Intertek

RTX Consumer Products Hong Kong Ltd.

Application
For
Certification
(FCC ID: T7HCH8050)

Induction Battery Charger

HK08080298-1
BC/cl
20 October, 2008

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

LIST OF EXHIBITS

MEASUREMENT/TECHNICAL REPORT

RTX Consumer Products Hong Kong Ltd.
RTX: RTX8050 (Charger)
NEC: I755s (Charger), I755d (Charger)

FCC ID: T7HCH8050

20 October, 2008

This report concerns (check one:) Original Grant__X__ Class II Change_____

Equipment Type: Induction Battery Charger

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 18.123? Yes___ No_X__

If no, assumed Part 18 for Induction Battery Charger device - the new 47 CFR Part 18 [10-1-06 Edition] provision.

Report prepared by:

Chow Chi Ming, Billy
Intertek Testing Services
2/F., Garment Center,
576, Castle Peak Road,
Hong Kong
Phone: 852-2173-8528
Fax: 852-2742-6521

Table of Contents

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.doc
Test Setup Photo	Conducted Emission	conducted photos.doc
External Photo	External Photo	external photos.doc
Internal Photo	Internal Photo	internal photos.doc
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 an Induction Battery Charger operating at 5.95MHz. The EUT is powered by AC/DC adaptor (Model: S008CM1200040). The EUT is an inductive charging device to charge up RTX8050 Battery. It can charge a RTX8050 Handset and a second RTX8050 Battery simultaneously.

The models I755s (Charger) and I755d (Charger) are declared to be identical to the model RTX8050 (Charger) in hardware aspect. The difference in model number represent different colour of the plastic enclosure and trade name. The representative model RTX8050 (Charger) was selected to test.

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 induction charger. No other related submittal grants.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in FCC/OST MP-5 (1986). All 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.

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. 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 EUT was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in FCC/OST MP-5 (1986).

The EUT was powered by 120Va.c. 60Hz.

For maximizing emissions, the EUT was rotated through 360°. For loop antenna, the antenna height was fixed at around 2 meters above the ground plane. For biconical and log-periodic antenna, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

2.2 EUT Exercising Software

There was no special software to exercise the device. Once the EUT is turned on, it emits the RF noise.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

2.4 Equipment Modification

Any modifications installed previous to testing by RTX Consumer Products Hong Kong Ltd. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services.

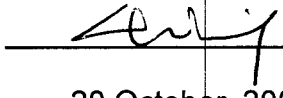
2.5 Support Equipment List and Description

1 x RTX8050 Battery and 1 x RTX Handset

All the items listed under section 2.0 of this report are

Confirmed by:

Chow Chi Ming, Billy
Manager
Intertek Testing Services Hong Kong Ltd.
Agent for RTX Consumer Products Hong Kong Ltd.



Signature

20 October, 2008

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, average factor and distance factor (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + PD + AV + DF

where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
AF = Antenna Factor in dB (including the cable factor)
PD = Pulse Desensitization in dB
AV = Average Factor in -dB
DF = Distance 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 + PD + AV + DF

3.1 Field Strength Calculation (cont'd)

Example

Assume a receiver reading of 39.0 dBµV is obtained. The antenna factor of 10.6 dB is added. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was 0 dB, however, the distance factor is -20 dB. The net field strength for comparison to the appropriate emission limit is 29.6 dBµV/m. This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 39.0 dBµV
AF = 10.6 dB
PD = 0 dB
DF = 20 log(3/30) = -20dB
AV = 0 dB

FS = 39 + 10.6 - 20 = 29.6 dBµV/m

Level in µV/m = Common Antilogarithm [(29.6 dBµV/m)/20] = 30.2 µV/m

3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at
0.596MHz

For electronic filing, the front view and back view of test configuration photograph is saved with filename: radiated photos.doc.

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 -24.9dB margin

The radiated emission test was observed up to 400MHz

TEST PERSONNEL:

Signature

Tam Ka Po, Sylvia, Compliance Engineer
Typed/Printed Name

20 October, 2008
Date

Applicant: RTX Consumer Products Hong Kong Ltd. Date of Test: 25 September, 2008
Model: RTX8050

Table 1

Radiated Emissions
Pursuant to FCC 18.305(b) Emissions Requirement

Frequency (MHz)	Net at 3m (dBμV/m)	Calculated at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.596	38.6	-1.4	23.5	-24.9
2.384	38.2	-1.8	23.5	-25.3
5.964	37.6	-2.4	23.5	-25.9
8.940	37.2	-2.8	23.5	-26.3
12.516	35.2	-4.8	23.5	-28.3
23.840	34.6	-5.4	23.5	-28.9

Notes: 1. Average Detector Data unless otherwise stated.

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

3. Frequency range scanned: 9kHz to 30MHz

4. Only emissions significantly above equipment noise floor are reported.

5. A closer fixed distance was used for testing and 1/d attenuation law factor was used.

6. Loop antenna was used for the emission below 30MHz.

Test Engineer: Tam Ka Po, Sylvia

Applicant: RTX Consumer Products Hong Kong Ltd. Date of Test: 25 September, 2008
Model: RTX8050

Table 2

Radiated Emissions
Pursuant to FCC 18.305(b) Emissions Requirement

Polarization	Frequency (MHz)	Net at 3m (dBµV/m)	Calculated at 300m (dBµV/m)	Limit at 300m (dBµV/m)	Margin (dB)
V	32.184	32.4	-7.6	23.5	-31.1
V	59.602	32.0	-8.0	23.5	-31.5
V	119.204	31.9	-8.1	23.5	-31.6
H	136.789	30.9	-9.1	23.5	-32.6
H	142.717	33.2	-6.8	23.5	-30.3
H	184.326	32.1	-7.9	23.5	-31.4
H	196.235	32.0	-8.0	23.5	-31.5
H	208.135	35.2	-4.8	23.5	-28.3
H	234.796	32.4	-7.6	23.5	-31.1
H	285.394	30.6	-9.4	23.5	-32.9

Notes: 1. Average Detector Data unless otherwise stated.

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

3. Frequency range scanned: 30MHz to 400MHz

4. Only emissions significantly above equipment noise floor are reported.

5. A closer fixed distance was used for testing and 1/d attenuation law factor was used.

Test Engineer: Tam Ka Po, Sylvia

3.4 Conducted Configuration Photograph

Worst Case Line-Conducted Configuration
at
5.945MHz

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

3.5 Conducted Emission Data

The data on the following page lists the significant emission frequencies, the level and the limit of compliance.

Judgement: Passed by -1.9dB margin

TEST PERSONNEL:

Signature

Tam Ka Po, Sylvia, Compliance Engineer
Typed/Printed Name

20 October, 2008
Date

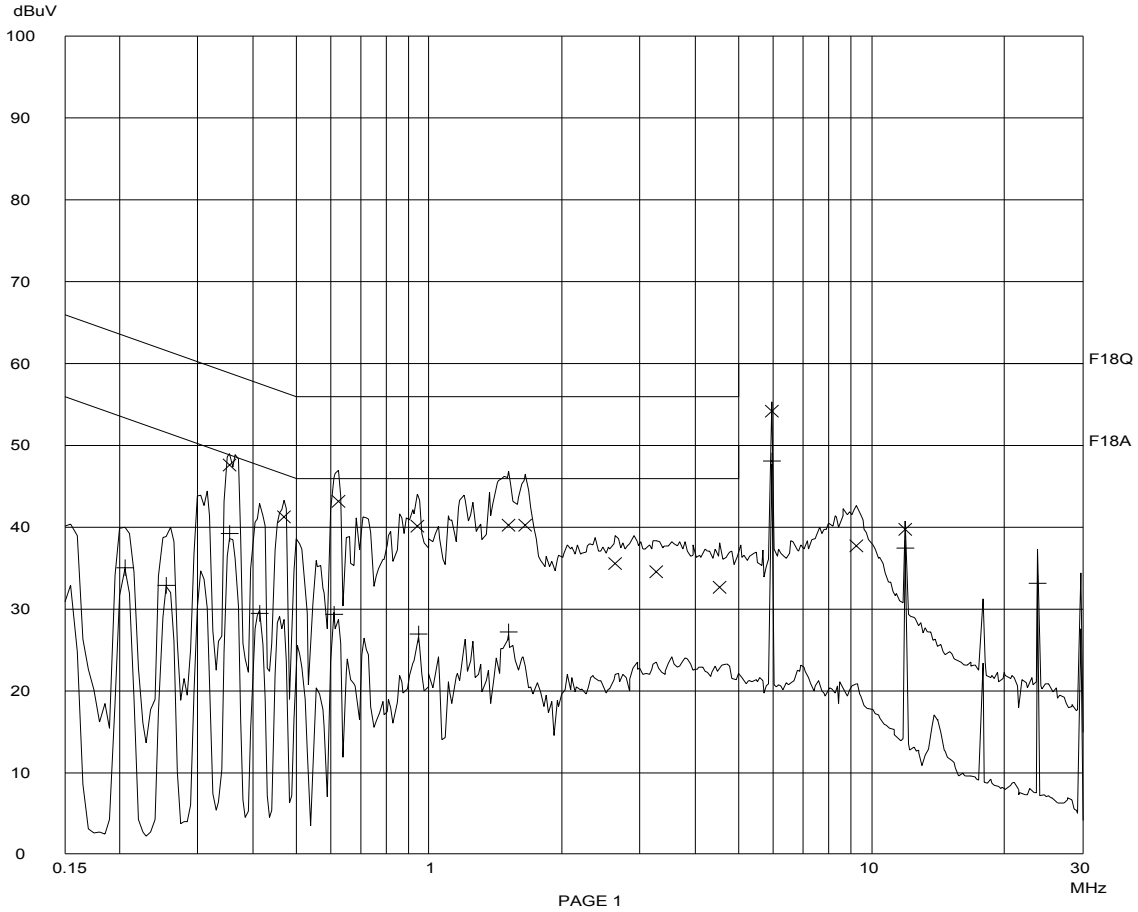
Report No.: HK08080298-1
Changing mode
AC mains “L”

Report No.:HK08080298-1
Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	30M	5k	10k	PK+AV	10ms	AUTO	LN OFF	60dB

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 16
Acc Margin: 20dB

Transducer No.	Start	Stop	Name
2	1	9k	30M	EW0700
	3	9k	30M	EW2454
	12	9k	30M	EW0090



PAGE 1

Report No.:HK08080298-1

Scan Settings (1 Range)

|--------- Frequencies ----------||---------- Receiver Settings ----------|

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	30M	5k	10k	PK+AV	10ms	AUTO	LN OFF	60dB

Final Measurement Results:

Frequency MHz	QP Level dBuV	QP Limit dBuV	Delta dB
0.35500	47.5	58.8	-11.3
0.47000	41.2	56.5	-15.3
0.62500	43.1	56.0	-12.9
0.94000	40.1	56.0	-15.9
1.51000	40.1	56.0	-15.9
1.65000	40.2	56.0	-15.8
2.63500	35.5	56.0	-20.5
3.26500	34.5	56.0	-21.5
4.53000	32.6	56.0	-23.4
5.94500	54.1	60.0	-5.9
9.23000	37.7	60.0	-22.3
11.89500	39.7	60.0	-20.3

Frequency MHz	AV Level dBuV	AV Limit dBuV	Delta dB
0.20500	35.0	53.4	-18.4
0.25500	32.8	51.6	-18.8
0.35500	39.2	48.8	-9.6
0.41500	29.4	47.6	-18.2
0.61000	29.3	46.0	-16.7
0.94500	26.9	46.0	-19.1
1.51000	27.2	46.0	-18.8
5.94500	48.1	50.0	-1.9
11.89500	37.4	50.0	-12.6
23.78500	33.2	50.0	-16.8

* limit exceeded

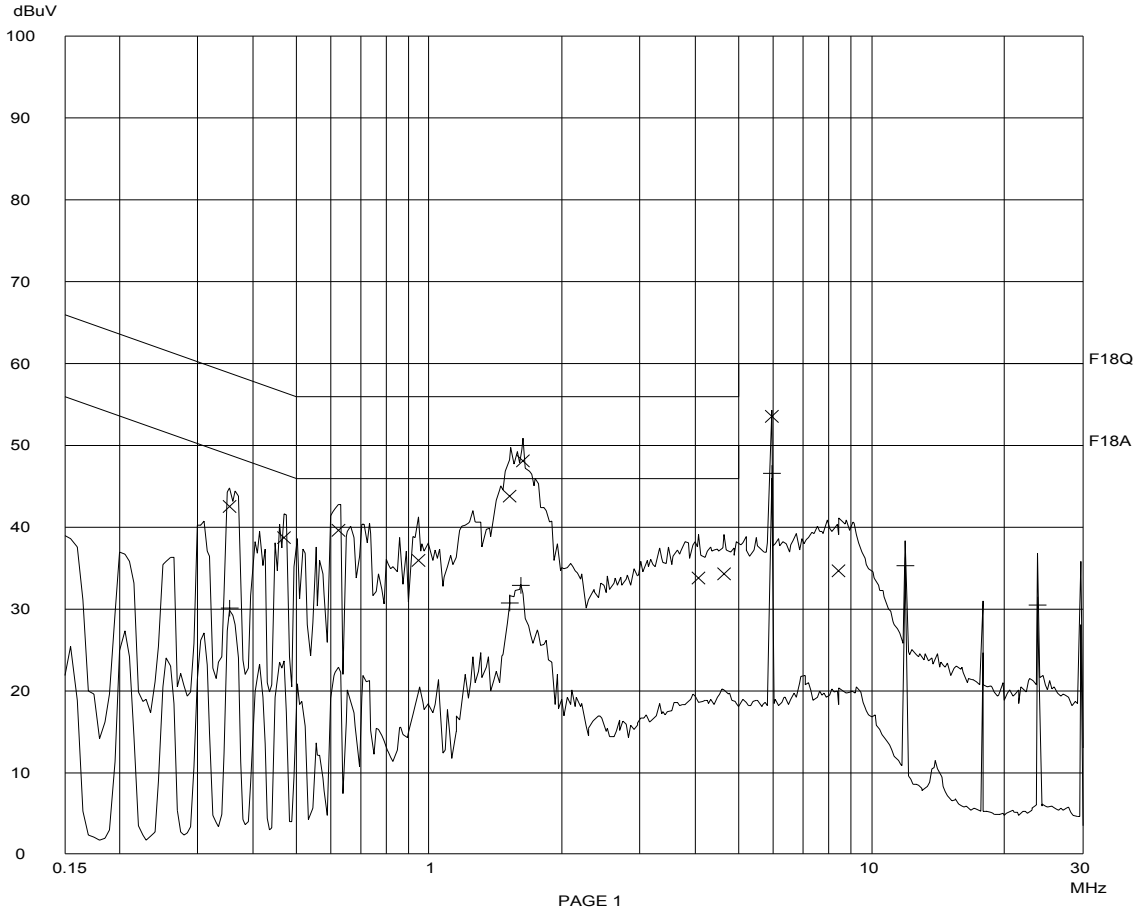
Report No.: HK08080298-1
Changing mode
AC mains “N”

Report No.:HK08080298-1
Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	30M	5k	10k	PK+AV	10ms	AUTO	LN OFF	60dB

Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 16
Acc Margin: 20dB

Transducer No.	Start	Stop	Name
2	1	9k	30M	EW0700
	3	9k	30M	EW2454
	12	9k	30M	EW0090



PAGE 1

Report No.:HK08080298-1
Scan Settings (1 Range)
|--------- Frequencies ----------||---------- Receiver Settings ----------|
Start Stop Step IF BW Detector M-Time Atten Preamp OpRge
150k 30M 5k 10k PK+AV 10ms AUTO LN OFF 60dB
Final Measurement Results:

Frequency MHz	QP Level dBuV	QP Limit dBuV	Delta dB
0.35500	42.5	58.8	-16.3
0.47000	38.7	56.5	-17.8
0.62500	39.6	56.0	-16.4
0.94500	35.8	56.0	-20.2
1.52000	43.7	56.0	-12.3
1.63500	48.0	56.0	-8.0
4.06000	33.8	56.0	-22.2
4.64000	34.3	56.0	-21.7
5.94500	53.5	60.0	-6.5
8.44000	34.6	60.0	-25.4

Frequency MHz	AV Level dBuV	AV Limit dBuV	Delta dB
0.35500	30.0	48.8	-18.8
1.52000	30.7	46.0	-15.3
1.61000	32.8	46.0	-13.2
5.94500	46.5	50.0	-3.5
11.89500	35.3	50.0	-14.7
23.78500	30.4	50.0	-19.6

* limit exceeded

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 Equipment Photographs

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

EXHIBIT 5

PRODUCT LABELLING

5.0 **Product Labelling**

For electronic 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 schematics 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

This miscellaneous information includes details of the test procedure and calculation of factors such as pulse desensitization and averaging factor.

8.1 Discussion of Pulse Desensitization

No desensitization of the measurement equipment is required as this device is an Induction Battery Charger.

8.2 Calculation of Average Factor

This device is an Induction Battery Charger. It is not necessary to apply average factor to the measurement result.

8.3 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services Hong Kong Ltd. in the measurements of Induction Battery Charger operating under Part 18, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of FCC/OST MP-5 (1986).

The equipment under test (EUT) is placed on a wooden turntable which is 1.5 x 1 meter dimension and approximately 1 meter in height above the ground plane. During the radiated emissions test, the turntable is rotated to resulting in maximum emissions. The antenna polarization is varied during the testing to search for maximum signal levels. For loop antenna, the height of the antenna is set at 2 meters. For biconical and log-periodic antenna, the antenna height is varied from one to four meters.

According to FCC/OST MP-5 (1986), the frequency range scanned is 9 kHz to 400MHz in field strength emission. The detector function of the measurement is set to average. For line conducted emission, the frequency range scanned is from 0.15 MHz to 30 MHz in quasi peak and average measurement.