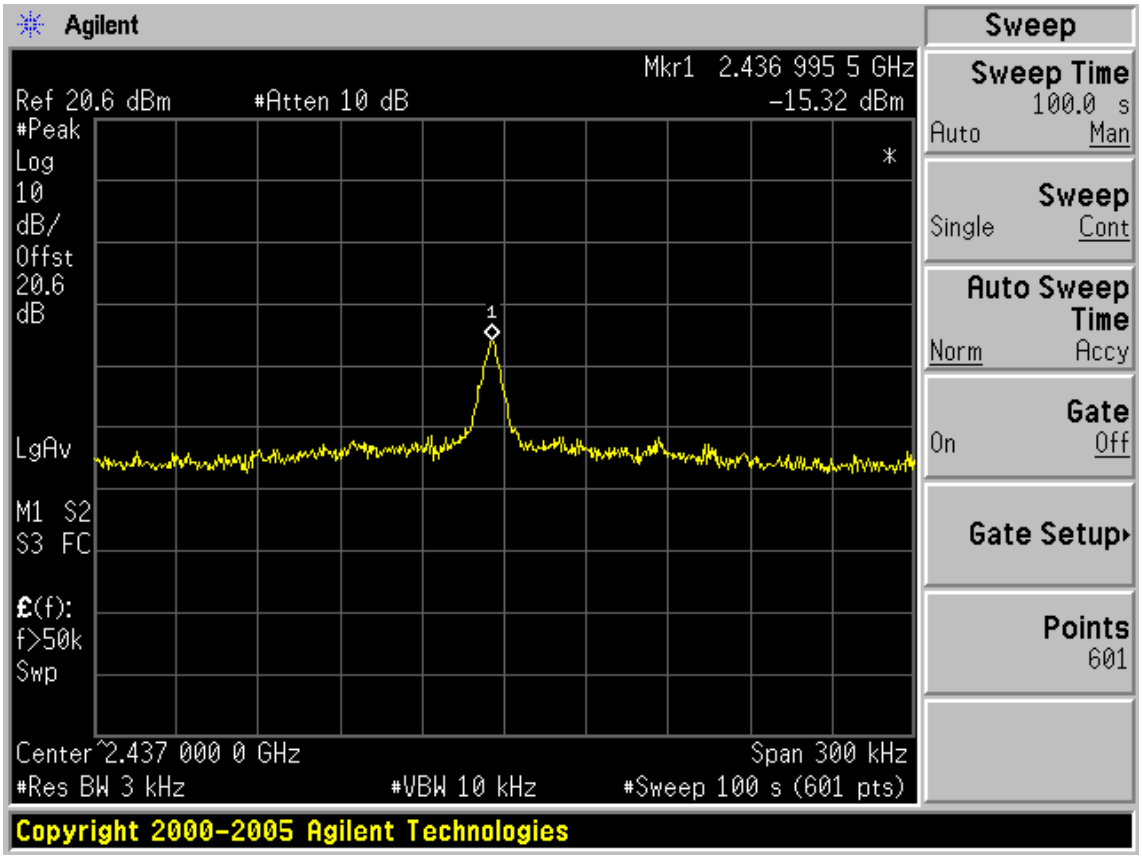


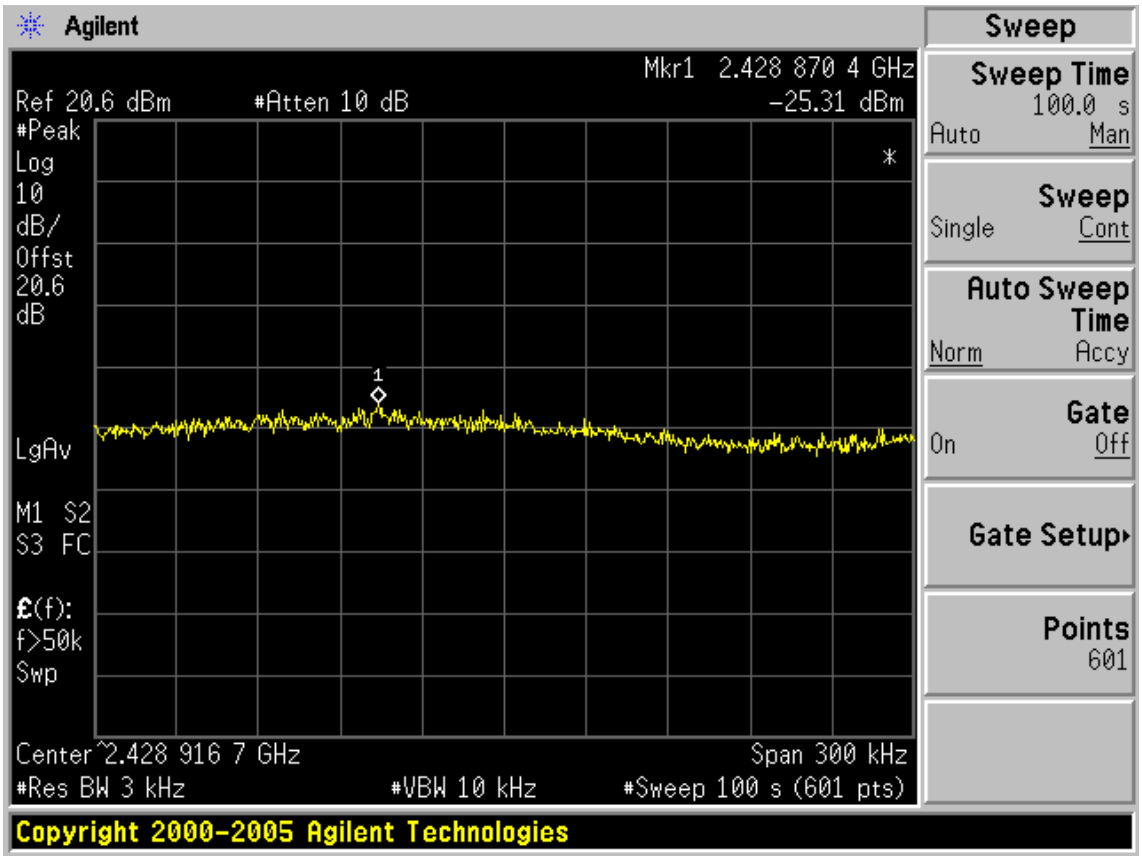




Test Mode: IEEE 802. 11n HT40 TX




Agilent
Sweep
Mkr1 2.436 995 5 GHz
Ref 20.6 dBm
#Atten 10 dB
-15.32 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.437 000 0 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 10 kHz
#Sweep 100 s (601 pts)
Sweep Time
100.0 s
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Gate
On Off
Gate Setup
Points
601
Copyright 2000-2005 Agilent Technologies


Agilent
Sweep
Mkr1 2.428 870 4 GHz
Ref 20.6 dBm
#Atten 10 dB
-25.31 dBm
#Peak
Log
10
dB/
Offst
20.6
dB
LgAv
M1 S2
S3 FC
£(f):
f>50k
Swp
Center 2.428 916 7 GHz
Span 300 kHz
#Res BW 3 kHz
#VBW 10 kHz
#Sweep 100 s (601 pts)
Sweep Time
100.0 s
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Gate
On Off
Gate Setup
Points
601
Copyright 2000-2005 Agilent Technologies

10. ANTENNA REQUIREMENT

10.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product are one integrated PCB antenna and one dipole antenna with SMA-B connector that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 5dBi.

11.MPE ESTIMATION

11.1.Limit for General Population/ Uncontrolled Exposures

Frequency	**Power density (mW/ cm^2)**	**Averaging time(minutes)**
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Frequency(MHz)	**Power density (mW/ cm^2)**	**Averaging time(minutes)**
2412	1	30
2437	1	30
2462	1	30

Note: F= Frequency in MHz

11.2.2, Estimation Result

Mode	CH	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain(linear)	MPE
11b	1	2412	19.27	84.53	5	3.16	0.0532
	6	2437	22.65	184.08	5	3.16	0.1159
	11	2462	20.60	114.82	5	3.16	0.0723
11g	1	2412	21.52	141.91	5	3.16	0.0893
	6	2437	20.81	120.50	5	3.16	0.0758
	11	2462	20.88	122.46	5	3.16	0.0771
11n HT20	1	2412	20.34	108.14	5	3.16	0.0681
	6	2437	21.97	157.40	5	3.16	0.0991
	11	2462	17.72	59.16	5	3.16	0.0372
11n HT40	1	2422	11.24	13.30	5	3.16	0.0084
	4	2437	20.01	100.23	5	3.16	0.0631
	7	2452	14.45	27.86	5	3.16	0.0175

Note: The estimation distance is 20cm

12. DEVIATION TO TEST SPECIFICATIONS

[NONE]