EMC TEST Report

FCC ID: TFJEPORTG6

This report concerns (check one) : ■ **Original Grant** □ **Class II Change**

Issued Date : Jun. 13, 2006
Report No. : 0606051
Equipment : Contactless Card Reader
Model No. : ePort G6

Applicant : Uniform Industrial Corp.
Address : 47709 Fremont Blvd., Fremont, California, United States 94539

Tested by:
Neutron Engineering Inc. EMC Laboratory
Data of Test:
Jun. 09, 2006 ~ Jun. 12, 2006

Testing Engineer : Alan Liu (Alan Liu)

Technical Manager : (Jeff Yang)

Authorized Signatory : (Andy Chiu)

NEUTRON ENGINEERING INC.

No. 132-1, Lane 329, Sec. 2, Palain Rd.,
Shijr City, Taipei, Taiwan
TEL : (02) 2646-5426 FAX : (02) 2646-6815

NVLAP Lab Code: 200145-0 ilac-MRA TAF Testing Laboratory 0659

Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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1. CERTIFICATION

Equipment: Contactless Card Reader
Trade Name: Uniform
Model No.: ePort G6
Applicant: Uniform Industrial Corp.
Data of Test: Jun. 09, 2006 ~ Jun. 12, 2006
Test Item: ENGINEERING SAMPLE
Standards: FCC Part15, Subpart C / RSS-210: 2004/ ANCI C63.4 : 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-0606051) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and CNLA according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: (Antenna to EUT distance is **3** m)

FCC Part15, Subpart C		
Standard	Test Item	Judgment
15.207	Conducted Emission	PASS
15.35 / 15.205 / 15.209 / 15.225	Radiated Emission	PASS
15.225(e)	Frequency Stability	PASS
15.203	Antenna Requirement	PASS

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C01/OS02** at the location of No.132-1, Lane 329, Sec. 2, Palain Road, Shijr City, Taipei, Taiwan.

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U，(dB)	NOTE
OS-01	ANSI	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
OS-02	ANSI	30MHz ~ 200MHz	V	2.48	
		30MHz ~ 200MHz	H	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	H	2.66	

3. GENERAL INFORMATION

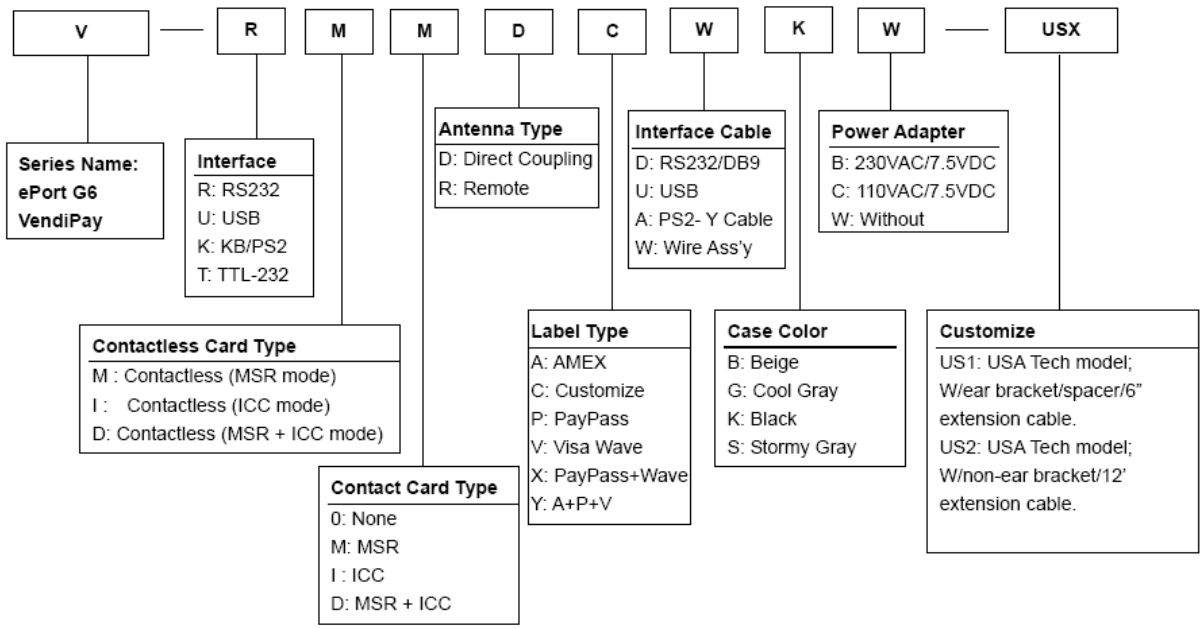
3.1 GENERAL DESCRIPTION OF EUT

Equipment	Contactless Card Reader
Trade Name	Uniform
Model No.	ePort G6
OEM Brand/Model No.	N/A
Model Difference	N/A
Product Description	The EUT is a Contactless Card Reader. Operation Frequency: 13.56MHz Antenna Designation: Integra (Induction coil) Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
Power Source	DC Voltage supplied from AC/DC adapter.
Power Rating	AC I/P 120Vac, 60Hz, 8W/ DC O/P 5V, 500mA
Connecting I/O Port(s)	Please refer to the User's Manual
Products Covered	AC/DC Adapter(Model No.: DCU050050)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Part Number Description of ePort G6 (VendiPay) Series (Rev. A)



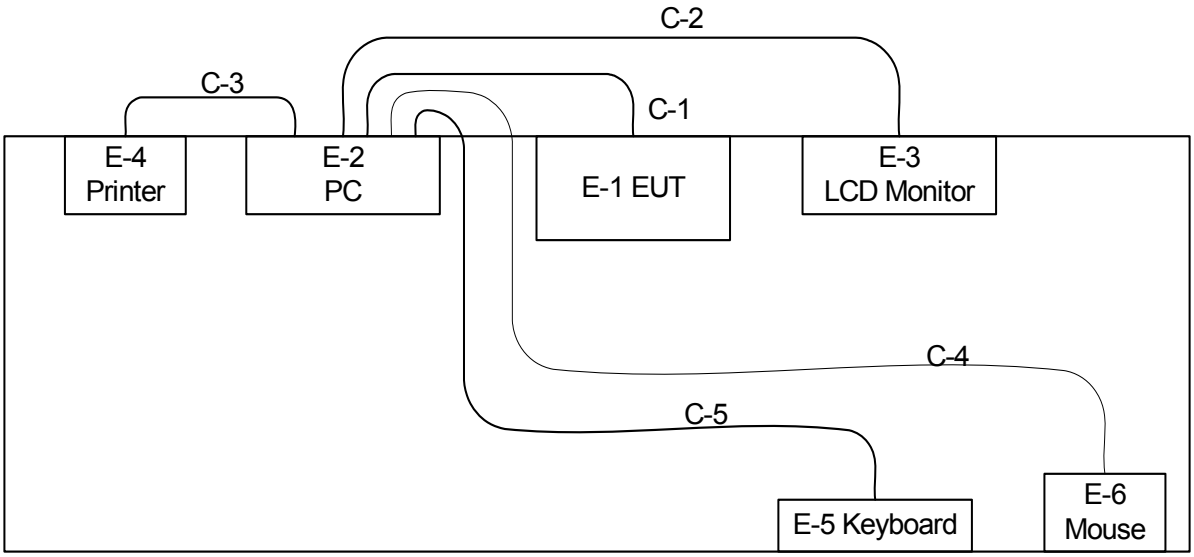
3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
	The EUT has been programmed to continuously transmit during test.

For Conducted / Radiated Test	
Final Test Mode	Description
	The EUT has been programmed to continuously transmit during test.

3.3 **BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED**



C-1 Data Cable
C-2 VGA Cable
C-3 Centronics Cable
C-4 Data Cable
C-5 Data Cable

3.1 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Contactless Card Reader	Uniform	ePort G6	TFJEPORTG6	N/A	EUT
E-2	PC	IBM	8196-I5V	DOC	99M1136	
E-3	19" LCD Monitor	Samsung	SyncMaster 193P	GH19PH	DI19H4JXC05517A	
E-4	Printer	SII	DPU-414	DOC	1045105A	
E-5	PS/2 K/B	Logitech	Y-SJ17(ACK260A)	DOC	SYU44664880	
E-6	PS/2 Mouse	Logitech	M-SBF69	DOC	HCA44601156	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	1.5M	
C-2	YES	YES	1.8M	
C-3	YES	NO	1.8M	
C-4	YES	NO	1.5M	
C-5	YES	NO	1.5M	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	Rolf Heine	NNB-2/16Z	98053	Dec. 19, 2006
2	4L-V-LISN	Rolf Heine	NNB-4/63TL	02/10040	Apr. 10, 2007
3	Pulse Limiter	Electro-Metrics	EM-7600	112644	Nov. 29, 2006
4	50Ω Terminator	N/A	N/A	N/A	May 11, 2007
5	Test Cable	N/A	C01	N/A	Nov. 29, 2006
6	EMI Test Receiver	R&S	ESCI	100082	Feb. 01, 2007

Remark: ” N/A” denotes No Model No. , Serial No. or No Calibration specified.

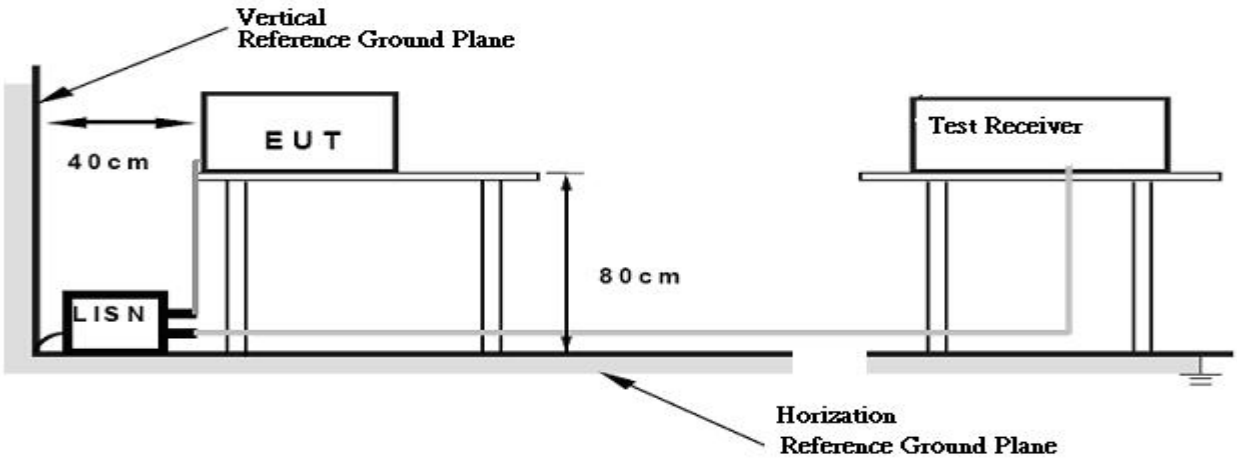
4.1.3 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



4.1.6 **EUT OPERATING CONDITIONS**

The EUT exercise program (EMC.exe) used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use. The program contained on a PC hard disk and is auto-starting on power-up. Once loaded, the program sequentially exercises each system component in turn. The sequence used is:

1. Read (write) from (to) mass storage device (Disk).
2. Send "H" pattern to video port device (Monitor).
3. Send " H " pattern to parallel port device (Printer).
4. Send " H " pattern to serial port device (Modem).
5. The EUT has been programmed to continuously transmit during test.
6. Repeated from 2 to 5 continuously.

4.1.7 **TEST RESULTS**

EUT：	Contactless Card Reader	Model No. ：	ePort G6
Temperature：	25.6 ℃	Relative Humidity：	54 %
Pressure：	1014 hPa		AC 120V/60Hz
Test Mode ：			

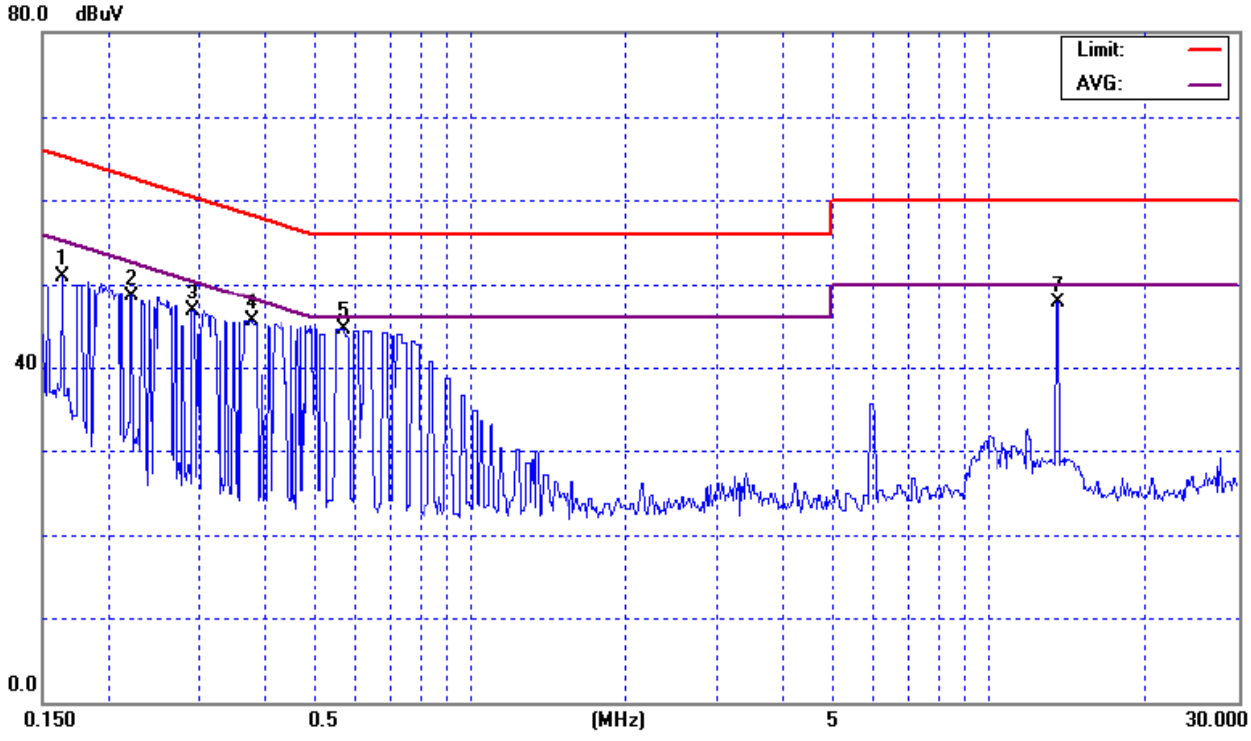
Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.16	Line	50.88	*	65.28	55.28	-14.40	(QP)
0.22	Line	48.48	*	62.78	52.78	-14.30	(QP)
0.29	Line	46.69	*	60.50	50.50	-13.81	(QP)
0.38	Line	45.52	*	58.32	48.32	-12.80	(QP)
0.57	Line	44.53	30.13	56.00	46.00	-11.47	(QP)
13.57	Line	47.65	*	60.00	50.00	-12.35	(QP)

Remark

(1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz；SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz。Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz。

(2) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform。In this case, a " * " marked in AVG Mode column of Interference Voltage Measured。

(3) Measuring frequency range from 150KHz to 30MHz。



EUT：	Contactless Card Reader	Model No. ：	ePort G6
Temperature：	25.6 ℃	Relative Humidity：	54 %
Pressure：	1014 hPa	Test Power ：	AC 120V/60Hz
Test Mode ：			

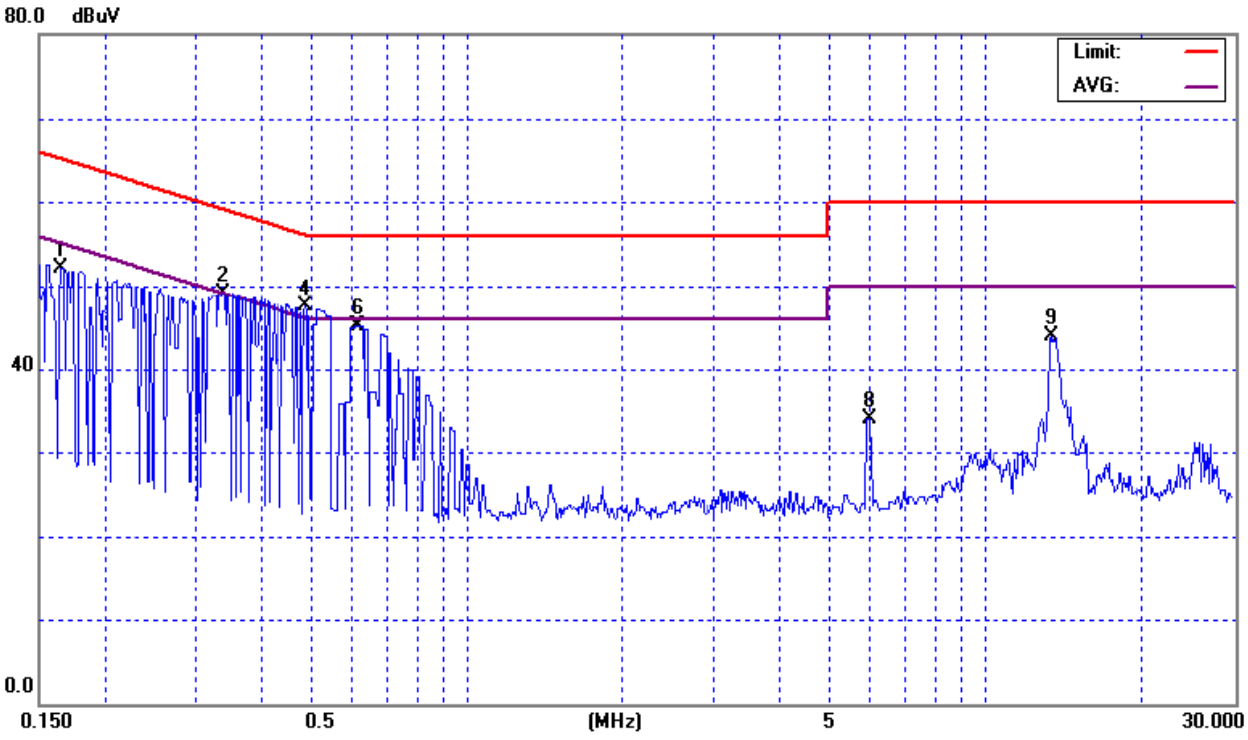
Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.17	Neutral	52.08	*	65.21	55.21	-13.13	(QP)
0.34	Neutral	49.10	31.19	59.25	49.25	-10.15	(QP)
0.49	Neutral	47.50	32.00	56.19	46.19	-8.69	(QP)
0.62	Neutral	45.14	34.13	56.00	46.00	-10.86	(QP)
6.00	Neutral	34.13	*	60.00	50.00	-25.87	(QP)
13.46	Neutral	43.86	*	60.00	50.00	-16.14	(QP)

Remark

(1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz；SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz。Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz。

(2) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform。In this case, a " * " marked in AVG Mode column of Interference Voltage Measured。

(3) Measuring frequency range from 150KHz to 30MHz。



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 – 30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500
FCC Part 15.239(a)/(b)/(c)				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
13.553 – 13.567	15,848	30 m	15,848*100	124
13.567 – 13.710	334	30 m	334*100	90.5
13.110 – 13.410 13.710 – 14.010	106	30 m	106*100	80.5

Notes:

(1) The tighter limit shall apply at the boundary between two frequency range.

(2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).

(3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$.
Example:
F.S Limit at 30m distance is 30uV/m , then F.S Limitation at 3m distance is adjusted as $L_{d1} = L_1 = 30uV/m * (10)^2 = 100 * 30$ uV/m

4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	MESS-ELEKTRONIK	VULB 9160	3058	Nov. 29, 2006
2	Test Cable	N/A	10M_OS02	N/A	Nov. 29, 2006
3	Test Cable	N/A	OS02-1/-2/-3	N/A	Nov. 29, 2006
4	Pre-Amplifier	Anritsu	MH648A	M09961	Nov. 29, 2006
5	EMI Test Receiver	R&S	ESCI	100082	Feb. 01, 2007
6	Antenna Mast	Chance Most	CMTB-1.5	N/A	N/A
7	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
8	Loop Ant	EMCO	6502	00042960	Jan. 13, 2008

Remark: ” N/A” denotes No Model No. / Serial No. and No Calibration specified.

4.2.3 TEST PROCEDURE

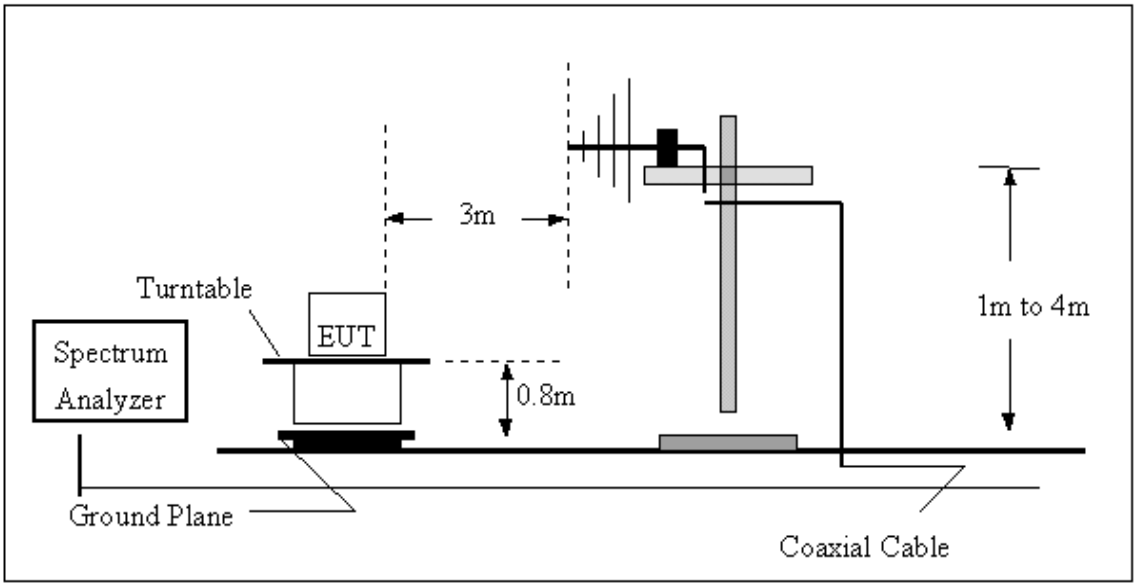
a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.4 DEVIATION FROM TEST STANDARD

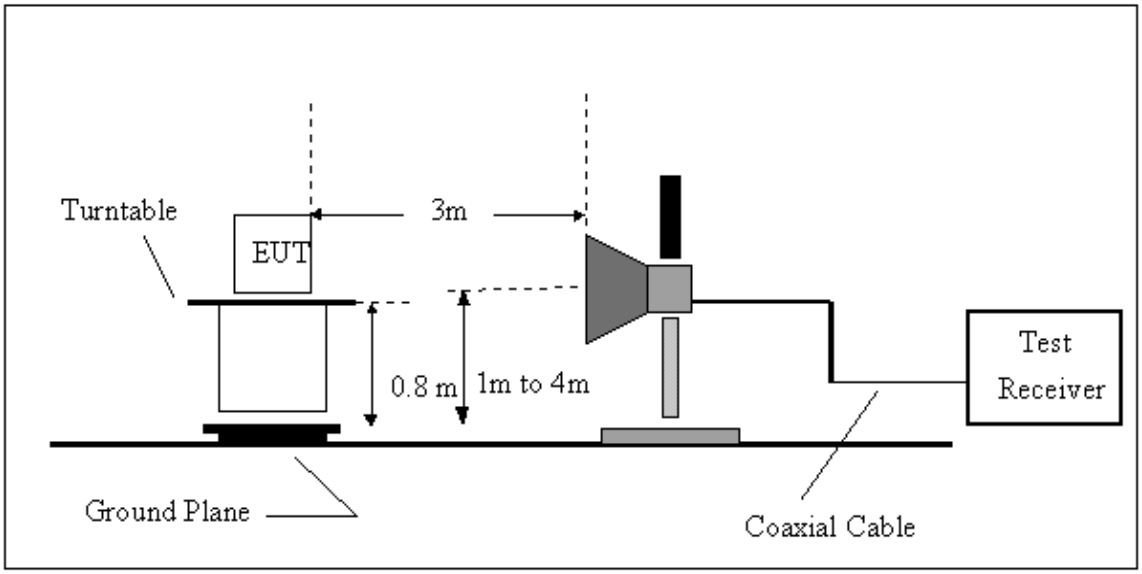
No deviation

4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.7 **TEST RESULTS (Below 30 MHz)**

EUT：	Contactless Card Reader	Model No. ：	ePort G6
Temperature：	28 ℃	Relative Humidity：	79 %
Pressure：	1017 hPa	Test Power ：	AC 120V/60Hz
Test Mode ：			

Freq. (MHz)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dB)	Note
13.56	79.43	10.61	90.04	124.00	- 33.96	Carrier
27.20	51.45	-10.46	40.99	69.00	- 28.01	**Remark (5)**

Remark：

(1) Spectrum Setting:
9 KHz – 150 KHz, RBW= 1 KHz, VBW=1 KHz, Sweep time = 200 ms.
150 K Hz – 30 MHz, RBW= 9 KHz, VBW=9 KHz, Sweep time = 200 ms.
30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

(2) All readings are Peak unless otherwise stated QP in column of『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measure-ment didn‘t perform ◦

(3) Measuring frequency range from 30MHz to 1000MHz ◦

(4) If the peak scan value lower limit more than 20dB, then this signal data does not how in table ◦

(5)

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
1.705 – 30.00	30	30m	100* 30	69.5

4.2.8 TEST RESULTS **(30 – 1000 MHz)**

EUT：	Contactless Card Reader	Model No. ：	ePort G6
Temperature：	28 ℃	Relative Humidity：	79 %
Pressure：	1017 hPa	Test Power ：	AC 120V/60Hz
Test Mode ：			

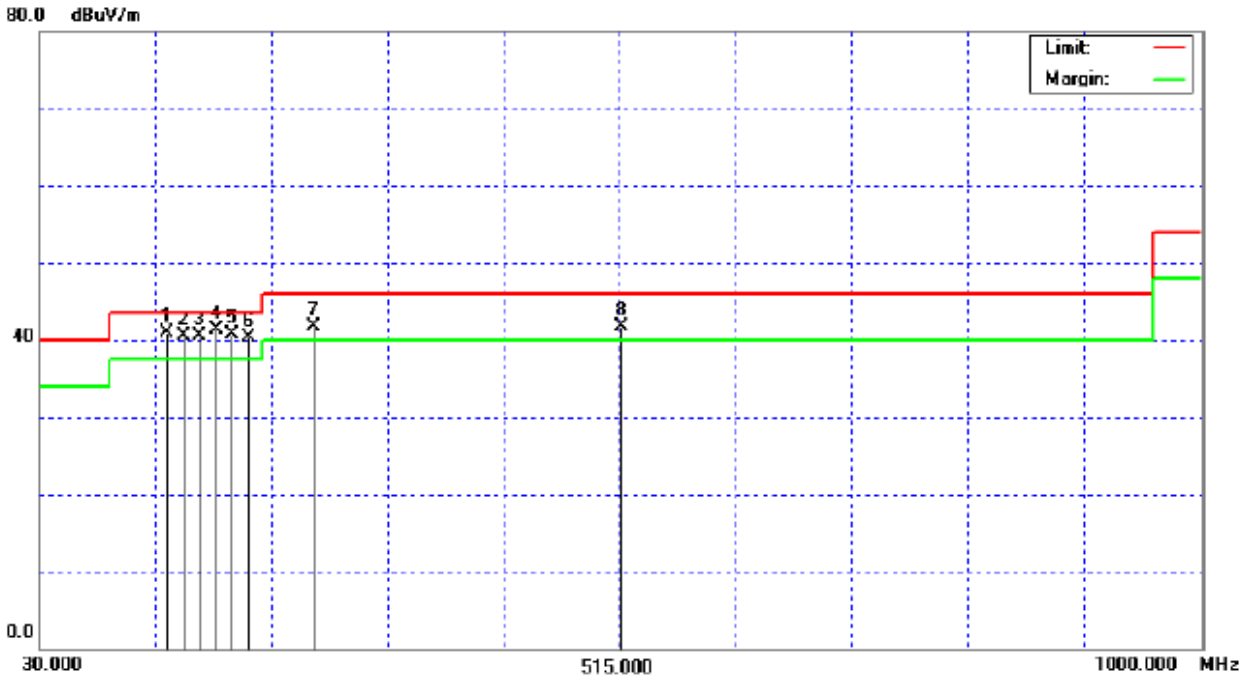
Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
135.60	V	46.82	-5.84	40.98	43.50	- 2.52	(QP)
149.16	V	46.01	-5.48	40.53	43.50	- 2.97	(QP)
162.72	V	45.98	-5.57	40.41	43.50	- 3.09	(QP)
176.29	V	47.60	-6.23	41.37	43.50	- 2.13	(QP)
189.84	V	49.02	-8.28	40.74	43.50	- 2.76	(QP)
203.41	V	49.18	-8.94	40.24	43.50	- 3.26	(QP)
257.65	V	47.82	-6.16	41.66	46.00	- 4.34	(QP)
515.29	V	41.50	0.16	41.66	46.00	- 4.34	(QP)

Remark：

(1) Spectrum Setting:
9 KHz – 150 KHz, RBW= 1 KHz, VBW=1 KHz, Sweep time = 200 ms.
150 K Hz – 30 MHz, RBW= 9 KHz, VBW=9 KHz, Sweep time = 200 ms.
30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

(2) All readings are Peak unless otherwise stated QP in column of『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measure-ment didn't perform。

(3) If the peak scan value lower limit more than 20dB, then this signal data does not how in table。



EUT：	Contactless Card Reader	Model No. ：	ePort G6
Temperature：	28 ℃	Relative Humidity：	79 %
Pressure：	1017 hPa	Test Power ：	AC 120V/60Hz
Test Mode ：			

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
149.16	H	46.85	-5.48	41.37	43.50	- 2.13	(QP)
162.72	H	46.56	-5.57	40.99	43.50	- 2.51	(QP)
203.41	H	47.62	-8.94	38.68	43.50	- 4.82	(QP)
230.53	H	47.91	-7.15	40.76	46.00	- 5.24	(QP)
257.65	H	50.09	-6.16	43.93	46.00	- 2.07	(QP)
284.77	H	46.56	-5.43	41.13	46.00	- 4.87	(QP)
515.30	H	40.75	0.16	40.91	46.00	- 5.09	(QP)
541.94	H	38.66	0.74	39.40	46.00	- 6.60	(QP)

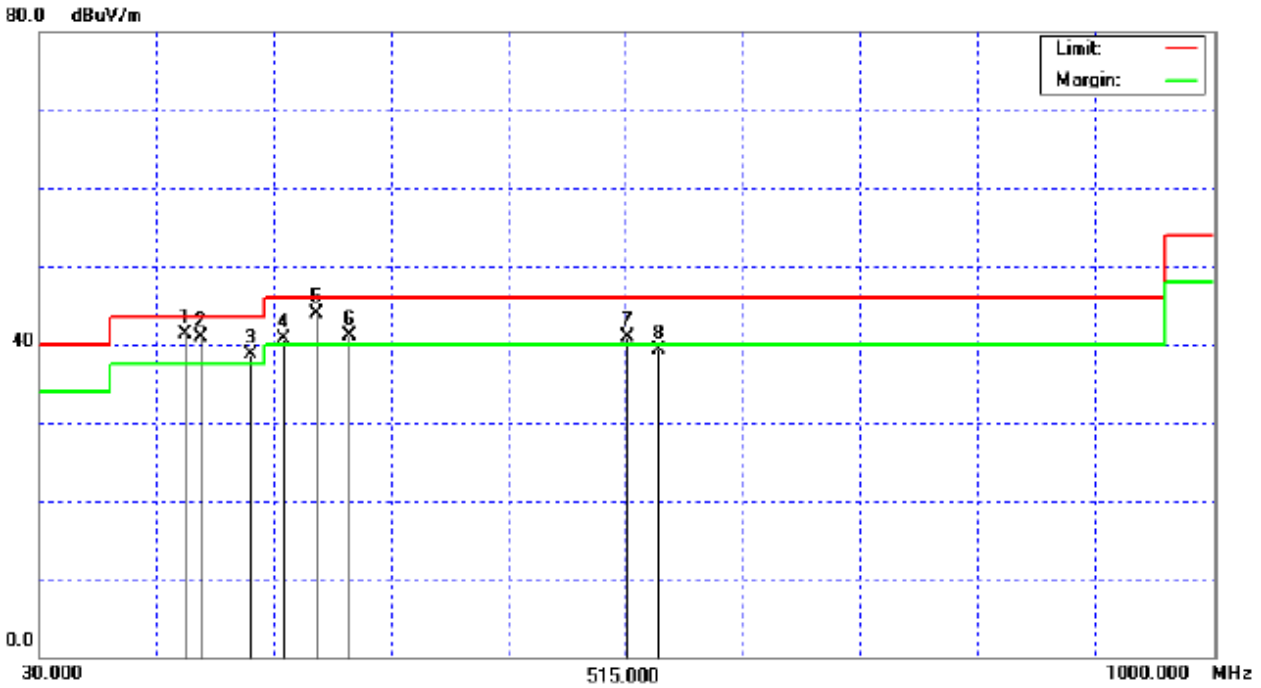
Remark：

(1) Spectrum Setting:
9 KHz – 150 KHz, RBW= 1 KHz, VBW=1 KHz, Sweep time = 200 ms.
150 K Hz – 30 MHz, RBW= 9 KHz, VBW=9 KHz, Sweep time = 200 ms.
30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

(2) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measure-ment didn‘t perform。

(3) Measuring frequency range from 30MHz to 1000MHz。

(4) If the peak scan value lower limit more than 20dB, then this signal data does not how in table。



4.3 FREQUENCY STABILITY MEASUREMENT

4.3.1 FREQUENCY STABILITY LIMITS

FCC Part 15.225(e)
the frequency tolerance of the carrier signal shall be maintained within ± 0.01% of the operating frequency over a temperature variation of –20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

4.3.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100082	Feb. 01, 2007
2	Loop Ant	EMCO	6502	00042960	Jan. 13, 2008
3	AC Power Source	APE	APW-130	883755	N/A
4	Temperature & Humitidy Chamber	GIANT FORCE	GTH-056P	GF-94454-1	Jul. 25, 2006

Remark: ” N/A” denotes No Model No. / Serial No. and No Calibration specified.

4.3.3 TEST PROCEDURE

a. The equipment under test was connected to an external AC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber.
After the temperature stabilized for approximately 20 minutes, the frequency of the output signal was recorded from the counter.
b. At room temperature (25±5°C), an external variable DC power supply was connected to the EUT. The frequency of the transmitter was measured for 115%, 100% and 85% of the nominal operating input voltage.
c. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.3.6 **TEST RESULTS**

EUT：	Contactless Card Reader	Model No. ：	ePort G6
Temperature：	28 ℃	Relative Humidity：	79 %
Pressure：	1017 hPa	Test Power ：	AC 120V/60Hz
Test Mode ：			

Frequency Stability Versus Environmental Temperature						
	Temperature (℃)	**Voltage (Vac)**	**Frequency (MHz)**	**Freq Error (KHz)**	**Limit (KHz)**	**Results**
	20	120V	13.56044			
0 min	50	120V	13.56043	-0.010	+/- 1.356	**PASS**
	-20	120V	13.56045	0.010	+/- 1.356	**PASS**
2 min	50	120V	13.56042	-0.020	+/- 1.356	**PASS**
	-20	120V	13.56045	0.010	+/- 1.356	**PASS**
5 min	50	120V	13.56041	-0.030	+/- 1.356	**PASS**
	-20	120V	13.56046	0.020	+/- 1.356	**PASS**
10 min	50	120V	13.56039	-0.050	+/- 1.356	**PASS**
	-20	120V	13.56047	0.030	+/- 1.356	**PASS**

Frequency Stability Versus Input Voltage						
Temperature(℃)	**Voltage (Vac)**		**Frequency (MHz)**	**Freq Error (KHz)**	**Limit (KHz)**	**Results**
20	V-nom	120	13.56044			
20	V-min	102	13.56043	-0.01	+/- 1.356	**PASS**
20	V-max	138	13.56044	0	+/- 1.356	**PASS**
20	V-min	102	13.56044	0	+/- 1.356	**PASS**
20	V-max	138	13.56045	0.01	+/- 1.356	**PASS**