



Compliance Test Report

For FCC Part 15.247 Certification

Product Name : Cellular PCS CDMA Phone with EVDO and
Bluetooth (BT2.0 + EDR)

Model No. : RM-384

FCC ID. : QMNRN-384

Max. Output Power : 2.559 mW(4.08 dBm) Conducted (GFSK)
3.524 mW(5.47 dBm) Conducted (EDR)

Frequency Range : 2402 – 2480 MHz (Bluetooth for US)

FCC Rule Part(s) : FCC CFR Title 47 Part 15 Subpart C

FCC Classification : FCC Part 15 Spread Spectrum Transmitter

Filing Type : Certification

Test Procedure : ANSI C63.4-2003

Applicant : Nokia Inc.

Address : 12278 Scripps Summit Dr. San Diego CA
92131 USA

Date of Receipt : Sep. 08, 2008

Issued Date : Oct. 06, 2008

Report No. : 088352R-RFUSP06V01

Report Version : V1.0

The Test Results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of Quie Tek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issued Date: Oct. 06, 2008

Report No.: 088352R-RFUSP06V01



Product Name : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Applicant : Nokia Inc.
Address : 12278 Scripps Summit Dr. San Diego CA 92131 USA
Manufacturer : Foxconn International Holdings Limited.
Model No. : RM-384
FCC ID. : QMNRM-384
Rated Voltage : AC 100-240V/50-60Hz
EUT Voltage : DC 3.7V(Standard Battery : BL-4C)
Trade Name : Nokia
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
ANSI C63.4: 2003
Test Result : Complied



The Test Results relate only to the samples tested.

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History of Test Report

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1. GENERAL INFORMATION**1.1. EUT Description**

Product Name : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)

Trade Name : Nokia

FCC ID. : QMNRM-384

Model No. : RM-384

MEID : A000000126D671 (Conducted Sample)
A000000126D674 (Radiated Sample)

FCC Classification : FCC Part 15 Spread Spectrum Transmitter(DSS)

Method/System : Frequency Hopping Spread Spectrum(FHSS)

Type of Modulation : GFSK(Normal)
8DPSK(EDR)

Frequency Range : 2402 - 2480MHz

Channel Number : 79

Antenna type : Fixed internal

Hardware version : 2500

Software version : CB_1103T_FCC_151

Battery Type : Standard : BL-4C (DC 3.7V)

Power Adapter : MFR: NOKIA, M/N:AC-6U, 3943497466070800979
INPUT: AC 100-240V, 50-60Hz, 150mA
OUTPUT: DC 5V, 550 mA
Cable : Non-Shielded, 1.8m

Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 20:	2422 MHz	Channel 40:	2442 MHz	Channel 60:	2462 MHz
Channel 01:	2403 MHz	Channel 21:	2423 MHz	Channel 41:	2443 MHz	Channel 61:	2463 MHz
Channel 02:	2404 MHz	Channel 22:	2424 MHz	Channel 42:	2444 MHz	Channel 62:	2464 MHz
Channel 03:	2405 MHz	Channel 23:	2425 MHz	Channel 43:	2445 MHz	Channel 63:	2465 MHz
Channel 04:	2406 MHz	Channel 24:	2426 MHz	Channel 44:	2446 MHz	Channel 64:	2466 MHz
Channel 05:	2407 MHz	Channel 25:	2427 MHz	Channel 45:	2447 MHz	Channel 65:	2467 MHz
Channel 06:	2408 MHz	Channel 26:	2428 MHz	Channel 46:	2448 MHz	Channel 66:	2468 MHz
Channel 07:	2409 MHz	Channel 27:	2429 MHz	Channel 47:	2449 MHz	Channel 67:	2469 MHz
Channel 08:	2410 MHz	Channel 28:	2430 MHz	Channel 48:	2450 MHz	Channel 68:	2470 MHz
Channel 09:	2411 MHz	Channel 29:	2431 MHz	Channel 49:	2451 MHz	Channel 69:	2471 MHz
Channel 10:	2412 MHz	Channel 30:	2432 MHz	Channel 50:	2452 MHz	Channel 70:	2472 MHz
Channel 11:	2413 MHz	Channel 31:	2433 MHz	Channel 51:	2453 MHz	Channel 71:	2473 MHz
Channel 12:	2414 MHz	Channel 32:	2434 MHz	Channel 52:	2454 MHz	Channel 72:	2474 MHz
Channel 13:	2415 MHz	Channel 33:	2435 MHz	Channel 53:	2455 MHz	Channel 73:	2475 MHz
Channel 14:	2416 MHz	Channel 34:	2436 MHz	Channel 54:	2456 MHz	Channel 74:	2476 MHz
Channel 15:	2417 MHz	Channel 35:	2437 MHz	Channel 55:	2457 MHz	Channel 75:	2477 MHz
Channel 16:	2418 MHz	Channel 36:	2438 MHz	Channel 56:	2458 MHz	Channel 76:	2478 MHz
Channel 17:	2419 MHz	Channel 37:	2439 MHz	Channel 57:	2459 MHz	Channel 77:	2479 MHz
Channel 18:	2420 MHz	Channel 38:	2440 MHz	Channel 58:	2460 MHz	Channel 78:	2480 MHz
Channel 19:	2421 MHz	Channel 39:	2441 MHz	Channel 59:	2461 MHz		

Note:

1. This device is a Cellular PCS CDMA Phone with a built-in 2.4GHz Bluetooth 2.0+EDR (Enhanced Data Rate) transceiver.
2. These tests were conducted on a sample for the purpose of demonstrating compliance of Bluetooth transmitter with Part 15 Subpart C (paragraph 15.247) for frequency hopping spread spectrum devices.
3. Regarding to the operation frequency, the lowest, the middle and the highest frequency channels are selected for testing.

1.2. Operational Description

The EUT is a Cellular PCS CDMA Phone with a built-in 2.4GHz Bluetooth 2.0+EDR (Enhanced Data Rate) transceiver. The number of the channels is 79 from 2402MHz to 2480MHz. The device adapts the frequency hopping spread spectrum modulation.

This device provides wireless technology that revolutionizes personal connectivity. It is the solution for the seamless integration of Bluetooth technology into personal computer enabling short-range wireless connections between desktop/laptop computers, Bluetooth-enabled peripherals, and portable handheld devices.

Test Mode	Mode 1: Transmitter 1Mbps (GFSK) Mode 2: Transmitter 3Mbps EDR
-----------	---

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1.	N/A	N/A	N/A	N/A	N/A

Signal Cable Type	Signal cable Description
A.	N/A

1.4. Configuration of Tested System

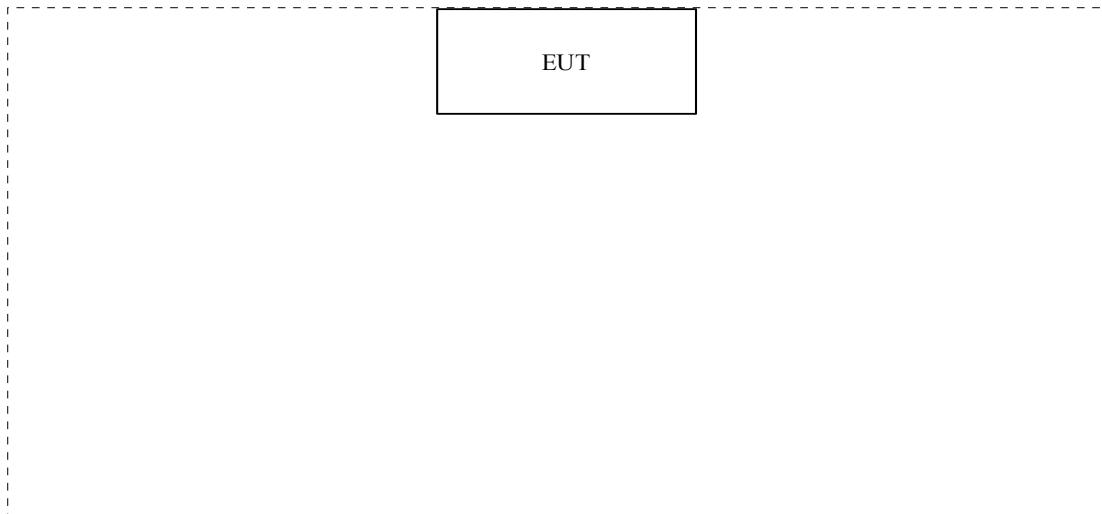


Fig. 1-1 Test setup.

1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4.
- (2) Execute the program from manufacturer and let BT simulator, MT8852B continuous link to the EUT.
- (3) Setup the test mode, the test channel, and the data rate.
- (4) Start to test.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	30-65
Barometric pressure (mbar)	860-1060	950-1000

Site Description: File on

Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
FCC Registration Number: 92195



Certification and Engineering Bureau
3701 Carling Ave., Building 94
P.O. Box 11490, Station "H"
Ottawa, Ontario K2H 8S2
IC Recognized No.: 4075A



Accreditation on NVLAP
NVLAP Lab Code: 200533-0



Site Name: Quietek Corporation
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Lin Kou Shiang, Taipei 244 Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com



1.7. EMI Reduction Method During Compliance Testing

No modification was made during testing.

1.8. Summary of Test Results

Product Name : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Model No. : RM-384
 FCC ID : QMNRM-384
 Method/System : Frequency Hopping Spread Spectrum (FHSS)
 No. of Channel : 79

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
§ 15.207	Conducted Emission	< § 15.207 limits	Line Conducted	Pass	Sec. 2
§ 15.247(b)(1)	Peak power output	1 Watt (if at least 75 non- overlapping hopping channels used.)	Conducted	Pass	Sec. 3
§ 15.205(a) § 15.209(a) § 15.247(d)	Radiated Emission	Emission in the restricted bands must meet to radiated limit details in § 15.209(a)	Radiated	Pass	Sec. 4
§ 15.247(d)	Spurious RF Conducted Emission	At least 20 dB below the highest level of desired power within the band.	Conducted	Pass	Sec. 5
§ 15.247(d)	Band Edge	At least 20 dB below the highest level of desired power within the band.	Conducted	Pass	Sec. 6
§ 15.247 (a)(1)(iii)	Channel Number	> 15 channels used	Conducted	Pass	Sec. 7
§ 15.247(a)(1)	Channel Separation	>25 kHz or 2/3 of 20dB BW for the system with output power no longer than 125 mW.	Conducted	Pass	Sec. 8
§ 15.247 (a)(1)(iii)	Dwell Time	< 0.4 sec in 31.6 sec period.	Conducted	Pass	Sec. 9
§ 15.247 (a)(1)(iii)	Occupied Bandwidth	< 1MHz only if using less than 15 non-overlapping channels	Conducted	Pass	Sec 10

2. Conducted Emission

2.1. Test Equipment

The following test equipments are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./ Serial No	Calibration Date	Calibration Due	Remark
1	Test Receiver	R & S	ESCS 30/100366	18. Oct, 2007	17. Oct, 2008	
2	L.I.S.N.	R & S	ESH3-Z5/836679	15. Jul, 2008	14. Jul, 2009	EUT
3	L.I.S.N.	R & S	ENV4200/833209	11. Aug, 2008	10. Aug, 2009	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2/ 357.8810.52	04. Sep, 2008	03. Sep, 2009	
5	No. 1 Shielded Room			N/A	N/A	

2.2. Test Setup

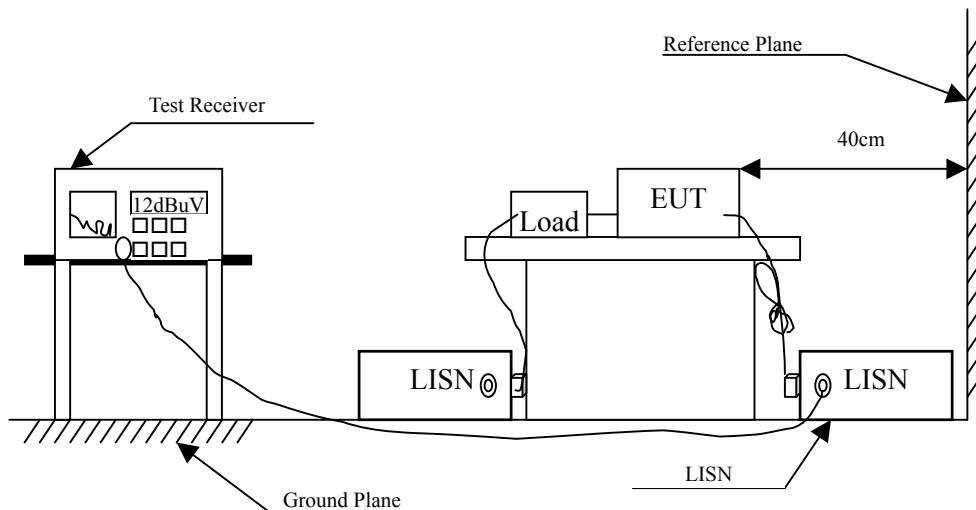


Fig. 2-1 Test arrangement for conducted disturbance at the mains port.

2.3. Limits

FCC Part 15 Subpart C Paragraph § 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.4:2003 and tested according to FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247 requirements..

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

Contributions		Probability Distribution	Standard Uncertainty u_i (dB)
LISN Factor Calibration	U_1	Rectangular	0.693
Receiver : absolute level	U_2	Rectangular	0.577
Site Imperfection	U_3	U-shaped	0.591
Cable Loss	U_4	Normal	0.208
System Repeatability	U_5	Normal	0.260
Combined Standard Uncertainty, U			1.13
Expanded Uncertainty (for a 95 % confidence level, $k=2$)			2.26

2.6. Test Result of Conducted Emission

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.193	9.821	29.170	38.991	-25.780	64.771
0.288	9.830	22.390	32.220	-29.837	62.057
0.515	9.820	22.790	32.610	-23.390	56.000
0.791	9.830	22.030	31.860	-24.140	56.000
2.912	9.860	29.480	39.340	-16.660	56.000
6.531	9.890	23.360	33.250	-26.750	60.000
Average					
0.193	9.821	17.990	27.811	-26.960	54.771
0.288	9.830	9.510	19.340	-32.717	52.057
0.515	9.820	8.700	18.520	-27.480	46.000
0.791	9.830	9.170	19.000	-27.000	46.000
2.912	9.860	18.880	28.740	-17.260	46.000
6.531	9.890	9.360	19.250	-30.750	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " █ ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.197	9.860	30.760	40.620	-24.037	64.657
0.244	9.860	27.000	36.860	-26.454	63.314
0.440	9.836	19.890	29.726	-27.988	57.714
1.037	9.830	22.380	32.210	-23.790	56.000
2.861	9.860	23.710	33.570	-22.430	56.000
5.975	9.880	21.290	31.170	-28.830	60.000
Average					
0.197	9.860	19.380	29.240	-25.417	54.657
0.244	9.860	18.880	28.740	-24.574	53.314
0.440	9.836	9.000	18.836	-28.878	47.714
1.037	9.830	8.330	18.160	-27.840	46.000
2.861	9.860	11.960	21.820	-24.180	46.000
5.975	9.880	8.440	18.320	-31.680	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Conducted Emission Test
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
Battery Type : Standard Battery

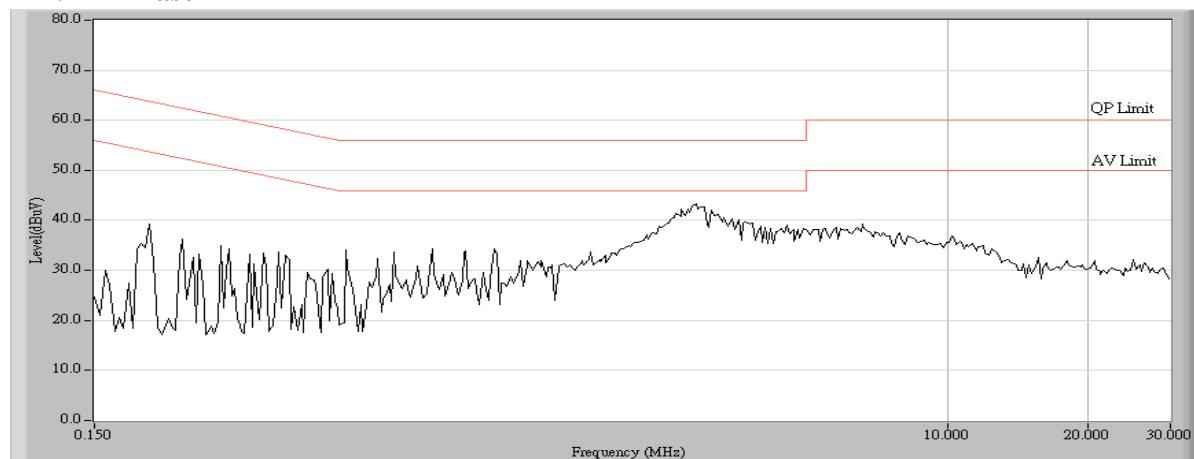
LINE 1=Phase

Fig. 2-2 Conducted emission measurements for mode 1(Ch. 00).

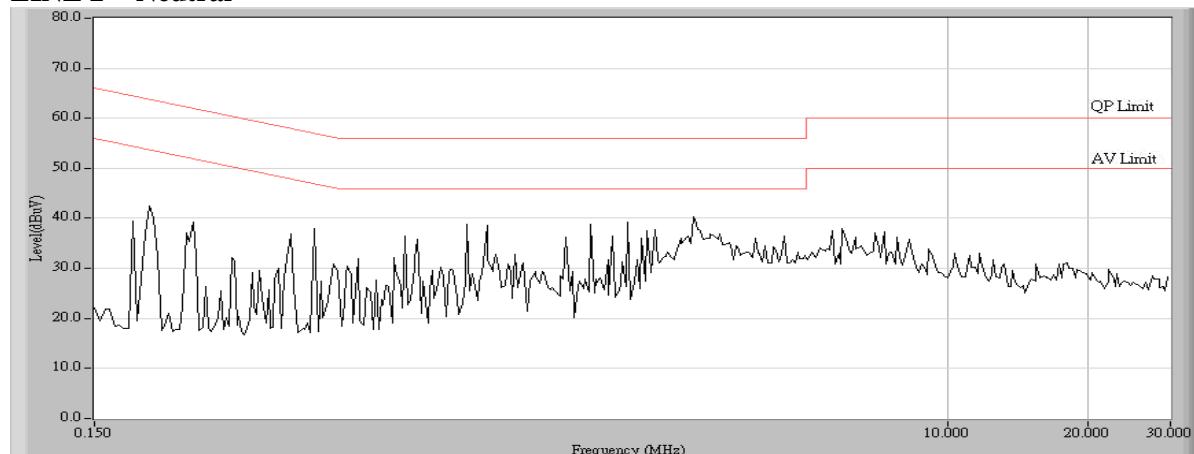
LINE 2 = Neutral

Fig. 2-3 Conducted emission measurements for mode 1(Ch. 00).

Note :

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. The limits for class B devices from 150KHz to 30 MHz are specified in section § 15.207 of the title 47CFR.
3. Line 1 = Phase, Line 2 = Neutral.
4. Traces shown in above figures are made using a peak detector.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.193	9.821	28.730	38.551	-26.220	64.771
0.468	9.820	21.270	31.090	-25.824	56.914
0.793	9.830	21.750	31.580	-24.420	56.000
1.084	9.830	19.650	29.480	-26.520	56.000
2.845	9.860	30.150	40.010	-15.990	56.000
7.341	9.890	22.140	32.030	-27.970	60.000
Average					
0.193	9.821	17.380	27.201	-27.570	54.771
0.468	9.820	7.740	17.560	-29.354	46.914
0.793	9.830	5.760	15.590	-30.410	46.000
1.084	9.830	7.830	17.660	-28.340	46.000
2.845	9.860	18.030	27.890	-18.110	46.000
7.341	9.890	8.090	17.980	-32.020	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.191	9.860	32.980	42.840	-21.989	64.829
0.245	9.860	29.910	39.770	-23.516	63.286
0.333	9.850	24.950	34.800	-25.971	60.771
0.890	9.830	17.060	26.890	-29.110	56.000
1.857	9.850	17.350	27.200	-28.800	56.000
2.837	9.860	21.510	31.370	-24.630	56.000
Average					
0.191	9.860	21.830	31.690	-23.139	54.829
0.245	9.860	19.660	29.520	-23.766	53.286
0.333	9.850	10.080	19.930	-30.841	50.771
0.890	9.830	5.440	15.270	-30.730	46.000
1.857	9.850	5.270	15.120	-30.880	46.000
2.837	9.860	9.850	19.710	-26.290	46.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Conducted Emission Test
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 39)
Battery Type : Standard Battery

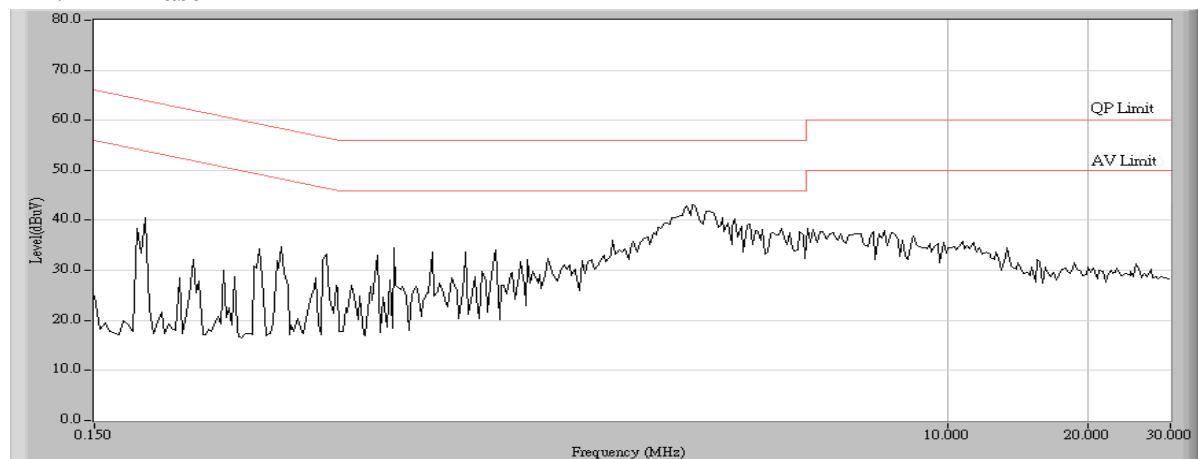
LINE 1= Phase

Fig. 2-4 Conducted emission measurements for mode 1(Ch. 39).

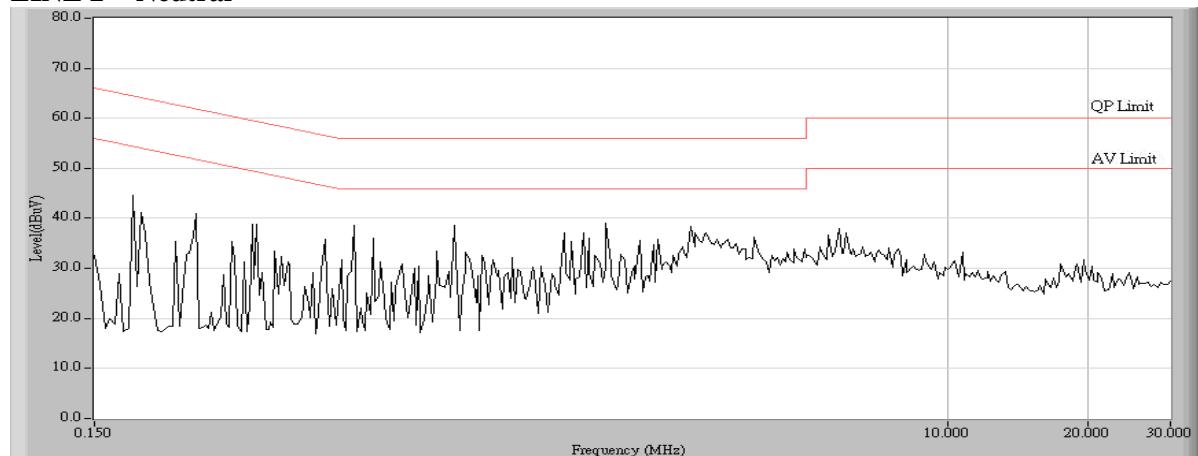
LINE 2 = Neutral

Fig. 2-5 Conducted emission measurements for mode 1(Ch. 39).

Note :

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. The limits for class B devices from 150KHz to 30 MHz are specified in section 15.207 of the title 47CFR.
3. Line 1 = Phase, Line 2 = Neutral.
4. Traces shown in above figures are made using a peak detector.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.185	9.819	38.810	48.629	-16.371	65.000
0.240	9.830	30.870	40.700	-22.729	63.429
0.326	9.830	26.640	36.470	-24.501	60.971
0.459	9.820	20.480	30.300	-26.871	57.171
2.951	9.860	28.760	38.620	-17.380	56.000
4.463	9.870	22.990	32.860	-23.140	56.000
Average					
0.185	9.819	19.430	29.249	-25.751	55.000
0.240	9.830	20.570	30.400	-23.029	53.429
0.326	9.830	9.300	19.130	-31.841	50.971
0.459	9.820	7.240	17.060	-30.111	47.171
2.951	9.860	18.560	28.420	-17.580	46.000
4.463	9.870	10.010	19.880	-26.120	46.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.195	9.860	31.450	41.310	-23.404	64.714
0.384	9.840	25.930	35.770	-23.544	59.314
0.822	9.830	20.610	30.440	-25.560	56.000
1.306	9.840	20.210	30.050	-25.950	56.000
2.947	9.860	25.350	35.210	-20.790	56.000
6.521	9.890	19.740	29.630	-30.370	60.000
Average					
0.195	9.860	19.430	29.290	-25.424	54.714
0.384	9.840	15.770	25.610	-23.704	49.314
0.822	9.830	10.120	19.950	-26.050	46.000
1.306	9.840	7.840	17.680	-28.320	46.000
2.947	9.860	13.210	23.070	-22.930	46.000
6.521	9.890	7.450	17.340	-32.660	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Conducted Emission Test
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
Battery Type : Standard Battery

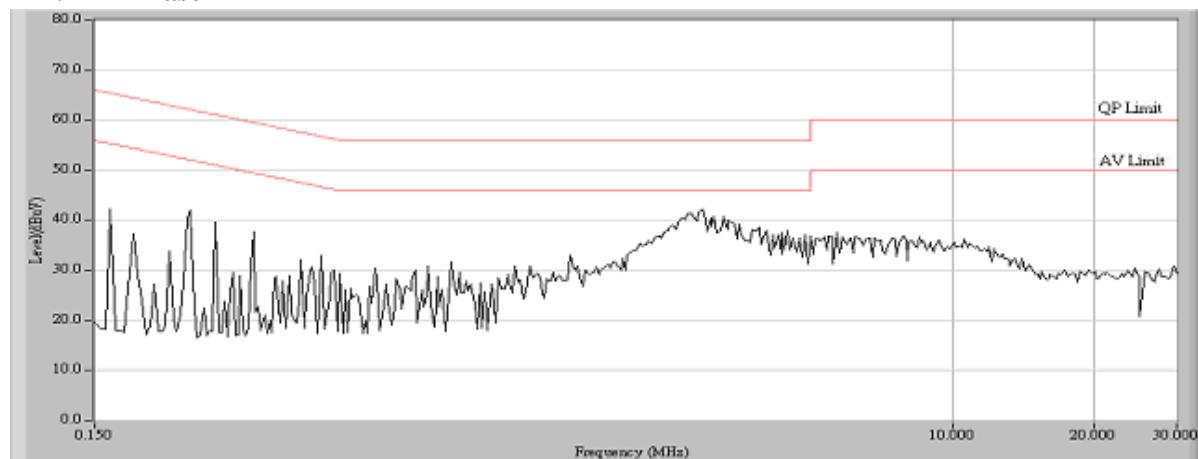
LINE 1= Phase

Fig. 2-6 Conducted emission measurements for mode 1(Ch. 78)

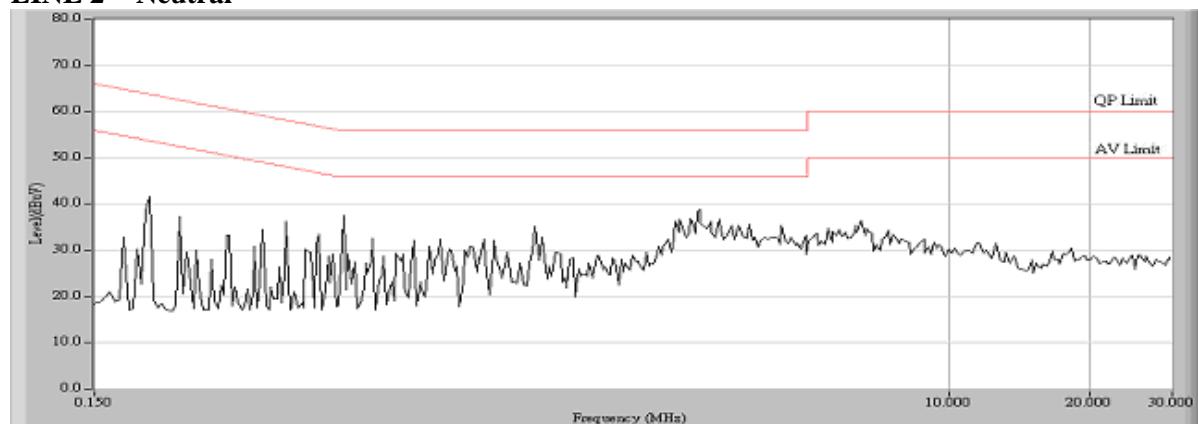
LINE 2 = Neutral

Fig. 2-7 Conducted emission measurements for mode 1(Ch. 78)

Note :

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. The limits for class B devices from 150KHz to 30 MHz are specified in section § 15.207 of the title 47CFR.
3. Line 1 = Phase, Line 2 = Neutral.
4. Traces shown in above figures are made using a peak detector.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.240	9.830	26.530	36.360	-27.069	63.429
0.365	9.821	21.520	31.341	-28.516	59.857
0.728	9.830	20.530	30.360	-25.640	56.000
2.728	9.850	29.550	39.400	-16.600	56.000
5.353	9.870	22.610	32.480	-27.520	60.000
7.818	9.900	21.410	31.310	-28.690	60.000
Average					
0.240	9.830	16.790	26.620	-26.809	53.429
0.365	9.821	8.530	18.351	-31.506	49.857
0.728	9.830	9.600	19.430	-26.570	46.000
2.728	9.850	17.050	26.900	-19.100	46.000
5.353	9.870	8.130	18.000	-32.000	50.000
7.818	9.900	8.390	18.290	-31.710	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.193	9.860	32.000	41.860	-22.911	64.771
0.388	9.840	25.170	35.010	-24.190	59.200
0.720	9.830	20.250	30.080	-25.920	56.000
1.349	9.840	21.070	30.910	-25.090	56.000
2.951	9.860	20.980	30.840	-25.160	56.000
6.275	9.890	18.900	28.790	-31.210	60.000
Average					
0.193	9.860	21.230	31.090	-23.681	54.771
0.388	9.840	14.350	24.190	-25.010	49.200
0.720	9.830	10.350	20.180	-25.820	46.000
1.349	9.840	8.180	18.020	-27.980	46.000
2.951	9.860	9.610	19.470	-26.530	46.000
6.275	9.890	7.320	17.210	-32.790	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Conducted Emission Test
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
Battery Type : Standard Battery

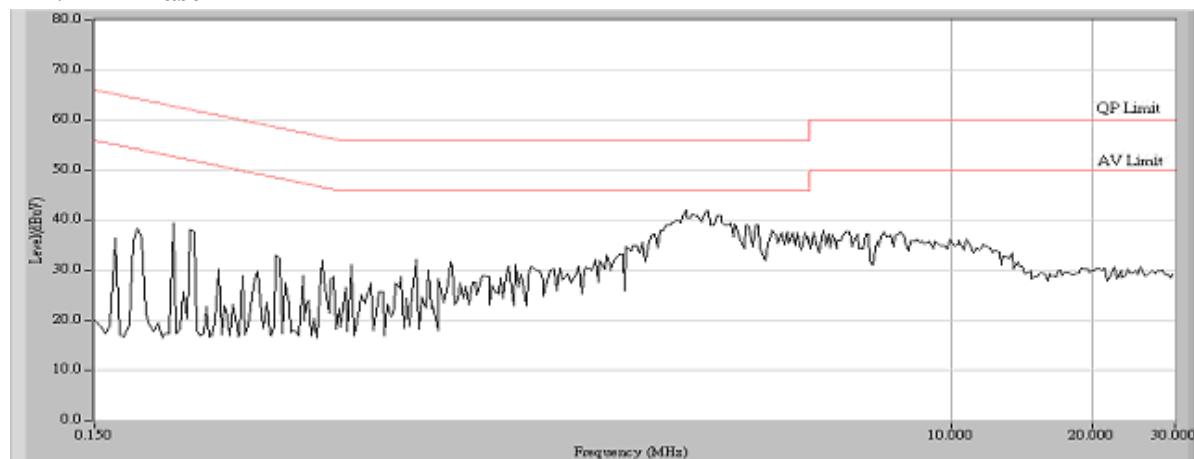
LINE 1= Phase

Fig. 2-8 Conducted emission measurements for mode 2(Ch. 00)

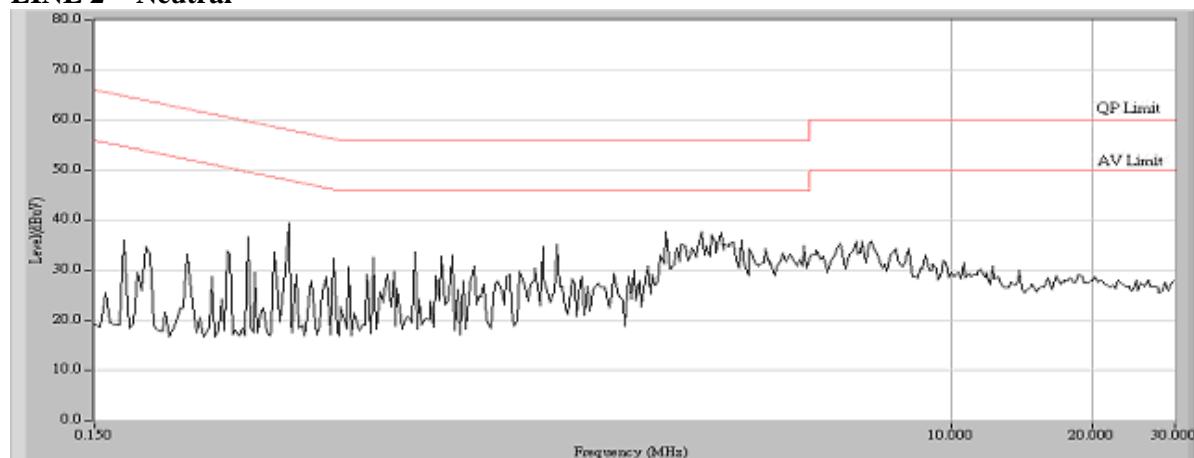
LINE 2 = Neutral

Fig. 2-9 Conducted emission measurements for mode 2(Ch. 00)

Note :

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. The limits for class B devices from 150KHz to 30 MHz are specified in section § 15.207 of the title 47CFR.
3. Line 1 = Phase, Line 2 = Neutral.
4. Traces shown in above figures are made using a peak detector.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.187	9.820	28.460	38.280	-26.663	64.943
0.330	9.830	20.800	30.630	-30.227	60.857
0.728	9.830	20.850	30.680	-25.320	56.000
2.740	9.851	29.880	39.731	-16.269	56.000
4.349	9.870	23.820	33.690	-22.310	56.000
7.005	9.890	21.830	31.720	-28.280	60.000
Average					
0.187	9.820	16.530	26.350	-28.593	54.943
0.330	9.830	6.680	16.510	-34.347	50.857
0.728	9.830	9.720	19.550	-26.450	46.000
2.740	9.851	18.060	27.911	-18.089	46.000
4.349	9.870	9.660	19.530	-26.470	46.000
7.005	9.890	8.330	18.220	-31.780	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.193	9.860	31.490	41.350	-23.421	64.771
0.388	9.840	24.650	34.490	-24.710	59.200
0.822	9.830	19.390	29.220	-26.780	56.000
2.900	9.860	23.800	33.660	-22.340	56.000
5.845	9.880	20.870	30.750	-29.250	60.000
8.838	9.920	16.850	26.770	-33.230	60.000
Average					
0.193	9.860	20.840	30.700	-24.071	54.771
0.388	9.840	13.400	23.240	-25.960	49.200
0.822	9.830	6.500	16.330	-29.670	46.000
2.900	9.860	12.540	22.400	-23.600	46.000
5.845	9.880	7.400	17.280	-32.720	50.000
8.838	9.920	5.410	15.330	-34.670	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Conducted Emission Test
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
Battery Type : Standard Battery

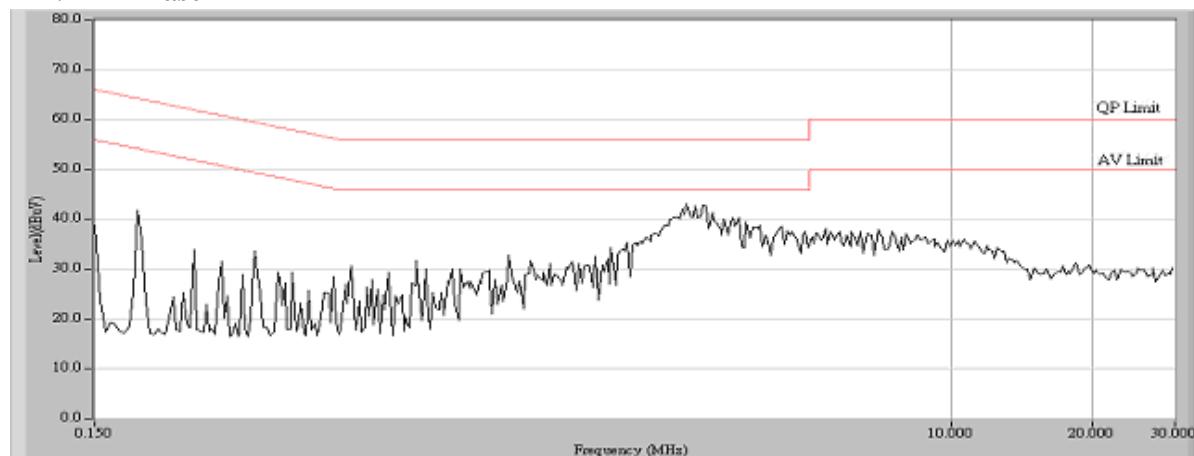
LINE 1= Phase

Fig. 2-10 Conducted emission measurements for mode 2(Ch. 39)

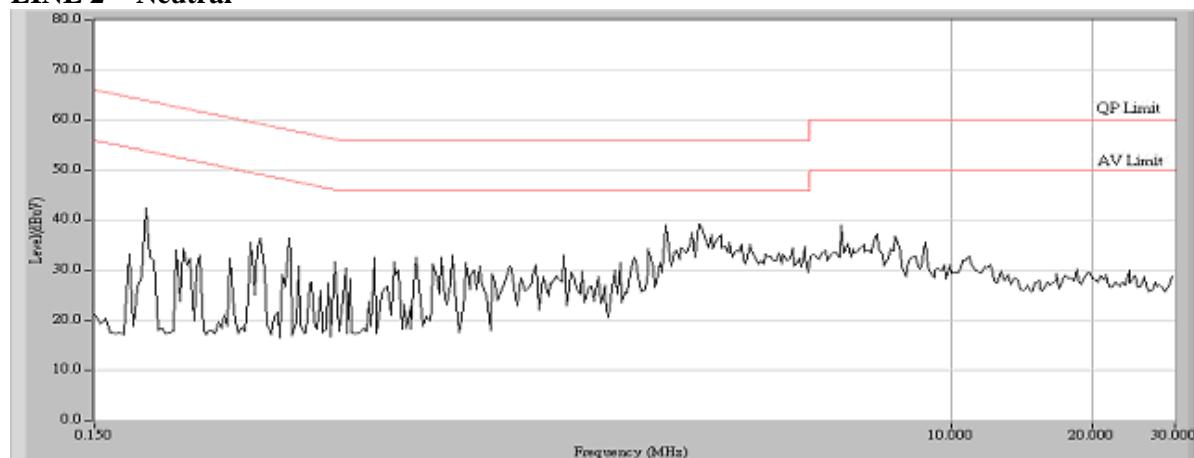
LINE 2 = Neutral

Fig. 2-11 Conducted emission measurements for mode 2(Ch. 39)

Note :

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. The limits for class B devices from 150KHz to 30 MHz are specified in section 15.207 of the title 47CFR.
3. Line 1 = Phase, Line 2 = Neutral.
4. Traces shown in above figures are made using a peak detector.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 1					
Quasi-Peak					
0.193	9.821	29.580	39.401	-25.370	64.771
0.318	9.830	24.730	34.560	-26.640	61.200
0.771	9.830	20.200	30.030	-25.970	56.000
2.810	9.860	30.080	39.940	-16.060	56.000
4.502	9.870	21.990	31.860	-24.140	56.000
7.482	9.892	21.870	31.762	-28.238	60.000
Average					
0.193	9.821	18.030	27.851	-26.920	54.771
0.318	9.830	11.160	20.990	-30.210	51.200
0.771	9.830	7.830	17.660	-28.340	46.000
2.810	9.860	19.200	29.060	-16.940	46.000
4.502	9.870	9.050	18.920	-27.080	46.000
7.482	9.892	8.040	17.932	-32.068	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
LINE 2					
Quasi-Peak					
0.244	9.860	26.710	36.570	-26.744	63.314
0.529	9.830	23.700	33.530	-22.470	56.000
1.498	9.840	23.400	33.240	-22.760	56.000
2.752	9.854	25.130	34.984	-21.016	56.000
7.923	9.910	20.820	30.730	-29.270	60.000
20.232	10.207	11.400	21.607	-38.393	60.000
Average					
0.244	9.860	16.580	26.440	-26.874	53.314
0.529	9.830	13.470	23.300	-22.700	46.000
1.498	9.840	9.080	18.920	-27.080	46.000
2.752	9.854	12.870	22.724	-23.276	46.000
7.923	9.910	8.420	18.330	-31.670	50.000
20.232	10.207	3.420	13.627	-36.373	50.000

Note:

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. All Reading Levels are Quasi-Peak and average value.
3. " **■** ", means this data is the worst emission level.
4. Line 1 = Phase, Line 2 = Neutral.
5. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Conducted Emission Test
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
Battery Type : Standard Battery

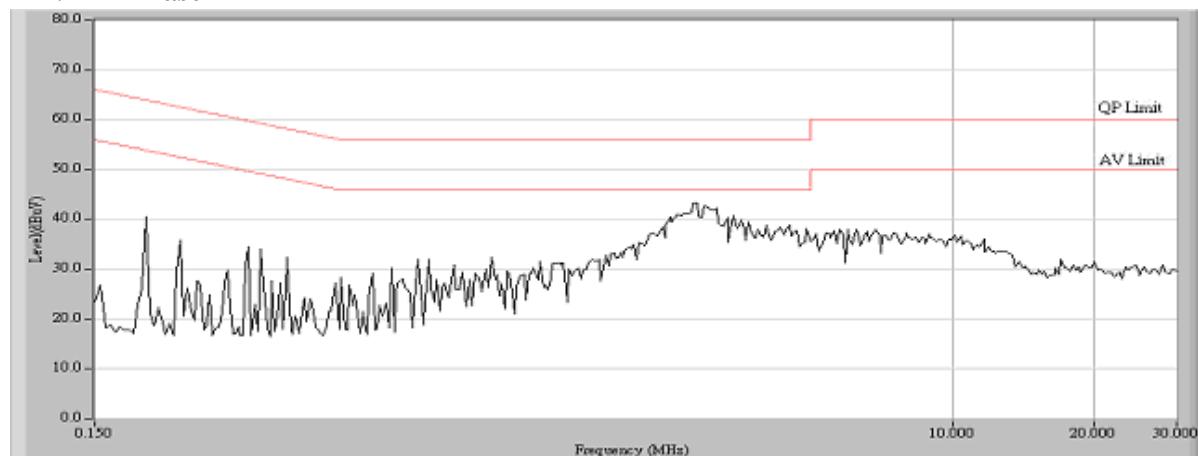
LINE 1= Phase

Fig. 2-12 Conducted emission measurements for mode 2(Ch. 78)

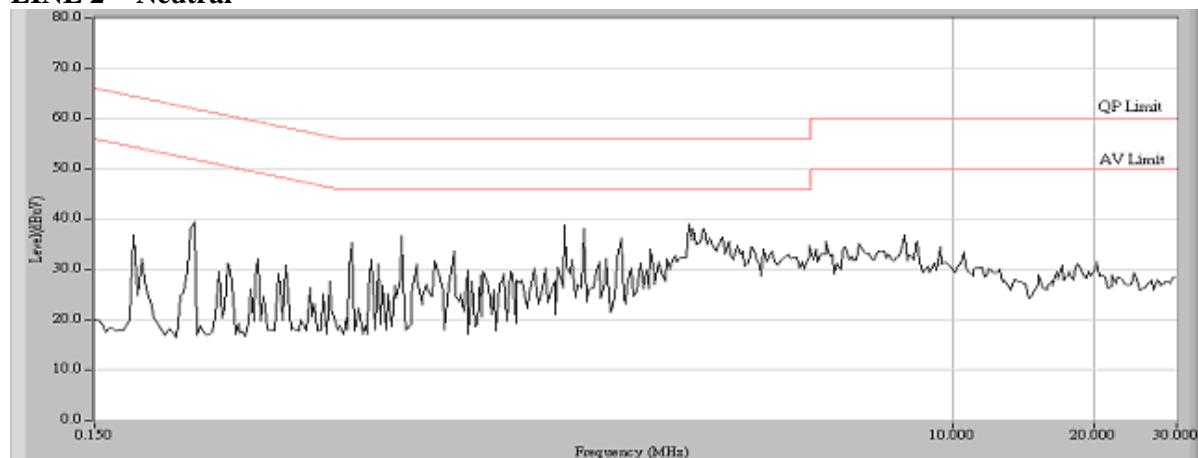
LINE 2 = Neutral

Fig. 2-13 Conducted emission measurements for mode 2(Ch. 78)

Note :

1. All Modes of operation were investigated and the worst-case emissions are supports.
2. The limits for class B devices from 150KHz to 30 MHz are specified in section § 15.207 of the title 47CFR.
3. Line 1 = Phase, Line 2 = Neutral.
4. Traces shown in above figures are made using a peak detector.

3. Peak Power Output

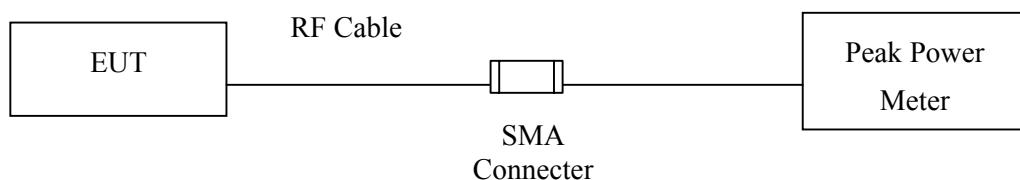
3.1. Test Equipment

The following test equipments are used during the radiated emission tests:

Item	Equipment	Manufacturer	Type No./Serial No	Calibration Date	Calibration Due
1	Power Meter	Anritsu	ML2495A/6K00003357	29 May, 2008	28 May, 2009
2	Power Sensor	Anritsu	MA2491A/034457	30 May, 2008	29 May, 2009
3	Bluetooth test set with Audio	Anritsu	MT8852B/6K00006247	24. Jul, 2008	23. Jul, 2009
4	Dual Directional couple	Agilent	778D-012/50550	08. Aug, 2008	07. Aug, 2009
5	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

3.2. Test Setup

Conducted Measurement



3.3. Test procedures

The EUT was setup according to ANSI C63.4, 2003 for compliance to FCC 47CFR § 15.247(b)(1) requirements

3.4. Limits

For frequency hopping systems in the 2400-2483.5 MHz band employing at least 75 hopping channels: 1Watt.

3.5. Uncertainty

The measurement uncertainty is defined as ± 1.036 dB.

Contributions		Probability Distribution	Standard Uncertainty Ui(dB)
Mismatch : Reference level Measurement	U01	U-shaped	0.04
Mismatch : direct attenuation measurement	U02	U-shaped	0.089
Attenuation measurement reading	U03	Normal	0.29
Attenuator: influence of the ambient temperature	U04	Normal	0
Attenuator: influence of setting the power supply	U05	Normal	0.017
EUT: influence of the ambient temperature	U06	Normal	0.1
EUT: influence of setting the power supply	U07	Normal	0.026
Mismatch on EUT	U08	U-shaped	0.391
Random: System Repeatability	U09	Standard Deviation	0.103
Combined Standard Uncertainty, U			0.518
Expanded Uncertainty (for a 95 % confidence level, k=2)			1.036

3.6. Test Result of Peak Power Output

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Peak Power Output
Test Mode : Mode 1: Transmitter 1Mbps GFSK
Battery Type : Standard Battery

Channel 00.	Frequency (MHz)	Cable loss (dB)	Peak Power Output (dBm)	Limit (dBm)	Result
DH1	2402.00	0.3	3.52	30	Pass
DH3	2402.00	0.3	3.92	30	Pass
DH5	2402.00	0.3	4.05	30	Pass

Channel 39.	Frequency (MHz)	Cable loss (dB)	Peak Power Output (dBm)	Limit (dBm)	Result
DH1	2441.00	0.3	3.51	30	Pass
DH3	2441.00	0.3	3.92	30	Pass
DH5	2441.00	0.3	4.05	30	Pass

Channel 78	Frequency (MHz)	Cable loss (dB)	Peak Power Output (dBm)	Limit (dBm)	Result
DH1	2480.00	0.3	3.51	30	Pass
DH3	2480.00	0.3	3.91	30	Pass
DH5	2480.00	0.3	4.08	30	Pass

Note: Peak Power Output =Reading value on peak power meter + cable loss

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Peak Power Output
Test Mode : Mode 2: Transmitter 3Mbps EDR
Battery Type : Standard Battery

Channel 00.	Frequency (MHz)	Cable loss (dB)	Peak Power Output (dBm)	Limit (dBm)	Result
DH1	2402.00	0.3	4.77	30	Pass
DH3	2402.00	0.3	5.25	30	Pass
DH5	2402.00	0.3	5.47	30	Pass

Channel 39.	Frequency (MHz)	Cable loss (dB)	Peak Power Output (dBm)	Limit (dBm)	Result
DH1	2441.00	0.3	4.90	30	Pass
DH3	2441.00	0.3	5.27	30	Pass
DH5	2441.00	0.3	5.39	30	Pass

Channel 78.	Frequency (MHz)	Cable loss (dB)	Peak Power Output (dBm)	Limit (dBm)	Result
DH1	2480.00	0.3	4.82	30	Pass
DH3	2480.00	0.3	5.23	30	Pass
DH5	2480.00	0.3	5.36	30	Pass

Note: Peak Power Output =Reading value on peak power meter + cable loss

4. Radiated Emission

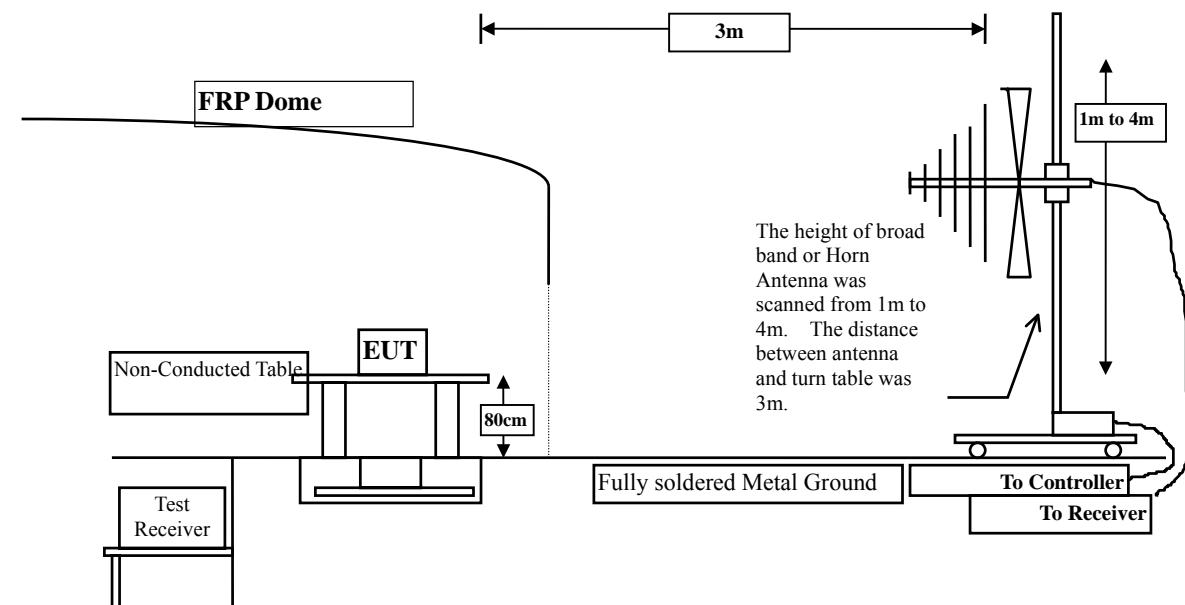
4.1. Test Equipment

The following test equipments are used during the radiated emission test:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Bilog Antenna	Schaffner Chase	CBL6112B/2921	08. Aug, 2008	07. Aug, 2009
2	Broadband Horn Antenna	Schwarzbeck	BBHA9170/497	05. Sep, 2008	04. Sep, 2009
3	EMI Test Receiver	R&S	ESCS 30/100123	06. May, 2008	05. May, 2009
4	Horn Antenna	Schwarzbeck	BBHA9120D/305	05. Sep, 2008	04. Sep, 2009
5	Pre-Amplifier	QTK	N/A	N/A	
6	Microwave Amplifier (0.5GHZ-26.5GHZ)	Agilent	83017A/ MY39500682	08. Aug, 2008	07. Aug, 2009
7	Spectrum Analyzer	Advantest	R3162/01700040	13. Nov, 2007	12. Nov, 2008
8	Spectrum Analyzer (9K-40GHz)	R&S	FSP40/100339	06. Nov, 2007	05. Nov, 2008
9	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009

4.2. Test Setup

Under 1GHz Test Setup



Above 1GHz Test Setup

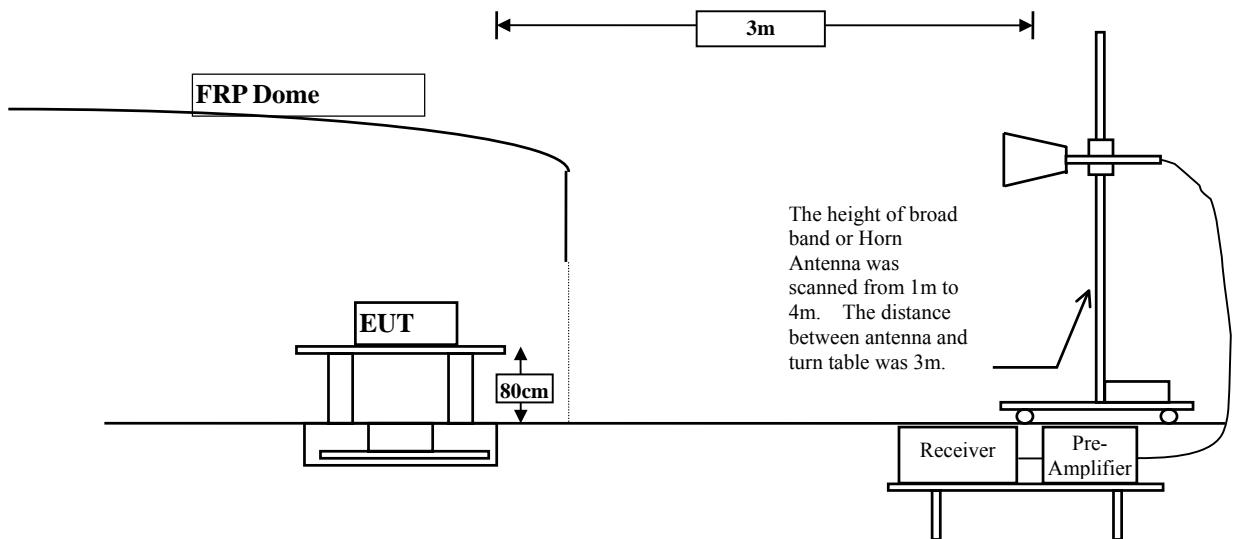


Fig. 4-1 Radiated Emission Test set up.

4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph § 15.209(a), whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph § 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4:2003 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(d) requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonics is checked.

4.5. Uncertainty

The measurement uncertainty is evaluated as ± 4.22 dB from 30MHz to 1000 MHz.

Contributions	Probability Distribution	Standard Uncertainty $u_i(\text{dB})$	
Mismatch :receiving part	U_{01}	U-shaped	0.182
Insertion loss: Measurement Antenna cable	U_{02}	Normal	0.50
Gain of the Pre-Amplifier	U_{03}	Rectangular	0.29
Receiving device: absolute level	U_{04}	Rectangular	0.58
EUT: influence of setting the power supply	U_{05}	Normal	0.03
Position of the phase center : within the EUT volume	U_{06}	Rectangular	0.12
Positioning of the phase center : within the EUT over the axis of rotation of the turntable	U_{07}	Rectangular	0.08
EUT: influence of the ambient temperature	U_{08}	Normal	0.10
Correction: measurement distance	U_{09}	Normal	0.30
Antenna: gain of the Measurement Antenna	U_{10}	Normal	0.60
Reflectivity of absorbing material: EUT to the test antenna	U_{11}	Normal	0.50
Correction: off bore-sight angle in the elevation plane	U_{12}	Normal	0.50
EUT: mutual coupling to the power leads	U_{13}	Normal	0.50
Mutual coupling: amplitude effect of the test antenna on the EUT	U_{14}	Normal	0.50
Mutual coupling: EUT to its images in the absorbing material	U_{15}	Normal	0.50
Mutual coupling: EUT to its image in the ground plane	U_{16}	Normal	1.15
Mutual coupling: measuring antenna to its image in the absorbing material	U_{17}	Normal	0.50
Mutual coupling: measuring antenna to its image in the ground plane	U_{18}	Normal	0.58
Mutual coupling: interpolation of mutual coupling and mismatch loss correction factors	U_{19}	Normal	0.17
Random: System Repeatability	U_{20}	Standard Deviation	0.30
Combined Standard Uncertainty, U		2.11	
Expanded Uncertainty (for a 95 % confidence level, $k=2$)		4.22	

The measurement uncertainty is evaluated as ± 4.06 dB from 1 GHz to 10 GHz.

Contributions	Probability Distribution	Standard Uncertainty $u_i(\text{dB})$
Mismatch: receiving part	U-shaped	0.182
Insertion loss: Measurement Antenna cable	Normal	0.50
Gain of the Pre-Amplifier	Rectangular	0.29
Receiving device: absolute level	Rectangular	0.58
EUT: influence of setting the power supply	Normal	0.03
Position of the phase center: within the EUT volume	Rectangular	0.12
Positioning of the phase center: within the EUT over the axis of rotation of the turntable	Rectangular	0.08
EUT: influence of the ambient temperature	Normal	0.10
Correction: measurement distance	Normal	1.26
Antenna: gain of the Measurement Antenna	Normal	0.60
Reflectivity of absorbing material: EUT to the test antenna	Normal	0.50
Correction: off bore-sight angle in the elevation plane	Normal	0.50
EUT: mutual coupling to the power leads	Normal	0.50
Mutual coupling: amplitude effect of the test antenna on the EUT	Normal	0.50
Mutual coupling: EUT to its images in the absorbing material	Normal	0.50
Mutual coupling: EUT to its image in the ground plane	Normal	0.15
Mutual coupling: measuring antenna to its image in the absorbing material	Normal	0.50
Mutual coupling: measuring antenna to its image in the ground plane	Normal	0.15
Mutual coupling: interpolation of mutual coupling and mismatch loss correction factors	Normal	0.00
Random: System Repeatability	Standard Deviation	0.40
Combined Standard Uncertainty, U		2.03
Expanded Uncertainty (for a 95 % confidence level, $k=2$)		4.06

4.6. Test Result of Radiated Emission

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Harmonic Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4804.000	2.815	42.010	44.824	-9.176	54.000
7206.000	7.637	40.820	48.457	-5.543	54.000
9608.000	9.283	39.940	49.224	-4.776	54.000
 Vertical					
Peak Detector:					
4804.000	2.815	42.090	44.904	-9.096	54.000
7206.000	7.637	41.430	49.067	-4.933	54.000
9608.000	9.283	39.730	49.014	-4.986	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Harmonic Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
Battery Type : Standard Battery

Horizontal

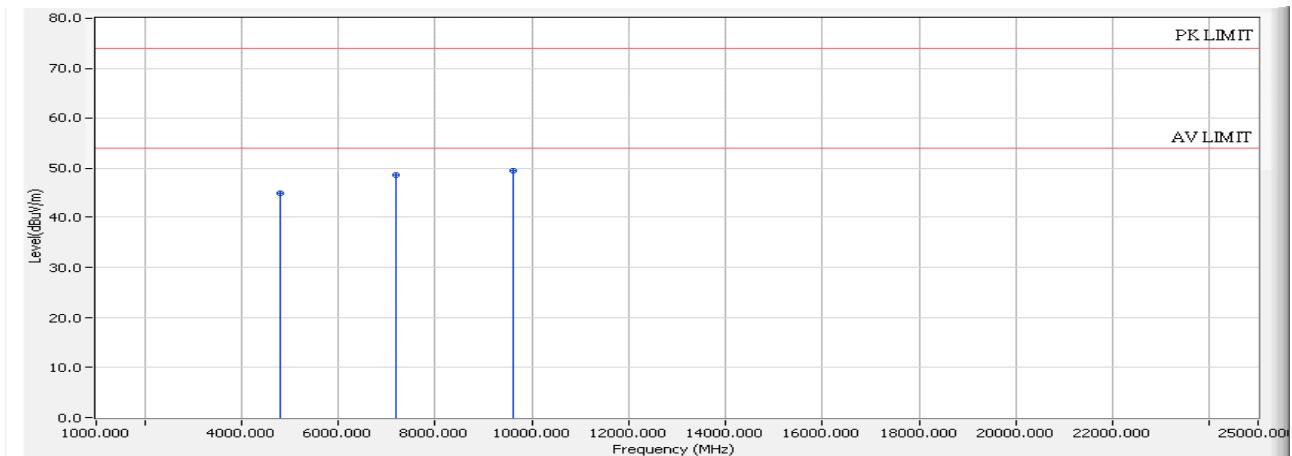


Fig.3-2 Radiated emission measurements for mode 1(Ch. 00).

Vertical

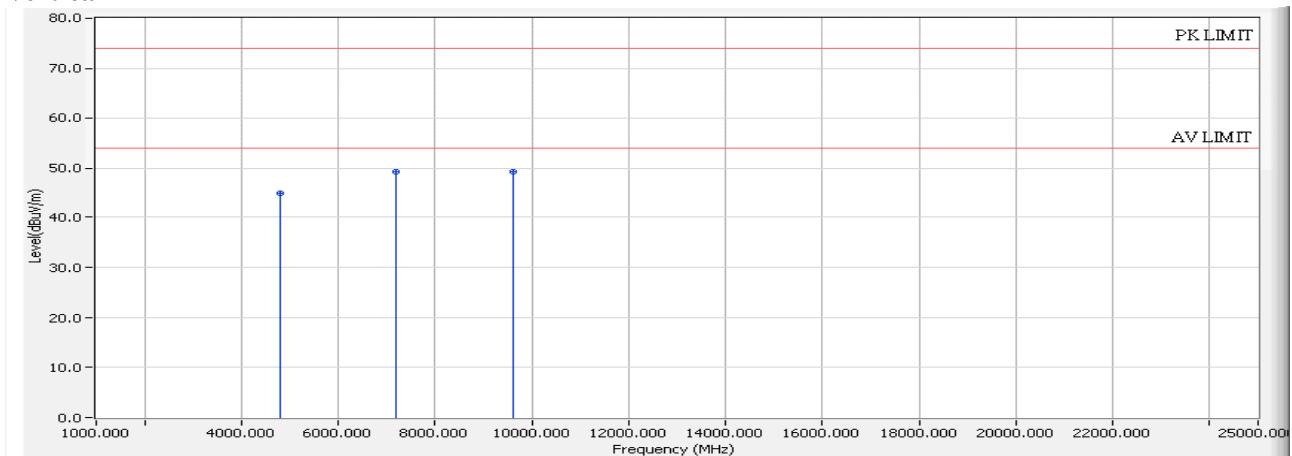


Fig.3-3 Radiated emission measurements for mode 1(Ch. 00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Harmonic Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4882.000	3.022	42.170	45.192	-8.808	54.000
7323.000	7.901	39.570	47.470	-6.530	54.000
9764.000	9.364	38.790	48.154	-5.846	54.000

Vertical

Peak Detector:

4882.000	3.022	42.470	45.492	-8.508	54.000
7323.000	7.901	41.590	49.490	-4.510	54.000
9764.000	9.364	39.410	48.774	-5.226	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Harmonic Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 39)
Battery Type : Standard Battery

Horizontal

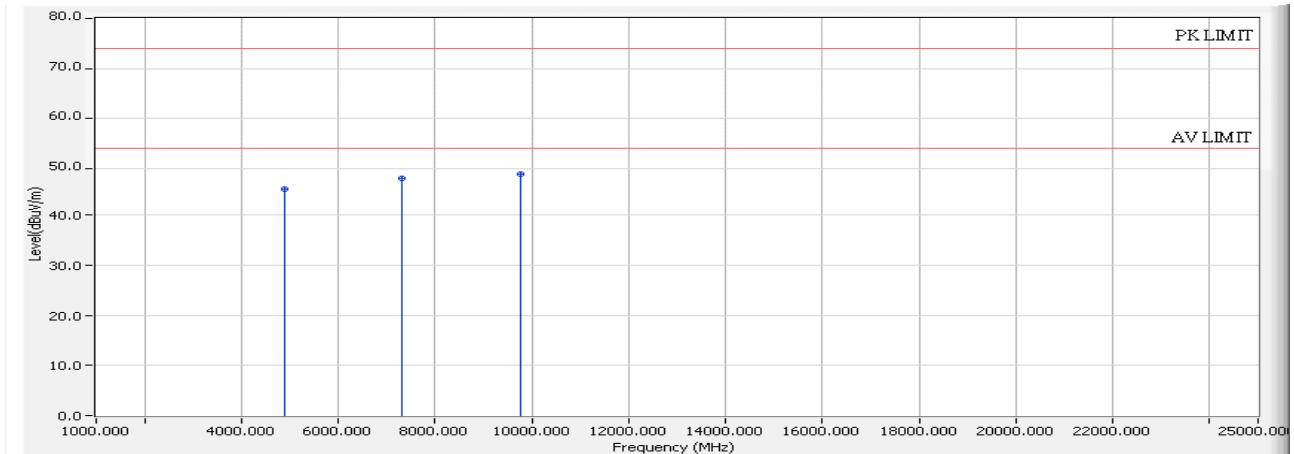


Fig.3-4 Radiated emission measurements for mode 1(Ch. 39).

Vertical

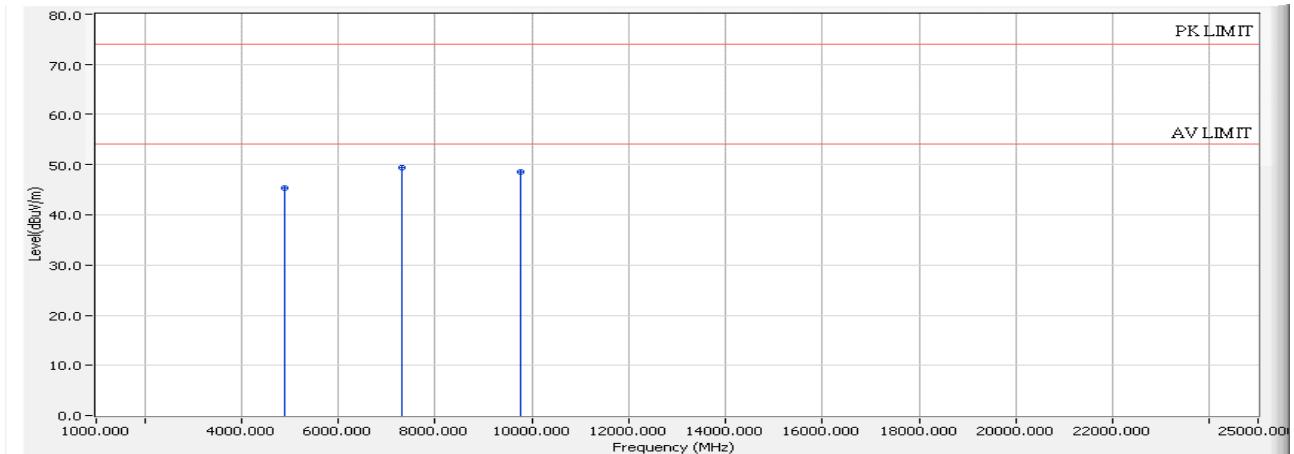


Fig.3-5 Radiated emission measurements for mode 1(Ch. 39).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Harmonic Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
 Battery Type : Standard Battery

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Average Limit dBuV/m
Horizontal					
Peak Detector:					
4960.000	3.235	41.770	45.005	-8.995	54.000
7440.000	8.161	38.390	46.551	-7.449	54.000
9920.000	9.446	38.440	47.886	-6.114	54.000
 Vertical					
Peak Detector:					
4960.000	3.235	42.000	45.235	-8.765	54.000
7440.000	8.161	39.800	47.961	-6.039	54.000
9920.000	9.446	38.720	48.166	-5.834	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Harmonic Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
Battery Type : Standard Battery

Horizontal

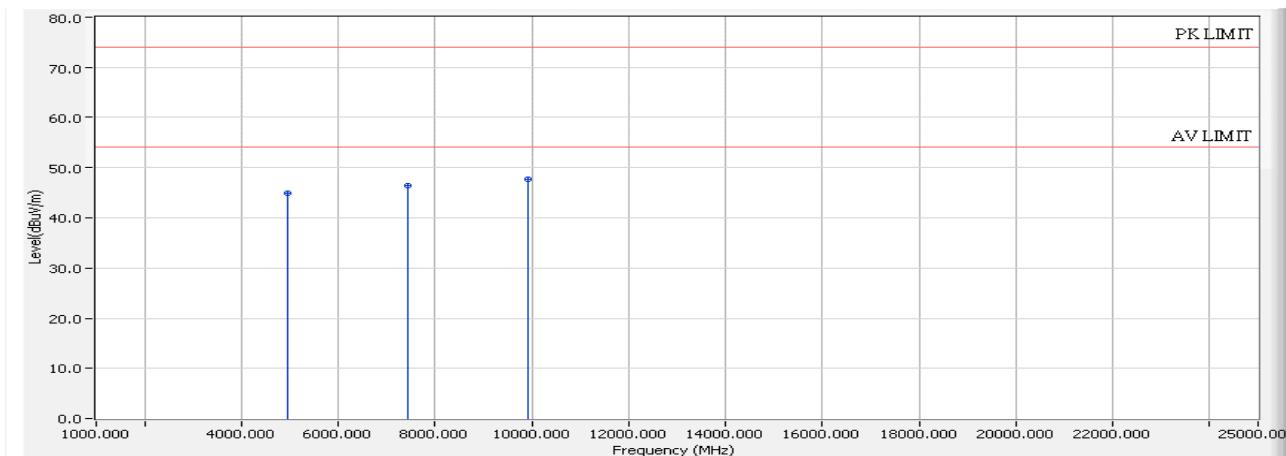


Fig.3-6 Radiated emission measurements for mode 1(Ch. 78).

Vertical

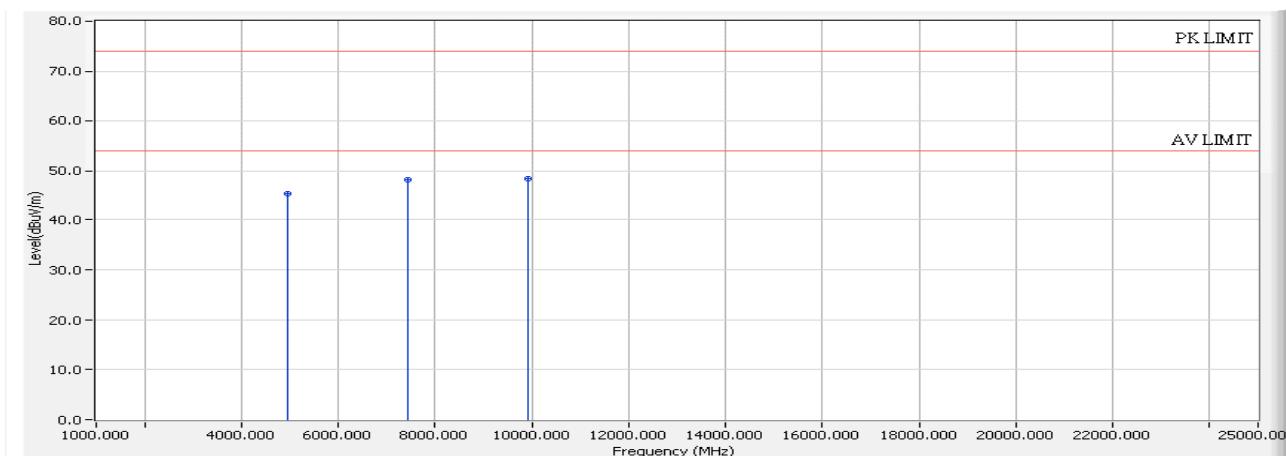


Fig.3-7 Radiated emission measurements for mode 1(Ch. 78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Harmonic Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4804.000	2.815	40.940	43.754	-10.246	54.000
7206.000	7.637	40.560	48.197	-5.803	54.000
9608.000	9.283	39.540	48.824	-5.176	54.000

--

Vertical

Peak Detector:

4804.000	2.815	42.300	45.114	-8.886	54.000
7206.000	7.637	43.020	50.657	-3.343	54.000
9608.000	9.283	40.110	49.394	-4.606	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Harmonic Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
Battery Type : Standard Battery

Horizontal

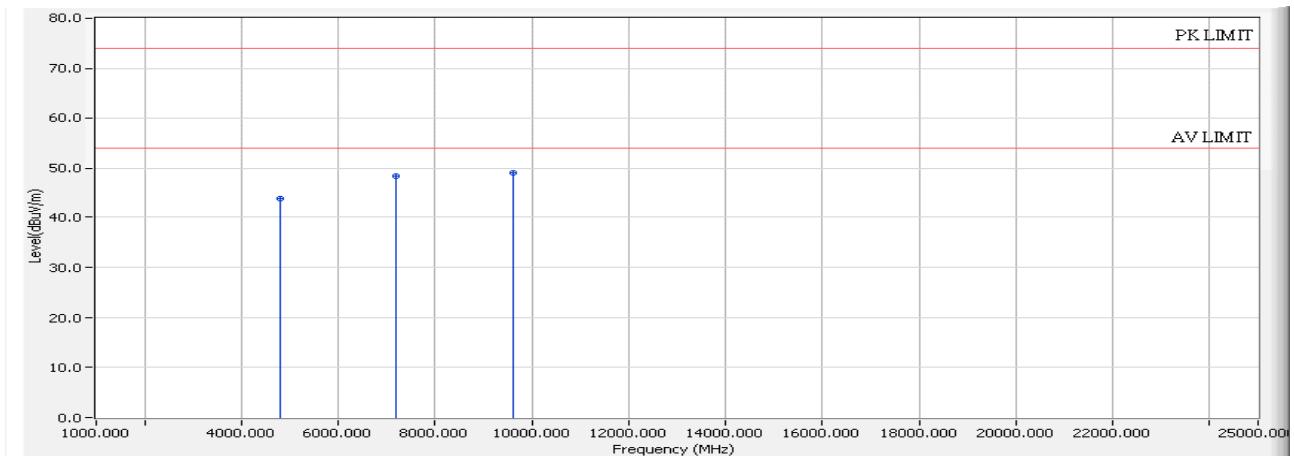


Fig.3-8 Radiated emission measurements for mode 2(Ch. 00).

Vertical

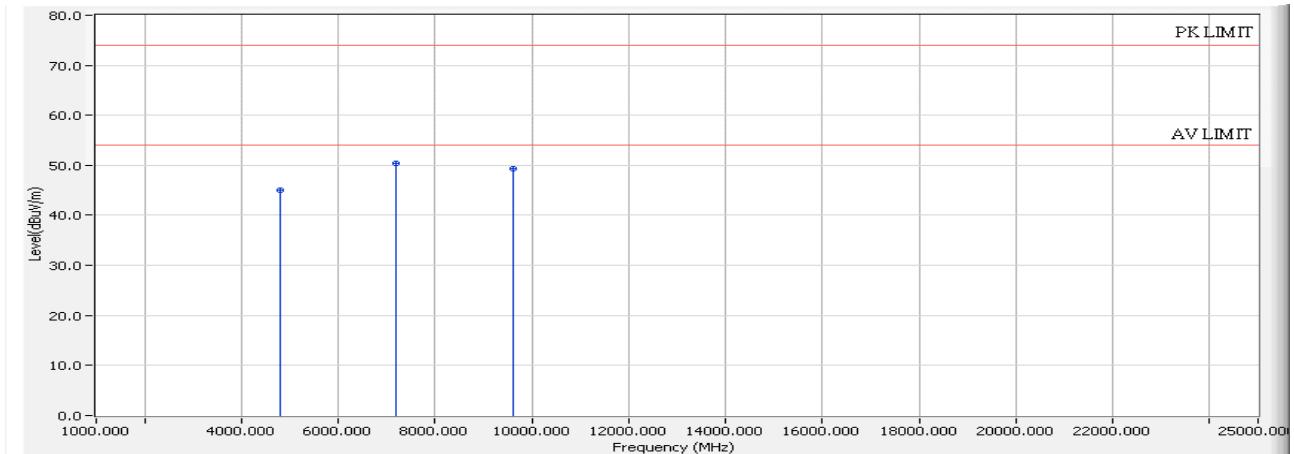


Fig.3-9 Radiated emission measurements for mode2(Ch. 00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Harmonic Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
 Battery Type : Standard Battery

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Average Limit dBuV/m
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Horizontal

Peak Detector:

4882.000	3.022	41.820	44.842	-9.158	54.000
7323.000	7.901	39.750	47.650	-6.350	54.000
9764.000	9.364	38.660	48.024	-5.976	54.000

Vertical

Peak Detector:

4882.000	3.022	42.750	45.772	-8.228	54.000
7323.000	7.901	41.510	49.410	-4.590	54.000
9764.000	9.364	38.630	47.994	-6.006	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Harmonic Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
Battery Type : Standard Battery

Horizontal

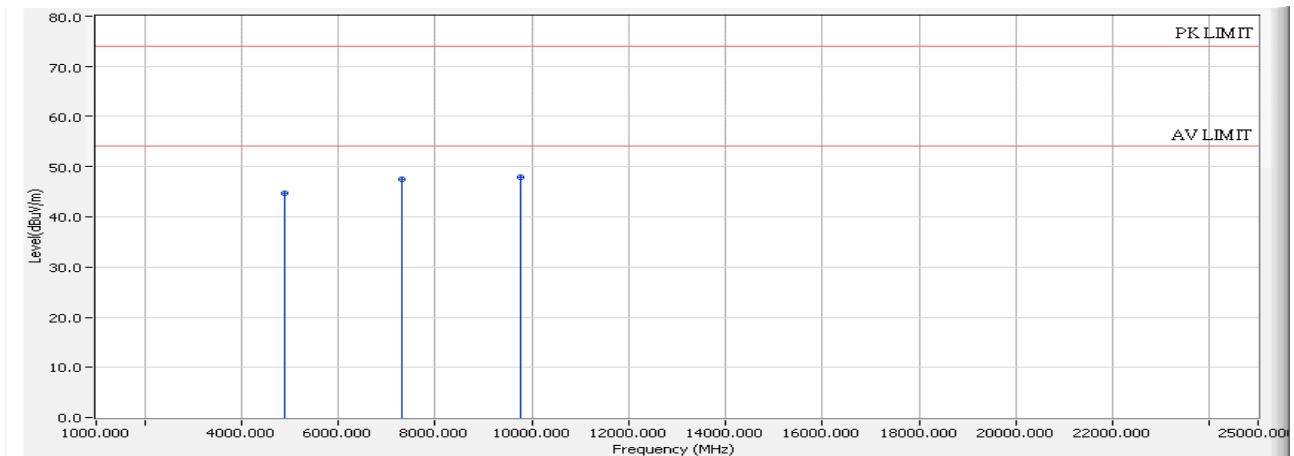


Fig.3-10 Radiated emission measurements for mode 2(Ch. 39).

Vertical

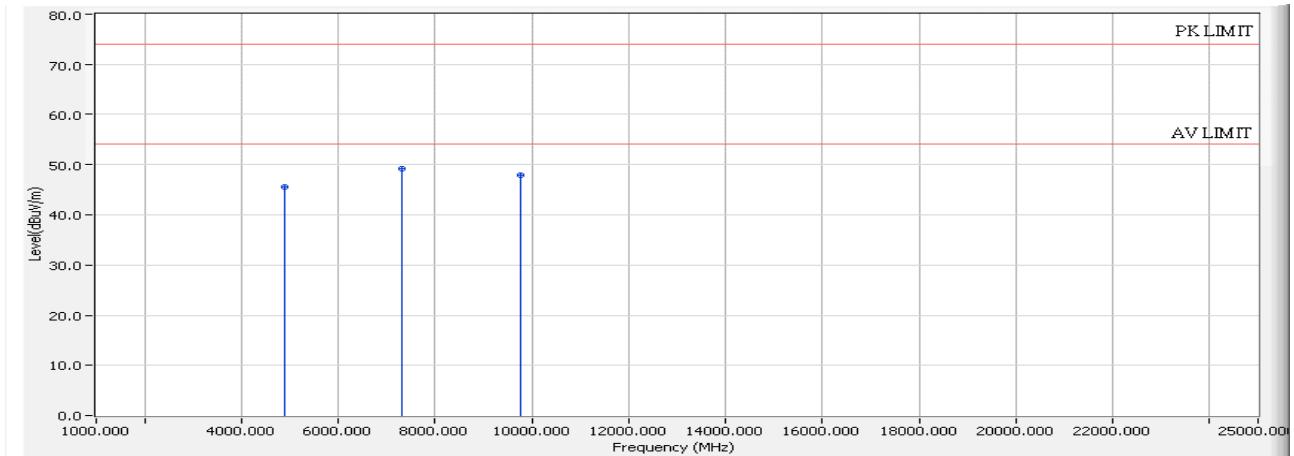


Fig.3-11 Radiated emission measurements for mode 2(Ch. 39).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Harmonic Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Average Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4960.000	3.235	41.540	44.775	-9.225	54.000
7440.000	8.161	38.600	46.761	-7.239	54.000
9920.000	9.446	37.980	47.426	-6.574	54.000

Vertical

Peak Detector:

4960.000	3.235	41.640	44.875	-9.125	54.000
7440.000	8.161	40.300	48.461	-5.539	54.000
9920.000	9.446	38.140	47.586	-6.414	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Harmonic Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
Battery Type : Standard Battery

Horizontal

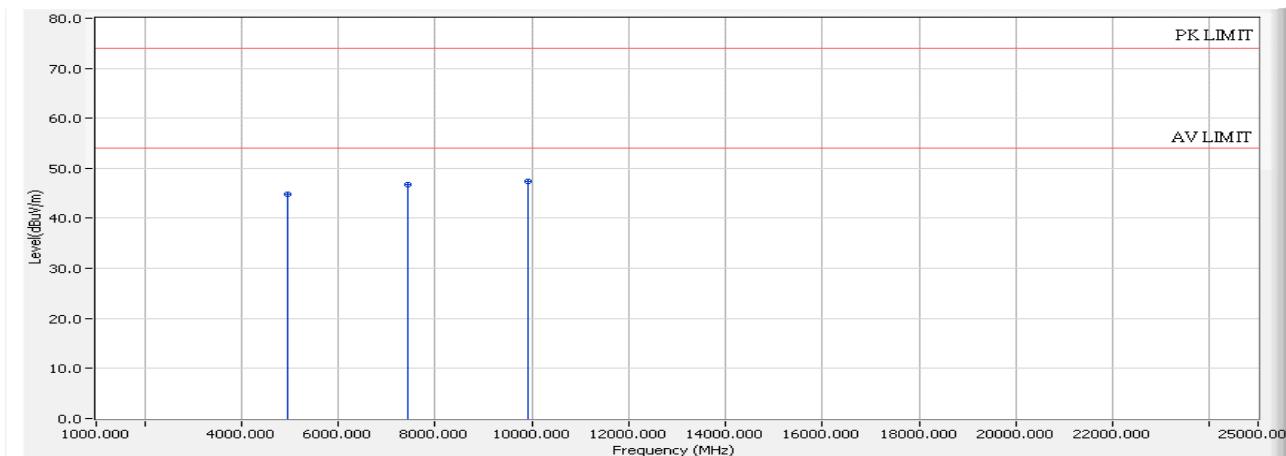


Fig.3-12 Radiated emission measurements for mode 2(Ch. 78).

Vertical

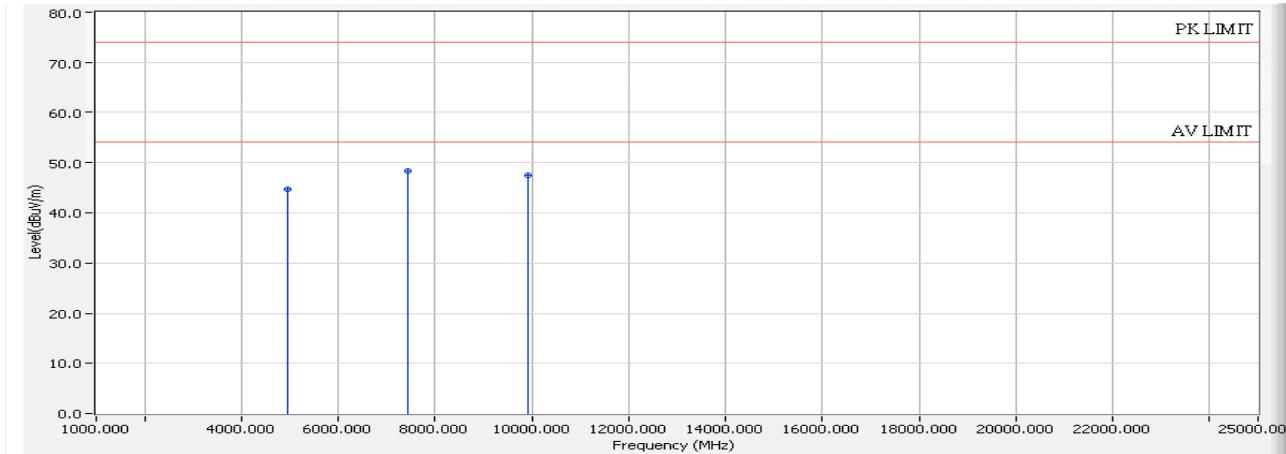


Fig.3-13 Radiated emission measurements for mode2(Ch. 78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : General Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
 Battery Type : Standard Battery

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
	dB	dBuV	dBuV/m		
Horizontal					
138.640	-7.690	31.613	23.923	-19.577	43.500
253.100	-5.789	28.101	22.312	-23.688	46.000
472.320	2.770	25.359	28.129	-17.871	46.000
604.240	4.056	23.254	27.311	-18.689	46.000
784.660	5.292	22.740	28.032	-17.968	46.000
903.000	5.669	26.965	32.634	-13.366	46.000
Vertical					
103.720	-5.210	26.136	20.926	-22.574	43.500
253.100	-5.159	26.826	21.667	-24.333	46.000
379.200	0.786	21.520	22.306	-23.694	46.000
540.220	1.970	25.726	27.696	-18.304	46.000
757.500	2.279	22.563	24.842	-21.158	46.000
932.100	3.197	21.875	25.072	-20.928	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak Value
2. “” means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : General Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
Battery Type : Standard Battery

Horizontal

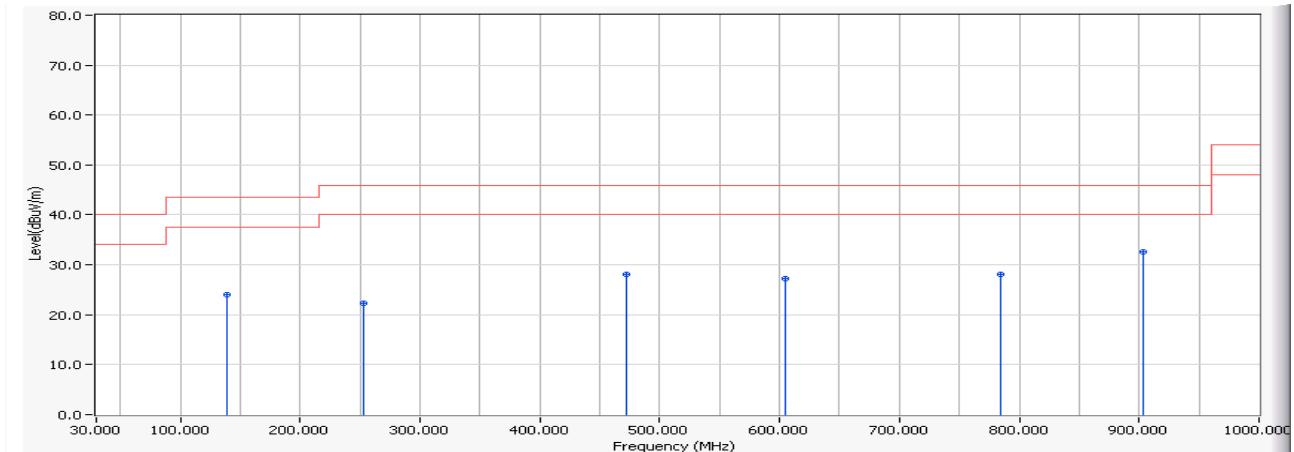


Fig.3-26 Radiated emission measurements for mode 1. (Ch. 00)

Vertical

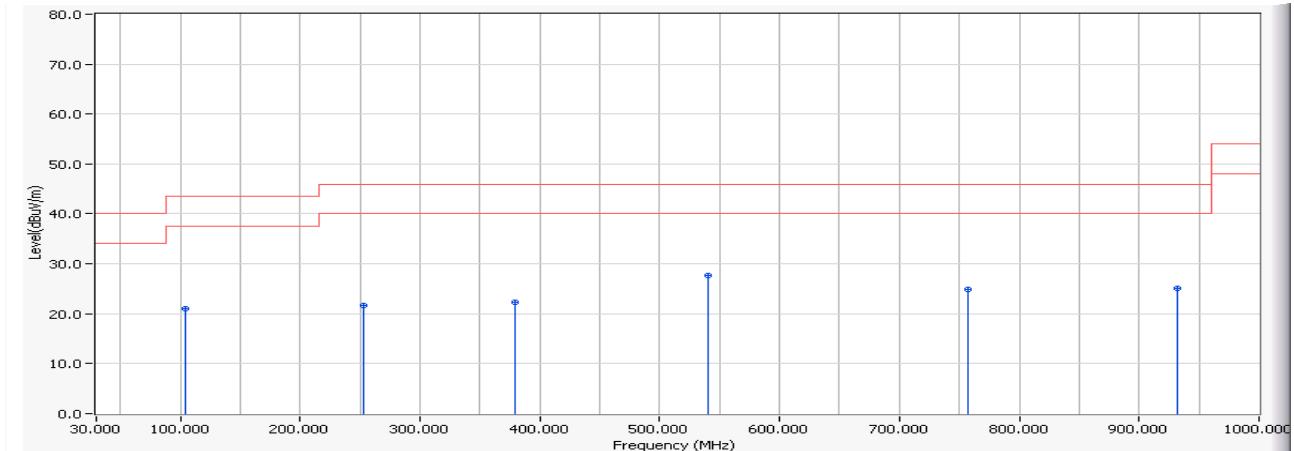


Fig.3-27 Radiated emission measurements for mode 1(Ch. 00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : General Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch.39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
156.100	-8.635	26.249	17.614	-25.886	43.500
253.100	-5.789	28.639	22.850	-23.150	46.000
472.320	2.770	24.854	27.624	-18.376	46.000
644.980	1.071	24.023	25.094	-20.906	46.000
823.460	6.970	22.029	28.999	-17.001	46.000
903.000	5.669	29.215	34.884	-11.116	46.000
Vertical					
61.040	-11.708	34.762	23.054	-16.946	40.000
173.560	-2.857	30.727	27.870	-15.630	43.500
315.180	-4.300	26.442	22.142	-23.858	46.000
544.100	1.310	25.249	26.559	-19.441	46.000
687.660	2.124	22.532	24.656	-21.344	46.000
903.000	1.149	22.925	24.074	-21.926	46.000

Note:

- 1 All Readings below 1GHz are Quasi-Peak Value
2. “ ” means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : General Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch.39)
Battery Type : Standard Battery

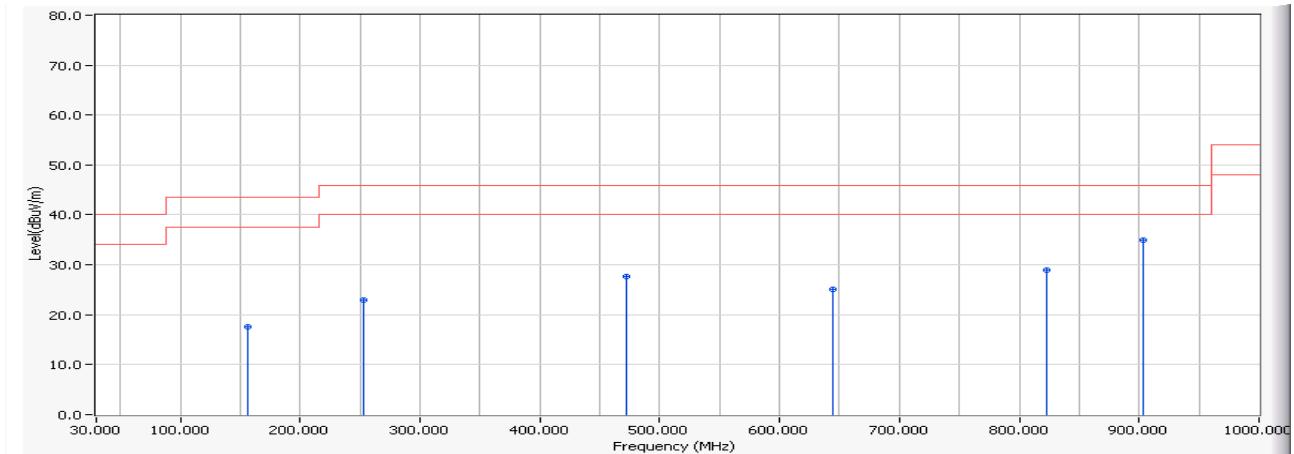
Horizontal

Fig.3-28 Radiated emission measurements for mode 1(Ch.39).

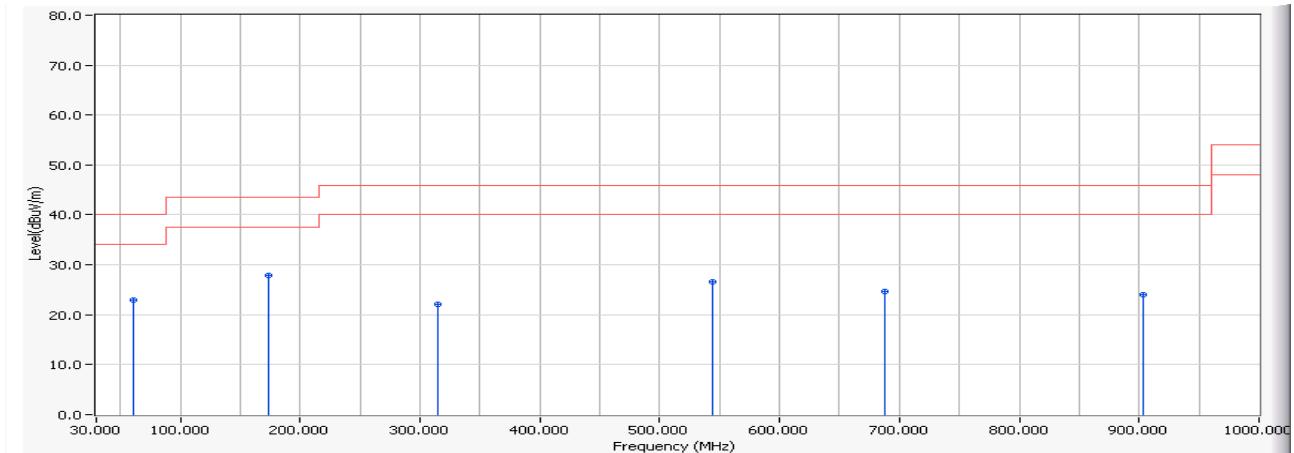
Vertical

Fig.3-29 Radiated emission measurements for mode 1(Ch.39).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : General Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
177.440	-1.400	22.379	20.979	-22.521	43.500
315.180	-4.300	26.156	21.856	-24.144	46.000
381.140	0.722	21.824	22.546	-23.454	46.000
536.340	1.415	24.714	26.129	-19.871	46.000
749.740	1.813	22.177	23.990	-22.010	46.000
903.000	1.149	24.823	25.972	-20.028	46.000
Vertical					
90.140	-4.330	32.159	27.829	-15.671	43.500
175.500	-1.990	22.808	20.818	-22.682	43.500
363.680	-0.036	22.369	22.333	-23.667	46.000
602.300	1.470	23.226	24.696	-21.304	46.000
771.080	2.545	21.907	24.452	-21.548	46.000
932.100	3.197	21.845	25.042	-20.958	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak Value
2. “ ” means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : General Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
Battery Type : Standard Battery

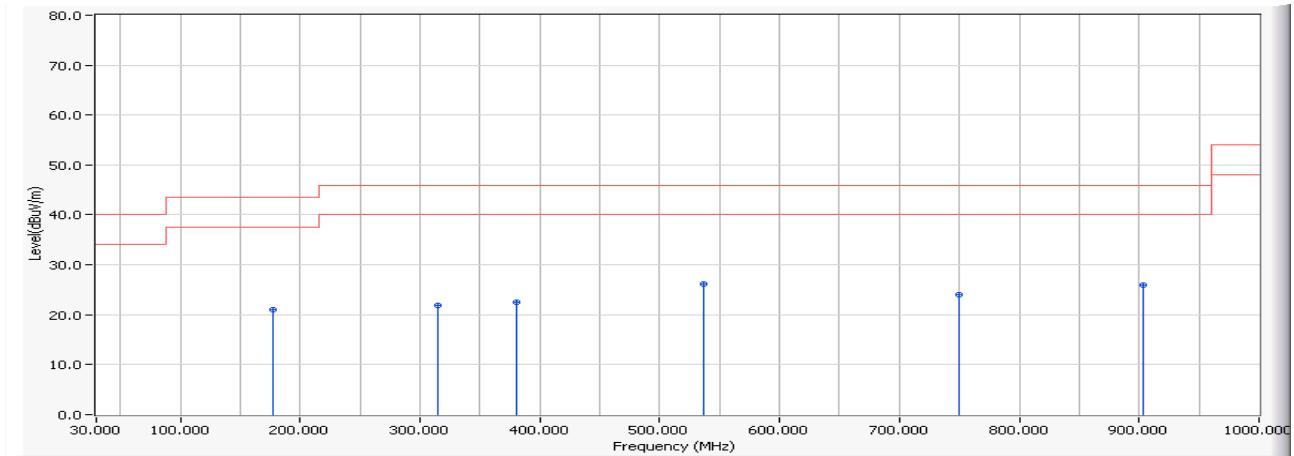
Horizontal

Fig.3-30 Radiated emission measurements for mode 1(Ch. 78).

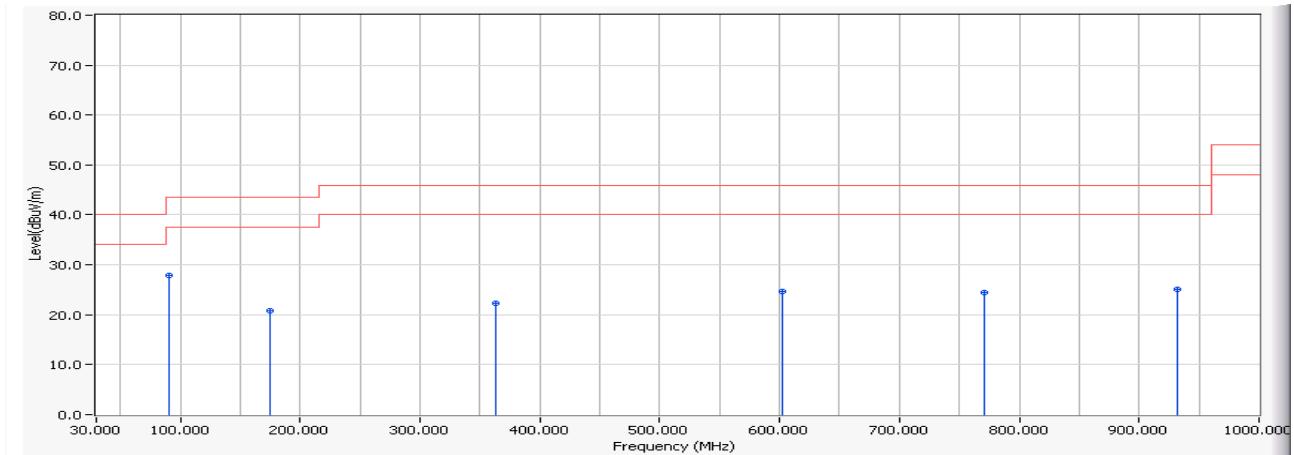
Vertical

Fig.3-31 Radiated emission measurements for mode 1(Ch. 78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : General Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
92.080	-11.560	35.207	23.647	-19.853	43.500
173.560	-9.687	28.812	19.125	-24.375	43.500
472.320	2.770	24.861	27.631	-18.369	46.000
728.400	3.652	26.604	30.256	-15.744	46.000
885.540	6.251	26.193	32.444	-13.556	46.000
988.360	7.360	30.238	37.598	-16.402	54.000
Vertical					
179.380	-0.980	30.347	29.367	-14.133	43.500
363.680	-0.036	25.902	25.866	-20.134	46.000
538.280	1.800	24.054	25.854	-20.146	46.000
728.400	-0.988	25.831	24.843	-21.157	46.000
833.160	1.430	24.856	26.286	-19.714	46.000
988.360	-1.840	32.952	31.112	-22.888	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak Value
2. “ ” means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : General Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
Battery Type : Standard Battery

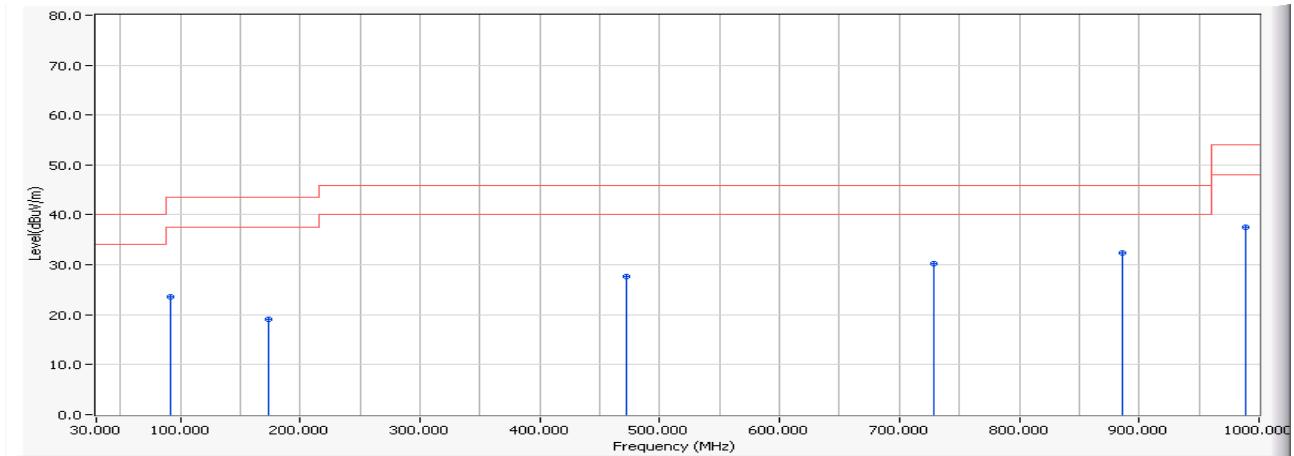
Horizontal

Fig.3-32 Radiated emission measurements for mode 2(Ch. 00).

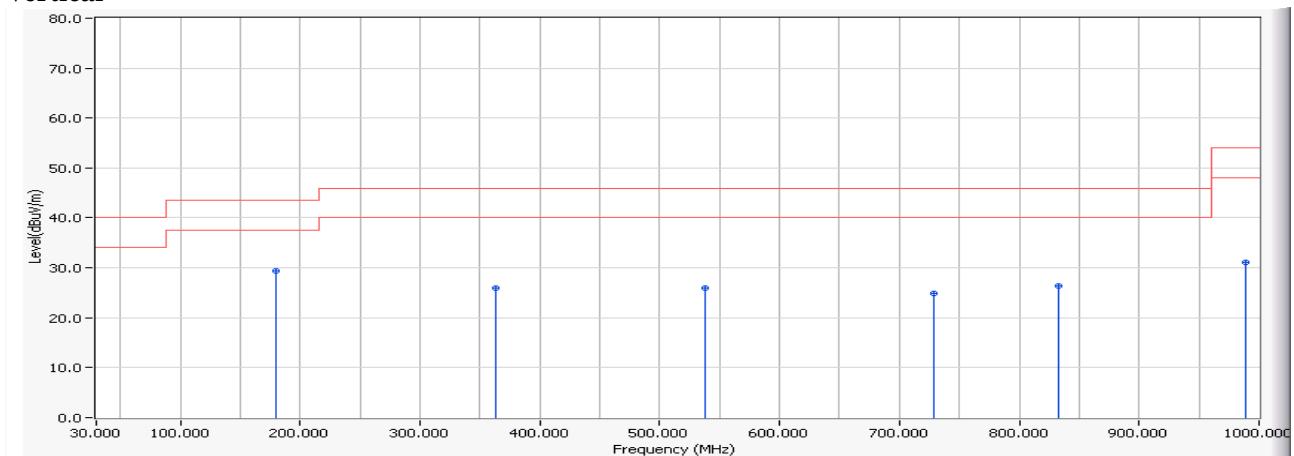
Vertical

Fig.3-33 Radiated emission measurements for mode 2(Ch. 00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : General Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
 Battery Type : Standard Battery

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
156.100	-8.635	23.577	14.942	-28.558	43.500
400.540	0.868	23.108	23.976	-22.024	46.000
472.320	2.770	25.001	27.771	-18.229	46.000
623.640	1.409	26.719	28.128	-17.872	46.000
885.540	6.251	25.788	32.039	-13.961	46.000
988.360	7.360	30.369	37.729	-16.271	54.000
Vertical					
88.200	-4.226	26.189	21.963	-21.537	43.500
179.380	-0.980	39.190	38.210	-5.290	43.500
255.040	-5.212	29.075	23.863	-22.137	46.000
493.660	-1.829	28.764	26.935	-19.065	46.000
780.780	2.538	26.463	29.001	-16.999	46.000
935.980	2.590	26.863	29.453	-16.547	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak Value
2. “ ” means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : General Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
Battery Type : Standard Battery

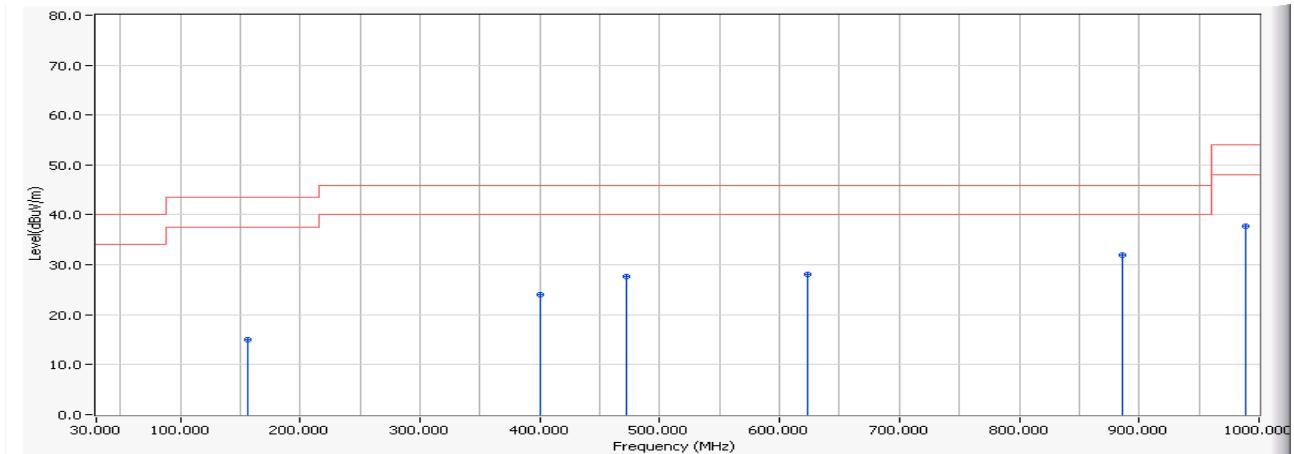
Horizontal

Fig.3-34 Radiated emission measurements for mode 2 (Ch. 39).

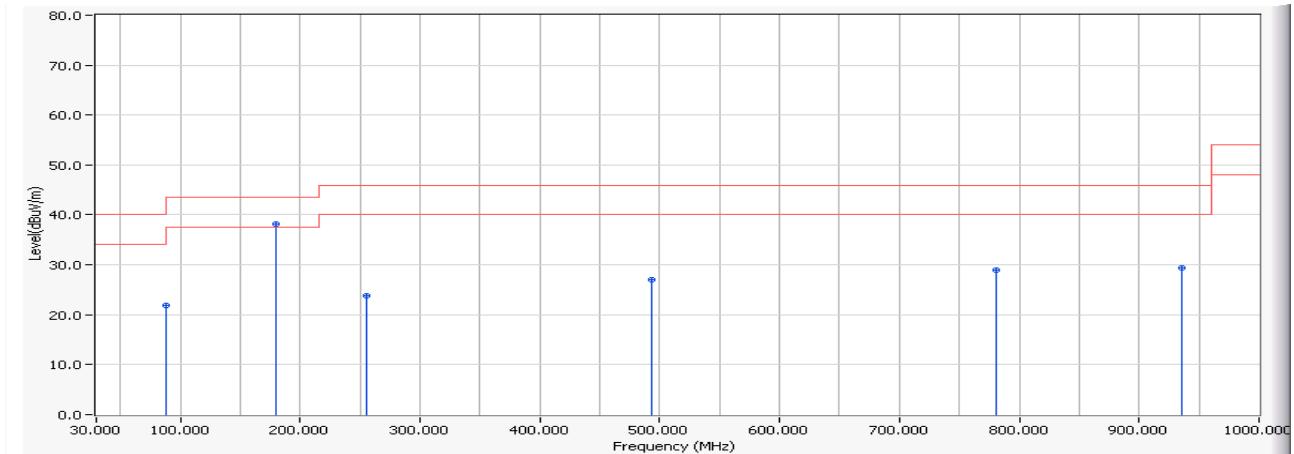
Vertical

Fig.3-35 Radiated emission measurements for mode 2(Ch. 39).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : General Radiated Emission
 Test Site : No.1 OATS
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
 Battery Type : Standard Battery

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
177.440	-10.990	33.522	22.532	-20.968	43.500
363.680	0.074	23.020	23.094	-22.906	46.000
472.320	2.770	25.225	27.995	-18.005	46.000
676.020	2.675	27.108	29.783	-16.217	46.000
885.540	6.251	25.428	31.679	-14.321	46.000
988.360	7.360	30.113	37.473	-16.527	54.000
Vertical					
76.560	-6.597	39.159	32.562	-7.438	40.000
179.380	-0.980	38.301	37.321	-6.179	43.500
363.680	-0.036	26.901	26.865	-19.135	46.000
493.660	-1.829	30.315	28.486	-17.514	46.000
728.400	-0.988	30.746	29.758	-16.242	46.000
885.540	1.031	25.397	26.428	-19.572	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak Value
2. “ ” means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : General Radiated Emission
Test Site : No.1 OATS
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
Battery Type : Standard Battery

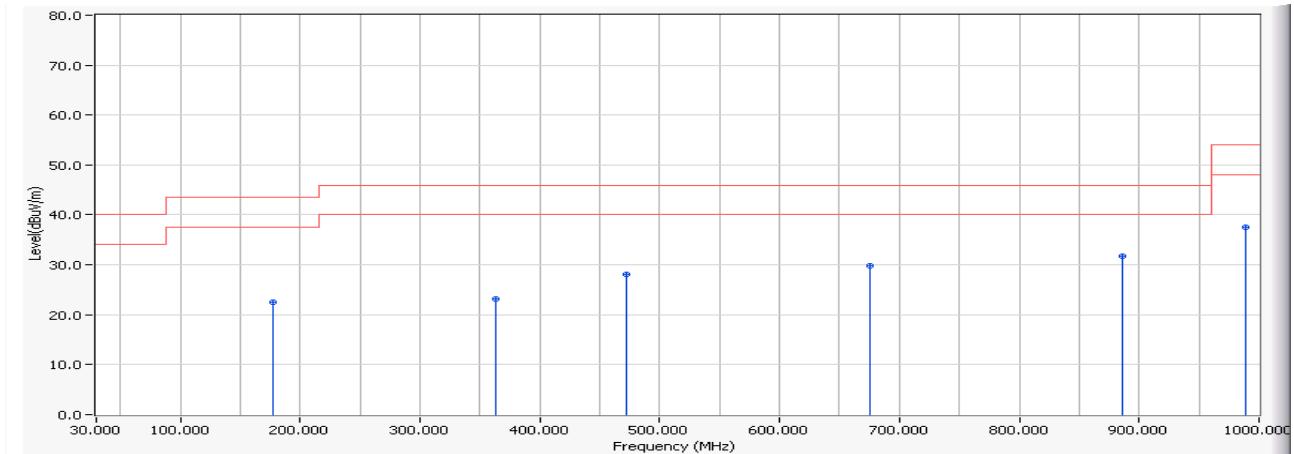
Horizontal

Fig.3-36 Radiated emission measurements for mode 2(Ch. 78).

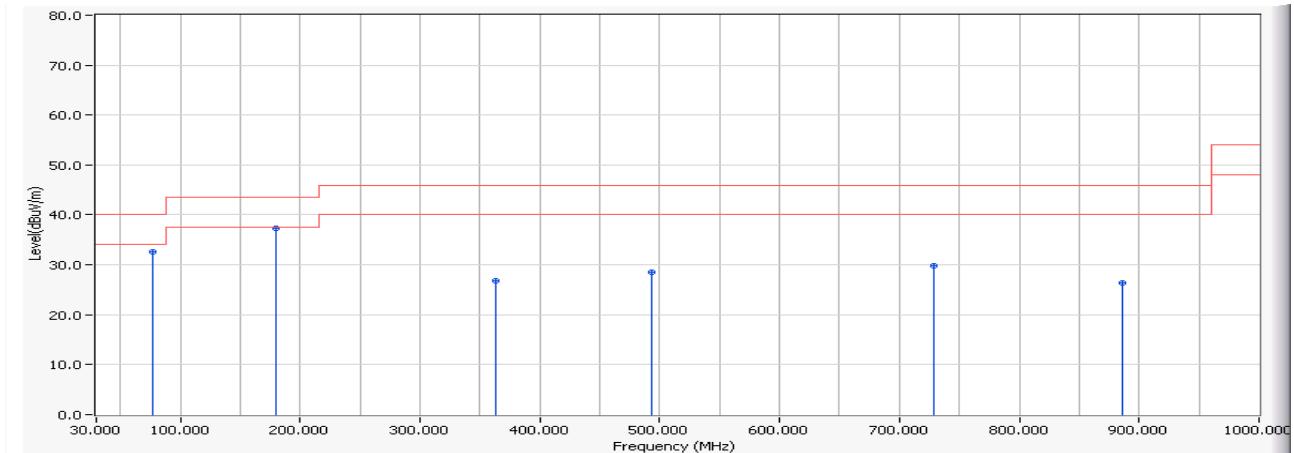
Vertical

Fig.3-37 Radiated emission measurements for mode 2(Ch. 78).

5. Spurious RF Conducted Emissions

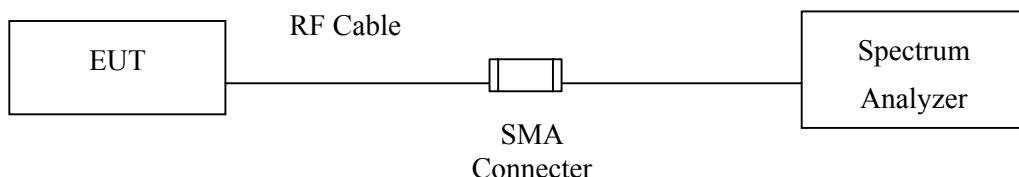
5.1. Test Equipment

The following test equipments are used during the band edge tests:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Spectrum Analyzer	Agilent	E4407B / US39440758	02. Jun, 2008	01. Jun, 2009
2	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009
3	Dual Directional couple	Agilent	778D-012/50550	08. Aug, 2008	07. Aug, 2009
4	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

5.2. Test Setup

Spurious RF Conducted Measurement



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(d) requirements.

Set RBW=100KHz, VBW \geq RBW, Sweep = auto, Detector function = peak

Trace = max hold

5.5. Uncertainty

The measurement uncertainty is defined as ± 1.19 dB.

Contributions		Probability Distribution	Standard Uncertainty U_i (dB)
Reference level of spectrum analyzer	U01	Rectangular	0.03
Spectrum analyzer calibration	U02	Rectangular	0.058
Level accuracy	U03	Rectangular	0.29
Linearity of spectrum analyzer	U04	Rectangular	0.013
Mismatch on spectrum analyzer	U05	U-shaped	0.013
Mismatch : Reference level Measurement	U06	U-shaped	0.04
Mismatch : direct attenuation measurement	U07	U-shaped	0.089
Attenuation measurement reading	U08	Normal	0.29
Attenuator: influence of the ambient temperature	U09	Normal	0
Attenuator: influence of setting the power supply	U10	Normal	0.017
EUT: influence of the ambient temperature	U11	Normal	0.1
EUT: influence of setting the power supply	U12	Normal	0.026
Mismatch on EUT	U13	U-shaped	0.391
Random: System Repeatability	U14	Standard Deviation	0.103
Combined Standard Uncertainty, U			0.597
Expanded Uncertainty (for a 95 % confidence level, $k=2$)			1.19

5.6. Test Result of Spurious RF Conducted Emissions

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Spurious RF Conducted Emissions
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
 Battery Type : Standard Battery

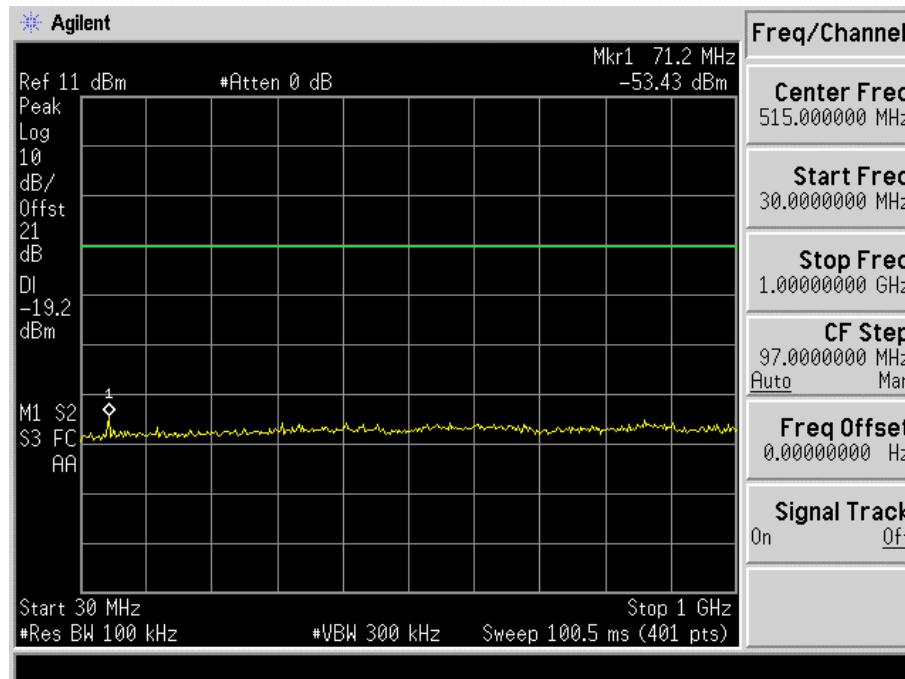


Fig.5-1 Conduct Spurious Emission for mode 1(Ch. 00).

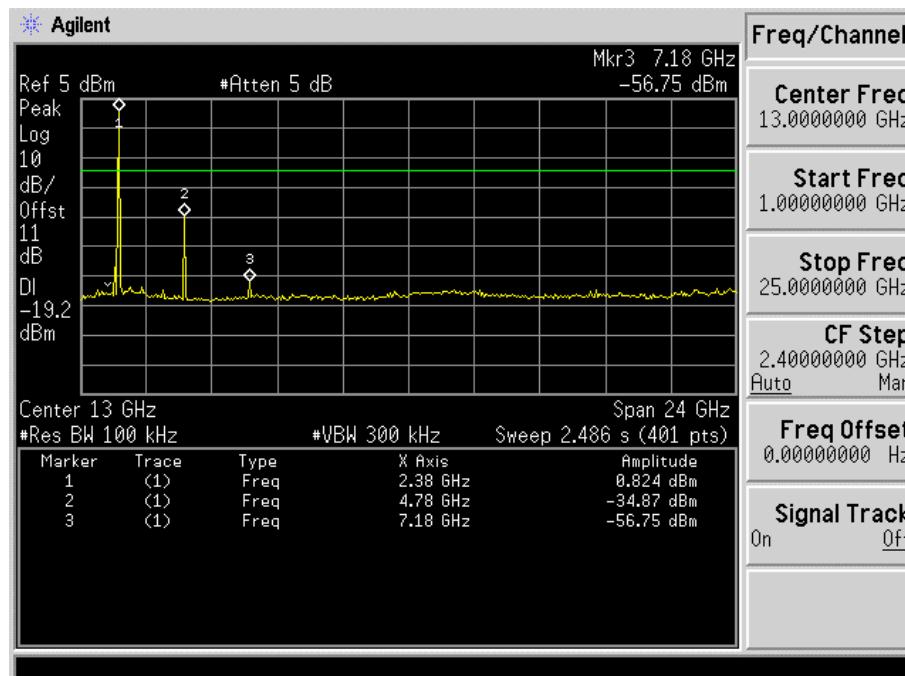


Fig.5-2 Conduct Spurious Emission for mode 1(Ch. 00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Spurious RF Conducted Emissions
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 39)
Battery Type : Standard Battery

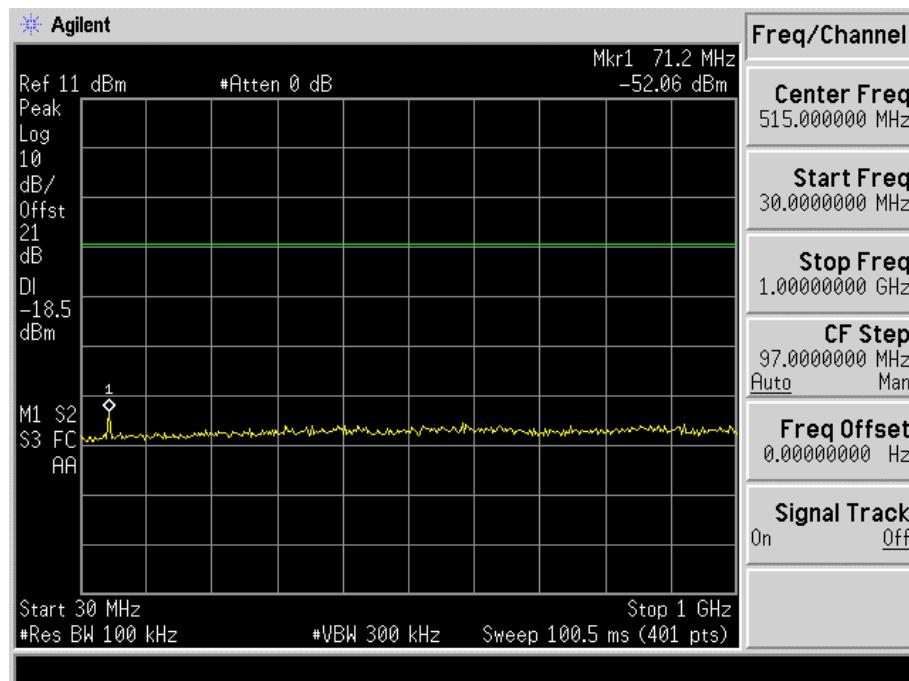


Fig.5-3 Conduct Spurious Emission for mode 1(Ch. 39).

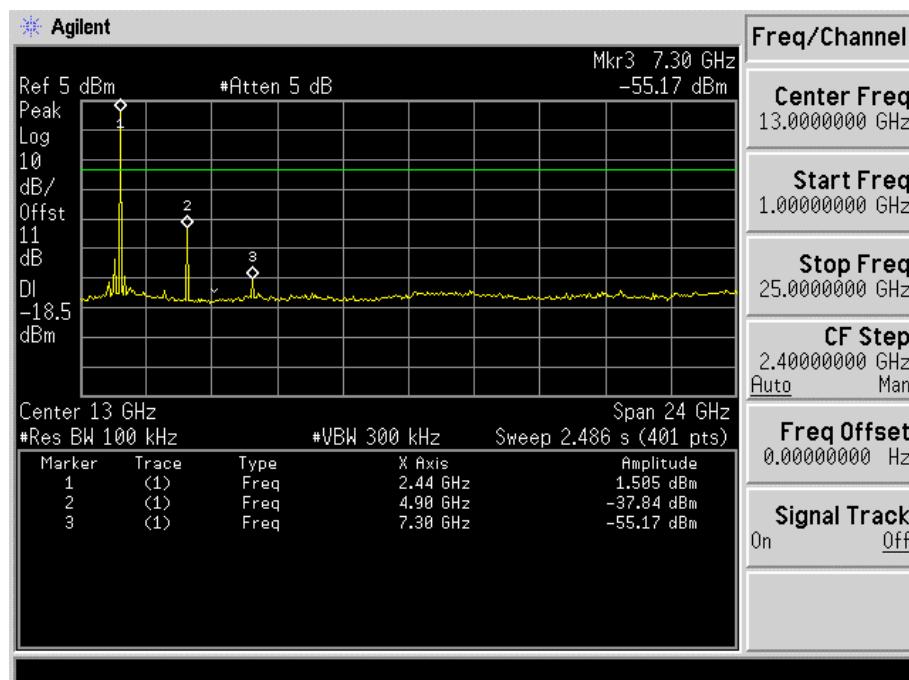


Fig.5-4 Conduct Spurious Emission for mode 1(Ch. 39).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Spurious RF Conducted Emissions
 Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
 Battery Type : Standard Battery

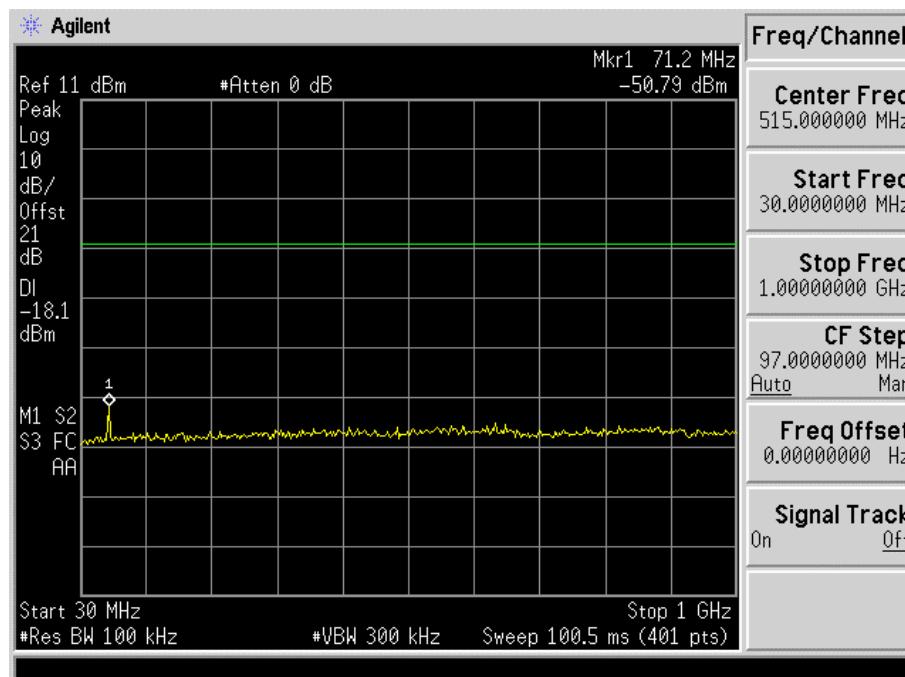


Fig.5-5 Conduct Spurious Emission for mode 1(Ch. 78).

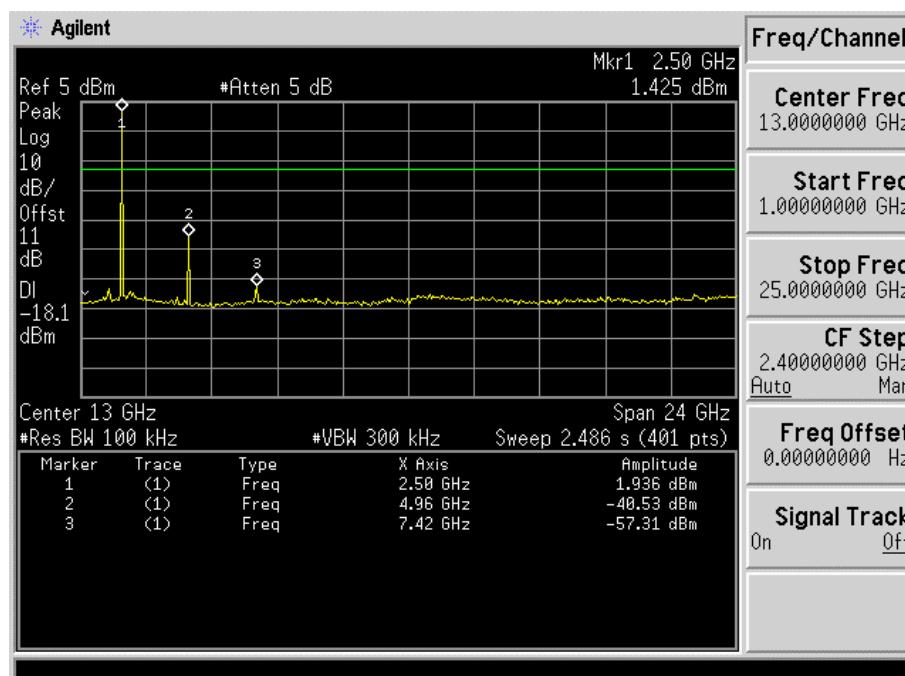


Fig.5-6 Conduct Spurious Emission for mode 1(Ch. 78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Spurious RF Conducted Emissions
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
 Battery Type : Standard Battery

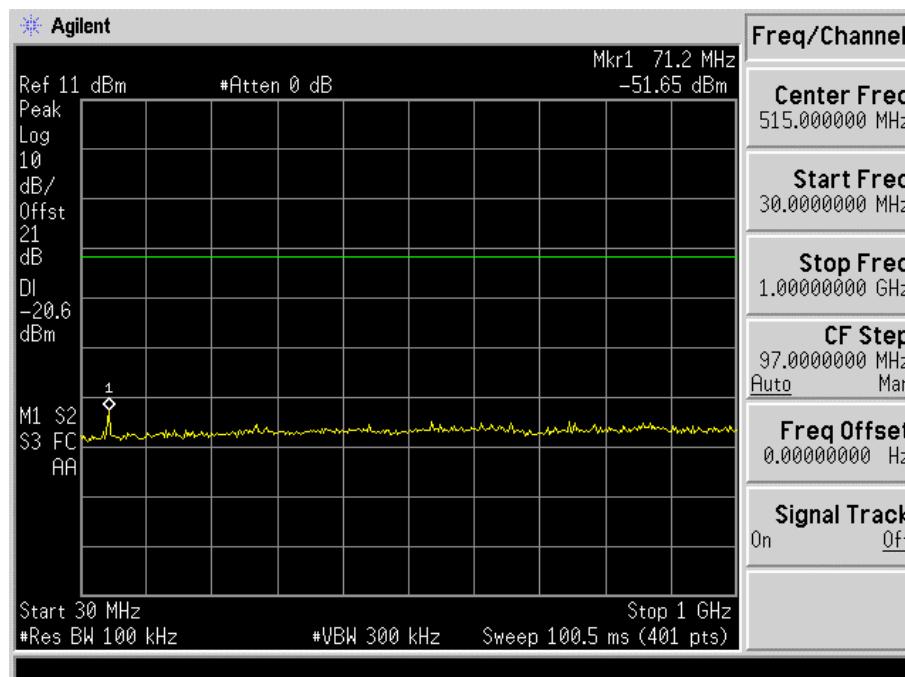


Fig.5-7 Conduct Spurious Emission for mode 2(Ch. 00).

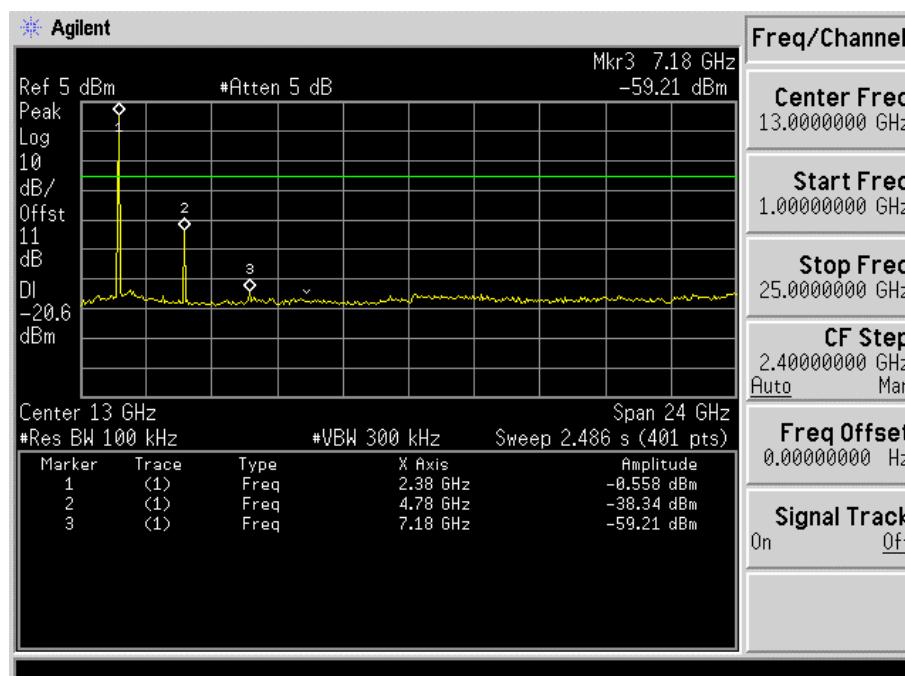


Fig.5-8 Conduct Spurious Emission for mode 2(Ch. 00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Spurious RF Conducted Emissions
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 39)
Battery Type : Standard Battery

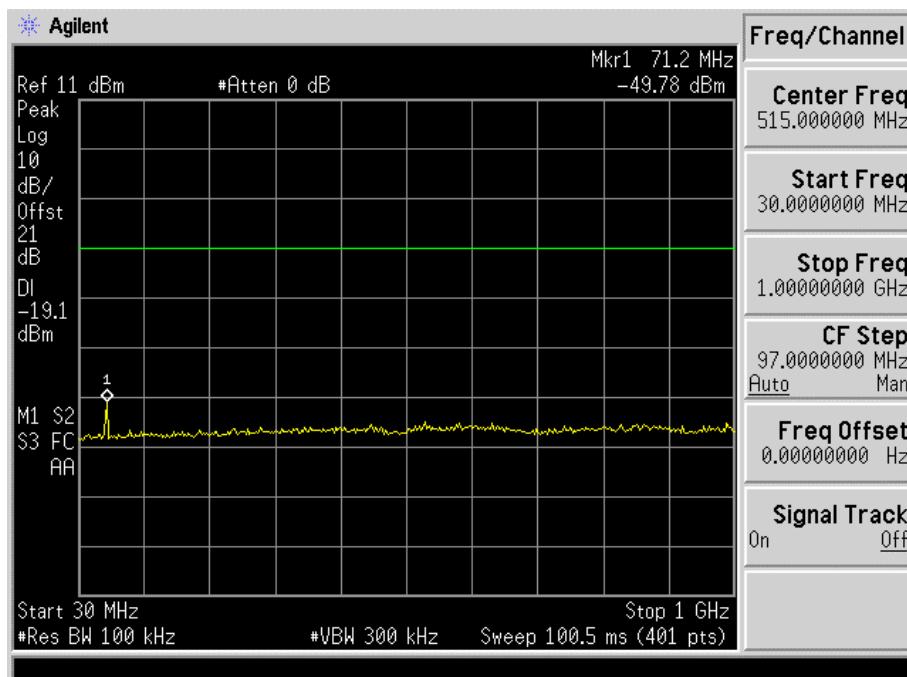


Fig.5-9 Conduct Spurious Emission for mode 2(Ch. 39).

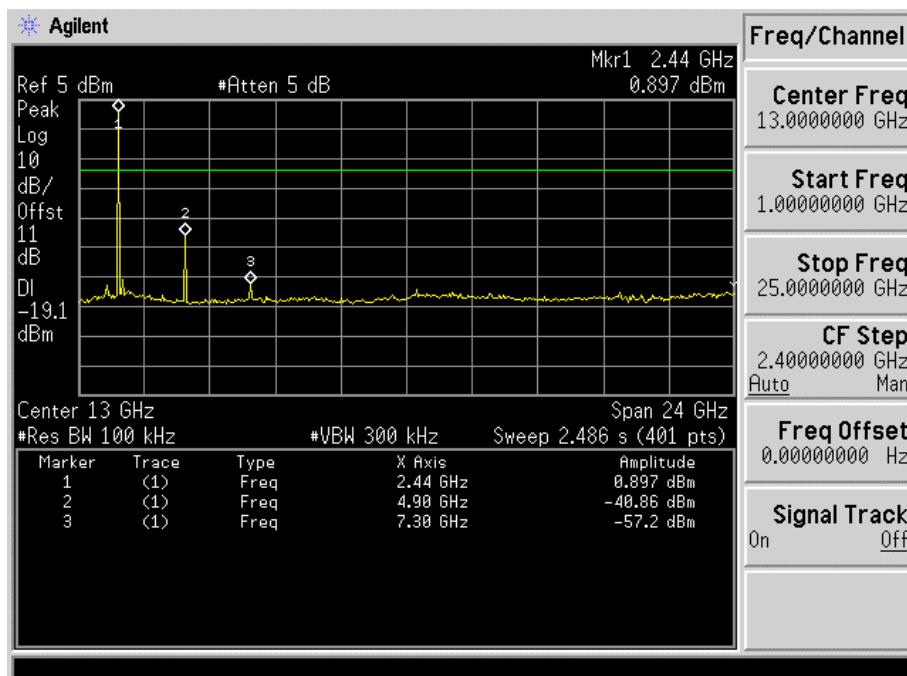


Fig.5-10 Conduct Spurious Emission for mode 2(Ch. 39).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Spurious RF Conducted Emissions
 Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
 Battery Type : Standard Battery

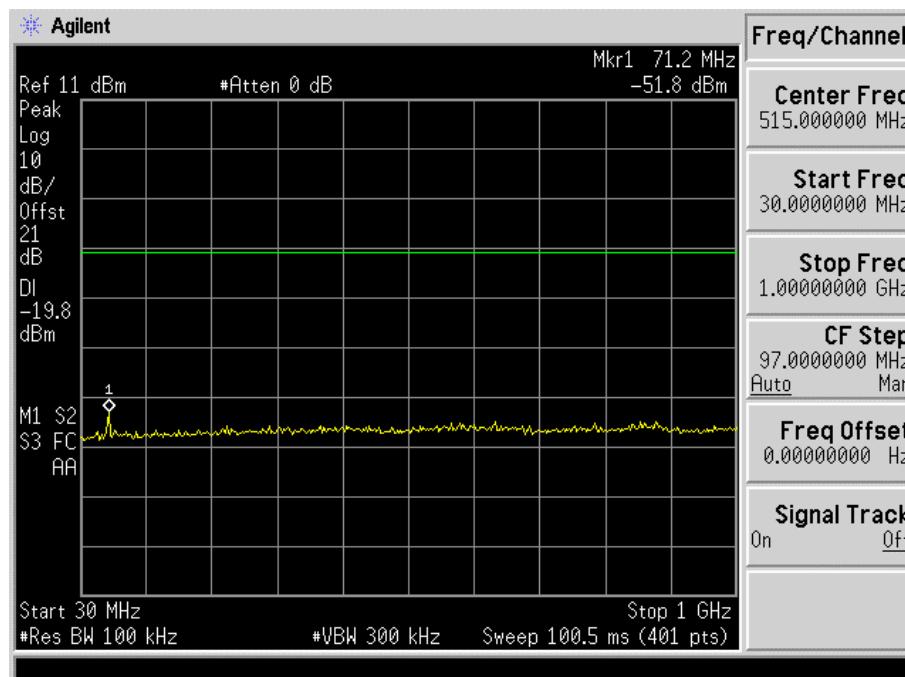


Fig.5-11 Conduct Spurious Emission for mode 2(Ch. 78).

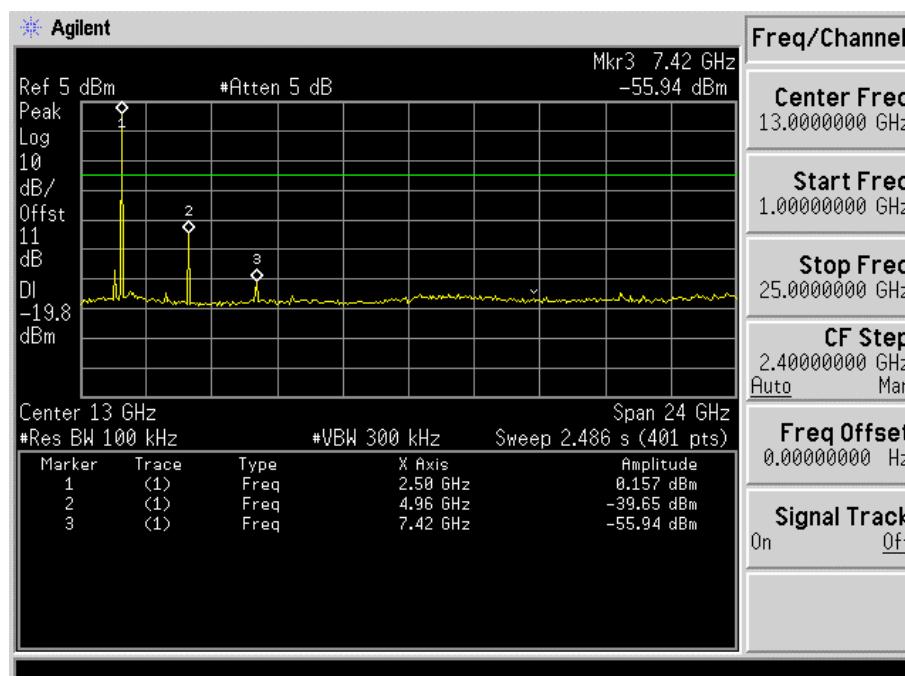


Fig.5-12 Conduct Spurious Emission for mode 2(Ch. 78).

6. Band Edge

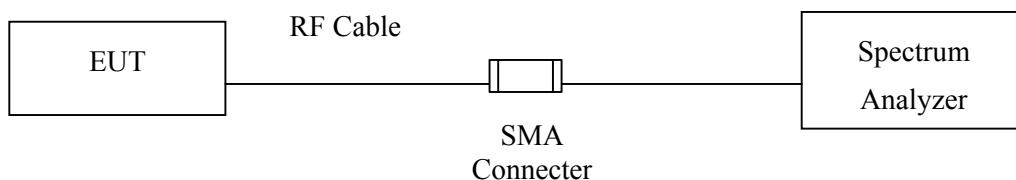
6.1. Test Equipment

The following test equipments are used during the band edge tests:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Spectrum Analyzer	Agilent	E4407B / US39440758	02. Jun, 2008	01. Jun, 2009
2	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009
3	Dual Directional couple	Agilent	778D-012/50550	09. Aug, 2008	08. Aug, 2009
4	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

6.2. Test Setup

Band Edge Measurement



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph § 15.209(a), whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(d) requirements.

6.5. Uncertainty

The measurement uncertainty is defined as ± 1.19 dB.

Contributions		Probability Distribution	Standard Uncertainty $Ui(\text{dB})$
Reference level of spectrum analyzer	U01	Rectangular	0.03
Spectrum analyzer calibration	U02	Rectangular	0.058
Level accuracy	U03	Rectangular	0.29
Linearity of spectrum analyzer	U04	Rectangular	0.013
Mismatch on spectrum analyzer	U05	U-shaped	0.013
Mismatch : Reference leve Measurement	U06	U-shaped	0.04
Mismatch : direct attenuation measurement	U07	U-shaped	0.089
Attenuation measurement reading	U08	Normal	0.29
Attenuator: influence of the ambient temperature	U09	Normal	0
Attenuator: influence of setting the power supply	U10	Normal	0.017
EUT: influence of the ambient temperature	U11	Normal	0.1
EUT: influence of setting the power supply	U12	Normal	0.026
Mismatch on EUT	U13	U-shaped	0.391
Random: System Repeatability	U14	Standard Deviation	0.103
Combined Standard Uncertainty, U			0.597
Expanded Uncertainty (for a 95 % confidence level, $k=2$)			1.19

6.6. Test Result of Band Edge

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Band Edge
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 00)
Battery Type : Standard Battery

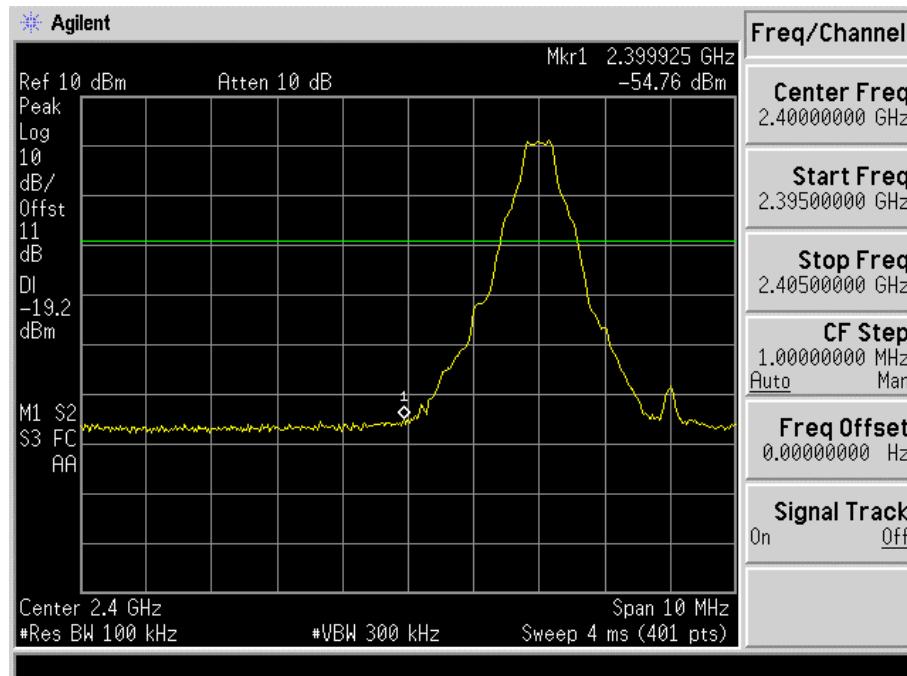


Fig. 6-1 Band Edge for Mode 1(Ch.00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Band Edge
Test Mode : Mode 1: Transmitter 1Mbps GFSK (Ch. 78)
Battery Type : Standard Battery

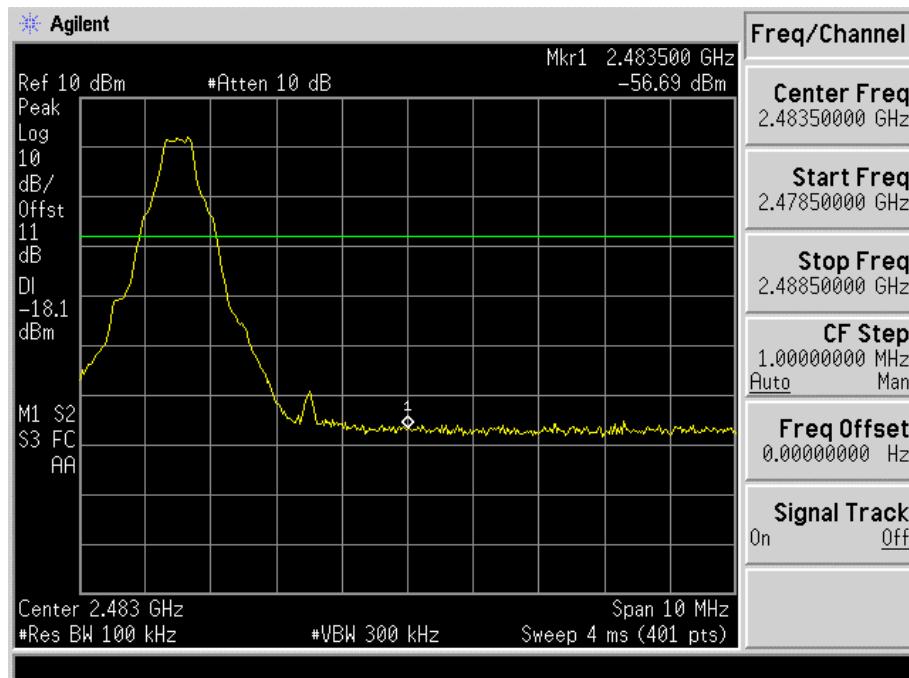


Fig. 6-2 Band Edge for Mode 1(Ch.78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Band Edge
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 00)
Battery Type : Standard Battery

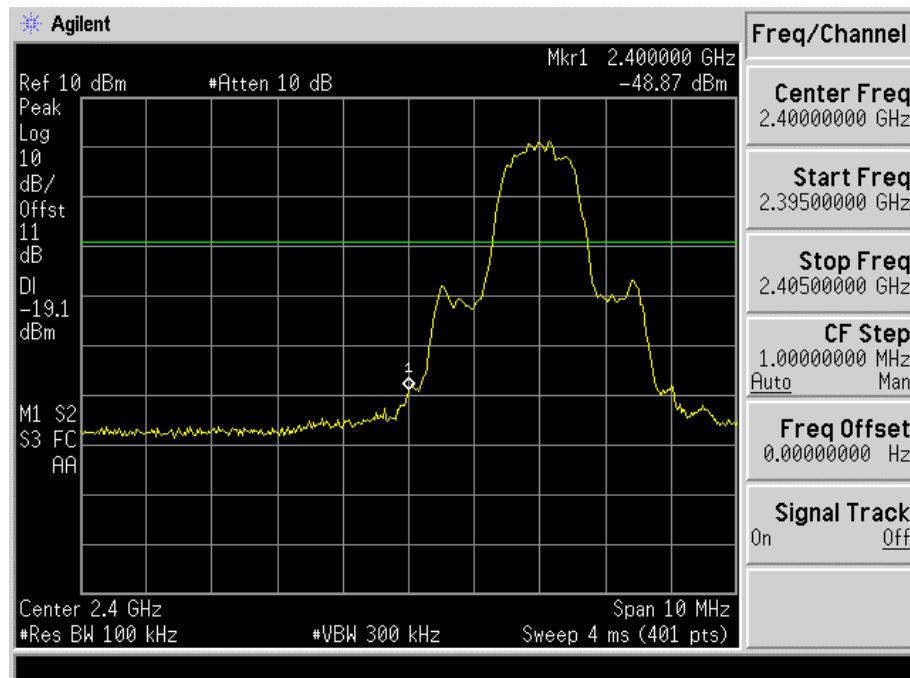


Fig. 6-3 Band Edge for Mode 2(Ch.00).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Band Edge
Test Mode : Mode 2: Transmitter 3Mbps EDR (Ch. 78)
Battery Type : Standard Battery

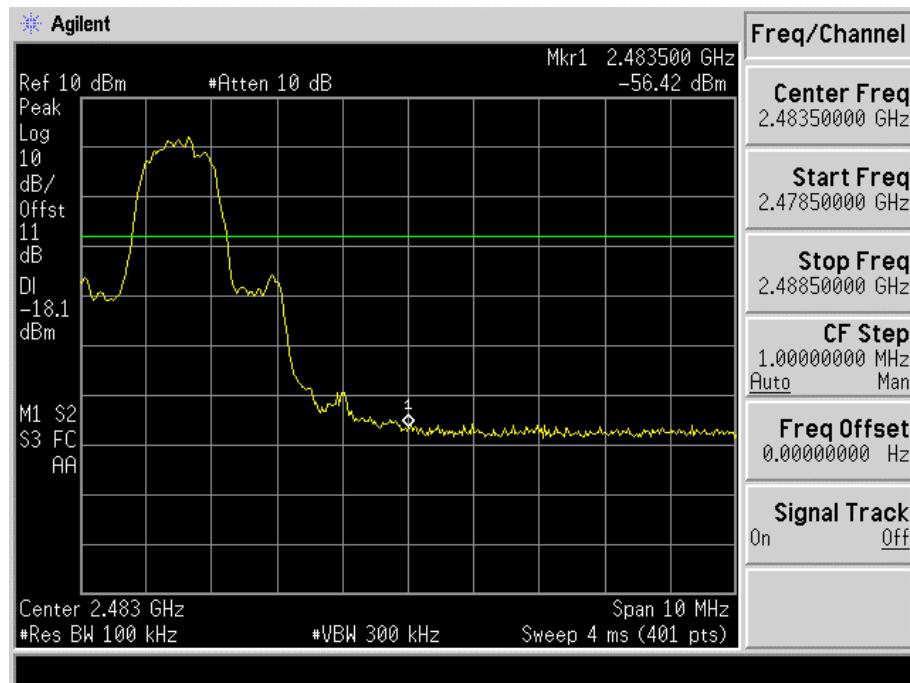


Fig. 6-4 Band Edge for Mode 2(Ch.78).

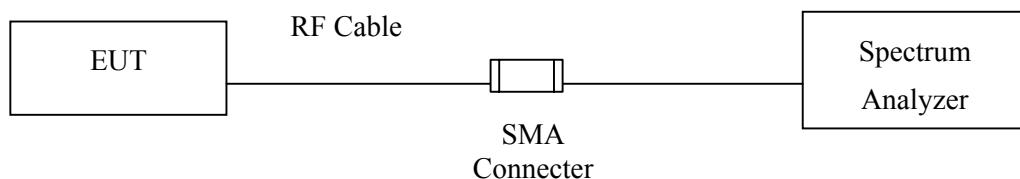
7. Channel Number

7.1. Test Equipment

The following test equipments are used during the Channel Number tests:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Spectrum Analyzer	Agilent	E4407B / US39440758	02. Jun, 2008	01. Jun, 2009
2	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009
3	Dual Directional couple	Agilent	778D-012/50550	08. Aug, 2008	07. Aug, 2009
4	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

7.2. Test Setup



7.3. Limits

Number of hopping frequencies ≥ 75

7.4. Test Procedures

The EUT was setup according to ANSI C63.4, 2003 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(a)(1)(iii) requirements

Span = the frequency band of operation

RBW $\geq 1\%$ of the span , VBW \geq RBW

Sweep = auto, Detector function = peak, Trace = max hold

7.5. Uncertainty

N/A

7.6. Test Result of Channel Number

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Channel Number
Test Mode : Mode 1: Transmitter 1Mbps GFSK
Battery Type : Standard Battery

Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

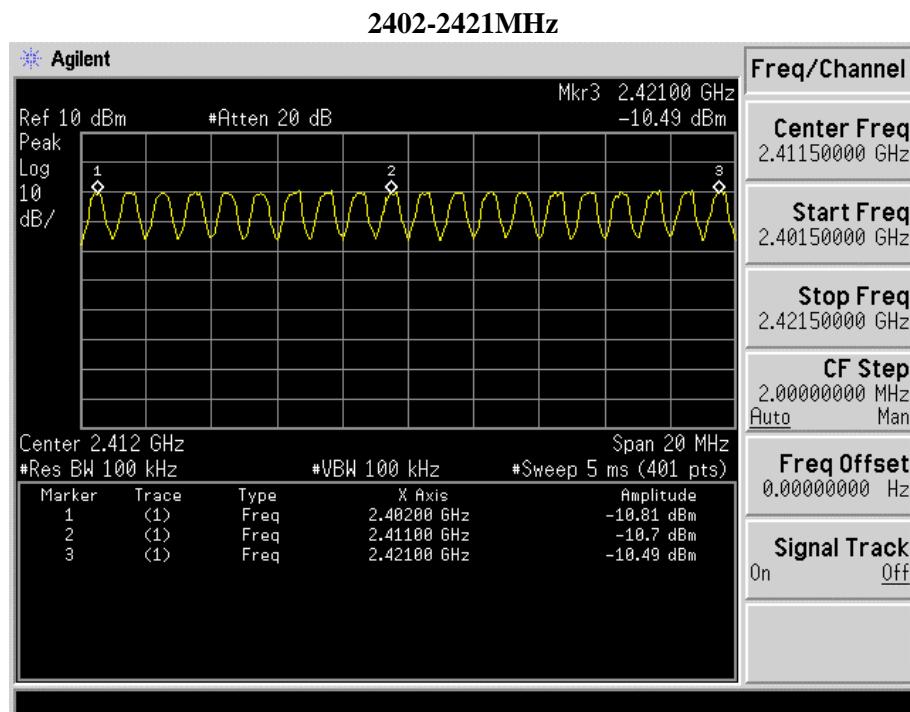


Fig. 7-1 Channel Number measurement between 2402MHz and 2421MHz for mode 1.

2422-2441MHz

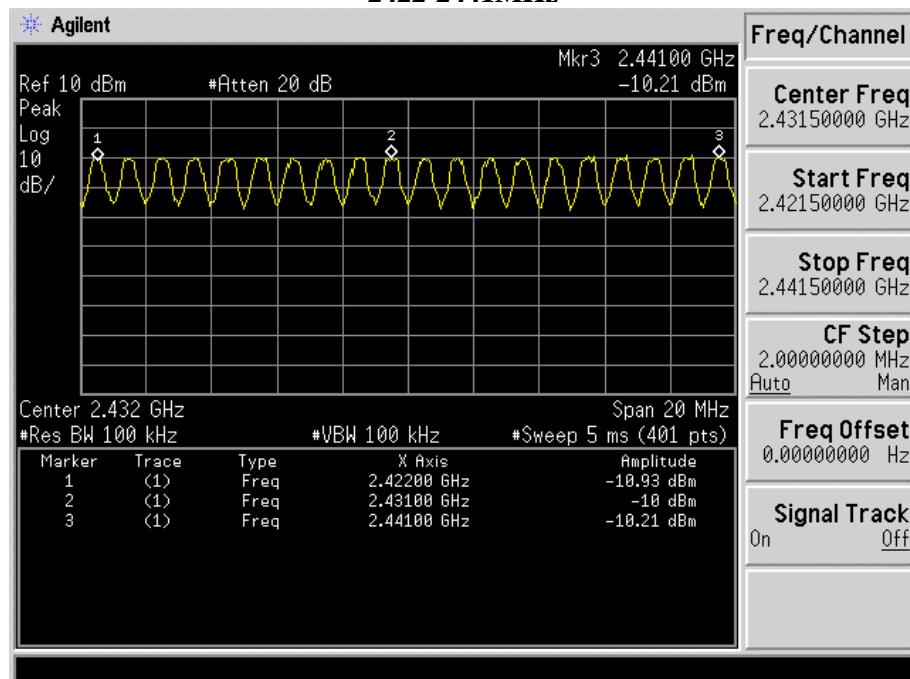


Fig. 7-2 Channel Number measurement between 2422MHz and 2441MHz for mode 1.

2442-2461MHz

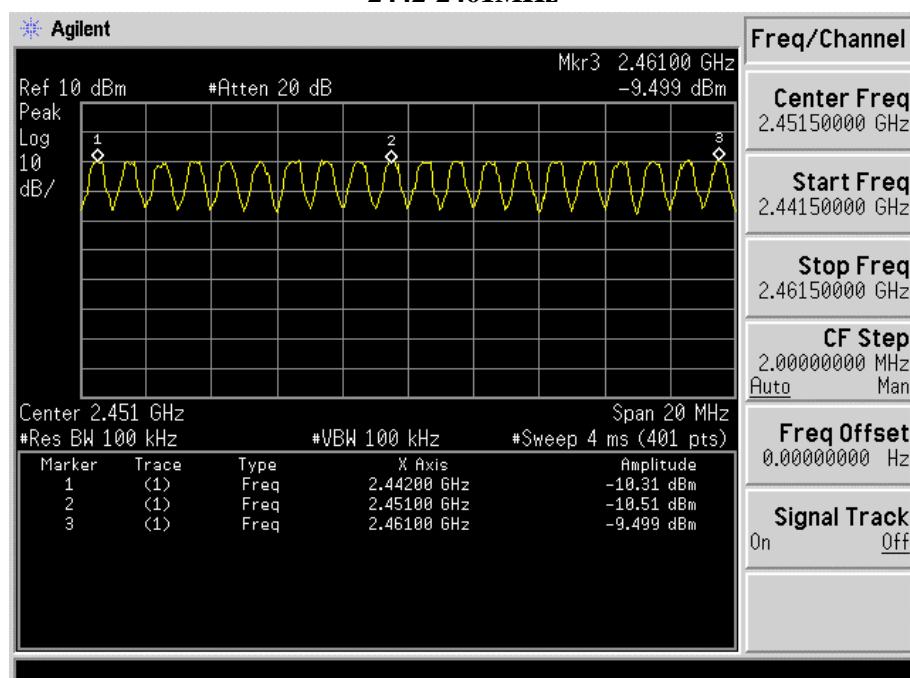


Fig. 7-3 Channel Number measurement between 2442MHz and 2461MHz for mode 1.

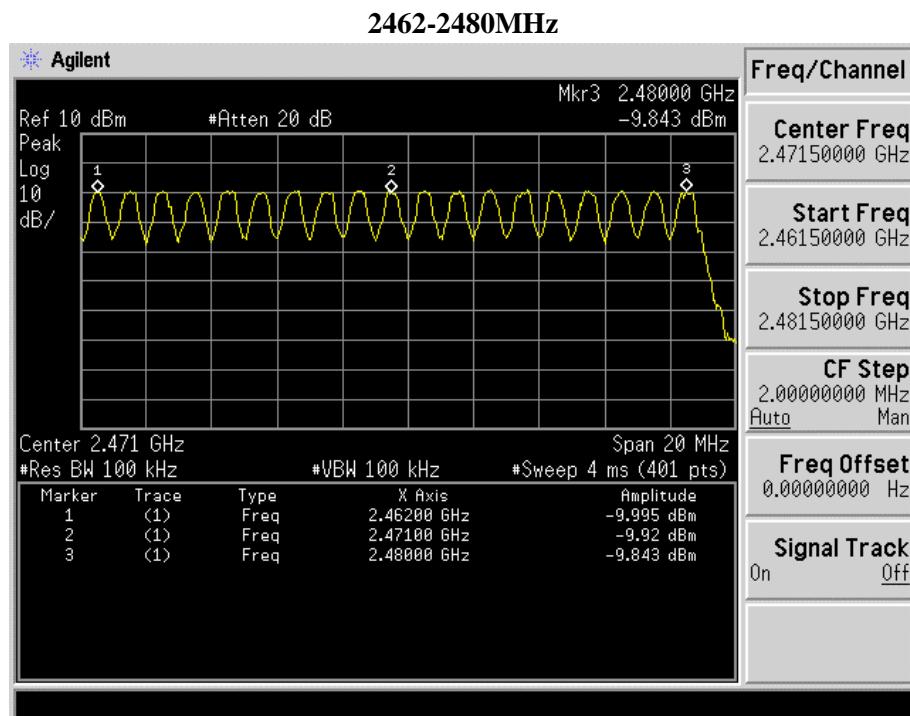


Fig. 7-4 Channel Number measurement between 2462MHz and 2480MHz for mode 1.

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Channel Number
Test Mode : Mode 2: Transmitter 3Mbps EDR
Battery Type : Standard Battery

Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

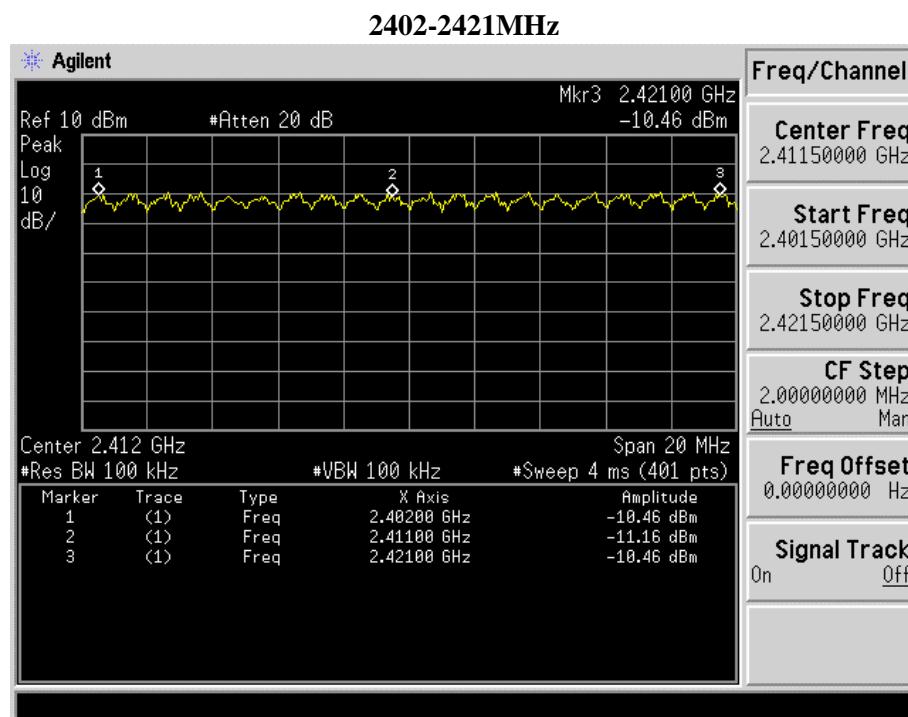


Fig. 7-5 Channel Number measurement between 2402MHz and 2421MHz for mode 2.

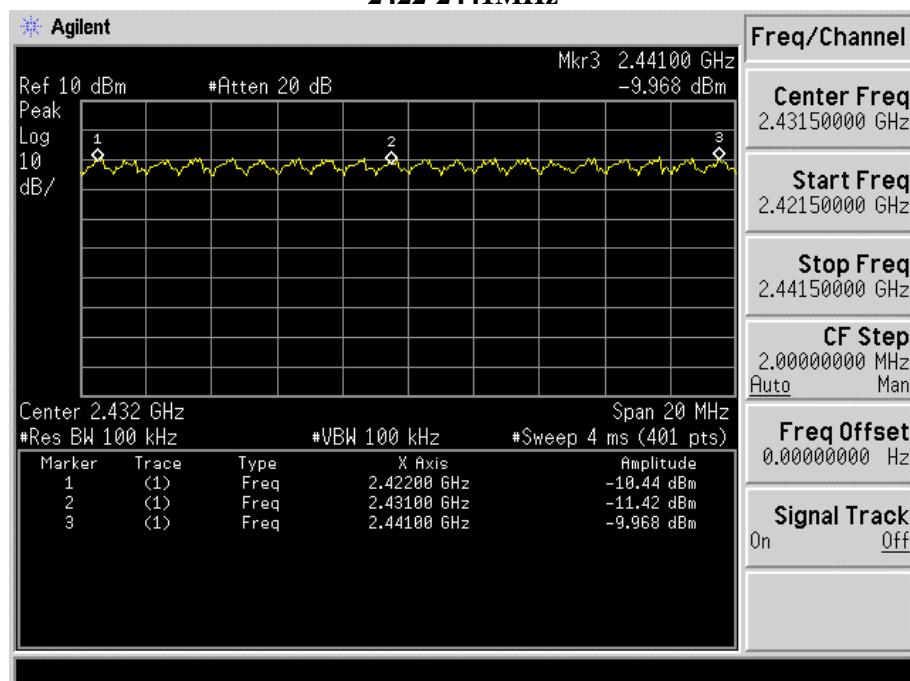
2422-2441MHz


Fig. 7-6 Channel Number measurement between 2422MHz and 2441MHz for mode 2.

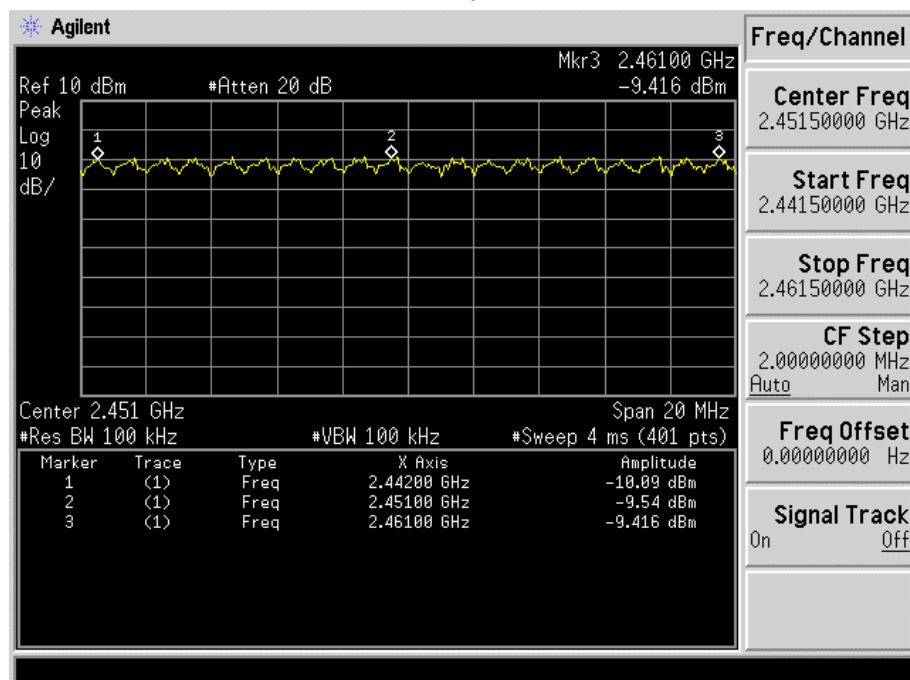
2442-2461MHz


Fig. 7-7 Channel Number measurement between 2442MHz and 2461MHz for mode 2.

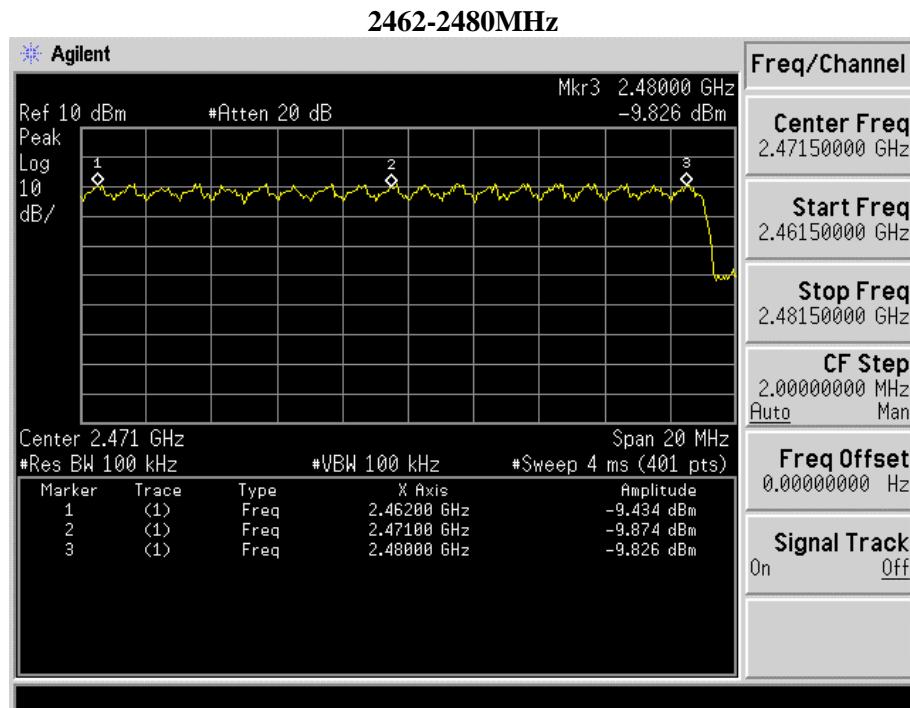


Fig. 7-8 Channel Number measurement between 2462MHz and 2480MHz for mode 2.

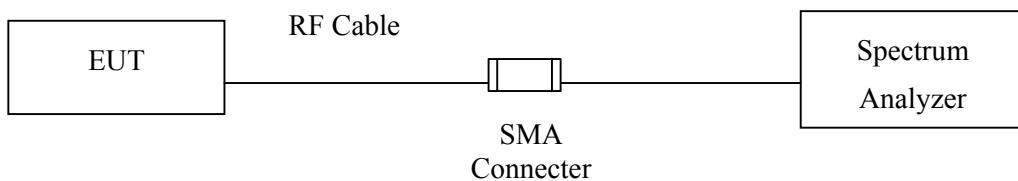
8. Channel Separation

8.1. Test Equipment

The following test equipments are used during the Channel Separation tests:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Spectrum Analyzer	Agilent	E4407B / US39440758	02. Jun, 2008	01. Jun, 2009
2	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009
3	Dual Directional couple	Agilent	778D-012/50550	08. Aug, 2008	07. Aug, 2009
4	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

8.2. Test Setup



8.3. Limits

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

8.4. Test Procedures

The EUT was tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(a)(1) requirements

Span = Capture the peaks of two adjacent channels

Resolution Bandwidth (RBW) \geq 1% of the span, $VBW \geq RBW$

Sweep = auto, Detector function = peak, Trace = max hold

8.5. Uncertainty

The measurement uncertainty is evaluated as \pm 30.30 kHz.

Contributions		Probability Distribution	Standard Uncertainty $u_i(\text{Hz})$
Frequency Error	U_{01}	Rectangular	139.2
Frequency readout accuracy	U_{02}	Normal	15149
Combined Standard Uncertainty, U			15150
Expanded Uncertainty (for a 95 % confidence level, $k=2$)			30.30 kHz

8.6. Test Result of Channel Separation

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Channel Separation
 Test Mode : Mode 1: Transmitter 1Mbps GFSK
 Battery Type : Standard Battery

Frequency (MHz)	Measurement Level (MHz)	Required Limit	Result
2402	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2441	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2480	1.00	>25 kHz or 2/3 * 20 dB BW	Pass

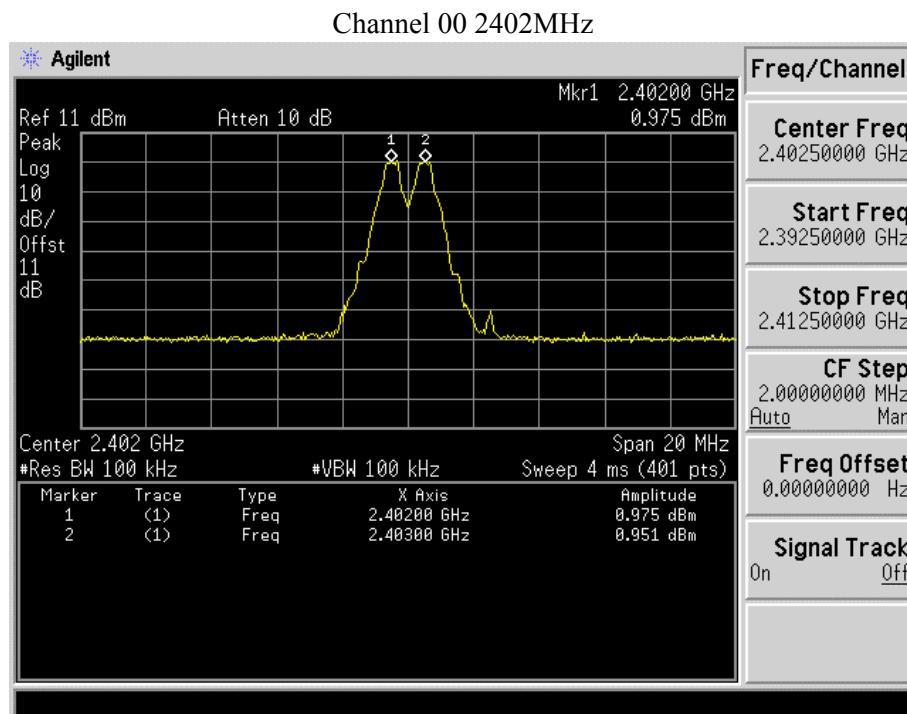


Fig. 8-1 Channel Separation measurement for mode 1(Ch. 00).

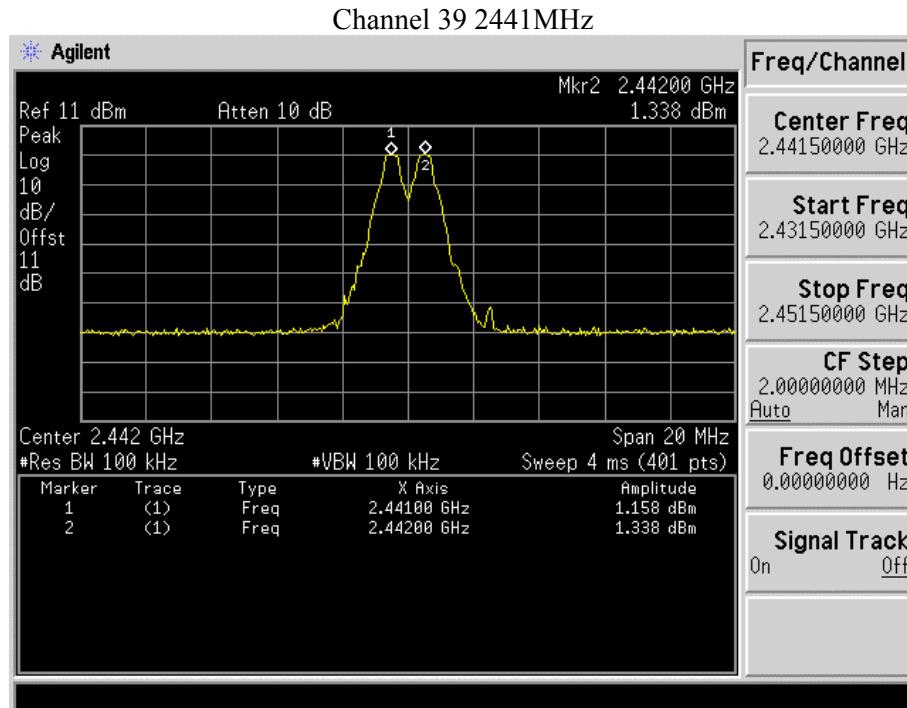


Fig. 8-2 Channel Separation measurement for mode 1(Ch. 39).

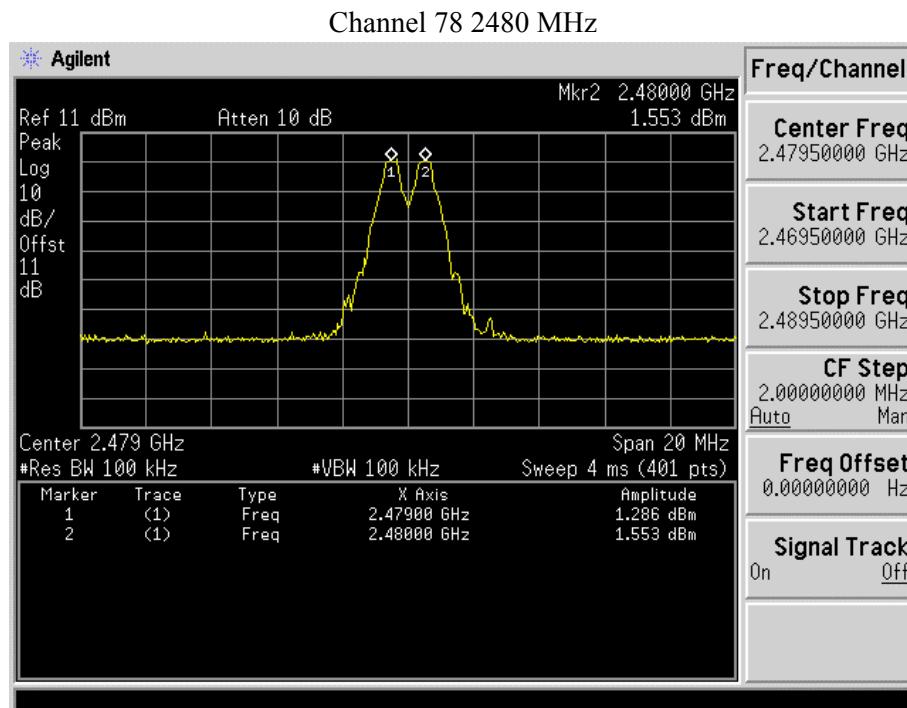


Fig. 8-3 Channel Separation measurement for mode 1(Ch. 78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Channel Separation
Test Mode : Mode 2: Transmitter 3Mbps EDR
Battery Type : Standard Battery

Frequency (MHz)	Measurement Level (MHz)	Required Limit	Result
2402	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2441	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2480	1.00	>25 kHz or 2/3 * 20 dB BW	Pass

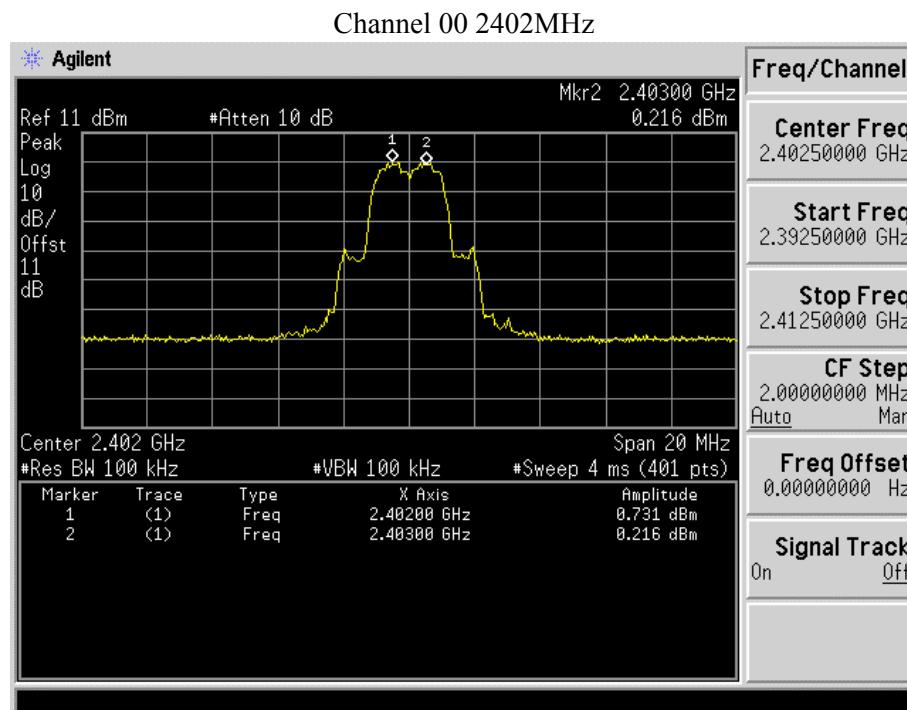


Fig. 8-4 Channel Separation measurement for mode 2(Ch. 00).

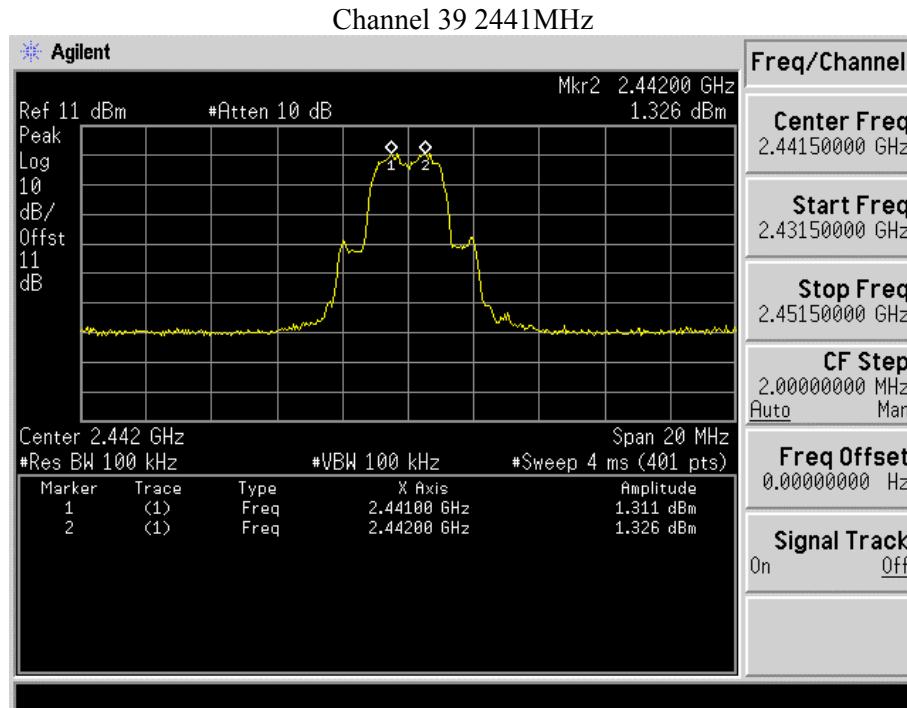


Fig. 8-5 Channel Separation measurement for mode 2(Ch. 39).

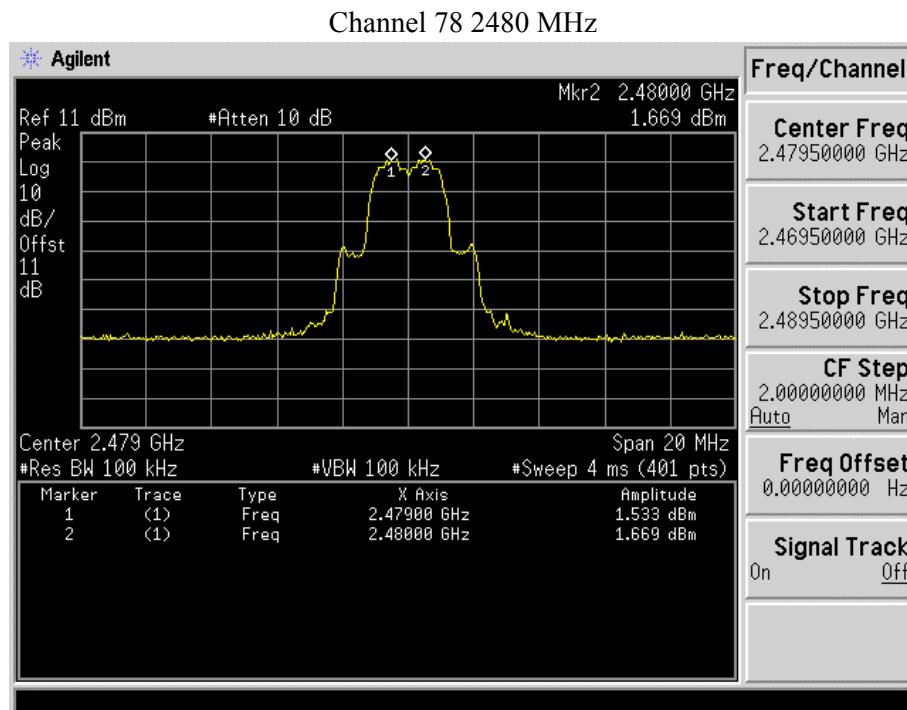


Fig. 8-6 Channel Separation measurement for mode 2(Ch. 78).

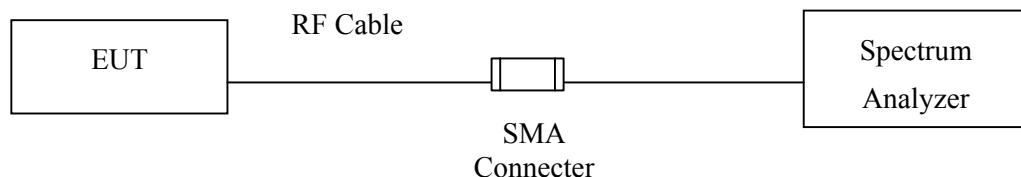
9. Dwell Time

9.1. Test Equipment

The following test equipments are used during the Time of Occupancy tests:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Spectrum Analyzer	Agilent	E4407B / US39440758	02. Jun, 2008	01. Jun, 2009
2	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009
3	Dual Directional couple	Agilent	778D-012/50550	08. Aug, 2008	07. Aug, 2009
4	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

9.2. Test Setup



9.3. Limits

For frequency hopping systems operating in the 2400-2483.5 MHz bands. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

9.4. Test Procedures

The EUT was tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(a)(1)(iii) requirements

The hopping function of the EUT is enabled.

Span = zero span, centered on a hopping channel

RBW = 1 MHz, VBW \geq RBW

Sweep = Capture the entire dwell time per hopping channel

Detector function = peak, Trace = max hold

9.5. Uncertainty

The measurement uncertainty is evaluated as \pm 16 msec.

$U_{\text{Dwell time}} = \text{Sweep time} \times [0.5\% + 1/(\text{sweep points}-1)] \times (\text{number of times one channel transmits within a 31.6sec time frame})$
 $= 20 \text{ ms} \times [0.5\% + 1/(401-1)] \times (31.6/79)/(3.75) = 16 \text{ msec}$

9.6. Test Result of Dwell Time

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Dwell Time
 Test Mode : Mode 1: Transmitter GFSK(Channel 00,39,78 –DH5)
 Battery Type : Standard Battery

Test Channel	Data Packet Type	Limit	Test Result	Verdict
Channel 00	DH5	$\leq 0.4S$	290ms	Pass
DH5 Dwell Time : $31600\text{ms} \times 2.9\text{ms} \times 5 / 20\text{ms} / 79 = 290\text{ms}$				
Channel 39	DH5	$\leq 0.4S$	290ms	Pass
DH5 Dwell Time : $31600\text{ms} \times 2.9\text{ms} \times 5 / 20\text{ms} / 79 = 290\text{ms}$				
Channel 78	DH5	$\leq 0.4S$	290ms	Pass
DH5 Dwell Time : $31600\text{ms} \times 2.9\text{ms} \times 5 / 20\text{ms} / 79 = 290\text{ms}$				

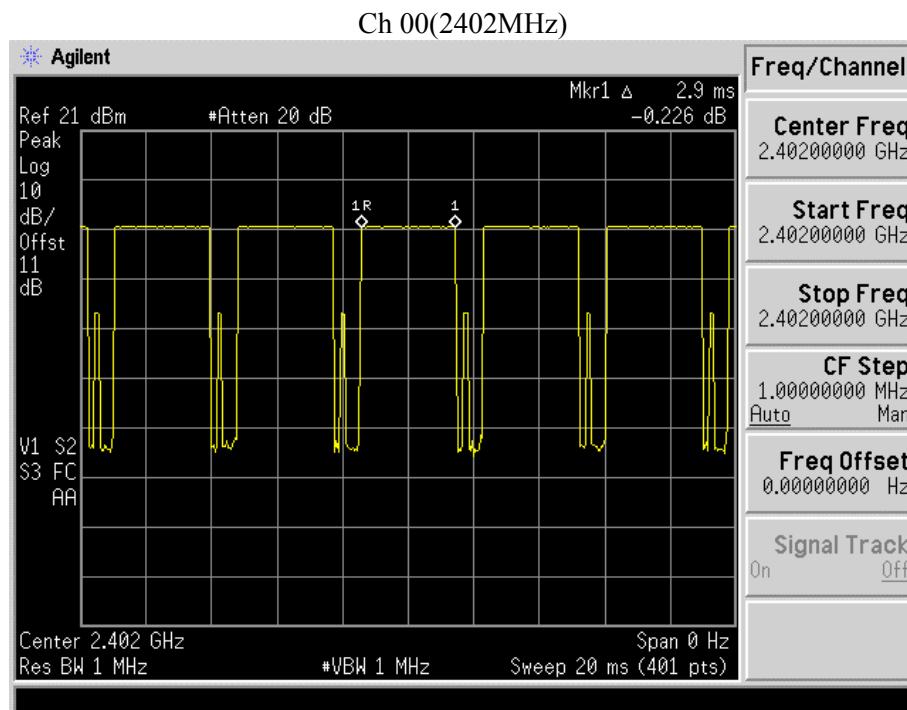


Fig. 9-1 Dwell Time Measurement for mode 1(Ch. 00).

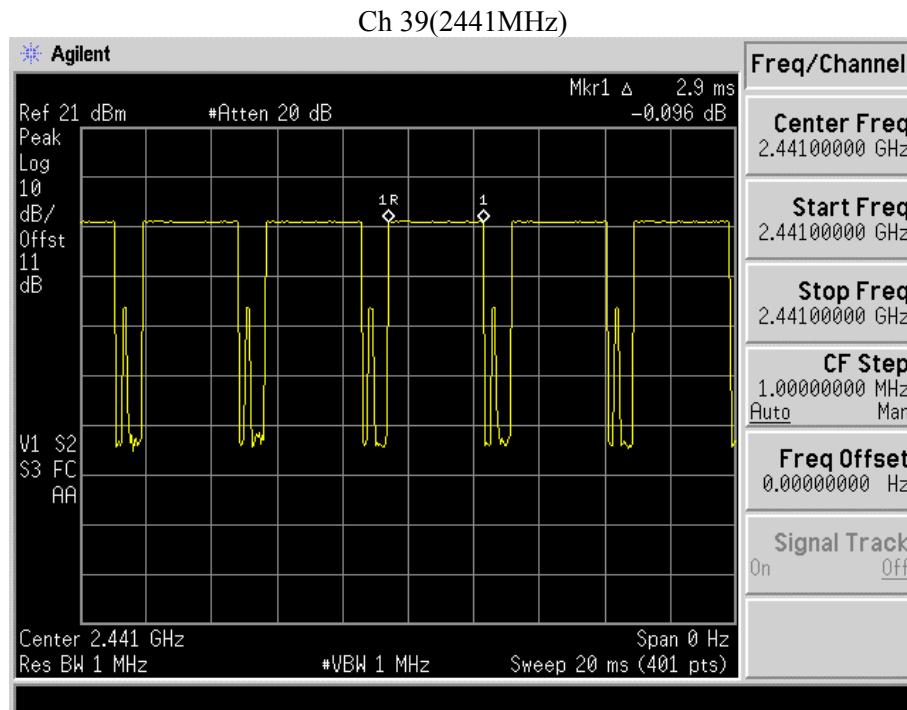


Fig. 9-2 Dwell Time Measurement for mode 1(Ch. 39).

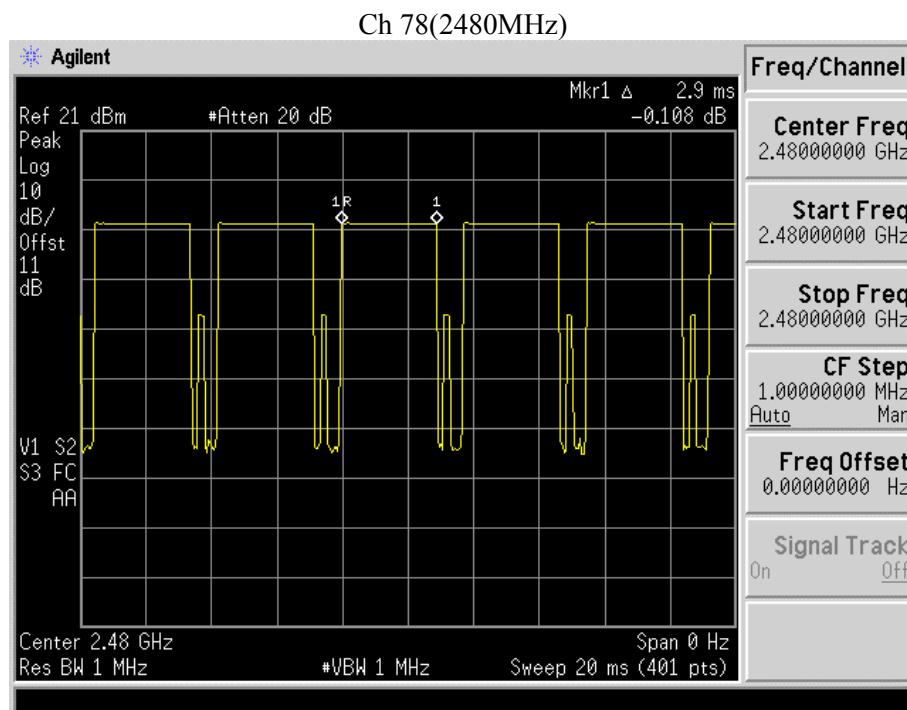


Fig. 9-3 Dwell Time Measurement for mode 1(Ch. 78).

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
 Test Item : Dwell Time
 Test Mode : Mode 2: Transmitter 3Mbps EDR(Channel 00,39,78 –DH5)
 Battery Type : Standard Battery

Test Channel	Data Packet Type	Limit	Test Result	Verdict
Channel 00	DH5	$\leq 0.4S$	290ms	Pass
DH5 Dwell Time : $31600\text{ms} \times 2.9\text{mss} \times 5 / 79 / 20\text{ms} = 290\text{ms}$				
Channel 39	DH5	$\leq 0.4S$	290ms	Pass
DH5 Dwell Time : $31600\text{ms} \times 2.9\text{ms} \times 5 / 79 / 20\text{ms} = 290\text{ms}$				
Channel 78	DH5	$\leq 0.4S$	290ms	Pass
DH5 Dwell Time : $31600\text{ms} \times 2.9\text{ms} \times 5 / 79 / 20\text{ms} = 290\text{ms}$				

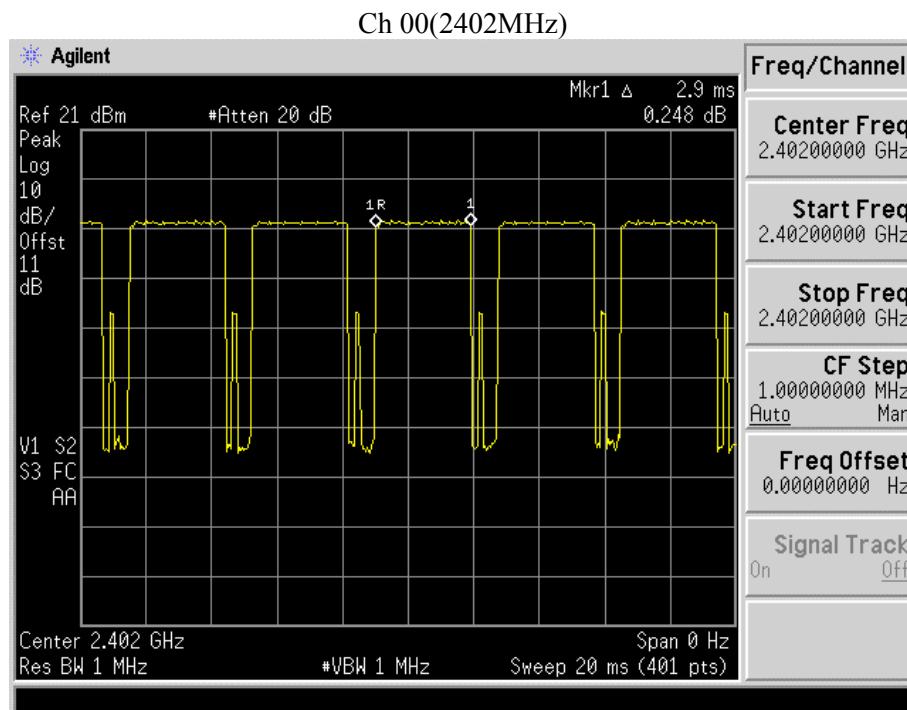


Fig. 9-4 Dwell Time Measurement for mode 2(Ch. 00).

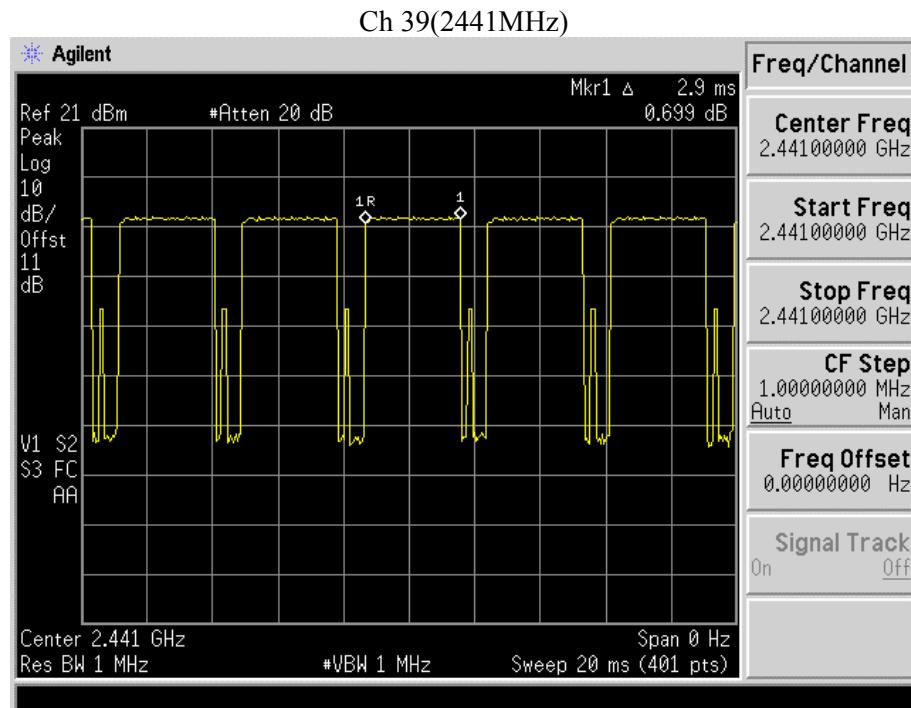


Fig. 9-5 Dwell Time Measurement for mode 2(Ch. 39).

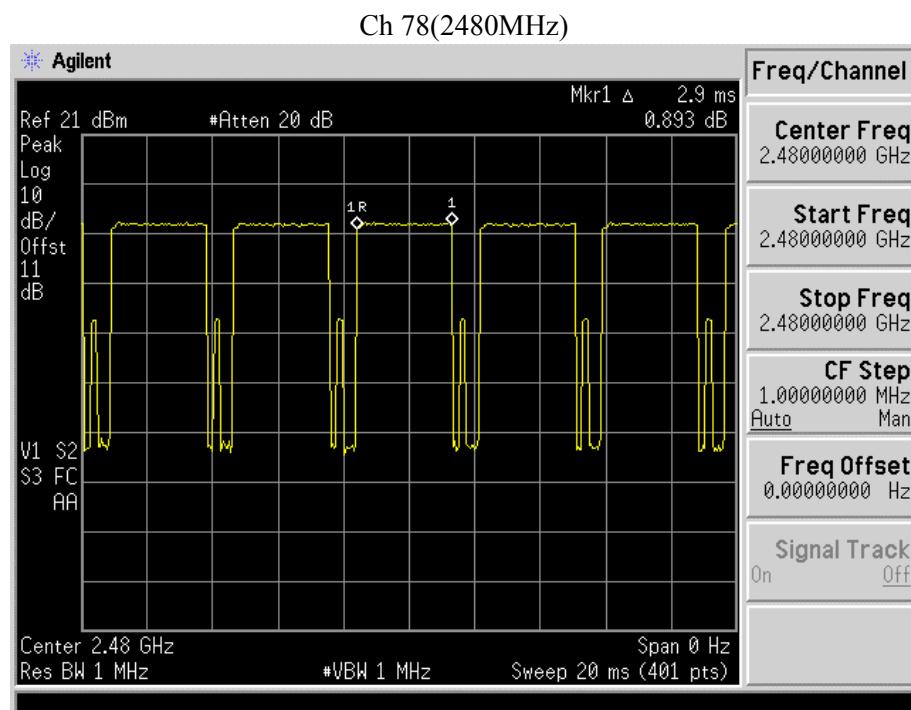


Fig. 9-6 Dwell Time Measurement for mode 2(Ch. 78).

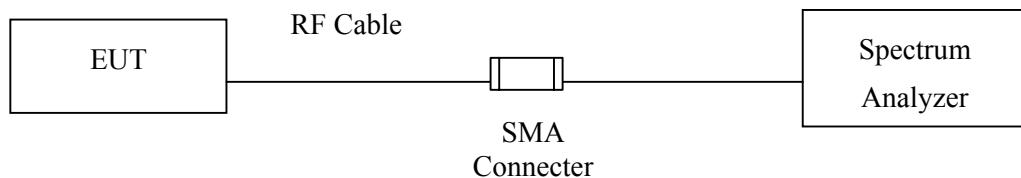
10. Occupied Bandwidth

10.1. Test Equipment

The following test equipments are used during the Occupied Bandwidth tests:

Item	Equipment	Manufacturer	Model No./ Serial No.	Calibration Date	Calibration Due
1	Spectrum Analyzer	Agilent	E4407B / US39440758	02. Jun, 2008	01. Jun, 2009
2	Bluetooth test set with Audio	Anritsu	MT8852B/ 6K00006247	24. Jul, 2008	23. Jul, 2009
3	Dual Directional couple	Agilent	778D-012/50550	08. Aug, 2008	07. Aug, 2009
4	Directional coupler	Agilent	87300C/ MY44300353	16. Aug, 2008	15. Aug, 2009

10.2. Test Setup



10.3. Limits

< 1MHz only if using less than 15 non-overlapping channels

10.4. Test Procedures

The EUT was tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR § 15.247(a)(1)(iii) requirements

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW \geq 1% of the 20 dB bandwidth, VBW \geq RBW

Sweep = auto, Detector function = peak, Trace = max hold

The EUT should be transmitting at its maximum data rate.

10.5. Uncertainty

The measurement uncertainty is evaluated as ± 24.30 kHz.

Contributions		Probability Distribution	Standard Uncertainty $u_i(\text{Hz})$
Frequency Error	U_{01}	Rectangular	139.2
Frequency readout accuracy	U_{02}	Normal	12149
Combined Standard Uncertainty, U			12150
Expanded Uncertainty (for a 95 % confidence level, $k=2$)			24.30 kHz

10.6. Test Result of Occupied Bandwidth

Product : Cellular PCS CDMA Phone with EVDO and Bluetooth (BT2.0 + EDR)
Test Item : Occupied Bandwidth
Battery Type : Standard Battery

Test Mode	Frequency (MHz)	20 dB bandwidth (kHz)	Required Limit (kHz)	Result	Battery Type
Mode 1: Transmitter 1Mbps GFSK (Ch. 00)	2402	808	N/A	Pass	Standard
Mode 1: Transmitter 1Mbps GFSK (Ch. 39)	2441	808	N/A	Pass	Standard
Mode 1: Transmitter 1Mbps GFSK (Ch. 78)	2480	808	N/A	Pass	Standard
Mode 2: Transmitter 3Mbps EDR (Ch. 00)	2402	1272	N/A	Pass	Standard
Mode 2: Transmitter 3Mbps EDR (Ch. 39)	2441	1272	N/A	Pass	Standard
Mode 2: Transmitter 3Mbps EDR (Ch. 78)	2480	1272	N/A	Pass	Standard

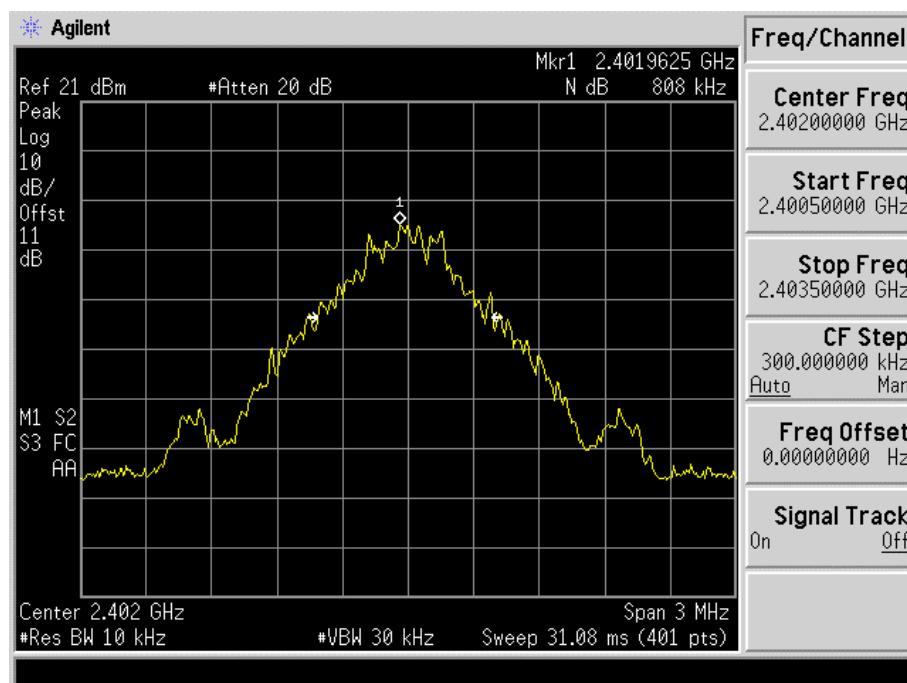


Fig. 10-1 Occupied Bandwidth measurement for mode 1(Ch. 00).

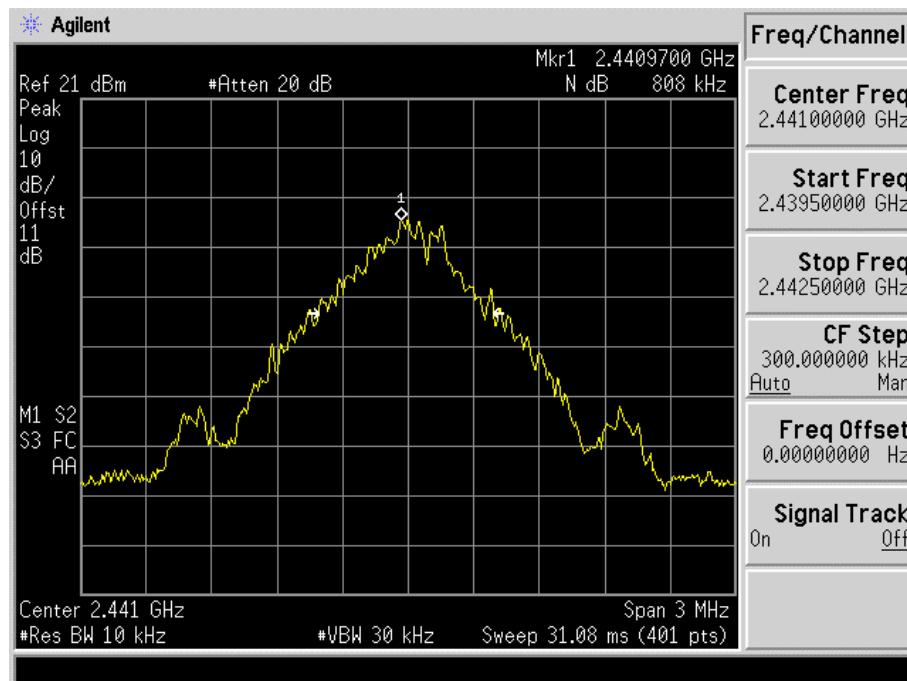


Fig. 10-2 Occupied Bandwidth measurement for mode 1(Ch. 39).

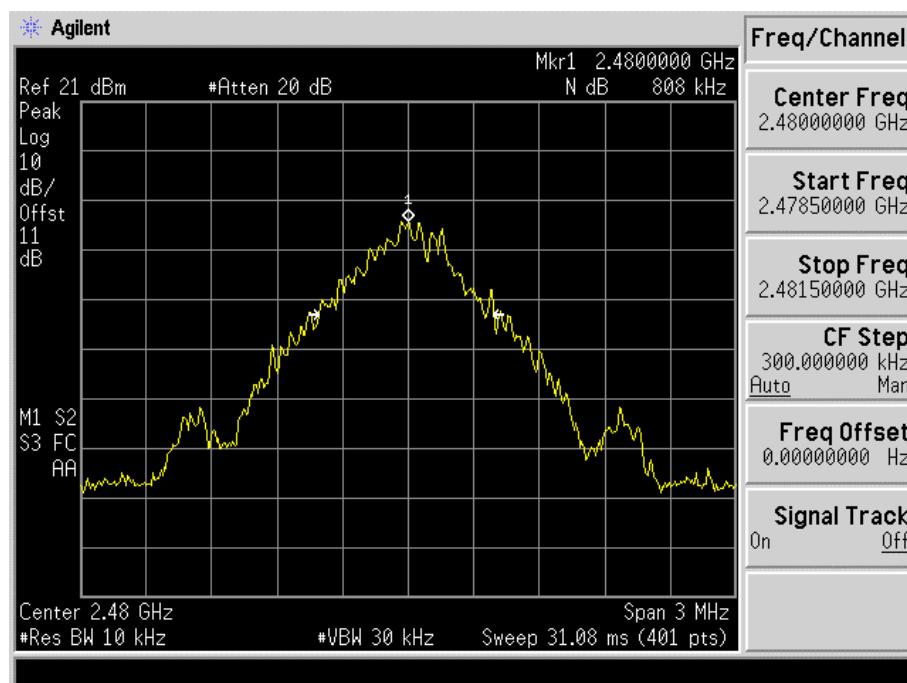


Fig. 10-3 Occupied Bandwidth measurement for mode 1(Ch. 78).

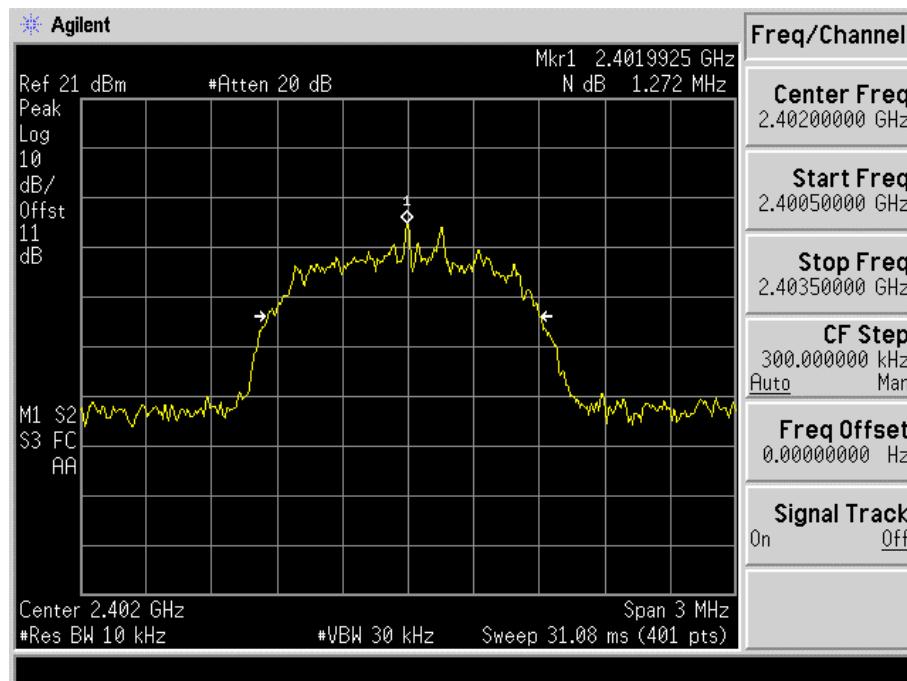


Fig. 10-4 Occupied Bandwidth measurement for mode 2(Ch. 00).

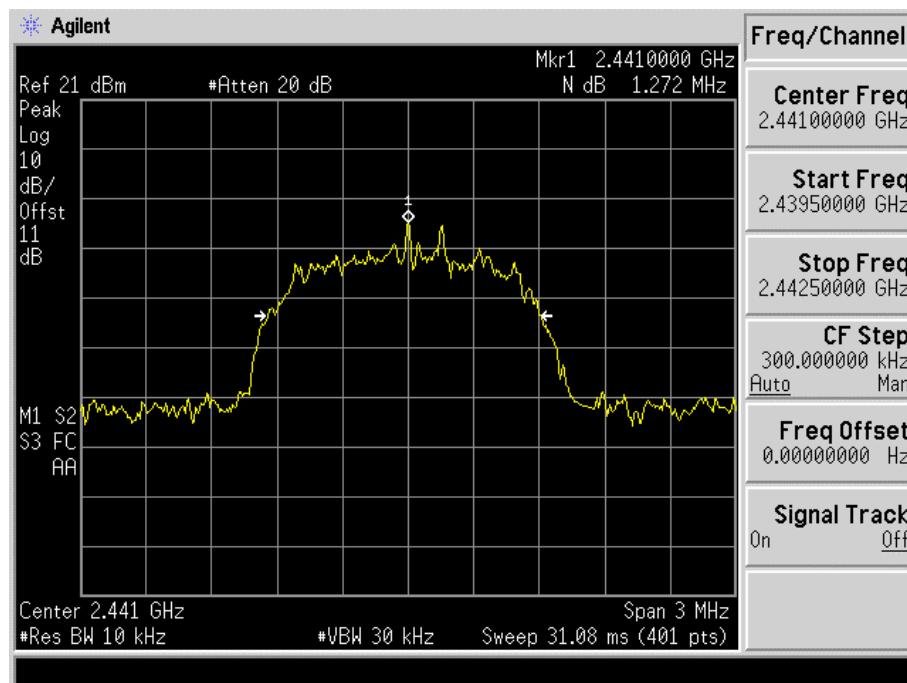


Fig. 10-5 Occupied Bandwidth measurement for mode 2(Ch. 39).

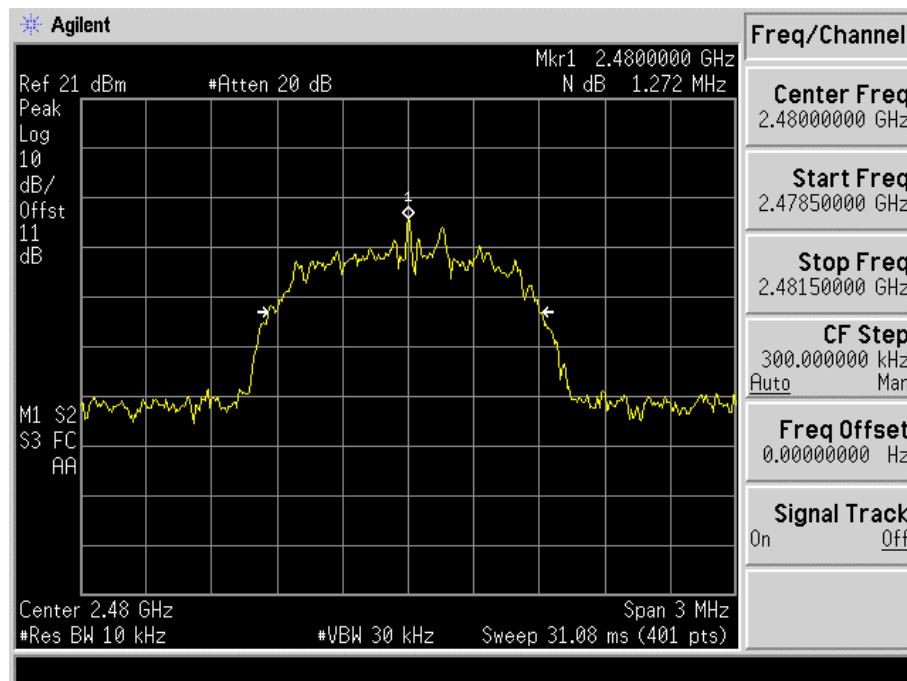


Fig. 10-6 Occupied Bandwidth measurement for mode 2(Ch. 78).