

1.1 BAND EDGES MEASUREMENT

LIMIT

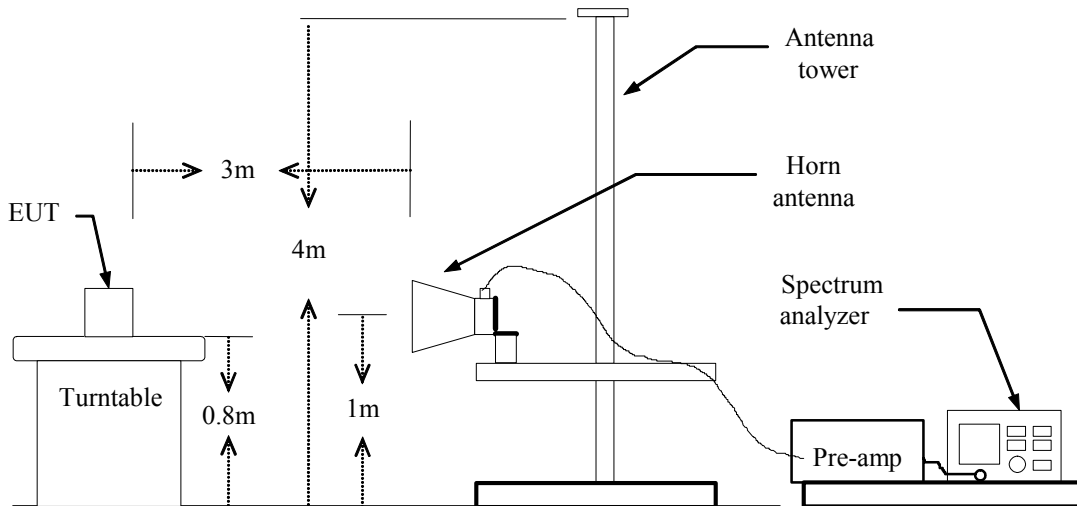
According to §15.247(c), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360131	01/10/2005
Spectrum Analyzer	R&S	FSP30	100112	08/03/2005

Remark: Each piece of equipment is scheduled for calibration once a year.

Test Configuration



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be 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=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

TEST RESULTS

Refer to attach spectrum analyzer data chart.



Test Plot

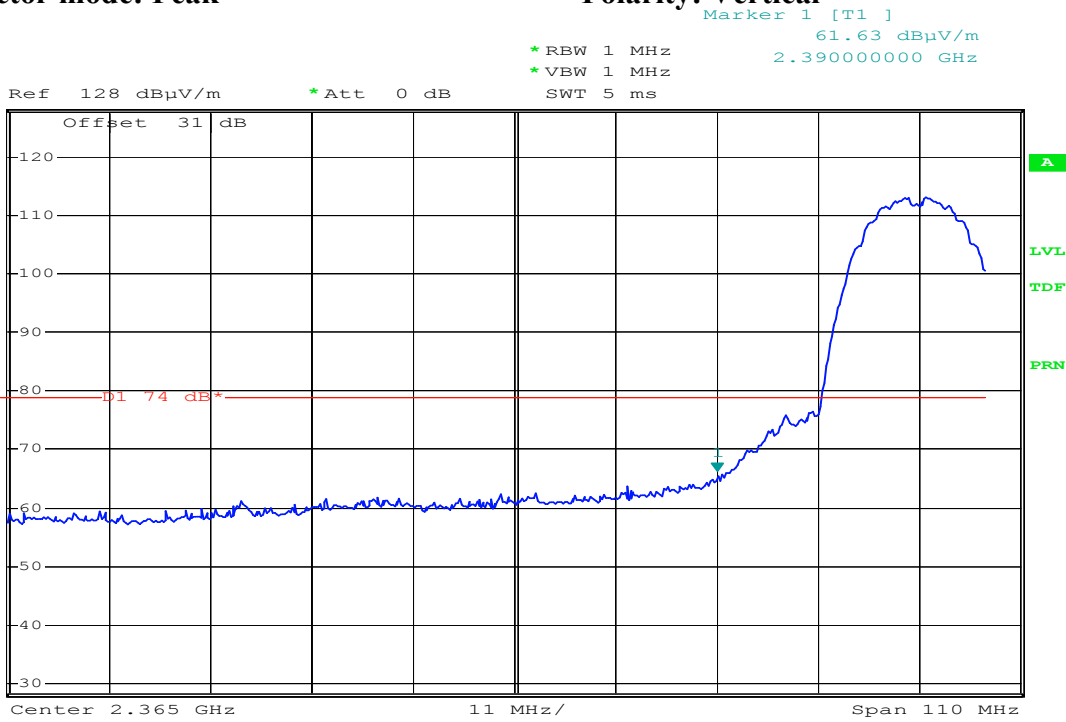
Since 802.11b/g AP has higher power output than 802.11a mini-PCI card

IEEE 802.11b/g 4.5dBi + IEEE 802.11a 5dBi

IEEE 802.11b / CH Low

Detector mode: Peak

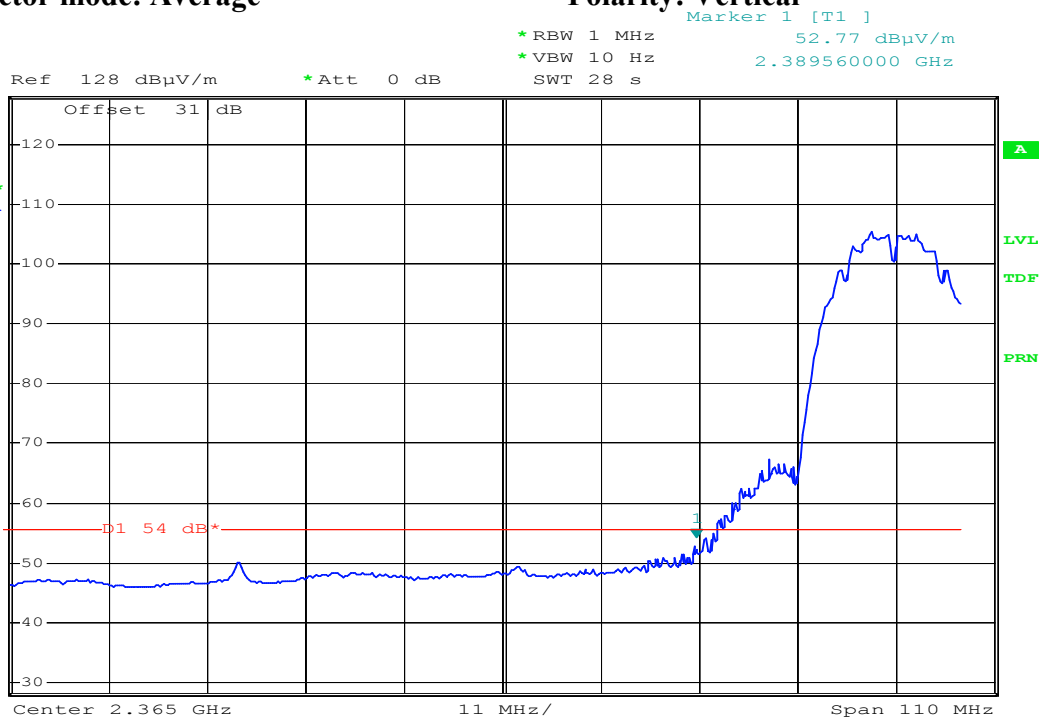
Polarity: Vertical



Date: 15.DEC.2004 09:21:55

Detector mode: Average

Polarity: Vertical

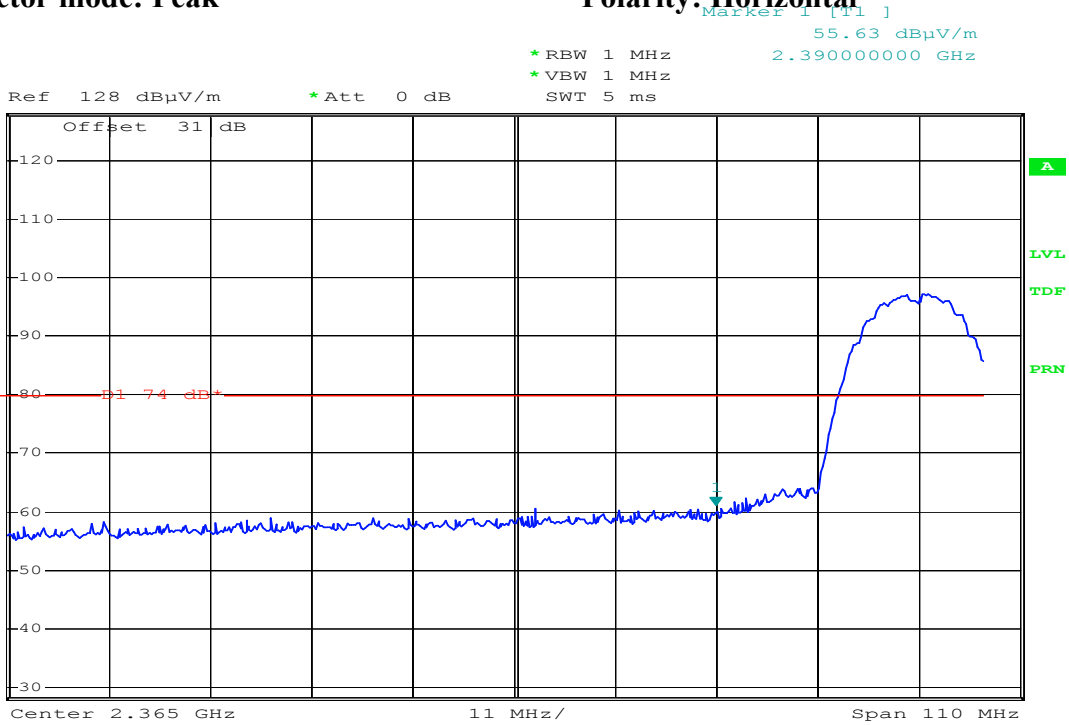


Date: 15.DEC.2004 09:18:38



Detector mode: Peak

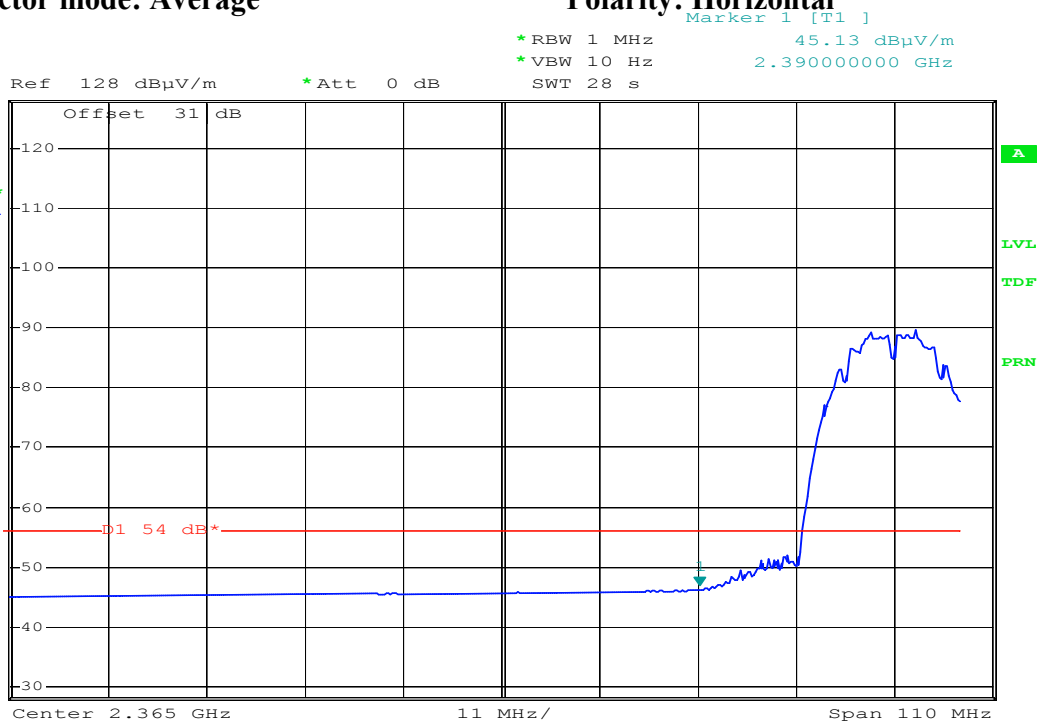
Polarity: Horizontal



Date: 15.DEC.2004 09:25:47

Detector mode: Average

Polarity: Horizontal



Date: 15.DEC.2004 09:24:42



IEEE 802.11b / CH High

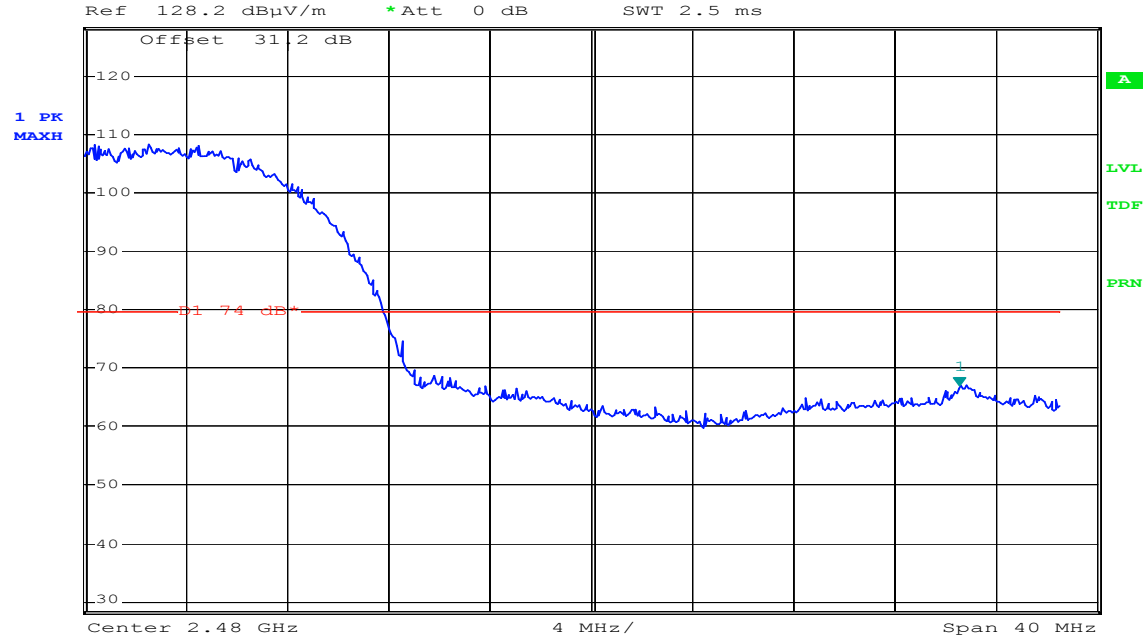
Detector mode: Peak

Polarity: Vertical



Marker 1 [T1]
 61.73 dBμV/m
 2.495900000 GHz

* RBW 1 MHz
 * VBW 1 MHz
 SWT 2.5 ms



Date: 15.DEC.2004 09:48:47

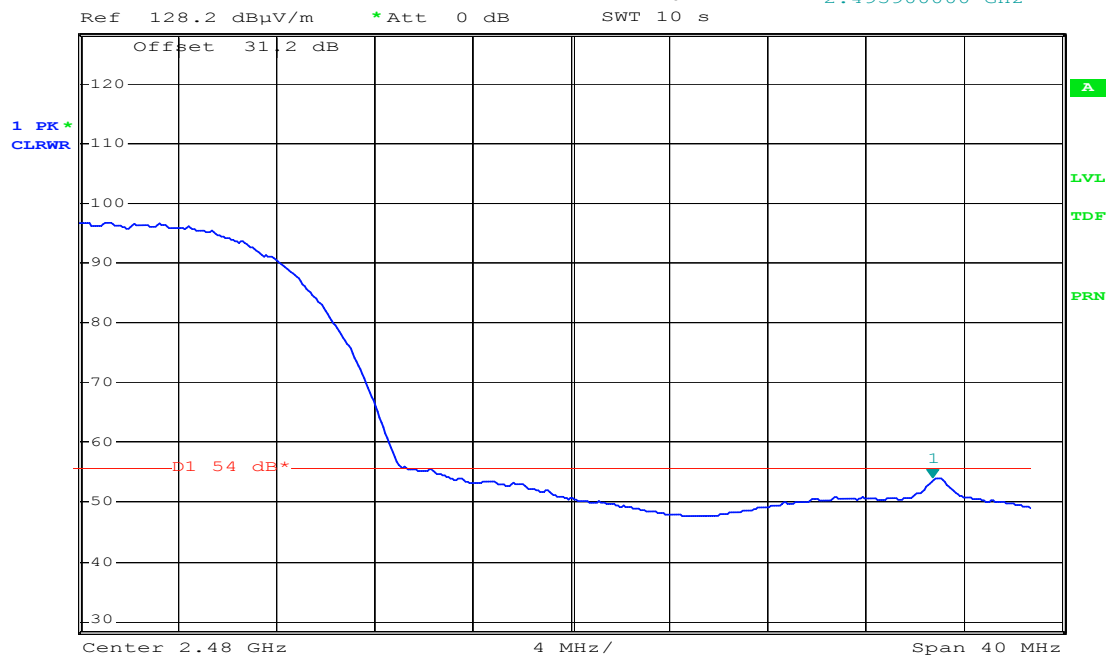
Detector mode: Average

Polarity: Vertical



Marker 1 [T1]
 52.37 dBμV/m
 2.495900000 GHz

* RBW 1 MHz
 * VBW 10 Hz
 SWT 10 s



Date: 15.DEC.2004 09:47:44



Detector mode: Peak

Polarity: Horizontal

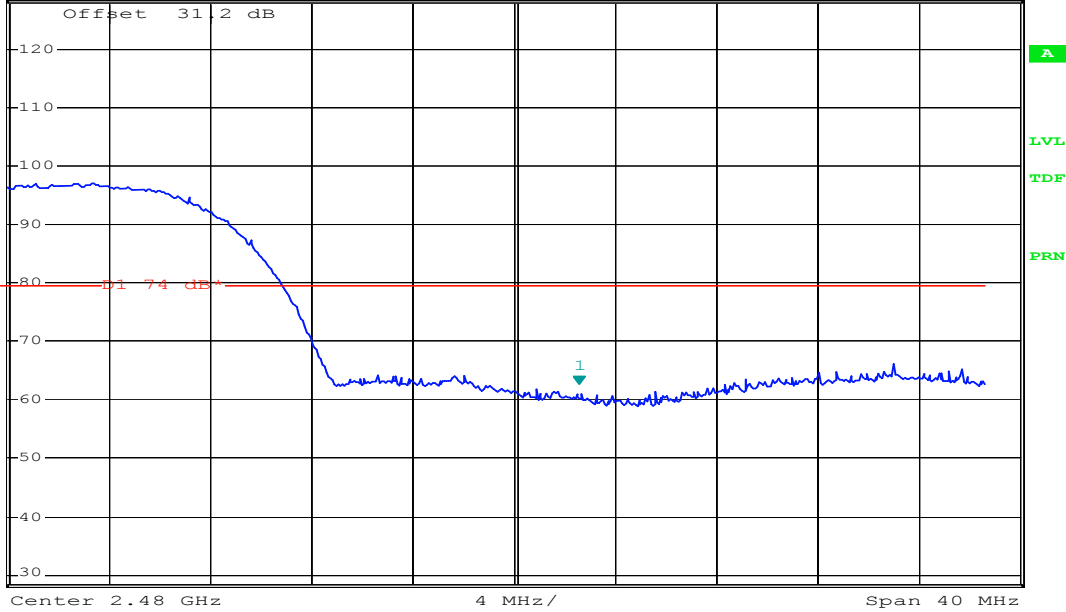


*RBW 1 MHz
*VBW 1 MHz
SWT 2.5 ms

Marker 1 [T1]
57.55 dBμV/m
2.483500000 GHz

Ref 128.2 dBμV/m *Att 0 dB

1 PK
MAXH



Date: 15.DEC.2004 09:43:36

Detector mode: Average

Polarity: Horizontal

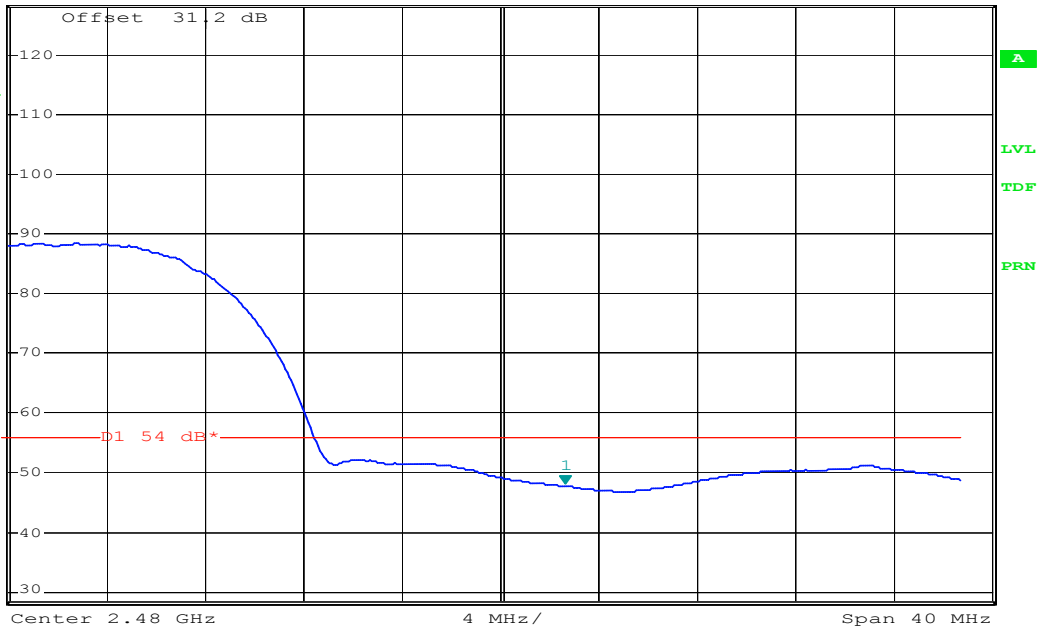


*RBW 1 MHz
*VBW 10 Hz
SWT 10 s

Marker 1 [T1]
46.54 dBμV/m
2.483500000 GHz

Ref 128.2 dBμV/m *Att 0 dB

1 PK*
CLRWR



Date: 15.DEC.2004 09:42:25

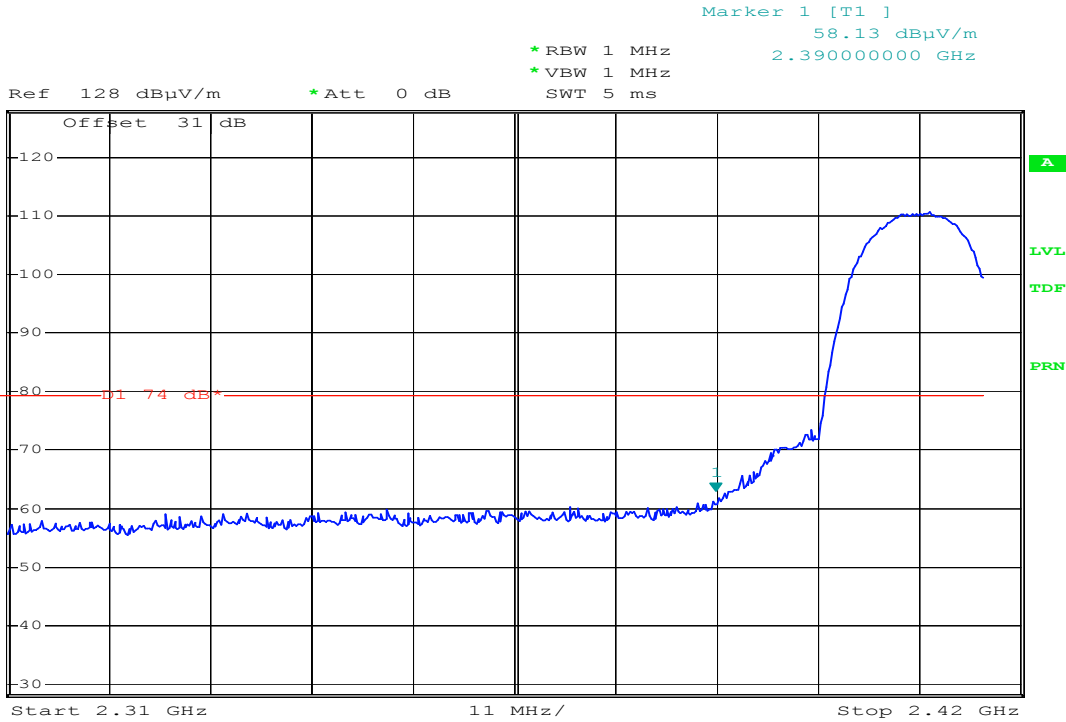


IEEE 802.11b/g 16dBi + IEEE 802.11a 18dBi

IEEE 802.11b / CH Low

Detector mode: Peak

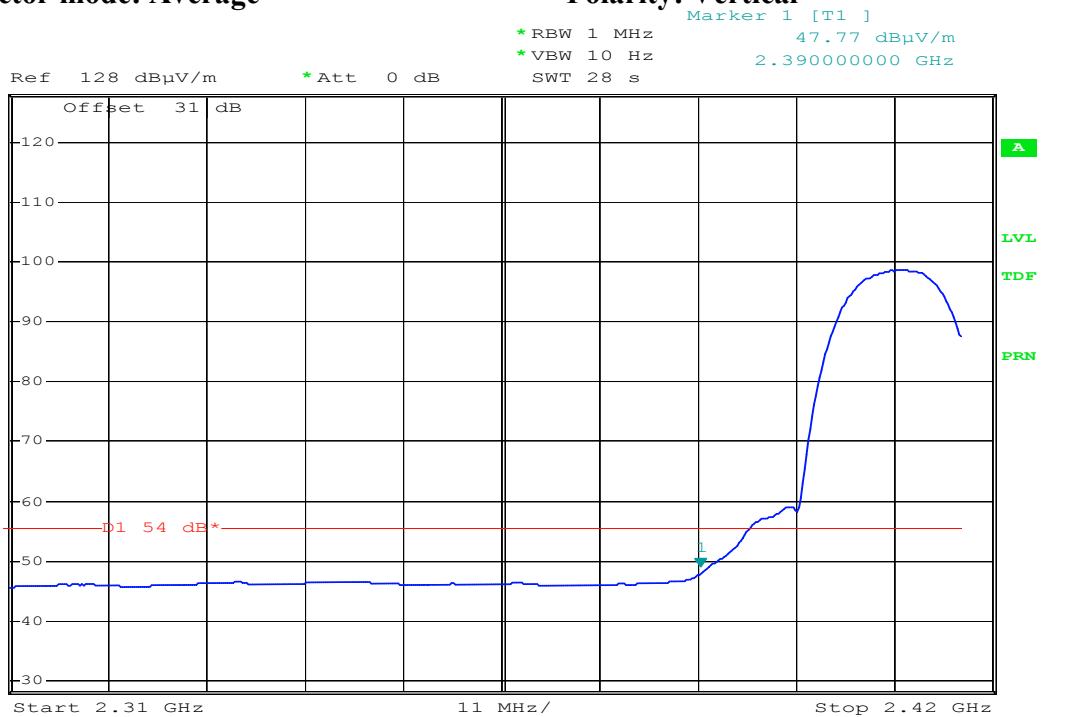
Polarity: Vertical



Date: 15.DEC.2004 10:41:30

Detector mode: Average

Polarity: Vertical

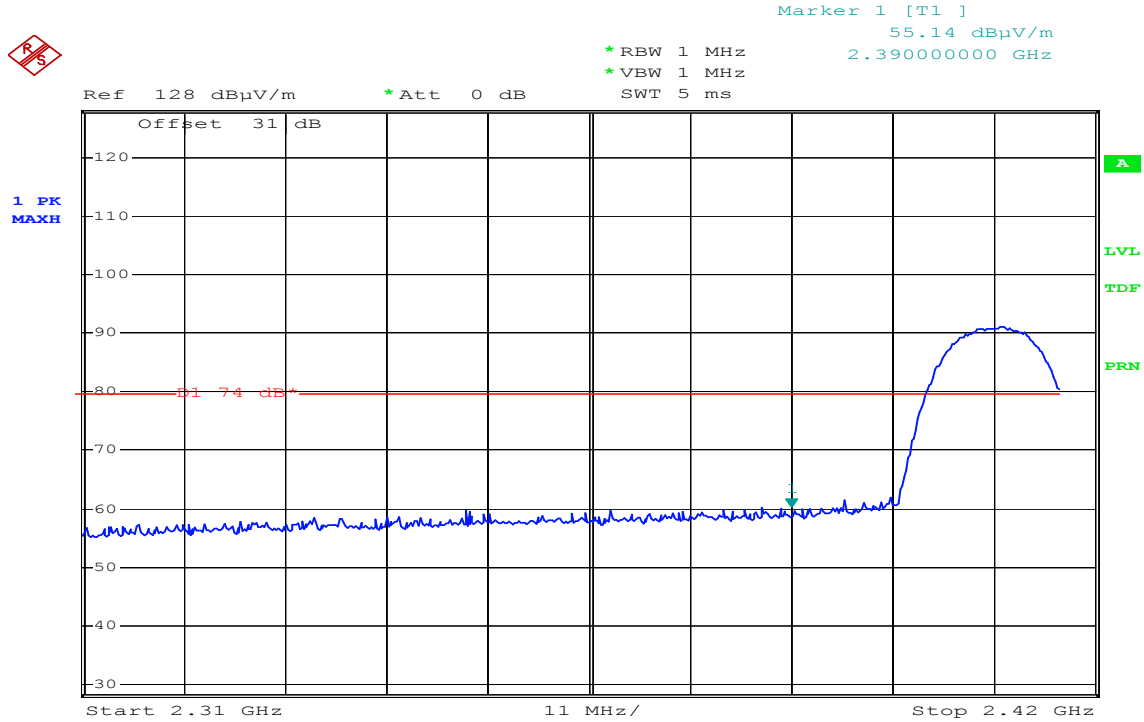


Date: 15.DEC.2004 10:43:41



Detector mode: Peak

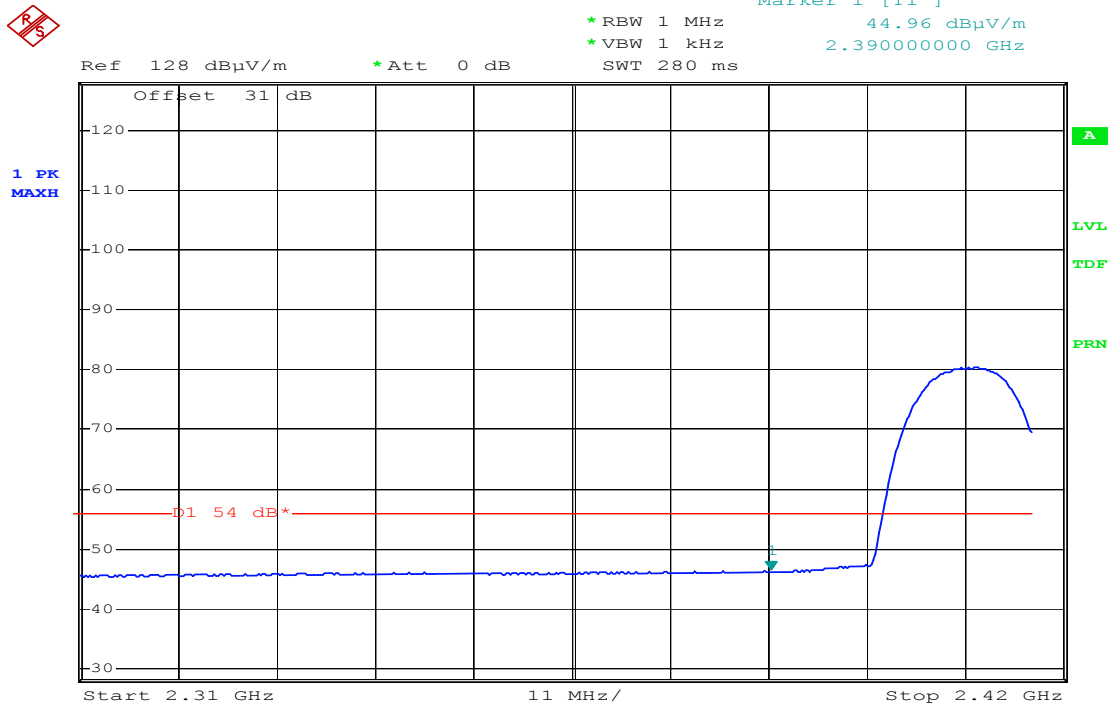
Polarity: Horizontal



Date: 15.DEC.2004 10:46:02

Detector mode: Average

Polarity: Horizontal



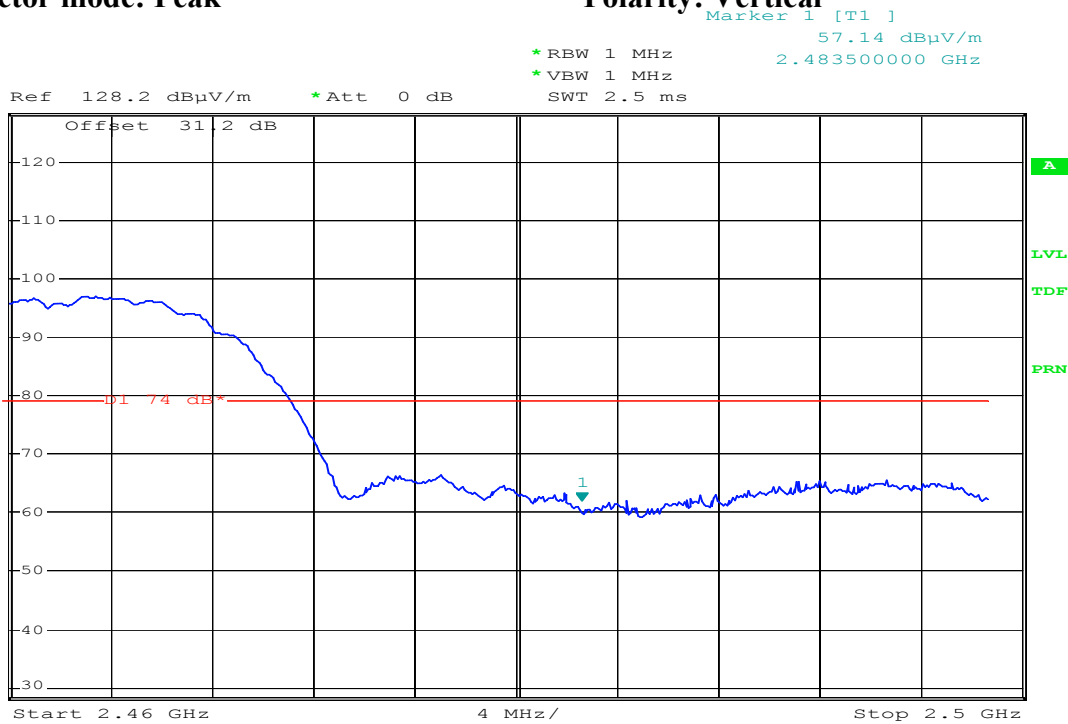
Date: 15.DEC.2004 10:44:57



IEEE 802.11b / CH High

Detector mode: Peak

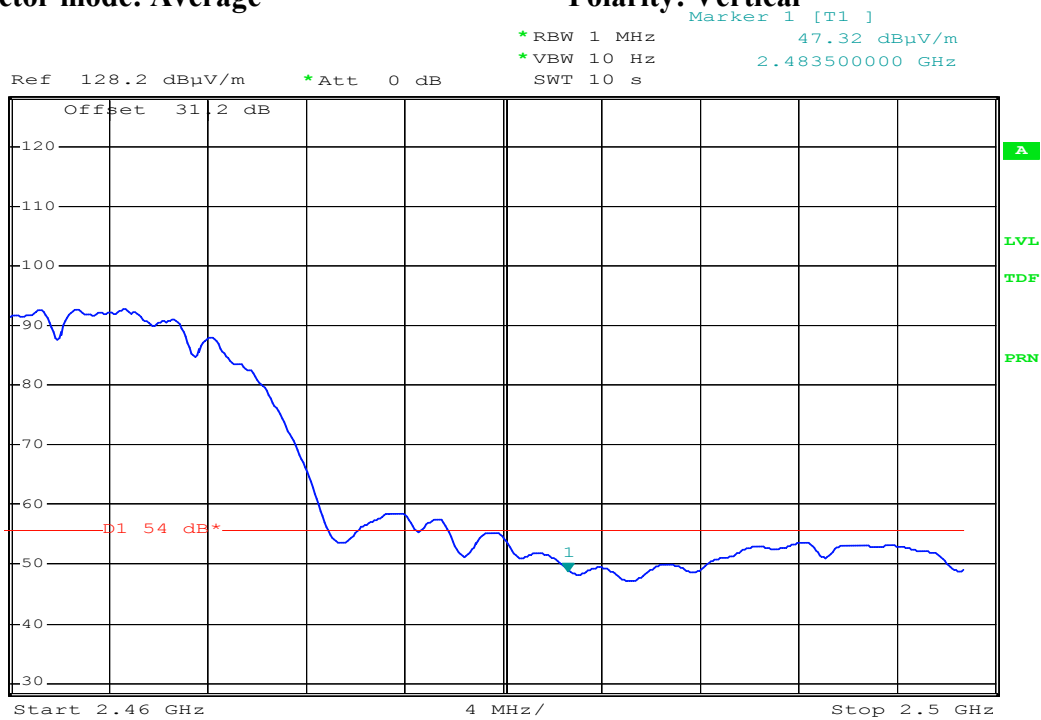
Polarity: Vertical



Date: 15.DEC.2004 10:53:17

Detector mode: Average

Polarity: Vertical

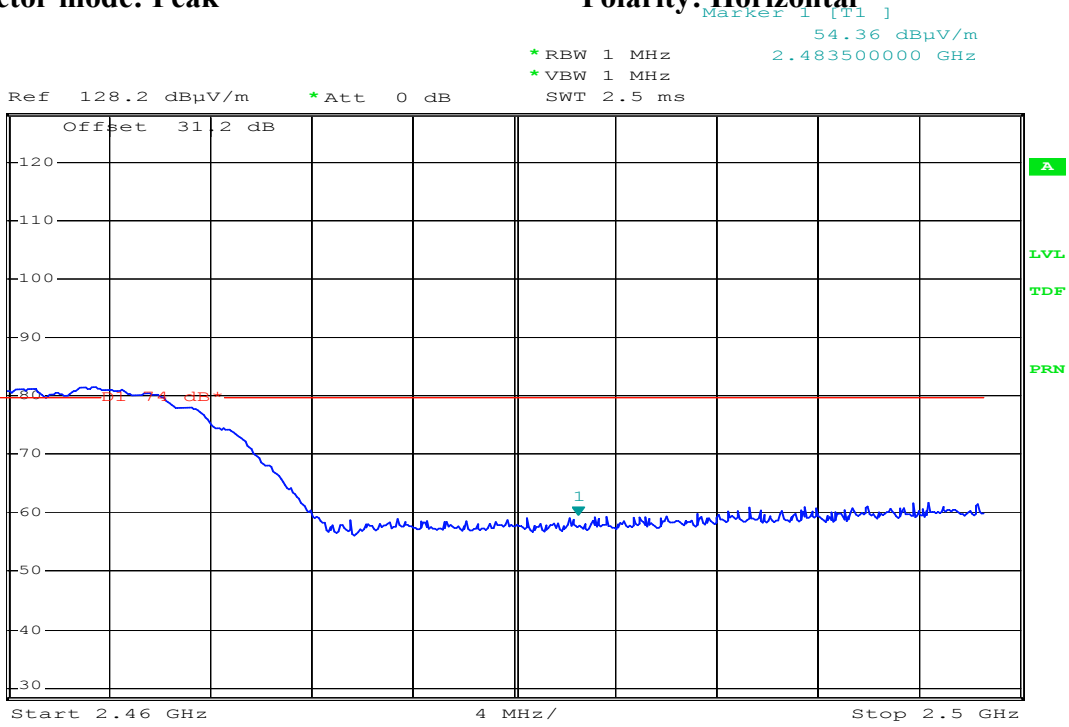


Date: 15.DEC.2004 10:55:07



Detector mode: Peak

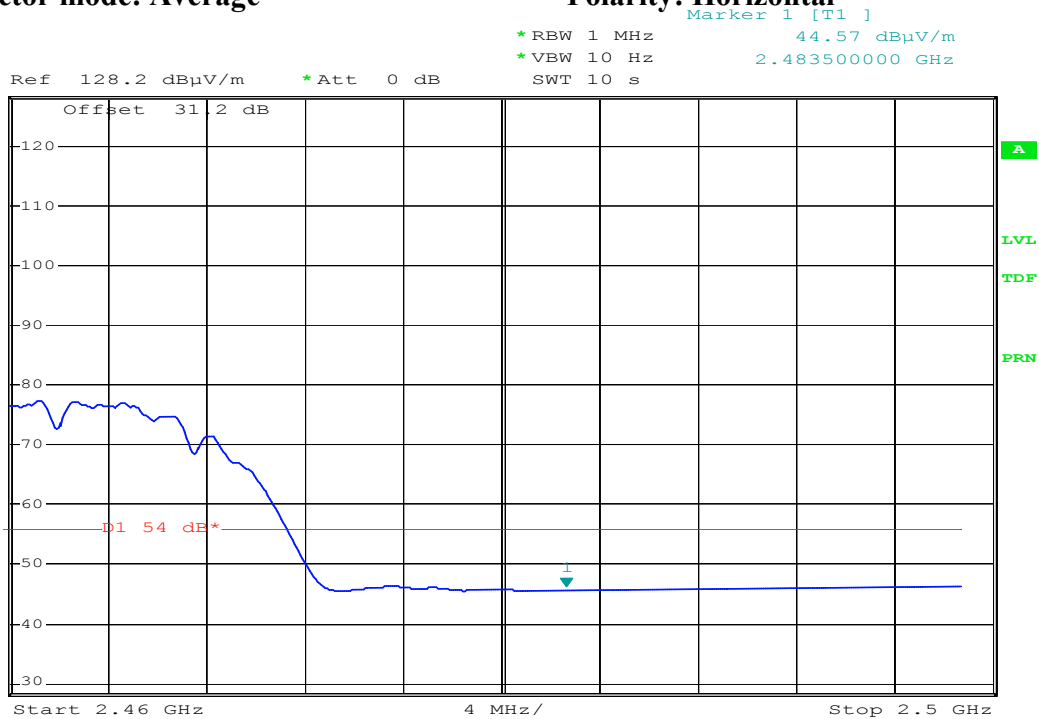
Polarity: Horizontal



Date: 15.DEC.2004 10:52:08

Detector mode: Average

Polarity: Horizontal



Date: 15.DEC.2004 10:51:06

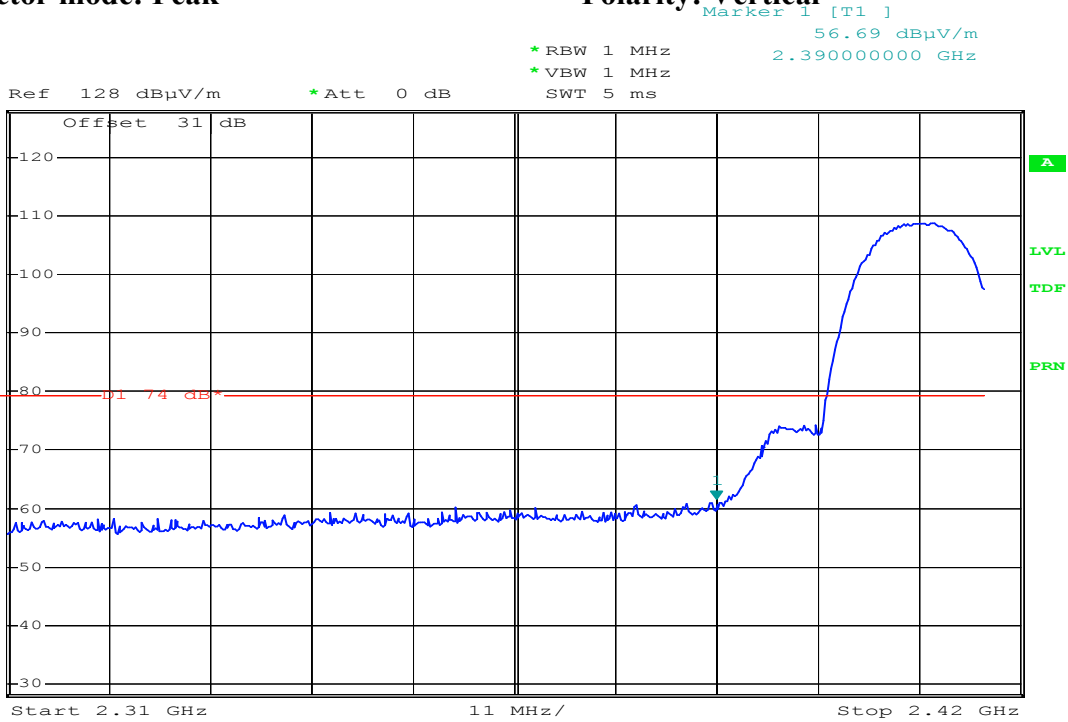


IEEE 802.11b/g 16dBi + IEEE 802.11a 14dBi

IEEE 802.11b / CH Low

Detector mode: Peak

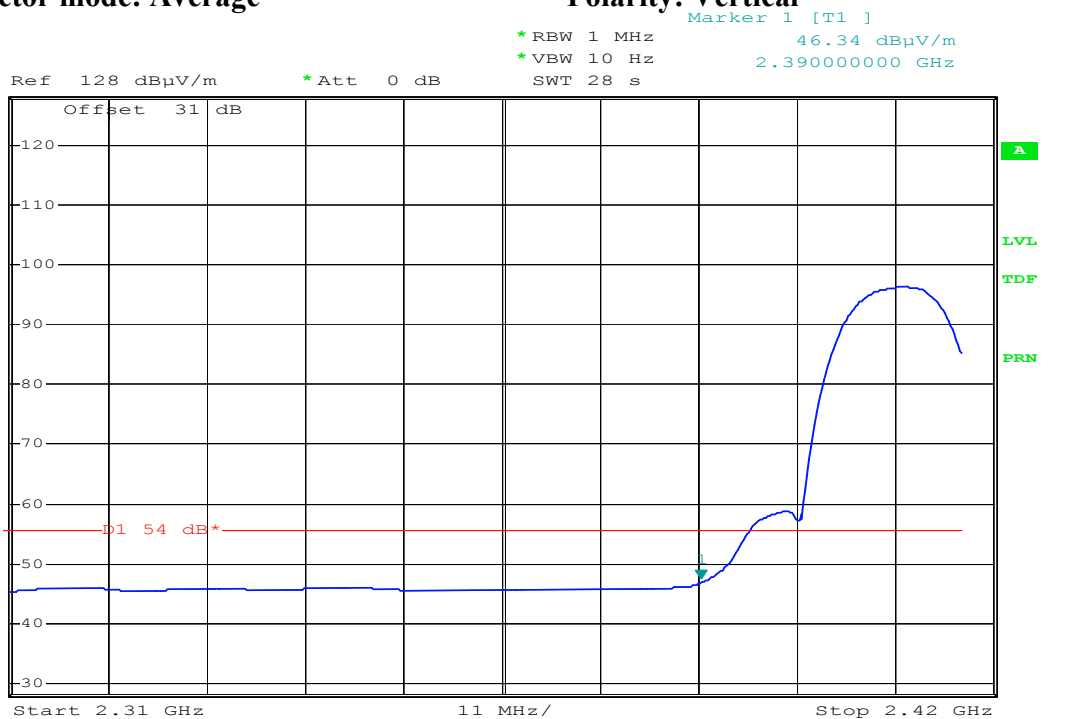
Polarity: Vertical



Date: 15.DEC.2004 10:33:27

Detector mode: Average

Polarity: Vertical

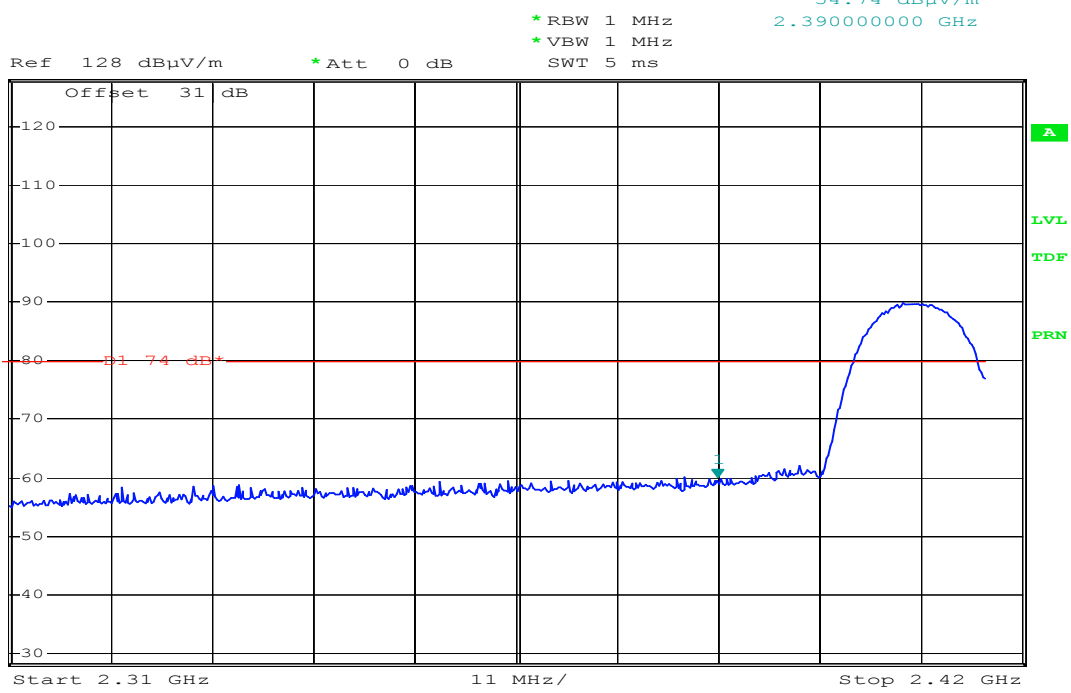


Date: 15.DEC.2004 10:30:48



Detector mode: Peak

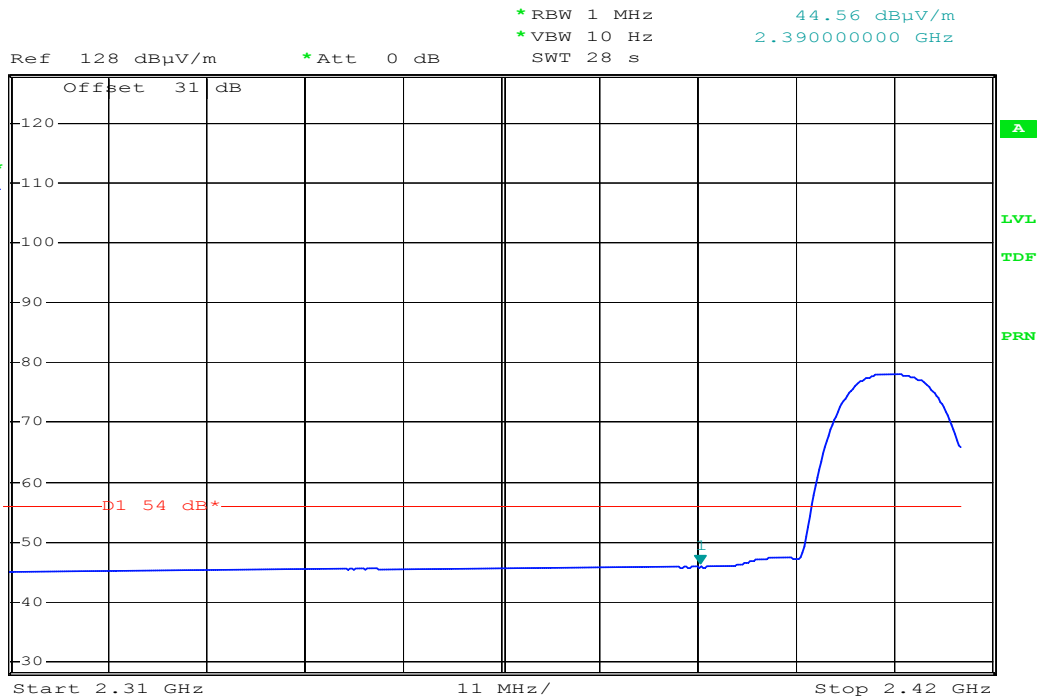
Polarity: Horizontal



Date: 15.DEC.2004 10:26:28

Detector mode: Average

Polarity: Horizontal



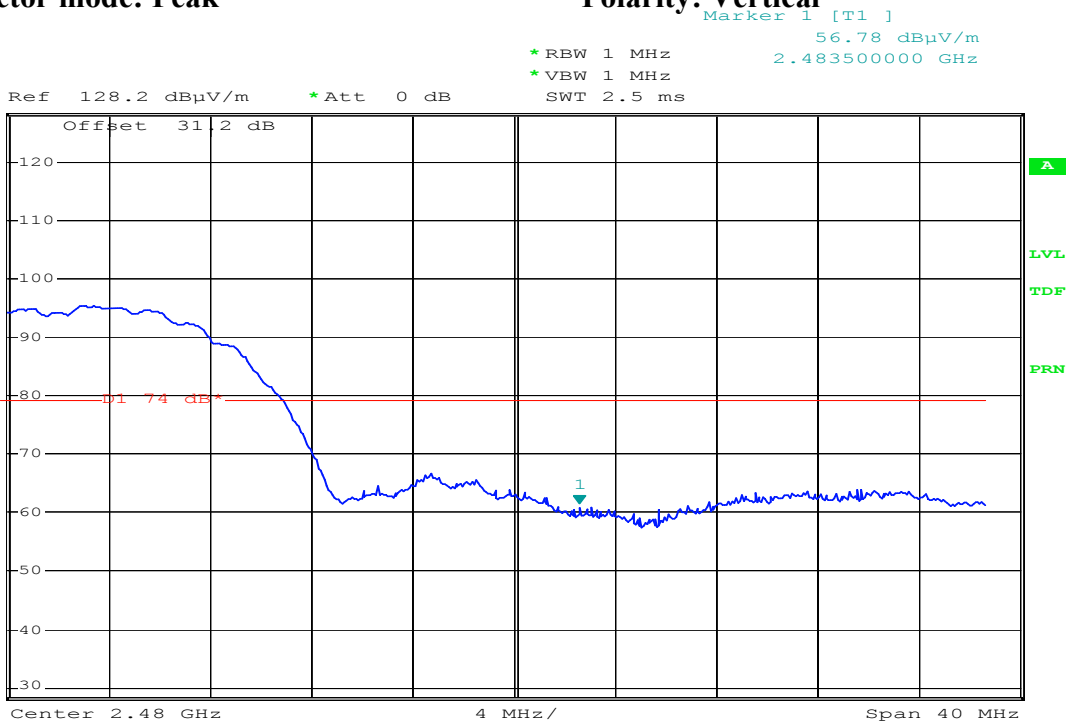
Date: 15.DEC.2004 10:22:53



IEEE 802.11b / CH High

Detector mode: Peak

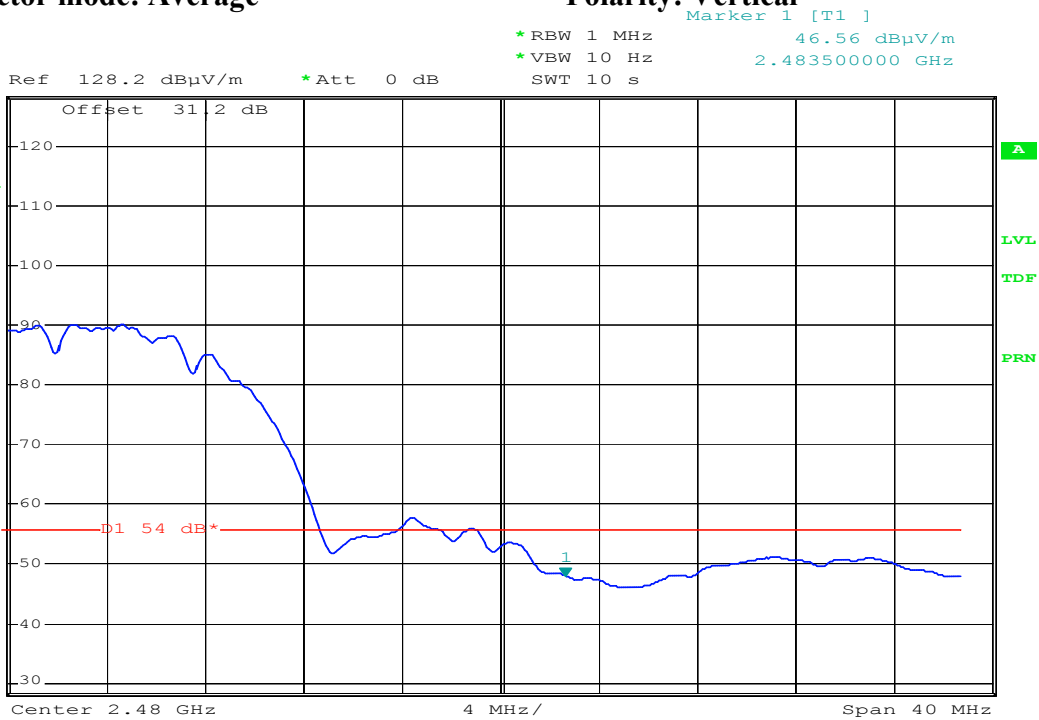
Polarity: Vertical



Date: 15.DEC.2004 10:14:51

Detector mode: Average

Polarity: Vertical

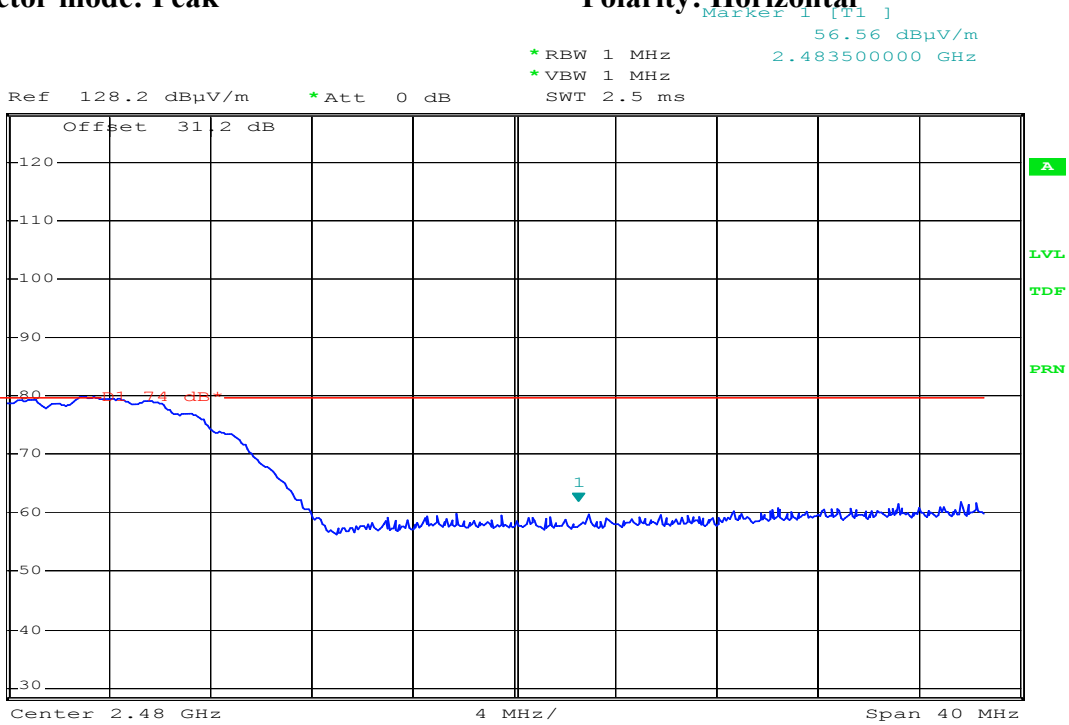


Date: 15.DEC.2004 10:13:03



Detector mode: Peak

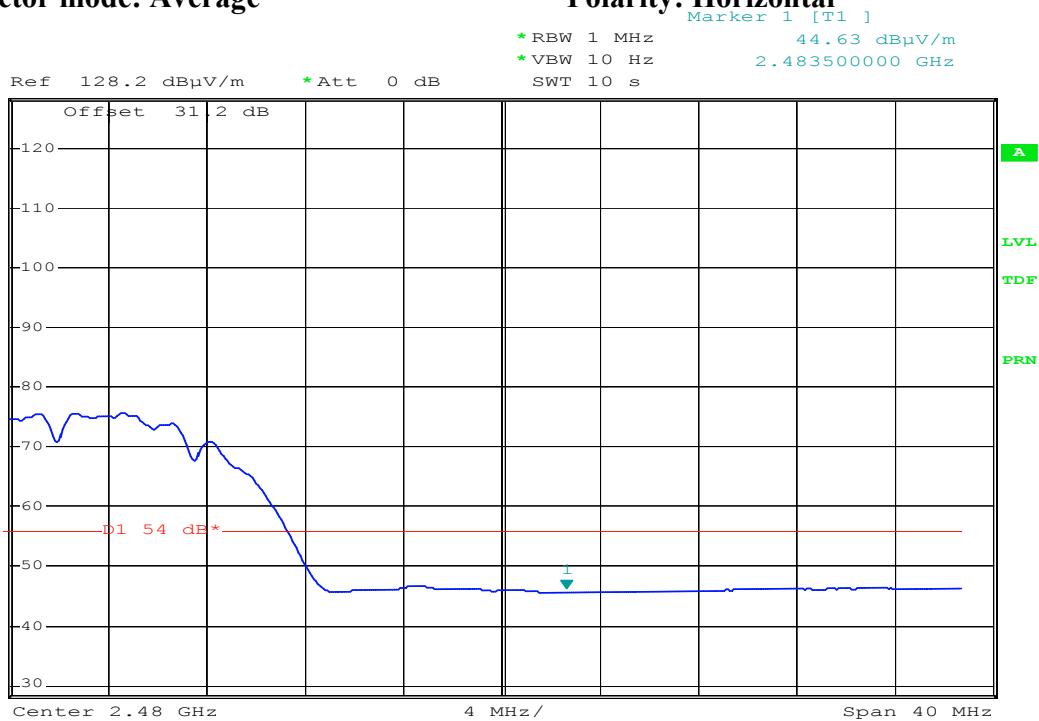
Polarity: Horizontal



Date: 15.DEC.2004 10:18:09

Detector mode: Average

Polarity: Horizontal



Date: 15.DEC.2004 10:16:58