

FCC TEST REPORT

according to

FCC Rules and Regulations

Part 15 Subpart E

Applicant	Netgear Inc.
Address	4500 Great America Parkway Santa Clara California 95054 USA
Equipment	ProSafe Dual Band Wireless Access Point
Model No.	WAG102
FCC ID	PY305200015
Trade Name	Netgear

Laboratory accreditation



1332

- The test result refers exclusively to the test presented test model / sample.,
- Without written approval of **Exclusive Certification Corp.** the test report shall not be reproduced except in full.
- The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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CERTIFICATE OF COMPLIANCE

according to

FCC Rules and Regulations

Part 15 Subpart C & E

Applicant	Netgear Inc.
Address	4500 Great America Parkway Santa Clara California 95054 USA
Equipment	ProSafe Dual Band Wireless Access Point
Model No.	WAG102
FCC ID	PY305200015

I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4** The equipment was **passed** the test performed according to **FCC Rules and Regulations Part 15 Subpart C & E (2003)**.

The test was carried out on Oct. 20, 2005 at **Exclusive Certification Corp.**

Signature


Anson Chou / Manager

1. Report of Measurements and Examinations

1.1. List of Measurements and Examinations

For Frequency 5.15GHz ~ 5.35GHZ

Applied Standard : FCC Part 15, Subpart E (Section 15.407)		
FCC Rule	Description of Test	Result
15.407(b)(5)	. Conducted Emission	Pass
15.407(b)(1/2/3)(b)(5)	. Radiated Emission	Pass
15.407(a)(1/2/3)	. Peak Transmit Power	Pass
15.407(a)(6)	. Peak Power Excursion	Pass
15.407(a)(1/2/3)	. Peak Power Spectral Density	Pass
15.407(g)	. Frequency Stability	Pass

Test engineer: _____

Jerry

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

•	Multiple Operating Modes
-	Wireless Access Point. Operates as a standard 802.11a/g.
-	Point-to-Point Bridge. In this mode, the WAG102 only communicates with another bridge-mode wireless station. You must enter the MAC address (physical address) of the other bridge-mode wireless station in the field provided. WEP should be used to protect this communication.
-	Point-to-Multi-Point Bridge. Select this only if this WAG102 is the “Master” for a group of bridge-mode wireless stations. The other bridge-mode wireless stations must be set to Point-to-Point Bridge mode, using this WAG102's MAC address. They then send all traffic to this “Master”, rather than communicate directly with each other. WEP should be used to protect this traffic.
-	Wireless Repeater. In this half-duplex mode, the WAG102 only communicates with another repeater-mode wireless station. You must enter the MAC address of the root access point. WEP should be used to protect this communication.
•	Upgradeable Firmware. Firmware is stored in a flash memory and can be upgraded easily, using only your Web browser, and can be upgraded remotely.
•	Access Control. The Access Control MAC address filtering feature can ensure that only trusted wireless stations can use the WAG102 to gain access to your LAN.
•	Simple Configuration. If the default settings are unsuitable, they are easy to change.
•	Hidden Mode. The SSID is not broadcast, assuring only clients configured with the correct SSID can connect.
•	Secure Telnet Command Line Interface. The Telnet command line interface enables direct access over the serial port and easy scripting of configuration of multiple WAG102s across an extensive network via the Ethernet interface. An SSH client is required.
•	Configuration Backup. Configuration settings can be backed up to a file and restored.
•	Secure and Economical Operation. Adjustable power output allows more secure or economical operation.
•	Power over Ethernet. Power can be supplied to the WAG102 over the Ethernet port from any 802.3af compliant mid-span or end-span source such as the NETGEAR FSM7326P Managed Power over Ethernet Layer 3 managed switch.
•	Autosensing Ethernet Connection with Auto Uplink Interface. Connects to 10/100 Mbps IEEE 802.3 Ethernet networks.
•	LED Indicators. Power, test, LAN speed, LAN activity, and wireless activity are easily identified.

2.2. RF Specifications

Parameter	WAG102 ProSafe Dual Band Wireless Access Point
802.11a Data Rates	6, 9, 12, 18, 24, 36, 48, 54, and 108 Mbps (Auto-rate capable)
802.11a Operating Frequencies	5.15 ~ 5.25 5.25 ~ 5.35 5.57 ~ 5.825
802.11a Encryption	40-bit (also called 64-bit), 128- and 152-bit WEP data encryption
802.11g Data Rates	1, 2, 5.5, 11, 12, 18, 24, 36, 38, 54, & 108 Mbps (Auto-rate capable)
802.11g Operating Frequencies	2.412 ~ 2.462 GHz (US) 2.457 ~ 2.462 GHz (Spain) 2.412 ~ 2.484 GHz (Japan) 2.457 ~ 2.472 GHz (France) 2.412 ~ 2.472 GHz (Europe ETSI)
802.11g Encryption	40-bit (also called 64-bit), 128- and 152-bits WEP data encryption
Network Management	Web-based configuration and status monitoring
Maximum Clients	Limited by the amount of wireless network traffic generated by each node; typically 15 to 20 nodes.
Status LEDs	Power/Ethernet LAN/Wireless LAN/Test
Power Adapter	12V DC, 1 A
Electromagnetic Compliance	FCC Part 15 Class B and Class E, CE, and C-TICK
Environmental Specifications	Operating temperature: 0 to 50° C Operating humidity: 5-95%, non-condensing

2.3. Test Mode and Test Software

The following test mode and test software was performed for conduction and radiation test:

- 802.11 a (CH 36: Test Define CH1: 5180MHz)
- 802.11 a (CH 48: Test Define CH4: 5240MHz)
- 802.11 a (CH 52: Test Define CH5: 5260MHz)
- 802.11 a (CH 64: Test Define CH8: 5320MHz)
- An executive programs, "ART.exe" Application under WIN XP

The test mode of Radiated emission as below:

- Test Model 1: Adapter: DSA-0131F-12
- Test Model 2: PoE mode

2.4. Description of Test System

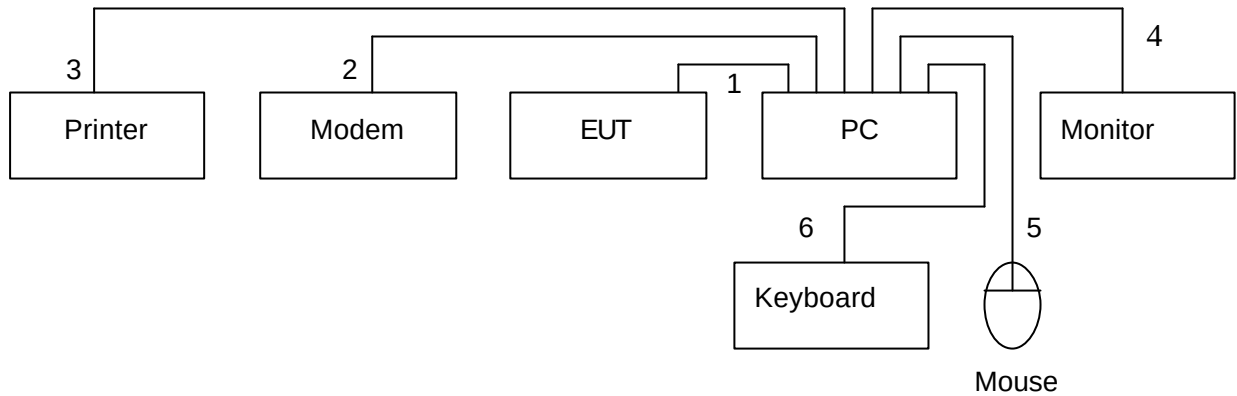
Device	Manufacturer	Model No.	Description
PC	IBM	IGV	Power Cable, Unshielding 1.8 m
Monitor	SlimAGE	510A	Power Cable, Adapter Unshielding 1.8 m Data Cable, VGA shielding 1.35 m
Keyboard	IBM	KB-0225	Data Cable, PS2 shielding 1.85 m
Mouse	IBM	MO28VO	Data Cable, USB shielding 1.85 m
Modem	ACEXX	DM-1414	Power Cable, Adapter Unshielding 1.8 m Data Cable, RS232 shielding 1.35 m
Printer	HP	Desk Jet400	Power Cable, Adapter Unshielding 1.8 m Data Cable, PRINT shielding 1.6 m
POE (Remote site)	Sercomm	FS108P	Power Cable, Adapter Unshielding 1.8 m

Use Cable:

Cable	Description
RJ 45*1	Unshielding, 1.5m
RJ 45*1	Unshielding, 5m

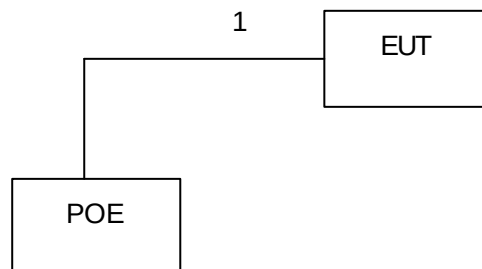
2.5. Connection Diagram of Test System

Test mode 1:



1. The RJ 45 cable is connected from PC to the EUT.
2. The I/O cable is connected from PC to the Modem.
3. The I/O cable is connected from PC to the Printer.
4. The I/O cable is connected from PC to the Monitor.
5. The I/O cable is connected from PC to the Mouse.
6. The I/O cable is connected from PC to the Keyboard.

Test model 2:



1. The RJ 45 cable is connected from PoE to the EUT.

3. General Information of Test

Test Site:	Exclusive Certification Corp. 4F-2, No. 28, Lane 78, Xing-Ai Rd. Nei-hu, Taipei City 114 Taiwan R.O.C.
Test Site Location (OATS1-SD):	No.68-1, Shihbachongsi, shihding Township, Taipei City 223, Taiwan, R.O.C.
Test Voltage:	AC 120V/ 60Hz
Test in Compliance with:	ANSI C63.4-2003 FCC Part 15 Subpart C & E
Frequency Range Investigated:	AC Power Conducted Emission : from 150kHz to 30 MHz Radiated and conducted Emission: from 30 MHz to 40 GHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

3.1. History of this test report

ORIGINAL.

4. Antenna Requirements

4.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.2. Antenna Construction and Directional Gain

Antenna type: Reverse SMA connect, Dipole antenna

Antenna Gain: 5 dBi

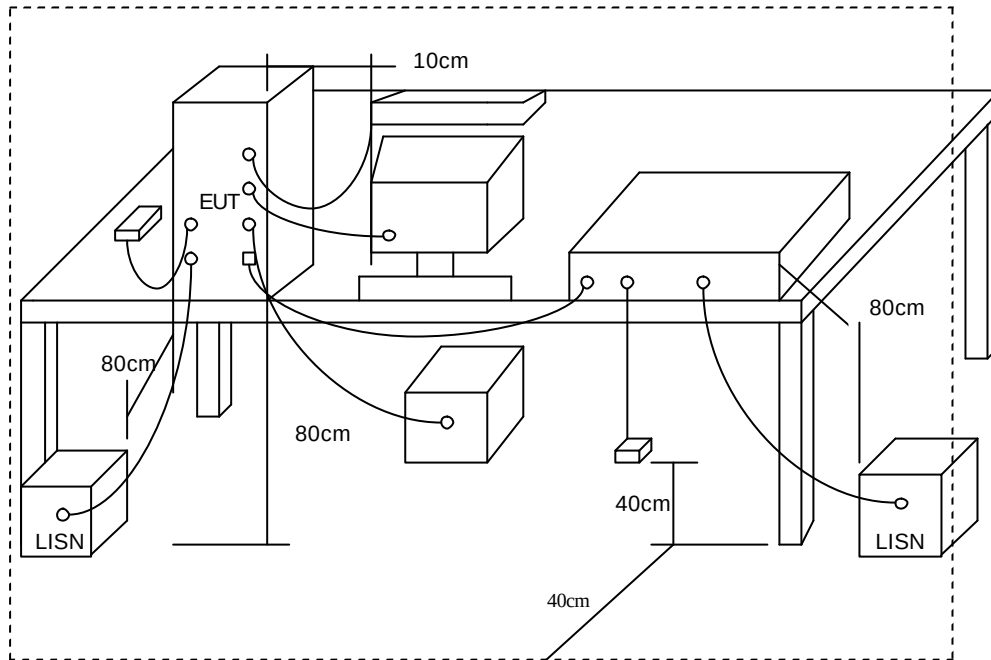
5. Test of Conducted Emission

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 115 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 1.3.1. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

5.1. Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5.2. Typical Test Setup Layout of Conducted Emission



5.3. Conducted Emission Requirement

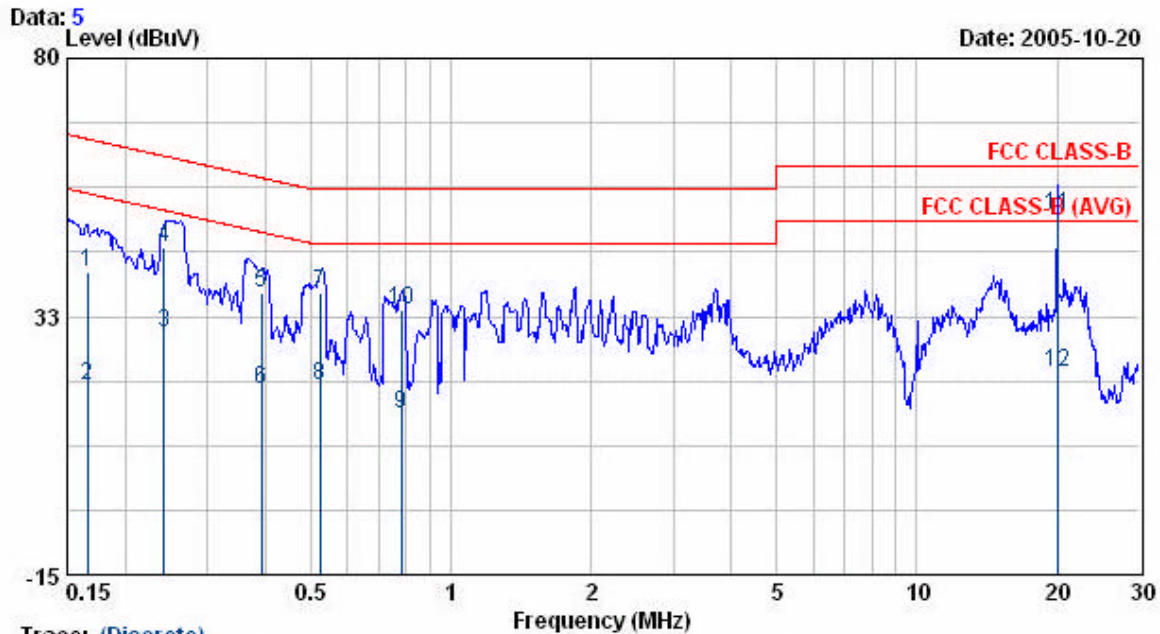
Except for A digital devices, for equipment that is designed to be connected to the public utility (AC) power line on any frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150KHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the Radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

5.4. Test Result and Data

EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH1
 Memo : DSA-0131F-12

Pol/Phase : NEUTRAL
 Temperature : 25 °C
 Humidity : 57 %



Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.17	40.45	0.28	40.73	65.18	-24.45	QP
0.17	19.42	0.28	19.70	55.18	-35.48	AVERAGE
0.24	29.35	0.28	29.63	52.02	-22.39	AVERAGE
0.24	44.83	0.28	45.11	62.02	-16.91	QP
0.39	36.26	0.49	36.75	58.01	-21.25	QP
0.39	18.58	0.49	19.07	48.01	-28.93	AVERAGE
0.52	36.24	0.50	36.74	56.00	-19.26	QP
0.52	19.29	0.50	19.79	46.00	-26.21	AVERAGE
0.78	14.23	0.50	14.73	46.00	-31.27	AVERAGE
0.78	33.14	0.50	33.64	56.00	-22.36	QP
20.00	50.27	0.80	51.07	60.00	-8.93	QP
20.00	21.35	0.80	22.15	50.00	-27.85	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

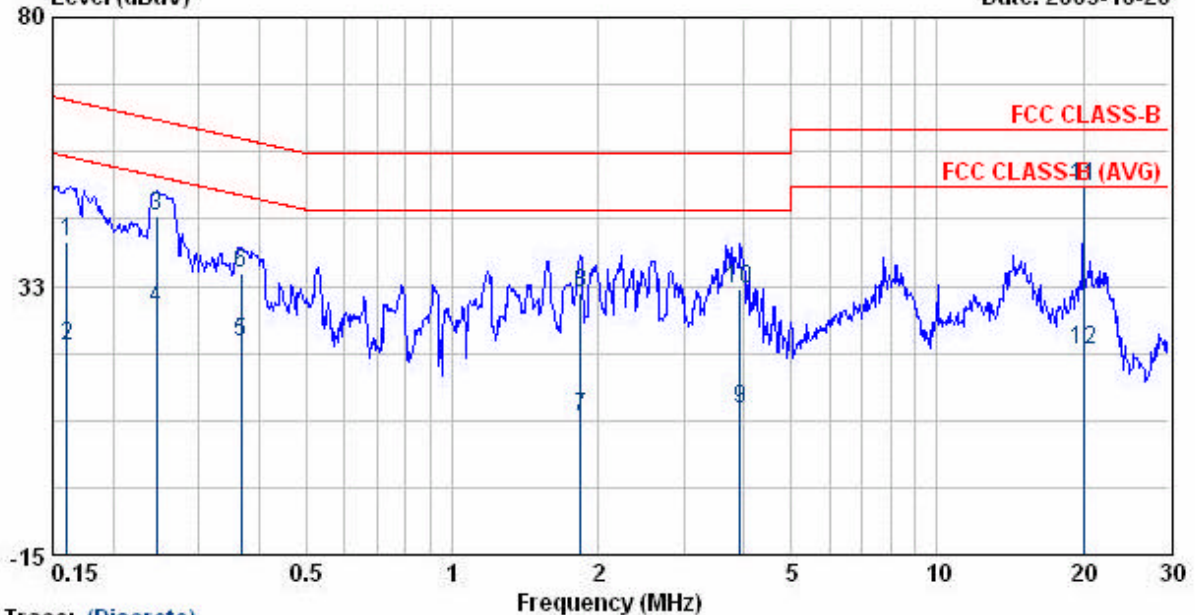
EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH1
 Memo : DSA-0131F-12

Pol/Phase : LINE
 Temperature : 25 °C
 Humidity : 57 %

Data: 6

Level (dBuV)

Date: 2005-10-20



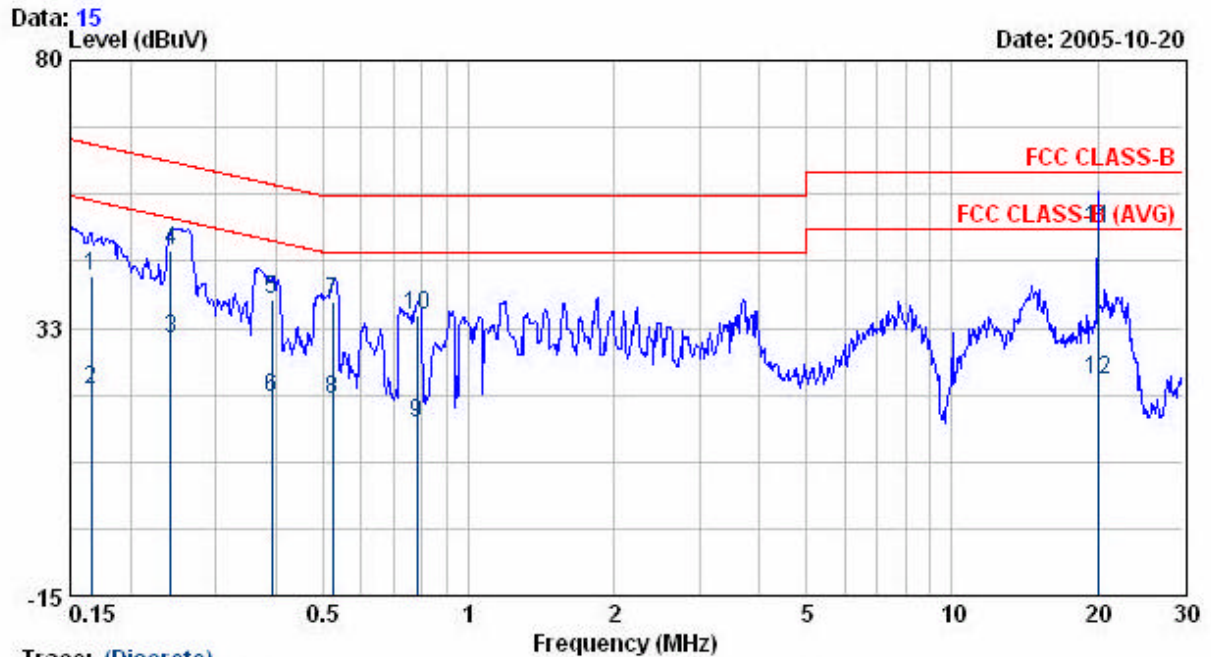
Trace: (Discrete)

Freq	Read	Factor	Level	Limit	Over	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.16	39.96	0.36	40.32	65.44	-25.12	QP
0.16	21.56	0.36	21.92	55.44	-33.52	AVERAGE
0.25	44.63	0.39	45.02	61.91	-16.89	QP
0.25	27.95	0.39	28.34	51.91	-23.57	AVERAGE
0.37	22.18	0.56	22.74	48.58	-25.84	AVERAGE
0.37	34.35	0.56	34.91	58.58	-23.67	QP
1.84	8.55	0.68	9.23	46.00	-36.77	AVERAGE
1.84	30.77	0.68	31.45	56.00	-24.55	QP
3.93	10.12	0.70	10.82	46.00	-35.18	AVERAGE
3.93	31.22	0.70	31.92	56.00	-24.08	QP
20.00	49.56	0.60	50.16	60.00	-9.84	QP
20.00	20.53	0.60	21.13	50.00	-28.87	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH4
 Memo : DSA-0131F-12

Pol/Phase : NEUTRAL
 Temperature : 25 °C
 Humidity : 57 %



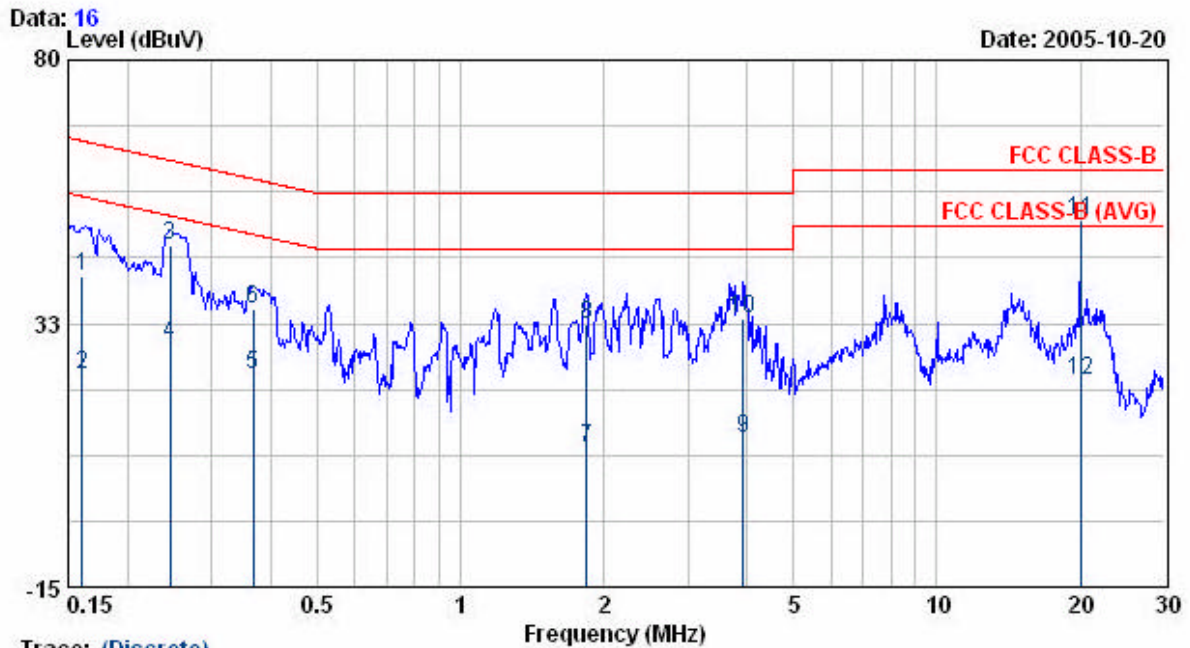
Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.17	41.45	0.28	41.73	65.18	-23.45	QP
0.17	21.42	0.28	21.70	55.18	-33.48	AVERAGE
0.24	30.35	0.28	30.63	52.02	-21.39	AVERAGE
0.24	45.83	0.28	46.11	62.02	-15.91	QP
0.39	37.11	0.49	37.60	58.01	-20.40	QP
0.39	19.58	0.49	20.07	48.01	-27.93	AVERAGE
0.52	36.79	0.50	37.29	56.00	-18.71	QP
0.52	19.29	0.50	19.79	46.00	-26.21	AVERAGE
0.78	15.23	0.50	15.73	46.00	-30.27	AVERAGE
0.78	34.14	0.50	34.64	56.00	-21.36	QP
20.00	49.27	0.80	50.07	60.00	-9.93	QP
20.00	22.61	0.80	23.41	50.00	-26.59	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH4
 Memo : DSA-0131F-12

Pol/Phase : LINE
 Temperature : 25 °C
 Humidity : 57 %



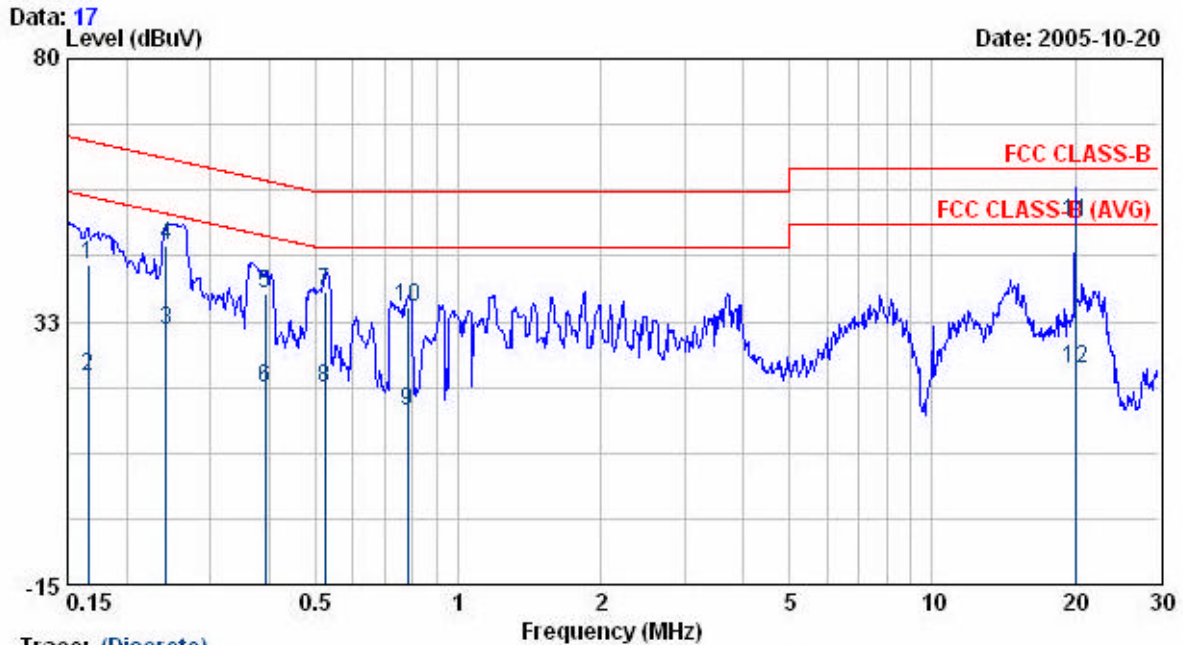
Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.16	40.63	0.36	40.99	65.44	-24.45	QP
0.16	22.97	0.36	23.33	55.44	-32.11	AVERAGE
0.25	46.04	0.39	46.43	61.91	-15.48	QP
0.25	28.63	0.39	29.02	51.91	-22.89	AVERAGE
0.37	22.87	0.56	23.43	48.58	-25.15	AVERAGE
0.37	34.64	0.56	35.20	58.58	-23.38	QP
1.84	9.55	0.68	10.23	46.00	-35.77	AVERAGE
1.84	31.61	0.68	32.29	56.00	-23.71	QP
3.93	11.12	0.70	11.82	46.00	-34.18	AVERAGE
3.93	32.61	0.70	33.31	56.00	-22.69	QP
20.00	50.56	0.60	51.16	60.00	-8.84	QP
20.00	21.61	0.60	22.21	50.00	-27.79	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH5
 Memo : DSA-0131F-12

Pol/Phase : NEUTRAL
 Temperature : 25 °C
 Humidity : 57 %



Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.17	42.45	0.28	42.73	65.18	-22.45	QP
0.17	22.42	0.28	22.70	55.18	-32.48	AVERAGE
0.24	30.78	0.28	31.06	52.02	-20.96	AVERAGE
0.24	45.97	0.28	46.25	62.02	-15.77	QP
0.39	36.97	0.49	37.46	58.01	-20.54	QP
0.39	20.11	0.49	20.60	48.01	-27.40	AVERAGE
0.52	37.31	0.50	37.81	56.00	-18.19	QP
0.52	20.02	0.50	20.52	46.00	-25.48	AVERAGE
0.78	15.77	0.50	16.27	46.00	-29.73	AVERAGE
0.78	34.54	0.50	35.04	56.00	-20.96	QP
20.00	49.74	0.80	50.54	60.00	-9.46	QP
20.00	23.04	0.80	23.84	50.00	-26.16	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

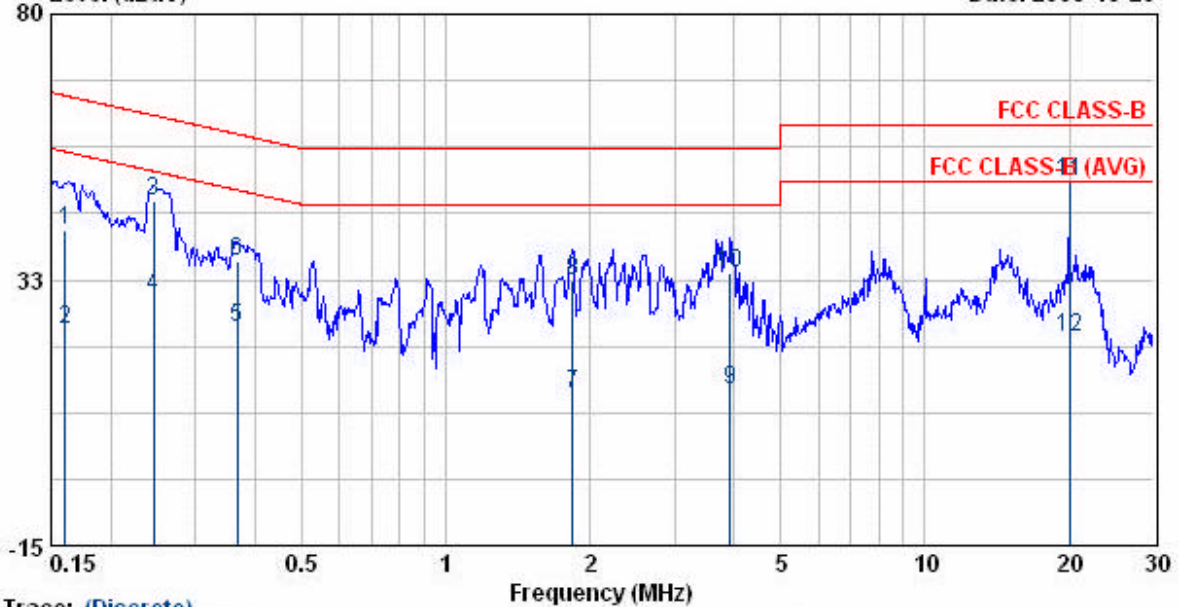
EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH5
 Memo : DSA-0131F-12

Pol/Phase : LINE
 Temperature : 25 °C
 Humidity : 57 %

Data: 18

Level (dBuV)

Date: 2005-10-20



Trace: (Discrete)

Freq	Read	Factor	Level	Limit	Over	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.16	41.09	0.36	41.45	65.44	-23.99	QP
0.16	23.43	0.36	23.79	55.44	-31.65	AVERAGE
0.25	46.34	0.39	46.73	61.91	-15.18	QP
0.25	29.11	0.39	29.50	51.91	-22.41	AVERAGE
0.37	23.41	0.56	23.97	48.58	-24.61	AVERAGE
0.37	35.11	0.56	35.67	58.58	-22.91	QP
1.84	11.55	0.68	12.23	46.00	-33.77	AVERAGE
1.84	31.61	0.68	32.29	56.00	-23.71	QP
3.93	12.12	0.70	12.82	46.00	-33.18	AVERAGE
3.93	32.98	0.70	33.68	56.00	-22.32	QP
20.00	49.56	0.60	50.16	60.00	-9.84	QP
20.00	21.61	0.60	22.21	50.00	-27.79	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

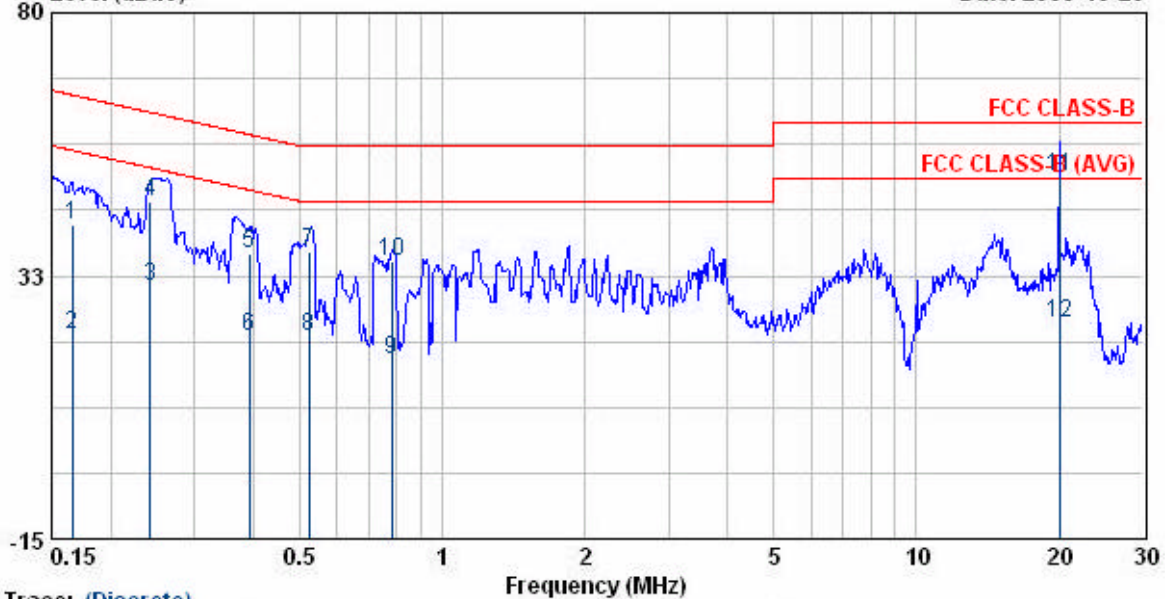
EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH8
 Memo : DSA-0131F-12

Pol/Phase : NEUTRAL
 Temperature : 25 °C
 Humidity : 57 %

Data: 19

Level (dBuV)

Date: 2005-10-20



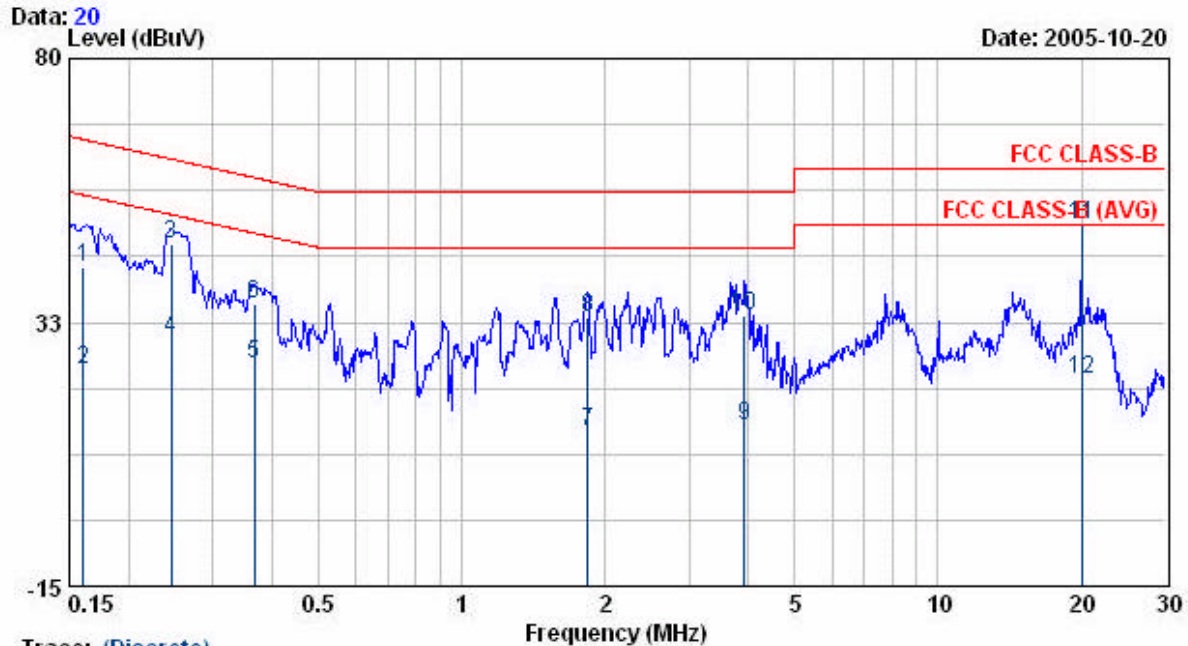
Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.17	41.49	0.28	41.77	65.18	-23.41	QP
0.17	21.67	0.28	21.95	55.18	-33.23	AVERAGE
0.24	30.42	0.28	30.70	52.02	-21.32	AVERAGE
0.24	45.49	0.28	45.77	62.02	-16.25	QP
0.39	36.14	0.49	36.63	58.01	-21.37	QP
0.39	21.01	0.49	21.50	48.01	-26.50	AVERAGE
0.52	36.41	0.50	36.91	56.00	-19.09	QP
0.52	21.19	0.50	21.69	46.00	-24.31	AVERAGE
0.78	16.77	0.50	17.27	46.00	-28.73	AVERAGE
0.78	34.54	0.50	35.04	56.00	-20.96	QP
20.00	49.74	0.80	50.54	60.00	-9.46	QP
20.00	23.04	0.80	23.84	50.00	-26.16	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

EUT : WAG102
 Power : AC 120V
 Test Mode : 802.11a CH8
 Memo : DSA-0131F-12

Pol/Phase : LINE
 Temperature : 25 °C
 Humidity : 57 %



Trace: (Discrete)

Freq	Read Level	Factor	Level	Limit	Over Limit	Remark
MHz	dBuV	dB	dBuV	dBuV	dBuV	
0.16	42.09	0.36	42.45	65.44	-22.99	QP
0.16	23.67	0.36	24.03	55.44	-31.41	AVERAGE
0.25	46.34	0.39	46.73	61.91	-15.18	QP
0.25	29.11	0.39	29.50	51.91	-22.41	AVERAGE
0.37	24.41	0.56	24.97	48.58	-23.61	AVERAGE
0.37	35.11	0.56	35.67	58.58	-22.91	QP
1.84	12.23	0.68	12.91	46.00	-33.09	AVERAGE
1.84	32.77	0.68	33.45	56.00	-22.55	QP
3.93	13.12	0.70	13.82	46.00	-32.18	AVERAGE
3.93	32.98	0.70	33.68	56.00	-22.32	QP
20.00	49.56	0.60	50.16	60.00	-9.84	QP
20.00	21.61	0.60	22.21	50.00	-27.79	AVERAGE

Remarks: 1. Level = Read Level + Factor
 2. Factor = LISN(ISN) Factor + Cable Loss

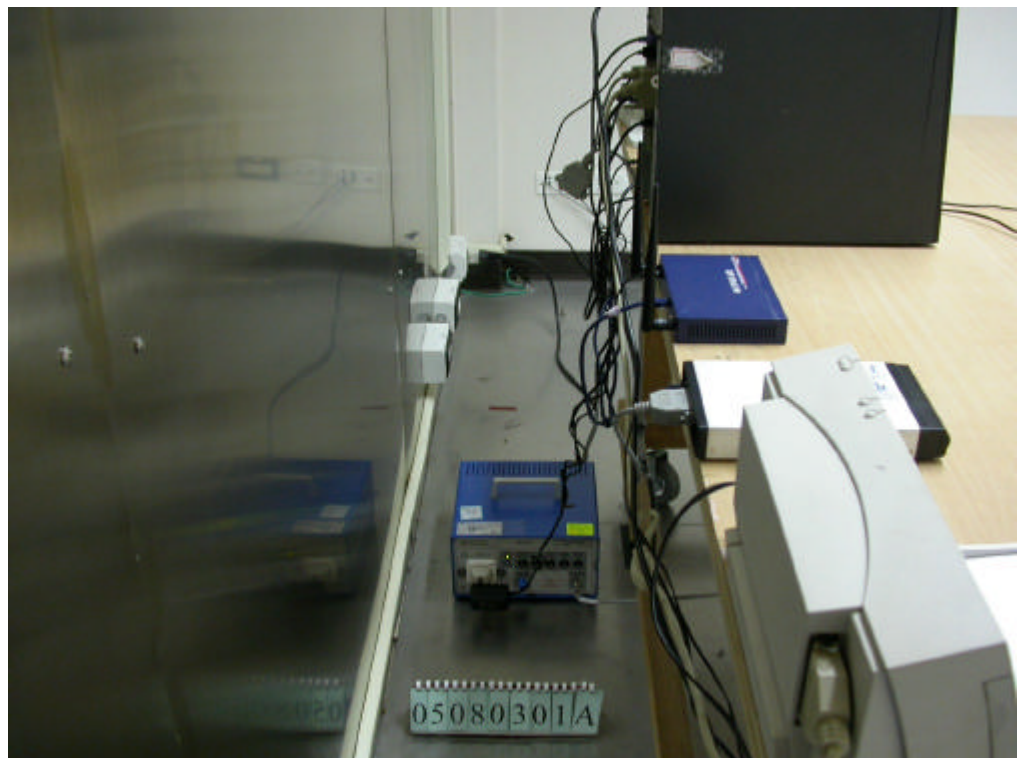
Test engineer: Jerry

5.4.1. Photographs of Conducted Emission Test

Front View



Rear View



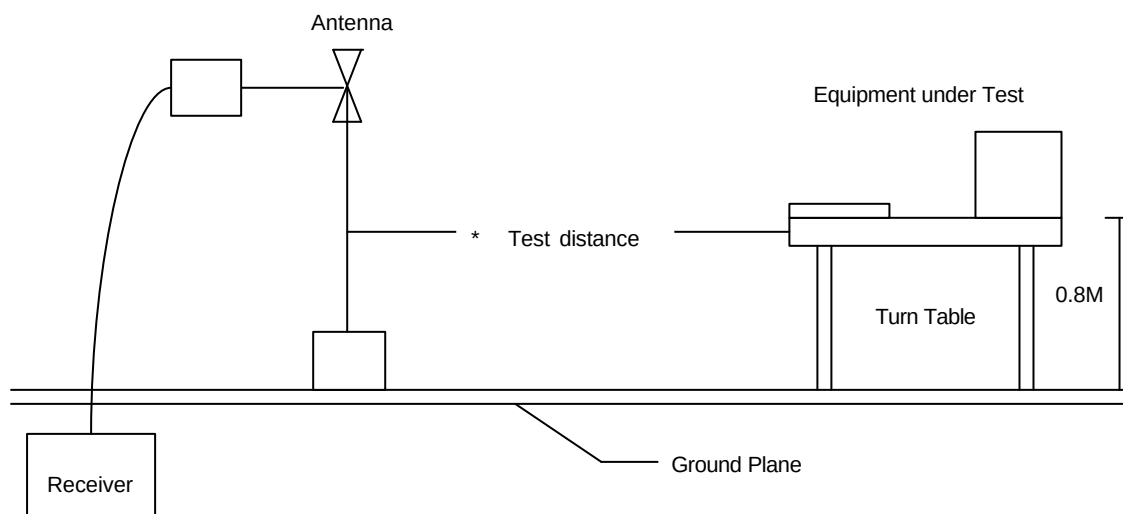
6. Test of Radiated Emission

Radiated emissions from 30 MHz to 40 GHz were measured according to the methods defines in ANSI C63.4-2003. The EUT was placed, 0.8 meter above the ground plane, as shown in section 1.4.2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions

6.1. Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
5. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

6.2. Typical Test Setup Layout of Radiated Emission



6.3. Test Result of Radiated Emission

Test Model 1: Adapter: DSA-0131F-12

Emission frequencies below 1 GHz Channel 01

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBUV)	Corrected Factor (dB)	Result@3m (dBUV/m)	Limit@3m (dBUV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
143.30	H	52.72	-14.44	38.28	43.5	-5.22	Q.P	75	1.1
150.73	H	49.13	-14.53	34.60	43.5	-8.90	Peak	75	1.1
200.23	H	49.88	-17.09	32.78	43.5	-10.71	Peak	0	1.1
232.80	H	52.17	-10.91	41.26	46.0	-4.74	Q.P	20	1.1
248.30	H	52.60	-10.47	42.13	46.0	-3.87	Q.P	100	1.1
249.18	H	56.10	-13.47	42.63	46.0	-3.37	Q.P	0	1.1
598.90	H	46.77	-4.55	42.22	46.0	-3.87	Q.P	100	1.1
997.90	H	45.88	2.78	48.66	54.0	-5.34	Q.P	0	1.1
148.11	V	55.50	-14.43	41.07	43.5	-2.43	Q.P	0	1.0
170.80	V	51.84	-16.83	35.01	43.5	-8.49	Peak	0	1.0
194.73	V	52.75	-17.06	35.69	43.5	-7.81	Peak	215	1.0
249.73	V	57.22	-13.36	43.86	46.0	-2.14	Q.P	200	1.0
323.80	V	53.41	-10.91	42.50	46.0	-3.50	Q.P	0	1.0
348.30	V	54.45	-10.47	43.98	46.0	-2.02	Q.P	215	1.0
449.80	V	51.33	-8.81	42.52	46.0	-3.48	Q.P	30	1.0
498.80	V	50.70	-7.05	43.65	46.0	-2.35	Q.P	30	1.0

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.

Emission frequencies 1~40 GHz

Test Mode: Normal, Channel 01, Transmit Rate: 54Mbps

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
10362.10	H	42.43	15.79	58.22	68.3	-10.08	Peak	246	1.0
15540.00	H	---	17.13	---	54.0	---	Ave	---	---
20720.00	H	---	28.10	---	54.0	---	Ave	---	---
25900.00	H	---	31.67	---	68.3	---	Peak	--	--
10358.89	V	44.23	14.92	-59.15	68.3	-9.15	Peak	350	1.0
15540.00	V	---	16.44	---	54.0	---	Ave	---	---
20720.00	V	--	28.10	---	54.0	---	Ave	---	---
25900.00	V	---	31.67	---	68.3	---	Peak	---	--

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too below to be measured.

Emission frequencies 1~40 GHz

Test Mode: Normal, Channel 04, Transmit Rate: 54Mbps

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
10481.13	H	42.79	16.08	58.87	68.3	-9.43	Peak	246	1.0
15720.00	H	---	16.70	---	54.0	---	Ave	---	---
20960.00	H	---	28.67	---	54.0	---	Ave	---	---
26200.00	H	---	32.07	---	68.3	---	Peak	--	--
10481.17	V	44.78	15.28	60.06	68.3	-8.24	Peak	350	1.0
15720.00	V	---	16.04	---	54.0	---	Ave	---	---
20960.00	V	---	28.67	---	54.0	---	Ave	---	---
26200.00	V	---	32.07	---	68.3	---	Peak	---	--

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.

Emission frequencies 1~40 GHz

Test Mode: Normal, Channel 05, Transmit Rate: 54Mbps

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBUV)	Corrected Factor (dB)	Result@3m (dBUV/m)	Limit@3m (dBUV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
10521.25	H	42.66	16.13	58.97	68.3	-9.33	Peak	246	1.0
15780.00	H	---	16.55	---	54.0	---	Ave	---	---
21040.00	H	---	28.90	---	54.0	---	Ave	---	---
26300.00	H	---	32.23	---	68.3	---	Peak	--	--
10521.10	V	44.08	15.33	59.41	68.3	-8.89	Peak	350	1.0
15780.00	V	---	15.91	---	54.0	---	Ave	---	---
21040.00	V	---	28.90	---	54.0	---	Ave	---	---
26300.00	V	---	32.23	---	68.3	---	Peak	---	--

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too below to be measured.

Emission frequencies 1~40 GHz

Test Mode: Normal, Channel 08, Transmit Rate: 54Mbps

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
10641.63	H	42.10	16.16	58.26	74.0	-15.74	Peak	246	1.0
15960.00	H	---	16.12	---	54.0	---	Ave	---	---
21280.00	H	---	29.75	---	54.0	---	Ave	---	---
26600.00.	H	---	32.52	---	68.3	---	Peak	--	--
10641.63	V	42.80	15.36	58.16	74.0	-15.84	Peak	350	1.0
15960.00	V	---	15.51	---	54.0	---	Ave	---	---
21280.00	V	---	29.75	---	54.0	---	Ave	---	---
26600.00	V	---	32.52	---	68.3	---	Peak	---	--

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too below to be measured

Test Model 2: POE mode

Emission frequencies below 1 GHz Channel 01

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
124.60	H	47.72	-16.01	31.71	43.5	-11.79	Peak	75	1.1
136.98	H	51.16	-14.69	36.347	43.5	-7.03	Peak	75	1.1
141.65	H	47.44	-14.46	32.98	43.5	-10.52	Peak	75	1.1
268.43	H	53.08	-12.06	41.02	46.0	-4.98	Q.P	0	1.1
325.00	H	54.48	-10.88	43.60	46.0	-2.40	Q.P	20	1.1
348.30	H	54.02	-10.47	43.55	46.0	-2.45	Q.P	100	1.1
449.80	H	46.72	-8.81	37.91	46.0	-8.09	Peak	0	1.1
997.90	H	45.85	2.78	48.63	54.0	-5.37	Q.P	0	1.1
51.73	V	52.26	-15.88	36.38	40.0	-3.62	Q.P	40	1.0
138.63	V	47.82	-14.57	33.25	43.5	-10.25	Peak	0	1.0
249.73	V	56.98	-13.36	43.62	46.0	-2.38	Q.P	200	1.0
268.98	V	55.50	-12.02	43.48	46.0	-2.52	Q.P	200	1.0
348.30	V	53.50	-10.47	43.03	46.0	-2.97	Q.P	215	1.0
400.80	V	49.75	-8.87	40.88	46.0	-5.12	Q.P	30	1.0
498.80	V	50.90	-7.05	43.85	46.0	-2.15	Q.P	30	1.0
747.30	V	44.67	-1.52	43.15	46.0	-2.85	Q.P	0	1.0

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too below to be measured.

Test Model 2: PoE mode

Emission frequencies 1~40 GHz

Test Mode: Normal, Channel 01, Transmit Rate: 54Mbps

Test Date: Oct. 20, 2005 Temperature: 22°C Humidity: 70% Atmospheric pressure: 1020mmHg

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result@3m (dBuV/m)	Limit@3m (dBuV/m)	Margin (dB)	Remark	Table Deg.	Ant High (m)
10362.10	H	42.51	15.79	58.30	68.3	-10.00	Peak	246	1.0
15540.00	H	---	17.13	---	54.0	---	Ave	---	---
20720.00	H	---	28.10	---	54.0	---	Ave	---	---
25900.00	H	---	31.67	---	68.3	---	Peak	--	--
10358.89	V	44.50	14.92	59.42	68.3	-8.88	Peak	350	1.0
15540.00	V	---	16.44	---	54.0	---	Ave	---	---
20720.00	V	--	28.10	---	54.0	---	Ave	---	---
25900.00	V	---	31.67	---	68.3	---	Peak	---	--

Notes:

1. Result = Meter Reading + Corrected Factor
2. Corrected Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120 kHz and video bandwidth is 300 kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too below to be measured.