

HCT CO., LTD.

CERTIFICATE OF COMPLIANCE

FCC Certification

Applicant Name:
NEC CASIO Mobile Communications, Ltd.

Date of Issue:
August 06, 2012

Address:
1753 Shimonumabe, Nakahara-ku, Kawasaki,
Kanagawa 211-8666 Japan

Test Site/Location:
HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon,
Icheon-si, Kyunggi-Do, Korea

Report No.: HCTR1208FR07

HCT FRN: 0005866421

FCC ID : TYK-JDS9507

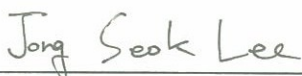
APPLICANT : NEC CASIO Mobile Communications, Ltd.

FCC Model(s): C811
EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC
RF Output Field Strength: 12.24 dBuV/m
Frequency of Operation: 13.55984 MHz
Modulation type ASK
FCC Classification: Low Power Communication Device – Transmitter
FCC Rule Part(s): FCC Part 15.225 Subpart C

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S. C.853(a)



Report prepared by

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Test engineer of RF Team



Approved by

: Sang Jun Lee

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FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1208FR07	August 06, 2012	- First Approval Report

Table of Contents

1. GENERAL INFORMATION	4
2. EUT DESCRIPTION	4
3. TEST METHODOLOGY	5
3.1 EUT CONFIGURATION	5
3.2 EUT EXERCISE	5
3.3 GENERAL TEST PROCEDURES	5
3.4 DESCRIPTION OF TEST MODES	5
3.5 STANDARDS	6
4. INSTRUMENT CALIBRATION.....	7
5. FACILITIES AND ACCREDITATIONS	7
5.1 FACILITIES	7
5.2 EQUIPMENT	7
6. ANTENNA REQUIREMENTS	7
7. TEST SUMMARY	8
8. RADIATED EMISSION MEASUREMENT	9
8.1. RADIATED EMISSION 9 kHz – 30 MHz	10
8.2. RADIATED EMISSION 30 MHz – 1000 MHz	15
9. EMISSION BANDWIDTH PLOT.....	17
10. FREQUENCY TOLERANCE	18
11. POWERLINE CONDUCTE EMISSIONS.....	19
12. LIST OF TEST EQUIPMENT	28

1. GENERAL INFORMATION

Applicant: NEC CASIO Mobile Communications, Ltd.

Address: 1753 Shimonumabe, Nakahara-ku, Kawasaki, Kanagawa 211-8666 Japan

FCC ID: TYK-JDS9507

EUT: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC

Model name(s): C811

Date of Test: July 20, 2012 ~ August 03, 2012

Place of Tests: HCT Co., Ltd.
105-1, Jangam-ri , Majang-Myeon, Icheon-si, Kyunggi-Do, 467-811, KOREA.

2. EUT DESCRIPTION

Product	CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC
FCC Model Name	C811
Power Supply	DC 3.7 V
Battery Type	Li-ion Battery(Standard)
Frequency of Operation	12.24 dBuV/m
Transmit Power	13.55984 MHz
Modulation Type	ASK
Antenna Specification	Manufacturer: DONGNAM Antenna type: Loop Antenna

3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Testing Unlicensed Wireless Devices(ANSI C63.10-2009).

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.225 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2009) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 6.3 of ANSI C63.10. (Version: 2009).

3.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

FCC PT.15.225 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507	

3.5 STANDARDS

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance With

FCC Part 15.Subpart C

Regulation	Measurement standard	Range
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(a)	ANSI C63.10:2009	13.553MHz to 13.567MHz
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(d)	ANSI C63.10:2009	outside of the 13.110-14.010 MHz band
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.209	ANSI C63.10:2009	9kHz to 30MHz
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.209	ANSI C63.10:2009	30MHz to 1GHz
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.207	ANSI C63.10:2009	150kHz to 30MHz
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(e)	ANSI C63.10:2009	0.01% of nominal
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.215(c)	ANSI C63.10:2009	-

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The 10 m semi anechoic chamber used to collect the Conducted and Radiated data is located at the 105-1, Jangam-Ri, Majang-Myeon, Icheon-Si, Kyongki-Do, Korea. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4. Detailed description of test facilities was submitted to the Commission and accepted dated Sep. 03, 2010 (Registration Number: 90661)

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

6. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

* The antennas of this E.U.T are permanently attached.

*The E.U.T Complies with the requirement of §15.203

FCC PT.15.225 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507	

7. TEST SUMMARY

The results in this report apply only to sample tested

Regulation	Test Type	Range	Result
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(a)	Radiated Electric Field Emissions	13.553MHz to 13.567MHz	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(b)	Radiated Electric Field Emissions	13.410MHz to 13.553MHz and 13.567MHz to 13.710MHz	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(c)	Radiated Electric Field Emissions	13.110 MHz to 13.410 MHz and 13.710 MHz to 14.010 MHz	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.209 (d)	Radiated Electric Field Emissions	9kHz to 30MHz	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.209	Radiated Electric Field Emissions	30MHz to 1GHz	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.207	AC power conducted emissions	150kHz to 30MHz	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.225(e)	Frequency Stability	0.01% of nominal	Pass
Title 47 of the CFR:2009, Part 15 Subpart (c), Clause 15.215(c)	20 dB Bandwidth	-	Pass

8. RADIATED EMISSION MEASUREMENT

Requirement(s): 15.209, 15.225

Except as provided elsewhere in this paragraph the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Minimum Standard: FCC Part 15.225 / 15.209

Rule Part	Frequency (MHz)	Limit
Part 15.209	0.009 ~ 0.490	2400/F(kHz)uV/m@300
	0.490 ~1.705	24000/F(kHz)uV/m@30
	1.705 ~ 30	30 uV/m@30
	30 ~ 88	100 ** uV/m@3m
	88 ~ 216	150 ** uV/m@3m
	216 ~ 960	200 ** uV/m@3m
	Above 960	500 uV/m@3m

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

15.225 Operation within the band 13.110 – 14.010 MHz.

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter (= 84 dBuV/m) at 30 meters.

(b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter (=50.5dBuV/m) at 30 meters.

(c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter (=40.5 dBuV/m) at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

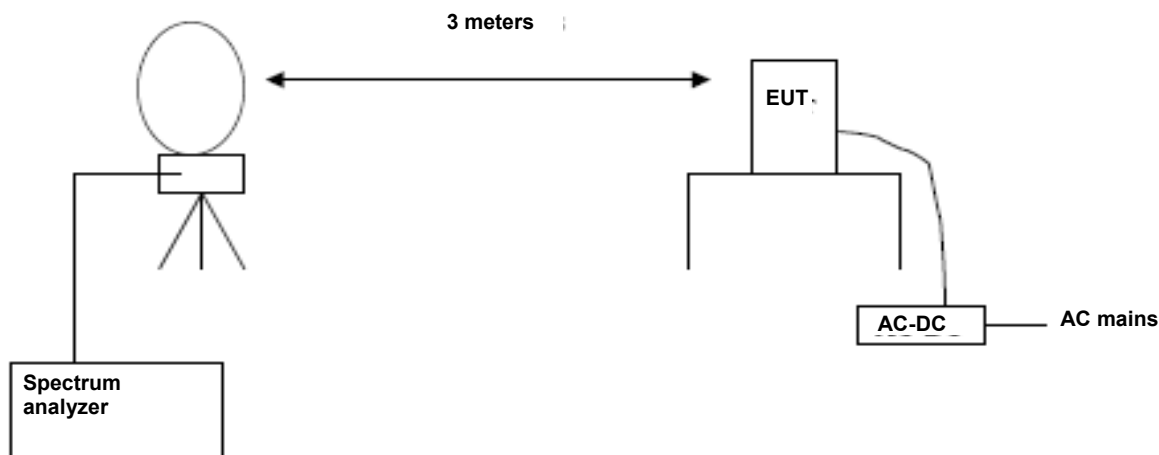
(e) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a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

(f) In the case of radio frequency powered tags designed to operate with a device authorized under this section, the tag may be approved with the device or be considered as a separate device subject to its own authorization. Powered tags approved with a device under a single application shall be labeled with the same identification number as the device.

FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

8.1. RADIATED EMISSION 9 kHz – 30 MHz

Test Set-up



Test Procedure

The EUT was placed on a non-conductive table located on a large open test site. The loop antenna was placed at a location 3m from the EUT. Radiated emissions were measured with the loop antenna both parallel and perpendicular to the plane of the EUT loop antenna.

The limit is converted from microvolts/meter to decibel microvolts/meter. Sample Calculation:

Corrected Amplitude = Raw Amplitude(dBμV/m) + ACF(dB) + Cable Loss(dB) – Distance Correction Factor

The spectrum analyzer is set to:

Frequency Range = 9 kHz ~ 1GHz

RBW = 9 kHz (9 kHz ~ 30MHz)
= 120 kHz (30 MHz ~ 1 GHz)

Trace Mode = max hold

Detector Mode = peak / Quasi-peak

Sweep time = auto

FCC PT.15.225 TEST REPORT		FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507	

Test Results

Normal Battery Cover

13.553 MHz-13.567 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.56	41.01(H)*	9.81	-40	10.82	84	73.18
13.56	36.37(V)*	9.81	-40	6.18	84	77.82

13.410 MHz-13.553 MHz and 13.567 MHz-13.710 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.553	26.82	9.81	-40	-3.37	50.47	53.84
13.567	27.76	9.81	-40	-2.43	50.47	52.90

13.110 MHz – 13.410 MHz and 13.710 MHz-14.010 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.1130	20.51	9.81	-40	-9.68	40.51	50.19
13.7724	22.79	9.81	-40	-7.40	40.51	47.91

9 kHz -30 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
11.79758	14.74	8.23	-40	-17.03	29.54	46.57
14.55366	19.03	8.23	-40	-12.74	29.54	42.28

Extended Battery Cover

13.553 MHz-13.567 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.56	40.40(H)*	9.81	-40	10.21	84	73.79
13.56	35.27(V)*	9.81	-40	5.08	84	78.92

13.410 MHz-13.553 MHz and 13.567 MHz-13.710 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.553	26.18	9.81	-40	-4.01	50.47	54.48
13.567	27.14	9.81	-40	-3.05	50.47	53.52

13.110 MHz – 13.410 MHz and 13.710 MHz-14.010 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.1154	19.88	9.81	-40	-10.31	40.51	50.82
13.7544	14.20	9.81	-40	-15.99	40.51	56.50

9 kHz -30 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
14.544	20.42	8.23	-40	-11.35	29.54	40.89

Wireless Battery Cover

13.553 MHz-13.567 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.56	42.43 (H)*	9.81	-40	12.24	84	71.76
13.56	37.36 (V)*	9.81	-40	7.17	84	76.83

13.410 MHz-13.553 MHz and 13.567 MHz-13.710 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.553	28.30	9.81	-40	-1.89	50.47	52.36
13.567	29.27	9.81	-40	-0.92	50.47	51.39

13.110 MHz – 13.410 MHz and 13.710 MHz-14.010 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
13.1202	20.61	9.81	-40	-9.58	40.51	50.09
13.7184	16.21	9.81	-40	-13.98	40.51	54.49

9 kHz -30 MHz						
Frequency (MHz)	Read Level (dBuV)@3m	Ant.Factor+Cable Loss (dB/m)	Distance Correction (dB)	Result Level (dBuV/m)@30m	Limit (dBuV/m)@30m	Margin (dB)
14.544	20.00	8.23	-40	-11.77	29.54	41.31

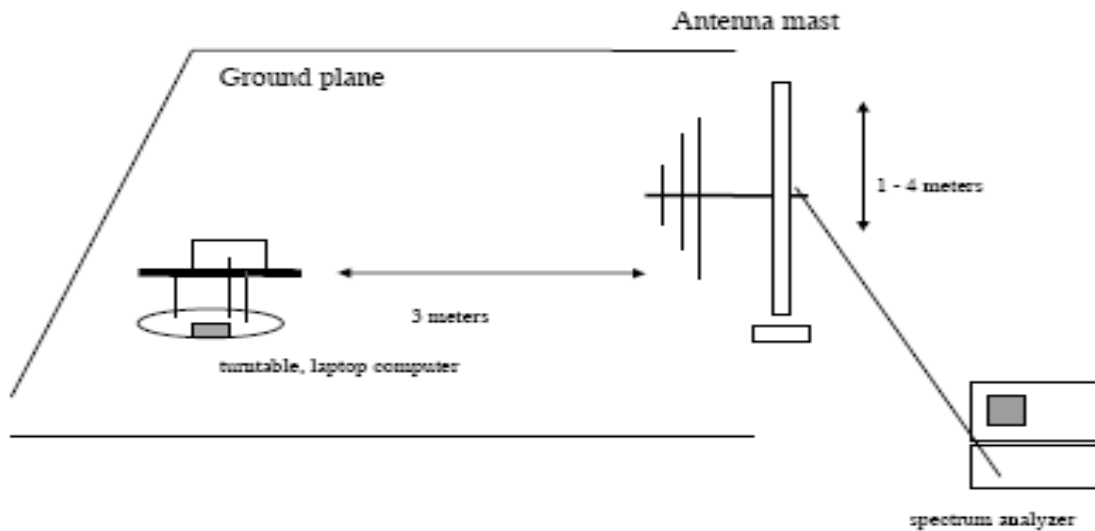
Note :

1. Distance Correction Below 30MHz = $40\log(3m/30m) = -40 \text{ dB}$
Measurement Distance : 3 m (Below 30 MHz)
2. Factor = Antenna Factor + Cable Loss
3. Result Level = Read Level + Factor + Distance Correction
4. Margin = Limit – Result Level
5. (H)* and (V)* mean antenna polarization.

FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

8.2. RADIATED EMISSION 30 MHz – 1000 MHz

Test Set-up



Test Procedures: Radiated emissions were measured according to ANSI C63.10.

The EUT was set to transmit at the highest output power.

The EUT was set 3 meter away from the measuring antenna.

Normal Battery Cover

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	$\text{dB}_{\mu\text{V}}$	dB/m	dB	(H/V)	$\text{dB}_{\mu\text{V/m}}$	$\text{dB}_{\mu\text{V/m}}$	dB
115.36	22.01	10.4	1.1	V	33.50	43.5	10.00
145.82	21.62	12.8	1.2	V	35.62	43.5	7.88

Extended Battery Cover

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	$\text{dB}_{\mu\text{V}}$	dB/m	dB	(H/V)	$\text{dB}_{\mu\text{V/m}}$	$\text{dB}_{\mu\text{V/m}}$	dB
35.67	20.77	12.3	0.5	V	33.63	40.0	6.37
114.80	21.32	10.3	1.1	V	32.69	43.5	10.81

Wireless Battery Cover

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
33.69	22.01	12.2	0.5	V	34.69	40.0	5.31
42.04	21.86	13.2	0.6	H	35.63	40.0	4.37
109.87	23.72	9.7	1.1	H	34.50	43.5	9.00

Remark

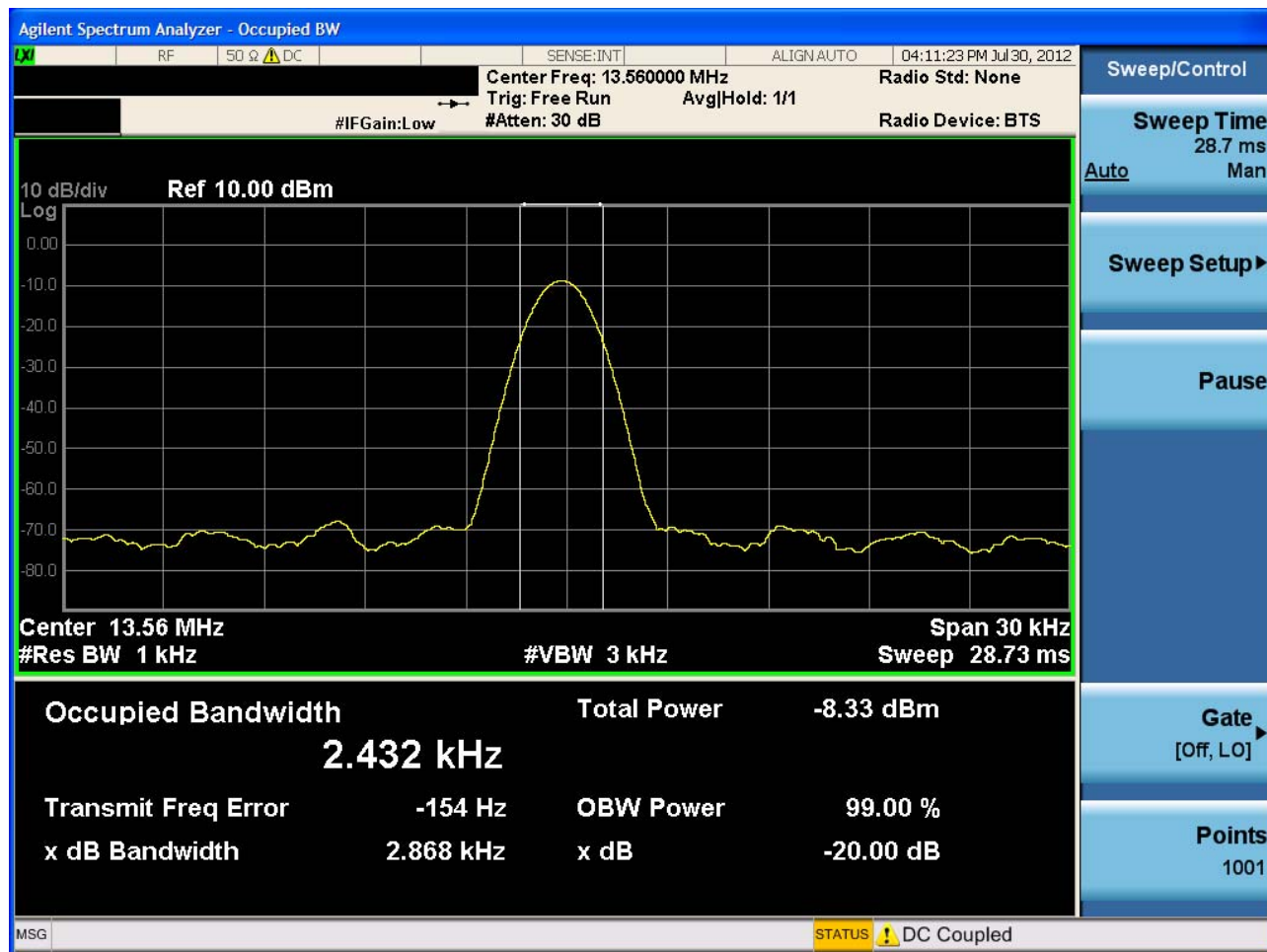
1. Result Level = Read Level + (Antenna Factor+ Cable Loss)
2. Margin = Limit – Result Level

9. EMISSION BANDWIDTH PLOT.

Requirement(s):

Test Set-up: The EUT was connected to a spectrum analyzer.

Test Procedure: The 20 dB bandwidth was measured by using a spectrum analyzer.



FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

10. FREQUENCY TOLERANCE

Procedure: Part 15.225, ANSI 63.10

If required, the operating or transmitting frequency of an intentional radiator should be measured in accordance with the following procedure to ensure that the device operates outside certain precluded frequency bands and within the frequency range. No modulation needs to be supplied to the intentional radiator during these tests, unless modulation is required to produce an output, e.g., single-sideband suppressed carrier transmitters.

The frequency stability of the transmitter is measured by:

- a) Temperature: The temperature is varied from -20°C to + 50°C using an environmental chamber.
- b) For battery operated equipment, the equipment tests shall be performed using a new battery.

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency.

Measurement Result:

VOLTAGE (%)	POWER	Temperature (°C)	Frequency (MHz)	Frequency Error (Hz)
100%	3.7 V	-20	13.560239	399
100%		-10	13.560510	670
100%		0	13.560307	467
100%		10	13.560683	843
100%		20	13.559840	0
100%		30	13.560540	700
100%		40	13.560132	292
100%		50	13.560646	806

Notes:

1. The EUT is supplied with the fully re-charged battery.

11. POWERLINE CONDUCTE EMISSIONS

LIMIT

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolt (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

Test Plots

Unterminate the Antenna

Conducted Emissions (Line 1)

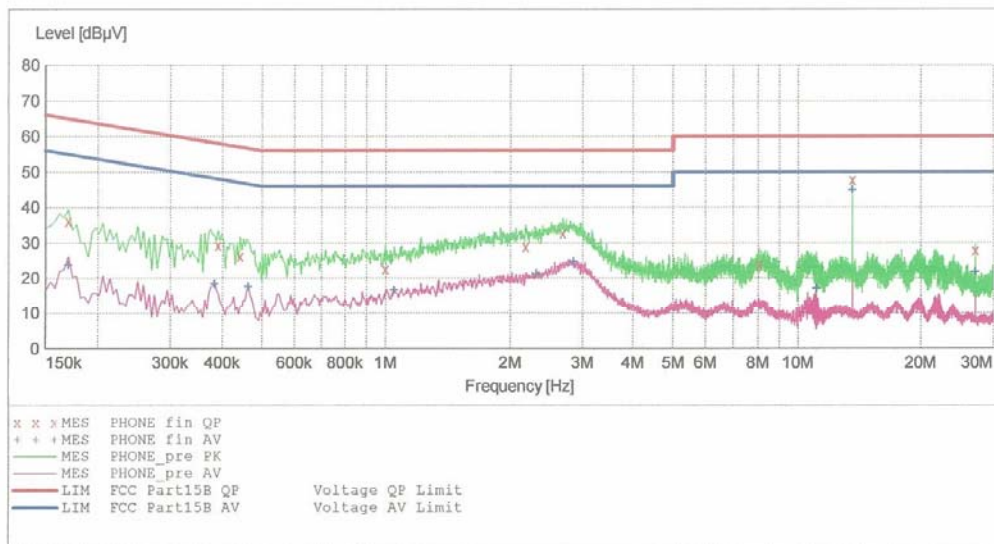
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EMC

EUT: C811
 Manufacturer: NEC CASIO MOBILE COMMUNICATIONS
 Operating Condition: NFC MODE
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 CLASS B
 Comment: N (Unterminated)

SCAN TABLE: "FCC PART 15 B(N)"

Short Description:				FCC PART 15 CLASS B			
Start	Stop	Step	Detector	Meas.	IF	Transducer	
Frequency	Frequency	Width		Time	Bandw.		
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				



MEASUREMENT RESULT: "PHONE_fin_QP"

7/11/2012 10:53AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.170010	36.30	9.9	65	28.7	---	---
0.390010	29.40	9.9	58	28.7	---	---
0.442010	26.40	9.9	57	30.6	---	---
1.000000	22.70	10.0	56	33.3	---	---
2.180000	28.90	10.0	56	27.1	---	---
2.692000	32.70	10.0	56	23.3	---	---
8.068000	23.90	10.4	60	36.1	---	---
13.560000	47.80	10.7	60	12.2	---	---
27.120000	28.00	11.4	60	32.0	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

7/11/2012 10:53AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.170010	23.80	9.9	55	31.1	---	---
0.382010	18.50	9.9	48	29.7	---	---
0.462010	17.70	9.9	47	29.0	---	---
1.052000	16.70	10.0	46	29.3	---	---
2.316000	21.20	10.0	46	24.8	---	---
2.860000	24.70	10.0	46	21.3	---	---
11.056000	17.20	10.5	50	32.8	---	---
13.560000	44.90	10.7	50	5.1	---	---
27.120000	21.80	11.4	50	28.2	---	---

FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC		FCC ID: TYK-JDS9507

Conducted Emissions (Line 2)

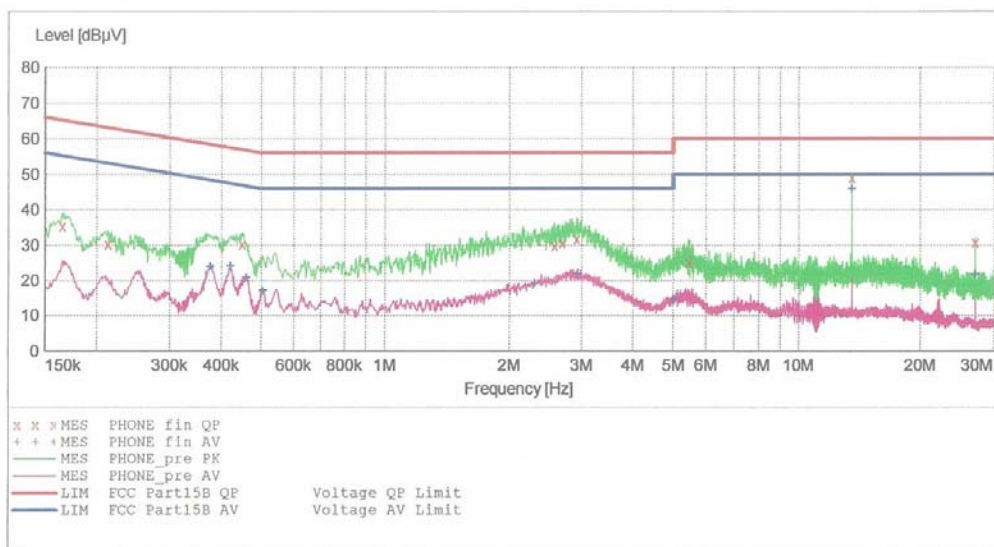
HCT

EMC

EUT: C811
 Manufacturer: NEC CASIO MOBILE COMMUNICATIONS
 Operating Condition: NFC MODE
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 CLASS B
 Comment: H (Unterminated)

SCAN TABLE: "FCC PART 15 B(H)"

Short Description:			FCC PART 15 CLASS B			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.0 kHz	500.0 kHz	1.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

7/11/2012 10:43AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.165010	35.50	9.7	65	29.7	---	---
0.213010	30.40	9.7	63	32.7	---	---
0.449010	30.50	9.7	57	26.4	---	---
2.580000	30.00	9.8	56	26.0	---	---
2.696000	30.80	9.8	56	25.2	---	---
2.924000	31.80	9.9	56	24.2	---	---
5.464000	25.30	10.1	60	34.7	---	---
13.560000	49.00	10.4	60	11.0	---	---
27.120000	30.90	11.0	60	29.1	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

7/11/2012 10:43AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.375010	24.00	9.7	48	24.4	---	---
0.420010	24.10	9.7	47	23.4	---	---
0.460010	21.00	9.7	47	25.7	---	---
0.504000	17.00	9.7	46	29.0	---	---
2.304000	19.40	9.8	46	26.6	---	---
2.940000	22.00	9.9	46	24.0	---	---
5.000000	14.50	10.0	46	31.5	---	---
13.560000	45.90	10.4	50	4.1	---	---
27.120000	21.80	11.0	50	28.2	---	---

FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

Terminate the Antenna

Conducted Emissions (Line 1)

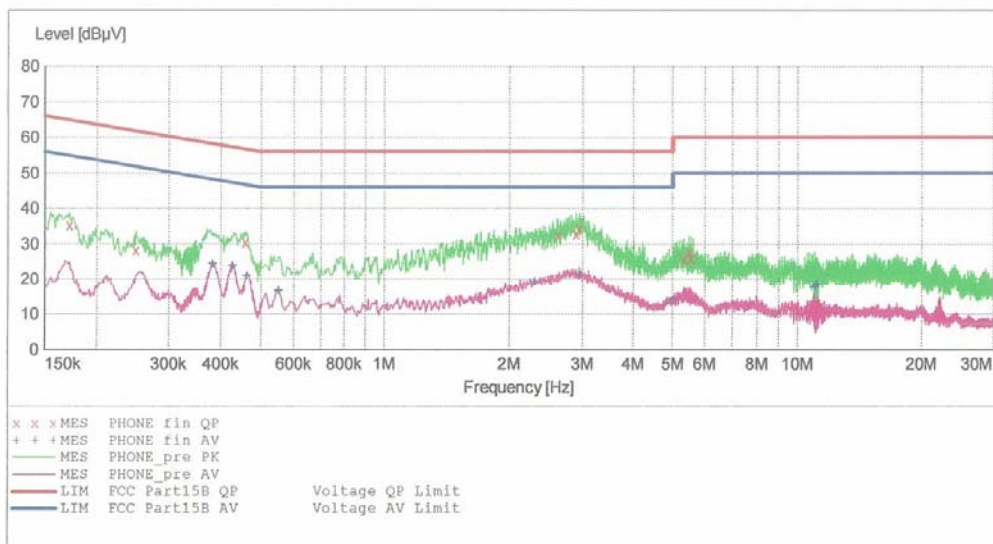
HCT

EMC

EUT: C811
 Manufacturer: NEC CASIO MOBILE COMMUNICATIONS
 Operating Condition: NFC MODE
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 CLASS B
 Comment: H(Terminated)

SCAN TABLE: "FCC PART 15 B(H)"

Short Description:		FCC PART 15 CLASS B				
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	1.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

7/11/2012 11:05AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.172010	35.40	9.7	65	29.5	---	---
0.249010	28.40	9.7	62	33.3	---	---
0.457010	30.60	9.7	57	26.1	---	---
2.620000	32.40	9.8	56	23.6	---	---
2.900000	32.90	9.9	56	23.1	---	---
2.952000	34.50	9.9	56	21.5	---	---
5.324000	25.60	10.1	60	34.4	---	---
5.488000	28.00	10.1	60	32.0	---	---
5.552000	25.90	10.1	60	34.1	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

7/11/2012 11:05AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.382010	24.50	9.7	48	23.7	---	---
0.426010	23.90	9.7	47	23.4	---	---
0.461010	21.20	9.7	47	25.5	---	---
0.552000	16.70	9.7	46	29.3	---	---
2.300000	19.40	9.8	46	26.6	---	---
2.952000	21.40	9.9	46	24.6	---	---
5.000000	14.00	10.0	46	32.0	---	---
11.020000	17.70	10.3	50	32.3	---	---
11.104000	18.70	10.3	50	31.3	---	---

FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

Conducted Emissions (Line 2)

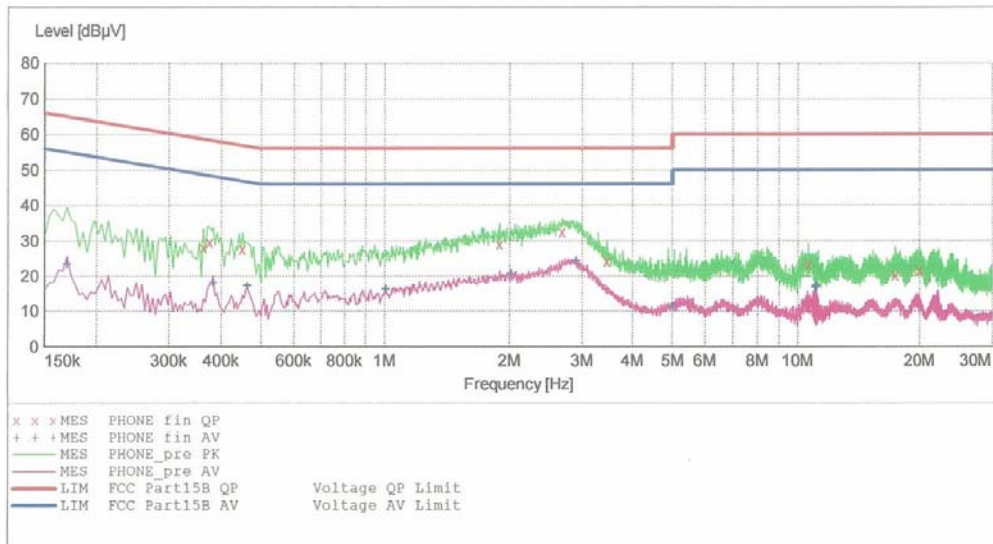
HCT

EMC

EUT: C811
 Manufacturer: NEC CASIO MOBILE COMMUNICATIONS
 Operating Condition: NFC MODE
 Test Site: SHIELD ROOM
 Operator: JS LEE
 Test Specification: FCC PART15 CLASS B
 Comment: N(Terminated)

SCAN TABLE: "FCC PART 15 B(N)"

Short Description:			FCC PART 15 CLASS B			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	4.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

7/11/2012 10:57AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.362010	28.20	9.9	59	30.5	---	---
0.374010	29.70	9.9	58	28.7	---	---
0.450010	27.70	9.9	57	29.2	---	---
1.892000	29.10	10.0	56	26.9	---	---
2.692000	32.50	10.0	56	23.5	---	---
3.460000	24.30	10.1	56	31.7	---	---
10.620000	23.40	10.5	60	36.6	---	---
17.388000	20.30	10.9	60	39.7	---	---
19.924000	21.90	11.0	60	38.1	---	---

MEASUREMENT RESULT: "PHONE_fin AV"

7/11/2012 10:57AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.170010	23.40	9.9	55	31.6	---	---
0.382010	18.30	9.9	48	29.9	---	---
0.462010	17.20	9.9	47	29.4	---	---
1.008000	16.30	10.0	46	29.7	---	---
2.016000	20.70	10.0	46	25.3	---	---
2.904000	24.40	10.1	46	21.6	---	---
5.000000	11.40	10.2	46	34.6	---	---
11.016000	16.70	10.5	50	33.3	---	---
11.056000	17.20	10.5	50	32.8	---	---

FCC PT.15.225 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1208FR07	Date of Issue: August 06, 2012	EUT Type: CDMA/GSM/WCDMA/LTE Phone with Bluetooth/WLAN/NFC	FCC ID: TYK-JDS9507

12. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ENV216/ LISN	Annual	02/09/2013	100073
Schwarzbeck	VULB 9168/ TRILOG Antenna	Biennial	02/09/2013	200
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	05/03/2013	831564103
Agilent	E4440A/ Spectrum Analyzer	Annual	05/02/2013	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	Annual	09/23/2012	MY51110020
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	Annual	09/19/2012	10094
MITEQ	AFS44-00102650-42-10P-44-PS/ POWER AMP	Annual	09/23/2012	1532439
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	10/17/2013	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	Biennial	10/26/2012	BBHA9170342
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	02/09/2013	839117/011
Agilent	E4440A / Spectrum Analyzer	Annual	05/02/2013	US45303008
Agilent	E4416A /Power Meter	Annual	11/07/2012	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	05/02/2013	MY4442009
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	05/02/2013	1
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	05/02/2013	1
Hewlett Packard	11636B/Power Divider	Annual	11/07/2012	11377
Hewlett Packard	11667B / Power Splitter	Annual	06/05/2013	05001
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	11/07/2012	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/07/2012	010002156287001199
TESCOM	TC-3000C / BLUETOOTH TESTER	Annual	11/14/2012	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2013	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/11/2014	9009-2536
MITEQ	AMF-6D-001180-35-20P/ POWER AMP	Annual	12/26/2012	990893
EMCO	6502,LOOP ANTENNA	Biennial	01/11/2014	9009-2536