



**CMA Testing
and Certification
Laboratories**
廠商會檢定中心

TEST REPORT

Report No. : AG020886-001 Date : 2006 November 06

Application No. : LG218123(6)

Applicant : Sweda Limited
8/F., Cheung Lung Ind. Bldg.,
10 Cheung Yee Street, Cheung Sha Wan,
Kowloon, Hong Kong

Sample Description : One(1) submitted sample(s) stated to be USB Memory Stick
of Model No. USM6019
Rating : USB 5V
No. of submitted sample : Two(2) piece(s) ***

Date Received : 2006 August 04

Test Period : 2006 August 04 – 2006 August 10

Test Requested : FCC Part 15 Certification.

Test Method : 47 CFR Part 15 (10-1-05 Edition)
ANSI C63.4 – 2003

Test Result : See attached sheet(s) from page 2 to 14.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15
Subpart B.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____

Danny Chui
Deputy Manager - EL. Division

FCC ID: RVXUSM6019

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1 General Information

1.1 General Description

The equipment under test (EUT) is computer peripherals for USB Memory Stick. It operates at 12MHz in which is generated by a crystal. The EUT is powered by USB5V and the memory size is 128MB. It has single feature for downloading and storage the electronic file.

The brief circuit description is listed as follows:

- AU6386A33 and associated circuit act as controller.
- K9F56008U0A and associated circuit act as memory chip.
- AIC1732-33CX and associated circuit act as voltage controller.

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1.2 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
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1.3 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.
EMI Test Receiver	R&S	ESCS30	100001
Broadband Antenna	Schaffner	CBL6112B	2692
LISN	R&S	ESH3-Z5	100038
LISN	R&S	ESH3-Z5	100010
Spectrum Analyzer	R&S	FSP30	100628

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1.4 List of support equipment

1. Intel CPU P4 2.8GHz / 512k cache / 533MHz bus
Model: 9426A657
2. Intel Mother Board
Model: Intel Type: D815GVHZ
3. Seagate Hard-disk
Model: ST340014A, 40GB
4. Proview LCD Monitor
Model: 568
S/N: FYUJ240040133
5. IBM Mouse
Model: 12J3618
S/N: 23-005077
6. Acer Keyboard
Model: 6511-VA
7. Hewlett Packard LaserJet 2100TN
Model: C4172A
S/N: SGGS038577
8. PenPower Handwriting System
Model: PP403N
S/N: PT9122239

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2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

2.2 Test Result

All other measurements are well below the limit. Thus, those highest emissions were presented in next page.

The emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

It was found that the EUT meet the FCC requirement.

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2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dB μ V/m)	Antenna and Cable factor (dB)	Field Strength (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
40.687	V	22.3	12.9	35.2	40.0	-4.8
30.102	V	30.5	5.7	36.2	40.0	-3.8
147.018	V	22.2	11.9	34.1	43.5	-9.4
242.058	V	30.8	9.7	40.5	46.0	-5.5
265.023	H	24.1	13.9	38.0	46.0	-8.0
316.785	H	24.1	14.9	39.0	46.0	-7.0
443.870	V	20.8	17.7	38.5	46.0	-7.5

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3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

The PC connected mode has been tested. The EUT connected with an USB terminal and the measurement data was indicated in next page.

3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the document are saved with filename TestRpt2.pdf

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Measurement of disturbance voltage (150 kHz - 30 MHz) according to EN55022

Continuous RF disturbances (150 kHz - 30 MHz)

General information about the test:

Instruments:		
Description	Manufacturer	Model number
EMI Test Receiver	Rohde & Schwarz	ESCS 30
Artificial Mains Network	Rohde & Schwarz	ESH3-Z5

Protocol: Refer to graph and test data shown in following pages.

Result: **PASS**
No Emission above the specified limits were detected

Continuous RF disturbances (150 kHz - 30 MHz)

Test data:
Remarks:

Final Measurement Results:

Indicated Phase/PE shows Configuration of max. Emission

Frequency MHz	QP Level dBuV	Delta Limit dB	Phase	PE
0.19500	38.3	-25.5	L1	gnd
0.24000	40.6	-21.4	N	gnd
0.31000	34.6	-25.4	N	gnd
0.44500	31.6	-25.3	N	gnd
0.58500	31.1	-24.8	L1	gnd
0.79000	34.5	-21.4	L1	gnd
1.17000	36.2	-19.7	L1	gnd
1.58000	31.0	-24.9	L1	gnd
2.82000	33.2	-22.7	L1	gnd
3.89000	32.5	-23.4	L1	gnd

Frequency MHz	AV Level dBuV	Delta Limit dB	Phase	PE
0.19500	29.4	-24.4	L1	gnd
0.24000	31.3	-20.7	N	gnd
0.38000	25.3	-22.9	N	gnd
0.44500	29.3	-17.6	L1	gnd
0.58500	25.2	-20.7	L1	gnd
0.79000	31.4	-14.5	L1	gnd
1.34000	29.8	-16.1	L1	gnd
1.68000	24.2	-21.7	L1	gnd
2.82000	24.0	-21.9	L1	gnd
3.60000	24.9	-21.0	N	gnd
4.28000	23.8	-22.1	N	gnd

* limit exceeded



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Continuous RF disturbances (150 kHz - 30 MHz) (con'd)

Graph:

Remarks:

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	AUTO	LN OFF
1M	30M	10k	9k	QP+AV	20ms	AUTO	LN OFF

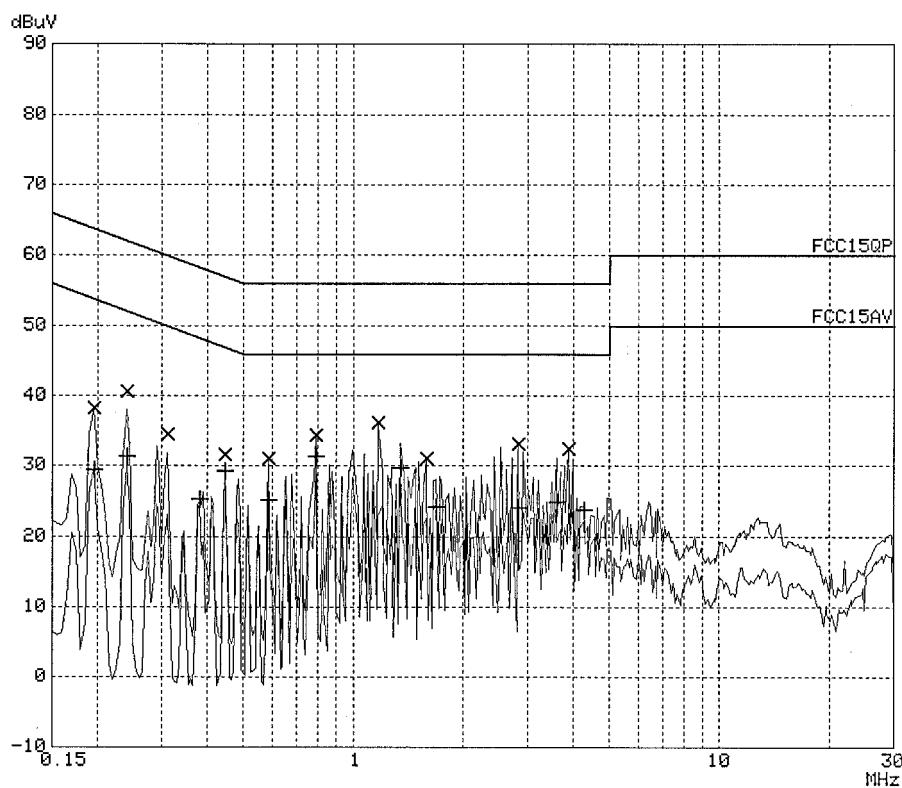
Transducer No.	Start	Stop	Name
12	150k	30M	CECF

Final Measurement: x QP / + AV

Meas Time: 1 s

Subranges: 16

Acc Margin: 30dB



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4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup5.jpg

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho2.jpg.



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5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

5.1 Bandwidth

N/A

5.2 Duty cycle

N/A

5.3 Transmission time

N/A



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6 Appendices

A1.	Photos of the set-up of Radiated Emissions	1	page
A2.	Photos of the set-up of Conducted Emissions	2	pages
A3.	Photos of External Configurations	1	page
A4.	Photos of Internal Configurations	1	page
A5.	ID Label/Location	1	page
A6.	Conduct Emission Measurement Data	2	pages
A7.	Block Diagram	1	page
A8.	Schematics Diagram	1	page
A9.	User Manual	1	page
A10.	Operation Description	1	page

***** End of Report *****

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