

HCT CO., LTD.

Product Compliance Division

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FCC Certification

Applicant Name: Franklin Technology Inc. Address: 1505 Digital Tower Aston, 505-15 Gasan-dong, Gumcheon-gu, Seoul, Korea Date of Issue: November 02, 2010 Location: HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon, Icheon-si, Kyunggi-Do, Korea(Lab) Test Report No.: HCTR1010FFR12-2 HCT FRN: 0005866421

IC Recognition No.: IC 5944A-2

FCC ID : XHG-M600C

APPLICANT : Franklin Technology Inc.

Model(s):	M600C
EUT Type:	3G Module
Tx Frequency:	824.70 — 848.31 MHz (CDMA) 1 851.25 — 1 908.75 MHz (PCS CDMA)
Rx Frequency:	869.70 — 893.31 MHz (CDMA) 1 931.25 — 1 988.75 MHz (PCS CDMA)
Max. Conducted Power:	0.254 W CDMA (24.05 dBm) / 0.248 W PCS CDMA (23.96 dBm)/ 0.255 W CDMA EVDO (24.08 dBm) / 0.254 W PCS EVDO (24.06 dBm)
Emission Designator(s):	1M28F9W (CDMA) / 1M28F9W (PCS CDMA) 1M27F9W (CDMA EVDO), 1M28/F9W (PCS CDMA EVDO)
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§22, §24, §2

The measurements shown in this report were made in accordance with the procedures specified in §2.947. 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 : Hyo Sun Kwak Test engineer of RF Team

Approved by : Sang Jun Lee Manager of RF Team

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Test Report No.	Date of Issue:	EUT Type:	FCC ID:
HCTR1010FFR12-2	November 02, 2010	3G Module	XHG-M600C



<u>Version</u>

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1010FR12	October 19, 2010	First Approval Report
HCTR1010FR12-1	October 29, 2010	Change the test site description
HCTR1010FR12-2 November 02, 2010		Delete ERP/ EIRP Test

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			XI 19-10000C



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MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	Franklin Technology Inc.
Address:	1505 Digital Tower Aston, 505-15 Gasan-dong, Gumcheon-gu, Seoul, Korea
Contact Person:	Name: Michael Chun Phone #: TEL :+82-70-8260-343 / FAX : +82-2-2082-822
FCC ID:	XHG-M600C
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§22, §24, §2
EUT Type:	3G Module
Model(s):	M600C
Tx Frequency:	824.70 — 848.31 MHz (CDMA) 1 851.25 — 1 908.75 MHz (PCS CDMA)
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Emission Designator(s):	1M28F9W (CDMA) / 1M28F9W (PCS CDMA) 1M27F9W (CDMA EVDO), 1M28/F9W (PCS CDMA EVDO)
Date(s) of Tests:	October 05, 2010 ~ October 15, 2010

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2. INTRODUCTION

2.1. EUT DESCRIPTION

The M600C 3G Module consists of Cellular CDMA, PCS CDMA, EVDO Rev.0 and EVDO Rev.A.

2.2. MEASURING 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 equipment, which is traceable to recognized national standards.

2.3. TEST FACILITY

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 105-1, Jangam-ri , Majang-Myeon, Icheon-si, 467-811, KOREA. The site is constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated June 10, 2009 (Registration Number: 90661)

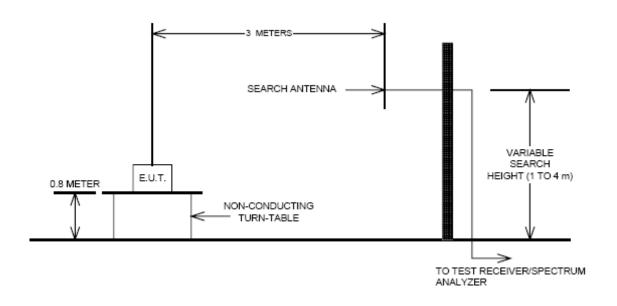
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3. DESCRIPTION OF TESTS

3.1 EFFECTIVE RADIATED POWER/EQUIVALENT ISOTROPIC RADIATED POWER

Test Set-up



Test Procedure

Radiated emission measurements were performed at an SAC(Semi-Anechoic Chamber)

The equipment under test is placed on a non-conductive styrofoam resin table 3-meters from the receive antenna. A styrofoam turntable was rotated 360° and the receiving antenna scanned from 1-4m in order to capture the maximum emission. A half wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the previously recorded signal was duplicated.

The maximum EIRP was calculated by adding the forward power to the calibrated source plus its appropriate gain value. These steps were carried out with the receiving antenna in both vertical and horizontal polarization. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

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3.2 PEAK- TO- AVERAGE RATIO

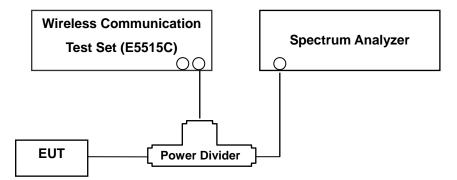
A peak to average ratio measurement is performed at the conducted port of the EUT. For CDMA and WCDMA signals, the spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level. For GSM signals, an average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a bandwidth greater than the emission bandwidth. Plots of the EUT's Peak- to- Average Ratio are shown herein.

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3.3 OCCUPIED BANDWIDTH.

Test set-up



(Configuration of conducted Emission measurement) Test Procedure

The EUT was setup to maximum output power at its lowest channel. The occupied bandwidth was measured using a spectrum analyzer. The measurements are repeated for the highest and a middle channel. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Plots of the EUT's occupied bandwidth are shown herein.

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3.4 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL.

Test Procedure

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer.

The EUT was setup to maximum output power at its lowest channel. The Resolution BW of the analyzer is set to 1 % of the emission bandwidth to show compliance with the – 13 dBm limit, in the 1 MHz bands immediately outside and adjacent to the edge of the frequency block. The 1 MHz RBW was used to scan from 30 MHz to 10 GHz. (PCS CDMA Mode: 30 MHz to 20 GHz). A display line was placed at – 13 dBm to show compliance. The high, lowest and a middle channel were tested for out of band measurements.

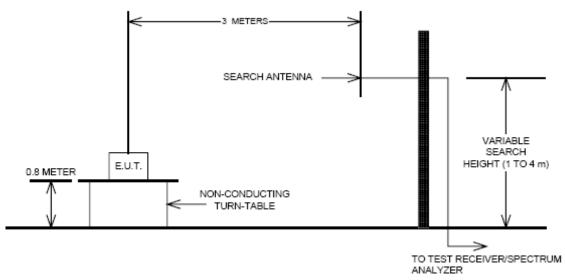
- Band Edge Requirement : In the 1MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

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3.5 RADIATED SPURIOUS AND HARMONIC EMISSIONS

Test Set-up



The measurement facilities used for this test have been documented in previous filings with the commission pursuant to section § 2.948. The SAC(Semi-Anechoic Chamber) meets requirements in ANSI C63.4 –2003. A mast capable of lifting the receiving antenna from a height of one to four meters is used together with a rotatable styrofoam platform mounted at three from the antenna mast.

- 1) The unit mounted on a styrofoam turntable 1.5 m × 1.0 m × 0.80 m is 0.8 meter above test site ground level.
- 2) During the emission test, the turntable is rotated and the EUT is manipulated to find the configuration resulting in maximum emission under normal condition of installation and operation.
- 3) The antenna height and polarization are also varied from 1 to 4 meters until the maximum signal is found.
- 4) The spectrum shall be scanned up to the 10th harmonic of the fundamental frequency.

Test Procedure

The equipment under test is placed on a non-conductive styrofoam resin table 3-meters from the receive antenna. A styrofoam turntable was rotated 360° and the receiving antenna scanned from 1-4m in order to capture the maximum emission. A half wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the previously recorded signal was duplicated.

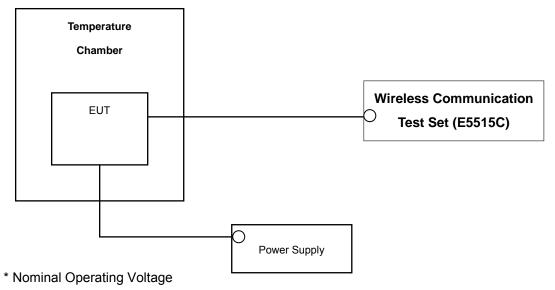
The maximum EIRP was calculated by adding the forward power to the calibrated source plus its appropriate gain value. These steps were carried out with the receiving antenna in both vertical and horizontal polarization. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

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3.6 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

Test Set-up



Test Procedure

The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from - 30 °C to + 50 °C using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from battery end point to 115 % of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

Specification — the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within \pm 0.000 25 %(\pm 2.5 ppm) of the center frequency.

Time Period and Procedure:

The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).

1. The equipment is turned on in a "standby" condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

2. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one halfhour is provided to allow stabilization of the equipment at each temperature level. **NOTE: The EUT is tested down to the battery endpoint.**

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4. LIST OF TEST EQUIPMENT

Manufacture	Model/ Equipment	Serial Number	Calibration Interval	Calibration Due
R&S	ESI40/ Spectrum Analyzer	831564/003	Annual	10/30/2010
Agilent	E4416A/ Power Meter	GB41291412	Annual	01/14/2011
Agilent	E9327A/ Power Sensor	MY4442009	Annual	07/23/2011
Agilent	8960 (E5515C)/ Base Station	GB44400269	Annual	02/10/2011
MITEQ	AMF-6D-001180-35-20P/AMP	990893	Annual	05/20/2011
Wainwright	WHK1.2/15G-10EF/H.P.F	2	Annual	06/25/2011
Wainwright	WHK3.3/18G-10EF/H.P.F	1	Annual	06/25/2011
Agilent	775D/ Dual Directional Coupler	12922	Annual	12/24/2010
Agilent	11636B/ Power Divider	11377	Annual	12/24/2010
Digital	EP-3010/ Power Supply	3110117	Annual	01/08/2011
Schwarzbeck	UHAP/ Dipole Antenna	585	Biennial	02/13/2011
Schwarzbeck	UHAP/ Dipole Antenna	558	Biennial	02/13/2011
Korea Engineering	KR-1005L / Chamber	KRAB07063-2CH	Annual	12/28/2010
Schwarzbeck	BBHA 9120D/ Horn Antenna	296	Biennial	09/23/2011
Agilent	E4440A/Spectrum Analyzer	US45303008	Annual	06/09/2011

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Dev. 1.0240					



5. SUMMARY OF TEST RESULTS

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result
2.1049, 22.917(a), 24.238(a)	Occupied Bandwidth	N/A		PASS
2.1051, 22.917(a), 24.238(a)	Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	< 43 + 10log ₁₀ (P[Watts]) at Band Edge and for all out-of-band emissions	CONDUCTED	PASS
2.1046	Conducted Output Power	N/A		PASS
24.232(d),	Peak- to- Average Ratio	< 13 dB		PASS
2.1055, 22.355, 24.235	Frequency stability / variation of ambient temperature	< 2.5 ppm		PASS
22.913(a)(2)	Effective Radiated Power	< 7 Watts max. ERP		PASS
24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP(PCS)	RADIATED	PASS
2.1053, 22.917(a), 24.238(a)	Radiated Spurious and Harmonic Emissions	< 43 + 10log ₁₀ (P[Watts]) for all out-of band emissions		PASS

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6. SAMPLE CALCULATION

A. ERP Sample Calculation

Mode	Ch./ Freq.		Measured	Substitude Ant. Gain		C.L	Pol.	EF	RP
Wode	channel	Freq.(MHz)	Level(dBm)	LEVEL(dBm)	Ant. Gain	U.L	FUI.	w	dBm
CDMA	384	836.52	-10.96	24.81	2.50	1.19	Н	0.41	26.12

ERP = SubstitudeLEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a wooden tripod is 0.8 meter above test site ground level.

2) During the test, the turn table is rotated and the antenna height is also varied from 1 to 4 meters until the maximum signal is found.

3) Record the field strength meter's level.

4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.

5) Increase the signal generator output till the field strength meter's level is equal to the item (3).

6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power (**ERP**).

B. Emission Designator CDMA Emission Designator

Emission Designator = 1M27F9W

CDMA BW = 1.27 MHz (Measured at the 99% power bandwidth)

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

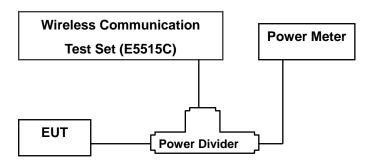
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7. TEST DATA

7.1 CONDUCTED OUTPUT POWER

A base station simulator was used to establish communication with The EUT. The base station simulator parameters were set to produce the maximum power from the EUT. This device was tested under all configurations and the highest power is reported. Conducted Output Powers of EUT are reported below.



		SO2	SO2	SO55	SO55	TDSO	1xEvD	1xEvD	1xEvDO	1xEvDO
Dand	Observat	302	502	3033	3033	SO32	Rev.O	Rev.O	Rev.1	Rev.1
Band	Channel	RC1/1	RC3/3	RC1/1	RC3/3	RC3/3				
		(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(FTAP)	(RTAP)	(FETAP)	(RETAP)
	1013	24.05	24.01	24.02	23.94	24.03	24.08	24.05	24.04	23.98
CDMA	384	23.90	23.89	23.85	23.89	23.88	24.04	24.02	23.86	23.91
	777	23.79	23.82	23.83	23.94	23.87	23.94	23.98	23.98	23.78
	25	23.87	23.86	23.88	23.96	23.89	24.06	23.97	23.98	23.83
PCS	600	23.63	23.58	23.59	23.67	23.60	23.75	23.58	23.70	23.56
	1175	23.93	23.90	23.91	23.94	23.92	23.95	23.92	23.92	23.76

(Maximum Conducted Output Powers)

Note : Detecting mode is average.

7.2 PEAK-TO-AVERAGE RATIO

- Plots of the EUT's Peak- to- Average Ratio are shown Page 26.

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7.2 OCCUPIED BANDWIDTH

Band	Channel	Frequency(MHz)	Data (MHz)
	1013	824.70	1.2738
CDMA	384	836.52	1.2760
	777	848.31	1.2769
CDMA EVDO	777	848.31	1.2735
	25	1851.25	1.2786
PCS	600	1880.00	1.2825
	1175	1908.75	1.2817
PCS EVDO	600	1880.00	1.2763

- Plots of the EUT's Occupied Bandwidth are shown Page 22 ~ 25.

7.3 CONDUCTED SPURIOUS EMISSIONS

Band	Channel	Frequency of Maximum Harmonic (GHz)	Maximum Data (dBm)
	1013	1.6520	-36.01
CDMA	384	1.6730	-33.51
	777	1.6970	-34.45
	25	3.7020	-20.84
PCS	600	3.7620	-23.67
	1175	3.8150	-30.02

- Plots of the EUT's Conducted Spurious Emissions are shown Page 34 ~ 40.

7.3.1 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 26 ~ 34.

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7.4 RADIATED SPURIOUS EMISSIONS

7.4.1 RADIATED SPURIOUS EMISSIONS(CDMA MODE)

MEASURED OUTPUT POWER: 27.67 dBm = 0.585 W

MODULATION SIGNAL:
 CDMA EVDO

DISTANCE:

3 meters

LIMIT: - (43 + 10 log10 (W)) = - 40.67 dBc

Ch.	Freq.(MHz)	Measured Level	Ant. Gain	<u>Substitute</u> Level [dBm]	C.L	Pol.	ERP (dBm)	dBc
	1,649.40	-31.97	7.09	-42.50	1.73	Н	-37.14	-64.48
1013	2,474.10	_	_	_	_	_	_	_
	3,298.80	_	_	_	-	_	-	_
	1,673.04	-30.87	7.23	-41.63	1.79	Н	-36.19	-63.53
384	2,509.56	_	_	_	_	_	_	_
	3,346.08	-49.74	9.99	-57.77	2.66	V	-50.44	-77.78
	1,696.62	-35.43	7.41	-46.04	1.83	V	-40.46	-67.80
777	2,544.93	_	_	_	_	-	_	_
	3,393.24	-46.84	9.91	-54.47	2.85	V	-47.41	-74.75

NOTES: <u>1. Radiated Spurious Emission Measurements at 3 meters by Substitution Method</u> according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

2. The magnitude of spurious emissions attenuated more than 20dB below the limit above 5th Harmonic for <u>all channel.</u>

3. we have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

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7.4.2 RADIATED SPURIOUS EMISSIONS(PCS CDMA MODE)

- MEASURED OUTPUT POWER: 27.59 dBm = 0.574 W
- MODULATION SIGNAL:
 PCS CDMA EVDO
- DISTANCE: <u>3 meters</u>
- LIMIT: (43 + 10 log10 (W)) = _____ 40.59 dBc

Ch.	Freq.(MHz)	Measured Level	Ant. Gain	<u>Substitute</u> Level [dBm]	C.L	Pol.	EIRP (dBm)	dBc
	3,702.50	-35.79	12.46	-42.06	2.73	Н	-32.33	-59.15
25	5,553.75	-	_	_	_	_	-	_
	7,405.00	_	_	-	-	-	-	_
	3,760.00	-26.37	12.47	-32.34	2.73	Н	-22.60	-49.42
600	5,640.00	_	_	-	-	-	-	_
	7,520.00	_	_	-	-	-	-	_
	3,817.50	-36.99	12.49	-42.87	2.73	Н	-33.11	-59.93
1175	5,726.25	_	_	_	_	_	_	_
	7,635.00	-	_	-	-	_	-	-

NOTES: <u>1. Radiated Spurious Emission Measurements at 3 meters by Substitution Method</u> <u>according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:</u>

2. The magnitude of spurious emissions attenuated more than 20dB below the limit above 5th Harmonic for all channel.

3. we have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

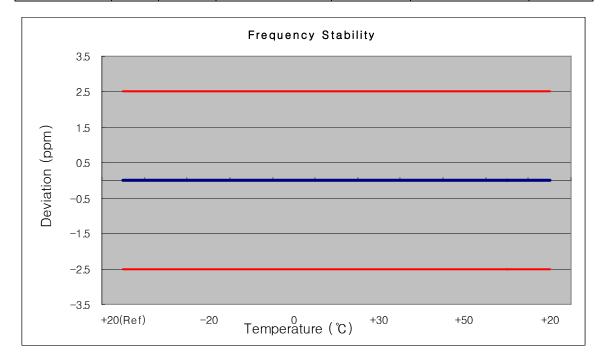
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7.5 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE 7.5.1 FREQUENCY STABILITY (CDMA)

OPERATING FREQUENCY:	836,520,000 Hz
CHANNEL:	384
REFERENCE VOLTAGE:	3.7 VDC
DEVIATION LIM IT:	<u>± 0.000 25 % or 2.5 ppm</u>

Voltage	Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100%		+20(Ref)	836 520 003	0	0.000 000	0.000
100%		-30	836 520 002	2.09	0.000 000	0.002
100%		-20	836 520 006	6.12	0.000 001	0.007
100%		-10	836 519 990	-9.88	-0.000 001	-0.012
100%	5.00	0	836 520 002	1.90	0.000 000	0.002
100%		+10	836 520 007	7.43	0.000 001	0.009
100%		+30	836 519 990	-10.42	-0.000 001	-0.012
100%		+40	836 519 996	-4.10	0.000 000	-0.005
100%		+50	836 520 003	2.52	0.000 000	0.003
115%	5.75	+20	836 520 005	4.98	0.000 001	0.006
Batt. Endpoint	4.25	+20	836 520 011	11.37	0.000 001	0.014



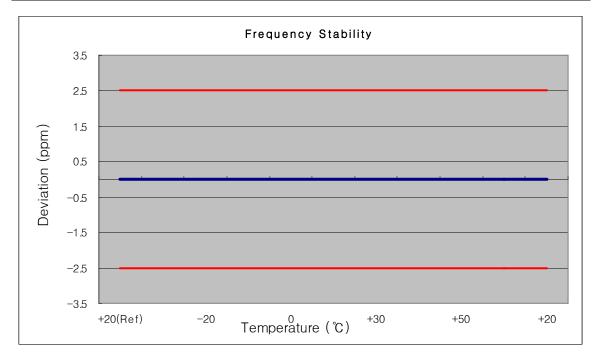
	FCC CERTIFICATION REPORT				
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C		
HCTR1010FFR12-2	November 02, 2010	3G Module	XHG-M600C		



7.5.2 FREQUENCY STABILITY (PCS CDMA)

OPERATING FREQUENCY:	1880,000,000 Hz
CHANNEL:	600
REFERENCE VOLTAGE:	3.7 VDC
DEVIATION LIM IT:	± 0.000 25 % or 2.5 ppm

Voltage	Power	Temp.	Frequency	Frequency	Deviation	
(%)	(VDC)	(°C)	(Hz)	Error (Hz)	(%)	ppm
100%		+20(Ref)	1879 999 995	0	0.000 000	0.000
100%		-30	1880 000 006	6.30	0.000 000	0.003
100%		-20	1880 000 001	0.97	0.000 000	0.001
100%		-10	1879 999 998	-1.57	0.000 000	-0.001
100%	5.00	0	1879 999 997	-2.77	0.000 000	-0.001
100%		+10	1880 000 011	10.61	0.000 001	0.006
100%		+30	1880 000 003	3.11	0.000 000	0.002
100%		+40	1880 000 005	5.02	0.000 000	0.003
100%		+50	1879 999 992	-8.10	0.000 000	-0.004
115%	5.75	+20	1879 999 998	-2.17	0.000 000	-0.001
Batt. Endpoint	4.25	+20	1880 000 002	1.76	0.000 000	0.001



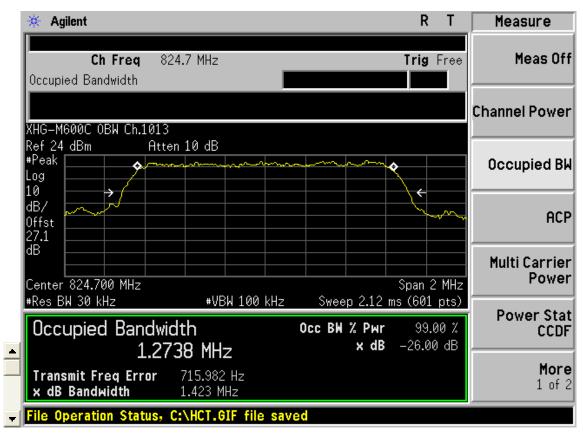
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Test Dates:	EUT Type:	FCC ID:
HCTR1010FFR12-2	November 02, 2010	3G Module	XHG-M600C



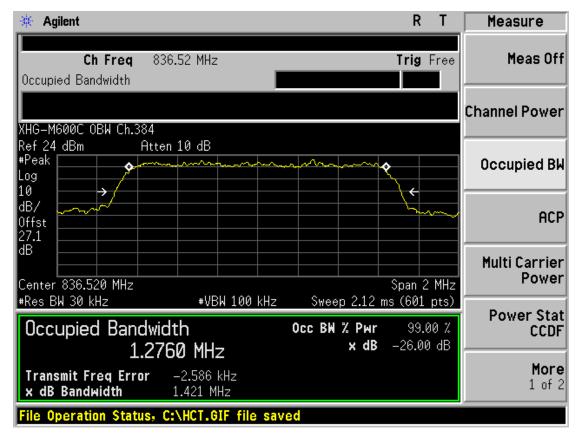
FCC CERTIFICATION REPORT				
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C	
		Dege 0.1 of 40		



CDMA MODE (1013 CH.) Occupied Bandwidth



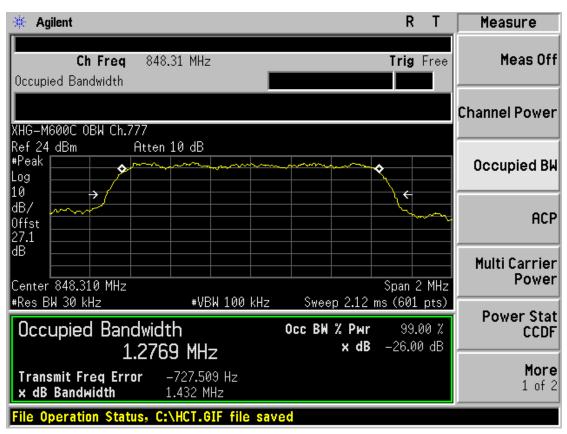
CDMA MODE (384 CH.) Occupied Bandwidth



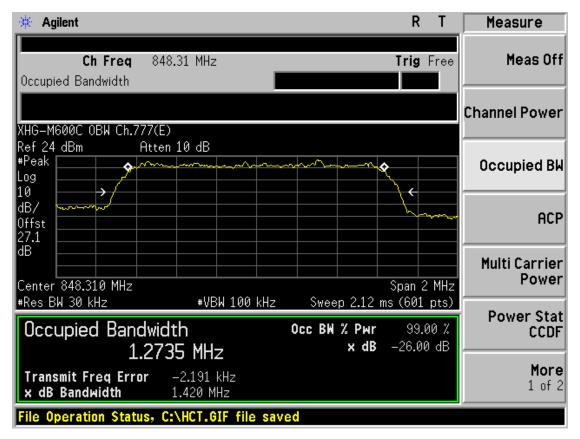
FCC CERTIFICATION REPORT			www.hct.co.kr
Test Report No.	Test Dates:	EUT Type:	FCC ID:
HCTR1010FFR12-2	November 02, 2010	3G Module	XHG-M600C



CDMA MODE (777 CH.) Occupied Bandwidth



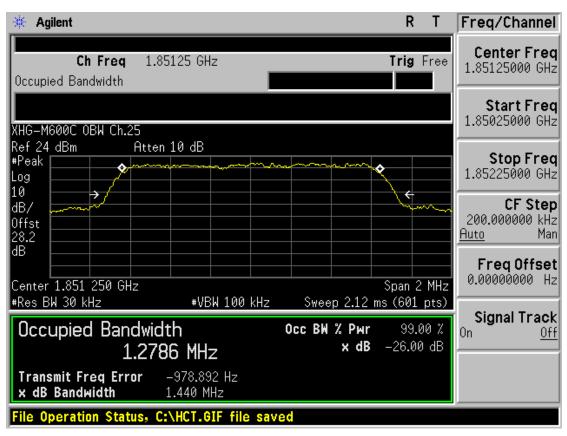
CDMA EVDO MODE (777 CH.) Occupied Bandwidth



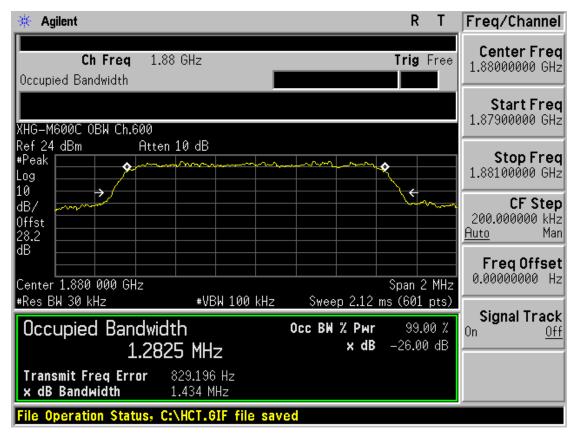
FCC CERTIFICATION REPORT			www.hct.co.kr
Test Report No.	Test Dates:	EUT Type:	FCC ID:
HCTR1010FFR12-2	November 02, 2010	3G Module	XHG-M600C



PCS CDMA MODE (25 CH.) Occupied Bandwidth



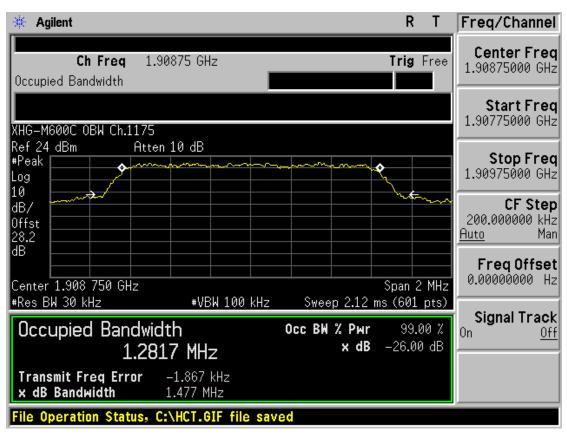
PCS CDMA MODE (600 CH.) Occupied Bandwidth



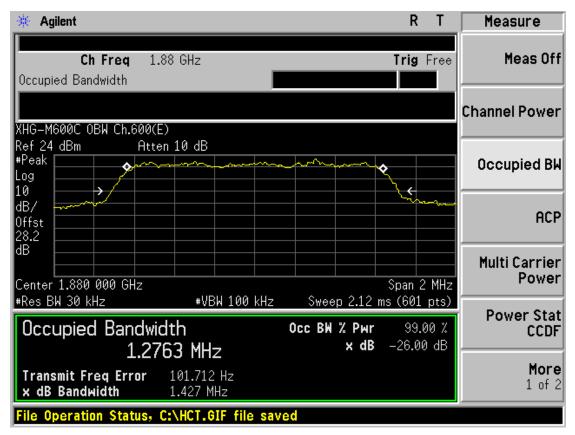
FCC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



PCS CDMA MODE (1175 CH.) Occupied Bandwidth

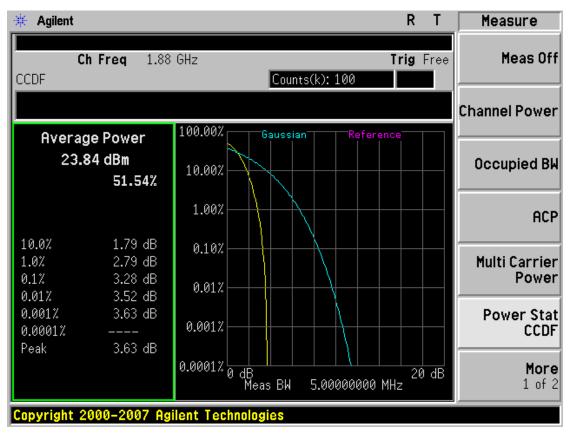


PCS CDMA EVDO MODE (600 CH.) Occupied Bandwidth



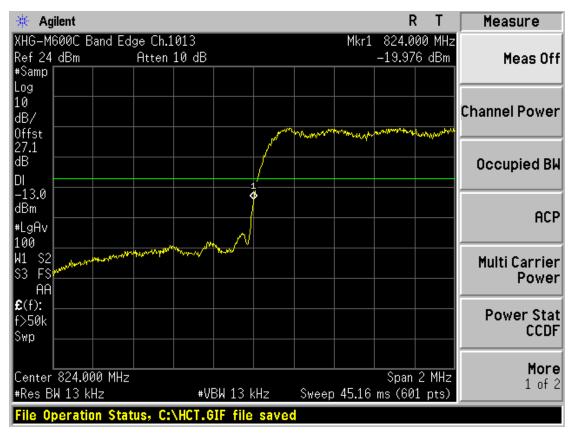
FCC CERTIFICATION REPORT			www.hct.co.kr
	Fest Dates:	EUT Type:	FCC ID:
	November 02, 2010	3G Module	XHG-M600C





PCS CDMA MODE (600 CH.) Peak-to-Average Ratio

■ CDMA MODE (1013 CH.) Band Edge



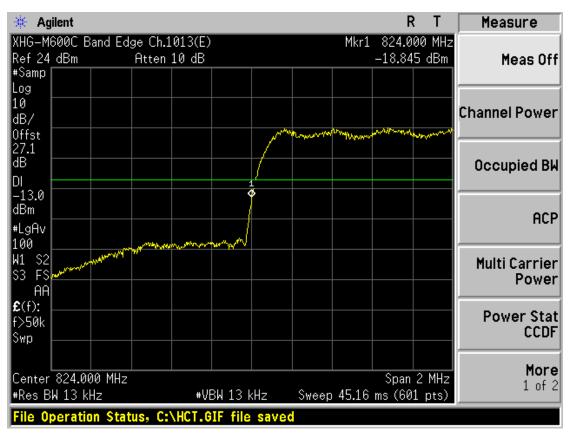
FCC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



🔆 Agilent			R	Т	Measure
	h.777 en 10 dB	Mkr1	849.000 -14.988		Meas Off
#Samp Log 10 dB/ Offst	and the second				Channel Power
27.1 dB DI -13.0					Occupied BW
dBm 4LgAv 100					ACP
W1 S2 S3 FS AA		M.	n.	~~~	Multi Carrier Power
£(f): f>50k Swp					Power Stat CCDF
Center 849.000 MHz #Res BW 13 kHz	#VBW 13 kHz	Sweep 45.16	Span 2 ms (601		More 1 of 2
File Operation Status,	C:\HCT.GIF file sav	ed			

■ CDMA MODE (777 CH.) Band Edge

■ CDMA EVDO MODE (1013 CH.) Band Edge



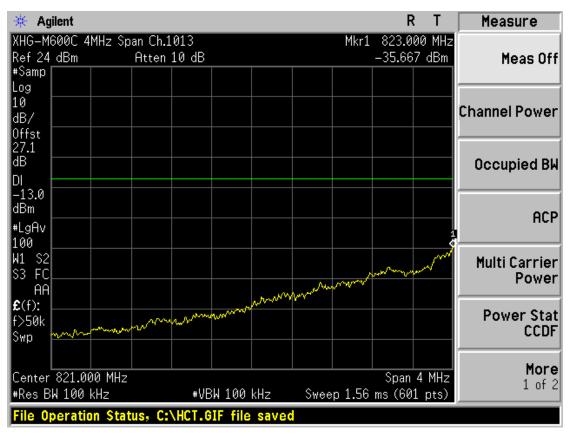
FCC CERTIFICATION REPORT			www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C
L	,		



🔆 Agilent				R	Т	Measure
XHG-M600C Band E			Mkr1	849.000		
Ref 24 dBm	Atten 10 dB			-14.713	dBm	Meas Off
#Samp						
Log 10						
dB/						Channel Power
	Man providence and	1mn 1ng				
27.1		₩				
dB		<u>\</u>				Occupied BW
-13.0 dBm						
						ACP
#LgAv 100						
W1 S2		han	λ.			Hull Country
S3 FS		V V V		Jurg My		Multi Carrier
ÂĂ				ALL PARTY A	~~~v	Power
£ (f):						
f>50k						Power Stat
Swp						CCDF
Center 849.000 MH	7			Span 2	MHz	More
#Res BW 13 kHz		SW 13 kHz – Sv	veep 45.16 i			1 of 2
File Operation Sta						
rife operation su	atus, c. ther.0	IF THE SAVED				

■ CDMA EVDO MODE (777 CH.) Band Edge

CDMA MODE (1013 CH.) 4 MHz Span



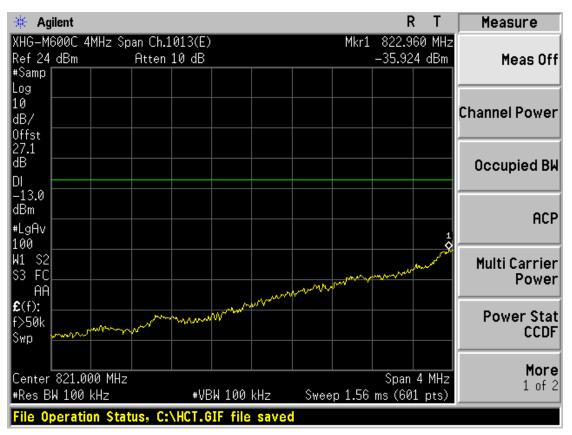
FCC CERTIFICATION REPORT	WWW.IICL.CO.KI
Test Report No. Test Dates: EUT Type: HCTR1010FFR12-2 November 02, 2010 3G Module	FCC ID: XHG-M600C



🔆 Agilent				R	T Measure
XHG—M600C 4MHz Sp			Mkr1	850.080 N	
Ref 24_dBm	Atten 10 dB			-38.467 df	Bm MeasOff
#Samp					
Log 10					
dB/					Channel Power
Offst					
27.1					
dB					Occupied BW
DI					
-13.0					
dBm					ACP
#LgAv					
100 <u>1</u> W1 S2 🛠					
W1 S2 X S3 FC					Multi Carrier
AA	Maria				Power
£(f):	montheme	m			
f>50k		mm	mmmm		Power Stat
Swp			" " "	many	CCDF
Center 852.000 MHz				Span 4 M	More
#Res BW 100 kHz	#UF	3W 100 kHz	Sweep 1.56		
				m a (001 pi	
File Operation Stat	us, C:\HCT.0	ill file saved			

CDMA MODE (777 CH.) 4 MHz Span

CDMA EVDO MODE (1013 CH.) 4 MHz Span



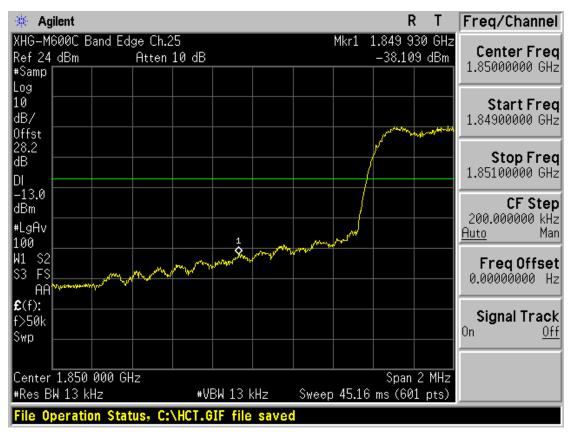
FCC CERTIFICATION REPORT		
	FCC ID: XHG-M600C	



🔆 Agilent				RT	Measure
XHG-M600C 4MHz Sp			Mkr1	850.087 MHz	
Ref 24 dBm	Atten 10 dB			-39.142 dBm	Meas Off
#Samp					
Log 10					
dB/					Channel Power
Offst					
27.1					
dB					Occupied BW
DI					
-13.0					
dBm					ACP
#LgAv					
100 1					
W1 S2					Multi Carrier
AA AA	mon				Power
£(f):	month	<u></u>			
f>50k		man man man and a			Power Stat
Śwp		V 17 V () / 1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mman	CCDF
				Survey 4 Mills	More
Center 852.000 MHz	"IIDI	100 Julia - Succe	- 1 EC	Span 4 MHz	1 of 2
#Res BW 100 kHz			p 1.56	ms (601 pts)	
File Operation Stat	us, C:\HCT.GI	F file saved			

CDMA EVDO MODE (777 CH.) 4 MHz Span

■ PCS CDMA MODE (25 CH.) Band Edge



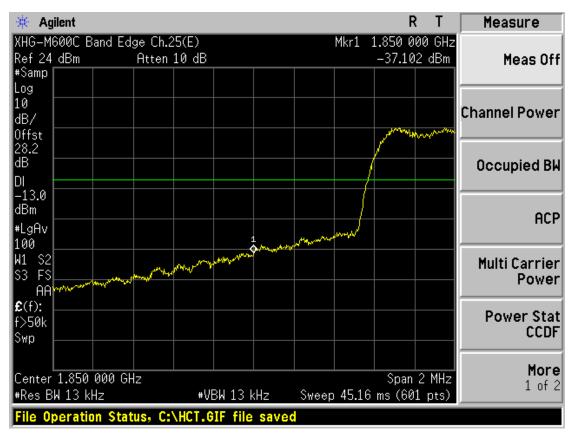
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



🔆 Agilent				R	Т	Freq/Channel
XHG-M600C Band Edg Ref 24 dBm #Samp	e Ch.1175 Atten 10 dB		Mkr1	1.910 00) -30.040		Center Freq 1.91000000 GHz
Log 10 dB/ Offst						Start Freq 1.90900000 GHz
28.2 dB						Stop Freq 1.91100000 GHz
-13.0 dBm #LgAv 100	June where we	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Marine Contraction			CF Step 200.000000 kHz <u>Auto</u> Man
W1 S2 S3 FS AA			and the second s	Winnellin on wh	-whow	FreqOffset 0.00000000 Hz
€(f): f>50k Swp						Signal Track ^{On <u>Off</u>}
Center 1.910 000 GH: #Res BW 13 kHz		3W 13 kHz	Sweep 45.16	Span 2 ms (601		
File Operation State	is, C:\HCT.G	IF file saved				

■ PCS CDMA MODE (1175 CH.) Band Edge

■ PCS CDMA EVDO MODE (25 CH.) Band Edge



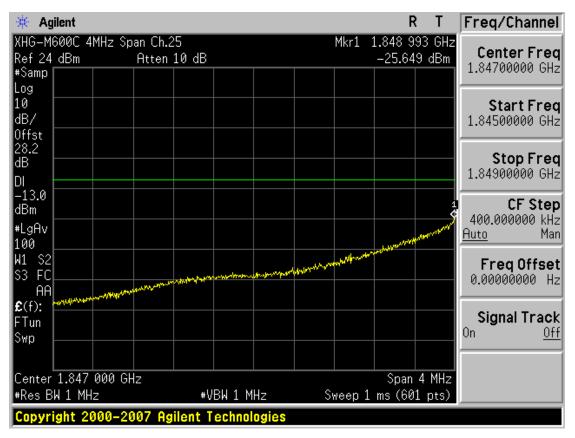
FCO		www.hct.co.kr
		FCC ID: XHG-M600C
	tes: E	tes: EUT Type:



🔆 Agilent				R	Т	Measure
XHG-M600C Band E			Mkr1	1.910 003		
Ref 24 dBm	Atten 10 dB			-26.328	dBm	Meas Off
#Samp Log						
10						
dB/						Channel Power
Offst when when						
28.2 " dB	¥					O a sure in al DU
DI						Occupied BW
-13.0	+					
dBm	manymour	1				000
#LgAv		where we prove the second	Mary Mary Mary			ACP
100			a marking when a shall be a second a se			
W1 S2				M. Whanking	mon	Multi Carrier
\$3 FS						Power
AA £(f):						
f>50k						Power Stat
Swp						CCDF
Center 1.910 000 G				Span 2	MUL	More
tenter 1.910 000 G #Res BW 13 kHz		3W 13 kHz	Sweep 45.10			1 of 2
					pts/	
File Operation Sta	itus, C:\HCT.G	IF file saved				

■ PCS CDMA EVDO MODE (1175 CH.) Band Edge

PCS CDMA MODE (25 CH.) 4 MHz Span



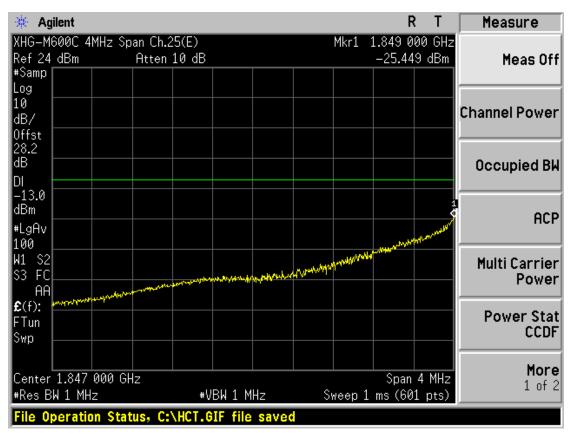
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



🔆 Agilent			R	T Freq/Chann	el
XHG-M600C 4MHz			Mkr1 1.911 02	Conton Fr	ea
Ref 24 dBm #Samp	Atten 10 dB		-21.805	1.91300000 G	
Log					_
10 dB/				Start Fre	
0ffst				1.91100000 G	HΖ
28.2				Stop Fre	~~
dB				1.91500000 G	сч Hz
DI					
dBm 🔨				CF Sto 400.000000 k	
#LgAv	~				1an
W1 S2	an and a state a			Erog Offe	+
\$3 FC	and the second	many many		Freq Offs 0.00000000	Hz
AA		1 CON 1447	have and the state where	tonik a	
£ (f): FTun				Signal Tra	ck
Swp				0n <u>(</u>	<u>Off</u>
Center 1.913 000			Span 4	4 MHz	
#Res BW 1 MHz	#VBW 1	MHz S	weep 1 ms (601	pts)	
File Operation St	atus, C:\HCT.GIF fi	le saved			

PCS CDMA MODE (1175 CH.) 4 MHz Span

■ PCS CDMA EVDO MODE (25 CH.) 4 MHz Span



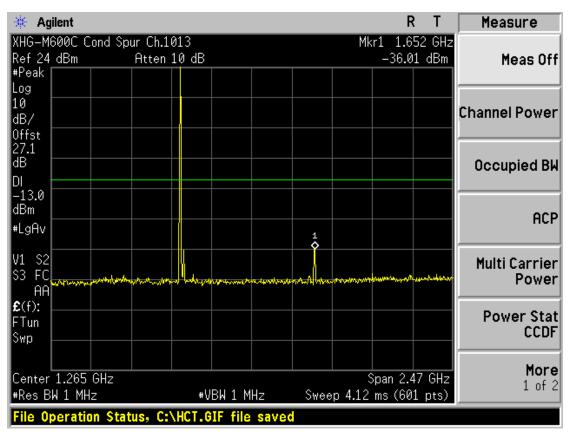
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



Measure	RT							gilent	₩ A(
Meas Off	11 067 GHz 20.327 dBm)	1175(E) 10 dB		4MHz S	4 dBm	XHG-M Ref 24 #Samp
Channel Power									Log 10 dB/ Offst
Occupied BW								-1	28.2 dB DI
ACP						monde	1-41. www.yhy		-13.0 dBm #LgAv 100
Multi Carrier Power	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	W#14-4460/#+++	montemantpole	munny	New West And And And		^{NYK-M} IM	2	W1 S2 S3 FC AA
Power Stat CCDF									€(f): FTun Swp
More 1 of 2	Span 4 MHz s (601 pts)	Sweep 1	Hz	/BW 1 M	#\	Hz	 3 000 G Hz	r 1.913 BW 1 M	
			saved	F file	\HCT.6	tus, C:	ion Sta)perat	File 0

PCS CDMA EVDO MODE (1175 CH.) 4 MHz Span

CDMA MODE (1013 CH.) Conducted Spurious Emissions - 1



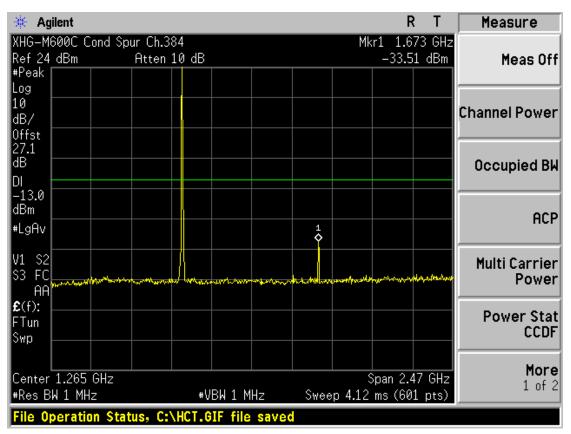
	•••••
Test Report No.Test Dates:EUT Type:FCC ID:HCTR1010FFR12-2November 02, 20103G ModuleXHG-M600	5



🔆 Agilent					R	Т	Measure
XHG-M600C Cond S				Mkr1			
	Atten 1	0 dB			-40.62	dBm	Meas Off
#Peak							
10 dB/							Channel Power
ав/ Offst			<u> </u>				
27.1							
dB							Occupied Bk
DI							occupied br
-13.0							
dBm							
#LgAv							ACF
V1 S2			\$				Multi Carrier
S3 FCmmlmmm	Water Alter destation	which some the strategist	adult	no-willy the subliques	tophonomen	manthe	Power
AA							1 0 1 0 1
£ (f):							Day your Charl
FTun							Power Stat
Swp			<u> </u>				CCDF
Center 6.250 0 GH	7				Span 7.5	5 647	More
#Res BW 1 MHz	£	#VBW 1 N	111-7 Swa	ep 12.52			1 of 2
				op 12.02	1007 601	ptoy	
File Operation St	atus, C:\l	HCI.GIF file	saved				

CDMA MODE (1013 CH.) Conducted Spurious Emissions - 2

CDMA MODE (384 CH.) Conducted Spurious Emissions - 1



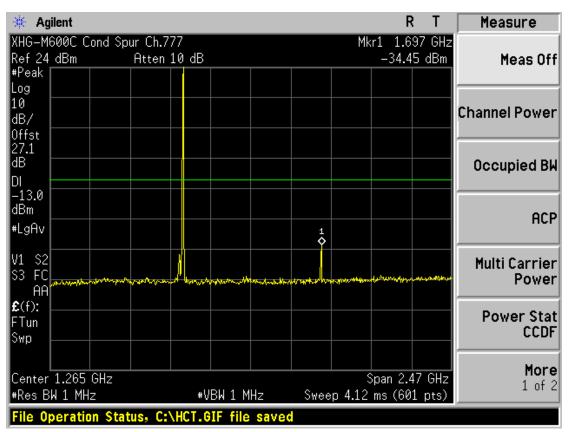
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No.	Test Dates:	EUT Type:	FCC ID:
HCTR1010FFR12-2	November 02, 2010	3G Module	XHG-M600C



🔆 Agilent					R	Т	Measure
XHG-M600C Cond Sp				Mkr1	7.125 (
Ref 24 dBm #Peak	Atten 10 d	3		1 1	-40.38	dBm	Meas Off
Log							
10							Channel Dewer
dB/							Channel Power
Offst 27.1							
dB							Occupied Bk
DI							occupied DR
-13.0							
dBm							ACF
#LgAv							
V1 S2			1 \$				
VI 52 S3 FC	. In a start of the start of the	method and	And and a state of the second	American	-	www.ander	Multi Carrier
AA		al alle all have the second					Power
£(f):							Day your Charl
FTun							Power Stat CCDF
Swp							
							Morra
Center 6.250 0 GHz					Span 7.5		More 1 of 2
#Res BW 1 MHz		⊭VBW 1 MHz	Sweep	o 12 . 52	ms (601	pts)	
File Operation Sta	tus, C:\HCT	.GIF file sa	ved				

CDMA MODE (384 CH.) Conducted Spurious Emissions - 2

CDMA MODE (777 CH.) Conducted Spurious Emissions - 1



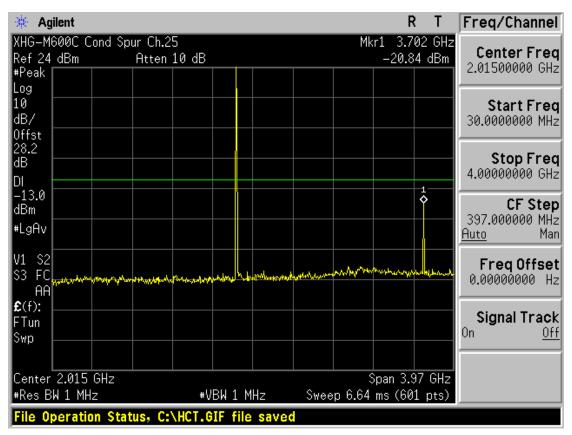
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



Measure	Т	R									jilent	₩ A
) GHz			Mkr1						Cond Sp		
Meas Of	dBm	.62	-40.					10 dB	Atten		dBm	Ref 24
												#Peak
		_									L	Log 10
Channel Power												dB/
		+										Offst
												27.1
Occupied Bl												dB
		_										DI
												-13.0
ACF												dBm
пст												#LgAv
					1							
Multi Carrier			Ar at	Sec. 4.	m Same							V1 S2
Power	mph www	~~~	Authorse	, an owned	, or toda	and the second	and the second	program where the second second	manutar	d Mary and M		
												AF
Power Stat		+										£ (f):
CCDF												FTun
		+										Swp
More												
More 1 of 2	GHz	7.5	Span (0 GHz	6.250	Center
1 01 2	pts)	01	ms (60	12.52	Sweep	Hz	BW 1 M	#\/		lz	3W 1 M⊦	#Res E
					d	save	IF file	HCT.6	us. C:'	on Stat	nerati	File 0

CDMA MODE (777 CH.) Conducted Spurious Emissions - 2

■ PCS CDMA MODE (25 CH.) Conducted Spurious Emissions - 1



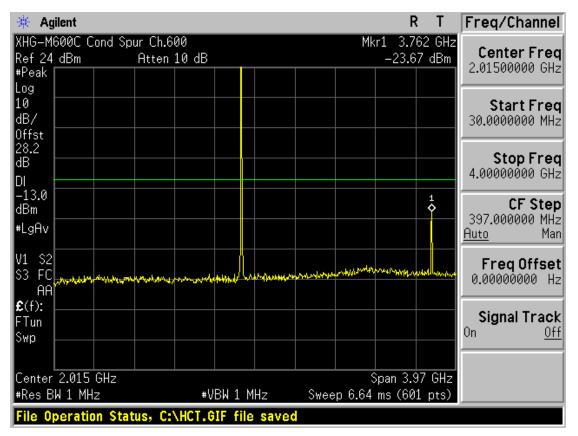
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



🔆 Ag	jilent								F	х т	Freq/Channel
Ref 24		ond Spi	ur Ch.2 Atten					Mkr		60 GHz 1 dBm	Center Freq 12.0000000 GHz
#Peak Log 10											Start Freq
dB/ Offst 28.2											4.00000000 GHz
dB DI											Stop Freq 20.0000000 GHz
-13.0 dBm #LgAv											CF Step 1.6000000 GHz Auto Man
V1 S2 S3 FC AA	likensenters		r ann an	Mutrahiyapa	malahan	wayneed and	d ^{en o} lenski med	1 %~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	hyphyhaun	www.	Freq Offset 0.00000000 Hz
£ (f): FTun Swp											Signal Track On <u>Off</u>
	12.000 W 1 MH			#\/	BW 1 M	Hz	Swe	eep 40		l6 GHz 1 nts)	
			us, C:'			saved					

■ PCS CDMA MODE (25 CH.) Conducted Spurious Emissions - 2

PCS CDMA MODE (600 CH.) Conducted Spurious Emissions - 1



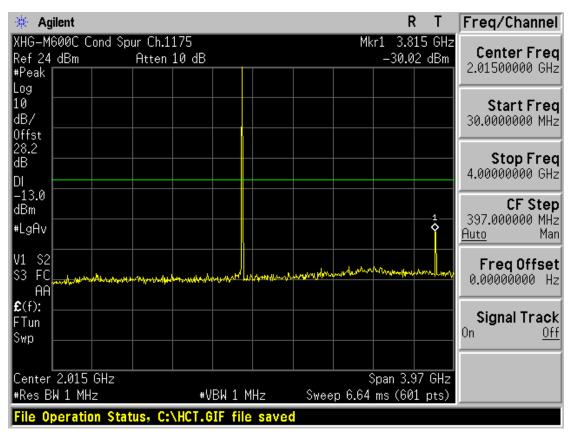
		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



* Agilent			RT	Freq/Channel
XHG-M600C Cond Spur		М	kr1 14.240 GHz	Center Freq
Ref24 dBm f #Peak	Atten 10 dB		-36.61 dBm	12.0000000 GHz
Log				
10 dB/				Start Freq 4.0000000 GHz
Offst 🛛 👘				4.00000000 0H2
28.2 dB				Stop Freq
DI				20.0000000 GHz
-13.0				CF Step
dBm				1.60000000 GHz
#LgAv				<u>Auto</u> Man
V1 S2	and and an and and an	manage real and the second second	demonstration	Freq Offset
S3 FC				0.00000000 Hz
£(f):				
FTun				Signal Track On Off
Swp				
Center 12.000 GHz #Res BW 1 MHz	#VBW 1 M	Hz Sween 4	Span 16 GHz 40 ms (601 pts)	
	s, C:\HCT.GIF file		10 mo (001 p(3)	

■ PCS CDMA MODE (600 CH.) Conducted Spurious Emissions - 2

■ PCS CDMA MODE (1175 CH.) Conducted Spurious Emissions - 1



		FCC CERTIFICATION REPORT	www.hct.co.kr
Test Report No. HCTR1010FFR12-2	Test Dates: November 02, 2010	EUT Type: 3G Module	FCC ID: XHG-M600C



🔆 Agilent			R	T	Freq/Channel
XHG-M600C Cond Sp				60 GHz	Center Freq
Ref 24 dBm #Peak	Atten 10 dB		-36.8	5 dBm	12.0000000 GHz
Log					
10					Start Freq
dB/					4.00000000 GHz
Offst 28.2					
dB					Stop Freq
DI					20.0000000 GHz
-13.0					CF Step
dBm					1.60000000 GHz
#LgAv		1			<u>Auto</u> Man
V1 S2 "/		and provider and	man when have marked and	etermet thete	Freq Offset
S3 FC	and a second and a second second	Windows			0.00000000 Hz
AA					
£(f):					Signal Track
FTun Swp					On <u>Off</u>
011p					
Contor 12.000 CU-			<u> </u>		
Center 12.000 GHz #Res BW 1 MHz	₩VBW 1	MH-2 SI	ى span weep 40 ms (60	.6 GHz 1 nts)	
				1 pt3/	
rife operation Stat	tus, C:\HCT.GIF fil	e saved			

PCS CDMA MODE (1175 CH.) Conducted Spurious Emissions - 2

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Test Report No. Test Dates: EUT Type: HCTR1010FFR12-2 November 02, 2010 3G Module	FCC ID: XHG-M600C	