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Electromagnetic Emissions Test Report and Application for Grant of Equipment Authorization pursuant to FCC Part 15, Subpart C (15.247) DTS Specifications and Industry Canada RSS 210 Issue 5 for an Intentional Radiator on the 2Wire, Inc. Model: 2700HGV

FCC ID: UPN:	PGR2W2700ATH 3439B-2700ATH
GRANTEE:	2Wire, Inc. 1704 Automation Parkway San Jose, CA 95131
TEST SITE:	Elliott Laboratories, Inc. 684 W. Maude Avenue Sunnyvale, CA 94086
REPORT DATE:	June 28, 2005

FINAL TEST DATE:

June 10, 2005

AUTHORIZED SIGNATORY:

man

Juan Martinez Senior EMC Engineer



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DECLARATIONS OF COMPLIANCE

Equipment Name and Model: 2700HGV

Manufacturer:

2Wire, Inc. 1704 Automation Parkway San Jose, CA 95131

Tested to applicable standards:

RSS-210, Issue 5, November 2001 (Low Power License-Exempt Radiocommunication Devices) FCC Part 15.247 (DTS)

Measurement Facility Description Filed With Department of Industry:

Departmental Acknowledgement Number: IC2845 SV2 Dated August 12, 2001 Departmental Acknowledgement Number: IC2845 SV3 Dated July 30, 2001

I declare that the testing was performed or supervised by me; that the test measurements were made in accordance with the above mentioned departmental standards (through the use of ANSI C63.4:2003 as detailed in section 5.3 of RSS-210, Issue 5); and that the equipment performed in accordance with the data submitted in this report.

Signature Name Title Company Address

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Juan Martinez Senior EMC Engineer Elliott Laboratories Inc. 684 W. Maude Ave Sunnyvale, CA 94086 USA

Date: June 28, 2005

Maintenance of compliance with the above standards is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

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SCOPE

An electromagnetic emissions test has been performed on the 2Wire, Inc. model 2700HGV pursuant to Subpart C of Part 15 of FCC Rules for intentional radiators and RSS-210 Issue 5 for licence-exempt low power devices. Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in ANSI C63.4:2003 as outlined in Elliott Laboratories test procedures.

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant FCC performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

The test results recorded herein are based on a single type test of the 2Wire, Inc. model 2700HGV and therefore apply only to the tested sample. The sample was selected and prepared by Jeremy Muir of 2Wire, Inc.

OBJECTIVE

The primary objective of the manufacturer is compliance with Subpart C of Part 15 of FCC Rules and RSS-210 Issue 5 for license-exempt low power devices for the radiated and conducted emissions of intentional radiators. Certification of these devices is required as a prerequisite to marketing as defined in Part 2 the FCC Rules.

Certification is a procedure where the manufacturer or a contracted laboratory makes measurements and submits the test data and technical information to the FCC. The FCC issues a grant of equipment authorization upon successful completion of their review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units which are subsequently manufactured.

SUMMARY OF RESULTS

FCC Part 15 Section	RSS 210 Section	Description	Measured Value	Comments	Result
15.247(a)	6.2.2(o)(b)	Digital Modulation	Systems uses OFDM / DSSS techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	6.2.2(o)(b)	6dB Bandwidth	16.7MHz (802.11g) 13.3MHz (802.11b)	Minimum allowed is 500kHz	Complies
	RSP 100	99% Bandwidth	16.7 MHz	For information only	Complies
15.247 (b) (3)	6.2.2(o)(b)	Output Power, 2400 - 2483.5 MHz	26.2 dBm (0.412 Watts) EIRP = 0.519 W	Multi-point applications: Maximum permitted is 1Watt, with EIRP limited to 4 Watts.	Complies
15.247(d)	6.2.2(o)(b)	Power Spectral Density	0.67 dBm / MHz	Maximum permitted is 8dBm/3kHz	Complies
15.247(c)	6.2.2(o)(e1)	Antenna Port Spurious Emissions – 30MHz – 26 GHz	All spurious emissions < -20dBc	All spurious emissions < -20dBc.	Complies
15.247(c) / 15.209		Radiated Spurious Emissions – 30MHz – 26 GHz	52 dBuV/m @ 7309.948 MHz (-2 dB)	Emissions in restricted bands must meet the radiated emissions limits detailed in 15.207. All others must be < -20dBc	Complies
15.207		AC Conducted Emissions	42.3 dBuV @ 0.917 MHz (-3.7dB)		Complies
	6.6	AC Conducted Emissions	41.8 dBuV @ 0.524MHz (-6.2 dB)		Complies
15.247 (b) (5)		RF Exposure Requirements	MPE calculation		Complies
15.203		RF Connector	Antenna is permanently attached	Antenna is part of the Printed circuit board	Complies

EIRP calculated using antenna gain of dBi (1) for the highest EIRP point-to-multipoint system.

MEASUREMENT UNCERTAINTIES

ISO Guide 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Frequency Range (MHz)	Calculated Uncertainty (dB)
Conducted Emissions	0.15 to 30	± 2.4
Radiated Emissions	30 to 1000	± 3.6

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The 2Wire, Inc. model 2700HGV is a DSL router which is designed to provide web connectivity. Normally, the EUT would be placed on a tabletop during operation. The EUT was, therefore, treated as tabletop equipment during testing to simulate the end-user environment. The electrical rating of the EUT is 120 V, 60 Hz, 1 Amps.

The sample was received on June 10, 2005 and tested on June 10, 2005. The EUT consisted of the following component(s):

Manufacturer/Model/Description	Serial Number	Proposed FCC ID #
2Wire 2700HGV DSL Wireless Router	-	-
2Wire 2900-800020-000 AC Adapter	-	-

ENCLOSURE

The EUT enclosure is primarily constructed of plastic. It measures approximately 22.5 cm wide by 17.5 cm deep by 3.5 cm high.

MODIFICATIONS

The EUT did not require modifications during testing in order to comply with the emission specifications.

SUPPORT EQUIPMENT

The following equipment was used as local support equipment for emissions testing:

Manufacturer	Model	Description	Serial Number	FCC ID
Dell	Inspiron 3700 PPX	Laptop	99080	-
US Robotics	Pilot100	PDA	604819965702	MQ9001
HP	ThinkJet 2225C+	Parallel Printer	3028576892	DS16XU225
Coby	CT-P220	Phone	324001152	-

The following equipment was used as remote support equipment for emissions testing:

Manufacturer	Model	Description	Serial Number
Dell	Inspiron 3700 PPX	Laptop	139-311-94
Dell	PP01L	Laptop	6P326A02
ADAPCOM	Micro-890	ADSL Mini-DSLAM	-

EUT INTERFACE PORTS

			Cable(s)	
Port	Connected To	Description	Shielded or	Length(m)
			Unshielded	
2700HGV-RJ45 #1	Remote Dell PP01L	CAT5	Unshielded	3m
2700HGV-RJ45 #2	Not connected	-	-	-
2700HGV-RJ45 #3	Not connected	-	-	-
2700HGV-RJ45 #4	Not connected	-	-	-
2700HGV-RJ11 DSL	ADSL Mini-DSLAM	RJ11	Unshielded	4m
2700HGV-Client USB	Local Dell Laptop	USB	Shielded	2m
2700HGV-Host USB	Not connected	-	-	-
2700HGV-RJ11 Phone	Phone	RJ11	Unshielded	4m
Local Dell Laptop	Printer	Serial	Shielded	2m
Local Dell Laptop	PDA	Serial	Shielded	2m

The I/O cabling configuration during emissions testing was as follows:

Note: The Host USB ports were not connected as the manufacturer stated that these are for configuration purpose and therefore would not normally be connected.

EUT OPERATION DURING TESTING

During emissions testing, the EUT was connected to two remote laptop PCs using the EUT's phone line and Ethernet ports. The two Laptops are pinging the EUT, a switch is pinging the EUT Ethernet via loopback. A third laptop is pinging the EUT via wireless.

ANTENNA REQUIREMENTS

Antenna is permanently attached

TEST SITE

GENERAL INFORMATION

Final test measurements were taken on June 10, 2005at the Elliott Laboratories Open Area Test Site #2 & 3 located at 684 West Maude Avenue, Sunnyvale, California. The test site contains separate areas for radiated and conducted emissions testing. Pursuant to section 2.948 of the Rules, construction, calibration, and equipment data has been filed with the Federal Communications Commission. In accordance with Industry Canada rules detailed in RSS 210 Issue 5 and RSS-212, construction, calibration, and equipment data for the test sites have been filed with the Federal Communications Commission.

The FCC recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement with the exception of predictable local TV, radio, and mobile communications traffic. The test site contains separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent FCC requirements.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.4:2003. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment. The test site is maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde and Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

POWER METER

A power meter and peak power sensor are used for all direct output power measurements from transmitters as they provide a broadband indication of the power output.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A biconical antenna is used to cover the range from 30 MHz to 300 MHz and a log periodic antenna is utilized from 300 MHz to 1000 MHz. Narrowband tuned dipole antennas are used over the entire 30 to 1000 MHz range for precision measurements of field strength. Above 1000 MHz, a horn antenna is used. The antenna calibration factors are included in site factors programmed into the test receivers.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a nonconductive antenna mast equipped with a motor-drive to vary the antenna height.

ANSI C63.4:2003 specifies that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

TEST PROCEDURES

EUT AND CABLE PLACEMENT

The FCC requires that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.

RADIATED EMISSIONS

Radiated emissions measurements are performed in two phases as well. A preliminary scan of emissions is conducted in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed from 30 MHz up to the frequency required by the regulation specified on page 1. One or more of these is with the antenna polarized vertically while the one or more of these is with the antenna polarized horizontally. During the preliminary scans, the EUT is rotated through 360°, the antenna height is varied and cable positions are varied to determine the highest emission relative to the limit.

A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth which results in the highest emission is then maintained while varying the antenna height from one to four meters. The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain. Emissions which have values close to the specification limit may also be measured with a tuned dipole antenna to determine compliance.

CONDUCTED EMISSIONS FROM ANTENNA PORT

Direct measurements are performed with the antenna port of the EUT connected to either the power meter or spectrum analyzer via a suitable attenuator and/or filter. These are used to ensure that the front end of the measurement instrument is not overloaded by the fundamental transmission.

Measurement bandwidths (video and resolution) are set in accordance with FCC procedures for the type of radio being tested.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions from the AC power port are given in units of microvolts, the limits for radiated electric field emissions are given in units of microvolts per meter at a specified test distance and the output power limits are given in terms of Watts, milliwatts or dBm. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp) the following formula is used to determine the field strength limit in terms of microvolts per meter at a distance of 3m from the equipment under test:

 $E = \frac{1000000 \text{ v } 30 \text{ P}}{3} \text{ microvolts per meter}$

where P is the eirp (Watts)

For reference, converting the voltage and electric field strength specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. Conversion of power specification limits from linear units (in milliwatts) to decibel form (in dBm) is accomplished by taking the base ten logarithm, then multiplying by 10.

FCC 15.407 (a)and RSS 210 (o) OUTPUT POWER LIMITS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
902 - 928	1 Watts (30 dBm)	8 dBm/3kHz
2400 - 2483.5	1 Watts (30 dBm)	8 dBm/3kHz
5725 - 5850	1 Watts (30 dBm)	8 dBm/3kHz

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 - 5850 MHz band are not subject to this restriction.

RSS 210 (o) AND FCC 15.247 SPURIOUS RADIATED EMISSIONS LIMITS

T limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands detailed in Part 15.205 and for all spurious emissions from the receiver are:

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest inband signal level.

FCC 15.205 AC POWER PORT CONDUCTED EMISSIONS LIMITS

The table below shows the limits for emissions on the AC power line as detailed in FCC Part 15.205.

Frequency (MHz)	Average Limit (dBuV)	Quasi Peak Limit (dBuV)
0.150 to 0.500	Linear decrease on logarithmic frequency axis between 56.0 and 46.0	Linear decrease on logarithmic frequency axis between 66.0 and 56.0
0.500 to 5.000 5.000 to 30.000	46.0 50.0	56.0 60.0

RSS-210 SECTION 6.6 AC POWER PORT CONDUCTED EMISSIONS LIMITS

The table below shows the limits for emissions on the AC power line as detailed in Industry Canada RSS-210 section 6.6.

Frequency		
Range	Limit	Limit
(MHz)	(uV)	(dBuV)
0.450 to 30.000	250	48

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - B = C$$

and

$$C - S = M$$

where:

 $R_r = Receiver Reading in dBuV$

B = Broadband Correction Factor*

C = Corrected Reading in dBuV

S = Specification Limit in dBuV

M = Margin to Specification in +/- dB

* Broadband Level - Per ANSI C63.4:2003, 13 dB may be subtracted from the quasi-peak level if it is determined that the emission is broadband in nature. If the signal level in the average mode is six dB or more below the signal level in the peak mode, the emission is classified as broadband.

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements. A distance factor, when used for electric field measurements, is calculated by using the following formula:

$$F_d = 20*LOG_{10} (D_m/D_s)$$

where:

 F_d = Distance Factor in dB D_m = Measurement Distance in meters D_s = Specification Distance in meters

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

 $M = R_c - L_s$

where:

- R_r = Receiver Reading in dBuV/m
- F_d = Distance Factor in dB
- R_{c} = Corrected Reading in dBuV/m
- L_S = Specification Limit in dBuV/m
- M = Margin in dB Relative to Spec

EXHIBIT 1: Test Equipment Calibration Data

1 Page

Antenna Conducted Emissions, 1000 - 26,500 MHz, 15-Jun-05 Engineer: Juan Martinez

Manufacturer Hewlett Packard	Description EMC Spectrum Analyzer 9KHz-26.5GHz, non programmable	<u>Model #</u> 8563E	<u>Asset #</u> 284	<u>Cal Due</u> 22-Apr-06
Conducted Emissions Engineer: Juan Martin	- AC Power Ports, 15-Jun-05 ez			
Manufacturer	Description	Model #	Asset #	Cal Due
Hewlett Packard	EMC Spectrum Analyzer 9KHz-26.5GHz, non programmable	8563E	284	22-Apr-06
Rohde & Schwarz	Pulse Limiter	ESH3 Z2	372	01-Sep-05
Solar Electronics	LISN	8028-50-TS-24-BNC support	904	10-Aug-05
Rohde & Schwarz	Test Receiver, 0.009-30 MHz	ESH3	1316	31-Jan-06

Radiated Emissions, 30 - 1,000 MHz, 21-Jun-05 Engineer: Yu Chien Ho

Engineer. Tu omen ne	,		
Manufacturer	Description	<u>Model #</u>	Asset # Cal Due
EMCO	Biconical Antenna, 30-300 MHz	3110B	1320 25-Aug-05
EMCO	Log Periodic Antenna, 0.2-2 GHz	3148	1321 30-Mar-07
Rohde & Schwarz	Test Receiver, 0.009-2750 MHz	ESN	1332 23-May-06

EXHIBIT 2: Test Data Log Sheets

ELECTROMAGNETIC EMISSIONS

TEST LOG SHEETS

AND

MEASUREMENT DATA

T59972 32 Pages

Elliott

EMC Test Data

-			
Client:	2Wire, Inc.	Job Number:	J59884
Model:	2700HGV	T-Log Number:	T59972
		Project Manager:	Mark Hill
Contact:	Jeremy Muir		
Emissions Spec:	FCC 15.247,RSS-201, FCC15	Class:	B / Radio
Immunity Spec:	-	Environment:	-

EMC Test Data

For The

2Wire, Inc.

Model

2700HGV

Date of Last Test: 6/21/2005

Ellio	t		EM	C Test Data
Client:	2Wire, Inc.		Job Number:	J59884
Model:	2700HGV		T-Log Number:	T59972
			Account Manager:	Mark Hill
	Jeremy Muir			
	FCC 15.247,RSS-201, FC	C15	Class:	
Immunity Spec:	-		Environment:	-
The EUT is a DSL route	_	T INFORMATIC General Description vide web connectivity. No	-	placed on a table top
during operation. The	EUT was, therefore, treate the EUT is 120 V, 60 Hz, 1	d as table-top equipment o	luring testing to simulate t	
Manufacturer	Model	Description	Serial Number	FCC ID
2Wire	2700HGV	DSL wireless Router	-	-
2Wire	2900-800020-000	AC adapter	-	-
The EUT Antenna is pe The EUT enclosure is p	rmanently attached. primarily constructed of pla	EUT Antenna EUT Enclosure stic. It measures approxin	nately 22.5 cm wide by 17	.5 cm deep by 3.5 cm
high. Mod. #	Test Da	Modification History	Modification	111 Dhopo port
2	RE 6/21/	2005 Placed	d filter cap close the the R.	
3				
	re assumed to be used on	subsequent tests unless c	therwise stated as a furth	er modification.

Elliott

EMC Test Data

Client:	2Wire, Inc.	Job Number:	J59884
Model:	2700HGV	T-Log Number:	T59972
		Account Manager:	Mark Hill
Contact:	Jeremy Muir		
Emissions Spec:	FCC 15.247,RSS-201, FCC15	Class:	B / Radio
Immunity Spec:	-	Environment:	-

Test Configuration #1

	Lo	cal Support Equipme	ent	
Manufacturer	Model	Description	Serial Number	FCC ID
Dell	Inspiron 3700 PPX	Laptop	99080	-
US Robotics	Pilot100	PDA	604819965702	MQ9001
HP	ThinkJet 2225C+	Parallel Printer	3028576892	DS16XU225
Coby	CT-P220	Phone	324001152	-

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
Dell	Inspiron 3700 PPX	Laptop	139-311-94	-
Dell	PP01L	Laptop	6P326A02	-
ADAPCOM	Micro-890	ADSL Mini-DSLAM	-	-

Interface Cabling and Ports

	<u> </u>				
Connected To	Cable(s)				
Connected To	Description	Shielded or Unshielded	Length(m)		
Remote Dell PP01L	CAT5	Unshielded	3m		
Not connected	-	-	-		
Not connected	-	-	-		
Not connected	-	-	-		
ADSL Mini-DSLAM	RJ11	Unshielded	4m		
Local Dell Laptop	USB	Shielded	2m		
Not connected	-	-	-		
Phone	RJ11	Unshielded	4m		
Printer	Serial	Shielded	2m		
PDA	Serial	Shielded	2m		
	Not connected Not connected ADSL Mini-DSLAM Local Dell Laptop Not connected Phone Printer	Connected ToDescriptionRemote Dell PP01LCAT5Not connected-Not connected-Not connected-ADSL Mini-DSLAMRJ11Local Dell LaptopUSBNot connected-PhoneRJ11PrinterSerial	Connected ToCable(s)DescriptionShielded or UnshieldedRemote Dell PP01LCAT5UnshieldedNot connectedNot connectedNot connectedADSL Mini-DSLAMRJ11UnshieldedLocal Dell LaptopUSBShieldedNot connectedPhoneRJ11UnshieldedSerialShielded		

Note: The Host USB ports were not connected as the manufacturer stated that these are for configuration purpose and therefore would not normally be connected.

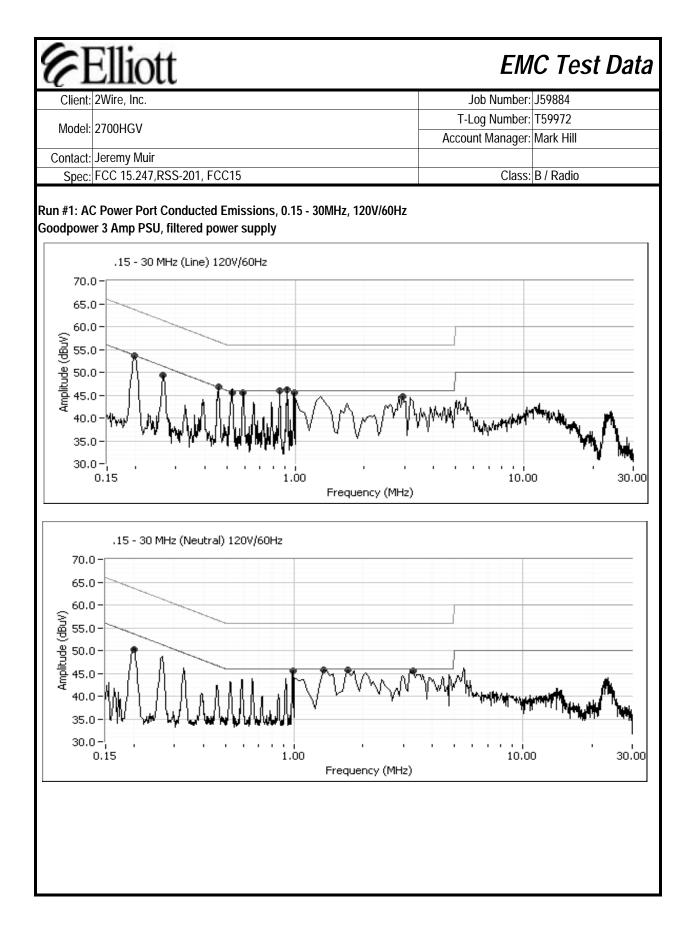
EUT Operation During Emissions Tests

During emissions testing, the EUT was connected to two remote laptop PCs using the EUT's phone line and Ethernet ports. The two Laptops are pinging the EUT, a switch is pinging the EUT Ethernet via loopback. A third laptop is pinging the EUT via wireless.

6 Ellio	ott			EM	C Test L
Client: 2Wire, Inc			J	ob Number:	J59884
Model: 2700HGV	,			og Number: nt Manager:	
Contact: Jeremy M					
Spec: FCC 15.2	47,RSS-201, FCC15			Class:	B / Radio
	Rx En	nissions (RSS-	210)		
Test Specifics Objective:	The objective of this test session specification listed above.	on is to perform final qualif	ication testir	ng of the EU	IT with respect to
Date of Test: Test Engineer: Test Location:	Jmartinez	Config. Used: Config Change: EUT Voltage:	None		
General Test Co The EUT and all loo	nfiguration cal support equipment were loca	ated on the turntable for ra	idiated emis	sions testing	g.
The test distance a	nd extrapolation factor (if used)	are detailed under each r	un descriptio	on.	
Note, for testing ab	ove 1 GHz, the FCC specifies the	he limit as an average me	asurement.	In addition	the ECC states t
•	y emission above 1 GHz, can no				
peak reading of any	y emission above 1 GHz, can no	ot exceed the average limi : 18 °C			
peak reading of an	y emission above 1 GHz, can no ons: Temperature: Rel. Humidity	ot exceed the average limi : 18 °C			
peak reading of an	y emission above 1 GHz, can no ons: Temperature: Rel. Humidity	ot exceed the average limi : 18 °C		an 20 dB. Ma	argin
peak reading of any Ambient Condition Summary of Res	y emission above 1 GHz, can no ons: Temperature: Rel. Humidity: ults	ot exceed the average limi : 18 °C : 45 %	t by more th	an 20 dB. <u>Ma</u> 44.3c (164.8	

Cilent	Ellic 2Wire, Inc.						J	ob Number:	J59884
	07001/01/					T-L	og Number:	T59972	
Model	2700HGV -						nt Manager:		
Contact	Jeremy Mu	uir						5	
	FCC 15.247,RSS-201, FCC15						Class:	B / Radio	
Run #1 M	aximized re	eadings	. 1000 - 80	00 MHz					
302.11G	annii 200 N	suunige	, 1000 00						
Frequency	Level	Pol		5-210	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
CH: 2412									
1608.000		V	60.0	-17.0	Avg	0	1.0		
3219.000		V	60.0	-19.0	Avg	360	1.0		
4824.000	44.3	V	60.0	-15.7	Avg	0	1.0		
CH: 2437									
1624.000		V	60.0	-28.2	Avg	0	1.0		
3248.000		V	60.0	-20.6	Avg	360	1.0		
4872.000	43.2	V	60.0	-16.8	Avg	0	1.0		
CH: 2462									
	01.4	V	60.0	-28.6	Avg	360	1.0		
1641.000	31.4	v	0010	= = • • •	ing		-		
		V	60.0	-21.0	Avg	0	1.0		
3265.000	39.0	-			Ŭ.				
3265.000 4889.000 Run #2: M 802.11B	39.0 43.7 1aximized 1	V V	60.0 60.0 s, 1000 - 80	-21.0 -16.3	Avg	0	1.0 1.0		
3265.000 4889.000 Run #2: M	39.0 43.7 Iaximized r	v v	60.0 60.0 s, 1000 - 80	-21.0 -16.3	Avg Avg	0 360 Azimuth	1.0		
3265.000 4889.000 Run #2: M 802.11B Frequency MHz	39.0 43.7 1aximized 1	v v reading	60.0 60.0 s, 1000 - 80 RSS	-21.0 -16.3 000 MHz	Avg Avg Detector	0 360	1.0 1.0 Height		
3265.000 4889.000 Run #2: M 802.11B Frequency MHz	39.0 43.7 laximized r Level dBµV/m	v v reading	60.0 60.0 s, 1000 - 80 RSS	-21.0 -16.3 000 MHz	Avg Avg Detector	0 360 Azimuth	1.0 1.0 Height	Comments	
3265.000 4889.000 Run #2: M 802.11B Frequency MHz CH: 2412	39.0 43.7 Iaximized r Level dBµV/m 30.7	v v reading Pol v/h	60.0 60.0 s, 1000 - 8(RSS Limit	-21.0 -16.3 000 MHz 5-210 Margin	Avg Avg Detector Pk/QP/Avg	0 360 Azimuth degrees	1.0 1.0 Height meters	Comments	
3265.000 4889.000 Run #2: M 802.11B Frequency MHz CH: 2412 1608.000	39.0 43.7 Iaximized r Level dBµV/m 30.7 39.5	v v reading Pol v/h	60.0 60.0 s, 1000 - 8(RSS Limit 60.0	-21.0 -16.3 000 MHz 5-210 Margin -29.3	Avg Avg Detector Pk/QP/Avg Avg	0 360 Azimuth degrees 0	1.0 1.0 Height meters 1.0	Comments	
3265.000 4889.000 Run #2: M 802.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000	39.0 43.7 Iaximized r Level dBµV/m 30.7 39.5	v v reading Pol v/h v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0	-21.0 -16.3 000 MHz 5-210 Margin -29.3 -20.5	Avg Avg Detector Pk/QP/Avg Avg Avg	0 360 Azimuth degrees 0 360	1.0 1.0 Height meters 1.0 1.0	Comments	
3265.000 4889.000 Run #2: M 02.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000	39.0 43.7 Iaximized π Level dBμV/m 30.7 39.5 43.7	v v reading Pol v/h v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0	-21.0 -16.3 000 MHz 5-210 Margin -29.3 -20.5	Avg Avg Detector Pk/QP/Avg Avg Avg	0 360 Azimuth degrees 0 360	1.0 1.0 Height meters 1.0 1.0	Comments	
3265.000 4889.000 Run #2: M 602.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000 CH: 2437	39.0 43.7 Iaximized π Level dBμV/m 30.7 39.5 43.7 31.6	v v reading Pol v/h v v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0 60.0	-21.0 -16.3 000 MHz 5-210 Margin -29.3 -20.5 -16.3 -28.5	Avg Avg Detector Pk/QP/Avg Avg Avg Avg Avg Avg	0 360 Azimuth degrees 0 360 0 0	1.0 1.0 Height meters 1.0 1.0 1.0	Comments	
3265.000 4889.000 Run #2: M 02.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000 24824.000 CH: 2437 1624.000 3248.000	39.0 43.7 Iaximized r Level dBµV/m 30.7 39.5 43.7 31.6 39.3	v v reading Pol v/h v v v v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0 60.0	-21.0 -16.3 000 MHz -210 Margin -29.3 -20.5 -16.3	Avg Avg Detector Pk/QP/Avg Avg Avg Avg Avg Avg Avg Avg	0 360 Azimuth degrees 0 360 0	1.0 1.0 Height meters 1.0 1.0 1.0	Comments	
3265.000 4889.000 Run #2: M 02.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000 2H: 2437 1624.000 3248.000 4872.000	39.0 43.7 Iaximized r Level dBµV/m 30.7 39.5 43.7 31.6 39.3	v v v v v v v v v v v v v v v v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0 60.0 60.0 60.0	-21.0 -16.3 000 MHz -210 Margin -29.3 -20.5 -16.3 -28.5 -28.5 -20.7	Avg Avg Detector Pk/QP/Avg Avg Avg Avg Avg Avg	0 360 Azimuth degrees 0 360 0 0 360 0 360	1.0 1.0 Height meters 1.0 1.0 1.0 1.0 1.0	Comments	
3265.000 4889.000 Run #2: M 802.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000 CH: 2437 1624.000 3248.000 4872.000 CH: 2462	39.0 43.7 Iaximized π Level dBμV/m 30.7 39.5 43.7 31.6 39.3 42.5	v v v v v v v v v v v v v v v v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0 60.0 60.0 60.0	-21.0 -16.3 000 MHz -29.3 -20.5 -16.3 -28.5 -20.7 -17.5	Avg Avg Detector Pk/QP/Avg Avg Avg Avg Avg Avg Avg Avg Avg Avg	0 360 Azimuth degrees 0 360 0 0 360 0 360	1.0 1.0 Height meters 1.0 1.0 1.0 1.0 1.0	Comments	
3265.000 4889.000 Run #2: M 802.11B Frequency MHz CH: 2412 1608.000 3219.000 4824.000 CH: 2437 1624.000 3248.000	39.0 43.7 Aximized f dBμV/m 30.7 39.5 43.7 31.6 39.3 42.5 31.0	v v v reading Pol v/h v v v v v v v v v v	60.0 60.0 s, 1000 - 80 RSS Limit 60.0 60.0 60.0 60.0 60.0	-21.0 -16.3 000 MHz -210 Margin -29.3 -20.5 -16.3 -28.5 -28.5 -20.7	Avg Avg Detector Pk/QP/Avg Avg Avg Avg Avg Avg Avg Avg	0 360 Azimuth degrees 0 360 0 360 0 360 0	1.0 1.0 Height meters 1.0 1.0 1.0 1.0 1.0 1.0 1.0	Comments	

Client: 2Wire, In	ott			EM	C Test D
	С.			Job Number:	J59884
Model: 2700HG				_og Number:	
			Αссоι	int Manager:	Mark Hill
Contact: Jeremy N				01	
Spec: FCC 15.2	247,RSS-201, FCC15			CIG22	B / Radio
	Conducted E	missions - P	Power F	Ports	
est Specifics					
Objective	The objective of this test session the specification listed above.	is to perform engineer	ring evaluatio	on testing of t	he EUT with respe
Date of Test		Config. Used			
0	: Juan Martinez	Config Change			
Test Location	. JVUAI J #J	EUT VUILAY	e: Refer to in	uiviuudi i uli	
	ions: Temperature:	23 °C			
	Rel. Humidity:	41 %			
	Rel. Humidity:		Result		argin
Ambient Condition Summary of Resonance Run # 1	Rel. Humidity:	41 %	Result Pass	42.3 dBu	argin V @ 0.917 (-3.7dB)



6I	- III L	JU						C Test L
Client:	2Wire, In	С.					Job Number:	J59884
Model	del: 2700HGV					T-Log Number:	T59972	
wouer.	9: 2700HGV				Account Manager:	Mark Hill		
Contact:	Jeremy N	luir						
Spec:	FCC 15.2	247,RSS-20	01, FCC15				Class:	B / Radio
Frequency	Level	AC	EN55	022 B	Detector	Comments		
MHz	dBµV	Line	Limit	Margin	QP/Ave			
0.524	42.3	Line 1	46.0	-3.7	AVG			
0.917	42.3	Line 1	46.0	-3.7	AVG			
0.458	42.6	Line 1	46.7	-4.1	AVG			
0.852	41.5	Line 1	46.0	-4.5	AVG			
0.590	41.4	Line 1	46.0	-4.6	AVG			
1.705	41.1	Neutral	46.0	-4.9	AVG			
0.984	40.4	Line 1	46.0	-5.6	AVG			
3.212	40.3	Neutral	46.0	-5.7	AVG			
0.983	40.3	Neutral	46.0	-5.7	AVG			
2.884	40.1	Line 1	46.0	-5.9	AVG			
1.311	40.1	Neutral	46.0	-5.9	AVG			
0.262	42.3	Line 1	51.4	-9.1	AVG			
0.197	43.6	Line 1	53.7	-10.1	Average			
0.197	49.6	Line 1	63.7	-14.1	QP			
0.524	41.8	Line 1	56.0	-14.2	QP			
0.917	41.8	Line 1	56.0	-14.2	QP			
1.705	41.4	Neutral	56.0	-14.6	QP			
0.458	42.1	Line 1	56.7	-14.6	QP			
0.590	41.3	Line 1	56.0	-14.7	QP			
2.884	41.2	Line 1	56.0	-14.8	QP			
0.197	38.7	Neutral	53.8	-15.1	AVG			
0.852	40.8	Line 1	56.0	-15.2	QP			
1.311	40.7	Neutral	56.0	-15.3	QP			
3.212	40.7	Neutral	56.0	-15.3	QP			
0.984	40.3	Line 1	56.0	-15.7	QP			
0.262	45.6	Line 1	61.4	-15.8	QP			
0.983	40.1	Neutral	56.0	-15.9	QP			
0.197	46.1	Neutral	63.8	-17.7	QP			

Model: 2700HGV T-Log Number: T59972 Account Manager: Mark Hill ontact: Jeremy Muir Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio quency Level AC RSS-210 Detector Comments quency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave Vertical State Vertical State 917 41.8 Line 1 49.0 -7.2 QP Vertical State Vertical State 705 41.4 Neutral 50.0 -8.6 QP Vertical State Vertical State	Model: 2700HGV T-Log Number: T59972 Account Manager: Mark Hill Contact: Jeremy Muir Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio n #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio odpower 3 Amp PSU, filtered power supply Detector Comments Version equency Level AC RSS-210 Detector Comments 0.524 41.8 Line 1 48.0 -6.2 QP Version Version 0.524 41.8 Line 1 49.0 -7.2 QP Version Version Version 0.755 41.4 Neutral 50.0 -8.6 QP Version Version Version Version 0.590 41.3 Line 1 51.0 -8.9 QP Version	Model: 2700HGV T-Log Number: T59972 Account Manager: Mark Hill Sontact: Jeremy Muir Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio attack Account Manager: Mark Hill Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio attack Account Manager: Mark Mark attack Account Manager: Mark Mark attack Account Manager: Class: B / Radio bdpower Amp PSU, filtered power supply Comments Margin quency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave V .524 41.8 Line 1 49.0 -7.2 QP V .705 41.4 Neutral 50.0 -8.6 QP V V .458 42.1 Line 1 51.0 -8.9	Model: 2700HGV T-Log Number: T59972 Account Manager: Mark Hill Contact: Jeremy Muir Image: Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio n #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio odpower 3 Amp PSU, filtered power supply Detector Comments MHz dBµV Line Limit Margin QP/Ave 0.524 41.8 Line 1 48.0 -6.2 QP		Elli	JII						IC Test
Model: 2700HGV Account Manager: Mark Hill ontact: Jeremy Muir <th>Model: 2700HGV Account Manager: Mark Hill Contact: Jeremy Muir <!--</th--><th>Model: 2700HGV Account Manager: Mark Hill Sontact: Jeremy Muir <!--</th--><th>Model: 27/00HGV Account Manager: Mark Hill Contact: Jeremy Muir <</th><th>Client</th><th>2Wire, In</th><th>C.</th><th></th><th></th><th></th><th></th><th></th><th></th></th></th>	Model: 2700HGV Account Manager: Mark Hill Contact: Jeremy Muir </th <th>Model: 2700HGV Account Manager: Mark Hill Sontact: Jeremy Muir <!--</th--><th>Model: 27/00HGV Account Manager: Mark Hill Contact: Jeremy Muir <</th><th>Client</th><th>2Wire, In</th><th>C.</th><th></th><th></th><th></th><th></th><th></th><th></th></th>	Model: 2700HGV Account Manager: Mark Hill Sontact: Jeremy Muir </th <th>Model: 27/00HGV Account Manager: Mark Hill Contact: Jeremy Muir <</th> <th>Client</th> <th>2Wire, In</th> <th>C.</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Model: 27/00HGV Account Manager: Mark Hill Contact: Jeremy Muir <	Client	2Wire, In	C.						
Account Manager: Mark Hill ontact: Jeremy Muir Image: Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio dpower 3 Amp PSU, filtered power supply Detector Comments nuency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave P 524 41.8 Line 1 48.0 -6.2 QP P 917 41.8 Line 1 50.0 -8.6 QP P 705 41.4 Neutral 50.0 -8.6 QP P 590 41.3 Line 1 51.0 -8.9 QP P	Account Manager: Mark Hill Contact: Jeremy Muir Image: Image: Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio n #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio odpower 3 Amp PSU, filtered power supply Detector Comments Comments equency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave Image: Image: Image: 0.524 41.8 Line 1 48.0 -6.2 QP Image:	Account Manager: Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio a#2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio adpower 3 Amp PSU, filtered power supply Detector Comments quency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave P .524 41.8 Line 1 48.0 -6.2 QP P .705 41.4 Neutral 50.0 -8.6 QP P .458 42.1 Line 1 51.0 -8.9 QP P .590 41.3 Line 1 52.0 -10.7 QP P	Account Manager: Mark Hill Contact: Jeremy Muir	Model	2700HG\	/				_		
Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Class: B / Radio dpower 3 Amp PSU, filtered power supply Detector Comments quency Level AC RSS-210 Detector Comments HHz dBµV Line Limit Margin QP/Ave Comments 524 41.8 Line 1 48.0 -6.2 QP	Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio n#2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz odpower 3 Amp PSU, filtered power supply Iteration Iteration	Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio n#2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Detector Comments Detector Comments odpower 3 Amp PSU, filtered power supply AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave P .524 41.8 Line 1 48.0 -6.2 QP P .917 41.8 Line 1 50.0 -8.6 QP P .705 41.4 Neutral 50.0 -8.6 QP P .458 42.1 Line 1 51.0 -8.9 QP P P .590 41.3 Line 1 52.0 -10.7 QP P	Spec: FCC 15.247,RSS-201, FCC15 Class: B / Radio n #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz Detector Comments odpower 3 Amp PSU, filtered power supply AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave Comments 0.524 41.8 Line 1 48.0 -6.2 QP								Account Manager:	Mark Hill
#2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz adpower 3 Amp PSU, filtered power supply nuency Level AC RSS-210 Detector Comments /Hz dBµV Line Limit Margin QP/Ave Comments 524 41.8 Line 1 48.0 -6.2 QP	n #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz odpower 3 Amp PSU, filtered power supply equency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave OP 0.524 41.8 Line 1 48.0 -6.2 QP OP 0.917 41.8 Line 1 49.0 -7.2 QP OP 1.705 41.4 Neutral 50.0 -8.6 QP OP 0.458 42.1 Line 1 51.0 -8.9 QP OP 0.590 41.3 Line 1 52.0 -10.7 QP OP	#2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz podpower 3 Amp PSU, filtered power supply quency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave P .524 41.8 Line 1 48.0 -6.2 QP QP .917 41.8 Line 1 49.0 -7.2 QP QP .705 41.4 Neutral 50.0 -8.6 QP	n #2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz podpower 3 Amp PSU, filtered power supply equency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave OP/Ave 0.524 41.8 Line 1 48.0 -6.2 QP OP 0.917 41.8 Line 1 49.0 -7.2 QP OP 1.705 41.4 Neutral 50.0 -8.6 QP OP 0.458 42.1 Line 1 51.0 -8.9 QP OP 0.590 41.3 Line 1 52.0 -10.7 QP OP		-						Class	D / Dadia
Appower 3 Amp PSU, filtered power supply quency Level AC RSS-210 Detector Comments MHz dBμV Line Limit Margin QP/Ave Comments 524 41.8 Line 1 48.0 -6.2 QP Comments 917 41.8 Line 1 49.0 -7.2 QP Comments 705 41.4 Neutral 50.0 -8.6 QP Comments 458 42.1 Line 1 51.0 -8.9 QP Comments 590 41.3 Line 1 52.0 -10.7 QP Comments	odpower 3 Amp PSU, filtered power supply equency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave OP/Ave 0.524 41.8 Line 1 48.0 -6.2 QP OP 0.917 41.8 Line 1 49.0 -7.2 QP OP 1.705 41.4 Neutral 50.0 -8.6 QP OP 0.458 42.1 Line 1 51.0 -8.9 QP OP 0.590 41.3 Line 1 52.0 -10.7 QP OP	Adpower 3 Amp PSU, filtered power supply quency Level AC RSS-210 Detector Comments MHz dBμV Line Limit Margin QP/Ave .524 41.8 Line 1 48.0 -6.2 QP .917 41.8 Line 1 49.0 -7.2 QP .705 41.4 Neutral 50.0 -8.6 QP .458 42.1 Line 1 51.0 -8.9 QP .590 41.3 Line 1 52.0 -10.7 QP	odpower 3 Amp PSU, filtered power supply equency Level AC RSS-210 Detector Comments MHz dBµV Line Limit Margin QP/Ave OP/Ave 0.524 41.8 Line 1 48.0 -6.2 QP OP/Ave 0.917 41.8 Line 1 49.0 -7.2 QP OP 1.705 41.4 Neutral 50.0 -8.6 QP OP 0.458 42.1 Line 1 51.0 -8.9 QP OP 0.590 41.3 Line 1 52.0 -10.7 QP OP	_					5 - 30MHz	120V/60H7	CIASS	B / Raulo
μuency Level AC RSS-210 Detector Comments HHz dBμV Line Limit Margin QP/Ave Comments 524 41.8 Line 1 48.0 -6.2 QP P 917 41.8 Line 1 49.0 -7.2 QP P 705 41.4 Neutral 50.0 -8.6 QP P 458 42.1 Line 1 51.0 -8.9 QP P 590 41.3 Line 1 52.0 -10.7 QP P	quency Level AC RSS-210 Detector Comments MHz dBμV Line Limit Margin QP/Ave Comments 0.524 41.8 Line 1 48.0 -6.2 QP Comments 0.917 41.8 Line 1 49.0 -7.2 QP Comments 1.705 41.4 Neutral 50.0 -8.6 QP Comments 0.458 42.1 Line 1 51.0 -8.9 QP Comments 0.590 41.3 Line 1 52.0 -10.7 QP Comments	quency Level AC RSS-210 Detector Comments MHz dBμV Line Limit Margin QP/Ave Comments .524 41.8 Line 1 48.0 -6.2 QP	quency Level AC RSS-210 Detector Comments MHz dBμV Line Limit Margin QP/Ave Comments 0.524 41.8 Line 1 48.0 -6.2 QP Comments 0.917 41.8 Line 1 49.0 -7.2 QP Comments 1.705 41.4 Neutral 50.0 -8.6 QP Comments 0.458 42.1 Line 1 51.0 -8.9 QP Comments 0.590 41.3 Line 1 52.0 -10.7 QP Comments						5 - 5 010112,	120 1/00112		
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EMC Test Data

Client:2Wire, Inc.J59884Model:2700HGVT-Log Number:T59972Account Manager:Mark HillContact:Jeremy MuirImage: Class:Mark HillSpec:FCC 15.247,RSS-201, FCC15Class:N/A

FCC 15.247 DTS - Power, Bandwidth and Spurious Emissions

Test Specifics

Objective: The objective of this test session is to perform engineering evaluation testing of the EUT with respect to the specification listed above.

Date of Test: 6/10/2005 & 6/15/2005 Test Engineer: Chris Byleckie & Jmartinez Test Location: SVOATS #2 & 3 Config. Used: 1 Config Change: None EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators used.

Ambient Conditions:	Temperature:	21 °C
	Rel. Humidity:	65 %

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	RE, 1000 - 18000 MHz - Spurious Emissions	FCC Part 15.209 / 15.247(c)	Pass	52 dBuV/m @ 7309.948 MHz (-2.0 dB)
2	6dB Bandwidth	15.247(a)	Pass	13.3 MHz
3	Output Power	15.247(b)	Pass	26.2 dBm
4	Power Spectral Density (PSD)	15.247(d)	Pass	0.67 dBm

Modifications Made During Testing:

Modifications are detailed under each run description.

Deviations From The Standard

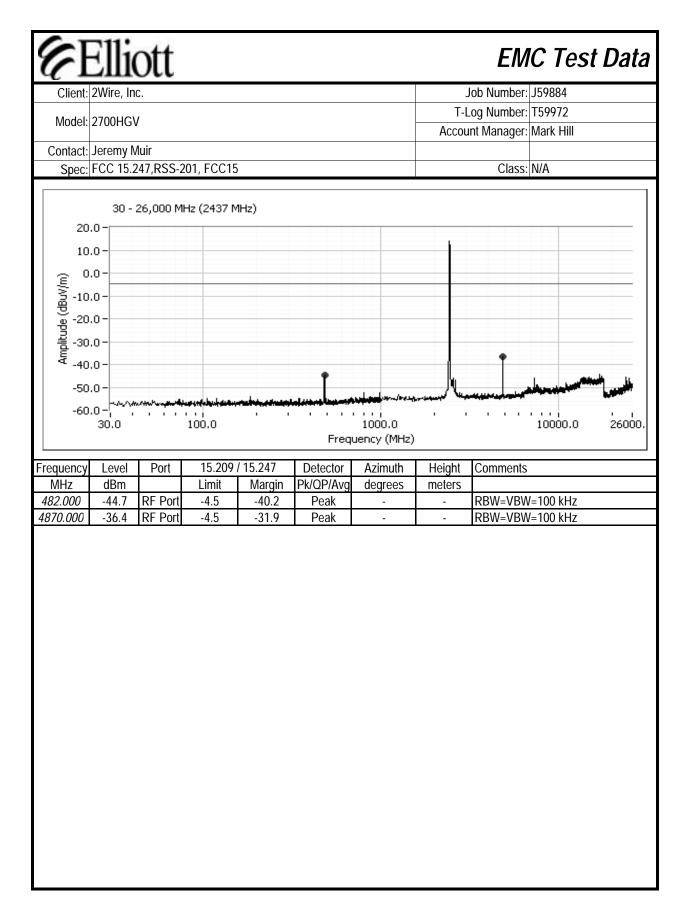
No deviations were made from the requirements of the standard.

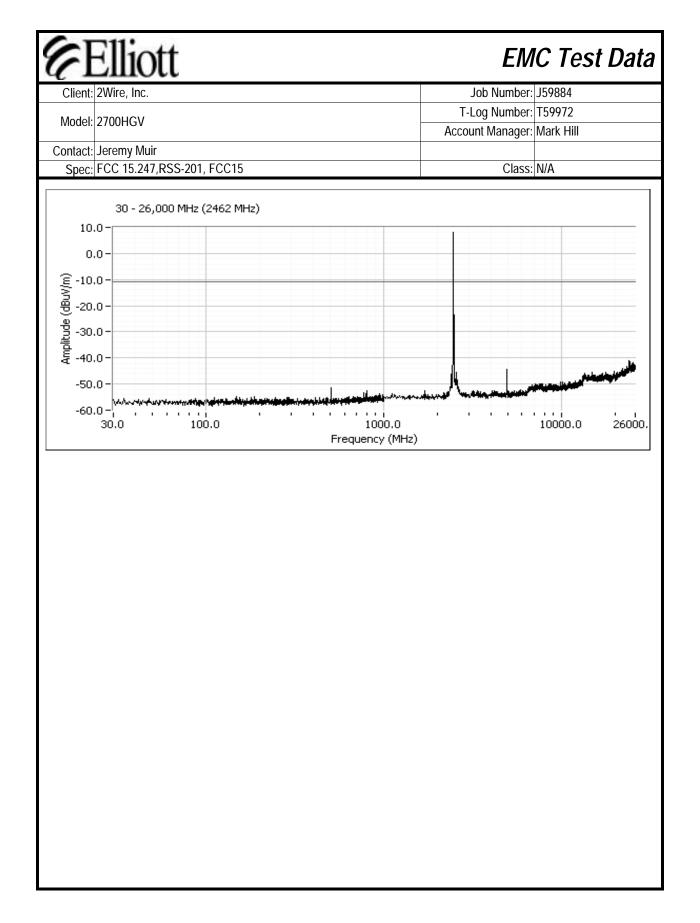
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Model	2700HGV						T-L	og Number:	T59972
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	Jeremy M								
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equency	Level	Pol	15.209/	15.247	Detector	Azimuth	Height	Comments	
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824.040	51.9	Н	74.0	-22.1	PK	278	2.0		
235.185	54.0	Н	92.9	-38.9	PK	328	1.4	Non restrio	cted
	42.0	V	54.0	-12.1	AVG	140	1.0		
	48.3	V	74.0	-25.7	PK	140	1.0	New 11	-1 - J
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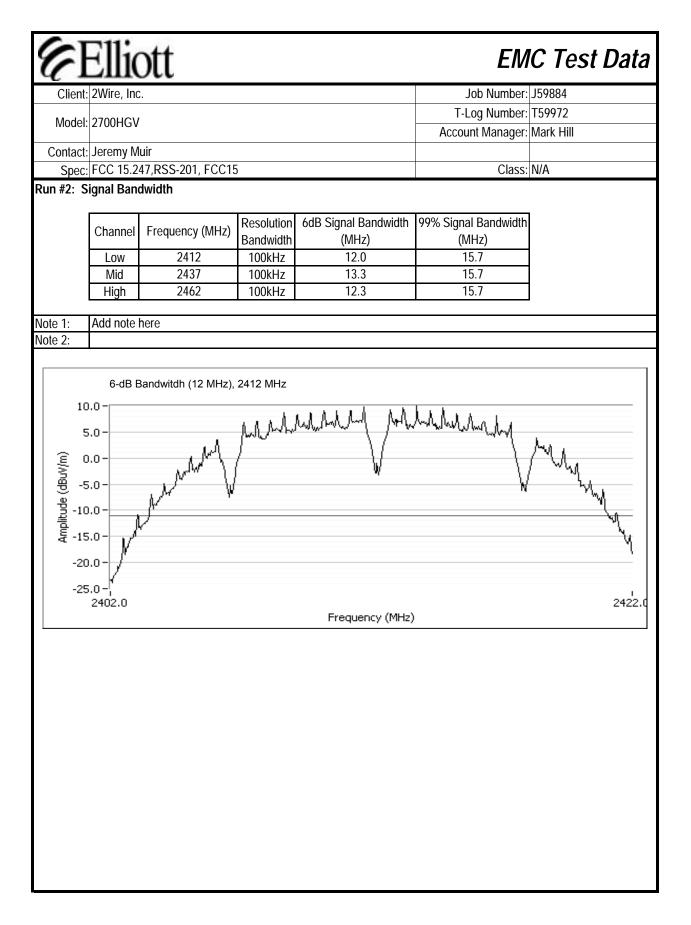
Noto 1:	Model: 2700HGV T-Log Number: T5972 Account Manager: Mark Hill Account Manager: Mark Hill Contact: Jeremy Muir Class: N/A Run #1b: Radiated Spurious Emissions, 1000 - 25000 MHz. Center Channel @ 2437 MHz Class: N/A 802.11B, power set to 26dBm (Used Average Power Meter) ppcdac setting - 35 Status Status Status MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 4873.965 47.5 V 54.0 -6.5 AVG 336 1.0 1.1 7309.910 53.4 V 54.0 -0.6 AVG 281 1.1 7309.910 57.6 V 74.0 -16.4 PK 281 1.1 4873.955 50.1 H 54.0 -3.9 AVG 99 1.4 4873.955 50.1 H 54.0 -3.0 AVG 14 1.4 7310.295 60.9 H 74.0 <	T-Log Number: T59972 Account Manager: Mark Hill Contact: Jeremy Muir Spec: FCC 15.247,RSS-201, FCC15 Class: N/A Run #1b: Radiated Spurious Emissions, 1000 - 25000 MHz. Center Channel @ 2437 MHz Boom of the second of the secon	Model: 2700HGV T-Log Number: T59972 Account Manager: Mark Hill Contact: Jeremy Muir Class: N/A Spec: FCC 15.247,RSS-201, FCC15 Class: N/A Run #1b: Radiated Spurious Emissions, 1000 - 25000 MHz. Center Channel @ 2437 MHz Southand State	Model: 2700HGV T-Log Number: T59972 Account Manager: Mark Hill Contact: Jeremy Muir Image: Mark Hill Spec: FCC 15.247,RSS-201, FCC15 Class: N/A Run #1b: Radiated Spurious Emissions, 1000 - 25000 MHz. Center Channel @ 2437 MHz Source 2437 MHz 302.11B, power set to 26dBm (Used Average Power Meter) ppcdac setting - 35 Source 2437 MHz Source 2437 MHz 302.11B, rower set to 26dBm (Used Average Power Meter) ppcdac setting - 35 Source 2437 MHz Source 2437 MHz 3047.3965 51.4 V 54.0 -6.5 AVG 336 1.0 4873.965 51.4 V 74.0 -22.6 PK 336 1.0 - 7309.910 53.4 V 54.0 -0.6 AVG 281 1.1 - 7309.910 57.6 V 74.0 -16.4 PK 281 1.1 - 7310.295 50.1 H 54.0 -3.9 AVG 99 1.4 - <t< th=""><th>E</th><th>Ellic</th><th>ott</th><th></th><th></th><th></th><th></th><th></th><th>EM</th><th>IC Test Data</th></t<>	E	Ellic	ott						EM	IC Test Data
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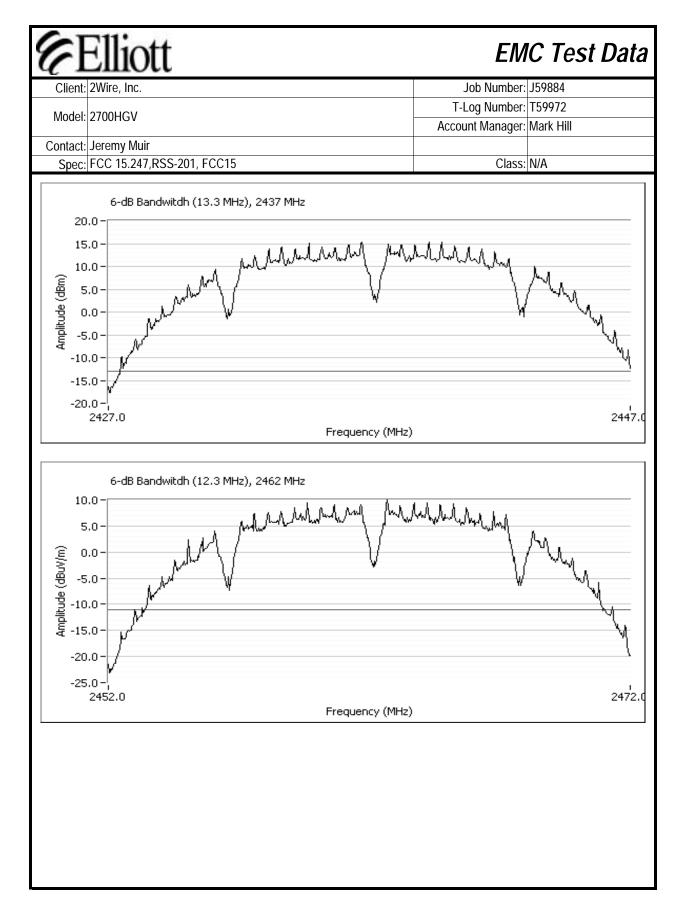
2	2Wire, Inc	•					J	ob Number:	J59884	
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would.	27001101						Accou	nt Manager:	Mark Hill	
Contact:	Jeremy Mu	uir								
Spec:	FCC 15.24	17,RSS-2	201, FCC15	5				Class:	N/A	
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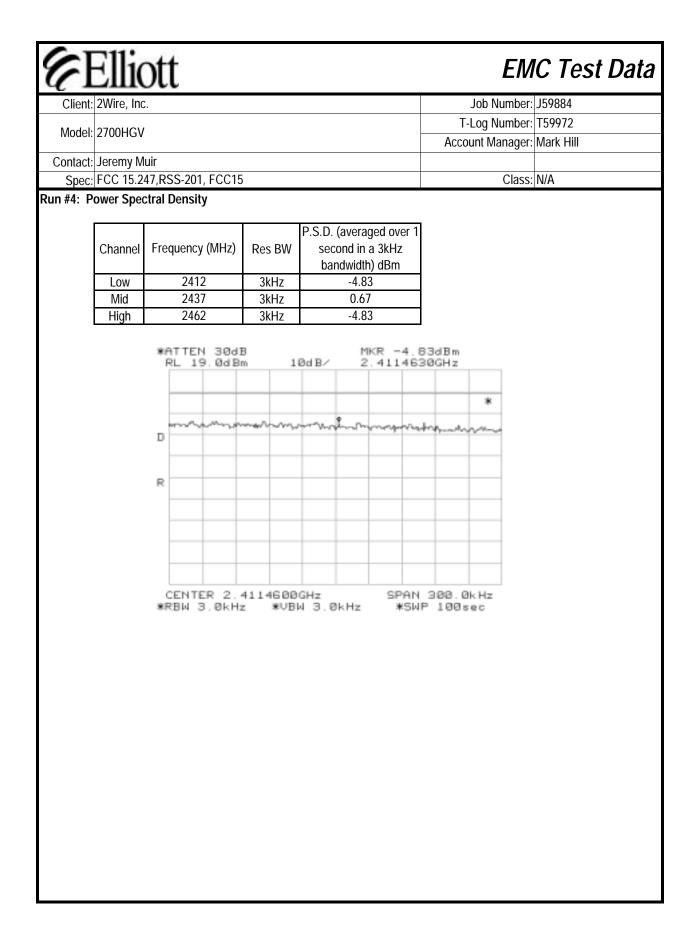
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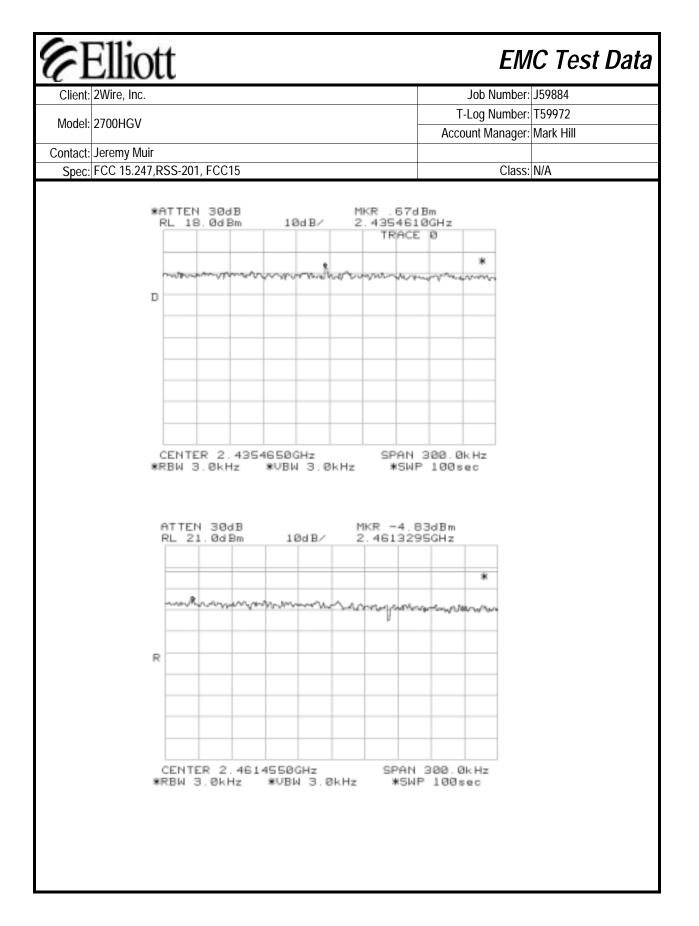












EMC Test Data Client: 2Wire, Inc Job Number: J59884 T-Log Number: T59972 Model: 2700HGV Account Manager: Mark Hill Contact: Jeremy Muir Spec: FCC 15.247,RSS-201, FCC15 Class: N/A FCC 15.247 DTS - Spurious Emissions **Test Specifics** The objective of this test session is to perform final qualification testing of the EUT with respect to the Objective: specification listed above. Date of Test: 6/10/2005 & 6/15/2005 Config. Used: 1 Test Engineer: Chris Byleckie & Jmartinez Config Change: None Test Location: SVOATS #2 & 3 EUT Voltage: 120V/60Hz General Test Configuration The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT. When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators used. Ambient Conditions: Temperature: 15 °C Rel. Humidity: 35 % Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	RE, 1000 - 18,000 MHz -	FCC Part 15.209 /	Pass	43.1dBuV/m @ 7386
I	Spurious Emissions	15.247(c)	Pd55	MHz (-10.9dB)
2	6dB Bandwidth	15.247(a)	Pass	16.7 MHz
3	Output Power	15.247(b)	Pass	26 dBm
4	Power Spectral Density (PSD)	15.247(d)	Pass	-4.33 dBm

Modifications Made During Testing:

No modifications were made to the EUT during testing

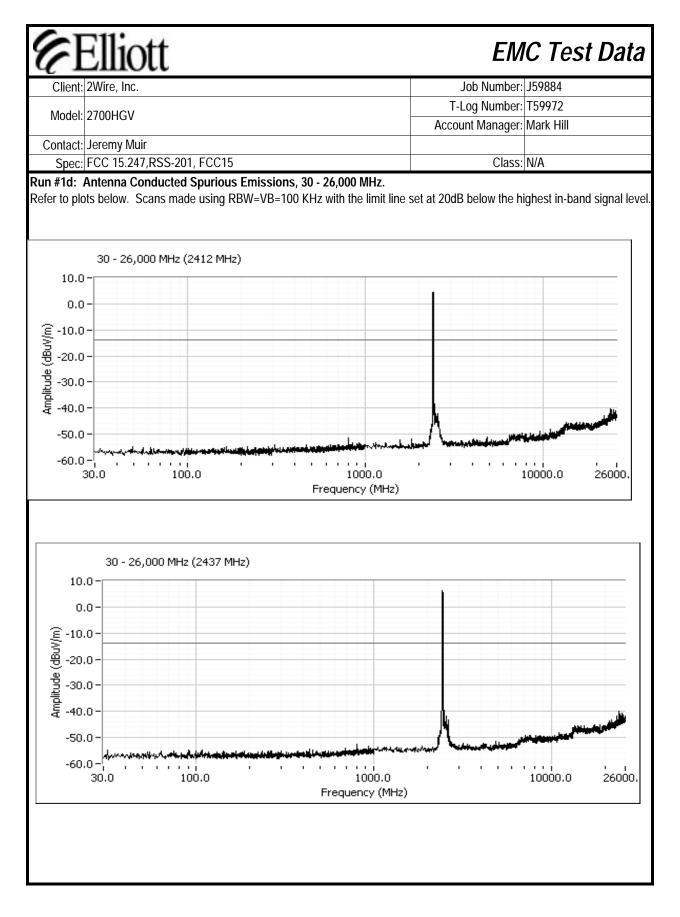
Deviations From The Standard

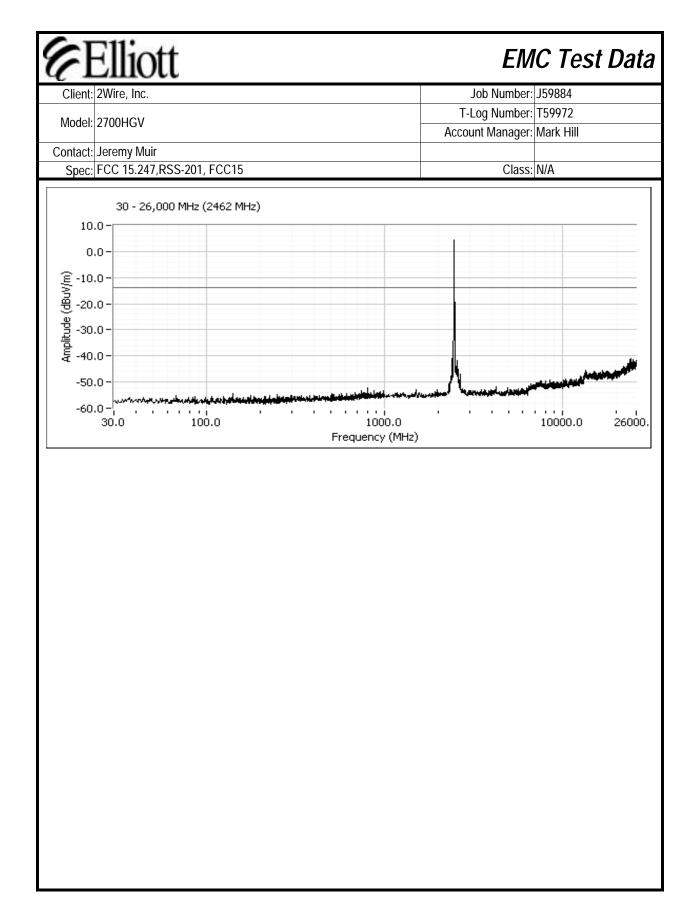
No deviations were made from the requirements of the standard.

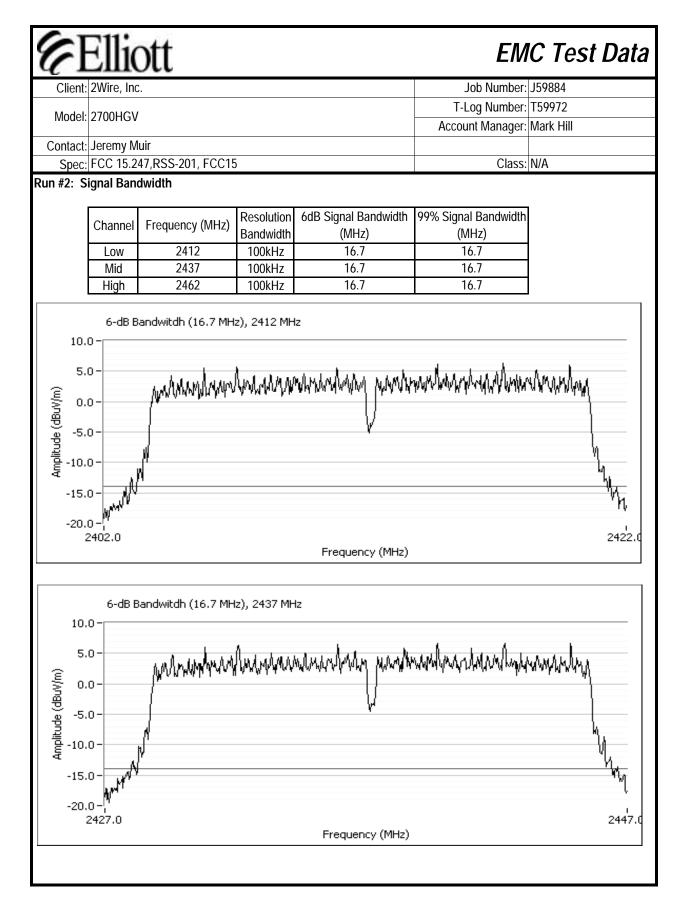
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MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degre			ters	1						
4824.000	47.0	٧	74.0	-27.0	Pk	-		-								
4824.000		V	54.0	-19.0	Avg	-		-								
7236.000		V	93.3	-45.3	Pk	-		-		Non-R	Restri	cted				
4824.000		h	74.0	-26.0	Pk	-		-								
4824.000		h	54.0	-17.9	Avg	-		-		Non 5		otod				
7236.000	50.0	h	93.3	-43.3	Pk	-		-		Non-R	estri	cied				
	For emiss	ions in re	stricted ha	nds the limi	t of 15.209 v	NAS LISA	d Fo	r all of	her e	mission	ns th	e limi	twas	set 20)dR h	elo
lote 1:	the level o				. 51 10.207 1	135 450	u. 10				13 ₁ 11	5 mm		301 21		5101
lote 2:				letected afte	er the 3rd ha	rmonic	20-dE	3 of the	e limit							
		•														

6E	Ellic	ott						EM	C Test Data
Client:	2Wire, Inc							Job Number:	J59884
							T-L	og Number:	T59972
Model:	2700HGV							int Manager:	
Contact	Jeremy M	uir						<u> </u>	-
			201, FCC15					Class:	N/A
					8,000 MHz. (Center Chan	nel @ 243		
		•			/leter) pcdac				
Frequency		Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
4874.000		V	74.0	-27.5	Pk	-	-		
4874.000	34.2	V	54.0	-19.8	Avg		-		
7311.000	50.9	V	74.0	-23.1	Pk	-	-		
7311.000	38.2	٧	54.0	-15.8	Avg				
4874.000	48.9	h	74.0	-25.1	Pk	-	-		
4874.000	36.3	h	54.0	-17.7	Avg	-	-		
7311.000	52.9	h	74.0	-21.1	Pk	-	-		
7311.000	40.1	h	54.0	-13.9	Avg	-	-		

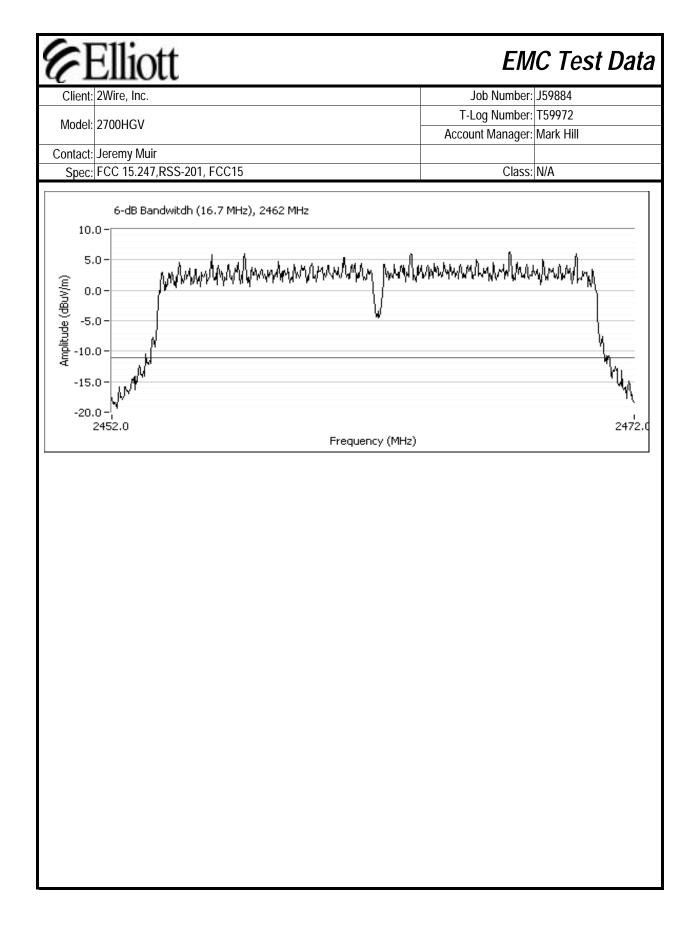
22.11g, power set to 26dBm (Used Peak Power Meter) pcdac - 17 Image: Comparison of the set of the se	Client:	2Wire, Inc.						J	ob Number:	J59884	
Account Manager: Mark Hill Contact: Jeremy Muir Spec: FCC 15.247,RSS-201, FCC15 Class: Un #21c: Radiated Spurious Emissions, 1000 - 18,000 MHz. High Channel @ 2462 MHz 22.11g, power set to 26dBm (Used Peak Power Meter) pcdac - 17 H V Fundamental emission level @ 3m in 1MHz RBW: 90.52 112.86 Fundamental emission level @ 3m in 1MHz RBW: 99.51 103.93 Delta Marker - Average 50.50 dB Average Measurement (RB=VB=1MHz) Calculated Band-Edge Measurement: 53.43 dBuV/m Peak Calculated Band-Edge Measurement: 53.43 dBuV/m Peak Average 1048 -22.00HHz -22.00HHz CENTER 2.4858064z VENTER 2.4958064z SPAH E0.80HHz VENTER 2.4958064z CENTER 2.4455064z V7.40 -22.0 Pk -24.90HHz SHP 23.8eec MHz dBuV/m V/h Limit Marker Average -23.8eec CENTER 2.4455064z V2.0 Pk -4.938064z SHP 23.8eec MHz dBuV/m V/h Limit	Model	2700461/						T-L	og Number:	T59972	
Spec: FCC 15.247,RSS-201, FCC15 Class: IN/A Un # 21c: Radiated Spurious Emissions, 1000 - 18,000 MHz. High Channel @ 2462 MHz D2.11g, power set to 26dBm (Used Peak Power Meter) pcdac - 17 Fundamental emission level @ 3m in 1MHz RBW: 108.52 112.86 Fundamental emission level @ 3m in 1MHz RBW: 99.51 D3.93 Delta Marker - Average Peak Measurement (RB=1MHz, VB=10 Calculated Band-Edge Measurement: 64.19 dBuV/m Peak Calculated Band-Edge Measurement: 53.43 dBuV/m Average Calculated Band-Edge Measurement: 53.43 dBuV/m Average Calculated Band-Edge Measurement: 53.43 dBuV/m Average Average Sector Sector Calculated Band-Edge Measurement: 53.43 dBuV/m Average Average Calculated Band-Edge Measurement: 53.43 dBuV/m Average Sector Center 2: 48350GHz SPPH 68: 000HHz Center 2: 48350GHz SPPH 58: 000HHz SPPH 68: 000Hz CENTER 2: 48350GHz SPPH 59: 000Hz <td>wouci.</td> <td>27001101</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Accou</td> <td>nt Manager:</td> <td>Mark Hill</td> <td></td>	wouci.	27001101						Accou	nt Manager:	Mark Hill	
un #21c: Radiated Spurious Emissions, 1000 - 18,000 MHz. High Channel @ 2462 MHz 02.11g, power set to 26dBm (Used Peak Power Meter) pcdac - 17 Fundamental emission level @ 3m in 1MHz RBW: 199.51 Fundamental emission level @ 3m in 1MHz RBW: 199.51 Delta Marker - Peak Attract RB-VB=1MHz) Calculated Band-Edge Measurement: 63.43 dBUV/m Calculated Band-Edge Measurement: 53.43 dBUV/m Centrer 2 48 580 GHz Centrer 2 48 580 GHz Centrer 2 48 580 GHz SPAN 60 000HHz CENTER 2 48 580 GHz SPAN 60 000HHz SPAN 60 000HHz CENTER 2 48 580 GHz SPAN 60 000HHz	Contact:	Jeremy Mu	ıir								
02.11g, power set to 26dBm (Used Peak Power Meter) pcdac - 17 H V Fundamental emission level @ 3m in 1MHz RBW: 108.52 112.86 Fundamental emission level @ 3m in 1MHz RBW: 109.51 1103.93 Delta Marker - Peak 48.67 dB Average Measurement (RB=1MHz, VB=10 Calculated Band-Edge Measurement: 53.43 dBuV/m Peak Calculated Band-Edge Measurement: 53.43 dBuV/m Average Average -17.40Hz -17.40Hz Peak Average -23.60Hz -23.60HHz -23.60Hz FL - 2.44Bs 104B17.40Hz -17.40Hz Peak CENTER 2.40580GHz -24.50GHz -23.60HHz -23.60Hz CENTER 2.40580GHz FME - 2.40Hz SPAH 60.00HHz SHP 23.66ec requency Level Pol 15.209/15.247 Detector Azimuth Height Comments MHz BgLV/m v/h Limit Margin Pk/QP/Avg ergeres meters 4924.000 52.0 v 74.0 -22.0 Pk - - 738.000 49.0 v 74.0<	Spec:	FCC 15.24	7,RSS-2	201, FCC15	5				Class:	N/A	
H V Fundamental emission level @ 3m in 1MHz RBW: 108,52 112,86 Peak Measurement (RB=VB=1MHz) Fundamental emission level @ 3m in 1MHz RBW: 99,51 103,93 Average Measurement (RB=1MHz, VB=10 Delta Marker - Peak 48,67 dB 90,51 103,93 Average Measurement (RB=1MHz, VB=10 Delta Marker - Average 50,5 dB Peak Peak Peak Calculated Band-Edge Measurement: 64,19 dBuV/m Peak Peak Calculated Band-Edge Measurement: 53,43 dBuV/m Peak Peak TTEM 10dB 10dB17 d0Hz Peak Peak Peak TEM - 2 dBSC Mz -17 d0Hz Peak Peak Peak CENTER 2 dBSC Mz SPAN 60.000Hz Peak Peak Peak Peak CENTER 2 dBSC Mz SPAN 60.000Hz SPAN 60.000Hz Peak Peak Peak CENTER 2 dBSC Mz SPAN 60.000Hz SPAN 60.000Hz SPAN 60.000Hz SPAN 60.000Hz SPAN 60.000Hz CENTER 2 dBSC Mz VEBH 1 0Hz SPAN 60.000Hz SPAN 60.000Hz SPAN 60.000Hz </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>nel @ 2462</td> <td>MHz</td> <td></td> <td></td>								nel @ 2462	MHz		
Fundamental emission level @ 3m in 1MHz RBW: 108.52 112.86 Peak Measurement (RB=1MHz, VB=10 Fundamental emission level @ 3m in 1MHz RBW: 99.51 103.93 Average Measurement (RB=1MHz, VB=10 Delta Marker - Average 50.5 dB Calculated Band-Edge Measurement: 53.43 dBuV/m Peak Calculated Band-Edge Measurement: 53.43 dBuV/m Average Average ArtEM 104.87 -17.40Hz Average Average III 105 55.19 06.74 Average Average III 105 55.19 06.74 Average Average III 105 55.19 06.87 Average Average III 105 55.19 06.87 Average Average III 105 55.19 06.87 Average Average IIII 106 55.19 06.87 Average Average IIII 106 55.19 07.40 Average Average IIII 106 F5.10 10.48 Average SPAH 60.00HHz IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	02.11g, po	ower set to	26dBm	n (Used Pe	ak Power N	1		1			
Fundamental emission level @ 3m in 1MHz RBW: 99.51 103.93 Delta Marker - Peak Average Measurement (RB=1MHz, VB=10 Delta Marker - Average 50.5 dB Calculated Band-Edge Measurement: 63.13 dBuV/m Calculated Band-Edge Measurement: 53.43 dBuV/m Calculated Band-Edge Measurement: 53.43 dBuV/m Average ATTEM 10dB attRR 46.67 dB CENTER 2.465m ODELT 10dB attRR 58.50dB CENTER 2.46350CHz SPAN 68.000Hz CENTER 2.46350CHz SPAN 68.000Hz CENTER 2.46350CHz SPAN 68.000Hz SPAN 68.000Hz SPAN 68.000Hz CENTER 2.46350CHz SPAN 68.000Hz CENTER 2.46350CHz SPAN 68.000Hz CENTER 2.46350CHz SPAN 68.000Hz SPAN 68.000Hz SPAN 68.000Hz SPAN 68.000Hz SPAN 68.000Hz	Fundam	ontal omice	ion lovo	l@?min1			-	Dook Moor	uromont (D		-)
Delta Marker - Peak 48.67 dB Delta Marker - Average 50.5 dB Calculated Band-Edge Measurement: 64.19 dBuV/m Calculated Band-Edge Measurement: 53.43 dBuV/m Peak Average Atter 48 67 dB III b5 10d Br III b6 10d Br									•		
Delta Marker - Average 50.5 dB Calculated Band-Edge Measurement: 64.19 dBuV/m Peak Average 53.43 dBuV/m Average ArtKP 48. 574 B 104 B 104 B -23.00HHz PL - 24 44B 104 B -23.00HHz -23.00HHz CENTER 2. 49 550 CHz 59PN 58.00HHz 104 B -23.00HHz CENTER 2. 49 550 CHz 59PN 58.00HHz 59PN 58.00HHz 59PN 58.00Hz CENTER 2. 49 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 49 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 48 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 48 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 48 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 48 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 48 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTER 2. 48 550 CHz 59PN 58.00Hz 59PN 58.00Hz 59PN 58.00Hz CENTE	T unuum	ondi oniise						Average in	casarcment		
Calculated Band-Edge Measurement: 53.43 dBuV/m Average ATTEN 10dB AMKR 46.67dB APKR 46.67dB APKR 50.50dB PL -2.4dBm 10dB -17.40Hz APKR 46.67dB APKR 50.50dB PL -2.4dBm 10dB -17.40Hz APKR 50.50dB APKR 50.50dB PL -2.4dBm 10dB -23.00HHz -23.00HHz -23.00HHz CENTER 2.48580GHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz CENTER 2.48550GHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz CENTER 2.48550GHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz CENTER 2.48550GHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz CENTER 2.48550GHz VEW 1.0Hz SPAN 60.00HHz SPAN 60.00HHz SPAN 60.00HHz CENTER 2.48550GHz VEW 1.0Hz SPAN 60.00HHz SPAN 60.00Hz SPAN 60.00HHz CENTER 2.48550GHz VEW 1.0Hz SPAN 60.00Hz SPAN 60.00Hz SPAN 60.00Hz CENTER 2.48550GHz VEW 1.0Hz SPAN 60.0			[
ATTEN 1948 AMKR 48.6748 PL -2.448 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 11 1948 1948 1944 1948 1944 1948 1944 1948 1944 1948 1944 1948 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944 1944							dBuV/m	Peak			
HTTER 10dBs 10dB 10dB -23.00HHz HTTER 2-4dBs 10dB -23.00HHz CENTER 2-4dBs Height SPRN 58.00Hz SPRN 58.00Hz SPRN 58.00Hz SPRN 58.00Hz CENTER 2-4dBsCGHz SPRN 50.00Hz SHP 23.000 S2.0 V MHz dBµV/m Vh MHz dBµV/m Vh MHz dBµV/m Vh MHz dBµV/m Vh X86.000 52.0 V 7386.000 35.6 V 54.0 -15.4 Avg - - 4924.000 37.4 54.0 -16.6 Avg - - 7386.000 43.1 54.0 -10.9 Avg - <		Calcula	ated Bar	nd-Edge Me	asurement	53.43	dBuV/m	Average			
PL -2.4 dem 10del -1/* 40Hez Image: PL -1/* 40Hez -1/* 40Hez <								1045			
Image: Construction of the second	and the second s			-17 4	0MHz						
Image: Construction of the second state s	m		+			\vdash					
Image: Construction of the second state s			-					1			
CENTER 2.48350GHz SPAN 50.00MHz GENTER 2.48350GHz SPAN 50.00MHz MHz BµV/m MHz Margin MHZ BµV/m V/h Limit Margin Pk/OP/Avg degrees meters 4924.000 52.0 7386.000 49.0 74.0 -25.0 7386.000 35.6 74.0 -25.0 7386.000 51.0 74.0 -23.0 7386.000 56.9 74.0 -17.1 7386.000 6.9 74.0 -10.9 <td></td>											
CENTER 2.48350GHz SPAN 50.00MHz GENTER 2.48350GHz SPAN 50.00MHz MHz BµV/m MHz Margin MHZ BµV/m V/h Limit Margin Pk/OP/Avg degrees meters 4924.000 52.0 7386.000 49.0 74.0 -25.0 7386.000 35.6 74.0 -25.0 7386.000 51.0 74.0 -23.0 7386.000 56.9 74.0 -17.1 7386.000 6.9 74.0 -10.9 <td></td> <td></td> <td>N.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			N.								
PEN T DHH2 COEN 1 DHH2 CAP Co Cons PEN 1 OHH2 #VEN 10H2 SHP 23.0sed Trequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/h Limit Margin Pk/QP/Avg degrees meters 4924.000 52.0 v 74.0 -22.0 Pk - - 4924.000 38.6 v 54.0 -15.4 Avg - - 7386.000 49.0 v 74.0 -25.0 Pk - - 4924.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 4924.000 51.0 h 74.0 -16.6 Avg - - 4924.000 37.4 h 54.0 -10.9 Avg - - 7386.000 43.1 h 54.0 <td></td> <td></td> <td></td> <td>minuna</td> <td>man</td> <td>Wind</td> <td></td> <td></td> <td></td> <td></td> <td></td>				minuna	man	Wind					
TERM T DHH2 COEM 1 DHH2 CAP CD Com REM 1 0HH2 #VBM 10H2 SMP 23.0sed requency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/h Limit Margin Pk/QP/Avg degrees meters 4924.000 52.0 v 74.0 -22.0 Pk - - 7386.000 49.0 v 74.0 -25.0 Pk - - 7386.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 7386.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0									4		
PER 1 PH 23 <											
PER 1 PH 23 <											
PER 1 PH 23 <											
MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 4924.000 52.0 v 74.0 -22.0 Pk - - 4924.000 38.6 v 54.0 -15.4 Avg - - 7386.000 49.0 v 74.0 -25.0 Pk - - 7386.000 35.6 v 54.0 -18.4 Avg - - 7386.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 4924.000 37.4 h 54.0 -16.6 Avg - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - -						- 11 L					
4924.000 52.0 v 74.0 -22.0 Pk - - 4924.000 38.6 v 54.0 -15.4 Avg - - 7386.000 49.0 v 74.0 -25.0 Pk - - 7386.000 35.6 v 54.0 -18.4 Avg - - 7386.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 4924.000 37.4 h 54.0 -16.6 Avg - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - - For emissions in restricted hands, the limit of 15 209 was used. For all other emissions, the limit was set 20dB	requency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments		
4924.000 38.6 v 54.0 -15.4 Avg - - 7386.000 49.0 v 74.0 -25.0 Pk - - 7386.000 35.6 v 54.0 -18.4 Avg - - 7386.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 4924.000 37.4 h 54.0 -16.6 Avg - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - - Eor emissions in restricted bands, the limit of 15 209 was used. For all other emissions, the limit was set 20dB			v/h	Limit	Margin	Pk/QP/Avg	degrees	meters			
7386.000 49.0 v 74.0 -25.0 Pk - - 7386.000 35.6 v 54.0 -18.4 Avg - - 4924.000 51.0 h 74.0 -23.0 Pk - - 4924.000 37.4 h 54.0 -16.6 Avg - - 4924.000 37.4 h 54.0 -16.6 Avg - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - - Eor emissions in restricted bands, the limit of 15 209 was used. For all other emissions, the limit was set 20dB					1		-	-			
7386.000 35.6 v 54.0 -18.4 Avg						<u> </u>	-	-			
4924.000 51.0 h 74.0 -23.0 Pk - - 4924.000 37.4 h 54.0 -16.6 Avg - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - - Eor emissions in restricted bands, the limit of 15 209 was used. For all other emissions, the limit was set 20dB							-	-			
4924.000 37.4 h 54.0 -16.6 Avg - - 7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - -											
7386.000 56.9 h 74.0 -17.1 Pk - - 7386.000 43.1 h 54.0 -10.9 Avg - - For emissions in restricted bands, the limit of 15 209 was used. For all other emissions, the limit was set 20dB							-	-			
7386.000 43.1 h 54.0 -10.9 Avg							-	-			
For emissions in restricted bands, the limit of 15 209 was used. For all other emissions, the limit was set 20dB							-	-			
For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 20dB	······································										
	lote 1:	For emissi	ons in re	estricted bar	nds, the lim	it of 15.209 v	vas used. Fo	r all other e	missions, th	e limit was s	et 20dB b
the level of the fundamental.											
lote 2: No other spurious emissions detected after the 3rd harmonic 20-dB of the limit	loto 2.	No other s	purious	emissions o	letected after	er the 3rd ha	rmonic 20-dE	3 of the limit			







802.11g DTS Tests 10-Jun-05



Elli	ott				EMO	l les
nt: 2Wire, In					Job Number: J	J59884
lel: 2700HG\	1				og Number: T	
				Αссοι	Int Manager: N	Mark Hill
ict: Jeremy N	luir					
	47,RSS-201, FCC15				Class: N	N/A
Output Por aximum anter		dBi				
Channel		Output Power (dBm)	Output Po		EIRP (W)	
Low	2412	26.0	0.39		0.501	
Mid	2437	26.0	0.3		0.501	
High	2462	26.0	0.39	98	0.501	
Output po	wer measured using	a peak power meter.				

