Thomson Inc.

Application
For
Permissive Change Class II

Unlicensed Personal Communication Service Devices
(Handset)

FCC ID: G9H2-8225A

Test Report Number: HK08041602-1

Issue Date: May 22, 2008

TL/ ac

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LIST OF EXHIBITS

MEASUREMENT/TECHNICAL REPORT

Thomson Inc. - Model: 28225XXX-A, TC28225XXX-A

FCC ID: G9H2-8225A

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

Equipment Type : PUE - Part 15 Unlicensed PCS portable Tx held to ear

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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 D for Unlicensed Personal Communication Service Device - the new 47 CFR [09-20-07 Edition] Provision.

Report prepared by: Leung Wai Leung, Tommy

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External Photos	External Photo	external photos.pdf
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Cover Letter	Letter of Agency	letter of agency.pdf

EXHIBIT 1
SUMMARY OF TEST RESULTS

1.0 **Summary of Test Results**

Thomson Inc. - Model: 28225XXX-A, TC28225XXX-A

FCC ID: G9H2-8225A

Technical Requirements				
Test Items	**FCC Part 15 Section**	**Test Procedure ANSI C63.17 / ANSI C63.4 ***	**Results**	**Details see section**
Emissions Outside the Sub-Band	15.323(d)	6.1.6.2	Pass	4.1
AC Power Lines Conducted Emissions from Transmitter Portion of EUT	15.315	7 *	Pass	4.2

Test Engineer:

Ken Sit
Supervisor

Date: May 22, 2008

Approved By:

Leung Wai Leung, Tommy
Senior Manager

Date: May 22, 2008

EXHIBIT 2
GENERAL DESCRIPTION

2.0 General Description

2.1 Product Description

The 28225FE2-A is a 1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone and Digital Answering Machine - Handset. It operates at frequency range of 1921.536MHz to 1928.448MHz with 5 channels (1921.536MHz, 1923.264MHz, 1924.992MHz, 1926.720MHz and 1928.448MHz). The handset is powered by “Ni-MH” type rechargeable batteries (1.2VDC 600mAh *2). The extra charger is powered by 120VAC to 7VDC 200mA.

The unit is capable of either tone or pulse dialing. The internal power supply's isolation is accomplished through a power transformer having an adequate dielectric rating. The circuit wiring is consistent under the requirement of part 68.

The antenna used in handset is integral, and the test sample is a prototype.

The Models: TC28225XXX-A and 28225XXX-A are the same as the Model: 28225FE2-A in hardware aspects. The suffix, “XXX”, followed by the model number represents color and packing configuration.

28225FE1-A has one base and one handset only.
28225FE2-A has one base, two handsets, and one charger (model:5-2835).
28225FE3-A has one base, three handsets, and two chargers (model:5-2835).
28225FE4-A has one base, four handsets, and three chargers (model:5-2835).

The difference in suffix of model number serves as the marketing strategy.

2.2 Purpose of Application

The purpose of change letter is saved as the filename: product change.pdf

The RF module, antenna and algorithm of Base Unit and Handset are the same with the previously granted Model: 28225FE1-A. The difference is adding an extra charger.

2.3 Related Submittal(s) Grants

This is an application for Certification of a PUE - Part 15 Unlicensed PCS portable Tx held to ear. The device is also subject to Part 68 Registration.

A Verification report has been prepared for the digital device portion.

2.4 Test Methodology

AC power line-conducted emission measurements for intentional radiator were performed according to the test procedures specified in ANSI C63.4 (2003). The radiated emission measurements for intentional radiator contained in UPCS device were performed according to the test procedures specified in ANSI C63.17 (2006). All radiated measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Justification Section" of this Application. All other measurements were made in accordance with the procedures in 47 CFR Part 2.

2.5 Test Facility

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

EXHIBIT 3
SYSTEM TEST CONFIGURATION

3.0 **System Test Configuration**

3.1 Justification

For emissions testing, the equipment under test (EUT) was setup to transmit continuously in burst mode with pseudo-random data to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst-case emissions. The handset (if any) was powered by a fully charged battery.

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the base unit attached to peripherals, they were connected and operational (as typical as possible).

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Detector function was in peak mode. Radiated emissions are taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

The spectrum analyzer resolution bandwidth was approximately 1% of the EUT emission bandwidth, unless otherwise specified.

Since the intentional radiator for handset was not changed, low-frequency spurious emission due to the charger was investigated. Radiated emission measurements were performed from 30MHz to 1GHz.

3.2 EUT Exercising Software

The EUT exercise program (if any) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Details of EUT and Description of Peripherals

Details of EUT:

An AC adaptor and/or a battery (provided with the unit) were used to power the device. Their description are listed below.

(1) Handset: A "Ni-MH" type rechargeable battery (1.2V 600mAh*2) (Supplied by Client)

Description of Peripherals:

(1) Charger: An AC adaptor (120VAC to 7VDC 200mA, Model: UD070020A) (Supplied by Client)
(2) Charger Unit :(Model: 5-2835) (Supplied by Client)

3.4 Measurement Uncertainty

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

3.5 Equipment Modification

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

No modifications were installed by Commercial & Electrical, Intertek Testing Services Hong Kong Ltd.

All the items listed under section 3.0 of this report are confirmed by:

Confirmed by:

Leung Wai Leung, Tommy
Senior Manager
Intertek Testing Services Hong Kong Ltd.
Agent for Thomson Inc.

Signature

May 22, 2008 Date

EXHIBIT 4
MEASUREMENT RESULTS

Company: Thomson Inc. Date of Test: April 24-May 5, 2008
Model: 28225FE2-A

4.0 **Measurement Results**

4.1 Emissions Outside the Sub-Band, FCC Rule 15.323(d):

Emissions outside the sub-band shall be attenuated below a reference power of 112 mW (20.5 dBm) as follows:

1. 30 dB between the band edge and 1.25 MHz above or below the band;
2. 50 dB between 1.25 and 2.5 MHz above or below the band; and
3. 60 dB at 2.5 MHz or greater above or below the band, or shall meet the requirement of FCC Rule 15.319(g) which shall not exceed the limits of FCC Rule 15.209.

Example: Calculation of Limit for emissions between the band edge and 1.25 MHz (1920.000 – 1918.750 MHz)

The emissions shall not exceed the Limit: 20.5 dBm – 30 dB = -9.5 dBm

Measurements are made in accordance with ANSI C63.17 sub-clause 6.1.6.2. As EUT has non-detachable antenna(s), radiated emissions test method is used for out-of-band emissions tests. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured. Test setup and procedures are described in section 3.2 Figure 3.2.1.

Test Results:

Channel	Carrier Frequency (MHz)	Measured Band (MHz)	Limit (dBm)	Results
Lowest	1921.536	1920.000 - 1918.750	NA	NA
		1918.750 - 1917.500	NA	NA
		0.009 - 1917.500 & 1932.500 - 19300.000	-39.5	Pass
Highest	1928.448	1930.000 - 1931.250	NA	NA
		1931.250 - 1932.500	NA	NA
		0.009 - 1917.500 & 1932.500 - 19300.000	-39.5	Pass

Please refer to the section 4.1.1 to 4.1.2 for more details.

Company: Thomson Inc. Date of Test: April 24-May 5, 2008
Model: 28225FE2-A
Mode: Talking with Charging (Extra Charger)

4.1.1 Radiated Emissions Configuration Photographs:

Worst Case Radiated Emission

The worst case radiated emission configuration photographs are saved as filename: config photos.pdf

Company: Thomson Inc. Date of Test: April 24-May 5, 2008
Model: 28225FE2-A
Mode: Talking with Charging (Extra Charger)

4.1.2 Radiated Emissions Data:

Data are included of the 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. All measurements were performed with peak detection unless otherwise specified.

The data in table 1 list the significant emission frequencies, the limit and the margin of compliance.

Judgement: Passed by more than 20 dB margin

TEST ENGINEER:

Signature

Ken Sit, Supervisor
Typed/Printed Name

May 22, 2008
Date

Company: Thomson Inc. Date of Test: April 24-May 5, 2008
Model: 28225FE2-A
Mode: Talking with Charging (Extra Charger)

Table 1

Radiated Emissions Data
Pursuant To FCC Part 15 Section 15.323 (d) Emissions Requirements

Polarization	Frequency (MHz)	Measured Power (dBm)	Power Limit (dBm)	Margin (dB)
V	41.500	-65.9	-39.5	-26.4
V	83.000	-64.6	-39.5	-25.1
H	124.500	-63.8	-39.5	-24.3
H	166.000	-62.3	-39.5	-22.8
H	207.500	-61.6	-39.5	-22.1
H	290.500	-63.1	-39.5	-23.6

NOTES:

1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters.

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

4.2 AC Power Lines Conducted Emissions from Transmitter portion of EUT, FCC Rule 15.315:

The AC power lines conducted emission shall not exceed the limits of FCC Rule 17.207.

Measurements are made in accordance with ANSI C63.4 sub-clause 7. Emissions that are directly caused by digital circuits in the transmit path and transmitter portion are measured.

[ ] Not applicable – EUT is only powered by battery for operation.

[×] EUT connects to AC power lines. Emission Data are listed in following pages. Please refer to the section 4.2.1 to 4.2.2 for more details.

Company: Thomson Inc. Date of Test: April 24-May 5, 2008
Model: 28225FE2-A
Mode: Speakerphone with Charger

4.2.1 AC Power Lines Conducted Emissions Configuration Photographs:

Worst Case AC Power Line Conducted Emission
at

18.000 MHz

The worst case radiated emission configuration photographs are saved as filename: config photos.pdf

Company: Thomson Inc. Date of Test: April 24-May 5, 2008
Model: 28225FE2-A
Mode: Speakerphone with Charger

4.2.2 AC Power Lines Conducted Emissions Data:

The data on the following pages list the significant emission frequencies, the limit, and the margin of compliance.

Judgement: Passed by 11.0 dB margin

The worst case AC Power line conducted emission data are saved as filename: conduct.pdf

TEST ENGINEER:

Signature

Ken Sit, Supervisor
Typed/Printed Name

May 22, 2008

EXHIBIT 5
EQUIPMENT PHOTOGRAPHS

5.0 **Equipment Photographs**

The photographs are saved as filename: external photos.pdf

EXHIBIT 6
INSTRUCTION MANUAL

6.0 **Instruction Manual**

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

The required FCC Information to the User is stated on P.2-3 of the Instruction Manual.

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

EXHIBIT 7
LETTER OF AGENCY

7.0 **Letter of Agency**

A copy of the Letter of Agency is saved as filename: letter of agency.pdf