

MEASUREMENT REPORT of PDA with WiFi and Bluetooth capabilities

Applicant : PalmOne, Inc.

EUT : PDA

Model : LifeDrive

FCC ID : O3W830

Tested by :

Training Research Co., Ltd.

TEL : 886-2-26935155 FAX : 886-2-26934440

No. 255, Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C.

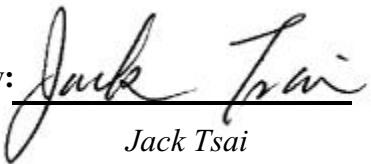
CERTIFICATION

We here by verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made mainly in accordance with the procedures given in ANSI C63.4 (2003) as a reference. All test were conducted by **Training Research Co., Ltd.**, No. 255, Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with the technical requirements set forth in the FCC Rules Part 15 Subpart B (Declaration of Conformity) and C Section 15.247.

Applicant : PalmOne, Inc.
Applicant address : 400 N. McCarthy Blvd. Milpitas, CA 95035
Product Name : LifeDrive
Model Name : LifeDrive
FCC ID : O3W830
Report No. : I2215050059
Test Date : January 21, 2005

Prepared by: 
Jack Tsai

Approved by: 
Frank Tsai

Conditions of issue :

- (1) This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.
- (2) This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.
- (3) This test report, measurements made by TRC are traceable to the NIST only Conducted and Radiated Method.

★ NVLAP LAB CODE: 200174-0

Federal Communications Commission

Declaration of Conformity (DoC)

for the following equipment:

Product name : LifeDrive

Model name : LifeDrive

Trade name : PalmOne

Is herewith confirmed and found to comply with the requirements of CFR 47 part15 Subpart B - Unintentional Radiators regulation. The results of electromagnetic mission evaluation are shown in the report number : I2215050059

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation

<i>Manufacturer</i>	<i>USA local representative</i>
Company name: Inventec Appliances Corp.	To be determined
Computer address: 37, Wugung 5 th Rd., Wugu Shiang, Taipei, Taiwan	
ZIP / Postal code: 248	
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I . GENERAL

1.1 Introduction

The following measurement report is submitted on behalf of applicant in support that the certification in accordance with Part 2 Subpart J and Part 15 Subpart A, B and C of the Commission's Rules and Regulations.

1.2 Description of EUT

FCC ID : O3W830

Product Name : LifeDrive

Model Name : LifeDrive

Frequency Range : 2402MHz to 2480MHz

Support Channel : 79 Channels

Channel Spacing : 1 MHz

Modulation Skill : GFSK

Power Type : (1) Rechargeable Battery
or (2) Power adapter
Mfg.: NetBit
Model: DSC-51F 52100
I/P: 100-240VAC, 50-60Hz, 0.2A 20VA
O/P: 5.2VDC, 1.0A
Power cable 175cm length, non-shielded, with ferrite core
or (3) Power adapter
Mfg.: Palm
Model: SCP0501000P
I/P: 100-240VAC, 50-60Hz, 300mA ; O/P: 5VDC, 1000mA
Power cable 180cm length, non-shielded, with ferrite core

Data Cable : USB cable, 182cm length, shielded, with ferrite core

1.3 Test method

PDA connected PC:

- (1) Connected PDA to the USB interface of PC.
- (2) The power port of USB cable is connected with the AC power source via a power adaptor.
- (3) The headphone jack of PDA body is connected with the earphone.

PDA only (EUT Stand on three orthogonal planes respectively, record worst-case in report):

- (4) The USB jack of PDA body is connected with the USB cable un-termination.
- (5) The power port of USB cable is connected with the AC power source via a power adaptor.
- (6) The headphone jack of PDA body is connected with the earphone.
- (7) The PDA software of applicant is operated under the Palm OS, and making EUT to the linking mode with support equipments (another PDA) in the unintentional test.
- (8) Set different channel (CH1/CH40/CH79) being tested and repeat the procedures above.
 - (a) Radiated for intentional test:
making EUT to the mode of continuous TX or RX
 - (b) Conducted and radiated for unintentional test:
making EUT to the linking mode with another PDA.

1.4 Description of Support Equipment

In order to construct the minimum testing, following equipment were used as the support units.

PC : **IBM 8434**

Model No. : IVG

Serial No. : 99CCZG9

FCC ID : DoC (Declaration of Confirmation) Approved

BSMI : R33026

Power type : 100 ~ 127VAC/200 ~ 240VAC, 6A/3A, 50 ~ 60Hz, Switching

Power cord : Non-shielded, 1.8m length, Plastic hood, No ferrite core

Monitor : **HP 15' Color Monitor**

Model No. : D2827A

Serial No. : KR91161719

FCC ID : C5F7NFCMC1518X

BSMI : 3872B039

Power type : 100 ~ 240 VAC / 50 ~ 60 Hz, Switching

Power cord : Shielded, 1.83m long, No ferrite core

Data cable : Shielded, 1.46m long, with two ferrite cores

PS2 Keyboard : **IBM**

Model No. : KB-0225

Serial No. : 0110406

FCC ID : DoC Approved

BSMI : R31310

Power type : By PC

Data cable : Shielded, 2.17m length, Plastic hood, No ferrite core

Mouse : **HP**

Model No. : M-UR89

Serial No. : LZS21750238

FCC ID : DoC Approved

BSMI : 3892D767

Power type : By PC

Power cord : Shielded, 1.80m length, No ferrite core

USB

Gamepad : **Rockfire**
Model No. : QF-337uv
Serial No. : 10600545
FCC ID : None (CE approval)
BSMI : 3862A574
Power type : By PC
Data Cable : Shielded, 1.81m long, Plastic, with ferrite core

Fax/Modem : **Aceex**

Model No. : DM-1414
Serial No. : 9010583
FCC ID : IFAXDM1414
Power type : 100 VAC / 50 ~ 60 Hz, Switching
Power Cord : Non-shielded, 1.90m length, Plastic hoods, No ferrite bead
Data Cable : RS-232→Shielded, 1.30m length, Metal hoods, No bead
RJ-11Cx2→Non-shielded, 7' long, Plastic hoods, No bead

Printer : **EPSON STYLUS C63.**

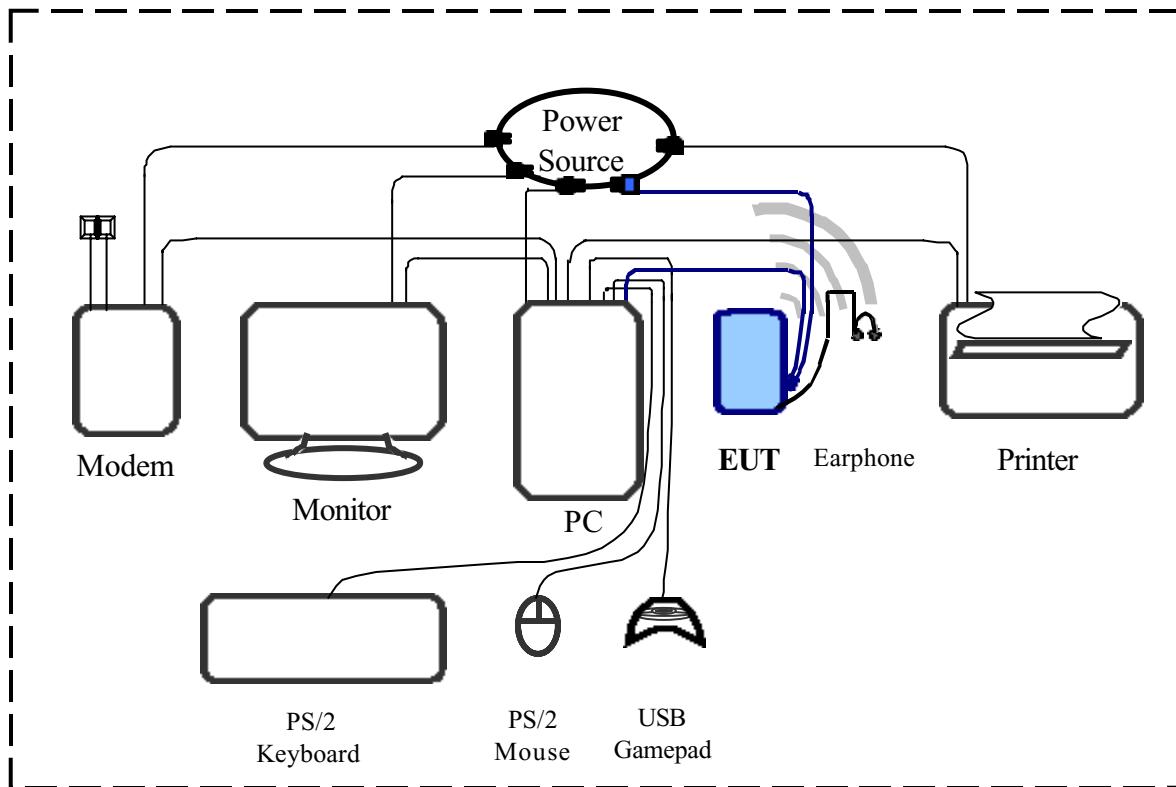
Model No. : B241A
Serial No. : FAPY155090
FCC ID : DoC
BSMI : R33126
Power type : Switching, Non-shielded, 198cm length, No ferrite core
Data Cable : Shielded, 150cm length, Plastic hood, No ferrite core

Earphone : **God Information Technology Co., Ltd.**

Model No. : MIC-A01
Serial No. : GIT-2001A001
FCC ID : None (CE approval)
Power type : By PDA
Data Cable : Non-Shielded, 1.34m length, no ferrite core

1.5 Configuration of System Under Test

1.5.1 Conducted and Radiated of Unintentional

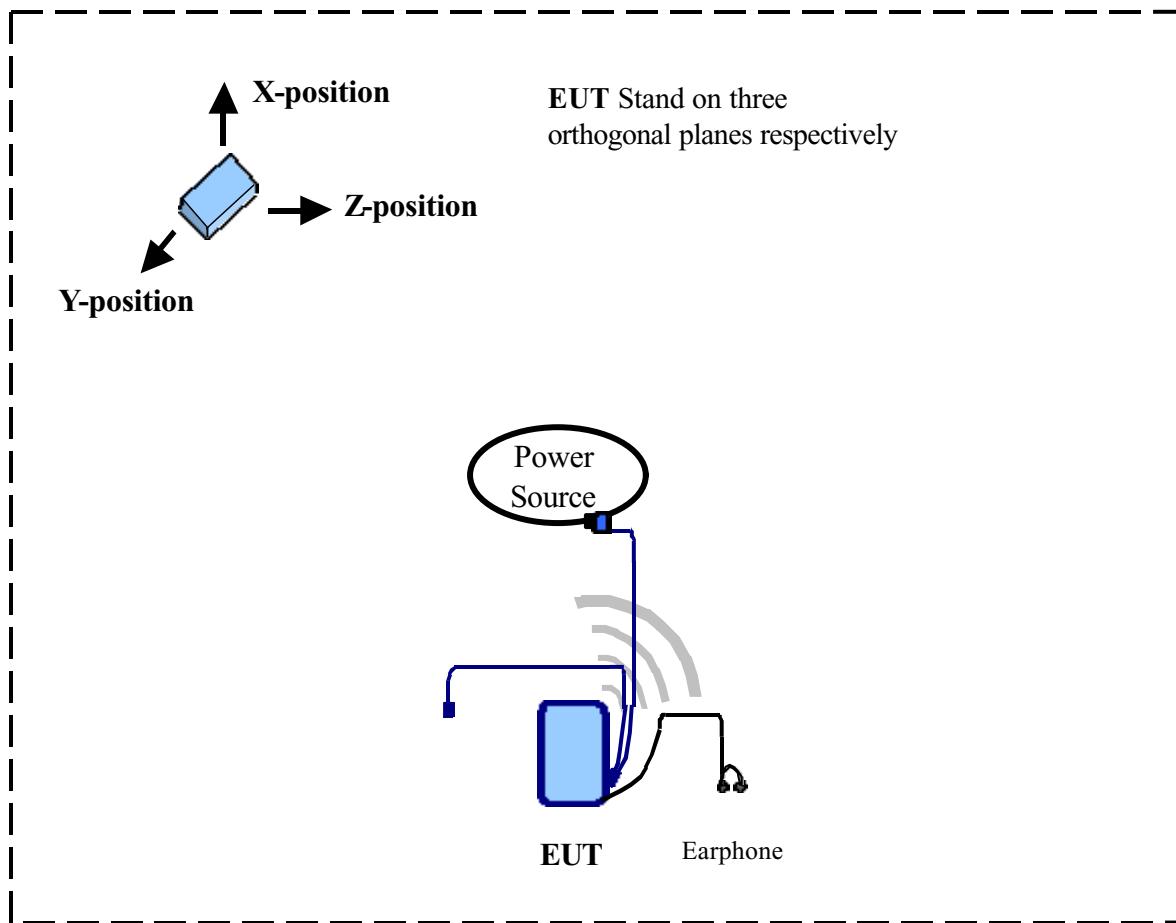


Connections of Equipment

PC:

- *VGA Port --- a monitor
- *Serial A-Port --- an external modem
- *Parallel Port --- a printer
- *PS/2 Ports --- a PS/2 keyboard and PS/2 mouse
- *USB A-Port --- a USB gamepad
- *USB B-Port --- EUT

1.5.2 Radiated of Intentional



Connections of Equipment

EUT:

USB Cable

*USB cable x 1 --- 124cm length, shielded, with ferrite core

Switching Adaptor

*Power cable x 1 --- 175/180cm length, non-shielded, with ferrite core

Earphone:

*Data cable x 1 --- 182cm length, non-shielded, no ferrite core

1.6 Test Procedure

All measurements contained in this report were performed mainly according to the techniques described in ANSI C63.4 (2003) and the pre-setup was written 1.3 test method, the detail setup was written on each test item.

1.7 Location of the Test Site

The radiated emissions measurements required by the rules were performed on the **three-meter, Anechoic Chamber (FCC Registration Number: 93906)** maintained by *Training Research Co., Ltd.* – No. 255, Nanyang Street, Shijr, Taipei Hsien 221, Taiwan. Complete description and measurement data have been placed on file with the commission. The conducted power line emissions tests and other test items were performed in an anechoic chamber also located at *Training Research Co., Ltd.*

255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, *Training Research Co., Ltd.* is listed by the FCC as a facility available to do measurement work for others on a contract basis.

1.8 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions, which the EUT was considered likely to encounter in normal uses were investigated.

There is a test condition apply in this test item, the test procedure description as <1.3 test method>. Three channels were tested, one in the top (CH1), one in the middle (CH40) and the other in bottom (CH79).

II. Section 15.101(a): Equipment authorization of unintentional radiators

The EUT equipped with a USB interface and should be operated with the computer. It was categorized to *Class B personal computers and peripherals* as cannot be operated stand-alone. The authorization requires **Declaration of Conformity (DoC)** and the items required such as Section 15.107 (Conducted limits) and Section 15.109 (Radiated emission limits) is same as Section 15.207 and 15.247(C).

III. Section 15.203: Antenna requirement

The EUT is equipped with an integral antenna, it is permanently installed inside its case. The antenna cannot be removed or modified without any tools from outside in order to prevent the un-authorized modification. This makes that complies with the antenna requirement stated in Section 15.203 is inapplicable to this EUT.

IV. Section 15.207: Power Line Conducted Emissions for AC Powered Units**4.1 Test Condition & Setup**

The power line conducted emission measurements were performed in an anechoic chamber. The EUT was assembled on a wooden table, which is 80 centimeters high, was placed 40 centimeters from the backwall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and Line Impedance Stabilization Networks (LISNs). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer (or EMI receiver) was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak and average detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150KHz to 30MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.3

There is a test condition apply in this test item, the test procedure description as <1.3 test method>. Three channels were tested, one in the top (CH1), one in the middle (CH40) and the other in bottom (CH79).

4.2 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Next time
<u>Calibration</u>				
<u>Date</u>				
EMI Receiver	8546A	HP	3520A00242	08/05/05
RF Filter Section	85460A	HP	3448A00217	08/05/05
LISN (EUT)	LISN-01	TRC	99-05	10/07/05
LISN (Support E.)	LISN-01	TRC	9912-03, 04	11/04/05
Pre-amplifier	15542 ZFL-500	Mini – Circuits	0 0117	05/20/05
6dB Attenuator	MCL BW-S6W2	Mini – Circuits	9915 – Conducted	05/20/05
10dB Attenuator	A5542 VAT010	Mini – Circuits	0215 – Conducted	05/20/05
Coaxial Cable (2 meter)	A30A30-0058-50FS-2M	Jyebao	SMA-08	05/20/05
Coaxial Cable (1.1 meter)	A30A30-0058-50FS-1M	Jyebao	SMA-09	05/20/05
Coaxial Cable (20 meter)	RG-214/U	Jyebao	NP-01	05/20/05
Coaxial Cable (20 meter)	RG-214/U	Jyebao	NP-02	05/20/05
Auto Switch Box (< 30MHz)	ASB-01	TRC	9904-01	05/20/05

4.3 Test Results of Conducted Emissions

The following table shows a summary of the highest emissions of power line conducted emissions on the LIVE and NETURAL conductors of the EUT power cord. The test data only recorded worst case in report.

Test Conditions: Temperature : 25 °C Humidity : 73 % RH

Test mode: Standby mode for DSC-51F 52100 Adapter

Power Connected Emissions					Class B		
Conductor	Frequency (KHz)	Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	530.070	50.47	48.27	33.93	56.00	46.00	-7.73
	593.395	48.89	47.65	32.45	56.00	46.00	-8.35
	669.290	52.82	49.36	35.05	56.00	46.00	-6.64
	797.250	48.92	47.05	31.96	56.00	46.00	-8.95
	7736.900	56.09	52.19	40.65	60.00	50.00	-7.81
	9136.090	59.03	53.82	43.44	60.00	50.00	-6.18
Line 2	455.735	50.84	49.85	37.28	57.37	47.37	-7.52
	532.680	53.01	50.84	37.70	56.00	46.00	-5.16
	589.775	53.55	51.87	38.77	56.00	46.00	-4.13
	723.055	53.27	50.43	38.09	56.00	46.00	-5.57
	7683.220	51.74	49.09	33.47	60.00	46.00	-6.91
	8959.280	58.82	55.39	45.04	60.00	46.00	-4.61

NOTE:

- (1) Margin = Peak Amplitude – Limit, The reading amplitudes are all under limit.
- (2) A "+" sign in the margin column means the emission is OVER the Class B Limit and "–" sign of means UNDER the Class B limit

Test mode: BT CH01 for DSC-51F 52100 Adapter

Power Connected Emissions					Class B		
Conductor	Frequency (KHz)	Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	222.000	48.96	---	---	63.94	53.94	-4.98
	410.535	47.88	34.09	10.53	58.71	48.71	-24.62
	510.890	50.44	47.46	36.71	56.00	46.00	-8.54
	636.300	46.02	44.72	33.42	56.00	46.00	-11.28
	9830.000	44.69	---	---	60.00	50.00	-5.31
	16592.360	50.36	45.51	35.77	60.00	50.00	-14.23
Line 2	380.870	46.89	44.44	35.82	59.51	49.51	-13.69
	513.905	51.62	50.29	38.42	56.00	46.00	-5.71
	679.110	49.40	47.17	33.41	56.00	46.00	-8.83
	2288.390	45.54	40.80	27.96	56.00	46.00	-15.20
	2829.490	44.17	38.97	25.94	56.00	46.00	-17.03
	16771.945	52.81	47.65	37.52	60.00	50.00	-12.35

Test mode: BT CH40 for DSC-51F 52100 Adapter

Power Connected Emissions					Class B		
Conductor	Frequency (KHz)	Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	257.000	49.26	---	---	62.94	52.94	-3.68
	288.000	48.96	---	---	62.06	52.06	-3.10
	511.385	48.96	47.56	36.78	56.00	46.00	-8.44
	639.210	48.87	44.64	33.60	56.00	46.00	-11.36
	690.655	45.06	43.39	31.81	56.00	46.00	-12.61
	16661.970	49.41	45.32	35.73	60.00	50.00	-14.27
Line 2	512.330	52.53	50.38	39.23	56.00	46.00	-5.62
	638.370	49.17	45.83	36.49	56.00	46.00	-9.51
	689.150	48.96	46.89	35.63	56.00	46.00	-9.11
	802.475	47.90	43.96	29.28	56.00	46.00	-12.04
	2070.470	44.01	38.10	25.40	56.00	46.00	-17.90
	16587.340	52.49	47.56	37.34	60.00	50.00	-12.44

Test mode: BT CH79 for DSC-51F 52100 Adapter

Conductor	Frequency (KHz)	Power Connected Emissions			Class B		
		Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	174.175	54.58	44.62	21.66	65.63	55.63	-21.01
	183.310	53.64	42.38	19.54	64.94	54.94	-22.56
	341.000	47.36	---	---	60.54	50.54	-3.18
	513.050	48.48	47.67	36.26	56.00	46.00	-8.33
	640.350	45.47	44.65	33.38	56.00	46.00	-11.35
	16238.835	50.07	45.82	35.55	60.00	50.00	-14.18
Line 2	383.885	47.66	44.68	36.42	59.51	49.51	-13.09
	510.840	52.75	50.17	39.80	56.00	46.00	-5.83
	676.460	48.27	46.85	30.45	56.00	46.00	-9.15
	885.035	46.99	42.56	29.21	56.00	46.00	-13.44
	2112.375	43.45	38.34	25.90	56.00	46.00	-17.66
	16097.590	52.73	47.29	37.20	60.00	50.00	-12.71

Test mode: Standby mode for SCP0501000P Adapter

Conductor	Frequency (KHz)	Power Connected Emissions			Class B		
		Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	191.000	48.44	---	---	64.83	54.83	-6.39
	231.000	48.24	---	---	63.69	53.69	-5.45
	285.000	43.51	---	---	62.14	52.14	-8.63
	404.240	46.27	46.18	42.65	58.83	48.83	-6.18
	569.000	35.26	---	---	56.00	46.00	-10.74
	6740.000	41.79	---	---	60.00	50.00	-8.21
Line 2	174.000	51.11	---	---	65.31	55.31	-4.20
	188.810	52.55	40.80	35.99	64.66	54.66	-23.86
	229.000	48.91	---	---	63.74	53.74	-4.83
	401.000	44.59	---	---	58.83	48.83	-4.24
	461.000	40.41	---	---	57.11	47.11	-6.70
	7080.000	43.49	---	---	60.00	50.00	-6.51

Test mode: BT CH01 for SCP0501000P Adapter

Power Connected Emissions					Class B		
Conductor	Frequency (KHz)	Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	401.000	36.16	---	---	58.83	48.83	-12.67
	569.000	30.93	---	---	56.00	46.00	-15.07
	802.000	30.11	---	---	56.00	46.00	-15.89
	1038.000	29.09	---	---	56.00	46.00	-16.91
	1490.000	27.53	---	---	56.00	46.00	-18.47
	2243.000	28.90	---	---	56.00	46.00	-17.10
Line 2	401.000	40.39	---	---	58.83	48.83	-8.44
	575.000	33.44	---	---	56.00	46.00	-12.56
	858.000	32.25	---	---	56.00	46.00	-13.75
	1091.000	31.91	---	---	56.00	46.00	-14.09
	1320.000	31.28	---	---	56.00	46.00	-14.72
	6490.000	36.21	---	---	60.00	50.00	-13.79

Test mode: BT CH40 for SCP0501000P Adapter

Power Connected Emissions					Class B		
Conductor	Frequency (KHz)	Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	401.000	36.34	---	---	58.83	48.83	-12.49
	575.000	30.88	---	---	56.00	46.00	-15.12
	802.000	30.00	---	---	56.00	46.00	-16.00
	1256.000	29.18	---	---	56.00	46.00	-16.82
	1490.000	28.02	---	---	56.00	46.00	-17.98
	2458.000	28.06	---	---	56.00	46.00	-17.94
Line 2	401.000	41.16	---	---	58.83	48.83	-7.67
	569.000	33.44	---	---	56.00	46.00	-12.56
	858.000	32.48	---	---	56.00	46.00	-13.52
	1091.000	32.18	---	---	56.00	46.00	-13.82
	1320.000	31.32	---	---	56.00	46.00	-14.68
	2286.000	31.35	---	---	56.00	46.00	-14.65

Test mode: BT CH79 for SCP0501000P Adapter

Power Connected Emissions					Class B		
Conductor	Frequency (KHz)	Peak (dB μ V)	QP (dB μ V)	Average (dB μ V)	QP-limit (dB μ V)	AVG-limit (dB μ V)	Margin (dB)
Line 1	401.000	36.40	---	---	58.83	48.83	-12.43
	569.000	31.09	---	---	56.00	46.00	-14.91
	802.000	29.83	---	---	56.00	46.00	-16.17
	1038.000	29.32	---	---	56.00	46.00	-16.68
	1256.000	29.60	---	---	56.00	46.00	-16.40
	2243.000	28.74	---	---	56.00	46.00	-17.26
Line 2	401.000	41.16	---	---	58.83	48.83	-7.67
	575.000	33.58	---	---	56.00	46.00	-12.42
	802.000	31.84	---	---	56.00	46.00	-14.16
	1091.000	32.18	---	---	56.00	46.00	-13.82
	2286.000	30.67	---	---	56.00	46.00	-15.33
	7390.000	35.56	---	---	60.00	50.00	-14.44

V. Section 15.247 (a): Technical description of the EUT

Frequency Hopping Spectrum System is a spread spectrum system in which the carrier has been modulated by a *high speed spreading code* and an *information data stream* with its *known hopping algorithm* and *avoidance method*. The high speed code sequence dominates the “modulating function” and is the direct cause of the wide spreading of the transmitted signal. In the *operational description* demonstrates the operation principles of the base-band processor employed by the EUT, shows that which is a complete FHSS base-band processor and meets the definition of the *Frequency Hopping Spectrum System*.

VI. Section 15.247(a)(1): Carrier Frequency Separation

6.1 Test Condition

The EUT must have its hopping function enabled. Use the following spectrum analyzer setting

Span = wide enough to capture the peaks of two adjacent channels

Resolution (or IF) bandwidth (RBW) \geq 1% of the span

Video (or Average) Bandwidth (VBW) \geq RBW

Sweep = Auto

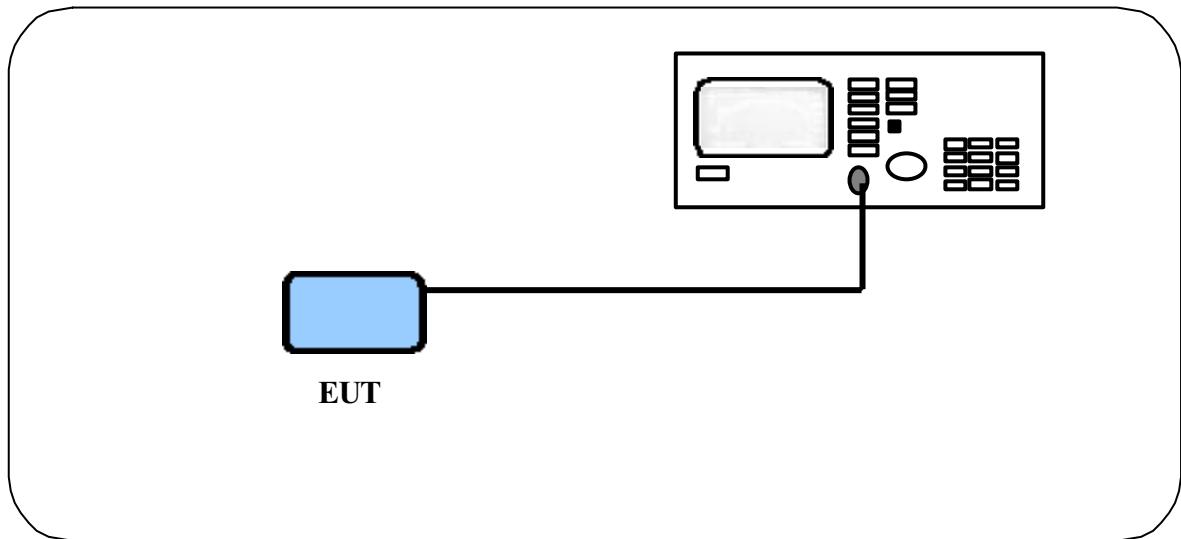
Detector Function = peak

Trace = max hold

Setting up procedure is written on 1.3 test method.

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channel. The limit is specified in one of the subparagraphs of this section. Submit this plot.

6.2 Test Instruments Configuration



Test Configuration of carrier frequency separation

6.3 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Calibration Date Next time
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	11/02/05

6.4 Test Results

Channel Separation: 996KHz



VII. Section 15.247(a)(1)(ii) Number of Hopping Frequencies

7.1 Test Condition

The EUT must have its Hopping function enabled. Use the following spectrum analyzer setting:

Span = the frequency band of operation

RBW \geq 1% of the span

VBW \geq RBW

Sweep = auto

Detector function = peak

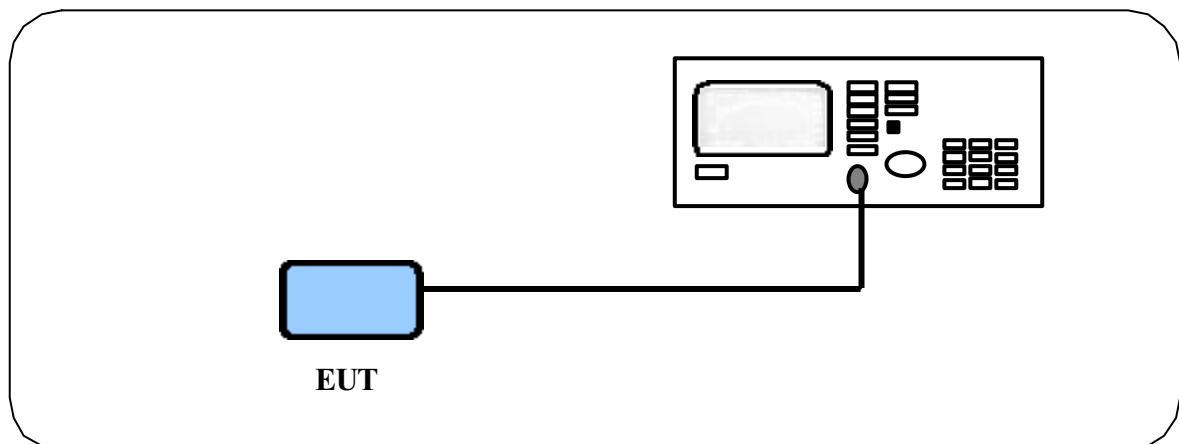
Trace = max hold

Allow the trace to stabilize. It may prove necessary to break the span up to sections. In order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this section. Submit this plots.

7.2 List of Test Instruments

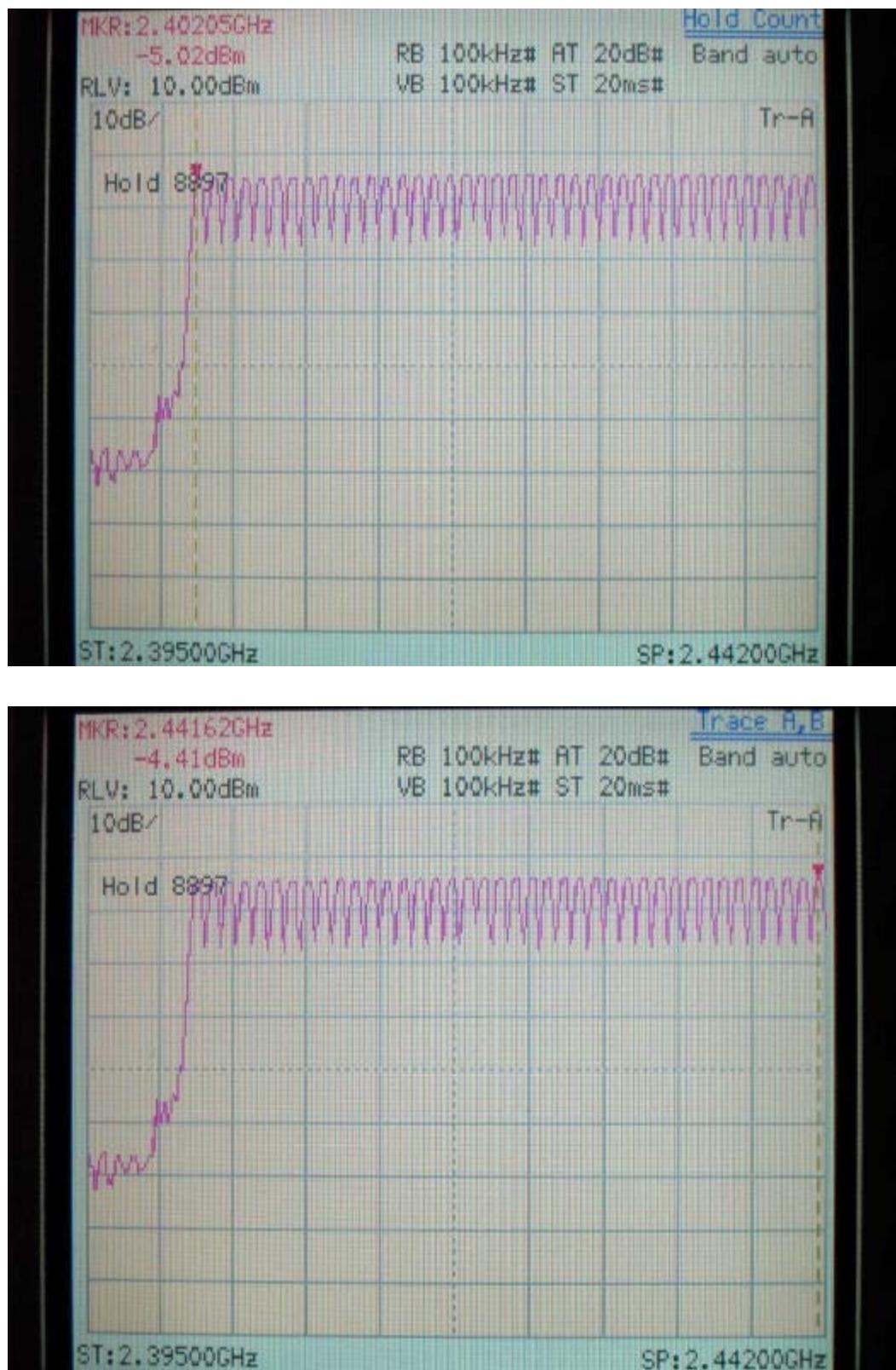
Instrument Name	Model	Brand	Serial No.	Calibration Date
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	11/02/05

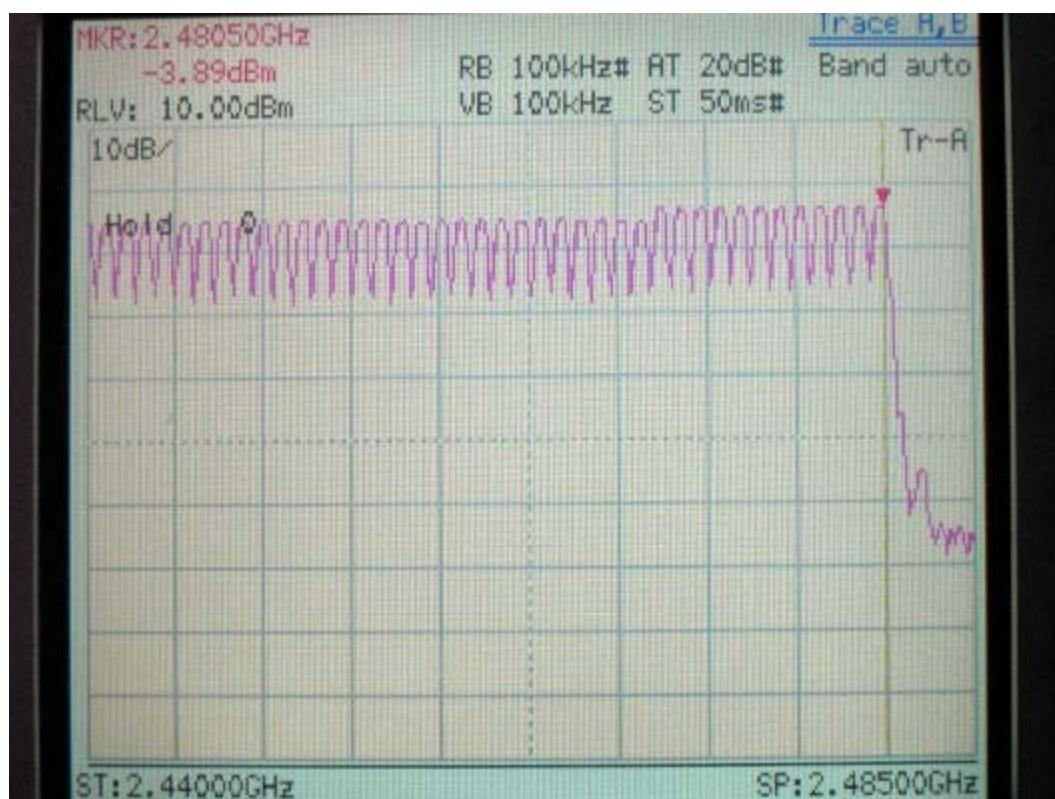
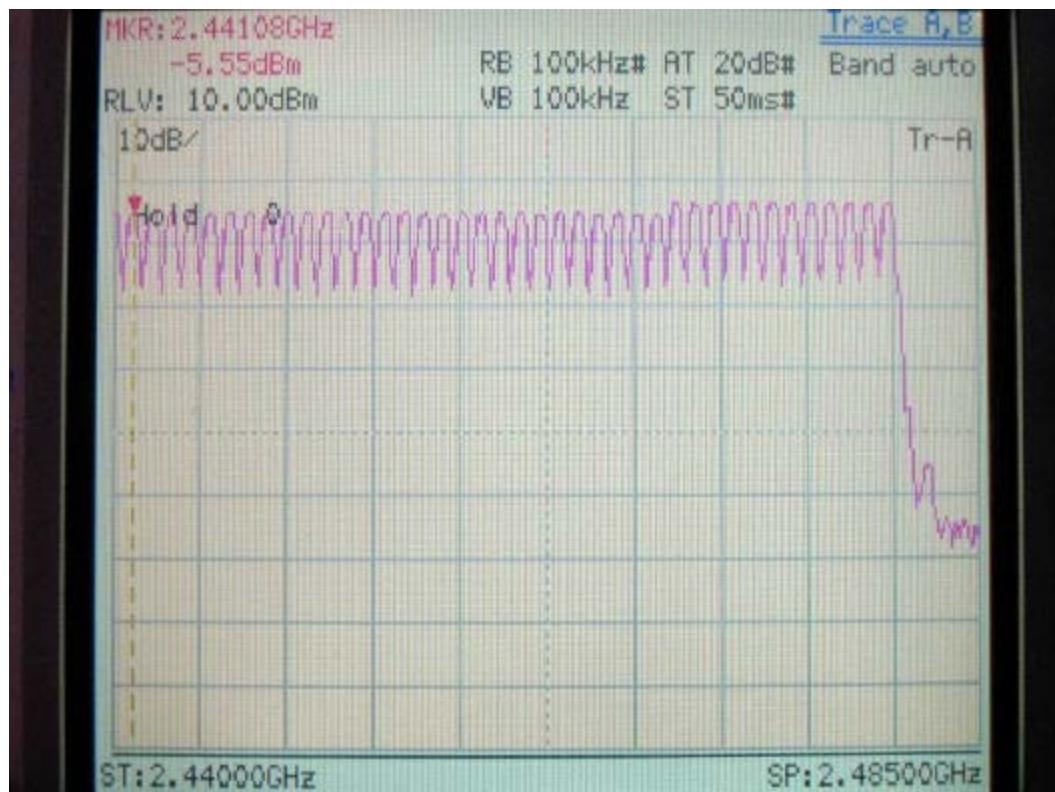
7.3 Test Instruments Configuration



Test Configuration for number of hopping frequencies

7.4 Test Results





VIII. Section 15.247(a)(1)(ii) Time of Occupancy (Dwell Time)

8.1 Test Condition

The EUT must have its hopping function enabled. Use the following spectrum analyzer setting:

Span = zero span, centered on a hopping channel

RBW = 1M

VBW \geq RBW

Sweep = as necessary to capture the entire dwell time per hopping channel

Detector function = peak

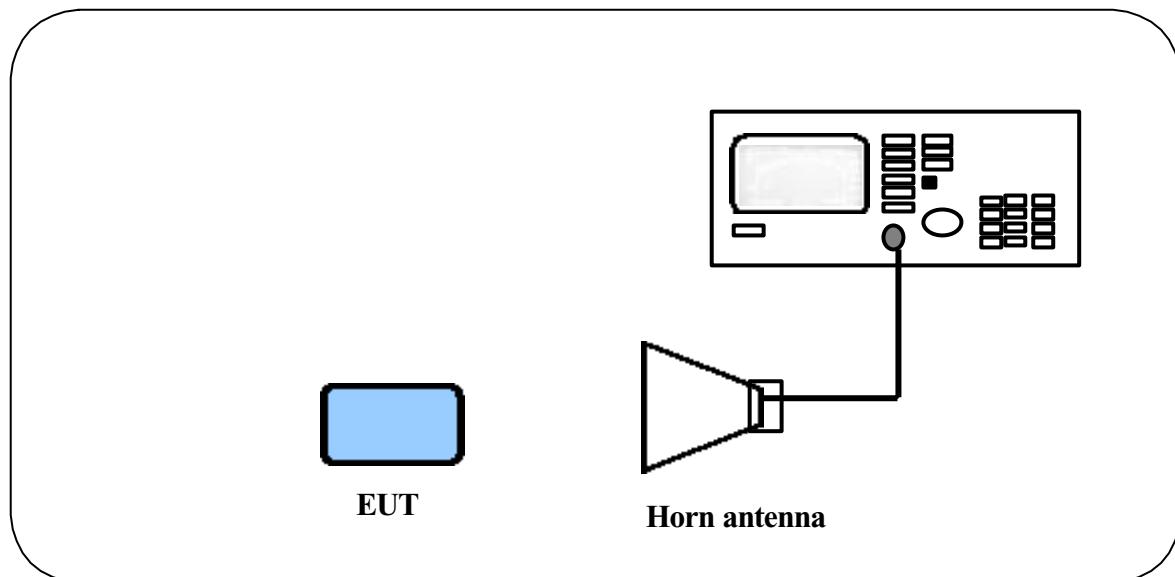
Trace = max hold

If possible, use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this section. Submit this plot(s). An oscilloscope may be used instead of a spectrum analyzer.

8.2 List of Test Instruments

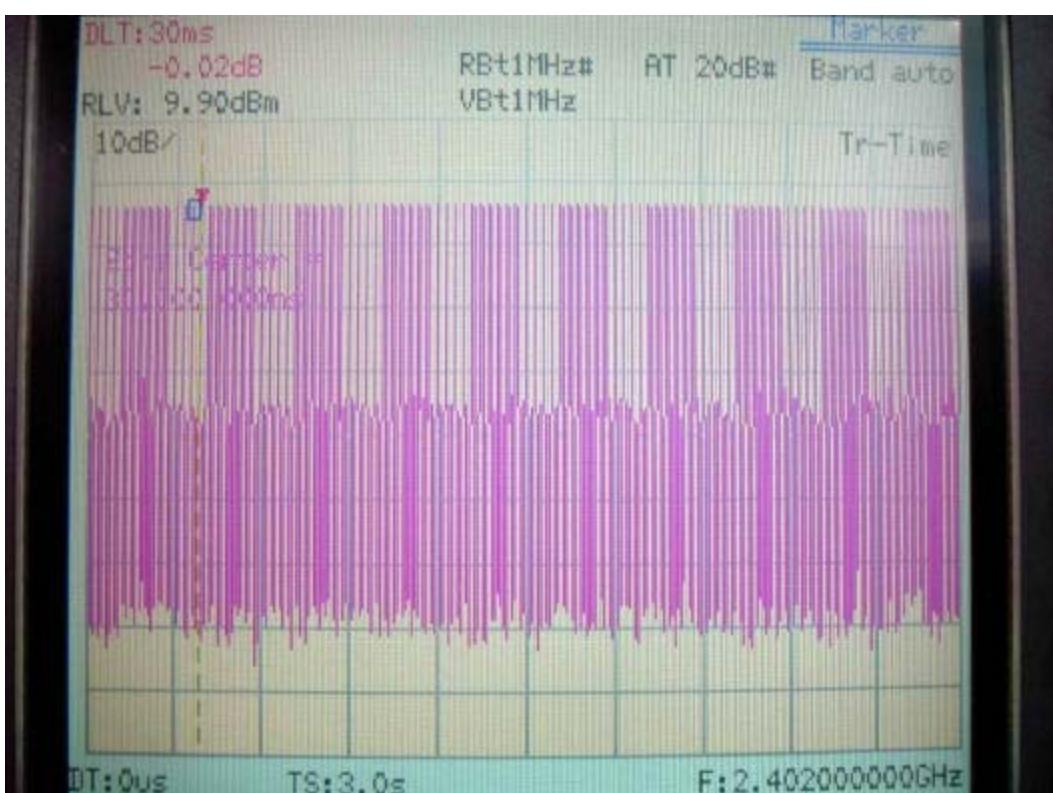
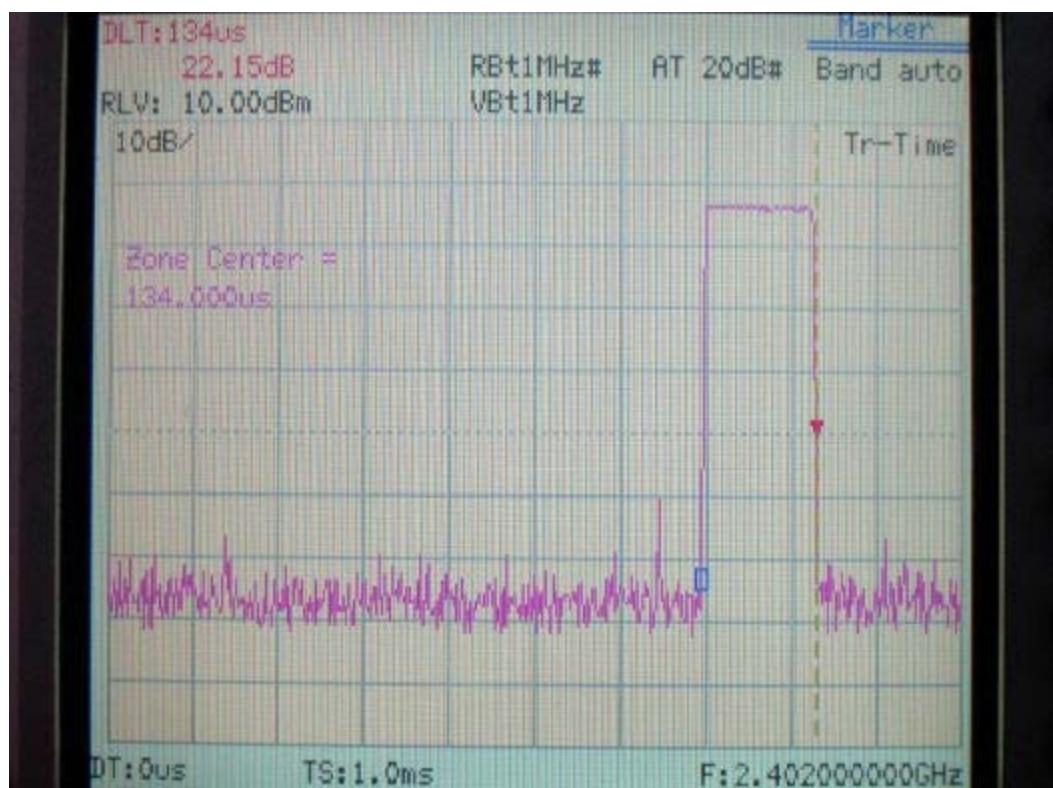
Instrument Name	Model No	Brand	Serial No.	<u>Calibration</u> <u>Date</u>
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	11/02/05
Spectrum Analyzer	8564E	HP	3720A00840	08/13/05
Microwave Preamplifier	84125C	HP	US36433002	08/13/05
Horn Antenna	3115	EMCO	9104-3668	12/27/05

8.3 Test Instruments Configuration



8.4 Test Results

1. Pulse width of one slot measurement:
Results: 134 µSec
2. Dwell time measurement
Time period of each burst is 134µSec in 1.0mSec sweep time.
There are 100-bursts in 3-second.
So, the occupancy time within 30 second is $(30/3) * 100 * 134 = 1340$ mSec
Results: 0.134 second
3. Limits: The average time of occupancy is less than 0.4 second within a 30 second period.
4. Show as following page.



IX. Section 15.247(a)(1)(ii) 20dB Bandwidth

9.1 Test Condition

Use the following spectrum analyzer setting:

Span = the frequency band of operation

RBW \geq 1% of the emission bandwidth

VBW \geq RBW

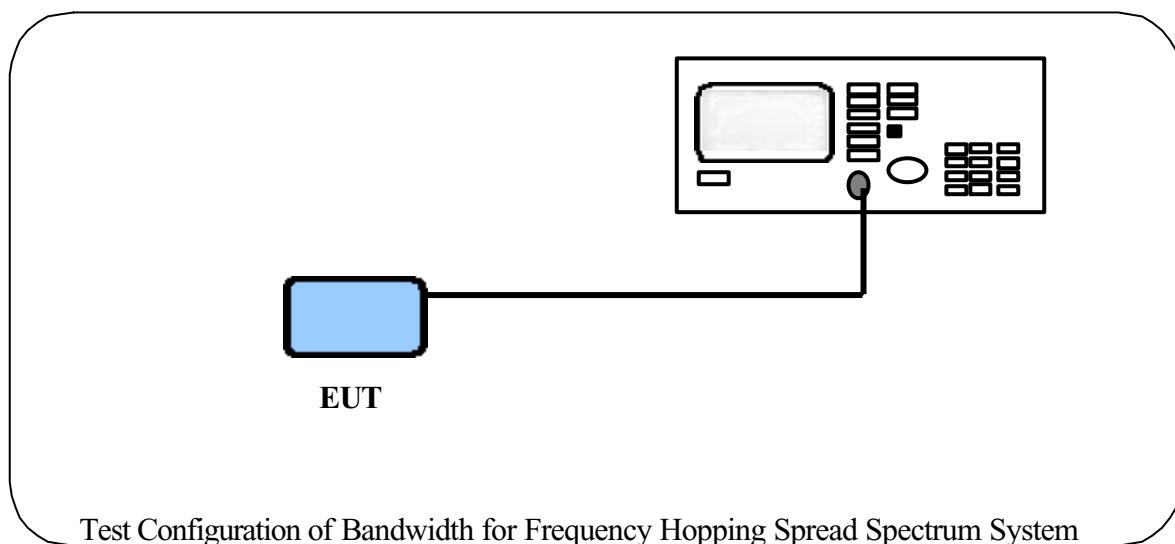
Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of emission. Use the marker-delta function to measure 20dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this section. Submit this plot(s).

9.2 Test Instruments Configuration



9.3 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Calibration Date
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	11/02/05

9.4 Test Results

Channel	Bandwidth
CH 01	960 kHz
CH 40	960 kHz
CH 79	964 kHz

Note:

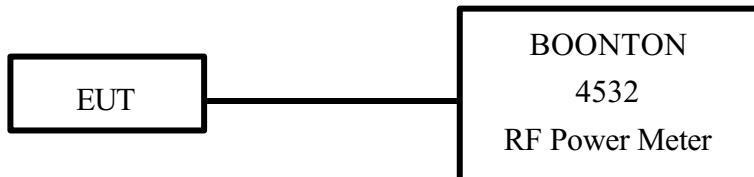
The data in the above table are summarizing the following attachment spectrum analyzer.

20dB Bandwidth of Channel 1:**20dB Bandwidth of Channel 40:**

20dB Bandwidth of Channel 79:

X. Section 15.247(b) Peak Output Power

10.1 Test Condition & Setup



1. The output of the transmitter is connected to the BOONTON RF Power Meter.
2. The calibration is performed before every test. The values of the output power of the EUT will be shown in the dBm directly are the transmitter output peak power. Recording as follows.

10.2 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Calibration Date
				Next time
RF Power Meter	4532	BOONTON	117501	04/16/05
Peak Power Sensor	57340	BOONTON	2696	04/16/05

10.3 Test Result

Formula:

RF output power of EUT + |Cable loss| = Output peak power

Channel	RF output	Cable Loss	Output peak power	
			dBm	mW
CH 01	-2.90	1.00	-1.90	0.65
CH 40	-2.55	1.00	-1.55	0.70
CH 79	-3.06	1.00	-2.06	0.62

XI. Section 15.247(c) Band-edge Compliance

11.1 Test Condition

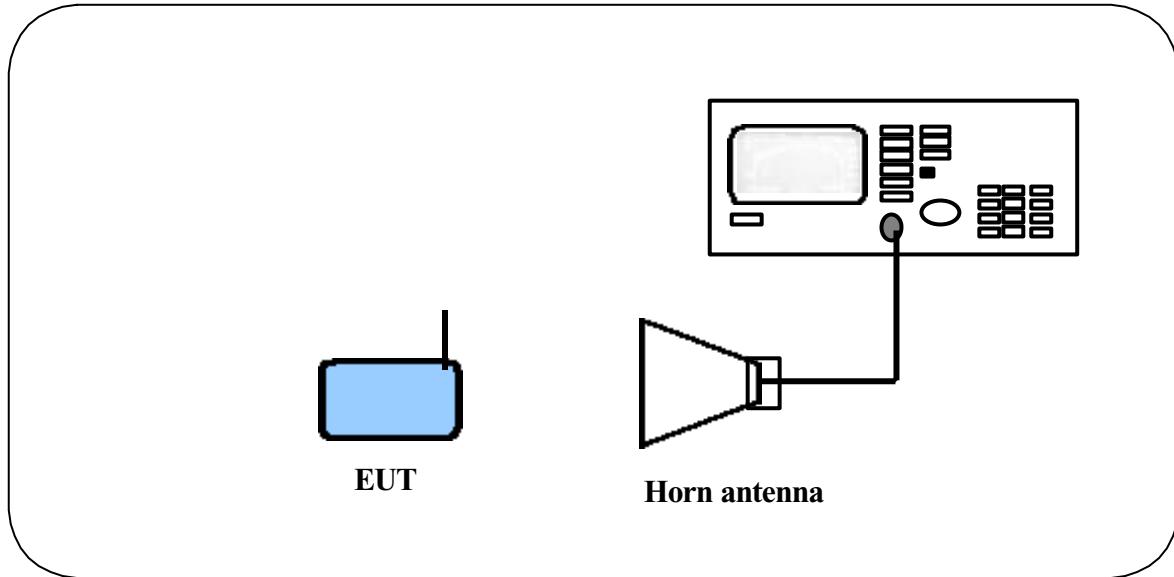
If any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either *at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in § 15.209(a)*,

We perform this section by the *radiated manner*, the RBW is set to 100kHz and VBW>RBW. We'd made the observation up to *10th harmonics and the criterion is all the harmonic/spurious emissions must be 20dB below the highest emission level measured*. If the emissions fall in the restricted bands stated in the Part 15.205(a) must also *comply with the radiated emission limits specified in Part 15.209(a)*. (*Peak mode: RBW=VBW=1MHz, Average mode: RBW=1MHz; VBW=10Hz*)

11.2 List of Test Instruments

Instrument Name	Model No	Brand	Serial No.	<u>Calibration</u>
				<u>Date</u>
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	11/02/05
Spectrum Analyzer	8564E	HP	3720A00840	08/13/05
Microwave Preamplifier	84125C	HP	US36433002	08/13/05
Horn Antenna	3115	EMCO	9104-3668	12/27/05

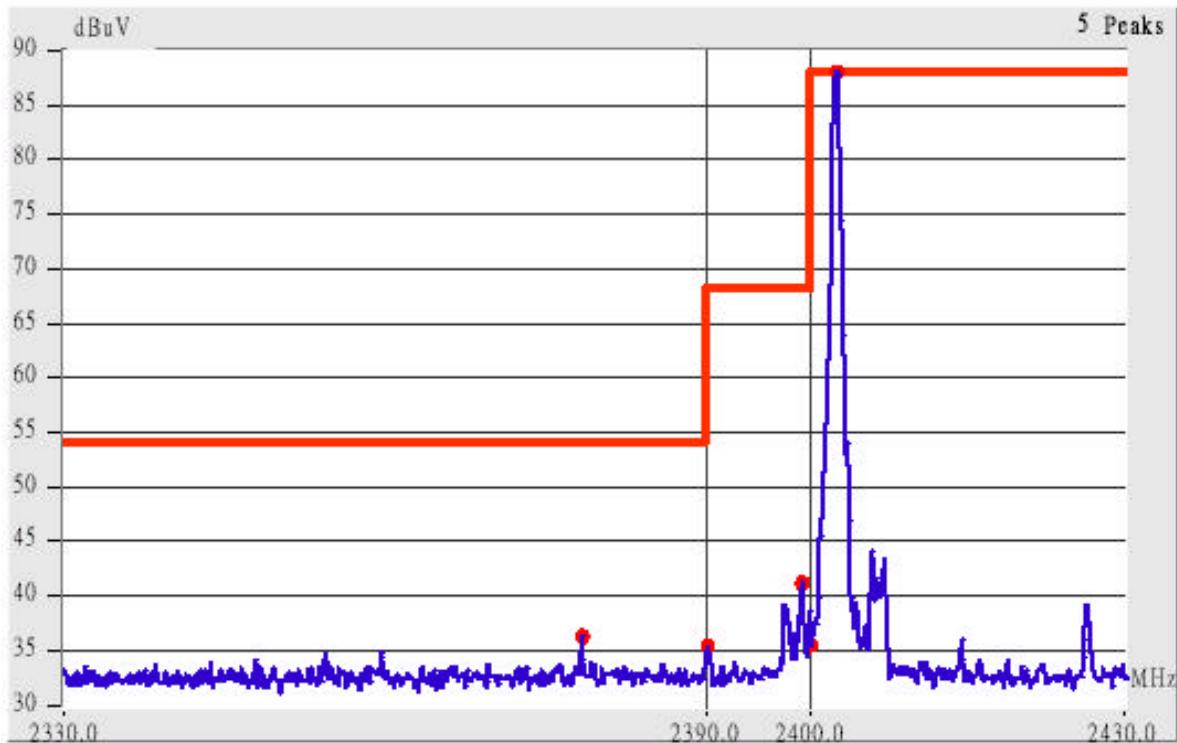
11.3 Test Instruments Configuration



11.4 Test Result of the Bandedge

The following pages show our observations referring to the channel 1 and 79 respectively.

Channel 01

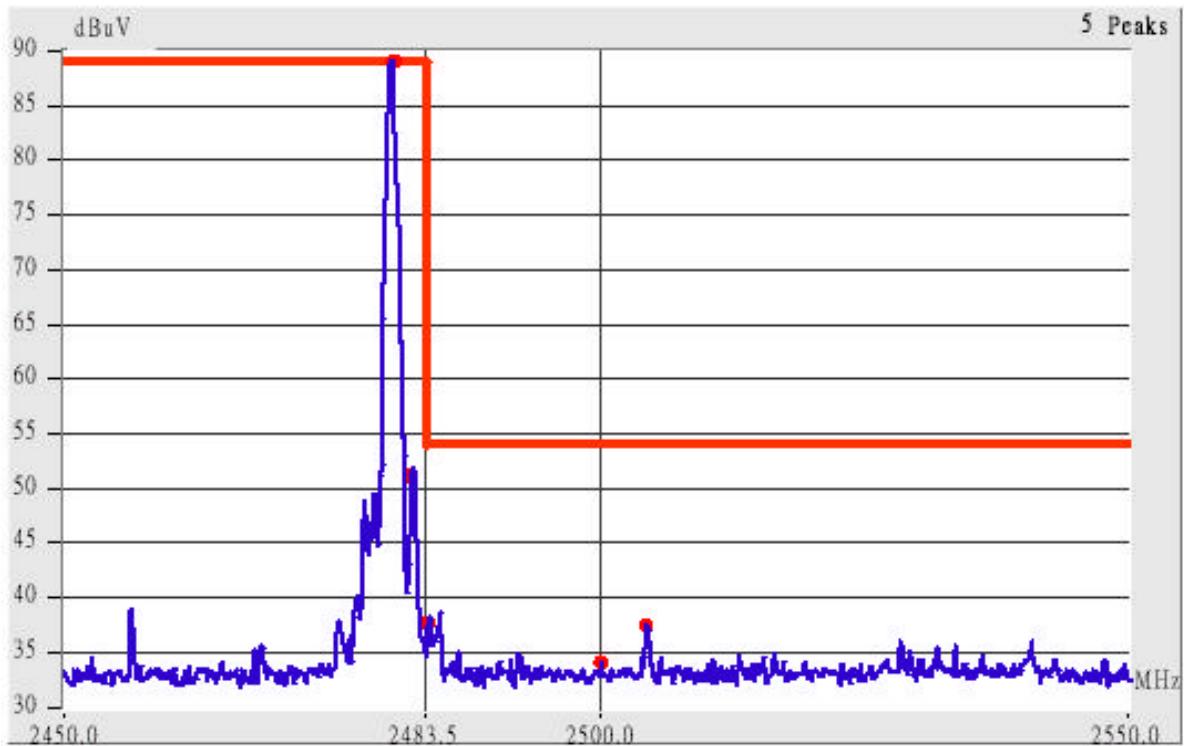


This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

1. The lobe left by the fundamental side is already 20dB below the highest emission level.
2. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below.

Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency (MHz)	Ant. P.	Ant. H. (m)	Table (°)	Factors (dB)	(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)
					Peak	Average	Peak	Ave.	
2388.45	Hor	1.00	131	9.18	45.34	---	73.96	53.96	-8.62
2390.02	Hor	1.00	108	9.18	43.35	---	73.96	53.96	-10.61
2382.87	Ver	1.00	360	9.16	44.66	---	73.96	53.96	-9.30
2390.02	Ver	1.00	32	9.18	43.18	---	73.96	53.96	-10.78

Channel 79



This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 79.

3. The lobe left by the fundamental side is already 20dB below the highest emission level.
4. The emissions recorded in the restricted band is do comply with the Part 15.209(a) – as below.

Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency (MHz)	Ant. P.	Ant. H. (m)	Table (°)	Factors (dB)	(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)
					Peak	Average	Peak	Ave.	
2483.50	Hor	1.00	258	9.44	46.94	---	73.96	53.96	-7.02
2491.61	Hor	1.00	168	9.47	45.30	---	73.96	53.96	-8.66
2503.92	Hor	1.00	344	9.50	45.66	---	73.96	53.96	-8.30
2483.50	Ver	1.00	203	9.44	44.94	---	73.96	53.96	-9.02
2492.02	Ver	1.00	266	9.47	45.80	---	73.96	53.96	-8.16
2500.01	Ver	1.00	328	9.49	43.32	---	73.96	53.96	-10.64
2515.64	Ver	1.00	66	9.52	44.02	---	73.96	53.96	-9.94

XII. Section 15.247(c) Spurious Radiated Emissions

12.1 Test Condition and Setup

We'd performed the test by the *radiated emission* skill: The EUT was placed in an anechoic chamber, and set the EUT transmitting continuously and scanned at 3-meter distance to determine its emission characteristics. The physical arrangement of the EUT was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude, directivity, and frequency. The exact system configuration, which produced the highest emissions was noted so it could be reproduced later during the final tests. For the measurement above 1GHz, according to the guidance we'd set the spectrum analyzer's 6dB bandwidth RBW to 1MHz.

This was done to ensure that the final measurements would demonstrate the worst-case interference potential of the EUT. Final radiation measurements were made on a three-meter, anechoic chamber. The EUT system was placed on a nonconductive turntable, which is 0.8 meters height, top surface 1.0 x 1.5 meter.

The spectrum was examined from 30 MHz to 1000 MHz using an Hewlett Packard 85460A EMI Receiver, SCHWARZECK whole range Small Biconical Antenna (Model No.: UBAA9114 & BBVU9135) is used to measure frequency from 30 MHz to 1GHz. The final test is used the HP 85460A spectrum and 8564E spectrum was examined from 1GHz to 25GHz using an Hewlett Packard Spectrum Analyzer, EMCO/HP Horn Antenna (Model 3115 / 84125-80008) for 1G - 25GHz.

At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. There are two spectrum analyzers use on this testing, HP 85460A for frequency 30MHz to 1000MHz, and 8564E for frequency 1GHz to 25GHz. No post-detector video filters were used in the test. The spectrum analyzer's 6dB bandwidth was set to 120KHz (spectrum was examined from 30 MHz to 1000 MHz), the spectrum analyzer's 6 dB bandwidth was set to 1 MHz (spectrum was examined from 1GHz to 25GHz) and the analyzer was operated in the maximum hold mode. There is a test condition applies in this test item, the test procedure description as the following:

Three channels were tested, one in the top (CH1), one in the middle (CH40) and the other in bottom (CH79). The setting up procedure is recorded on <1.3 test method>

With the transmitter operating from a AC source and using the internal of EUT, radiates spurious emissions falling within the restricted bands of 15.209 were measured at operating frequencies corresponding to upper, middle and bottom channels in the 2400 ~ 2483.5 MHz band.

The actual field intensity in decibels referenced to 1 microvolt per meter (dB μ V/m) is determined by algebraically adding the measured reading in dB μ V, the antenna factor (dB), and cable loss (dB) at the appropriate frequency. Since the EUT was set to transmit continuously, no *duty cycle* is present.

For frequency between 30MHz to 1000MHz

$F_{Ia} (\text{dB}\mu\text{V}/\text{m}) = F_{Ir} (\text{dB}\mu\text{V}) + \text{Correction Factors}$

F_{Ia} : Actual Field Intensity

F_{Ir} : Reading of the Field Intensity

Correction Factors = Antenna Factor + (Cable Loss – Amplifier Gain) + Switching Box Loss

For frequency between 1GHz to 25GHz

$F_{Ia} (\text{dB}\mu\text{V}/\text{m}) = F_{Ir} (\text{dB}\mu\text{V}) + \text{Correction Factor}$

F_{Ia} : Actual Field Intensity

F_{Ir} : Reading of the Field Intensity

Correction Factors = Antenna Factor + (Cable Loss – Amplifier Gain) + Switching Box Loss

12.2 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Calibration Date
EMI Receiver	8546A	HP	3520A00242	08/05/05
RF Filter Section	85460A	HP	3448A00217	08/05/05
Small Biconical Antenna	UBAA9114 & BBVU9135	SCHWARZECK	127	10/11/05
Pre-amplifier	PA1F	TRC	1FAC	05/20/05
Auto Switch Box (>30MHz)	ASB-01	TRC	9904-01	05/20/05
Coaxial Cable (Double shielded, 15 meter)	A30A30-0058-50FS-15M	JYEBAO	SMA-01	05/20/05
Coaxial Cable (1.1 meter)	A30A30-0058-50FS-1M	JYEBAO	SMA-02	05/20/05
Spectrum Analyzer	8564E	HP	3720A00840	08/13/05
Microwave Preamplifier	84125C	HP	US36433002	08/13/05
Horn Antenna	3115	EMCO	9104-3668	03/18/05
Standard Guide Horn Antenna	84125-80008	HP	18-26.5GHz	03/18/05
Standard Guide Horn Antenna	84125-80001	HP	26.5-40GHz	03/18/05
Horn Antenna	1196E (3115)	HP (EMCO)	9704-5178	03/12/05
Pre-amplifier	PA2F	TRC	2F1GZ	03/20/05
Coaxial Cable (3 miter)	A30A30-0058-50FST118	JYEBAO	MSA-05	03/20/05
Coaxial Cable (1 meter)	A30A30-0058-50FST118	JYEBAO	MSA-04	03/20/05

12.3 Test Result of Spurious Radiated Emissions

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarizations, EUT orientation, etc. are recorded on the following. (worst case)

Test Conditions: Temperature : 25.0 ° C Humidity : 73.0 % RH

Test mode: RX mode for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
192.47	38.58	1.00	262	-3.70	34.88	43.50	-8.62
210.66	40.55	1.00	81	-3.90	36.65	43.50	-6.85
290.69	40.94	1.00	317	-3.77	37.17	46.00	-8.83
366.75	36.86	1.00	288	-2.15	34.71	46.00	-11.29
419.21	38.81	1.00	271	-0.23	38.58	46.00	-7.42
470.37	32.44	1.00	302	1.78	34.22	46.00	-11.78

Test mode: RX mode for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
55.46	28.20	1.00	256	2.86	31.06	40.00	-8.94
160.95	40.16	1.00	37	-3.50	36.66	43.50	-6.84
175.50	37.68	1.00	323	-3.77	33.91	43.50	-9.59
210.66	37.36	1.00	341	-3.90	33.46	43.50	-10.04
468.92	33.30	1.00	186	1.73	35.03	46.00	-10.97
728.40	26.86	1.00	300	10.05	36.91	46.00	-9.09

Note:

1. Margin = Amplitude – limit, if margin is minus means under limit.
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss – Amplitude gain) + Switching Box Loss

Test mode: RX mode for 1GHz to 25GHz [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.		
MHz	m	degree	dB μ V	dB/m	dB μ V/m	dB μ V/m	dB		
1864.17	1.00	141	35.24	---	2.53	37.77	---	73.96	53.96 -16.19
3351.67	1.00	324	31.90	---	10.03	41.93	---	73.96	53.96 -12.03
5901.67	1.00	288	27.91	---	17.76	45.67	---	73.96	53.96 -8.29
9478.75	1.00	174	23.40	---	23.30	46.70	---	73.96	53.96 -7.26
21768.33	1.00	153	47.82	---	2.77	50.59	---	73.96	53.96 -3.37

Test mode: RX mode for 1GHz to 25GHz [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.		
MHz	m	degree	dB μ V	dB/m	dB μ V/m	dB μ V/m	dB		
1361.25	1.00	50	37.74	---	0.56	38.30	---	73.96	53.96 -15.66
3110.83	1.00	247	31.57	---	9.47	41.04	---	73.96	53.96 -12.92
6085.83	1.00	14	27.41	---	18.00	45.41	---	73.96	53.96 -8.55
9478.75	1.00	197	24.40	---	23.30	47.70	---	73.96	53.96 -6.26
21973.75	1.00	158	49.16	---	2.93	52.09	---	73.96	53.96 -1.87
24548.54	1.00	6	49.66	---	2.46	52.12	---	73.96	53.96 -1.84

Note:

- Margin = Corrected - Limit.
- The EUT utilizes a *permanently attached antenna*. In addition the spurious RF radiated emissions levels do comply with the *20dBc limit* both at its bandedges and other spurious emissions.
- As stated in Section 15.35(b), for any frequencies above 1000MHz, radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. As the results of our test, the peak amplitudes are already below the FCC limit. Thus the average amplitudes of the rest are omitted.

Test mode: BT CH01 for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
158.52	34.32	1.00	308	-3.42	30.90	43.50	-12.60
260.37	35.69	1.00	271	-4.22	31.47	46.00	-14.53
289.47	41.64	1.00	294	-3.78	37.86	46.00	-8.14
339.19	39.15	1.00	179	-2.94	36.21	46.00	-9.79
386.47	32.82	1.00	274	-1.47	31.35	46.00	-14.65
470.14	32.97	1.00	334	1.77	34.74	46.00	-11.26

Test mode: BT CH01 for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
74.86	30.94	1.00	228	0.77	31.71	40.00	-8.29
240.97	32.32	1.00	167	-4.01	28.31	46.00	-17.69
290.69	35.45	1.00	236	-3.77	31.68	46.00	-14.32
339.19	32.19	1.00	40	-2.94	29.25	46.00	-16.75
649.59	22.97	1.00	102	8.45	31.42	46.00	-14.58
728.40	23.58	1.00	267	10.05	33.63	46.00	-12.37

Test mode: BT CH01 for 1GHz to 25GHz [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin	
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.			
MHz	m	degree	dB μ V		dB/m	dB μ V/m		dB μ V/m	dB	
2506.25	1.00	191	35.17	---	9.50	44.67	---	73.96	53.96	-9.29
4805.00	1.00	98	38.44	---	3.69	42.13	---	73.96	53.96	-11.83
7203.54	1.00	113	39.28	---	9.91	49.19	---	73.96	53.96	-4.77
9608.12	1.00	74	36.44	---	11.47	47.91	---	73.96	53.96	-6.05
12012.71	1.00	40	37.77	---	10.01	47.78	---	73.96	53.96	-6.18
24020.83	1.00	207	46.16	---	3.14	49.30	---	73.96	53.96	-4.66

Test mode: BT CH01 for 1GHz to 25GHz [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin	
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.			
MHz	m	degree	dB μ V		dB/m	dB μ V/m		dB μ V/m	dB	
1954.17	1.00	91	37.33	---	8.81	46.14	---	73.96	53.96	-7.82
2154.17	1.00	224	38.67	---	8.52	47.19	---	73.96	53.96	-6.77
4805.00	1.00	116	38.77	---	3.69	42.46	---	73.96	53.96	-11.50
7203.54	1.00	95	40.61	---	9.91	50.52	---	73.96	53.96	-3.44
9608.12	1.00	60	35.61	---	11.47	47.08	---	73.96	53.96	-6.88
12012.71	1.00	226	37.44	---	10.01	47.45	---	73.96	53.96	-6.51

Test mode: BT CH40 for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
185.20	31.66	1.00	253	-3.71	27.95	43.50	-15.55
216.72	32.40	1.00	297	-3.94	28.46	46.00	-17.54
289.47	45.40	1.00	308	-3.78	41.62	46.00	-4.38
339.19	41.90	1.00	317	-2.94	38.96	46.00	-7.04
468.92	29.07	1.00	204	1.73	30.80	46.00	-15.20
599.87	24.53	1.00	52	6.67	31.20	46.00	-14.80

Test mode: BT CH40 for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
74.86	31.08	1.00	121	0.77	31.85	40.00	-8.15
240.97	32.09	1.00	158	-4.01	28.08	46.00	-17.92
290.69	35.13	1.00	230	-3.77	31.36	46.00	-14.64
339.19	32.12	1.00	32	-2.94	29.18	46.00	-16.82
418.00	32.79	1.00	207	-0.28	32.51	46.00	-13.49
471.35	28.64	1.00	207	1.82	30.46	46.00	-15.54

Test mode: BT CH40 for 1GHz to 25GHz [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin	
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.			
MHz	m	degree	dB μ V		dB/m	dB μ V/m		dB μ V/m	dB	
2018.75	1.00	232	36.34	---	8.14	44.48	---	73.96	53.96	-9.48
4883.54	1.00	296	38.77	---	3.99	42.76	---	73.96	53.96	-11.20
7324.37	1.00	95	38.27	---	10.33	48.60	---	73.96	53.96	-5.36
9765.21	1.00	43	35.94	---	11.90	47.84	---	73.96	53.96	-6.12
12206.04	1.00	333	40.11	---	9.79	49.90	---	73.96	53.96	-4.06
21970.21	1.00	217	46.72	---	2.95	49.67	---	73.96	53.96	-4.29

Test mode: BT CH40 for 1GHz to 25GHz [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin	
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.			
MHz	m	degree	dB μ V		dB/m	dB μ V/m		dB μ V/m	dB	
2152.08	1.00	133	38.16	---	8.52	46.68	---	73.96	53.96	-7.28
4883.54	1.00	357	39.44	---	3.99	43.43	---	73.96	53.96	-10.53
7324.37	1.00	86	40.77	---	10.33	51.10	---	73.96	53.96	-2.86
9765.21	1.00	177	35.61	---	11.90	47.51	---	73.96	53.96	-6.45
12206.04	1.00	335	39.11	---	9.79	48.90	---	73.96	53.96	-5.06
21970.21	1.00	210	47.11	---	2.95	50.06	---	73.96	53.96	-3.90

Test mode: BT CH79 for 30MHz to 1GHz [Horizontal]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
171.86	31.63	1.00	259	-3.78	27.85	43.50	-15.65
260.37	38.19	1.00	259	-4.22	33.97	46.00	-12.03
290.69	45.35	1.00	305	-3.77	41.58	46.00	-4.42
339.19	42.13	1.00	308	-2.94	39.19	46.00	-6.81
387.69	32.94	1.00	225	-1.43	31.51	46.00	-14.49
599.87	25.12	1.00	46	6.67	31.79	46.00	-14.21

Test mode: BT CH79 for 30MHz to 1GHz [Vertical]

Radiated Emission				Correction Factors (dB)	Corrected Amplitude (dB μ V/m)	Class B (3 m)	
Frequency (MHz)	Amplitude (dB μ V)	Ant. H. (m)	Table (°)			Limit (dB μ V/m)	Margin (dB)
76.07	30.81	1.00	190	0.62	31.43	40.00	-8.57
240.97	30.86	1.00	158	-4.01	26.85	46.00	-19.15
289.47	36.18	1.00	357	-3.78	32.40	46.00	-13.60
339.19	30.85	1.00	351	-2.94	27.91	46.00	-18.09
468.92	27.29	1.00	239	1.73	29.02	46.00	-16.98
599.87	26.72	1.00	203	6.67	33.39	46.00	-12.61

Test mode: BT CH79 for 1GHz to 25GHz [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin	
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.			
MHz	m	degree	dB μ V		dB/m	dB μ V/m		dB μ V/m	dB	
2018.75	1.00	175	36.00	---	8.14	44.14	---	73.96	53.96	-9.82
4962.08	1.00	171	39.11	---	4.25	43.36	---	73.96	53.96	-10.60
7439.17	1.00	59	40.11	---	10.33	50.44	---	73.96	53.96	-3.52
9922.29	1.00	82	35.61	---	11.66	47.27	---	73.96	53.96	-6.69
12399.37	1.00	343	37.94	---	9.02	46.96	---	73.96	53.96	-7.00
24800.00	1.00	316	48.44	---	2.22	50.66	---	73.96	53.96	-3.30

Test mode: BT CH79 for 1GHz to 25GHz [Vertical]

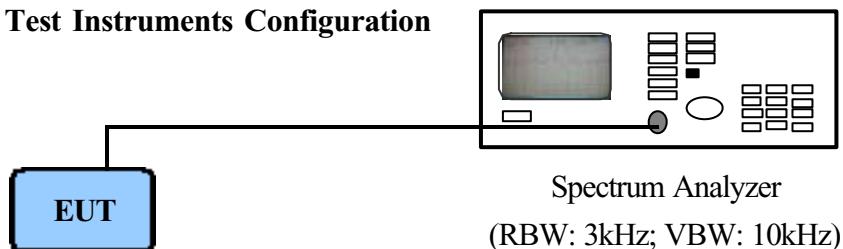
Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit	Margin	
			Peak / Ave.	Peak / Ave.		Peak / Ave.	Peak / Ave.			
MHz	m	degree	dB μ V		dB/m	dB μ V/m		dB μ V/m	dB	
2152.08	1.00	315	39.00	---	8.52	47.52	---	73.96	53.96	-6.44
4962.08	1.00	79	39.94	---	4.25	44.19	---	73.96	53.96	-9.77
7439.17	1.00	29	40.11	---	10.33	50.44	---	73.96	53.96	-3.52
9922.29	1.00	83	35.11	---	11.66	46.77	---	73.96	53.96	-7.19
12399.37	1.00	250	37.77	---	9.02	46.79	---	73.96	53.96	-7.17
24800.00	1.00	307	48.13	---	2.22	50.35	---	73.96	53.96	-3.61

XIII. Section 15.247(d): Power Spectral Density

13.1 Test Condition & Setup

The tests below are running with the EUT transmitter set at high power in TDD mode. The EUT is needed to force selection of output power level and channel number. While testing, the EUT was set to transmit continuously and to be tested by the contact manner with the spectrum analyzer.

13.2 Test Instruments Configuration



9.3 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Next time	Calibration Date
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	11/02/05	

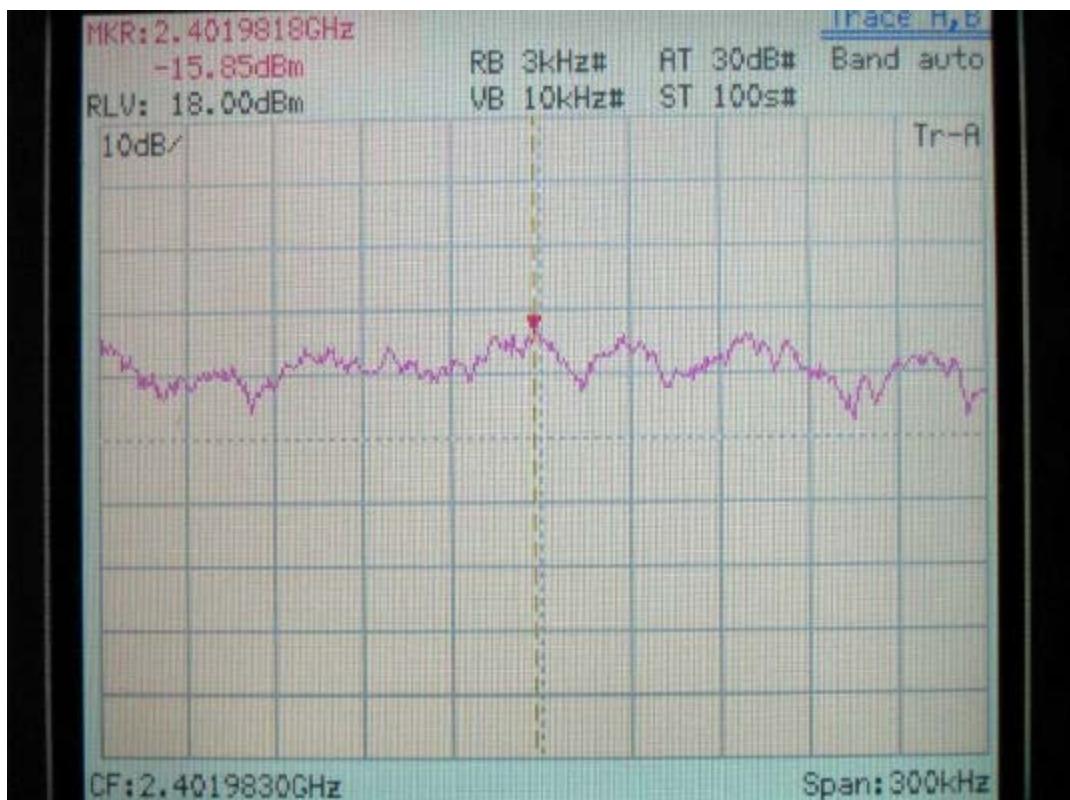
13.4 Test Result of Power spectral density

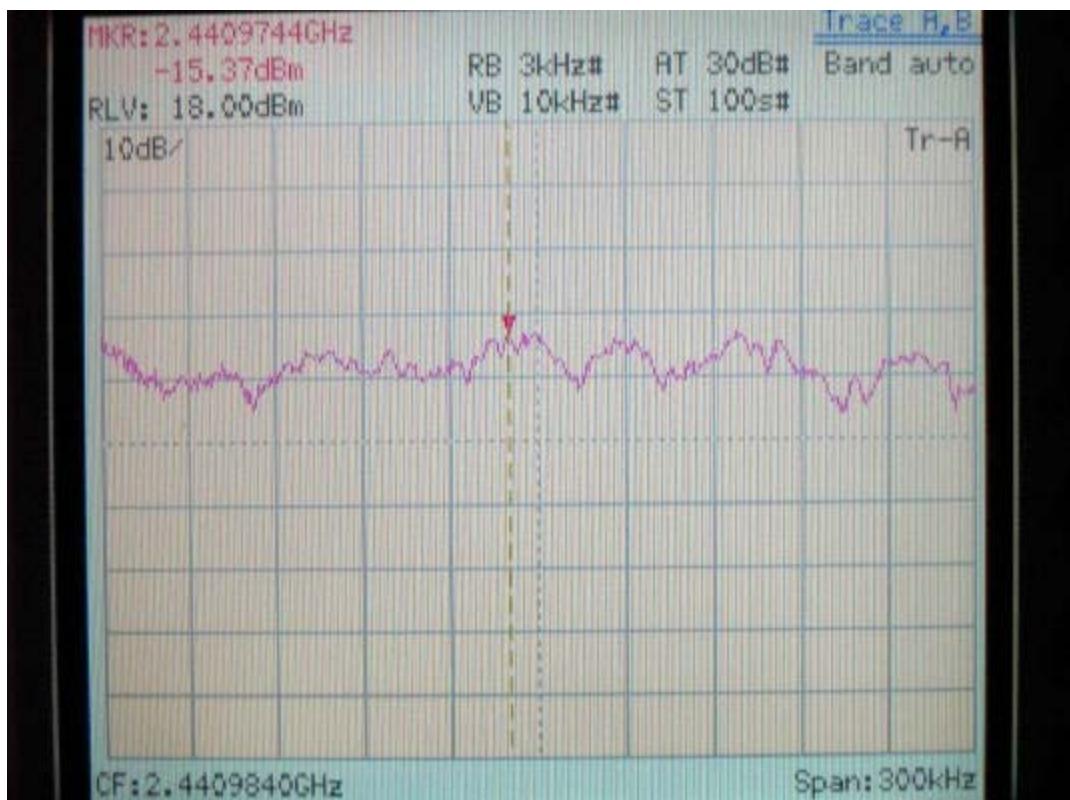
The following table shows a summary of the test results of the Power Spectral Density.

Channel	Ppr (dBm)	Cable Loss (dB)	Ppq (dBm)	Limit (dB)	Margin (dB)
BT CH01	-15.85	1.00	-14.85	8.00	-22.85
BT CH40	-15.37	1.00	-14.37	8.00	-22.37
BT CH79	-15.58	1.00	-14.58	8.00	-22.58

Note:

1. The following pages show the results of spectrum reading.
2. Ppr: spectrum read power density (using peak search mode),
Ppq: actual peak power density in the spread spectrum band.
3. Ppq = Ppr + |Cable Loss|

Power Spectral Density for CH01

Power Spectral Density for CH40

Power Spectral Density for CH79