FCC TEST REPORT

For

8DN Weather Sation

MODEL No.: DF08012-27-XXX(X=A-Z, a-z, 0-9); DPF8WS-WA; QUMO QS800.02

Trademark: N/A

FCC ID: V37-WS8DNSP01

REPORT NO: ED10050058-1

ISSUE DATE: June 07, 2010

Prepared for

WIN ACCORD LTD.
12F, NO. 225, SEC 5, 105 SONG SHAN DIST.,
NAN JING EAST ROAD, TAIPEI, TAIWAN

Prepared by

DONGGUAN EMTEK CO., LTD

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TEST REPOTR DESCRIPTION

Applicant	:	WIN ACCORD LTD.
Manufacturer	:	WIN ACCORD LTD.
EUT	:	8DN Weather Sation
FCC ID No.	:	V37-WS8DNSP01
Test Voltage	:	120V/60Hz
File Number	:	ED10050058-1
Date of Test	:	May 18, 2010 to June 06, 2010

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B October 2009 & FCC / ANSI C63.4-2003

The device described above is tested by Dongguan EMTEK Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Dongguan EMTEK Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Dongguan EMTEK Co., Ltd.

Approved By

Nicol Lee / Q.A. Manager
DONGGUAN EMTEK CO., LTD.

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	8DN Weather Sation
Model Number	:	Basic Model: DF08012-27-XXX(X=A-Z, a-z, 0-9); Additional Model: DPF8WS-WA; QUMO QS800.02 (Note: Those models are the same except appearance and model names, all models use the same FCC ID Number.)
Cable	:	USB Line, 1.5m shielded line, with a core.
FCC ID Number	:	V37-WS8DNSP01
Trade Mark	:	N/A
Power Supply	:	100~240V 50/60Hz
ADAPTER	:	Manufacturer: E-TEK ELECTRONIC CO., LTD. M/N: ZDA05150US Input: AC 100~240V 50/60Hz Output: DC 5V 1.5A Output line: Unshielded line (with a core)
Remark	:	They are different model name and appearance.
Applicant	:	WIN ACCORD LTD.
Address	:	12F, NO. 225, SEC 5, 105 SONG SHAN DIST., NAN JING EAST ROAD, TAIPEI, TAIWAN
Manufacturer	:	WIN ACCORD LTD.
Address	:	12F, NO. 225, SEC 5, 105 SONG SHAN DIST., NAN JING EAST ROAD, TAIPEI, TAIWAN
Date of sample	:	May 18, 2010
Date of Test	:	May 18, 2010 to June 06, 2010

1.2. Description of Support Device

PC	:	Manufacturer: Dell Inc. M/N: DCSM S/N: CXBMMZX FCC ID: DoC
LCD Monitor	:	Manufacturer: Dell Inc. M/N: E1909Wf FCC ID: DoC
USB Mouse	:	Manufacturer: Dell Inc. M/N: M-UAK DEL7 P/N: XN966 FCC ID: DoC
USB Keyboard	:	Manufacturer: Dell Inc. M/N: L30U S/N:D1C FCC ID: DoC
Printer	:	Manufacturer: HP M/N:HP LaserJet 1020 S/N: CNCK512065 P/N: Q5911A FCC ID: DoC
USB	:	Kingston 2GB
SD Card	:	Kingston 2GB

1.3 Test Facility

Site Description

EMC Lab. **:** Accredited by CNAS, 2007.07.27
The certificate is valid until 2012.07.26
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2005
The Certificate Registration Number is L3150

Accredited by TUV Rheinland Shenzhen 2009.9
The certificate is valid until 2011.3
The Laboratory has been assessed according to the requirements ISO/IEC 17025

Accredited by FCC, Nov. 05, 2008
The Certificate Number is 247565.

Accredited by Industry Canada, May 24, 2008
The Certificate Registration Number. is 46405-4480

Name of Firm **:** Dongguan EMTEK Co., Ltd.

Site Location **:** No.281, Guantai Road, Nancheng District, Dongguan, Guangdong, China.

1.4 Measurement Uncertainty

Conducted Emission Uncertainty **:** Ur = 3.3

Radiated Emission Uncertainty **:** Uc = 2.8

Disturbance Power Uncertainty **:** Uc = 2.6

2. POWER LINE CONDUCTED MEASUREMENT

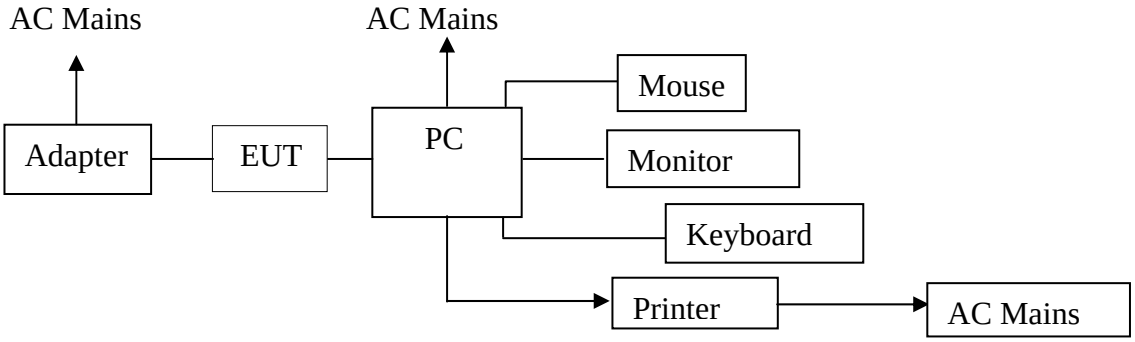
2.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	EMI Test Receiver	ROHDE&SCHWARZ	ESCS30	828985/018	May 29, 2010	1 Year
2	LISN	ROHDE&SCHWARZ	ENV216	100017	May 29, 2010	1Year
3	Conical Housing	EMTEK	N/A	N/A	May 29, 2010	N/A
4	Voltage Probe	SCHWARZBECK	EZ-17	100213	May 29, 2008	1Year
5	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6100175589	May 29, 2010	1Year

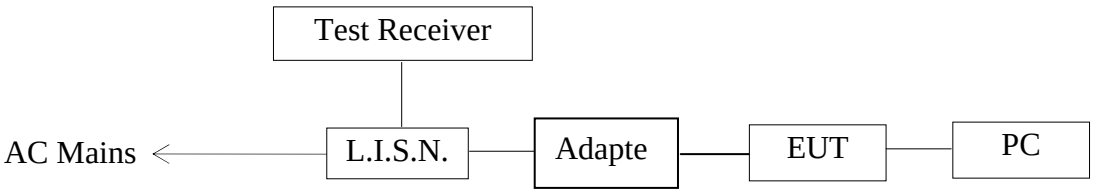
2.2. Block Diagram of Test Setup

2.2.1 Block diagram of connection between the EUT and simulators



(EUT: 8DN Weather Sation)

2.2.2 Block diagram of test setup



(EUT: 8DN Weather Sation)

2.3. Power Line Conducted Emission Measurement Limits

Conducted Emission Limits is as following.

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

2.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT	:	8DN Weather Sation
Model Number	:	DPF8WS-WA
Manufacturer	:	WIN ACCORD LTD.

2.5. Operating Condition of EUT

2.5.1. Setup the EUT and simulator as shown as Section 2.2.

2.5.2. Turn on the power of all equipment.

2.5.3. Let the EUT work in test model (Connect to PC) and measure it.

2.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 9KHz.
The frequency range from 150KHz to 30MHz is checked.

2.7.Power Line Conducted Emission Measurement Results

PASS

The frequency range from 150KHz to 30 MHz is investigated.

The scanning waveforms refer to the following pages.

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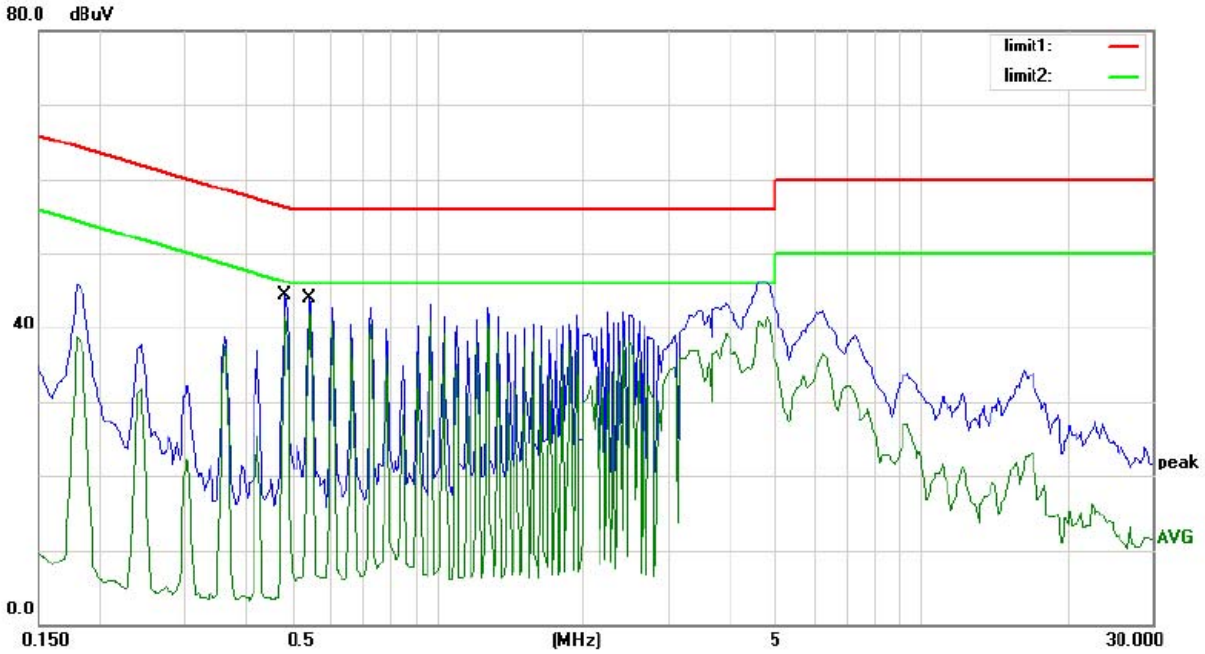
Conducted Emission Measurement

File :DPF8WS-WA Data :#11 Date: 10/05/28/ Time: 11/10/10



Site site #1 Phase: L1 Temperature: 25
Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 50 %
EUT: 8DN Weather Sation
M/N: DPF8WS-WA
Mode: Connect to PC
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.4850	42.30	0.00	42.30	56.25	-13.95	QP	
2		0.4850	41.60	0.00	41.60	46.25	-4.65	AVG	
3		0.5450	42.28	0.00	42.28	56.00	-13.72	QP	
4	*	0.5450	42.18	0.00	42.18	46.00	-3.82	AVG	

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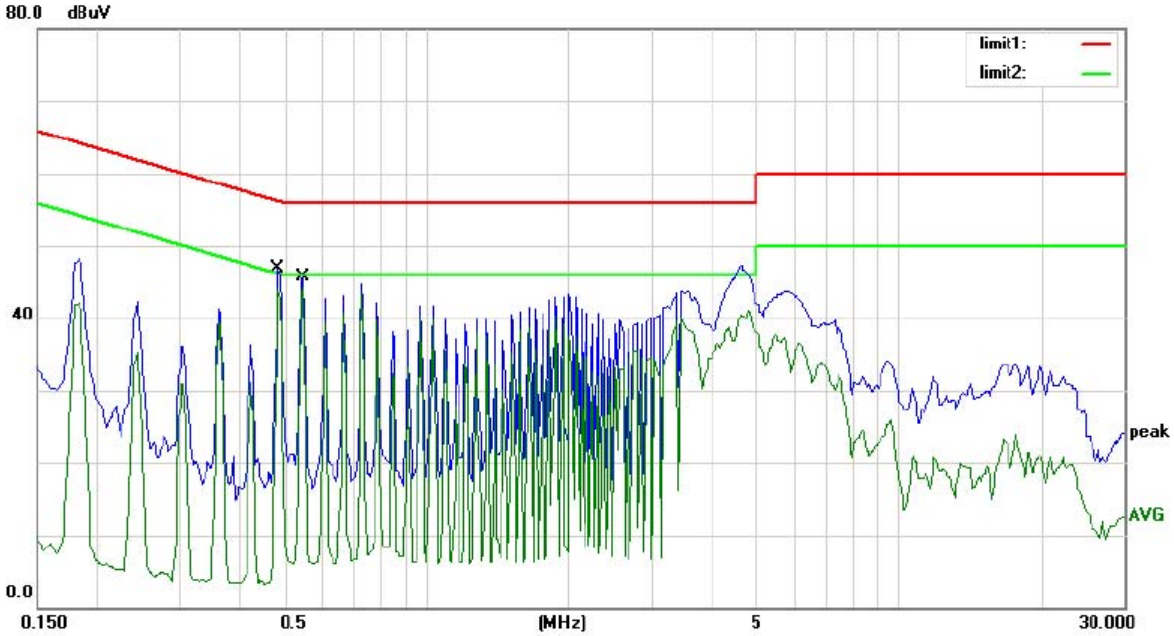
Conducted Emission Measurement

File :DPF8WS-WA Data :#12 Date: 10/05/28/ Time: 11/14/36



Site site #1 Phase: *N* Temperature: 25
Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 50 %
EUT: 8DN Weather Sation
M/N: DPF8WS-WA
Mode: Connect to PC
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.4850	44.00	0.00	44.00	56.25	-12.25	QP	
2		0.4850	43.96	0.00	43.96	46.25	-2.29	AVG	
3		0.5500	44.50	0.00	44.50	56.00	-11.50	QP	
4	*	0.5500	44.20	0.00	44.20	46.00	-1.80	AVG	

3. RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

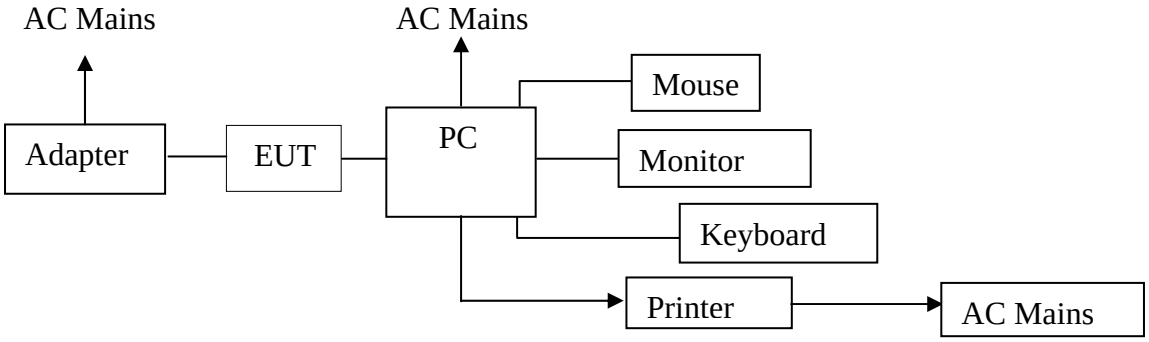
The following test equipments are used during the radiated emission measurement:

3.1.1. For Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Rohde & Schwarz	ESCI	100137	May 29, 2010	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCI	100137	May 29, 2010	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	143	May 29, 2010	1 Year
4.	Power Amplifier	HP	8447F	OPT H64	May 29, 2010	1 Year
5.	Positioning Controller	C&C LAB	CC-C-IF	N/A	May 29, 2010	1 Year
6.	Color Monitor	SUNSPO	SP-140A	N/A	May 29, 2010	1 Year
7.	Single Line Filter	JIANLI	XL-3	N/A	May 29, 2010	1 Year
8.	Single Phase Power Line Filter	JIANLI	DL-2X100B	N/A	May 29, 2010	1 Year
9.	3 Phase Power Line Filter	JIANLI	DL-4X100B	N/A	May 29, 2010	1 Year
10.	DC Power Filter	JIANLI	DL-2X50B	N/A	May 29, 2010	1 Year
11.	Cable	Schwarzbeck	PLF-100	N/A	May 29, 2010	1 Year
12.	Cable	Rosenberger	CIL02	A0783566	May 29, 2010	1 Year
13.	Cable	Rosenberger	AK9513	AC RX1	May 29, 2010	1 Year

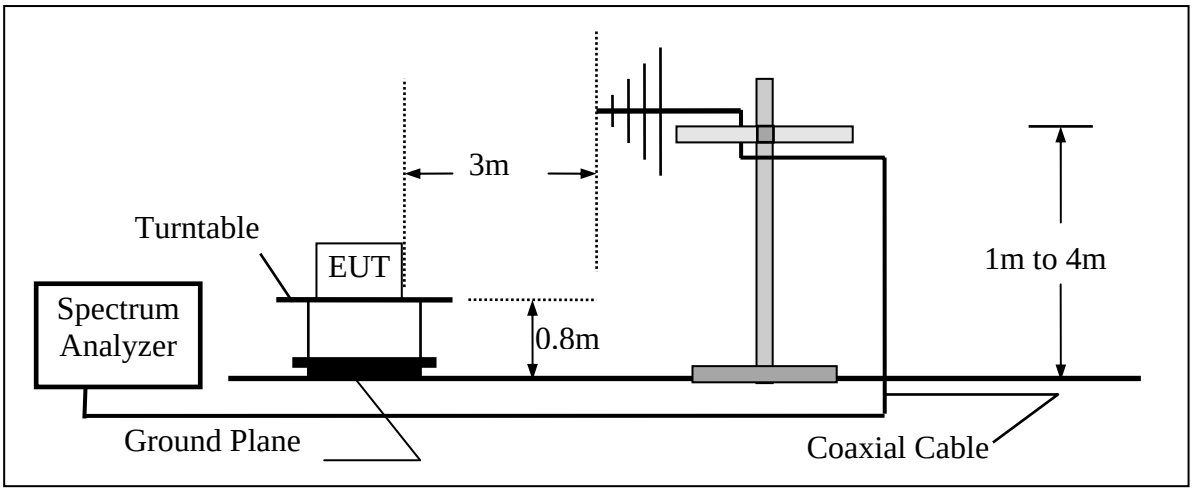
3.2.Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators



(EUT: 8DN Weather Sation)

3.2.2. Anechoic Chamber Test Setup Diagram



(EUT: 8DN Weather Sation)

3.3.Radiated Emission Limit

Radiated Emission Limits is as following.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
＞1000	3	74.0 dB(μV)/m (peak) 54.0 dB(μV)/m (Average)

Remark： (1) Emission level (dB)μV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

8DN Weather Sation (EUT)

Model Number : DPF8WS-WA

3.5. Operating Condition of EUT

3.5.1 Setup the EUT as shown in Section 3.2.

3.5.2 Turn on the power of all equipment.

3.5.3 Let the EUT work in test mode (Connect to PC) and measure it.

3.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission measurement.
The bandwidth of the EMI test receiver (R&S ESCI) set at 120KHz in 30MHz to 1000MHz, set at 1MHz above 1000MHz.

The frequency range from 30MHz to 1000MHz is checked.

3.7. Radiated Emission Noise Measurement Results

PASS.

The scanning waveforms refer to the following pages:

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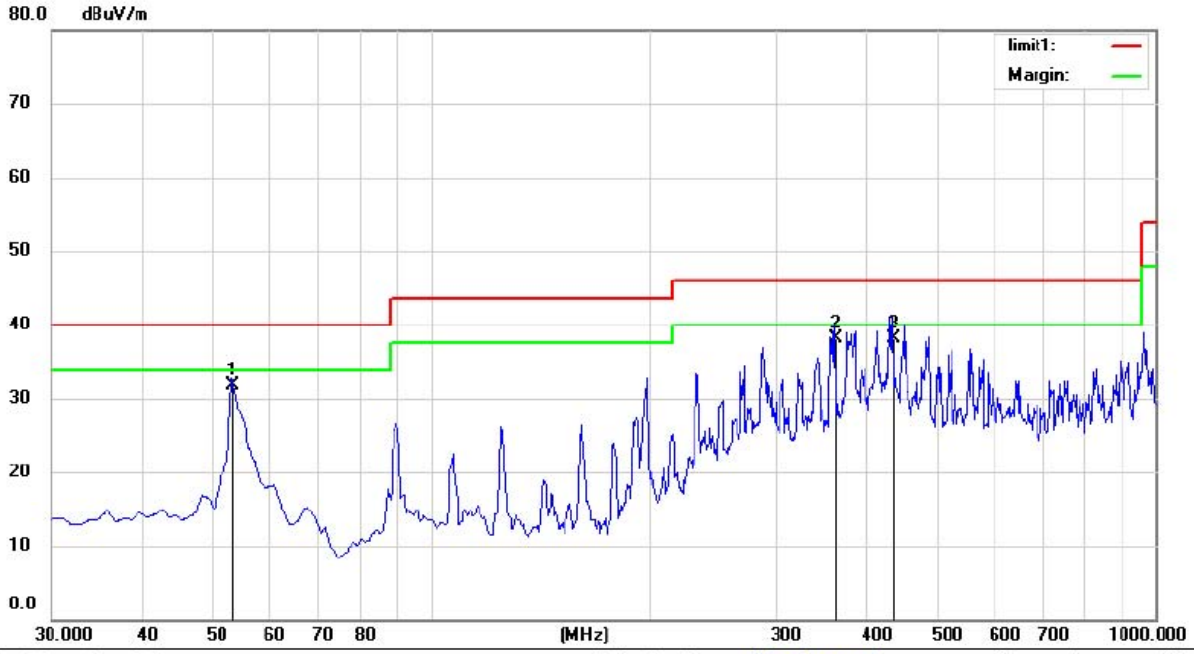
Radiated Emission Measurement

File :DPF8WS-WA Data :#4 Date: 10/05/22/ Time: 9/56/35



Site Chamber #1 Polarization: **Horizontal** Temperature: 26

Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %

EUT: 8DN Weather Sation

M/N: DPF8WS-WA

Mode: Connect to PC

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		53.2800	48.29	-16.55	31.74	40.00	-8.26	QP			
2	*	361.7400	48.16	-9.98	38.18	46.00	-7.82	QP			
3		434.4900	46.45	-8.29	38.16	46.00	-7.84	QP			

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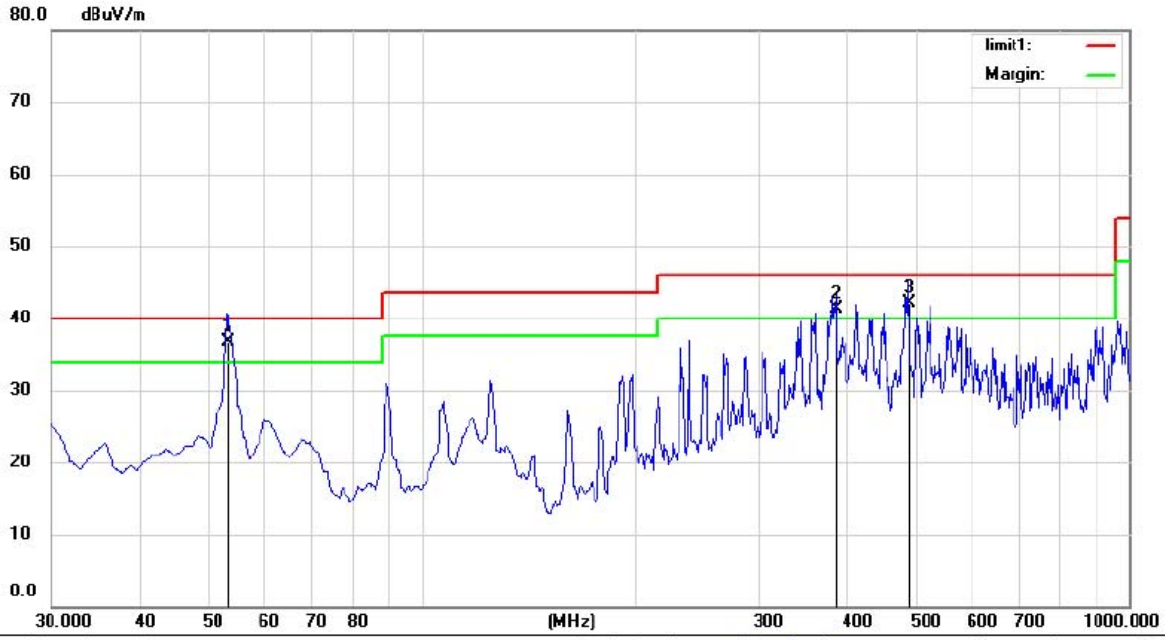
Radiated Emission Measurement

File :DPF8WS-WA Data :#3 Date: 10/05/22/ Time: 9/52/00



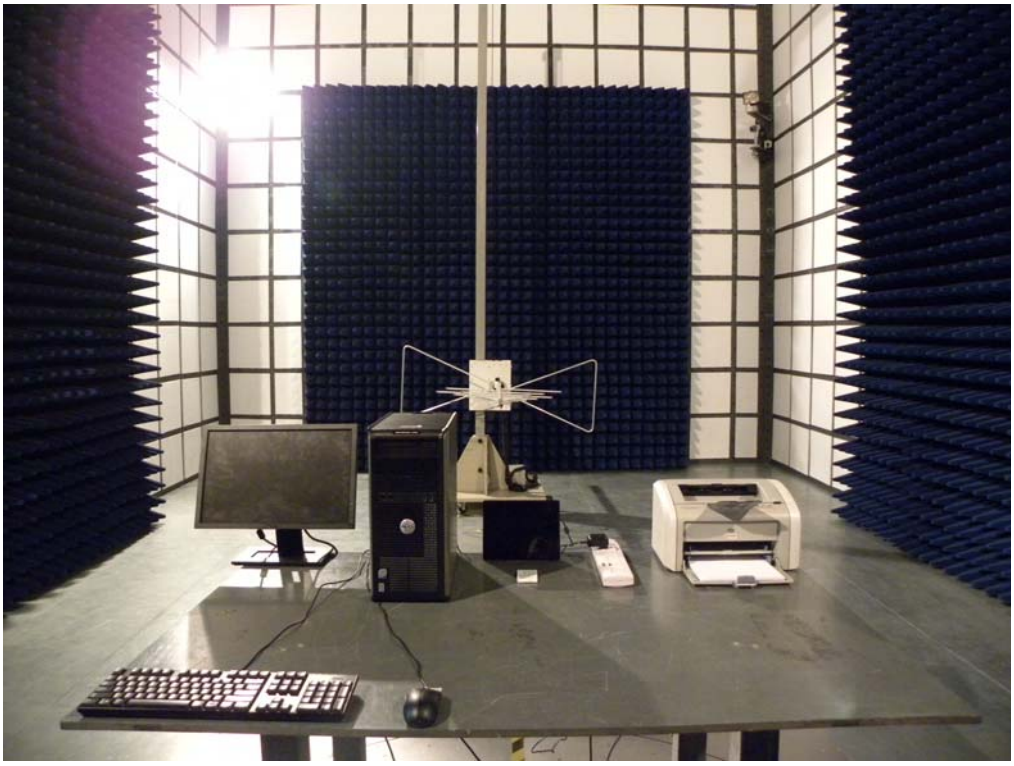
Site Chamber #1 Polarization: **Vertical** Temperature: 26
Limit: (RE)FCC PART 15 class B 3m Power: AC 120V/60Hz Humidity: 55 %
EUT: 8DN Weather Sation
M/N: DPF8WS-WA
Mode: Connect to PC
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	53.2800	53.32	-16.55	36.77	40.00	-3.23	QP			
2	!	385.9900	50.79	-9.44	41.35	46.00	-4.65	QP			
3	!	487.8400	49.49	-7.40	42.09	46.00	-3.91	QP			

4. PHOTOGRAPHS

4.1 Photo of Power Line Conducted Emission Measurement

4.2 Photo of Radiated Emission Measurement



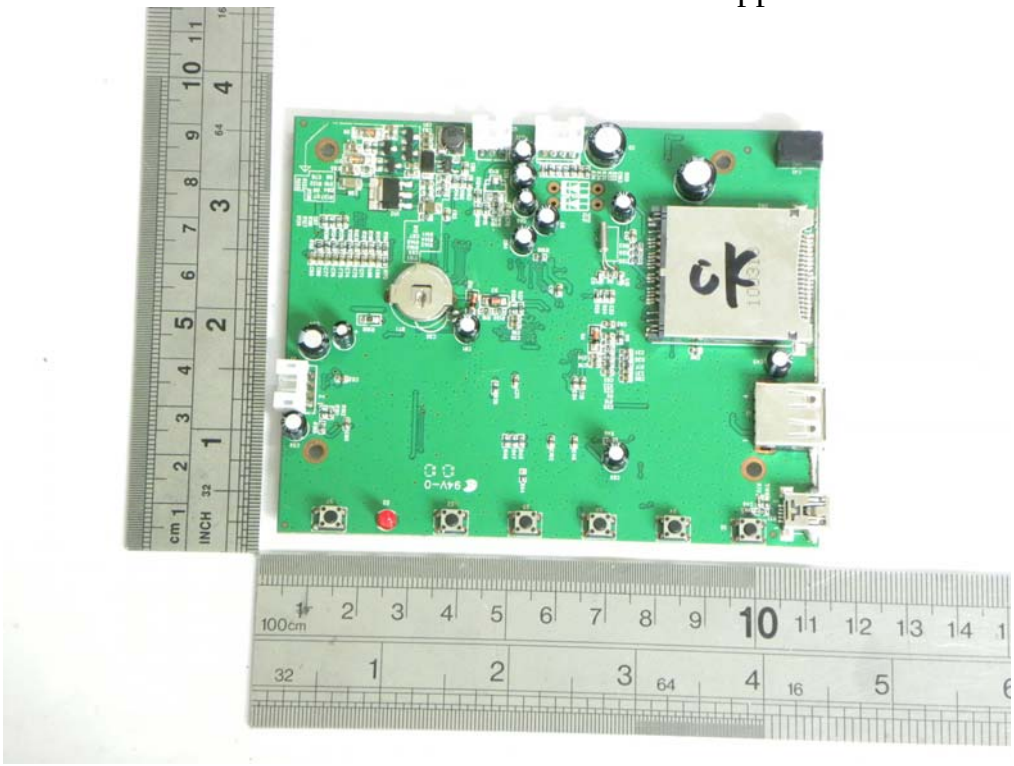
4.3 Photos of EUT

General Appearance of EUT

General Appearance of EUT

General Internal of EUT

General Appearance of PCB



General Appearance of PCB