

EMI TEST REPORT

Test Report No. : 25BE0219-HO-2

Applicant : NEC Infrontia Co.,Ltd.
Type of Equipment : Mobile Terminal
Model No. : S1596-01
(S1596-01** : '**' differs for the identification of the customer.)
Test standard : RSS-210(issue 5):2001+ Amendment:2002
+ Amendment2:2003+ Amendment3:2004
+ Amendment4: 2004
IC Number : 140P-S159601
Test Result : Complied

1. This test report shall not be reproduced 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.
3. This equipment is in compliance with above regulation. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this report are traceable to the national or international standards.

Date of test:

March 2, 3 and 23 to 28, 2005

Tested by:



Mitsuru Fujimura
EMC Service



Kenichi Adachi
EMC Service



Norihisa Hashimoto
EMC Service

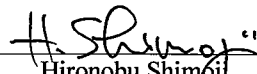


Makoto Kosaka
EMC Service



Keiichi Aoki
EMC Service

Approved by :



Hironobu Shimogai
Group Leader of
EMC Service

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

CONTENTS	PAGE
SECTION 1: Client information	3
SECTION 2: Equipment under test (E.U.T.).....	3
SECTION 3: Test specification, procedures & results.....	5
SECTION 4: Operation of E.U.T. during testing	9
SECTION 5: Conducted Emission.....	12
SECTION 6: Spurious Emission	13
SECTION 7: Maximum Peak Output Power	14
SECTION 8: 20dB Bandwidth	14
SECTION 9: Carrier Frequency Separation	14
SECTION 10: Number of Hopping Frequency	14
SECTION 11: Dwell time.....	14
SECTION 12: 6dB Bandwidth	15
SECTION 13: Peak Power Density.....	15
APPENDIX 1: Photographs of test setup	16
Conducted Emission (Bluetooth).....	16
Conducted Emission (Wireless LAN).....	19
Spurious Emission (Radiated)(Bluetooth)	20
Worst Case Position (X-axis:Horizontal / Z-axis:Vertical)(Bluetooth).....	21
Spurious Emission (Radiated)(Wireless LAN)	22
Worst Case Position (Y-axis:Horizontal / Y or Z-axis:Vertical)(Wireless LAN).....	23
APPENDIX 2:Test instruments	24
APPENDIX 3: Data of EMI test.....	25
Conducted Emission (Bluetooth)(Mobile Terminal).....	25
Conducted Emission (Bluetooth)(Mobile Terminal with Single station)	28
Conducted Emission (Bluetooth)(Mobile Terminal with Dual station).....	31
Conducted Emission (Wireless LAN).....	34
[FHSS]	41
Carrier Frequency Separation(FHSS)	41
20dB Bandwidth(FHSS)	43
Number of Hopping Frequency(FHSS)	45
Dwell time(FHSS)	47
Maximum Peak Output Power(FHSS).....	50
Radiated Spurious Emission(FHSS)(below 1GHz)	52
Radiated Spurious Emission (FHSS)(above 1GHz)	55
Conducted Spurious Emission (FHSS).....	58
99% Occupied Bandwidth(FHSS).....	62
[DSSS and other forms of modulation].....	63
6dB Bandwidth(DSSS and other forms of modulation).....	63
Maximum Peak OutPut Power (DSSS and other forms of modulation).....	66
Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz).....	69
Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz).....	77
Conducted Spurious Emission(DSSS and other forms of modulation)	85
Conducted emission Band Edge compliance (DSSS and other forms of modulation)	91
Power Density (DSSS and other forms of modulation).....	92
99%Occupied Bandwidth(DSSS and other forms of modulation)	95

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

SECTION 1: Client information

Company Name : NEC Infrontia Corporation
Address : 2-6-1, Kitamikata, Takatsu-ku, Kawasaki-shi, Kanagawa, 213-8511, Japan
Telephone Number : +81-44-820-3837
Facsimile Number : +81-44-820-4534
Contact Person : Jyunichi Ohta

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : Mobile Terminal
Model No. : S1596-01
Serial No. : 525014A (for Radiated emission and Conducted emission),
525005A (for Other test for Bluetooth),
530002A (for Other test for Wireless LAN's power and power density)
525006A (for Other test for Wireless LAN's BW, spurious)
Rating : DC12.0V, 1.7A (AC adapter input : AC120V / 60Hz)
Country of Manufacture : Japan
Receipt Date of Sample : February 28, 2005
Condition of EUT : Engineering prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product Description

Model No: S1596-01 (referred to as the EUT in this report) is the Mobile Terminal.

Clock frequencies in the system	CPU: 520MHz, 13MHz, 32.768KHz, GDC: 24MHz, USBC: 6MHz WLAN: 48MHz, 40MHz, 32.768kHz
Series model	S1596-02** is Single Battery Charger (SBS) S1596-03** is Single Docking Station (SDS) S1596-06** is Dual Charging Station (DCS) ** is added to model No.'s Suffix. It applies with blank, alphabet, or numbers.

[Radio Specification]

	Wireless LAN Section
Equipment Type	Transceiver
Frequency of operation	2412- 2462MHz
Bandwidth & Channel spacing	22MHz & 5MHz/CH
Transmit power	50mW
Type of Modulation	DSSS(CCK,QPSK), OFDM(64QAM)
Antenna Type	¼ lambda Inverted-F (Diversity)
Antenna Connector type	U.FL-R
Antenna Gain	5.28 dBi max (This antenna gain is value mounted to the mobile terminal.)
Mode of Operation	Simplex
Method of frequency generation	Synthesizer
ITU code	G1D
Power Supply	DC5V

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

[Radio Specification]

	Wireless LAN Section / Receiver
Type of Receiver	Direct conversion
Frequency of operation	2412- 2462MHz
Antenna Type	Inverted-F (Diversity)
Antenna Connector type	U.FL-R
Mode of Operation	Simplex
Method of frequency generation	Synthesizer
Power Supply	DC5V

	Bluetooth Section
Equipment Type	Transceiver
Frequency of operation	2402- 2480MHz
Transmit power	1mW
Bandwidth & Channel spacing	1MHz & 1MHz/CH
Type of Modulation	FHSS
Antenna Type	Chip Antenna
Antenna Gain	2.044 dBi max
Method of frequency generation	Synthesizer
ITU code	F1D
Power Supply (Inner)	DC3.3V and DC1.8V

FCC 15.31 (e)

This EUT provides stable voltage (Wireless LAN: DC5.0V, Bluetooth: DC3.3V and DC1.8V) constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

Remarks : This equipment adopted section 15.101(b) procedure-「However, receivers indicated as being subject to Declaration of Conformity that are contained within a transceiver, the transmitter portion of which is subject to certification, shall be authorized under the verification procedure.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : RSS-210(issue 5):2001+ Amendment:2002
+ Amendment2:2003+ Amendment3:2004
+ Amendment4: 2004
Title : Low Power Licence-Exempt Radiocommunication Devices
(All Frequency Bands)

3.2 Procedures and results

[FHSS]

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin*0)	Results
1	Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	RSS-210 6.6	-	N/A	<Mobile Terminal> 3.5 dB, AV, 0.7329MHz, N <Single Station> 14.7dB, AV, 1.4876MHz, N <Dual Station> 8.2dB, AV, 0.1939MHz ,L	Complied
2	Carrier Frequency Separation	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2 (o)(a)(a1)	Conducted	N/A	*See data.	Complied
3	20dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2 (o)(a)(a1)	Conducted	N/A		Complied
4	Number of Hopping Frequency	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2 (o)(ii)	Conducted	N/A		Complied
5	Dwell time	ANSI C63.4:2003 13.Measurement of intentional radiators	RSS-210 6.2.2 (o)(ii)	Conducted	N/A		Complied
6	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(iv)	Conducted	N/A		Complied
7	Band Edge Compliance	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(e) and 6.3	Conducted	N/A		Complied
8	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(e) and 6.3	Conducted/ Radiated	N/A	2.6dB MHz, QP, 360.001MHz, Horizontal	Complied

Note: UL Apex's EMI Work Procedures No.QPM05.

*0) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Uncertainty:

*In case of the margin below the EMC Head Office's uncertainty.

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Conducted Emission

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

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ± 4.5 dB(3m)/ ± 4.7 dB(10m).

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ± 5.2 dB(3m)/ ± 3.8 dB(10m).

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

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is ± 3.0 dB.

*These tests were also referred to FCC Public Notice DA 00-705 "Guidance on Measurement for Frequency Hopping Spread Spectrum Systems".

*These tests were performed without any deviations from test procedure except for additions or exclusions.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

[DSSS and other forms of modulation]

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	RSS-210 6.6	-	N/A	4.9dB, AV, 0.7237MHz, N	Complied
2	6dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 5.9.1	Conducted	N/A	*See data.	Complied
3	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(b)	Conducted	N/A		Complied
4	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(e) and 6.3	Conducted/ Radiated	N/A	<11g ch.: Mid+BT> 1.4dB, QP 233.989MHz, Horizontal	Complied
5	Restricted Band Edges	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(e) and 6.3	Conducted	N/A	*See data.	Complied
6	Power Density	ANSI C63.4:2003 13. Measurement of intentional radiators	RSS-210 6.2.2(o)(b)	Conducted	N/A		Complied

Note: UL Apex's EMI Work Procedures No.QPM05.

Uncertainty:

*In case of the margin below the EMC Head Office's uncertainty.

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Conducted Emission

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

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ± 4.5 dB(3m)/ ± 4.7 dB(10m).

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ± 5.2 dB(3m)/ ± 3.8 dB(10m).

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

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is ± 3.0 dB.

*These tests were also referred to "Guidance on Measurement for Digital Transmission Systems Section15.247".

*These tests were performed without any deviations from test procedure except for additions or exclusions.

3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS-210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4: 2004	RSS-210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4: 2004	Conducted	N/A	N/A	N/A

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

3.4 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116 Facsimile : +81 596 24 8124

	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 shielded room	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.4 measurement room	3.1 x 5.0 x 2.7m	N/A	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1 and No.2 semi-anechoic and No.3 shielded room.

3.5 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

The mode is used : [FHSS:Bluetooth]
Transmitting mode
(Payload: PRBS9, Packet size DH1/ DH3/ DH5 (for Dwell time), DH5 (for other test))
Low Channel :2402MHz
Mid Channel :2441MHz
High channel :2480MHz
Inquiry

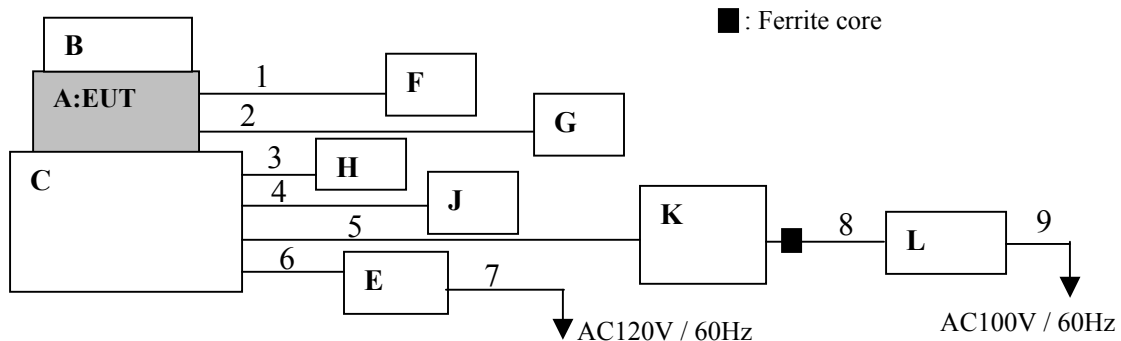
[DSSS and other forms of modulation]
Transmitting mode 11b (CCK 1Mbps (Maximum power))
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

Transmitting mode 11g (OFDM 54Mbps (Maximum power))
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

**As for Antenna Terminal test, the test was made with ANT-0
which had worse data of the two (ANT-0 and ANT-1).*

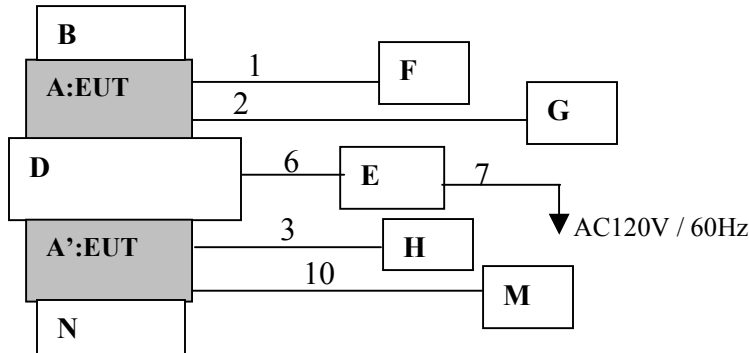
4.2 Configuration and peripherals

4.2.1. Conducted Emission with Single Docking Station (Bluetooth)



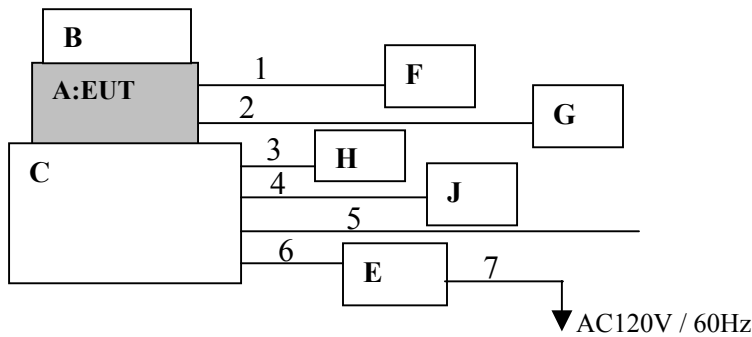
*Cabling was taken into consideration and test data was taken under worse case conditions.

4.2.2. Conducted Emission with Dual Charging Station (Bluetooth)



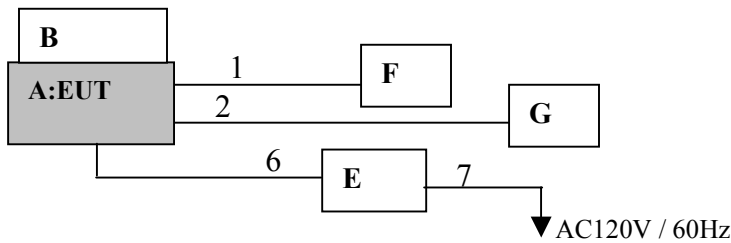
*Cabling was taken into consideration and test data was taken under worse case conditions.

4.2.3. Radiated Emission (Bluetooth)



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

4.2.4. Other tests



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	IC Number
A	Mobile Terminal	S1596-01	525014A (RE,CE), 525005A(BT other tests), 525002A(WLAN power density), 525006A(WLAN other tests)	NEC	140P-S159601 (EUT)
A'	Mobile Terminal	S1596-01	525013A	NEC	140P-S159601 (EUT)
B	Main Battery	S1596-05	T00026A	NEC	-
C	Single Docking Station	S1596-03	525011A	NEC	-
D	Dual Charging Station	S1596-06	1	NEC	-
E	AC Adapter	S1596-04	0411A0000211G	NEC	-
F	USB mouse	M-BJ58	HCA34602157	Logitech	-
G	Headphone	HST601-BL	-	-	-
H	USB mouse	T-BC21	LZE44050094	Logitech	-
J	Keyboard	BKBU-J109LG	A41012	BUFFALO	-
K	Personal Computer	TYPE2881-6NJ	KM-16721	IBM	-
L	AC adapter	PA-1121-051	11S02K7095Z1Z6C74CR26N	IBM	-
M	Headphone	LT-100	-	Panasonic	-
N	Main Battery	S1596-05	T00074A	NEC	-

List of cables used

No.	Name	Length (m)	Shield	Backshell Material
1	USB Mouse cable	1.8	N	Polyvinyl chloride
2	Headphone cable	1.8	N	Polyvinyl chloride
3	USB Mouse cable	1.8	N	Polyvinyl chloride
4	Keyboard cable	1.6	N	Polyvinyl chloride
5	LAN cable	1.0	N	Polyvinyl chloride
6	DC cable	1.0	N	Polyvinyl chloride
7	AC cable	1.5	N	Polyvinyl chloride
8	DC cable	1.8	N	Polyvinyl chloride
9	AC cable	1.0	N	Polyvinyl chloride
10	Headphone cable	3.0	N	Polyvinyl chloride

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

[FHSS / DSSS]

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 1m by 1.5m or 0.5 by 1.0m, raised 80cm above the conducting ground plane.

The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals 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 a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center.

1) For the tests on EUT with other peripherals (as a whole system)

I/O cable and AC cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane.

2) For the tests on EUT itself (as a stand alone equipment)

Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN/(AMN) to the input power source. All unused 50ohm connectors of the LISN(AMN) were resistivity terminated in 50ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber or a Measurement Room.

The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

Detector	: CISPR quasi-peak detector (IF BW 9 kHz)
Measurement range	: 0.15-30MHz
Test data	: APPENDIX 3
Test result	: Pass

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

SECTION 6: Spurious Emission

[Conducted]

Test Procedure

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

Test data : APPENDIX 3

Test result : Pass

[Radiated]

Test Procedure

EUT was placed on a platform of nominal size, 0.5m by 1.0m, raised 80cm above the conducting ground plane.

The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz).

The height of the measuring 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 with the Test Receiver or the Spectrum Analyzer.

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.

20dBc was applied to the frequency over the limit of FCC 15.209 and outside the restricted band of 15.205.

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver / Spectrum Analyzer	Spectrum Analyzer
Detector	QP: BW 120kHz(T/R)	PK: RBW:1MHz/VBW: 1MHz
IF Bandwidth	20dBc : RBW: 100kHz VBW: 300kHz (S/A)	AV: RBW:1MHz/VBW:10Hz 20dBc : RBW:100kHz/VBW:300kHz

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

Test data : APPENDIX 3

Test result : Pass

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

SECTION 7: Maximum Peak Output Power

Test Procedure

The test was made with the spectrum analyzer that has a function of channel-power measurements.
The Maximum Peak Output Power was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass

[FHSS]

SECTION 8: 20dB Bandwidth

Test Procedure

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

Test data : APPENDIX 3
Test result : Pass

SECTION 9: Carrier Frequency Separation

Test Procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass

SECTION 10: Number of Hopping Frequency

Test Procedure

The Number of Hopping Frequency was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass

SECTION 11: Dwell time

Test Procedure

The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

[DSSS]

SECTION 12: 6dB Bandwidth

Test Procedure

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

Test data : APPENDIX 3
Test result : Pass

SECTION 13: Peak Power Density

[Conducted]

Test Procedure

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

Test data : APPENDIX 3
Test result : Pass

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

APPENDIX 1: Photographs of test setup

Conducted Emission (Bluetooth)

(Mobile Terminal only)

Front

Rear

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)
(Mobile Terminal with Single Docking Station)
Front

Rear

Conducted Emission (Bluetooth)
(Mobile Terminal with Dual Charging Station)
Front

Rear

Conducted Emission (Wireless LAN)

Front

Rear

Spurious Emission (Radiated)(Bluetooth)

Front

Rear

Worst Case Position (X-axis:Horizontal / Z-axis:Vertical)(Bluetooth)

X-axis

Y-axis

Z-axis

Spurious Emission (Radiated)(Wireless LAN)

Front

Rear

Worst Case Position (Y-axis:Horizontal / Y or Z-axis:Vertical)(Wireless LAN)

X-axis

Y-axis

Z-axis

APPENDIX 2:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT	2004/06/12 * 12
MCC-19	Microwave Cable	Suhner	SUCOFLEX	AT	2005/02/03 * 12
MAT-20	Attenuator(10dB)(above 1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	AT / RE	2005/01/11 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE	2004/11/13 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE	2004/11/12 * 12
MCC-05	Microwave Cable	Storm	421-011	RE	2005/01/05 * 12
MCC-23	Microwave Cable	Storm	-	RE	2004/05/01 * 12
MHA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/01/10 * 12
MPA-05	Pre Amplifier	TSJ	TSJ 1-26.5GHz PreAmp	RE	2004/06/12 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	RE	2004/09/18 * 12
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE / CE	2004/04/12 * 12
MRENT-14	Spectrum Analyzer	Advantest	R3273	RE / CE	2005/02/21 * 12
MCC-04	Microwave Cable 1-40G	Storm	421-011	RE	2005/01/05 * 12
MCC-21	Microwave Cable	Storm	-	RE	2004/05/01 * 12
MCC-22	Microwave Cable	Storm	-	RE	2004/05/01 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2005/02/05 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2005/01/10 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE / CE	2005/02/02 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2005/02/24 * 12
MPA-06	Pre Amplifier	Hewlett Packard	8447D	RE	2004/08/29 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2004/12/16 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/10/14 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2004/10/14 * 12
MCC-13	Coaxial Cable	Fujikura/Agilent	-	CE	2005/02/24 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE (EUT)	2005/02/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	CE (AE)	2005/02/04 * 12
MTA-04	Termination	MCL	NTRM-50	CE	2005/02/03 * 12
MCC-16	Microwave Cable	Suhner	SUCOFLEX 104	AT	2005/02/03 * 12
MAT-22	Attenuator(10dB)(above 1GHz)	Orient Microwave	BX10-0476-00	AT	2005/03/16 * 12
MDPS-01	DC Power Supply	Agilent	6642A	AT	Pre Check

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

Test Item:

CE: AC Main Conducted Emission
RE: Radiated Spurious Emission
AT: Other tests

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

APPENDIX 3: Data of EMI test

Conducted Emission (Bluetooth)(Mobile Terminal)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 19:34:25

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks: Bluetooth Tx2402MHz /

LIMIT : RSS-210 6.6(QP)
RSS-210 6.6 (AV)

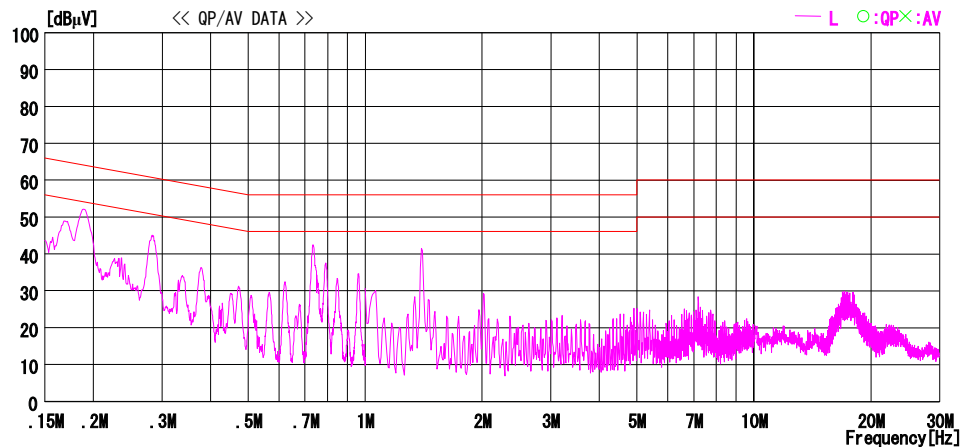
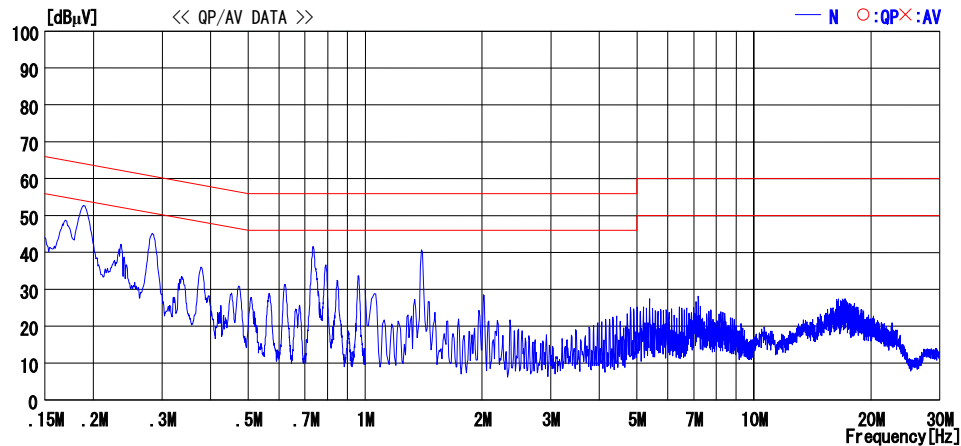


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal)

DATA OF CONDUCTED EMISSION TEST

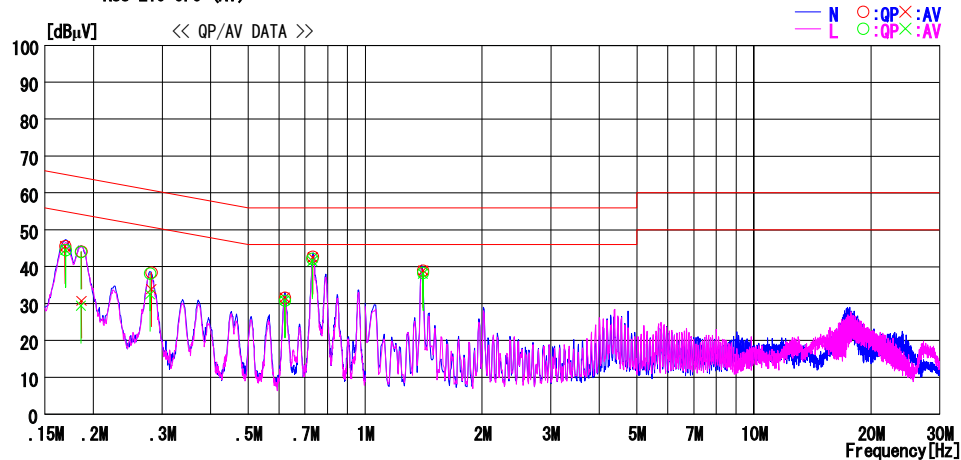
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 16:27:28

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg. C / 30 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2441MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)



NO	FREQ [MHz]	READING		C. F	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	0.1690	45.5	45.5	0.0	45.5	45.5	65.0	55.0	19.5	9.5	N
2	0.1863	44.1	30.7	0.0	44.1	30.7	64.2	54.2	20.1	23.5	N
3	0.2816	38.4	33.9	0.0	38.4	33.9	60.8	50.8	22.4	16.9	N
4	0.6205	31.4	31.5	0.2	31.6	31.7	56.0	46.0	24.4	14.3	N
5	0.7329	42.6	42.4	0.1	42.7	42.5	56.0	46.0	13.3	3.5	N
6	1.4089	38.7	38.8	0.2	38.9	39.0	56.0	46.0	17.1	7.0	N
7	0.1694	44.5	44.5	0.0	44.5	44.5	65.0	55.0	20.5	10.5	L
8	0.1859	44.0	29.4	0.0	44.0	29.4	64.2	54.2	20.2	24.8	L
9	0.2794	38.1	32.5	0.0	38.1	32.5	60.8	50.8	22.7	18.3	L
10	0.6205	30.6	30.7	0.2	30.8	30.9	56.0	46.0	25.2	15.1	L
11	0.7314	42.0	41.4	0.1	42.1	41.5	56.0	46.0	13.9	4.5	L
12	1.4078	38.1	37.9	0.2	38.3	38.1	56.0	46.0	17.7	7.9	L

CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 19:30:00

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2480MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

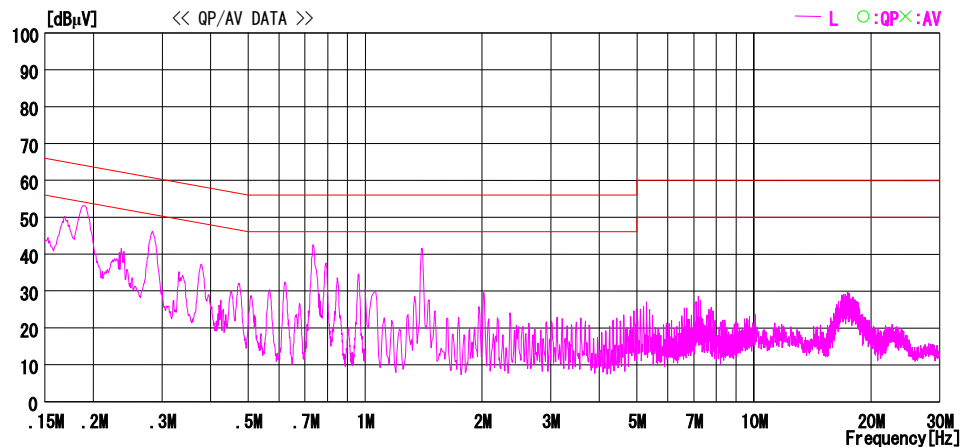
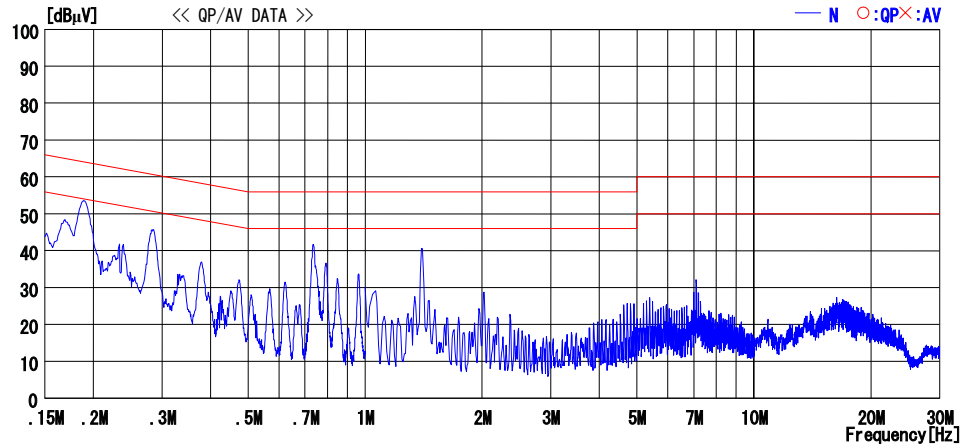


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal with Single station)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 19:41:43

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + single station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks: Bluetooth Tx2402MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

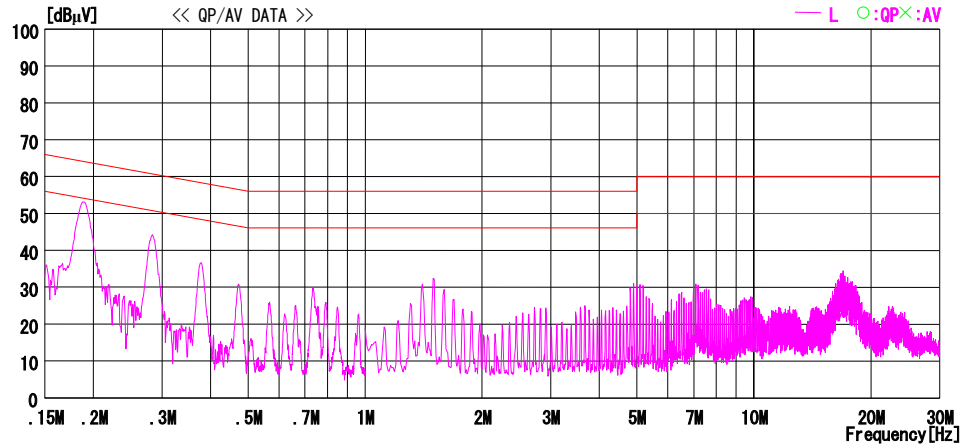
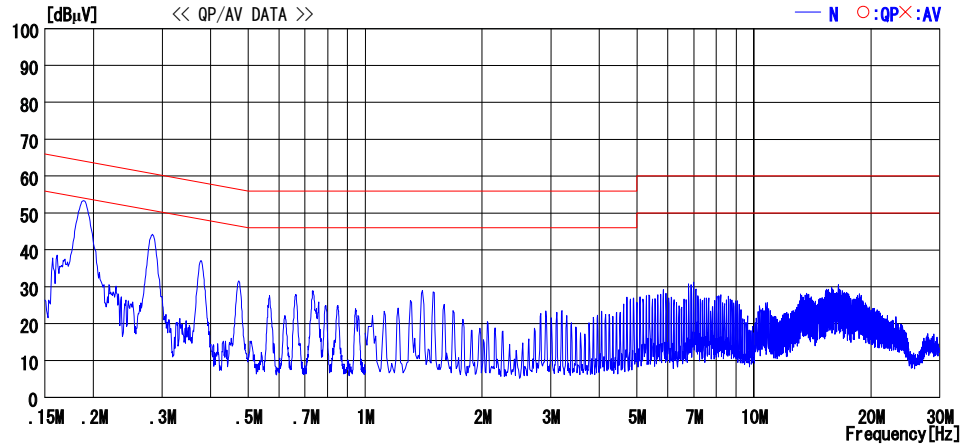


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal with Single station)

DATA OF CONDUCTED EMISSION TEST

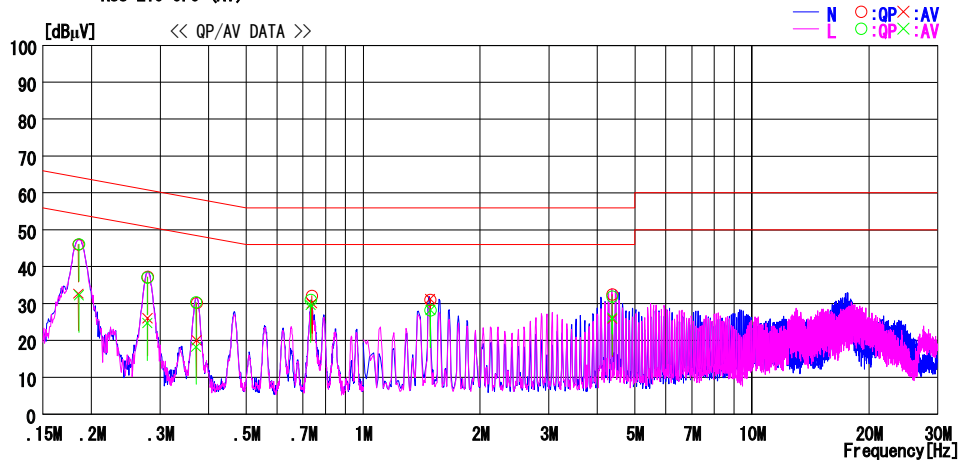
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 16:08:22

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + single station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2441MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)



NO	FREQ [MHz]	READING		C. F	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	0.1851	46.0	32.7	0.0	46.0	32.7	64.3	54.3	18.3	21.6	N
2	0.2788	37.2	26.0	0.0	37.2	26.0	60.9	50.9	23.7	24.9	N
3	0.3728	30.2	20.0	0.0	30.2	20.0	58.4	48.4	28.2	28.4	N
4	0.7380	32.0	29.9	0.1	32.1	30.0	56.0	46.0	23.9	16.0	N
5	1.4876	30.8	31.1	0.2	31.0	31.3	56.0	46.0	25.0	14.7	N
6	4.3768	32.0	25.3	0.5	32.5	25.8	56.0	46.0	23.5	20.2	N
7	0.1858	46.1	32.3	0.0	46.1	32.3	64.2	54.2	18.1	21.9	L
8	0.2785	37.1	24.7	0.0	37.1	24.7	60.9	50.9	23.8	26.2	L
9	0.3715	30.3	18.2	0.0	30.3	18.2	58.5	48.5	28.2	30.3	L
10	0.7328	30.9	29.4	0.1	31.0	29.5	56.0	46.0	25.0	16.5	L
11	1.4884	28.0	28.0	0.2	28.2	28.2	56.0	46.0	27.8	17.8	L
12	4.3708	31.4	25.6	0.5	31.9	26.1	56.0	46.0	24.1	19.9	L

CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C. F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal with Single station)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 19:45:38

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + single station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks: Bluetooth Tx2480MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

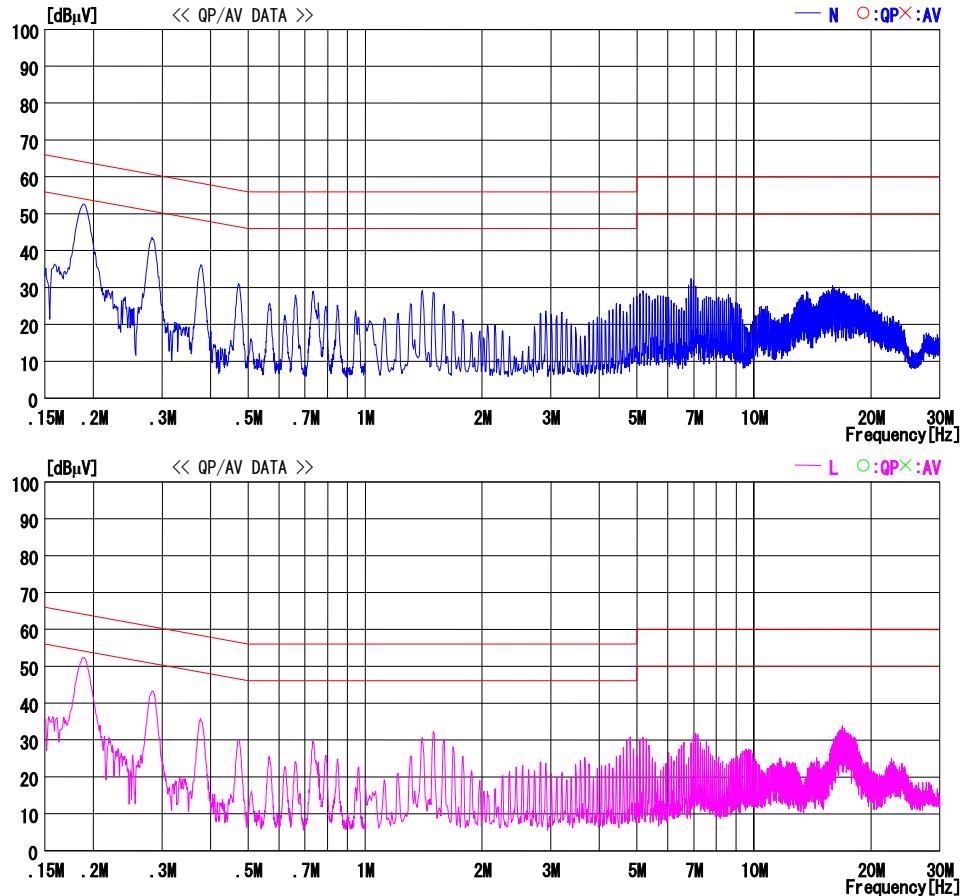


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal with Dual station)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 19:12:44

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg. C / 30 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2402MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

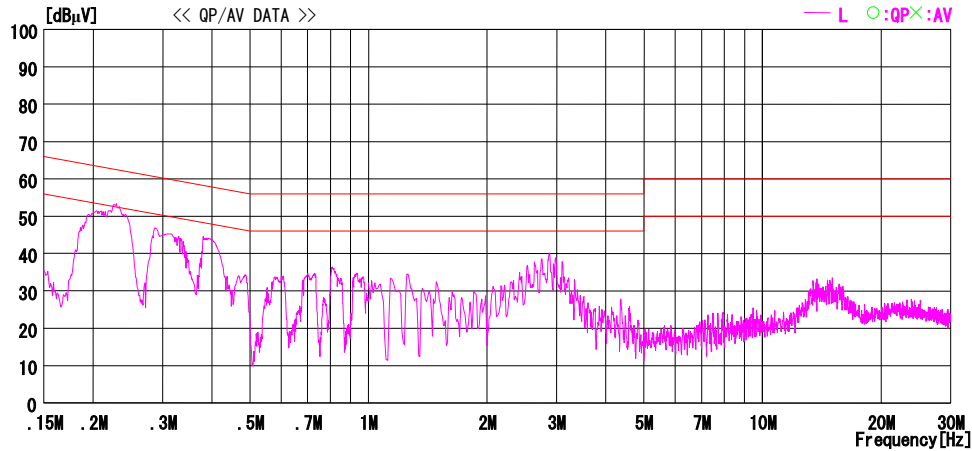
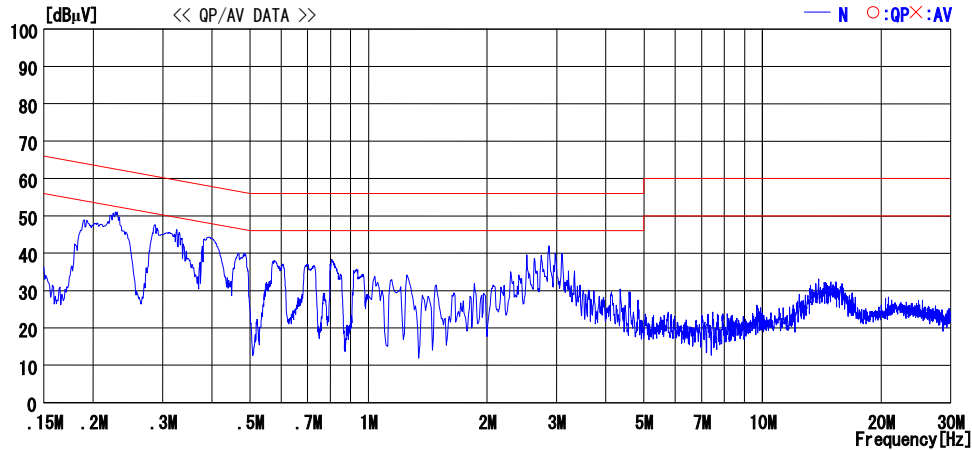


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal with Dual station)

DATA OF CONDUCTED EMISSION TEST

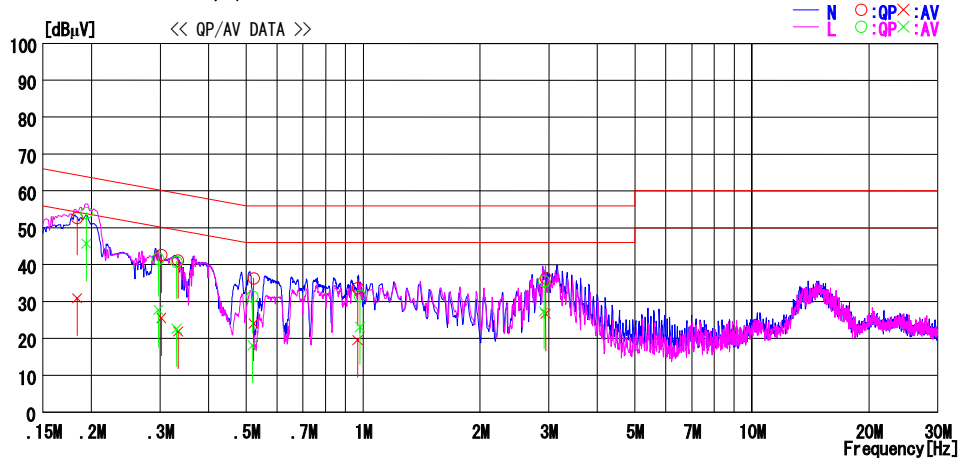
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 16:51:07

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2441MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)



NO	FREQ [MHz]	READING		C. F	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	0.1837	52.7	30.9	0.0	52.7	30.9	64.3	54.3	11.6	23.4	N
2	0.3026	42.6	25.5	0.0	42.6	25.5	60.2	50.2	17.6	24.7	N
3	0.3340	41.1	21.9	0.0	41.1	21.9	59.4	49.4	18.3	27.5	N
4	0.5224	36.1	23.8	0.2	36.3	24.0	56.0	46.0	19.7	22.0	N
5	0.9683	33.4	19.4	0.2	33.6	19.6	56.0	46.0	22.4	26.4	N
6	2.9465	35.9	26.3	0.4	36.3	26.7	56.0	46.0	19.7	19.3	N
7	0.1939	54.1	45.7	0.0	54.1	45.7	63.9	53.9	9.8	8.2	L
8	0.2970	41.6	27.7	0.0	41.6	27.7	60.3	50.3	18.7	22.6	L
9	0.3311	40.8	22.6	0.0	40.8	22.6	59.4	49.4	18.6	26.8	L
10	0.5188	31.2	17.9	0.2	31.4	18.1	56.0	46.0	24.6	27.9	L
11	0.9802	31.4	22.9	0.2	31.6	23.1	56.0	46.0	24.4	22.9	L
12	2.9193	35.1	26.9	0.4	35.5	27.3	56.0	46.0	20.5	18.7	L

CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Bluetooth)(Mobile Terminal with Dual station)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/03 19:17:47

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 24 deg.C / 30 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2480MHz /

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

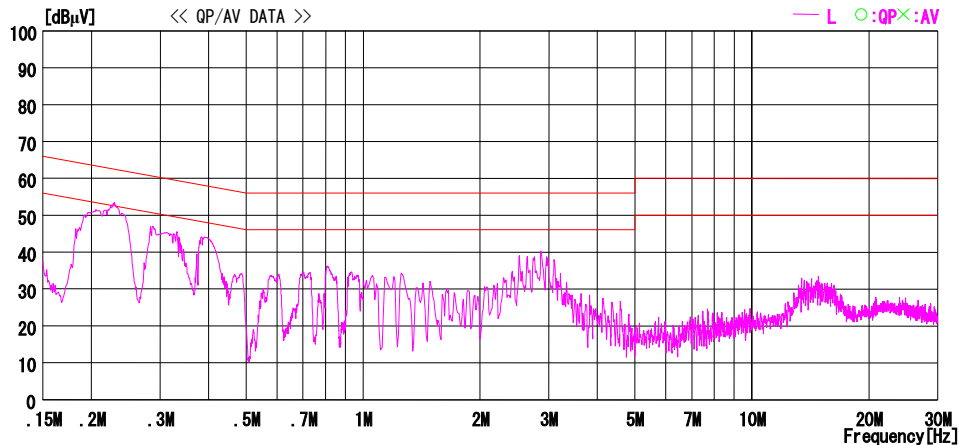
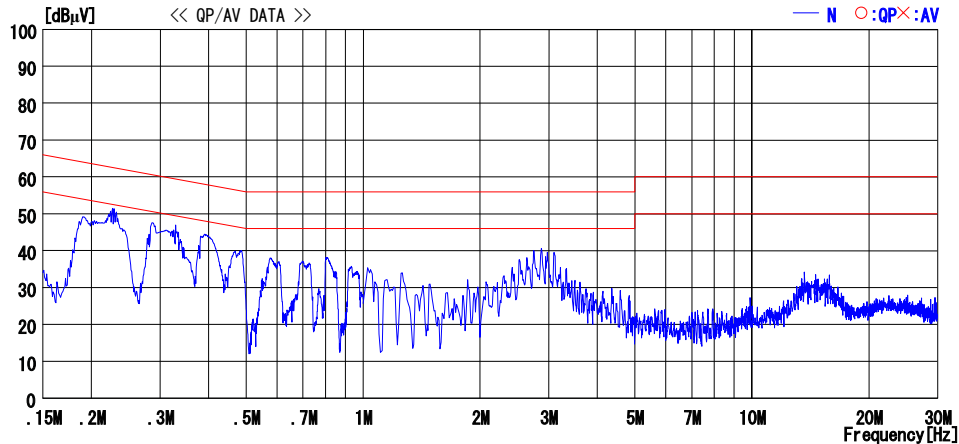


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 09:15:29

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks: WLAN 11b Tx2412MHz /1MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

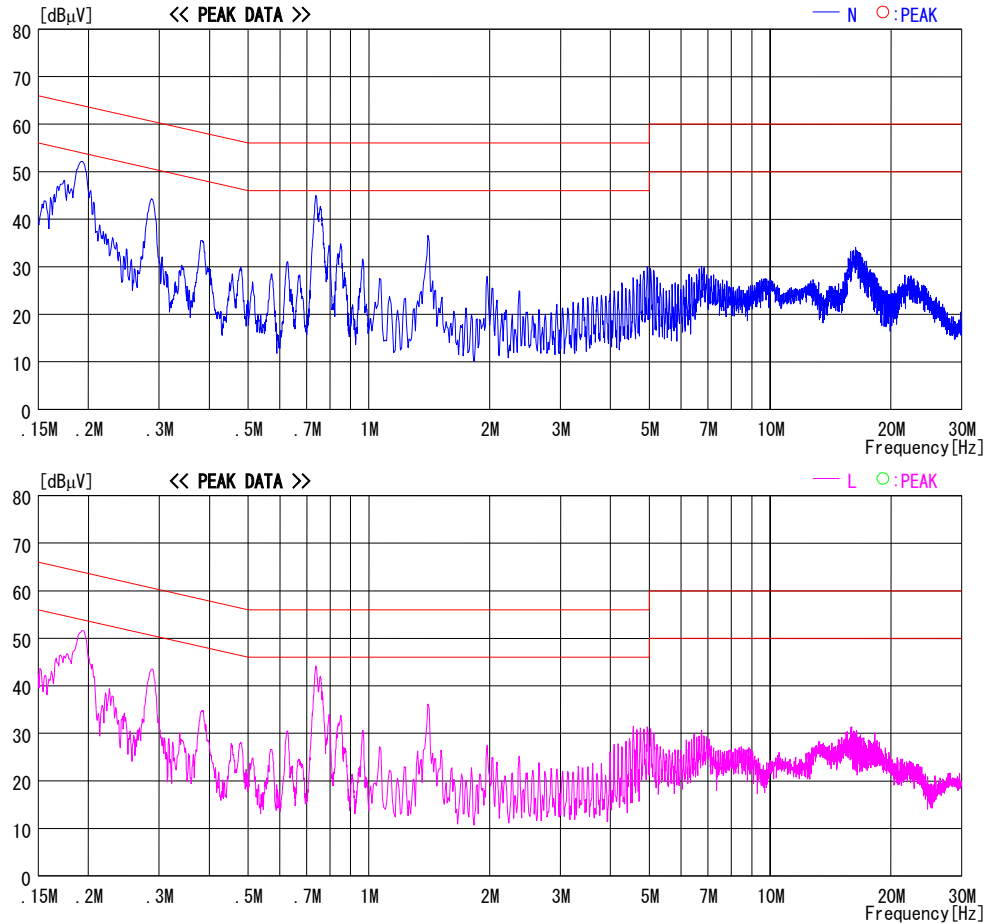


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 09:23:04

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-H0
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks: WLAN 11b Tx2437MHz /1MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

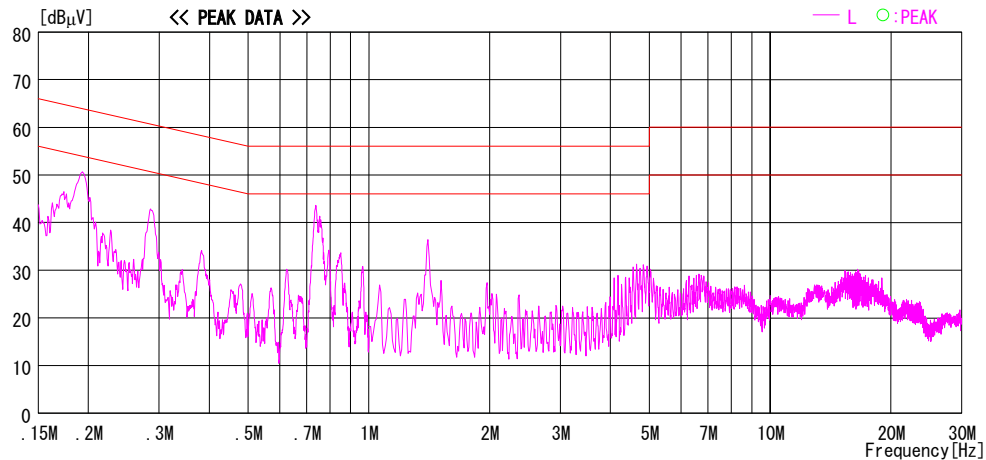
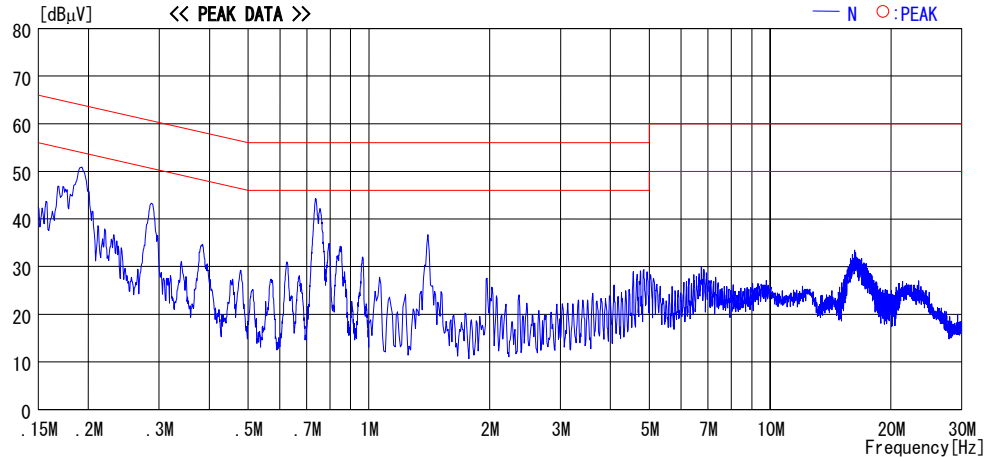


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/03/25 09:30:20

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-H0
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg. C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks: WLAN 11b Tx2462MHz /1MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

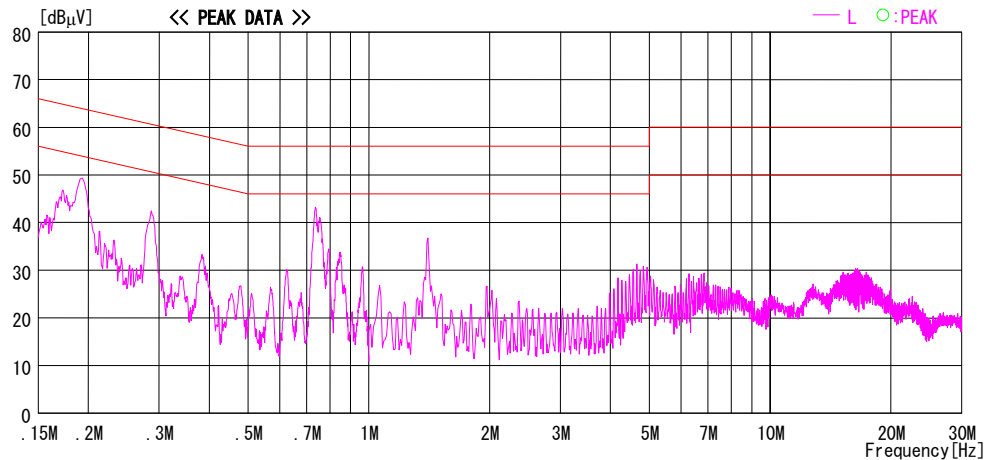
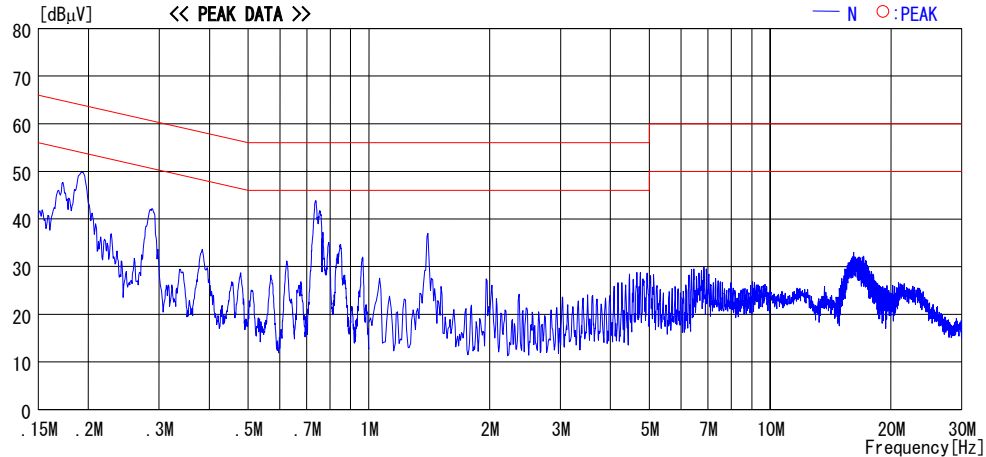


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 09:35:08

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg. C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks : WLAN 11g Tx2412MHz / 54MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

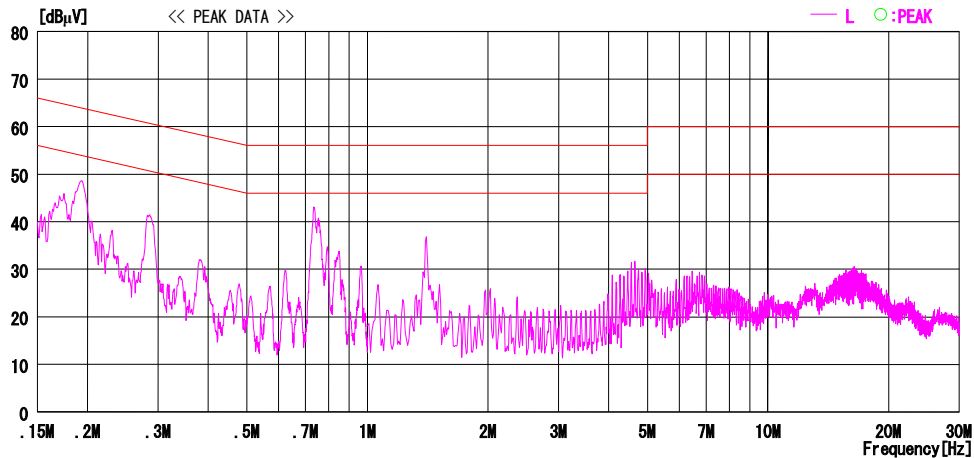
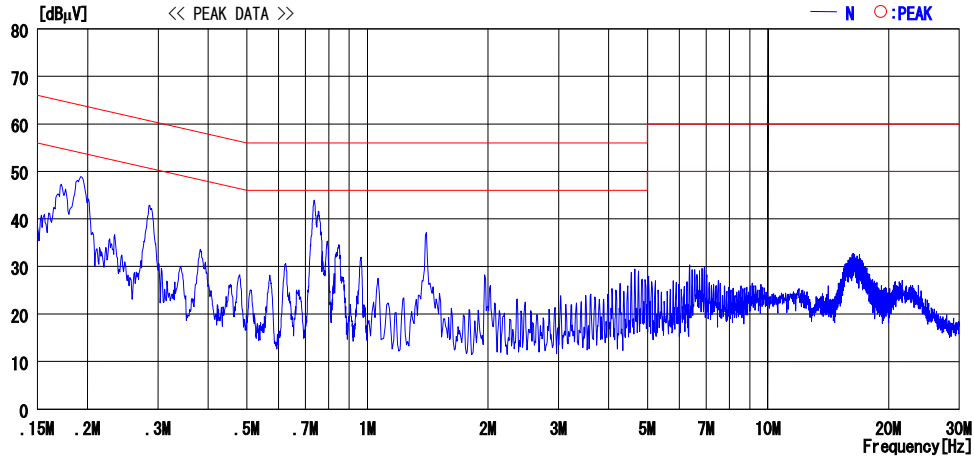


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 09:41:21

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg. C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks : WLAN 11g Tx2437MHz / 54MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

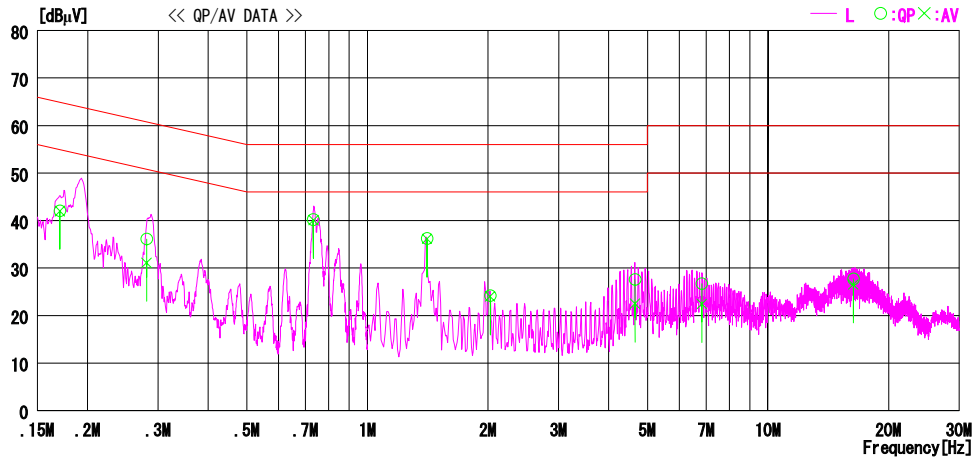
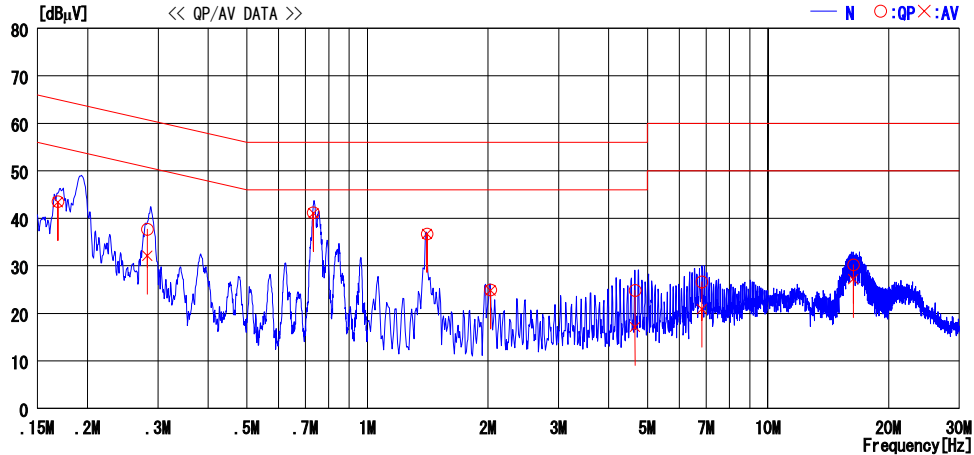


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 09:41:21

Applicant : NEC Infrontia Corporation Report No. : 25BE0219-HO
Kind of EUT : Mobile Terminal + Dual station Power : AC 120V / 60Hz
Model No. : S1596-01 Temp./Humi. : 20 deg. C / 28 %
Serial No. : 525014A Operator : Yutaka Yoshida

Mode / Remarks : WLAN 11g Tx2437MHz /54MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	0.1687	43.4	43.3	0.1	43.5	43.4	65.0	55.0	21.5	11.6	N
2	0.2822	37.6	32.0	0.1	37.7	32.1	60.8	50.8	23.1	18.7	N
3	0.7327	40.9	40.8	0.3	41.2	41.1	56.0	46.0	14.8	4.9	N
4	1.4077	36.3	36.3	0.4	36.7	36.7	56.0	46.0	19.3	9.3	N
5	2.0279	24.4	24.3	0.5	24.9	24.8	56.0	46.0	31.1	21.2	N
6	4.6540	24.0	16.3	0.8	24.8	17.1	56.0	46.0	31.2	28.9	N
7	6.8355	25.7	20.0	0.9	26.6	20.9	60.0	50.0	33.4	29.1	N
8	16.3257	28.6	25.6	1.6	30.2	27.2	60.0	50.0	29.8	22.8	N
9	0.1707	42.0	41.9	0.1	42.1	42.0	64.9	54.9	22.8	12.9	L
10	0.2810	36.0	31.0	0.1	36.1	31.1	60.8	50.8	24.7	19.7	L
11	0.7328	39.9	39.8	0.3	40.2	40.1	56.0	46.0	15.8	5.9	L
12	1.4075	35.8	35.7	0.4	36.2	36.1	56.0	46.0	19.8	9.9	L
13	2.0245	23.7	23.5	0.5	24.2	24.0	56.0	46.0	31.8	22.0	L
14	4.6525	26.8	21.7	0.8	27.6	22.5	56.0	46.0	28.4	23.5	L
15	6.8355	25.8	21.5	0.9	26.7	22.4	60.0	50.0	33.3	27.6	L
16	16.3261	26.1	24.9	1.6	27.7	26.5	60.0	50.0	32.3	23.5	L

CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Emission (Wireless LAN)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 09:47:19

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Dual station
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg. C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks : WLAN 11g Tx2462MHz / 54MBPS

LIMIT : RSS-210 6.6 (QP)
RSS-210 6.6 (AV)

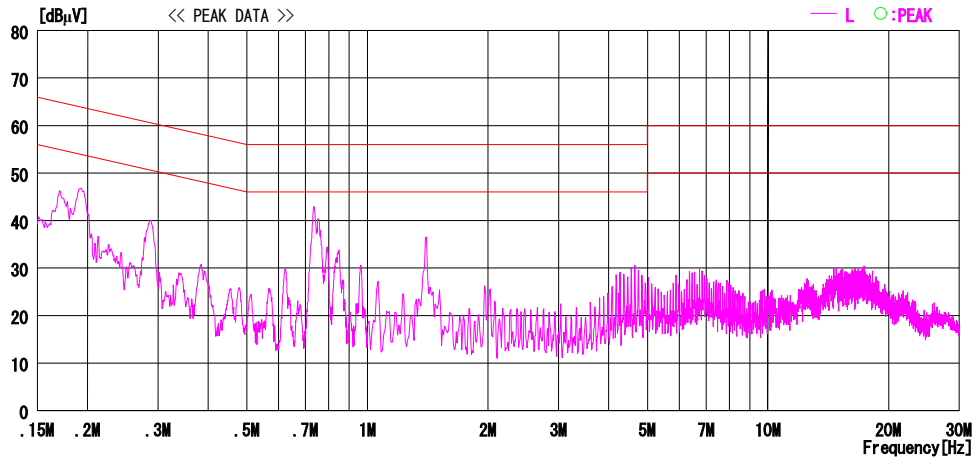
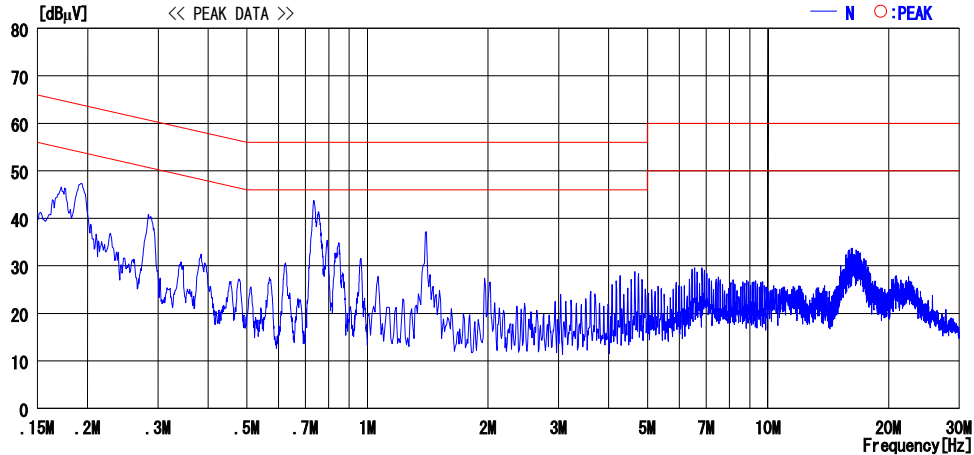


CHART:WITH FACTOR, Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

[FHSS]

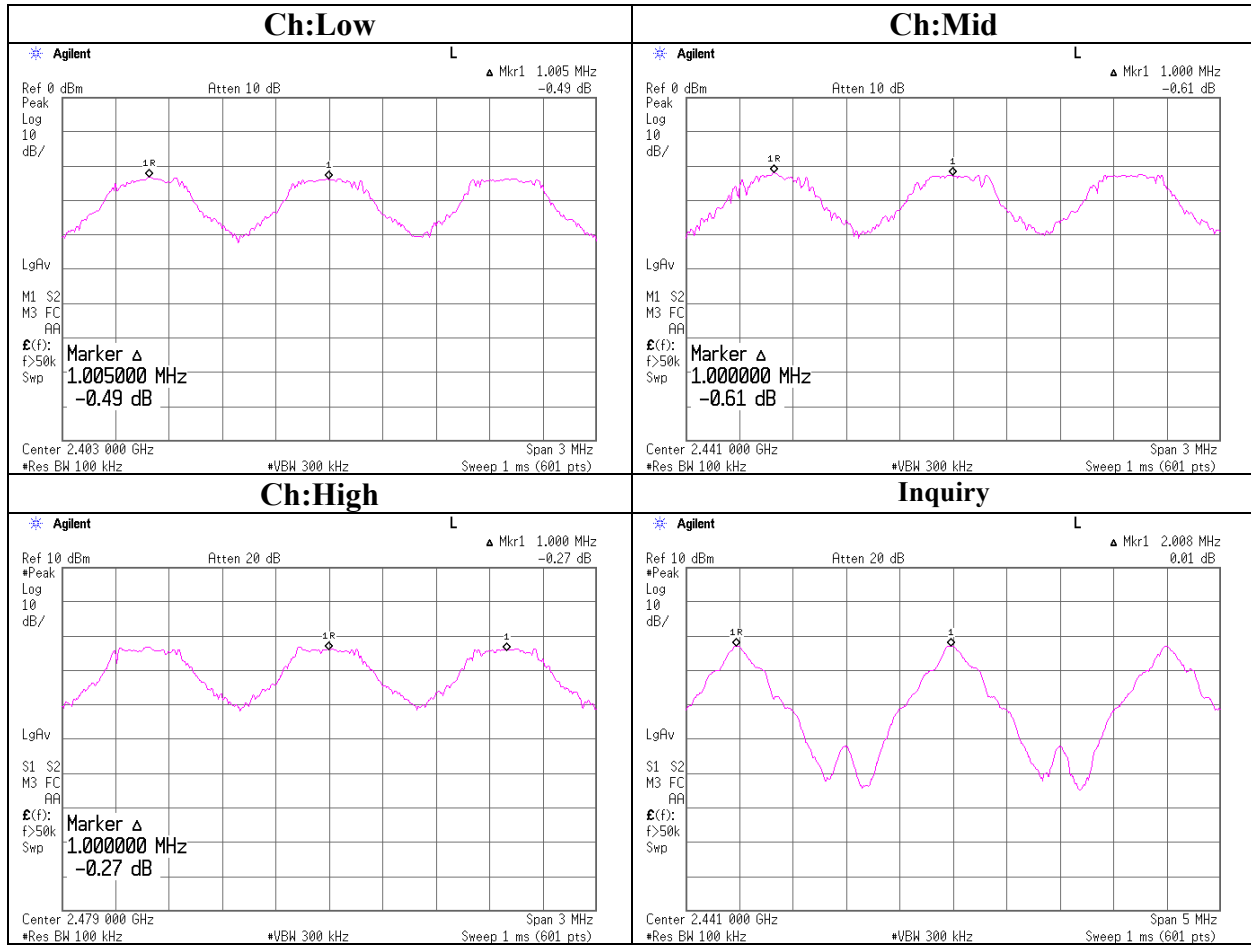
Carrier Frequency Separation(FHSS)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: NEC Infrontia Corporation	REGULATION	: RSS-210 6.2.2(o)(a)(a1)
EQUIPMENT	: Mobile Terminal	TEST DISTANCE	: -
MODEL	: S1596-01	DATE	: 03/02/2005
S/ N	: 525005A	TEMPERATURE	: 25 deg.C
POWER	: AC 120 V / 60Hz	HUMIDITY	: 30%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Kenichi Adachi

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.005	>20dB Bandwidth and 25[kHz]
Mid	2441.0	1.000	>20dB Bandwidth and 25[kHz]
High	2480.0	1.000	>20dB Bandwidth and 25[kHz]
Inquiry	2441.0	2.008	>20dB Bandwidth and 25[kHz]

Carrier Frequency Separation(FHSS)



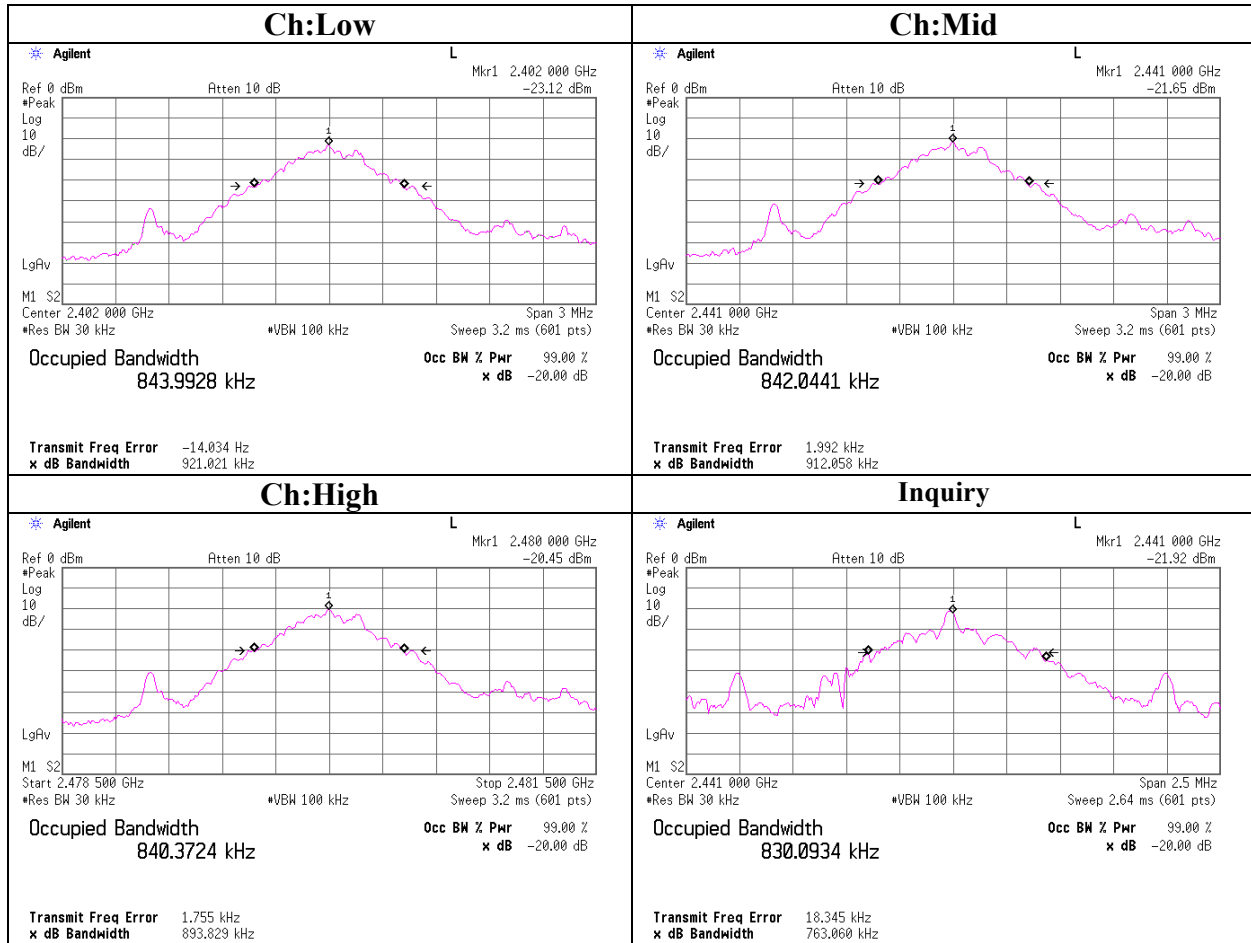
20dB Bandwidth(FHSS)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: NEC Infrontia Corporation	REGULATION	: RSS-210 6.2.2(o)(a)(a1)
EQUIPMENT	: Mobile Terminal	TEST DISTANCE	: -
MODEL	: S1596-01	DATE	: 03/02/2005
S/ N	: 525005A	TEMPERATURE	: 25 deg.C
POWER	: AC 120 V / 60Hz	HUMIDITY	: 30%
MODE	: Tx(Hopping off)/Inquiry	ENGINEER	: Kenichi Adachi

Ch	Freq.	20dB Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	2402.0	0.921	-
Mid	2441.0	0.912	-
High	2480.0	0.894	-
Inquiry	2441.0	0.763	-

20dB Bandwidth(FHSS)



Number of Hopping Frequency(FHSS)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

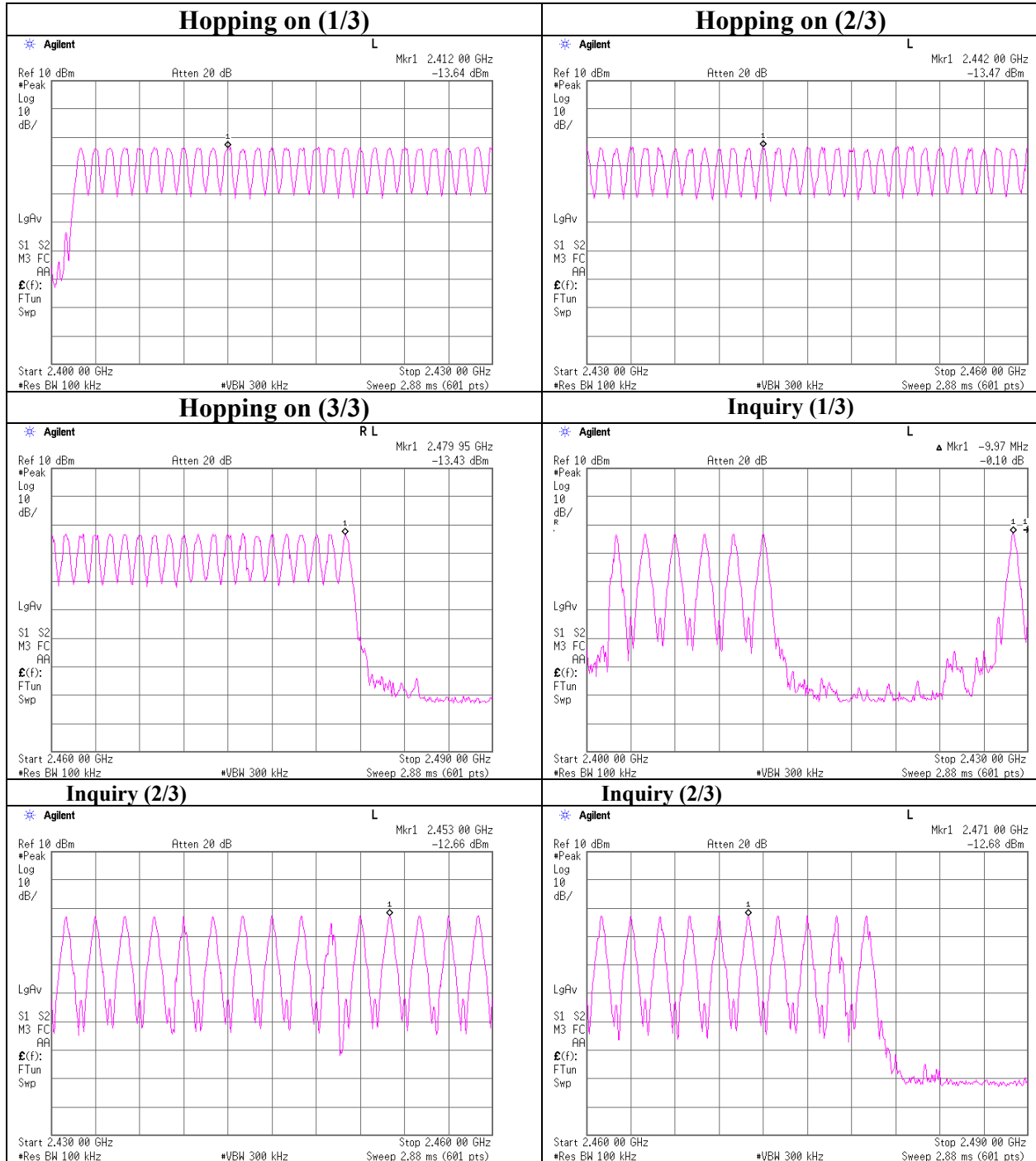
COMPANY	: NEC Infrontia Corporation	REGULATION	: RSS-210 6.2.2(o)(ii)
EQUIPMENT	: Mobile Terminal	TEST DISTANCE	: -
MODEL	: S1596-01	DATE	: 03/02/2005
S/ N	: 525005A	TEMPERATURE	: 25 deg.C
POWER	: AC 120 V / 60Hz	HUMIDITY	: 30%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Kenichi Adachi

79 channel Hopping

Mode	Number of channel	Limit
	[time]	[time]
Tx(Hoppng on)	79	≥ 15

Mode	Number of channel	Limit
	[time]	[time]
Inquiry	32	≥ 15

Number of Hopping Frequency(FHSS)



Dwell time(FHSS)

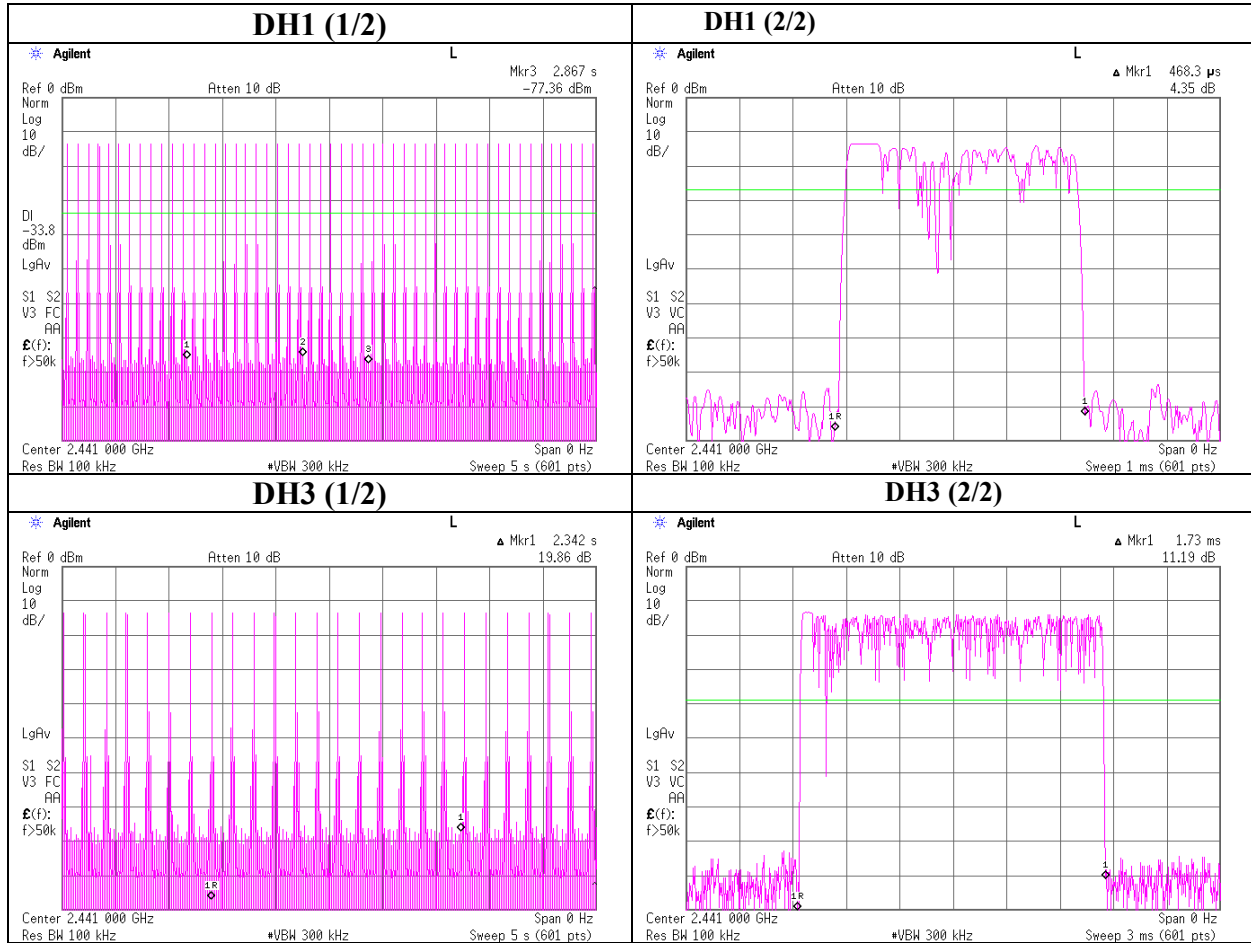
UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: NEC Infrontia Corporation	REGULATION	: RSS-210 6.2.2(o)(ii)
EQUIPMENT	: Mobile Terminal	TEST DISTANCE	: -
MODEL	: S1596-01	DATE	: 03/02/2005
S/ N	: 525005A	TEMPERATURE	: 25deg.C
POWER	: AC 120 V / 60Hz	HUMIDITY	: 30%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Kenichi Adachi

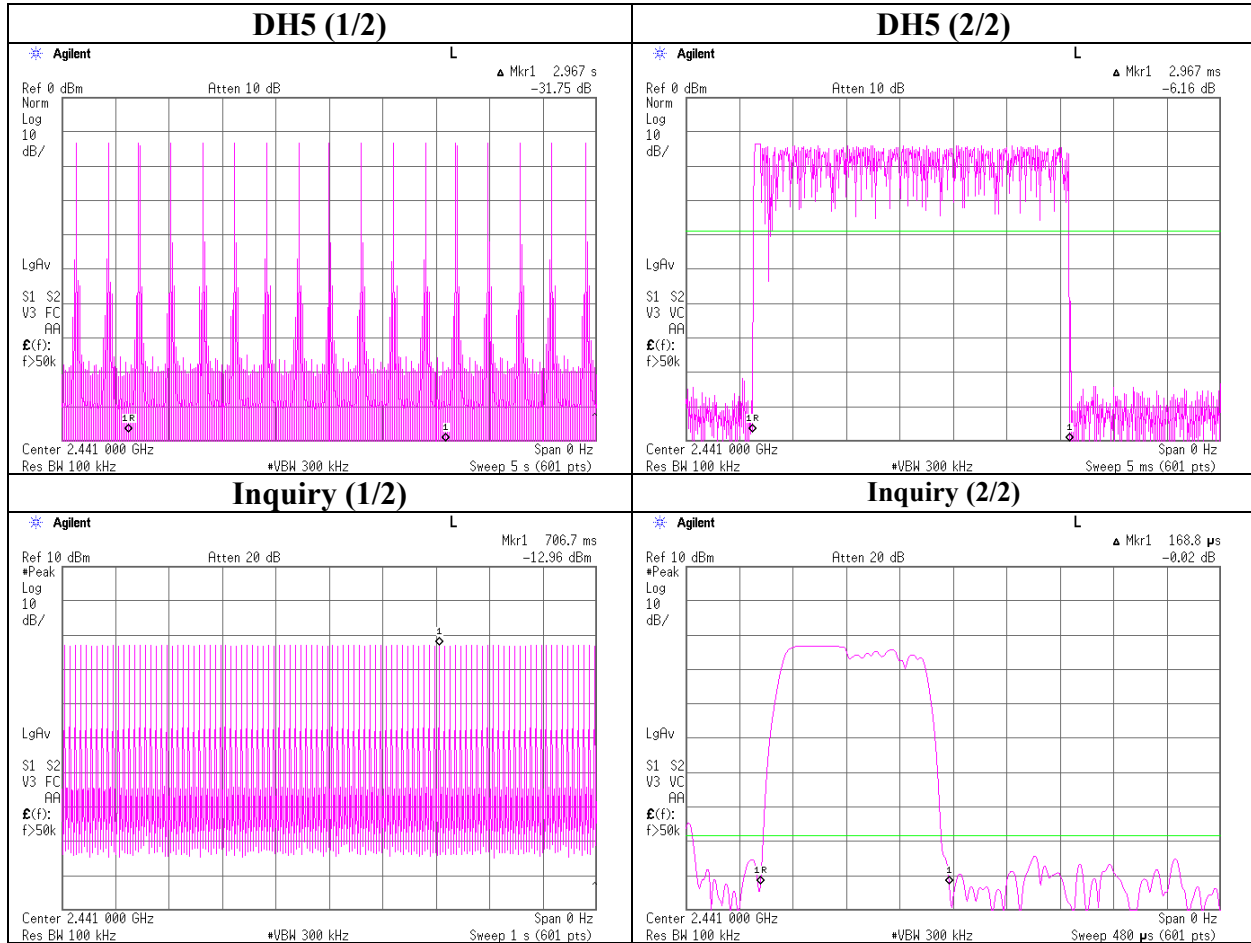
79 channel Hopping

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	50 times /5sec. x 31.6 = 316 times	0.468	148	400
DH3	26 times / 5sec. x 31.6 = 164 times	1.730	284	400
DH5	17 times / 5 sec. x 31.6 = 107 times	2.967	317	400
Inquiry	100 times / 1sec. x 12.8 = 1280 times	0.169	216	400

Dwell time(FHSS)



Dwell time(FHSS)



Maximum Peak Output Power(FHSS)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded room

COMPANY	: NEC Infrontia Corporation	REGULATION	: RSS-210 6.2.2(o)(iv)
EQUIPMENT	: Mobile Terminal	TEST DISTANCE	: -
MODEL	: S1596-01	DATE	: 03/02/2005
S/ N	: 525005A	TEMPERATURE	: 25deg.C
POWER	: AC 120 V / 60Hz	HUMIDITY	: 30%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Kenichi Adachi

79 channel Hopping

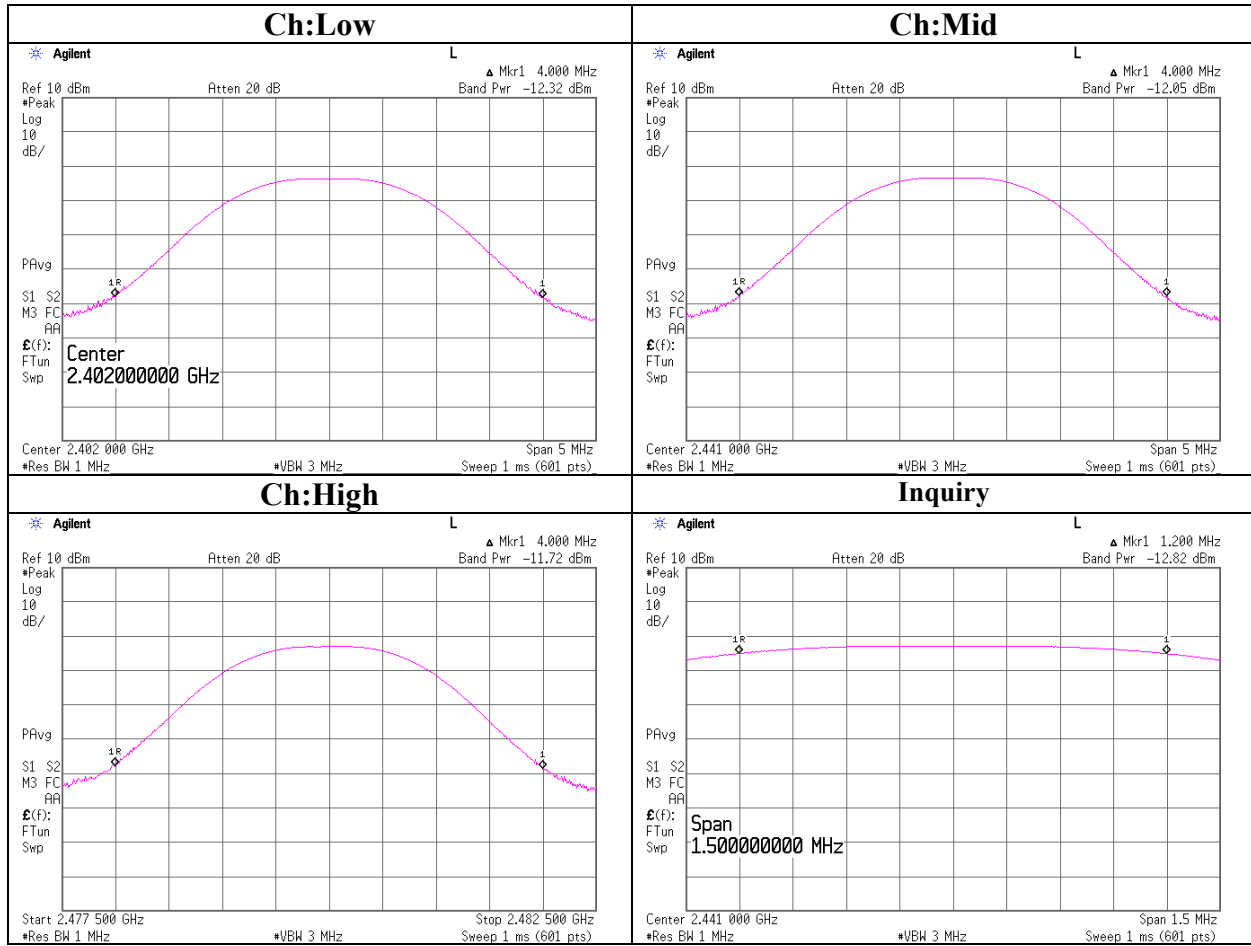
Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2402.0	-12.32	1.69	10.00	-0.63	30.00	30.63
Mid	2441.0	-12.05	1.71	10.00	-0.34	30.00	30.34
High	2480.0	-11.72	1.67	10.00	-0.05	30.00	30.05
Inquiry	2441.0	-12.82	1.71	10.00	-1.11	30.00	31.11

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer and UL-Apex)+ Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Maximum Peak Output Power(FHSS)



Radiated Spurious Emission(FHSS)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
(Bluetooth, Ch:Low)

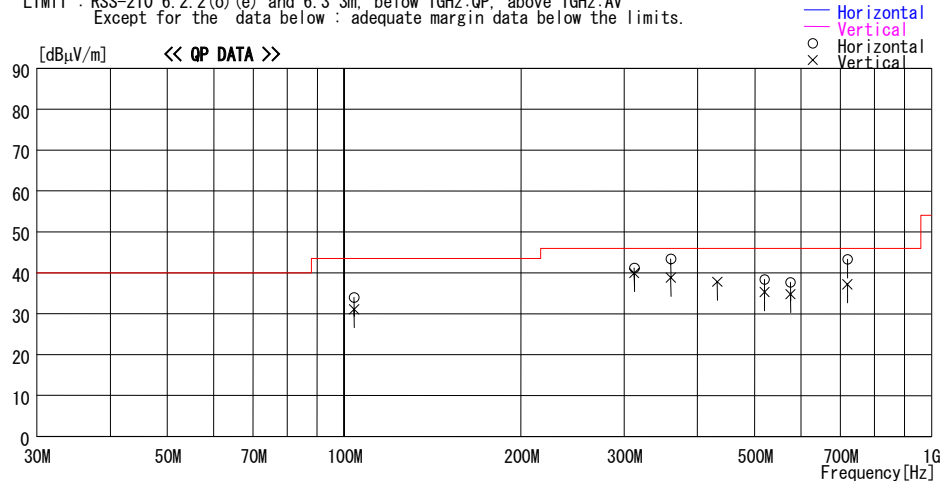
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/03/03 14:51:59

Applicant : NEC Infrontia Corporation Report No. : 25BE0219-HO
Kind of EUT : Mobile Terminal + Single station Power : AC 120V / 60Hz
Model No. : S1596-01P Temp./Humi. : 20 deg.C / 31 %
Serial No. : 525014A Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2402MHz / EUT-max-axis(H: X-axis, V: Z-axis) / with single station

LIMIT : RSS-210 6.2.2(o) (e) and 6.3 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	103.998	43.9	10.9	6.8	27.6	34.0	43.5	9.5	294	178
2	311.980	44.8	15.3	7.9	26.8	41.2	46.0	4.8	100	0
3	360.001	45.4	17.1	8.1	27.2	43.4	46.0	2.6	100	186
4	519.962	38.7	19.1	8.8	28.2	38.4	46.0	7.6	251	209
5	575.993	37.5	19.5	9.0	28.3	37.7	46.0	8.3	215	195
6	719.983	41.0	20.8	9.7	28.2	43.3	46.0	2.7	100	193
----- Vertical -----										
7	103.995	41.0	10.9	6.8	27.6	31.1	43.5	12.4	100	86
8	311.982	43.5	15.3	7.9	26.8	39.9	46.0	6.1	159	313
9	360.000	40.8	17.1	8.1	27.2	38.8	46.0	7.2	157	0
10	432.008	38.4	18.7	8.5	27.8	37.8	46.0	8.2	100	240
11	519.967	35.6	19.1	8.8	28.2	35.3	46.0	10.7	100	157
12	575.986	34.6	19.5	9.0	28.3	34.8	46.0	11.2	100	179
13	719.986	34.9	20.8	9.7	28.2	37.2	46.0	8.8	100	39

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(FHSS)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

(Bluetooth, Ch:High)

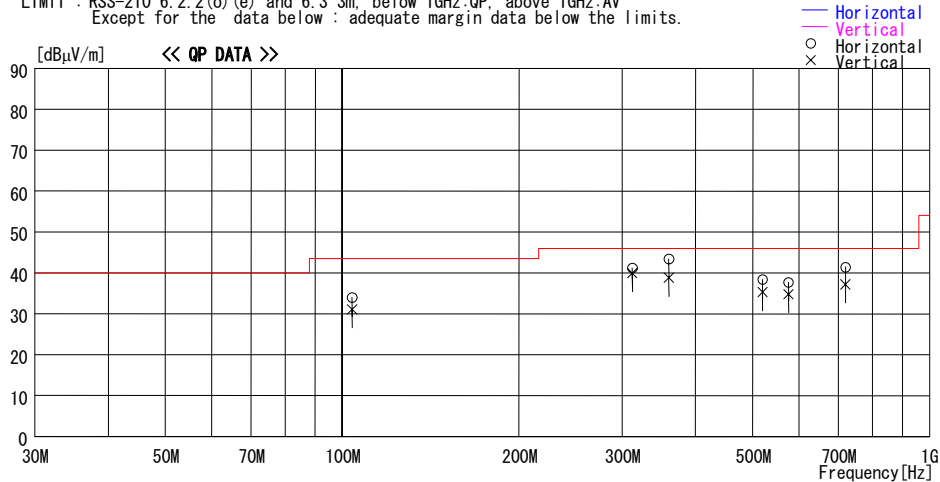
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/03/03 15:35:18

Applicant : NEC Infrontia Corporation
Kind of EUT : Mobile Terminal + Single station
Model No. : S1596-01
Serial No. : 525014A
Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 31 %
Operator : Kenichi Adachi

Mode / Remarks : Bluetooth Tx2480MHz / EUT-max-axis(H: X-axis, V: Z-axis) / with single station

LIMIT : RSS-210 6.2.2(o)(e) and 6.3 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	103.998	43.9	10.9	6.8	27.6	34.0	43.5	9.5	294	178
2	311.980	44.8	15.3	7.9	26.8	41.2	46.0	4.8	100	0
3	360.001	45.4	17.1	8.1	27.2	43.4	46.0	2.6	100	186
4	519.962	38.7	19.1	8.8	28.2	38.4	46.0	7.6	251	209
5	575.993	37.5	19.5	9.0	28.3	37.7	46.0	8.3	215	195
6	719.982	39.1	20.8	9.7	28.2	41.4	46.0	4.6	100	192
----- Vertical -----										
7	103.995	41.0	10.9	6.8	27.6	31.1	43.5	12.4	100	86
8	311.982	43.5	15.3	7.9	26.8	39.9	46.0	6.1	159	313
9	360.000	40.8	17.1	8.1	27.2	38.8	46.0	7.2	157	0
10	519.967	35.6	19.1	8.8	28.2	35.3	46.0	10.7	100	157
11	575.986	34.6	19.5	9.0	28.3	34.8	46.0	11.2	100	179
12	719.986	34.9	20.8	9.7	28.2	37.2	46.0	8.8	100	39

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission (FHSS)(above 1GHz) (Bluetooth, Ch:Low)

Company : NEC Infrontia Corporation	UL Apex Co., Ltd.	Head Office EMC Lab. No.1&2 Semi Anechoic Chamber
Equipment : Mobile Terminal	REPORT NO : 25BE0219-HO	
Model : S1596-01	REGULATION : RSS-210 6.2.2(o)(e) and 6.3	
Sample No. : 525014A	TEST DISTANCE : 3/1m	
Power : AC 120 V / 60 Hz	DATE : 03/02/2005	: 03/03/2005
Mode : Bluetooth, Tx 2402MHz	TEMPERATURE : 23deg.C	: 21deg.C
	HUMIDITY : 25%	: 33%
Remarks : Hor X , Ver Z-axis	ENGINEER : Mitsuru Fujimura	

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1296.0	67.2	62.1	23.2	39.8	4.1	0.0	54.7	49.6	74.0	19.3	24.4
2	2390.0	57.8	58.0	31.0	39.9	5.5	0.0	54.4	54.6	74.0	19.6	19.4
3*	2400.0	79.8	79.0	30.9	39.9	5.5	0.0	76.3	75.5	74.0	-	-
4	4804.0	48.8	48.7	34.9	41.2	8.0	1.0	51.5	51.4	74.0	22.5	22.6
5	7206.0	46.7	47.1	37.6	40.4	10.0	0.4	54.3	54.7	74.0	19.7	19.3
6	9608.0	44.7	44.8	36.3	39.5	11.8	0.1	53.4	53.5	74.0	20.7	20.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12010.4	48.0	46.5	41.4	39.6	13.7	0.0	54.0	52.5	74.0	20.0	21.5
8	14412.0	45.6	45.3	41.7	41.0	15.6	0.0	52.4	52.1	74.0	21.6	21.9
9	16814.0	44.9	44.9	44.7	41.7	17.1	0.0	55.5	55.5	74.0	18.5	18.5
10	19216.0	44.7	43.1	40.1	34.1	18.6	0.0	59.8	58.2	74.0	14.2	15.8
11	21618.0	44.8	45.6	39.8	34.8	19.4	0.0	59.7	60.5	74.0	14.3	13.5
12	24020.0	45.2	45.4	40.4	35.5	21.6	0.0	62.2	62.4	74.0	11.8	11.6

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1296.0	60.4	51.1	23.2	39.8	4.1	0.0	47.9	38.6	54.0	6.1	15.4
2	2390.0	44.7	44.5	31.0	39.9	5.5	0.0	41.3	41.1	54.0	12.7	12.9
3*	2400.0	67.4	67.5	30.9	39.9	5.5	0.0	63.9	64.0	54.0	-	-
4	4804.0	35.9	35.8	34.9	41.2	8.0	1.0	38.6	38.5	54.0	15.4	15.5
5	7206.0	33.8	33.8	37.6	40.4	10.0	0.4	41.4	41.4	54.0	12.6	12.6
6	9608.0	31.7	31.7	36.3	39.5	11.8	0.1	40.4	40.4	54.0	13.6	13.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12010.4	35.6	33.3	41.4	39.6	13.7	0.0	41.6	39.3	54.0	12.4	14.7
8	14412.0	32.3	32.2	41.7	41.0	15.6	0.0	39.1	39.0	54.0	15.0	15.0
9	16814.0	32.1	32.0	44.7	41.7	17.1	0.0	42.7	42.6	54.0	11.3	11.4
10	19216.0	31.2	31.2	40.1	34.1	18.6	0.0	46.3	46.3	54.0	7.7	7.7
11	21618.0	32.3	32.3	39.8	34.8	19.4	0.0	47.2	47.2	54.0	6.8	6.8
12	24020.0	32.6	32.5	40.4	35.5	21.6	0.0	49.6	49.5	54.0	4.4	4.5

* Reference data

20dBc(Fundamental 2402MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR [dBuV/m]	VER		HOR [dB]	VER [dB]
		[dBuV]										
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2402.0	103.6	103.2	30.9	39.9	5.5	0.0	100.1	99.7	-	-	-
3	2400.0	64.6	62.8	30.9	39.9	5.5	0.0	61.1	59.3	Funda-20dB	19.0	20.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission (FHSS)(above 1GHz)
(Bluetooth, Ch:Mid)
DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.1&2 Semi Anechoic Chamber

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Mobile Terminal	REGULATION	: RSS-210 6.2.2(o)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: 525014A	DATE	: 03/02/2005 : 03/03/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 23deg.C : 21deg.C
Mode	: Bluetooth, Tx 2441MHz	HUMIDITY	: 25% : 33%
Remarks	: Hor X , Ver Z-axis	ENGINEER	: Mitsuru Fujimura

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1295.9	66.2	63.7	23.2	39.8	4.1	0.0	53.7	51.2	74.0	20.3	22.8
2	4882.0	49.1	48.6	35.3	41.2	8.0	1.0	52.2	51.7	74.0	21.8	22.4
3	7323.0	47.0	46.7	37.8	40.4	10.0	0.5	54.9	54.6	74.0	19.1	19.4
4	9764.0	44.8	44.8	36.2	39.6	12.0	0.2	53.6	53.6	74.0	20.5	20.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12205.0	46.3	47.0	41.5	39.8	13.8	0.0	52.3	53.0	74.0	21.7	21.0
6	14646.0	45.4	45.6	42.2	40.9	15.8	0.0	53.0	53.2	74.0	21.0	20.8
7	17087.0	45.0	44.8	44.5	41.8	17.1	0.0	55.3	55.1	74.0	18.7	19.0
8	19528.0	44.3	44.0	40.3	34.3	18.9	0.0	59.7	59.4	74.0	14.3	14.6
9	21969.0	45.7	44.9	39.8	34.2	19.4	0.0	61.2	60.4	74.0	12.8	13.6
10	24410.0	43.9	44.1	40.4	35.8	21.6	0.0	60.6	60.8	74.0	13.4	13.2

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1295.9	59.3	55.8	23.2	39.8	4.1	0.0	46.8	43.3	54.0	7.2	10.7
2	4882.0	36.0	35.9	35.3	41.2	8.0	1.0	39.1	39.0	54.0	14.9	15.0
3	7323.0	33.7	33.7	37.8	40.4	10.0	0.5	41.6	41.6	54.0	12.4	12.4
4	9764.0	31.6	31.6	36.2	39.6	12.0	0.2	40.4	40.4	54.0	13.6	13.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12205.0	33.5	33.5	41.5	39.8	13.8	0.0	39.5	39.5	54.0	14.5	14.5
6	14646.0	32.6	32.1	42.2	40.9	15.8	0.0	40.2	39.7	54.0	13.8	14.4
7	17087.0	31.8	31.7	44.5	41.8	17.1	0.0	42.1	42.0	54.0	11.9	12.0
8	19528.0	31.5	31.5	40.3	34.3	18.9	0.0	46.9	46.9	54.0	7.1	7.1
9	21969.0	32.2	32.2	39.8	34.2	19.4	0.0	47.7	47.7	54.0	6.3	6.3
10	24410.0	31.2	31.2	40.4	35.8	21.6	0.0	47.9	47.9	54.0	6.1	6.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission (FHSS)(above 1GHz)
(Bluetooth, Ch:High)
DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.1&2 Semi Anechoic Chamber

Company : NEC Infrontia Corporation	REPORT NO : 25BE0219-HO	
Equipment : Mobile Terminal	REGULATION : RSS-210 6.2.2(o)(e) and 6.3	
Model : S1596-01	TEST DISTANCE : 3/1m	
Sample No. : 525014A	DATE : 03/02/2005	: 03/03/2005
Power : AC 120 V / 60 Hz	TEMPERATURE : 23deg.C	: 21deg.C
Mode : Bluetooth, Tx 2480MHz	HUMIDITY : 25%	: 33%
Remarks : Hor X , Ver Z-axis	ENGINEER : Mitsuru Fujimura	

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV/m]					[dBuV/m]	[dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1296.0	66.3	65.3	23.3	39.7	4.2	0.0	54.1	53.1	74.0	19.9	20.9
2	2484.7	57.0	54.0	30.8	40.0	5.5	0.0	53.3	50.3	74.0	20.7	23.7
3	4960.0	49.1	49.5	35.8	41.3	8.1	1.1	52.8	53.2	74.0	21.2	20.8
4	7440.0	46.8	46.8	37.9	40.3	10.2	0.7	55.3	55.3	74.0	18.7	18.7
5	9920.0	45.9	46.0	36.2	39.6	12.1	0.3	54.9	55.0	74.0	19.2	19.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12400.0	46.6	47.0	41.6	40.0	14.0	0.0	52.7	53.1	74.0	21.3	20.9
7	14880.0	45.5	45.6	42.6	40.9	15.9	0.0	53.6	53.7	74.0	20.4	20.3
8	17360.0	45.6	46.0	44.4	41.6	17.2	0.0	56.1	56.5	74.0	17.9	17.5
9	19840.0	43.6	44.5	40.4	34.8	19.2	0.0	58.9	59.8	74.0	15.1	14.2
10	22320.0	44.3	44.7	39.8	34.1	19.8	0.0	60.3	60.7	74.0	13.7	13.3
11	24800.0	44.5	43.5	40.7	35.1	21.6	0.0	62.2	61.2	74.0	11.8	12.8

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1296.0	59.6	55.2	23.3	39.7	4.2	0.0	47.4	43.0	54.0	6.6	11.0
2	2484.7	44.9	41.7	30.8	40.0	5.5	0.0	41.2	38.0	54.0	12.9	16.0
3	4960.0	36.2	36.5	35.8	41.3	8.1	1.1	39.9	40.2	54.0	14.1	13.9
4	7440.0	33.8	33.8	37.9	40.3	10.2	0.7	42.3	42.3	54.0	11.7	11.7
5	9920.0	32.5	32.5	36.2	39.6	12.1	0.3	41.5	41.5	54.0	12.5	12.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12400.0	33.5	33.5	41.6	40.0	14.0	0.0	39.6	39.6	54.0	14.4	14.4
7	14880.0	32.4	32.4	42.6	40.9	15.9	0.0	40.5	40.5	54.0	13.5	13.5
8	17360.0	32.2	32.2	44.4	41.6	17.2	0.0	42.7	42.7	54.0	11.3	11.3
9	19840.0	31.6	31.6	40.4	34.8	19.2	0.0	46.9	46.9	54.0	7.1	7.1
10	22320.0	31.8	31.8	39.8	34.1	19.8	0.0	47.8	47.8	54.0	6.2	6.2
11	24800.0	31.2	31.2	40.7	35.1	21.6	0.0	48.9	48.9	54.0	5.1	5.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

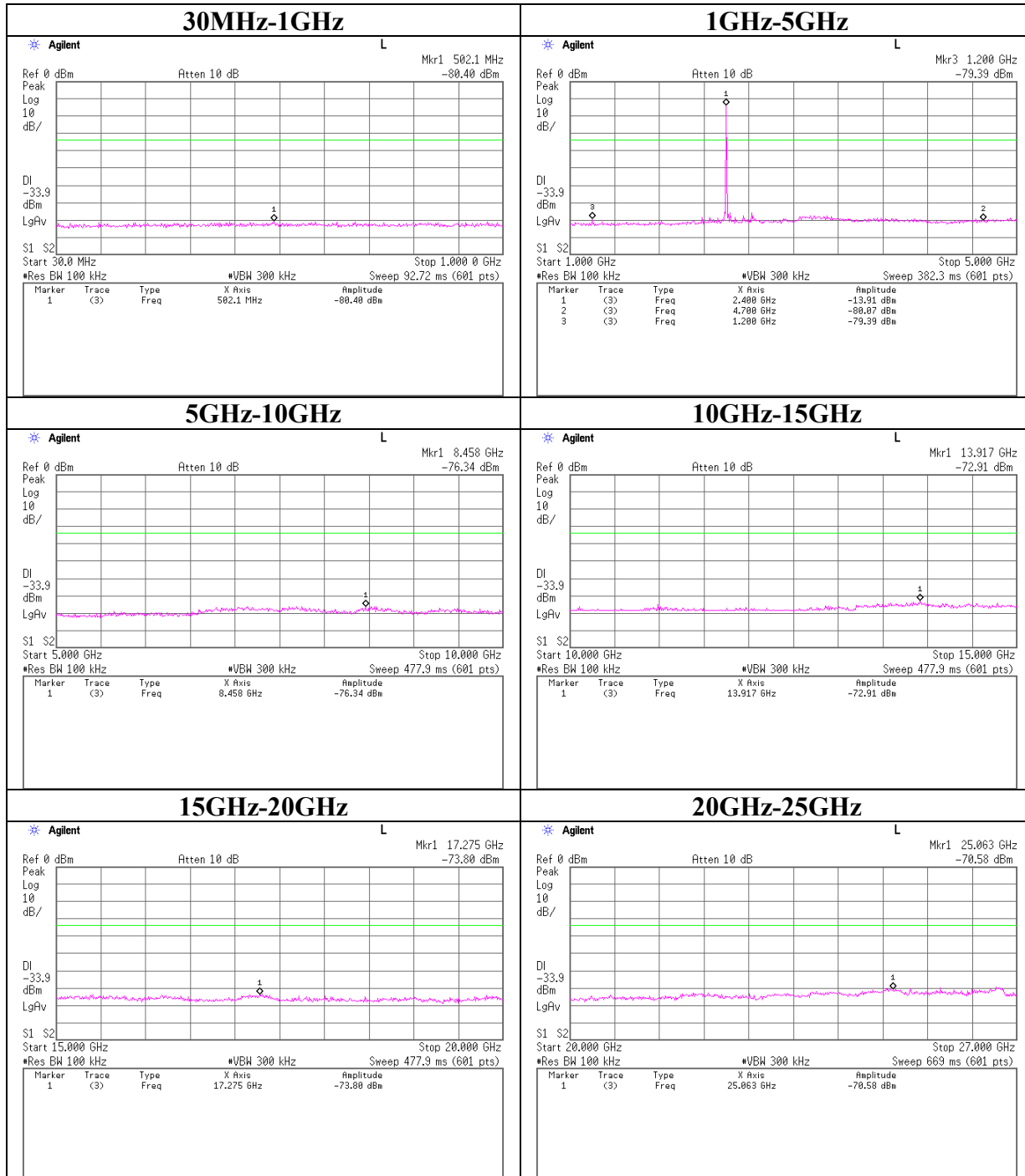
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

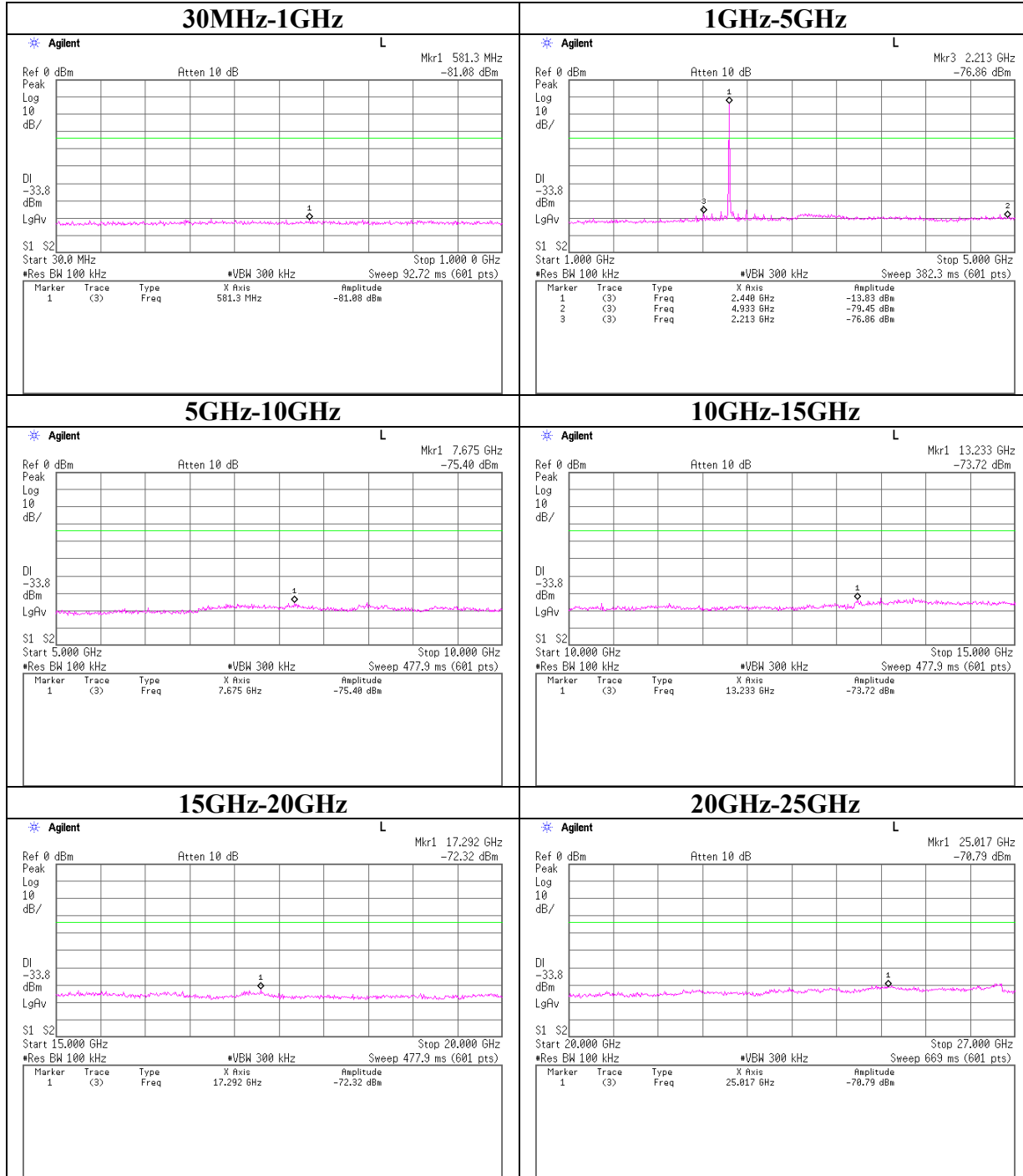
Conducted Spurious Emission (FHSS)

Ch:Low



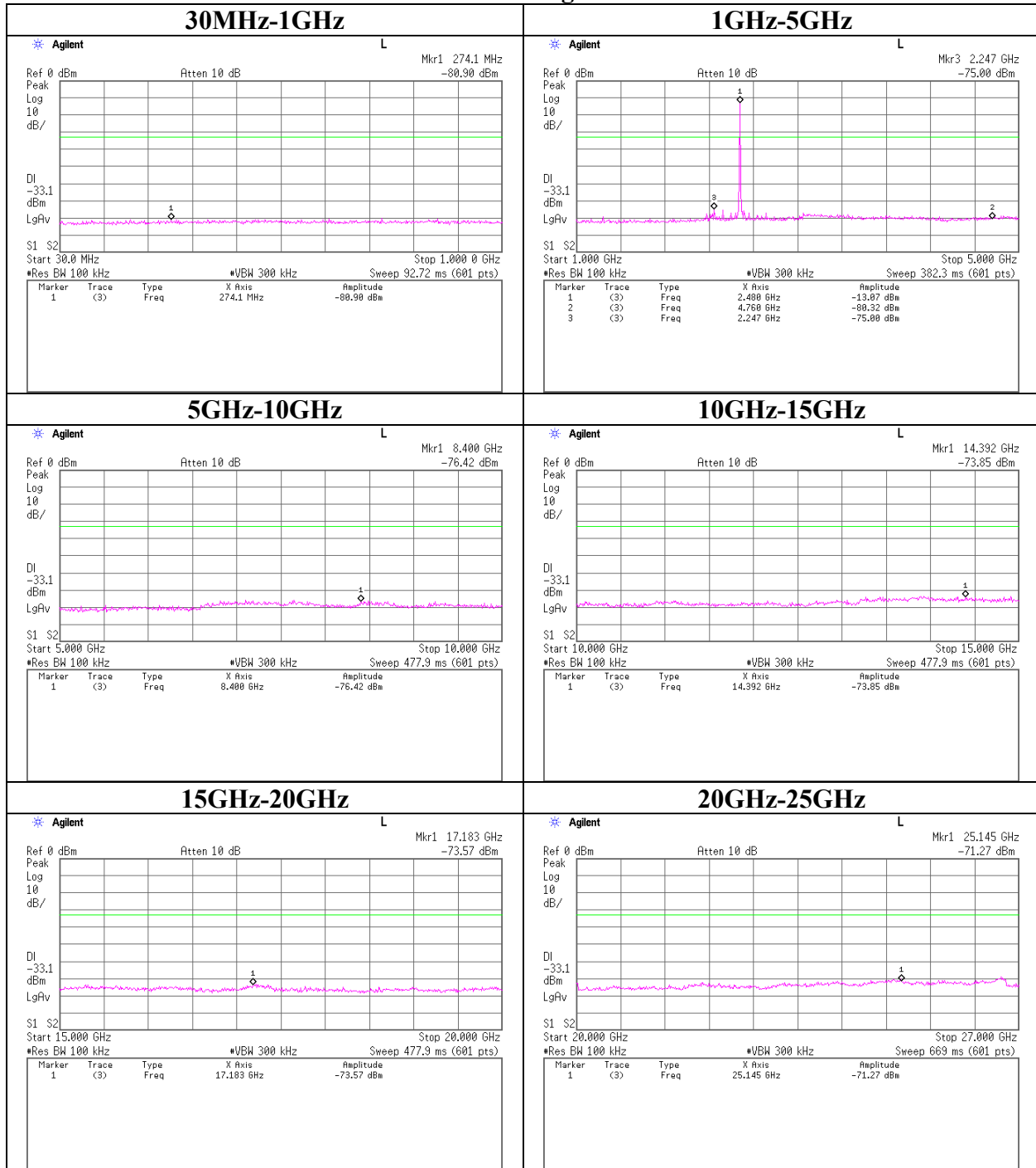
Conducted Spurious Emission (FHSS)

Ch:Mid

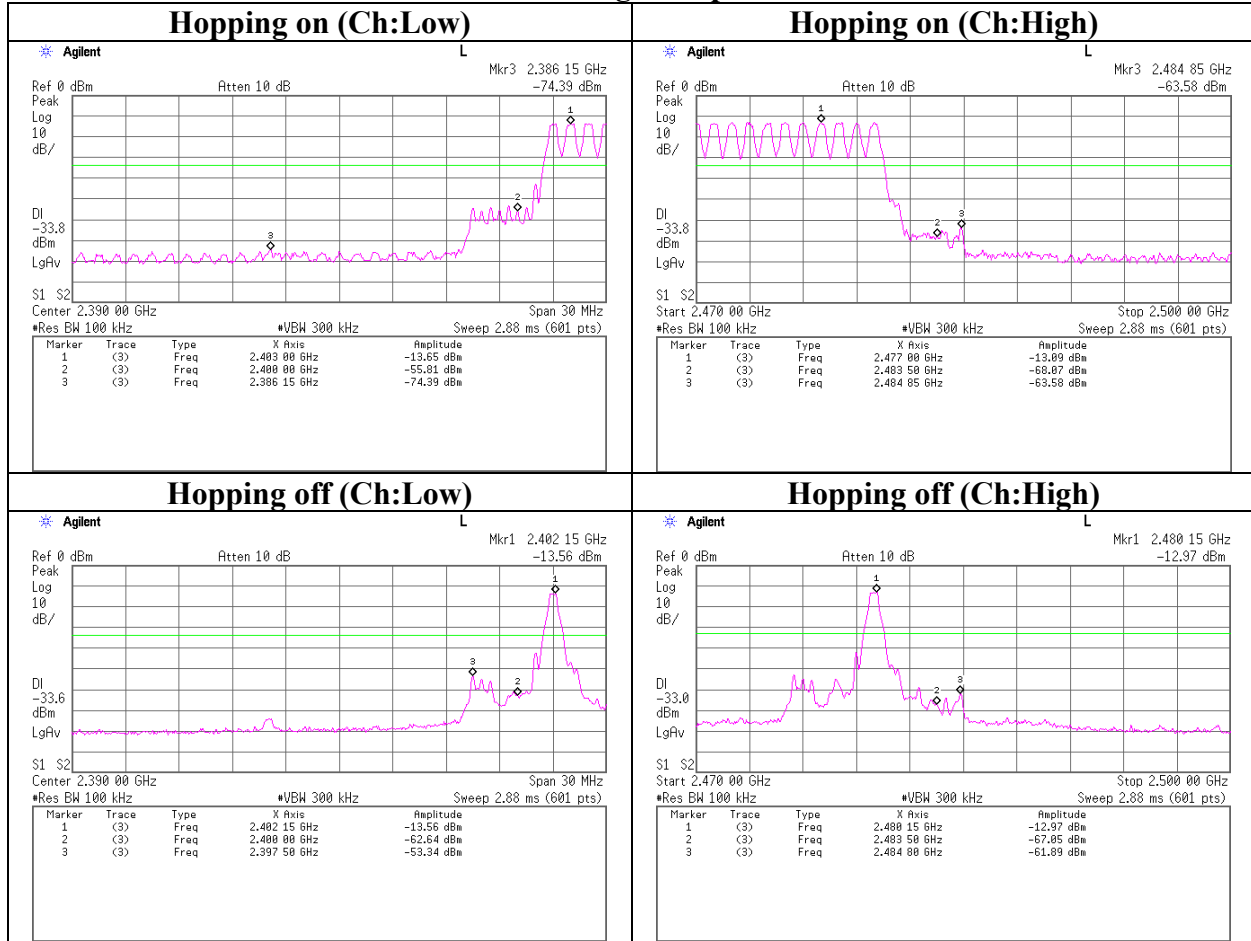


Conducted Spurious Emission (FHSS)

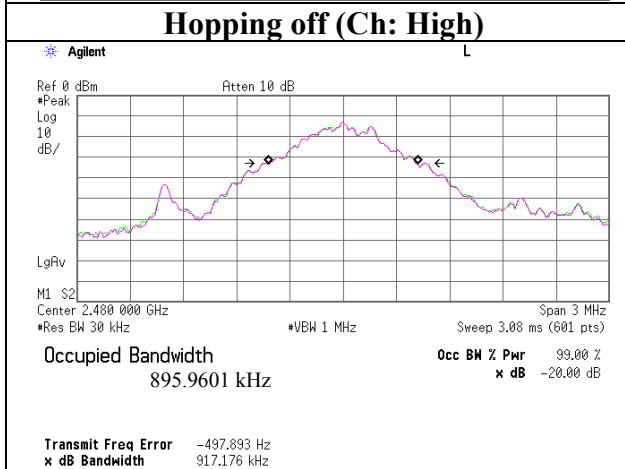
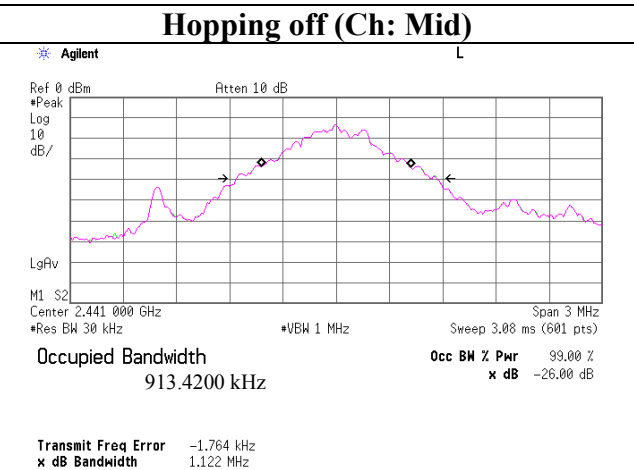
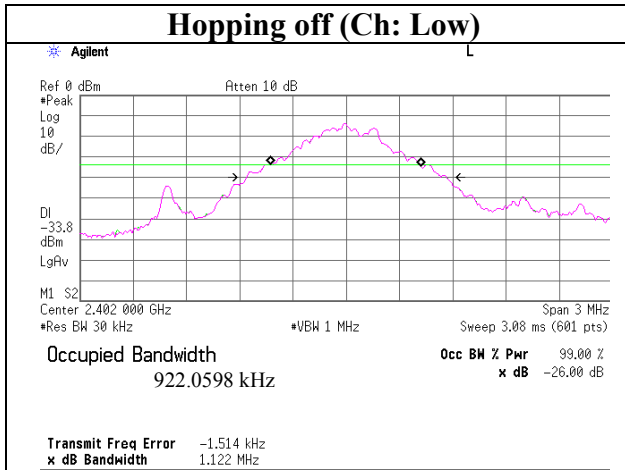
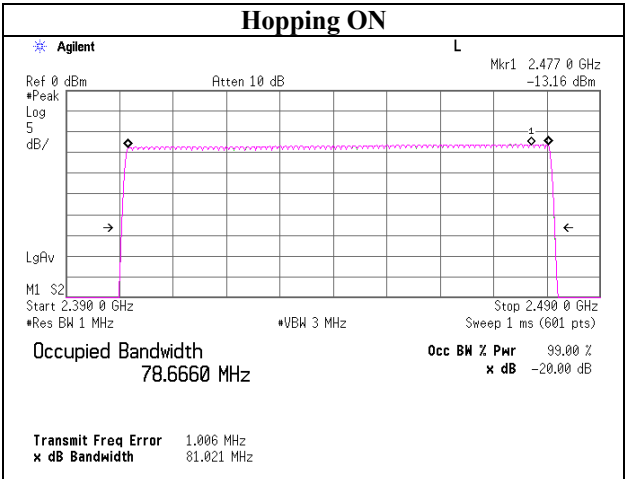
Ch:High



Conducted Spurious Emission (FHSS)
Band Edge compliance



99% Occupied Bandwidth(FHSS)



IDSSS and other forms of modulation

6dB Bandwidth(DSSS and other forms of modulation)

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

Company : NEC Infrontia Corporation
Equipment : Order Terminal
Model : S1596-01
Sample No. : 525006A
Power : AC 120 V / 60Hz
Mode : Tx (ch1,6,11)

REPORT NO : 25BE0219-HO
REGULATION : RSS-210 5.9.1
TEST DISTANCE : -
DATE : 03/24/2005
TEMPERATURE : 24 deg.C.
HUMIDITY : 30%
ENGINEER : Kenichi Adachi

[IEEE802.11b, 1Mbps, Ant-0]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	10.133	500.0
Mid	2437.0	10.130	500.0
High	2462.0	10.132	500.0

[IEEE802.11g, 54Mbps, Ant-0]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	16.455	500.0
Mid	2437.0	16.437	500.0
High	2462.0	16.485	500.0

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

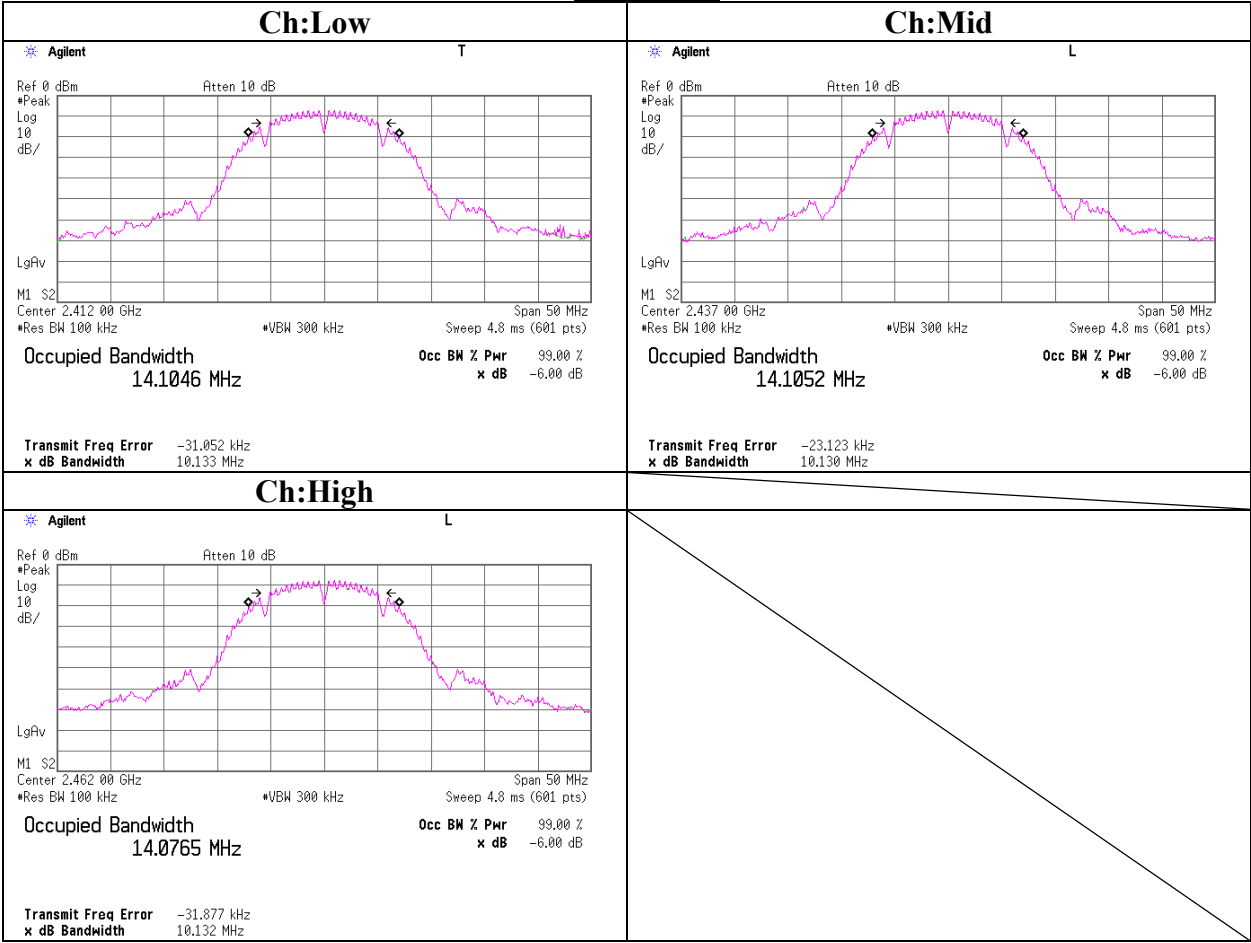
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

6dB Bandwidth(DSSS and other forms of modulation)

11b, 1Mbps



Maximum Peak OutPut Power (DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Measurement Room

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2(o)(b)
Model	: S1596-01	TEST DISTANCE	: -
Sample No.	: 525006A	DATE	: 03/24/2005
Power	: AC 120 V / 60Hz	TEMPERATURE	: 24 deg.C.
Mode	: Tx(ch1,6,11)	HUMIDITY	: 30%
		ENGINEER	: Kenichi Adachi

[IEEE802.11b] Worst data (1Mbps, Ant-0)

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	6.30	1.02	10.00	17.32	30.00	12.68
Mid	2437.0	5.21	1.00	10.00	16.21	30.00	13.79
High	2462.0	4.95	0.97	10.00	15.92	30.00	14.08

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer and UL-Apex) + Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

[IEEE802.11g] Worst data (54Mbps, Ant-0)

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	6.73	1.02	10.00	17.75	30.00	12.25
Mid	2437.0	6.23	1.00	10.00	17.23	30.00	12.77
High	2462.0	6.08	0.97	10.00	17.05	30.00	12.95

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer and UL-Apex) + Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

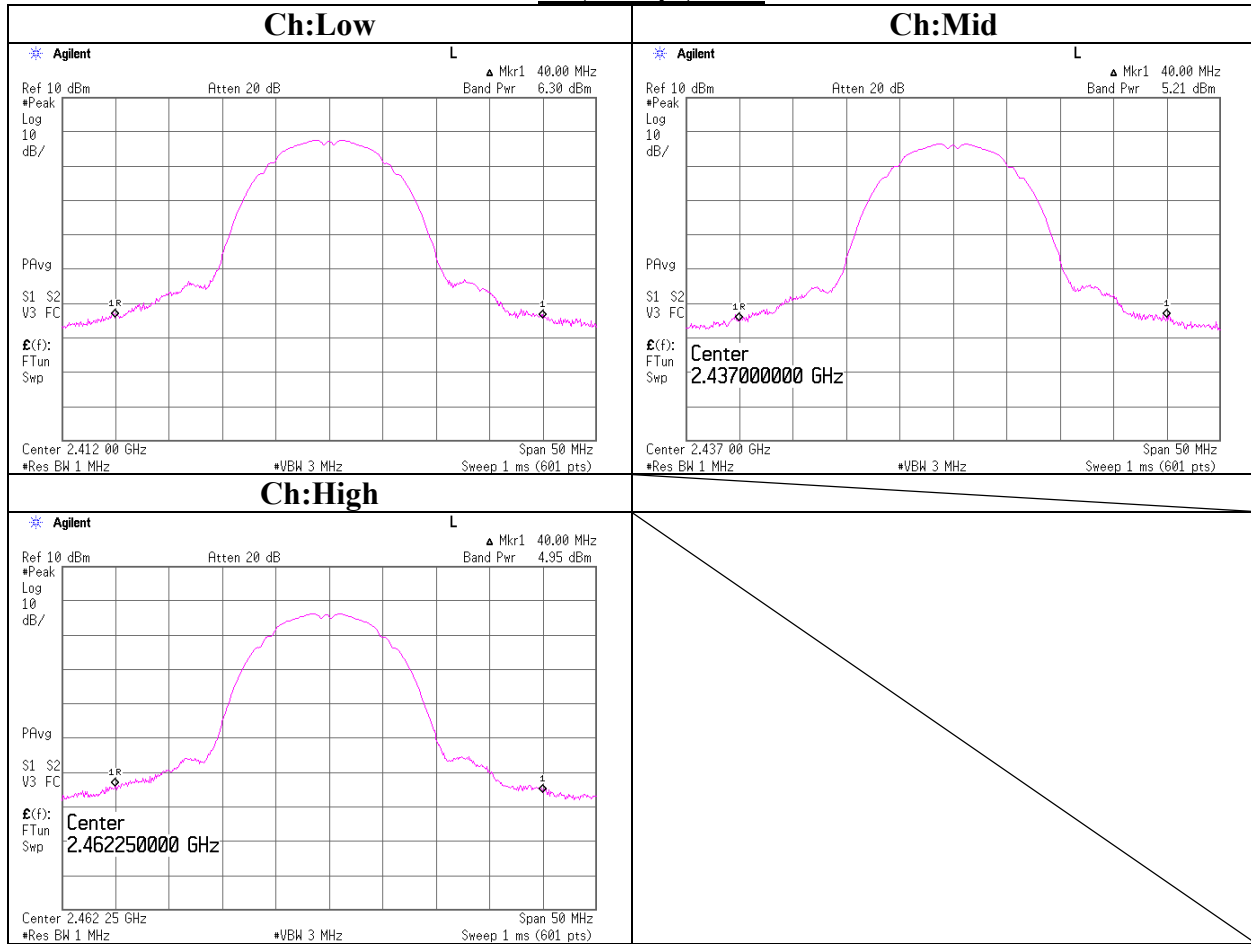
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Maximum Peak OutPut Power (DSSS and other forms of modulation)

11b, 1Mbps, Ant-0



UL Apex Co., Ltd.

Head Office EMC Lab.

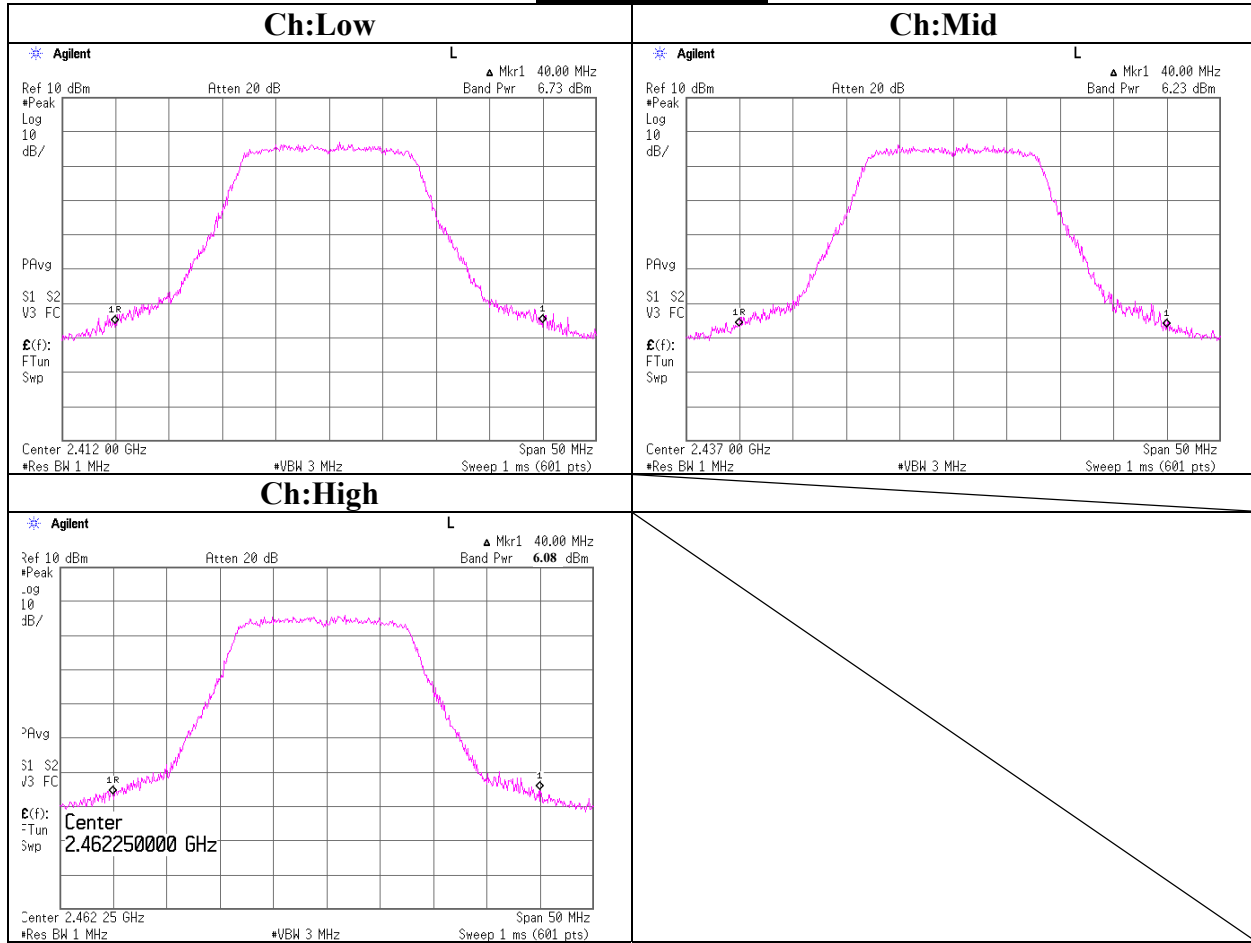
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Maximum Peak OutPut Power (DSSS and other forms of modulation)
11g, 54Mbps, Ant-0



Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,Low

DATA OF RADIATED EMISSION TEST

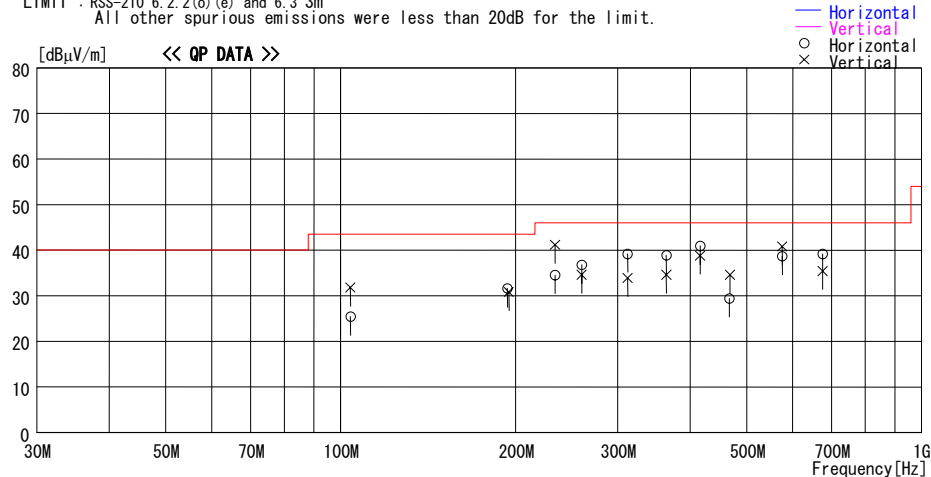
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/25 11:02:19

Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A
Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Yutaka Yoshida

Mode / Remarks: WLAN 11b/Tx 2412MHz/1Mbps/Hor Y-axis Ver Z-axis(MAX axis)

LIMIT : RSS-210 6.2.2(o)(e) and 6.3.3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	103.997	35.3	10.9	6.8	27.6	25.4	43.5	18.1	272	264
2	193.634	34.3	17.0	7.4	27.1	31.6	43.5	11.9	100	148
3	234.024	36.7	17.1	7.6	26.9	34.5	46.0	11.5	100	135
4	259.996	38.1	17.8	7.7	26.8	36.8	46.0	9.2	100	158
5	311.992	42.8	15.3	7.9	26.8	39.2	46.0	6.8	100	174
6	363.994	40.7	17.2	8.2	27.2	38.9	46.0	7.1	100	51
7	415.991	41.6	18.6	8.4	27.7	40.9	46.0	5.1	100	190
8	466.940	30.1	18.8	8.5	28.0	29.4	46.0	16.6	181	360
9	575.990	38.5	19.5	9.0	28.3	38.7	46.0	7.3	120	142
10	675.986	37.7	20.3	9.4	28.2	39.2	46.0	6.8	100	194
----- Vertical -----										
11	103.998	41.7	10.9	6.8	27.6	31.8	43.5	11.7	263	89
12	194.634	33.5	17.0	7.4	27.1	30.8	43.5	12.7	179	166
13	234.023	43.4	17.1	7.6	26.9	41.2	46.0	4.8	100	185
14	259.993	35.9	17.8	7.7	26.8	34.6	46.0	11.4	100	155
15	311.993	37.5	15.3	7.9	26.8	33.9	46.0	12.1	100	189
16	363.992	36.4	17.2	8.2	27.2	34.6	46.0	11.4	100	305
17	415.991	39.5	18.6	8.4	27.7	38.8	46.0	7.2	100	125
18	467.989	35.3	18.8	8.5	28.0	34.6	46.0	11.4	100	243
19	575.991	40.6	19.5	9.0	28.3	40.8	46.0	5.2	115	89
20	675.985	33.9	20.3	9.4	28.2	35.4	46.0	10.6	100	105

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,Mid

DATA OF RADIATED EMISSION TEST

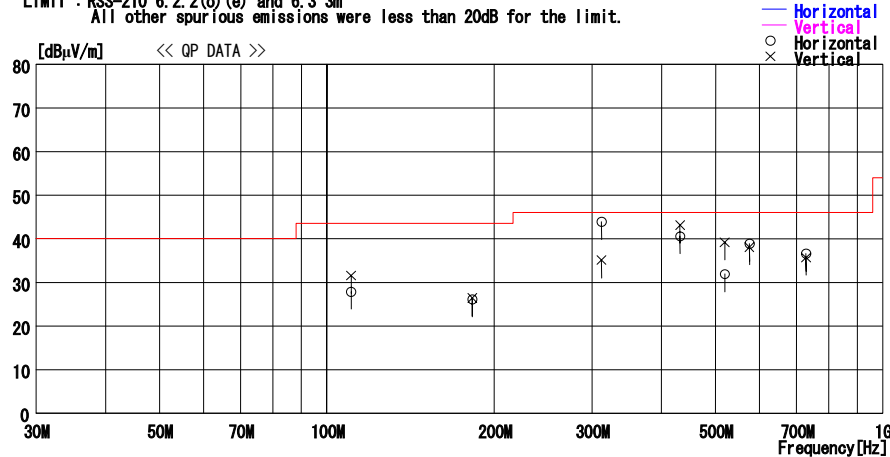
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/28 19:05:37

Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A
Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Keiichi Aoki

Mode / Remarks: WLAN 11b/Tx 2437MHz/1Mbps/Hor Y-axis Ver Y-axis(MAX axis)

LIMIT : RSS-210 6.2.2(c) (e) and 6.3 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	110.595	36.9	11.8	6.7	27.5	27.9	43.5	15.6	144	88
2	182.761	29.2	16.8	7.3	27.2	26.1	43.5	17.4	100	99
3	312.002	47.5	15.3	7.9	26.8	43.9	46.0	2.1	100	164
4	431.994	41.2	18.7	8.5	27.8	40.6	46.0	5.4	100	59
5	519.992	32.2	19.1	8.8	28.2	31.9	46.0	14.1	100	133
6	575.993	38.7	19.5	9.0	28.3	38.9	46.0	7.1	180	66
7	727.989	34.2	20.9	9.7	28.2	36.6	46.0	9.4	187	174
Vertical										
8	110.595	40.6	11.8	6.7	27.5	31.6	43.5	11.9	100	82
9	182.761	29.5	16.8	7.3	27.2	26.4	43.5	17.1	100	0
10	312.002	38.7	15.3	7.9	26.8	35.1	46.0	10.9	136	100
11	431.994	43.7	18.7	8.5	27.8	43.1	46.0	2.9	115	83
12	519.992	39.5	19.1	8.8	28.2	39.2	46.0	6.8	100	0
13	575.993	37.9	19.5	9.0	28.3	38.1	46.0	7.9	100	213
14	727.989	33.3	20.9	9.7	28.2	35.7	46.0	10.3	100	159

CHART:WITH FACTOR ANT TYPE: -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,High

DATA OF RADIATED EMISSION TEST

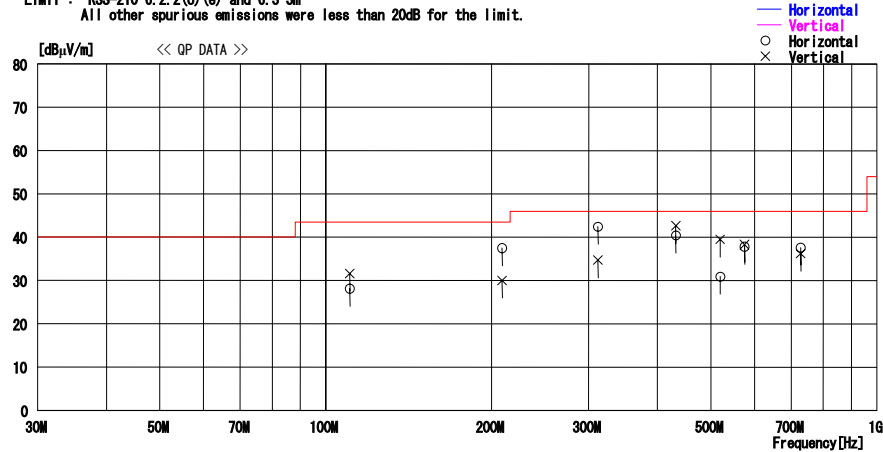
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/28 20:55:36

Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Keiichi Aoki

Mode / Remarks : WLAN 11b/Tx 2462MHz/1Mbps/Hor Y-axis Ver Y-axis(MAX axis)

LIMIT : RSS-210 6.2.2(c) (a) and 6.3 3m
All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	110.595	37.1	11.8	6.7	27.5	28.1	43.5	15.4	142	91
2	208.997	40.1	17.1	7.4	27.1	37.5	43.5	6.0	100	0
3	312.000	46.0	15.3	7.9	26.8	42.4	46.0	3.6	100	167
4	431.994	41.0	18.7	8.5	27.8	40.4	46.0	5.6	100	55
5	519.992	31.2	19.1	8.8	28.2	30.9	46.0	15.1	100	133
6	575.993	37.6	19.5	9.0	28.3	37.8	46.0	8.2	172	68
7	727.990	35.2	20.9	9.7	28.2	37.6	46.0	8.4	185	192
Vertical										
8	110.595	40.6	11.8	6.7	27.5	31.6	43.5	11.9	100	93
9	208.997	32.6	17.1	7.4	27.1	30.0	43.5	13.5	100	352
10	312.000	38.3	15.3	7.9	26.8	34.7	46.0	11.3	182	125
11	431.994	43.2	18.7	8.5	27.8	42.6	46.0	3.4	117	96
12	519.992	39.8	19.1	8.8	28.2	39.5	46.0	6.5	100	0
13	575.993	38.1	19.5	9.0	28.3	38.3	46.0	7.7	100	217
14	727.990	33.8	20.9	9.7	28.2	36.2	46.0	9.8	100	165

CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g,Low

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/28 21:46:07

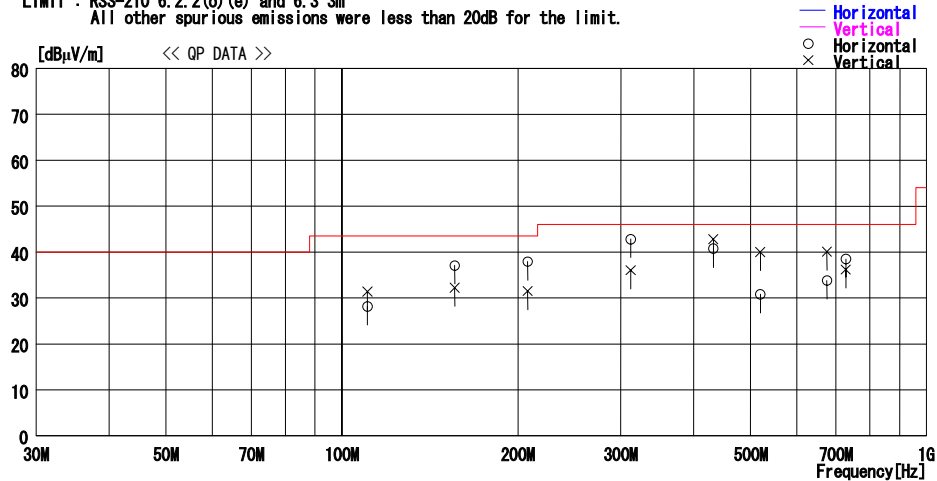
Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Keiichi Aoki

Mode / Remarks : WLAN 11g/Tx 2412MHz/54Mbps/Hor Y-axis Ver Y-axis(MAX axis)

LIMIT : RSS-210 6.2.2(o) (a) and 6.3 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	110.595	37.1	11.8	6.7	27.5	28.1	43.5	15.4	155	94
2	156.000	40.9	16.4	7.1	27.3	37.1	43.5	6.4	226	273
3	207.997	40.5	17.1	7.4	27.1	37.9	43.5	5.6	100	0
4	312.000	46.4	15.3	7.9	26.8	42.8	46.0	3.2	100	157
5	431.994	41.3	18.7	8.5	27.8	40.7	46.0	5.3	100	50
6	519.993	31.1	19.1	8.8	28.2	30.8	46.0	15.2	100	139
7	675.991	32.3	20.3	9.4	28.2	33.8	46.0	12.2	100	179
8	727.990	36.1	20.9	9.7	28.2	38.5	46.0	7.5	100	194
Vertical										
9	110.595	40.4	11.8	6.7	27.5	31.4	43.5	12.1	100	91
10	156.000	36.0	16.4	7.1	27.3	32.2	43.5	11.3	100	130
11	207.997	34.1	17.1	7.4	27.1	31.5	43.5	12.0	100	339
12	312.000	39.6	15.3	7.9	26.8	36.0	46.0	10.0	187	135
13	431.994	43.4	18.7	8.5	27.8	42.8	46.0	3.2	121	105
14	519.993	40.3	19.1	8.8	28.2	40.0	46.0	6.0	100	0
15	675.991	38.6	20.3	9.4	28.2	40.1	46.0	5.9	100	0
16	727.990	33.8	20.9	9.7	28.2	36.2	46.0	9.8	100	170

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g, Mid

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/28 22:49:24

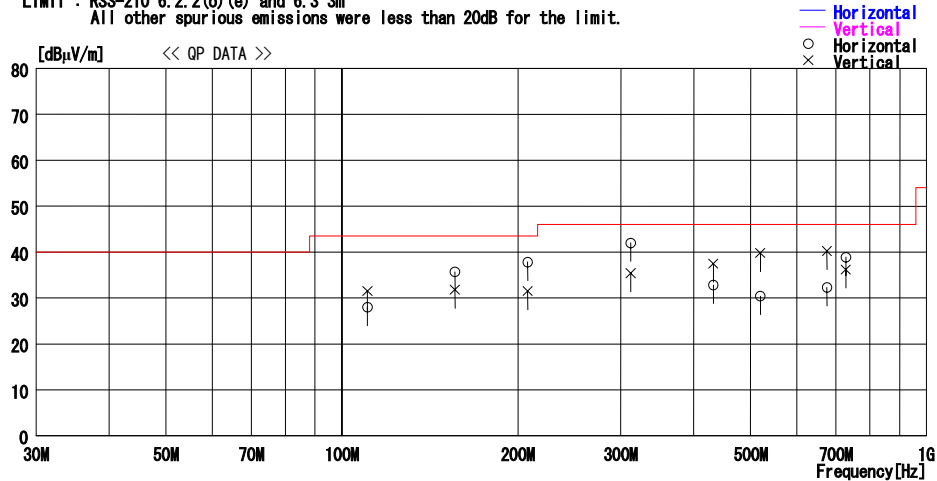
Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Keiichi Aoki

Mode / Remarks : WLAN 11g/Tx 2437MHz/54Mbps/Hor Y-axis Ver Y-axis(MAX axis)

LIMIT : RSS-210 6.2.2(o) (a) and 6.3 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	110.595	37.0	11.8	6.7	27.5	28.0	43.5	15.5	146	86
2	156.090	39.5	16.4	7.1	27.3	35.7	43.5	7.8	207	272
3	207.997	40.4	17.1	7.4	27.1	37.8	43.5	5.7	100	0
4	312.000	45.6	15.3	7.9	26.8	42.0	46.0	4.0	100	148
5	431.994	33.4	18.7	8.5	27.8	32.8	46.0	13.2	100	50
6	519.994	30.7	19.1	8.8	28.2	30.4	46.0	15.6	100	133
7	675.992	30.8	20.3	9.4	28.2	32.3	46.0	13.7	100	249
8	727.990	36.5	20.9	9.7	28.2	38.9	46.0	7.1	100	188
Vertical										
9	110.595	40.5	11.8	6.7	27.5	31.5	43.5	12.0	100	91
10	156.090	35.6	16.4	7.1	27.3	31.8	43.5	11.7	100	123
11	207.997	34.1	17.1	7.4	27.1	31.5	43.5	12.0	100	338
12	312.000	39.0	15.3	7.9	26.8	35.4	46.0	10.6	187	130
13	431.994	38.1	18.7	8.5	27.8	37.5	46.0	8.5	115	173
14	519.994	40.1	19.1	8.8	28.2	39.8	46.0	6.2	100	0
15	675.992	38.7	20.3	9.4	28.2	40.2	46.0	5.8	100	0
16	727.990	33.8	20.9	9.7	28.2	36.2	46.0	9.8	100	171

CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g,High

DATA OF RADIATED EMISSION TEST

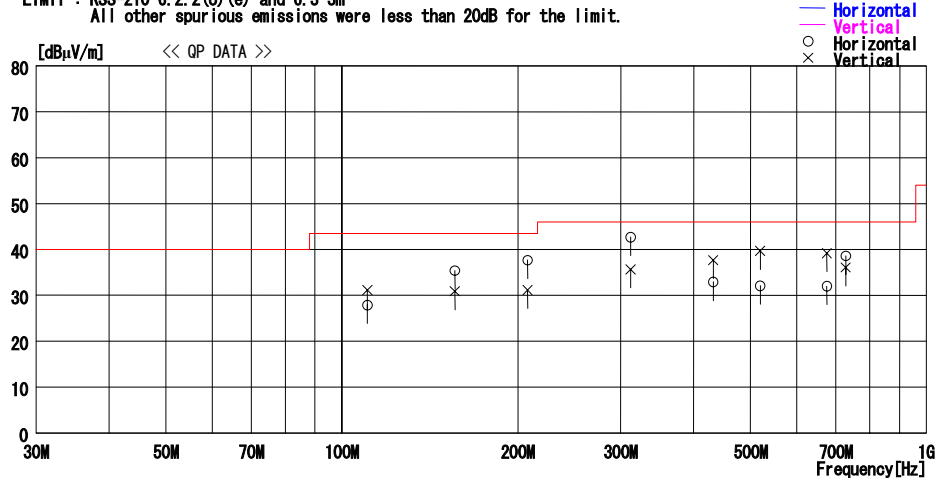
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/03/28 23:27:23

Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A
Report No. : 25BE0219-HO
Power : AC 120V / 60Hz
Temp./Humi. : 20 deg.C / 28 %
Operator : Keiichi Aoki

Mode / Remarks : WLAN 11g/Tx 2462MHz/54Mbps/Hor Y-axis Ver Y-axis(MAX axis)

LIMIT : RSS-210 6.2.2(a) and 6.3 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
— Horizontal —										
1	110.595	36.9	11.8	6.7	27.5	27.9	43.5	15.6	144	91
2	156.090	39.2	16.4	7.1	27.3	35.4	43.5	8.1	138	310
3	207.997	40.3	17.1	7.4	27.1	37.7	43.5	5.8	100	0
4	312.000	46.3	15.3	7.9	26.8	42.7	46.0	3.3	100	165
5	431.992	33.5	18.7	8.5	27.8	32.9	46.0	13.1	100	75
6	519.994	32.4	19.1	8.8	28.2	32.1	46.0	13.9	100	127
7	675.992	30.5	20.3	9.4	28.2	32.0	46.0	14.0	100	227
8	727.990	36.2	20.9	9.7	28.2	36.6	46.0	7.4	100	186
— Vertical —										
9	110.595	40.2	11.8	6.7	27.5	31.2	43.5	12.3	100	97
10	156.090	34.7	16.4	7.1	27.3	30.9	43.5	12.6	100	128
11	207.997	33.8	17.1	7.4	27.1	31.2	43.5	12.3	100	351
12	312.000	39.3	15.3	7.9	26.8	35.7	46.0	10.3	180	159
13	431.992	38.3	18.7	8.5	27.8	37.7	46.0	8.3	115	158
14	519.994	40.0	19.1	8.8	28.2	39.7	46.0	6.3	100	0
15	675.992	37.7	20.3	9.4	28.2	39.2	46.0	6.8	100	0
16	727.990	33.7	20.9	9.7	28.2	36.1	46.0	9.9	100	160

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b, Mid + Bluetooth hopping on

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/03/26 11:50:11

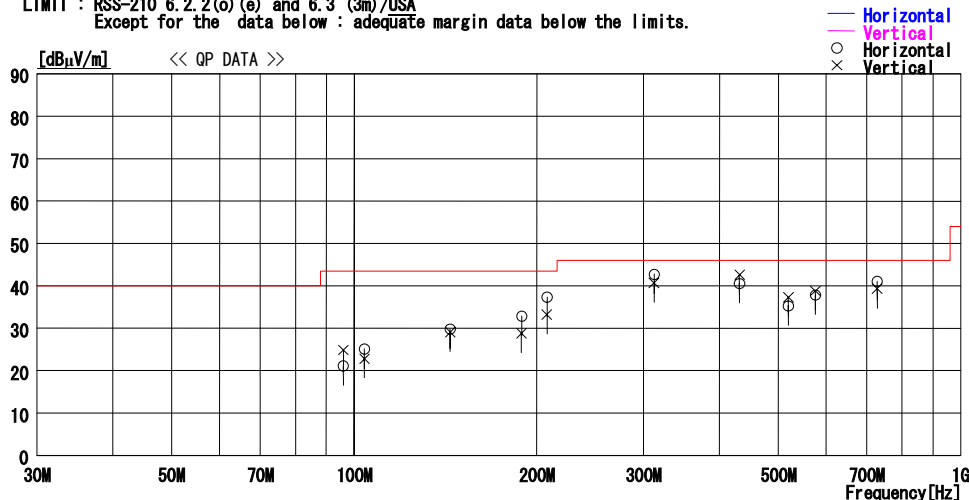
Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A

Report No. : 25BE0219-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 23deg. C / 28%
Operator : Norihisa Hashimoto

Mode / Remarks : W-LAN 11b 1Mbps Ch6(2437MHz) / BT Hopping / Hor:Y Ver:Z (Max-Axis)

LIMIT : RSS-210 6.2.2(o) (e) and 6.3 (3m)/USA

Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
—— Horizontal ——										
1	95.985	31.4	9.4	7.9	27.6	21.1	43.5	22.4	344	322
2	104.002	33.9	10.8	8.2	27.8	25.1	43.5	18.4	157	101
3	144.015	34.2	14.7	8.6	27.7	29.8	43.5	13.7	223	359
4	188.807	34.2	16.9	8.9	27.2	32.8	43.5	10.7	100	288
5	207.993	38.2	17.1	9.3	27.2	37.4	43.5	6.1	143	359
6	311.989	45.1	15.0	10.0	27.3	42.8	46.0	3.3	100	359
7	431.983	39.6	18.2	10.9	28.1	40.6	46.0	5.4	100	87
8	519.983	33.7	18.9	11.3	28.6	35.3	46.0	10.7	216	285
9	575.976	35.3	19.6	11.7	28.8	37.8	46.0	8.2	240	159
10	727.971	36.5	20.9	12.4	28.7	41.1	46.0	4.9	100	190
—— Vertical ——										
11	96.002	35.2	9.4	7.9	27.6	24.9	43.5	18.6	100	285
12	103.997	31.6	10.8	8.2	27.8	22.8	43.5	20.7	100	268
13	144.018	33.5	14.7	8.6	27.7	29.1	43.5	14.4	100	93
14	188.687	30.2	16.9	8.9	27.2	28.8	43.5	14.7	100	250
15	207.982	34.0	17.1	9.3	27.2	33.2	43.5	10.3	216	356
16	311.982	43.0	15.0	10.0	27.3	40.7	46.0	5.3	183	225
17	431.985	41.6	18.2	10.9	28.1	42.6	46.0	3.4	123	149
18	519.984	35.7	18.9	11.3	28.6	37.3	46.0	8.7	100	7
19	575.981	36.3	19.6	11.7	28.8	38.8	46.0	7.2	100	74
20	727.975	34.7	20.9	12.4	28.7	39.3	46.0	6.7	117	291

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(below 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g, Mid + Bluetooth hopping on

DATA OF RADIATED EMISSION TEST

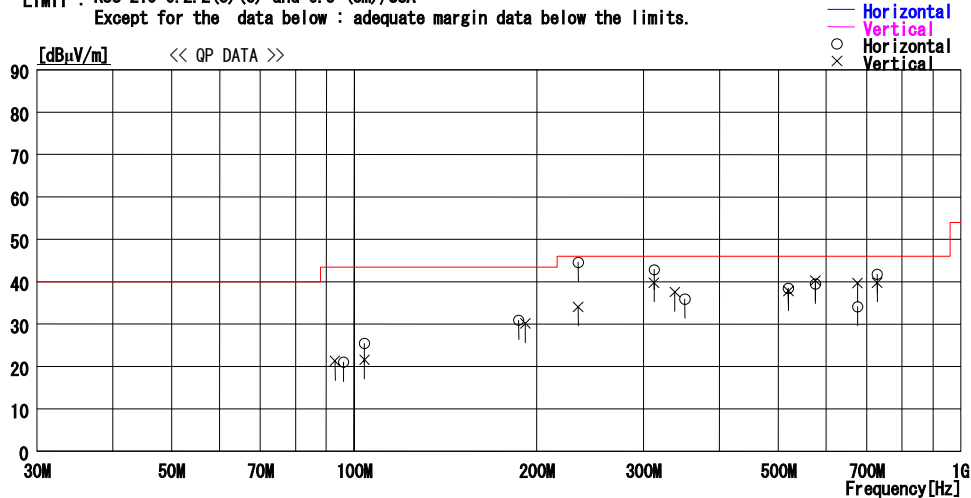
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/03/26 09:54:52

Applicant : NEC Infrontia Corporation
Kind of EUT : Order Terminal
Model No. : S1596-01
Serial No. : 525014A
Report No. : 25BE0219-HO
Power : AC120V / 60Hz
Temp./Humi. : 23deg. C / 28%
Operator : Norihisa Hashimoto

Mode / Remarks : W-LAN 11g 54Mbps Ch6(2437MHz) / BT Hopping / Hor:Y Ver:Z (Max-Axis)

LIMIT : RSS-210 6.2.2(o) (e) and 6.3 (3m)/USA

Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	96.002	31.3	9.4	7.9	27.6	21.0	43.5	22.5	343	312
2	103.982	34.3	10.8	8.2	27.8	25.5	43.5	18.0	185	111
3	186.703	32.4	16.8	8.9	27.2	30.9	43.5	12.6	202	289
4	233.989	45.1	17.3	9.5	27.3	44.6	46.0	1.4	140	355
5	311.986	45.2	15.0	10.0	27.3	42.9	46.0	3.1	100	205
6	350.999	36.8	16.3	10.4	27.5	36.0	46.0	10.1	100	215
7	519.979	36.9	18.9	11.3	28.6	38.5	46.0	7.5	193	310
8	575.989	37.0	19.6	11.7	28.8	39.5	46.0	6.5	115	289
9	675.982	30.1	20.6	12.2	28.8	34.1	46.0	11.9	131	180
10	727.984	37.1	20.9	12.4	28.7	41.7	46.0	4.3	108	187
Vertical										
11	92.976	32.1	8.9	7.9	27.6	21.3	43.5	22.2	100	0
12	104.000	30.4	10.8	8.2	27.8	21.6	43.5	21.9	105	297
13	191.513	31.7	16.9	8.9	27.3	30.2	43.5	13.3	100	281
14	233.986	34.6	17.3	9.5	27.3	34.1	46.0	11.9	182	241
15	311.976	42.1	15.0	10.0	27.3	39.8	46.0	6.2	210	212
16	337.978	38.9	15.9	10.3	27.5	37.6	46.0	8.4	139	0
17	519.977	36.1	18.9	11.3	28.6	37.7	46.0	8.3	100	0
18	575.985	37.7	19.6	11.7	28.8	40.2	46.0	5.8	100	69
19	675.978	35.7	20.6	12.2	28.8	39.7	46.0	6.3	100	274
20	727.976	35.2	20.9	12.4	28.7	39.8	46.0	6.2	115	300

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,Low

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chambe

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2(o)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: 525014A	DATE	: 03/25/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: 11b 1Mbps, Tx 2412MHz	HUMIDITY	: 28%
Remarks	: Hor Y , Ver Z-axis	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass or ATT [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	45.0	45.6	30.5	36.4	5.7	10.0	54.8	55.4	74.0	19.2	18.6
2	4824.0	42.9	44.6	35.2	36.0	8.3	1.0	51.4	53.1	74.0	22.6	20.9
3	7236.0	43.2	43.1	37.7	36.0	10.1	0.4	55.4	55.3	74.0	18.6	18.7
4	9648.0	43.4	44.0	37.0	36.4	12.3	0.2	56.5	57.1	74.0	17.5	16.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12060.0	39.6	40.5	41.6	36.1	14.3	0.0	49.9	50.8	74.0	24.1	23.2
6	14472.0	39.3	39.5	41.8	34.6	15.2	0.0	52.2	52.4	74.0	21.8	21.6
7	16884.0	42.8	41.8	45.2	35.0	16.6	0.0	60.1	59.1	74.0	13.9	14.9
8	19296.0	40.4	42.1	41.6	34.1	12.8	0.0	51.2	52.9	74.0	22.8	21.1
9	21708.0	41.4	41.8	40.4	34.7	13.0	0.0	50.6	51.0	74.0	23.4	23.0
10	24120.0	42.1	42.6	41.0	35.6	15.0	0.0	53.0	53.5	74.0	21.0	20.5

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	32.6	32.9	30.5	36.4	5.7	10.0	42.4	42.7	54.0	11.6	11.3
2	4824.0	33.0	34.5	35.2	36.0	8.3	1.0	41.5	43.0	54.0	12.5	11.0
3	7236.0	30.0	30.0	37.7	36.0	10.1	0.4	42.2	42.2	54.0	11.8	11.8
4	9648.0	30.2	30.5	37.0	36.4	12.3	0.2	43.3	43.6	54.0	10.7	10.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12060.0	29.8	29.6	41.6	36.1	14.3	0.0	40.1	39.9	54.0	13.9	14.1
6	14472.0	29.2	29.3	41.8	34.6	15.2	0.0	42.1	42.2	54.0	11.9	11.8
7	16884.0	31.5	31.5	45.2	35.0	16.6	0.0	48.8	48.8	54.0	5.2	5.2
8	19296.0	30.8	30.9	41.6	34.1	12.8	0.0	41.6	41.7	54.0	12.4	12.3
9	21708.0	31.3	31.3	40.4	34.7	13.0	0.0	40.5	40.5	54.0	13.5	13.5
10	24120.0	31.7	31.7	41.0	35.6	15.0	0.0	42.6	42.6	54.0	11.4	11.4

* Reference data

20dBc(Fundamental 2402MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2412.0	89.4	90.4	30.5	36.4	5.7	10.0	99.2	100.2	-	-	-
3	2400.0	40.0	40.8	30.5	36.4	5.7	10.0	49.8	50.6	Funda-20dB	29.4	29.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,Mid

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chambe

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2(o)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: 525014A	DATE	: 03/25/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: 11b 1Mbps, Tx 2437MHz	HUMIDITY	: 28%
Remarks	: Hor Y , Ver Z-axis	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass or ATT	RESULT		Limit PK	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4874.0	43.5	45.5	35.5	36.0	8.4	1.0	52.4	54.4	74.0	21.6	19.6
2	7311.0	43.1	42.4	37.9	36.0	10.2	0.5	55.7	55.0	74.0	18.3	19.0
3	9748.0	43.4	44.5	36.9	36.4	12.4	0.2	56.5	57.6	74.0	17.5	16.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12185.0	39.6	40.5	41.6	36.0	14.4	0.0	50.1	51.0	74.0	23.9	23.0
5	14622.0	39.4	39.5	42.1	35.1	15.3	0.0	52.2	52.3	74.0	21.8	21.7
6	17059.0	42.8	42.5	45.3	34.9	16.6	0.0	60.3	60.0	74.0	13.7	14.0
7	19496.0	40.3	42.1	41.4	34.3	13.0	0.0	50.9	52.7	74.0	23.1	21.3
8	21933.0	41.4	41.7	40.5	34.2	12.9	0.0	51.1	51.4	74.0	22.9	22.6
9	24370.0	42.1	42.6	41.1	35.7	15.0	0.0	53.0	53.5	74.0	21.0	20.5

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4874.0	30.1	36.6	35.5	36.0	8.4	1.0	39.0	45.5	54.0	15.0	8.5
2	7311.0	29.7	29.6	37.9	36.0	10.2	0.5	42.3	42.2	54.0	11.7	11.8
3	9748.0	30.3	30.7	36.9	36.4	12.4	0.2	43.4	43.8	54.0	10.6	10.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12185.0	29.8	29.6	41.6	36.0	14.4	0.0	40.3	40.1	54.0	13.7	13.9
5	14622.0	29.2	29.3	42.1	35.1	15.3	0.0	42.0	42.1	54.0	12.0	11.9
6	17059.0	31.5	31.5	45.3	34.9	16.6	0.0	49.0	49.0	54.0	5.0	5.0
7	19496.0	30.8	30.9	41.4	34.3	13.0	0.0	41.4	41.5	54.0	12.6	12.5
8	21933.0	31.3	31.3	40.5	34.2	12.9	0.0	41.0	41.0	54.0	13.0	13.0
9	24370.0	31.7	31.7	41.1	35.7	15.0	0.0	42.6	42.6	54.0	11.4	11.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,High

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chambe

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2(o)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: S25014A	DATE	: 03/25/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: 11b 1Mbps, Tx 2462MHz	HUMIDITY	: 28%
Remarks	: Hor Y , Ver Z-axis	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass or ATT [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	44.5	45.6	30.5	36.4	5.8	10.0	54.4	55.5	74.0	19.6	18.5
2	4924.0	43.2	46.0	35.8	35.9	8.4	1.0	52.5	55.3	74.0	21.5	18.7
3	7386.0	43.0	42.5	38.0	36.0	10.2	0.6	55.8	55.3	74.0	18.2	18.7
4	9848.0	43.4	44.0	36.8	36.4	12.4	0.3	56.5	57.1	74.0	17.5	16.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12310.0	39.6	40.6	41.7	35.9	14.4	0.0	50.3	51.3	74.0	23.7	22.7
6	14772.0	39.3	40.3	42.4	35.6	15.5	0.0	52.1	53.1	74.0	21.9	20.9
7	17234.0	42.8	42.5	44.9	35.0	16.7	0.0	59.9	59.6	74.0	14.1	14.4
8	19696.0	40.3	42.1	41.2	34.6	13.2	0.0	50.6	52.4	74.0	23.4	21.6
9	22158.0	41.8	41.9	40.5	34.1	13.0	0.0	51.7	51.8	74.0	22.3	22.2
10	24620.0	42.1	42.3	41.1	35.5	15.0	0.0	53.2	53.4	74.0	20.8	20.6

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	33.2	32.4	30.5	36.4	5.8	10.0	43.1	42.3	54.0	10.9	11.7
2	4924.0	30.1	36.6	35.8	35.9	8.4	1.0	39.4	45.9	54.0	14.6	8.1
3	7386.0	29.6	29.6	38.0	36.0	10.2	0.6	42.4	42.4	54.0	11.6	11.6
4	9848.0	30.5	30.6	36.8	36.4	12.4	0.3	43.6	43.7	54.0	10.4	10.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12310.0	29.8	29.6	41.7	35.9	14.4	0.0	40.5	40.3	54.0	13.5	13.7
6	14772.0	29.2	29.3	42.4	35.6	15.5	0.0	42.0	42.1	54.0	12.0	11.9
7	17234.0	31.5	31.5	44.9	35.0	16.7	0.0	48.6	48.6	54.0	5.4	5.4
8	19696.0	30.8	30.9	41.2	34.6	13.2	0.0	41.1	41.2	54.0	12.9	12.8
9	22158.0	31.3	31.3	40.5	34.1	13.0	0.0	41.2	41.2	54.0	12.8	12.8
10	24620.0	31.7	31.7	41.1	35.5	15.0	0.0	42.8	42.8	54.0	11.2	11.2

Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.5\text{dB}$

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g,Low

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2(a)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: 525014A	DATE	: 03/25/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: 11g 54Mbps, Tx 2412MHz	HUMIDITY	: 28%
Remarks	: Hor Y , Ver Z-axis	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass or ATT	RESULT		Limit PK	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]						[dB/m]	[dB]		[dB]	[dBuV/m]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	45.6	45.2	30.5	36.4	5.7	10.0	55.4	55.0	74.0	18.6	19.0
2	4824.0	45.8	46.5	35.2	36.0	8.3	1.0	54.3	55.0	74.0	19.7	19.0
3	7236.0	42.9	43.6	37.7	36.0	10.1	0.4	55.1	55.8	74.0	18.9	18.2
4	9648.0	42.8	43.7	37.0	36.4	12.3	0.2	55.9	56.8	74.0	18.1	17.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12060.0	39.6	40.4	41.6	36.1	14.3	0.0	49.9	50.7	74.0	24.1	23.3
6	14472.0	39.3	39.0	41.8	34.6	15.2	0.0	52.2	51.9	74.0	21.8	22.1
7	16884.0	41.8	41.5	45.2	35.0	16.6	0.0	59.1	58.8	74.0	14.9	15.2
8	19296.0	40.4	42.1	41.6	34.1	12.8	0.0	51.2	52.9	74.0	22.8	21.1
9	21708.0	41.4	41.7	40.4	34.7	13.0	0.0	50.6	50.9	74.0	23.4	23.1
10	24120.0	42.1	42.4	41.0	35.6	15.0	0.0	53.0	53.3	74.0	21.0	20.7

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	32.5	32.5	30.5	36.4	5.7	10.0	42.3	42.3	54.0	11.7	11.7
2	4824.0	36.5	36.8	35.2	36.0	8.3	1.0	45.0	45.3	54.0	9.0	8.7
3	7236.0	29.6	29.6	37.7	36.0	10.1	0.4	41.8	41.8	54.0	12.2	12.2
4	9648.0	31.1	31.1	37.0	36.4	12.3	0.2	44.2	44.2	54.0	9.8	9.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12060.0	29.8	29.6	41.6	36.1	14.3	0.0	40.1	39.9	54.0	13.9	14.1
6	14472.0	29.2	29.3	41.8	34.6	15.2	0.0	42.1	42.2	54.0	11.9	11.8
7	16884.0	31.5	31.5	45.2	35.0	16.6	0.0	48.8	48.8	54.0	5.2	5.2
8	19296.0	30.8	30.9	41.6	34.1	12.8	0.0	41.6	41.7	54.0	12.4	12.3
9	21708.0	31.3	31.3	40.4	34.7	13.0	0.0	40.5	40.5	54.0	13.5	13.5
10	24120.0	31.6	31.7	41.0	35.6	15.0	0.0	42.5	42.6	54.0	11.5	11.4

* Reference data

20dBc(Fundamental 2402MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2412.0	83.4	81.3	30.5	36.4	5.7	10.0	93.2	91.1	-	-	-
3	2400.0	48.0	43.8	30.5	36.4	5.7	10.0	57.8	53.6	Funda-20dB	15.4	17.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g,Mid

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2 (o)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: 525014A	DATE	: 03/25/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: 11g 54Mbps, Tx 2437MHz	HUMIDITY	: 28%
Remarks	: Hor Y , Ver Z-axis	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass or ATT [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4874.0	46.2	45.9	35.5	36.0	8.4	1.0	55.1	54.8	74.0	18.9	19.2
2	7311.0	43.5	43.2	37.9	36.0	10.2	0.5	56.1	55.8	74.0	17.9	18.2
3	9748.0	43.4	44.4	36.9	36.4	12.4	0.2	56.5	57.5	74.0	17.5	16.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12185.0	39.6	39.3	41.6	36.0	14.4	0.0	50.1	49.8	74.0	23.9	24.2
5	14622.0	38.3	39.5	42.1	35.1	15.3	0.0	51.1	52.3	74.0	22.9	21.7
6	17059.0	41.7	42.5	45.3	34.9	16.6	0.0	59.2	60.0	74.0	14.8	14.0
7	19496.0	40.3	42.1	41.4	34.3	13.0	0.0	50.9	52.7	74.0	23.1	21.3
8	21933.0	41.6	41.7	40.5	34.2	12.9	0.0	51.3	51.4	74.0	22.7	22.6
9	24370.0	42.3	42.2	41.1	35.7	15.0	0.0	53.2	53.1	74.0	20.8	20.9

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4874.0	37.1	36.1	35.5	36.0	8.4	1.0	46.0	45.0	54.0	8.0	9.0
2	7311.0	29.6	29.6	37.9	36.0	10.2	0.5	42.2	42.2	54.0	11.8	11.8
3	9748.0	30.4	30.8	36.9	36.4	12.4	0.2	43.5	43.9	54.0	10.5	10.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12185.0	29.8	29.6	41.6	36.0	14.4	0.0	40.3	40.1	54.0	13.7	13.9
5	14622.0	29.2	29.3	42.1	35.1	15.3	0.0	42.0	42.1	54.0	12.0	11.9
6	17059.0	31.5	31.5	45.3	34.9	16.6	0.0	49.0	49.0	54.0	5.0	5.0
7	19496.0	30.8	30.9	41.4	34.3	13.0	0.0	41.4	41.5	54.0	12.6	12.5
8	21933.0	31.3	31.3	40.5	34.2	12.9	0.0	41.0	41.0	54.0	13.0	13.0
9	24370.0	31.7	31.7	41.1	35.7	15.0	0.0	42.6	42.6	54.0	11.4	11.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g,High

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company	: NEC Infrontia Corporation	REPORT NO	: 25BE0219-HO
Equipment	: Order Terminal	REGULATION	: RSS-210 6.2.2 (o)(e) and 6.3
Model	: S1596-01	TEST DISTANCE	: 3/1m
Sample No.	: S25014A	DATE	: 03/25/2005
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: 11g 54Mbps, Tx 2462MHz	HUMIDITY	: 28%
Remarks	: Hor Y , Ver Z-axis	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass or ATT [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
2	2483.5	46.2	45.2	30.5	36.4	5.8	10.0	56.1	55.1	74.0	17.9	18.9
3	4924.0	45.7	45.7	35.8	35.9	8.4	1.0	55.0	55.0	74.0	19.0	19.0
4	7386.0	43.2	43.0	38.0	36.0	10.2	0.6	56.0	55.8	74.0	18.0	18.2
5	9848.0	44.1	44.0	36.8	36.4	12.4	0.3	57.2	57.1	74.0	16.8	16.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12310.0	39.6	40.4	41.7	35.9	14.4	0.0	50.3	51.1	74.0	23.7	22.9
7	14772.0	39.3	39.3	42.4	35.6	15.5	0.0	52.1	52.1	74.0	21.9	21.9
8	17234.0	42.9	42.5	44.9	35.0	16.7	0.0	60.0	59.6	74.0	14.0	14.4
9	19696.0	41.0	42.1	41.2	34.6	13.2	0.0	51.3	52.4	74.0	22.7	21.6
10	22158.0	41.8	42.0	40.5	34.1	13.0	0.0	51.7	51.9	74.0	22.3	22.1
11	24620.0	42.1	42.4	41.1	35.5	15.0	0.0	53.2	53.5	74.0	20.8	20.5

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
2	2483.5	32.0	32.0	30.5	36.4	5.8	10.0	41.9	41.9	54.0	12.1	12.1
3	4924.0	37.7	35.9	35.8	35.9	8.4	1.0	47.0	45.2	54.0	7.0	8.8
4	7386.0	29.6	29.6	38.0	36.0	10.2	0.6	42.4	42.4	54.0	11.6	11.6
5	9848.0	31.4	30.8	36.8	36.4	12.4	0.3	44.5	43.9	54.0	9.5	10.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12310.0	29.8	29.6	41.7	35.9	14.4	0.0	40.5	40.3	54.0	13.5	13.7
7	14772.0	29.2	29.3	42.4	35.6	15.5	0.0	42.0	42.1	54.0	12.0	11.9
8	17234.0	31.5	31.5	44.9	35.0	16.7	0.0	48.6	48.6	54.0	5.4	5.4
9	19696.0	30.7	30.9	41.2	34.6	13.2	0.0	41.0	41.2	54.0	13.0	12.8
10	22158.0	31.3	31.3	40.5	34.1	13.0	0.0	41.2	41.2	54.0	12.8	12.8
11	24620.0	31.6	31.7	41.1	35.5	15.0	0.0	42.7	42.8	54.0	11.3	11.2

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)(above 1GHz)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11b,Mid + Bluetooth hopping on

UL Apex Co., Ltd.

Head Office EMC Lab. No.1Semi Anechoic Chamber

Company : NEC Infrontia Corporation
Equipment : Mobile Terminal
Model : S1596-01
Sample No. : 525014A
Power : AC 120 V / 60 Hz
Mode : Bluetooth Hopping, WLAN 11b 1Mbps 2437MHz
Remarks : Hor Y , Ver Z-axis

REPORT NO : 25BE0219-HO
REGULATION : RSS-210 6.2.2 (o)(e) and 6.3
TEST DISTANCE : 3/1m
DATE : 03/26/2005
TEMPERATURE : 23deg.C
HUMIDITY : 28%
ENGINEER : Norihisa Hashimoto

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1144.3	54.7	54.6	22.9	39.9	3.9	0.0	41.6	41.5	74.0	32.4	32.5
2	2390.0	55.3	55.7	31.0	39.9	5.5	0.0	51.9	52.3	74.0	22.1	21.7
3	4874.0	52.8	51.8	35.3	41.2	8.0	1.0	55.9	54.9	74.0	18.1	19.1
4	7311.0	52.6	52.3	37.7	40.4	10.0	0.5	60.3	60.0	74.0	13.7	14.0
5	9748.0	50.6	50.7	36.3	39.5	11.9	0.2	59.4	59.5	74.0	14.6	14.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	46.4	46.4	41.4	39.8	13.4	0.3	52.2	52.2	74.0	21.8	21.8
7	14622.0	46.9	46.0	42.1	40.9	15.1	0.2	53.9	53.0	74.0	20.1	21.0
8	17059.0	45.1	44.8	44.6	41.9	16.5	1.1	55.9	55.6	74.0	18.1	18.4
9	19496.0	42.5	42.5	41.4	39.9	18.9	2.3	55.7	55.7	74.0	18.3	18.3
10	21933.0	45.5	45.4	40.5	35.8	19.2	1.1	61.0	60.9	74.0	13.0	13.1
11	24370.0	47.3	47.4	41.1	33.7	13.5	0.6	59.2	59.3	74.0	14.8	14.7

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1144.3	41.6	43.0	22.9	39.9	3.9	0.0	28.5	29.9	54.0	25.5	24.1
2	2390.0	44.8	45.2	31.0	39.9	5.5	0.0	41.4	41.8	54.0	12.6	12.2
3	4874.0	44.2	38.4	35.3	41.2	8.0	1.0	47.3	41.5	54.0	6.7	12.5
4	7311.0	39.2	39.2	37.7	40.4	10.0	0.5	46.9	46.9	54.0	7.1	7.1
5	9748.0	38.2	38.2	36.3	39.5	11.9	0.2	47.0	47.0	54.0	7.0	7.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	34.0	34.0	41.4	39.8	13.4	0.3	39.8	39.8	54.0	14.2	14.2
7	14622.0	33.1	33.1	42.1	40.9	15.1	0.2	40.1	40.1	54.0	13.9	13.9
8	17059.0	32.3	32.3	44.6	41.9	16.5	1.1	43.1	43.1	54.0	10.9	10.9
9	19496.0	30.1	30.1	41.4	39.9	18.9	2.3	43.3	43.3	54.0	10.7	10.7
10	21933.0	33.2	33.3	40.5	35.8	19.2	1.1	48.7	48.8	54.0	5.3	5.2
11	24370.0	35.8	35.7	41.1	33.7	13.5	0.6	47.7	47.6	54.0	6.3	6.4

20dBc(Fundamental 2412MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2412.0	101.3	96.4	30.9	39.9	5.5	0.0	97.8	92.9	-	-	-
2	2400.0	67.9	63.5	30.9	39.9	5.5	0.0	64.4	60.0	Funda-20dB	13.4	12.9
3	2462.0	106.8	102.1	30.9	40.0	5.5	0.0	103.2	98.5	-	-	-
4	2483.5	58.8	56.3	30.8	40.0	5.5	0.0	55.1	52.6	Funda-20dB	28.1	25.9

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

11g, Mid + Bluetooth hopping on

UL Apex Co., Ltd.

Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : NEC Infrontia Corporation
Equipment : Order Terminal
Model : S1596-01
Sample No. : 525014A
Power : AC 120 V / 60 Hz
Mode : Bluetooth Hopping, WLAN 11g 54Mbps 2437MHz
Remarks : Hor Y, Ver Z-axis

REPORT NO : 25BE0219-HO
REGULATION : RSS-210 6.2.2 (o)(e) and 6.3
TEST DISTANCE : 3/1m
DATE : 03/26/2005
TEMPERATURE : 23deg.C
HUMIDITY : 28%
ENGINEER : Norihisa Hashimoto

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1144.3	55.7	57.2	22.9	39.9	3.9	0.0	42.6	44.1	74.0	31.4	29.9
2	2390.0	56.2	56.7	31.0	39.9	5.5	0.0	52.8	53.3	74.0	21.2	20.7
3	4879.8	51.5	52.4	35.3	41.2	8.0	1.0	54.6	55.5	74.0	19.4	18.5
4	7274.5	52.1	52.2	37.7	40.4	9.9	0.5	59.7	59.8	74.0	14.3	14.2
5	9608.0	48.3	47.8	36.3	39.5	11.4	0.2	56.6	56.1	74.0	17.4	17.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	46.3	46.3	41.5	39.8	13.8	0.3	52.6	52.6	74.0	21.4	21.4
7	14622.0	46.0	46.5	42.1	40.9	15.7	0.2	53.6	54.1	74.0	20.4	19.9
8	17059.0	45.0	44.9	44.6	41.9	17.1	1.1	56.4	56.3	74.0	17.6	17.7
9	19496.0	42.6	42.5	41.4	39.9	18.9	2.3	55.8	55.7	74.0	18.2	18.3
10	21933.0	45.3	45.5	40.5	35.8	19.2	1.1	60.8	61.0	74.0	13.2	13.0
11	24370.0	47.2	47.4	41.1	33.7	13.5	0.6	59.1	59.3	74.0	14.9	14.7

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1144.3	45.2	46.6	22.9	39.9	3.9	0.0	32.1	33.5	54.0	21.9	20.5
2	2390.0	45.0	45.4	31.0	39.9	5.5	0.0	41.6	42.0	54.0	12.4	12.0
3	4879.8	40.5	42.3	35.3	41.2	8.0	1.0	43.6	45.4	54.0	10.4	8.6
4	7274.5	39.0	39.0	37.7	40.4	9.9	0.5	46.6	46.6	54.0	7.4	7.4
5	9608.0	39.1	38.9	36.3	39.5	11.4	0.2	47.4	47.2	54.0	6.6	6.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	34.1	34.0	41.5	39.8	13.8	0.3	40.4	40.3	54.0	13.6	13.7
7	14622.0	33.1	33.0	42.1	40.9	15.7	0.2	40.7	40.6	54.0	13.3	13.4
8	17059.0	32.4	32.3	44.6	41.9	17.1	1.1	43.8	43.7	54.0	10.2	10.3
9	19496.0	30.2	30.1	41.4	39.9	18.9	2.3	43.4	43.3	54.0	10.6	10.7
10	21933.0	33.2	33.2	40.5	35.8	19.2	1.1	48.7	48.7	54.0	5.3	5.3
11	24370.0	35.8	35.8	41.1	33.7	13.5	0.6	47.7	47.7	54.0	6.3	6.3

20dBc(Fundamental 2412MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2412.0	102.8	101.1	30.9	39.9	5.5	0.0	99.3	97.6	-	-	-
2	2400.0	68.1	67.6	30.9	39.9	5.5	0.0	64.6	64.1	Funda-20dB	14.7	13.5
3	2462.0	107.2	105.5	30.9	40.0	5.5	0.0	103.6	101.9	-	-	-
4	2483.5	58.8	56.3	30.8	40.0	5.5	0.0	55.1	52.6	Funda-20dB	28.5	29.3

UL Apex Co., Ltd.

Head Office EMC Lab.

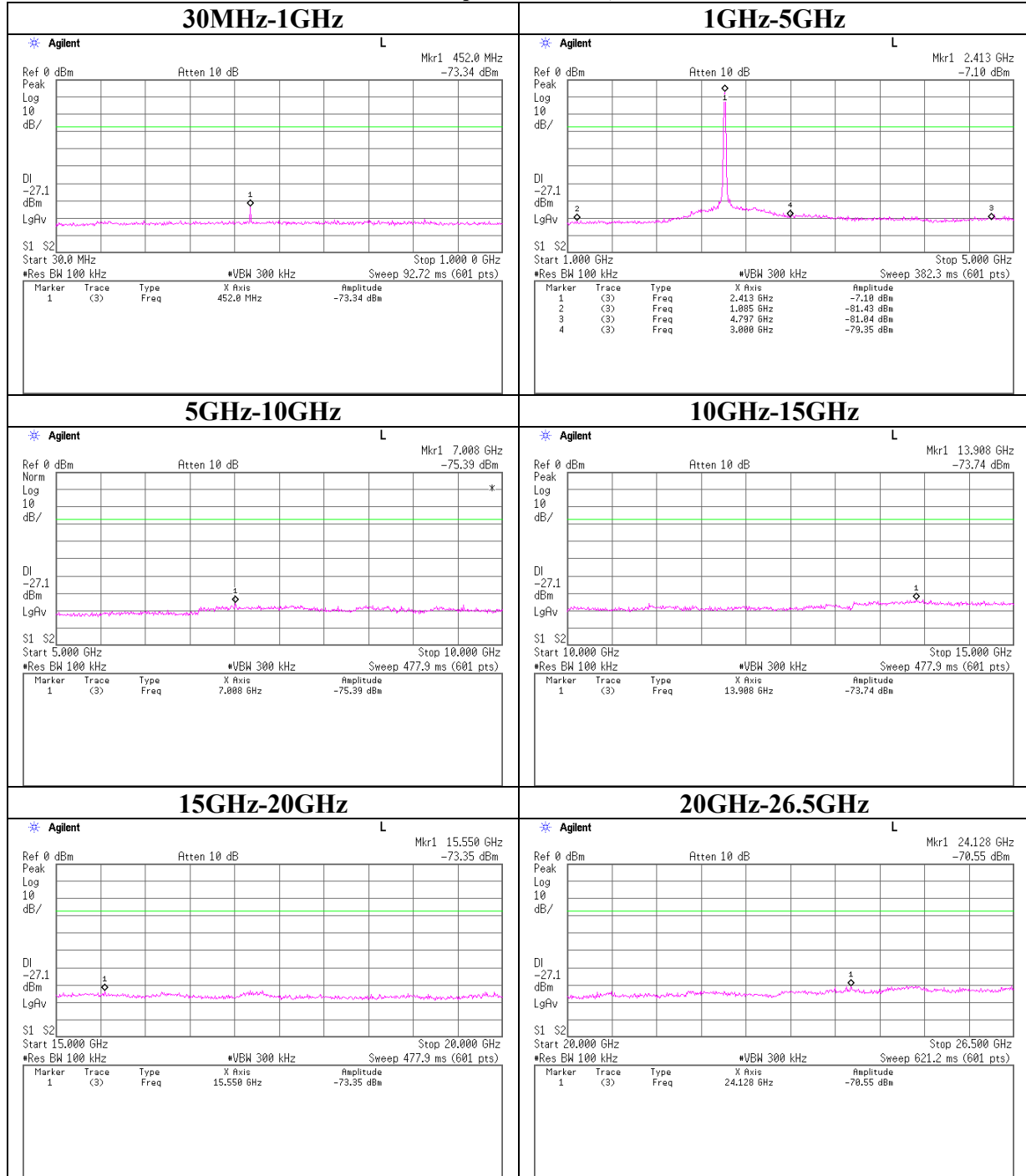
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

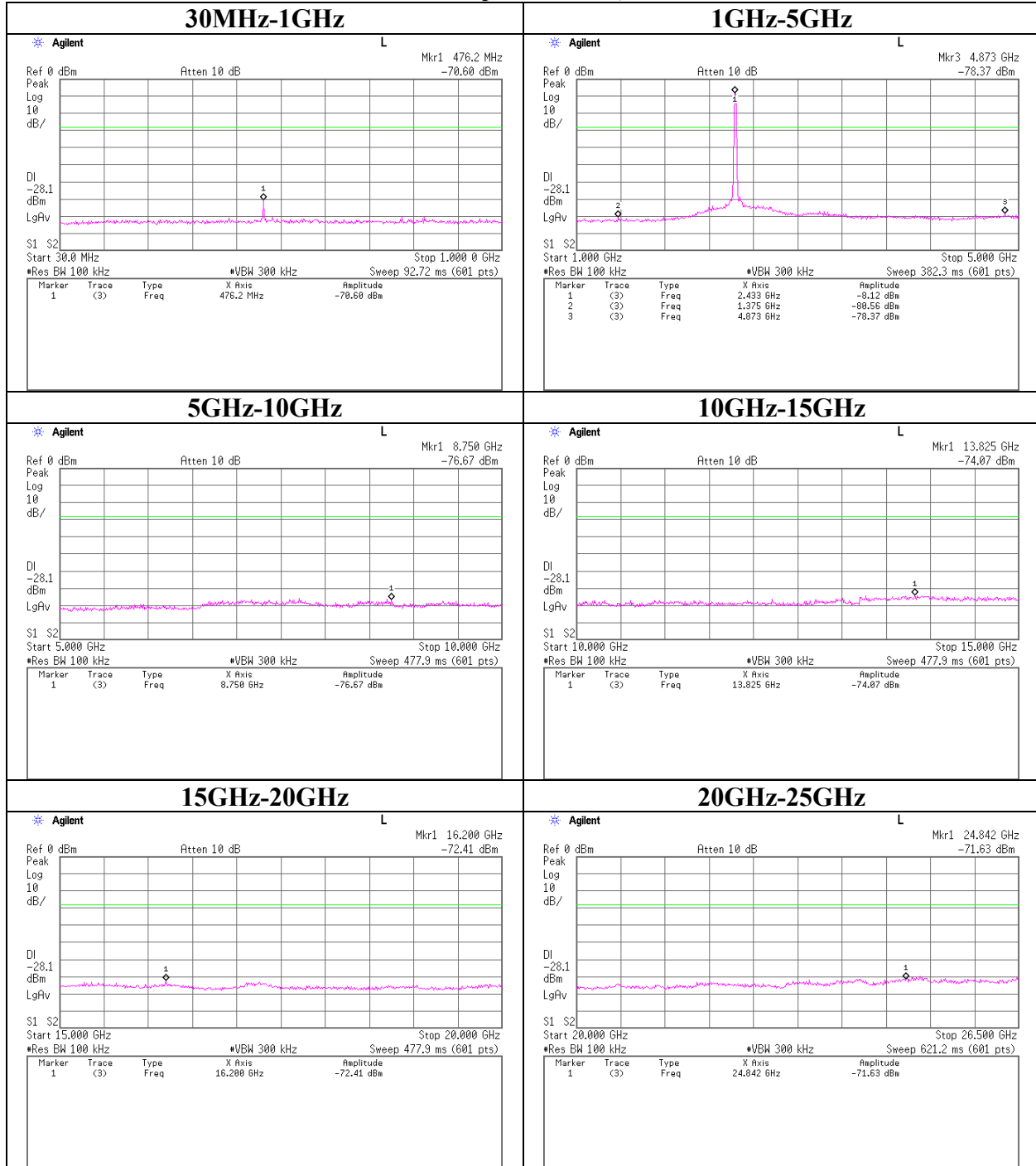
Facsimile : +81 596 24 8124

MF060b(10.04.03)

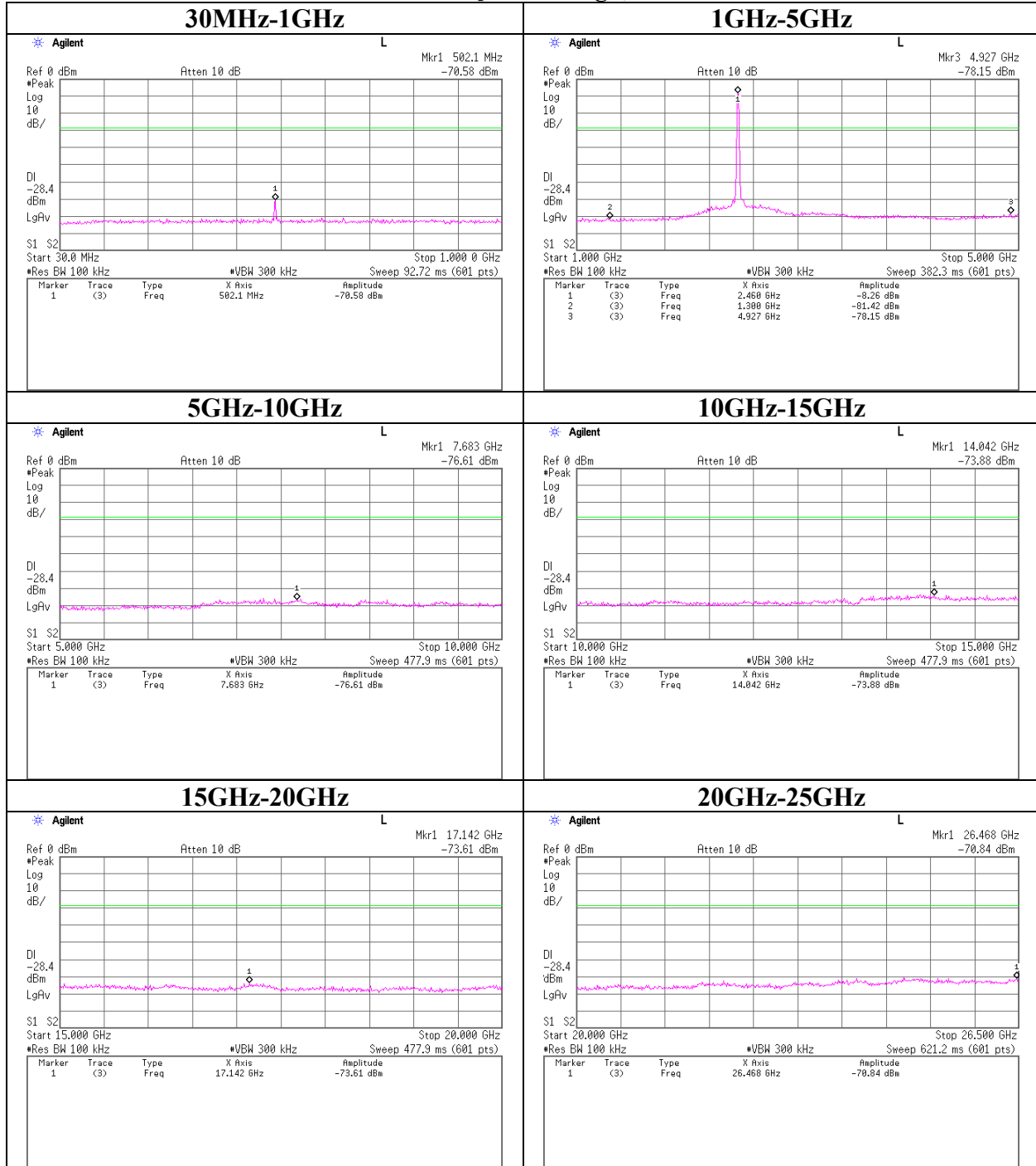
Conducted Spurious Emission(DSSS and other forms of modulation)
11b, 1Mbps, Ch : Low, Ant-0



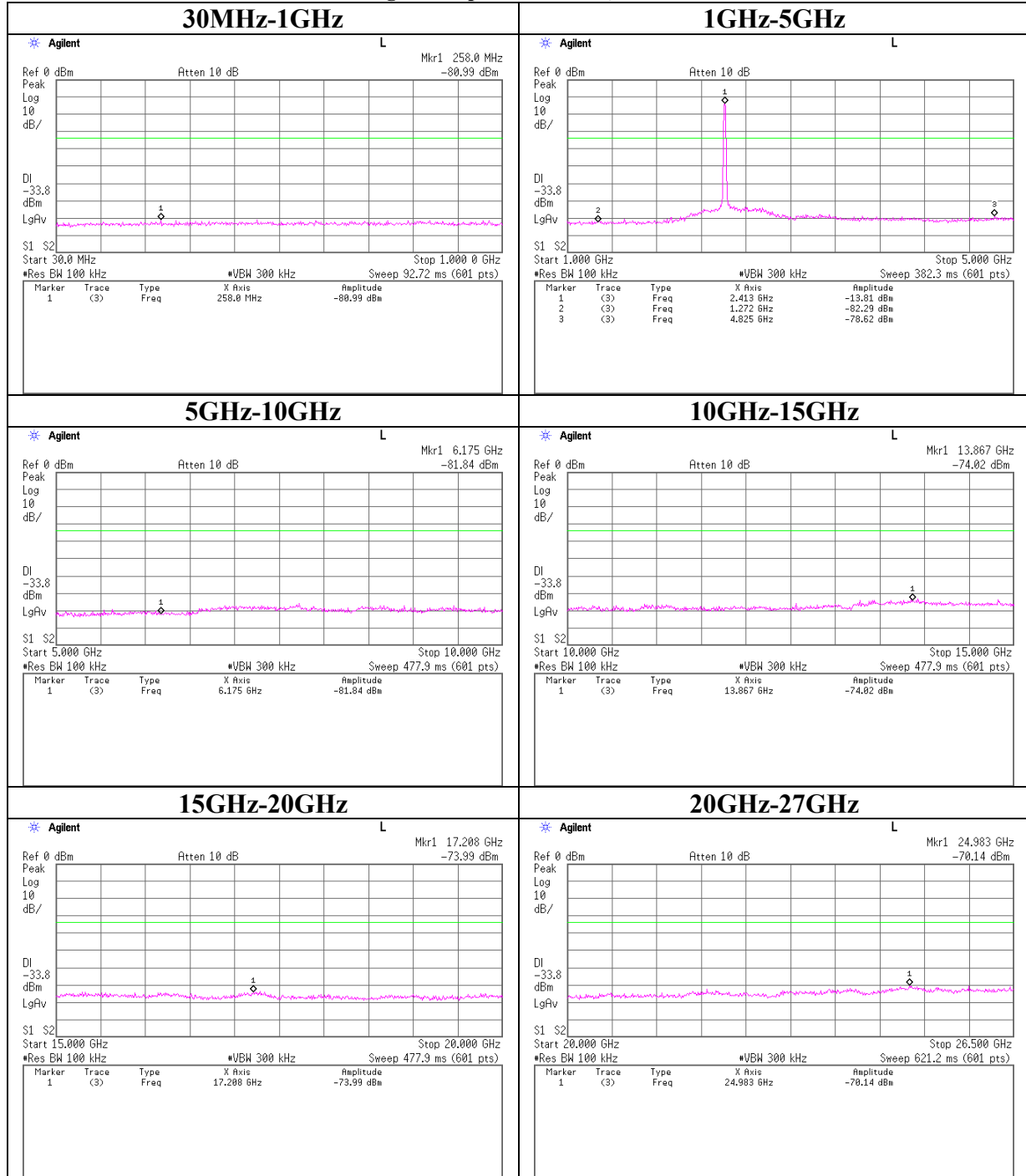
Conducted Spurious Emission(DSSS and other forms of modulation)
11b, 1Mbps, Ch : Mid, Ant-0



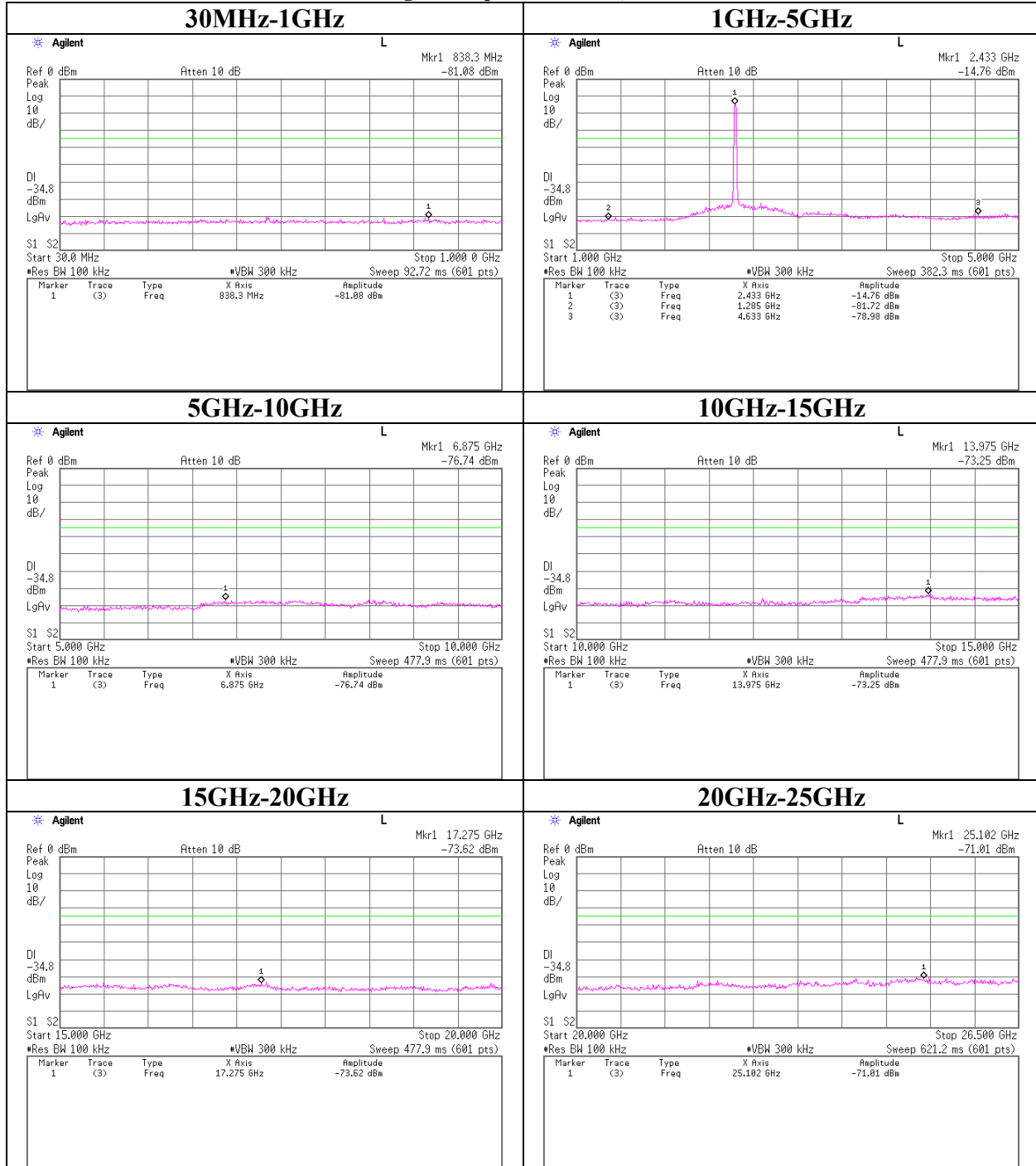
Conducted Spurious Emission(DSSS and other forms of modulation)
11b, 1Mbps, Ch : High, Ant-0



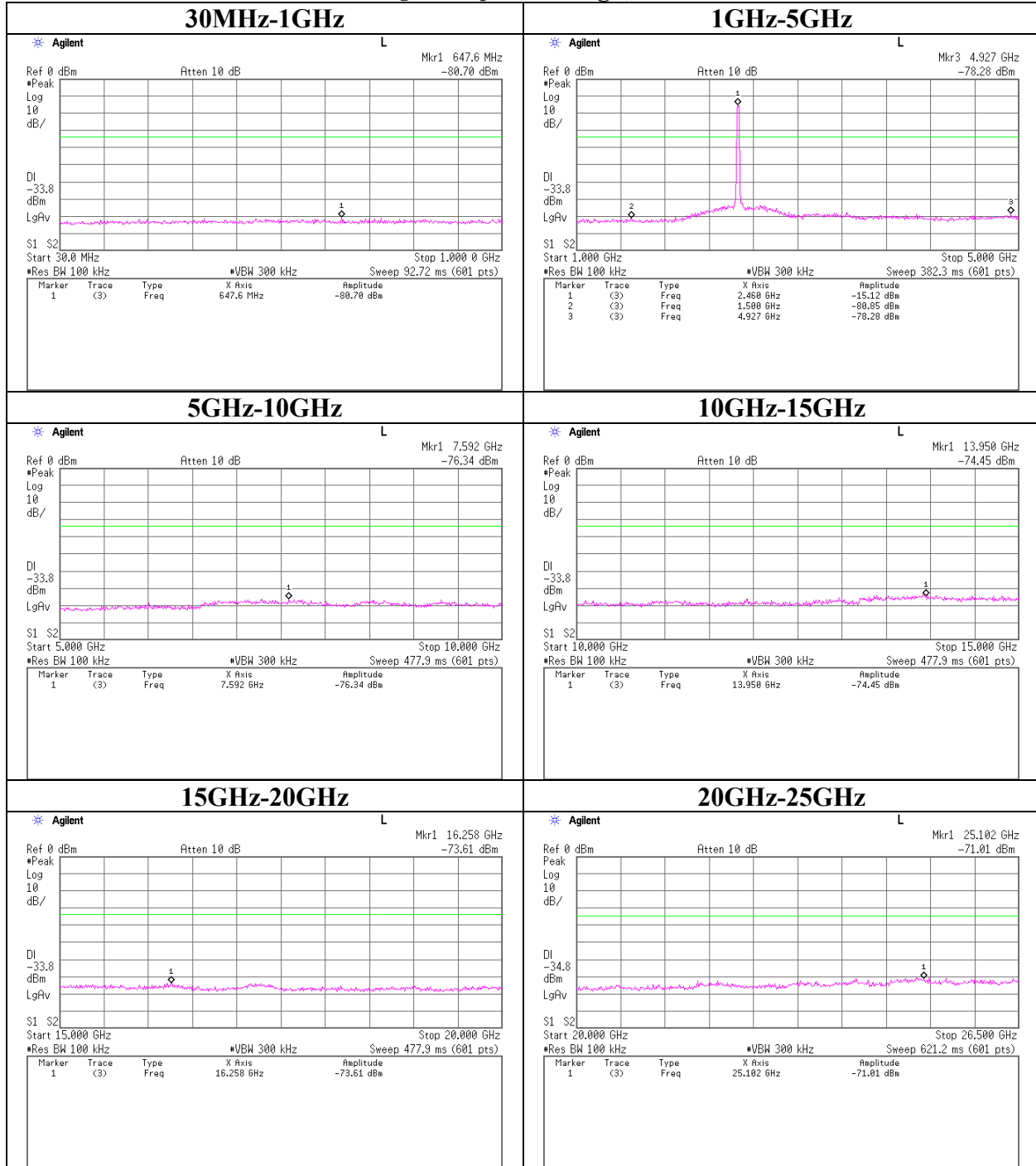
Conducted Spurious Emission(DSSS and other forms of modulation)
11g, 54Mbps, Ch : Low, Ant-0



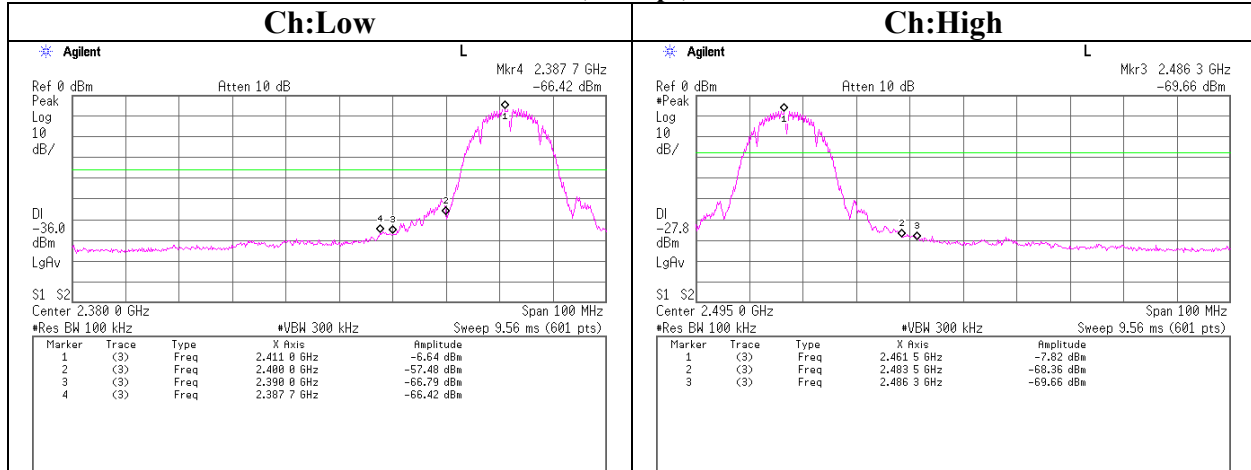
Conducted Spurious Emission(DSSS and other forms of modulation)
11g, 54Mbps, Ch : Mid, Ant-0



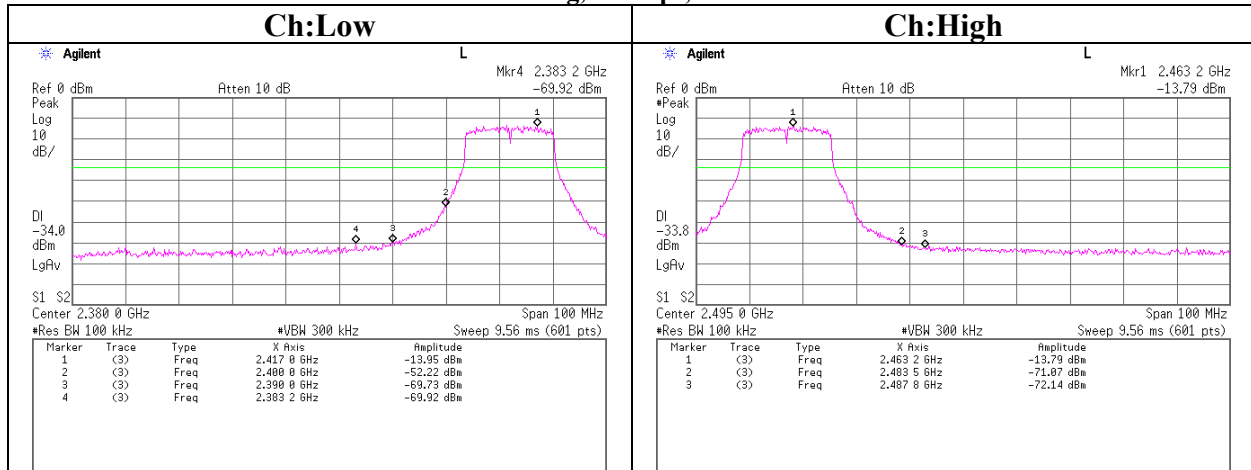
Conducted Spurious Emission(DSSS and other forms of modulation)
11g, 54Mbps, Ch : High, Ant-0



Conducted emission Band Edge compliance (DSSS and other forms of modulation)
11b, 1Mbps, Ant-0



11g, 54Mbps, Ant-0



Power Density (DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: NEC Infrontia Corporation	REGULATION	: RSS-210 6.2.2 (o)(b)
EQUIPMENT	: Mobile Terminal	TEST DISTANCE	: -
MODEL	: S1596-01	DATE	: 03/24/2005
SAMPLE NO.	: 530002A	TEMPERATURE	: 24 deg.C.
POWER	: AC 120 V / 60Hz	HUMIDITY	: 30%
MODE	: Tx (ch1,6,11)	ENGINEER	: Kenichi Adachi

[IEEE802.11b, 1Mbps, Ant-0]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2411.2	-19.93	1.02	10.00	-8.9	8.0	16.9
Mid	2437.0	-20.99	1.00	10.00	-10.0	8.0	18.0
High	2462.0	-21.50	0.97	10.00	-10.5	8.0	18.5

Sample Calculation:

Result = Reading + Cable Loss (spplied by customer and UL Apex) + Attenuator

[IEEE802.11g, 54Mbps, Ant-0]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-25.81	1.02	10.00	-14.8	8.0	22.8
Mid	2437.0	-26.14	1.00	10.00	-15.1	8.0	23.1
High	2462.0	-26.45	0.97	10.00	-15.5	8.0	23.5

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer and UL Apex)+ Attenuator

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

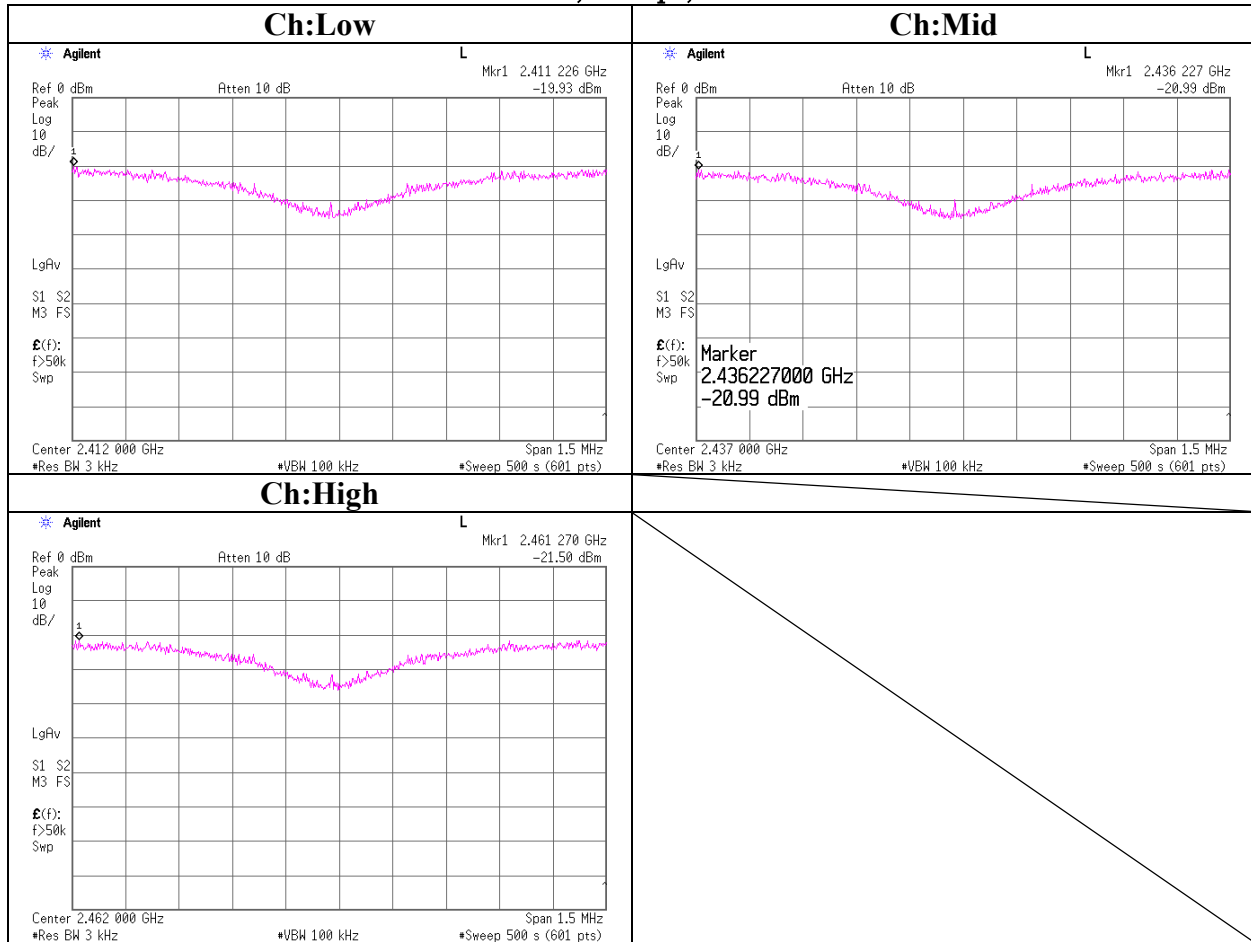
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

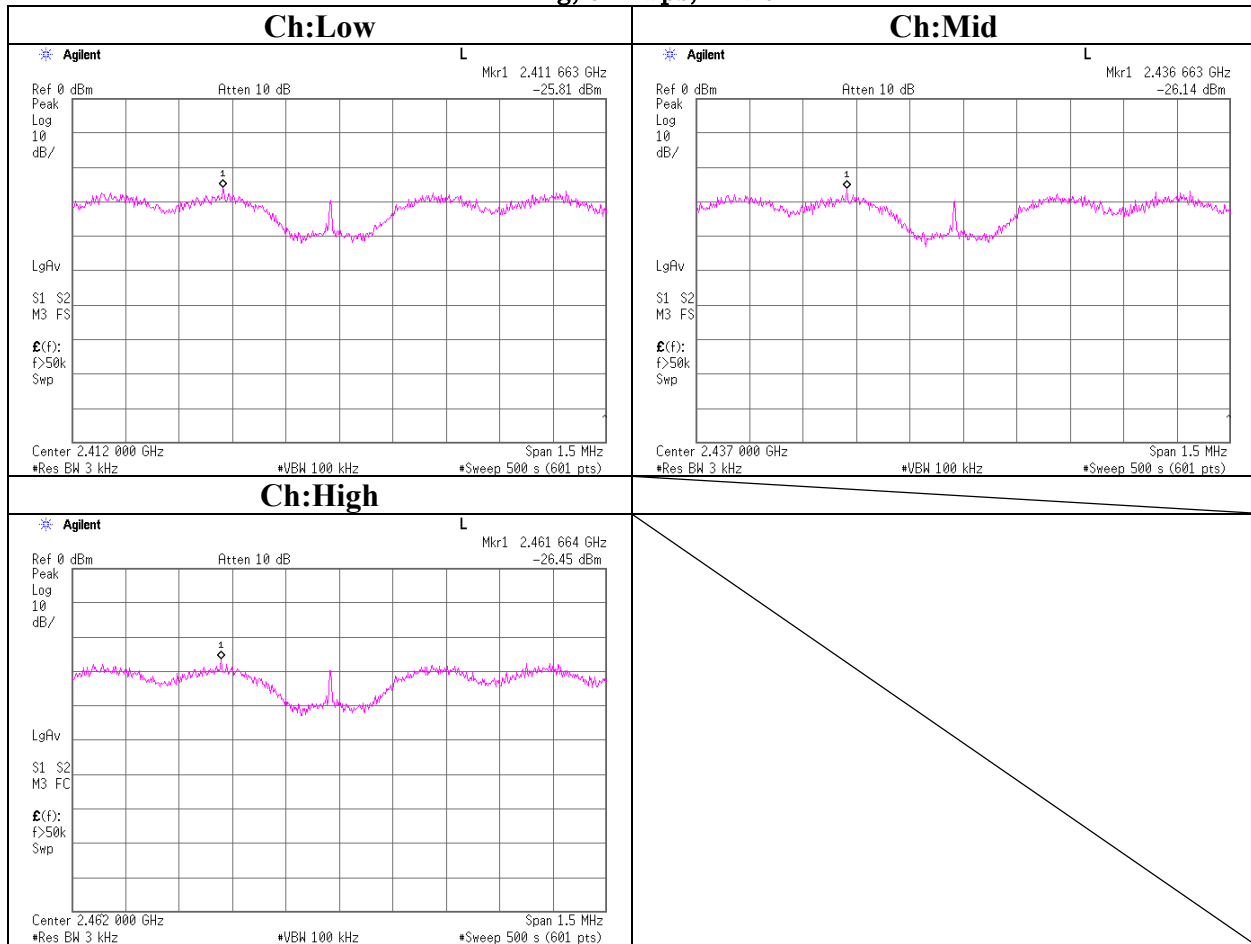
Power Density(DSSS and other forms of modulation)

11b, 1Mbps, Ant-0



Power Density(DSSS and other forms of modulation)

11g, 54Mbps, Ant-0



UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

99%Occupied Bandwidth(DSSS and other forms of modulation)

11g, 54Mbps, Ant-0

