



CERT NO: 2006-01

## **TEST REPORT #180708**

**STANDARD: FCC PART 15**

**SUBPART C--INTENTIONAL RADIATORS**

**SECTION 15. 227 OPERATION WITHIN THE BAND 26.96 – 27.28 Mhz**

**EQUIPMENT TESTED:**

**RFG DISTRIBUTING, INC.**

**FCC ID: WR8 D541,253**

**GENTLE TRAINER SERIES**

**TEST DATE: 18 JULY 2008**

1100 Falcon Avenue  
Glencoe, MN 55336



***CERTIFICATION SERVICES, INC.***

Tele: 320-864-4444  
Fax: 320-864-6611

**Prepared for:**

RFG Distributing, Inc.  
7301 32<sup>nd</sup> Ave North  
Crystal, MN 55427

**Test agent:**

International Certification Services, Inc.  
1100 Falcon Avenue  
Glencoe, MN 55336  
Tele: 320-864-4444  
Fax: 320-864-6611

**Test location:**

International Certification Services, Inc.  
1100 Falcon Avenue  
Glencoe, MN 55336  
Tele: 320-864-4444  
Fax: 320-864-6611

**Prepared by:**

International Certification Services, Inc.  
1100 Falcon Avenue  
Glencoe, MN 55336

International Certification Services represents to the client that testing is done in accordance with standard procedures applicable and that reported test results are accurate within generally accepted commercial ranges of accuracy.

This report only applies to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. International Certification Services shall have no liability for any deductions, inferences or generalizations drawn by the client or others from this report.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.

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## 1.0 TEST SUMMARY

**TEST REPORT:** #180708

**COMPANY:** RFG Distributing, Inc.

**AGENT:** International Certification Services, Inc.

**PHONE:** 320-864-4444

**TEST DATE:** 18 July, 2008

**EQUIPMENT UNDER TEST:** 27 Mhz Transmitter is a "No-Shock" adjustable vibration and stimulation designed to quickly train active and sensitive dogs.

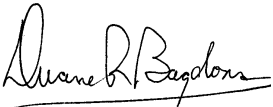
**GENERAL TEST SUMMARY:** The testing was performed at International Certification Services, Inc. at 1100 Falcon Ave, Glencoe, MN 55336

**VERIFICATION / CERTIFICATION STATUS:** RFG Distributing, Inc. Model: GT-2 Gentle Trainer Series was found to be in compliance with the FCC Part 15 Subpart C, Section 15.227 requirements.

**MODIFICATIONS NECESSARY:** None

### TESTED BY

Duane R. Bagdons



### WRITTEN BY

Duane R. Bagdons



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## Applicable Standards

47 CFR Ch.1 (10-1-98 Edition)

FCC Part 15 Radio Frequency Devices

Subpart C Intentional Radiators

Section 15.227 Operation within the band 26.96 – 27.28 Mhz

## 2.1 Referenced Standards

ANSI C63.4-2003 Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40 Ghz.

## 2.2 Equipment Units Tested

The equipment tested was a battery powered 27 Mhz transmitter GT-2 series. This device uses FSK modulation transmitting a signal at 27.0432 Mhz with a 4.5 KHz Bandwidth. The transmission is bursts of 8 bit words of data only when a transmitt button is pushed.

## 2.3 Equipment and Cable Configuration

See photo of the EUT test configuration setup in Attachment A

## 2.4 List of Test Equipment

<u>Test Equipment</u>	<u>Model</u>	<u>S/N</u>	<u>Calibration Date</u>
Spectrum Analyzer	Hewlett-Packard 8566B	2421A00458	01/25/08
Preamp	MiniCircuits ZKL-2R7	N/A	10/17/07
Biconical Antenna	AH Systems Model SAS-200/540	328	08/30/07
Log Periodic Antenna (200-1000 MHz)	EMCO 3146	9111-3280	08/30/07
Horn Antenna (1-18 Ghz)	EMCO 3115	5697	08/30/07

Measurement cable losses, and antenna correction factors are included in the data sheets. The Resolution BW was set at 1 Mhz and the Video BW was set at 1 Hz with a Span of 0 Hz to perform the correct average detected measurements over 1000 Mhz.

## 2.5 Units of Measurement.

All measurements were taken in uV/m with the antenna located at 3 meters distance from the EUT. Frequency measurements are recorded in Mhz

## 2.6 Location of Test Site

The open area test site (OATS) measurement facility used to collect the data was International Certification Services, Inc. at 1100 Falcon Ave in Glencoe, MN 55336. This site has been certified to be in spec of the normalized site attenuation per ANSI C63.4-2003.

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## 2.7 Measurement Procedures

The antenna was placed at a distance of 3 meters from the EUT. The EUT was set on an insulating table in the OATS site and rotated through 360 degrees to determine the worst case EUT orientation. The antenna was then positioned vertical and horizontal to determine which antenna polarity orientation was worst case. Then certification data was recorded at all the transmitter frequencies from the fundamental to the 10<sup>th</sup> harmonic at an antenna height variation of from 1-4 meters.

## 2.8 Reporting Measurement Data

See data sheets and plots in Attachment B.

## 2.9 Radiated Emissions Data

The frequency and amplitude of the tuned frequency of the EUT along with the frequencies and amplitudes of the harmonics up to the 10<sup>th</sup> harmonic are reported in the data sheets in Attachment B. This information is plotted against the limit of section 15.227 of FCC Part 15 subpart C. Both Horizontal and Vertical antenna polarities as well as antenna heights of 1 to 4 meters were observed but all maximum signal strengths occurred in the Horizontal antenna polarity and at 1 meter antenna height.

The Final Level, expressed in dBuV/m, is arrived at by taking the reading from the spectrum analyzer (Level dBuV) and adding the antenna correction factor and cable loss factor (Factor dB) and subtracting the preamp gain. This result then has the FCC limit subtracted from it to provide the margin which gives the tabular data as shown in the data sheets in Attachment B.

Example:

<u>Frequency</u>	<u>Level</u>	+	<u>Factor</u>	=	<u>Corr Data</u>	-	<u>FCC Limit</u>	=	<u>Margin</u>
<u>(MHz)</u>	<u>(dBuV)</u>	+	<u>(dB)</u>	=	<u>(dBuV/m)</u>	-	<u>(dBuV/m)</u>	=	<u>(dB)</u>
100.0	20.6	+	11.0	=	31.6	-	43.5	=	-11.9

## 2.10 Summary of Results

The EUT passed the requirements of FCC Part 15 Subpart C, Section 15.227 with a maximum output field strength of 5432.5 uV/m at the fundamental frequency of 27.0432 Mhz against a limit of 10000 uVolts. No modifications were necessary to accomplish this compliance.

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# **ATTACHMENT A**

## **RADIATED MEASUREMENT**

### **TEST SET UP**

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**RFG Distributing, Inc.  
Gentle Trainer Series  
Model: GT-2  
Radiated Emissions  
Test Configuration**



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**RFG Distributing, Inc.  
Gentle Trainer Series  
Model: GT-2  
Radiated Emissions  
Test Configuration**



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## **ATTACHMENT B**

### **DETAILED TEST DATA SHEETS**

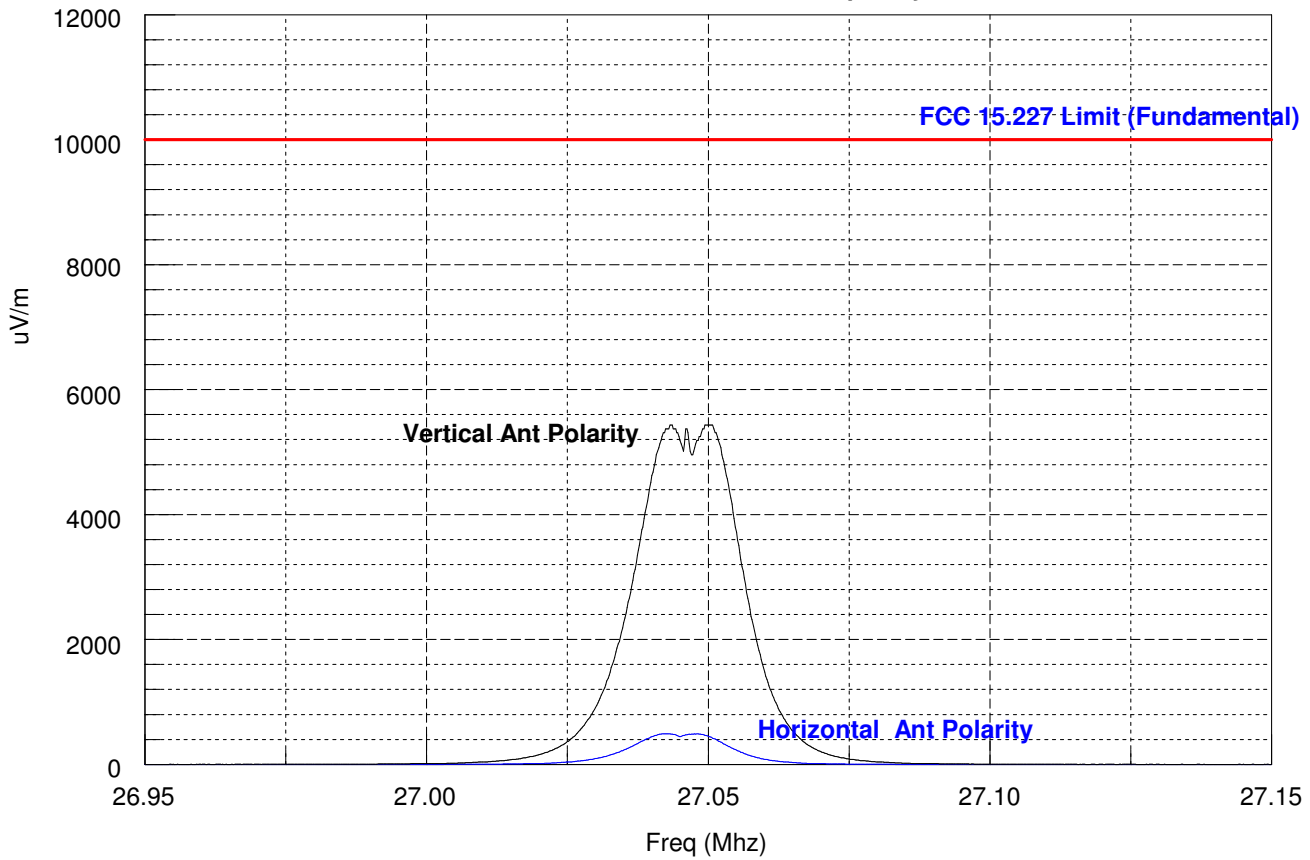
Each radiated emissions plot indicates the receiving antenna measurement distance in meters and the emission amplitudes with respect to their applicable limits. The associated tabulation for each radiated plot lists the emission frequency, the final emission level, and the margin from the limit.

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RFG Distributing, Inc.  
Gentle Trainer Model: GT-3  
FCC ID: WR8 D541,253  
FCC 15.227 Fundamental Frequency



International Certification Services, Inc.

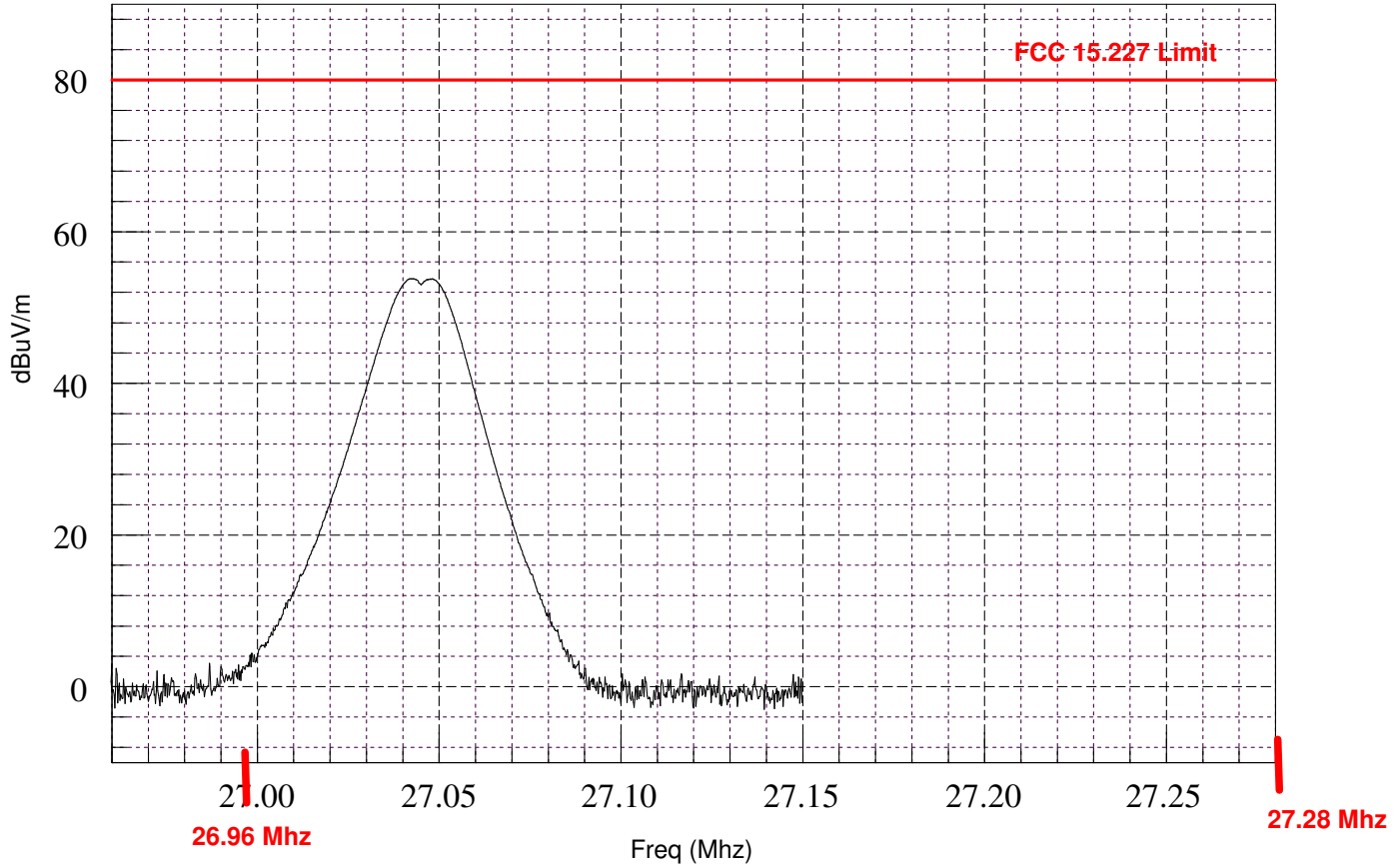
July 18, 2008

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CERTIFICATION SERVICES, INC.

RFG Distributing, Inc.  
Gentle Trainer Model: GT-3  
FCC ID: WR8 D541,253  
FCC 15.227 Radiated Emissions (Full Band)



International Certification Services, Inc.

March 14, 2007

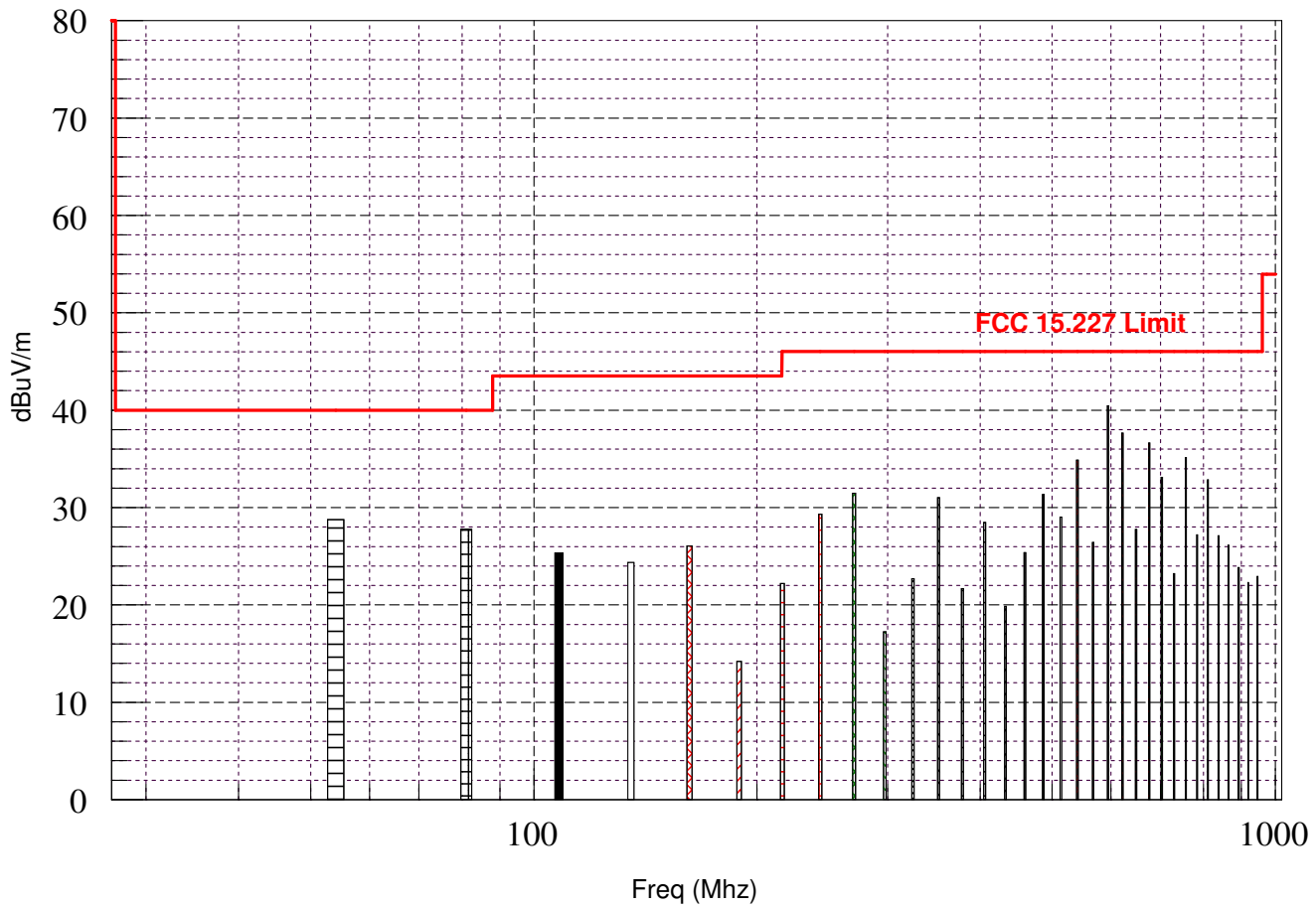
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# HARMONICS

RFG Distributing, Inc.  
Model: Gentle Trainer Series  
FCC ID: WR8 D541,253  
FCC 15.227 Harmonic Radiated Emissions



International Certification Services, Inc.

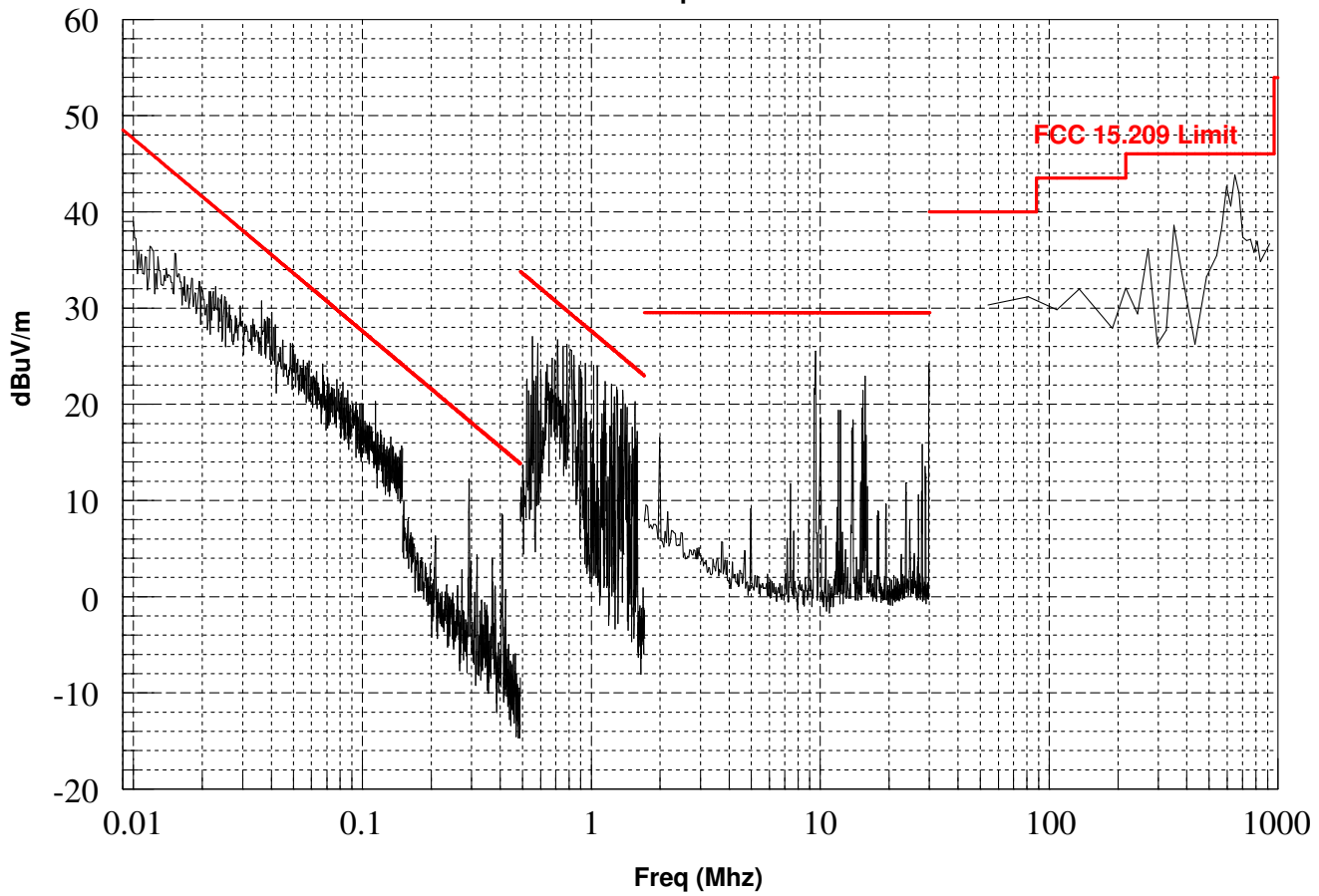
April 29, 2007

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CERTIFICATION SERVICES, INC.

RFG Distributing, Inc.  
Gentle Trainer Model: GT-3  
FCC ID: WR8 D541,253  
FCC 15.209 Spurious Emissions



International Certification Services, Inc.

March 14, 2007

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## **ATTACHMENT C**

**PRODUCT DATA SHEET OR PRODUCT INFORMATION FORM AS SUPPLIED  
BY THE CUSTOMER**

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**COMPANY NAME:** RFG Distributing, Inc.

**CUSTOMER REPRESENTATIVE:** International Certification Services, Inc.

**EQUIPMENT DESCRIPTION:** 27.0432 Mhz Transmitter

**MODEL NUMBER:** GT-3

**SERIAL NUMBER:** N/A

**TYPE OF TEST:** ☐ Development  
☐ Initial Design Verification  
☐ Design Change (Please describe exact changes below)  
☒ Production Sample (Audit Test)  
Changes made: NONE

**OSCILLATOR FREQUENCIES:**

27.0432 Mhz

**PRODUCT SHIELDING PROVISION:**

Plastic enclosure

**SOFTWARE AND / OR OPERATING MODES:**

Company proprietary software

**I/O CABLES:** NONE

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