



RADIO TEST REPORT

Test Report No. : 31GE0227-SH-02

Applicant : NEC CASIO Mobile Communications, Ltd.
Type of Equipment : Digital Portable Cellular Telephone
Model No. : CAI11
Test standard : FCC Part 15 Subpart C: 2010
FCC ID : TYK-BHJ3994
Test result : Complied

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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:

March 17 and 18, 2011

**Representative
test engineer:**

Akio Hayashi
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.
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Shonan EMC Lab.

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13-EM-F0429

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SECTION 1: Customer information

Company Name : NEC CASIO Mobile Communications, Ltd.
Address : 1753 Shimonumabe, Nakahara-ku, Kawasaki, Kanagawa 211-8666 Japan
Telephone Number : +81-44-455-8778
Facsimile Number : +81-44-455-8025
Contact Person : Resshi Sato

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

2.1 Identification of E.U.T.

Type of Equipment : Digital Portable Cellular Telephone
Model No. : CAI11
Serial No. : Refer to Section 4, Clause 4.2
Rating : DC 3.3-4.2V
Receipt Date of Sample : March 17, 2011
Country of Mass-production : China
Condition of EUT : Engineering prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT : No Modification by the test lab.

2.2 Product description

Model No: CAI11 (referred to as the EUT in this report) is the Digital Portable Cellular Telephone.

General Specification

Clock frequency(ies) in the system : CPU: 1GHz

Radio Specification

Bluetooth (Ver.2.1 + EDR)	
Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Other Clock Frequency	19.2MHz
Type of Modulation	FHSS
Bandwidth & Channel spacing	1MHz & 1MHz
Antenna Connector Type	Integrated antenna

WLAN (IEEE802.11b/g/n (SISO/HT20))	
Equipment Type	Transceiver
Frequency of Operation	2412-2462MHz
Other Clock Frequency	19.2MHz
Type of Modulation	DSSS, OFDM
Antenna Connector Type	Integrated antenna

RFID	
Equipment Type	Transceiver
Frequency of Operation	13.56MHz
Type of Modulation	ASK
Antenna Connector Type	Integrated antenna

GSM	
Equipment Type	Transceiver
Frequency of Operation	[Up Link] GSM850: 824 – 849MHz PCS: 1850 – 1910MHz [Down Link] GSM850: 869 – 894MHz PCS: 1930 – 1990MHz
Other Clock Frequency	19.2MHz
Type of Modulation	GMSK
Channel spacing	200kHz
Antenna Connector Type	Integrated antenna

GPS	
Equipment Type	Receiver
Receiver Type	Direct Downconversion
Frequency of Operation	1575.42MHz
Other Clock Frequency	19.2MHz
Antenna Connector Type	Integrated antenna

*This test report applies for RFID.

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart C: 2010, final revised on December 6, 2010 and effective January 5, 2011

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 and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted emission	ANSI C63.4:2003 7. AC power line conducted emission measurements	Section 15.207	N/A	N/A	*1)
Electric field strength of Fundamental emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.225(a)	75.0dB 13.56MHz, QP, Vertical.	Complied	Radiated
Spectrum mask	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.225(b)(c)	See data	Complied	Radiated
20dB bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.215(c)	See data	-	Radiated
Electric field strength of Spurious emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.209, Section 15.225 (d)	19.7dB 244.08MHz, QP, Horizontal	Complied	Radiated
Frequency tolerance	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.225(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 EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422

FCC 15.31 (e)

This EUT provides stable voltage (DC3.1V) constantly to RF Part regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

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 antenna requirement of Section 15.203.

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3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Occupied Bandwidth (99%)	ANSI C63.4:2003 13. Measurement of intentional radiators RSS-Gen 4.6.1	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} /SR ^{*2} (±)	No.2 SAC/SR (±)	No.3 SAC/SR (±)
Radiated emission (Measurement distance: 3m)	9kHz-30MHz	3.3 dB	2.7 dB	3.4 dB
	30MHz-300MHz	4.7 dB	4.5 dB	4.7 dB
	300MHz-1GHz	4.5 dB	4.6 dB	4.6 dB

*1: SAC=Semi-Anechoic Chamber

*2: SR= Shielded Room is applied besides radiated emission

Radiated emission test

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

Frequency tolerance

Frequency Measurement uncertainty (with a 95% confidence level) for this test was: (±) 1.3×10^{-6} .

3.5 Test location

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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
<input checked="" type="checkbox"/> No.1 Semi-anechoic chamber	697847	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
<input type="checkbox"/> No.2 Semi-anechoic chamber	697847	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
<input checked="" type="checkbox"/> No.3 Semi-anechoic chamber	697847	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5m
<input type="checkbox"/> No.4 Full-anechoic chamber	-	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
<input type="checkbox"/> No.1 shielded room	-	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
<input type="checkbox"/> No.2 shielded room	-	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
<input type="checkbox"/> No.3 shielded room	-	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
<input type="checkbox"/> No.4 shielded room	-	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
<input checked="" type="checkbox"/> No.5 shielded room	-	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
<input type="checkbox"/> No.6 shielded room	-	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-

3.6 Test set up, Data of test, and Test instruments

Refer to APPENDIX.

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

4.1 Operating modes

The mode is used:

Mode	Remarks
Transmitting (13.56MHz)	Continuous transmitting 13.56MHz (modulated)
The EUT was operated in a manner similar to typical use during the tests.	

Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

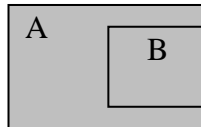
Frequency Tolerance:

Temperature : -20deg.C to +50deg.C Step 10deg.C

Voltage : Normal Voltage DC 3.7V

*This EUT provides stable voltage (DC3.1V) constantly to RF Part regardless of input voltage.

4.2 Configuration and peripherals



* Setup was taken into consideration and test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Digital Portable Cellular Telephone	CAI11	99000059002168	CASIO COMPUTER CO., LTD.	EUT
B	Battery	CAI11UAA	17	CASIO COMPUTER CO., LTD.	EUT

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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 80cm 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)

- 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.

* FCC Part 15 Section 15.31 (f)(2)

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

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

Test result

Pass (Refer to the APPENDIX.)

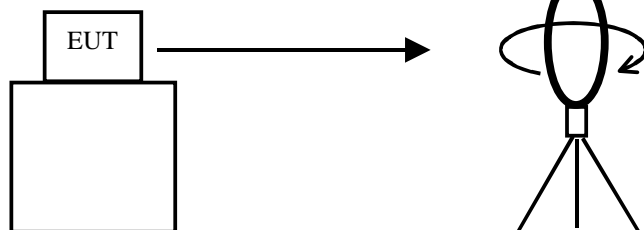
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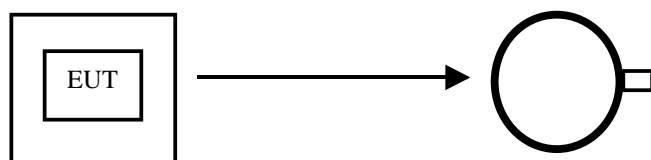
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Figure 1: Direction of the Loop Antenna

Side View (Vertical)

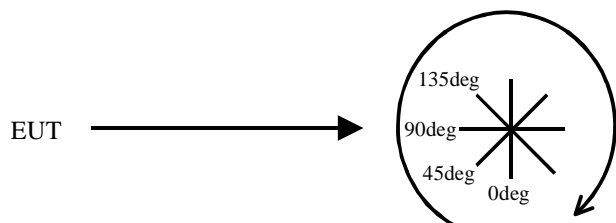


Top View (Horizontal)



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	-	-	-	-	-	-	Universal Counter

Test result

Pass (Refer to the APPENDIX.)

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APPENDIX 1: Photographs of test setup

Data of Field Strength and Outside Filed Strength: FCC15.225(a)(b)(c)

UL Japan, Inc.
Shonan No3 Semi-Anechoic Chamber

Company:	NEC CASIO Mobile Communications, Ltd.	Report No.:	31GE0227-SH-02
Equipment:	Digital Portable Cellular Telephone	Regulation:	FCC Part15 SupartC 15.225
Model:	CA111	Test Distance:	3m
Sample No.:	99000059002168	Date:	2011/3/17
Power:	DC3.7V(Battery)	Temperature:	21deg.C
Mode:	Transmitting 13.56MHz	Humidity:	49% RH
		ENGINEER:	Wataru Kojima

Remarks: : Felica 212kbps(Axis:Hor_X/Ver_Z) , Vertical polarization (antenna angle) of the worst case: 0deg

Field strength

No.	FREQ [MHz]	T/R Reading		ANT Factor	LOSS [dB]	AMP GAIN [dB]	RESULT		LIMIT (3m) [dBuV/m]	MARGIN	
		Hor [dBuV]	Ver [dBuV]				Hor [dBuV/m]	Ver [dBuV/m]		Hor [dB]	Ver [dB]
1	13.560	45.7	55.2	19.6	6.3	32.2	39.4	48.9	123.9	84.5	75.0

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 [MHz]	T/R Reading		ANT Factor	LOSS [dB]	AMP GAIN [dB]	RESULT		LIMIT (3m) [dBuV/m]	MARGIN	
		Hor [dBuV]	Ver [dBuV]				Hor [dBuV/m]	Ver [dBuV/m]		Hor [dB]	Ver [dB]
1	13.110	30.6	30.6	19.6	6.3	32.2	24.3	24.3	69.5	45.2	45.2
2	13.410	30.7	30.7	19.6	6.3	32.2	24.4	24.4	80.5	56.1	56.1
3	13.553	35.0	43.5	19.6	6.3	32.2	28.7	37.2	90.4	61.7	53.2
4	13.567	34.2	42.5	19.6	6.3	32.2	27.9	36.2	90.5	62.6	54.3
5	13.710	30.6	30.8	19.6	6.3	32.2	24.3	24.5	80.5	56.2	56.0
6	14.010	30.6	30.7	19.6	6.3	32.2	24.3	24.4	69.5	45.2	45.1

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

Outside filed strength frequencies

- filed strength band $F_c \pm 7\text{kHz}$:13.553MHz to 13.567MHz
 - Outside filde strength $F_c \pm 150\text{kHz}$:13.410MHz to 13.710MHz
 - Outside filde strength $F_c \pm 450\text{kHz}$:13.110MHz to 14.010MHz
- $F_c = 13.56\text{MHz}$

Limits (3m)

- 13.410MHz to 13.553MHz and 13.567MHz to 13.710MHz : $50.5\text{dBuV/m} + 40\log 30\text{m}/3\text{m} = 90.5\text{dBuV/m}$ (FCC15.225(b))
- 13.110MHz to 14.010MHz and 13.710MHz to 14.010MHz : $40.5\text{dBuV/m} + 40\log 30\text{m}/3\text{m} = 80.5\text{dBuV/m}$ (15.225(c))
- Below 13.110MHz and Above 14.010MHz : $29.5\text{dBuV/m} + 40\log 30\text{m}/3\text{m} = 69.5\text{dBuV/m}$ (FCC15.225(d)and FCC15.209)

Radiated Emission

UL Japan, Inc.
Shonan No1 Semi-Anechoic Chamber

Company: NEC CASIO Mobile Communications, Ltd.
 Equipment: Digital Portable Cellular Telephone
 Model: CA111
 Sample No.: 99000059002168
 Power: DC3.7V(Battery)
 Mode: Transmitting 13.56MHz
 EUT axis: See Remarks

Report No.: 31GE0227-SH-02
 Regulation: FCC Part15 SupartC 15.225
 Date: 2011/3/17
 Temperature: 21deg.C
 Humidity: 49%RH
 ENGINEER: Wataru Kojima

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	30.00	20.90	6.50	32.20	25.20	69.50	44.30	100	121	Z-axis
Hori.	40.68	QP	29.00	14.40	6.70	32.10	18.00	40.00	22.00	300	74	Z-axis
Hori.	54.24	QP	29.60	9.70	6.80	32.10	14.00	40.00	26.00	200	174	Z-axis
Hori.	67.80	QP	28.80	6.80	6.90	32.10	10.40	40.00	29.60	150	7	Z-axis
Hori.	81.36	QP	32.70	6.40	7.00	32.10	14.00	40.00	26.00	200	165	Z-axis
Hori.	94.92	QP	29.00	8.90	7.20	32.10	13.00	43.50	30.50	150	355	Z-axis
Hori.	108.48	QP	31.60	11.00	7.30	32.10	17.80	43.50	25.70	150	37	Z-axis
Hori.	122.04	QP	30.00	12.40	7.40	32.10	17.70	43.50	25.80	300	77	Z-axis
Hori.	135.60	QP	34.70	13.30	7.50	32.10	23.40	43.50	20.10	300	314	Z-axis
Hori.	149.16	QP	32.60	14.30	7.60	32.10	22.40	43.50	21.10	200	349	Z-axis
Hori.	162.72	QP	32.30	15.30	7.60	32.00	23.20	43.50	20.30	150	354	Z-axis
Hori.	176.28	QP	29.80	15.70	7.70	32.00	21.20	43.50	22.30	150	234	Z-axis
Hori.	189.84	QP	30.50	16.00	7.80	32.00	22.30	43.50	21.20	150	183	Z-axis
Hori.	203.40	QP	29.30	16.40	7.90	32.00	21.60	43.50	21.90	150	214	Z-axis
Hori.	216.96	QP	31.00	16.60	8.00	32.00	23.60	46.00	22.40	200	274	Z-axis
Hori.	230.52	QP	29.80	16.80	8.00	32.00	22.60	46.00	23.40	200	278	Z-axis
Hori.	244.08	QP	33.20	17.00	8.10	32.00	26.30	46.00	19.70	150	231	Z-axis
Hori.	257.64	QP	29.50	17.40	8.20	32.00	23.10	46.00	22.90	200	32	Z-axis
Vert.	27.12	QP	30.00	20.90	6.50	32.20	25.20	69.50	44.30	100	357	Y-axis(Antenna:0deg.)
Vert.	40.68	QP	28.30	14.40	6.70	32.10	17.30	40.00	22.70	100	298	X-axis
Vert.	54.24	QP	34.50	9.70	6.80	32.10	18.90	40.00	21.10	100	339	X-axis
Vert.	67.80	QP	30.10	6.80	6.90	32.10	11.70	40.00	28.30	100	295	X-axis
Vert.	81.36	QP	32.70	6.40	7.00	32.10	14.00	40.00	26.00	100	357	X-axis
Vert.	94.92	QP	29.50	8.90	7.20	32.10	13.50	43.50	30.00	100	318	X-axis
Vert.	108.48	QP	33.50	11.00	7.30	32.10	19.70	43.50	23.80	100	273	X-axis
Vert.	122.04	QP	29.60	12.40	7.40	32.10	17.30	43.50	26.20	100	66	X-axis
Vert.	135.60	QP	34.00	13.30	7.50	32.10	22.70	43.50	20.80	100	0	X-axis
Vert.	149.16	QP	31.20	14.30	7.60	32.10	21.00	43.50	22.50	100	51	X-axis
Vert.	162.72	QP	30.50	15.30	7.60	32.00	21.40	43.50	22.10	100	0	X-axis
Vert.	176.28	QP	29.50	15.70	7.70	32.00	20.90	43.50	22.60	100	273	X-axis
Vert.	189.84	QP	29.20	16.00	7.80	32.00	21.00	43.50	22.50	100	167	X-axis
Vert.	203.40	QP	29.00	16.40	7.90	32.00	21.30	43.50	22.20	100	280	X-axis
Vert.	216.96	QP	30.10	16.60	8.00	32.00	22.70	46.00	23.30	100	204	X-axis
Vert.	230.52	QP	28.50	16.80	8.00	32.00	21.30	46.00	24.70	100	350	X-axis
Vert.	244.08	QP	30.40	17.00	8.10	32.00	23.50	46.00	22.50	100	189	X-axis
Vert.	257.64	QP	29.60	17.40	8.20	32.00	23.20	46.00	22.80	100	220	X-axis

Result = Reading + Ant Factor + Loss (Cable+Attenuator) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

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

UL Japan, Inc.
Shonan No5 Shield room

Company: NEC CASIO Mobile Communications, Ltd.
 Equipment: Digital Portable Cellular Telephone
 Model: CA111
 Sample No.: 99000059002168
 Power: DC3.7V(Battery)
 Mode: Transmitting 13.56MHz

Report No.: 31GE0227-SH-02
 Regulation: FCC Part15 SupartC 15.225
 Date: 2011/3/18
 Temperature: 23deg.C
 Humidity: 33% RH
 ENGINEER: Akio Hayashi

Temperature Variation: 50deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.559979	-0.000021	-0.00015	0.01
after 2minutes	13.56	13.559974	-0.000026	-0.00019	0.01
after 5minutes	13.56	13.559973	-0.000027	-0.00020	0.01
after 10minutes	13.56	13.559971	-0.000029	-0.00021	0.01

Temperature Variation: 40deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.559995	-0.000005	-0.00004	0.01
after 2minutes	13.56	13.559987	-0.000013	-0.00010	0.01
after 5minutes	13.56	13.559984	-0.000016	-0.00012	0.01
after 10minutes	13.56	13.559982	-0.000018	-0.00013	0.01

Temperature Variation: 30deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560020	0.000020	0.00015	0.01
after 2minutes	13.56	13.560011	0.000011	0.00008	0.01
after 5minutes	13.56	13.560007	0.000007	0.00005	0.01
after 10minutes	13.56	13.560005	0.000005	0.00004	0.01

Temperature Variation: 20deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560049	0.000049	0.00036	0.01
after 2minutes	13.56	13.560037	0.000037	0.00027	0.01
after 5minutes	13.56	13.560035	0.000035	0.00026	0.01
after 10minutes	13.56	13.560033	0.000033	0.00024	0.01

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

Company: NEC CASIO Mobile Communications, Ltd.
 Equipment: Digital Portable Cellular Telephone
 Model: CA111
 Sample No.: 99000059002168
 Power: DC3.7V(Battery)
 Mode: Transmitting 13.56MHz

UL Japan, Inc.
Shonan No5 Shield room
 Report No.: 31GE0227-SH-02
 Regulation: FCC Part15 SupartC 15.225
 Date: 2011/3/18
 Temperature: 23deg.C
 Humidity: 33% RH
 ENGINEER: Akio Hayashi

Temperature Variation: 10deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560070	0.000070	0.00052	0.01
after 2minutes	13.56	13.560062	0.000062	0.00046	0.01
after 5minutes	13.56	13.560060	0.000060	0.00044	0.01
after 10minutes	13.56	13.560059	0.000059	0.00044	0.01

Temperature Variation: 0deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560081	0.000081	0.00060	0.01
after 2minutes	13.56	13.560078	0.000078	0.00058	0.01
after 5minutes	13.56	13.560078	0.000078	0.00058	0.01
after 10minutes	13.56	13.560077	0.000077	0.00057	0.01

Temperature Variation: -10deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560073	0.000073	0.00054	0.01
after 2minutes	13.56	13.560077	0.000077	0.00057	0.01
after 5minutes	13.56	13.560077	0.000077	0.00057	0.01
after 10minutes	13.56	13.560077	0.000077	0.00057	0.01

Temperature Variation: -20deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
startup	13.56	13.560050	0.000050	0.00037	0.01
after 2minutes	13.56	13.560063	0.000063	0.00046	0.01
after 5minutes	13.56	13.560058	0.000058	0.00043	0.01
after 10minutes	13.56	13.560056	0.000056	0.00041	0.01

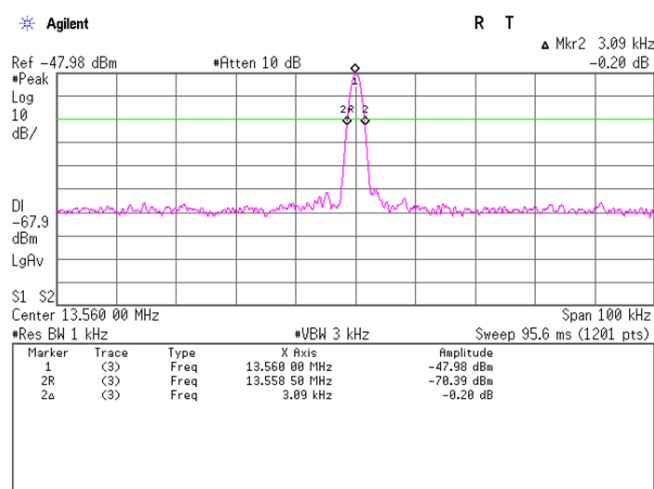
20dB bandwidth & Occupied bandwidth (99%): FCC 15.215

UL Japan, Inc.
Shonan No5 Shield room

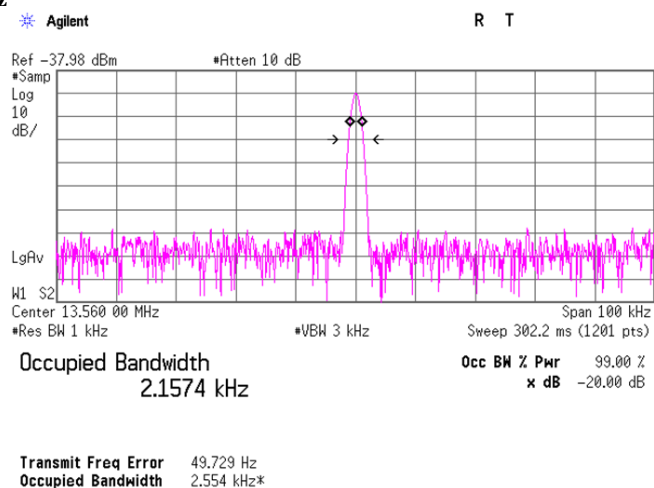
Company: NEC CASIO Mobile Communications, Ltd.
Equipment: Digital Portable Cellular Telephone
Model: CA111
Sample No.: 99000059002168
Power: DC3.7V(Battery)
Mode: Transmitting 13.56MHz

Report No.: 31GE0227-SH-02
Regulation: FCC Part15 Subpart C 15.215
Date: 2011/3/18
Temperature: 23deg.C
Humidity: 33% RH
ENGINEER: Akio Hayashi

20dB Bandwidth: 3.09kHz



OBW(99%): 2.16kHz



APPENDIX 3:Test instruments

EMI test equipment

[illegible]

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

Test Item:

RE: Radiated emission

FT: Frequency Tolerance

BW: Bandwidth

UL Japan, Inc.

Shonan EMC Lab.

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