PROCARE INTERNATIONAL CO.

Application
For
Certification
(FCC ID: POSEF-6225)

FM Transmitter

JGZ0701196-1

February 09, 2007

Intertek Testing Services Shenzhen Ltd. Guangzhou GDD Branch
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LIST OF EXHIBITS

MEASUREMENT / TECHNICAL REPORT

PROCARE INTERNATIONAL CO. – MODEL: EF6225 / DX-MP3FM2

FCC ID: POSEF-6225

February 09, 2007

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

Equipment Type: Low Power Transmitter (example: computer, printer, modem, etc.)

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.

Transition Rules Request per 15.37? Yes _____ No ___X___

If no, assumed Part 15, Subpart C for intentional radiator – the new 47 CFR [08-07-06 Edition] provision.

Report prepared by:

Derek Feng
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List of attached file

Exhibit Type	File Description	Filename
Test Report	Test Report	report.pdf
Operation Description	Technical Description	descri.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Report	Bandwidth Plot	bw.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
ID Label / Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf

EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The Equipment Under Test (EUT) is a wireless FM transmitter that can be operated from 88.1MHz to 107.9MHz. The main function of the EUT is used to transmit the FM modulated signal that can be obtained from audio sources such as MP3 player. The FM modulated signal is received by a common FM broadcast radio and regenerate the audio signal thru the radio. It is powered by a car adaptor 3V DC / 12V DC or two 1.5V “AAA” batteries.The tuning range is tuned manually by a two electronic key.

For electronic filing, the brief circuit description is saved with filename: descri.pdf

1.2 Related Submittal(s) Grants

This is a single application for certification of a transmitter.

1.3 Test Methodology

Radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). Radiated Emission measurement was performed in a Semi-chamber. Preliminary scans were performed in the Semi-chamber only to determine worst case modes. For each scan, the procedure for maximizing emissions in Appendices D and E were followed. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the **"Justification Section"** of this Application.

1.4 Test Facility

The Semi-chamber facility used to collect the radiated data is **SHENZHEN ACADEMY OF METROLOGY AND QUALITY INSPECTION** and located at Bldg. of Metrology & Quality Inspection, Longzhu Road, Shenzhen, Guangdong, China. This 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 system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2003).

The EUT was powered with an adaptor 3V DC / 12V DC by 12V car battery or by two new 1.5V “AAA” batteries.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. The step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

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

2.2 EUT Exercising Software

There was no special software to exercise the device. Once the unit is powered up, it transmits the RF signal continuously.

2.3 Special Accessories

DC-DC Adaptor: Input: 12V DC
Output: 3.0V DC
(with a ferrite in the cable)

2.4 Equipment Modification

Any modifications installed previous to testing by PROCARE INTERNATIONAL CO. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services.

2.5 Measurement Uncertainty

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

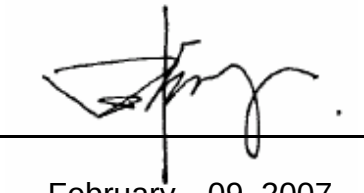
2.6 Support Equipment List and Description

1. MP3 player (provided by Intertek)

All the items listed under section 2.0 of this report are

Confirmed by:

Derek Feng
Assistant Manager
Intertek Testing Services Shenzhen Ltd.
Guangzhou GDD Branch
Agent for PROCARE INTERNATIONAL CO.



_____ *Signature*

February 09, 2007 *Date*

EXHIBIT 3

EMISSION RESULTS

3.0 **Emission Results**

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.

3.1 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:

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

3.1 Field Strength Calculation (cont'd)

Example

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

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

AV = −10dB

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

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

3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at
88.100MHz

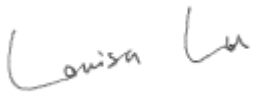
For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos.pdf.

3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 4.9dB margin

TEST PERSONNEL:



Signature

Louisa Lu, Engineer
Typed / Printed Name

February 09, 2007
Date

Company: PROCARE INTERNATIONAL CO. Date of Test: February 09, 2007
Model: EF6225 / DX-MP3FM2
Worst Case Operating Mode: Transmitting

Table 1

Radiated Emissions

Low channel (88.1MHz)

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp (dB)	Antenna factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	88.100	58.0	26.1	11.2	43.1	48.0	-4.9
V	176.200	48.3	25.2	13.5	36.6	43.5	-6.9
V	264.300	46.5	24.7	12.8	34.6	46.0	-11.4

Middle channel (98.0MHz)

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp (dB)	Antenna factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	98.000	55.7	26.3	11.5	40.9	48.0	-7.1
V	196.000	36.8	25.5	13.8	25.1	43.5	-18.4

High channel (107.9MHz)

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp (dB)	Antenna factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	107.900	56.9	26.5	11.7	42.1	48.0	-5.9
V	215.800	38.5	25.7	14.1	26.9	43.5	-16.6

NOTES: 1. Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances 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.

4. Horn antenna is used for the emission over 1000MHz.

5. All emissions below the peak limit.

'*' Emission within the restricted band fulfil the requirement of Section 15.205.

Test Engineer: Louisa Lu

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 Equipment Photographs

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

EXHIBIT 5

PRODUCT LABELLING

5.0 **Product Labelling**

For electronics filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

EXHIBIT 6

TECHNICAL SPECIFICATIONS

6.0 Technical Specifications

For electronic filing, the block diagram and schematic of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

EXHIBIT 7

INSTRUCTION MANUAL

7.0 Instruction Manual

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

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

EXHIBIT 8

MISCELLANEOUS INFORMATION

8.0 Miscellaneous Information

The miscellaneous information includes details of the measured bandwidth and the test procedure.

8.1 Measured Bandwidth

For electronic filing, the plot on saved in bw.pdf shows the fundamental emission which is applied a typical device (MP3 player) with a typical source (pop music) under the maximum volume setting. From the plot, it shows the emission is 135.6kHz and is within 200kHz band.

8.2 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device. Since the transmitter transmits the RF signal continuously.

8.3 Calculation of Average Factor

The average factor is not applicable for this device as the transmitted signal is a continuously signal.

8.4 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 – 2003.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9kHz to the tenth harmonic of the highest fundamental frequency or 40GHz, whichever is lower. For line-conducted emissions, the range scanned is 150kHz to 30MHz.

8.4 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements are made as described in ANSI C63.4 – 2003.

The IF bandwidth used for measurement of radiated signal strength was 100kHz or greater when frequency is below 1000MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the forbidden bands and above 1GHz, signals are acquired at a distance of one meter of less. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.