TEST REPORT

Issued: April 11, 2017

Name and Address of the Customer:	Enagic International Co., Ltd 1-40-1, Hoshidakita, Katano-shi, Osaka 576-0017, Japan
Test Item:	Electrolysis Water System
Identification:	LeveLuk K8 / A26-00
Serial No.:	PD222701LG
FCC ID:	2AEBAA2600B
IC Certification Number:	20009-A2600A
Sample No.:	1
Sample Receipt Date:	January 6, 2017
Test Specification:	47 CFR Part 15 Subpart C RSS-210 Issue 9, RSS-Gen Issue 4
Period of Testing:	February 6, 2017 – February 20, 2017
Test Result:	PASS

Representative Test Engineer: K. Miyaji (2017-04-11) — K. Miyaji (EMC Section), iNARTE : EMC-003627-NE

Approved by: H. Onishi (2017-04-11) — H. Onishi (EMC Section), iNARTE : EMC-003318-NT

Abbreviations:

PASS	=	passed
FAIL	=	failed
N/A	=	not applicable

Note:
This test report should not be reproduced except in full, without the written approval of Cosmos Corporation.
The test result of this test report is based on the tests made for sample provided, and it is not applicable to individual product identical to the sample or similar product.
The judgment of this test report validates the test item only specified in "4. Summary of Test Results".
This test report is not things that be accredited by VLAC regarding the products and also ensured.
Therefore, this report must not be used for advocating them.

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1. Description of the Tested Sample

1.1 Product Description

Manufacturer	Enagic International Co., Ltd
Model (referred to as the EUT)	LeveLuk K8 / A26-00
Hardware Version	3.0
Software Version	3.0
Type of the Equipment	☐ Stand-alone ☒ Combined Equipment ☐ Plug-in Radio Device ☐ Other ( )
Transmitter Type	☐ WLAN ☐ Bluetooth ( ) ☐ ZigBee ☒ RFID ☐ Other ( )
Nominal Voltage	AC 120 V
Type of Modulation	OOK
Emission Designator	1M06K1D
Antenna Type	☒ Integral Antenna ☐ Dedicated External Antenna
Operating Frequency	13.56 MHz
Type of Power Source	☒ AC Mains ☐ Dedicated AC Adaptor ☐ DC Voltage ☐ Battery
Type of Battery (if applicable)	N/A
Thermal Limitation	5℃ to 40℃

1.2 Antenna Description

Model	Gain	Antenna Type	Remarks
Un-specified *	-58.3 dBi	Small Loop Antenna	---

Note:
*: The antenna does not have model name, because the antenna is a part of EUT.

1.3 EUT Description

Enagic, Inc., Model LeveLuk K8 / A26-00 (referred to as the EUT in this report) is Electrolysis Water System.

[Rating]

Rated Voltage	Rated Frequency	Rated Current
AC 100 – 240 V	50/60 Hz	2.6 – 1.1 A

2. General Information

2.1 Test Methodology

All measurement subject to the present test report is carried out according to the procedures in ANSI C63.10:2013.

2.2 Test Facility

The measurement was carried out at the following facility.

Cosmos Corporation EMC Lab. Oonoki
3571-2 Oonoki, Watarai-cho, Watarai-gun, Mie-ken 516-2102, Japan

- ☒ Semi anechoic Chamber 3 m (COAC3M-01)
- ☒ Shielded Room (COSR-01)
- ☒ Measurement Room

Cosmos Corporation EMC Lab. Oonoki is accredited in accordance with the International Standard ISO/IEC 17025 by the following accreditation bodies and the test facility is registered by the following bodies.

Accreditation: A2LA Accredited Laboratory No. 2900.01
VLAC Accredited Laboratory No. VLAC-039-2
FCC Designation No. JP5182

Registration: Industry Canada Registration No. 3958B
Nemko Laboratory Authorisation. No. ELA 621

2.3 Traceability

The calibration of measurement equipment used in the test subject to the present report is designed and operated to ensure that the measurement is traceable to national standards of measurement or equivalent abroad.

3. Test Condition (Manufacturer's Specification)

3.1 Mode of Operation

Mode of operation: RFID Operating

Note:
The EUT makes communication emission with the maximum RF power by normal operation.
(Cycle: 1.0 s, ON time: 8.5 ms)
The test of Field Strength of Fundamental Emission was performed under the following condition:

Voltage: AC 120 V ±15%

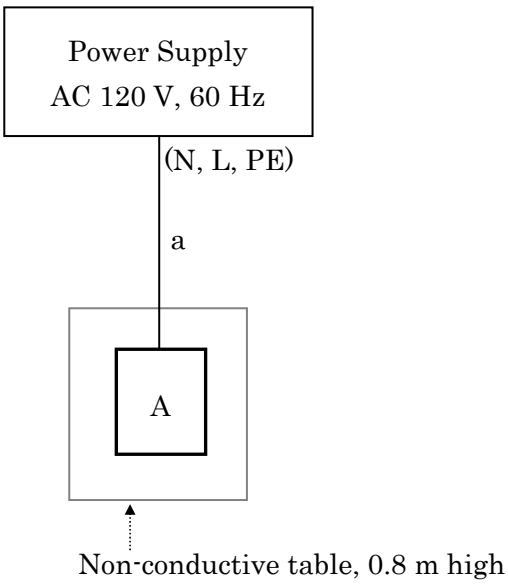
The test of Frequency Stability was performed under the following condition:

Temperature: 0℃ to +40℃
Voltage: AC 120 V ±15%

3.2 Configuration

	Instrument	Model		Cable	Length	Shield
A	EUT	LeveLuk K8 / A26-00	a	AC Power Cord	2.0 m	×

AC Power Line Conducted Emission / Transmitter Spurious Emission (Radiated) / Field Strength of Fundamental Emission

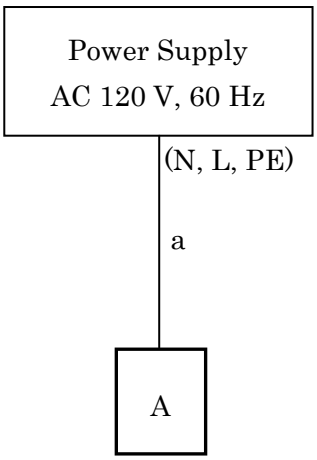


Excess cable arrangement

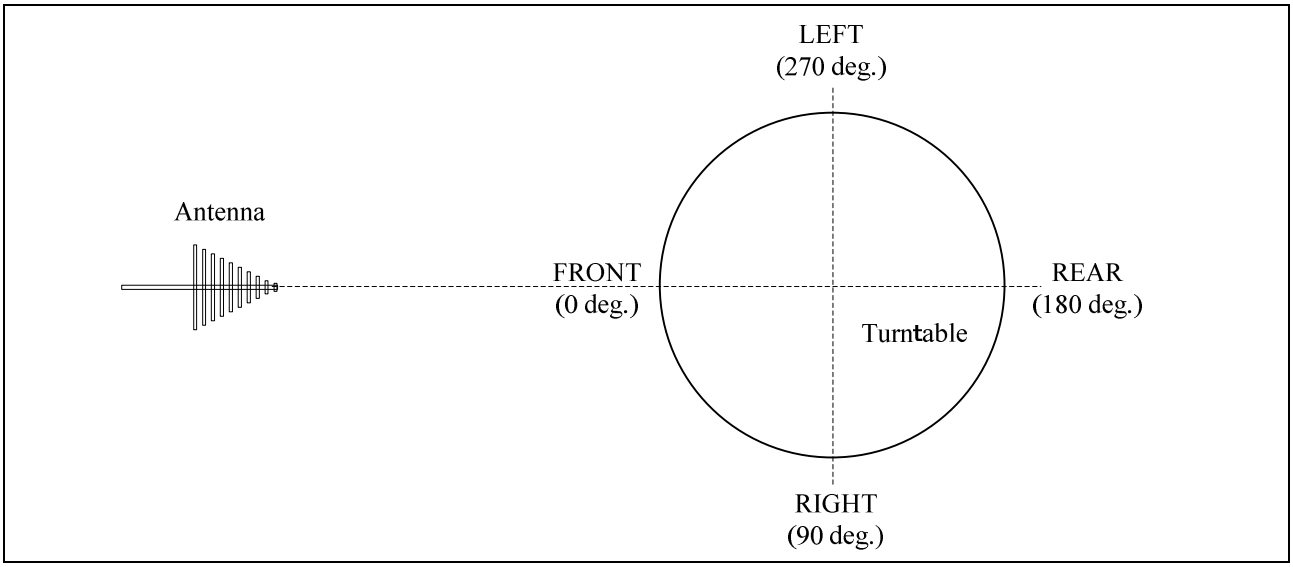
AC Power Line Conducted Emission

Symbol	Length	Position	Setting
a	0.4 m	Center	Bundle

20 dB Bandwidth / Frequency Stability / Occupied Bandwidth



3.3 EUT Angle



4. Summary of Test Results

These test results are the test results of the condition specified with "3. Test Condition".

FCC Section	IC Section	Test Item	FCC Result	IC Result
15.207	RSS-Gen 8.8	AC Power Line Conducted Emission	PASS	PASS
15.209, 15.225(d)	RSS-Gen 8.9	Transmitter Spurious Emission (Radiated)	PASS	PASS
15.215(c)	---	20 dB Bandwidth	PASS	---
15.225 (a) (b) (c) (d)	RSS-210 B.6	Field Strength of Fundamental Emission	PASS	PASS
15.225(e)	RSS-210 B.6	Frequency Stability	PASS	PASS
---	RSS-Gen Annex A	Occupied Bandwidth	---	PASS
---	RSS-Gen 7.1	Receiver Spurious Emission (Radiated)	---	N/A *

Note:
*: This item does not apply because this device receives some data only while the radio waves are transmitted.

5. Test Result

5.1 AC Power Line Conducted Emission (15.207, RSS-Gen 8.8)

5.1.1 Setting Remarks

The conducted disturbance voltage of AC power line in the frequency range from 150 kHz to 30 MHz was measured in accordance with ANSI C63.10:2013.
The test setup was made in accordance with ANSI C63.10:2013 in a shielded room.
The non-conductive table, 0.8 m high, was placed on the reference ground plane, and the EUT was put on the non-conductive table. The used Line Impedance Stabilizing Network (LISN) has a rated impedance of 50 Ω/50 μH as specified in CISPR16-1-2. The test receiver with Quasi Peak and Average detector is in accordance with CISPR 16-1-1.
The conducted emission level is calculated by adding Cable Attenuation Factor and Insertion Loss of LISN.

Setting Condition of Test receiver

Frequency range	Detector	RBW
150 kHz to 30 MHz	Quasi Peak	9 kHz
	Average	9 kHz

5.1.2 Limit

Frequency range	Conducted Limit [dBμV]	
	Quasi Peak	Average
150 kHz to 500 kHz	66 to 56 *	56 to 46 *
500 kHz to 5 MHz	56	46
5 MHz to 30 MHz	60	50

Note:
*: Decrease with the logarithm of the frequency.

5.1.3 Test Detail

Result: PASS

Uncertainty of measurement result	:	±2.64 dB
Date of testing	:	February 8, 2017
Room temperature	:	21℃
Relative humidity	:	46%

Sample Calculation
Result = Reading + c.f
= 42.0 + 10.7
= 52.7

Margin = Limit – Result
= 64.3 – 52.7
= 11.6

Note:
c.f (Correction Factor) = Cable Attenuation Factor + LISN Factor

5.1.3 Test Detail (Continued)

Test Data

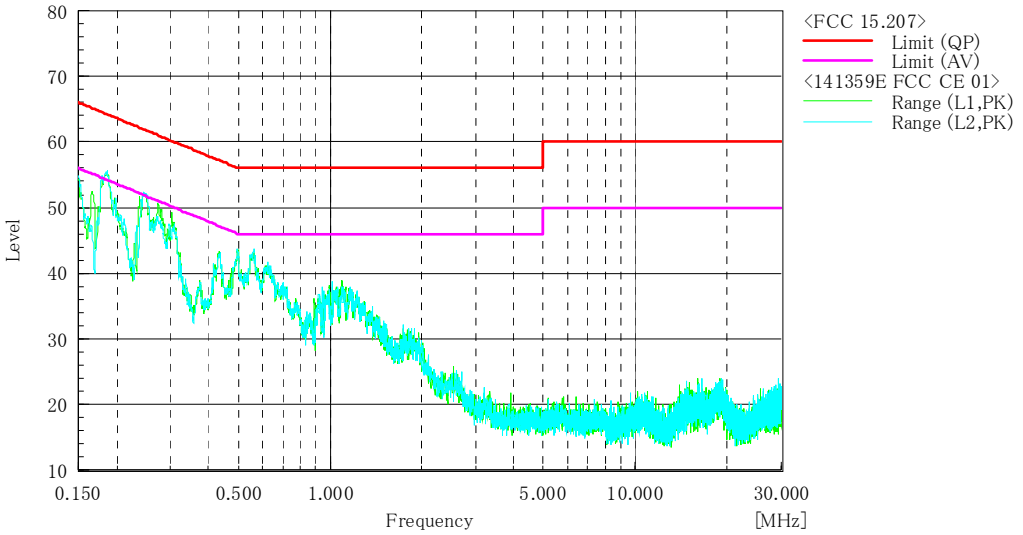
Cosmos Corporation
Oonoki Lab.

<<Conducted Emission EP5/CE Ver 5.3.20>>

8 February,2017 11:36
141359E FCC CE 01.dat

Model : LeveLuk K8/A26-00
Serial : PD222701LG
Operater : K. Miyaji
Power : AC 120V, 60Hz
Temp., Humi. : 21 deg., 46%

Limit : FCC 15.207
Mode : RFID
Remark :
Remark :
Remark : RBW:9kHz



Final Result

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.1838	42.0	31.0	10.7	52.7	41.7	64.3	54.3	11.6	12.6
2	0.24633	39.6	29.1	10.5	50.1	39.6	61.9	51.9	11.8	12.3
3	0.3066	34.6	28.2	10.5	45.1	38.7	60.1	50.1	15.0	11.4
4	0.5482	30.2	22.8	10.4	40.6	33.2	56.0	46.0	15.4	12.8
5	1.09234	23.8	13.5	10.4	34.2	23.9	56.0	46.0	21.8	22.1
6	19.14388	5.7	-1.0	11.4	17.1	10.4	60.0	50.0	42.9	39.6

--- L2 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.1845	42.0	31.2	10.7	52.7	41.9	64.3	54.3	11.6	12.4
2	0.2454	39.2	28.6	10.5	49.7	39.1	61.9	51.9	12.2	12.8
3	0.3067	33.3	27.0	10.5	43.8	37.5	60.1	50.1	16.3	12.6
4	0.54705	31.2	23.6	10.4	41.6	34.0	56.0	46.0	14.4	12.0
5	1.02972	24.3	13.4	10.4	34.7	23.8	56.0	46.0	21.3	22.2
6	19.15259	5.3	-1.3	11.7	17.0	10.4	60.0	50.0	43.0	39.6

5.2 Transmitter Spurious Emission (Radiated) (15.209, 15.225(d), RSS-Gen 8.9)

5.2.1 Setting Remarks

In the frequency range from 9 kHz to 1 GHz (over 10th harmonics), the electric field strength was measured in accordance with ANSI C63.10:2013.
The test setup was made in accordance with ANSI C63.10:2013 in a semi-anechoic chamber. The non-conductive table, 0.8 m high, was placed on the turntable, and the EUT was put on the non-conductive table. The EUT was measured at 1 m to 4 m height of the antenna above 30 MHz. The turntable was fully rotated. The highest radiation from the equipment was recorded. The measurement above 30 MHz was carried out with both horizontal and vertical antenna polarization. The test receiver with Quasi Peak detector is in accordance with CISPR 16-1-1. The measurement was carried out with the measuring distance of 3 m. Then the limit of 30 m distance below 30 MHz was converted to the limit of 3 m distance with the 40log(30 m/3 m).

Setting Condition of Test receiver

Frequency range	Detector	RBW
9 kHz to 90 kHz	Peak	200 Hz
	Average	200 Hz
90 kHz to 110 kHz	Quasi Peak	200 Hz
110 kHz to 150 kHz	Peak	200 Hz
	Average	200 Hz
150 kHz to 490 kHz	Peak	9 kHz
	Average	9 kHz
490 kHz to 30 MHz	Quasi Peak	9 kHz
30 MHz to 1 GHz	Quasi Peak	120 kHz

5.2.2 Limit

The emission limits shown in the following table are based on measurements employing a CISPR Quasi Peak detector except for the frequency bands 9 kHz to 90 kHz, 110 kHz to 490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an Average detector. The limit on Peak radio frequency emissions is 20 dB above the maximum permitted Average emission limit applicable to the equipment under test.

Frequency range	Field Strength (Distance)			
	[μV/m]		[dBμV/m]	
9 kHz to 490 kHz	2400/F (kHz) 266.6 to 4.89	(300 m)	128.5 to 93.8	(3 m)
490 kHz to 1.705 MHz	24000/F (kHz) 48.9 to 14.0	(30 m)	73.8 to 62.9	(3 m)
1.705 MHz to 30 MHz	30	(30 m)	69.5	(3 m)
30 MHz to 88 MHz	100	(3 m)	40.0	(3 m)
88 MHz to 216 MHz	150	(3 m)	43.5	(3 m)
216 MHz to 960 MHz	200	(3 m)	46.0	(3 m)
Above 960 MHz	500	(3 m)	53.9	(3 m)

5.2.3 Test Detail

Result: PASS

Uncertainty of measurement result : ±3.98 dB
Date of testing : February 14, 2017
Room temperature : 19℃
Relative humidity : 49%

Sample Calculation
Result = Reading + c.f
= 43.4 + (-9.6)
= 33.8

Margin = Limit – Result
= 43.5 – 33.8
= 9.7

Note:
c.f (Correction Factor) = Cable Attenuation Factor + Antenna Factor + Amplifier Gain

5.2.3 Test Detail (Continued)

<Below 30 MHz>
No spurious emission for RF module was found.

<Above 30 MHz>
Test Data

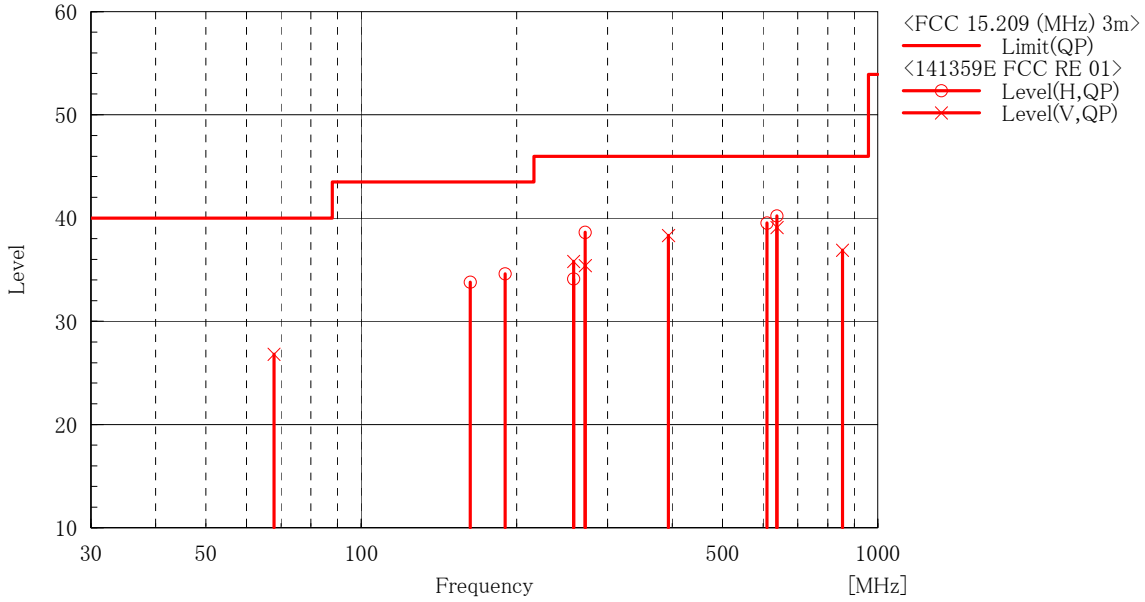
Cosmos Corporation
Oonoki Lab.

<<Radiated Emission EP5/RE Ver 5.7.1>>

14 February,2017 13:58
141359E FCC RE 01.dat

Model : LeveLuk K8/A26-00
Serial : PD222701LG
Operator : K. Miyaji
Power : AC 120V, 60Hz
Temp, Humid : 19℃, 49%

Limit : FCC 15.209 (MHz) 3m
Mode : RFID
Remark :
Remark :
Remark : RBW:120kHz



Final Result

--- Horizontal Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	162.719	43.4	-9.6	33.8	43.5	9.7	114.0	348.0
2	189.840	42.6	-8.0	34.6	43.5	8.9	100.0	344.0
3	257.640	38.8	-4.7	34.1	46.0	11.9	127.0	339.0
4	271.200	42.4	-3.8	38.6	46.0	7.4	119.0	327.0
5	610.200	40.3	-0.8	39.5	46.0	6.5	116.0	0.0
6	637.320	40.4	-0.2	40.2	46.0	5.8	115.0	351.0

--- Vertical Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	67.810	41.2	-14.4	26.8	40.0	13.2	102.0	271.0
2	257.640	40.5	-4.7	35.8	46.0	10.2	179.0	37.0
3	271.200	39.2	-3.8	35.4	46.0	10.6	215.0	259.0
4	393.240	43.1	-4.8	38.3	46.0	7.7	133.0	297.0
5	637.320	39.3	-0.2	39.1	46.0	6.9	100.0	108.0
6	854.280	33.6	3.3	36.9	46.0	9.1	185.0	202.0

5.3 20 dB Bandwidth (15.215(c))

5.3.1 Setting Remarks

The both side of 20 dB down value from peak power were measured by using 20 dB bandwidth measurement function of the spectrum analyzer.
The spectrum analyzer is set as following:

・Resolution Bandwidth	: 1% to 5% of the OBW (not less than 1 kHz)
・Video Bandwidth	: greater than RBW
・Detector Mode	: Peak
・Trace Mode	: Max Hold

5.3.2 Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission is contained within the frequency band designated in the rule section under which the equipment is operated.

5.3.3 Test Detail

Result: PASS

Uncertainty of measurement result	:	±0.025%
Date of testing	:	February 6, 2017
Room temperature	:	21℃
Relative humidity	:	55%

Measured Bandwidth [kHz]
4.910

	Edge of Bandwidth [MHz]	Limit [MHz]	Margin [kHz]
Lower	13.557	13.01	547
Higher	13.563	14.01	447

5.3.3 Test Detail (Continued)

Test Data

5.4 Field Strength of Fundamental Emission (15.225(a) (b) (c) (d), RSS-210 B.6)

5.4.1 Setting Remarks

The test setup was made in accordance with ANSI C63.10:2013 in a semi-anechoic chamber. The non-conductive table, 0.8 m high, was placed on the turntable, and the EUT was put on the non-conductive table. The turntable was fully rotated. The highest radiation from the equipment was recorded. The measurement was carried out with the measuring distance of 3 m. The test receiver with Quasi Peak detector is in accordance with CISPR 16-1-1. Then the limit of 30 m distance was converted to the limit of 3 m distance with the 40log(30 m/3 m).

5.4.2 Limit

Frequency range	Field Strength (Distance)			
	[μV/m]		[dBμV/m]	
13.553 MHz to 13.567 MHz	15848	(30 m)	123.9	(3 m)
13.410 MHz to 13.553 MHz and 13.567 MHz to 13.710 MHz	334	(30 m)	90.4	(3 m)
13.110 MHz to 13.410 MHz and 13.710 MHz to 14.010 MHz	106	(30 m)	80.5	(3 m)
Outside of 13.110 MHz to 14.010 MHz	30	(30 m)	69.5	(3 m)

5.4.3 Test Detail

Result: PASS

Uncertainty of measurement result	:	±2.21 dB
Date of testing	:	February 20, 2017
Room temperature	:	19℃
Relative humidity	:	45%

Sample Calculation

Result = Reading + c.f
= 11.3 + 22.1
= 33.4

Margin = Limit – Result
= 69.5 – 33.4
= 36.1

Note:
c.f (Correction Factor) = Cable Attenuation Factor + Antenna Factor

5.4.3 Test Detail (Continued)

Test Data (AC 120 V, 60 Hz)

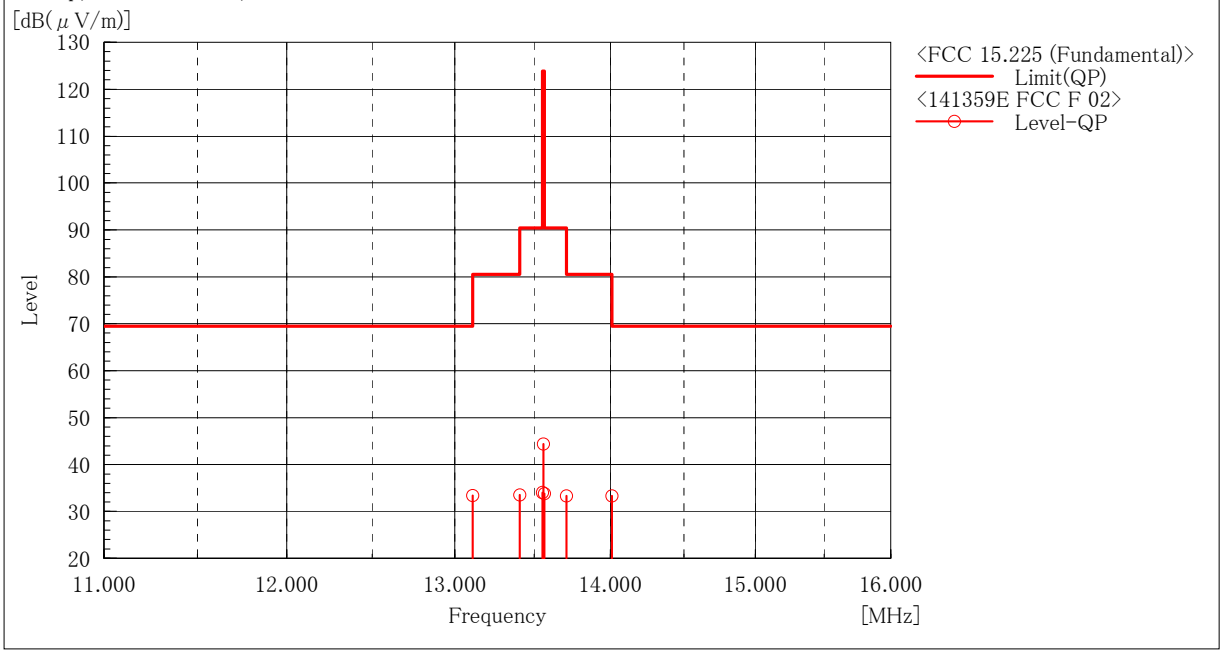
Cosmos Corporation
Oonoki Lab.

<<Electromagnetic Radiation Ver 5.1.40>>

20 February,2017 16:06
141359E FCC F 02.dat

Model : LeveLuk K8/A26-00
Serial : PD222701LG
Operator : K. Miyaji
Power : AC 120V, 60Hz
Temp, Humid : 19℃, 45%

Limit : FCC 15.225 (Fundamental)
Mode : RFID
Antenna : 0 deg.
Remark :
Remark : RBW:200Hz(9k-150kHz) / 9kHz(150k-30MHz)



Final Result

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Angle [°]	Remark
1	13.110	11.3	22.1	33.4	69.5	36.1	187.0	
2	13.410	11.4	22.1	33.5	80.5	47.0	187.0	
3	13.553	11.9	22.1	34.0	90.4	56.4	187.0	
4	13.560	22.3	22.1	44.4	123.9	79.5	187.0	
5	13.567	11.7	22.1	33.8	90.4	56.6	187.0	
6	13.710	11.1	22.2	33.3	80.5	47.2	187.0	
7	14.010	11.1	22.2	33.3	69.5	36.2	187.0	

5.4.3 Test Detail (Continued)

Test Data (AC 102 V, 60 Hz)

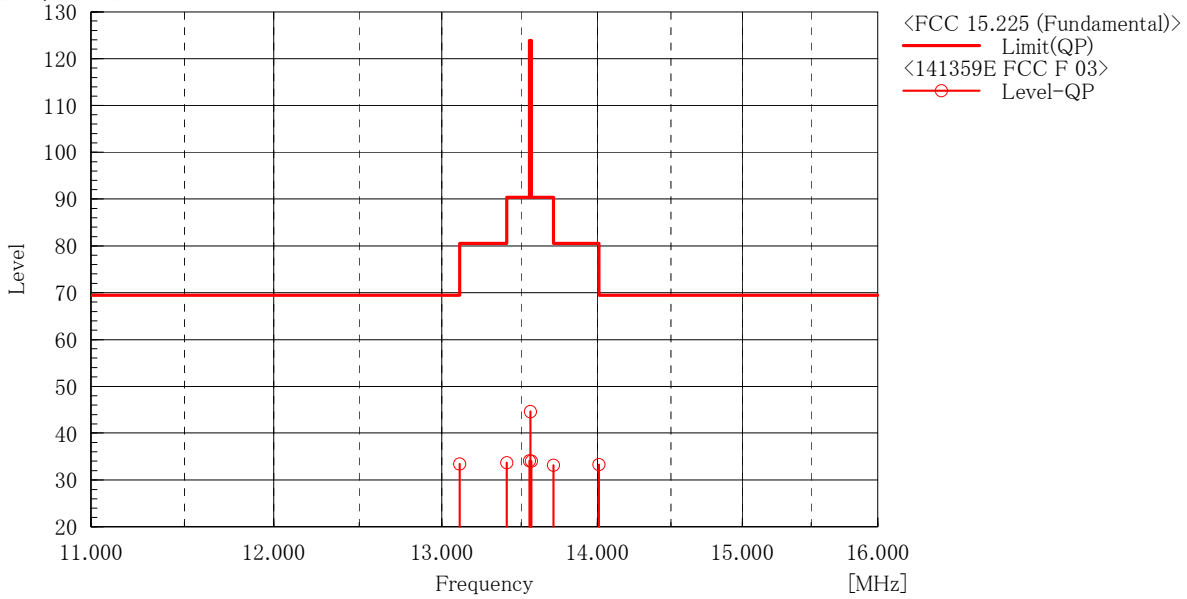
Cosmos Corporation
Oonoki Lab.

<<Electromagnetic Radiation Ver 5.1.40>>

20 February,2017 16:52
141359E FCC F 03.dat

Model : LeveLuk K8/A26-00
Serial : PD222701LG
Operator : K. Miyaji
Power : AC 102V, 60Hz
Temp, Humid : 19℃, 45%

Limit : FCC 15.225 (Fundamental)
Mode : RFID
Antenna : 0 deg.
Remark :
Remark : RBW:200Hz(9k-150kHz) / 9kHz(150k-30MHz)



Final Result

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Angle [°]	Remark
1	13.110	11.3	22.1	33.4	69.5	36.1	187.0	
2	13.410	11.6	22.1	33.7	80.5	46.8	187.0	
3	13.553	12.0	22.1	34.1	90.4	56.3	187.0	
4	13.560	22.5	22.1	44.6	123.9	79.3	187.0	
5	13.567	11.9	22.1	34.0	90.4	56.4	187.0	
6	13.710	11.0	22.2	33.2	80.5	47.3	187.0	
7	14.010	11.1	22.2	33.3	69.5	36.2	187.0	

5.4.3 Test Detail (Continued)

Test Data (AC 138 V, 60 Hz)

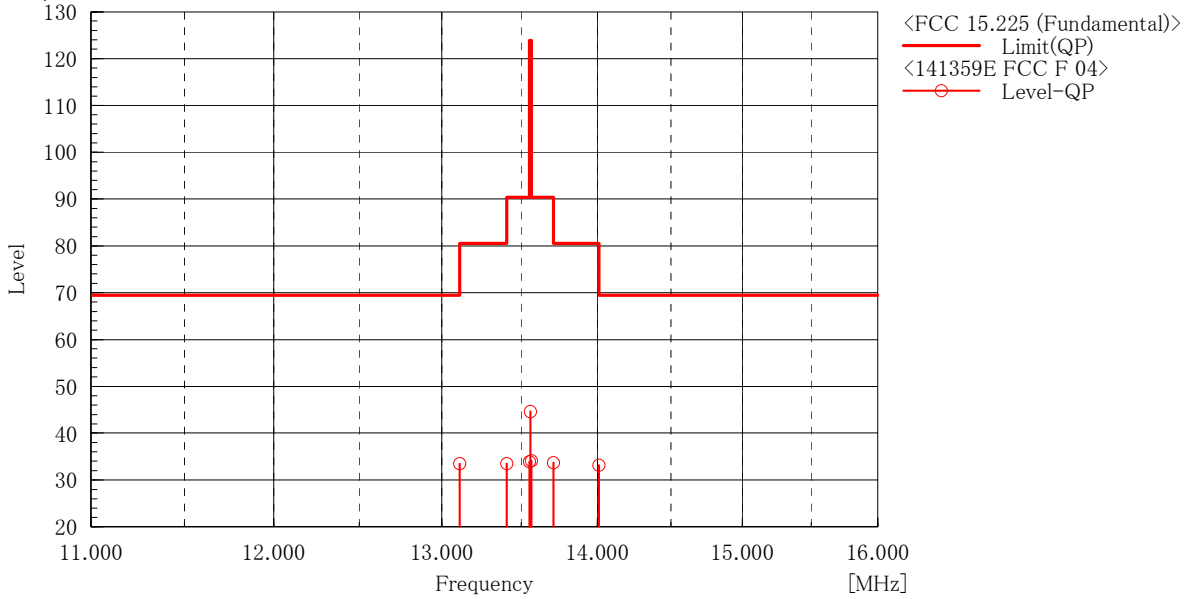
Cosmos Corporation
Oonoki Lab.

<<Electromagnetic Radiation Ver 5.1.40>>

20 February,2017 17:47
141359E FCC F 04.dat

Model : LeveLuk K8/A26-00
Serial : PD222701LG
Operator : K. Miyaji
Power : AC 138V, 60Hz
Temp, Humid : 19℃, 45%

Limit : FCC 15.225 (Fundamental)
Mode : RFID
Antenna : 0 deg.
Remark :
Remark : RBW:200Hz(9k-150kHz) / 9kHz(150k-30MHz)



Final Result

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Angle [°]	Remark
1	13.110	11.4	22.1	33.5	69.5	36.0	187.0	
2	13.410	11.4	22.1	33.5	80.5	47.0	187.0	
3	13.553	11.8	22.1	33.9	90.4	56.5	187.0	
4	13.560	22.5	22.1	44.6	123.9	79.3	187.0	
5	13.567	12.0	22.1	34.1	90.4	56.3	187.0	
6	13.710	11.5	22.2	33.7	80.5	46.8	187.0	
7	14.010	11.0	22.2	33.2	69.5	36.3	187.0	

5.5 Frequency Stability (15.225(e), RSS-210 B.6)

5.5.1 Setting Remarks

The EUT was placed in an environmental test chamber, exposed in extreme temperatures until its temperature is stabilized. The measurement was carried out at every 10℃ from -20℃ to +50℃ in the most common nominal supply voltage and the measurement was carried out at ±15% of rated voltage at 20℃.

5.5.2 Limit

The frequency stability of the carrier signal shall be maintained within ±0.01% of the operating frequency.

5.5.3 Test Detail

Result: PASS

Uncertainty of measurement result	:	±0.10 Hz
Date of testing	:	February 15 and 16, 2017
Room temperature	:	Refer to Test Data

Sample Calculation

Deviation [Hz] = Measured Frequency – Center Frequency
= 13559909 – 13560000
= -91

Deviation [ppm] = |Deviation [Hz]| ÷ Center Frequency × 1000000
= |-91| ÷ 13560000 × 1000000
≒ 6.7

Margin = Limit – Deviation [ppm]
= 100 – 6.7
= 93.3

5.5.3 Test Detail (Continued)

Test Data

Temp [℃]	Operation Time	Measured Frequency [Hz]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Margin [ppm]
50	Startup	13559909	-91	6.7	100	93.3
	2 min	13559908	-92	6.8	100	93.2
	5 min	13559907	-93	6.9	100	93.1
	10 min	13559907	-93	6.9	100	93.1
40	Startup	13559930	-70	5.2	100	94.8
	2 min	13559927	-73	5.4	100	94.6
	5 min	13559926	-74	5.5	100	94.5
	10 min	13559925	-75	5.5	100	94.5
30	Startup	13559958	-42	3.1	100	96.9
	2 min	13559955	-45	3.3	100	96.7
	5 min	13559954	-46	3.4	100	96.6
	10 min	13559952	-48	3.5	100	96.5
20	Startup	13559979	-21	1.5	100	98.5
	2 min	13559977	-23	1.7	100	98.3
	5 min	13559976	-24	1.8	100	98.2
	10 min	13559975	-25	1.8	100	98.2
10	Startup	13559985	-15	1.1	100	98.9
	2 min	13559984	-16	1.2	100	98.8
	5 min	13559984	-16	1.2	100	98.8
	10 min	13559984	-16	1.2	100	98.8
0	Startup	13560006	6	0.4	100	99.6
	2 min	13560006	6	0.4	100	99.6
	5 min	13560006	6	0.4	100	99.6
	10 min	13560006	6	0.4	100	99.6
-10	Startup	13560003	3	0.2	100	99.8
	2 min	13560005	5	0.4	100	99.6
	5 min	13560006	6	0.4	100	99.6
	10 min	13560006	6	0.4	100	99.6
-20	Startup	13559983	-17	1.3	100	98.7
	2 min	13559987	-13	1.0	100	99.0
	5 min	13559988	-12	0.9	100	99.1
	10 min	13559989	-11	0.8	100	99.2

5.5.3 Test Detail (Continued)

Test Data

Temp [℃]	Supply Voltage [V]	Measured Frequency [Hz]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Margin [ppm]
20	102.00	13559975	-25	1.8	100	98.2
	120.00	13559975	-25	1.8	100	98.2
	138.00	13559975	-25	1.8	100	98.2

Test Data

Temp [℃]	Supply Voltage [V]	Measured Frequency [Hz]	Deviation [Hz]	Deviation [ppm]	Limit [ppm]	Margin [ppm]
50	120	13559907	-68.0	5.0	100	95.0
20	120	13559975	reference value			
-20	120	13559989	14.0	1.0	100	99.0
20	102	13559975	0.0	0.0	100	100.0
	138	13559975	0.0	0.0	100	100.0

5.6 Occupied Bandwidth (RSS-Gen Annex A)

5.6.1 Setting Remarks

EUT directly connects to the spectrum analyzer via calibrated coaxial cable and 10 dB attenuator. The spectrum analyzer is set-up as following;

・Resolution Bandwidth	: Approx. 1% of the span
・Video Bandwidth	: 3 × RBW
・Sweep	: Auto
・Detector Mode	: RMS
・Trace Mode	: Max Hold

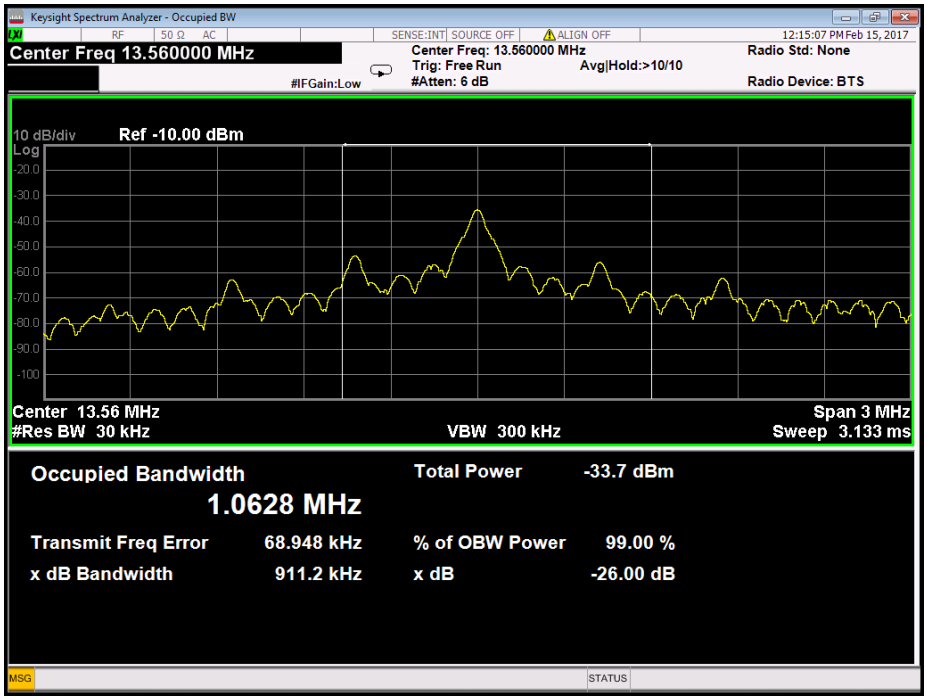
5.6.2 Test Detail

Result: PASS

Uncertainty of measurement result	:	±0.025%
Date of testing	:	February 15, 2017
Room temperature	:	20℃
Relative humidity	:	45%

5.6.2 Test Detail (Continued)

Test Data



6. List of Test and Measurement Instruments

AC Power Line Conducted Emission

Instruments	Manufacturer	Model	Serial No.	Calibrated Date/Until
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100413	2016/02/27 2017/02/26
Artificial-Mains Network /Highpass Filter /Attenuator 10 dB	Kyoritsu /Kyoritsu /TAMAGAWA	KNW-341C (F) /KFL-007 /CFA-03	8-1659-1 /8-1708-10 /---	2016/06/01 2017/05/31
Shield Room	JSE	COSR-01	---	---
RF Cable RF Selector (9 kHz to 30 MHz)	Fujikura	3D-2W	OC01	2016/04/05 2017/04/04
	SUHNER	RG223/U	OC02 OC04	
	TSJ	RFM-E221	3148	
Software	TOYO	EP5/CE (Ver.5.3.20)	---	---

Transmitter Spurious Emission (Radiated) (Below 30 MHz)
Field Strength of Fundamental Emission

Instruments	Manufacturer	Model	Serial No.	Calibrated Date/Until
EMI Test Receiver	Keysight Technologies	N9038A	MY55330106	2016/10/03 2017/10/02
Loop Antenna (9 kHz to 30 MHz)	SCHAFFNER	HLA6120	1137	2015/11/06 2018/11/05
Anechoic Chamber 3 m	JSE	COAC3M-01	---	2016/04/20 2017/04/19
RF Cable RF Selector (9 kHz to 30 MHz)	Fujikura	5D-2W	OC09	2016/04/18 2017/04/17
	SUHNER	RG223/U	OC10 OC11 OC12	
	TSJ	RFM-E121	03149	
Software	TOYO	EP5/ME (ver 5.1.40)	---	---

6. List of Test and Measurement Instruments (Continued)

Transmitter Spurious Emission (Radiated) (Above 30 MHz)

Instruments	Manufacturer	Model	Serial No.	Calibrated Date/Until
EMI Test Receiver	Keysight Technologies	N9038A	MY55330106	2016/10/03 2017/10/02
Pre-Amplifier (30 MHz to 1 GHz)	HEWLETT PACKARD	8447D OPT 010	2944A 07891	2016/04/08 2017/04/07
Biconical Antenna (30 MHz to 300 MHz)	SCHWARZBECK	VHBB9124 / BBA9106	9124-311	2016/09/05 2017/09/04
Log-Periodic Antenna (300 MHz to 1 GHz)	SCHWARZBECK	UHALP9108-A	0645	2016/09/05 2017/09/04
Anechoic Chamber 3 m	JSE	COAC3M-01	---	2016/04/20 2017/04/19
Attenuator 3 dB	JFW	50FP-003-H2	---	2016/04/06 2017/04/05
RF Cable RF Selector (30 MHz to 1 GHz)	Fujikura	8D-2W	OC14	2016/04/18 2017/04/17
	SUHNER	RG223/U	OC11	
		RG214/U	OC15 OC16	
		RG400/U	OC17	
	TSJ	RFM-E121	03149	
Software	TOYO	EP5/RE (ver 5.7.1)	---	---

20 dB Bandwidth / Frequency Stability / Occupied Bandwidth

Instruments	Manufacturer	Model	Serial No.	Calibrated Date/Until
EMI Test Receiver	Keysight Technologies	N9038A	MY55330106	2016/10/03 2017/10/02
Thermostatic Chamber	ESPEC	PU-2KP	14010409	2016/07/29 2017/07/28

7. Appendix

Refer to separated files for the following appendixes.
Appendix 1: Angle of EUT
Appendix 2: Photographs of the Test Setup
Appendix 3: Photographs of EUT