

Elliott Laboratories Inc. www.elliottlabs.com

684 West Maude Avenue Sunnwale, CA 94086-3518 408-245-3499 Fax

408-245-7800 Phone

Electromagnetic Emissions Test Report and Application for Grant of Equipment Authorization pursuant to FCC Part 15, Subpart C (15.247) DTS Specifications for an Intentional Radiator on the 2Wire, Inc. Model: RG3700HGV-00 and RG370HGV-00



FINAL TEST DATE:

September 1, 2005

AUTHORIZED SIGNATORY:

Chris Byleckie Senior EMC Engineer



Elliott Laboratories, Inc. is accredited by the A2LA, certificate number 2016-01, to perform the test(s) listed in this report. This report shall not be reproduced, except in its entirety, without the written approval of Elliott Laboratories, Inc.

TABLE OF CONTENTS

COVER PAGE	
TABLE OF CONTENTS	2
SCOPE	4
OBJECTIVE	4
SUMMARY OF RESULTS	5
MEASUREMENT UNCERTAINTIES	6
EQUIPMENT UNDER TEST (EUT) DETAILS	7
GENERALOTHER EUT DETAILSOTHER EUT DETAILS ENCLOSURE MODIFICATIONSSUPPORT EQUIPMENT EUT INTERFACE PORTS	7 7 8 8 8
TEST SITE	9
GENERAL INFORMATION CONDUCTED EMISSIONS CONSIDERATIONS RADIATED EMISSIONS CONSIDERATIONS MEASUREMENT INSTRUMENTATION	9 9
RECEIVER SYSTEM	
INSTRUMENT CONTROL COMPUTER	
LINE IMPEDANCE STABILIZATION NETWORK (LISN)	
POWER METER FILTERS/ATTENUATORS	
ANTENNAS	
ANTENNA MAST AND EQUIPMENT TURNTABLE	
INSTRUMENT CALIBRATION	11
TEST PROCEDURES	12
EUT AND CABLE PLACEMENT	12
CONDUCTED EMISSIONS	
RADIATED EMISSIONS	
CONDUCTED EMISSIONS FROM ANTENNA PORT	13
SPECIFICATION LIMITS AND SAMPLE CALCULATIONS	14
FCC 15.407 (A)AND RSS 210 (O) OUTPUT POWER LIMITS	15
RSS 210 (O) AND FCC 15.247 SPURIOUS RADIATED EMISSIONS LIMITS	
FCC 15.205 AC POWER PORT CONDUCTED EMISSIONS LIMITS	
RSS-210 SECTION 6.6 AC POWER PORT CONDUCTED EMISSIONS LIMITS	
SAMPLE CALCULATIONS - CONDUCTED EMISSIONS SAMPLE CALCULATIONS - RADIATED EMISSIONS	

TABLE OF CONTENTS

EXHIBIT 1: Test Equipment Calibration Data	. 1
EXHIBIT 2: Test Data Log Sheets	
EXHIBIT 3: Test Configuration Photographs	. 3
EXHIBIT 4: Proposed FCC ID Label & Label Location	. 4
EXHIBIT 5: Detailed Photographs	. 5
EXHIBIT 6: Operator's Manual	.6
EXHIBIT 7: Block Diagram	. 7
EXHIBIT 8: Schematic Diagrams	. 8
EXHIBIT 9: Theory of Operation	.9
EXHIBIT 10: RF Exposure Information	10

SCOPE

An electromagnetic emissions test has been performed on the 2Wire, Inc. model RG3700HGV-00 pursuant to Subpart C of Part 15 of FCC Rules for intentional radiators. 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 RG3700HGV-00 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 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.

Testing performed on RG3700HGV-00 was considered representative of the RG370HGV-00. The difference is in the broadband connection. On the 3700, it is VDSL, on the 370, the VDSL is bypassed and broadband comes in over the MoCA interface. For this product, the 3700HGV is the superset and is used as the family representative

SUMMARY OF RESULTS

FCC Part 15 Section	Description	Measured Value	Comments	Result
15.247(a)	Digital Modulation	Systems uses OFDM/ DSSS techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	6dB Bandwidth	802.11b 12.15MHz 802.11g 16.72MHz	Minimum allowed is 500kHz	Complies
	99% Bandwidth	802.11b 15.6MHz 802.11g 16.6 MHz	For information only	Complies
15.247 (b) (3)	Output Power, 2400 - 2483.5 MHz	802.11b 21.8 dBm (0.151 Watts) EIRP = 0.240 W 802.11g 26.8 dBm (0.479 Watts) EIRP = 0.759 W	Multi-point applications: Maximum permitted is 1Watt, with EIRP limited to 4 Watts.	Complies
15.247(d)	Power Spectral Density	802.11b -2.61 dBm / MHz 802.11g -3.51 dBm / MHz	Maximum permitted is 8dBm/3kHz	Complies
15.247(c)	Antenna Port Spurious Emissions – 30MHz – 25 GHz	All spurious emissions < -20dBc	All spurious emissions < - 20dBc.	Complies
15.247(c) / 15.209	Radiated Spurious Emissions – 30MHz – 25 GHz	53.9 dBuV/m @ 4874MHz (-0.1dB)	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	49.2 dBuV @ 19.647. MHz (-0.8dB)		Complies
15.247 (b) (5)	RF Exposure Requirements	MPE Calculation consistent with mobile use. User manual statement (page 81) also consistent with MPE calculation.	RF exposure requirements.	Complies
15.203	RF Connector	The antenna is integral to the EUT	Unique antenna connection required for user-installed applications.	Complies

EIRP calculated using antenna gain of 2.0dBi 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 RG3700HGV-00 is a Wireless VDSL router which is designed to route VDSL signals to various network interfaces. Normally, the EUT would be placed on a table top during operation. The EUT was, therefore, treated as table-top equipment during testing to simulate the end-user environment. The electrical rating of the EUT is 120/240 V, 50/60 Hz, 0.8 Amps.

The sample was received on August 24, 2005 and tested on September 1, 2005. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number	FCC ID
		Wireless		
2Wire	RG3700HGV-00	802.11B/G	325114028821	PGR2W3700ATH
		VDSL router		

OTHER EUT DETAILS

Power supply: Good Power Model# JSE-02512-U Input: 120V, 50/60Hz 0.8A Output: 12VDC, 2.9A

Testing performed on the RG3700HGV-00 was considered representative of the following models. The wireless transceiver circuitry is identical in all models. The main differences are in the wired options available.

Model	DSL	Voice	Wireless	Ethernet	USB	MoCA
RG3700HGV-00	Yes	Yes	Yes	Yes	Yes	Yes
RG370HGV-00	No	Yes	Yes	Yes	Yes	Yes
RG370-00	No	No	No	Yes	Yes	Yes
RG370HG-00	No	No	Yes	Yes	Yes	Yes
RG370V-00	No	Yes	No	Yes	Yes	Yes

ENCLOSURE

The EUT enclosure is primarily constructed of ABS plastic with a fabricated sheet steel outer shield. It measures approximately 29.5 cm wide by 24.5 cm deep by 5 cm high.

MODIFICATIONS

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

SUPPORT EQUIPMENT

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

Manufacturer	Model	Description	Serial Number
Coby	-	Phone	324001152
ADAPCOM	Micro-890	ADSL Mini-DSLAM	-
Motorola	Moca	Ethernet Bridge	520111-001-00
Dell	PP01L	Laptop	CN-04P240048643-35F-1683
Dell	-	Laptop	CX-04P240-38643-36P-1826
Dell	-	Laptop	-

No remote support equipment was used during testing.

EUT INTERFACE PORTS

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

Port	Connected To	Connected To (Cable(s)	
FOIt	Connected 10	Description	Shielded or Unshielded	Length(m)
DSL	DSLAM	RJ11	Shielded	1
Voice	Phone	RJ11	Unshielded	3
Ethernet	Laptop	Cat 5	Unshielded	1
USB	Laptop	Multiwire	Shielded	1.5
Moca	Motorola Ethernet Bridge	coax	Shielded	3
Motorola				
Ethernet	Laptop	Cat 5	Unshielded	1
Bridge				
AC	Power	3 Wire	Unshielded	1.5

EUT OPERATION

During transmitter testing the EUT was transmitting continuously on either the low, 2412MHz, the middle, 2437MHz, or the high, 2462MHz, channel. The transmitting tests were done for both CCK and OFDM modulation. For receiver testing the EUT was set to receive on the middle, 2437MHz channel.

ANTENNA REQUIREMENTS

The antenna is integral to the device

TEST SITE

GENERAL INFORMATION

Final test measurements were taken on September 1, 2005at the Elliott Laboratories Open Area Test Site #2 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 6 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

Radiated Emissions, 30 - 2,000 MHz, 24-Aug-05 Engineer: Peter Sales

Engineer: Peter Sales			
Manufacturer	Description	Model #	Asset # Cal Due
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	785 26-Apr-06
EMCO	Horn Antenna, D. Ridge 1-18GHz	3115	786 08-Nov-05
Hewlett Packard	EMC Spectrum Analyzer 9kHz - 6.5GHz	8595EM	787 17-Dec-05
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

Conducted Emissions - AC Power, 24-Aug-05 Engineer: Peter Sales

Engineer: Peter Sales				
<u>Manufacturer</u>	Description	<u>Model #</u>	Asset #	Cal Due
Elliott Laboratories	FCC / CISPR LISN	LISN-3, OATS	304	08-Jul-06
Hewlett Packard	EMC Spectrum Analyzer 9kHz - 6.5GHz	8595EM	787	17-Dec-05
Solar Electronics	LISN	8028-50-TS-24-BNC support	904	08-Jul-06
Rohde & Schwarz	Test Receiver, 0.009-2750 MHz	ESN	1332	23-May-06
Rohde& Schwarz	Pulse Limiter	ESH3 Z2	1398	11-Feb-06

Radio Antenna Port (Power and Spurious Emissions), 01-Sep-05 Engineer: Mehran Birgani

Manufacturer	Description	Model #	Asset #	Cal Due
EMCO	Horn Antenna, D. Ridge 1-18GHz	3115	786	08-Nov-05
Hewlett Packard	EMC Spectrum Analyzer 9kHz - 40 GHz, Fremont (SA40)	8564E (84125C)	1393	26-Oct-05
Hewlett Packard	High Pass filter, 3.5GHz	P/N 84300-80038 (84125C)	1403	09-Jun-06
Rohde & Schwarz	Power Meter, Single Channel	NRVS	1422	01-Nov-05
Rohde & Schwarz	Power Sensor, 1uW-100mW, DC-18 GHz, 50ohm	NRV-Z51	1535	22-Sep-05
Rohde & Schwarz	Peak Power Sensor 100uW - 2 Watts	NRV-Z32	1536	09-May-06

EXHIBIT 2: Test Data Log Sheets

ELECTROMAGNETIC EMISSIONS

TEST LOG SHEETS

AND

MEASUREMENT DATA

T 60846 28 Pages

Elliot	t	EM	C Test Data
Client: 2	Wire	Job Number:	J60845
Model: R	RG3700HGV-00 and RG370HGV-00	T-Log Number:	T60846
		Account Manager:	Mark Hill
Contact: J	eremy Muir		
Emissions Spec: E	N55022	Class:	В
Immunity Spec: -		Environment:	-

EMC Test Data

For The

2Wire

Model

RG3700HGV-00 and RG370HGV-00

Date of Last Test: 10/12/2005

Ellio	t					EM	C Test Data
Client:						Job Number:	J60845
	RG3700HGV-00	and RG3	370HGV-0	00		T-Log Number:	
						Account Manager:	
Contact:	Jeremy Muir						
Emissions Spec:	EN55022					Class:	В
Immunity Spec:	-					Environment:	-
would be placed on a ta	able top during op	h is desiç eration.	The EUT	I Desc oute VDS was, th	cription SL signals erefore, ti	s to various network interfare	nent during testing to
simulate the end-user e	nvironment. The		l rating of quipm e			240 V, 50/60 Hz, 0.8 Amp: t	5.
Manufacturer	Model			escriptio		Serial Number	FCC ID
2Wire	RG3700HG	/-00	Wirele	ss 802. DSL rou	11B/G	325114028821	PGR2W3700ATH
Power supply: Good Power Model# J: Input: 120V, 50/60Hz 0 Output: 12VDC, 2.9A Testing performed on th circuitry is identical in a Model RG3700HGV-00 RG370HGV-00 RG370HG-00 RG370V-00 The antenna is integral AN MMCX connector is	8A ne RG3700HGV-0 Il models. The ma DSL Voice Yes Yes No Yes No No No No No Yes to the device	in differe Wireless Yes Yes No Yes No	nces are Ethernet Yes Yes Yes Yes EUT	represe in the w USB Yes Yes Yes Yes Yes	entative o vired optic MoCA Yes Yes Yes Yes Yes nna		e wireless transceiver
The EUT enclosure is p approximately 29.5 cm	2	deep by §	S plastic v	with a fa	abricated	sheet steel outer shield.	It measures
Mod. #	Test	Da			j	Modification	
1	-		-			None	
Modifications applied a	re assumed to be	used on	subseque	ent tests	s unless o	therwise stated as a furth	er modification.

Elliot			Job Number:	160845	
	RG3700HGV-00 and RG3	70HCV-00	T-Log Number:		
		/011010-00	Account Manager:		
Contact:	Jeremy Muir				
Emissions Spec:			Class:	В	
Immunity Spec:			Environment:	-	
		t Configuratio			
Manufacturer	Model	Description	Serial Number	FCC ID	
Coby	-	Phone	324001152	-	
ADAPCOM	Micro-890	ADSL Mini-DSLAM	-	-	
Motorola	Моса	Ethernet Bridge	520111-001-00	-	
Dell	PP01L	Laptop #1	CN-04P240048643-35F- 1683	-	
Dell	-	Laptop #2	CX-04P240-38643-36P- 1826	-	
Dell	-	Laptop #3	-	-	
	Rem	ote Support Equip	ment		
Manufacturer	Model	Description	Serial Number	FCC ID	
Dell	-	Laptop #4	-	-	
	Inte	rface Cabling and F			
Port	Connected To		Cable(s)		
		Description	Shielded or Unshield		
DSL	DSLAM	RJ11	Shielded	1	
Voice	Phone	RJ11	Unshielded	3	
Ethernet USB	Laptop	Cat 5 Multiwire	Unshielded Shielded	1	
U2R	Laptop	wuttwire			
Моса	Motorola Ethernet Bridge	соах	Shielded	3	
Motorola Ethernet Bridge	Laptop	Cat 5	Unshielded	1	
				Unsilieided	

EUT Operation During Digital Emissions Tests

During emissions testing, the EUT was connected to three remote laptop PCs using the EUT's MoCA line, Ethernet and USB ports. The three Laptops were pinging the EUT, the DSLAM kept the VDSL port active. The phone terminated the Voice port. The remote laptop was pinging the EUT via wireless.

EUT Operation During Transceiver Tests

During transmitter testing the EUT was transmitting continuously on either the low, 2412MHz, the middle, 2437MHz, or the high, 2462MHz, channel. The transmitting tests were done for both CCK and OFDM modulation. For receiver testing the EUT was set to receive on the middle, 2437MHz channel.

EMC Test Data

Client:	2Wire	Job Number:	J60845
Madal	RG3700HGV-00 and RG370HGV-00	T-Log Number:	T60846
wouer.		Account Manager:	Mark Hill
Contact:	Jeremy Muir		
Spec:	EN55022	Class:	N/A

FCC 15.247 DTS - Power, Bandwidth and Spurious Emissions

Test Specifics

Elliott

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

Date of Test: 9/1/2005 Test Engineer: Mehran Birgani Test Location: SVOATS #2 Config. Used: 1 Config Change: None EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT.

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:	61 %

Elliott

EMC Test Data

Client:	2Wire	Job Number:	J60845
Madal	RG3700HGV-00 and RG370HGV-00	T-Log Number:	T60846
Mouel.		Account Manager:	Mark Hill
Contact:	Jeremy Muir		
Spec:	EN55022	Class:	N/A

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	RE, 30 - 25000 MHz Spurious Emissions in Restricted Bands	FCC Part 15.209 / 15.247(c)	Pass	52.4dBuV/m (416 uV/m) @ 2390 Mhz (-1.6dB)
2	6dB Bandwidth	15.247(a)	Pass	16.72 MHz
3	Output Power	15.247(b)	Pass	26.8 dBm
4	Power Spectral Density (PSD)	15.247(d)	Pass	-3.51 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.

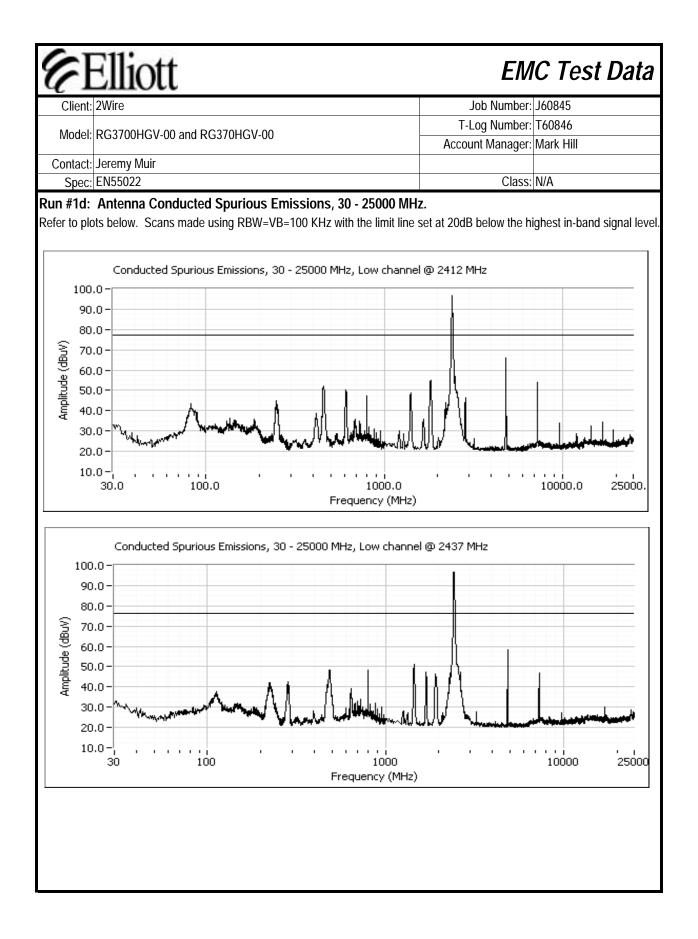
EUT Configuration:

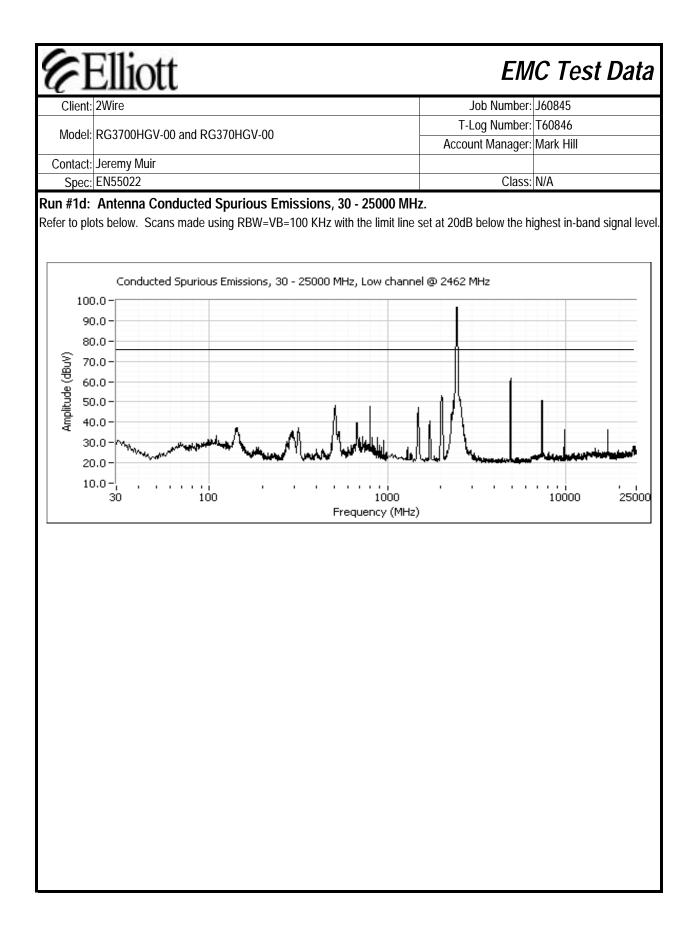
Output Power Setting:	20
Antenna:	А
Output Mode:	TX99
Rate:	6 Mbps

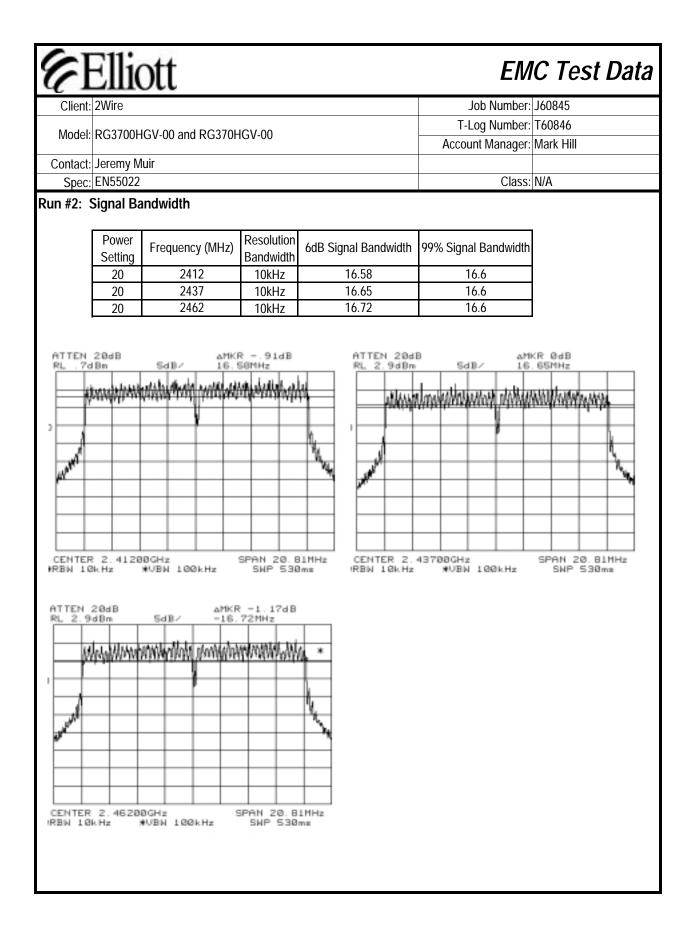
	2Wire						~	Job Number: J60845
Madal	D00700U	01/00		01/00			T-L	₋og Number: T60846
wodel:	RG3/00H	GV-00 a	nd RG370H	GV-00			Accou	int Manager: Mark Hill
Contact:	Jeremy M	uir						
Spec:	EN55022							Class: N/A
Run #1a:	Radiated	I Spurio	ous Emiss	ions, 30 -	25000 MHz	. Low Cha	nnel @ 24	412 MHz
	ital Signal	•						
requency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2410.740	101.0	Н	-	-	AVG	265	2.0	RB = 1MHz, VB = 10Hz
2410.740	108.6	Н	-	-	PK	265	2.0	RB = VB = 1MHz
2408.833		V V	-	-	AVG	180	1.1	RB = 1MHz, $VB = 10Hz$
2408.833	110.7	V	-		PK	180 TEN 3048	1.1	RB = VB = 1MHz
ATTEN : RL 15		18dB/	24.47	49.67dB HHz		15.3dBm	10dB	
			1.1	1.1				
			1	~.				
		-					1	
	-	_					aller	
		-	1			and the state of t		
	-				M4	-		
	-				_ +			
		_						
-	-	-					++-	
						TER 2 401	128/04+	SPAN 48 88MHz
RBM 1.	2.40120 MHz ¥	JBM 104		AN 40.00 SWP 15.0		1 DMHz	*UBN 1	
- 0. 104 - 74 1.			Dalta Ma	rkar Daak	47.0	ID		
				rker - Peak				een highest in-band and highest
			Delta Marke	i - Average	49.7	uв	restricted l	
	e Signal Fi	eld Stre	ngth					
and Edg		Pol	15.209	15.247	Detector	Azimuth	Height	Comments
and Edge requency	Level			Manalia	Pk/QP/Avg	dograaa	motore	
requency MHz	Level dBµV/m	V/H	Limit	Margin	INCIANY	degrees	meters	
requency MHz 2390.000	Level dBµV/m 63.5	V/H V	74.0	-10.5	Peak	180	1.1	Power Setting 20
requency MHz 2390.000	Level dBµV/m 63.5	V/H			9			Power Setting 20 Power Setting 20
MHz 2390.000 2390.000	Level dBµV/m 63.5 52.4	V/H V V	74.0 54.0	-10.5 -1.6	Peak Average	180 180	1.1 1.1	Power Setting 20
requency MHz 2390.000	Level dBµV/m 63.5 52.4	V/H V V	74.0 54.0	-10.5 -1.6	Peak Average	180 180	1.1 1.1	<u>.</u>
requency MHz 2390.000 2390.000 lote 1:	Level dBµV/m 63.5 52.4	V/H V V	74.0 54.0 racting the r	-10.5 -1.6 narker delta	Peak Average	180 180	1.1 1.1	Power Setting 20
requency MHz 2390.000 2390.000 ote 1: ther Spu requency	Level dBµV/m 63.5 52.4 Calculated rious Emis Level	V/H V V I by subt ssions Pol	74.0 54.0 racting the r 15.209	-10.5 -1.6 narker delta 15.247	Peak Average a values from Detector	180 180 the fundame Azimuth	1.1 1.1 ental field s Height	Power Setting 20
requency MHz 2390.000 2390.000 ote 1: ote 1: ther Spu requency MHz	Level dBµV/m 63.5 52.4 Calculated rious Emis Level dBµV/m	V/H V I by subt ssions Pol V/H	74.0 54.0 racting the r 15.209 / Limit	-10.5 -1.6 marker delta / 15.247 Margin	Peak Average values from Detector Pk/QP/Avg	180 180 the fundame Azimuth degrees	1.1 1.1 ental field s Height meters	Power Setting 20 trength measurements. Comments
requency MHz 2390.000 2390.000 2390.000 lote 1: hther Spu requency MHz 4821.525	Level dBµV/m 63.5 52.4 Calculatec rious Emis Level dBµV/m 48.8	V/H V V I by subt ssions Pol V/H H	74.0 54.0 racting the r 15.209 Limit 54.0	-10.5 -1.6 marker delta 15.247 Margin -5.2	Peak Average values from Detector Pk/QP/Avg AVG	180 180 the fundame Azimuth degrees 252	1.1 1.1 ental field s Height meters 1.9	Power Setting 20 trength measurements. Comments 2nd Harmonics
requency MHz 2390.000 2390.000 lote 1: ther Spu requency MHz 4821.525 4822.805	Level dBμV/m 63.5 52.4 Calculateo rious Emis Level dBμV/m 48.8 42.6	V/H V I by subt ssions Pol V/H H V	74.0 54.0 racting the r 15.209 / Limit 54.0 54.0	-10.5 -1.6 marker delta / 15.247 Margin -5.2 -11.4	Peak Average values from Detector Pk/QP/Avg AVG AVG	180 180 the fundame Azimuth degrees 252 322	1.1 1.1 ental field s Height meters 1.9 1.0	Power Setting 20 trength measurements. Comments 2nd Harmonics 2nd Harmonics
irequency MHz 2390.000 2390.000 lote 1: Dther Spu irequency	Level dBµV/m 63.5 52.4 Calculatec rious Emis Level dBµV/m 48.8	V/H V V I by subt ssions Pol V/H H	74.0 54.0 racting the r 15.209 Limit 54.0	-10.5 -1.6 marker delta 15.247 Margin -5.2	Peak Average values from Detector Pk/QP/Avg AVG	180 180 the fundame Azimuth degrees 252	1.1 1.1 ental field s Height meters 1.9	Power Setting 20 trength measurements. Comments 2nd Harmonics

Client:							~	Job Number:	J60845
	DOOTOOL	01/00	10007011	01/ 00			T-L	og Number:	T60846
Model:	RG3/00H	GV-00 a	nd RG370H	GV-00			Ассоц	int Manager:	Mark Hill
Contact:	Jeremy M	uir							
Spec:	EN55022							Class:	N/A
Run #1b:	Radiated	d Spurio	ous Emiss	ions, 30 -	25000 MHz	. Center C	hannel @	2437 MHz	
Frequency	Level	Pol	15.209/	15 2/7	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
4874.350	50.6	H	54.0	-3.5	AVG	251	1.9	2nd Harmo	nics
4874.350	64.2	H	74.0	-9.8	PK	251	1.9	2nd Harmo	
7309.525	44.1	H	54.0	-9.9	AVG	258	1.5	3rd Harmor	
4875.100	44.1	V	54.0	-9.9	AVG	306	1.0	2nd Harmo	
7313.650	39.8	V	54.0	-12.0	AVG	320	1.0	3rd Harmor	
7309.525	56.7	H	74.0	-17.3	PK	258	1.5	3rd Harmor	
4875.100	53.5	V	74.0	-20.5	PK	306	1.0	2nd Harmo	
7313.650	50.7	V	74.0	-23.4	PK	320	1.1	3rd Harmor	
	Radiated	d Spurio			25000 MHz	•			manurad in 100kUz
undamer	Radiated	l Spurio Field St	ous Emiss rength: Pea	ak and ave	rage values n	neasured in	1 MHz, and	peak value i	neasured in 100kHz
Fundamer Frequency	Radiated Ital Signal	d Spuric Field St Pol	ous Emiss rength: Pea 15.209 /	ak and aver 15.247	rage values n Detector	neasured in Azimuth	1 MHz, and Height		neasured in 100kHz
Fundamer Frequency MHz	Radiated Ital Signal Level dBµV/m	d Spuric Field St Pol V/H	ous Emiss rength: Pea	ak and ave	rage values n Detector Pk/QP/Avg	neasured in Azimuth degrees	1 MHz, and Height meters	peak value i Comments	
Fundamer Frequency MHz 2463.150	Radiated tal Signal Level dBµV/m 102.2	d Spuric Field St Pol	ous Emiss rength: Pea 15.209 /	ak and aver 15.247	rage values n Detector	neasured in Azimuth	1 MHz, and Height	peak value i Comments	z, VB = 10Hz
Fundamer Frequency MHz 2463.150 2463.150	Radiateo Ital Signal Level dBµV/m	d Spuric Field St Pol V/H H	Dus Emiss rength: Pea 15.209 / Limit	ak and aver 15.247	rage values n Detector Pk/QP/Avg AVG	Azimuth degrees 209	1 MHz, and Height meters 1.9	peak value r Comments RB = 1MHz RB = VB =	r, VB = 10Hz 1MHz
Fundamer Frequency MHz 2463.150 2463.150 2462.980	Radiated tal Signal Level dBµV/m 102.2 111.1	d Spuric Field St Pol V/H H H	ous Emiss rength: Pea 15.209 / Limit -	ak and aver 15.247	rage values n Detector Pk/QP/Avg AVG PK	neasured in Azimuth degrees 209 209	1 MHz, and Height meters 1.9 1.9	peak value r Comments RB = 1MHz RB = VB =	z, VB = 10Hz 1MHz z, VB = 10Hz
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiated tal Signal Level dBμV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	age values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	Peak value i Comments RB = 1MHz RB = VB = RB = 1MHz RB = VB =	z, VB = 10Hz 1MHz z, VB = 10Hz 1MHz
Find a mer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiated tal Signal Level dBμV/m 102.2 111.1 102.6 111.7	d Spuric Field St Pol V/H H H V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	age values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	Peak value i Comments RB = 1MHz RB = VB = RB = 1MHz RB = VB =	z, VB = 10Hz 1MHz z, VB = 10Hz 1MHz
Fundamen Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiated tal Signal Level dBμV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	age values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	Peak value i Comments RB = 1MHz RB = VB = RB = 1MHz RB = VB =	z, VB = 10Hz 1MHz z, VB = 10Hz 1MHz
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiateo tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	Peak value i Comments RB = 1MHz RB = VB = RB = 1MHz RB = VB =	z, VB = 10Hz 1MHz z, VB = 10Hz 1MHz
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiateo tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiateo tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Tequency MHz 2463.150 2463.150 2462.980 2462.980	Radiateo tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Tundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiateo tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	z, VB = 10Hz 1MHz z, VB = 10Hz 1MHz
Tundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiateo tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiatec tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Fundamen Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiatec tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	ous Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK PK	Azimuth degrees 209 209 184 184	1 MHz, and Height meters 1.9 1.9 1.0 1.0	RB = 1MHz RB = 1MHz RB = 1MHz RB = VB = RB = 1MHz	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980	Radiated tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	Dus Emiss rength: Pea 15.209 / Limit - - - -	ak and aver 15.247 Margin - - - - - - - - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK	Azimuth degrees 209 209 184 184 184	1 MHz, and Height meters 1.9 1.0 1.0 1.0	Peak value i Comments RB = 1MHz RB = VB = RB = 1MHz RB = VB =	2, VB = 10Hz 1MHz 2, VB = 10Hz 1MHz 45.67dB 00HH=
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980 Comparison	Radiated tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	STOP 2	ak and aver 15.247 Margin - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK	Azimuth degrees 209 209 184 184	1 MHz, and Height neters 1.9 1.0 1.0 1.0 1.0 316GHz	Peak value i Comments RB = 1MHz RB = VB = RB = 1MHz RB = VB =	:, VB = 10Hz 1MHz :, VB = 10Hz 1MHz ? 45.67d В
Fundamer Frequency MHz 2463.150 2463.150 2462.980 2462.980 ALTEN START	Radiated tal Signal Level dBµV/m 102.2 111.1 102.6 111.7	d Spurio Field St Pol V/H H H V V	Dus Emiss rength: Pea 15.209 / Limit - - - - - - - - - - - - - - - - - - -	Ak and aver 15.247 Margin - - - - - - - - - - - - -	rage values n Detector Pk/QP/Avg AVG PK AVG PK	Azimuth degrees 209 209 184 184 184 184 184 184 184 184 184 184	1 MHz, and Height meters 1.9 1.0 1.0 1.0 1.0	RB = 1MHz RB = VB = RB = 1MHz RB = VB =	2, VB = 10Hz 1MHz 2, VB = 10Hz 1MHz 45. 67d B 00HHz 10Hz 2. 49310GHz

Client: 2Wire Model: RG370 Contact: Jeremy Spec: EN550	0HGV-00						المعامل	1/ 00 45
Contact: Jeremy Spec: EN550	0HGV-00	-					lob Number:	
Spec: EN550		and RG370H	GV-00				og Number:	
Spec: EN550						Accou	nt Manager:	Mark Hill
								<u> </u>
// / · · ·							Class:	N/A
un #1c: contin								
and Edge Signa			45.047					
requency Leve		15.209 /		Detector	Azimuth	Height	Comments	
MHz dBμV/ 2484.490 66		Limit	Margin	Pk/QP/Avg Peak	degrees 184	meters	Dowor Cott	ing 20
	5.0 V 2.1 V	74.0 54.0	-8.0 -1.9	Average	184	1.0 1.0	Power Sett Power Sett	
2404.490 32	I V	04.0	-1.7	Average	104	1.0	FUWEI Sell	iiiy 20
ote 1: Calcula	ated by sub	tracting the r	narker delta	a values from	the fundame	ental field s	trength mea	surements.
		<u></u>						
ther Spurious E	missions							
requency Leve	l Pol	15.209/	/ 15.247	Detector	Azimuth	Height	Comments	
MHz dBµV/	m V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
386.375 45.0		54.0	-9.1	AVG	341	1.4	3rd Harmor	nics
924.720 44.1	Н	54.0	-9.9	AVG	66	1.3	2nd Harmo	
2317.30 40.8		54.0	-13.2	AVG	358	1.0		nics (Noise Floor)
7386.13 40.7		54.0	-13.3	AVG	11	1.2	3rd Harmor	
4921.40 40.3		54.0	-13.7	AVG	262	1.0	2nd Harmo	
386.375 57.9		74.0	-16.1	PK	341	1.4	3rd Harmor	
924.720 54.8		74.0	-19.2	PK	66	1.3	2nd Harmo	
7386.13 52.5 4921.40 52.4		74.0 74.0	-21.5	PK PK	11 262	1.2 1.0	3rd Harmor 2nd Harmo	
4921.40 52.4 2317.30 51.1	H	74.0	-21.6 -22.9	PK PK	358	1.0		nics nics (Noise Floor)
For em		restricted bar ndamental.	nds, the limi	t of 15.209 w	vas used. Fo	r all other e		e limit was set 20dB bel

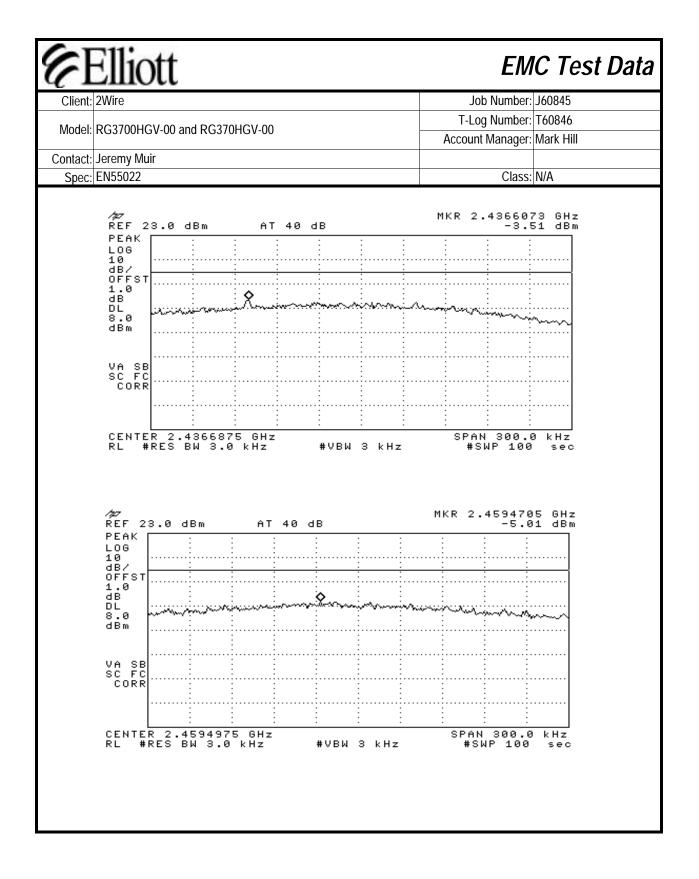






	Client: 2\ Model: R Contact: Je Spec: El In #3: Ou Maximu	Wire G3700H eremy Mu N55022 utput Po um antenu Power Setting 20 20 20 20 20	GV-00 and RG370H uir ower na gain: 2 Frequency (MHz) 2412 2437 2462 wer measured using	dBi Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	T-L Accour Average F dBm 18.1 18.0 17.6	og Number: nt Manager: Class: Ower ^{Note 2} W 0.065 0.063 0.058	T60846 Mark Hill
Model: RG3700HGV-00 and RG370HGV-00 Account Manager: Mark Hill Contact: Jeremy Muir Class: N/A Spec: EN55022 Class: N/A n #3: Output Power Average Power Note 2 Mark Hill Maximum antenna gain: 2 dBi 2 dBi V V Power Setting Frequency (MHz) Peak Output Power Bin W W Average Power Note 2 dBm W 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058 	Contact: Je Spec: El In #3: Ou Maximu	eremy Mu N55022 Jtput Pc Im anteni Power Setting 20 20 20 20 20	uir wer ha gain: 2 Frequency (MHz) 2412 2437 2462 wer measured using	dBi Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	Accour	Class: Class: Power ^{Note 2} W 0.065 0.063 0.058	Mark Hill
Account Manager: Mark Hill Contact: Jeremy Muir Class: Spec: EN55022 Class: n #3: Output Power Class: N/A Maximum antenna gain: 2 dBi Power Frequency (MHz) Peak Output Power EIRP Average Power Note 2 20 2412 26.8 0.479 0.759 18.1 0.065 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058	Contact: Je Spec: El In #3: Ou Maximu	eremy Mu N55022 Jtput Pc Im anteni Power Setting 20 20 20 20 20	uir wer ha gain: 2 Frequency (MHz) 2412 2437 2462 wer measured using	dBi Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	Average F dBm 18.1 18.0 17.6	Class: Power ^{Note 2} W 0.065 0.063 0.058	N/A
Spec: EN55022 Class: N/A n#3: Output Power Maximum antenna gain: 2 dBi 2 dBi Power Frequency (MHz) Peak Output Power EIRP Average Power Note 2 20 2412 26.8 0.479 0.759 18.1 0.065 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058	Spec: El In #3: Ou Maximu	N55022 Jtput Pc Im antenne Power Setting 20 20 20 20 20 20 20 20 20 20	wer na gain: 2 Frequency (MHz) 2412 2437 2462 wer measured using	Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	dBm 18.1 18.0 17.6	Power ^{Note 2} W 0.065 0.063 0.058	
P #3: Output Power 2 dBi Maximum antenna gain: 2 dBi	In #3: Ou Maximu	utput Po m anteni Power Setting 20 20 20 20 20 20 20	requency (MHz) 2412 2437 2462 wer measured using	Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	dBm 18.1 18.0 17.6	Power ^{Note 2} W 0.065 0.063 0.058	
Maximum antenna gain: 2 dBi Power Frequency (MHz) Peak Output Power EIRP Average Power Note 2 Setting Frequency (MHz) Peak Output Power EIRP Average Power Note 2 20 2412 26.8 0.479 0.759 18.1 0.065 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058	Maximu	Power Setting 20 20 20 20 20 vutput pow	requency (MHz) 2412 2437 2462 wer measured using	Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	dBm 18.1 18.0 17.6	W 0.065 0.063 0.058	
Power Setting Frequency (MHz) Peak Output Power dBm EIRP W Average Power Note 2 dBm 20 2412 26.8 0.479 0.759 18.1 0.065 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058	Jote 1: 0	Power Setting 20 20 20 vutput pow	Frequency (MHz) 2412 2437 2462 wer measured using	Peak Out dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	dBm 18.1 18.0 17.6	W 0.065 0.063 0.058	
Setting Hequency (WH2) dBm W W dBm W 20 2412 26.8 0.479 0.759 18.1 0.065 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058	lote 1: 0	Setting 20 20 20 20 Putput pov	2412 2437 2462 wer measured using	dBm 26.8 26.6 26.2 a peak pov	W 0.479 0.457 0.417 ver meter	W 0.759 0.724 0.661	dBm 18.1 18.0 17.6	W 0.065 0.063 0.058	
20 2412 26.8 0.479 0.759 18.1 0.065 20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058 ote 1: Output power measured using a peak power meter	lote 1: 0	20 20 20 20 Putput pov	2437 2462 wer measured using	26.8 26.6 26.2 a peak pov	0.479 0.457 0.417 ver meter	0.759 0.724 0.661	18.1 18.0 17.6	0.065 0.063 0.058	ises only.
20 2437 26.6 0.457 0.724 18.0 0.063 20 2462 26.2 0.417 0.661 17.6 0.058 ote 1: Output power measured using a peak power meter		20 Putput pov	2462 wer measured using	26.6 26.2 a peak pov	0.457 0.417 ver meter	0.724 0.661	18.0 17.6	0.063 0.058	ises only.
ote 1: Output power measured using a peak power meter		output pov	wer measured using	a peak pov	ver meter		•		ses only.
						sor - this valu	ie is for refe	rence purpos	ises only.

6I	Ellic	ott					EM	C Test Data
Client:						Job Nu	umber:	J60845
Model	RG3700H	GV-00 and RG370H	GV-00			T-Log Ni		
			01.00			Account Ma	nager:	Mark Hill
	Jeremy M EN55022	uir					Class:	Ν/Λ
		ectral Density					Class.	IN/A
Ruii #4. r	ower sp	ectral Density						
	Power Setting	Operating Frequency (MHz)	Freq. @ PPSD	Res BW	P.S.D. (de	3m/3kHz)		
	20	2412	2408.22	3kHz	-5.4			
	20 20	2437 2462	2436.61 2459.47	3kHz 3kHz	-3.! -5.(
	20	2402	2439.47	3 ΚΠΖ	-5.0	11		
Note 1:		PSD: Frequency of						
Note 2:	least 1 sec		measureme	nt is made a	at the frequen	cy of PPSD deter	rmined	sure a dwell time of at from preliminary scans
	/207 REF 23.0 dBm PEAK LOG 10 dB/ OFFST		AT 40	dB		MKR 2.40	8228	0 GHz 9 dBm
	1.0 dB DL 8.0 dBm			, X ,	Murrolaini	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	الشيهر وحم	······
	VA SE SC FC Corf	: i.						
	CENTE	: : R 2.4082625	: GHz	:	: :	: : Span 3	: 00.0	kHz
	RL #	RES BW 3.0	κΗΖ	#∨B₩	3 KHZ	#SWP	100	sec



EMC Test Data

Client:	2Wire	Job Number:	J60845
Model	RG3700HGV-00 and RG370HGV-00	T-Log Number:	T60846
wouer.		Account Manager:	Mark Hill
Contact:	Jeremy Muir		
Spec:	EN55022	Class:	N/A

FCC 15.247 DTS - Power, Bandwidth and Spurious Emissions

Test Specifics

Elliott

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

Date of Test: 9/2/2005 Test Engineer: Jmartinez Test Location: SVOATS #2 Config. Used: 1 Config Change: None EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT.

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:	61 %

Elliott

EMC Test Data

Client:	2Wire	Job Number:	J60845
Model	RG3700HGV-00 and RG370HGV-00	T-Log Number:	T60846
wouer.		Account Manager:	Mark Hill
Contact:	Jeremy Muir		
Spec:	EN55022	Class:	N/A

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	RE, 30 - 25000 MHz Spurious Emissions in Restricted Bands	FCC Part 15.209 / 15.247(c)	Pass	53.9dBuV/m (493.7 uV/m) @ 4874 MHz (- 0.1dB)
2	6dB Bandwidth	15.247(a)	Pass	12.15 MHz
3	Output Power	15.247(b)	Pass	21.8 dBm
4	Power Spectral Density (PSD)	15.247(d)	Pass	-2.61 dBm

Modifications Made During Testing:

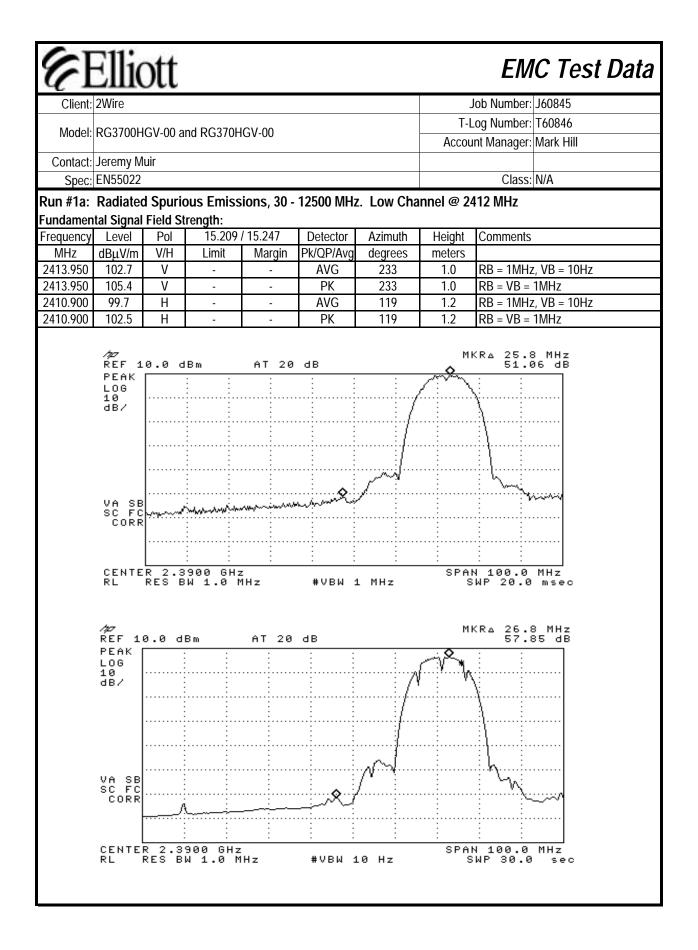
No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

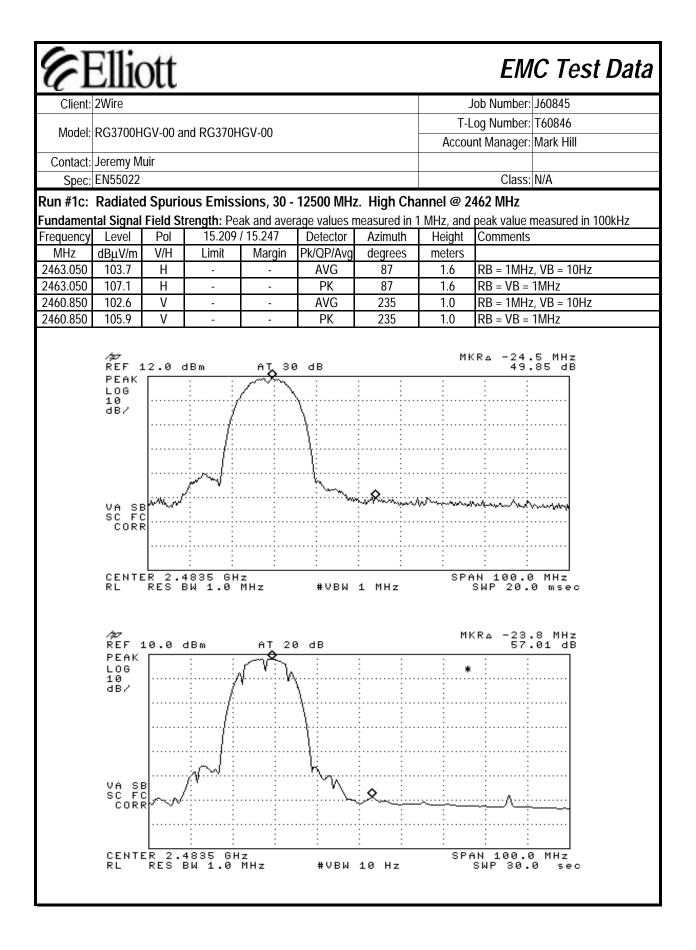
EUT Configuration:

Output Power Setting:	20
Antenna:	А
Output Mode:	TX100
Rate:	1 Mbps

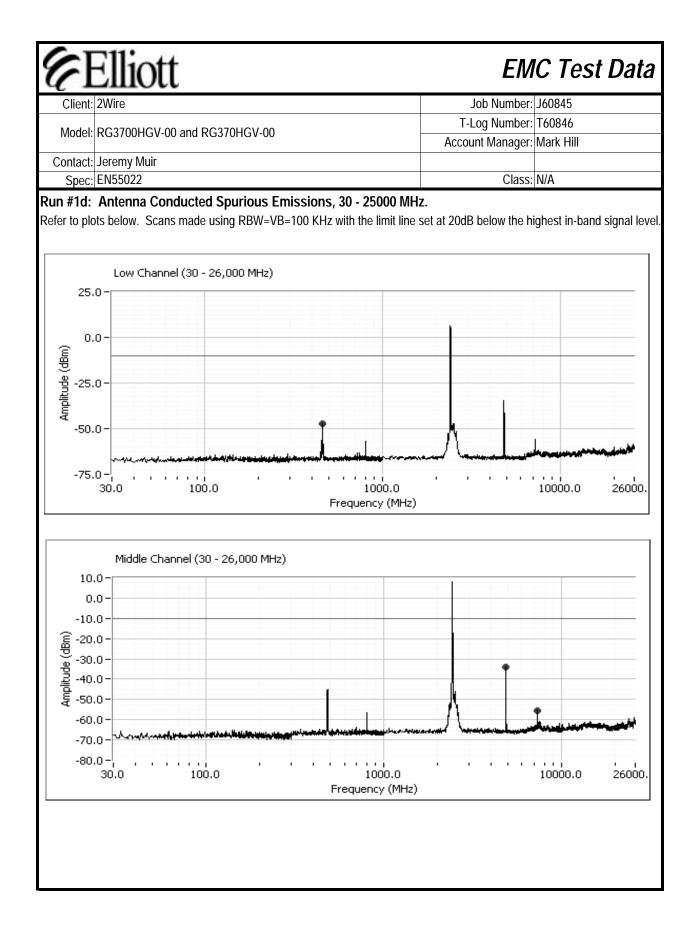


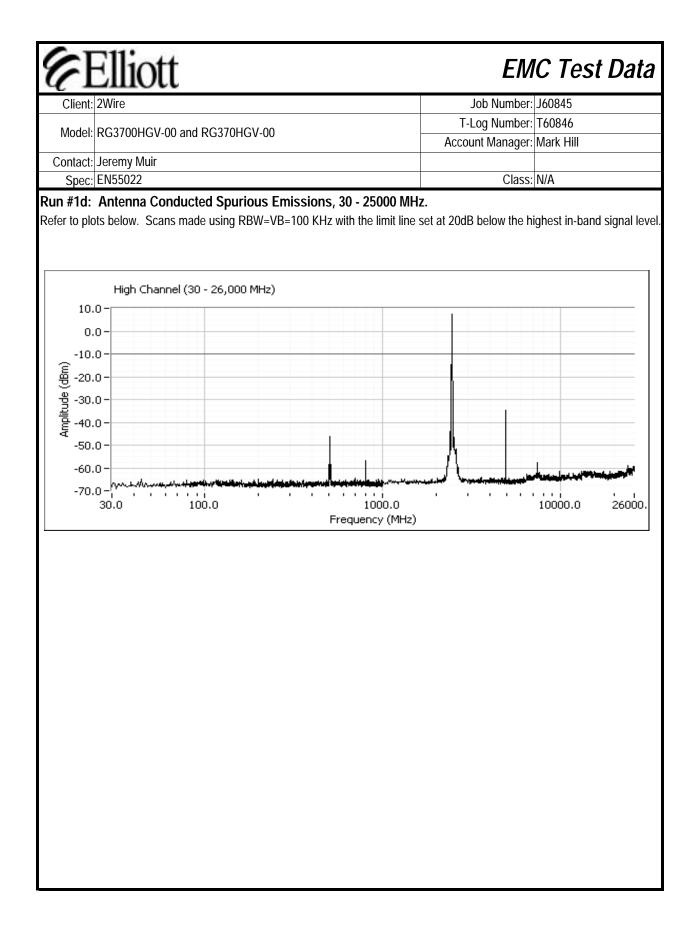
	2Wire	ott						lob Number:	J60845
							T-L	og Number:	T60846
Model:	RG3700H	GV-00 a	nd RG370H	GV-00				nt Manager:	
Contact:	Jeremy M	uir							
Spec:	EN55022							Class:	N/A
					-		_		
				rker - Peak	-				in-band and highest
			Delta Marke	r - Average	57.9	dB	restricted b	and level	
Band Edg	e Signal Fi	eld Stre	nath						
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2390.000		٧	74.0	-19.7	Peak	-	-	Power Sett	ng 20
2390.000	44.8	V	54.0	-9.2	Average	-	-	Power Sett	ng 20
Noto 1.		hy cubt	racting the r	markor dolta	a values from	the funder	ontal field o	tronath moo	
Note 1:	Calculated	a ny Subi	racing the f	narker ueita	a values from		iendi nela s	uengui meas	Surements.
Other Spu	rious Emis	ssions							
Frequency		Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
4823.888	51.5	Н	54.0	-2.5	AVG	268	1.7	Power Sett	
4823.888	57.1	Н	74.0	-16.9	PK	268	1.7	Power Sett	
4824.038	48.3	V	54.0	-5.7	AVG	174	1.0	Power Sett	
4824.038	56.0	V	74.0	-18.0	PK	174	1.0	Power Sett	
7236.735	37.9	Η	-	-	AVG	174	1.6	Power Sett	
7236.735	47.0	Н	-	-	PK	174	1.6	Power Sett	
9647.940	43.1	Н	-	-	AVG	23	1.3	Power Sett	
9647.940	51.3	H	-	-	PK	23	1.3	Power Sett	
12060.54	39.6	H	54.0	-14.4	AVG	276	1.1	Power Sett	3
12060.54 7237.840	51.2 35.3	H V	74.0	-22.8	PK AVG	276 322	1.1 1.5	Power Setti Power Setti	
7237.840	45.8	V	-	-	PK	322	1.5		
9648.015	43.8	V	-	-	AVG	322	1.5	Power Setti Power Setti	
9648.015	43.9 50.3	V	-	-	PK	3	1.2	Power Sett	3
12059.33	39.6	V	- 54.0	-14.4	AVG	301	1.2	Power Sett	
12059.33	50.5	V	74.0	-23.5	PK	301	1.0	Power Sett	u .

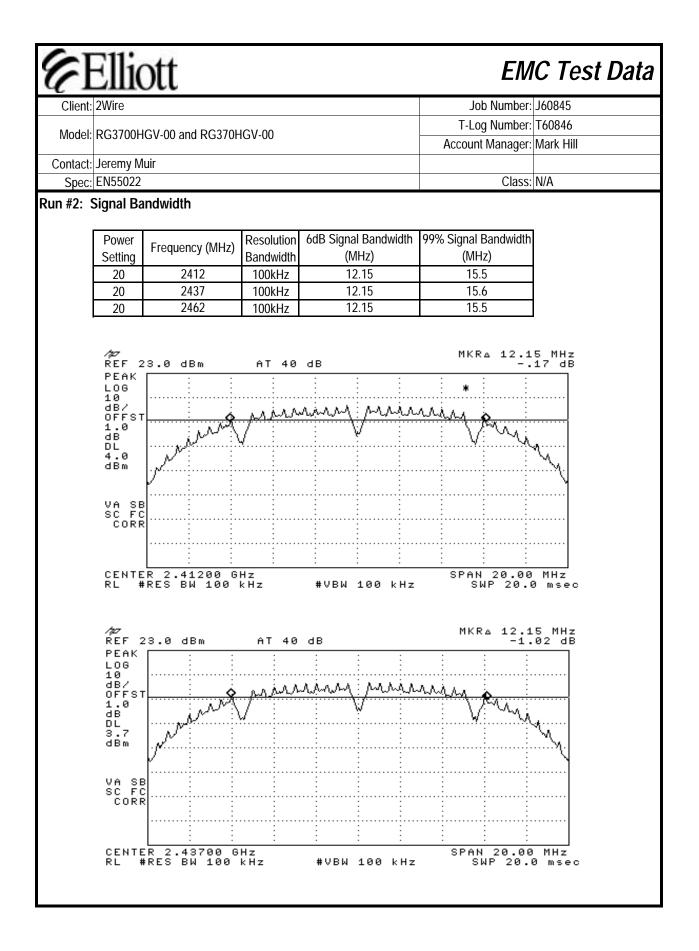
Client:	Ellic 2Wire	л						Job Number: J60845	
							T-Log Number: T60846		
Model:	RG3700H	GV-00 a	nd RG370F	IGV-00				Int Manager: Mark Hill	
Contact:	Jeremy M	uir							
	EN55022							Class: N/A	
Run #1b:	Radiated	l Spurio	ous Emiss	sions, 30 -	12500 MHz	z. Center C	hannel @	2437 MHz	
requency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
4874.023	53.9	Н	54.0	-0.1	AVG	209	1.8	Power Setting = 23	
4874.023	58.7	Н	74.0	-15.3	PK	209	1.8	Power Setting = 23	
7313.100	41.0	V	54.0	-13.0	AVG	22	1.0	Power Setting = 23	
7313.100	49.1	V	74.0	-24.9	PK	22	1.0	Power Setting = 23	
9747.910	55.4	V	-	-	AVG	2	1.3	Power Setting = 23	
9747.910	57.8	V	-	-	PK	2	1.3	Power Setting = 23	
12186.42	39.7	V	54.0	-14.3	AVG	22	1.2	Power Setting = 23	
12186.42	50.2	V	74.0	-23.8	PK	22	1.2	Power Setting = 23	
7311.680	46.5	Н	54.0	-7.5	AVG	167	1.5	Power Setting = 23	
7311.680	52.8	Н	74.0	-21.3	PK	167	1.5	Power Setting = 23	
7311.680 9747.933	52.8 51.0	Н	74.0 -	-21.3 -	AVG	223	1.4	Power Setting = 23	
7311.680 9747.933 9747.933	52.8 51.0 54.7	H H	-	-	AVG PK	223 223	1.4 1.4	Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53	52.8 51.0 54.7 39.7	H H H	- - 54.0	- - -14.3	AVG PK AVG	223 223 360	1.4 1.4 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933	52.8 51.0 54.7	H H	-	-	AVG PK	223 223	1.4 1.4	Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	
7311.680 9747.933 9747.933 12185.53 12185.53	52.8 51.0 54.7 39.7 50.5	H H H H	- - 54.0 74.0 estricted ba	- -14.3 -23.5	AVG PK AVG PK	223 223 360 360	1.4 1.4 1.5 1.5	Power Setting = 23 Power Setting = 23 Power Setting = 23 Power Setting = 23	

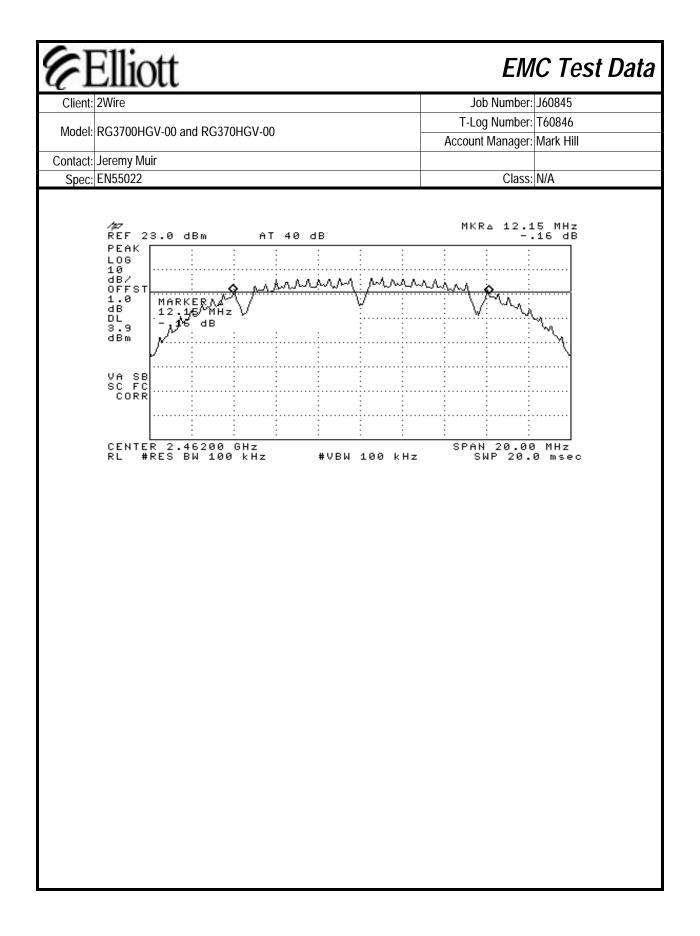


eremy Mu N55022		nd RG370H	GV-00				og Number: nt Manager:				
eremy Mı			GV-00			Accou	nt Manager:	Mark Hill			
-	uir						I: RG3700HGV-00 and RG370HGV-00 Account Manager: Mark Hill				
N55022											
							Class:	N/A			
						-					
Delta Marker - Peak 49.9 dB Delta Marker - Average 57.0 dB							Delta between highest in-band and highest restricted band level				
ontinue Signal Fi				0710							
Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments				
dBμV/m		Limit	Margin	0	degrees	meters					
				Peak	-	-					
46.7	V	54.0	-1.3	Average	-	-	Power Sett	ng 20			
alculated	I by subt	racting the r	narker delta	values from	n the fundam	nental field s	trength meas	surements.			
ous Emis	sions										
Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments				
dBμV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters					
								u .			
							÷				
		-	-22.0					<u> </u>			
		_	-					<u> </u>			
		54.0	-14.7								
49.3	V	74.0		PK		1.7					
	V	-	-	AVG				V			
53.0	V	-	-	PK	0	1.1		V			
39.3	V	54.0	-14.7	AVG	298	1.1		0			
49.8	V	74.0	-24.2	PK	298	1.1		* *			
	ignal Fi Level BμV/m 57.3 46.7 alculated us Emis Level BμV/m 48.4 56.5 49.6 56.4 43.6 51.2 44.4 51.2 44.4 51.2 44.4 51.2 40.6 49.3 47.4 53.0 39.3	ignal Field Stree Level Pol BμV/m V/H 57.3 V 46.7 V alculated by subt us Emissions Level Pol BµV/m V/H 48.4 V 56.5 V 49.6 H 56.4 H 43.6 H 51.2 H 44.4 H 51.2 H 49.3 V 47.4 V 53.0 V 39.3 V	lignal Field Strength Level Pol 15.209 $B\mu V/m$ V/H Limit 57.3 V 74.0 46.7 V 54.0 alculated by subtracting the r us Emissions Level Pol 15.209 $B\mu V/m$ V/H Limit 48.4 V 54.0 56.5 V 74.0 49.6 H 54.0 56.4 H 74.0 43.6 H 54.0 51.2 H 74.0 44.4 H - 51.2 H 74.0 44.4 H - 39.3 H 54.0 50.5 H 74.0 40.6 V 54.0 47.4 V - 53.0 V - 39.3 V 54.0	signal Field Strength Level Pol 15.209 / 15.247 BμV/m V/H Limit Margin 57.3 V 74.0 -16.7 46.7 V 54.0 -7.3 alculated by subtracting the marker delta us Emissions Level Pol 15.209 / 15.247 BμV/m V/H Limit Margin 48.4 V 54.0 -5.6 56.5 V 74.0 -17.6 49.6 H 54.0 -4.4 56.4 H 74.0 -17.6 43.6 H 54.0 -10.4 51.2 H 74.0 -22.8 44.4 H - - 51.2 H 74.0 -23.5 40.6 V 54.0 -14.7 50.5 H 74.0 -23.5 40.6 V 54.0 -13.4 49.3 V	ignal Field Strength Level Pol 15.209 / 15.247 Detector BµV/m V/H Limit Margin Pk/QP/Avg 57.3 V 74.0 -16.7 Peak 46.7 V 54.0 -7.3 Average alculated by subtracting the marker delta values from us Emissions Level Pol 15.209 / 15.247 Detector BµV/m V/H Limit Margin Pk/QP/Avg 48.4 V 54.0 -5.6 AVG 56.5 V 74.0 -17.6 PK 49.6 H 54.0 -4.4 AVG 56.4 H 74.0 -17.6 PK 43.6 H 54.0 -10.4 AVG 51.2 H 74.0 -22.8 PK 44.4 H - - PK 39.3 H 54.0 -14.7 AVG 50.5 <td< td=""><td>ignal Field Strength Level Pol 15.209 / 15.247 Detector Azimuth BµV/m V/H Limit Margin Pk/QP/Avg degrees 57.3 V 74.0 -16.7 Peak - 46.7 V 54.0 -7.3 Average - alculated by subtracting the marker delta values from the fundam us Emissions Level Pol 15.209 / 15.247 Detector Azimuth BµV/m V/H Limit Margin Pk/QP/Avg degrees 48.4 V 54.0 -5.6 AVG 137 56.5 V 74.0 -17.6 PK 121 56.4 H 54.0 -4.4 AVG 121 56.4 H 74.0 -17.6 PK 121 43.6 H 54.0 -10.4 AVG 169 51.2 H 74.0 -22.8 PK 169</td><td>ignal Field Strength Level Pol 15.209 / 15.247 Detector Azimuth Height BμV/m V/H Limit Margin Pk/QP/Avg degrees meters 57.3 V 74.0 -16.7 Peak - - 46.7 V 54.0 -7.3 Average - - alculated by subtracting the marker delta values from the fundamental field si us Emissions Level Pol 15.209 / 15.247 Detector Azimuth Height BµV/m V/H Limit Margin Pk/QP/Avg degrees meters 48.4 V 54.0 -5.6 AVG 137 1.8 56.5 V 74.0 -17.6 PK 121 1.9 56.4 H 54.0 -4.4 AVG 169 1.5 51.2 H 74.0 -17.6 PK 121 1.9 43.6 H 54.0</td><td>Aignal Field Strength Level Pol 15.209 / 15.247 Detector Azimuth Height Comments BµV/m V/H Limit Margin Pk/QP/Avg degrees meters 57.3 V 74.0 -16.7 Peak - - Power Setti 46.7 V 54.0 -7.3 Average - - Power Setti alculated by subtracting the marker delta values from the fundamental field strength meas us Emissions Level Pol 15.209 / 15.247 Detector Azimuth Height Comments BµV/m V/H Limit Margin Pk/QP/Avg degrees meters 48.4 V 54.0 -5.6 AVG 137 1.8 Power Setti 56.5 V 74.0 -17.6 PK 121 1.9 Power Setti 56.4 H 54.0 -4.4 AVG 169 1.5 Power Setti 51.2 H 54.0</td></td<>	ignal Field Strength Level Pol 15.209 / 15.247 Detector Azimuth BµV/m V/H Limit Margin Pk/QP/Avg degrees 57.3 V 74.0 -16.7 Peak - 46.7 V 54.0 -7.3 Average - alculated by subtracting the marker delta values from the fundam us Emissions Level Pol 15.209 / 15.247 Detector Azimuth BµV/m V/H Limit Margin Pk/QP/Avg degrees 48.4 V 54.0 -5.6 AVG 137 56.5 V 74.0 -17.6 PK 121 56.4 H 54.0 -4.4 AVG 121 56.4 H 74.0 -17.6 PK 121 43.6 H 54.0 -10.4 AVG 169 51.2 H 74.0 -22.8 PK 169	ignal Field Strength Level Pol 15.209 / 15.247 Detector Azimuth Height BμV/m V/H Limit Margin Pk/QP/Avg degrees meters 57.3 V 74.0 -16.7 Peak - - 46.7 V 54.0 -7.3 Average - - alculated by subtracting the marker delta values from the fundamental field si us Emissions Level Pol 15.209 / 15.247 Detector Azimuth Height BµV/m V/H Limit Margin Pk/QP/Avg degrees meters 48.4 V 54.0 -5.6 AVG 137 1.8 56.5 V 74.0 -17.6 PK 121 1.9 56.4 H 54.0 -4.4 AVG 169 1.5 51.2 H 74.0 -17.6 PK 121 1.9 43.6 H 54.0	Aignal Field Strength Level Pol 15.209 / 15.247 Detector Azimuth Height Comments BµV/m V/H Limit Margin Pk/QP/Avg degrees meters 57.3 V 74.0 -16.7 Peak - - Power Setti 46.7 V 54.0 -7.3 Average - - Power Setti alculated by subtracting the marker delta values from the fundamental field strength meas us Emissions Level Pol 15.209 / 15.247 Detector Azimuth Height Comments BµV/m V/H Limit Margin Pk/QP/Avg degrees meters 48.4 V 54.0 -5.6 AVG 137 1.8 Power Setti 56.5 V 74.0 -17.6 PK 121 1.9 Power Setti 56.4 H 54.0 -4.4 AVG 169 1.5 Power Setti 51.2 H 54.0			









2	Ellio	ott					EN	IC Test Da
	2Wire					J	ob Number	J60845
Model	PC3700H	IGV-00 and RG370H	GV-00				og Number	
			00-00			Accou	nt Manager:	Mark Hill
	Jeremy M EN55022	uir					Class	• NI/A
	Output P	owor					Class	IN/A
	num anten		dBi					
	Power	Frequency (MHz)	Peak Out	put Power	EIRP	Average F	Power Note 2	1
	Setting		dBm	W	W	dBm	W	
	20 20	2412 2437	21.3 19.9	0.135 0.098	0.214 0.156	19.2 19.1	0.083	-
	20	2437	21.8	0.098	0.130	19.1	0.083	-
ote 1:		wer measured using						
	<u> </u>	wer measured using	<u></u>					
			<u></u>					
			<u></u>					

ΥL	Ellio	ott					EM	IC Test Data
Client:	2Wire					J	ob Number:	J60845
Model	RG3700H	GV-00 and RG370H	GV-00				og Number:	
			00-00			Accour	nt Manager:	Mark Hill
	Jeremy M	uir						
	EN55022						Class:	N/A
tun #4: F	Power Sp	ectral Density						
	Power Setting	Operating Frequency (MHz)	Freq. @ PPSD	Res BW	P.S.D. (de	3m/3kHz)		
	20	2412	2412.73	3kHz	-2.	61		
	20	2437	2437.68	3kHz	-3.			
	20	2462	2461.26	3kHz	-3.	15		
lote 1:	Freq. @ F	PSD: Frequency of	the Peak P	ower Spectr	al Density (P	PSD)		
							ne set to en	sure a dwell time of at
lote 2:					•	5		l from preliminary scans
	using RB=	-3kHz using multiple	sweeps at a	a faster rate	over the 6dB	bandwidth	of the signa	l.
	PEAK LOG 10 dB/ OFFS1 1.0 dB						\$	
	DL 8.0 dBm		·	,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
	VA SE SC FC	×I						
		×I						
	SC FO	×I						
	SC FC CORF CENTE	×I		#VBW	2 64-		N 300.0	

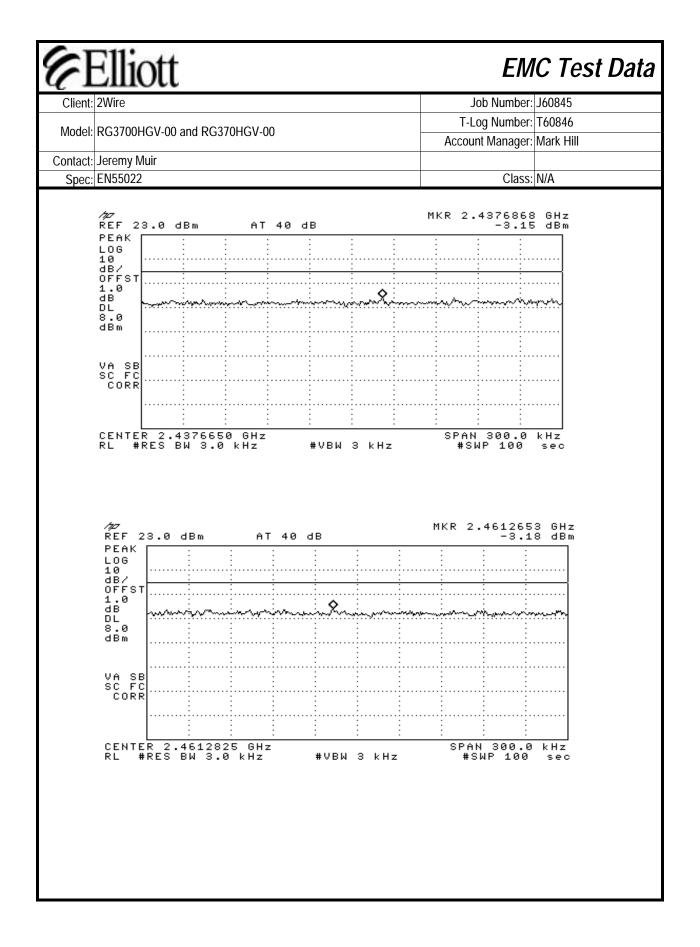


EXHIBIT 3: Test Configuration Photographs

EXHIBIT 4: Proposed FCC ID Label & Label Location

EXHIBIT 5: Detailed Photographs of 2Wire, Inc. Model RG3700HGV-00Construction

EXHIBIT 6: Operator's Manual for 2Wire, Inc. Model RG3700HGV-00

EXHIBIT 7: Block Diagram of 2Wire, Inc. Model RG3700HGV-00

EXHIBIT 8: Schematic Diagrams for 2Wire, Inc. Model RG3700HGV-00

EXHIBIT 9: Theory of Operation for 2Wire, Inc. Model RG3700HGV-00

EXHIBIT 10: RF Exposure Information