RADIO TEST REPORT

Test Report No.: 33AE0065-SH-02

Applicant	:	**NEC Corporation of America**
Type of Equipment	:	**Digital Portable Cellular Telephone**
Model No.	:	**KMP7R4H1-2A**
FCC ID	:	**A98-IOX5488**
Test regulation	:	**FCC Part 15 Subpart C: 2012**
Test result	:	**Complied**

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3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
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6. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.

Date of test: September 24 to 25 , 2012

Tested by:

Tatsuya Arai
Engineer of WiSE Japan,
UL Verification Service

Approved by :

Go Ishiwata
Manager of WiSE Japan,
UL Verification Service

☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan.
☒ There is no testing item of "Non-accreditation".

JAB Testing RTL02610

UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

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SECTION 1: Customer information

Company Name	:	NEC Corporation of America
Address	:	Radio Communications Systems Division 6535N. State Highway 161, Irving, TX 75039-2402 USA
Telephone Number	:	+1 214 262 4241
Facsimile Number	:	+1 214 262 4225
Contact Person	:	Sanjay Wadhwa

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment	:	Digital Portable Cellular Telephone
Model Number	:	KMP7R4H1-2A
Serial Number	:	004401201060288
Rating	:	DC 3.8V
Country of Mass-production	:	Japan
Condition of EUT	:	Production prototype
Receipt Date of Sample	:	September 21, 2012
Modification of EUT	:	No modification by the test lab.

2.2 Product description

Model: KMP7R4H1-2A (referred to as the EUT in this report) is a Digital Portable Cellular Telephone.

Clock frequency(ies) in the system : RFID part: 27.12MHz

<Radio part (RFID)>

Equipment type	:	Transceiver
Frequency of operation	:	13.56MHz
Type of modulation	:	ASK
Antenna type	:	Integrated

*This test report applies for RFID.

SECTION 3: Test specification, procedures & results

3.1 Test specification

Test specification	:	FCC Part 15 Subpart C: 2012, final revised on August 13, 2012 and effective September 12, 2012
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators Section 15.207 Conducted limits Section 15.209 Radiated emission limits, general requirements Section 15.215 Additional provisions to the general radiated emission limitations Section 15.225 : Operation within the band 13.110-14.010MHz

3.2 Procedures & Results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted emission	ANSI C63.4:2009 7. AC power line conducted emission measurements	FCC 15.207	N/A	N/A	*1)
Electric field strength of Fundamental emission	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225(a)	69.6dB 13.56MHz, QP, Vertical.	Complied	Radiated
Spectrum mask	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225(b)(c)	See data	Complied	Radiated
20dB bandwidth	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.215(c)	See data	-	Radiated
Electric field strength of Spurious emission	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.209, FCC 15.225 (d)	11.2dB 176.28MHz, QP, Horizontal	Complied	Radiated
Frequency tolerance	ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.225(e)	See data	Complied	Radiated
*1) The test is not applicable since the EUT is designed to stop transmission when the AC adaptor is connected. Note: UL Japan, Inc.'s Work Procedures No. 13-EM-W0420 and 13-EM-W0422					

FCC 15.31 (e)
This EUT provides stable voltage (DC3.2V) constantly to RF Part regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC 15.203
It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the requirement.

3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Occupied Bandwidth (99%)	ANSI C63.4:2009 13. Measurement of intentional radiators RSS-Gen 4.6.1	-	N/A	-	Radiated

Other than above, no addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Item	Frequency range	No.1 SAC*1 (±)	No.2 SAC (±)	No.3 SAC (±)
Radiated emission (Measurement distance: 3m)	9kHz-30MHz	3.7 dB	3.7 dB	3.6 dB
	30MHz-300MHz	4.9 dB	5.1 dB	4.9 dB
	300MHz-1GHz	5.0 dB	5.2 dB	4.9 dB
	1GHz-15GHz	4.8 dB	4.8 dB	4.9 dB

*1: SAC=Semi-Anechoic Chamber

The data listed in this test report has enough margin, more than site margin.

Frequency tolerance
Frequency Measurement uncertainty for this test was: (±) 7.9 x 10^-8.

3.5 Test location

UL Japan, Inc. Shonan EMC Lab.
1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 JAPAN
Telephone number : +81 463 50 6400
Facsimile number : +81 463 50 6401
JAB Accreditation No. : RTL02610

	FCC Registration No.	IC Registration No.	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
☐ No.1 semi-anechoic chamber	697847	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
☐ No.2 semi-anechoic chamber	697847	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
☒ No.3 semi-anechoic chamber	697847	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5m
☐ No.4 semi-anechoic chamber	-	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
☐ No.1 shielded room	-	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
☐ No.2 shielded room	-	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
☐ No.3 shielded room	-	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
☐ No.4 shielded room	-	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
☒ No.5 shielded room	-	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
☐ No.6 shielded room	-	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-

3.6 Test setup, Data of test & Test instruments

Refer to APPENDIX 1 to 3.

SECTION 4: Operation of E.U.T. during testing

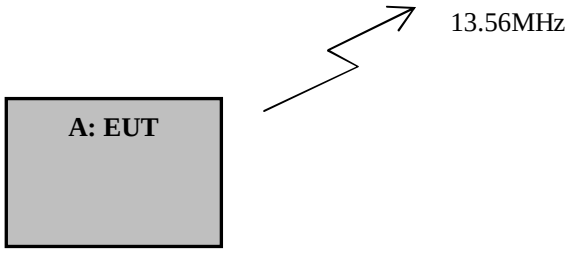
4.1 Operating mode

The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use.

Operating mode	Tested frequency
Transmitting (13.56MHz)	Continuous transmitting 13.56MHz (modulated)

Frequency Tolerance:
Temperature : -20deg.C to +50deg.C Step 10deg.C
Voltage : Normal Voltage DC 3.8V
*This EUT provides stable voltage constantly to RF Part regardless of input voltage.

4.2 Configuration and peripherals



* Test data was taken under worse case conditions.

Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Digital Portable Cellular Telephone	KMP7R4H1-2A	004401201060288	NEC CASIO Mobile Communications, Ltd.	EUT

SECTION 5: Radiated emission (Fundamental, Spurious emission and Spectrum mask)

Test configuration
EUT was placed on a platform of nominal size, 1m by 1.5m, raised 0.8m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity.
The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

Test conditions
Frequency range : 9kHz - 1GHz
Test distance : 3m

Test procedure
The Radiated Electric Field Strength intensity has been measured with a ground plane and at a distance of 3m.

Frequency: From 9kHz to 30MHz
The EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.
The measurements were performed for vertical polarization (antenna angle: 0deg.to 360deg.) and horizontal polarization. Drawing of the antenna direction is shown in Figure 1.

Frequency: From 30MHz to 1GHz
The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.
The measurements were performed for both vertical and horizontal antenna polarization.

Measurements were performed with QP, PK, and AV detector.
The radiated emission measurements were made with the following detector function of the test receiver.

	9kHz to 90kHz & 110kHz to 150kHz	90kHz to 110kHz	150kHz to 490kHz	490kHz to 30MHz	30MHz to 1GHz
Detector type	PK/AV	QP	PK/AV	QP	QP
IF Bandwidth	200Hz	200Hz	9kHz	9kHz	120kHz
Measuring antenna type	Loop				Biconical (30-299.99MHz) Logperiodic (300MHz-1GHz)

* FCC 15.31 (f)(2)

$$9\text{kHz} - 490\text{kHz}\,[\text{Limit at 3m}] = [\text{Limit at 300m}] - 40\log\left(\frac{3}{300}\right)$$

$$490\text{kHz} - 30\text{MHz}[\text{Limit at 3m}] = [\text{Limit at 30m}] - 40\log\left(\frac{3}{30}\right)$$

The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

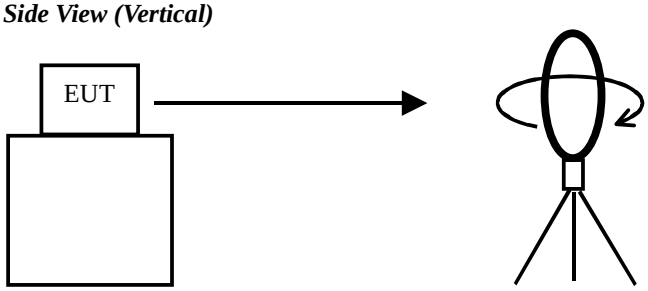
Antenna polarization	Carrier	Spurious	
		9kHz to 30MHz	30 to 1000MHz
Horizontal	Y	Y	X
Vertical	Z	Z	Y

* The definition of the axis is listed in “Pre-check of the worst position” in APPENDIX.

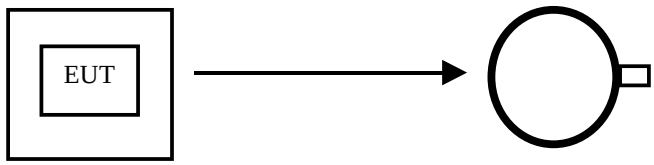
Test result
Pass (Refer to the APPENDIX.)

Figure 1: Direction of the Loop Antenna

Side View (Vertical)

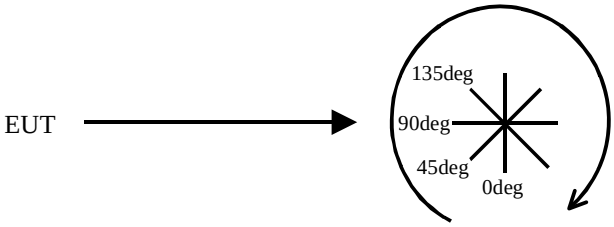


Top View (Horizontal)



Antenna was not rotated.

Top View (Vertical)



Front side: 0 deg.
Forward direction: clockwise

SECTION 6: Other test

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used
20dB Bandwidth	100kHz	1kHz	3kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Frequency Tolerance	-	-	-	-	-	-	Microwave Counter

Test result
Pass (Refer to the APPENDIX.)

APPENDIX 1: Data of Radio tests
Data of Field Strength and Outside Fileld Strength: FCC15.225(a)(b)(c)

UL Japan, Inc.
Shonan EMC Lab., No.3 Semi-Anechoic Chamber

		Regulation:	FCC Part15 SupartC 15.225
		Test Distance:	3m
Model:	KMP7R4H1-2A	Date:	September 24, 2012
Sample No.:	004401201060288	Temperature:	25deg.C
Power:	DC3.8V(Battery)	Humidity:	55% RH
Mode:	Transmitting 13.56MHz	ENGINEER:	Tatsuya Arai

Remarks: : 424kbps (Axis:Hor_Y / Ver_Z) , Vertical polarization (antenna angle) of the worst case: 0deg

Field strength

No.	FREQ	Test Receiver Reading		Antenna Factor	LOSS	AMP GAIN	RESULT		LIMIT (3m)	MARGIN	
		Hor	Ver				Hor	Ver		Hor	Ver
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
1	13.560	48.6	56.6	23.6	6.3	32.2	46.3	54.3	123.9	77.6	69.6

Calculation:Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]
Field strength of 13.553MHz to 13.567MHz Limit(3m) = 83.9dBuV/m + 40log 30m/3m
= 123.9dBuV/m (FCC15.225(a))

Outside Field strength

No.	FREQ	Test Receiver Reading		Antenna Factor	LOSS	AMP GAIN	RESULT		LIMIT (3m)	MARGIN	
		Hor	Ver				Hor	Ver		Hor	Ver
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]
1	13.110	28.5	28.3	23.5	6.3	32.2	26.1	25.9	69.5	43.4	43.6
2	13.410	28.4	28.4	23.5	6.3	32.2	26.0	26	80.5	54.5	54.5
3	13.553	36.3	43.8	23.6	6.3	32.2	34.0	41.5	90.4	56.4	48.9
4	13.567	36.7	44.3	23.6	6.3	32.2	34.4	42.0	90.5	56.1	48.5
5	13.710	28.4	28.4	23.7	6.3	32.2	26.2	26.2	80.5	54.3	54.3
6	14.010	28.3	28.3	26.2	6.3	32.2	28.6	28.6	69.5	40.9	40.9

Calculation:Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]

Outside filed strength frequencies
・filed strength band Fc±7kHz:13.553MHz to 13.567MHz
・Outside filde strength Fc±150kHz:13.410MHz to 13.710MHz
・Outside filde strength Fc±450kHz:13.110MHz to 14.010MHz
Fc = 13.56MHz

Limits (3m)
・13.410MHz to 13.553MHz and 13.567MHz to 13.710MHz : 50.5dBuV/m + 40log30m/3m = 90.5dBuV/m (FCC15.225(b))
・13.110MHz to 14.010MHz and 13.710MHz to 14.010MHz : 40.5dBuV/m + 40log30m/3m = 80.5dBuV/m (15.225(c))
・Below 13.110MHz and Above 14.010MHz : 29.5dBuV/m + 40log30m/3m = 69.5dBuV/m (FCC15.225(d)and FCC15.209)

UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa, Japan 259-1220
Telephone :+81 463 50 6400
Facsimile : +81 463 50 6401

Radiated Emission

UL Japan, Inc.
Shonan EMC Lab., No.3 Semi-Anechoic Chamber

Regulation: FCC Part15 SupartC 15.225
Test Distance 3m
Date: September 24, 2012
Temperature: 25deg.C
Humidity: 55% RH
ENGINEER: Tatsuya Arai

Model: KMP7R4H1-2A
Sample No.: 004401201060288
Power: DC3.8V(Battery)
Mode: Transmitting 13.56MHz
EUT axis: Below 30MHz(Horizontal Y-axis, Vertical Z-axis),
Above 30MHz(Horizontal: X-axis, Vertical: Y-axis)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	27.12	QP	26.9	26.2	6.5	32.2	27.4	69.5	42.1	-	0	
Hori.	40.68	QP	30.2	13.9	6.6	32.2	18.5	40.0	21.5	214	359	
Hori.	54.24	QP	23.8	9.9	6.7	32.2	8.2	40.0	31.8	148	0	
Hori.	67.80	QP	37.7	7.0	6.5	32.2	19.0	40.0	21.0	254	184	
Hori.	81.36	QP	25.6	6.3	7.5	32.2	7.2	40.0	32.8	207	328	
Hori.	94.92	QP	37.2	8.7	7.4	32.2	21.1	43.5	22.4	183	179	
Hori.	108.48	QP	27.2	11.0	7.2	32.1	13.3	43.5	30.2	274	123	
Hori.	122.04	QP	36.2	12.9	7.2	32.1	24.2	43.5	19.3	147	182	
Hori.	135.60	QP	29.5	14.0	7.4	32.1	18.8	43.5	24.7	238	114	
Hori.	176.28	QP	40.9	15.7	7.8	32.1	32.3	43.5	**11.2**	179	140	
Hori.	203.40	QP	39.1	16.1	8.0	32.1	31.1	43.5	12.4	156	237	
Vert.	27.12	QP	27.1	26.2	6.5	32.2	27.4	69.5	41.9	-	180	
Vert.	40.68	QP	37.1	13.9	6.6	32.2	25.4	40.0	14.6	100	74	
Vert.	54.24	QP	24.2	9.9	6.7	32.2	8.6	40.0	31.4	100	0	
Vert.	67.80	QP	41.9	7.0	6.5	32.2	23.2	40.0	16.8	100	76	
Vert.	81.36	QP	26.9	6.3	7.5	32.2	8.5	40.0	31.5	142	348	
Vert.	94.92	QP	38.5	8.7	7.4	32.2	22.4	43.5	21.1	100	82	
Vert.	108.48	QP	28.5	11.0	7.2	32.1	14.6	43.5	28.9	100	344	
Vert.	122.04	QP	36.3	12.9	7.2	32.1	24.3	43.5	19.2	100	258	
Vert.	135.60	QP	31.6	14.0	7.4	32.1	20.9	43.5	22.6	100	166	
Vert.	176.28	QP	38.2	15.7	7.8	32.1	29.6	43.5	13.9	100	275	
Vert.	203.40	QP	35.4	16.1	8.0	32.1	27.4	43.5	16.1	100	238	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+S.Fac(Δ AF)) - Gain(Amprifier)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa, Japan 259-1220
Telephone :+81 463 50 6400
Facsimile : +81 463 50 6401

Data of Frequency Tolerance: FCC 15.225(e) (1/2)

UL Japan, Inc.
Shonan EMC Lab. No.5 Shield room

Regulation: FCC Part15 SupartC 15.225

Model:	KMP7R4H1-2A	Date:	September 25, 2012
Sample No.:	004401201060288	Temperature:	25deg.C
Power:	DC3.8V(Battery)	Humidity:	56%RH
Mode:	Transmitting 13.56MHz	ENGINEER:	Hikaru Shirasawa

Temperature Variation: 50deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560190	0.000190	0.00140	0.01
after 2minutes	13.56	13.560195	0.000195	0.00144	0.01
after 5minutes	13.56	13.560203	0.000203	0.00150	0.01
after 10minutes	13.56	13.560204	0.000204	0.00150	0.01

Temperature Variation: 40deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560195	0.000195	0.00144	0.01
after 2minutes	13.56	13.560193	0.000193	0.00142	0.01
after 5minutes	13.56	13.560191	0.000191	0.00141	0.01
after 10minutes	13.56	13.560190	0.000190	0.00140	0.01

Temperature Variation: 30deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560209	0.000209	0.00154	0.01
after 2minutes	13.56	13.560205	0.000205	0.00151	0.01
after 5minutes	13.56	13.560203	0.000203	0.00150	0.01
after 10minutes	13.56	13.560201	0.000201	0.00148	0.01

Temperature Variation: 20deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560231	0.000231	0.00170	0.01
after 2minutes	13.56	13.560224	0.000224	0.00165	0.01
after 5minutes	13.56	13.560221	0.000221	0.00163	0.01
after 10minutes	13.56	13.560220	0.000220	0.00162	0.01

Data of Frequency Tolerance: FCC 15.225(e) (2/2)

UL Japan, Inc.
Shonan EMC Lab. No.5 Shield room

Regulation: FCC Part15 SupartC 15.225

Model:	KMP7R4H1-2A	Date:	September 25, 2012
Sample No.:	004401201060288	Temperature:	25deg.C
Power:	DC3.8V(Battery)	Humidity:	56%RH
Mode:	Transmitting 13.56MHz	ENGINEER:	Hikaru Shirasawa

Temperature Variation: 10deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560248	0.000248	0.00183	0.01
after 2minutes	13.56	13.560243	0.000243	0.00179	0.01
after 5minutes	13.56	13.560242	0.000242	0.00178	0.01
after 10minutes	13.56	13.560240	0.000240	0.00177	0.01

Temperature Variation: 0deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560257	0.000257	0.00190	0.01
after 2minutes	13.56	13.560256	0.000256	0.00189	0.01
after 5minutes	13.56	13.560256	0.000256	0.00189	0.01
after 10minutes	13.56	13.560256	0.000256	0.00189	0.01

Temperature Variation: -10deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560254	0.000254	0.00187	0.01
after 2minutes	13.56	13.560257	0.000257	0.00190	0.01
after 5minutes	13.56	13.560257	0.000257	0.00190	0.01
after 10minutes	13.56	13.560257	0.000257	0.00190	0.01

Temperature Variation: -20deg.C

Test Conditions	Original Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560255	0.000255	0.00188	0.01
after 2minutes	13.56	13.560254	0.000254	0.00187	0.01
after 5minutes	13.56	13.560245	0.000245	0.00181	0.01
after 10minutes	13.56	13.560235	0.000235	0.00173	0.01

UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa, Japan 259-1220
Telephone :+81 463 50 6400
Facsimile : +81 463 50 6401

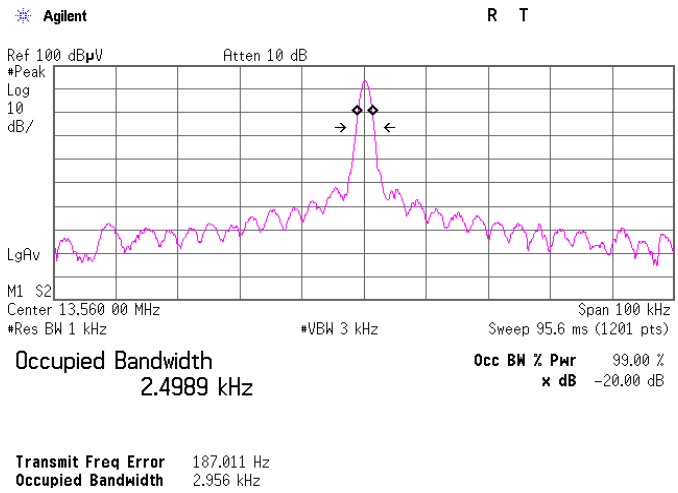
20dB bandwidth & 99% Occupied bandwidth: FCC 15.215 / RSS-Gen

UL Japan, Inc.
Shonan EMC Lab. No.5 Shield room

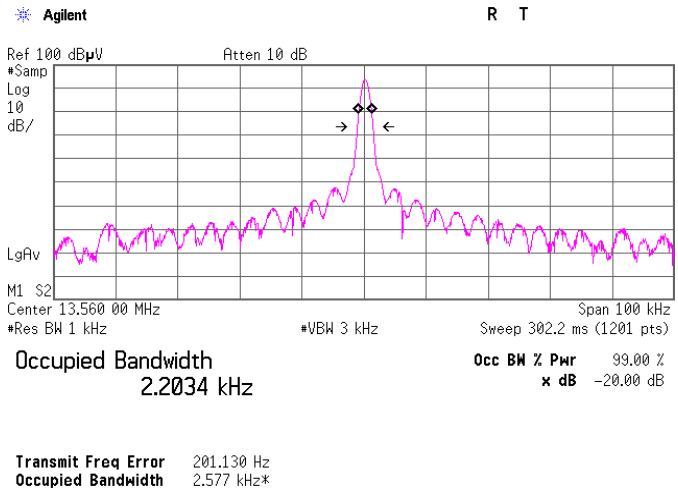
Regulation: FCC Part15 Subpart C 15.215
Test Distance: -

Model:	KMP7R4H1-2A	Date:	September 25, 2012
Sample No.:	004401201060288	Temperature:	25deg.C
Power:	DC3.8V(Battery)	Humidity:	56%RH
Mode:	Transmitting 13.56MHz	ENGINEER:	Hikaru Shirasawa

20dB Bandwidth: 2.956 kHz



99% Occupied Bandwidth: 2.203 kHz



APPENDIX 2: Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date	Expiration Date of the calibration
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2012/02/10	2013/02/28
SAT6-03	Attenuator	JFW	50HF-006N	-	RE	2012/02/10	2013/02/28
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2011/10/23	2012/10/31
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2012/04/10	2013/04/30
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2011/10/23	2012/10/31
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2012/02/06	2013/02/28
STR-03	Test Receiver	Rohde & Schwarz	ESI40	100054/040	RE	2012/06/14	2013/06/30
SJM-10	Measure	PROMART	SEN1935	-	RE	-	-
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2012/09/21	2013/09/30
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE,RFI,MF)	-	RE	-	-
LP-01	Loop Antenna	Rohde & Schwarz	HFH2-Z2	829425/014	RE	2011/12/19	2012/12/31
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	FT, BW	2011/12/05	2012/12/31
SFC-01	Microwave Counter	Agilent	53151A	US40511493	FT	2012/03/21	2013/03/31
SCH-01	Temperature and Humidity Chamber	Espec	PL-1KT	14020837	FT	2012/04/04	2013/04/30
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	FT	2012/03/26	2013/03/31
SSP-01	Search Probe	Nisshin Electric	NSP-01	-	FT, BW	-	-

The expiration date of the calibration is the end of the expired month.
As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.
All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

Test Item:
RE: Radiated emission,
FT: Frequency Tolerance,
BW: Bandwidth