





ISO/IEC17025Accredited Lab.

Report No: FCC 0807244
File reference No: 2008-09-22

Applicant: SHENZHEN TENDA TECHNOLOGY CO., LTD

Product: 300M Wireless PCI Adapter

Model No: W302P

Trademark: Tenda

Test Standards: FCC Part 15 Subpart C, Paragraph 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4FCC Part 15 Subpart C, Paragraph 15.247 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung Manager

Dated: Sep 22,2008

Results appearing herein relate only to the sample tested The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

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Date: 2008-09-22



Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

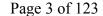
The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC-Registration No.: IC5205A-01

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-01.





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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District,

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Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-01

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: SHENZHEN TENDA TECHNOLOGY CO., LTD

Address: 3F, Moso Technology Park, Xili Town, Nanshan District, Shenzhen 518108, China

Telephone: +86-755-27657068 Fax: +86-755-27657178

1.3 Description of EUT

Product: 300M Wireless PCI Adapter

Manufacturer: SHENZHEN TENDA TECHNOLOGY CO., LTD

Brand Name: Tenda
Model Number: W302P
Additional Model Name N/A
Additional Trade Name N/A

Power Source Powered By PC

Type of Modulation IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK)

IEEE 802.11g: OFDM (64QAM, 16AQM, QPSK, BPSK)

IEEE 802.11n HT20/40: OFDM (64QAM, 16QAM, QPSK, BPSK

Frequency range IEEE 802.11b/g, 802.11n HT20: 2412-2462MHz

IEEE 802.11n HT40: 2422MHz-2452MHz

Channel Spacing IEEE 802.11b/g ,802.11n HT20/HT40 : 5MHz

Air Data Rate IEEE 802.11b : 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20: 130, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps IEEE 802.11n HT40: 130, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps

Frequency Selection By software

The report refers only to the sample tested and does not apply to the bulk.

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Channel Number

IEEE 802.116/g ,802.11n HF20 : 11 Channels

IEEE 802.11n HT40: 7 Channels

1.4 Submitted Sample: 1 Sample

1.5 Test Duration

2008-08-05 to 2008-09-22

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

2.0		Test Equi	ipments		
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2007-12-05	2008-12-04
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	100126	2007-12-05	2008-12-04
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2007-12-05	2008-12-04
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2007-12-05	2008-12-04
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2007-12-05	2008-12-04
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2008-04-26	2009-04-25
4-WIRE ISN	ROHDE&SCHWARZ	ENY 41	830663/044	2008-02-18	2009-02-17
GG ENY22 Double 2-Wire ISN	ROHDE&SCHWARZ	ENY22	83066/016	2008-02-18	2009-02-17
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2008-02-18	2009-02-17
System Controller	CT	SC100	-	2008-02-18	2009-02-17
Printer	EPSON	РНОТО ЕХЗ	CFNH234850	2008-02-18	2009-02-17

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	,		5/		
FM-AM Signal Generator	JUNG.JIN	SG-150M	389911177	2008-02-18	2009-02-17
Color TV Pattern Generator	PHILIPS	PM5418	LO621747	2008-02-18	2009-02-17
Computer	IBM	8434	1S8434KCE99BLX LO*	-	-
Oscillator	KENWOOD	AG-203D	3070002	2008-02-18	2009-02-17
Power meter	Anritsu	ML2487A	6K00003613	2008-02-18	2009-02-17
Power sensor	Anritsu	MA2491A	32263	2008-02-18	2009-02-17
Spectrum Analyzer	HAMEG	HM5012	-	2008-04-26	2009-04-25
Power Supply	LW	APS1502	-	-	-
5K VA AC Power Source	California Instruments	5001iX	56060	2008-02-18	2009-02-17
CDN	EM TEST	CDN M2/M3	-	2008-02-18	2009-02-17
Attenuation	EM TEST	ATT6/75	-	2008-02-18	2009-02-17
Resistance	EM TEST	R100	-	2008-02-18	2009-02-17
Electromagnetic Injection Clamp	LITTHI	EM101	35708	2008-02-18	2009-02-17
Signal Generator	ROHDE&SCHWARZ	SMT03	100029	2008-02-18	2009-02-17
Power Amplifier	AR	150W1000	300999	2008-02-18	2009-02-17
Field probe	Holaday	HI-6005	105152	2008-02-18	2009-02-17
Bilog Antenna	Chase	CBL6111C	2576	2008-02-18	2009-02-17
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2008-02-18	2009-02-17
3m OATS			N/A	2008-02-18	2009-02-17
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2007-08-16	2008-08-15
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2008-04-26	2009-04-25

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DESCRIPTION OF TEST MODES

The EUT is an 802.11n MISO transceiver in Mini PCI Adapter form factor. It has one transmitter chains and two receive chains (1×2 configurations). The 1×2 configuration is implemented with only one outside chains (Chain 0). 11b/g mode, only examines Chain 0, because only Chain 0 is functional according to the user driver of Ralink. The power is transmitted from TX0 only at 11b/g normal mode in Ralink solution. The RF chipset is manufactured by Ralink Technology, Corp. The antenna peak gain 5.0dBi (highest gain) were chosen for full testing.

IEEE 802.11b, 802.11g, 802.11n HT20 mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 11Mbps data rate (worst case) were chosen for full testing. IEEE 802.11g mode: 6Mbps data rate (worst case) were chosen for full testing. IEEE 802.11n HT20 mode: 130Mbps data rate (worst case) was chosen for full testing except for power density.

IEEE 802.11n HT40 mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n HT40 mode: 6Mbps data rate (worst case) was chosen for full testing except for power density.

The worst-case data rates are determined according to the description above, based on the investigations by measuring the PSD and average power across all the data rates, bandwidths, modulations and spatial stream modes.

The worst-case channel is determined as the channel with the highest output power. The highest measured output power was at 2437 MHz.

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3.0 Technical Details

3.1 Summary of test results

The EUT has bee	n tested accord	ing to the followi	ng specifications:

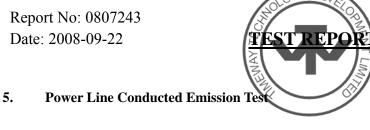
Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107	Conducted Emission Test	PASS	Complies
& 15.207			
	Spectrum bandwidth of a		Complies
FCC Part 15 Subpart C	Orthogonal Frequency		
•	Division Multiplex System	PASS	
Paragraph 15.247(a)(2) Limit	Limit: 6dB		
	bandwidth>500kHz		
FCC Part 15, Paragraph	Maximum peak output		
15.247(b)	power	PASS	Complies
13.247(0)	Limit: max. 30dBm		
FCC Part 15, Paragraph	Transmitter Radiated	PASS	Complies
15.109,15.205 & 15.209	Emission		
	Limit: Table 15.209		
FCC Part 15, Paragraph	Power Spectral Density	PASS	Complies
15.247(d)	Limit: max. 8dBm		
FCC Part 15, Paragraph	Out of Band Emission and	PASS	Complies
15.247(c)	Restricted Band		
	Radiation		
	Limit: 20dB less than		
	peak value of fundamental		
	frequency		
	Restricted band limit:		
	Table 15.209		

3.2 Test Standards

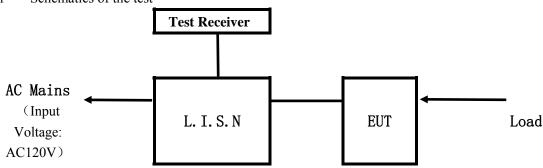
FCC Part 15 Subpart & Subpart C, Paragraph 15.247

4.0 EUT Modification

No modification by Shenzhen Timeway Technology Consulting Co.,Ltd



5.1 Schematics of the test

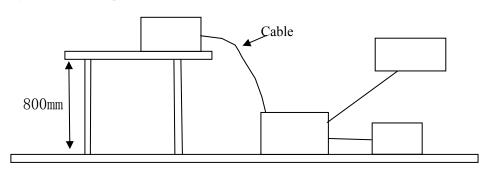


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4-2003.

Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2003. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	Model	FCC ID
300M	SHENZHEN TENDA TECHNOLOGY	W302P	V7TW302P
Wireless PCI	CO., LTD		
Adapter			

B. Internal Device

Device			FCC ID/DOC
N/A			

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C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
Keyboard	IBM	KB-0225	DOC	2.0m length non-shielding
PC	IBM	8434	DOC	1.5m length non-shielding AC mains
Monitor	IBM	6331-4CN	DOC	1.5m length non-shielding VGA cable
Mouse	DELL	1310	DOC	1.5m length non-shielding

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2003.

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition
- C Test voltage: AC120V

5.5 Power line conducted Emission Limit according to Paragraph 15.207 and 15.107

Frequency	Class A Lim	its (dB µ V)	Class B Limits (dB µ V)		
(MHz)	Quasi-peak Level Average Level		Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	73.0	60.0	56.0	46.0	
$5.00 \sim 30.00$	73.0	60.0	60.0	50.0	

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

Note: the worse cases was selected to conducted the test

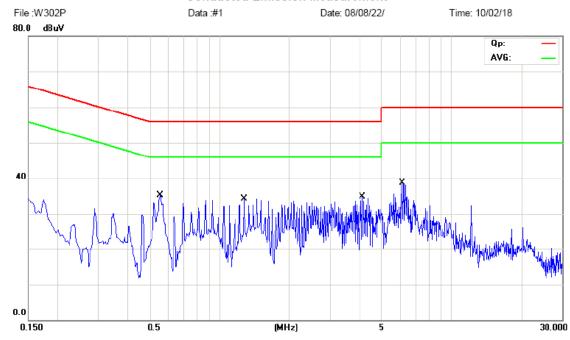
A Conducted Emission on Line Terminal of the power line (150kHz to 30MHz)

EUT set Condition: Normal

Results: Pass

Please refer to following diagram for individual

Conducted Emission Measurement



Eraguanav	Reading(dB µ V)				Limi	t
Frequency (MHz)	Line	;	Neutr	al	(dB µ	V)
(WITIZ)	Quasi-peak	Average	Quasi-peak	Average	Quasi-peak	Average
0.5580	30.20	25.70		1	56.00	46.00
1.2820	29.20	28.10			56.00	46.00
4.1380	24.80	23.60		1	56.00	46.00
6.1820	25.80	18.70			60.00	50.00

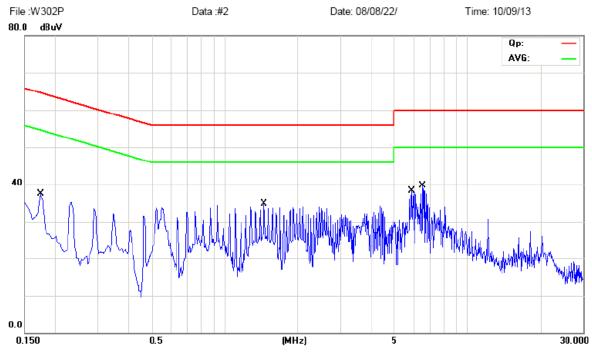
B Conducted Emission on Neutral Terminal of the power line (150kHz to 30MHz)

EUT set Condition: Normal

Results: Pass

Please refer to following diagram for individual

Conducted Emission Measurement



Eraguanav	Reading(dB \(\mu \)			Limit		
Frequency (MHz)	Live		Neutral		(dB µ V)	
(IVIIIZ)	Quasi-peak	Average	Quasi-peak	Average	Quasi-peak	Average
0.1740			23.10	20.20	64.77	54.77
1.4597			19.70	17.80	56.00	46.00
5.9056			21.50	11.20	60.00	50.00
6.5448			20.40	10.20	60.00	50.00

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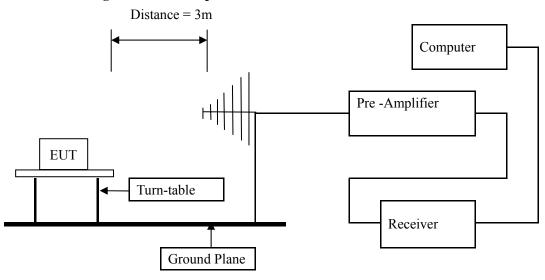
Date: 2008-09-22



6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.4 –2003. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2003.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth and video bandwidth of 1 MHz; AV values with a resolution bandwidth of 1 MHz and a video bandwidth of 10Hz. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization: Vertical polarization and Horizontal polarization.

Block diagram of Test setup



- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.

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6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209 and 15.109

		~ <u>-</u>
Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

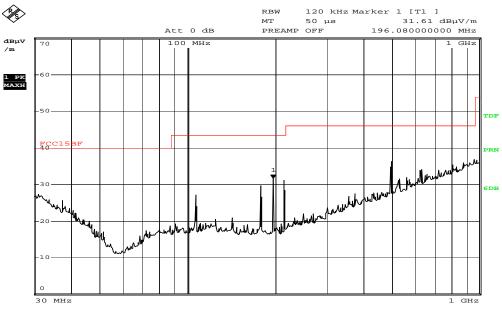
EUT set Condition: Normal Operation

Results: Pass

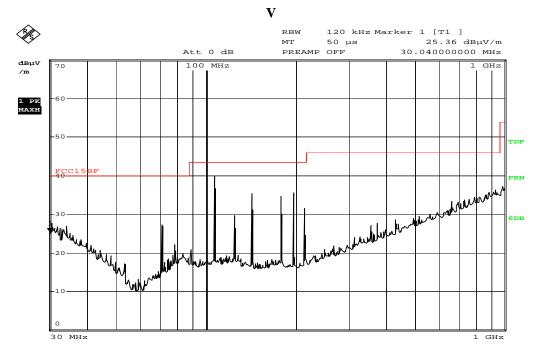
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
110.235	25.63	Н	43.50
171.256	29.89	Н	43.50
196.080	31.61	Н	43.50
485.632	35.96	Н	46.00
71.023	28.55	V	40.00
108.125	39.56	V	43.50
150.875	36.29	V	43.50
177.775	35.07	V	43.50
216.150	31.92	V	46.00



Test Figure:







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	4		
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2412.00	99.2(PK) /82.3 (AV)	Н	Eurodomontol Enogueros
2412.00	102.5(PK) /84.6 (AV)	V	Fundamental Frequency
4824.00		H/V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)
3216	49.6(PK) /48.2 (AV)	V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps
- 4. Test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH06 at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)	
2437.00	104.2 (PK) /85.6 (AV)	V	Fundamental Frequency	
2437.00	99.3 (PK) /82.8 (AV)	Н	rundamental Frequency	
4874.00		H/V	74(Peak)/ 54(AV)	
7311.00	-	H/V	74(Peak)/ 54(AV)	
9748.00		H/V	74(Peak)/ 54(AV)	
12185		H/V	74(Peak)/ 54(AV)	
14622	-	H/V	74(Peak)/ 54(AV)	
17059	-	H/V	74(Peak)/ 54(AV)	
19496		H/V	74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	
3216	47.6 (PK) /46.2 (AV)	V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps
- 4. Test results are for the worst case condition

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Operation Mode: Transmitting & Receiving under CH11 at 6Mbps					
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)		
2462.00	97.6 (PK) /80.7 (AV)	Н	Fundamental Fraguency		
2462.00	100.3 (PK) /84.2 (AV)	V	Fundamental Frequency		
4924	49.2 (PK) /37.3 (AV)	V	74(Peak)/ 54(AV)		
4924		Н	74(Peak)/ 54(AV)		
7386		H/V	74(Peak)/ 54(AV)		
9848		H/V	74(Peak)/ 54(AV)		
12310		H/V	74(Peak)/ 54(AV)		
14772		H/V	74(Peak)/ 54(AV)		
17234		H/V	74(Peak)/ 54(AV)		
19696		H/V	74(Peak)/ 54(AV)		
22158		H/V	74(Peak)/ 54(AV)		
24650		H/V	74(Peak)/ 54(AV)		
3216	46.6 (PK) /44.7 (AV)	V	74(Peak)/ 54(AV)		

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

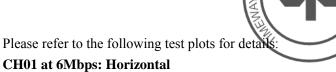
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode at 6Mbps

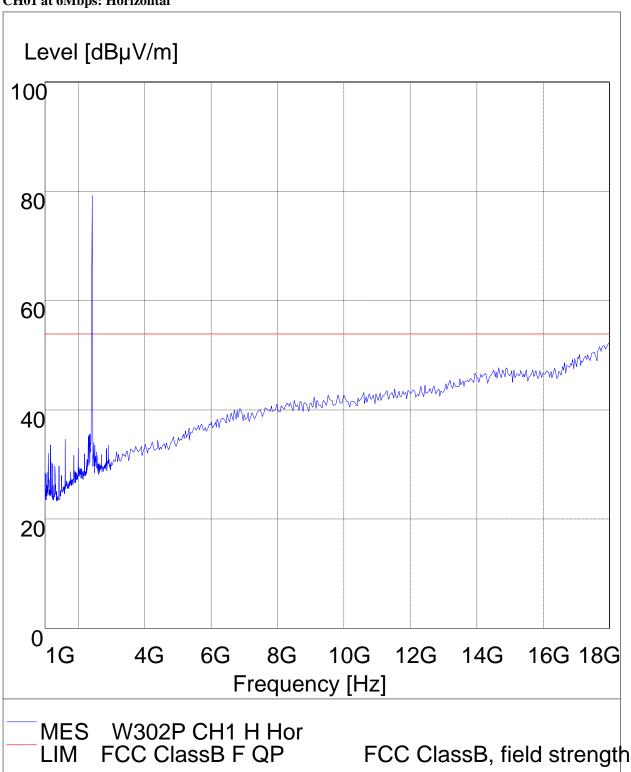
Date: 2008-09-22

4. Test results are for the worst case condition

Report No: 0807243

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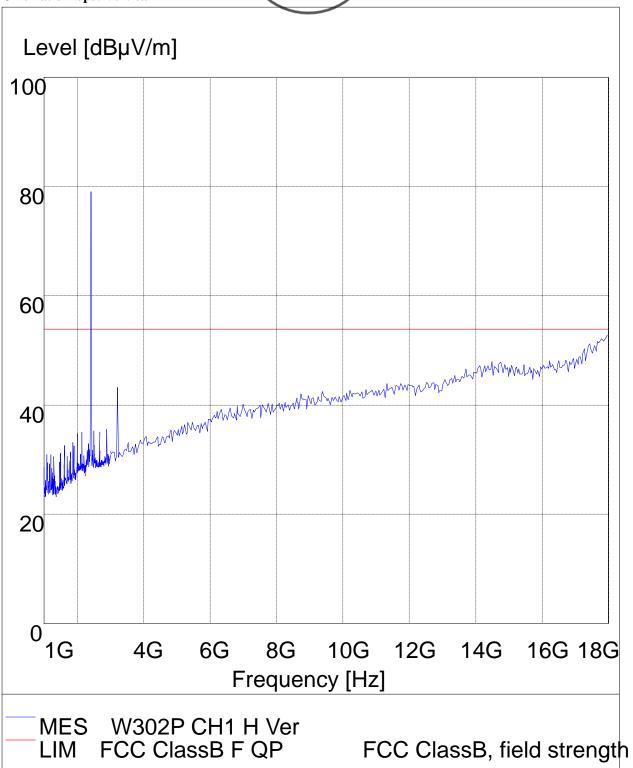
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CH01 at 6Mbps: Vertical

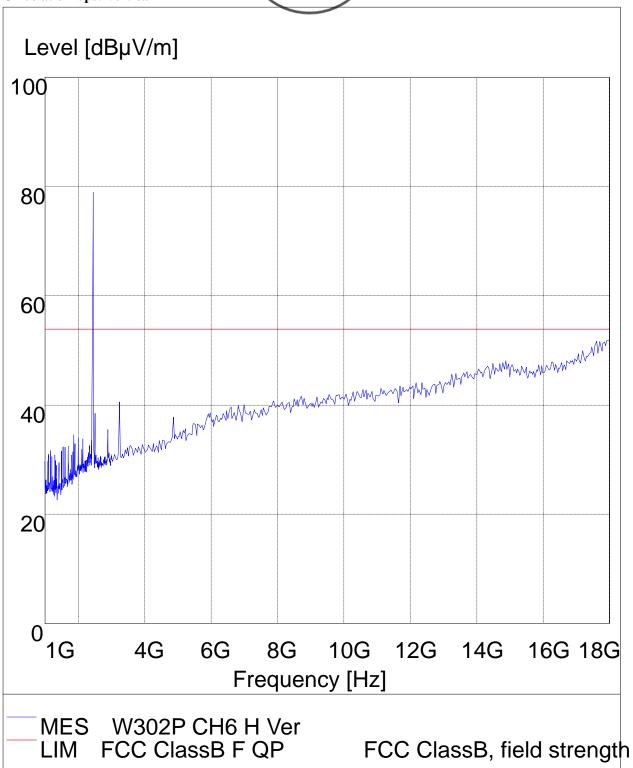


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CH06 at 6Mbps: Vertical

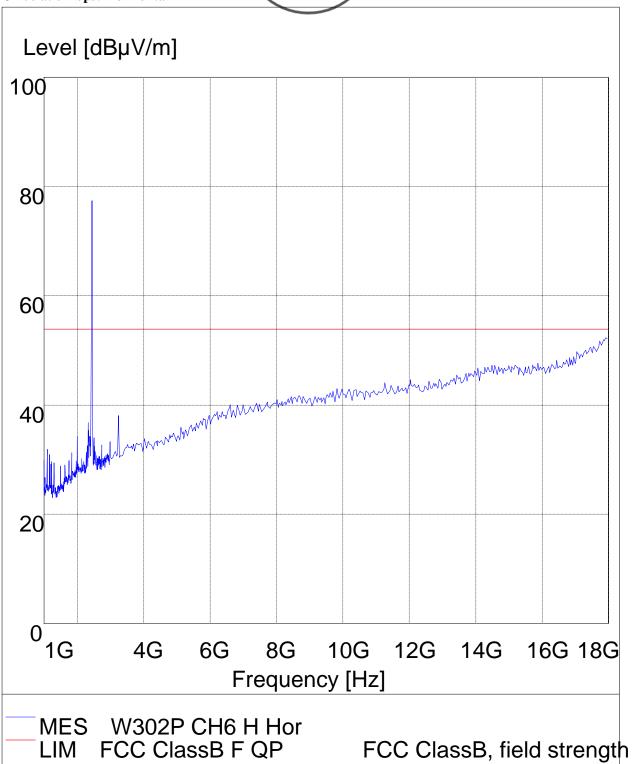


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CH06 at 6Mbps: Horizontal

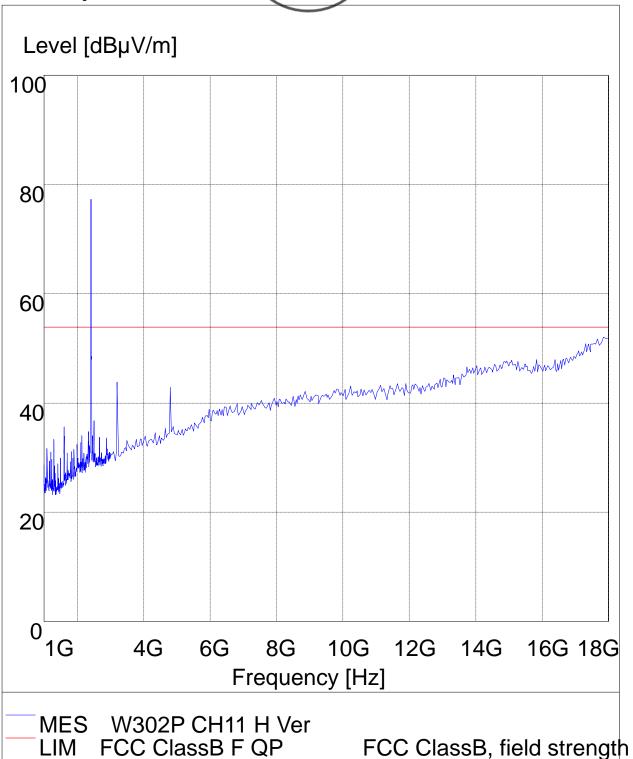


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CH11 at 6Mbps: Vertical

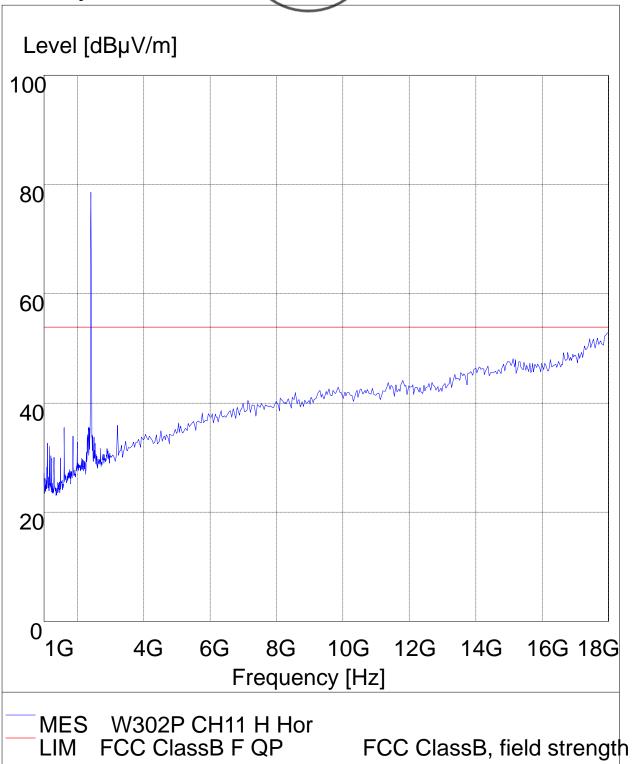


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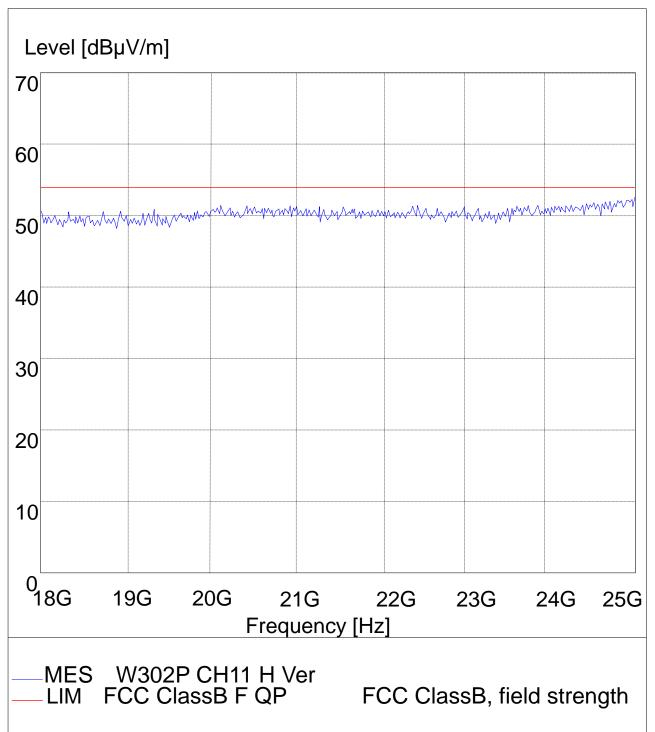


CH11at 6Mbps: Horizontal



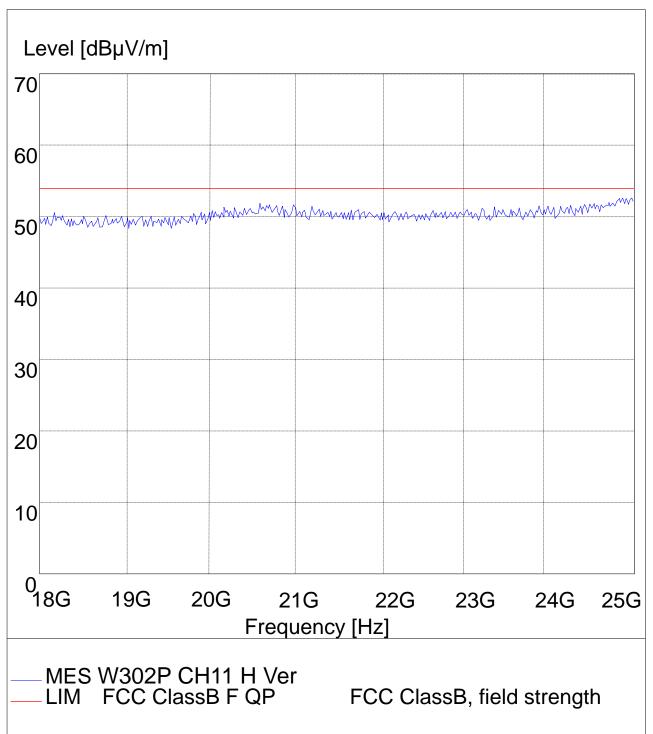


18-25G CH11 6M Horizontal





18-25G CH11 6M Vertical



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Operation Mode: Transmitting & Receiving under CH01 at 11Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
2412.00	97.2 (PK)/ 81.1(AV)	Н	Fundamental Frequency	
2412.00	101.3 (PK)/83.4 (AV)	V	Fundamental Frequency	
4824.00	55.7 (PK)/ 41.2(AV)	Н	74(Peak)/ 54(AV)	
4824.00	59.1 (PK)/ 45.1(AV)	V	74(Peak)/ 54(AV)	
7236.00		H/V	74(Peak)/ 54(AV)	
9648.00		H/V	74(Peak)/ 54(AV)	
12060		H/V	74(Peak)/ 54(AV)	
14472		H/V	74(Peak)/ 54(AV)	
16684		H/V	74(Peak)/ 54(AV)	
19296		H/V	74(Peak)/ 54(AV)	
21708		H/V	74(Peak)/ 54(AV)	
24120		H/V	74(Peak)/ 54(AV)	
3216	52.3 (PK)/ 50.3(AV)	V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps
- 4. Test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH06 at 1Mbps

Frequency (MHz)	Level@3m (dB \mu V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)	
2437.00	100.2(PK)/ 81.8AV)	Н	Б	
2437.00	103.5(PK)/83.4 (AV)	V	Fundamental Frequency	
4874.00	58.7(PK)/46.2 (AV)	V	74(Peak)/ 54(AV)	
4874.00	55.8(PK)/42.3 (AV)	Н	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00	-	H/V	74(Peak)/ 54(AV)	
12185	1	H/V	74(Peak)/ 54(AV)	
14622	1	H/V	74(Peak)/ 54(AV)	
17059	1	H/V	74(Peak)/ 54(AV)	
19496	1	H/V	74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	
3216	48.6(PK)/47.0 (AV)	V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark "---" means that the emissions level is too low to be measured

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- 3. For 802.11b mode 11Mbps
- 4. test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH11 at 11Mbps

Frequency (MHz)	Level@3m (dB \u03ba V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)	
2462.00	101.2(PK/81.2AV)	Н	Fundamental Frequency	
2462.00	104.6(PK)/85.0AV)	V	rundamentai riequency	
4924	1	H/V	74(Peak)/ 54(AV)	
7368	1	H/V	74(Peak)/ 54(AV)	
9848	-	H/V	74(Peak)/ 54(AV)	
12310		H/V	74(Peak)/ 54(AV)	
14772	1	H/V	74(Peak)/ 54(AV)	
17234	1	H/V	74(Peak)/ 54(AV)	
19696	-	H/V	74(Peak)/ 54(AV)	
22158		H/V	74(Peak)/ 54(AV)	
24650	-	H/V	74(Peak)/ 54(AV)	
3216	49.0/47.7	V	74(Peak)/ 54(AV)	

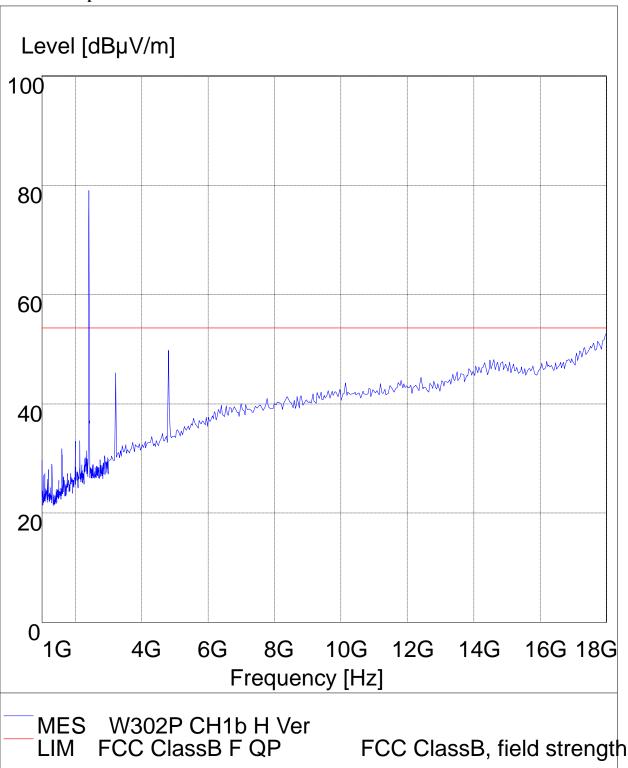
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 11Mbps
- 4. Test results are for the worst case condition



Please refer to the following test plots for details

CH01 at 11Mbps: Vertical



The report refers only to the sample tested and does not apply to the bulk.

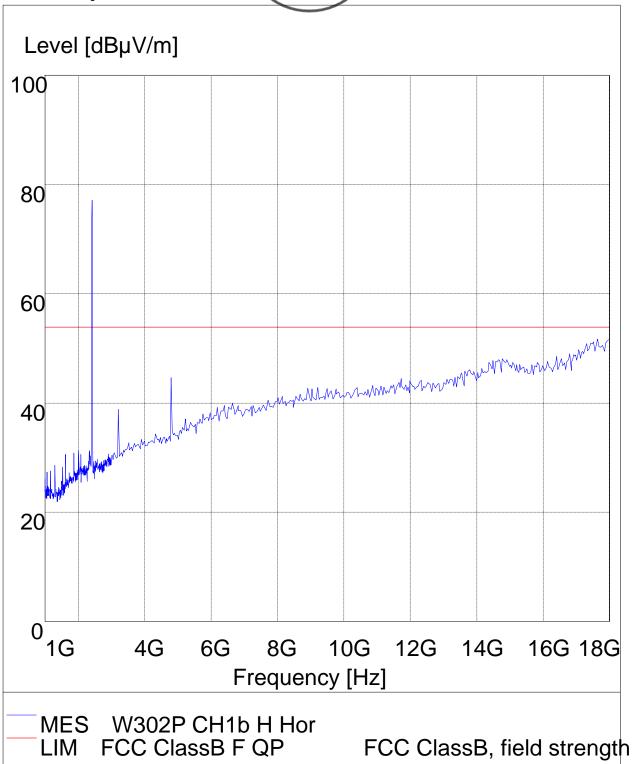
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CH01 at 11Mbps: Horizontal



The report refers only to the sample tested and does not apply to the bulk.

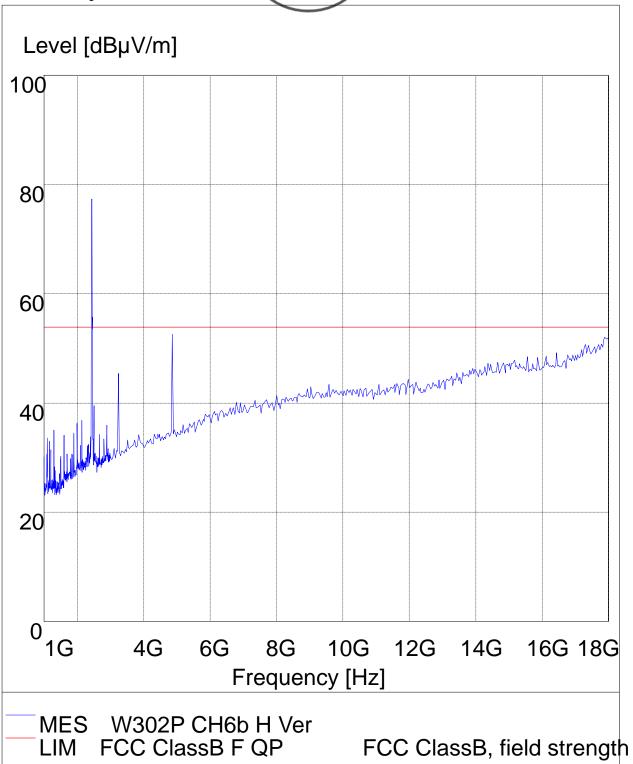
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CH06 at 11Mbps: Vertical

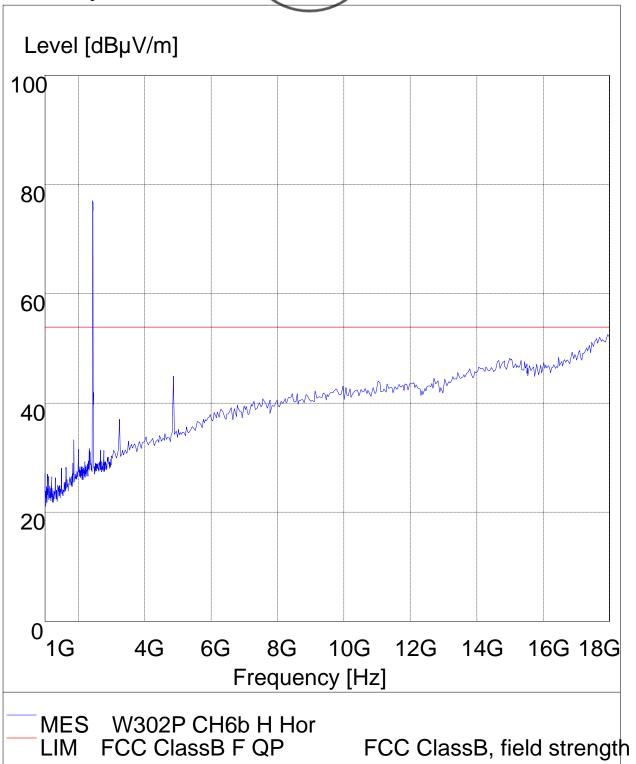


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CH06 at 11Mbps: Horizontal

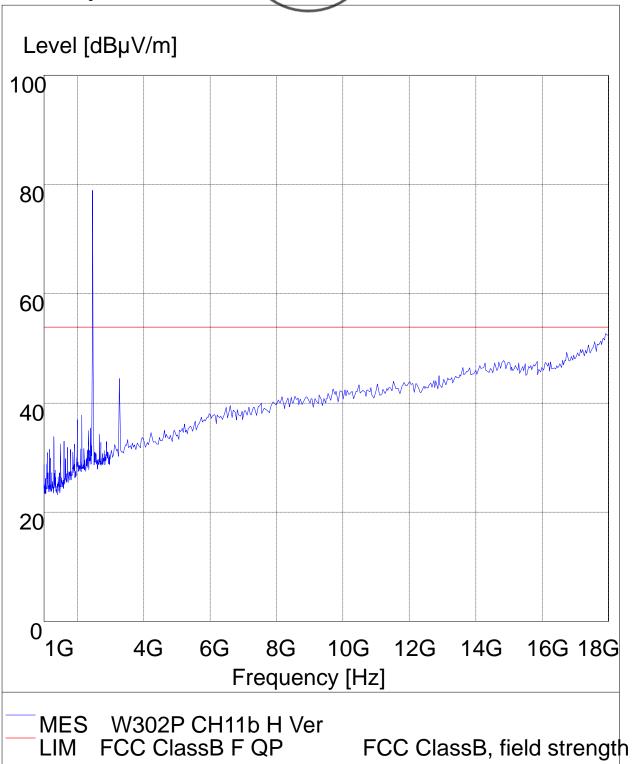


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CH11 at 11Mbps: Vertical

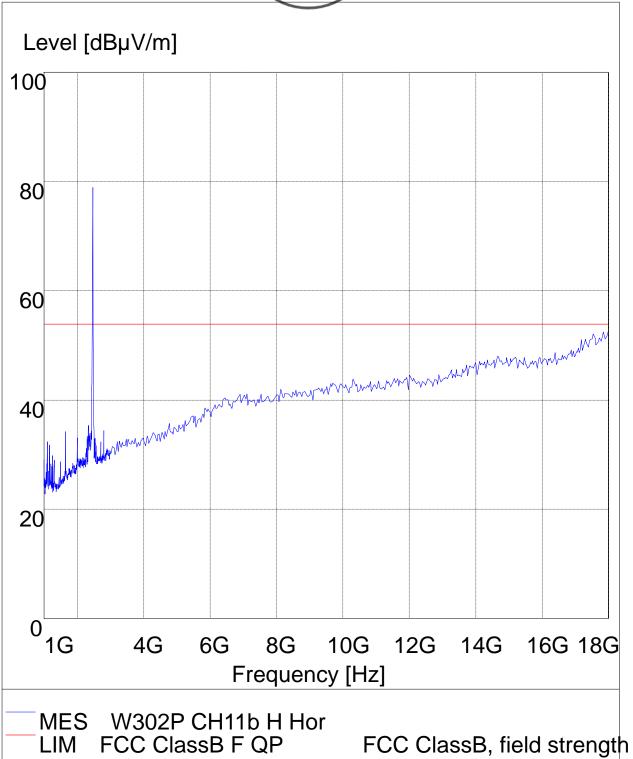


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CH11 at 11Mbps: Horizontal

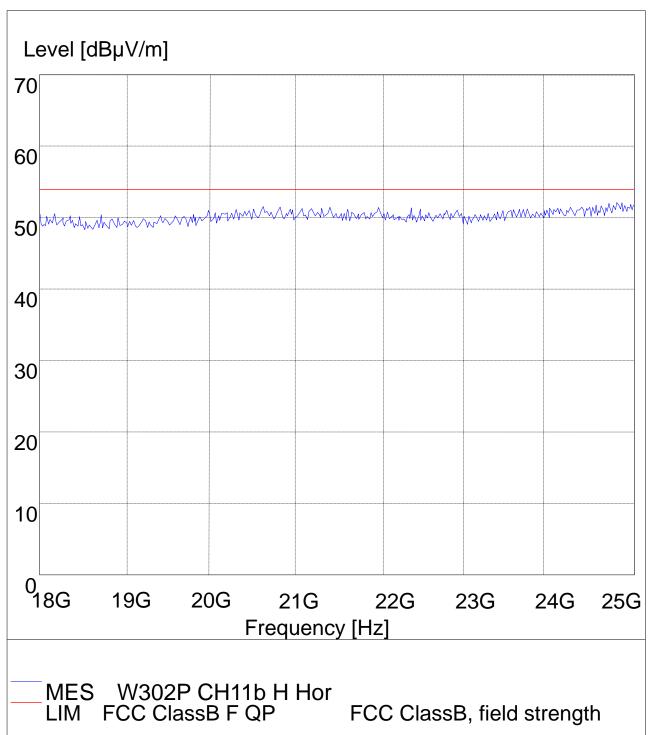


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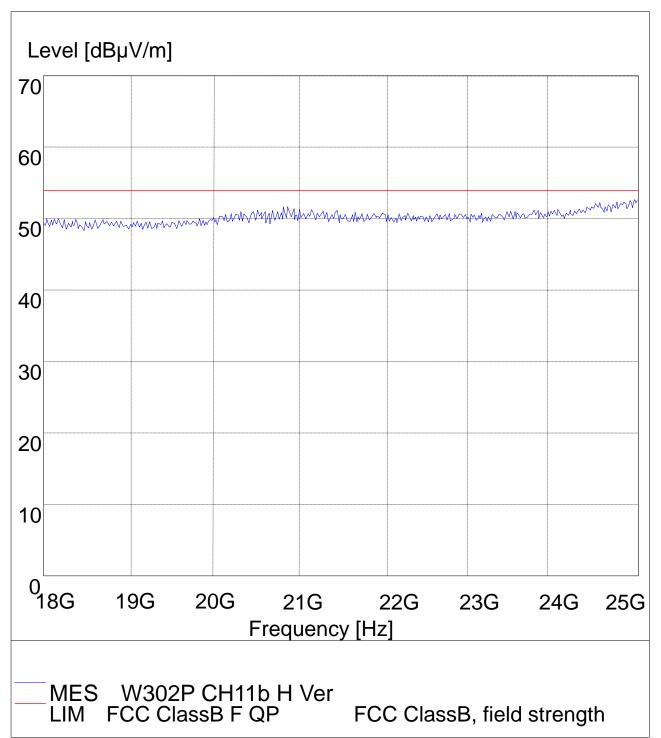


18-25G CH11 11M Horizontal





18-25G CH11 11M Vertical



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Operation Mode: Transmitting & Receiving under CH01 at 130Mbps

	0 0		<u> </u>
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2412.00	96.1 (PK)/ 80.3(AV)	Н	Fundamental Frequency
2412.00	102.3(PK)/85.3 (AV)	V	Fundamental Frequency
4824.00	48.1(PK)/ 35.7(AV)	Н	74(Peak)/ 54(AV)
4824.00	54.2 (PK)/ 42.6(AV)	V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)
3216	52.8 (PK)/ 50.9(AV)	V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n HT20 mode 130Mbps
- 4. Test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH06 at 130Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \) V/m)	
2437.00	101.3(PK)/ 84.6(AV)	Н	Evendom antal Engavanav	
2437.00	106.7(PK)/90.1 (AV)	V	Fundamental Frequency	
4874.00	54.8(PK)/42.4 (AV)	V	74(Peak)/ 54(AV)	
4874.00	50.5(PK)/37.8 (AV)	Н	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00		H/V	74(Peak)/ 54(AV)	
12185	-	H/V	74(Peak)/ 54(AV)	
14622		H/V	74(Peak)/ 54(AV)	
17059		H/V	74(Peak)/ 54(AV)	
19496		H/V	74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	
3216	49.3(PK)/47.8 (AV)	V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

2. Remark "---" means that the emissions level is too low to be measured

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- 3. For 802.11n HT20 mode 130Mbps
- 4. test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH11 at 130Mbps

Frequency (MHz)	Level@3m (dB \u03ba V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
2462.00	99.6(PK/82.5(AV)	Н	Fundamental Frequency
2462.00	102.8(PK)/84.2(AV)	V	rundamentai riequency
4924	ı	H/V	74(Peak)/ 54(AV)
7368	1	H/V	74(Peak)/ 54(AV)
9848	1	H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772	1	H/V	74(Peak)/ 54(AV)
17234	1	H/V	74(Peak)/ 54(AV)
19696	-	H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)
3216	50.1/48.5	V	74(Peak)/ 54(AV)

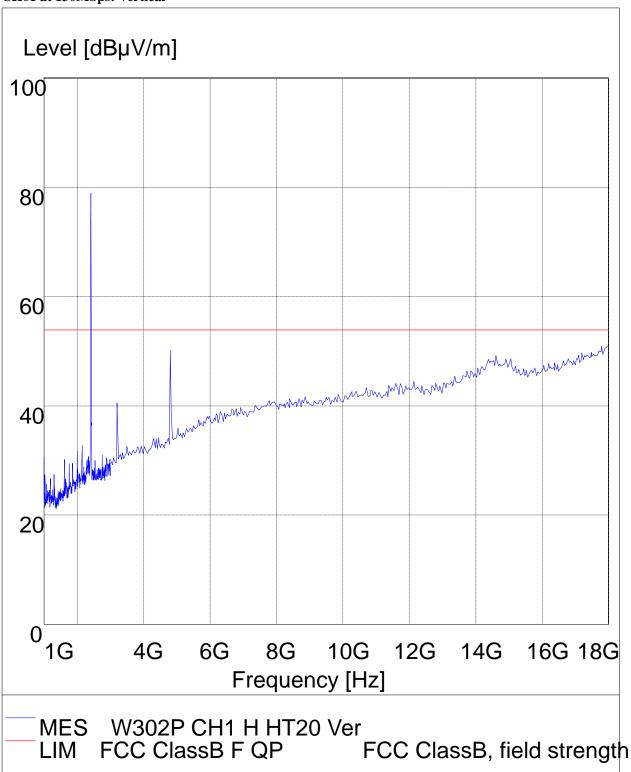
Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n HT20mode at 130Mbps
- 4. Test results are for the worst case condition



Please refer to the following test plots for details

CH01 at 130Mbps: Vertical



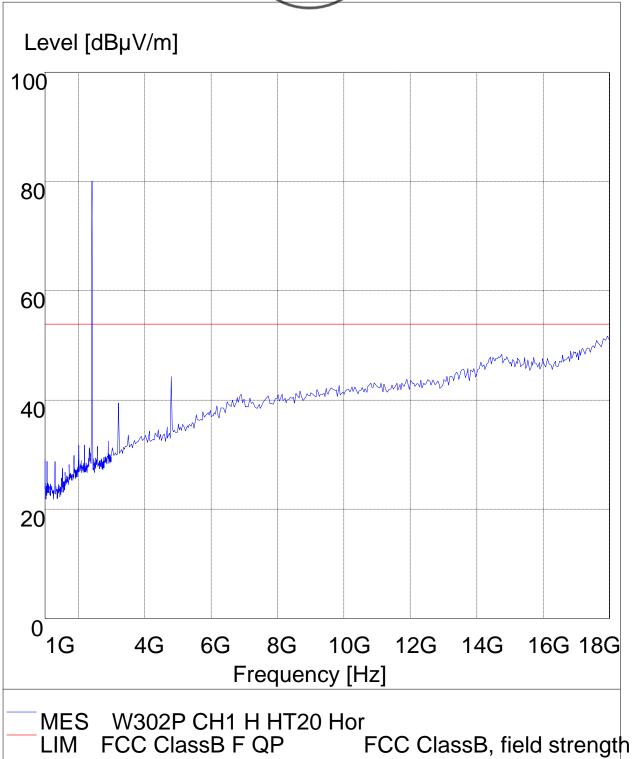
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CH01 at 130Mbps: Horizontal



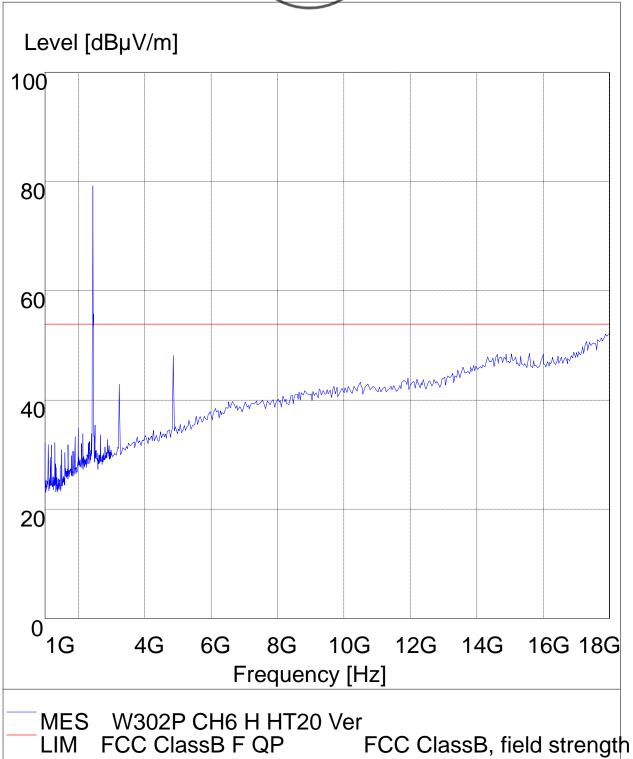
The report refers only to the sample tested and does not apply to the bulk.

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CH06 at 130Mbps: Vertical



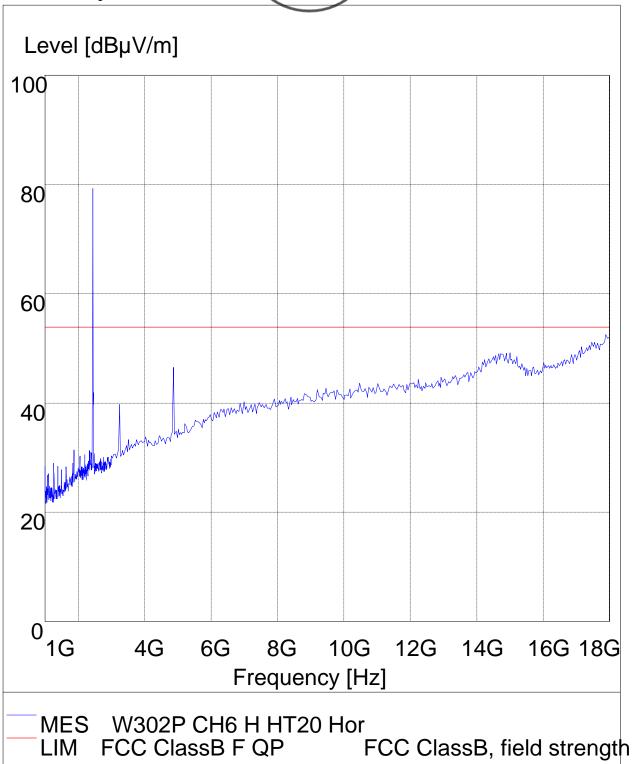
The report refers only to the sample tested and does not apply to the bulk.

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CH06 at 130Mbps: Horizontal

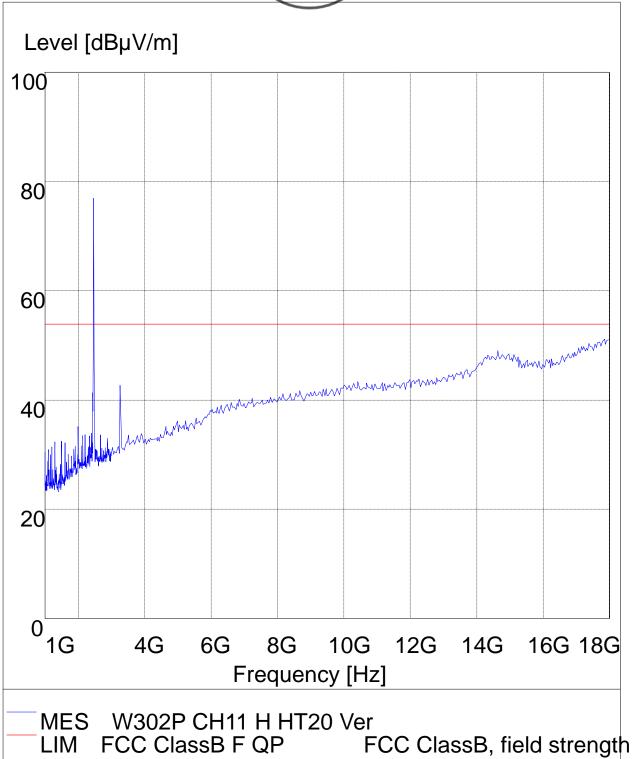


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CH11 at 130Mbps: Vertical

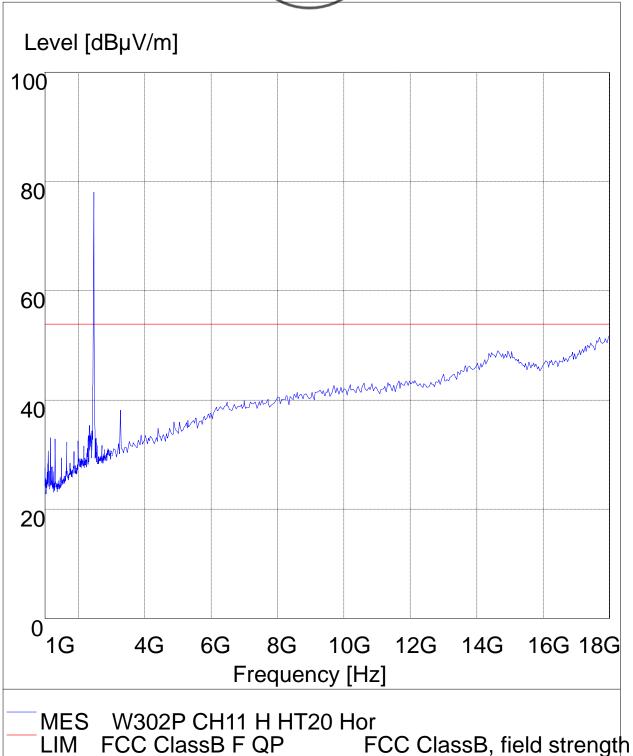


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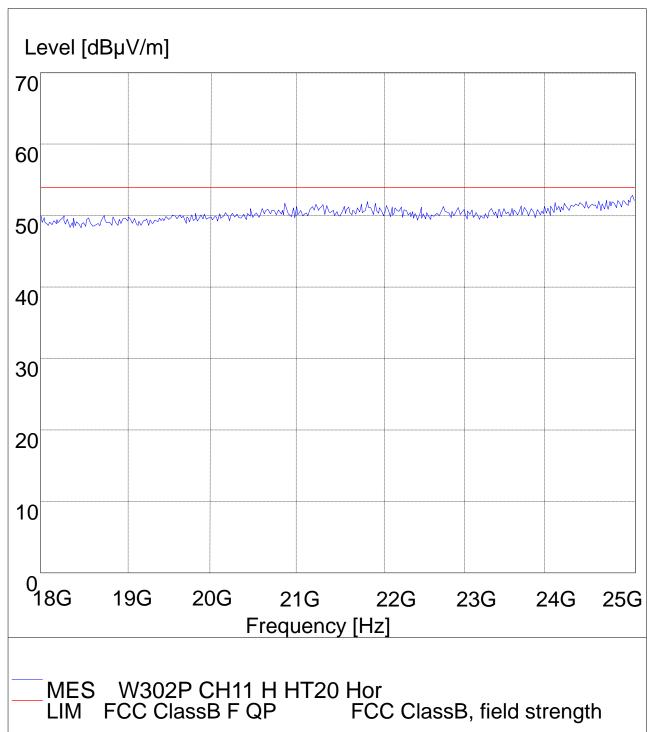


CH11 at 130Mbps: Horizontal



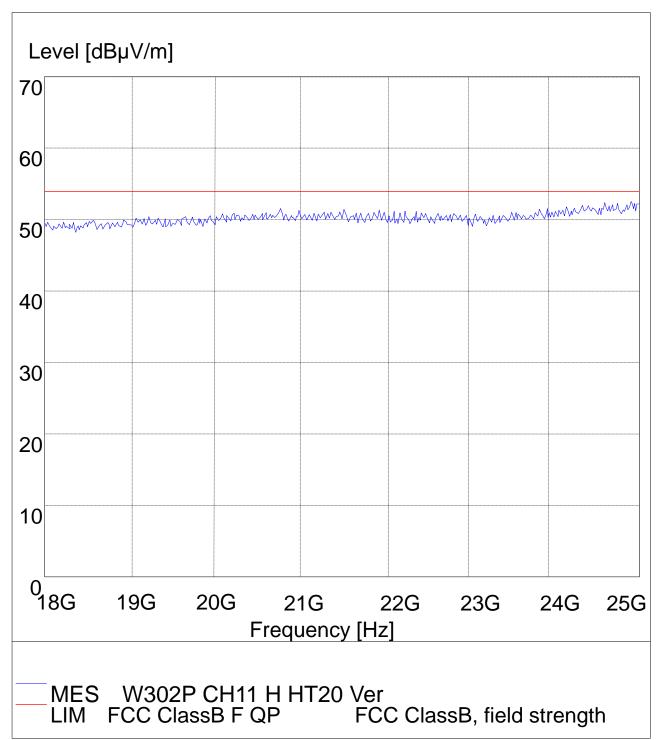


18-25G CH11 130M Horizontal





18-25G CH11 6M Vertical



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79.7 (AV)	Antenna Polarity H	Limit@3m (dB \u03b4 V/m)
79.7 (AV)	П	
	п	Eum domontal Emaguemen
81.5 (AV)	V	Fundamental Frequency
	H/V	74(Peak)/ 54(AV)
45.2 (AV)	V	74(Peak)/ 54(AV)
	81.5 (AV) 45.2 (AV)	81.5 (AV) V H/V

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n HT40 mode 130Mbps
- 4. Test results are for the worst case condition

Operation Mode: Transmitting & Receiving under CH04 at 130Mbps

Frequency (MHz)	Level@3m (dB \u03ba V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
2437.00	102.4 (PK) /84.7 (AV)	V	Fundamental Frequency
2437.00	98.8 (PK) /80.6 (AV)	Н	Fundamental Frequency
4874.00	48.7 (PK) /37.1 (AV)	V	74(Peak)/ 54(AV)
4874.00		Н	74(Peak)/ 54(AV)
7311.00	-	H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185	-	H/V	74(Peak)/ 54(AV)
14622	-	H/V	74(Peak)/ 54(AV)
17059		H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)
3216	46.7 (PK) /46.1 (AV)	V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n HT40 mode 130Mbps
- 4. Test results are for the worst case condition

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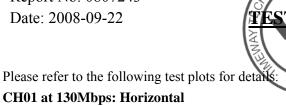
Operation Mode: Transmit	tting & Receiving under	CH07 at 130Mbps
---------------------------------	-------------------------	-----------------

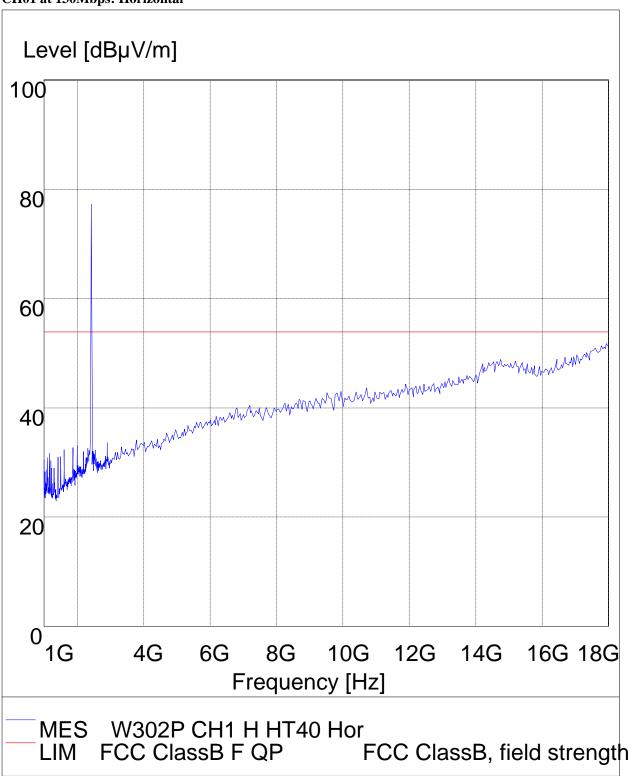
	0 0		<u>-</u>
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2452.00	97.9 (PK) /79.4 (AV)	Н	Fundamental Frequency
2452.00	100.5 (PK) /81.6 (AV)	V	Fundamental Frequency
4904	48.0 (PK) /36.8 (AV)	V	74(Peak)/ 54(AV)
4904		Н	74(Peak)/ 54(AV)
7356		H/V	74(Peak)/ 54(AV)
9808	-	H/V	74(Peak)/ 54(AV)
12260		H/V	74(Peak)/ 54(AV)
14712		H/V	74(Peak)/ 54(AV)
17164	-	H/V	74(Peak)/ 54(AV)
19616	-	H/V	74(Peak)/ 54(AV)
22068		H/V	74(Peak)/ 54(AV)
24520		H/V	74(Peak)/ 54(AV)
3216	47.3 (PK) /46.0 (AV)	V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n HT40 mode 130Mbps
- 4. Test results are for the worst case condition

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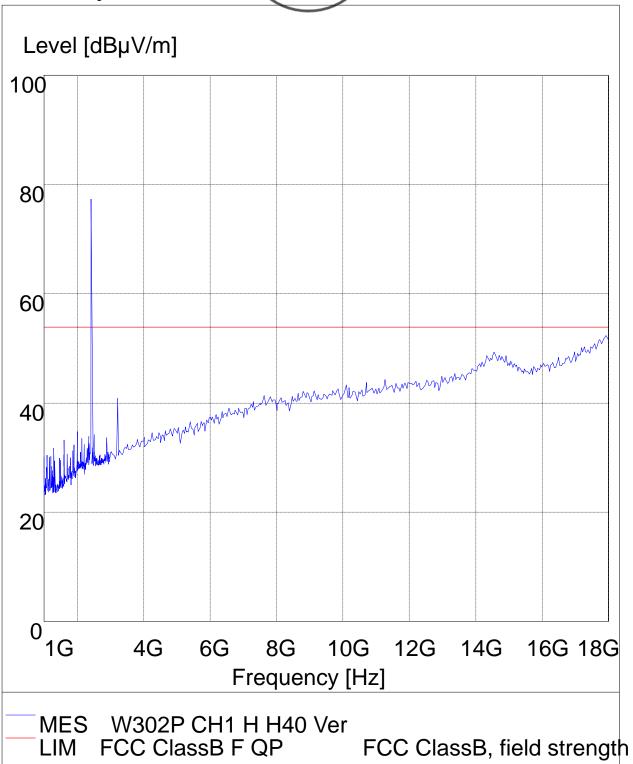
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CH01 at 130Mbps: Vertical

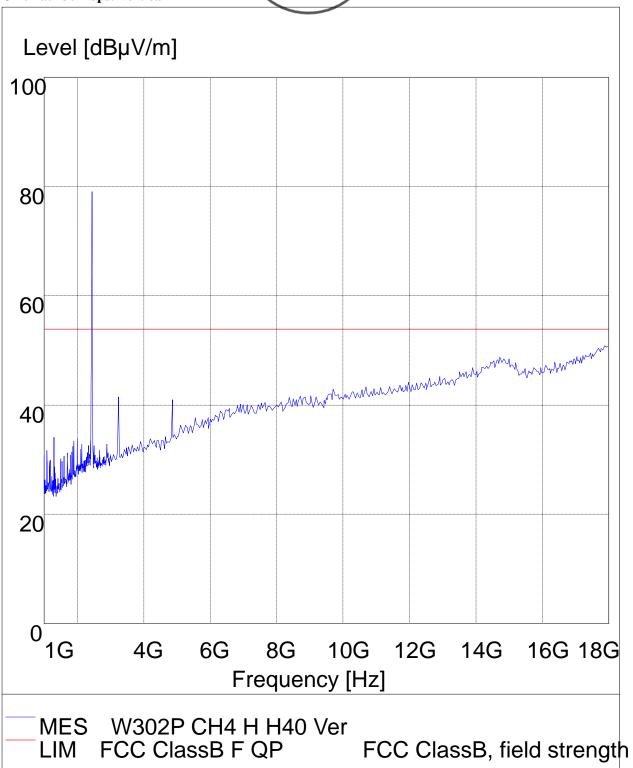


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CH04 at 130Mbps: Vertical

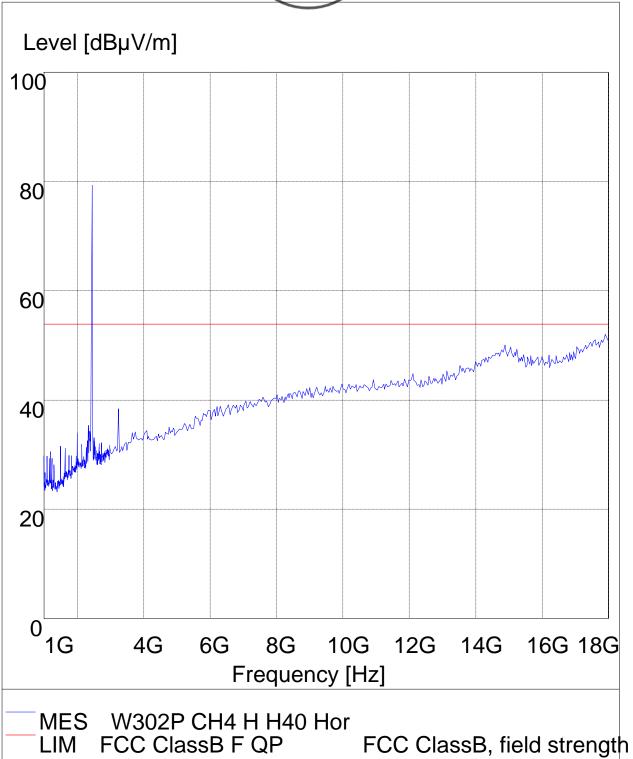


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CH04 at 130Mbps: Horizontal

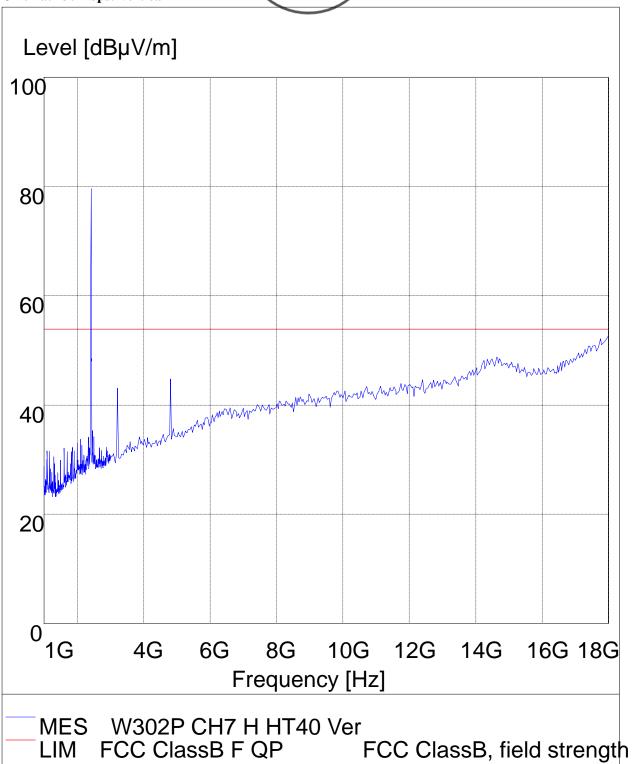


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CH07 at 130Mbps: Vertical

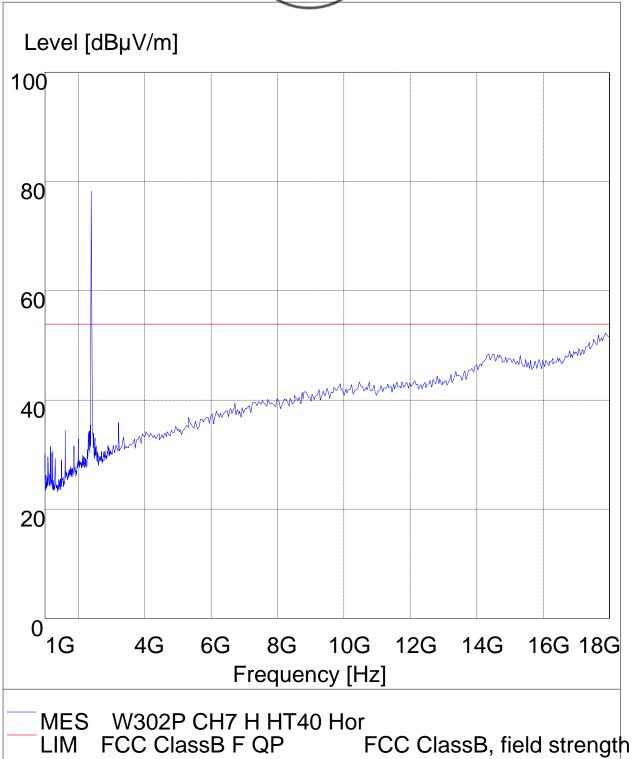


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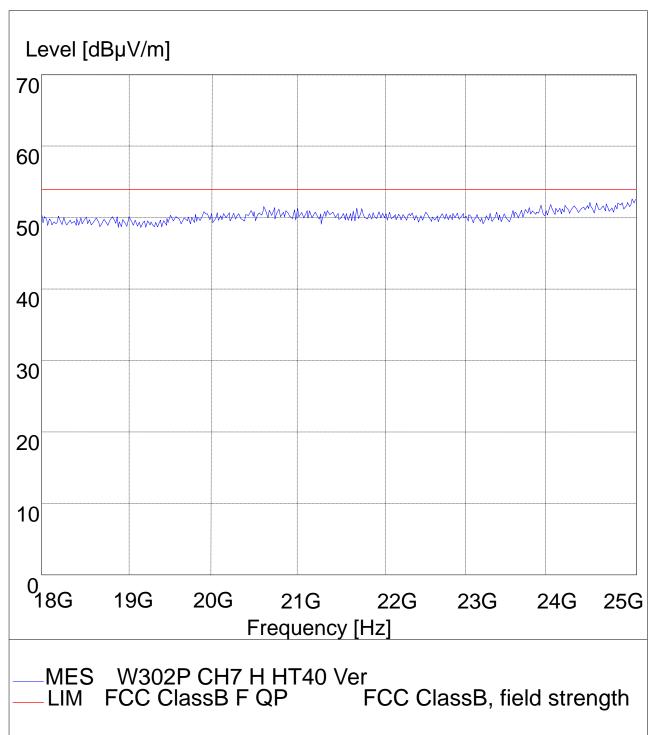
CH07 at 130Mbps: Horizontal



The report refers only to the sample tested and does not apply to the bulk.

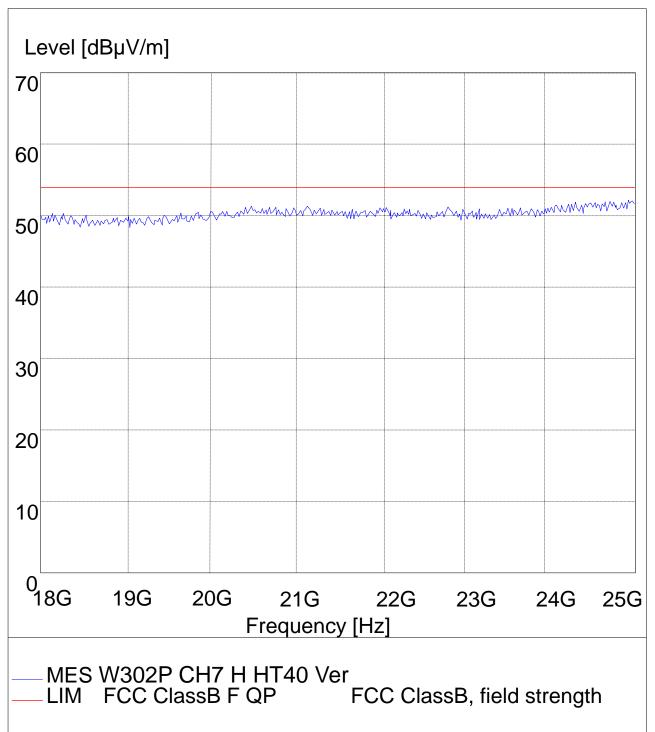


18-25G CH11 130M Horizontal





18-25G CH7 6M Vertical



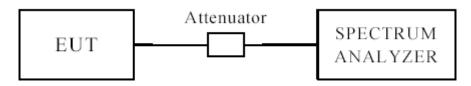
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500kHz

7.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator.

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

7.4 Test Result

EUT		300M Wireless PCI Adapter		Model		W302P		
Mode		8	302.11b		Input Voltage		Powered by PC	
Temperat	ure	24	4 deg. C,		Humidity		56% RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		andwidth Hz)		Minimum Limit (MHz)	
1		2412	1 11		.11		0.5	Pass
6		2437	1 11		.11		0.5	Pass
11		2462	1 11		.11		0.5	Pass

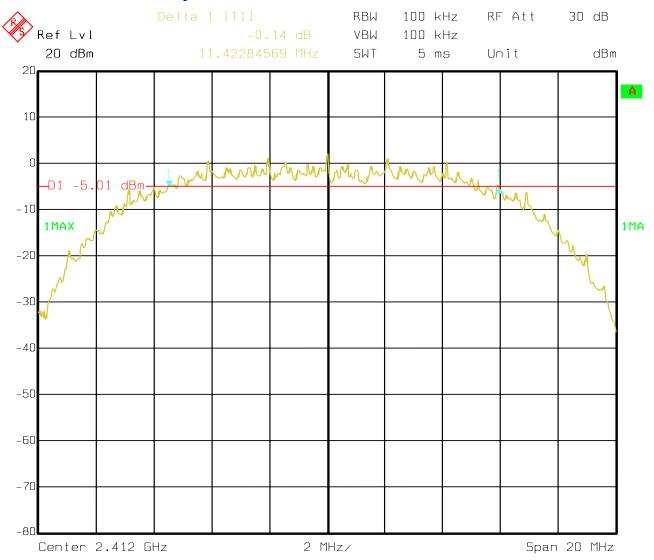
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Report No: 0807243 Date: 2008-09-22



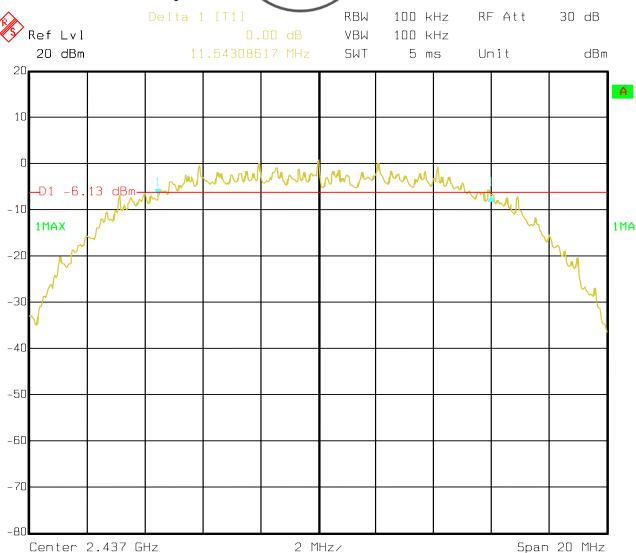
Test Figure:

1. Condition: 802.11b at 11Mbps of CH01



Date: 06.AUG.2008 11:13:39

2. Condition: 802.11b at 11Mbps of CH06



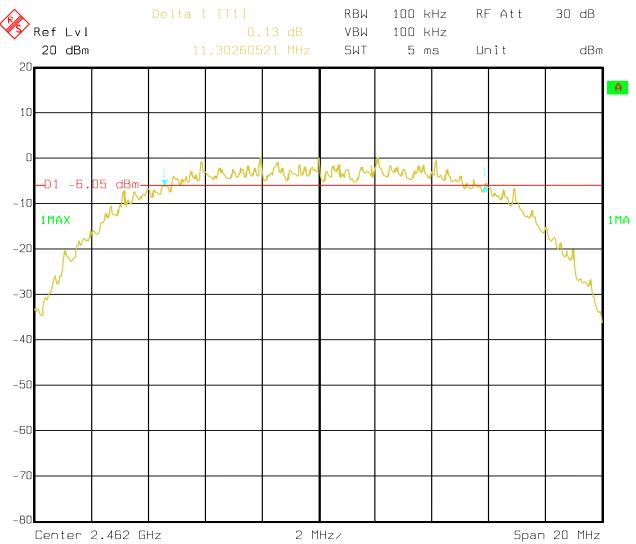
Date: 06.AUG.2008 11:12:19

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3. 802.11b at 11Mbps of CH11



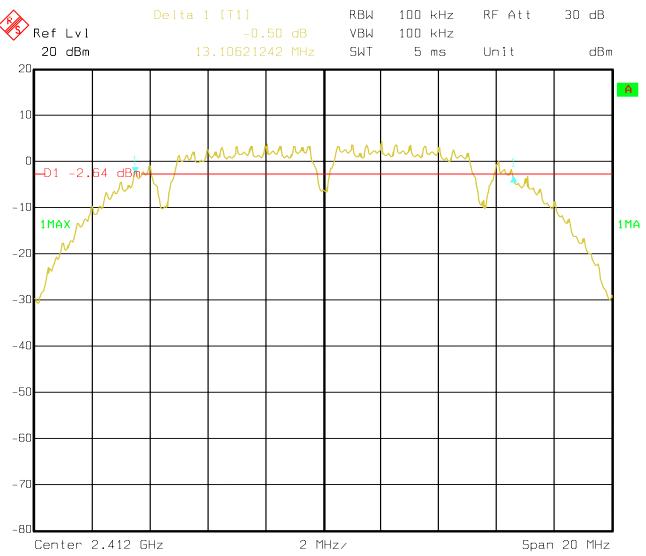
Date: 06.AUG.2008 11:10:47

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Report No: 0807243 Date: 2008-09-22



4. 802.11b at 1Mbps of CH01

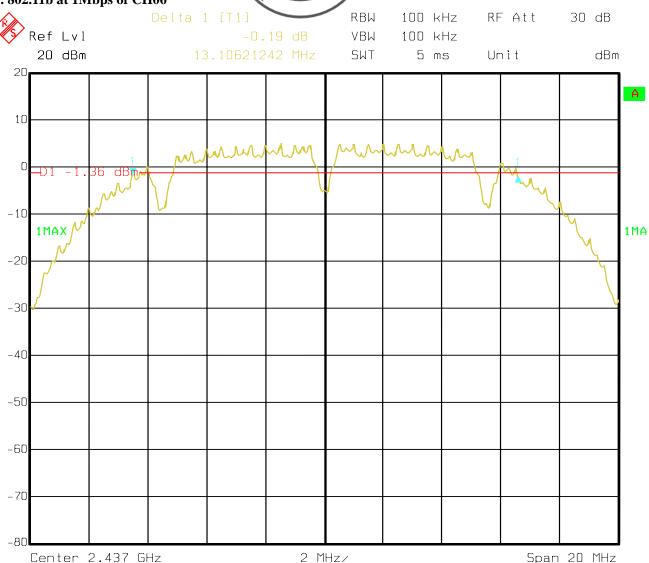


Date: 08.AUG.2008 15:43:42

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Date: 2008-09-22

5. 802.11b at 1Mbps of CH06



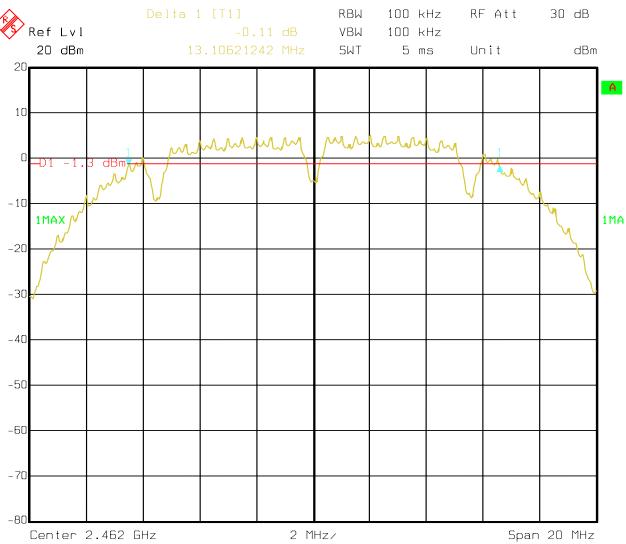
Date: 08.AUG.2008 15:42:12

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6. 802.11b at 1Mbps of CH11



Date: 08.AUG.2008 15:40:35

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								_	
EUT		300M Wireless PCI Adapter		Model		W302P			
Mode		8	302.11g		Input Vol	nt Voltage Powered		by PC	
Temperat	ure	24	4 deg. C,		Humidity		56%]	RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		andwidth Hz)		Minimum Limit (MHz)		
1		2412	6 54		.43		0.5	Pass	
6		2437	6 54		16.43 16.51		0.5	Pass	
11		2462	6 54		.43		0.5	Pass	

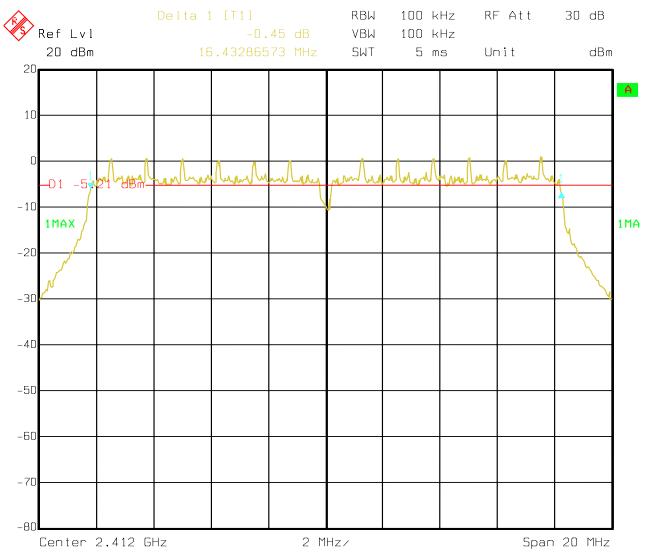
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Test Plots:

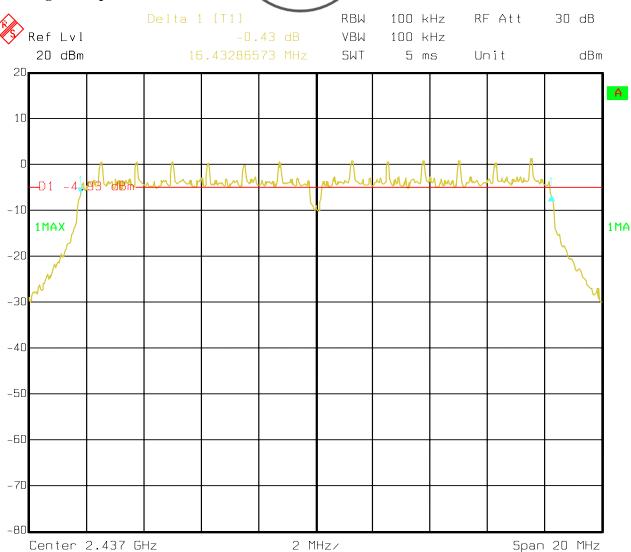
1. 802.11g at 6Mbps of CH01



Date: 20.SEP.2008 15:01:43

Date: 2008-09-22

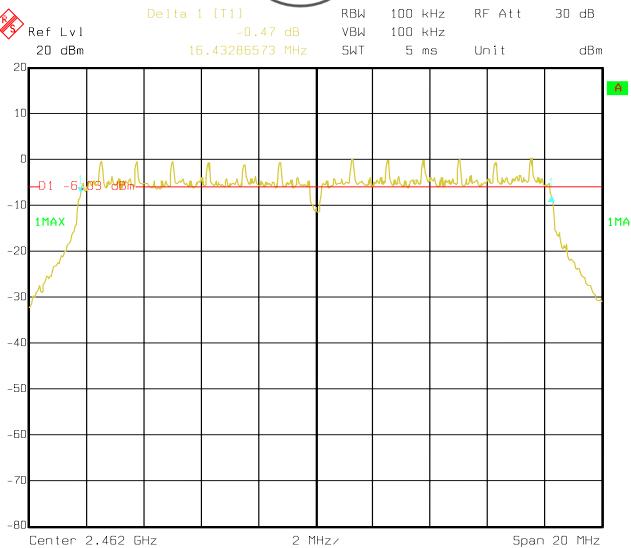




Date: 20.SEP.2008 15:05:00



3. 802.11g at 6Mbps of CH11

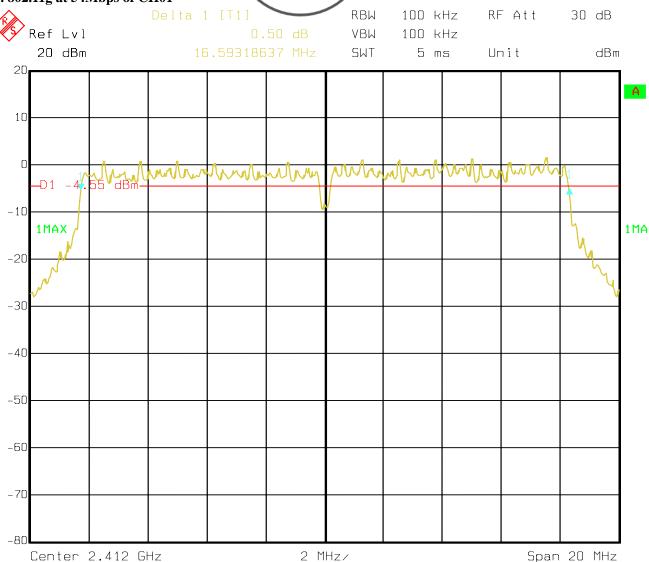


Date: 20.SEP.2008 15:07:08

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Report No: 0807243 Date: 2008-09-22

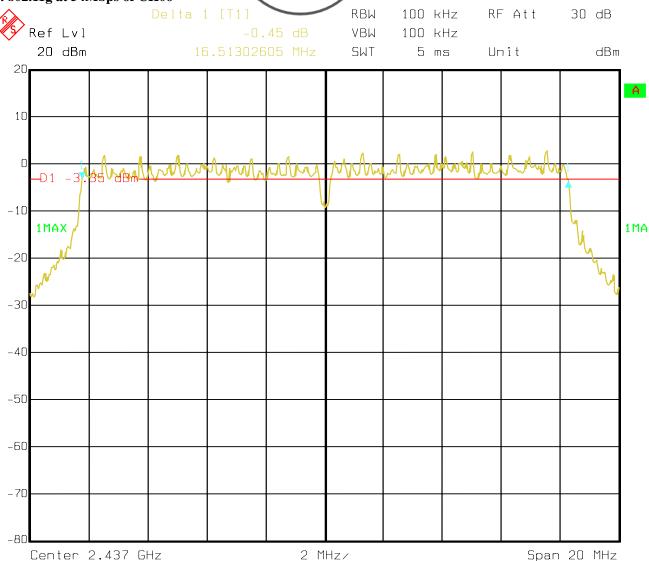
4. 802.11g at 54Mbps of CH01



Date: 08.AUG.2008 15:22:25



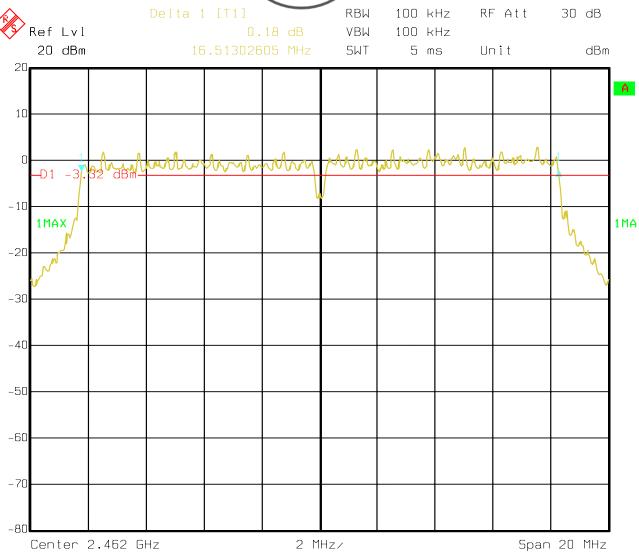
5. 802.11g at 54Mbps of CH06



Date: 08.AUG.2008 15:24:53



6. 802.11g at 54Mbps of CH11



Date: 08.AUG.2008 15:26:24

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Report No: 0807243 Date: 2008-09-22



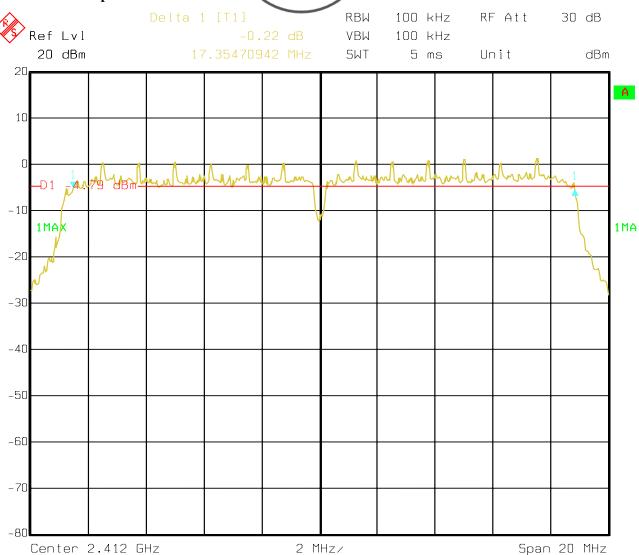
EUT		300M Wireless PCI Adapter Model		W302P		2P		
Mode			IEEE 802.11n HT20 mode Input Voltage (one TX)		tage	e Powered by PO		
Temperat	ure	24	4 deg. C,		Humidity		56%]	RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ındwidth Hz)		num Limit MHz)	Pass/ Fail
1		2412	6 130		.35		0.5	Pass
6		2437	6 130		.35		0.5	Pass
11		2462	6 130		17.68 17.56		0.5	Pass

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1. 802.11n at 6Mbps of CH1



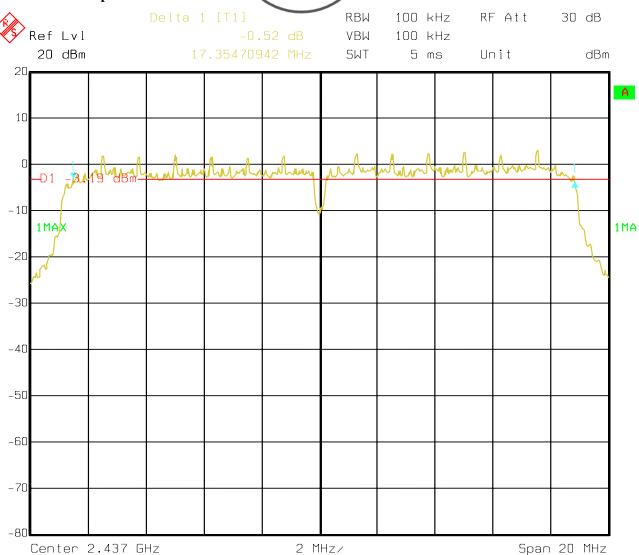
Date: 09.AUG.2008 11:00:50

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2. 802.11n at 6Mbps of CH6

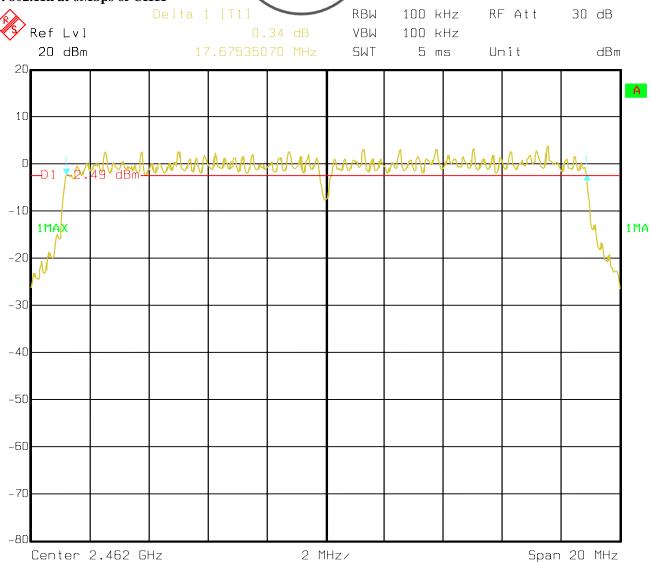


Date: 09.AUG.2008 10:59:28

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Date: 2008-09-22

3. 802.11n at 6Mbps of CH11



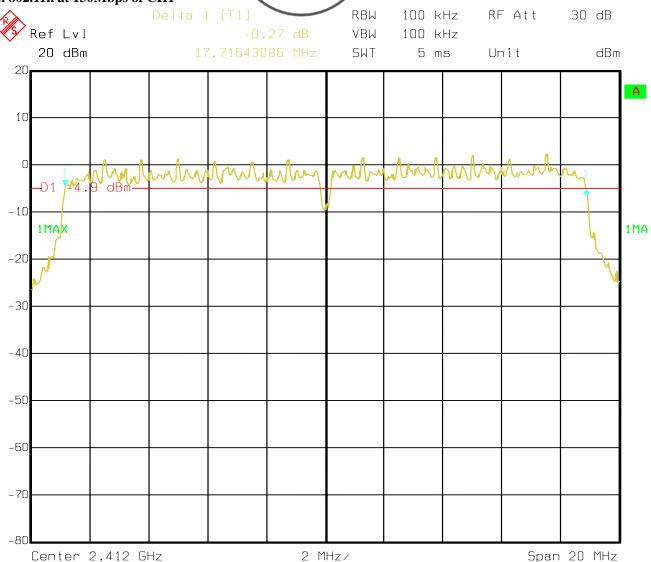
Date: 09.AUG.2008 10:58:06

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Report No: 0807243 Date: 2008-09-22



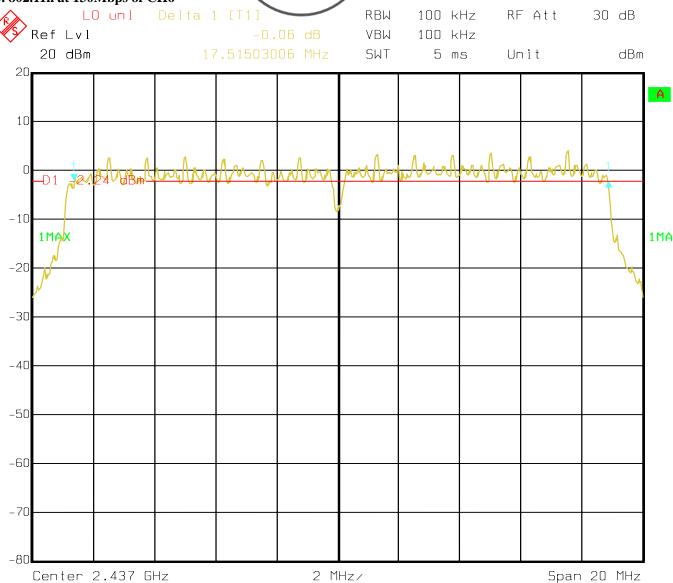
4. 802.11n at 130Mbps of CH1



Date: 09.AUG.2008 10:51:50

FEST R EPORT

5. 802.11n at 130Mbps of CH6



Date: 09.AUG.2008 10:53:41

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Date: 2008-09-22

6. 802.11n at 130Mbps of CH11



Date: 09.AUG.2008 10:56:21

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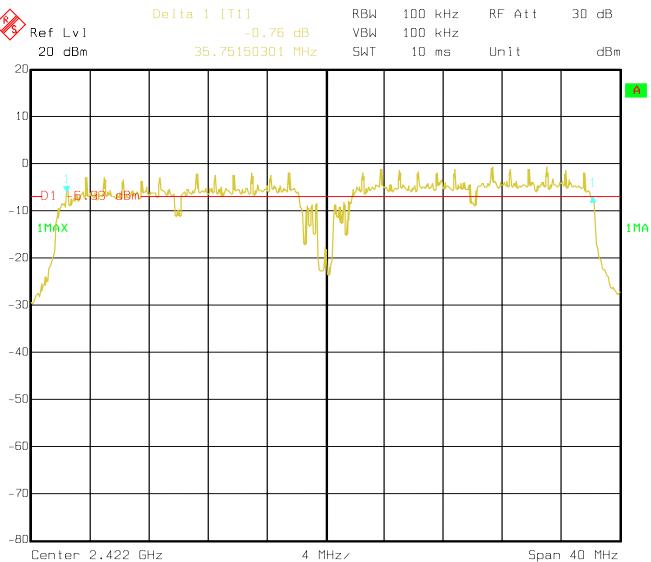
EUT		300M Wireless PCI		Adapter Model		W3021		2P
Mode				•	Input Voltage		Powered by PC	
`			4 deg. C,		Humidity		56%	RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)				num Limit MHz)	Pass/ Fail
1		2422	6 130		.75 .75		0.5	Pass
4		2437	6 130		.75 .75		0.5	Pass
7		2452	6 130		.75 .75		0.5	Pass

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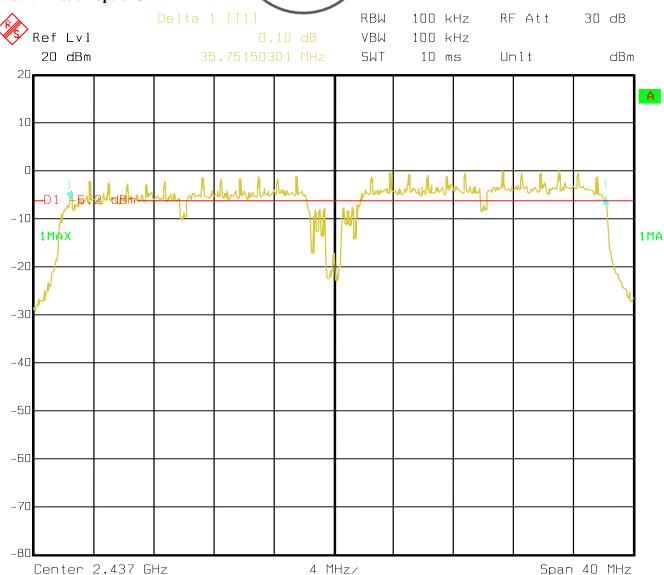
1. 802.11n at 6Mbps of CH1



Date: 09.AUG.2008 11:12:08



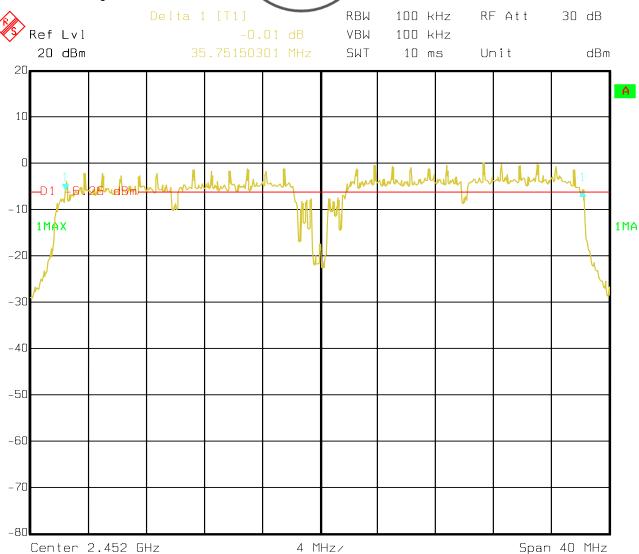
2. 802.11n at 6Mbps of CH4



Date: 09.AUG.2008 11:06:04



3. 802.11n at 6Mbps of CH7



Date: 09.AUG.2008 11:07:45

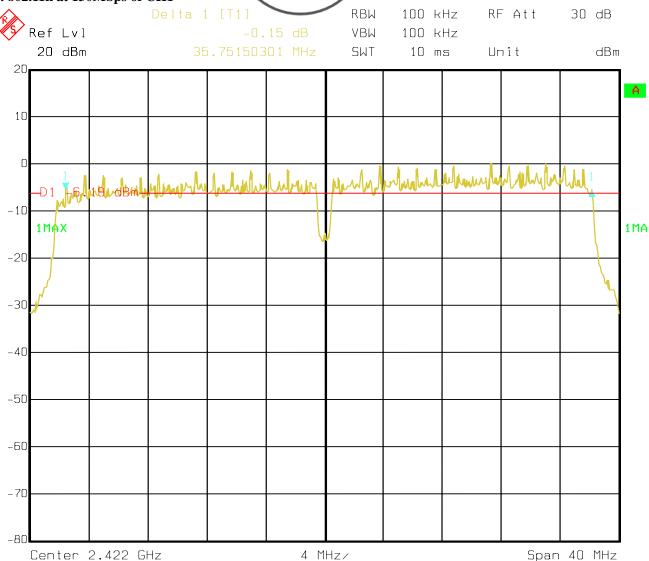
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Date: 2008-09-22

Report No: 0807243

Date: 2008-09-22

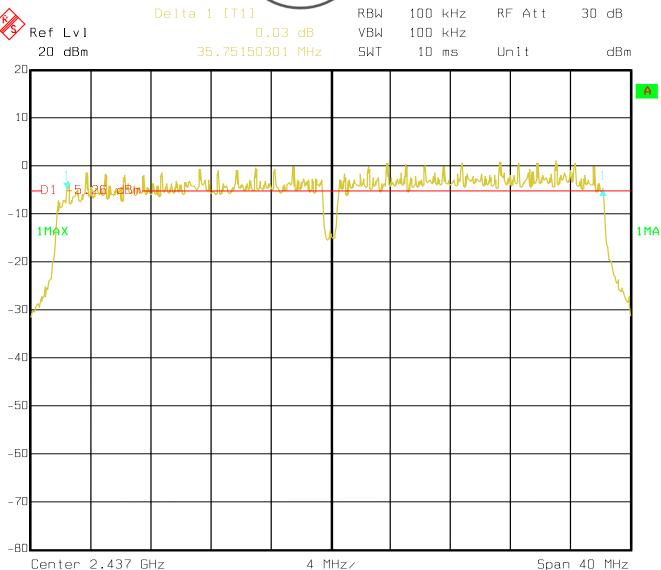
4. 802.11n at 130Mbps of CH1



Date: 09.AUG.2008 11:10:50



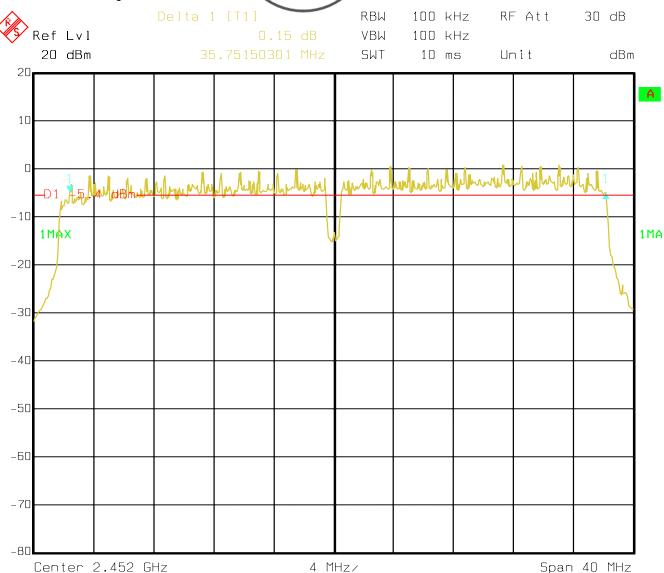
5. 802.11n at 130Mbps of CH4



Date: 09.AUG.2008 11:09:44



6. 802.11n at 130Mbps of CH7



Date: 09.AUG.2008 11:08:46

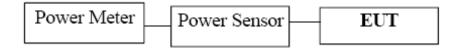
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Date: 2008-09-22



8. Maximum Peak Output Power

8.1 Test Setup



8.2 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

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8.4Test Results

EUT		300M W	Tireless Mo		odel V		V302P
		PCI Adapter					
Mode	Iode 802.1		Input '		Voltage Power		ered by PC
Temperati	Temperature 24 deg		g. C,	g. C, Humidity		56% RH	
Channel	Ch	annel Frequency (MHz)	Peak Power Output (dBm)		Peak P Lin (dB:	nit	Pass/ Fail
1		2412	12.03		30		Pass
6		2437	12.78		30		Pass
11		2462	13.75		30		Pass

Note: 1. At finial test to get the worst-case emission at 11Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

EUT		300M W	Tireless Me		odel	V	W302P	
		PCI Adapter						
Mode		802.1	I1g Inpu		Input Voltage		ered by PC	
Temperat	Temperature 24 deg		g. C, Hun		midity 5		6% RH	
Channel	Ch	annel Frequency (MHz)	Peak Power Output (dBm)		Peak P Lin (dB:	nit	Pass/ Fail	
1		2412	12.35		30		Pass	
6		2437	13.57		30)	Pass	
11		2462	10.86		30)	Pass	

Note: 1. At finial test to get the worst-case emission at 6Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

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Date: 2008-09-22 **TEST REPORT**

EUT 300M Wireles Model W302P PCI Adapter Mode 802.11n HT20 Input Voltage Powered by PC Humidity 56% RH Temperature 24 deg. C, Peak Power Channel Frequency Peak Power Output Pass/ Fail Channel Limit (MHz) (dBm) (dBm) 1 2412 11.13 30 Pass 6 2437 12.28 30 Pass 11 2462 13.98 30 Pass

Note: 1. At finial test to get the worst-case emission at 130Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

EUT		300M W	rireless Mo		odel	V	W302P	
		PCI A	dapter					
Mode	Mode 802.11n		HT40 Input		Voltage Power		ered by PC	
Temperat	Temperature 24 deg		g. C, Hum		midity 5		6% RH	
Channel	Ch	annel Frequency (MHz)	Peak Power Output (dBm)		Peak P Lin (dB:	nit	Pass/ Fail	
1		2422	11.25		30		Pass	
4		2437	13.12		30)	Pass	
7		2452	11.12		30		Pass	

Note: 1. At finial test to get the worst-case emission at 130Mbps for CH01, CH04 and CH07

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

Teak Tower Output - Teak Tower Reading + Cable 1055 + Attenuator

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9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3KHz RBW and 10kHz VBW, set sweep time=100s

The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span / 3KHz for a full response of the mixer in the spectrum analyzer with peak detector used.

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9.4Test Result

EUT		300M W	Vireless Mc		odel V		V302P
	PCI Ad		dapter				
Mode	Mode 802.1		Ilb Input		Voltage Power		ered by PC
Temperat	Temperature 24 deg		g. C,	Humidity		56% RH	
Channel	Ch	annel Frequency (MHz)	Final RF Power Level in 3kHz BW (dBm)		Maximur (dB	-	Pass/ Fail
1		2412	1.22		8		Pass
6		2437	2.76		8		Pass
11		2462	1.55		8		Pass

Note: For 802.11b mode at finial test to get the worst-case emission at 11Mbps for CH11, CH06 and CH01

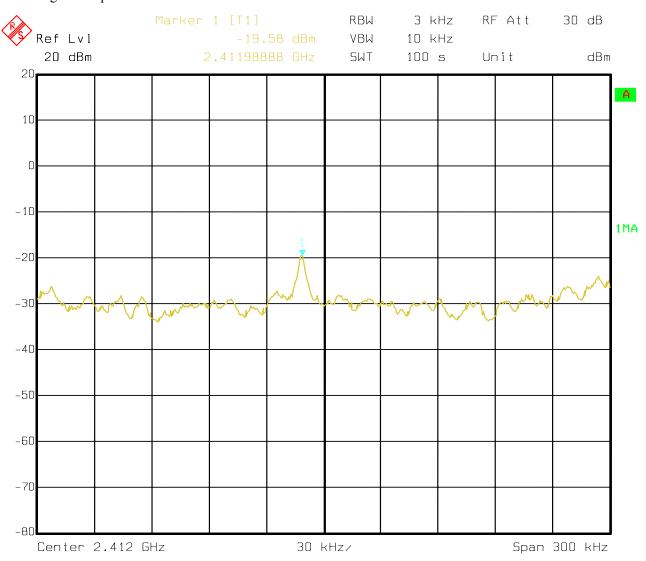
EUT		300M W	Tireless Mo		odel V		V302P
		PCI A	dapter				
Mode	Mode 802.1		Input Input		Voltage I		PC 5V
Temperat	Temperature 24 deg		g. C, Humidity		56% RH		
Channel	Ch	annel Frequency (MHz)	Final RF Power Level in 3kHz BW (dBm)		Maximum Limit (dBm)		Pass/ Fail
1		2412	-19.58		8		Pass
6		2437	-19.03		8		Pass
11		2462	-18.90		8		Pass

Note: For 802.11g mode at finial test to get the worst-case emission at 6Mbps for CH11, CH06 and CH01



9.5Photo of Power Spectral Density Measurement

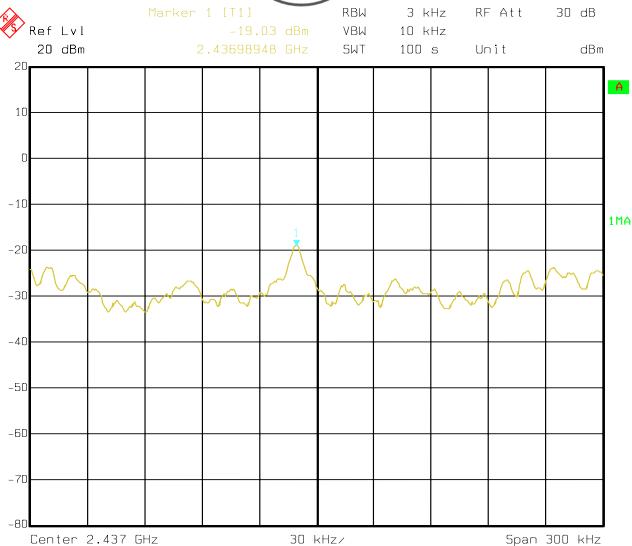
1.802.11g at 6Mbps of CH01



Date: 20.SEP.2008 15:29:09



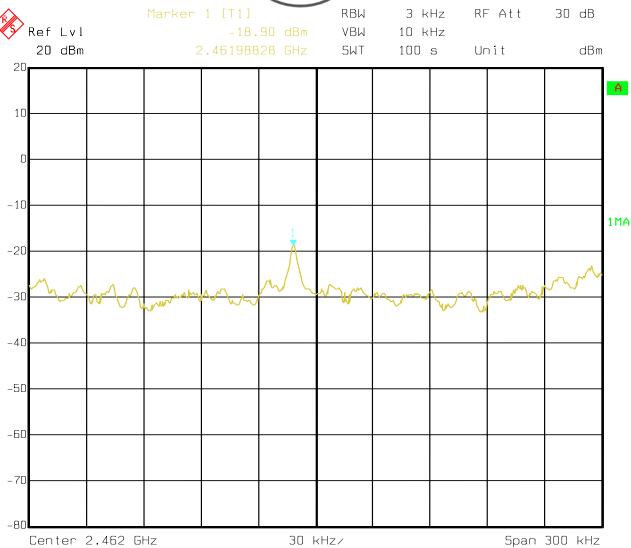
2. 802.11g at 6Mbps at CH06



Date: 20.SEP.2008 15:25:08



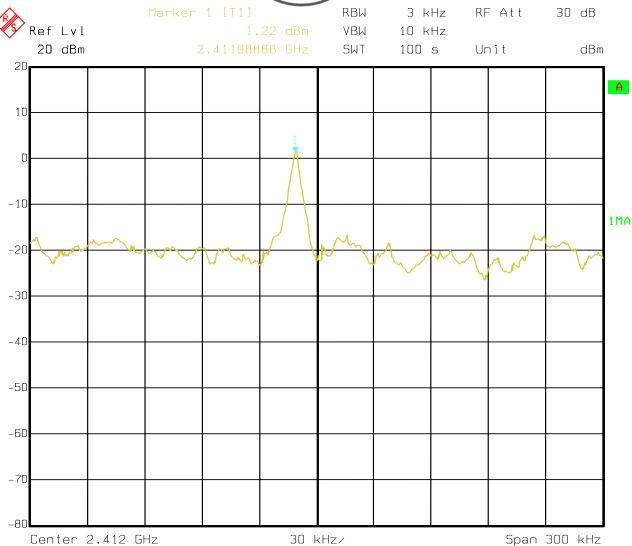
3. 802.11g at 6Mbps of CH11



Date: 20.SEP.2008 15:33:11



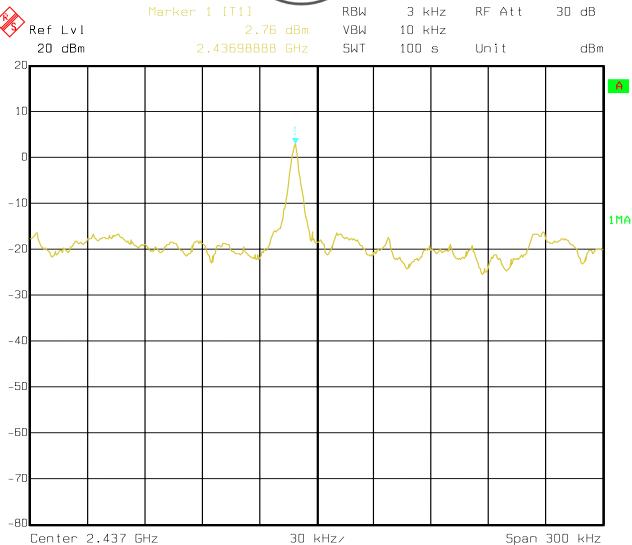
4. 802.11b at 11Mbps of CH01



Date: 20.SEP.2008 15:43:21



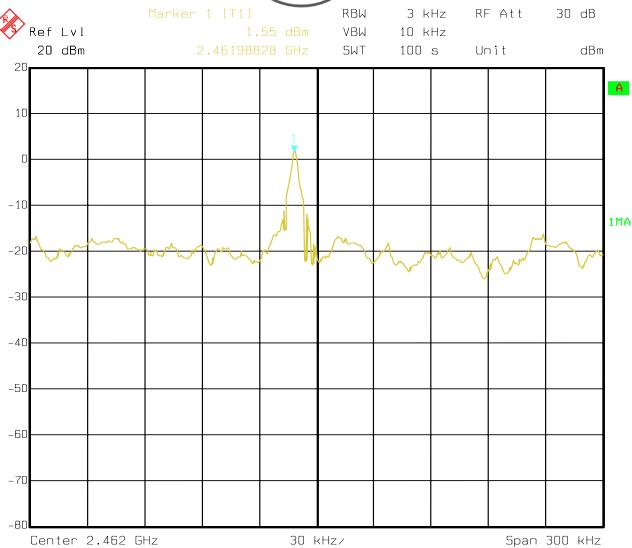
5. 802.11b at 11Mbps of CH06



Date: 20.SEP.2008 15:39:45



6. 802.11b at 11Mbps of CH11



Date: 20.SEP.2008 15:36:18

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Date: 2008-09-22

		No.	7 2 2777				
EUT		300M W	ireless	Model		W302P	
	PCI Adapter		dapter				
Mode	Mode 802.11n		HT20	Input Voltage		Powered by PC	
Temperati	Temperature 24 deg		g. C,	Humidity		56% RH	
Channel	Cha	annel Frequency (MHz)	Final RF Po Level in 3kH: (dBm)		Maximum Limi (dBm)		Pass/ Fail
1		2412	-27.56		8		Pass
6		2437	-28.00		8		Pass
11		2462	-26.50		8		Pass

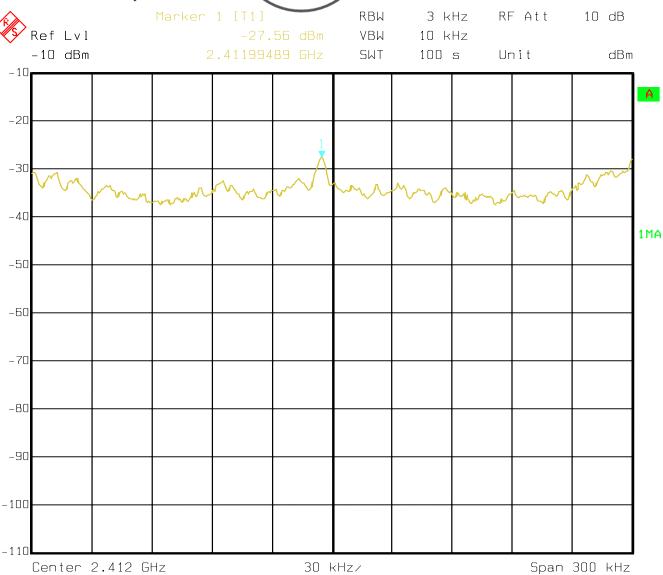
Note: For 802.11n HT20 mode at finial test to get the worst-case emission at 6Mbps for CH11, CH06 and CH01

EUT		300M W	ireless dapter	М	odel	W302P	
Mode PCI Ac				Voltage I		PC 5V	
Temperat	Temperature 24 deg		g. C,	Humidity		56% RH	
Channel	Ch	annel Frequency (MHz)	Final RF Power Level in 3kHz BW (dBm)		Maximur (dB		Pass/ Fail
1		2412	-29.87		8		Pass
4		2437	-30.38		8		Pass
7		2462	-29.15		8		Pass

Note: For 802.11n HT40 mode at finial test to get the worst-case emission at 6Mbps for CH07, CH04 and CH01



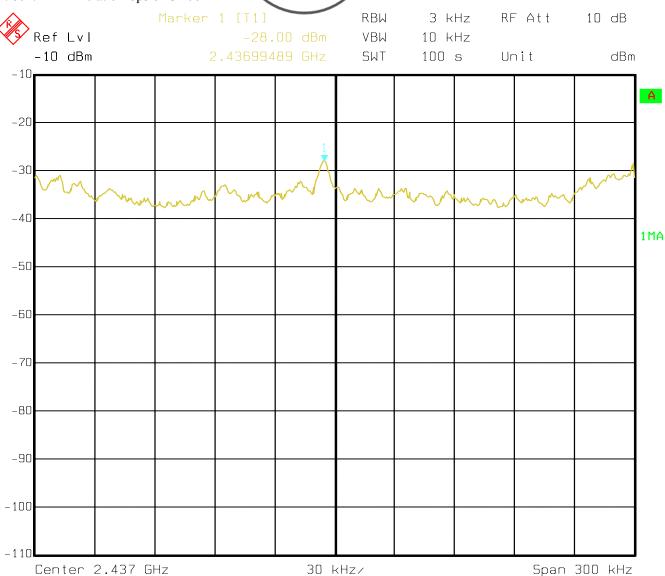
1. 802.11n HT20 at 6Mbps of CH01



Date: 20.AUG.2008 11:06:49



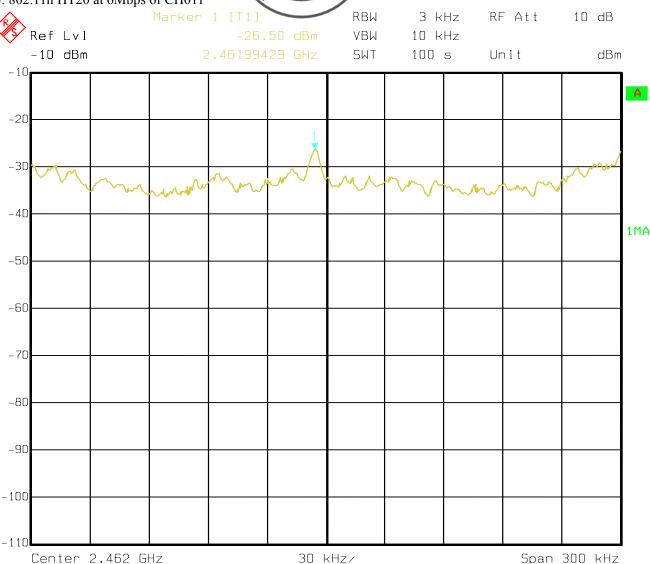
2. 802.11n HT20 at 6Mbps of CH06



Date: 20.AUG.2008 11:14:26



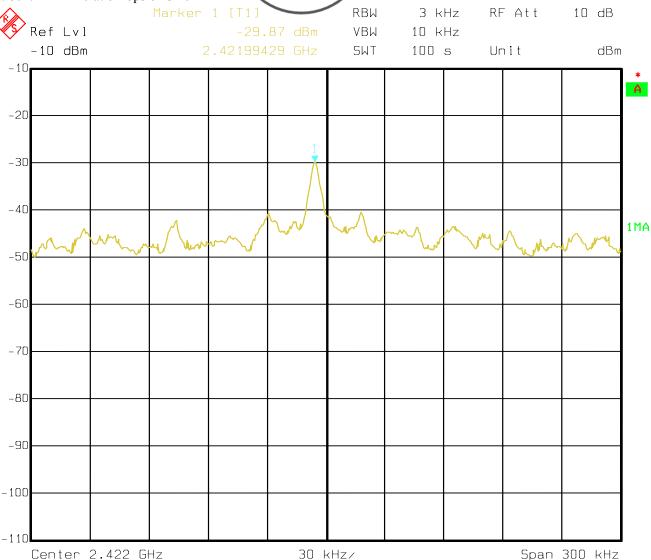
3. 802.11n HT20 at 6Mbps of CH011



Date: 20.AUG.2008 11:22:09



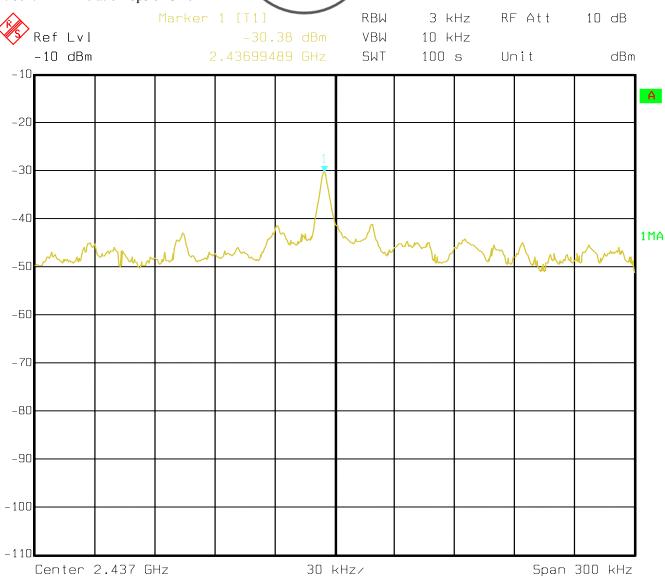
4. 802.11n HT40 at 6Mbps of CH01



Date: 20.AUG.2008 10:46:55



4. 802.11n HT40 at 6Mbps of CH04



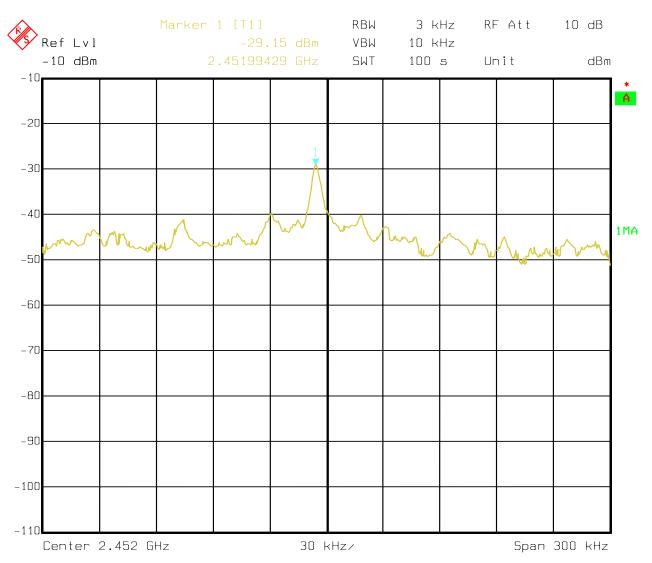
Date: 20.AUG.2008 11:00:42

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6. 802.11n HT40 at 6Mbps of CH07



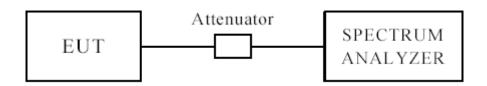
Date: 20.AUG.2008 11:02:12

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Date: 2008-09-22



10 Out of Band Measurement 10.1 Test Setup for bandedge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test. PK setting: RBW=VBW=1MHz; AV setting: RBW=1MHz, VBW=10Hz

For bandage test, the spectrum set as follows: RBW=VBW=100 kHz. A conducted measurement used with peak detector

10.4Test Result

Please see next pages



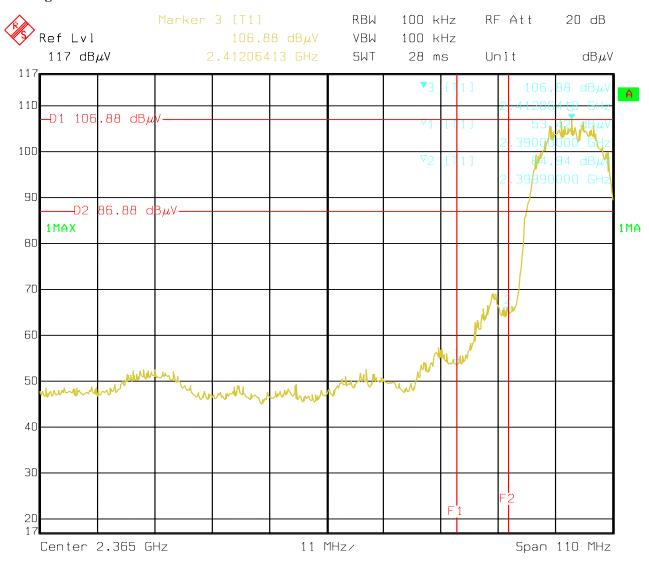
For 802.11b mode

CH01 at 11Mbps

10.4 Restricted band and bandedge Measurement

Product:	300M Wireless	s PCI Adapter	Test Mode:	CH1
Mode	Keeping Tr	ansmitting	Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pas	SS	Detector	PK
The Max. FS in	PK (dBμV/m)	56.6(V)/54.5(H)	T ::4	$74(dB\mu V/m)$
Restrict Band	AV (dBμV/m)	42.5(V)40.3(H)	Limit	$54(dB\mu V/m)$

Test Figure:



Note: The Max. FS in Restrict Band are measured in conventional method.

16:03:49

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19.SEP.2008

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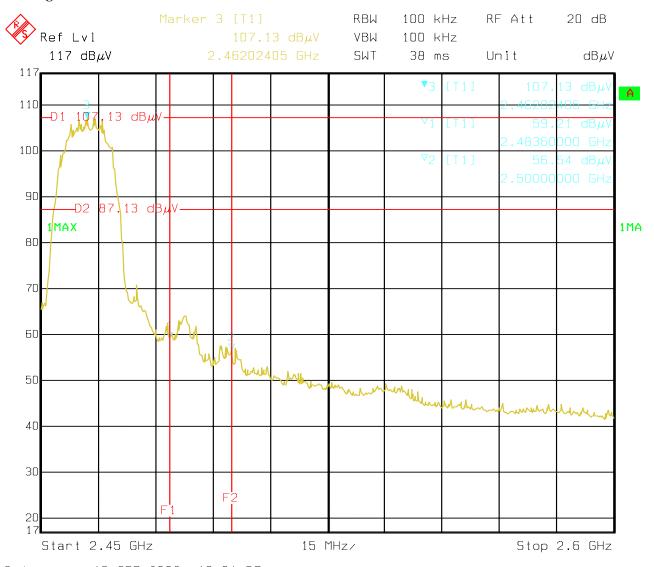


CH11 at 11Mbps

10.4 Restricted band and bandedge Measurement

Product:	300M Wireless PCI Adapter		Test Mode:	CH11
Mode	Keeping Tra	ansmitting	Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pas	SS	Detector	PK
The Max. FS in	PK (dBµV/m)	58.4(V)/55.4(H)	T ::4	$74(dB\mu V/m)$
Restrict Band	AV ($dB\mu V/m$)	46.7(V)/43.6(H)	Limit	$54(dB\mu V/m)$

Test Figure:



Date: 19.SEP.2008 16:01:57

Note: The Max. FS in Restrict Band are measured in conventional method.

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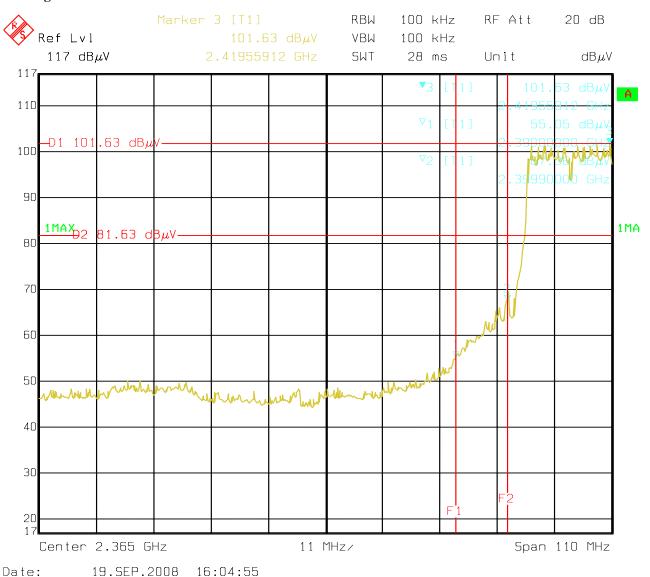
For 802.11g mode

CH01 at 6Mbps

10.4 Restricted band and bandedge Measurement

Product:	300M Wireless PCI Adapter		Test Mode:	CH1
Mode	Keeping Transmitting		Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pa	SS	Detector	PK
The Max. FS in	PK ($dB\mu V/m$)	57.8(V)/53.2(H)	T ::4	$74(dB\mu V/m)$
Restrict Band	AV ($dB\mu V/m$)	44.9(V)/40.9(H)	Limit	74(dBμV/m)

Test Figure:



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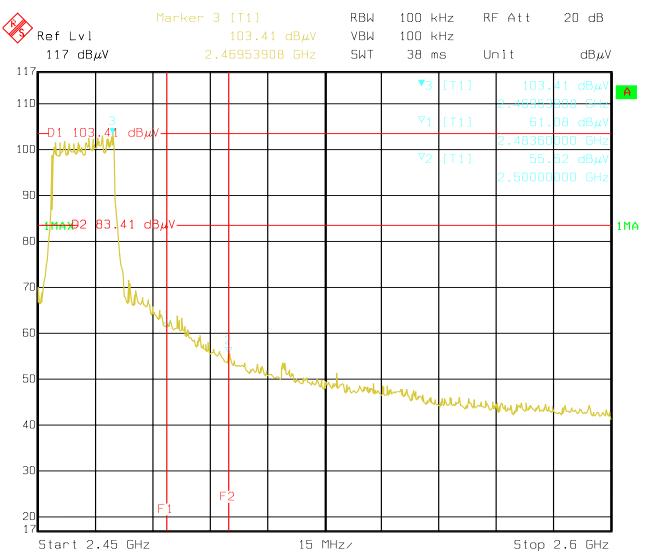


CH11 at 6Mbps

10.4 Restricted band and bandedge Measurement

Product:	300M Wireless PCI Adapter		Test Mode:	CH11
Mode	Keeping Transmitting		Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pas	SS	Detector	PK
The Max. FS in	PK (dBμV/m)	53.6(V)/52.6(H)	T ::4	$74(dB\mu V/m)$
Restrict Band	AV (dBμV/m)	40.2(V)/40.1(H)	Limit	$54(dB\mu V/m)$

Test Figure:



Date: 19.SEP.2008 16:00:49

Note: The Max. FS in Restrict Band are measured in conventional method.

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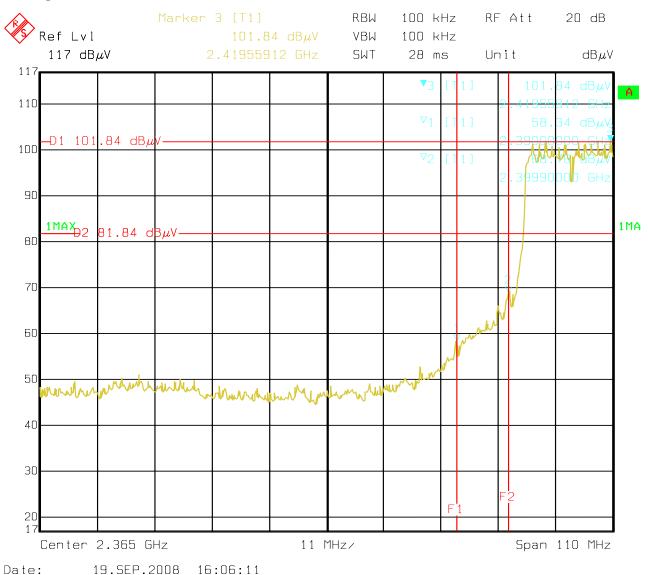


CH1 at HT20 130Mbps

10.4 Restricted band and bandedge Measurement

Product:	300M Wireless PCI Adapter		Test Mode:	CH1
Mode	Keeping Transmitting		Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
The Max. FS in	PK ($dB\mu V/m$)	52.1(V)/48.8(H)	Limit	74(dBµV/m)
Restrict Band	PK ($dB\mu V/m$)	39.2(V)/36.0(H)		54(dBµV/m)

Test Figure:



Note: The Max. FS in Restrict Band are measured in conventional method.

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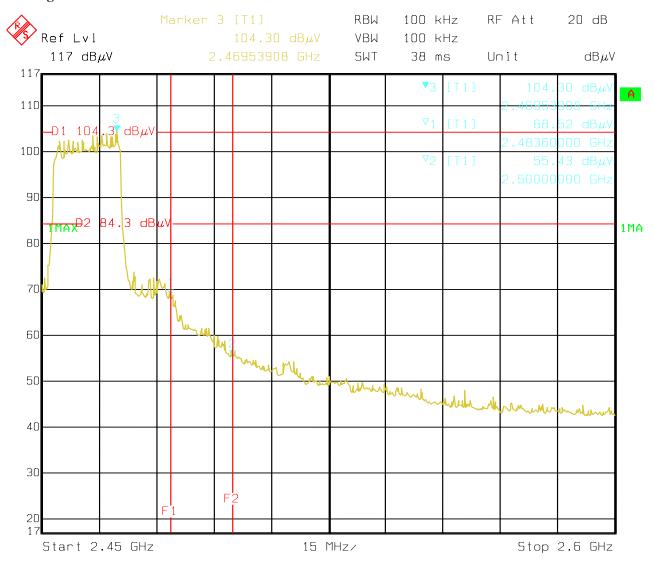
802.11n

CH11 at HT20 130Mbps

10.4 Restricted band and bandedge Measurement

Product:	300M Wireless	s PCI Adapter	Test Mode:	CH11
Mode	Keeping Tr	ansmitting	Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
The Max. FS in	PK ($dB\mu V/m$)	59.2(V)/56.4(H)	T ::4	$74(dB\mu V/m)$
Restrict Band	AV ($dB\mu V/m$)	46.8(V)/44.3(H)	Limit	$54(dB\mu V/m)$

Test Figure:



Date: 19.SEP.2008 15:58:34

Note: The Max. FS in Restrict Band are measured in conventional method.

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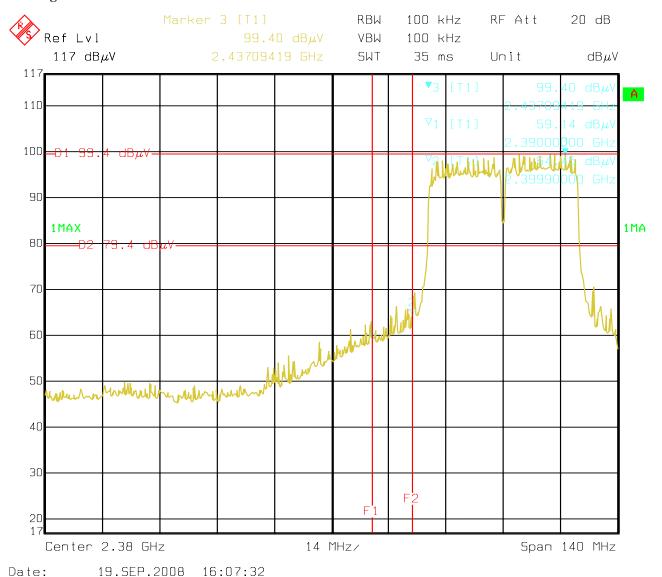
802.11n

CH1 at HT40 130Mbps

10.4 Out of Band Test Result

Product:	300M Wireless	PCI Adapter	Test Mode:	CH1
Mode	Keeping Transmitting		Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
The Max. FS in	PK (dBµV/m)	56.1(V)/53.2(H)	T ::4	$74(dB\mu V/m)$
Restrict Band	AV ($dB\mu V/m$)	42.5(V)/40.5(H)	Limit	$54(dB\mu V/m)$

Test Figure:



Note: The Max. FS in Restrict Band are measured in conventional method.

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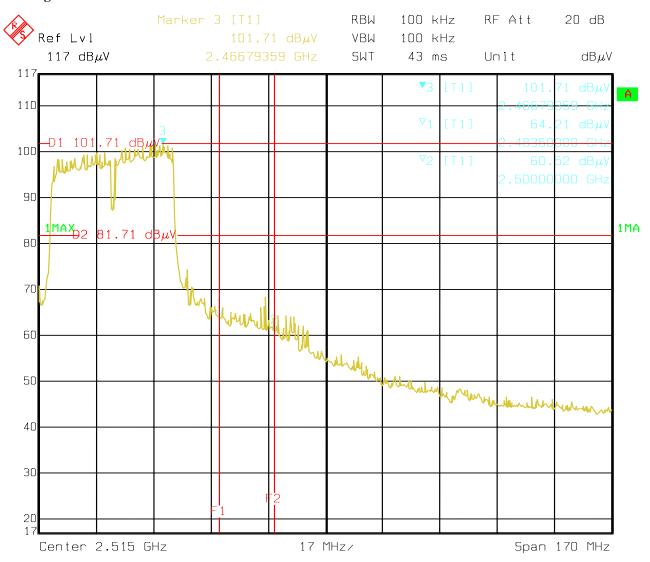


802.11n

CH07 at HT40 130Mbps **10.4** Out of Band Test Result

Product:	300M Wireless	s PCI Adapter	Test Mode:	CH11
Mode	Keeping Tr	ansmitting	Input Voltage	Powered by PC
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
The Max. FS in	PK ($dB\mu V/m$)	54.6(V)/50.3(H)	T ::4	74(dBµV/m)
Restrict Band	AV ($dB\mu V/m$)	42.0(V)/37.9(H)	Limit	54(dBµV/m)

Test Figure:



Date: 19.SEP.2008 15:56:04

Note: The Max. FS in Restrict Band are measured in conventional method.

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11.0 Antenna Requirement 11.1 Standard Applicable

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

11.2 Antenna Connected construction

There are two antennas used in the device. The antenna type used in this product is Dipole antenna with reverse polarity SMA connector. The maximum Gain of this antenna is 1.8dBi.



12.0 Maximum Permissible Exposure

Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2 , H 2 or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100000			5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2 , H 2 or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100000			1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

MPE Calculation Method

 $E(V/m) = (30*P*G)^{0.5}/d$ Power Density: Pd $(W/m^2) = E^2/377$

 $\mathbf{E} = \text{Electric Field (V/m)}$

 \mathbf{P} = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

 $Pd = (30*P*G) / (377*d^2)$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

The report refers only to the sample tested and does not apply to the bulk.

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Calculated Result and Limit

802.11b Mode

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
1.5136	13.75	23.714	0.00714	1	Compiles

802.11g Mode

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
1.5136	13.57	22.751	0.00685	1	Compiles

For 802.11n HT20, we get the worse case

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
1.5136	13.98	25.003	0.00753	1	Compiles

For 802.11n HT40

Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
1.5136	13.12	20.512	0.00618	1	Compiles

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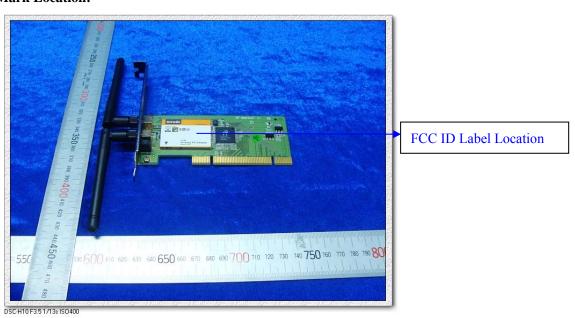


13.0 FCC ID Label

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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14.0 Photo of testing

14.1 Conducted test View--



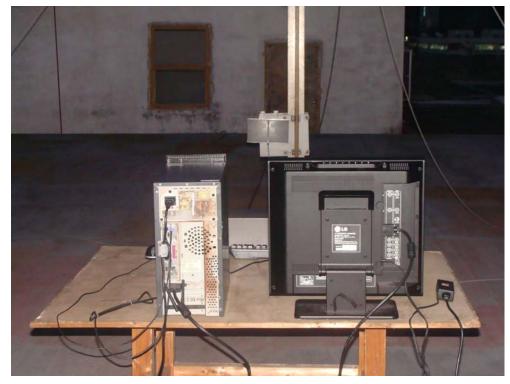
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14.2 Emission Radiated test View--





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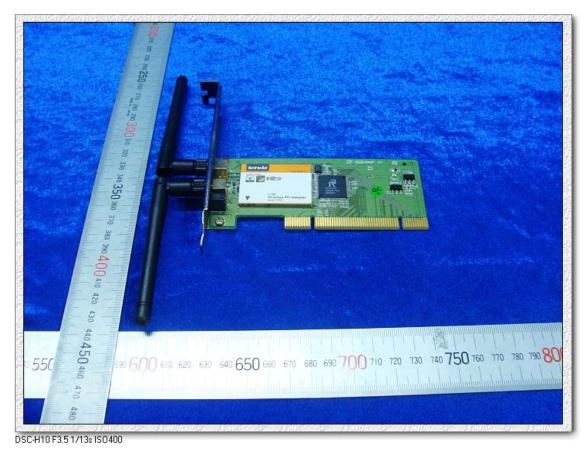
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14.3 Photo for the EUT



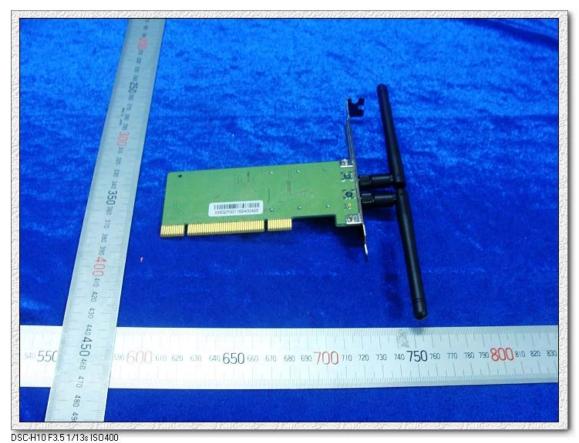
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14.4 Photo for the EUT



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DSC-H10 F3.5 1/10s ISO 400

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DSC-H10 F3.5 1/13s ISO 400

Outside View

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DSC-H10 F4.0 1/8s ISO500

Outside View

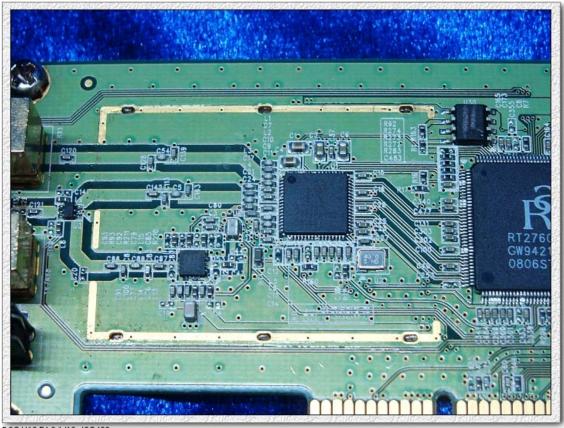
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DSC-H10 F4.0 1/10s ISO 400

End of the report