

## **CERTIFICATION TEST REPORT**

In Accordance With:	FCC Part 15 Subpart C,	15.249
	10 000 040 1 7 1	0007

IC RSS-210 Issue 7 June 2007

Applicant: AGL Corporation

2202 Redmond Road

Jacksonville, Arizona 72076

Equipment Under Test: Laser Pointer/Leveling System

Model:

**GP15** 

**FCC ID**: NR7GP15 **IC**: 5282A-GP15

Tested By: Nemko USA Inc.

11696 Sorrento Valley Road, Suite F

San Diego, CA 92121

Test Report: 2010 04147536 FCC2
Date: September 2, 2010

Project number: 43561-1 Nex Number: 147536

**Total Number of Pages:** 30

Nemko USA, Inc. FCC ID: NR7GP15 IC: 5282A-GP15

## Section 1. Summary of Test Results

#### General

#### All measurements are traceable to national standards

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15; Subpart C. Radiated tests were conducted is accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

The assessment summary is as follows:

Apparatus Assessed: Laser Pointer/Leveling System

Model: GP15

Works in conjunction with

**Hand Held Remote** 

GP15R

**Specification:** FCC Part 15 Subpart C, 15.249

IC RSS-210 Issue 7 June 2007

Date Received in Laboratory: April 5, 2010

Compliance Status: Complies

Exclusions: None

Non-compliances: None

Specification: FCC Part 15 Subpart C, 15.249

**Nemko USA, Inc.** FCC ID: NR7GP15

FCC ID: NR7GP15 IC: 5282A-GP15



## **Report Release History**

REVISION	DATE	COMMENTS	
-	September 2, 2010	Prepared By:	Alan Laudani
-	September 2, 2010	Initial Release:	Alan Laudani

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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**TESTED BY:** 

Date: September 2, 2010

Alan Laudani, EMC Test Engineer

Specification: FCC Part 15 Subpart C, 15.249

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# **Nemko USA, Inc.** FCC ID: NR7GP15 IC: 5282A-GP15

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Report Number: 2010 04147536 FCC2 Specification: FCC Part 15 Subpart C, 15.249



#### 2.1 **Product Identification**

The Equipment Under Test for compliance with FCC Part 15.249 was identified as follows:

EUT:	Laser Pointer/Leveling
	System
Model:	GP15
Serial Number:	HG0129

#### **Samples Submitted for Assessment** 2.2

The following samples of the apparatus have been submitted for type assessment:

DEVICE	MANUFACTURER MODEL # SERIAL #	POWER CABLE
EUT – Hand Held Remote	AGL Corporation	
	Model: GP15R	
	Serial #: HG0129R	
EUT – Laser Pointer/Leveling	AGL Corporation	12 Vdc twin lead from
System	Model: GP15	charger, internal
	Serial #: HG0129	rechargeable battery
EUT— Battery Charger	FSP Group Inc.	Two prong wall wart 100-
	Model: FSP024-DEEB2	240Vac Output 12V @
	Serial #: H00001138	2A max

CONNECTION	I/O CABLE
No connections	None - wireless

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#### 2.3 Theory of Operation

**The GP15R** is a Hand Held Remote to be used as a remote control for the Laser Pointer/Leveling System, model GP15. As a handheld device, the GP15R was tested in all three axes and with the keypad activated by mechanical means to hold the button down. When the GP15R is activated and transmits, the GP15 answers, changing operation as directed and stays transmitting for about 2 minutes, relaying status to the screen of the Hand Held Remote.

The GradoPlane 15 (GP15) is a self leveling laser instrument for height measurement and surveying. A dual grade percentage of +/-10% can be entered directly and will be level automatically.

The EUT's performance during test was evaluated against the performance criterion specified by applicable test standards. Performance results are detailed in the test results section of this report.

## 2.4 Technical Specifications of the EUT

Manufacturer: AGL Corporation

Operating Frequency: 916.6 to 919.6 MHz in the 902 to 928 MHz Band

Number of Operating Frequencies: 16

**Measured Field Strength:** 90.0 dBμV/m at 3m

or 32 mV/m  $\,$ 

Modulation: GFSK

Emissions Designator: 220KF1D

Antenna Data: Soldered onto circuit board

Antenna Connector: None

**Power Source:** Internal rechargeable batteries.

12 Vdc with 100-240 Vac charger

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## 3.1 Specifications

The apparatus was assessed against the following specifications:

#### FCC Part 15 Subpart C, 15.249

Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5850 MHz and 24.0-24.25 GHz bands.

#### IC RSS-210 Issue 7 June 2007

Low-power Licence-exempt Radio-communication Devices (All Frequency Bands): Category I Equipment. Annex 8 - Frequency Hopping and Digital Modulation Systems Operating in the Bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

#### IC RSS-Gen Issue 2 June 2007

General Requirements and Information for the Certification of Radiocommunication Equipment

## 3.2 Deviations From Laboratory Test Procedures

No deviations from Laboratory Test Procedure

#### 3.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range 16 – 22 °C
Humidity range 40-66 %
Pressure range 86 - 106 kPa



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Nemko						Cal Due
ID	Device	Manufacturer	Model	Serial Number	Cal Date	Date
110	Antenna, LPA	Electrometrics	LPA-25	1217	1/10/2009	2/10/2011
114	Antenna, Bicon	EMCO	3110	2997	3/5/2010	3/5/2012
317	Preamplifier	HP	8449A	2749A00167	6/16/2009	6/16/2010
911	Spectrum Analyzer	Agilent	E4440A	US41421266	12/17/2009	12/17/2010
877	Antenna, DRG Horn, .7-18GHz	AH Systems	SAS-571	688	7/28/2008	7/28/2010
898	EMI Receiver & filter set	HP	8546A	3625A00348	5/31/2009	5/31/2010
899	Filter Section	HP	85460A	3448A00288	5/31/2009	5/31/2010
811	Multimeter	Fluke	111	78130057	12/2/2009	12/2/2010
NA	Regulating Transformer	TDGC	0-250 Vac	NA	NCR	NCR

Registration of the OATS are on file with the Federal Communications Commission, under Registration Number 90579, the VCCI under registration number R-3027, and are also registered with Industry Canada under Site Numbers 2040B-1 and 2040B-2.



Specification: FCC Part 15 Subpart C, 15.249

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## **Section 4: Observations**

## 4.1 Modifications Performed During Assessment

No modifications were performed during assessment.

## 4.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

## 4.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

#### 4.4 Tests Deleted

No Tests were deleted from this assessment.

#### 4.5 Additional Observations

There were no additional observations made during this assessment.

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## **Section 5: Results Summary**

This section contains the following:

FCC Part 15 Subpart C: §15.249 IC RSS-210 Issue 7 June 2007 A2.9 IC RSS-Gen Issue 2 June 2007

The column headed "Required" indicates whether the associated clauses were invoked for the apparatus under test. The following abbreviations are used:

No: not applicable / not relevant

Yes: Mandatory i.e. the apparatus shall conform to these tests.

N/T Not Tested, mandatory but not assessed. (See section 4.4 Test deleted)

The results contained in this section are representative of the operation of the apparatus as originally submitted.

## 5.1 Results Summary

FCC	Industry Canada	Test Description	Required	Result
15.107 (a)	RSS-Gen 7.2.2	Power line Conducted Emissions – Receive or Stand-by Mode	Y	Pass
15.207 (a)	RSS-Gen 7.2.2	Power line Conducted Emissions Transmit Mode	Y	Pass
15.215 (c)	RSS-Gen 4.6.1	Occupied Bandwidth	Y	Pass
		Duty Cycle Test	Y	Pass
15.249 (a)	RSS-Gen 4.8 & 4.9 & RSS-210 A2.9	Field Strength of Emissions	Y	Pass
15.249 (d) 15.209 (a)	RSS-Gen 4.9 & RSS-210 A2.9	Spurious Emissions Outside of the band	Y	Pass
15.249 (b)		Fixed Point-to-Point Operation	N	
15.109 (a)	RSS-Gen 4.10 RSS-Gen 7.2.3	Receiver Spurious Emissions	Y	Pass



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## **Appendix A: Test Results**

## Power line Conducted Emissions / Receiver or Stand-by Mode

RSS-Gen Table 2 - AC Power Lines Conducted Emission Limits

Frequency range (MHz)	Conducted limit (dBµV)				
	Quasi-peak	Average			
0.15 - 0.5	66 to 56*	56 to 46*			
0.5 - 5	56	46			
5 – 30	60	50			

#### **Test Conditions:**

Sample Number:	HG0129	Temperature:	22°C
Date:	4-6-2010	Humidity:	44%
Modulation State:	Modulated	Tester:	Alan Laudani
		Laboratory:	Shielded room 2

#### **Test Parameters:**

Peak RBW: 100kHz VBW: 100kHz Quasi-Peak: RBW 9kHz, VBW 30 kHz Average: RBW 9kHz, VBW 30 kHz

Quasi-Peak Limit Red Line, Average Limit Purple Line

## Sweep Settings (1 Range)

I	Frequencie	S		Analyzer Settings				
Start	Stop	Sweep Points	Res BW	Sweep Time	Atten	Preamp	Pre- selector	Ref Level
150 kHz	30 MHz	8001	9 kHz (6dB)	1 s	Auto	Off	Off	80 dBµV

#### **Final Measurement**

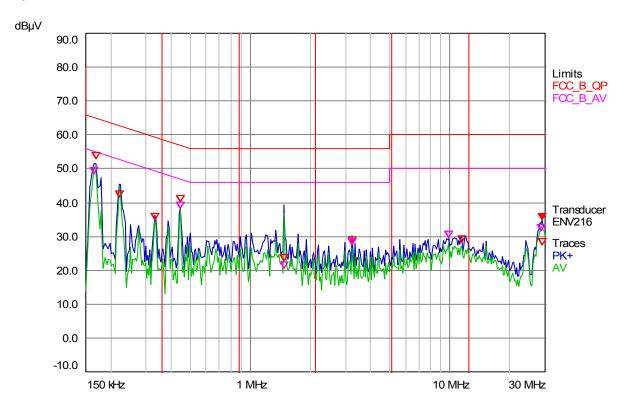
Detectors: QP, AV Meas Time: 1 s

Test Results: EUT Complies

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Mode: Receive, laser system on, rotating operation

Input: Line

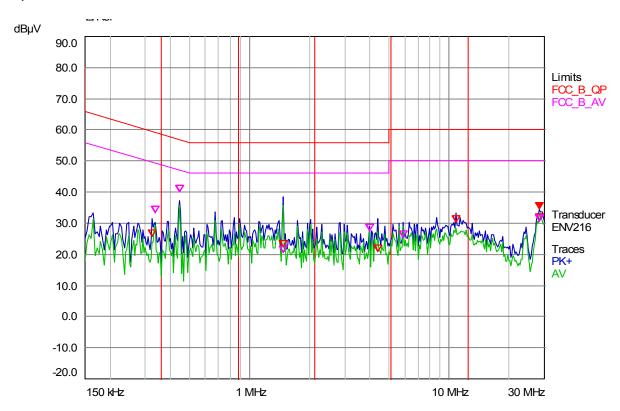


Trace	Frequency	Level	Limit	Delta Limit
	(MHz)	( dBµV)	( dBµV)	(dB)
1 QP	0.168656	52.81	65.03	-12.22
2 AV	0.164925	48.52	55.21	-6.69
1 QP	0.220894	41.52	62.79	-21.27
1 QP	0.332831	34.80	59.38	-24.58
1 QP	0.4485	40.08	56.90	-16.82
2 AV	0.444769	38.24	46.97	-8.73
1 QP	1.478325	22.67	56.00	-33.33
2 AV	1.478325	20.50	46.00	-25.50
1 QP	3.250669	27.83	56.00	-28.17
2 AV	3.246938	27.51	46.00	-18.49
1 QP	11.493	28.18	60.00	-31.82
2 AV	9.810206	29.63	50.00	-20.37
1 QP	28.996294	27.27	60.00	-32.73
2 AV	28.619438	31.43	50.00	-18.57

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Mode: Receive, laser system on, rotating operation

Input: Neutral

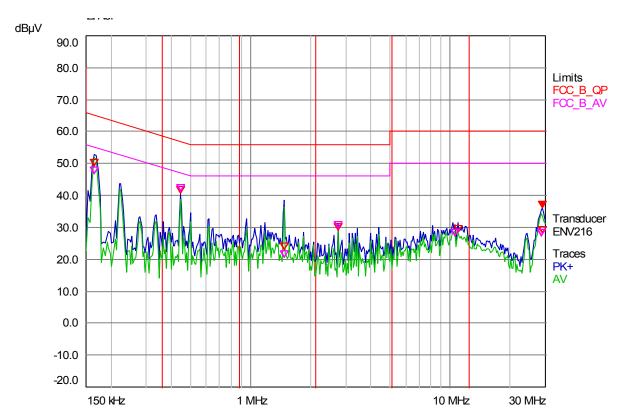


Trace	Frequency	Level	Limit	Delta Limit
	(MHz)	( dBµV)	( dBµV)	(dB)
1 QP	0.325369	25.74	59.57	-33.83
2 AV	0.336563	33.32	49.29	-15.97
1 QP	0.4485	39.92	56.90	-16.98
2 AV	0.4485	40.08	46.90	-6.82
1 QP	1.478325	22.44	56.00	-33.56
2 AV	1.478325	20.45	46.00	-25.55
1 QP	4.366313	20.80	56.00	-35.20
2 AV	3.978263	27.42	46.00	-18.58
2 AV	5.884931	25.31	50.00	-24.69
1 QP	10.869881	30.23	60.00	-29.77
1 QP	28.182881	30.80	60.00	-29.20
2 AV	28.182881	30.71	50.00	-19.29

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Mode: Transmit, laser system on, rotating operation

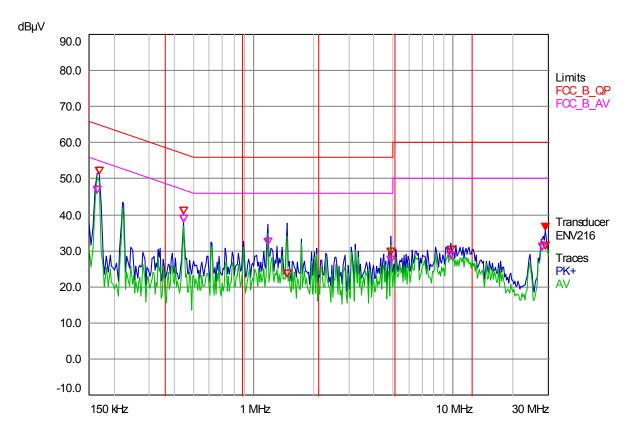
Input: Line



Trace	Frequency	Level	Limit	Delta Limit
	(MHz)	( dBµV)	( dBµV)	(dB)
1 QP	0.164925	49.03	65.21	-16.18
2 AV	0.164925	46.78	55.21	-8.43
1 QP	0.4485	40.53	56.90	-16.37
2 AV	0.4485	41.17	46.90	-5.73
1 QP	1.467131	22.99	56.00	-33.01
2 AV	1.467131	20.49	46.00	-25.51
1 QP	2.74695	29.19	56.00	-26.81
2 AV	2.74695	29.55	46.00	-16.45
1 QP	10.981819	28.30	60.00	-31.70
2 AV	10.593769	27.08	50.00	-22.92
1 QP	28.869431	28.06	60.00	-31.94
2 AV	28.682869	27.22	50.00	-22.78

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Mode: Transmit, laser system on, rotating operation Input: Neutral



Trace	Frequency	Level	Limit	Delta Limit
	(MHz)	( dBµV)	( dBµV)	(dB)
2 AV	0.164925	45.85	55.21	-9.36
1 QP	0.168656	51.14	65.03	-13.89
2 AV	0.444769	37.89	46.97	-9.08
1 QP	0.4485	40.13	56.90	-16.77
2 AV	1.176094	31.64	46.00	-14.36
1 QP	1.478325	22.59	56.00	-33.41
1 QP	4.873763	28.82	56.00	-27.18
2 AV	4.873763	26.65	46.00	-19.35
1 QP	9.746775	29.22	60.00	-30.78
2 AV	9.746775	27.78	50.00	-22.22
2 AV	27.932888	30.11	50.00	-19.89
1 QP	28.806	30.45	60.00	-29.55

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## **Occupied Bandwidth**

4.6.1 Occupied Bandwidth

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.

The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

Clause 15.215(c); Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

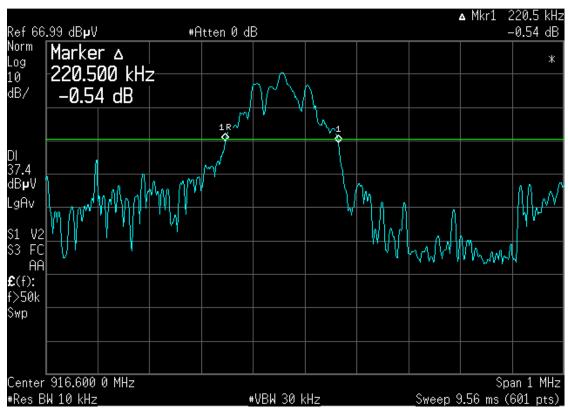
#### **Test Conditions:**

Sample Number:	HG0129	Temperature:	22°C
Date:	7-15-2010	Humidity:	40%
Modulation State:	Modulated	Tester:	Alan Laudani
		Laboratory:	SOATS

Test Results: 220 kHz

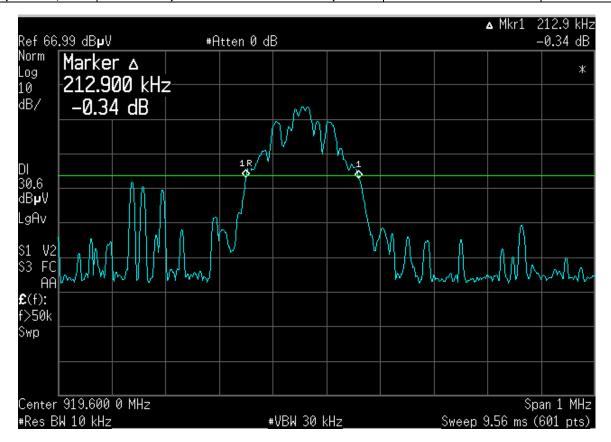
- Span is wide enough to capture the channel transmission
- RBW is 1% of the span
- VBW is 3X RBW
- Sweep is auto
- Detector is Peak
- Trace is Max Hold
- A peak output max hold reading was taken, a display line was drawn 20 dB lower than peak level. The 20 dB bandwidth was determined from where the channel output spectrum intersected the display line.

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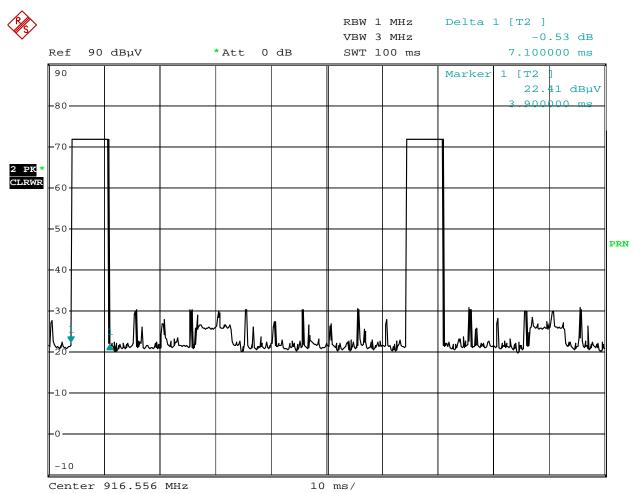
## **Duty Cycle Test**

## **Test Conditions:**

Sample Number:	HG0129	Temperature:	17°C
Date:	4-6-2010	Humidity:	70%
Modulation State:	w/ modulation	Tester:	Alan Laudani
		Laboratory:	SOATS

**Test Results:** The modulation is digital.

Duty cycle factor =  $20 \times \log((0.007s + 0.007s)/100ms) = -17dB$ 



Date: 6.APR.2010 15:21:49

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#### Field Strength of Emissions

15.249(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency (MHz)	Field strength of fundamental (mV/meter)	Field strength of harmonics (uV/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

#### Emissions radiated outside of the band

15.249 (d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Sec. 15.209, whichever is the lesser attenuation.

#### **Test Conditions:**

Sample Number:	HG0129	Temperature:	19°C
Date:	7-15-2010	Humidity:	43%
Modulation State:	w/ modulation	Tester:	Alan Laudani
		Laboratory:	SOATS

**Test Results:** See Table. EUT complies for fundamental power, band edges and spurious emissions.

#### Additional Observations:

- All digital emission measurements below 1 GHz were performed at 3m employing a CISPR quasi-peak detector
- Peak measurements above 1 GHz utilize a RBW of 1 MHz and a VBW of 3 MHz
- Power levels did not change when input power was varied by 15%. An autotransformer and multimeters was used to vary the input 120 Vac to the charger. Non-charger measurements were performed when batteries were fully charged.
- The Spectrum was searched from 30 MHz to the 10<sup>th</sup> Harmonic (9084 MHz), but no emissions other than reported within 20 dB of the limits were evident.
- All Measurements below 1 GHz were performed at 3m employing a CISPR quasi-peak detector
- Peak measurements above 1 GHz utilize a RBW of 1 MHz and a VBW of 3 MHz
- Peak measurements below 1 GHz utilize a RBW of 100 kHz and a VBW of 300 kHz

#### Limit = 50 mV/m

Measured Peak reading 61.6 dBuV + antenna factor 23.3 dB/m + Cable loss 5.1 dB = 90.0 dBuV/  $10^{((90.0-120)/20)}$  = 0.032 V/m, or 32 mV/m

For pulse modulated devices with a pulse-repetition frequency of 20 Hz or less and for which CISPR quasi-peak measurements are specified, compliance with the regulations shall be demonstrated using measuring equipment employing a peak detector function, properly adjusted for such factors as pulse desensitization, using the same measurement bandwidths that are indicated for CISPR quasi-peak measurements

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	Radiated Emissions Data										
Job#: NEX#:		43561 147536			Time :	7-15-2010 1510 AAL		Page	1	of	1
Client Na EUT Nar EUT Mod EUT Ser EUT Cor	me : del # : rial # :	AGL Corporation Laser Levelling System GP15 HG0129 TRANSMIT/LASER ON On battery					• • • •	EUT Vol EUT Fre Phase: NOATS SOATS Distance	equency e < 1000	MHz:	12 dc - X 3 m
Specifica Loop Ant Bicon Ar Log Ant: DRG Ant Cable LF Cable HI Preamp Preamp	t. #: nt.#: #: t. # F#: LF#:	CFR47 Pa NA 114_3M 110_3M 877 SOATS SOATS NA 317	S An	Tem Humid Spec An alyzer D Peak De	Class B  np. (°C): dity (%): alyzer #: isplay #: tector #:	19 43 898 898 898	911	Distance	Quasi-Pe Peak < 10 Peal > 10 Average	eak 000	RBW: 120 kHz Video Bandwidth 300 kHz RBW: 100 kHz Video Bandwidth 300 kHz Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 10 Hz RBW: 2 MHz Video Bandwidth 11 Hz
Meas. Freq. (MHz)	Meter Reading <b>Vertical</b>	Meter Reading Horizontal	Det.	EUT Side F/L/R/B	Ant. Height m	Max. Reading (dBµV)	Corrected Reading (dBµV/m)	Spec. limit (dBµV/m)	CR/SL Diff. (dB)	Pass Fail	Comment
52.4 86.1 223.8 271.9 287.8 399.9 431.9	18.2 25.7 25.5 14.0 13.5 13.7 7.9	15.4 13.1 22.3 11.4 11.4 11.3 8.3	Q Q Q Q Q Q	- - - - -	1.0 1.0 1.0 1.0 1.0 1.0	18.2 25.7 25.5 14.0 13.5 13.7 8.3	31.1 35.0 39.3 29.9 29.9 32.9 28.2	40.0 40.0 46.0 46.0 46.0 46.0 46.0	-8.9 -5.0 -6.7 -16.1 -16.1 -13.1 -17.8	Pass Pass Pass Pass Pass Pass Pass	

Job # : NEX #:							ions Dat				
		43561 147536			Date : Time : Staff :	7-15-2010 1120 AAL		Page	1	of	1
Client Nam EUT Nam EUT Mod EUT Seria EUT Conf	ne : lel # : al # :	AGL Corpo Laser Leve GP15 HG0129 TRANSMI CHARGIN	elling Sys	stem				EUT Vol EUT Fre Phase: NOATS SOATS Distance	quency	MHz:	120 60 1 X 3 m
Specificat Loop Ant. Bicon Ant Log Ant.# DRG Ant. Cable LF# Cable HF: Preamp L Preamp H	. #: t.#: t: . # #: :#: LF#:	CFR47 Pa NA 114_3M 110_3M 877 SOATS SOATS NA 317	; An	Tem Humio Spec Ana alyzer D Peak De	Class B  ip. (°C): dity (%): alyzer #: isplay #: tector #:	19 43 898 898 898	911 911		Quasi-Pe Peak < 10 Peal > 10 Average	000	RBW: 120 kHz Video Bandwidth 300 kHz RBW: 100 kHz Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 10 Hz RBW: 2 MHz Video Bandwidth 11 Hz
Meas. Freq. (MHz)	Meter Reading Vertical	Meter Reading Horizontal	Det.	EUT Side F/L/R/B	Ant. Height m	Max. Reading (dBµV)	Corrected Reading (dBµV/m)	Spec. limit (dBµV/m)	CR/SL Diff. (dB)	Pass Fail	Comment
46.0	13.5	6.6	Q	-	1.0	13.5	26.2	40.0	-13.8	Pass	
52.4	18.2	15.4	Q	-	1.0	18.2	31.1	40.0	-8.9	Pass	
86.1	25.7	13.1	Q	-	1.0	25.7	35.0	40.0	-5.0	Pass	
112.0	20.5	13.1	Q	-	1.0	20.5	36.0	43.5	-7.5	Pass	
128.0	18.5	19.7	Q	-	1.0	19.7	33.0	43.5	-10.5	Pass	
176.0	18.8	17.4	Q	-	1.0	18.8	37.0	43.5	-6.5	Pass	
223.8	25.5	22.3	Q	-	1.0	25.5	39.3	46.0	-6.7	Pass	
271.9	14.0	11.4	Q Q	-	1.0	14.0 13.5	29.9	46.0	-16.1	Pass	
287.8 399.9	13.5 13.7	11.4 11.3	Q Q	-	1.0	13.5	29.9 32.9	46.0 46.0	-16.1 -13.1	Pass	
431.9	7.9	8.3	Q	-	1.0	8.3	28.2	46.0	-13.1	Pass Pass	
431.9	1.9	0.3	Q		1.0	0.3	20.2	40.0	-17.0	rass	

Nemko USA	, Inc.	11696 Sori	rento Valley Road, Suite F, San Phone (858) 755-5525 - Fa	0 ,
DATE	DOCUMENT N	AME	DOCUMENT #	PAGE
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				F	Radiate	d Emiss	ions Dat	a			
Job#:		43561			Date :	9-2-2010		Page	1	of	1
NEX #:		147536			Time :	0930		Ü			
Client Na	ame ·	AGL Corp	oration		Staff:	AAL	·	EUT Vol	tane ·		12
EUT Nar		System	oration					EUT Fre			dc
EUT Mod		GP15						Phase:	4400)		batt
EUT Ser	rial # :	HG0129						NOATS			X
EUT Cor	nfig. :	transmit						SOATS			
		test mode						Distance			3 m
Specifica	ation :	CFR47 Pa	rt 15 Cı	ihnart B	Class B			Distance	> 1000	IVIHZ:	<u>3 m</u>
Loop Ant		NA	11 13, 30	ıbpart b,	Class D					Quasi-Pe	eak RBW: 120 kHz
Bicon An		128_3m		Tem	np. (°C):	28					Video Bandwidth 300 kHz
Log Ant.		110_3m			dity (%):					Peak	RBW: 1 MHz
DRG Ant		752			alyzer #:		835				Video Bandwidth 3 MHz
Cable LF Cable HF		SOATS			isplay#:	898 898	835			Average	RBW: 1 MHz Video Bandwidth 10 Hz
Preamp		na	Quasi-i		elector #:						VIGEO Balluwidili 10 HZ
Preamp		317					urements be	low 1 GHz	are Quasi-	Peak val	ues, unless otherwise stated
						Me	easurements	above 1 G	Hz are Av	erage val	ues, unless otherwise stated
Meas.	Meter	Meter	Det.	EUT	Ant.	Max.	Corrected	Spec.	CR/SL	Pass	
Freq. (MHz)	Reading Vertical	Reading Horizontal		Side F/L/R/B	Height m	Reading (dBµV)	Reading (dBµV/m)	limit (dBµV/m)	Diff. (dB)	Fail	Comment
(1711 12)	voi ticai	. Ionzoniai		176/100	- 111	(συμν)	(GDP A1111)	(aphaill)	(40)		- Commont
902.0	-3.4	-3.5	Q	-	1.0	-3.4	25.1	46.0	-20.9	Pass	
928.0	-3.6	-3.6	Q	-	1.0	-3.6	24.8	46.0	-21.2	Pass	
040.0	04.0	57.0	_		4.^	04.0	00.0	04.0	4.0	D-	
916.6	61.6	57.8	Р	-	1.0	61.6	90.0	94.0	-4.0	Pass	
1833.1	46.2	46.1	P	-	1.0	46.2	47.6	74.0	-26.4	Pass	
1833.1	29.2	29.1	A	-	1.0	29.2	30.6	54.0	-23.4	Pass	
2749.7	49.2	48.7	Р	-	1.0	49.2	54.3	74.0	-19.7	Pass	
2749.7	32.2	31.7	Α	-	1.0	32.2	37.3	54.0	-16.7	Pass	
010.6	60.6	F7.6	P		1.0	60.6	00.0	04.0	F 0	Dese	
	60.6	57.6	Р	-	1.0	60.6	89.0	94.0	-5.0	Pass	
919.6	46.1	45.9	Р	-	1.0	46.1	47.5	74.0	-26.5	Pass	
1839.2	70.1				1.0	29.1	20.5	54.0	-23.5	Pass	
1839.2 1839.2	29.1	28.9	A	-			30.5				
1839.2		28.9 48.8 31.8	P A	-	1.0	49.0 32.0	54.1 37.1	74.0 54.0	-19.9 -16.9	Pass Pass	
1839.2 1839.2 2758.8	29.1 49.0	48.8	Р	-	1.0	49.0 32.0 ed Emiss	54.1 37.1	74.0 54.0	-19.9	Pass Pass	1
1839.2 1839.2 2758.8 2758.8	29.1 49.0	48.8 31.8	Р	-	1.0 1.0 Radiate	49.0 32.0 ed Emiss 9-2-2010 0810	54.1 37.1	74.0 54.0	-19.9 -16.9	Pass	_1_
1839.2 1839.2 2758.8 2758.8	29.1 49.0 32.0	48.8 31.8 43561	P A	-	1.0 1.0 Radiate	49.0 32.0 ed Emiss 9-2-2010	54.1 37.1	74.0 54.0	-19.9 -16.9	Pass Pass	1
1839.2 1839.2 2758.8 2758.8 Job #: NEX #: Client Na	29.1 49.0 32.0 ame: me:	48.8 31.8 43561 147536 AGL Corp System	P A	-	1.0 1.0 Radiate	49.0 32.0 ed Emiss 9-2-2010 0810	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre	-19.9 -16.9	Pass Pass of	120 ac
1839.2 1839.2 2758.8 2758.8 Job #: NEX #: Client Na EUT Nan	29.1 49.0 32.0 32.0 ame: me: del#:	48.8 31.8 43561 147536 AGL Corp System GP15	P A	-	1.0 1.0 Radiate	49.0 32.0 ed Emiss 9-2-2010 0810	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre Phase:	-19.9 -16.9	Pass Pass of	120 ac 1
1839.2 1839.2 2758.8 2758.8 Job #: NEX #: Client Na EUT Nar EUT Mo EUT Ser	29.1 49.0 32.0 32.0 ame : me : ndel # : rial # :	43561 147536 AGL Corp System GP15 HG0129	P A	-	1.0 1.0 Radiate	49.0 32.0 ed Emiss 9-2-2010 0810	54.1 37.1	74.0 54.0 2a Page EUT Vol EUT Fre Phase: NOATS	-19.9 -16.9	Pass Pass of	120 ac
1839.2 1839.2 2758.8 2758.8 Job #: NEX #: Client Na EUT Nan	29.1 49.0 32.0 32.0 ame : me : ndel # : rial # :	43561 147536 AGL Corp System GP15 HG0129 transmit	P A	-	1.0 1.0 Radiate	49.0 32.0 ed Emiss 9-2-2010 0810	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre Phase:	-19.9 -16.9 1 tage :	Pass Pass of	120 ac 1
1839.2 1839.2 2758.8 2758.8 Job #: NEX #: Client Na EUT Nar EUT Mo EUT Ser	29.1 49.0 32.0 32.0 ame : me : ndel # : rial # :	43561 147536 AGL Corp System GP15 HG0129 transmit test mode	P A	-	1.0 1.0 Radiate Date : Time : Staff :	49.0 32.0 2d Emiss 9-2-2010 0810 AAL	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre Phase: NOATS SOATS	1 tage:	Pass Pass of MHz:	120 ac 1 X
1839.2 1839.2 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8	29.1 49.0 32.0 32.0 ame : me : del # : rial # : nfig. :	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode	P A	-	1.0 1.0 Radiate Date : Time : Staff :	49.0 32.0 2d Emiss 9-2-2010 0810 AAL	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre Phase: NOATS SOATS Distance	1 tage:	Pass Pass of 	120 ac 1 X
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1839.2 1839.2 2758.8 2758.8 2758.8 Job #: NEX #: Client Na EUT Nan EUT Ser EUT Cor Specifica Loop An Bicon Ar	29.1 49.0 32.0 ame: me: me: del #: rial #: nfig.: ation: tt. #: nt.#:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pa NA 128_3m	P A	- - I ubpart B	1.0 1.0 1.0 Radiate Date: Time: Staff:	49.0 32.0 ed Emiss 9-2-2010 0810 AAL	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre Phase: NOATS SOATS Distance	1 tage:	Pass Pass  of  MHz: MHz: Quasi-P	120 ac 1 X 3 m 3 m 2 m 2 video Bandwidth 300 kHz
1839.2 1839.2 2758.8 2758.8 2758.8 2758.8 2758.8 2015 MEX #: Client Na EUT Nar EUT Mor EUT Cor Specifica Loop An	29.1 49.0 32.0 ame: me: me: rial #: rial #: nfig.: ation: tt. #: tt. #:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode	P A	Lubpart B. Tem	1.0 1.0 Radiate Date: Time: Staff:	49.0 32.0 ed Emiss 9-2-2010 0810 AAL	54.1 37.1	74.0 54.0 ta Page EUT Vol EUT Fre Phase: NOATS SOATS Distance	1 tage:	Pass Pass of 	120 ac 1 X 3 m 3 m
1839.2 1839.2 2758.8 2758.8 2758.8 2758.8 Job #: NEX #: Client Na EUT Nan EUT Ser EUT Cor Specifica Loop An Bicon Ar Log Ant: DRG An Cable LF	29.1 49.0 32.0 32.0 ame: me: del #: rinfig.: ation: tt. #: tt. #: tt. #:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pa NA 128_3m 110_3m 752 SOATS	P A	Jubpart B Terr Humie Spec An	1.0 1.0 1.0  Radiate  Date: Time: Staff:  Class E  pp. (°C): dit(y(%): alyzer #: bisplay #:	49.0 32.0 ed Emiss 9-2-2010 0810 AAL 28 78 898 898	54.1 37.1 ions Dat	74.0 54.0 ta Page EUT Vol EUT Fre Phase: NOATS SOATS Distance	1 tage:	Pass Pass  of  MHz: MHz: Quasi-P	ac 120 ac 1 X 3 m 3 m 3 m Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 3 MHz RBW: 1 MHz RBW: 1 MHz
Job #: NEX #: Client Na EUT Nai EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant: DRG An Cable LI Cable LI Cable LI Cable LI	29.1 49.0 32.0 32.0 ame: me: me: me: midel #: rial #: nfig.: ation: tt. #: tt. #: F#:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pa NA 128_3m 110_3m 752 SOATS SOATS	P A	Jubpart B. Tem Humik Spec Annalyzer D. Peak De	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class E  pp. (°C): dity (%): slyzer #: bisplay #: bistector #:	49.0 32.0 8d Emiss 9-2-2010 0810 AAL 28 78 898 898 898	54.1 37.1 ions Dat	74.0 54.0 ta Page EUT Vol EUT Fre Phase: NOATS SOATS Distance	1 tage:	Pass Pass  of  MHz: MHz: Quasi-P	120 ac 1 X 3 m 3 m 2 Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 3 MHz
Job #: NEX #: Client Na EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant. DRG An Cable LF Cable HI Preamp	29.1 49.0 32.0 32.0 ame: me: me: rial#: nfig.: ation: tt.#: tt.#: tt.#: LF#:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pe NA 128 3m 110 3m 752 SOATS SOATS	P A	Jubpart B. Tem Humik Spec Annalyzer D. Peak De	1.0 1.0 1.0  Radiate  Date: Time: Staff:  Class E  pp. (°C): dit(y(%): alyzer #: bisplay #:	49.0 32.0 8d Emiss 9-2-2010 0810 AAL 28 78 898 898 898 NA	54.1 37.1 ions Dat	74.0 54.0 Page EUT Voll EUT Fre Phase: NOATS SOATS Distance	1 tage: equency	Pass Pass Of  MHz: MHz: Quasi-P Peak Average	ac 1 X 3 m 3 m 3 m Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 3 MHz RBW: 1 MHz Video Bandwidth 10 Hz
Job #: NEX #: Client Na EUT Nai EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant: DRG An Cable LI Cable LI Cable LI Cable LI	29.1 49.0 32.0 32.0 ame: me: me: rial#: nfig.: ation: tt.#: tt.#: tt.#: LF#:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pa NA 128_3m 110_3m 752 SOATS SOATS	P A	Jubpart B. Tem Humik Spec Annalyzer D. Peak De	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class E  pp. (°C): dity (%): slyzer #: bisplay #: bistector #:	49.0 32.0 ed Emiss 9-2-2010 0810 AAL 28 78 898 898 898 898 NA Meas	54.1 37.1 ions Dat	74.0 54.0 ta Page EUT Voll EUT Fre Phase: NOATS SOATS Distance Distance	1 tage: quency	Pass Pass Of  MHz: MHz: Quasi-Peak Average	ac 120 ac 1 X 3 m 3 m 3 m Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 3 MHz RBW: 1 MHz Video Bandwidth 10 Hz Video Bandwidth 10 Hz
Job #: NEX #: Client Na EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant. DRG An Cable LF Cable HI Preamp	29.1 49.0 32.0 32.0 ame: me: me: rial#: nfig.: ation: tt.#: tt.#: tt.#: LF#:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pe NA 128 3m 110 3m 752 SOATS SOATS	P A	Jubpart B. Tem Humik Spec Annalyzer D. Peak De	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class E  pp. (°C): dity (%): slyzer #: bisplay #: bistector #:	49.0 32.0 ed Emiss 9-2-2010 0810 AAL 28 78 898 898 898 898 NA Meas	54.1 37.1 ions Dat	74.0 54.0 ta Page EUT Voll EUT Fre Phase: NOATS SOATS Distance Distance	1 tage: quency	Pass Pass Of  MHz: MHz: Quasi-Peak Average	ac 120 ac 1 X 3 m 3 m 3 m Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 3 MHz RBW: 1 MHz Video Bandwidth 10 Hz Video Bandwidth 10 Hz
Job #: NEX #: Client Na EUT Mo EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant DRG An Cable LF Cable HI Preamp Preamp  Meas. Freq.	29.1 49.0 32.0  ame: me: me: rial #: rial #: ntig:: tt. #: tt. # F#: LF#: HF#  Meter Reading	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 Vansmit test mode CFR47 Pa NA 128 3m 752 SOATS SOATS SOATS	oration  art 15, Su  Art Quasi-	Jubpart B. Tem Humic Spec An nalyzer D Peak De Prese	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class E  pp. (°C): dity(%): salyzer#: sisplay#: etector#: Ant. Height	49.0 32.0 ed Emiss 9-2-2010 0810 AAL 28 78 898 898 898 NA Meas M	54.1 37.1  ions Dat  835 835  sassurements be	74.0 54.0  Eut Vol Eut Fre Phase: NOATS SOATS Distance Distance Distance  low 1 GHz above 1 G Spec. limit	-19.9 -16.9  1  tage:	Pass Pass  of  MHz: MHz: Quasi-Peak  Average	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz Video Bandwidth 13 MHz Video Bandwidth 10 Hz Video Bandwid
Job #: NEX #: Client Na EUT Nai EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant: DRG An Cable LF Cable HI Preamp Preamp Meas.	29.1 49.0 32.0 ame: me: me: rial#: rial#: nfig.: ation: tt.#: tt.#: tt.#: F#: F#: F#: HF#:	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode Transmit 128_3m 110_3m 752 SOATS SOATS na 317	oration  art 15, Su  Art Quasi-	Jubpart B. Tem Humic Spec An allyzer D Peak De Prese	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class E  pp. (°C): dity (%): alyzer #: bisplay #: elector #: Ant.	49.0 32.0 8d Emiss 9-2-2010 0810 AAL 28 78 898 898 898 NA Mess Max.	54.1 37.1  ions Dati	74.0 54.0  Ea Page  EUT Vol EUT Fre Phase: NOATS SOATS Distance Distance Distance		Pass Of  MHz: MHz: Quasi-P Peak Average Peak val Pass	ac 120 ac 1 X 3 m 3 m 3 m Video Bandwidth 300 kHz RBW: 1 MHz Video Bandwidth 3 MHz RBW: 1 MHz Video Bandwidth 10 Hz Video Bandwidth 10 Hz
Job #: NEX #: Client Na EUT Nan EUT Mon EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant: DRG An Cable LE Cable HI Preamp Preamp Meas. Freq. (MHz)	29.1 49.0 32.0  ame: me: del #: rial #: nfig.:  ation: tt. #: tt. #: F#: F#: F#: HF#  Meter Reading	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pe NA 128_3m 110_3m 752 SOATS SOATS na 317	oration  oration  And Quasi-	Jubpart B. Tem Humin Spec An halyzer D Peak De Prese	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class B  p. (°C): dity (%): dity(%): display#: detector #: detector #: Ant. Height m	49.0 32.0  d Emiss 9-2-2010 0810 AAL  28 78 898 898 NA Meass Max. Reading (dBµV)	54.1 37.1  ions Dat  835 835 835  urements be beasurements  Corrected Reading (dBµV/m)	Page EUT Vol EUT Fre Phase: NOATS SOATS Distance Distance Distance Imit (dBµV/m)	-19.9 -16.9  1  tage: quency < 10000  >> 10000  are Quasit Hz are Av CR/SL Diff. (dB)	Pass Of  MHz: MHz: Quasi-P Peak Average Peak val Pass Fail	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz Video Bandwidth 13 MHz Video Bandwidth 10 Hz Video Bandwid
Job #: NEX #: NEX #: Client Na EUT Nai EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon Ar Log Ant: DRG An Cable LF Cable HI Preamp Preamp Meas. Freq. (MHz)	29.1 49.0 32.0  ame: me: me: rial #: rial #: riii #: tt. #: tt. #: tt. #: HF#:  Meter Reading Vertical  -3.4	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pc NA 128 3m 110 3m 752 SOATS SOATS na 317	oration  art 15, Su  Art Quasi-	Jubpart B. Tem Humic Spec An nalyzer D Peak De Prese	1.0 1.0 1.0 1.0 Radiate Date: Time: Staff:  Class Enp. (°C): dity (%): alyzer #: elector #: Ant. Height m	49.0 32.0  8d Emiss 9-2-2010 0810 AAL  28 78 898 898 NA Meas Meas Meas (dBµV)	54.1 37.1  ions Dati  835 835  sass  urrements be easurements  Corrected Reading (dBpV/m)  25.1	Page EUT Vol EUT Free Phase: NOATS SOATS Distance Distance Distance  Iow 1 GHz above 1 G Spec. Iimit (dBµV/m) 46.0	-19.9 -16.9  1  tage: quency < 10000  >> 10000  are Quasis Hz are Av CR/SL Diff. (dB) -20.9	Pass Of  MHz: MHz: MHz: Quasi-P Peak Average Peak val Pass Fail	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz Video Bandwidth 13 MHz Video Bandwidth 10 Hz Video Bandwid
Job #: NEX #: Client Na EUT Nan EUT Mon EUT Ser EUT Cor Specifica Loop An Bicon An Log Ant: DRG An Cable LE Cable HI Preamp Preamp Meas. Freq. (MHz)	29.1 49.0 32.0  ame: me: del #: rial #: nfig.:  ation: tt. #: tt. #: F#: F#: F#: HF#  Meter Reading	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pe NA 128_3m 110_3m 752 SOATS SOATS na 317	P A A A A A A A A A A A A A A A A A A A	Jubpart B. Tem Humin Spec An halyzer D Peak De Prese	1.0 1.0 1.0 Radiate Date: Time: Staff:  Class B  p. (°C): dity (%): dity(%): display#: detector #: detector #: Ant. Height m	49.0 32.0  d Emiss 9-2-2010 0810 AAL  28 78 898 898 NA Meass Max. Reading (dBµV)	54.1 37.1  ions Dat  835 835 835  urements be beasurements  Corrected Reading (dBµV/m)	Page EUT Vol EUT Fre Phase: NOATS SOATS Distance Distance Distance Imit (dBµV/m)	-19.9 -16.9  1  tage: quency < 10000  >> 10000  are Quasit Hz are Av CR/SL Diff. (dB)	Pass Of  MHz: MHz: Quasi-P Peak Average Peak val Pass Fail	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz Video Bandwidth 13 MHz Video Bandwidth 10 Hz Video Bandwid
Job #: NEX #: NEX #: Client Na EUT Nai EUT Moi EUT Ser EUT Cor Specifica Loop An Bicon Ar Log Ant: DRG An Cable LF Cable HI Preamp Preamp Meas. Freq. (MHz)	29.1 49.0 32.0  ame: me: me: rial #: rial #: riii #: tt. #: tt. #: tt. #: HF#:  Meter Reading Vertical  -3.4	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 transmit test mode CFR47 Pc NA 128 3m 110 3m 752 SOATS SOATS na 317	P A A A A A A A A A A A A A A A A A A A	Jubpart B. Tem Humin Spec An halyzer D Peak De Prese	1.0 1.0 1.0 1.0 Radiate Date: Time: Staff:  Class Enp. (°C): dity (%): alyzer #: elector #: Ant. Height m	49.0 32.0  8d Emiss 9-2-2010 0810 AAL  28 78 898 898 NA Meas Meas Meas (dBµV)	54.1 37.1  ions Dati  835 835  sass  urrements be easurements  Corrected Reading (dBpV/m)  25.1	Page EUT Vol EUT Free Phase: NOATS SOATS Distance Distance Distance  Iow 1 GHz above 1 G Spec. Iimit (dBµV/m) 46.0	-19.9 -16.9  1  tage: quency < 10000  >> 10000  are Quasis Hz are Av CR/SL Diff. (dB) -20.9	Pass Of  MHz: MHz: MHz: Quasi-P Peak Average Peak val Pass Fail	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz Video Bandwidth 13 MHz Video Bandwidth 10 Hz Video Bandwid
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1839.2 1839.2 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2015.0 20	29.1 49.0 32.0  ame: me: del #: rial #: nfig.: ation: tt. #: tt. # F#: LF#: HF#  Meter Reading Vertical  -3.4 -3.6 61.6 46.2 29.2 49.2 32.2	48.8 31.8  43561 147536  AGL Corp System GP15 HG0129 Transmit test mode  CFR47 Pa NA 128_3m 110_3m 752 SOATS na 317  Meter Reading Horizontal  57.8  46.1 29.1 48.7 31.7	P A A P A A	Jubpart B. Terr Humic Spec Annalyzer D Peak De Prese  EUT Side F/L/R/B	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	28 78 898 898 NA Meas M Max. Reading (dBµV) -3.4 46.2 29.2 49.2 32.2	835 835 surements be easurements Corrected Reading (dBµV/m) 25.1 24.8 90.0 47.6 30.6 54.3 37.3	74.0 54.0  Ea Page  EUT Vol EUT Fre Phase: NOATS SOATS Distance Distance Distance  Image  46.0 46.0 46.0 74.0 54.0 74.0 54.0	-19.9 -16.9  1 tage: quency e < 10000 > 10000 > 10000   -20.9 -21.2 -4.0 -23.4 -19.7 -16.7	Pass Of  MHz: MHz: MHz: Quasi-P Peak Average Pass Fail  Pass Pass Pass Pass Pass Pass Pass	ac 120 ac 1 X 3 m 3 m 3 m 3 m Video Bandwidth 300 kHz Video Bandwidth 3 MHz Video Bandwidth 3 MHz Video Bandwidth 10 Hz Video Bandwidth 10 Hz Uses, unless otherwise stated
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1839.2 1839.2 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2015.0 20	29.1 49.0 32.0  ame: me: del #: rial #: nfig.: ation: tt. #: tt. # F#: LF#: HF#  Meter Reading Vertical  -3.4 -3.6 61.6 46.2 29.2 49.2 32.2	48.8 31.8  43561 147536  AGL Corp System GP15 HG0129 Transmit test mode  CFR47 Pa NA 128_3m 110_3m 752 SOATS na 317  Meter Reading Horizontal  57.8  46.1 29.1 48.7 31.7	P A A P A A	Jubpart B. Terr Humic Spec Annalyzer D Peak De Prese  EUT Side F/L/R/B	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	28 78 898 898 NA Meas M Max. Reading (dBµV) -3.4 46.2 29.2 49.2 32.2	835 835 surements be easurements Corrected Reading (dBµV/m) 25.1 24.8 90.0 47.6 30.6 54.3 37.3	74.0 54.0  Ea Page  EUT Vol EUT Fre Phase: NOATS SOATS Distance Distance Distance  Image  46.0 46.0 46.0 74.0 54.0 74.0 54.0	-19.9 -16.9  1 tage: quency e < 10000 > 10000 > 10000   -20.9 -21.2 -4.0 -23.4 -19.7 -16.7	Pass Of  MHz: MHz: MHz: Quasi-P Peak Average Pass Fail  Pass Pass Pass Pass Pass Pass Pass	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz RBW: 1 MHz Video Bandwidth 10 Hz Vid
1839.2 1839.2 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2758.8 2018.0 2019.0 20	29.1 49.0 32.0  ame: me: me: fig: ation: tt.#: tt.#: tt.#: HF#: HF#  Meter Reading Vertical  -3.4 -3.6 61.6 -46.2 29.2 49.2 32.2 60.6	48.8 31.8 43561 147536 AGL Corp System GP15 HG0129 Transmit test mode  CFR47 Pa NA 128_3m 110_3m 752 SOATS na 317 Meter Reading Horizontal 57.8 46.1 29.1 48.7 31.7	P A A P A P A A P A A	Jubpart B Tem Humic Spec An nalyzer D Peak De Prese	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	28 78 898 898 NA Meas Meating (dBµV) -3.4 -3.6 61.6 46.2 29.2 49.2 32.2 60.6 46.1 29.1	835 835 835 835 0 curements be easurements Corrected Reading (dBμV/m) 25.1 24.8 90.0 47.6 30.6 54.3 37.3 89.0	74.0 54.0  EuT Vol EUT Fre Phase: NOATS SOATS Distance Distance Distance  Image  46.0 46.0 46.0 74.0 54.0 74.0 94.0	-19.9 -16.9  1 tage: quency e < 10000  are Quasis Hz are Av CR/SL Diff. (dB)  -20.9 -21.2  -4.0  -26.4 -23.4  -19.7 -16.7  -5.0  -26.5 -23.5	Pass Of  MHz: MHz: MHz: Quasi-P Peak Average Pass Fail  Pass Pass Pass Pass Pass Pass Pass Pa	ac 120 ac 1 X 3 m 3 m 3 m 2 Video Bandwidth 30 kHz Video Bandwidth 30 kHz RBW: 1 MHz Video Bandwidth 10 Hz Vid
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#### **Fixed Point-to-Point Operation**

15.249 (b) Fixed, point-to-point operation as referred to in this paragraph shall be limited to systems employing a fixed transmitter transmitting to a fixed remote location. Point-to-multipoint systems, omnidirectional applications, and multiple co-located intentional radiators transmitting the same information are not allowed. Fixed, point-to-point operation is permitted in the 24.05–24.25 GHz band subject to the following conditions:

- (1) The field strength of emissions in this band shall not exceed 2500 millivolts/meter.
- (2) The frequency tolerance of the carrier signal shall be maintained within ±0.001% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.
- (3) Antenna gain must be at least 33 dBi. Alternatively, the main lobe beamwidth must not exceed 3.5 degrees. The beamwidth limit shall apply to both the azimuth and elevation planes. At antenna gains over 33 dBi or beamwidths narrower than 3.5 degrees, power must be reduced to ensure that the field strength does not exceed 2500 millivolts/meter.

#### **Test Conditions:**

Sample Number:	HG0129	Temperature:	
Date:		Humidity:	
Modification State:		Tester:	Alan Laudani
		Laboratory:	Nemko

**Test Results:** Not Applicable, EUT is not Point-to-Point.

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## **Receiver Spurious Emissions**

The following receiver spurious emission limits shall be complied with: If a radiated measurement is made, all spurious emissions shall comply with the limits of Table 1.

**Table 1 - Spurious Emission Limits for Receivers** 

Spurious Frequency	Field Strength
(MHz)	(microvolt/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960	500

#### **Test Conditions:**

Sample Number:	HG0129	Temperature:	19°C
Date:	7-15-2010	Humidity:	43%
Modulation State:	Standby / receive	Tester:	Alan Laudani
		Laboratory:	SOATS

#### **Test Results:**

See Table. EUT complies for stand by spurious emissions. It receives and transmits simultaneously—there is no separate receive mode.

#### **Additional Observations:**

• The Spectrum was searched from 30 MHz to the 5<sup>th</sup> Harmonic (4542 MHz), but no emissions within 20 dB of the limits except in the table below were evident.

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Radiated Emissions Data											
Job#:		43561			Date :	7-15-2010		Page	1	of	_1_
NEX #:		147536	•		Time : Staff :	1030 AAL	•				
Client N	ame :	AGL Corp						EUT Vol	tage :		120
EUT Na		Laser Lev	elling Sy	stem			•	EUT Fre	quency	:	60
EUT Mo		GP15						Phase:			<u> </u>
EUT Se		HG0129						NOATS			
EUT Co	nfig. :	STANDBY		ON				SOATS			X
		CHARGIN	<u>IG</u>					Distance			<u>3 m</u>
Specifica	ation :	CFR47 Pa	ort 15 Cu	ıbpart D	Class P			Distance	> 1000	MHz:	3 m
Loop An		NA	iit 15, St	лоран Б,	Class b					Quasi-P	Pook PRW: 120 k
Bicon A		114 3M		Tem	np. (°C):	19				Quasi-P	Peak RBW: 120 k Video Bandwidth 300 k
Log Ant.		110 3M	•		dity (%):	43	•			Peak	RBW: 1 MH
DRG An		877			alyzer#:		911			Cak	Video Bandwidth 3 MH
Cable LI		SOATS		•	isplay #:	898	911	•		Average	
			-	,	. ,			•			
Cable H	F#:	SOAIS	Quasi-	геак ре	tector #:	898					video Bandwidth 10 Hz
		SOATS NA	. Quasi-		tector #:	898 899	•				Video Bandwidth 10 Hz
Preamp	LF#:		Quasi-			899	urements be	low 1 GHz :	are Quasi	-Peak va	lues, unless otherwise sta
Preamp	LF#:	NA	. Quasi-			899 Meas					
Cable H Preamp Preamp Meas.	LF#:	NA	Quasi-			899 Meas					lues, unless otherwise sta
Preamp Preamp	LF#: HF#	NA 317		Prese	elector #:	899 Meas	easurements	above 1 G	Hz are Av	erage va	lues, unless otherwise sta
Preamp Preamp Meas.	LF#: HF# Meter	NA 317 Meter		Prese	elector #:	899 Meas Max.	easurements Corrected	above 1 G Spec.	Hz are Av	erage va Pass	lues, unless otherwise sta
Preamp Preamp Meas. Freq. (MHz)	LF#: HF# Meter Reading Vertical	NA 317 Meter Reading Horizontal	Det.	Prese	Ant. Height	899 Meas Max. Reading (dBμV)	Corrected Reading (dBµV/m)	above 1 G Spec. limit (dBµV/m)	Hz are Av CR/SL Diff. (dB)	erage va Pass Fail	lues, unless otherwise sta lues, unless otherwise sta Comment
Preamp Preamp Meas. Freq. (MHz)	LF#: HF# Meter Reading Vertical	NA 317  Meter Reading Horizontal  6.6	Det.	Prese	Ant. Height m	Meas Max. Reading (dBµV)	Corrected Reading (dBµV/m)	above 1 G Spec. limit (dBµV/m) 40.0	Hz are Av CR/SL Diff. (dB)	Pass Fail	lues, unless otherwise sta
Preamp Preamp Meas. Freq. (MHz) 46.0 52.4	LF#: HF# Meter Reading Vertical	NA 317  Meter Reading Horizontal  6.6 15.4	Det.	EUT Side F/L/R/B	Ant. Height m 1.0 1.0	Meas Meas Meas Meas Meading (dBµV)	Corrected Reading (dBµV/m)  26.2 31.1	above 1 G Spec. limit (dBµV/m) 40.0 40.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9	Pass Fail Pass Pass Pass	lues, unless otherwise sta lues, unless otherwise sta Comment
Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1	LF#: HF#  Meter Reading Vertical  13.5 18.2 25.7	NA 317  Meter Reading Horizontal  6.6 15.4 13.1	Det. Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0	899  Meas Mr.  Max.  Reading (dBμV)  13.5  18.2  25.7	Corrected Reading (dBµV/m)  26.2 31.1 35.0	above 1 G Spec. limit (dBµV/m) 40.0 40.0 40.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9 -5.0	Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
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Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1 112.0 128.0	Meter Reading Vertical 13.5 18.2 25.7 20.5 18.5	NA 317 Meter Reading Horizontal 6.6 15.4 13.1 13.1 19.7	Det.  Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0	899  Meas M  Max. Reading (dBμV)  13.5  18.2  25.7  20.5  19.7	Corrected Reading (dBµV/m)  26.2 31.1 35.0 36.0 33.0	above 1 G Spec. limit (dBμV/m) 40.0 40.0 40.0 43.5 43.5	CR/SL Diff. (dB) -13.8 -8.9 -5.0 -7.5	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1 112.0 128.0 176.0	Meter Reading Vertical 13.5 18.2 25.7 20.5 18.8	NA 317  Meter Reading Horizontal  6.6 15.4 13.1 13.1 19.7 17.4	Det.  Q Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0	899  Meas M  Max. Reading (dBμV)  13.5  18.2  25.7  20.5  19.7  18.8	Corrected Reading (dBµV/m)  26.2 31.1 35.0 36.0 33.0 37.0	above 1 G Spec. limit (dBμV/m) 40.0 40.0 40.0 43.5 43.5	CR/SL Diff. (dB)  -13.8  -8.9  -7.5  -10.5  -6.5	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1 112.0 128.0 176.0 223.8	Meter Reading Vertical 13.5 18.2 25.7 20.5 18.8 25.5	NA 317  Meter Reading Horizontal  6.6 15.4 13.1 13.1 19.7 17.4 22.3	Det.  Q Q Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0	899  Meas M Max. Reading (dBµV)  13.5 18.2 25.7 20.5 19.7 18.8 25.5	Corrected Reading (dBµV/m)  26.2 31.1 35.0 36.0 33.0 37.0 39.3	above 1 G Spec. limit (dBµV/m) 40.0 40.0 40.0 43.5 43.5 46.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9 -5.0 -7.5 -10.5 -6.5	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
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Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1 112.0 128.0 176.0 223.8 271.9 287.8	Meter Reading Vertical  13.5 18.2 25.7 20.5 18.8 25.5 14.0 13.5	NA 317  Meter Reading Horizontal  6.6 15.4 13.1 13.1 19.7 17.4 22.3 11.4 11.4	Det.  Q Q Q Q Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	899  Meas Mo  Max. Reading (dBμV)  13.5  18.2  25.7  20.5  19.7  18.8  25.5  14.0  13.5	савитементь Соггесted Reading (dВµV/m)  26.2 31.1 35.0 36.0 33.0 37.0 39.3 29.9 29.9	above 1 G Spec. limit (dBμV/m) 40.0 40.0 40.0 43.5 43.5 43.5 46.0 46.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9 -5.0 -7.5 -10.5 -6.5 -6.7 -16.1	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1 112.0 128.0 176.0 223.8 271.9 287.8 399.9	Meter Reading Vertical  13.5 18.2 25.7 20.5 18.5 18.8 25.5 14.0 13.5 13.7	NA 317  Meter Reading Horizontal  6.6 15.4 13.1 13.1 19.7 17.4 22.3 11.4 11.4 11.3	Det.  Q Q Q Q Q Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	899  Meas Mr.  Reading (dBμV)  13.5  18.2  25.7  20.5  19.7  18.8  25.5  14.0  13.5  13.7	савитементы Соггесted Reading (dВµV/m) 26.2 31.1 35.0 36.0 33.0 37.0 39.3 29.9 29.9 32.9	above 1 G Spec. limit (dBμV/m) 40.0 40.0 40.0 43.5 43.5 43.5 46.0 46.0 46.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9 -5.0 -7.5 -10.5 -6.5 -6.7 -16.1 -13.1	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
Preamp Preamp Meas. Freq. (MHz) 46.0 52.4 86.1 112.0 128.0 176.0 223.8 271.9 287.8	Meter Reading Vertical  13.5 18.2 25.7 20.5 18.8 25.5 14.0 13.5	NA 317  Meter Reading Horizontal  6.6 15.4 13.1 13.1 19.7 17.4 22.3 11.4 11.4	Det.  Q Q Q Q Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	899  Meas Mo  Max. Reading (dBμV)  13.5  18.2  25.7  20.5  19.7  18.8  25.5  14.0  13.5	савитементь Соггесted Reading (dВµV/m)  26.2 31.1 35.0 36.0 33.0 37.0 39.3 29.9 29.9	above 1 G Spec. limit (dBμV/m) 40.0 40.0 40.0 43.5 43.5 43.5 46.0 46.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9 -5.0 -7.5 -10.5 -6.5 -6.7 -16.1	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other
Preamp  Meas. Freq. (MHz)  46.0 52.4 86.1 112.0 128.0 176.0 223.8 271.9 287.8 399.9	Meter Reading Vertical  13.5 18.2 25.7 20.5 18.5 18.8 25.5 14.0 13.5 13.7	NA 317  Meter Reading Horizontal  6.6 15.4 13.1 13.1 19.7 17.4 22.3 11.4 11.4 11.3	Det.  Q Q Q Q Q Q Q Q Q Q	EUT Side F/L/R/B	Ant. Height m 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	899  Meas Mr.  Reading (dBμV)  13.5  18.2  25.7  20.5  19.7  18.8  25.5  14.0  13.5  13.7	савитементы Соггесted Reading (dВµV/m) 26.2 31.1 35.0 36.0 33.0 37.0 39.3 29.9 29.9 32.9	above 1 G Spec. limit (dBμV/m) 40.0 40.0 40.0 43.5 43.5 43.5 46.0 46.0 46.0	Hz are Av CR/SL Diff. (dB) -13.8 -8.9 -5.0 -7.5 -10.5 -6.5 -6.7 -16.1 -13.1	Pass Pass Pass Pass Pass Pass Pass Pass	lues, unless otherwise stalues, unless other

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## **APPENDIX B**

#### **B. Radiated Emissions Measurement Uncertainties**

#### 1. Introduction

ISO/IEC 17025:2005 and ANSI/NCSL Z540.3: 2006 require that all measurements contained in a test report be "traceable". "Traceability" is defined in the *International Vocabulary of Basic and General Terms in Metrology* (ISO: 1993) as: "the property of the result of a measurement... whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons, *all having stated uncertainties*".

The purposes of this Appendix are to "state the *Measurement Uncertainties*" of the conducted emissions and radiated emissions measurements contained in Section 5 of this Test Report, and to provide a practical explanation of the meaning of these measurement uncertainties.

# 2. Statement of the Worst-Case Measurement Uncertainties for the Conducted and Radiated Emissions Measurements Contained in This Test Report

Table 1: Worst-Case Expanded Uncertainty "U" of Measurement for a k=2 Coverage Factor

Radiated Emissions Measurement Detection Systems	Applicable Frequency Range	"U" for a k=2 Coverage Factor
Spectrum Analyzer with QPA & Preamplifier	30 MHz - 200 MHz	+3.9 dB, -4.0 dB
Spectrum Analyzer with QPA & Preamplifier	200 MHz-1000 MHz	+/- 3.5 dB
Spectrum Analyzer with Preamplifier	1 GHz - 18 GHz	+2.5 dB, -2.6 dB
Spectrum Analyzer with Preamplifier	18 GHz - 40 GHz	+/- 3.4 dB

#### NOTES:

- 1. Applies to 3 and 10 meter measurement distances
- 2. Applies to all valid combinations of Transducers (i.e. LISNs, Line Voltage Probes, and Antennas, as appropriate)
- 3. Excludes the Repeatability of the EUT

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#### 3. Practical Explanation of the Meaning of Radiated Emissions Measurement Uncertainties

In general, a "Statement of Measurement Uncertainty" means that with a certain (specified) confidence level, the "true" value of a measurand will be between a (stated) upper bound and a (stated) lower bound.

In the specific case of EMC Measurements in this test report, the measurement uncertainties of the conducted emissions measurements and the radiated emissions measurements have been calculated in accordance with the method detailed in the following documents:

- ANSI Z540.2 (2002) Guide to the Expression of Uncertainty in Measurement
- o NIS 81:1994, The Treatment of Uncertainty in EMC Measurements (NAMAS, 1994)
- NIST Technical Note 1297(1994), Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results (NIST, 1994)

The calculation method used in these documents requires that the stated uncertainty of the measurements be expressed as an "expanded uncertainty", U, with a k=2 coverage factor. The practical interpretation of this method of expressing measurement uncertainty is shown in the following example:

EXAMPLE: Assume that at 39.51 MHz, the (measured) radiated emissions level was equal to +26.5 dBuV/m, and that the +/- 2 standard deviations (i.e. 95% confidence level) measurement uncertainty was +/- 3.4 dB.

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## **APPENDIX C**

#### C. Nemko USA, Inc. Test Equipment & Facilities Calibration Program

Nemko USA, Inc. operates a comprehensive Periodic Calibration Program in order to ensure the validity of all test data. Nemko USA's Periodic Calibration Program is fully compliant to the requirements of NVLAP Policy Guide PG-1-1988, ANSI/NCSL Z540.3: 2006, ISO 10012:2003, ISO/IEC 17025:2005, and ISO-9000: 2000. Nemko USA, Inc.'s calibrations program therefore meets or exceeds the US national commercial and military requirements [N.B. ANSI/NCSL Z540.1-1994 replaced MIL-STD-45662A].

Specifically, all of Nemko USA's *primary reference standard devices* (e.g. vector voltmeters, multimeters, attenuators and terminations, RF power meters and their detector heads, oscilloscope mainframes and plug-ins, spectrum analyzers, RF preselectors, quasi-peak adapters, interference analyzers, impulse generators, signal generators and pulse/function generators, field-strength meters and their detector heads, etc.) and certain *secondary standard devices* (e.g. RF Preamplifiers used in CISPR 11/22 and FCC Part 15/18 tests) are periodically recalibrated by:

- A Nemko USA-approved independent (third party) metrology laboratory that uses NISTtraceable standards and that is ISO Guide 25-accredited as a calibration laboratories by NIST: or.
- A Nemko USA-approved independent (third party) metrology laboratory that uses NISTtraceable standards and that is ISO Guide 25-accredited as a calibration laboratory by another accreditation body (such as A2LA) that is mutually recognized by NIST; or,
- A manufacturer of Measurement and Test Equipment (M&TE), if the manufacturer uses NIST-traceable standards and is ISO Guide 25-accredited as calibration laboratory either by NIST or by another accreditation body (such as A2LA) that is mutually recognized by NIST; or
- A manufacturer of M&TE (or by a Nemko USA-approved independent third party metrology laboratory) that is not ISO Guide 25-accredited. (In these cases, Nemko USA conducts an annual audit of the manufacturer or metrology laboratory for the purposes of proving traceability to NIST, ensuring that adequate and repeatable calibration procedures are being applied, and verifying conformity with the other requirements of ISO Guide 25).

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In all cases, the entity performing the Calibration is required to furnish Nemko USA with a calibration test report and/or certificate of calibration, and a "calibration sticker" on each item of M&TE that is successfully calibrated.

Calibration intervals are normally one year, except when the manufacture advises a shorter interval or if US Government directives or client requirements demand a shorter interval. Items of instrumentation/related equipment which fail during routine use, or which suffer visible mechanical damage (during use or while in transit), are sidelined pending repair and recalibration. (Repairs are carried out either in-house [if minor] or by a Nemko USA-approved independent [third party] metrology laboratory, or by the manufacturer of the item of M&TE).

Each antenna used for CISPR 11 and CISPR 22 and FCC Part 15 and Part 18 radiated emissions testing (and for testing to the equivalent European Norms) is calibrated annually by either a NIST (or A2LA) ISO Standard 17025-Accredited third-party Antenna Calibration Laboratory or by the antenna's OEM if the OEM is NIST or A2LA ISO Standard 17025-accredited as an antenna calibration laboratory. The antenna calibrations are performed using the methods specified in Annex G.5 of CISPR 16-1(2003) or ANSI C63.5-2004, including the "Three-Antenna Method". Certain other kinds of antennas (e.g. magnetic-shielded loop antennas) are calibrated annually by either a NIST (or A2LA) ISO Standard 17025-accredited third-party antenna calibration laboratory, or by the antenna's OEM if the OEM is NIST or A2LA ISO Standard 17025-accredited as an antenna calibration laboratory using the procedures specified in the latest version of SAE ARP-958.

In accordance with FCC and other regulations, Nemko USA recalibrates its suite of antennas used for radiated emissions tests on an annual basis. These calibrations are performed as a precursor to the FCC-required annual revalidation of the Normalized Site Attenuation properties of Nemko USA's Open Area Test Site. Nemko USA, Inc. uses the procedures given in both Sub clause 16.6 and Annex G.2 of CISPR 16-1 (2003), and, ANSI C63.4-2003 when performing the normalized site attenuation measurements.

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# APPENDIX D D. NVLAP Accreditation

United States Department of Commerce National Institute of Standards and Technology



# Certificate of Accreditation to ISO/IEC 17025:2005

**NVLAP LAB CODE: 200116-0** 

## Nemko USA, Inc. - San Diego EMC Division

San Diego, CA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

#### **ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).

2009-01-01 through 2009-12-31

Effective dates



Sally S. Buce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2006-09-13)