



EMI TEST REPORT

Test Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
Type of Equipment : Wireless LAN Transmitter
Model No. : WT-1A
FCC ID : CGJWT01
Test standard : FCC Part15 Subpart C, Section 15.247
Test Result : Complied

1. This test report shall not be reproduced except in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.

Date of test: June 2, 9, 10, 11 and 14, 2003

Tested by: T. Imamura
Toyokazu Imamura

I. Isozaki
Ichiro Isozaki

T. Suzuki
Takahiro Suzuki

Approved by: O. Watatani
Osamu Watatani
Site Manager of Yamakita EMC Lab.

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

Table of Contents	Page
1 GENERAL INFORMATION	3
1.1 Tested Methodology	3
1.2 Test Facility	3
2 PRODUCT DESCRIPTION	4
3 SYSTEM TEST CONFIGURATION	5
3.1 Justification	5
3.2 Configuration of Tested System	6
4 MEASUREMENT UNCERTAINTY	9
5 SUMMARY OF TEST	10
5.1 §15.207 Conducted Emissions	10
5.2 §15.247(a)(2) 6dB Bandwidth (Antenna Port Conducted)	10
5.3 §15.247(b)(3) Maximum Peak Out Put Power (Antenna port Conducted)	10
5.4 §15.247(c) Out of Band Emissions (Radiated)	11
5.5 §15.247(c) Out of Band Emissions (Antenna Port Conducted)	11
5.6 §15.247(d) Power Density (Antenna Port Conducted)	11
<u>Contents of Appendixes</u>	12
APPENDIX 1: Photographs of test setup	13
APPENDIX 2: Test Data	19
APPENDIX 3: Test instruments	65

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

1 GENERAL INFORMATION

Company Name : NIKON CORPORATION

Brand Name : Nikon

Address : OHI PLANT;
6-3, Nishi-Ohi 1-chome, Shinagawa-ku, TOKYO, 140-8601 JAPAN

Telephone Number : +81-3-3773-8029

Facsimile Number : +81-3-3773-1842

Contact Person : Kenji Ishizuki

Type of Equipment : Wireless LAN Transmitter

Model Number : WT-1A

Serial Number : No.2

Rating : DC3.3V
The power is supplied from the digital camera (model: D2H) that is connected with WT-1A.
The power of digital camera is either battery that is rechargeable nickel-metal hydride power source or AC100V-240V, 50/60Hz, AC adaptor (single phase-2pin plug)

Condition of EUT : Production prototype

Country of Manufacture : Japan

Receipt Date of Sample : May 29, 2003

Condition of E.U.T. : Production prototype

Regulation(s) : FCC Part15 Subpart C, Section 15.247

Test Site : UL Apex Yamakita EMC Lab. No.1 Open Test Site and No.4 Shielded Room

1.1 Tested Methodology

The measurements were performed according to the procedures in ANSI C63.4 (2001).
These tests were also referred to FCC 97-114 "Guidance on Measurement for Direct Sequence Spread Spectrum Systems".

1.2 Test Facility

This site has been fully described in a report submitted to FCC office, and accepted on September 20, 2002.
(No.1 Open Test Site Registration No.: 95486)
NVLAP Lab. code : 200441-0

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

2 PRODUCT DESCRIPTION

NIKON CORPORATION, Model: WT-1A (referred to as the EUT in this report) is a wireless LAN transmitter.

The clock frequencies used in EUT : 8 MHz, 32.768 MHz (MPU)
48 MHz (USB)

Equipment type : Transceiver
Frequency band : Lower limit:2412 MHz / Upper limit: 2462 MHz
Local clock frequency : 2082 MHz ~ 2153.5 MHz
Bandwidth & channel spacing : Bandwidth: 15.0 MHz \pm 4 MHz, Channel spacing: 5 MHz
Type of modulation : BPSK (1 Mbps), QPSK (2 Mbps), CCK (5.5/11 Mbps)
Antenna fixing method : External, removal type
Antenna type : Box type: Chip inductive antenna
Rod type: Collinear antenna
Antenna connector type : SMA reverse type
Antenna gain : WA-S1 (Box type): -1.5 dBi
WA-E1 (Rod type): 3 dBi (including cable loss of -1dB.)
Transmit power : equal or less than 5 mW
Mode of operation : Simplex
Other clock frequency : 8 MHz, 32.768 MHz (MPU section), 48 MHz (USB section)
Emission Designation : G7D
Power supply : DC3.3V
Operation temperature range : 0 – 40 deg.C.
Power and signal cable length : equal or less than 3m

*. The operation clocks on the digital camera (model: D2H) that connected with the wireless LAN transmitter (model: WT-1A) are as follows;
6.25MHz, 12MHz, 12.288MHz, 14.31818MHz, 16MHz, 17.734475MHz, 50MHz

*FccPart15.31(e)

The host device D2H (Digital camera) provides the wireless LAN transmitter with stable power supply (DC3.3V), and the power is not changed when voltage of the digital camera is varied.
Therefore, the wireless LAN transmitter complies power supply regulation.

*FccPart15.203

The antenna of WT-1A doesn't use a standard antenna jack or electrical connector,
Therefore the wireless LAN transmitter complies with FCC Part15.203 Antenna requirement.

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

3 SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured in typical fashion (as a customer would normally use it) for testing.

Test mode:

1. Transmitting 2412MHz (Low)
2. Transmitting 2437MHz (Middle)
3. Transmitting 2462MHz (High)

Antenna type:

1. WA-S1 (Short type)
2. WA-E1 (Long type)

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

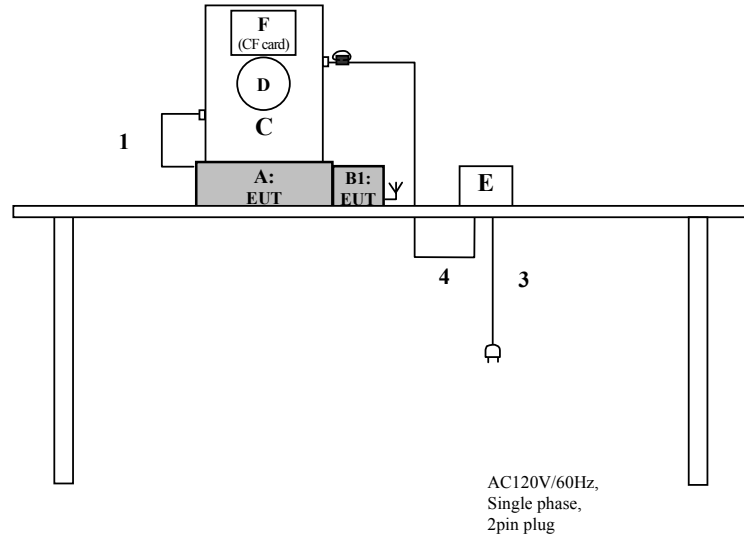
Facsimile: +81 465 77 2112

MF060b(10.04.03)

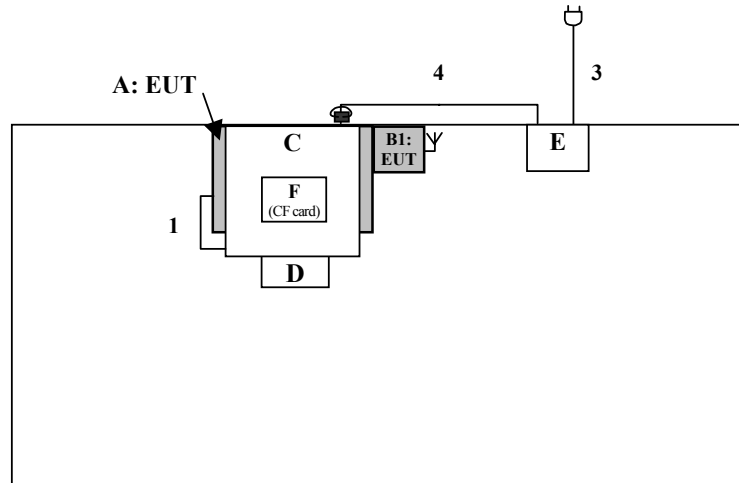
3.2 Configuration of Tested System

Short antenna setup

Front View



Top View



*Cabling was taken into consideration and test data was taken under worse case conditions.

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

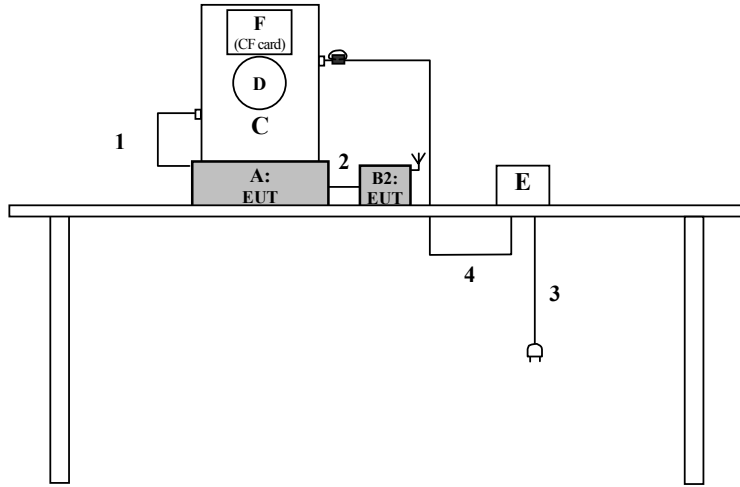
907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011
Facsimile: +81 465 77 2112

MF060b(10.04.03)

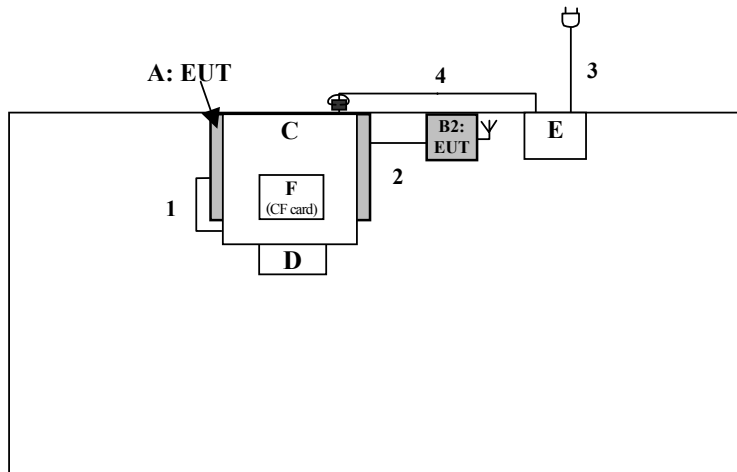
Long antenna setup

Front View



AC120V/60Hz,
Single phase,
2pin plug

Top View



*Cabling was taken into consideration and test data was taken under worse case conditions.

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011
Facsimile: +81 465 77 2112

MF060b(10.04.03)

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark	FCC ID
A	Wireless LAN transmitter	WT-1A	No.2	Nikon	EUT.	CGJW01
B1	Antenna (short)	WA-S1	-	Nikon	EUT.	-
B2	Antenna (long)	WA-E1	-	Nikon	EUT.	-
C	Digital camera	D2H	PT00105	Nikon	Not EUT.	-
D	Lens	28-80mm, 3.5-5.6D	-	Nikon	Not EUT.	-
E	AC adaptor	EH-6	No.1	Nikon	Not EUT.	-
F	CF memory card	Ultra 512MB	-	SanDisk	Not EUT.	-

List of cables used

No.	Name	Length (m)	Shield	Backshell material	Remark
1	USB cable	0.1	Shielded	Polyvinyl chloride	EUT. This cable is detachable from the wireless LAN transmitter (model: WT-1A).
2	Antenna cable	1	Shielded	Polyvinyl chloride	EUT. This cable is detachable from the long antenna (model: WA-E1).
3	AC power cable (AC adaptor)	2	Unshielded	Polyvinyl chloride	Not EUT. This is accessory cable and supplied with the digital camera (model: D2H).
4	DC power cable (AC adaptor)	2	Unshielded	Polyvinyl chloride	Not EUT. This cable has a ferrite core and is not detachable from AC adaptor. AC adaptor is accessory part and supplied with the digital camera (model: D2H).

UL Apex Co., Ltd.**YAMAKITA EMC LAB.**

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

4 MEASUREMENT UNCERTAINTY

Conducted emission test

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.3 dB.

The data listed in this test report has enough margin, more than site margin.

Radiated emission test

The measurement uncertainty (with 95% confidence level) for this test using Biconical antenna is ± 4.8 dB.

The measurement uncertainty (with 95% confidence level) for this test using Logperiodic antenna is ± 5.2 dB.

The measurement uncertainty (with 95% confidence level) for this test using Horn antenna is ± 6.6 dB.

The result is within Yamakita EMC lab's uncertainty.

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

5 SUMMARY OF TESTS

5.1 §15.207 Conducted Emissions (Limits by CISPR Pub.22 Class B)

Test Procedure

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.

The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT and its peripherals were aligned and flushed with rear of tabletop.

All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from LISN and excess AC cable was bundled in center.

Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT on a shielded room.

The EUT was connected to a Line Impedance Stabilization Network (LISN).

An overview sweep with peak detection has been performed.

The measurements have been performed with a CISPR quasi-peak detector (IF BW 9kHz).

(Measurement range : 150kHz to 30MHz)

Test data : APPENDIX Page 19 to 28

Photographs of test setup: Page 13 to 14

Test result : Pass

Test instruments : KCC-14/15/16/18/KPL-01, KLS-01, KSA-01, KTR-02

5.2 §15.247(a)(2) 6dB Bandwidth (Antenna Port Conducted)

Test Procedure

The minimum 6dB bandwidth was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX Page 29

Test result : Pass

Test instruments : KTR-01, KCC-D7

5.3 § 15.247(b)(3) Maximum Peak Out Put Power (Antenna Port Conducted)

Test Procedure

The Maximum Peak Output power was measured with a power meter connected to the antenna port.

* Antenna Gain dose not exceed 6dBi.

Test data : APPENDIX Page 30

Test result : Pass

Test instruments : KPM-05, KPSS-01

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

5.4 § 15.247(c) Out of Band Emissions (Radiated)

Test Procedure

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.

The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

The Radiated Electric Field Strength intensity has been measured on an open test site with a ground plane and at a distance of 3m.

The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for both vertical and horizontal antenna polarization. EUT emission levels were compared when the EUT antenna position was vertical polarization and horizontal polarization. The equipment was also previously checked at each position of three axes X, Y and Z for short antenna. It was found that X axis was worst under both polarizations in below 1GHz. Y axis was worst under the vertical antenna polarization and that Z axis was worst under the horizontal antenna polarization in above 1GHz. For long antenna, two axes X and Y to find that X axis was worst under both polarization in below 1GHz, and X axis was worst under the vertical antenna polarization and that Y axis was worst under the horizontal antenna polarization. The position in which the maximum noise occurred was chosen to put into measurement. See the photographs in page 17-18.

Radiated spurious emissions

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

The result was also satisfied the general limits specified in Sec.15.209 (a).

Measurement range : 30MHz to 1000MHz CISPR QP Detector, IF BW 120kHz
: 1GHz to 26GHz PK and AV Detector

Test data : APPENDIX 2 Page 31 to 36 (30 - 1000MHz)
: APPENDIX 2 Page 37 to 48 (1 - 26GHz)
: APPENDIX 2 Page 49 to 56
(Band Edges: 2390MHz/ 2483.5MHz, Restricted band Charts)

Photographs of test setup: Page 15 to 16

Test result : Pass

Test instruments: KAF-01, KAF-02, KAT10-S1, KAT6-01, KBA-01, KTR-01, KTR-02, KFL-01
KCC-10/11/12/13/18, KCC-D3/D7, KHA-01, KHA-03, KLA-01, KOTS-01, KSA-01

5.5 § 15.247(c) Out of Band Emissions (Antenna Port Conducted)

Test Procedure

The Out of Band Emissions was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX Page 57 to 62
Test result : Pass
Test instruments : KTR-01, KCC-D7

5.6 § 15.247(d) Power Density (Antenna Port Conducted)

Test Procedure

The Power Density was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX Page 63 to 64
Test result : Pass
Test instruments : KTR-01, KCC-D7

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

APPENDIX 1: Photographs of test setup

- 1. Page 13 – 14 : Conducted emission
- 2. Page 15 – 16 : Radiated emission
- 3. Page 17 – 18 : Pre-check of worst-case position

APPENDIX 2: Test Data

- 1. Page 19 – 28 : Conducted emission
- 2. Page 29 : 6dB Bandwidth (Antenna Port Conducted)
- 3. Page 30 : Maximum Peak Power (Antenna Port Conducted)
- 4. Page 31 – 56 : Out Band of Emissions (Radiated)
- 5. Page 57 – 62 : Out Band of Emissions (Antenna Port Conducted)
- 6. Page 63 – 64 : Power Density (Antenna Port Conducted)

APPENDIX 3: Test instruments

- Page 65 : Test instruments

UL Apex Co., Ltd.

YAMAKITA EMC LAB.

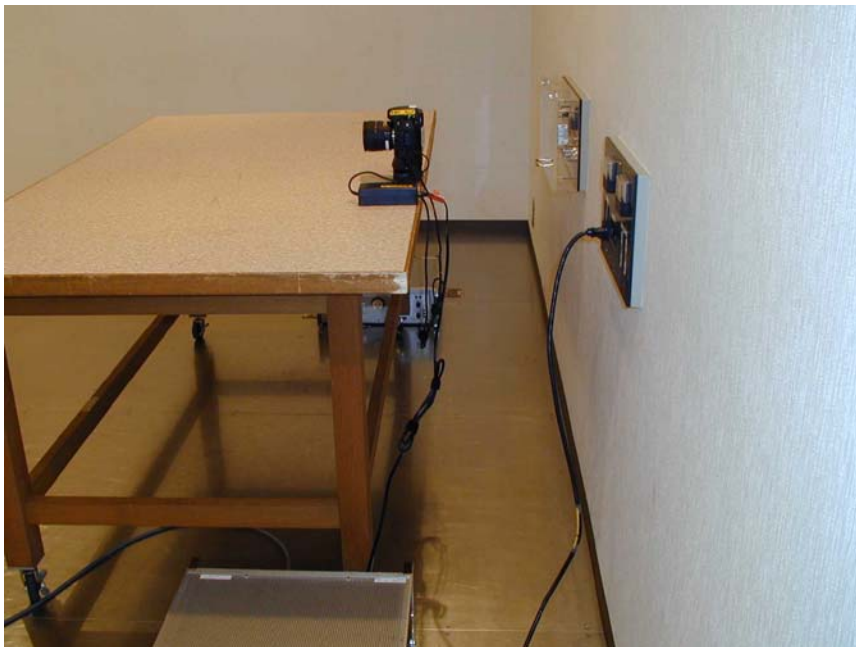
907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

Conducted emission (Short antenna setup)



UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

Conducted emission (Long antenna setup)



UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

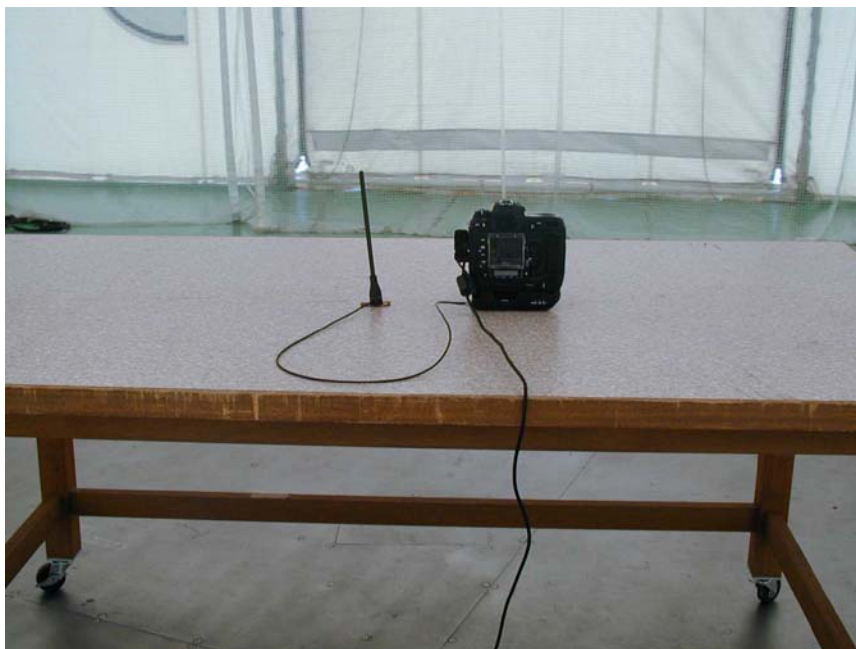
Facsimile: +81 465 77 2112

MF060b(10.04.03)

Radiated emission (Short antenna setup)



Radiated emission (Long antenna setup)



UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

Pre check of worse-case position (Short antenna)

X axis



Y axis



Z axis



UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b(10.04.03)

Pre check of worse-case position (Long antenna)



UL Apex Co., Ltd.

YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011
Facsimile: +81 465 77 2112

MF060b(10.04.03)

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/10/2003
 Phase : Single Phase
 Temperature : 22 °C
 Humidity : 65 %
 Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	READING (N)		READING (L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]				QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
1.	0.1689	38.3	25.7	39.0	27.8	0.0	0.1	0.0	39.1	27.9	65.0	55.0	25.9	27.1
2.	0.2271	32.3	20.4	33.0	23.8	0.0	0.1	0.0	33.1	23.9	62.6	52.6	29.5	28.7
3.	8.0013	32.5	31.8	32.6	32.1	0.3	0.9	0.0	33.8	33.3	60.0	50.0	26.2	16.7
4.	16.0004	35.2	33.8	34.5	34.1	0.8	1.5	0.0	37.5	36.4	60.0	50.0	22.5	13.6
5.	24.0016	33.9	31.9	35.3	32.7	1.1	1.8	0.0	38.2	35.6	60.0	50.0	21.8	14.4
6.	27.7968	33.6	28.5	34.2	29.2	1.2	1.9	0.0	37.3	32.3	60.0	50.0	22.7	17.7

CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

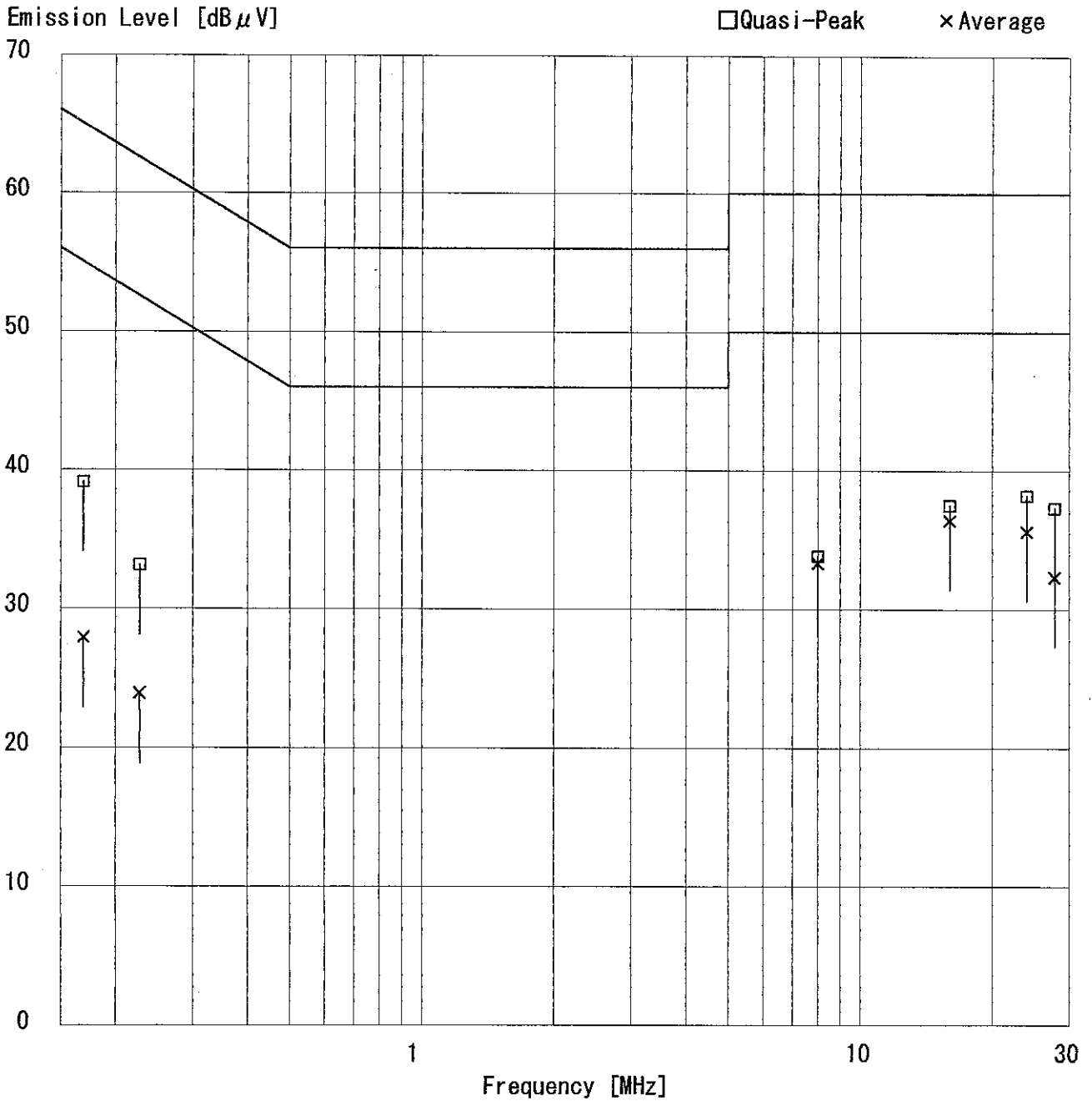
■LISN:KLS-01 ■COAXIAL CABLE:KCC-14/15/16/18
 ■PULSE LIMITTER:KPL-01 (PLO1) ■EMI RECEIVER:KTR-02 (ESCS30)

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/10/2003
 Phase : Single Phase
 Temperature : 22 °C
 Humidity : 65 %
 Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)



 Engineer : Toyokazu Imamura

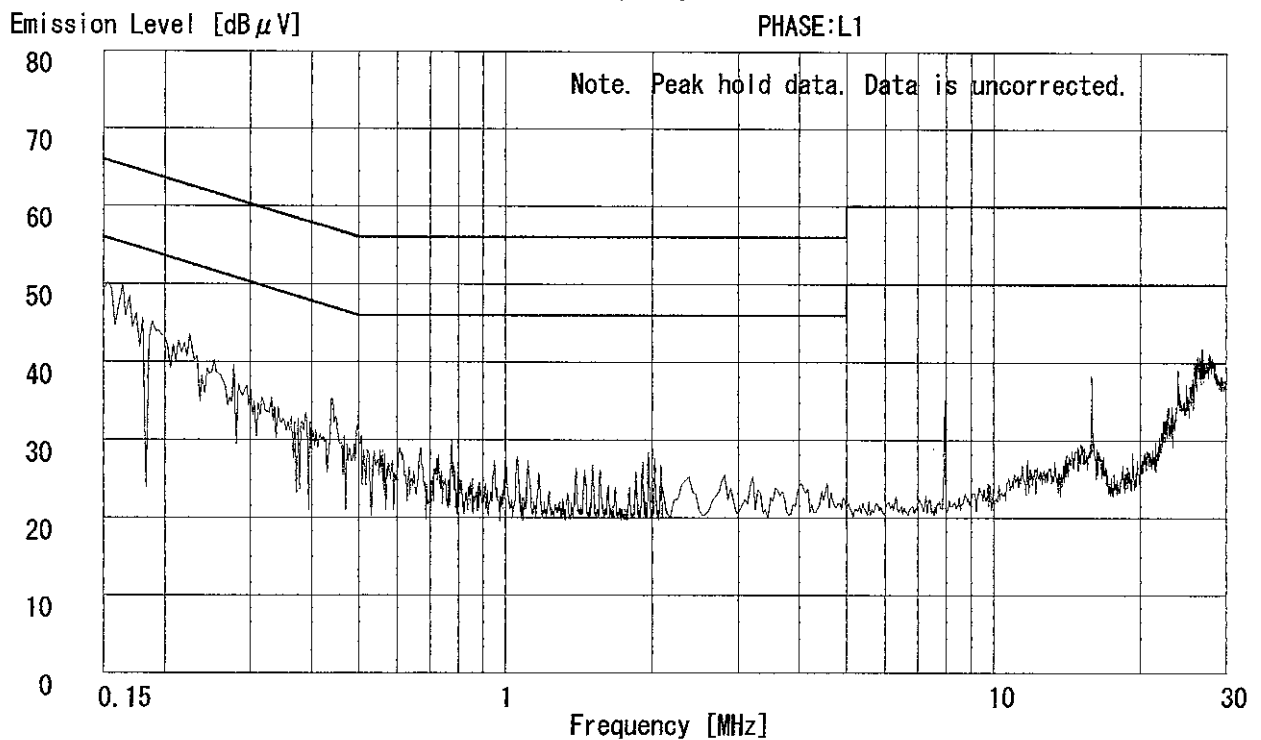
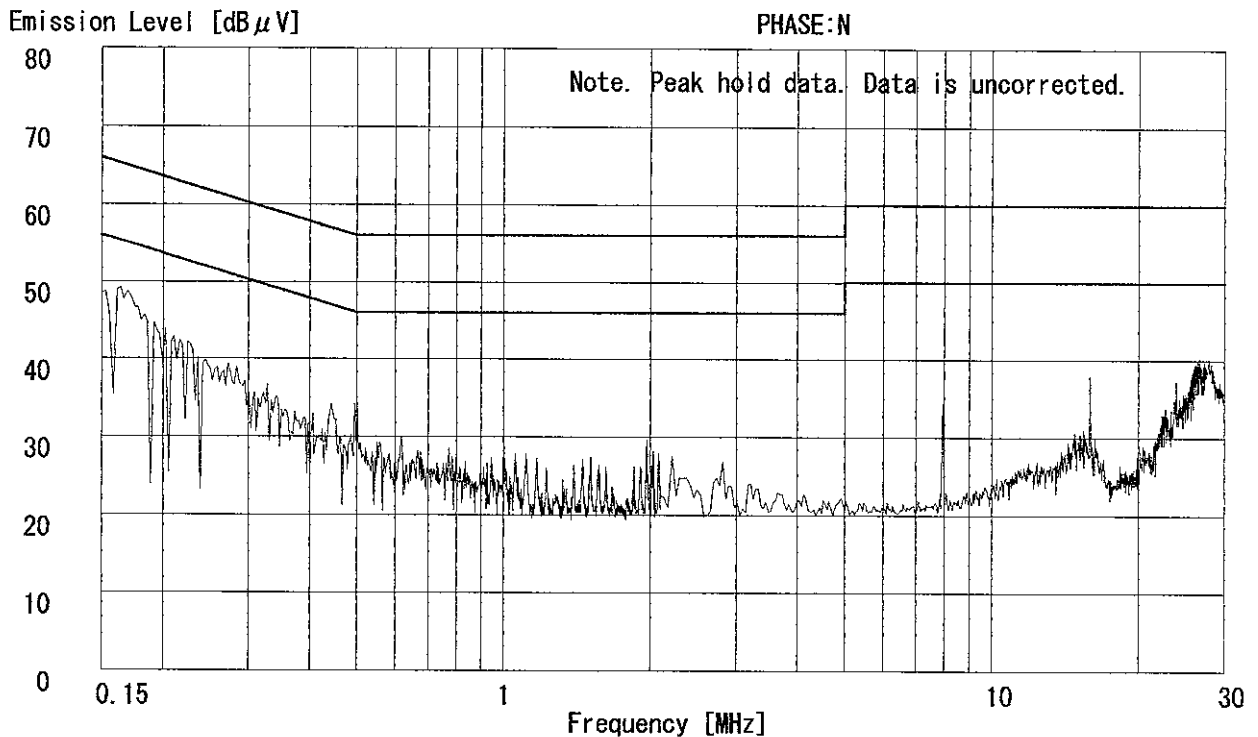


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
Kind of Equipment : Wireless LAN Transmitter
Model No. : WT-1 A
Serial No. : No. 2
Power : AC120V/60Hz
Mode : Transmitting (Lowch:2412MHz)
Remarks : Antenna model : WA-S1
Date : 6/10/2003
Phase : Single Phase
Temperature : 22 °C
Humidity : 65 %
Regulation 1 : FCC Part15C §15.207. (CISPR Pub. 22)
Regulation 2 : None


Engineer : Toyokazu Imamura

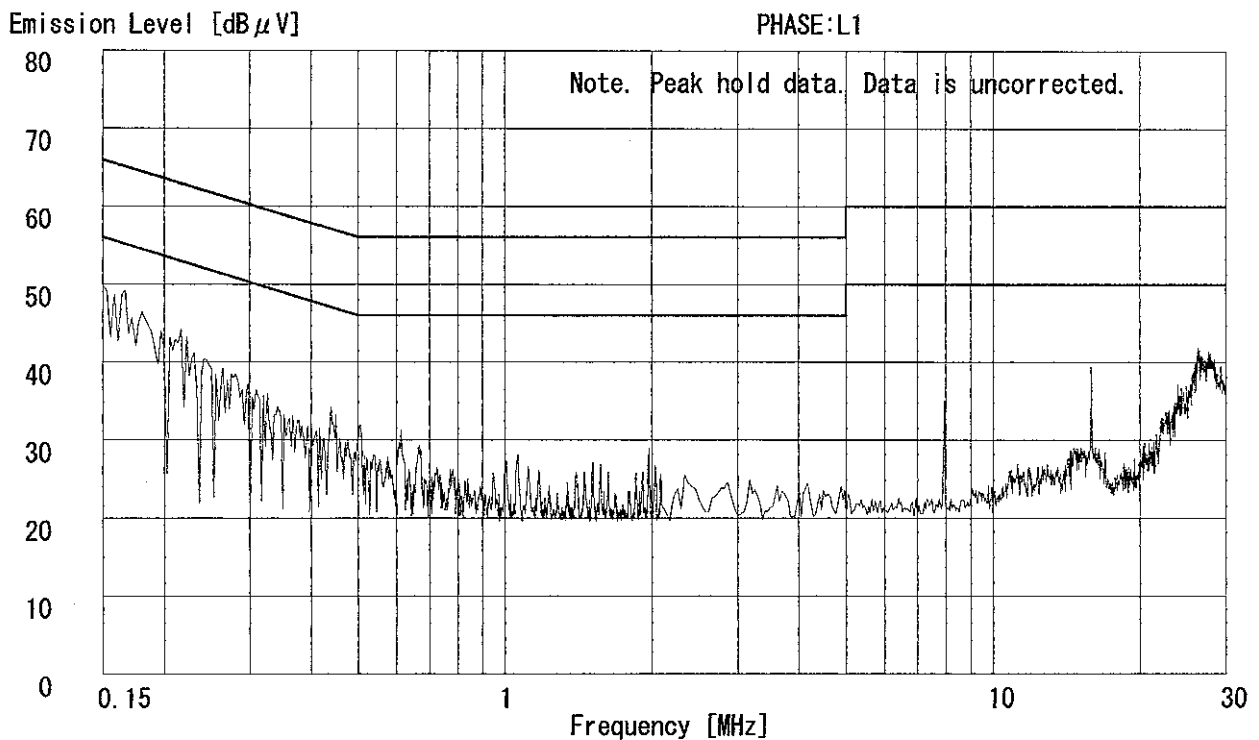
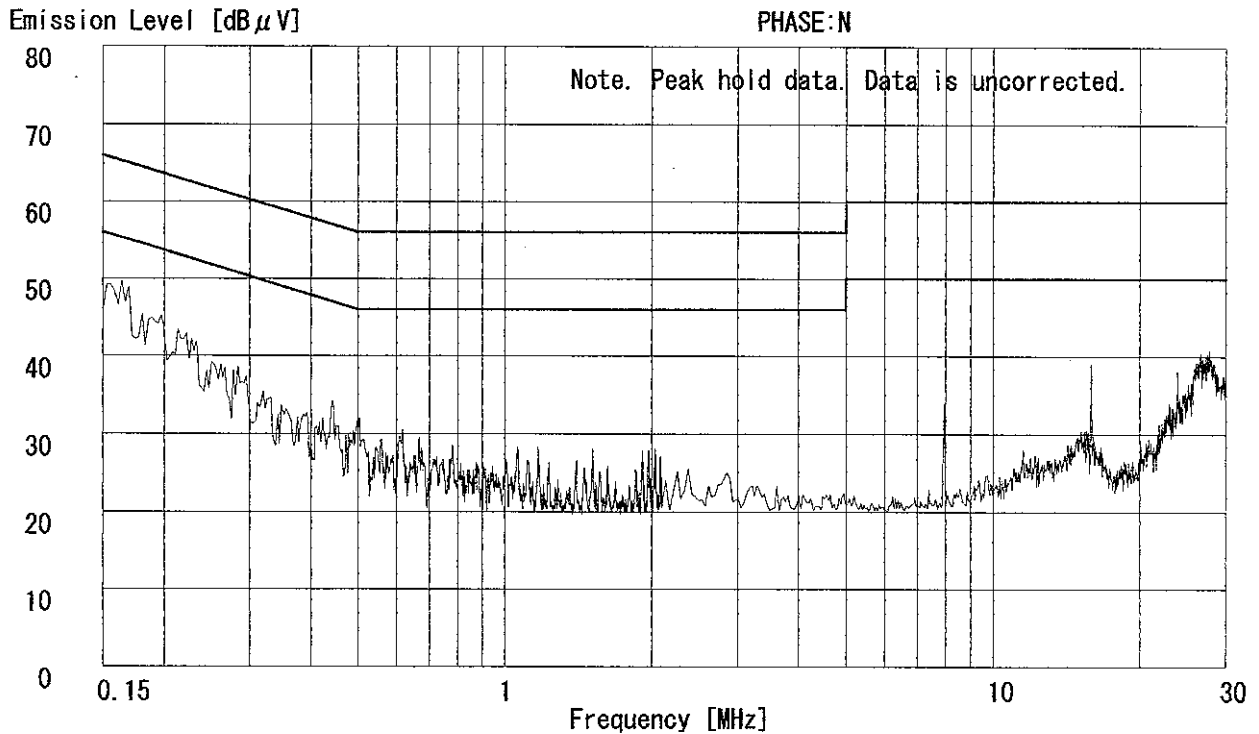


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
Kind of Equipment : Wireless LAN Transmitter
Model No. : WT-1A
Serial No. : No. 2
Power : AC120V/60Hz
Mode : Transmitting (Midch:2437MHz)
Remarks : Antenna model : WA-S1
Date : 6/10/2003
Phase : Single Phase
Temperature : 22 °C
Humidity : 65 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None


Engineer : Toyokazu Imamura

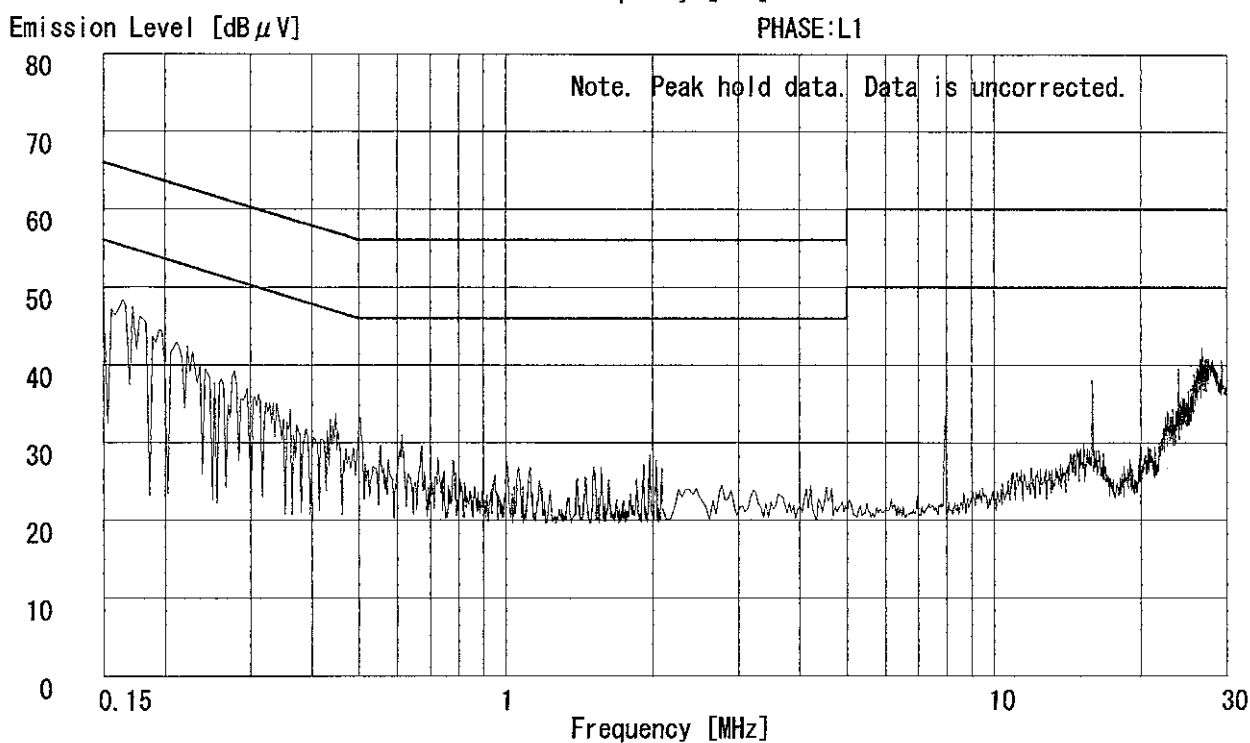
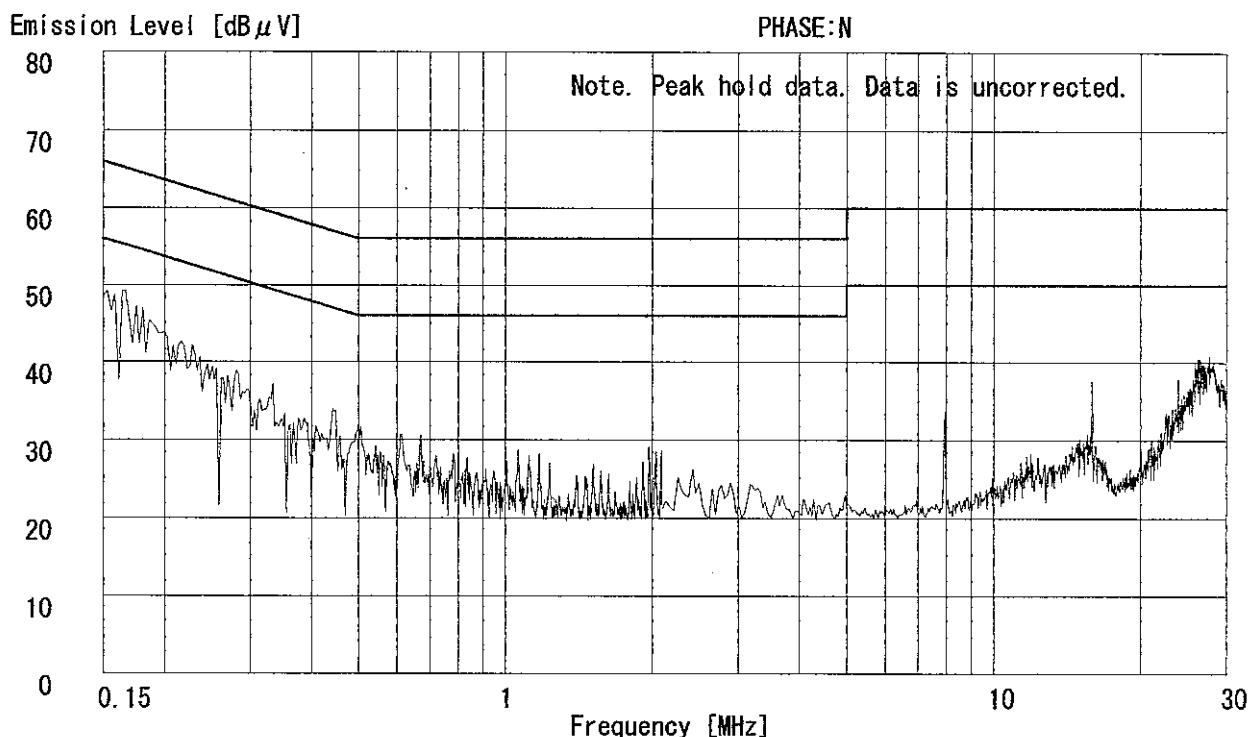


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
Kind of Equipment : Wireless LAN Transmitter
Model No. : WT-1A
Serial No. : No. 2
Power : AC120V/60Hz
Mode : Transmitting (Highch:2462MHz)
Remarks : Antenna model : WA-S1
Date : 6/10/2003
Phase : Single Phase
Temperature : 22 °C
Humidity : 65 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None


Engineer : Toyokazu Imamura



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/10/2003
 Phase : Single Phase
 Temperature : 22 °C
 Humidity : 65 %
 Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	READING (N)		READING (L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]				QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
1.	0.1702	39.5	26.2	39.8	28.2	0.0	0.1	0.0	39.9	28.3	65.0	55.0	25.1	26.7
2.	0.2286	33.1	20.4	34.1	23.4	0.0	0.1	0.0	34.2	23.5	62.5	52.5	28.3	29.0
3.	8.0015	35.2	34.5	35.5	34.7	0.3	0.9	0.0	36.7	35.9	60.0	50.0	23.3	14.1
4.	16.0079	37.2	36.2	37.3	36.8	0.8	1.5	0.0	39.6	39.1	60.0	50.0	20.4	10.9
5.	24.0042	39.9	37.5	40.0	38.2	1.1	1.8	0.0	42.9	41.1	60.0	50.0	17.1	8.9
6.	26.4741	33.6	29.2	34.8	30.2	1.1	1.9	0.0	37.8	33.2	60.0	50.0	22.2	16.8

CALCULATION: READING[dB μV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

- LISN: KLS-01 ■ COAXIAL CABLE: KCC-14/15/16/18
- PULSE LIMITER: KPL-01 (PL01) ■ EMI RECEIVER: KTR-02 (ESCS30)

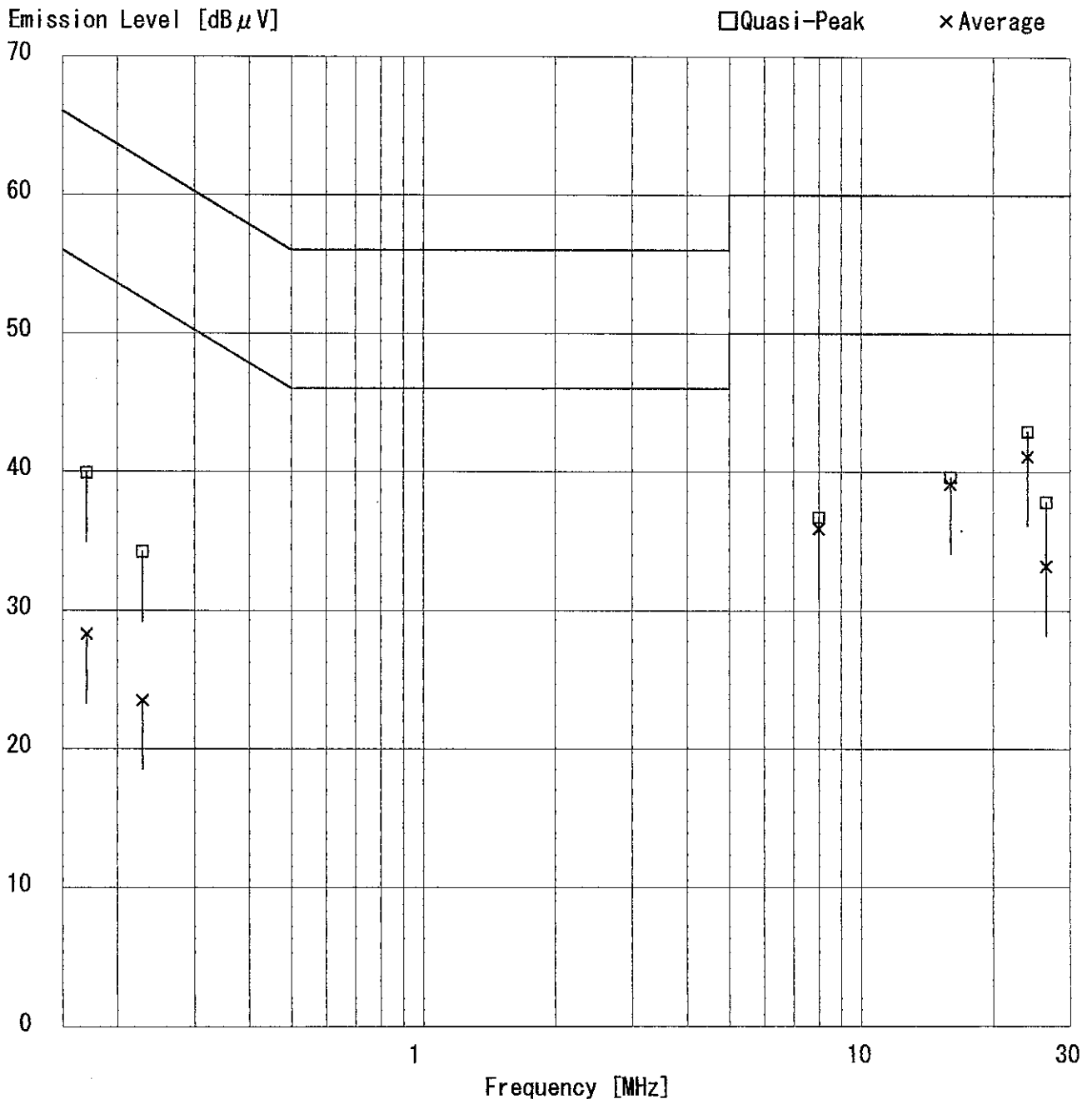
DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/10/2003
 Phase : Single Phase
 Temperature : 22 °C
 Humidity : 65 %
 Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)

T. Imamura


 Engineer : Toyokazu Imamura

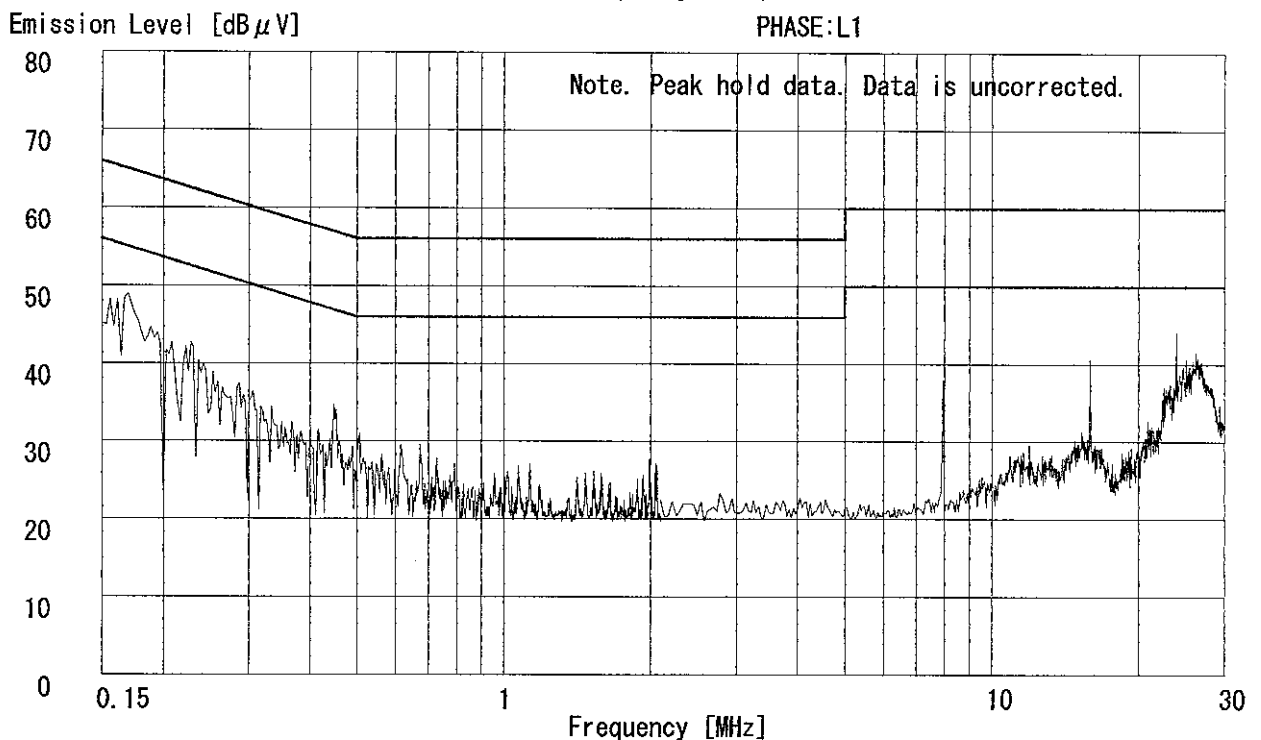
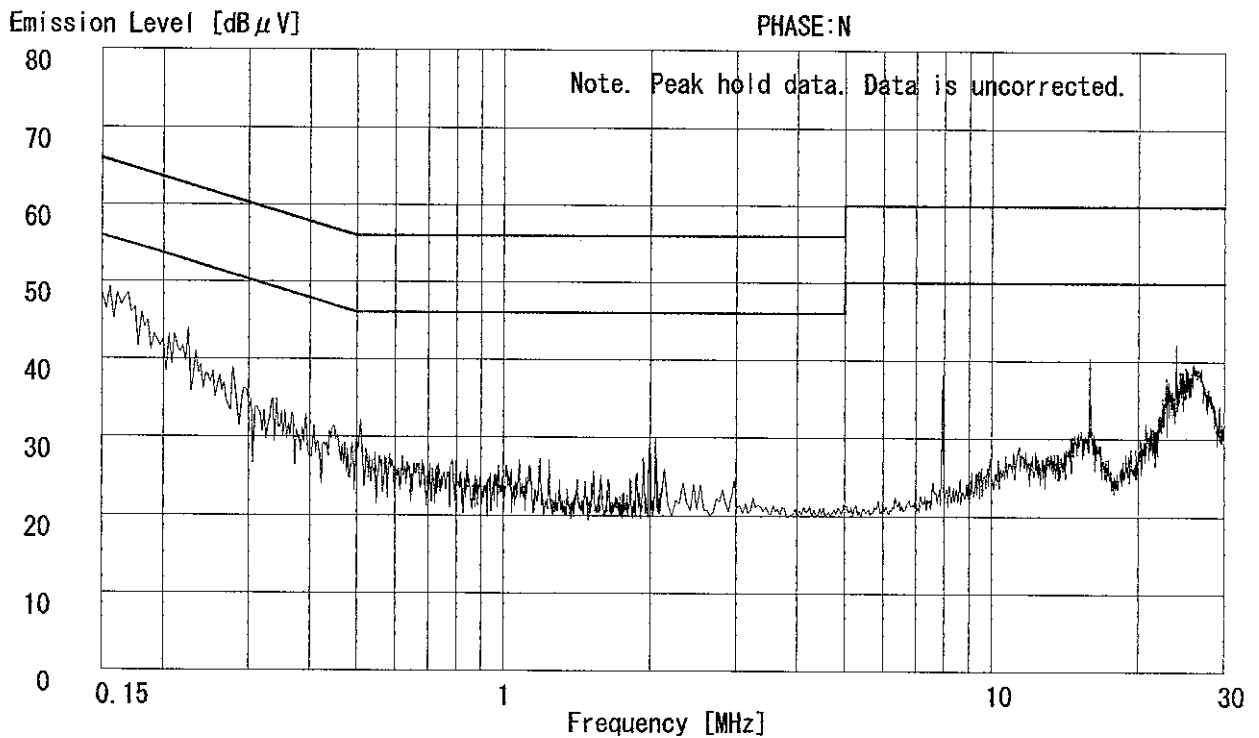


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
Kind of Equipment : Wireless LAN Transmitter
Model No. : WT-1A
Serial No. : No. 2
Power : AC120V/60Hz
Mode : Transmitting (Lowch:2412MHz)
Remarks : Antenna model : WA-E1
Date : 6/10/2003
Phase : Single Phase
Temperature : 22 °C
Humidity : 65 %
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub. 22)
Regulation 2 : None


Engineer : Toyokazu Imamura

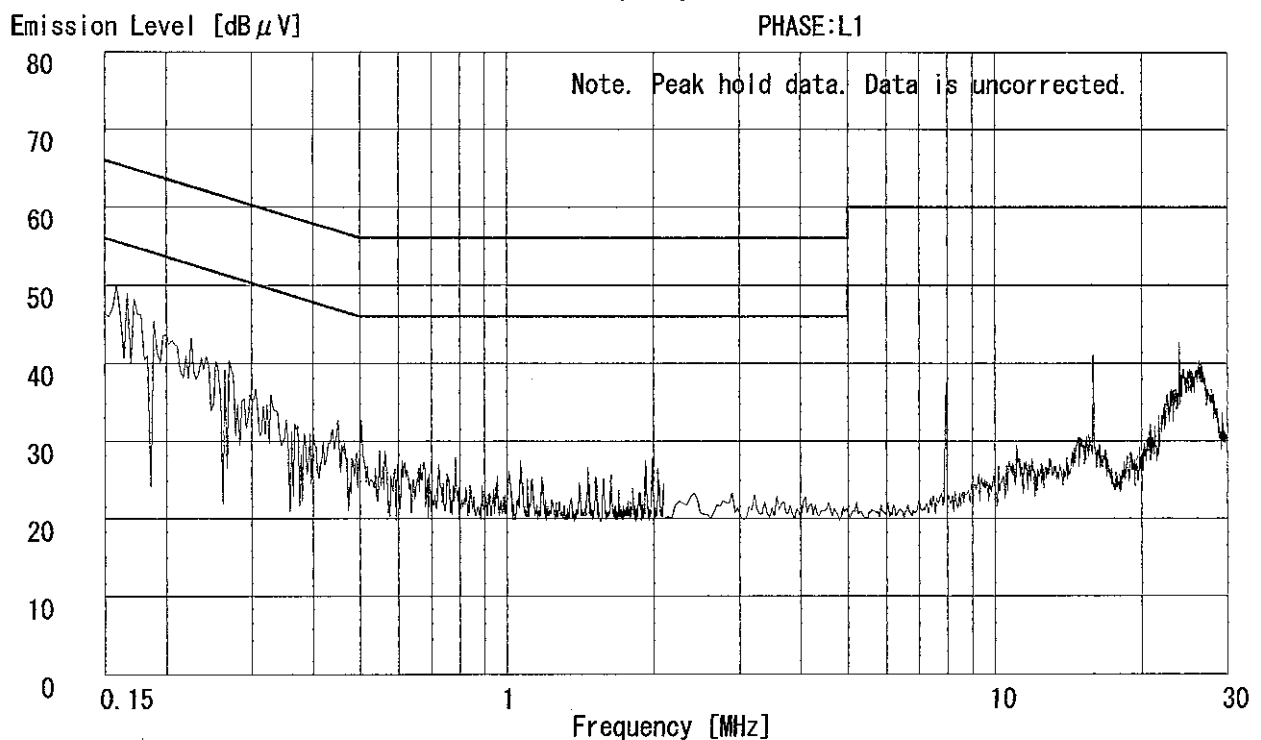
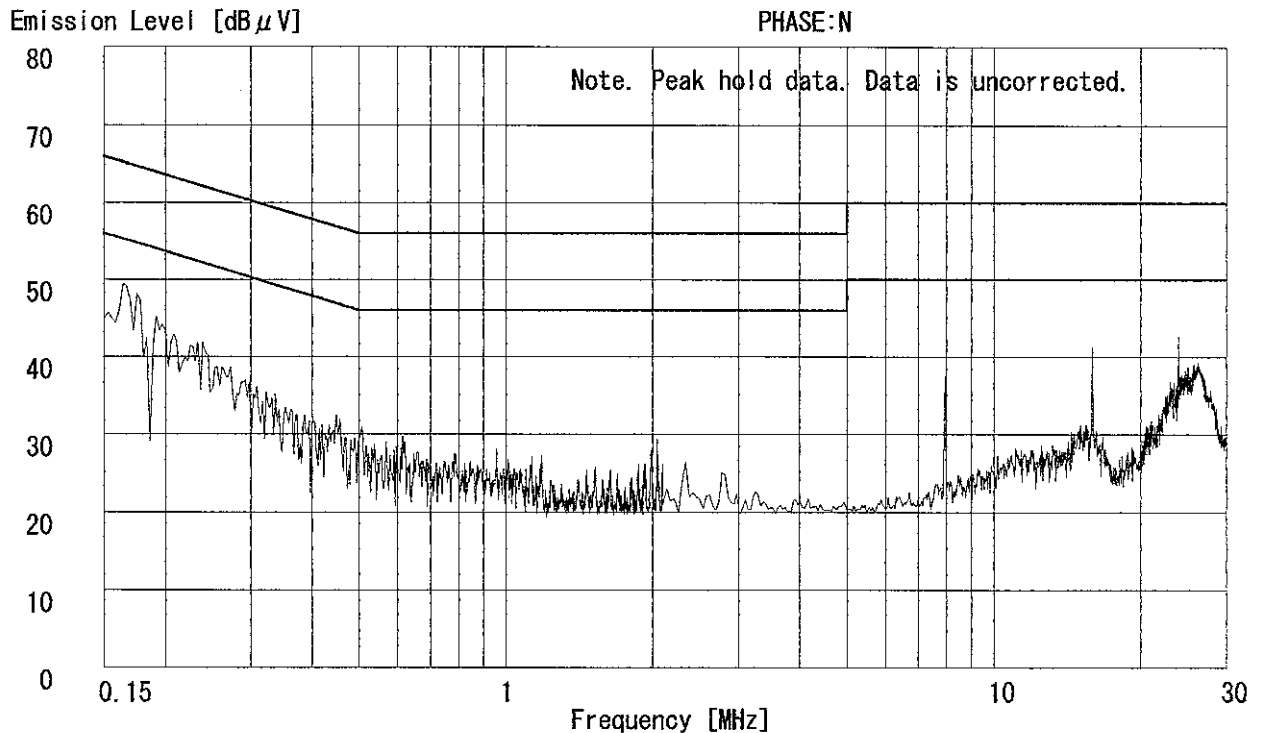


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
Kind of Equipment : Wireless LAN Transmitter
Model No. : WT-1A
Serial No. : No.2
Power : AC120V/60Hz
Mode : Transmitting (Midch:2437MHz)
Remarks : Antenna model : WA-E1
Date : 6/10/2003
Phase : Single Phase
Temperature : 22 °C
Humidity : 65 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None



Engineer : Toyokazu Imamura

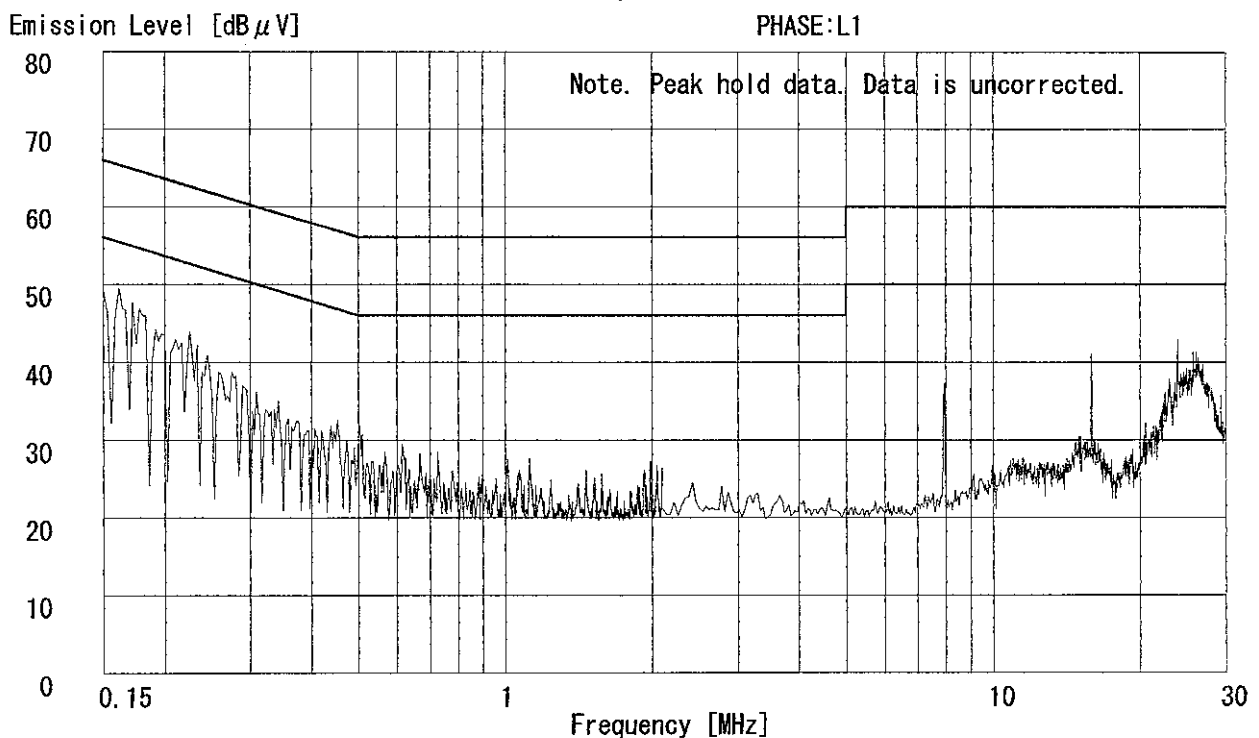
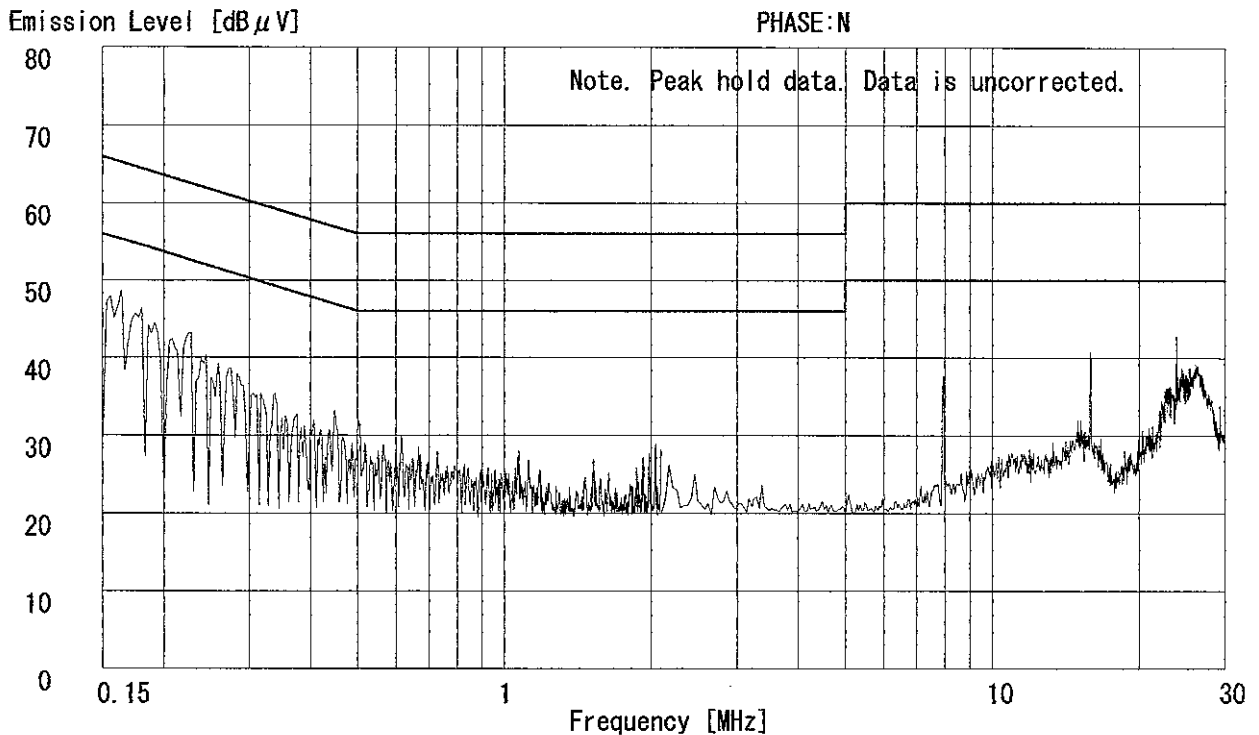


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
Yamakita No.1 Shielded Room
Report No. : 23JE0023-YK-1

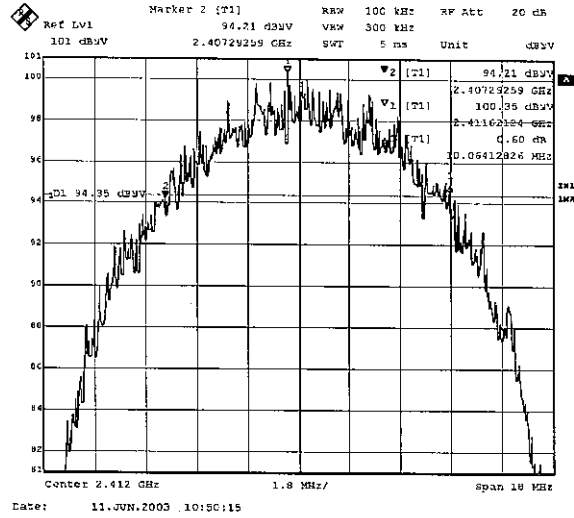
Applicant : NIKON CORPORATION
Kind of Equipment : Wireless LAN Transmitter
Model No. : WT-1A
Serial No. : No.2
Power : AC120V/60Hz
Mode : Transmitting (Highch:2462MHz)
Remarks : Antenna model : WA-E1
Date : 6/10/2003
Phase : Single Phase
Temperature : 22 °C
Humidity : 65 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub.22)
Regulation 2 : None


Engineer : Toyokazu Imamura

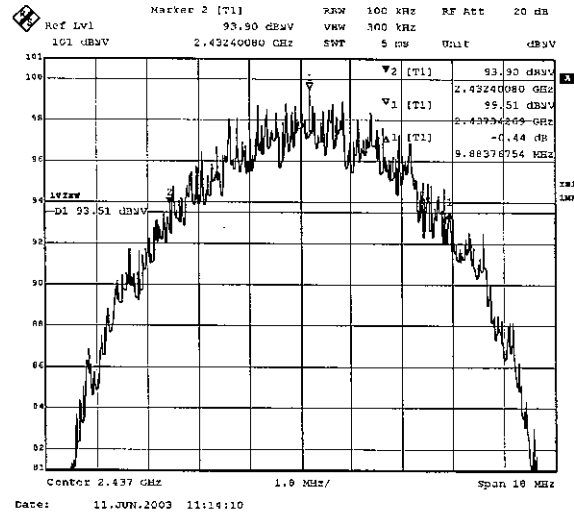


1. Ch Low:2412MHz

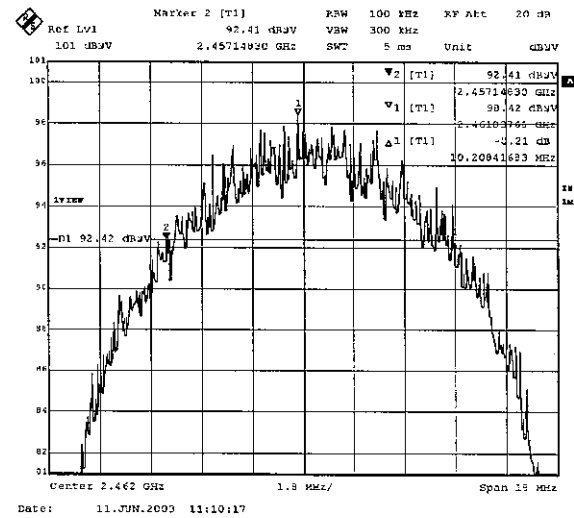
J. Suzuki



2. Ch Mid:2437MHz



3. Ch High:2462MHz



Peak Out Put Power(Conducted)

UL Apex Co., Ltd.
YAMAKITA EMC NO.1 OPEN SITE

COMPANY : NIKON CORPORATION
EQUIPMENT : Wireless LAN Transmitter
MODEL : WT-1A
FCC ID : CGJWT01
POWER : AC120V/60Hz
Mode : Transmitting

REPORT NO : 23JE0023-YK-1
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2003/ 06/11
Temp./Humi. : 23°C/56%


ENGINEER : Ichiro Isozaki

CH	FREQ [GHz]	PM Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (1W) [dBm]	MARGIN [dB]
Low	2412.00	5.54	0.20	5.74	30.0	24.26
Mid	2437.00	4.97	0.20	5.17	30.0	24.83
High	2462.00	4.03	0.20	4.23	30.0	25.77

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/9/2003
 Test Distance : 3 m
 Temperature : 32 °C
 Humidity : 59 %
 Regulation : FCC Part15C § 15.209


 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER	HOR [dB]	VER		
1.	50.09	BB	22.5	28.5	11.3	28.5	1.8	6.0	13.1	19.1	40.0	26.9	20.9	
2.	367.98	BB	30.5	25.2	16.5	28.4	5.2	6.1	29.9	24.6	46.0	16.1	21.4	
3.	426.65	BB	26.8	32.0	17.6	28.7	5.7	6.1	27.5	32.7	46.0	18.5	13.3	
4.	540.03	BB	30.6	28.3	18.6	29.3	6.5	6.1	32.5	30.2	46.0	13.5	15.8	
5.	600.02	BB	32.5	31.6	19.4	29.6	7.0	6.1	35.4	34.5	46.0	10.6	11.5	
6.	768.00	BB	27.8	31.2	21.1	29.3	8.0	6.1	33.7	37.1	46.0	12.3	8.9	

CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KBA-03 (BBA9106) 30-299. 99MHz/KLA-01 (USLP9143) 300-1000MHz
 CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Midch:2437MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/9/2003
 Test Distance : 3 m
 Temperature : 32 °C
 Humidity : 59 %
 Regulation : FCC Part15C §15.209



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER	HOR [dB]	VER		
1.	50.09	BB	21.5	28.0	11.3	28.5	1.8	6.0	12.1	18.6	40.0	27.9	21.4	
2.	367.96	BB	30.4	25.3	16.5	28.4	5.2	6.1	29.8	24.7	46.0	16.2	21.3	
3.	426.67	BB	25.0	31.1	17.6	28.7	5.7	6.1	25.7	31.8	46.0	20.3	14.2	
4.	540.02	BB	30.5	28.7	18.6	29.3	6.5	6.1	32.4	30.6	46.0	13.6	15.4	
5.	600.03	BB	32.6	32.1	19.4	29.6	7.0	6.1	35.5	35.0	46.0	10.5	11.0	
6.	768.99	BB	27.5	32.6	21.1	29.3	8.0	6.1	33.4	38.5	46.0	12.6	7.5	

CALCULATION: READING [dB μ V] + ANT. FACTOR [dB/m] + CABLE LOSS [dB] - AMP. GAIN [dB] + ATTEN [dB].

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz
 CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Highch:2462MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/9/2003
 Test Distance : 3 m
 Temperature : 32 °C
 Humidity : 59 %
 Regulation : FCC Part15C § 15. 209



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER		HOR [dB]	VER
1.	50.09	BB	21.2	27.7	11.3	28.5	1.8	6.0	11.8	18.3	40.0	28.2	21.7
2.	367.95	BB	30.4	25.0	16.5	28.4	5.2	6.1	29.8	24.4	46.0	16.2	21.6
3.	426.67	BB	24.2	30.6	17.6	28.7	5.7	6.1	24.9	31.3	46.0	21.1	14.7
4.	540.03	BB	31.6	28.6	18.6	29.3	6.5	6.1	33.5	30.5	46.0	12.5	15.5
5.	600.01	BB	32.6	32.1	19.4	29.6	7.0	6.1	35.5	35.0	46.0	10.5	11.0
6.	768.00	BB	27.5	31.6	21.1	29.3	8.0	6.1	33.4	37.5	46.0	12.6	8.5


CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KBA-03 (BBA9106) 30-299. 99MHz/KLA-01 (USLP9143) 300-1000MHz
 CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/9/2003
 Test Distance : 3 m
 Temperature : 32 °C
 Humidity : 59 %
 Regulation : FCC Part15C § 15.209



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER [dB/m]					HOR [dB μ V/m]	VER [dB μ V/m]	HOR [dB]	VER [dB]		
1.	50.09	BB	21.9	26.4	11.3	28.5	1.8	6.0	12.5	17.0	40.0	27.5	23.0	
2.	367.98	BB	29.5	25.5	16.5	28.4	5.2	6.1	28.9	24.9	46.0	17.1	21.1	
3.	426.68	BB	26.1	30.7	17.6	28.7	5.7	6.1	26.8	31.4	46.0	19.2	14.6	
4.	540.03	BB	33.1	29.3	18.6	29.3	6.5	6.1	35.0	31.2	46.0	11.0	14.8	
5.	600.04	BB	32.4	30.2	19.4	29.6	7.0	6.1	35.3	33.1	46.0	10.7	12.9	
6.	768.00	BB	27.8	31.5	21.1	29.3	8.0	6.1	33.7	37.4	46.0	12.3	8.6	

CALCULATION: $READING[dB \mu V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB]$.

■ANTENNA: KBA-03 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

CABLE: KCC-10/11/12/13/18 ■PREAMP: KAF-01 (8447D) ■EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Midch:2437MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/9/2003
 Test Distance : 3 m
 Temperature : 32 °C
 Humidity : 59 %
 Regulation : FCC Part15C § 15.209



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER		HOR [dB]	VER
1.	50.09	BB	21.6	27.6	11.3	28.5	1.8	6.0	12.2	18.2	40.0	27.8	21.8
2.	367.99	BB	29.9	25.5	16.5	28.4	5.2	6.1	29.3	24.9	46.0	16.7	21.1
3.	426.67	BB	26.2	30.6	17.6	28.7	5.7	6.1	26.9	31.3	46.0	19.1	14.7
4.	540.03	BB	32.0	29.4	18.6	29.3	6.5	6.1	33.9	31.3	46.0	12.1	14.7
5.	600.02	BB	33.3	30.1	19.4	29.6	7.0	6.1	36.2	33.0	46.0	9.8	13.0
6.	767.99	BB	28.0	31.2	21.1	29.3	8.0	6.1	33.9	37.1	46.0	12.1	8.9

CALCULATION: $READING[dB \mu V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB]$.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz
 CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Highch: 2462MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/9/2003
 Test Distance : 3 m
 Temperature : 32 °C
 Humidity : 59 %
 Regulation : FCC Part15C §15.209



 Engineer : Toyokazu Imamura

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER		HOR [dB]	VER
1.	50.09	BB	23.7	26.6	11.3	28.5	1.8	6.0	14.3	17.2	40.0	25.7	22.8
2.	368.01	BB	30.0	25.9	16.5	28.4	5.2	6.1	29.4	25.3	46.0	16.6	20.7
3.	426.67	BB	28.4	31.2	17.6	28.7	5.7	6.1	29.1	31.9	46.0	16.9	14.1
4.	540.03	BB	30.4	31.5	18.6	29.3	6.5	6.1	32.3	33.4	46.0	13.7	12.6
5.	600.03	BB	31.9	29.9	19.4	29.6	7.0	6.1	34.8	32.8	46.0	11.2	13.2
6.	767.99	BB	28.2	30.7	21.1	29.3	8.0	6.1	34.1	36.6	46.0	11.9	9.4

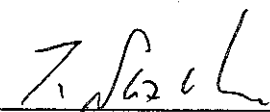
CALCULATION: $READING [dB \mu V] + ANT. FACTOR [dB/m] + CABLE LOSS [dB] - AMP. GAIN [dB] + ATTEN [dB]$.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz
 CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15.209 (AV Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER					HOR [dB μV/m]	VER		HOR [dB]	VER
1.	2081.75	BB	40.8	41.8	30.6	36.9	3.9	10.0	48.4	49.4	54.0	5.6	4.6
2.	2389.56	BB	33.9	33.6	30.6	36.9	4.1	10.0	41.7	41.4	54.0	12.3	12.6
3.	2390.00	BB	33.8	33.5	30.6	36.9	4.1	10.0	41.6	41.3	54.0	12.4	12.7
4.	4824.00	BB	31.3	31.5	34.7	35.2	5.6	0.6	37.0	37.2	54.0	17.0	16.8
5.	7236.00	BB	29.8	29.8	37.7	36.8	6.5	0.5	37.7	37.7	54.0	16.3	16.3
6.	9648.00	BB	28.8	28.8	39.0	36.9	7.2	0.5	38.6	38.6	54.0	15.4	15.4
7.	12060.00	BB	28.9	28.6	42.1	36.3	8.1	0.5	43.3	43.0	54.0	10.7	11.0
8.	14472.00	BB	28.3	28.5	41.2	35.2	7.3	0.2	41.8	42.0	54.0	12.2	12.0
9.	16884.00	BB	28.1	27.8	41.6	35.0	8.8	0.5	44.0	43.7	54.0	10.0	10.3
10.	19296.00	BB	26.5	26.6	39.1	34.7	9.4	0.0	40.3	40.4	54.0	13.7	13.6
11.	21708.00	BB	29.0	28.8	39.2	34.3	9.9	0.0	43.8	43.6	54.0	10.2	10.4
12.	24120.00	BB	27.8	27.7	40.3	35.5	10.9	0.0	43.5	43.4	54.0	10.5	10.6

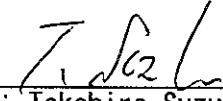
CALCULATION: READING[dB μV] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ AMP: KAF-02 (8447B) ■ RECEIVER: KTR-01 (ES140) ■ CABLE: KCC-D3/D7

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Midch:2437MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15.209 (AV Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER					HOR [dB μV/m]	VER		HOR [dB]	VER
1.	2106.80	BB	43.2	39.6	30.6	36.9	4.0	10.0	50.9	47.3	54.0	3.1	6.7
2.	4874.00	BB	31.5	31.4	35.0	35.2	5.6	0.6	37.5	37.4	54.0	16.5	16.6
3.	7311.00	BB	29.9	29.7	37.8	36.8	6.6	0.5	38.0	37.8	54.0	16.0	16.2
4.	9748.00	BB	28.7	28.7	39.0	37.0	7.2	0.6	38.5	38.5	54.0	15.5	15.5
5.	12185.00	BB	28.9	29.0	42.3	36.1	8.1	0.4	43.6	43.7	54.0	10.4	10.3
6.	14622.00	BB	28.2	28.0	41.7	35.2	7.7	0.3	42.7	42.5	54.0	11.3	11.5
7.	17059.00	BB	27.6	27.7	41.7	34.9	8.7	0.5	43.6	43.7	54.0	10.4	10.3
8.	19496.00	BB	26.8	26.7	39.0	34.7	9.5	0.0	40.6	40.5	54.0	13.4	13.5
9.	21933.00	BB	29.0	28.9	39.3	33.6	10.2	0.0	44.9	44.8	54.0	9.1	9.2
10.	24370.00	BB	27.4	27.5	40.4	36.3	10.8	0.0	42.3	42.4	54.0	11.7	11.6

CALCULATION: $READING [dB \mu V] + ANT. FACTOR [dB/m] + CABLE LOSS [dB] - AMP. GAIN [dB] + ATTEN [dB]$.

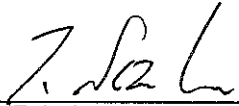
■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Highch:2462MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15. 209(AV Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER					HOR [dB μV/m]	VER		HOR [dB]	VER
1.	2131.80	BB	43.3	43.2	30.6	36.9	4.0	10.0	51.0	50.9	54.0	3.0	3.1
2.	2483.50	BB	36.7	36.4	30.6	36.9	4.1	10.0	44.5	44.2	54.0	9.5	9.8
3.	4924.00	BB	31.6	31.4	35.3	35.2	5.6	0.5	37.8	37.6	54.0	16.2	16.4
4.	7386.00	BB	29.3	29.5	37.9	36.9	6.6	0.5	37.4	37.6	54.0	16.6	16.4
5.	9848.00	BB	28.7	28.7	39.0	37.0	7.2	0.7	38.6	38.6	54.0	15.4	15.4
6.	12310.00	BB	28.9	28.6	42.5	35.9	8.1	0.4	44.0	43.7	54.0	10.0	10.3
7.	14772.00	BB	28.5	28.4	42.2	35.1	8.1	0.4	44.1	44.0	54.0	9.9	10.0
8.	17234.00	BB	27.7	27.7	42.3	34.8	8.5	0.6	44.3	44.3	54.0	9.7	9.7
9.	19696.00	BB	26.3	26.4	39.5	35.0	9.6	0.0	40.4	40.5	54.0	13.6	13.5
10.	22158.00	BB	28.1	29.0	39.2	33.7	10.3	0.0	43.9	44.8	54.0	10.1	9.2
11.	24620.00	BB	27.5	27.6	40.4	36.0	10.9	0.0	42.8	42.9	54.0	11.2	11.1

CALCULATION: $READING[dB \mu V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB]$.

- ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
- CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting(Lowch:2412MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15.209(PK Detection)

T. Suzuki

 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER		HOR [dB]	VER
1.	2081.75	BB	49.1	49.6	30.6	36.9	3.9	10.0	56.7	57.2	74.0	17.3	16.8
2.	2389.56	BB	48.6	44.6	30.6	36.9	4.1	10.0	56.4	52.4	74.0	17.6	21.6
3.	2390.00	BB	44.5	43.7	30.6	36.9	4.1	10.0	52.3	51.5	74.0	21.7	22.5
4.	4824.00	BB	44.0	44.4	34.7	35.2	5.6	0.6	49.7	50.1	74.0	24.3	23.9
5.	7236.00	BB	42.7	42.3	37.7	36.8	6.5	0.5	50.6	50.2	74.0	23.4	23.8
6.	9648.00	BB	42.6	41.3	39.0	36.9	7.2	0.5	52.4	51.1	74.0	21.6	22.9
7.	12060.00	BB	42.4	41.6	42.1	36.3	8.1	0.5	56.8	56.0	74.0	17.2	18.0
8.	14472.00	BB	40.9	41.2	41.2	35.2	7.3	0.2	54.4	54.7	74.0	19.6	19.3
9.	16884.00	BB	40.8	41.6	41.6	35.0	8.8	0.5	56.7	57.5	74.0	17.3	16.5
10.	19296.00	BB	40.0	39.7	39.1	34.7	9.4	0.0	53.8	53.5	74.0	20.2	20.5
11.	21708.00	BB	42.1	42.4	39.2	34.3	9.9	0.0	56.9	57.2	74.0	17.1	16.8
12.	24120.00	BB	40.8	40.6	40.3	35.5	10.9	0.0	56.5	56.3	74.0	17.5	17.7


CALCULATION: $READING[dB \mu V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB]$.

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ AMP: KAF-02 (8447B) ■ RECEIVER: KTR-01 (ES140) ■ CABLE: KCC-D3/D7

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Midch:2437MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15. 209 (PK Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER		HOR [dB]	VER
1.	2106.80	BB	49.6	48.9	30.6	36.9	4.0	10.0	57.3	56.6	74.0	16.7	17.4
2.	4874.00	BB	44.4	44.2	35.0	35.2	5.6	0.6	50.4	50.2	74.0	23.6	23.8
3.	7311.00	BB	42.8	42.4	37.8	36.8	6.6	0.5	50.9	50.5	74.0	23.1	23.5
4.	9748.00	BB	42.5	41.8	39.0	37.0	7.2	0.6	52.3	51.6	74.0	21.7	22.4
5.	12185.00	BB	42.3	41.9	42.3	36.1	8.1	0.4	57.0	56.6	74.0	17.0	17.4
6.	14622.00	BB	40.9	41.0	41.7	35.2	7.7	0.3	55.4	55.5	74.0	18.6	18.5
7.	17059.00	BB	40.7	41.7	41.7	34.9	8.7	0.5	56.7	57.7	74.0	17.3	16.3
8.	19496.00	BB	39.4	39.5	39.0	34.7	9.5	0.0	53.2	53.3	74.0	20.8	20.7
9.	21933.00	BB	42.3	42.1	39.3	33.6	10.2	0.0	58.2	58.0	74.0	15.8	16.0
10.	24370.00	BB	40.5	40.7	40.4	36.3	10.8	0.0	55.4	55.6	74.0	18.6	18.4

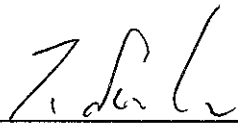
CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Highch:2462MHz)
 Remarks : Antenna model : WA-S1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15. 209 (PK Detection)



 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]	HOR [dB]	VER [dB]		
1.	2131.80	BB	50.8	49.7	30.6	36.9	4.0	10.0	58.5	57.4	74.0	15.5	16.6	
2.	2483.50	BB	49.0	48.0	30.6	36.9	4.1	10.0	56.8	55.8	74.0	17.2	18.2	
3.	4924.00	BB	44.3	44.1	35.3	35.2	5.6	0.5	50.5	50.3	74.0	23.5	23.7	
4.	7386.00	BB	42.8	42.2	37.9	36.9	6.6	0.5	50.9	50.3	74.0	23.1	23.7	
5.	9848.00	BB	42.4	41.8	39.0	37.0	7.2	0.7	52.3	51.7	74.0	21.7	22.3	
6.	12310.00	BB	42.5	42.1	42.5	35.9	8.1	0.4	57.6	57.2	74.0	16.4	16.8	
7.	14772.00	BB	41.3	41.0	42.2	35.1	8.1	0.4	56.9	56.6	74.0	17.1	17.4	
8.	17234.00	BB	40.3	41.5	42.3	34.8	8.5	0.6	56.9	58.1	74.0	17.1	15.9	
9.	19696.00	BB	39.5	39.8	39.5	35.0	9.6	0.0	53.6	53.9	74.0	20.4	20.1	
10.	22158.00	BB	42.1	42.5	39.2	33.7	10.3	0.0	57.9	58.3	74.0	16.1	15.7	
11.	24620.00	BB	40.7	40.8	40.4	36.0	10.9	0.0	56.0	56.1	74.0	18.0	17.9	

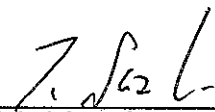
CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Lowch:2412MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15.209 (AV Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]	HOR [dB]	VER [dB]		
1.	2082.00	BB	39.2	42.0	30.6	36.9	3.9	10.0	46.8	49.6	54.0	7.2	4.4	
2.	2389.10	BB	33.9	34.1	30.6	36.9	4.1	10.0	41.7	41.9	54.0	12.3	12.1	
3.	2390.00	BB	34.0	33.9	30.6	36.9	4.1	10.0	41.8	41.7	54.0	12.2	12.3	
4.	4824.00	BB	31.4	31.6	34.7	35.2	5.6	0.6	37.1	37.3	54.0	16.9	16.7	
5.	7236.00	BB	29.7	29.9	37.7	36.8	6.5	0.5	37.6	37.8	54.0	16.4	16.2	
6.	9648.00	BB	28.7	28.8	39.0	36.9	7.2	0.5	38.5	38.6	54.0	15.5	15.4	
7.	12060.00	BB	28.8	28.4	42.1	36.3	8.1	0.5	43.2	42.8	54.0	10.8	11.2	
8.	14472.00	BB	28.2	28.4	41.2	35.2	7.3	0.2	41.7	41.9	54.0	12.3	12.1	
9.	16884.00	BB	28.0	27.6	41.6	35.0	8.8	0.5	43.9	43.5	54.0	10.1	10.5	
10.	19296.00	BB	26.4	26.5	39.1	34.7	9.4	0.0	40.2	40.3	54.0	13.8	13.7	
11.	21708.00	BB	29.0	28.6	39.2	34.3	9.9	0.0	43.8	43.4	54.0	10.2	10.6	
12.	24120.00	BB	27.7	27.6	40.3	35.5	10.9	0.0	43.4	43.3	54.0	10.6	10.7	


CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ AMP: KAF-02 (8447B) ■ RECEIVER: KTR-01 (ES140) ■ CABLE: KCC-D3/D7

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Midch:2437MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15. 209 (AV Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER					HOR [dB μV/m]	VER		HOR [dB]	VER
1.	2106.80	BB	41.1	41.7	30.6	36.9	4.0	10.0	48.8	49.4	54.0	5.2	4.6
2.	4874.00	BB	31.4	31.4	35.0	35.2	5.6	0.6	37.4	37.4	54.0	16.6	16.6
3.	7311.00	BB	29.8	29.8	37.8	36.8	6.6	0.5	37.9	37.9	54.0	16.1	16.1
4.	6748.00	BB	28.8	28.8	37.4	36.6	6.3	0.3	36.2	36.2	54.0	17.8	17.8
5.	12185.00	BB	28.8	28.9	42.3	36.1	8.1	0.4	43.5	43.6	54.0	10.5	10.4
6.	14622.00	BB	28.1	28.2	41.7	35.2	7.7	0.3	42.6	42.7	54.0	11.4	11.3
7.	17059.00	BB	27.9	27.9	41.7	34.9	8.7	0.5	43.9	43.9	54.0	10.1	10.1
8.	19496.00	BB	26.9	26.8	39.0	34.7	9.5	0.0	40.7	40.6	54.0	13.3	13.4
9.	21933.00	BB	29.1	29.1	39.3	33.6	10.2	0.0	45.0	45.0	54.0	9.0	9.0
10.	24370.00	BB	27.5	27.5	40.4	36.3	10.8	0.0	42.4	42.4	54.0	11.6	11.6

CALCULATION: $READING [dB \mu V] + ANT. FACTOR [dB/m] + CABLE LOSS [dB] - AMP. GAIN [dB] + ATTEN [dB]$.

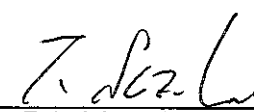
■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Highch:2462MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C §15.209 (AV Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER					HOR [dB μV/m]	VER		HOR [dB]	VER
1.	2131.64	BB	38.2	43.2	30.6	36.9	4.0	10.0	45.9	50.9	54.0	8.1	3.1
2.	2483.50	BB	36.2	36.5	30.6	36.9	4.1	10.0	44.0	44.3	54.0	10.0	9.7
3.	4924.00	BB	31.8	31.5	35.3	35.2	5.6	0.5	38.0	37.7	54.0	16.0	16.3
4.	7386.00	BB	29.4	29.6	37.9	36.9	6.6	0.5	37.5	37.7	54.0	16.5	16.3
5.	9848.00	BB	28.6	28.9	39.0	37.0	7.2	0.7	38.5	38.8	54.0	15.5	15.2
6.	12310.00	BB	28.7	28.4	42.5	35.9	8.1	0.4	43.8	43.5	54.0	10.2	10.5
7.	14772.00	BB	28.4	28.2	42.2	35.1	8.1	0.4	44.0	43.8	54.0	10.0	10.2
8.	17234.00	BB	27.6	27.8	42.3	34.8	8.5	0.6	44.2	44.4	54.0	9.8	9.6
9.	19696.00	BB	26.5	26.8	39.5	35.0	9.6	0.0	40.6	40.9	54.0	13.4	13.1
10.	22158.00	BB	29.0	29.2	39.2	33.7	10.3	0.0	44.8	45.0	54.0	9.2	9.0
11.	24620.00	BB	27.6	27.7	40.4	36.0	10.9	0.0	42.9	43.0	54.0	11.1	11.0

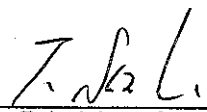
CALCULATION: READING [dB μV] + ANT. FACTOR [dB/m] + CABLE LOSS [dB] - AMP. GAIN [dB] + ATTEN [dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting(Lowch:2412MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15.209(PK Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]	HOR [dB]	VER [dB]		
1.	2082.00	BB	49.0	50.0	30.6	36.9	3.9	10.0	56.6	57.6	74.0	17.4	16.4	
2.	2389.10	BB	53.2	52.9	30.6	36.9	4.1	10.0	61.0	60.7	74.0	13.0	13.3	
3.	2390.00	BB	44.7	44.5	30.6	36.9	4.1	10.0	52.5	52.3	74.0	21.5	21.7	
4.	4824.00	BB	44.2	44.2	34.7	35.2	5.6	0.6	49.9	49.9	74.0	24.1	24.1	
5.	7236.00	BB	42.8	42.5	37.7	36.8	6.5	0.5	50.7	50.4	74.0	23.3	23.6	
6.	9648.00	BB	42.4	41.6	39.0	36.9	7.2	0.5	52.2	51.4	74.0	21.8	22.6	
7.	12060.00	BB	42.7	41.5	42.1	36.3	8.1	0.5	57.1	55.9	74.0	16.9	18.1	
8.	14472.00	BB	41.0	40.8	41.2	35.2	7.3	0.2	54.5	54.3	74.0	19.5	19.7	
9.	16884.00	BB	40.6	41.4	41.6	35.0	8.8	0.5	56.5	57.3	74.0	17.5	16.7	
10.	19296.00	BB	39.7	39.3	39.1	34.7	9.4	0.0	53.5	53.1	74.0	20.5	20.9	
11.	21708.00	BB	42.0	42.3	39.2	34.3	9.9	0.0	56.8	57.1	74.0	17.2	16.9	
12.	24120.00	BB	40.6	40.4	40.3	35.5	10.9	0.0	56.3	56.1	74.0	17.7	17.9	

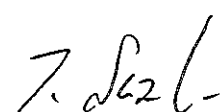
CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ AMP: KAF-02 (8447B) ■ RECEIVER: KTR-01 (ES140) ■ CABLE: KCC-D3/D7

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Midch:2437MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C §15.209(PK Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μV]	VER					HOR [dB μV/m]	VER	HOR [dB]	VER		
1.	2106.80	BB	49.3	49.6	30.6	36.9	4.0	10.0	57.0	57.3	74.0	17.0	16.7	
2.	4874.00	BB	44.3	44.1	35.0	35.2	5.6	0.6	50.3	50.1	74.0	23.7	23.9	
3.	7311.00	BB	42.6	42.3	37.8	36.8	6.6	0.5	50.7	50.4	74.0	23.3	23.6	
4.	9748.00	BB	42.4	41.7	39.0	37.0	7.2	0.6	52.2	51.5	74.0	21.8	22.5	
5.	12185.00	BB	42.2	41.8	42.3	36.1	8.1	0.4	56.9	56.5	74.0	17.1	17.5	
6.	14622.00	BB	40.8	40.8	41.7	35.2	7.7	0.3	55.3	55.3	74.0	18.7	18.7	
7.	17059.00	BB	40.5	41.8	41.7	34.9	8.7	0.5	56.5	57.8	74.0	17.5	16.2	
8.	19496.00	BB	39.3	39.3	39.0	34.7	9.5	0.0	53.1	53.1	74.0	20.9	20.9	
9.	21933.00	BB	42.2	42.2	39.3	33.6	10.2	0.0	58.1	58.1	74.0	15.9	15.9	
10.	24370.00	BB	40.4	40.8	40.4	36.3	10.8	0.0	55.3	55.7	74.0	18.7	18.3	

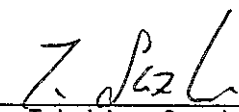
CALCULATION: READING[dB μV] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site
Report No. : 23JE0023-YK-1

Applicant : NIKON CORPORATION
 Kind of Equipment : Wireless LAN Transmitter
 Model No. : WT-1A
 Serial No. : No. 2
 Power : AC120V/60Hz
 Mode : Transmitting (Highch:2462MHz)
 Remarks : Antenna model : WA-E1
 Date : 6/2/2003
 Test Distance : 3 m
 Temperature : 28 °C
 Humidity : 37 %
 Regulation : FCC Part15C § 15.209(PK Detection)


 Engineer : Takahiro Suzuki

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
			HOR [dB μ V]	VER					HOR [dB μ V/m]	VER	HOR [dB]	VER		
1.	2131.64	BB	48.2	51.2	30.6	36.9	4.0	10.0	55.9	58.9	74.0	18.1	15.1	
2.	2483.50	BB	48.1	50.4	30.6	36.9	4.1	10.0	55.9	58.2	74.0	18.1	15.8	
3.	4924.00	BB	44.5	44.0	35.3	35.2	5.6	0.5	50.7	50.2	74.0	23.3	23.8	
4.	7386.00	BB	42.7	42.1	37.9	36.9	6.6	0.5	50.8	50.2	74.0	23.2	23.8	
5.	9848.00	BB	42.3	41.6	39.0	37.0	7.2	0.7	52.2	51.5	74.0	21.8	22.5	
6.	12310.00	BB	42.4	42.0	42.5	35.9	8.1	0.4	57.5	57.1	74.0	16.5	16.9	
7.	14772.00	BB	41.1	41.0	42.2	35.1	8.1	0.4	56.7	56.6	74.0	17.3	17.4	
8.	17234.00	BB	40.2	41.4	42.3	34.8	8.5	0.6	56.8	58.0	74.0	17.2	16.0	
9.	19696.00	BB	39.4	39.6	39.5	35.0	9.6	0.0	53.5	53.7	74.0	20.5	20.3	
10.	22158.00	BB	42.0	42.4	39.2	33.7	10.3	0.0	57.8	58.2	74.0	16.2	15.8	
11.	24620.00	BB	40.6	40.7	40.4	36.0	10.9	0.0	55.9	56.0	74.0	18.1	18.0	

CALCULATION: READING[dB μ V] + ANT. FACTOR[dB/m] + CABLE LOSS[dB] - AMP. GAIN[dB] + ATTEN[dB].

■ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
 ■CABLE: KCC-D3/D7 ■PREAMP: KAF-02 (8449B) ■EMI RECEIVER: KTR-01 (ES140)

Restricted band edges: FCC 15.247(c)

Antenna type: WA-S1

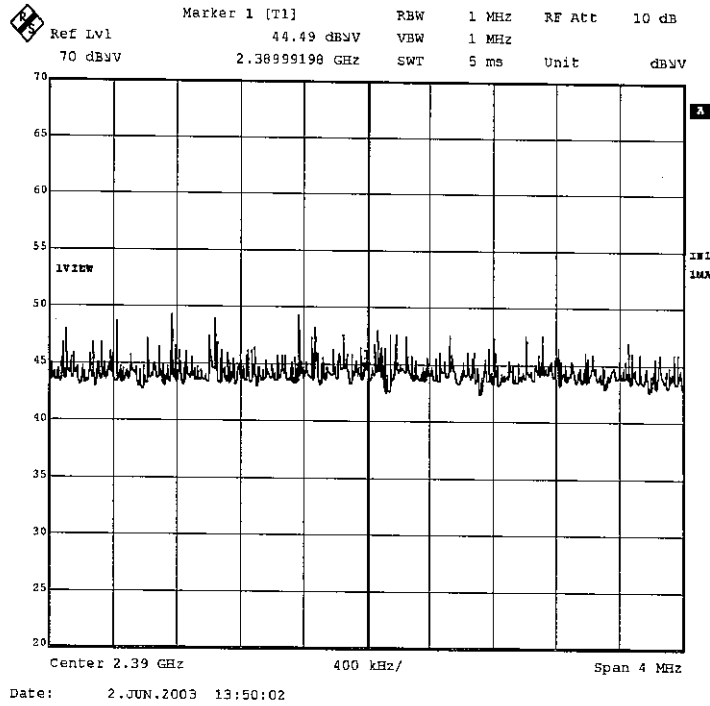
2.39GHz (Ch 1:2412MHz)

1. Horizontal/ PK

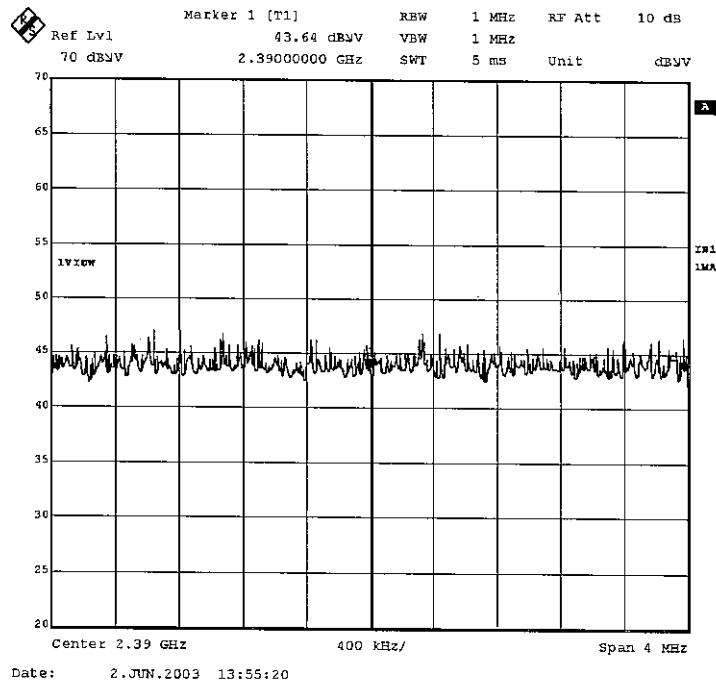
FCC ID: CGJW01

Job No: 23JE0023-YK-1

T. Seal

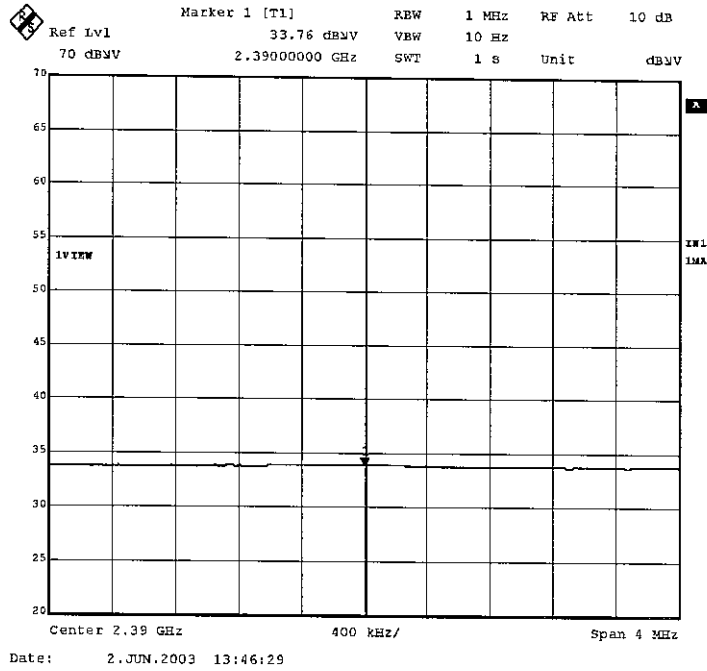


2. Vertical/ PK

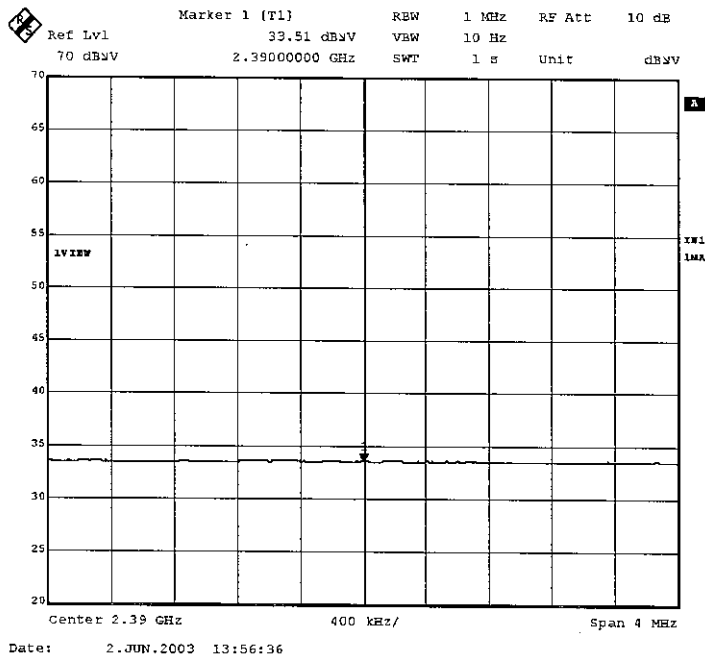


T. S. L.

3. Horizontal/AV



4. Vertical/AV



Restricted band edges: FCC 15.247(c)

Antenna type: WA-S1

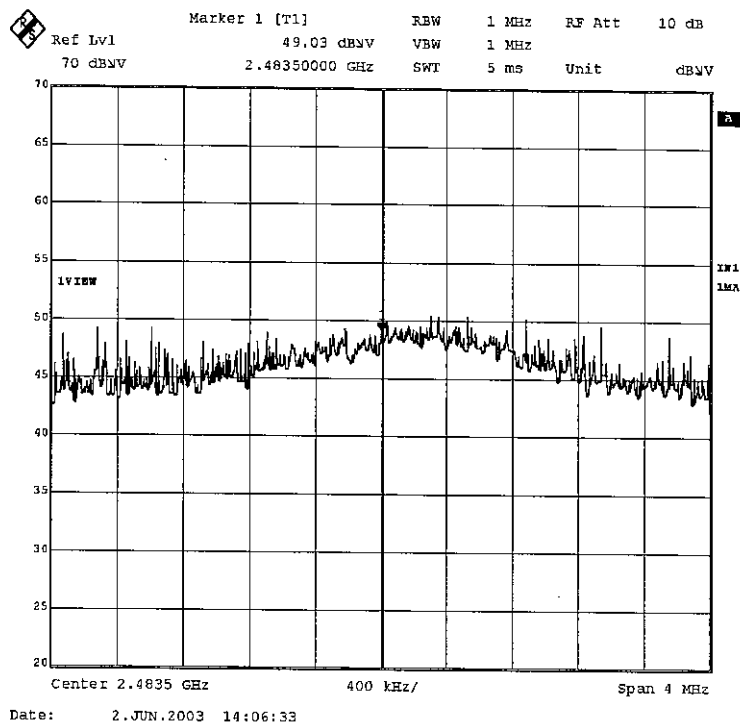
2.4835GHz (Ch 11:2462MHz)

1. Horizontal/PK

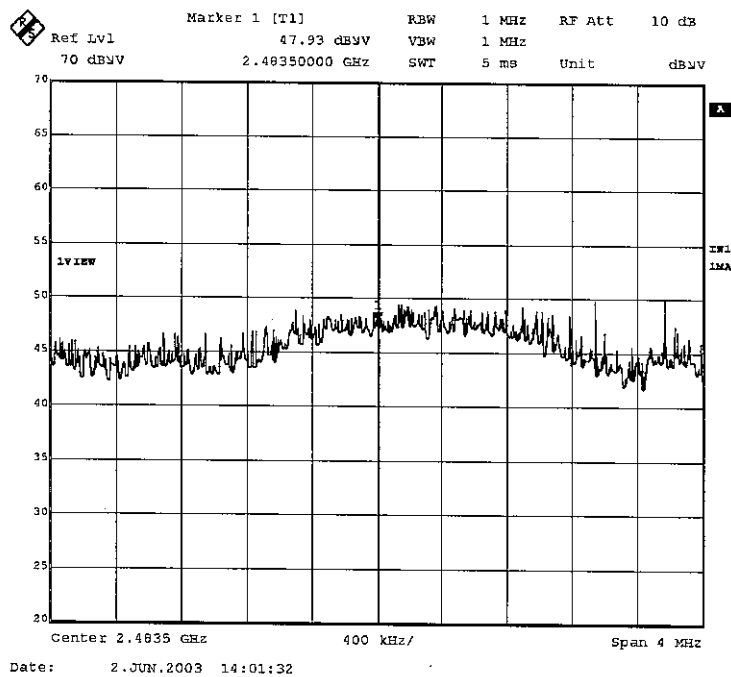
FCC ID: CGJW01

Job No: 23JE0023-YK-1

T. Szulc

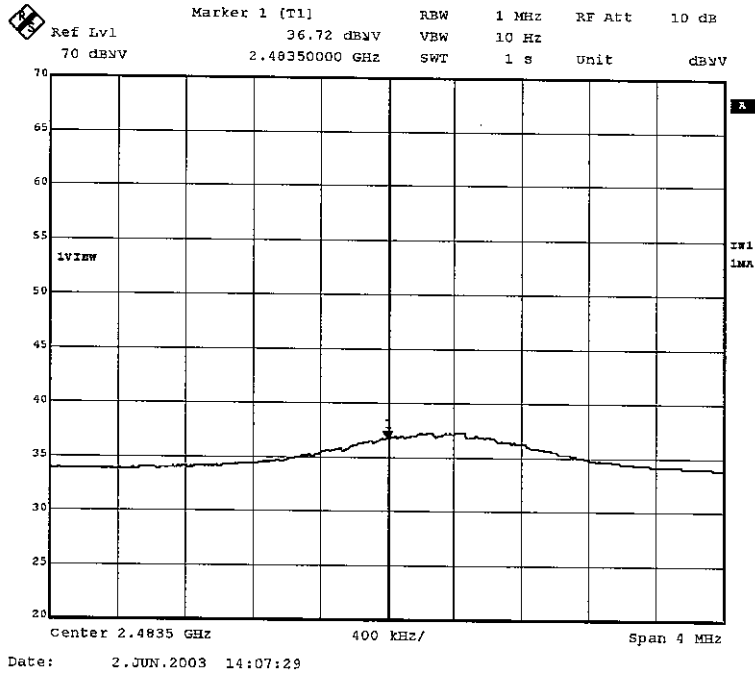


2. Vertical/PK

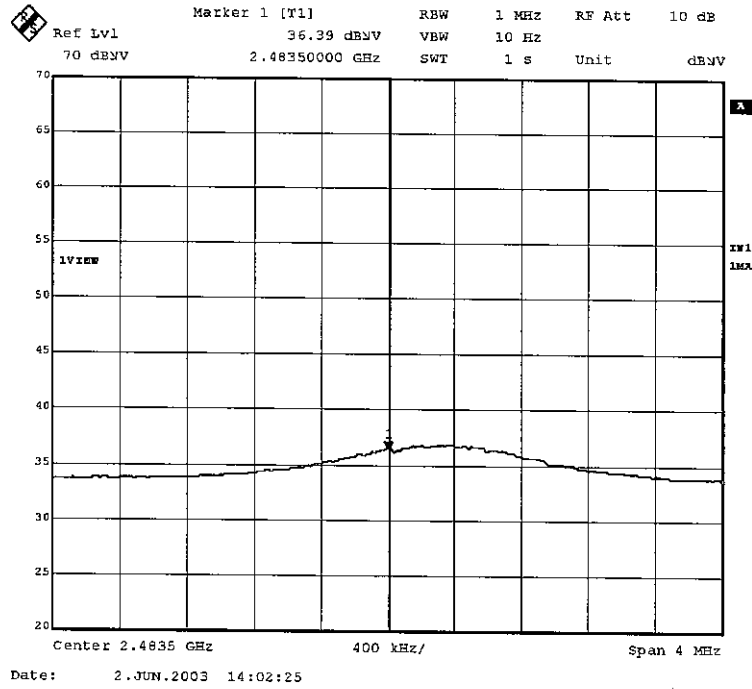


T. Lee

3. Horizontal/AV



4. Vertical/AV



Restricted band edges: FCC 15.247(c)

Antenna type: WA-E1

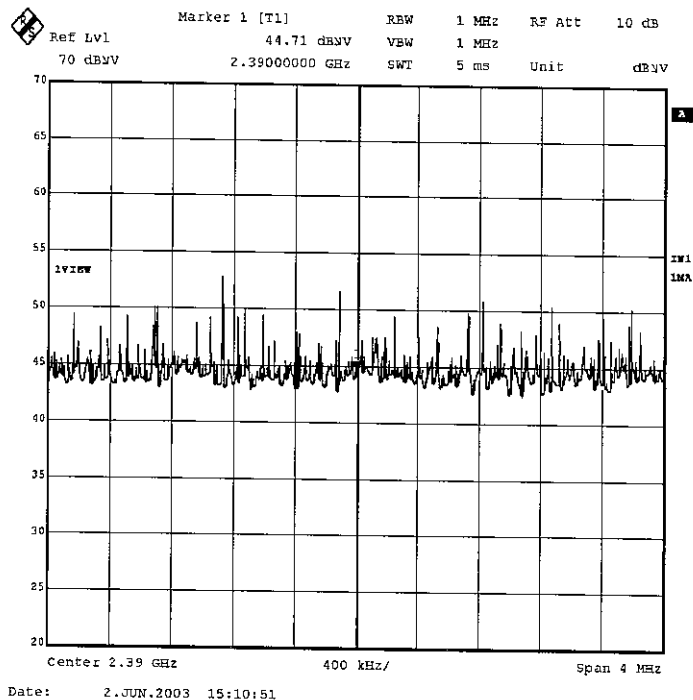
2.39GHz (Ch 1:2412MHz)

1. Horizontal/PK

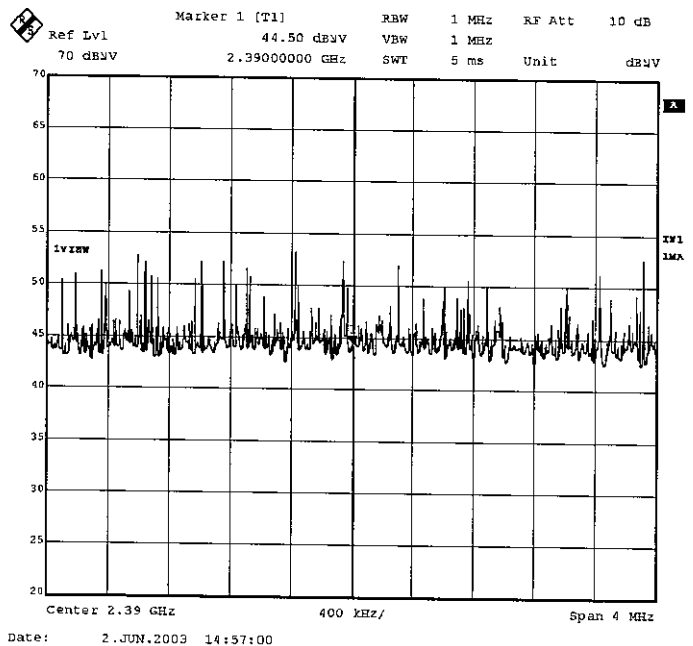
FCC ID: CGJW01

Job No: 23JE0023-YK-1

T. Szolc

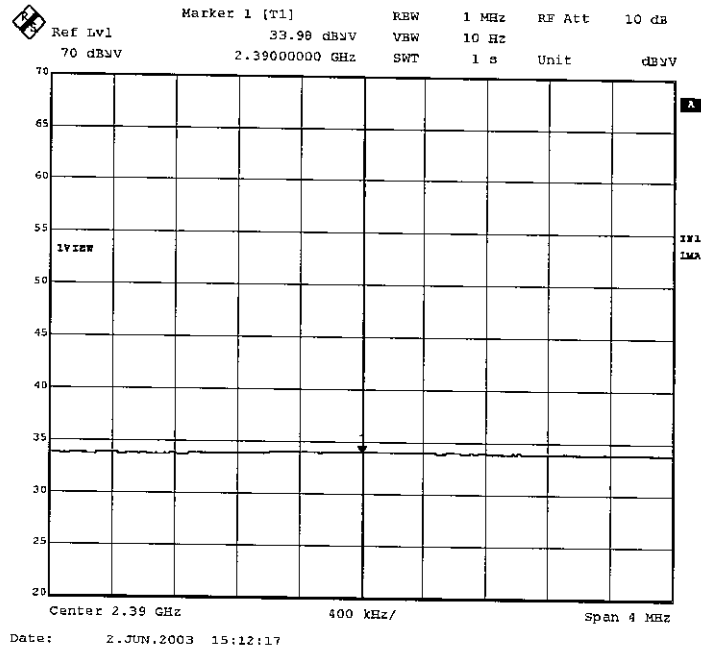


2. Vertical/PK

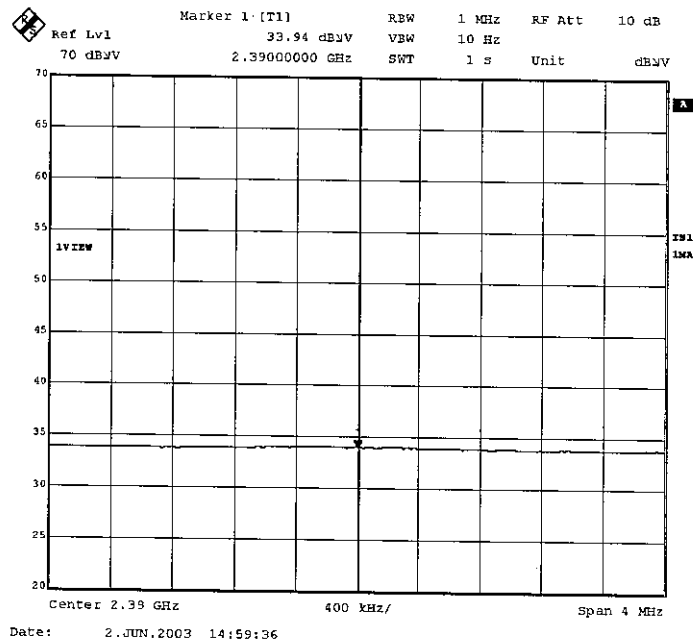


3. Horizontal/AV

T. S. 2006



4. Vertical/AV



Restricted band edges: FCC 15.247(c)

Antenna type: WA-E1

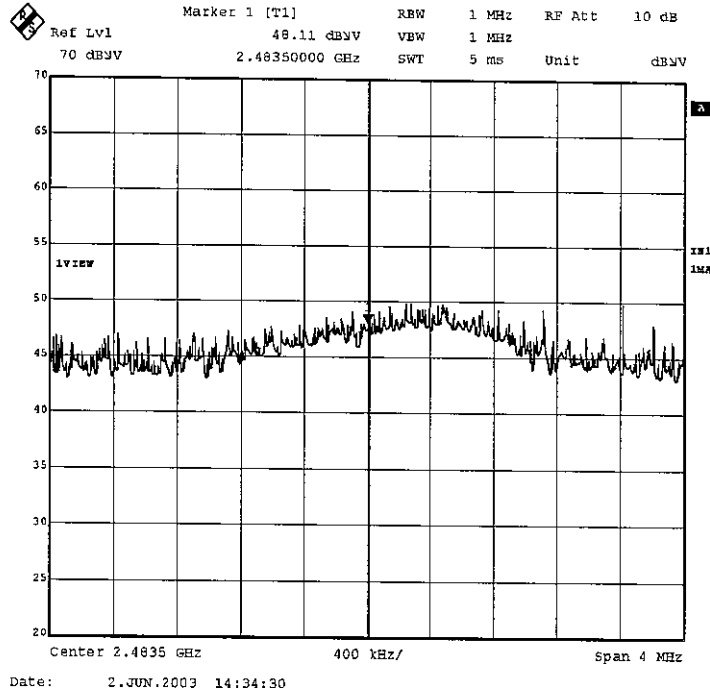
2.4835GHz (Ch 11:2462MHz)

1. Horizontal/PK

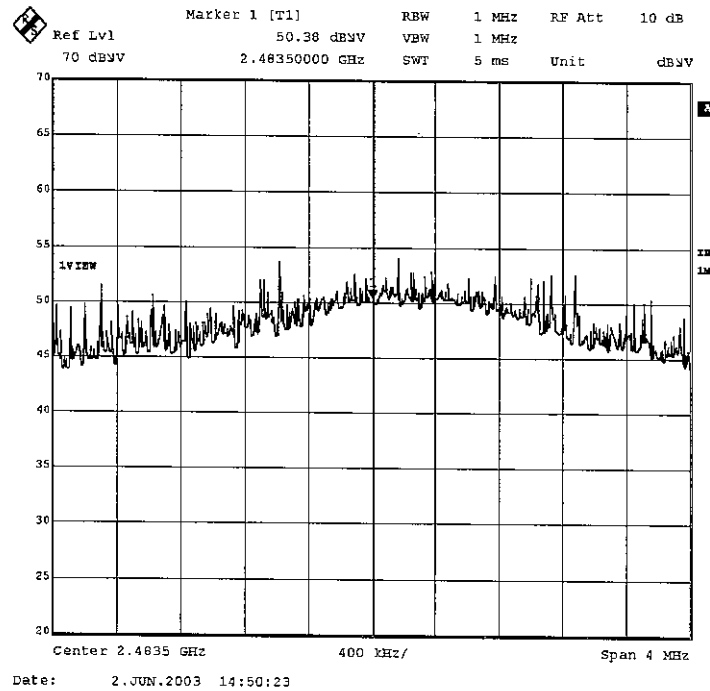
FCC ID: CGJWT01

Job No: 23JE0023-YK-1

T. Seal

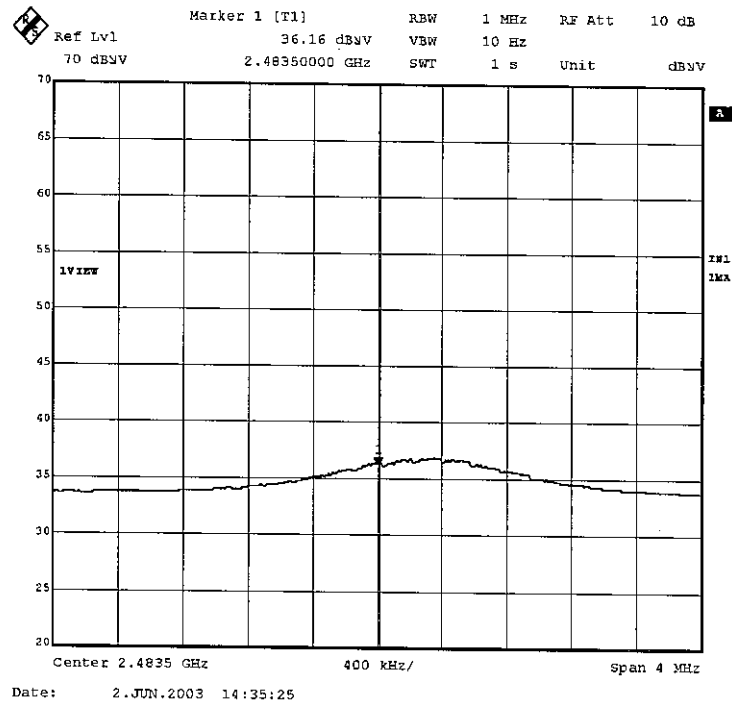


2. Vertical/PK

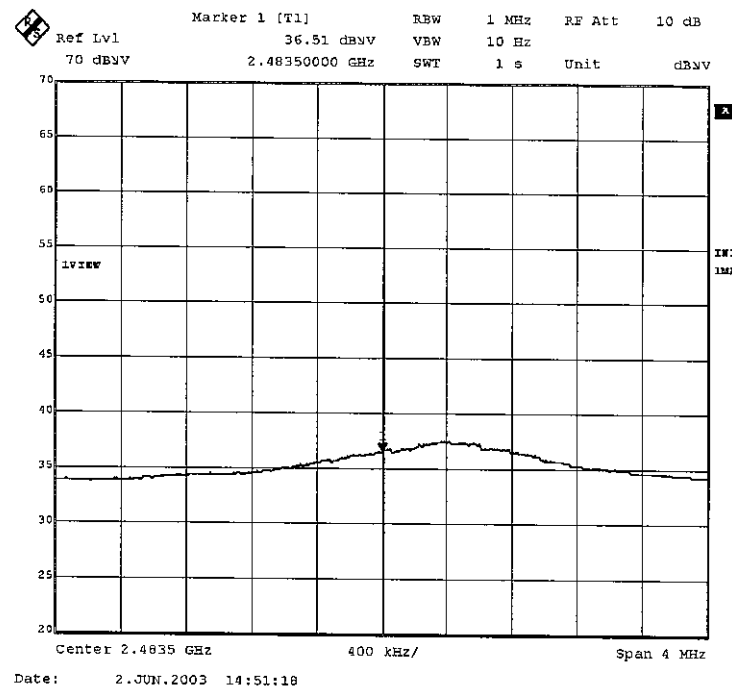


3. Horizontal/AV

T. Szal



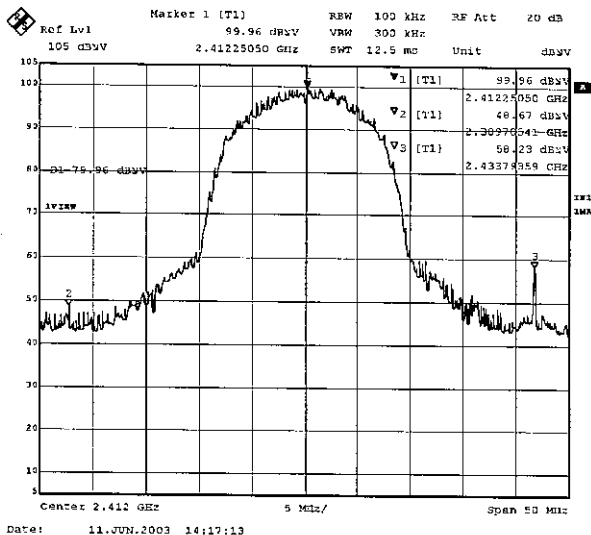
4. Vertical/AV



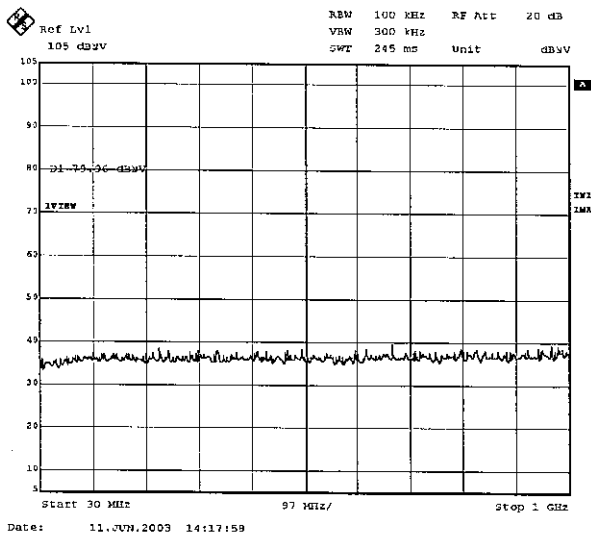
Ch 1: 2412MHz

1.

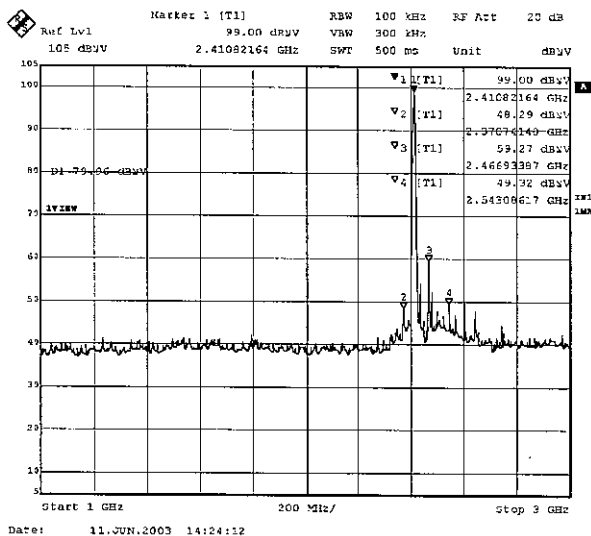
U. Suzuki



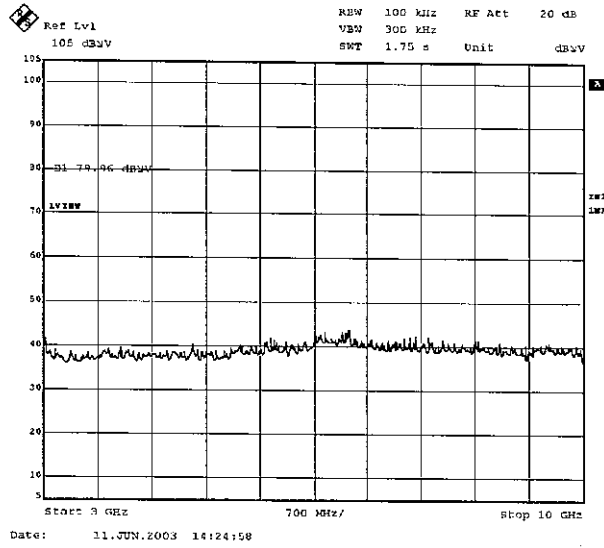
2.



3.

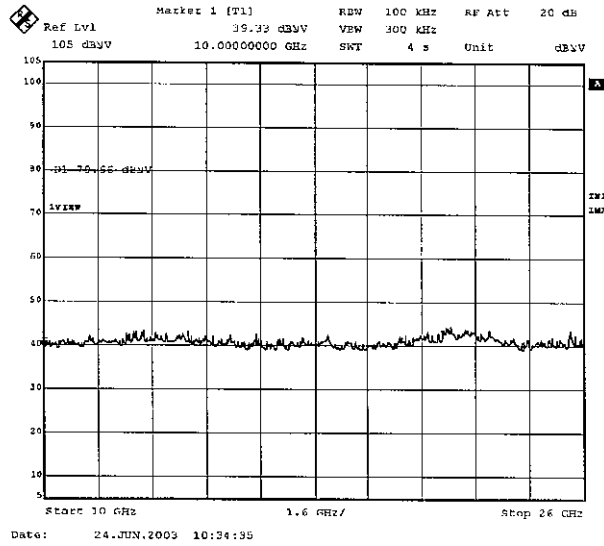


4.



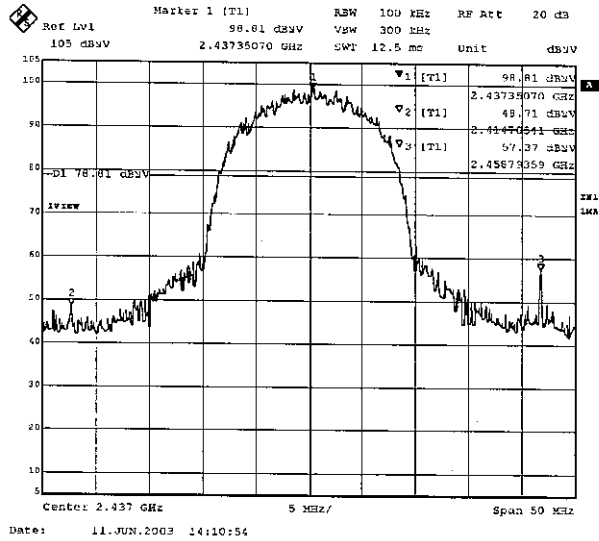
U. Suzuki

5.



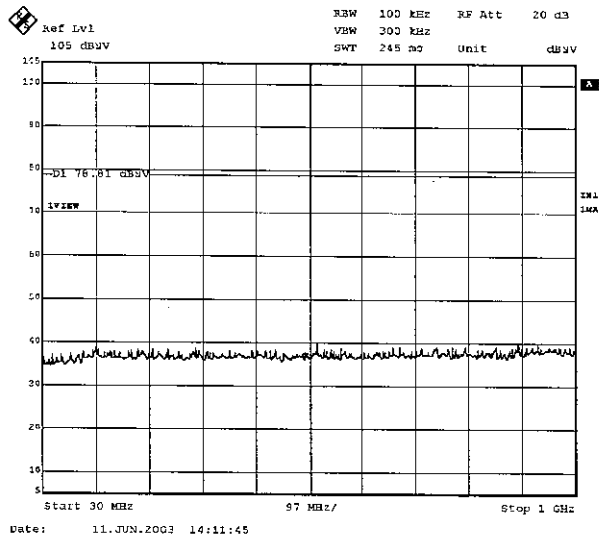
Ch 6: 2437MHz

1.

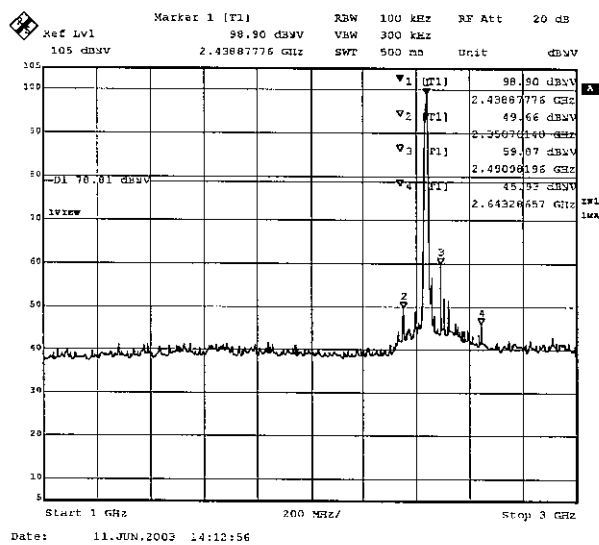


U. Szorki

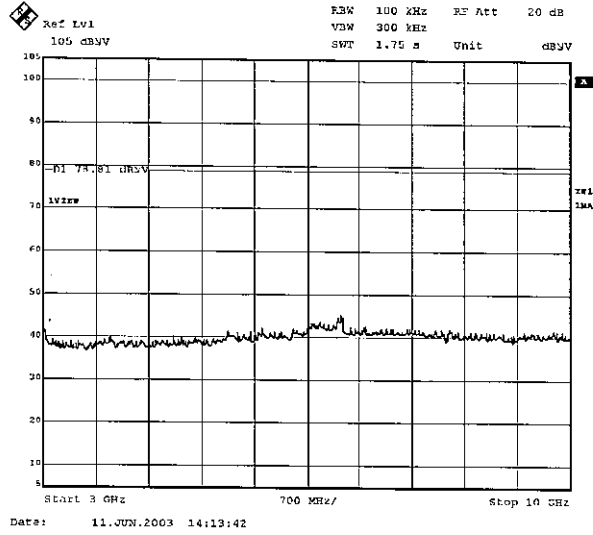
2.



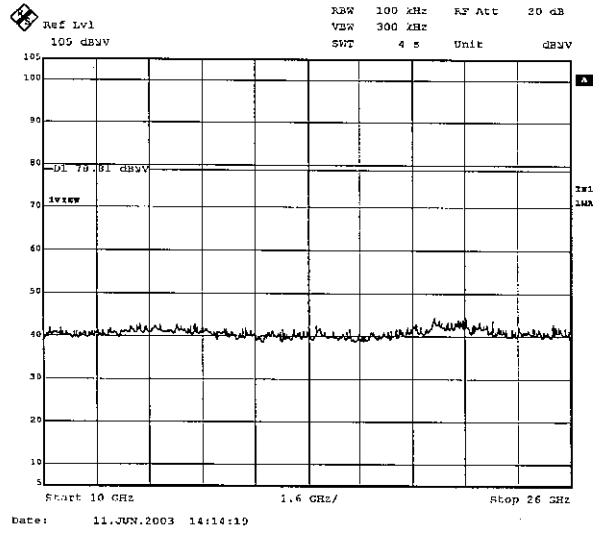
3.



4.



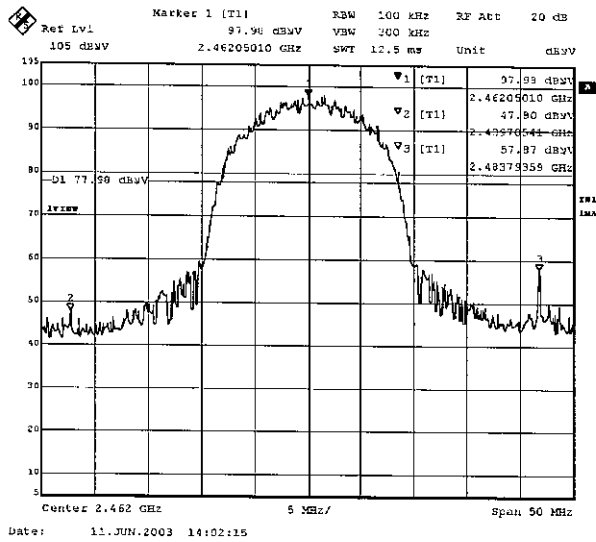
5.



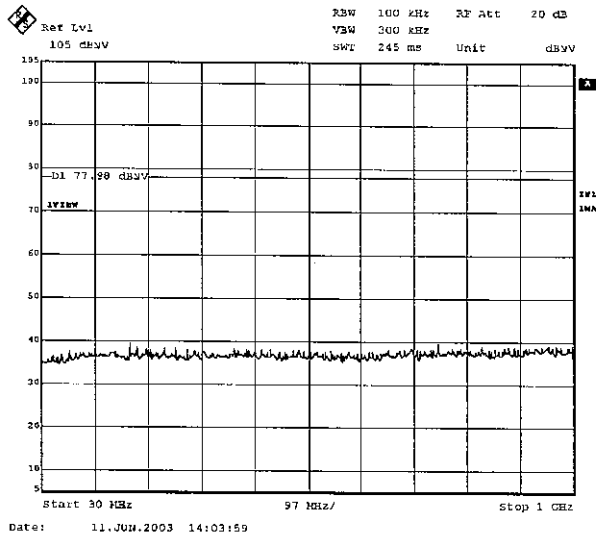
Ch 11: 2462MHz

1.

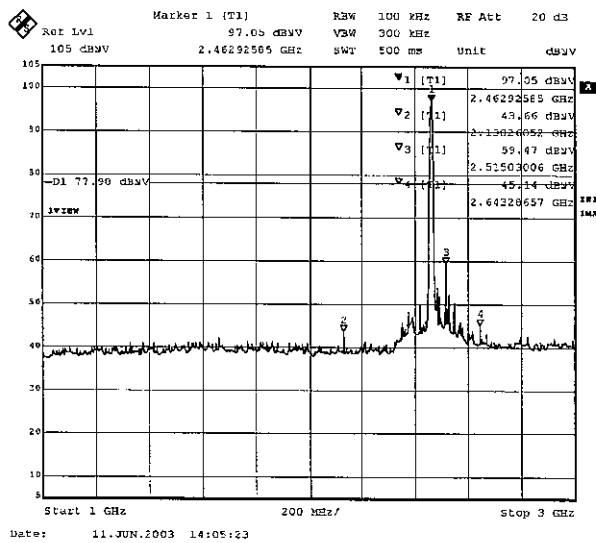
U. Suzuki



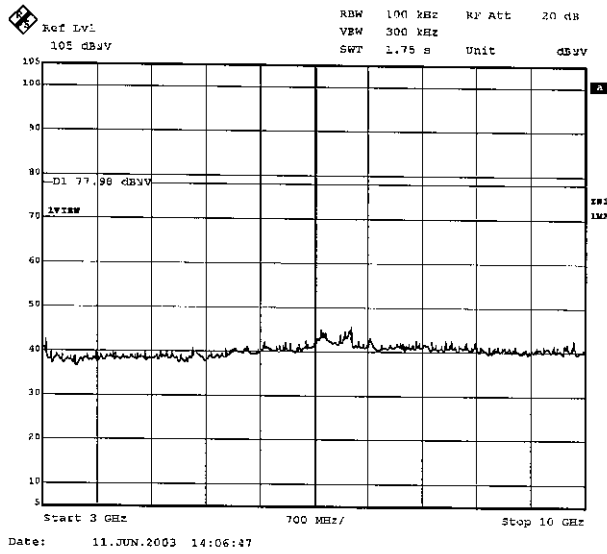
2.



3.

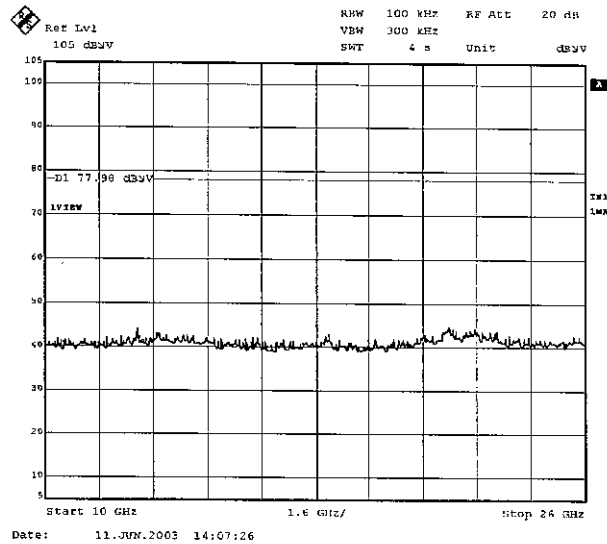


4.



J. Suzuki

5.

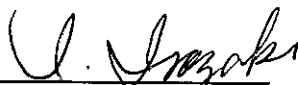


Power Density(Conducted)

UL Apex Co., Ltd.
YAMAKITA EMC NO.1 OPEN SITE

COMPANY : NIKON CORPORATION
EQUIPMENT : Wireless LAN Transmitter
MODEL : WT-1A
FCC ID : CGJWT01
POWER : AC120V/60Hz
Mode : Transmitting

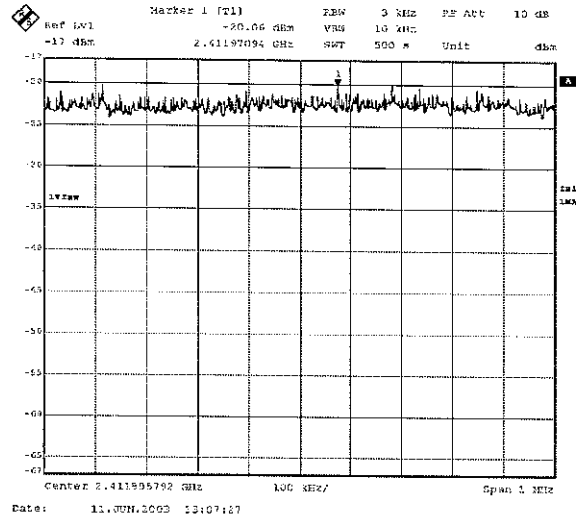
REPORT NO : 23JE0023-YK-1
REGULATION : Fcc Part15SubpartC 247(d)
DATE : 2003/06/11
Temp./Humi. : 23°C/56%


ENGINEER : Ichiro Isozaki

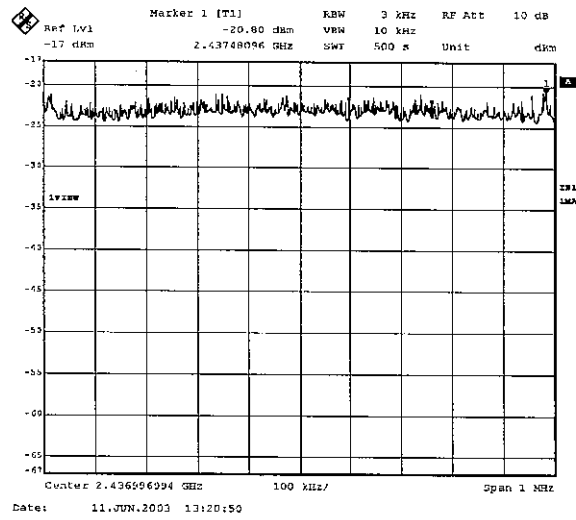
CH	FREQ [GHz]	S/A Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit [dBm]	MARGIN [dB]
Low	2.411971	-20.60	0.7	-19.9	8.0	27.9
Mid	2.437481	-20.80	0.7	-20.1	8.0	28.1
High	2.462109	-21.79	0.7	-21.09	8.0	29.1

1. ch 1: 2412MHz

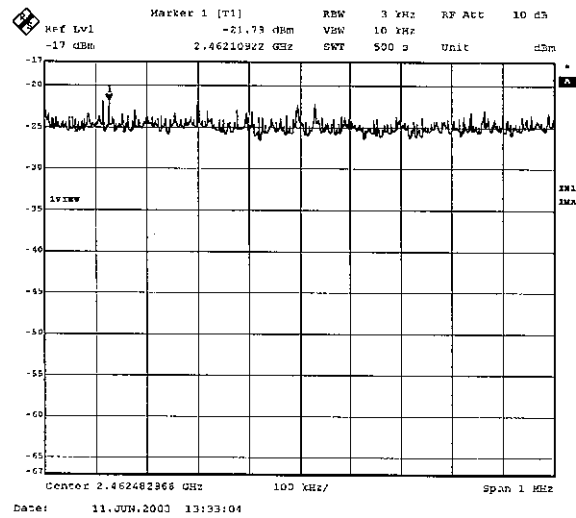
U. Izaki



2. ch 6: 2437MHz



3. ch 11: 2462MHz



Test Report No : 23JE0023-YK-1

APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No.	Test Item	Calibration Date * Interval(month)
KAF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2002/08/03 * 12
KAF-02	Pre Amplifier	Hewlett Packard	8449B	RE	2003/05/08 * 12
KAT10-S1	Attenuator	Agilent	8449D 010	RE	2003/04/18 * 12
KAT6-01	Attenuator	INMET	18N-6dB	RE	2003/05/12 * 12
KBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2003/02/06 * 12
KCC-10/11/12/13/18	Coaxial Cable	Fujikura/Suhner	8D-2W/12D-SF A/S04272B/S04272B/S04272B	RE	2002/08/17 * 12
KCC-14/15/16/18/KPL-01	Coaxial Cable/Pulse Limiter	Fujikura/Suhner/PMM	5D-2W/8D-2W/S04272B/S04272B/PL01	CE	2002/08/17 * 12
KCC-D3/D7	Coaxial Cable	Rosenberger/Advantest	2201/JUN-08-01-061	RE	2003/04/18 * 12
KFL-01	Highpass Filter	Hewlett Packard	84300 80038	RE	2003/04/18 * 12
KHA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2002/07/14 * 12
KHA-03	Horn Antenna	EMCO	3160-09	RE	2003/04/23 * 12
KLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2003/02/19 * 12
KLS-01	LISN(AMN)	Schwarzbeck	NSLK8126	CE	2002/08/16 * 12
KOTS-01	Open Test Site	JSE	30m	RE	2002/08/18 * 12
KPM-05	Power meter	Agilent	E4417A	AT	2003/02/17 * 12
KPSS-01	Power sensor	Agilent	E9327A	AT	2003/02/21 * 12
KSA-01	Spectrum Analyzer	Advantest	R3365	CE/RE	2003/06/09 * 12
KTR-01	Test Receiver	Rohde & Schwarz	ES140	RE/AT	2002/07/22 * 12
KTR-02	Test Receiver	Rohde & Schwarz	ESCS30	CE/RE	2002/11/25 * 12

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Test Item:

- CE: Conducted emission test
- RE: Radiated emission test
- AT: Antenna terminal conducted test