FCC 47CFR part 15C
Test Report
For
Evoke Flow

Reference Standard: FCC 47CFR part 15C
Manufacturer: Pure Digital Ltd
For type of equipment and serial number, refer to section 3
Report Number: 03-398B/4201/2/10
Supersedes report # 03-398A/4201/2/10
Report Produced by: -

R.N. Electronics Ltd.
1 Arnolds Court
Arnolds Farm Lane
Mountnessing
Essex
CM13 1UT
U.K.

www.RNelectronics.com

Telephone +44 (0) 1277 352219
Facsimile +44 (0) 1277 352968

1. Contents

2. Summary of Test Results

The Evoke Flow was tested to the following standards: -

FCC Part 15C (effective date October 1st, 2009); Class DTS Intentional Radiator

Any compliance statements are made reliant on the modes of operation as instructed to us by the Manufacturer based on their specific knowledge of the application and functionality of the equipment tested. Whilst every effort is made to assure quality of testing, type tests are not exhaustive and although no non-conformances may be found, this doesn't exclude the possibility of equipment not meeting the intentions of the standard, particularly under different conditions to those during testing.

Title	Reference	Results
1. Conducted Emissions	FCC Part 15C §15.207	PASSED
2. Radiated Emissions	FCC Part 15C §15.205, §15.209 and §15.247(d)	PASSED
3. Modulation Bandwidth	FCC Part 15C §15.215(c), §15.247(a)(2)	PASSED
4. Peak Conducted Power	FCC Part 15C §15.247(b)	PASSED
5. Frequency Tolerance	FCC Part 15C §15.215(c)	NOT APPLICABLE[1]
6. Duty Cycle	FCC Part 15C §15.247	NOT APPLICABLE[2]
7. Power Spectral Density	FCC Part 15C §15.247(e)	PASSED
8. Band Edge Compliance	FCC Part 15C §15.205, §15.209 and §15.247	PASSED
9. Frequency separation	FCC Part 15C §15.247	NOT APPLICABLE[2]
10. No. of hopping channels	FCC Part 15C §15.247	NOT APPLICABLE[2]

[1] No test requirement or limit specified for this type of device.
[2] EUT is not FHSS equipment.

This report relates to the equipment tested as identified by a unique serial number and at the time it was tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed.

Date of Test: 4th February to 24th March 2010

Test Engineer: Daniel Sims — Digitally signed by: Daniel Sims DN: CN = Daniel Sims C = GB O = RN Electronics Date: 2010.08.25 13:00:47 Z

Approved By: Paul Darragh — Digitally signed by: Paul Darragh DN: CN = Paul Darragh C = GB O = RN Electronics Ltd Date: 2010.08.27 08:58:52 Z

Customer Representative:

3. Equipment Under Test (EUT)

3.1 Equipment Specification

Applicant	PURE Digital Home Park Estate Kings Langley Hertfordshire WD4 8DH
Manufacturer of EUT	Pure Digital Ltd
Brand name of EUT	Pure Digital Ltd
Model Number of EUT	Evoke Flow
Serial Number of EUT	119090CJ000009 and 119090000023
Date when equipment was received by RN Electronics	4th February 2010
Date of test:	4th February to 24th March 2010
Customer order number:	PO091661
Visual description of EUT:	Small black enclosure with LCD display, controls and speaker on the front. The unit has several sockets on the rear along with a DC input from the supplied AC/DC PSU, an antenna and a battery compartment. The WIFI and wireless USB antennae are located inside the enclosure.
Main function of the EUT:	802.11b/g internet radio and audio file streaming.
Height	170 mm
Width	210 mm
Depth	90 mm
Weight	<2kg
Voltage	100-240V AC/DC adapter. 6V DC from adapter @ 2A max
Current required from above voltage source	0.4A (AC side)

3.2 EUT Configurations for testing

Frequency range	Wi-Fi = 2.412 - 2.462GHz Wireless USB = 2.402 - 2.479GHz
Normal use position	Desk/table top
Normal test signals	Wi-Fi = 802.11B, 802.11G, OFMD, CCK, DSSS Wireless USB = DSSS, 250kbps
Declared Power Level	Wi-Fi = + 20dBm Wireless USB = +4dBm
Declared Channel Bandwidth	Wi-Fi = 22MHz Wireless USB = 1MHz
Highest Frequencies generated/used	Wi-Fi = 2.412 - 2.462GHz Wireless USB = 2.402 - 2.479GHz

3.3 EUT Modes

Wi-Fi RF part

Mode	Description of mode	Used for Testing
TX channel 1	Unit constantly transmitting on 2.412GHz	YES
TX channel 6	Unit constantly transmitting on 2.437GHz	YES
TX channel 11	Unit constantly transmitting on 2.462GHz	YES
RX channel 1	Unit constantly Receiving on 2.412GHz	YES
RX channel 6	Unit constantly Receiving on 2.437GHz	YES
RX channel 11	Unit constantly Receiving on 2.462GHz	YES
Normal mode	Unit communicating with wireless Router network	NO

Wi-Fi modes were provided with 100% TX duty cycle.

Wireless USB RF part

Mode	Description of mode	Used for Testing
Transmit 2.402GHz	Unit transmitting constantly, 35.3% duty and modulation	YES
Transmit 2.442GHz	Unit transmitting constantly, 35.3% duty and modulation	YES
Transmit 2.480GHz	Unit transmitting constantly, 35.3% duty and modulation	YES
Receive 2.402GHz	Unit sitting in receive mode on bottom channel	YES
Receive 2.442GHz	Unit sitting in receive mode on middle channel	YES
Receive 2.479GHz	Unit sitting in receive mode on top channel	YES
Normal mode	Unit communicating with remote control	NO

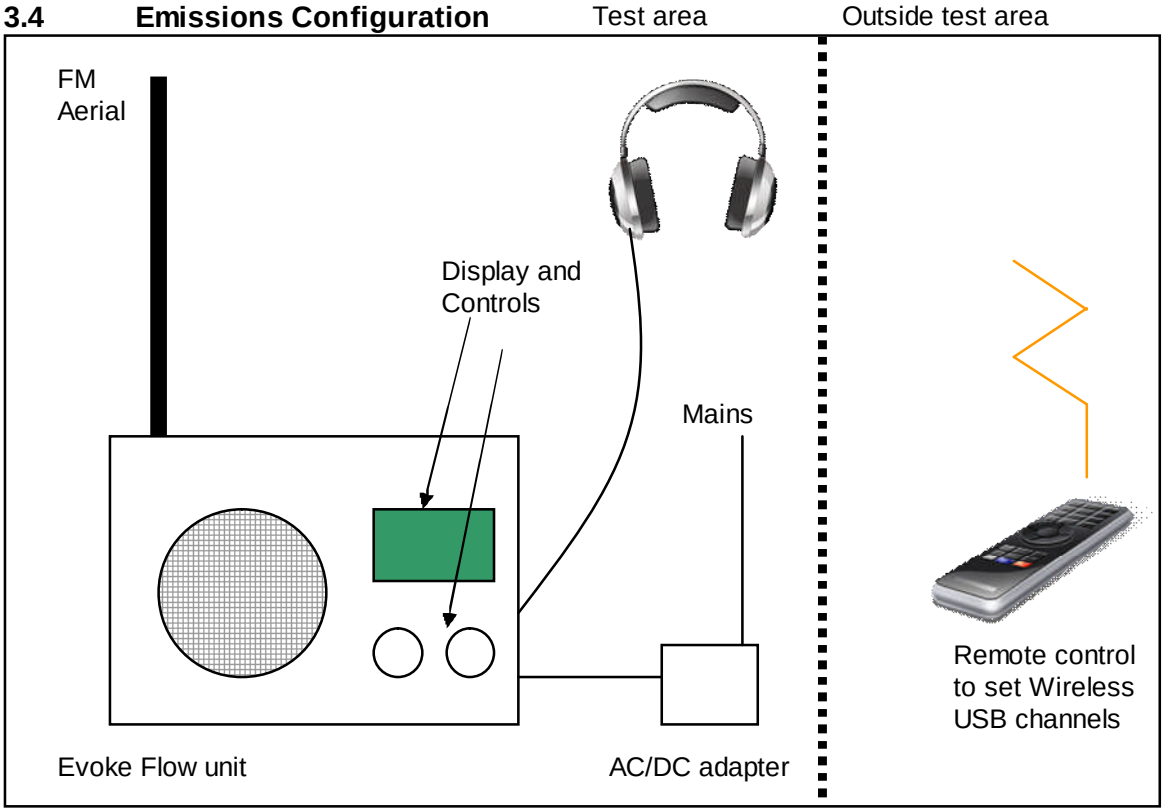
Wireless USB modes were provided with 35.3% TX duty cycle.

Description of ancillary equipment connected to the equipment under test, for the purpose of tests, can be found in Section 10.

Any modifications made to the EUT, whilst under test, can be found in Section 11.

This report was printed on: 25 August 2010

3.4 Emissions Configuration



The units were powered from the dedicated AC/DC adapter provided with the units (see below for details).Two units where provided by Pure Digital Ltd. Unit marked s/n 119090CJ000023 was provided with its integral antennae intact as required for all radiated type tests. The unit marked 119090CJ000009 was provided with 2 very short coaxial cables soldered to each of the Wi-Fi and Wireless USB antennae ports with the antennae removed, for all conducted tests. Both units were also software modified to allow permanent transmit and receive modes in both Wi-Fi and wireless USB RF modes on the top, middle and bottom channels as stated within section 3.3 of this report (see diagram). The Wi-Fi TX and RX modes were set using the engineering mode provided within the main unit and the wireless USB RF modes were set by RF communication from an external remote control.

For radiated emissions tests the unit was populated with typical leads and a pair of headphones. The AC/DC adapter was also placed on to the test table along with the main enclosure of the EUT.

The Evoke Flow EUT came supplied with a dedicated AC/DC power supply with the details as below:-

Manufacturer: Pure Digital Ltd
Model: KSAD0600200W1UV-1
S/N: Not specified.
100-240V AC input (0.4A), 6V Nominal DC output (2A).

4. Specifications

The tests were performed by RN Electronics Engineer Daniel Sims who set up the tests, the test equipment, and operated it in accordance with the ***R.N. Electronics Ltd*** procedures manual, FCC Part 15 and those specifications incorporated by reference into 47CFR15 (e.g. ANSI C63.4-2003). Other external references, where used, have been stated in the applicable results section.

R.N. Electronics Ltd sites M and OATS are listed with the FCC. Registration number 293246

4.1 Deviations

None.

4.2 Tests at Extremes of Temperature and Voltage

☒ A permanent integral antenna RF port was used for testing.
☐ A test fixture was used for testing.
☒ A temporary RF port was created for testing.
☐ The equipment external RF port was used for testing.

4.3 Measurement Uncertainties

Parameter	Uncertainty
Transmitter Tests	
RF frequency	<± 0.7 ppm
Conducted RF power	<± 1.0 dB*
Spectral power density	<± 1.5 dB
Bandwidth	<± 1.9 %
Radiated RF Power	<± 3.5 dB
Radiated Spurious Emissions	<± 3.4 dB
Receiver Tests	
Radiated Spurious Emissions	<± 3.4 dB

* Applies to average conducted power only.

5. Tests, Methods and Results

5.1 Conducted Emissions

5.1.1 Test Methods

Test Requirements FCC Part 15C, Reference (15.207)

Test Method: ANSI C63.4, Reference (7.)

5.1.1.1 Configuration of EUT

The EUT and AC/DC adapter were placed on a wooden table 0.8m above the ground plane and connected to a LISN via a 1m mains cable.

Details of the Peripheral and Ancillary Equipment connected for this test is listed in section 11.

Initial scans were made in transmit, receive and normal modes of both the Wi-Fi and Wireless USB RF parts to determine any worst case mode for emissions. No discernable difference was noted. Therefore full tests were performed in Wi-Fi mode TX channel 6 (see section 3.3).

5.1.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted in the 'Test Equipment' Section. Measurements were made on the live and neutral conductors using both average and quasi-peak detection.
At least 6 signals within 20dB and/or all signals within 10dB of the limit were investigated.

Tests were performed in Test Site F.

5.1.2 Test results

Temperature of test Environment: 20°C Humidity: 41%

Analyser plots for the Quasi-Peak / Average values as applicable and a table of signals within 20dB of the limit line can be found in Section 6.1 of this report.

These results show that the **EUT** has **PASSED** this test.

5.1.2.1 Test Equipment used

E150, E410, E411, E412

See Section 10 for more details.

5.2 Radiated Emissions

5.2.1 Test Methods

Test Requirements FCC Part 15C, Reference (15.209)

Test Method: ANSI C63.4, Reference (8.)

5.2.1.1 Configuration of EUT

The EUT was placed on a 0.8 metres high turntable. The front edge of the EUT was initially positioned facing the antenna. The EUT was measured at a distance of 3 metres.
The EUT was tested in all applicable modes as listed in section 3.3 modes.

5.2.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below.

Below 30MHz, measurements were made in a semi-anechoic chamber (pre-scan) with final measurements on an OATS without a ground plane. The antenna was placed 1m above the ground. The equipment and the antenna were rotated 360° to record the worst case emissions.

30MHz - 1GHz, measurements were made on a site listed with the FCC. The equipment was rotated 360° and the antenna scanned 1 – 4 metres in both horizontal and vertical polarisations to record the worst case emissions.

Above 1GHz, measurements were made in a semi-anechoic chamber with appropriate absorbing material for use in this range. The antenna was placed 1m above the ground in line with the EUT, which was rotated through 360° to record the worst case emissions.

At least 6 signals within 20dB and all signals within 10dB of the limit were investigated.

5.2.2 Test results

Tests were performed using Test Site **M** for measurements under 1GHz and test site **B** for emissions above 1GHz**.**

Temperature: 16-22°C Humidity: 30-46%

Analyser plots for the Quasi-Peak / Average values as applicable and any table of signals within 20dB of the limit line can be found in Section 6.2 of this report. Band Edge Compliance plots can be found in section 6.6 of this report.

Plot references above 1GHz

Frequency range	Plot reference
1 – 2 GHz	0055
2 – 2.7 GHz	0056
2.7 – 4 GHz	0057
4 – 5 GHz	0058
5 – 6 GHz	0059
6 – 7.8 GHz	0070
7.8 – 10 GHz	0071

Frequency range	Plot reference
10 – 12 GHz	0072
12 – 14 GHz	0073
14 – 16 GHz	0074
16 – 18 GHz	0081
18- 20 GHz	0084
20 – 22 GHz	0088
22 – 25 GHz	0089

All applicable channels were measured and signal lists for all three channels accompany the plots in Section 6.2. Only middle channel (channel 6) plots are listed/shown.

These show that the **EUT** has **PASSED** this test.

5.2.2.1 Test Equipment used

E410, E411, E412, TMS933, E268, E342, TMS79, TMS82, E429, E383, E252, E001, TMS81, E428

See Section 10 for more details

5.3 Peak Conducted Power

5.3.1 Test Methods

Test Requirements	FCC Part 15C, Reference (15.247)
Test Methods:	FCC Part 15C, Reference (15.247) KDB558074, Power output option 1 ANSI C63.10, Reference (6.10.2.1 b))

5.3.1.1 Configuration of EUT

The conducted EUT was measured on a bench using a power meter / spectrum analyser connected to the temporary RF port. The EUT was set to each mode and test signal in turn (see sections 3.2 and 3.3) and highest power levels recorded.

5.3.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below.
Power meter reading stated is maximum power observed using an average power head. Where applicable, a duty cycle correction is applied to avoid averaging during blanking periods (see section 5.5 within this report).
Peak stated for the WUSB function is maximum power observed using a spectrum analyser with RBW greater than the 6dB bandwidth, per KDB558074.
Peak stated for the Wi-Fi function is maximum power observed using a spectrum analyser channel power function over the 6dB bandwidth + 1MHz using a 1MHz RBW, per ANSI C63.10.

Measurements were made on a test bench.

5.3.2 Test results

Tests were performed using Test Site A**.**

Test Environment: Temperature: 18-20°C Humidity: 36-42%

Wi-Fi RF part results

Channel / scheme	Meter reading (dBm)	Duty cycle adjustment (dB)	Total (dBm)	Result (mW)	Peak ANSI C63.10 (mW)
bot 1Mbps	17.3	N/A	17.3	53.7	77.6
bot 2Mbps	17.0	N/A	17.0	50.1	87.1
bot 5.5Mbps	16.9	N/A	16.9	49.0	128.8
bot 11Mbps	17.0	N/A	17.0	50.1	158.5
bot 22Mbps	14.8	N/A	14.8	30.2	190.5
bot 6Mbps	15.7	N/A	15.7	37.2	166.0
bot 9Mbps	15.8	N/A	15.8	38.0	162.2
bot 12Mbps	15.8	N/A	15.8	38.0	158.5
bot 18Mbps	15.7	N/A	15.7	37.2	154.9
bot 24Mbps	15.7	N/A	15.7	37.2	177.8
bot 36Mbps	15.6	N/A	15.6	36.3	182.0
bot 48Mbps	15.7	N/A	15.7	37.2	204.2
bot 54Mbps	15.6	N/A	15.6	36.3	199.5

Channel / scheme	Meter reading (dBm)	Duty cycle adjustment (dB)	Total (dBm)	Result (mW)	Peak ANSI C63.10 (mW)
mid 1Mbps	17.0	N/A	17.0	50.1	81.3
mid 2Mbps	16.9	N/A	16.9	49.0	89.1
mid 5.5Mbps	17.0	N/A	17.0	50.1	128.8
mid 11Mbps	17.0	N/A	17.0	50.1	177.8
mid 22Mbps	16.5	N/A	16.5	44.7	204.2
mid 6Mbps	15.6	N/A	15.6	36.3	173.8
mid 9Mbps	15.6	N/A	15.6	36.3	177.8
mid 12Mbps	15.6	N/A	15.6	36.3	169.8
mid 18Mbps	15.6	N/A	15.6	36.3	166.0
mid 24Mbps	15.5	N/A	15.5	35.5	190.5
mid 36Mbps	15.5	N/A	15.5	35.5	195.0
mid 48Mbps	15.6	N/A	15.6	36.3	208.9
mid 54Mbps	15.4	N/A	15.4	34.7	199.5

Channel / scheme	Meter reading (dBm)	Duty cycle adjustment (dB)	Total (dBm)	Result (mW)	Peak ANSI C63.10 (mW)
top 1Mbps	16.3	N/A	16.3	42.7	66.1
top 2Mbps	16.2	N/A	16.2	41.7	72.4
top 5.5Mbps	16.2	N/A	16.2	41.7	93.3
top 11Mbps	16.2	N/A	16.2	41.7	117.5
top 22Mbps	14.5	N/A	14.5	28.2	162.2
top 6Mbps	14.4	N/A	14.4	27.5	138.0
top 9Mbps	14.4	N/A	14.4	27.5	138.0
top 12Mbps	14.5	N/A	14.5	28.2	138.0
top 18Mbps	14.5	N/A	14.5	28.2	128.8
top 24Mbps	14.5	N/A	14.5	28.2	151.4
top 36Mbps	14.5	N/A	14.5	28.2	147.9
top 48Mbps	14.6	N/A	14.6	28.8	169.8
top 54Mbps	14.6	N/A	14.6	28.8	158.5

Wireless USB RF part results

Channel	Meter reading (dBm)	Duty cycle adjustment (dB)	Total (dBm)	Result (mW)	Peak KDB558074 (mW/3MHz)
Bottom	-4.0	+4.52	+0.52	1.1	1.2
Middle	-4.5	+4.52	+0.02	1.0	1.0
Top	-5.2	+4.52	-0.68	0.9	0.8

Limit: 1Watt.

These results show that the EUT has **PASSED** this test.

5.3.2.1 Test Equipment used

E434, E250, E131, E290, E342, E397, E003, E266

See Section 10 for more details

5.4 Frequency Tolerance

Test not applicable. No test requirement nor limit given for DTS devices.

5.5 Duty Cycle

Test not applicable. However, a basic duty cycle measurement was made in order to ascertain any duty cycle corrections required to be applied to the test results.

Wireless USB:
Transmit ON time was measured to be 240uS.
Transmit OFF time was measured to be 440uS.

Therefore Duty cycle (x) = TX ON/ TX ON + TX OFF.

x = 0.353

Correction factor for power measurements in dBm (dB) = 10 Log (1/x) = 4.52 dB.

Correction factor for voltage measurements in dBuV (dB) = 20 Log (1/x) = 9.04 dB.

5.5.1 Test Equipment used

E249, E325

See Section 10 for more details

5.6 Maximum Spectral Power Density

5.6.1 Test Methods

Test Requirements: FCC Part 15C, Reference (15.247)

Test Method: FCC Part 15C, Reference (15.247)
EN 300 328 v1.7.1, Reference (5.7.3.1 option 2)
KDB558074, PSD Option 1

5.6.1.1 Configuration of EUT

The EUT was tested on a bench via the temporary RF ports. Both Wi-Fi and Wireless USB RF parts were tested.

5.6.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below. The peak of the power envelope was found and the spectrum analyser set to measure at zero span in 3kHz bandwidth. The resultant IF output of the analyser was calibrated against a known source to give the power reading in dBm.
PEP was also recorded per KDB558074, PSD Option 1.

5.6.2 Test results

Tests were performed using Test Site **A.**

Temperature of test Environment: 20°C

Wireless USB RF part results

Channel	Reading (dBm)	Duty cycle adjustment (dB)	Peak PSD (dBm/3kHz)	PEP (dBm/3kHz)
Bottom	-19.4	+4.52	-14.88	-12.95
Middle	-20.2	+4.52	-15.68	-13.67
Top	-21.0	+4.52	-16.48	-14.36

Wi-Fi RF part results

Channel/ scheme	Reading (dBm)	Duty cycle adjustment (dB)	Peak PSD (dBm/3kHz)	PEP (dBm/3kHz)
bot 1Mbps	-15	N/A	-15.0	-14.0
mid 1Mbps	-15.6	N/A	-15.6	-14.6
top 1Mbps	-15.8	N/A	-15.8	-15.9
bot 2Mbps	-5.5	N/A	-5.5	-5.5
mid 2Mbps	-5.7	N/A	-5.7	-5.9
top 2Mbps	-6.2	N/A	-6.2	-7.3
bot 5.5Mbps	-6.3	N/A	-6.3	-6.7
mid 5.5Mbps	-6.8	N/A	-6.8	-7.1
top 5.5Mbps	-6.7	N/A	-6.7	-8.0
bot 11Mbps	-5.7	N/A	-5.7	-5.4
mid 11Mbps	-5.7	N/A	-5.7	-6.3
top 11Mbps	-6.2	N/A	-6.2	-7.2
bot 22Mbps	-14.5	N/A	-14.5	-11.9
mid 22Mbps	-14.4	N/A	-14.4	-12.0

Channel/ scheme	Reading (dBm)	Duty cycle adjustment (dB)	Peak PSD (dBm/3kHz)	PEP (dBm/3kHz)
top 22Mbps	-12.8	N/A	-12.8	-12.7
bot 6Mbps	-14.2	N/A	-14.2	-13.0
mid 6Mbps	-14.2	N/A	-14.2	-13.4
top 6Mbps	-13.3	N/A	-13.3	-15.3
bot 9Mbps	-14.4	N/A	-14.4	-13.2
mid 9Mbps	-14.4	N/A	-14.4	-13.6
top 9Mbps	-12.7	N/A	-12.7	-15.2
bot 12Mbps	-13.6	N/A	-13.6	-12.3
mid 12Mbps	-12.3	N/A	-12.3	-12.5
top 12Mbps	-12.6	N/A	-12.6	-13.8
bot 18Mbps	-14	N/A	-14.0	-12.2
mid 18Mbps	-12.9	N/A	-12.9	-12.5
top 18Mbps	-14.8	N/A	-14.8	-13.6
bot 24Mbps	-14.2	N/A	-14.2	-9.8
mid 24Mbps	-12.4	N/A	-12.4	-9.8
top 24Mbps	-13.4	N/A	-13.4	-11.1
bot 36Mbps	-13.6	N/A	-13.6	-11.1
mid 36Mbps	-13.9	N/A	-13.9	-11.2
top 36Mbps	-12.9	N/A	-12.9	-12.6
bot 48Mbps	-13.4	N/A	-13.4	-9.6
mid 48Mbps	-12.8	N/A	-12.8	-10.0
top 48Mbps	-12.3	N/A	-12.3	-10.9
bot 54Mbps	-14.4	N/A	-14.4	-11.8
mid 54Mbps	-14.3	N/A	-14.3	-12.0
top 54Mbps	-14	N/A	-14.0	-13.2

Limit: +8dBm/3kHz.

These results show that the **EUT** has **PASSED** this test.

5.6.2.1 Test Equipment used

E397, E321, E250, E434, E003, E005, E266, E290, E412

See Section 10 for more details.

5.7 6dB Bandwidth

5.7.1 Test Methods

Test Requirements	FCC Part 15C, Reference (15.247)
Test Method:	FCC Part 15C, Reference (15.247) KDB558074 - Bandwidth

5.7.1.1 Configuration of EUT

The EUT was tested on a bench via the temporary RF ports. Both Wi-Fi and Wireless USB RF parts were tested.

5.7.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below. In accordance with KDB558074, the analyser's RBW was set to 100kHz and the span was set greater than this. Readings of 6dB bandwidth are taken directly from the analyser.

5.7.2 Test results

Tests were performed using Test Site **A**.

Temperature of test Environment: 19-20°C

Analyser plots illustrating the 6dB bandwidth can be found in Section 6.5 of this report.

Wireless USB RF part results

Channel	Result	Plot reference
Bottom	955kHz	J4201-2, Wireless USB bot chan 6dB BW
Middle	955kHz	J4201-2, Wireless USB mid chan 6dB BW
Top	960kHz	J4201-2, Wireless USB top chan 6dB BW

Wi-Fi RF part results

Channel 1 / Scheme	BW result (MHz)	Plot reference
1Mbps	13.96	0001
2Mbps	14.04	0002
5.5Mbps	13.63	0003
11Mbps	13.71	0004
22Mbps	16.58	0005
6Mbps	16.71	0006
9Mbps	16.71	0007
12Mbps	16.58	0008
18Mbps	16.63	0009
24Mbps	16.58	0010
36Mbps	16.63	0011
48Mbps	16.58	0012
54Mbps	16.58	0013

Channel 6 / Scheme	BW result (MHz)	Plot reference
1Mbps	14	0014
2Mbps	14	0015
5.5Mbps	13.67	0016
11Mbps	13.71	0017
22Mbps	16.63	0018
6Mbps	16.75	0019
9Mbps	16.71	0020
12Mbps	16.67	0021
18Mbps	16.63	0022
24Mbps	16.58	0023
36Mbps	16.63	0024
48Mbps	16.58	0025
54Mbps	16.63	0026

Channel 11 / Scheme	BW result (MHz)	Plot reference
1Mbps	13.88	0027
2Mbps	13.88	0028
5.5Mbps	13.67	0029
11Mbps	13.63	0030
22Mbps	16.63	0031
6Mbps	16.71	0032
9Mbps	16.71	0033
12Mbps	16.63	0034
18Mbps	16.63	0035
24Mbps	16.63	0036
36Mbps	16.63	0037
48Mbps	16.58	0038
54Mbps	16.58	0039

Limits: > 500kHz BW.

These results show that the **EUT** has **PASSED** this test.

5.7.2.1 Test Equipment used

E434, E321, E266, E003, E250, E397, E290, E342

See Section 10 for more details.

5.8 Band Edge Compliance

5.8.1 Test Methods

Test Requirements FCC Part 15C, Reference (15.215 and 15.247)

Test Method: FCC Part 15C, Reference (15.215)

5.8.1.1 Configuration of EUT

The EUT was placed on a 0.8 metres high turntable. The front edge of the EUT was initially positioned facing the antenna. The EUT was measured at a distance of 3 metres.

5.8.1.2 Test Procedure

Tests were made in accordance with FCC Part 15 using the measuring equipment noted below. The emission from the EUT was maximised before taking the plots.

5.8.2 Test results

Tests were performed using Test Site B.

Temperature of test Environment: 17-21°C

5.8.2.1 Restricted band edges.

Analyser plots for the Band Edge Compliance can be found in Section 6.6 of this report. The following tables list the field strengths observed in the adjacent restricted bands, which are required to meet the tighter 15.209 limits:

Wireless USB RF part results

Channel	Band edge PK reading (dBuV/m)	Band edge AV reading (dBuV/m)	Plot reference
Bottom	62.33	53.29	J4201-2, wireless USB, PK band edge 1MHz RBW, 2479MHz channel
Top	62.62	53.58	J4201-2, wireless USB, PK band edge 1MHz RBW, 2402MHz channel

Due to the Wireless USB RF part being only 35.3% TX duty cycle, the band edge readings were performed with a peak detector (max held plot) and adjusted by a duty cycle correction factor to show an average reading.

Wi-Fi RF part results

Channel 1 / Scheme	Band edge PK reading (dBuV/m)	Band edge AV reading (dBuV/m)	Plot reference
1Mbps	57.0	45.2	channel 1, 1MHz lower restricted (PK and AV)
2Mbps	55.7	44.0	channel 1, 2MHz lower restricted (PK and AV)
5.5Mbps	57.5	44.7	channel 1, 5.5MHz lower restricted (PK and AV)
11Mbps	57.2	44.3	channel 1, 11MHz lower restricted (PK and AV)
22Mbps	68.2	48.2	channel 1, 22MHz lower restricted (PK and AV)
6Mbps	66.5	48.7	channel 1, 6MHz lower restricted (PK and AV)
9Mbps	69.0	49.0	channel 1, 9MHz lower restricted (PK and AV)
12Mbps	67.5	48.2	channel 1, 12MHz lower restricted (PK and AV)
18Mbps	66.0	48.3	channel 1, 18MHz lower restricted (PK and AV)
24Mbps	67.7	50.2	channel 1, 24MHz lower restricted (PK and AV)
36Mbps	69.0	50.0	channel 1, 36MHz lower restricted (PK and AV)
48Mbps	69.0	51.0	channel 1, 48MHz lower restricted (PK and AV)
54Mbps	68.5	48.3	channel 1, 54MHz lower restricted (PK and AV)

Channel 11 / Scheme	Band edge PK reading (dBuV/m)	Band edge AV reading (dBuV/m)	Plot reference
1Mbps	58.0	45.5	channel 11, 1MHz lower restricted (PK and AV)
2Mbps	58.3	45.3	channel 11, 2MHz lower restricted (PK and AV)
5.5Mbps	57.3	44.7	channel 11, 5.5MHz lower restricted (PK and AV)
11Mbps	57.5	45.3	channel 11, 11MHz lower restricted (PK and AV)
22Mbps	66.2	46.5	channel 11, 22MHz lower restricted (PK and AV)
6Mbps	66.0	47.5	channel 11, 6MHz lower restricted (PK and AV)
9Mbps	64.7	47.2	channel 11, 9MHz lower restricted (PK and AV)
12Mbps	66.7	47.2	channel 11, 12MHz lower restricted (PK and AV)
18Mbps	67.8	46.7	channel 11, 18MHz lower restricted (PK and AV)
24Mbps	66.5	47.2	channel 11, 24MHz lower restricted (PK and AV)
36Mbps	66.5	47.7	channel 11, 36MHz lower restricted (PK and AV)
48Mbps	66.7	46.8	channel 11, 48MHz lower restricted (PK and AV)
54Mbps	69.7	49.7	channel 11, 54MHz lower restricted (PK and AV)

Limits: AV = 54dBuV/m at band edges
PK = 74dBuV/m at band edges

These results show that the **EUT** has **PASSED** this test.

5.8.2.2 Non-Restricted band edges.

Analyser plots for the Band Edge Compliance can be found in Section 6.6 of this report. These show the 20dBc/30dBc requirement of 15.247(d) are met at the band edges of 2400 and 2483.5 MHz.

Channel	Scheme	Plot reference
1	1Mbps	Evoke Flow Band Edge Compliance Plot J4200/501 CH1 1M
1	2Mbps	Evoke Flow Band Edge Compliance Plot J4200/502 CH1 2M
1	5.5Mbps	Evoke Flow Band Edge Compliance Plot J4200/503 CH1 5.5M
1	11Mbps	Evoke Flow Band Edge Compliance Plot J4200/504 CH1 11M
1	22Mbps	Evoke Flow Band Edge Compliance Plot J4200/505 CH1 22M
1	6Mbps	Evoke Flow Band Edge Compliance Plot J4200/506 CH1 6M
1	9Mbps	Evoke Flow Band Edge Compliance Plot J4200/507 CH1 9M
1	12Mbps	Evoke Flow Band Edge Compliance Plot J4200/508 CH1 12M
1	18Mbps	Evoke Flow Band Edge Compliance Plot J4200/509 CH1 18M
1	24Mbps	Evoke Flow Band Edge Compliance Plot J4200/510 CH1 24M
1	36Mbps	Evoke Flow Band Edge Compliance Plot J4200/511 CH1 36M
1	48Mbps	Evoke Flow Band Edge Compliance Plot J4200/512 CH1 48M
1	54Mbps	Evoke Flow Band Edge Compliance Plot J4200/513 CH1 54M

Channel	Scheme	Plot reference
11	1Mbps	channel 11, 1MHz lower restricted (PK and AV)
11	2Mbps	channel 11, 2MHz lower restricted (PK and AV)
11	5.5Mbps	channel 11, 5.5MHz lower restricted (PK and AV)
11	11Mbps	channel 11, 11MHz lower restricted (PK and AV)
11	22Mbps	channel 11, 22MHz lower restricted (PK and AV)
11	6Mbps	channel 11, 6MHz lower restricted (PK and AV)
11	9Mbps	channel 11, 9MHz lower restricted (PK and AV)
11	12Mbps	channel 11, 12MHz lower restricted (PK and AV)
11	18Mbps	channel 11, 18MHz lower restricted (PK and AV)
11	24Mbps	channel 11, 24MHz lower restricted (PK and AV)
11	36Mbps	channel 11, 36MHz lower restricted (PK and AV)
11	48Mbps	channel 11, 48MHz lower restricted (PK and AV)
11	54Mbps	channel 11, 54MHz lower restricted (PK and AV)

Limits: Average power complied with = 30dBc
Peak power complied with = 20dBc

These results show that the **EUT** has **PASSED** this test.

5.8.2.1 Test Equipment used

E342, TMS82, E250, E268, E410, E411, E412, E428, E003

See Section 10 for more details.

5.9 Frequency Separation

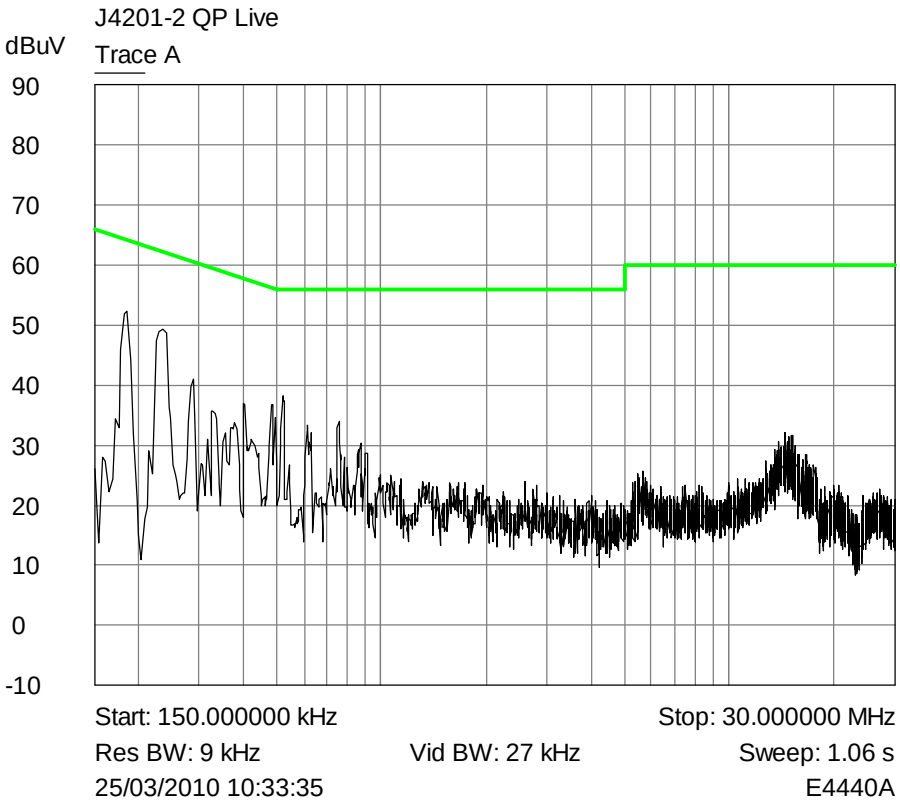
Test not applicable, EUT does not employ FHSS Technology.

5.10 Number of hopping Channels

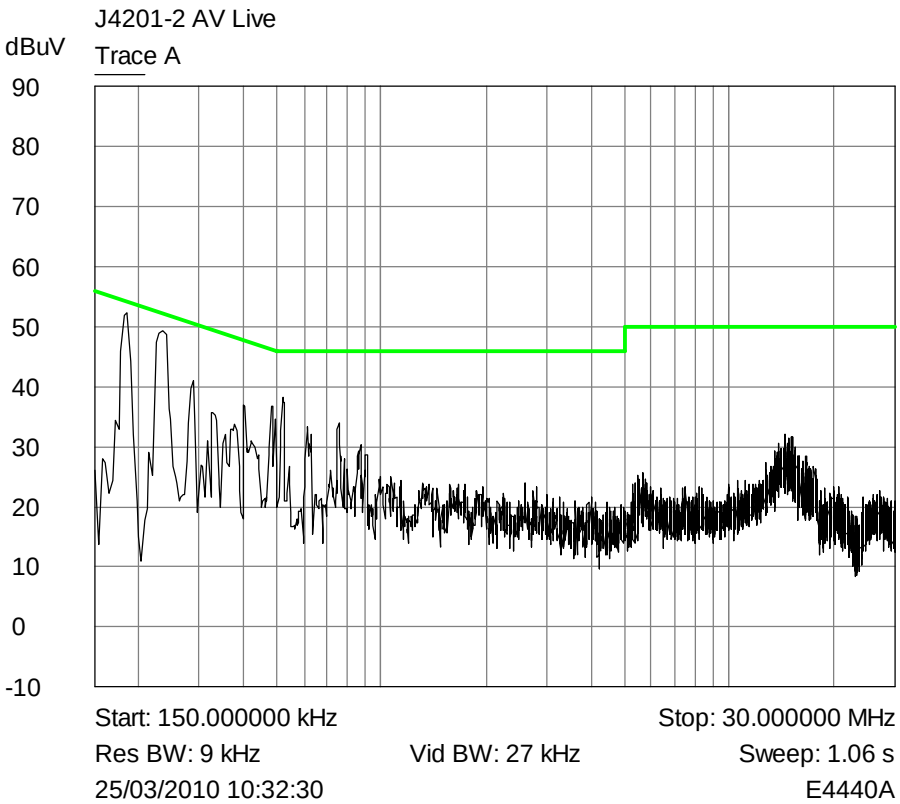
Test not applicable, EUT does not employ FHSS Technology.

6. Plots and Results

6.1 Conducted Emissions



Plot of peak emissions 150kHz - 30MHz on the mains live terminal against the quasi-peak limit line.

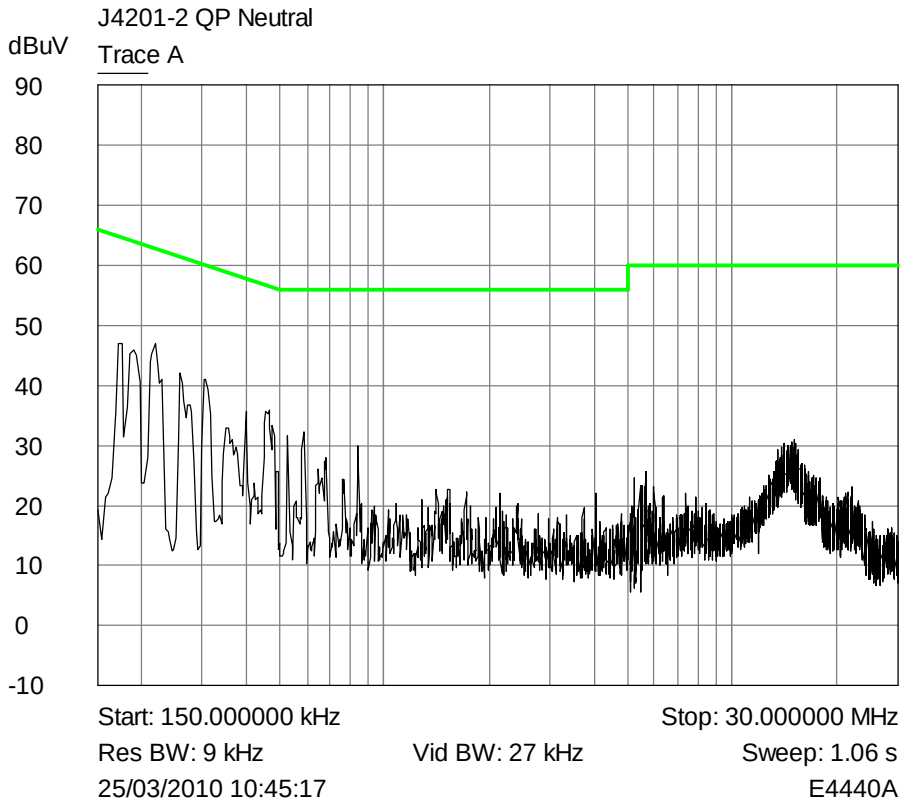


Plot of peak emissions 150kHz - 30MHz on the mains live terminal against the average limit line.

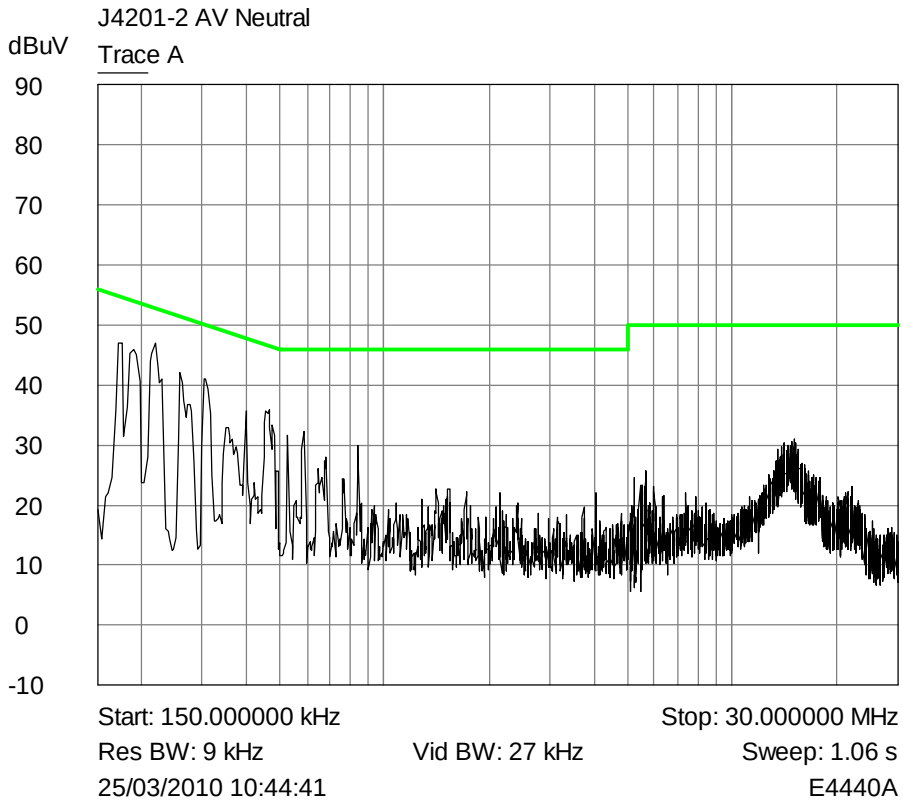
Table of signals measured.

Quasi-Peak and Average Live

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	0.175771	52.63	48.41	-16.27	23.61	-31.07
2	0.185549	52.83	49.87	-14.36	30.59	-23.65
3	0.200263	44.34	35.22	-28.38	15.92	-37.68
4	0.232985	49.24	46.60	-15.74	26.07	-26.27
5	0.268024	45.70	41.26	-19.92	17.94	-33.24
6	0.330493	41.76	38.19	-21.25	20.40	-29.04
7	0.377448	40.75	35.40	-22.94	19.22	-29.11
8	0.452462	36.35	30.33	-26.50	11.10	-35.73
9	0.499597	35.72	27.86	-28.14	9.94	-36.07
10	0.516532	37.82	32.90	-23.10	13.62	-32.38
11	0.528292	37.62	31.63	-24.37	13.93	-32.07
12	0.540603	36.24	29.72	-26.28	11.13	-34.87
13	0.549319	35.57	29.91	-26.09	10.64	-35.36
14	0.585874	34.95	28.17	-27.83	10.99	-35.01
15	0.614857	33.66	29.04	-26.96	13.15	-32.85
16	0.682909	31.21	24.22	-31.78	10.57	-35.43
17	0.703527	33.31	27.20	-28.80	14.91	-31.09
18	0.730097	31.99	24.38	-31.62	11.76	-34.24
19	0.746827	32.66	27.35	-28.65	14.56	-31.44
20	0.814153	31.30	25.18	-30.82	12.48	-33.52
21	14.660972	32.10	26.82	-33.18	19.10	-30.90



Plot of peak emissions 150kHz - 30MHz on the mains neutral terminal against the quasi-peak limit line.



Plot of peak emissions 150kHz - 30MHz on the mains neutral terminal against the average limit line.

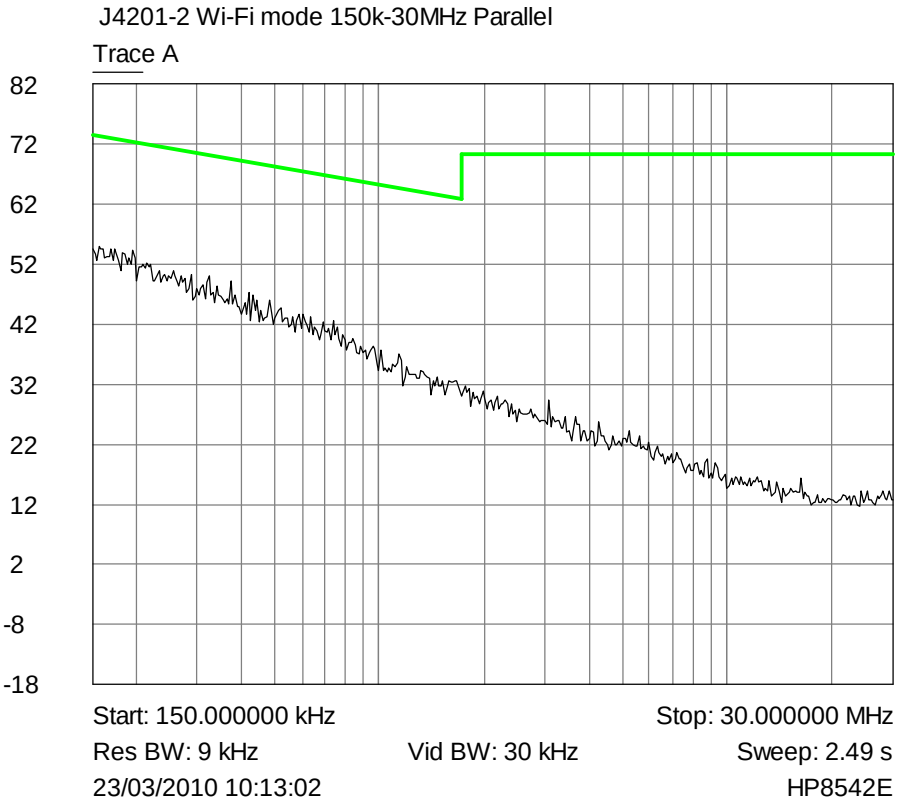
Table of signals measured.

Quasi-Peak and Average Neutral

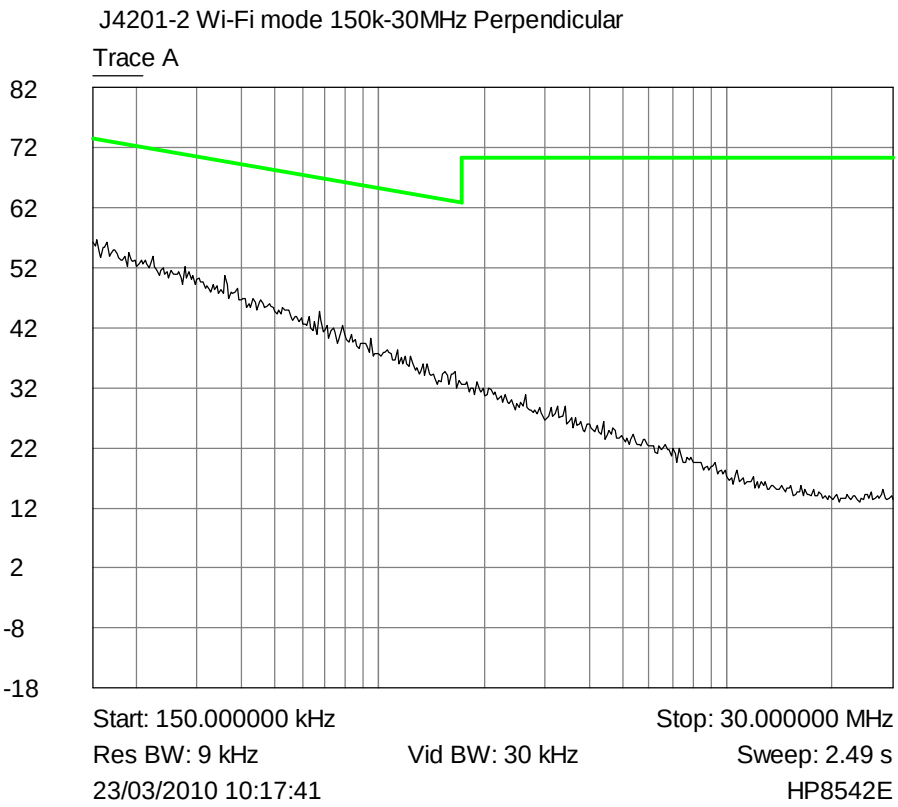
Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	0.167646	48.66	41.66	-23.41	19.03	-36.05
2	0.185969	50.71	47.07	-17.14	23.16	-31.06
3	0.21658	47.82	45.02	-17.93	23.05	-29.90
4	0.21658	47.78	45.20	-17.75	22.51	-30.44
5	0.236041	47.50	42.02	-20.21	16.62	-35.61
6	0.26149	44.53	41.40	-19.99	19.18	-32.20
7	0.279609	44.30	40.00	-20.82	14.89	-35.94
8	0.355314	35.95	31.55	-27.28	15.45	-33.38
9	0.387397	40.85	36.23	-21.89	15.87	-32.25
10	0.406528	44.28	37.60	-20.12	15.25	-32.47
11	0.431965	39.72	35.15	-22.07	16.84	-30.37
12	0.473502	36.83	31.97	-24.49	12.92	-33.53
13	0.516399	35.26	30.94	-25.06	10.59	-35.41
14	0.540613	34.17	28.04	-27.96	7.89	-38.11
15	0.567779	34.71	29.80	-26.20	10.32	-35.68
16	0.592259	32.59	24.97	-31.03	6.95	-39.05
17	0.612906	31.88	27.15	-28.85	8.99	-37.01
18	0.670186	28.51	22.46	-33.54	6.95	-39.05
19	0.693153	31.68	25.53	-30.47	9.04	-36.96
20	0.810325	29.37	23.85	-32.15	7.84	-38.16

6.2 Radiated Emissions

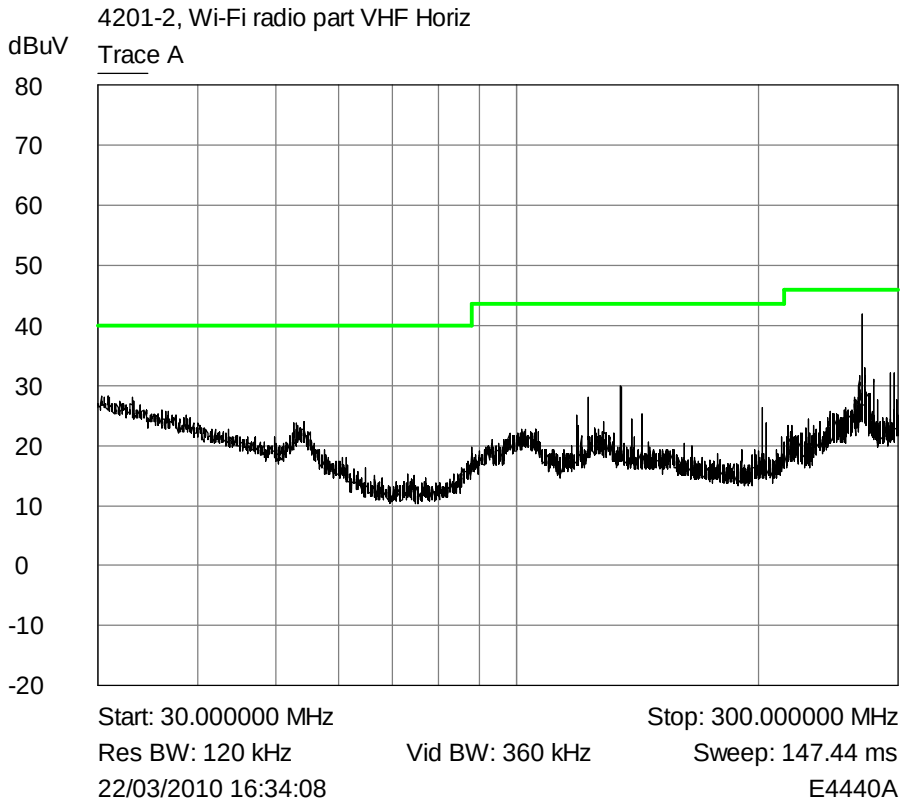
Wi-Fi mode results.



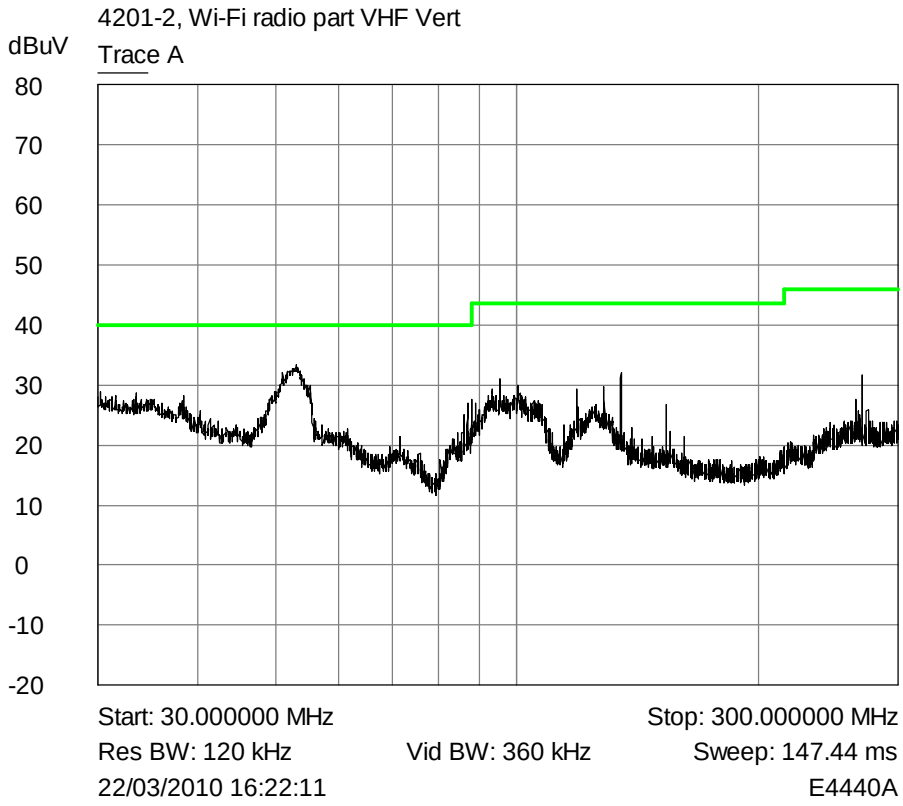
Plot of peak Parallel emissions 150kHz - 30MHz against the quasi-peak limit line.



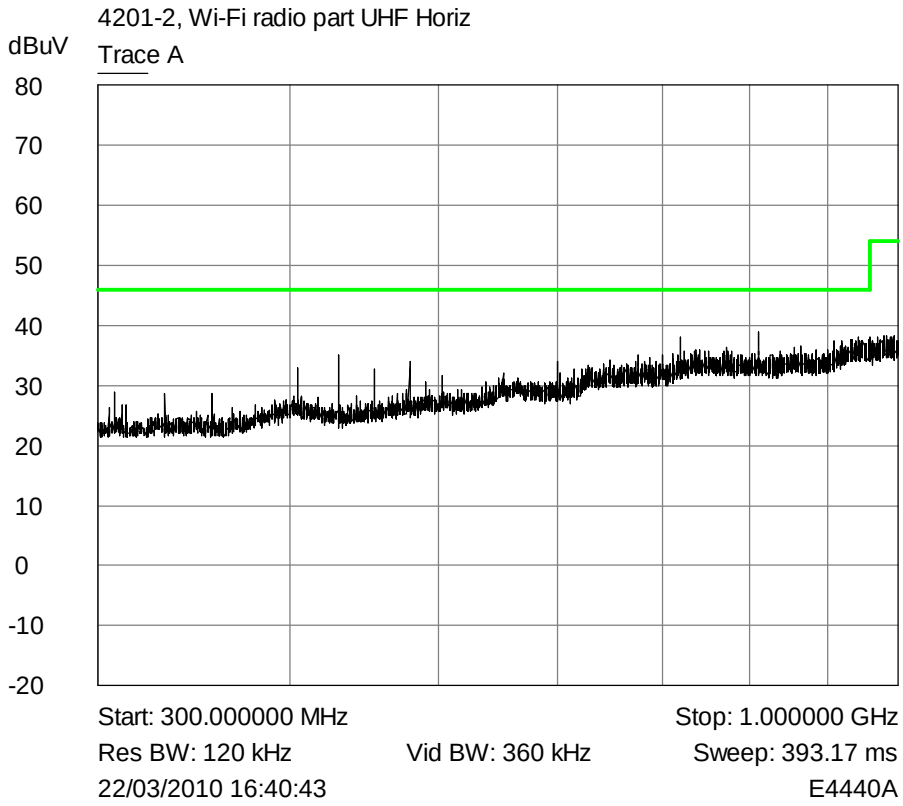
Plot of peak Perpendicular emissions 150kHz - 30MHz against the quasi-peak limit line.



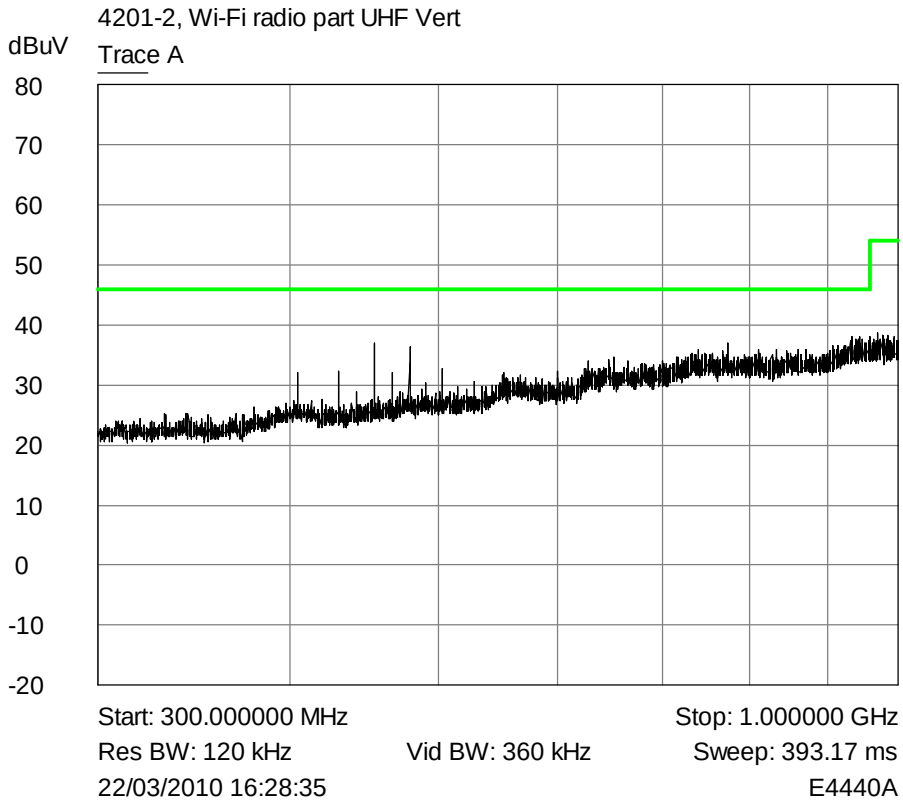
Plot of peak horizontal emissions 30MHz - 300MHz against the quasi-peak limit line.



Plot of peak vertical emissions 30MHz - 300MHz against the quasi-peak limit line.



Plot of peak horizontal emissions 300MHz - 1GHz against the quasi-peak limit line.



Plot of peak vertical emissions 300MHz - 1GHz against the quasi-peak limit line.

Table of signals measured below 1GHz Wi-Fi radio part.

Horizontal

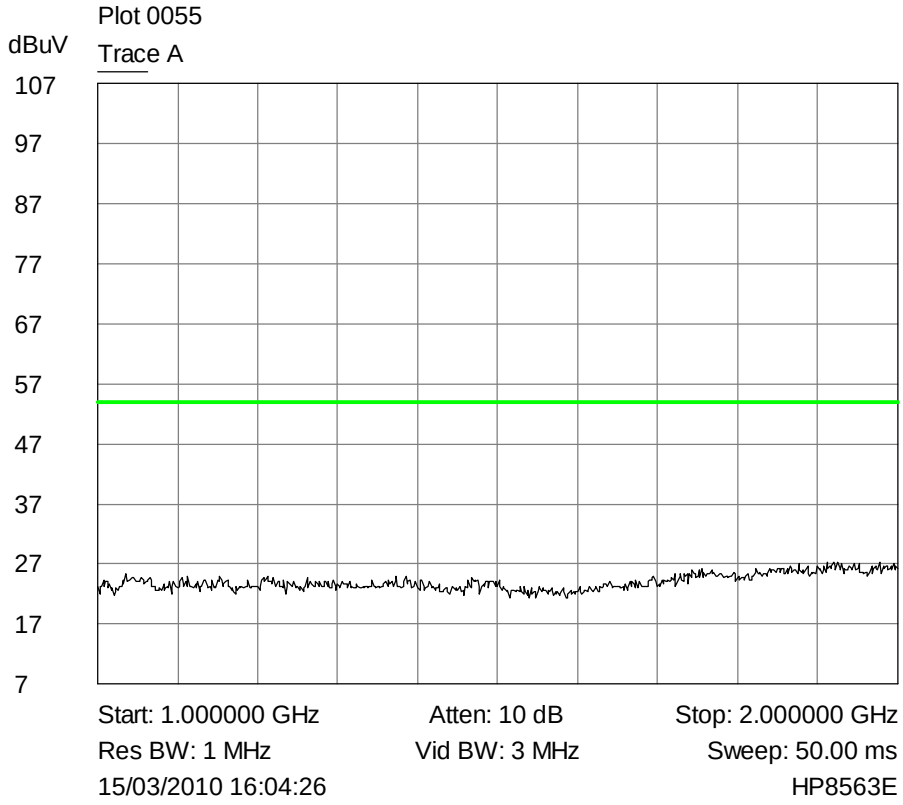
Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)
1	122.882445	21.30	19.90	-23.60
2	135.155324	30.38	28.20	-15.30
3	202.731145	17.65	20.21	-23.29
4	270.310803	42.39	41.16	-4.84
5	272.440584	34.53	29.75	-16.25
6	292.850327	23.67	17.50	-28.50
7	307.175214	25.72	21.03	-24.97
8	331.754014	27.68	24.59	-21.41
9	356.318816	28.45	24.80	-21.20
10	405.464566	31.53	27.25	-18.75
11	430.039877	32.91	30.09	-15.91
12	454.613575	32.39	29.42	-16.58
13	479.187279	34.27	31.92	-14.08
14	503.760979	34.33	30.82	-15.18
15	599.964247	35.58	32.57	-13.43
16	719.952818	35.23	29.89	-16.11
17	810.891978	36.03	30.36	-15.64

Vertical

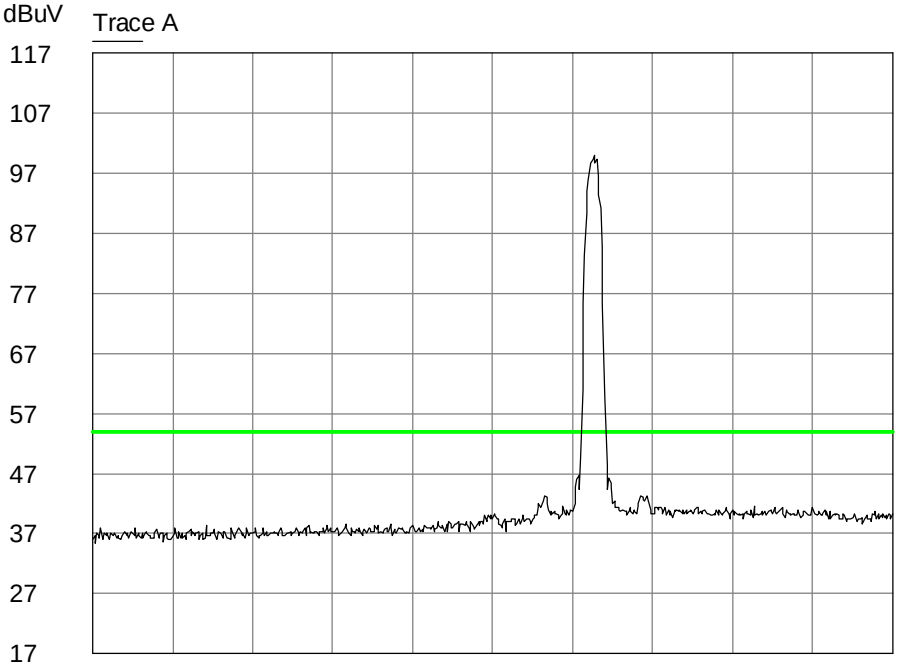
Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)
1	53.110988	33.58	29.64	-10.36
2	86.869442	26.30	23.24	-16.76
3	87.877192	26.70	23.67	-16.33
4	95.524788	30.83	25.46	-18.04
5	135.155428	32.13	29.91	-13.59
6	270.311104	31.73	29.42	-16.58
7	454.613729	37.48	35.55	-10.45
8	479.187437	37.18	35.03	-10.97
9	491.482113	33.20	29.39	-16.61
10	503.762868	34.33	31.81	-14.19

Note: No difference was observed in emissions between Top, Middle and Bottom channels; Therefore the signal lists above represent emissions common to all three channels.

Plots of Average horizontal and vertical (combined) emissions 1GHz - 25GHz against the Average limit line.

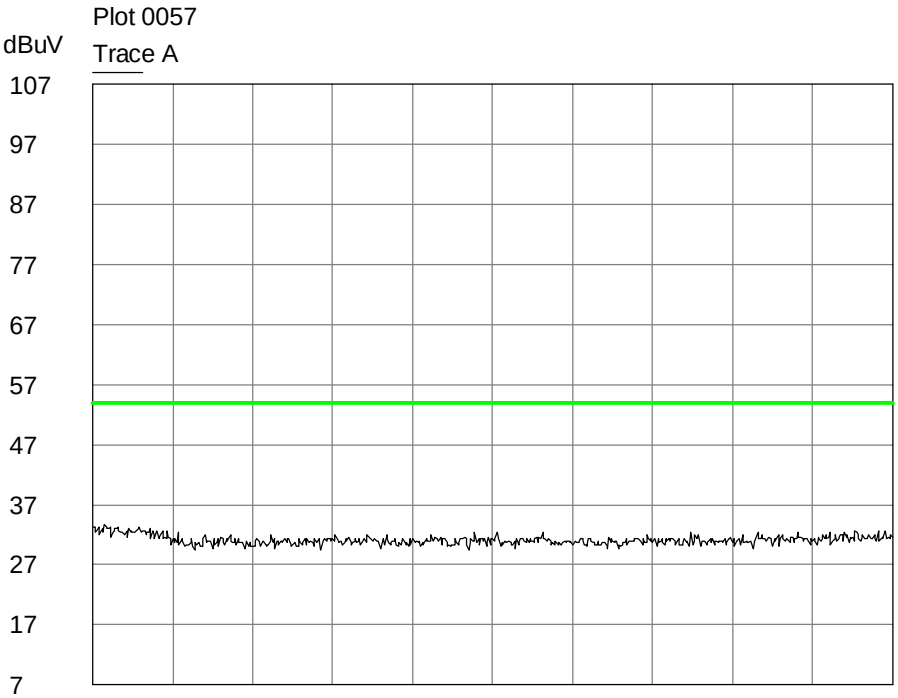


Plot 0056



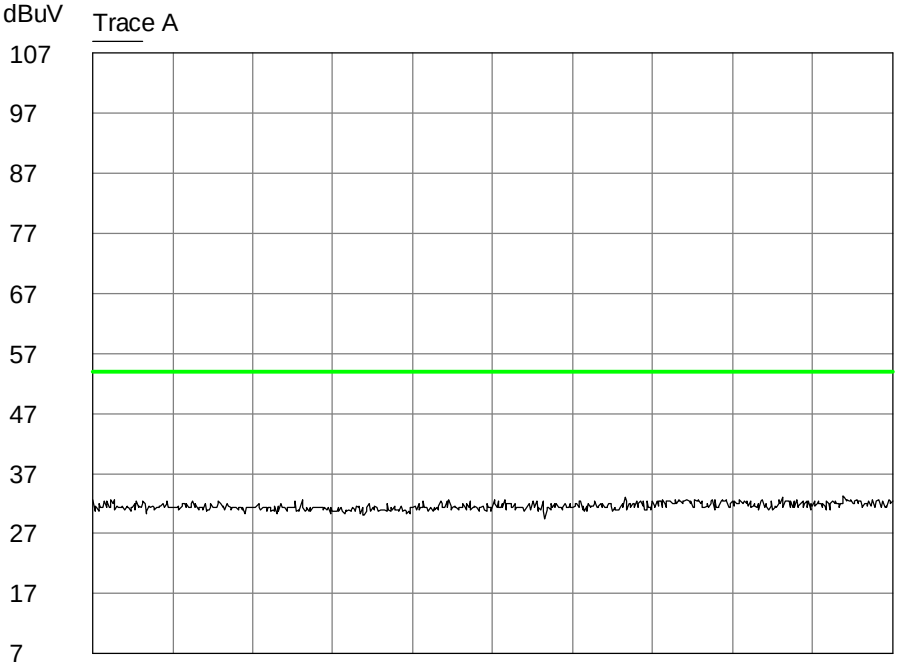
Start: 2.000000 GHz Atten: 10 dB Stop: 2.700000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
15/03/2010 16:05:36 HP8563E

Plot 0057



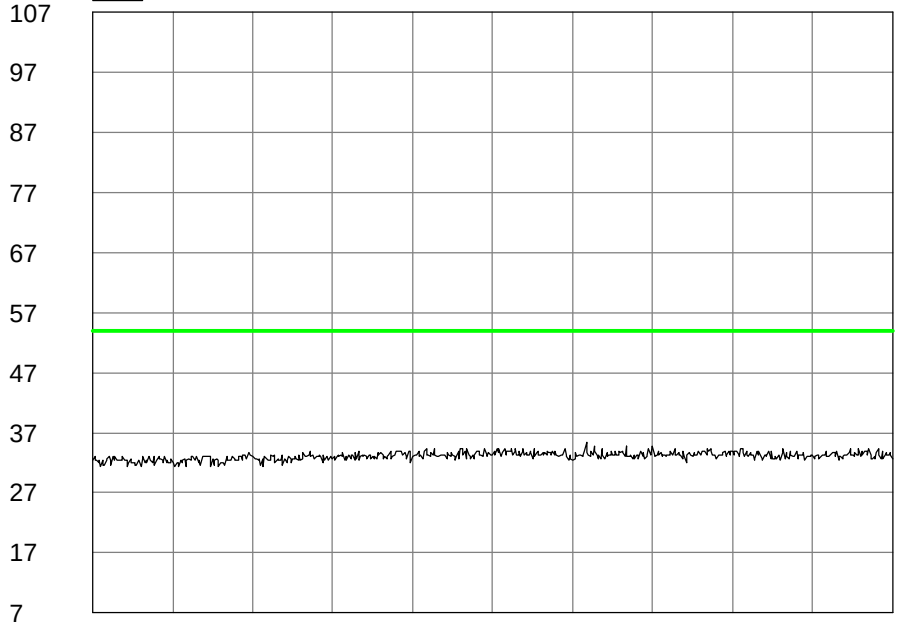
Start: 2.700000 GHz Atten: 10 dB Stop: 4.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
15/03/2010 16:09:31 HP8563E

Plot 0058



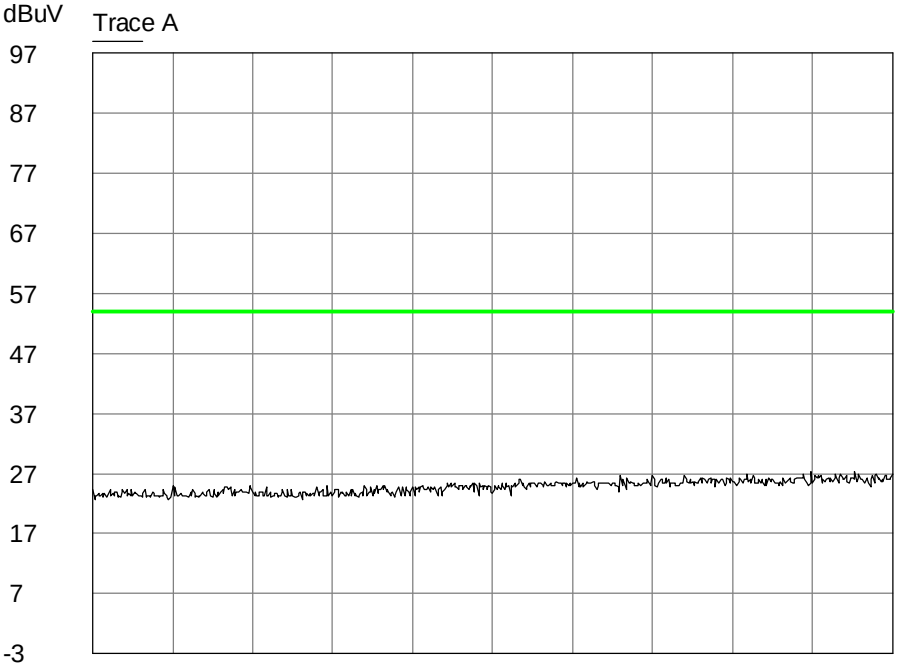
Start: 4.000000 GHz Atten: 10 dB Stop: 5.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
15/03/2010 16:11:33 HP8563E

Plot 0059



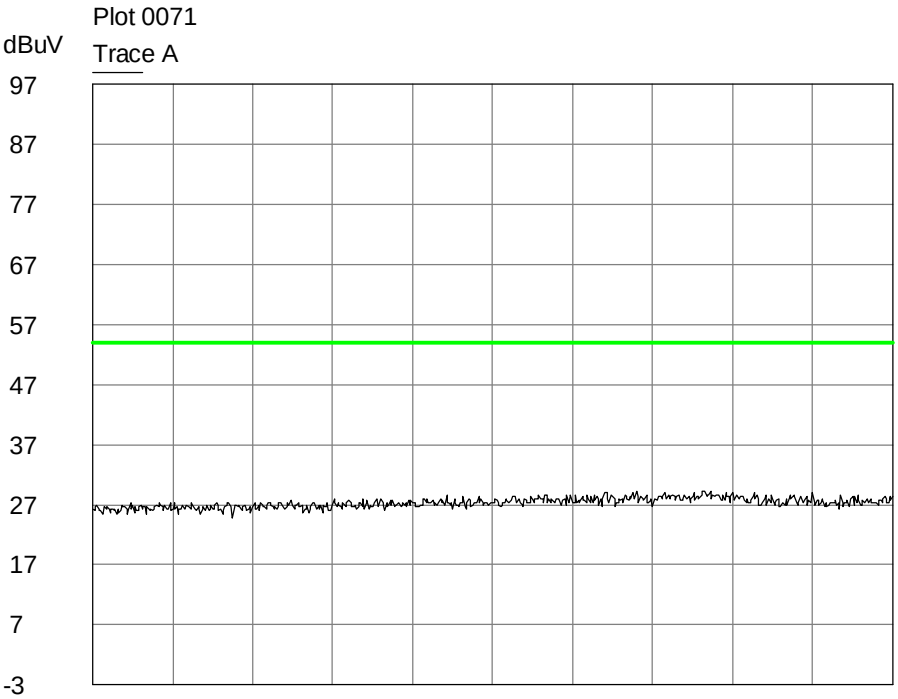
Start: 5.000000 GHz Atten: 10 dB Stop: 6.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
15/03/2010 16:13:51 HP8563E

Plot 0070



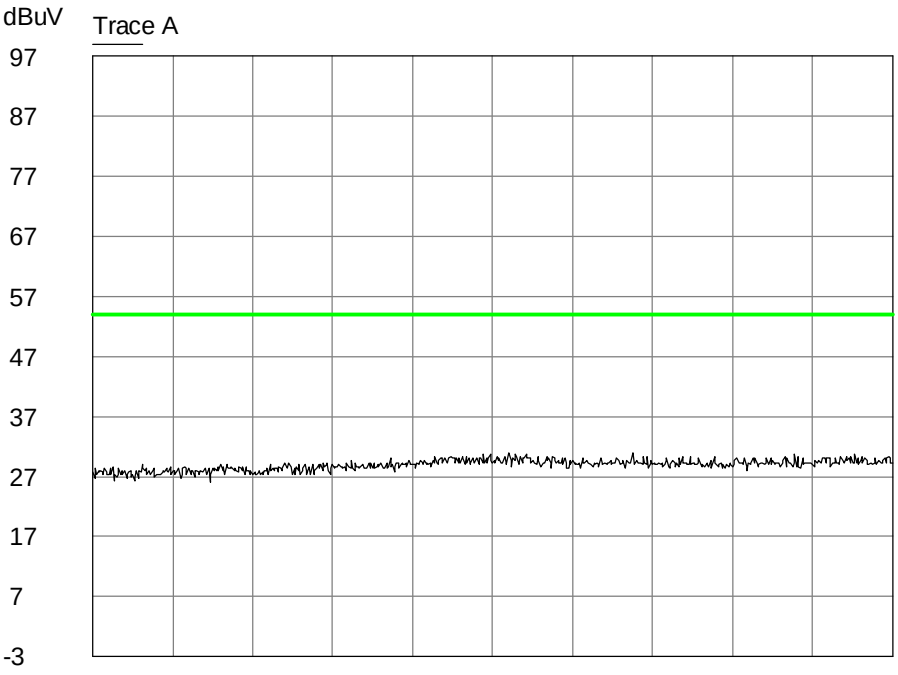
Start: 6.000000 GHz Atten: 10 dB Stop: 7.800000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 10:52:55 HP8563E

Plot 0071



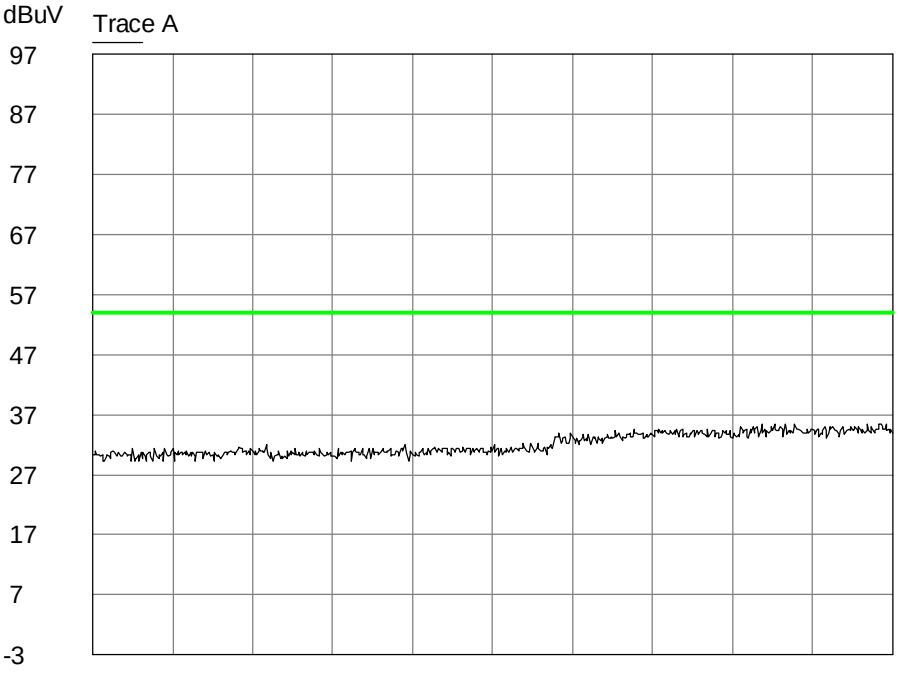
Start: 7.800000 GHz Atten: 10 dB Stop: 10.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 10:57:28 HP8563E

Plot 0072



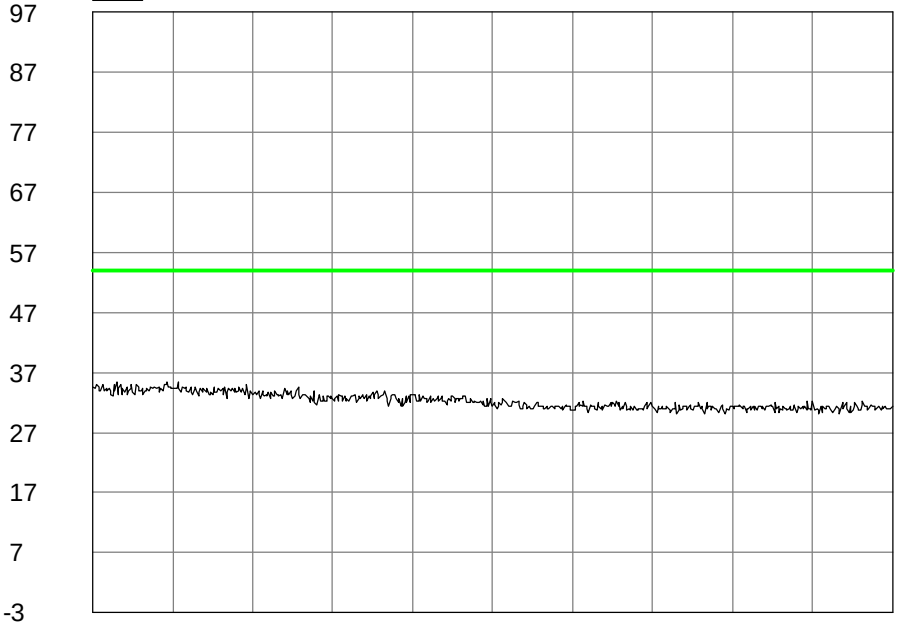
Start: 10.000000 GHz Atten: 10 dB Stop: 12.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 10:58:20 HP8563E

Plot 0073



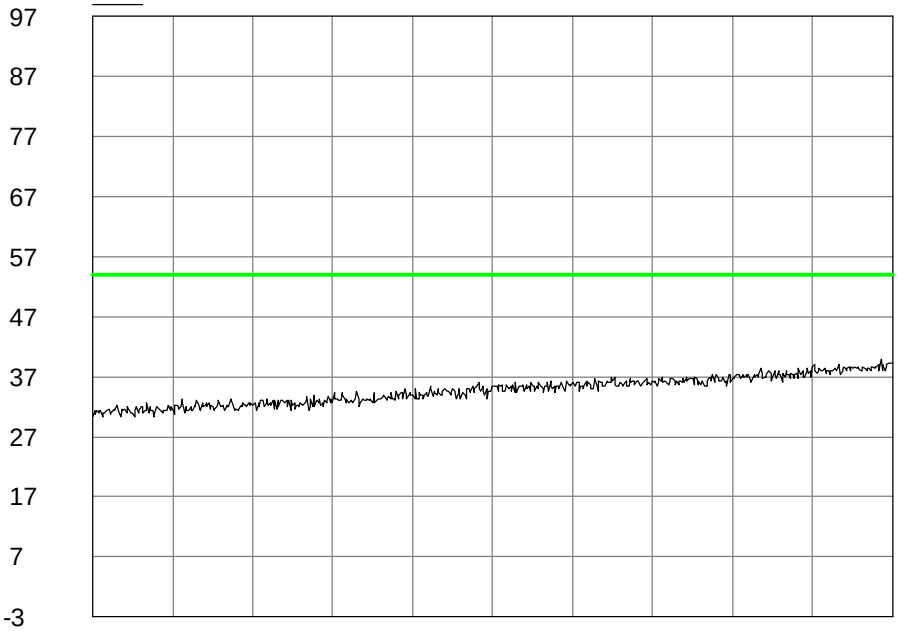
Start: 12.000000 GHz Atten: 10 dB Stop: 14.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 10:59:31 HP8563E

Plot 0074
Trace A



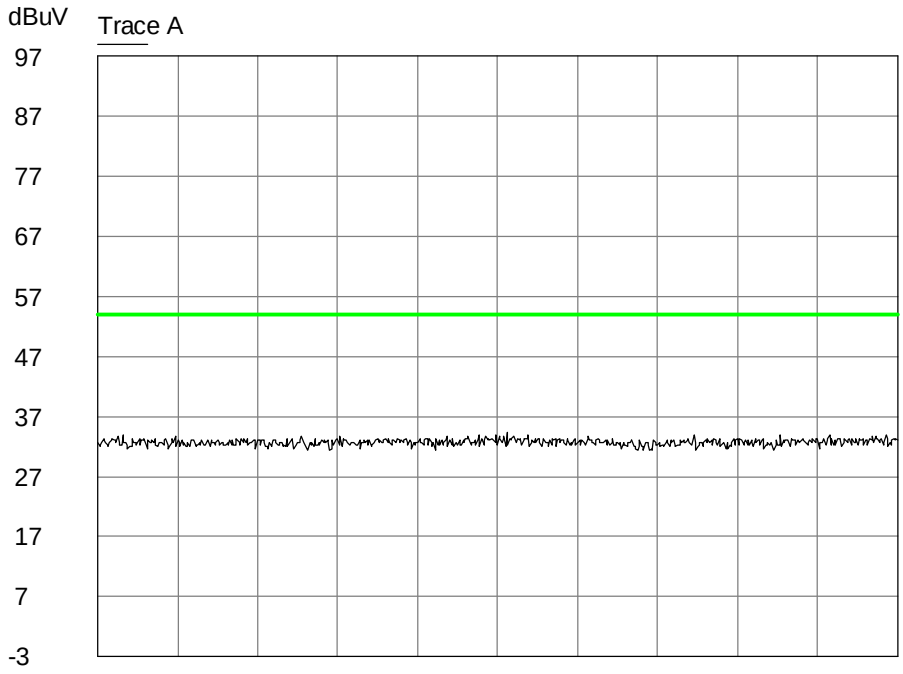
Start: 14.000000 GHz Atten: 10 dB Stop: 16.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 11:00:45 HP8563E

Plot 0081
Trace A



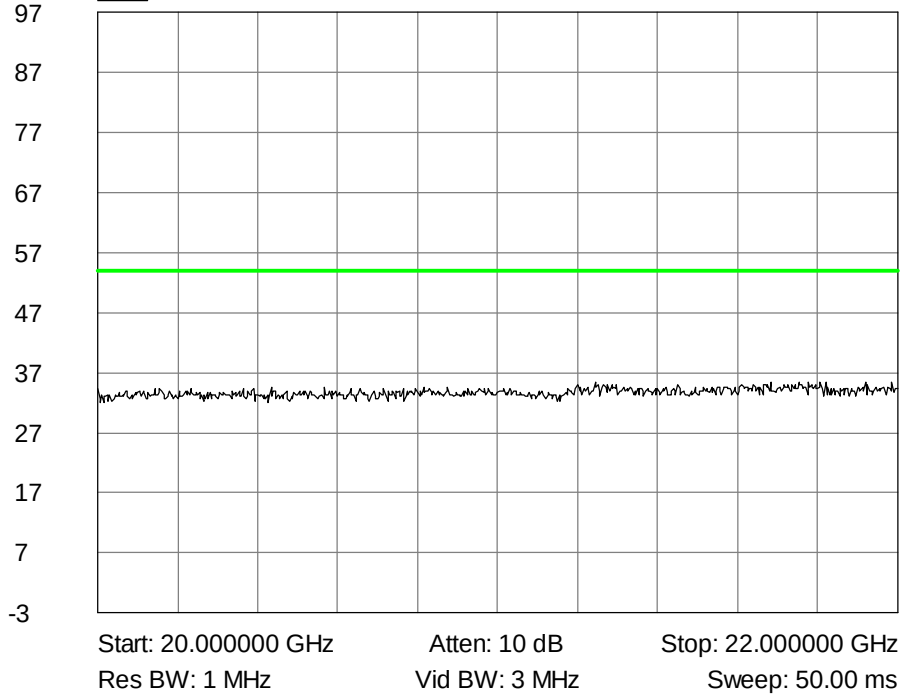
Start: 16.000000 GHz Atten: 10 dB Stop: 18.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 11:17:50 HP8563E

Plot 0084



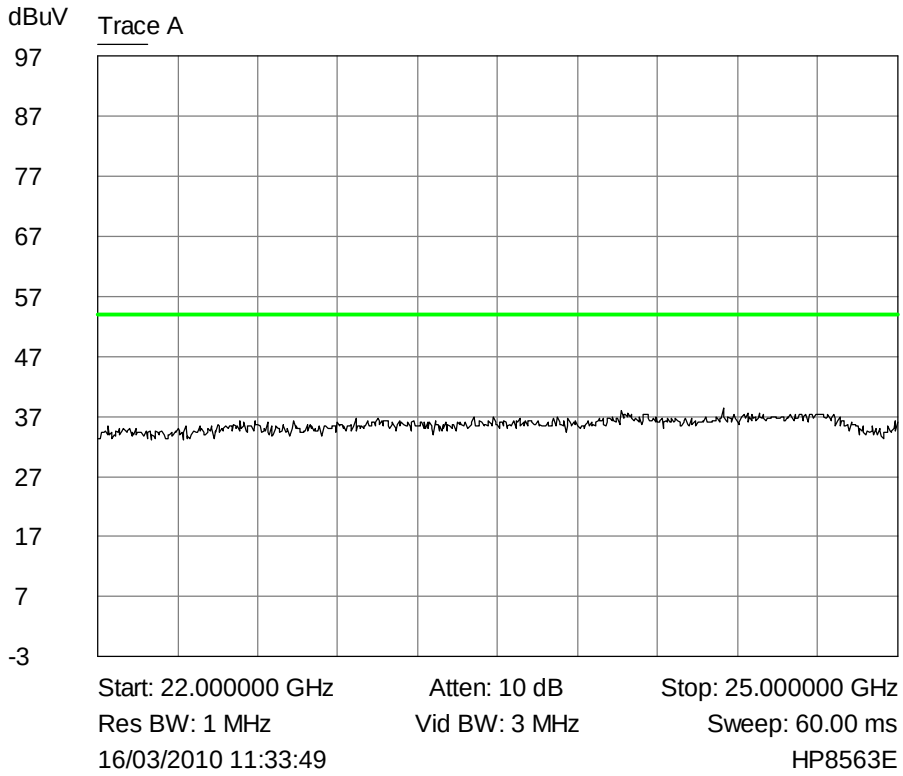
Start: 18.000000 GHz Atten: 10 dB Stop: 20.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 11:28:28 HP8563E

Plot 0088



Start: 20.000000 GHz Atten: 10 dB Stop: 22.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
16/03/2010 11:32:58 HP8563E

Plot 0089
Trace A

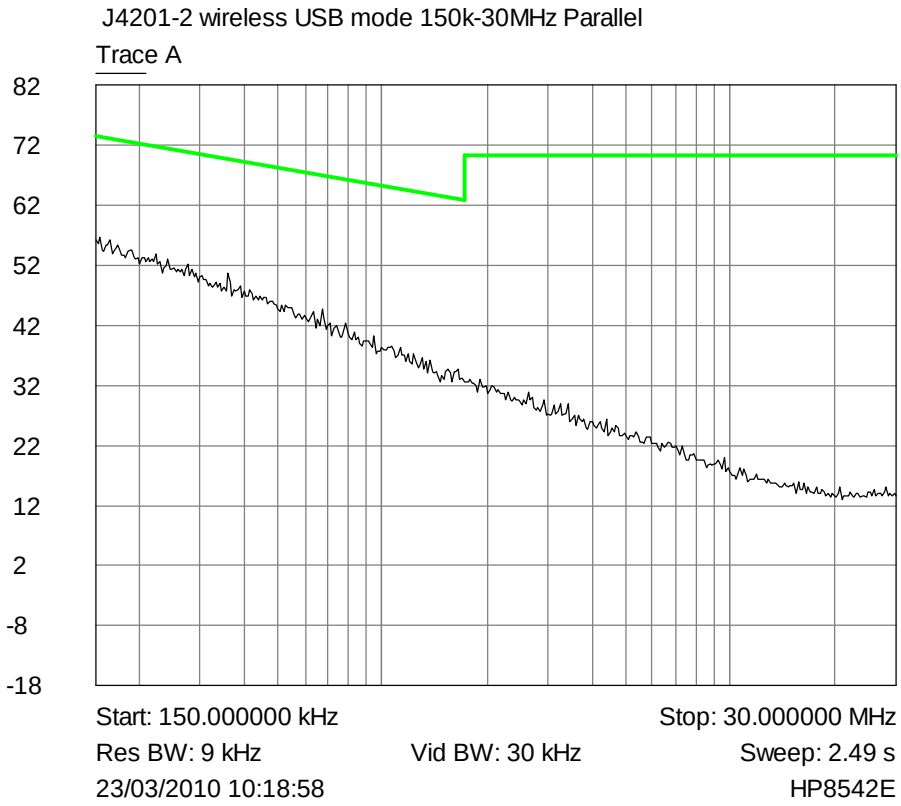


Start: 22.000000 GHz Atten: 10 dB Stop: 25.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 60.00 ms
16/03/2010 11:33:49 HP8563E

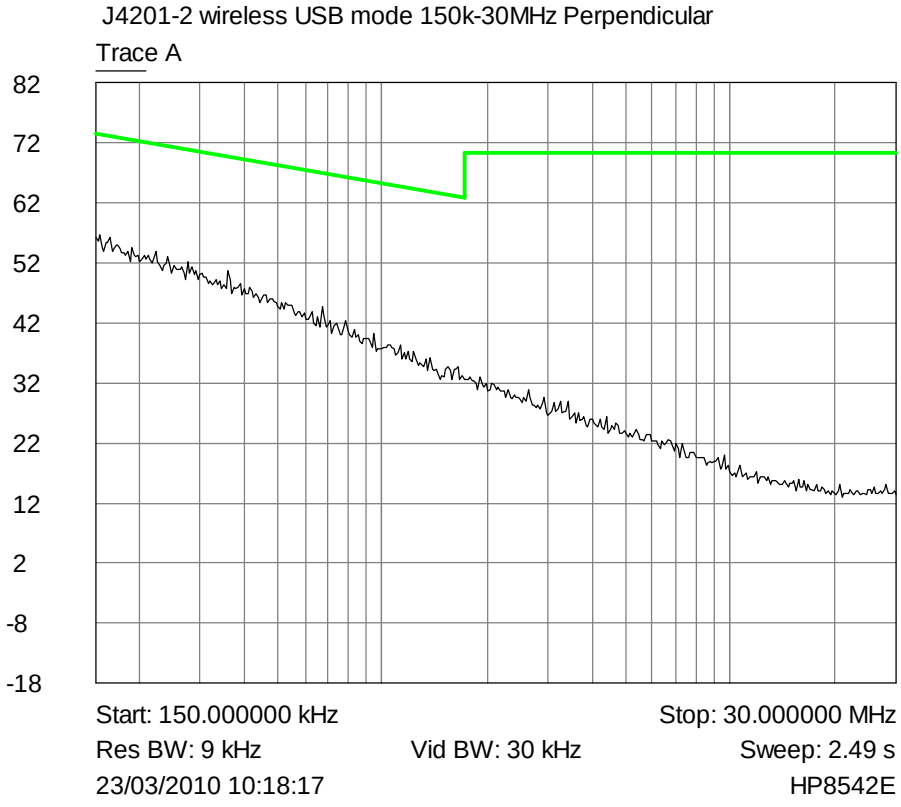
Table of signals measured above 1GHz.

No signals found within 20dB of limits on Top, Middle or Bottom channels.

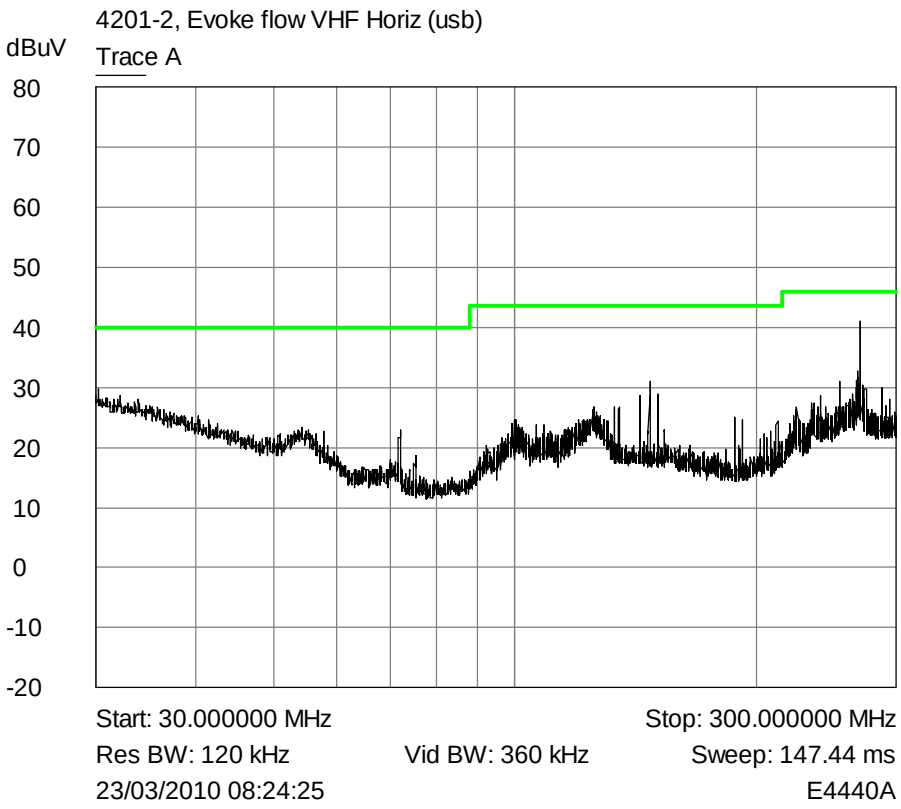
Wireless USB mode results.



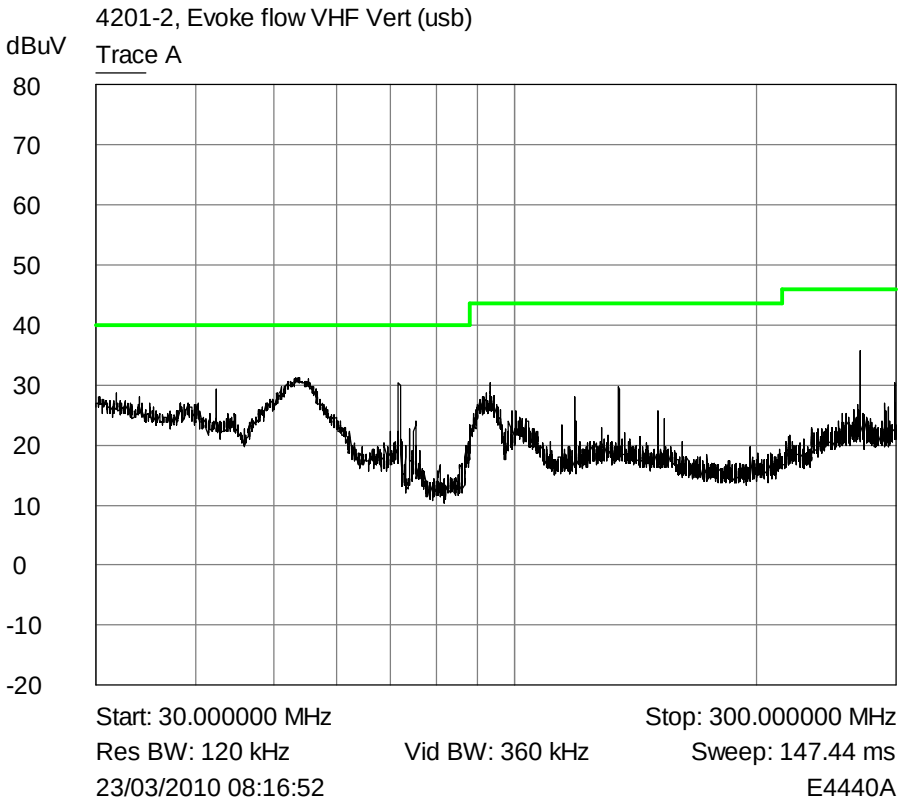
Plot of peak Parallel emissions 150kHz - 30MHz against the quasi-peak limit line.



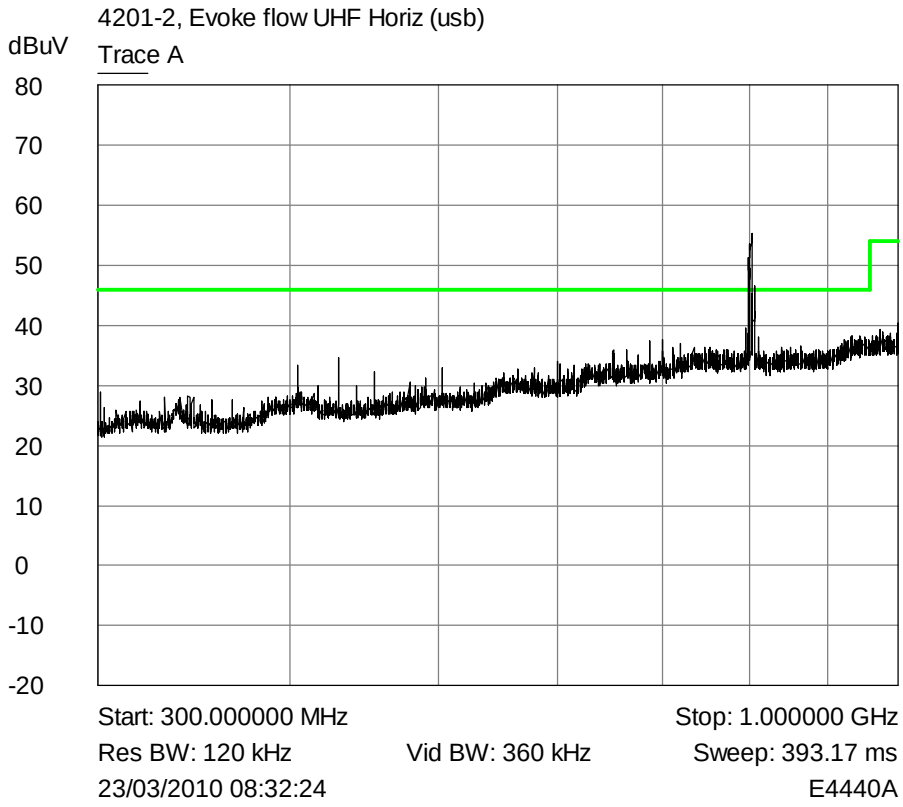
Plot of peak Perpendicular emissions 150kHz - 30MHz against the quasi-peak limit line.



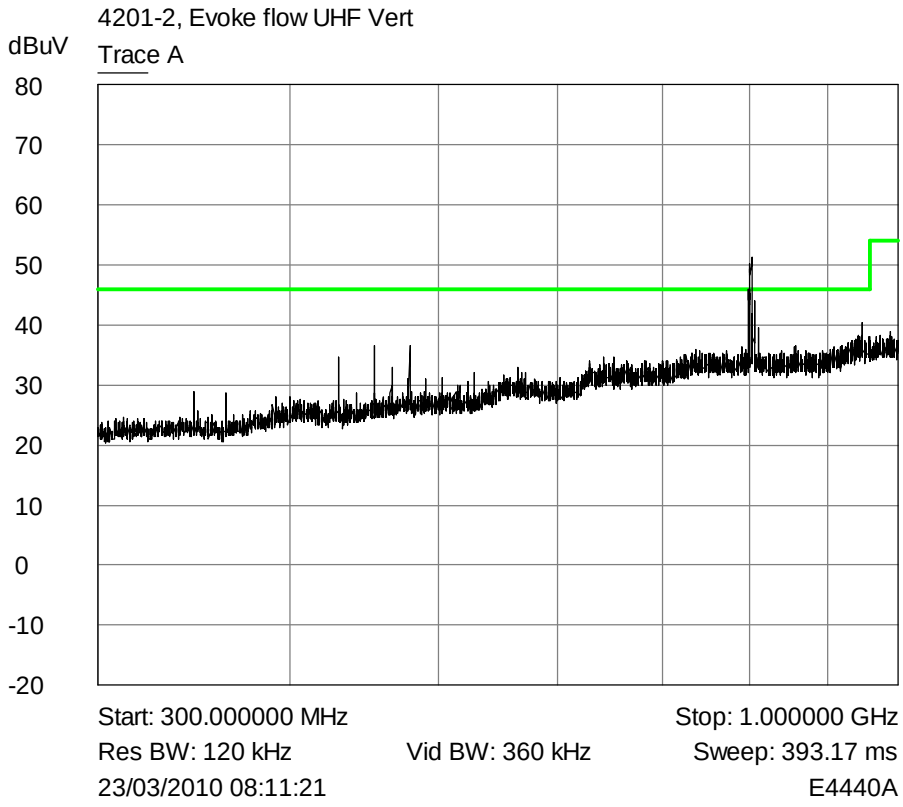
Plot of peak horizontal emissions 30MHz - 300MHz against the quasi-peak limit line.



Plot of peak vertical emissions 30MHz - 300MHz against the quasi-peak limit line.



Plot of peak horizontal emissions 300MHz - 1GHz against the quasi-peak limit line.



Plot of peak vertical emissions 300MHz - 1GHz against the quasi-peak limit line.

Table of signals measured below 1GHz for Wireless USB RF part.

Horizontal

Bottom Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	20dBc limit 100k RBW
1	147.412484	19.64	23.85	-19.65	
2	151.531868	19.54	13.19	-30.31	
3	255.962862	25.79	20.27	-25.73	
4	268.264924	33.25	28.79	-17.21	
5	270.311072	41.16	39.84	-6.16	
6	288.792784	25.30	18.38	-27.62	
7	430.040292	35.78	34.02	-11.98	
8	454.614026	34.39	31.82	-14.18	
9	801.312185	53.60	50.68	4.68	-21.16

Middle Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	20dBc limit 100k RBW
1	147.412484	19.64	23.85	-19.65	
2	151.531868	19.54	13.19	-30.31	
3	255.962862	25.79	20.27	-25.73	
4	268.264924	33.25	28.79	-17.21	
5	270.311072	41.16	39.84	-6.16	
6	288.792784	25.30	18.38	-27.62	
7	651.200521	38.55	35.84	-10.16	
8	688.064346	39.51	36.67	-9.33	
9	700.3515	41.15	37.56	-8.44	
10	812.333747	53.55	50.84	4.84	-19.66
11	814.978285	54.03	50.77	4.77	-19.73
12	815.659852	45.77	42.42	-3.58	-28.08
13	817.637299	45.42	42.81	-3.19	-27.69

Top Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	20dBc limit 100k RBW
1	147.412484	19.64	23.85	-19.65	
2	151.531868	19.54	13.19	-30.31	
3	255.962862	25.79	20.27	-25.73	
4	268.264924	33.25	28.79	-17.21	
5	270.311072	41.16	39.84	-6.16	
6	288.792784	25.30	18.38	-27.62	
7	405.46645	37.84	35.99	-10.01	
8	651.204714	38.70	35.92	-10.08	
9	675.777414	43.07	41.21	-4.79	
10	688.064404	40.44	36.40	-9.60	
11	700.351705	39.75	36.70	-9.30	
12	825.05757	49.39	46.43	0.43	-22.07
13	826.947831	47.95	44.31	-1.69	-24.19
14	828.056779	41.63	36.33	-9.67	
15	829.947924	42.16	37.59	-8.41	

NOTE: Figures shown in orange are very close or exceed the 15.209 limits. However, the frequencies stated are not in the restricted bands of operation and therefore only compliance to the 20dBc limits of 15.247(d) measured in 100kHz RBW is required as shown in the extra column. See plots section 6.3.

Bottom Channel Vertical TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	20dBc limit 100k RBW
1	53.673001	32.42	28.13	-11.87	
2	71.742774	31.27	28.79	-11.21	
3	93.185124	32.23	27.55	-15.95	
4	135.155519	30.90	28.92	-14.58	
5	270.311134	33.19	30.89	-15.11	
6	297.891769	23.74	18.22	-27.78	
7	346.661788	24.59	18.73	-27.27	
8	363.502436	24.72	18.66	-27.34	
9	430.040481	33.70	31.31	-14.69	
10	454.614228	36.23	34.43	-11.57	
11	466.901079	33.39	30.54	-15.46	
12	479.187981	37.53	35.37	-10.63	
13	798.996793	48.77	45.46	-0.54	-26.38
14	801.609092	53.01	49.25	3.25	-22.59
15	801.637311	53.39	49.77	3.77	-22.07
16	802.331192	44.14	40.81	-5.19	
17	804.285782	45.77	42.04	-3.96	-29.8

Middle Channel Vertical TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	20dBc limit 100k RBW
1	53.673001	32.42	28.13	-11.87	
2	71.742774	31.27	28.79	-11.21	
3	93.185124	32.23	27.55	-15.95	
4	135.155519	30.90	28.92	-14.58	
5	270.311134	33.19	30.89	-15.11	
6	297.891769	23.74	18.22	-27.78	
7	812.338172	51.15	47.85	1.85	-22.65
8	812.990761	49.18	46.09	0.09	-24.41
9	814.345387	49.24	46.59	0.59	-23.91
10	814.581356	50.25	48.10	2.10	-22.4
11	814.982346	50.92	47.83	1.83	-22.67
12	815.703956	43.06	39.33	-6.67	
13	817.620352	44.24	39.82	-6.18	

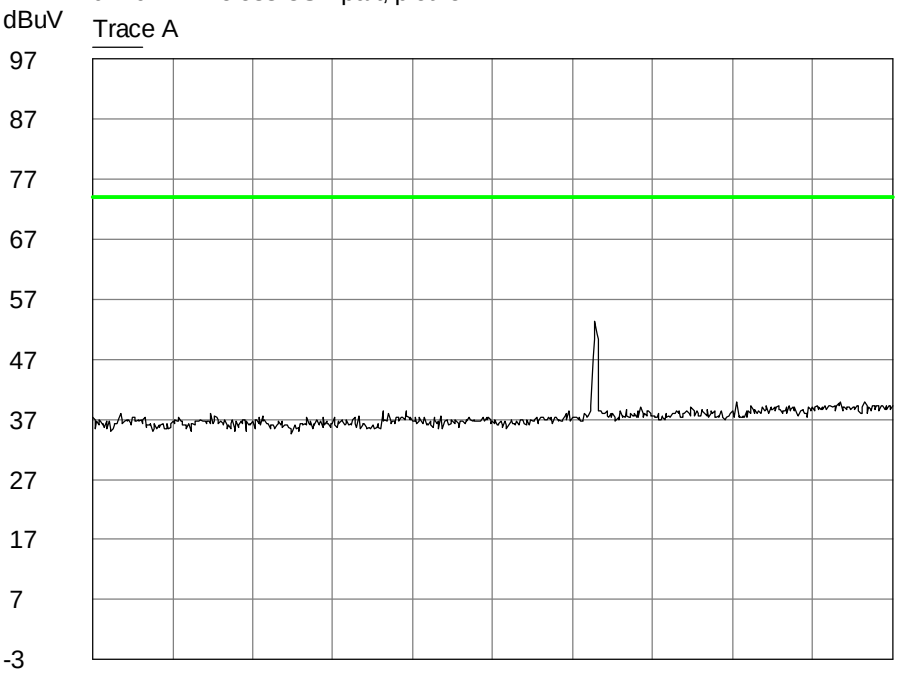
Top Channel Vertical TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	QP Amp (dBuV)	QP - Lim1 (dB)	20dBc limit 100k RBW
1	53.673001	32.42	28.13	-11.87	
2	71.742774	31.27	28.79	-11.21	
3	93.185124	32.23	27.55	-15.95	
4	135.155519	30.90	28.92	-14.58	
5	270.311134	33.19	30.89	-15.11	
6	297.891769	23.74	18.22	-27.78	
7	405.466425	33.25	30.33	-15.67	
8	430.040149	34.85	32.83	-13.17	
9	454.61386	36.50	34.97	-11.03	
10	479.187586	38.57	36.19	-9.81	
11	824.724348	46.99	43.05	-2.95	-25.45
12	827.367459	43.87	41.33	-4.67	-27.17
13	827.976068	39.91	35.10	-10.90	

NOTE: Figures shown in orange are very close or exceed the 15.209 limits. However, the frequencies stated are not in the restricted bands of operation and therefore only compliance to the 20dBc limits of 15.247(d) measured in 100kHz RBW is required as shown in the extra column. See plots section 6.3.

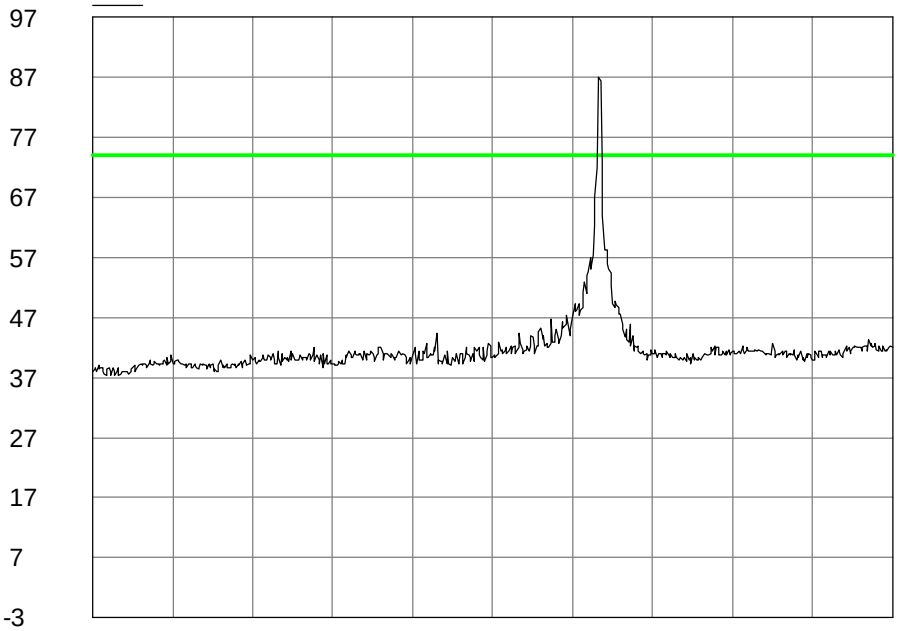
Plots of peak horizontal emissions 1GHz - 25GHz against the peak limit line.

J4201-2 wireless USB part, plot25



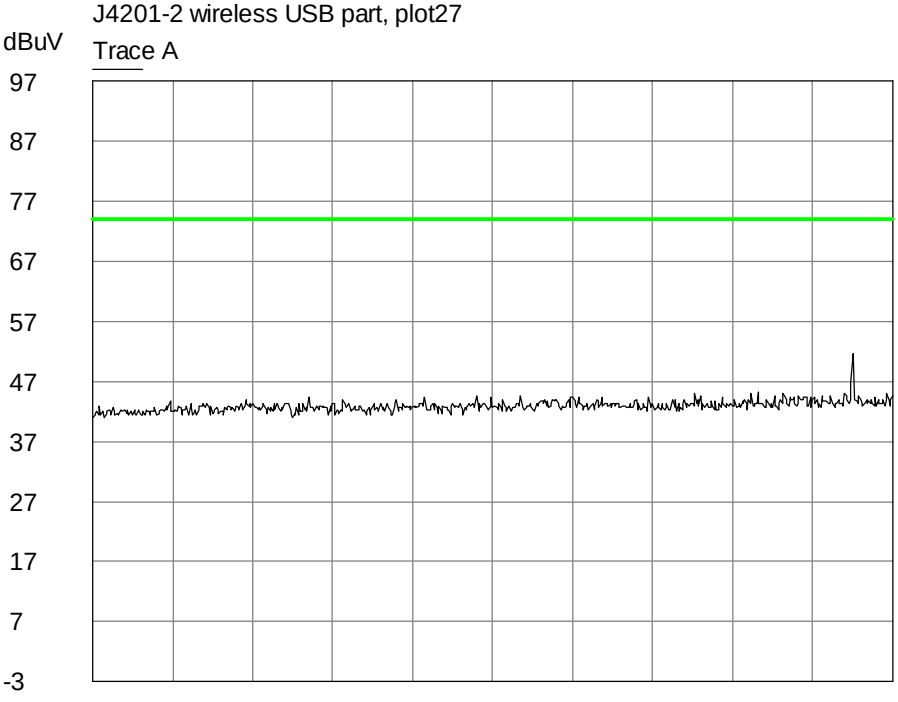
Start: 1.000000 GHz Atten: 10 dB Stop: 2.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:02:44 HP8563E

J4201-2 wireless USB part, plot26



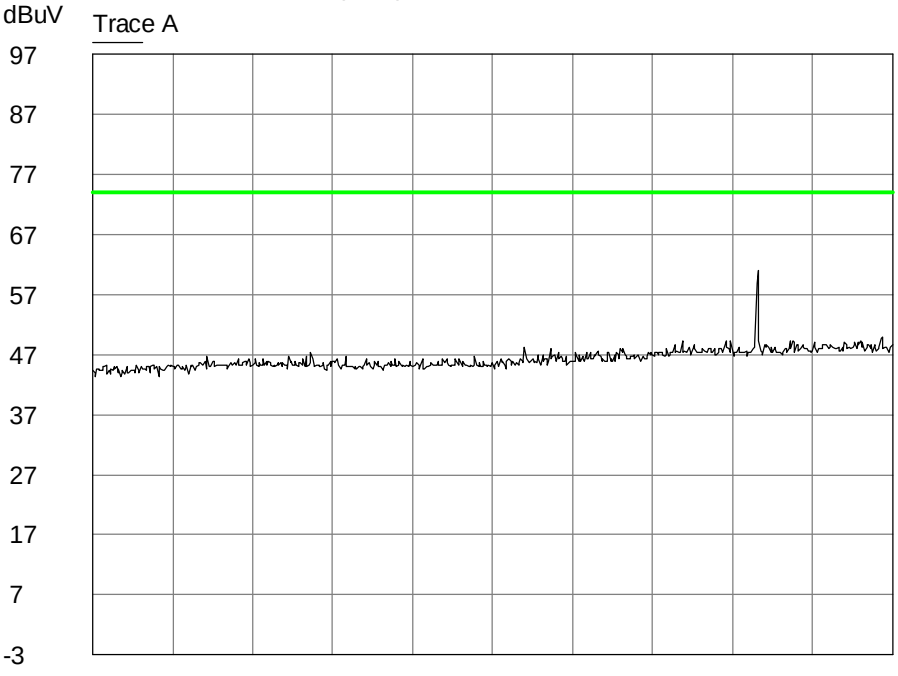
Start: 2.000000 GHz Atten: 10 dB Stop: 2.700000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:04:17 HP8563E

J4201-2 wireless USB part, plot27



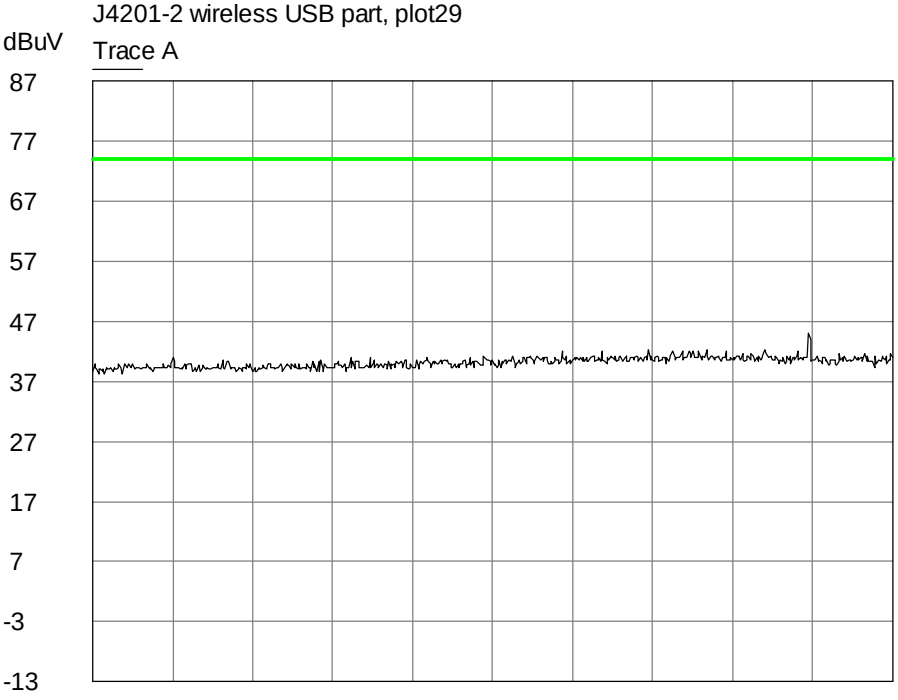
Start: 2.700000 GHz Atten: 10 dB Stop: 5.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:05:28 HP8563E

J4201-2 wireless USB part, plot28



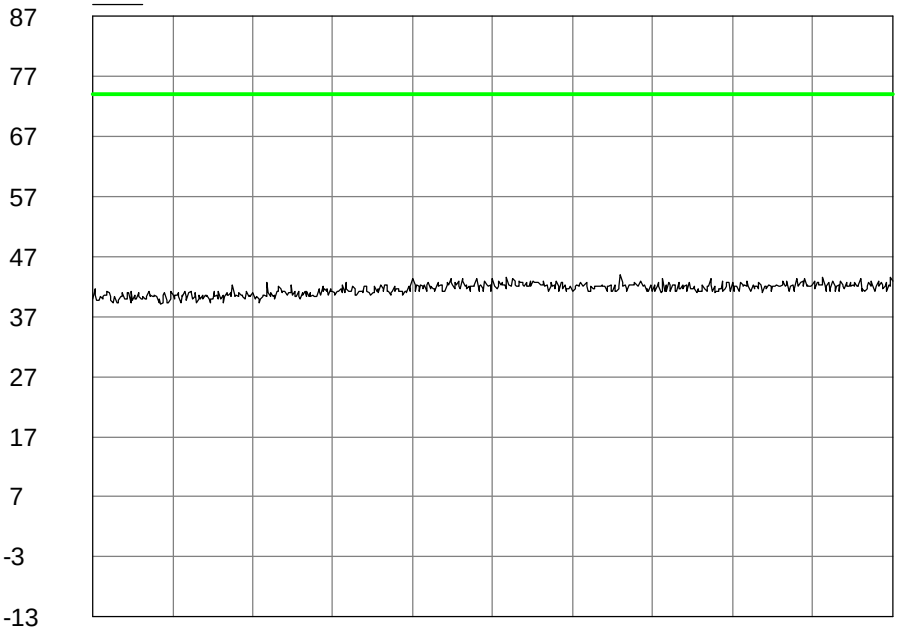
Start: 5.000000 GHz Atten: 10 dB Stop: 7.800000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 56.00 ms
18/03/2010 14:06:58 HP8563E

J4201-2 wireless USB part, plot29



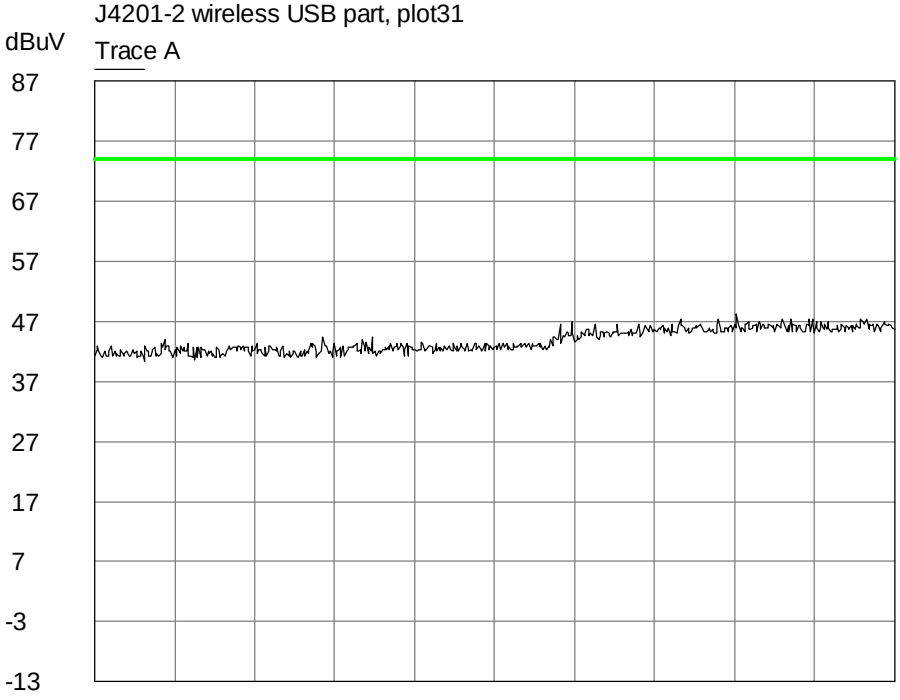
Start: 7.800000 GHz Atten: 10 dB Stop: 10.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:58:09 HP8563E

J4201-2 wireless USB part, plot30



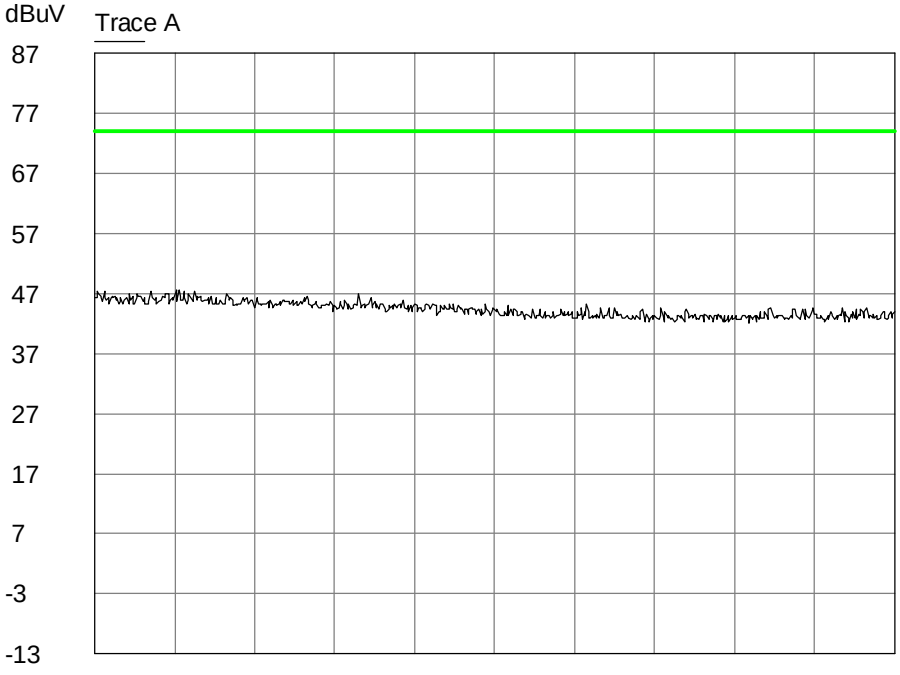
Start: 10.000000 GHz Atten: 10 dB Stop: 12.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:58:55 HP8563E

J4201-2 wireless USB part, plot31



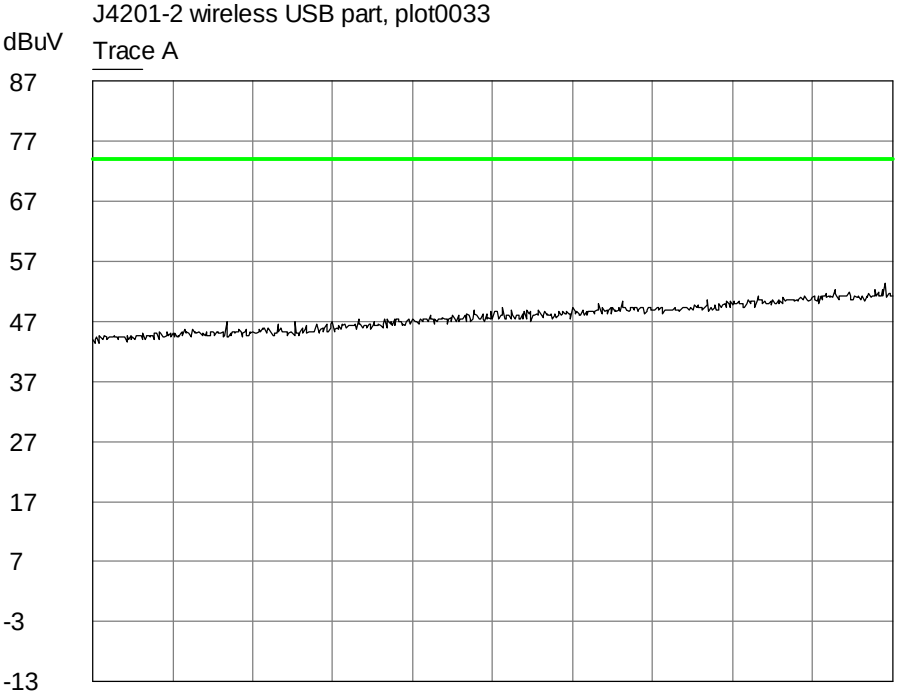
Start: 12.000000 GHz Atten: 10 dB Stop: 14.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:59:52 HP8563E

J4201-2 wireless USB part, plot32



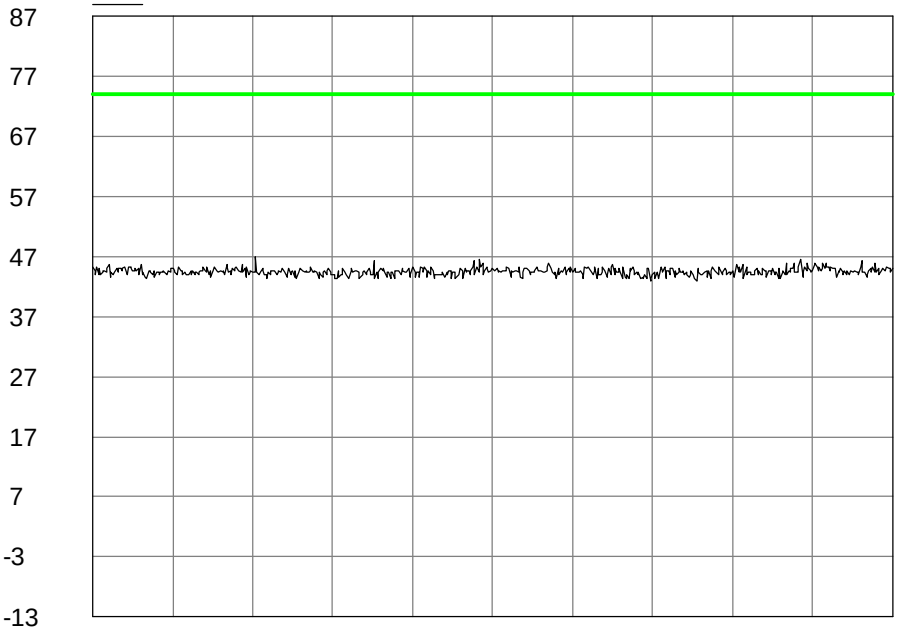
Start: 14.000000 GHz Atten: 10 dB Stop: 16.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:01:18 HP8563E

J4201-2 wireless USB part, plot0033



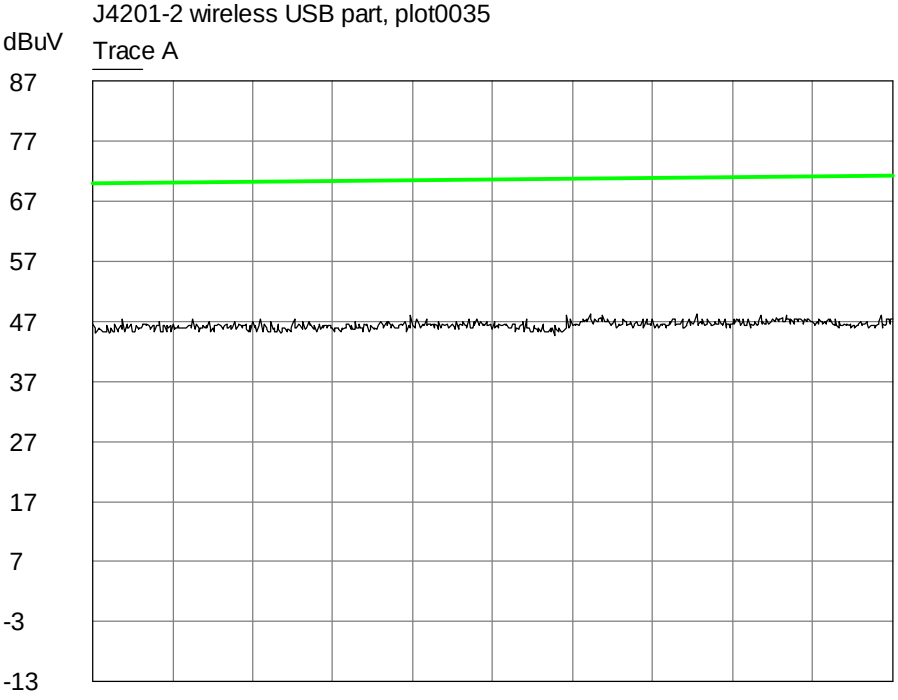
Start: 16.000000 GHz Atten: 10 dB Stop: 18.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:28:58 HP8563E

J4201-2 wireless USB part, plot0034



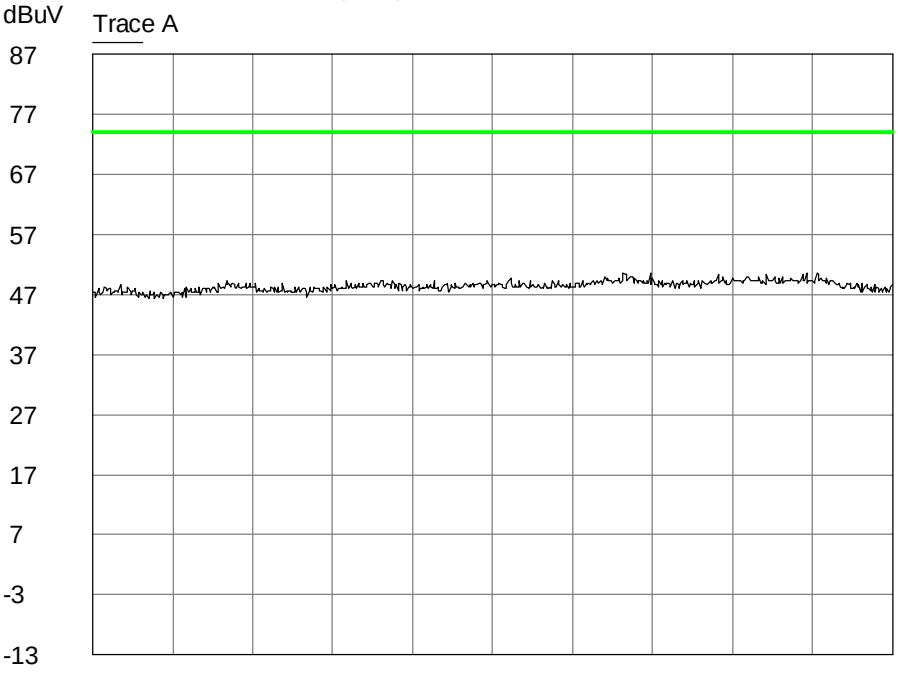
Start: 18.000000 GHz Atten: 10 dB Stop: 20.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:39:57 HP8563E

J4201-2 wireless USB part, plot0035



Start: 20.000000 GHz Atten: 10 dB Stop: 22.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:41:42 HP8563E

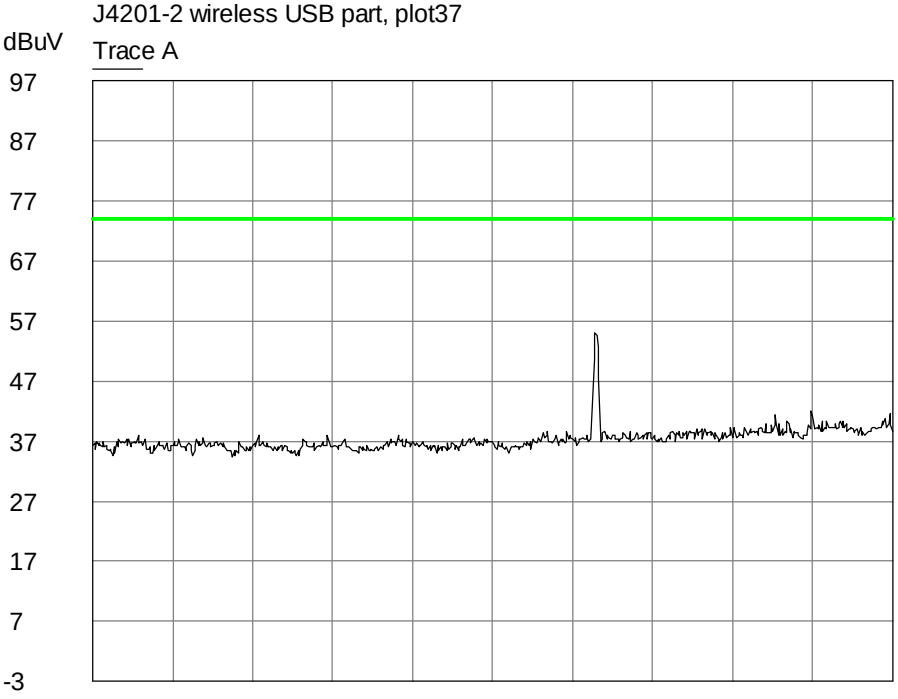
J4201-2 wireless USB part, plot0036



Start: 22.000000 GHz Atten: 10 dB Stop: 25.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 60.00 ms
18/03/2010 15:44:01 HP8563E

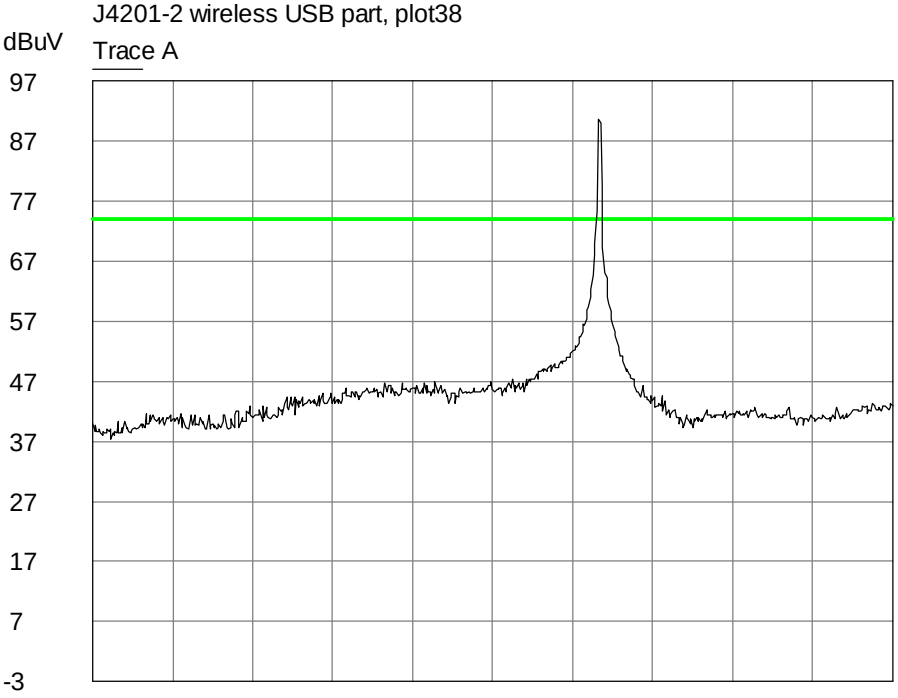
Plot of peak vertical emissions 1GHz - 25GHz against the peak limit line.

J4201-2 wireless USB part, plot37



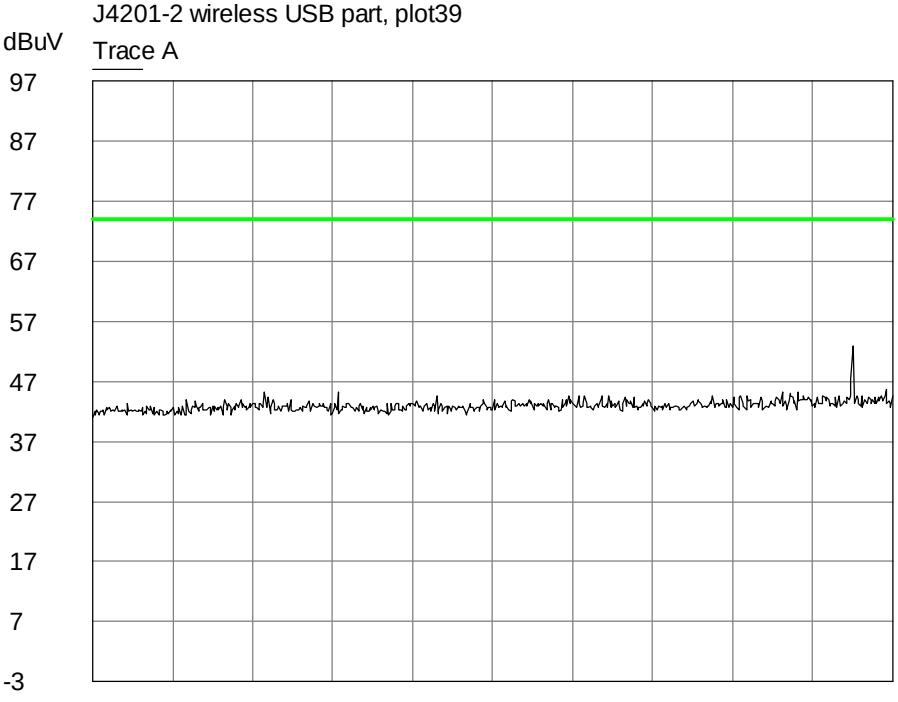
Start: 1.000000 GHz Atten: 10 dB Stop: 2.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:12:59 HP8563E

J4201-2 wireless USB part, plot38



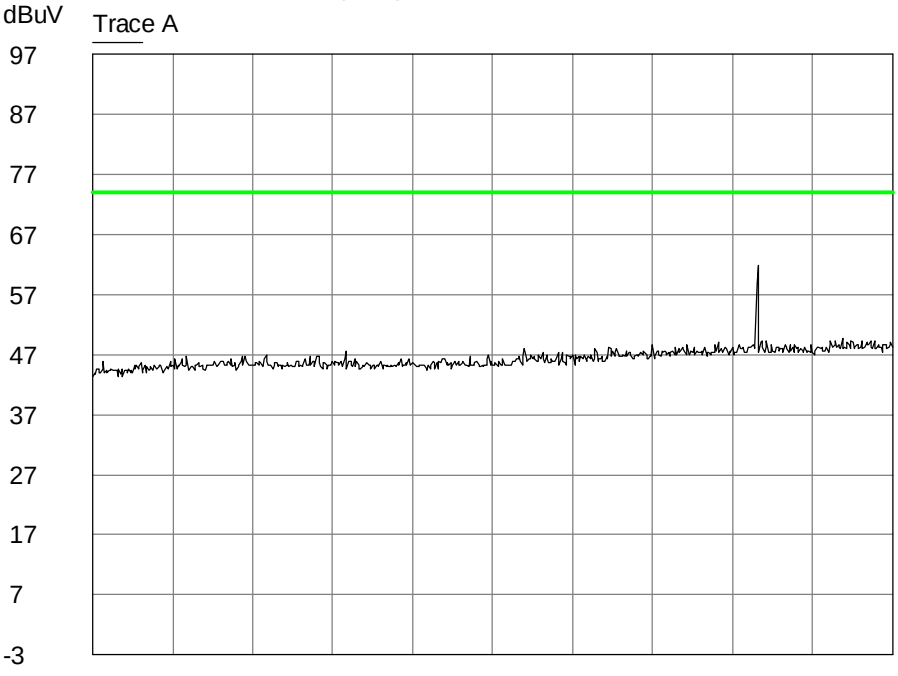
Start: 2.000000 GHz Atten: 10 dB Stop: 2.700000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:11:52 HP8563E

J4201-2 wireless USB part, plot39



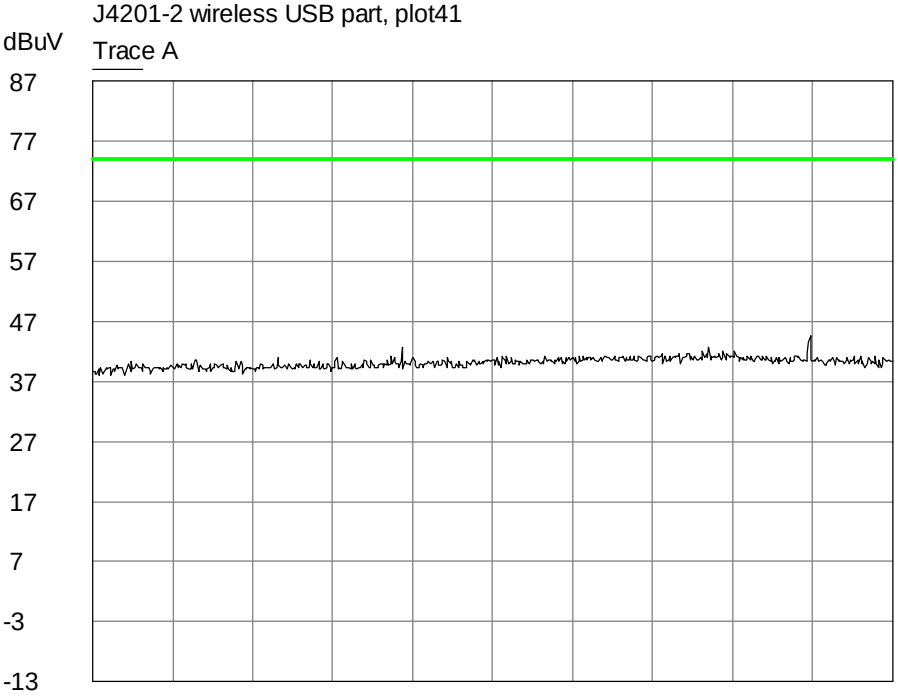
Start: 2.700000 GHz Atten: 10 dB Stop: 5.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 14:10:21 HP8563E

J4201-2 wireless USB part, plot40



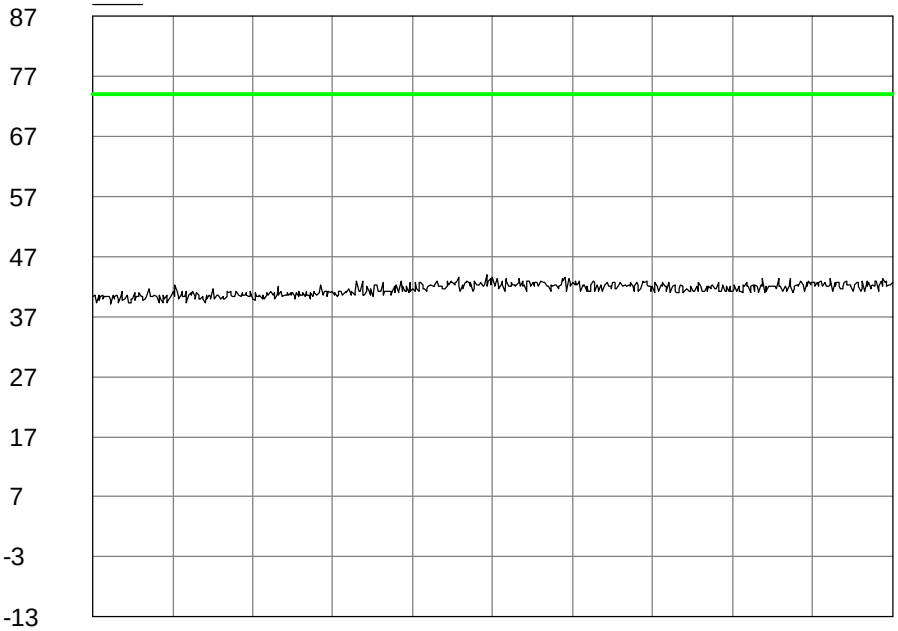
Start: 5.000000 GHz Atten: 10 dB Stop: 7.800000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 56.00 ms
18/03/2010 14:08:23 HP8563E

J4201-2 wireless USB part, plot41



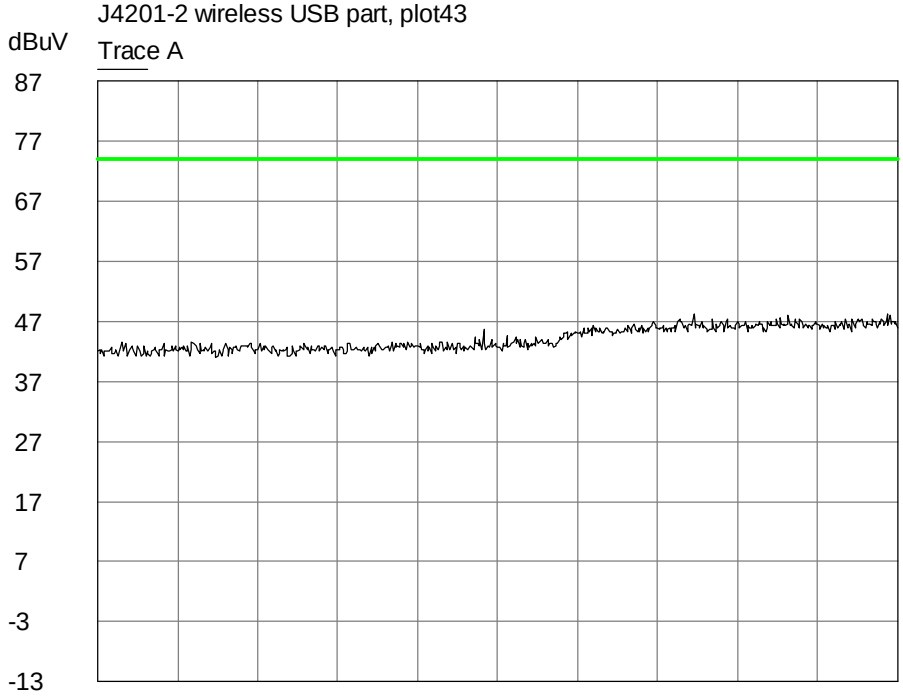
Start: 7.800000 GHz Atten: 10 dB Stop: 10.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:06:20 HP8563E

J4201-2 wireless USB part, plot42



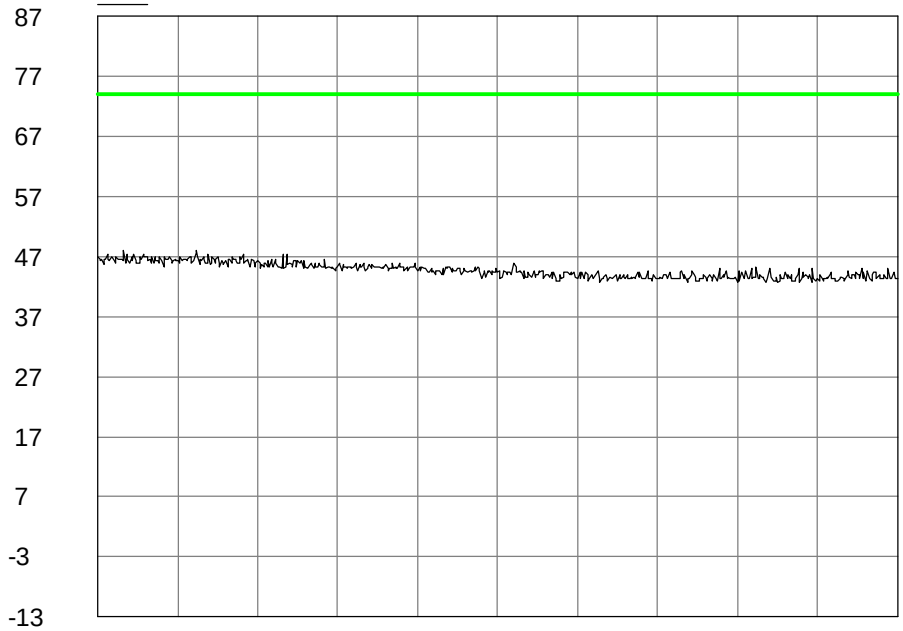
Start: 10.000000 GHz Atten: 10 dB Stop: 12.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:05:03 HP8563E

J4201-2 wireless USB part, plot43



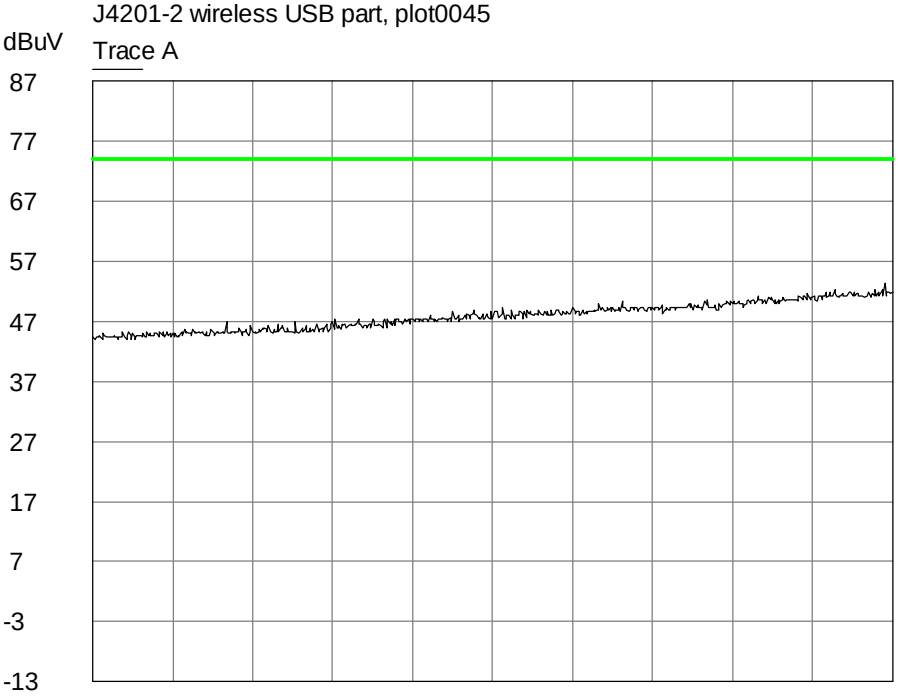
Start: 12.000000 GHz Atten: 10 dB Stop: 14.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:04:07 HP8563E

J4201-2 wireless USB part, plot44



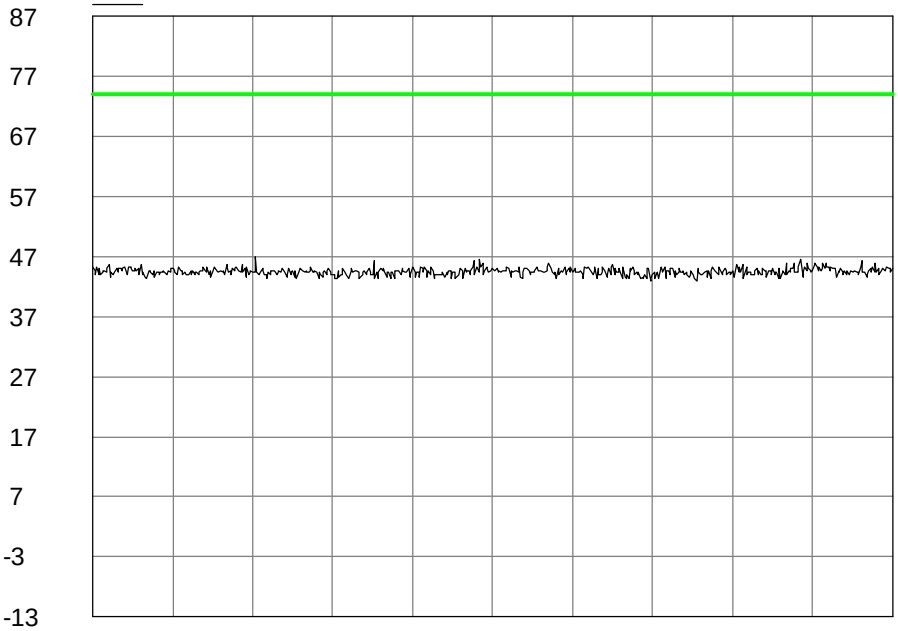
Start: 14.000000 GHz Atten: 10 dB Stop: 16.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:03:18 HP8563E

J4201-2 wireless USB part, plot0045



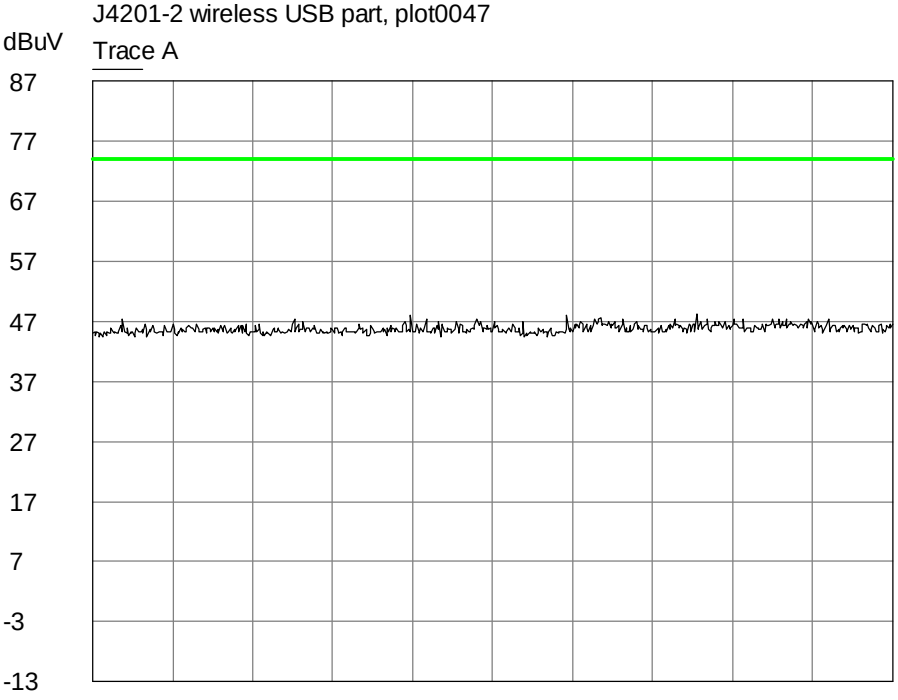
Start: 16.000000 GHz Atten: 10 dB Stop: 18.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:29:45 HP8563E

J4201-2 wireless USB part, plot0046



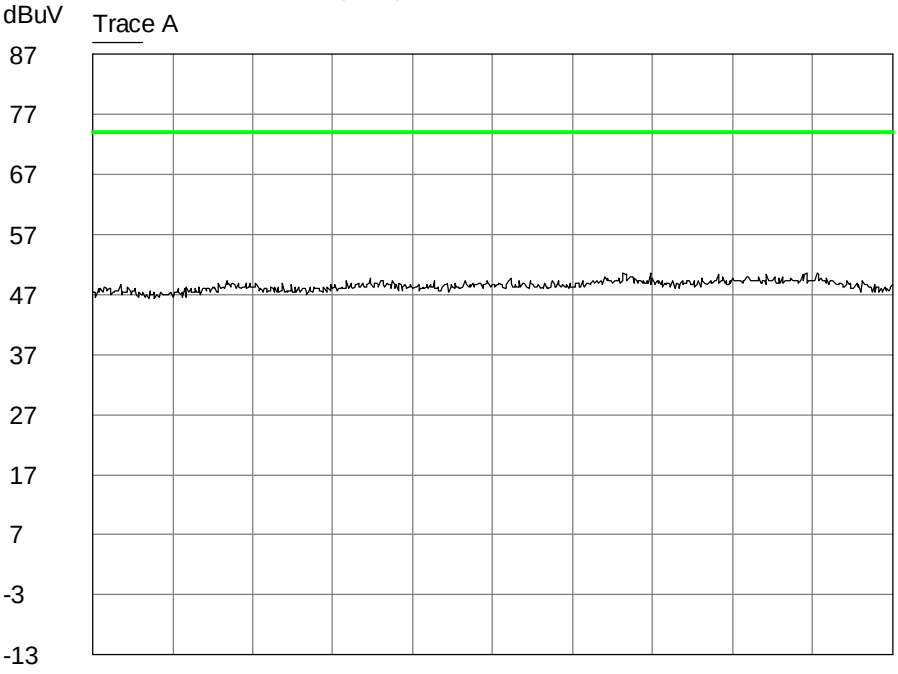
Start: 18.000000 GHz Atten: 10 dB Stop: 20.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:40:32 HP8563E

J4201-2 wireless USB part, plot0047



Start: 20.000000 GHz Atten: 10 dB Stop: 22.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
18/03/2010 15:41:12 HP8563E

J4201-2 wireless USB part, plot0048



Start: 22.000000 GHz Atten: 10 dB Stop: 25.000000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 60.00 ms
18/03/2010 15:44:25 HP8563E

Table of signals measured above 1GHz for Wireless USB RF part.

Horizontal

Bottom Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	PK - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	1600	49.5	-24.5	40.46	-13.54
2	3179	48.7	-25.3	39.66	-14.34
3	4804	52.5	-21.5	43.46	-10.54
4	7206	61	-13.0	51.96	-2.04
5	9611	45.7	-28.3	36.66	-17.34

Middle Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	PK - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	1628	52.7	-21.3	43.66	-10.34
2	4885	54.3	-19.7	45.26	-8.74
3	7326	61.7	-12.3	52.66	-1.34
4	9773	45.2	-28.8	36.16	-17.84

Top Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	PK - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	1653	52.1	-21.9	43.06	-10.94
2	4958	50.7	-23.3	41.66	-12.34
3	7436	59.5	-14.5	50.46	-3.54
4	9919	46	-28.0	36.96	-17.04

Vertical

Bottom Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	PK - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	1600	51.5	-22.5	42.46	-11.54
2	3179	53.3	-20.7	44.26	-9.74
3	4804	55.3	-18.7	46.26	-7.74
4	7206	62	-12.0	52.96	-1.04
5	9611	46.3	-27.7	37.26	-16.74

Middle Channel TX

Signal No.	Freq (MHz)	Peak Amp (dBuV)	PK - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	1628	56.3	-17.7	47.26	-6.74
2	4885	55.7	-18.3	46.66	-7.34
3	7326	62.5	-11.5	53.46	-0.54
4	9773	46.5	-27.5	37.46	-16.54

Top Channel TX

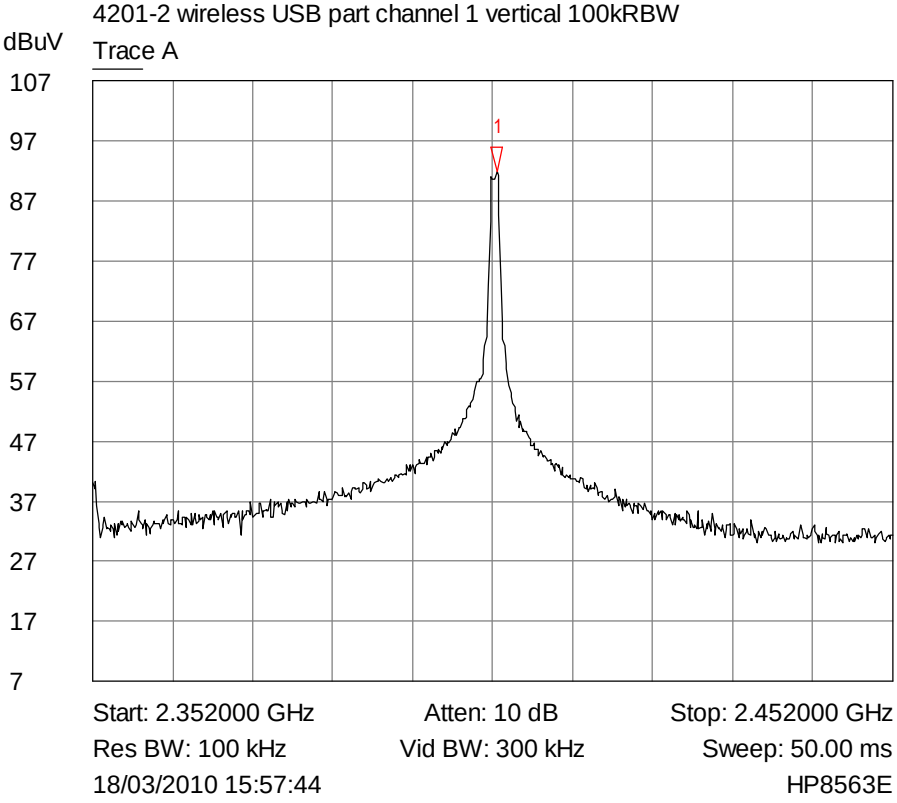
Signal No.	Freq (MHz)	Peak Amp (dBuV)	PK - Lim1 (dB)	AV Amp (dBuV)	AV - Lim1 (dB)
1	1653	54.8	-19.2	45.76	-8.24
2	4958	52.7	-21.3	43.66	-10.34
3	7436	60.8	-13.2	51.76	-2.24
4	9919	45	-29.0	35.96	-18.04

Note: Average amplitudes shown above are calculated from the peak measurement values taking into account the 35.3% TX duty cycle correction factor of 9.04dB.

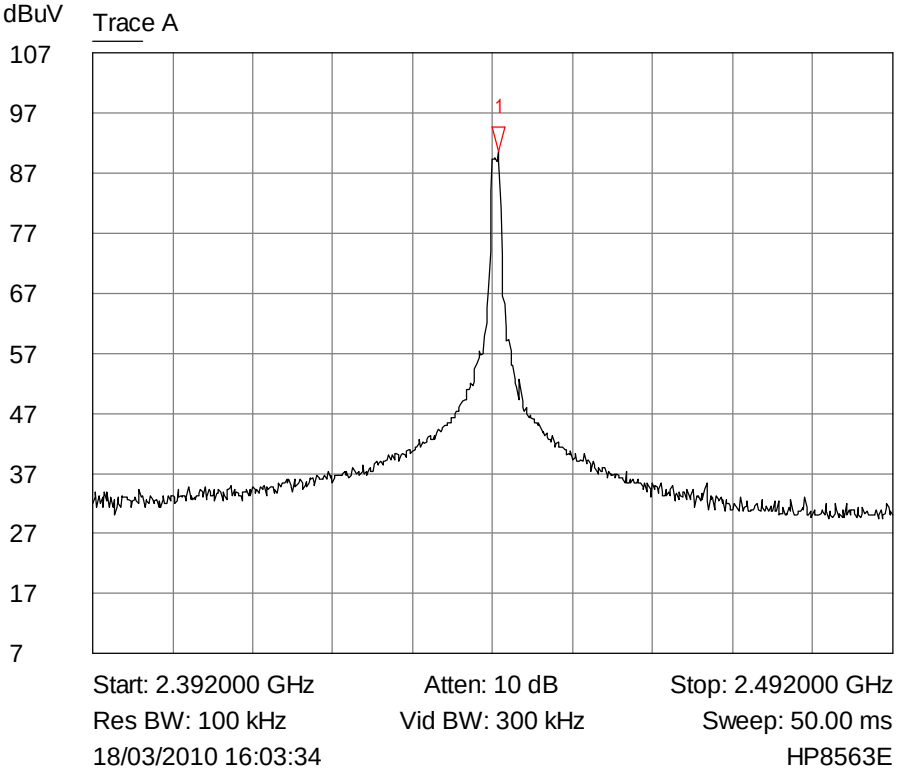
6.3 Fundamental Emissions

Plots provided for reference to 20dBc Limit of spurious emissions measured outside of the restricted bands. Fundamental field strength measured in 100 kHz RBW.

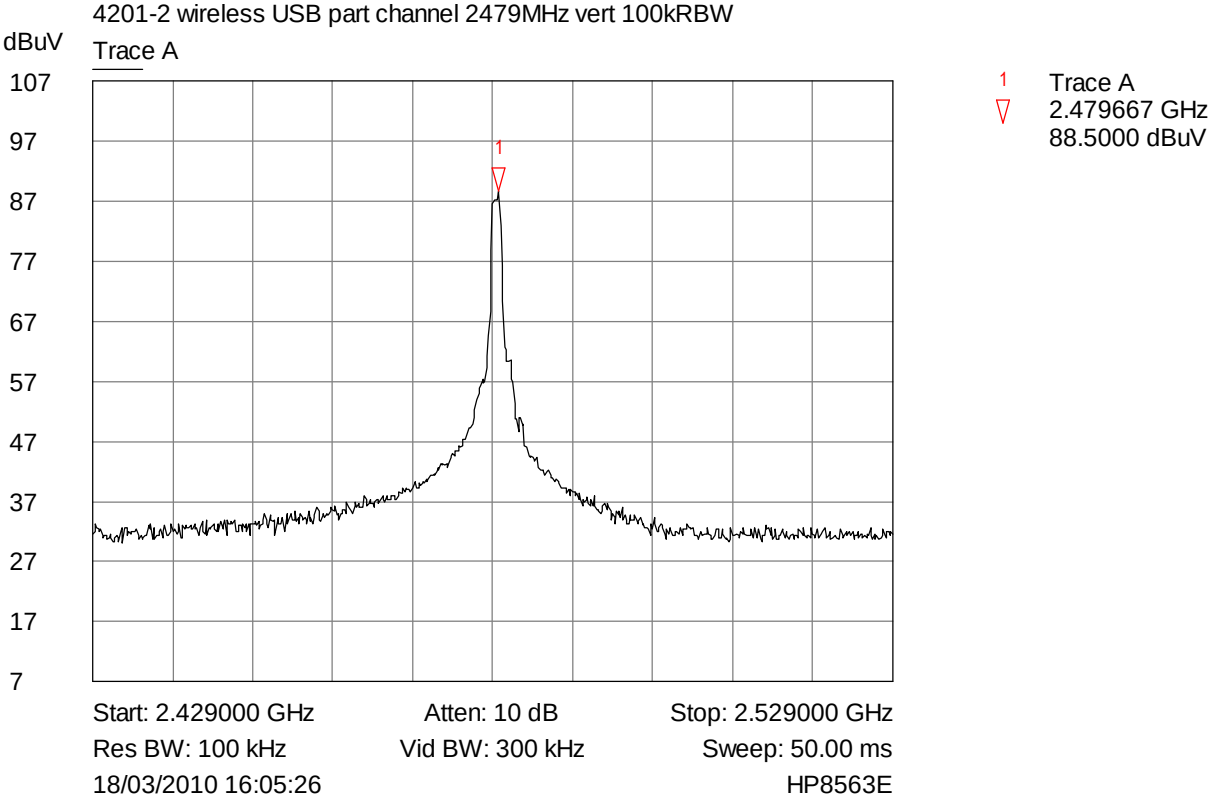
4201-2 wireless USB part channel 1 vertical 100kRBW



4201-2 wireless USB part channel 2442MHz vert 100kRBW



4201-2 wireless USB part channel 2479MHz vert 100kRBW



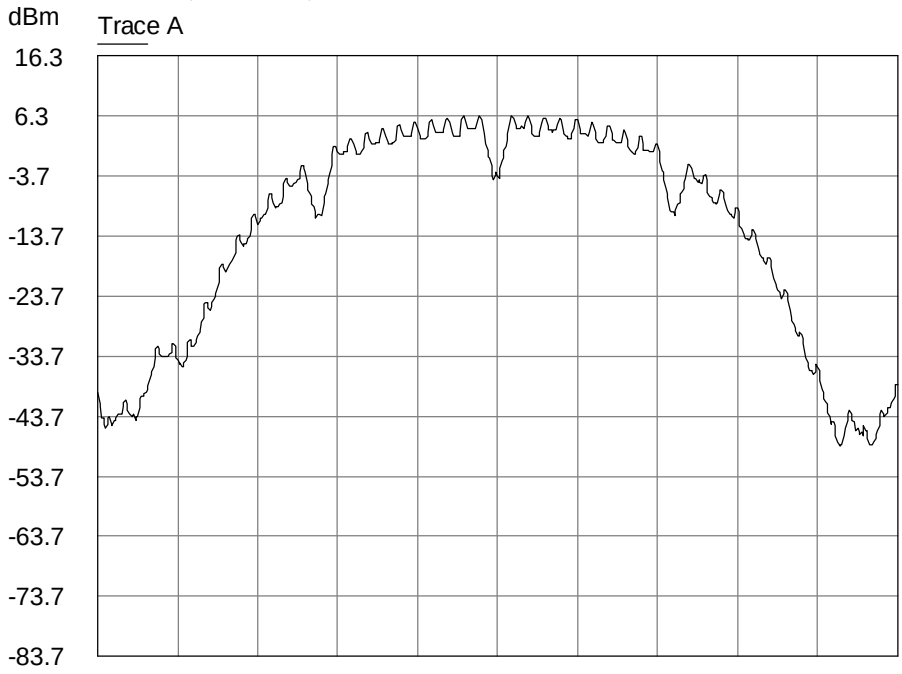
6.4 Duty Cycle

No test requirement.

6.5 6dB Bandwidth

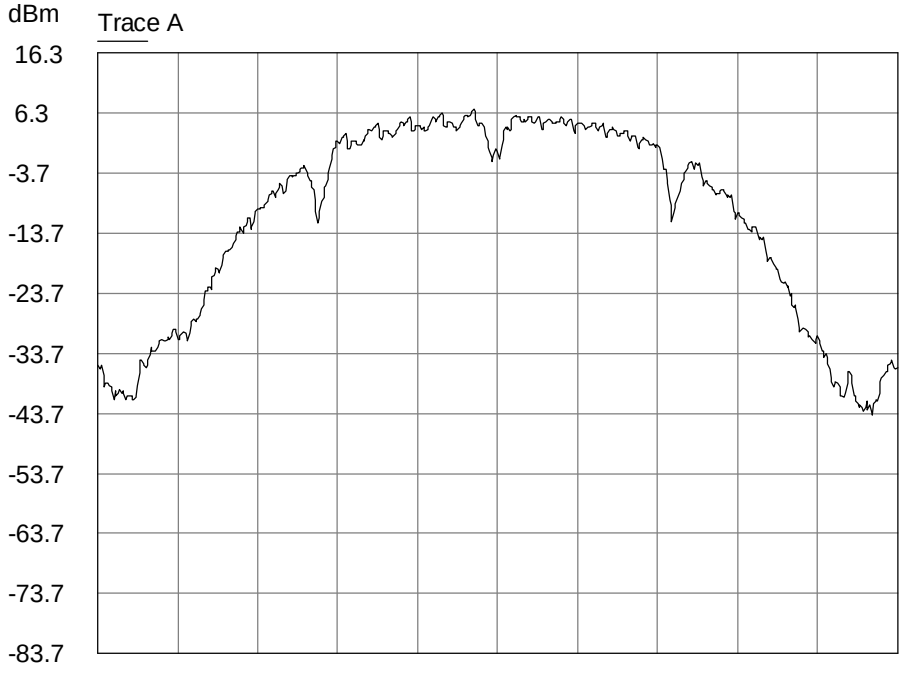
Wi-Fi RF part.

J4201-2, Plot 0001, chan 1 bit rate 1M 6dB BW



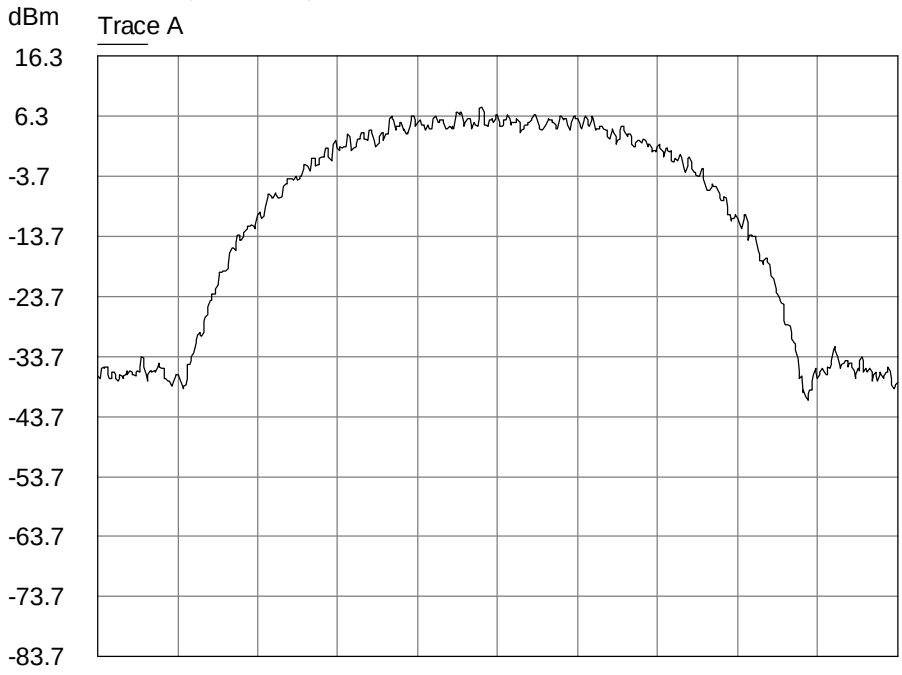
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:35:00 HP8563E

J4201-2, Plot 0002, chan 1 bit rate 2M 6dB BW



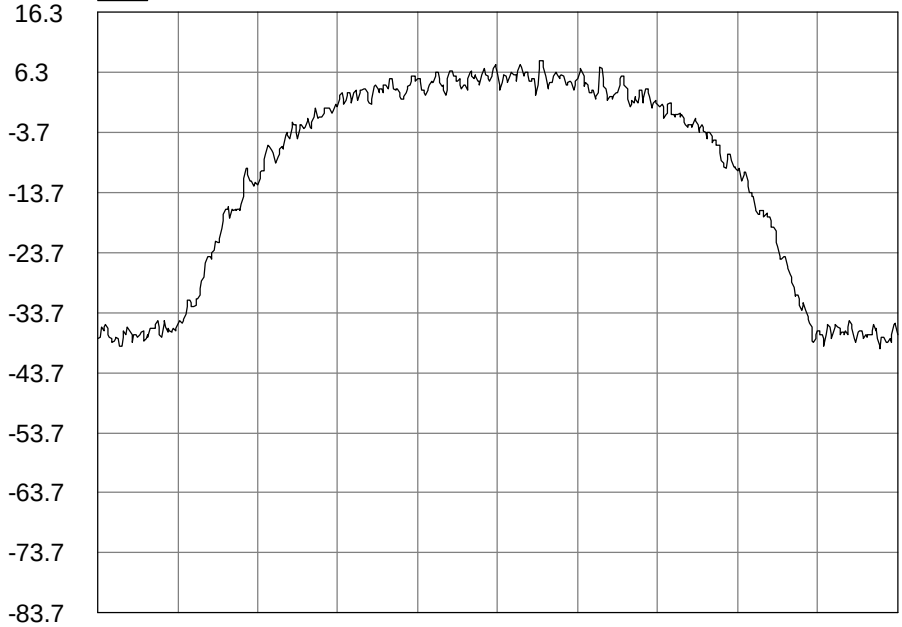
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:37:40 HP8563E

J4201-2, Plot 0003, chan 1 bit rate 5.5M 6dB BW



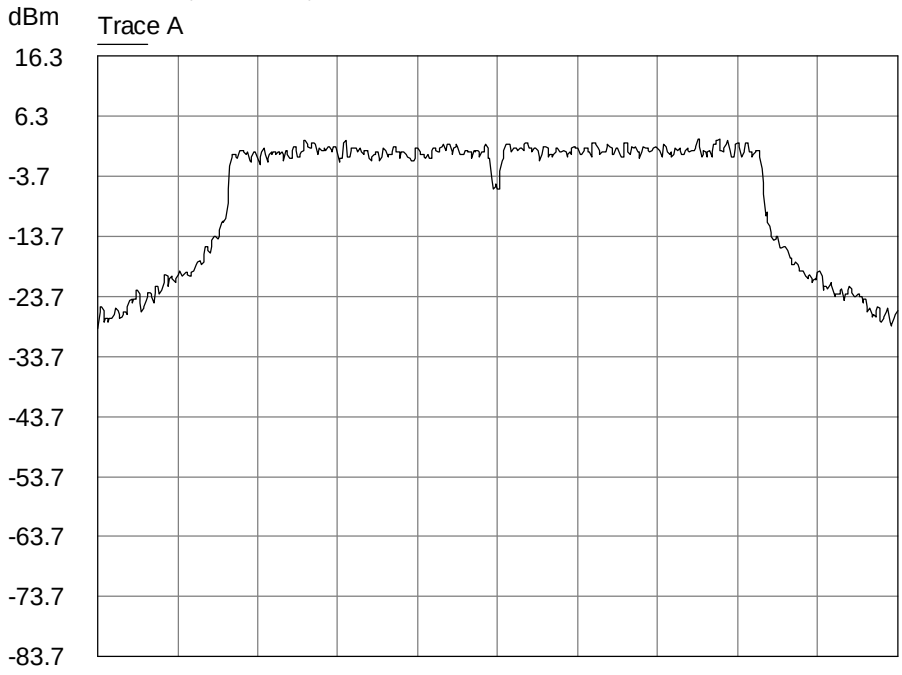
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:38:49 HP8563E

J4201-2, Plot 0004, chan 1 bit rate 11M 6dB BW



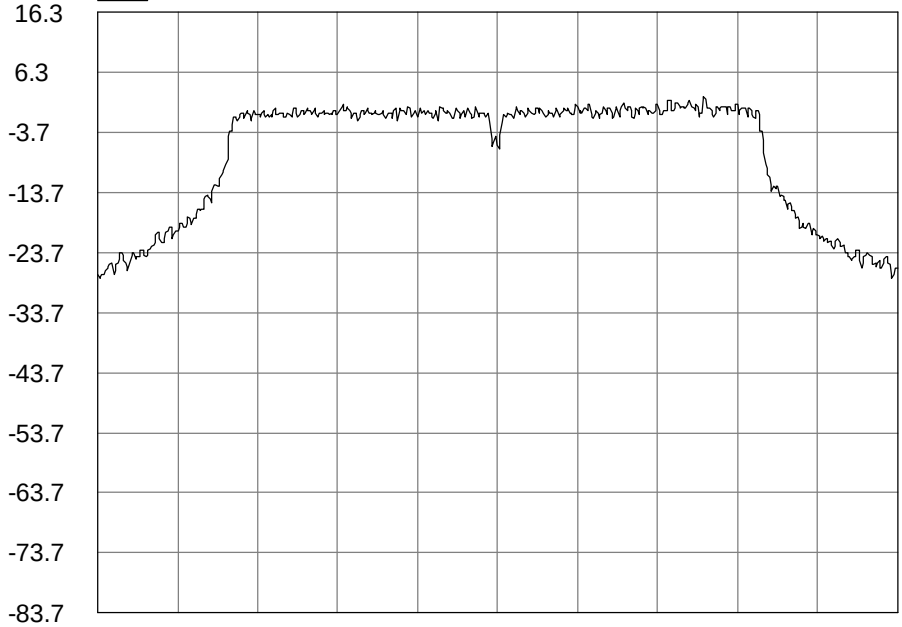
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:40:04 HP8563E

J4201-2, Plot 0005, chan 1 bit rate 22M 6dB BW



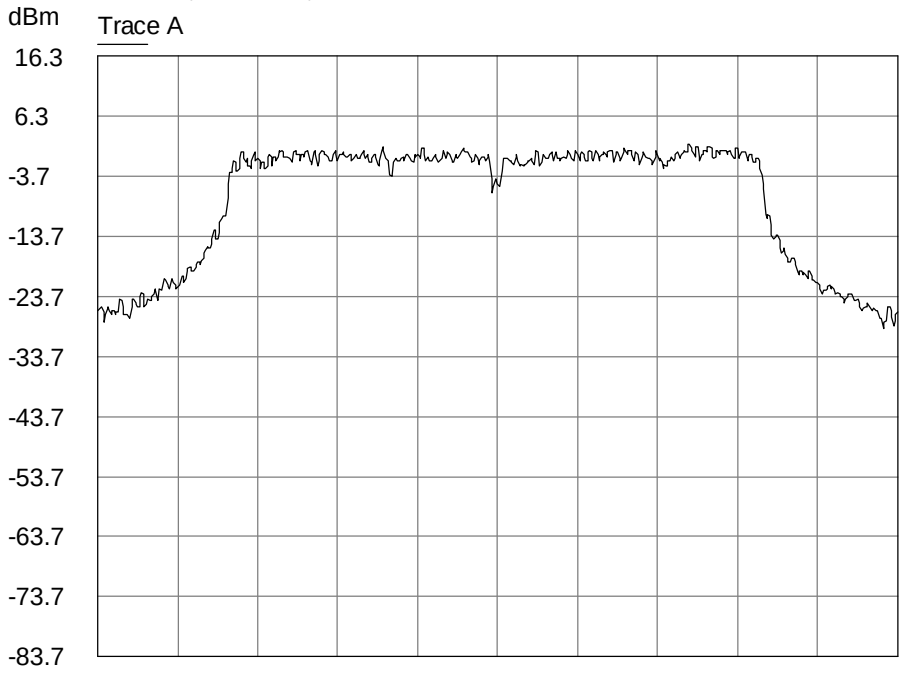
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:41:08 HP8563E

J4201-2, Plot 0006, chan 1 bit rate 6M 6dB BW



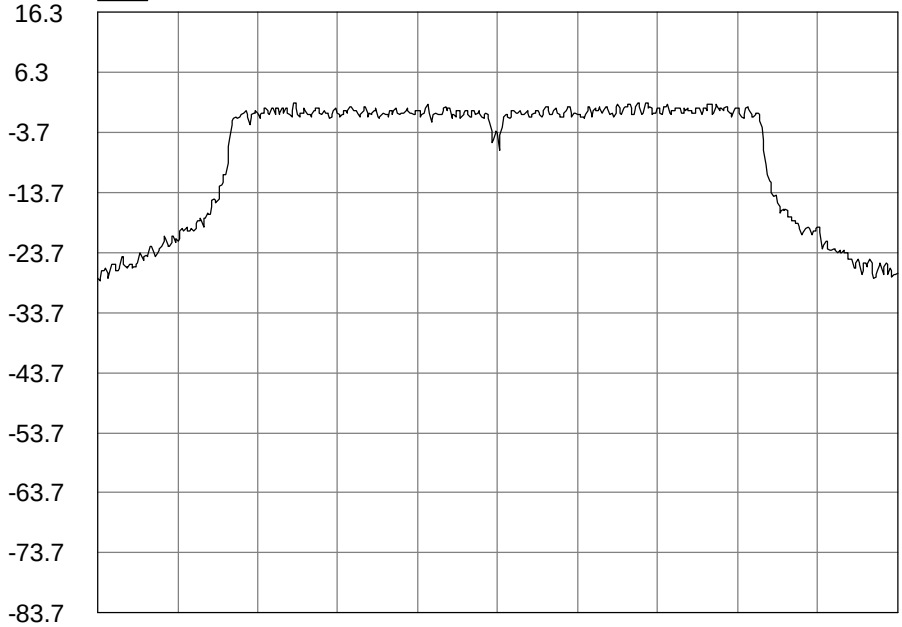
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:42:03 HP8563E

J4201-2, Plot 0007, chan 1 bit rate 9M 6dB BW



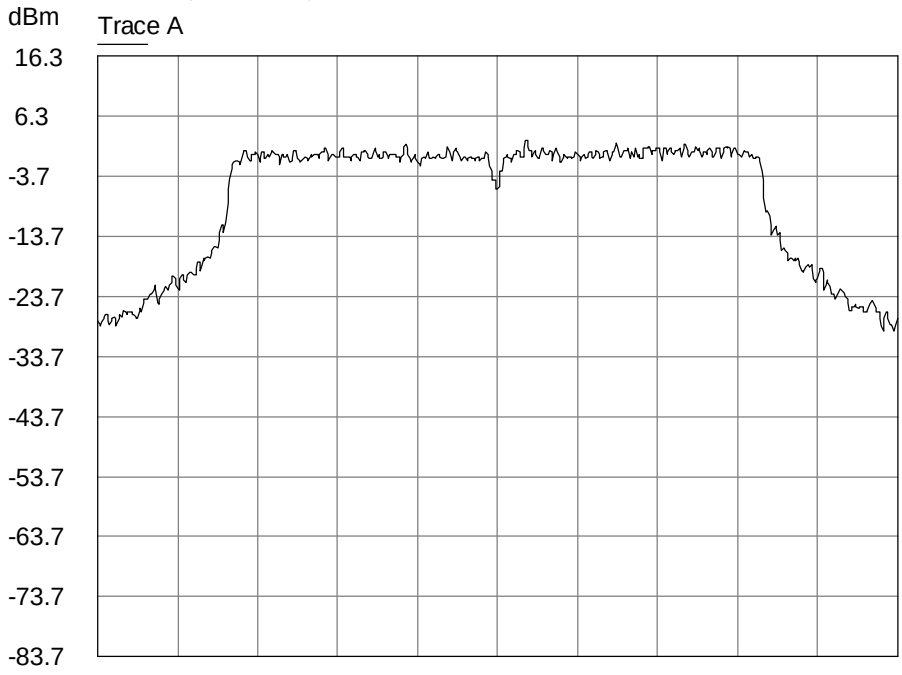
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:43:49 HP8563E

J4201-2, Plot 0008, chan 1 bit rate 12M 6dB BW



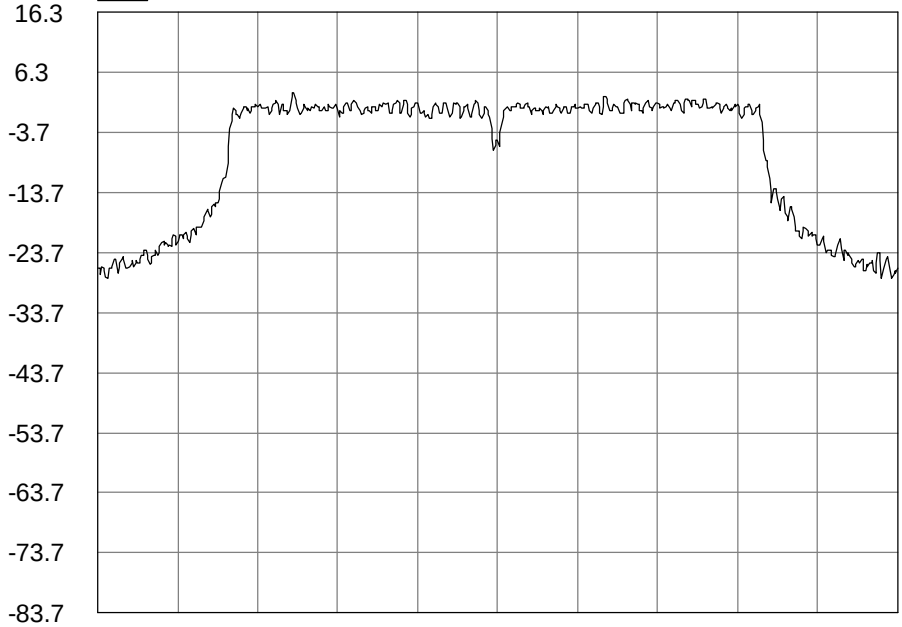
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:45:49 HP8563E

J4201-2, Plot 0009, chan 1 bit rate 18M 6dB BW



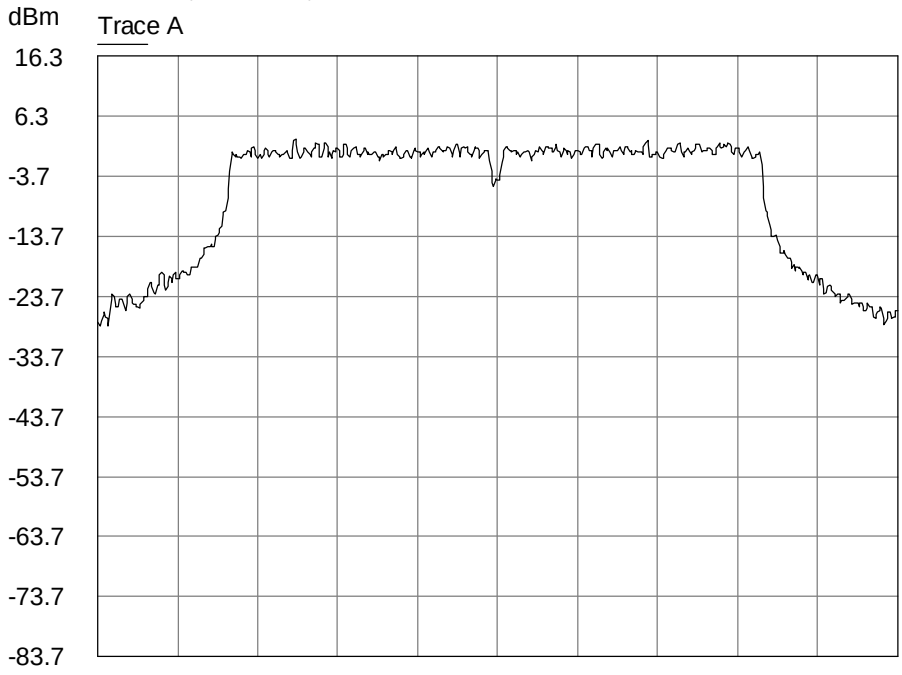
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:46:47 HP8563E

J4201-2, Plot 0010, chan 1 bit rate 24M 6dB BW



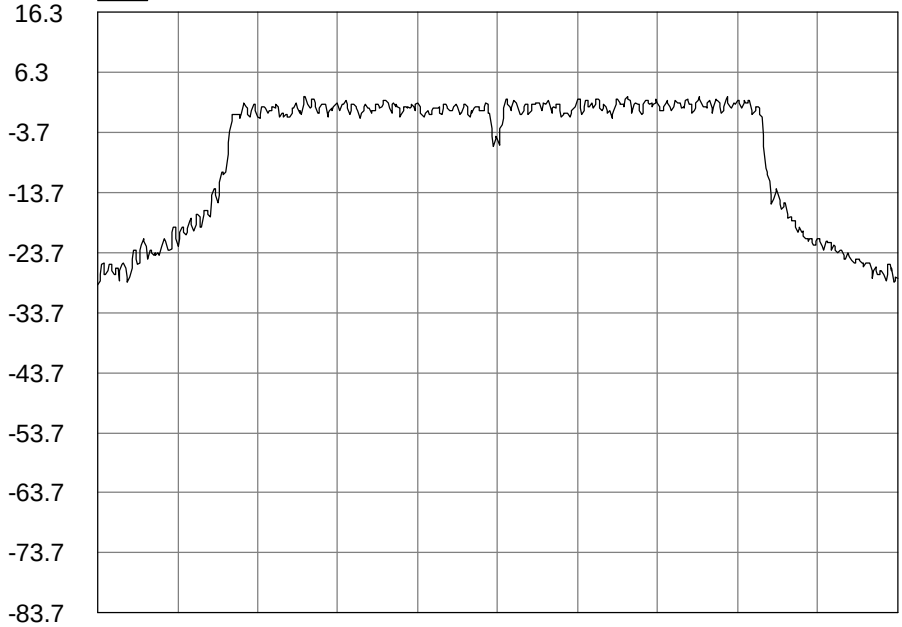
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:47:40 HP8563E

J4201-2, Plot 0011, chan 1 bit rate 36M 6dB BW



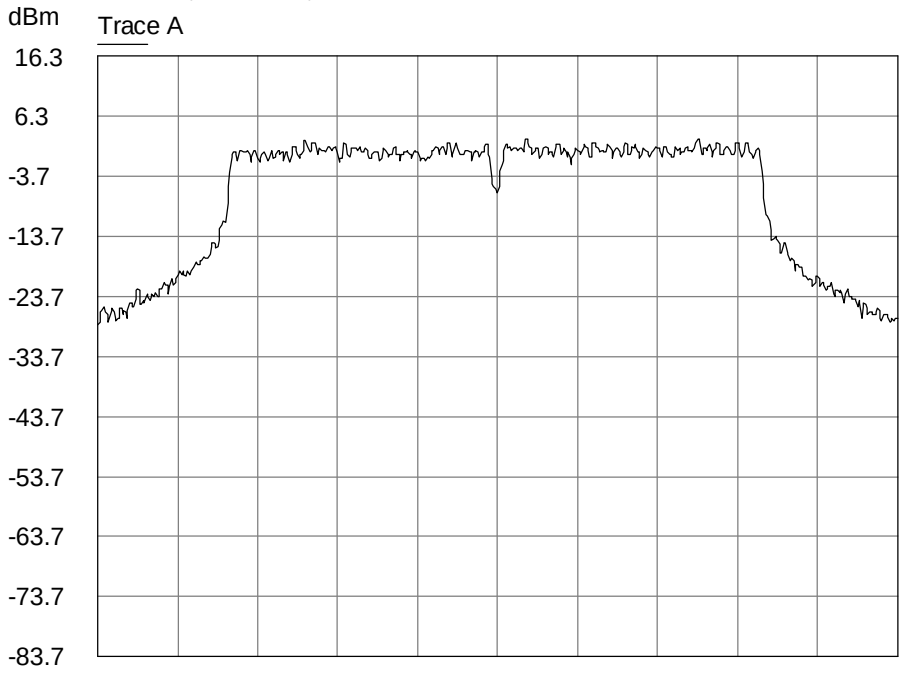
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:48:51 HP8563E

J4201-2, Plot 0012, chan 1 bit rate 48M 6dB BW



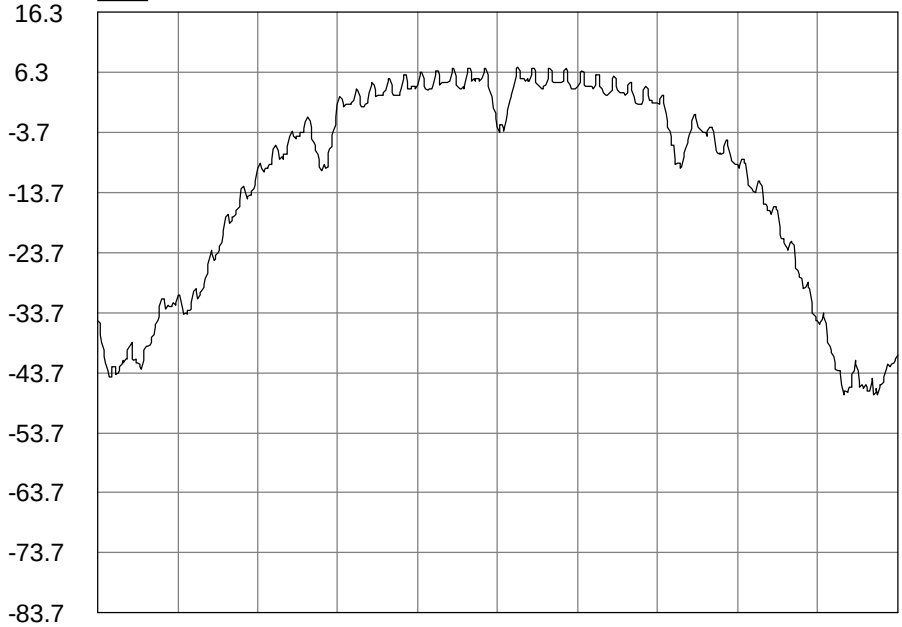
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:49:49 HP8563E

J4201-2, Plot 0013, chan 1 bit rate 54M 6dB BW



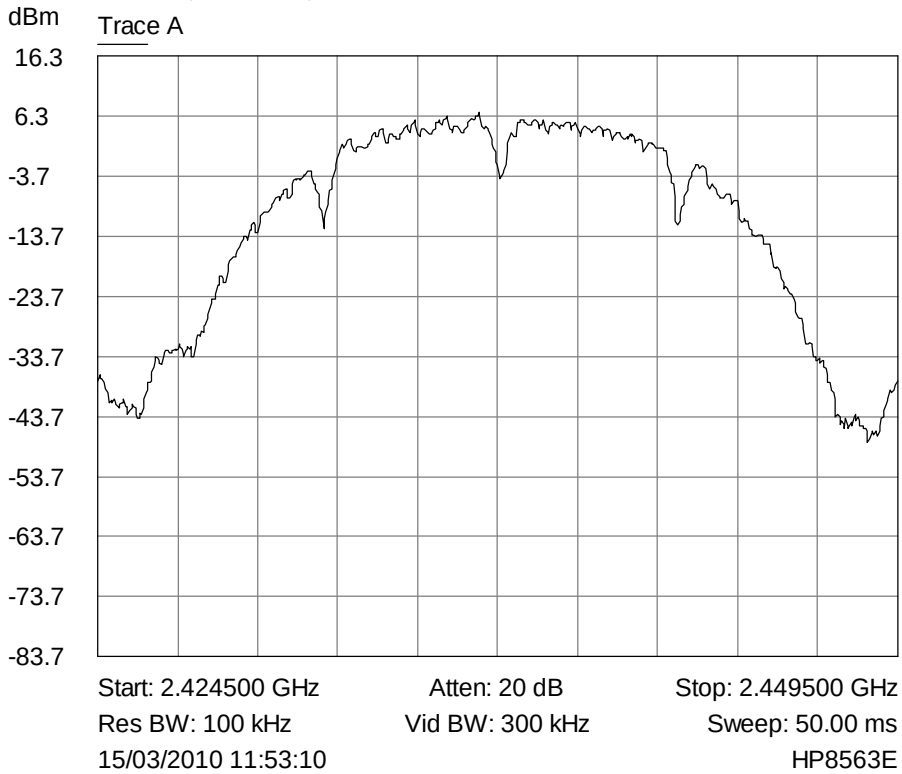
Start: 2.399646 GHz Atten: 20 dB Stop: 2.424646 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:50:39 HP8563E

J4201-2, Plot 0014, chan 6 bit rate 1M 6dB BW



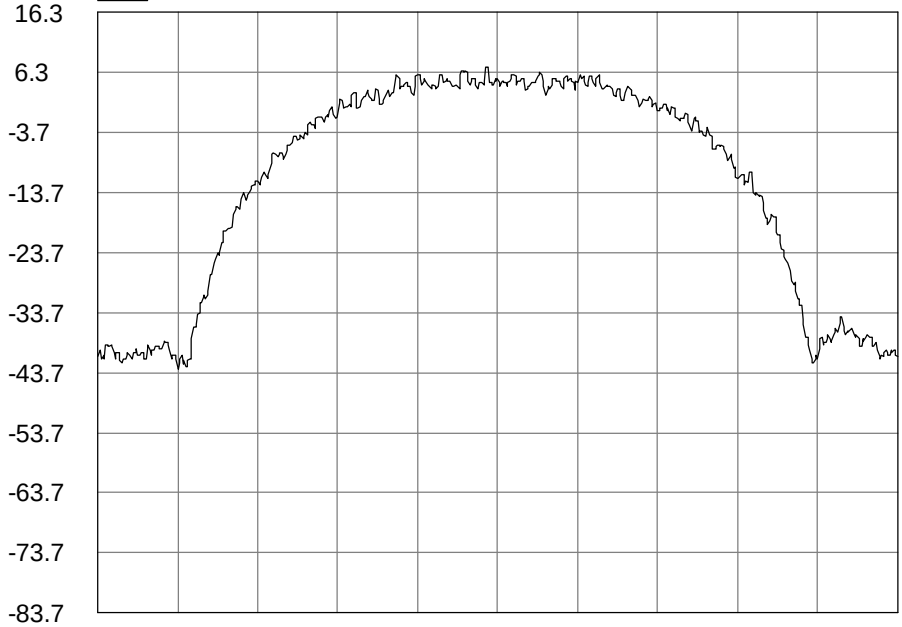
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:52:20 HP8563E

J4201-2, Plot 0015, chan 6 bit rate 2M 6dB BW



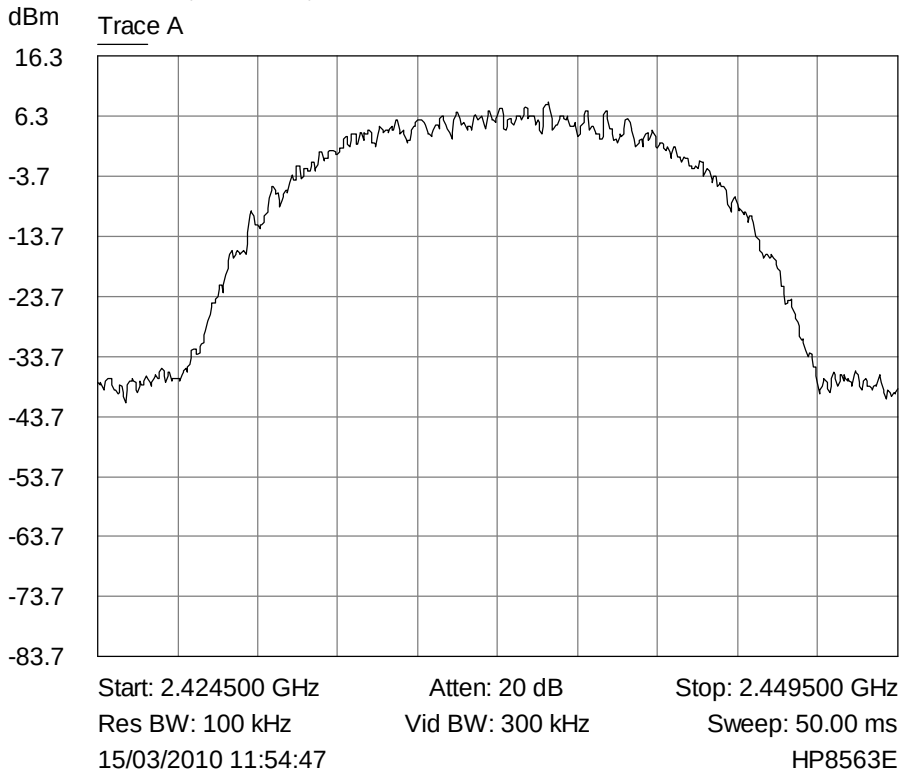
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:53:10 HP8563E

J4201-2, Plot 0016, chan 6 bit rate 5.5M 6dB BW



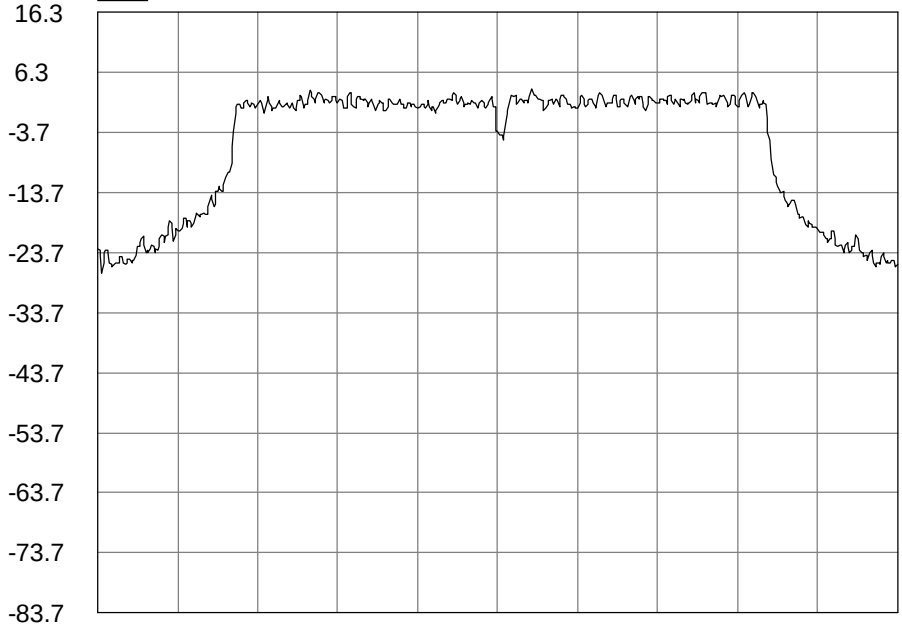
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:54:00 HP8563E

J4201-2, Plot 0017, chan 6 bit rate 11M 6dB BW



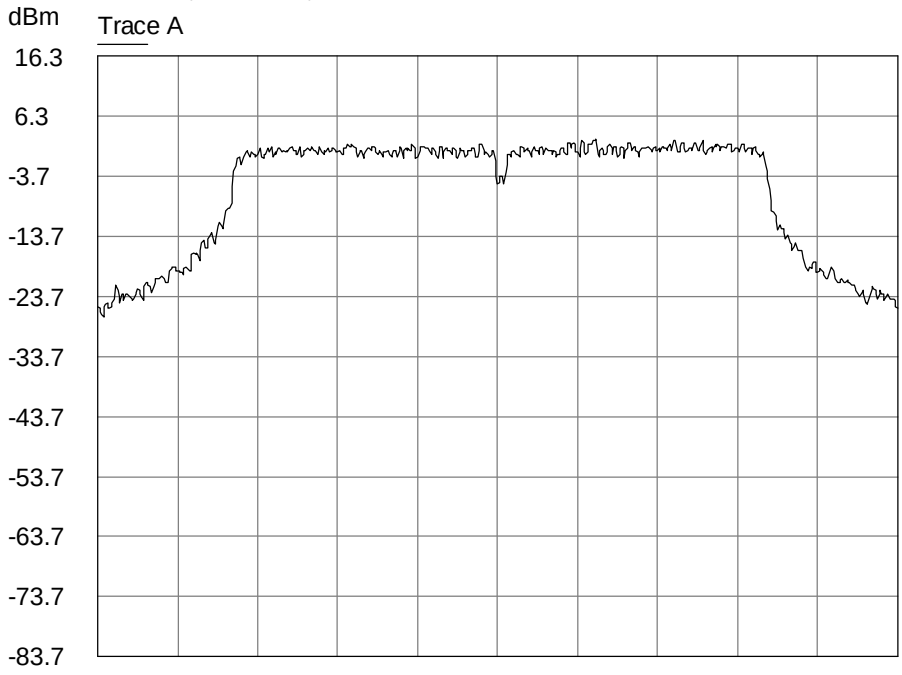
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:54:47 HP8563E

J4201-2, Plot 0018, chan 6 bit rate 22M 6dB BW



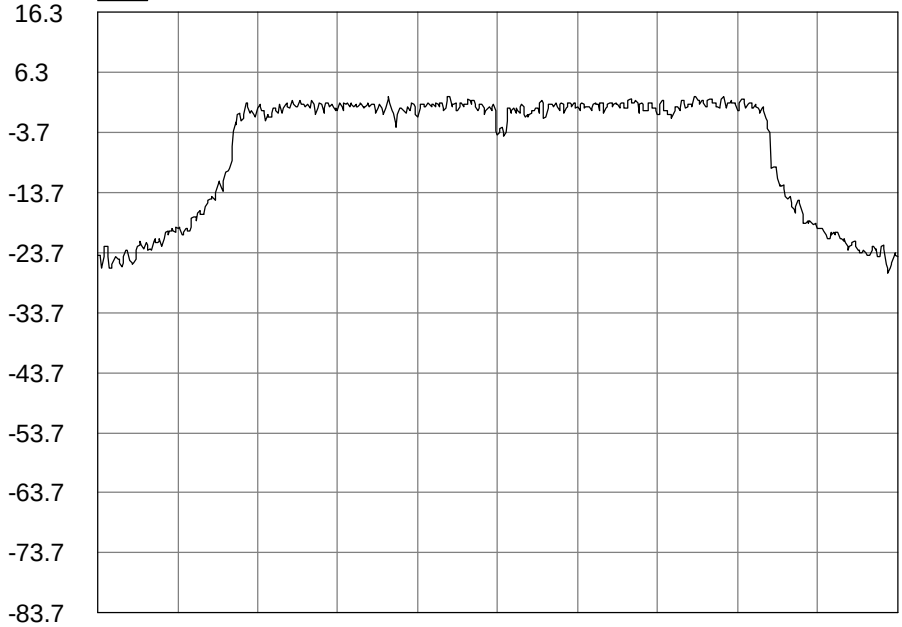
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:55:53 HP8563E

J4201-2, Plot 0019, chan 6 bit rate 6M 6dB BW



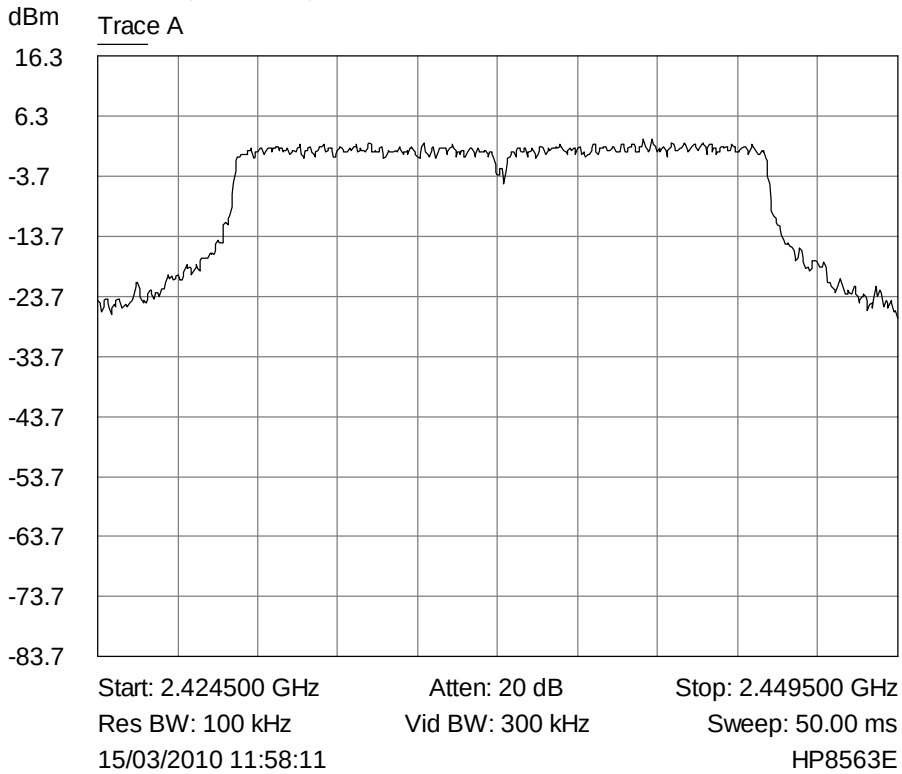
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:56:32 HP8563E

J4201-2, Plot 0020, chan 6 bit rate 9M 6dB BW



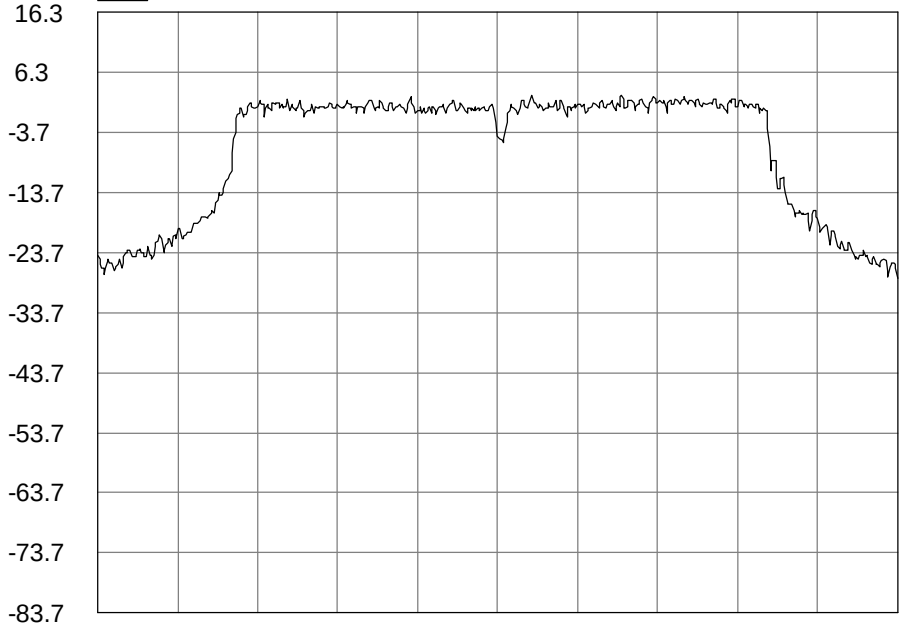
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:57:21 HP8563E

J4201-2, Plot 0021, chan 6 bit rate 12M 6dB BW



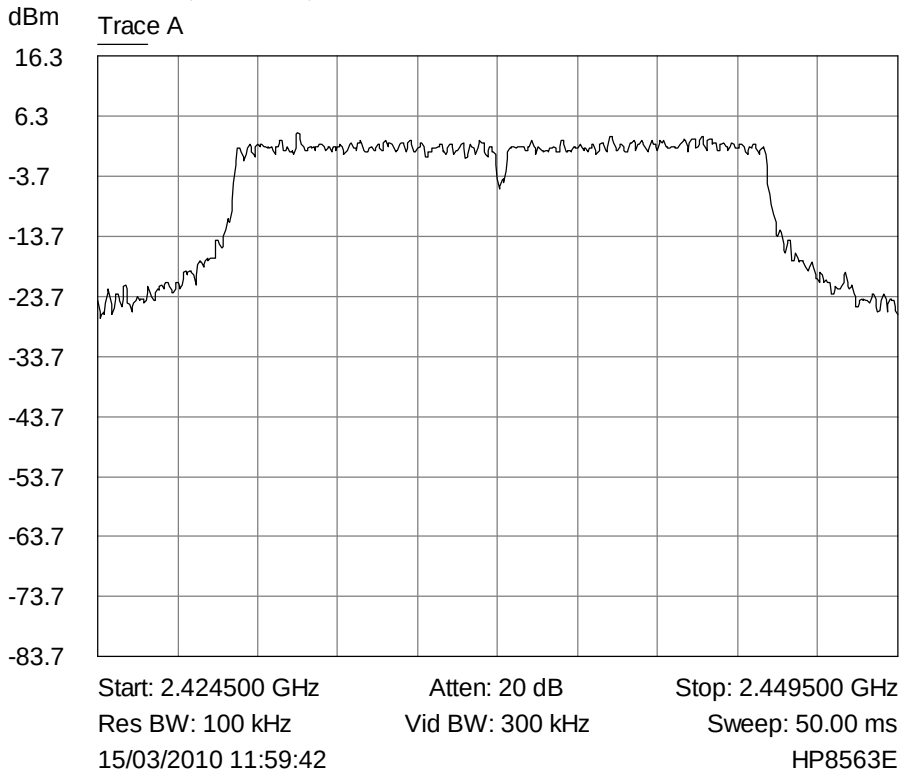
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:58:11 HP8563E

J4201-2, Plot 0022, chan 6 bit rate 18M 6dB BW



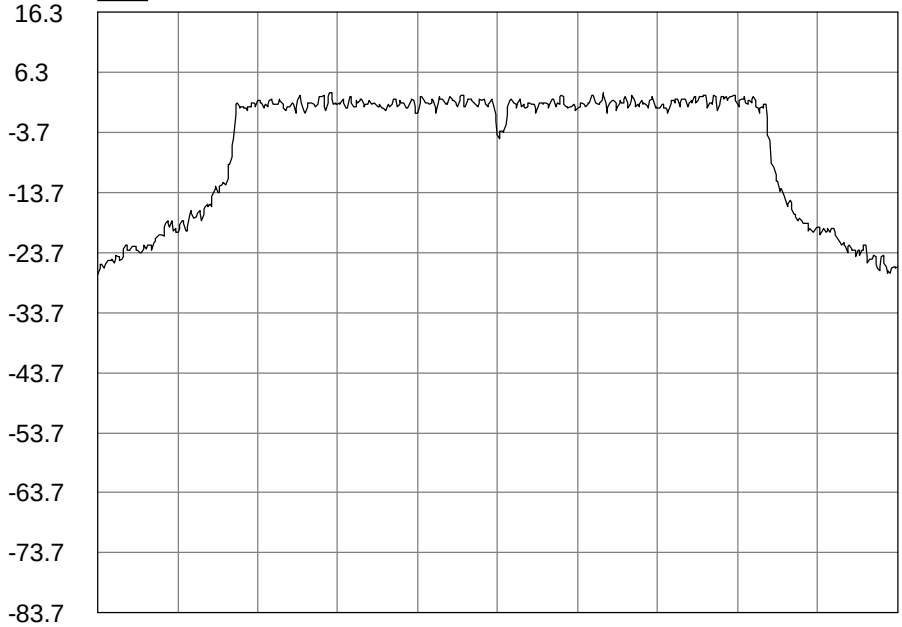
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:58:47 HP8563E

J4201-2, Plot 0023, chan 6 bit rate 24M 6dB BW



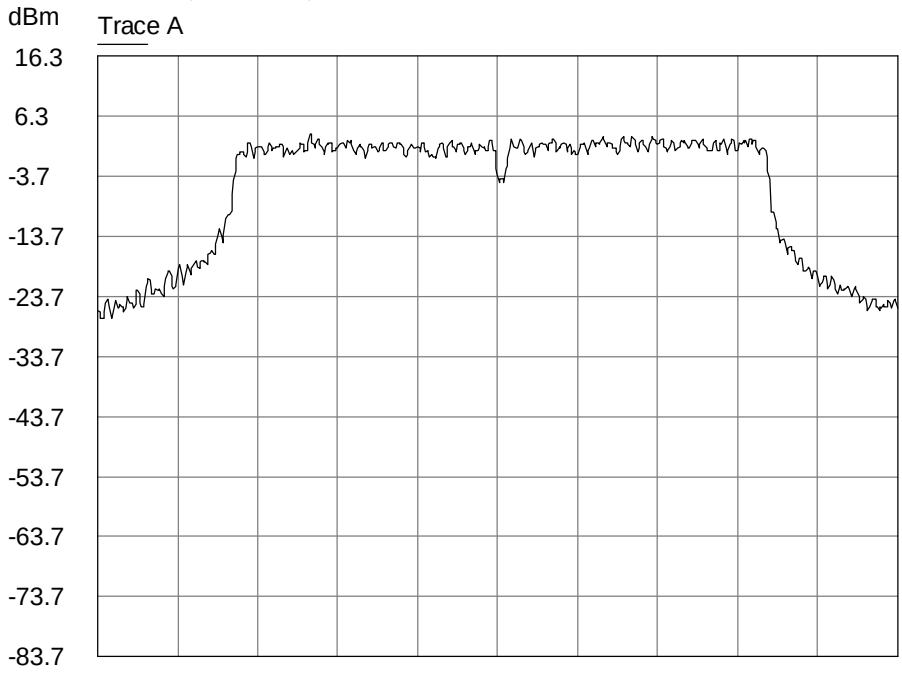
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 11:59:42 HP8563E

J4201-2, Plot 0024, chan 6 bit rate 36M 6dB BW



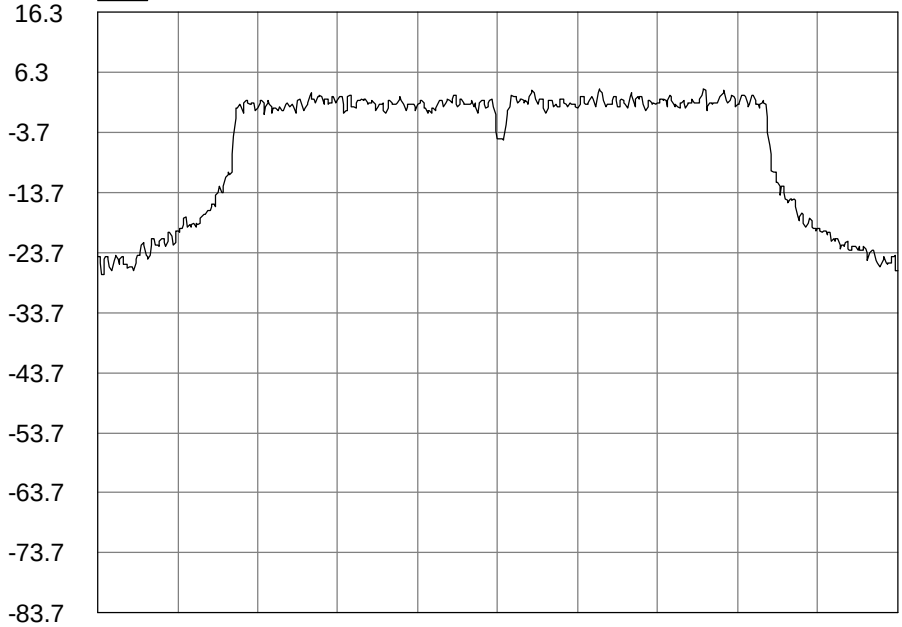
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:00:51 HP8563E

J4201-2, Plot 0025, chan 6 bit rate 48M 6dB BW



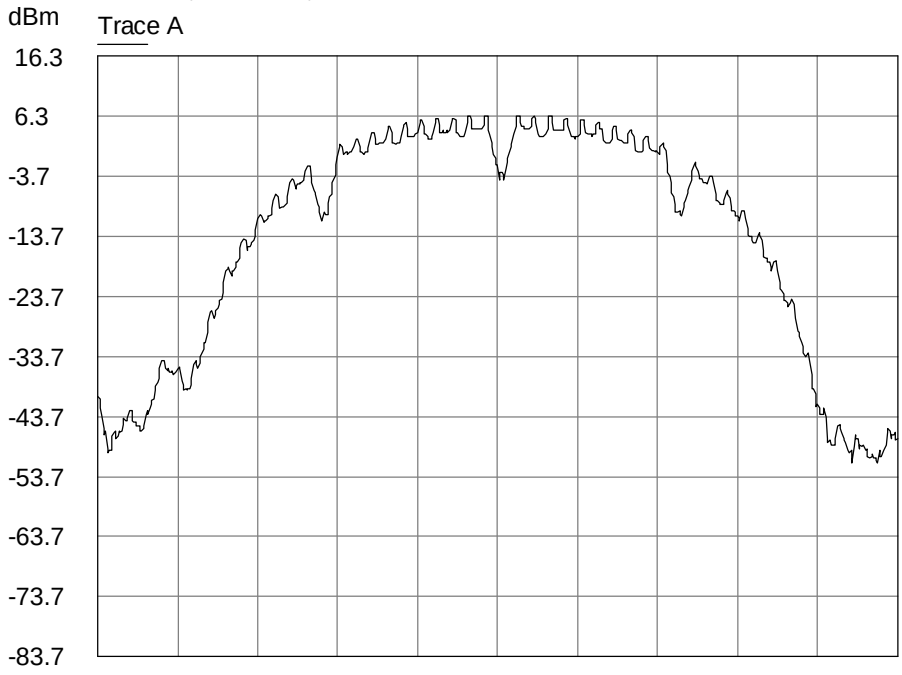
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:01:31 HP8563E

J4201-2, Plot 0026, chan 6 bit rate 54M 6dB BW



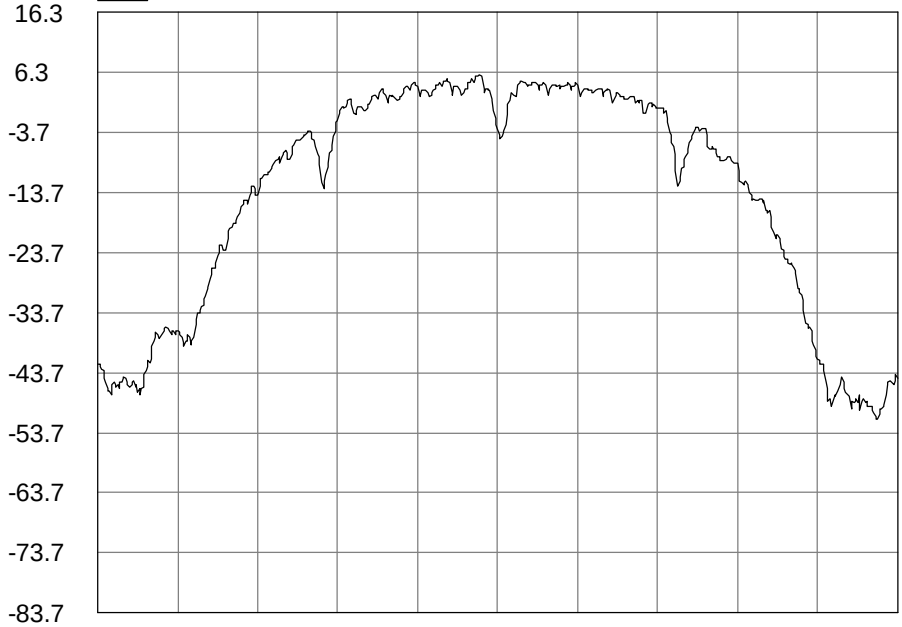
Start: 2.424500 GHz Atten: 20 dB Stop: 2.449500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:02:26 HP8563E

J4201-2, Plot 0027, chan 11 bit rate 1M 6dB BW



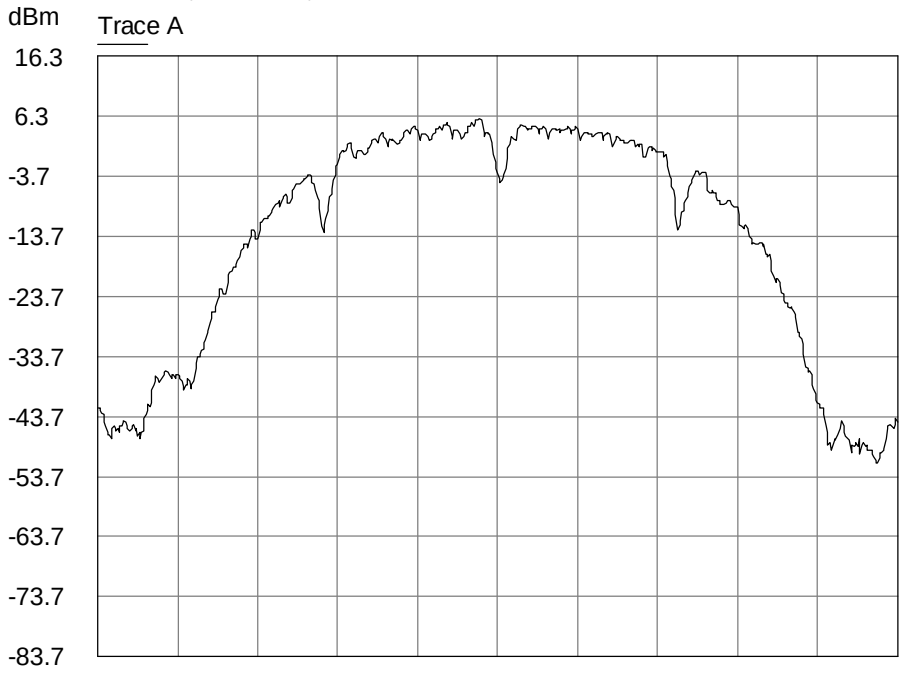
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:04:04 HP8563E

J4201-2, Plot 0028, chan 11 bit rate 2M 6dB BW



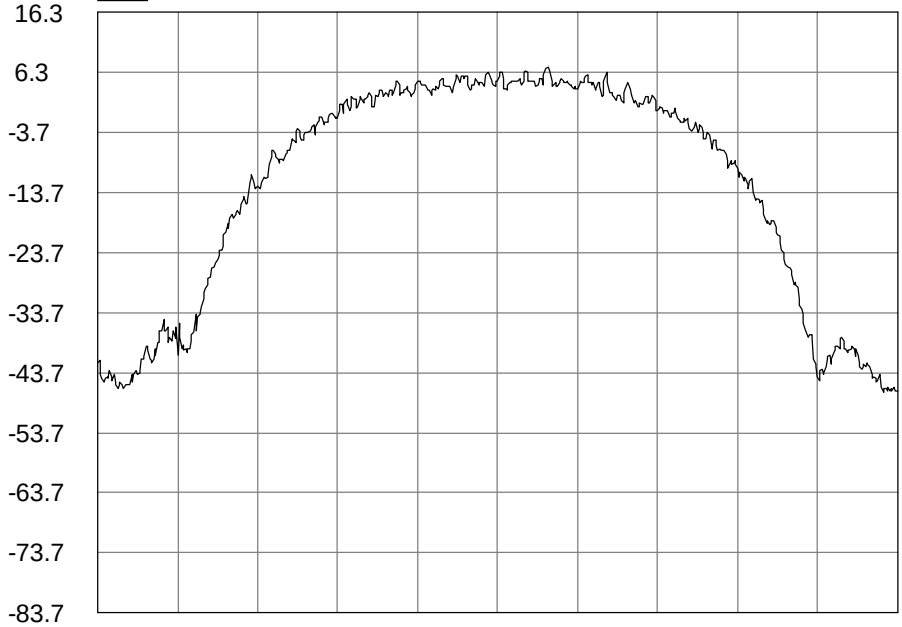
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:04:49 HP8563E

J4201-2, Plot 0029, chan 11 bit rate 5.5M 6dB BW



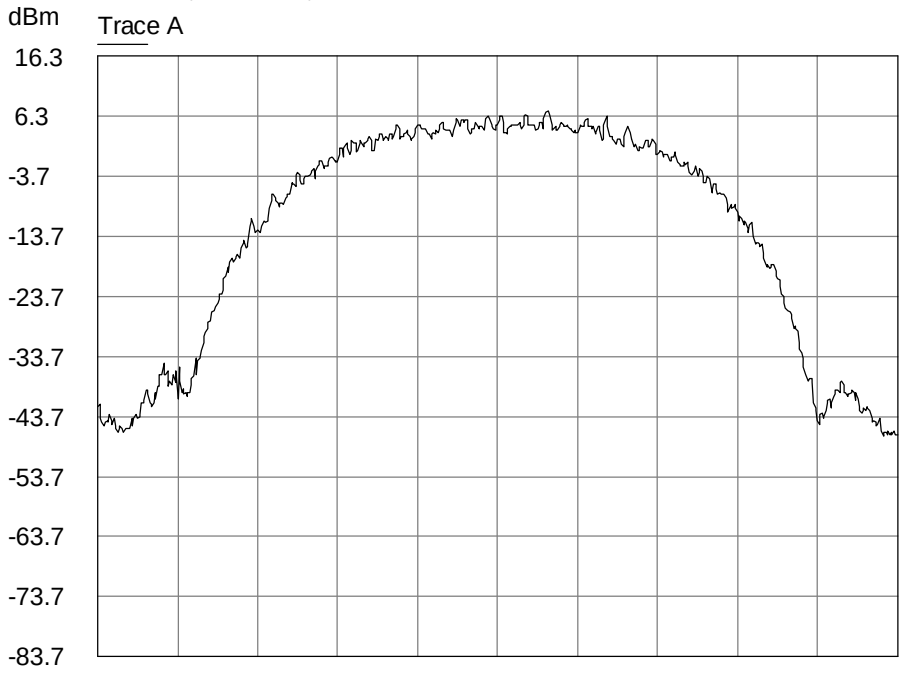
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:04:49 HP8563E

J4201-2, Plot 0030, chan 11 bit rate 11M 6dB BW



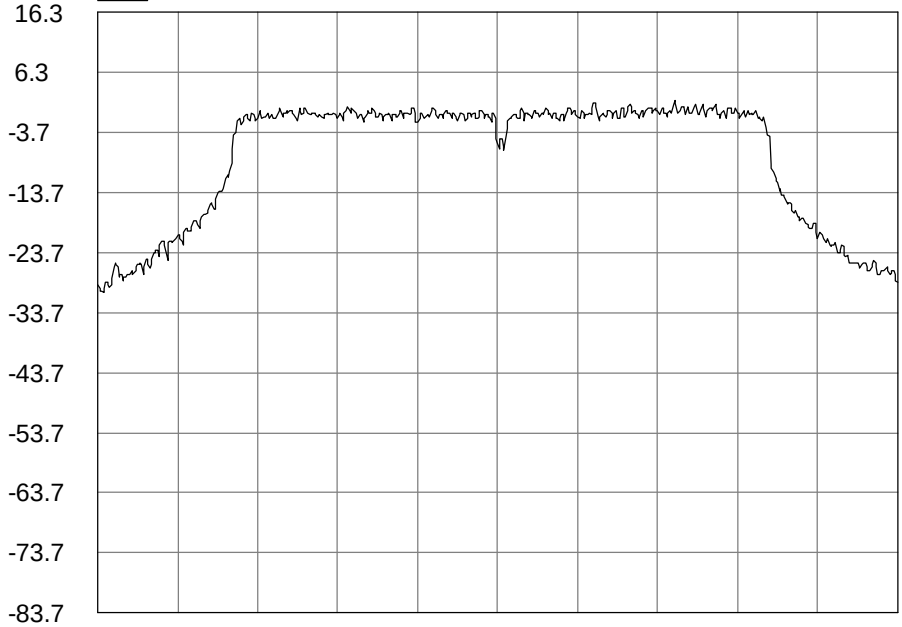
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:08:49 HP8563E

J4201-2, Plot 0031, chan 11 bit rate 22M 6dB BW



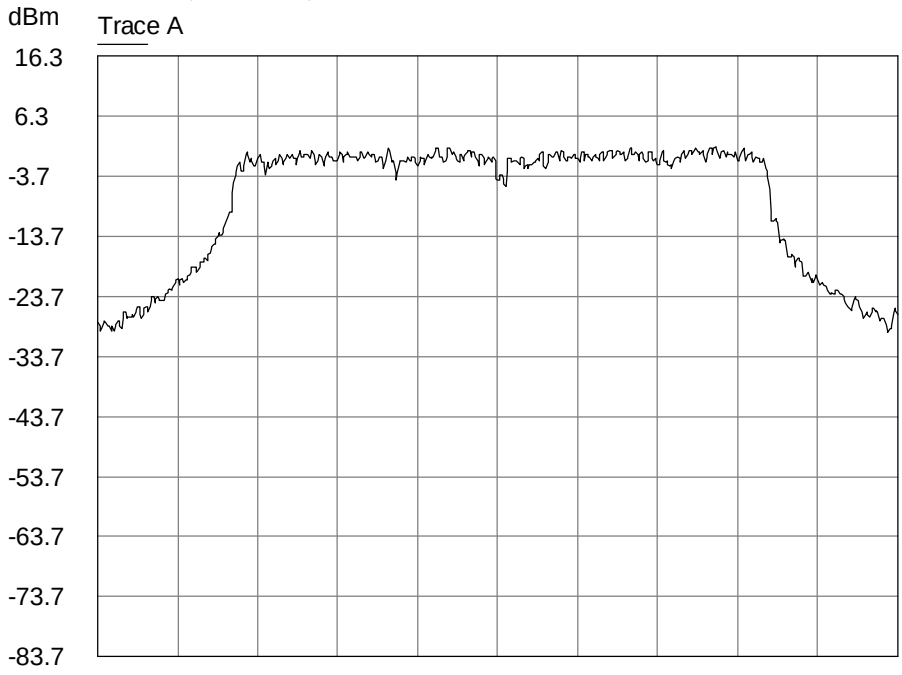
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:08:49 HP8563E

J4201-2, Plot 0032, chan 11 bit rate 6M 6dB BW



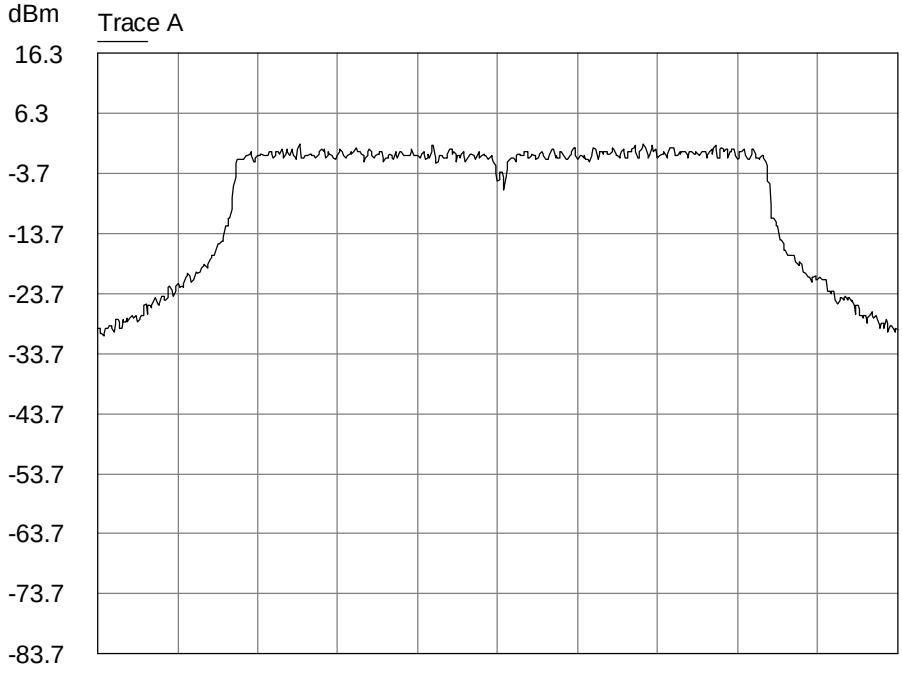
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:10:54 HP8563E

J4201-2, Plot 0033, chan 11 bit rate 9M 6dB BW



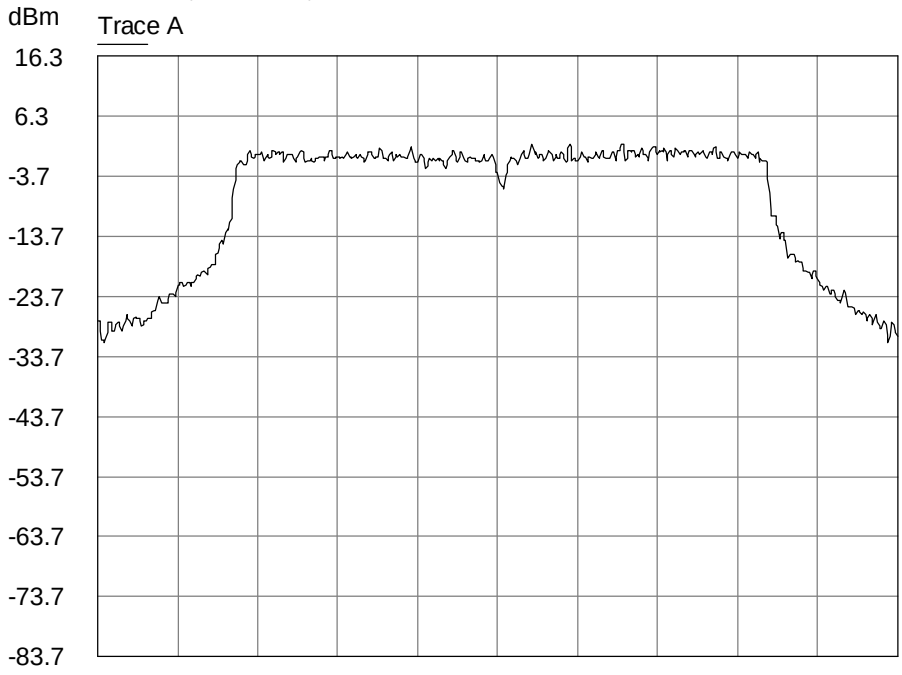
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:11:49 HP8563E

J4201-2, Plot 0034, chan 11 bit rate 12M 6dB BW



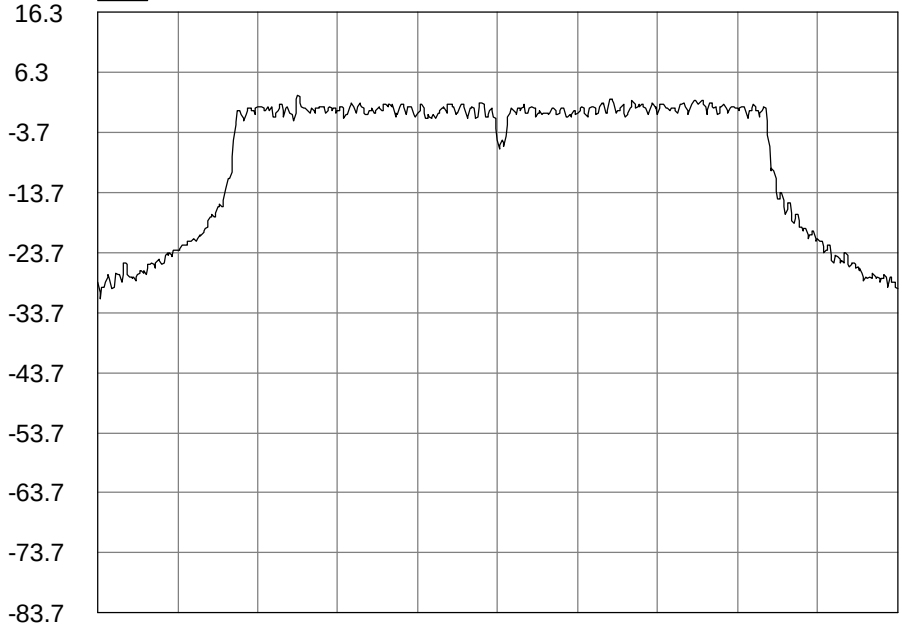
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:12:32 HP8563E

J4201-2, Plot 0035, chan 11 bit rate 18M 6dB BW



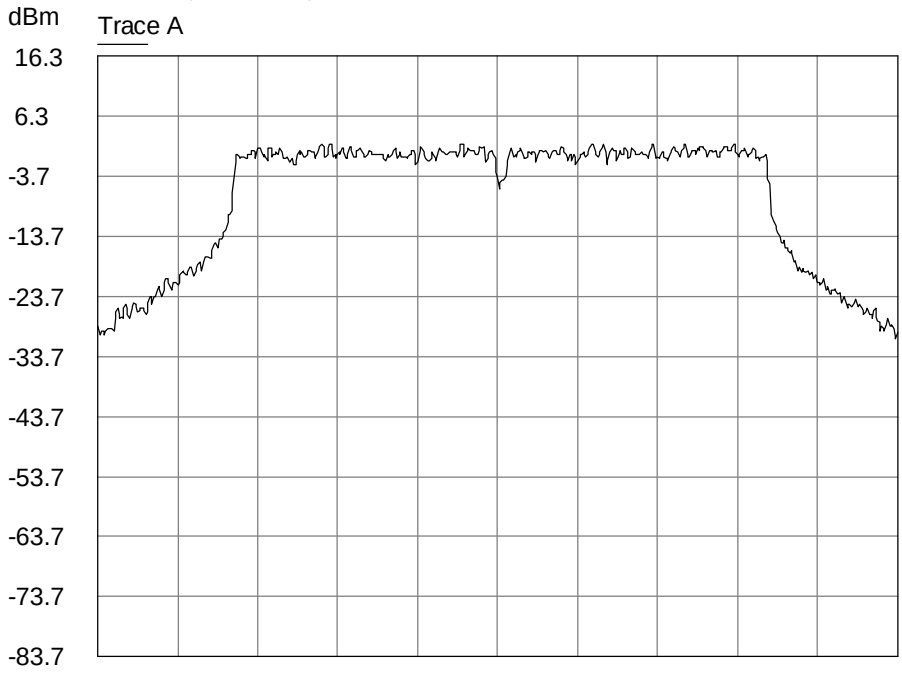
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:13:27 HP8563E

J4201-2, Plot 0036, chan 11 bit rate 24M 6dB BW



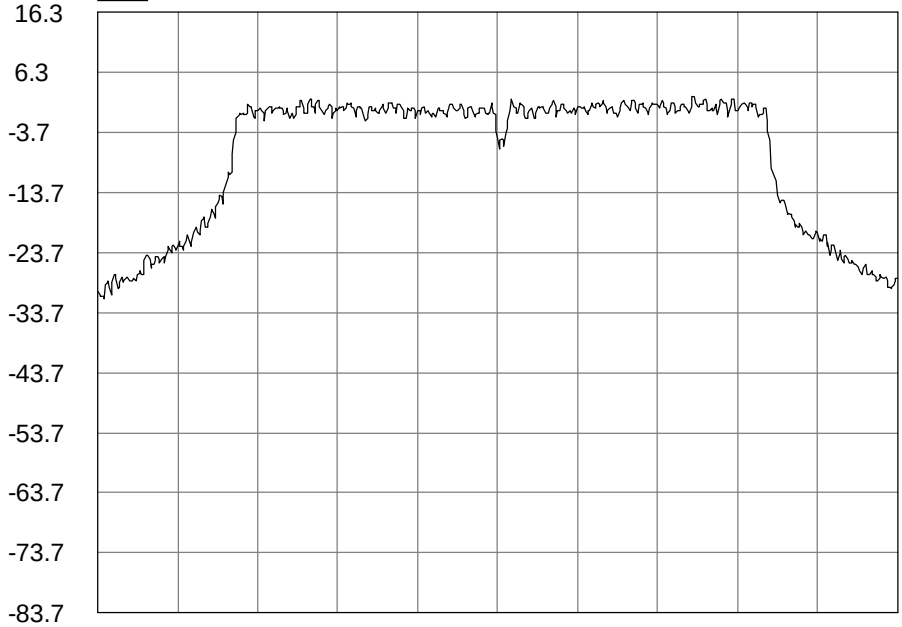
Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:14:19 HP8563E

J4201-2, Plot 0037, chan 11 bit rate 36M 6dB BW

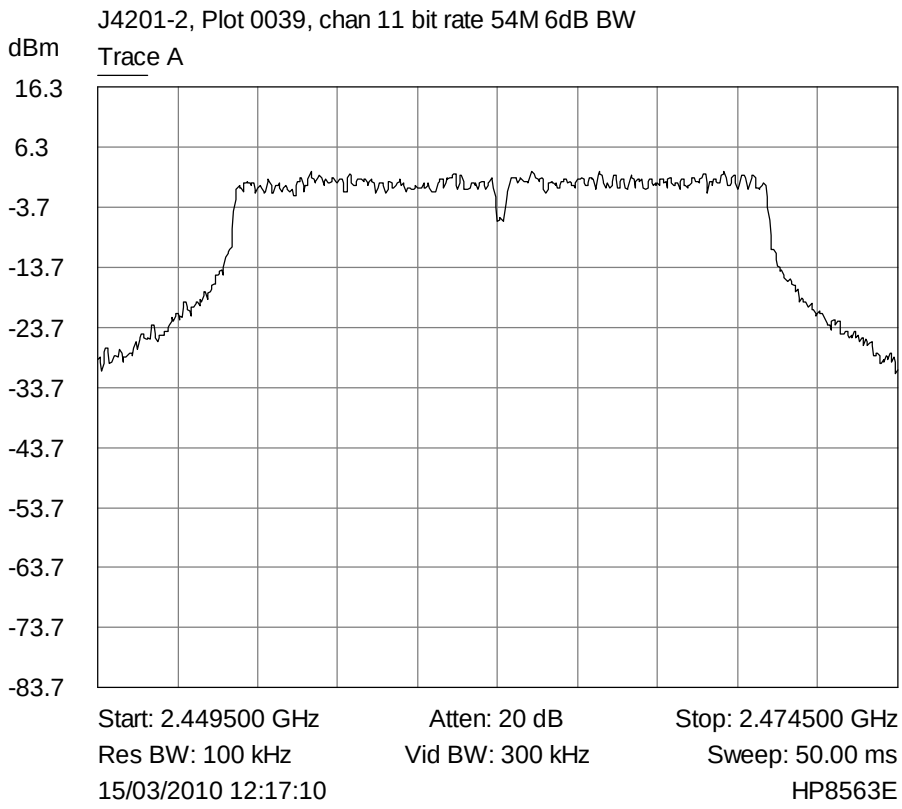


Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:15:27 HP8563E

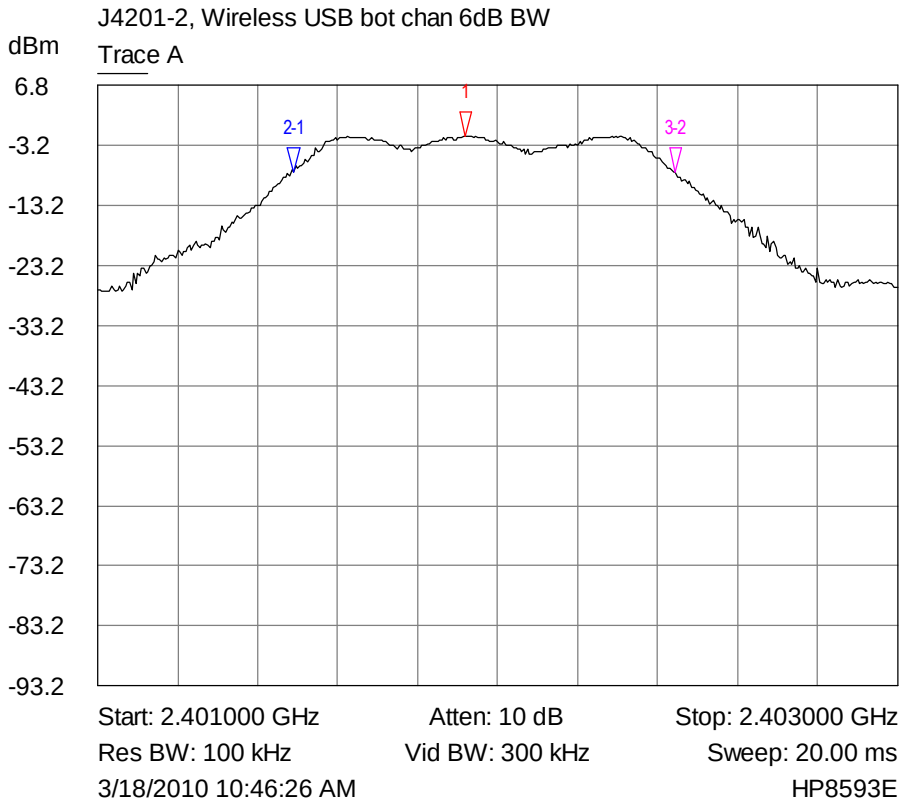
J4201-2, Plot 0038, chan 11 bit rate 48M 6dB BW



Start: 2.449500 GHz Atten: 20 dB Stop: 2.474500 GHz
Res BW: 100 kHz Vid BW: 300 kHz Sweep: 50.00 ms
15/03/2010 12:16:11 HP8563E



Wireless USB RF part.

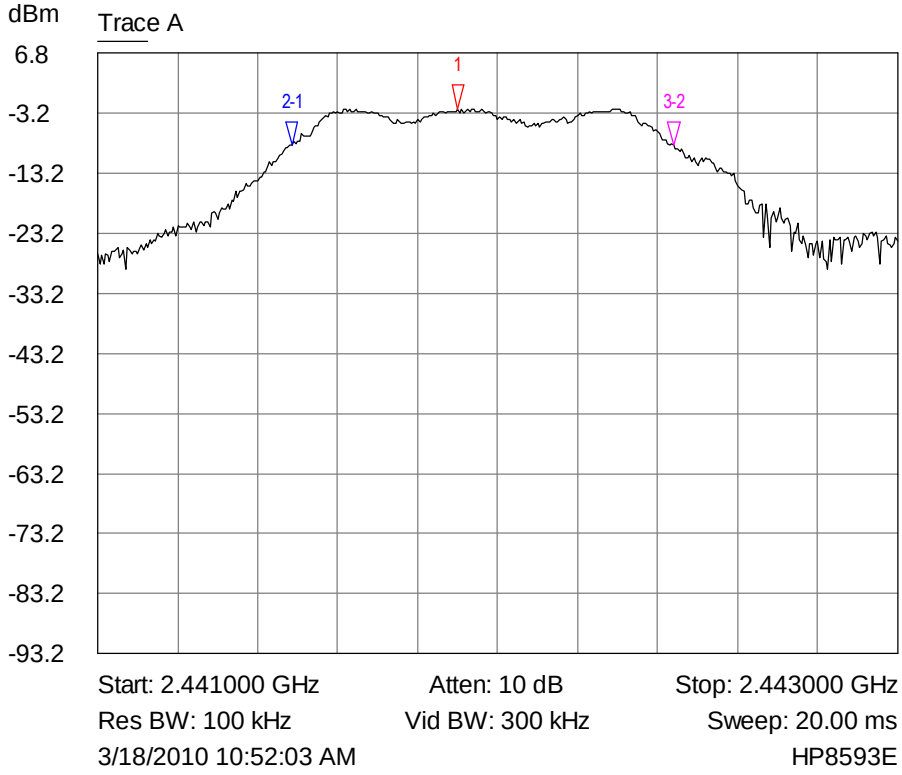


1 Trace A
2.401920 GHz
-1.4200 dBm

2-1 Trace A
-430.000000 kHz
-6.0800 dB

3-2 Trace A
955.000000 kHz
0.1000 dB

J4201-2, Wireless USB Midchan 6dB BW



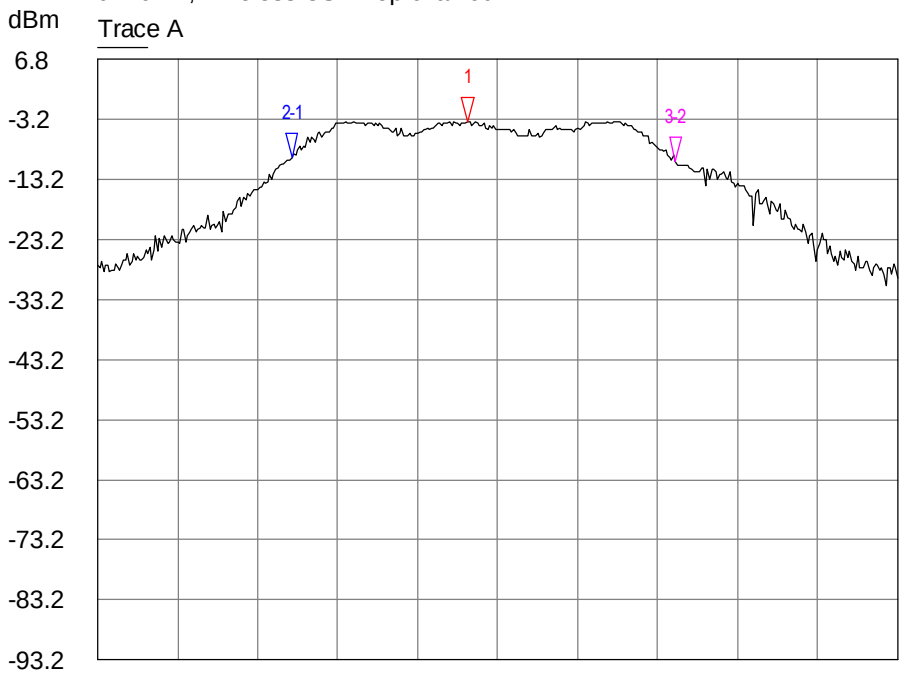
1 Trace A
2.441900 GHz
-2.4100 dBm

2-1 Trace A
-415.000000 kHz
-6.0100 dB

3-2 Trace A
955.000000 kHz
-0.2700 dB

Start: 2.441000 GHz | Atten: 10 dB | Stop: 2.443000 GHz
Res BW: 100 kHz | Vid BW: 300 kHz | Sweep: 20.00 ms
3/18/2010 10:52:03 AM | HP8593E

J4201-2, Wireless USB Top chan 6dB BW



1 Trace A
2.478925 GHz
-3.3900 dBm

2-1 Trace A
-440.000000 kHz
-6.1100 dB

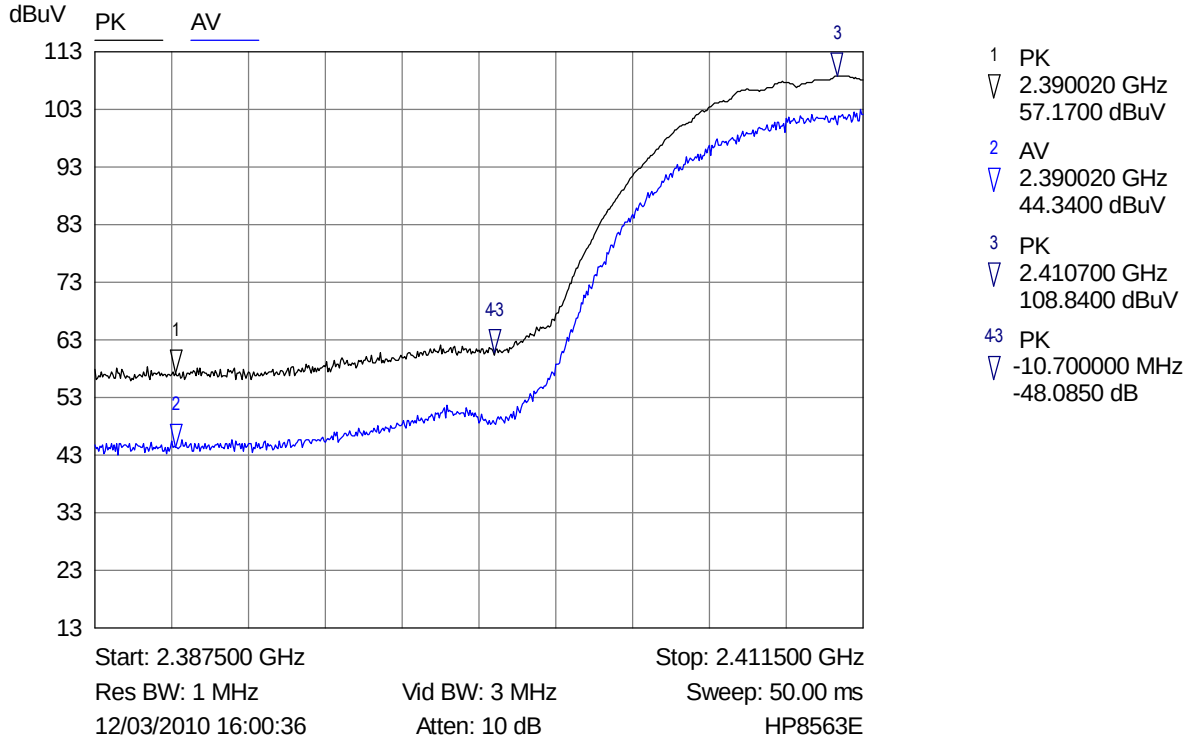
3-2 Trace A
960.000000 kHz
-0.8300 dB

Start: 2.478000 GHz | Atten: 10 dB | Stop: 2.480000 GHz
Res BW: 100 kHz | Vid BW: 300 kHz | Sweep: 20.00 ms
3/18/2010 11:01:37 AM | HP8593E

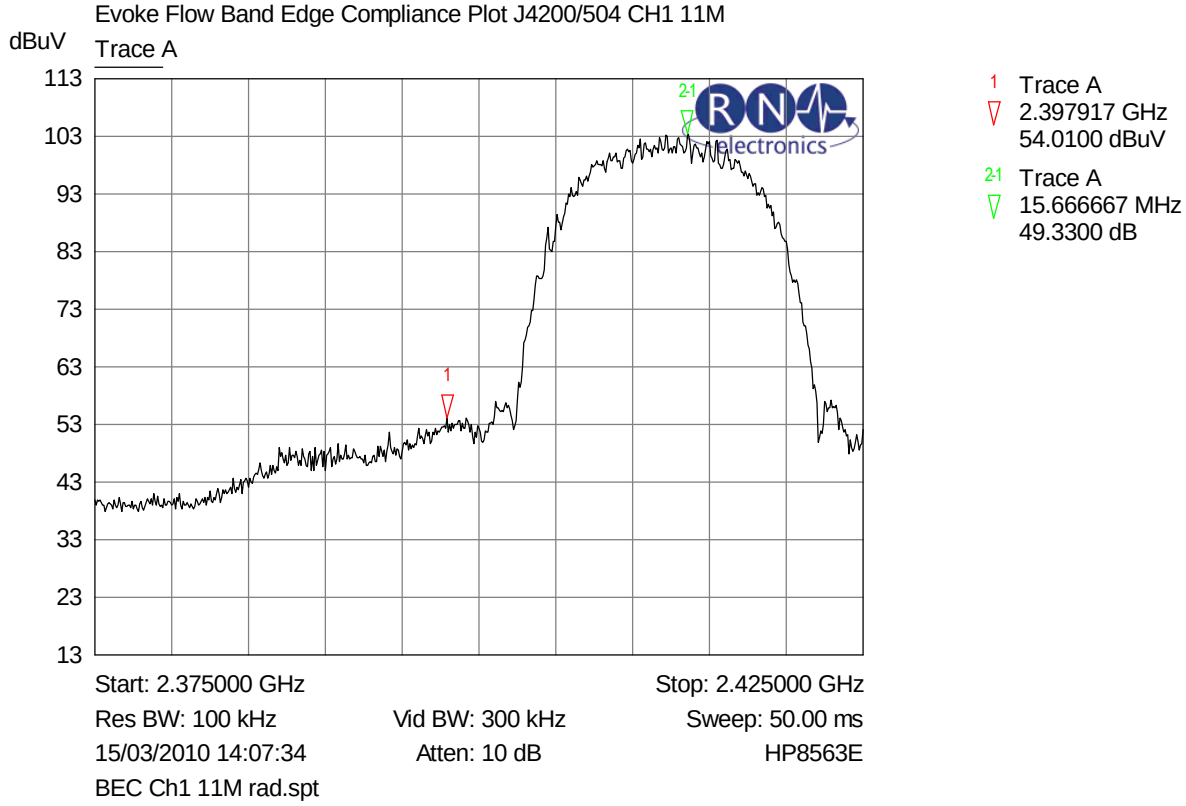
6.6 Band Edge Compliance

Wi-Fi RF part.

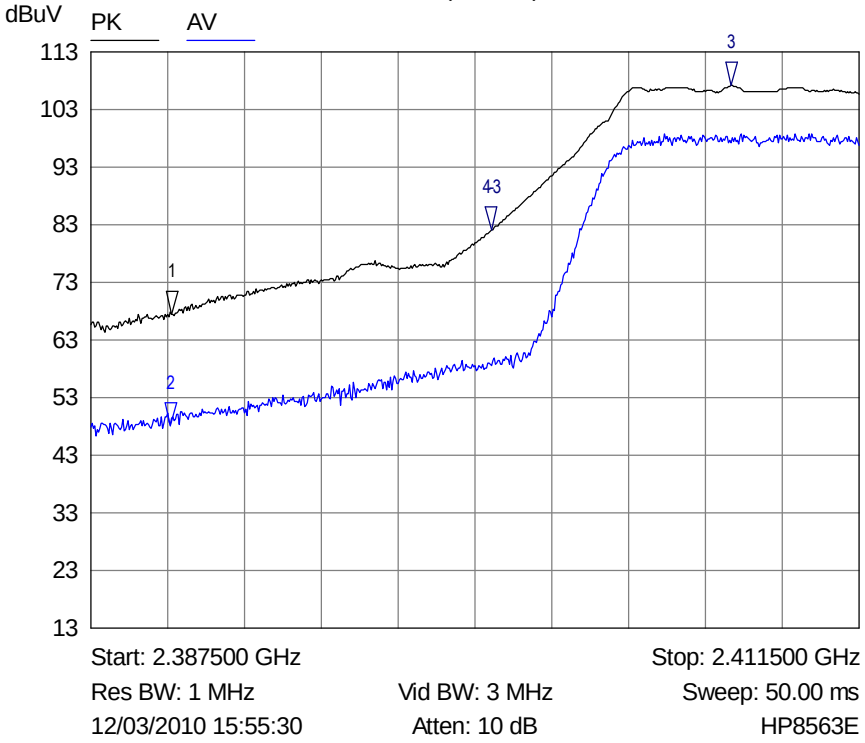
channel 1, 11MHz lower restricted (PK &AV)



Evoke Flow Band Edge Compliance Plot J4200/504 CH1 11M



channel 1, 12MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
67.5000 dBuV

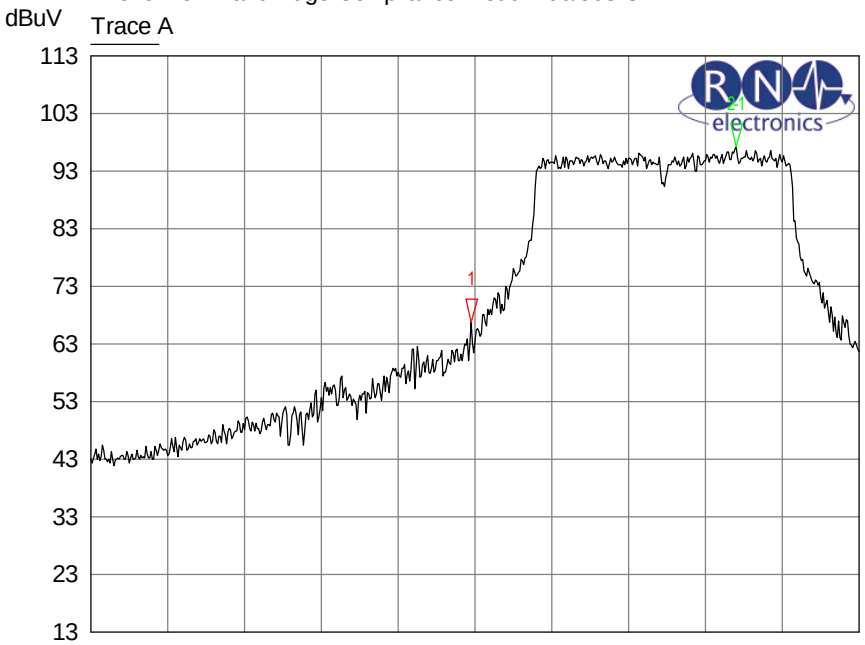
2 AV
2.389980 GHz
48.1700 dBuV

3 PK
2.407500 GHz
107.1700 dBuV

43 PK
-7.480000 MHz
-25.1700 dB

Start: 2.387500 GHz
Res BW: 1 MHz
12/03/2010 15:55:30
Vid BW: 3 MHz
Atten: 10 dB
Stop: 2.411500 GHz
Sweep: 50.00 ms
HP8563E

Evoke Flow Band Edge Compliance Plot J4200/508 CH1 12M

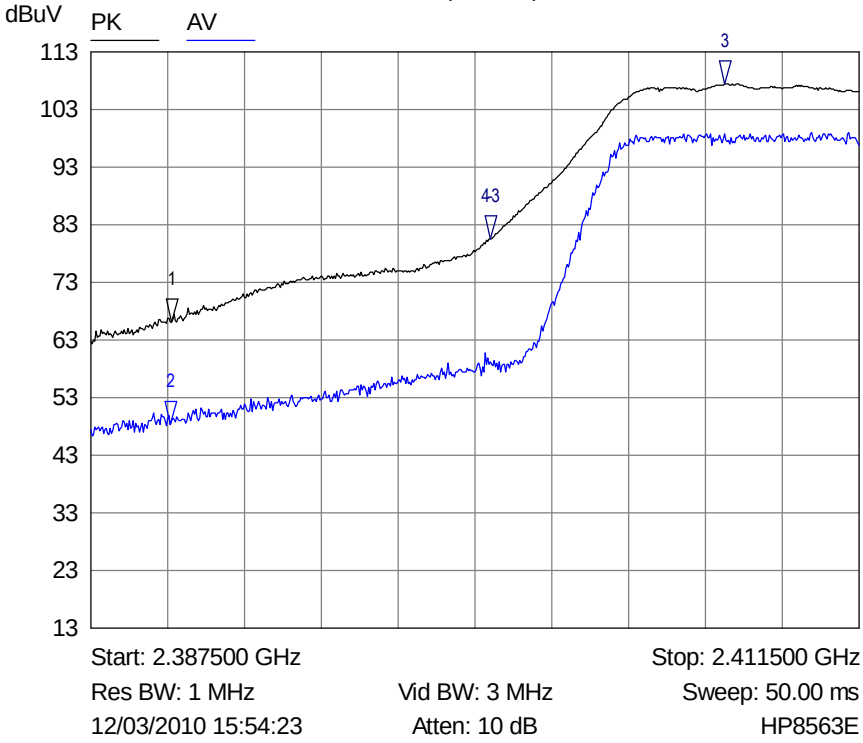


1 Trace A
2.399750 GHz
66.8400 dBuV

21 Trace A
17.250000 MHz
30.3300 dB

Start: 2.375000 GHz
Res BW: 100 kHz
15/03/2010 14:08:57
BEC Ch1 12M rad.spt
Vid BW: 300 kHz
Atten: 10 dB
Stop: 2.425000 GHz
Sweep: 50.00 ms
HP8563E

channel 1, 18MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
66.0000 dBuV

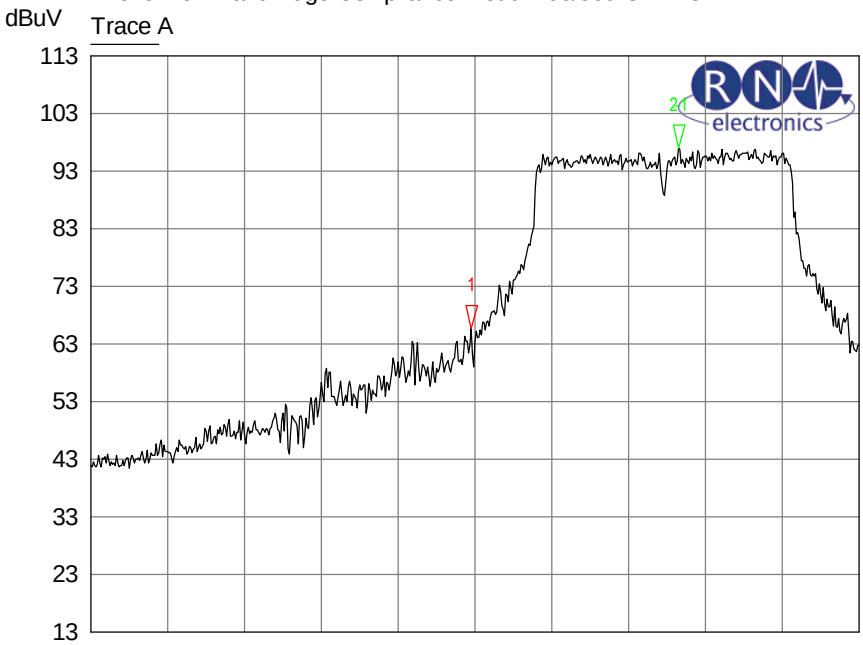
2 AV
2.389980 GHz
48.3400 dBuV

3 PK
2.407300 GHz
107.3400 dBuV

43 PK
-7.300000 MHz
-26.8400 dB

Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 15:54:23
Atten: 10 dB
HP8563E

Evoke Flow Band Edge Compliance Plot J4200/509 CH1 18M

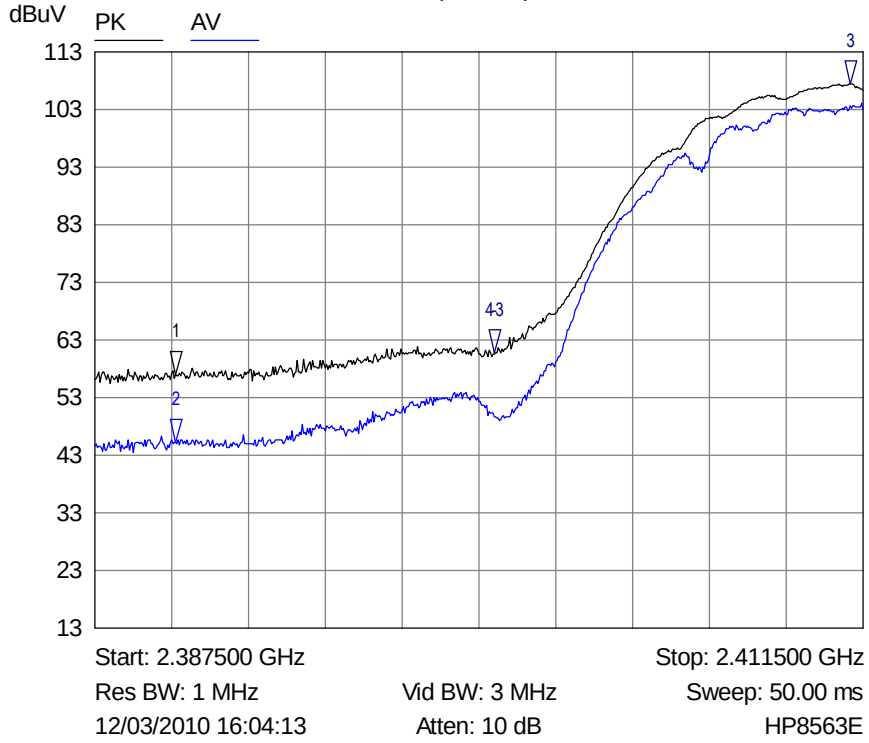


1 Trace A
2.399750 GHz
65.6700 dBuV

21 Trace A
13.500000 MHz
31.3400 dB

Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:08:57
Atten: 10 dB
HP8563E
BEC Ch1 18M rad.spt

channel 1, 1MHz lower restricted (PK &AV)



Start: 2.387500 GHz
Res BW: 1 MHz
12/03/2010 16:04:13
Vid BW: 3 MHz
Atten: 10 dB
Stop: 2.411500 GHz
Sweep: 50.00 ms
HP8563E

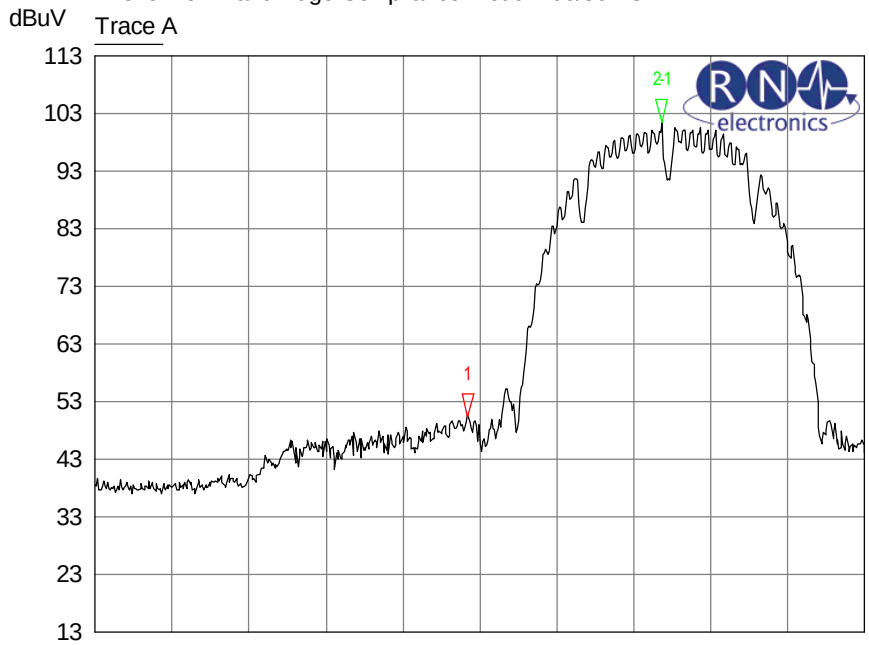
1 PK
2.390020 GHz
57.0000 dBuV

2 AV
2.390020 GHz
45.1700 dBuV

3 PK
2.411100 GHz
107.5000 dBuV

43 PK
-11.100000 MHz
-46.8300 dB

Evoke Flow Band Edge Compliance Plot J4200/501 CH1 1M

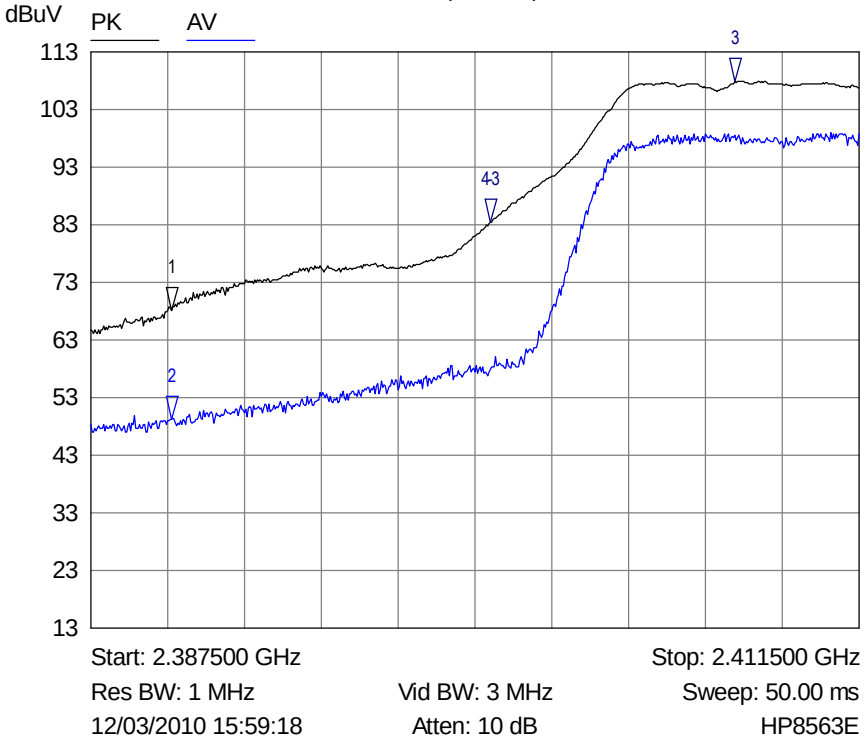


Start: 2.375000 GHz
Res BW: 100 kHz
15/03/2010 14:01:13
BEC Ch1 1M rad.spt
Vid BW: 300 kHz
Atten: 10 dB
Stop: 2.425000 GHz
Sweep: 50.00 ms
HP8563E

1 Trace A
2.399200 GHz
50.3960 dBuV

2-1 Trace A
12.633333 MHz
50.9440 dB

channel 1, 22MHz lower restricted (PK &AV)



Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 15:59:18
Atten: 10 dB
HP8563E

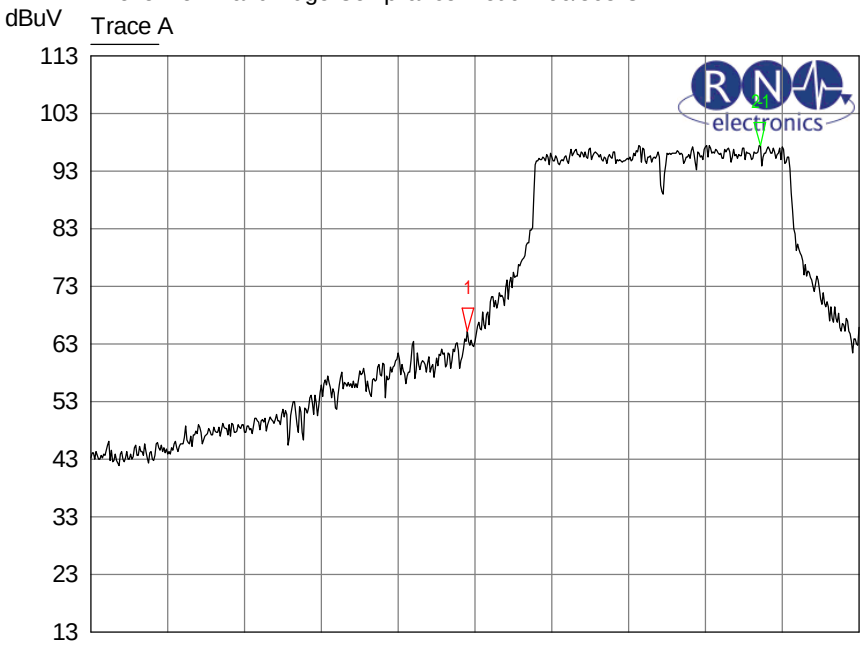
1 PK
2.390020 GHz
68.1700 dBuV

2 AV
2.390020 GHz
49.1700 dBuV

3 PK
2.407620 GHz
107.8400 dBuV

43 PK
-7.620000 MHz
-24.4200 dB

Evoke Flow Band Edge Compliance Plot J4200/505 CH1 22M

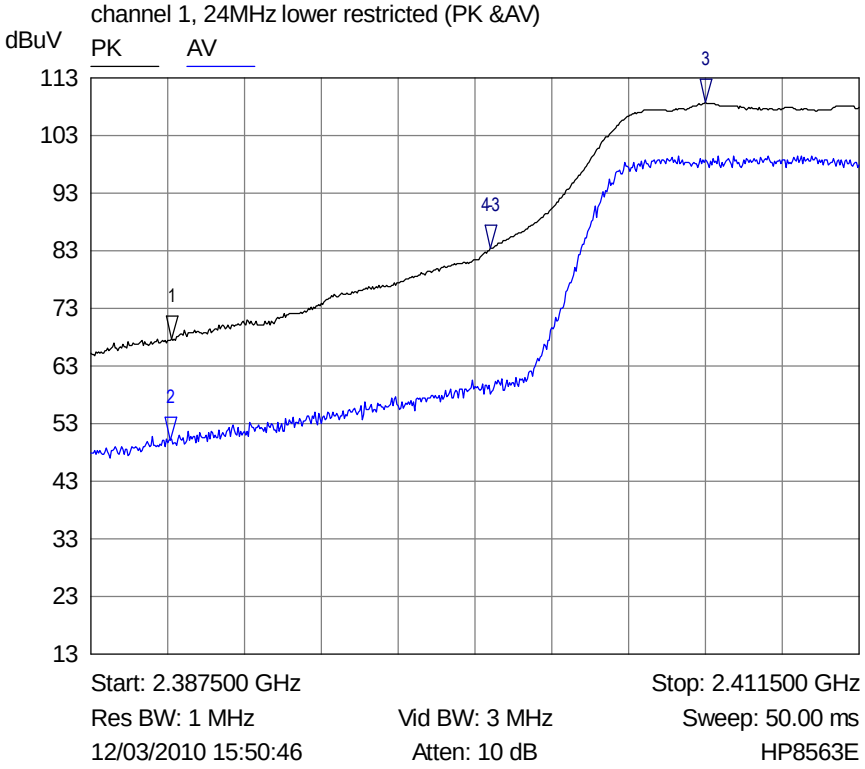


Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:08:57
Atten: 10 dB
HP8563E
BEC Ch1 22M rad.spt

1 Trace A
2.399500 GHz
65.1700 dBuV

2-1 Trace A
19.083333 MHz
32.3400 dB

channel 1, 24MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
67.6700 dBuV

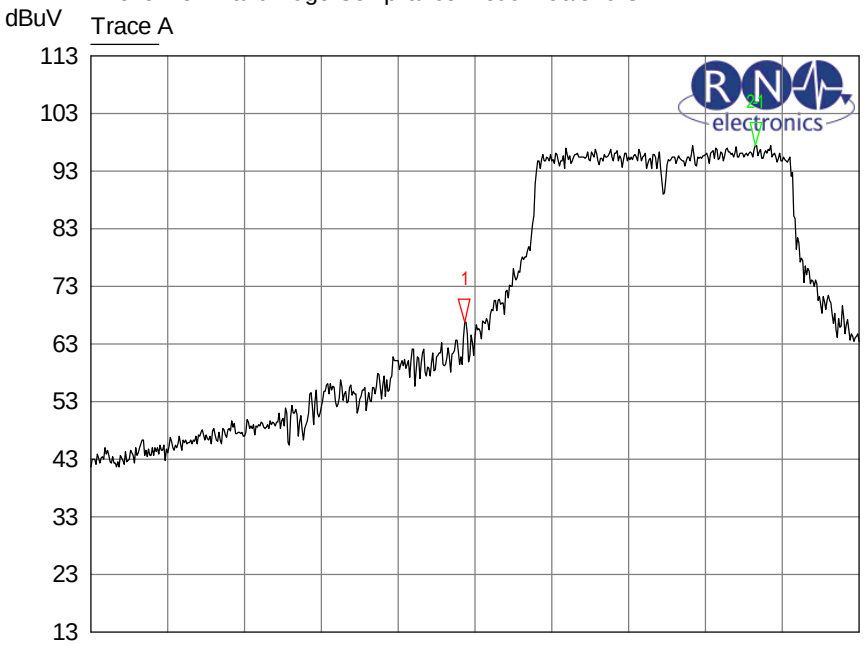
2 AV
2.389980 GHz
50.1700 dBuV

3 PK
2.406700 GHz
108.6700 dBuV

43 PK
-6.700000 MHz
-25.3300 dB

Start: 2.387500 GHz
Res BW: 1 MHz
12/03/2010 15:50:46
Vid BW: 3 MHz
Atten: 10 dB
Stop: 2.411500 GHz
Sweep: 50.00 ms
HP8563E

Evoke Flow Band Edge Compliance Plot J4200/510 CH1 24M

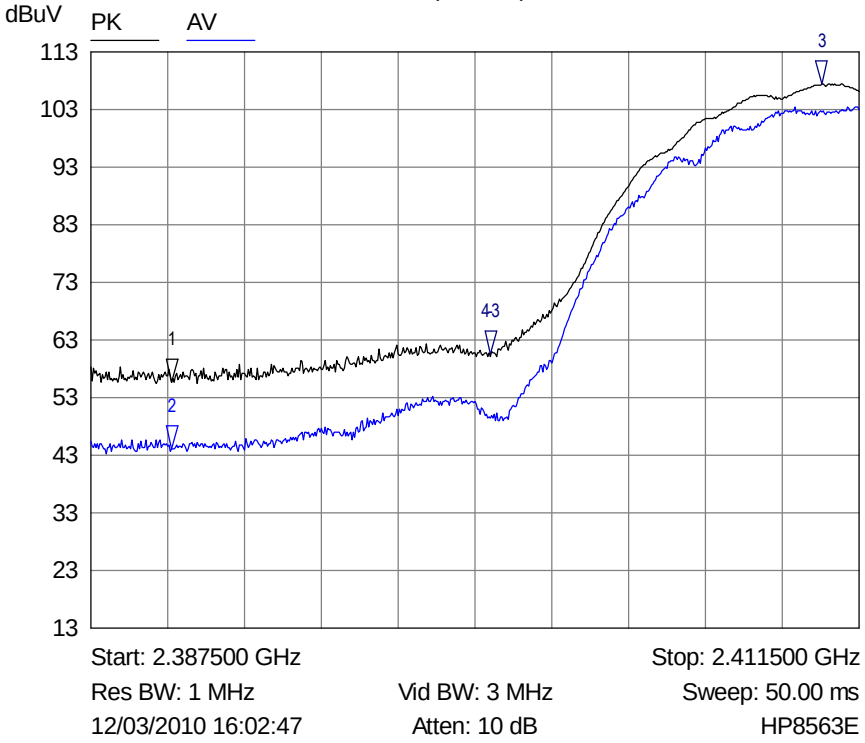


1 Trace A
2.399333 GHz
66.8400 dBuV

21 Trace A
18.916667 MHz
30.5000 dB

Start: 2.375000 GHz
Res BW: 100 kHz
15/03/2010 14:08:57
BEC Ch1 24M rad.spt
Vid BW: 300 kHz
Atten: 10 dB
Stop: 2.425000 GHz
Sweep: 50.00 ms
HP8563E

channel 1, 2MHz lower restricted (PK &AV)



Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 16:02:47
Atten: 10 dB
HP8563E

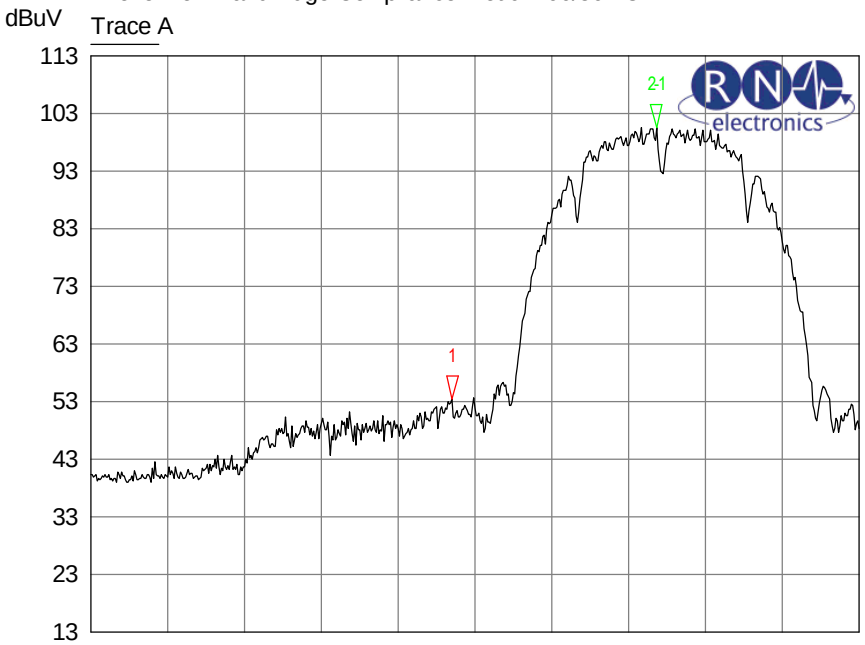
1 PK
2.390020 GHz
55.6700 dBuV

2 AV
2.390020 GHz
44.0000 dBuV

3 PK
2.410340 GHz
107.3400 dBuV

43 PK
-10.340000 MHz
-46.8400 dB

Evoke Flow Band Edge Compliance Plot J4200/502 CH1 2M

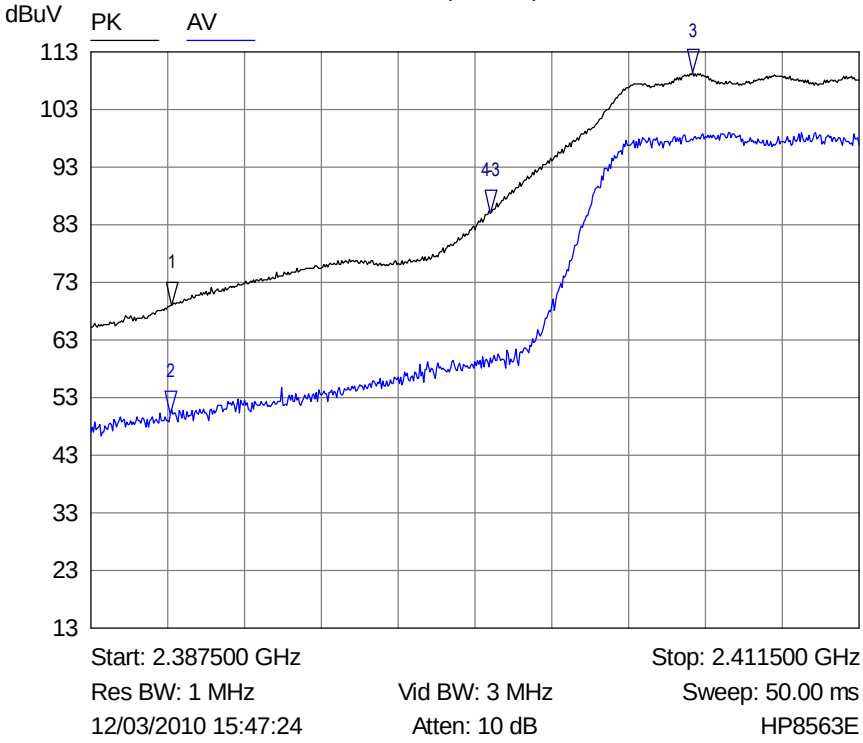


Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:01:13
Atten: 10 dB
HP8563E
BEC Ch1 2M rad.spt

1 Trace A
2.398500 GHz
53.3400 dBuV

2-1 Trace A
13.333333 MHz
47.1700 dB

channel 1, 36MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
69.0000 dBuV

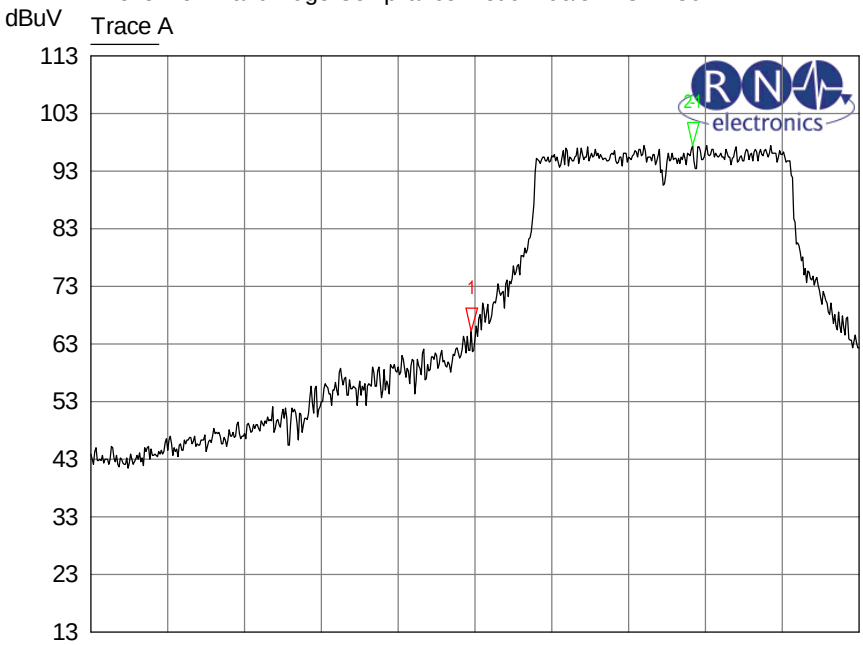
2 AV
2.389980 GHz
50.0000 dBuV

3 PK
2.406300 GHz
109.3400 dBuV

4-3 PK
-6.300000 MHz
-24.2550 dB

Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 15:47:24
Atten: 10 dB
HP8563E

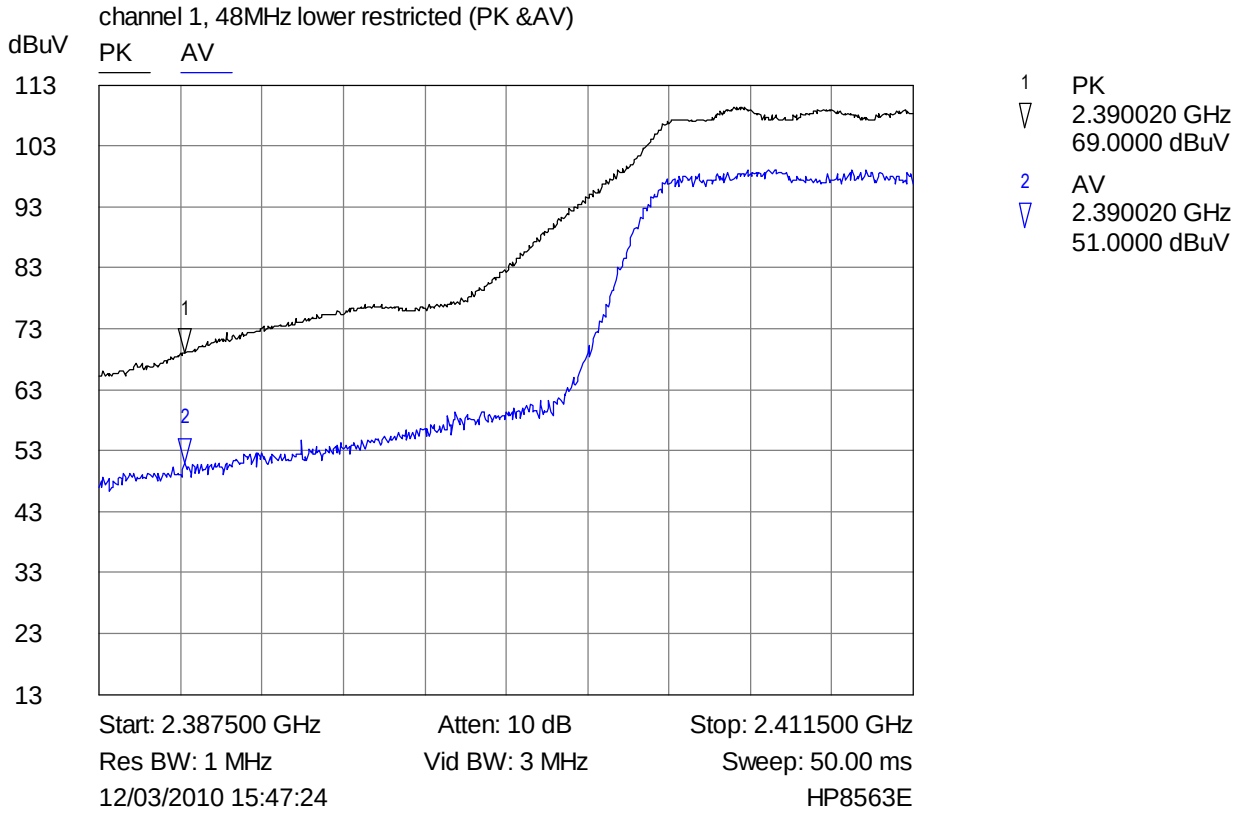
Evoke Flow Band Edge Compliance Plot J4200/511 CH1 36M

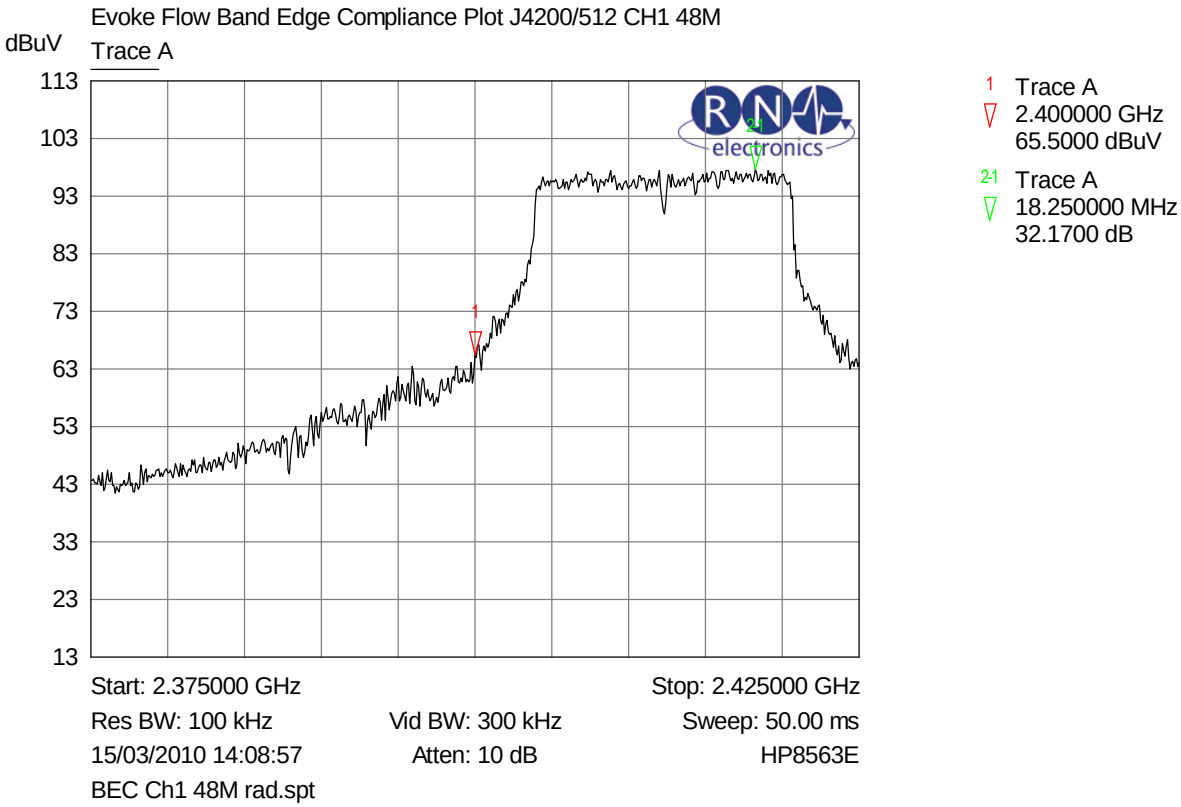


1 Trace A
2.399750 GHz
65.1700 dBuV

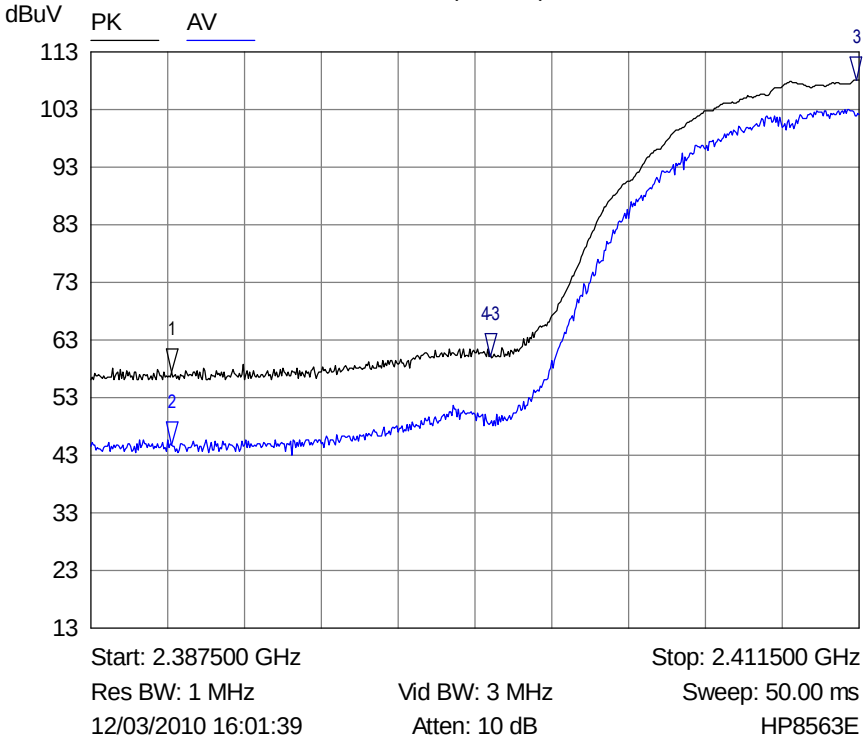
2-1 Trace A
14.416667 MHz
32.3300 dB

Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:08:57
Atten: 10 dB
HP8563E
BEC Ch1 36M rad.spt





channel 1, 5.5MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
57.5000 dBuV

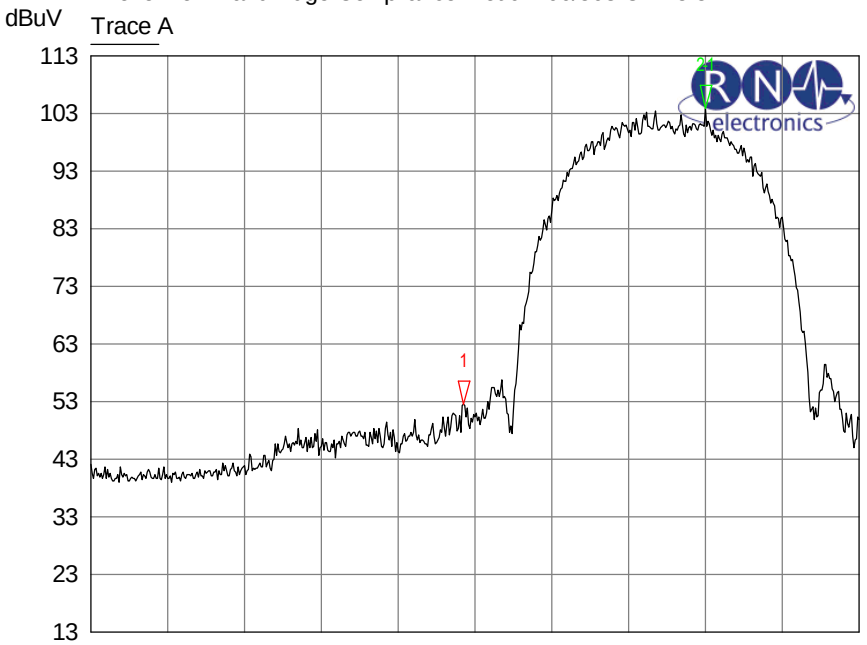
2 AV
2.390020 GHz
44.6700 dBuV

3 PK
2.411420 GHz
108.1700 dBuV

43 PK
-11.420000 MHz
-48.0000 dB

Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 16:01:39
Atten: 10 dB
HP8563E

Evoke Flow Band Edge Compliance Plot J4200/503 CH1 5.5M

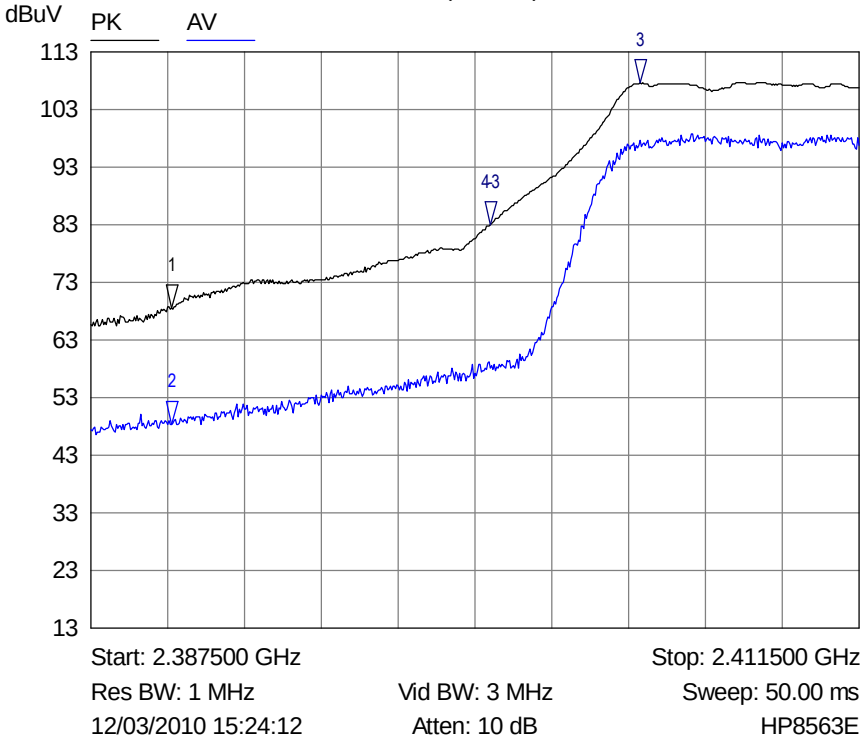


1 Trace A
2.399250 GHz
52.5100 dBuV

21 Trace A
15.750000 MHz
51.3300 dB

Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:07:34
Atten: 10 dB
HP8563E
BEC Ch1 5.5M rad.spt

channel 1, 54MHz lower restricted (PK &AV)



Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 15:24:12
Atten: 10 dB
HP8563E

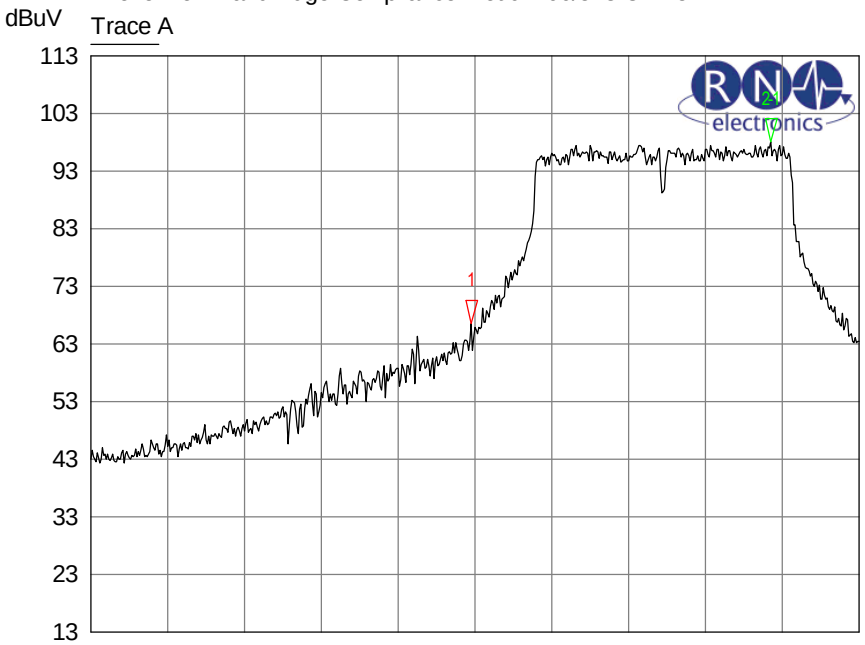
1 PK
2.390020 GHz
68.5000 dBuV

2 AV
2.390020 GHz
48.3400 dBuV

3 PK
2.404660 GHz
107.6700 dBuV

43 PK
-4.660000 MHz
-24.5850 dB

Evoke Flow Band Edge Compliance Plot J4200/513 CH1 54M

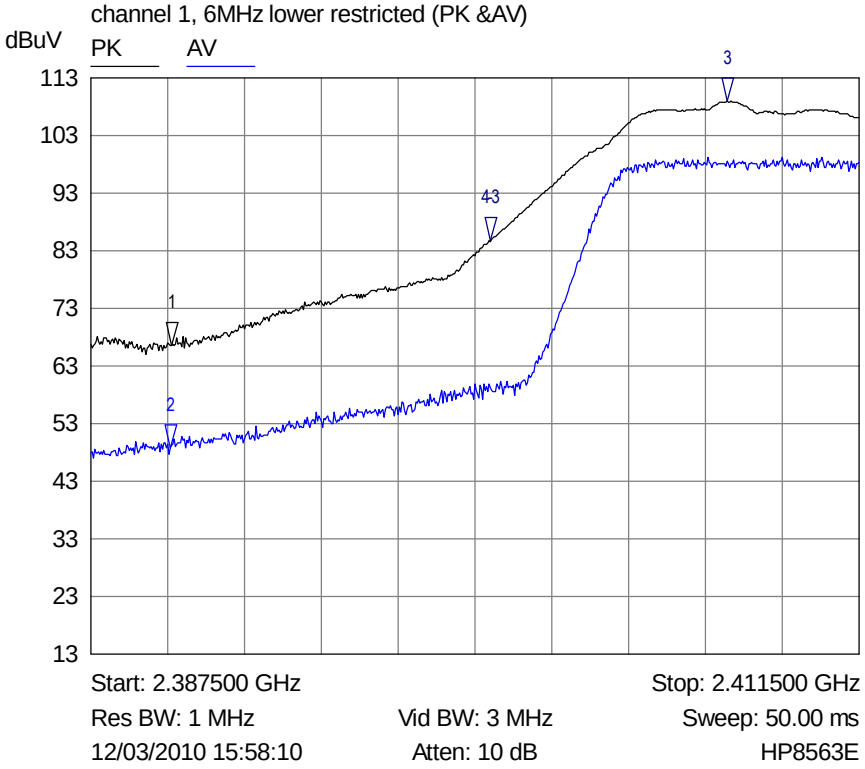


Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:08:57
Atten: 10 dB
HP8563E
BEC Ch1 54M rad.spt

1 Trace A
2.399750 GHz
66.5000 dBuV

21 Trace A
19.500000 MHz
31.5000 dB

channel 1, 6MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
66.5000 dBuV

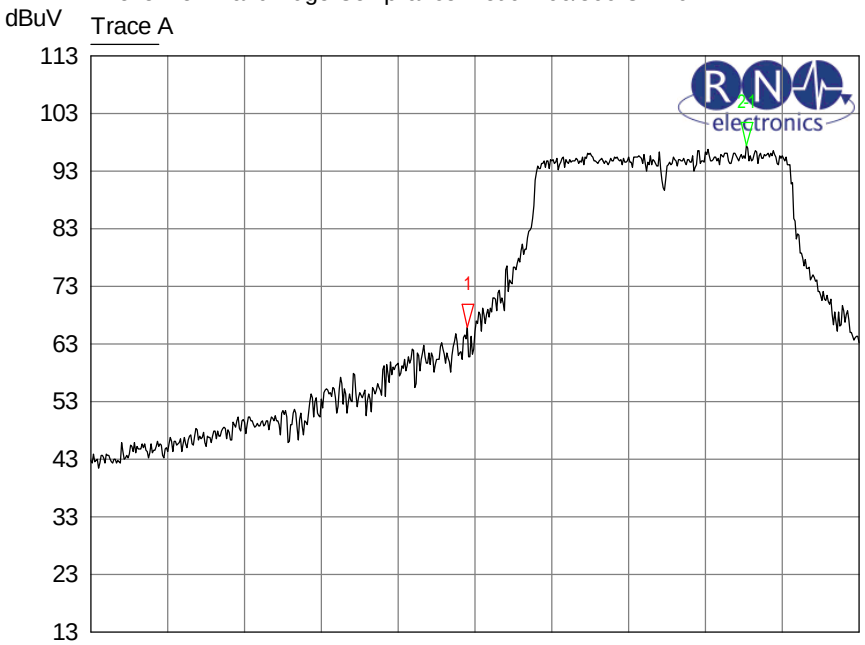
2 AV
2.389980 GHz
48.6700 dBuV

3 PK
2.407380 GHz
109.0000 dBuV

43 PK
-7.380000 MHz
-24.2500 dB

Start: 2.387500 GHz
Stop: 2.411500 GHz
Res BW: 1 MHz
Vid BW: 3 MHz
Sweep: 50.00 ms
12/03/2010 15:58:10
Atten: 10 dB
HP8563E

Evoke Flow Band Edge Compliance Plot J4200/506 CH1 6M

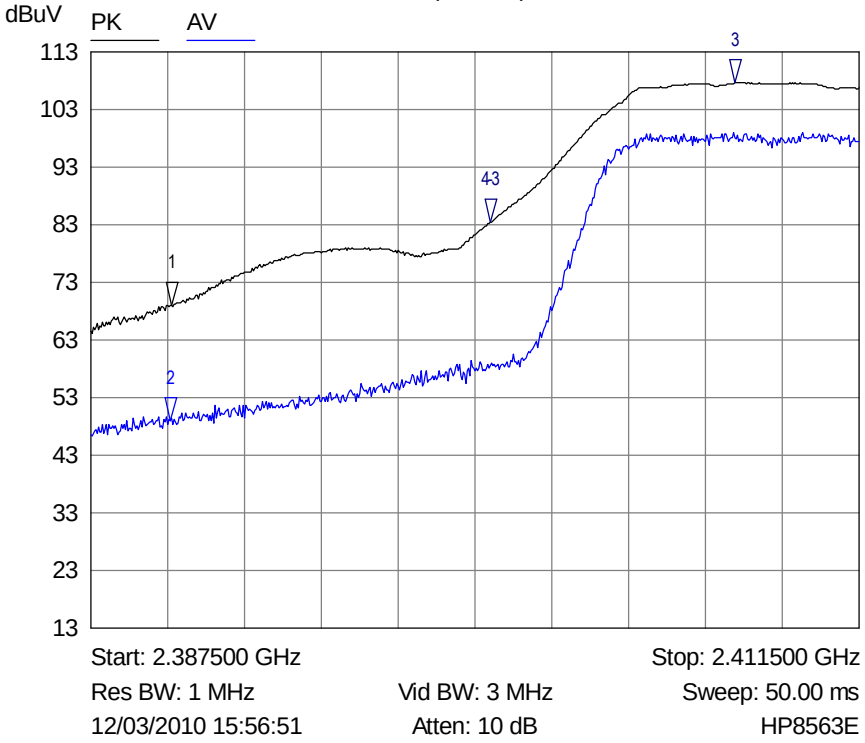


1 Trace A
2.399500 GHz
65.8400 dBuV

21 Trace A
18.166667 MHz
31.6600 dB

Start: 2.375000 GHz
Stop: 2.425000 GHz
Res BW: 100 kHz
Vid BW: 300 kHz
Sweep: 50.00 ms
15/03/2010 14:08:57
Atten: 10 dB
HP8563E
BEC Ch1 6M rad.spt

channel 1, 9MHz lower restricted (PK &AV)



1 PK
2.390020 GHz
69.0000 dBuV

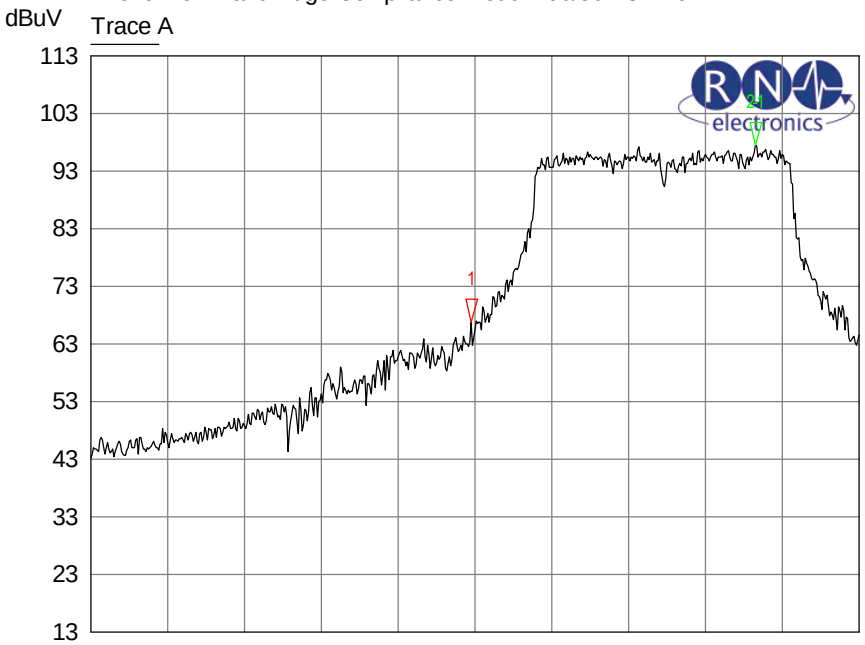
2 AV
2.389980 GHz
49.0000 dBuV

3 PK
2.407620 GHz
107.6700 dBuV

43 PK
-7.620000 MHz
-24.2500 dB

Start: 2.387500 GHz
Res BW: 1 MHz
12/03/2010 15:56:51
Vid BW: 3 MHz
Atten: 10 dB
Stop: 2.411500 GHz
Sweep: 50.00 ms
HP8563E

Evoke Flow Band Edge Compliance Plot J4200/507 CH1 9M

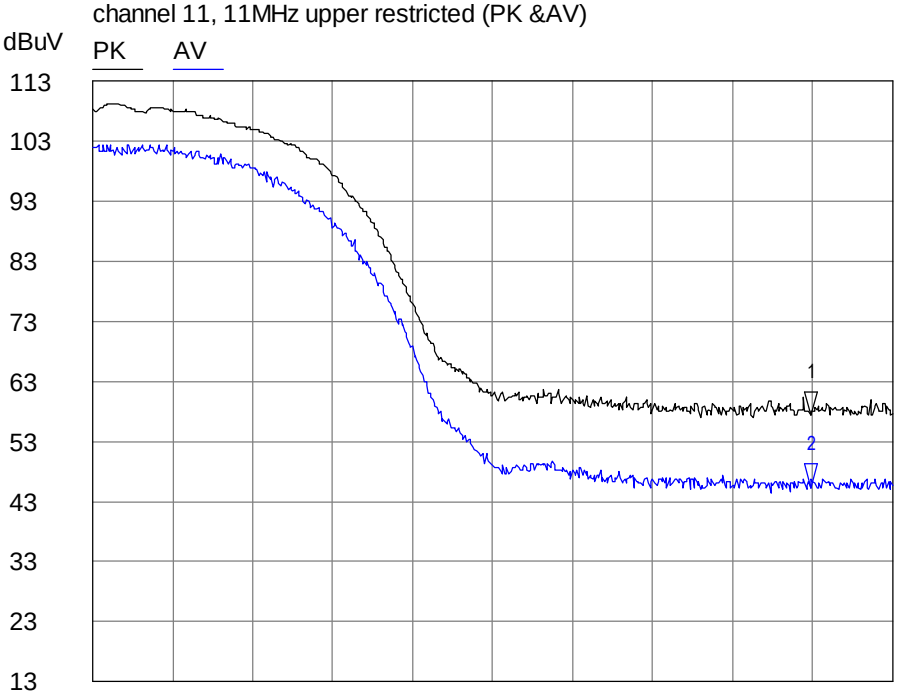


1 Trace A
2.399750 GHz
66.6700 dBuV

21 Trace A
18.500000 MHz
30.8400 dB

Start: 2.375000 GHz
Res BW: 100 kHz
15/03/2010 14:08:57
BEC Ch1 9M rad.spt
Vid BW: 300 kHz
Atten: 10 dB
Stop: 2.425000 GHz
Sweep: 50.00 ms
HP8563E

channel 11, 11MHz upper restricted (PK &AV)

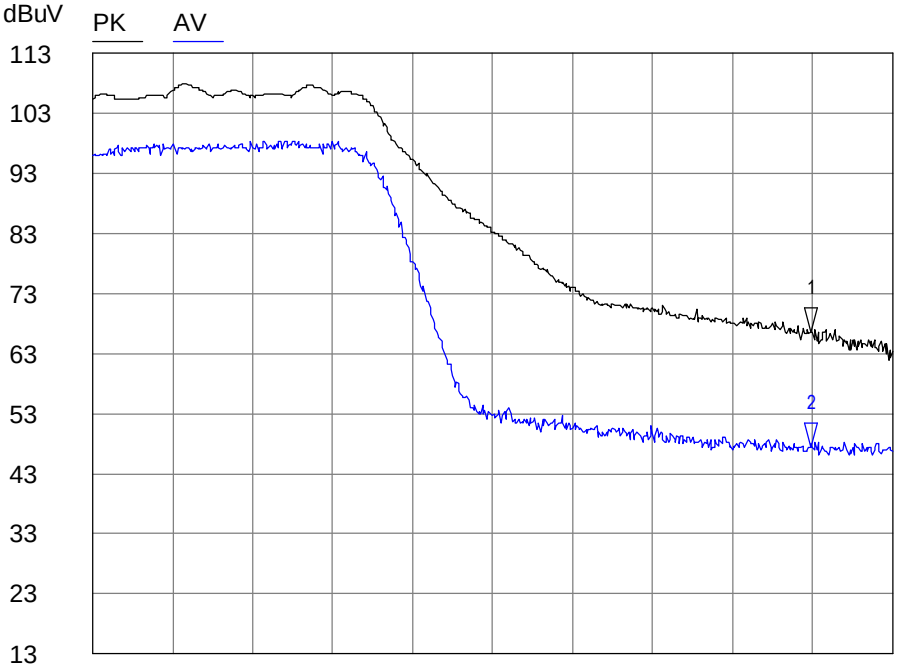


1 PK
2.483520 GHz
57.5000 dBuV

2 AV
2.483520 GHz
45.3400 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:15:17 HP8563E

channel 11, 12MHz upper restricted (PK &AV)

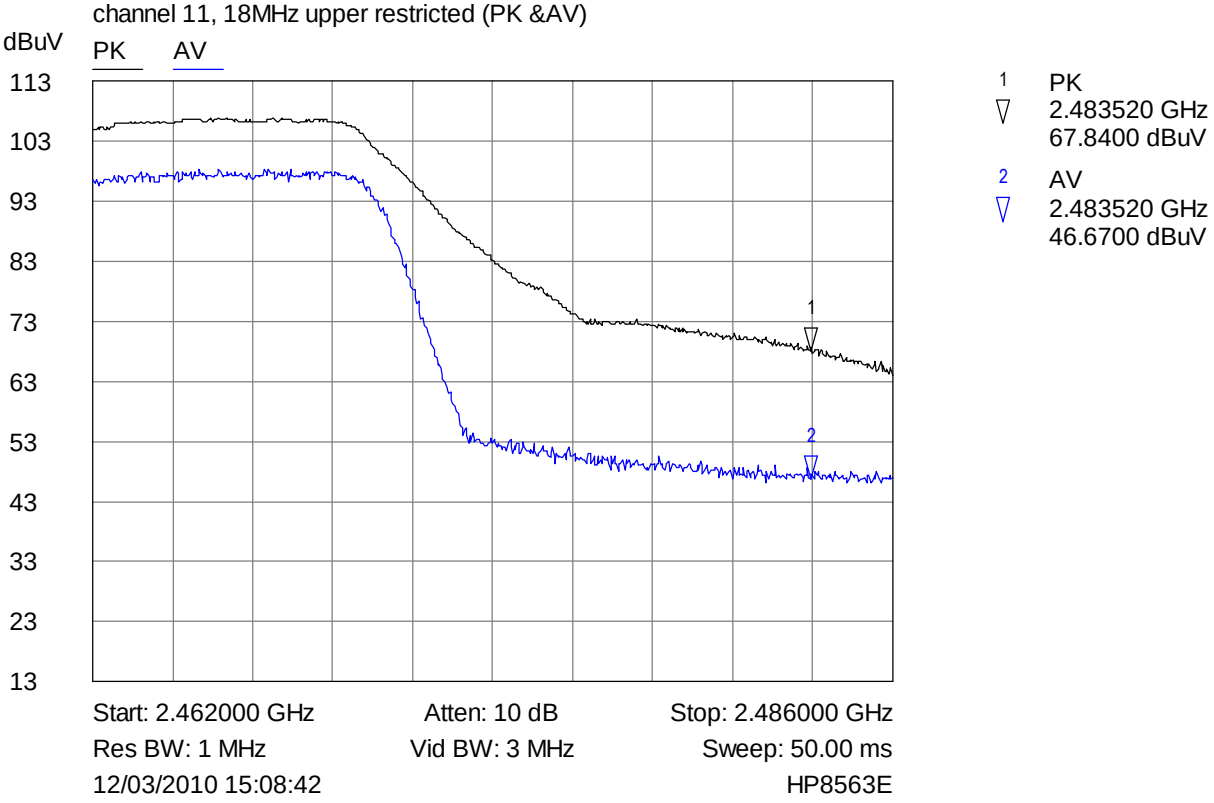


1 PK
2.483520 GHz
66.6700 dBuV

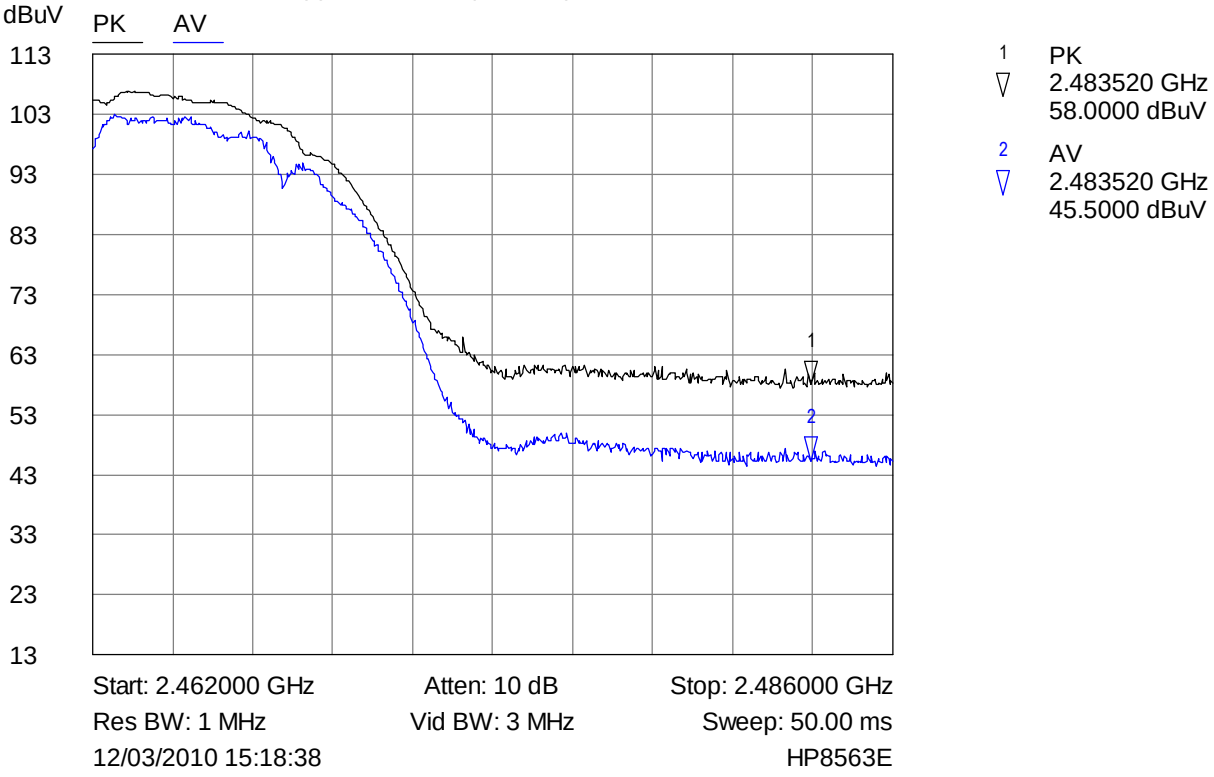
2 AV
2.483520 GHz
47.1700 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:09:44 HP8563E

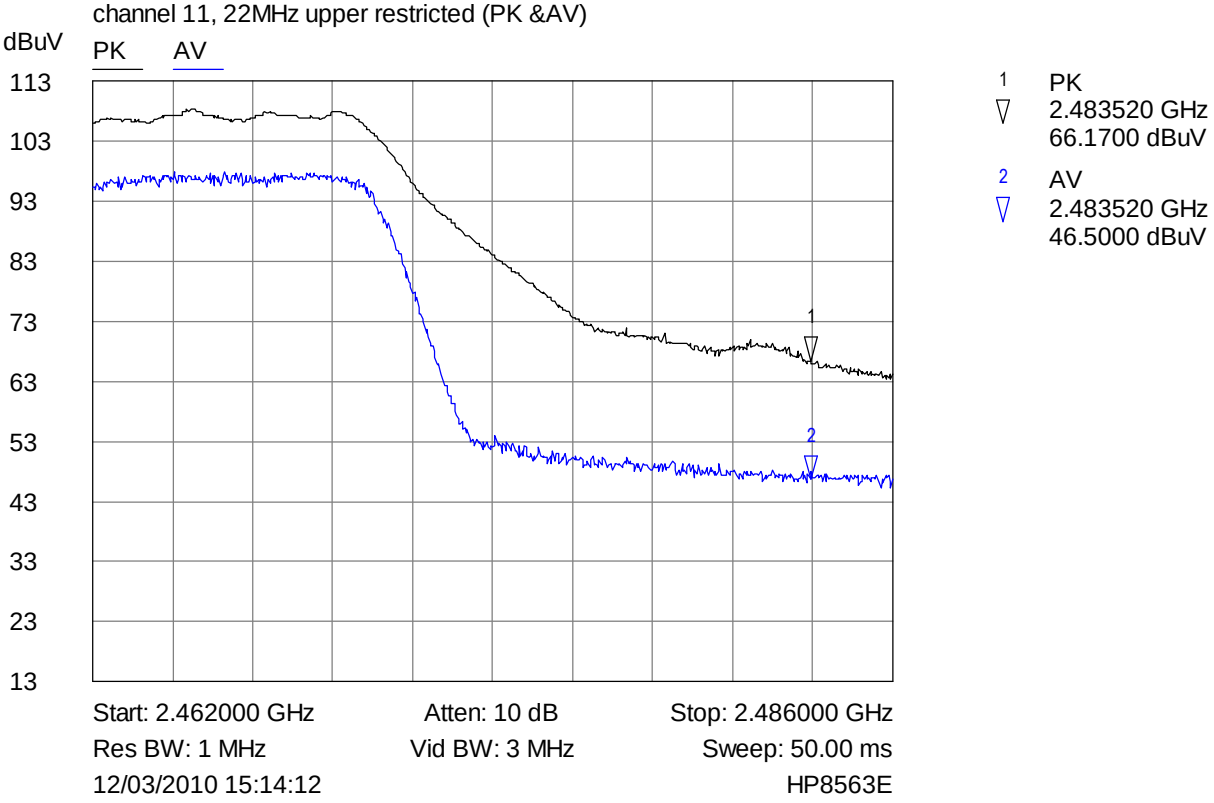
channel 11, 18MHz upper restricted (PK &AV)



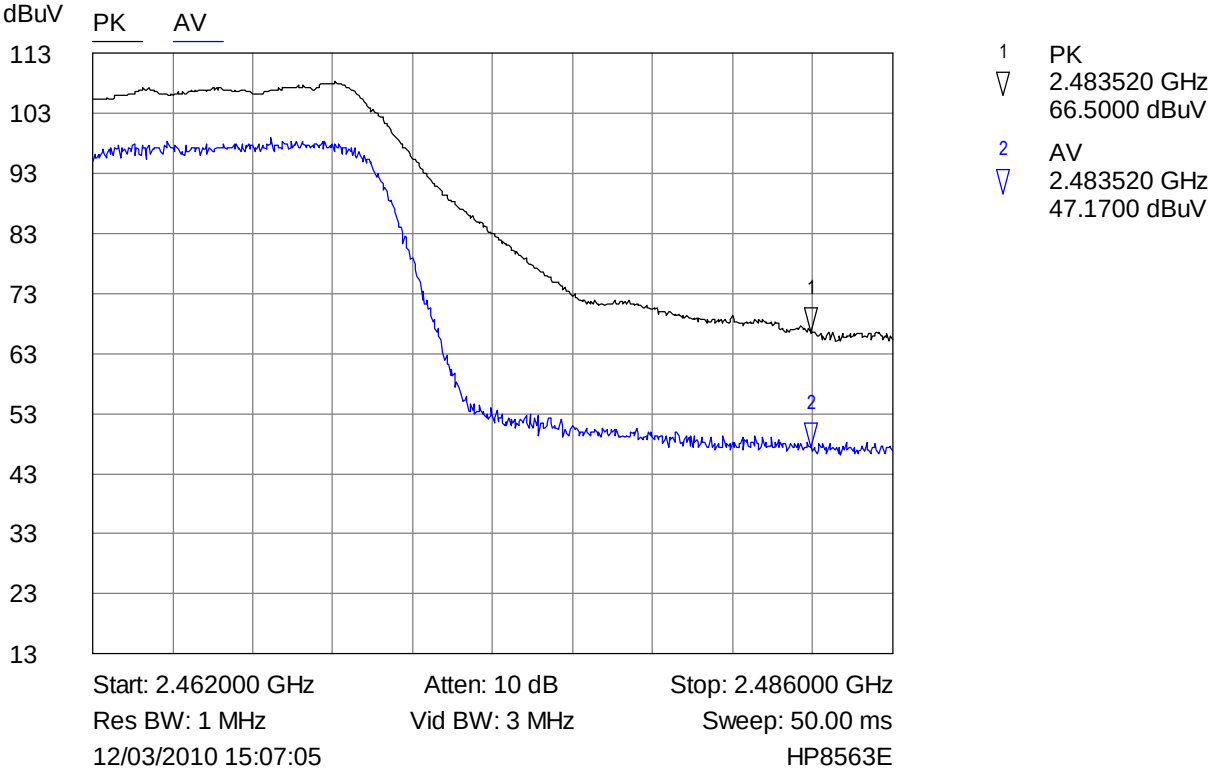
channel 11, 1MHz upper restricted (PK &AV)



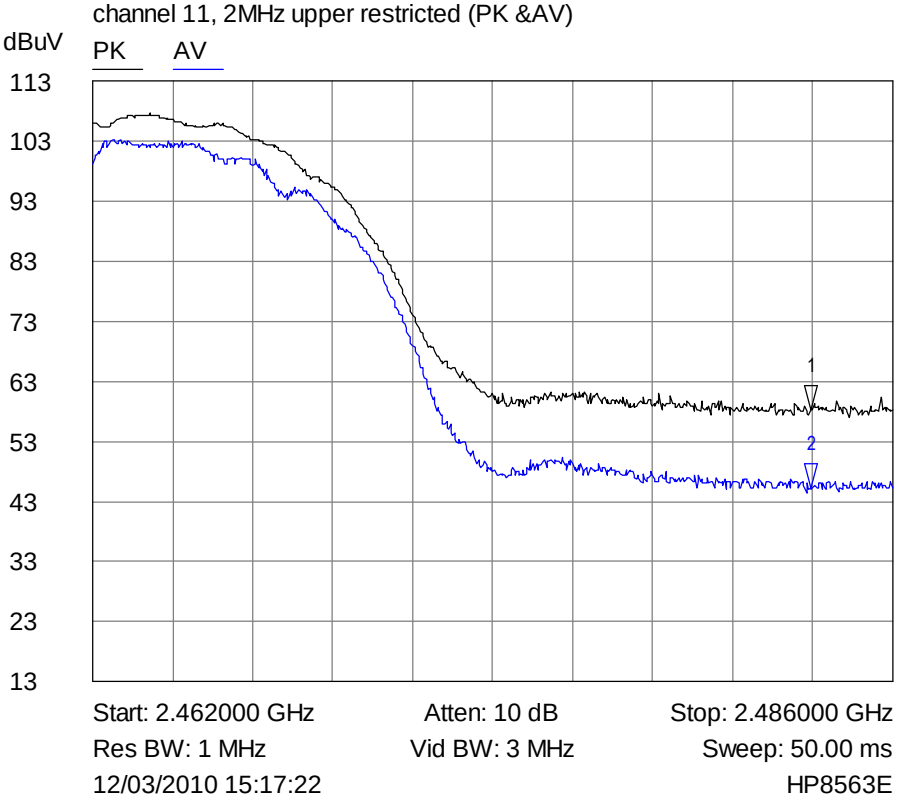
channel 11, 22MHz upper restricted (PK &AV)



channel 11, 24MHz upper restricted (PK &AV)



channel 11, 2MHz upper restricted (PK &AV)

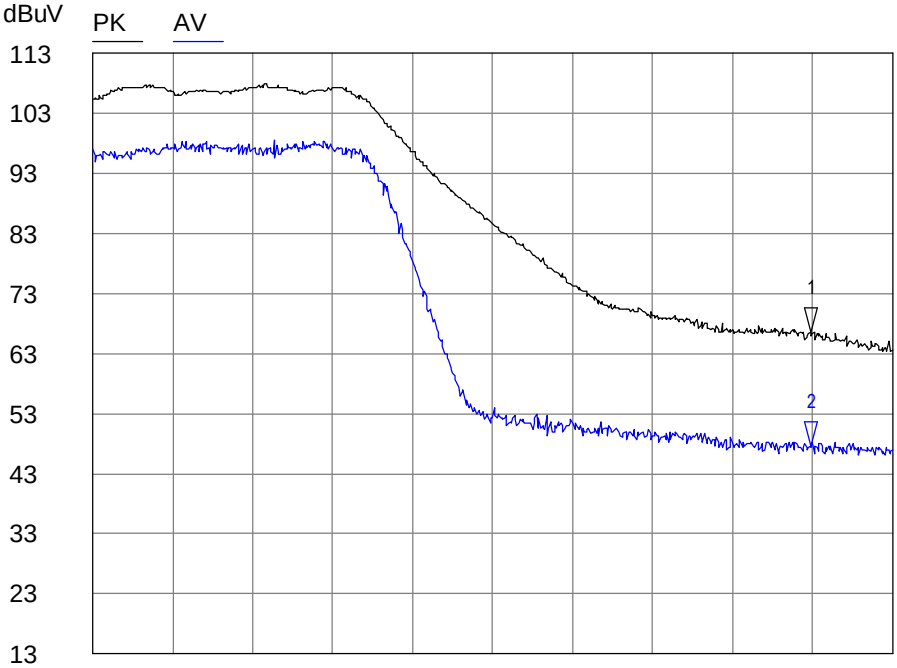


1 PK
2.483520 GHz
58.3400 dBuV

2 AV
2.483520 GHz
45.3400 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:17:22 HP8563E

channel 11, 36MHz upper restricted (PK &AV)

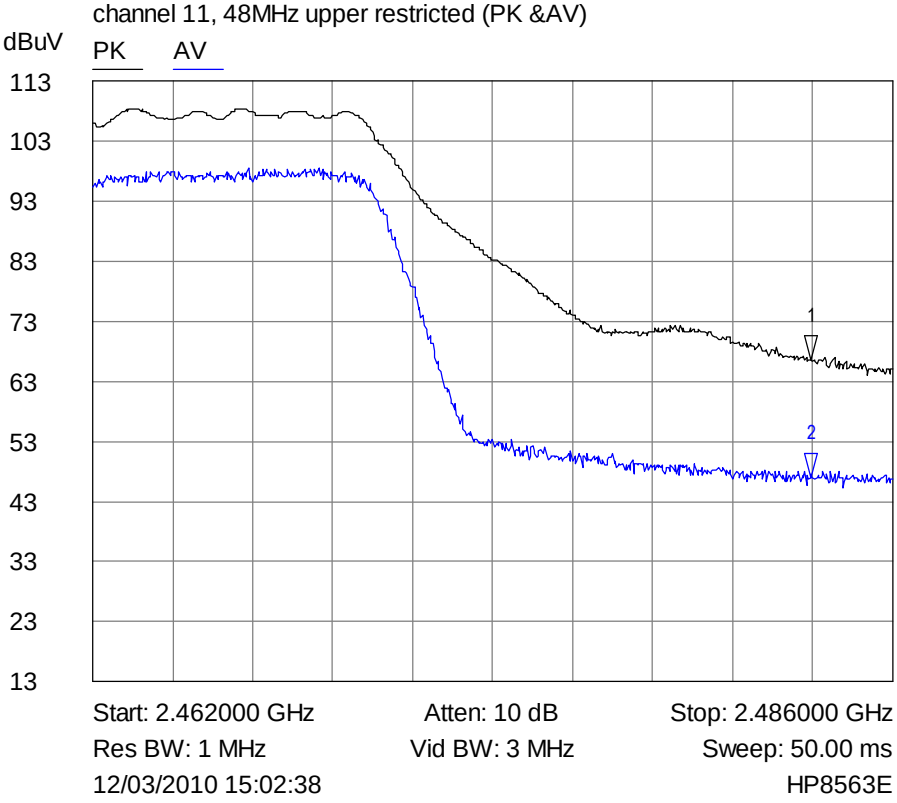


1 PK
2.483520 GHz
66.5000 dBuV

2 AV
2.483520 GHz
47.6700 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:04:26 HP8563E

channel 11, 48MHz upper restricted (PK &AV)

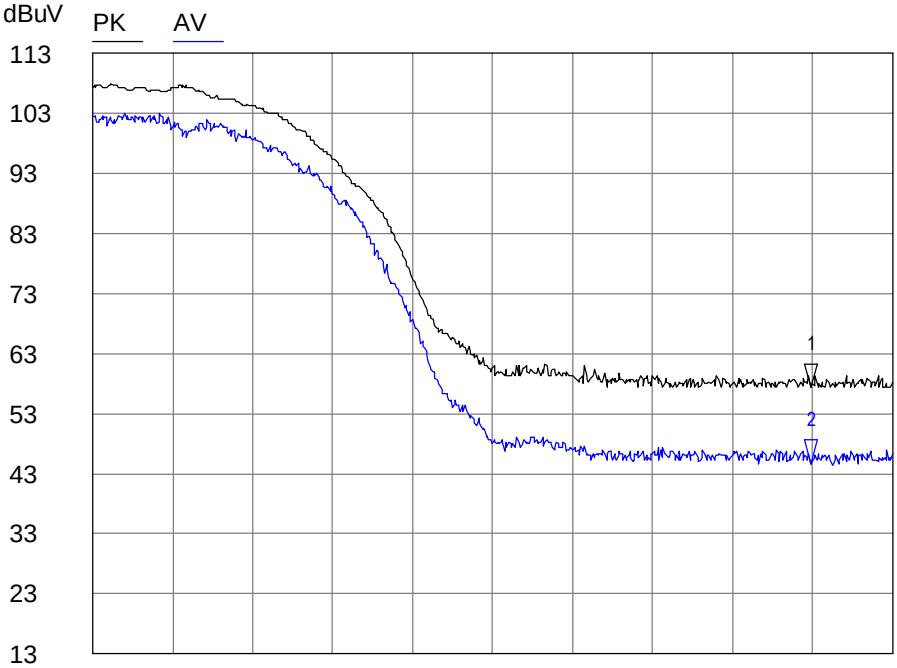


1 PK
2.483520 GHz
66.6700 dBuV

2 AV
2.483520 GHz
46.8400 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:02:38 HP8563E

channel 11, 5.5MHz upper restricted (PK &AV)

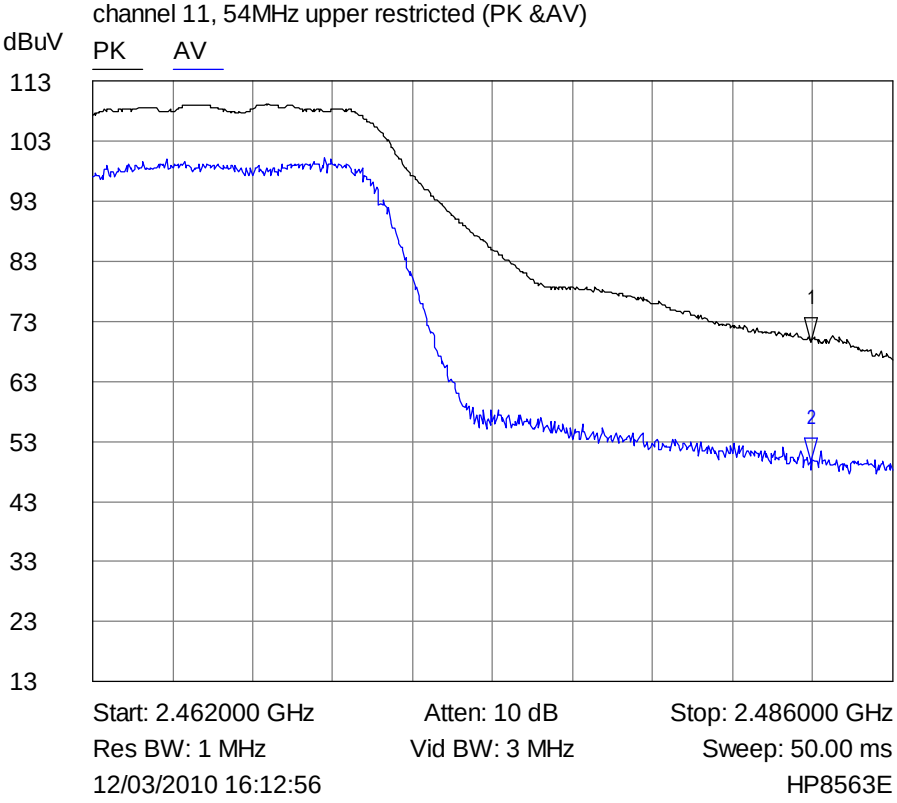


1 PK
2.483520 GHz
57.3400 dBuV

2 AV
2.483520 GHz
44.6700 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:16:19 HP8563E

channel 11, 54MHz upper restricted (PK &AV)

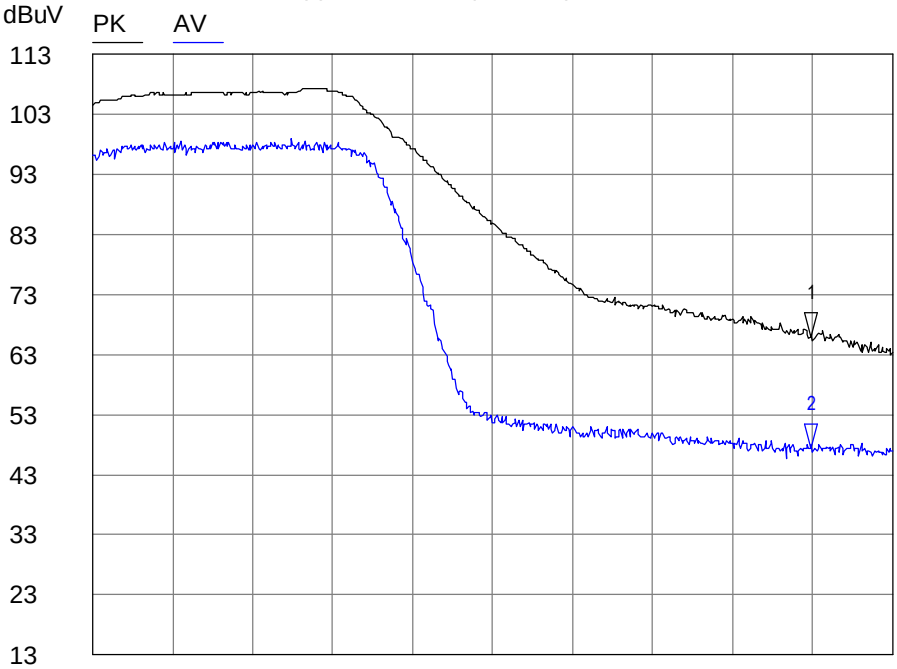


1 PK
2.483520 GHz
69.6700 dBuV

2 AV
2.483520 GHz
49.6700 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 16:12:56 HP8563E

channel 11, 6MHz upper restricted (PK &AV)

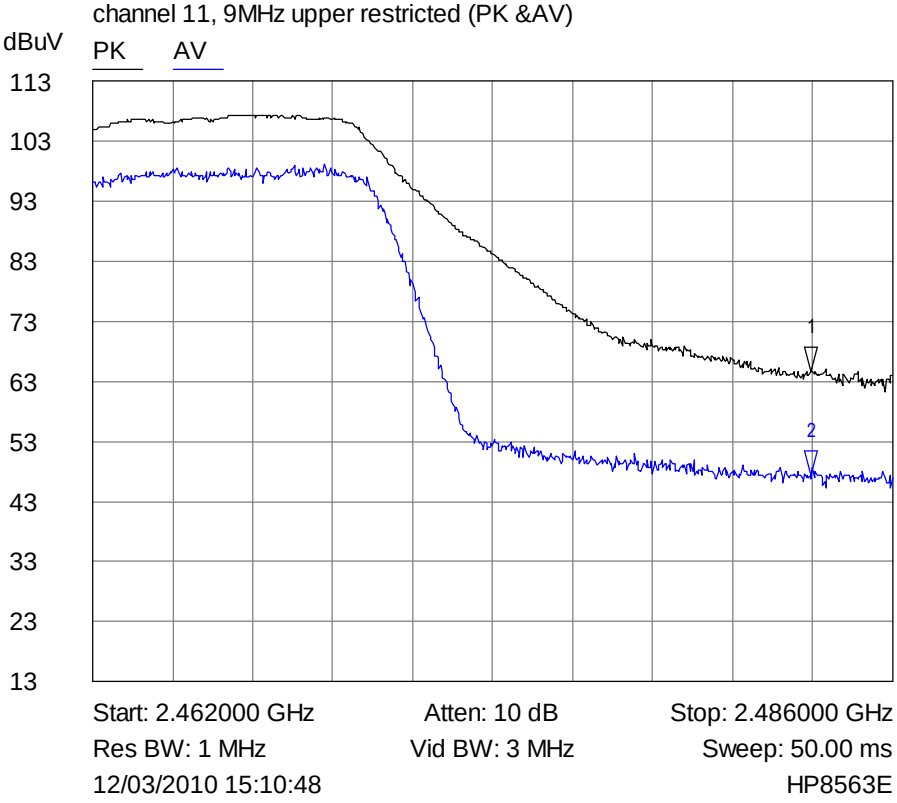


1 PK
2.483520 GHz
66.0000 dBuV

2 AV
2.483520 GHz
47.5000 dBuV

Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:12:14 HP8563E

channel 11, 9MHz upper restricted (PK &AV)

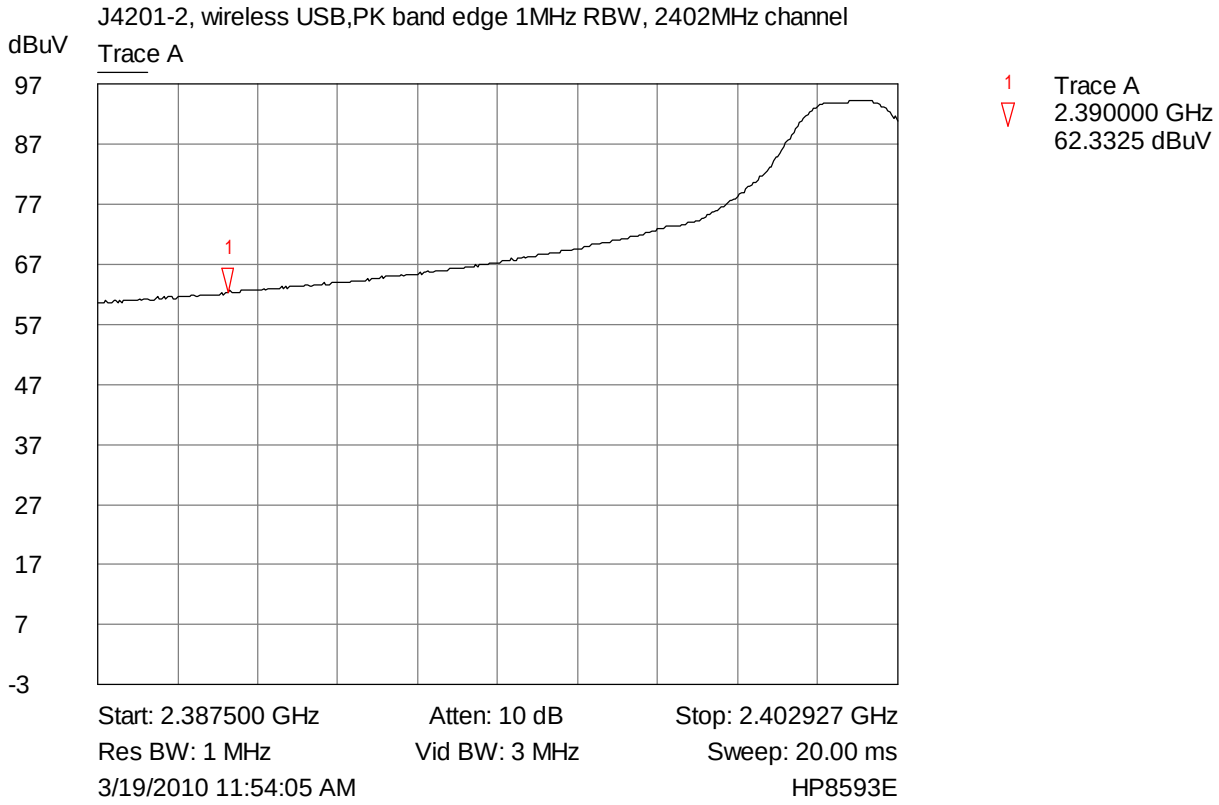


1 PK
2.483520 GHz
64.6700 dBuV

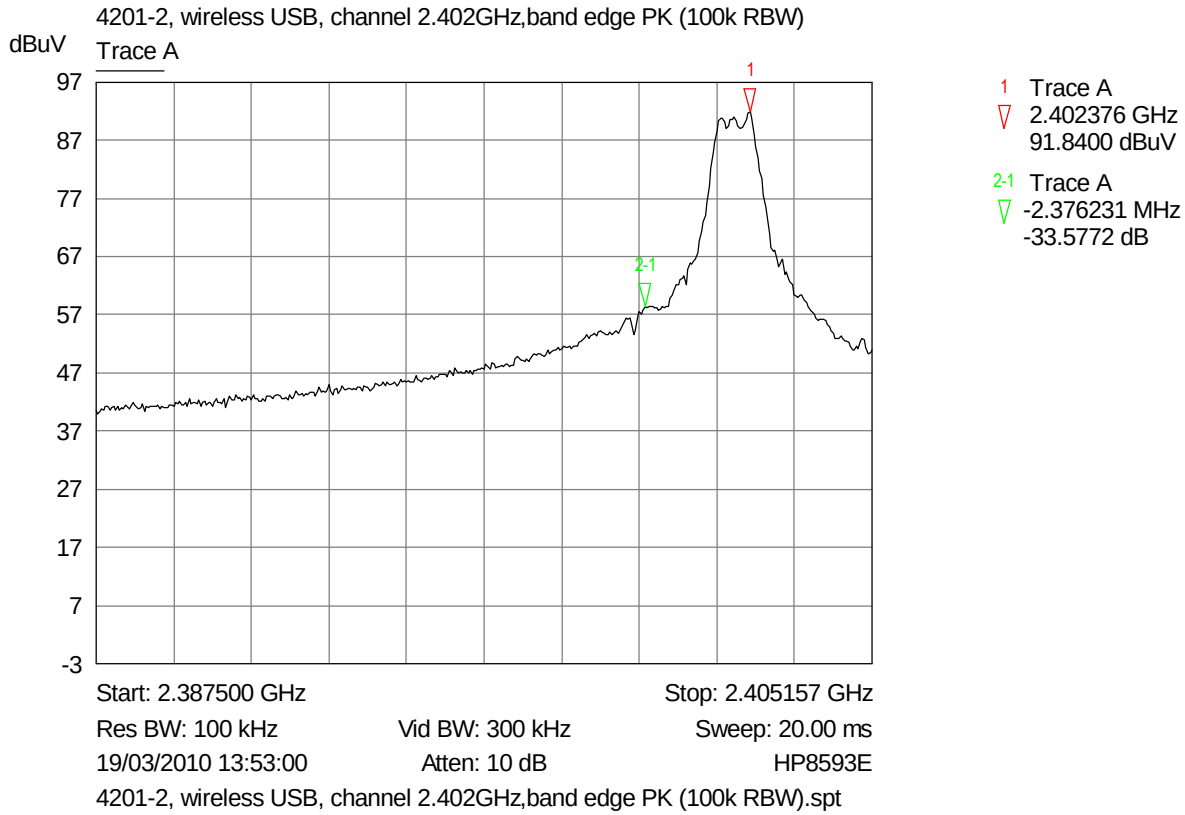
2 AV
2.483520 GHz
47.1700 dBuV

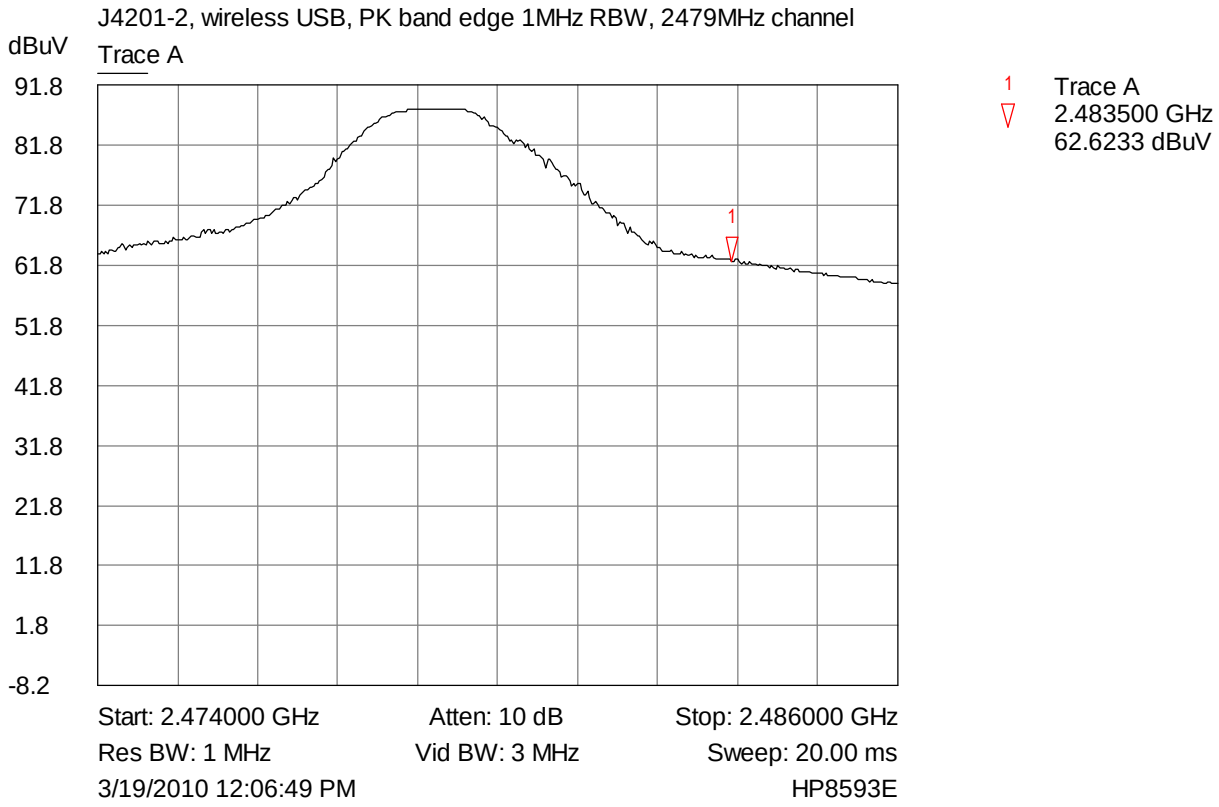
Start: 2.462000 GHz Atten: 10 dB Stop: 2.486000 GHz
Res BW: 1 MHz Vid BW: 3 MHz Sweep: 50.00 ms
12/03/2010 15:10:48 HP8563E

Wireless USB RF part.

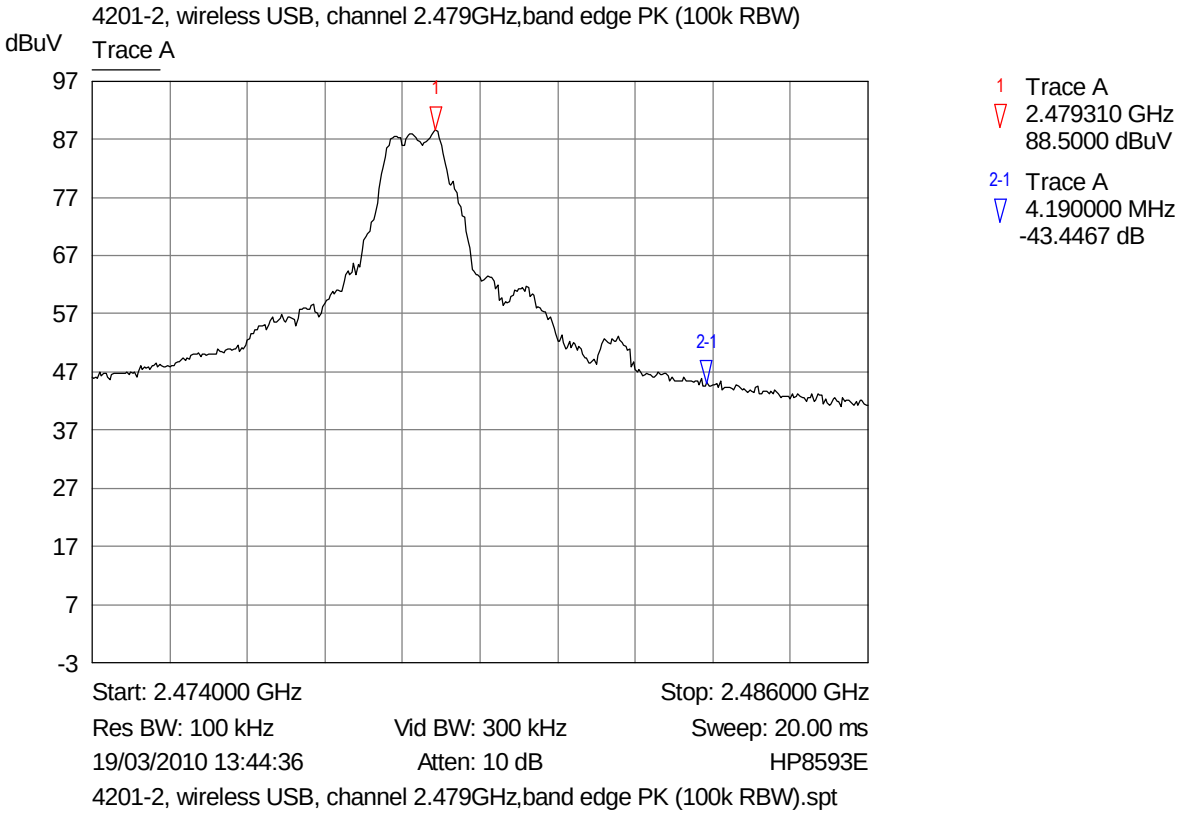


After duty cycle correction of 9.04dB applied, AV value at band edge = 53.29 dBuV/m.





After duty cycle correction of 9.04dB applied, AV value at band edge = 53.58 dBuV/m.



6.7 Frequency separation

Not applicable, EUT does not employ FHSS technology.

6.8 Number of hopping channels

Not applicable, EUT does not employ FHSS technology.

7 Explanatory Notes

7.1 Explanation of FAIL LIMIT 1 Statement

The **FAIL MARGIN 1** statement(s) may appear on the graphical plots when the receiver used to measure your equipment detects a signal that exceeds the dashed line. This does not mean that the **EUT** has failed the test, only that the 10 dB calculation margin set, has been exceeded on a peak measurement.

Following the indication that the margin has been exceeded, measurements are made at the frequency (ies) of the peaks. These peaks have been calculated to either Quasi Peak or Average Peak dependant on the test. A table of results has been printed on the reverse of the page. This table looks similar to the one illustrated below: -

Signal Number	Frequency (MHz)	Peak (dBμV)	PK Delta L 1 (dB)	Avg (dBμV)	Av Delta L 1 (dB)
1	12345.0000	12.9	-2.5	10.2	-5.2

The First column, labelled Signal Number, is a number that the receiver has given to each signal, which has been calculated.

Column Two, labelled Frequency (MHz), is the frequency of the signal received.

Column Three, labelled Peak (dBμV), (can also be labelled, in the case of Quasi Peak, Peak dBμV/m) is the Level that was received at peak amount in dB above 1μV.

Column Four, labelled PK Delta L1 (dB), is the same level as Column three but is given in a level relative to the limit line required.

Column Five, labelled AVG (dBμV), (can also be labelled, in the case of Quasi Peak, QP dBμV/m) when undertaking a Quasi peak test, This is the Average or Quasi peak calculation results given in dBμV or dBμV/m above 1μV.

Column Six, labelled AV Delta L 1 (dB), (can also be labelled, in the case of Quasi Peak, QP Delta L 1 (dB)) is the Average or Quasi Peak calculation relevant to the limit line. The results entered in this column indicate the signal level relative to the compliance limit required. Negative numbers indicate that the product is compliant.

7.2 Explanation of limit line calculations for radiated measurements

The limits given in the test standard are normally expressed as absolute values (e.g. in μV/m at a specified distance), whereas the measured values are expressed as peak, quasi peak or average values in dBμV/m referenced to the measuring instrument inputs. RN Electronics calibrate the test set-up to account for any path losses, antenna gains, etc. so that the value read at the receiver relates directly to the absolute value required, except that it is expressed in dB relative to one microVolt and may need to take account of any alternative measuring distance used. Examples:

(a) limit of 500 μV/m equates to 20.log (500) = 54 dB μV/m.

(b) limit of 300 μV/m at 10m equates to 20.log (300 . 10/3) = 60 dB μV/m at 3m

8. Photographs

Photograph of the EUT as viewed from in front of the antenna, site M

To remain Confidential.

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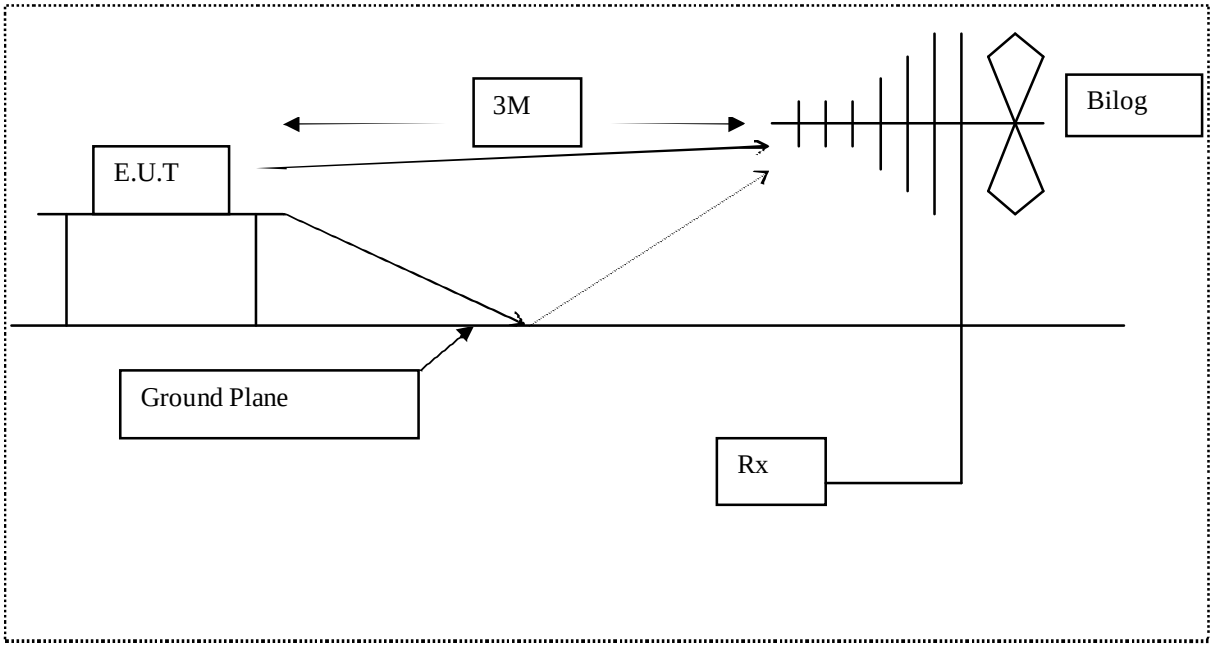

Diagram of the radiated emissions test setup.

Photograph of the EUT as viewed from screened room (conducted emissions)

To remain Confidential.

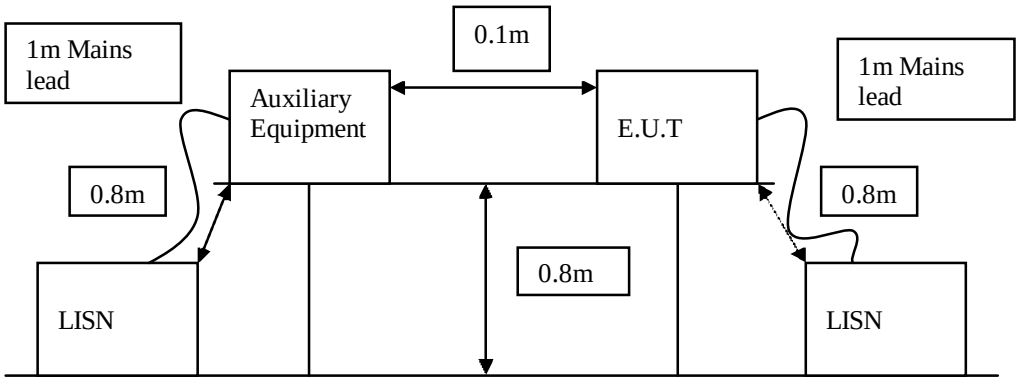

Diagram of the conducted emissions test setup.

Identifying Photograph of the EUT

To remain Confidential.

9. Signal Leads

Port Name	Cable Type
AC/DC Supply	adapter to 2 core DC
Aux Input	2.5mm audio
Stereo Out	2.5mm audio
Headphones	2.5mm audio
Aux Speaker	2.5mm audio
Mini USB	USB

10. Test Equipment Calibration list

The following table lists the test equipment used, last calibration date and calibration interval. All test equipment used has been maintained within the calibration requirements of ***R.N. Electronics Ltd.*** test facility quality system. Calibration intervals are regularly reviewed dependent on equipment manufacturer's recommendations and actual usage of the equipment.

RNNo	Model	Description	Manufacturer	Date Calibrated	Period
E001	HP8542E	EMI Receiver and RF Filter	Hewlett Packard	12-Aug-09	12
E003	HP8593E	Spectrum Analyser	Hewlett Packard	10-Oct-08	24
E005	HP8447F	Pre-Amplifier	Hewlett Packard	23-Oct-09	12
E131	ESG-3000A	Signal Generator	Hewlett Packard	21-Nov-08	24
E150	MN2050	LISN 13A	Chase	29-Oct-09	24
E249	8471E	Detector	Hewlett Packard	15-Jan-10	12
E250	6806.19.A	6dB Attenuator	Hewlett Packard	29-Oct-09	12
E252	6810.19.A	10 dB Attenuator	Suhner	29-Oct-09	12
E266	2032	5.4GHz Signal Generator	Marconi Instruments	27-Mar-08	24
E268	BHA 9118	1-18 GHz Horn Antenna	Schaffner	02-Mar-09	60
E290	6914	Power Sensor	Marconi Instruments	01-Jun-09	24
E321	3020A	BI-Directional Coaxial Coupler 50-1000 MHz	Narda	N/A	N/A
E342	8563E	Spectrum Analyser 26.5 GHz	HP	23-Feb-09	24
E383	SB029	11 - 18 GHz Band pass filter	Filtronic Components Ltd	N/A	N/A
E397	6960B	RF Power Meter	Marconi Instruments	21-Nov-08	24
E410	N5181A	100 kHz - 3 GHz MXG Signal Generator	Agilent Technologies	05-Oct-09	12
E411	N9039A	9 kHz - 1 GHz RF Filter Section	Agilent Technologies	07-Oct-09	12
E412	E4440A	3 Hz - 26.5 GHz PSA	Agilent Technologies	07-Oct-09	12
E428	HF906	1-18 GHz Horn Antenna	Rhode and Schwarz	23-Oct-09	36
E429	-	5 Switch Filter Box 0.91 GHz - 16.3 GHz	RN Electronics	N/A	N/A
E434	G3RUH	10 MHz GPS Oscillator	James Miller	N/A	N/A
TMS79	460451	Std Gain Horn Antenna 18-26.5 GHz	ETS Systems	21-Apr-10	24
TMS81	6502	Active Loop Antenna	EMCO	13-Apr-10	24
TMS82	8449B	Pre Amplifier 1 - 26 GHz	Agilent	23-Oct-09	12
TMS933	CBL6141A	Bilog Antenna 30MHz - 2GHz	York EMC	10-Sep-07	36

11. Auxiliary equipment

11.1 Auxiliary equipment supplied by PURE Digital

Auxiliary equipment used for the purpose of test supplied by the above has been listed below

Manufacturer	Description	Model Number	Serial Number
One for All	Modified Remote Control	-	G073103

11.2 Auxiliary equipment supplied by RN Electronics Limited

Auxiliary equipment used for the purpose of test supplied by the above has been listed below

RN Number	Manufacturer	Description	Model Number	Serial Number
N453	Uni Tone	Hi-Fi Stereo Headphones	HD-828	-

12. Modifications

In order for the EUT to produce the results shown within this report the following modifications, if any, were implemented.

12.1 Modifications before test

The Wi-Fi antenna matching/tuning components were adjusted by a Pure Digital Ltd representative and the EUT software was upgraded to version “vivaldi_2.30.1.113.013.dfu”.

12.2 Modifications during test

There were no modifications made by R.N. Electronics Ltd during testing.

13 Compliance Information

Products subject to the Declaration of Conformity procedure are required to be supplied with a compliance information statement. A copy of this statement may be included here:

14 Description of Test Sites

Site A	Radio / Calibration Laboratory and anechoic chamber
Site B	Semi-anechoic chamber
Site B1	Control Room for Site B
Site C	Transient Laboratory
Site D	Screened Room (Conducted Immunity)
Site E	Screened Room (Control Room for Site D)
Site F	Screened Room (Conducted Emissions) VCCI Registration No. C-2823
Site K	Screened Room (Control Room for Site M)
Site M	3m Semi-anechoic chamber (indoor OATS) FCC Registration No. 293246
Site Q	Fully-anechoic chamber
Site OATS	3m and 10m Open Area Test Site FCC Registration No. 293246 IC Registration No. 5612A-1 VCCI Registration No. R-2580

15 Abbreviations and Units

%	Percent
µA/m	microAmps per metre
µV	microVolts
µW	microWatts
AC	Alternating Current
ALSE	Absorber Lined Screened Enclosure
AM	Amplitude Modulation
Amb	Ambient
ATPC	Automatic Transmit Power Control
BER	Bit Error Rate
ºC	Degrees Celsius
C/I	Carrier / Interferer
CEPT	European Conference of Postal and Telecommunications Administrations
COFDM	Coherent OFDM
CS	Channel Spacing
CW	Continuous Wave
dB	deciBels
dBµA/m	deciBels relative to 1µA/m
dBµV	deciBels relative to 1µV
dBc	deciBels relative to Carrier
dBm	deciBels relative to 1mW
DC	Direct Current
DTA	Digital Transmission Analyser
EIRP	Equivalent Isotropic Radiated Power
ERP	Effective Radiated Power
EU	European Union
EUT	Equipment Under Test
FM	Frequency Modulation
FSK	Frequency Shift Keying
g	Grams
GHz	GigaHertz
Hz	Hertz
IF	Intermediate Frequency
kHz	kiloHertz
LBT	Listen Before Talk
LO	Local Oscillator
mA	milliAmps
max	maximum
mbar	milliBars
Mbit/s	MegaBits per second
MHz	MegaHertz
mic	Microphone
min	minimum
mm	milliMetres
ms	milliSeconds
mW	milliWatts
NA	Not Applicable
nom	Nominal
nW	nanoWatt
OATS	Open Area Test Site
OFDM	Orthogonal Frequency Division Multiplexing
ppm	Parts per million
PRBS	Pseudo Random Bit Sequence
QAM	Quadrature Amplitude Modulation
QPSK	Quadrature Phase Shift Keying
R&TTE	Radio and Telecommunication Terminal Equipment
Ref	Reference
RF	Radio Frequency
RFC	Remote Frequency Control
RSL	Received Signal Level
RTP	Room Temperature and Pressure
RTPC	Remote Transmit Power Control
Rx	Receiver
s	Seconds
SINAD	SIgnal to Noise And Distortion
Tx	Transmitter
V	Volts

RN Electronics
EMC & RADIO TEST SERVICES

Certificate of Test

The equipment noted below has been tested by ***R.N. Electronics Limited*** and conforms with the relevant subpart of FCC 47CFR part 15, subject to deviations as detailed in this report.

This certificate relates to the unit, as identified by unique serial number(s) and further detailed in the referenced report, in the condition(s) at the time it was tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed. Furthermore, this is a certificate of test only and should not be confused with an equipment authorisation.

Equipment:	Evoke Flow
Model Number(s):	Evoke Flow
Unique Serial Number(s):	119090CJ000009 and 119090000023
Manufacturer:	PURE Digital Ltd Home Park Estate Kings Langley Hertfordshire WD4 8DH
Customer Purchase Order Number:	PO091661
R.N. Electronics Limited Report Number:	03-398B/4201/2/10
Test Standards:	FCC 47CFR Part 15C effective date **October 1st, 2009,** Class DTS Intentional Radiator
Date:	4th February to 24th March 2010
For and on behalf of R.N. Electronics Limited	
Signature:	Paul Darragh Digitally signed by: Paul Darragh DN: CN = Paul Darragh C = GB O = RN Electronics Ltd Date: 2010.08.27 08:59:16 Z
Notes:	

RN Electronics Ltd www.RNelectronics.com
Arnolds Court, Arnolds Farm Lane, Mountnessing, Brentwood, Essex CM13 1UT
Tel: +44 1277 352219 E-mail: sales@RNelectronics.com Fax: +44 1277 352968