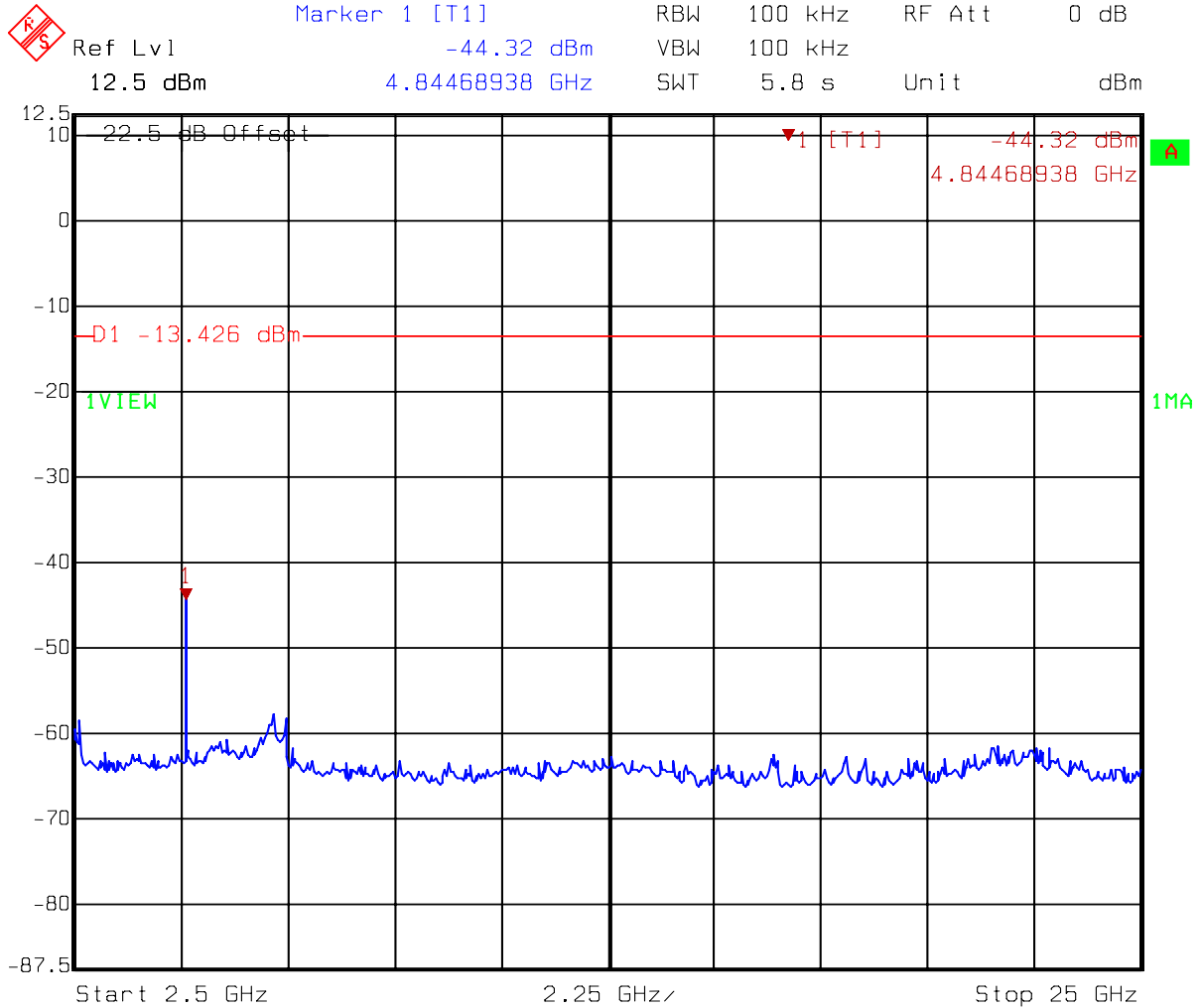


## Chain C

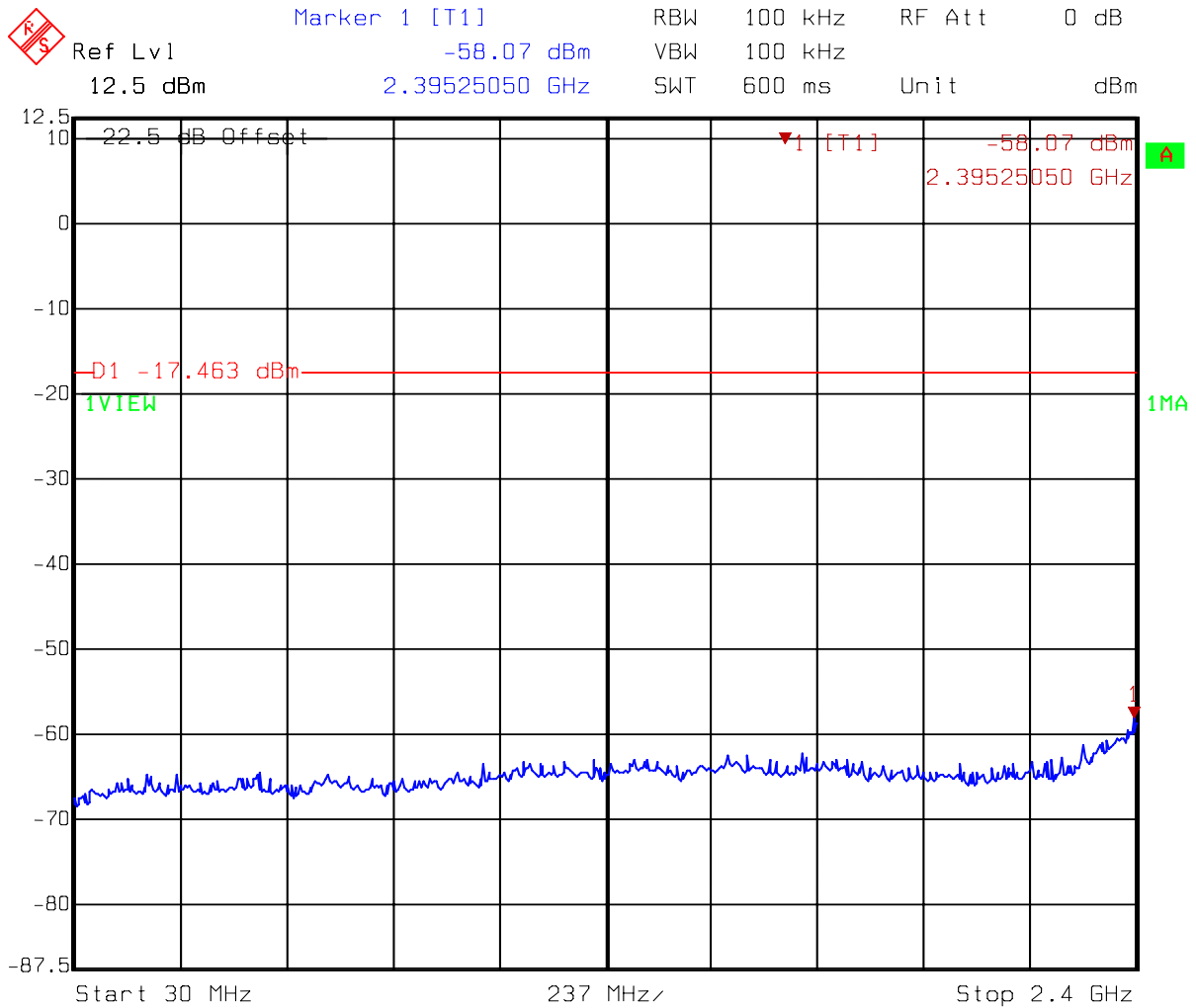
### Test Mode: 802.11b mode CH6



Title: Conductive-Spurious  
Comment A: CH 6 at 802.11b mode 2483.5MHz~25GHz  
Date: 17.APR.2008 10:39:14

## Chain C

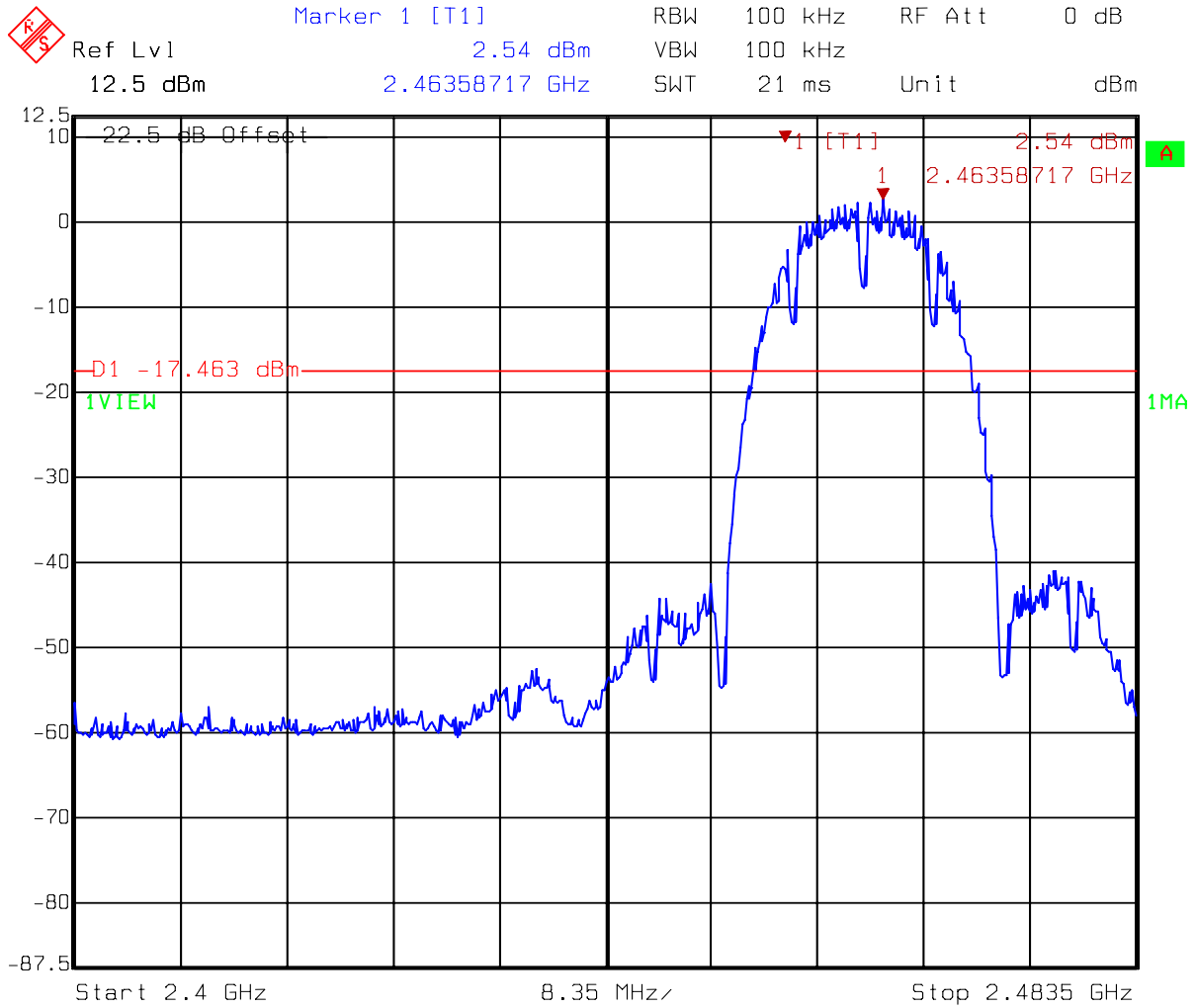
### Test Mode: 802.11b mode CH11



Title: Conductive-Spurious  
 Comment A: CH 11 at 802.11b mode 30MHz~2400MHz  
 Date: 17.APR.2008 10:57:05

**Chain C**

**Test Mode: 802.11b mode CH11**

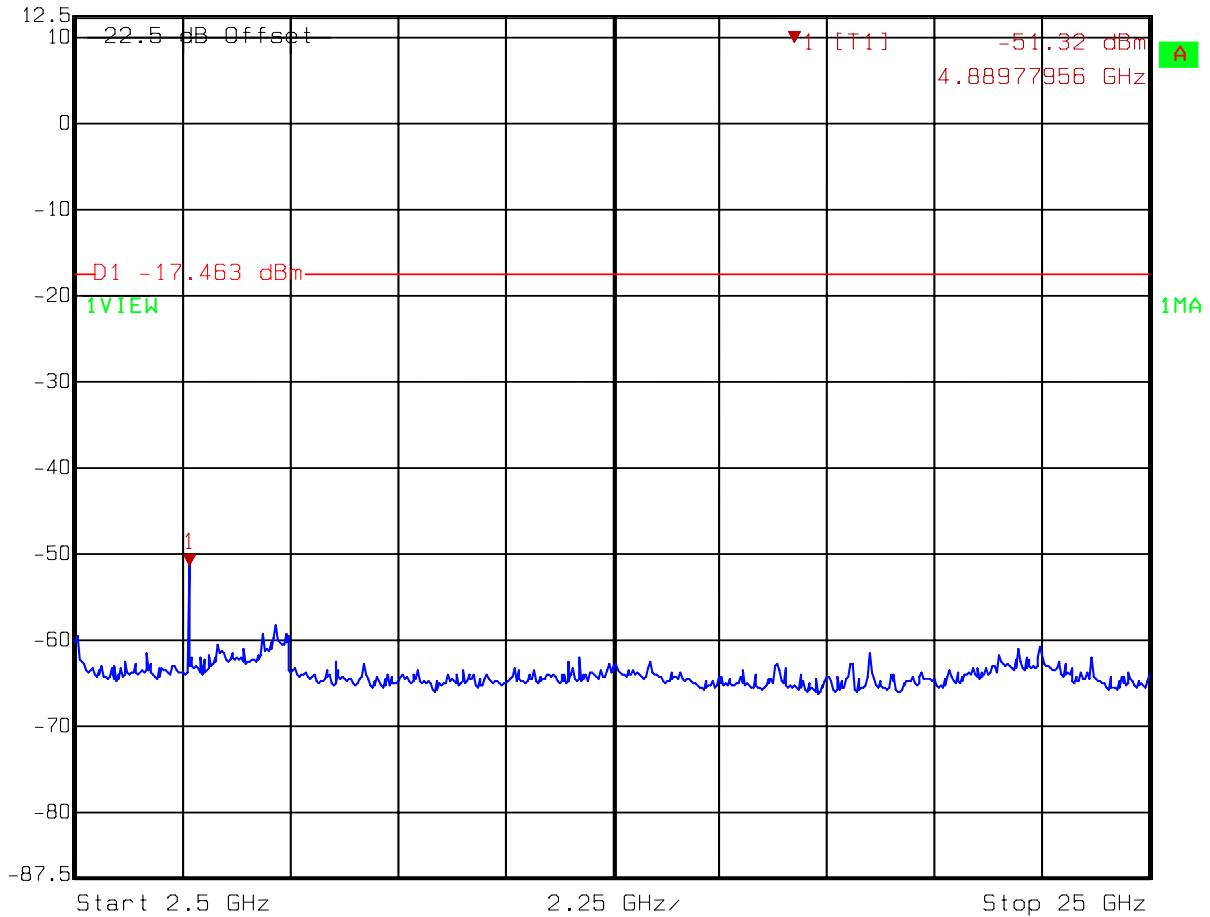


Title: Conductive-Spurious  
Comment A: CH 11 at 802.11b mode 2400MHz~2483.5MHz  
Date: 17.APR.2008 10:56:43

**Chain C**

**Test Mode: 802.11b mode CH11**

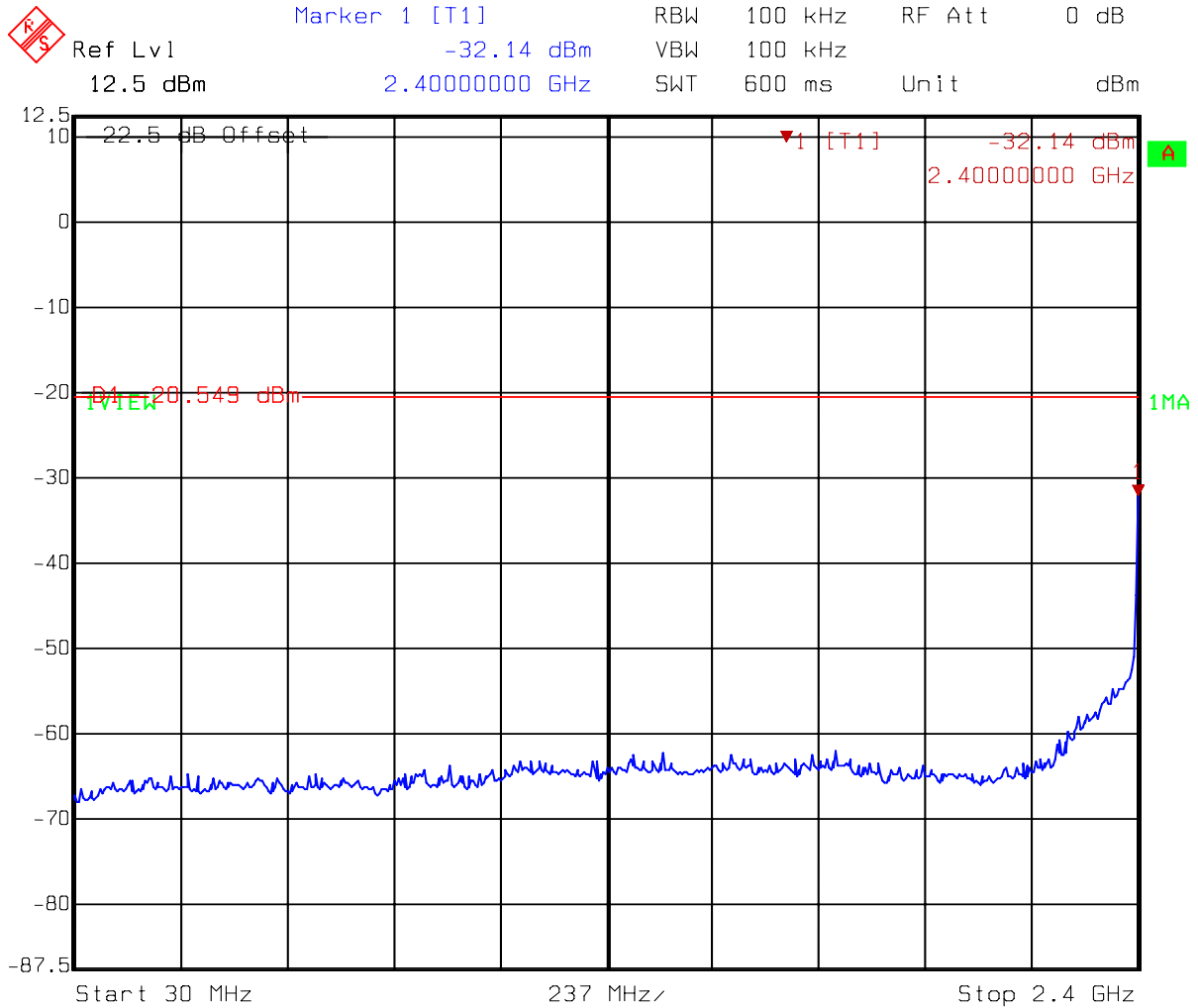
◆ S Ref Lvl 12.5 dBm      Marker 1 [T1] -51.32 dBm      RBW 100 kHz      RF Att 0 dB  
 -51.32 dBm      4.88977956 GHz      VBW 100 kHz  
 Unit dBm      SWT 5.8 s



Title: Conductive-Spurious  
 Comment A: CH 11 at 802.11b mode 2483.5MHz~25GHz  
 Date: 17.APR.2008 10:57:32

## Chain C

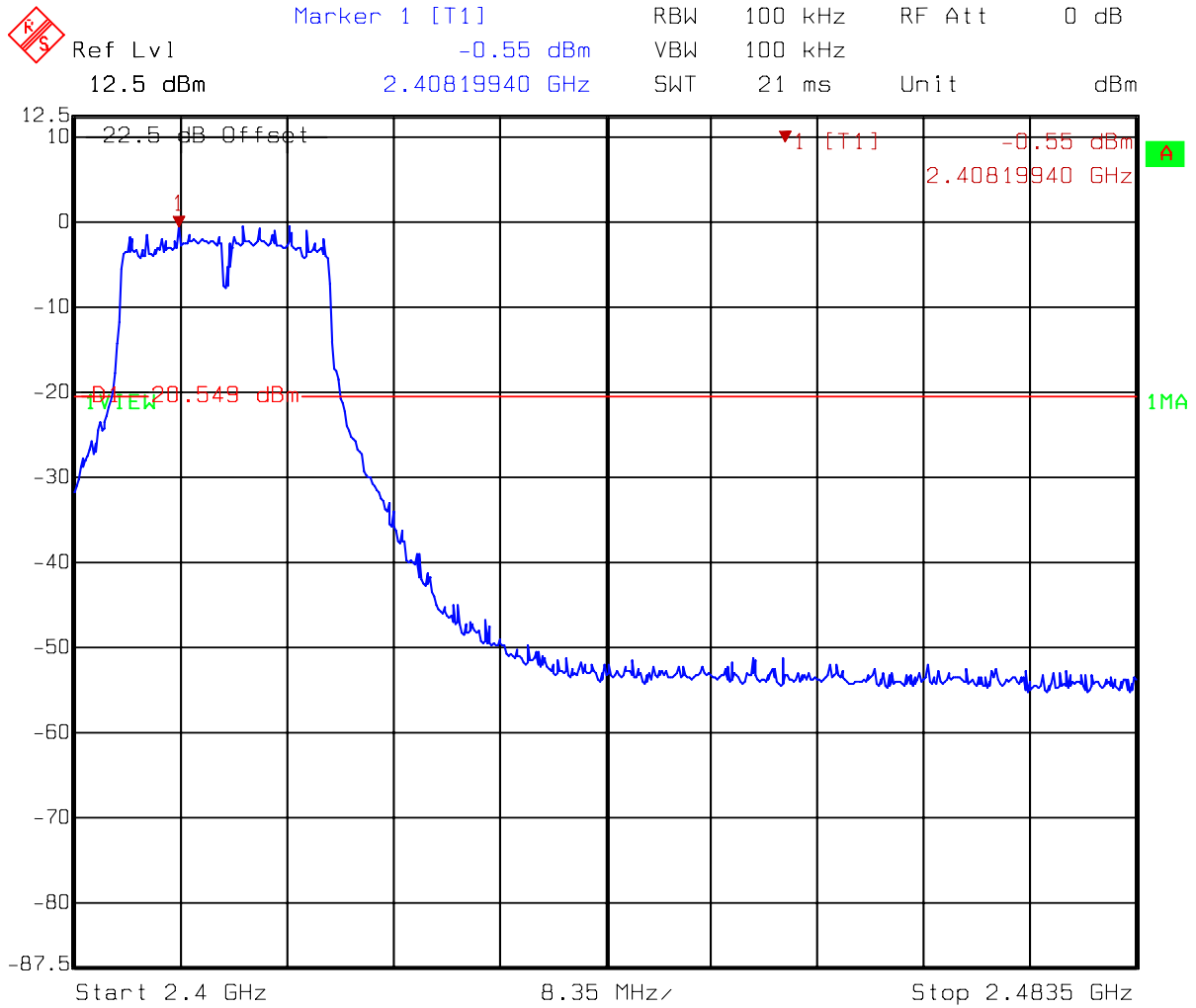
### Test Mode: 802.11g mode CH1



Title: Conductive-Spurious  
 Comment A: CH 1 at 802.11g mode 30MHz~2400MHz  
 Date: 17.APR.2008 11:09:06

## Chain C

### Test Mode: 802.11g mode CH1

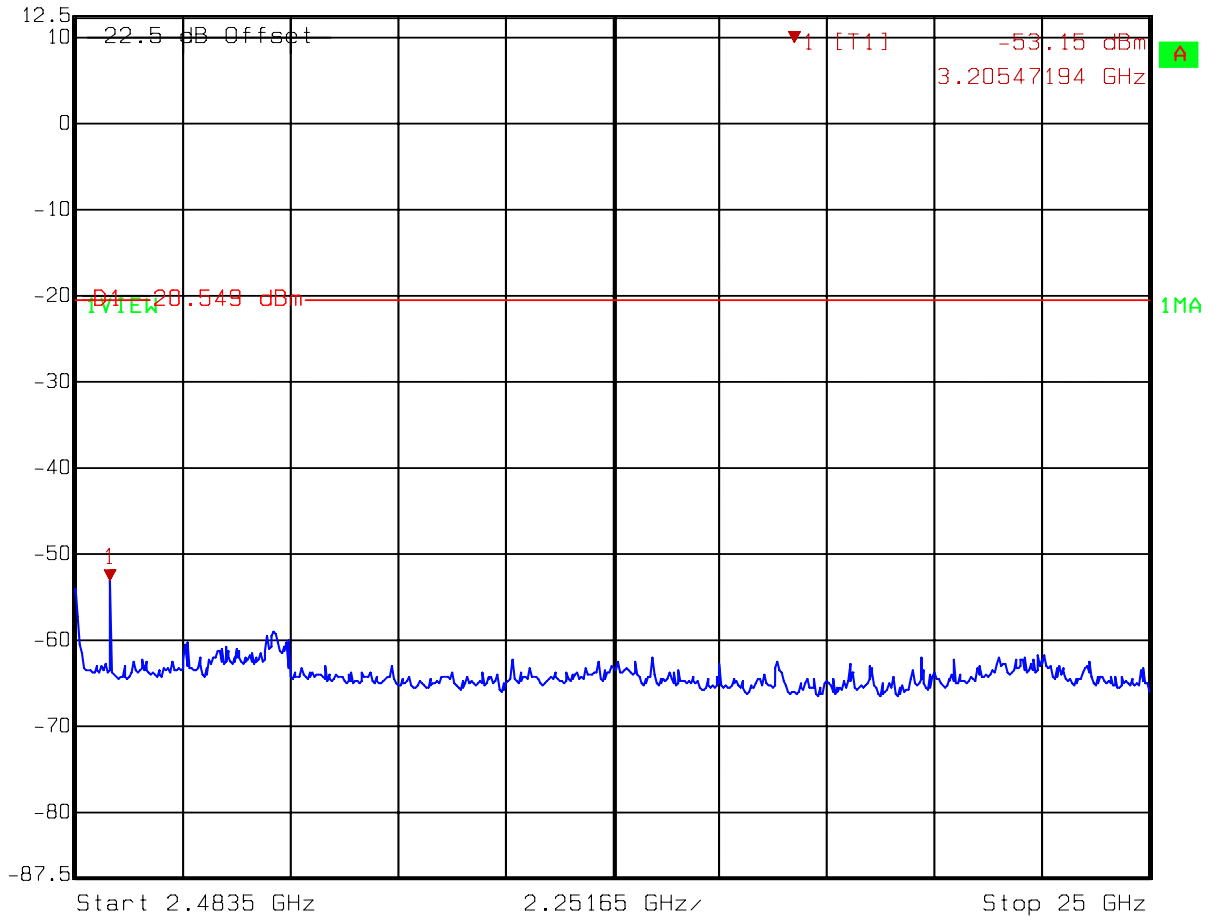


Title: Conductive-Spurious  
 Comment A: CH 1 at 802.11g mode 2400MHz~2483.5MHz  
 Date: 17.APR.2008 11:08:45

**Chain C**

**Test Mode: 802.11g mode CH1**

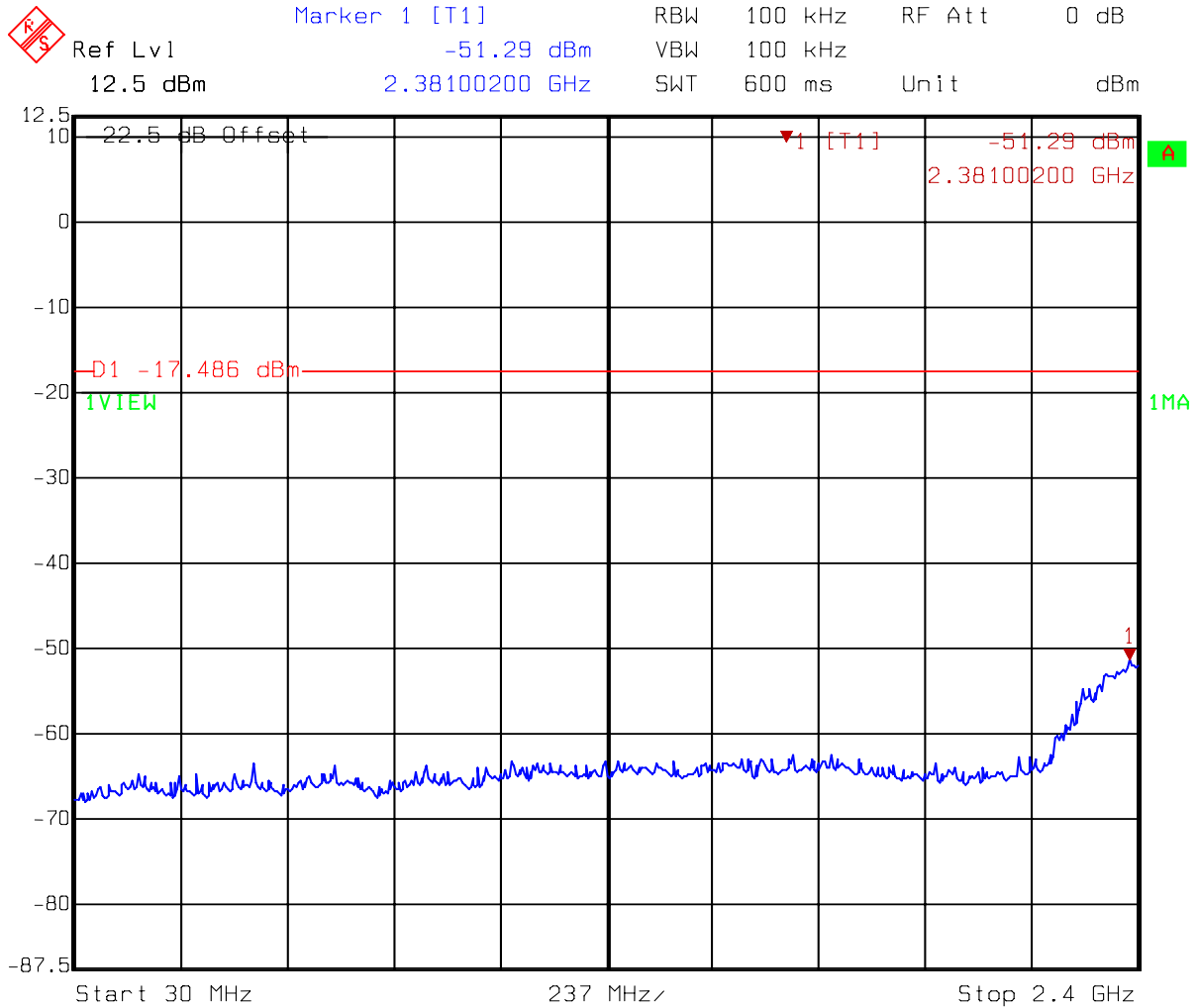
◆ S Ref Lvl 12.5 dBm      Marker 1 [T1] -53.15 dBm      RBW 100 kHz      RF Att 0 dB  
 -53.15 dBm      3.20547194 GHz      VBW 100 kHz  
 Unit dBm      SWT 5.8 s



Title: Conductive-Spurious  
 Comment A: CH 1 at 802.11g mode 2483.5MHz~25000MHz  
 Date: 17.APR.2008 11:09:33

## Chain C

### Test Mode: 802.11g mode CH6



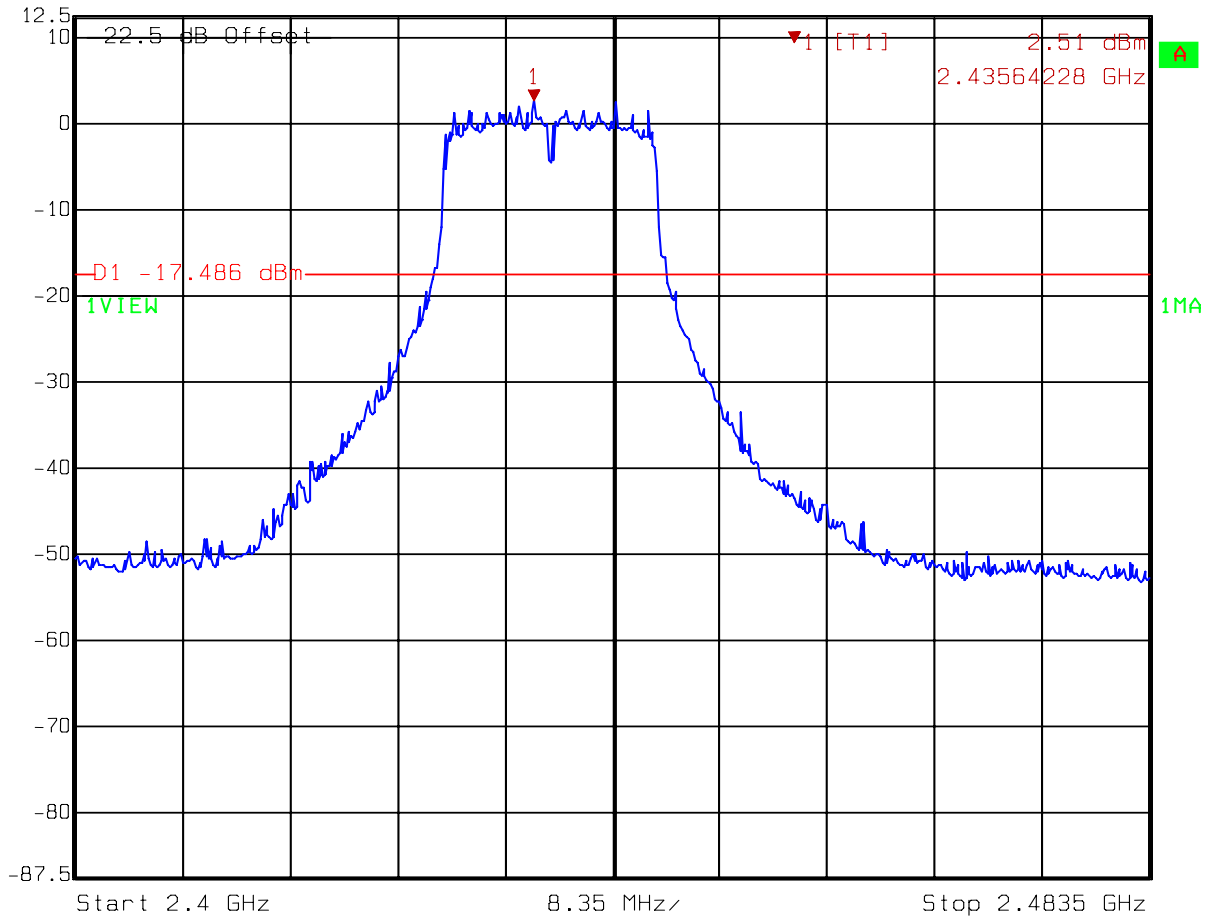
Title: Conductive-Spurious  
 Comment A: CH 6 at 802.11g mode 30MHz~2400MHz  
 Date: 17.APR.2008 11:12:20



**Chain C**

**Test Mode: 802.11g mode CH6**

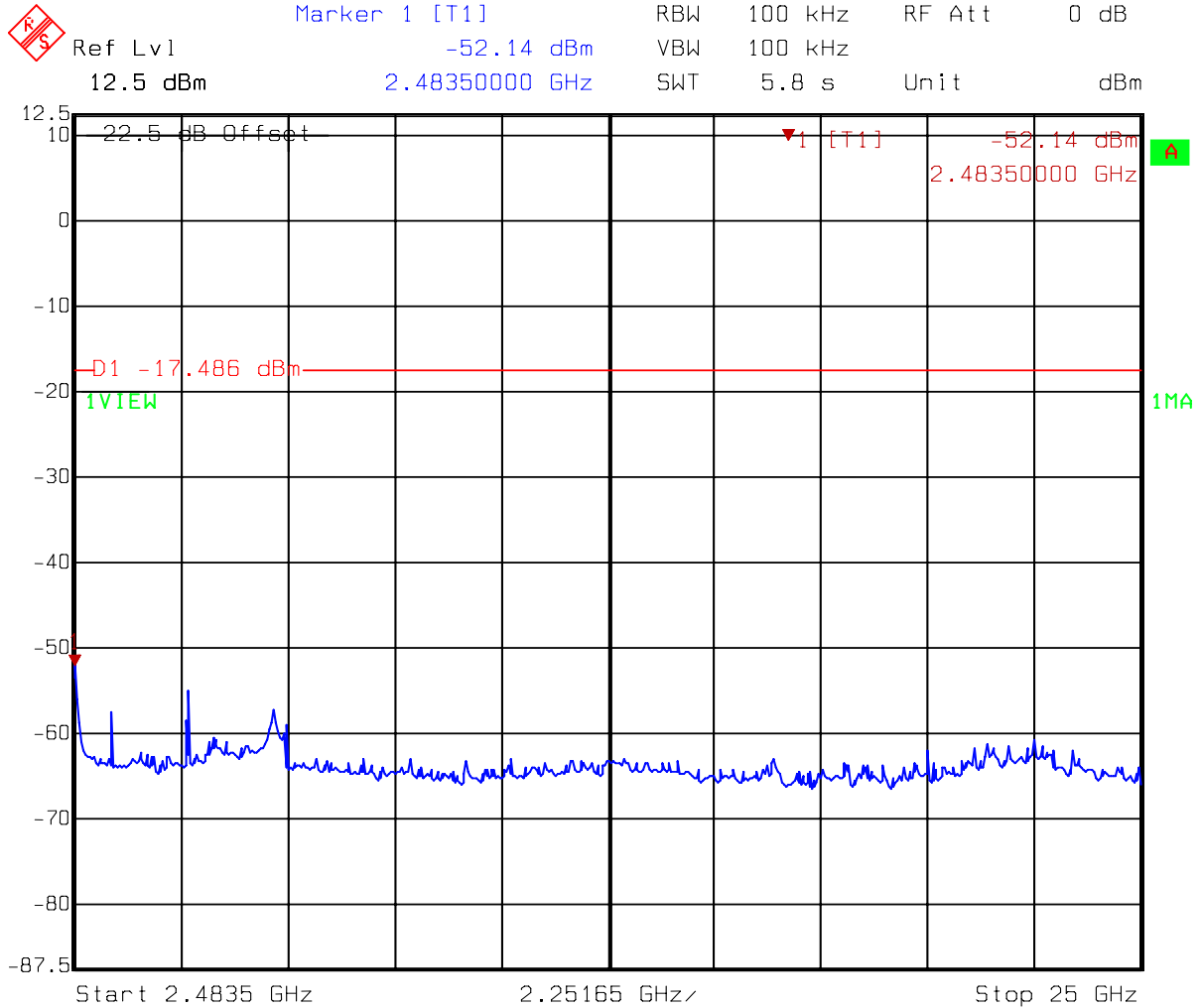
	Marker 1 [T1]	RBW	100 kHz	RF Att	0 dB
	Ref Lvl	2.51 dBm	VBW	100 kHz	
	12.5 dBm	2.43564228 GHz	SWT	21 ms	Unit



Title: Conductive-Spurious  
 Comment A: CH 6 at 802.11g mode 2400MHz~2483.5MHz  
 Date: 17.APR.2008 11:11:58

## Chain C

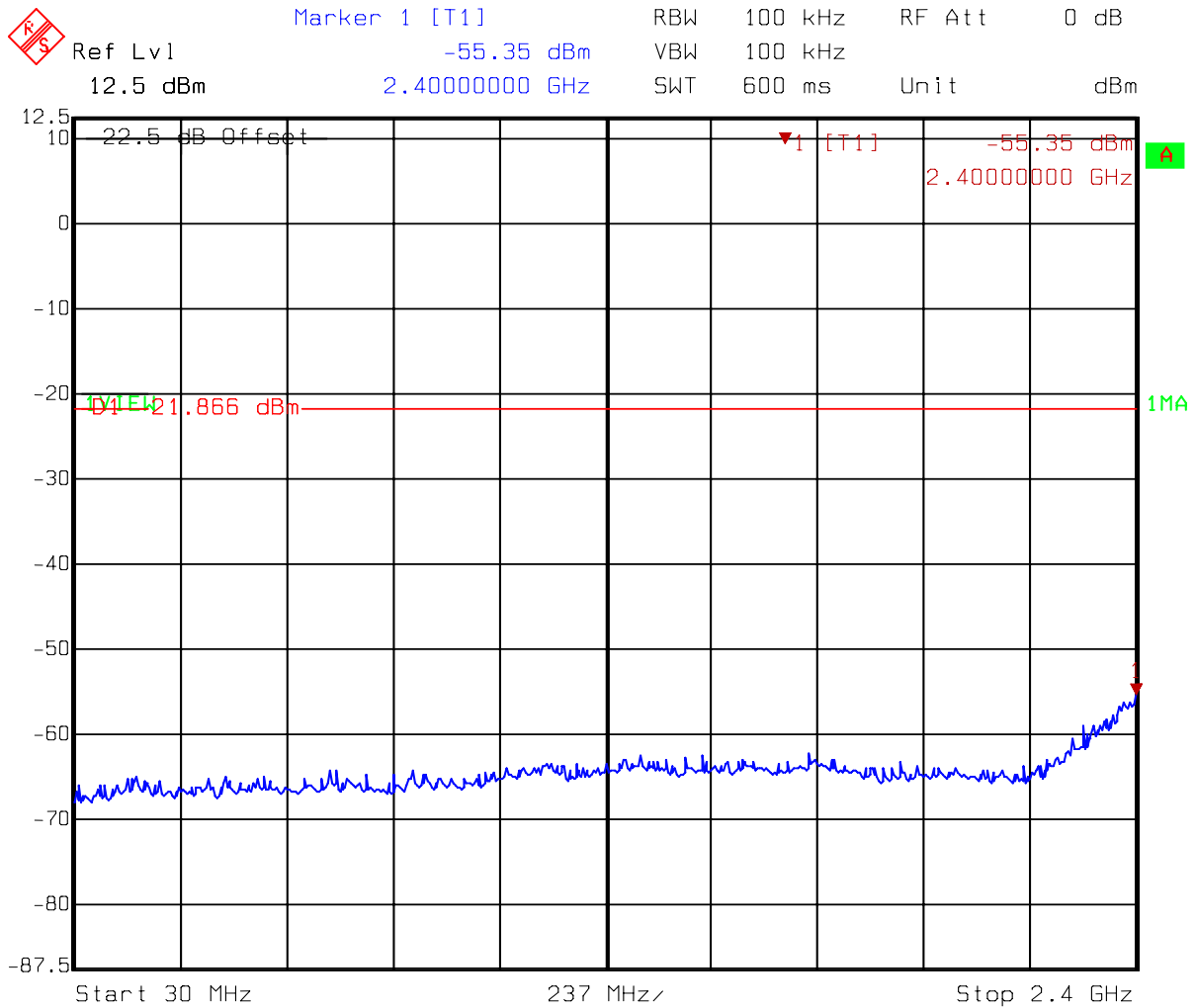
### Test Mode: 802.11g mode CH6



Title: Conductive-Spurious  
Comment A: CH 6 at 802.11g mode 2483.5MHz~25000MHz  
Date: 17.APR.2008 11:12:46

**Chain C**

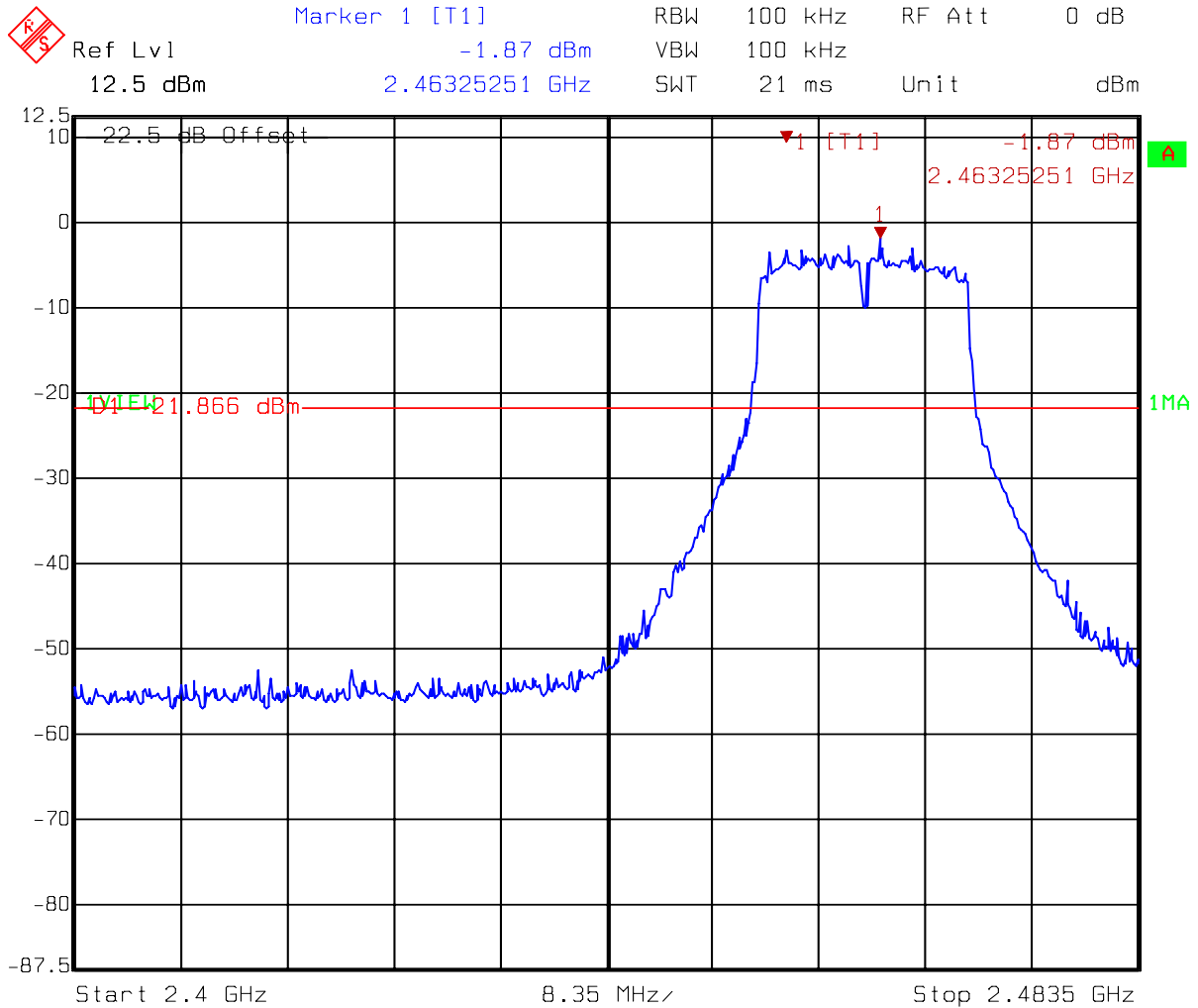
**Test Mode: 802.11g mode CH11**



Title: Conductive-Spurious  
 Comment A: CH 11 at 802.11g mode 30MHz~2400MHz  
 Date: 17.APR.2008 11:27:31

## Chain C

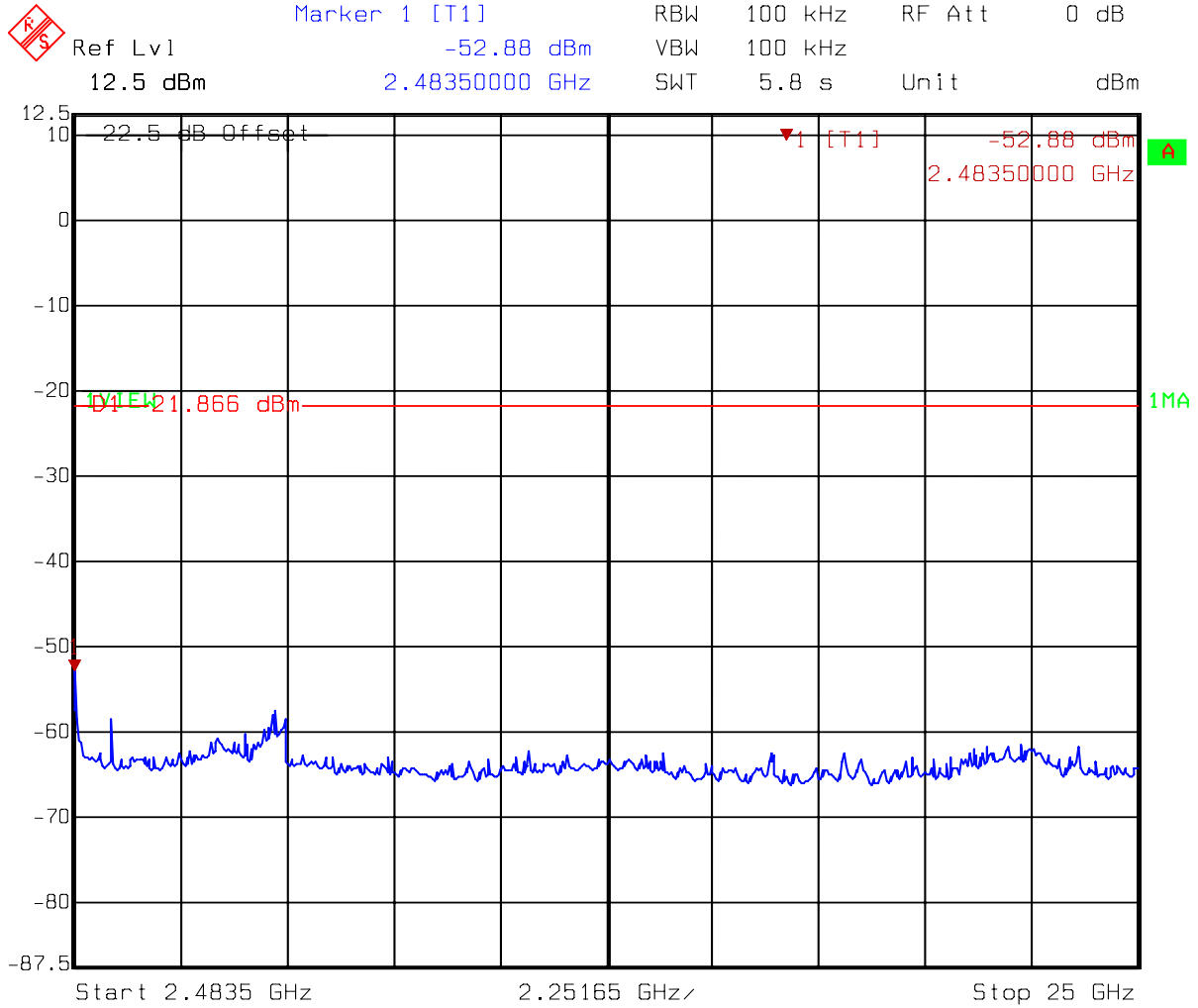
### Test Mode: 802.11g mode CH11



Title:      Conductive-Spurious  
 Comment A: CH 11 at 802.11g mode 2400MHz~2483.5MHz  
 Date:      17.APR.2008 11:27:10

## Chain C

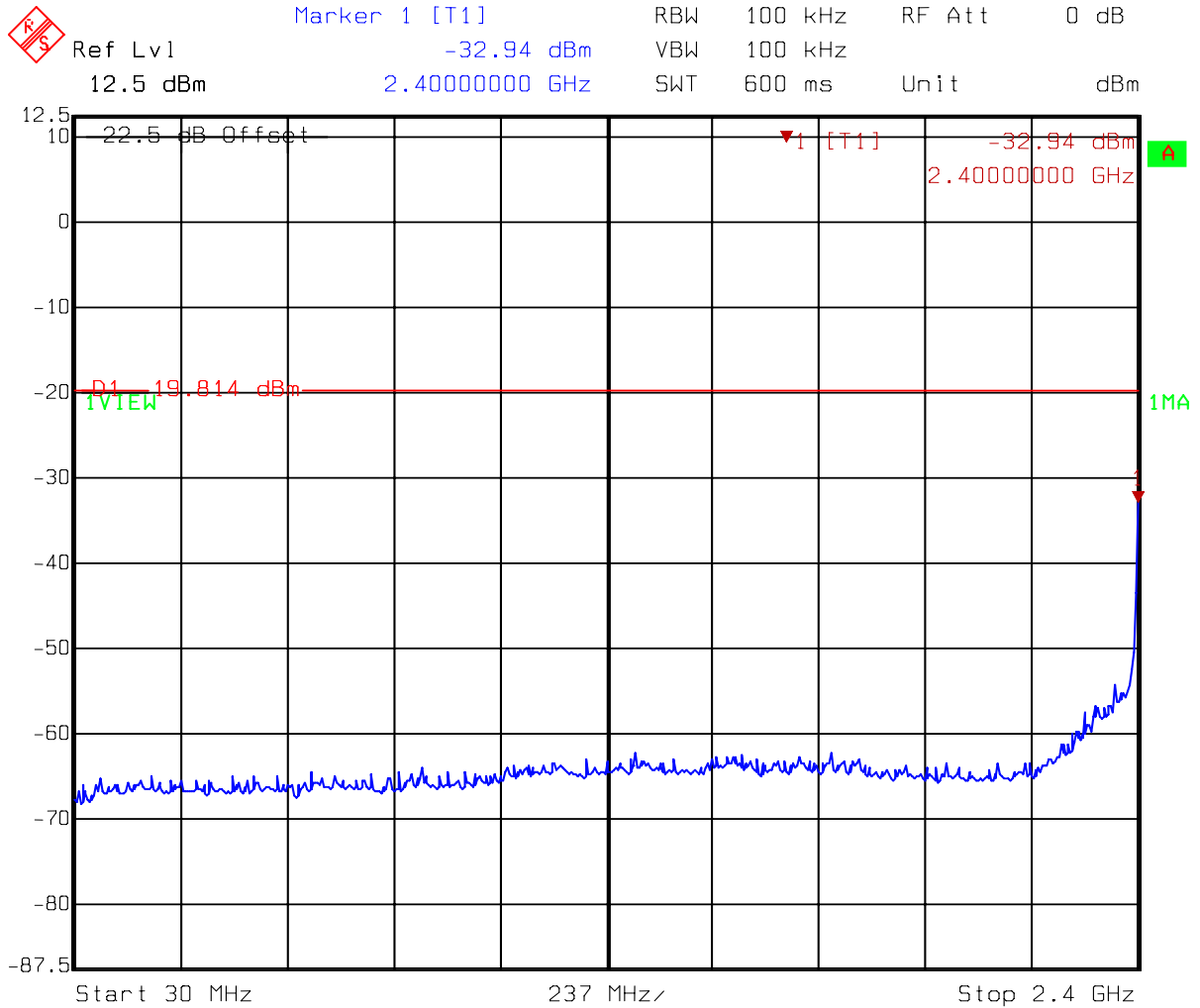
### Test Mode: 802.11g mode CH11



Title: Conductive-Spurious  
 Comment A: CH 11 at 802.11g mode 2483.5MHz~25000MHz  
 Date: 17.APR.2008 11:27:58

## Chain C

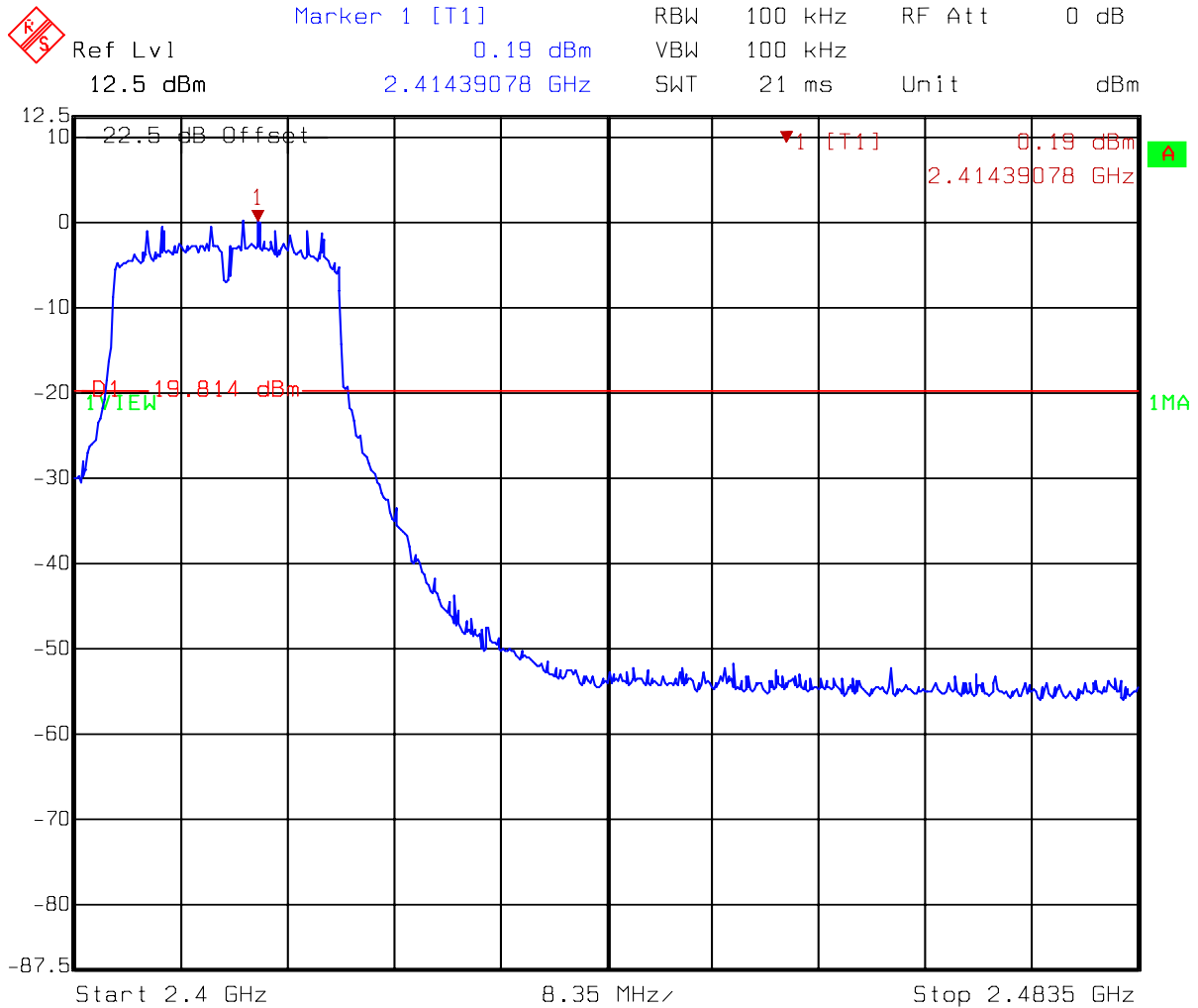
### Test Mode: 802.11n HT20 mode CH1



Title: Conductive-Spurious  
 Comment A: CH 1 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:36:43

**Chain C**

**Test Mode: 802.11n HT20 mode CH1**

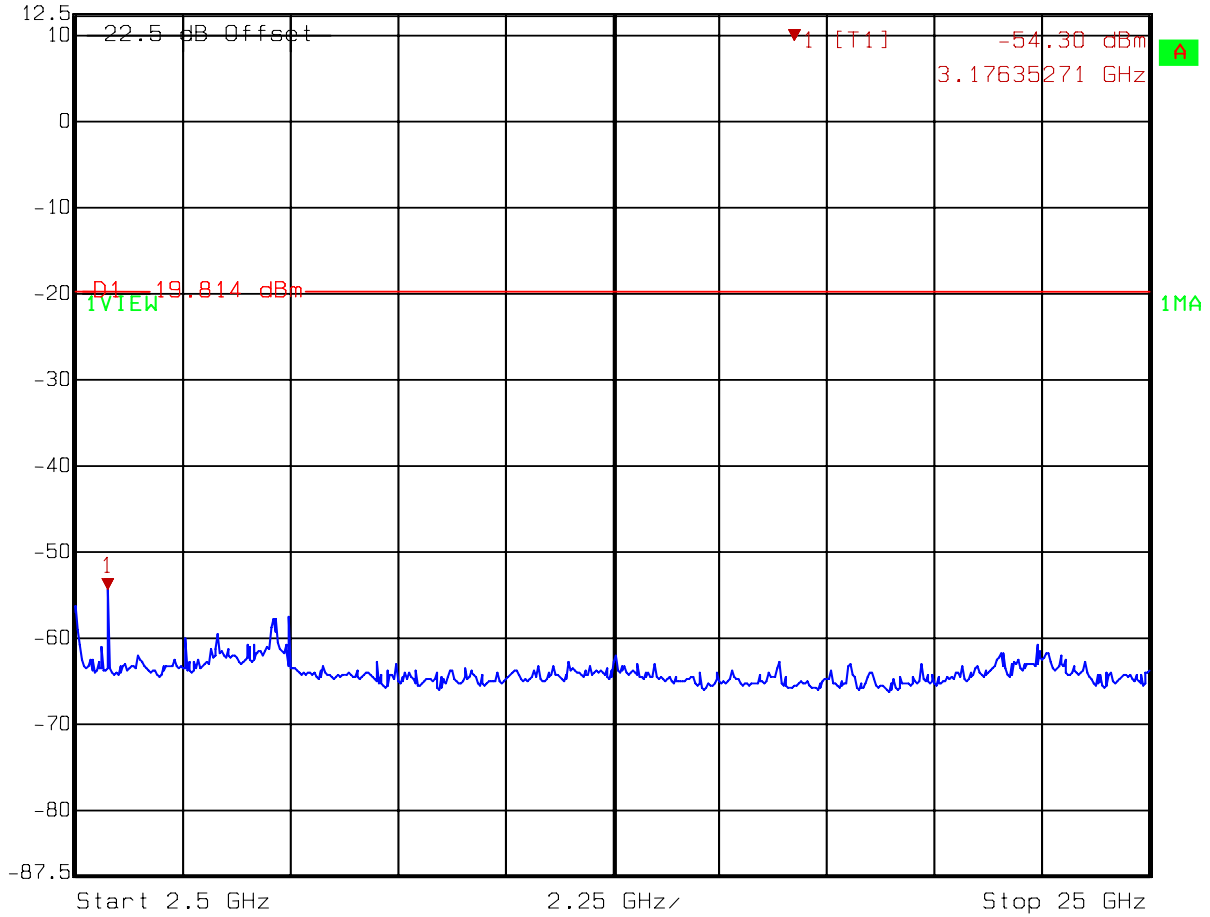


Title: Conductive-Spurious  
 Comment A: CH 1 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:36:22

## Chain C

### Test Mode: 802.11n HT20 mode CH1

	Ref Lvl	Marker 1 [T1]	RBW	100 kHz	RF Att	0 dB
	12.5 dBm	-54.30 dBm	VBW	100 kHz		
		3.17635271 GHz	SWT	5.8 s	Unit	dBm

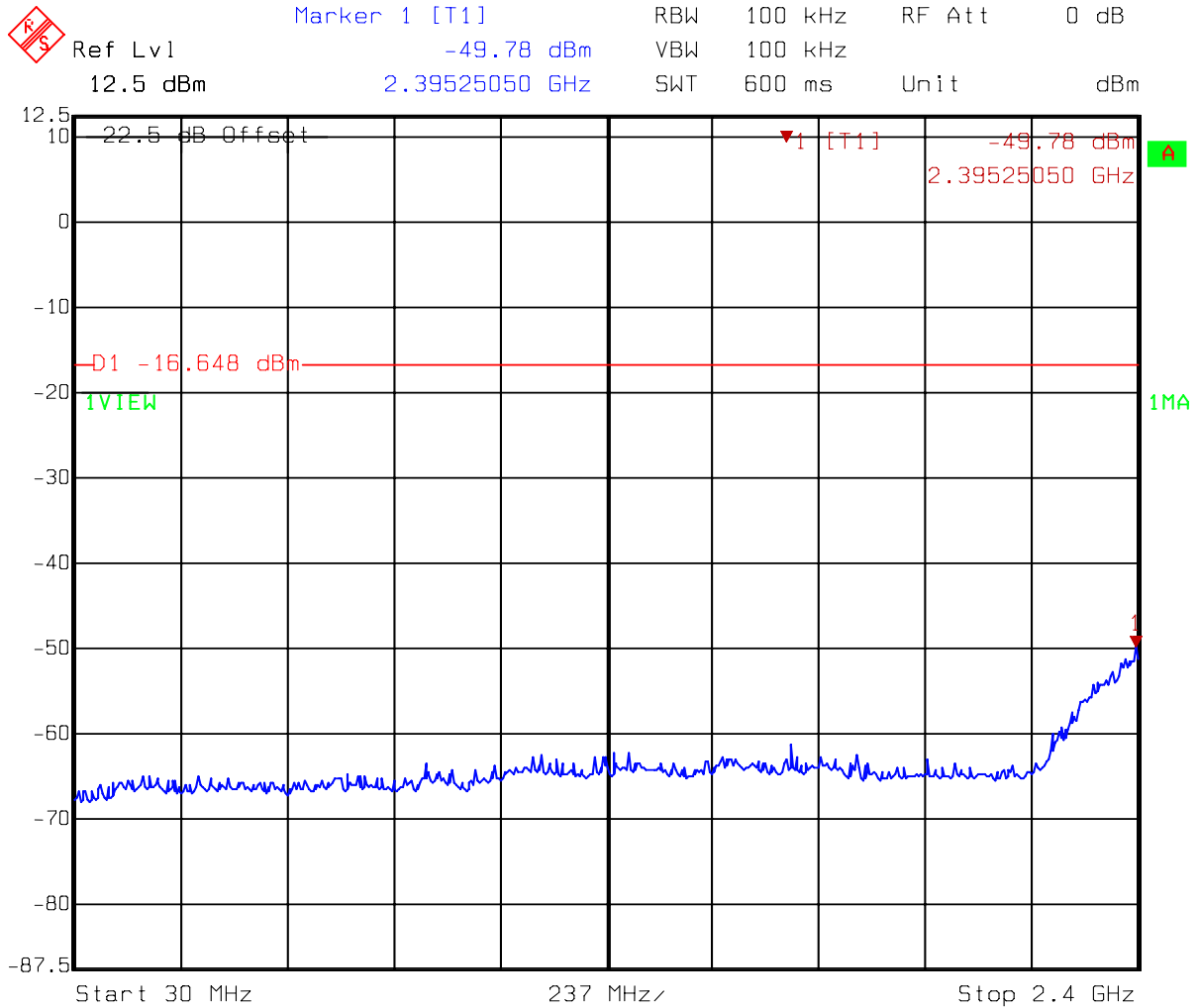


Title:      Conductive-Spurious  
 Comment A: CH 1 at 802.11n 20MHz mode  
 Date:      17.APR.2008 11:37:10



## Chain C

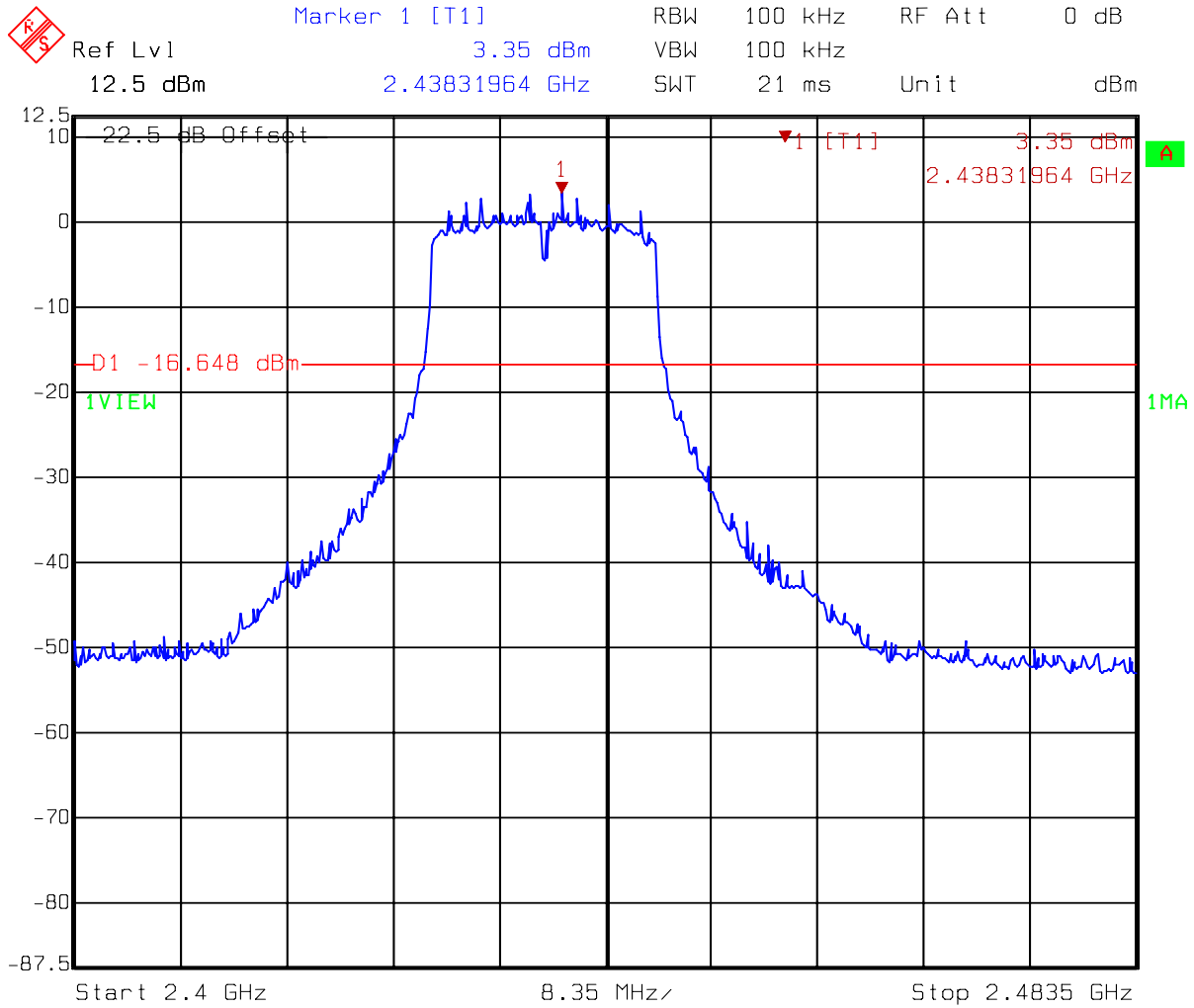
### Test Mode: 802.11n HT20 mode CH6



Title: Conductive-Spurious  
Comment A: CH 6 at 802.11n 20MHz mode  
Date: 17.APR.2008 11:46:28

**Chain C**

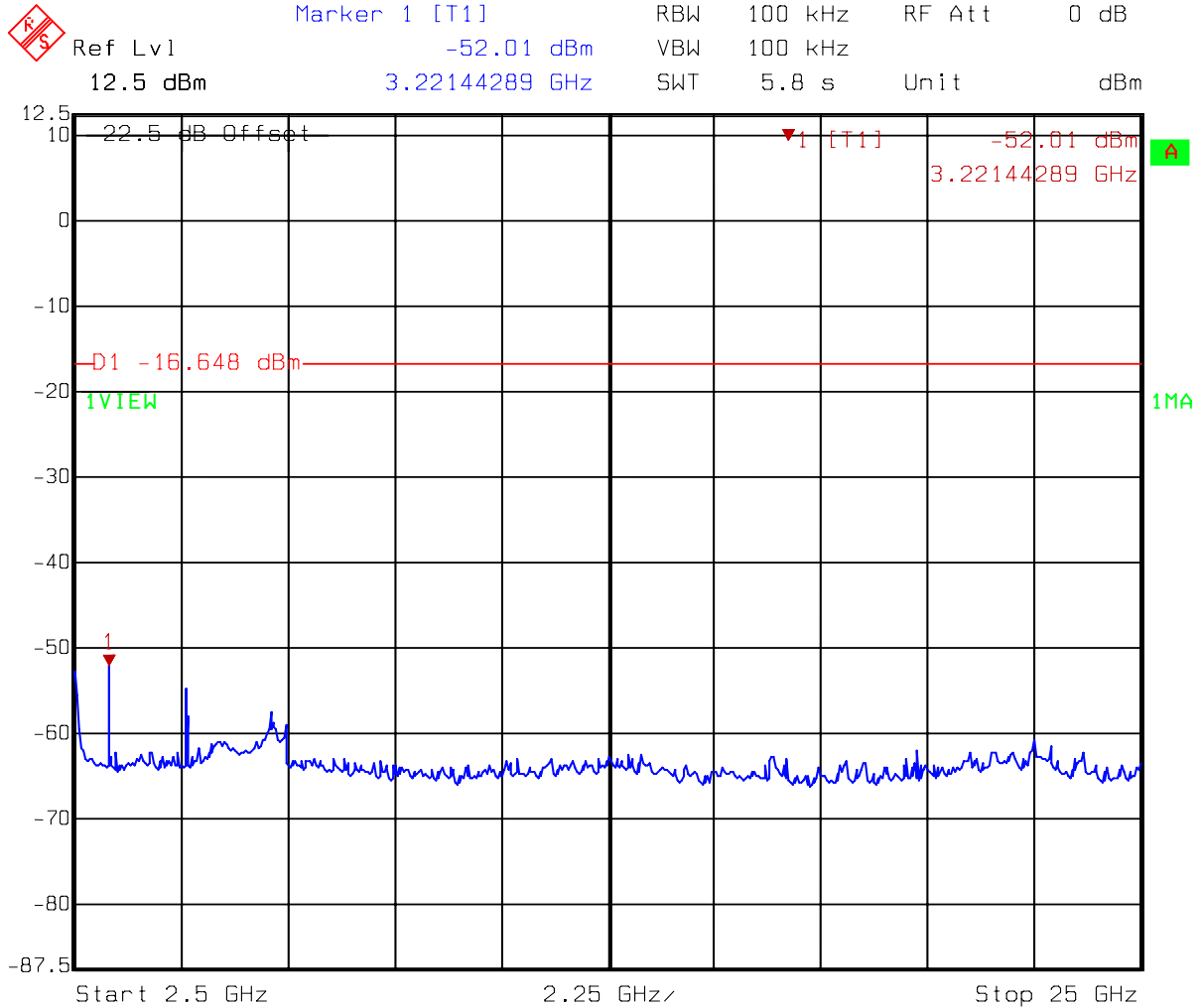
**Test Mode: 802.11n HT20 mode CH6**



Title: Conductive-Spurious  
 Comment A: CH 6 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:46:06

## Chain C

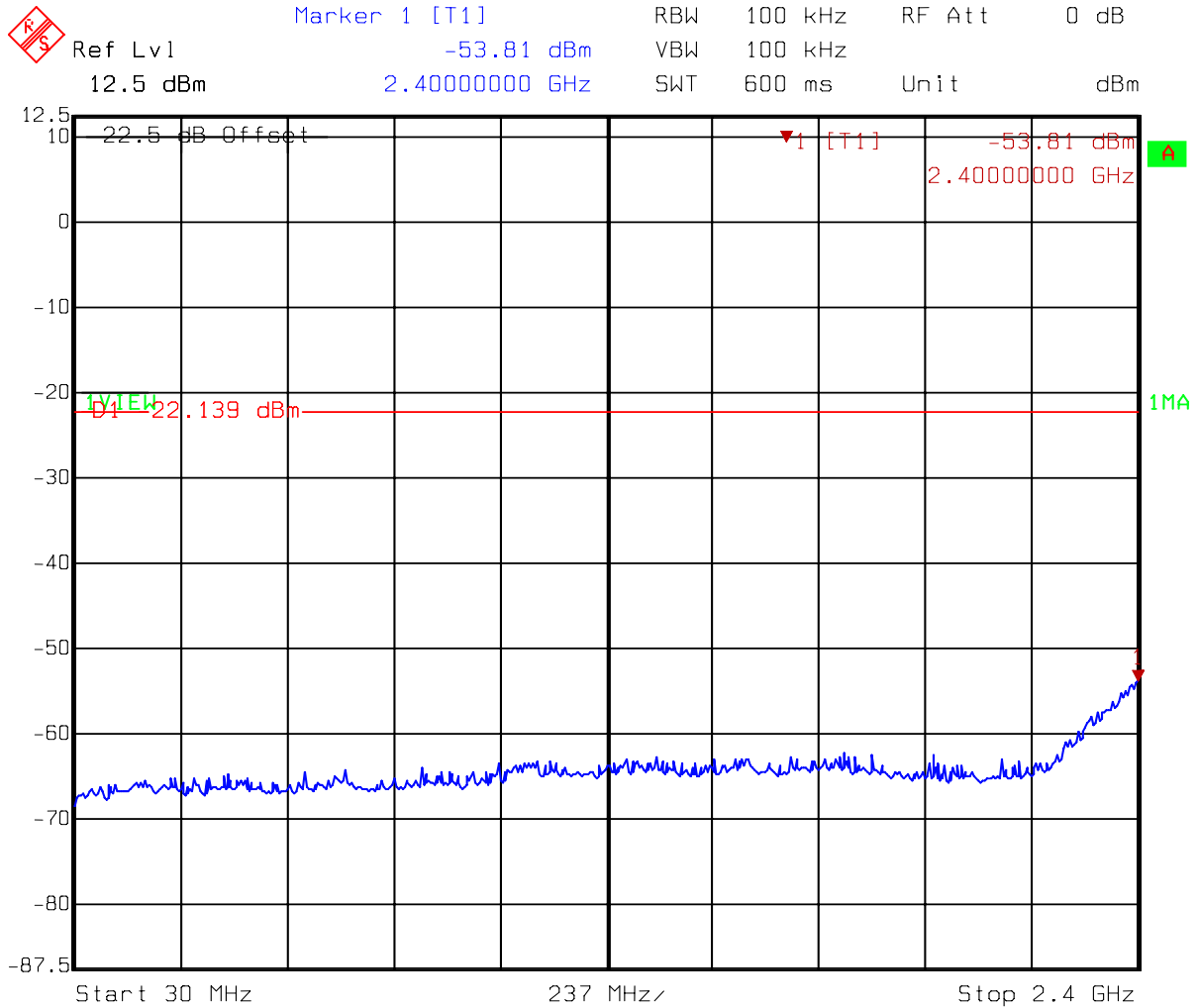
### Test Mode: 802.11n HT20 mode CH6



Title: Conductive-Spurious  
Comment A: CH 6 at 802.11n 20MHz mode  
Date: 17.APR.2008 11:46:55

## Chain C

### Test Mode: 802.11n HT20 mode CH11

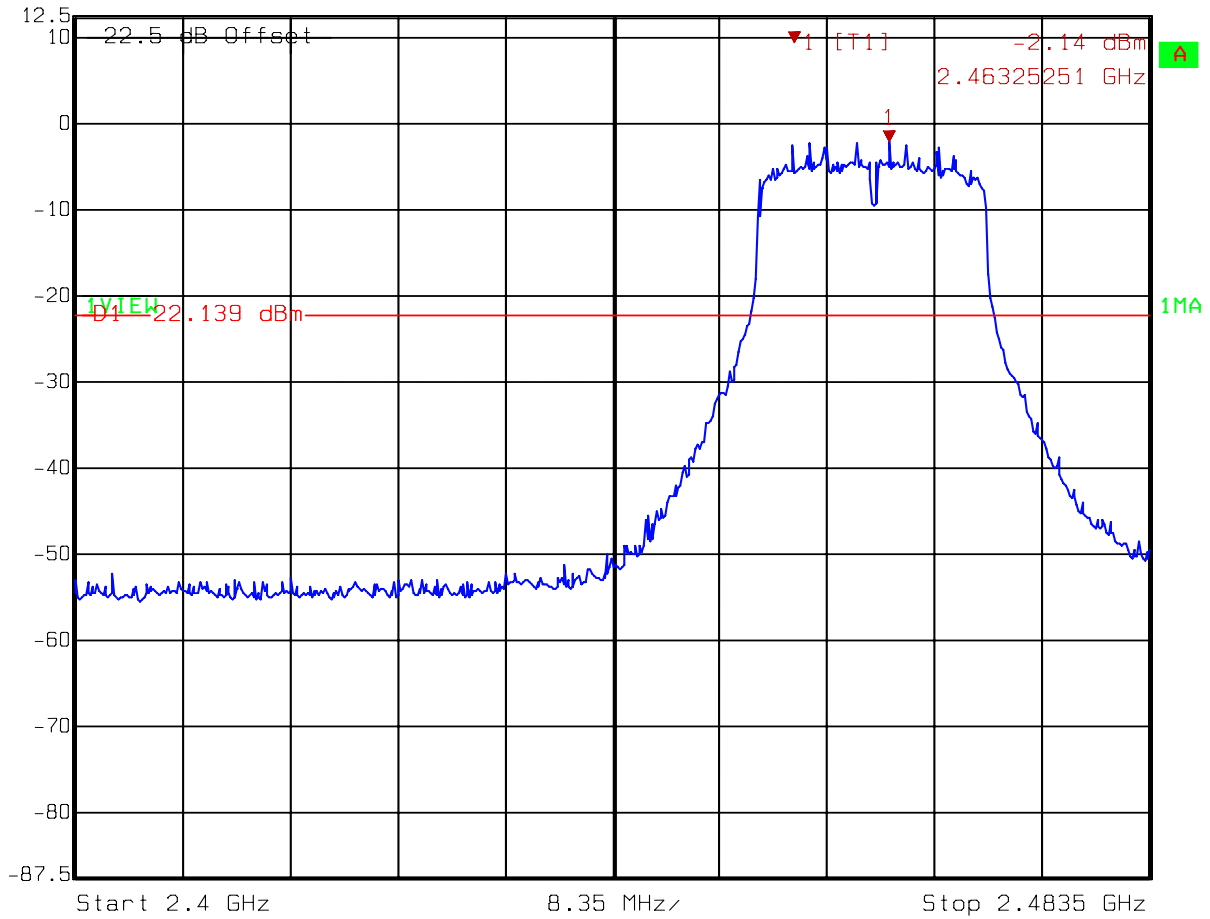


Title: Conductive-Spurious  
 Comment A: CH 11 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:50:53

**Chain C**

**Test Mode: 802.11n HT20 mode CH11**

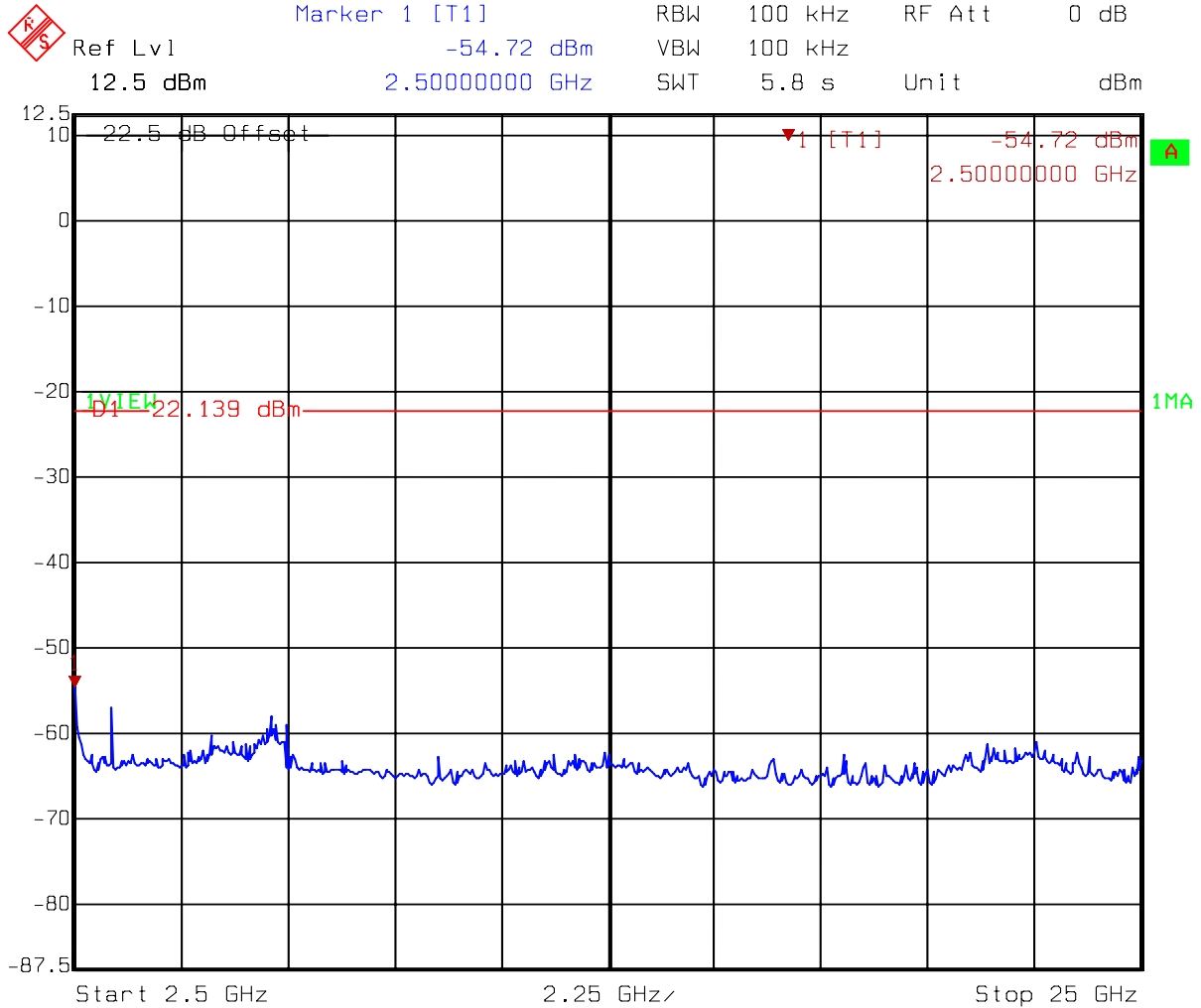
	Marker 1 [T1]	RBW	100 kHz	RF Att	0 dB
	Ref Lvl	-2.14 dBm	VBW	100 kHz	
	12.5 dBm	2.46325251 GHz	SWT	21 ms	Unit dBm



Title: Conductive-Spurious  
 Comment A: CH 11 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:50:32

## Chain C

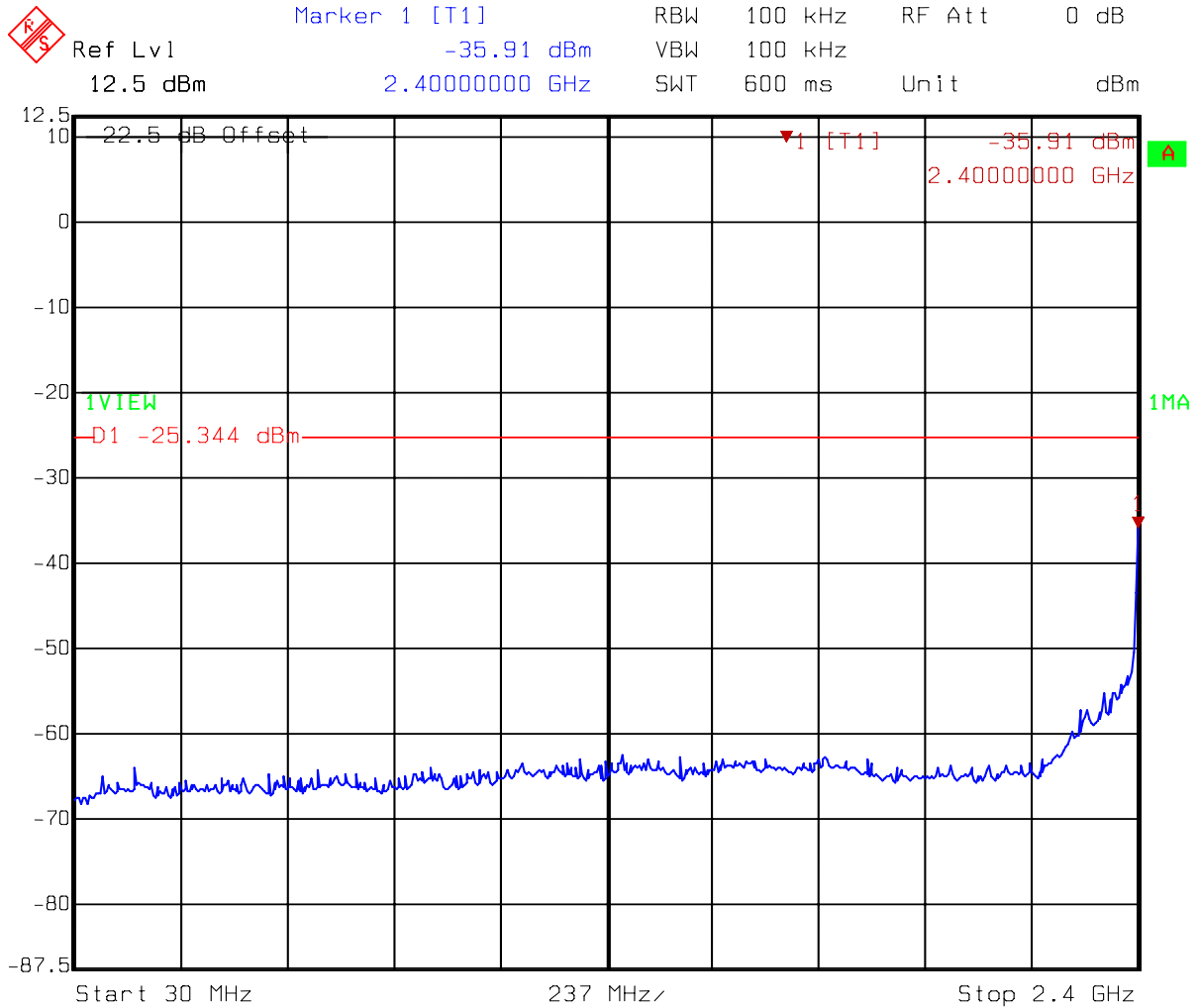
### Test Mode: 802.11n HT20 mode CH11



Title: Conductive-Spurious  
Comment A: CH 11 at 802.11n 20MHz mode  
Date: 17.APR.2008 11:51:20

## Chain C

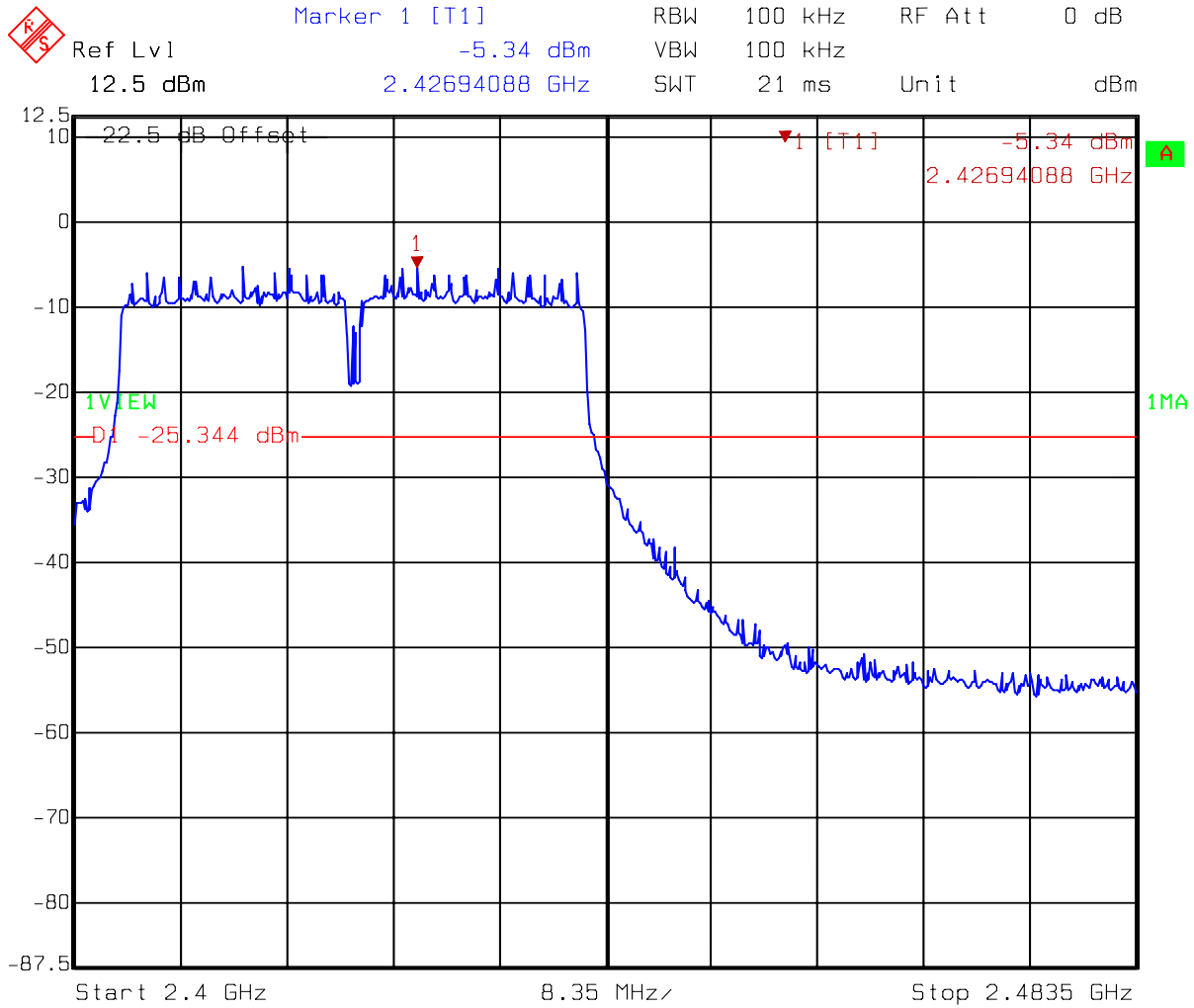
### Test Mode: 802.11n HT40 mode CH3



Title: Conductive-Spurious  
Comment A: CH 3 at 802.11n 40MHz mode  
Date: 17.APR.2008 12:07:57

**Chain C**

**Test Mode: 802.11n HT40 mode CH3**

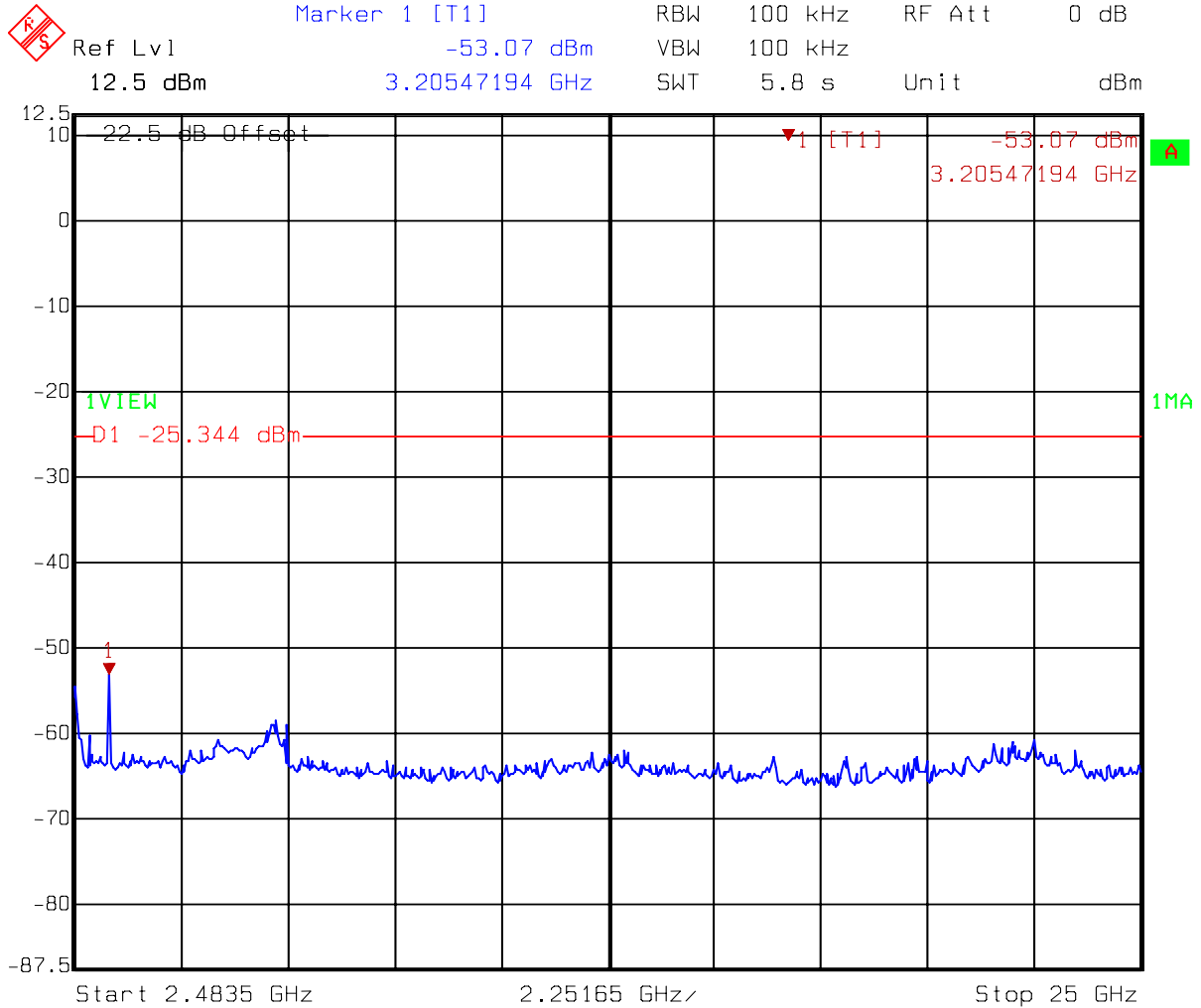


Title:      Conductive-Spurious  
 Comment A: CH 3 at 802.11n 40MHz mode  
 Date:      17.APR.2008 12:07:36



## Chain C

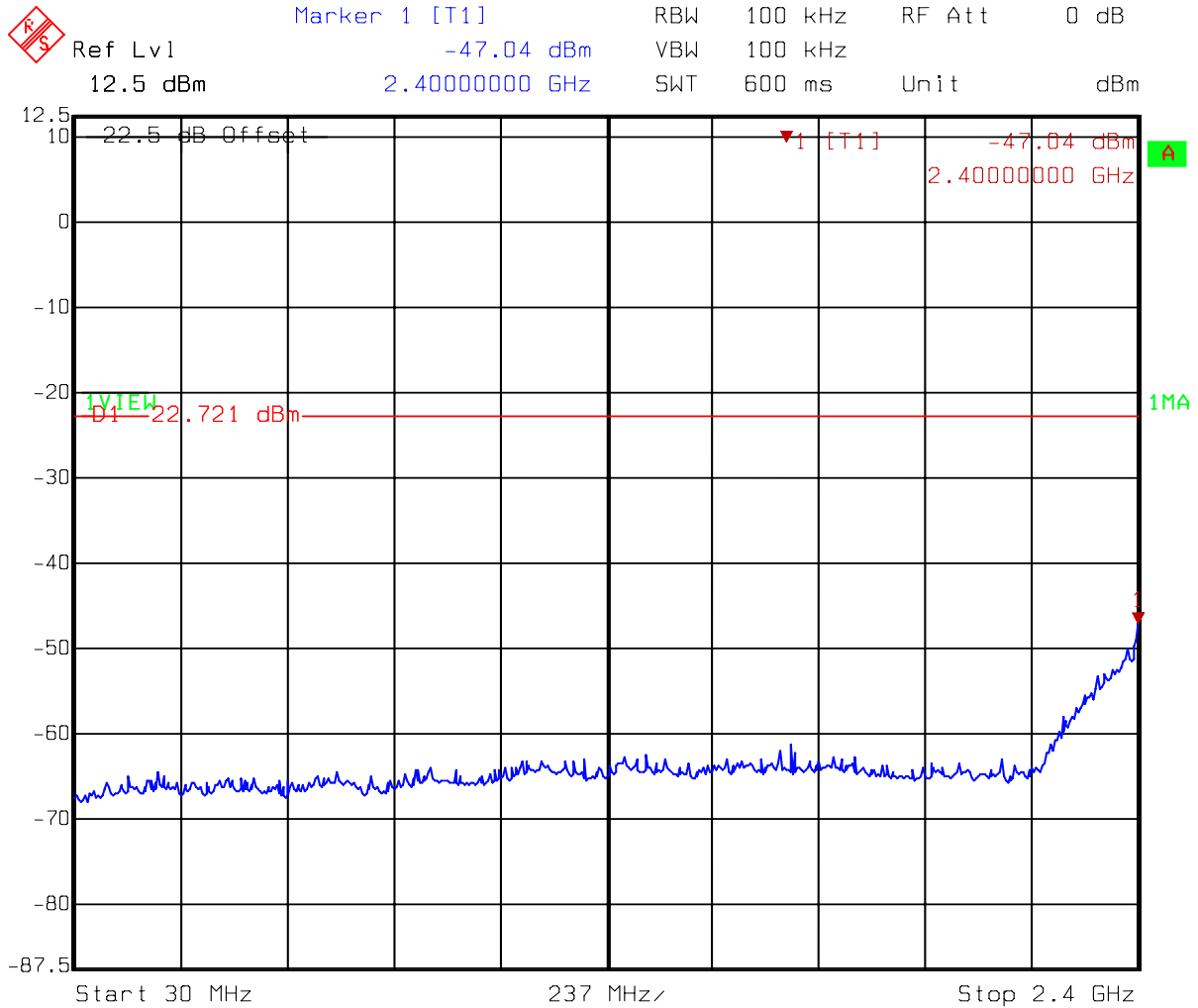
### Test Mode: 802.11n HT40 mode CH3



Title: Conductive-Spurious  
Comment A: CH 3 at 802.11n 40MHz mode  
Date: 17.APR.2008 12:08:24

## Chain C

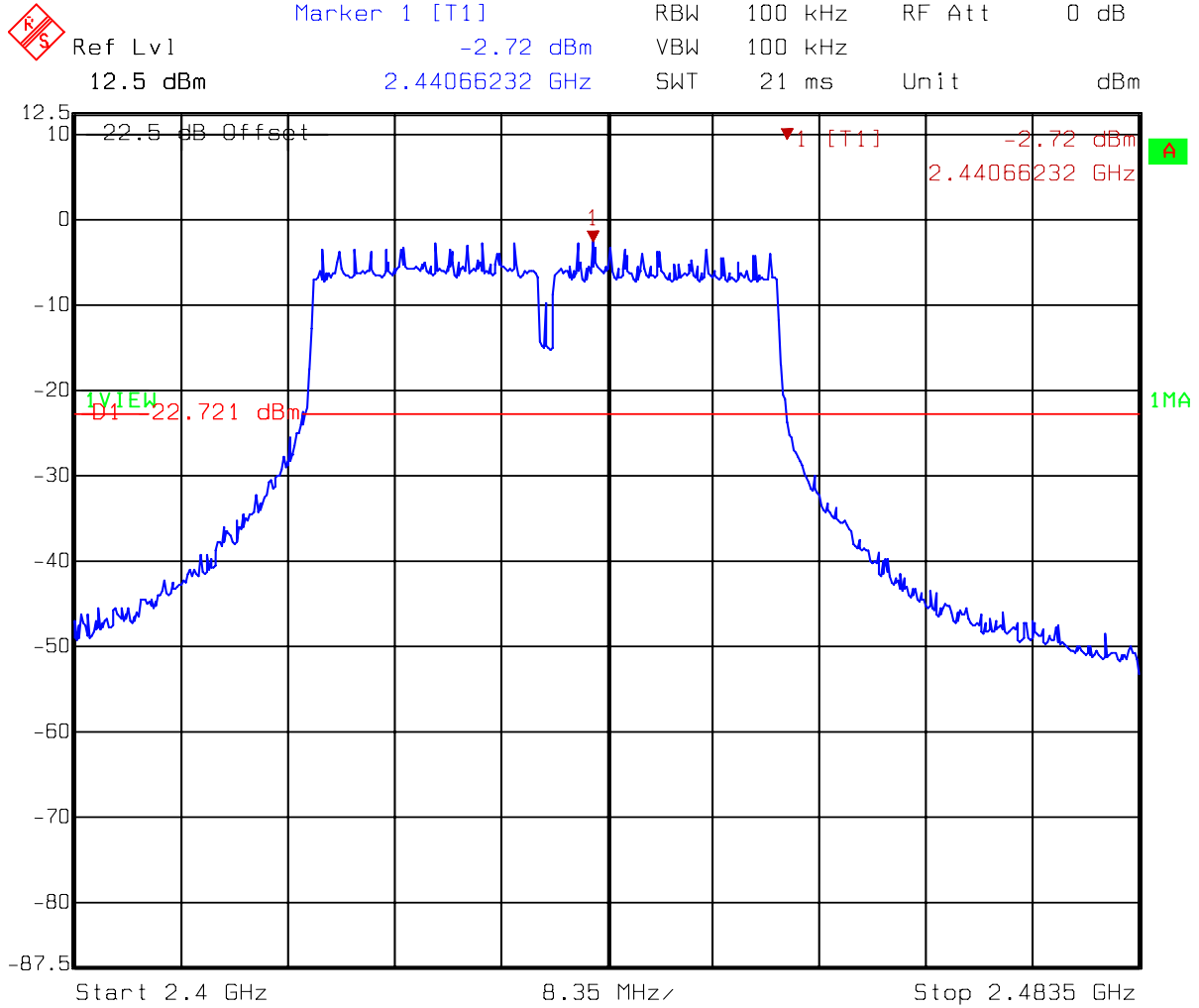
### Test Mode: 802.11n HT40 mode CH6



Title: Conductive-Spurious  
Comment A: CH 6 at 802.11n 40MHz mode  
Date: 17.APR.2008 12:10:49

## Chain C

### Test Mode: 802.11n HT40 mode CH6

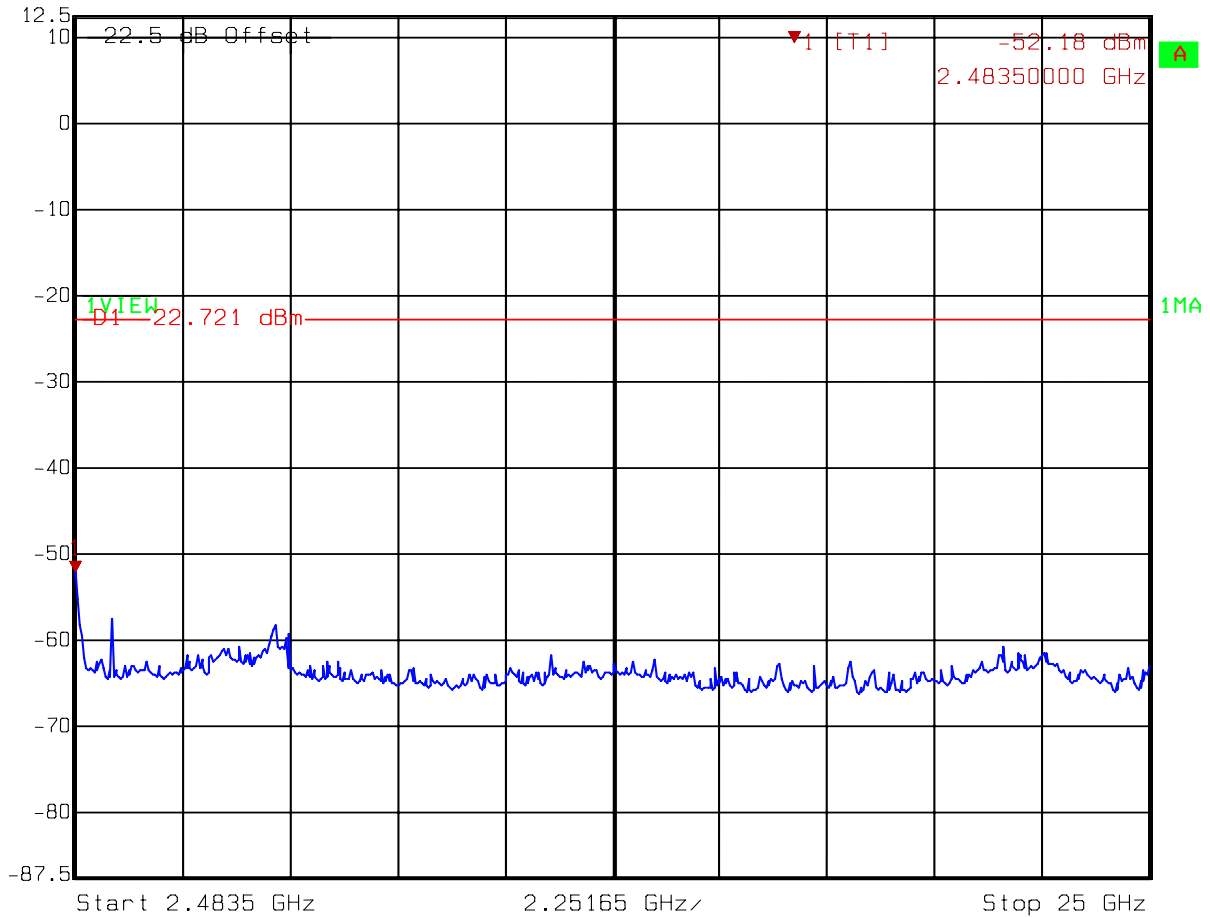


Title: Conductive-Spurious  
 Comment A: CH 6 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:10:27

## Chain C

### Test Mode: 802.11n HT40 mode CH6

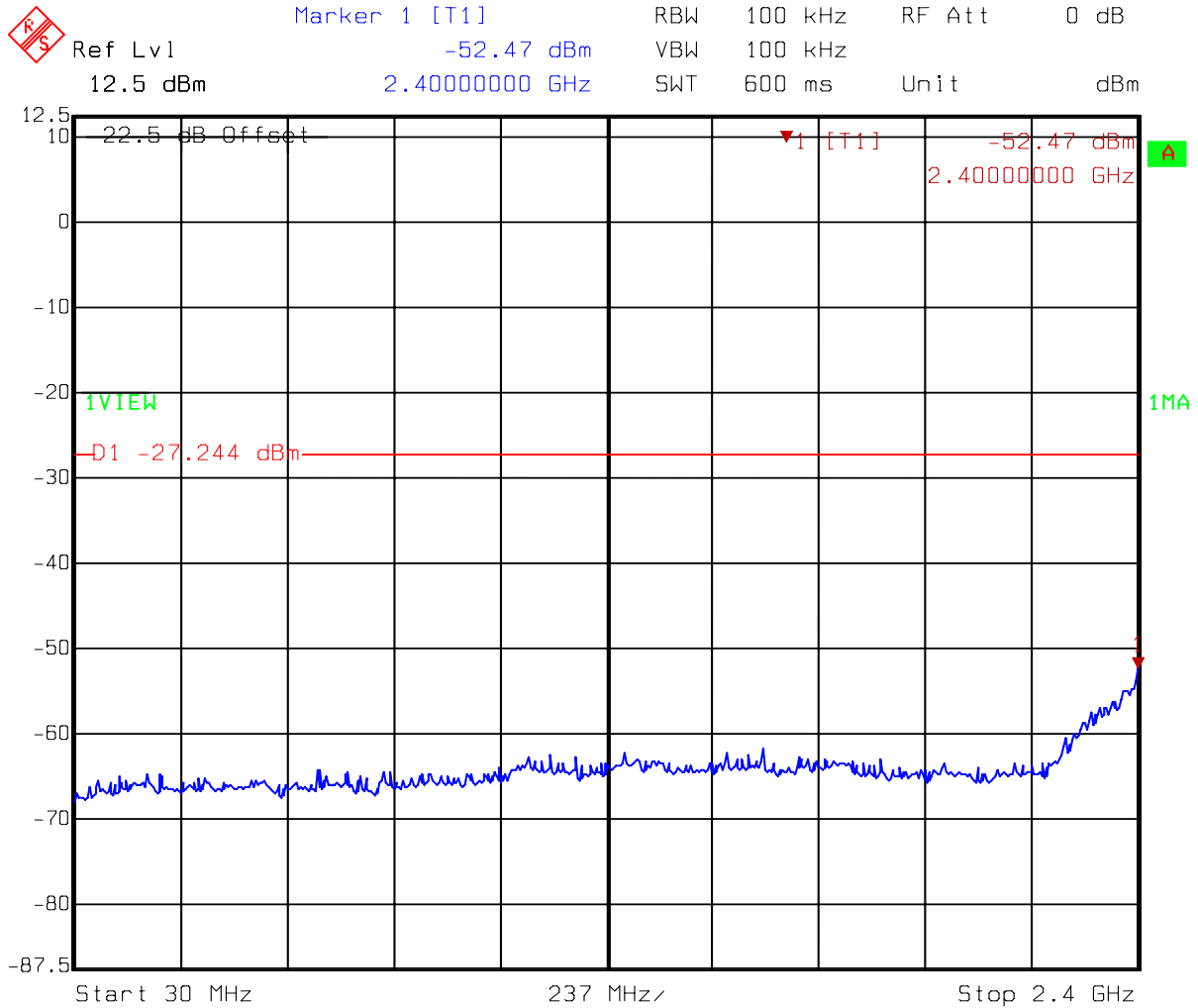
◆ S Ref Lvl 12.5 dBm      Marker 1 [T1] -52.18 dBm      RBW 100 kHz      RF Att 0 dB  
 -52.18 dBm      2.48350000 GHz      VBW 100 kHz  
 Unit dBm      SWT 5.8 s



Title: Conductive-Spurious  
 Comment A: CH 6 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:11:16

## Chain C

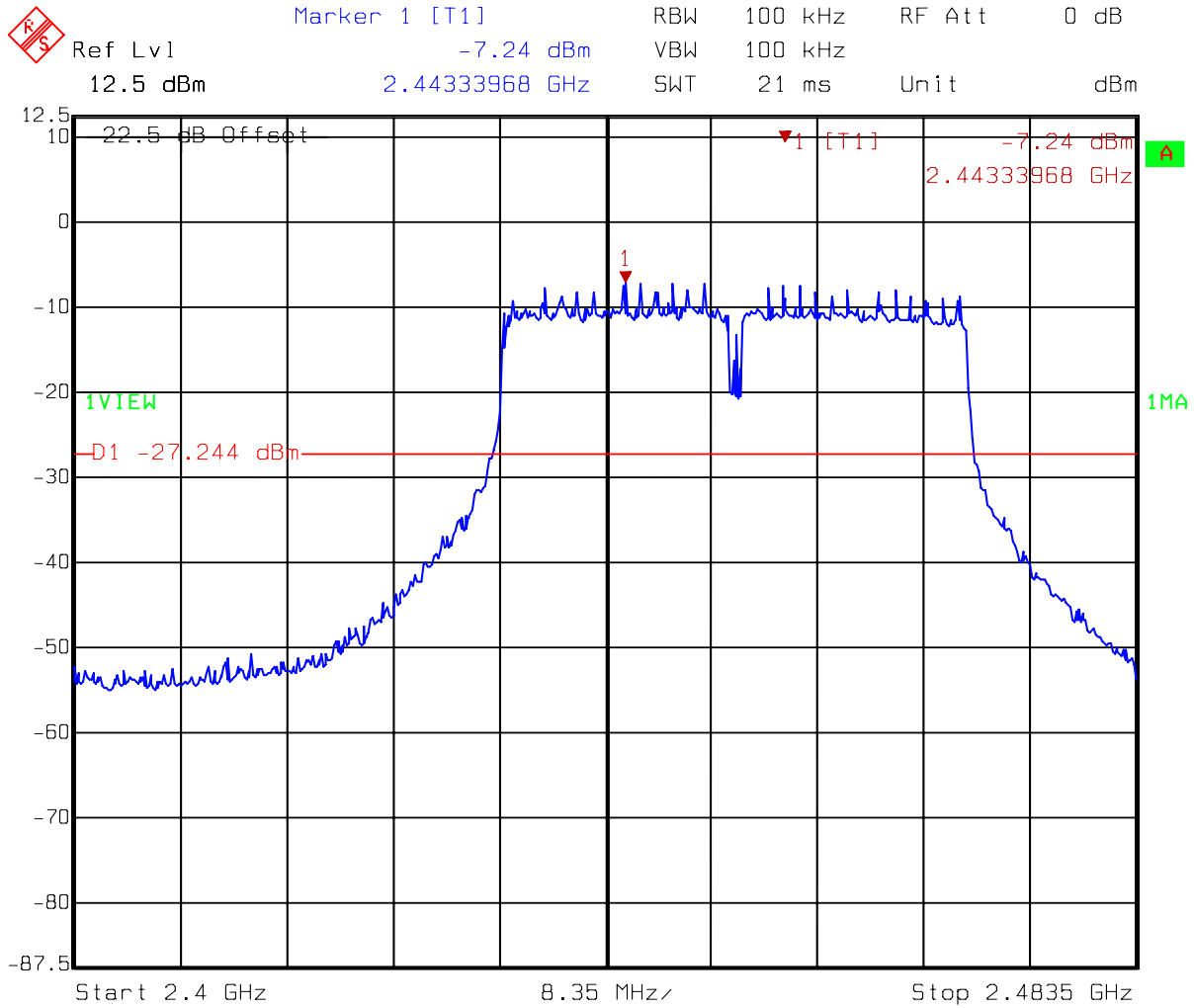
### Test Mode: 802.11n HT40 mode CH9



Title: Conductive-Spurious  
 Comment A: CH 9 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:24:39

**Chain C**

**Test Mode: 802.11n HT40 mode CH9**

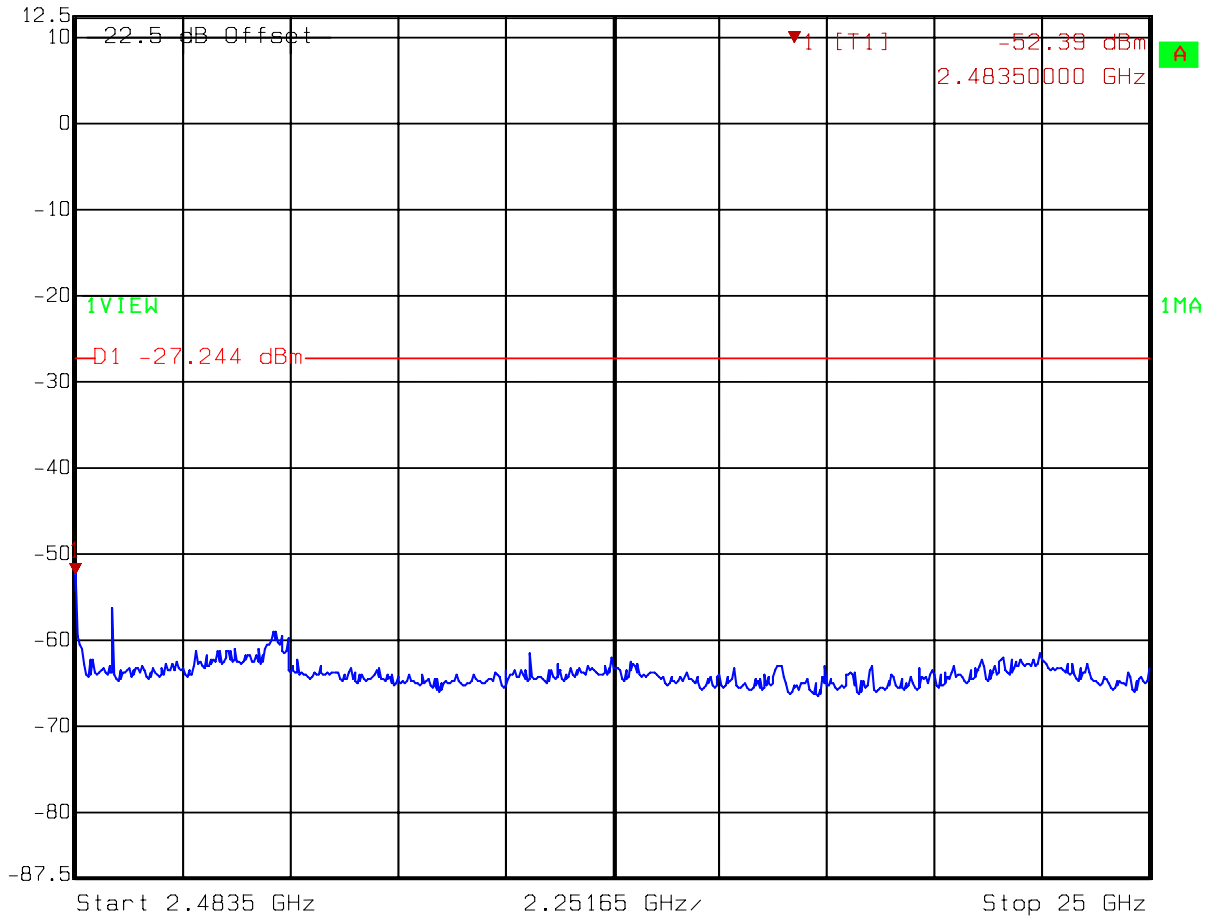


Title: Conductive-Spurious  
 Comment A: CH 9 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:24:18

## Chain C

### Test Mode: 802.11n HT40 mode CH9

◆ S Ref Lvl 12.5 dBm      Marker 1 [T1]      RBW 100 kHz      RF Att 0 dB  
 -52.39 dBm      VBW 100 kHz  
 2.48350000 GHz      SWT 5.8 s      Unit dBm



Title: Conductive-Spurious  
 Comment A: CH 9 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:25:06

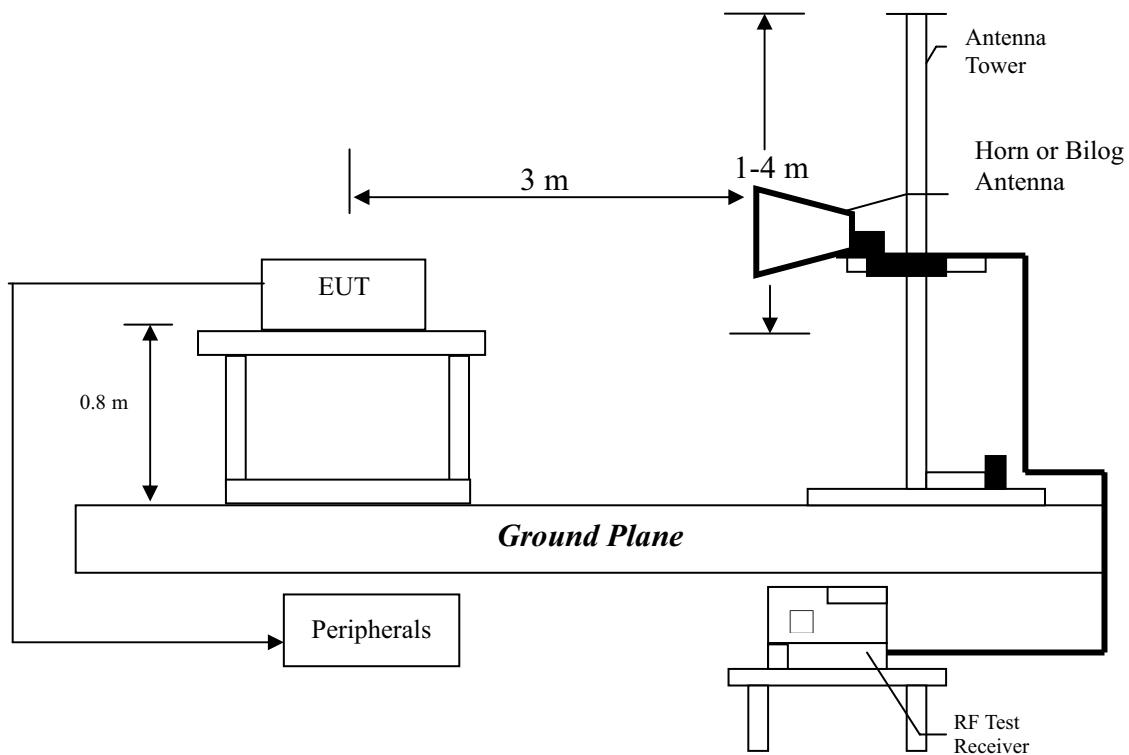
**6. Radiated Emission test**

**6.1 Operating environment**

Temperature: 25 °C  
 Relative Humidity: 55 %  
 Atmospheric Pressure: 1023 hPa

**6.2 Test setup & procedure**

The Diagram below shows the test setup, which is utilized to make these measurements.



The frequency range from 30MHz to 1000MHz using Bilog Antenna.  
 The frequency range over 1GHz using Horn Antenna.

Radiated emissions were investigated cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1MHz RBW/VBW) recorded also on the report.  
 The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.



The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent 3 meter reading using inverse scaling with distance.

The EUT configuration please refer to the “Spurious set-up photo.pdf”.

### 6.3 Emission limits

The spurious Emission shall test through the 10th harmonic. 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).

Frequency (MHz)	Limits (dB $\mu$ V/m@3m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

Uncertainty was calculated in accordance with NAMAS NIS 81.  
Expanded uncertainty (k=2) of radiated emission measurement is  $\pm 4.98$  dB.

## 6.4 Radiated spurious emission test data

### 6.4.1 Measurement results: frequencies equal to or less than 1 GHz

The test was performed on EUT under 802.11b/g/n continuously transmitting mode. The worst case occurred at 802.11b Tx channel 6.

EUT : NBG460NH  
 Worst Case : 802.11b Tx at channel 6

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	374.350	QP	15.06	18.07	33.13	46.00	-12.87
V	499.480	QP	18.43	16.02	34.45	46.00	-11.56
V	624.610	QP	20.75	14.24	34.99	46.00	-11.01
V	749.740	QP	22.74	17.20	39.94	46.00	-6.06
V	799.210	QP	23.19	13.92	37.11	46.00	-8.89
V	874.870	QP	23.70	10.77	34.47	46.00	-11.53
H	374.350	QP	15.48	21.72	37.20	46.00	-8.81
H	499.480	QP	18.64	19.28	37.92	46.00	-8.08
H	624.610	QP	20.88	14.15	35.03	46.00	-10.98
H	749.740	QP	22.95	16.41	39.36	46.00	-6.64
H	799.210	QP	23.52	11.98	35.50	46.00	-10.50
H	874.870	QP	24.12	9.39	33.51	46.00	-12.50

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

The test was performed on EUT under 802.11b/g/n continuously transmitting mode. Channel 1, 6, 11 were verified. The worst case occurred at 802.11b Tx channel 6.

EUT : NBG460N  
 Worst Case : 802.11b Tx at channel 6

Antenna Polariz. (V/H)	Freq. (MHz)	Receiver Detector	Corr. Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
V	249.220	QP	12.22	16.37	28.59	46.00	-17.42
V	374.350	QP	15.06	19.55	34.61	46.00	-11.39
V	499.480	QP	18.43	18.05	36.48	46.00	-9.53
V	624.610	QP	20.75	15.79	36.54	46.00	-9.46
V	799.210	QP	23.19	13.48	36.67	46.00	-9.33
V	1000.000	QP	25.44	12.90	38.34	54.00	-15.66
H	249.220	QP	12.36	24.80	37.16	46.00	-8.84
H	374.350	QP	15.48	20.31	35.79	46.00	-10.22
H	499.480	QP	18.64	19.84	38.48	46.00	-7.52
H	624.610	QP	20.88	14.68	35.56	46.00	-10.45
H	799.210	QP	23.52	12.47	35.99	46.00	-10.01
H	874.870	QP	24.12	12.27	36.39	46.00	-9.61

Remark:

1. Corr. Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Corr. Factor

### 6.4.2 Measurement results: frequency above 1GHz

EUT : NBG460NH  
 Test Condition : 802.11b Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4824.00	PK	V	36.07	37.77	46.42	48.12	54	-5.88
4824.00	PK	H	36.07	37.77	44.23	45.93	54	-8.07

EUT : NBG460NH  
 Test Condition : 802.11b Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4874.00	PK	V	36.07	37.77	49.7	51.4	54	-2.60
4874.00	PK	H	36.07	37.77	43.85	45.55	54	-8.45

**Remark:**

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.



EUT : NBG460NH  
Test Condition : 802.11b Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4924.00	PK	V	36.07	37.77	39.63	41.33	54	-12.67
4924.00	PK	H	36.07	37.77	39.86	41.56	54	-12.44

EUT : NBG460NH  
Test Condition : 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	35.54	34.62	44.07	43.15	54	-10.85
4824.00	PK	V	36.07	37.77	44.39	46.09	54	-7.91
3210.00	PK	H	35.54	34.62	43.81	42.89	54	-11.11
4824.00	PK	H	36.07	37.77	39.78	41.48	54	-12.52

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460NH  
 Test Condition : 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	35.54	34.62	45.33	44.41	54	-9.59
4874.00	PK	V	36.07	37.77	48.09	49.79	54	-4.21
3240.00	PK	H	35.54	34.62	46.29	45.37	54	-8.63
4874.00	PK	H	36.07	37.77	41.19	42.89	54	-11.11

EUT : NBG460NH  
 Test Condition : 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	35.54	34.62	41.39	40.47	54	-13.53
4924.00	PK	V	36.07	37.77	42.2	43.9	54	-10.10
3270.00	PK	H	35.54	34.62	43.88	42.96	54	-11.04
4924.00	PK	H	36.07	37.77	37.74	39.44	54	-14.56

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460NH  
 Test Condition : 802.11n HT20 Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	35.54	34.62	44.63	43.71	54	-10.29
4824.00	PK	V	36.07	37.77	41.9	43.6	54	-10.40
3210.00	PK	H	35.54	34.62	42.39	41.47	54	-12.53
4824.00	PK	H	36.07	37.77	39.44	41.14	54	-12.86

EUT : NBG460NH  
 Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	35.54	34.62	44.34	43.42	54	-10.58
4874.00	PK	V	36.07	37.77	43.44	45.14	54	-8.86
3240.00	PK	H	35.54	34.62	46.68	45.76	54	-8.24
4874.00	PK	H	36.07	37.77	39.93	41.63	54	-12.37

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.



EUT : NBG460NH  
Test Condition : 802.11n HT20 Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	35.54	34.62	41.42	40.5	54	-13.50
4924.00	PK	V	36.07	37.77	40.24	41.94	54	-12.06
3270.00	PK	H	35.54	34.62	41.49	40.57	54	-13.43
4924.00	PK	H	36.07	37.77	37.37	39.07	54	-14.93

EUT : NBG460NH  
Test Condition : 802.11n HT40 Tx at channel 3

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	35.54	34.62	43.27	42.35	54	-11.65
4844.00	PK	V	36.07	37.77	38.32	40.02	54	-13.98
3210.00	PK	H	35.54	34.62	46.16	45.24	54	-8.76
4844.00	PK	H	36.07	37.77	38.07	39.77	54	-14.23

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.



EUT : NBG460NH  
 Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	35.54	34.62	44.15	43.23	54	-10.77
4874.00	PK	V	36.07	37.77	39.39	41.09	54	-12.91
3240.00	PK	H	35.54	34.62	44.34	43.42	54	-10.58
4874.00	PK	H	36.07	37.77	39.27	40.97	54	-13.03

EUT : NBG460NH  
 Test Condition : 802.11n HT40 Tx at channel 9

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	35.54	34.62	41.92	41	54	-13.00
4904.00	PK	V	36.07	37.77	37.31	39.01	54	-14.99
3270.00	PK	H	35.54	34.62	42.3	41.38	54	-12.62
4904.00	PK	H	36.07	37.77	38.09	39.79	54	-14.21

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460N  
 Test Condition : 802.11b Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4824.00	PK	V	36.07	37.77	54.53	56.23	74	-17.77
4824.00	AV	V	36.07	37.77	51.79	53.49	54	-0.51
4824.00	PK	H	36.07	37.77	41.28	42.98	54	-11.02

EUT : NBG460N  
 Test Condition : 802.11b Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4874.00	PK	V	36.07	37.77	47.96	49.66	54	-4.34
4874.00	PK	H	36.07	37.77	41.59	43.29	54	-10.71

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460N  
 Test Condition : 802.11b Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
4924.00	PK	V	36.07	37.77	41.12	42.82	54	-11.18
4924.00	PK	H	36.07	37.77	38.18	39.88	54	-14.12

EUT : NBG460N  
 Test Condition : 802.11g Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	35.54	34.62	44.27	43.35	54	-10.65
4824.00	PK	V	36.07	37.77	40.92	42.62	54	-11.38
4824.00	PK	H	36.07	37.77	37.83	39.53	54	-14.47

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460N  
 Test Condition : 802.11g Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	35.54	34.62	47.67	46.75	54	-7.25
4874.00	PK	V	36.07	37.77	45.46	47.16	54	-6.84
4874.00	PK	H	36.07	37.77	38.16	39.86	54	-14.14

EUT : NBG460N  
 Test Condition : 802.11g Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	35.54	34.62	43.38	42.46	54	-11.54
4924.00	PK	V	36.07	37.77	37.75	39.45	54	-14.55
4924.00	PK	H	36.07	37.77	37.36	39.06	54	-14.94

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460N  
 Test Condition : 802.11n HT20 Tx at channel 1

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	35.54	34.62	46.04	45.12	54	-8.88
4824.00	PK	V	36.07	37.77	45.98	47.68	54	-6.32
4824.00	PK	H	36.07	37.77	37.92	39.62	54	-14.38

EUT : NBG460N  
 Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	35.54	34.62	50.1	49.18	54	-4.82
4874.00	PK	V	36.07	37.77	48.32	50.02	54	-3.98
4874.00	PK	H	36.07	37.77	39.82	41.52	54	-12.48

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.



EUT : NBG460N  
Test Condition : 802.11n HT20 Tx at channel 11

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	35.54	34.62	44.07	43.15	54	-10.85
4924.00	PK	V	36.07	37.77	39.02	40.72	54	-13.28
4924.00	PK	H	36.07	37.77	38.92	40.62	54	-13.38

EUT : NBG460N  
Test Condition : 802.11n HT40 Tx at channel 3

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3210.00	PK	V	35.54	34.62	46.54	45.62	54	-8.38
4844.00	PK	V	36.07	37.77	36.96	38.66	54	-15.34
4844.00	PK	H	36.07	37.77	37.38	39.08	54	-14.92

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.

EUT : NBG460N  
 Test Condition : 802.11n HT20 Tx at channel 6

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3240.00	PK	V	35.54	34.62	46.76	45.84	54	-8.16
4874.00	PK	V	36.07	37.77	36.13	37.83	54	-16.17
4874.00	PK	H	36.07	37.77	35.67	37.37	54	-16.63

EUT : NBG460N  
 Test Condition : 802.11n HT40 Tx at channel 9

Frequency (MHz)	Spectrum Analyzer Detector	Antenna Polariz. (H/V)	Preamp. Gain (dB)	Correction Factor (dB/m)	Reading (dBuV)	Corrected Level (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3270.00	PK	V	35.54	34.62	46	45.08	54	-8.92
4904.00	PK	V	36.07	37.77	38.82	40.52	54	-13.48
4904.00	PK	H	36.07	37.77	38.83	40.53	54	-13.47

Remark:

1. Correction Factor = Antenna Factor + Cable Loss
2. Corrected Level = Reading + Correction Factor – Preamp. Gain
3. The frequency measured ranges from 1GHz to 25GHz. The data value listed above which is higher than the noise floor, the others please refer to noise floor level.



## 7. Power Spectrum Density test

### 7.1 Operating environment

Temperature: 20 °C  
 Relative Humidity: 49 %  
 Atmospheric Pressure 1023 hPa

### 7.2 Test setup & procedure

The power spectrum density per FCC §15.247(e) and KDB558074 was measured from the antenna port of the EUT using a 50ohm spectrum analyzer with the resolution bandwidth set at 3kHz, the video bandwidth set at 10kHz, a span of 1.5MHz, and the sweep time set at 500 seconds. Power Density was read directly correction was added to the reading to obtain power at the EUT antenna terminals. The test was performed at 3 channels (lowest, middle and highest channel). The Power Spectral Density measured result is in the following table.

### 7.3 Measured data of Power Spectrum Density test results

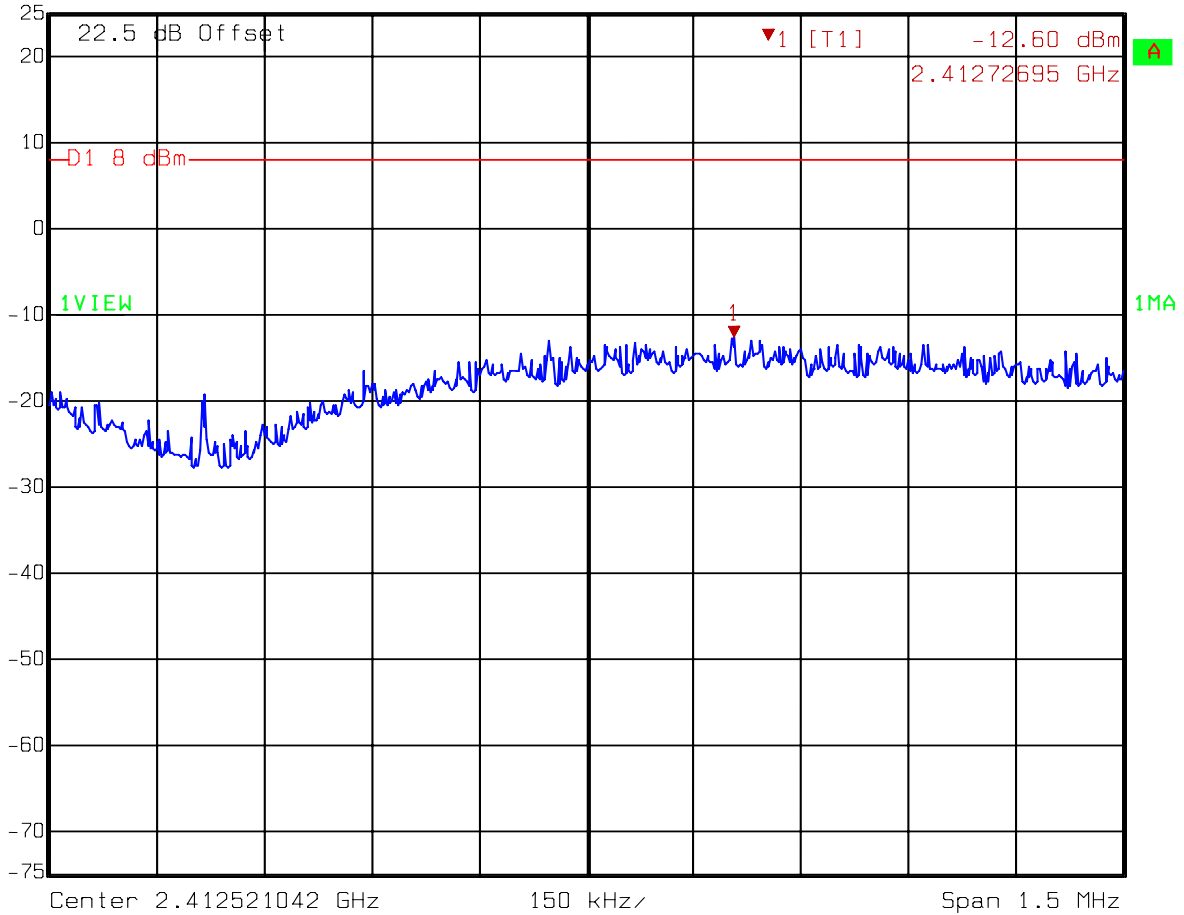
Mode	Channel	Frequency (MHz)	Data rate Mbps	PPSD (dBm)			Total PPSD		Limit (dBm)	Margin (dB)
				Chain A	Chain B	ChainC	mW	dBm		
11b	1	2412	1	-12.60	-10.87	-10.85	0.22	-6.60	8	-14.60
	6	2437		-8.52	-8.27	-8.48	0.43	-3.65	8	-11.65
	11	2462		-11.60	-11.90	-12.97	0.18	-7.35	8	-15.35
11g	1	2412	6	-14.7	-13.51	-12.83	0.13	-8.84	8	-16.84
	6	2437		-11.39	-10.63	-10.39	0.25	-6.01	8	-14.01
	11	2462		-15.12	-15.42	-17.26	0.08	-11.06	8	-19.06
11n HT20	1	2412	6.5	-15.62	-14.88	-14.49	0.10	-10.20	8	-18.20
	6	2437		-10.64	-10.79	-10.09	0.27	-5.72	8	-13.72
	11	2462		-16.58	-15.86	-15.30	0.08	-11.11	8	-19.11
11n HT40	3	2422	13.5	-18.85	-18.92	-19.78	0.04	-14.39	8	-22.39
	6	2437		-16.54	-16.60	-16.06	0.07	-11.62	8	-19.62
	9	2452		-21.50	-21.04	-20.58	0.02	-16.25	8	-24.25

Please see the plot below.




**Chain A**  
**Test mode: 802.11b mode CH1**

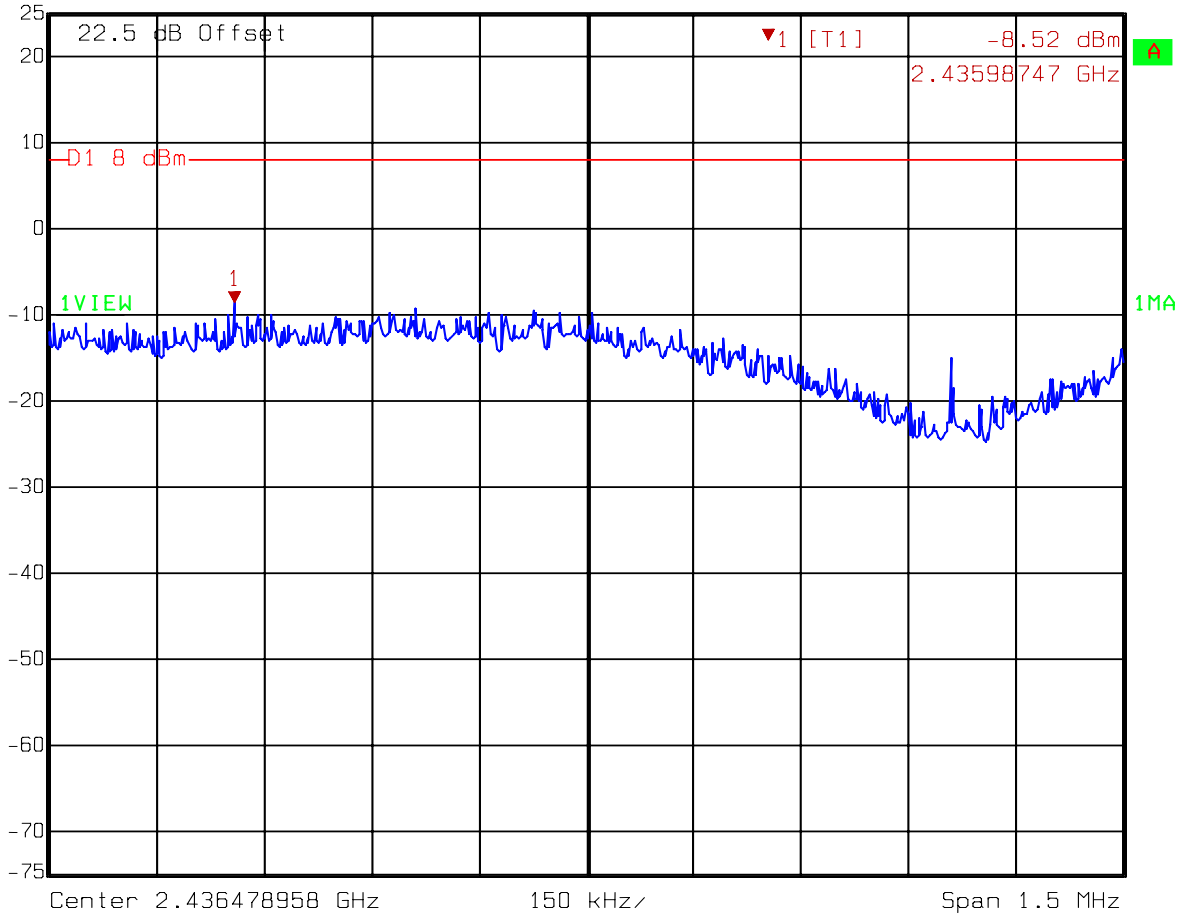
	Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	25 dBm	-12.60 dBm	VBW	10 kHz		
		2.41272695 GHz	SWT	500 s	Unit	dBm



Title: Power density  
 Comment A: CH 1 at 802.11b mode  
 Date: 17.APR.2008 10:26:20

**Chain A**  
**Test mode: 802.11b mode CH6**

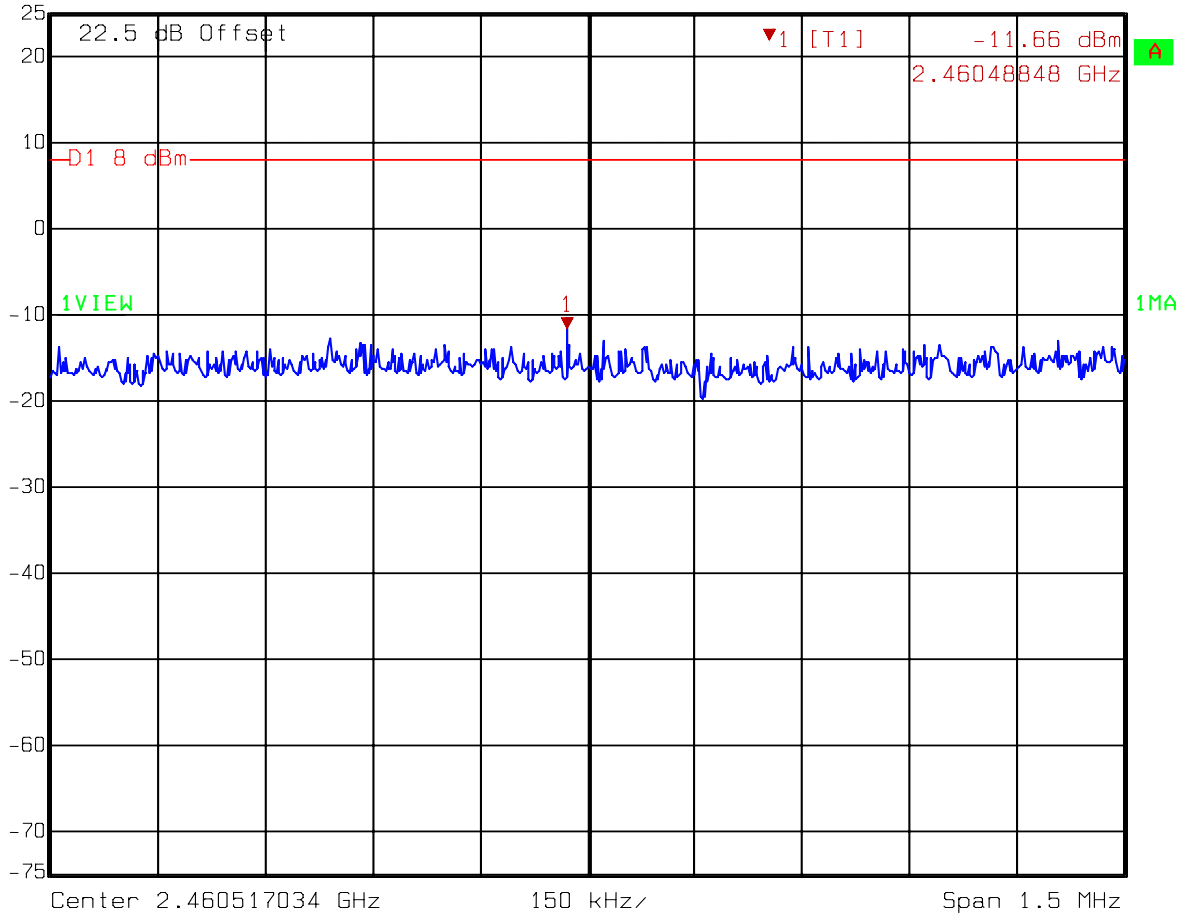
	Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	25 dBm	-8.52 dBm	VBW	10 kHz		
		2.43598747 GHz	SWT	500 s	Unit	dBm



Title: Power density  
 Comment A: CH 6 at 802.11b mode  
 Date: 17.APR.2008 10:45:50


**Chain A**  
**Test mode: 802.11b mode CH11**

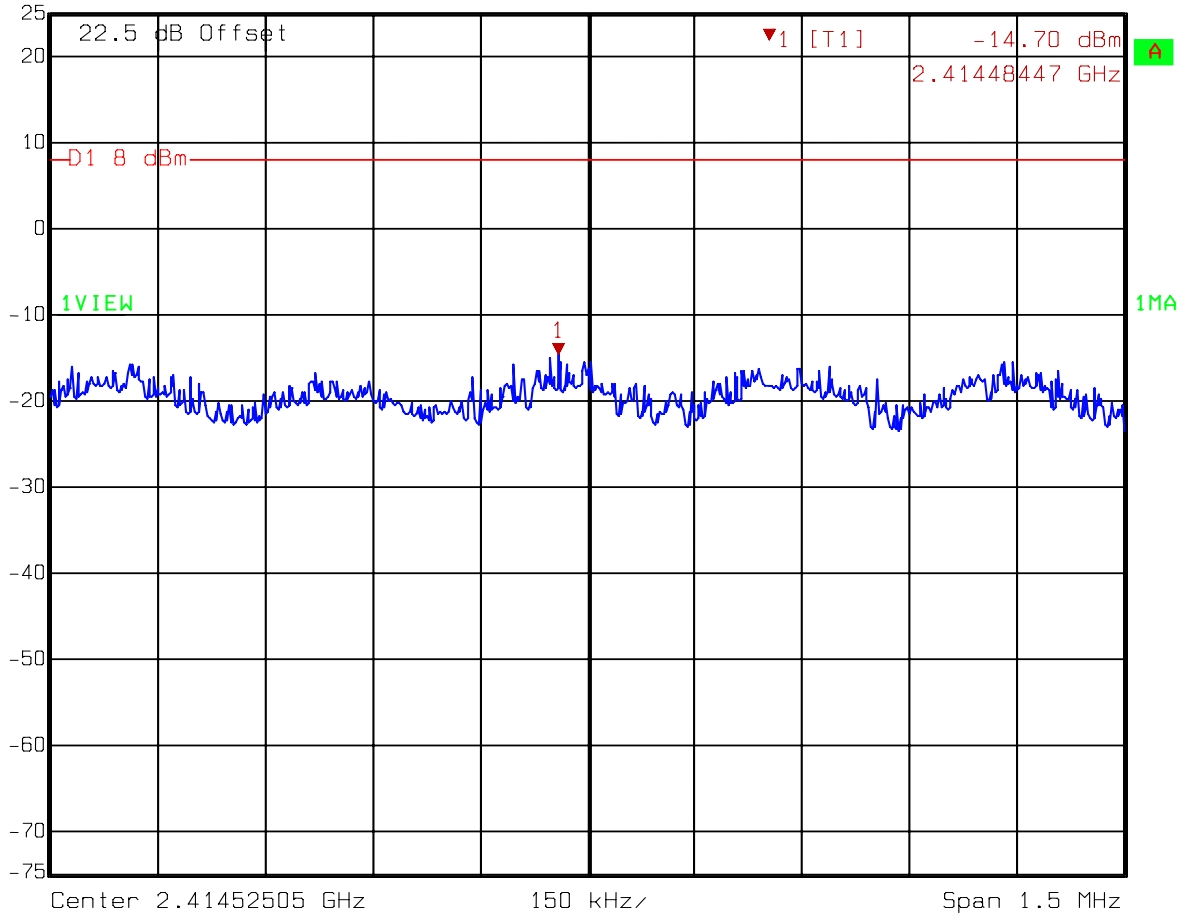
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-11.66 dBm	VBW	10 kHz	
	25 dBm	2.46048848 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 11 at 802.11b mode  
 Date: 17.APR.2008 10:49:27

**Chain A**  
**Test mode: 802.11g mode CH1**

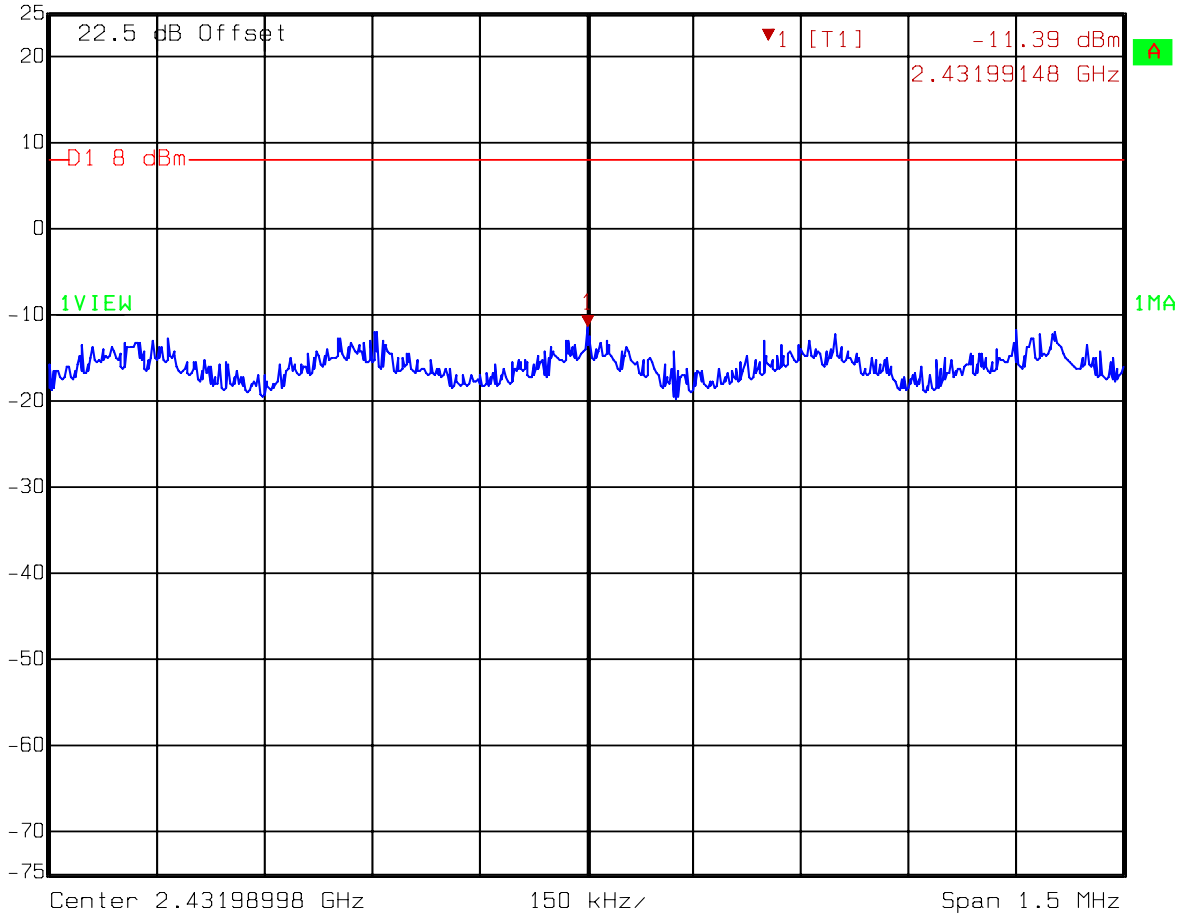
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-14.70 dBm	VBW	10 kHz	
	25 dBm	2.41448447 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11g mode  
 Date: 17.APR.2008 11:01:19


**Chain A**  
**Test mode: 802.11g mode CH6**

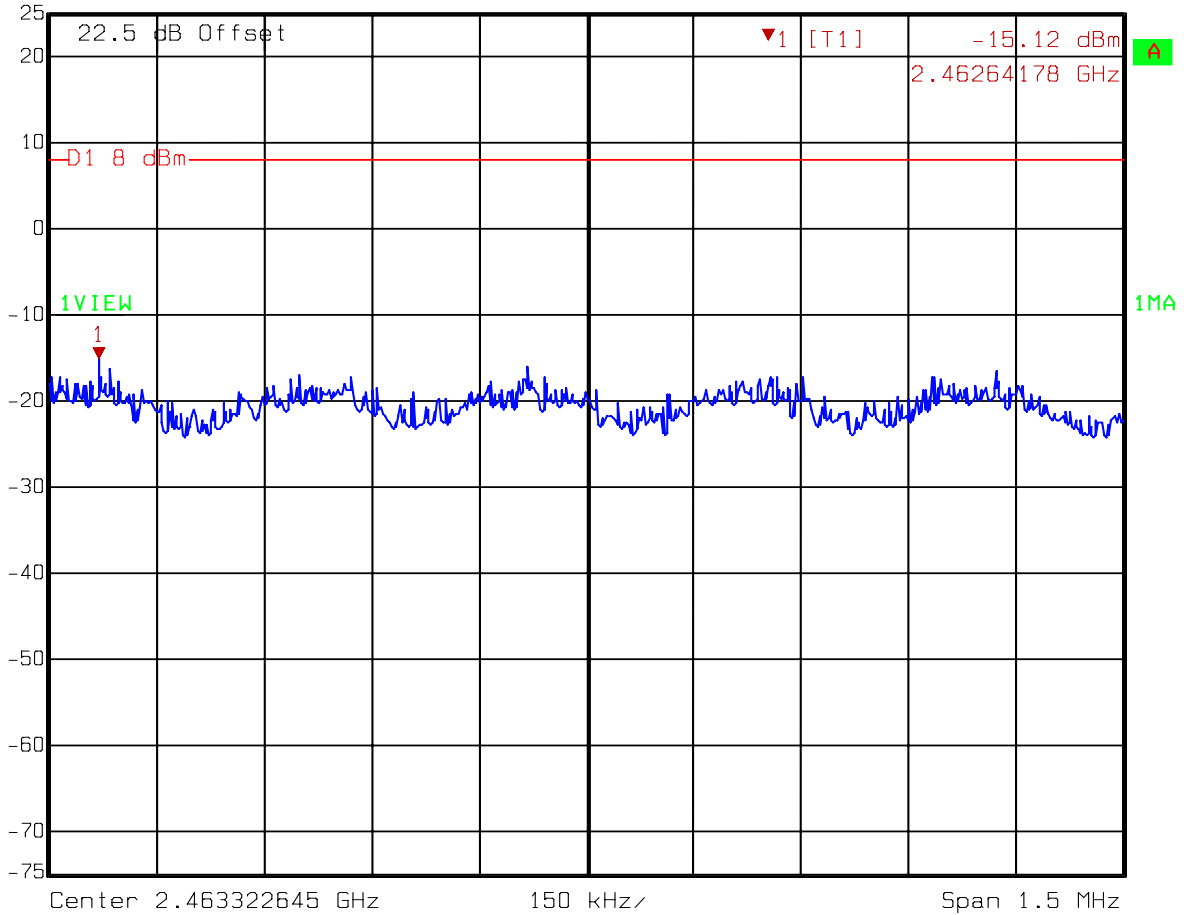
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-11.39 dBm	VBW	10 kHz	
	25 dBm	2.43199148 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11g mode  
 Date: 17.APR.2008 11:17:13


**Chain A**  
**Test mode: 802.11g mode CH11**

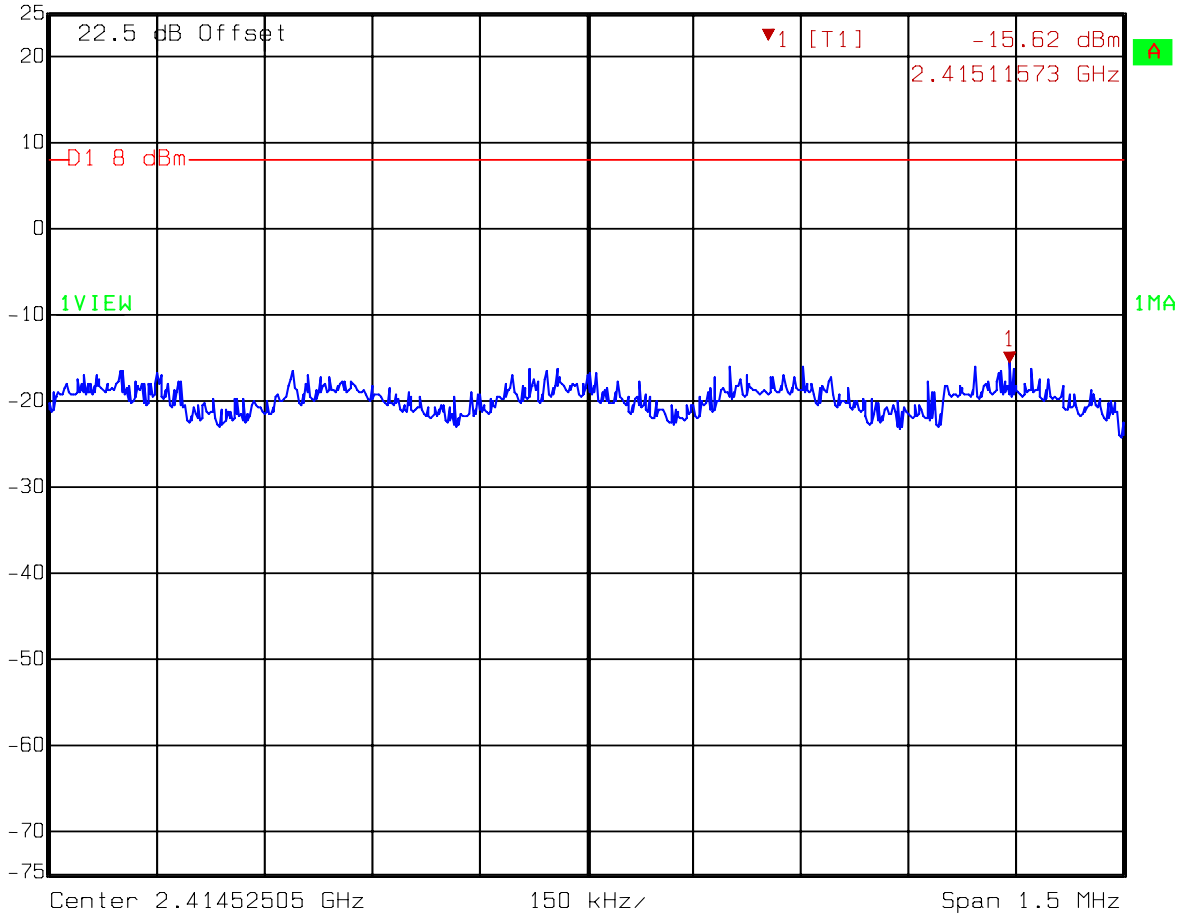
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-15.12 dBm	VBW	10 kHz	
	25 dBm	2.46264178 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 11 at 802.11g mode  
 Date: 17.APR.2008 11:20:16

**Chain A**  
**Test mode: 802.11n HT20 mode CH1**

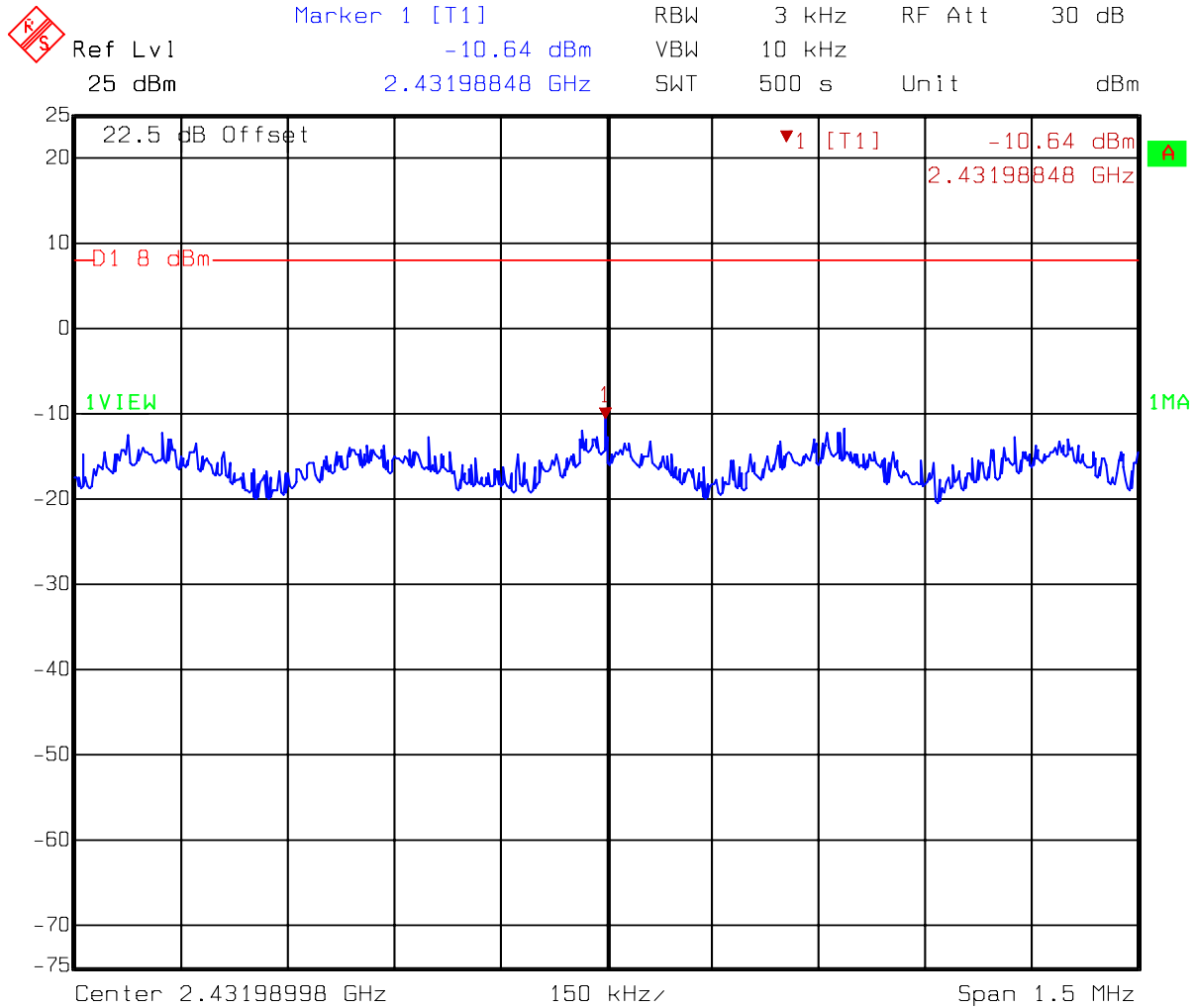
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-15.62 dBm	VBW	10 kHz	
	25 dBm	2.41511573 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:30:45



**Chain A**  
**Test mode: 802.11n HT20 mode CH6**

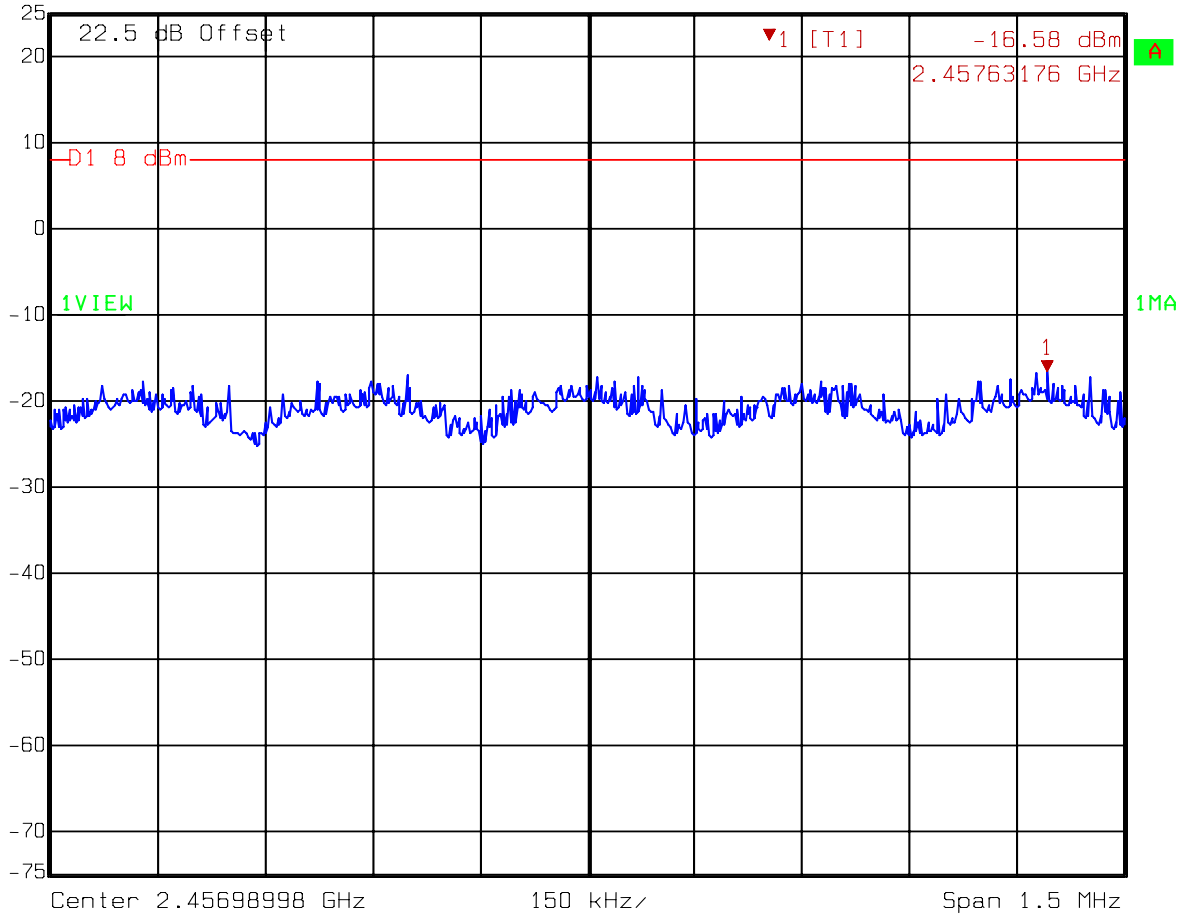


Title: Power density  
Comment A: CH 6 at 802.11n 20MHz mode  
Date: 17.APR.2008 11:39:35




**Chain A**  
**Test mode: 802.11n HT20 mode CH11**

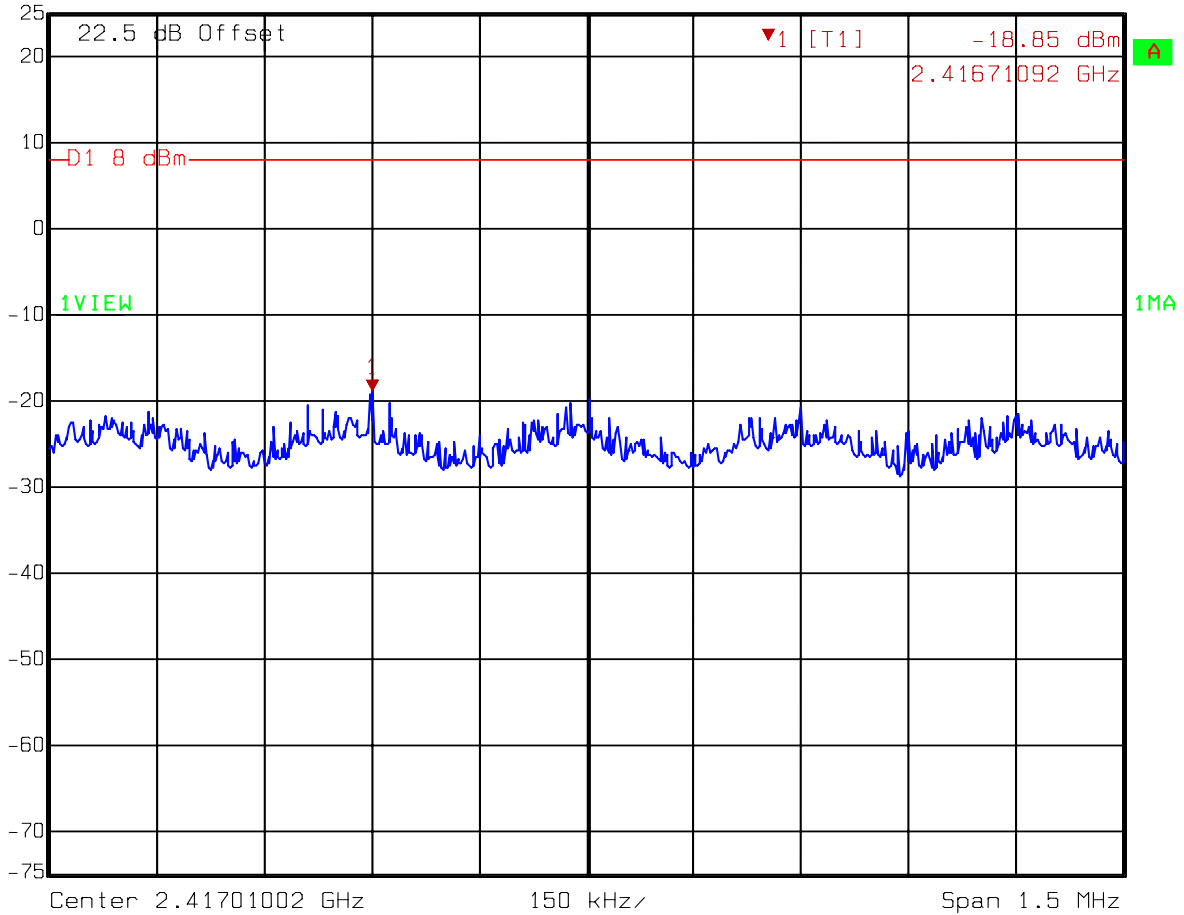
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-16.58 dBm	VBW	10 kHz	
	25 dBm	2.45763176 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 11 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:58:47

**Chain A**  
**Test mode: 802.11n HT40 mode CH3**

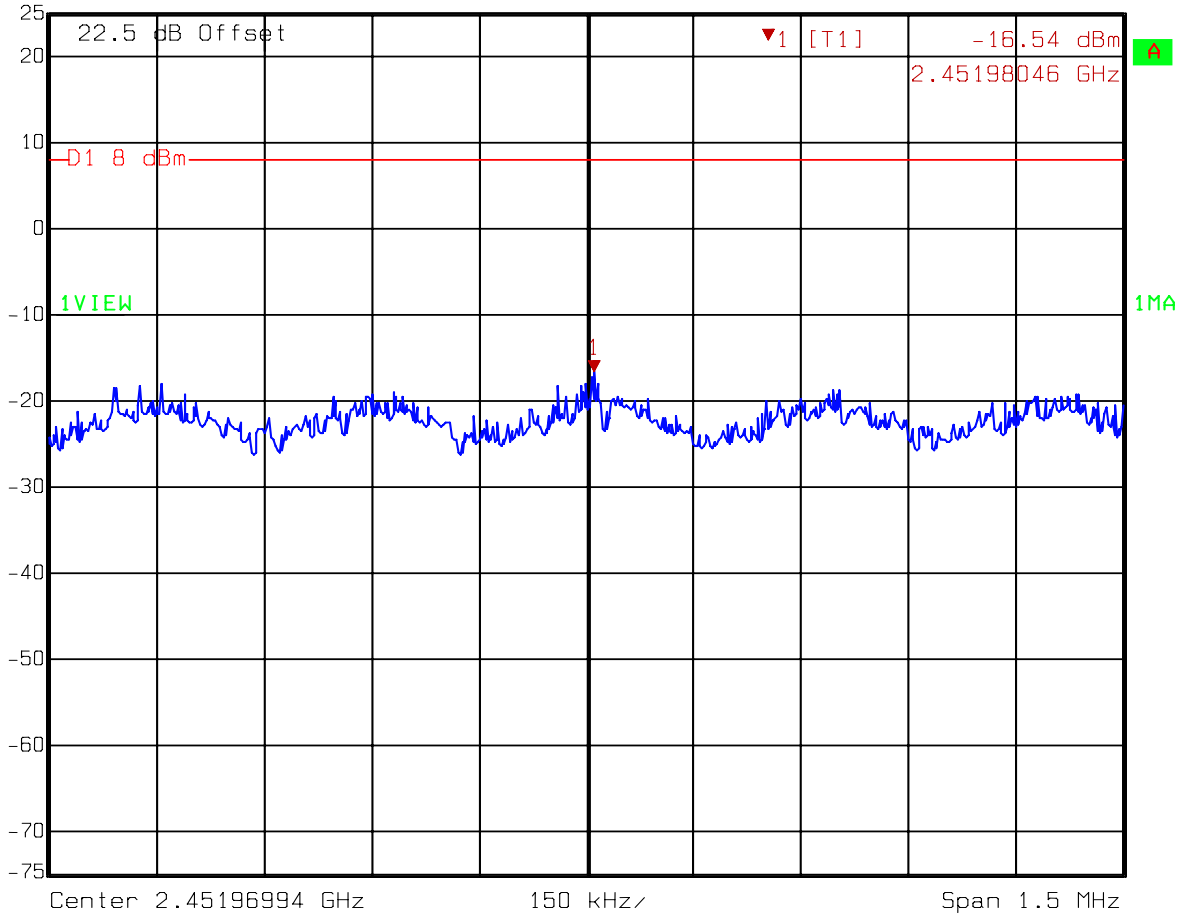
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-18.85 dBm	VBW	10 kHz	
	25 dBm	2.41671092 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 3 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:02:05


**Chain A**  
**Test mode: 802.11n HT40 mode CH6**

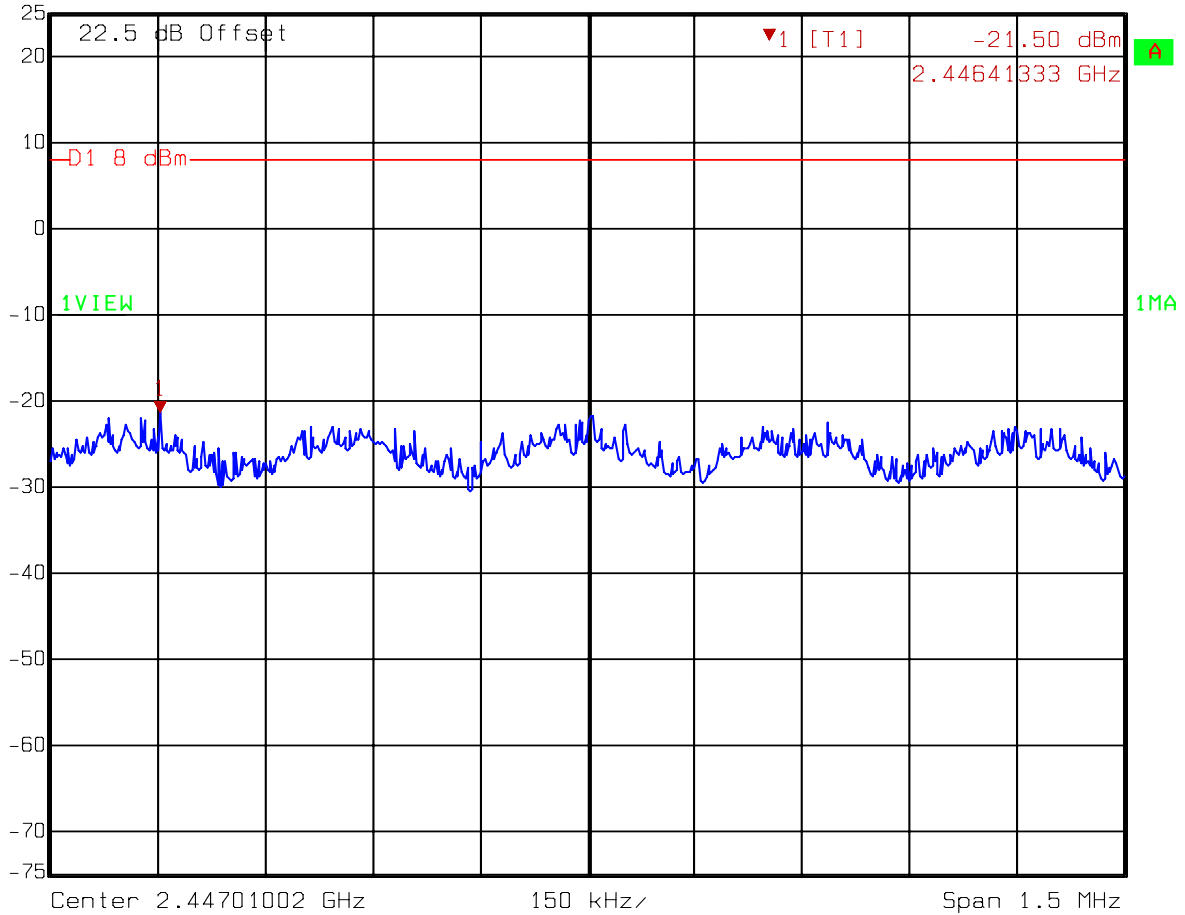
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-16.54 dBm	VBW	10 kHz	
	25 dBm	2.45198046 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:15:25


**Chain A**  
**Test mode: 802.11n HT40 mode CH9**

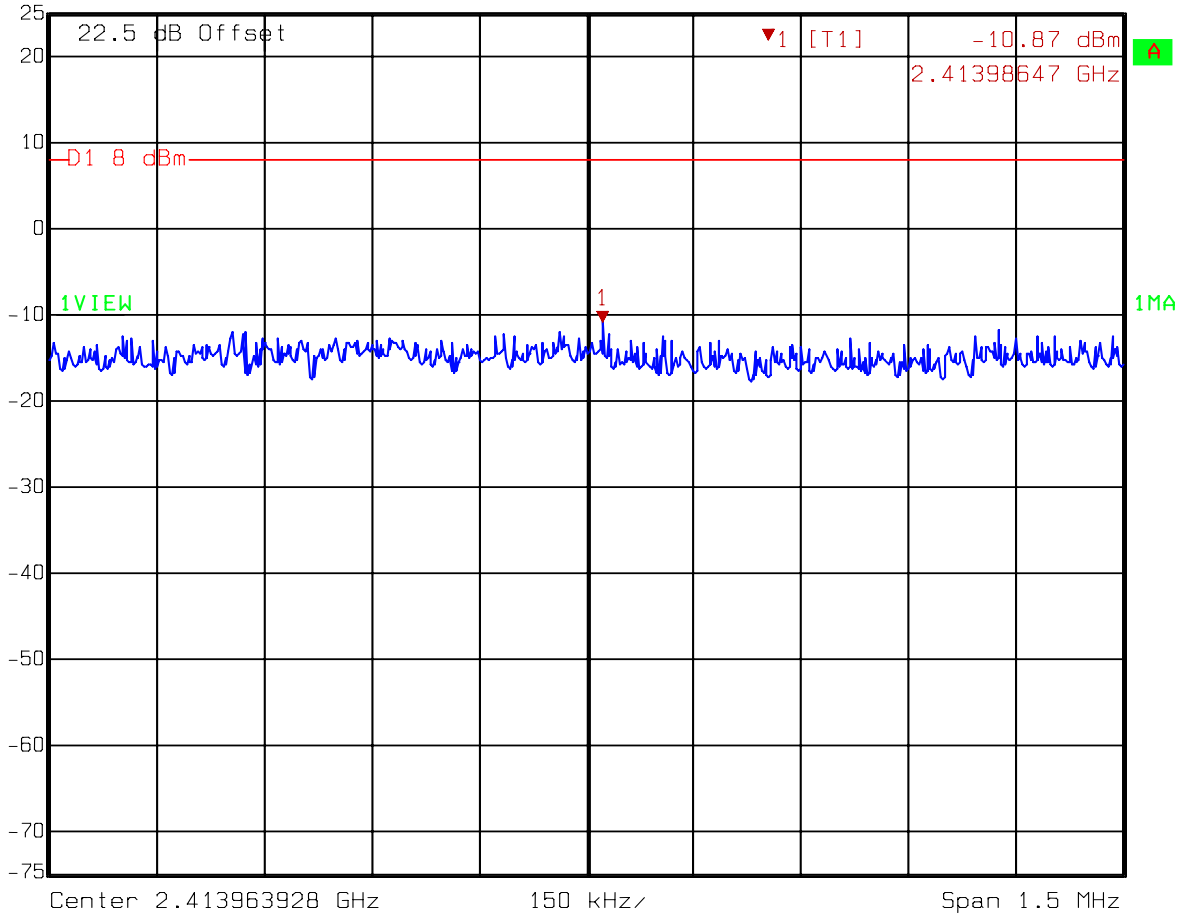
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-21.50 dBm	VBW	10 kHz	
	25 dBm	2.44641333 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 9 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:18:47


**Chain B**  
**Test mode: 802.11b mode CH1**

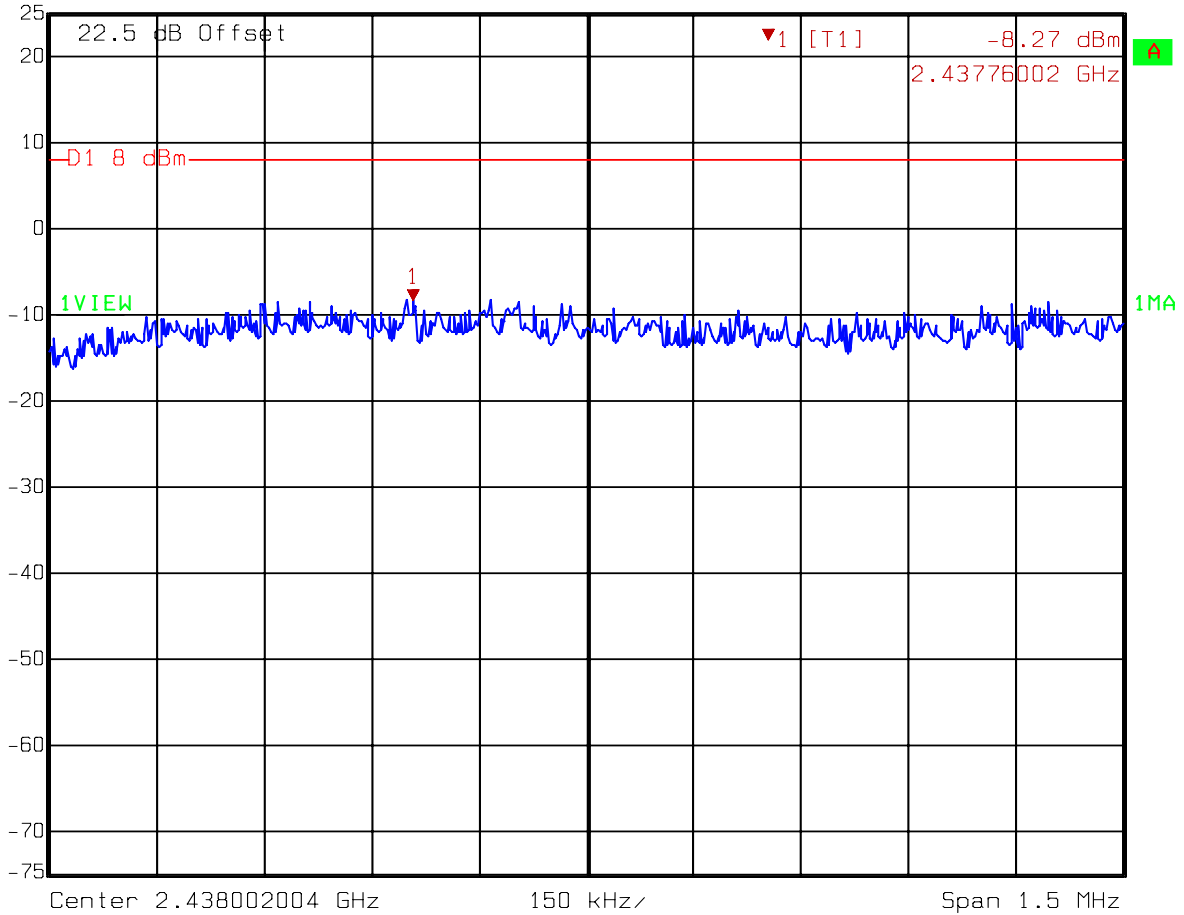
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-10.87 dBm	VBW	10 kHz	
	25 dBm	2.41398647 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11b mode  
 Date: 17.APR.2008 10:30:14


**Chain B**  
**Test mode: 802.11b mode CH6**

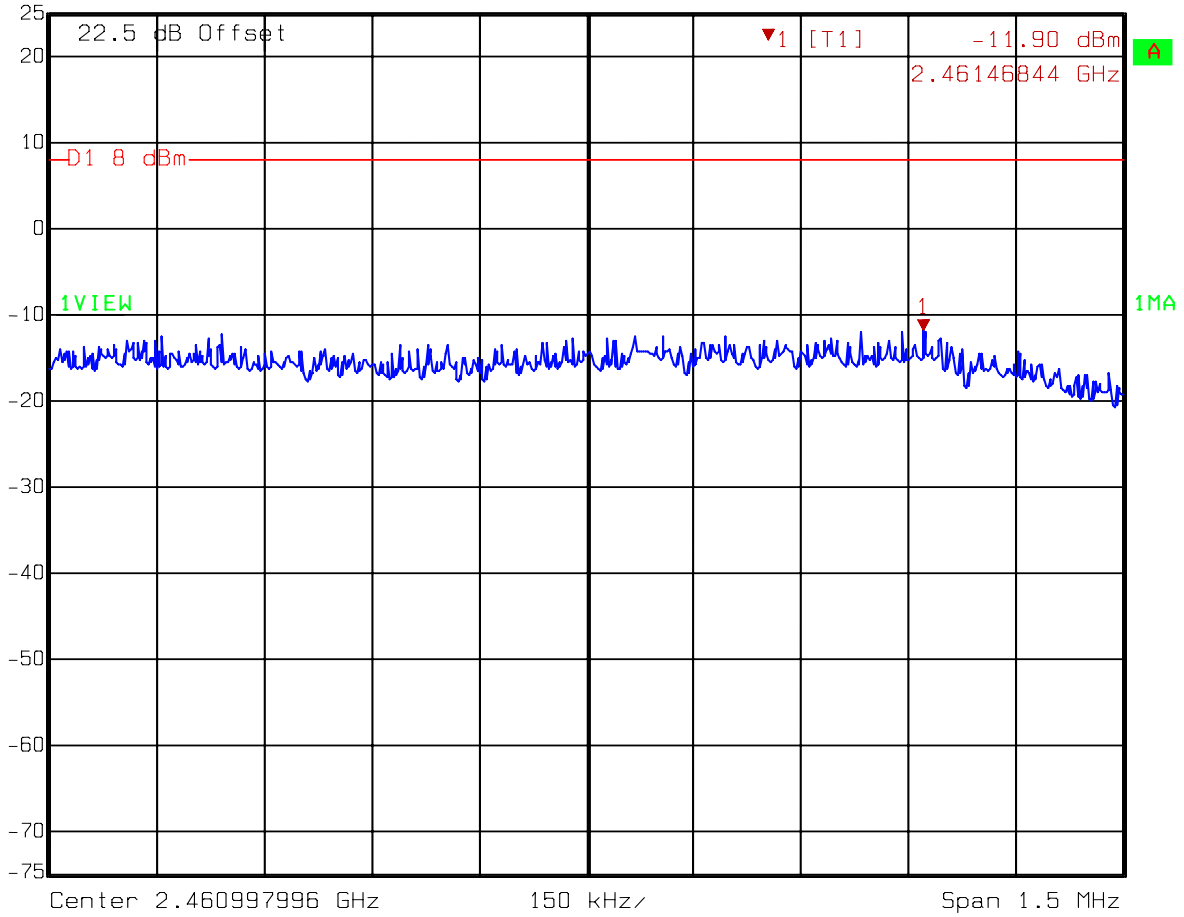
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-8.27 dBm	VBW	10 kHz	
	25 dBm	2.43776002 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11b mode  
 Date: 17.APR.2008 10:43:12

**Chain B**  
**Test mode: 802.11b mode CH11**

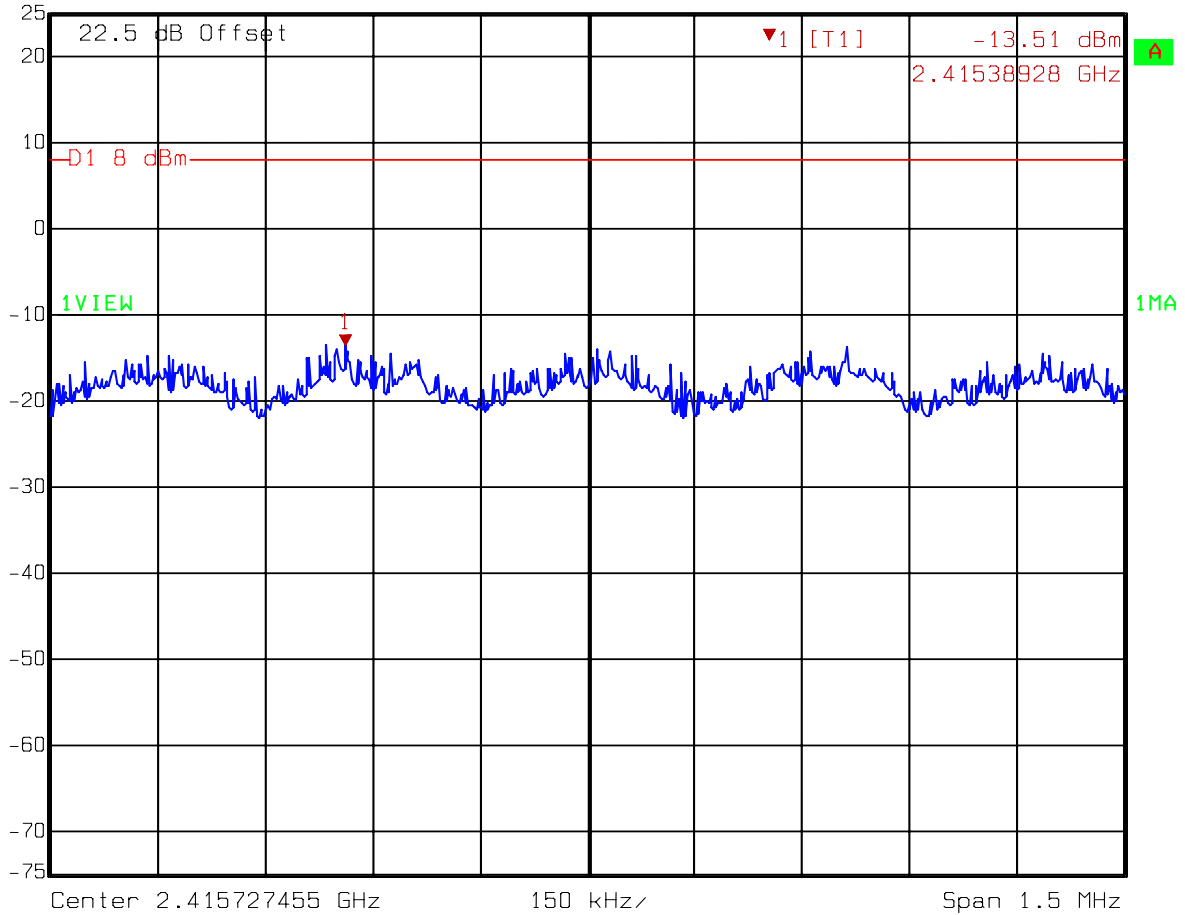
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-11.90 dBm	VBW	10 kHz	
	25 dBm	2.46146844 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 11 at 802.11b mode  
 Date: 17.APR.2008 10:52:00

**Chain B**  
**Test mode: 802.11g mode CH1**

	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-13.51 dBm	VBW	10 kHz	
	25 dBm	2.41538928 GHz	SWT	500 s	Unit dBm

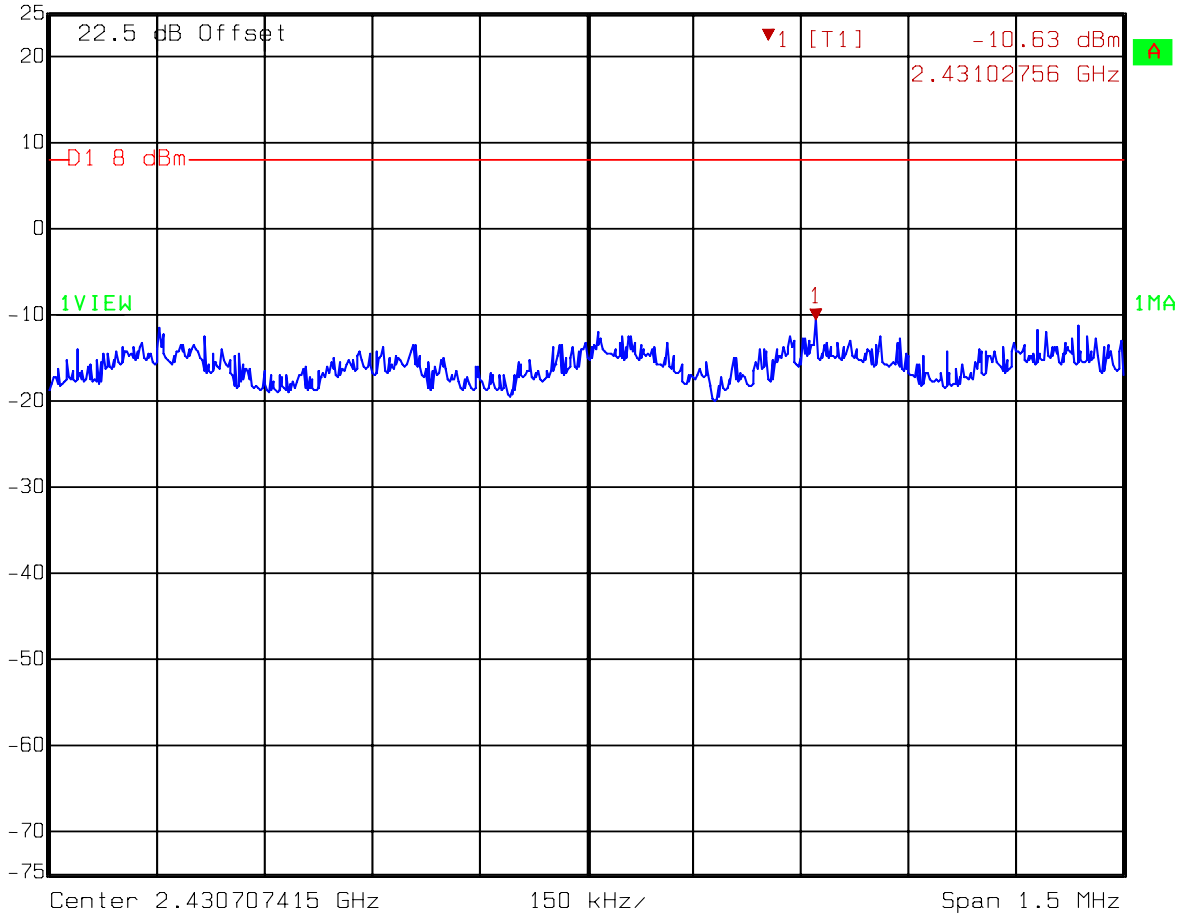


Title: Power density  
 Comment A: CH 1 at 802.11g mode  
 Date: 17.APR.2008 11:04:52




**Chain B**  
**Test mode: 802.11g mode CH6**

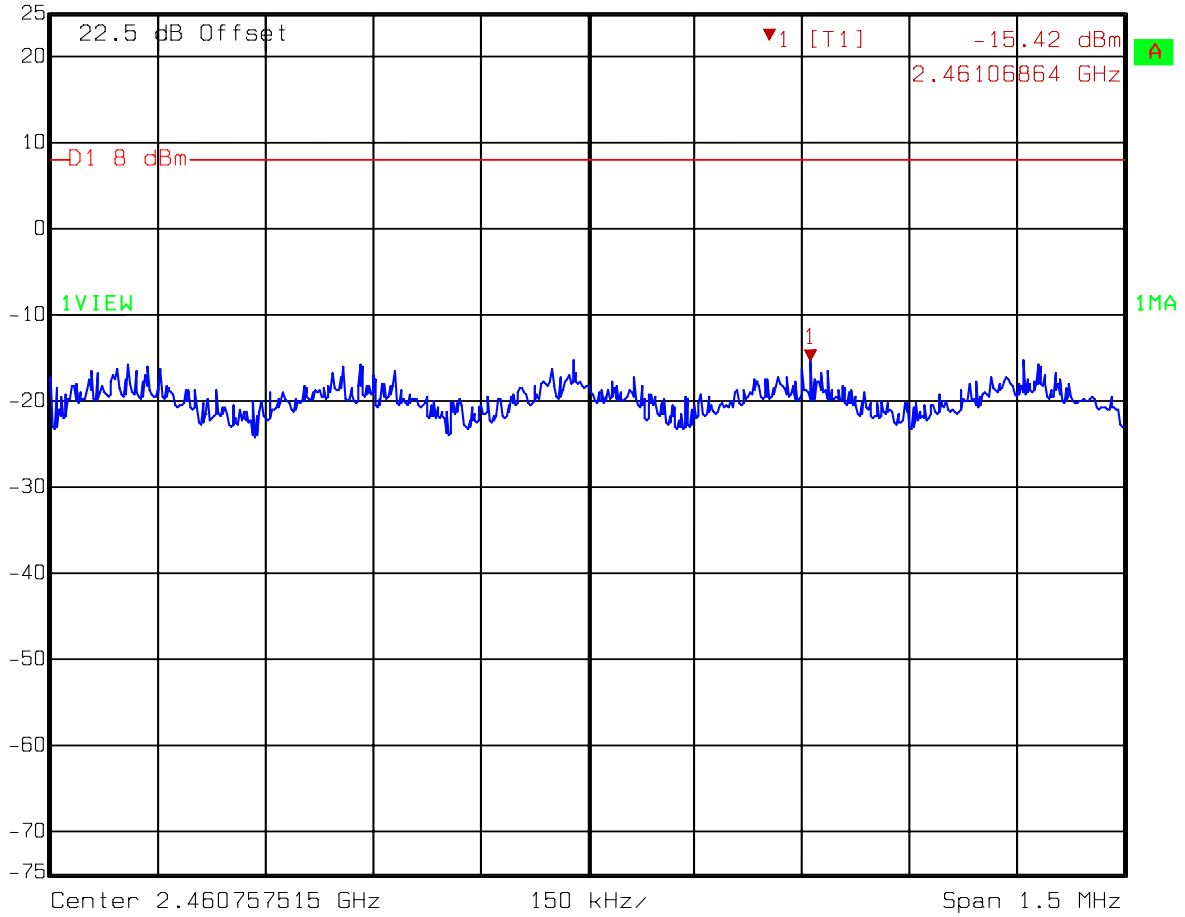
	Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	25 dBm	-10.63 dBm	VBW	10 kHz		
		2.43102756 GHz	SWT	500 s	Unit	dBm



Title: Power density  
 Comment A: CH 6 at 802.11g mode  
 Date: 17.APR.2008 11:14:25

**Chain B**  
**Test mode: 802.11g mode CH11**

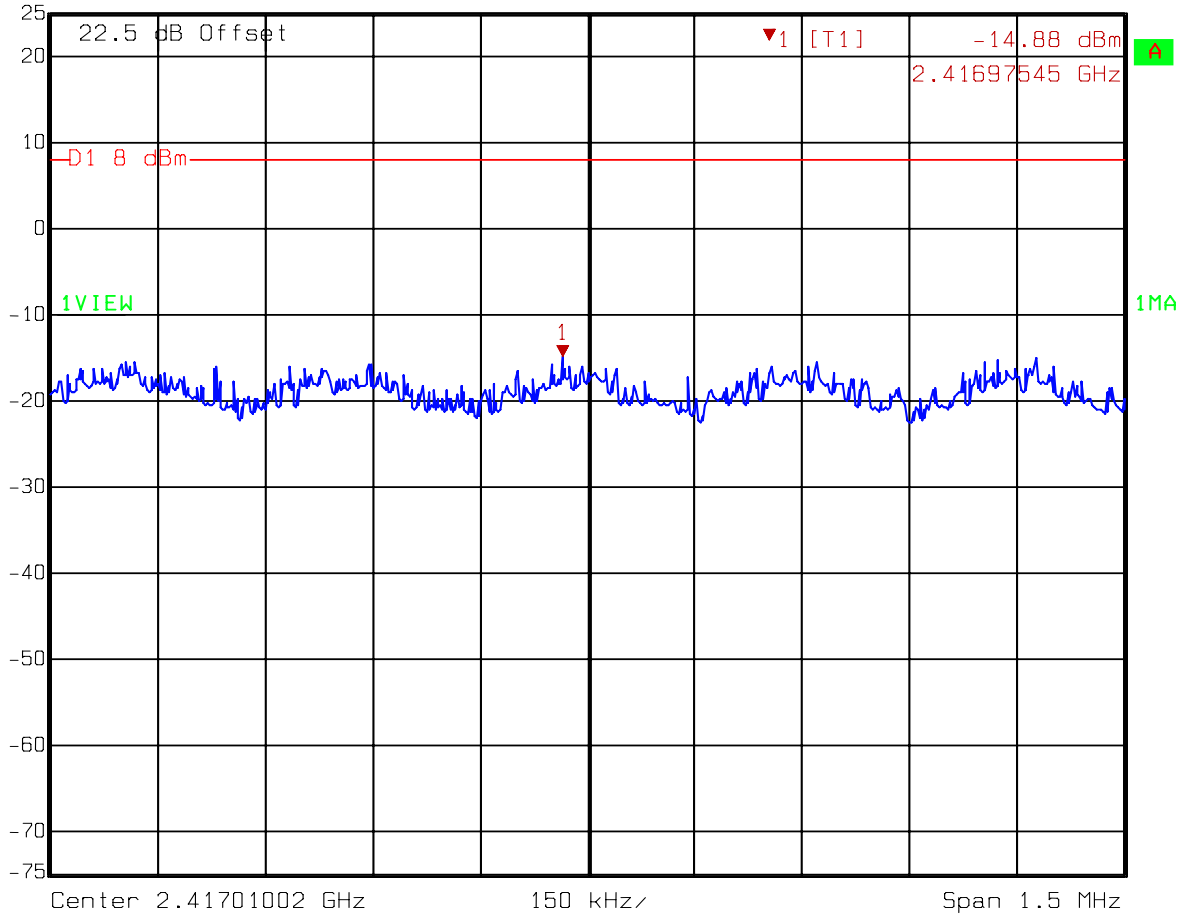
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-15.42 dBm	VBW	10 kHz	
	25 dBm	2.46106864 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 11 at 802.11g mode  
 Date: 17.APR.2008 11:24:13

**Chain B**  
**Test mode: 802.11n HT20 mode CH1**

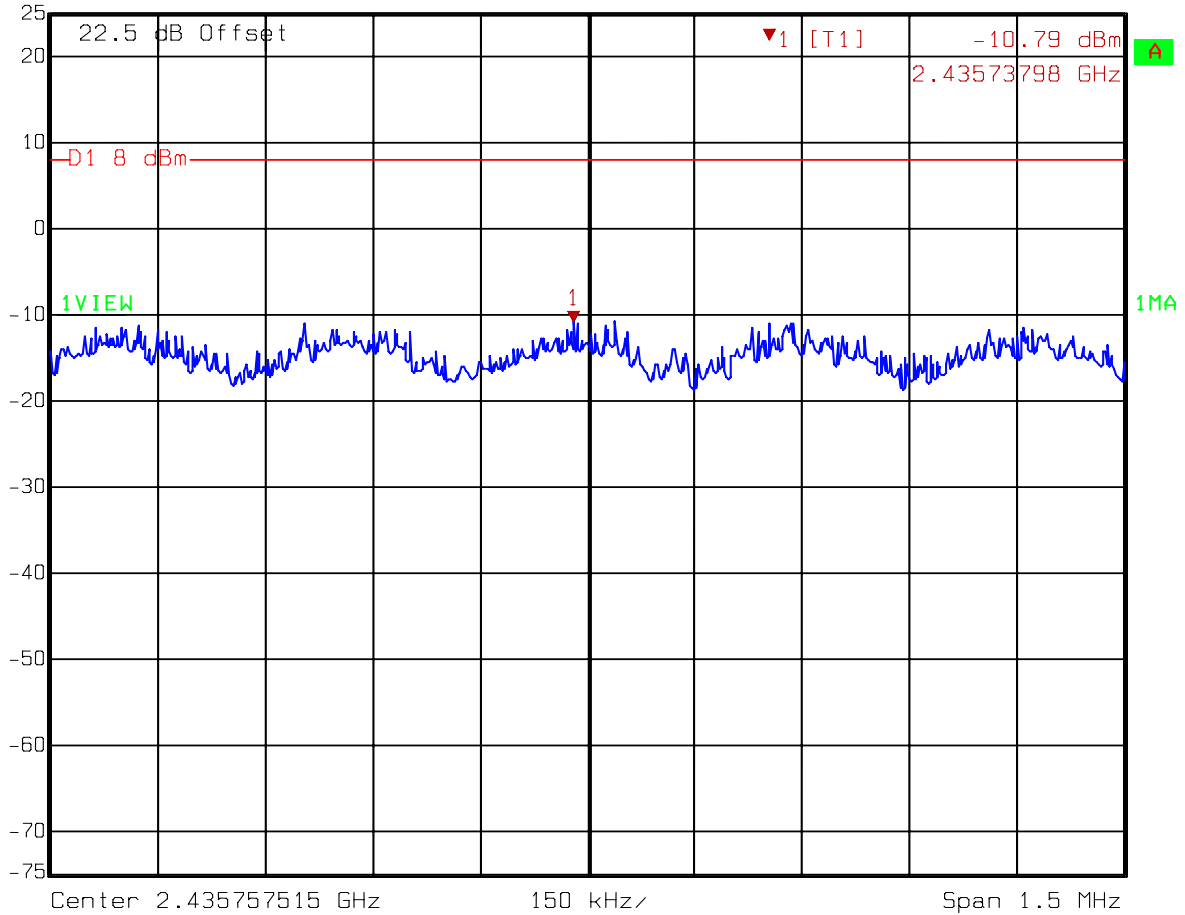
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-14.88 dBm	VBW	10 kHz	
	25 dBm	2.41697545 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:33:22

**Chain B**  
**Test mode: 802.11n HT20 mode CH6**

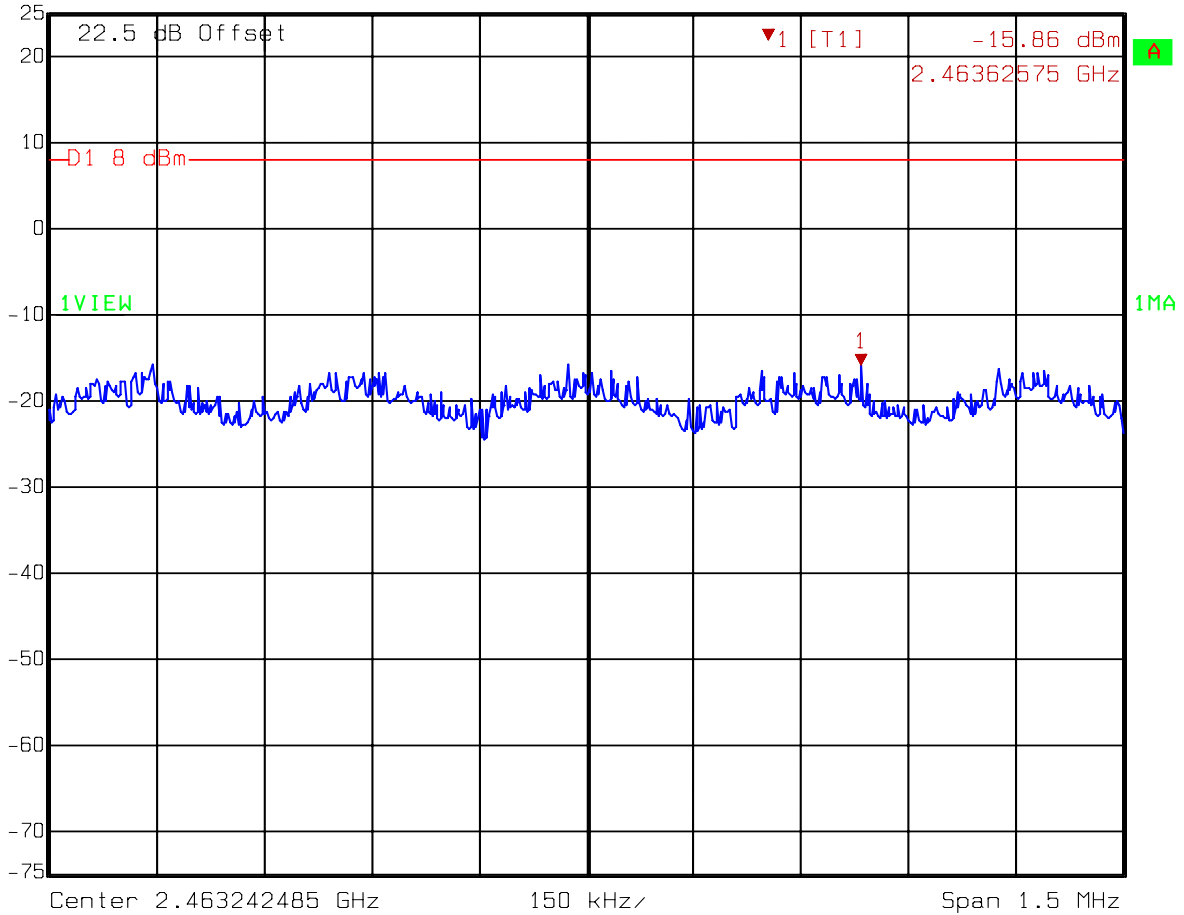
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-10.79 dBm	VBW	10 kHz	
	25 dBm	2.43573798 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:42:53


**Chain B**  
**Test mode: 802.11n HT20 mode CH11**

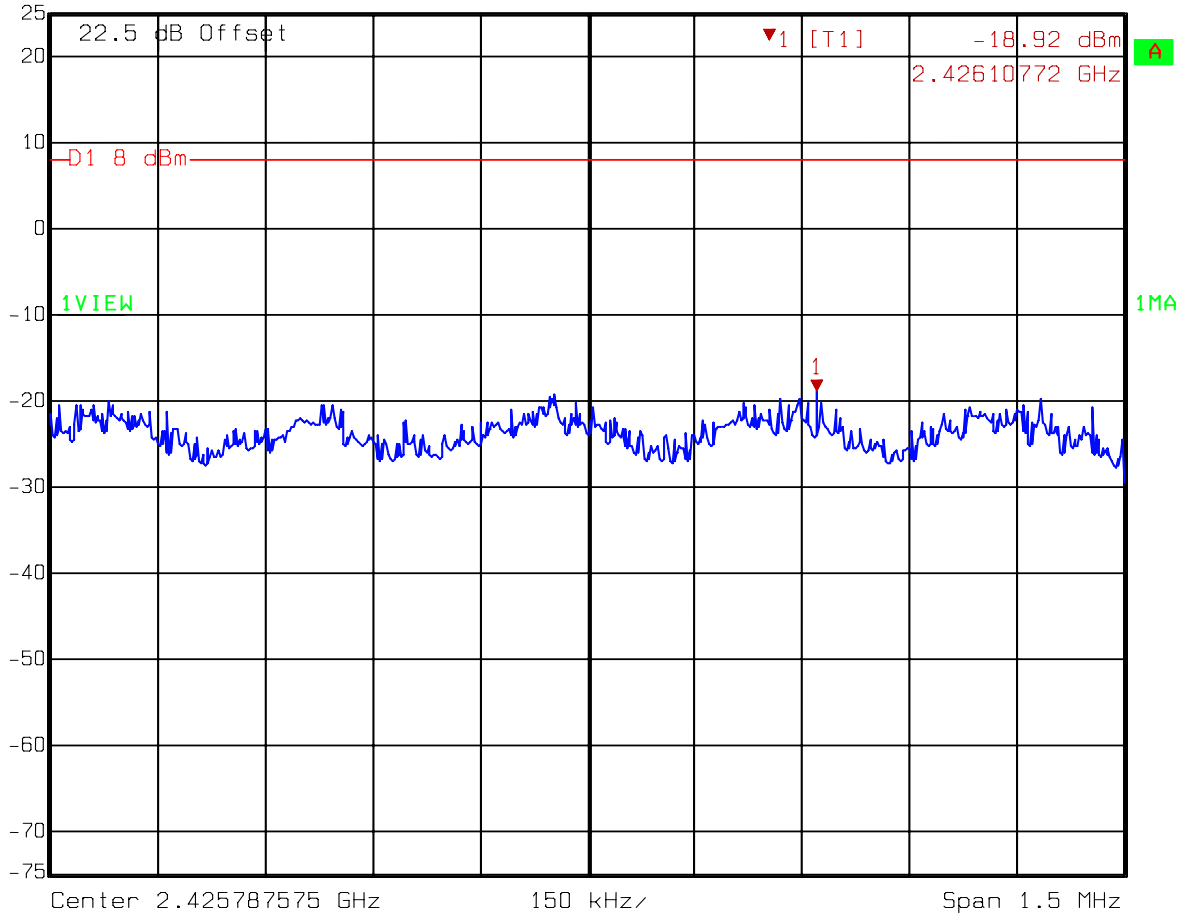
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-15.86 dBm	VBW	10 kHz	
	25 dBm	2.46362575 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 11 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:56:05


**Chain B**  
**Test mode: 802.11n HT40 mode CH3**

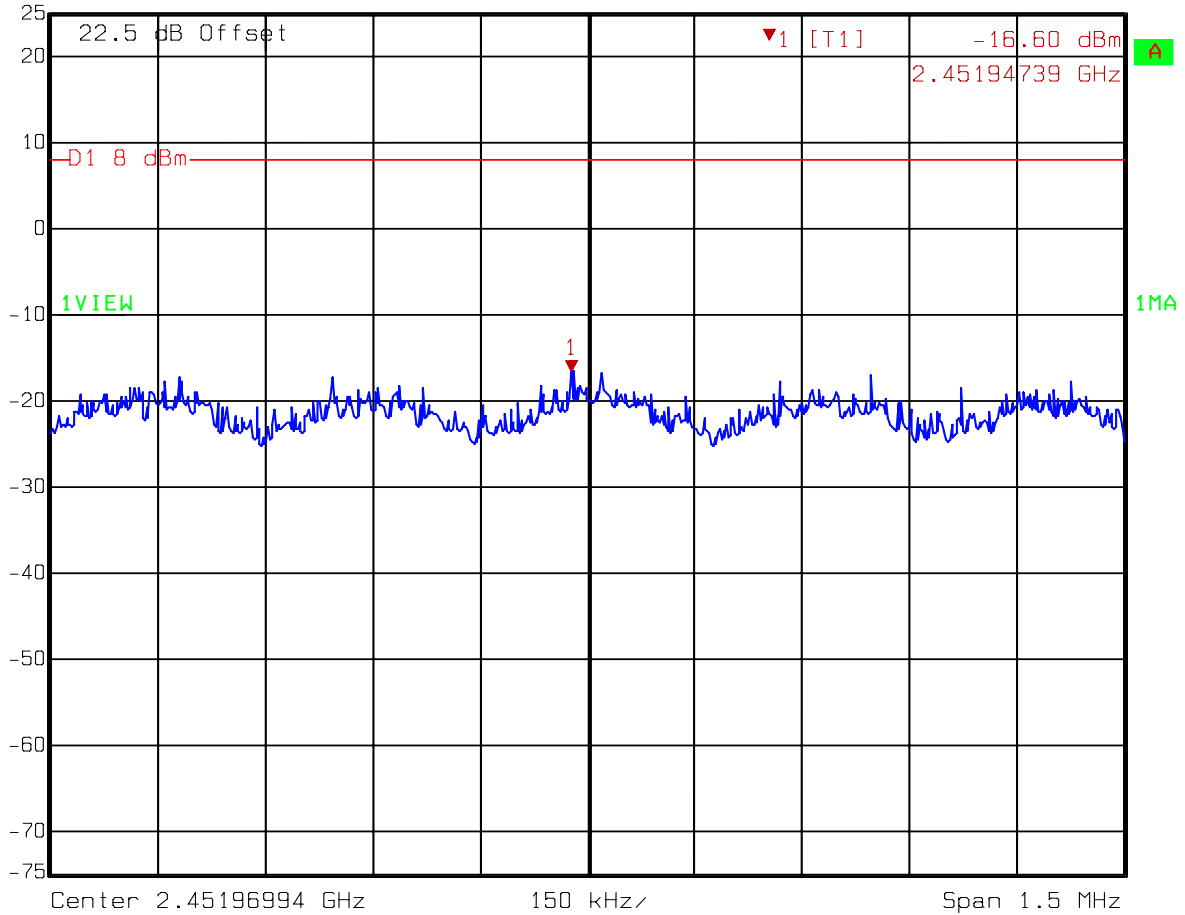
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-18.92 dBm	VBW	10 kHz	
	25 dBm	2.42610772 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 3 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:04:41


**Chain B**  
**Test mode: 802.11n HT40 mode CH6**

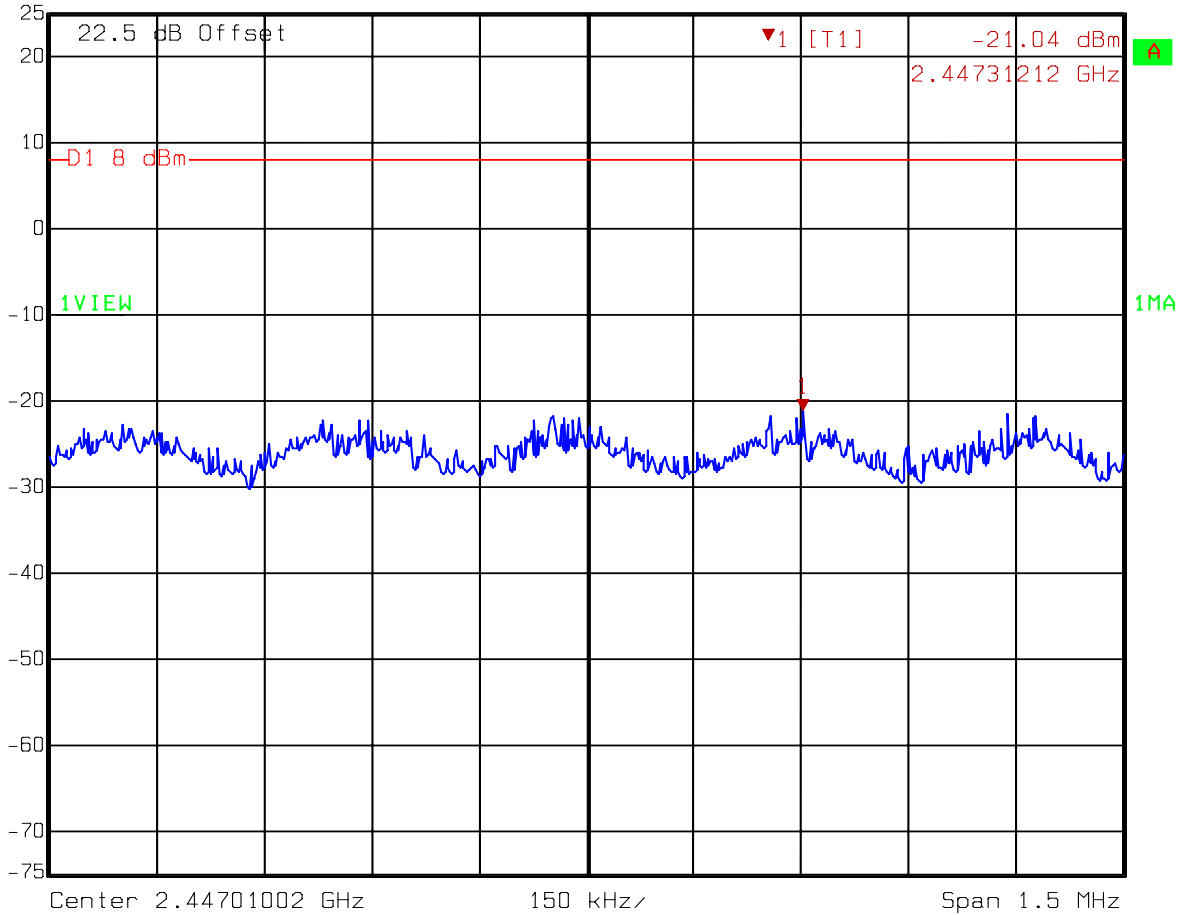
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-16.60 dBm	VBW	10 kHz	
	25 dBm	2.45194739 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:12:53

**Chain B**  
**Test mode: 802.11n HT40 mode CH9**

	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-21.04 dBm	VBW	10 kHz	
	25 dBm	2.44731212 GHz	SWT	500 s	Unit dBm

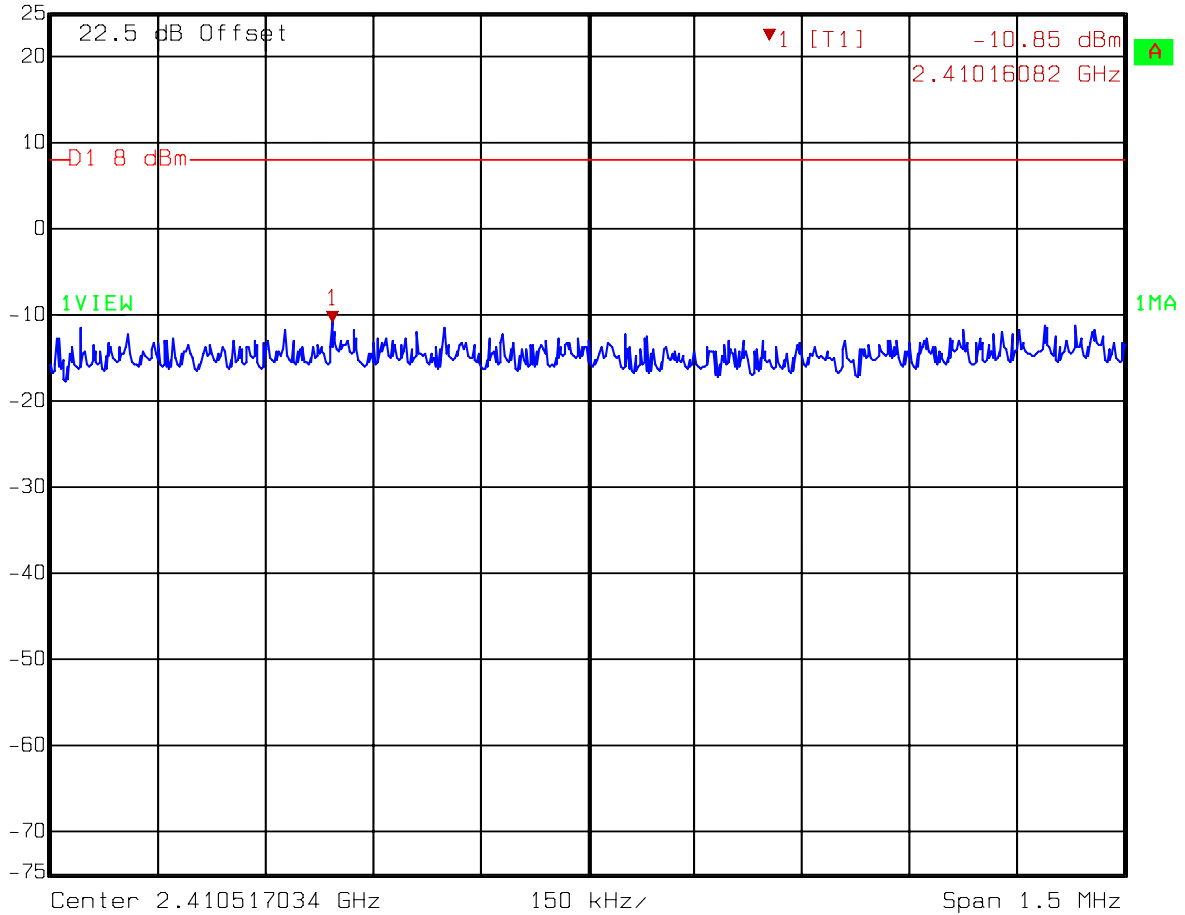


Title: Power density  
 Comment A: CH 9 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:21:19



**Chain C**  
**Test mode: 802.11b mode CH1**

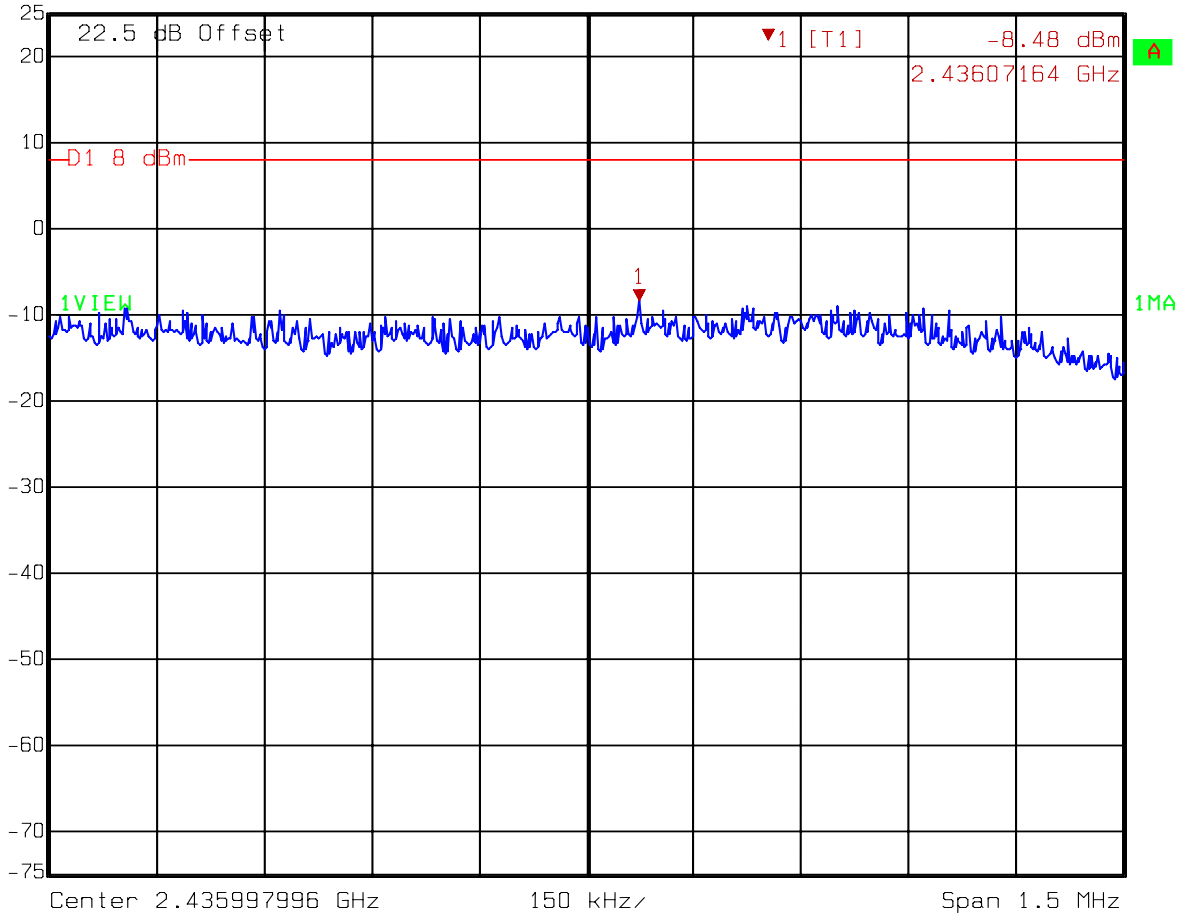
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-10.85 dBm	VBW	10 kHz	
	25 dBm	2.41016082 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11b mode  
 Date: 17.APR.2008 10:35:02

**Chain C**  
**Test mode: 802.11b mode CH6**

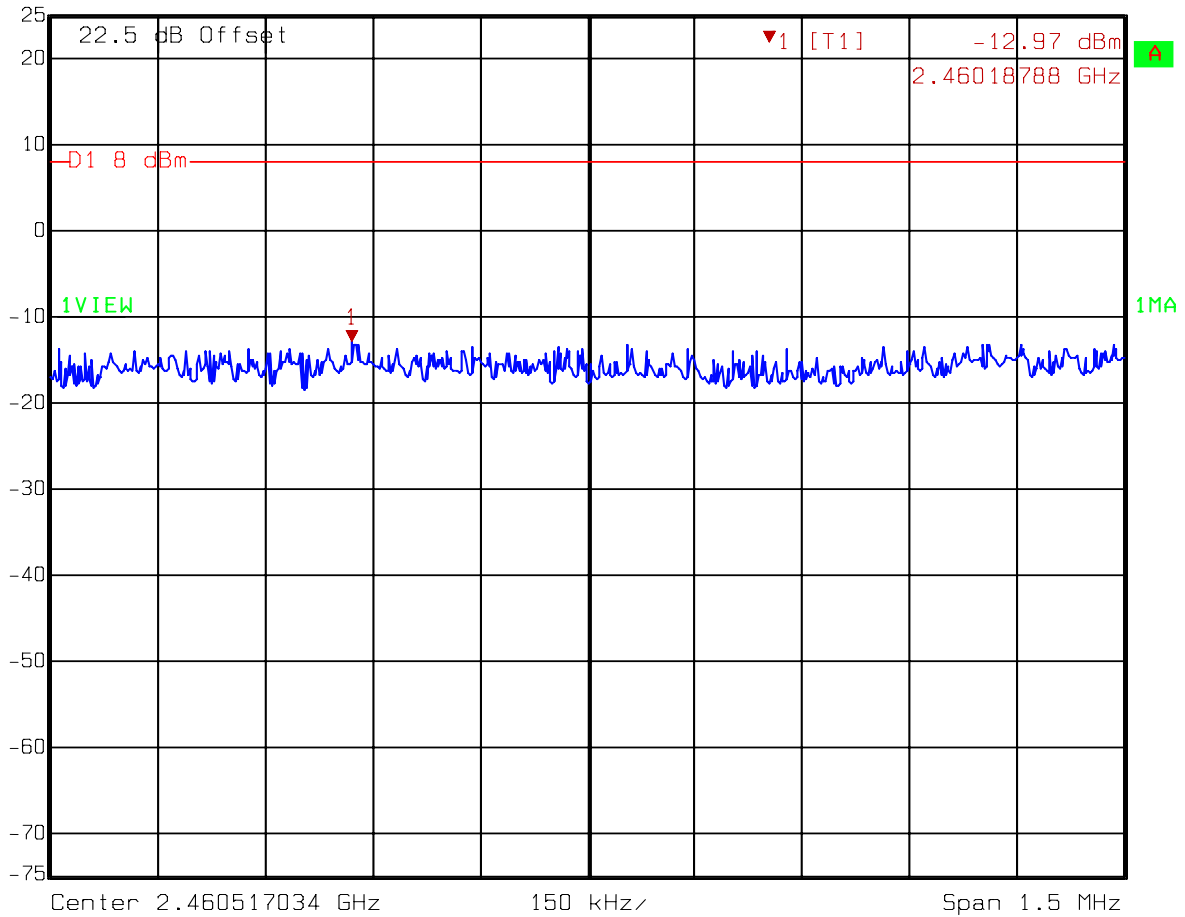
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-8.48 dBm	VBW	10 kHz	
	25 dBm	2.43607164 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11b mode  
 Date: 17.APR.2008 10:38:06

**Chain C**  
**Test mode: 802.11b mode CH11**

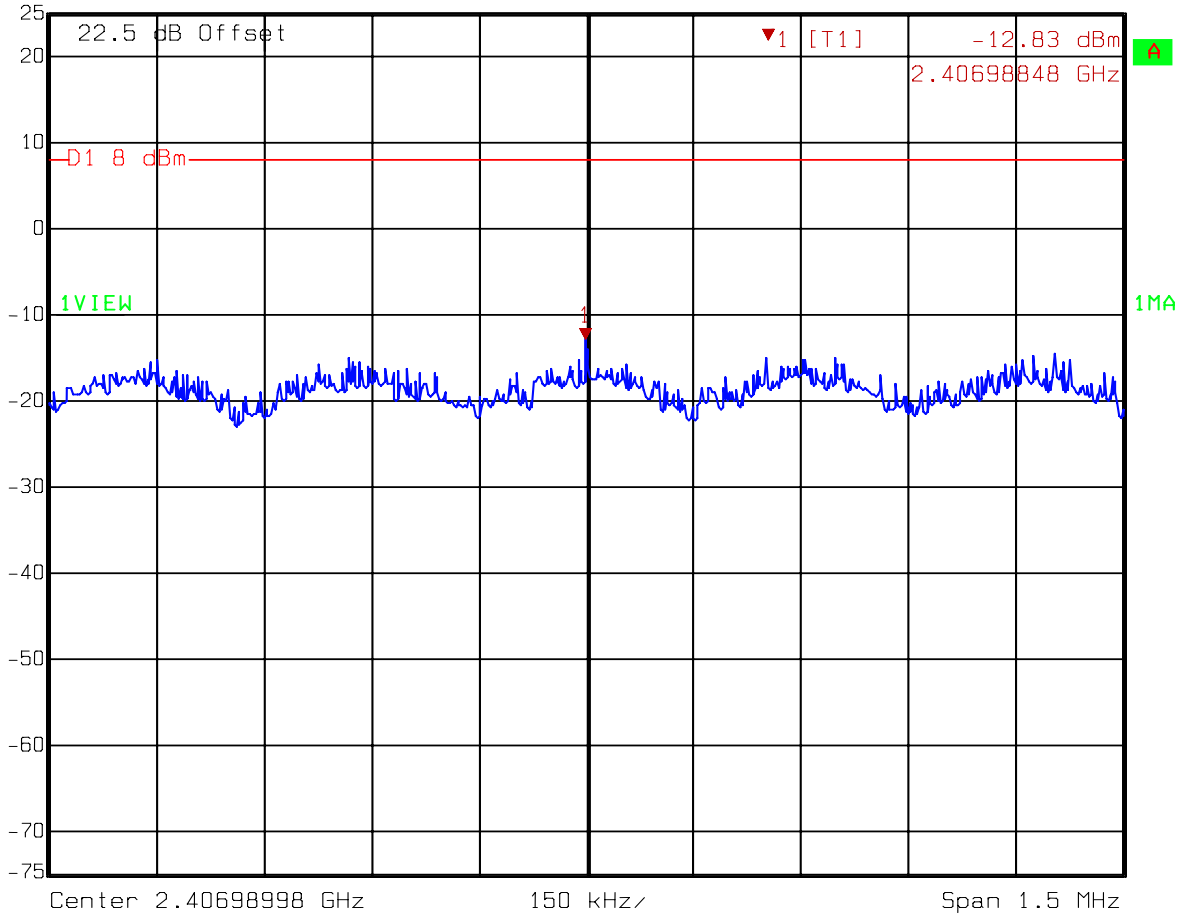
	Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	25 dBm	-12.97 dBm	VBW	10 kHz		
		2.46018788 GHz	SWT	500 s	Unit	dBm



Title: Power density  
 Comment A: CH 11 at 802.11b mode  
 Date: 17.APR.2008 10:56:23

**Chain C**  
**Test mode: 802.11g mode CH1**

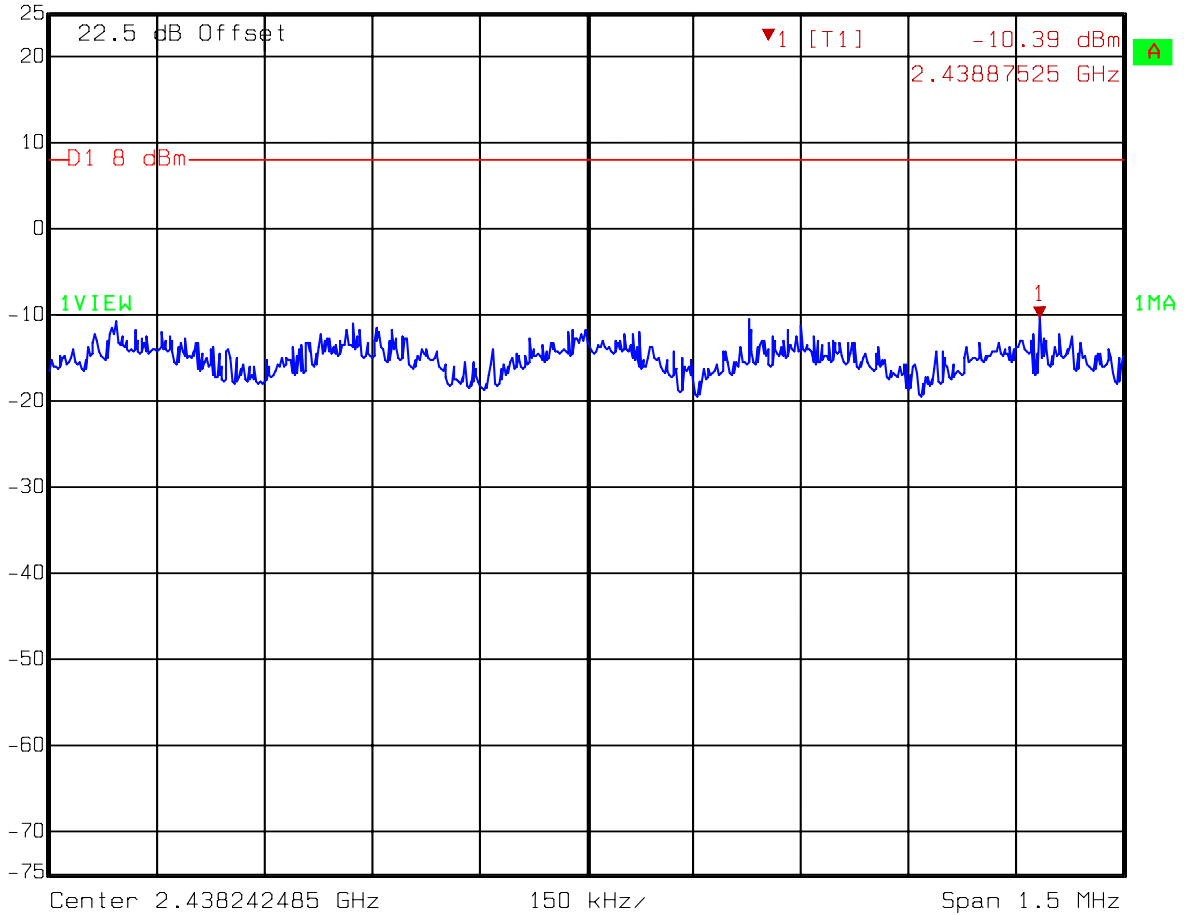
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-12.83 dBm	VBW	10 kHz	
	25 dBm	2.40698848 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11g mode  
 Date: 17.APR.2008 11:08:24

**Chain C**  
**Test mode: 802.11g mode CH6**

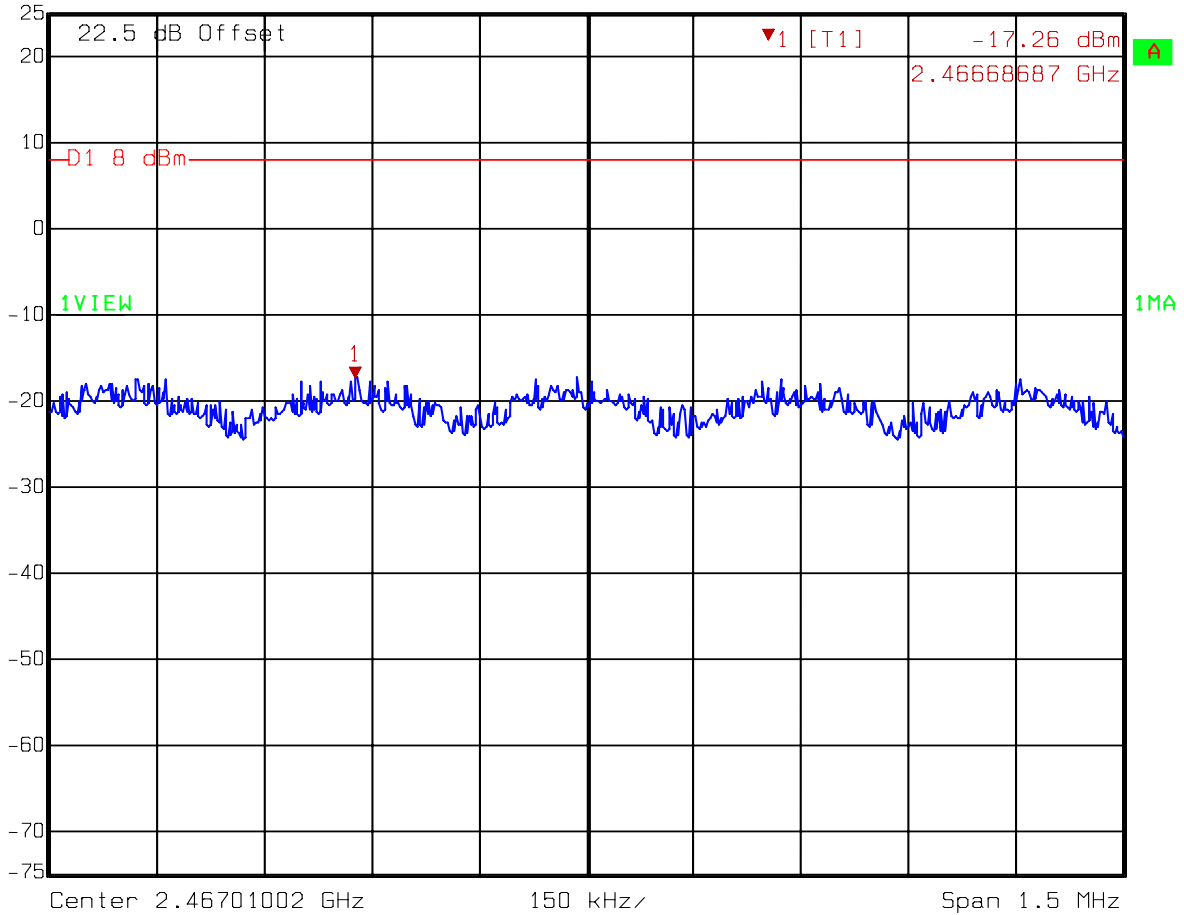
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-10.39 dBm	VBW	10 kHz	
	25 dBm	2.43887525 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11g mode  
 Date: 17.APR.2008 11:11:38

**Chain C**  
**Test mode: 802.11g mode CH11**

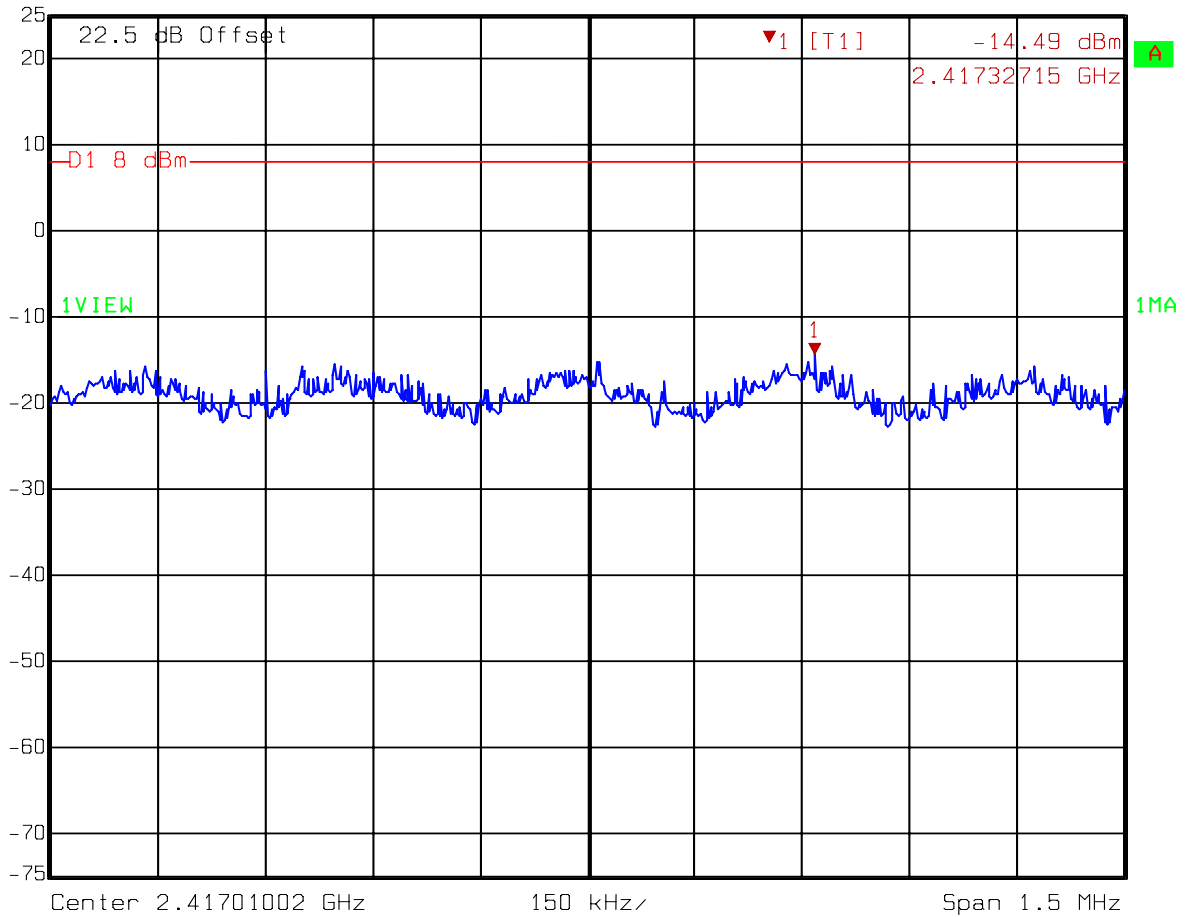
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-17.26 dBm	VBW	10 kHz	
	25 dBm	2.46668687 GHz	SWT	500 s	Unit



Title: Power density  
 Comment A: CH 11 at 802.11g mode  
 Date: 17.APR.2008 11:26:50

**Chain C**  
**Test mode: 802.11n HT20 mode CH1**

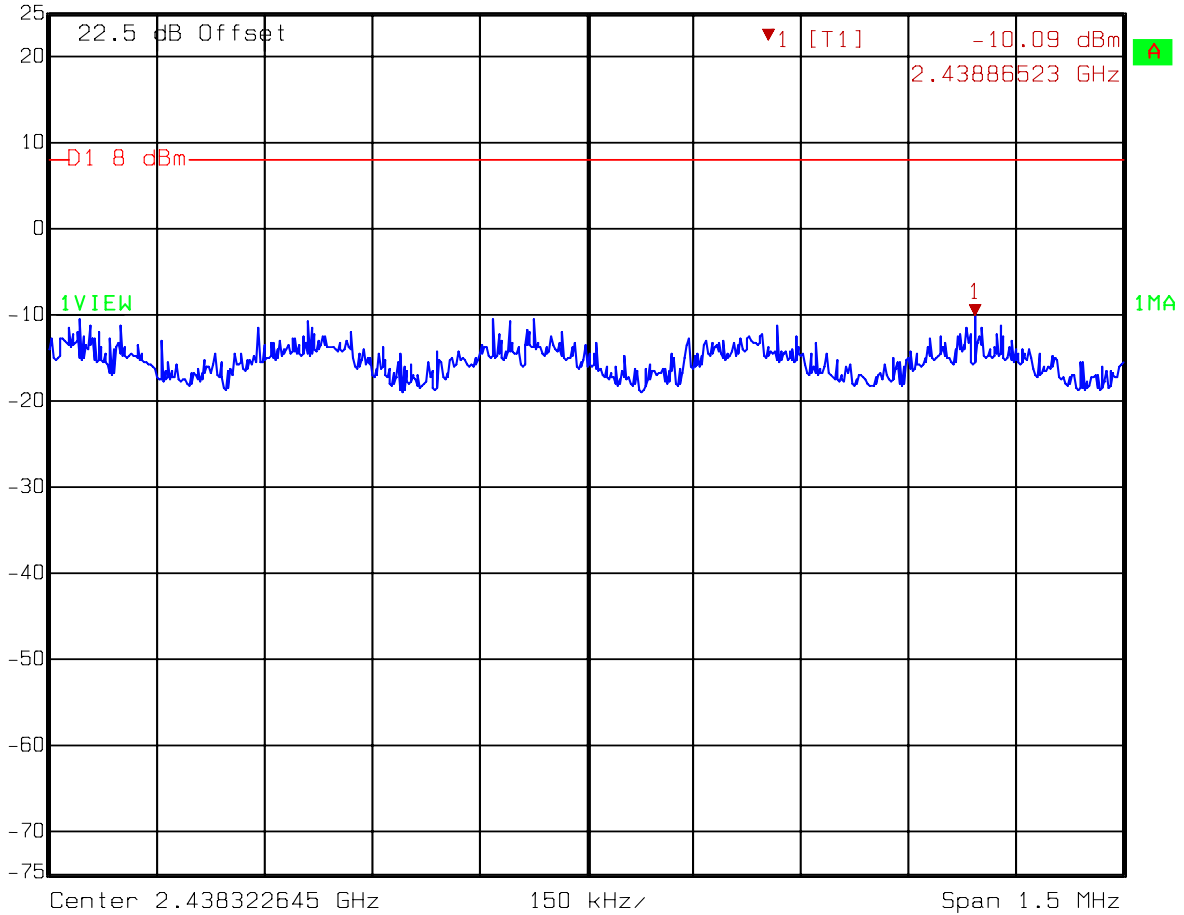
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-14.49 dBm	VBW	10 kHz	
	25 dBm	2.41732715 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 1 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:36:01

**Chain C**  
**Test mode: 802.11n HT20 mode CH6**


	Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	25 dBm	-10.09 dBm	VBW	10 kHz		
		2.43886523 GHz	SWT	500 s	Unit	dBm

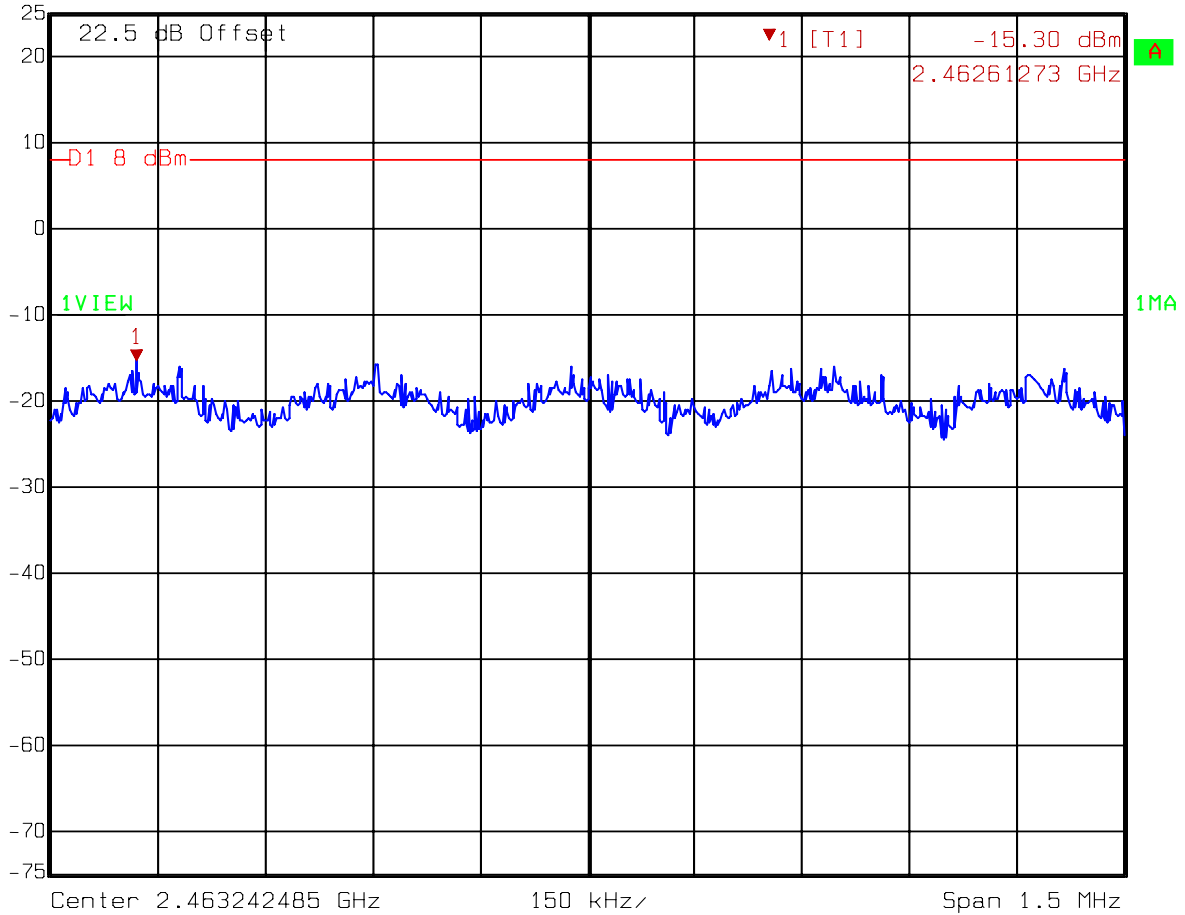


Title: Power density  
 Comment A: CH 6 at 802.11n 20MHz mode  
 Date: 17.APR.2008 11:45:46



**Chain C**  
**Test mode: 802.11n HT20 mode CH11**

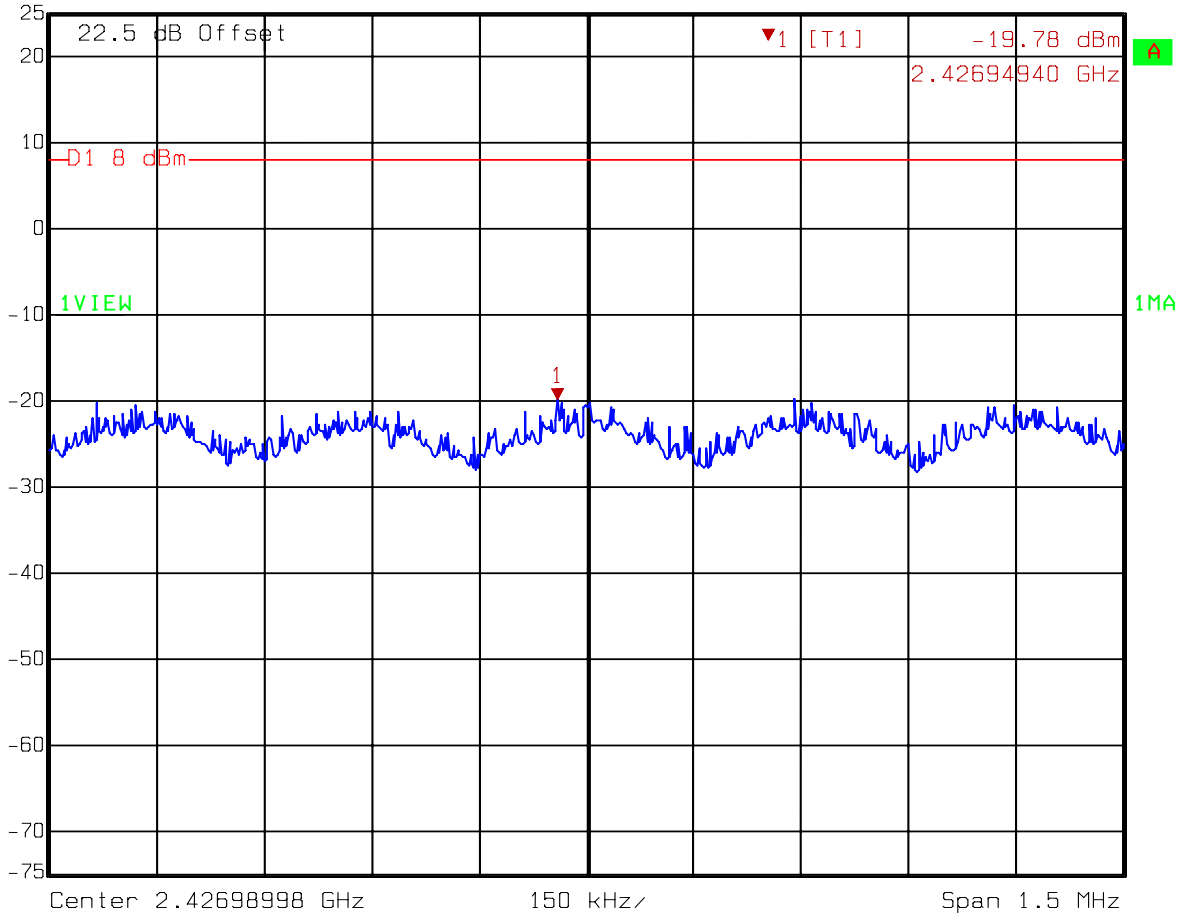
 Marker 1 [T1]      RBW    3 kHz    RF Att    30 dB  
Ref Lvl                      -15.30 dBm    VBW    10 kHz  
25 dBm                      2.46261273 GHz    SWT    500 s    Unit            dBm



Title:            Power density  
Comment A:      CH 11 at 802.11n 20MHz mode  
Date:            17.APR.2008 11:50:11


**Chain C**  
**Test mode: 802.11n HT40 mode CH3**

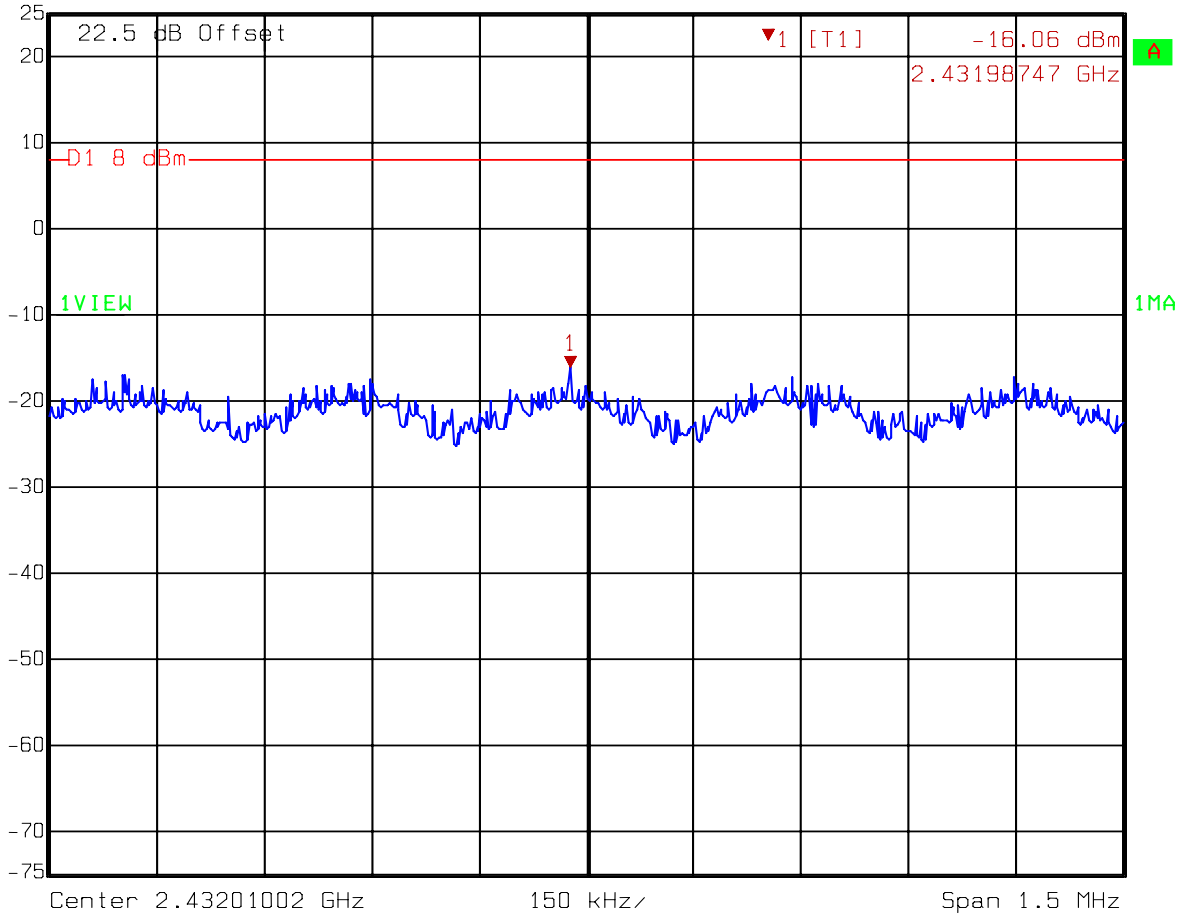
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-19.78 dBm	VBW	10 kHz	
	25 dBm	2.42694940 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 3 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:07:15

**Chain C**  
**Test mode: 802.11n HT40 mode CH6**

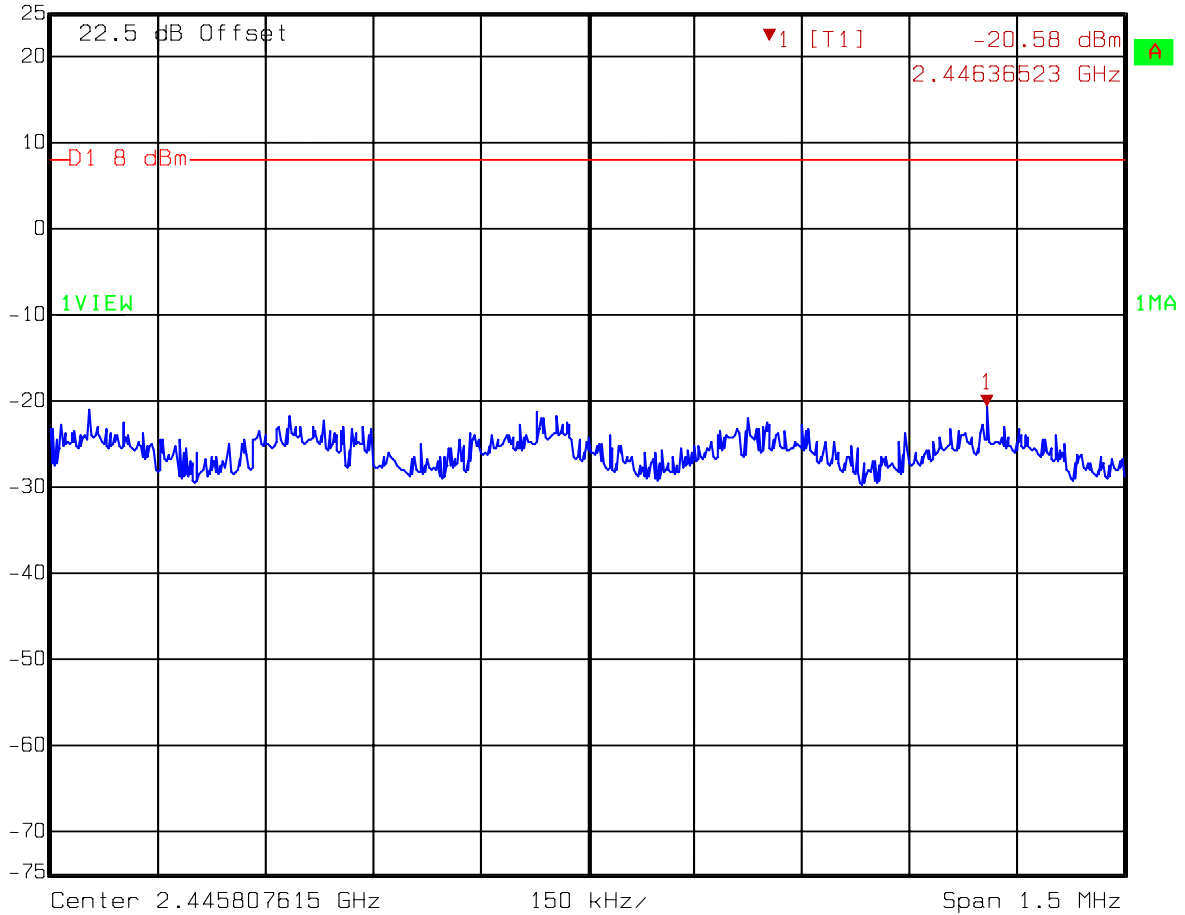
	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-16.06 dBm	VBW	10 kHz	
	25 dBm	2.43198747 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 6 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:10:07

**Chain C**  
**Test mode: 802.11n HT40 mode CH9**

	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-20.58 dBm	VBW	10 kHz	
	25 dBm	2.44636523 GHz	SWT	500 s	Unit dBm



Title: Power density  
 Comment A: CH 9 at 802.11n 40MHz mode  
 Date: 17.APR.2008 12:23:57

## 8. Emission on the band edge

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Radiated emissions, which fall in the restricted band, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

### 8.1 Operating environment

Temperature:	25	°C
Relative Humidity:	50	%
Atmospheric Pressure	1023	hPa

### 8.2 Test setup & procedure

Please refer to the clause 6.2 of this report.

### 8.3 Test Result

#### NBG460NH

##### Test Mode: 802.11b operating mode

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK	60.70	74	-6.61
		AV	53.22	54	-0.82
11 (highest)	2483.5-2500	PK	62.42	74	-5.65
		AV	53.44	54	-0.74

#### NBG460NH

##### Test Mode: 802.11g operating mode

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK	67.39	74	-6.61
		AV	53.18	54	-0.82
11 (highest)	2483.5-2500	PK	68.35	74	-5.65
		AV	53.26	54	-0.74

**NBG460NH**

**Test Mode: 802.11n HT20 operating mode**

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK	67.46	74	-6.54
		AV	53.05	54	-0.95
11 (highest)	2483.5-2500	PK	70.57	74	-3.43
		AV	53.54	54	-0.46

5

**NBG460NH**

**Test Mode: 802.11n HT40 operating mode**

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3 (lowest)	2310-2390	PK	72.00	74	-2.00
		AV	53.22	54	-0.78
9 (highest)	2483.5-2500	PK	68.43	74	-5.57
		AV	53.23	54	-0.77

**NBG460N**

**Test Mode: 802.11b operating mode**

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK	60.93	74	-13.07
		AV	51.06	54	-2.94
11 (highest)	2483.5-2500	PK	59.25	74	-14.75
		AV	49.76	54	-4.24

**NBG460N**

**Test Mode: 802.11g operating mode**

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK	62.84	74	-11.16
		AV	50.78	54	-3.22
11 (highest)	2483.5-2500	PK	65.93	74	-8.07
		AV	49.12	54	-4.88



**NBG460N**

**Test Mode: 802.11n HT20 operating mode**

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
1 (lowest)	2310-2390	PK	66.09	74	-7.91
		AV	50.91	54	-3.09
11 (highest)	2483.5-2500	PK	62.46	74	-11.54
		AV	49.38	54	-4.62

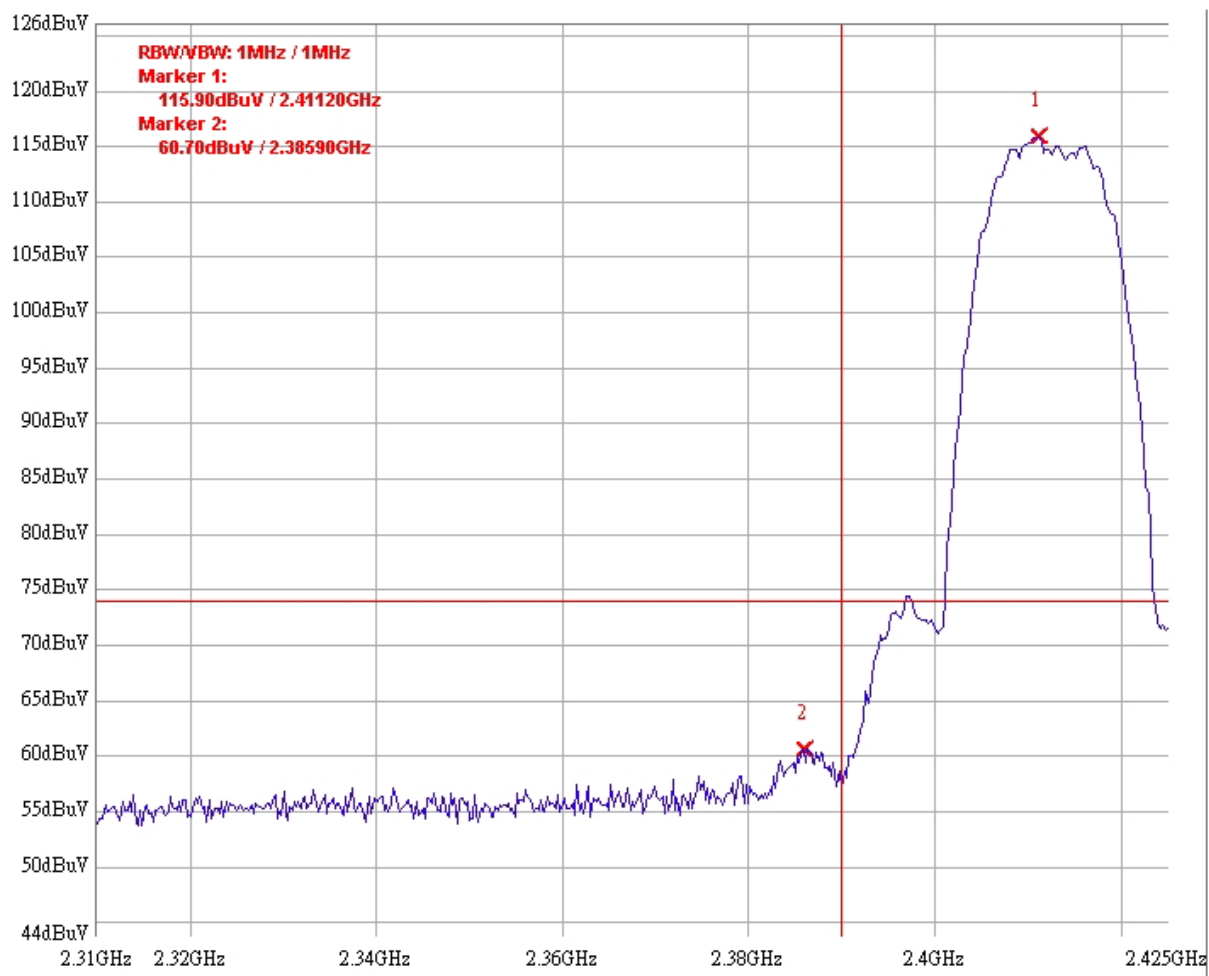
**NBG460N**

**Test Mode: 802.11n HT40 operating mode**

Channel	Measurement Freq.Band (MHz)	Detector	The Max. Field Strength in Restrict Band (dBuV/m)	Limit @ 3 m (dBuV/m)	Margin (dB)
3 (lowest)	2310-2390	PK	68.15	74	-5.85
		AV	50.90	54	-3.10
9 (highest)	2483.5-2500	PK	64.79	74	-9.21
		AV	48.84	54	-5.16

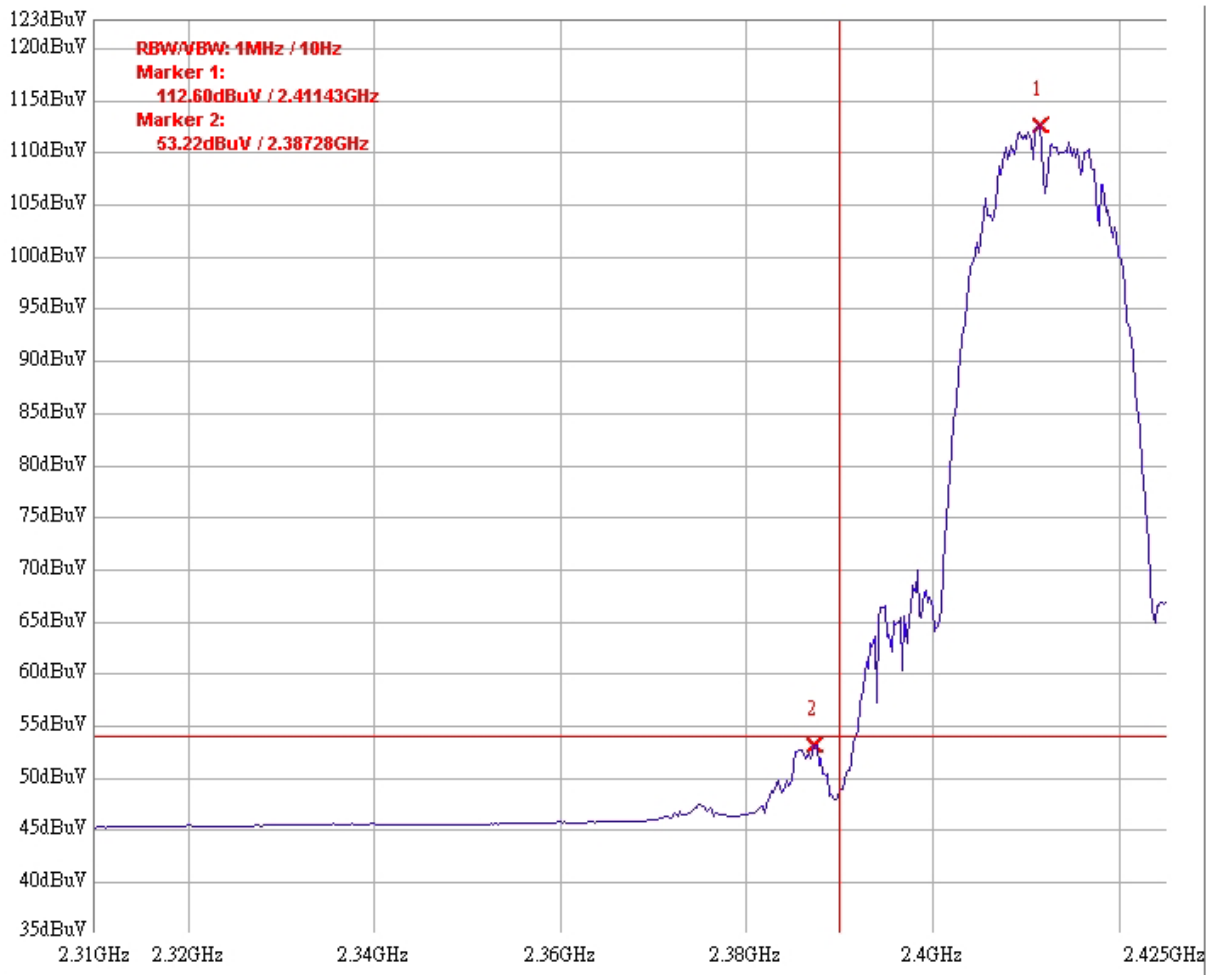
Please see the plot below.

**NBG460NH**  
**Test Mode: 802.11b mode CH1 PK**



bandedge  
11b chl  
PK

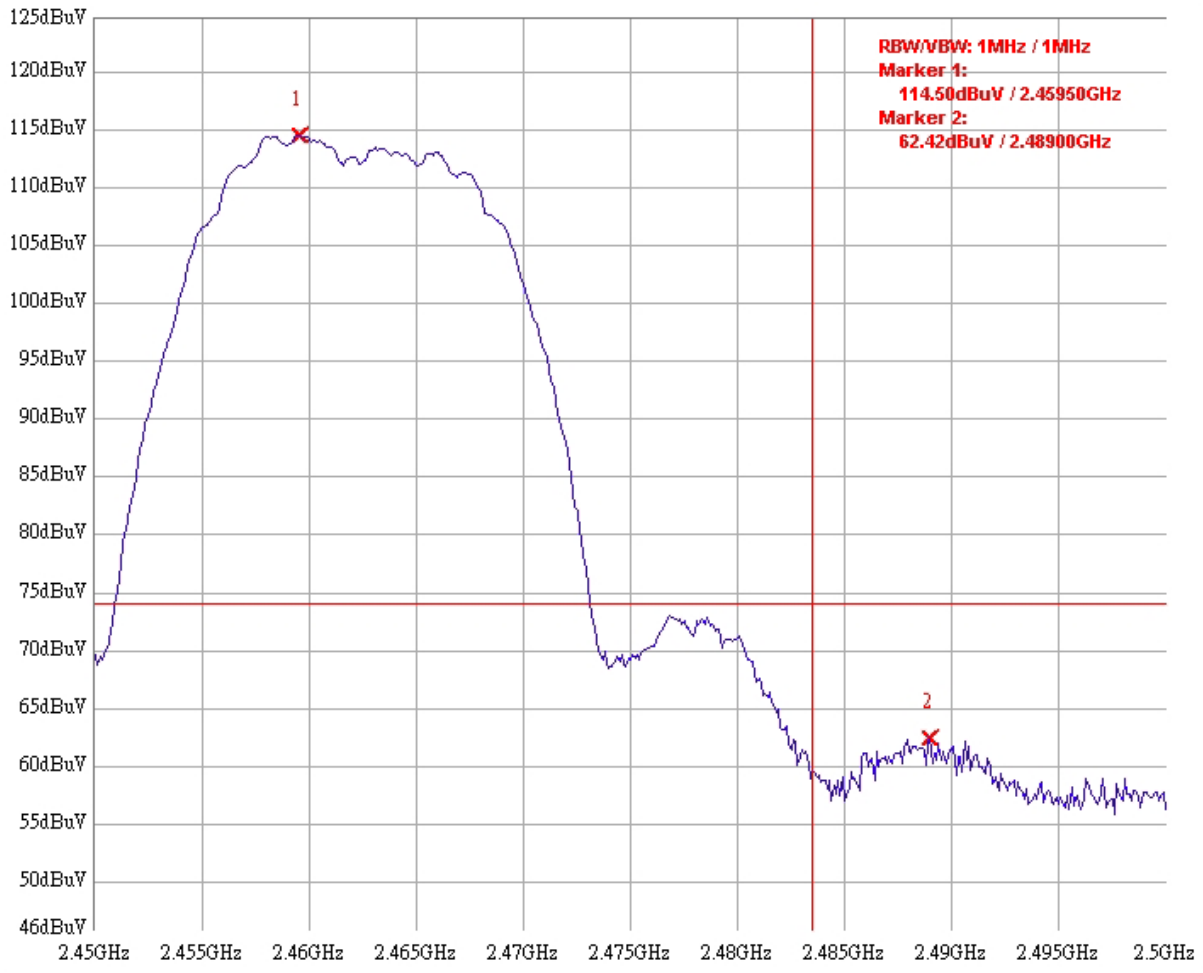
**NBG460NH**  
**Test Mode: 802.11b mode CH1 AV**



bandedge  
11b chl  
AV

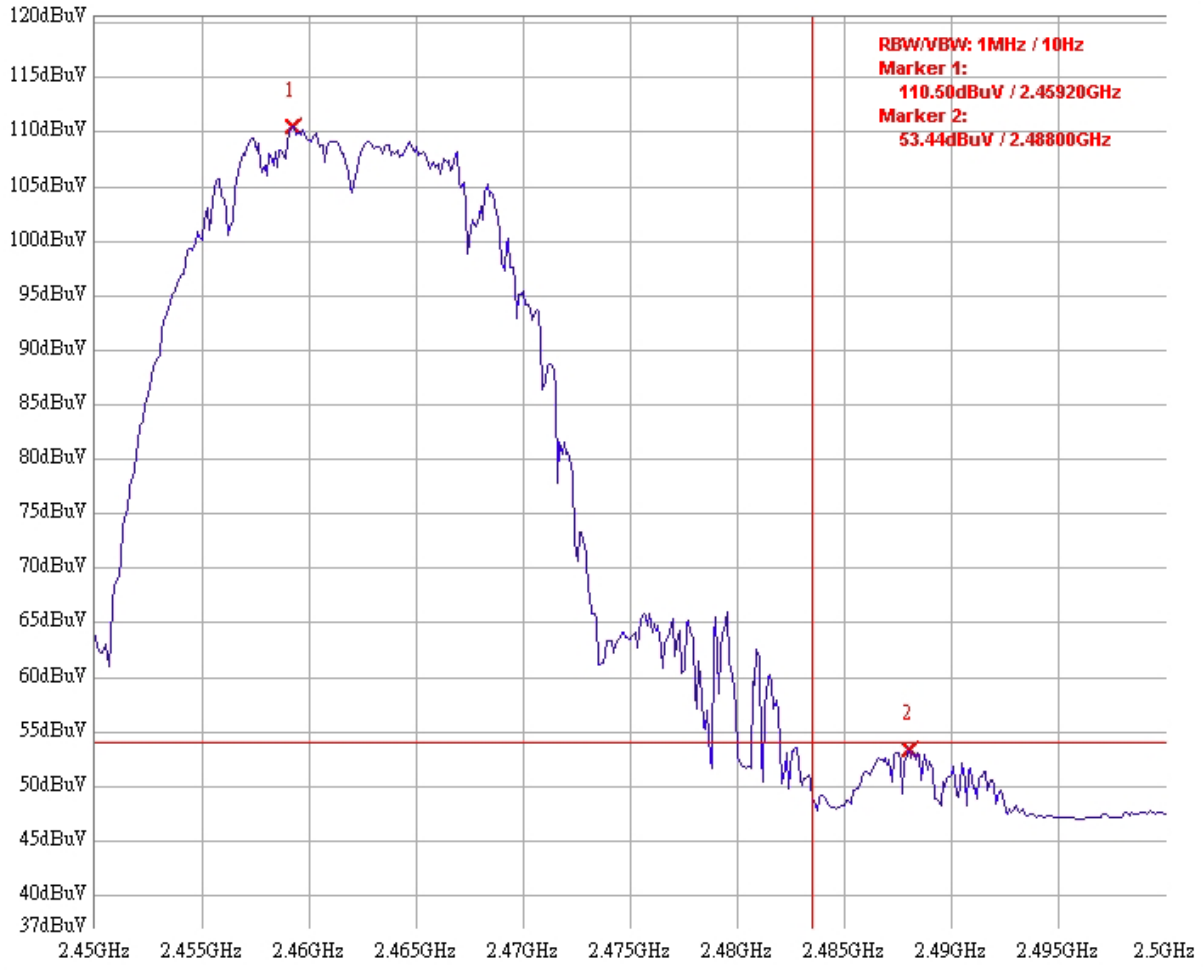


**NBG460NH**  
**Test Mode: 802.11b mode CH11 PK**



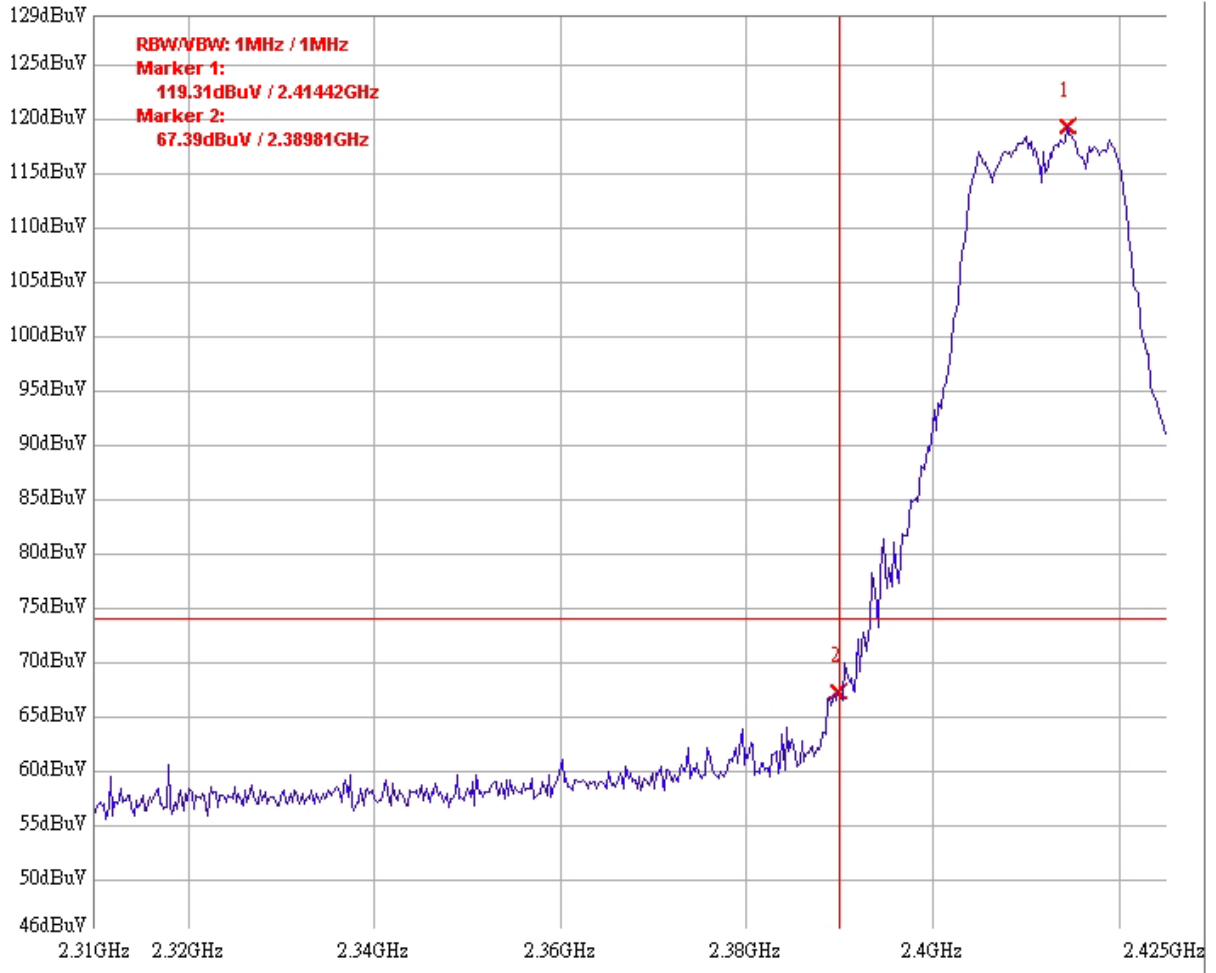
bandedge  
11b ch11  
PK

**NBG460NH**  
**Test Mode: 802.11b mode CH11 AV**



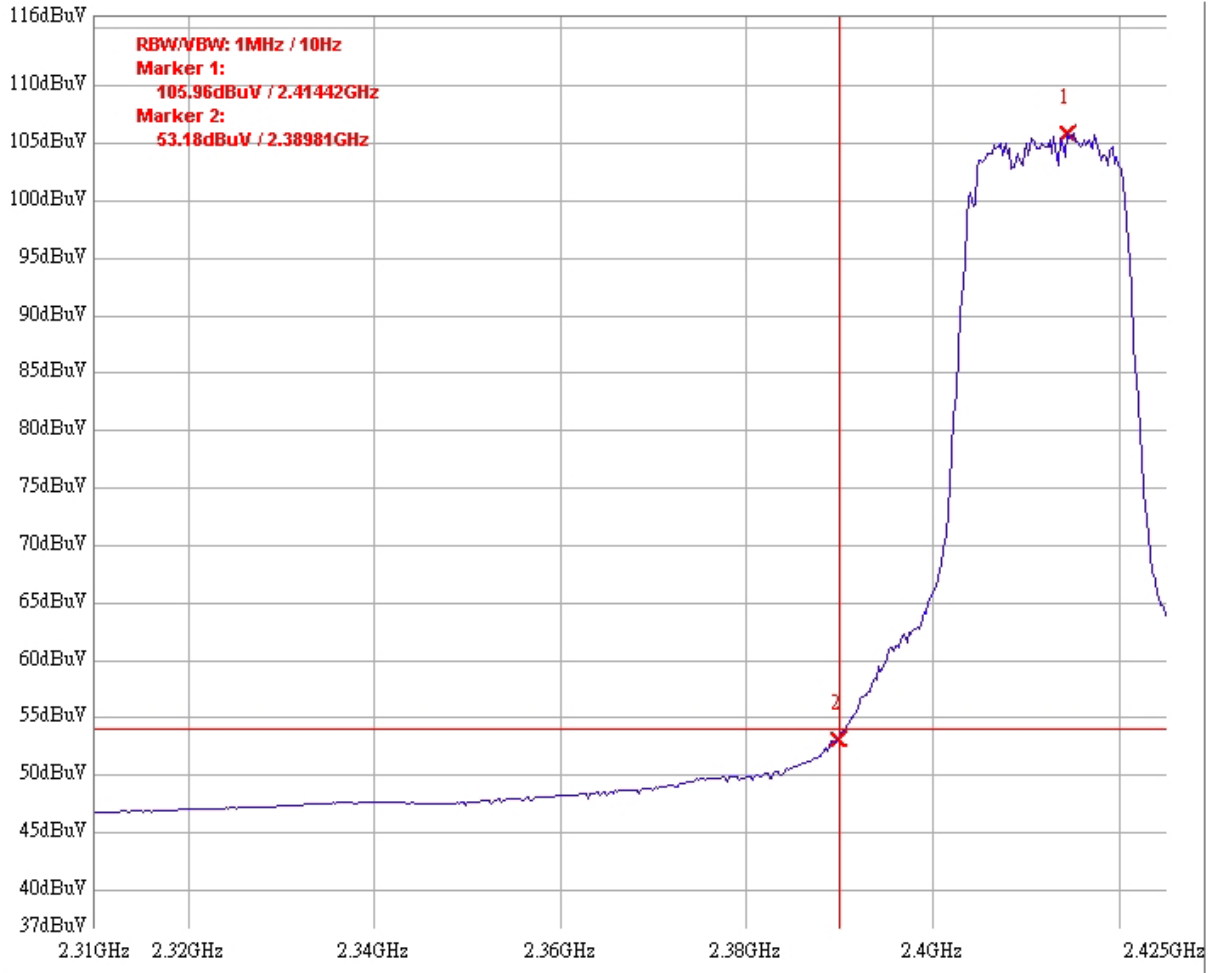
bandedge  
11b ch11  
AV

**NBG460NH**  
**Test Mode: 802.11g mode CH1 PK**



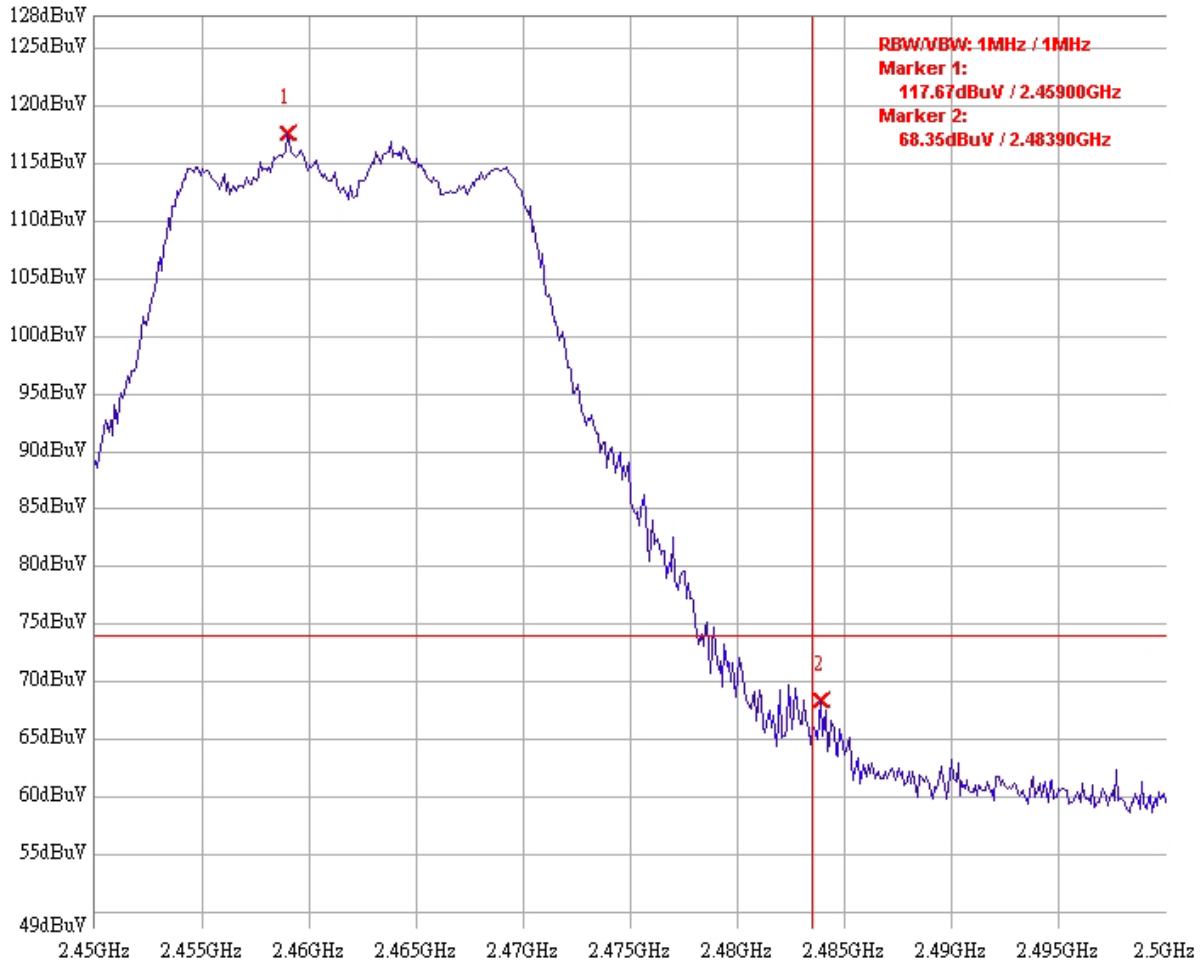
bandedge  
11g chl  
PK

**NBG460NH**  
**Test Mode: 802.11g mode CH1 AV**



bandedge  
11g chl  
AV

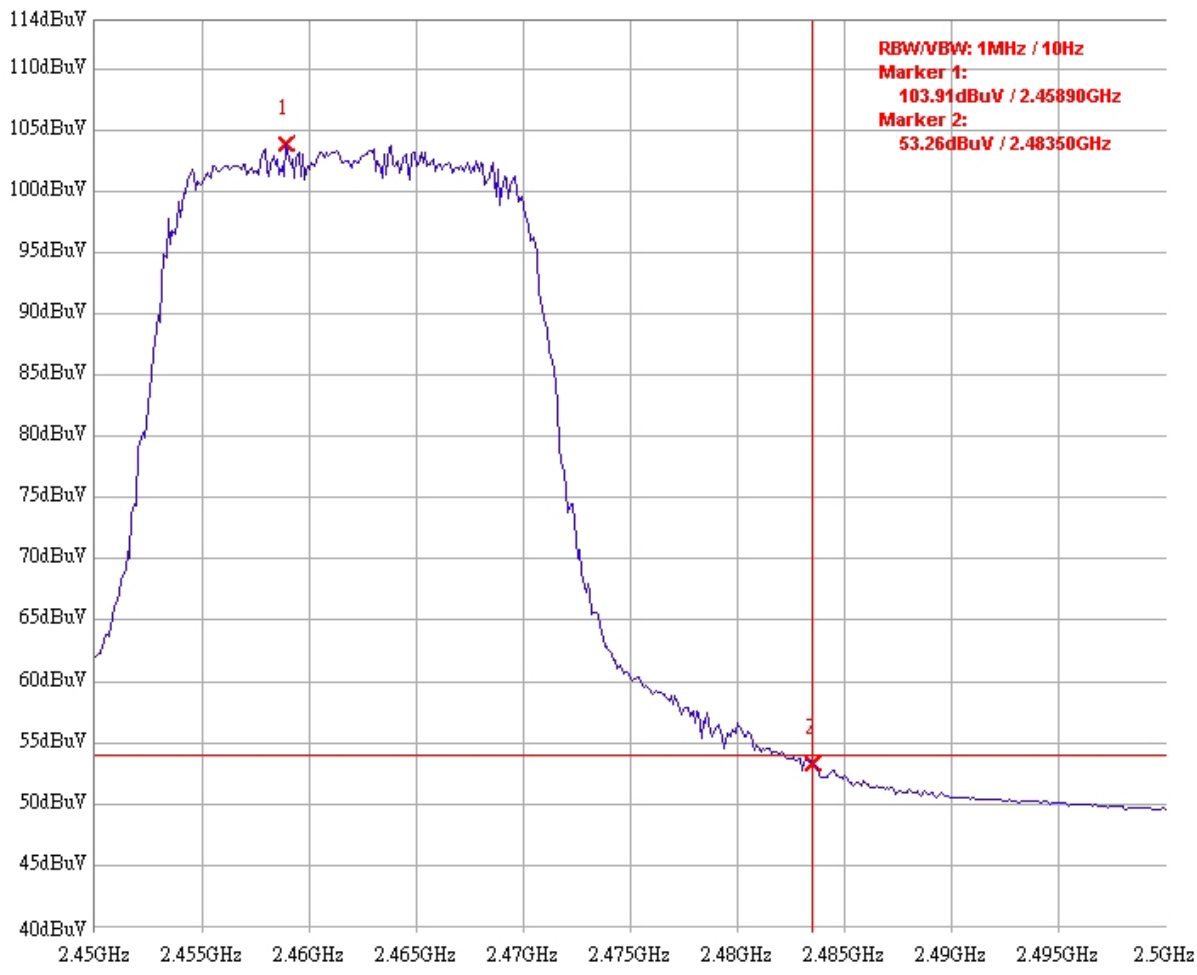
**NBG460NH**  
**Test Mode: 802.11g mode CH11 PK**



bandedge  
11g ch11  
PK

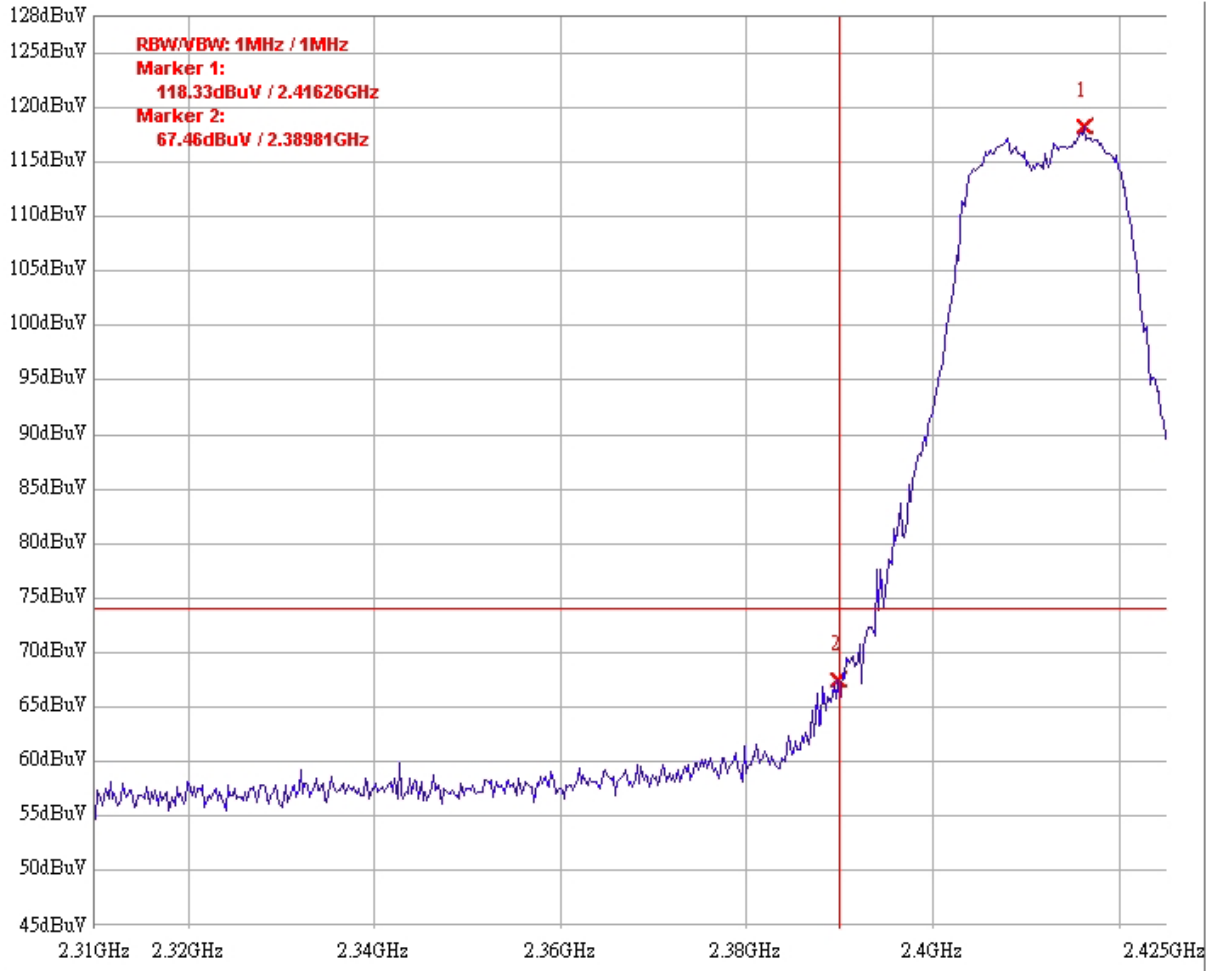


**NBG460NH**  
**Test Mode: 802.11g mode CH11 AV**



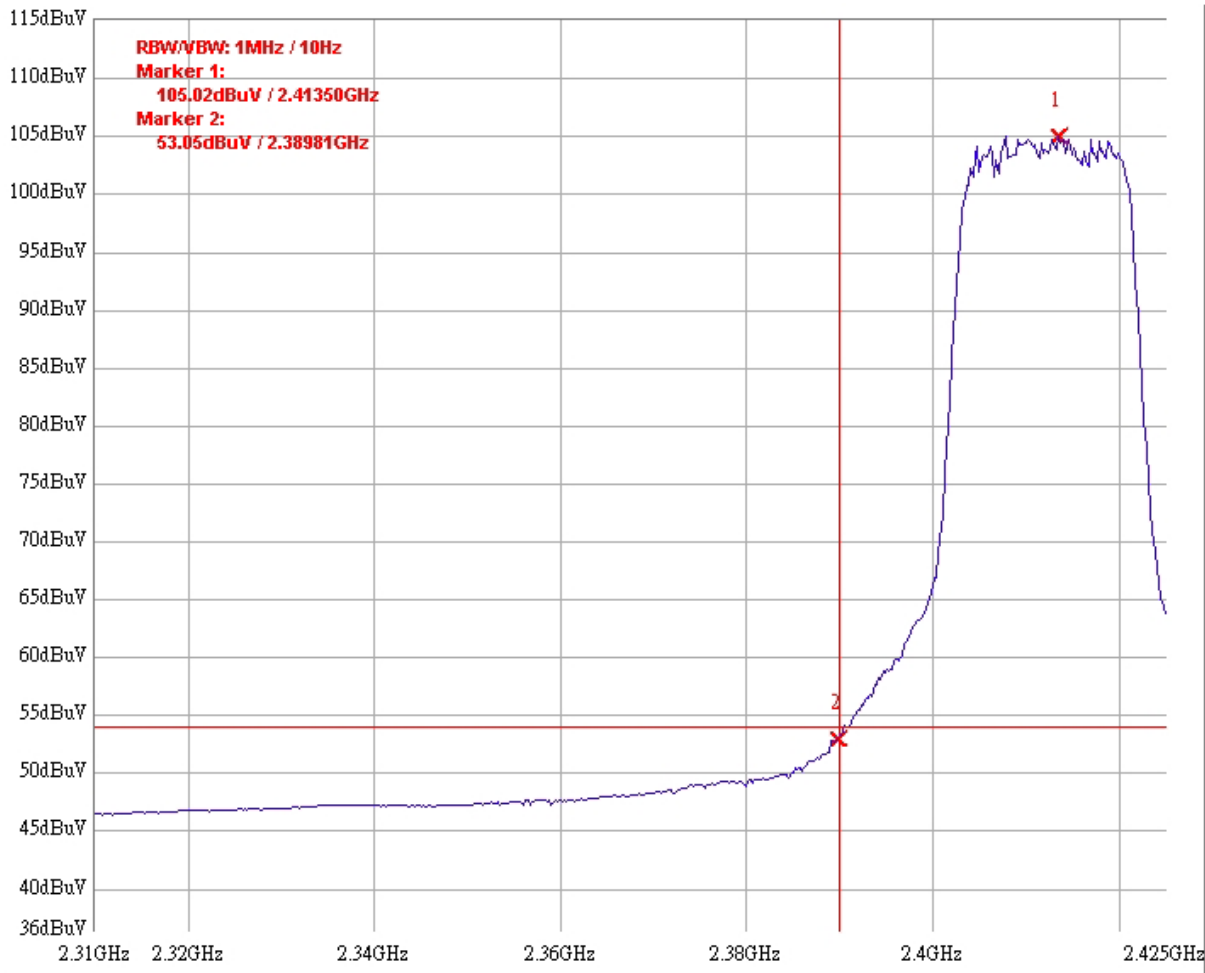
bandedge  
11g ch11  
AV

**NBG460NH**  
**Test Mode: 802.11n HT20 mode CH1 PK**



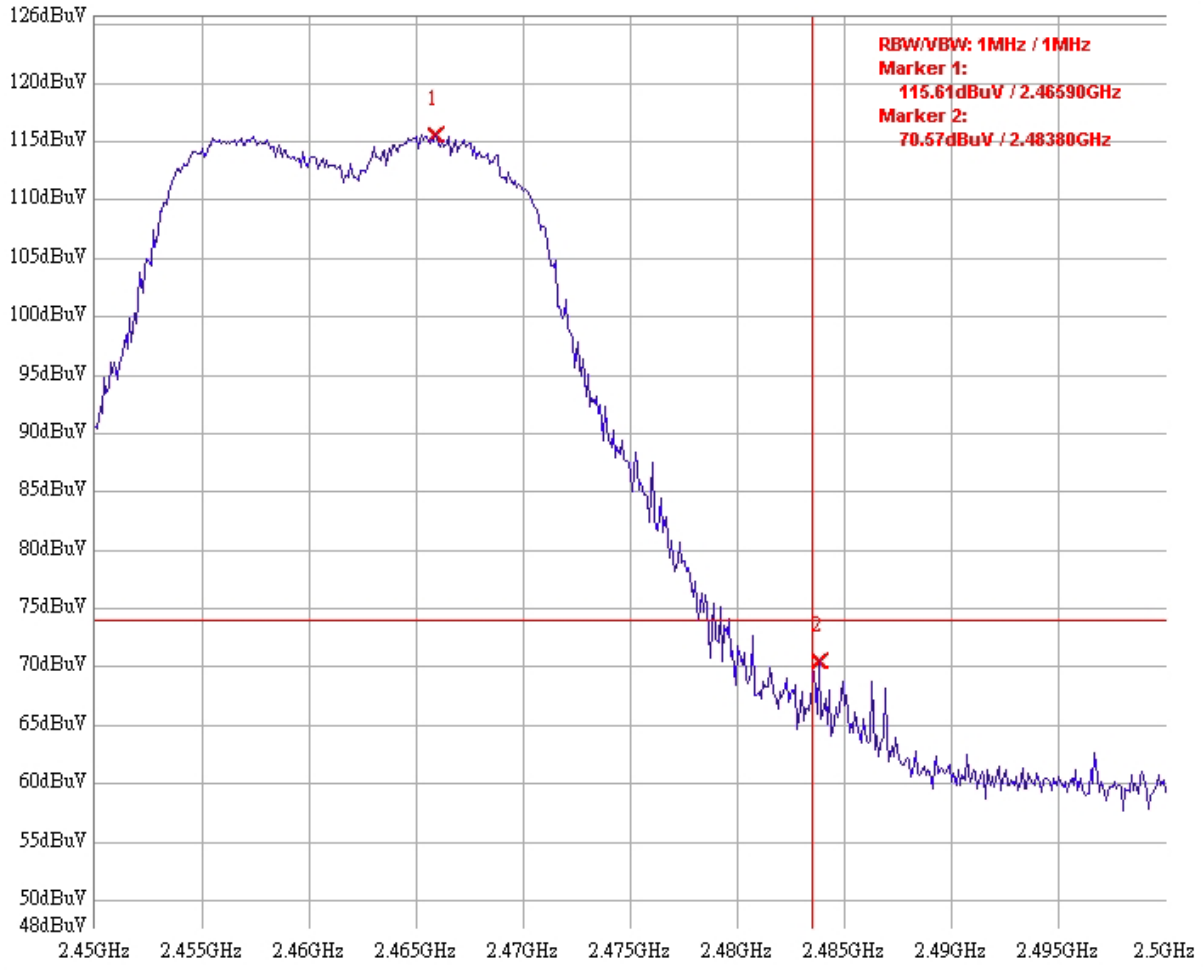
bandedge  
11n(20) ch1  
PK

**NBG460NH**  
**Test Mode: 802.11n HT20 mode CH1 AV**



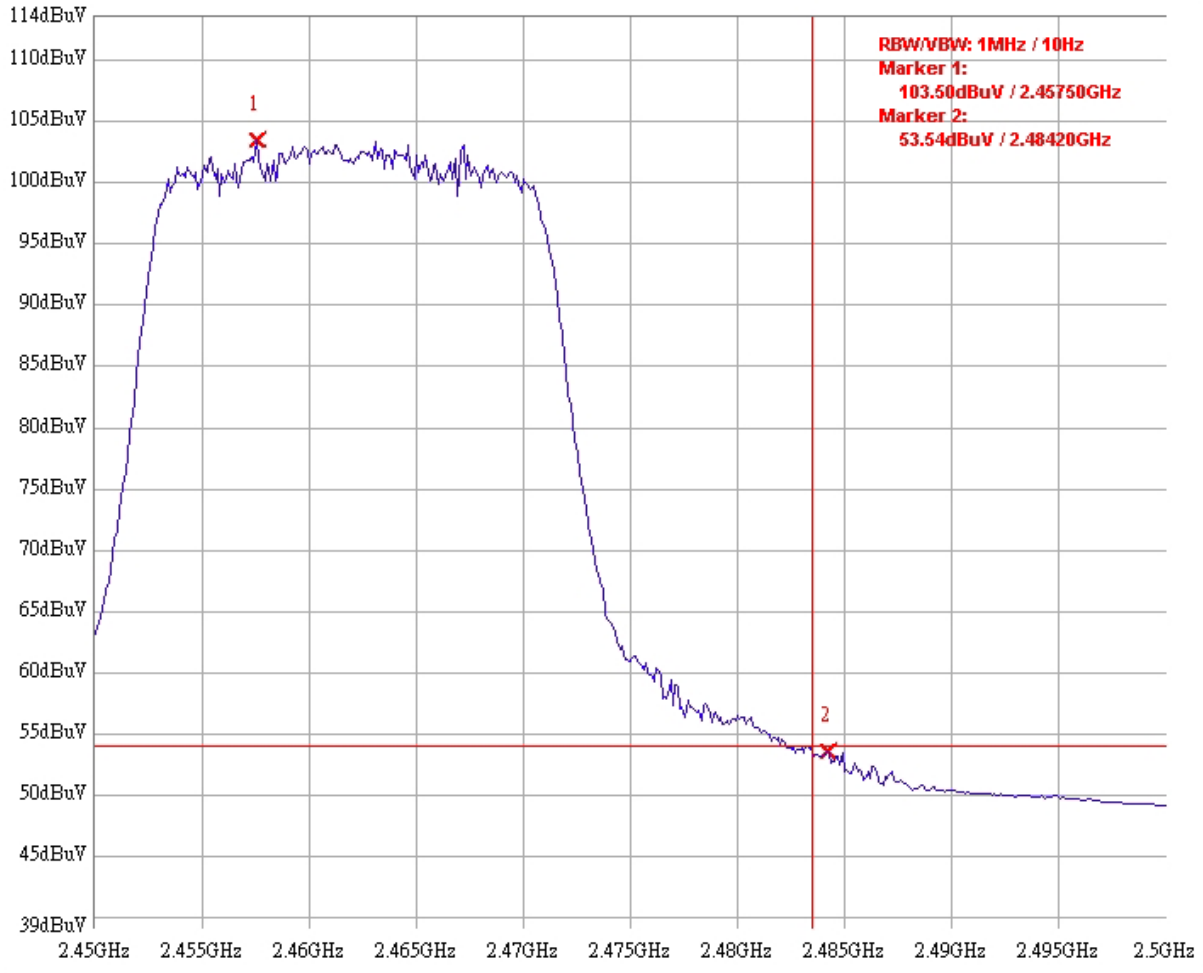
bandedge  
11n(20) ch1  
AV

**NBG460NH**  
**Test Mode: 802.11n HT20 mode CH11 PK**



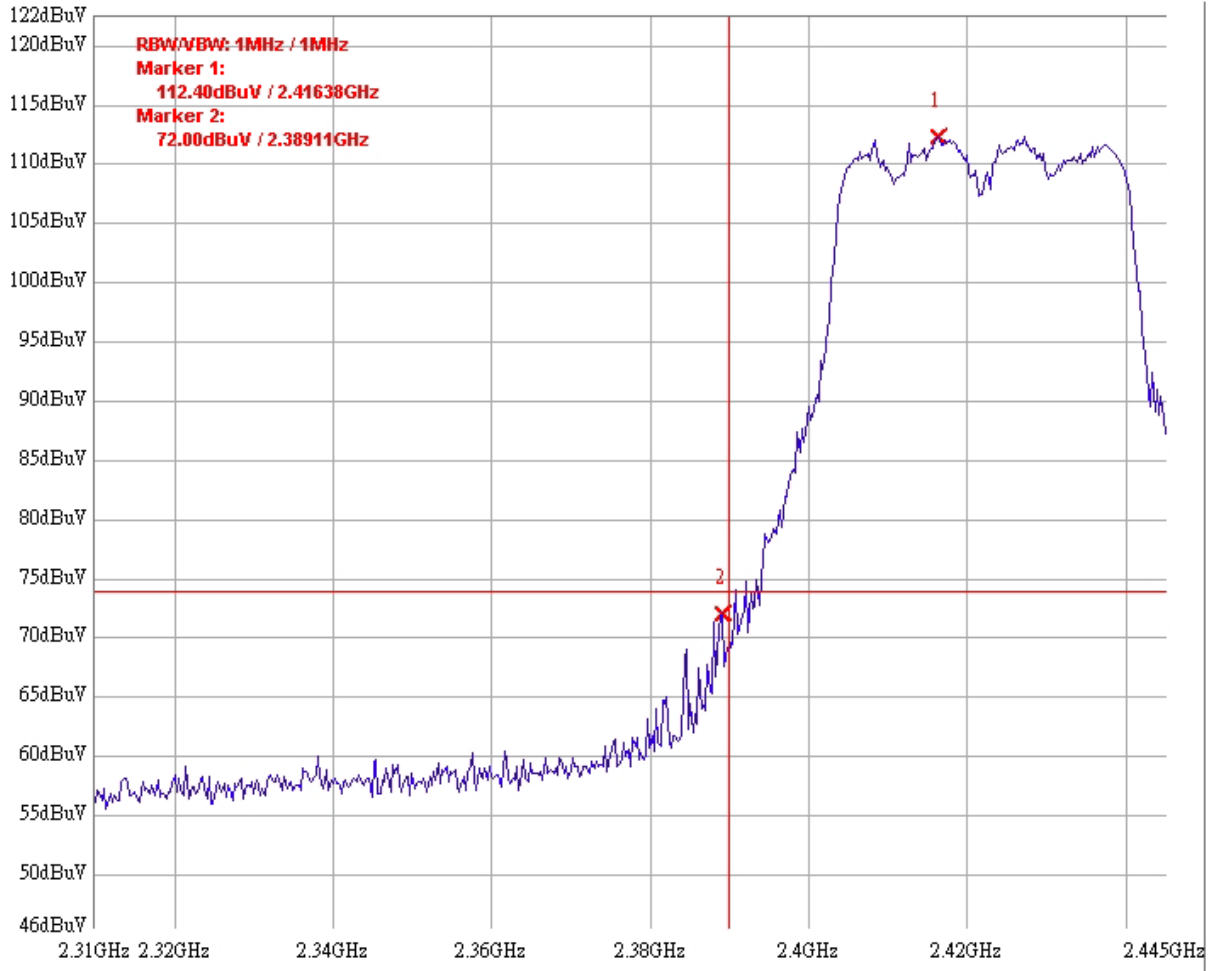
bandedge  
11n(20) ch11  
PK

**NBG460NH**  
**Test Mode: 802.11n HT20 mode CH11 AV**



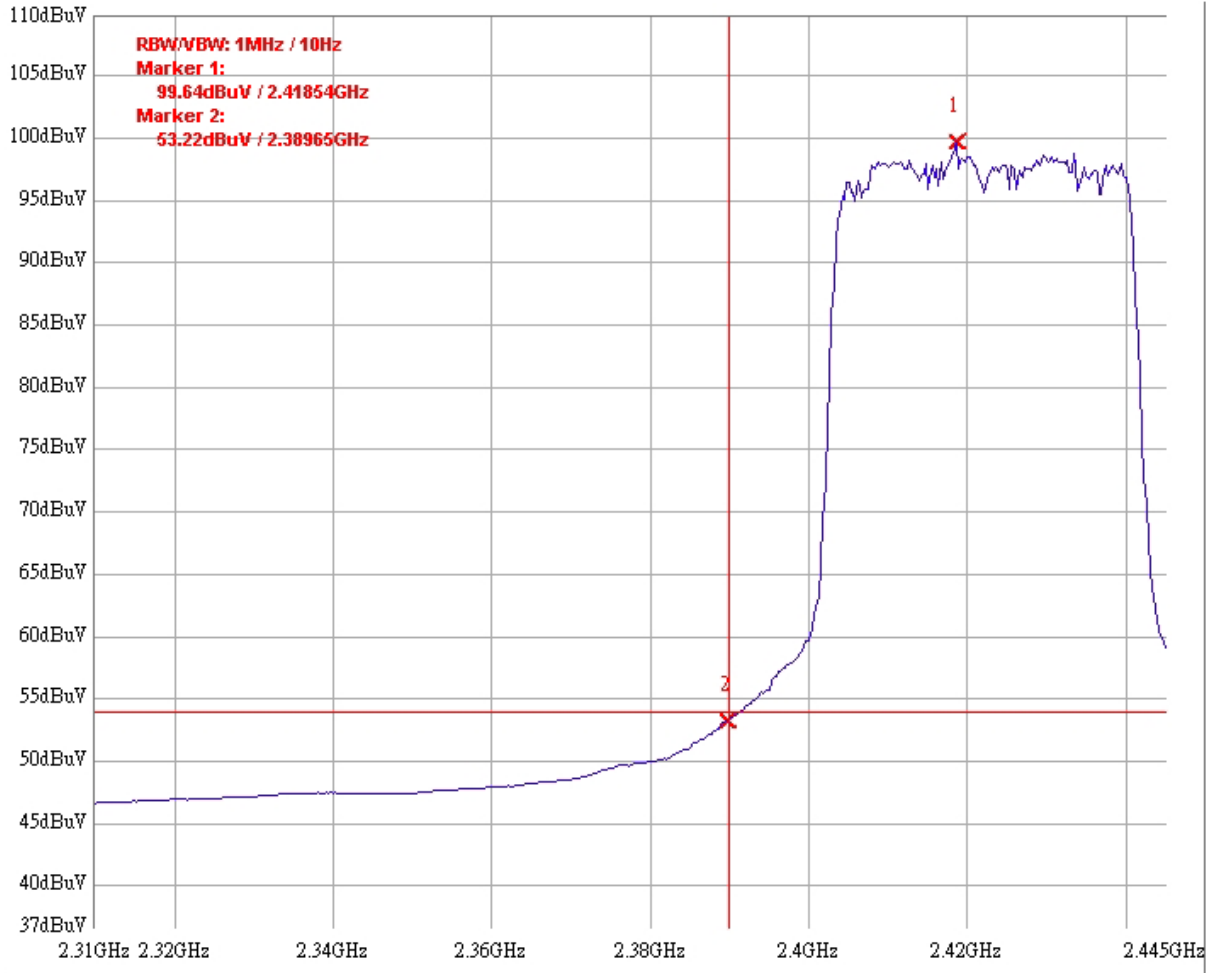
bandedge  
11n(20) ch11  
AV

**NBG460NH**  
**Test Mode: 802.11n HT40 mode CH3 PK**



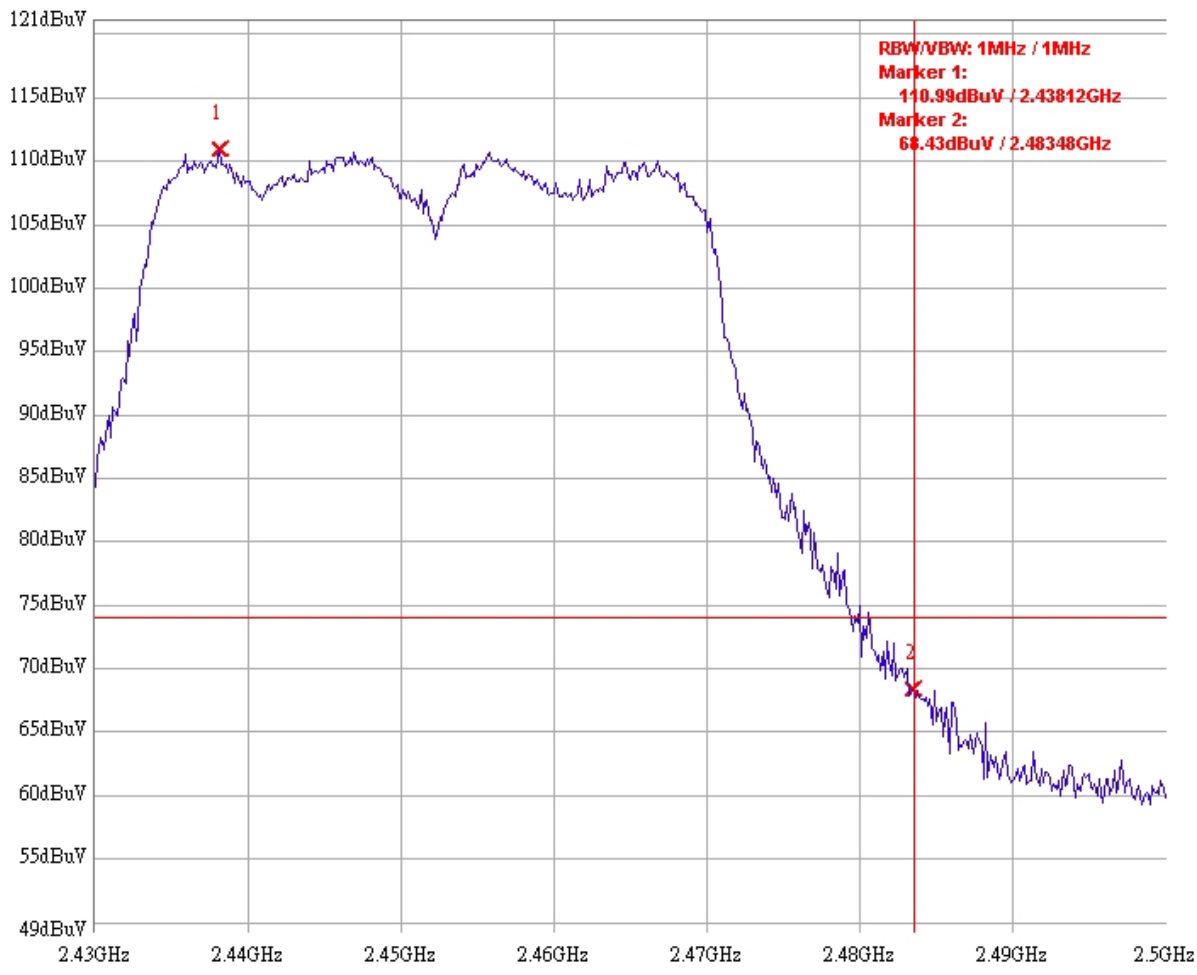
bandedge  
11n(40) ch3  
PK

**NBG460NH**  
**Test Mode: 802.11n HT40 mode CH3 AV**



bandedge  
11n(40) ch3  
AV

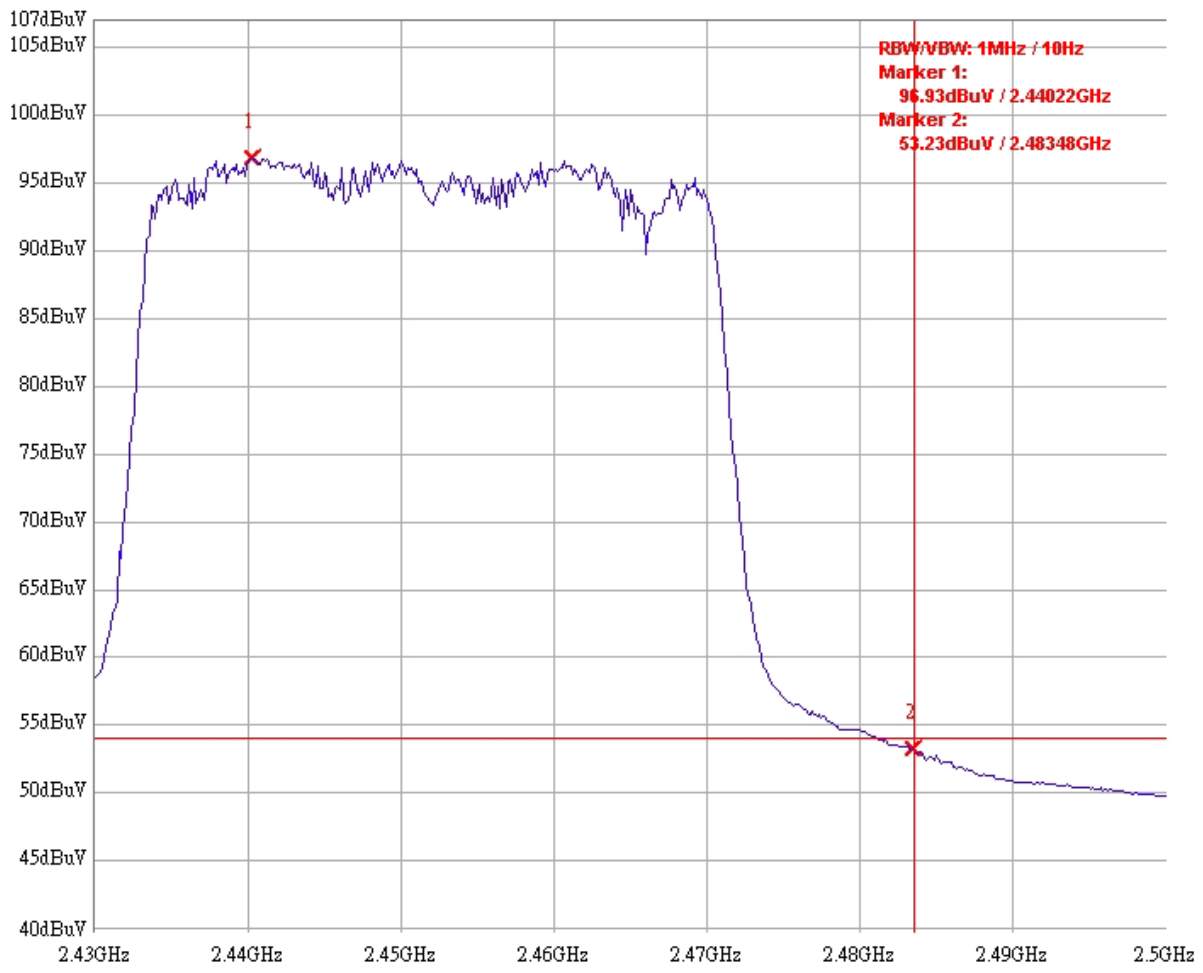
**NBG460NH**  
**Test Mode: 802.11n HT40 mode CH9 PK**



bandedge  
11n(40) ch9  
PK

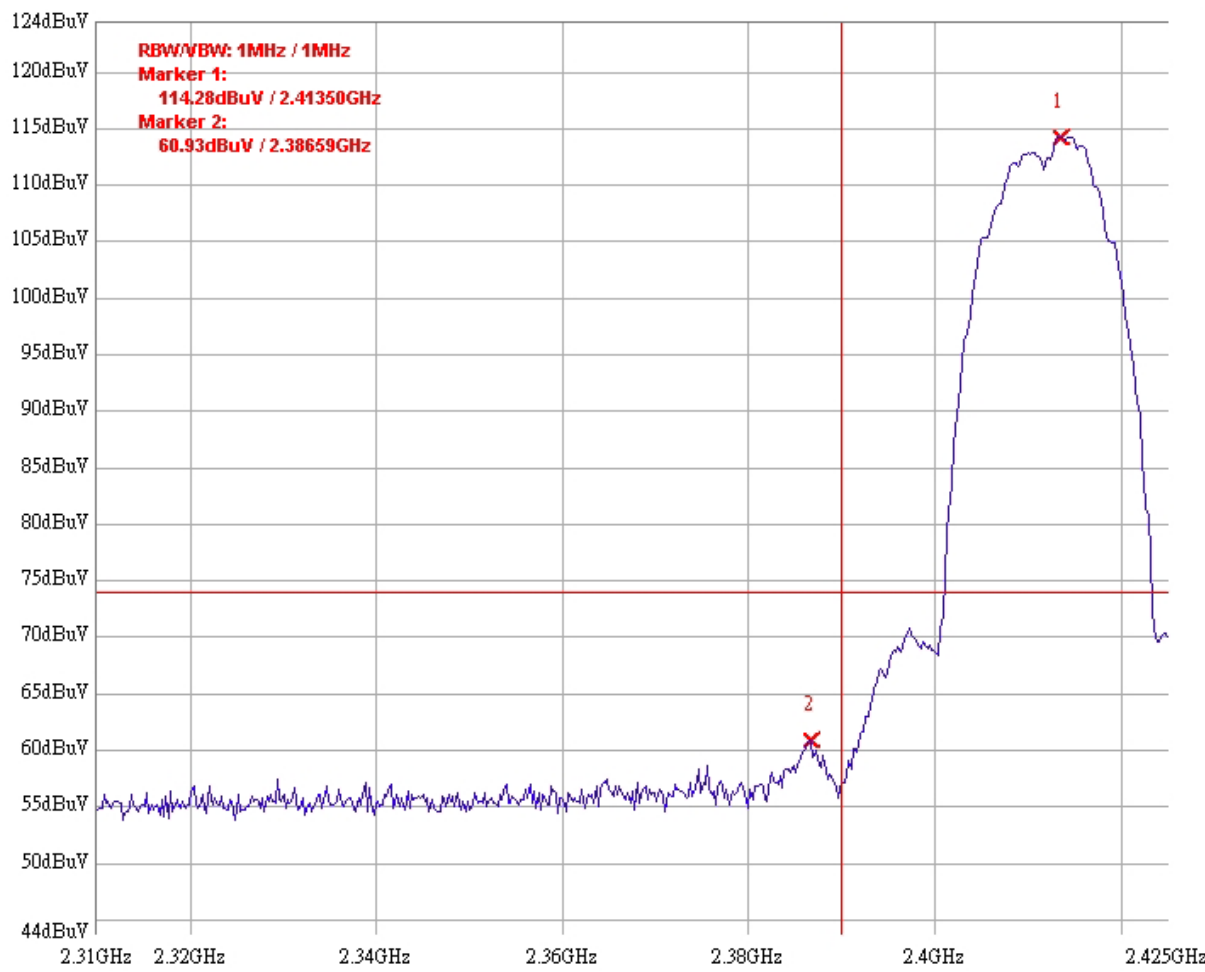


**NBG460NH**  
**Test Mode: 802.11n HT40 mode CH9 AV**



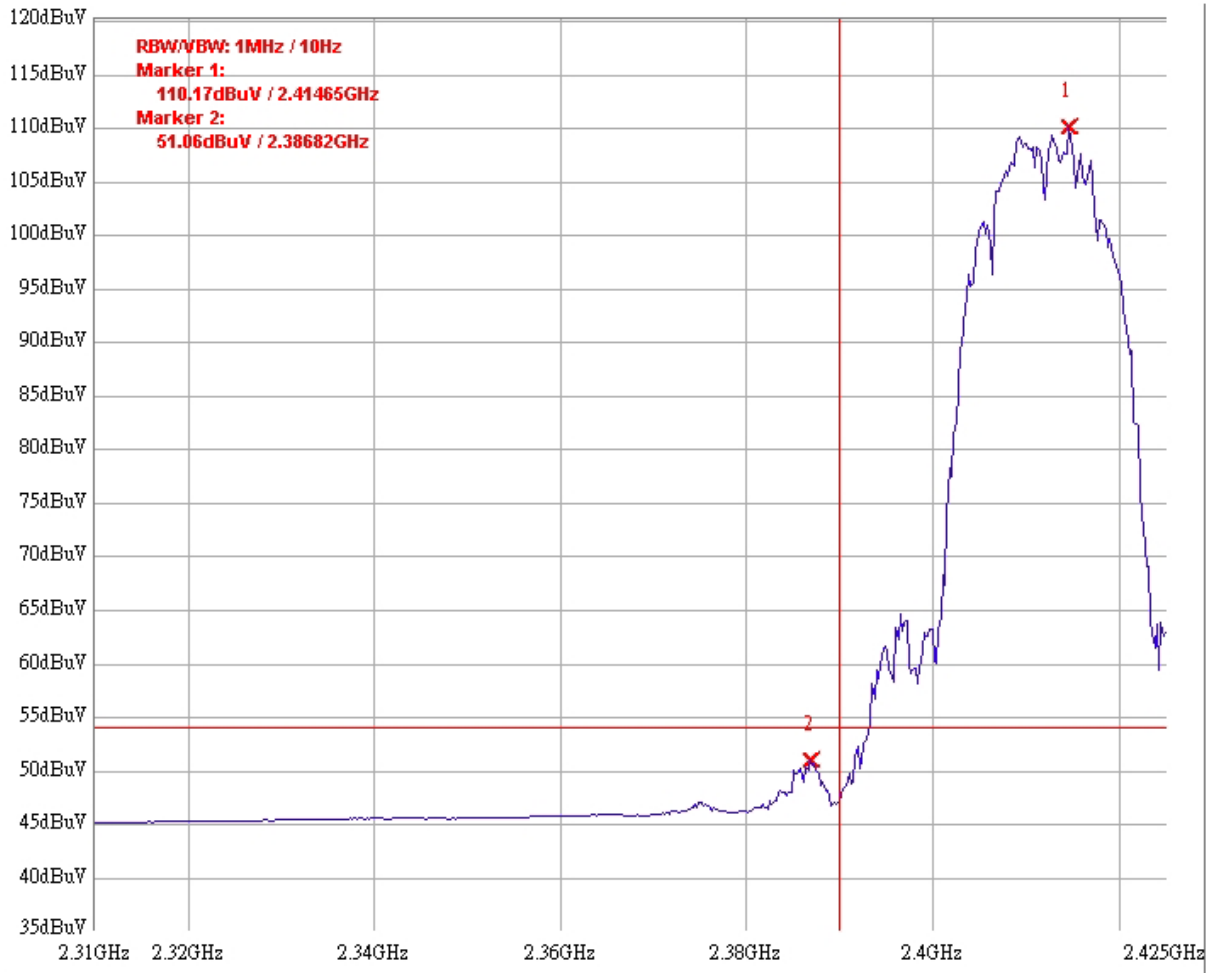
bandedge  
11n(40) ch9  
AV

**NBG460N**  
**Test Mode: 802.11b mode CH1 PK**



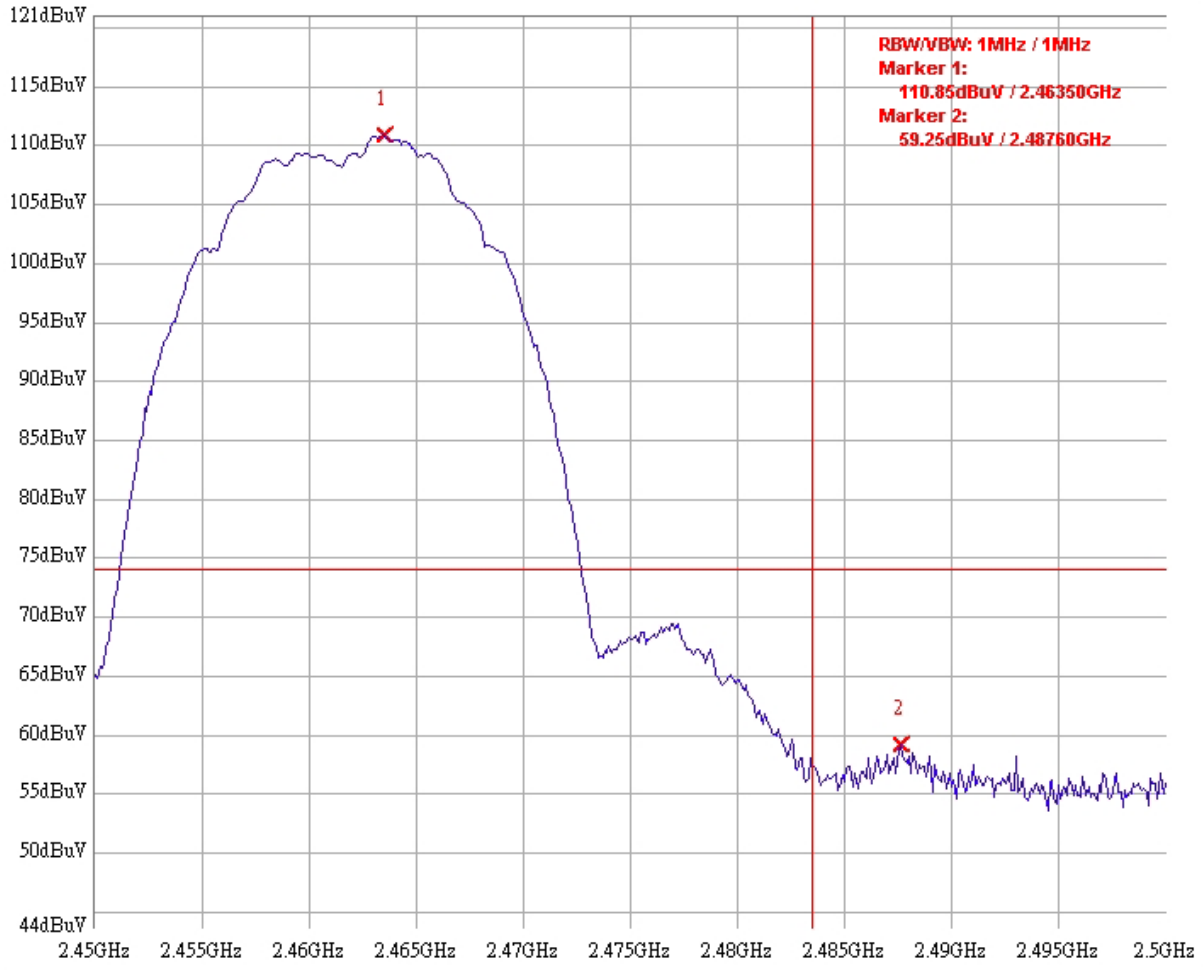
bandedge  
NBG460N  
11b ch1  
PK

**NBG460N**  
**Test Mode: 802.11b mode CH1 AV**



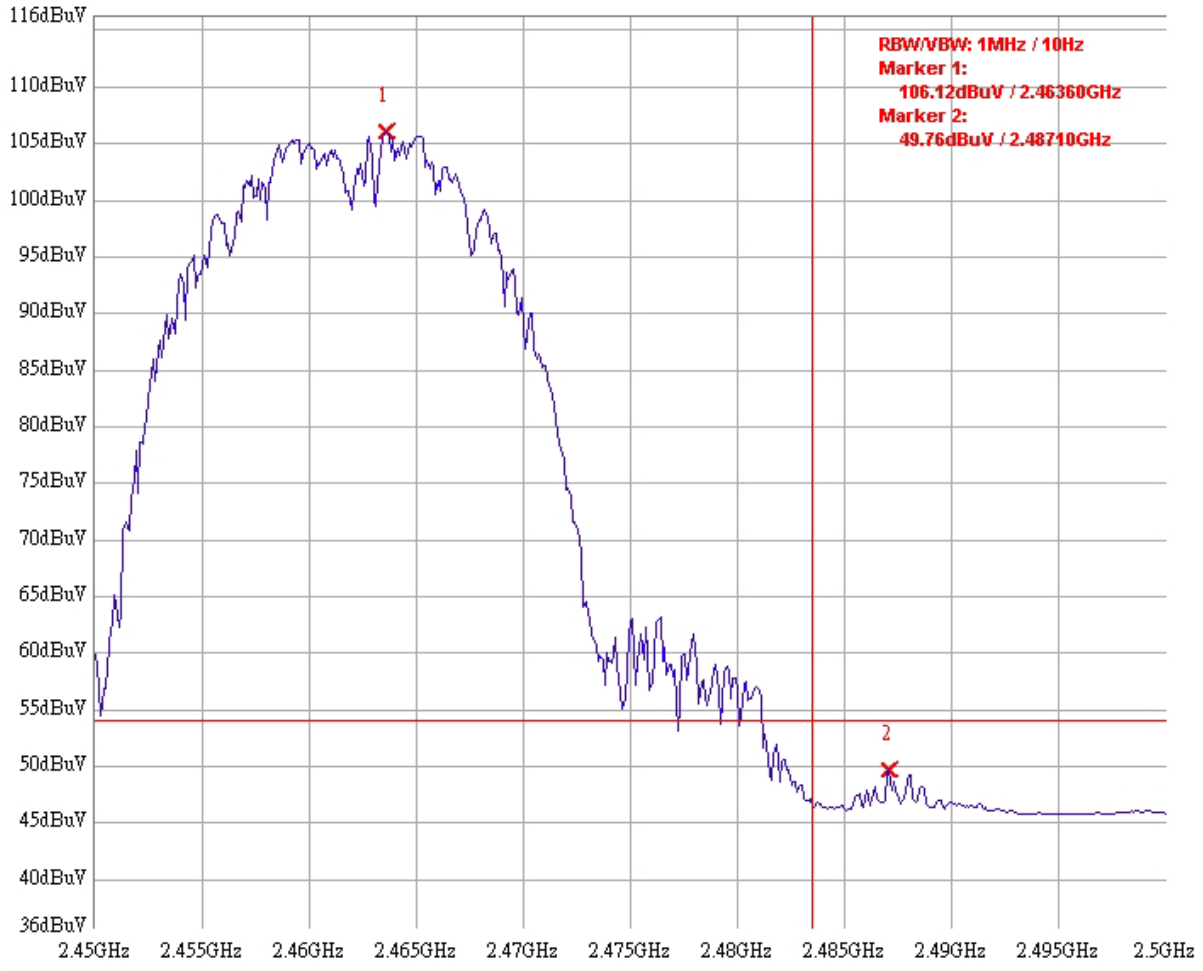
bandedge  
NBG460N  
11b ch1  
AV

**NBG460N**  
**Test Mode: 802.11b mode CH11 PK**



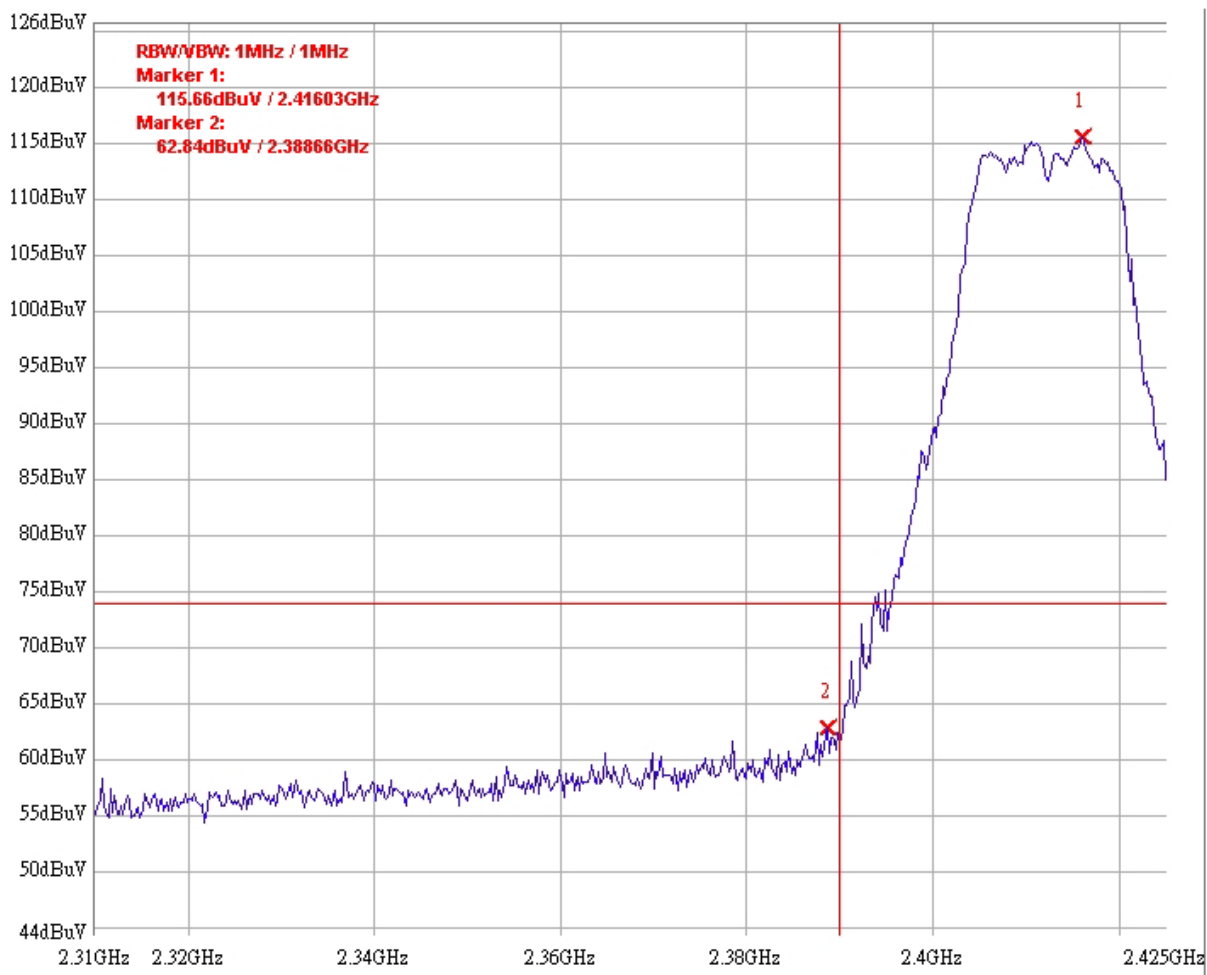
bandedge  
NBG460N  
11b ch11  
pk

**NBG460N**  
**Test Mode: 802.11b mode CH11 AV**



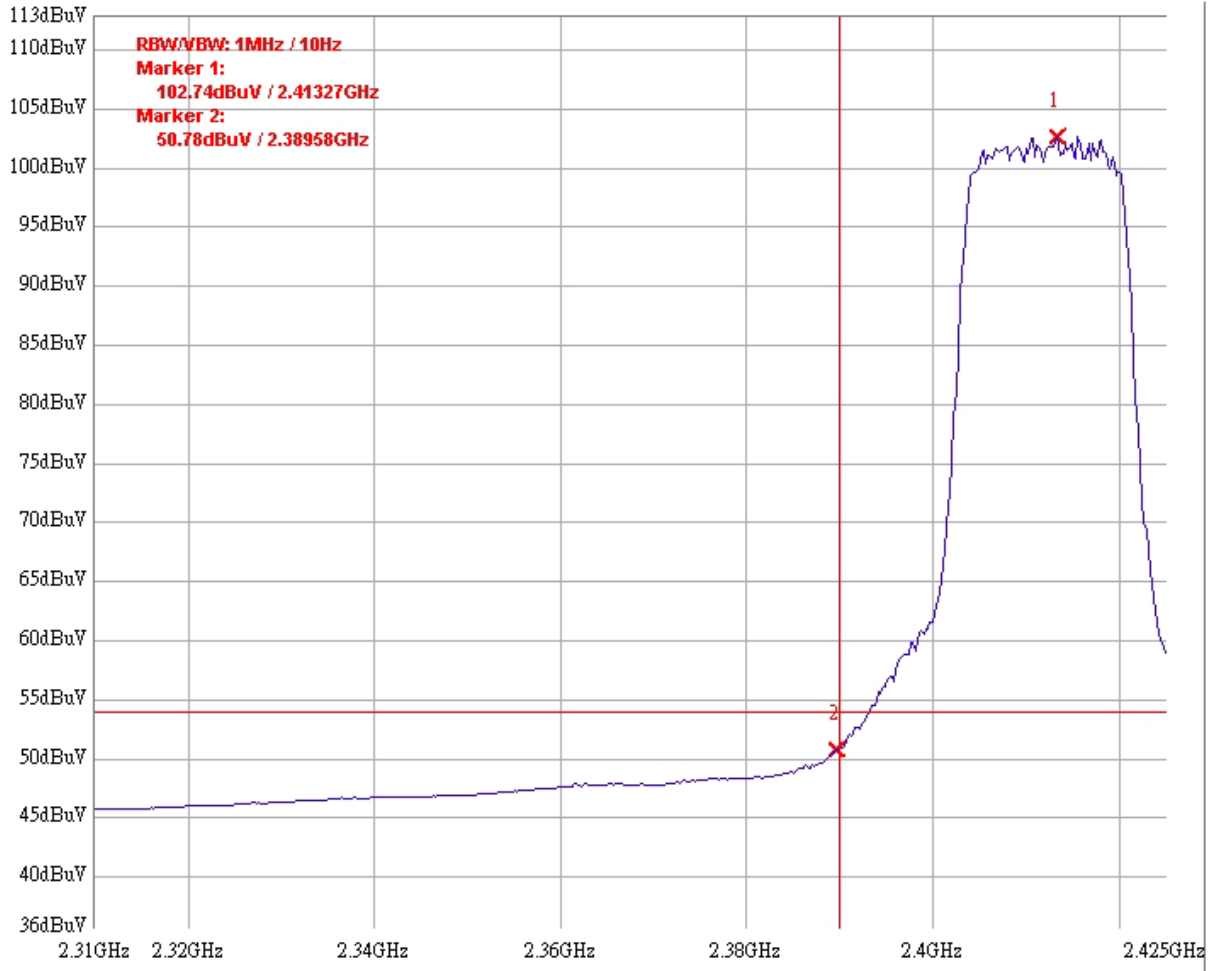
bandedge  
NBG460N  
11b ch11  
AV

**NBG460N**  
**Test Mode: 802.11g mode CH1 PK**



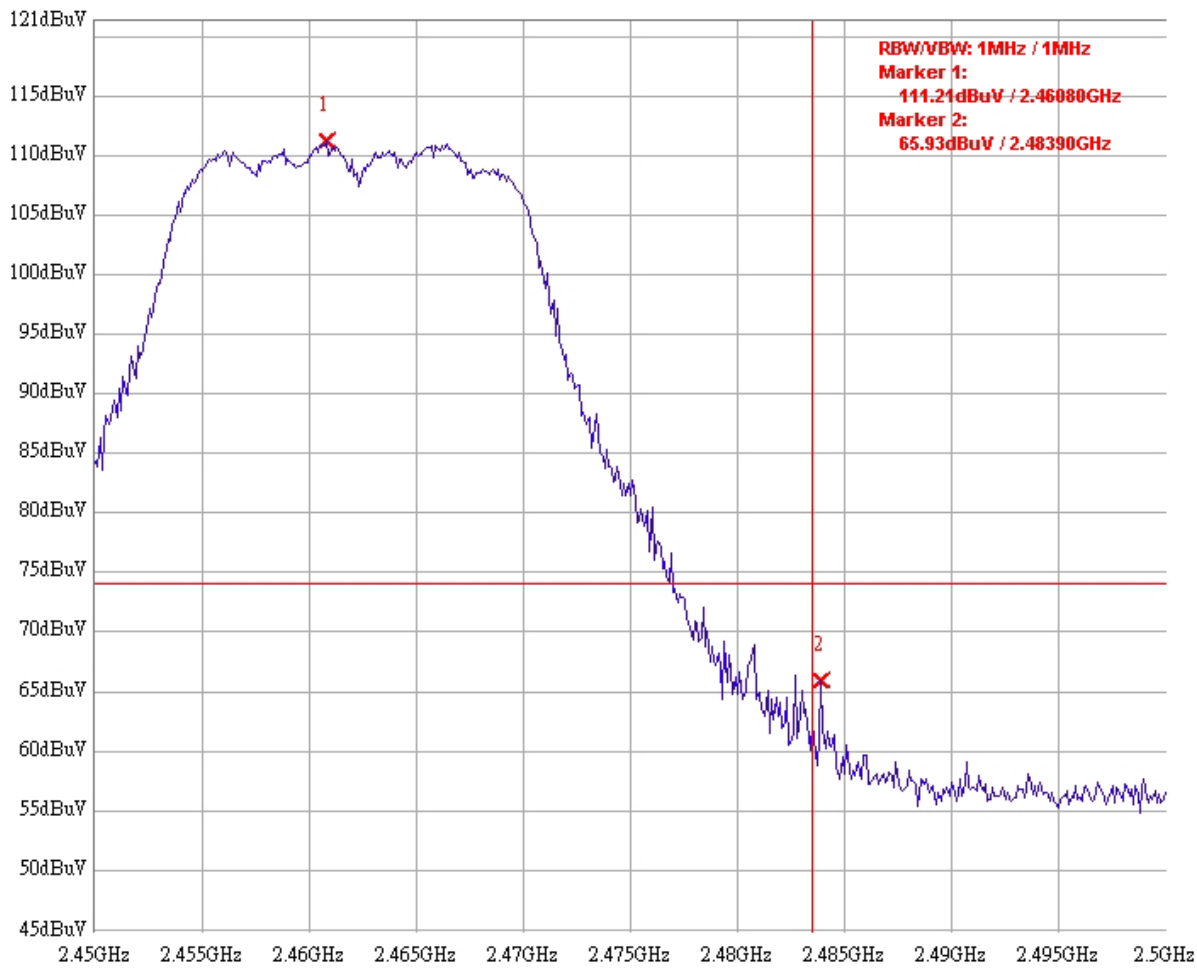
bandedge  
NBG460N  
11g ch1  
PK

**NBG460N**  
**Test Mode: 802.11g mode CH1 AV**



bandedge  
NBG460N  
11g ch1  
AV

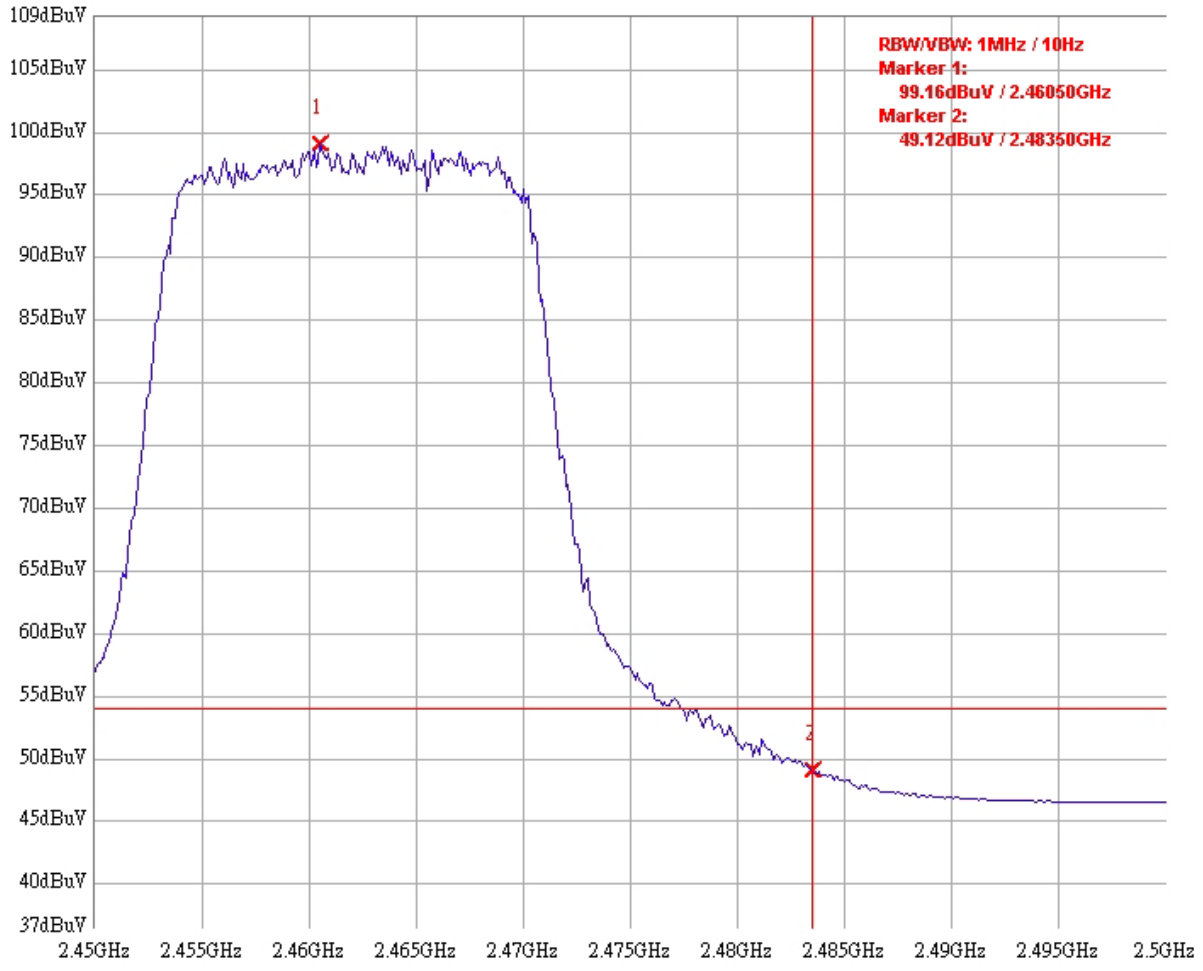
**NBG460N**  
**Test Mode: 802.11g mode CH11 PK**



bandedge  
NBG460N  
11g ch11  
PK

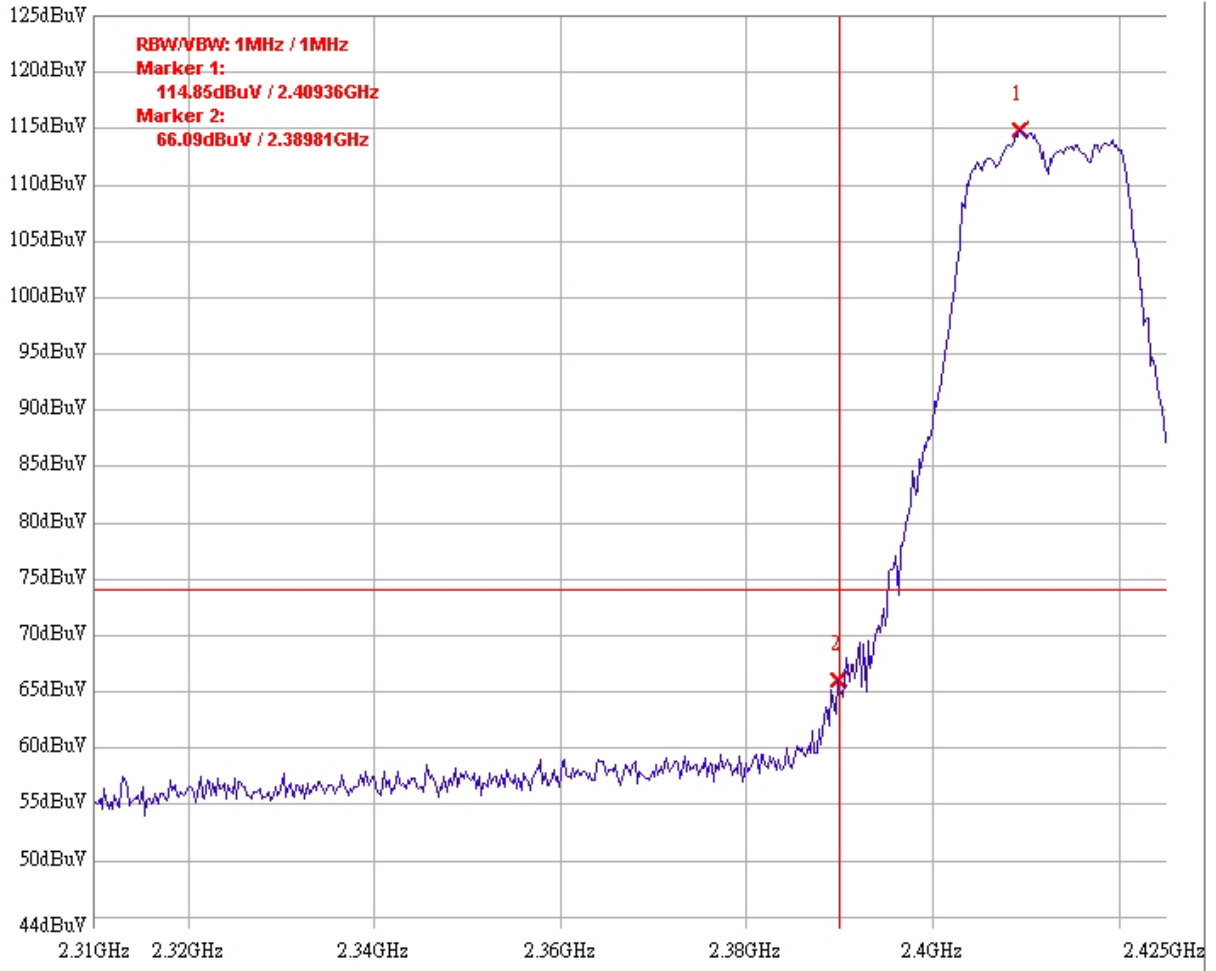


**NBG460N**  
**Test Mode: 802.11g mode CH11 AV**



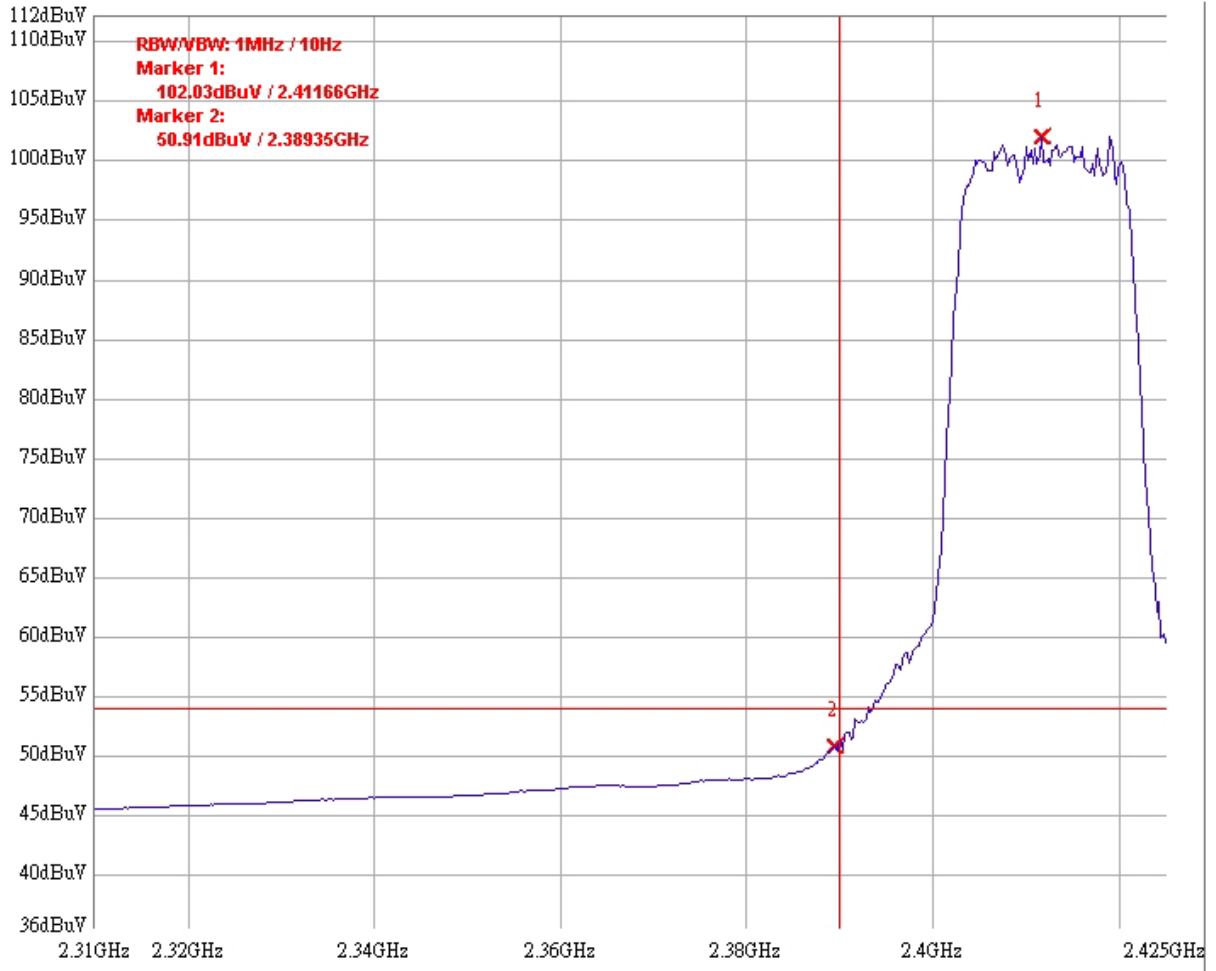
bandedge  
NBG460N  
11g ch11  
AV

**NBG460N**  
**Test Mode: 802.11n HT20 mode CH1 PK**



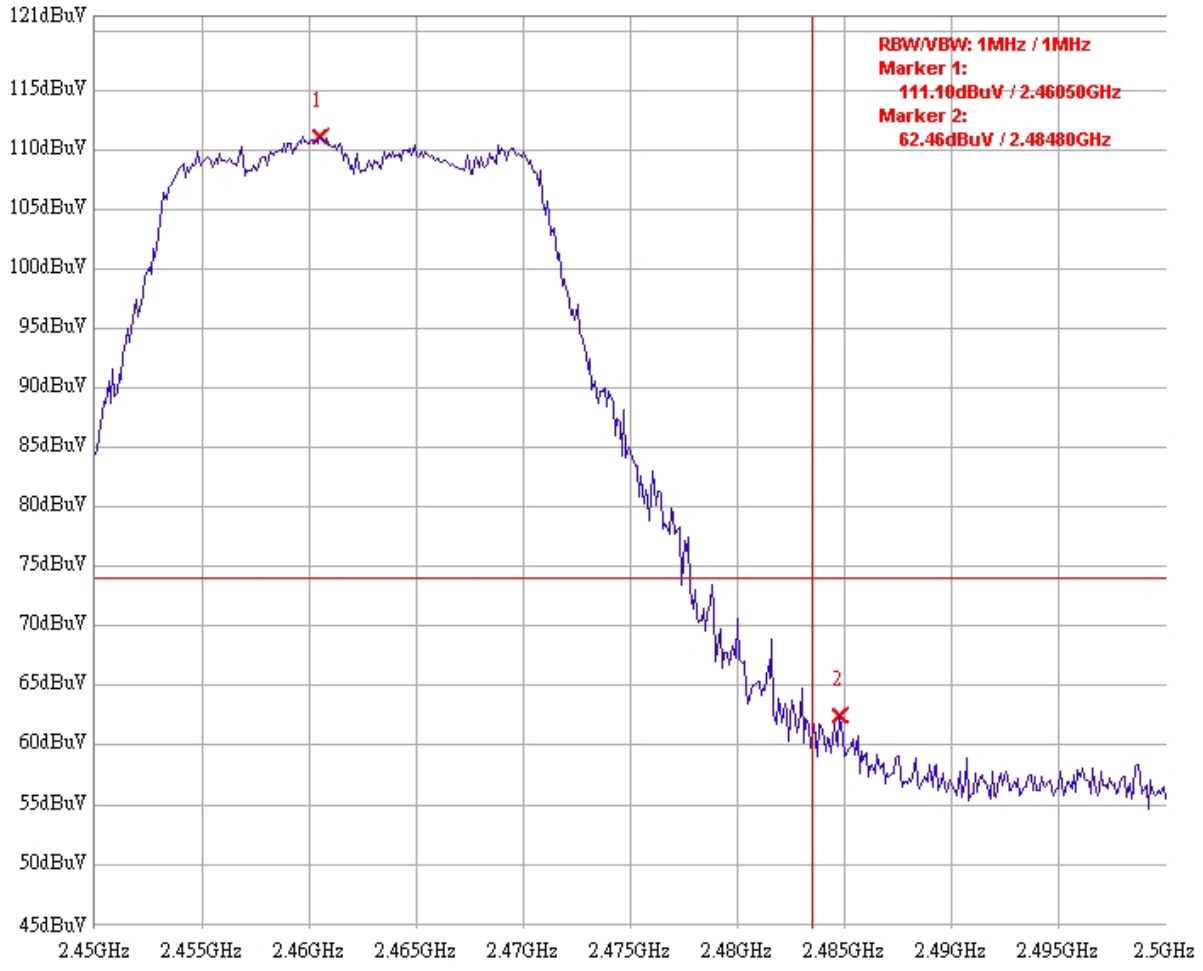
bandedge  
NBG460N  
11n(20) ch1  
PK

**NBG460N**  
**Test Mode: 802.11n HT20 mode CH1 AV**



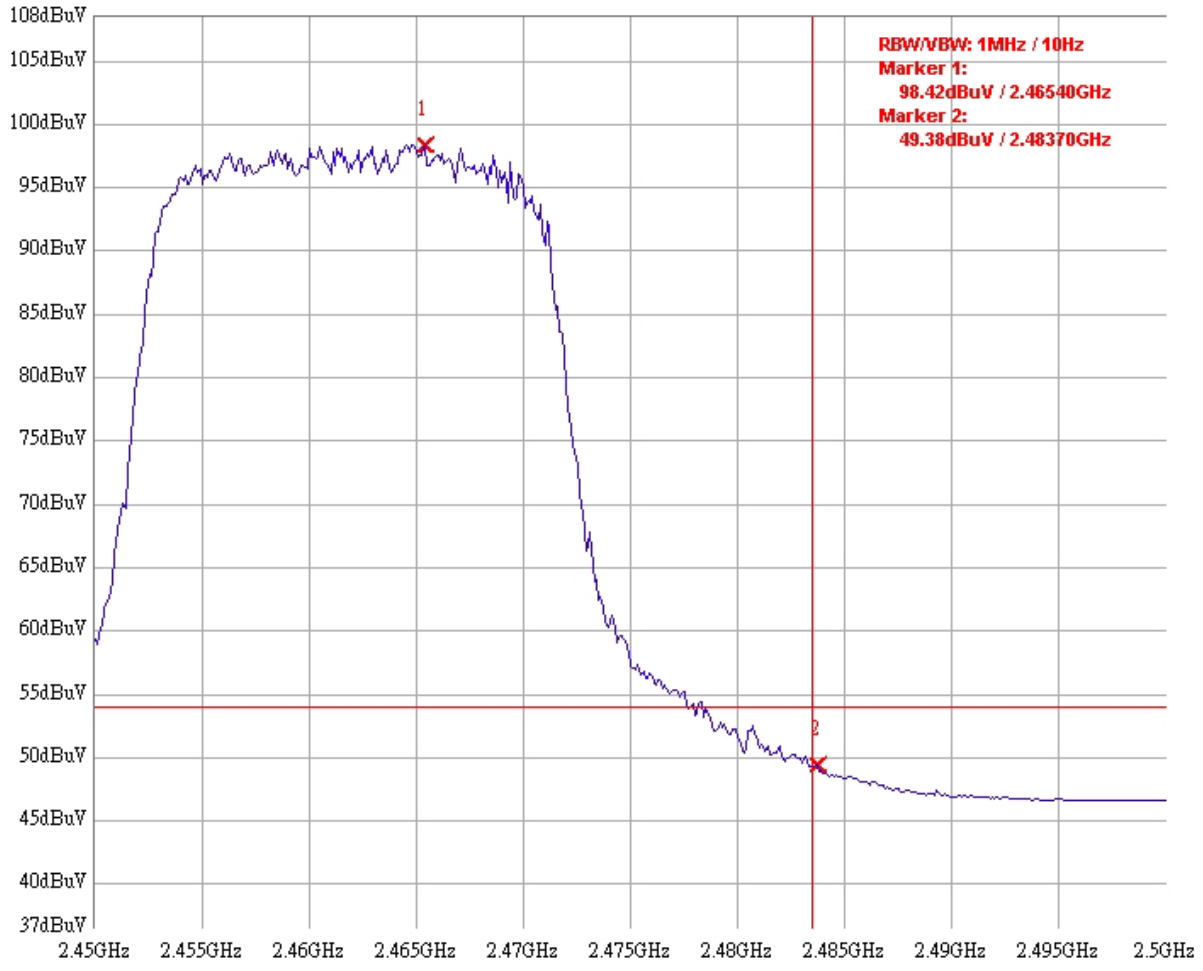
bandedge  
NBG460N  
11n(20) ch1  
AV

**NBG460N**  
**Test Mode: 802.11n HT20 mode CH11 PK**



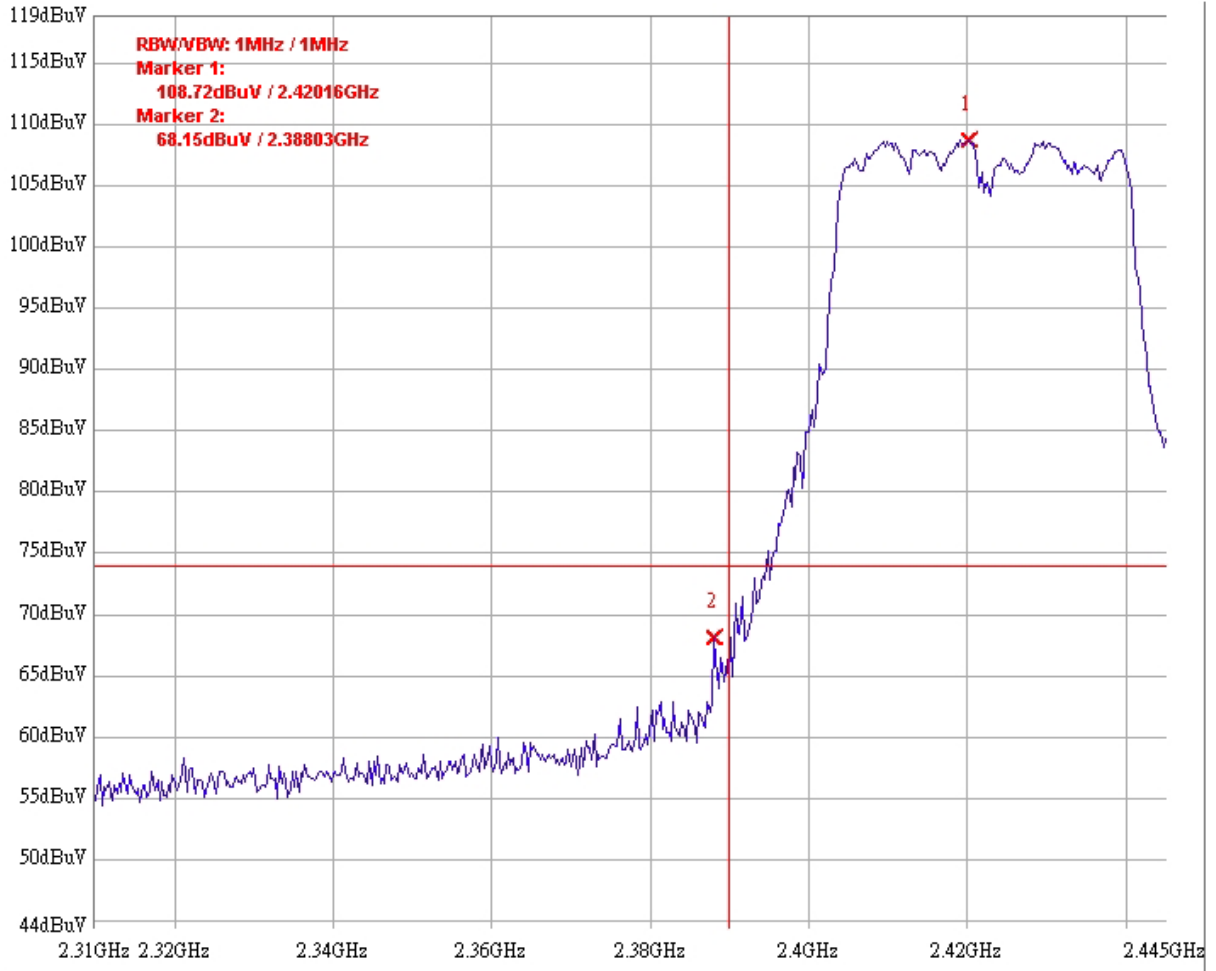
bandedge  
NBG460N  
11n(20) ch11  
pk

**NBG460N**  
**Test Mode: 802.11n HT20 mode CH11 AV**



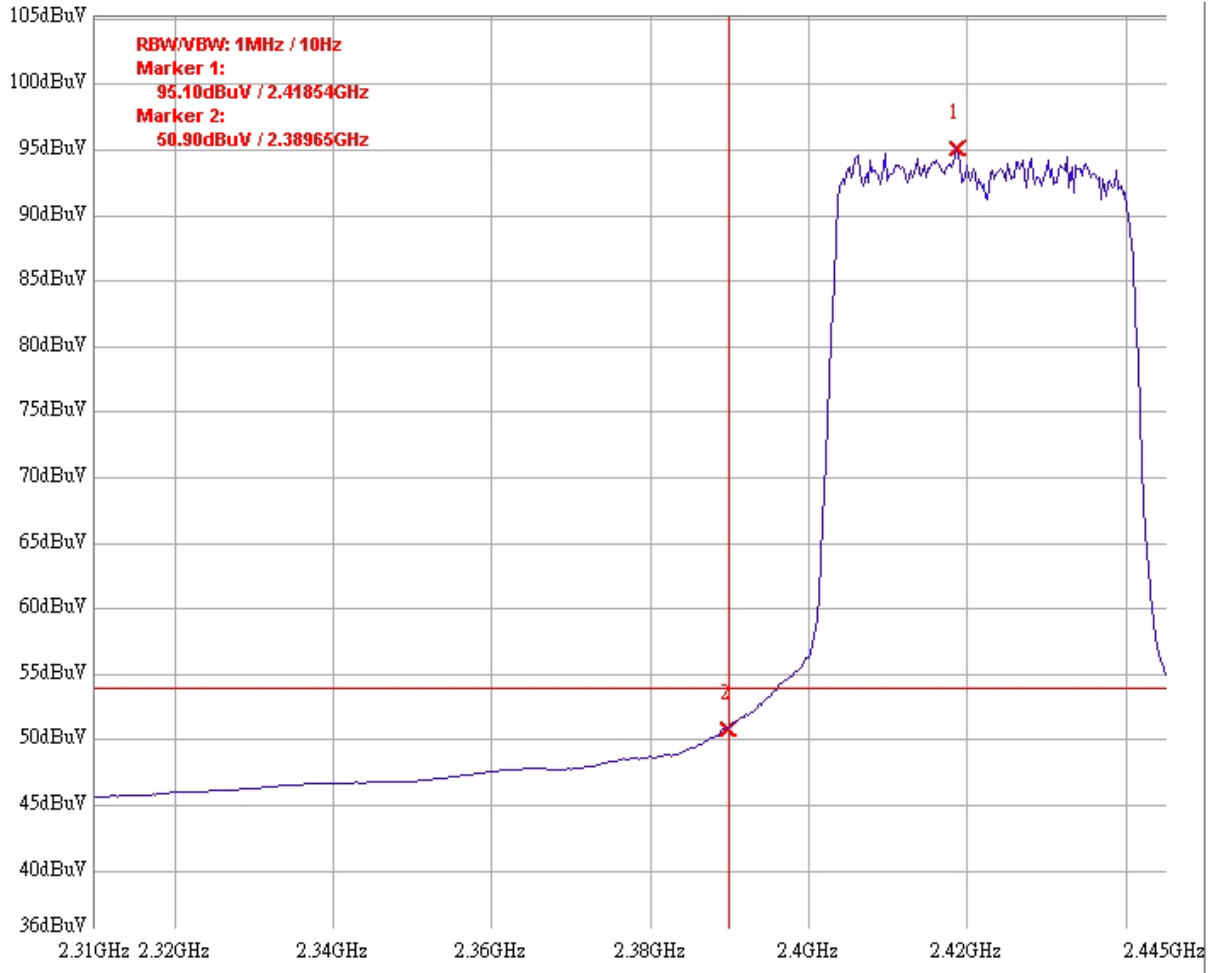
bandedge  
NBG460N  
11n(20) ch11  
AV

**NBG460N**  
**Test Mode: 802.11n HT40 mode CH3 PK**



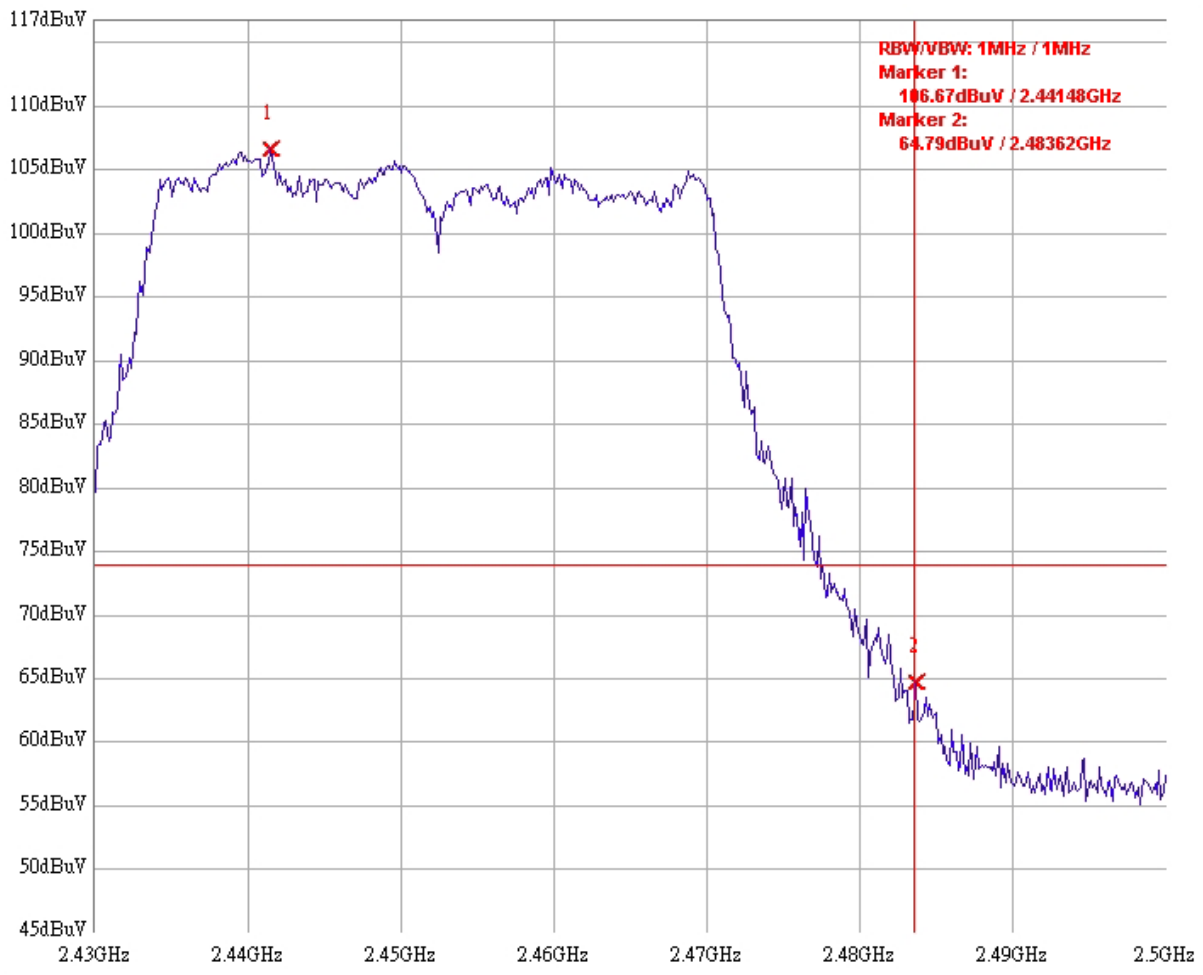
bandedge  
NBG460N  
11n(40) ch3  
PK

**NBG460N**  
**Test Mode: 802.11n HT40 mode CH3 AV**



bandedge  
NBG460N  
11n(40) ch3  
AV

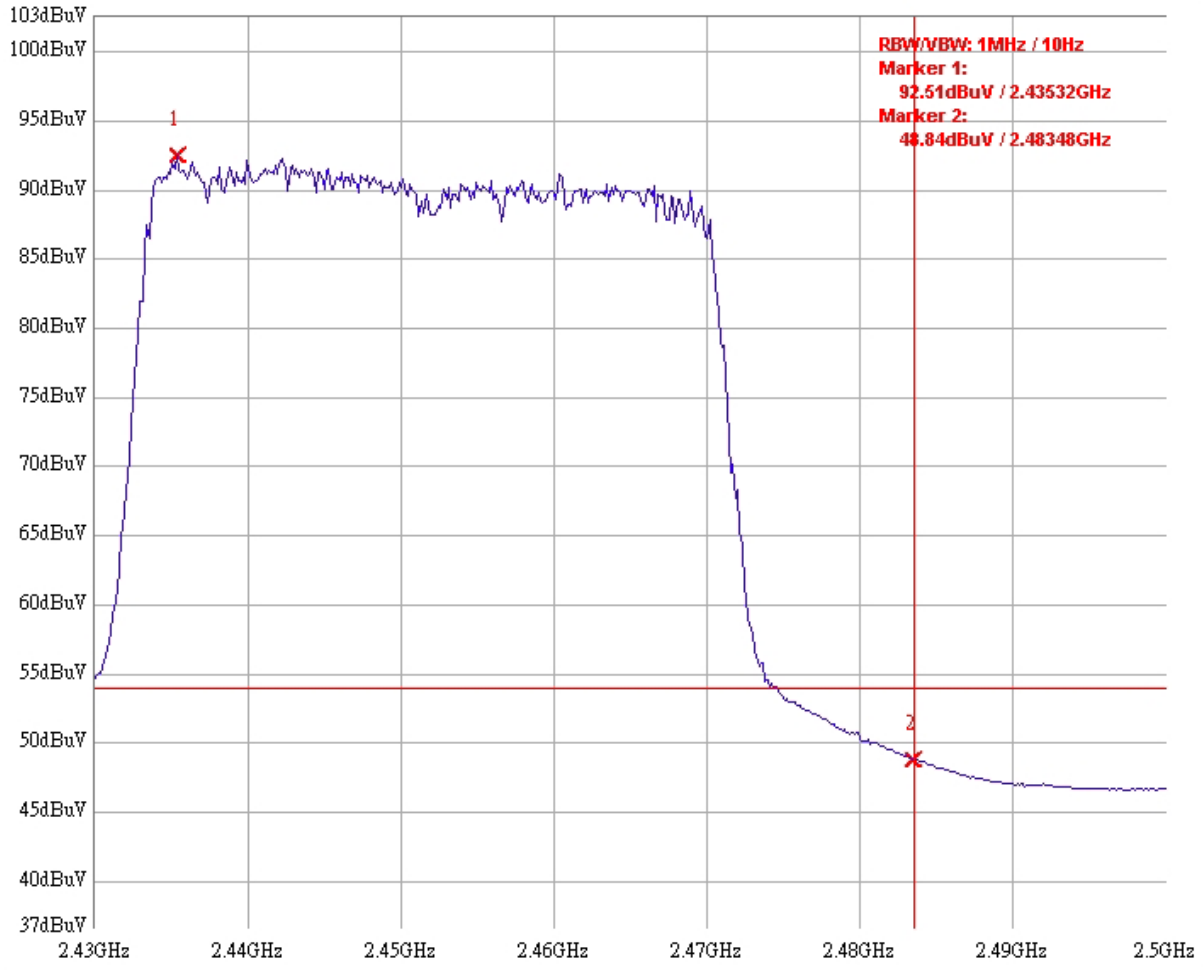
**NBG460N**  
**Test Mode: 802.11n HT40 mode CH9 PK**



bandedge  
NBG460N  
11n(40) ch9  
PK



**NBG460N**  
**Test Mode: 802.11n HT40 mode CH9 AV**



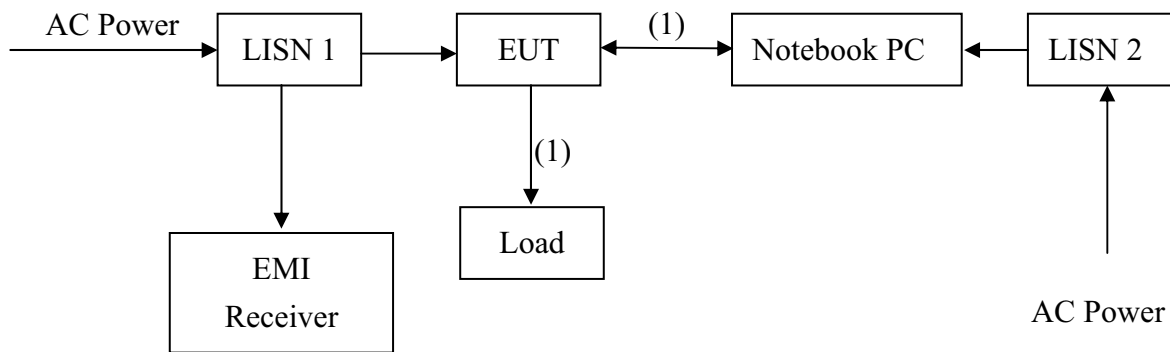
bandedge  
NBG460N  
11n(40) ch9  
AV

## 9. Power Line Conducted Emission test §FCC 15.207

### 9.1 Operating environment

Temperature:	22	°C
Relative Humidity:	55	%
Atmospheric Pressure	1023	hPa

### 9.2 Test setup & procedure



(1) RJ-45 UTP Cat.5 10meter

The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4/2003 on conducted measurement. The bandwidth of the field strength meter (R & S Test Receiver ESCS 30) is set at 9kHz.

The EUT configuration please refer to the “Conducted set-up photo.pdf”.

### 9.3 Emission limit

Freq. (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56*	56 – 46*
0.50~5.00	56	46
5.00~30.0	60	50

\*Decreases with the logarithm of the frequency.

### 9.4 Uncertainty of Conducted Emission

Expanded uncertainty (k=2) of conducted emission measurement is  $\pm 2.26$  dB.

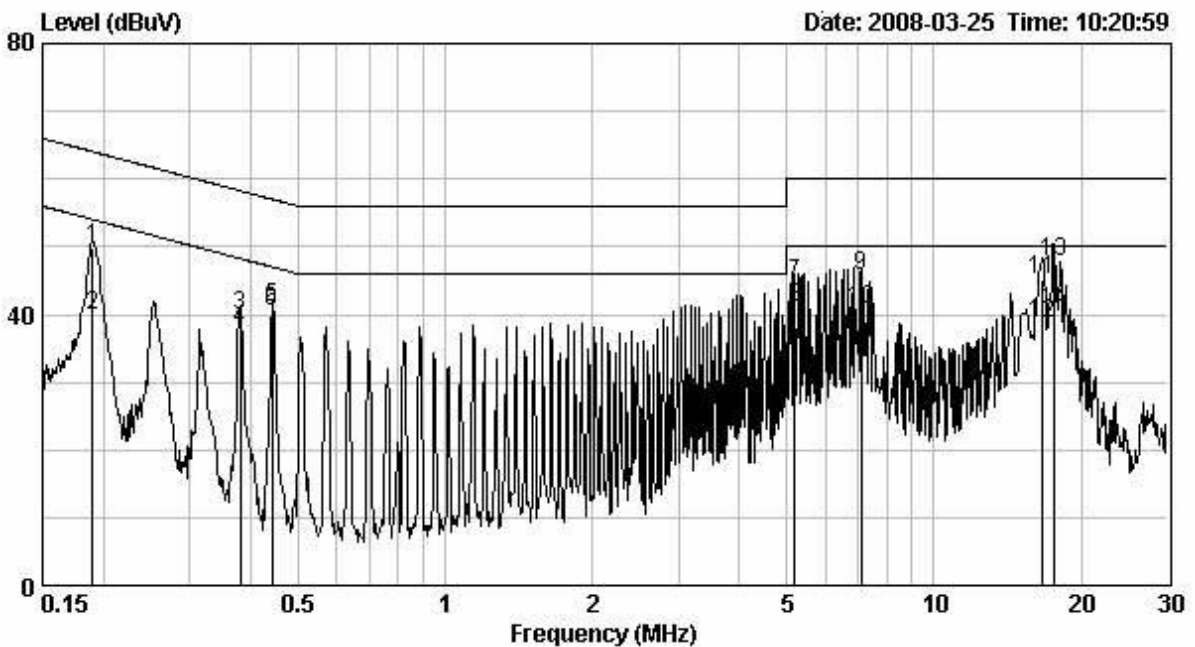
### 9.5 Power Line Conducted Emission test data

Phase: Line  
 EUT: NBG460NH  
 Test Condition: Normal operating mode

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level AV (dBuV)	Limit Av (dBuV)	Margin (dB)	
						Qp	Av
0.190	0.80	49.79	64.04	40.00	54.04	-14.25	-14.04
0.380	0.16	39.94	58.27	37.85	48.27	-18.34	-10.43
0.443	0.10	41.11	57.01	40.38	47.01	-15.90	-6.63
5.196	0.36	44.65	60.00	41.08	50.00	-15.35	-8.92
7.098	0.43	45.70	60.00	40.88	50.00	-14.30	-9.12
16.668	0.84	45.13	60.00	38.70	50.00	-14.87	-11.30
17.555	0.86	47.83	60.00	40.56	50.00	-12.17	-9.44

Remark:

1. Corr. Factor (dB)= LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)



Phase: Neutral  
 EUT: NBG460NH  
 Test Condition: Normal operating mode

Frequency (MHz)	Corr. Factor (dB)	Level Qp (dBuV)	Limit Qp (dBuV)	Level AV (dBuV)	Limit Av (dBuV)	Margin (dB)	
						Qp	Av
0.190	0.10	50.66	64.04	41.38	54.04	-13.38	-12.66
0.444	0.10	42.87	56.99	42.06	46.99	-14.12	-4.93
6.020	0.34	44.73	60.00	40.43	50.00	-15.27	-9.57
6.656	0.36	45.01	60.00	40.28	50.00	-14.99	-9.72
16.734	0.50	44.85	60.00	37.71	50.00	-15.15	-12.29
17.555	0.50	47.57	60.00	40.20	50.00	-12.43	-9.80

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Level (dBuV) – Limit (dBuV)

