



ETS Dr.GenZ Taiwan PS Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679

Accredited Testing Laboratory



A2LA Cert.No.: 2300.01

PTCRB Accredited Type Certification Test House

FCC TEST - REPORT

FCC Part 15 C for IEEE 802.11 b device

FCC ID: RXZ-WM71RL1

Test report no.: W6M20603-6705-C-1

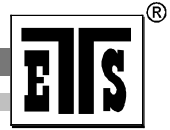
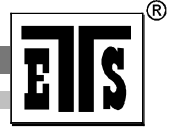


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1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has Passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.

The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the ETS DR. GENZ TAIWAN PS CO., LTD.


Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

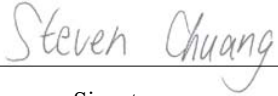
The test sample is able to work according IEEE 802.11 b.

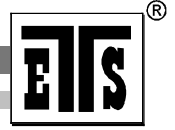
This report is related to FCC Part 15 C (DSSS device).

Tester:

Apr.13.2006		Jay Chaing	
_____	_____	_____	_____
Date	ETS-Lab.	Name	Signature

Technical responsibility for area of testing:

Apr.13.2006		Steven Chung	
_____	_____	_____	_____
Date	ETS	Name	Signature



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1.2 Testing laboratory

1.2.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)

Company
ETS Dr.Genx Taiwan PS Co., Ltd.
6F, NO. 58, LANE 188, RUEY-KUANG RD.
NEIHU, TAIPEI 114, TAIWAN R.O.C.
Tel : 886-2-66068877
Fax : 886-2-66068879

1.2.2 Details of accreditation status

Accredited testing laboratory

A2LA-registration number: 2300.01

FCC filed test laboratory Reg. No. 930600

Industry Canada filed test laboratory Reg. No. IC 5679

PTCRB Accredited Type Certification Test House

1.3 Details of approval holder

Name : Pro-Nets Technology Corporation
Street : 7F,No.95,Lide St,Chung Ho City
Town : Taipei 235
Country : Taiwan R.O.C.
Telephone : +886-2-8221-8385#700
Fax : +886-2-3234-5818

Contact : Mr. Sam Yu
Telephone : +886-2-8221-8385#700

Registration number: W6M20603-6705-C-1
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1.4 Application details

Date of receipt of application : Mar.15.2006
Date of receipt of test item : Apr.06.2006
Date of test : from Apr.06.2006 to Apr.13.2006

1.5 General information of Test item

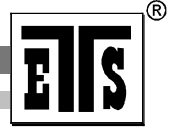
Type of test item : WIRELESS MINI PCI
Model Number : WM71RL1
Serial Model Number : ./.
Brand Name : PRO-NETS, Speed Com+, Jet Com, Medilink
Hardware : 1.0
Software : 1.0.2.0
Serial number : without
Photos : see Annex

Technical data

Frequency band : 2.4 GHz – 2.4835 GHz
Frequency (ch A) : 2.412 GHz
Frequency (ch B) : 2.437 GHz
Frequency (ch C) : 2.462 GHz
Number of Channels : 11
Operation modes : duplex
Modulation Type : DSSS

Fixed point-to-point operation : Yes / No
Type of Antenna 1 (TX) : Swivel Access Point Antenna
Type of Antenna 2 (RX) : Swivel Access Point Antenna
Type of Antenna 3 (RX) : Swivel Access Point Antenna
Antenna gain of Antenna 1 (TX) : 2.5 dBi
Antenna gain of Antenna 2 (RX) : 2.5 dBi
Antenna gain of Antenna 3 (RX) : 2.5 dBi
Power supply : 120 VAC (power on pc)
Emission designator : 17M1G1D

Remark: There are 3 antennas in this case. One of the TX antenna in the middle, and the other 2 RX antennas in the two side of TX. When testing TX mode, only TX antenna in the middle will operate. When testing RX mode, the TX antenna in the middle will not operate, but the other 2 RX antennas in the two side of TX will operate at the same time.



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Host device: none

Classification :

Fixed Device	<input type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input checked="" type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input type="checkbox"/>

Transmitter

Unom

Power (ch A) : Conducted: 12.48 dBm
Power (ch B) : Conducted: 11.63 dBm
Power (ch C) : Conducted: 9.72 dBm

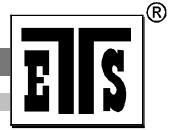
Manufacturer:
 (if applicable)

Name : ./.
 Street : ./.
 Town : ./.
 Country : ./.

Additional information: The sample is using WLAN technology according IEEE 802.11 b/g. For this report the function according IEEE 802.11b is considered only. The scheme for frequency generation, spectrum spreading, receiver parameters, synchronization procedure, and other parameters are determined by the mentioned standard above.

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART B / SUBPART C § 15.247



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2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.



or

The deviations as specified in 2.5 were ascertained in the course of the tests performed.



2.2 Test environment

Temperature	: 23 °C
Relative humidity content	: 20 ... 75 %
Air pressure	: 86 ... 103 kPa
Details of power supply	: 120 VAC (power on pc)
Extreme conditions parameters	: --

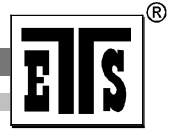
Registration number: W6M20603-6705-C-1
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2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2005/10/27	2006/10/26
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW		
ETSTW-CE 004	ZWEILEITER-V- NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2005/10/25	2006/10/24
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2005/10/21	2006/10/20
ETSTW-CE 006	IMPULS-BEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2004/11/11	2006/11/10
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	ABSORPTIONS- MESSWANDLER- ZANGE	2005/10/24	2007/10/23
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40- 1P-U	MAA0305-009	GIANT FORCE	2005/8/18	2006/8/17
ETSTW-CS 001	SIGNAL GENERATOR	SMX	849254/003	R&S	2005/10/14	2006/10/13
ETSTW-CS 002	COUPLING AND DECOUPLING NETWORK	CDN S751	19263	SCHAFFNER	2005/10/14	2006/10/13
ETSTW-CS 003	COUPLING AND DECOUPLING NETWORK	CDN T400	19820	SCHAFFNER	2005/10/14	2006/10/13
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2005/10/27	2006/10/26
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	2005/10/14	2006/10/13
ETSTW-CS 004	6 dB Attenuator	HFP-5100-3/06 N M/F	2010876106			
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2005/10/14	2007/10/13
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2005/10/24	2006/10/23
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2005/10/29	2006/10/30
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2005/10/16	2006/10/15
ETSTW-RE 015	ANTENNA	HK116	841489/003	R&S	2005/1/14	2007/1/11
ETSTW-RE 016	ANTENNA	HL223	848953/006	R&S	2005/1/14	2007/1/11
ETSTW-RE 017	ANTENNA	HL025	352886/001	R&S	2005/9/6	2007/9/3
ETSTW-RE 018	ANTENNA	AT4560	27212	AR	2004/11/8	2007/11/7
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2005/10/14	2006/10/13
ETSTW-RE 022	AMPLIFIER	8447D	2944A09837	Brüel&Kjær	2005/10/14	2006/10/13
ETSTW-RE 027	Passive Loop Antenna	6512	34563	EMCO	2004/6/30	2007/6/29

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ETSTW-RE 030	Double-Ridged Waveguide Horn Antenna	3117	35224	EMCO	2004/5/5	2006/5/4
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2005/10/17	2006/10/16
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2005/10/17	2006/10/16
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2005/3/22	2008/3/21
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2005/5/19	2007/5/18
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2005/9/6	2006/9/5
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	93	EMC-PARTNER	2005/9/11	2006/11/10
ETSTW-EMS 001	Clamp BASELSTRASSE 160 CH-4242 LAUFEN	CN-EFT1000	354	EMC-PARTNER	2004/11/2	2006/11/1
ETSTW-EMS 003	EMC Immunity Test System	TRA2000IN6	579	EMC-PARTNER	2005/10/27	2006/10/26
ETSTW-EMS 004	ESD generator minizap	ESD2000	016	EMC-PARTNER	2005/10/27	2006/10/26
ETSTW-EMS 008	Safety Test Solutions	ELT-400	E-0039	Narda	2005/1/4	2007/1/3
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	2004/12/3	2007/12/2
ETSTW-EMS 010	Coupling De-coupling Network	CDN-UTP8	014	EMC-PARTNER	2005/9/1	2008/8/31
ETSTW-EMS 012	EM Injection Clamp	F-2031-23MM	476	FCC	2005/8/11	2007/8/11
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR		
ETSTW-RS 004	RF Power Amplifier	150W1000	307009	AR	2005/10/21	2006/10/20
ETSTW-RS 005	Electric Field Probe Type 8.3	EMR-20	BN 2244/20	Narda	2005/9/7	2006/9/6
ETSTW-RS 006	SIGNAL GENERATOR	SML03	101551	R&S	2005/10/21	2006/10/20
ETSTW-GSM 01	SIM Simulator	IT3	B2004-50106	ORGA	2005/9/15	2006/9/14
ETSTW-GSM 02	Universal Radio Communication Tester	CMU 200	103489	R&S	2005/11/15	2006/11/14
ETSTW-GSM 03	Agilent 8960 Test Set 1	E5515C	GB44052675	Agilent	2004/7/14	2006/7/13
ETSTW-GSM 04	Agilent 8960 Test Set 2	E5515C	GB44052665	Agilent	2004/7/14	2006/7/13
ETSTW-GSM 05	Agilent 8960 Test Set 3	E5515C	GB44052652	Agilent	2004/7/17	2006/7/16
ETSTW-GSM 06	Agilent 8960 Test Set 4	E5515C	GB44052684	Agilent	2004/7/16	2006/7/15
ETSTW-GSM 07	Agilent 8960 Test Set 5	E5515C	GB44052658	Agilent	2004/7/14	2006/7/13
ETSTW-GSM 08	Agilent 8960 Test Set 6	E5515C	GB44052666	Agilent	2004/7/16	2006/7/15
ETSTW-GSM 10	Combiner Wessex / Anite	B4605/100	053	Wessex / Anite	2004/7/14	2006/7/13



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ETSTW-GSM 11	GSM 850,900,1800,1900 Test system	TS8950G		R&S	2005/11/1	2006/10/31
ETSTW-GSM 12	Acoustical Calibrator	4231	2463874	Brüel&Kjær	2005/10/31	2006/10/30
ETSTW-GSM 13	Conditioning Amplifier	2690--0S2	2437856	Brüel&Kjær		
ETSTW-GSM 14	Telephone Test Head	4602B	2465324	Brüel&Kjær		
ETSTW-GSM 15	Mouth Simulator	4227	2462516	Brüel&Kjær		
ETSTW-GSM 16	TEMP.&HUMIDITY CHAMBER	GTH-120-40-1P-U	MAA0501002	GIANT FORCE	2005/12/29	2006/12/28
ETSTW-GSM 17	ANTENNT COPLER	CMU-Z10	100988	R&S		
ETSTW-GSM 18	AUDIO ANALYZER	UPL16	100173	R&S	2005/10/29	2006/10/28
ETSTW-GSM 23	SPLITTER	4901.19.A	None	SUHNER		
ETSTW-GSM 24	Vibration Testing System	VS-100V	5494	Vibration	2005/12/20	2006/12/19

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2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2003 using a 50 μ H LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was according to ANSI STANDARD C63.4-2003 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dB μ V) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

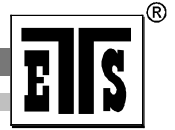
Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dB μ V + 10.36 dB + 6 dB = 36.36 dB μ V/m @3m

The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2003 Section 13.1.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

Measurements were made by ETS Dr.Genx Taiwan PS Co., Ltd. at the registered open field test site located at No.5-1, Shuang Sing Village, LiShuei Rd., Wanli Township, Taipei County 207, Taiwan (R.O.C.) The Registration Number: 930600.



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When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

Average = Peak + Duty Factor

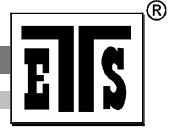
Duty Factor = $20 \log (\text{dwell time}/T)$

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

ANTENNA & GROUND:

This unit uses Swivel Access Point Antenna (see photos)

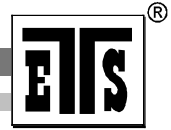


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3 Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equivalent radiated Power	15.247(b)(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions radiated – Transmitter operating	15.247(c)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Band Edge Measurement	15.247(c)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Minimum 6 dB Bandwidth	15.247(a)(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Peak Power Spectral Density	15.247(d)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Digital Part And Receiver L.O.	15.109	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The follows is intended to leave blank.



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3.1 Peak Output Power (transmitter)

FCC Rule: 15.247(b)(3)

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

The power was measured with modulation (declared by the applicant).

Test condition		Conducted Power		
		Channel A	Channel B	Channel C
		[dBm]	[dBm]	[dBm]
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120\ V$	12.48	11.63	9.72
Measurement uncertainty		< 3 dB		

Test condition	Signal Field strength TX highest power mode
$T_{nom} = 23^{\circ}C, V_{nom} = 120\ V$	dB $\mu V/m$
Frequency [MHz]	
2412	102.57
Measurement uncertainty	< 3 dB

Limits:

Frequency MHz	Power dBm
902 - 928	30
2400 – 2483.5	30
5725 – 5850	30

In case of employing transmitter antennas having antenna gain > 6 dBi and using fixed point-to-point operation consider §15.247 (b)(4)

Test equipment used: ETSTW-RE 003 , ETSTW-RE 012 , ETSTW-RE 017 , ETSTW-RE 024



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3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain
 EIRP = 12.48dBm + 2.5dBi
 = 14.98dBm

Limit: EIRP = +36 dBm for Antenna gain <6dBi

3.2.1 Transmitter

Integral Antenna:

At the transmitter the measurement was transacted with the modulation declared by the manufacturer and the maximum available output power of the EUT.

In this arrangement the EUT fulfils the requirements of the FCC rules § 15.247, subpart C, section b.

3.3 RF Exposure Compliance Requirements

The test sample is a WLAN access point intended for fixed installation.

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

$$S = \frac{PG}{4 \pi R^2}$$

S – Power Density

P – Output power ERP

R – Distance

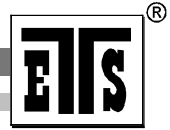
D – Cable Loss

AG – Antenna Gain G = AG-D

Item	Unit	Value	Remarks
P	mW	17.7	Peak value
D	dB		
AG	dBi	1.8	
G		2.5	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.006339	Calculated value

Limits:

Limit for General Population / Uncontrolled Exposure	
Frequency (MHz)	Power Density (mW/cm ²)
1500 – 100.000	1,0



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3.4 Transmitter Radiated Emissions in Restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 1000 MHz.

For radiated emission tests, the analyzer setting was as followings:

Frequency \leq 1 GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements)

Frequency $>$ 1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements)

Frequency $>$ 1 GHz , RBW:1 MHz , VBW: 100Hz (Average measurements)

Limits.

For frequencies below 1GHz:

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of DSSS Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction = $20 \log (\text{dwell time} / 100\text{ms})$

No duty cycle correction was added to the reading.

$54.0\text{dB } \mu\text{V/m} + 20 \text{ dB} = 74 \text{ dB } \mu\text{V/m}$

Remarks: see attached diagrams

Test equipment used: ETS 0125, ETS 0271

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3.5 Spurious Emissions (tx)

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

FCC Rule: 15.247(c), 15.35

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

Limits:

For frequencies below 1GHz:

Max. reading – 20 dB

$102.57\text{dB } \mu\text{V/m} - 20\text{ dB} = 82.57\text{dB } \mu\text{V/m}$

Guidance on Measurement of DSSS Systems:

“If the emission is pulsed, modify the unit for continuous operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty Cycle correction = $20 \log(\text{dwell time}/100\text{ms})$

For frequencies above 1GHz (Peak measurements).

Limit = max. aver. Reading-20dB+20dB(because Peak detector is used)

$82.57\text{dB } \mu\text{V/m}$

For frequencies above 1GHz (Average measurements).

Max. reading – 20dB

No duty cycle correction was added to the reading

$102.57\text{dB } \mu\text{V/m} - 20\text{ dB} = 82.57\text{dB } \mu\text{V/m}$

Remarks: see attached diagrams

Test equipment used: ETSTW-RE 003 , ETSTW-RE 012 , ETSTW-RE 015 , ETSTW-RE 016 , ETSTW-RE 017 , ETSTW-RE 024



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SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance with point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits. In the Table being listed the critical peak and average value and exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Duty-Cycle Correction Factor".

Summary table with radiated data of the test plots

(CH1)

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
V	133.567134	16.53	14.20	PK	30.73	43.52	12.79	271
	166.272545	15.51	15.15	PK	30.66	43.52	12.86	209
	265.731463	14.72	14.27	PK	28.99	46	17.01	292
	400.400802	16.26	17.79	PK	34.05	46	11.95	211
	4822.33216	58.71	4.53	PK	63.24	74	10.76	81
	4822.33216	45.14	4.53	AV	49.67	54	4.33	81
	2390.0	50.07	2.05	PK	52.12	54	1.88	360
	6436.873747	45.63	6.01	PK	51.64	82.57	30.93	33

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
H	133.567134	21.24	14.20	PK	35.44	43.52	8.08	309
	166.272545	17.1	15.15	PK	32.25	43.52	11.27	311
	265.731463	24.63	14.27	PK	38.90	46	7.1	217
	398.797595	22.42	17.77	PK	40.19	82.57	41.81	208
	2390.0	40.06	2.05	PK	42.11	54	11.89	32
	4825.651303	48.87	4.55	PK	53.42	54	0.58	231

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(CH6)

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
V	133.907816	17.85	14.21	PK	32.06	43.5	11.46	311
	166.613226	15.13	15.16	PK	30.29	43.52	13.23	300
	265.731463	16.09	14.31	PK	30.40	46	15.6	217
	400.400802	16.07	17.79	PK	33.86	46	12.14	209
	4872.37661	53.46	4.75	PK	58.21	74	15.79	98
	4872.37661	39.87	4.75	AV	44.62	54	9.38	98
	6501.002004	45.33	6.16	PK	51.49	82.57	31.08	88

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
H	100.180361	27.18	11.49	PK	38.67	82.57	4.39	199
	133.567134	22.65	14.20	PK	36.85	43.52	6.67	307
	265.731463	24.19	14.27	PK	38.46	46	7.54	221
	400.400802	22.42	17.79	PK	40.21	46	5.79	211
	4873.747495	43.97	4.76	PK	48.73	54	5.27	333

(CH11)

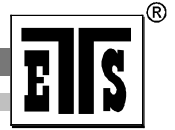
Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
V	133.567134	18.3	14.20	PK	32.50	43.52	11.02	307
	166.272545	15.06	15.15	PK	30.21	43.52	13.31	296
	265.731463	15.21	14.31	PK	29.52	46	16.48	218
	2483.5	54.24	-1.09	PK	53.15	54	0.85	172
	4921.843687	48.15	4.96	PK	53.11	54	0.89	88
	6565.130261	44.63	5.89	PK	50.52	82.57	32.05	83

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
H	100.180361	27.71	11.49	PK	39.20	82.57	43.37	232
	133.226453	22.51	14.21	PK	36.72	43.52	6.8	305
	265.731463	24.35	14.31	PK	38.66	46	7.34	222
	398.797595	22.31	17.77	PK	40.08	82.57	42.49	205
	2483.5	44.87	-1.09	PK	43.78	54	10.22	273

Note : 1. Correction Factor = Antenna Factor + Cable Loss – Pre-amplifier.

2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor.

3. Detector function in the form: P = Peak, QP = Quasi Peak, AV=Average.



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Freq. – Frequency Range:

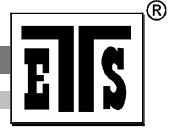
1:	30	-	200 MHz
2:	200	-	1000 MHz
3:	1	-	4 GHz
4:	4	-	8 GHz
5:	8	-	12 GHz
6:	12	-	17 GHz
7:	17	-	26.5 GHz

All not in the table noted test results are more than 20 dB below the relevant limits.
All other not noted test polts do not contain significant test results in relation to the limits.

TEST RESULT (Transmitter): The unit DOES meet the FCC requirements.

Comment: see attached diagrams

Test equipment used: ETSTW-RE 003, ETSTW-RE 015, ETSTW-RE 016, ETSTW-RE 017, ETSTW-RE 024



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3.6 Minimum 6 dB Bandwidth

The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission. The 6 dB bandwidth is the frequency difference between the two markers.

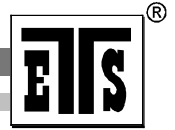
Test conditions		6 dB Bandwidth		
		Channel A	Channel B	Channel C
T _{nom} = 23°C	V _{nom} = 120 V	10.929487179 MHz	9.839743590 MHz	10.512820513 MHz
Measurement uncertainty		< 10 Hz		

Limits:

Frequency Range MHz	Limits
902-928	min 500 kHz
2400-2483.5	min 500 kHz
5725-5850	min 500 kHz

Test equipment used: ETSTW-CE 003 , ETSTW-RE 003

Comment: see attached diagram



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3.7 Peak Power Spectral Density

Peak Power Spectral density is a measured at low, middle and high channel.
 The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

Test conditions		Peak Power Spectral Density (3 kHz)		
		Channel A [dBm]	Channel B [dBm]	Channel C [dBm]
$T_{nom} = 23^{\circ}C$	$V_{nom} = 120 V$	-11.50	-7.33	-14.51
Measurement uncertainty		< 3 Hz		

Limits:

Frequency Range MHz	dBm
902-928	8
2400-2483,5	8
5725-5850	8

Test equipment used: ETSTW-CE 003 , ETSTW-RE 003

Comment: see attached diagram

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3.8 Radiated Emissions from Receiver Section of Transceiver

FCC Rule: 15.109

Summary table with radiated data of the test plots

(RX)

(CH1)

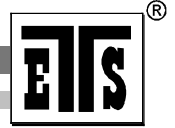
Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
V	100.180361	12.06	11.49	PK	23.55	43.5	19.95	211
	166.953908	16.94	15.16	PK	32.10	43.5	11.40	209
	501.402806	17.63	19.82	PK	37.45	46	8.55	219
	913.426854	12.68	26.53	PK	39.21	46	6.79	318
	3218.436874	38.28	0.32	PK	38.60	54	15.4	332

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
H	100.180361	25.49	11.49	PK	36.98	43.5	6.52	215
	132.885772	21.63	14.16	PK	35.79	43.5	7.71	278
	199.659319	25.66	12.12	PK	37.78	43.5	5.72	330
	224.048096	30.57	12.53	PK	43.10	46	2.90	132
	259.318637	28.52	41.06	PK	42.58	46	3.42	259
	365.6893787	15.21	16.83	PK	32.04	46	13.96	313

(CH6)

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
V	99.839679	12.72	11.48	PK	24.20	43.5	19.30	208
	166.272545	15.44	15.15	PK	30.59	43.5	12.91	215
	198.977956	17.76	12.11	PK	29.87	43.5	13.63	322
	501.402806	18.11	19.82	PK	37.93	46	8.07	220
	833.266533	12.75	25.54	PK	38.29	46	7.71	274

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
H	100.180361	25.01	11.47	PK	36.50	43.5	7.0	208
	133.567134	21.60	14.21	PK	35.81	43.5	7.69	269
	199.659319	24.52	12.12	PK	36.64	43.5	6.86	320
	301.002004	26.1	15.25	PK	41.35	46	4.65	305
	367.6302605	21.44	17.02	QP	38.46	46	7.54	258



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(CH11)

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
V	99.839679	9.62	11.48	PK	21.10	43.5	22.40	207
	166.613226	13.59	15.16	PK	28.75	43.5	14.75	214
	498.196393	18.76	19.77	PK	38.53	46	7.47	222
	834.869739	14.17	25.55	PK	39.72	46	6.28	275

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)
H	99.839679	25.08	11.48	PK	36.56	43.5	6.94	206
	133.567134	21.82	14.21	QP	36.03	43.5	7.47	271
	199.659319	24.47	12.12	PK	36.59	43.5	6.91	319
	301.002004	25.36	15.25	PK	40.61	46	5.39	315
	367.640318	21.38	17.02	PK	38.40	46	7.6	249

- Note :**
1. Correction Factor = Antenna Factor + Cable Loss – Preamplifier.
 2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor.
 3. Detector function in the form: P = Peak, QP = Quasi Peak, AV=Average.

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(Digital)

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)	Antenna Height (cm)
V	33.066132	17.23	13.11	PK	30.34	40	9.66	195	274
	132.885772	18.42	14.16	PK	32.58	43.5	10.92	217	263
	166.272545	16.68	15.15	PK	31.83	43.5	11.67	276	302
	499.799599	18.15	19.79	PK	37.94	46	8.06	283	132
	831.663327	12.36	25.56	PK	37.92	46	8.08	211	218
	913.426854	14.24	26.63	PK	40.87	46	5.13	275	326

Antenna Polarization	Frequency Marker (MHz)	Corrected Reading (dBuV)	Correction Factor (dB)	Detector	Test Result (dBuV/m)	Compliance Limit (dBuV/m)	Margin (dB)	Table Azimuth (degree)	Antenna Height (cm)
H	66.793587	16.70	13.51	PK	30.21	40	9.79	199	295
	100.180361	27.91	11.49	PK	39.4	43.5	4.10	216	283
	133.567134	23.75	14.21	PK	37.96	43.5	5.54	278	305
	299.398798	25.37	15.21	PK	40.58	46	5.42	274	317
	367.543086	21.48	16.83	QP	38.31	46	7.69	276	313
	400.400802	22.64	17.79	PK	40.43	46	5.57	263	205

- Note :**
1. Correction Factor = Antenna Factor + Cable Loss – Preamplifier.
 2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor.
 3. Detector function in the form: P = Peak, QP = Quasi Peak, AV=Average.

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 015, ETSTW-RE 016, ETSTW-RE 017, ETSTW-CS 001, ETSTW-RE 026, ETSTW-RE 003, ETSTW-RE 025

Comment: see attached diagram



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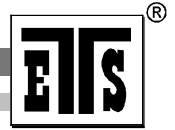
3.9 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Frequency	Level (dBμV)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

LISN type	Frequency Marker (MHz)	Corrected Reading (dBμV)	Correction Factor (dB)	Detector	Test Result (dBμV)	Compliance Limit (dBμV)	Margin (dB)
N	0.51	30.3	10.1	QP	40.4	56	15.6
	0.51	21.3	10.1	AV	31.4	46	14.6
	0.58	30.2	10.1	QP	40.3	56	15.7
	0.58	23	10.1	AV	33.1	46	12.9
	0.74	27.5	10.1	QP	37.6	56	18.4
	0.74	9.3	10.1	AV	19.4	46	26.6
	0.89	22.7	10.1	QP	32.8	56	23.2
	0.89	5.5	10.1	AV	15.6	46	30.4
	2.84	25.5	10.1	QP	35.6	56	20.4
	2.84	5.6	10.1	AV	15.7	46	30.3
	28.87	31.4	10.1	QP	41.5	60	18.5
	28.87	23.3	10.1	AV	33.4	50	16.6



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LISN type	Frequency Marker (MHz)	Corrected Reading (dBµV)	Correction Factor (dB)	Detector	Test Result (dBµV)	Compliance Limit (dBµV)	Margin (dB)
L1	0.59	34.4	10.1	QP	44.5	56	11.5
	0.59	19.7	10.1	AV	29.8	46	16.2
	0.72	34	10.1	QP	44.1	56	11.9
	0.72	24.6	10.1	AV	34.7	46	11.3
	0.93	34.1	10.1	QP	44.2	56	11.8
	0.93	27.6	10.1	AV	37.7	46	8.3
	1.87	25.6	10.1	QP	35.7	56	20.3
	1.87	6	10.1	AV	16.1	46	29.9
	2.65	26.3	10.1	QP	36.4	56	19.6
	2.65	11.8	10.1	AV	21.9	46	24.1
	25.85	33.4	10.1	QP	43.5	60	16.5
	25.85	24.8	10.1	AV	34.9	50	15.1

- Note :**
1. Correction Factor = Antenna Factor + Cable Loss – Preamplifier.
 2. The formula of measured value as: Test Result = Corrected Reading + Correction Factor.
 3. Detector function in the form: P = Peak, QP = Quasi Peak, AV=Average.

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETSTW-CE 004, ETSTW-CE 001, ETSTW-RE 023

Comment: see attached diagram

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Appendix

- A Peak Output Power
- B Spurious Emissions radiated – Transmitter operating
- C Band Edge Measurement
- D Minimum 6dB Bandwidth
- E Peak Power Spectral Density
- F Radiated Emissions from Receiver Section of Transceiver
- G Power Line Conducted Emission
- H Pictures

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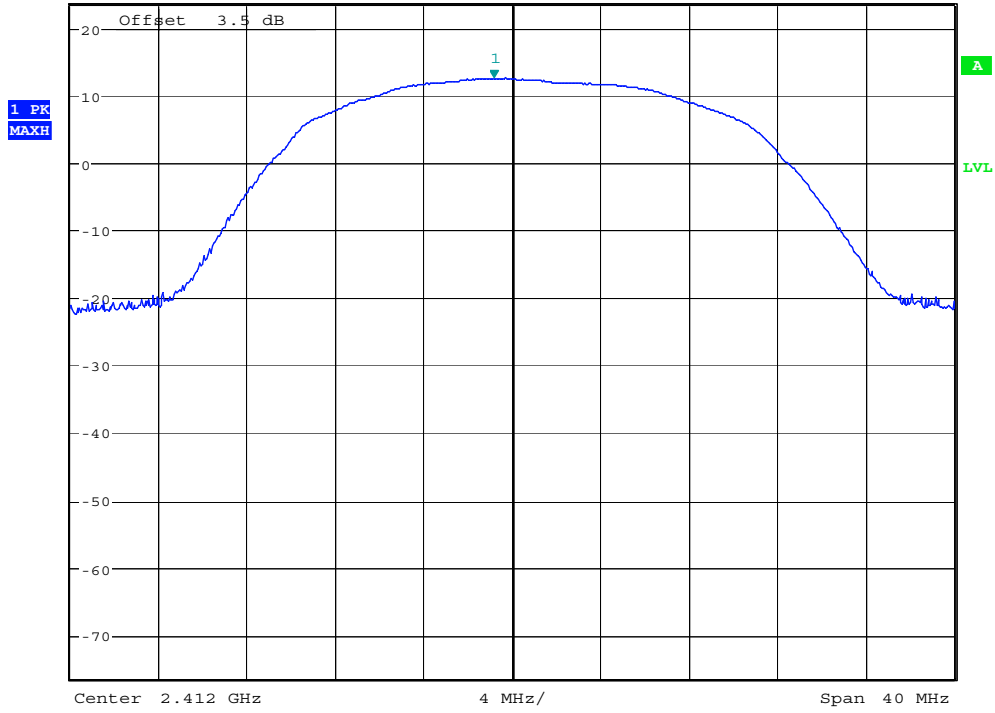
Appendix A

Peak Output Power

The measurement diagram are wideband pre-scan results; only for reference.



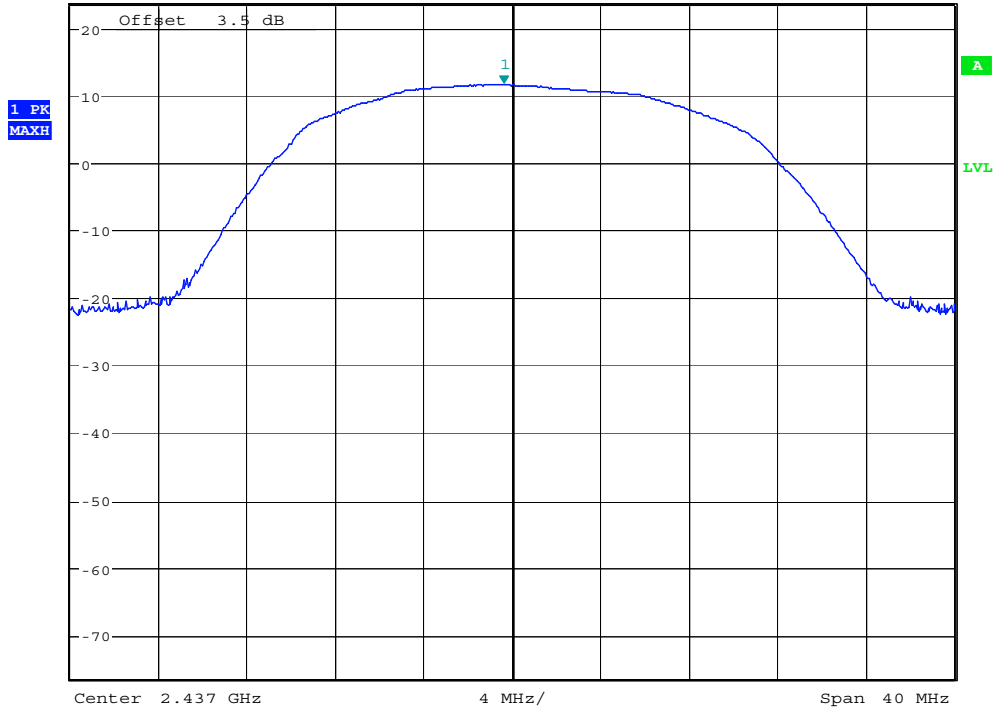
Ref 23.5 dBm Att 45 dB *RBW 10 MHz *VBW 10 MHz SWT 2.5 ms Marker 1 [T1] 12.48 dBm 2.411166667 GHz



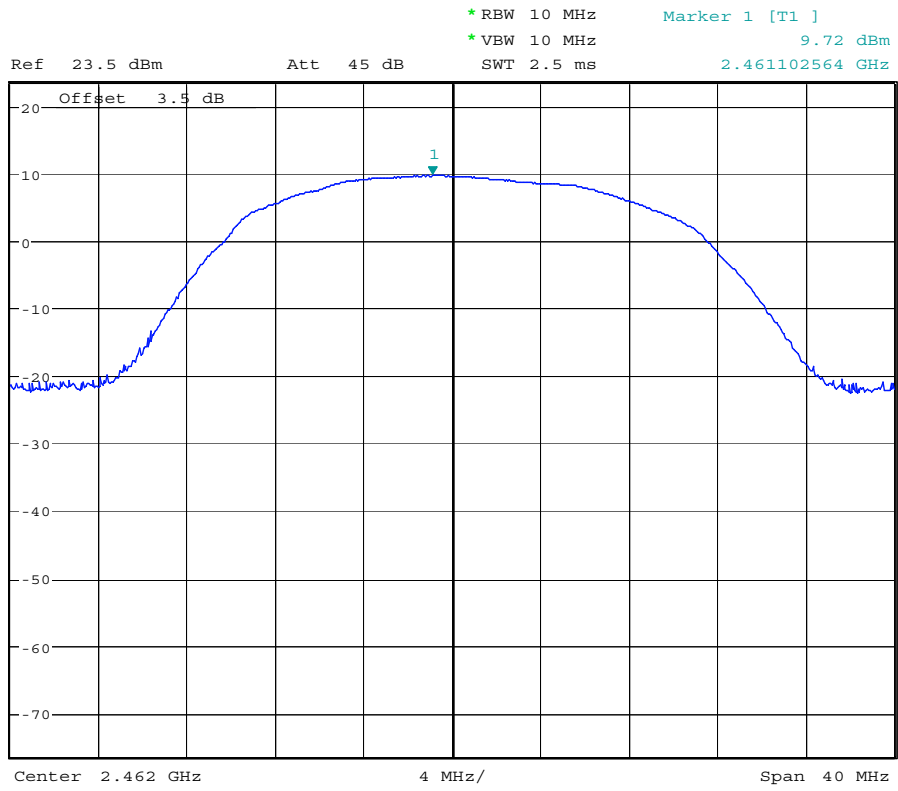
11b max output power ch 1
Date: 10.APR.2006 16:19:53



Ref 23.5 dBm Att 45 dB *RBW 10 MHz *VBW 10 MHz SWT 2.5 ms Marker 1 [T1] 11.63 dBm 2.436615385 GHz



11b max output power ch 6
Date: 10.APR.2006 16:20:34

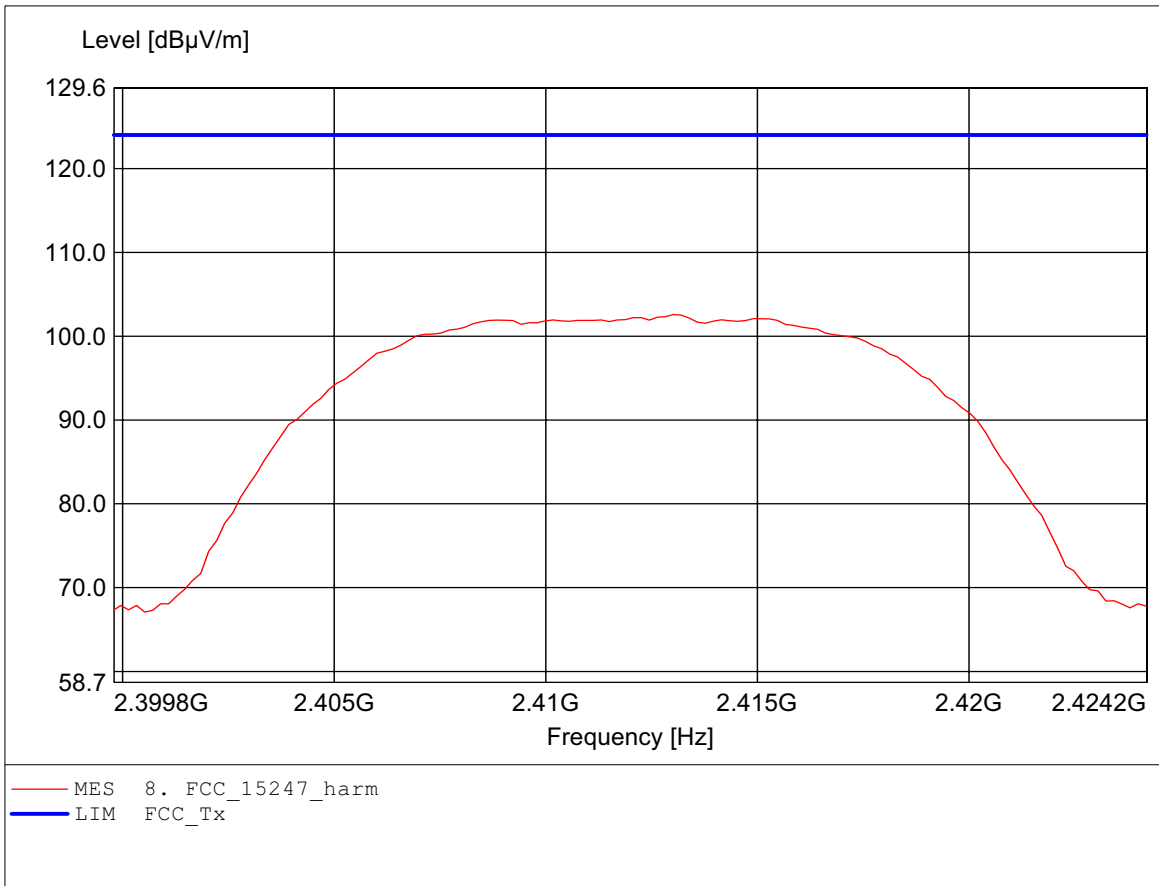


11b max output power ch 11
Date: 10.APR.2006 16:21:18

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

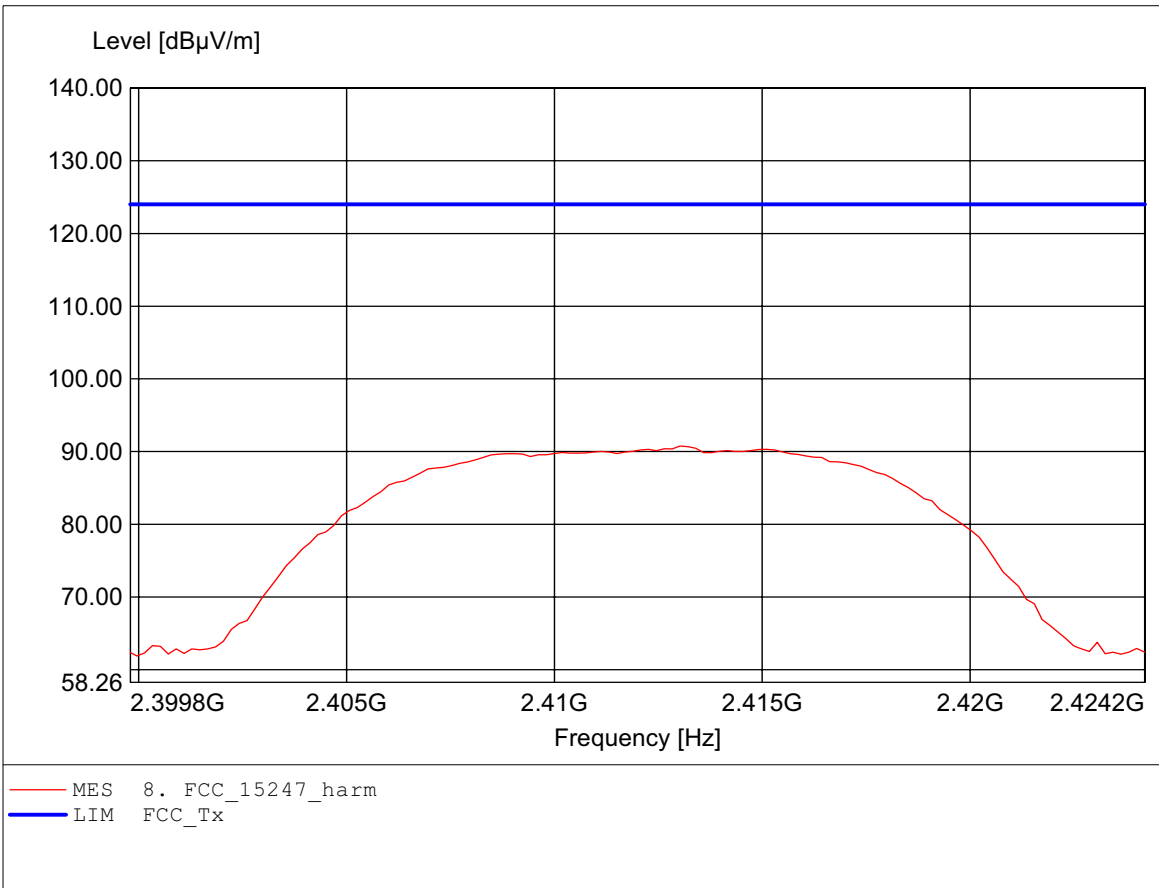
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL025
Freq: 2.413GHz, Emax: 102.57dBµV/m, RBW: 1MHz



Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

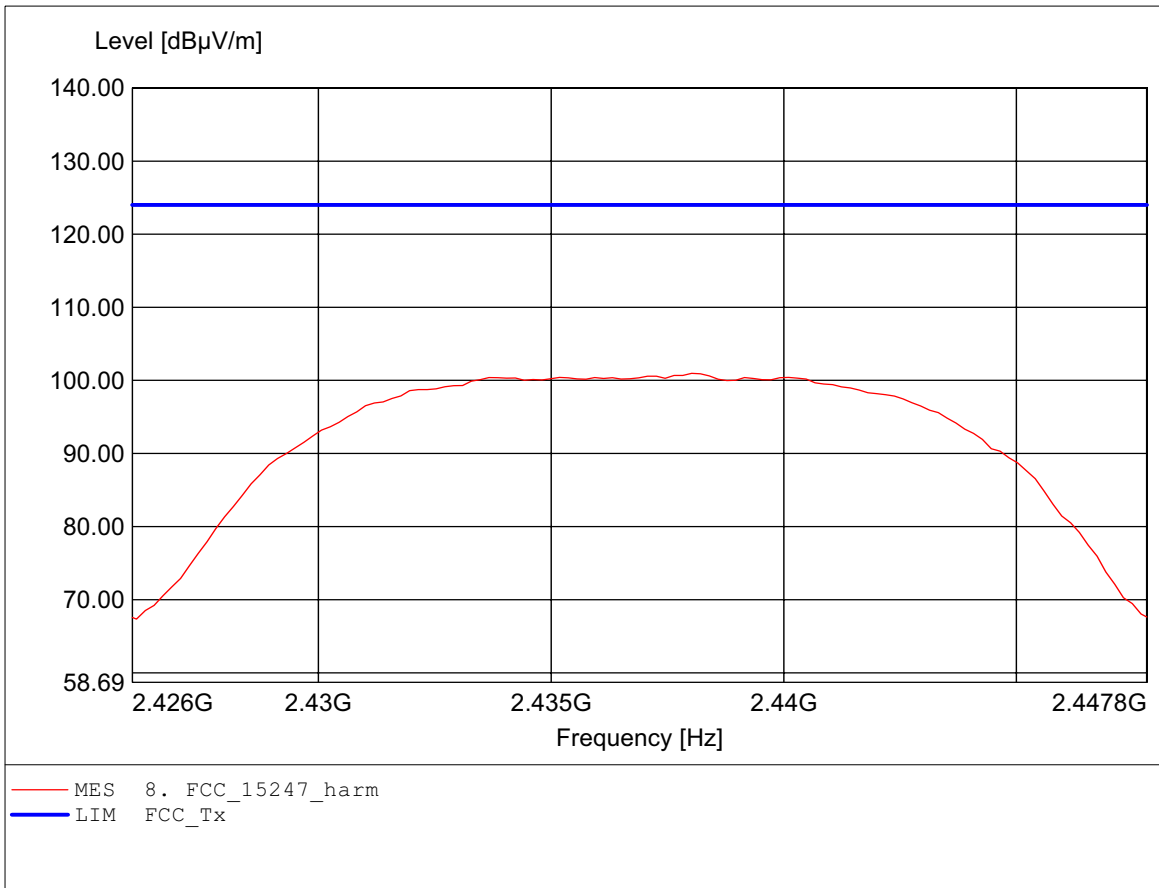
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL025
Freq: 2.413GHz, Emax: 90.75dBµV/m, RBW: 1MHz



Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

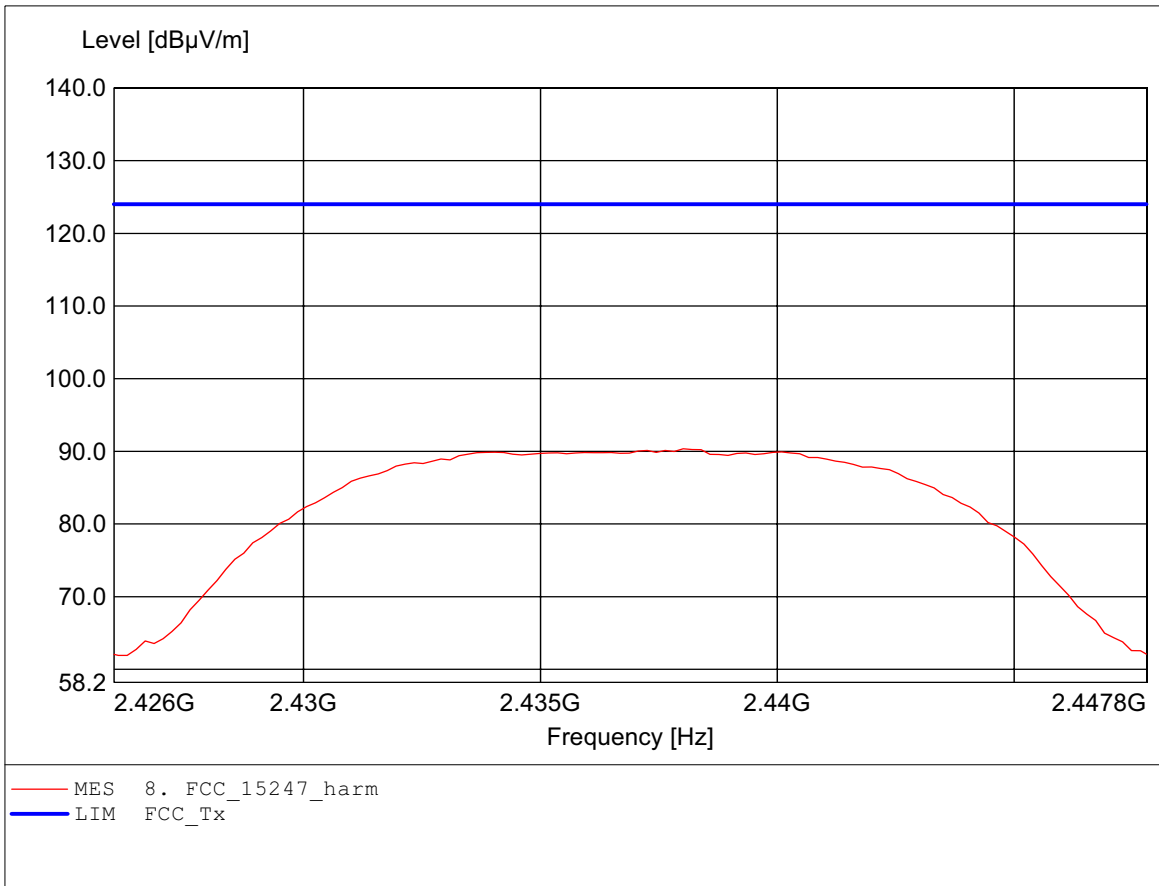
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC (power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL025
Freq: 2.438GHz, Emax: 100.96dBμV/m, RBW: 1MHz



Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

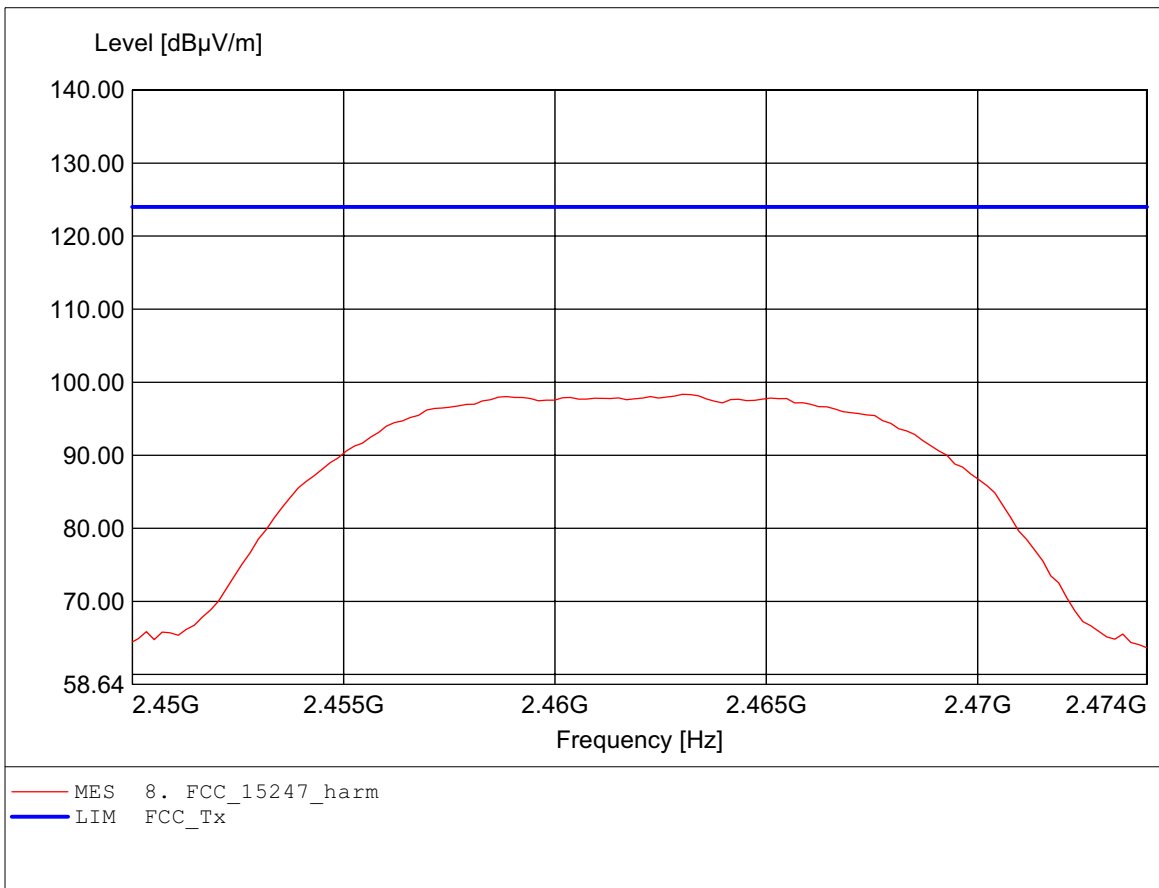
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC (power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL025
Freq: 2.438GHz, Emax: 90.36dBµV/m, RBW: 1MHz



Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

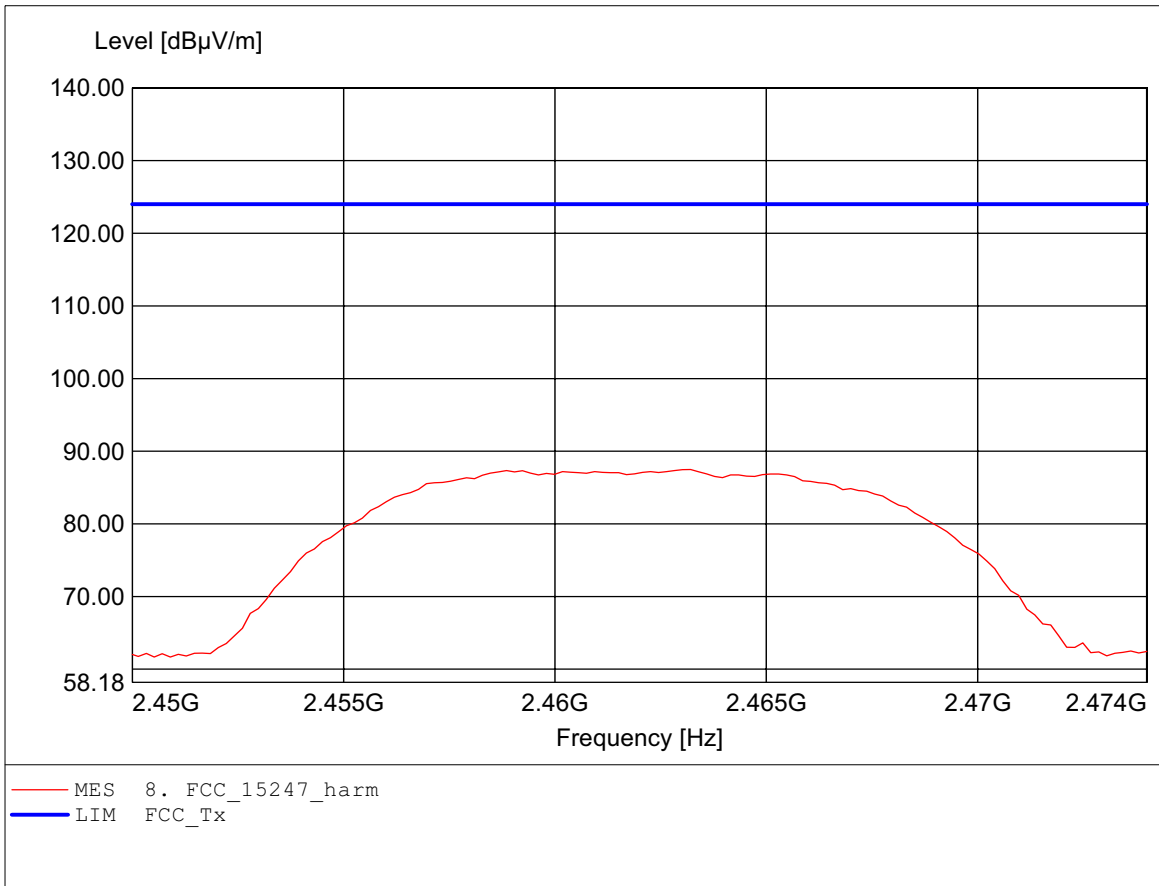
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL025
Freq: 2.463GHz, Emax: 98.35dBµV/m, RBW: 1MHz



Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL025
Freq: 2.463GHz, Emax: 87.47dBµV/m, RBW: 1MHz



Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix B

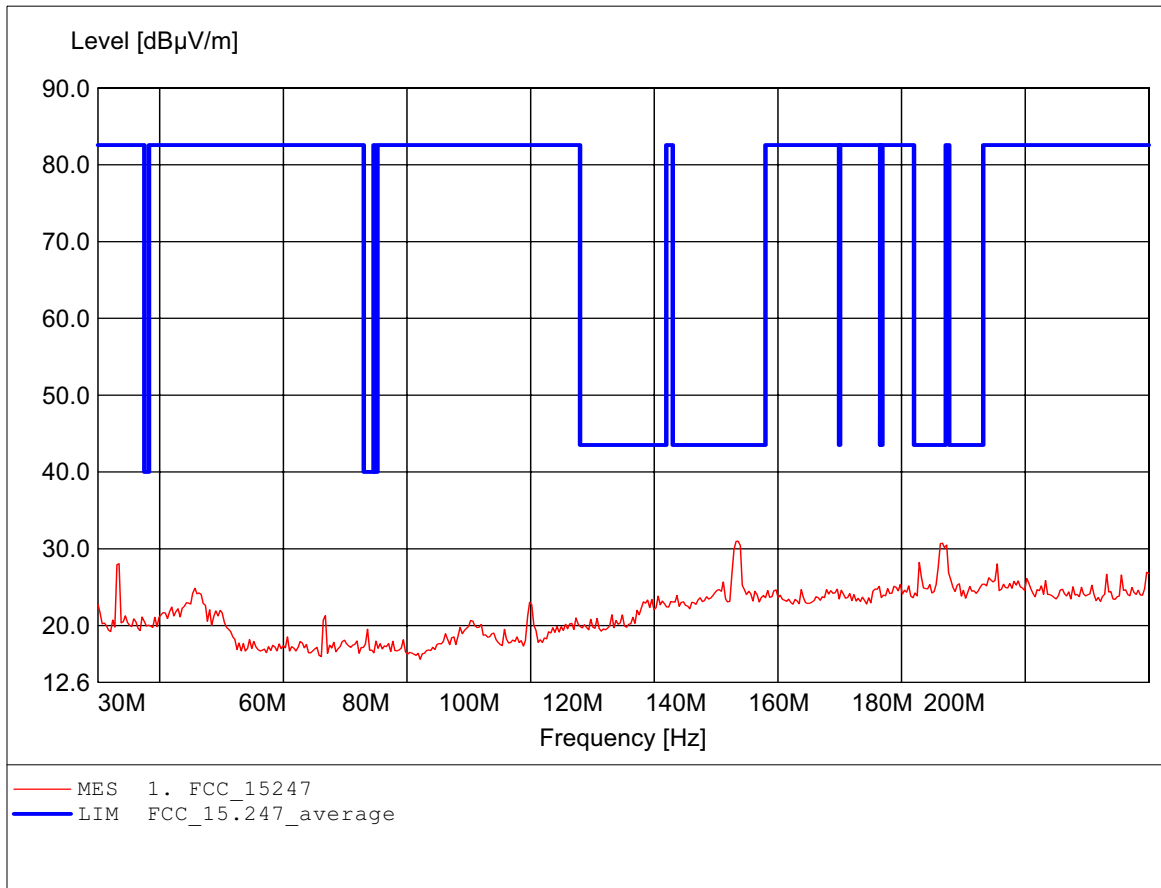
Spurious Emissions radiated – Transmitter operating

The measurement diagrams are wideband pre-scan results; only for reference. The final results are measured at OATS of 3 m. Please see final results as page 18 to 19.

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

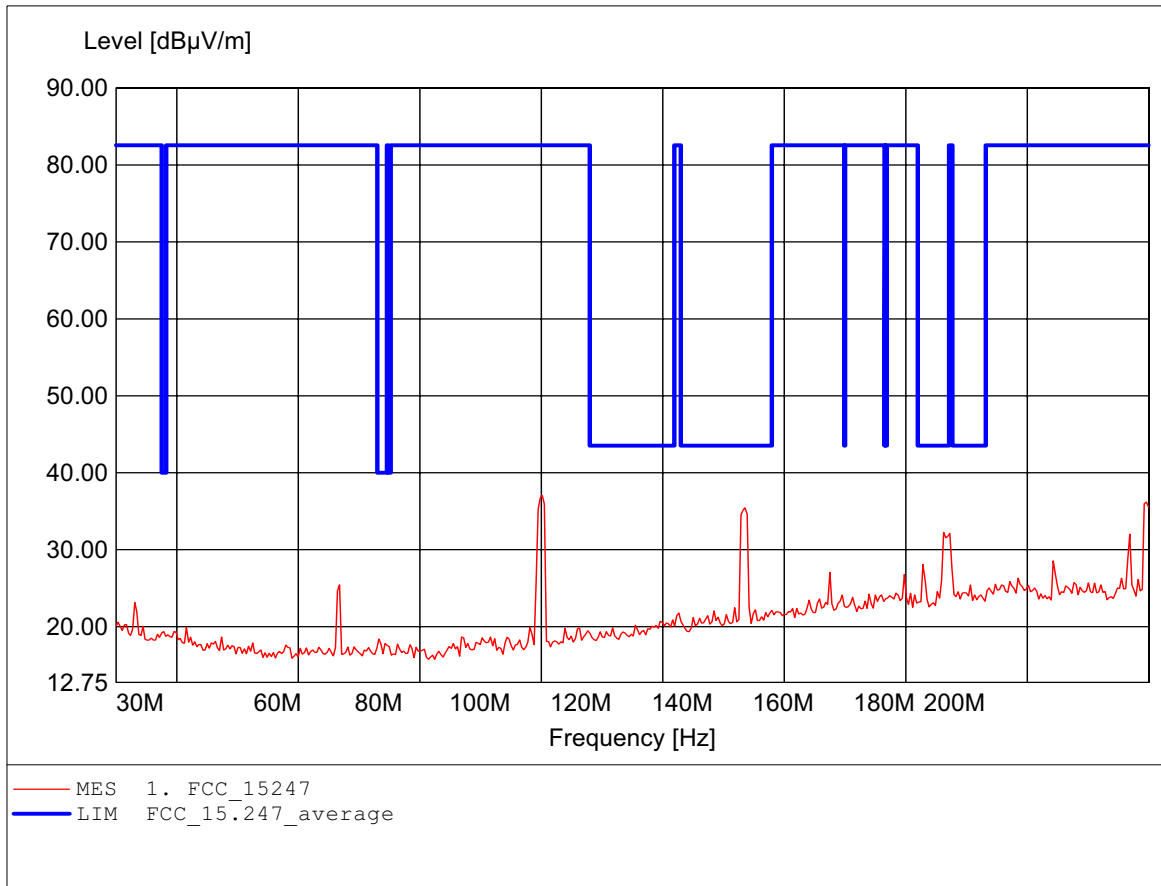
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Freq: 133.567MHz, Emax: 31.00dBμV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

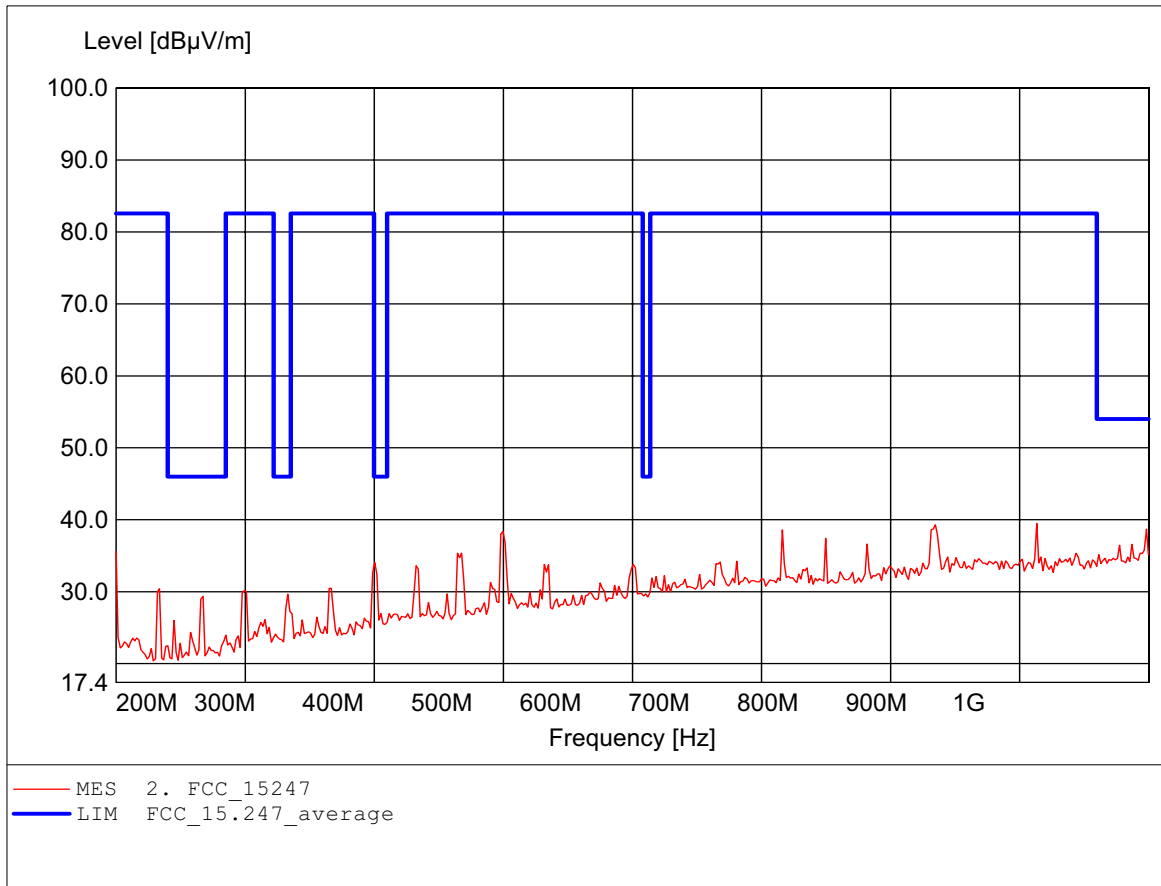
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Freq: 100.180MHz, Emax: 37.05dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

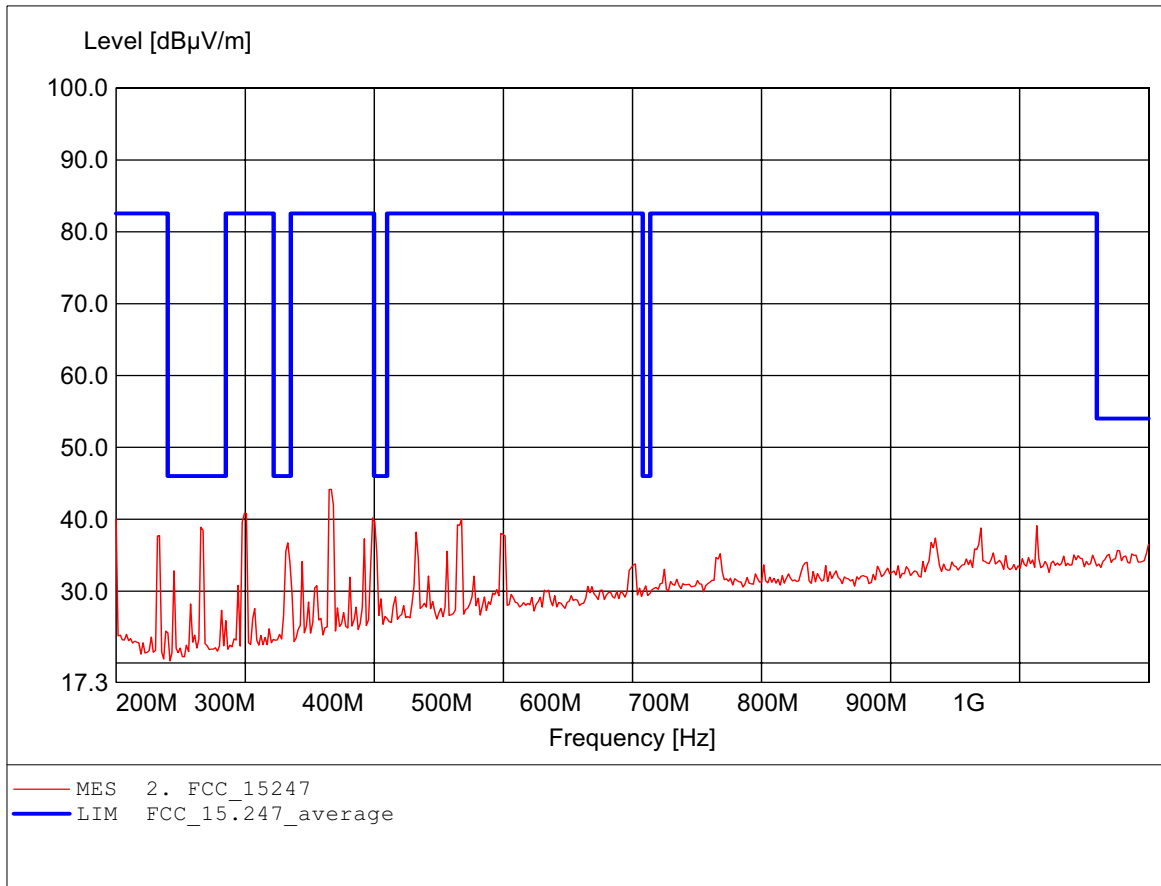
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223,
Freq: 913.427MHz, Emax: 39.49dBμV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

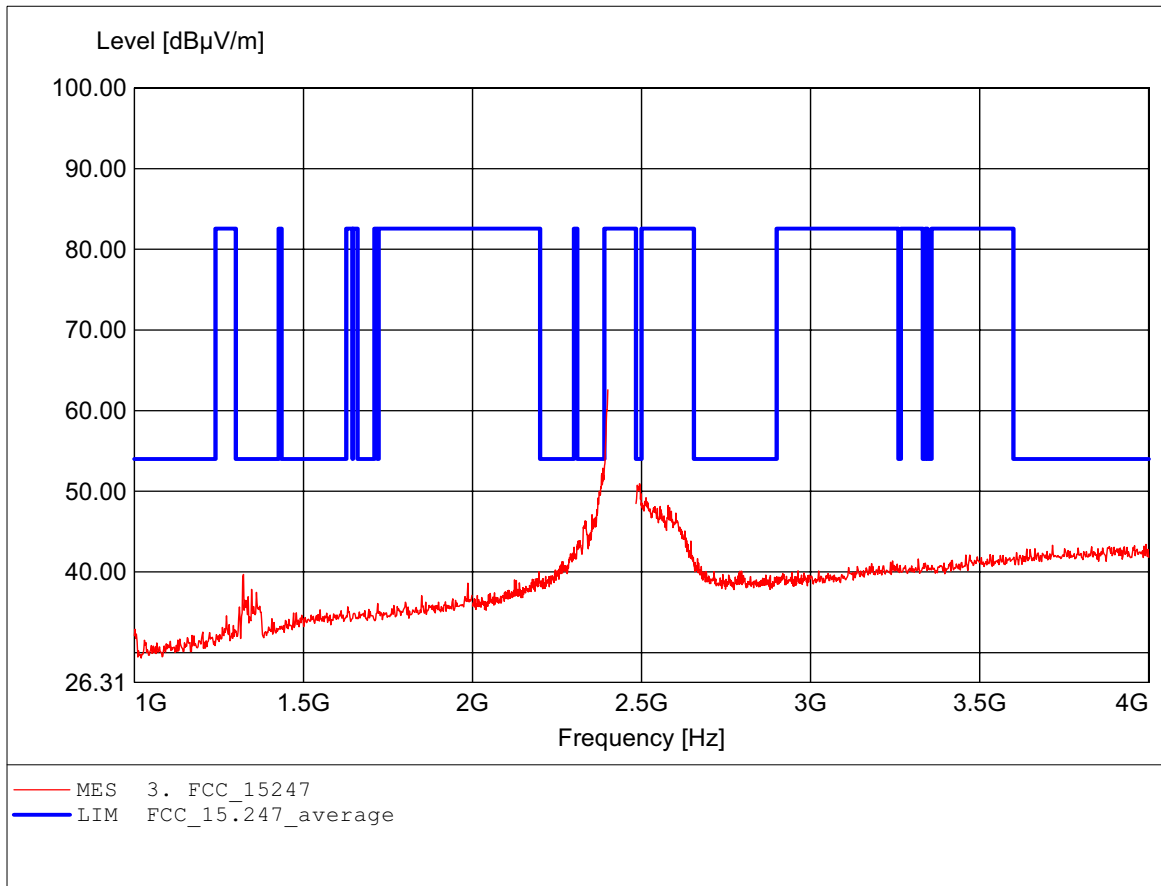
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223,
Freq: 366.733MHz, Emax: 44.17dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

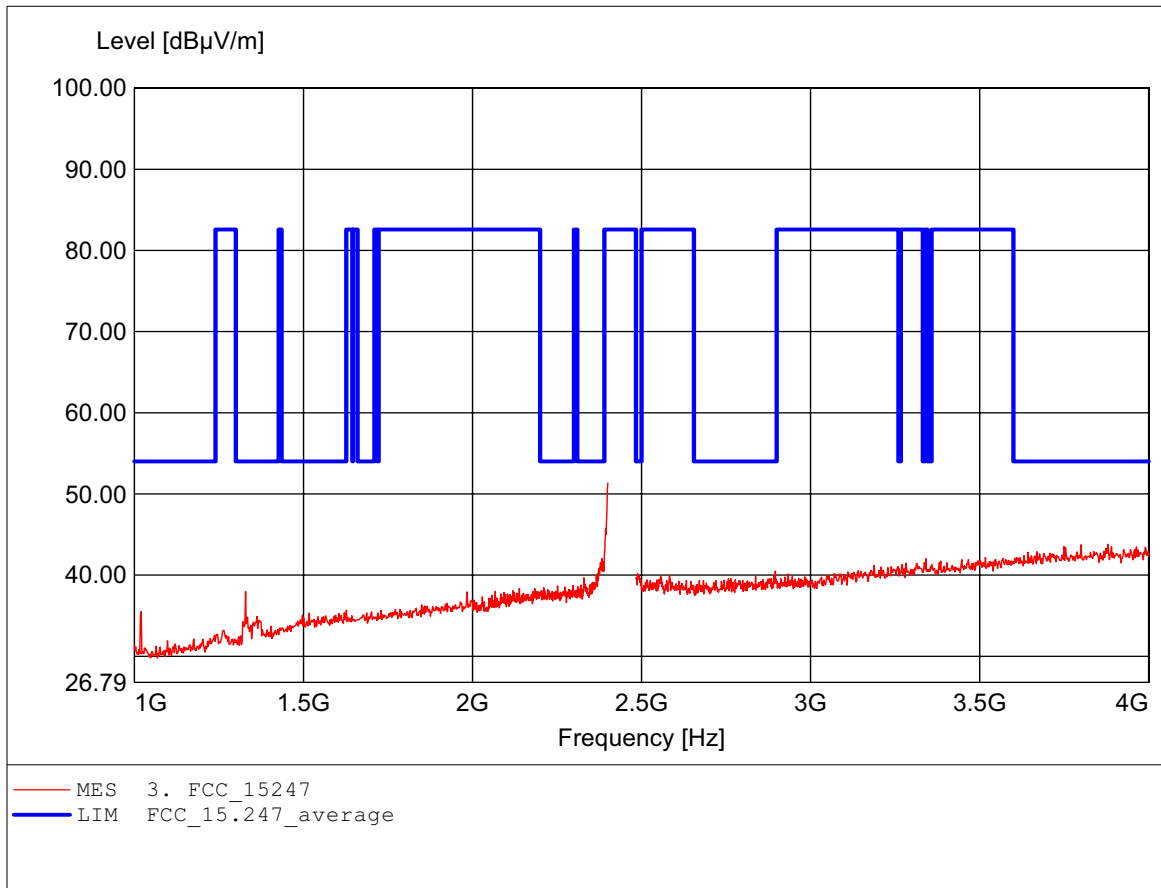
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 2.400GHz, Emax: 62.58dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

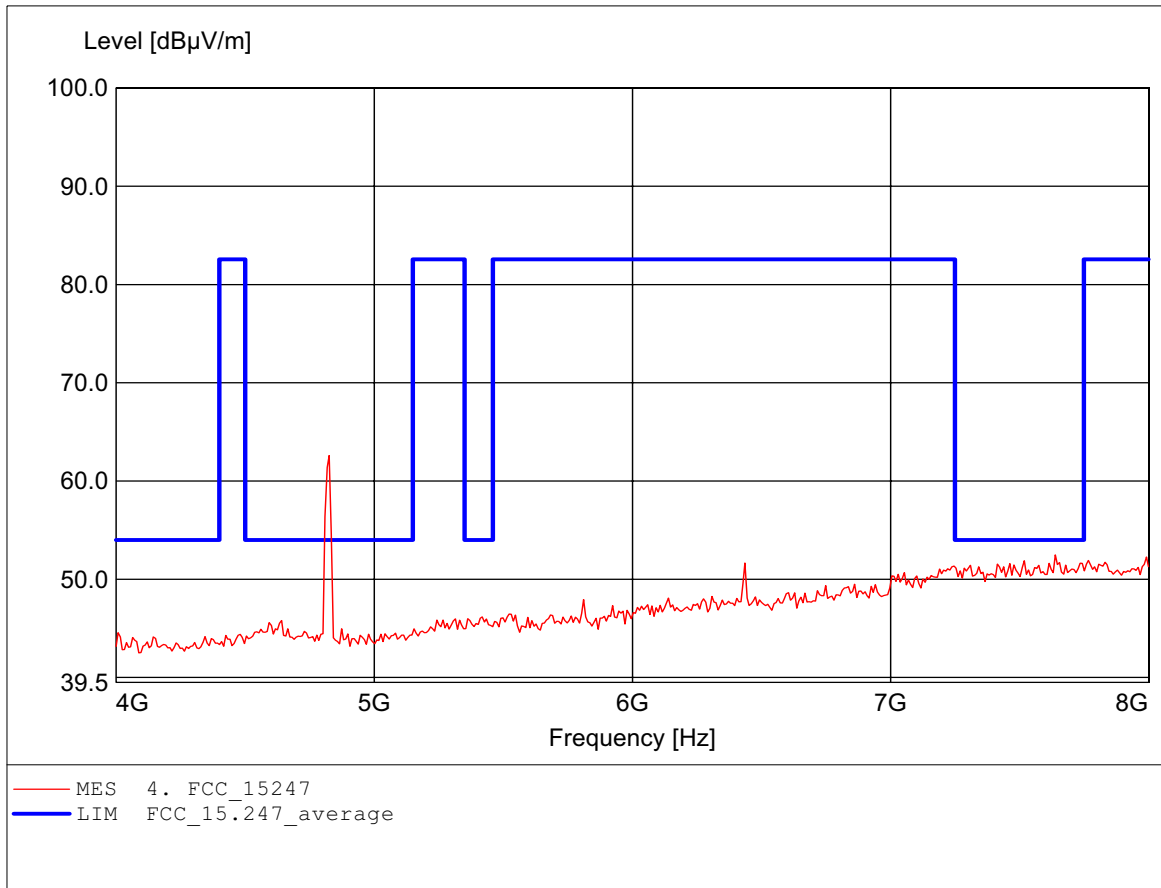
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 2.400GHz, Emax: 51.34dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

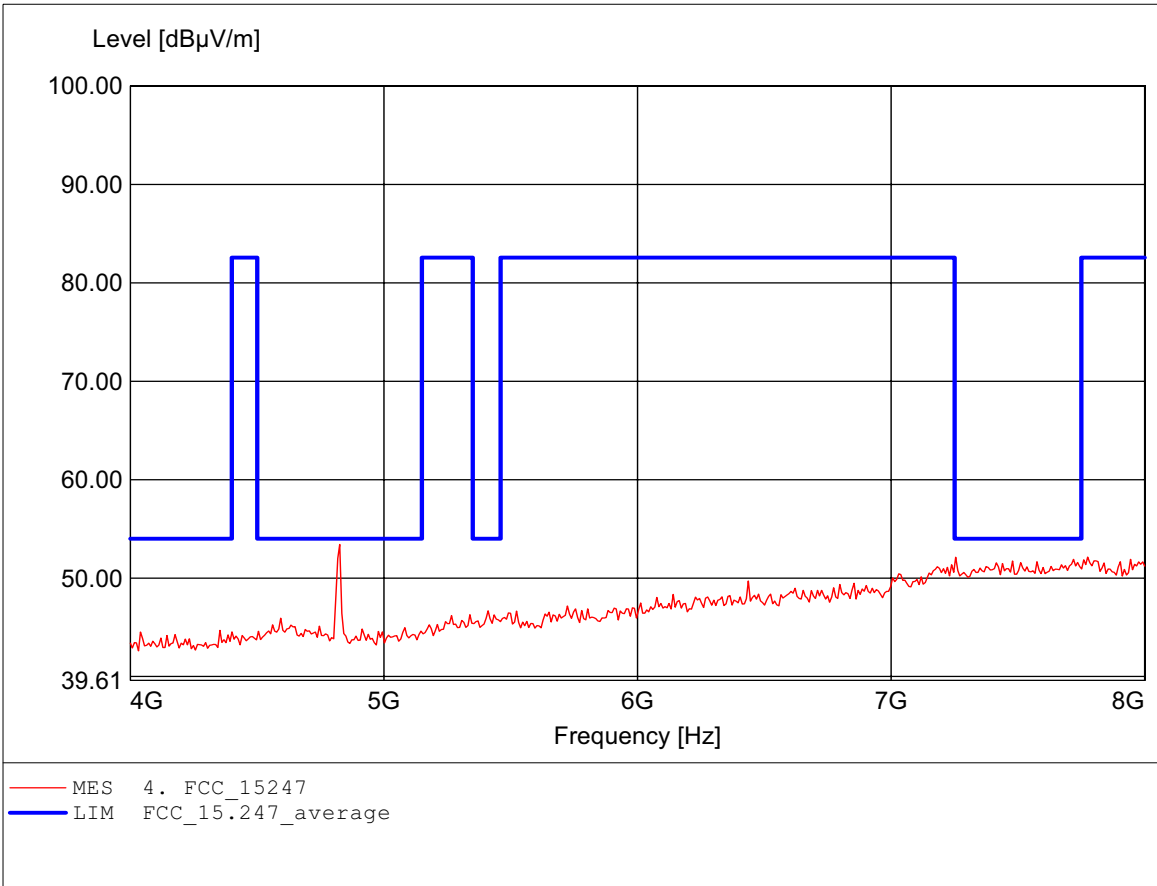
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 4.826GHz, Emax: 62.59dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

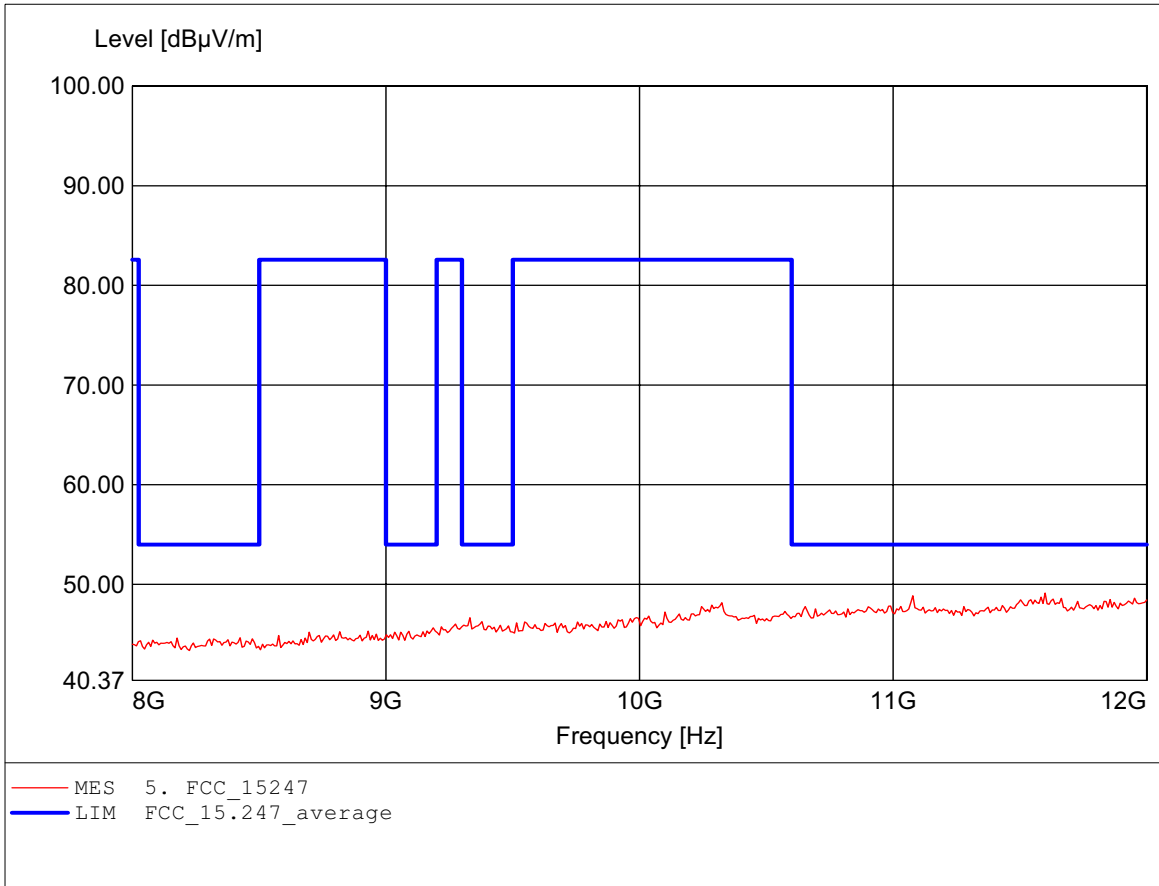
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 4.826GHz, Emax: 53.42dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

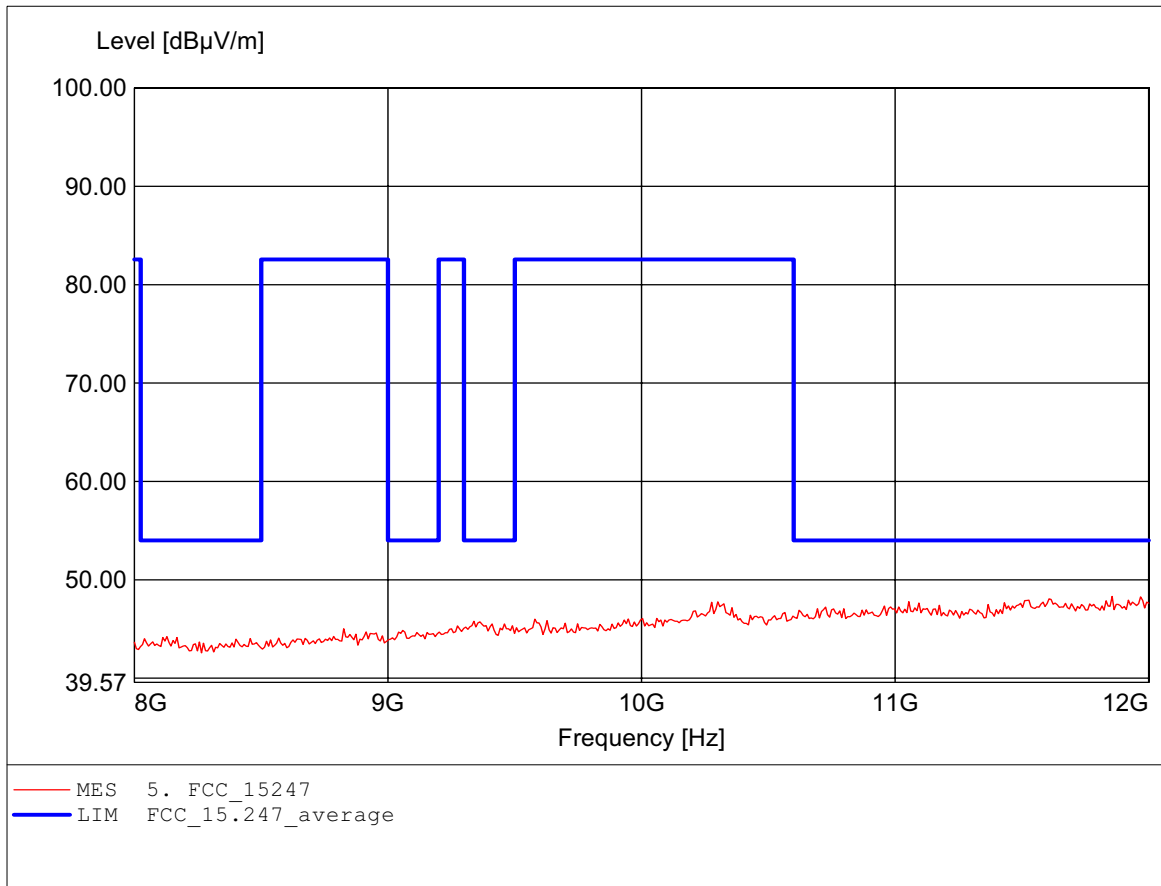
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 11.599GHz, Emax: 49.12dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

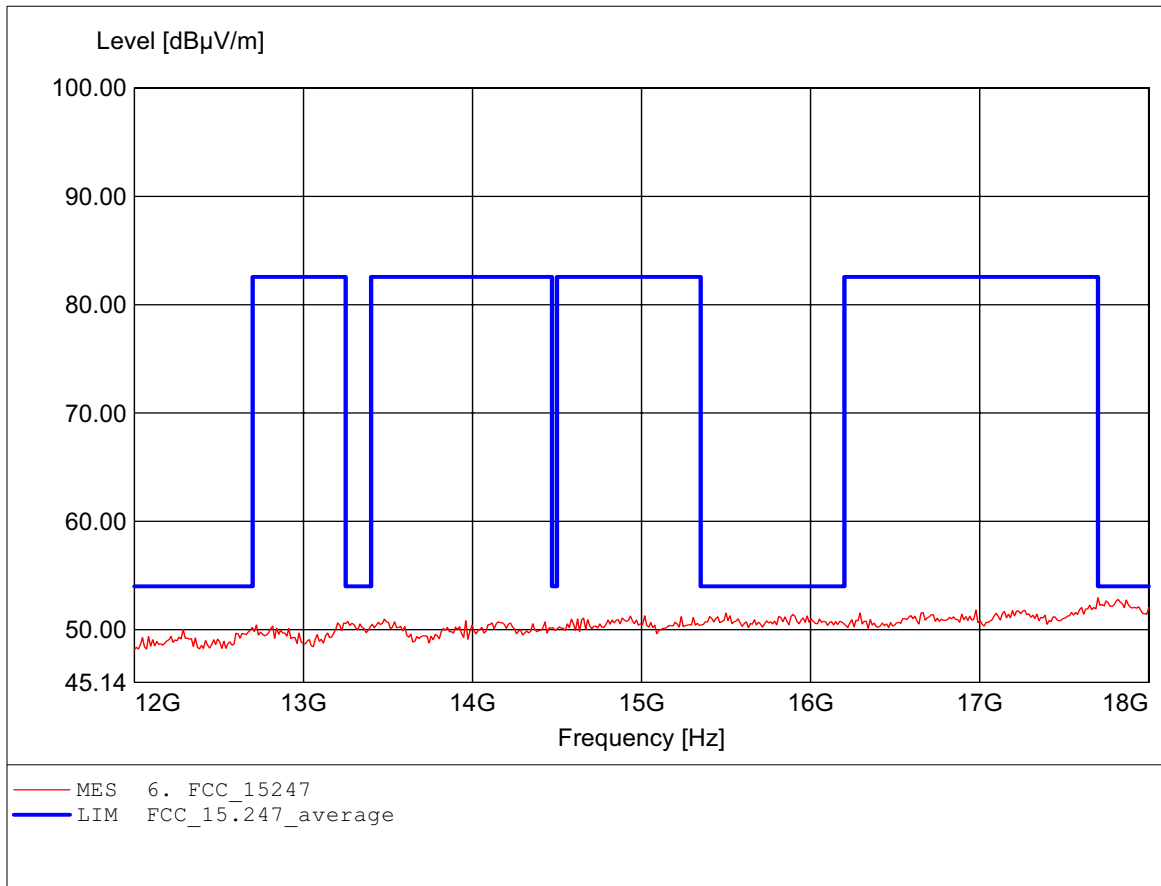
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 11.856GHz, Emax: 48.30dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

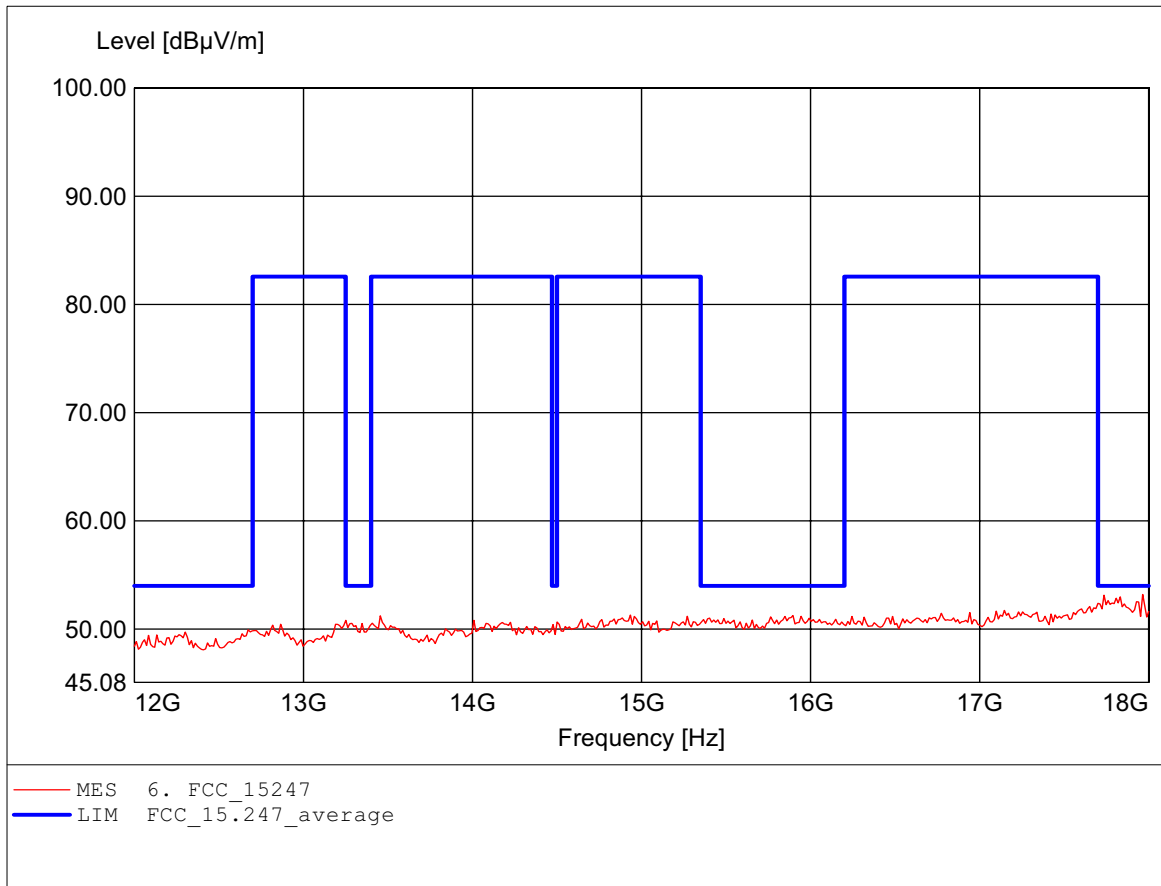
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 17.699GHz, Emax: 52.94dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

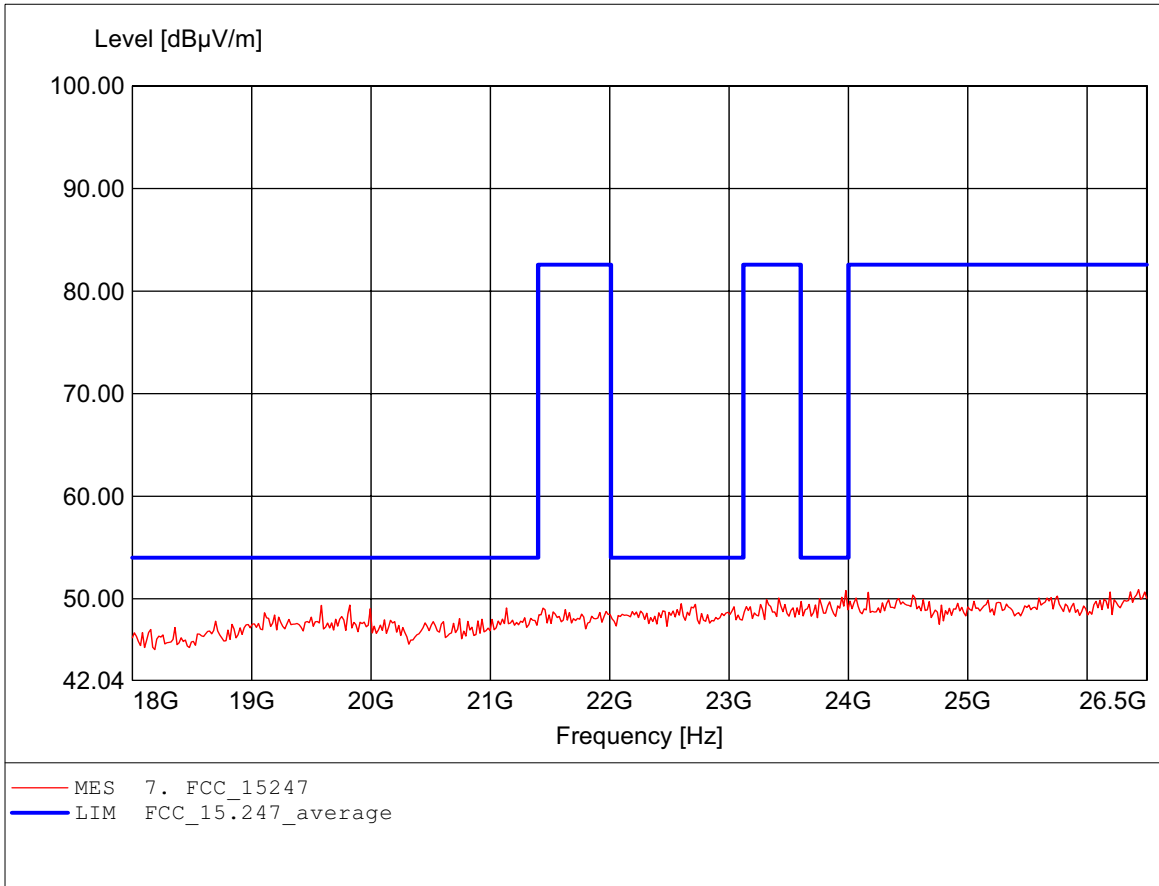
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 17.964GHz, Emax: 53.20dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

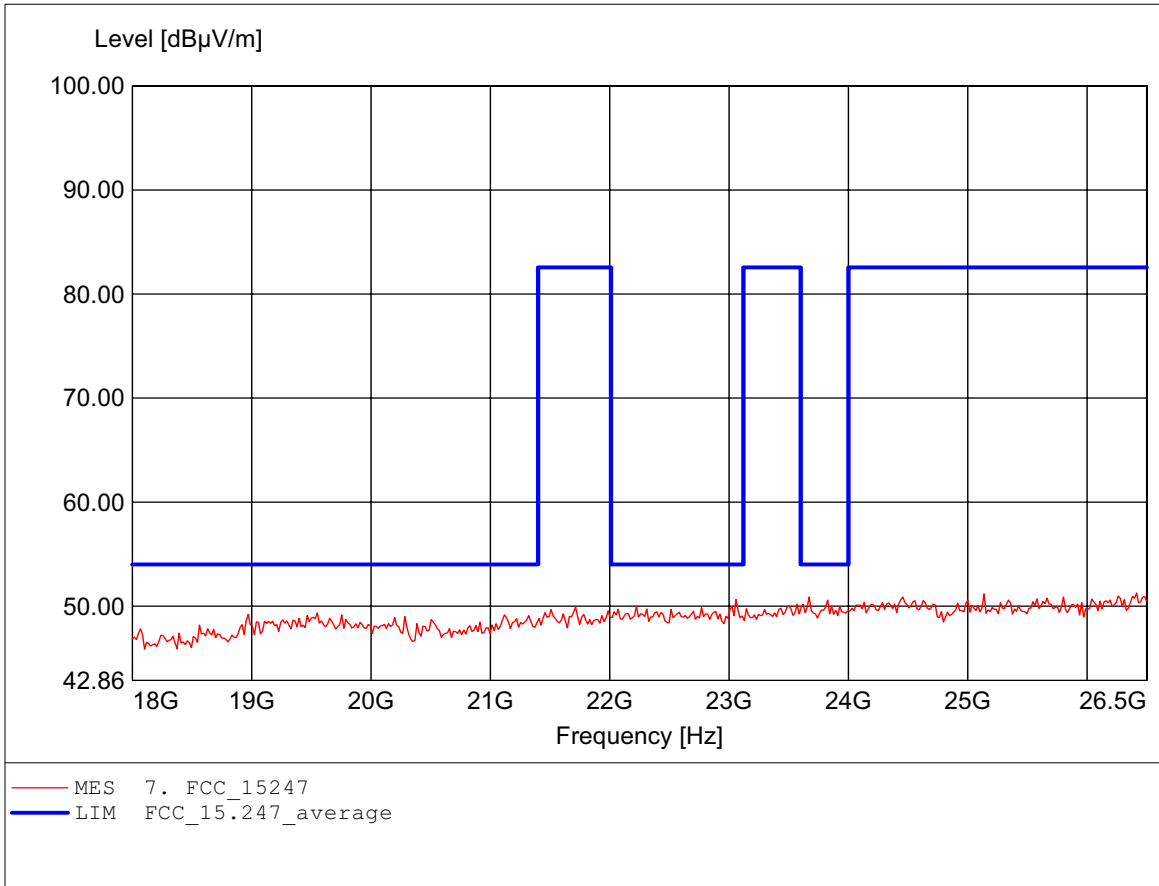
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 26.432GHz, Emax: 50.89dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

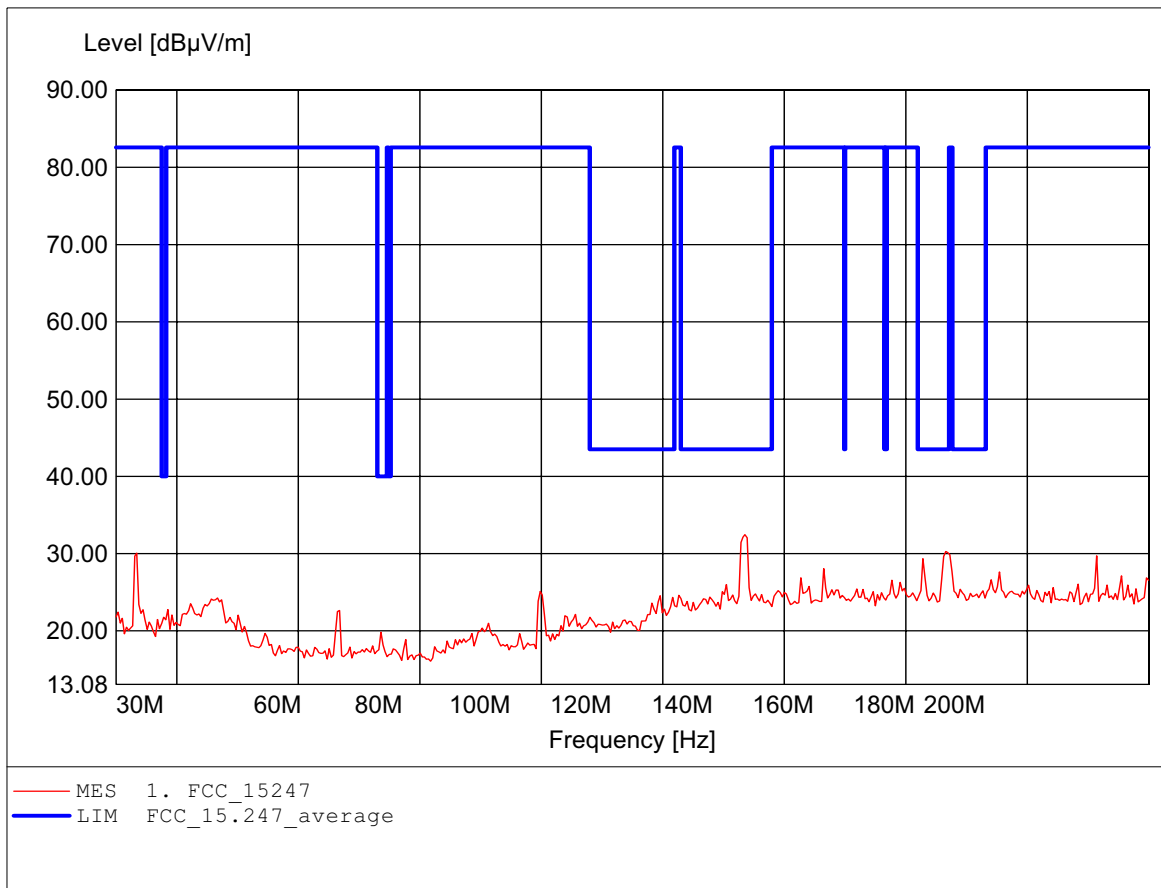
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 26.415GHz, Emax: 51.25dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

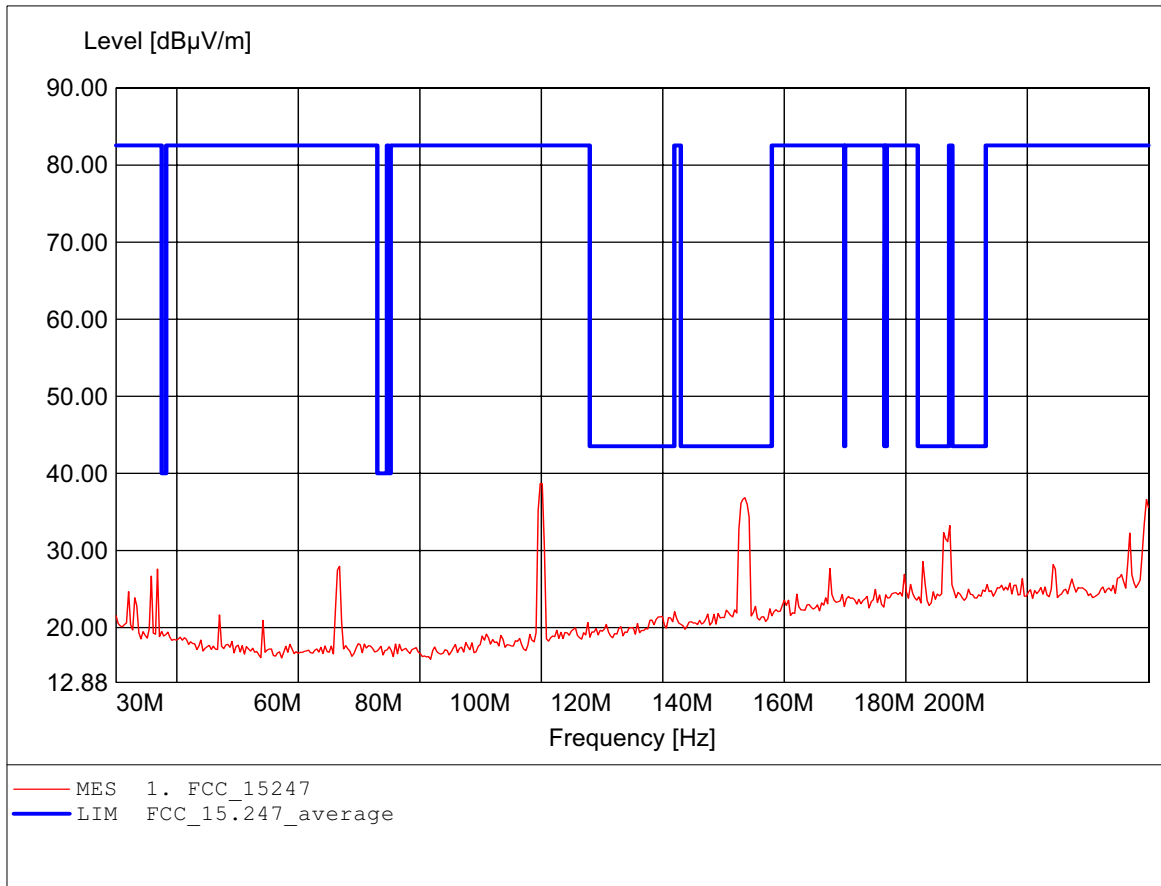
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Freq: 133.567MHz, Emax: 32.46dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

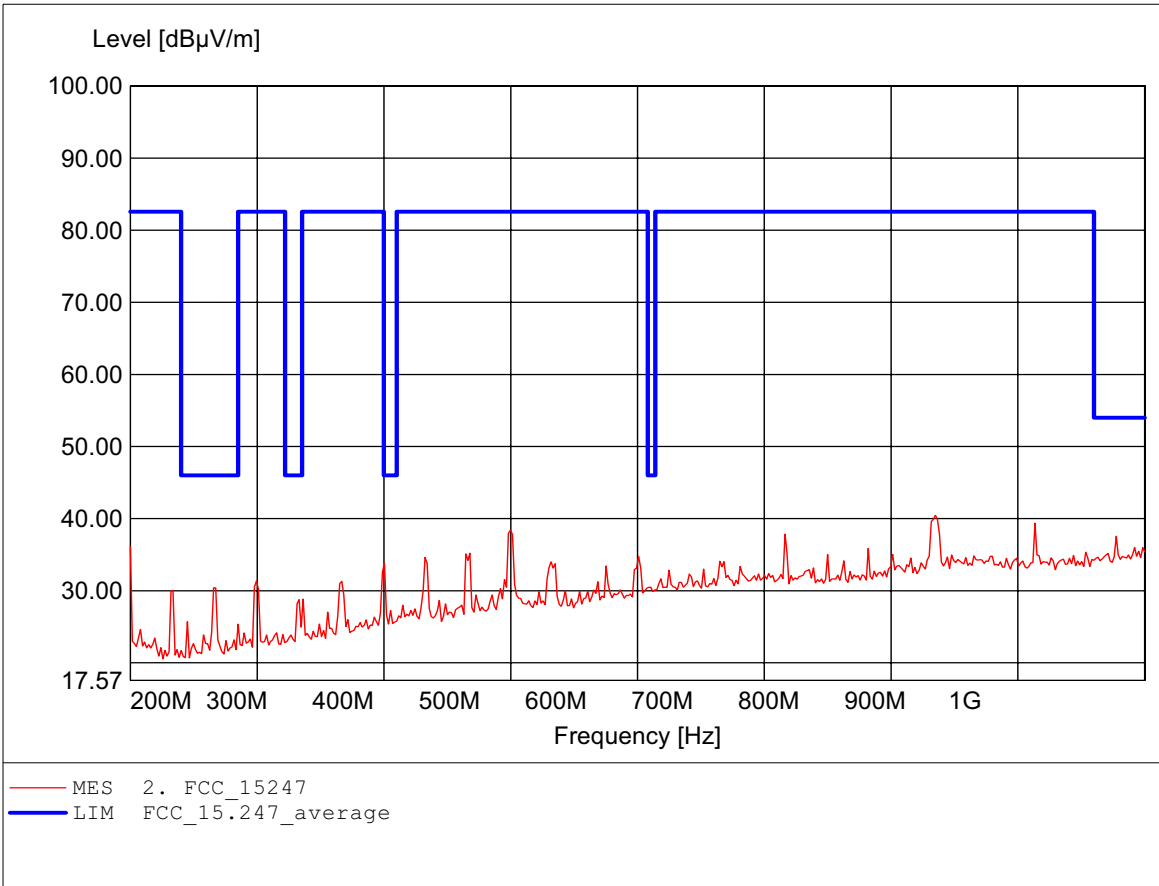
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Freq: 99.840MHz, Emax: 38.70dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

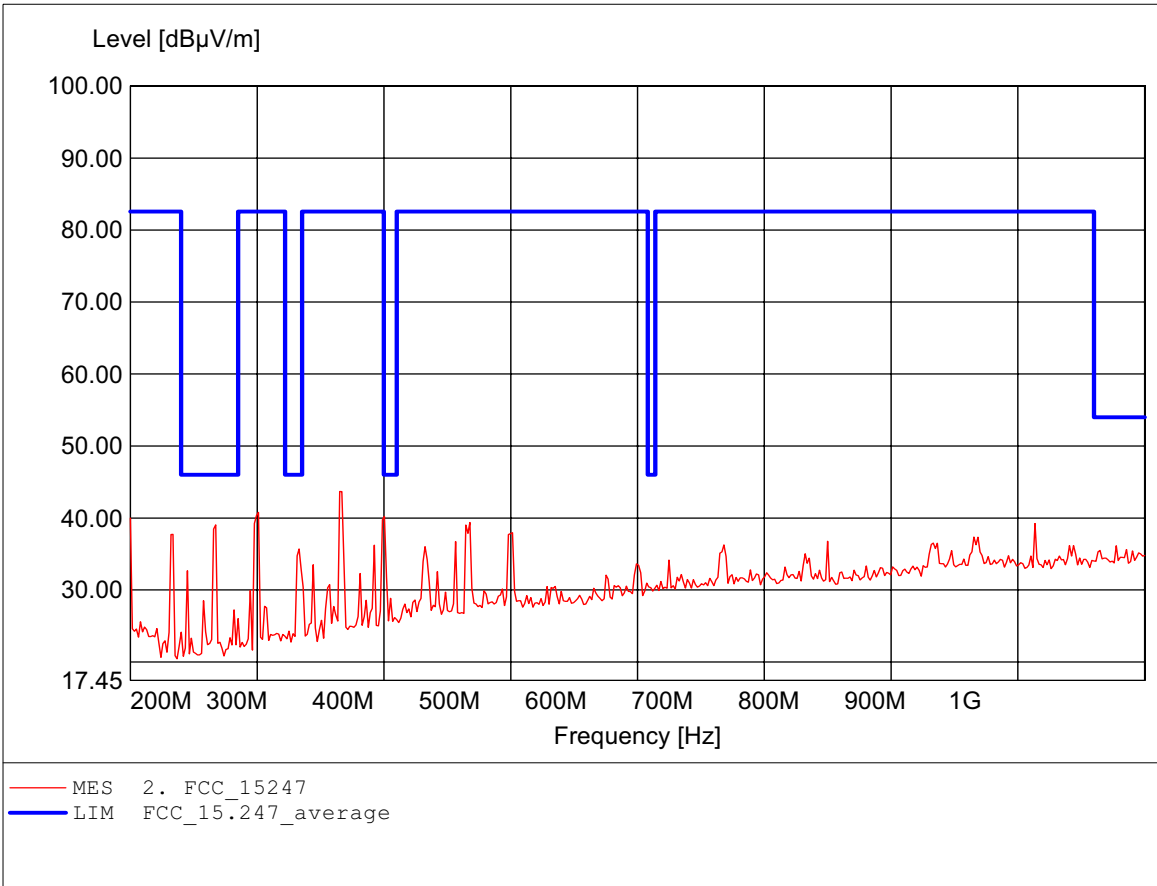
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223,
Freq: 834.870MHz, Emax: 40.45dBμV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

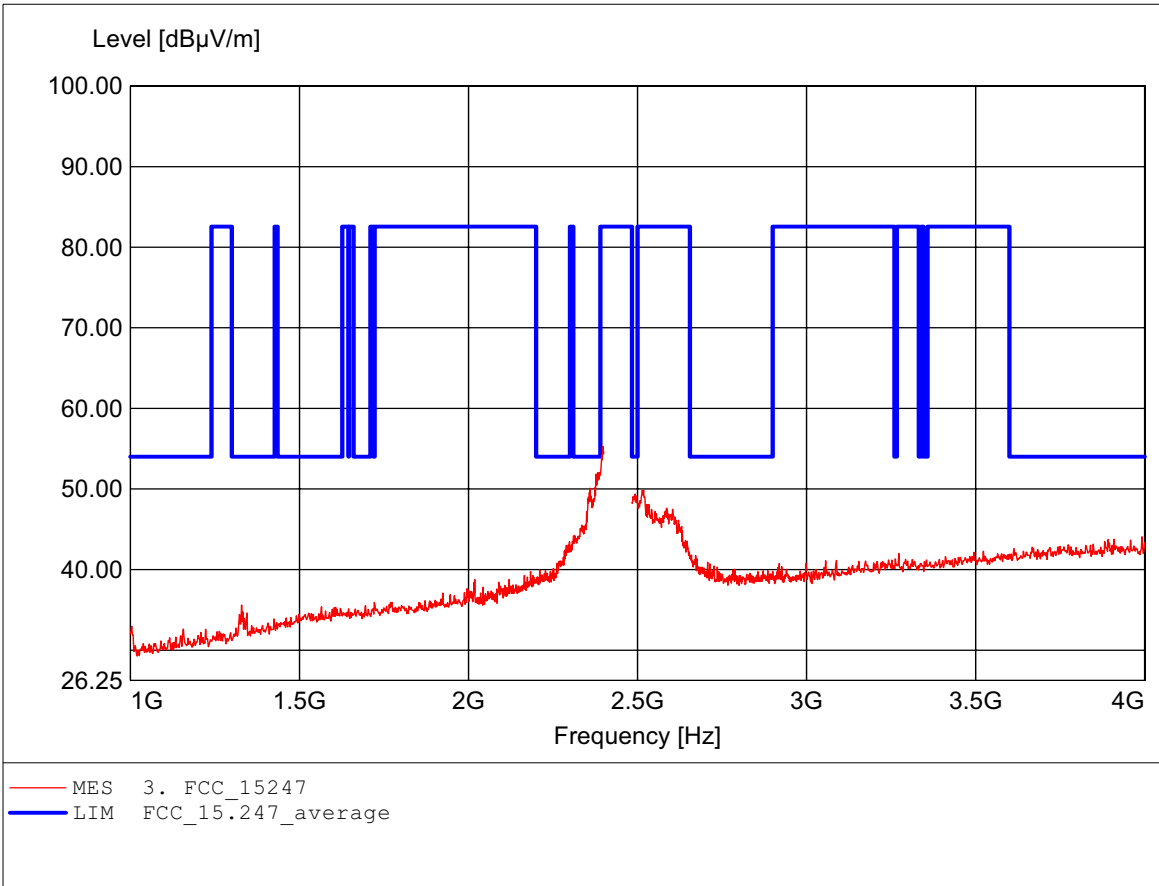
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223,
Freq: 365.130MHz, Emax: 43.68dBμV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

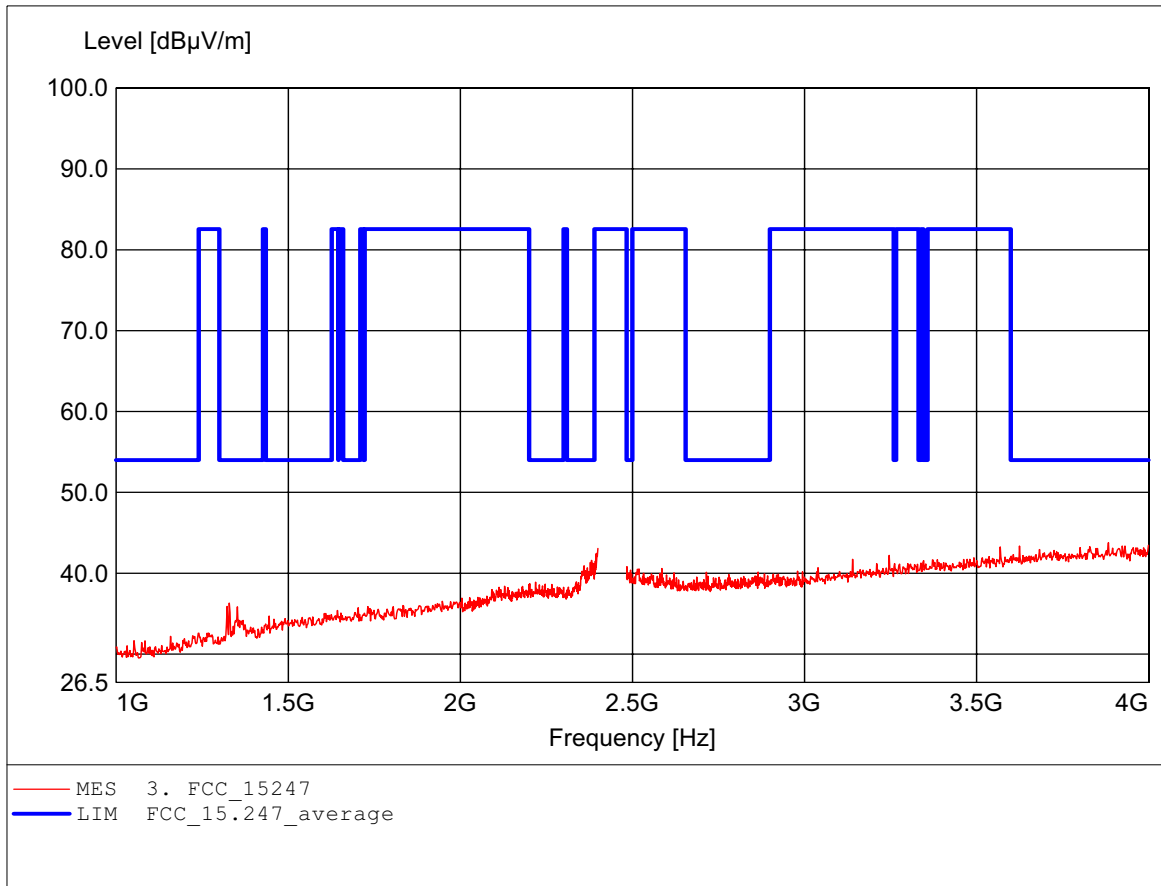
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 2.398GHz, Emax: 55.28dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

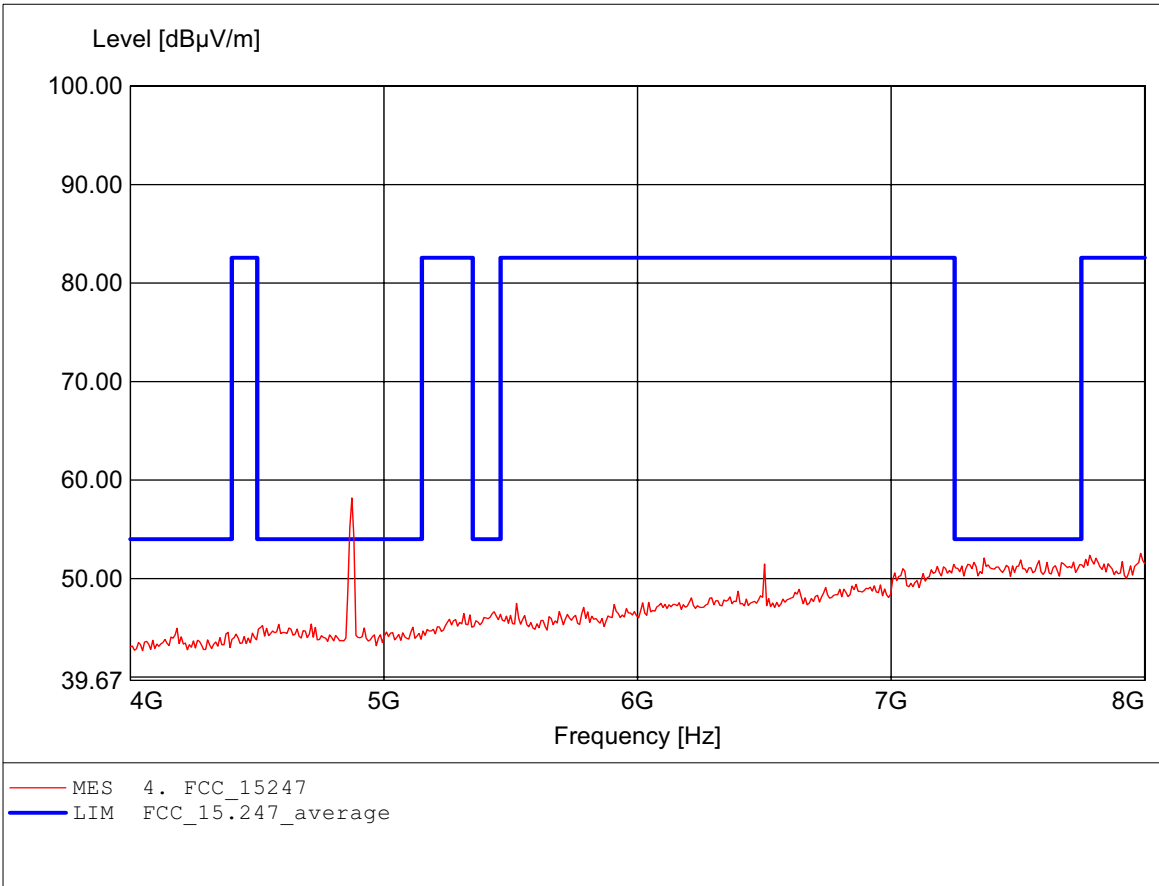
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 3.884GHz, Emax: 43.77dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

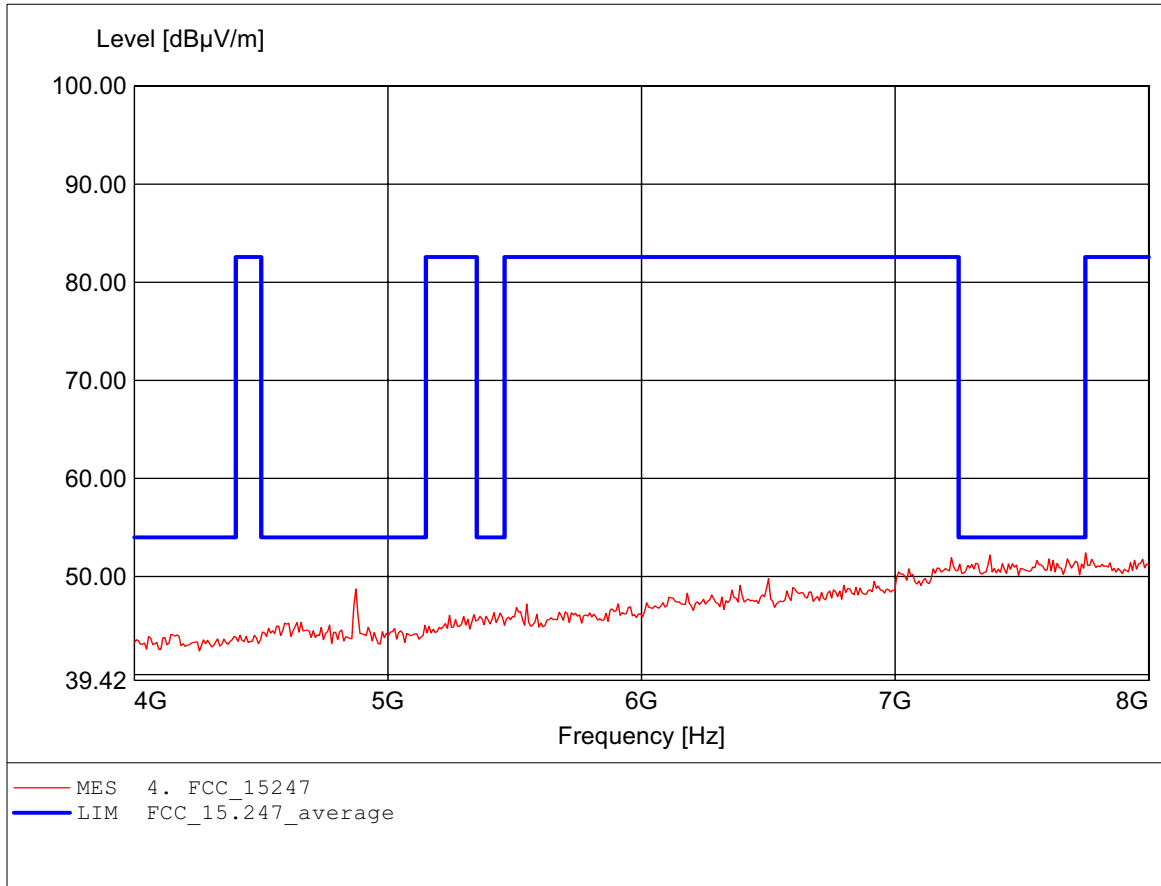
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 4.874GHz, Emax: 58.19dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

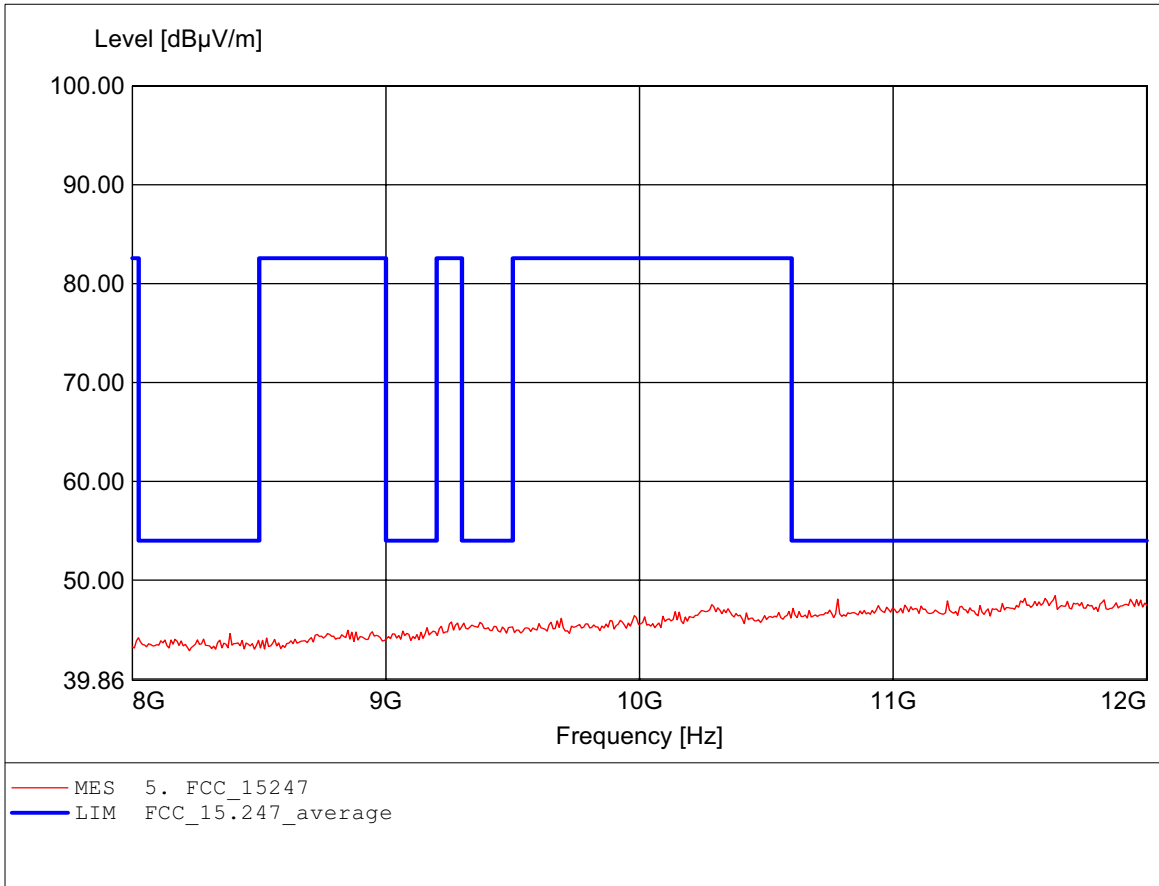
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 7.752GHz, Emax: 52.42dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

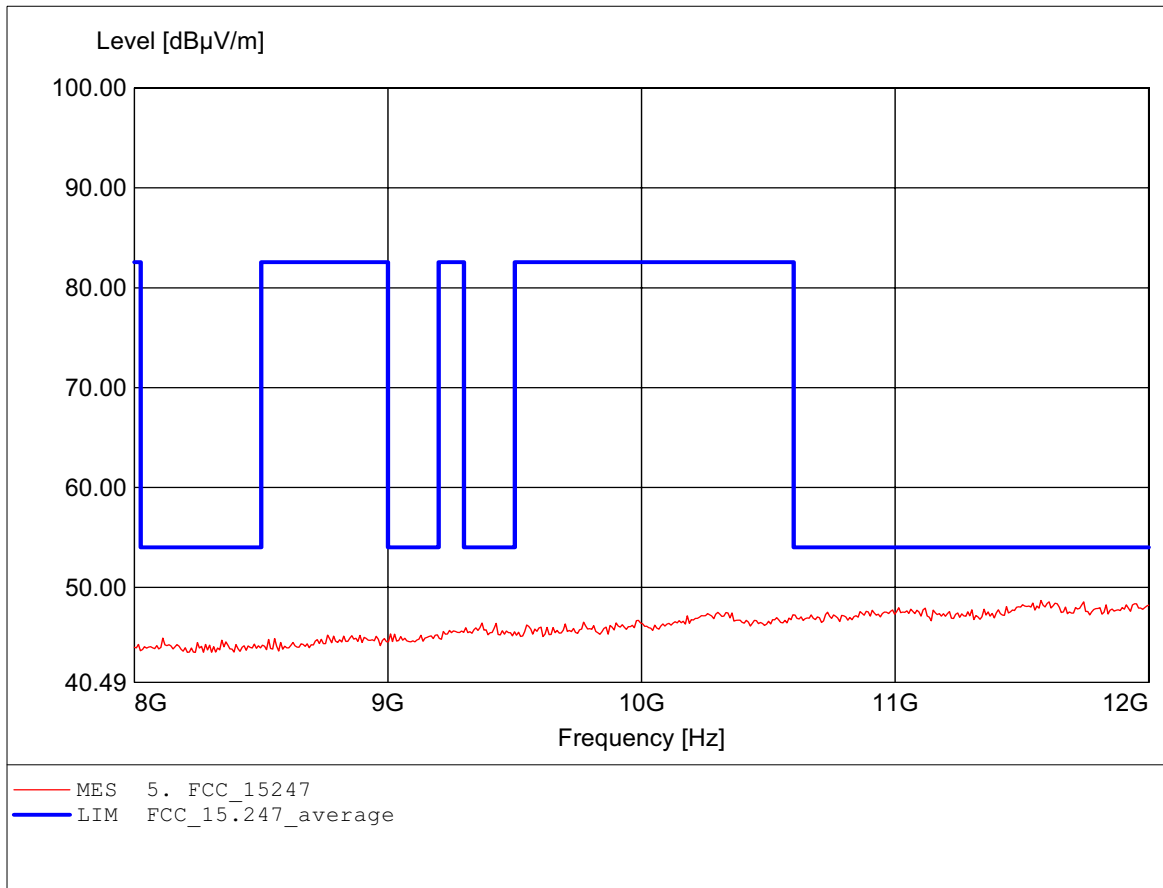
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 11.639GHz, Emax: 48.43dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

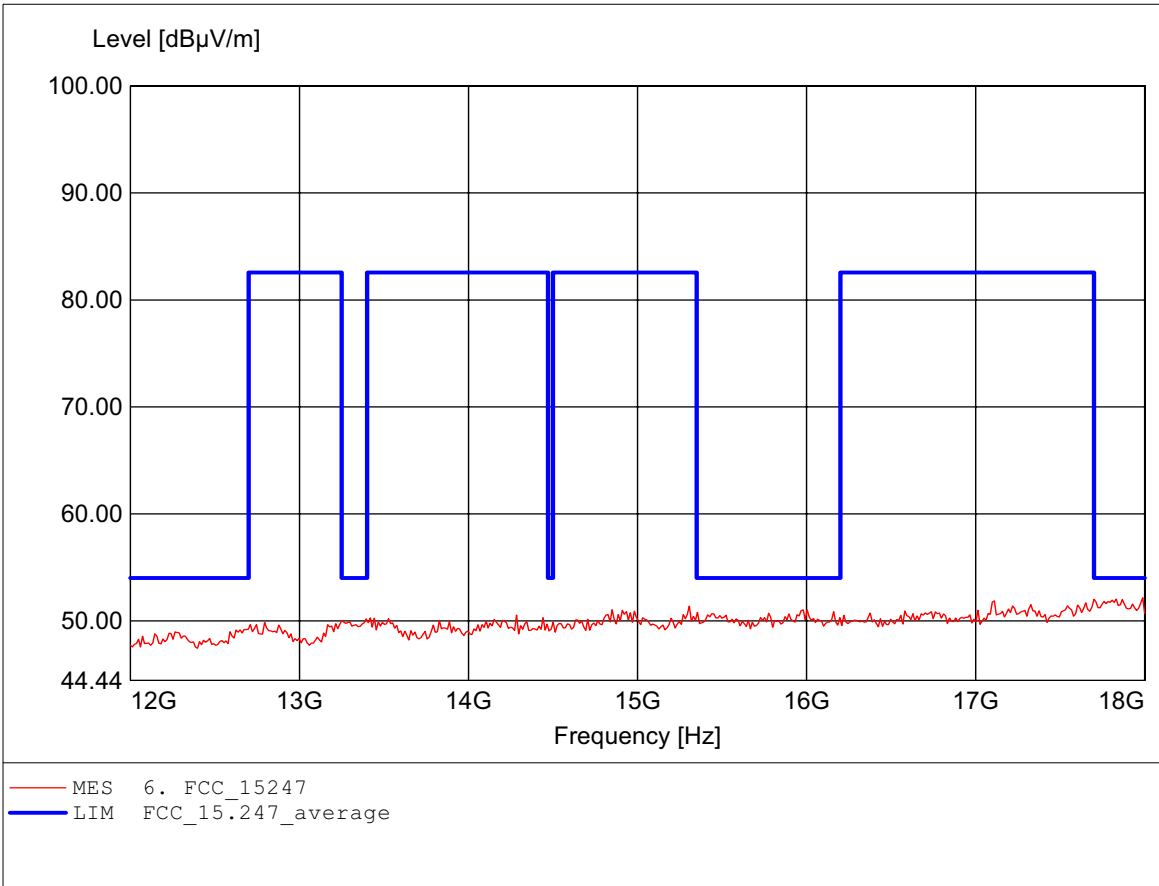
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MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 11.575GHz, Emax: 48.68dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

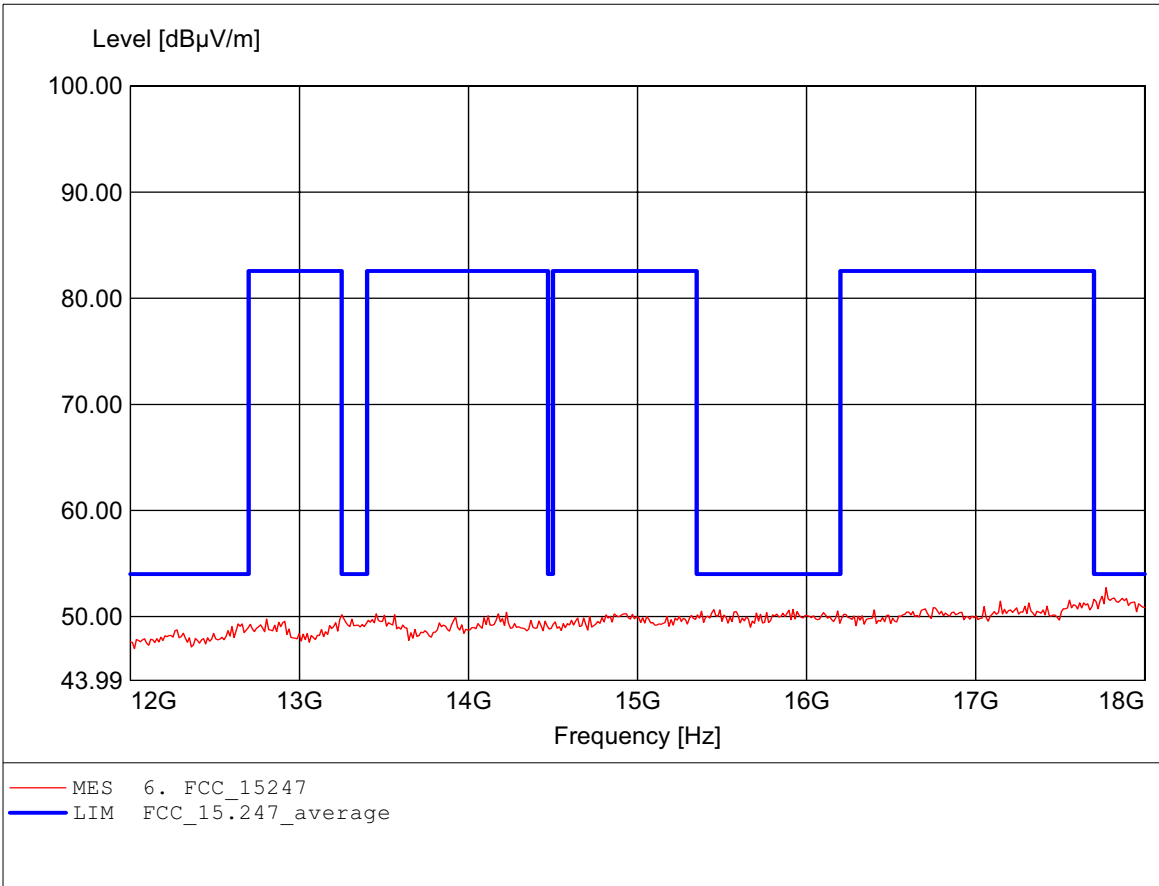
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 17.988GHz, Emax: 52.16dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

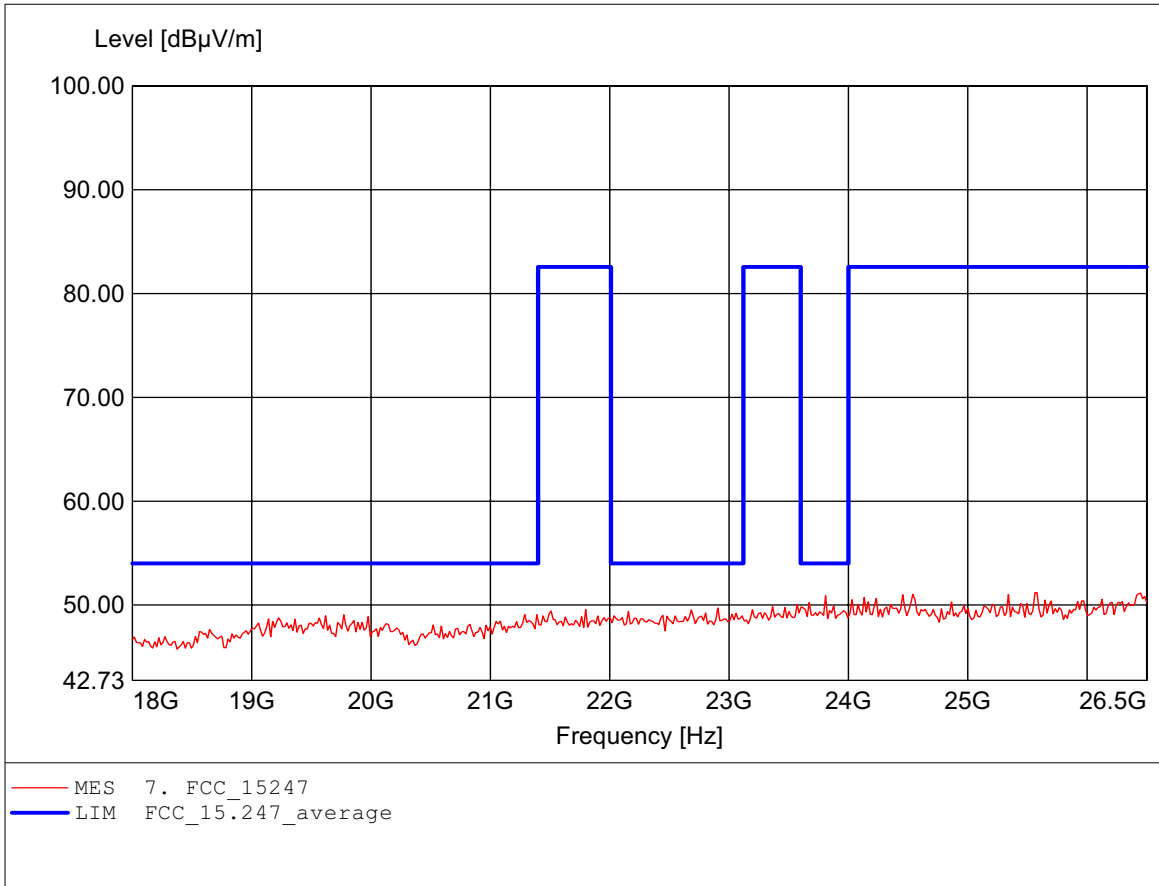
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, ampl.+HP.
Freq: 17.772GHz, Emax: 52.72dBμV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

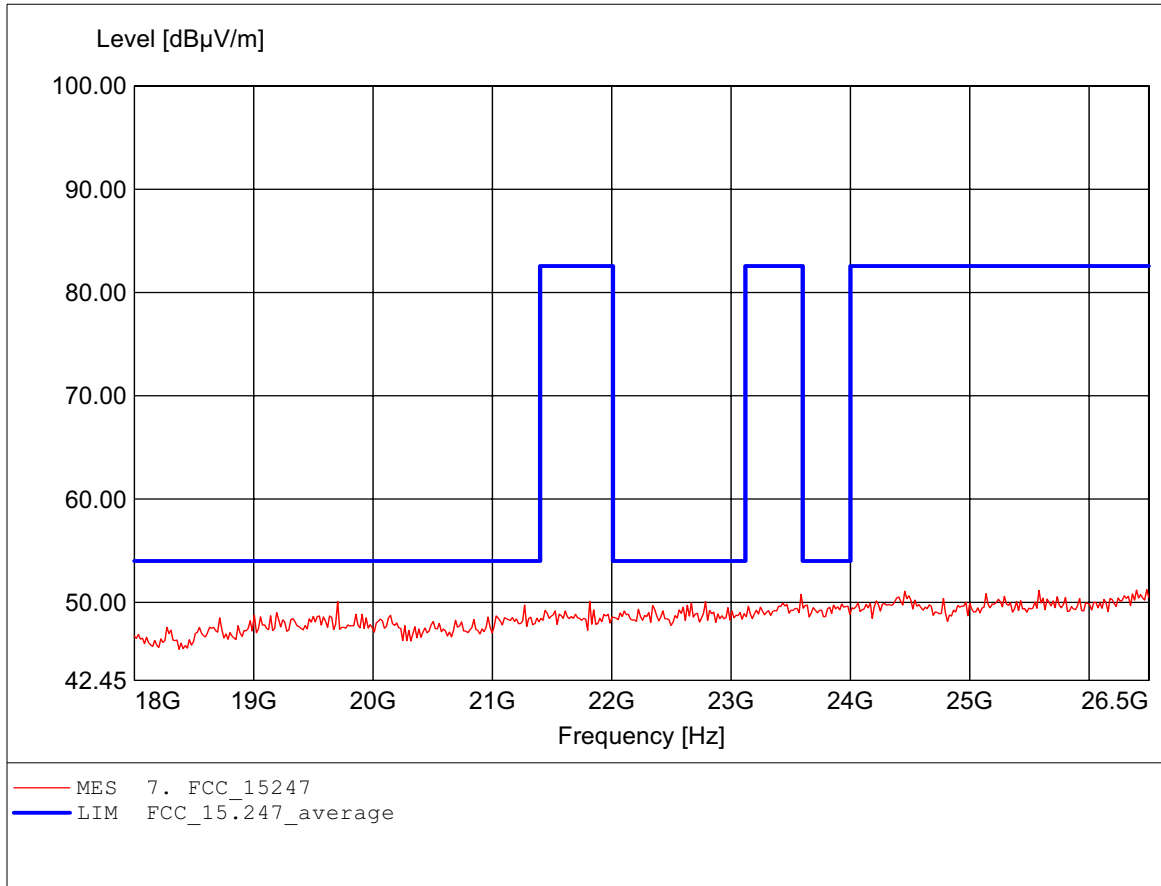
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 25.580GHz, Emax: 51.19dBμV/m, RBW: 1MHz

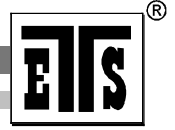


Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Freq: 26.483GHz, Emax: 51.24dBµV/m, RBW: 1MHz





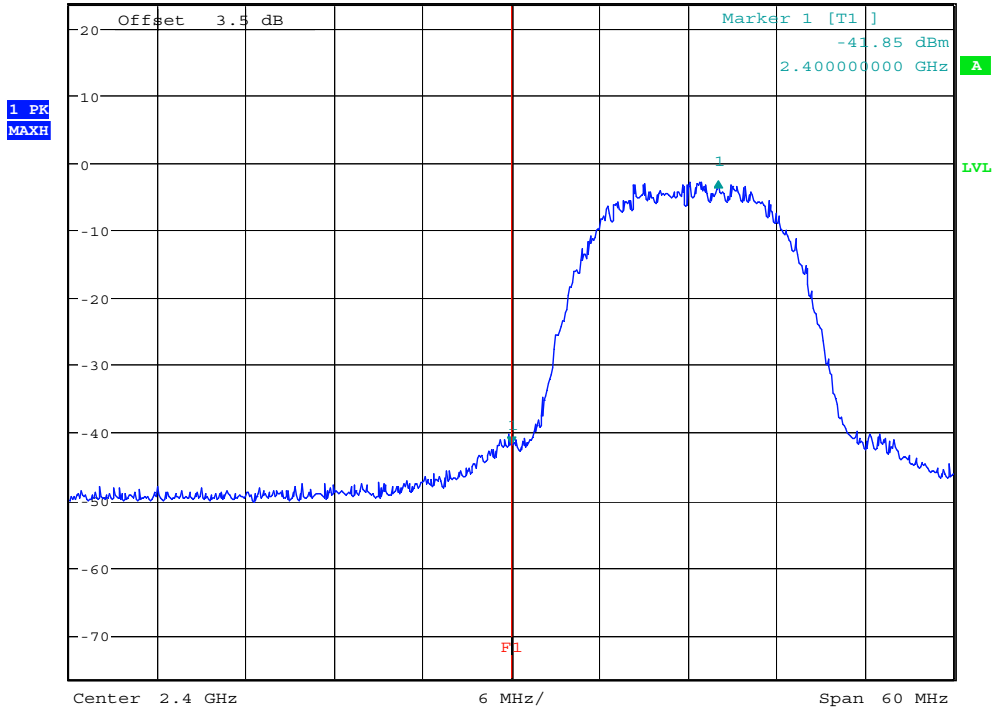
Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix C

Band Edge Measurement



Ref 23.5 dBm *Att 30 dB *RBW 100 kHz Delta 1 [T1]
*VBW 100 kHz 39.07 dB
*SWT 200 ms 14.038461538 MHz



11B BANDEDGE CH 1

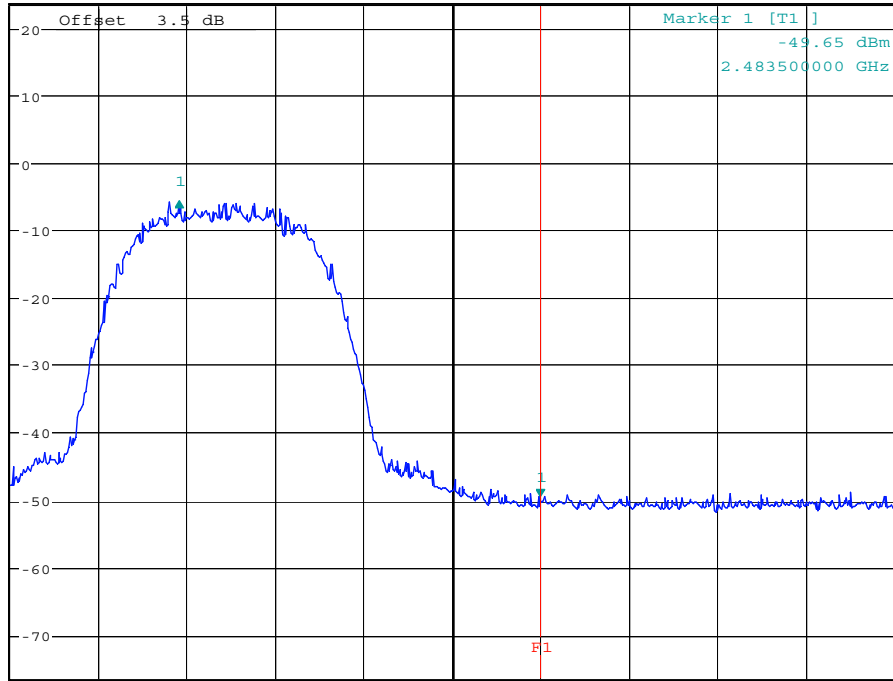
Date: 6.APR.2006 20:13:06



*RBW 100 kHz Delta 1 [T1]
*VBW 100 kHz 43.77 dB
*SWT 200 ms -24.557692308 MHz

Ref 23.5 dBm *Att 30 dB

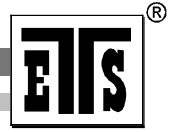
1 PR
MAXH



Center 2.4775 GHz 6 MHz/ Span 60 MHz

11B BANDEDGE CH 11

Date: 6.APR.2006 20:16:11



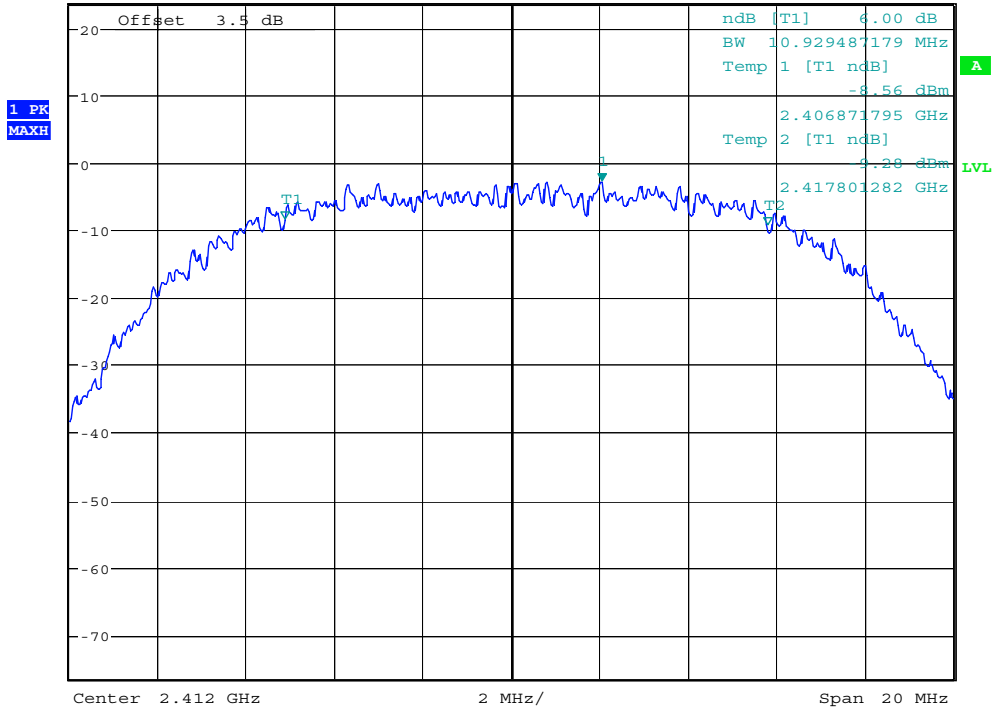
Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix D

Minimum 6dB Bandwidth



Ref 23.5 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -2.82 dBm
*VBW 100 kHz *SWT 200 ms 2.414051282 GHz



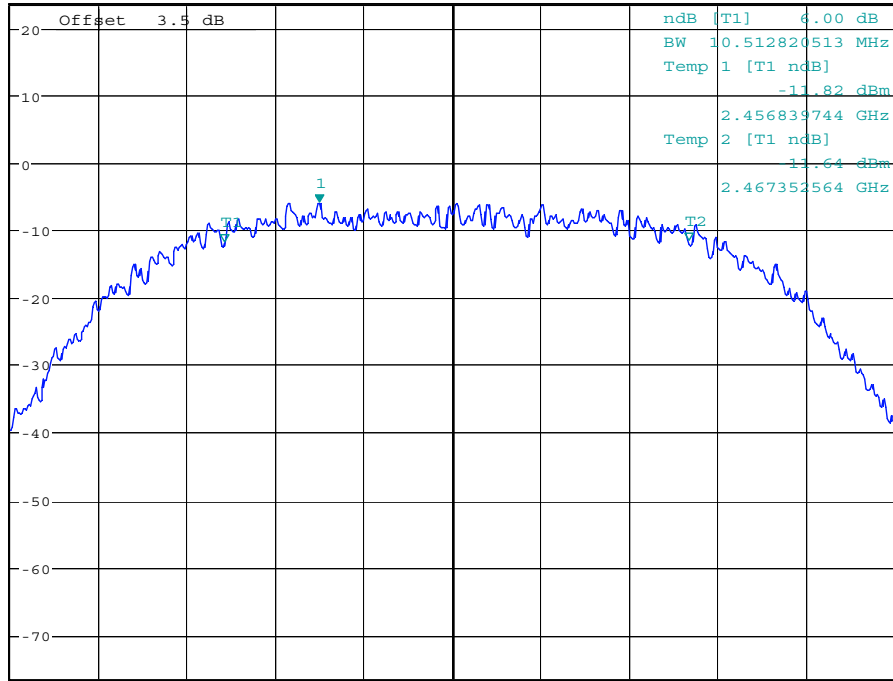
11B 6dB BANDWIDTH CH 1
Date: 6.APR.2006 19:48:20



*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -5.98 dBm
*SWT 200 ms 2.458987179 GHz

Ref 23.5 dBm *Att 30 dB

1 PK
MAXH



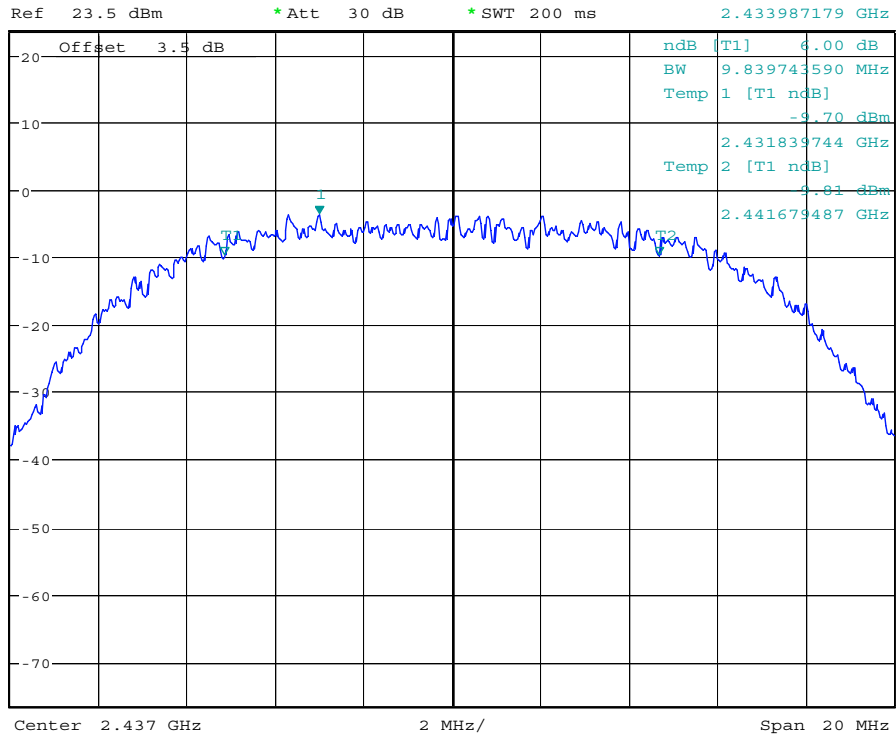
Center 2.462 GHz 2 MHz/ Span 20 MHz

11B 6dB BANDWIDTH CH 11

Date: 6.APR.2006 19:46:29

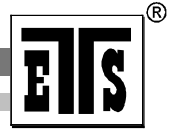


*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -3.74 dBm
*SWT 200 ms 2.433987179 GHz



11B 6dB BANDWIDTH CH 6

Date: 6.APR.2006 19:47:40



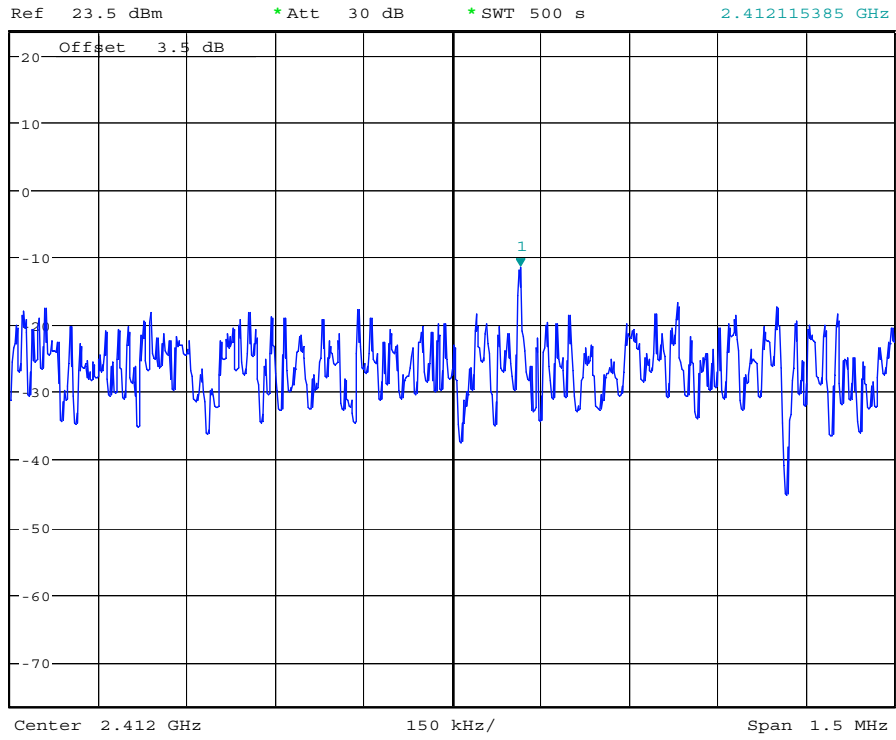
Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix E

Peak Power Spectral Density



*RBW 3 kHz Marker 1 [T1]
*VBW 100 kHz -11.50 dBm
*SWT 500 s 2.412115385 GHz

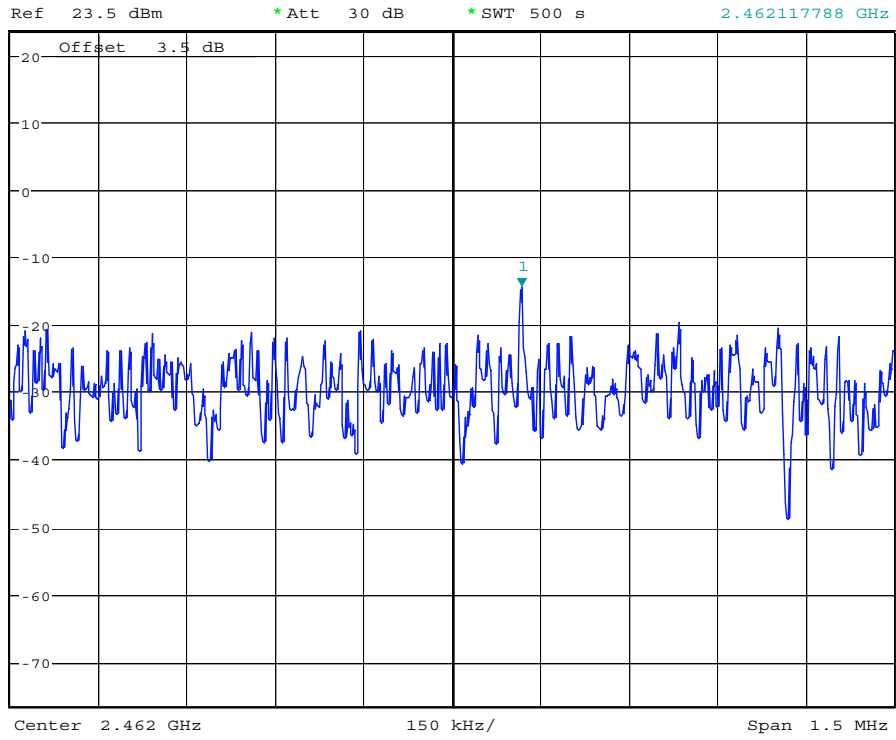


11B POWER DENSITY CH 1

Date: 6.APR.2006 20:26:29



*RBW 3 kHz Marker 1 [T1]
*VBW 100 kHz -14.51 dBm
*SWT 500 s 2.462117788 GHz

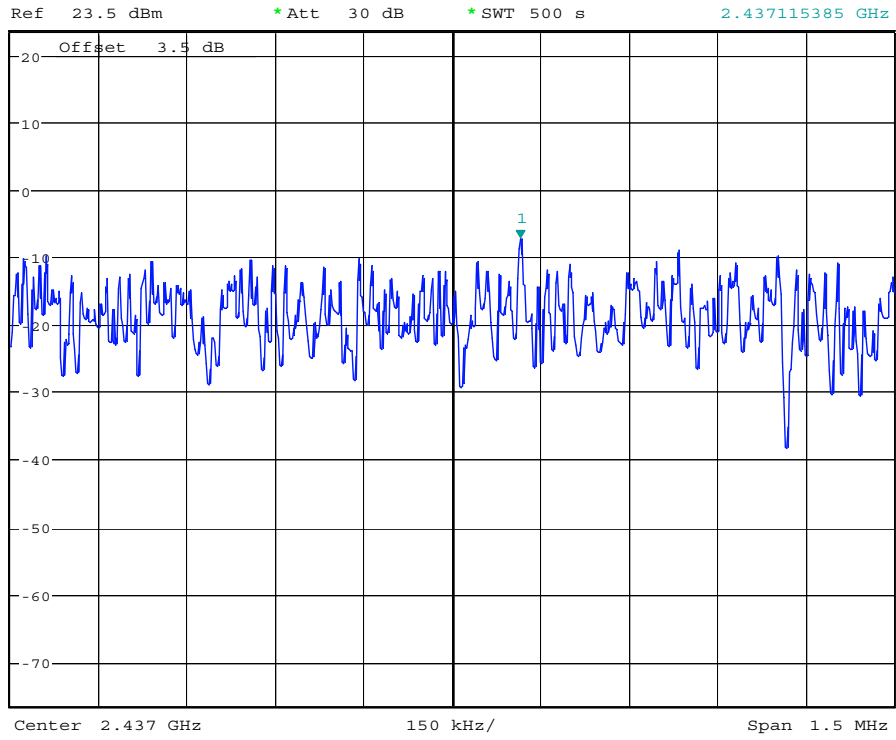


11B POWER DENSITY CH 11

Date: 6.APR.2006 20:08:14



*RBW 3 kHz Marker 1 [T1]
*VBW 100 kHz -7.33 dBm
*SWT 500 s 2.437115385 GHz



11B POWER DENSITY CH 6

Date: 6.APR.2006 20:09:18

Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix F

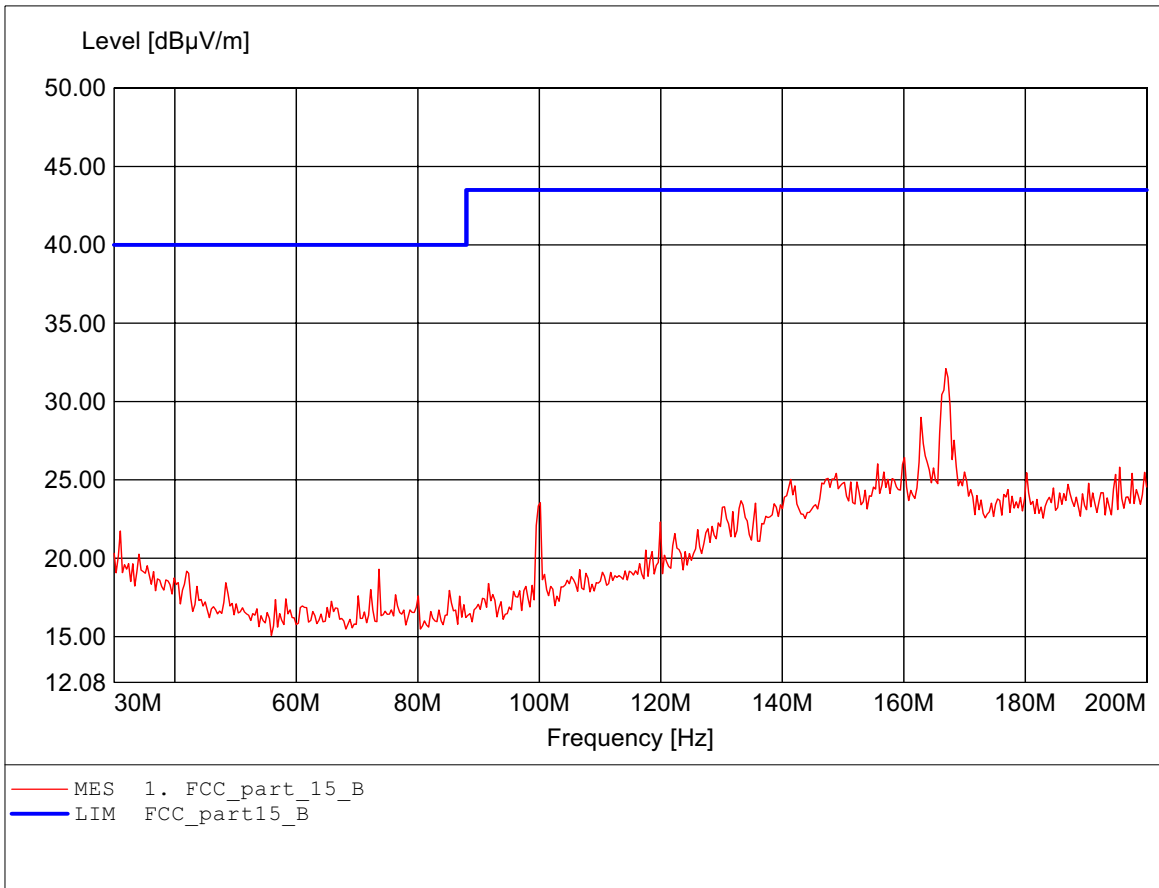
Radiated Emissions from Receiver Section of Transceiver

The measurement diagrams are wideband pre-scan results; only for reference. The final results are measured at OATS of 3 m. Please see final results as page 23 to 25.

Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

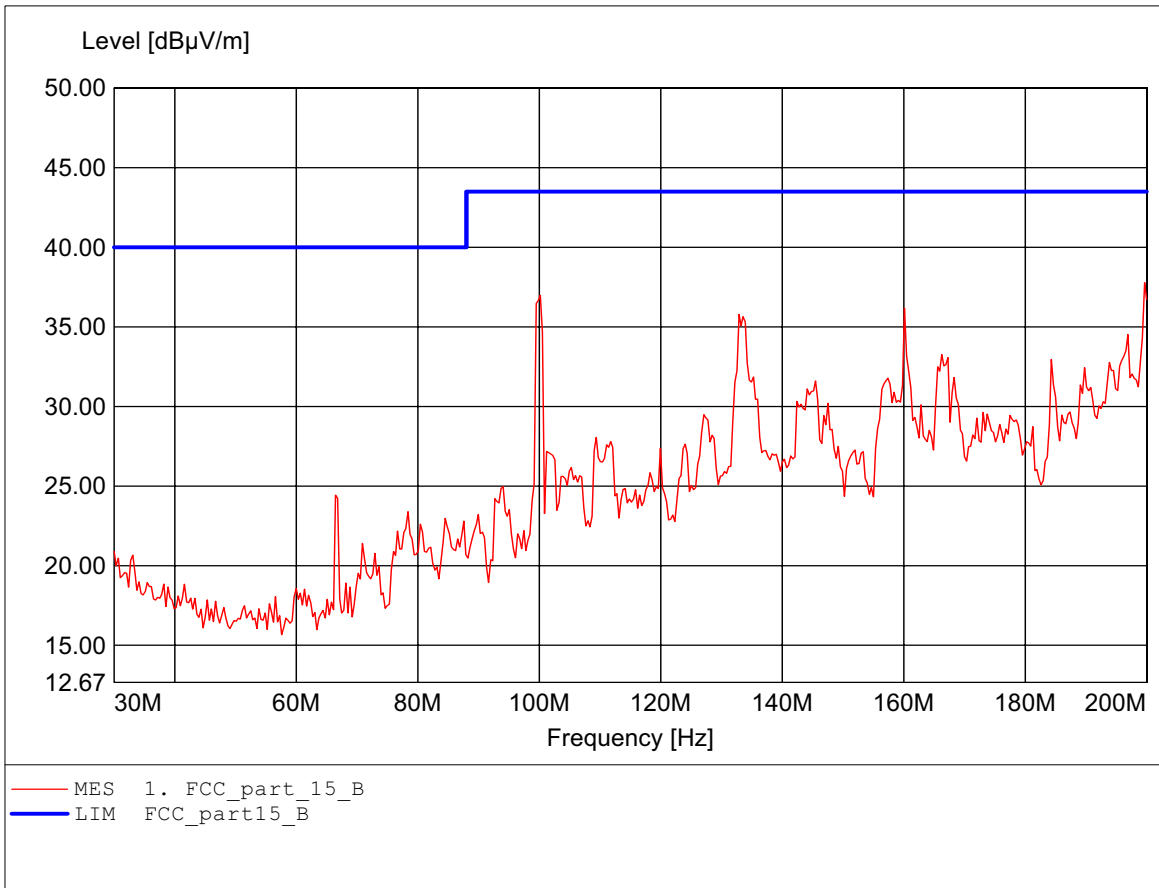
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:166.954MHz Emax:32.10dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

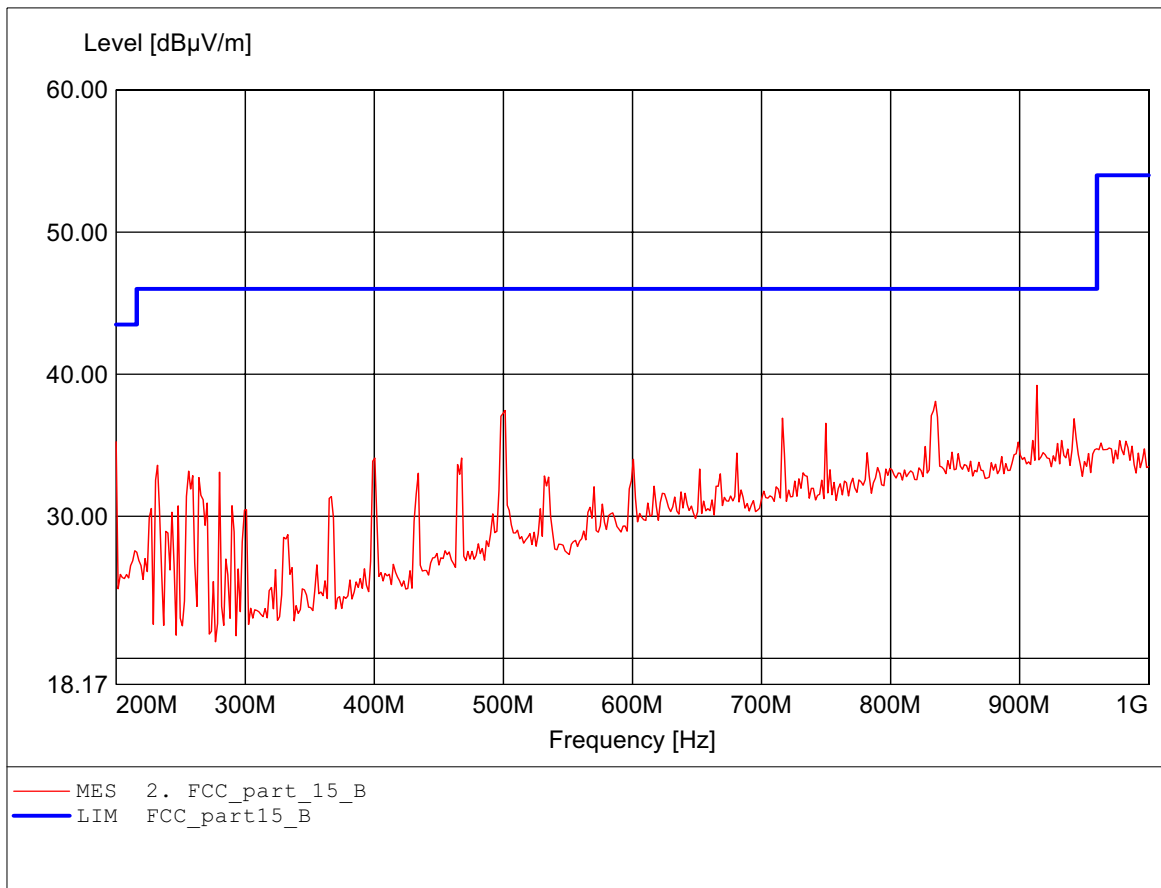
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:199.659MHz Emax:37.78dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

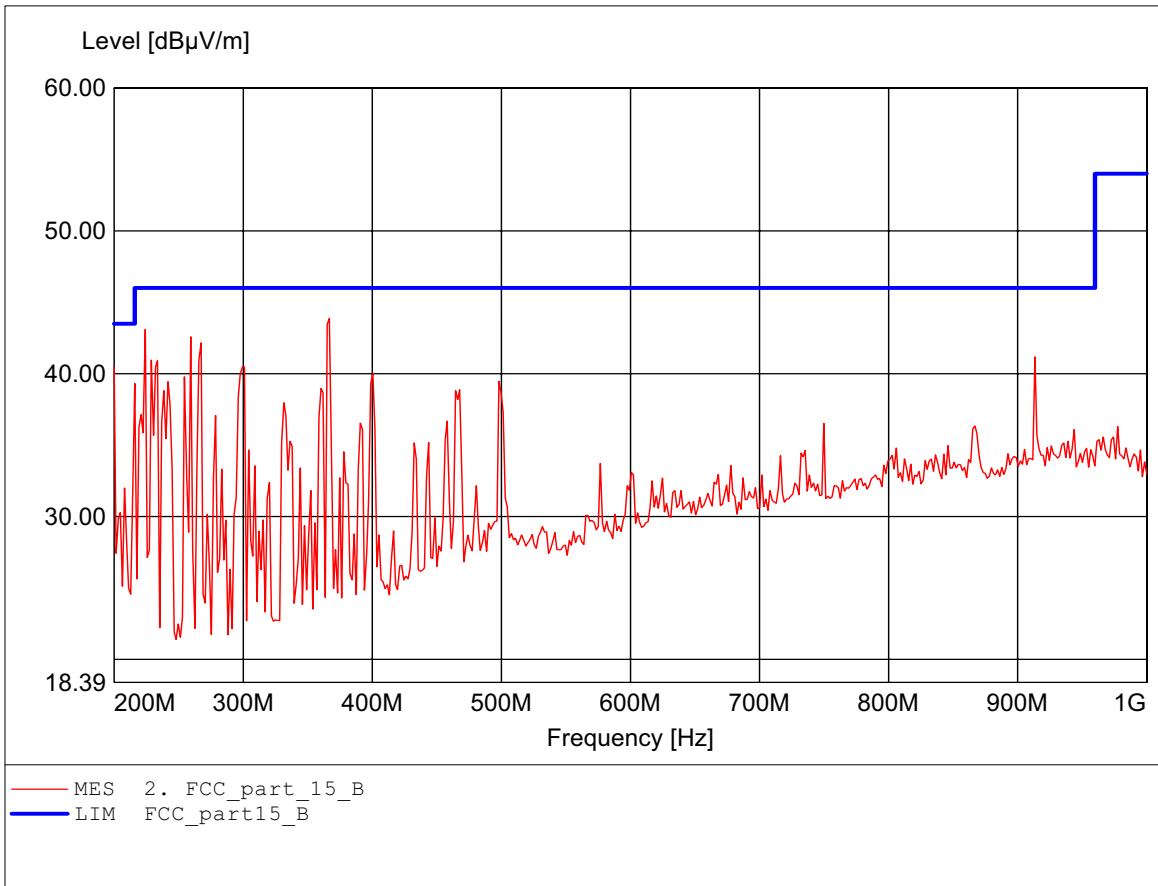
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:913.427MHz Emax:39.21dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

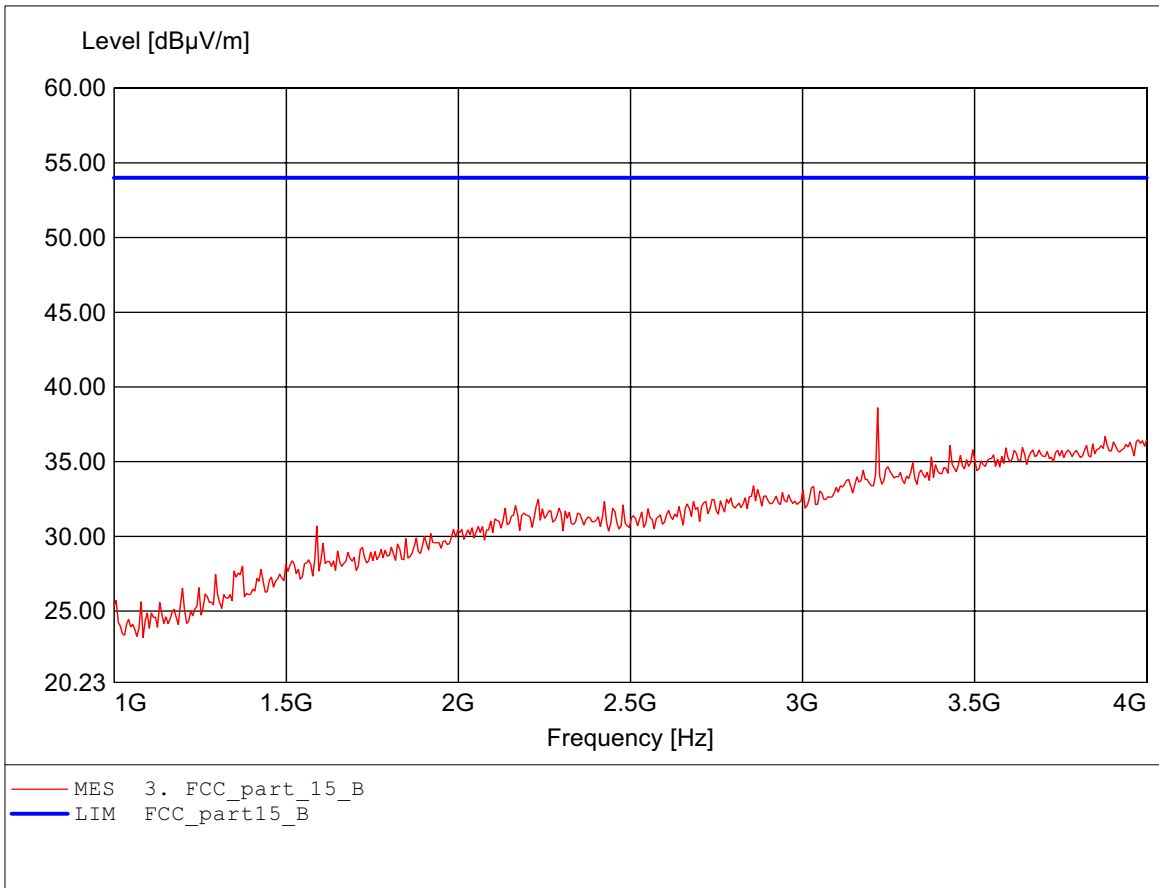
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:366.733MHz Emax:43.87dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

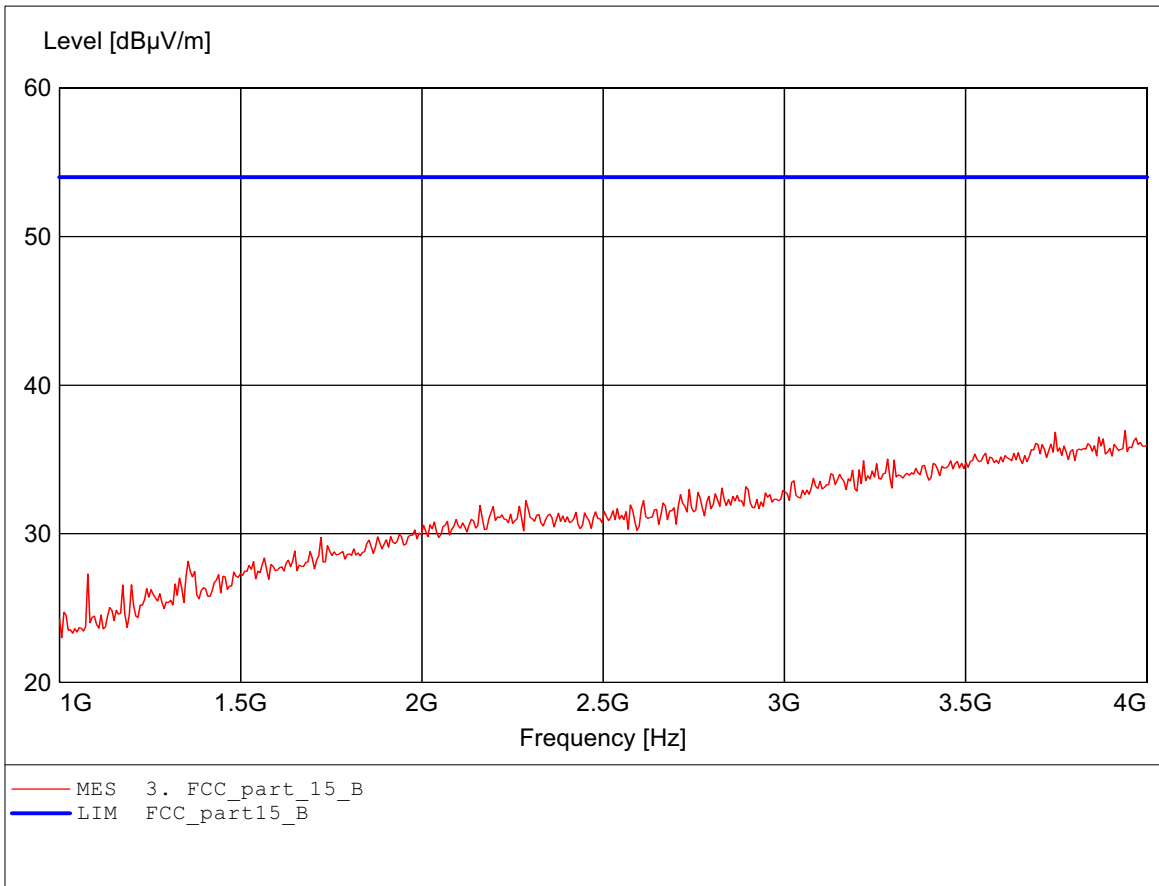
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:3.218GHz Emax:38.60dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

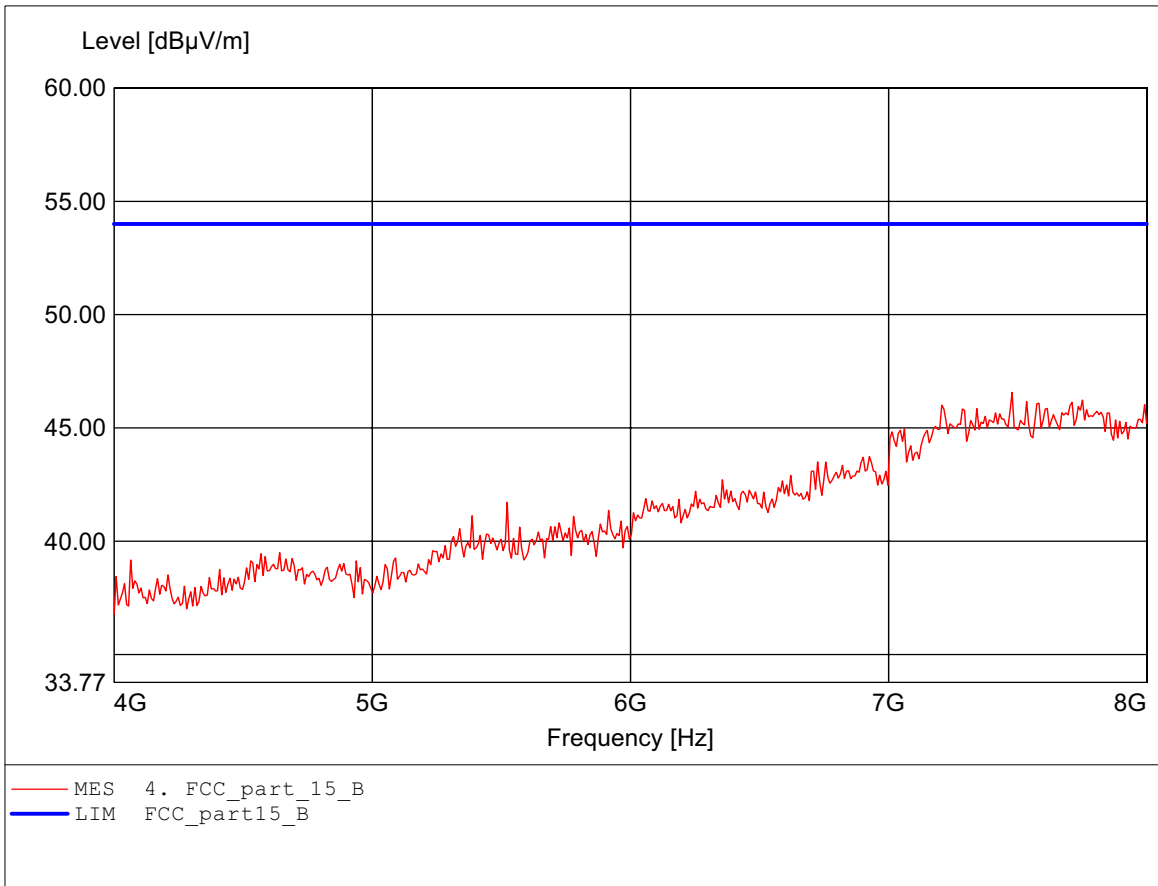
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:3.940GHz Emax:36.95dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

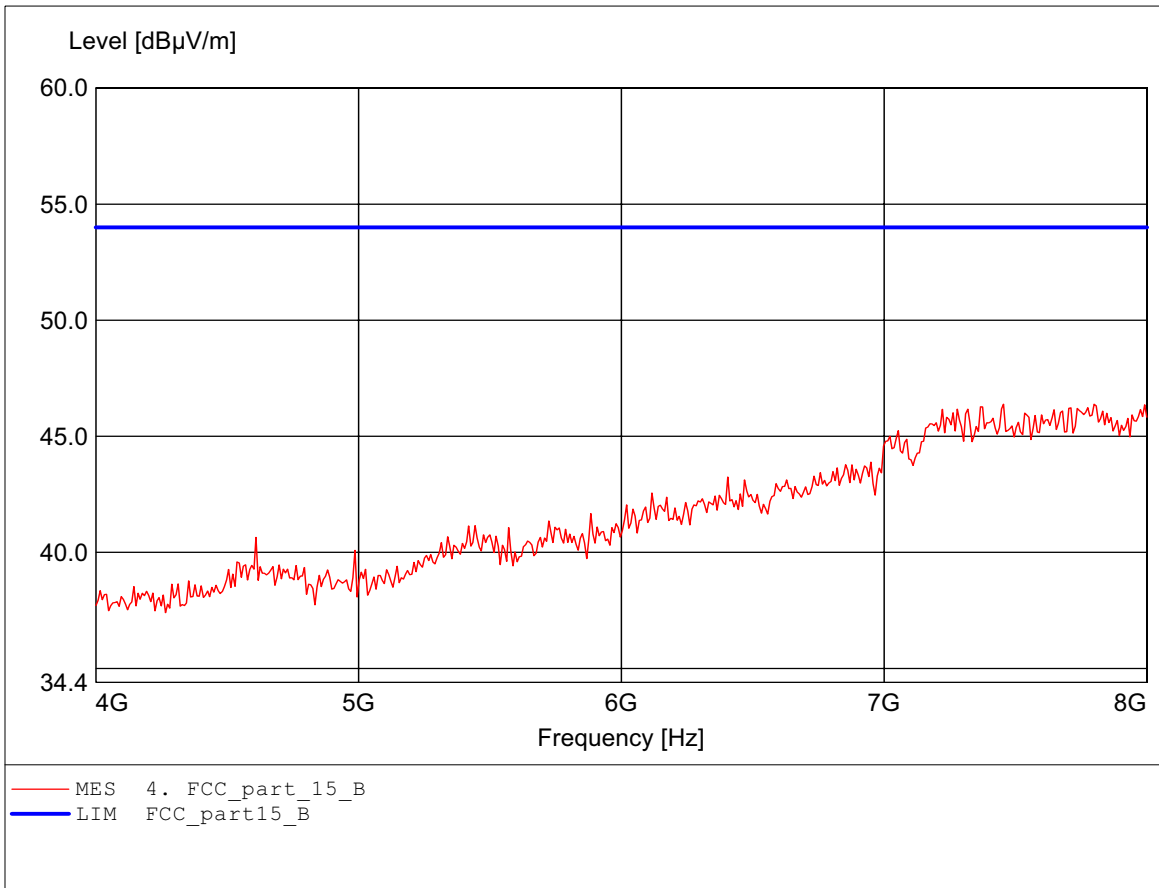
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:7.479GHz Emax:46.57dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

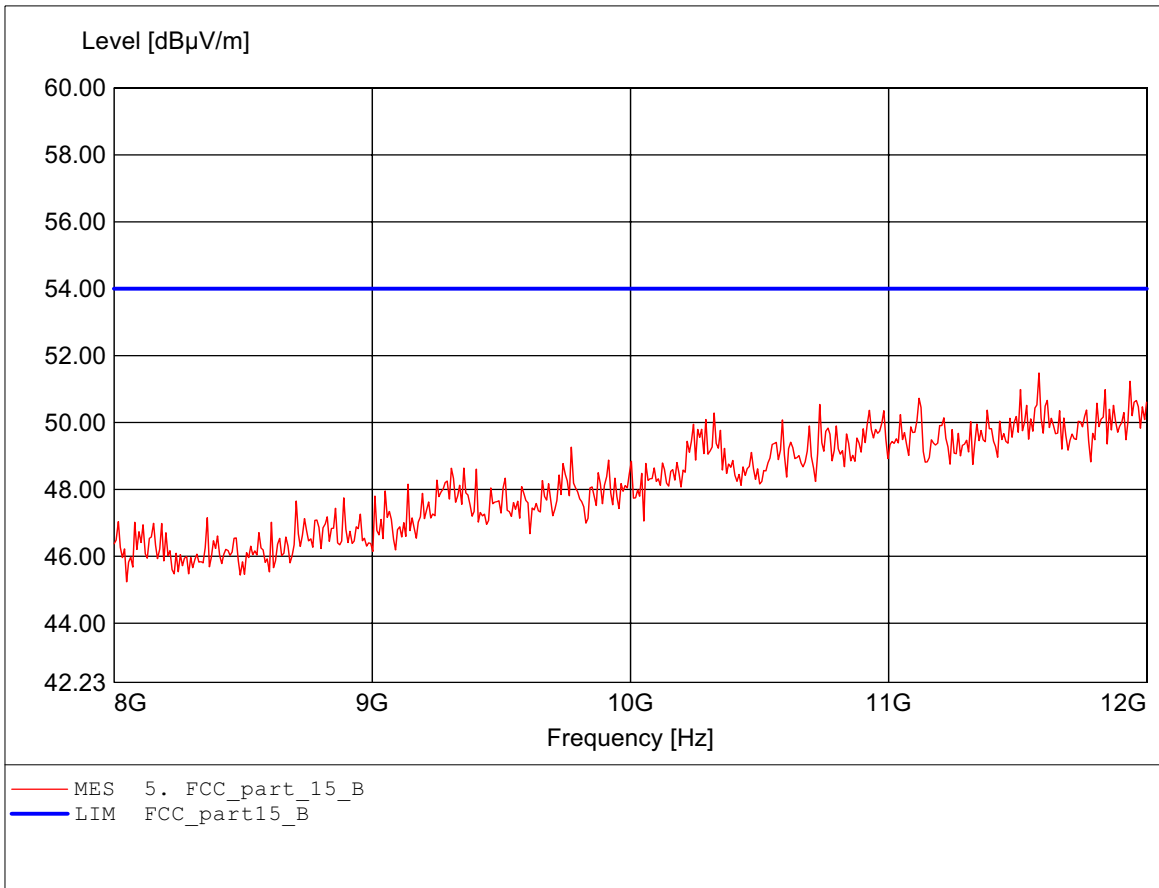
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:7.800GHz Emax:46.38dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

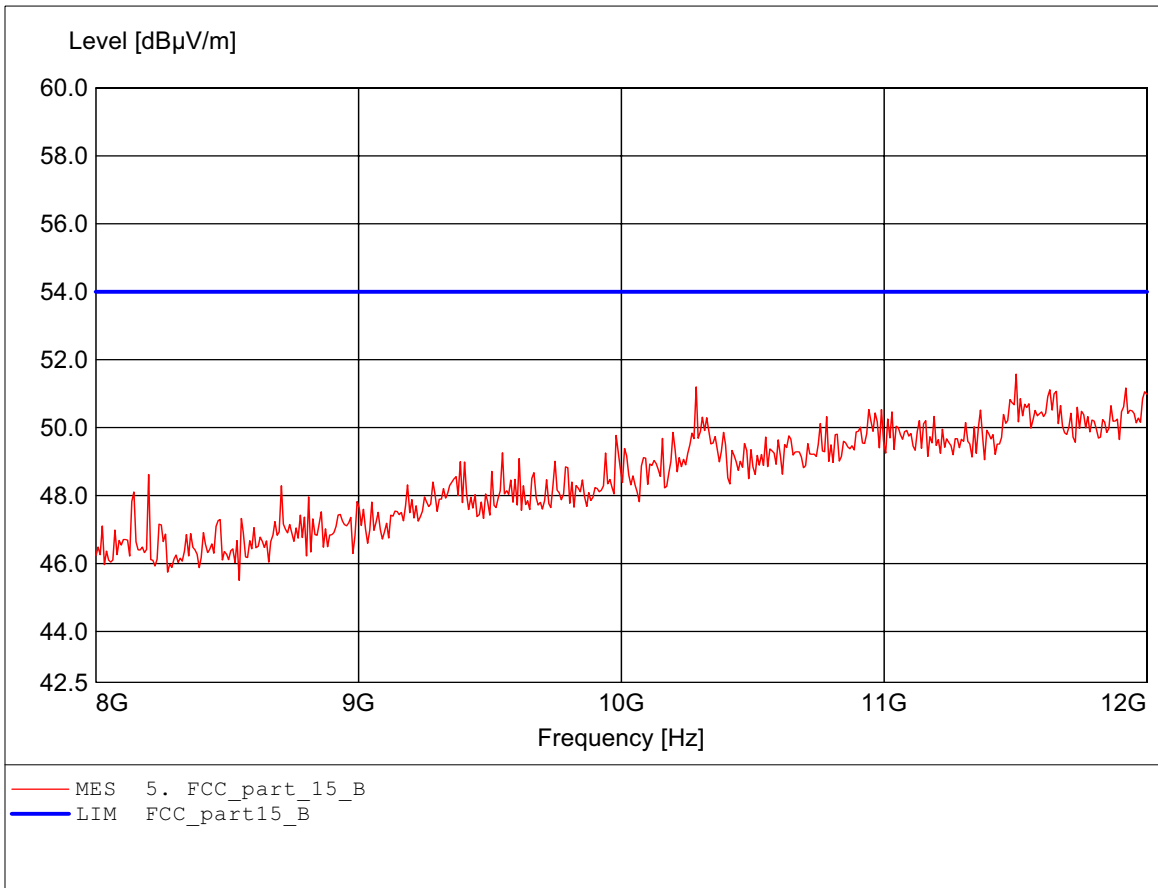
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:11.583GHz Emax:51.48dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

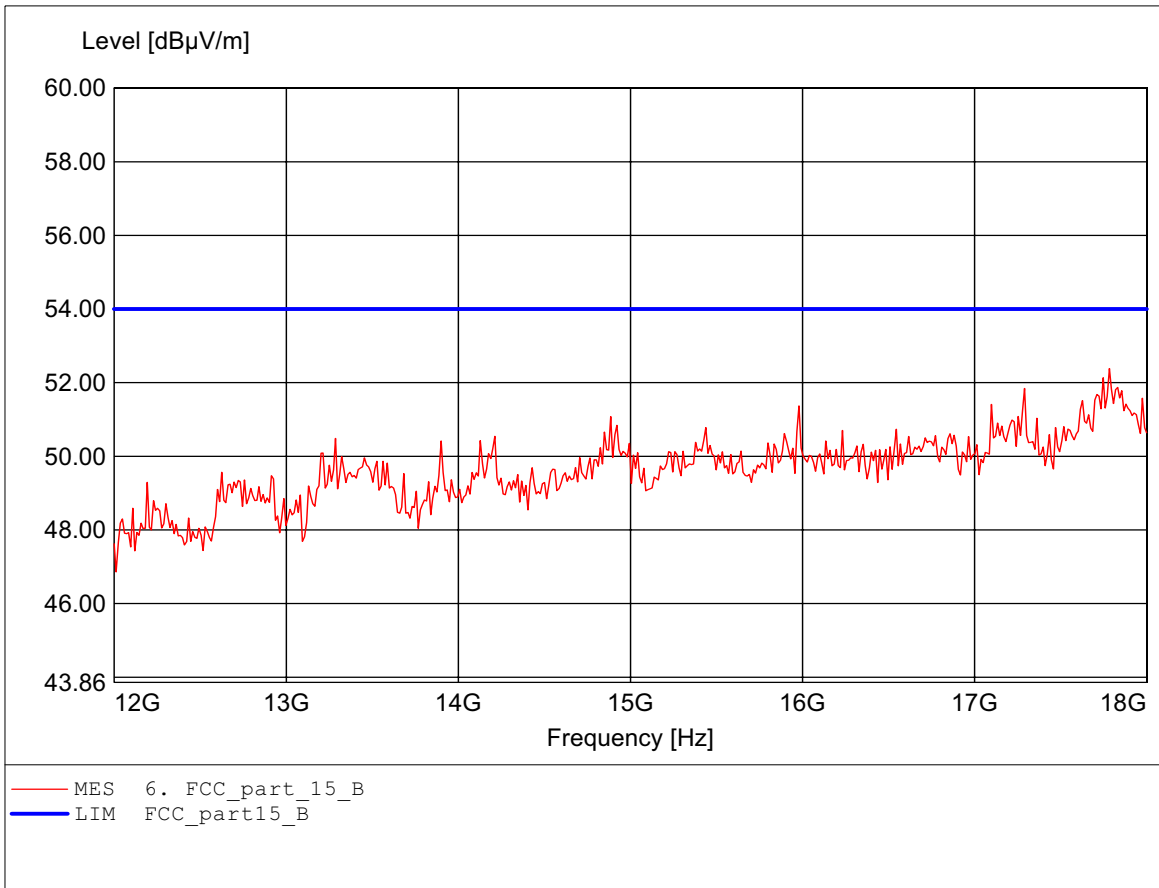
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:11.503GHz Emax:51.58dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

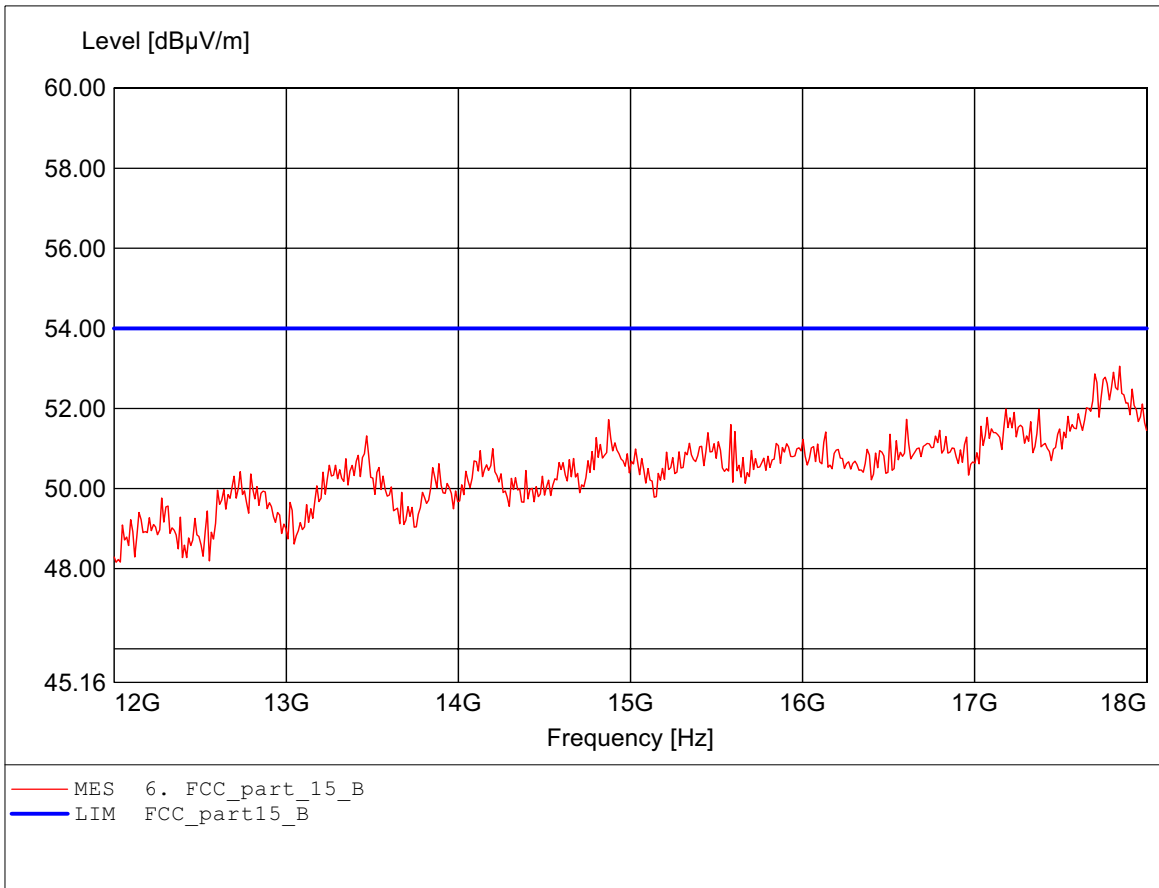
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:17.784GHz Emax:52.38dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

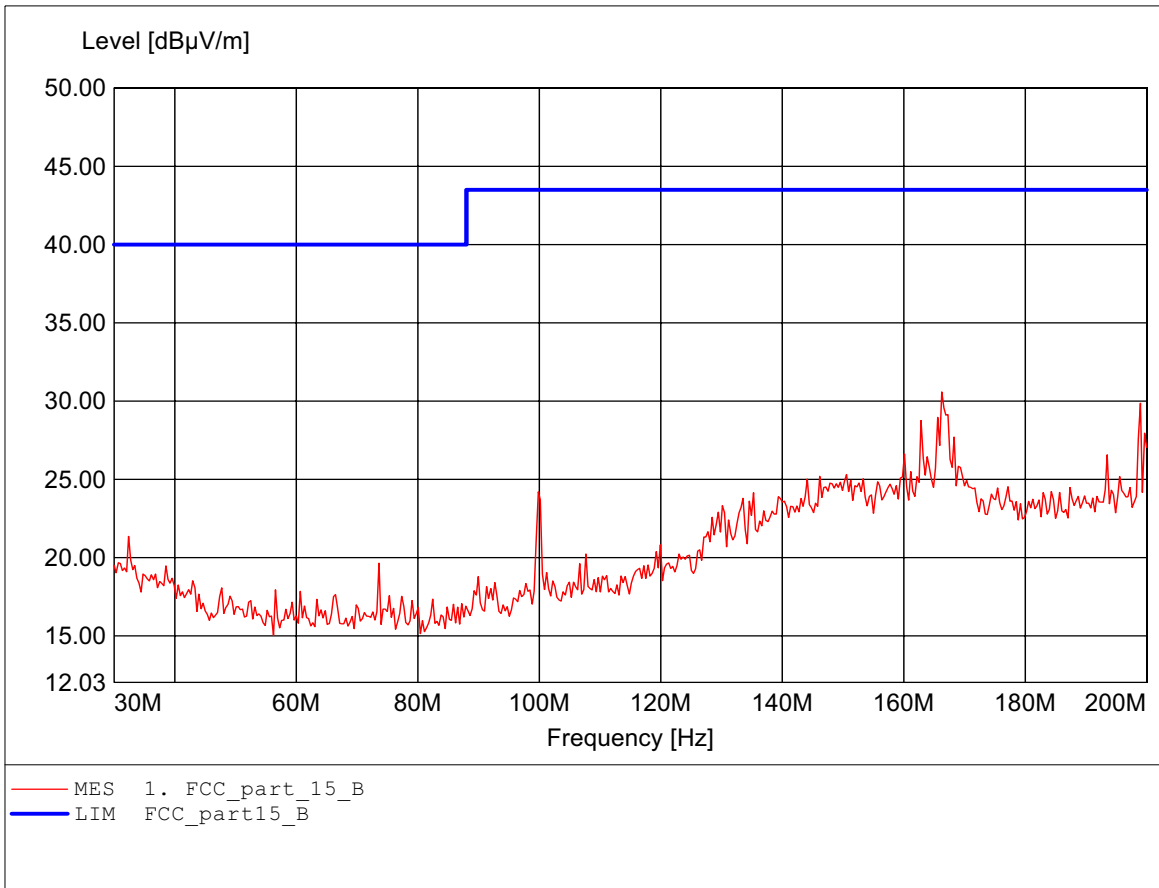
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:17.844GHz Emax:53.05dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

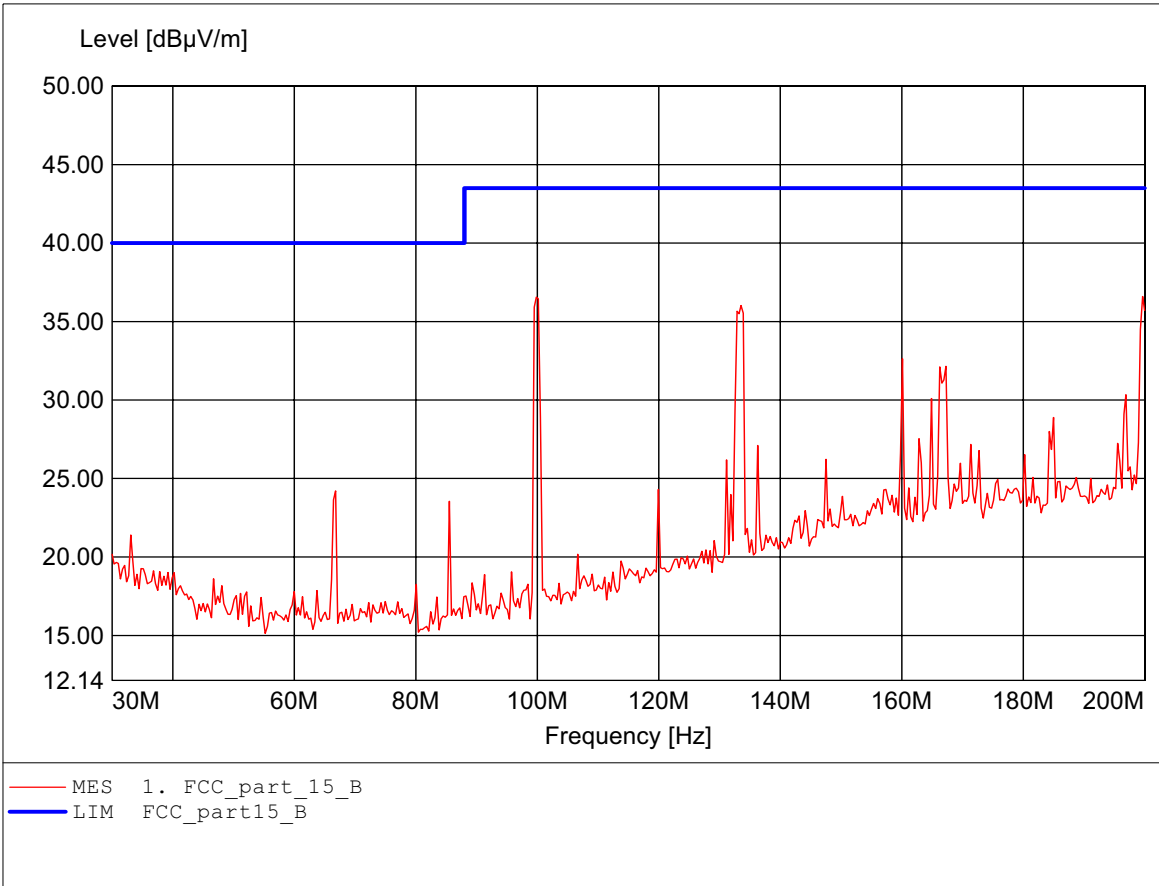
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 6
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:166.273MHz Emax:30.59dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

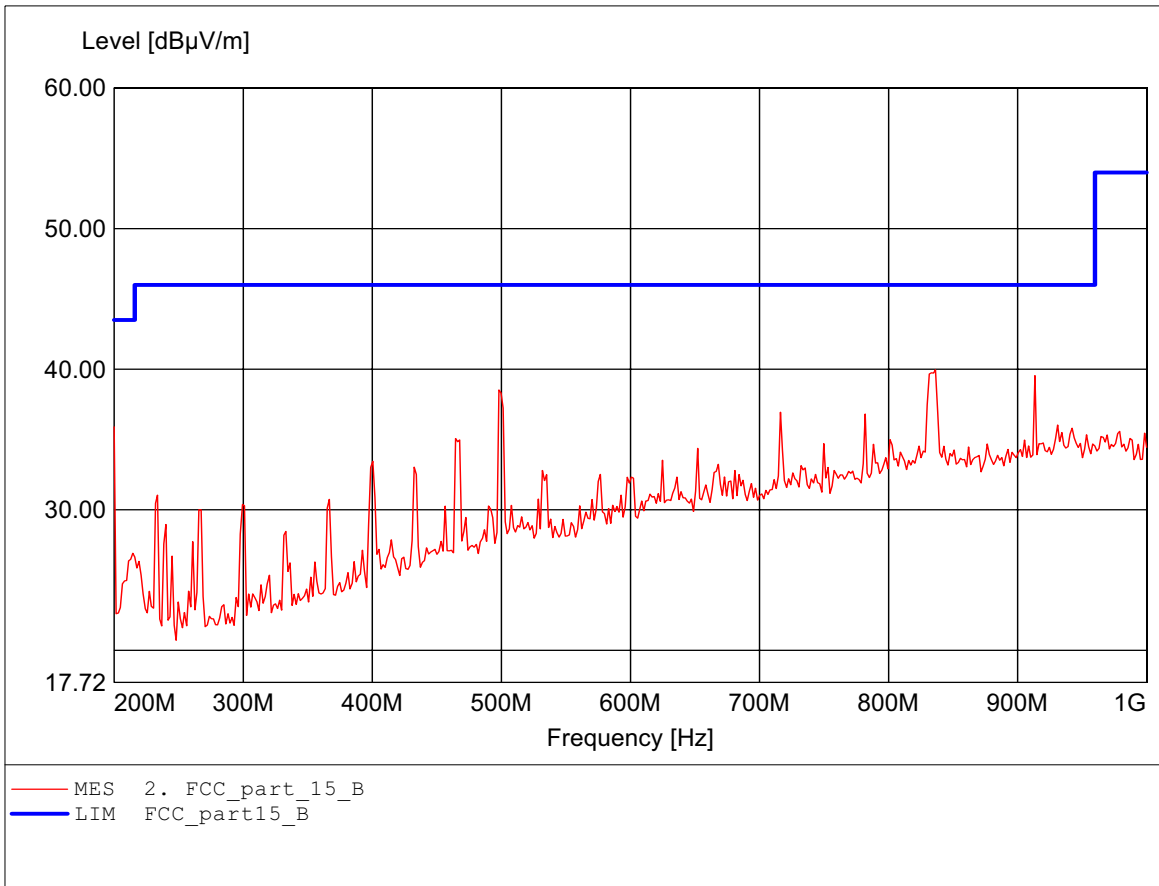
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:199.659MHz Emax:36.59dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

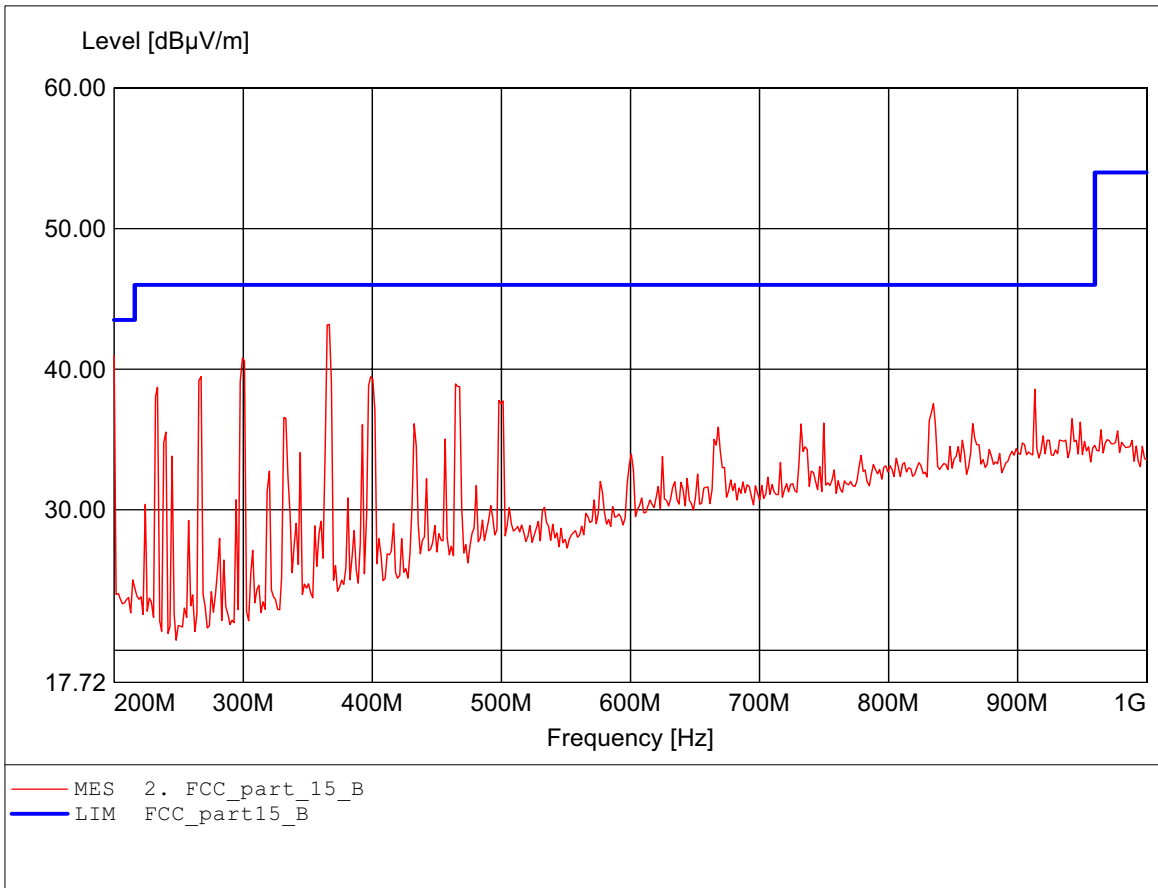
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:836.473MHz Emax:39.96dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

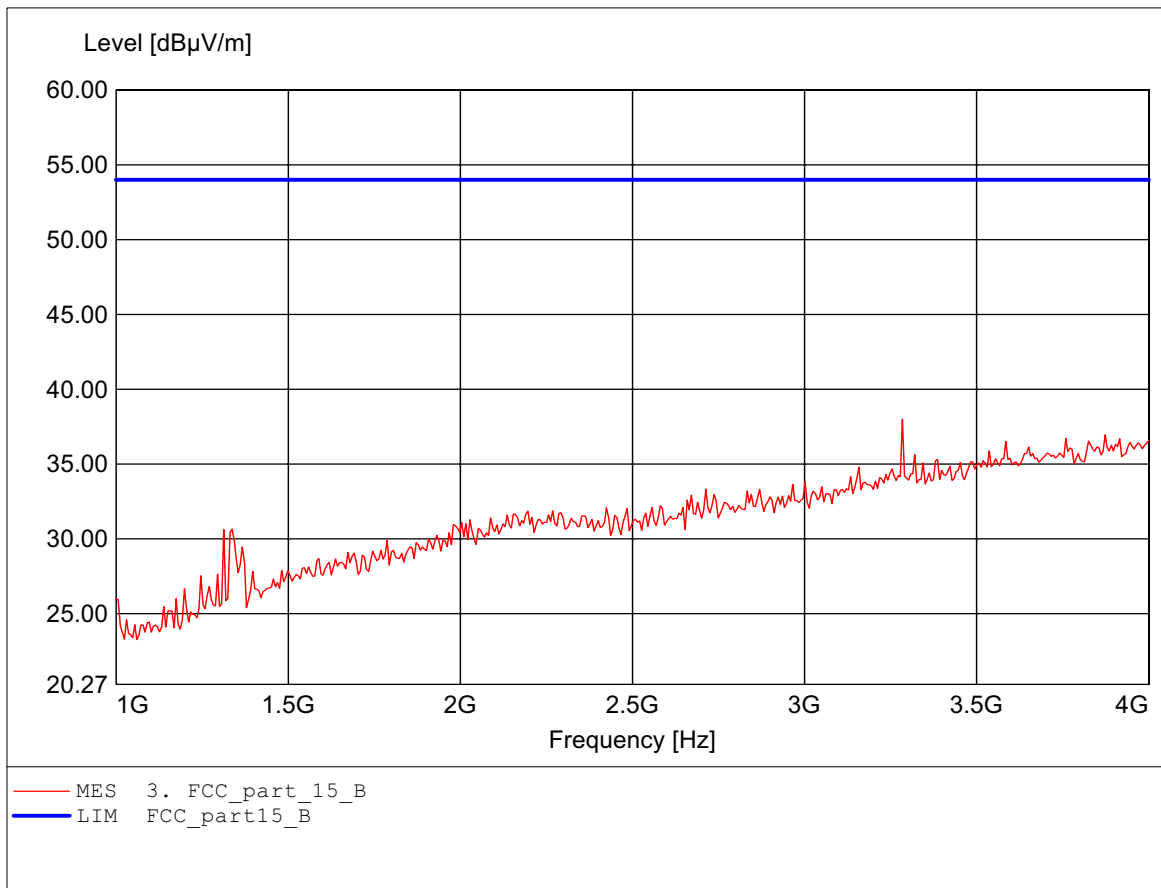
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:366.733MHz Emax:43.18dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

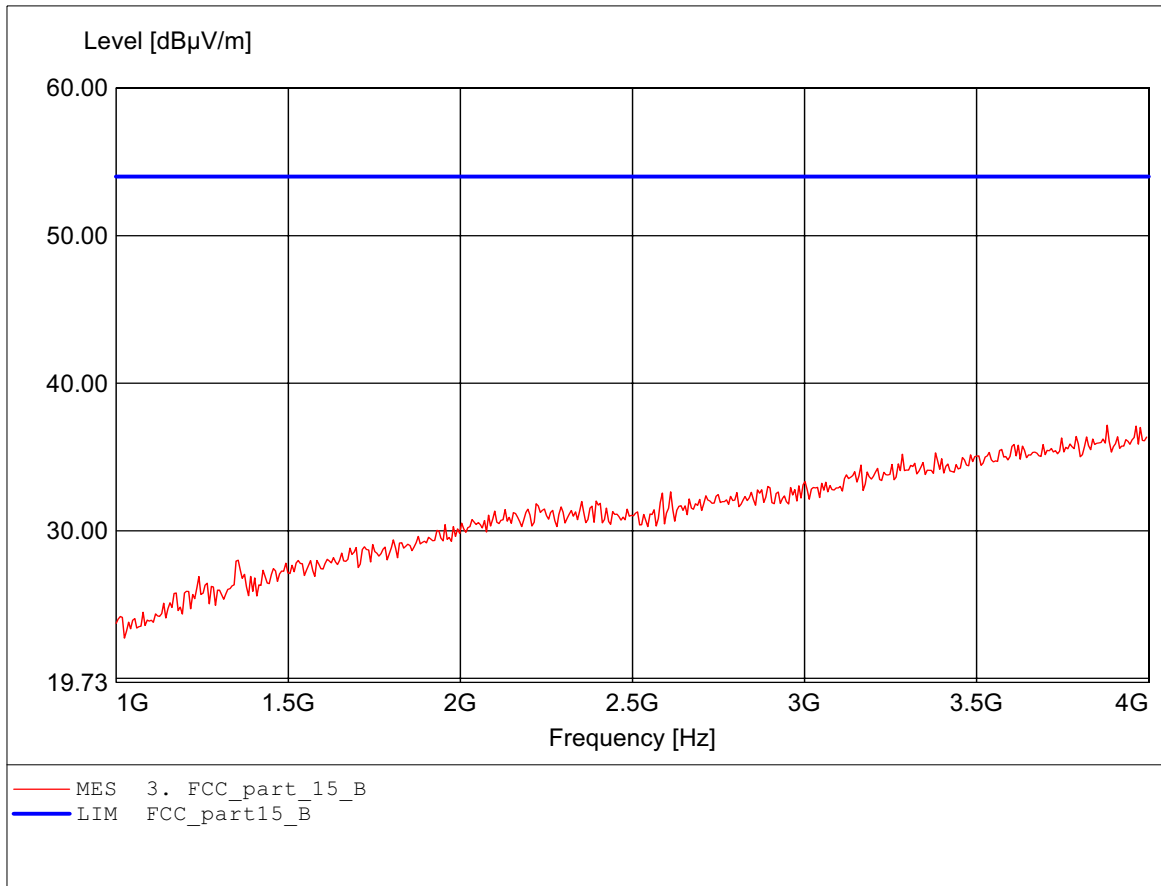
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:3.285GHz Emax:38.00dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

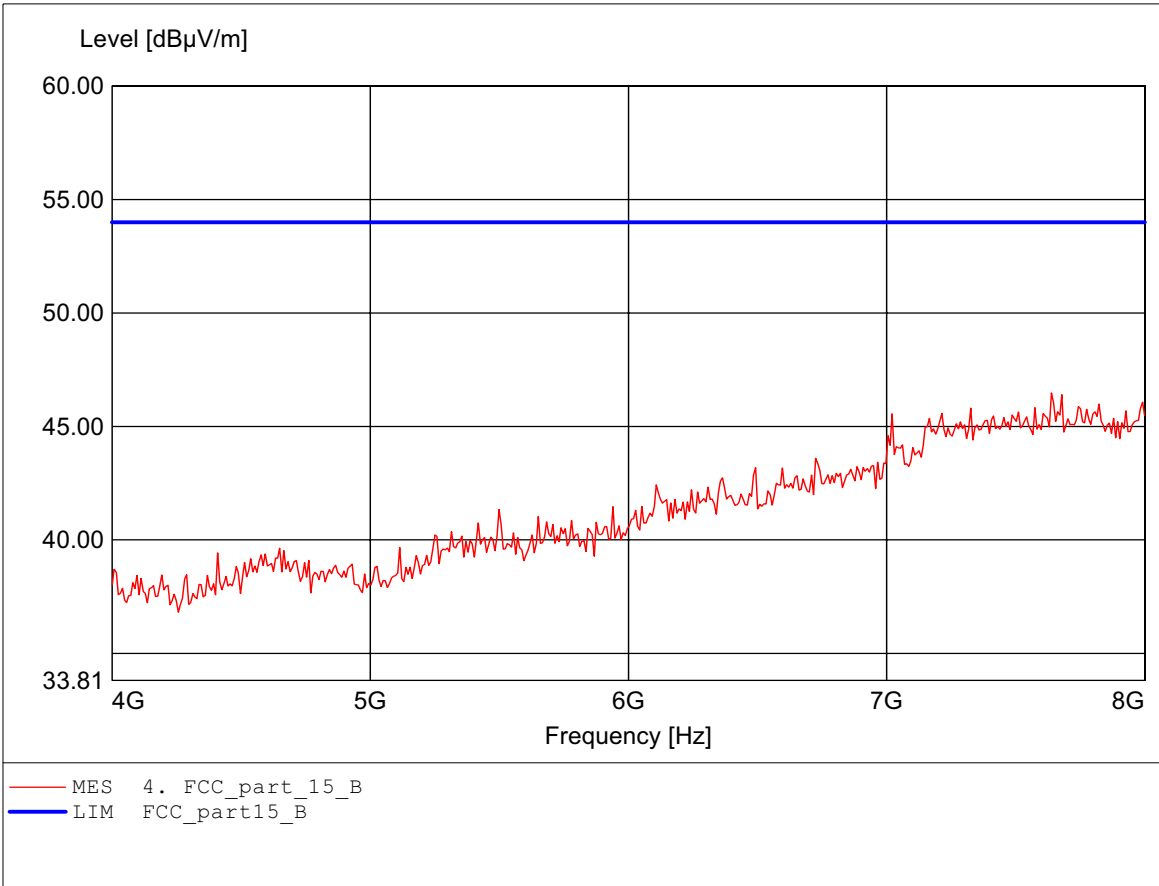
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:3.880GHz Emax:37.15dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

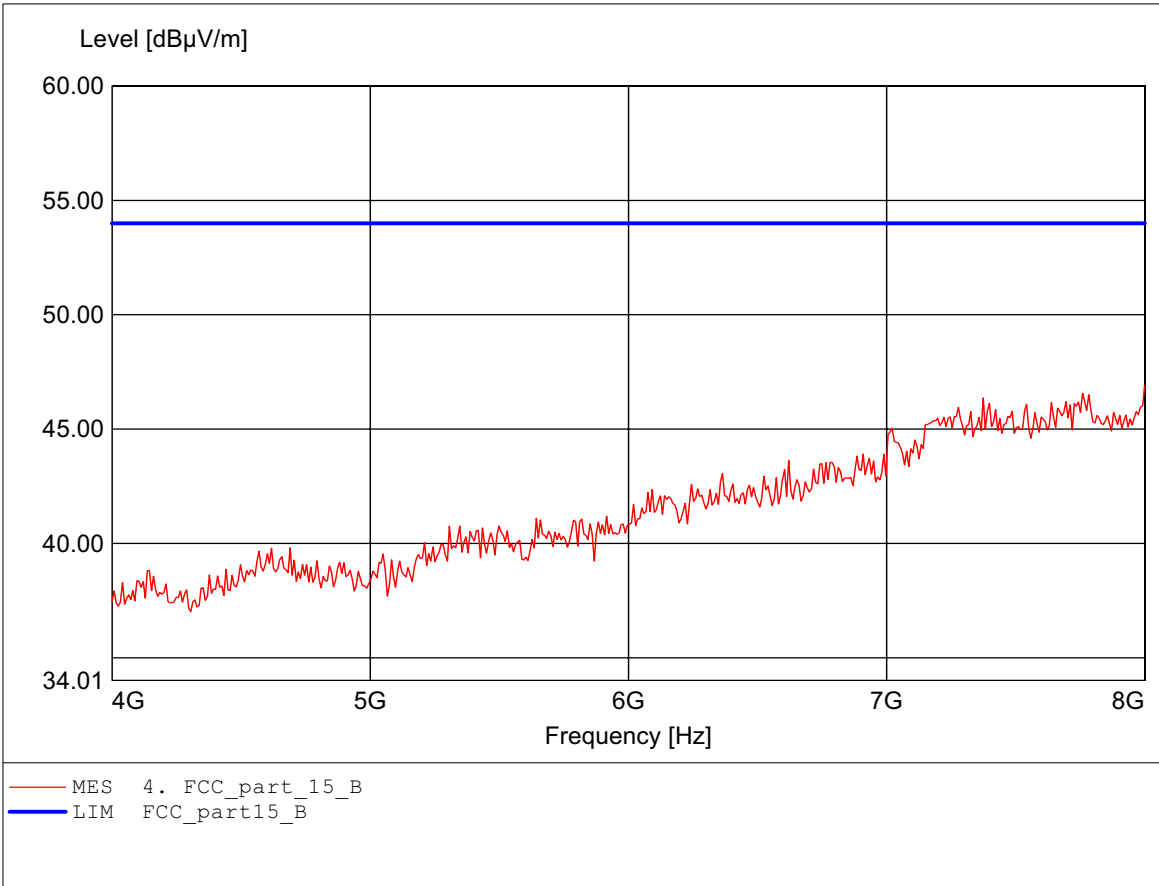
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:7.639GHz Emax:46.48dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

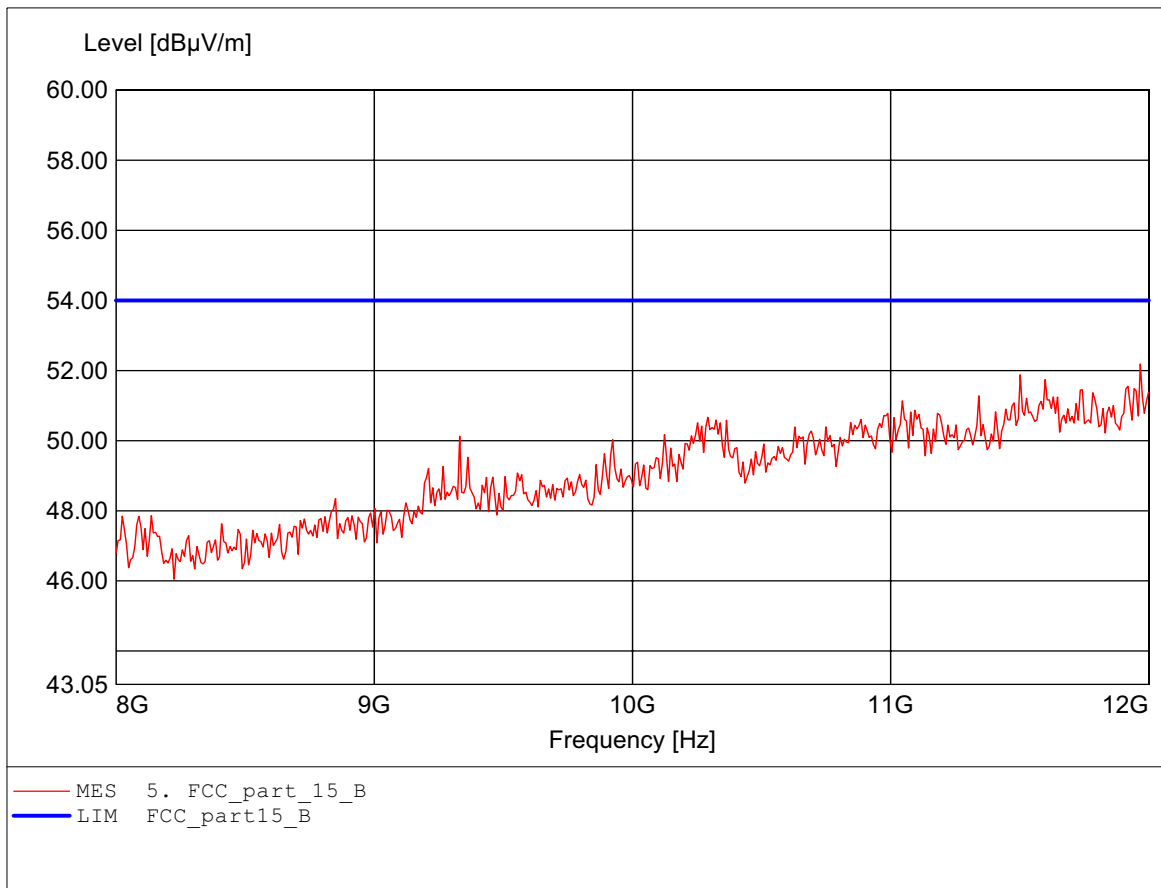
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:8.000GHz Emax:46.89dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

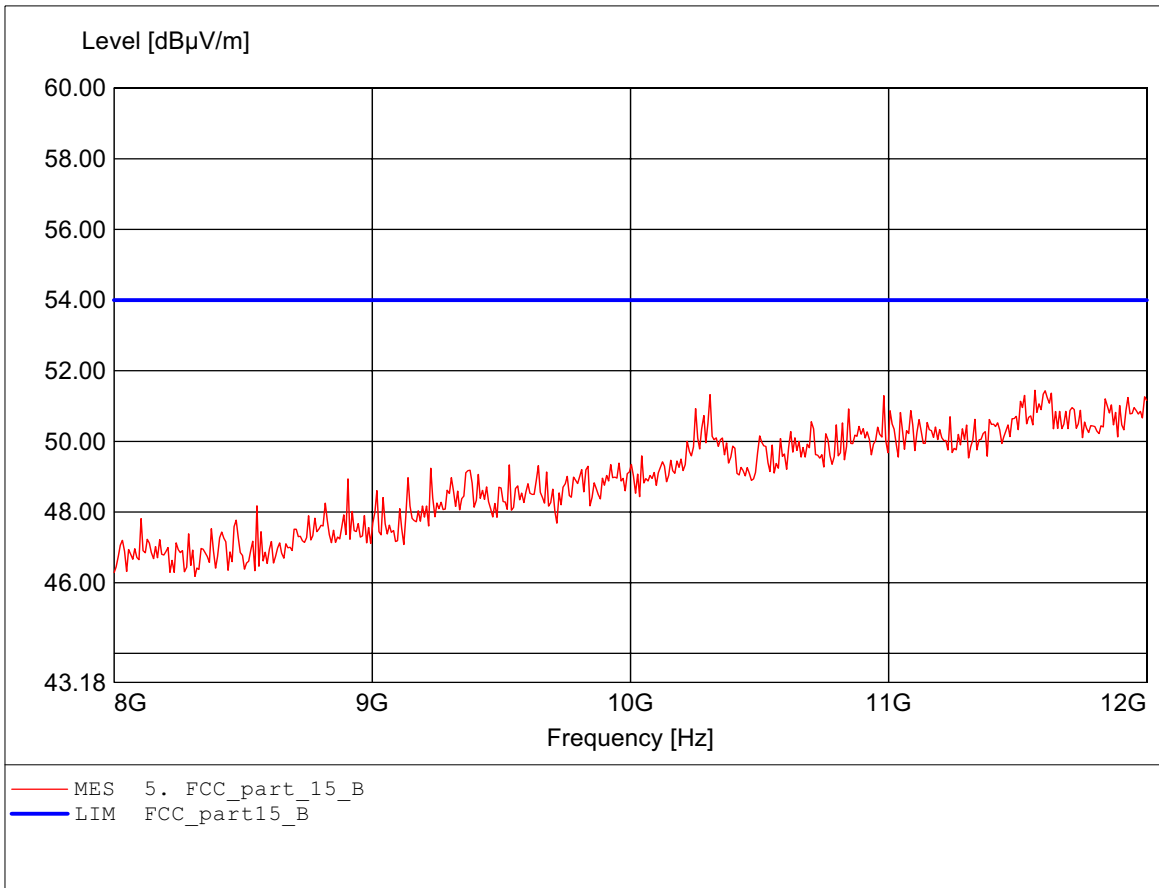
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:11.968GHz Emax:52.19dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

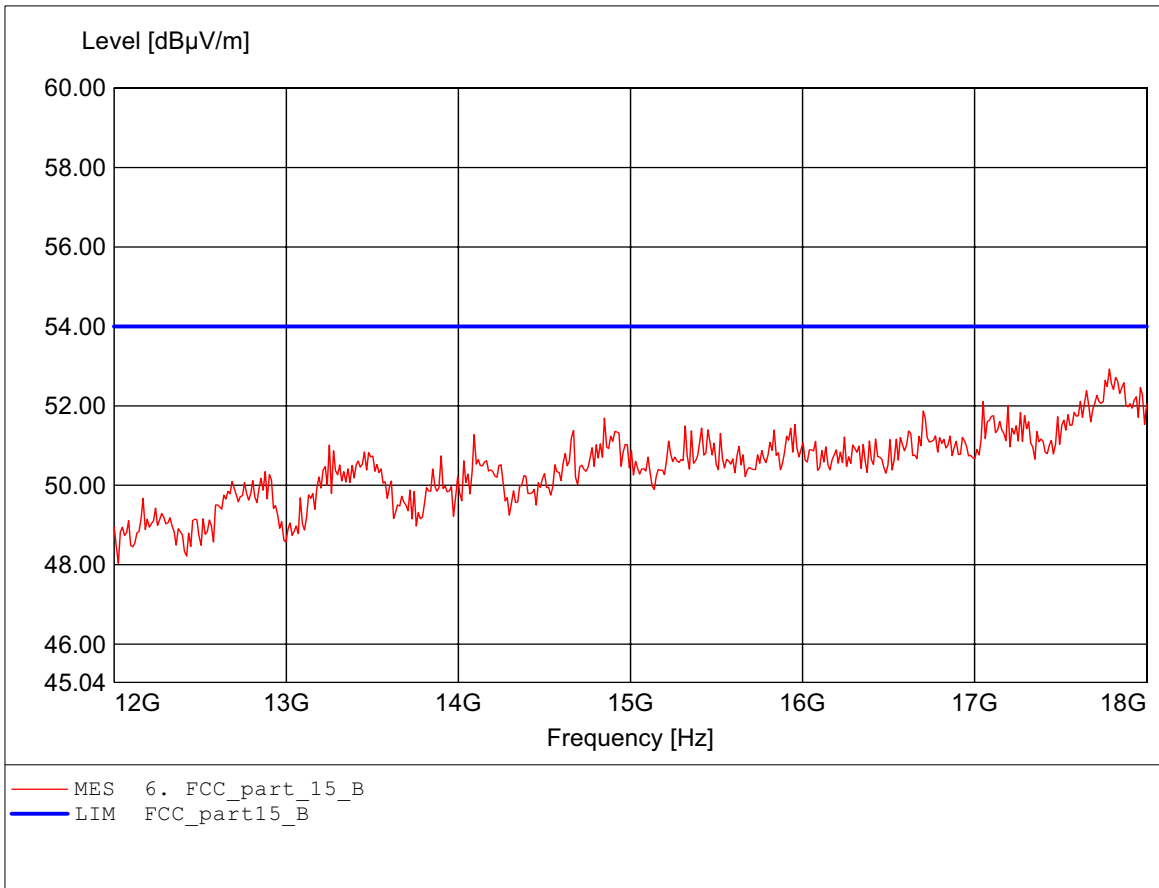
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:11.567GHz Emax:51.45dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

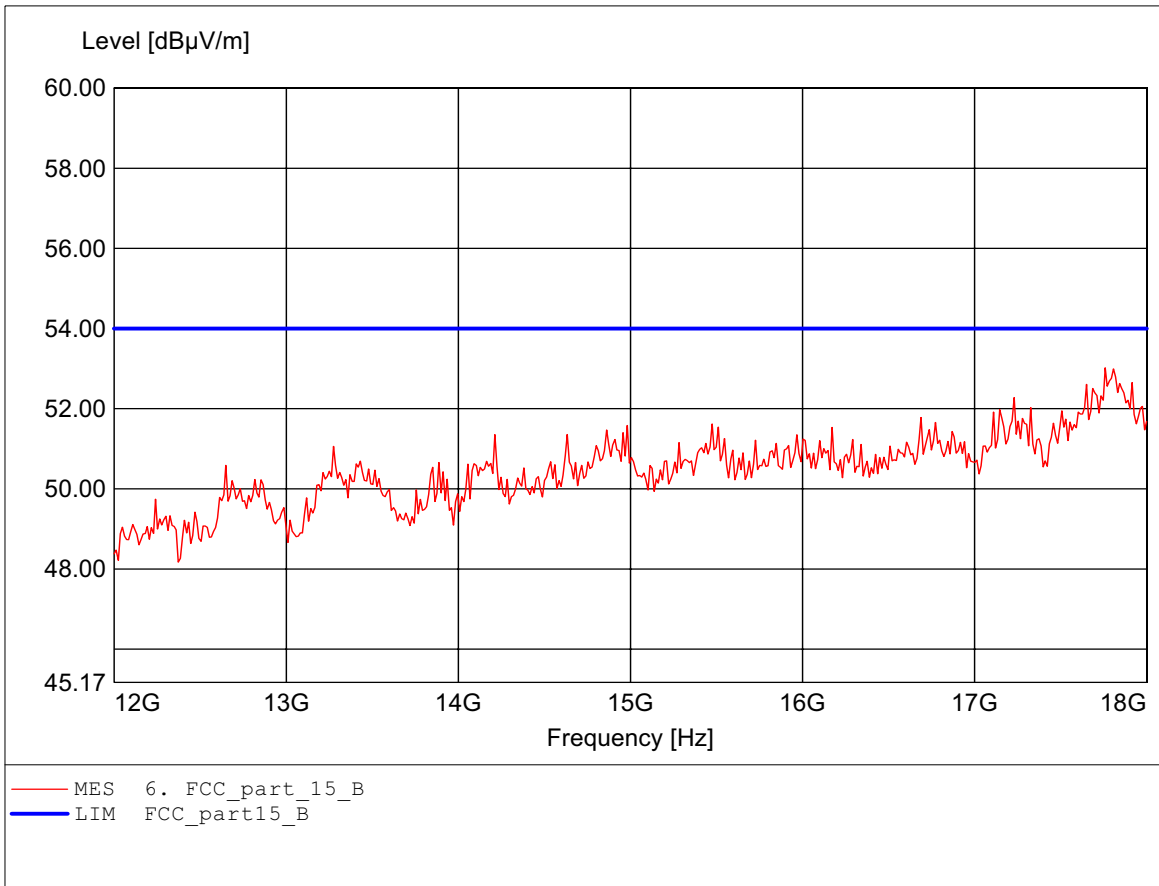
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:17.784GHz Emax:52.93dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

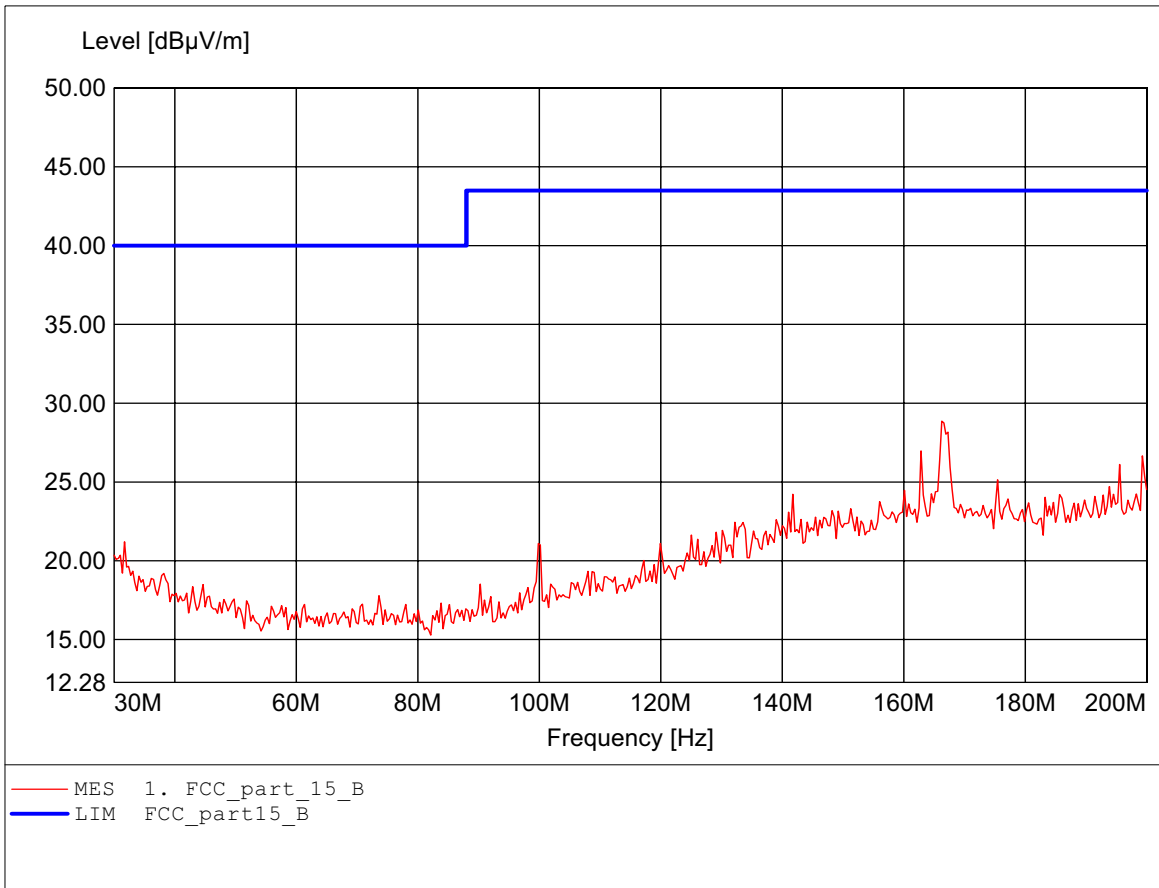
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:17.760GHz Emax:53.02dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

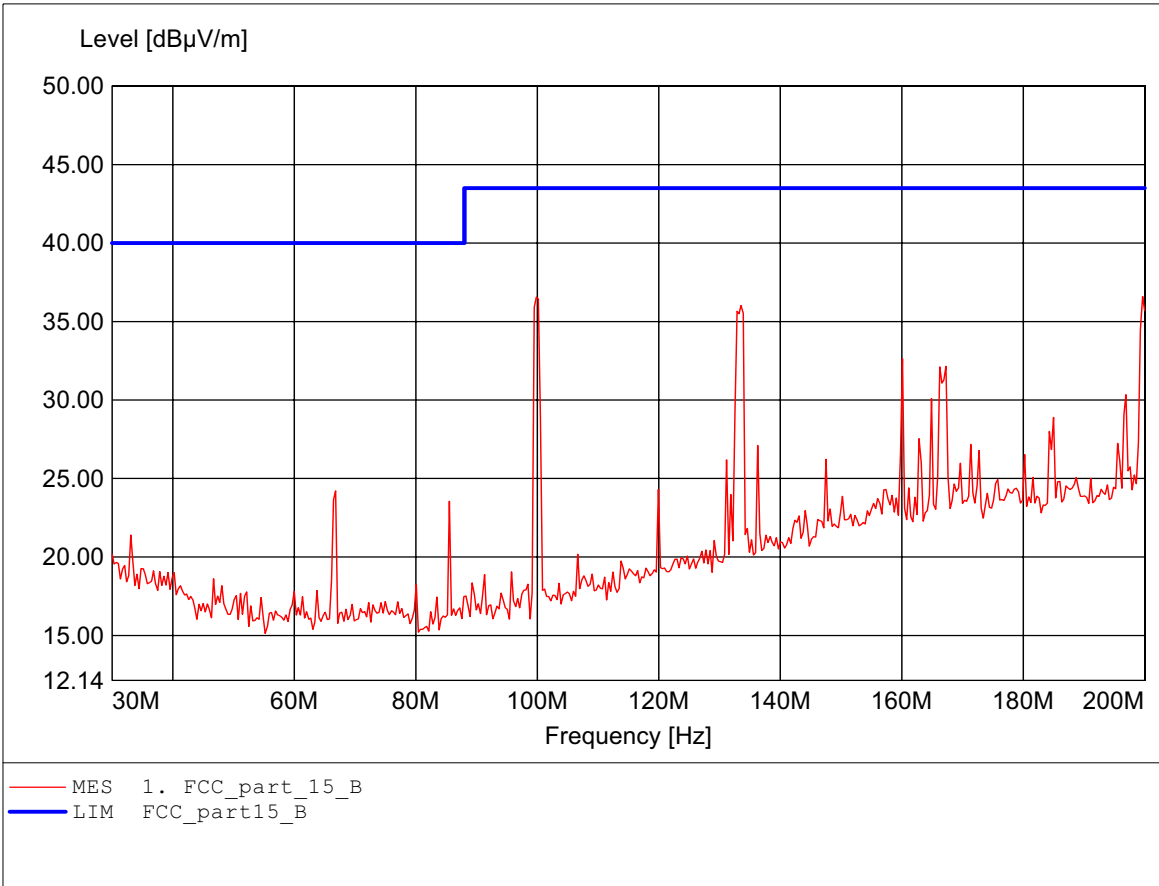
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:166.273MHz Emax:28.87dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

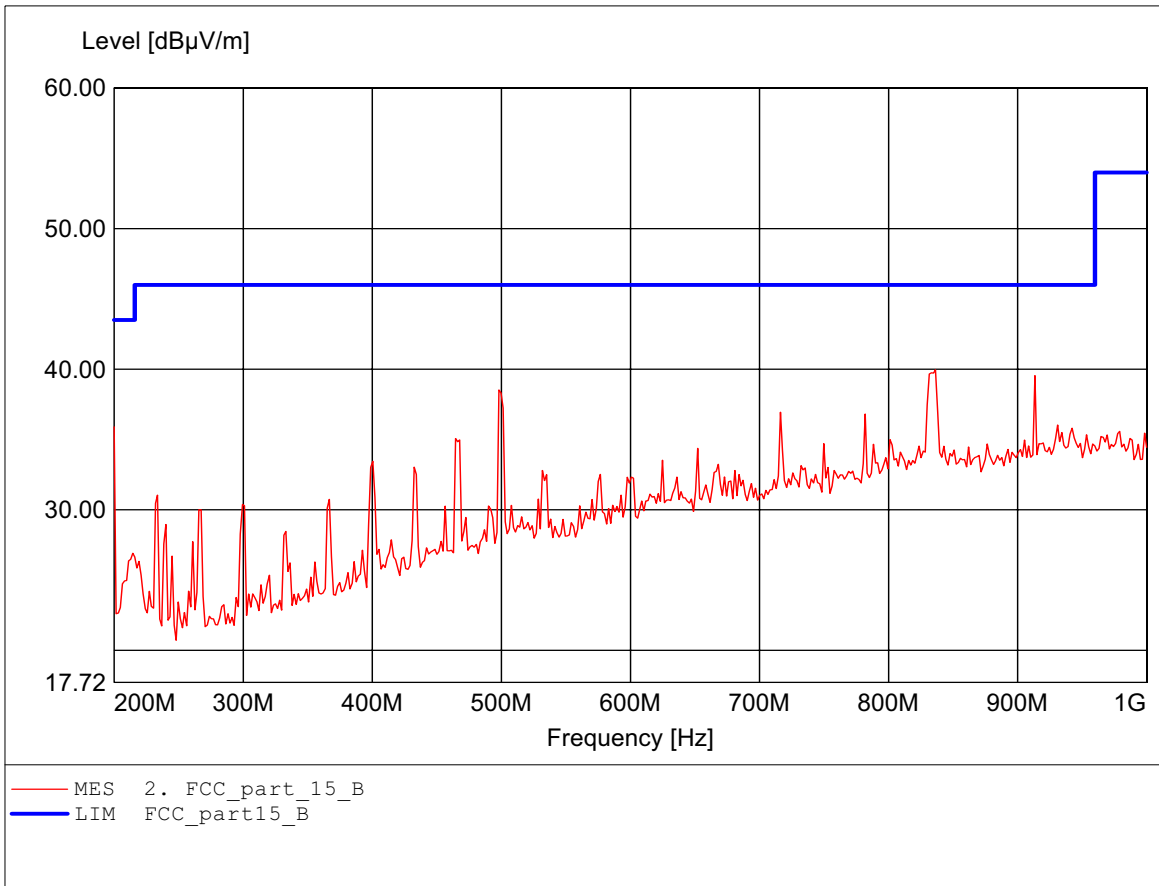
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:199.659MHz Emax:36.59dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

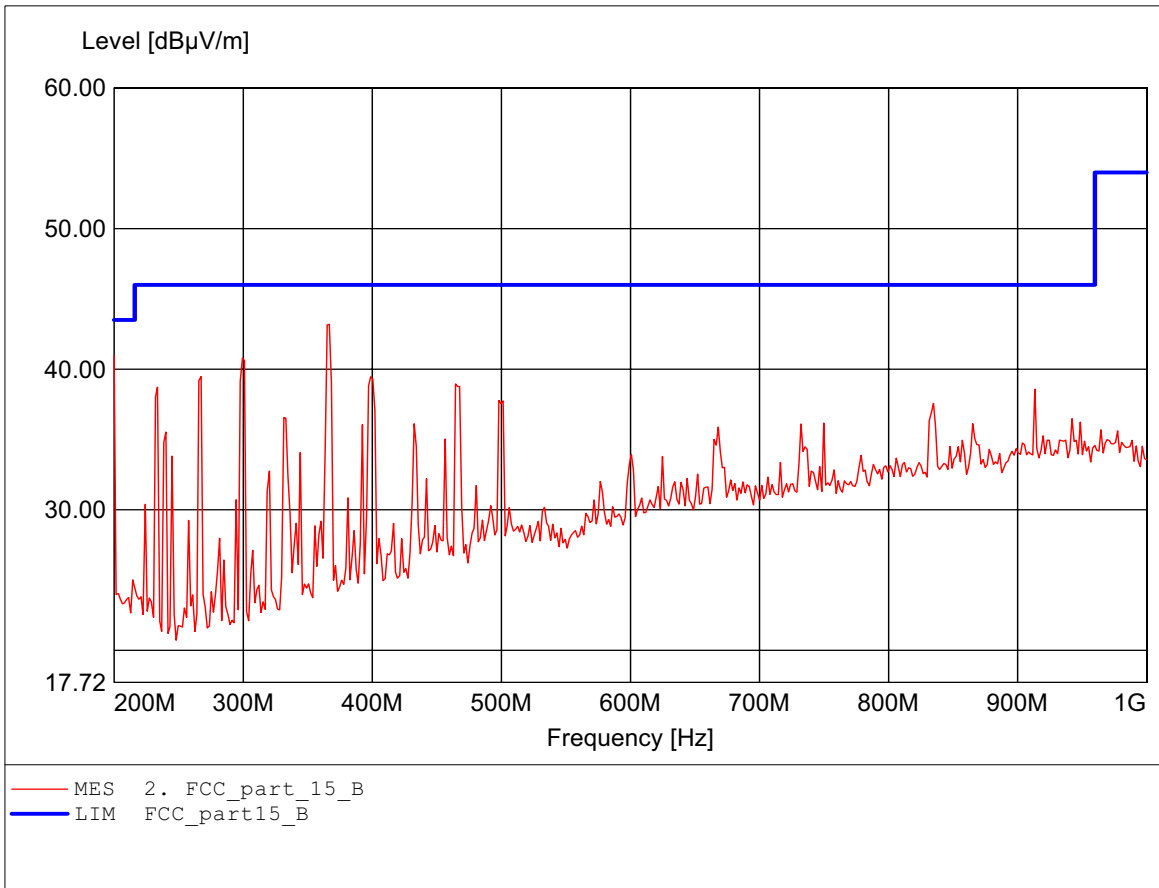
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:836.473MHz Emax:39.96dBμV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

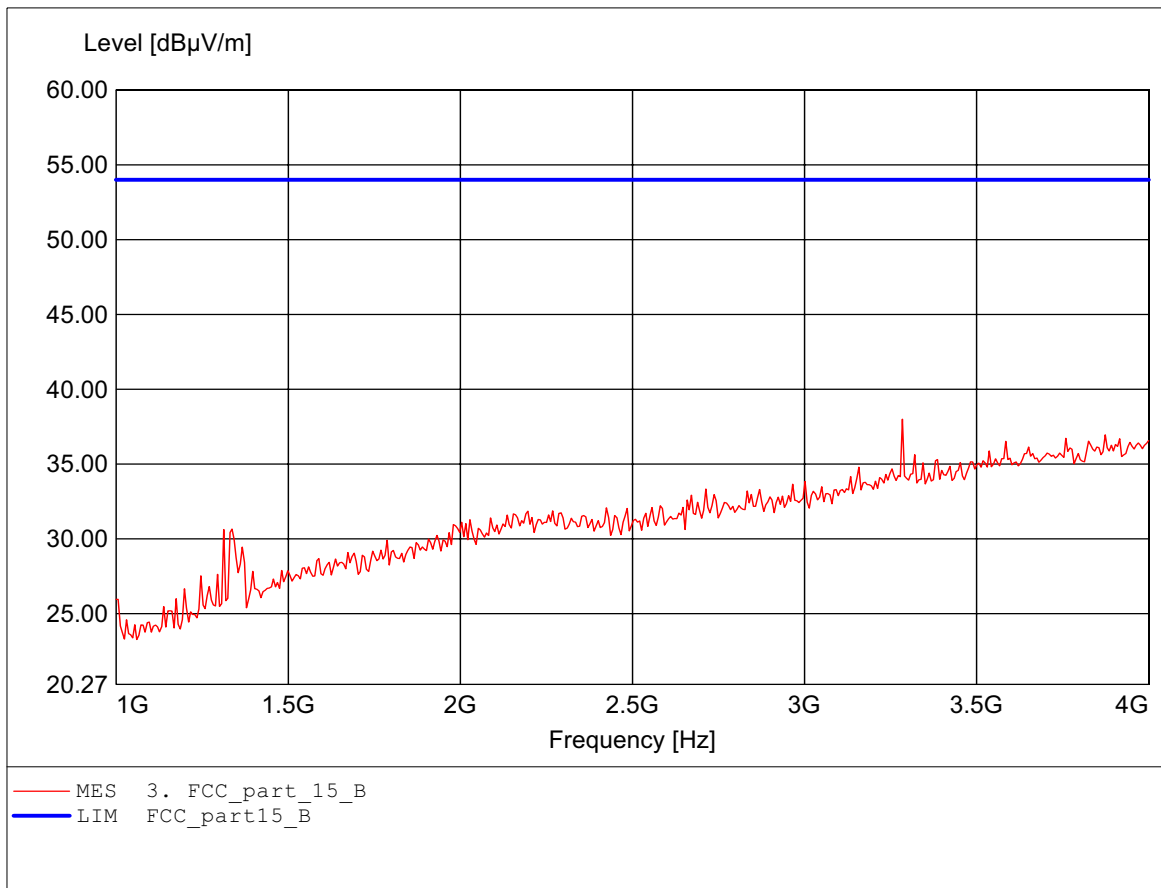
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC (power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:366.733MHz Emax:43.18dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

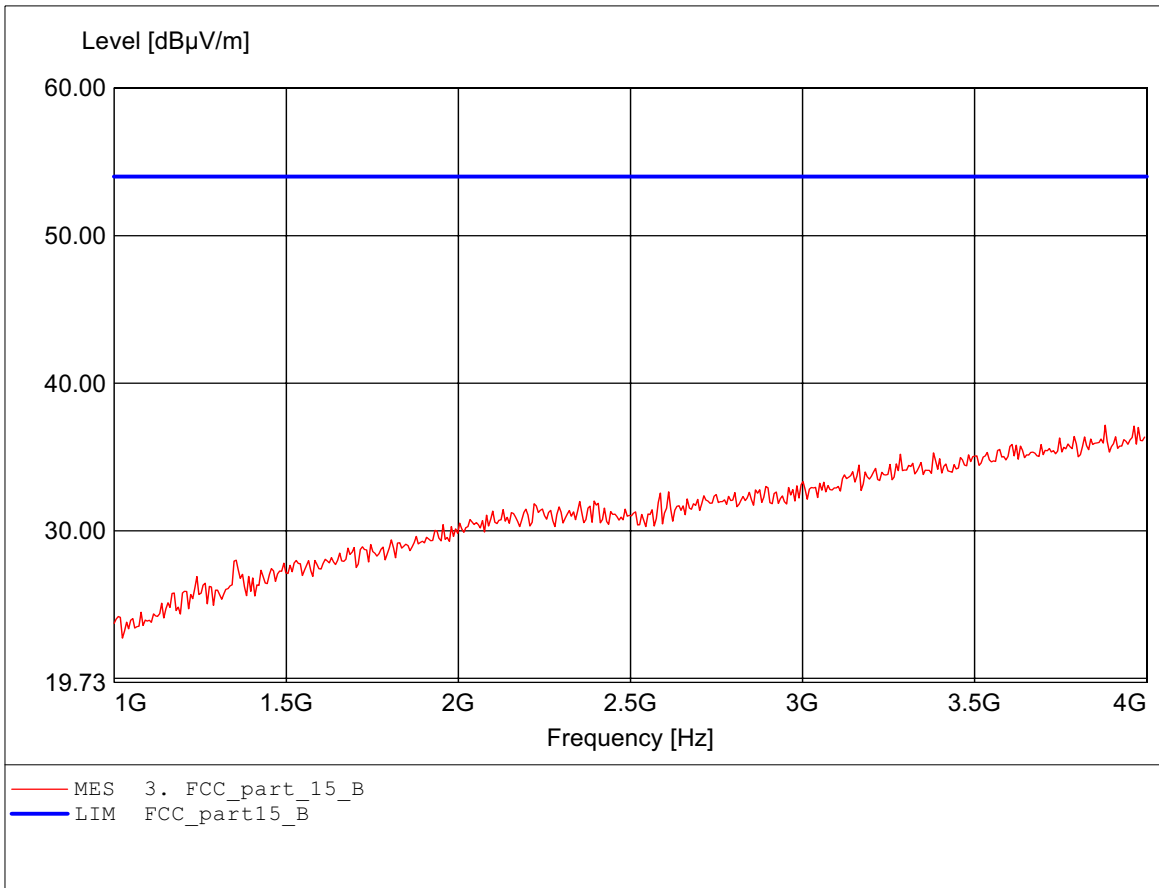
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:3.285GHz Emax:38.00dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

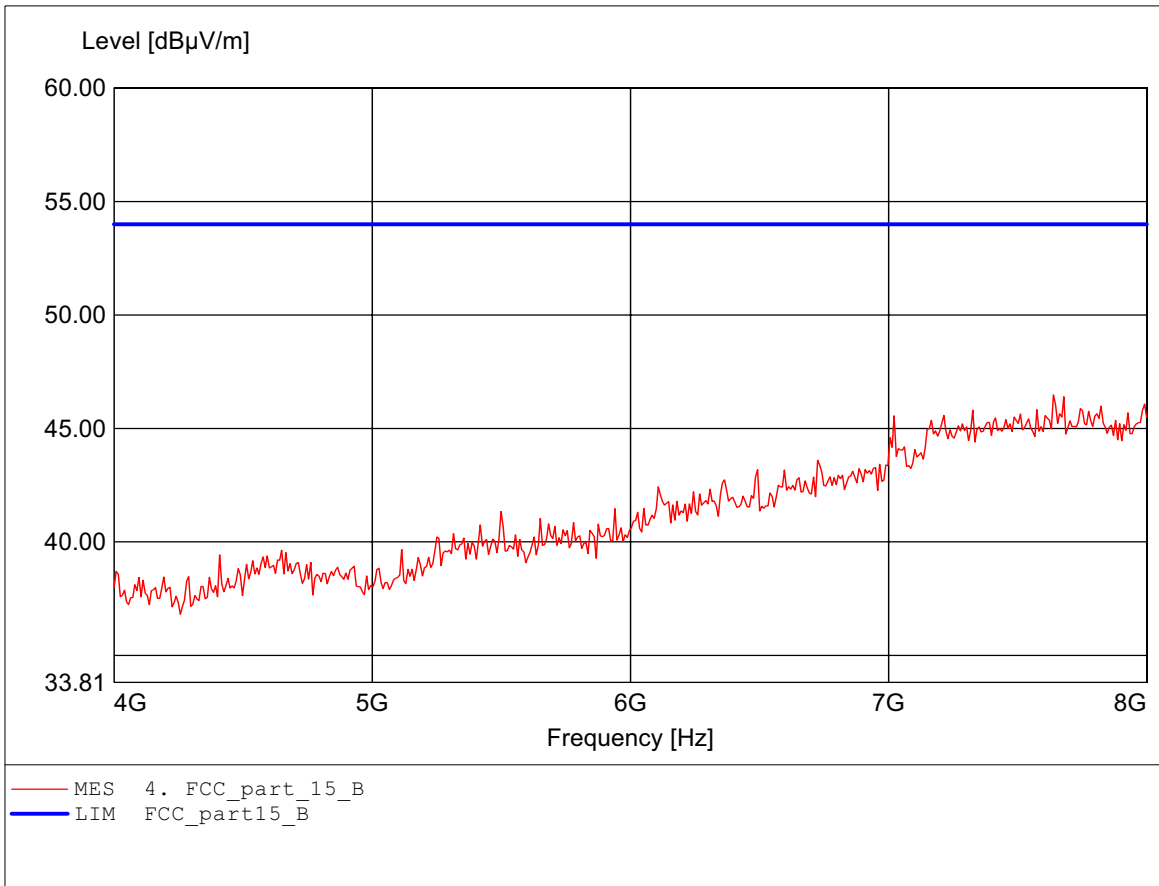
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:3.880GHz Emax:37.15dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

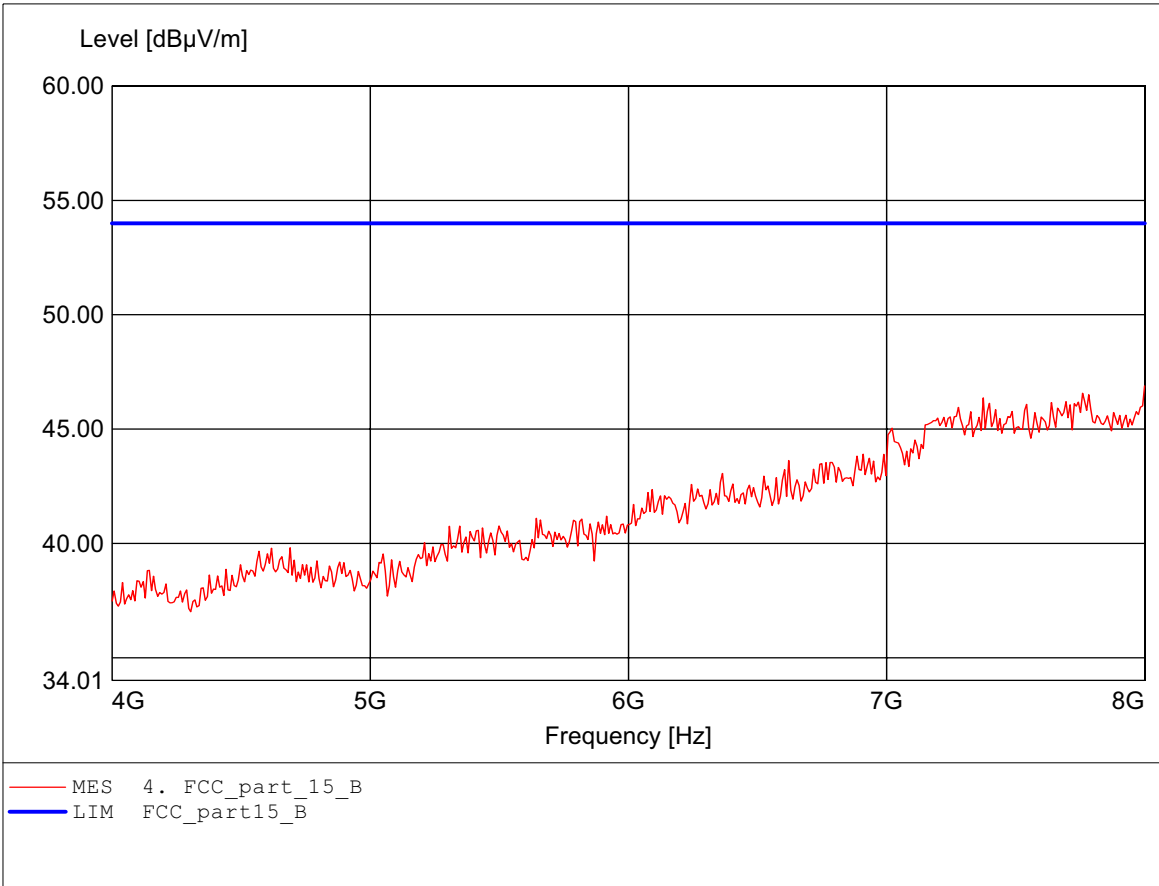
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:7.639GHz Emax:46.48dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

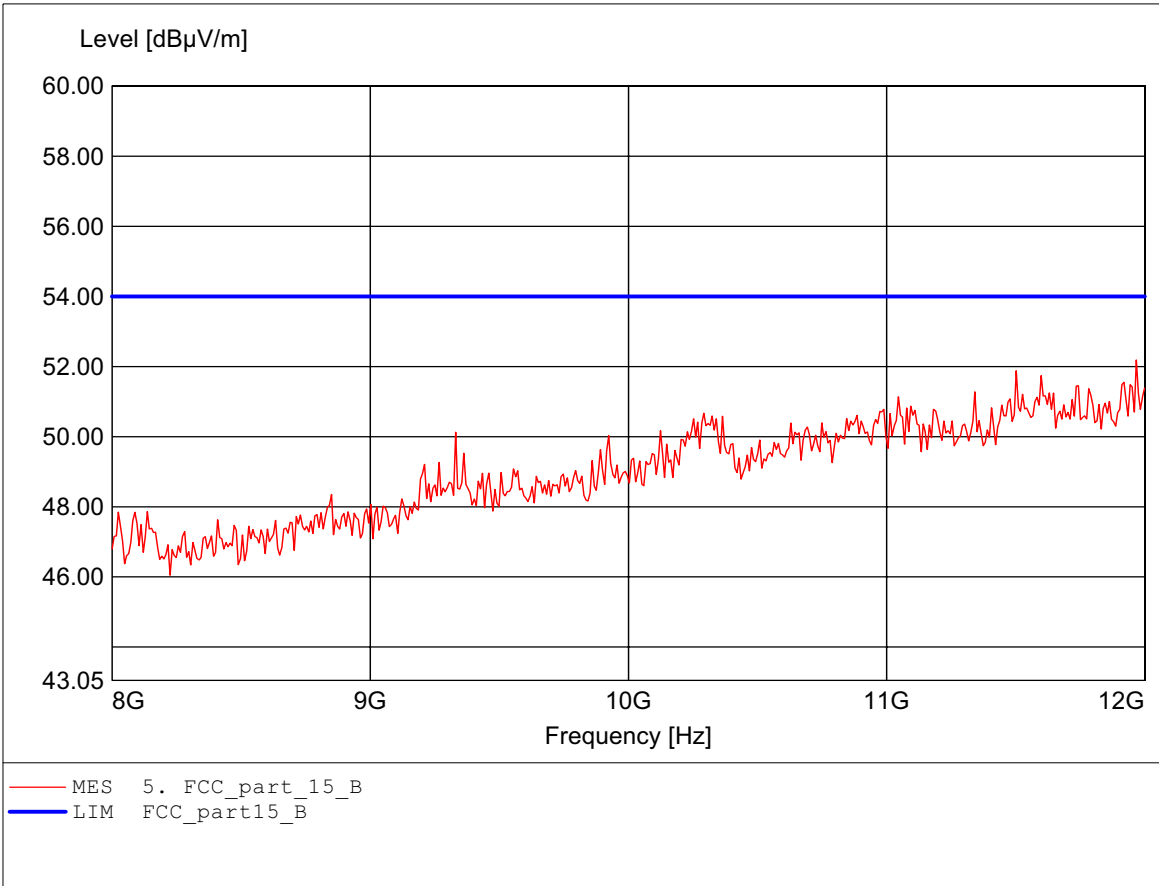
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:8.000GHz Emax:46.89dBμV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

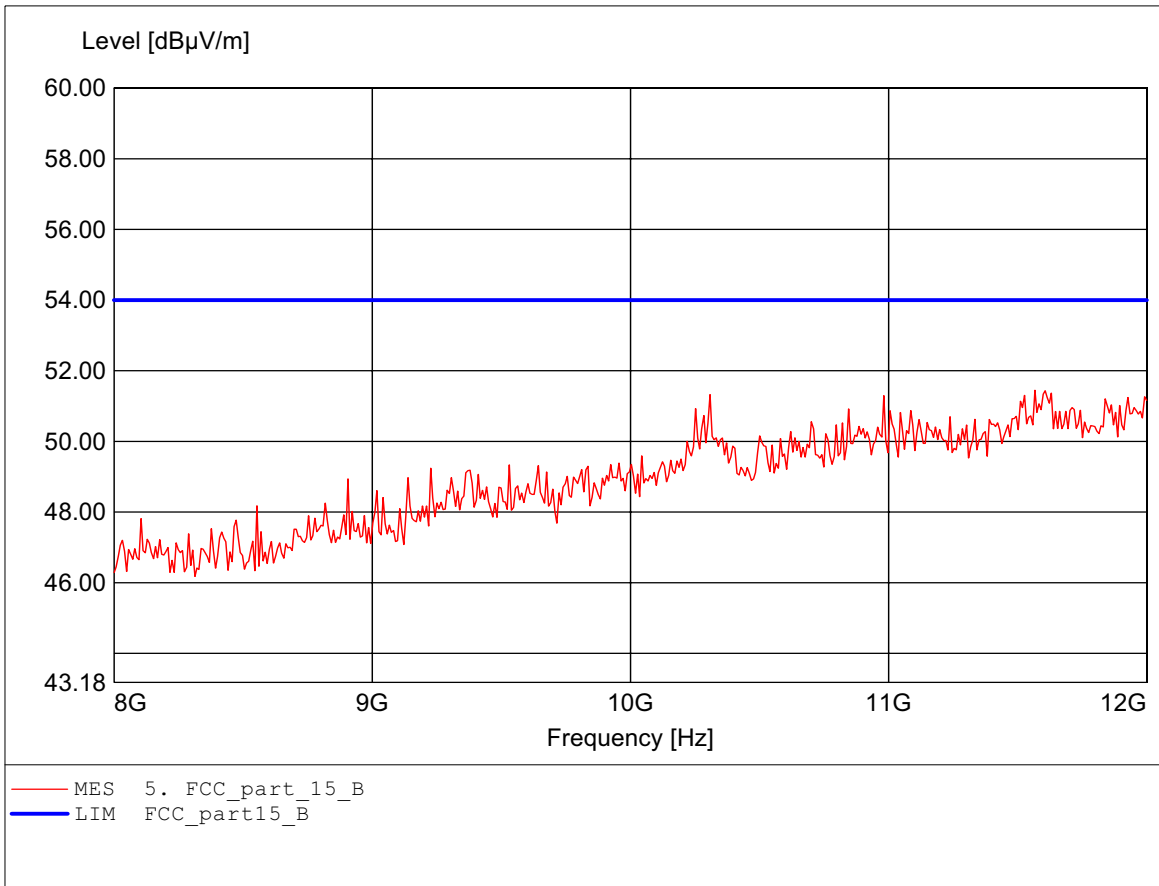
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:11.968GHz Emax:52.19dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

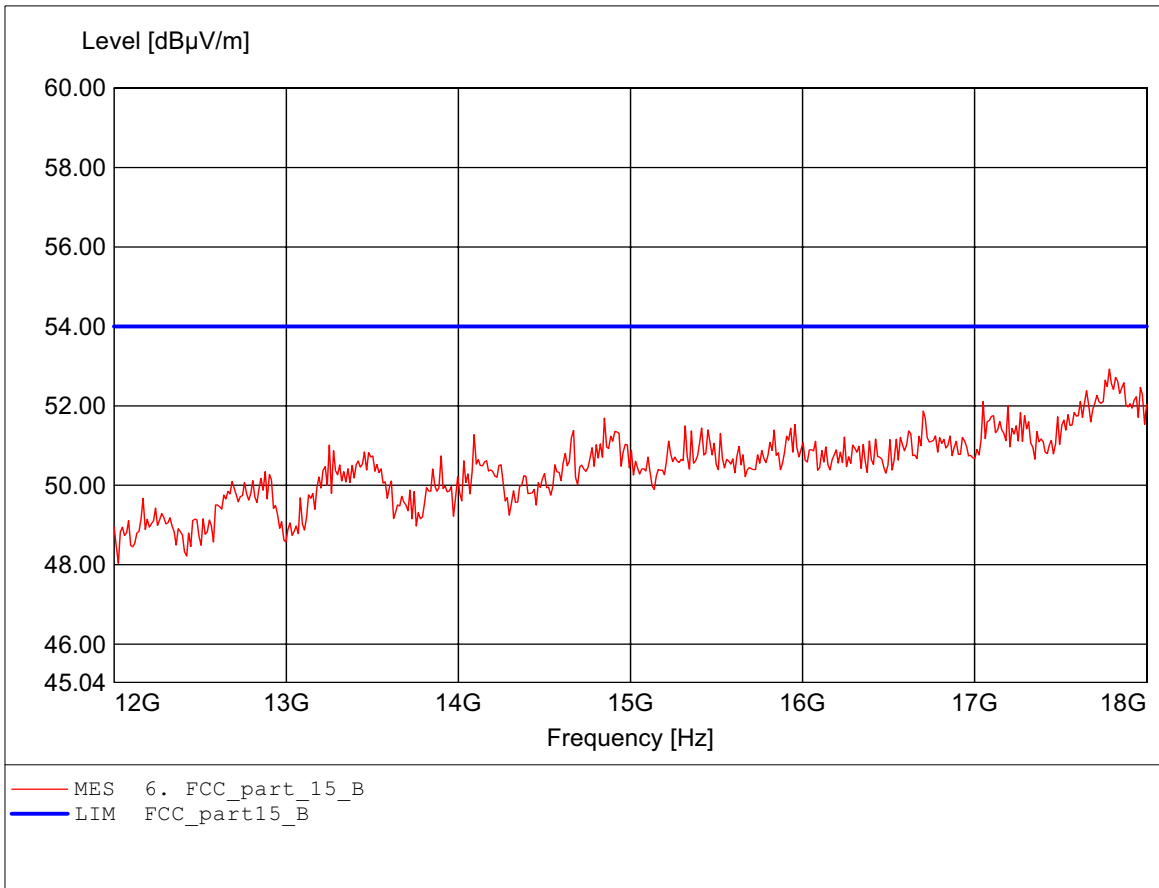
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:11.567GHz Emax:51.45dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

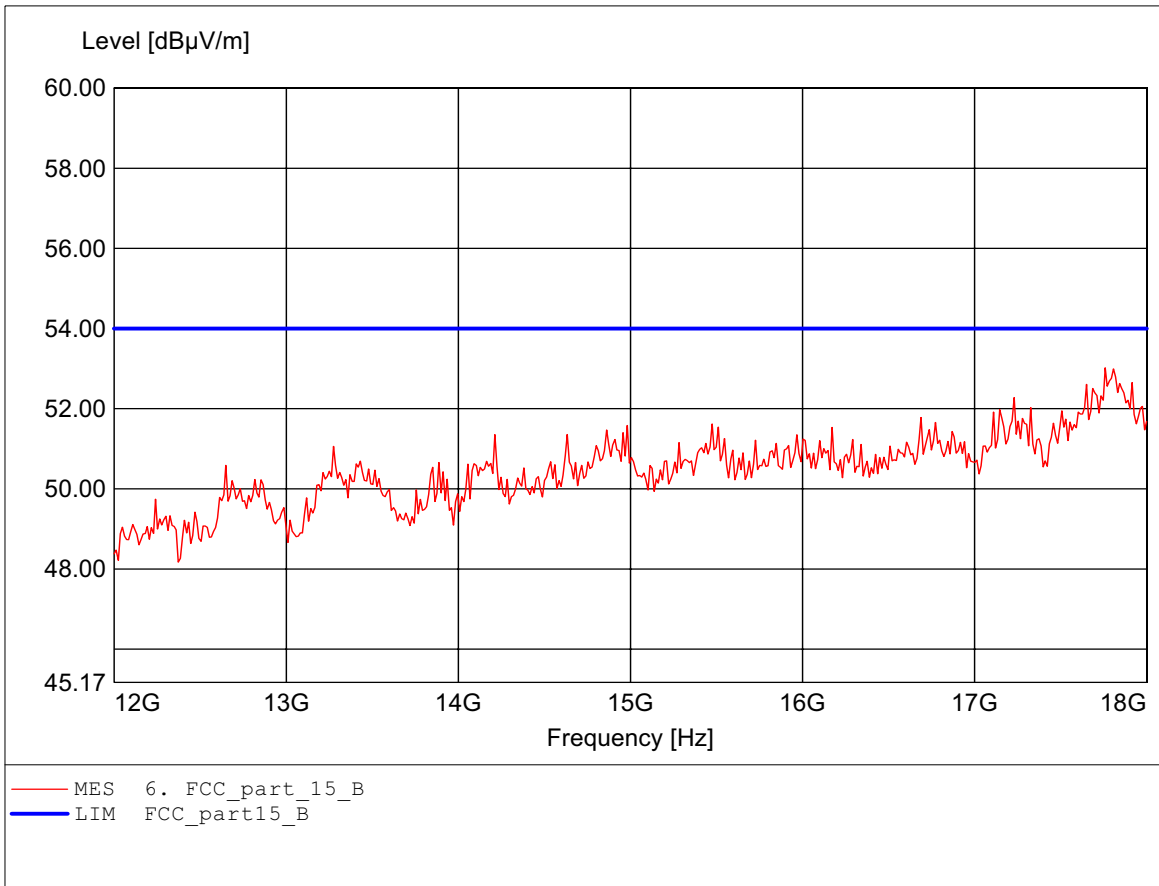
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:17.784GHz Emax:52.93dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

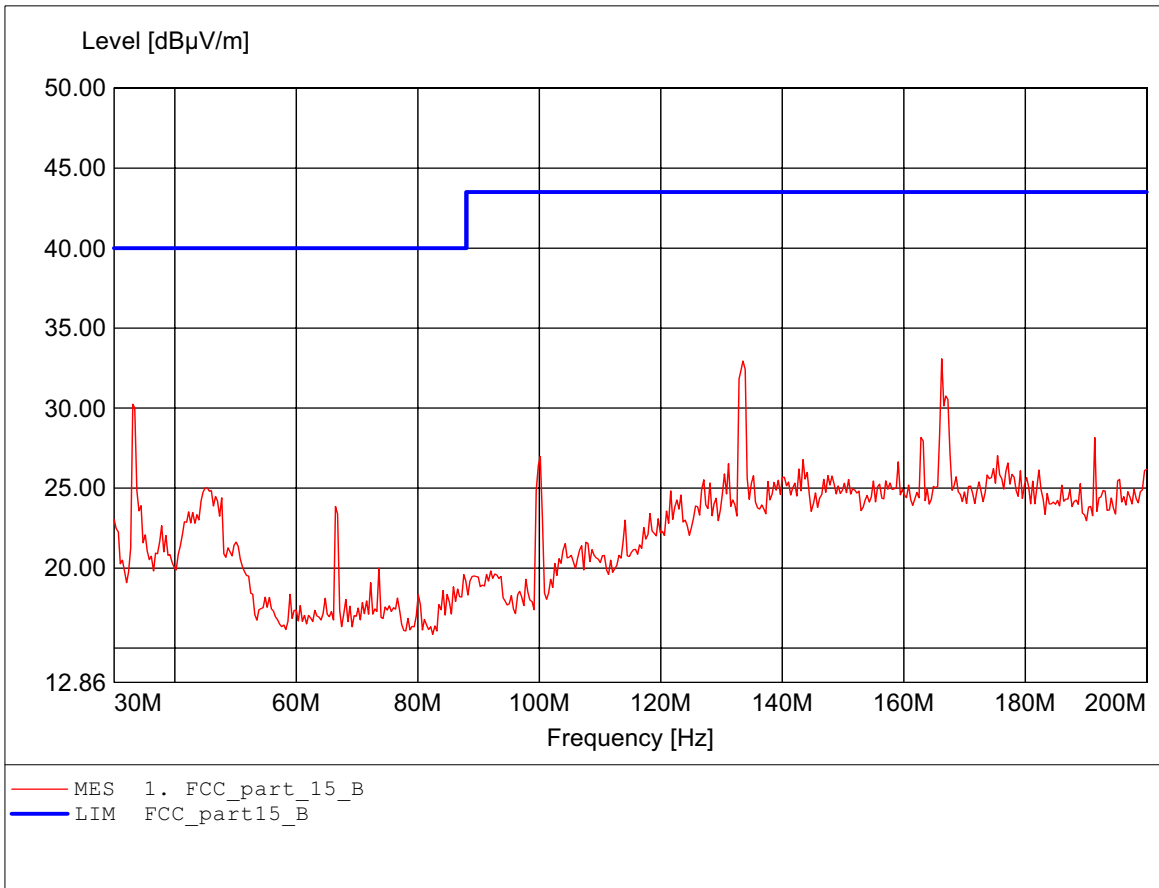
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1 802.11b channel 11
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL25, ampl.
Freq:17.760GHz Emax:53.02dBµV/m RBW: 1 MHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

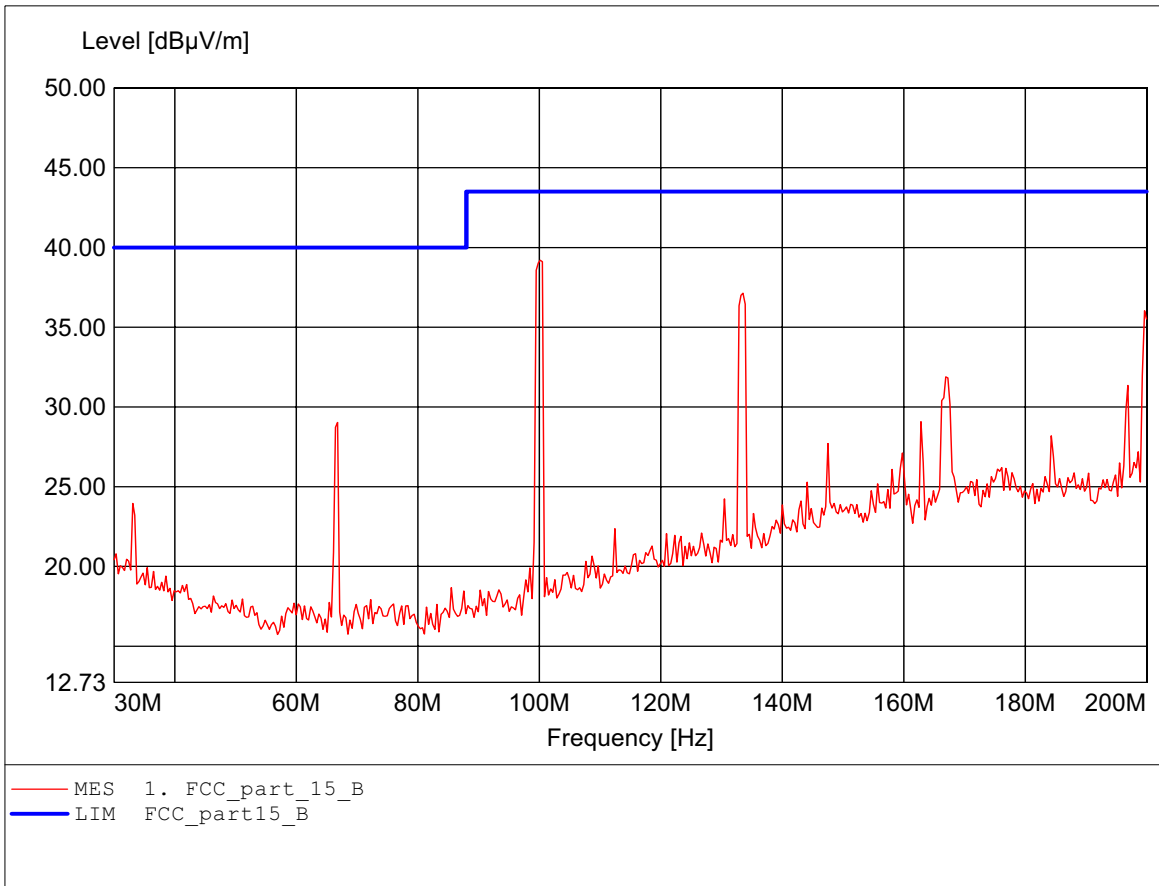
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:166.273MHz Emax:33.08dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

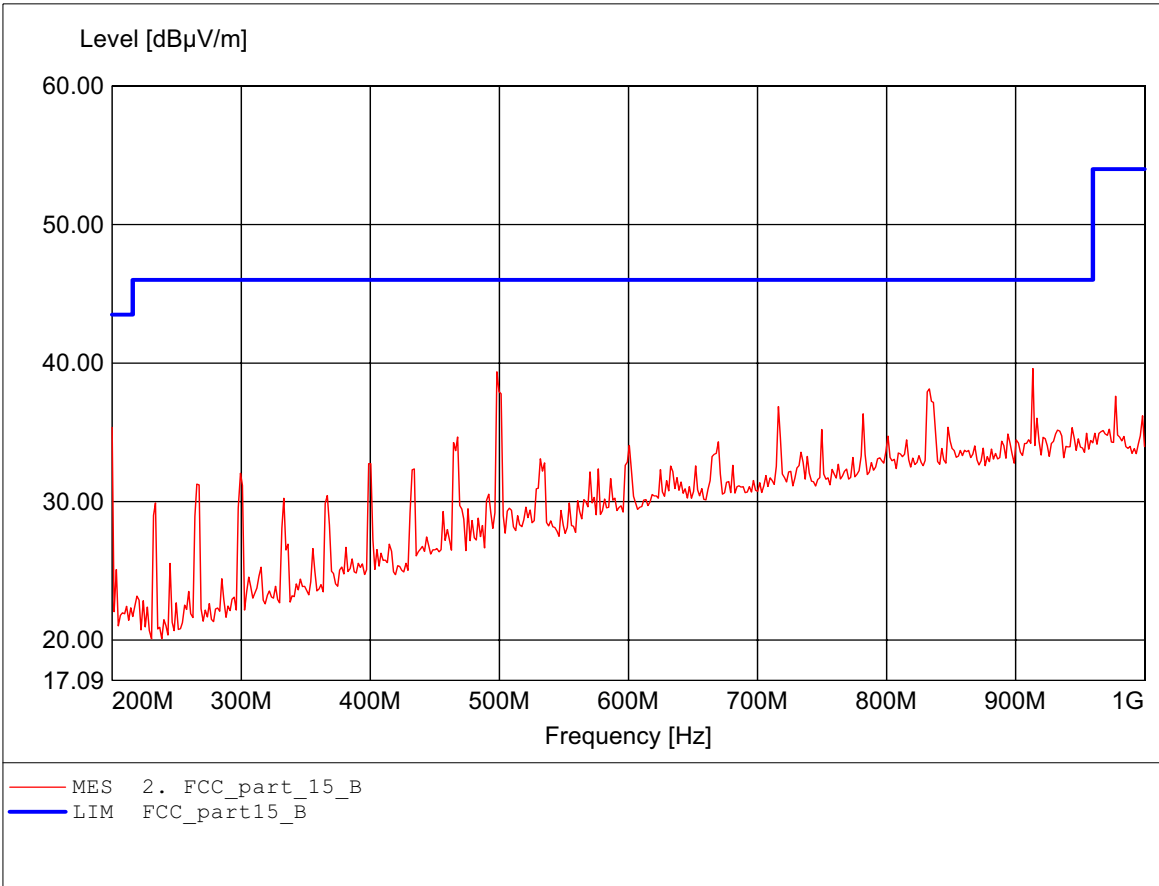
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HK 116
Freq:100.180MHz Emax:39.20dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

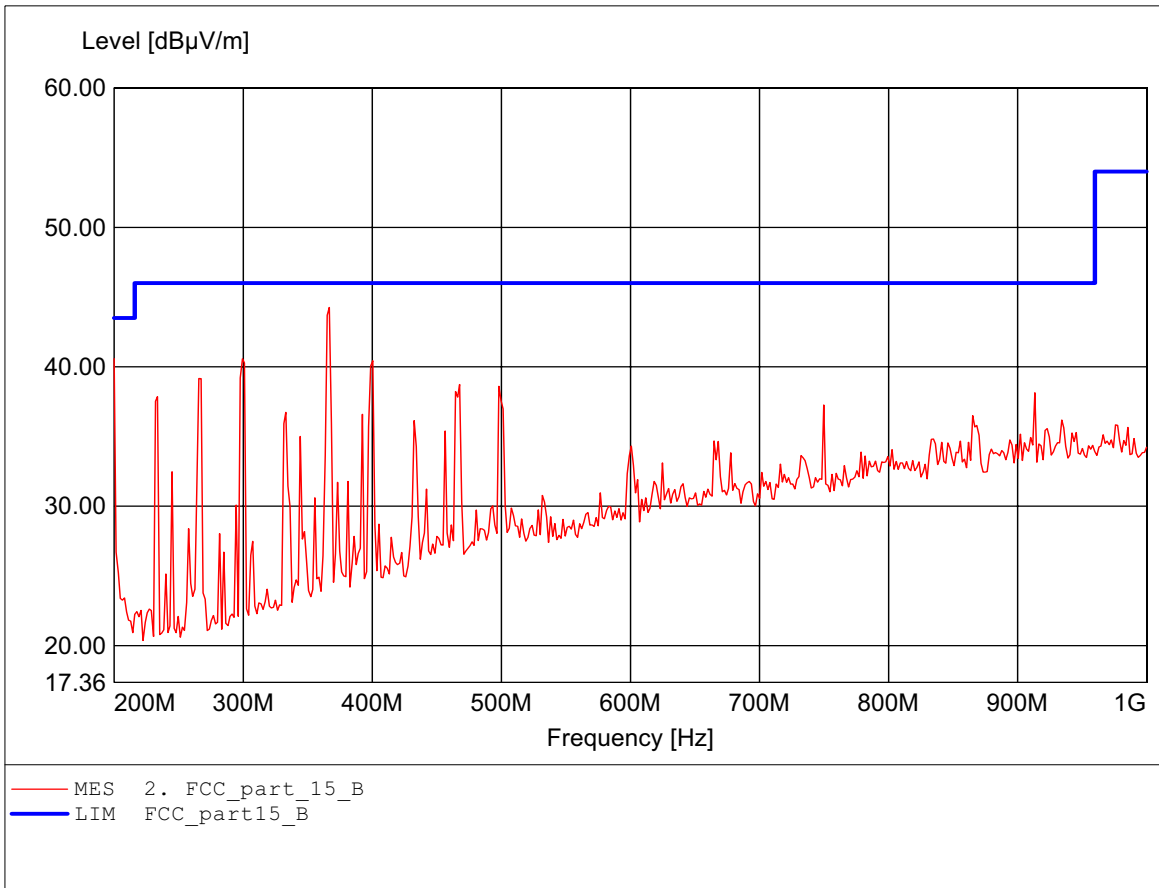
EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:913.427MHz Emax:39.61dBµV/m RBW: 100 kHz



Field Strength under normal conditions

FCC RULES PART 15, SUBPART B

EUT: WIRELESS MINI PCI
MODEL NO.: WM71RL1
Approval Holder: Pro-Nets Technology Corporation
Test Site / Operator: ETS / Dennis
Temperature/Voltage: Temp.: 24.9°C/ Unom.: 120VAC(power on pc)
Test Specification: according to subpart B
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Freq:366.733MHz Emax:44.25dBµV/m RBW: 100 kHz



Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix G

Power Line Conducted Emission

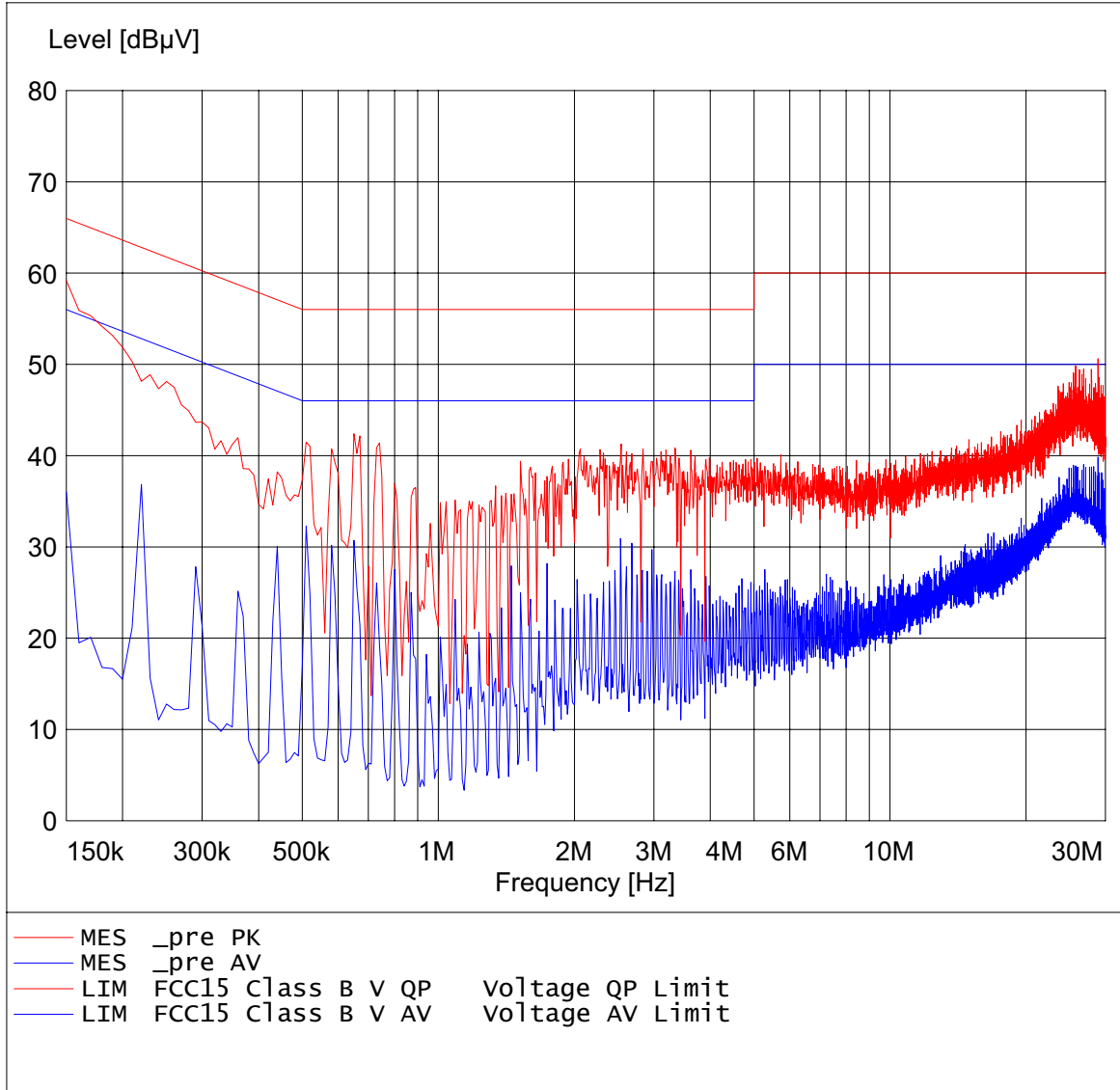
The measurement diagrams are wideband pre-scan results; only for reference. Please see final results as page 26 to 27.

EMI voltage test in the ac-mains according to FCC Part 15

Class B

EUT: WIRELESS MINI PCI
Manufacturer: Pro-Nets Technology Corporation
Operating Condition: Unom : 120 VAC ,
Tnom : 24.2°C Test Site: ETS
Operator: Daren
Test Specification: V-network: ESH3-Z5 N
Comment: model: WM71RL1 mode: active

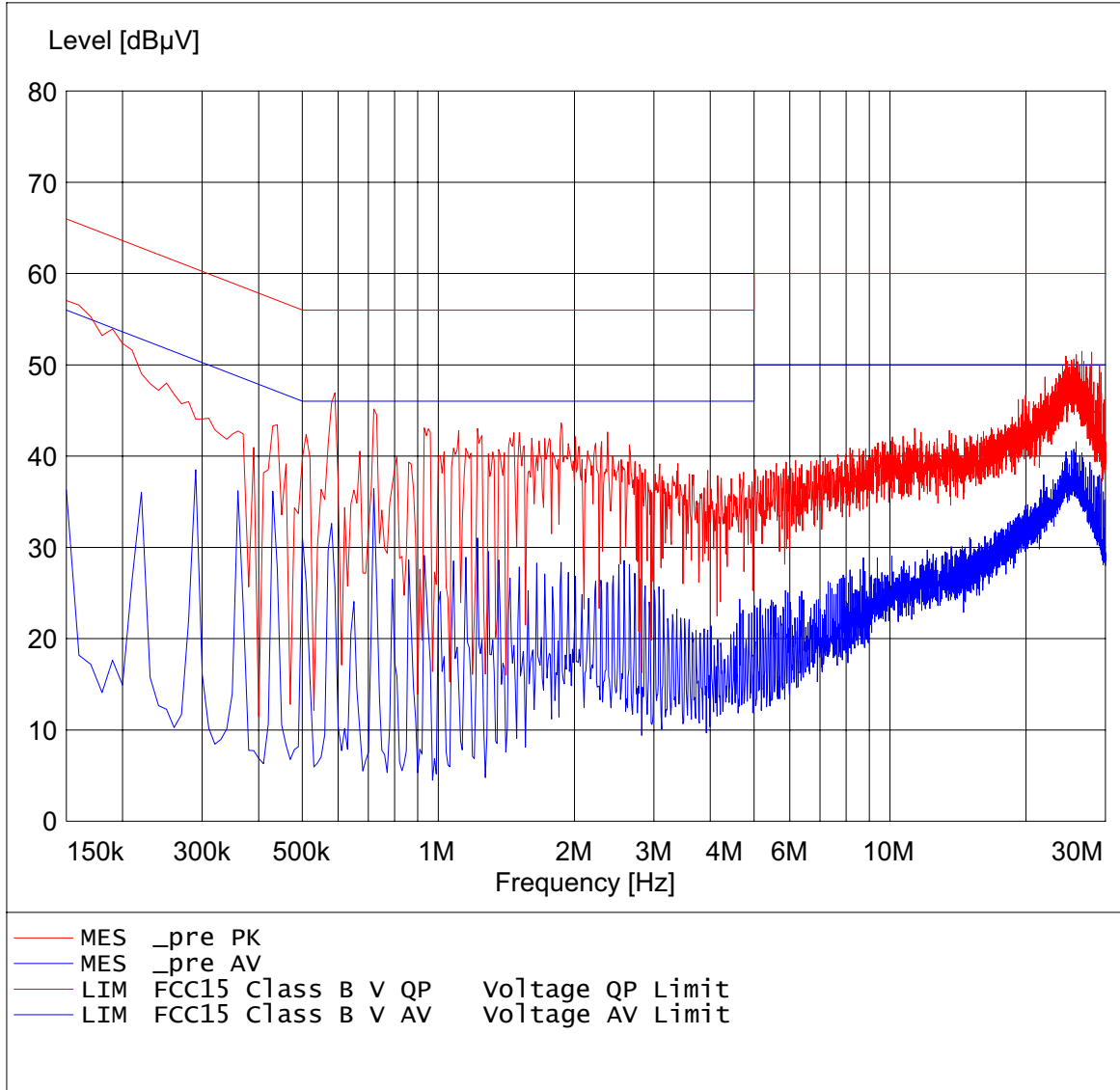
Pro-Nets Technology Corporation

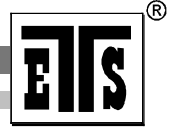


EMI voltage test in the ac-mains according to FCC Part 15

Class B

EUT: WIRELESS MINI PCI
Manufacturer: Pro-Nets Technology Corporation
Operating Condition: Unom : 120 VAC , Tnom : 24.2°C
Test Site: ETS
Operator: Daren
Test Specification: V-network: ESH3-Z5 L1
Comment: model: WM71RL1 mode: active





Registration number: W6M20603-6705-C-1
FCC ID: RXZ-WM71RL1

Appendix H

Pictures