Excellence in Compliance Testing

Transmitter Certification

Test Report

FCC ID: P2SNTGR900GR
IC: 4171B-NTGR900GR

FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-210

ACS Report Number: 08-0247-15C

Manufacturer: Neptune Technology Group, Inc.
Model: R900G Remote

Test Begin Date: June 17, 2008
Test End Date: June 27, 2008

Report Issue Date: June 27, 2008

FOR THE SCOPE OF ACCREDITATION UNDER LAB Code 200612-0

This report is not be used to claim certification, approval, or endorsement by NVLAP, NIST or any government agency.

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This report contains 18 pages

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1.0 GENERAL

1.1 Purpose
The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations and Industry Canada's Radio Standards Specification RSS-210.

1.2 Product Description

1.2.1 General
The R900 Remote uses a spread-spectrum [frequency hopping] transmitter designed for operation in gas meter RF telemetry. The R900 REMOTE is for mounting to Natural Gas Meters The R900 REMOTE has an embedded antenna and no external antenna connection. For moisture protection the boards will be coated. The main responsibility for the transmitter is to transmit the gas meter's reading.

Manufacturer Information:
Neptune Technology Group, Inc.
1600 Alabama Highway 229
Tallassee, AL 36078

Test Sample Condition:
The EUT sample was received in working order with no visible defects.

Detailed photographs of the EUT are filed separately with this filing.

1.2.2 Intended Use
The main responsibility for the transmitter is to transmit the gas meter's reading.

1.3 Test Methodology and Considerations
The R900 Remote utilizes an integral antenna therefore the alternative test procedures set forth in DA 00-705 were used for determining peak output power and spurious RF conducted emissions.

2.0 TEST FACILITIES

2.1 Location
The radiated and conducted emissions test sites are located at the following address:

Advanced Compliance Solutions
5015 B.U. Bowman Drive
Buford, GA 30518
Phone: (770) 831-8048
Fax: (770) 831-8598

2.2 Laboratory Accreditations/Recognitions/Certifications
The Semi-Anechoic Chamber Test Site, Open Area Test Site (OATS) and Conducted Emissions Site have been fully described, submitted to, and accepted by the FCC, Industry Canada and the Japanese Voluntary Control Council for Interference by information technology equipment. In addition, ACS is compliant to ISO 17025 as certified by the National Institute of Standards and Technology under their National Voluntary Laboratory Accreditation Program. The following certification numbers have been issued in recognition of these accreditations and certifications:

FCC Registration Number: 894540
Industry Canada Lab Code: IC 4175
VCCI Member Number: 1831
- VCCI OATS Registration Number R-1526
- VCCI Conducted Emissions Site Registration Number: C-1608

NVLAP Lab Code: 200612-0

2.3 Radiated Emissions Test Site Description

2.3.1 Semi-Anechoic Chamber Test Site

The Semi-Anechoic Chamber Test Site consists of a 20' x 30' x 18' shielded enclosure. The chamber is lined with Toyo Ferrite Grid Absorber, model number FFG-1000. The ferrite tile grid is 101 x 101 x 19mm thick and weighs approximately 550 grams. These tiles are mounted on steel panels and installed directly on the inner walls of the chamber.

The turntable is 150cm in diameter and is located 160cm from the back wall of the chamber. The chamber is grounded via 1 - 8' copper ground rod, installed at the center of the back wall, it is bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is all steel, flush mounted table installed in an all steel frame. The table is remotely operated from inside the control room located 25' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Behind the turntable is a 3' x 6' x 4' deep shielded pit used for support equipment if necessary. The pit is equipped with 1 - 4" PVC chases from the turntable to the pit that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit.

A diagram of the Semi-Anechoic Chamber Test Site is shown in Figure 2.3-1 below:

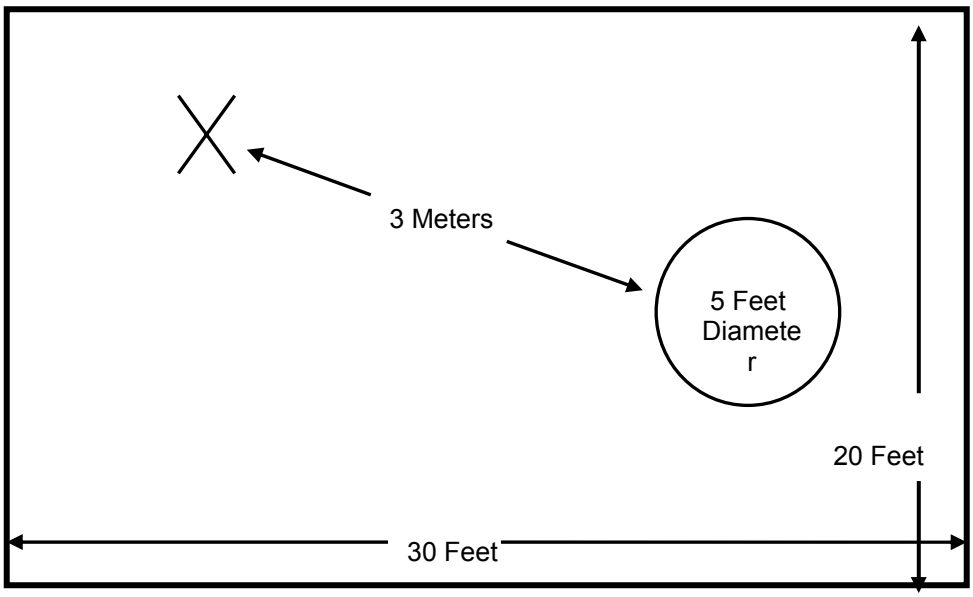

Figure 2.3-1: Semi-Anechoic Chamber Test Site

2.3.2 Open Area Tests Site (OATS)

The open area test site consists of a 40' x 66' concrete pad covered with a perforated electro-plated galvanized sheet metal. The perforations in the sheet metal are 1/8" holes that are staggered every 3/16". The individual sheets are placed to overlap each other by 1/4" and are riveted together to provide a continuous seam. Rivets are spaced every 3" in a 3 x 20 meter perimeter around the antenna mast and EUT area. Rivets in the remaining area are spaced as necessary to properly secure the ground plane and maintain the electrical continuity.

The entire ground plane extends 12' beyond the turntable edge and 16' beyond the antenna mast when set to a 10 meter measurement distance. The ground plane is grounded via 4 - 8' copper ground rods, each installed at a corner of the ground plane and bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is an all aluminum 10' flush mounted table installed in an all aluminum frame. The table is remotely operated from inside the control room located 40' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Adjacent to the turntable is a 7' x 7' square and 4' deep concrete pit used for support equipment if necessary. The pit is equipped with 5 - 4" PVC chases from the pit to the control room that allow for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit. The pit is covered with 2 sheets of 1/4" diamond style re-enforced steel sheets. The sheets are painted to match the perforated steel ground plane; however the underside edges have been masked off to maintain the electrical continuity of the ground plane. All reflecting objects are located outside of the ellipse defined in ANSI C63.4.

A diagram of the Open Area Test Site is shown in Figure 2.3-2 below:

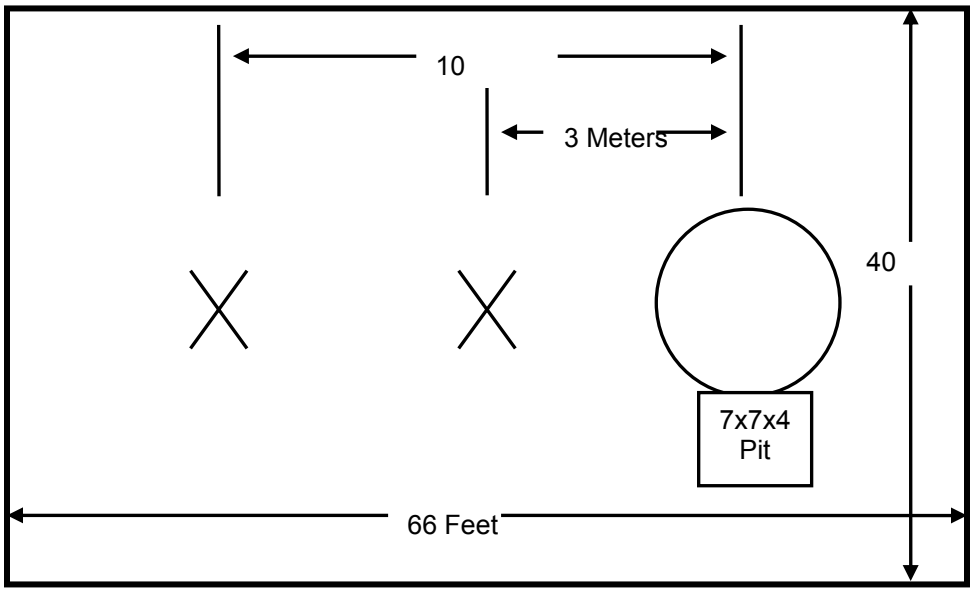

Figure 2.3-2: Open Area Test Site

2.4 Conducted Emissions Test Site Description

The AC mains conducted EMI site is located in the main EMC lab. It consists of an 8' x 8' solid aluminum horizontal group reference plane (GRP) bonded every 3" to an 8' X 8' vertical ground plane.

The site is of sufficient size to test table top and floor standing equipment in accordance with section 6.1.4 of ANSI C63.4.

A diagram of the room is shown below in figure 4.1.3-1:

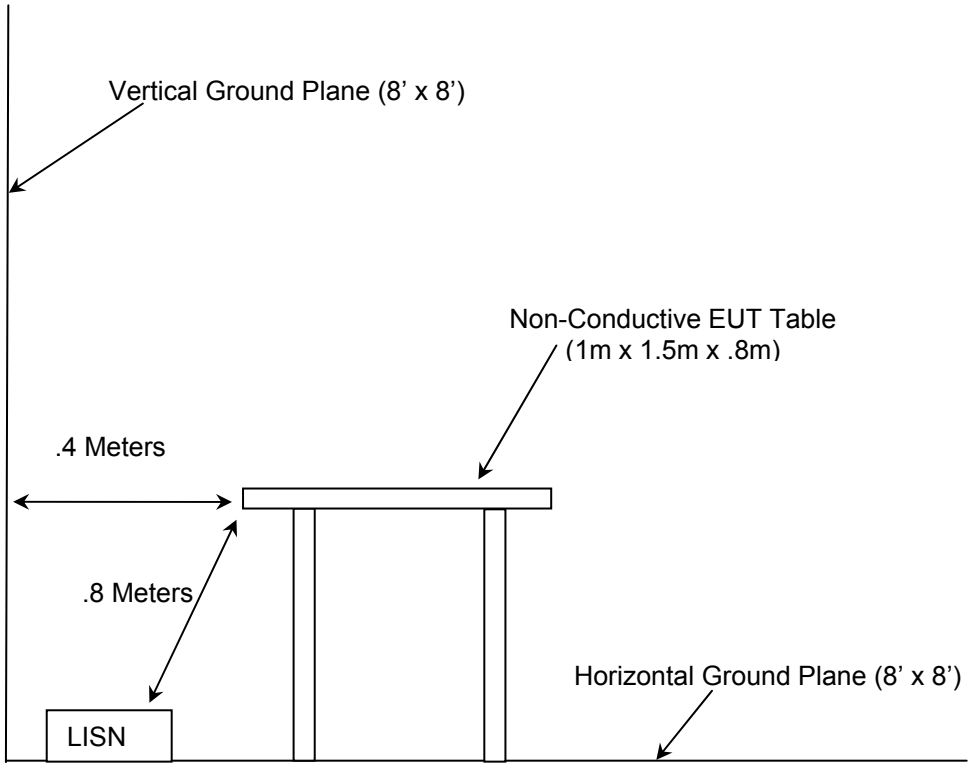

Figure 2.4-1: AC Mains Conducted EMI Site

3.0 APPLICABLE STANDARD REFERENCES

The following standards were used:

- ANSI C63.4-2003: Method of Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the 9KHz to 40GHz
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2007
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2007
- FCC OET Bulletin 65 Appendix C - Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, 2001
- FCC Public Notice DA 00-705 - Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems, March 30, 2000
- Industry Canada Radio Standards Specification: RSS-210 - Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, Issue 7 June 2007

4.0 LIST OF TEST EQUIPMENT

All test equipment used for regulatory testing is calibrated yearly or according to manufacturer's specifications.

Table 4-1: Test Equipment

Equipment Calibration Information					
ACS#	**Mfg.**	**Eq. type**	**Model**	**S/N**	**Cal. Due**
1	Rohde & Schwarz	Spectrum Analyzers	ESMI - Display	833771/007	10-26-2008
2	Rohde & Schwarz	Spectrum Analyzers	ESMI-Receiver	839587/003	10-26-2008
22	Agilent	Amplifiers	8449B	3008A00526	10-25-2008
25	Chase	Antennas	CBL6111	1043	08-08-2008
30	Spectrum Technologies	Antennas	DRH-0118	970102	05-07-2009
73	Agilent	Amplifiers	8447D	2727A05624	12-19-2008
167	ACS	Cable Set	Chamber EMI Cable Set	167	01-04-2009
277	Emco	Antenna	93146	9904-5199	08-15-2008
283	Rohde & Schwarz	Spectrum Analyzers	FSP40	1000033	11-09-2008
291	Florida RF Cables	Cables	SMRE-200W-12.0-SMRE	None	11-21-2008
292	Florida RF Cables	Cables	SMR-290AW-480.0-SMR	None	11-21-2008
324	ACS	Cables	Belden	8214	07-10-2008
337	Microwave Circuits	Filters	H1G513G1	282706	08-28-2008
343	Florida RF Cables	Cables	SMRE-200W-12.0-SMRE	NA	11-21-2008
396	Florida RF Cables	Cables	SMS-290AW-480.0-SMS	NA	11-29-2008
422	Florida RF	Cables	SMS-200AW-72.0-SMR	805	02-25-2009

5.0 SUPPORT EQUIPMENT

Table 5-1: Support Equipment

Manufacturer	Equipment Type	Model Number	Serial Number	FCC ID
EUT Was Stand-Alone and Self Supporting				

6.0 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

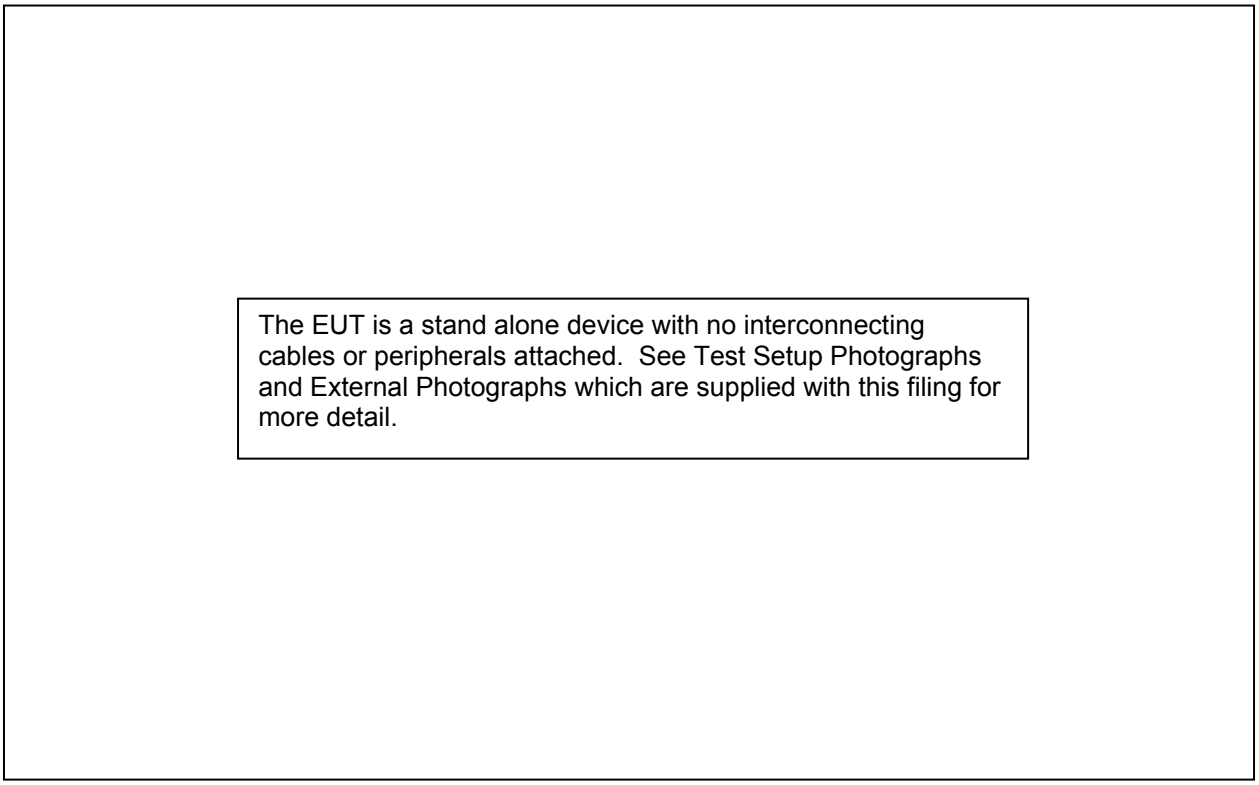

Figure 6-1: EUT Test Setup

7.0 SUMMARY OF TESTS

Along with the tabular data shown below, plots were taken of all signals deemed important enough to document.

7.1 Antenna Requirement – Part 15.203

The EUT employs a single integral PCB mounted helix antenna with 0dBi gain. The device is professionally installed.

7.2 Power Line Conducted Emissions

7.2.1 Test Methodology

The EUT is powered by an internal battery and is therefore not designed to be connected to the public utility (AC) power line. No Power line conducted emissions testing was performed.

7.3 Radiated Emissions - Unintentional Radiation

7.3.1 Test Methodology

Radiated emissions tests were performed over the frequency range of 30MHz to 1GHz. Measurements of the radiated field strength were made at a distance of 3m from the boundary of the equipment under test (EUT) and the receiving antenna. The antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. Radiated measurements were made with the Spectrum Analyzer's resolution bandwidth set to 120 KHz for measurements above 30MHz. Average and peak measurements are taken with the RBW set to 1MHz for measurements above 1000MHz.

7.3.2 Test Results

Results of the test are given in Table 7.3-1 below:

Table 7.3-1: Radiated Emissions Tabulated Data

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
30	---------	16.81	H	-7.50	---------	9.31	--------	40.0	---------	30.69
42.93	---------	16.10	H	-13.87	---------	2.24	--------	40.0	---------	37.77
63.41	---------	19.73	V	-20.10	---------	-0.37	--------	40.0	---------	40.37
117.3	---------	17.25	V	-13.06	---------	4.19	--------	43.5	---------	39.31
144.24	---------	17.58	V	-12.97	---------	4.61	--------	43.5	---------	38.89
202.44	---------	17.91	V	-14.10	---------	3.81	--------	43.5	---------	39.69
341.47	---------	18.85	V	-9.66	---------	9.19	--------	46.0	---------	36.81
464.34	---------	20.04	V	-6.47	---------	13.57	--------	46.0	---------	32.43
693.91	---------	19.48	V	-2.36	---------	17.12	--------	46.0	---------	28.88
952.57	---------	19.46	V	3.13	---------	22.59	--------	46.0	---------	23.41

* Note: All emissions above 952.57 MHz were attenuated below the permissible limit.

7.4 Peak Output Power

7.4.1 Test Methodology

Antenna conducted measurements could not be performed on this device, therefore radiated tests were performed to show compliance with the peak output power limit according to the alternative test methods in the FCC publication DA 00-705.

The procedures set forth in ANSI C63.4 were followed with respect to maximizing the peak emission. The resolution bandwidth of the spectrum analyzer was set to 1 MHz which was greater the 20 dB bandwidth measured in section 7.5.4. The video bandwidth was set to 3 MHz and a peak detector using the Max Hold function was utilized.

The power was calculated using the following equation:

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

Where: G = Numeric Gain of the transmitting antenna with reference to an isotropic radiator
d = The distance in meters from which the field strength was measured
E = The measured maximum fundamental field strength in V/m

7.4.2 Test Results

Results are shown below in tables 7.4.2-1 and 7.4.2-2 below:

Table 7.4.2-1: Fundamental Field Strength

Frequency (MHz)	Uncorrected Level (dBuV)	Antenna Polarity (H/V)	Correction Factors (dB)	Corrected Level (dBuV/m)
911.08	85.77	H	28.90	114.67
915.01	84.51	H	28.90	113.41
919.10	85.88	H	28.90	114.78

Table 7.4.2-2: Peak Output Power

Frequency (MHz)	Measurement Distance (m)	Antenna Gain (dBi)	Field Strength (V/m)	Antenna Gain (Num)	Power (mW)	Power (dBm)
911.08	3	0	0.54	1.00	87.93	19.44
915.01	3	0	0.47	1.00	65.78	18.18
919.10	3	0	0.55	1.00	90.18	19.55

7.5 Channel Usage Requirements

7.5.1 Carrier Frequency Separation

7.5.1.1 Test Methodology

The span of the spectrum analyzer was set wide enough to capture two adjacent peaks and the RBW and VBW were set to ≥ 1% of the span.

7.5.1.2 Test Results

The maximum 20dB bandwidth of the hopping channel was measured to be 90.4kHz (See figure 7.5.4-1 to 7.5.4-3 below). The adjacent channel separation was measured to be 132kHz. Results are shown in figure 7.5.1-1 below:

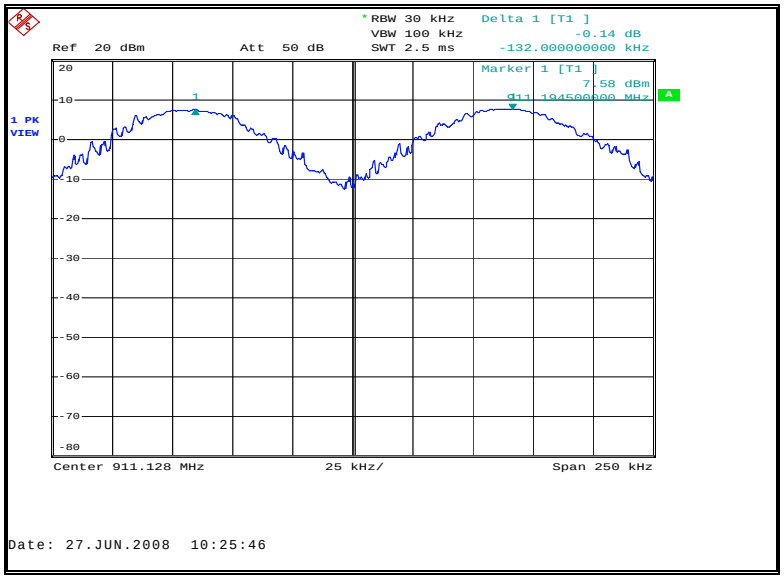

Figure 7.5.1-1: Carrier Frequency Separation

7.5.2 Number of Hopping Channels

The 20dB bandwidth of the device is less than 250 kHz. The device employs 50 hopping channels as required. Results are shown in Figure 7.5.2-1 below:

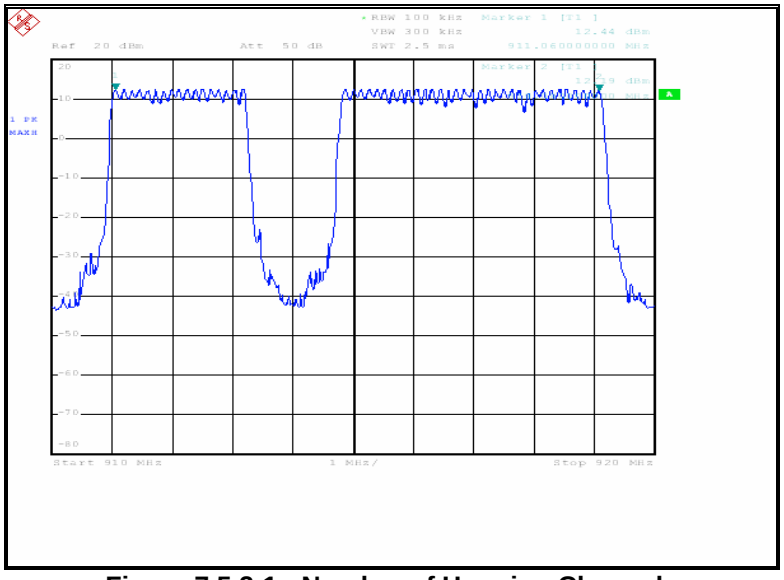

Figure 7.5.2-1: Number of Hopping Channels

7.5.3 Channel Dwell Time

7.5.3.1 Test Methodology

The emission measured centered on the analyzer and the span set to 0 Hz. The RBW was set to 1 MHz and the VBW to 3 MHz. Sweep time was set to 20 ms to capture the burst duration of the emission. The marker –delta function of the analyzer was employed to measure the burst duration.

7.5.3.2 Test Results

The duration of the RF transmission is 7 ms. There is a minimum 10 second rest period in which the device hops to another channel according to the pseudorandom frequency table before transmitting another 7 ms burst. Therefore the average time of occupancy on any channel in a 20 second period is 7ms. A single transmission is shown in figure 7.5.3-1 below:

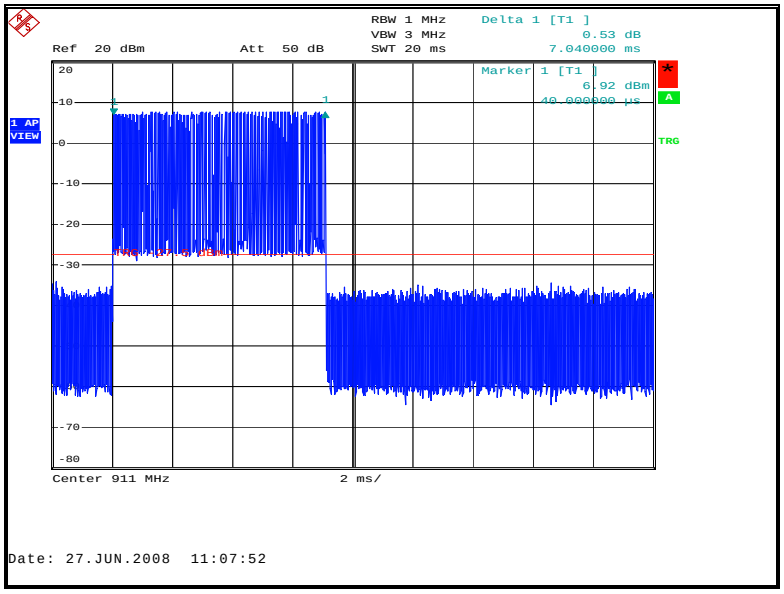

Figure 7.5.3-1: Channel Dwell Time

7.5.4 20dB Bandwidth

7.5.4.1 Test Methodology

The spectrum analyzer span was set to 2 to 3 times the estimated 20 dB bandwidth of the emission. The RBW was to ≥ 1% of the estimated 20 dB bandwidth. The trace was set to max hold with a peak detector active. The Delta function of the analyzer was utilized to determine the 20 dB bandwidth of the emission. The span and RBW were examined and re-adjusted if necessary to meet the requirements of 2 to 3 times the 20 bandwidth for the span and ≥ 1% of the 20 dB bandwidth for the RBW.

7.5.4.2 Test Results

The maximum 20dB bandwidth was found to be approximately 90.4kHz. Results are shown below in Table 7.5.4-1 and Figures 7.5.4-1 through 7.5.4-3.

Table 7.5.4-1

Frequency [MHz]	Bandwidth [kHz]
911	84.0
915	90.4
919	82.4

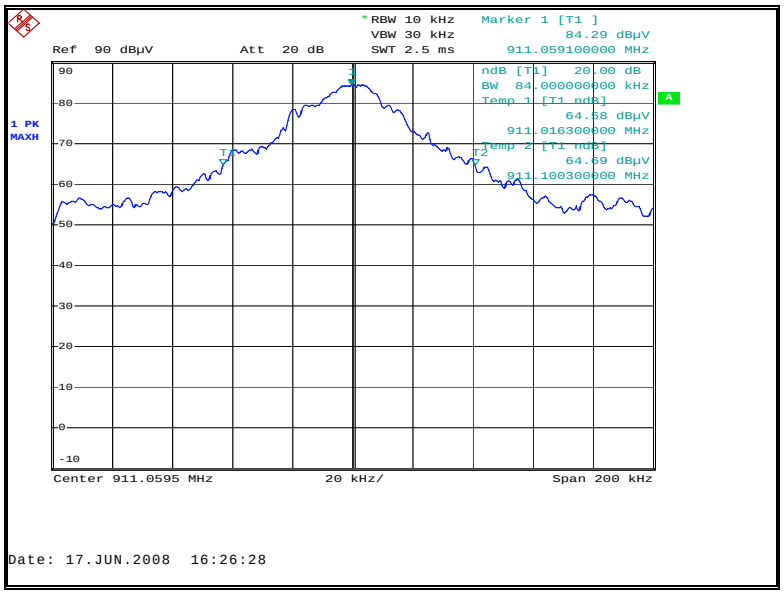

Figure 7.5.4-1: 20dB Bandwidth Low Channel

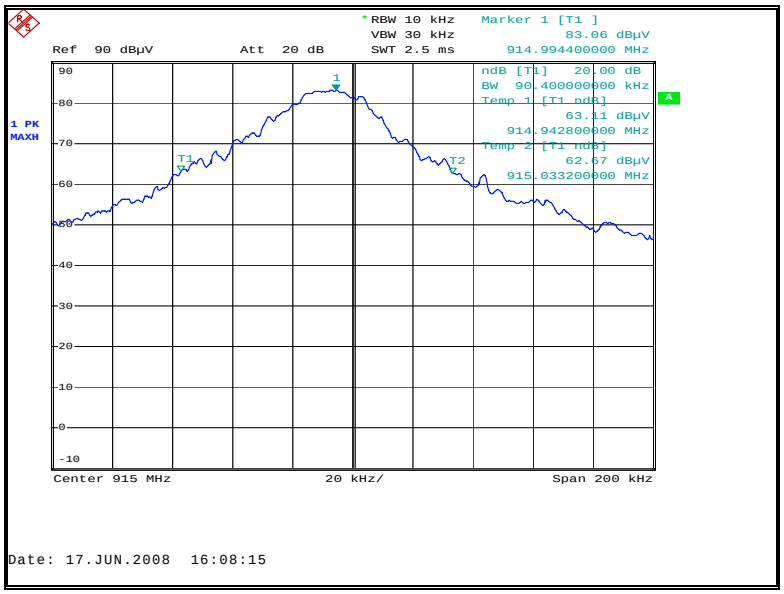

Figure 7.5.4-2: 20dB Bandwidth Mid Channel

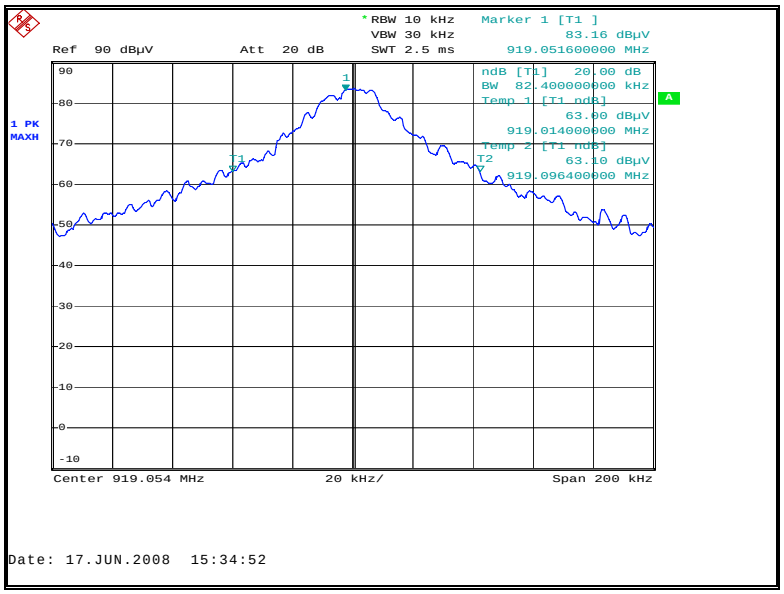

Figure 7.5.4-3: 20dB Bandwidth High Channel

7.6 Band-Edge Compliance and Spurious Emissions

7.6.1 Band-Edge Compliance of RF Emissions

7.6.1.1 Test Methodology

The EUT was investigated at the lowest and highest channel available to determine band-edge compliance. For each measurement the spectrum analyzer's RBW was set to 100 kHz and the VBW was set to 300kHz.

7.6.1.2 Test Results

In a 100 kHz bandwidth at the lower and upper band-edge, the radio frequency power that was produced by the EUT is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. Band-edge compliance is displayed in Figures 7.6.1-1 and 7.6.2-2

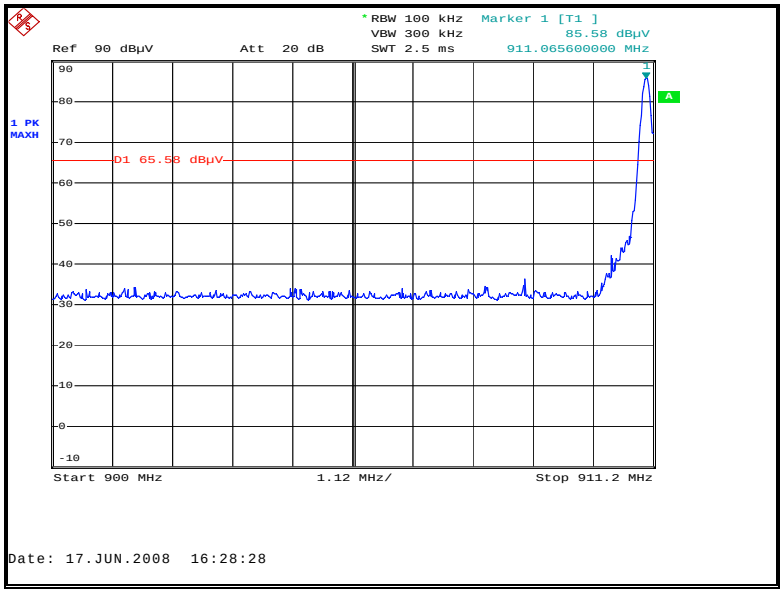

Figure 7.6.1-1: Lower Band-edge

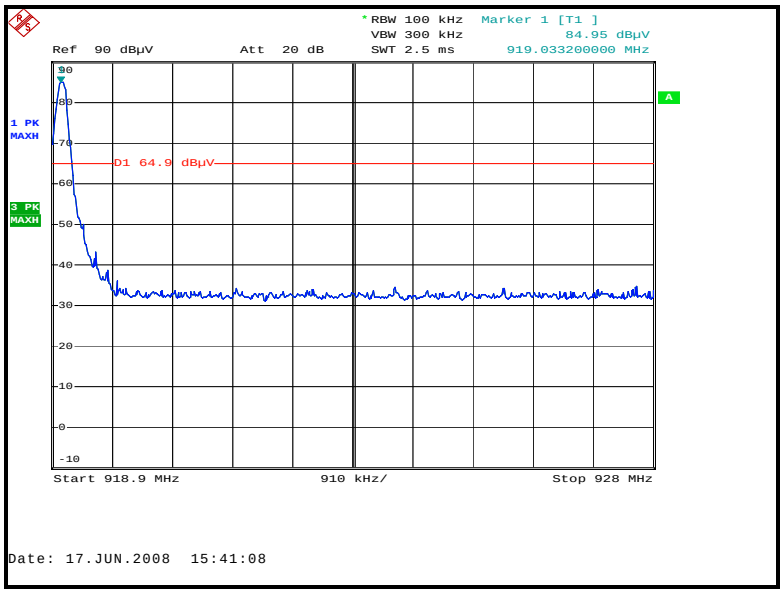

Figure 7.6.1-2: Upper Band-edge

7.6.2 RF Conducted Spurious Emissions

7.6.2.1 Test Methodology

Antenna conducted measurements could not be performed on this device therefore radiated tests were performed to show compliance with the spurious RF conducted limit according to FCC publication DA 00-705.

For each measurement, the spectrum analyzer's RBW was set to 100 kHz and the VBW was set to 300 kHz. The peak detector and Max Hold function of the analyzer were utilized. The field strength of both the fundamental emission and all spurious emissions were measured with these settings. Procedures in ANSI C63.4 with respect to maximizing the emissions were followed. The measured field strength of all spurious emissions must be below the measured field strength of the fundamental emission by 20dB.

7.6.2.2 Test Results

The magnitude of all emissions are reported in section 7.6.3 with the appropriate limit as referenced to 20 dB below the fundamental frequency field strength. Emissions that fell within the restricted bands were referenced to the radiated emissions limit set forth in FCC Section 15.209 and IC RSS-210 Section 2.6.

7.6.3 Radiated Spurious Emissions – Intentional Radiation

7.6.3.1 Test Methodology

Radiated emissions tests were made over the frequency range of 30MHz to 10GHz, 10 times the highest fundamental frequency.

The EUT was rotated through 360° and the receive antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. For frequencies below 1000MHz, quasi-peak measurements were made using a resolution bandwidth (RBW) of 120 kHz and a video bandwidth (VBW) of 300 kHz. For frequencies above 1000MHz, peak measurements were made using an RBW of 1 MHz and a VBW of 3 MHz. For comparison to the average limits, the peak values were corrected for the duty cycle of the EUT. See section 7.6.3.2 for more details.

For those frequencies that fell outside the restricted bands as defined in 15.205, the alternative test methods in the FCC publication DA 00-705 was followed using a RBW of 100kHz and VBW of 300kHz and peak detector. See section 7.6.2 for more details.

7.6.3.2 Duty Cycle Correction

For average radiated measurements in restricted bands, the measured level was reduced by a factor 23dB to account for the duty cycle of the EUT. The EUT transmits for 7mS on a channel followed by a minimum 10 second rest period before hopping to the next channel. The EUT does not return to the same channel for over 500 seconds. Therefore the duty cycle is 7%. The duty cycle correction factor is determined using the formula: 20log (7/100) = 23dB.

7.6.3.3 Test Results

Radiated spurious emissions found in the band of 30MHz to 10GHz are reported in Tables 7.6.3-1 to 7.6.3-3.

Table 7.6.3-1: Radiated Spurious Emissions – Low Channel

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
Fundamental Emissions										
911.0815	85.69	---------	H	28.90	114.59	---------	--------	--------	---------	---------
911.0815	79.31	---------	V	27.91	107.22	---------	--------	--------	---------	---------
Spurious Emissions										
1822.163	73.42	---------	H	-3.56	69.86	---------	94.6	---------	24.73	---------
1822.163	70.83	---------	V	-3.59	67.24	---------	94.6	---------	27.35	---------
2733.2445	70.40	70.40	H	-0.52	69.88	46.78	74.0	54.0	4.12	7.22
2733.2445	70.11	70.11	V	-0.72	69.39	46.29	74.0	54.0	4.61	7.71
3644.326	66.89	55.89	H	2.25	69.14	35.04	74.0	54.0	4.86	18.96
3644.326	59.53	59.53	V	2.28	61.81	38.71	74.0	54.0	12.19	15.29
4555.4075	60.68	60.68	H	4.50	65.18	42.08	74.0	54.0	8.82	11.92
4555.4075	55.57	55.57	V	4.60	60.17	37.07	74.0	54.0	13.83	16.93
5466.489	52.28	---------	H	6.39	58.67	---------	94.6	---------	35.92	---------
5466.489	49.64	---------	V	6.39	56.03	---------	94.6	---------	38.56	---------
6377.5705	47.20	---------	H	7.82	55.02	---------	94.6	---------	39.57	---------
6377.5705	51.18	---------	V	7.87	59.05	---------	94.6	---------	35.54	---------
7288.652	51.16	51.16	H	9.52	60.68	37.58	74.0	54.0	13.32	16.42
7288.652	55.08	55.08	V	9.57	64.65	41.56	74.0	54.0	9.35	12.44
8199.7335	47.98	47.98	H	10.31	58.29	35.19	74.0	54.0	15.71	18.81
8199.7335	53.27	53.27	V	10.31	63.58	40.48	74.0	54.0	10.42	13.52

***** *The magnitude of all emissions not reported were below the noise floor of the measurement system.*

Table 7.6.3-2: Radiated Spurious Emissions – Mid Channel

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
Fundamental Emissions										
915.01	84.33	---------	H	28.90	113.23	---------	--------	--------	---------	---------
915.01	80.94	---------	V	27.95	108.89	---------	--------	--------	---------	---------
Spurious Emissions										
1830.02	69.76	---------	H	-3.53	66.23	---------	93.2	---------	27.00	---------
1830.02	67.03	---------	V	-3.56	63.47	---------	93.2	---------	29.76	---------
2745.03	64.61	64.61	H	-0.51	64.10	41.00	74.0	54.0	9.90	13.00
2745.03	69.66	69.66	V	-0.71	68.95	45.85	74.0	54.0	5.05	8.15
3660.04	64.92	64.92	H	2.32	67.24	44.14	74.0	54.0	6.76	9.86
3660.04	59.73	59.73	V	2.35	62.08	38.98	74.0	54.0	11.92	15.02
4575.05	60.08	60.08	H	4.51	64.59	41.49	74.0	54.0	9.41	12.51
4575.05	54.83	54.83	V	4.61	59.44	36.34	74.0	54.0	14.56	17.66
5490.06	49.75	49.75	H	6.47	56.22	---------	93.2	---------	37.01	---------
5490.06	48.75	---------	V	6.48	55.23	---------	93.2	---------	38.00	---------
6405.07	46.43	---------	H	7.88	54.31	---------	93.2	---------	38.92	---------
6405.07	52.51	---------	V	7.92	60.43	---------	93.2	---------	32.80	---------
7320.08	50.87	50.87	H	9.53	60.40	37.30	74.0	54.0	13.60	16.70
7320.08	54.18	54.18	V	9.59	63.77	40.67	74.0	54.0	10.23	13.33
8235.09	47.70	47.70	H	10.34	58.04	34.94	74.0	54.0	15.96	19.06
8235.09	51.76	51.76	V	10.34	62.10	39.00	74.0	54.0	11.90	15.00 *****

The magnitude of all emissions not reported were below the noise floor of the measurement system.

Table 7.6.3-3: Radiated Spurious Emissions – High Channel

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
Fundamental Emissions										
919.1	85.66	---------	H	28.90	114.56	---------	--------	--------	---------	---------
919.1	80.86	---------	V	27.99	108.85	---------	--------	--------	---------	---------
Spurious Emissions										
1838.2	65.53	--------	H	-3.50	62.03	---------	94.6	---------	32.53	---------
1838.2	62.76	--------	V	-3.54	59.22	---------	94.6	---------	35.34	---------
2757.3	67.36	67.36	H	-0.49	66.87	43.77	74.0	54.0	7.13	10.23
2757.3	66.95	66.95	V	-0.69	66.26	43.16	74.0	54.0	7.74	10.84
3676.4	65.42	65.42	H	2.38	67.80	44.70	74.0	54.0	6.20	9.30
3676.4	58.75	58.75	V	2.42	61.17	38.07	74.0	54.0	12.83	15.93
4595.5	60.11	60.11	H	4.51	64.62	41.53	74.0	54.0	9.38	12.47
4595.5	55.09	55.09	V	4.61	59.70	36.61	74.0	54.0	14.30	17.39
5514.6	48.57	48.57	H	6.52	55.09	---------	94.6	---------	39.47	---------
5514.6	47.74	--------	V	6.53	54.27	---------	94.6	---------	40.29	---------
6433.7	46.58	--------	H	7.94	54.52	---------	94.6	---------	40.04	---------
6433.7	50.12	--------	V	7.97	58.09	---------	94.6	---------	36.47	---------
7352.8	51.39	51.39	H	9.53	60.92	37.83	74.0	54.0	13.08	16.17
7352.8	53.08	53.08	V	9.61	62.69	39.59	74.0	54.0	11.31	14.41
8271.9	47.04	47.04	H	10.38	57.42	34.32	74.0	54.0	16.58	19.68
8271.9	50.64	50.64	V	10.38	61.02	37.92	74.0	54.0	12.98	16.08

***** *The magnitude of all emissions not reported were below the noise floor of the measurement system.*

7.6.3.4 Sample Calculation:

$R_C = R_U + CF_T$

Where:
CF_T = Total Correction Factor (AF+CA+AG)-DC (Average Measurements Only)
R_U = Uncorrected Reading
R_C = Corrected Level
AF = Antenna Factor
CA = Cable Attenuation
AG = Amplifier Gain
DC = Duty Cycle Correction Factor

Example Calculation

PEAK:
Corrected Level: 70.40 - 0.52= 69.88dBuV
Margin: 74dBuV – 69.88dBuV = 4.12dB

AVERAGE:
Corrected Level: 70.40 - 0.52 - 23.1= 46.78dBuV
Margin: 54dBuV – 46.78dBuV = 7.22dB

8.0 CONCLUSION
In the opinion of ACS, Inc. the R900G Remote, manufactured by Neptune Technology Group, Inc. meets the requirements of FCC Part 15 subpart C and Industry Canada's Radio Standards Specification RSS-210.

END REPORT