

Reference No.: A09040901 Report No.: FCC A09040901

FCCID: XJ8-BT-232B

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Date: Apr. 14, 2009

Product Name:

Bluetooth RS-232 Adapter

Model Number:

BT-232B

Applicant:

Uconnect International Co., Ltd.

13F., No.368, Sec. 1, Fuxing S. Rd., Taipei City 106,

Taiwan (R.O.C)

Date of Receipt:

Apr. 09, 2009 Apr. 14, 2009

Finished date of Test: Applicable Standards:

47 CFR Part 15, Subpart C

ANSI C63.4:2003

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Checked By :

Kunter Jin

Date:

Apr. 14, 2009

Approved By:

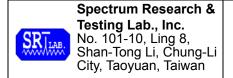
( Johnson Ho, Director )

Date:

4/14/2009

NATVÓ

Lab Code: 200099-0



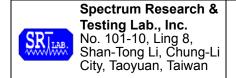
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### 1. DOCUMENT POLICY AND TEST STATEMENT

### 1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.
- The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

### 1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- AC power source, 120 VAC/60 Hz, was used during the test.

#### 1.3 EUT MODIFICATION

- No modification in SRT Lab.



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### 2. DESCRIPTION OF EUT AND TEST MODE

## 2.1 GENERAL DESCRIPTION OF EUT

Product	Bluetooth RS-232 Adapter
Model No.	BT-232B
Power Supply	PC USB Port, DC 5.0V~6.0V, 90 mA
Frequency Band	2400-2483.5 MHz
Number of Channel	79
Channel Spacing	1 MHz
Rated RF Output Power	94.3 dBuV/m@2480MHz
Modulation Type	GFSK
Bit Rate of Transmission	3Mbp/s
Mode of Operation	Duplex.
Antenna Gain	1.2 dBi
<b>Operating Temperature Range</b>	-20°C to +75°C
Channel Bandwidth	1 MHz
Antenna Type	PCB Printing
<b>Duty Cycle</b>	50 %
Carrier Frequency	2402-2480 MHz

#### NOTE:

For more detailed information, please refer to the EUT's specification or user's manual provided by manufacturer.

### 2.2 DESCRIPTION OF SUPPORT UNIT

The transmitter part of EUT was tested with a Notebook and configured by the requirement of ANSI C63.4. All interface ports were connected to the appropriate support units via specific cables. The support units and cables are listed below.

No	Device	Brand	Model #	FCC ID/DoC	Cable
1	NoteBook	COMPAQ	1525AP	DOC	power cable 2.0m (unshielding)
2	Dongle	ASUS	WL-BTD202	DOC	NA
3	NoteBook	COMPAQ	HSTNN-Q09C	DOC	Power cable 2.0m(shielding)

**NOTE**: For the actual test configuration, please refer to the photos of testing.



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## 2.3 DESCRIPTION OF TEST MODE

79 channels are provided by EUT. Three channels of lower, medium and higher were chosen for test.

Channel	Frequency (MHz)
00	2402
39	2441
78	2480

#### NOTE:

- 1. Below 1 GHz, the channel 0, 39 and 78 were pre-tested in chamber.
- 2. Above 1 GHz, the channel 0, 39 and 78 were tested individually.

### 3. DESCRIPTION OF APPLIED STANDARDS

The EUT is a kind of wireless product and to be connected with a PC system for normal use. According to the specifications provided by the applicant, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C ANSI C63.4: 2003

All tests have been performed and recorded as the above standards.



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#### 4. TECHNICAL CHARACTERISTICS TEST

### 4.1 CHANNEL SEPARATION TEST

#### 4.1.1 **LIMIT**

FCC Part15, Subpart C Section 15.247(a)(1). Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Frequency Range (MHz)	Limit(kHz)
902-928	>25kHz
2400-2483.5	>25kHz
5725-5850	>25kHz

### 4.1.2 TEST EQUIPMENT

The following test equipment was used during the radiated emission test:

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM	9kHz-40GHz	ROHDE &	FSP40/	SEP. 2009
SPECTRUM	9KHZ-4UGHZ	SCHWARZ	100093	ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

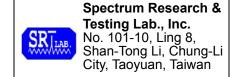
#### 4.1.3 TEST SET-UP



The EUT was connected to a spectrum through a  $50\Omega$  RF cable.

### 4.1.4 TEST PROCEDURE

The EUT was operating in hopping mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.



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### 4.1.5 EUT OPERATING CONDITION

- 1. Set the EUT under transmission condition continuously at a specific channel frequency.
- 2. The EUT was set to the highest available power level.

### 4.1.6 TEST RESULT

Temperature:	25°C	Humidity:	63%RH
Spectrum Detector:	PK	Tested by:	Kunter Jin
Test Result:	PASS	Tested Date:	Apr.11,2009

Channel Number	Channel Frequency (MHz)	Separation Read Value (kHz)	Minimum Limit(20dB Bandwidth) (kHz)
00	2402	976.000	25
39	2441	1004.000	25
78	2480	1000.000	25



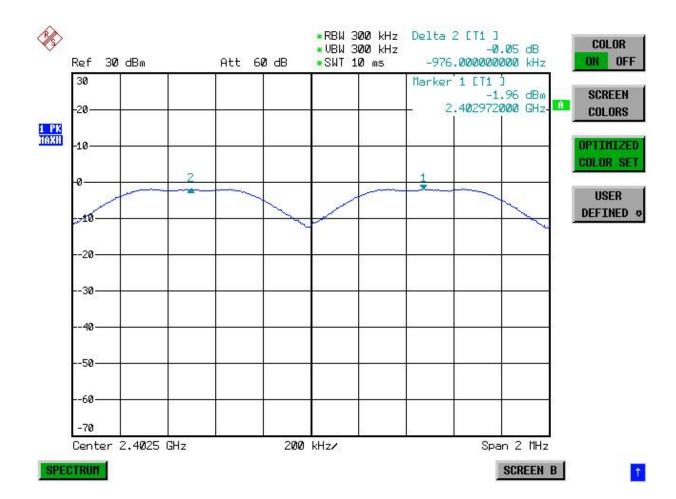
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### CH00:



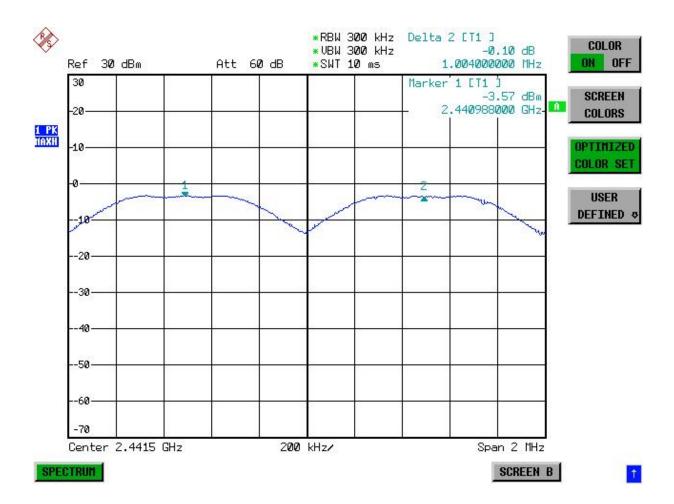


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### CH39:



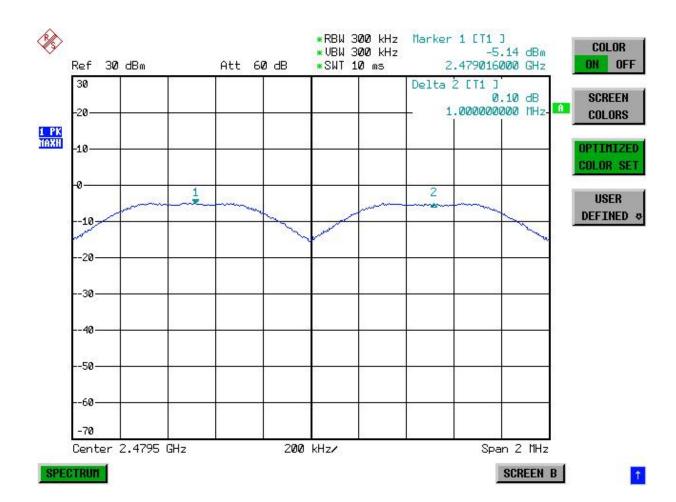


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#### 4.2 20dB Bandwidth

#### 4.2.1 **LIMIT**

	Limit(kHz)				
Frequency Range (MHz)	Quantity of Hopping Channel	50	25	15	75
902-	-928	<250	>250	NA	NA
2400-2	2483.5	NA	NA	>1000	<1000

### 4.2.2 TEST EQUIPMENT

The following test equipment was used during the test:

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. center
CDECTDUM	0kH= 40CH=	ROHDE &	FSP40/	SEP. 2009
SPECTRUM	9kHz-40GHz	SCHWARZ	100093	ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

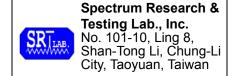
### 4.2.3 TEST SET-UP



The EUT was connected to a spectrum through a 50  $\Omega$  RF cable.

### 4.2.4 TEST PROCEDURE

The EUT was operated in hopping mode or any specific channel. Printed out the test result from the spectrum by hard copy function.



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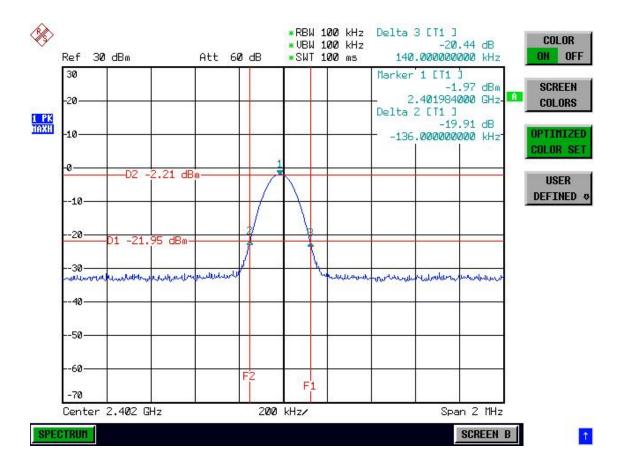
Date : Apr. 14, 2009

### 4.2.5 TEST RESULT

Temperature:25°CHumidity:63%RHSpectrum Detector:PKTested by:Kunter JinTest Result:PASSTested Date:Apr. 11, 2009

Channel Number	Channel Frequency (MHz)	20dB Down Bandwidth (KHz)
0	2402	276
39	2441	280
78	2480	280

### CH00:





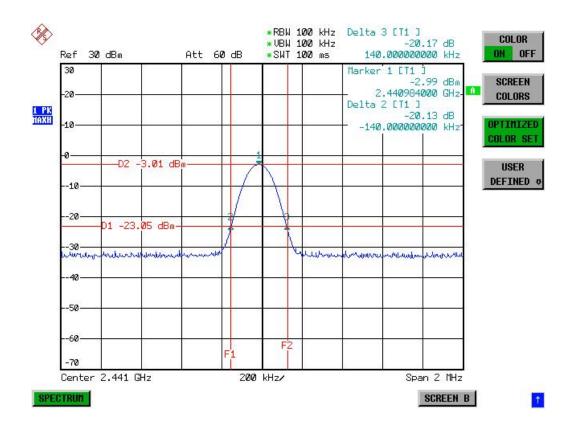
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### CH39:





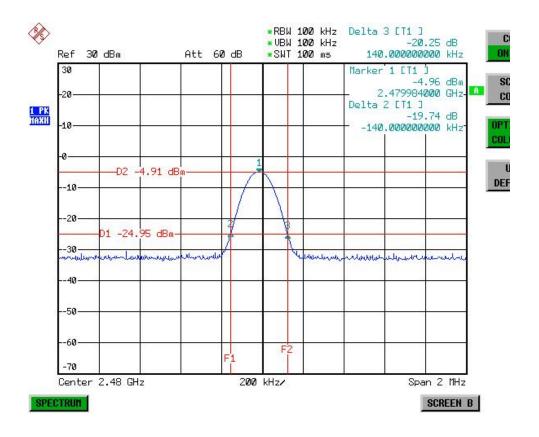
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### 4.3 QUANTITY OF HOPPING CHANNEL TEST

#### 4.3.1 LIMIT

FCC Part15, Subpart C Section 15.247.

Frequency	Limit (Quantity of Hopping Channel)				
Range (MHz)	20dB Bandwidth <250kHZ	20dB Bandwidth >250kHZ	20dB Bandwidth <1MHz	20dB Bandwidth >1MHz	
902-928	50	25	N/A	N/A	
2400-2483.5	N/A	N/A	75	15	
5725-5850	N/A	N/A	75	N/A	

### 4.3.2 TEST EQUIPMENT

The following test equipment was used during the test:

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM 9kHz-40	OVU- 400U-	ROHDE &	FSP40/	SEP. 2009
	9KHZ-4UGHZ	SCHWARZ	100093	ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.3.3 TEST SET-UP



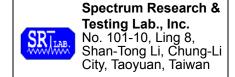
The EUT was connected to a spectrum through a  $50\Omega$  RF cable.

#### 4.3.4 TEST PROCEDURE

The EUT was operating in hopping mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

### 4.3.5 EUT OPERATING CONDITION

- 1. Set the EUT under frequency hopping transmission condition.
- 2. The EUT was set to the highest available power level.



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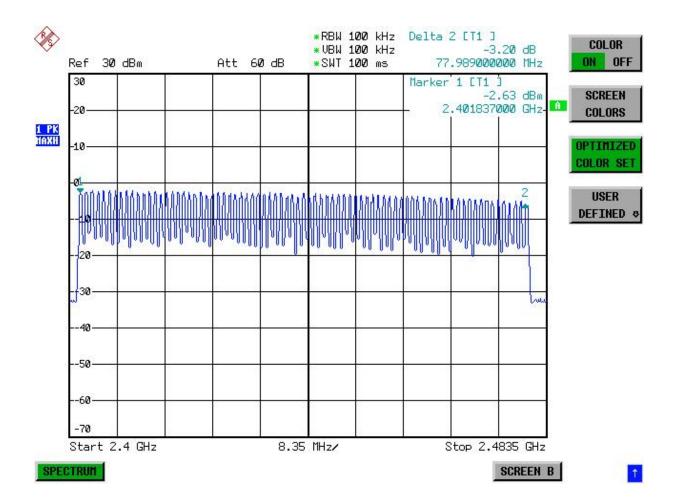
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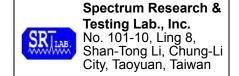
### 4.3.6 TEST RESULT

Temperature:25°CHumidity:63%RHSpectrum Detector:PKTested by:Kunter JinTest Result:PASSTested Date:Apr.11,2009

Hopping Channel Frequency Range(MHz)	Quantity of Hopping Channel Read Value	Quantity of Hopping Channel Limit
2402~2480	79	75

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### 4.4 TIME OF OCCUPANCY (Dwell Time)

#### 4.4.1 **LIMIT**

FCC Part15, Subpart C Section 15.247.

Frequency Range (MHz)		Limit (ms)	
	20dB Bandwidth <250kHZ(50Chan nel)	20dB Bandwidth >250kHZ(25Channel)	20dB Bandwidth <1MHz(75Channel)
902-928	400(20s)	400(10s)	NA
2400-2483.5	NA	NA	400(30s)
5725-5850	NA	NA	400(30s)

**NOTE:** The "()" is all channel's average time of occupancy.

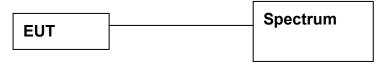
### 4.4.2 TEST EQUIPMENT

The following test equipment was used during the test:

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM	0kH- 40CH-	ROHDE &	FSP40/	SEP. 2009
SPECTRUM	ECTRUM 9kHz-40GHz	SCHWARZ	100093	ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.4.3 TEST SET-UP



The EUT was connected to a spectrum through a  $50\Omega$  RF cable.

#### 4.4.4 TEST PROCEDURE

The EUT was operating in hopping mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

### 4.4.5 EUT OPERATING CONDITION

Same as section 4.1.5 of this report.



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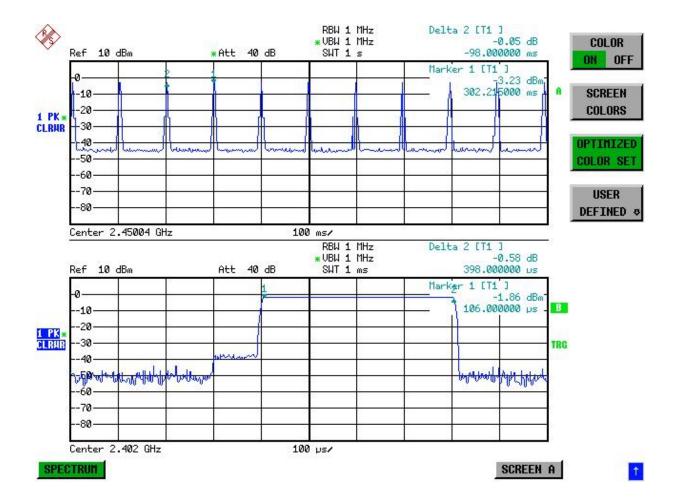
Date : Apr. 14, 2009

### 4.4.6 TEST RESULT

Temperature:25°CHumidity:63%RHSpectrum Detector:PKTested by:Kunter JinTest Result:PASSTested Date:Apr.11,2009

Channel Number	Channel Frequency (MHz)	Pulse Time (µs)	Time of Occupancy (Dwell Time) (ms)	Average Time of Occupancy Limit (ms)
0	2402.00	398	125.768	400
39	2441.00	382	120.832	400
78	2480.00	383	121.028	400

### CH00:



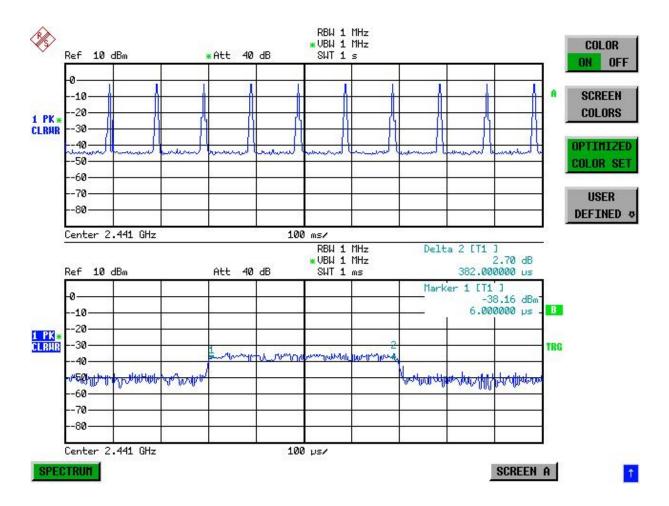


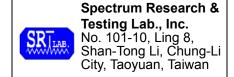
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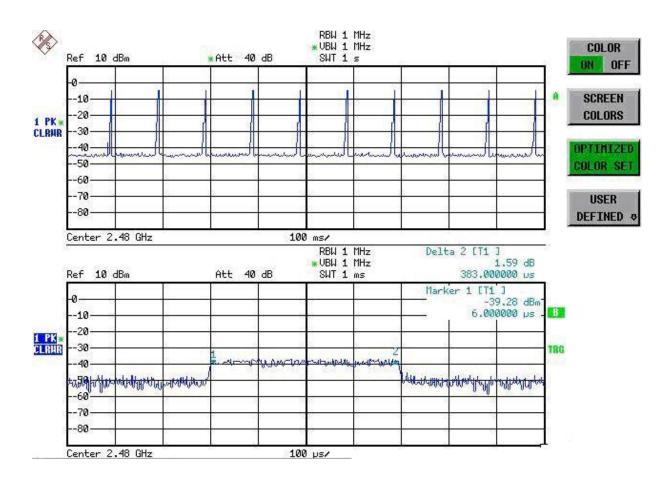
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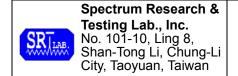
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### 4.5 PEAK POWER TEST

### 4.5.1 LIMIT

FCC Part15, Subpart C Section 15.247.

Frequency	Limit(w)					
Range (MHz)	Quantity of Hopping Channel	50	25	15	75	
902-9	928	1(30dBm)	0.125(21dBm)	NA	NA	
2400-2483.5		NA	NA	0.125(21dBm)	1(30dBm)	
5725-	5850	NA	NA	NA	1(30dBm)	

### 4.5.2 TEST EQUIPMENT

The following test equipment was used during the test:

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM	9kHz-40GHz	ROHDE &	FSP40/	SEP. 2009
SPECIRUM	9KHZ-40GHZ	SCHWARZ	HWARZ 100093	ETC
POWER METER	N/A	BOONTON	4232A/	MAY 2009
POWERIMETER	IN/A	BOONTON	29001 ETC	ETC
POWER SENSOR	DC-8GHz	BOONTON	51011EMC/	JUN. 2009
POWER SENSOR	50 Ω	BOONTON	31181	ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



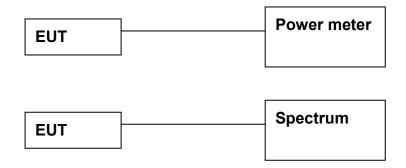
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### 4.5.3 TEST SET-UP



The EUT was connected to a spectrum through a 50  $\Omega$  RF cable.

### 4.5.4 TEST PROCEDURE

The EUT was operating in hopping mode or could control its channel. Printed out the test result from the spectrum by hard copy function. Recorded the read value of the power meter.

### 4.5.5 EUT OPERATING CONDITION

Same as section 4.1.5 of this report.

### 4.5.6 TEST RESULT

Temperature:	25°C	Humidity:	63%RH
Spectrum Detector:	PK	Tested by:	Kunter Jin
Test Result:	PASS	Tested Date:	Apr. 11, 2009

Channel Number	Channel Frequency (MHz)	Peak Output Power (dBm)	Peak Power Limit (dBm)
0	2402.0000	-0.33	30
39	2441.0000	-1.59	30
78	2480.0000	-3.49	30



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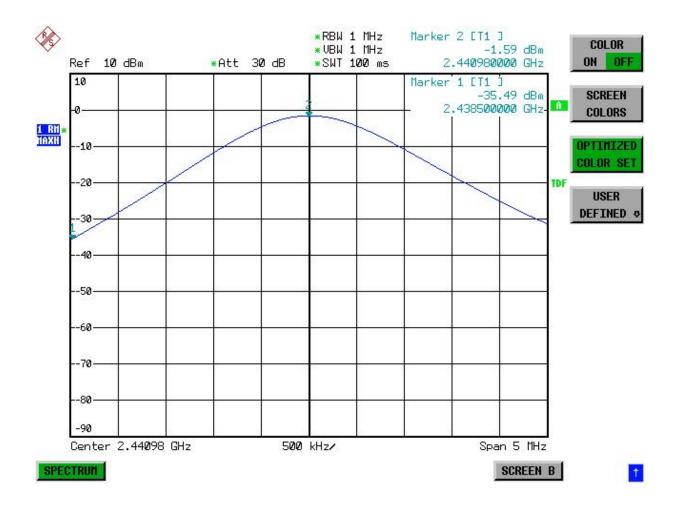
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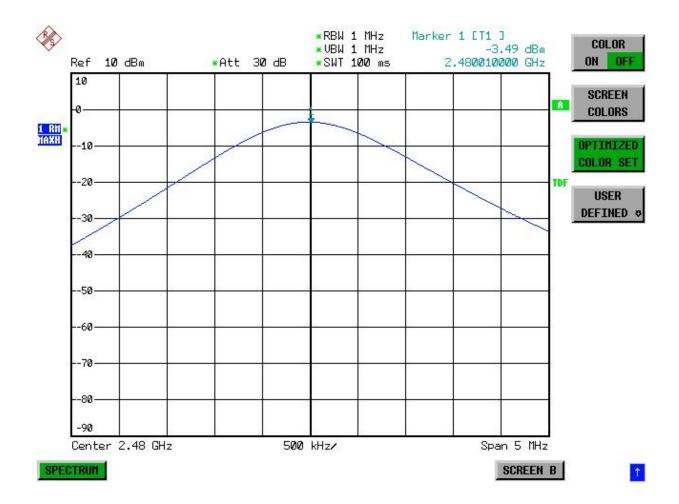
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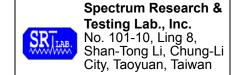
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#### 4.6 BAND EDGE TEST

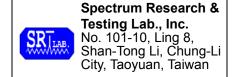
### 4.6.1 LIMIT

FCC Part15, Subpart C Section 15.249 (c), Emission radiated outside of the specified frequency bands, except for harmonics, shall attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Operating Frequency Range	Limit (dBµV/m)		
(MHz)	Peak	Average	
902-928			
2400-2483.5	74	54	
5725-5850			

FCC Part15, Subpart C Section 15.247. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

OPERATING	SPURIOUS EMISSION	LIMIT		
FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	Peak power ration to emission(dBc)	Emission level(dBuV/m)	
902 - 928	<902	>20	NA	
	>928	>20	NA	
	960-1240	NA	54	
2400 - 2483.5	<2400	>20	NA	
	>2483.5-2500	NA	54	
5725 - 5850	<5350-5460	NA	54	
	<5725	>20	NA	
	>5850	>20	NA	



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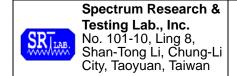
Date : Apr. 14, 2009

### 4.6.2 TEST EQUIPMENT

The following test equipment was used during the test:

Equipment/ Facilities	Specification	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
SPECTRUM	9kHz-40GHz	ROHDE &	FSP40/	SEP. 2009
SPECTRUM	9KHZ-40GHZ	SCHWARZ	100093	ETC
EMI TEST	9 kHz TO 2750	ROHDE &	ESCS30/	OCT. 2009
RECEIVER	MHz	SCHWARZ	830245/012	ETC
CDECTDUM	0811- 26 5011-	HP	8953E/	SEP 2009
SPECTRUM	9KHz-26.5GHz		3710A03220	ETC
DDE AMDUIEIED	1GHz-26.5GHz	LID	8449B/	NOV. 2009
PRE-AMPLIFIER	Gain:30dB	HP	3008A01019	ETC
BI-LOG	25 MHz TO	EMCO	3142/	FEB. 2010
ANTENNA	2 GHz	EMCO	9701-1124	SRT
LIODNI ANITENINIA	ODNI ANITENINIA (ACIDE LE ACCIDE		3115/	DEC. 2009
HORN ANTENNA	1GHz to 18GHz	EMCO	9602-4681	ETC
OATS	3 - 10 M	CDT	SRT-1	APR. 2010
OATS	measurement	SRT		SRT

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



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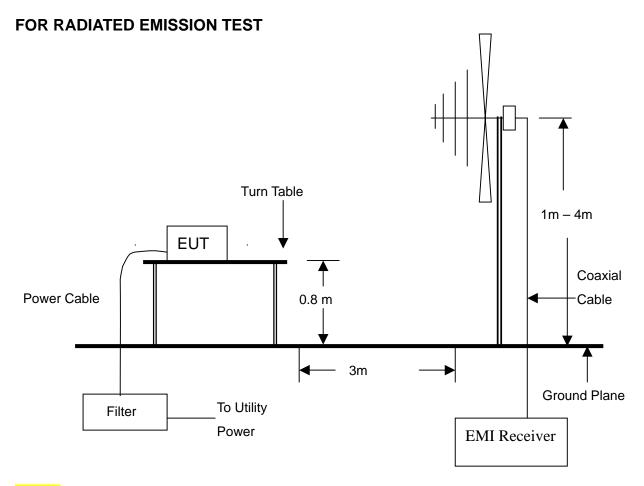
Date: Apr. 14, 2009

### 4.6.3 TEST SET-UP

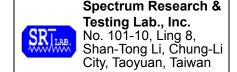
## FOR RF CONDUCTED TEST (dBc)



The EUT was connected to the spectrum through a 50  $\Omega$  RF cable.



- 1. The EUT system was put on a wooden table with 0.8m heights above a ground plane.
- 2. For the actual test configuration, please refer to the photos of testing.



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### 4.6.4 TEST PROCEDURE

- 1. The EUT was operating in hopping mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.
- 2. The EUT was tested according to the requirement of ANSI C63.4 and CISPR 22. The measurements were made at an open area test site with 3 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz. Under 1 GHz. All readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak and average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.

### 4.6.5 EUT OPERATING CONDITION

Same as section 4.1.5 of this report.

#### 4.6.6 TEST RESULT

Temperature:	25°C	Humidity:	63%RH
Spectrum Detector:	PK & AV	Tested by:	Kunter Jin
Test Result:	PASS	Tested Date:	Apr. 11, 2009

### 1.Conducted emission test

Frequency (MHz)	PEAK POWER OUTPUT (dBm)	Emission read Value (dBm)	Result of Band edge (dBc)	Band edge LIMIT (dBc)
<2400	-5.44	-54.36	48.92	>20dBc
>2483.5	-8.81	-53.92	45.11	>20dBc

### 2.Radiated emission test

Frequency (MHz)	Antenna polarization (H/V)	Reading (dBuV) Strength	Emission (dBuV/m) Strength	Band edge Limit (dBuV) Strength
<2400	Н	37.9	33.7	54.0
<2400	Н	36.1	31.9	54.0
>2483.5	V	33.3	29.3	54.0
>2483.5	V	37.9	33.9	54.0



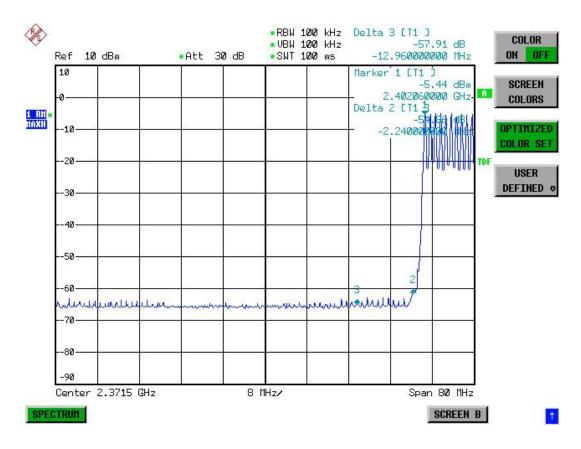
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### CH00:





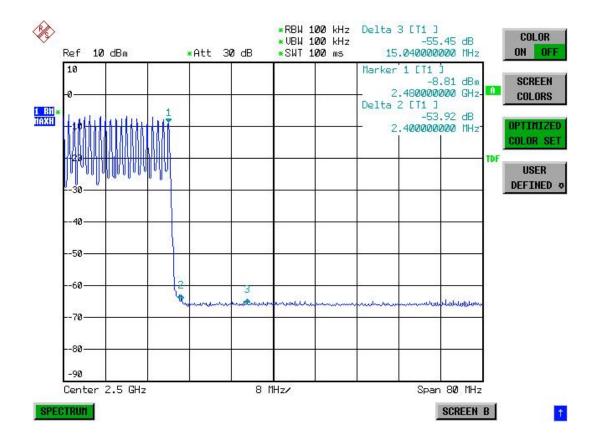
Reference No.: A09040901 Report No.: FCC A09040901

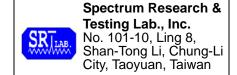
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### Ch78:





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### 4.7 FUNDERMENTAL & SPURIOUS RADIATED EMISSION TEST

#### 4.7.1 LIMIT

FCC Part15, Subpart C Section 15.209 limit of radiated emission for frequency below1000MHz. The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Distance (m)	Field Strength (dBμV/m)
30 - 88	3	40.0
88 - 216	3	43.5
216 - 960	3	46.0
ABOVE 960	3	54.0

- **NOTE**: 1. In the emission tables above, the tighter limit applies at the band edges.
  - 2. Distance refers to the distance between measuring instrument, antenna, and the closest point of any part of the device or system.

FCC Part 15, Section15.35(b) limit of radiated emission for frequency above 1000 MHz

Frequency (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
Frequency (MHZ)	Peak	Average	Peak	Average
Above 1000	80.0	60.0	74.0	54.0



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### 4.7.2 TEST EQUIPMENT

The following test equipment was used during the radiated emission test:

Equipment/ Facilities	Specification	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
EMI TEST RECEIVER	9kHz TO 2.75 GHz	ROHDE & SCHWARZ	ESCS30 / 830245/012	OCT. 2009 ETC
BI-LOG ANTENNA	26 MHz TO 2 GHz	EMCO	3142B / 0005-1534	NOV. 2009 ETC
OATS	3 – 10 M MEASUREMENT	SRT	SRT-1	NOV. 2009 SRT
COAXIAL CABLE	25M	TIMES	J400 / #25M	AUG. 2009 ETC
FILTER	2 LINE, 30A	FIL.COIL	FC-943 / 869	NCR
PRE-AMPLIFIER	1GHz-26.5GHz Gain:30dB	HP	8449B/ 3008A01019	NOV. 2009 ETC
BI-LOG ANTENNA	25 MHz TO 2 GHz	EMCO	3142/ 9701-1124	FEB. 2010 SRT

- 1. The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.
- 2. The Open Area Test Site (SRT-1) is registered by FCC with No. 90957 and VCCI with No. R-1081.
- 3. The Open Area Test Site (SRT-2) is registered by FCC with No. 98458 and VCCI with No. R-1168.



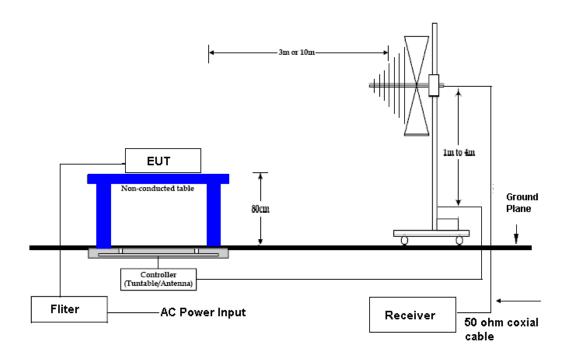
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### 4.7.3 TEST SET-UP



- 1. The EUT system was put on a wooden table with 0.8m heights above a ground plane.
- 2. For the actual test configuration, please refer to the photos of testing.



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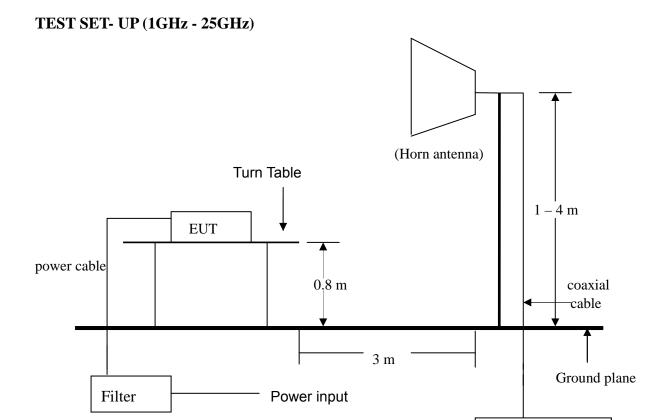
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Pre-amplifier

Spectrum analyzer



- 1. The EUT system was put on a wooden table with 0.8m heights above a ground plane.
- 2. For the actual test configuration, please refer to the photos of testing.



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#### 4.7.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.4 and CISPR 22. The measurements were made at an open area test site with 3 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz. Under 1 GHz. All readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak and average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency.

#### 4.7.5 EUT OPERATING CONDITION

Same as section 4.1.5 of this report.



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#### 4.7.6 TEST RESULT

Temperature: 22°C Humidity: 67 %RH

Frequency Range: 30 – 1000 MHz Measured Distance: 3m

Receiver Detector: Q.P. Tested Mode: Standby

Tested By: Kunter Jin Tested Date: Apr. 11, 2009

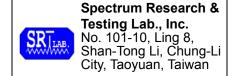
Antenna Polarization: Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
453.8360	2.98	16.89	10.5	30.4	46.0	-15.6	205	2.40
571.0125	3.69	18.71	11.2	33.6	46.0	-12.4	136	2.20
680.3371	4.31	20.80	4.9	30.0	46.0	-16.0	94	2.30
772.4916	4.65	21.34	10.0	36.0	46.0	-10.0	103	1.50
840.3951	4.69	22.52	2.9	30.1	46.0	-15.9	351	1.85
942.2743	4.88	23.07	6.1	34.1	46.0	-11.9	12	1.71

Antenna Polarization: Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
453.8360	2.98	16.89	10.5	30.4	46.0	-15.6	51	1.40
571.0125	3.69	18.71	11.2	33.6	46.0	-12.4	226	1.20
680.3371	4.31	20.80	4.9	30.0	46.0	-16.0	155	1.60
772.4916	4.65	21.34	10.0	36.0	46.0	-10.0	38	1.35
840.3951	4.69	22.52	2.9	30.1	46.0	-15.9	349	1.48
942.2743	4.88	23.07	6.1	34.1	46.0	-11.9	135	1.27

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": Measurement does not apply for this frequency.
- 3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
- 4. The field strength of other emission frequencies were very low agains the limit.



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Temperature: 32°C Humidity: 68 %RH

Frequency Range: 30 – 1000 MHz Measured Distance: 3m Receiver Detector: Q.P. Tested Mode: Link

Tested By: Kunter Jin Tested Date: Apr. 11, 2009

Antenna Polarization: Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
39.3494	0.89	9.91	13.9	24.7	40.0	-15.3	355	2.50
136.5575	1.70	11.28	13.6	26.6	43.5	-16.9	27	1.99
680.1953	4.31	20.80	14.8	39.9	46.0	-6.1	342	1.81
772.5725	4.65	21.34	11.1	37.1	46.0	-8.9	5	1.72
840.3153	4.69	22.52	12.8	40.0	46.0	-6.0	338	1.58
973.1430	5.07	22.23	6.9	34.2	54.0	-19.8	348	1.39

### Antenna Polarization: Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
39.0846	0.89	9.91	11.6	22.4	40.0	-17.6	17	1.79
284.0155	2.64	13.27	11.1	27.0	46.0	-19.0	340	1.62
571.2052	3.69	18.71	16.7	39.1	46.0	-6.9	155	1.58
680.2162	4.31	20.80	11.3	36.4	46.0	-9.6	351	1.42
840.1705	4.69	22.52	10.4	37.6	46.0	-8.4	97	1.33
972.9941	5.07	22.26	7.1	34.4	54.0	-19.6	82	1.25

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": Measurement does not apply for this frequency.
- 3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
- 4. The field strength of other emission frequencies were very low against the limit.



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Temperature: 32°C Humidity: 68%RH

Frequency Range: 30 – 1000 MHz Measured Distance: 3m

Receiver Detector: Q.P. Tested Mode: TX\_2402MHz
Tested By: Kunter Jin Tested Date: Apr. 11, 2009

Antenna Polarization: Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
453.8360	2.98	16.89	10.5	30.4	46.0	-15.6	86	2.90
571.0125	3.69	18.71	11.2	33.6	46.0	-12.4	148	2.50
680.3371	4.31	20.80	4.9	30.0	46.0	-16.0	25	2.20
772.4916	4.65	21.34	10.0	36.0	46.0	-10.0	99	1.80
840.3951	4.69	22.52	2.9	30.1	46.0	-15.9	279	1.60
942.2743	4.88	23.07	6.1	34.1	46.0	-11.9	234	1.20

Antenna Polarization: Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
136.3041	1.70	11.28	20.5	33.5	43.5	-10.0	86	1.50
174.0456	1.82	8.97	13.2	24.0	43.5	-19.5	148	1.61
308.2234	2.49	14.27	7.1	23.9	46.0	-22.1	25	1.38
642.1264	4.61	20.04	6.1	30.8	46.0	-15.2	99	1.45
840.1257	4.69	22.52	2.9	30.1	46.0	-15.9	279	1.25
917.2018	4.77	23.74	6.9	35.4	46.0	-10.6	234	1.18

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": Measurement does not apply for this frequency.
- 3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
- 4. The field strength of other emission frequencies were very low against the limit.



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Temperature: 32°C Humidity: 68%RH

Frequency Range: 30 – 1000 MHz Measured Distance: 3m

Receiver Detector: Q.P. Tested Mode: TX\_2441MHz

Tested By: Kunter Jin Tested Date: Apr. 11, 2009

Antenna Polarization: Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
68.5454	1.13	5.58	21.5	28.2	40.0	-11.8	83	4.00
286.0197	2.65	13.37	12.6	28.6	46.0	-17.4	18	3.50
308.5471	2.49	14.27	7.2	24.0	46.0	-22.0	120	3.40
642.0066	4.61	20.04	13.1	37.8	46.0	-8.2	169	2.40
840.1024	4.69	22.52	2.0	29.2	46.0	-16.8	209	1.60
917.2018	4.77	23.74	6.9	35.4	46.0	-10.6	230	1.20

Antenna Polarization: Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
136.3041	1.70	11.28	20.5	33.5	43.5	-10.0	101	1.20
174.0456	1.82	8.97	13.2	24.0	43.5	-19.5	162	1.30
308.2234	2.49	14.27	7.1	23.9	46.0	-22.1	219	1.60
642.1264	4.61	20.04	6.1	30.8	46.0	-15.2	331	2.50
840.1257	4.69	22.52	2.9	30.1	46.0	-15.9	171	3.40
917.1118	4.77	23.74	6.9	35.4	46.0	-10.6	33	3.50

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": Measurement does not apply for this frequency.
- 3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
- 4. The field strength of other emission frequencies were very low against the limit.



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Temperature: 32°C Humidity: 68%RH

Frequency Range: 30 – 1000 MHz Measured Distance: 3m

Receiver Detector: Q.P. Tested Mode: TX\_2480MHz
Tested By: Kunter Jin Tested Date: Apr. 11, 2009

Antenna Polarization: Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
68.1540	1.13	5.58	20.5	27.2	40.0	-12.8	82	4.00
286.1197	2.65	13.37	12.2	28.2	46.0	-17.8	108	3.50
308.3371	2.49	14.27	7.9	24.7	46.0	-21.3	20	3.40
642.6565	4.61	20.04	12.0	36.7	46.0	-9.3	69	2.40
840.3951	4.69	22.52	2.5	29.7	46.0	-16.3	239	1.60
917.7522	4.77	23.74	6.4	34.9	46.0	-11.1	233	1.20

Antenna Polarization: Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Reading Data (dBµV)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	AZ(°)	EL(m)
136.1455	1.70	11.28	21.5	34.5	43.5	-9.0	107	1.20
174.0456	1.82	8.97	15.2	26.0	43.5	-17.5	102	1.30
308.2234	2.49	14.27	7.4	24.2	46.0	-21.8	119	1.60
642.6446	4.61	20.04	6.9	31.6	46.0	-14.4	341	2.50
840.1257	4.69	22.52	2.3	29.5	46.0	-16.5	191	3.40
860.7878	4.58	23.08	8.2	35.9	46.0	-10.1	83	3.50

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": Measurement does not apply for this frequency.
- 3. Emissiom Level = Reading Value + Ant. Factor + Cable Loss.
- 4. The field strength of other emission frequencies were very low against the limit.



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Temperature: 32 °C Humidity: 68 %RH

Frequency Range: 1 – 25 GHz Measured Distance: 3m

Receiver Detector: PK. or AV. Tested Mode: TX-2402MHz
Tested By: Kunter Jin Tested Date: Apr. 11, 2009

Antenna Polarization: Horizontal

Frequency (MHz)	- 1 Factor   Factor		(dBµV)		Emiss Lev (dBµ)	rel .	Lim (dBµ\	V/m) (dB)		•	AZ (°)	EL (m)
	(ab)	(ab/iii)	PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2402.00	-32.16	28.00	89.6	86.2	85.4	82.0	114.0	94.0	(F)	(F)	183	1.71
4804.50	-30.47	33.64	52.6	30.9	55.8	34.1	74.0	54.0	-18.2	-19.9	283	1.20
7206.00	-28.90	36.26	49.6	26.8	57.0	34.2	74.0	54.0	-17.0	-19.8	90	1.39
9608.50	-28.55	37.84	40.1	*	49.4	*	74.0	54.0	-24.6	*	*	*
1610.00	-32.89	25.72	31.2	*	24.0	*	74.0	54.0	-50.0	*	351	1.20
1663.00	-32.78	25.92	37.6	*	30.7	*	74.0	54.0	-43.3	*	110	1.15

#### Antenna Polarization: Vertical

Frequency (MHz)	Correct Ant. Factor Factor (dB)		Da	ding ata µV)	Le	ssion vel V/m)	Lin (dBµ	V/m) (dB)			AZ (°)	EL (m)
	(32)	(42/11)	PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2402.00	-32.16	28.00	89.5	88.6	85.3	84.4	114.0	94.0	(F)	(F)	42	1.01
4804.00	-30.47	33.64	52.3	31.9	55.5	35.1	74.0	54.0	-18.5	-18.9	102	1.36
7206.50	-28.90	36.26	48.9	29.2	56.3	36.5	74.0	54.0	-17.7	-17.5	343	1.57
9608.00	-28.55	37.84	38.8	*	48.1	*	74.0	54.0	-25.9	*	110	1.15
1205.50	-33.86	24.65	31.1	*	21.9	*	74.0	54.0	-52.1	*	211	1.27
1610.50	-32.89	25.72	30.6	*	23.4	*	74.0	54.0	-50.6	*	158	1.00

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
- 4. The field strength of other emission frequencies were very low against the limit.
- 5. (F):The field stregth of fundamental frequency.



Reference No.: A09040901 Report No.: FCC A09040901

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Temperature:32 °CHumidity:68 %RHFrequency Range:1 – 25 GHzMeasured Distance:3mReceiver Detector:PK. or AV.Tested Mode:TX-2441MHz

Tested By: Kunter Jin Tested Date: Apr. 11, 2009

Antenna Polarization: Horizontal

Frequency (MHz)	- Pactor   Factor		Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
	(ab)	(ab/iii)	PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2441.00	-32.23	28.08	83.2	80.2	79.0	76.1	114.0	94.0	(F)	(F)	183	1.31
4882.50	-30.26	33.71	51.6	30.9	55.0	34.3	74.0	54.0	-19.0	-19.7	283	1.36
7323.00	-29.04	36.36	48.6	26.8	55.9	34.1	74.0	54.0	-18.1	-19.9	90	1.49
9764.50	-28.50	37.91	30.3	*	39.7	*	74.0	54.0	-34.3	*	164	1.25
1610.00	-32.89	25.72	31.2	*	24.0	*	74.0	54.0	-50.0	*	72	1.57
1663.00	-32.78	25.92	37.6	*	30.7	*	74.0	54.0	-43.3	*	39	1.37

#### Antenna Polarization: Vertical

Frequency (MHz)	ractor ractor (dBμV) (dBμV/m) (dBμV/m)			//m) (dB)		AZ (°)	EL (m)					
	(42)	(42/11)	PK.	AV.	PK.	AV.	PK. AV.		PK.	AV.		
2441.00	-32.23	28.08	83.1	80.6	79.0	76.5	114.0	94.0	(F)	(F)	42	1.54
4882.00	-30.26	33.71	52.1	32.1	55.5	35.5	74.0	54.0	-18.5	-18.5	102	1.66
7323.50	-29.04	36.36	46.9	29.2	54.2	36.5	74.0	54.0	-19.8	-17.5	343	1.37
9764.00	-28.50	37.91	38.4	*	47.8	*	74.0	54.0	-26.2	*	141	1.25
1213.50	-33.83	24.67	31.6	*	22.4	*	74.0	54.0	-51.6	*	309	1.21
1310.00	-33.59	24.88	31.1	*	22.4	*	74.0	54.0	-51.6	*	36	1.31

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
- 4. The field strength of other emission frequencies were very low against the limit.
- 5. (F):The field stregth of fundamental frequency.



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Temperature: 32 °C Humidity: 68 %RH

Frequency Range: 1 – 25 GHz Measured Distance: 3m

Receiver Detector: PK. or AV. Tested Mode: TX-2480MHz
Tested By: Tested Date: Apr. 11, 2009

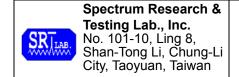
Antenna Polarization: Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Read Dat (dB <sub>L</sub>	a	Emiss Lev (dBµ\	el	el //m) (dBµV		(dBµV/m)			Margin (dB)		EL (m)
	(32)	(45/11)	PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.				
2480.00	-32.19	28.16	98.3	80.3	94.3	76.3	114.0	94.0	(F)	(F)	103	1.31		
4960.50	-30.26	33.77	50.6	30.1	54.1	33.6	74.0	54.0	-19.9	-20.4	83	1.26		
7440.00	-28.95	36.45	47.6	26.8	55.1	34.3	74.0	54.0	-18.9	-19.7	92	1.42		
9920.50	-28.65	37.97	30.6	*	39.9	*	74.0	54.0	-34.1	*	10	1.33		
1213.50	-33.83	24.67	31.1	*	21.9	*	74.0	54.0	-52.1	*	201	1.55		
1520.00	-31.78	25.38	33.3	*	26.9	*	74.0	54.0	-47.1	*	179	1.61		

#### Antenna Polarization: Vertical

Frequency		Ant. Factor	Da	Data		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		EL (m)
	(ab)	(aD/III)	PK.	AV.	PK.	AV.	PK.	PK. AV.		AV.		
2480.00	-32.19	28.16	93.1	80.1	89.1	76.1	114.0	94.0	(F)	(F)	142	1.64
4960.00	-30.26	33.77	52.3	31.0	55.8	34.5	74.0	54.0	-18.2	-19.5	10	1.33
7440.50	-28.95	36.45	46.1	28.2	53.6	35.7	74.0	54.0	-20.4	-18.3	303	1.17
9920.00	-28.65	37.97	38.1	*	47.4	*	74.0	54.0	-26.6	*	103	1.31
1310.00	-33.59	24.88	30.8	*	22.1	*	74.0	54.0	-51.9	*	36	1.31
1610.50	-32.89	25.72	30.9	*	23.7	*	74.0	54.0	-50.3	*	169	1.71

- 1. Measurement uncertainty is +/-3.7dB.
- 2. "\*": The Peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. Emissiom Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
- 4. The field strength of other emission frequencies were very low against the limit.
- 5. (F):The field stregth of fundamental frequency.



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#### 5. CONDUCTED EMISSION TEST FOR POWER PORT

### **5.1 LIMIT**

Frequency (MHz)	Class A	(dBµV)	Class B (dBµV)			
Frequency (MHZ)	Quasi-peak	Average	Quasi-peak	Average		
0.15 - 0.5	79	66	66 - 56	56 - 46		
0.50 - 5.0	73	60	56	46		
5.0 - 30.0	73	60	60	50		

#### NOTE:

- 1. The lower limit shall apply at the transition frequencies.
- 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

### **5.2 TEST EQUIPMENT**

The following test equipment was used for the test:

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST	9 kHz TO	ROHDE &	ESHS30 /	SEP. 2009
RECEIVER	30 MHz	SCHWARZ	826003/008	ETC
LISN	50 μH, 50 ohm	FCC	FCC-LISN-50-25-2 /	OCT. 2009
LISIN	50 μπ, 50 0ππ	FOO	01017	ETC
LISN	50μH, 50 ohm	FCC	9252-50-R24-BNC /	JUN. 2009
LISIN	30μπ, 30 σππ	FOO	951315	ETC
50 OHM	50 ohm	HP	11593A /	OCT. 2009
TERMINATOR	50 01111	ПР	#2	ETC
COAXIAL CABLE	5M	TIMES	EQM-0159 /	AUG. 2009
COAXIAL CABLE	Sivi	TIMES	#5-5m	SRT
FILTER	2 LINE, 30A	FIL.COIL	FC-943 /	NCR
FILTER	2 LINE, 30A	FIL.COIL	771	NCK
GROUND PLANE	2.3M (H) x	SRT	N/A	NCR
GROUND FLANE	2.4M (W)	SKI	IN/A	NON
GROUND PLANE	2.4M (H) x	SRT	N/A	NCR
GROUND FLANE	2.4M (W)	SKI	19/74	NOR

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



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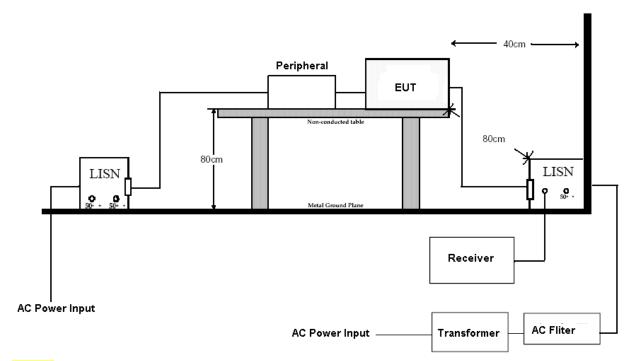
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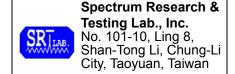
#### **5.3 TEST PROCEDURE**

According to FCC Part15, Subpart C

#### **5.4 TEST SETUP**



- 1. The EUT was put on a wooden table with 0.8m heights above ground plane, and 0.4m away from reference ground plane (> 2mx2m).
- 2. For the actual test configuration, please refer to the photos of testing.
- 3. The serial no. of the LISN connected to EUT is 01017.
- 4. The serial no. of the LISN connected to support units is 01018.



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#### 5.5 TEST RESULT

23 °C Humidity: 69 %RH Temperature: Frequency Range: 0.15 - 30 MHzTested Mode: Link Receiver Detector: Q.P. and AV. Modulation Type: N/A Tested By: Kunter Jin Tested Channel: N/A Tested Date: Apr. 11, 2009

Power Line Measured: Line

Freq.	lz) Factor (dBμV)			Emission Level (dBμV)		Limit (dBμV)		Margin (dB)	
()	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.156	0.30	47.96	21.17	48.26	21.47	65.66	55.66	-17.40	-34.19
0.552	0.24	21.89	20.34	22.13	20.58	56.00	46.00	-33.87	-25.42
3.378	0.19	25.30	21.60	25.49	21.79	56.00	46.00	-30.51	-24.21
3.705	0.19	21.80	13.25	21.99	13.44	56.00	46.00	-34.01	-32.56
5.000	0.22	22.36	10.29	22.58	10.51	56.00	46.00	-33.42	-35.49
22.524	0.39	10.76	1.52	11.15	1.91	60.00	50.00	-48.85	-48.09

Power Line Measured: Neutral

Freq.	Factor (dB <sub>µ</sub> V)			Emission Level (dB <sub>µ</sub> V)		Limit (dBμV)		rgin B)	
()	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.153	0.30	49.46	21.12	49.76	21.42	65.82	55.82	-16.06	-34.40
0.509	0.24	24.48	18.40	24.72	18.64	56.00	46.00	-31.28	-27.36
2.725	0.17	24.58	19.79	24.75	19.96	56.00	46.00	-31.25	-26.04
2.982	0.18	24.24	18.63	24.42	18.81	56.00	46.00	-31.58	-27.19
6.360	0.22	15.44	9.09	15.66	9.31	60.00	50.00	-44.34	-40.69
26.265	0.30	10.68	0.41	10.98	0.71	60.00	50.00	-49.02	-49.29

- 1. Measurement uncertainty is +/-2dB
- 2. Emission level = Reading valus + Correction factor
- 3. Correction Factor = Cable loss + Insertion loss of LISN
- 4. Margin value = Emission level Limit
- 5. The emission of other frequencies was very low against the limit.
- 6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.



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Temperature: 21 °C Humidity: 49 %RH

Frequency Range: 0.15 – 30 MHz Tested Mode: Standby

Receiver Detector: Q.P. and AV. Modulation Type: N/A

Tested By: Kunter Jin Tested Channel: N/A

Tested Date: Apr. 11, 2009

Power Line Measured: Line

Freq.	Factor (dB <sub>μ</sub> V)			mission Level (dBμV)		Limit (dBμV)		Margin (dB)	
(	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.152	0.30	49.46	21.12	49.76	21.42	65.82	55.82	-16.06	-34.40
0.508	0.24	24.48	18.40	24.72	18.64	56.00	46.00	-31.28	-27.36
2.724	0.17	24.58	19.79	24.75	19.96	56.00	46.00	-31.25	-26.04
2.981	0.18	24.24	18.63	24.42	18.81	56.00	46.00	-31.58	-27.19
6.359	0.22	15.44	9.09	15.66	9.31	60.00	50.00	-44.34	-40.69
26.264	0.30	10.68	0.41	10.98	0.71	60.00	50.00	-49.02	-49.29

Power Line Measured : Neutral

Freq.	Correct. Factor	1 10 0101111	Reading Value (dB <sub>μ</sub> V)				Limit (dBμV)		Margin (dB)	
(,	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	
0.157	0.30	47.96	21.17	48.26	21.47	65.66	55.66	-17.40	-34.19	
0.553	0.24	21.89	20.34	22.13	20.58	56.00	46.00	-33.87	-25.42	
3.379	0.19	25.30	21.60	25.49	21.79	56.00	46.00	-30.51	-24.21	
3.706	0.19	21.80	13.25	21.99	13.44	56.00	46.00	-34.01	-32.56	
5.001	0.22	22.36	10.29	22.58	10.51	56.00	46.00	-33.42	-35.49	
22.525	0.39	10.76	1.52	11.15	1.91	60.00	50.00	-48.85	-48.09	

- 1. Measurement uncertainty is +/-2dB
- 2. Emission level = Reading valus + Correction factor
- 3. Correction Factor = Cable loss + Insertion loss of LISN
- 4. Margin value = Emission level Limit
- 5. The emission of other frequencies was very low against the limit.
- 6. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.



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### 6. Antenna application

### 6.1 Antenna requirement

The EUT's antenna is met the requirement of FCC part15C section15.203 and 15.204.

#### 6.2 Result

The EUT's antenna used a PCB Printing Antenna on PCB. The antenna's gain is 1.2 dBi and meets the requirement.



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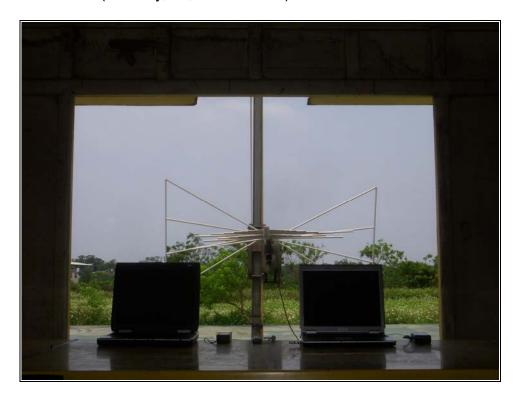
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### 6. PHOTOS OF TESTING

- Radiated test (Standby, Tx, below 1GHz)







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- Radiated test (Tx, above 1GHz)







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- Radiated test (Link)







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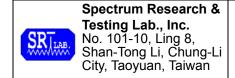
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## - Conducted test







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### 7. TERMS OF ABBREVIATION

AV.	Average detection
AZ(°)	Turn table azimuth
Correct.	Correction
EL(m)	Antenna height (meter)
EUT	Equipment Under Test
Horiz.	Horizontal direction
LISN	Line Impedance Stabilization Network
NSA	Normalized Site Attenuation
Q.P.	Quasi-peak detection
SRT Lab	Spectrum Research & Testing Laboratory, Inc.
Vert.	Vertical direction