



HCT CO., LTD.

Product Compliance Division

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CERTIFICATE OF COMPLIANCE

FCC Certification

Applicant Name:

Nokia, Inc.

12278 Scripps Summit Drive, San Diego, CA 92131

Date of Issue:

May 11, 2009

Location:

HCT CO., LTD., San 136-1 Ami-ri, Bubal-eup, Icheon-si,
Kyungki-do, Korea

Test Report No.: HCT-RF09-0418-3

HCT FRN: 0005866421

IC Recognition No.: IC 5944A

FCC ID: QMNRM-526

IC: 661X-RM526

APPLICANT: Nokia, Inc.

Model(s): RM-526

EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR

Max. RF Output Power: GFSK : 1.20dBm(1.32 mW) , EDR : 2.95 dBm(1.97 mW)

Frequency Range: 2402 - 2480 MHz (Bluetooth)

Modulation type: GFSK, PSK

FCC Classification: FCC Part 15 Frequency Hopping Spread Spectrum Transceiver

FCC Rule Part(s): Part 15 subpart C 15.247

IC Rule : RSS-210 Issue 7_June 2007, RSS-GEN Issue 2_June 2007

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 been denied FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S.C. 862

Report prepared by

: Hyo Sun Kwak

Test engineer of RF Part

Approved by

: Sang Jun Lee

Manager of RF Part

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT				www.hct.co.kr
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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF09-0418-1	April 27, 2009	Test information update Rule change of 7.6.4 Receiver Spurious Emissions Modified the section 7.7 drawing
HCT-RF09-0418-2	April 30, 2009	Remove Receiver spurious emission data Add the measurement uncertainty Correct the information of LISN Add the version for IC rule
HCT-RF09-0418-3	May 11, 2009	Change the BT antenna information

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1. GENERAL INFORMATION

Applicant: Nokia, Inc.
Address: 12278 Scripps Summit Drive, San Diego, CA 92131
FCC ID: QMNRM-526
IC CODE: 661X-RM526
EUT: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR
Model: RM-526
Date of Test: March 26, 2009
Contact person: Name: Sang Won, Bang
Phone #: +858 – 831 - 5000
Fax #: +858 – 831 - 6500

2. EUT DESCRIPTION

Product		Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	
Model Name		RM-526	
Serial No.:		A00000016703A3, A00000016703A1	
HW Version :		3000	
SW Version :		VN_2040T13_VZW_108	
Power Supply		DC 3.7 V	
Battery	Model Name:	BL-4C(Standard)	BL-10C(Extended)
	Power Rating:	3.7V , 860 mAh	3.7 V ,1786 mAh
	Type:	Li-ion	Li-ion
Frequency Range		2402 ~ 2480 MHz	
Transmit Power		GFSK : 1.20dBm (1.32 mW) , EDR : 2.95 dBm (1.97 mW)	
Modulation Type		GFSK(Normal), PSK(EDR)	
Modulation Technique		FHSS	
Number of Channels		79 Channels	
Antenna Specification		Manufacturer: EMW Antenna Co., Ltd. Antenna type: Chip Antenna Peak Gain : -0.42 dBi	

※ 15.247 Requirements for Bluetooth transmitter.

- This Bluetooth module has been tested by a Bluetooth Qualification Lab, and we confirm the following:
 - 1) This system is hopping pseudo randomly.
 - 2) Each frequency is used equally on the average by each transmitter.
 - 3) The receiver input bandwidths that match the hopping channel bandwidths of their corresponding transmitters
 - 4) The receiver shifts frequencies in synchronization with the transmitted signals.
- 15.247(g): The system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this Section 15.247 should the transmitter be presented with a continuous data (or information) stream.
- 15.247(h): The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

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3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz(ANSI C63.4-2003) and FCC Public Notice DA 00-705 dated March 30, 2000 entitled “Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems” were used in the measurement of the **Nokia, Inc.**

Dual-Band CDMA/EVDO Phone with+BT2.1+EDR FCC ID: QMNRM-526

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 15.247 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 13.1.4.1 of ANSI C63.4. (Version :2003) 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 13.1.4.1 of ANSI C63.4. (Version: 2003)

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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.

Channel low, mid and high with highest data rate (worst case) is chosen for full testing.

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 open area test site and conducted measurement facility used to collect the radiated data are located at the 254-1, Maekok-Ri, Hobup-Myun, Ichon-Si, Kyongki-Do, 467-701, KOREA. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2003) and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated July 6, 2006(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."

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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

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7. FCC PART 15.247 REQUIREMENTS

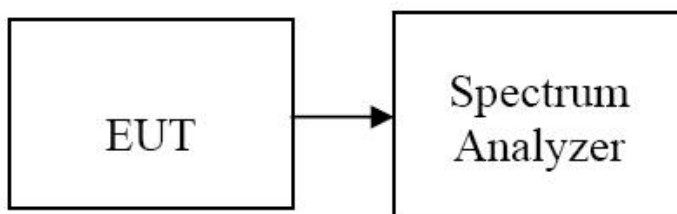
7.1 PEAK POWER

LIMIT

The maximum peak output power of the intentional radiator shall not exceed the following:

1. For systems using digital modulation in the bands of 902 ~ 928 MHz, 2400 ~ 2483.5 MHz, and 5725 ~ 5850 MHz: 1 watt.
2. Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Configuration



TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer. The Spectrum Analyzer is set to the peak detector mode.

1. Span = 5 MHz (GFSK) / 5 MHz (8DPSK)
2. RBW = 3 MHz (GFSK) / 3 MHz (8DPSK)
3. VBW = 3 MHz (GFSK) / 3 MHz (8DPSK)
4. Sweep = auto
5. Packet type= DH5 (GFSK) / 3-DH5 (8DPSK)

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Measurement Uncertainty

Contributions	Probability Distribution	Standard Uncertainty (dB)
Absolute error	Rectangular	0.29
Frequency response	Rectangular	1.44
Error of bandwidth switching	Rectangular	0.12
Drift of temperature for DUT	Rectangular	0.15
Time-duty cycle error for DUT	Rectangular	0.05
Supply voltage dependency for DUT	Rectangular	0.08
Mismatch: Spectrum : Divider	U-Shaped	0.26
Mismatch: Divider : DUT	U-Shaped	0.16
Combined standard uncertainty	1.52	
Expanded uncertainty (confidence interval of 95.45 %, Coverage Factor of $k = 2$)	3.04	

TEST RESULTS

No non-compliance noted

Test Data

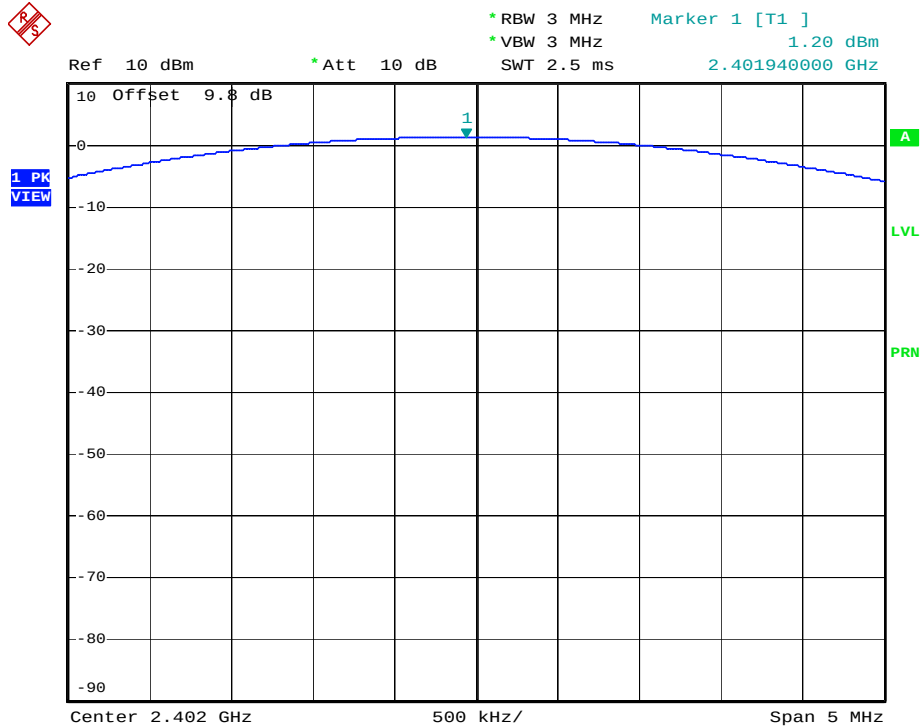
Channel	Frequency (MHz)	Output Power(GFSK)		Output Power(8DPSK)		Limit (W)	Result
		(dBm)	(mW)	(dBm)	(mW)		
Low	2402	1.20	1.32	2.95	1.97	1	PASS
Mid	2441	0.67	1.17	2.23	1.67		PASS
High	2480	0.50	1.12	2.23	1.67		PASS



Test Plots

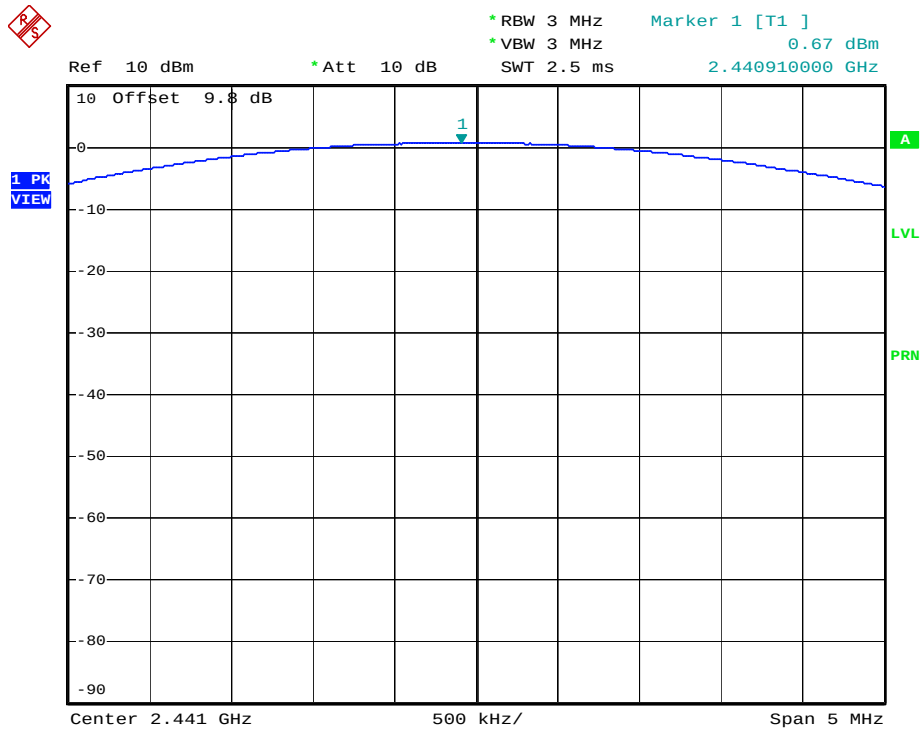
(GFSK)

Peak Power (Low CH)



Date: 26.MAR.2009 08:35:13

Peak Power (Mid CH)

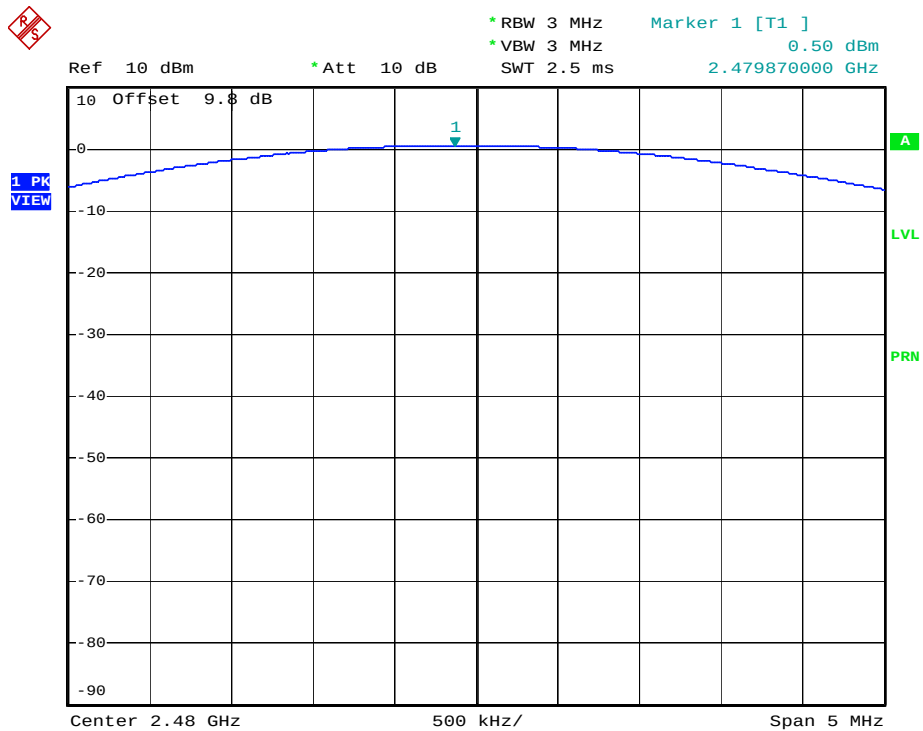


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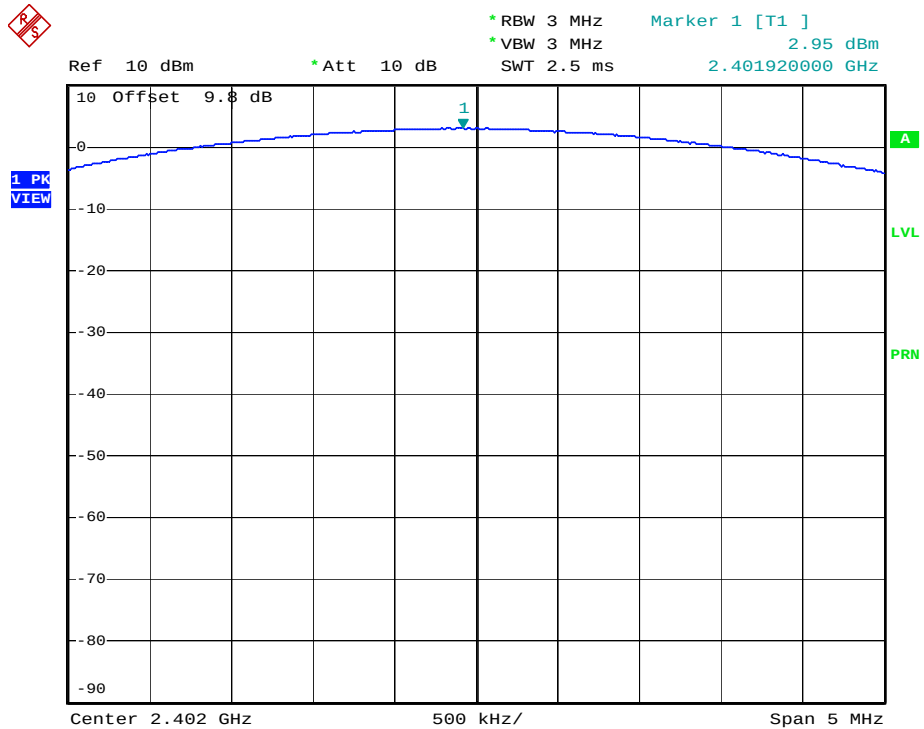
Peak Power (High CH)



Date: 26.MAR.2009 08:36:30

(8DPSK)

Peak Power (Low CH)

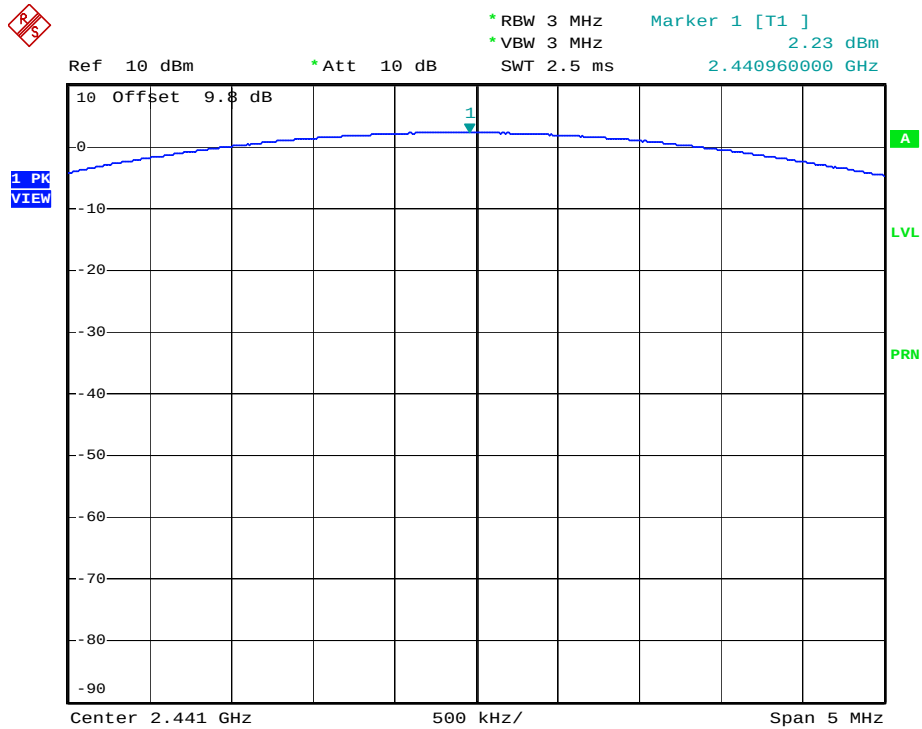


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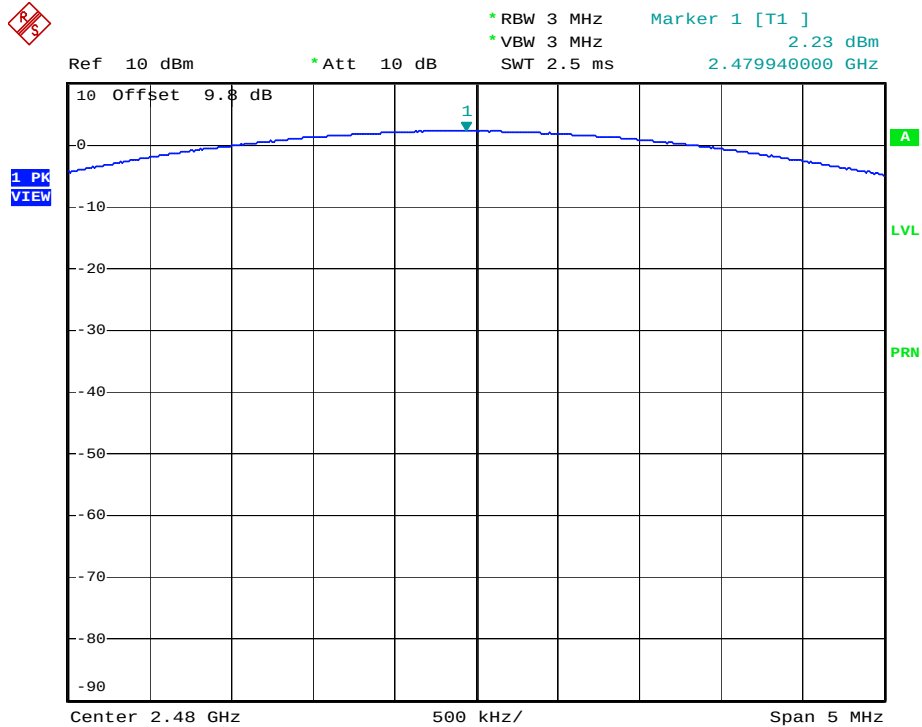


Peak Power (Mid CH)



Date: 26.MAR.2009 08:37:58

Peak Power (High CH)



Date: 26.MAR.2009 08:38:31

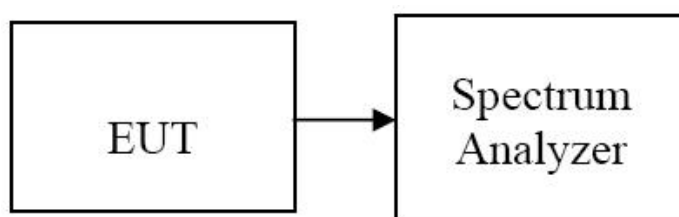
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7.2 BAND EDGES MEASUREMENT

LIMIT

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Test Configuration



TEST PROCEDURE

The spectrum analyzer is set to :

1. Span = 8 MHz
2. RBW = 100 kHz
3. VBW = 300 kHz
4. Sweep = auto
5. Detector Mode = Peak

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Measurement Uncertainty

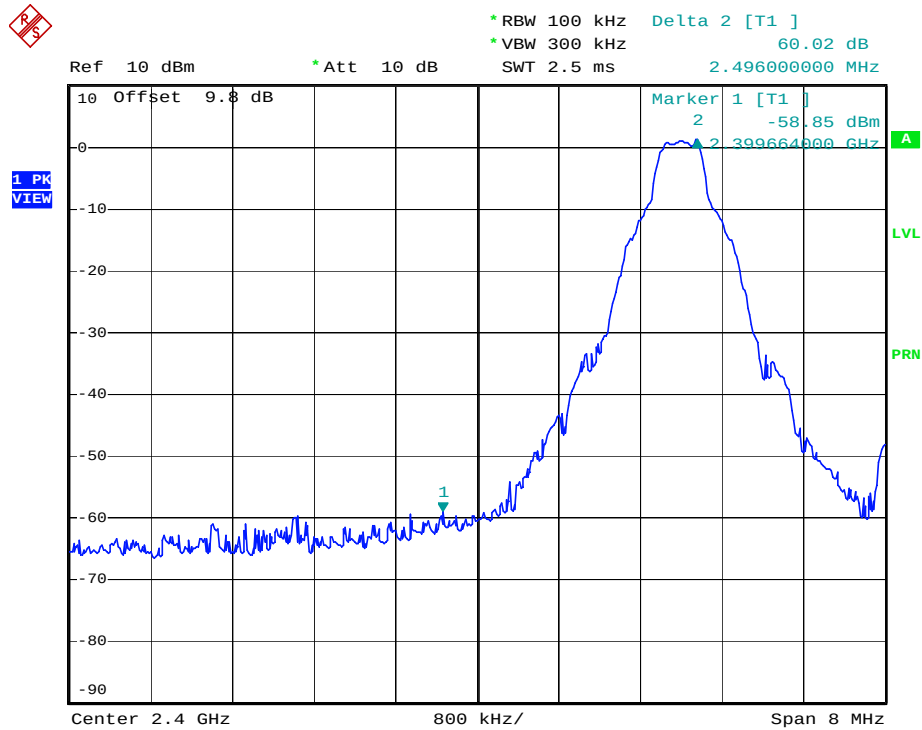
Contributions	Probability Distribution	Standard Uncertainty (dB)
Absolute error	Rectangular	0.29
Frequency response	Rectangular	1.44
Error of bandwidth switching	Rectangular	0.12
Drift of temperature for DUT	Rectangular	0.15
Time-duty cycle error for DUT	Rectangular	0.05
Supply voltage dependency for DUT	Rectangular	0.08
Mismatch: Spectrum : Divider	U-Shaped	0.26
Mismatch: Divider : DUT	U-Shaped	0.16
Combined standard uncertainty	1.52	
Expanded uncertainty (confidence interval of 95.45 %, Coverage Factor of $k = 2$)	3.04	

TEST RESULTS

See attached.

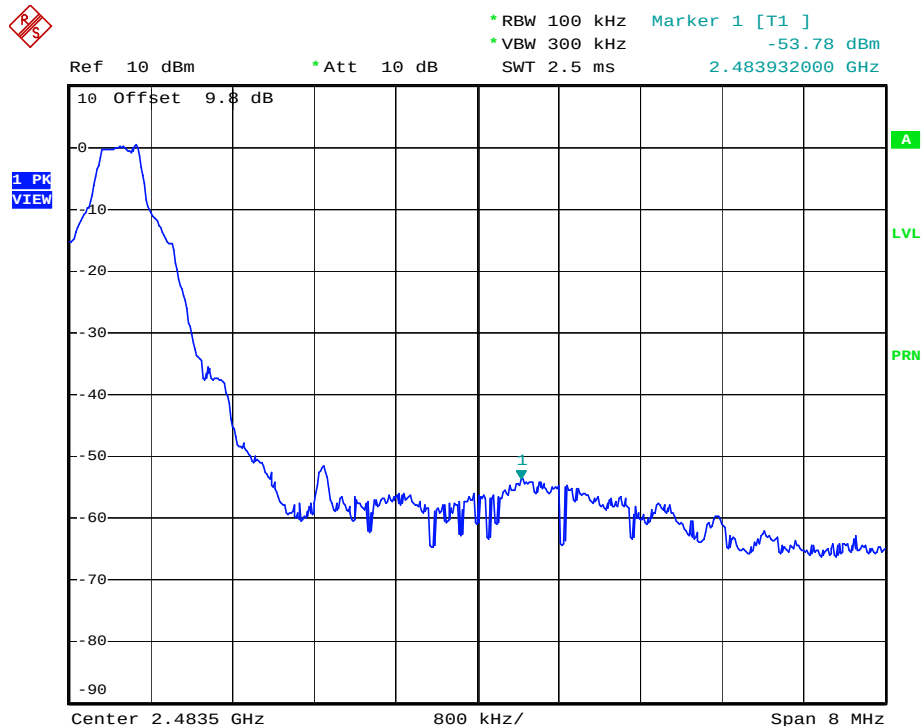
Test Data (GFSK)

Band Edges (Low- CH)



Date: 26.MAR.2009 08:39:43

Band Edges (High-CH)

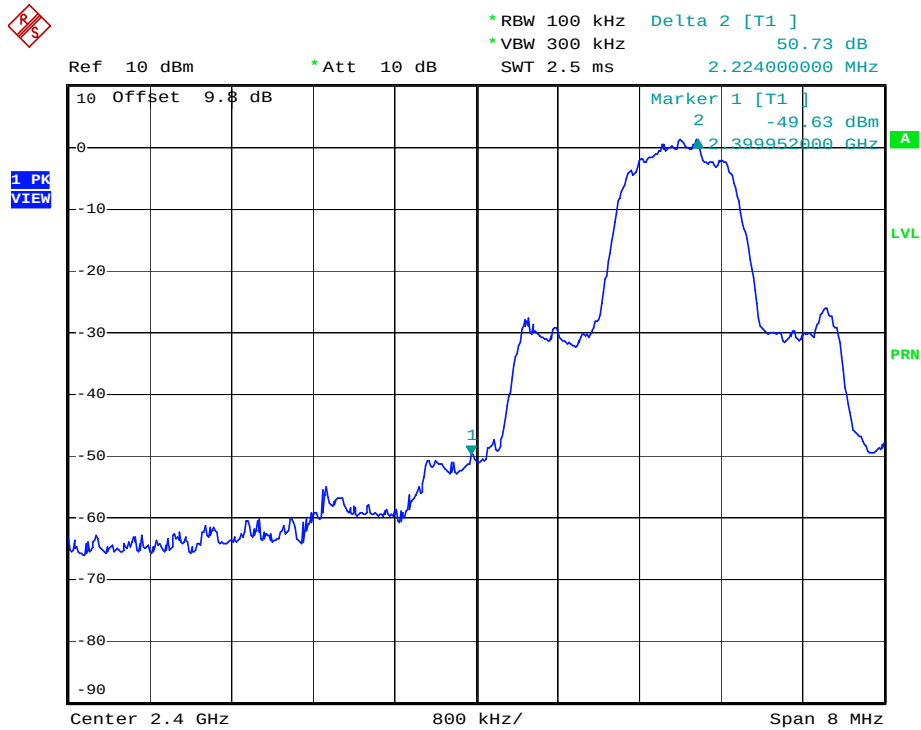


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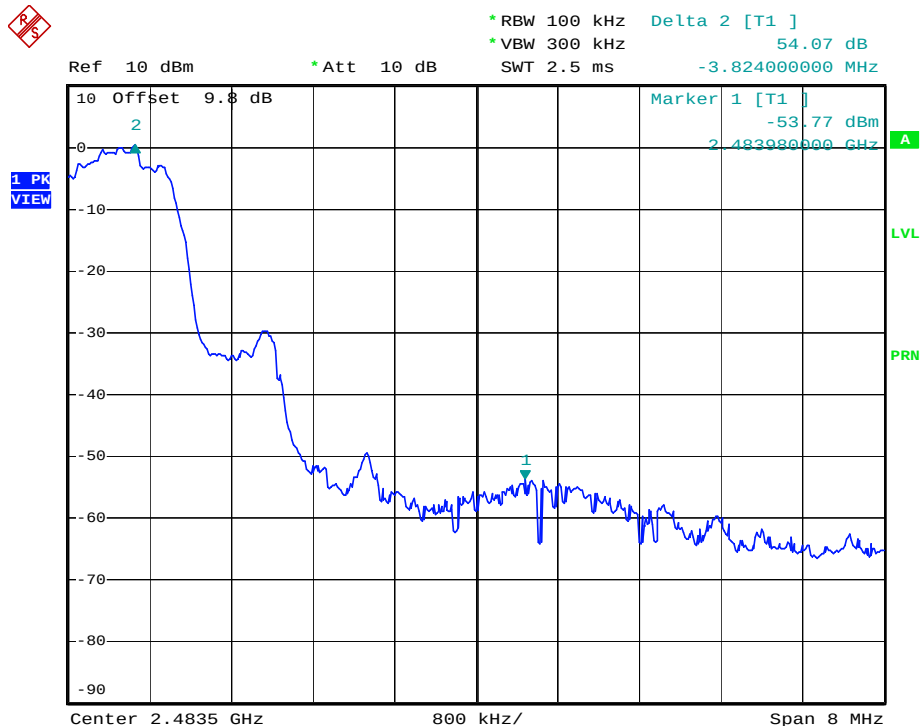
Test Data (8DPSK)

Band Edges (Low- CH)



Date: 26.MAR.2009 08:42:15

Band Edges (High-CH)



Date: 26.MAR.2009 08:47:10

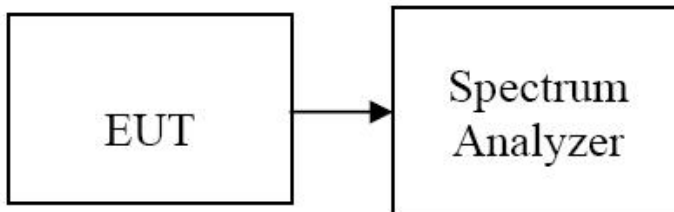
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7.3 FREQUENCY SEPARATION

LIMIT

According to §15.247(a)(1), Frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

Test Configuration



TEST PROCEDURE

The spectrum analyzer is set to :

1. Span = 3 MHz
2. RBW = 30 kHz
3. VBW = 100 kHz
4. Sweep = auto

The trace was allowed to stabilize. The marker-delta function was used to determine the separation between the peaks of the adjacent channels.

Measurement Uncertainty

Contributions	Probability Distribution	Standard Uncertainty (Hz)
Year aging of oscillator	Rectangular	721.69
Drift of temperature	Rectangular	72.17
Marker count accuracy	Rectangular	721.69
DUT drift of temperature	Rectangular	115.47
Combined standard uncertainty	1029.66	
Expanded uncertainty (confidence interval of 95.45 %, Coverage Factor of $k = 2$)	2059.33	



TEST RESULTS

No non-compliance noted

Test Data

Channel Separation (kHz)		20dB Bandwidth (kHz)			Limit (kHz)	Result
GFSK	8DPSK	Channel	GFSK	8DPSK		
996	846	Low CH	1044	1302	>25	Pass
		Middle CH	1044	1326		
		High CH	1044	1320		

Occupied Bandwidth (99% BW)

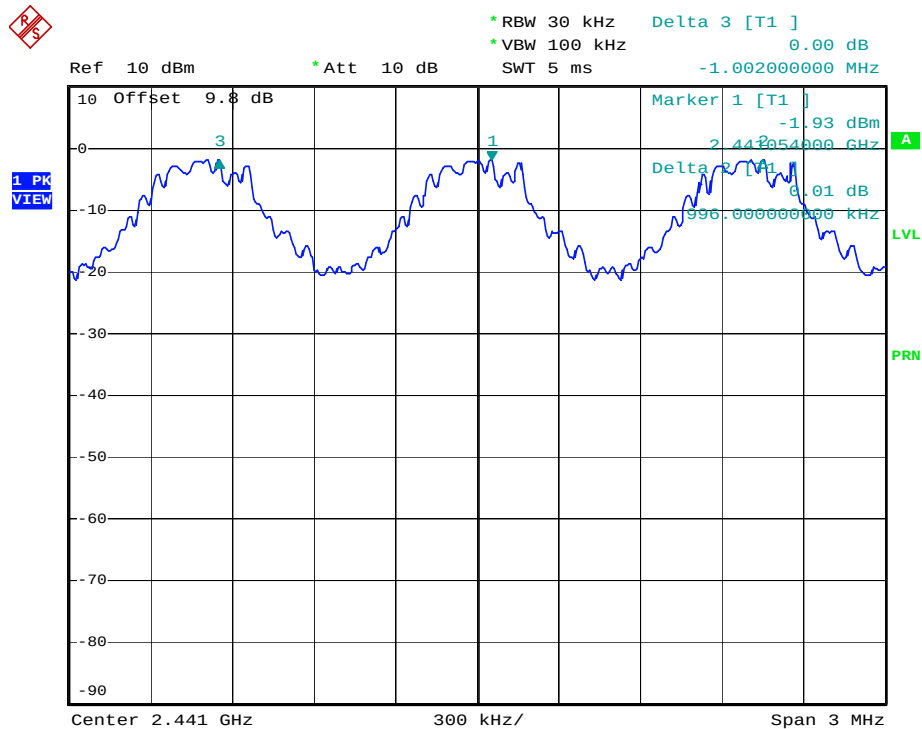
99% BW (KHz)			Result
Channel	GFSK	8DPSK	
Low CH	918	1212	Pass
Middle CH	924	1212	
High CH	930	1206	

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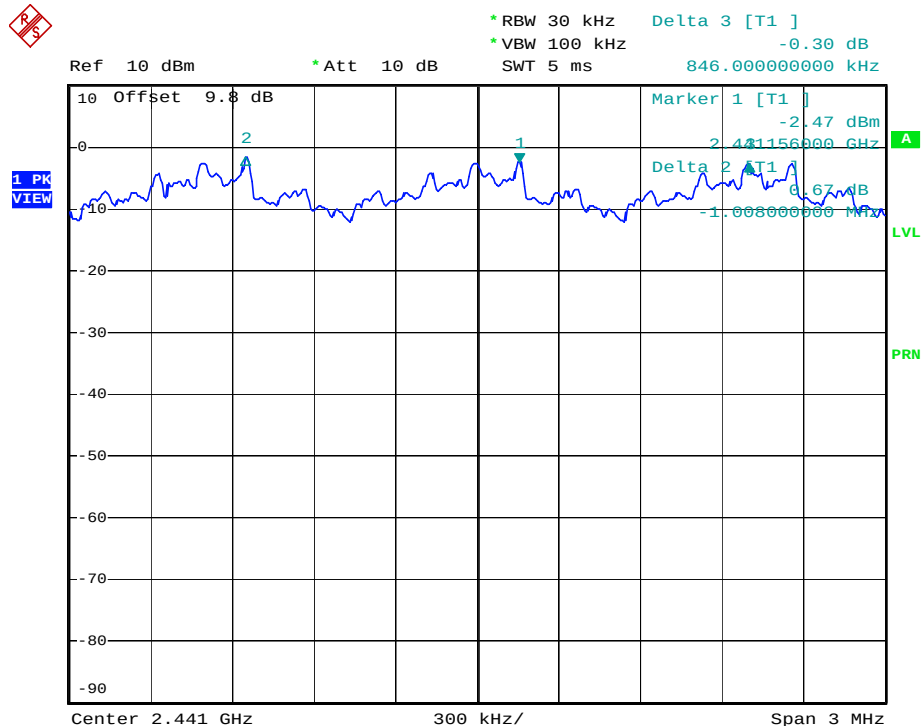
Test Plot

Measurement of Channel Separation(GFSK)



Date: 26.MAR.2009 08:49:26

Measurement of Channel Separation(8DPSK)



Date: 26.MAR.2009 08:51:08

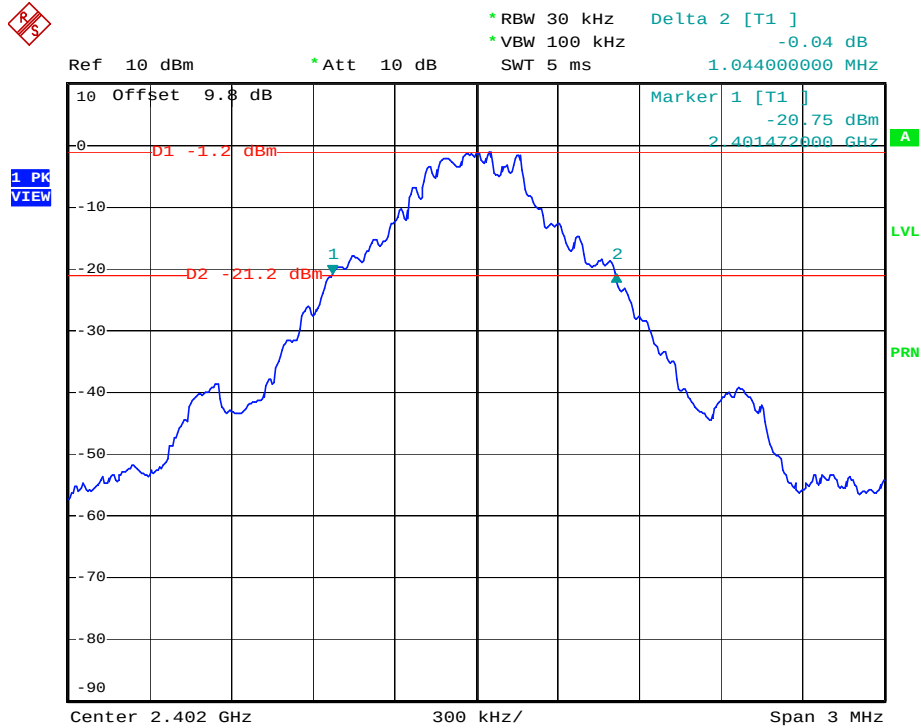
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Test Plot (GFSK)

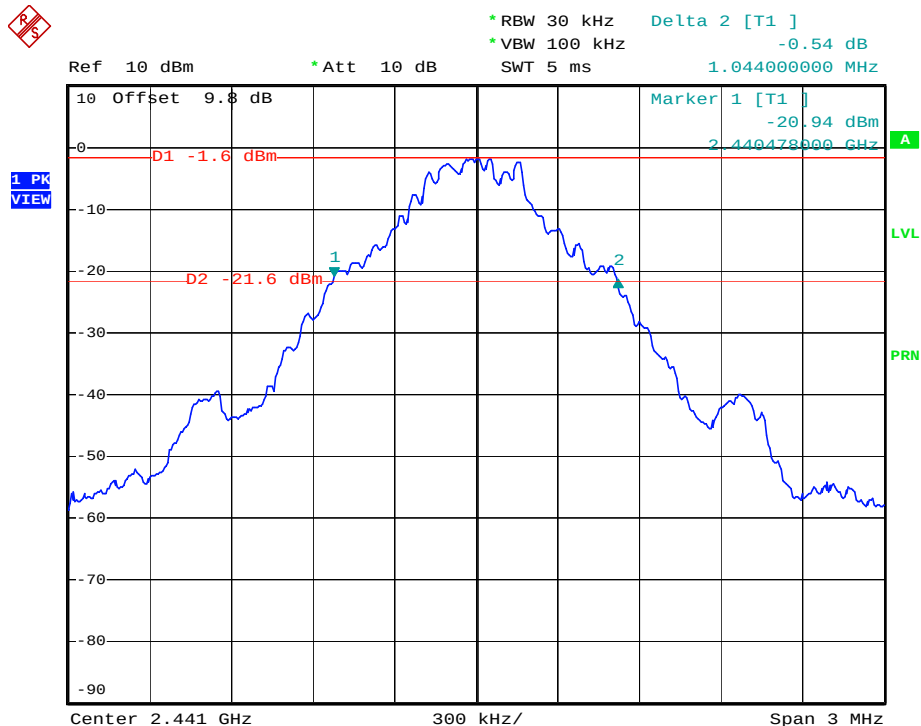
20 dB bandwidth

(Low CH)



Date: 26.MAR.2009 08:01:53

(Mid CH)

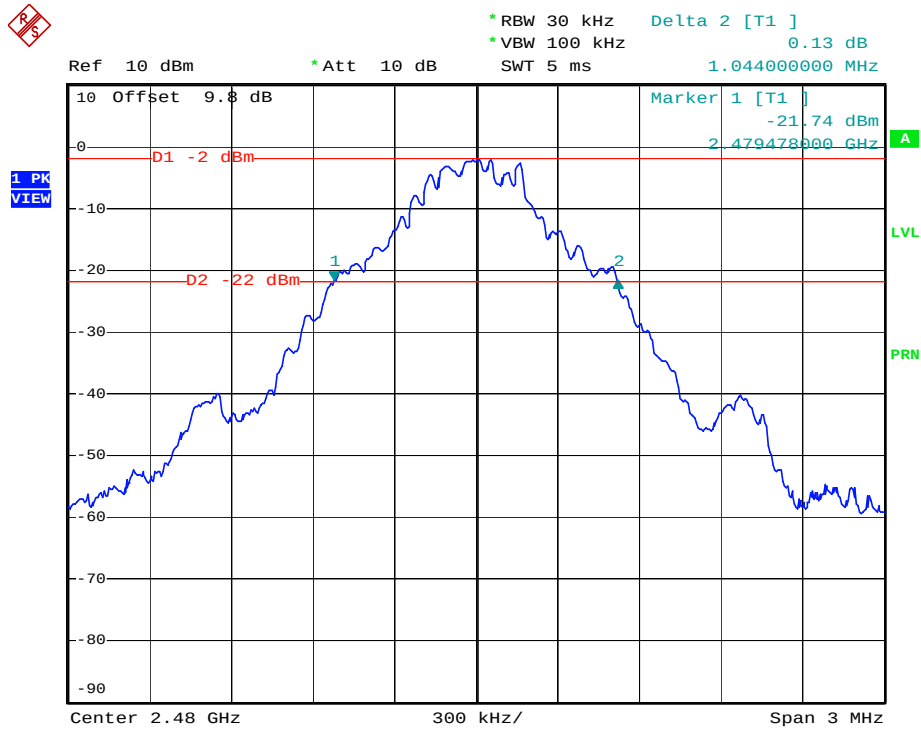


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(High CH)

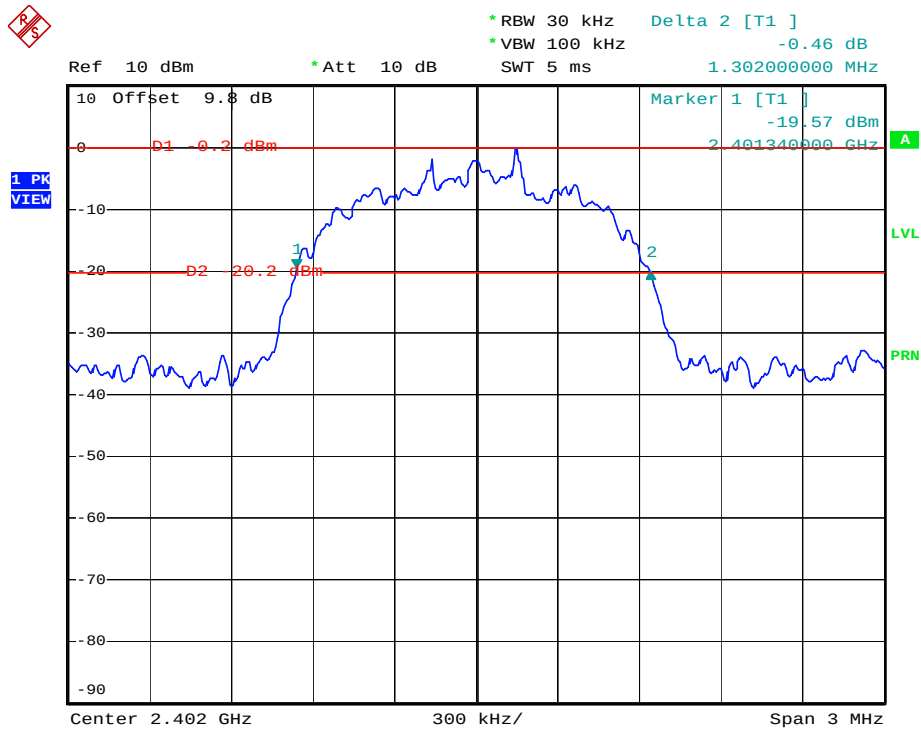


Date: 26.MAR.2009 08:04:47

Test Plot (8DPSK)

20 dB bandwidth

(Low CH)

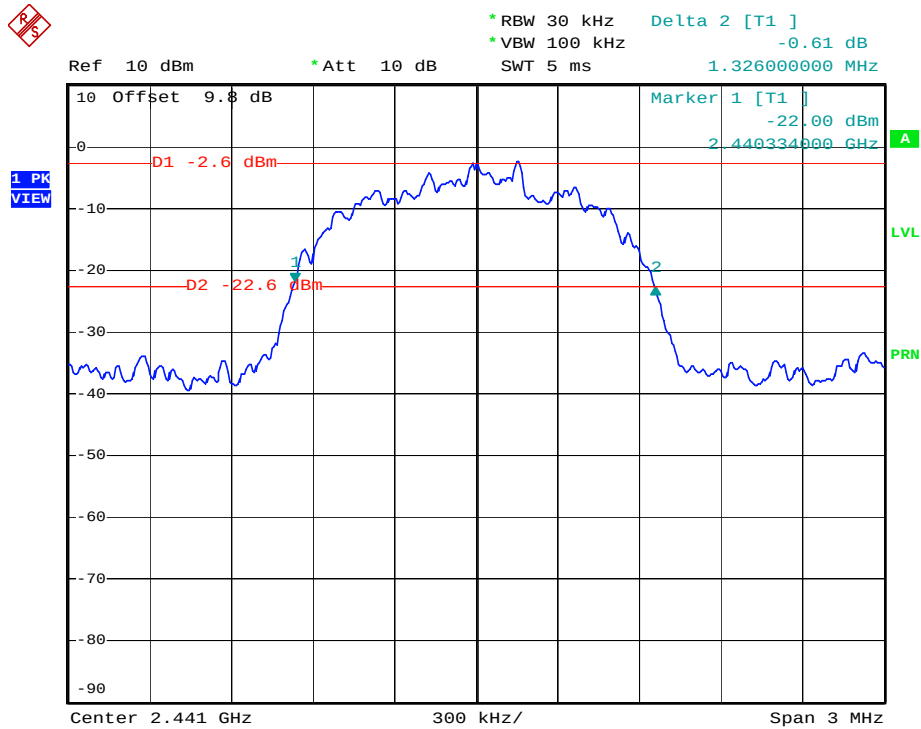


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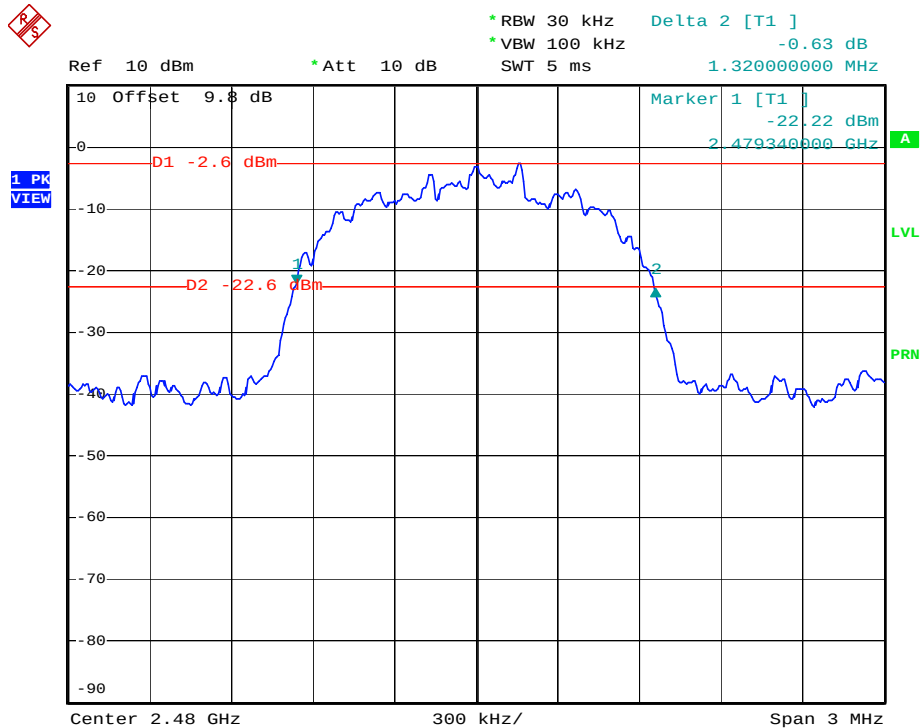


(Mid CH)



Date: 26.MAR.2009 08:07:56

(High CH)



Date: 26.MAR.2009 08:09:46

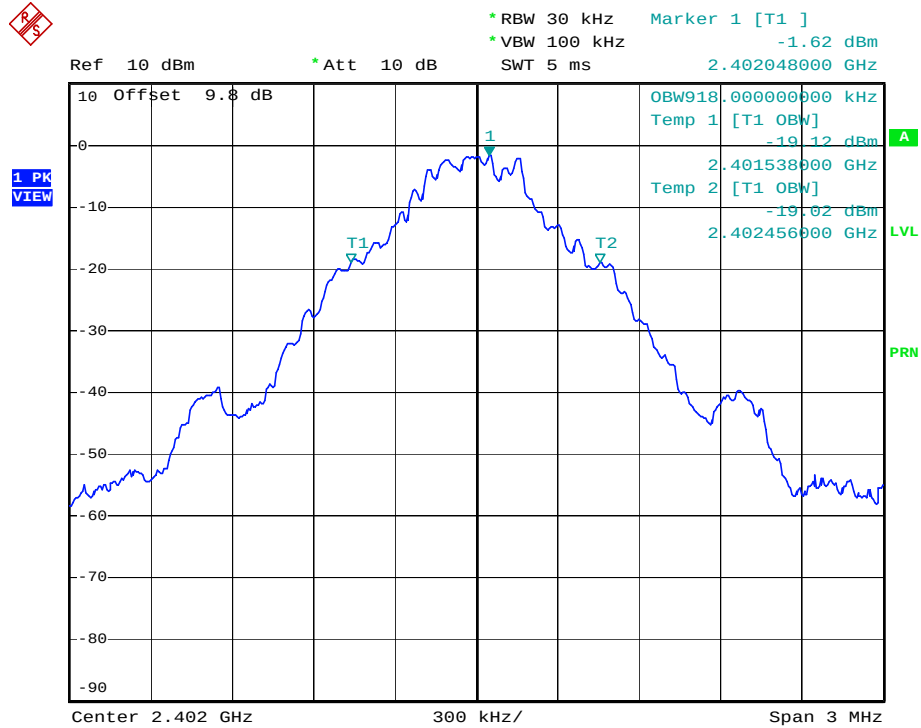
HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



Test Plot

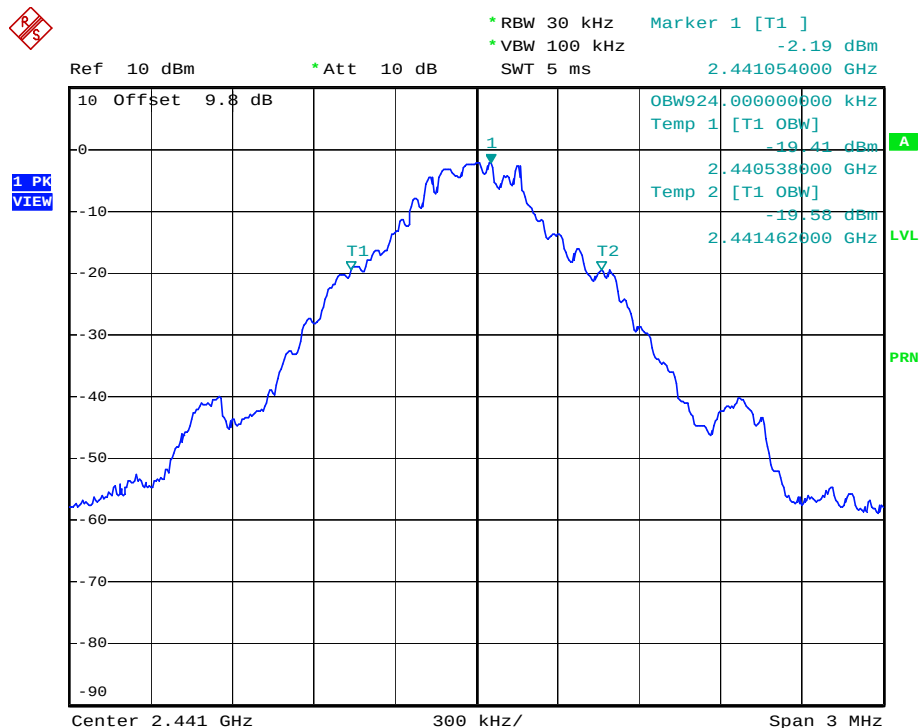
Measurement of Occupied Bandwidth (GFSK)

(Low CH)



Date: 16.APR.2009 11:26:45

(Mid CH)

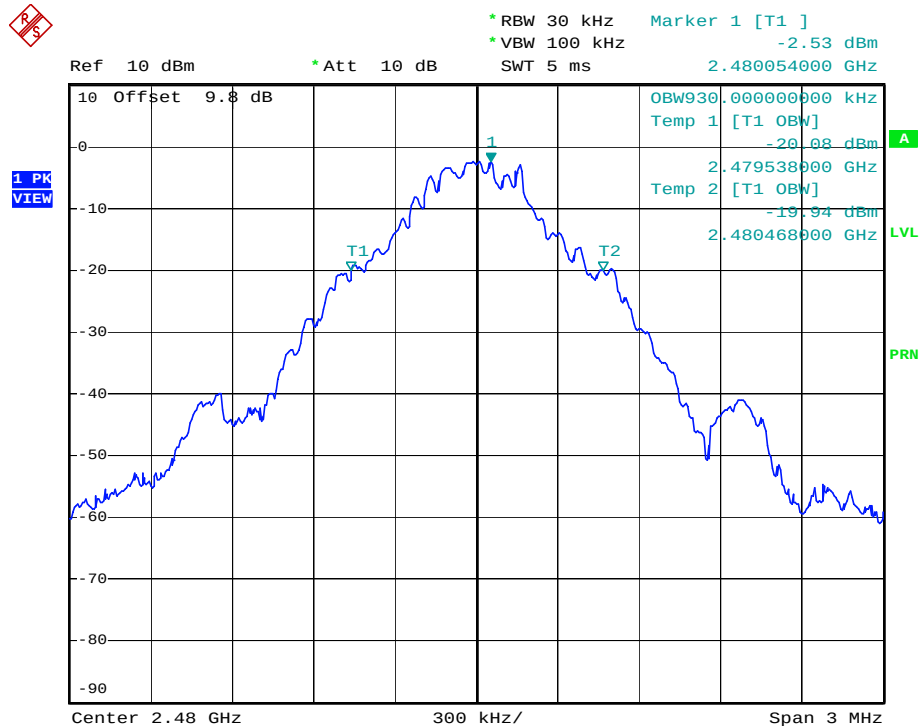


Date: 16.APR.2009 11:28:09

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



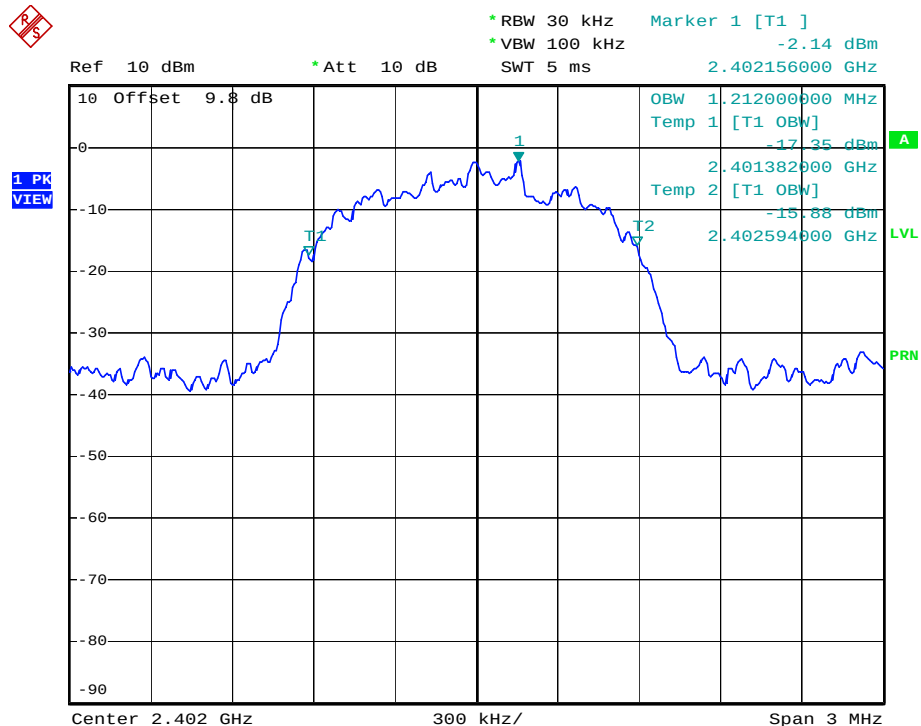
(High CH)



Date: 16.APR.2009 11:29:27

Measurement of Occupied Bandwidth (8DPSK)

(Low CH)

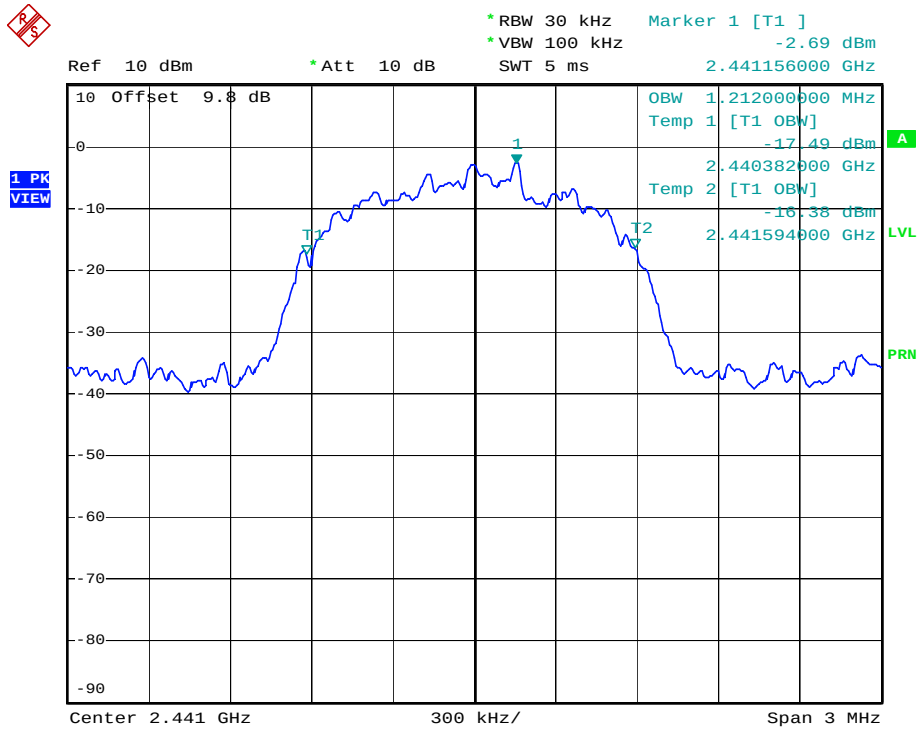


Date: 16.APR.2009 11:30:35

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

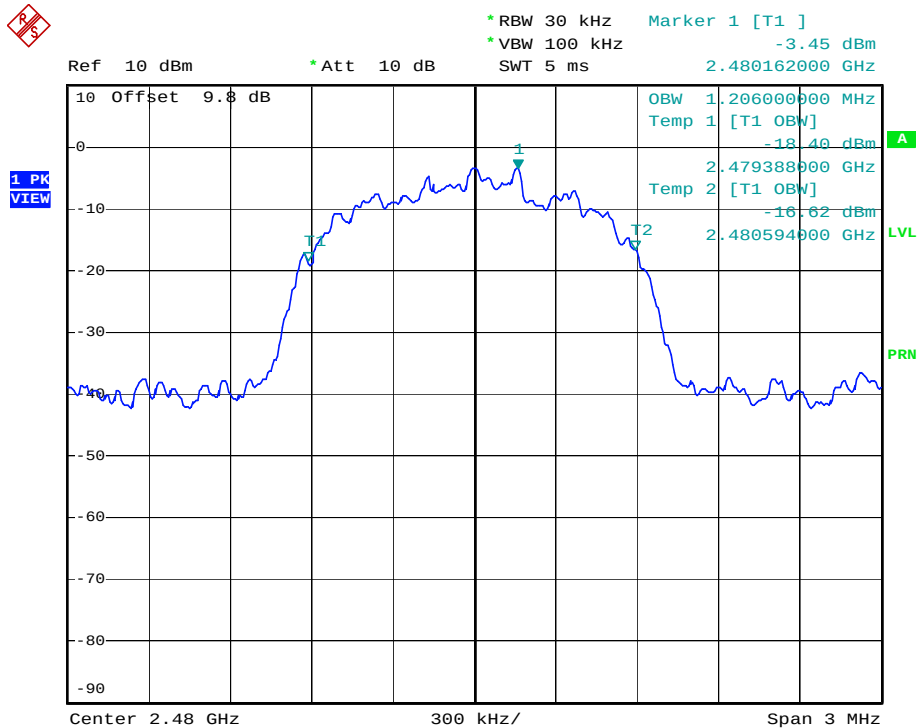


(Mid CH)



Date: 16.APR.2009 11:32:25

(High CH)



Date: 16.APR.2009 11:33:16

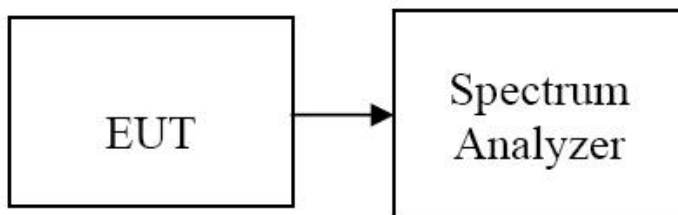
HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

7.4 NUMBER OF HOPPING FREQUENCY

LIMIT

According to §15.247(a)(1)(ii), Frequency hopping systems operating in the 2400 MHz ~ 2483.5 MHz bands shall use at least 15 hopping frequencies.

Test Configuration



TEST PROCEDURE

The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer was set to :

1. Span = the frequency band of operation (Start = 2400 MHz, Stop = 2483.5 MHz)
2. RBW = 300 kHz
3. VBW = 300 kHz
4. Sweep = auto

The trace was allowed to stabilize.

Measurement Uncertainty

N/A

TEST RESULTS

No non-compliance noted

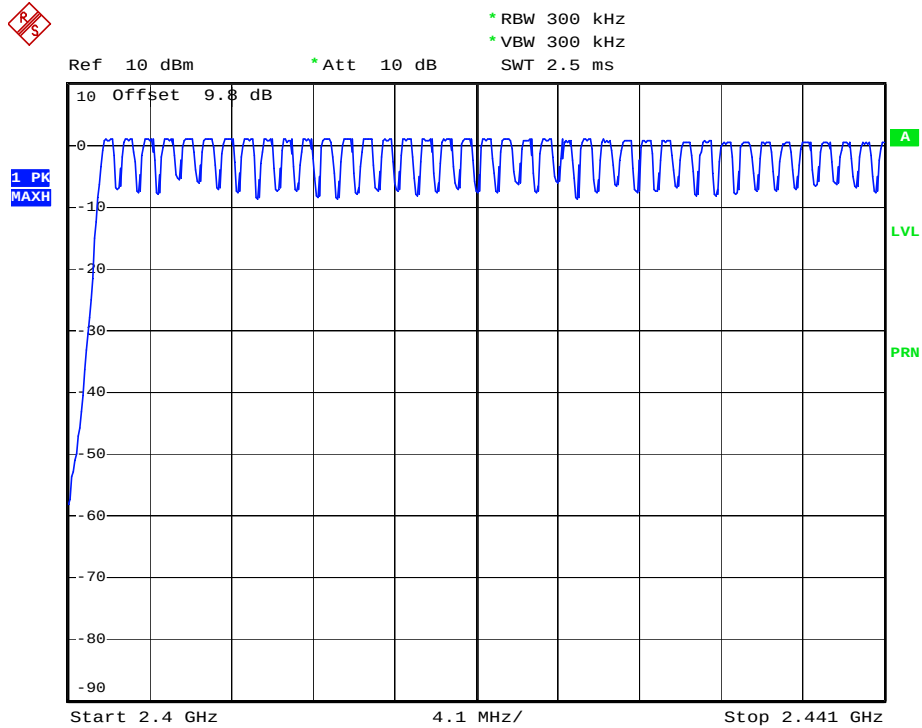
Test Data

Result (No. of CH)	Limit (No. of CH)	Result
79	>75	Pass

Test Plot

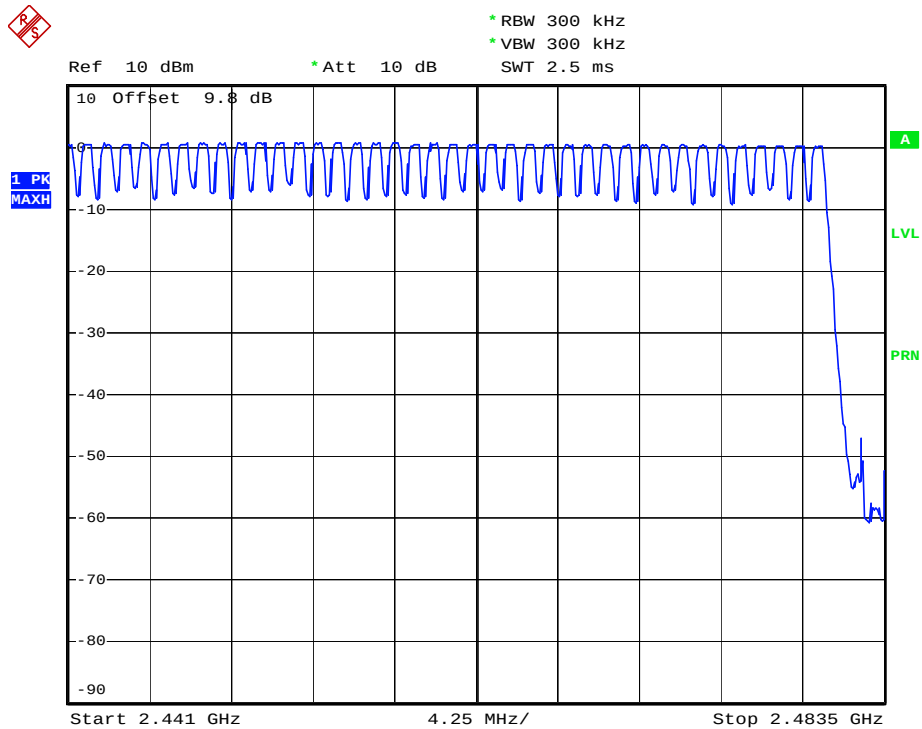
Number of Channels (GFSK)

2.4 GHz – 2.441 GHz



Date: 26.MAR.2009 08:52:45

2.441 GHz – 2.4835 GHz



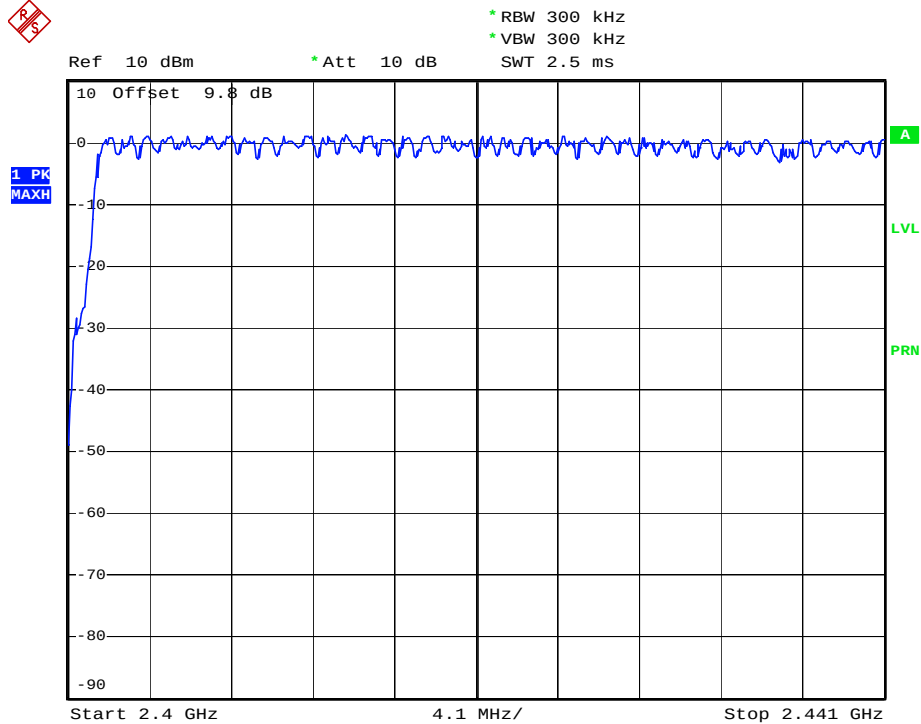
Date: 26.MAR.2009 08:54:59

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



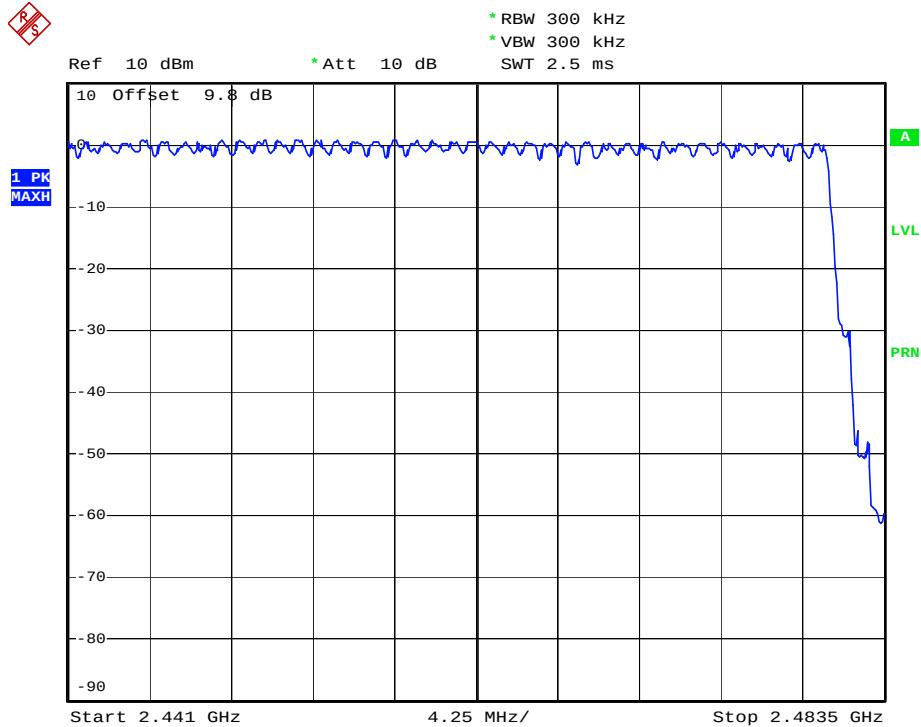
Number of Channels (8DPSK)

2.4 GHz – 2.441 GHz



Date: 26.MAR.2009 08:56:06

2.441 GHz – 2.4835 GHz



Date: 26.MAR.2009 08:57:30

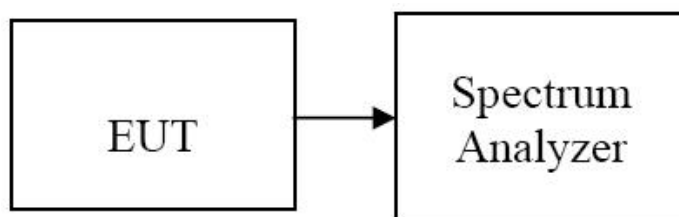
HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

7.5 TIME OF OCCUPANCY (DWELL TIME)

LIMIT

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400 MHz ~ 2483.5 MHz bands. The average time of occupancy on any channels shall not greater than 0.4 s within a period 0.4 s multiplied by the number of hopping channels employed.

Test Configuration



TEST PROCEDURE

EUT was set to transmit the longest packet type (DH5)

1. Span = zero span
2. RBW = 1 MHz
3. VBW = 1 MHz
4. Sweep = as necessary to capture the entire dwell time per channel

The marker-delta function was used to determine the dwell time.

Measurement Uncertainty

Contributions	Probability Distribution	Standard Uncertainty (Hz)
Year aging of oscillator	Rectangular	721.69
Drift of temperature	Rectangular	72.17
Marker count accuracy	Rectangular	721.69
DUT drift of temperature	Rectangular	115.47
Combined standard uncertainty	1029.66	
Expanded uncertainty (confidence interval of 95.45 %, Coverage Factor of $k = 2$)	2059.33	



TEST RESULTS

See the table.

DH 5(The longest packet type for GFSK)

CH Mid : $2.89 * (1600/6)/79 * 31.6 = 308.27$ (ms)

3-DH 5(The longest packet type for 8DPSK)

CH Mid : $2.90 * (1600/6)/79 * 31.6 = 309.33$ (ms)

Channel	Pulse Time (ms)		Total of Dwell (ms)		Period Time (s)	Limit (ms)	Result
	GFSK	8DPSK	GFSK	8DPSK			
Low	2.90	2.90	309.33	309.33	31.6	400	PASS
Mid	2.89	2.90	308.27	309.33	31.6		PASS
High	2.90	2.90	309.33	309.33	31.6		PASS

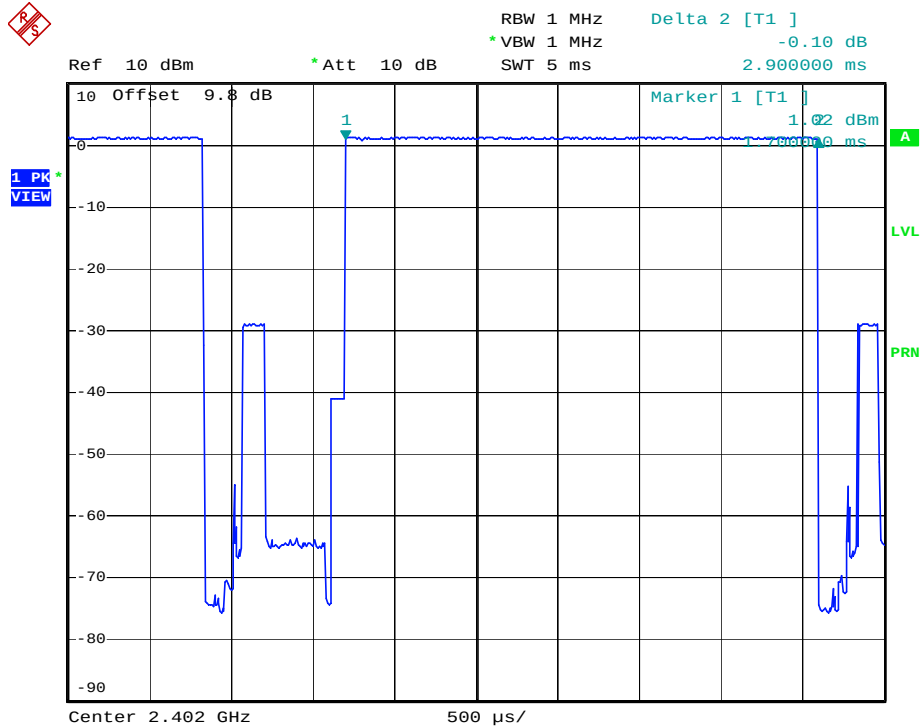
HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT				www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR		FCC ID: QMNRM-526	IC: 661X-RM526



Test Plots (GFSK)

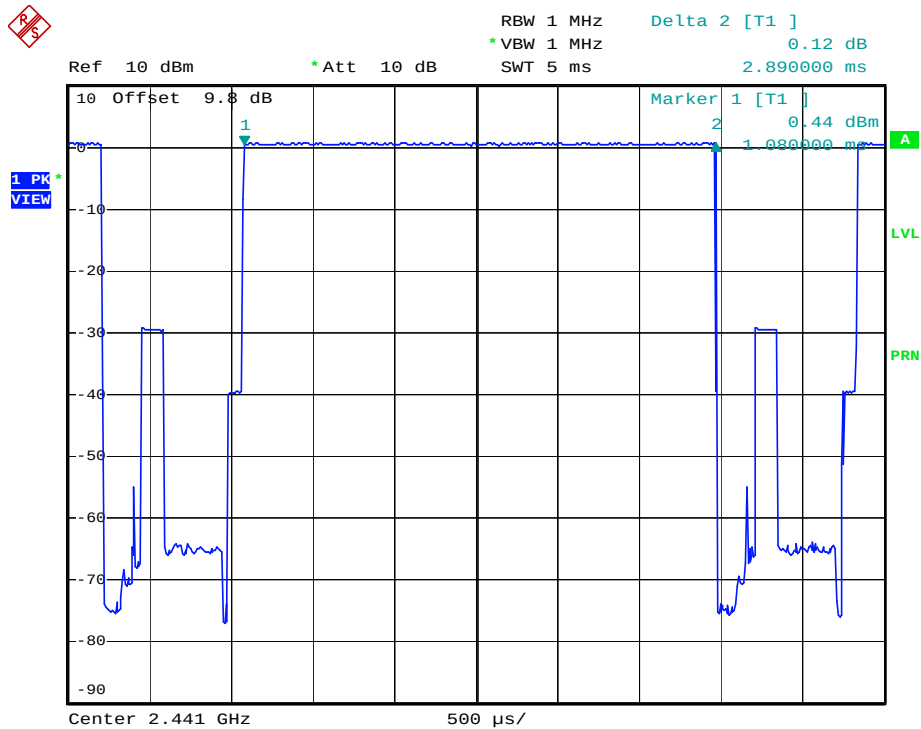
DH 5

(Low CH)



Date: 26.MAR.2009 08:11:01

(Mid CH)

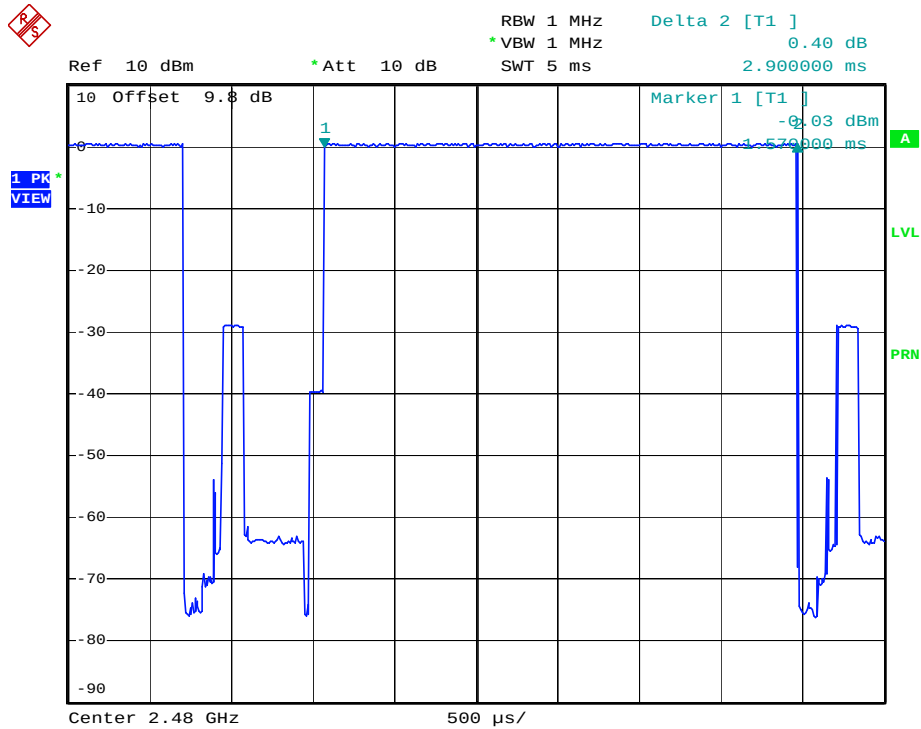


Date: 26.MAR.2009 08:14:21

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



(CH High)

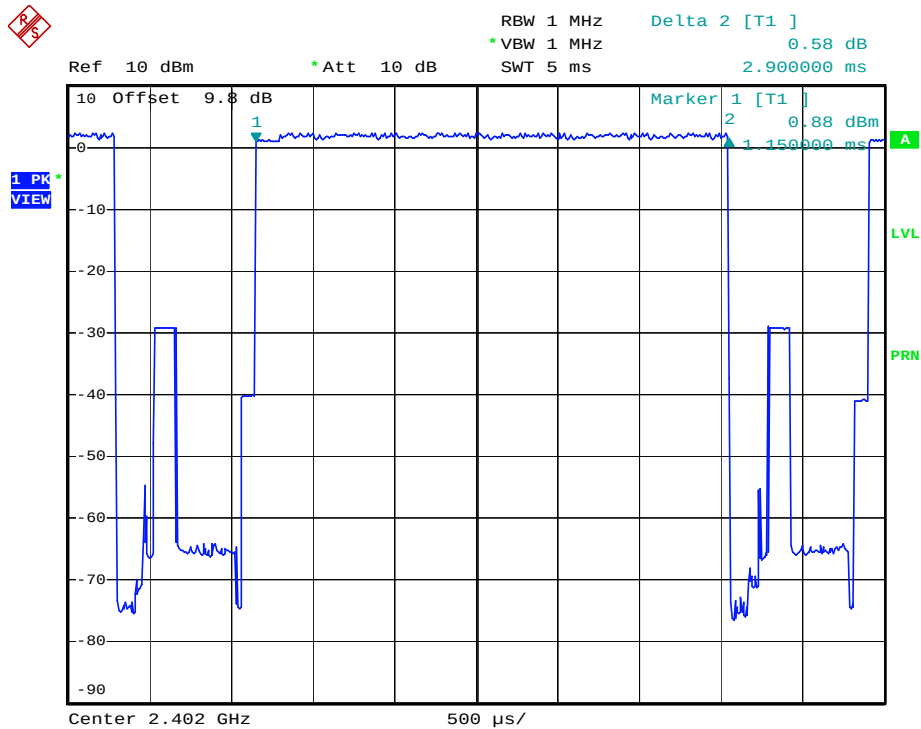


Date: 26.MAR.2009 08:16:07

Test Plots (8DPSK)

3-DH 5

(Low CH)

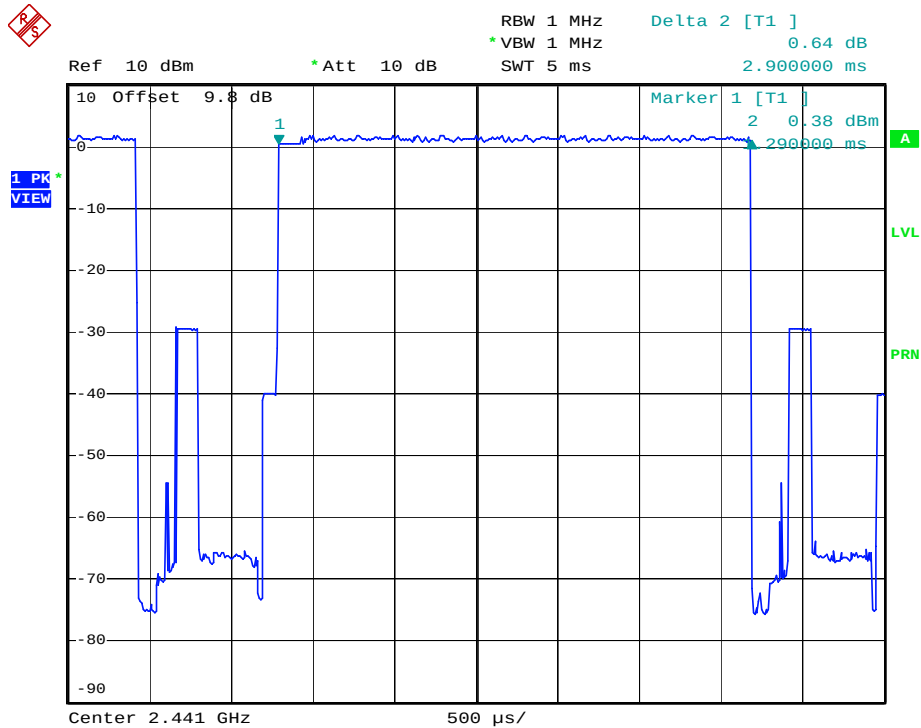


Date: 26.MAR.2009 08:17:05

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

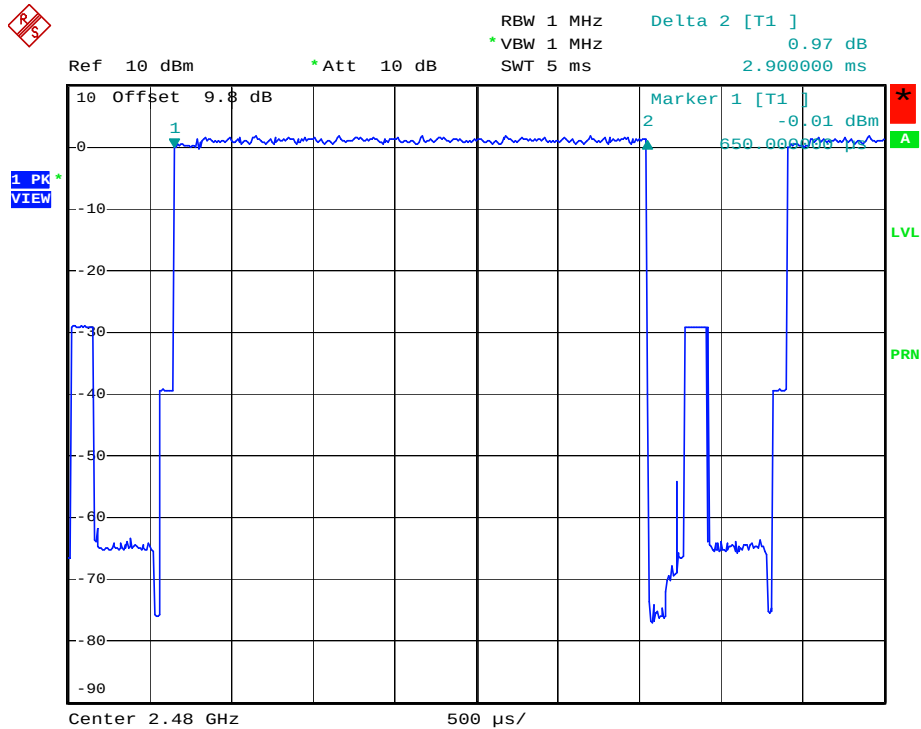


(Mid CH)



Date: 26.MAR.2009 08:26:33

(CH High)



Date: 26.MAR.2009 08:25:50

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

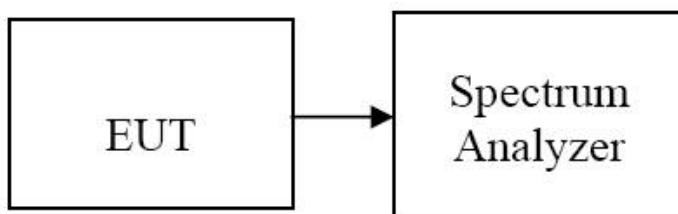
7.6 SPURIOUS EMISSIONS

7.6.1 Conducted Spurious Measurement

LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Test Configuration



TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

Detector Mode is set to a peak detector Mode.

Measurements are made over the 30 MHz to 26 GHz range with the transmitter set to the lowest, middle, and highest channels.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

Measurement Uncertainty

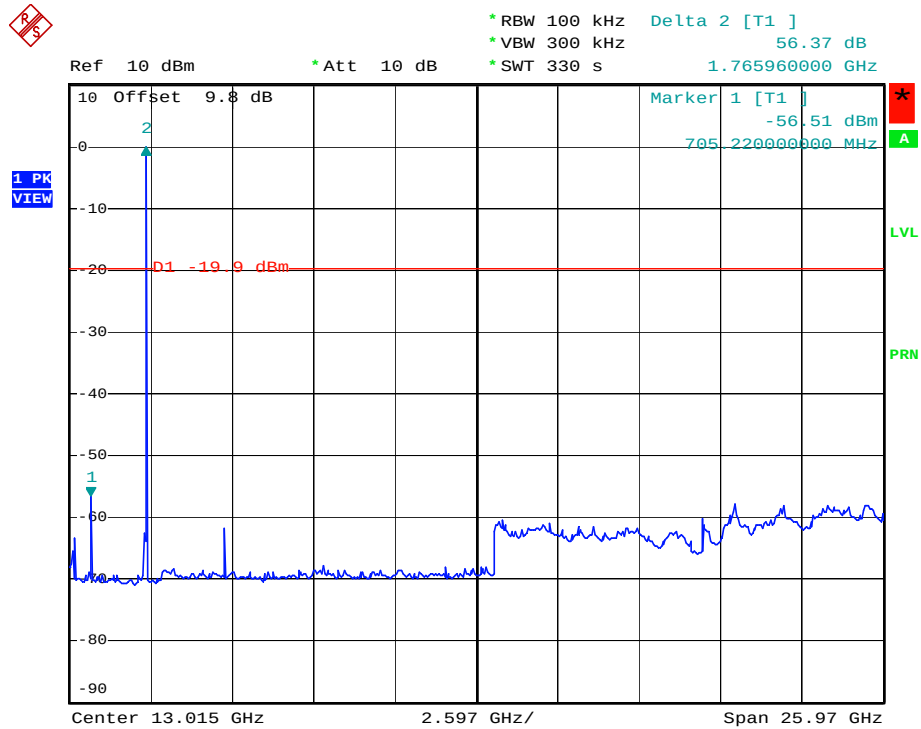
Contributions	Probability Distribution	Standard Uncertainty (dB)
Absolute error	Rectangular	0.29
Frequency response	Rectangular	1.44
Error of bandwidth switching	Rectangular	0.12
Drift of temperature for DUT	Rectangular	0.15
Time-duty cycle error for DUT	Rectangular	0.05
Supply voltage dependancy for DUT	Rectangular	0.08
Mismatch: Spectrum : Divider	U-Shaped	0.26
Mismatch: Divider : DUT	U-Shaped	0.16
Combined standard uncertainty	1.52	
Expanded uncertainty (confidence interval of 95.45 %, Coverage Factor of $k = 2$)	3.04	

TEST RESULTS

No non-compliance noted



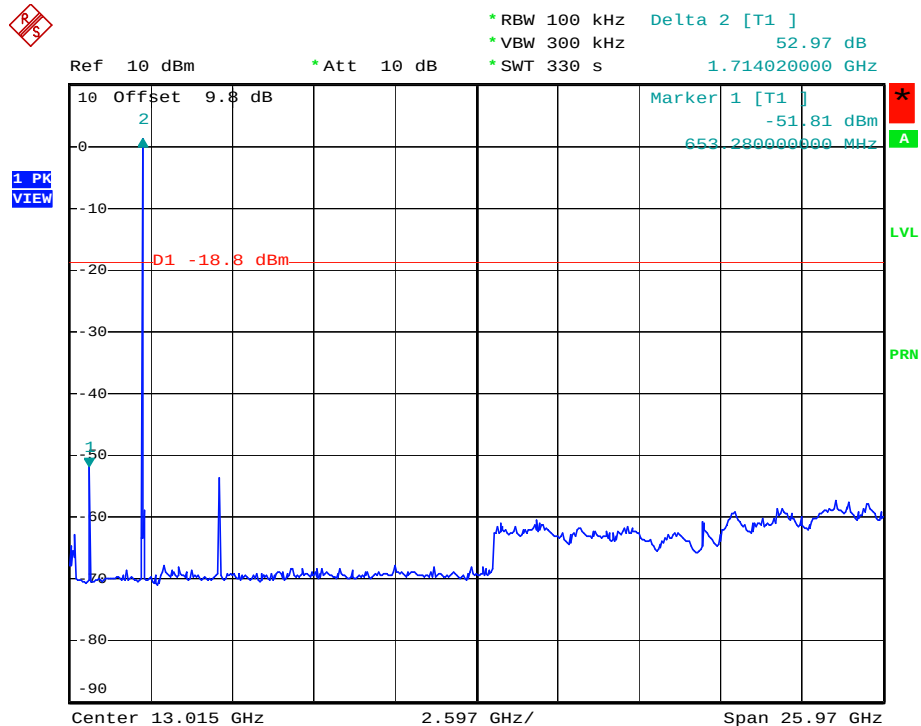
(High CH) – 2480 MHz



Date: 13.APR.2009 16:20:56

Test Plots (8DPSK): 30 MHz ~ 26 GHz

(Low CH) – 2402 MHz

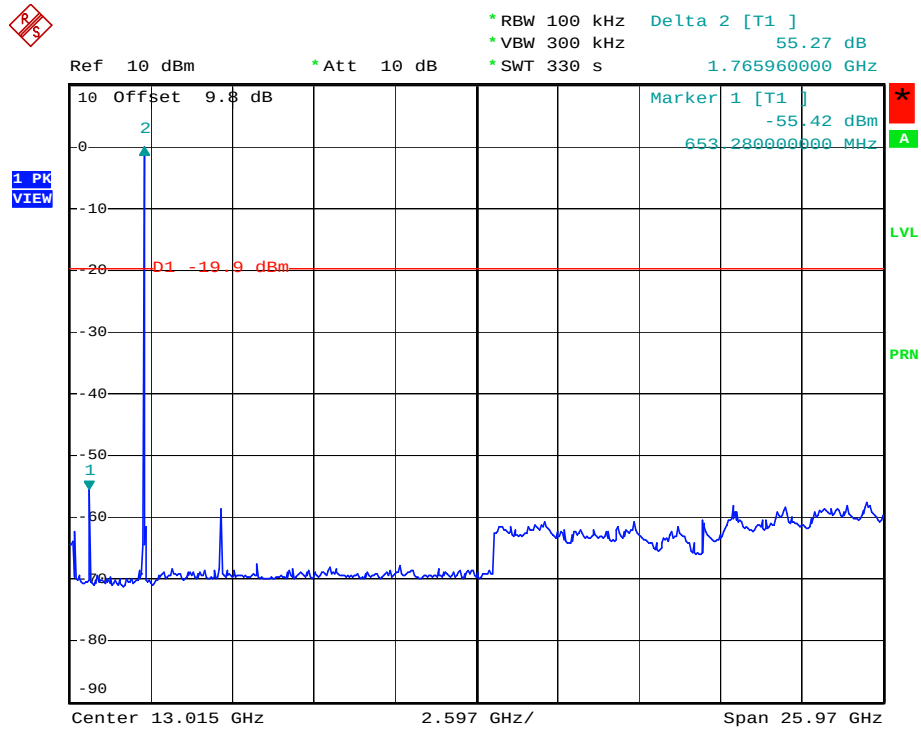


Date: 13.APR.2009 16:27:46

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

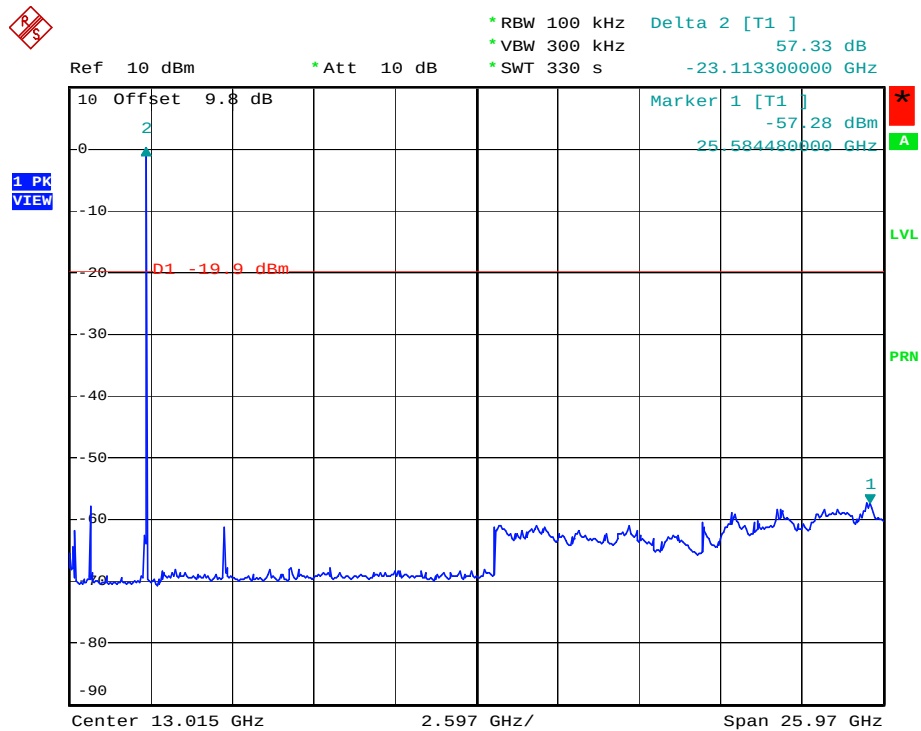


(Mid CH) – 2441 MHz



Date: 13.APR.2009 16:34:55

(High CH) – 2480 MHz



Date: 13.APR.2009 16:47:24

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

7.6.2 Radiated Spurious Emissions

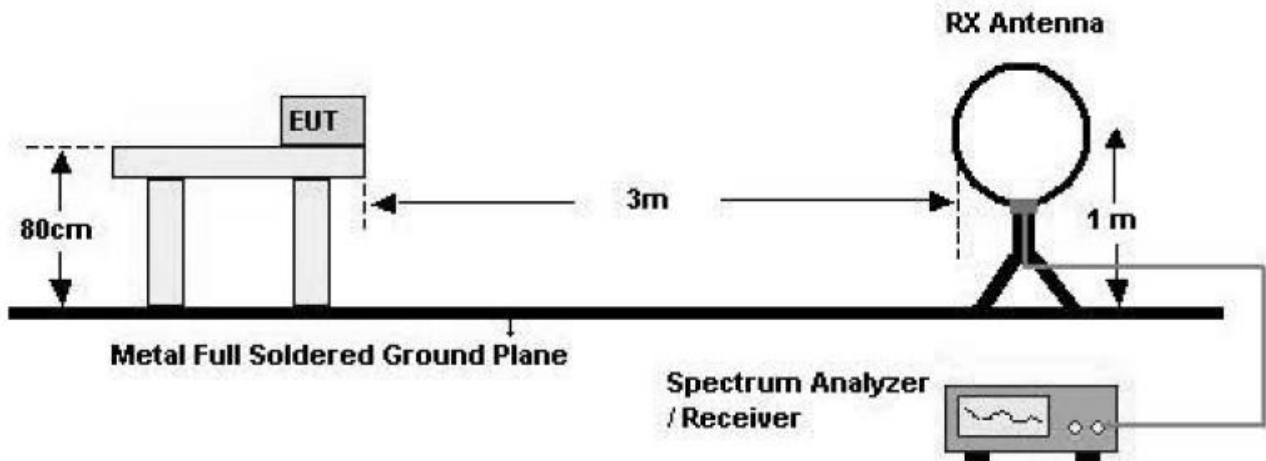
LIMIT

1. 20dBc in any 100kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed

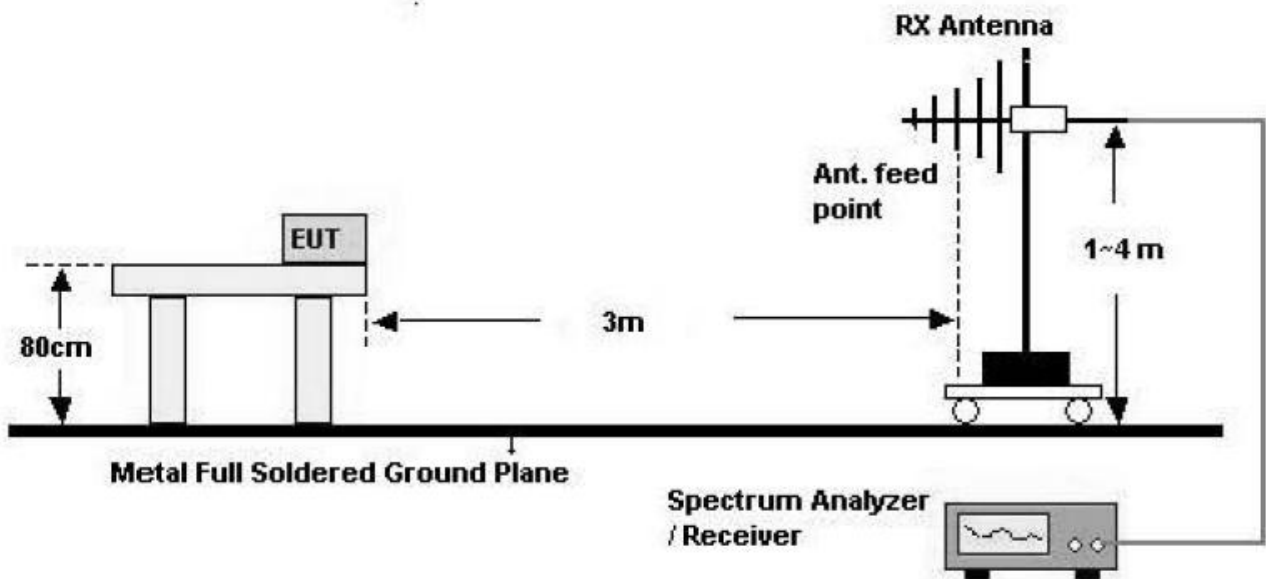
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30 (29.5 dBuV/m)	30
30-88	100 (40 dBuV/m)	3
88-216	150 (43.5 dBuV/m)	3
216-960	200 (46 dBuV/m)	3
Above 960	500 (54 dBuV/m)	3

Test Configuration

Below 30 MHz

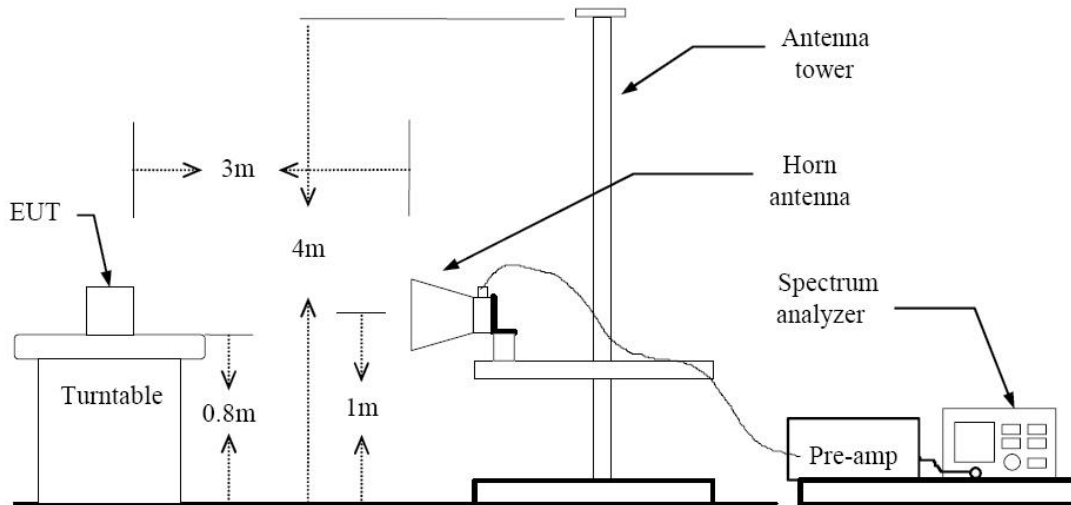


30 MHz - 1 GHz



HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

Measurement Uncertainty

For a 95 % confidence level, the measurement uncertainties for defined system.

30 MHz ~ 1 GHz	$\pm 5.6 \text{ dB } (k=2)$
Above 1 GHz	$\pm 5.8 \text{ dB } (k=2)$

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Link

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
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dB μ V) + Distance extrapolation factor
5. Detector : Quasi-peak
6. Preliminary Test was performed the both normal & EDR and three channels (Low, Mid, High).
The final test was performed the worst case mode only.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



TEST RESULTS

Below 1 GHz

Operation Mode: Normal Link(Mid: 2441 Mhz) -Standard Battery (BL-4C)

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
144.0	17.7	12.5	2.8	H	33.0	43.5	10.5
480.0	15.4	17.0	5.2	H	37.6	46.0	8.4
480.0	13.4	17.0	5.2	V	35.6	46.0	10.4
499.7	8.7	17.3	5.3	H	31.3	46.0	14.7

Operation Mode: Normal Link(Mid: 2441 Mhz) -Extended Battery (BL-10C)

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
144.0	16.4	12.5	2.8	H	31.7	43.5	11.8
480.0	14.8	17.0	5.2	H	37.0	46.0	9.0
480.0	12.6	17.0	5.2	V	34.8	46.0	11.2
499.7	8.9	17.3	5.3	H	31.5	46.0	14.5

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. RBW: 120 kHz, VBW: 300 kHz
4. Preliminary Test was performed the both normal & EDR and three channels (Low, Mid, High).
The final test was performed the worst case mode only.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT				www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526	



Above 1 GHz

Operation Mode: CH Low (EDR) – Standard Battery

Frequency [MHz]	Reading dBuV	AN.+CL-AMP GAIN. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4804	48.47	-4.79	V	43.68	74	30.32	PK
4804	38.12	-4.79	V	33.33	54	20.67	AV
7206	47.53	1.21	V	48.74	74	25.26	PK
7206	35.18	1.21	V	36.39	54	17.61	AV
4804	46.79	-4.79	H	42.00	74	32.00	PK
4804	34.35	-4.79	H	29.56	54	24.44	AV
7206	48.43	1.21	H	49.64	74	24.36	PK
7206	35.61	1.21	H	36.82	54	17.18	AV

Operation Mode: CH Low (EDR) – Extended Battery

Frequency [MHz]	Reading dBuV	AN.+CL-AMP GAIN. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4804	48.24	-4.79	V	43.45	74	30.55	PK
4804	36.89	-4.79	V	32.10	54	21.90	AV
7206	47.71	1.21	V	48.92	74	25.08	PK
7206	36.28	1.21	V	37.49	54	16.51	AV
4804	47.79	-4.79	H	43.00	74	31.00	PK
4804	34.74	-4.79	H	29.95	54	24.05	AV
7206	50.07	1.21	H	51.28	74	22.72	PK
7206	37.17	1.21	H	38.38	54	15.62	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
 - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT				www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR		FCC ID: QMNRM-526	IC: 661X-RM526



Operation Mode: CH Mid (EDR) – Standard Battery

Frequency [MHz]	Reading dBuV	AN.+CL-AMP GAIN. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4882	49.12	-4.61	V	44.51	74	29.49	PK
4882	37.43	-4.61	V	32.82	54	21.18	AV
7323	49.09	1.62	V	50.71	74	23.29	PK
7323	36.34	1.62	V	37.96	54	16.04	AV
4882	46.87	-4.61	H	42.26	74	31.74	PK
4882	34.19	-4.61	H	29.58	54	24.42	AV
7323	49.81	1.62	H	51.43	74	22.57	PK
7323	36.05	1.62	H	37.67	54	16.33	AV

Operation Mode: CH Mid (EDR) – Extended Battery

Frequency [MHz]	Reading dBuV	AN.+CL-AMP GAIN. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4882	48.74	-4.61	V	44.13	74	29.87	PK
4882	36.28	-4.61	V	31.67	54	22.33	AV
7323	50.56	1.62	V	52.18	74	21.82	PK
7323	37.35	1.62	V	38.97	54	15.03	AV
4882	47.99	-4.61	H	43.38	74	30.62	PK
4882	34.82	-4.61	H	30.21	54	23.79	AV
7323	50.25	1.62	H	51.87	74	22.13	PK
7323	37.45	1.62	H	39.07	54	14.93	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
 - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT				www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR		FCC ID: QMNRM-526	IC: 661X-RM526



Operation Mode: CH High (EDR) – Standard Battery

Frequency [MHz]	Reading dBuV	AN.+CL-AMP GAIN. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4960	47.94	-4.42	V	43.52	74	30.48	PK
4960	35.89	-4.42	V	31.47	54	22.53	AV
7440	49.26	2.04	V	51.30	74	22.70	PK
7440	36.34	2.04	V	38.38	54	15.62	AV
4960	46.97	-4.42	H	42.55	74	31.45	PK
4960	34.30	-4.42	H	29.88	54	24.12	AV
7440	48.86	2.04	H	50.90	74	23.10	PK
7440	36.26	2.04	H	38.30	54	15.70	AV

Operation Mode: CH High (EDR) – Extended Battery

Frequency [MHz]	Reading dBuV	AN.+CL-AMP GAIN. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4960	47.76	-4.42	V	43.34	74	30.66	PK
4960	35.99	-4.42	V	31.57	54	22.43	AV
7440	50.05	2.04	V	52.09	74	21.91	PK
7440	37.29	2.04	V	39.33	54	14.67	AV
4960	47.86	-4.42	H	43.44	74	30.56	PK
4960	34.75	-4.42	H	30.33	54	23.67	AV
7440	50.10	2.04	H	52.14	74	21.86	PK
7440	37.28	2.04	H	39.32	54	14.68	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
 - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



7.6.3 Radiated Restricted Band Edge Measurements

Test Requirements and limit, §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Standard Battery

Operation Mode:	GFSK(Normal)
Operating Frequency	2402, 2480 MHz
Channel No.	0, 78 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2389.54	48.56	-10.16	H	38.40	74	35.60	PK
2389.54	35.59	-10.16	H	25.43	54	28.57	AV
2344.63	48.12	-10.35	V	37.77	74	36.23	PK
2344.63	34.80	-10.35	V	24.45	54	29.55	AV
2497.67	48.27	-9.70	H	38.57	74	35.43	PK
2497.67	35.23	-9.70	H	25.53	54	28.47	AV
2491.87	46.90	-9.73	V	37.17	74	36.83	PK
2491.87	35.77	-9.73	V	26.04	54	27.96	AV

Notes:

1. Spectrum setting:

- Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
- AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



Extended Battery

Operation Mode:	GFSK(Normal)
Operating Frequency	2402, 2480 MHz
Channel No.	0, 78 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
2390.00	48.93	-10.16	H	38.77	74	35.23	PK
2390.00	35.50	-10.16	H	25.34	54	28.66	AV
2348.14	47.77	-10.34	V	37.43	74	36.57	PK
2348.14	35.57	-10.34	V	25.23	54	28.77	AV
2493.73	46.61	-9.72	H	36.89	74	37.11	PK
2493.73	35.25	-9.72	H	25.53	54	28.47	AV
2492.61	46.84	-9.72	V	37.12	74	36.88	PK
2492.61	35.30	-9.72	V	25.58	54	28.42	AV

Notes:

1. Spectrum setting:

- Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
- AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

7.7 POWERLINE CONDUCTED EMISSIONS

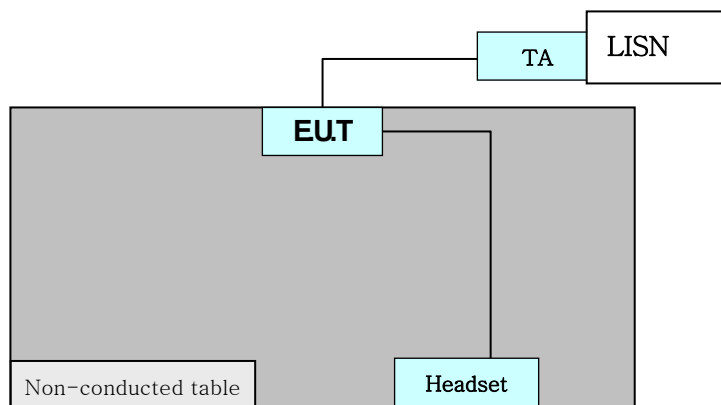
LIMIT

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 (HOT and NEUTRAL) and ground at the power terminals.

Test Configuration





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.

Measurement Uncertainty

For a 95 % confidence level, the measurement uncertainties for defined system.

150 kHz ~ 30 GHz ± 3.7 dB ($k=2$)

※ Preliminary Test was performed the both normal & EDR.

The final test was performed the worst case mode only.

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



Test Plot - (Standard Battery)

Conducted emissions (Line 1 / Mid CH / EDR) – HOT

EUT : RM-526

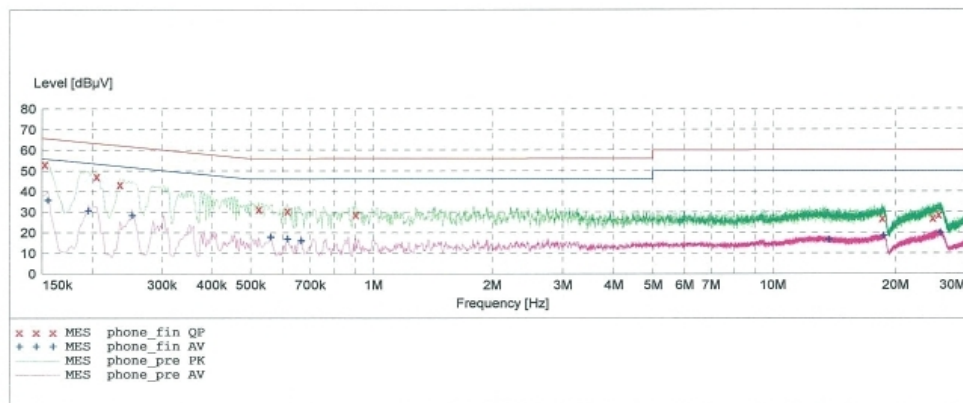
HCT

EMC TEST LAB.

EUT: 7705
 Manufacturer: Nokia
 Operating Condition: Bluetooth Mode
 Test Site: SHIELD ROOM
 Operator: YH, LEE
 Test Specification: CISPR 22 CLASS B
 Comment: H

SCAN TABLE: "CISPR 22 Voltage"

Short Description:			CISPR 22 Voltage				
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
Frequency	Frequency	Width					
150.1 kHz	500.0 kHz	2.5 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"

3/26/2009 8:06PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.152600	53.40	10.1	66	12.5	---	---
0.205100	47.50	10.1	63	15.9	---	---
0.235100	43.50	10.1	62	18.8	---	---
0.524000	31.60	10.2	56	24.4	---	---
0.616000	30.70	10.2	56	25.3	---	---
0.904000	28.80	10.2	56	27.2	---	---
18.552000	27.20	12.3	60	32.8	---	---
24.784000	27.30	12.8	60	32.7	---	---
25.608000	28.80	12.9	60	31.2	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



MEASUREMENT RESULT: "phone_fin AV"

3/26/2009 8:06PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.155100	35.90	10.1	56	19.8	---	---
0.195100	30.70	10.1	54	23.1	---	---
0.252600	28.40	10.1	52	23.3	---	---
0.560000	18.00	10.2	46	28.0	---	---
0.616000	17.10	10.2	46	28.9	---	---
0.664000	16.20	10.2	46	29.8	---	---
13.728000	16.80	11.7	50	33.2	---	---
18.660000	18.60	12.3	50	31.4	---	---
25.876000	20.10	12.9	50	29.9	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



Conducted emissions (Line 2 / Mid CH / EDR) – NEUTRAL

EUT : RM-526

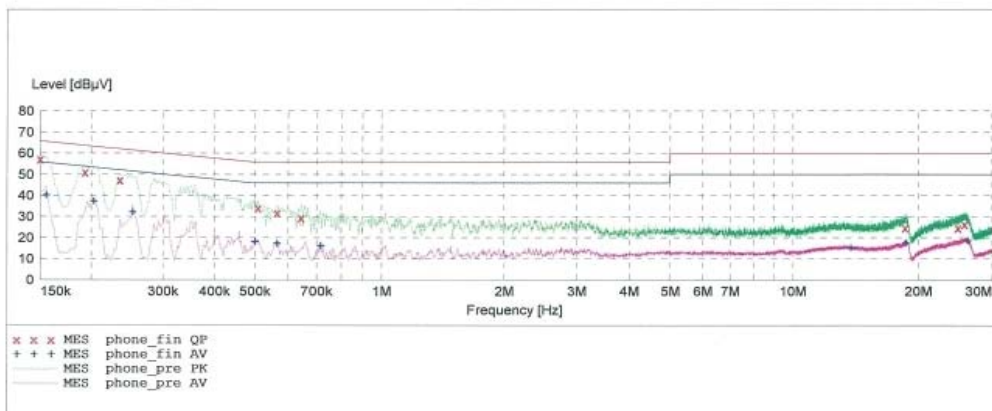
HCT

EMC TEST LAB.

EUT: 7705
Manufacturer: Nokia
Operating Condition: Bluetooth Mode
Test Site: SHIELD ROOM
Operator: YH, LEE
Test Specification: CISPR 22 CLASS B
Comment: N

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
150.1 kHz	500.0 kHz	2.5 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"

3/26/2009 8:02PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.150100	57.40	10.1	66	8.6	---	---
0.192600	51.20	10.1	64	12.7	---	---
0.235100	47.40	10.1	62	14.8	---	---
0.508000	34.30	10.2	56	21.7	---	---
0.564000	32.10	10.2	56	23.9	---	---
0.644000	29.70	10.2	56	26.3	---	---
18.556000	25.10	12.3	60	34.9	---	---
24.744000	24.90	12.8	60	35.1	---	---
25.640000	26.60	12.9	60	33.4	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



MEASUREMENT RESULT: "phone_fin AV"

3/26/2009 8:02PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.155100	40.50	10.1	56	15.2	---	---
0.202600	37.50	10.1	54	16.0	---	---
0.252600	32.40	10.1	52	19.3	---	---
0.500000	18.30	10.2	46	27.7	---	---
0.564000	17.50	10.2	46	28.5	---	---
0.716000	16.30	10.2	46	29.7	---	---
13.796000	15.60	11.7	50	34.4	---	---
18.604000	17.80	12.3	50	32.2	---	---
26.060000	19.00	12.9	50	31.0	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



Test Plot - (Extended Battery)

Conducted emissions (Line 1 / Mid CH / EDR) – HOT

EUT : RM-526

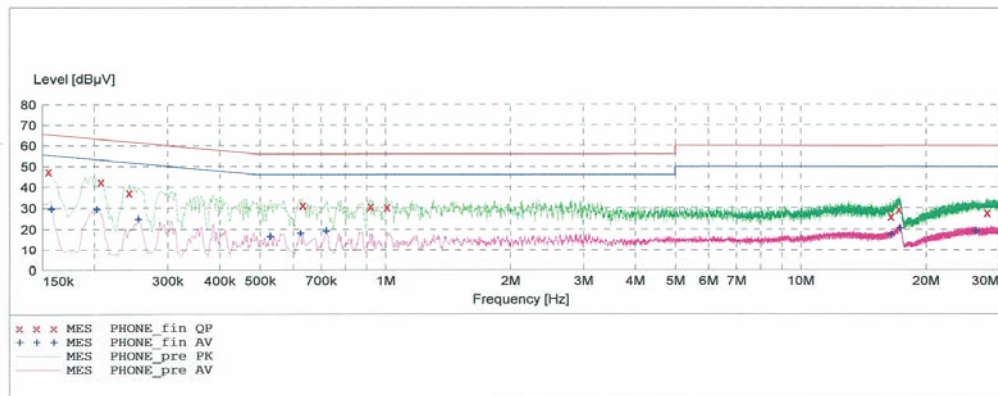
HCT

EMC TEST LAB.

EUT: RM-526 (HW Version: 3000)
Manufacturer: NOKIA
Operating Condition: Bluetooth Mode
Test Site: SHIELD ROOM
Operator: YH, LEE
Test Specification: CISPR 22 CLASS B
Comment: H

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage				
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.1 kHz	500.0 kHz	2.5 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"

4/16/2009 11:36AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.155100	47.80	10.1	66	17.9	---	---
0.207600	42.80	10.1	63	20.5	---	---
0.242600	37.50	10.1	62	24.5	---	---
0.632000	31.60	10.2	56	24.4	---	---
0.920000	31.00	10.2	56	25.0	---	---
1.008000	30.70	10.2	56	25.3	---	---
16.436000	26.30	12.1	60	33.7	---	---
17.212000	29.60	12.2	60	30.4	---	---
28.068000	28.10	13.0	60	31.9	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



MEASUREMENT RESULT: "PHONE_fin AV"

4/16/2009 11:37AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.157600	29.90	10.1	56	25.7	---	---
0.202600	29.70	10.1	54	23.8	---	---
0.255100	25.00	10.1	52	26.6	---	---
0.528000	16.70	10.2	46	29.3	---	---
0.624000	18.30	10.2	46	27.7	---	---
0.720000	19.50	10.2	46	26.5	---	---
16.436000	17.70	12.1	50	32.3	---	---
17.336000	20.70	12.2	50	29.3	---	---
26.352000	19.50	12.9	50	30.5	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



Conducted emissions (Line 2 / Mid CH / EDR) – NEUTRAL

EUT : RM-526

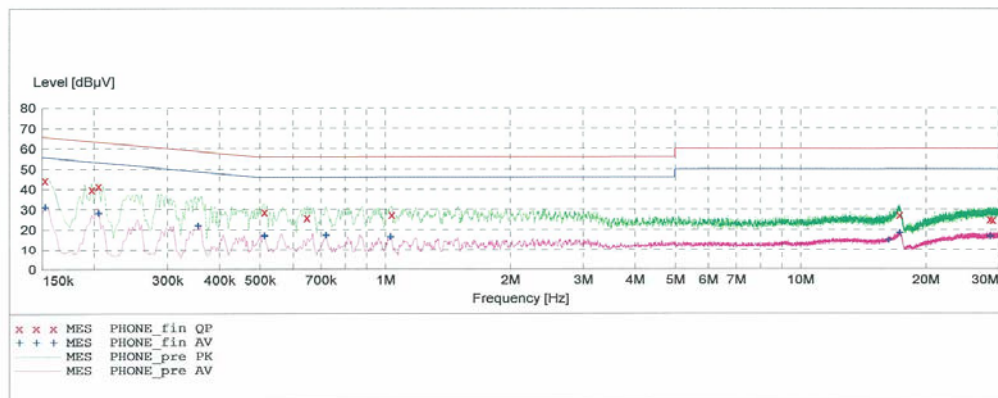
HCT

EMC TEST LAB.

EUT: RM-526 (HW Version: 3000)
Manufacturer: NOKIA
Operating Condition: Bluetooth Mode
Test Site: SHIELD ROOM
Operator: YH, LEE
Test Specification: CISPR 22 CLASS B
Comment: N

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage				
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.1 kHz	500.0 kHz	2.5 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"

4/16/2009 11:49AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.152600	44.60	10.1	66	21.3	---	---
0.197600	40.00	10.1	64	23.8	---	---
0.205100	41.80	10.1	63	21.6	---	---
0.512000	28.90	10.2	56	27.1	---	---
0.648000	26.20	10.2	56	29.8	---	---
1.036000	27.50	10.2	56	28.5	---	---
17.272000	27.40	12.2	60	32.6	---	---
28.536000	25.20	13.0	60	34.8	---	---
28.976000	25.00	13.0	60	35.0	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526



MEASUREMENT RESULT: "PHONE_fin AV"

4/16/2009 11:49AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.152600	31.40	10.1	56	24.4	---	---
0.205100	28.40	10.1	53	25.0	---	---
0.355100	22.30	10.1	49	26.6	---	---
0.512000	17.20	10.2	46	28.8	---	---
0.720000	17.60	10.2	46	28.4	---	---
1.028000	16.70	10.2	46	29.3	---	---
16.240000	15.10	12.1	50	34.9	---	---
17.276000	18.70	12.2	50	31.3	---	---
28.608000	17.10	13.0	50	32.9	---	---

HCT PT.15.247 TEST REPORT	FCC & IC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCT-RF09-0418-3	Date of Issue: May 11, 2009	EUT Type: Dual-Band CDMA/EVDO Phone with+BT2.1+EDR	FCC ID: QMNRM-526	IC: 661X-RM526

8. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Cal Interval	Calibration Due	Serial No.
EMCO	3816/2SH/ LISN	Annual	02/06/2010	9706-1071
Schwarzbeck	VULB 9160/ TRILOG Antenna	Biennial	12/18/2010	9160-3150
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	ESH3-Z2/ PULSE LIMITER	Annual	10/30/2009	375.8810.352
MITEQ	AMF-60-0010 1800-35-20P	Annual	05/20/2009	1200937
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	03/26/2010	147
EMCO	6502/Loop Antenna	Biennial	12/26/2009	9009-2536
Rohde & Schwarz	FSP30/Spectrum Analyzer	Annual	07/31/2009	839117/011
Rohde & Schwarz	ESCI/EMI TEST Receiver	Annual	06/01/2009	100033
Agilent	E4416A /Power Meter	Annual	01/21/2010	GB41291412
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	06/28/2009	1
Hewlett Packard	11636B/Power Divider	Annual	12/24/2009	11377
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	01/07/2010	3110117