

FCC Test Report

E4286240801KY

Type / Model Name: WMS-VL-01

Trade Name: Voicecode Security USB 2.0 Flash Drive

Product Description: USB voice recognition stick with memory

Applicant: Wrench Monkey Designs PTE LTD

FCC ID: ZVCWMS-VL-01

FCC -- T E S T R E P O R T

Test Report No. : E4286240801KY	Aug 15, 2011 Date of issue
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Type / Model Name: WMS-VL-01

Product Description: USB voice recognition stick with memory

Trade Name: Voicecode Security USB 2.0 Flash Drive

Applicant: Wrench Monkey Designs PTE LTD

Address: 132 Tamarind Road,
Singapore

Test Result according to the standards listed in clause 1 test standards:	POSITIVE
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Part 15 Subpart B:2010-10-01

Radio frequency devices-Unintentional Radiators

ANSI C63.4:2003

Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

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2 SUMMARY

GENERAL REMARKS:

FINAL ASSESSMENT:

The equipment under test fulfils the FCC requirements cited in test standard listed in section 1

Date of receipt of test sample : Aug 01, 2011

Testing commenced on : Aug 02, 2011

Testing concluded on : Aug 15, 2011

Checked by:

Tested by:

Ivan Toa
Technical Manager

Kidd Yang
Engineer

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3 EQUIPMENT UNDER TEST

3.1 Photo documentation of the EuT



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3.2 Power supply system utilised

Power supply voltage: DC 5V (by USB port)

3.3 Short description of the Equipment under Test (EuT)

Number of tested sample: 1

Serial number: Not labelled

Dimensions: L: 6.6cm W: 2.3cm H: 1.1cm

EuT operation mode:

The equipment under test was operated during the measurement under the following conditions:

- Download mode

-

-

EuT configuration:

The following interface cables and peripheral devices were connected during the measurements:

Interface cables:

Interface cable	Length [m]	Type	Line		Line termination
			shielded	unshielded	
Serial Cable connect to PC	3.0	Serial port Cable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Switch Simulator
Power Cable of Switch Simulator	2.0	3 wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Switch Simulator
Power Cable of PC	2.0	3 wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LISN
Parallel Cable connect to PC	3.0	Parallel port cable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Switch Simulator
USB Cable connect to EuT and PC	0.8	USB cable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PC

Peripheral devices:

Kind of equipment	Model and/or Manufacturer
PC	DELL
Switch Simulator	Schaffner

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4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**emitel (Shenzhen) Limited
Building 2, 171 Meihua Road,
Futian District,
Shenzhen, 518049
China**

FCC Registration No.: 746887

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2 /11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to ISO 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

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5.1.5 Test protocol

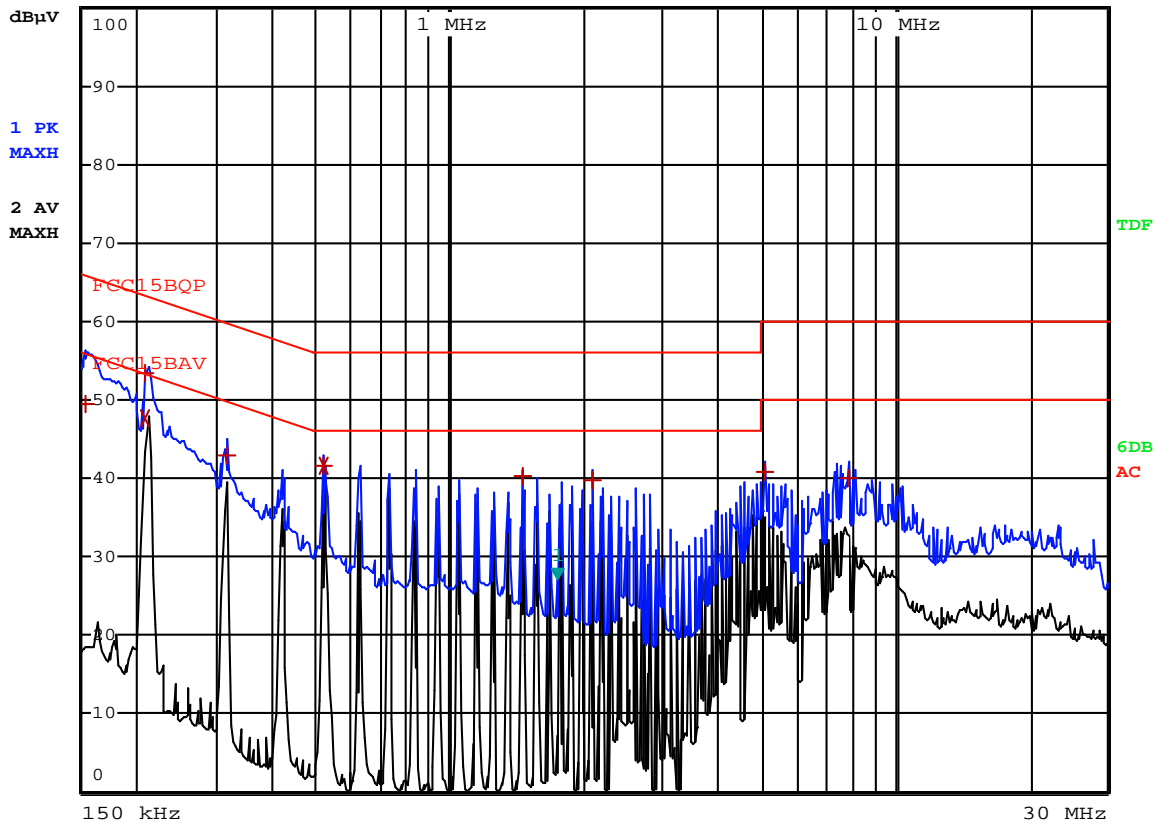
Product Description:	USB voice recognition stick with memory	Result: PASS
Operation mode:	Download mode	
Date:	Aug 15, 2011	
Tested by:	Kidd Yang	
Test point:	Line 1	



Mains Volt. Test
15.Aug 11 16:16

Att 10 dB

RBW 9 kHz Marker 1 [T1]
MT 1 s 27.04 dBμV
PREAMP OFF 1.758000000 MHz



Date: 15.AUG.2011 16:16:31

Report No. **E4286240801KY**

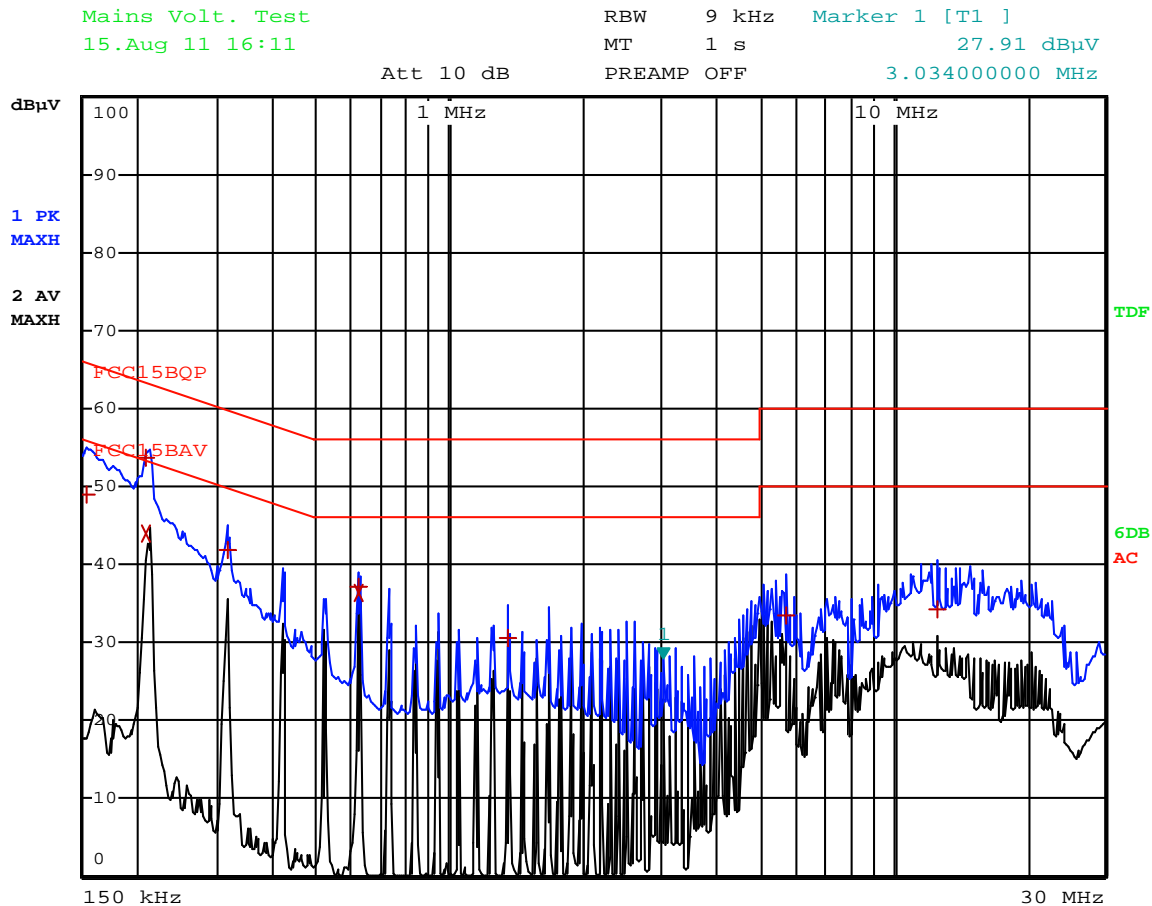
emitel (Hong Kong) Limited, Unit B3, 9/F., Boldwin Ind. Bldg., 16-18 Wah Sing Street, Kwai, Chung, N.T., Hong Kong

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Product Description:	USB voice recognition stick with memory	Result: PASS
Operation mode:	Download mode	
Date:	Aug 15, 2011	
Tested by:	Kidd Yang	
Test point:	Neutral	



Date: 15.AUG.2011 16:11:35

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Test data

LINE	Frequency	Measured QP Value	Limit	Margin
	[MHz]	[dB μ V]	[dB μ V/m]	[dB]
Line1	0.154	49.5	65.8	-16.3
Line1	0.210	53.4	63.2	-9.8
Line1	0.314	43.0	59.9	-16.9
Line1	0.522	41.7	56.0	-14.3
Line1	1.466	40.3	56.0	-15.7
Line1	2.094	39.8	56.0	-16.2
Line1	5.126	40.9	60.0	-19.1
Line1	7.950	40.0	60.0	-20.0
Neutral	0.154	48.9	65.8	-16.9
Neutral	0.210	53.6	63.2	-9.6
Neutral	0.314	41.8	59.9	-18.1
Neutral	0.626	37.1	56.0	-18.9
Neutral	1.362	30.7	56.0	-25.3
Neutral	5.754	33.6	60.0	-26.4
Neutral	12.554	34.2	60.0	-25.8

LINE	Frequency	Measured AV Value	Limit	Margin
	[MHz]	[dB μ V]	[dB μ V/m]	[dB]
Line1	0.210	47.5	53.2	-5.7
Line1	0.522	41.6	46.0	-4.4
Neutral	0.210	43.9	53.2	-9.3
Neutral	0.626	36.4	46.0	-9.6

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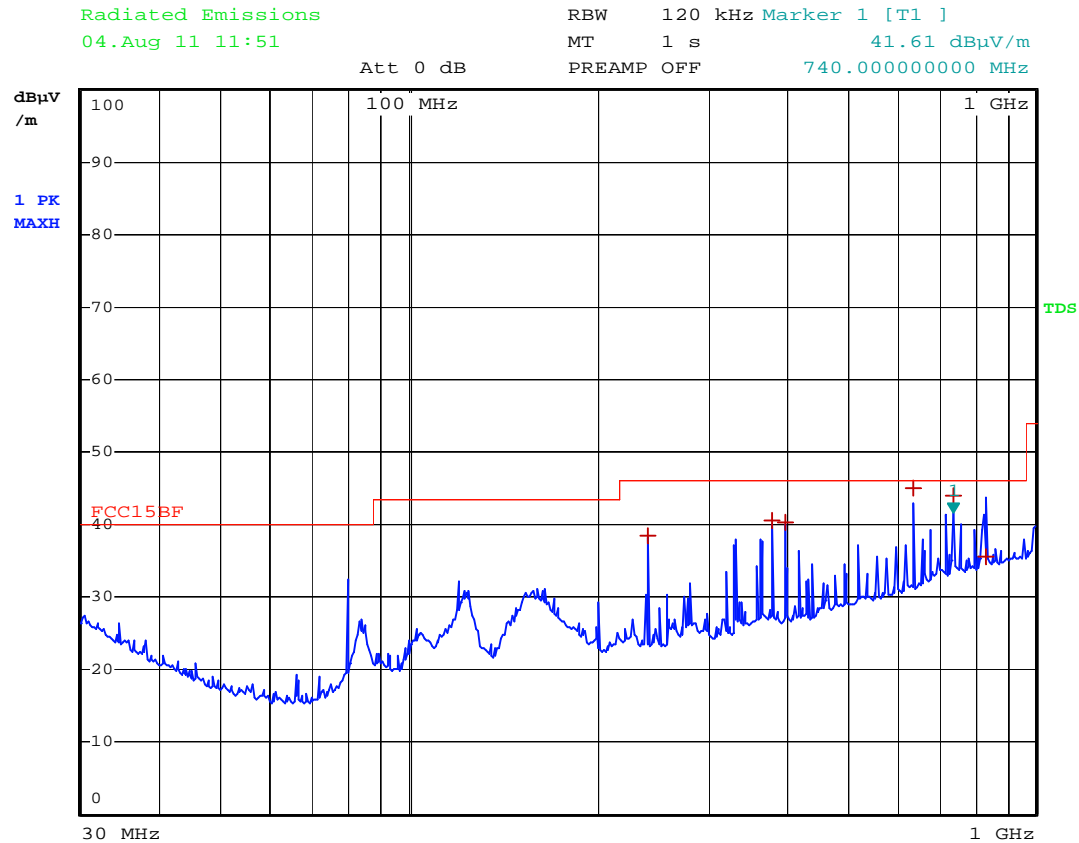
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Product Description: USB voice recognition stick with memory
Operation mode: Download mode
Date: Aug 04, 2011
Tested by: Kidd Yang
Polarization: Horizontal

Result: PASS



Date: 4.AUG.2011 11:51:20

Polarization	Frequency (MHz)	Read Value (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Measured Result (dBuV/m)	QP limit (dBuV/m)	margin (dB)
H	240.00	24.9	12.3	1.2	38.4	46.0	-7.6
H	380.00	23.0	16.0	1.5	40.5	46.0	-5.5
H	400.00	22.8	16.3	1.1	40.2	46.0	-5.8
H	640.00	22.6	20.5	1.9	45.0	46.0	-1.0
H	740.00	20.1	21.6	2.1	43.8	46.0	-2.2
H	831.84	11.0	22.4	2.3	35.7	46.0	-10.3

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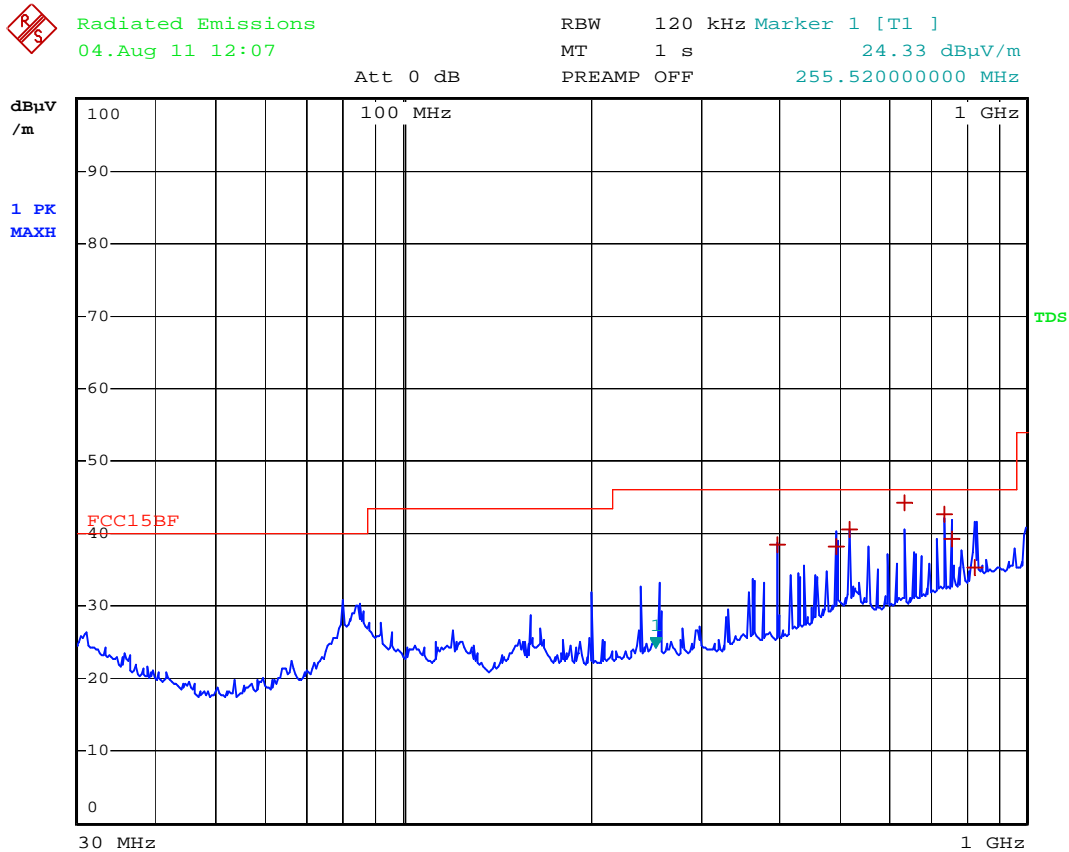
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Product Description: USB voice recognition stick with memory
Operation mode: Download mode
Date: Aug 04, 2011
Tested by: Kidd Yang
Polarization: Vertical

Result: PASS



Date: 4.AUG.2011 12:07:58

Polarization	Frequency (MHz)	Read Value (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Measured Result (dBuV/m)	QP limit (dBuV/m)	margin (dB)
V	400.00	21.6	15.6	1.1	38.3	46.0	-7.7
V	496.92	17.5	18.9	1.7	38.1	46.0	-7.9
V	520.00	18.7	19.8	2.1	40.6	46.0	-5.4
V	640.00	22.9	19.3	1.9	44.1	46.0	-1.9
V	740.00	20.0	20.6	2.1	42.7	46.0	-3.3
V	759.96	16.0	21.0	2.3	39.3	46.0	-6.7
V	829.96	10.1	23.0	2.3	35.4	46.0	-10.6

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6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test Item	Kind of Equipment	Model / Type	Manufacturer	Next Cal. Date	Equipment o.
I1	Test Receiver	ESPI3	Rohde & Schwarz	Apr 26, 2012	04-02/03-06-002
	LISN	ESH2-Z5	Rohde & Schwarz	Apr 26, 2012	04-02/20-06-001
I2	Test Receiver	ESPI3	Rohde & Schwarz	Apr 26, 2012	04-02/03-06-002
	BicoNILog Antenna	3142C	EMCO	Mar 26,2013	04-02/24-06-001
	MiniMast	2175	ETS LINDGREN	--	04-02/30-06-001
	Mult-Device controller	2091	EMCO	--	04-02/30-06-002

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