FCC RF Test Report

APPLICANT	:	Acer Incorporated
EQUIPMENT	:	Tablet Computer
BRAND NAME	:	Acer
MODEL NAME	:	A100
FCC ID	:	HLZTMDMA100
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	Digital Transmission System (DTS)

The product was received on Mar. 23, 2011 and completely tested on Mar. 29, 2011. 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:

Jones Tsai / Manager

Testing Laboratory 1190

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
FR132346B	Rev. 01	Initial issue of report	May 20,2011
FR132346B	Rev. 02	Revised descriptions at section 2.2	May 26, 2011

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	≥ 0.5MHz	Pass	-
3.1	-	Gen 4.4.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	A8.4	Power Output	≤ 30dBm	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	≤ 20dBc	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	< 20 dBc	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	≤ 8dBm	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 5.3 dB at 0.17 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.35 dB at 2483.5 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Acer Incorporated
8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22181, Taiwan (R.O.C.)

1.2 Manufacturer

1. **Compal Electronics, Inc.**
   No. 581, Ruiguang Rd., Neihu District, Taipei City 11492, Taiwan
2. **Compal Electronics Technology (Kunshan) Co., Ltd.**
   No. 25, Third Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China
3. **Compal Information (Kunshan) Co., Ltd.**
   No. 15, Third Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China
4. **Compal Information Technology (Kunshan) Co., Ltd.**
   No. 58, First Avenue, A Zone, Kunshan Comprehensive Free Trade Zone, Kunshan, Jiangsu, China
5. **Compalead Eletrônica Do Brasil Indústria E Comércio Ltda**
   Rua Kanebo 175, Galpões C1, C2, C3, C4, C5 C6 E C12, Bairro Distrito Industrial Jundiaí Business Park, Cep 13213-090, Jundiaí - São Paulo, Brasil
6. **Compal (Vietnam) Co., Ltd.**
   Ba Thien Industrial Zone, Ba Hien Commune, Binh Xuyen County, Vinh Phuc Province, Vietnam

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Tablet Computer
Brand Name	Acer
Model Name	A100
FCC ID	HLZTMDMA100
Sample 1	EUT with LP DDR2 Main and eMMC Main
Sample 2	EUT with LP DDR2 2nd and eMMC 2nd
Sample 3	EUT with LP DDR2 3rd and eMMC Main
Tx/Rx Frequency Range	2400 MHz ~ 2483.5 MHz
Number of Channels	11
Carrier Frequency of Each Channel	2412+(n-1)*5 MHz; n=1~11
Channel Spacing	5 MHz
Maximum Output Power to Antenna	802.11b : 18.51 dBm (0.071 W) 802.11g : 22.76 dBm (0.189 W) 802.11n (BW 20MHz) : 21.55 dBm (0.143 W)
Antenna Type	PIFA Antenna with gain -2.38 dBi
HW Version	LA7251PR10 Rev. 1.0
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Identical Prototype

Remark:

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

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st 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	03CH07-HY	722060/4086B-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 8

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.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
5.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A

2 Test Configuration of Equipment Under Test

2.1 RF Power

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

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	**18.51**	18.50	18.40	18.48
CH 06	2437 MHz	17.75	-	-	-
CH 11	2462 MHz	17.94	-	-	-

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	21.41	-	-	-	-	-	-	-
CH 06	2437 MHz	**22.76**	22.48	22.45	22.47	22.23	22.34	22.56	22.50
CH 11	2462 MHz	21.79	-	-	-	-	-	-	-

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	20.54	-	-	-	-	-	-	-
CH 06	2437 MHz	**21.55**	21.34	21.03	21.17	21.18	20.99	21.32	21.18
CH 11	2462 MHz	20.78	-	-	-	-	-	-	-

Remark:

1. The data rates of WLAN 802.11b/g/n were set in 1Mbps for 802.11b, 6Mbps for 802.11g, MCS0 for 802.11n (BW 20MHz) for all the test cases due to the highest RF output power.
2. The EUT is programmed to transmit signals 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.

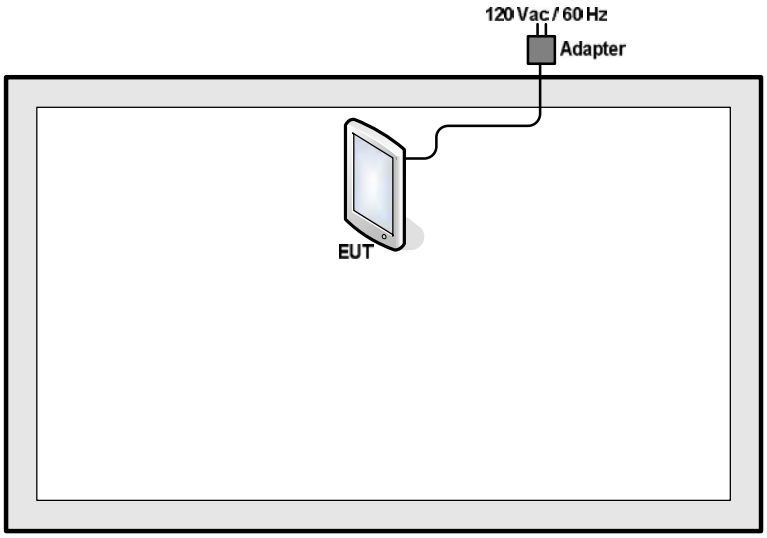
Test Cases		
Test Item	**802.11b (Modulation : DSSS)**	**802.11g/n (Modulation : OFDM)**
Conducted TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (BW 20M)_CH01_2412 MHz Mode 8: 802.11n (BW 20M)_CH06_2437 MHz Mode 9: 802.11n (BW 20M)_CH11_2462 MHz
Radiated TCs	Mode 1 : 802.11b CH01_2412 MHz for Sample 1 Mode 2 : 802.11b CH06_2437 MHz for Sample 1 Mode 3 : 802.11b CH11_2462 MHz for Sample 1	Mode 4: 802.11g_CH01_2412 MHz for Sample 1 Mode 5: 802.11g_CH06_2437 MHz for Sample 1 Mode 6: 802.11g_CH11_2462 MHz for Sample 1 Mode 7: 802.11n (BW 20M)_CH01_2412 MHz for Sample 1 Mode 8: 802.11n (BW 20M)_CH06_2437 MHz for Sample 1 Mode 9: 802.11n (BW 20M)_CH11_2462 MHz for Sample 1 Mode 10: 802.11g_CH11_2462 MHz for Sample 2
AC Conducted Emission	Mode 1 : WLAN Link + Bluetooth Link + TC + Adapter 1 for Sample 1 Mode 2 : WLAN Link + Bluetooth Link + TC + Adapter 2 for Sample 2	

Remark:

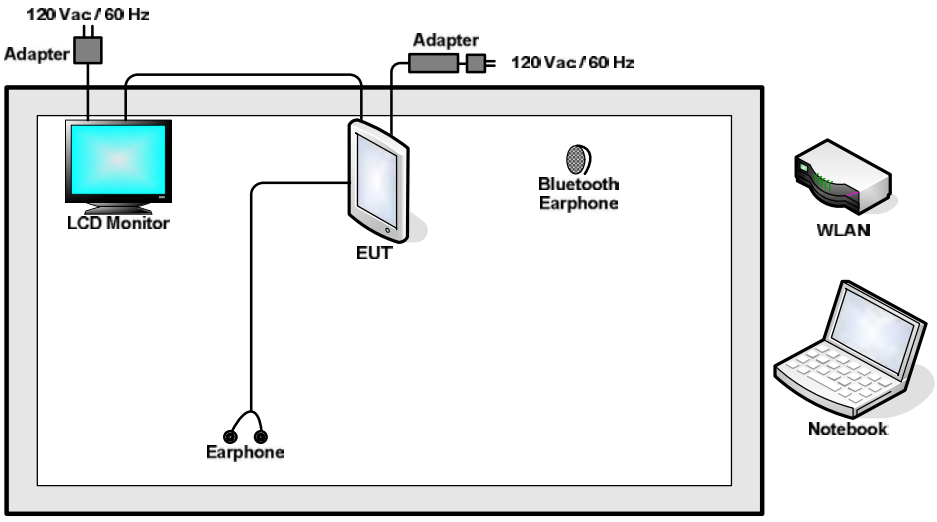
1. TC stands for Test Configuration, and consists of iPod, earphone, camera, MP3 function, HDMI and monitor.
2. The worst case of conducted emission is mode 1; only the test data of it was reported.
3. The RF parts (antenna, transmitter) in three samples are electric identical, and the output power are quite close. Because the change parts (memory) are far away radio parts, the sample 1 is mainly tested and the results are worst. The sample 2, are additionally verified the worst case at band edge. The sample 2, and 3 are mainly tested in FCC Part 15B due to it is related to digital part, and there are no non-compliance found.

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 RF Utility

The programmed RF execute command 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.

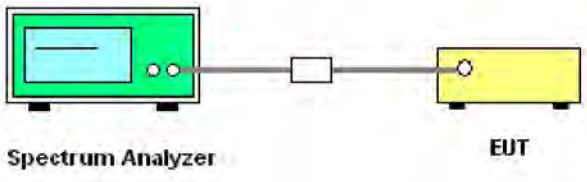
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing 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. 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.
4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

3.1.4 Test Setup

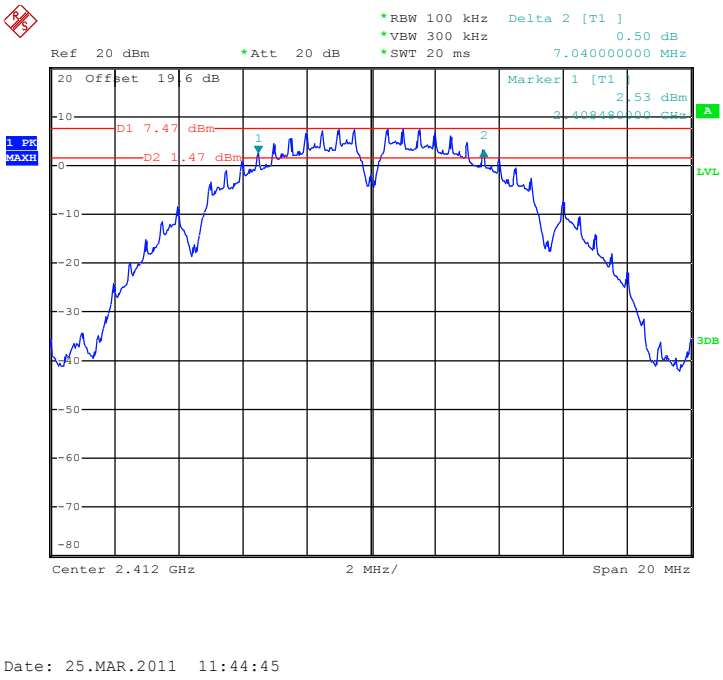


3.1.5 Test Result of 6dB Bandwidth

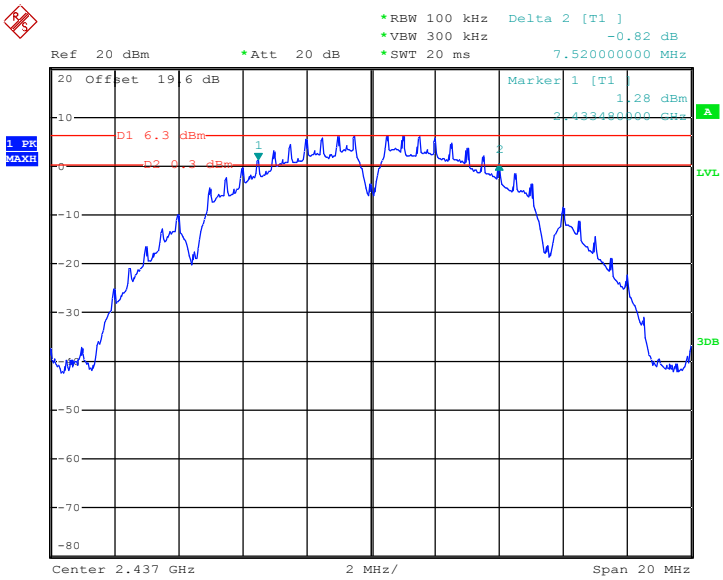
Test Mode :	Mode 1, 2, 3	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	7.04	0.5	Pass
06	2437	7.52	0.5	Pass
11	2462	7.54	0.5	Pass

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



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



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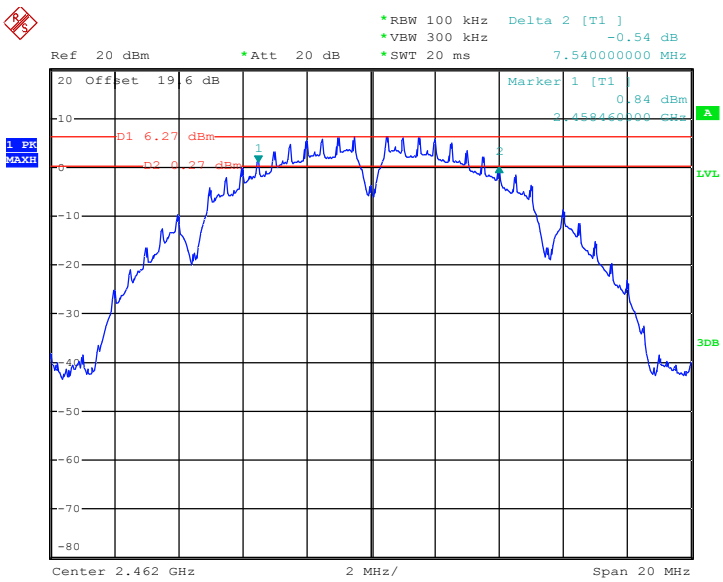
Mode 3 : 6 dB Bandwidth Plot on 802.11b Channel 11



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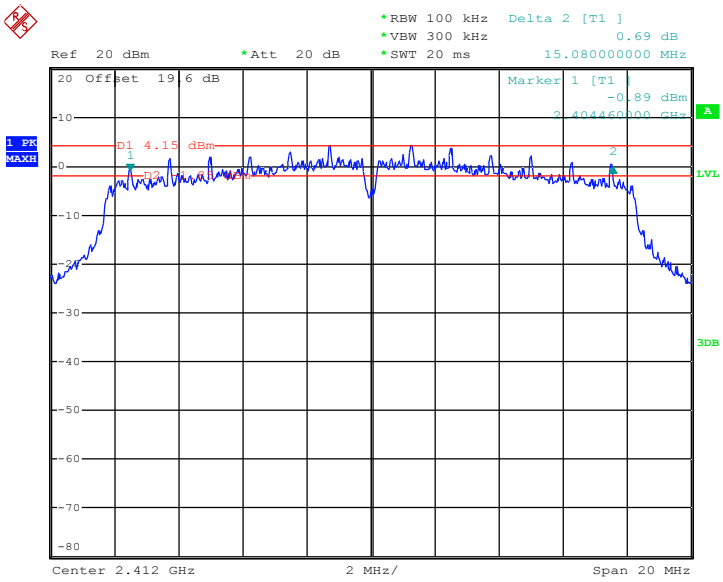
Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.08	0.5	Pass
06	2437	15.12	0.5	Pass
11	2462	15.04	0.5	Pass

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



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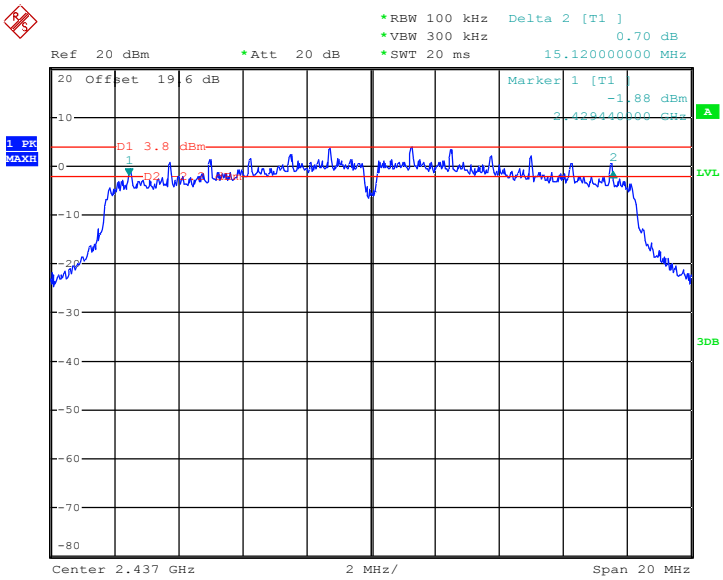
Mode 5 : 6 dB Bandwidth Plot on 802.11g Channel 06



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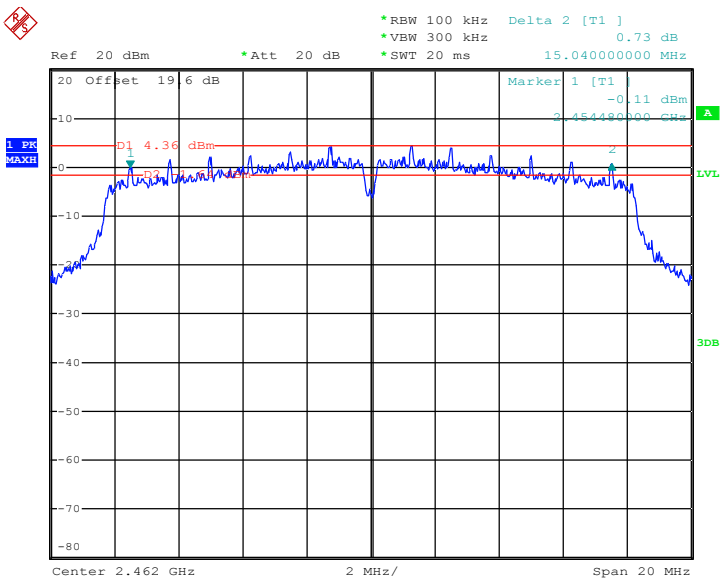
Mode 6 : 6 dB Bandwidth Plot on 802.11g Channel 11



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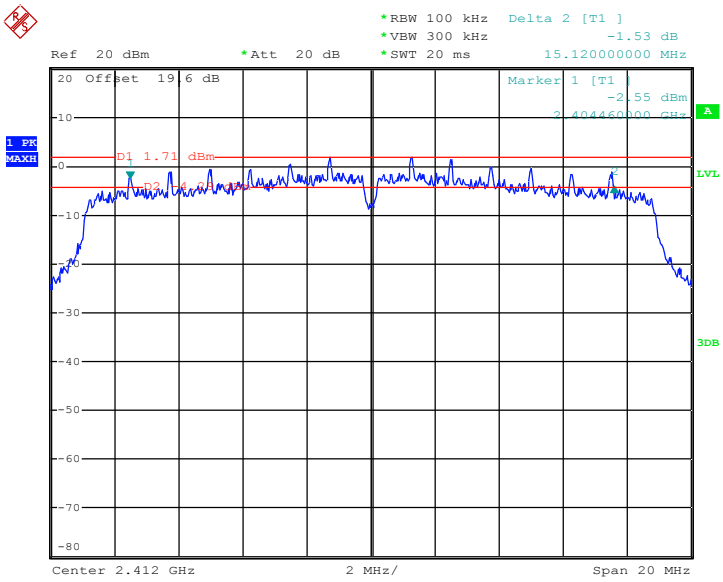
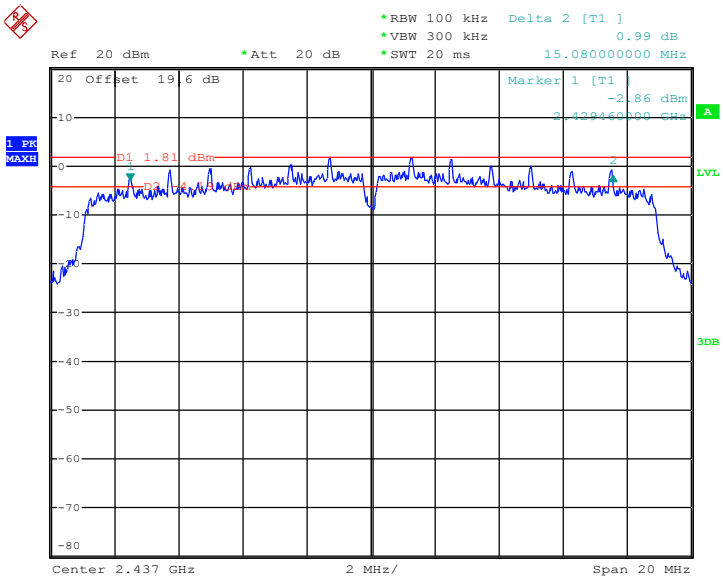
Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.12	0.5	Pass
06	2437	15.08	0.5	Pass
11	2462	15.12	0.5	Pass

Mode 7 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 01



Mode 8 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 06



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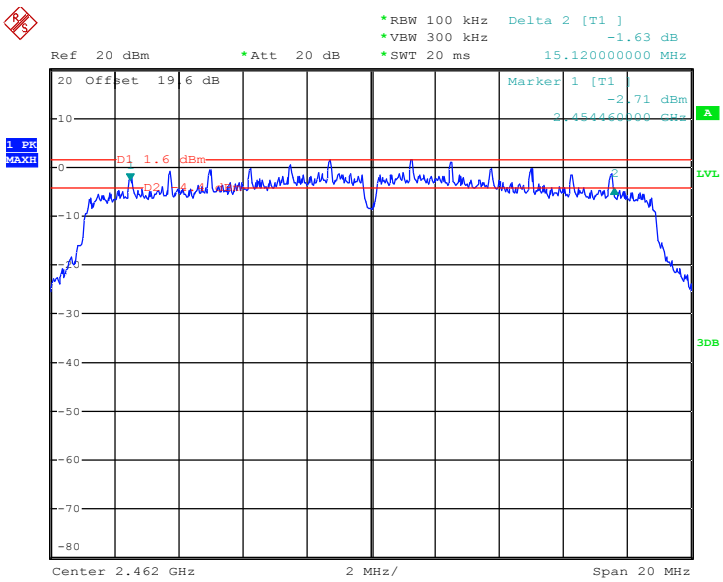
Mode 9 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 11



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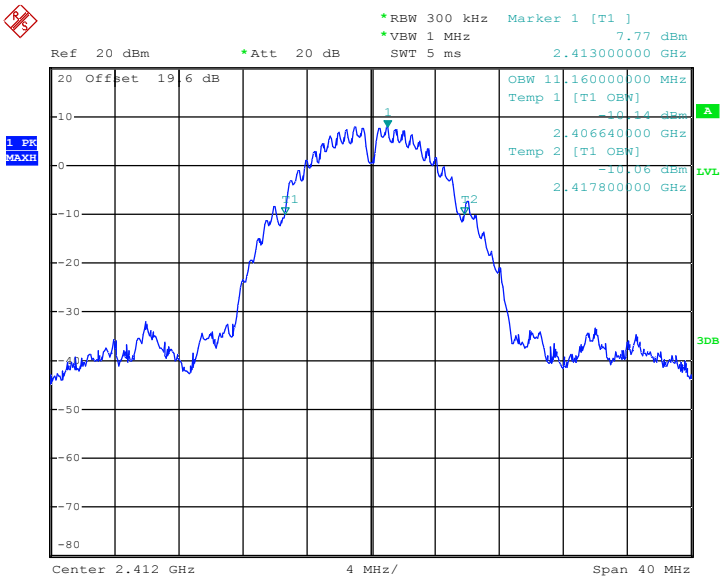
3.1.6 Test Result of 99% Occupied Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	11.16	Pass
06	2437	11.24	Pass
11	2462	11.16	Pass

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



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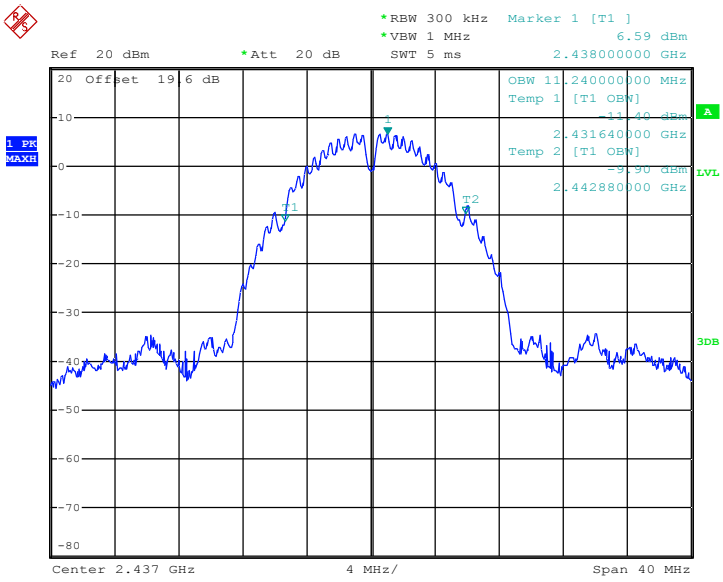
Mode 2 : 99% Occupied Bandwidth Plot on 802.11b Channel 06



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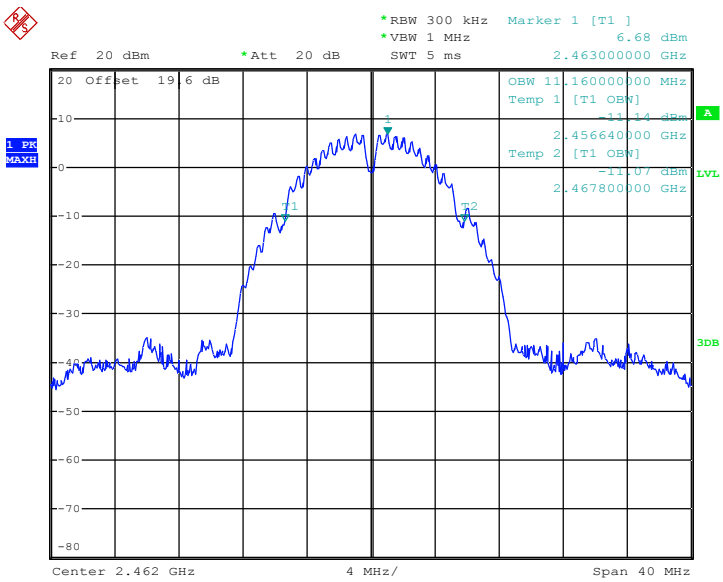
Mode 3 : 99% Occupied Bandwidth Plot on 802.11b Channel 11



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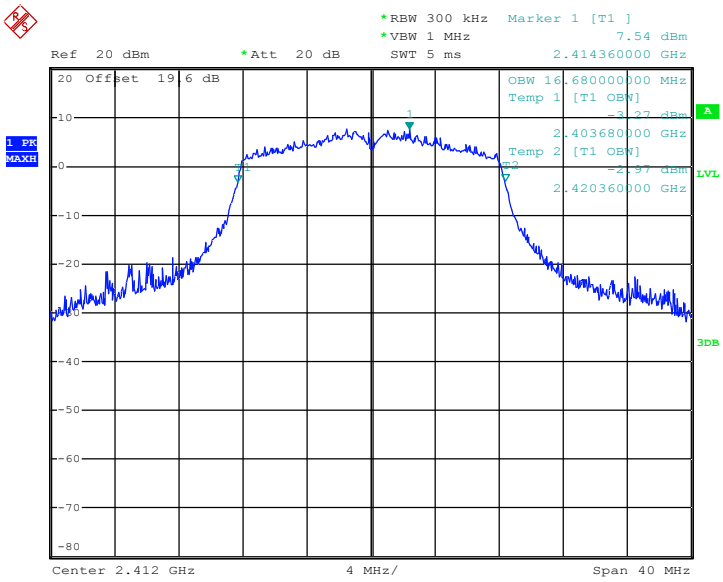
Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	16.68	Pass
06	2437	16.72	Pass
11	2462	16.68	Pass

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



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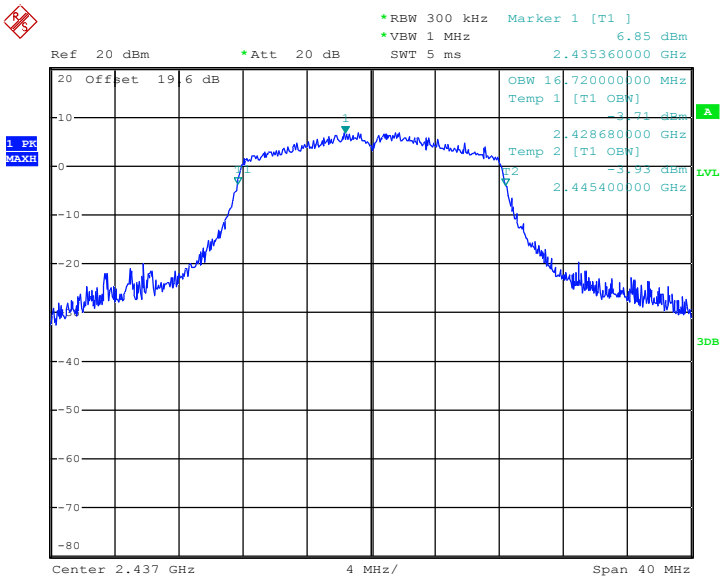
Mode 5 : 99% Occupied Bandwidth Plot on 802.11g Channel 06



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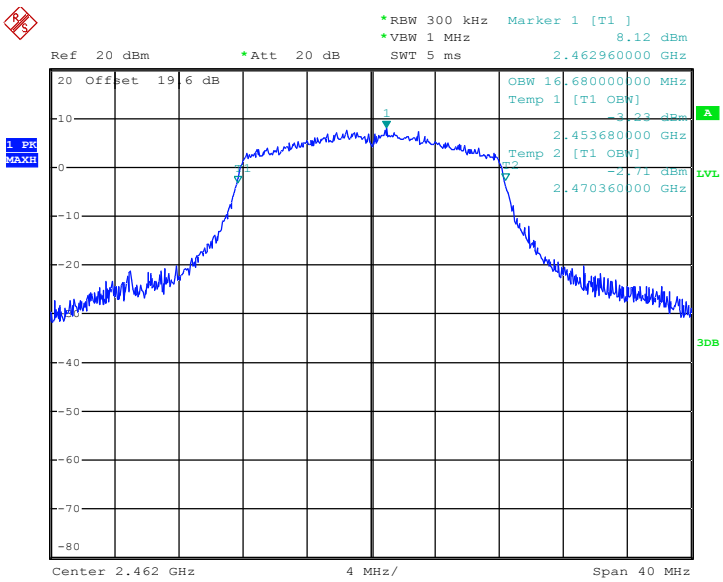
Mode 6 : 99% Occupied Bandwidth Plot on 802.11g Channel 11



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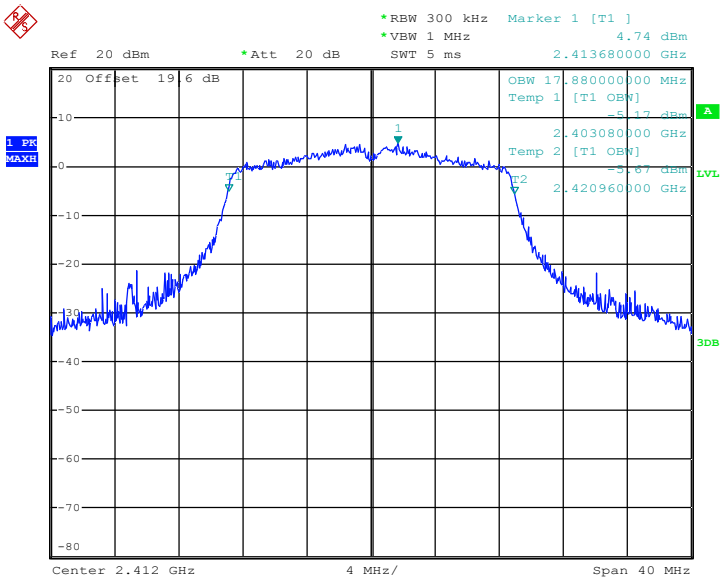
Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	17.88	Pass
06	2437	17.96	Pass
11	2462	17.88	Pass

Mode 7 : 99% Occupied Bandwidth Plot on 802.11n(BW 20MHz) Channel 01



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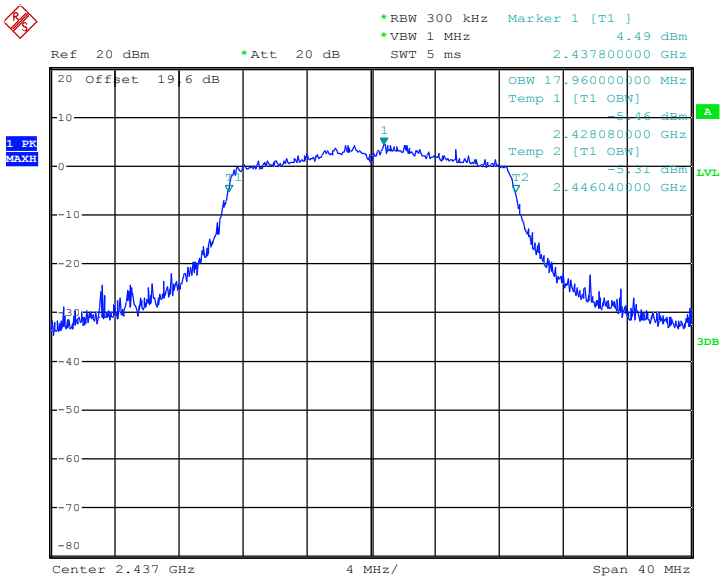
Mode 8 : 99% Occupied Bandwidth Plot on 802.11n(BW 20MHz) Channel 06



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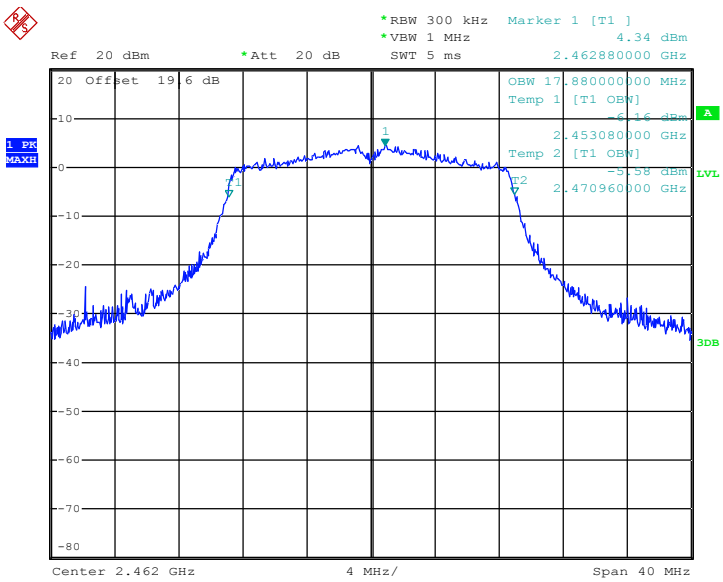
Mode 9 : 99% Occupied Bandwidth Plot on 802.11n(BW 20MHz) Channel 11



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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.

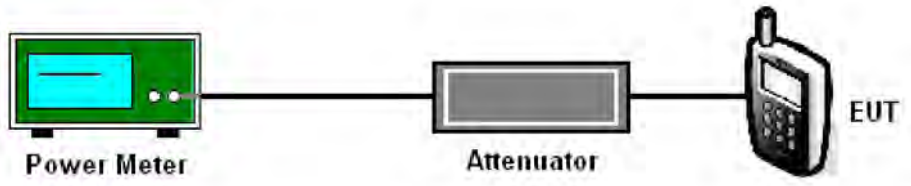
3.2.2 Measuring Instruments

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 :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	18.51	30	Pass
06	2437	17.75	30	Pass
11	2462	17.94	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	21.41	30	Pass
06	2437	22.76	30	Pass
11	2462	21.79	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.54	30	Pass
06	2437	21.55	30	Pass
11	2462	20.78	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

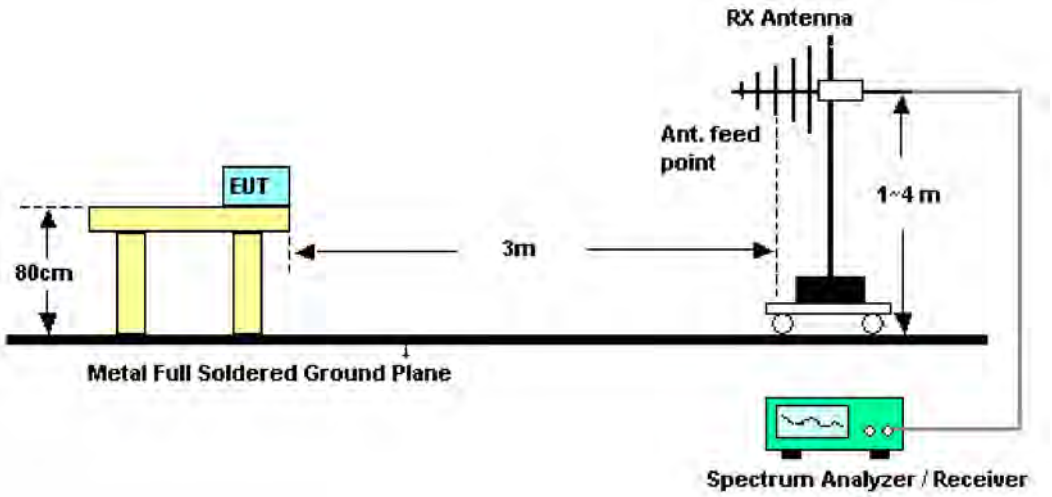
See list of measuring instruments of this test report.

3.3.3 Test Procedures

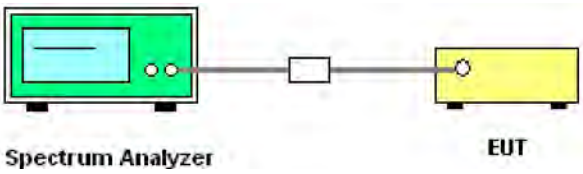
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) ≥ RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the device complies with the use of power option 2 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

<Radiated Band Edges>



<Conducted Band Edges>



3.3.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	21~23℃
Test Band :	802.11b	Relative Humidity :	46~49%
Test Channel :	01	Test Engineer :	Jason 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
2382.77	58.95	-15.05	74	54.61	32.16	6.03	33.85	104	31	Peak
2382.77	45.87	-8.13	54	41.53	32.16	6.03	33.85	104	31	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
2381.82	56.88	-17.12	74	52.54	32.16	6.03	33.85	100	82	Peak
2381.82	43.34	-10.66	54	39	32.16	6.03	33.85	100	82	Average

Test Mode :	Mode 3	Temperature :	21~23℃
Test Band :	802.11b	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Jason 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
2483.5	58.68	-15.32	74	54.12	32.28	6.18	33.9	102	25	Peak
2483.5	46.59	-7.41	54	42.03	32.28	6.18	33.9	102	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
2483.66	55.7	-18.3	74	51.14	32.28	6.18	33.9	100	93	Peak
2483.66	42.73	-11.27	54	38.17	32.28	6.18	33.9	100	93	Average

Test Mode :	Mode 4	Temperature :	21~23℃
Test Band :	802.11g	Relative Humidity :	46~49%
Test Channel :	01	Test Engineer :	Jason 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
2389.42	70.13	-3.87	74	65.77	32.18	6.03	33.85	104	30	Peak
2389.42	47.26	-6.74	54	42.9	32.18	6.03	33.85	104	30	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
2389.42	66.87	-7.13	74	62.51	32.18	6.03	33.85	100	83	Peak
2389.42	44.72	-9.28	54	40.36	32.18	6.03	33.85	100	83	Average

Test Mode :	Mode 6	Temperature :	21~23℃
Test Band :	802.11g	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Jason 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
2483.5	70.65	-3.35	74	66.09	32.28	6.18	33.9	102	24	Peak
2483.5	48.25	-5.75	54	43.69	32.28	6.18	33.9	102	24	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
2483.5	65.53	-8.47	74	60.97	32.28	6.18	33.9	100	91	Peak
2483.5	45.7	-8.3	54	41.14	32.28	6.18	33.9	100	91	Average

Test Mode :	Mode 7	Temperature :	21~23℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	46~49%
Test Channel :	01	Test Engineer :	Jason 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	70.6	-3.4	74	66.24	32.18	6.03	33.85	104	31	Peak
2389.99	46.97	-7.03	54	42.61	32.18	6.03	33.85	104	31	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
2389.61	68.05	-5.95	74	63.69	32.18	6.03	33.85	100	82	Peak
2389.61	44.73	-9.27	54	40.37	32.18	6.03	33.85	100	82	Average

Test Mode :	Mode 9	Temperature :	21~23℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Jason 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
2483.85	70.48	-3.52	74	65.92	32.28	6.18	33.9	103	26	Peak
2483.85	48.25	-5.75	54	43.69	32.28	6.18	33.9	103	26	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
2483.85	66.47	-7.53	74	61.91	32.28	6.18	33.9	100	93	Peak
2483.85	44.54	-9.46	54	39.98	32.28	6.18	33.9	100	93	Average

Test Mode :	Mode 10	Temperature :	21~23℃
Test Band :	802.11g	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Jason Wang

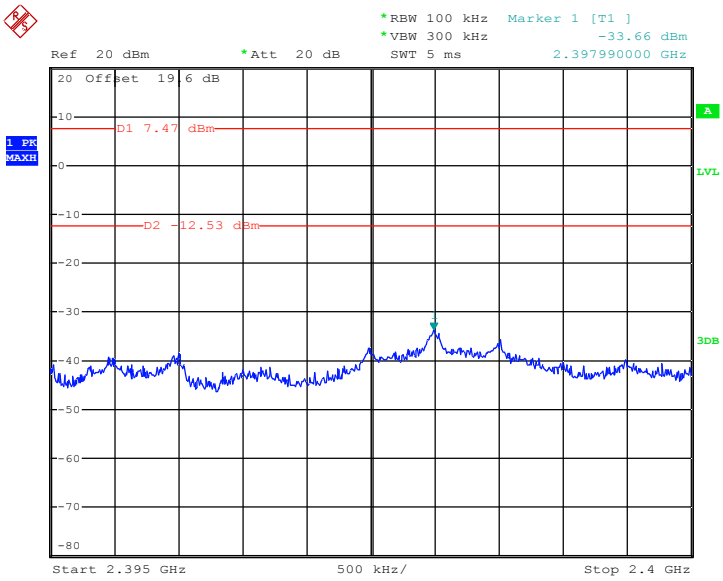
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	69.07	-4.93	74	64.51	32.28	6.18	33.9	109	32	Peak
2483.5	48.78	-5.22	54	44.22	32.28	6.18	33.9	109	32	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
2484.42	64.02	-9.98	74	59.46	32.28	6.18	33.9	200	341	Peak
2484.42	44.41	-9.59	54	39.85	32.28	6.18	33.9	200	341	Average

3.3.6 Test Plots of Conducted Band Edges

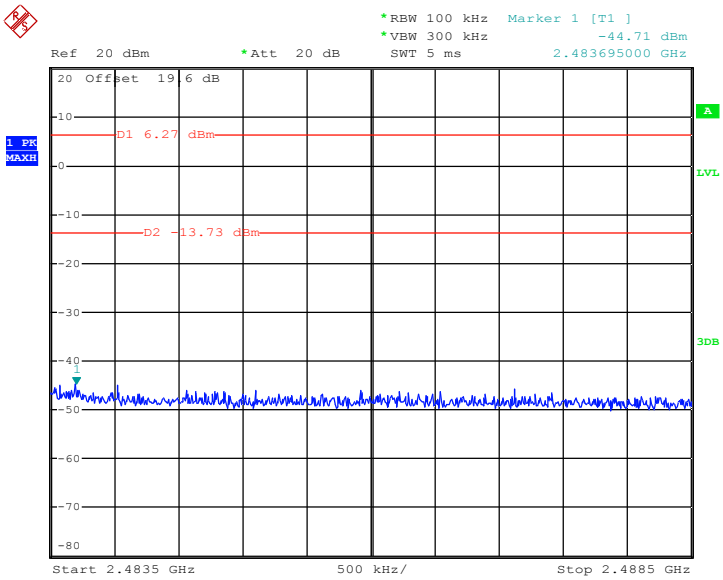
Test Mode :	Mode 1 and 3	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Phoenix Chen

Low Band Edge Plot on 802.11b Channel 01



Date: 25.MAR.2011 11:45:53

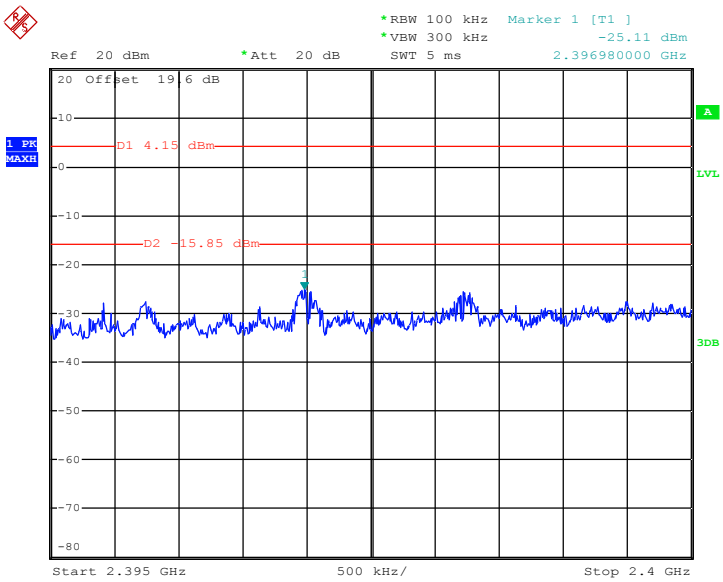
High Band Edge Plot on 802.11b Channel 11



Date: 25.MAR.2011 12:20:23

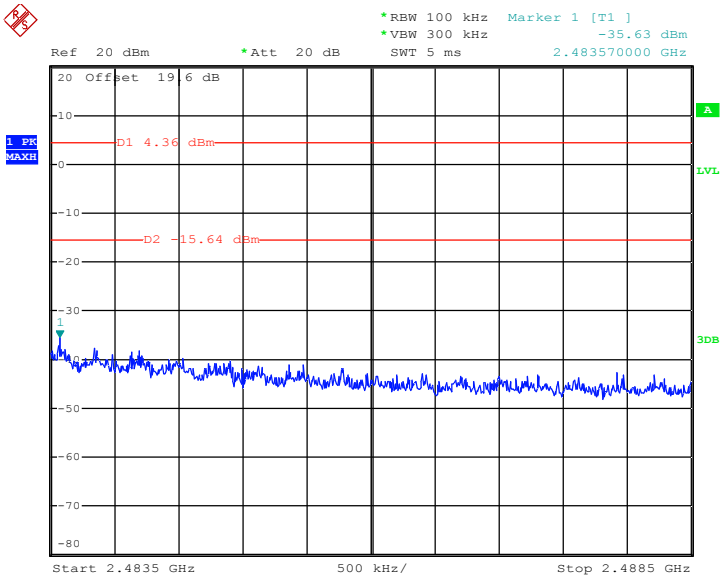
Test Mode :	Mode 4 and 6	Temperature :	24~26℃
Test Band :	802.11g	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Phoenix Chen

Low Band Edge Plot on 802.11g Channel 01



Date: 25.MAR.2011 13:45:40

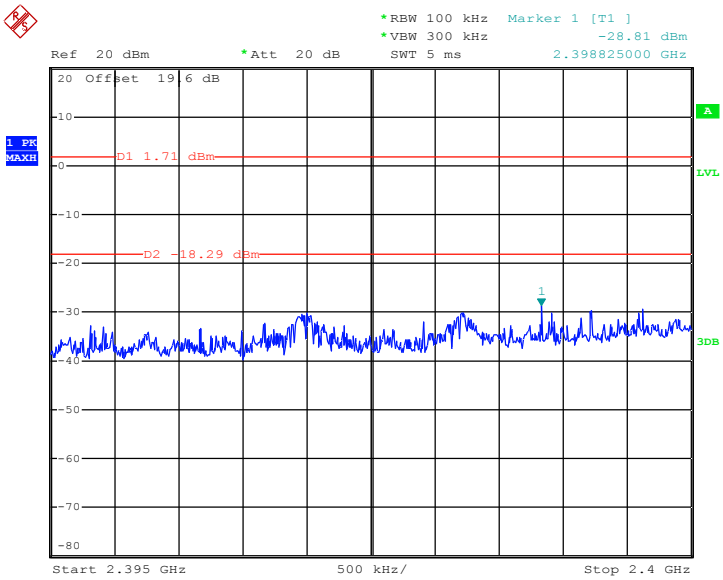
High Band Edge Plot on 802.11g Channel 11



Date: 25.MAR.2011 13:21:39

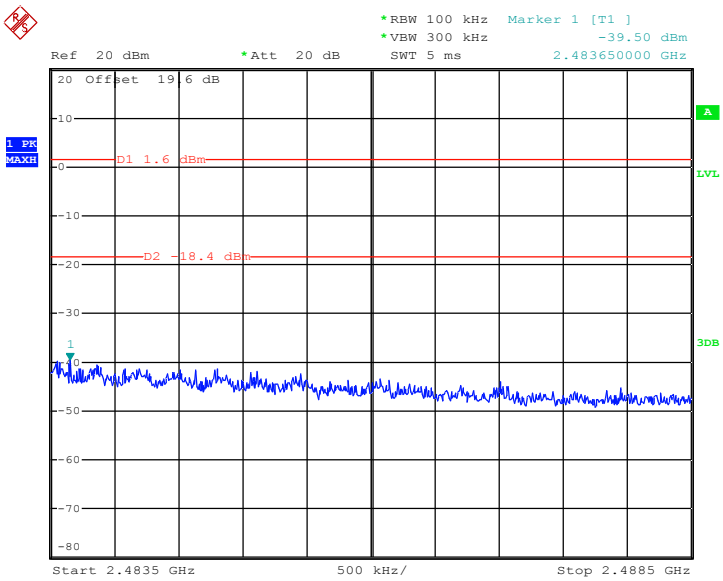
Test Mode :	Mode 7 and 9	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Phoenix Chen

Low Band Edge Plot on 802.11n (BW 20MHz) Channel 01



Date: 25.MAR.2011 14:13:10

High Band Edge Plot on 802.11n (BW 20MHz) Channel 11



Date: 25.MAR.2011 14:36:55

3.4 Spurious Emission Measurement

3.4.1 Limit of Spurious Emission Measurement

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

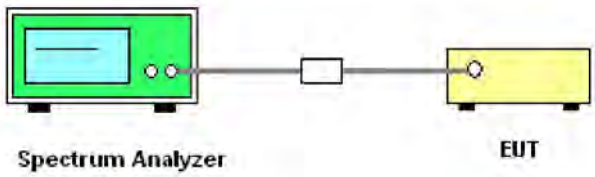
3.4.2 Measuring Instruments

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) ≥ 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.

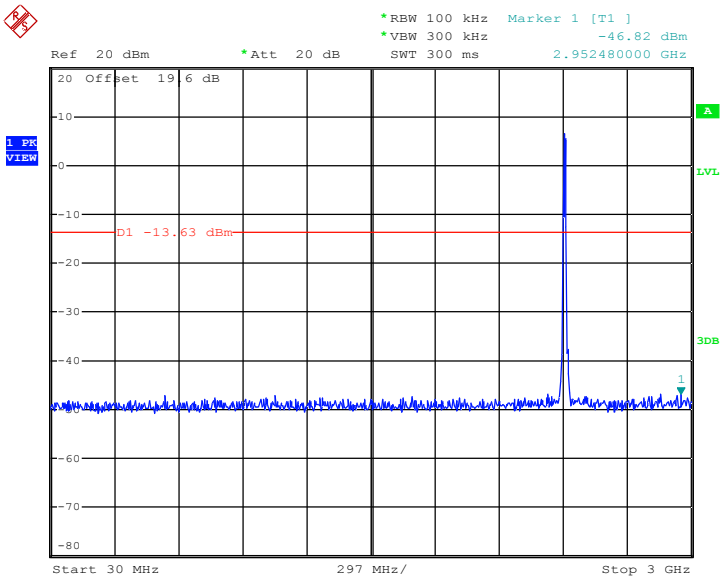
3.4.4 Test Setup



3.4.5 Test Plots of Spurious Emission

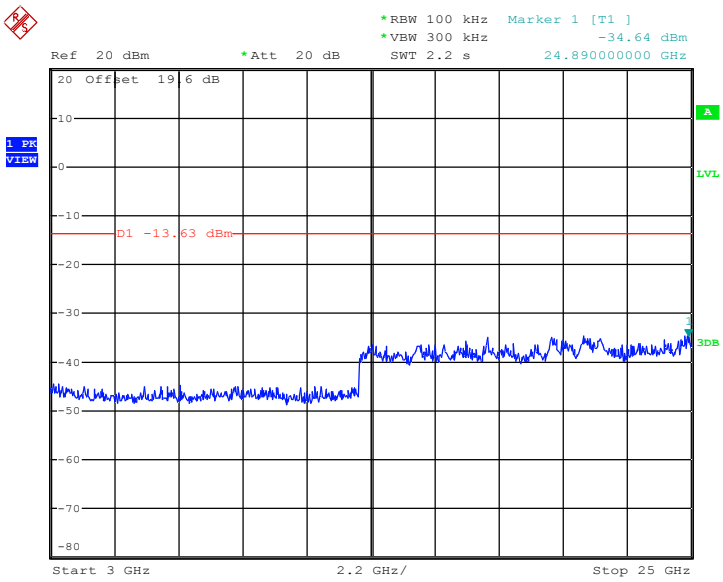
Test Mode :	Mode 1	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 11:55:17

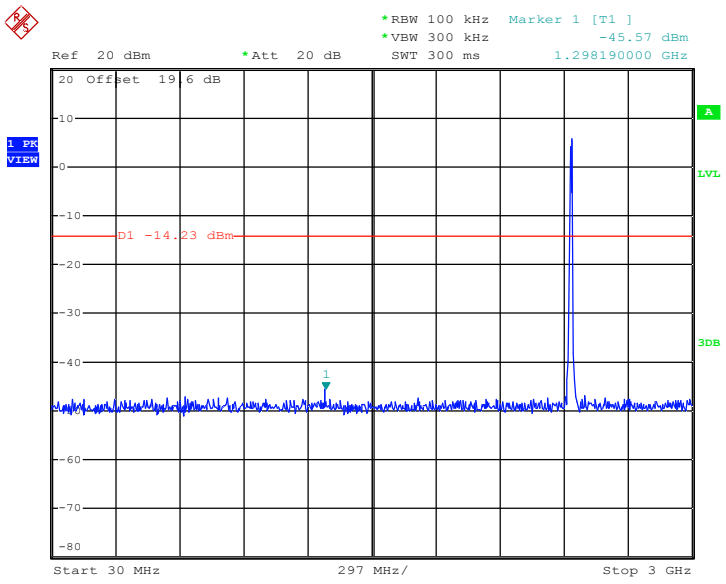
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 11:55:34

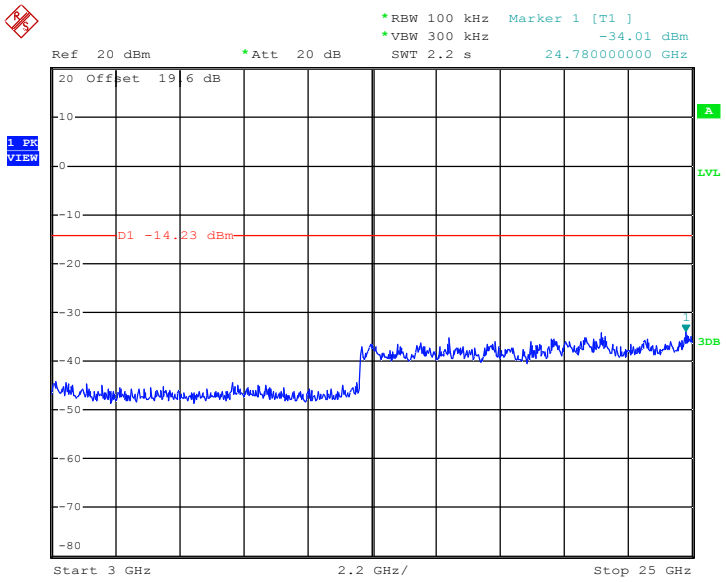
Test Mode :	Mode 2	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 12:18:17

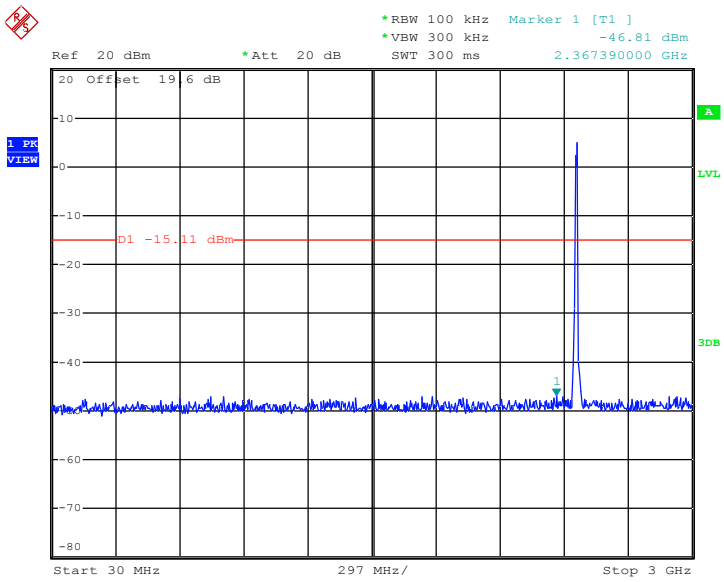
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 12:18:34

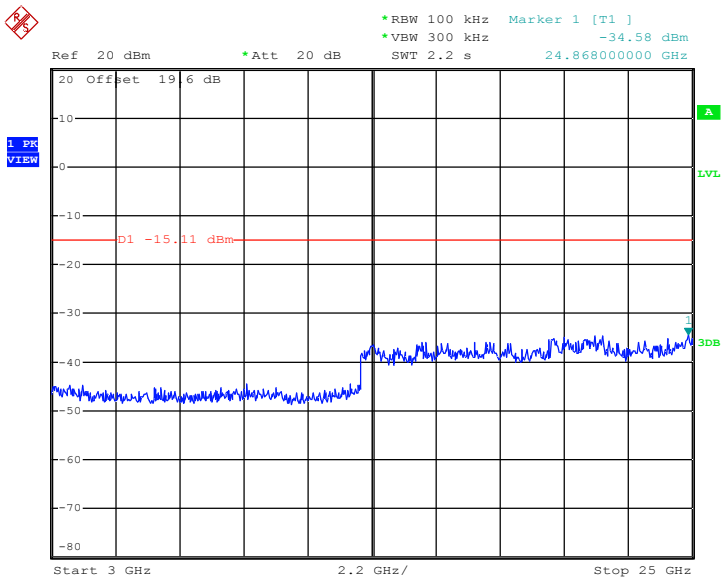
Test Mode :	Mode 3	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 13:16:55

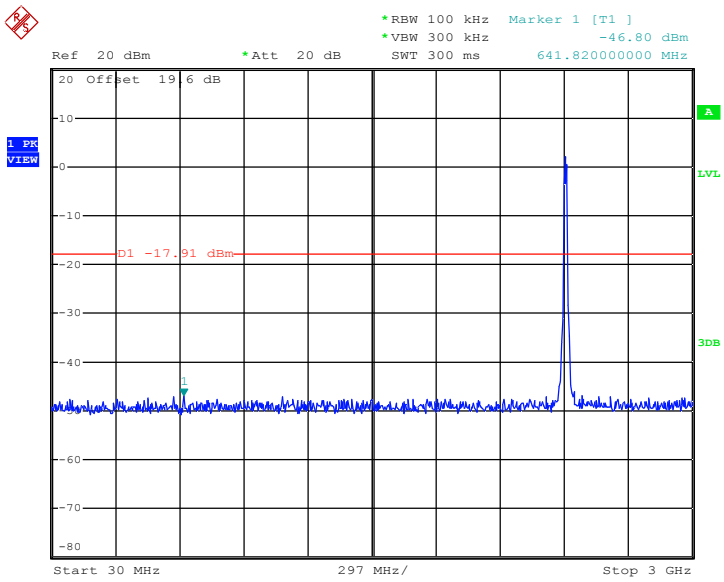
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 13:17:12

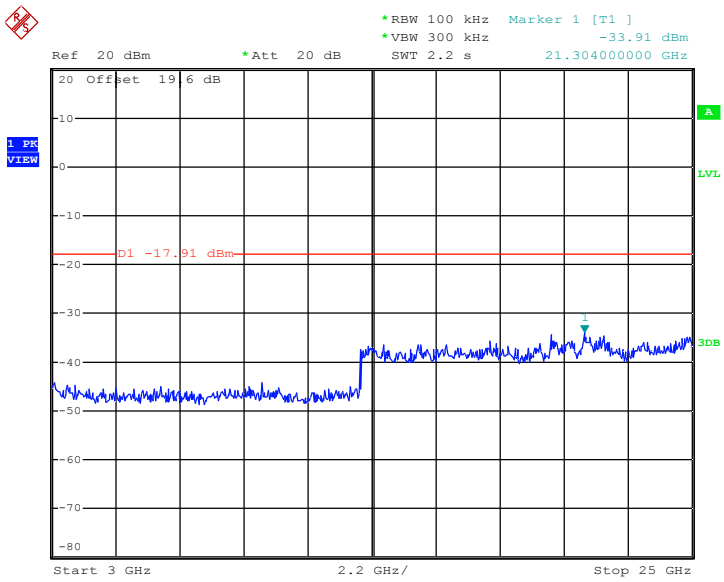
Test Mode :	Mode 4	Temperature :	24~26℃
Test Band :	802.11g	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 13:55:01

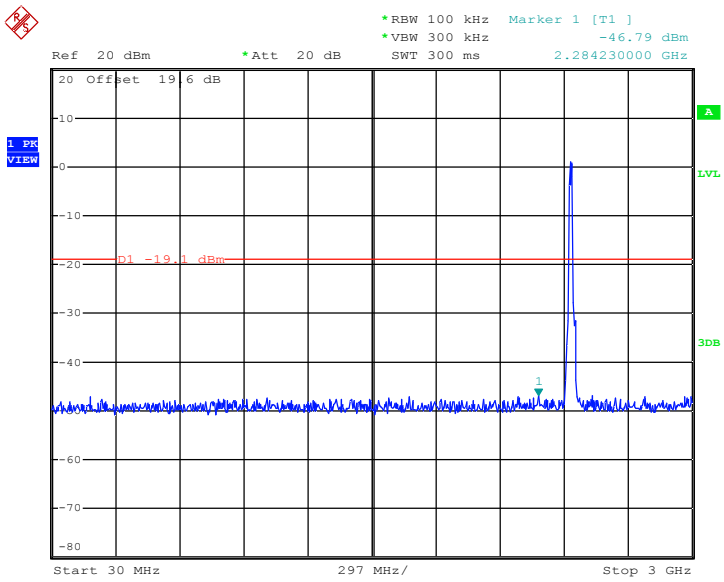
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 13:55:18

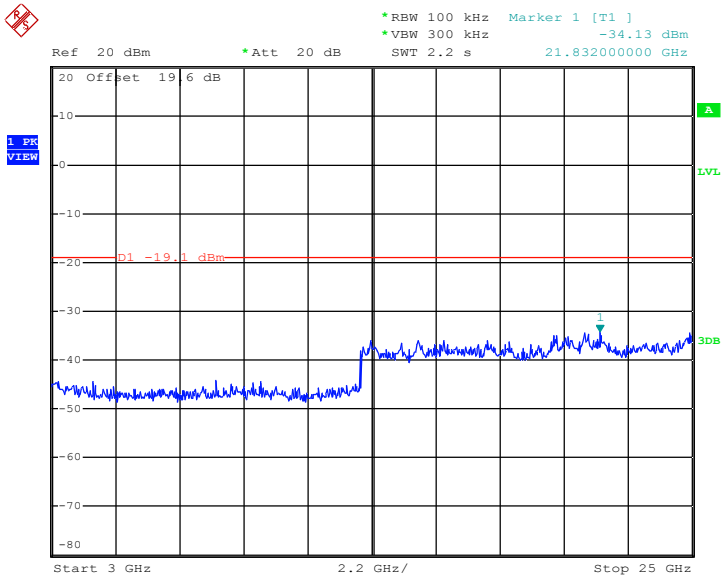
Test Mode :	Mode 5	Temperature :	24~26
Test Band :	802.11g	Relative Humidity :	50~53
Test Channel :	06	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 13:42:55

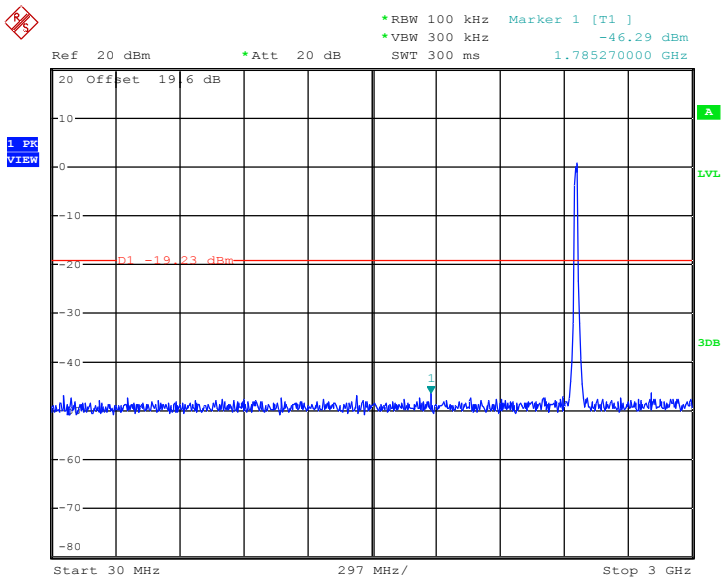
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 13:43:12

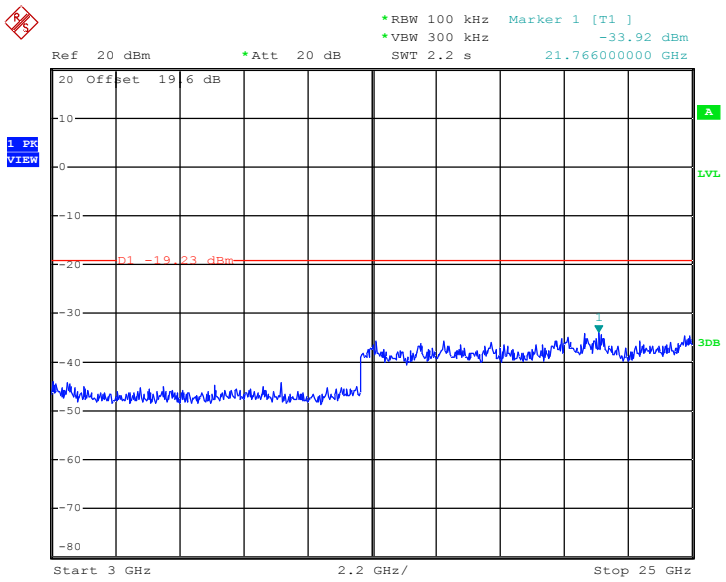
Test Mode :	Mode 6	Temperature :	24~26℃
Test Band :	802.11g	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 13:31:01

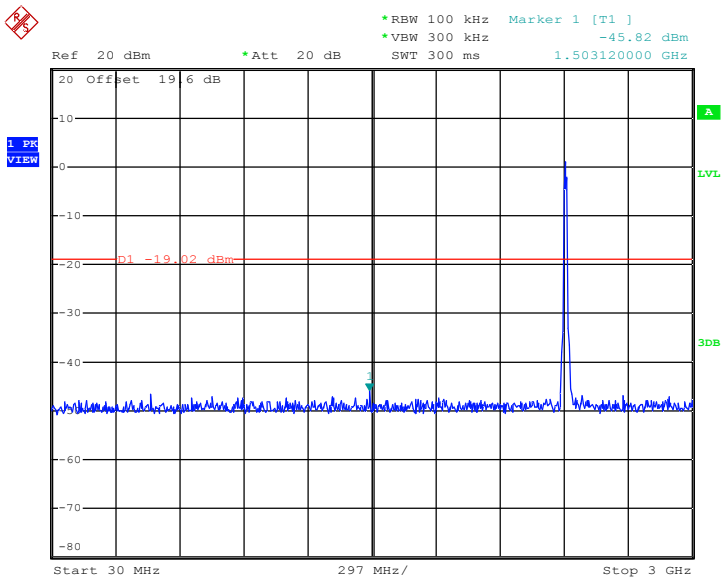
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 13:31:18

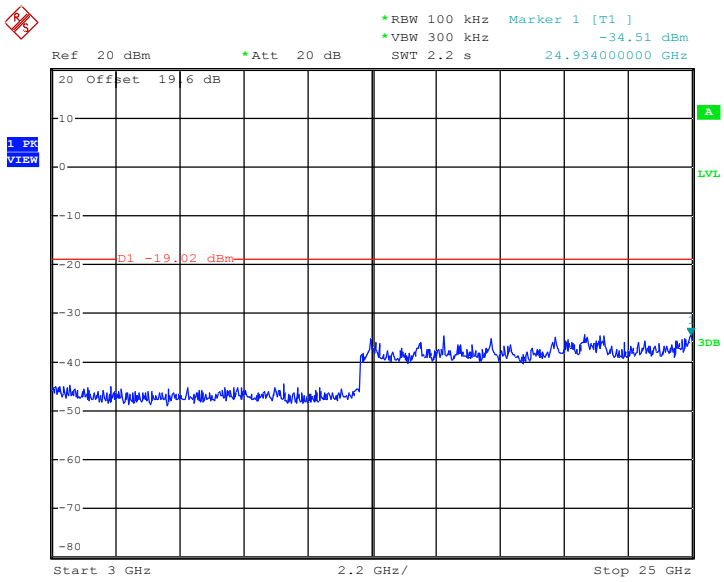
Test Mode :	Mode 7	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	50~53%
Test Channel :	01	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 14:22:31

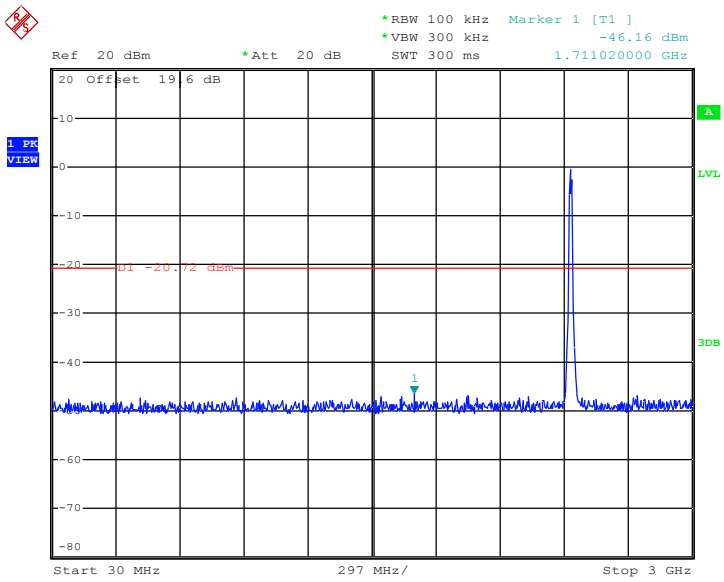
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 14:22:48

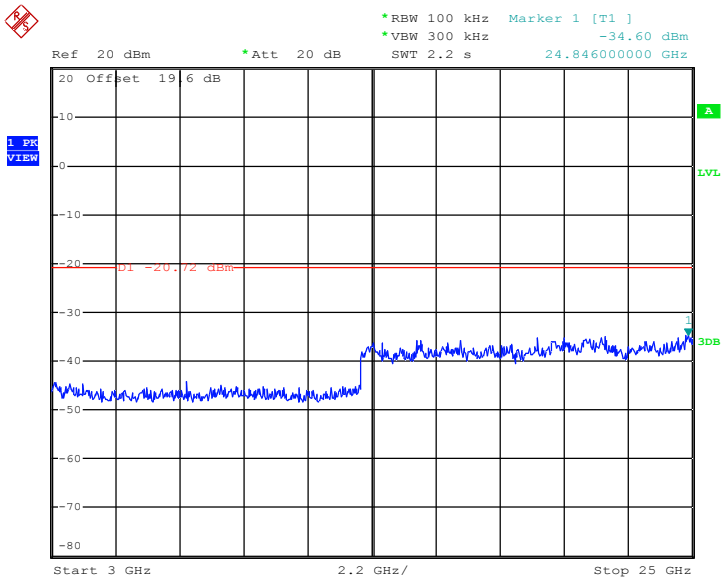
Test Mode :	Mode 8	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	50~53%
Test Channel :	06	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 14:33:51

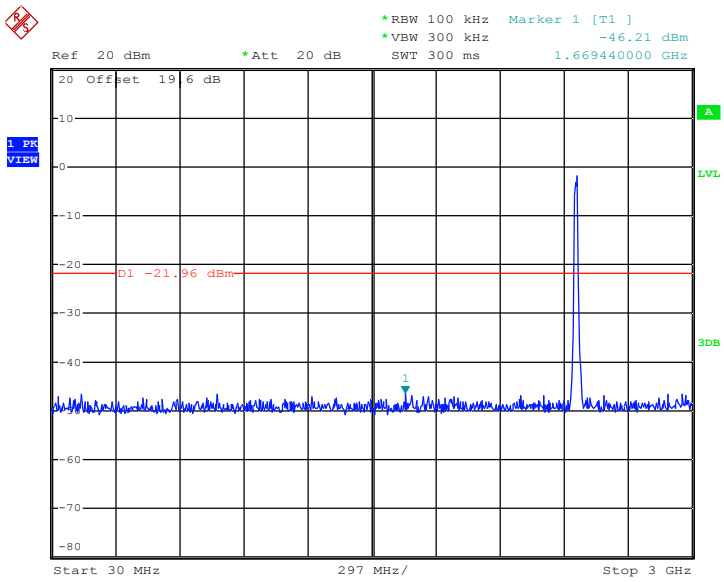
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 14:34:08

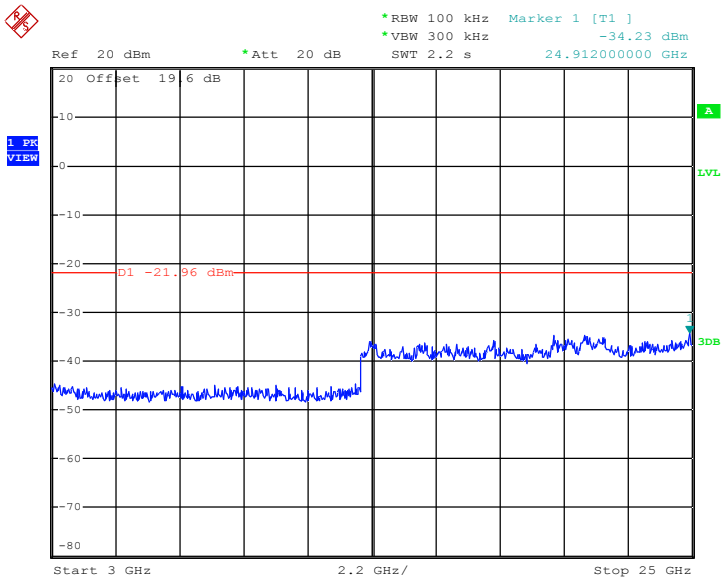
Test Mode :	Mode 9	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	50~53%
Test Channel :	11	Test Engineer :	Phoenix Chen

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 25.MAR.2011 14:46:51

Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 25.MAR.2011 14:47:08

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.

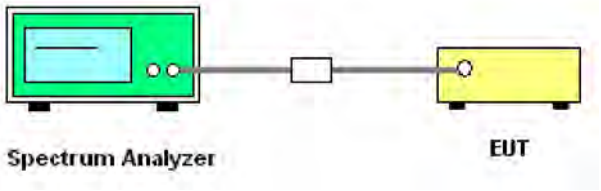
3.5.2 Measuring Instruments

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

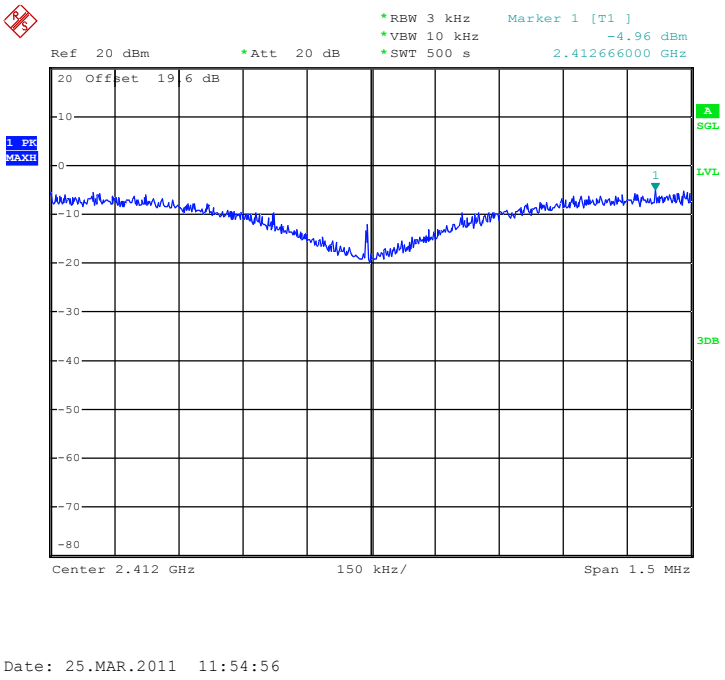


3.5.5 Test Result of Power Spectral Density

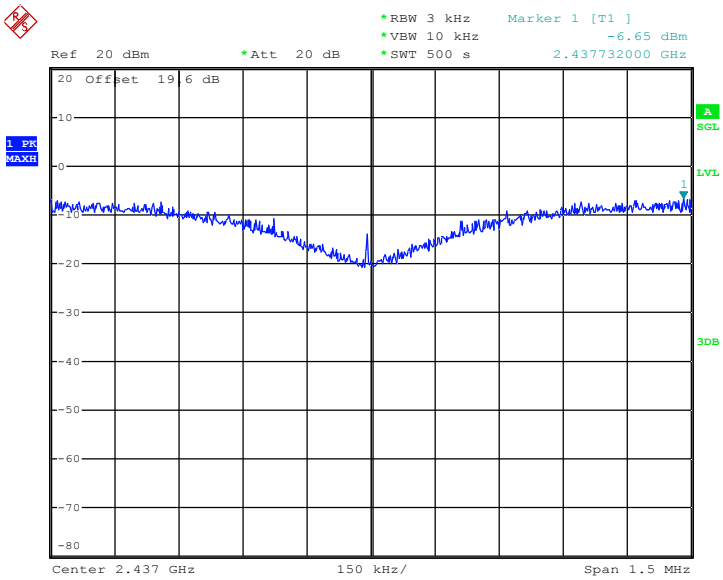
Test Mode :	Mode 1, 2, 3	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-4.96	8	Pass
06	2437	-6.65	8	Pass
11	2462	-5.87	8	Pass

Mode 1 : PSD Plot on 802.11b Channel 01

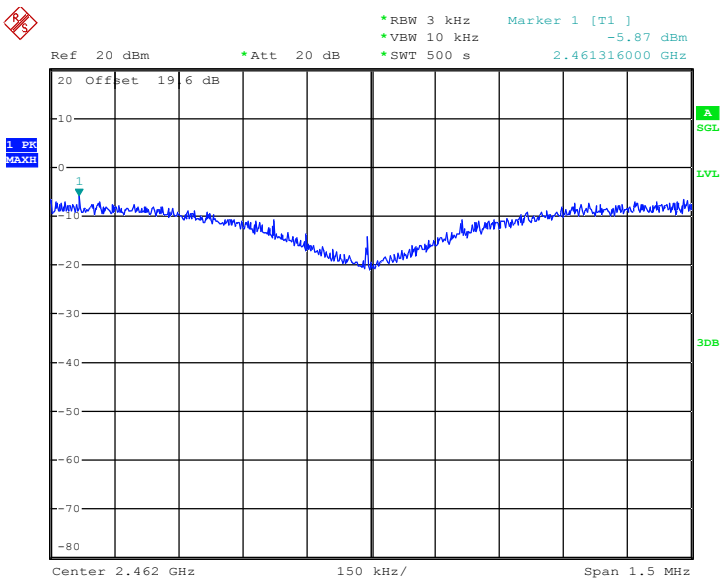


Mode 2 : PSD Plot on 802.11b Channel 06



Date: 25.MAR.2011 12:17:56

Mode 3 : PSD Plot on 802.11b Channel 11

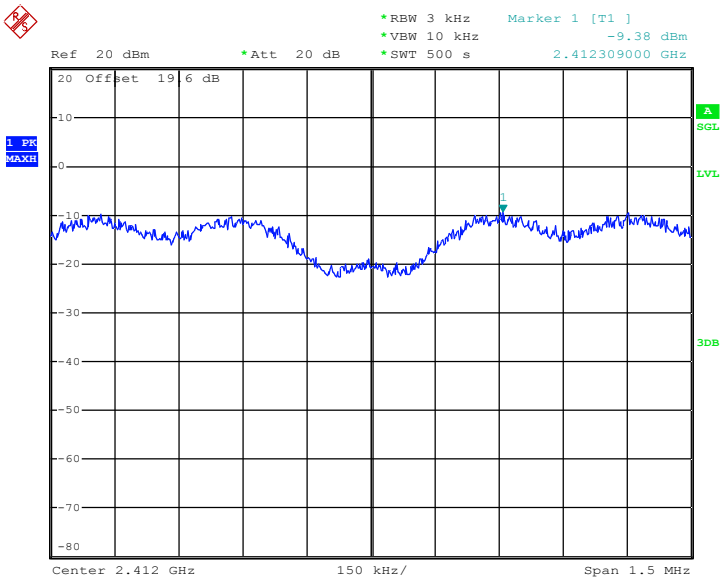


Date: 25.MAR.2011 13:15:47

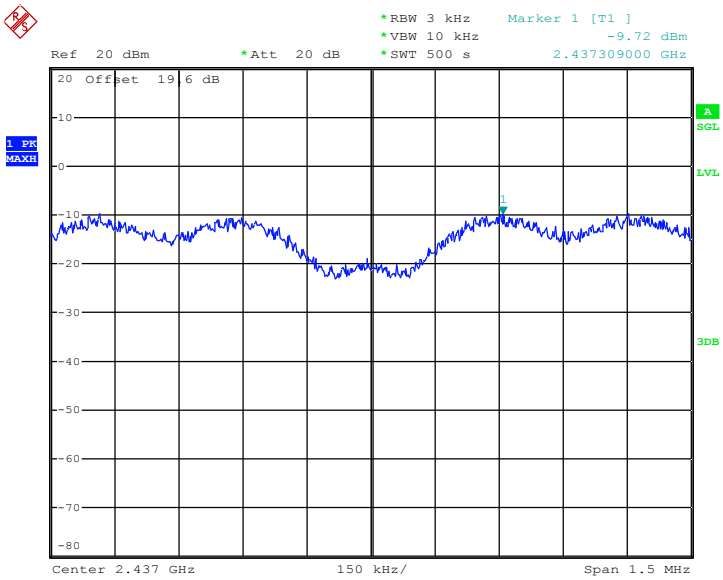
Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-9.38	8	Pass
06	2437	-9.72	8	Pass
11	2462	-9.20	8	Pass

Mode 4 : PSD Plot on 802.11g Channel 01

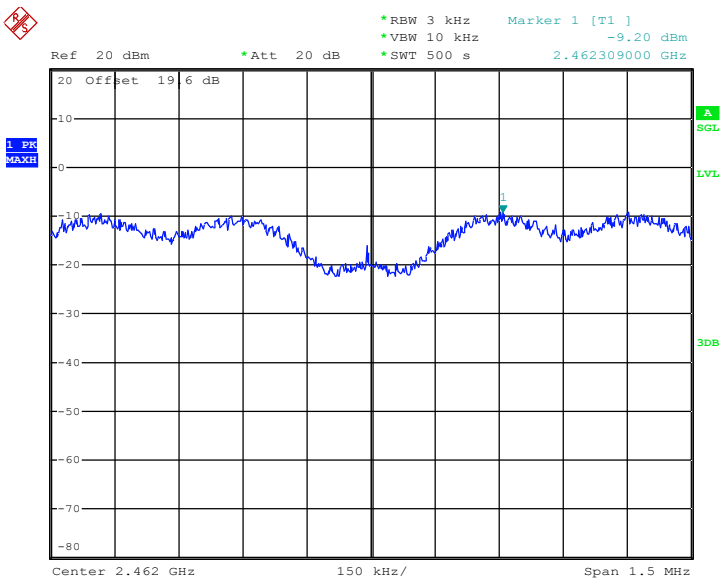


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 25.MAR.2011 13:42:34

Mode 6 : PSD Plot on 802.11g Channel 11

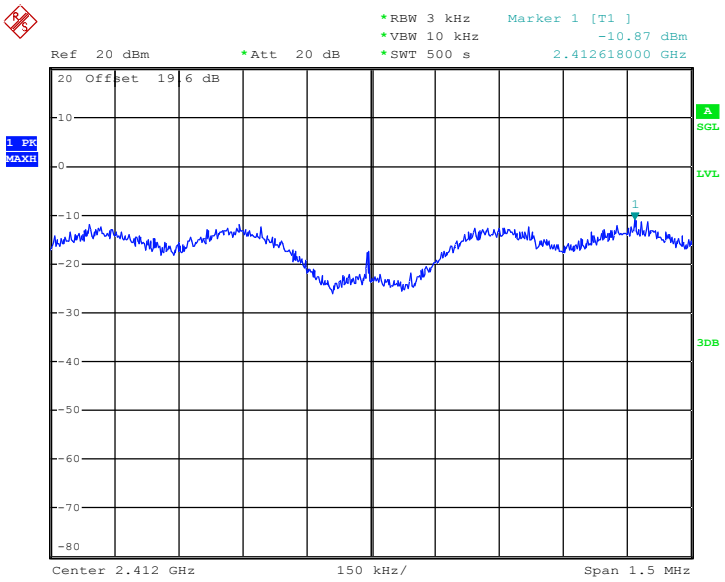


Date: 25.MAR.2011 13:30:40

Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Phoenix Chen	Relative Humidity :	50~53%

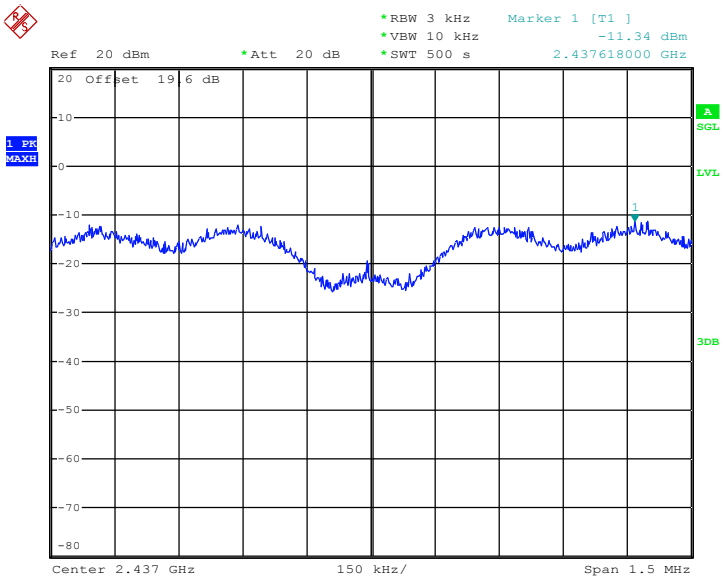
Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-10.87	8	Pass
06	2437	-11.34	8	Pass
11	2462	-11.38	8	Pass

Mode 7 : PSD Plot on 802.11n (BW 20MHz) Channel 01



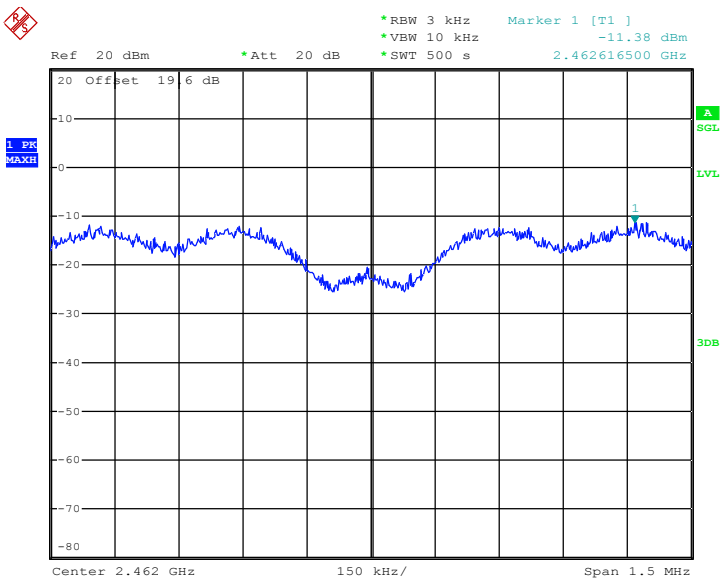
Date: 25.MAR.2011 14:22:10

Mode 8 : PSD Plot on802.11n (BW 20MHz) Channel 06



Date: 25.MAR.2011 14:33:30

Mode 9 : PSD Plot on 802.11n (BW 20MHz) Channel 11



Date: 25.MAR.2011 14:46:30

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.

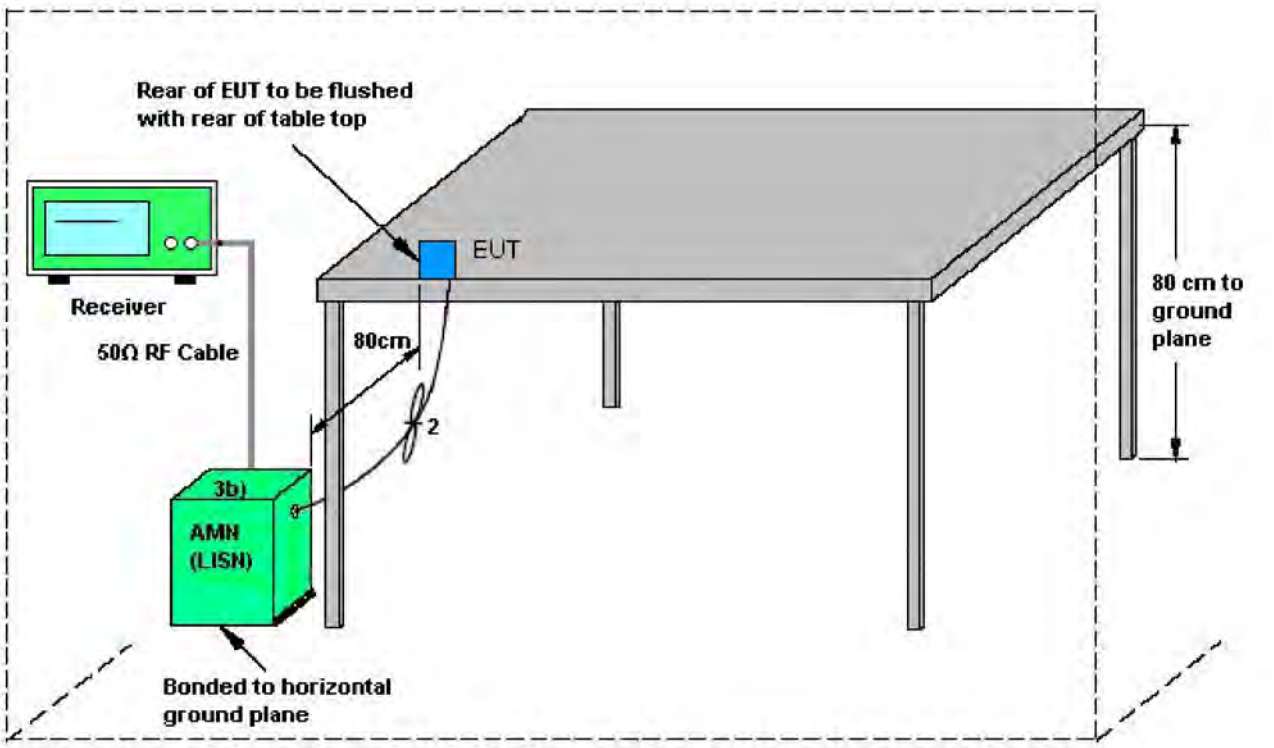
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

1. The testing follows the guidelines in ANSI C63.4-2003.
2. 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.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

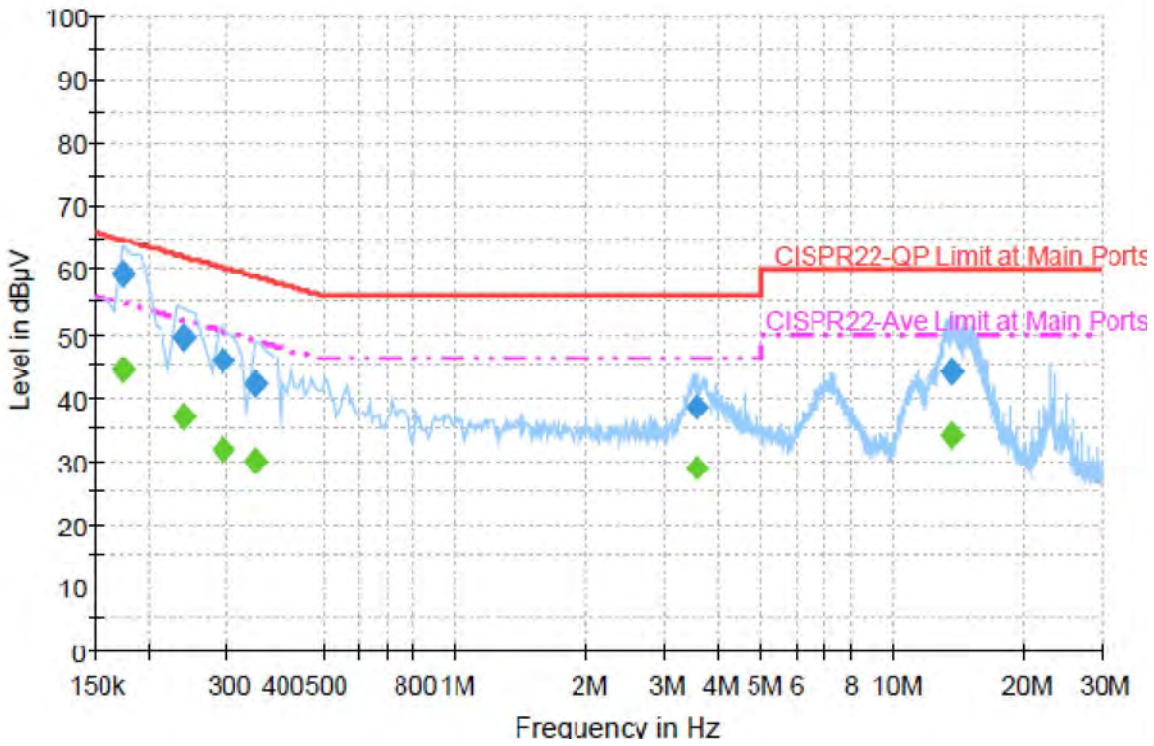
3.6.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Novic Chiang	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link + Bluetooth Link + TC + Adapter 1 for Sample 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



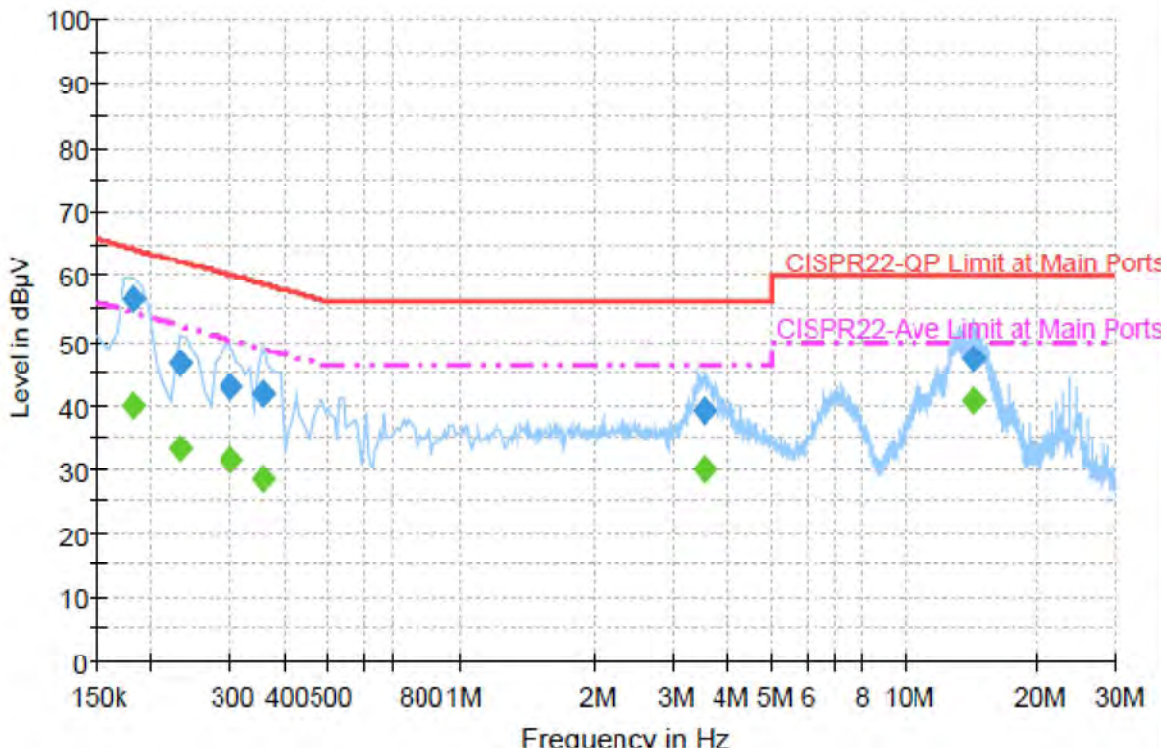
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	59.5	Off	L1	19.4	5.3	64.8
0.238000	49.6	Off	L1	19.4	12.6	62.2
0.294000	45.9	Off	L1	19.4	14.5	60.4
0.350000	42.0	Off	L1	19.4	17.0	59.0
3.550000	38.4	Off	L1	19.5	17.6	56.0
13.662000	44.0	Off	L1	19.6	16.0	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	44.1	Off	L1	19.4	10.7	54.8
0.238000	36.9	Off	L1	19.4	15.3	52.2
0.294000	31.9	Off	L1	19.4	18.5	50.4
0.350000	29.9	Off	L1	19.4	19.1	49.0
3.550000	28.8	Off	L1	19.5	17.2	46.0
13.662000	34.1	Off	L1	19.6	15.9	50.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Novic Chiang	Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link + Bluetooth Link + TC + Adapter 1 for Sample 1		
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)
0.182000	56.6	Off	N	19.4	7.8	64.4
0.230000	46.5	Off	N	19.5	15.9	62.4
0.302000	42.9	Off	N	19.4	17.3	60.2
0.358000	41.6	Off	N	19.4	17.2	58.8
3.526000	39.2	Off	N	19.5	16.8	56.0
14.302000	47.3	Off	N	19.7	12.7	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	39.8	Off	N	19.4	14.6	54.4
0.230000	33.1	Off	N	19.5	19.3	52.4
0.302000	31.2	Off	N	19.4	19.0	50.2
0.358000	28.3	Off	N	19.4	20.5	48.8
3.526000	29.7	Off	N	19.5	16.3	46.0
14.302000	40.6	Off	N	19.7	9.4	50.0

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

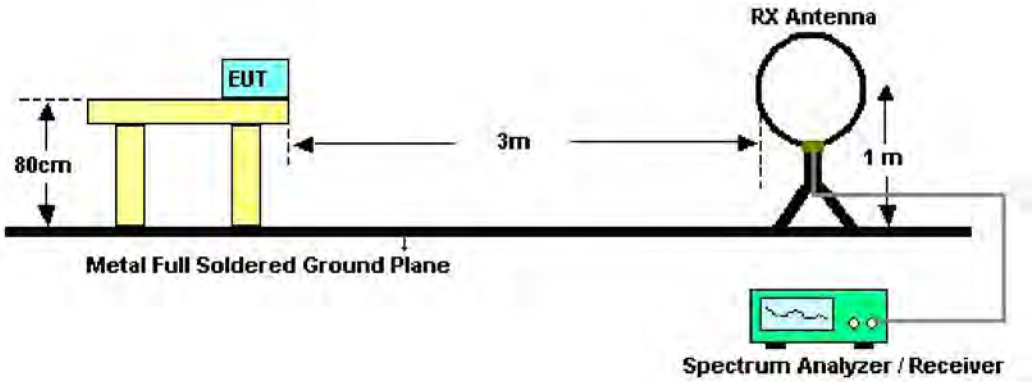
See list of measuring instruments of this test report.

3.7.3 Test Procedures

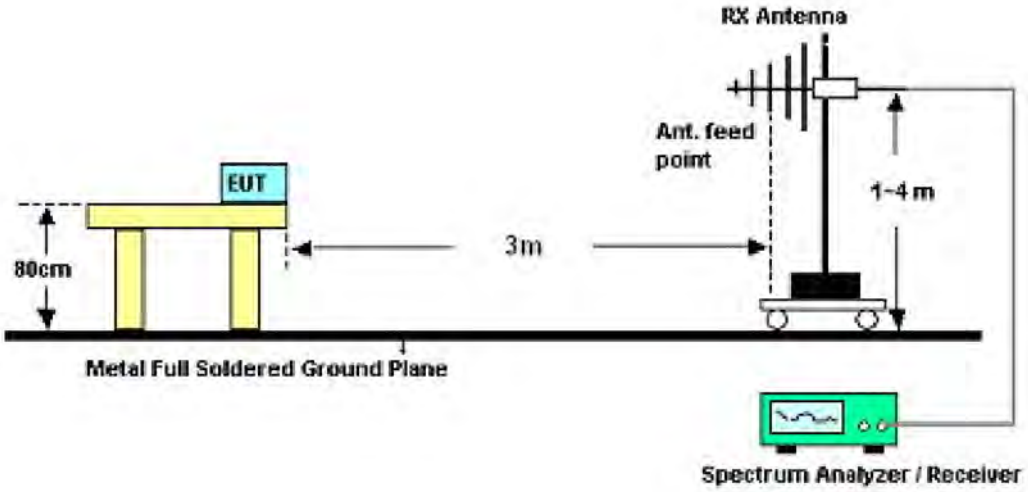
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
   (2) Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.
   Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB)
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

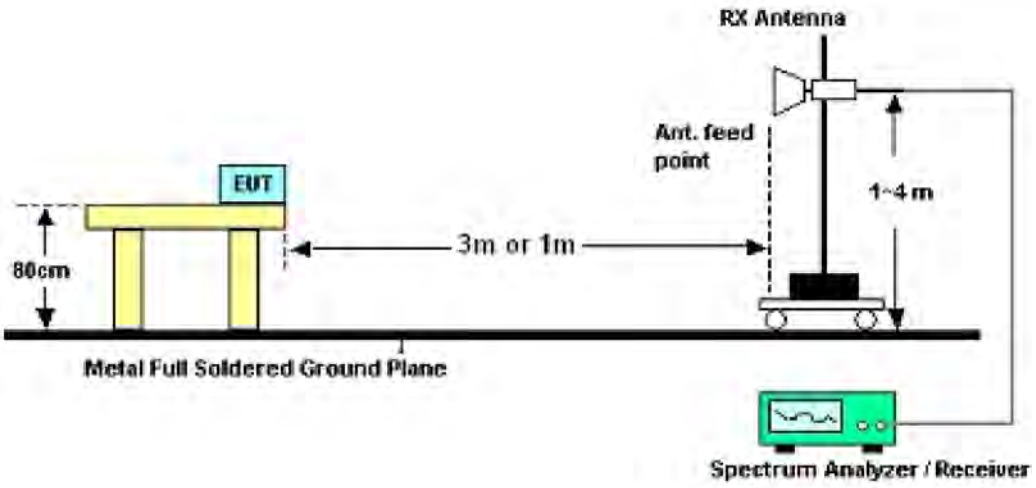
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

Test Engineer :	Jason Wang	Temperature :	21~23℃
		Relative Humidity :	46~49%

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 (specific distance / test distance) (dB);

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

3.7.6 Test Result of Radiated Emission (30 MHz ~ 10th Harmonic)

Test Mode :	Mode 1	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
192.54	27.67	-15.83	43.5	48.8	9.08	1.29	31.5	-	-	Peak
216.3	29.87	-16.13	46	49.66	10.27	1.4	31.46	-	-	Peak
290.01	29.98	-16.02	46	46.3	13.31	1.69	31.32	-	-	Peak
724.9	30.54	-15.46	46	37.03	21.27	3	30.76	-	-	Peak
783	33.08	-12.92	46	38.47	22.19	3.11	30.69	100	152	Peak
848.1	31.13	-14.87	46	35.58	23.02	3.26	30.73	-	-	Peak
2382.77	58.95	-15.05	74	54.61	32.16	6.03	33.85	104	31	Peak
2382.77	45.87	-8.13	54	41.53	32.16	6.03	33.85	104	31	Average
2412	110.02	-	-	105.62	32.2	6.07	33.87	104	31	Peak
2412	105.02	-	-	100.62	32.2	6.07	33.87	104	31	Average
2492	39.32	-14.68	54	34.74	32.3	6.18	33.9	104	31	Average
2492	51.68	-22.32	74	47.1	32.3	6.18	33.9	104	31	Peak
7236	49.83	-40.19	90.02	62.4	35.51	10.03	58.11	100	0	Peak

Test Mode :	Mode 1	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
30.54	29.63	-10.37	40	44.28	16.27	0.54	31.46	106	87	Peak
49.98	29.53	-10.47	40	52.09	8.28	0.7	31.54	-	-	Peak
229.26	29.4	-16.6	46	48.21	11.16	1.47	31.44	-	-	Peak
593.3	28.91	-17.09	46	37.5	19.67	2.67	30.93	-	-	Peak
791.4	30.68	-15.32	46	35.9	22.33	3.13	30.68	-	-	Peak
856.5	31.92	-14.08	46	36.25	23.12	3.28	30.73	-	-	Peak
2381.82	56.88	-17.12	74	52.54	32.16	6.03	33.85	100	82	Peak
2381.82	43.34	-10.66	54	39	32.16	6.03	33.85	100	82	Average
2412	108.97	-	-	104.57	32.2	6.07	33.87	100	82	Peak
2412	103.98	-	-	99.58	32.2	6.07	33.87	100	82	Average
2486	37.98	-16.02	54	33.42	32.28	6.18	33.9	100	82	Average
2486	50.33	-23.67	74	45.77	32.28	6.18	33.9	100	82	Peak
7236	50.25	-38.72	88.97	62.82	35.51	10.03	58.11	100	0	Peak

Test Mode :	Mode 2	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
192.54	28.2	-15.3	43.5	49.33	9.08	1.29	31.5	-	-	Peak
216.3	32.72	-13.28	46	52.51	10.27	1.4	31.46	100	201	Peak
238.17	28.89	-17.11	46	46.94	11.85	1.52	31.42	-	-	Peak
593.3	30.55	-15.45	46	39.14	19.67	2.67	30.93	-	-	Peak
780.9	32.02	-13.98	46	37.44	22.16	3.11	30.69	-	-	Peak
847.4	32.07	-13.93	46	36.52	23.02	3.26	30.73	-	-	Peak
2358	52.9	-21.1	74	48.62	32.13	5.99	33.84	104	30	Peak
2358	43.53	-10.47	54	39.25	32.13	5.99	33.84	104	30	Average
2437	110.23	-	-	105.78	32.22	6.11	33.88	104	30	Peak
2437	105.32	-	-	100.85	32.24	6.11	33.88	104	30	Average
2484	52.43	-21.57	74	47.87	32.28	6.18	33.9	104	30	Peak
2484	39.3	-14.7	54	34.74	32.28	6.18	33.9	104	30	Average
7311	49.93	-24.07	74	62.55	35.45	10.06	58.13	100	0	Peak

Test Mode :	Mode 2	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
40.26	26.7	-13.3	40	45.08	12.5	0.63	31.51	-	-	Peak
49.98	29.48	-10.52	40	52.04	8.28	0.7	31.54	120	196	Peak
226.29	27.53	-18.47	46	46.57	10.95	1.46	31.45	-	-	Peak
377	28.73	-17.27	46	42.01	15.87	2.09	31.24	-	-	Peak
593.3	29.9	-16.1	46	38.49	19.67	2.67	30.93	-	-	Peak
780.9	30.66	-15.34	46	36.08	22.16	3.11	30.69	-	-	Peak
2356	48.82	-25.18	74	44.57	32.13	5.95	33.83	102	94	Peak
2356	39.63	-14.37	54	35.38	32.13	5.95	33.83	102	94	Average
2437	108.31	-	-	103.84	32.24	6.11	33.88	102	94	Peak
2437	103.35	-	-	98.88	32.24	6.11	33.88	102	94	Average
2494	48.78	-25.22	74	44.2	32.3	6.18	33.9	102	94	Peak
2494	36.84	-17.16	54	32.26	32.3	6.18	33.9	102	94	Average
7311	49.08	-24.92	74	61.7	35.45	10.06	58.13	100	0	Peak

Test Mode :	Mode 3	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
107.49	21	-22.5	43.5	41.06	10.45	1.04	31.55	-	-	Peak
216.3	28.46	-17.54	46	48.25	10.27	1.4	31.46	-	-	Peak
235.74	25.9	-20.1	46	44.18	11.64	1.51	31.43	-	-	Peak
590.5	30.46	-15.54	46	39.11	19.62	2.66	30.93	-	-	Peak
792.1	31.87	-14.13	46	37.07	22.35	3.13	30.68	-	-	Peak
847.4	32	-14	46	36.45	23.02	3.26	30.73	100	305	Peak
2382	51.7	-22.3	74	47.36	32.16	6.03	33.85	102	25	Peak
2382	42.16	-11.84	54	37.82	32.16	6.03	33.85	102	25	Average
2462	109.28	-	-	104.77	32.26	6.14	33.89	102	25	Peak
2462	104.33	-	-	99.82	32.26	6.14	33.89	102	25	Average
2483.5	58.68	-15.32	74	54.12	32.28	6.18	33.9	102	25	Peak
2483.5	46.59	-7.41	54	42.03	32.28	6.18	33.9	102	25	Average
7386	48.3	-25.7	74	60.99	35.38	10.1	58.17	100	0	Peak

Test Mode :	Mode 3	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
49.17	29.75	-10.25	40	51.91	8.68	0.69	31.53	100	157	Peak
227.37	30.79	-15.21	46	49.76	11.02	1.46	31.45	-	-	Peak
286.77	26.29	-19.71	46	42.68	13.26	1.68	31.33	-	-	Peak
593.3	27.99	-18.01	46	36.58	19.67	2.67	30.93	-	-	Peak
755.7	31.48	-14.52	46	37.35	21.76	3.07	30.7	-	-	Peak
792.1	31.42	-14.58	46	36.62	22.35	3.13	30.68	-	-	Peak
2382	49.87	-24.13	74	45.53	32.16	6.03	33.85	100	93	Peak
2382	39.59	-14.41	54	35.25	32.16	6.03	33.85	100	93	Average
2462	101.95	-	-	97.44	32.26	6.14	33.89	100	93	Average
2462	107.12	-	-	102.61	32.26	6.14	33.89	100	93	Peak
2483.66	55.7	-18.3	74	51.14	32.28	6.18	33.9	100	93	Peak
2483.66	42.73	-11.27	54	38.17	32.28	6.18	33.9	100	93	Average
7386	48.99	-25.01	74	61.68	35.38	10.1	58.17	100	0	Peak

Test Mode :	Mode 4	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
192.54	24.8	-18.7	43.5	45.93	9.08	1.29	31.5	-	-	Peak
216.3	26.35	-19.65	46	46.14	10.27	1.4	31.46	-	-	Peak
240.33	24.92	-21.08	46	42.83	11.98	1.53	31.42	-	-	Peak
593.3	29.78	-16.22	46	38.37	19.67	2.67	30.93	-	-	Peak
783	31.96	-14.04	46	37.35	22.19	3.11	30.69	112	100	Peak
855.8	30.41	-15.59	46	34.75	23.11	3.28	30.73	-	-	Peak
2389.42	70.13	-3.87	74	65.77	32.18	6.03	33.85	104	30	Peak
2389.42	47.26	-6.74	54	42.9	32.18	6.03	33.85	104	30	Average
2412	108.11	-	-	103.71	32.2	6.07	33.87	104	30	Peak
2412	90.05	-	-	85.65	32.2	6.07	33.87	104	30	Average
2486	37.79	-16.21	54	33.23	32.28	6.18	33.9	104	30	Average
2486	52.07	-21.93	74	47.51	32.28	6.18	33.9	104	30	Peak
7236	51.14	-36.97	88.11	63.71	35.51	10.03	58.11	100	0	Peak

Test Mode :	Mode 4	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
49.17	27.57	-12.43	40	49.73	8.68	0.69	31.53	100	223	Peak
224.94	28.04	-17.96	46	47.15	10.89	1.45	31.45	-	-	Peak
245.46	26.77	-19.23	46	44.32	12.33	1.53	31.41	-	-	Peak
377	29.82	-16.18	46	43.1	15.87	2.09	31.24	-	-	Peak
755.7	31	-15	46	36.87	21.76	3.07	30.7	-	-	Peak
856.5	31.34	-14.66	46	35.67	23.12	3.28	30.73	-	-	Peak
2389.42	66.87	-7.13	74	62.51	32.18	6.03	33.85	100	83	Peak
2389.42	44.72	-9.28	54	40.36	32.18	6.03	33.85	100	83	Average
2412	108.07	-	-	103.67	32.2	6.07	33.87	100	83	Peak
2412	89.39	-	-	84.99	32.2	6.07	33.87	100	83	Average
2486	36.51	-17.49	54	31.95	32.28	6.18	33.9	100	83	Average
2486	49.81	-24.19	74	45.25	32.28	6.18	33.9	100	83	Peak
7236	49.45	-38.62	88.07	62.02	35.51	10.03	58.11	100	0	Peak

Test Mode :	Mode 5	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
192.54	27.32	-16.18	43.5	48.45	9.08	1.29	31.5	-	-	Peak
216.3	29.12	-16.88	46	48.91	10.27	1.4	31.46	-	-	Peak
253.02	24.61	-21.39	46	41.75	12.72	1.55	31.41	-	-	Peak
593.3	30.15	-15.85	46	38.74	19.67	2.67	30.93	-	-	Peak
718.6	29.69	-16.31	46	36.31	21.18	2.98	30.78	-	-	Peak
783.7	31.71	-14.29	46	37.08	22.21	3.11	30.69	100	243	Peak
2390	59.66	-14.34	74	55.3	32.18	6.03	33.85	103	31	Peak
2390	42.06	-11.94	54	37.7	32.18	6.03	33.85	103	31	Average
2437	112.62	-	-	108.17	32.22	6.11	33.88	103	31	Peak
2437	93.73	-	-	89.26	32.24	6.11	33.88	103	31	Average
2484	58.96	-15.04	74	54.4	32.28	6.18	33.9	103	31	Peak
2484	40.4	-13.6	54	35.84	32.28	6.18	33.9	103	31	Average
7311	56.2	-17.8	74	68.82	35.45	10.06	58.13	108	174	Peak
7311	36.58	-17.42	54	49.2	35.45	10.06	58.13	108	174	Average

Test Mode :	Mode 5	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
49.17	28.32	-11.68	40	50.48	8.68	0.69	31.53	100	66	Peak
201.45	26.01	-17.49	43.5	46.92	9.24	1.33	31.48	-	-	Peak
299.46	28.47	-17.53	46	44.57	13.46	1.77	31.33	-	-	Peak
377	27.86	-18.14	46	41.14	15.87	2.09	31.24	-	-	Peak
593.3	28.22	-17.78	46	36.81	19.67	2.67	30.93	-	-	Peak
783.7	29.6	-16.4	46	34.97	22.21	3.11	30.69	-	-	Peak
2390	38.68	-15.32	54	34.32	32.18	6.03	33.85	102	94	Average
2390	58.49	-15.51	74	54.13	32.18	6.03	33.85	102	94	Peak
2437	111.48	-	-	107.01	32.24	6.11	33.88	102	94	Peak
2437	92.13	-	-	87.66	32.24	6.11	33.88	102	94	Average
2484	56.2	-17.8	74	51.64	32.28	6.18	33.9	102	94	Peak
2484	37.53	-16.47	54	32.97	32.28	6.18	33.9	102	94	Average
7311	55.48	-18.52	74	68.1	35.45	10.06	58.13	102	280	Peak
7311	37.21	-16.79	54	49.83	35.45	10.06	58.13	102	280	Average

Test Mode :	Mode 6	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
32.7	18.18	-21.82	40	33.29	15.8	0.56	31.47	-	-	Peak
216.3	29.37	-16.63	46	49.16	10.27	1.4	31.46	-	-	Peak
236.01	22.22	-23.78	46	40.5	11.64	1.51	31.43	-	-	Peak
589.8	29.35	-16.65	46	38.01	19.61	2.66	30.93	-	-	Peak
721.4	29.45	-16.55	46	36	21.23	2.99	30.77	-	-	Peak
786.5	32.17	-13.83	46	37.48	22.26	3.12	30.69	102	331	Peak
2388	53.26	-20.74	74	48.9	32.18	6.03	33.85	102	24	Peak
2388	39.33	-14.67	54	34.97	32.18	6.03	33.85	102	24	Average
2462	108.86	-	-	104.35	32.26	6.14	33.89	102	24	Peak
2462	90.71	-	-	86.2	32.26	6.14	33.89	102	24	Average
2483.5	48.25	-5.75	54	43.69	32.28	6.18	33.9	102	24	Average
2483.5	70.65	-3.35	74	66.09	32.28	6.18	33.9	102	24	Peak
7386	48.49	-25.51	74	61.18	35.38	10.1	58.17	100	0	Peak

Test Mode :	Mode 6	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
49.98	26.71	-13.29	40	49.27	8.28	0.7	31.54	-	-	Peak
216.3	24.72	-21.28	46	44.51	10.27	1.4	31.46	-	-	Peak
297.3	33.17	-12.83	46	49.32	13.43	1.75	31.33	107	225	Peak
377	28.28	-17.72	46	41.56	15.87	2.09	31.24	-	-	Peak
724.2	28.81	-17.19	46	35.3	21.27	3	30.76	-	-	Peak
786.5	30.55	-15.45	46	35.86	22.26	3.12	30.69	-	-	Peak
2382	37.28	-16.72	54	32.94	32.16	6.03	33.85	100	91	Average
2382	50.21	-23.79	74	45.87	32.16	6.03	33.85	100	91	Peak
2462	88.87	-	-	84.36	32.26	6.14	33.89	100	91	Average
2462	106.94	-	-	102.43	32.26	6.14	33.89	100	91	Peak
2483.5	65.53	-8.47	74	60.97	32.28	6.18	33.9	100	91	Peak
2483.5	45.7	-8.3	54	41.14	32.28	6.18	33.9	100	91	Average
7386	48.19	-25.81	74	60.85	35.4	10.1	58.16	100	0	Peak

Test Mode :	Mode 7	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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	70.6	-3.4	74	66.24	32.18	6.03	33.85	104	31	Peak
2389.99	46.97	-7.03	54	42.61	32.18	6.03	33.85	104	31	Average
2412	107.11	-	-	102.71	32.2	6.07	33.87	104	31	Peak
2412	88.08	-	-	83.68	32.2	6.07	33.87	104	31	Average
2484	36.94	-17.06	54	32.38	32.28	6.18	33.9	104	31	Average
2484	49.84	-24.16	74	45.28	32.28	6.18	33.9	104	31	Peak

Test Mode :	Mode 7	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
2389.61	68.05	-5.95	74	63.69	32.18	6.03	33.85	100	82	Peak
2389.61	44.73	-9.27	54	40.37	32.18	6.03	33.85	100	82	Average
2412	105.49	-	-	101.09	32.2	6.07	33.87	100	82	Peak
2412	87.25	-	-	82.85	32.2	6.07	33.87	100	82	Average
2492	35.91	-18.09	54	31.33	32.3	6.18	33.9	100	82	Average
2492	48.7	-25.3	74	44.12	32.3	6.18	33.9	100	82	Peak

Test Mode :	Mode 8	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
2390	59.38	-14.62	74	55.02	32.18	6.03	33.85	104	30	Peak
2390	40.39	-13.61	54	36.03	32.18	6.03	33.85	104	30	Average
2437	109.14	-	-	104.69	32.22	6.11	33.88	104	30	Peak
2437	90.64	-	-	86.17	32.24	6.11	33.88	104	30	Average
2492	56.26	-17.74	74	51.68	32.3	6.18	33.9	104	30	Peak
2492	38.02	-15.98	54	33.44	32.3	6.18	33.9	104	30	Average

Test Mode :	Mode 8	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
2390	55.6	-18.4	74	51.24	32.18	6.03	33.85	103	94	Peak
2390	37.13	-16.87	54	32.77	32.18	6.03	33.85	103	94	Average
2437	107.95	-	-	103.48	32.24	6.11	33.88	103	94	Peak
2437	88.83	-	-	84.36	32.24	6.11	33.88	103	94	Average
2484	53.1	-20.9	74	48.54	32.28	6.18	33.9	103	94	Peak
2484	35.9	-18.1	54	31.34	32.28	6.18	33.9	103	94	Average

Test Mode :	Mode 9	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
2390	53.04	-20.96	74	48.68	32.18	6.03	33.85	103	26	Peak
2390	38.59	-15.41	54	34.23	32.18	6.03	33.85	103	26	Average
2462	107.43	-	-	102.92	32.26	6.14	33.89	103	26	Peak
2462	88.88	-	-	84.37	32.26	6.14	33.89	103	26	Average
2483.85	70.48	-3.52	74	65.92	32.28	6.18	33.9	103	26	Peak
2483.85	48.25	-5.75	54	43.69	32.28	6.18	33.9	103	26	Average

Test Mode :	Mode 9	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
2380	49.58	-24.42	74	45.24	32.16	6.03	33.85	100	93	Peak
2380	36.34	-17.66	54	32	32.16	6.03	33.85	100	93	Average
2462	86.65	-	-	82.14	32.26	6.14	33.89	100	93	Average
2462	105.37	-	-	100.86	32.26	6.14	33.89	100	93	Peak
2483.85	66.47	-7.53	74	61.91	32.28	6.18	33.9	100	93	Peak
2483.85	44.54	-9.46	54	39.98	32.28	6.18	33.9	100	93	Average

Test Mode :	Mode 10	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
107.49	20.54	-22.96	43.5	40.6	10.45	1.04	31.55	-	-	Peak
216.03	27.09	-18.91	46	46.88	10.27	1.4	31.46	-	-	Peak
270.3	21.1	-24.9	46	37.83	13	1.64	31.37	-	-	Peak
595.4	28.71	-17.29	46	37.26	19.7	2.68	30.93	-	-	Peak
787.9	32	-14	46	37.3	22.27	3.12	30.69	126	211	Peak
853	31.5	-14.5	46	35.88	23.08	3.27	30.73	-	-	Peak
2388	50.94	-23.06	74	46.58	32.18	6.03	33.85	109	32	Peak
2388	38.44	-15.56	54	34.08	32.18	6.03	33.85	109	32	Average
2462	108.98	-	-	104.47	32.26	6.14	33.89	109	32	Peak
2462	90.9	-	-	86.39	32.26	6.14	33.89	109	32	Average
2483.5	48.78	-5.22	54	44.22	32.28	6.18	33.9	109	32	Average
2483.5	69.07	-4.93	74	64.51	32.28	6.18	33.9	109	32	Peak
7386	47.63	-26.37	74	60.32	35.38	10.1	58.17	100	0	Peak

Test Mode :	Mode 10	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	46~49%
Test Engineer :	Jason Wang	Polarization :	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
50.52	25.29	-14.71	40	47.85	8.28	0.7	31.54	157	334	Peak
217.38	24.33	-21.67	46	44.05	10.34	1.4	31.46	-	-	Peak
297.03	26.96	-19.04	46	43.13	13.41	1.75	31.33	-	-	Peak
458.2	24.65	-21.35	46	35.89	17.52	2.32	31.08	-	-	Peak
589.8	27.11	-18.89	46	35.77	19.61	2.66	30.93	-	-	Peak
850.9	30.77	-15.23	46	35.17	23.06	3.27	30.73	-	-	Peak
2380	45.58	-28.42	74	41.24	32.16	6.03	33.85	200	341	Peak
2380	33.85	-20.15	54	29.51	32.16	6.03	33.85	200	341	Average
2462	102.39	-	-	97.88	32.26	6.14	33.89	200	341	Peak
2462	85.47	-	-	80.96	32.26	6.14	33.89	200	341	Average
2484.42	64.02	-9.98	74	59.46	32.28	6.18	33.9	200	341	Peak
2484.42	44.41	-9.59	54	39.85	32.28	6.18	33.9	200	341	Average
7386	48.61	-25.39	74	61.3	35.38	10.1	58.17	100	0	Peak

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 PIFA 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
System Simulator	R&S	CMU200	117995	N/A	Jun. 08, 2009	Jun. 07, 2011	Conducted (TH02-HY)
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 11, 2010	Jun. 10, 2011	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 13, 2010	Sep. 12, 2011	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 14, 2010	Sep. 13, 2011	Conducted (TH02-HY)
Power Meter	Agilent	E4416A	GB41292344	N/A	Feb. 18, 2011	Feb. 17, 2012	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US40441548	N/A	Feb. 18, 2011	Feb. 17, 2012	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D35P	TBN-930701	N/A	Jul. 30, 2010	Jul. 29, 2011	Conducted (TH02-HY)
EMI Test Receive	R&S	ESCS 30	100356	9KHz – 2.75GHz	Aug. 16, 2010	Aug. 15, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz – 30MHz	Dec. 03, 2010	Dec. 02, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz – 30MHz	Dec. 01, 2010	Nov. 30, 2011	Conduction (CO05-HY)
AC Power Source	APC	APC-1000 W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2010	Oct. 30, 2011	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9KHz ~ 30GHz	Dec. 03, 2010	Dec. 02, 2011	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 19, 2010	Aug. 18, 2011	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 18, 2010	Oct. 17, 2011	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec. 06, 2010	Dec. 05, 2011	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Mar. 29, 2011	Mar. 28, 2012	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	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 Specification	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-Shape	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)

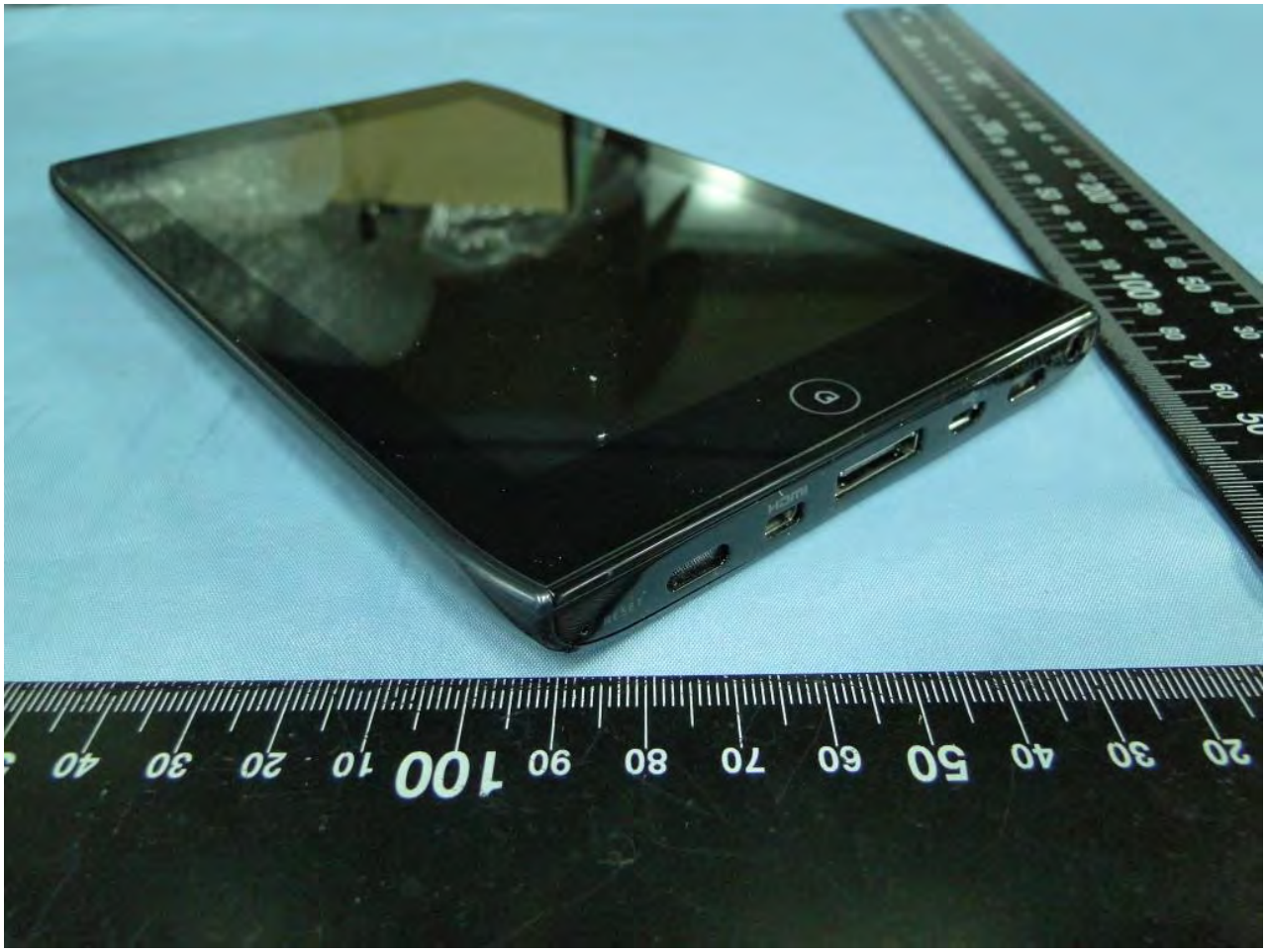
Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				

Appendix A. Photographs of EUT

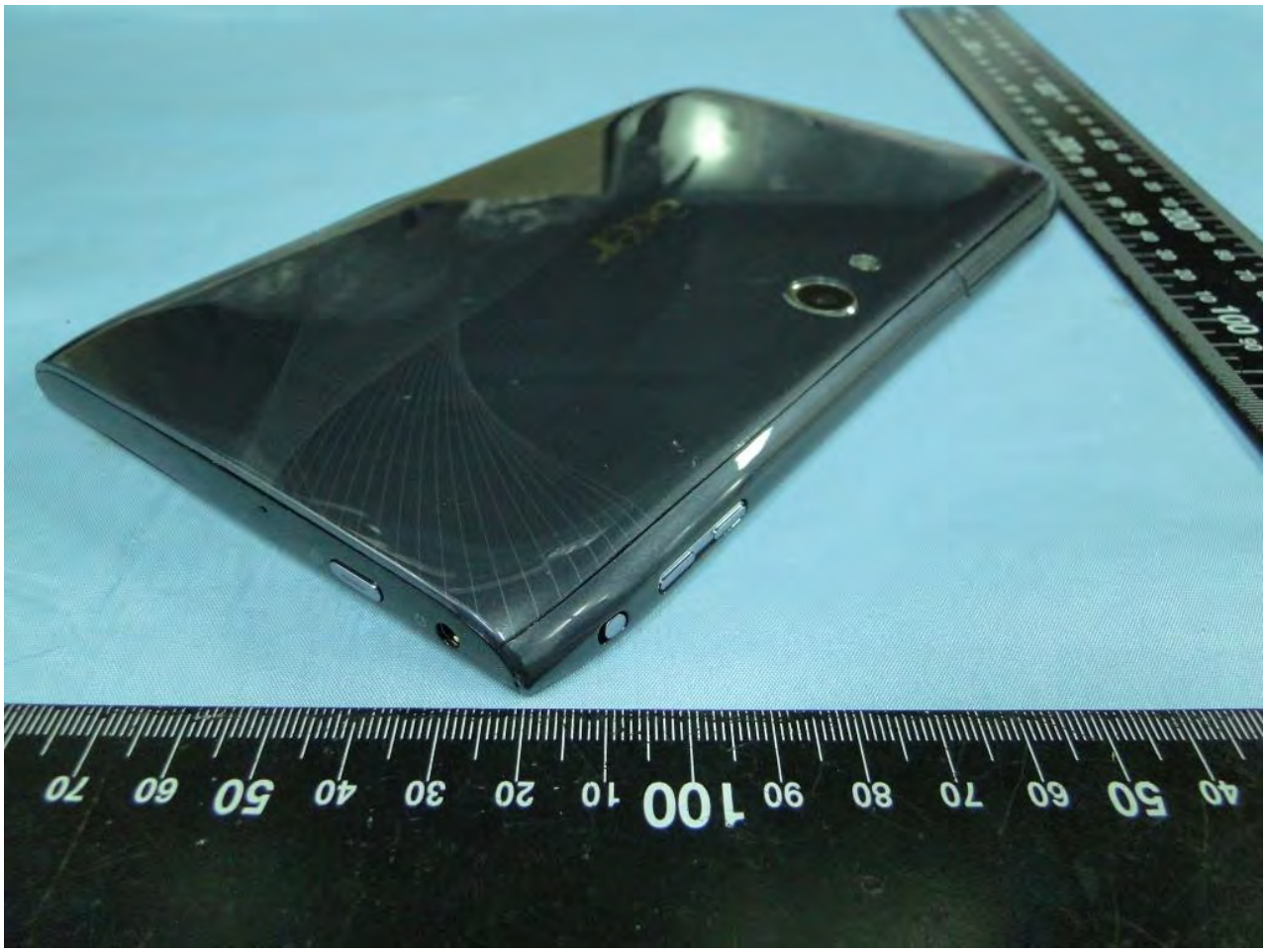
Please refer to Sporton report number EP132346 as below.

1. External Photograph of EUT

Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100



2. Photograph of Accessory

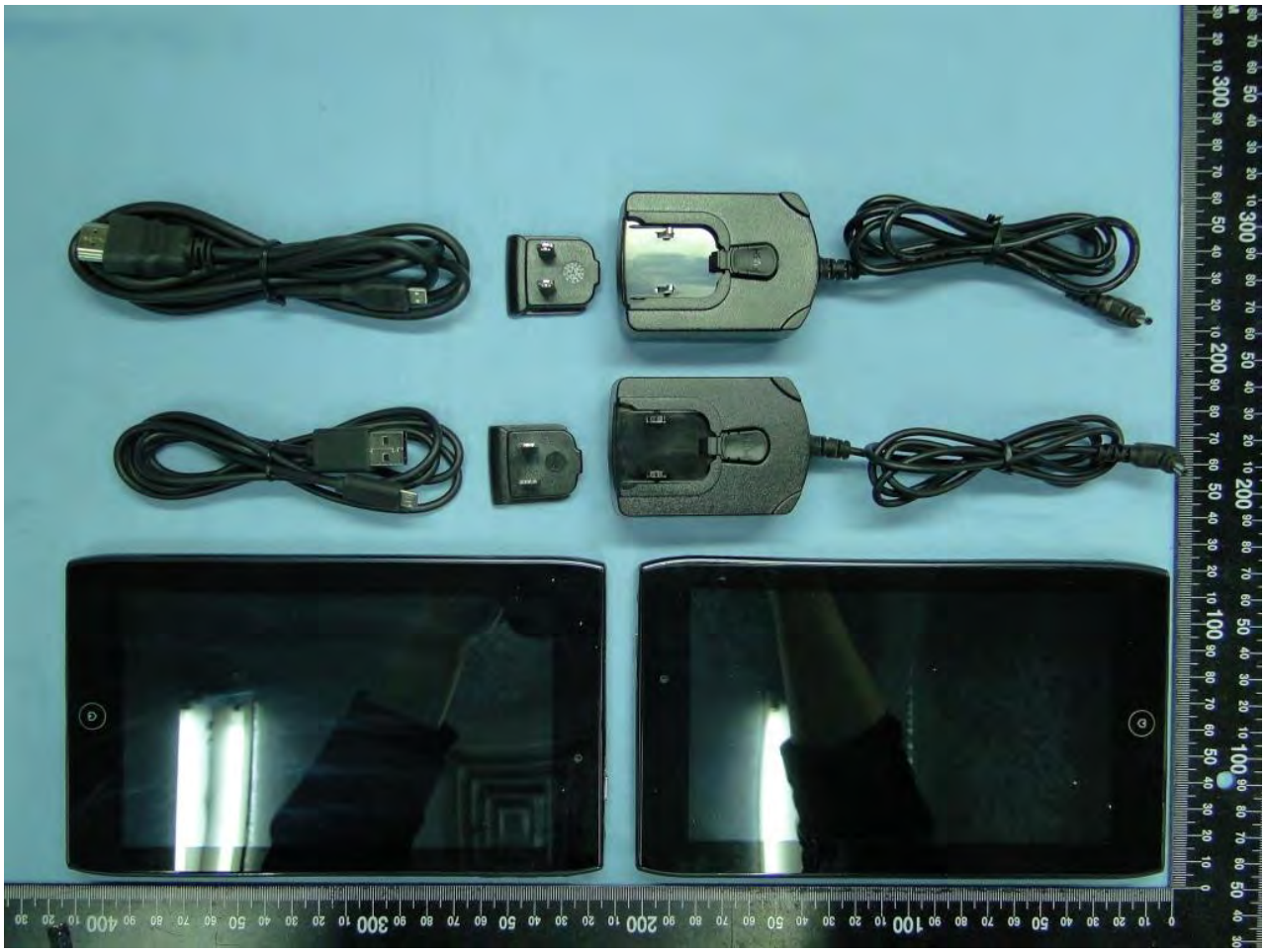
Brand Name: Acer / Model Name: A100

List of Accessory:

Specification of Accessory		
AC Adapter 1 (NF2_solution B_Rev. A2)	**Brand Name**	PHIHONG
	Model Name	PSA18R-120P
AC Adapter 2 (L1 & L2_solution A_Rev. A1)	**Brand Name**	PHIHONG
	Model Name	PSA18R-120P
Battery	**Brand Name**	SANYO
	Model Name	BAT-711
USB Cable	**Brand Name**	MEC
	Model Name	75-14782-200-Y
HDMI Cable	**Brand Name**	Molex
	Model Name	687860013
LCD Panel	**Brand Name**	CMI
	Model Name	EJ070NA-01F
LP DDR2_main	**Brand Name**	Elpida 512MB
	Model Name	SA00004EF20
LP DDR2_2nd	**Brand Name**	Hynix 512 MB
	Model Name	SA00004JD10
LP DDR2_3rd	**Brand Name**	Hynix 1G
	Model Name	SA00004MJ00
eMMC_main	**Brand Name**	Samsung 8GB
	Model Name	SA00004FP10
eMMC_2nd	**Brand Name**	Sandisk 8GB
	Model Name	SA00004FL10

Remark: For accessories equipped with this EUT, please refer to the following photos.

Brand Name: Acer / Model Name: A100

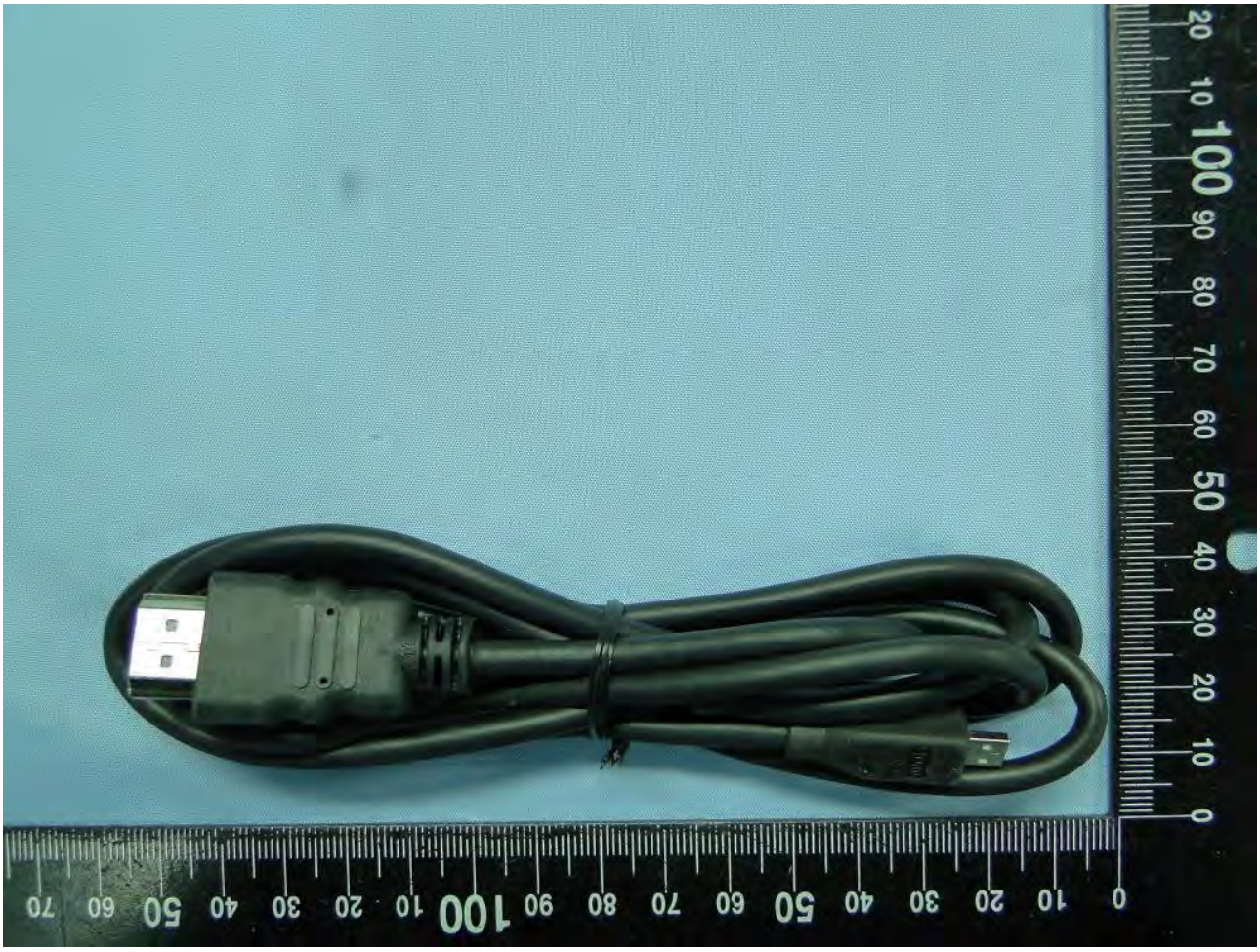


Brand Name: Acer / Model Name: A100

Brand Name: Acer / Model Name: A100

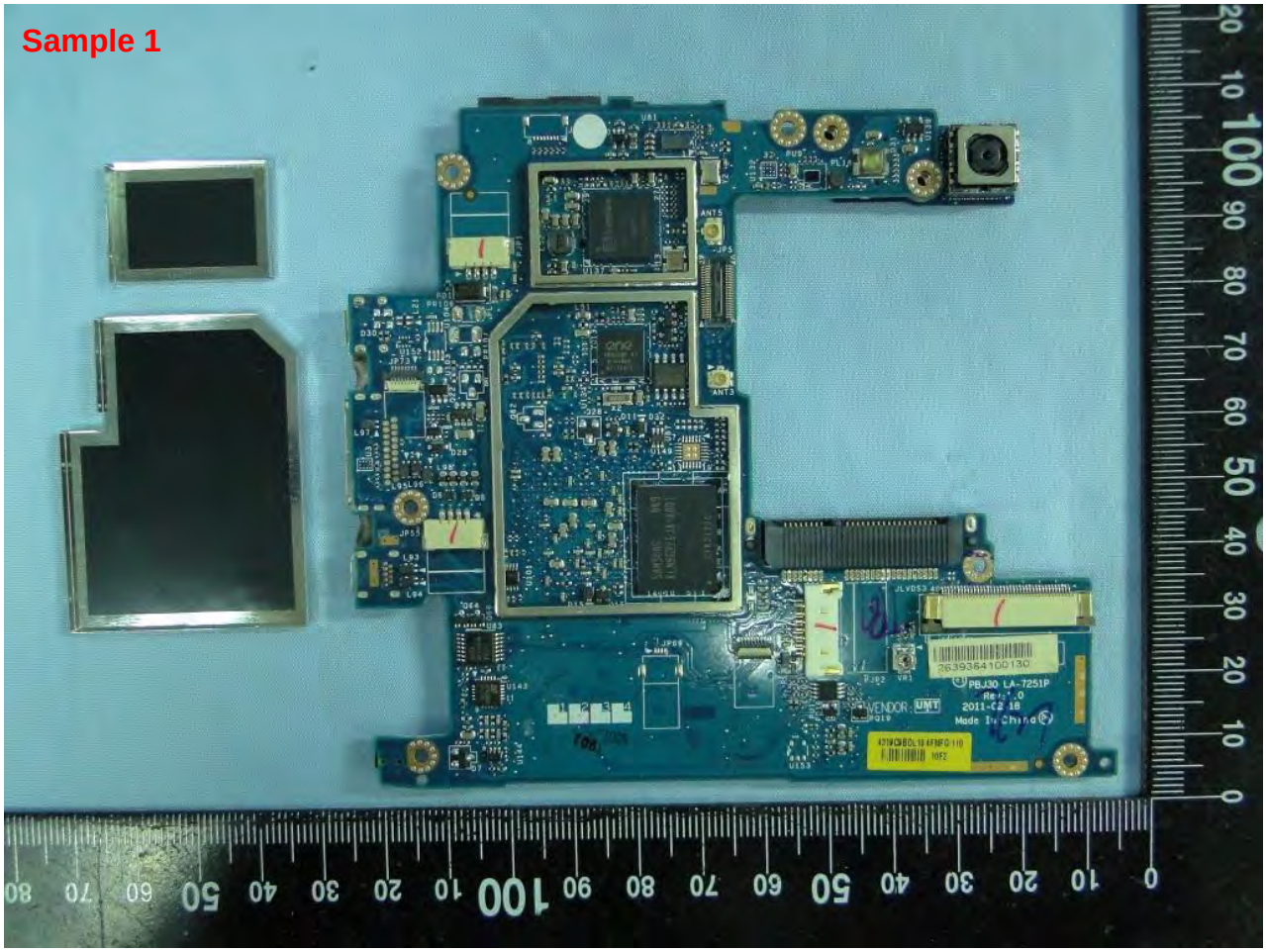
Brand Name: Acer / Model Name: A100

Brand Name: Acer / Model Name: A100

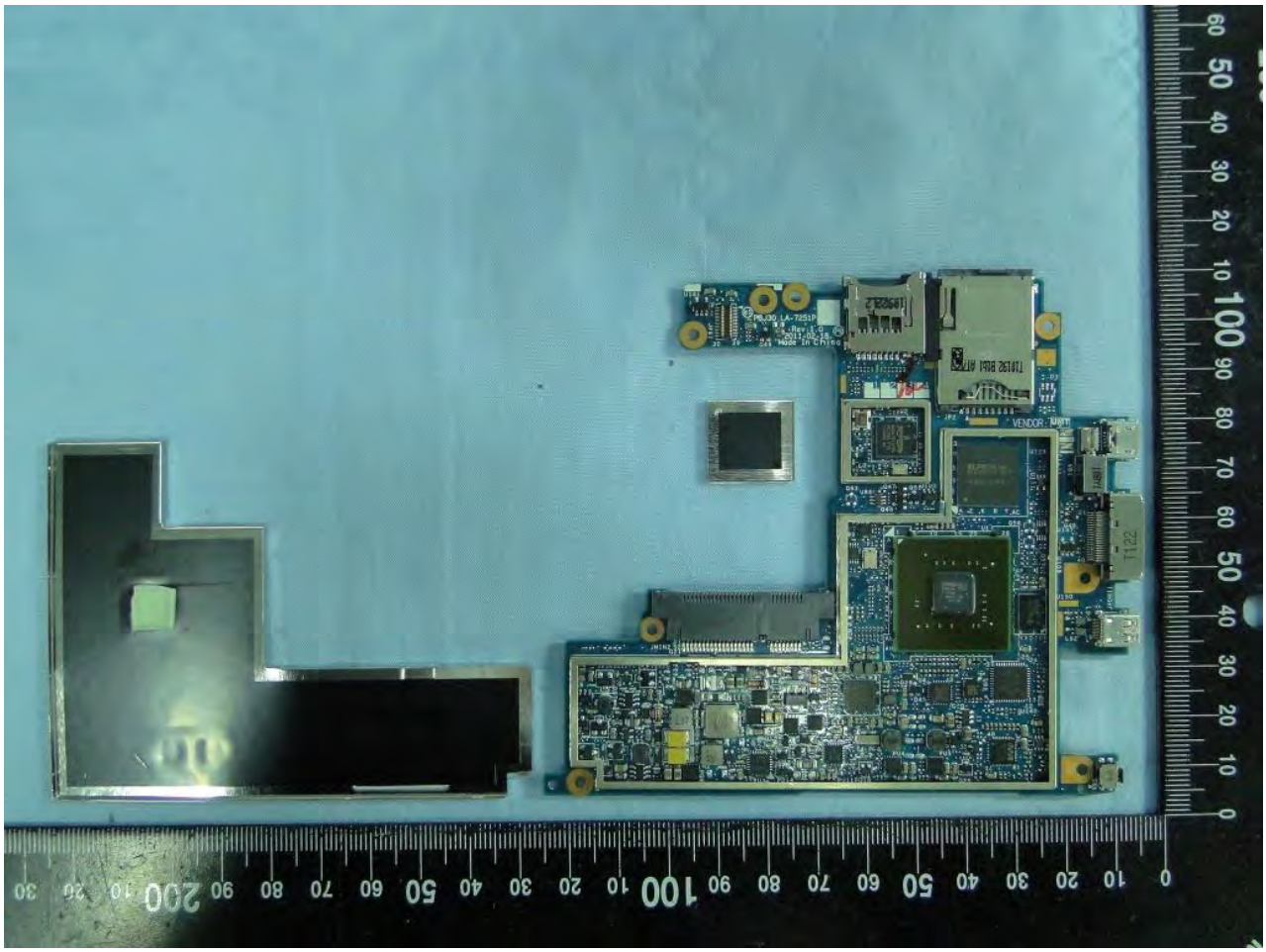


3. Internal Photograph of EUT

Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100



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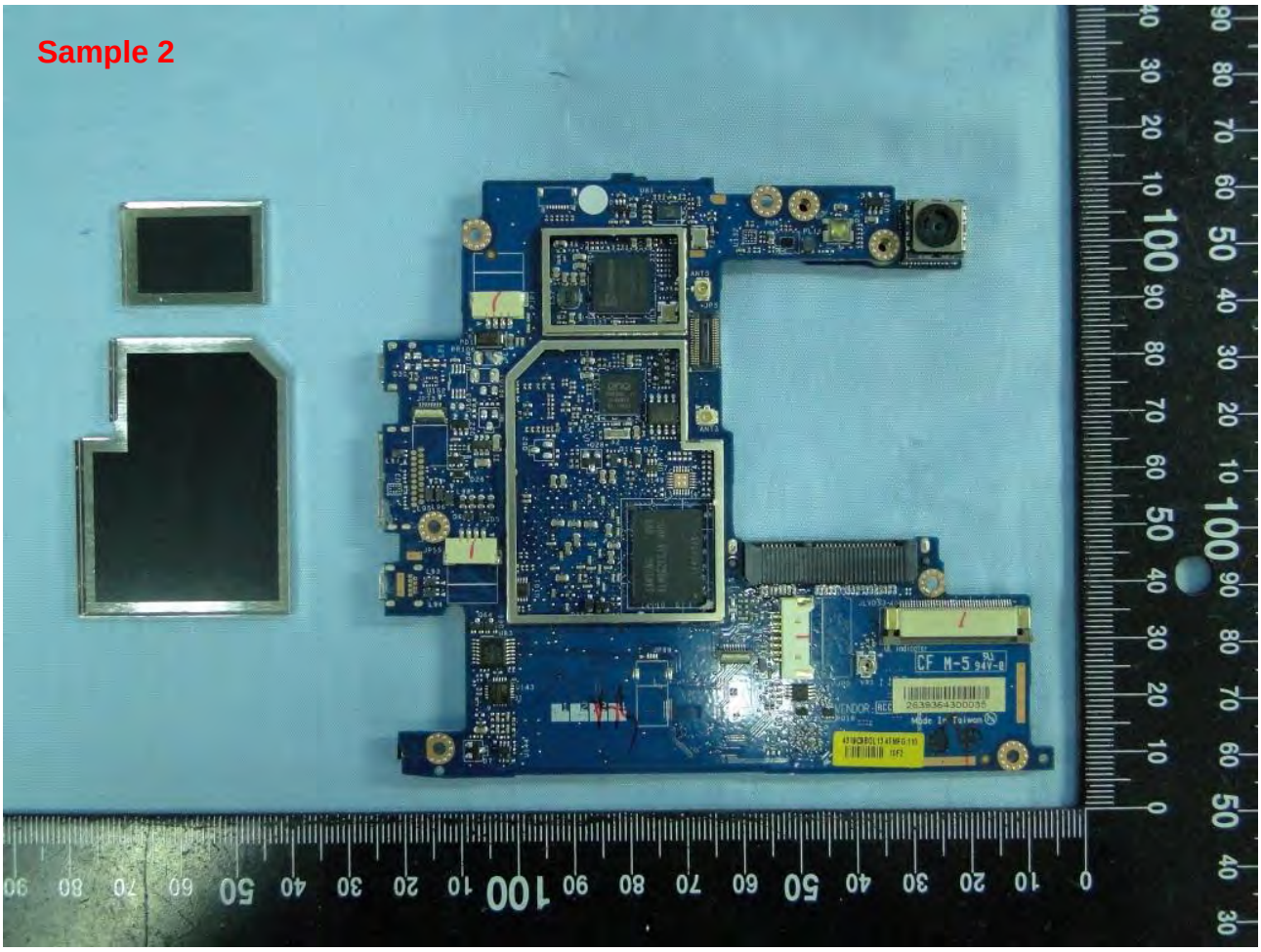
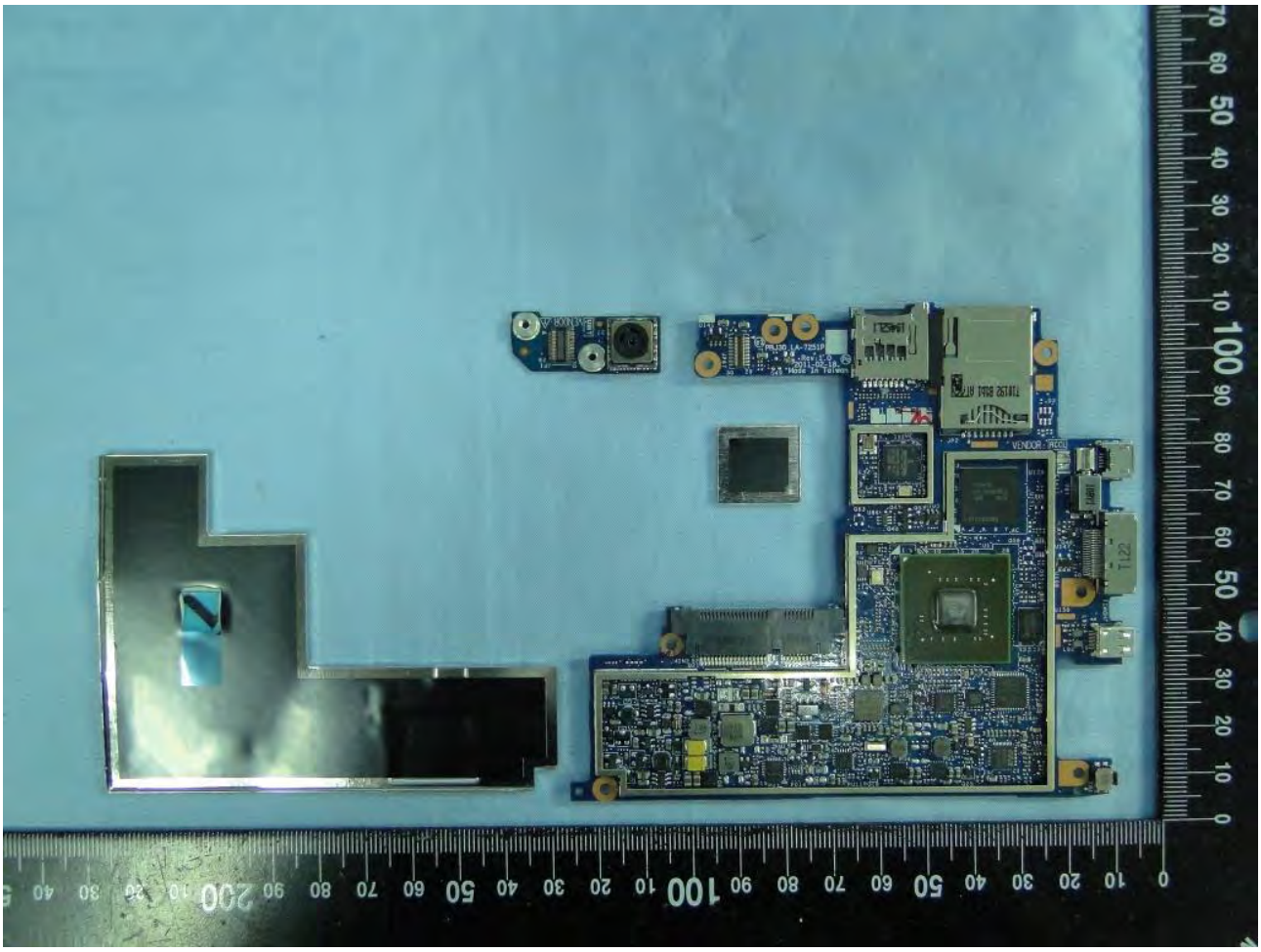
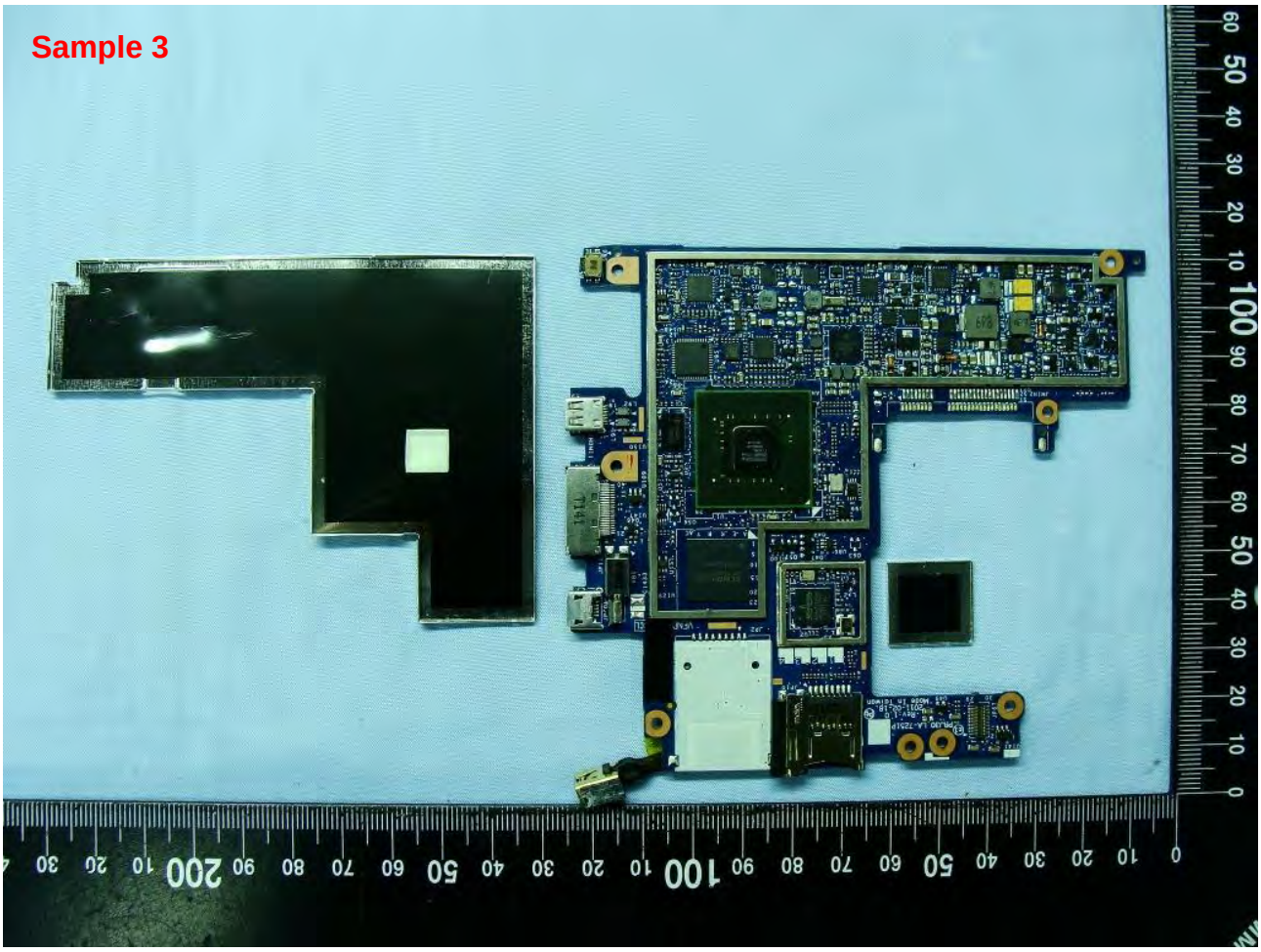


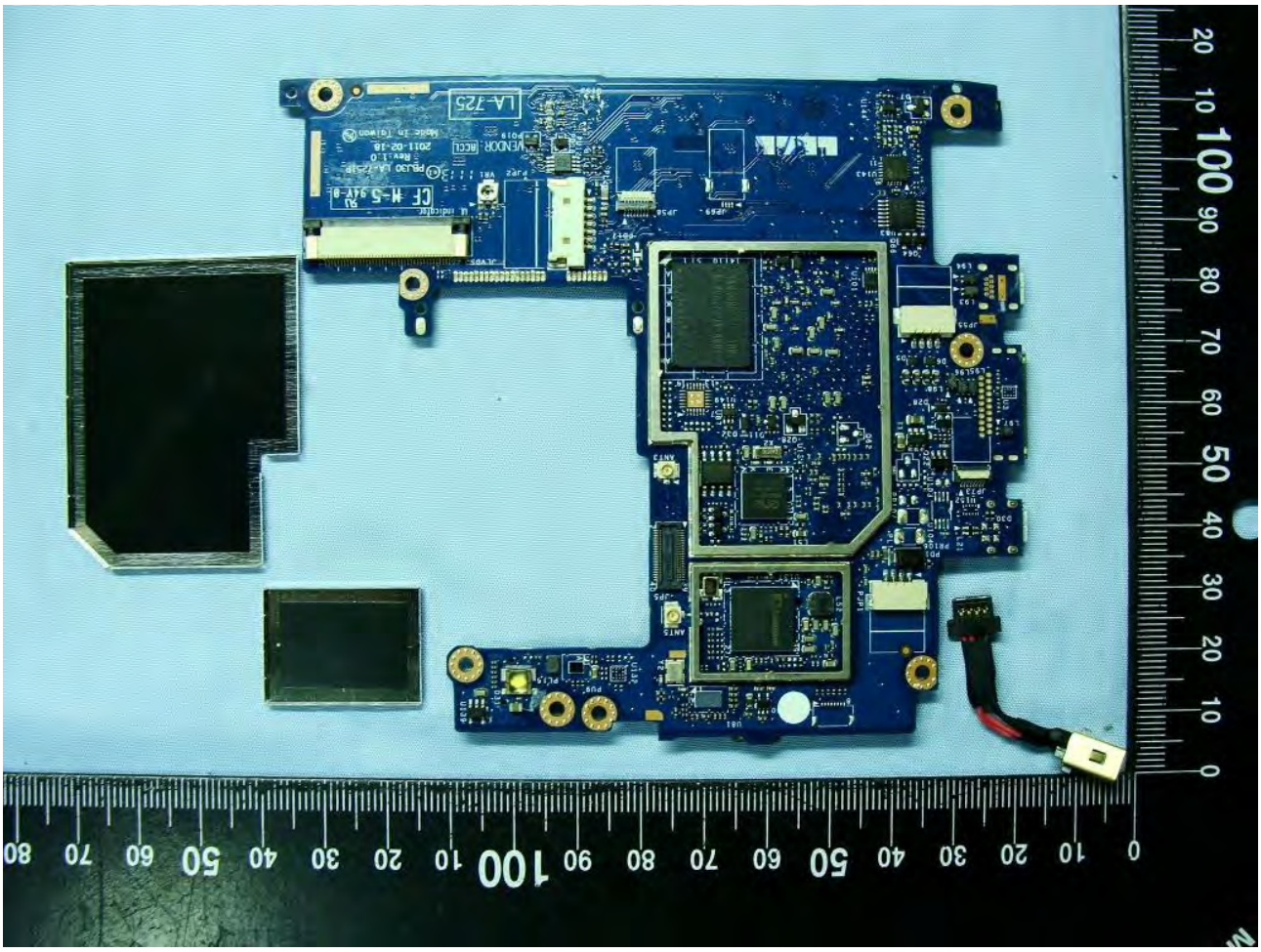
Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100

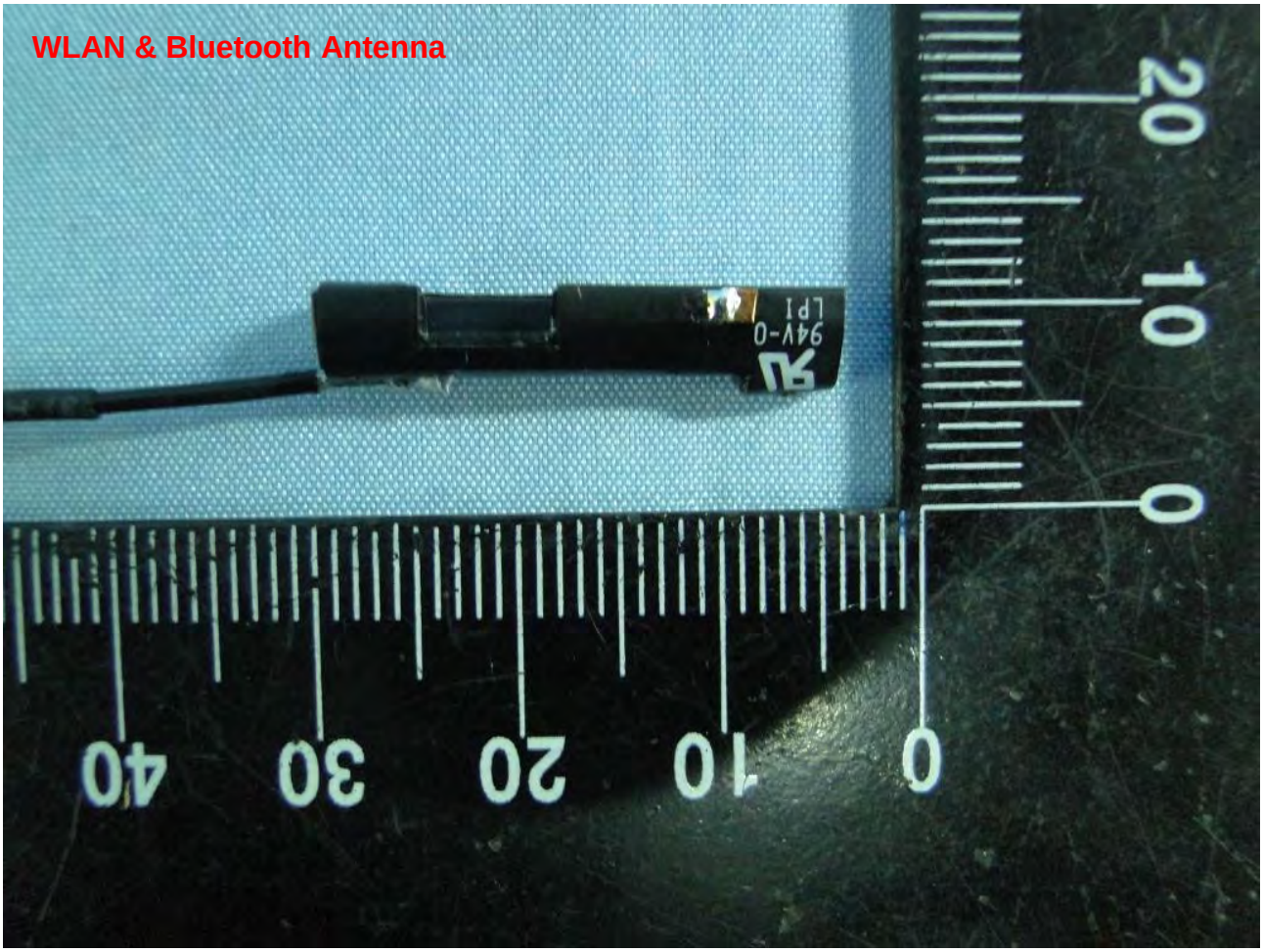


Brand Name: Acer / Model Name: A100

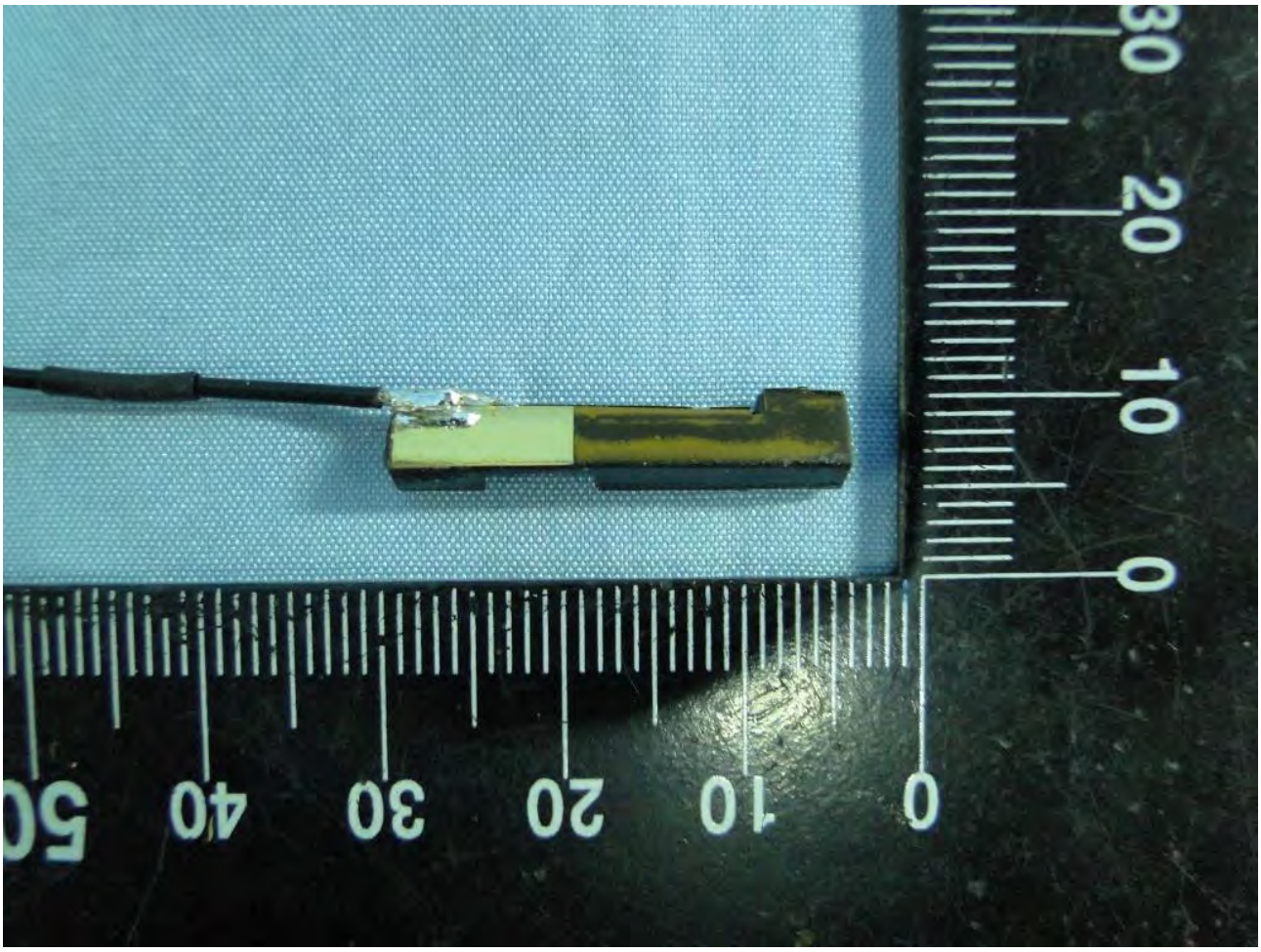


Brand Name: Acer / Model Name: A100

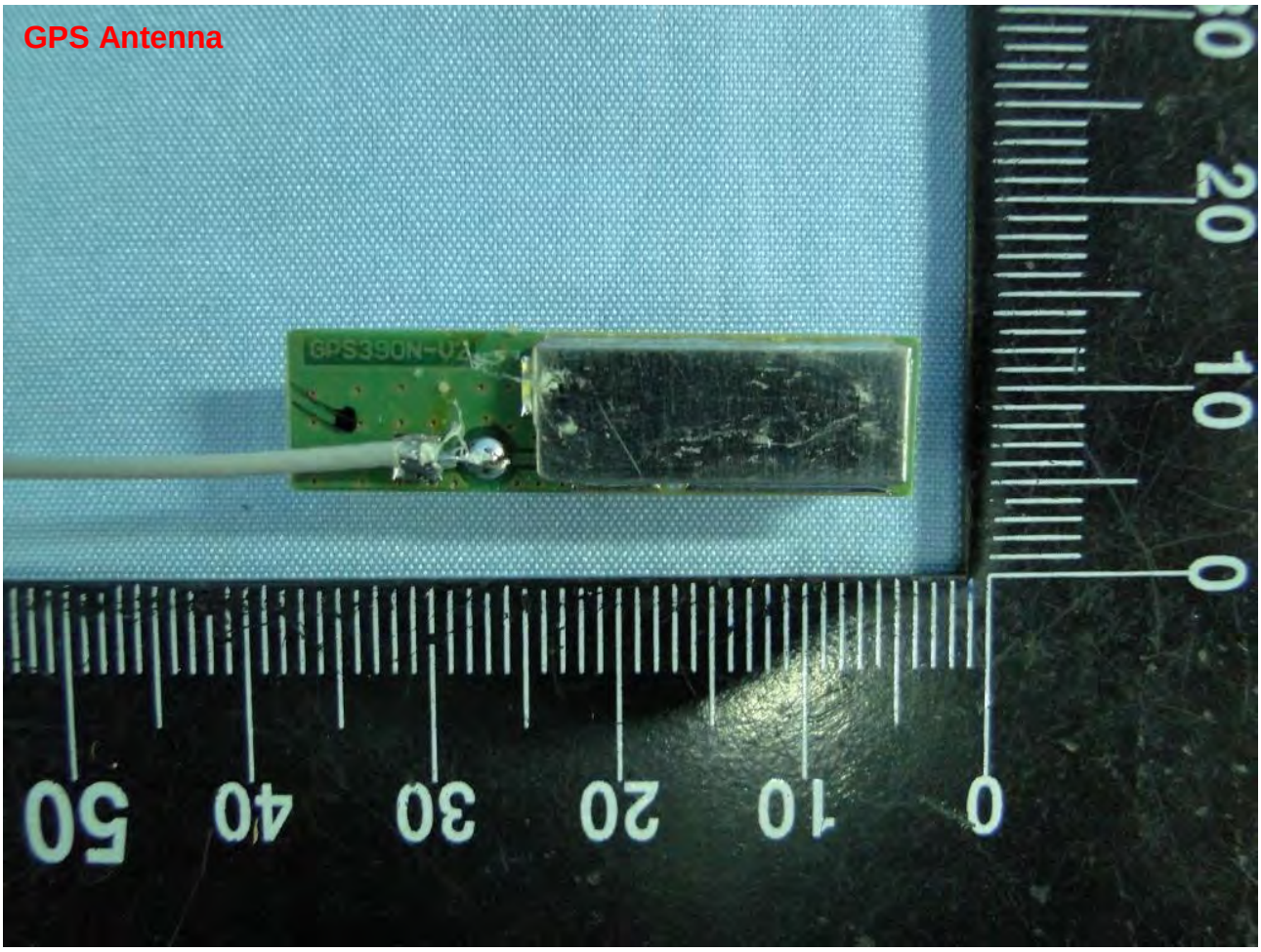
Sample 1



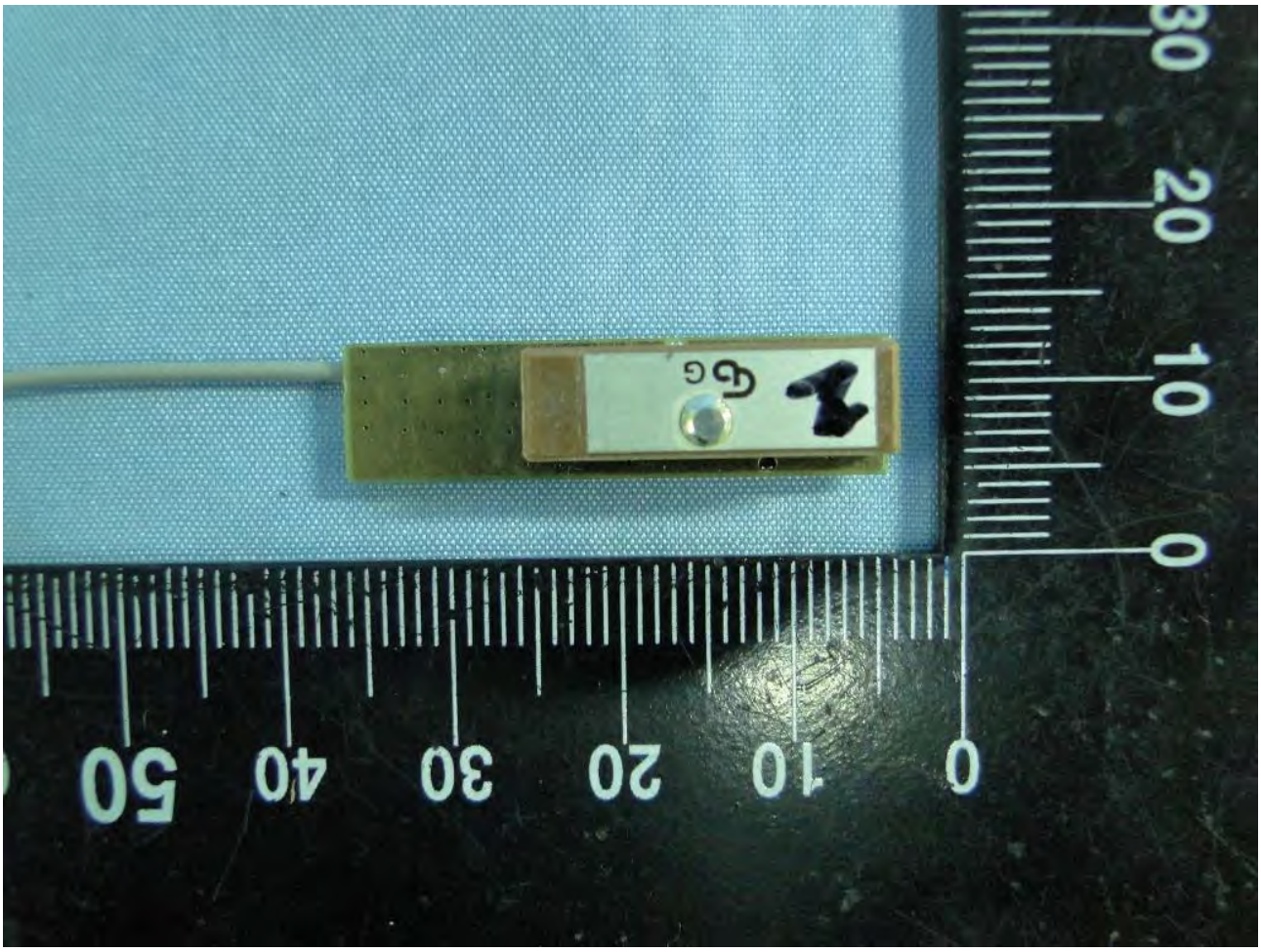
Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100

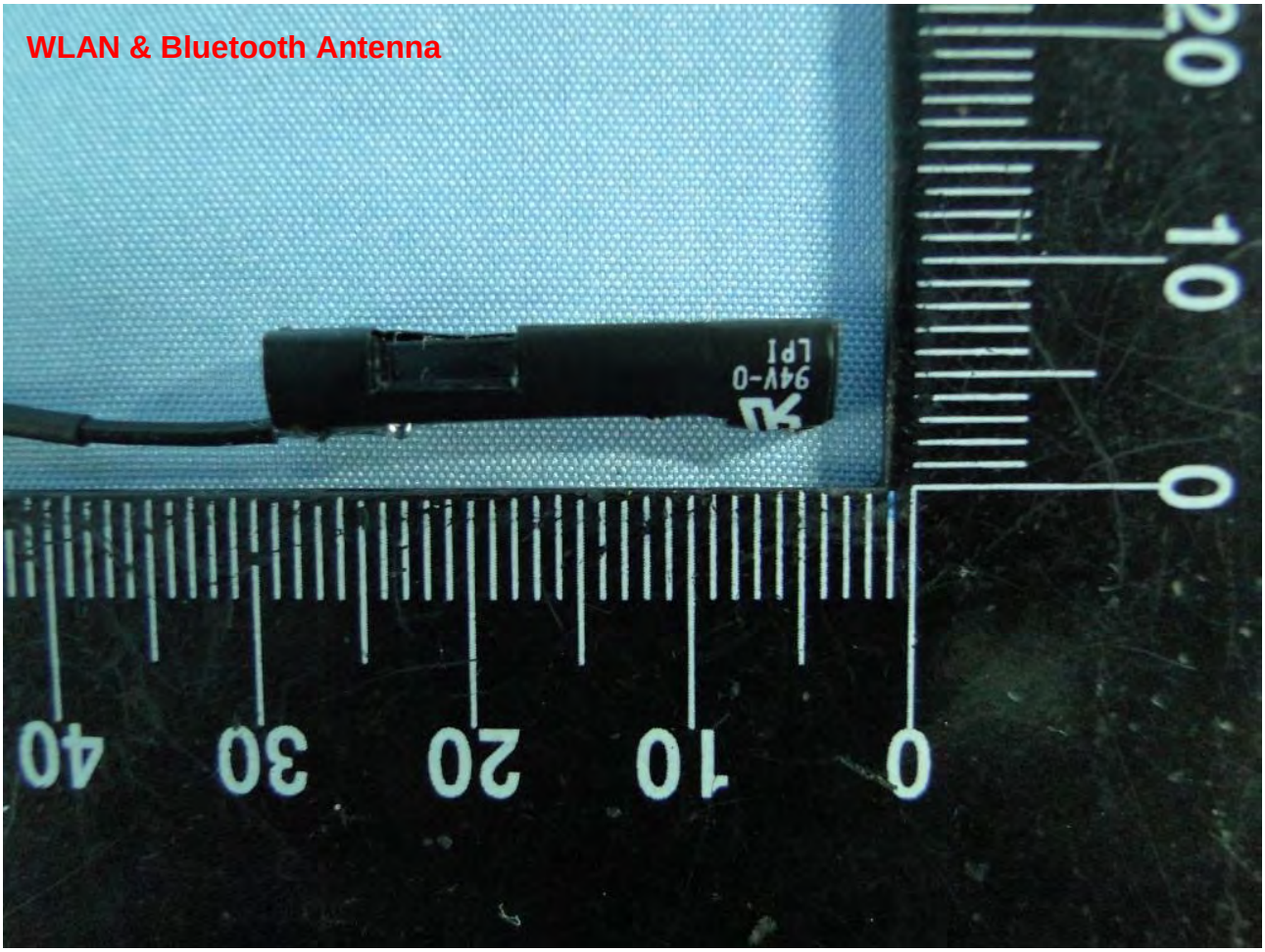


Brand Name: Acer / Model Name: A100

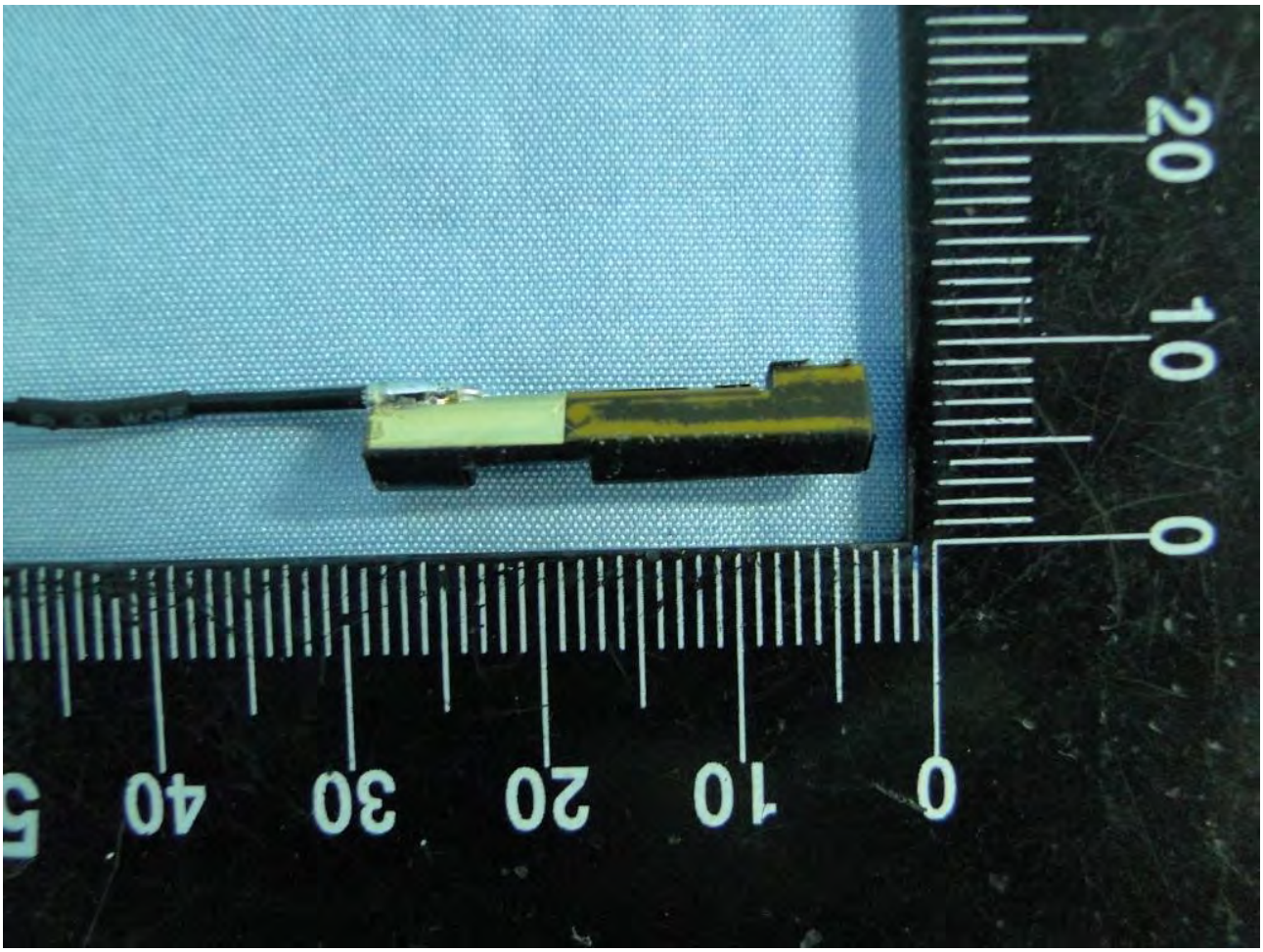


Brand Name: Acer / Model Name: A100

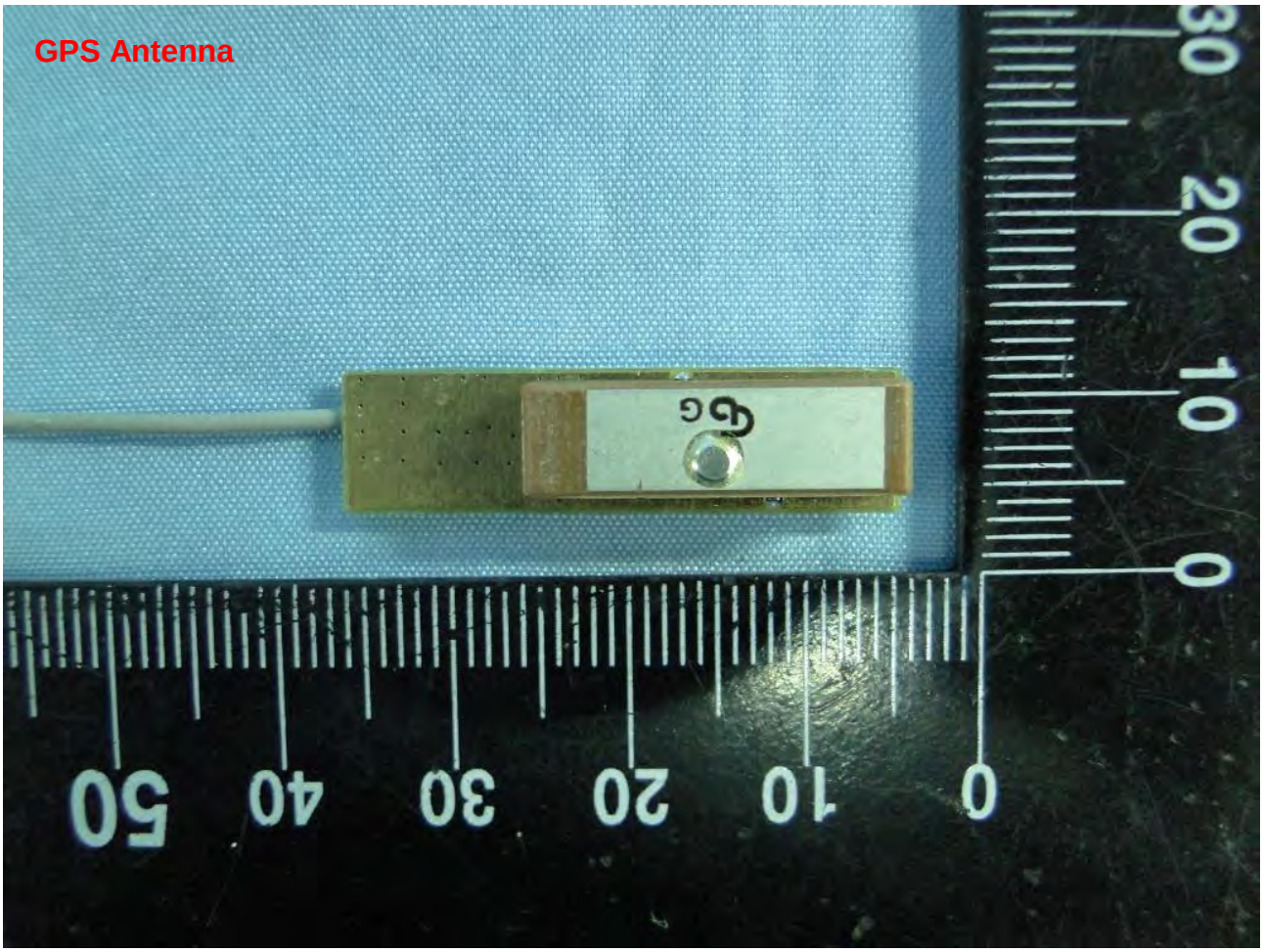
Sample 2



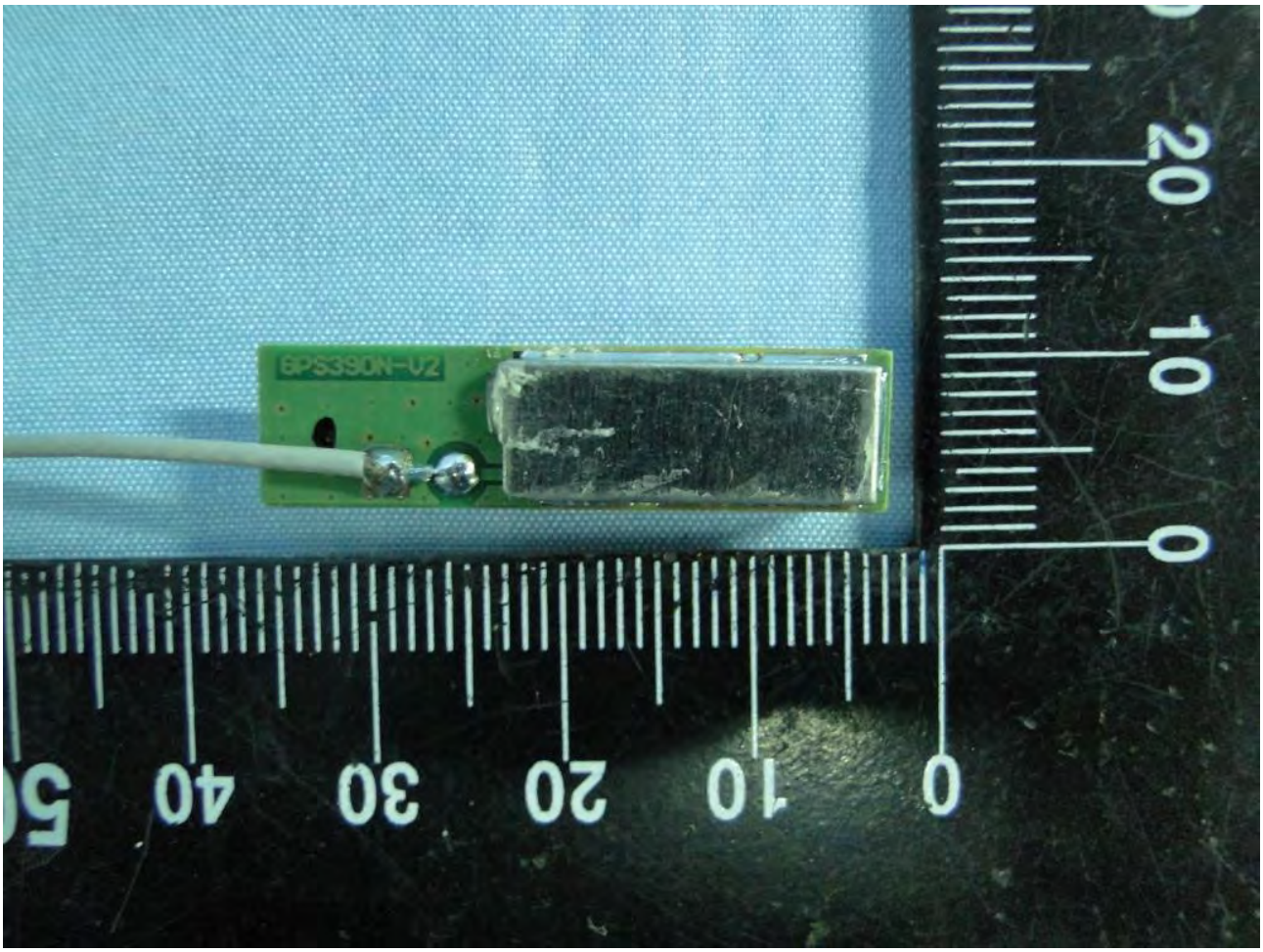
Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100



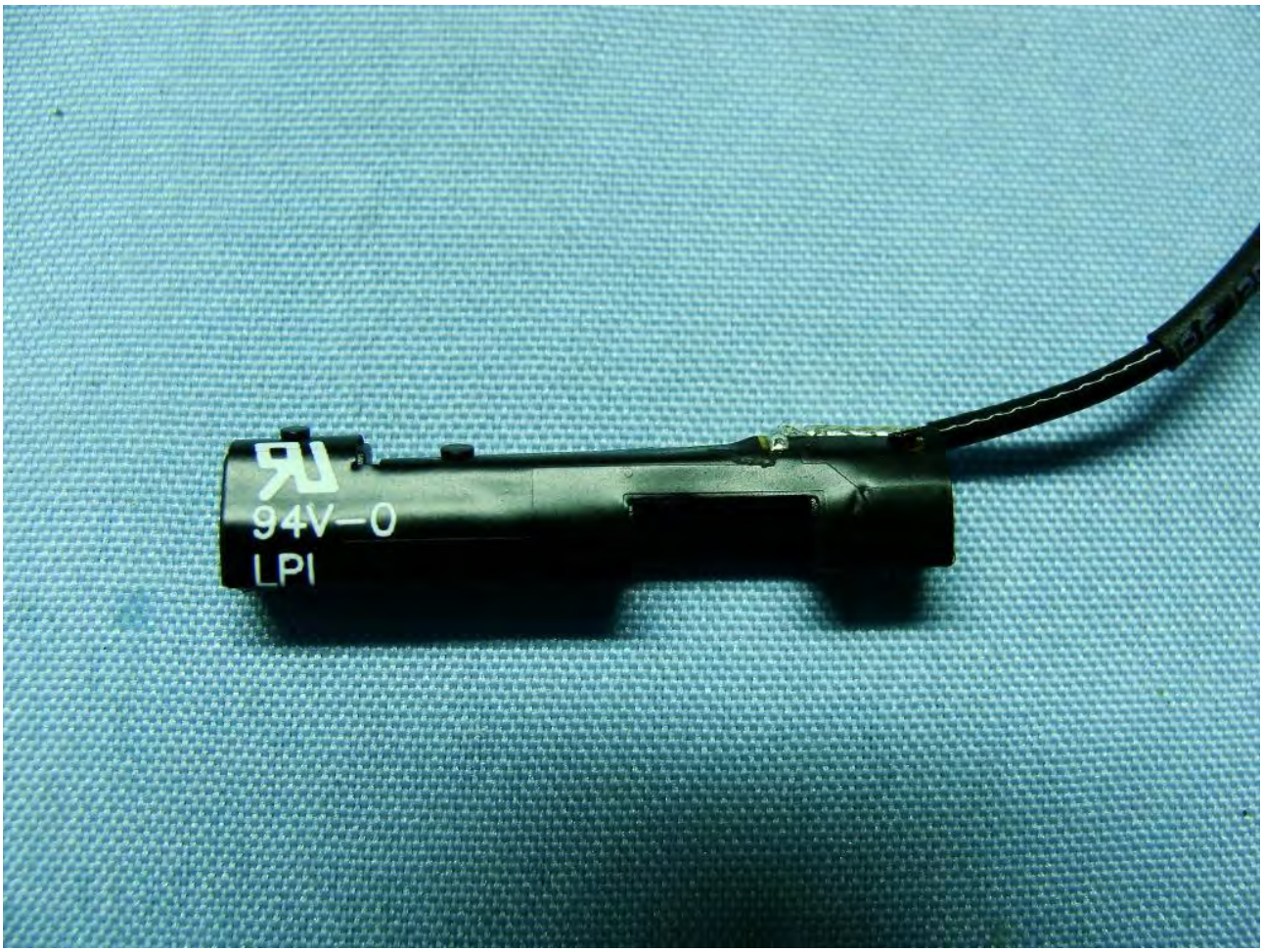
Brand Name: Acer / Model Name: A100



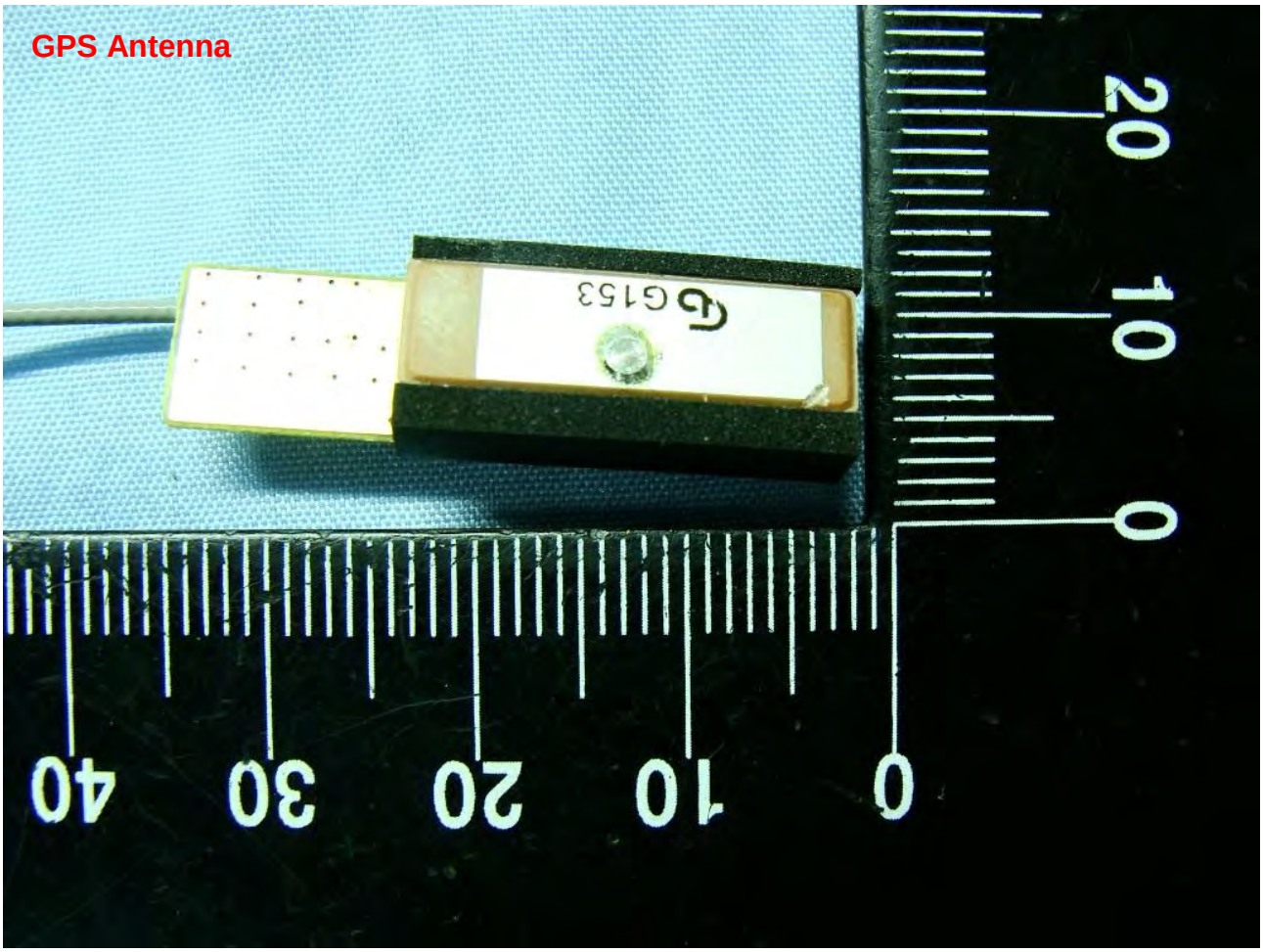
Brand Name: Acer / Model Name: A100

Sample 3

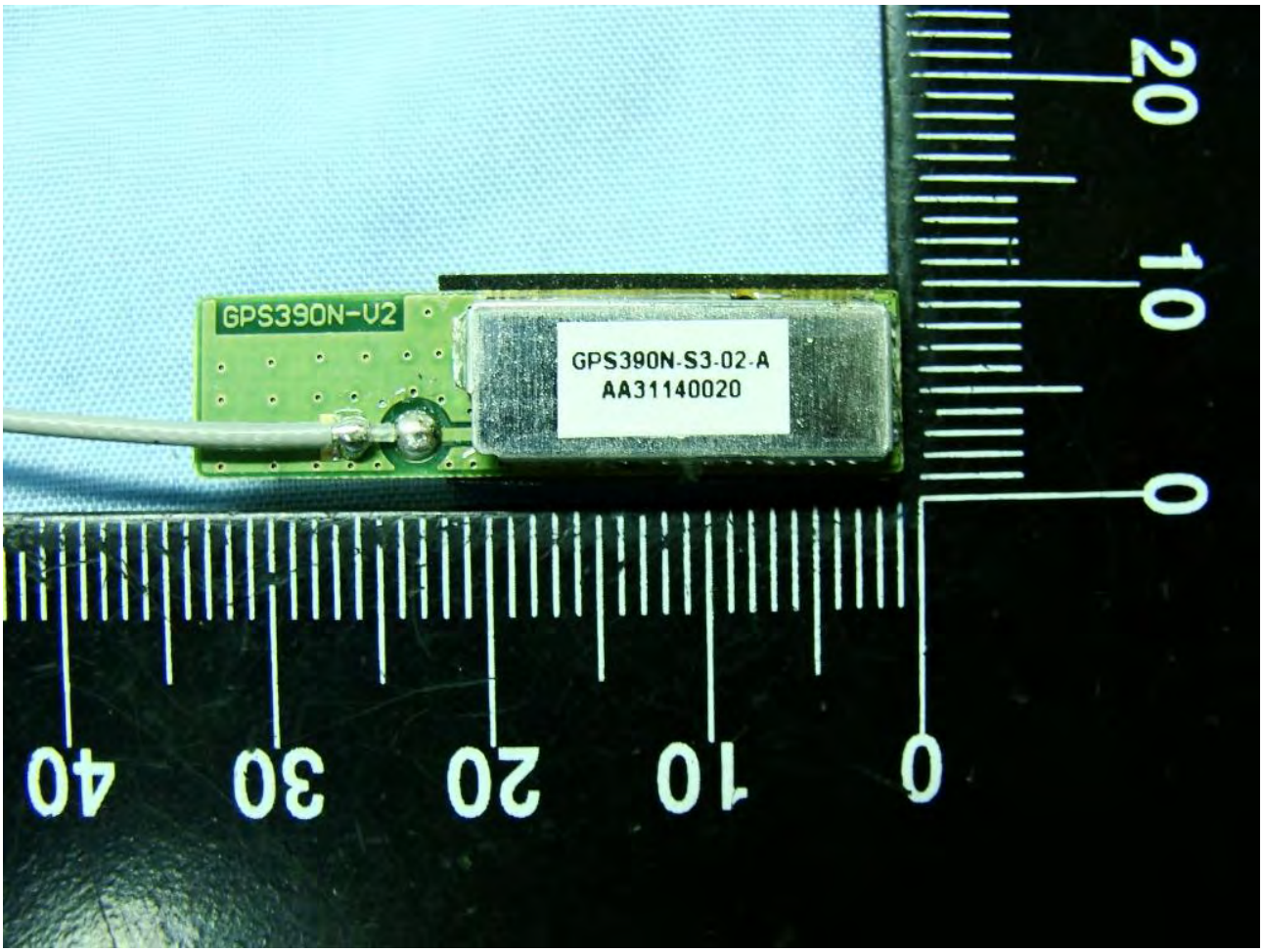
Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100



Brand Name: Acer / Model Name: A100



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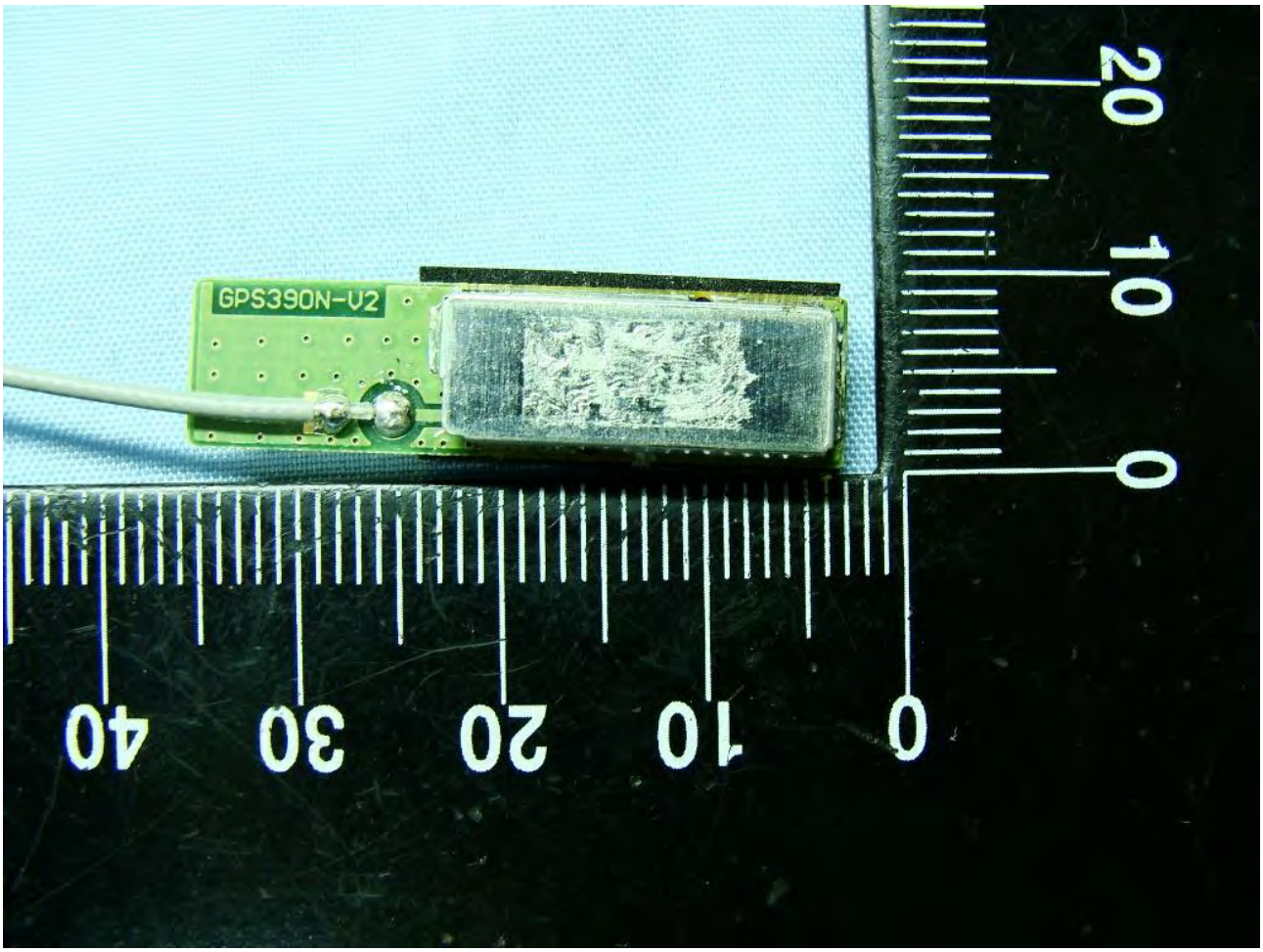


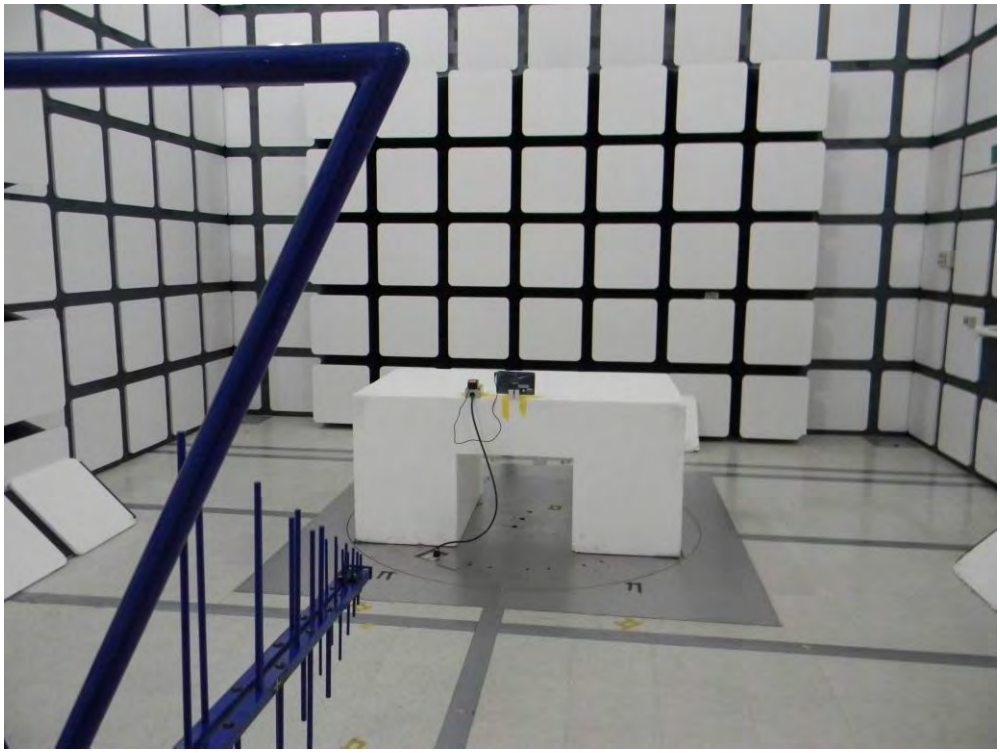
Appendix B. Setup Photographs

<Conducted Emission>

Mode 1

<Radiated Emission>

Sample 1



Sample 2