

# **TEST REPORT**

REGULATION : FCC Part15 Subpart C Section 15.207 & 15.209

Applicant	Testing Laboratory
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**Equipment Type** Multifunctional Individual Store Payment Terminal Trademark Fuji Electric Retail Systems Model (s) FCL-SCT20US 078-00051NS Serial No. Certification (FCC ID: VLOFCL-SCT20) **Equipment Authorization Test Result** Complied ESJ-307181 **Report Number Report Issue Date** November 30, 2007

This equipment has been shown to be capable of compliance with the applicable standard(s) as indicated in the test report. I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

This test report shall not be reproduced partially, or in full, without the prior written approval of ETL SEMKO Japan K.K. The results and statements contained in this report pertain only to the equipment evaluated.

Approved by

Yoshio Kowase [ Site Manager ]

Tested by

Yoshihide Mimura

## **TABLE OF CONTENTS**

			Page
SECTION	1.	GENERAL INFORMATION	3
SECTION	2.	SUMMARY OF TEST RESULTS	4
SECTION	3.	INFORMATION ABOUT EUT	5
SECTION	4.	SUPPORT EQUIPMENT(S)	6
SECTION	5.	USED CABLE (S)	7
SECTION	6.	CONSTRUCTION OF EQUIPMENT	8
SECTION	7.	OPERATING CONDITION	10
SECTION	8.	TEST PROCEDURE(S)	11
SECTION	9.	EVALUATION OF TEST RESULTS	15
SECTION	10.	LIST OF MEASURING INSTRUMENTS	20
SECTION	11.	MEASUREMENT UNCERTAINTY	21
SECTION	12.	DESCRIPTION OF TEST LABORATORY	22

#### SECTION 1. GENERAL INFORMATION

#### **TEST PERFORMED**

Location	Nagano No.2 Test Site	
EUT Received	November 13, 2007	
Test Started	November 13, 2007	
Test Completed	November 14, 2007	
Standard Applied	FCC Part15C – Section 15.207 & 15.209	
	Intentional Radiators	
Test Setup	ANSI C63.4-2003	
Deviation from Standard (s)	Not applicable	

#### TEST TRACEABILITY

Traceability to national standards of test result is achieved by means of calibration traceability to national or international standards.

#### LIMITATIONS ON RESULTS

The test result of this report is effective for equipment under test itself and under the test configuration described on the report.

This test report does not assure that whether the test result taken in other testing laboratory is compatible or reproducible to the test result on this report or not.

#### **ABBREVIATIONS**

AE = Associated Equipment DIP = Dipole Antenna

AMN = Artificial Mains Network DoC = Device for Declaration of Conformity

AMP = Amplifier, ATT = Attenuator EUT = Equipment Under Test

ANT = Antenna, BBA = Broadband Antenna ISN = Impedance Stabilization Network

AVG = Average LISN = Line Impedance Stabilization Network

Cal = Calibration PK = Peak

CDN = Coupling Decoupling Network Q-P = Quasi-peak

LCD = Liquid-Crystal Display

## **SECTION 2. SUMMARY OF TEST RESULTS**

This test report clearly shows that the EUT is in compliance with the FCC Part15 SubpartC - Section 15.207 & 15.209 specification.

Test	Reference < FCC >	Result
AC Conducted Emission	15.207	Pass
Spurious Emission - Radiated	15.205 15.209	Pass
Voltage Varied	15.31 (e)	Pass

## Note:

- 1. As for the FCC Part 15 Subpart B-Unintentional Radiators, the EUT has been measured and declared as Verification by Fuji Electric Retail Systems Co., Ltd.
- 2. See Section 9 for details.

## **SECTION 3. INFORMATION ABOUT EUT**

The equipment under test (EUT) consisted of the following equipment.

3.1 List of System Configuration

Symbol	Item		Model No.	Serial No.	Manufacturer	
A1	Multifunctional Individual Store Payment Terminal		FCL-SCT20US	078-00051NS	Fuji Electric Retail Systems	
Power R	<b>Power Ratings of EUT</b> : AC 100 – 240V, 47 – 63Hz, 50W					
Power Su	Power Supply : AC 120V, 60 Hz					
Condition of Equipment Production						
<b>Type</b> Tabletop						

#### 3.2 Overview of EUT:

Carrier Frequency 13.56 MHz +/-50ppm	
<b>Modulation Method</b>	Transmitting – Amplitude Shift Keying
RF Output Power	64.8 dBμV/m (at 3.0m : Measurement value)

## 3.3 Port(s)/Connector(s)

Port Name	Connector Type	Connector Pin	Notes
RS-232C	D-sub	9 pin	
RS-232C	Mini-DIN8 (With a lock)	8 pin	
ANT	Multi-Pole Circular Connecter	25 pin	
TEL	RJ-11	6 pin	
LINE	RJ-11	6 pin	
LAN	RJ-45	8 pin	
LAN	RJ-45	8 pin	

3.4 Highest Frequency Oscillator(s) / Crystal (s):

Oscillator	<b>Operating Frequency</b>	Board Name	Notes
50 MHz	50 MHz	Control Board	
	28.224 MHz	Built-in Modem Board	
	7.99 MHz	Built-in Printer	
	13.56 MHz	RF Board	
	4 MHz	VFD Board	
	270 kHz	LCD Board	
	30 kHz	AC Adaptor	

**3.5** Frequency Range of Measurements

AC Conducted Emission	0.15 – 30 MHz
Spurious Emission - Radiated (Magnetic Field)	0.009 – 30 MHz
Spurious Emission - Radiated (Electric Field)	30 – 1000 MHz

# **SECTION** 4. **SUPPORT EQUIPMENT(S)**

The EUT was supported by the following equipment during the test.

Symbol	Item		Model No.	Serial No.	Manufacturer	FCC ID
В	Handset		16727	EX000638340	VTECH TELECOMMUNICATIONS LTD.	EW780-5656-00
C	AC Adapter		U090040D	0736	VTECH TELECOMMUNICATIONS LTD.	N.A.
D	Modem		C202A	010539	EPSON	BKM552C202A
E	AC Adap	ter	НООСАА	020108	EPSON	N.A.
F	Computer	r	DHP	HRGPG1X	DELL	DoC
G	LCD Disp	olay	510MPS	MH15H4JXA00 527Y	SAMSUNG	DoC
Н	Keyboard	l	SK-8110	None	DELL	DoC
I	Mouse		MO71KC	412121270	DELL	DoC
J	Computer	r	2647-6AJ	PHNT01022705	IBM	DoC
К	AC Adap	ter	02K6665	11S02K6665Z1Z 0ZX10946S	IBM	N.A.
L	Private Br Exchange		MS-02	940526	Auvicul (Bic Suns)	N.A.
M	IC card (Felica Card)		S-860	9810 0000 0000 0538	Sony Corporation	N.A.
Power Su	ipply:					
C, E, F, C	Ъ, К	AC120	V, 60Hz			
L	L AC100V, 60Hz					

Note: IC card (Felica Card) are not self powered.

# **SECTION** 5. USED CABLE (S)

The following cable(s) was used for the test.

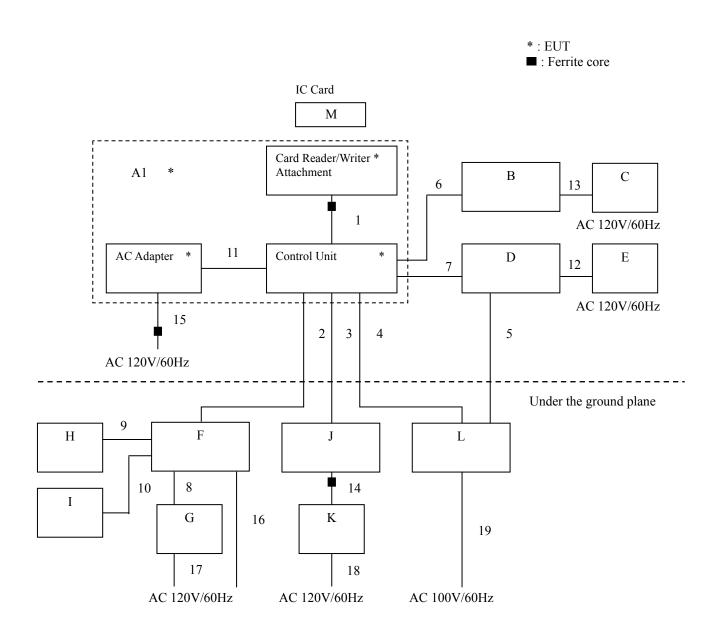
No.	Name	Length (m)	Shield	Connector Type	Ferrite Core
1	Card Reader/Writer Attachment cable	1.95	Yes	Metal	Fixed x 1
2	LAN	5.0	No	Plastic	
3	LAN	5.0	No	Plastic	
4	TEL	5.0	No	Plastic	
5	TEL	5.0	No	Plastic	
6	TEL	2.0	No	Plastic	
7	RS-232C	1.8	Yes	Metal	
8	Video cable	1.8	Yes	Metal	
9	Keyboard cable	2.0	Yes	Metal	
10	Mouse cable	1.8	Yes	Metal	
11	Power cable for Control Unit	1.8	Yes	-	
12	Power cable for Modem	1.9	No	-	
13	Power cable for Handset	1.9	No	-	
14	Power cable for Computer (IBM)	1.7	No	-	Fixed x 1
15	Power cable for AC Adapter (EUT)	1.0	No	-	Fixed x 1
16	Power cable for Computer	1.9	No	-	
17	Power cable for LCD	1.8	No	-	
18	Power cable for AC Adapter (IBM)	0.9	No	-	
19	Power cable for PBX	1.7	No	-	

#### Note:

a. No.1 and No.15 cables are supplied together with EUT by the applicant.

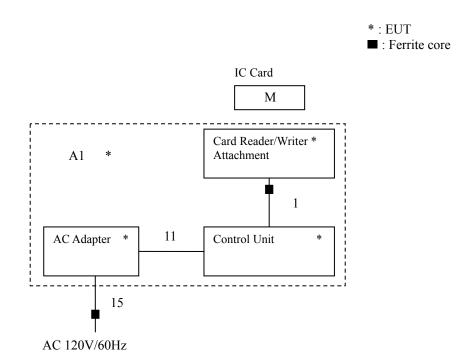
## SECTION 6. CONSTRUCTION OF EQUIPMENT

## 6.1 AC Conducted Emission Spurious Emission - Radiated



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

## 6.2 Voltage Varied



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

## **SECTION 7. OPERATING CONDITION**

The EUT was operated under the following conditions during the test.

## 7.1 Operating Condition

The test was carried out under the following mode.

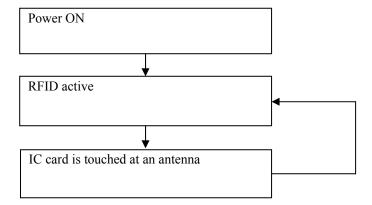
Settlement of a noncontact IC card mode

EUT was examined in the operating conditions that had maximum emissions.

#### 7.2 Operating Flow

Following operations were performed continuously.

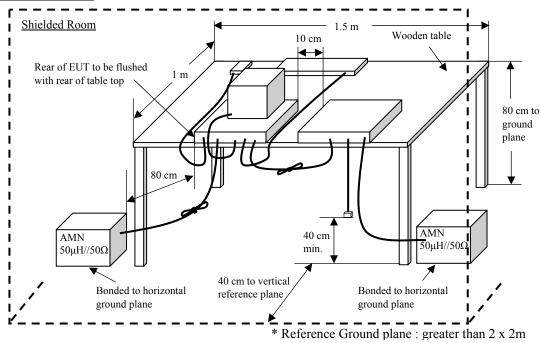
Settlement of a noncontact IC card mode



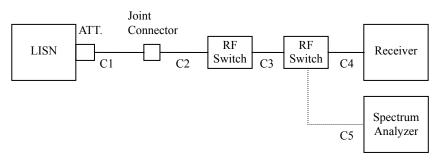
## **SECTION 8. TEST PROCEDURE(S)**

Test was carried out under the following conditions.

#### **AC Conducted Emission**



#### Schema for the conducted voltages on mains port measurement



#### [ Instrument Setup ]

Frequency [MHz]	Instrument	<b>Detector Function</b>	Resolution Bandwidth	Video Bandwidth
0.15 – 30	Danairon	Quasi Peak	10 kHz	N.A.
	Receiver	Average	10 kHz	N.A.

#### [ Preliminary Measurement ]

EUT is tested on all operating conditions.

The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart are plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.

All leads other than safety ground are tested.

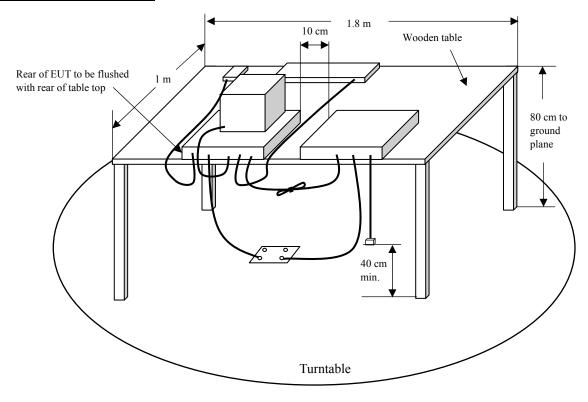
## [Final Measurement]

The EUT is operated in the worst emission condition found by the preliminary test.

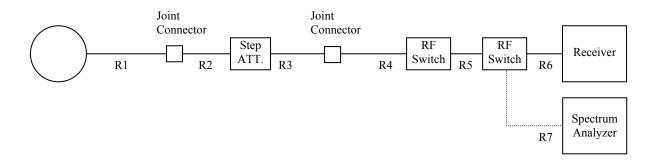
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

At least six highest spectrum are measured in quasi-peak and average (if necessary) using the test receiver.

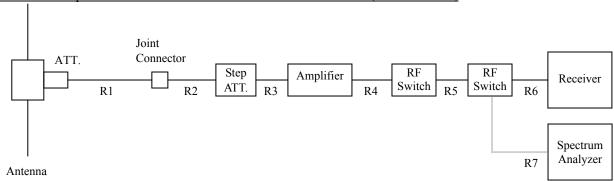
## **Spurious Emission - Radiated**



## Schema for the spurious emission radiated magnetic field measurement (Below 30MHz)



## Schema for the spurious emission radiated electric field measurement (30-1000MHz)



#### < Below 30MHz >

#### [ Instrument Setup ]

Frequency [MHz]	Instrument	<b>Detector Function</b>	Resolution Bandwidth	Video Bandwidth
0.009 to 0.15	Receiver	Quasi Peak	200Hz	N.A
0.15 to 30	Receiver	Quasi Peak	10 kHz	N.A.

#### [ Preliminary Measurement ]

EUT is tested on all operating conditions.

The Loop antenna is used for Magnetic field measurements on the frequency range 0.009 - 30 MHz.

The antenna mast is attachable to the Loop antenna and antenna's center height is set 1 meter above the ground.

Antenna angle is adjustable 0 to 360 degree and antenna polarization is also changed. (vertical and horizontal)

The spectrum analyzer is set max-hold mode and swept during turntable was rotated 0 to 360 degree. Then spectrum chart are plotted out to find the worst emission conditions in configuration, operating mode, or ambient noise notation.

## [ Final Measurement ]

The EUT operated in the worst emission condition found by the preliminary test.

The turntable azimuth (EUT direction) and antenna angle are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.

The equipment and cables are arranged or manipulated within the range of the test standard in the above condition. Higher spectrum is measured by the test receiver (quasi-peak).

#### < 30 - 1000 MHz >

#### [Instrument Setup]

Frequency [MHz]	Instrument	<b>Detector Function</b>	Resolution Bandwidth	Video Bandwidth
30 to 1000	Receiver	Quasi Peak	120 kHz	N.A.

#### [ Preliminary Measurement ]

EUT is tested on all operating conditions.

The broadband Tri-Log antenna is used for Electric field measurements on the frequency range 30 – 1000 MHz.

The antenna mast is attachable to the broadband Tri-Log and antenna height is adjustable 1 to 4 meters continuously, and antenna polarization is also changed. (vertical and horizontal)

The spectrum analyzer is set max-hold mode and swept during turntable was rotated 0 to 360 degree. Then spectrum chart are plotted out to find the worst emission conditions in configuration, operating mode, or ambient noise notation.

#### [ Final Measurement ]

The EUT operated in the worst emission condition found by the preliminary test.

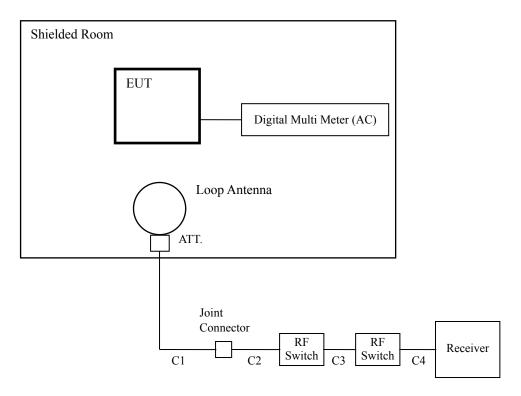
The turntable azimuth (EUT direction) and antenna height (1 to 4 meters) are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.

The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

At least six highest spectrum are measured by the test receiver (quasi-peak).

When the uncertain result was obtained, the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

## **Voltage Varied**



## [ Preliminary Measurement ]

EUT is tested on all operating conditions.

The power supply voltage to the EUT was varied from 85% to 115% of the normal value measured at the input to the EUT.

### [Final Measurement]

The EUT operated in the worst emission condition found by the preliminary test.

The power supply voltage to the EUT was varied from 85% to 115% of the normal value measured at the input to the EUT.

### SECTION 9. EVALUATION OF TEST RESULTS

#### 9.1 AC Conducted Emission (Section15.207)

9.1.1 Settlement of a noncontact IC card mode

# ETL SEMKO Japan K.K.

## Nagano No.2 Test Site

## AC Conducted Emission Test

APPLICANT : Fuji Electric Retail Systems Co.,Ltd. EUT NAME : Multifunctional Individual Store Payment

Terminal

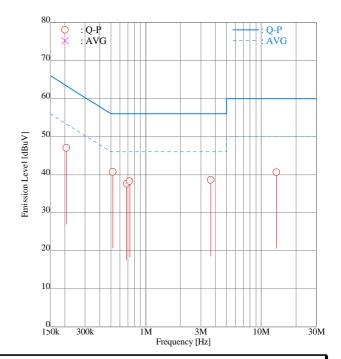
MODEL NO. : FCL-SCT20US SERIAL NO. : 078-00051NS

TEST MODE : Settlement of a noncontact IC card

POWER SOURCE: AC120V/60Hz
DATE TESTED : Nov 14 2007
FILE NO. : ESJ-307181
REGULATION : FCC part15C (15.207)
TEST METHOD : ANSI C63.4 :2003
TEMPERATURE : 22.0 [degC]

HUMIDITY : 46.0 [%] NOTE :





ENGINEER : Yoshihide Mimura

FRI [No]	EQUENCY MODE [MHz]	READIN [dBuV] Line1		FACTO [dB] Line1	R Line2	EMISSIOI [dBuV] Line1	N Line2	LIMIT [dBuV]	MARO [dB Line1	
1	0.2070 O-P	33.9	36.7	10.3	10.3	44.2	47.0	63.3	19.1	16.3
2	0.5204 Q-P	30.2	30.1	10.5	10.4	40.7	40.5	56.0	15.3	15.5
3	0.6867 Q-P	26.5	27.2	10.5	10.4	37.0	37.6	56.0	19.0	18.4
4	0.7271 Q-P	<u>27.8</u>	25.2	10.5	10.4	38.3	35.6	56.0	17.7	20.4
5	3.6709 Q-P	27.3	<u>28.0</u>	10.6	10.6	37.9	38.6	56.0	18.1	<u>17.4</u>
6	13.5600 Q-P	29.5	<u>29.5</u>	11.0	11.1	40.5	<u>40.6</u>	60.0	19.5	<u>19.4</u>

Higher six points are underlined.

Other frequencies: Below the FCC part15C (15.207) limit Emisson Level = Read + Factor(LISN,Pad,Cable)

#### 9.2 Spurious Emissions - Radiated (Section15.209)

9.2.1 Settlement of a noncontact IC card (9kHz – 30MHz)

# ETL SEMKO Japan K.K.

# Nagano No.2 Test Site

Spurious Emission - Radiated Test

 $APPLICANT \qquad : Fuji \ Electric \ Retail \ Systems \ Co., Ltd.$ 

EUT NAME : Multifunctional Individual Store Payment

Terminal

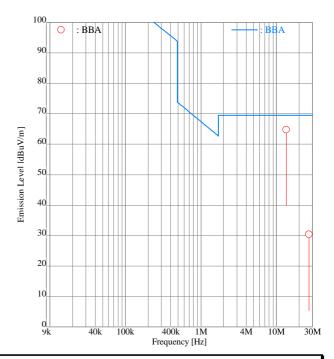
MODEL NO. : FCL-SCT20US SERIAL NO. : 078-00051NS

TEST MODE : Settlement of a noncontact IC card

POWER SOURCE: AC120V/60Hz
DATE TESTED : Nov 13 2007
FILE NO. : ESJ-307181
REGULATION : FCC part15C (15.209)
TEST METHOD : ANSI C63.4 :2003

 $\begin{array}{ll} \text{DISTANCE} & : 3.00 \text{ [m]} \\ \text{TEMPERATURE} & : 22.0 \text{ [degC]} \\ \text{HUMIDITY} & : 46.0 \text{ [\%]} \end{array}$ 

NOTE :



ENGINEER : Yoshihide Mimura

FRI [No]	EQUENCY [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV/m]	[d	LIMIT BuV/m]	MARG [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1 2	13.5600 27.1200	53.2 17.0	<u>53.9</u> <u>19.1</u>	10.9 11.3	10.9 11.3	64.1 28.3	<u>64.8</u> <u>30.4</u>	69.5 69.5	5.4 41.2	<u><b>4.7</b></u> 39.1

Higher six points are underlined.

Other frequencies: Below the FCC part15C (15.209) limit

 $Emisson\ Level\ = Read\ + Factor(Antenna,Antenna\ Pad,Cable,Preamp)$ 

#### 9.2.2 Settlement of a noncontact IC card mode (30 – 1000MHz)

# ETL SEMKO Japan K.K.

## Nagano No.2 Test Site

Spurious Emissions - Radiated Test

APPLICANT : Fuji Electric Retail Systems Co.,Ltd. EUT NAME : Multifunctional Individual Store Payment

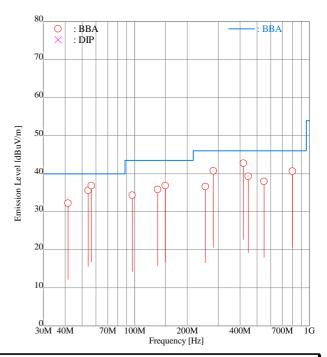
Terminal

MODEL NO. : FCL-SCT20US SERIAL NO. : 078-00051NS

TEST MODE : Settlement of a noncontact IC card

POWER SOURCE: AC120V/60Hz
DATE TESTED: Nov 13 2007
FILE NO.: ESJ-307181
REGULATION: FCCpart15C (15.209)
TEST METHOD: ANSI C63.4:2003

DISTANCE : 3.00 [m]
TEMPERATURE : 22.0 [degC]
HUMIDITY : 46.0 [%]
NOTE :



ENGINEER : Yoshihide Mimura

FRI [No]	EQUENCY [MHz]	ANT.	READINO [dBuV] Hori	<del>)</del> Vert	FACTOR [dB] Hori	Vert	EMISSION [dBuV/m] Hori		LIMIT dBuV/m]	MARG [dB] Hori	
			11011		11011		11011				·
1	41.47	BBA	-	36.0	-3.8	-3.8	-	32.2	40.0	_	7.8
2	54.24	BBA	-	42.1	-6.5	-6.5	-	35.6	40.0	-	4.4
3	56.44	BBA	-	44.0	-7.2	-7.2	-	36.8	40.0	-	3.2
4	96.77	BBA	-	44.0	-9.7	-9.7	-	34.3	43.5	-	9.2
5	135.60	BBA	-	44.4	-8.6	-8.6	-	35.8	43.5	-	7.7
6	150.00	BBA	-	46.3	-9.5	-9.5	-	36.8	43.5	-	<u>6.7</u>
7	254.10	BBA	-	40.0	-3.4	-3.4	-	36.6	46.0	-	9.4
8	282.23	BBA	43.2	-	-2.5	-2.5	<u>40.7</u>	-	46.0	<u>5.3</u>	-
9	420.36	BBA	<u>40.6</u>	-	2.1	2.1	<u>42.7</u>	-	46.0	3.3	-
10	447.48	BBA	37.1	-	2.2	2.2	39.3	-	46.0	5.3 3.3 6.7	-
11	550.49	BBA	-	33.9	4.0	4.0	-	37.9	46.0	-	8.1
12	800.82	BBA	<u>32.8</u>	32.1	7.8	7.8	<u>40.6</u>	39.9	46.0	<u>5.4</u>	6.1

Higher six points are underlined.

Other frequencies : Below the FCCpart15C (15.209) limit

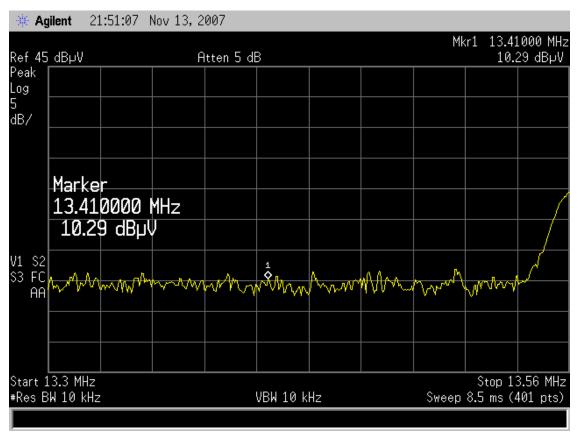
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)

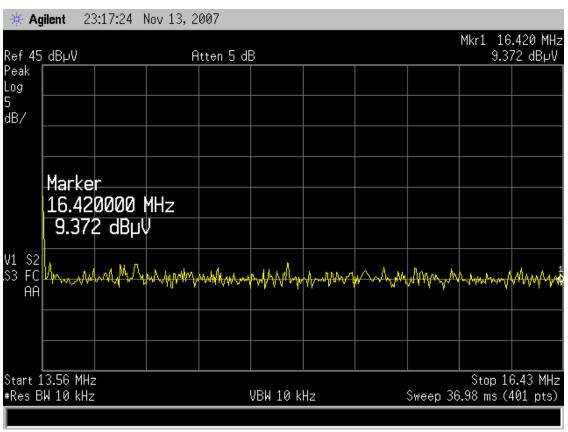
ANT.: Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

Version 0.2

#### 9.3 Restricted bands of operation

#### 9.3.1 Settlement of a noncontact IC card mode





## 9.4 Voltage Varied

Tested Date : November 19, 2007

: +50ppm = 13.627800 [MHz] : -50ppm = 13.492200 [MHz]

Engineer : Yoshihide Mimura

Supply V	Voltage [V] Operation Frequency [MHz]		Meter Reading [dBμV/m]	Result
85%	102	13.55999	39.8	Pass
100%	120	13.55999	39.8	Pass
115%	138	13.55999	39.8	Pass

## SECTION 10. LIST OF MEASURING INSTRUMENTS

Instrument	Model No.	Serial No.	Manufacturer	Cal. Date	Calibration expired			
Conducted Voltages on Mains Port								
LISN (EUT)	ESH2-Z5	843890/007	ROHDE & SCHWARZ	Sep. 13, 07	Sep. 30, 08			
10dB Attenuator	CFA-01	CE2022	TAMAGAWA	Apr. 03, 07	Apr. 30, 08			
LISN (Peripheral)	KNW-242	8-851-26	Kyoritsu	Sep. 13, 07	Sep. 30, 08			
50Ω Termination	CT-01	02	TAMAGAWA					
Coaxial cable	5D-2W(5.0 m)	C1	ETL SEMKO					
Coaxial cable	5D-2W(7.0 m)	C2	ETL SEMKO	Apr. 03, 07	Apr. 30, 08			
Coaxial cable	5D-2W(0.4 m)	С3	ETL SEMKO					
Coaxial cable	5D-2W(2.0 m)	C4	ETL SEMKO					
Digital Multimeter	10	68481797	FLUKE	Jul. 31, 07	Jul. 31, 08			
Radiated Electric Field								
Broad Band antenna	LPB-2513/A	1091	A.R.A.	Jun. 18, 07	Jun. 30, 08			
Loop antenna	HFH2-Z2	892665/008	ROHDE & SCHWARZ	May 11, 07	May 31, 08			
6dB Attenuator	8491A	36233	HEWLETT PACKARD					
Step Attenuator	8494B	2726A13828	HEWLETT PACKARD					
Amplifier	8447D	2727A05048	HEWLETT PACKARD					
Coaxial cable	5D-2W(20.0 m)	R1	ETL SEMKO					
Coaxial cable	5D-2W(3.1 m)	R2	ETL SEMKO					
Coaxial cable	5D-2W(0.4 m)	R3	ETL SEMKO	Sep. 21, 07	Sep. 30, 08			
Coaxial cable	5D-2W(0.4 m)	R4	ETL SEMKO					
Coaxial cable	5D-2W(0.4 m)	R5	ETL SEMKO					
Coaxial cable	5D-2W(2.0m)	R6	ETL SEMKO					
Site Attenuation				May. 23, 07	May. 31, 08			
Common								
RF Switch	ACX-150-1	CE2010	ETL SEMKO	Sep. 21, 07	Sep. 30, 08			
Test receiver	ESS (Firmware Version 1.07)	844362/007	ROHDE & SCHWARZ	Feb. 01, 07	Feb. 29, 08			
Testing Software : emiT (Version 2.0.2.0)								

Note: Test instruments are calibrated according to Quality Manual and Calibration Rules of ETL SEMKO Japan K.K..

## SECTION 11. MEASUREMENT UNCERTAINTY

The uncertainty of the measurements performed for this report lies:

Radiated Electric Field at 3m								
30 MHz – 1000 MHz	± 4.22 dB							
Above 1 GHz	± 3.9 dB							
Radiated Electric Field at 10m								
30 MHz – 1000 MHz	± 4.60 dB							
Above 1 GHz	± 3.9 dB							
Radiated Effective Power								
11.7 GHz – 12.7 GHz	± 3.8 dB							
<b>Conducted Voltages on Mains Port</b>	Conducted Voltages on Mains Port							
9 kHz – 30 MHz	± 3.60 dB							
Conducted Voltages on Telecommuni	Conducted Voltages on Telecommunication Port							
9 kHz – 30 MHz	± 3.59 dB							
Conducted Current on Telecommuni	cation Port							
9 kHz – 30 MHz	± 1.3 dB							
<b>Conducted Voltages on Terminals</b>								
150 kHz – 30 MHz	± 1.0 dB							
Radiated Power								
30 MHz – 300 MHz	± 3.10 dB							
Radiated Magnetic Field								
9 kHz – 30 MHz	± 2.94 dB							

Note on Radiated Electric Field measurement uncertainty

The following items are not included in the calculations in spite of their own uncertainty components because it is impracticable to find the value.

It is our problem awaiting solution in future.

- (1) Repeatability of measurement
- It is not possible to calculate repeatability since the measurement was carried out only one time.
- (2) Antenna factor variation

The definition of measured (radiated electric field strength) is not completed on the referred standard(s).

(3) Loss of EUT radiation propagation

It is certainly one of the uncertainty components, however is not able to calculate.

Please note that these uncertainties are not reflected to the compliance judgment of the test results in this report.

## SECTION 12. DESCRIPTION OF TEST LABORATORY

ETL SEMKO is a division of Intertek plc (LSE: ITRK), a global leader in testing, inspection and certification services, operating in 273 laboratories and 521 offices in 100 countries throughout the world. The ETL SEMKO division of Intertek provides access to global markets through its local services, which include product safety testing and certification, EMC testing and performance testing for customers in such industries as wireless technology, security, appliances, HVAC, cables and wiring accessories, industrial machinery, medical devices, telecommunications, lighting, automotive, semiconductor, building products and electronics.

ACCREDITATION		SCOPE	LAB. CODE
LAB CODE 100290-0	NVLAP USA	EMC Testing	100290-3
Lab Accreditation VLAC-008	VLAC JAPAN	EMC Testing	VLAC-008-4
BSMI	BSMI TAIWAN	EMC Testing	SL2-IN-E-6007

FILING		SCOPE	LAB. CODE
V€I	VCCI JAPAN	EMC Testing	-
Federal Communications Commission	FCC USA	EMC Testing	Designation Number JP5032
Industry Canada	IC CANADA	EMC Testing Telecom Testing	2065C-1
	SAUDI ARABIA	EMC Testing	-