Giant Electronics Ltd.

Application
For
Certification

Two Way Radio with GMRS, FRS and MP3 Player

(FCC ID: K7GT9140)

0520254
TL/ Ann Choy
December 21, 2005

Intertek Testing Services Hong Kong Ltd.
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MEASUREMENT/TECHNICAL REPORT

Application : Giant Electronics Ltd.
Trade Name/Model No : Giant T9140
Date : December 21, 2005

This report concerns (check one:)Original Grant X Class II Change

Equipment Type: FRF – Part 95 Family Radio Face Held Transmitter
JBP - Part 15 Class B Computer Peripheral

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes No X
If yes, defer until: date

Company Name agrees to notify the Commission by: date

of the intended date of announcement of the product so that the grant can be issued on that date.

Report prepared by:

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EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The Equipment Under Test (EUT) is a Two Way Radio with GMRS, FRS and MP3 Player operating between 462.5500MHz and 467.7125MHz. The EUT is powered by 3.6V (1 x 3.6V "Ni-MH" type rechargeable battery) or 4.5V (3 x "AAA" size 1.5V alkaline batteries). The EUT can play MP3 from its internal memory or external SD memory card as well as record voice message in digital format. The digital data in memory of EUT can be transferred to or from the personal computer through an USB port. The transmitter portion of EUT is turned off when the EUT is plugged into AC adaptor.

Transmitter Portion

(i)	Type of Emission	: 5K55F3E
(ii)	Frequency Range	: GMRS 15 Channels from 462.5500MHz to 462.7250MHz FRS 7 Channels from 467.5625MHz to 467.7125MHz
(iii)	Maximum Power Rating	: GMRS: 0.06W ERP; FRS: 0.05W ERP
(iv)	Antenna Type	: Integral

The brief circuit description is saved with filename: descri.pdf

1.2 Related Submittal(s) Grants

This is an Application for Certification of the transmitter portion of a GMRS + FRS Transceiver and Part 15 Certification of the computer peripheral. The receiver section of this Transceiver and digital device portion are subject to verification process.

1.3 Test Methodology

Radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003) and ANSI/TIA-603-B-2002. All measurement were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. For each scan, the procedure of maximizing emissions in Appendices D and E were followed. All Radiated tests were performed at an antenna the EUT distance of 3 meters, unless stated otherwise in the **"Justification Section"** of this Application.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the emission data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. The test facility and site measurement data have been fully placed on file with the FCC.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

2.0 System Test Configuration

2.1 Justification

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). During transmitter emission testing, the EUT was placed on a turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

During computer peripheral emission testing, the output USB port of EUT was connected to correspondence interface input port of personal computer. All cables were manipulated to produce worst case emissions. The data download was examined. When the radiated emissions are measured.

The EUT was powered by 3 new “AAA” size 1.5V alkaline batteries.

The frequency range from 30 MHz to 4.69 GHz was searched for spurious emissions from the device. Only those emissions reported were detected. All other emissions were at least 20 dB below the applicable limits.

2.2 EUT Exercising Software

For transmitter emission testing, there was no special software to exercise the EUT. Once the EUT is powered on, a signal is transmitted continuously.

For computer peripheral emission testing, the EUT exercise program used during radiated and conducted emission testing was designed to exercise the various system components in a manner similar to a typical use.

2.3 Special Accessories

No special accessory is needed for compliance of this device.

2.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

2.5 Equipment Modification

Any modification installed previous to testing by Giant Electronics Ltd. will be incorporated in each production model sold/leased in the United States.

No modification were installed by Intertek Testing Services Hong Kong Ltd.

2.6 Support Equipment

For Radiated Emission Test:

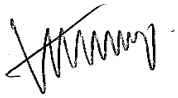
1. HP Computer
   Model: D530S
   S/N: CNG4110DX
2. HP Keyboard
   Model: SDM4700P
   S/N: 323686-B31
3. Philips Monitor
   Model: 150B4CG
   S/N: CX000409301774
4. HP Mouse
   Model: M-S69
   S/N: 323614-001
5. HP Printer
   Model: C2642A
   S/N: SG67B131RY
6. Hayes Modem
   Model: 6800N
   S/N: A00900153317
7. SanDisk Ultra II 512MB Memory Card
   (Supplied by Intertek)
8. A headset with 1.2m unshielded cable. (Supplied by Client)
9. A serial cable with 1 meter long
10. A parallel cable with 1 meter long
11. A USB cable with 1.5 meter long

For Conducted Emission Test:

1. IBM Computer
   Model: NetVista M42
   S/N: S99GMHN1
2. IBM Keyboard
   Model: 32P5100
   S/N: 1203496
3. Samsung Monitor
   Model: NB15ASHB/XSH
   S/N: NB15HVEX103069X
4. HP Mouse
   Model: C3751B
5. HP Printer
   Model: C6431D
   S/N: CN23B 680ZP
6. Genius Modem
   Model: GM56EX
   S/N: ZT5505000355

Confirmed by:

Tommy Leung
Assistant Manager
Intertek Testing Services
Agent for Giant Electronics Ltd.



_____ Signature

December 21, 2005 Date

EXHIBIT 3

RF POWER OUTPUT

3.0 **RF Power Output (Section 2.1046(a))**

A. Equipment Used

Equipment	**Brand Name**	**Model No.**
Log Periodic Antenna	EMCO	3148
Test receiver	Rohde & Schwarz	ESVS30
Tuned Dipole Antenna	CDI	A100
Signal Generator	RFI	2023B

B. Testing Procedure

1. On a test site, the EUT shall be placed at 1.5m height on a turn table, and in the position closest to normal use as declared by the applicant.

2. The test antenna shall be oriented initially for vertical polarisation located 3m from EUT to correspond to the frequency of the transmitter.

3. The output of the test antenna shall be connected to the measuring receiver and the quasi-peak detector is used for the measurement.

4. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.

5. The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6. The transmitter shall then the rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7. The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8. The maximum signal level detected by the measuring receiver shall be noted.

9. The transmitter shall be replaced by a tuned dipole (substitution antenna).

10. The substitution antenna shall be orientated for vertical polarisation and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

11. The substitution antenna shall be connected to a calibrated signal generator.

12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

13. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.

14. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring received, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.

15. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarisation.

17. The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.

Table 1

Giant Electronics Ltd.
Giant T9140

Transmission Power

Channel	Frequency (MHz)	Effective Radiated Power		Limit (W)	Margin (W)
		(dBm)	(W)		
1	462.5625	17.5	0.06	2.0	-1.94
2	462.5875	17.5	0.06	2.0	-1.94
3	462.6125	17.5	0.06	2.0	-1.94
4	462.6375	17.5	0.06	2.0	-1.94
5	462.6625	17.5	0.06	2.0	-1.94
6	462.6875	17.5	0.06	2.0	-1.94
7	462.7125	17.5	0.06	2.0	-1.94
8	467.5625	16.9	0.05	0.5	-0.45
9	467.5875	16.9	0.05	0.5	-0.45
10	467.6125	16.9	0.05	0.5	-0.45
11	467.6375	16.9	0.05	0.5	-0.45
12	467.6625	16.9	0.05	0.5	-0.45
13	467.6875	16.9	0.05	0.5	-0.45
14	467.7125	16.9	0.05	0.5	-0.45
15	462.5500	17.5	0.06	2.0	-1.94
16	462.5750	17.5	0.06	2.0	-1.94
17	462.6000	17.5	0.06	2.0	-1.94
18	462.6250	17.5	0.06	2.0	-1.94
19	462.6500	17.5	0.06	2.0	-1.94
20	462.6750	17.5	0.06	2.0	-1.94
21	462.7000	17.5	0.06	2.0	-1.94
22	462.7250	17.5	0.06	2.0	-1.94

Notes: Negative sign in the margin column shows the value below limits.

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

EXHIBIT 4

MODULATION CHARACTERISTICS

4.0 **Modulation Characteristics**

In order to satisfy the 95.637(a) requirement, Modulation Frequency Response and Modulation Limit Characteristics are attached in Exhibit 4.1 & 4.2.

Plots for each tests are saved with filename: mfr.pdf and mlc.pdf

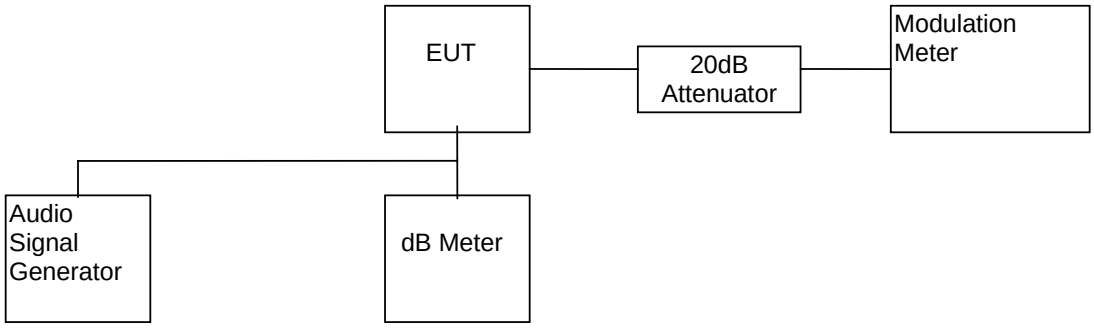
4.1 Modulation Frequency Response

A. Test Equipment

Equipment	Brand Name	Model No.
Audio Signal Generator	HP	HP8904A
AC Millivoltmeter	Leader	LMV-182A
20 dB RF Attenuator	Bird	8304-200-N
Communication Service Monitor	Marconi	2945

B. Testing Procedure

1) Set-up the test equipment in the following configuration:



2) Set the audio signal generator frequency to the sound pressure level 97dBSPL at the microphone of the EUT.
3) The frequency of the audio signal generator is changed from 300Hz to 5kHz.
4) Record the frequency deviation.

C. Test Result

Table 2

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Giant T9140

Modulation Frequency Response

Test Channel : 4
Input level = 97dBSPL

Modulation Frequency (Hz)	Modulation index (%)
300	0.35
400	0.30
500	0.30
600	0.30
700	0.64
800	0.70
900	0.63
1000	0.72
1250	0.72
1500	0.79
1750	1.01
2000	0.94
2250	0.70
2500	0.50
2750	0.32
3000	0.24
3125	0.21
3250	0.18
3500	0.13
4000	0.02
5000	0.01

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

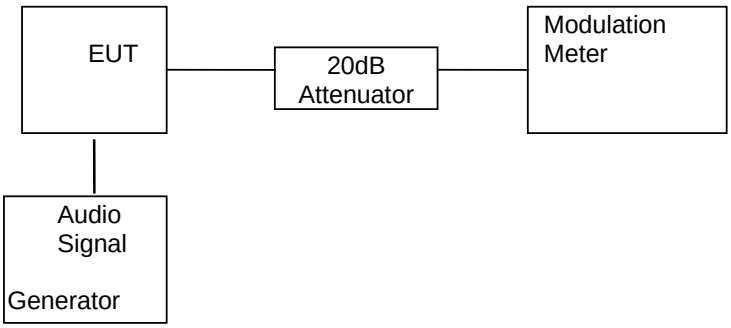
4.2 Modulation Limiting Characteristics (Section 2.1047(b))

A. Test Equipment

Equipment	Brand Name	Model No.
Audio Signal Generator	HP	HP8904A
20 dB RF Attenuator	Bird	8304-200-N
Communication Service Monitor	Marconi	2945

B. Testing Procedure

1) Set-up the test equipment in the following configuration:



2) Set the frequency of the audio signal generator to 500Hz and adjust the level from 47dBSPL to 137dBSPL.
3) Record the maximum value of plus or minus peak frequency deviation.
4) Repeat the above procedure with frequency 1000Hz, 2500Hz & 3125Hz.

C. Test Result

Table 3

Giant Electronics Ltd.
Giant T9140

Modulation Limiting Characteristics

Test Channel : 4

Modulation Input (dBSPL)	Peak Frequency Deviation (kHz) at 500Hz	Peak Frequency Deviation (kHz) at 1000Hz	Peak Frequency Deviation (kHz) at 2500Hz	Peak Frequency Deviation (kHz) at 3125Hz
47	0.046	0.046	0.047	0.046
57	0.049	0.048	0.064	0.049
67	0.049	0.051	0.064	0.500
77	0.050	0.066	0.127	0.088
87	0.065	0.144	0.662	0.463
97	0.149	0.720	1.250	0.664
107	0.747	1.888	1.250	0.667
117	1.992	1.899	1.250	0.668
127	2.078	1.978	1.250	0.666
137	2.058	2.043	1.250	0.658

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

4.3 Audio Low Pass Filter Response (Section 95.637(b))

A. Test Equipment

Equipment	Brand Name	Model No.
Audio Signal Generator	HP	HP8904A
AC Millivoltmeter	Leader	LMV-182A

B. Testing Procedure

1) Connect the audio signal generator to the input of the post limiter low pass filter and the dB meter to the output of the post limiter low pass filter.
2) Apply a 1000 Hz tone from the audio signal generator and adjust the level per manufacturer's specifications. Record the dB level of the 1000 Hz tone as LEV_{REF}.
3) Set the audio signal generator to the desired test frequency between 3000 Hz and the upper low pass filter limit. Record the dB level at the test frequency as LEV_{FREQ}.
4) Calculate the audio frequency response at the test frequency as:

low pass filter response **=** LEV_{FREQ} **-** LEV_{REF}

1) Repeat the above procedure for all the desired test frequencies.

C. Test Result

For electronic filing, the audio low pass frequency response is saved with filename: lpf.pdf.

EXHIBIT 5

OCCUPIED BANDWIDTH

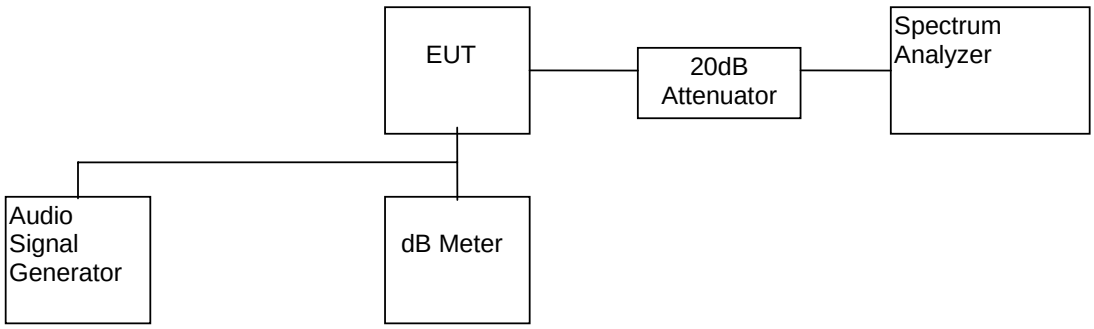
5.0 Occupied Bandwidth (Section 95.633(c))

A. Test Equipment

Equipment	Brand Name	Model No.
Audio Signal Generator	HP	HP8904A
AC Millivoltmeter	Leader	LMV-182A
20 dB RF Attenuator	Bird	8304-200-N
Spectrum Analyzer	HP	8951EM

B. Testing Procedure

1) Set-up the test equipment in the following configuration:



2) Set the level of audio signal generator to obtain 16 dB greater than required for 50% modulation.
3) The occupied bandwidth is measured with the spectrum analyzer set at 2kHz/div scan and 10dB/div.

C. Test Result

The occupied Bandwidth is measured to be 5.55 kHz for GMRS and FRS.

For the electronic filing, the bandwidth plot is saved with filename: bw.pdf

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

EXHIBIT 6

SPURIOUS EMISSION

6.0 **Spurious Emission**

In order to satisfy the 95.635(b) requirement, the spurious emission from the EUT - Transmitter are measured and shown in the Exhibit 6.1.

In order to satisfy the 15.109 requirement, the spurious emission from the EUT - Computer Peripheral are measured and shown in the Exhibit 6.2.

6.1 Field Strength of Spurious Radiation (Section 95.635(b)) - Transmitter

A. Test Equipment

Equipment	Brand Name	Model No.
Antenna	EMCO	A100, 3148, 3104C, 3115
Spectrum Analyzer	ADVANTEST	R3271
Test receiver	Rohde & Schwarz	ESVS30
RF Filter	Trilithic	3VF500/1000-5-50-CC

B. Testing Procedure

Radiated emission measurements were performed according to the procedures in ANSI C63.4(2003). All measurements were performed in Open Area Test Sites located at Roof Top of Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.

C. Radiated Emission Configuration Photograph

Worst Case Radiated Emission - Transmitter

For electronic filing, the radiated emission configurations photograph is saved with filename: config photos.doc

C. Test Result

Giant Electronics Ltd.
Giant T9140

Table 4(a)

1) Unwanted emission from CARRIER ±6.25kHz to CARRIER ±31.25kHz

(Refer to the plots which is saved with filename: spurious.pdf)

Region	Unwanted emission	
	Channel 4	Channel 11
CARRIER ±6.25kHz to ±12.5kHz	<25dB	<25dB
CARRIER ±12.5kHz to ±31.25kHz	<35dB	<35dB

Table 4(b): Channel 4

Frequency (MHz)	Effective Radiated Power (dBm)	Transmission Power (dBm)	Attenuation (dBc)	Limit (dB)	Margin (dB)
231.319	-46.1	17.5	63.6	30.5	-33.1
693.956	-43.1	17.5	60.6	30.5	-30.1
925.275	-32.0	17.5	49.5	30.5	-19.0
1156.594	-56.7	17.5	74.2	30.5	-43.7
1387.913	-34.7	17.5	52.2	30.5	-21.7
1619.231	-54.2	17.5	71.7	30.5	-41.2
1850.550	-57.1	17.5	74.6	30.5	-44.1
2081.869	-56.3	17.5	73.8	30.5	-43.3
2313.188	-44.3	17.5	61.8	30.5	-31.3
2544.506	-53.4	17.5	70.9	30.5	-40.4
2775.825	-44.4	17.5	61.9	30.5	-31.4
3007.144	-53.8	17.5	71.3	30.5	-40.8
3238.463	-45.1	17.5	62.6	30.5	-32.1
3469.781	-53.3	17.5	70.8	30.5	-40.3
3701.100	-52.8	17.5	70.3	30.5	-39.8
3932.419	-51.1	17.5	68.6	30.5	-38.1
4163.738	-44.9	17.5	62.4	30.5	-31.9
4395.056	-47.1	17.5	64.6	30.5	-34.1
4626.375	-46.8	17.5	64.3	30.5	-33.8

Remark: 1. Transmission power is 17.5 dBm or -12.5 dB(W).

2. According to Section 95.635(b7), the unwanted emission should be attenuated below TP by at least $43 + 10 \log_{10}$ (TP) dB or 30.5 dB.

3. The test is performed according to ANSI/TIA-603-B-2002.

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

Table 4(b): Channel 11

Frequency (MHz)	Effective Radiated Power (dBm)	Transmission Power (dBm)	Attenuation (dBc)	Limit (dB)	Margin (dB)
233.819	-45.9	16.9	62.8	29.9	-32.9
701.456	-42.4	16.9	59.3	29.9	-29.4
935.275	-36.1	16.9	53.0	29.9	-23.1
1169.094	-59.6	16.9	76.5	29.9	-46.6
1402.913	-40.1	16.9	57.0	29.9	-27.1
1636.731	-53.3	16.9	70.2	29.9	-40.3
1870.550	-54.3	16.9	71.2	29.9	-41.3
2104.369	-53.7	16.9	70.6	29.9	-40.7
2338.188	-48.7	16.9	65.6	29.9	-35.7
2572.006	-53.3	16.9	70.2	29.9	-40.3
2805.825	-49.1	16.9	66.0	29.9	-36.1
3039.644	-53.1	16.9	70.0	29.9	-40.1
3273.463	-46.0	16.9	62.9	29.9	-33.0
3507.281	-49.4	16.9	66.3	29.9	-36.4
3741.100	-49.4	16.9	66.3	29.9	-36.4
3974.919	-50.7	16.9	67.6	29.9	-37.7
4208.738	-50.0	16.9	66.9	29.9	-37.0
4442.556	-49.3	16.9	66.2	29.9	-36.3
4676.375	-49.8	16.9	66.7	29.9	-36.8

Remark: 1. Transmission power is 16.9 dBm or -13.1 dB(W).

2. According to Section 95.635(b7), the unwanted emission should be attenuated below TP by at least $43 + 10 \log_{10}$ (TP) dB or 29.9 dB.

3. The test is performed according to ANSI/TIA-603-B-2002.

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

6.2 Field Strength of Radiation Emission (Section 15.109) - Computer Peripheral

Data is included worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

A. Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

A. Field Strength Calculation (cont'd)

Example

Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB

AV = -10 dB

FS = 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 dBμV/m

Level in mV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

B. Radiated Emission Configuration Photograph

Worst Case Radiated Emission - Computer Peripheral
at
204.004 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: config photos.doc.

C. Radiated Emission Data - Computer Peripheral

Table 4(c): Radiated Emissions

Polarity	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
H	87.627	36.1	16	8.0	28.1	40.0	-11.9
H	204.004	47.5	16	11.8	43.3	43.5	-0.2
H	289.317	36.9	16	13.3	34.2	46.0	-11.8
H	312.964	35.1	16	14.3	33.4	46.0	-12.6
H	337.136	36.0	16	14.6	34.6	46.0	-11.4
H	409.064	3.8	16	15.9	3.7	46.0	-42.3

Remark: 1. Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meter. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

Test Engineer: Kenneth C. C. Lam Date of Test: September 23-December 10, 2005

D. Conducted Emission Configuration Photograph - Computer Peripheral

Worst Case Line-Conducted Configuration
at
0.200 MHz

For electronic filing, the worst case line-conducted configuration photograph are saved with filename: config photos.doc.

E. Conducted Emission Data - Computer Peripheral

For electronic filing, the graph and data table of conducted emission is saved with filename: conducted.pdf.

EXHIBIT 7

FREQUENCY STABILITY

7.0 **Frequency Stability**

The frequency tolerance was tested in normal condition & over extreme ambient conditions with respect to voltage and temperature variation.

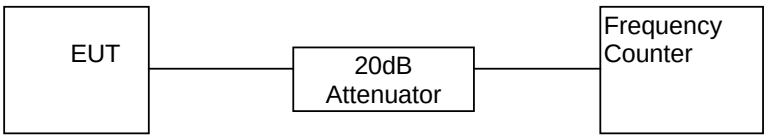
7.1 Frequency Tolerance (Section 95.627)

A. Test Equipment

Equipment	Brand Name	Model No.
20 dB RF Attenuator	Bird	8304-200-N
Frequency Counter	Phillips	PM6668

B. Testing Procedure

1) Set-up the test equipment in the following configuration:



2) Measure all transmit channel frequencies in MHz.

C. Test Result

Table 5

Giant Electronics Ltd.
Giant T9140

Frequency Tolerance

Channel	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (%)
1	462.5625	462.56297	0.000102
2	462.5875	462.58797	0.000102
3	462.6125	462.61297	0.000102
4	462.6375	462.63796	0.000099
5	462.6625	462.66297	0.000102
6	462.6875	462.68797	0.000102
7	462.7125	462.71296	0.000099
8	467.5625	467.56297	0.000101
9	467.5875	467.58797	0.000101
10	467.6125	467.61297	0.000101
11	467.6375	467.63797	0.000101
12	467.6625	467.66296	0.000098
13	467.6875	467.68797	0.000100
14	467.7125	467.71297	0.000100
15	462.5500	462.55047	0.000102
16	462.5750	462.57547	0.000102
17	462.6000	462.60047	0.000102
18	462.6250	462.62547	0.000102
19	462.6500	462.65047	0.000102
20	462.6750	462.67547	0.000102
21	462.7000	462.70047	0.000102
22	462.7250	462.72547	0.000102

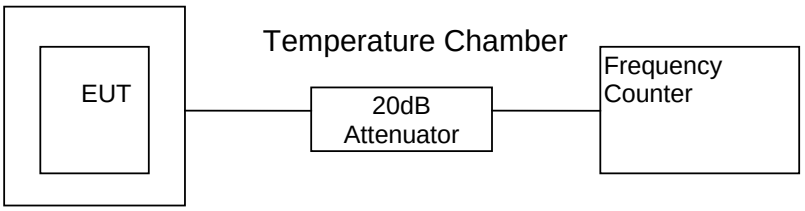
7.2 Frequency Stability - Temperature (Section 2.1055)

A. Test Equipment

Equipment	Brand Name	Model No.
20 dB RF Attenuator	Bird	8304-200-N
Frequency Counter	Phillips	PM6668

B. Testing Procedure

1) Set-up the test equipment in the following configuration:



2) Set the Temperature Chamber to 20°C and stabilize the EUT temperature for one hour. Set transmitter ON for two minutes.
3) Measure the channel frequency of channel 4, 11 in MHz.
4) Turn the EUT OFF.
5) Repeat the above procedure from -20°C to 50°C with 10°C increment.

C. Test Result

Table 6(a)

Giant Electronics Ltd.
Giant T9140

Frequency Deviation with Temperature Variation

Channel : 4

Temperature (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Deviation (%)	*Frequency Tolerance with reference to its value at +20°C (ppm)
-20	462.6375	462.63640	-0.000238	-3.4
-10	462.6375	462.63727	-0.000050	-1.5
0	462.6375	462.63831	0.000175	0.8
10	462.6375	462.63830	0.000173	0.7
20	462.6375	462.63796	0.000099	0.0
30	462.6375	462.63764	0.000030	-0.7
40	462.6375	462.63749	-0.000002	-1.0
50	462.6375	462.63766	0.000035	-0.6

*Remark: This column is presentable for Industry Canada Certification only.

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C. Test Result

Table 6(b)

Giant Electronics Ltd.
Giant T9140

Frequency Deviation with Temperature Variation

Channel : 11

Temperature (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	Deviation (%)	*Frequency Tolerance with reference to its value at +20°C (ppm)
-20	467.6375	467.63634	-0.000248	-3.5
-10	467.6375	467.63727	-0.000049	-1.5
0	467.6375	467.63829	0.000169	0.7
10	467.6375	467.63830	0.000171	0.7
20	467.6375	467.63797	0.000101	0.0
30	467.6375	467.63764	0.000030	-0.7
40	467.6375	467.63749	-0.000002	-1.0
50	467.6375	467.63765	0.000032	-0.7

*Remark: This column is presentable for Industry Canada Certification only.

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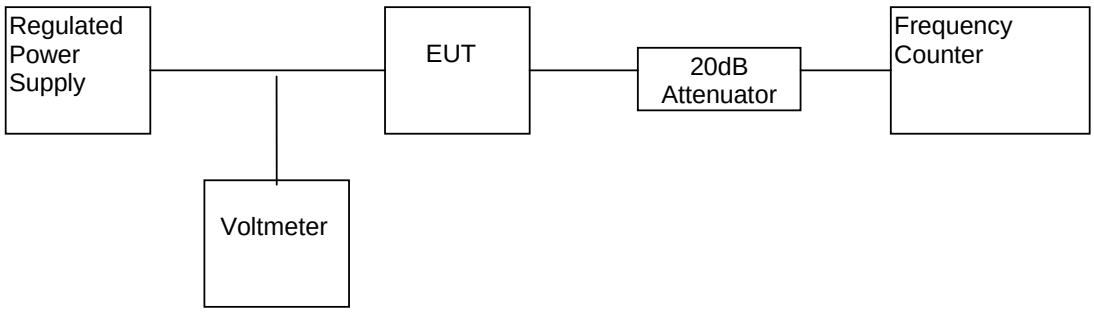
7.3 Frequency Stability - Voltage (Section 2.995)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
20 dB RF Attenuator	Bird	8304-200-N
Voltage meter	Fluke	87
Frequency Counter	Phillips	PM6668

B. Testing Procedure

1) Set-up the test equipment in the following configuration:



2) Vary the level of regulated power supply to the manufacturer specified battery end point of the EUT.
3) Measure the channel frequency of channel 4 and 11 in MHz.

C. Test Result

Table 7

Giant Electronics Ltd.
Giant T9140

Frequency Deviation with Voltage Variation

The manufacturer specified battery end point 3.5V

Channel	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (%)
4	462.63750	462.63815	0.000140
11	467.63750	467.63816	0.000141

EXHIBIT 8

TECHNICAL SPECIFICATIONS

8.0 **Technical Specifications**

8.1 Block Diagram

For electronic filing, the block diagram of the transceiver is saved with filename: block.pdf

Figure 8.1 Block Diagram

8.2 Schematic Diagram

For electronic filing, the schematic diagram of the transceiver is saved with filename: circuit.pdf

Figure 8.2 Schematic Diagram

EXHIBIT 9

PRODUCT LABELLING

9.0 **Product Labelling**

9.1 Label Artwork & Location

Figure 9.1 Label Artwork & Location

An engineering drawing of the label which will be permanently affixed to the unit. For electronic filing, the label artwork & location are saved with filename: label.pdf

EXHIBIT 10

PHOTOGRAPHS

10.0 **Equipment Photographs**

For electronic filing, photographs of the tested EUT are saved with filename: external photos.doc and internal photos.doc

EXHIBIT 11

INSTRUCTION MANUAL

11.0 **Instruction Manual**

This manual will be provided to the end-user with each unit sold/leased in the United States.

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf

EXHIBIT 12

TUNE UP PROCEDURE

12.0 **Tune Up Procedure**

For electronic filing, a preliminary copy of the Tune Up Procedure is saved with filename: tuneup.pdf

EXHIBIT 13

PART LIST

13.0 **Part List**

For electronic filing, a preliminary copy of the Part List is saved with filename: partlist.pdf

EXHIBIT 14

INPUT CURRENT

14.0 **Input Current**

The input current to final r.f. stage at 4.5VDC is 0.26A.

EXHIBIT 15

RF EXPOSURE INFO

15.0 **RF Exposure Info**

The RF Safety Information is shown on P.2 of User Manual.

EXHIBIT 16

CONFIDENTIALITY REQUEST

16.0 **Confidentiality Request**

For electronic filing, a confidentiality request is saved with filename: request.pdf