

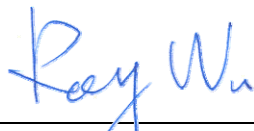
FCC Test Report

APPLICANT : Palm, Inc.
EQUIPMENT : Phone
BRAND NAME : Palm
MODEL NAME : P100UNA
FCC ID : O8F-CASG
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : Digital Transmission System (DTS)

The product sample received on Oct. 23, 2008 and completely tested on May 22, 2009. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:



Roy Wu / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR8O2323B	Rev. 01	Initial issue of report	May 28, 2009

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	Gen 4.4.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	A8.4	Power Output	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	$\leq 20\text{dBc}$	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	$< 20\text{ dBc}$	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}$	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 4.50 dB at 0.446 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 6.29 dB at 2483.50 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

Palm, Inc.

950 W Maude Avenue, Sunnyvale, CA 94085

1.2 Manufacturer

Palm, Inc.

950 W Maude Avenue, Sunnyvale, CA 94085

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Phone
Brand Name	Palm
Model Name	P100UNA
FCC ID	O8F-CASG
Tx/Rx Frequency Range	2400 MHz ~ 2483.5 MHz
Number of Channels	11
Carrier Frequency of Each Channel	$2412+(n-1)*5$ MHz; $n=1\sim11$
Channel Spacing	5 MHz
Maximum Output Power to Antenna	802.11b: 16.68 dBm (46.559 mW) 802.11g : 17.23 dBm (52.845 mW)
Antenna Type	stamped metal monopole antenna
Type of Antenna Connector	N/A
Type of Modulation	802.11b : DSSS 802.11g : OFDM
EUT Stage	Identical Prototype

List of Accessory:

Specification of Accessory		
AC Adapter 1	Brand Name	Palm
	Part Number	157-10108-00
	Power Rating	I/P:100-240Vac, 50-60Hz, 0.2A; O/P: 5Vdc, 1000mA
AC Adapter 2	Brand Name	Palm
	Part Number	157-10124-00
	Power Rating	I/P:100-240Vac, 50-60Hz, 0.2A; O/P: 5Vdc, 1000mA
Inductive Charger	Brand Name	Palm
	Part Number	157-10123-00
	Power Rating	I/P: 5Vdc, 1000mA
Inductive back cover	Brand Name	Palm
	Part Number	180-10704-00
Battery	Brand Name	Palm
	Type Number	157-10119-00
	Power Rating	3.7Vdc, 1150mAh
	Type	Li-ion
Earphone	Brand Name	Palm
	Part Number	180-10632-00
	Signal Line Type	1.2 meter non-shielded cable without ferrite core
USB Cable	Brand Name	Palm
	Part Number	180-10646-00
	Signal Line Type	1.5 meter shielded cable without ferrite core

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. For accessories equipped with this EUT, please refer to the appendix of the external photo.
3. For other wireless features of this EUT, test report will be issued separately.
4. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH76-HY	TW1022/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ♦ ANSI C63.4-2003
- ♦ IC RSS-210 Issue 7

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Nokia	BH-100	PYA1YH	N/A	N/A
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m

2 Test Configuration of Equipment Under Test

2.1 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and recorded the RF power output in the following table:

802.11b

2.4GHz 802.11b Pre-Scanned RF Power (dBm)					
Channel	Frequency (MHz)	Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	14.50	14.45	14.24	14.45
CH 06	2437 MHz	15.58	15.60	15.34	15.51
CH 11	2462 MHz	16.63	16.62	16.49	16.68

802.11g

2.4GHz 802.11g Pre-Scanned RF Power (dBm)									
Channel	Frequency (MHz)	Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	15.00	15.13	15.05	15.04	15.19	15.15	15.09	15.02
CH 06	2437 MHz	16.13	16.16	16.16	16.15	16.23	15.95	15.96	16.08
CH 11	2462 MHz	17.23	17.16	17.15	17.03	17.19	17.22	17.14	17.11

Remark:

1. For WLAN RF power, the pre-scanned RF power was measured by power meter.
2. The 802.11b data rates were set in 11 Mbps and 802.11g data rates were set in 6 Mbps for all the test cases, due to the highest RF output power.
3. The EUT is programmed to transmit signal continuously for all testing.

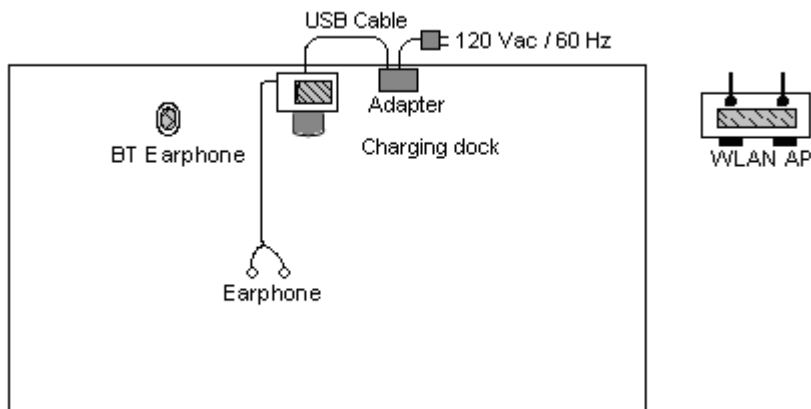
2.2 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). Pre-scanned tests were conducted to determine the final configuration from all possible combinations. The following tables are showing the test modes as the worst cases and recorded in this report.

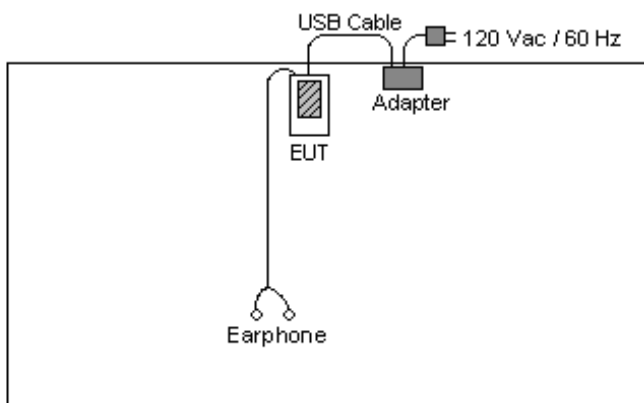
Test Cases		
Test Item	802.11b Modulation : DSSS	802.11g Modulation : OFDM
Conducted TCs	■ Mode 1: CH01_2412 MHz ■ Mode 2: CH06_2437 MHz ■ Mode 3: CH11_2462 MHz ■ Mode 4: 802.11b CH11 + BT CH39	■ Mode 5: CH01_2412 MHz ■ Mode 6: CH06_2437 MHz ■ Mode 7: CH11_2462 MHz
Radiated TCs	■ Mode 1: CH01_2412 MHz + Back cover A + Earphone + USB Cable + Adapter 2 ■ Mode 2: CH06_2437 MHz + Back cover A + Earphone + USB Cable + Adapter 2 ■ Mode 3: CH11_2462 MHz + Back cover A + Earphone + USB Cable + Adapter 2 ■ Mode 4: 802.11b CH11 + BT CH39 + Back cover A + Earphone + USB Cable + Adapter 2	■ Mode 5: CH01_2412 MHz + Back cover A + Earphone + USB Cable + Adapter 2 ■ Mode 6: CH06_2437 MHz + Back cover A + Earphone + USB Cable + Adapter 2 ■ Mode 7: CH11_2462 MHz + Back cover A + Earphone + USB Cable + Adapter 2
AC Conducted Emission	■ Mode 1: WLAN Link + BT Link + MPEG4 + Back cover B + USB Cable + Adapter 1 + Earphone + Charging dock	
Remark: Back cover A stands for standard specification; Back cover B stands for inductive specification.		

2.3 Connection Diagram of Test System

<Conducted Emission>



<Radiated Emission>



2.4 RF Utility

The programmed RF Utility "Compliance" is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

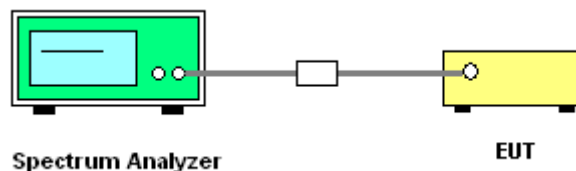
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

3. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
4. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
5. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz.
In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.
6. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	22~23℃
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	9.52	0.5	Pass
06	2437	9.52	0.5	Pass
11	2462	9.56	0.5	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	22~23℃
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.52	0.5	Pass
06	2437	16.52	0.5	Pass
11	2462	16.56	0.5	Pass

3.1.6 Test Result of 99% Occupied Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	22~23℃
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

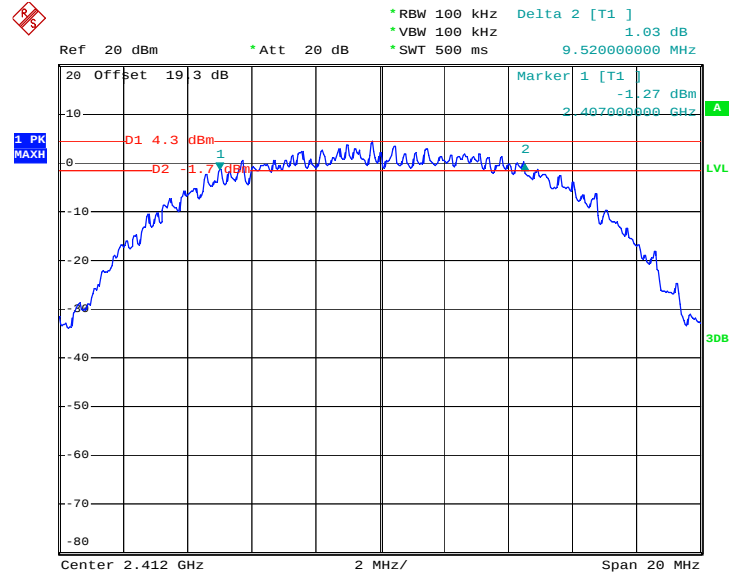
Channel	Frequency (MHz)	802.11b 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	13.96	Pass
06	2437	14.08	Pass
11	2462	14.12	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	22~23℃
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11g 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	16.76	Pass
06	2437	16.80	Pass
11	2462	16.84	Pass

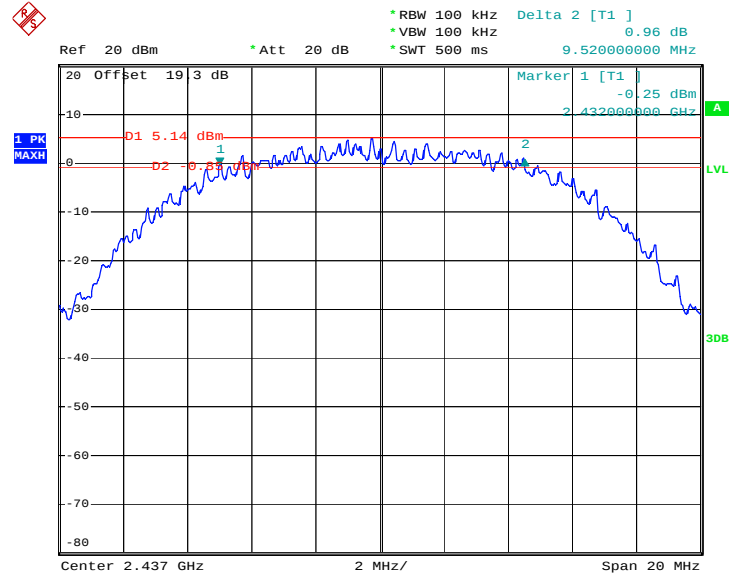
3.1.7 Test Plots of 6dB Bandwidth

Mode 1 : 6 dB Bandwidth Plot on 802.11b Channel 01

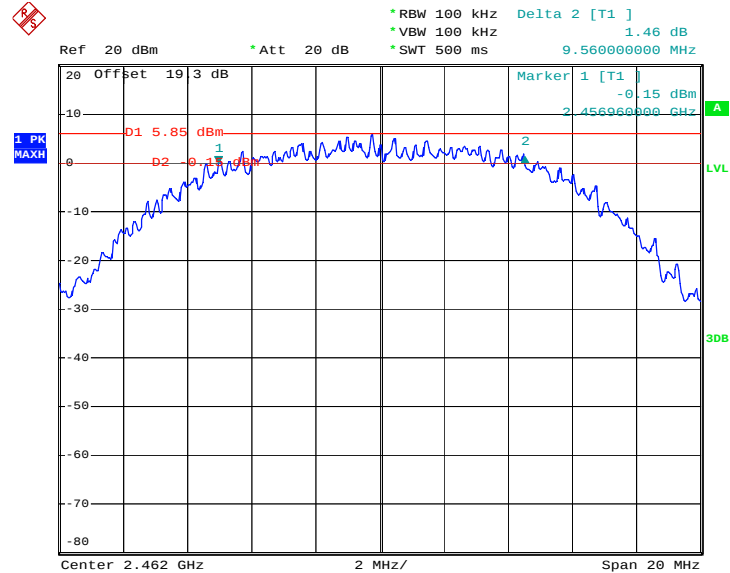


Date: 16.APR.2009 18:46:26

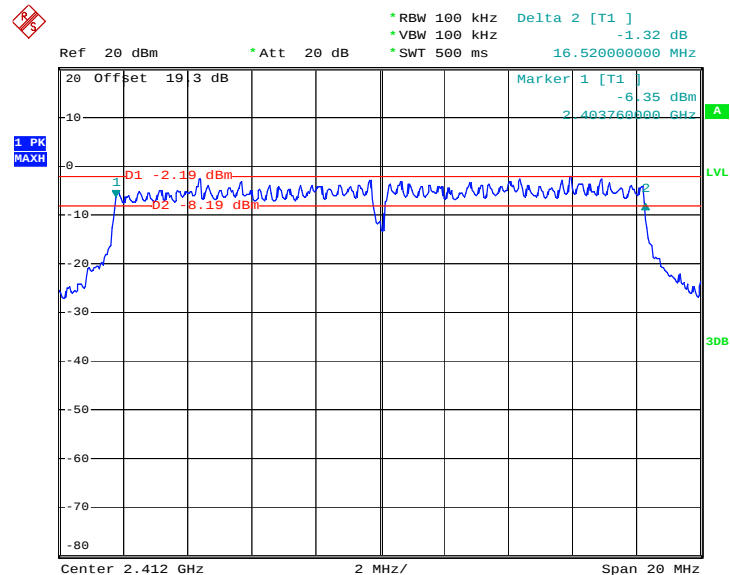
Mode 2 : 6 dB Bandwidth Plot on 802.11b Channel 06



Date: 16.APR.2009 21:00:18

Mode 3 : 6 dB Bandwidth Plot on 802.11b Channel 11


Date: 16.APR.2009 18:51:49

Mode 4 : 6 dB Bandwidth Plot on 802.11g Channel 01


Date: 16.APR.2009 18:53:39



Ref 20 dBm * Att 20 dB * RBW 100 kHz Delta 2 [T1] -1.62 dB
 * VBW 100 kHz * SWT 500 ms 16.52000000 MHz

20 Offset 19 3 dB Marker 1 [T1] -4.91 dBm
 2 428760000 GHz

1 PK MAXH 01 -0.91 dBm 02 -6.91 dBm

Center 2.437 GHz 2 MHz/ Span 20 MHz

Date: 16.APR.2009 18:55:14

Ref 20 dBm Att 20 dB RBW 100 kHz VBW 100 kHz SWT 500 ms Delta 2 [T1] 0.47 dB 16.56000000 MHz

20 Offset 19 3 dB

1 PK MAX

01 -6.42 dBm 02 -6.42 dBm

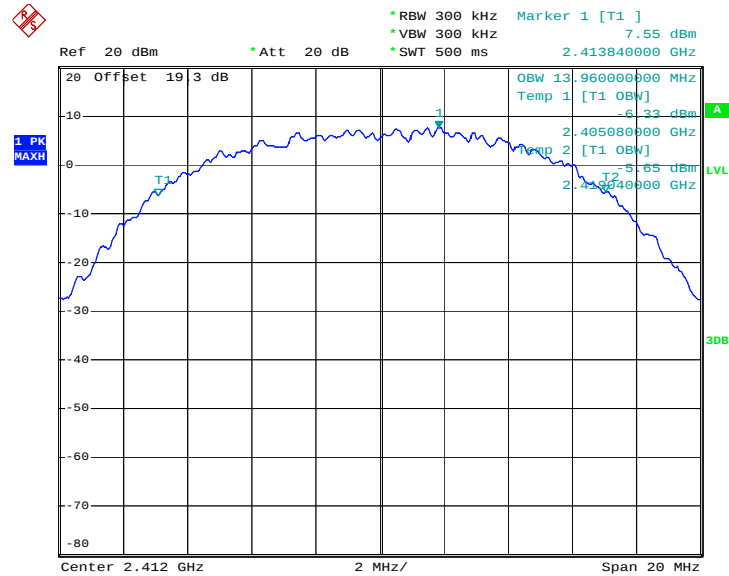
Marker 1 [T1] -6.31 dBm 2 453720000 GHz

Center 2.462 GHz 2 MHz/ Span 20 MHz

Date: 16.APR.2009 18:56:38

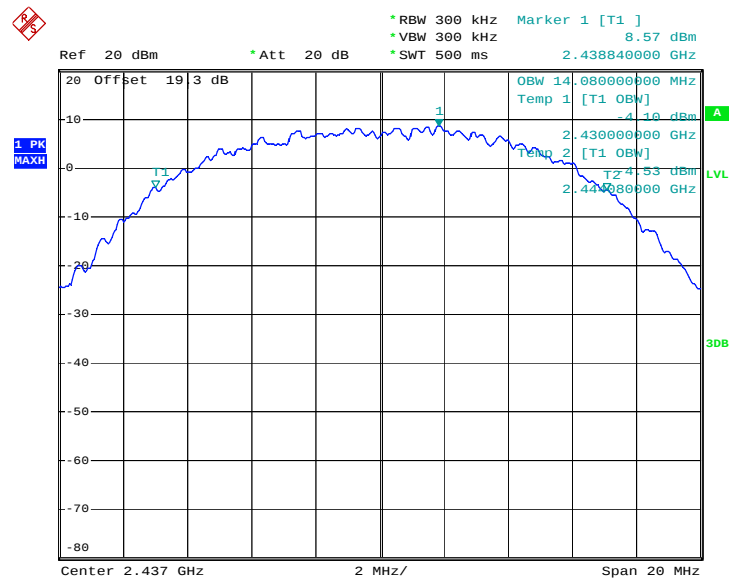
3.1.8 Test Plots of 99% Bandwidth

Mode 1 : 99% Occupied Bandwidth Plot on 802.11b Channel 01



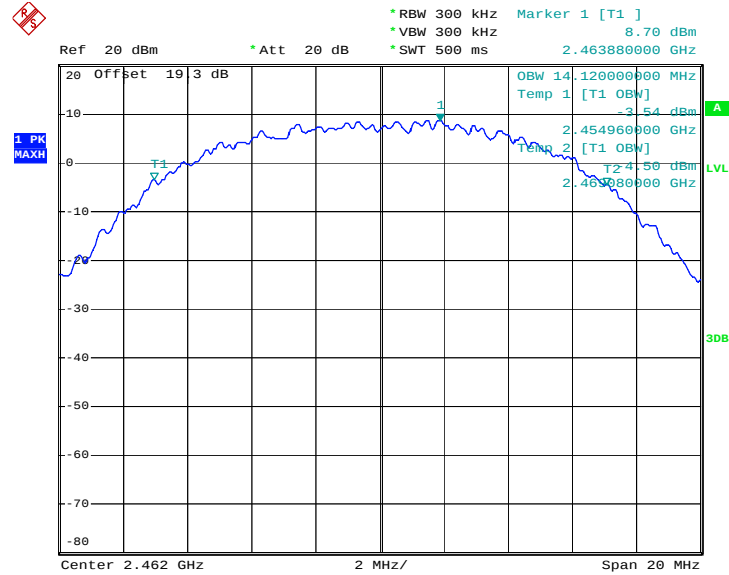
Date: 16.APR.2009 19:39:39

Mode 2 : 99% Occupied Bandwidth Plot on 802.11b Channel 06



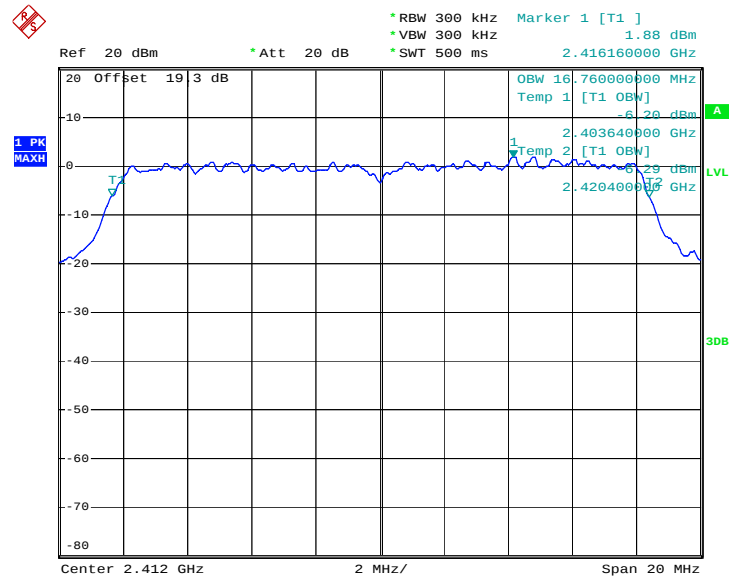
Date: 16.APR.2009 19:40:09

Mode 3 : 99% Occupied Bandwidth Plot on 802.11b Channel 11



Date: 16.APR.2009 19:40:34

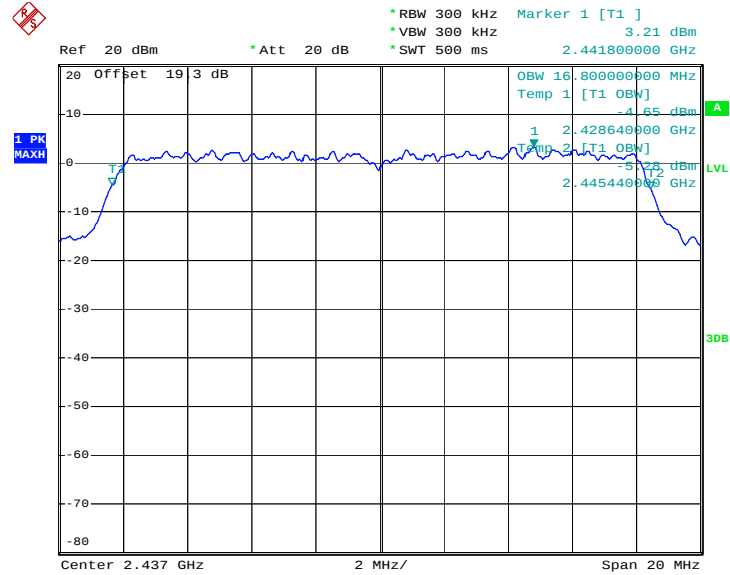
Mode 4 : 99% Occupied Bandwidth Plot on 802.11g Channel 01



Date: 16.APR.2009 19:41:49

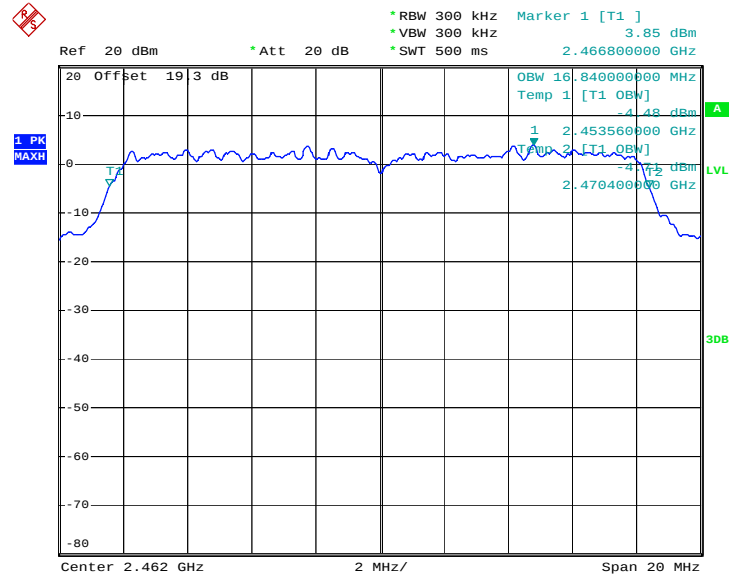


Mode 5 : 99% Occupied Bandwidth Plot on 802.11g Channel 06



Date: 16.APR.2009 19:43:12

Mode 6 : 99% Occupied Bandwidth Plot on 802.11g Channel 11



Date: 16.APR.2009 19:43:36

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

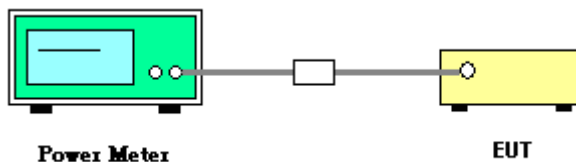
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the power meter by a low loss cable.
3. Measure the power by power meter.

3.2.4 Test Setup



3.2.5 Test Result of Output Power

Test Mode :	Mode 1, 2, 3	Temperature :	22~23°C
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	14.45	30	Pass
06	2437	15.51	30	Pass
11	2462	16.68	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	22~23°C
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	15.00	30	Pass
06	2437	16.13	30	Pass
11	2462	17.23	30	Pass

3.3 Band Edges Measurement

3.3.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

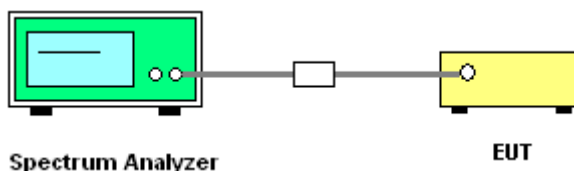
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) > RBW, scan up through 10th harmonic. Band edge emissions must be at least 20 dB below the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the output power of this device was measured by power meter, the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

3.3.4 Test Setup



3.3.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	24~26°C
Test Band :	802.11b	Relative Humidity :	41~45%
Test Channel :	01	Test Engineer :	Kai Wang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	50.61	-23.39	74.00	47.52	32.02	5.46	34.38	100	353	Peak
2389.99	38.39	-15.61	54.00	35.30	32.02	5.46	34.38	100	353	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.14	48.22	-25.78	74.00	45.13	32.02	5.46	34.38	133	25	Peak
2387.14	35.02	-18.98	54.00	31.93	32.02	5.46	34.38	133	25	Average

Test Mode :	Mode 3	Temperature :	24~26°C
Test Band :	802.11b	Relative Humidity :	41~45%
Test Channel :	11	Test Engineer :	Kai Wang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.61	53.08	-20.92	74.00	50.01	32.09	5.38	34.40	100	7	Peak
2484.61	40.95	-13.05	54.00	37.88	32.09	5.38	34.40	100	7	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2486.70	52.99	-21.01	74.00	49.92	32.09	5.38	34.40	156	122	Peak
2486.70	40.46	-13.54	54.00	37.39	32.09	5.38	34.40	156	122	Average

Test Mode :	Mode 4	Temperature :	24~26°C
Test Band :	802.11g	Relative Humidity :	41~45%
Test Channel :	01	Test Engineer :	Kai Wang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.85	60.56	-13.44	74.00	57.47	32.02	5.46	34.38	100	25	Peak
2388.85	41.47	-12.53	54.00	38.38	32.02	5.46	34.38	100	25	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.85	56.43	-17.57	74.00	53.34	32.02	5.46	34.38	162	121	Peak
2388.85	37.73	-16.27	54.00	34.64	32.02	5.46	34.38	162	121	Average

Test Mode :	Mode 6	Temperature :	24~26°C
Test Band :	802.11g	Relative Humidity :	41~45%
Test Channel :	11	Test Engineer :	Kai Wang

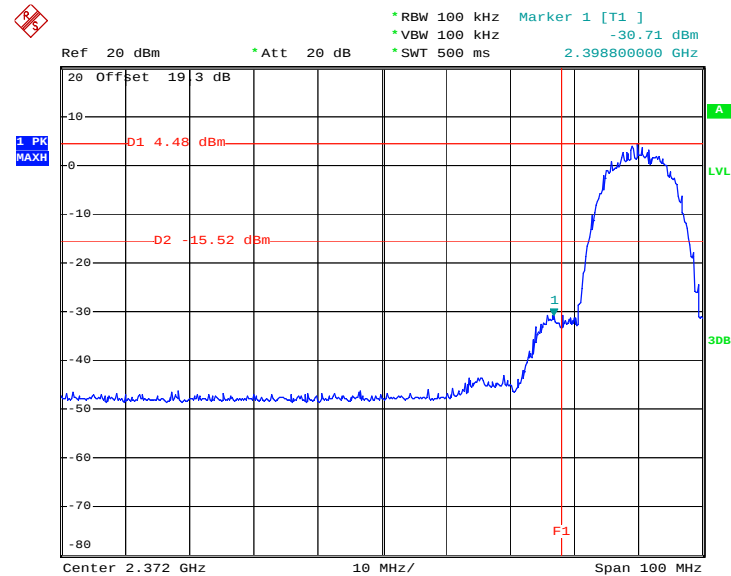
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	66.97	-7.03	74.00	63.90	32.09	5.38	34.40	100	18	Peak
2483.50	47.71	-6.29	54.00	44.64	32.09	5.38	34.40	100	18	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	65.14	-8.86	74.00	62.07	32.09	5.38	34.40	108	70	Peak
2483.50	45.50	-8.50	54.00	42.43	32.09	5.38	34.40	108	70	Average

3.3.6 Test Result of Conducted Band Edges

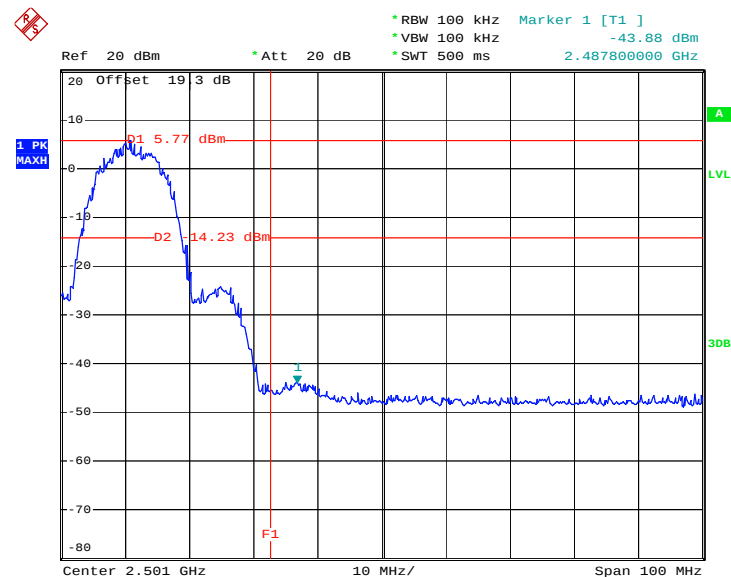
Test Mode :	Mode 1 and 3	Temperature :	22~23°C
Test Band :	802.11b	Relative Humidity :	42~43%
Test Channel :	01 and 11	Test Engineer :	Eric Hum

Low Band Edge Plot on 802.11b Channel 01



Date: 16.APR.2009 19:46:44

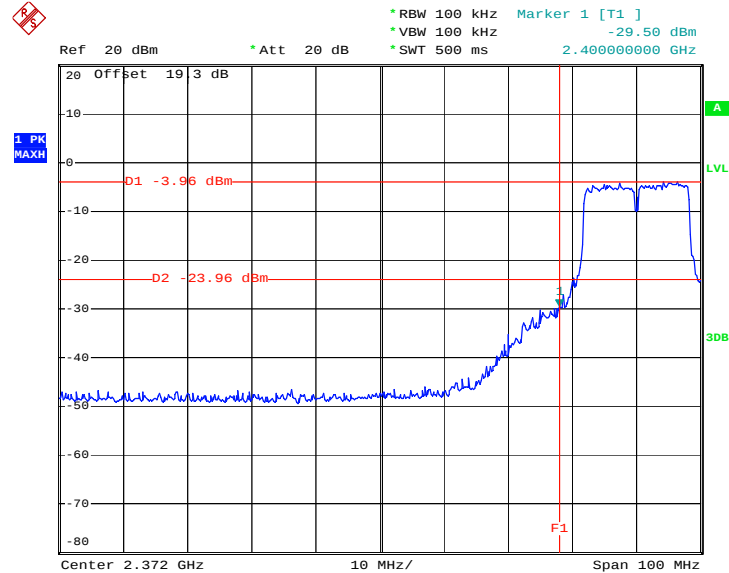
High Band Edge Plot on 802.11b Channel 11



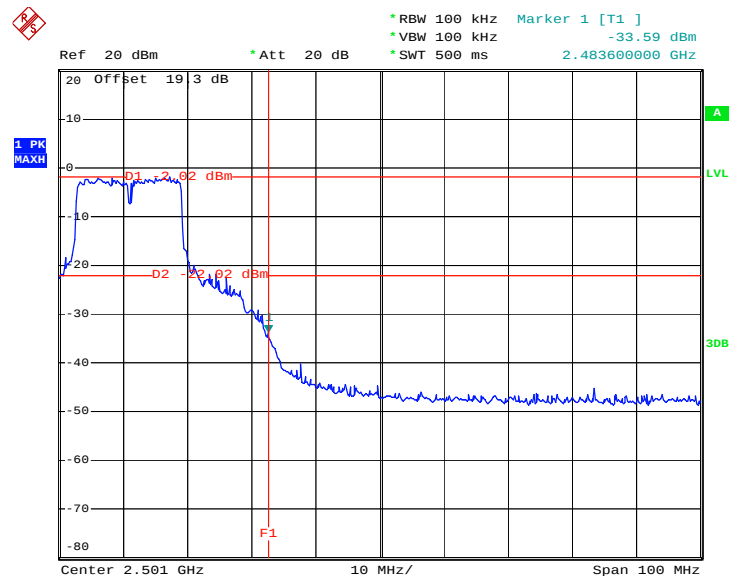
Date: 16.APR.2009 19:51:11



Test Mode :	Mode 4 and 6	Temperature :	22~23°C
Test Band :	802.11g	Relative Humidity :	42~43%
Test Channel :	01 and 11	Test Engineer :	Eric Hum

Low Band Edge Plot on 802.11g Channel 01

Date: 16.APR.2009 19:48:30

High Band Edge Plot on 802.11g Channel 11

Date: 16.APR.2009 19:50:14

3.4 Spurious Emission Measurement

3.4.1 Limit of Spurious Emission Measurement

All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band.

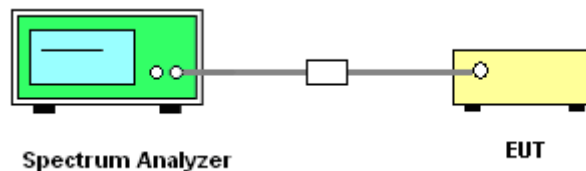
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW = 100 kHz, Video bandwidth (VBW) $\geq$ RBW, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

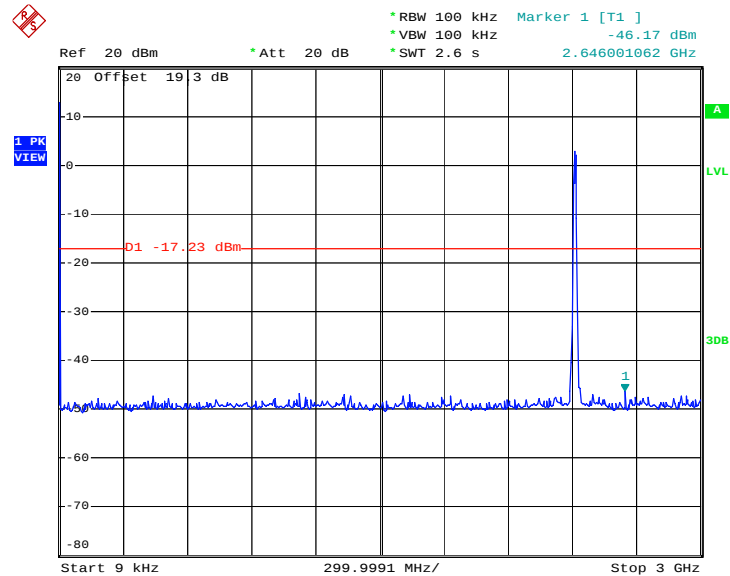
3.4.4 Test Setup



3.4.5 Test Result

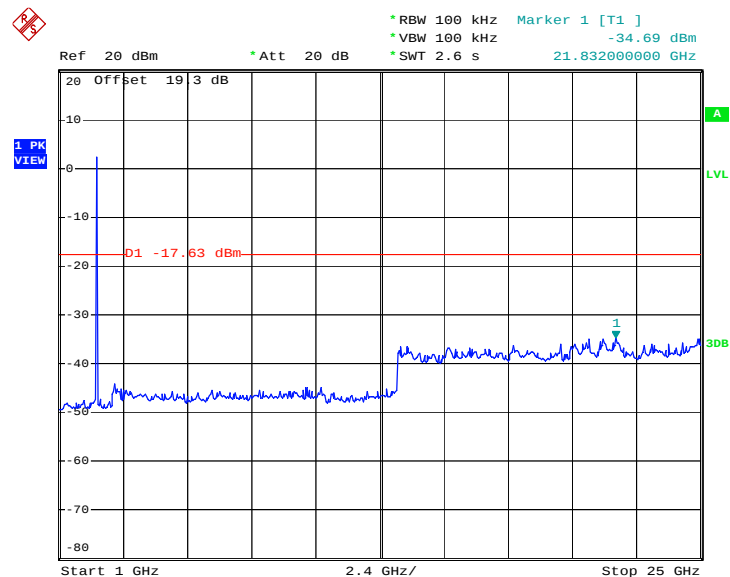
Test Mode :	Mode 1	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G



Date: 16.APR.2009 21:26:18

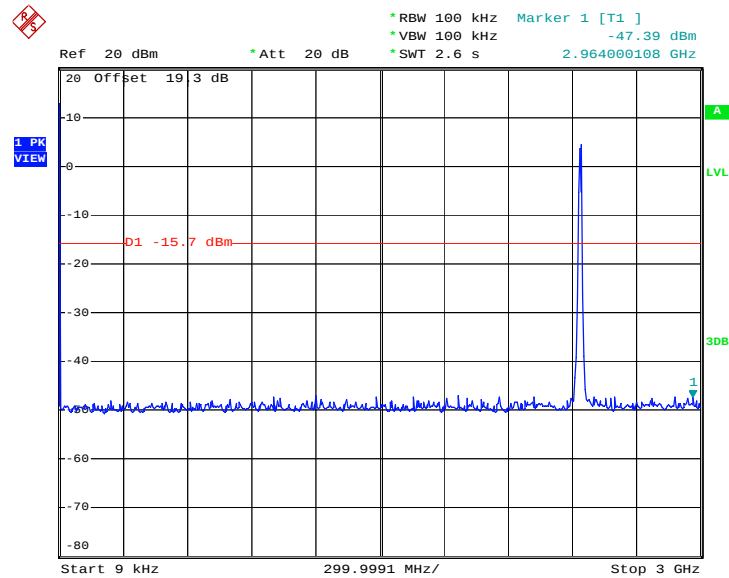
Conducted Spurious Emission Plot between 1G-25G



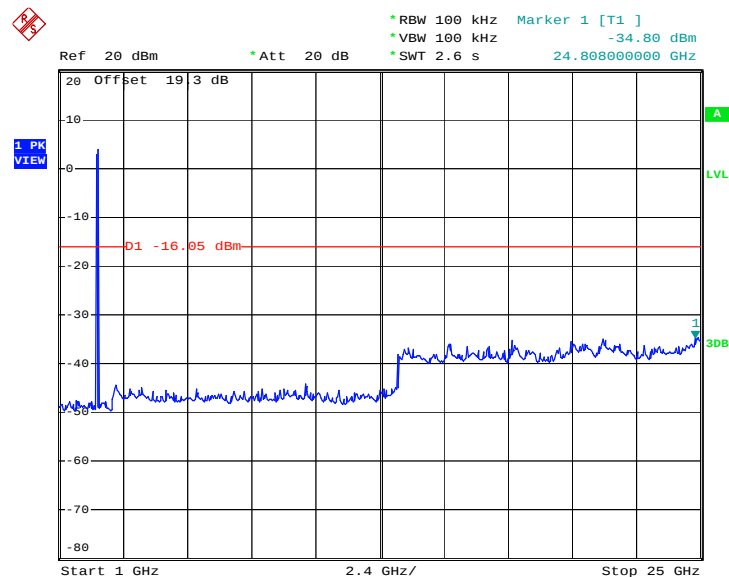
Date: 16.APR.2009 21:26:47



Test Mode :	Mode 2	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G

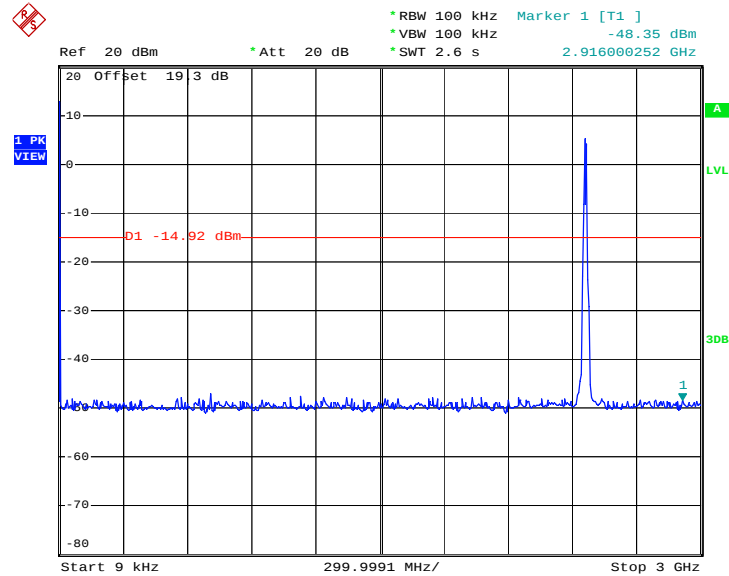
Date: 16.APR.2009 21:28:09

Conducted Spurious Emission Plot between 1G-25G

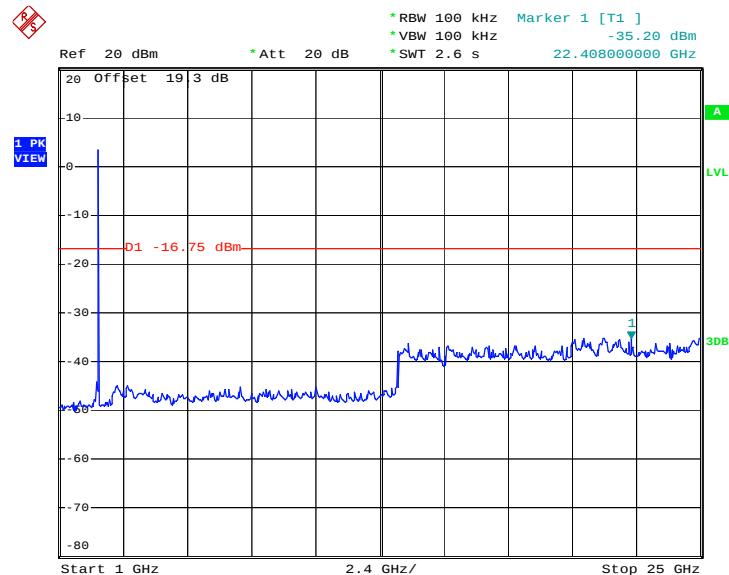
Date: 16.APR.2009 21:28:26



Test Mode :	Mode 3	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G

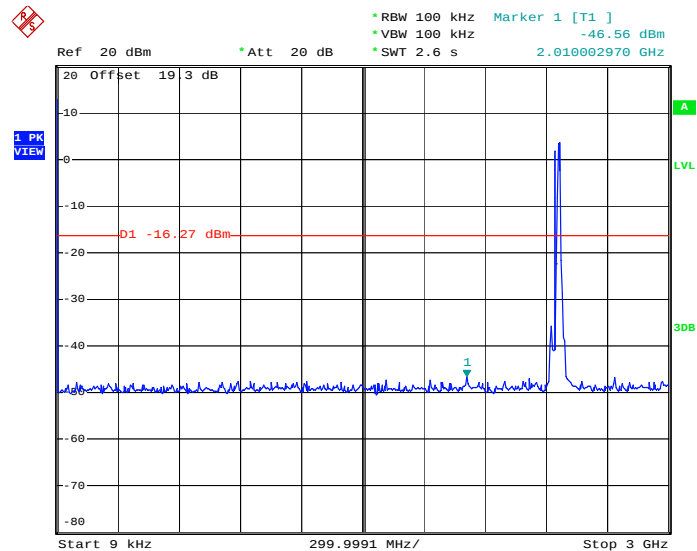
Date: 16.APR.2009 21:29:16

Conducted Spurious Emission Plot between 1G-25G

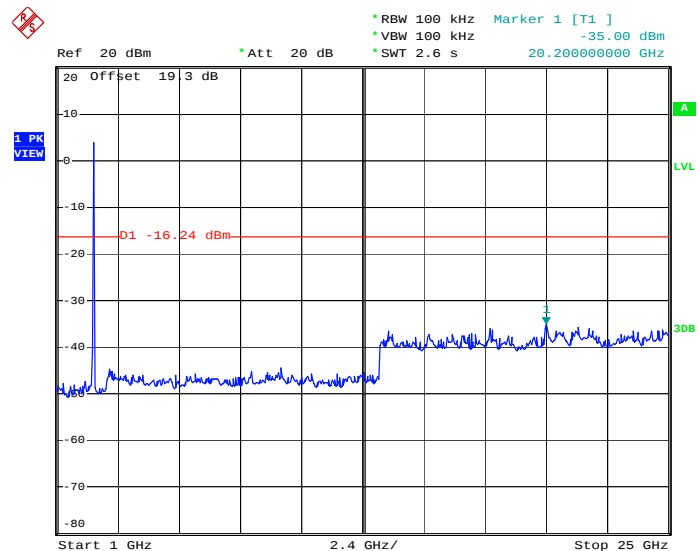
Date: 16.APR.2009 21:29:29



Test Mode :	Mode 4	Temperature :	22~23°C
Test Channel :	802.11b CH11 + BT CH39	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G

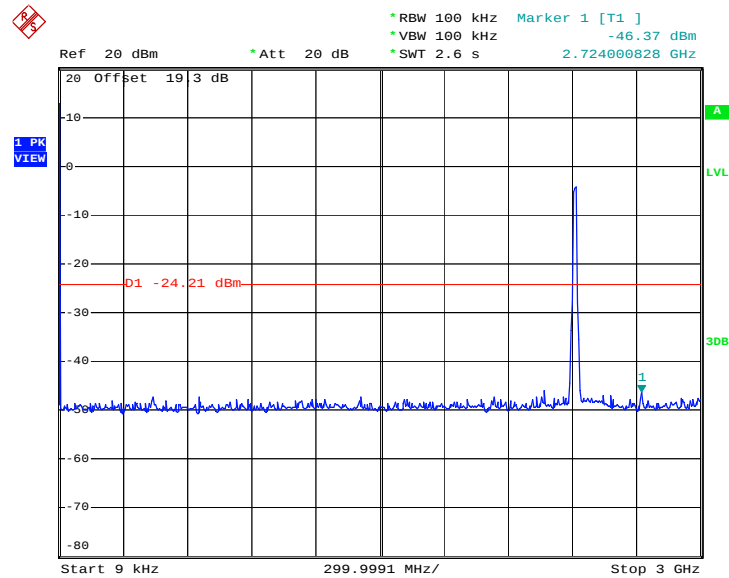
Date: 29.APR.2009 22:50:02

Conducted Spurious Emission Plot between 1G-25G

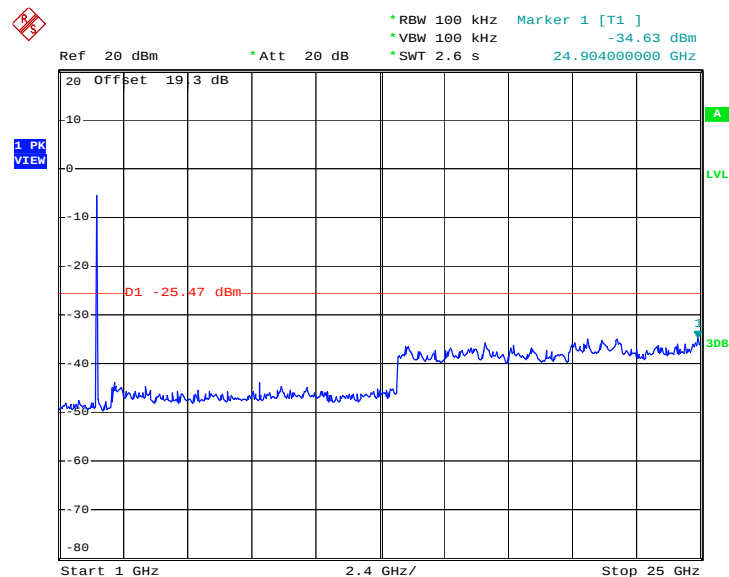
Date: 29.APR.2009 22:51:20



Test Mode :	Mode 5	Temperature :	22~23°C
Test Channel :	01	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G

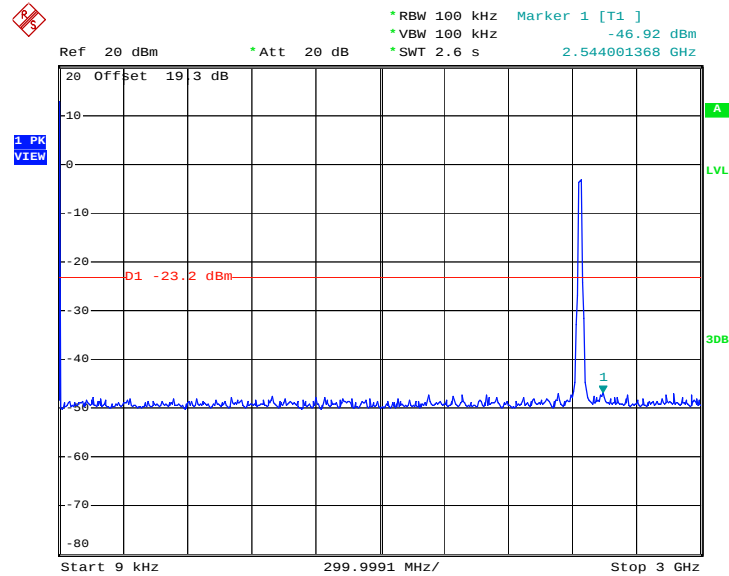
Date: 16.APR.2009 21:30:22

Conducted Spurious Emission Plot between 1G-25G

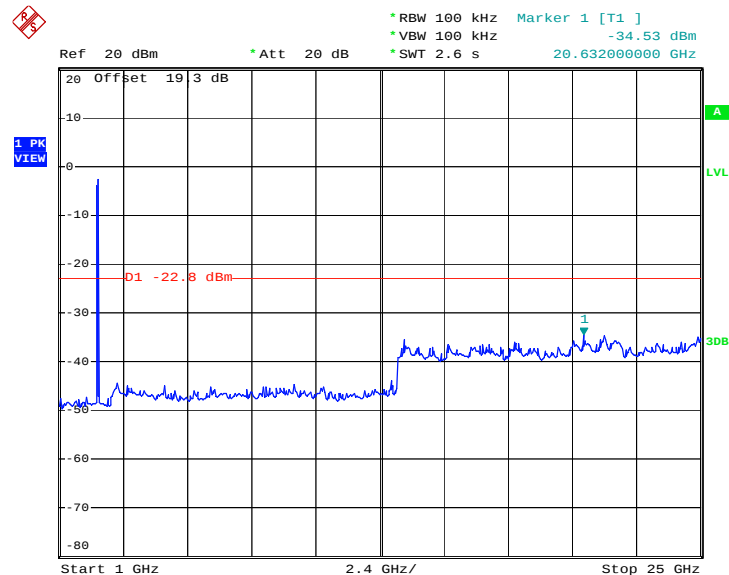
Date: 16.APR.2009 21:30:42



Test Mode :	Mode 6	Temperature :	22~23°C
Test Channel :	06	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G

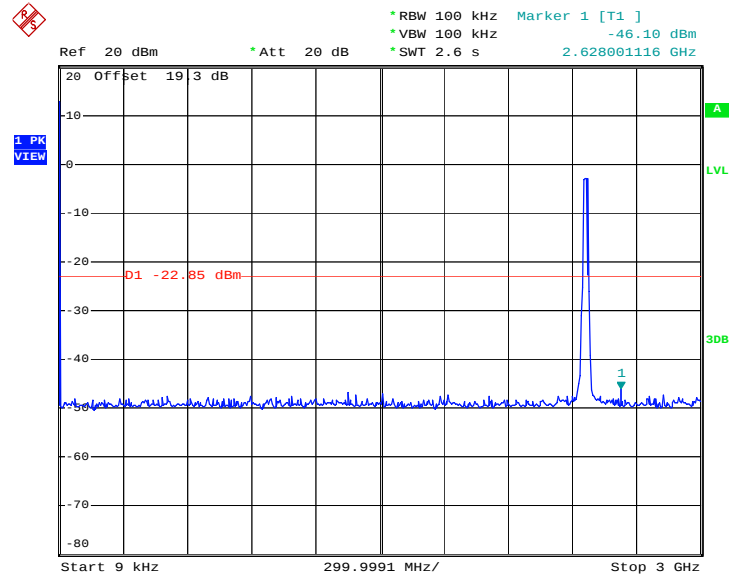
Date: 16.APR.2009 21:31:11

Conducted Spurious Emission Plot between 1G-25G

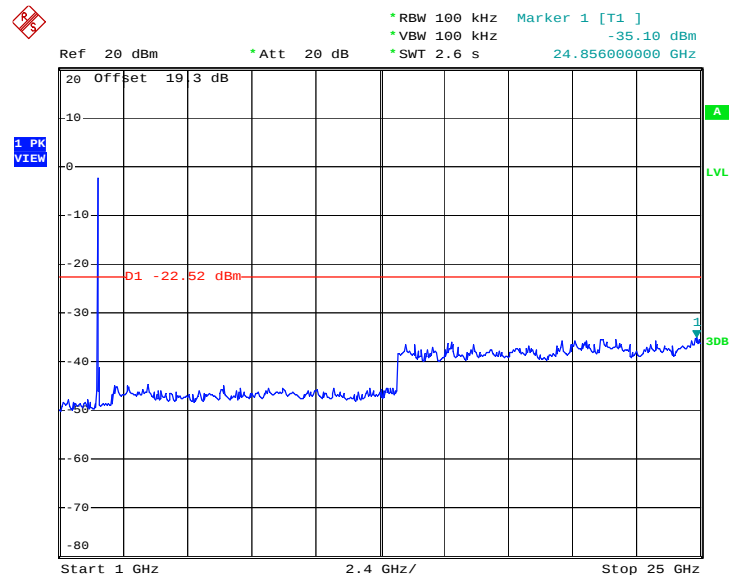
Date: 16.APR.2009 21:31:33



Test Mode :	Mode 7	Temperature :	22~23°C
Test Channel :	11	Relative Humidity :	42~43%
		Test Engineer :	Eric Hum

Conducted Spurious Emission Plot between 9K-3G

Date: 16.APR.2009 21:31:58

Conducted Spurious Emission Plot between 1G-25G

Date: 16.APR.2009 21:32:15

3.5 Power Spectral Density Measurement

3.5.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

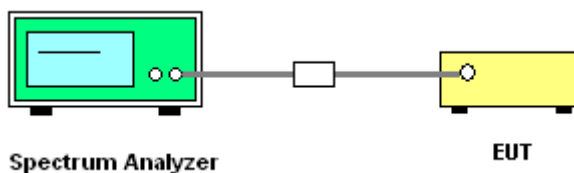
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The test follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Take the measured data from spectrum analyzer.

3.5.4 Test Setup



3.5.5 Test Result of Power Spectral Density

Test Mode :	Mode 1, 2, 3	Temperature :	22~23°C
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-9.60	8	Pass
06	2437	-8.33	8	Pass
11	2462	-7.89	8	Pass

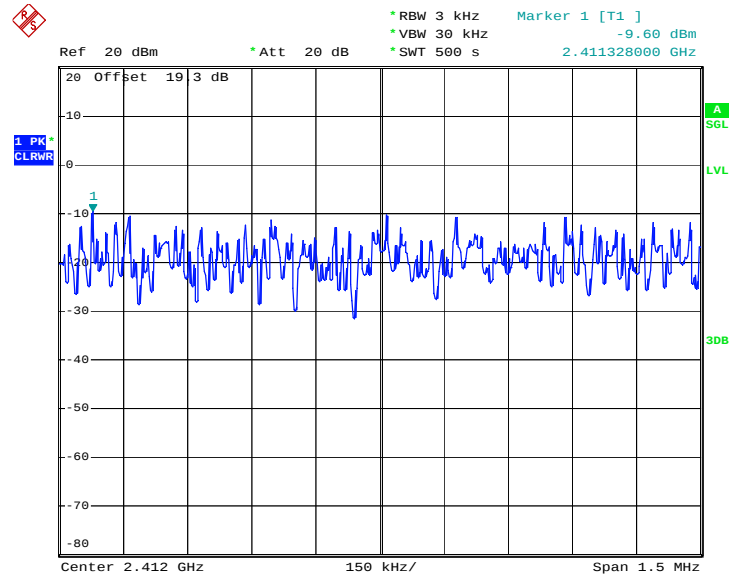
Test Mode :	Mode 4, 5, 6	Temperature :	22~23°C
Test Engineer :	Eric Hum	Relative Humidity :	42~43%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-18.91	8	Pass
06	2437	-16.73	8	Pass
11	2462	-16.60	8	Pass



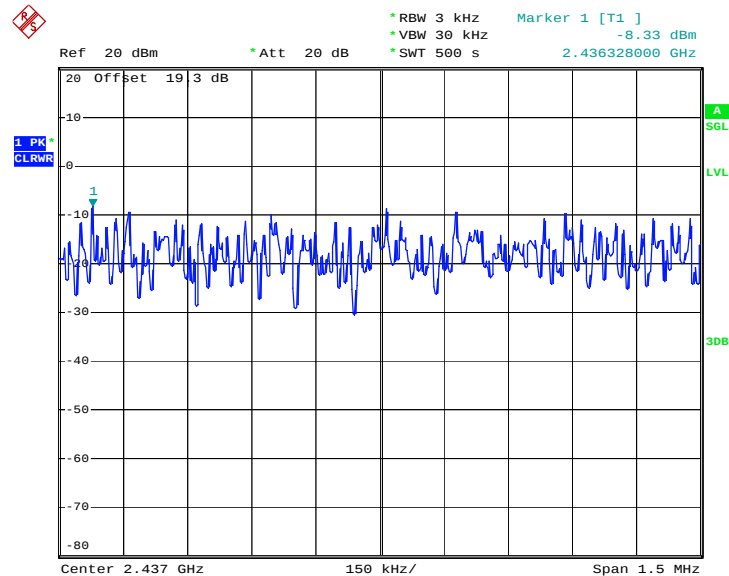
3.5.6 Test Result of Power Spectral Density Plots

Mode 1 : PSD Plot on 802.11b Channel 01



Date: 16.APR.2009 20:58:31

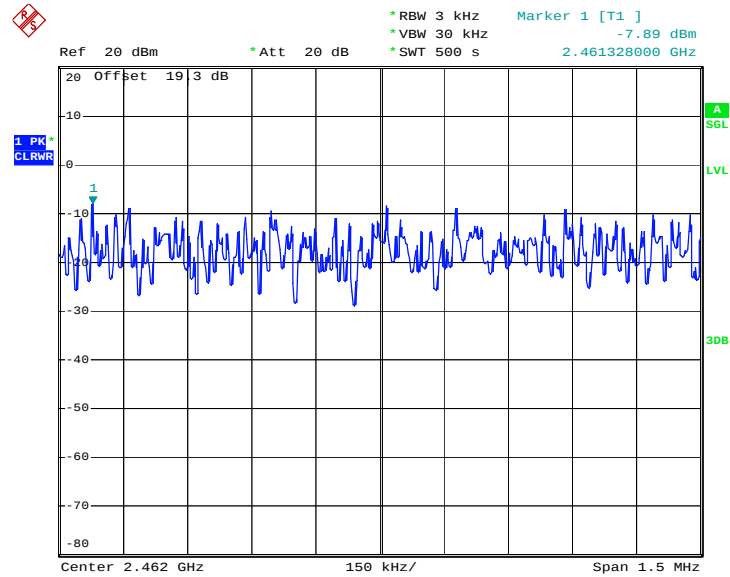
Mode 2 : PSD Plot on 802.11b Channel 06



Date: 16.APR.2009 20:46:00

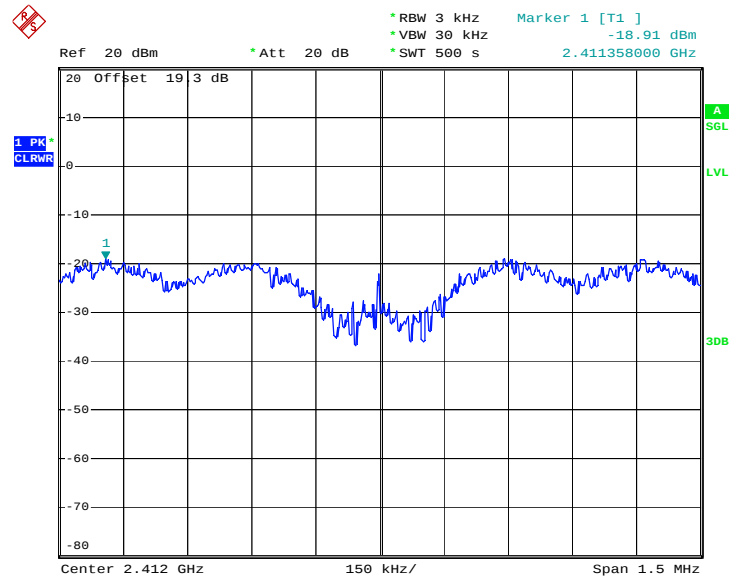


Mode 3 : PSD Plot on 802.11b Channel 11



Date: 16.APR.2009 20:35:48

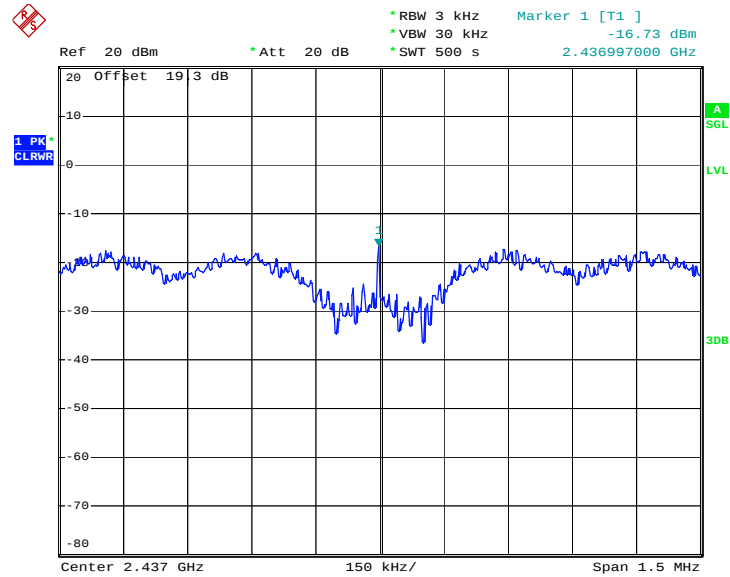
Mode 4 : PSD Plot on 802.11g Channel 01



Date: 16.APR.2009 20:03:38

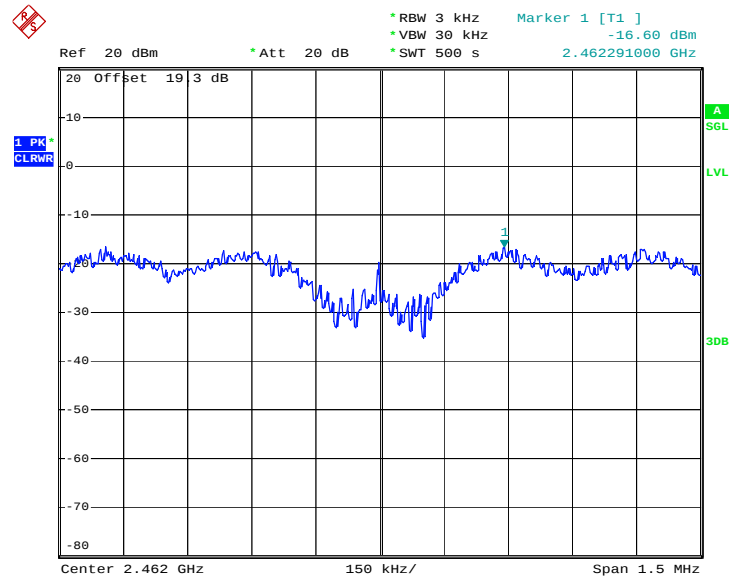


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 16.APR.2009 20:12:29

Mode 6 : PSD Plot on 802.11g Channel 11



Date: 16.APR.2009 20:24:41

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

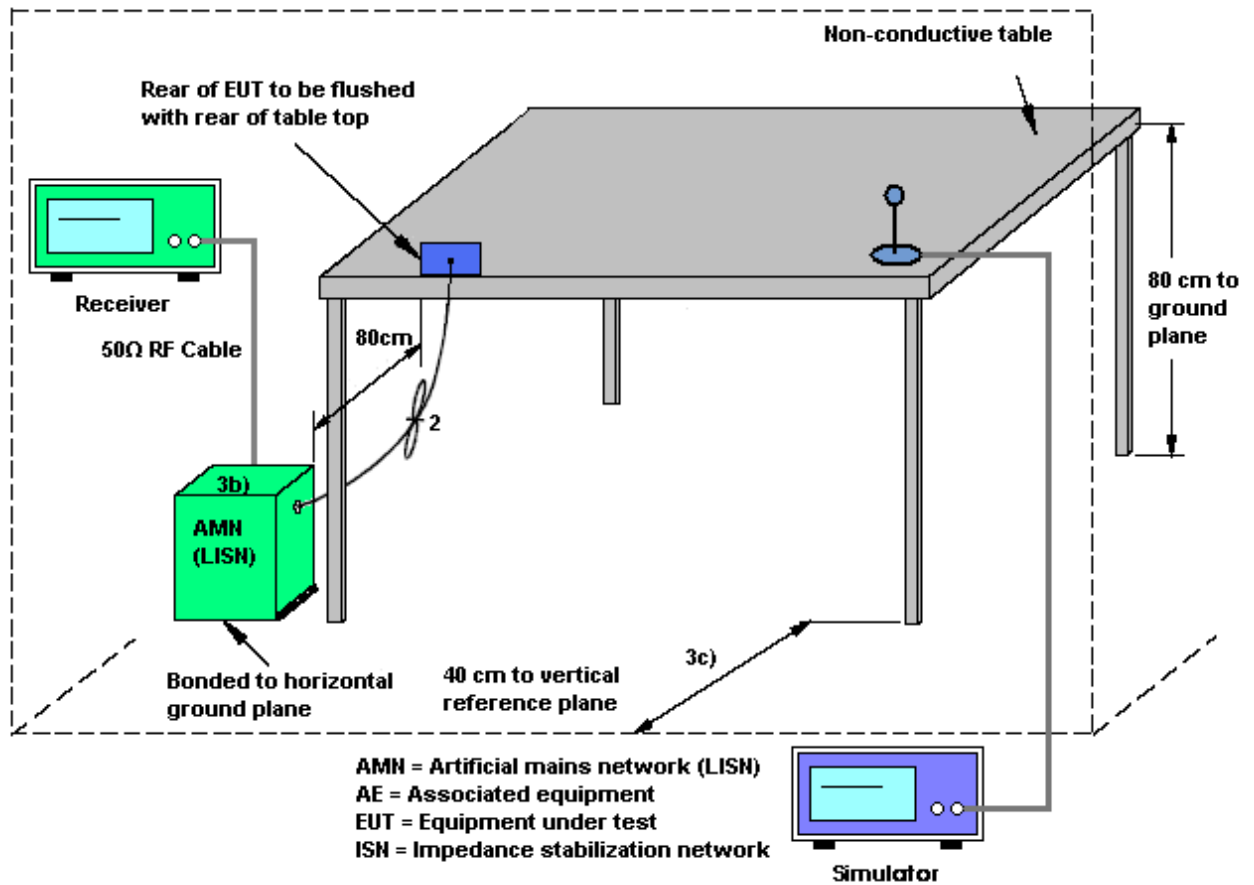
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

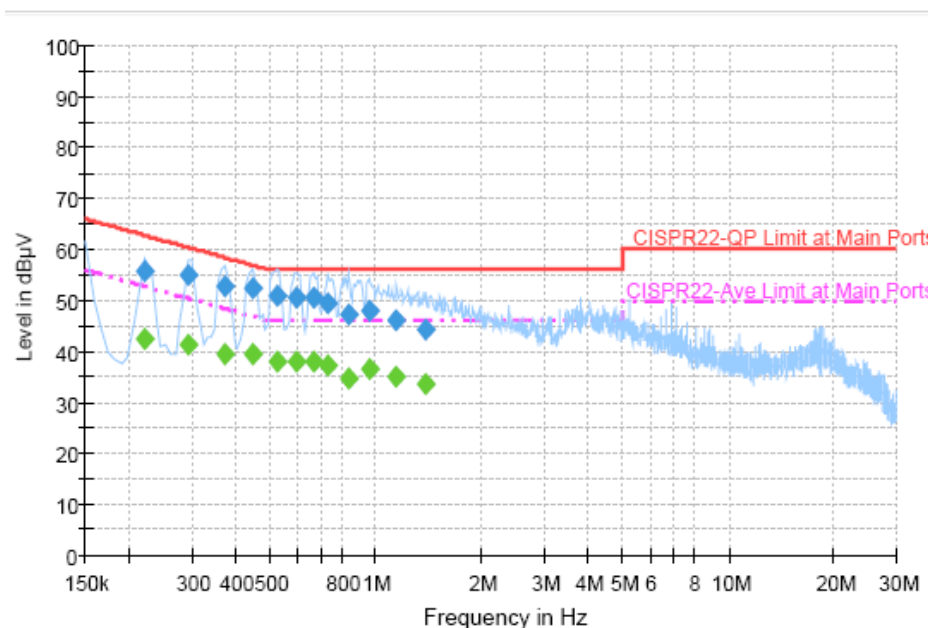
4. The testing follows the guidelines in ANSI C63.4-2003.
5. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
6. Connect EUT to the power mains through a line impedance stabilization network (LISN).
7. All the support units are connecting to the other LISN.
8. The LISN provides 50 ohm coupling impedance for the measuring instrument.
9. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
10. Both sides of AC line were checked for maximum conducted interference.
11. The frequency range from 150 kHz to 30 MHz was searched.
12. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~23℃
Test Engineer :	Cona Huang	Relative Humidity :	42~43%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link + BT Link + MPEG4 + Back cover B + USB Cable + Adapter 1 + Earphone + Charging dock		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



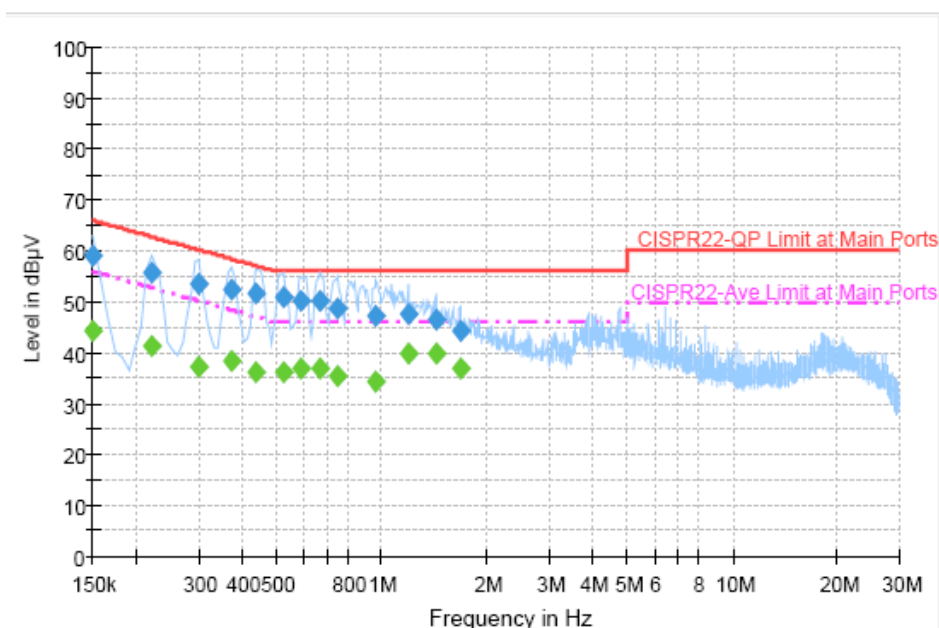
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.222000	55.8	Off	L1	19.3	6.9	62.7
0.294000	55.0	Off	L1	19.3	5.4	60.4
0.374000	52.8	Off	L1	19.4	5.6	58.4
0.446000	52.4	Off	L1	19.3	4.5	56.9
0.526000	51.0	Off	L1	19.3	5.0	56.0
0.598000	50.7	Off	L1	19.4	5.3	56.0
0.670000	50.7	Off	L1	19.4	5.3	56.0
0.734000	49.4	Off	L1	19.4	6.6	56.0
0.838000	47.3	Off	L1	19.5	8.7	56.0
0.958000	47.8	Off	L1	19.4	8.2	56.0
1.142000	46.3	Off	L1	19.4	9.7	56.0
1.390000	44.4	Off	L1	19.4	11.6	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.222000	42.4	Off	L1	19.3	10.3	52.7
0.294000	41.2	Off	L1	19.3	9.2	50.4
0.374000	39.4	Off	L1	19.4	9.0	48.4
0.446000	39.7	Off	L1	19.3	7.2	46.9
0.526000	37.9	Off	L1	19.3	8.1	46.0
0.598000	38.1	Off	L1	19.4	7.9	46.0
0.670000	38.0	Off	L1	19.4	8.0	46.0
0.734000	37.2	Off	L1	19.4	8.8	46.0
0.838000	34.9	Off	L1	19.5	11.1	46.0
0.958000	36.7	Off	L1	19.4	9.3	46.0
1.142000	35.0	Off	L1	19.4	11.0	46.0
1.390000	33.8	Off	L1	19.4	12.2	46.0

Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Cona Huang	Relative Humidity :	42~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link + BT Link + MPEG4 + Back cover B + USB Cable + Adapter 1 + Earphone + Charging dock		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		


Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	59.1	Off	N	19.4	6.9	66.0
0.222000	55.9	Off	N	19.3	6.8	62.7
0.302000	53.4	Off	N	19.3	6.8	60.2
0.374000	52.6	Off	N	19.4	5.8	58.4
0.438000	51.6	Off	N	19.4	5.5	57.1
0.526000	50.8	Off	N	19.3	5.2	56.0
0.590000	50.3	Off	N	19.3	5.7	56.0
0.670000	50.1	Off	N	19.4	5.9	56.0
0.750000	48.9	Off	N	19.4	7.1	56.0
0.966000	47.1	Off	N	19.4	8.9	56.0
1.190000	47.6	Off	N	19.5	8.4	56.0
1.430000	46.5	Off	N	19.4	9.5	56.0
1.670000	44.2	Off	N	19.5	11.8	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	44.2	Off	N	19.4	11.8	56.0
0.222000	41.3	Off	N	19.3	11.4	52.7
0.302000	37.4	Off	N	19.3	12.8	50.2
0.374000	38.3	Off	N	19.4	10.1	48.4
0.438000	36.3	Off	N	19.4	10.8	47.1
0.526000	36.1	Off	N	19.3	9.9	46.0
0.590000	36.8	Off	N	19.3	9.2	46.0
0.670000	36.7	Off	N	19.4	9.3	46.0
0.750000	35.3	Off	N	19.4	10.7	46.0
0.966000	34.2	Off	N	19.4	11.8	46.0
1.190000	39.8	Off	N	19.5	6.2	46.0
1.430000	39.9	Off	N	19.4	6.1	46.0
1.670000	36.8	Off	N	19.5	9.2	46.0

3.7 Radiated Emission Measurement

3.7.1 Limit of Radiated Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.7.2 Measuring Instruments

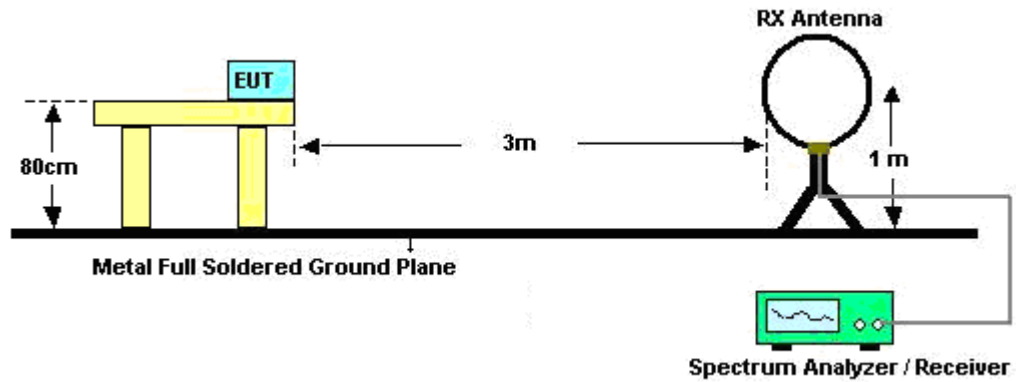
See list of measuring instruments of this test report.

3.7.3 Test Procedures

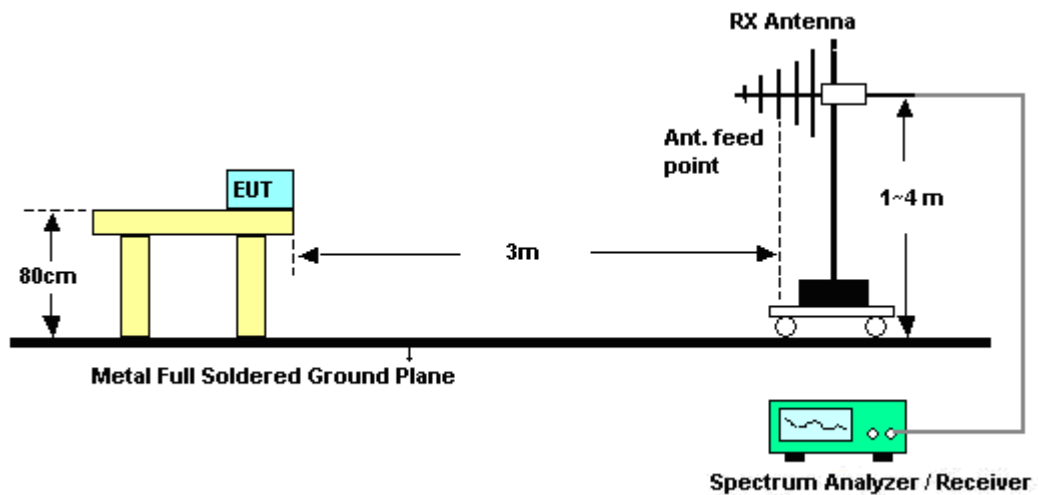
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.7.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



3.7.5 Test Results of Radiated Emissions (9kHz ~ 30MHz)

Test Engineer :	Kai Wang	Temperature :	24~26°C	
		Relative Humidity :	41~45%	

Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

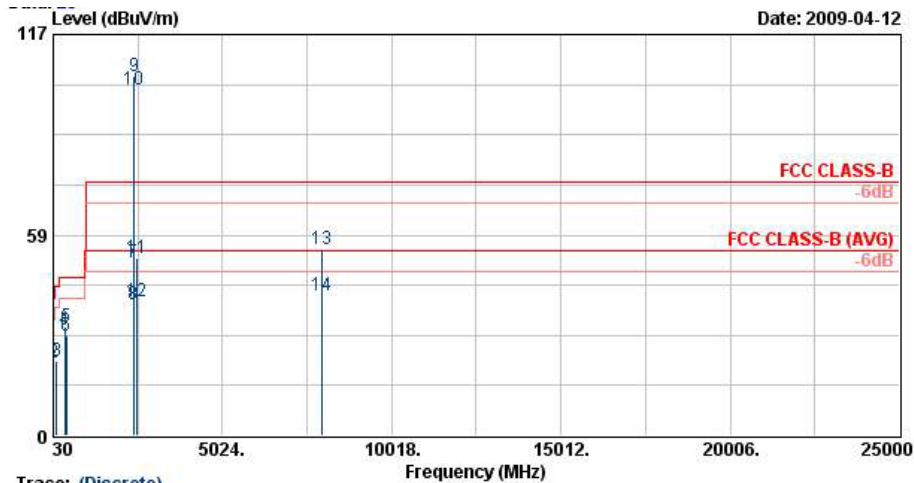
The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

3.7.6 Test Result of Radiated Emission (30MHz ~ 25GHz)

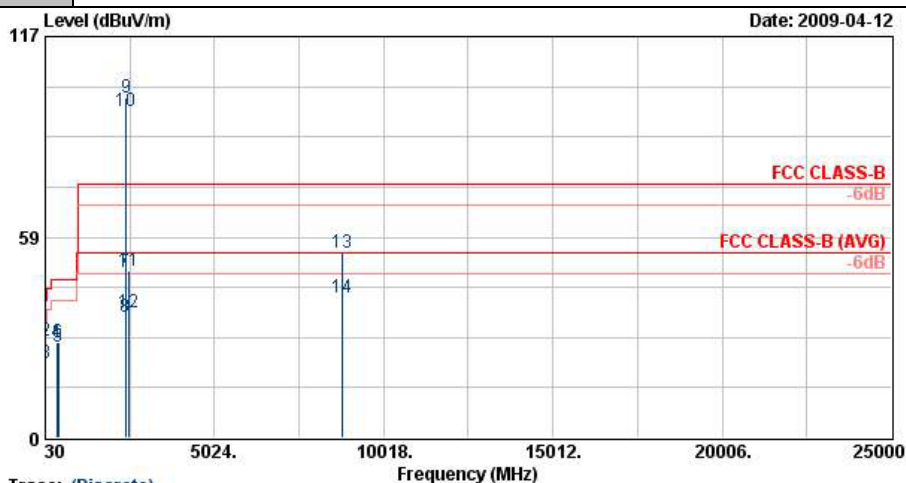
Test Mode :	Mode 1	Temperature :	24~26°C
Test Channel :	01	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 802323

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	30.81	28.90	-11.10	40.00	40.59	19.36	0.65	31.70	100	205	Peak
2	37.29	21.50	-18.50	40.00	37.03	15.46	0.71	31.70	---	---	Peak
3	132.33	21.74	-21.76	43.50	39.77	12.26	1.37	31.67	---	---	Peak
4	363.00	31.05	-14.95	46.00	44.41	15.51	2.41	31.27	---	---	Peak
5	393.80	31.54	-14.46	46.00	43.96	16.26	2.52	31.21	---	---	Peak
6	425.30	29.29	-16.71	46.00	40.89	16.87	2.70	31.17	---	---	Peak
7	2389.99	50.61	-23.39	74.00	47.52	32.02	5.46	34.38	100	353	Peak
8	2389.99	38.39	-15.61	54.00	35.30	32.02	5.46	34.38	100	353	Average
9 X	2412.00	104.73			101.63	32.03	5.44	34.38	100	353	Peak
10 @	2412.00	100.85			97.76	32.03	5.44	34.38	100	353	Average
11	2484.00	51.65	-22.35	74.00	48.58	32.09	5.38	34.40	100	353	Peak
12	2484.00	39.06	-14.94	54.00	35.99	32.09	5.38	34.40	100	353	Average
13	7962.00	54.23	-19.77	74.00	44.10	35.59	9.83	35.29	100	126	Peak
14	7962.00	41.02	-12.98	54.00	30.89	35.59	9.83	35.29	100	126	Average

Test Mode :	Mode 1	Temperature :	24~26°C
Test Channel :	01	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		

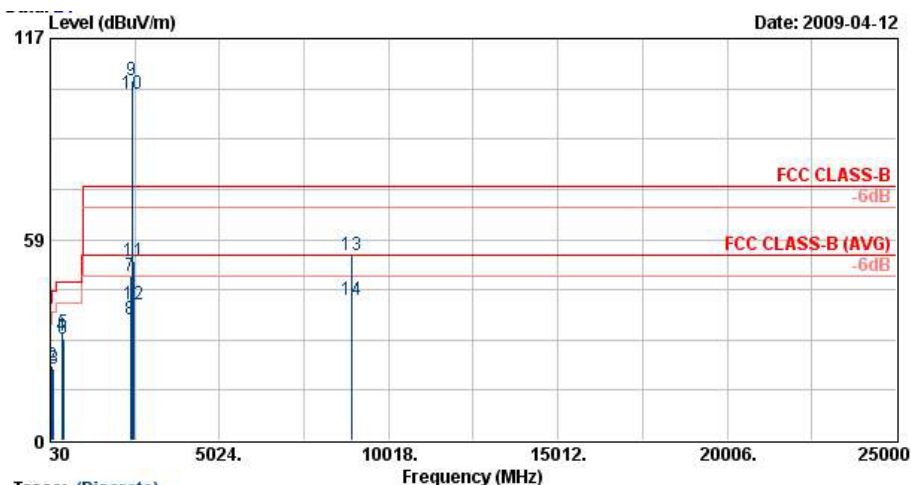


Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	31.89	28.95	-11.05	40.00	41.17	18.82	0.66	31.70	100	318 Peak
2	35.94	28.26	-11.74	40.00	42.65	16.62	0.69	31.70	---	Peak
3	43.77	21.92	-18.08	40.00	40.76	12.14	0.72	31.70	---	Peak
4	363.00	27.98	-18.02	46.00	41.34	15.51	2.41	31.27	---	Peak
5	393.80	26.34	-19.66	46.00	38.77	16.26	2.52	31.21	---	Peak
6	425.30	27.63	-18.37	46.00	39.23	16.87	2.70	31.17	---	Peak
7	2387.14	48.22	-25.78	74.00	45.13	32.02	5.46	34.38	133	25 Peak
8	2387.14	35.02	-18.98	54.00	31.93	32.02	5.46	34.38	133	25 Average
9 X	2412.00	99.02			95.93	32.03	5.44	34.38	133	25 Peak
10 @	2412.00	95.24			92.15	32.03	5.44	34.38	133	25 Average
11	2500.00	48.81	-25.19	74.00	45.74	32.10	5.37	34.40	133	25 Peak
12	2500.00	36.46	-17.54	54.00	33.39	32.10	5.37	34.40	133	25 Average
13	8802.00	53.93	-20.07	74.00	43.07	35.94	10.28	35.36	100	325 Peak
14	8802.00	40.69	-13.31	54.00	29.83	35.94	10.28	35.36	100	325 Average



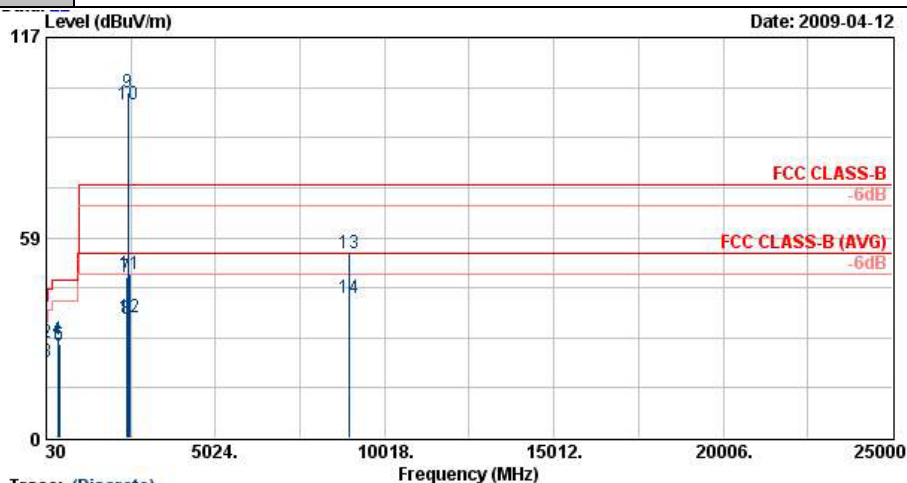
Test Mode :	Mode 2	Temperature :	24~26°C
Test Channel :	06	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	30.81	32.50	-7.50	40.00	44.19	19.36	0.65	31.70	100	159 Peak
2	89.13	21.83	-21.67	43.50	43.39	9.04	1.10	31.70	---	Peak
3	133.14	21.03	-22.47	43.50	39.08	12.24	1.38	31.67	---	Peak
4	363.00	30.64	-15.36	46.00	44.00	15.51	2.41	31.27	---	Peak
5	393.80	31.18	-14.82	46.00	43.61	16.26	2.52	31.21	---	Peak
6	425.30	29.60	-16.40	46.00	41.21	16.87	2.70	31.17	---	Peak
7	2390.00	47.83	-26.17	74.00	44.73	32.02	5.46	34.38	100	6 Peak
8	2390.00	35.17	-18.83	54.00	32.08	32.02	5.46	34.38	100	6 Average
9 X	2437.00	104.93			101.85	32.06	5.41	34.39	100	6 Peak
10 @	2437.00	101.10			98.02	32.06	5.41	34.39	100	6 Average
11	2500.00	52.27	-21.73	74.00	49.20	32.10	5.37	34.40	100	6 Peak
12	2500.00	39.55	-14.45	54.00	36.48	32.10	5.37	34.40	100	6 Average
13	8925.00	53.89	-20.11	74.00	42.93	36.03	10.31	35.38	100	216 Peak
14	8925.00	40.72	-13.28	54.00	29.76	36.03	10.31	35.38	100	216 Average

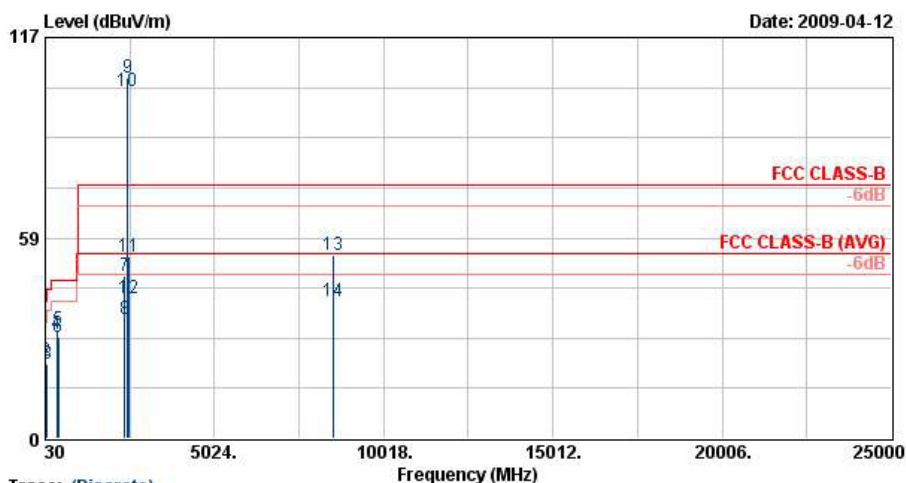
Test Mode :	Mode 2	Temperature :	24~26°C
Test Channel :	06	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 8O2323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	30.54	31.72	-8.28	40.00	43.41	19.36	0.65	31.70	100	286 Peak
2	37.02	27.79	-12.21	40.00	42.75	16.04	0.70	31.70	---	---
3	43.77	22.31	-17.69	40.00	41.15	12.14	0.72	31.70	---	---
4	363.00	28.72	-17.28	46.00	42.09	15.51	2.41	31.27	---	---
5	393.80	26.76	-19.24	46.00	39.19	16.26	2.52	31.21	---	---
6	425.30	27.33	-18.67	46.00	38.93	16.87	2.70	31.17	---	---
7	2390.00	47.08	-26.92	74.00	43.98	32.02	5.46	34.38	166	124 Peak
8	2390.00	34.68	-19.32	54.00	31.59	32.02	5.46	34.38	166	124 Average
9 X	2437.00	101.02			97.93	32.04	5.43	34.39	166	124 Peak
10 @	2437.00	97.37			94.29	32.06	5.41	34.39	166	124 Average
11	2484.00	47.99	-26.01	74.00	44.91	32.09	5.38	34.40	166	124 Peak
12	2484.00	35.02	-18.98	54.00	31.95	32.09	5.38	34.40	166	124 Average
13	8982.00	53.92	-20.08	74.00	42.89	36.09	10.33	35.40	100	116 Peak
14	8982.00	40.86	-13.14	54.00	29.84	36.09	10.33	35.40	100	116 Average

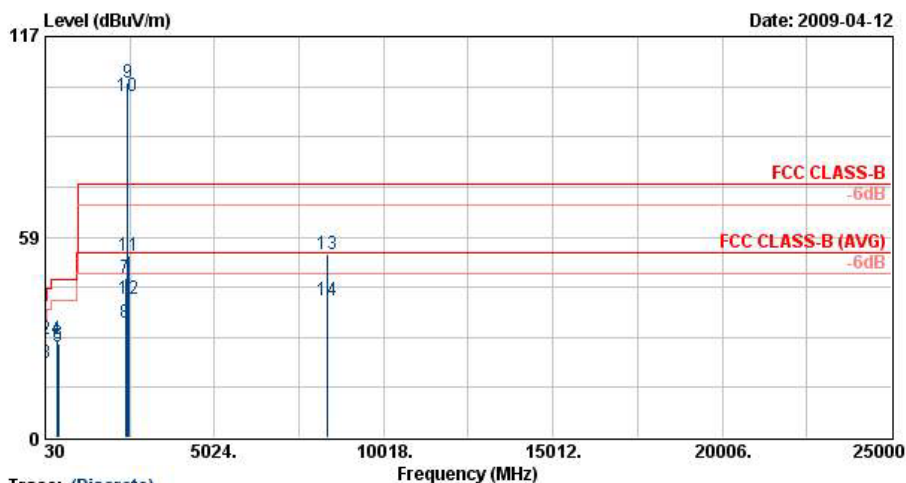
Test Mode :	Mode 3	Temperature :	24~26°C
Test Channel :	11	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	30.54	31.34	-8.66	40.00	43.04	19.36	0.65	31.70	100	105 Peak
2	36.21	22.53	-17.47	40.00	36.92	16.62	0.69	31.70	---	Peak
3	89.94	21.64	-21.86	43.50	43.03	9.20	1.11	31.70	---	Peak
4	363.00	30.23	-15.77	46.00	43.60	15.51	2.41	31.27	---	Peak
5	393.80	31.65	-14.35	46.00	44.08	16.26	2.52	31.21	---	Peak
6	425.30	29.58	-16.42	46.00	41.19	16.87	2.70	31.17	---	Peak
7	2382.00	47.28	-26.72	74.00	44.18	32.00	5.47	34.38	100	7 Peak
8	2382.00	34.68	-19.32	54.00	31.58	32.00	5.47	34.38	100	7 Average
9 X	2462.00	105.37			102.29	32.07	5.40	34.39	100	7 Peak
10 @	2462.00	101.49			98.41	32.07	5.40	34.39	100	7 Average
11	2484.61	53.08	-20.92	74.00	50.01	32.09	5.38	34.40	100	7 Peak
12	2484.61	40.95	-13.05	54.00	37.88	32.09	5.38	34.40	100	7 Average
13	8526.00	53.38	-20.62	74.00	42.77	35.73	10.19	35.31	100	229 Peak
14	8526.00	40.18	-13.82	54.00	29.57	35.73	10.19	35.31	100	229 Average

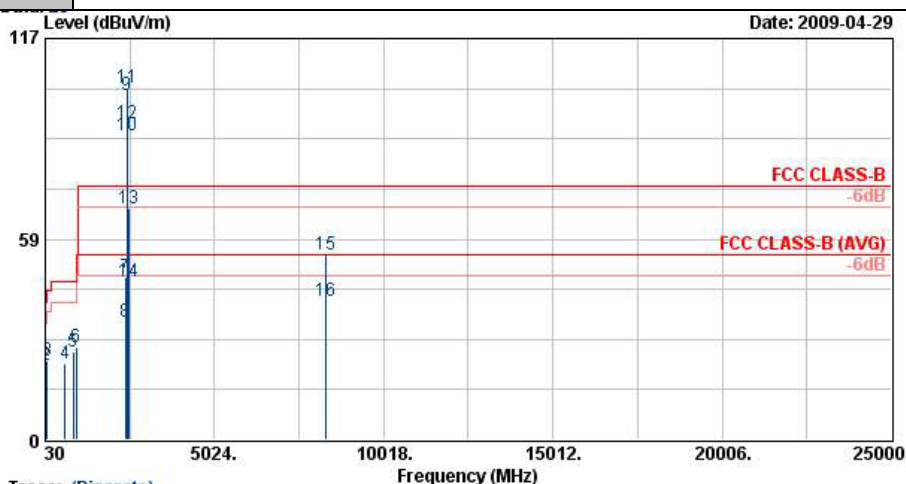
Test Mode :	Mode 3	Temperature :	24~26°C
Test Channel :	11	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV		dB		deg	
1	30.54	30.98	-9.02	40.00	42.67	19.36	0.65	31.70	100	226 Peak
2	35.94	28.58	-11.42	40.00	42.97	16.62	0.69	31.70	---	Peak
3	42.69	21.75	-18.25	40.00	40.05	12.68	0.72	31.70	---	Peak
4	363.00	28.49	-17.51	46.00	41.85	15.51	2.41	31.27	---	Peak
5	393.80	26.46	-19.54	46.00	38.89	16.26	2.52	31.21	---	Peak
6	425.30	27.37	-18.63	46.00	38.97	16.87	2.70	31.17	---	Peak
7	2390.00	46.68	-27.32	74.00	43.59	32.02	5.46	34.38	156	122 Peak
8	2390.00	33.62	-20.38	54.00	30.53	32.02	5.46	34.38	156	122 Average
9 X	2462.00	103.36			100.28	32.07	5.40	34.39	156	122 Peak
10 @	2462.00	99.62			96.54	32.07	5.40	34.39	156	122 Average
11	2486.70	52.99	-21.01	74.00	49.92	32.09	5.38	34.40	156	122 Peak
12	2486.70	40.46	-13.54	54.00	37.39	32.09	5.38	34.40	156	122 Average
13	8370.00	53.31	-20.69	74.00	42.84	35.68	10.10	35.30	100	139 Peak
14	8370.00	40.09	-13.91	54.00	29.62	35.68	10.10	35.30	100	139 Average

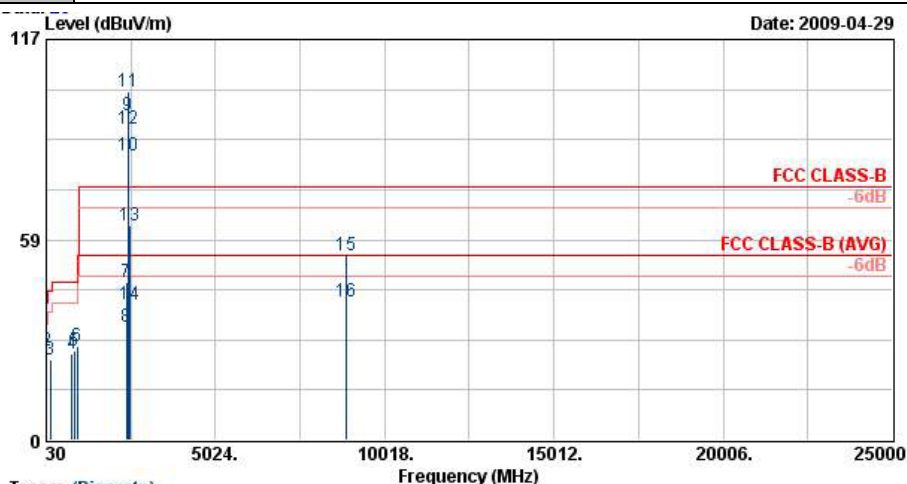
Test Mode :	Mode 4	Temperature :	24~26°C
Test Channel :	802.11b CH11 + BT CH39	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 ~ #12 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : 3m SHF-EHF HORN HORIZONTAL
Project : FR 802323

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Preamp Loss Factor	Ant Pos	Table Pos	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	32.97	24.26	-15.74	40.00	37.01	18.28	0.66	31.70	100	36	Peak
2	44.04	21.54	-18.46	40.00	40.37	12.14	0.72	31.70	---	---	Peak
3	95.34	23.26	-20.24	43.50	43.97	9.85	1.14	31.70	---	---	Peak
4	623.40	22.26	-23.74	46.00	30.13	19.78	3.33	30.98	---	---	Peak
5	855.80	25.86	-20.14	46.00	29.58	22.99	3.98	30.70	---	---	Peak
6	937.00	27.04	-18.96	46.00	29.45	24.02	4.23	30.66	---	---	Peak
7	2388.09	47.51	-26.49	74.00	44.42	32.02	5.46	34.38	100	4	Peak
8	2388.09	34.57	-19.43	54.00	31.48	32.02	5.46	34.38	100	4	Average
9 X	2441.00	100.34			97.26	32.06	5.41	34.39	100	4	Peak
10 X	2441.00	88.63			85.55	32.06	5.41	34.39	100	4	Average
11 X	2462.00	102.80			99.72	32.07	5.40	34.39	100	49	Peak
12 @	2462.00	92.42			89.34	32.07	5.40	34.39	100	49	Average
13	2483.50	67.22	-6.78	74.00	64.15	32.09	5.38	34.40	100	4	Peak
14	2483.50	46.02	-7.98	54.00	42.95	32.09	5.38	34.40	100	4	Average
15	8322.00	53.85	-20.15	74.00	43.43	35.67	10.06	35.30	100	281	Peak
16	8322.00	40.65	-13.35	54.00	30.22	35.67	10.06	35.30	100	281	Average

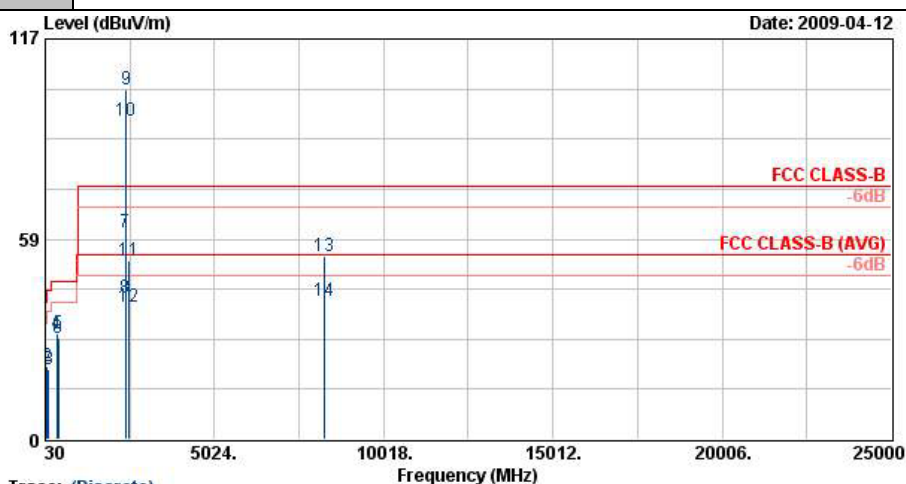
Test Mode :	Mode 4	Temperature :	24~26°C
Test Channel :	802.11b CH11 + BT CH39	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 ~ #12 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : 3m SHF-EHF HORN VERTICAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	34.05	26.10	-13.90	40.00	39.39	17.74	0.67	31.70	---	Peak
2	43.77	26.23	-13.77	40.00	45.07	12.14	0.72	31.70	100	57 Peak
3	155.82	23.41	-20.09	43.50	42.22	11.34	1.49	31.64	---	Peak
4	788.60	25.11	-20.89	46.00	30.14	21.88	3.82	30.72	---	Peak
5	859.30	26.26	-19.74	46.00	29.98	22.98	4.00	30.70	---	Peak
6	940.50	27.55	-18.45	46.00	29.83	24.14	4.24	30.66	---	Peak
7	2389.61	46.13	-27.87	74.00	43.04	32.02	5.46	34.38	158	120 Peak
8	2389.61	33.02	-20.98	54.00	29.93	32.02	5.46	34.38	158	120 Average
9 X	2441.00	94.72			91.64	32.06	5.41	34.39	100	135 Peak
10 X	2441.00	83.24			80.16	32.06	5.41	34.39	100	135 Average
11 X	2462.00	101.73			98.65	32.07	5.40	34.39	158	120 Peak
12 @	2462.00	91.05			87.97	32.07	5.40	34.39	158	120 Average
13	2483.50	62.64	-11.36	74.00	59.57	32.09	5.38	34.40	158	120 Peak
14	2483.50	39.63	-14.37	54.00	36.56	32.09	5.38	34.40	158	120 Average
15	8898.00	53.81	-20.19	74.00	42.87	36.02	10.31	35.38	100	182 Peak
16	8898.00	40.52	-13.48	54.00	29.57	36.02	10.31	35.38	100	182 Average

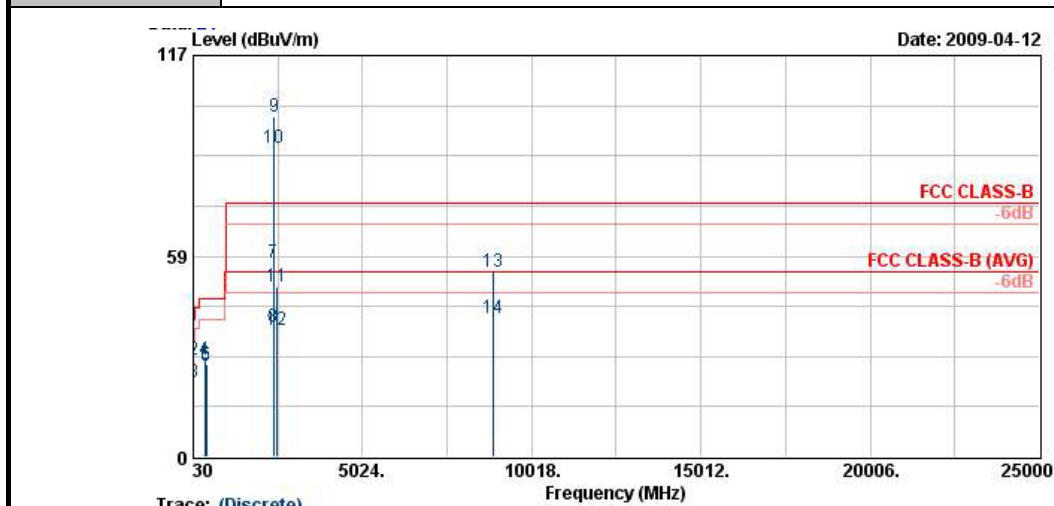
Test Mode :	Mode 5	Temperature :	24~26°C
Test Channel :	01	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 8O2323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	30.81	29.84	-10.16	40.00	41.53	19.36	0.65	31.70	100	76 Peak
2	89.94	21.47	-22.03	43.50	42.86	9.20	1.11	31.70	---	---
3	133.14	20.50	-23.00	43.50	38.55	12.24	1.38	31.67	---	---
4	363.00	30.68	-15.32	46.00	44.04	15.51	2.41	31.27	---	---
5	393.80	31.05	-14.95	46.00	43.48	16.26	2.52	31.21	---	---
6	425.30	29.50	-16.50	46.00	41.10	16.87	2.70	31.17	---	---
7	2388.85	60.56	-13.44	74.00	57.47	32.02	5.46	34.38	100	25 Peak
8	2388.85	41.47	-12.53	54.00	38.38	32.02	5.46	34.38	100	25 Average
9 X	2412.00	102.13			99.05	32.04	5.43	34.39	100	25 Peak
10 @	2412.00	93.27			90.18	32.03	5.44	34.38	100	25 Average
11	2486.00	52.35	-21.65	74.00	49.27	32.09	5.38	34.40	100	25 Peak
12	2486.00	38.80	-15.20	54.00	35.73	32.09	5.38	34.40	100	25 Average
13	8286.00	53.54	-20.46	74.00	43.14	35.66	10.04	35.30	100	138 Peak
14	8286.00	40.26	-13.74	54.00	29.86	35.66	10.04	35.30	100	138 Average

Test Mode :	Mode 5	Temperature :	24~26°C
Test Channel :	01	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		

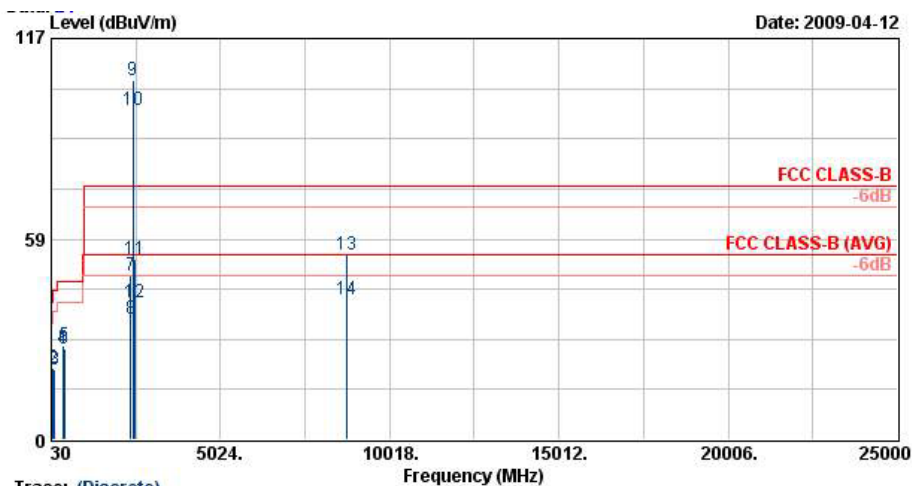


Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV		dB		deg	
1	30.81	30.43	-9.57	40.00	42.12	19.36	0.65	31.70	106	Peak
2	37.02	28.37	-11.63	40.00	43.33	16.04	0.70	31.70	---	Peak
3	43.50	21.81	-18.19	40.00	40.65	12.14	0.72	31.70	---	Peak
4	363.00	28.14	-17.86	46.00	41.50	15.51	2.41	31.27	---	Peak
5	393.80	26.73	-19.27	46.00	39.16	16.26	2.52	31.21	---	Peak
6	425.30	26.92	-19.08	46.00	38.53	16.87	2.70	31.17	---	Peak
7	2388.85	56.43	-17.57	74.00	53.34	32.02	5.46	34.38	162	Peak
8	2388.85	37.73	-16.27	54.00	34.64	32.02	5.46	34.38	162	Average
9 X	2412.00	98.99			95.91	32.04	5.43	34.39	162	Peak
10 @	2412.00	90.06			86.97	32.03	5.44	34.38	162	Average
11	2486.00	49.39	-24.61	74.00	46.31	32.09	5.38	34.40	162	Peak
12	2486.00	36.77	-17.23	54.00	33.70	32.09	5.38	34.40	162	Average
13	8901.00	53.74	-20.26	74.00	42.80	36.02	10.31	35.38	100	Peak
14	8901.00	40.49	-13.51	54.00	29.54	36.02	10.31	35.38	100	Average



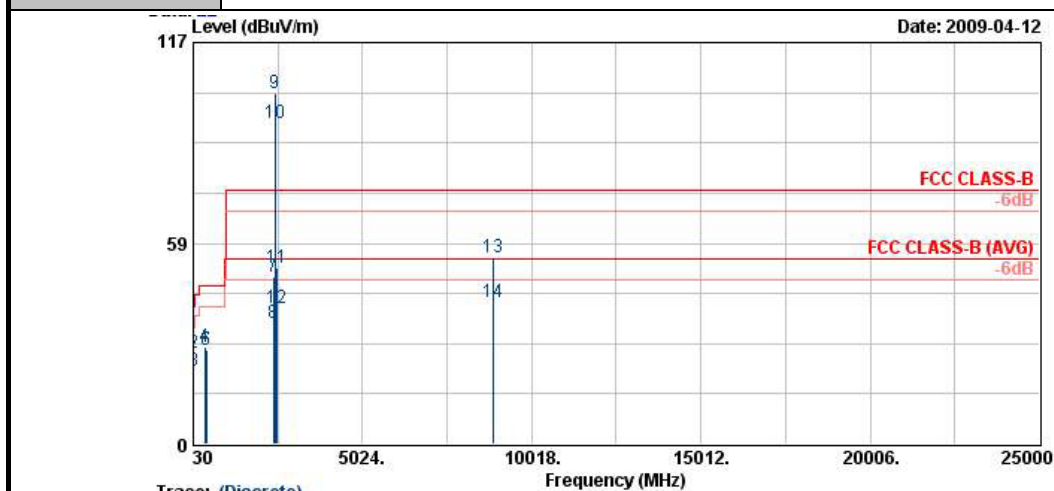
Test Mode :	Mode 6	Temperature :	24~26°C
Test Channel :	06	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	30.81	33.65	-6.35	40.00	45.34	19.36	0.65	31.70	127	Peak
2	89.13	20.99	-22.51	43.50	42.55	9.04	1.10	31.70	---	Peak
3	128.82	20.33	-23.17	43.50	38.36	12.28	1.36	31.67	---	Peak
4	363.00	26.66	-19.34	46.00	40.03	15.51	2.41	31.27	---	Peak
5	393.80	27.37	-18.63	46.00	39.80	16.26	2.52	31.21	---	Peak
6	425.30	26.38	-19.62	46.00	37.99	16.87	2.70	31.17	---	Peak
7	2374.00	47.86	-26.14	74.00	44.76	32.00	5.47	34.38	122	16 Peak
8	2374.00	35.25	-18.75	54.00	32.15	32.00	5.47	34.38	122	16 Average
9 X	2437.00	105.04			101.96	32.06	5.41	34.39	122	16 Peak
10 @	2437.00	96.12			93.04	32.06	5.41	34.39	122	16 Average
11	2484.00	52.81	-21.19	74.00	49.73	32.09	5.38	34.40	122	16 Peak
12	2484.00	39.95	-14.05	54.00	36.88	32.09	5.38	34.40	122	16 Average
13	8742.00	54.04	-19.96	74.00	43.25	35.89	10.25	35.35	100	96 Peak
14	8742.00	40.98	-13.02	54.00	30.19	35.89	10.25	35.35	100	96 Average

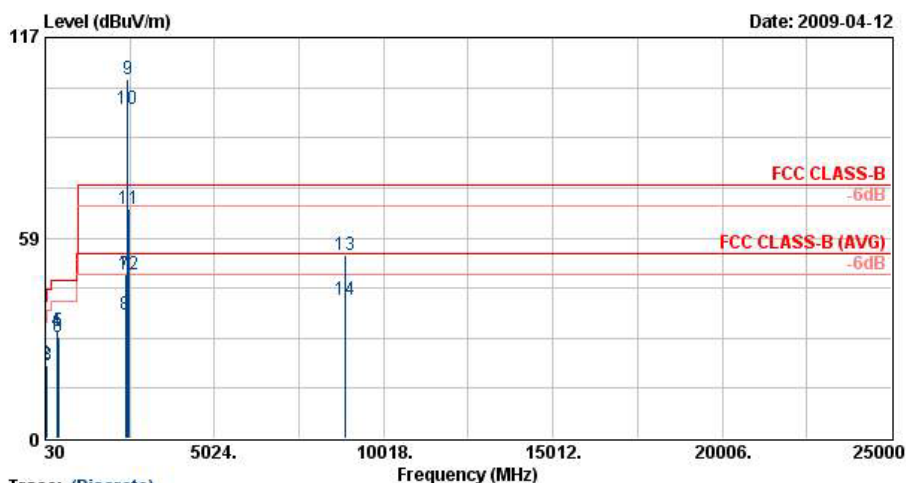
Test Mode :	Mode 6	Temperature :	24~26°C
Test Channel :	06	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	30.81	32.22	-7.78	40.00	43.91	19.36	0.65	31.70	100	292 Peak
2	35.13	26.48	-13.52	40.00	40.30	17.20	0.68	31.70	---	Peak
3	42.69	21.22	-18.78	40.00	39.51	12.68	0.72	31.70	---	Peak
4	363.00	28.42	-17.58	46.00	41.78	15.51	2.41	31.27	---	Peak
5	393.80	27.42	-18.58	46.00	39.85	16.26	2.52	31.21	---	Peak
6	425.30	27.29	-18.71	46.00	38.90	16.87	2.70	31.17	---	Peak
7	2390.00	48.70	-25.30	74.00	45.61	32.02	5.46	34.38	112	69 Peak
8	2390.00	35.37	-18.63	54.00	32.28	32.02	5.46	34.38	112	69 Average
9 X	2437.00	102.31	---	---	99.23	32.06	5.41	34.39	112	69 Peak
10 @	2437.00	93.45	---	---	90.37	32.06	5.41	34.39	112	69 Average
11	2484.00	51.25	-22.75	74.00	48.17	32.09	5.38	34.40	112	69 Peak
12	2484.00	39.39	-14.61	54.00	36.32	32.09	5.38	34.40	112	69 Average
13	8862.00	54.35	-19.65	74.00	43.45	35.98	10.29	35.37	100	203 Peak
14	8862.00	41.12	-12.88	54.00	30.22	35.98	10.29	35.37	100	203 Average

Test Mode :	Mode 7	Temperature :	24~26°C
Test Channel :	11	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		

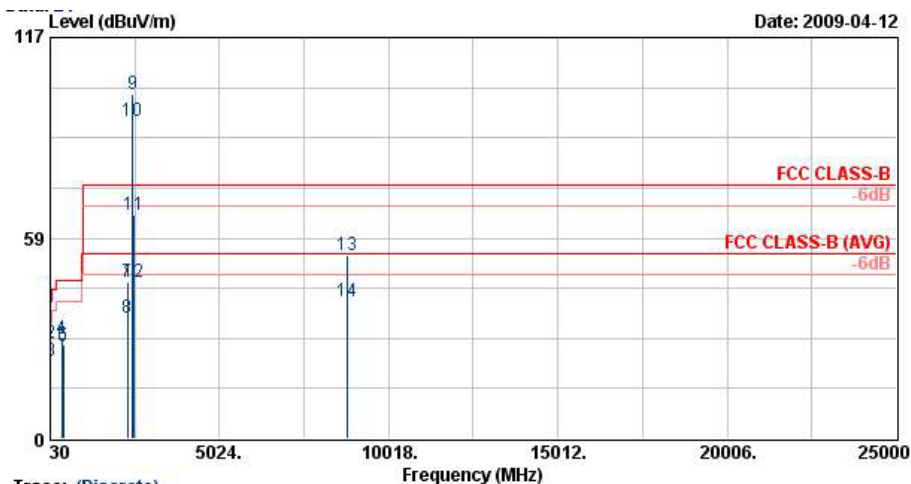


Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 802323

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV		dB		deg	
1	30.54	30.87	-9.13	40.00	42.57	19.36	0.65	31.70	156	Peak
2	34.86	21.72	-18.28	40.00	35.54	17.20	0.68	31.70	---	Peak
3	89.13	21.32	-22.18	43.50	42.88	9.04	1.10	31.70	---	Peak
4	363.00	31.35	-14.65	46.00	44.72	15.51	2.41	31.27	---	Peak
5	393.80	31.31	-14.69	46.00	43.74	16.26	2.52	31.21	---	Peak
6	425.30	29.51	-16.49	46.00	41.11	16.87	2.70	31.17	---	Peak
7	2388.00	48.04	-25.96	74.00	44.94	32.02	5.46	34.38	100	18 Peak
8	2388.00	36.24	-17.76	54.00	33.15	32.02	5.46	34.38	100	18 Average
9 X	2462.00	104.65			101.57	32.07	5.40	34.39	100	18 Peak
10 @	2462.00	95.94			92.86	32.07	5.40	34.39	100	18 Average
11	2483.50	66.97	-7.03	74.00	63.90	32.09	5.38	34.40	100	18 Peak
12	2483.50	47.71	-6.29	54.00	44.64	32.09	5.38	34.40	100	18 Average
13	8877.00	53.63	-20.37	74.00	42.71	35.99	10.30	35.37	100	164 Peak
14	8877.00	40.27	-13.73	54.00	29.35	35.99	10.30	35.37	100	164 Average



Test Mode :	Mode 7	Temperature :	24~26°C
Test Channel :	11	Relative Humidity :	41~45%
Test Engineer :	Kai Wang	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored.		



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
Project : FR 802323

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	29.96	-10.04	40.00	41.12	19.90	0.64	31.70	100	183	Peak
2	35.94	28.02	-11.98	40.00	42.41	16.62	0.69	31.70	---	---	Peak
3	43.50	22.69	-17.31	40.00	41.53	12.14	0.72	31.70	---	---	Peak
4	363.00	28.97	-17.03	46.00	42.33	15.51	2.41	31.27	---	---	Peak
5	393.80	27.02	-18.98	46.00	39.45	16.26	2.52	31.21	---	---	Peak
6	425.30	27.55	-18.45	46.00	39.15	16.87	2.70	31.17	---	---	Peak
7	2310.00	45.67	-28.33	74.00	42.56	31.95	5.53	34.36	108	70	Peak
8	2310.00	35.09	-18.91	54.00	31.97	31.95	5.53	34.36	108	70	Average
9 X	2462.00	100.67			97.59	32.07	5.40	34.39	108	70	Peak
10 @	2462.00	92.50			89.42	32.07	5.40	34.39	108	70	Average
11	2483.50	65.14	-8.86	74.00	62.07	32.09	5.38	34.40	108	70	Peak
12	2483.50	45.50	-8.50	54.00	42.43	32.09	5.38	34.40	108	70	Average
13	8793.00	53.51	-20.49	74.00	42.67	35.93	10.27	35.36	100	293	Peak
14	8793.00	40.21	-13.79	54.00	29.37	35.93	10.27	35.36	100	293	Average

3.8 Antenna Requirements

3.8.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.8.2 Antenna Connected Construction

The antennas type used in this product is stamped metal monopole antenna without connector and it is considered to meet antenna requirement.

3.8.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 26, 2008	Jun. 25, 2009	Conducted (TH02-HY)
Power Meter	R&S	NRP	101118	N/A	Oct. 25, 2008	Oct. 24, 2009	Conducted (TH02-HY)
Power Sensor	R&S	NRP-Z81	100050	N/A	Oct. 25, 2008	Oct. 24, 2009	Conducted (TH02-HY)
EMI Receiver	R&S	ESCS 30	100356	9kHz~2.75GHz	Aug. 01, 2008	Jul. 31, 2009	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kHz~30MHz	Nov. 26, 2008	Nov. 25, 2009	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz~30MHz	Nov. 26, 2008	Nov. 25, 2009	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz~1GHz	Nov. 20, 2008	Nov. 19, 2009	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9kHz~30GHz	Dec. 02, 2008	Dec. 01, 2009	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1G~18GHz	Aug. 13, 2008	Aug. 12, 2009	Radiation (03CH07-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	BBHA9170251	15G - 40GHz	Oct. 16, 2008	Oct. 15, 2009	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1G~26.5GHz	Dec. 17, 2008	Dec. 16, 2009	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10~1000MHz. 32dB.GAIN	Mar. 27, 2009	Mar. 26, 2010	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	66584	1G~18GHz	Aug. 06, 2008	Aug. 05, 2009	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	May 22, 2008	May 21, 2010	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
Combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
Combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	± 0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	± 1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	± 0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	± 2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	± 1.50	Rectangular	0.87	1	0.87
Site imperfection	± 2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				

6 Certification of TAF Accreditation



Certificate No. : L1190-090318

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,
Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	: ISO/IEC 17025:2005
Accreditation Number	: 1190
Originally Accredited	: December 15, 2003
Effective Period	: January 10, 2007 to January 09, 2010
Accredited Scope	: Testing Field, see described in the Appendix
Specific Accreditation Program	: Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities



Jay-San Chen
President, Taiwan Accreditation Foundation
Date : March 18, 2009

P1, total 19 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix



Appendix A. Photographs of EUT

Please refer to Sporton report number EP8O2323 as below.