



EMI TEST REPORT

Test Report No. : 24GE0302-HO-1

Applicant : CONTEC CO., LTD.
Type of Equipment : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247 : 2004
FCC ID : PQRDS540-APDL
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:

June 29 to July 14, 2004

Tested by:



Kenichi Adachi
EMC Service



Hiroka Umeyama
EMC Service

Approved by :



Naoki Sakamoto
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.....	4
SECTION 4: Operation of E.U.T. during testing.....	6
SECTION 5: Conducted Emission, Section 15.207	8
SECTION 6: Spurious Emission 15.247(c).....	9
SECTION 7: Bandwidth, Section 15.247(a)(2).....	10
SECTION 8: Maximum Peak Output Power, Section 15.247(b)(3)	10
SECTION 9: Peak Power Density, Section 15.247 (d)	10
APPENDIX 1: Photographs of test setup	11
Conducted Emission.....	11
Spurious Emission (Radiated).....	12
Worst Case Position (Y-axis:Horizontal / Y-axis:Vertical)	13
APPENDIX 2: Test instruments.....	14
APPENDIX 3: Data of EMI test	15
Conducted Emission.....	15
6dB Bandwidth(DSSS and other forms of modulation).....	23
Maximum Peak OutPut Power (DSSS and other forms of modulation)	26
Radiated Spurious Emission(DSSS and other forms of modulation)	29
Conducted emission Band Edge compliance (DSSS and other forms of modulation)	53
Power Density (DSSS and other forms of modulation).....	54
99% Occupied Bandwidth(DSSS and other forms of modulation)	57

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 : CONTEC CO., LTD.
Address : 3-9-31, Himesato, Nishiodogawa-ku, Osaka, 555-0025 Japan
Telephone Number : +81-6-6477-1363
Facsimile Number : +81-6-6477-7245
Contact Person : Naoki Ikeda

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

2.1 Identification of E.U.T.

Type of Equipment : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Serial No. : 3IRBG10000057
Rating : AC120V/60Hz
Country of Manufacture : Japan
Receipt Date of Sample : June 7, 2004
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product Description

[W-LAN:IEEE802.11b/g module]

Equipment Type : Transceiver
Frequency of operation : 2412-2462MHz
Transmission method : DSSS
Modulation Techniques : OFDM, CCK, QPSK, BPSK
Channel number : 11 channels
Power control : Non
Mode of operation : Simplex
Antenna Type : Chip Antenna
Antenna Gain : 2.0dBi
Antenna Connector Type : AYU3
Operating voltage (inner) : DC3.3V

FCC 15.31 (e)

This EUT provides stable voltage(DC3.3V inner) constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

The antenna is not removable from EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

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 : FCC Part15 Subpart C : 2004
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits : 2003
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz : 2004

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Section 15.207	-	N/A	2.3dB 1.9088MHz, Phase N(AV)	Complied
2	6dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(a)(2)	Conducted	N/A	11.9MHz IEEE802.11b Mid Ch	Complied
3	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(b)(3)	Conducted	N/A	7.86dB IEEE802.11b Mid Ch	Complied
4	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (c)	Conducted/ Radiated	N/A	0.2dB 6335MHz, HOR IEEE802.11b Mid Ch	Complied
5	Restricted Band Edges	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (c)	Conducted/ Radiated	N/A	1.3dB 2483.5MHz, HOR IEEE802.11g High Ch	Complied
6	Power Density	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted	N/A	12.8dB IEEE802.11b Mid Ch	Complied

Note: UL Apex's EMI Work Procedures No.QPM05 and QPM15.

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.

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)

3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004	Conducted	N/A	N/A	N/A

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

	Listed date (for FCC)	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	February 01, 2002	313583	IC4247	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	June 05, 2002	846015	IC4247-2	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 EUT was operating in a manner similar to typical use during the tests.

PacketType : Maximum
Payload : PN9
Operation :
1) Transmitting mode (IEEE802.11b 11Mbps)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)
2) Transmitting mode (IEEE802.11g 54Mbps)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

Remarks:

The antennas of this EUT are diversity type (ANT1 and ANT2). These diversity antennas are identical to each other in type, gain and cable length.

They are built in the EUT at the symmetrical location.

There is no difference in radio characteristics between ANT1 and ANT2; therefore, the testing was conducted with the representative antenna, ANT1.

The EUT has an ability to provide some different modulation and data rates. Some of these modulation and data rates did not change in the spectrum envelopes of the EUT at conducted Measurement with the antenna terminal. Therefore, the results of the final measurements were 11Mbps(IEEE802.11b)/54Mbps(IEEE802.11g) modulation as the highest data rate.

UL Apex Co., Ltd.

Head Office EMC Lab.

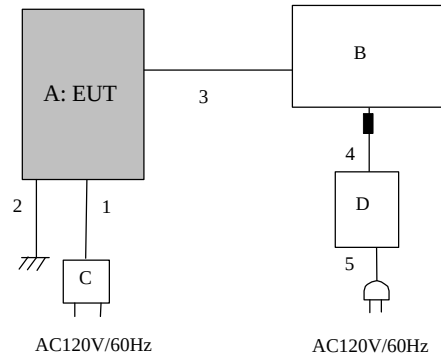
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

4.2 Configuration and peripherals



■ : Ferrite Core

* 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	FCC ID
A	WLAN Access Point	FX-DS540-APDL	3IRBG10000057	CONTEC	PQRDS540-APDL
B	Note PC	G40	KM-1640G 0312	IBM	DOC
C	AC Adapter	A10P1-33MP	-	AK-II	-
D	AC Adapter	02K7095	11S02K7095Z1Z6 C73BJ26X	IBM	-

List of cables used

No.	Name	Length (m)	Shield	Backshell Material
1	DC Cable	1.5	N	Polyvinyl chloride
2	Earth Cable	1.5	N	Polyvinyl chloride
3	LAN Cross Cable	1.5	N	Polyvinyl chloride
4	DC Cable	1.8	N	Polyvinyl chloride
5	AC Cable	1.0	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)

SECTION 5: Conducted Emission, Section 15.207

Test Procedure

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, 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 resistively 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.

The measurements have been performed with a 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 15.247(c)

[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 the size, 0.5m by 0.5m, 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.

When not satisfying the requirement of § 15.209, 20dBc was applied except 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

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: Bandwidth, Section 15.247(a)(2)

Test Procedure

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

Test data	: APPENDIX 3
Test result	: Pass

SECTION 8: Maximum Peak Output Power, Section 15.247(b)(3)

Test Procedure

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

Test data	: APPENDIX 3
Test result	: Pass

SECTION 9: Peak Power Density, Section 15.247 (d)

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)

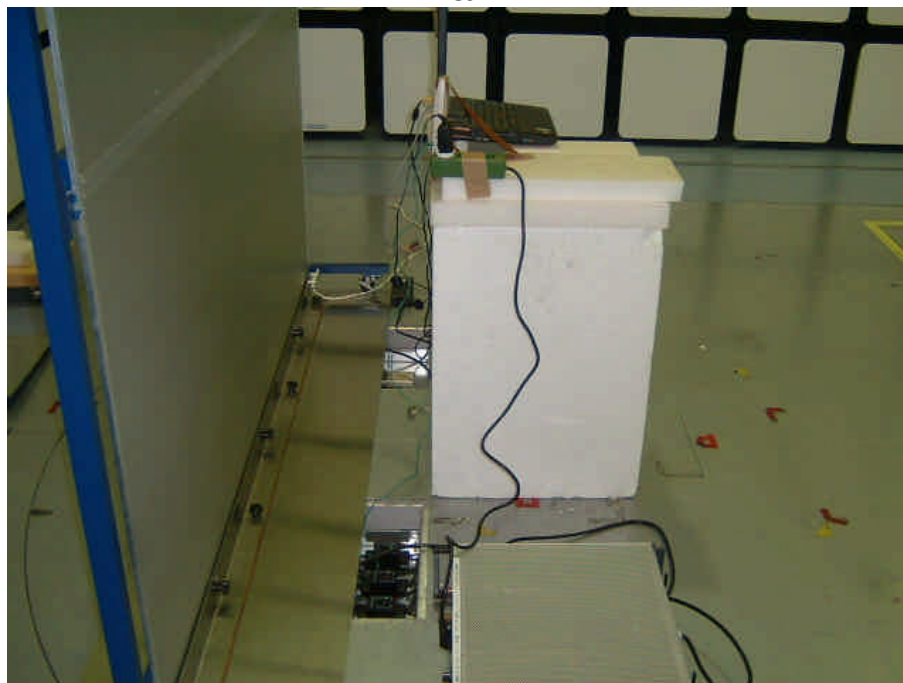
APPENDIX 1: Photographs of test setup

Conducted Emission

Front



Rear



UL Apex Co., Ltd.

Head Office EMC Lab.

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

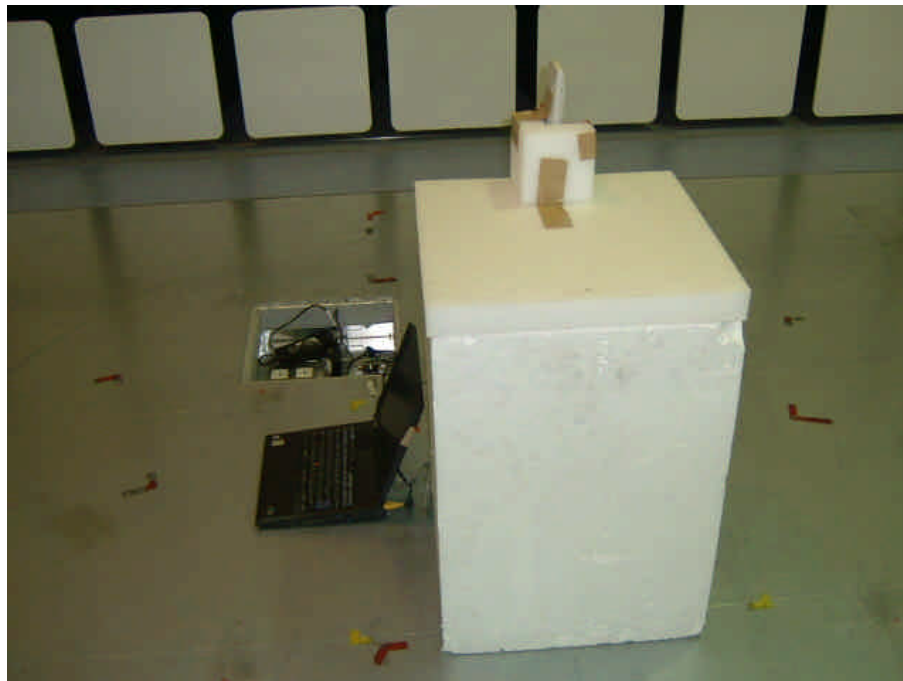
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

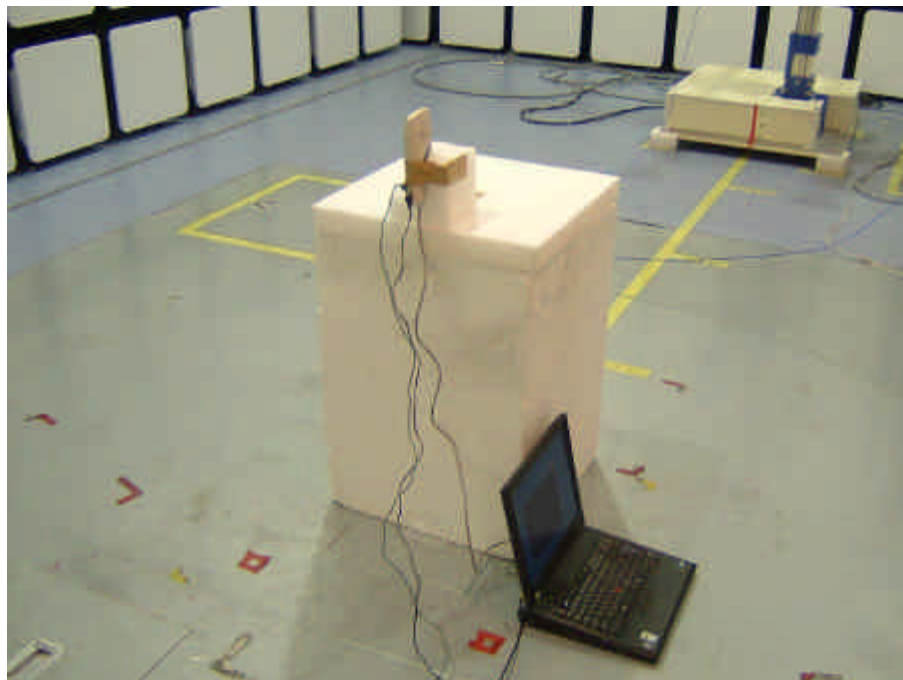
MF060b(10.04.03)

Spurious Emission (Radiated)

Front



Rear



Worst Case Position (Y-axis:Horizontal / Y-axis:Vertical)

X-axis



Y-axis



Z-axis



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 2:Test instruments

EMI test equipment (Conducted Emission)

Control No.	Instrument	Manufacturer	Model No	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	2004/04/12 * 12
MRENT-09	Spectrum Analyzer	Advantest	R3273	2004/02/18 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	2004/02/03 * 12
MCC-13	Coaxial Cable	Fujikura/Agilent	-	2004/02/24 * 12
MLS-06	LISN(AMN) : EUT	Schwarzbeck	NSLK8127	2004/02/17 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	2004/02/17 * 12
MTA-05	Termination	MCL	NTRM-50	2004/02/16 * 12

EMI test equipment (Spurious Emission and Band Edge Compliance(Radiated))

Control No.	Instrument	Manufacturer	Model No	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	2004/04/12 * 12
MRENT-09	Spectrum Analyzer	Advantest	R3273	2004/02/18 * 12
MCC-04	Microwave Cable	Storm	421-011	2004/01/06 * 12
MCC-24	Microwave Cable	Storm	-	2004/05/01 * 12
MPA-01	Pre Amplifier	Agilent	8449B	2004/02/06 * 12
MBF-03	SHF Bandpass Filter	M-City	13GHz BPF	2004/05/21 * 12
MHA-02	Horn Antenna	EMCO	3160-09	2004/01/10 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	2004/01/10 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESI40	2003/11/12 * 12
MCC-12	Coaxial Cable	Suhner/storm/Agilent/TSJ	-	2003/12/19 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	2003/10/15 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	2003/10/15 * 12
MPA-02	Pre Amplifier	Agilent	8447D	2004/05/25 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	2003/12/16 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	2003/09/19 * 12

EMI test equipment (Other)

Control No.	Instrument	Manufacturer	Model No	Calibration Date * Interval(month)
MSA-03	Spectrum Analyzer	Agilent	E4448A	2004/06/12 * 12
MCC-21	Microwave Cable	Storm	-	2004/05/01 * 12
MAT-20	Attenuator	HIROSE ELECTRIC CO.,LTD.	AT-110	2004/01/28 * 12
MRENT-09	Spectrum Analyzer	Advantest	R3273	2004/02/18 * 12

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

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

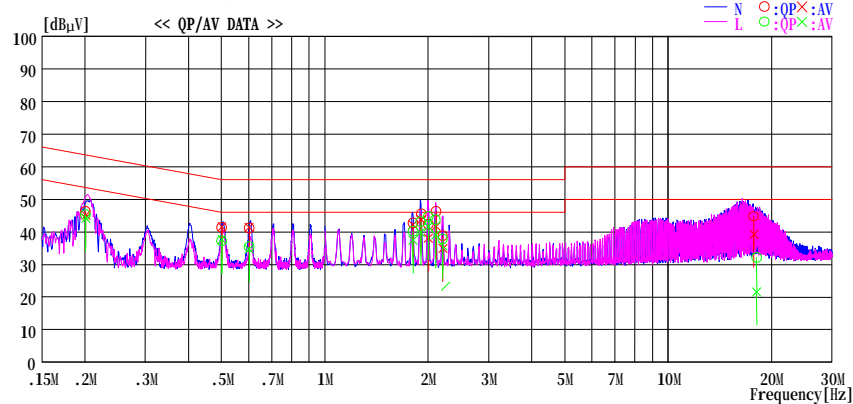
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 10:35:12

Applicant : CONTEC Co., LTD. Report No. : 24GE0302-HO
Kind of EUT : Wireless LAN Access Point Power : DC3.3V AC Adapter AC120V / 60Hz
Model No. : FX-DS540-APDL Temp°C/Humi% : 28 deg.C / 60 %
Serial No. : 31BRG10000057 Operator : Hiroka Umeyama

Mode / Remarks: Transmitting 11b/2437MHz/11Mbps(short)/FRAME PN9 with earth cable

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)



Frequency	Reading Level			Corr.	Results		Limit		Margin		Phase
	QP	AV	Factor		QP	AV	QP	AV	QP	AV	
[MHz]	[dBμV]	[dBμV]	[dB]		[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	
0.20110	46.1	45.1	0.1		46.2	45.2	63.6	53.6	17.4	8.4	N
0.20110	45.1	44.1	0.1		45.2	44.2	63.6	53.6	18.4	9.4	L
0.50130	37.0	37.5	0.2		37.2	37.7	56.0	46.0	18.8	8.3	L
0.50130	41.1	41.4	0.2		41.3	41.6	56.0	46.0	14.7	4.4	N
0.60231	41.0	41.2	0.2		41.2	41.4	56.0	46.0	14.8	4.6	N
0.60231	35.2	34.5	0.2		35.4	34.7	56.0	46.0	20.6	11.3	L
1.80650	39.9	37.1	0.3		40.2	37.4	56.0	46.0	15.8	8.6	L
1.80650	42.4	41.9	0.3		42.7	42.2	56.0	46.0	13.3	3.8	N
1.90235	42.7	39.6	0.3		43.0	39.9	56.0	46.0	13.0	6.1	L
1.90880	45.2	43.4	0.3		45.5	43.7	56.0	46.0	10.5	2.3	N
2.00407	44.4	41.3	0.3		44.7	41.6	56.0	46.0	11.3	4.4	L
2.00470	42.1	37.8	0.3		42.4	38.1	56.0	46.0	13.6	7.9	N
2.10271	43.5	38.7	0.3		43.8	39.0	56.0	46.0	12.2	7.0	L
2.11070	46.1	41.4	0.3		46.4	41.7	56.0	46.0	9.6	4.3	N
2.20760	37.5	35.3	0.3		37.8	35.6	56.0	46.0	18.2	10.4	L
2.20760	38.5	34.6	0.3		38.8	34.9	56.0	46.0	17.2	11.1	N
17.76120	43.2	37.6	1.6		44.8	39.2	60.0	50.0	15.2	10.8	N
17.76120	42.8	32.3	1.6		44.4	33.9	60.0	50.0	15.6	16.1	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.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 11:43:22

Applicant : CONTEC Co., LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Serial No. : 31BRG10000057
Report No. : 24GE0302-HO
Power : DC3.3V AC Adapter AC120V / 60Hz
Temp°C/Humi% : 28 deg.C / 60 %
Operator : Hiroka Uneyama
Mode / Remarks : Transmitting 11b/2437MHz/11Mbps(short)/FRAME PN9 without earth cable
LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

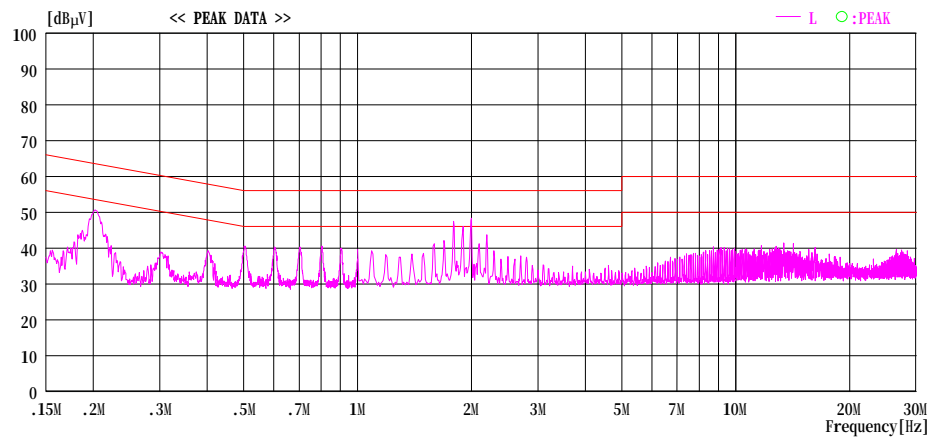
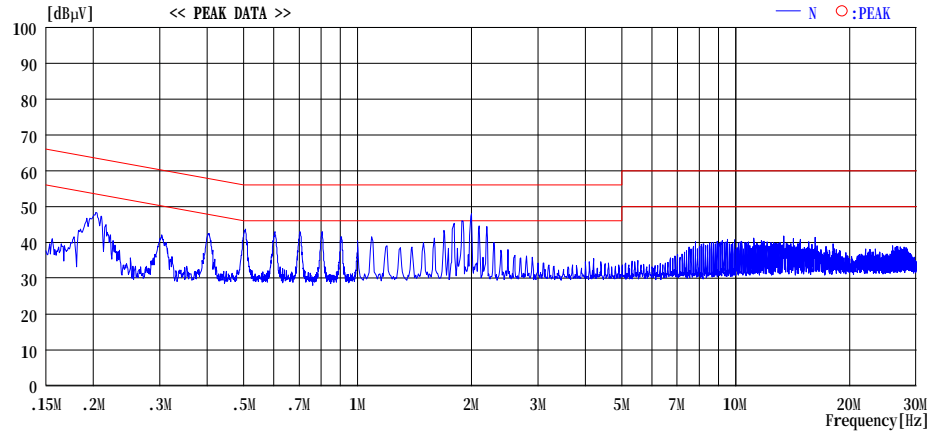


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 11:48:45

Applicant	: CONTEC Co., LTD.	Report No.	: 24GE0302-HO
Kind of EUT	: Wireless LAN Access Point	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DS540-APDL	Temp°C/Humi%	: 28 deg.C / 60 %
Serial No.	: 31BRG10000057	Operator	: Hiroka Uneyama

Mode / Remarks : Transmitting 11b/2412MHz/11Mbps(short)/FRAME PN9 with earth cable

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

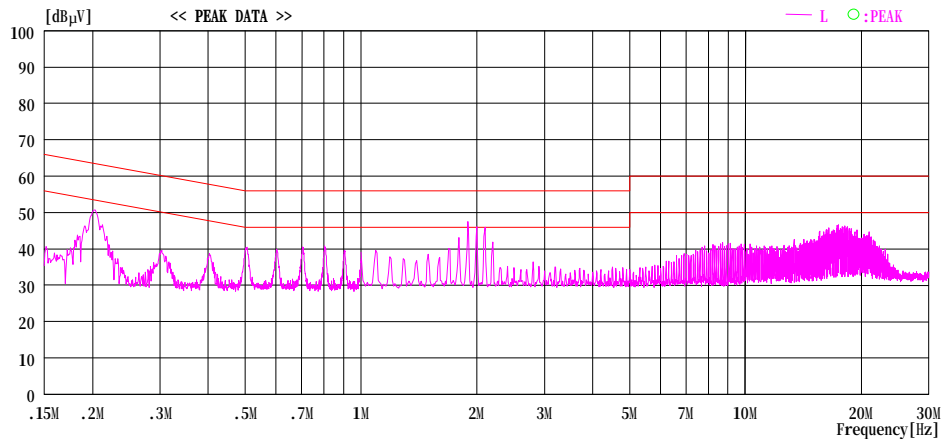
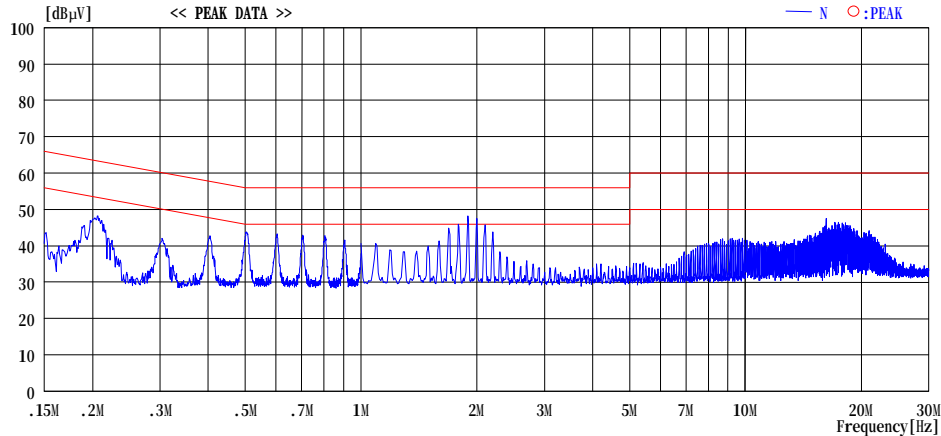


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 11:53:32

Applicant	: CONTEC Co., LTD.	Report No.	: 24GE0302-HO
Kind of EUT	: Wireless LAN Access Point	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DS540-APDL	Temp°C/Humi%	: 28 deg.C / 60 %
Serial No.	: 31BRG10000057	Operator	: Hiroka Uneyama

Mode / Remarks : Transmitting 11b/2462MHz/11Mbps(short)/FRAME PN9 with earth cable

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

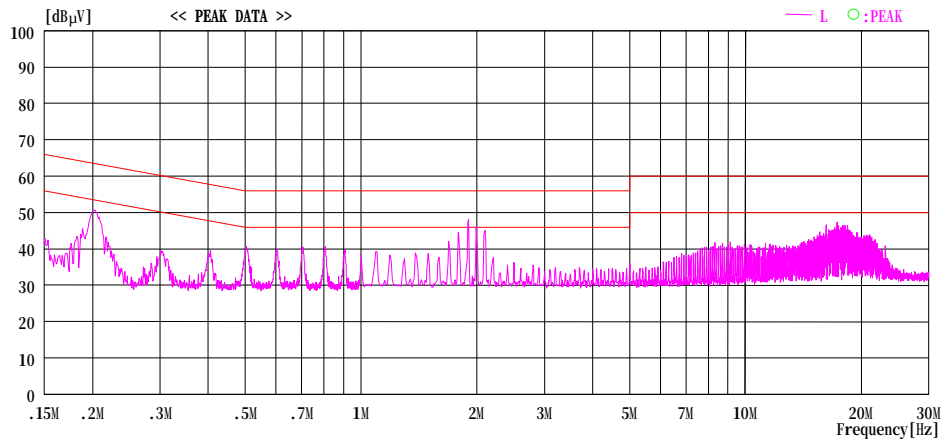
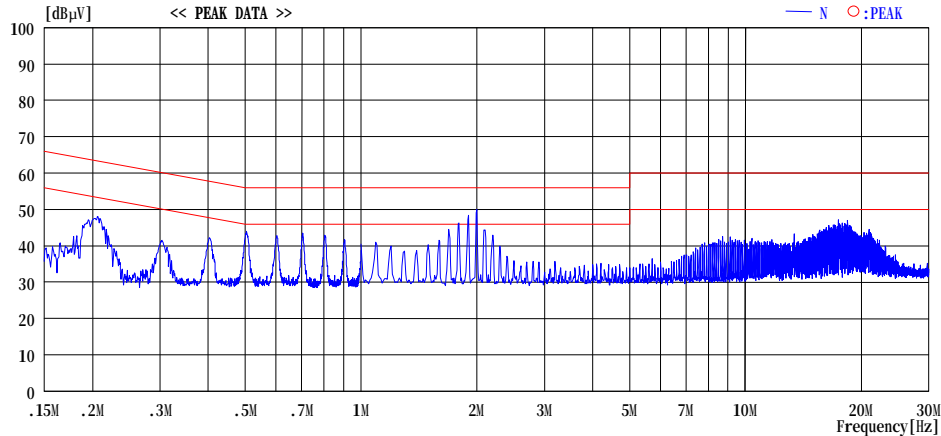


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 11:59:26

Applicant	: CONTEC Co., LTD.	Report No.	: 24GE0302-HO
Kind of EUT	: Wireless LAN Access Point	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DS540-APDL	Temp°C/Humi%	: 28 deg.C / 60 %
Serial No.	: 31BRG10000057	Operator	: Hiroka Uneyama

Mode / Remarks : Transmitting 11g/2412MHz/54Mbps(short)/FRAME PN9 with earth cable

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

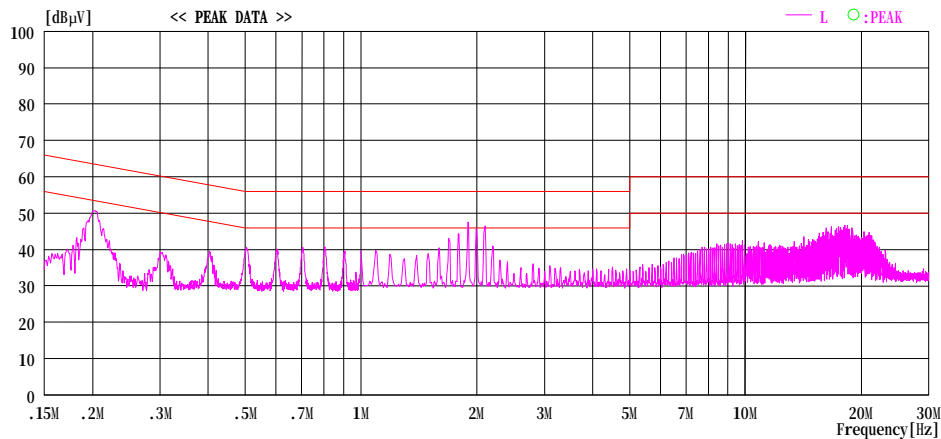
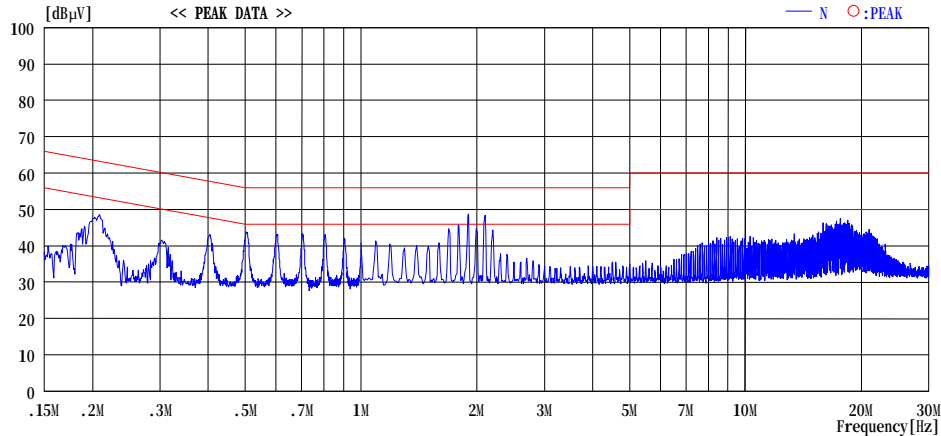


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 12:46:40

Applicant	: CONTEC Co., LTD.	Report No.	: 24GE0302-HO
Kind of EUT	: Wireless LAN Access Point	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DS540-APDL	Temp°C/Humi%	: 28 deg.C / 60 %
Serial No.	: 31BRG10000057	Operator	: Hiroka Uneyama

Mode / Remarks : Transmitting 11g/2437MHz/54Mbps(short)/FRAME PN9 with earth cable

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

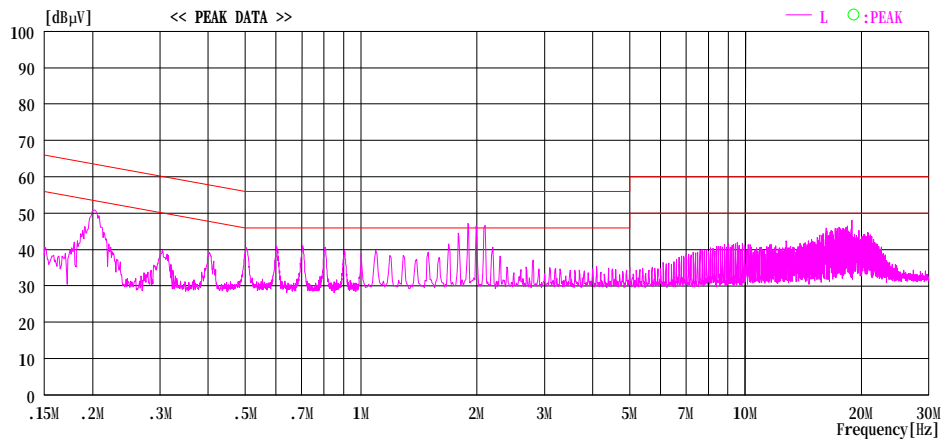
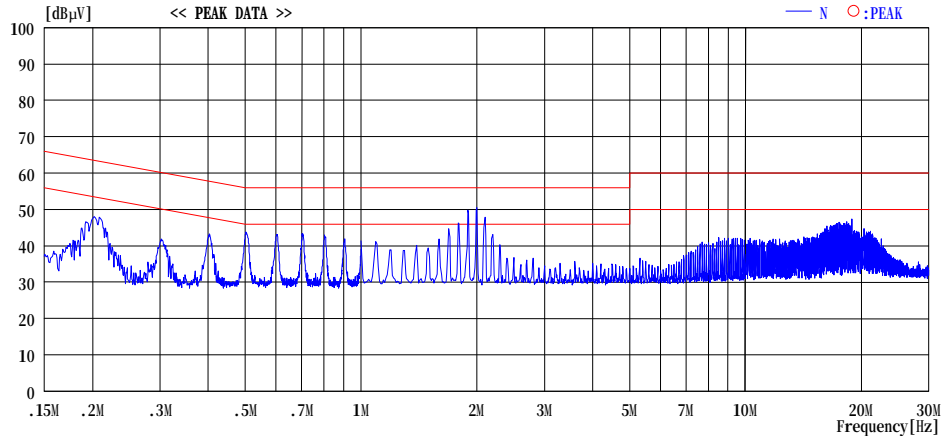


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 12:52:56

Applicant : CONTEC Co., LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Serial No. : 31BRG10000057

Report No. : 24GE0302-HO
Power : DC3.3V AC Adapter AC120V / 60Hz
Temp°C/Humi% : 28 deg.C / 60 %
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11g/2462MHz/54Mbps(short)/FRAME PN9 with earth cable

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)

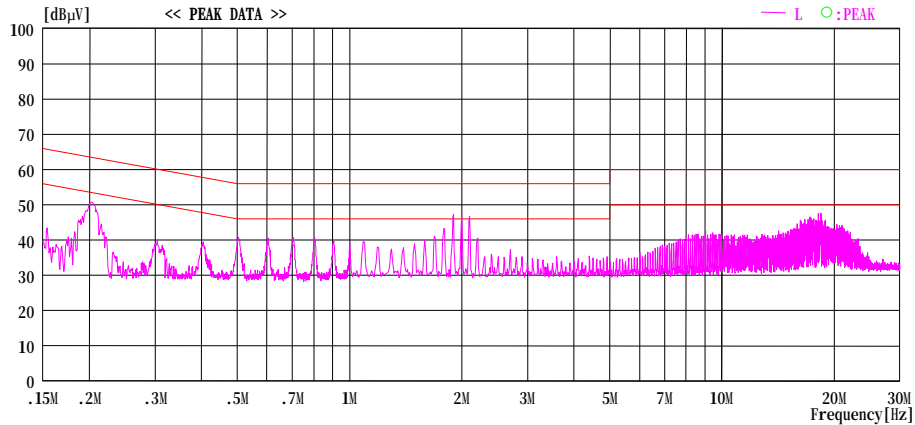
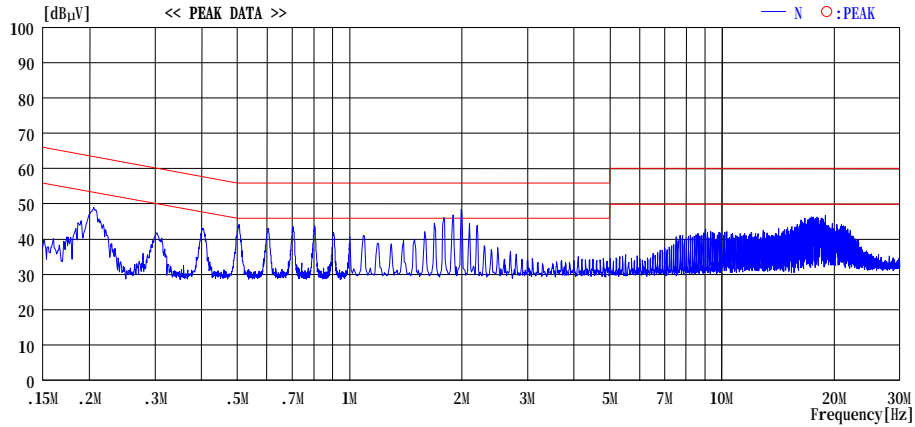


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

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)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/13 14:27:10

Applicant : CONTEC Co., LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Serial No. : 31BRG10000057

Report No. : 24GE0302-HO
Power : DC3.3V AC Adapter AC120V / 60Hz
Temp°C/Humi% : 28 deg.C / 60 %
Operator : Hiroka Uneyama

Mode / Remarks : Standby with earth cable

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

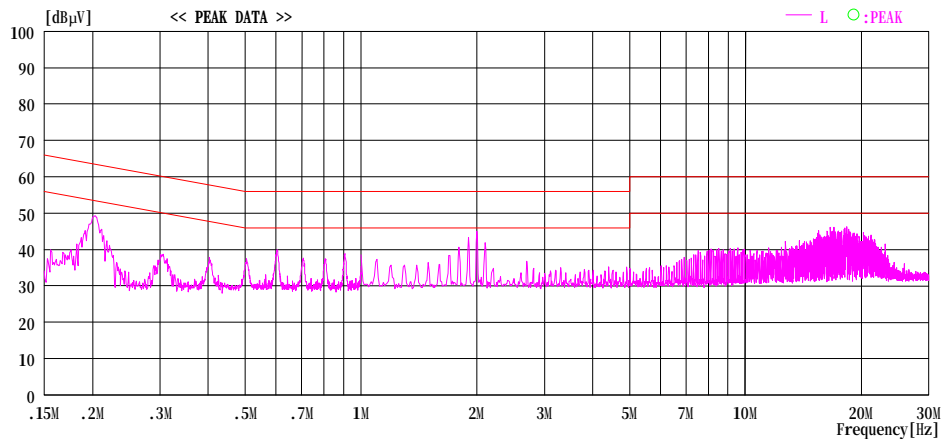
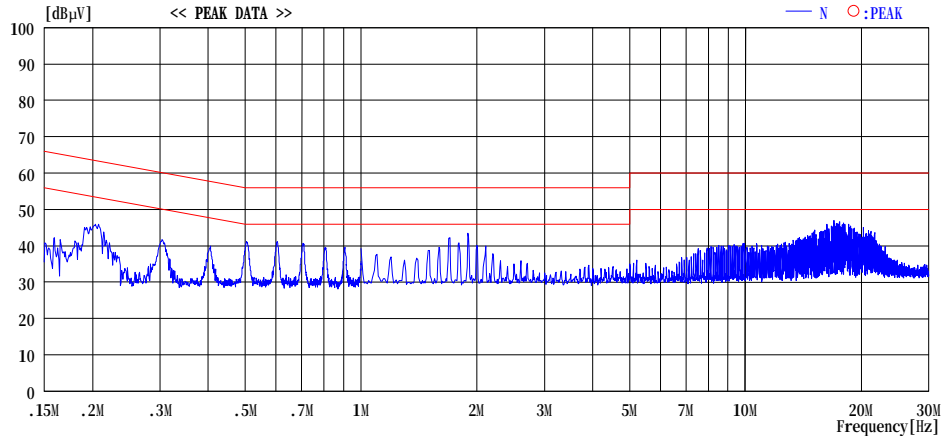


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

6dB Bandwidth(DSSS and other forms of modulation)

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

Company : CONTEC Co., LTD.
Equipment : Wireless LAN Access Point
Model : FX-DS540-APDL
Sample No. : 3IBRG10000057
Power : AC120V/60Hz
Mode : Tx (ch1,6,11)

REPORT NO : 23GE0302-HO
REGULATION : Fcc Part15 Subpart C 15.247(a)(2)
TEST DISTANCE : -
DATE : 07/05/2004
TEMPERATURE : 23°C
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

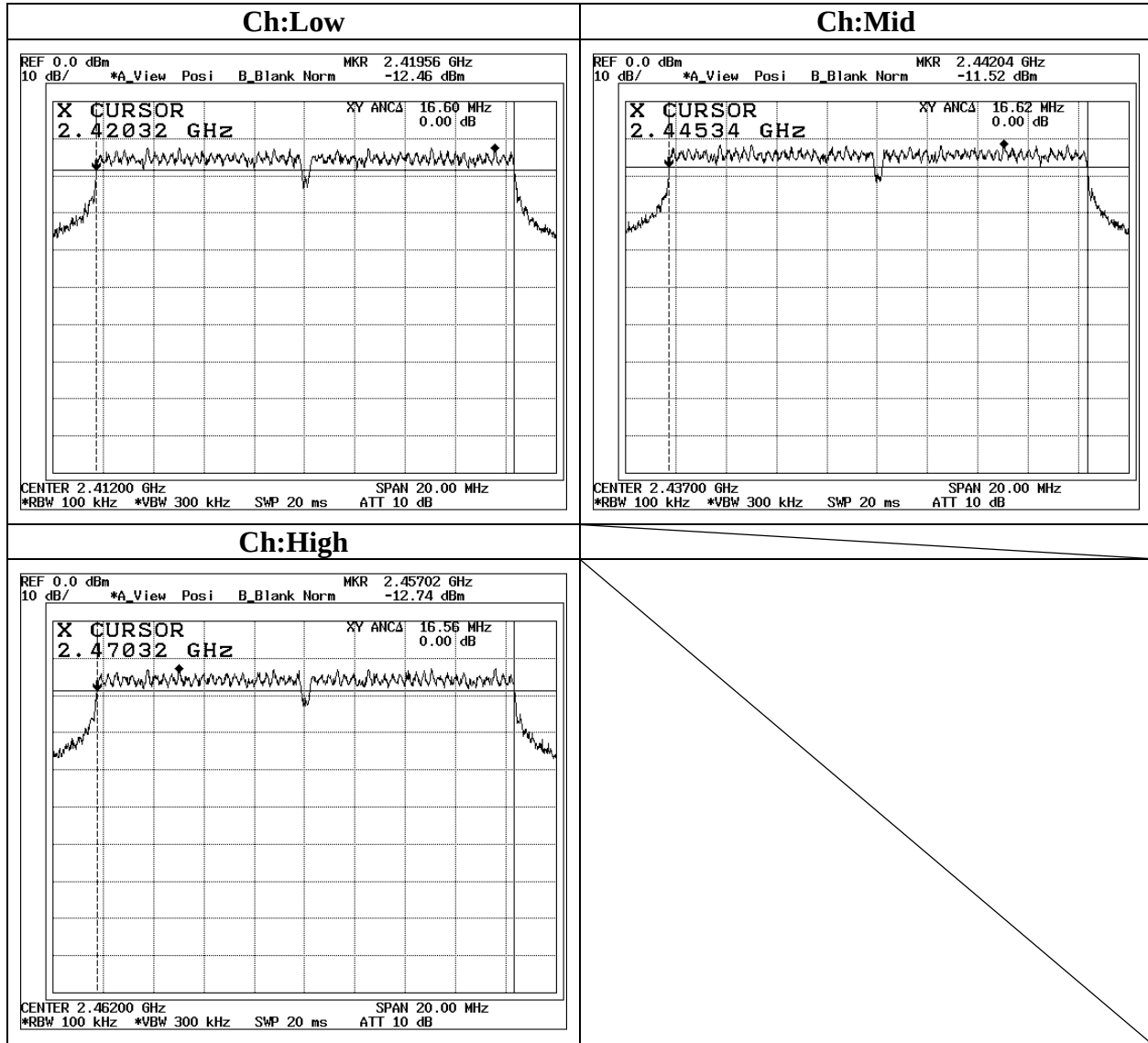
11g, 54Mbps,

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	16.600	500.0
Mid	2437.0	16.620	500.0
High	2462.0	16.560	500.0

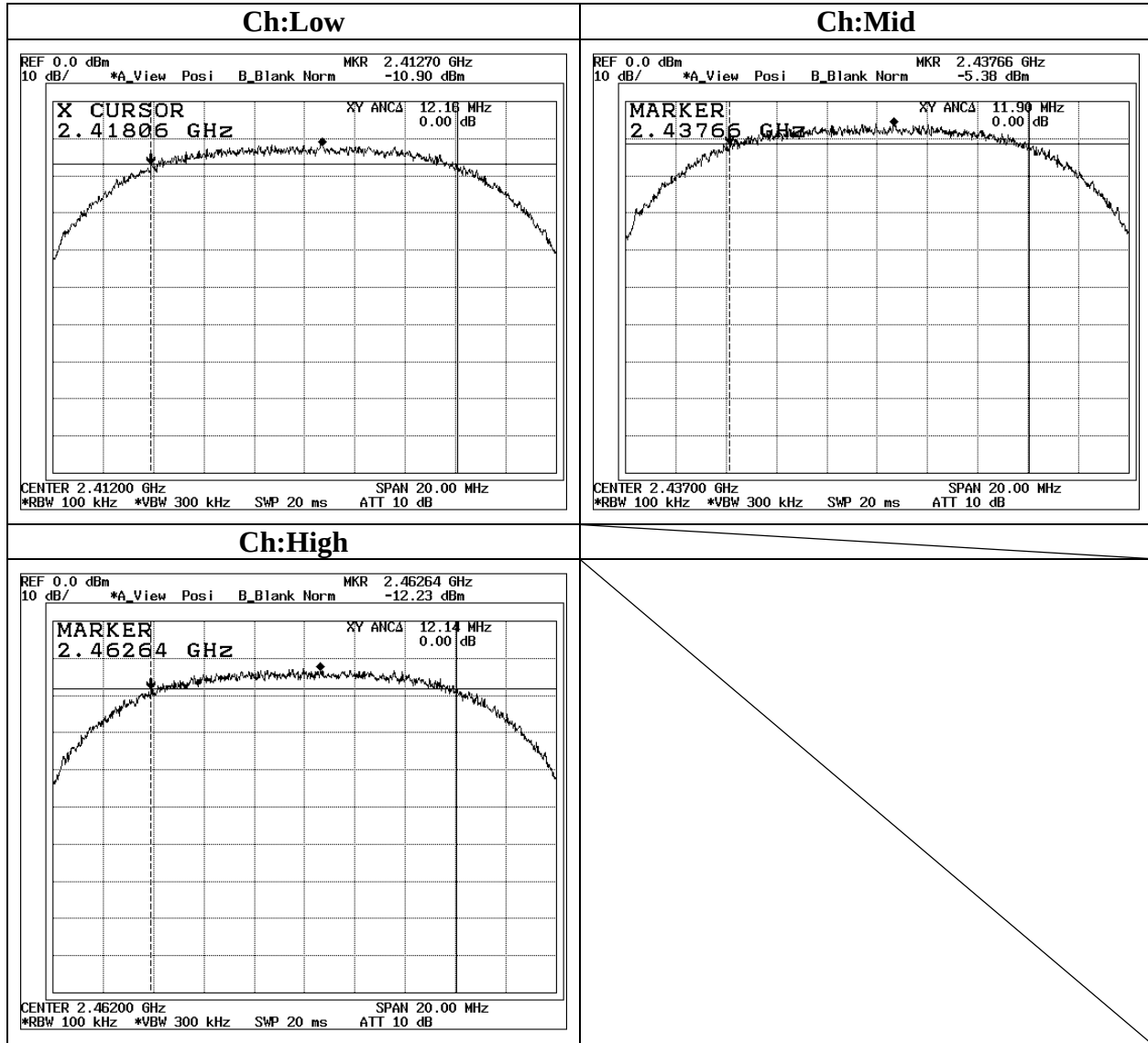
11b, 11Mbps,

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	12.160	500.0
Mid	2437.0	11.900	500.0
High	2462.0	12.140	500.0

6dB Bandwidth(DSSS and other forms of modulation)(11g)



6dB Bandwidth(DSSS and other forms of modulation)(11b)



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

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

Company	: CONTEC Co., LTD.	REPORT NO	: 24GE0302-HO
Equipment	: Wireless LAN Access Point	REGULATION	: Fcc Part15 Subpart C 15.247(b)(3)
Model	: FX-DS540-APDL	TEST DISTANCE	: -
Sample No.	: 3IBRG10000057	DATE	: 07/05/2004
Power	: AC120V/60Hz	TEMPERATURE	: 23 deg.C.
Mode	: Tx(ch1,6,11)	HUMIDITY	: 60%
		ENGINEER	: Kenichi Adachi

11g, 54MHz

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	7.49	1.97	10.00	19.46	30.00	10.54
Mid	2437.0	8.16	1.98	10.00	20.14	30.00	9.86
High	2462.0	7.15	1.98	10.00	19.13	30.00	10.87

11b, 11MHz

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	4.89	1.97	10.00	16.86	30.00	13.14
Mid	2437.0	10.16	1.98	10.00	22.14	30.00	7.86
High	2462.0	3.73	1.98	10.00	15.71	30.00	14.29

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

UL Apex Co., Ltd.

Head Office EMC Lab.

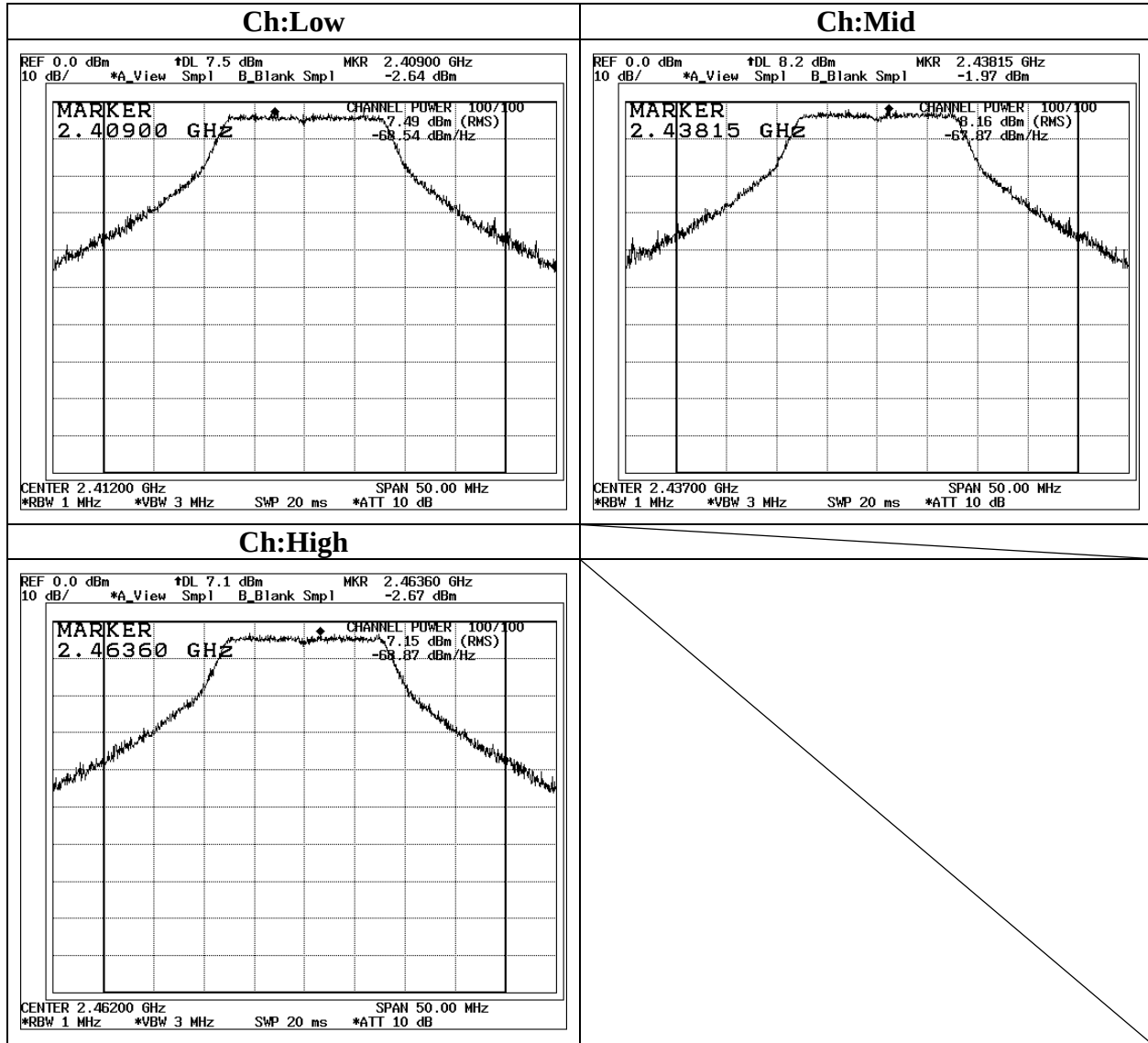
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

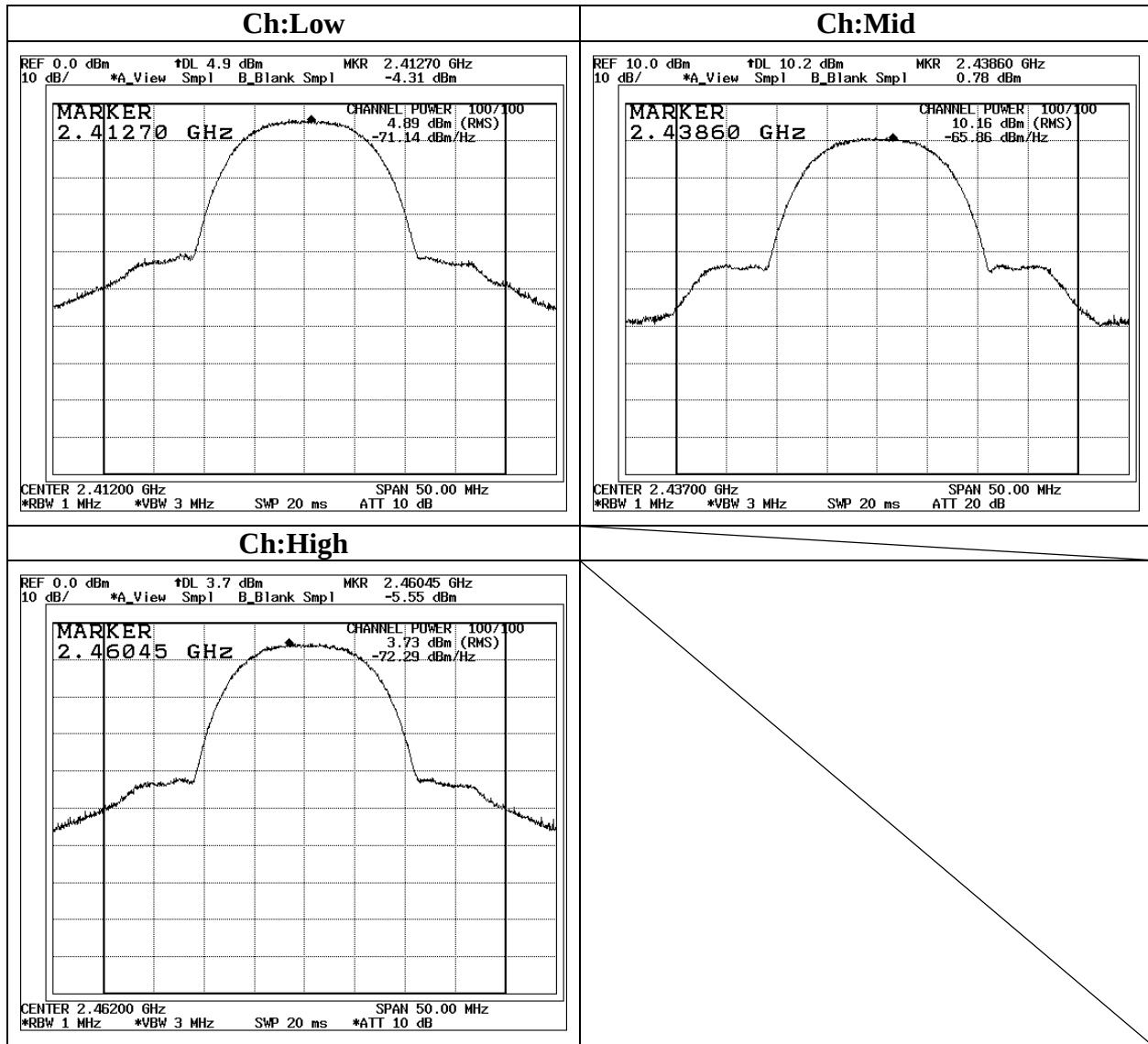
Facsimile : +81 596 24 8124

MF060b(10.04.03)

Maximum Peak OutPut Power(DSSS and other forms of modulation)(11g)



Maximum Peak OutPut Power(DSSS and other forms of modulation)(11b)



Radiated Spurious Emission(DSSS and other forms of modulation)

DATA OF RADIATED EMISSION TEST

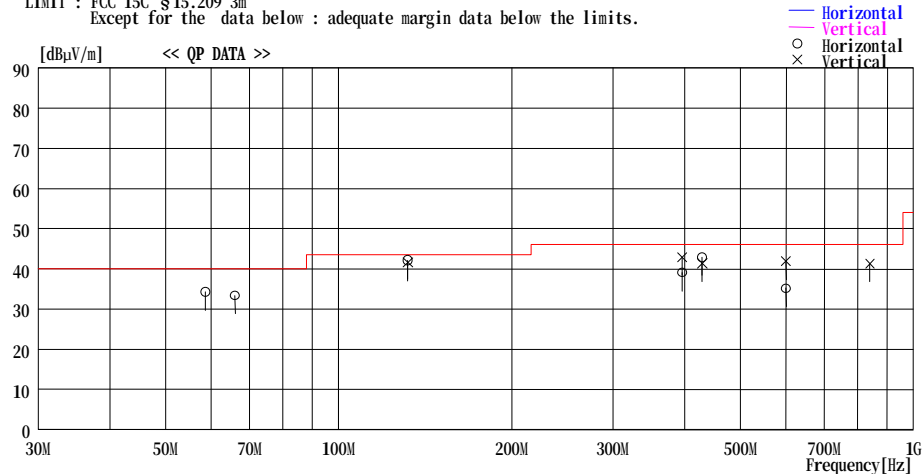
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/05 23:34:14

Applicant : CONTEC CO.,LTD. Report No. : 24GE0302-HO
Kind of EUT : Wireless LAN Access Point Power : DC 3.3V / AC Adapter AC120V/60Hz
Model No. : FX-DS540-APDL Temp°C/Humi% : 23deg.C / 56%
Sample No. : 31RBG10000057 Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11b/2412MHz/11Mbps(short)/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : FCC 15C §15.209 3m

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	58.623	46.8	8.4	6.8	27.8	34.2	40.0	5.8	400	281
2	65.998	46.8	7.3	6.9	27.6	33.4	40.0	6.6	400	285
3	131.998	48.6	13.7	7.4	27.6	42.1	43.5	1.4	166	98
4	395.992	40.0	18.1	8.8	27.8	39.1	46.0	6.9	100	256
5	428.991	43.6	18.3	9.1	28.1	42.9	46.0	3.1	100	139
6	599.992	34.7	19.6	9.7	28.8	35.2	46.0	10.8	146	309
----- Vertical -----										
7	131.997	48.1	13.7	7.4	27.6	41.6	43.5	1.9	100	201
8	395.992	43.8	18.1	8.8	27.8	42.9	46.0	3.1	100	213
9	428.991	42.1	18.3	9.1	28.1	41.4	46.0	4.6	142	291
10	599.993	41.4	19.6	9.7	28.8	41.9	46.0	4.1	100	110
11	839.990	37.8	21.5	10.6	28.6	41.3	46.0	4.7	141	286

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

DATA OF RADIATED EMISSION TEST

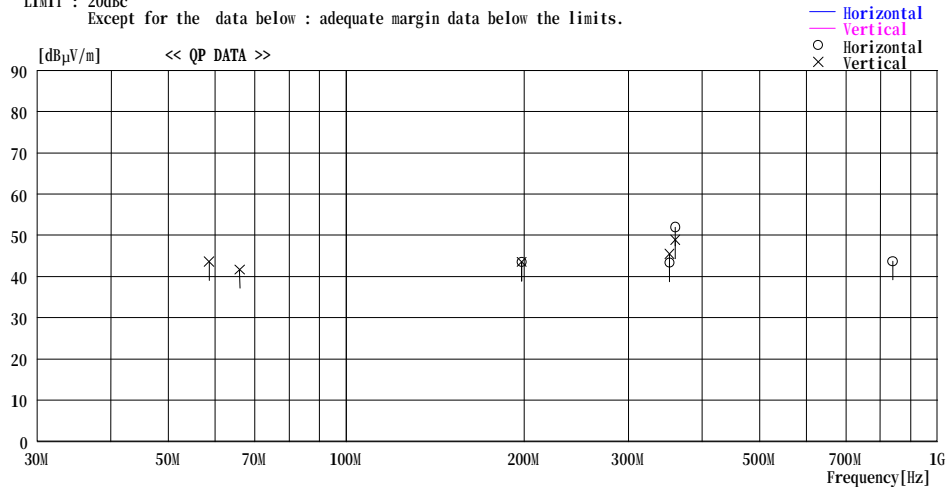
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/05 23:34:14

Applicant : CONTEC CO.,LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Sample No. : 31RBG10000057
Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11b/2412MHz/11Mbps(short)/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : 20dBc

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



No.	FREQ [MHz]	READING [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	197.997	46.2	16.7	7.8	27.2	43.5	40	3.5	100	115
2	352.002	46.1	16.2	8.5	27.5	43.3	40	3.3	100	99
3	359.996	54.3	16.6	8.6	27.5	52.0	40	12.0	100	213
4	839.990	40.2	21.5	10.6	28.6	43.7	40	3.7	100	171
----- Vertical -----										
5	58.622	56.2	8.4	6.8	27.8	43.6	40	3.6	100	0
6	65.999	55.1	7.3	6.9	27.6	41.7	40	1.7	100	360
7	197.997	46.2	16.7	7.8	27.2	43.5	40	3.5	100	-1
8	352.003	48.3	16.2	8.5	27.5	45.5	40	5.5	100	215
9	359.995	51.2	16.6	8.6	27.5	48.9	40	8.9	100	112

Carrier Level(Hor.)=94.3dBuV/m
Carrier Level(Ver.)=101.5dBuV/m
Limit=Carrier Level(Hor. / Ver.)-20dB > Results

Reading and Carrier level: RBW 100kHz, VBW 100kHz
CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN
Page:

DATA OF RADIATED EMISSION TEST

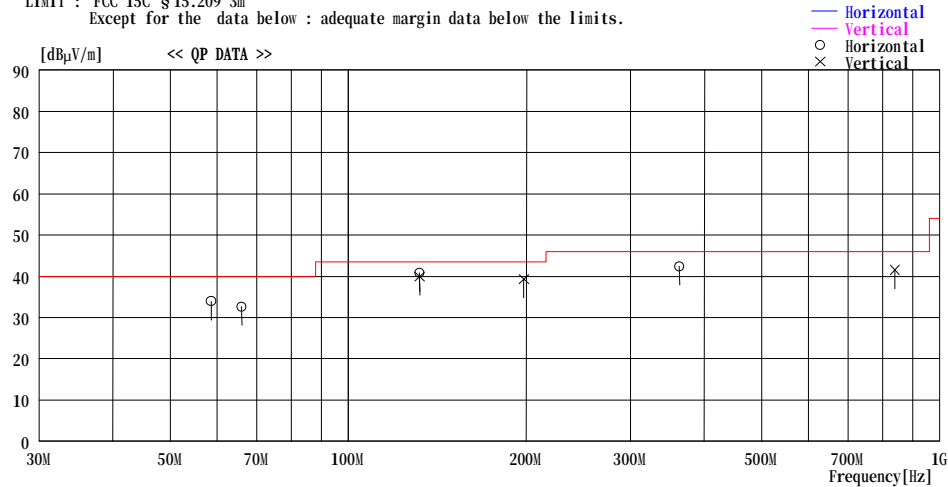
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/05 23:40:42

Applicant : CONTEC CO.,LTD. Report No. : 24GE0302-HO
Kind of EUT : Wireless LAN Access Point Power : DC 3.3V / AC Adapter AC120V/60Hz
Model No. : FX-DS540-APDL Temp°C/Humi% : 23deg.C / 56%
Sample No. : 31RBG10000057 Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11b/2437MHz/11Mbps(short)/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : FCC 15C §15.209 3m

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	58.618	46.5	8.4	6.8	27.8	33.9	40.0	6.1	400	284
2	65.999	46.0	7.3	6.9	27.6	32.6	40.0	7.4	122	271
3	131.998	47.3	13.7	7.4	27.6	40.8	43.5	2.7	158	137
4	362.994	44.6	16.7	8.6	27.5	42.4	46.0	3.6	100	161
----- Vertical -----										
5	131.998	46.4	13.7	7.4	27.6	39.9	43.5	3.6	100	222
6	197.995	42.0	16.7	7.8	27.2	39.3	43.5	4.2	100	217
7	839.991	38.0	21.5	10.6	28.6	41.5	46.0	4.5	152	290

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

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/05 23:40:42

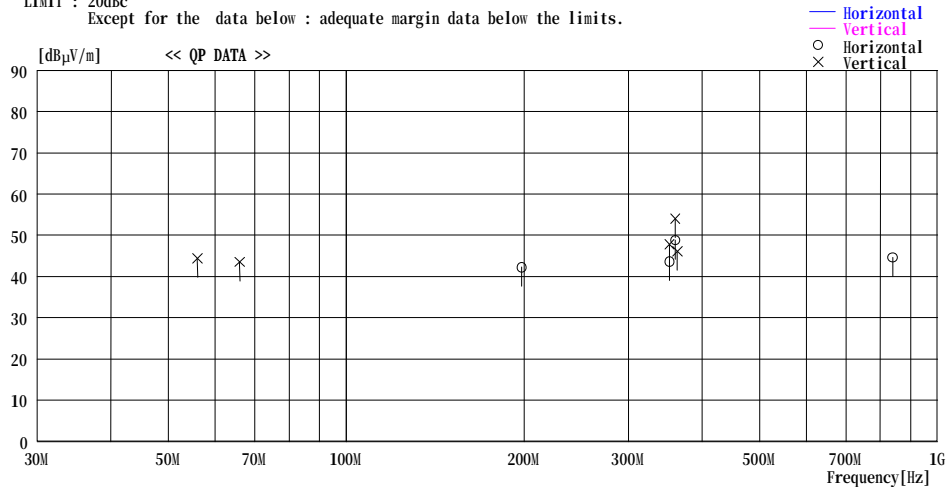
Applicant : CONTEC CO.,LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Sample No. : 31RBG10000057

Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11b/2437MHz/11Mbps(short)/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : 20dBc

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



No.	FREQ [MHz]	READING [dB μ V]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dB μ V/m]	LIMIT [dB μ V/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	197.996	44.9	16.7	7.8	27.2	42.2	----	----	176	130
2	352.002	46.4	16.2	8.5	27.5	43.6	----	----	100	167
3	359.995	51.1	16.6	8.6	27.5	48.8	----	----	100	158
4	839.989	41.1	21.5	10.6	28.6	44.6	----	----	100	172
----- Vertical -----										
5	56.016	56.3	9.0	6.8	27.7	44.4	----	----	100	360
6	65.999	56.9	7.3	6.9	27.6	43.5	----	----	100	151
7	352.000	50.6	16.2	8.5	27.5	47.8	----	----	127	215
8	359.996	56.3	16.6	8.6	27.5	54.0	----	----	124	198
9	362.992	48.3	16.7	8.6	27.5	46.1	----	----	115	211

Carrier Level(Hor.)=99.3dBuV/m
Carrier Level(Ver.)=108.2dBuV/m
Limit=Carrier Level(Hor./Ver.)-20dB > Results

Reading and Carrier level: RBW 100kHz, VBW 100kHz
CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN Page:

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 01:09:57

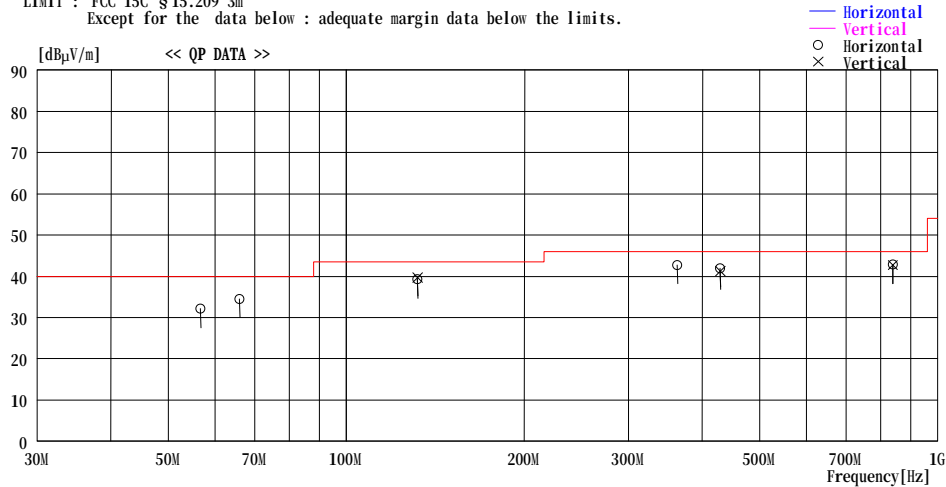
Applicant : CONTEC CO.,LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Sample No. : 31RBG10000057

Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11b/2462MHz/11Mbps(short)/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : FCC 15C §15.209 3m

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	56.712	44.2	8.8	6.8	27.7	32.1	40.0	7.9	400	261
2	65.999	47.9	7.3	6.9	27.6	34.5	40.0	5.5	400	300
3	131.997	45.7	13.7	7.4	27.6	39.2	43.5	4.3	179	86
4	362.993	44.9	16.7	8.6	27.5	42.7	46.0	3.3	100	94
5	428.992	42.6	18.3	9.1	28.1	41.9	46.0	4.1	100	138
6	839.989	39.3	21.5	10.6	28.6	42.8	46.0	3.2	100	164
----- Vertical -----										
7	131.999	46.2	13.7	7.4	27.6	39.7	43.5	3.8	100	240
8	428.992	42.0	18.3	9.1	28.1	41.3	46.0	4.7	143	293
9	839.990	39.2	21.5	10.6	28.6	42.7	46.0	3.3	125	203

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

DATA OF RADIATED EMISSION TEST

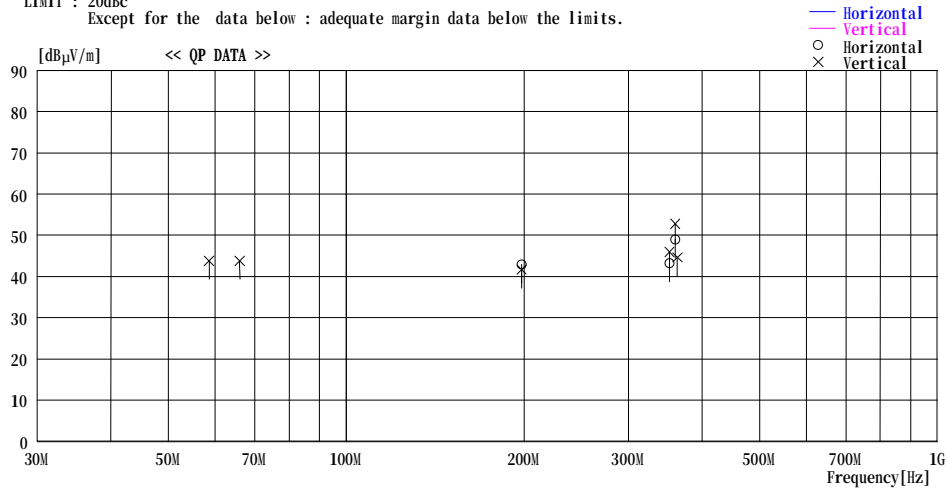
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 01:09:57

Applicant : CONTEC CO.,LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Sample No. : 31RBG10000057
Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11b/2462MHz/11Mbps(short)/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : 20dBc

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



No.	FREQ [MHz]	READING [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	197.996	45.6	16.7	7.8	27.2	42.9	----	----	157	118
2	352.002	46.0	16.2	8.5	27.5	43.2	----	----	100	91
3	359.996	51.3	16.6	8.6	27.5	49.0	----	----	100	116
----- Vertical -----										
4	58.623	56.4	8.4	6.8	27.8	43.8	----	----	100	360
5	65.999	57.2	7.3	6.9	27.6	43.8	----	----	100	158
6	197.997	44.4	16.7	7.8	27.2	41.7	----	----	100	215
7	352.002	48.8	16.2	8.5	27.5	46.0	----	----	100	208
8	359.996	55.1	16.6	8.6	27.5	52.8	----	----	100	204
9	362.992	46.8	16.7	8.6	27.5	44.6	----	----	100	202

Carrier Level(Hor.)=95.4dBuV/m
Carrier Level(Ver.)=101.4dBuV/m
Limit=Carrier Level(Hor./Ver.)-20dB > Results

Reading and Carrier level: RBW 100kHz, VBW 100kHz
CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN Page:

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 02:32:57

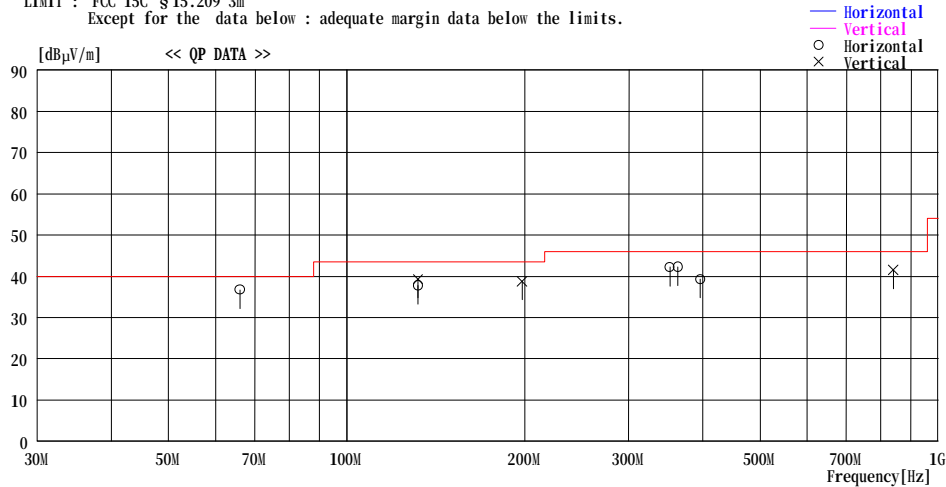
Applicant : CONTEC CO.,LTD.
Kind of EUT : Wireless LAN Access Point
Model No. : FX-DS540-APDL
Sample No. : 31RBG10000057

Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11g/2412MHz/54Mbps/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : FCC 15C §15.209 3m

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	66.000	50.1	7.3	6.9	27.6	36.7	40.0	3.3	400	282
2	131.999	44.3	13.7	7.4	27.6	37.8	43.5	5.7	176	248
3	352.002	45.0	16.2	8.5	27.5	42.2	46.0	3.8	100	152
4	362.994	44.5	16.7	8.6	27.5	42.3	46.0	3.7	100	141
5	395.992	40.2	18.1	8.8	27.8	39.3	46.0	6.7	100	260
----- Vertical -----										
6	131.998	45.8	13.7	7.4	27.6	39.3	43.5	4.2	100	242
7	197.997	41.5	16.7	7.8	27.2	38.8	43.5	4.7	100	234
8	839.989	38.0	21.5	10.6	28.6	41.5	46.0	4.5	149	292

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

DATA OF RADIATED EMISSION TEST

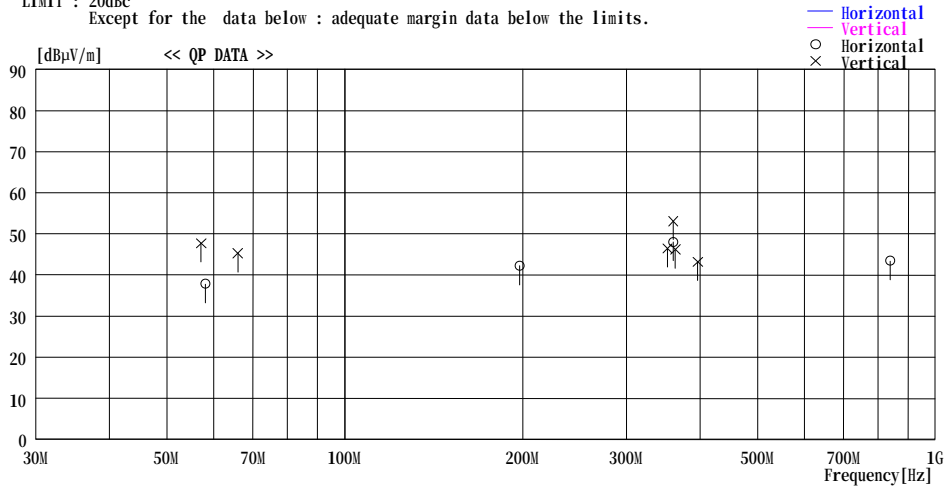
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 02:32:57

Applicant : CONTEC Co.,Ltd.
Kind of EUT : Wireless LAN MiniPCI Card User Unit
Model No. : FX-DS540-MPCI3u
Sample No. : 03LB087
Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11g/2412MHz/54Mbps/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : 20dBc

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



No.	FREQ [MHz]	READING [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	58.156	50.3	8.5	6.8	27.8	37.8	----	----	400	292
2	197.996	44.9	16.7	7.8	27.2	42.2	----	----	172	138
3	359.996	50.3	16.6	8.6	27.5	48.0	----	----	100	151
4	839.990	39.9	21.5	10.6	28.6	43.4	----	----	100	176
----- Vertical -----										
5	57.150	59.9	8.7	6.8	27.7	47.7	----	----	100	360
6	66.000	58.7	7.3	6.9	27.6	45.3	----	----	100	242
7	352.002	49.3	16.2	8.5	27.5	46.5	----	----	136	213
8	359.996	55.4	16.6	8.6	27.5	53.1	----	----	100	203
9	362.993	48.4	16.7	8.6	27.5	46.2	----	----	100	209
10	395.992	44.1	18.1	8.8	27.8	43.2	----	----	100	216

Carrier Level(Hor.)=94.4dBuV/m

Carrier Level(Ver.)=92.3dBuV/m

Limit=Carrier Level(Hor./Ver.)-20dB > Results

Reading and Carrier level: RBW 100kHz, VBW 100kHz
CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP. GAIN
Page:

DATA OF RADIATED EMISSION TEST

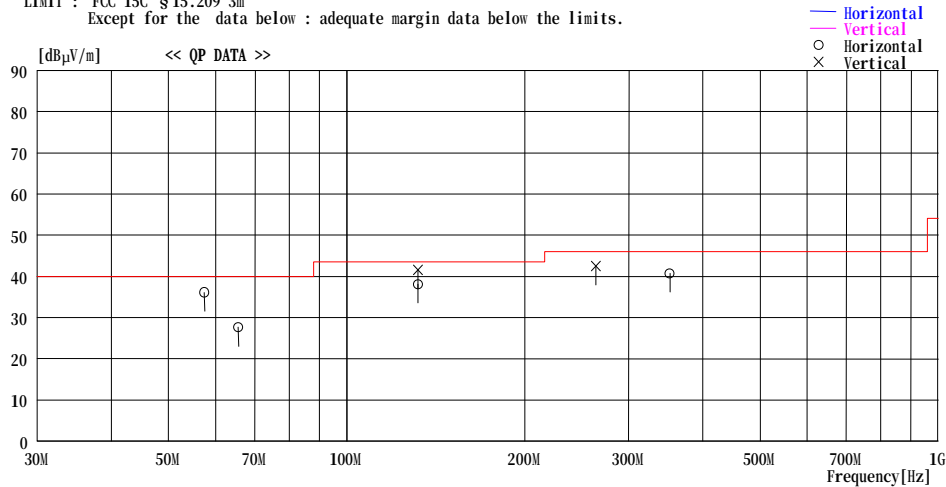
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 03:43:30

Applicant : CONTEC Co.,Ltd.
Kind of EUT : Wireless LAN MiniPCI Card User Unit
Model No. : EX-DS540-MPCI3u
Sample No. : 03LB087
Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11g/2437MHz/54Mbps/FAME PN9/EUT position Y-axis(MAX)

LIMIT : FCC 15C §15.209 3m

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	57.505	48.5	8.6	6.8	27.8	36.1	40.0	3.9	400	282
2	65.619	40.9	7.4	6.9	27.6	27.6	40.0	12.4	319	274
3	131.998	44.6	13.7	7.4	27.6	38.1	43.5	5.4	156	117
4	352.003	43.5	16.2	8.5	27.5	40.7	46.0	5.3	100	163
----- Vertical -----										
5	131.998	48.1	13.7	7.4	27.6	41.6	43.5	1.9	100	233
6	263.995	43.2	18.2	8.2	27.1	42.5	46.0	3.5	100	64

CHART:WITH 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)

DATA OF RADIATED EMISSION TEST

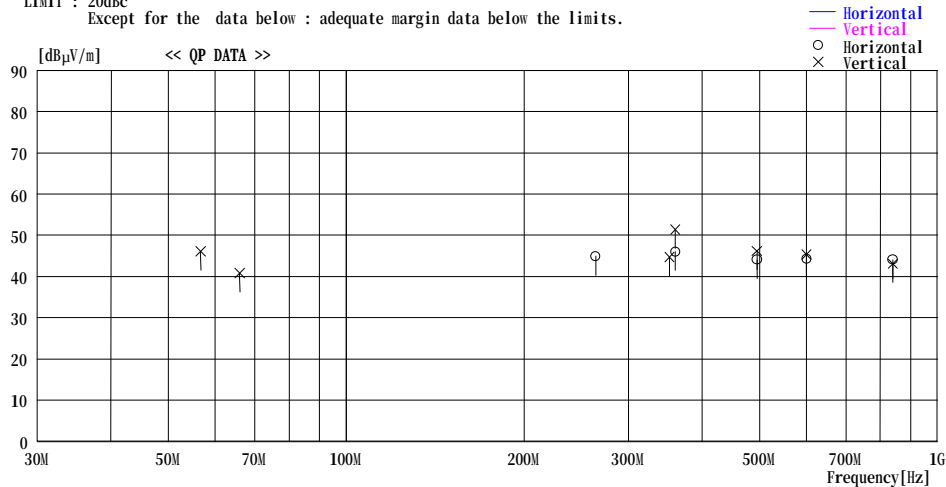
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 03:43:30

Applicant : CONTEC Co., Ltd.
Kind of EUT : Wireless LAN MiniPCI Card User Unit
Model No. : FX-DS540-MPCI3u
Sample No. : 03LB087
Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11g/2437MHz/54Mbps/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : 20dBc

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	263.995	45.6	18.2	8.2	27.1	44.9	40	4.9	130	129
2	359.996	48.3	16.6	8.6	27.5	46.0	40	6.0	100	152
3	494.991	44.9	18.3	9.3	28.4	44.1	40	4.1	100	149
4	599.992	43.8	19.6	9.7	28.8	44.3	40	4.3	145	243
5	839.989	40.6	21.5	10.6	28.6	44.1	40	4.1	100	163
----- Vertical -----										
6	56.704	58.2	8.8	6.8	27.7	46.1	40	6.1	100	360
7	65.999	54.2	7.3	6.9	27.6	40.8	40	0.8	100	139
8	352.004	47.5	16.2	8.5	27.5	44.7	40	4.7	144	232
9	359.996	53.7	16.6	8.6	27.5	51.4	40	11.4	119	227
10	494.990	47.0	18.3	9.3	28.4	46.2	40	6.2	100	198
11	599.993	44.8	19.6	9.7	28.8	45.3	40	5.3	100	128
12	839.990	39.6	21.5	10.6	28.6	43.1	40	3.1	124	209

Carrier Level (Hor.)=93.6dBuV/m
Carrier Level (Ver.)=102.2dBuV/m
Limit=Carrier Level (Hor./Ver.)-20dB > Results

Reading and Carrier level: RBW 100kHz, VBW 100kHz
CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN Page:

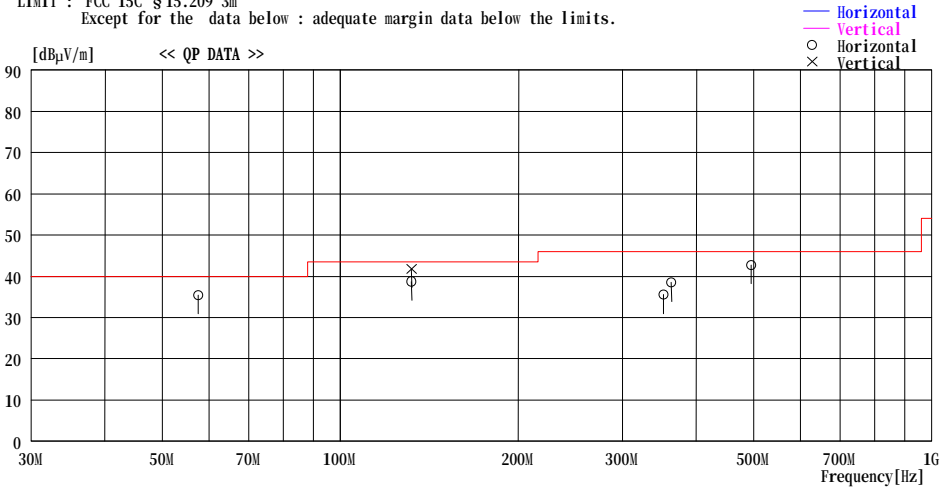
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 05:00:14

Applicant : CONTEC Co.,Ltd.
Kind of EUT : Wireless LAN MiniPCI Card User Unit
Model No. : FX-DS540-MPCI3u
Sample No. : 03LB087
Report No. : 24GE0302-HO
Power : DC 3.3V / AC Adapter AC120V/60Hz
Temp°C/Humi% : 23deg.C / 56%
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting 11g/2462MHz/54Mbps/FRAME PN9/EUT position Y-axis(MAX)

LIMIT : FCC 15C §15.209 3m
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	57.500	47.8	8.6	6.8	27.8	35.4	40.0	4.6	400	270
2	131.998	45.2	13.7	7.4	27.6	38.7	43.5	4.8	154	97
3	352.002	38.3	16.2	8.5	27.5	35.5	46.0	10.5	100	238
4	362.993	40.7	16.7	8.6	27.5	38.5	46.0	7.5	258	129
5	494.991	43.5	18.3	9.3	28.4	42.7	46.0	3.3	100	128
----- Vertical -----										
6	131.998	48.3	13.7	7.4	27.6	41.8	43.5	1.7	100	213

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

Radiated Spurious Emission(DSSS and other forms of modulation)

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

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN Access Point
MODEL : FX-DS540-APDL
SAMPLE NO. : 3IRBG1000057
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11Mbps / CH1:2412MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (c)
TEST DISTANCE : 3m / 1m
DATE : 06/29/2004, 07/14/2004
TEMPERATURE : 23deg.C., 26deg.C.
HUMIDITY : 60%, 60%
ENGINEER : Kenichi Adachi, Hiroka Umeyama

PK DETECT		(RBW: 1MHz , VBW:1MHz)										
No.	Freq.	Reading		Ant. Factor	Amp. Gain	Cable Loss	Atten. or Filter	Result		Limit PK	Margin	
		HOR	VER					HOR	VER		HOR	VER
		[MHz]	[dBuV]					[dBm]	[dB]		[dB]	[dBuV/m]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2196.8	46.5	47.1	30.5	36.3	6.1	9.9	56.7	57.3	74.0	17.3	16.7
2	2368.5	45.7	50.2	30.7	36.3	6.4	9.9	56.3	60.8	74.0	17.7	13.2
3	2400.0	54.0	64.3	30.8	36.3	6.4	9.9	64.8	75.1	-	-	-
4	4824.0	49.5	44.5	35.4	36.1	9.4	1.0	59.2	54.2	74.0	14.8	19.8
5	5581.5	59.5	52.3	36.3	35.7	10.2	0.8	71.1	63.9	-	-	-
6	6336.0	57.3	50.2	37.5	35.7	10.9	0.7	70.8	63.7	-	-	-
7	7236.0	42.4	42.4	38.0	35.6	11.8	0.5	57.1	57.1	74.0	16.9	16.9
8	9648.0	43.7	43.6	37.5	36.3	13.9	0.5	59.3	59.2	74.0	14.8	14.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
9	12060.0	42.8	42.3	41.1	35.7	15.5	0.0	54.2	53.7	74.0	19.8	20.3
10	14472.0	40.0	40.8	41.0	34.6	16.6	0.0	53.5	54.3	74.0	20.5	19.7
11	16884.0	43.0	43.6	46.0	35.5	18.6	0.0	62.6	63.2	74.0	11.4	10.8
12	19296.0	43.1	42.4	39.6	34.9	20.4	0.0	58.7	58.0	74.0	15.3	16.0
13	21708.0	43.3	43.4	40.7	35.3	22.1	0.0	61.3	61.4	74.0	12.7	12.6
14	24120.0	44.8	45.2	40.0	36.0	22.6	0.0	61.9	62.3	74.0	12.1	11.7

AV DETECT (RBW: 1MHz , VBW:10Hz)															
No.	Freq.	Reading		Ant. Factor	Amp. Gain	Cable Loss	Atten. or Filter	Result		Limit AV	Margin				
		HOR	VER					HOR	VER		HOR	VER			
	[MHz]		[dBuV]		[dB/m]		[dB]		[dBuV/m]		[dBuV/m]		[dB]		[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)															
1	2196.8	32.4	33.2	30.5	36.3	6.1	9.9	42.6	43.4	54.0	11.4	10.6			
2	2368.5	37.7	38.6	30.7	36.3	6.4	9.9	48.3	49.2	54.0	5.7	4.8			
3	2400.0	55.0	52.0	30.8	36.3	6.4	9.9	65.8	62.8	-	-	-			
4	4824.0	43.3	42.9	35.4	36.1	9.4	1.0	53.0	52.6	54.0	1.0	1.4			
5	5581.5	51.3	43.9	36.3	35.7	10.2	0.8	62.9	55.5	-	-	-			
6	6336.0	56.1	46.2	37.5	35.7	10.9	0.7	69.6	59.7	-	-	-			
7	7236.0	30.6	30.7	38.0	35.6	11.8	0.5	45.3	45.4	54.0	8.7	8.6			
8	9648.0	31.2	31.2	37.5	36.3	13.9	0.5	46.8	46.8	54.0	7.3	7.3			
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac															
9	12060.0	29.7	30.2	41.1	35.7	15.5	0.0	41.1	41.6	54.0	12.9	12.4			
10	14472.0	28.3	28.1	41.0	34.6	16.6	0.0	41.8	41.6	54.0	12.2	12.4			
11	16884.0	30.4	30.4	46.0	35.5	18.6	0.0	50.0	50.0	54.0	4.0	4.0			
12	19296.0	30.3	30.4	39.6	34.9	20.4	0.0	45.9	46.0	54.0	8.1	8.0			
13	21708.0	30.9	30.9	40.7	35.3	22.1	0.0	48.9	48.9	54.0	5.1	5.1			
14	24120.0	32.3	32.3	40.0	36.0	22.6	0.0	49.4	49.4	54.0	4.6	4.6			

20dBc(Fundamental 2412MHz)													(RBW: 100kHz, VBW:100kHz)			
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Atten. or Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN					
		HOR	VER					HOR	VER		HOR	VER				
		[dBuV/m]						[dBuV/m]			[dB]	[dB]				
Test distance 3meters													RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass			
1	2412.0	83.4	90.6	30.8	36.3	6.4	9.9	94.3	101.5	-	-	-				
2	2400.0	43.8	49.9	30.8	36.3	6.4	9.9	54.6	60.7	Funda-20dB	19.6	20.7				
3	5581.5	43.2	37.1	36.3	35.7	10.2	9.8	63.8	57.7	Funda-20dB	10.4	23.7				
4	6336.0	48.0	41.0	37.5	35.7	10.9	9.8	70.5	63.5	Funda-20dB	3.8	18.0				

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

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

* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz

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

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

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)

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

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN Access Point
MODEL : FX-DS540-APDL
SAMPLE NO. : 3IRBG10000057
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11Mbps / CH6:2437MHz)

REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m / 1m
DATE : 06/29/2004, 07/14/2004
TEMPERATURE : 23deg.C., 26deg.C.
HUMIDITY : 60%, 60%
ENGINEER : Kenichi Adachi, Hiroka Umeyama

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

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit PK [dBuV/m]	Margin	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.1	56.7	51.3	35.6	36.1	9.4	1.0	66.7	61.3	74.0	7.3	12.7
2	5603.4	64.1	58.9	36.4	35.7	10.2	0.8	75.8	70.6	-	-	-
3	6336.0	56.3	51.7	37.5	35.7	10.9	0.7	69.8	65.2	-	-	-
4	7311.0	45.5	46.6	38.2	35.6	11.9	0.5	60.6	61.7	74.0	13.4	12.3
5	9748.0	48.7	49.6	37.3	36.3	14.0	0.5	64.2	65.1	74.0	9.8	8.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
6	12185.0	43.6	44.7	41.4	35.6	15.6	0.5	56.0	57.1	74.0	18.0	16.9
7	14622.0	41.5	40.4	41.5	34.8	16.8	0.6	56.1	55.0	74.0	17.9	19.0
8	17059.0	43.8	43.6	46.4	35.4	18.8	0.4	64.5	64.3	74.0	9.5	9.7
9	19496.0	43.0	43.1	39.2	34.9	20.6	0.0	58.4	58.5	74.0	15.6	15.5
10	21933.0	43.7	44.2	40.5	35.0	22.3	0.0	62.0	62.5	74.0	12.0	11.5
11	24370.0	43.7	44.8	40.1	36.6	22.7	0.0	60.4	61.5	74.0	13.6	12.5

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

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit AV [dBuV/m]	Margin	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.1	42.5	37.4	35.6	36.1	9.4	1.0	52.5	47.4	54.0	1.5	6.6
2	5603.4	50.7	52.5	36.4	35.7	10.2	0.8	62.4	64.2	-	-	-
3	6336.0	54.6	47.9	37.5	35.7	10.9	0.7	68.1	61.4	-	-	-
4	7311.0	33.3	34.8	38.2	35.6	11.9	0.5	48.4	49.9	54.0	5.6	4.1
5	9748.0	36.8	35.6	37.3	36.3	14.0	0.5	52.3	51.1	54.0	1.8	3.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
6	12185.0	30.0	32.6	41.4	35.6	15.6	0.5	42.4	45.0	54.0	11.6	9.0
7	14622.0	28.4	28.2	41.5	34.8	16.8	0.6	43.0	42.8	54.0	11.0	11.2
8	17059.0	30.5	30.5	46.4	35.4	18.8	0.4	51.2	51.2	54.0	2.8	2.8
9	19496.0	30.1	30.1	39.2	34.9	20.6	0.0	45.5	45.5	54.0	8.5	8.5
10	21933.0	30.3	30.3	40.5	35.0	22.3	0.0	48.6	48.6	54.0	5.4	5.4
11	24370.0	31.6	31.6	40.1	36.6	22.7	0.0	48.3	48.3	54.0	5.7	5.7

20dBc(Fundamental 2437MHz) (RBW: 100kHz, VBW:100kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Atten. or Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	2437.0	88.4	97.3	30.9	36.3	6.5	9.9	99.3	108.2	-	-	-
2	5603.4	48.2	44.6	36.4	35.7	10.2	9.8	68.9	65.3	Funda-20dB	10.4	22.9
3	6336.0	45.0	40.7	37.5	35.7	10.9	9.8	67.5	63.2	Funda-20dB	11.8	25.0

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

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

* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz

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

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

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)

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

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN Access Point
MODEL : FX-DS540-APDL
SAMPLE NO. : 3IRBG10000057
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11Mbps / CH11:2462MHz)

REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m / 1m
DATE : 06/29/2004,07/14/2004
TEMPERATURE : 23deg.C., 26deg.C.
HUMIDITY : 60%, 60%
ENGINEER : Kenichi Adachi, Hiroka Umeyama

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

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit PK [dBuV/m]	Margin	
		HOR [dBuV]	VER					HOR [dBuV/m]	VER		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	44.7	51.4	30.9	36.2	6.5	9.9	55.8	62.5	74.0	18.3	11.6
2	4932.0	43.5	48.0	35.9	36.1	9.5	1.0	53.9	58.4	74.0	20.1	15.6
3	5630.0	58.4	53.8	36.4	35.7	10.2	0.8	70.2	65.6	-	-	-
4	6336.0	53.1	53.2	37.5	35.7	10.9	0.7	66.6	66.7	-	-	-
5	7386.0	42.6	42.5	38.3	35.7	12.0	0.5	57.8	57.7	74.0	16.2	16.3
6	9848.0	43.4	43.4	37.1	36.4	14.1	0.5	58.8	58.8	74.0	15.3	15.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	12310.0	42.2	42.6	41.7	35.6	15.6	0.0	54.4	54.8	74.0	19.6	19.2
8	14772.0	41.7	41.7	42.1	34.9	16.9	0.0	56.3	56.3	74.0	17.7	17.7
9	17234.0	43.8	44.5	46.7	35.3	18.9	0.0	64.6	65.3	74.0	9.4	8.7
10	19696.0	43.6	42.6	39.6	35.2	20.7	0.0	59.2	58.2	74.0	14.8	15.8
11	22158.0	43.8	43.6	40.6	35.0	22.3	0.0	62.2	62.0	74.0	11.8	12.0
12	24620.0	45.7	45.8	40.2	36.8	22.9	0.0	62.5	62.6	74.0	11.5	11.4

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

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit AV [dBuV/m]	Margin	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	32.8	32.9	30.9	36.2	6.5	9.9	43.9	44.0	54.0	10.2	10.1
2	4932.0	31.7	42.3	35.9	36.1	9.5	1.0	42.1	52.7	54.0	11.9	1.3
3	5630.0	50.2	52.3	36.4	35.7	10.2	0.8	62.0	64.1	-	-	-
4	6336.0	45.7	56.1	37.5	35.7	10.9	0.7	59.2	69.6	-	-	-
5	7386.0	32.7	30.6	38.3	35.7	12.0	0.5	47.9	45.8	54.0	6.1	8.2
6	9848.0	31.2	31.2	37.1	36.4	14.1	0.5	46.6	46.6	54.0	7.5	7.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
9	12310.0	29.8	29.7	41.7	35.6	15.6	0.0	42.0	41.9	54.0	12.0	12.1
10	14772.0	29.0	28.8	42.1	34.9	16.9	0.0	43.6	43.4	54.0	10.4	10.6
11	17234.0	30.4	30.2	46.7	35.3	18.9	0.0	51.2	51.0	54.0	2.8	3.0
12	19696.0	30.2	30.1	39.6	35.2	20.7	0.0	45.8	45.7	54.0	8.2	8.3
13	22158.0	31.1	31.0	40.6	35.0	22.3	0.0	49.5	49.4	54.0	4.5	4.6
14	24620.0	32.8	32.6	40.2	36.8	22.9	0.0	49.6	49.4	54.0	4.4	4.6

20dBc(Fundamental 2462MHz) (RBW: 100kHz , VBW:100kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Atten. or Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBm]	[dBm]					[dB]	[dB]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	2462.0	84.4	90.4	30.9	36.3	6.5	9.9	95.4	101.4	-	-	-
2	5630.0	43.6	42.3	36.3	35.7	10.2	9.8	64.2	62.9	Funda-20dB	11.2	18.5
3	6336.0	41.5	43.1	37.5	35.7	10.9	9.8	64.0	65.6	Funda-20dB	11.4	15.8

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

9.5 dB

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

* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz

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

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

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)

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN Access Point
MODEL : FX-DS540-APDL
SAMPLE NO. : 3IRBG10000057
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 54Mbps / CH1:2412MHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m / 1m
DATE : 06/29/2004, 07/14/2004
TEMPERATURE : 23deg.C., 26deg.C.
HUMIDITY : 60%, 60%
ENGINEER : Kenichi Adachi, Hiroka Umeyama

PK DETECT (RBW: 1MHz, VBW:1MHz)												
No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or 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 + Attenuator (or Filter)												
1	2183.9	47.5	48.9	30.5	36.3	6.1	9.9	57.7	59.1	74.0	16.3	14.9
2	2368.0	52.2	49.4	30.7	36.3	6.4	9.9	62.8	60.0	74.0	11.2	14.0
3	2400.0	70.0	69.5	30.8	36.3	6.4	9.9	80.8	80.3	-	-	-
4	4823.9	49.4	45.7	35.4	36.1	9.4	1.0	59.1	55.4	74.0	14.9	18.6
5	5573.8	60.0	55.6	36.3	35.7	10.2	0.8	71.6	67.2	-	-	-
6	6336.1	57.5	51.4	37.5	35.7	10.9	0.7	71.0	64.9	-	-	-
7	7236.0	42.7	42.6	38.0	35.6	11.8	0.5	57.4	57.3	74.0	16.6	16.7
8	9648.0	43.5	43.0	37.5	36.3	13.9	0.5	59.1	58.6	74.0	15.0	15.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
9	12060.0	42.3	42.7	41.1	35.7	15.5	0.0	53.7	54.1	74.0	20.3	19.9
10	14472.0	40.9	40.2	41.0	34.6	16.6	0.0	54.4	53.7	74.0	19.6	20.3
11	16884.0	43.2	43.6	46.0	35.5	18.6	0.0	62.8	63.2	74.0	11.2	10.8
12	19296.0	43.9	43.6	39.6	34.9	20.4	0.0	59.5	59.2	74.0	14.5	14.8
13	21708.0	43.7	43.9	40.7	35.3	22.1	0.0	61.7	61.9	74.0	12.3	12.1
14	24120.0	43.3	44.5	40.0	36.0	22.6	0.0	60.4	61.6	74.0	13.6	12.4

AV DETECT (RBW: 1MHz, VBW:10Hz)												
No.	Freq. [MHz]	Reading HOR VER [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result HOR VER [dBuV/m]		Limit AV [dBuV/m]	Margin HOR VER [dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2183.9	33.6	33.5	30.5	36.3	6.1	9.9	43.8	43.7	54.0	10.2	10.3
2	2368.0	37.9	38.7	30.7	36.3	6.4	9.9	48.5	49.3	54.0	5.5	4.7
3	2400.0	50.6	47.8	30.8	36.3	6.4	9.9	61.4	58.6	-	-	-
4	4823.9	36.4	31.8	35.4	36.1	9.4	1.0	46.1	41.5	54.0	7.9	12.5
5	5573.8	49.0	39.8	36.3	35.7	10.2	0.8	60.6	51.4	-	-	-
6	6336.1	48.0	55.5	37.5	35.7	10.9	0.7	61.5	69.0	-	-	-
7	7236.0	31.8	36.4	38.0	35.6	11.8	0.5	46.5	51.1	54.0	7.5	2.9
8	9648.0	31.5	31.5	37.5	36.3	13.9	0.5	47.1	47.1	54.0	7.0	7.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
9	12060.0	29.9	29.9	41.1	35.7	15.5	0.0	41.3	41.3	54.0	12.7	12.7
10	14472.0	28.5	28.5	41.0	34.6	16.6	0.0	42.0	42.0	54.0	12.0	12.0
11	16884.0	31.0	30.9	46.0	35.5	18.6	0.0	50.6	50.5	54.0	3.4	3.5
12	19296.0	30.3	30.4	39.6	34.9	20.4	0.0	45.9	46.0	54.0	8.1	8.0
13	21708.0	30.9	30.8	40.7	35.3	22.1	0.0	48.9	48.8	54.0	5.1	5.2
14	24120.0	30.7	30.8	40.0	36.0	22.6	0.0	47.8	47.9	54.0	6.2	6.1

20dBc(Fundamental 2412MHz)													(RBW: 100kHz , VBW:100kHz)			
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Atten. or Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN					
		HOR	VER					HOR	VER		HOR	VER				
		[dBuV/m]						[dB]	[dB]							
Test distance 3meters													RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass			
1	2412.0	83.5	81.4	30.8	36.3	6.4	9.9	94.4	92.3	-	-	-				
2	2400.0	54.4	54.5	30.8	36.3	6.4	9.9	65.2	65.3	Funda-20dB	9.1	6.9				
3	5581.5	43.9	38.0	36.3	35.7	10.2	9.8	64.5	58.6	Funda-20dB	9.8	13.6				
4	6336.0	49.6	46.8	37.5	35.7	10.9	9.8	72.1	69.3	Funda-20dB	2.3	3.0				

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

- * Except for the above table : All other spurious emissions were less than 20dB for the limit.
- * Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
- * In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
- * The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission(DSSS and other forms of modulation)

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN Access Point
MODEL : FX-DS540-APDL
SAMPLE NO. : 3IRBG10000057
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 54Mbps / CH6:2437MHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m / 1m
DATE : 06/29/2004, 07/14/2004
TEMPERATURE : 23deg.C., 26deg.C.
HUMIDITY : 60%, 60%
ENGINEER : Kenichi Adachi, Hiroka Umeyama

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

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit PK [dBuV/m]	Margin	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.1	50.2	44.3	35.6	36.1	9.4	1.0	60.2	54.3	74.0	13.8	19.7
2	5606.1	61.6	55.7	36.4	35.7	10.2	0.8	73.3	67.4	-	-	-
3	6335.0	58.0	51.6	37.5	35.7	10.9	0.7	71.5	65.1	-	-	-
4	7311.0	42.8	42.8	38.2	35.6	11.9	0.5	57.9	57.9	74.0	16.1	16.1
5	9748.0	43.5	43.5	37.3	36.3	14.0	0.5	59.0	59.0	74.0	15.1	15.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
6	12185.0	42.5	47.8	41.4	35.6	15.6	0.0	54.4	59.7	74.0	19.7	14.3
7	14622.0	41.5	43.3	41.5	34.8	16.8	0.0	55.5	57.3	74.0	18.5	16.7
8	17059.0	43.1	43.1	46.4	35.4	18.8	0.0	63.4	63.4	74.0	10.6	10.6
9	19496.0	43.3	43.2	39.2	34.9	20.6	0.0	58.7	58.6	74.0	15.3	15.4
10	21933.0	44.0	43.6	40.5	35.0	22.3	0.0	62.3	61.9	74.0	11.7	12.1
11	24370.0	44.8	44.1	40.1	36.6	22.7	0.0	61.5	60.8	74.0	12.5	13.2

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

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit AV [dBuV/m]	Margin	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.1	36.9	31.5	35.6	36.1	9.4	1.0	46.9	41.5	54.0	7.1	12.5
2	5606.1	50.0	44.0	36.4	35.7	10.2	0.8	61.7	55.7	-	-	-
3	6335.0	55.0	47.0	37.5	35.7	10.9	0.7	68.5	60.5	-	-	-
4	7311.0	30.6	30.6	38.2	35.6	11.9	0.5	45.7	45.7	54.0	8.3	8.3
5	9748.0	31.2	31.2	37.3	36.3	14.0	0.5	46.7	46.7	54.0	7.4	7.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
6	12185.0	30.0	31.3	41.4	35.6	15.6	0.0	41.9	43.2	54.0	12.1	10.9
7	14622.0	28.4	28.3	41.5	34.8	16.8	0.0	42.4	42.3	54.0	11.6	11.7
8	17059.0	31.0	30.9	46.4	35.4	18.8	0.0	51.3	51.2	54.0	2.7	2.8
9	19496.0	30.2	30.2	39.2	34.9	20.6	0.0	45.6	45.6	54.0	8.4	8.4
10	21933.0	30.9	30.7	40.5	35.0	22.3	0.0	49.2	49.0	54.0	4.8	5.0
11	24370.0	31.6	31.4	40.1	36.6	22.7	0.0	48.3	48.1	54.0	5.7	5.9

20dBc(Fundamental 2437MHz) (RBW: 100kHz, VBW:100kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Atten. or Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV/m]						[dB]			[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	2437.0	82.7	91.3	30.9	36.3	6.5	9.9	93.6	102.2	-	-	-
2	5606.1	51.6	50.5	36.4	35.7	10.2	9.8	72.3	71.2	Funda-20dB	1.3	11.0
3	6335.0	50.9	49.5	37.5	35.7	10.9	9.8	73.4	72.0	Funda-20dB	0.2	10.2

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

9.5 dB

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

* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz

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

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

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)

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN Access Point
MODEL : FX-DS540-APDL
SAMPLE NO. : 3IRBG10000057
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 54Mbps / CH11:2462MHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247(c)
TEST DISTANCE : 3m / 1m
DATE : 06/29/2004, 07/14/2004
TEMPERATURE : 23deg.C., 26deg.C.
HUMIDITY : 60%, 60%
ENGINEER : Kenichi Adachi, Hiroka Umeyama

PK DETECT

(RBW: 1MHz, VBW:1MHz)

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit PK [dBuV/m]	Margin	
		HOR [dBuV]	VER [dBuV]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1125.7	52.5	55.6	22.8	37.0	4.3	0.0	42.5	45.6	74.0	31.5	28.4
2	2192.0	54.0	62.7	30.9	36.2	6.5	0.0	55.2	63.9	74.0	18.8	10.1
3	2483.5	55.2	54.0	30.9	36.2	6.5	9.9	66.3	65.1	74.0	7.8	9.0
4	4936.0	43.2	44.0	35.9	36.1	9.5	1.0	53.6	54.4	74.0	20.4	19.6
5	5631.1	60.5	54.2	36.4	35.7	10.2	0.8	72.3	66.0	-	-	-
6	6336.0	56.0	50.2	37.5	35.7	10.9	0.7	69.5	63.7	-	-	-
7	7386.0	43.0	42.5	38.3	35.7	12.0	0.5	58.2	57.7	74.0	15.8	16.3
8	9848.0	43.6	42.1	37.1	36.4	14.1	0.5	59.0	57.5	74.0	15.1	16.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
9	12310.0	42.2	44.7	41.7	35.6	15.6	0.0	54.4	56.9	74.0	19.6	17.2
10	14772.0	41.3	41.4	42.1	34.9	16.9	0.0	55.9	56.0	74.0	18.1	18.0
11	17234.0	42.8	42.7	46.7	35.3	18.9	0.0	63.6	63.5	74.0	10.4	10.5
12	19696.0	42.7	43.3	39.6	35.2	20.7	0.0	58.3	58.9	74.0	15.7	15.1
13	22158.0	44.5	43.5	40.6	35.0	22.3	0.0	62.9	61.9	74.0	11.1	12.1
14	24620.0	44.4	44.6	40.2	36.8	22.9	0.0	61.2	61.4	74.0	12.8	12.6

AV DETECT

(RBW: 1MHz, VBW:10Hz)

No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit AV [dBuV/m]	Margin	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1125.7	42.0	45.6	22.8	37.0	4.3	0.0	32.0	35.6	54.0	22.0	18.4
2	2192.0	33.8	37.8	30.9	36.2	6.5	0.0	35.0	39.0	54.0	19.0	15.0
3	2483.5	41.7	39.4	30.9	36.2	6.5	9.9	52.8	50.5	54.0	1.3	3.6
4	4936.0	31.5	31.5	35.9	36.1	9.5	1.0	41.9	41.9	54.0	12.1	12.1
5	5631.1	47.8	41.0	36.4	35.7	10.2	0.8	59.6	52.8	-	-	-
6	6336.0	37.1	42.3	37.5	35.7	10.9	0.7	50.6	55.8	-	-	-
7	7386.0	30.7	30.8	38.3	35.7	12.0	0.5	45.9	46.0	54.0	8.1	8.0
8	9848.0	31.2	31.2	37.1	36.4	14.1	0.5	46.6	46.6	54.0	7.5	7.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
9	12310.0	30.0	30.2	41.7	35.6	15.6	0.0	42.2	42.4	54.0	11.8	11.6
10	14772.0	29.1	28.9	42.1	34.9	16.9	0.0	43.7	43.5	54.0	10.4	10.5
11	17234.0	31.0	30.9	46.7	35.3	18.9	0.0	51.8	51.7	54.0	2.2	2.3
12	19696.0	30.1	30.1	39.6	35.2	20.7	0.0	45.7	45.7	54.0	8.3	8.3
13	22158.0	31.0	31.0	40.6	35.0	22.3	0.0	49.4	49.4	54.0	4.6	4.6
14	24620.0	31.7	31.8	40.2	36.8	22.9	0.0	48.5	48.6	54.0	5.5	5.4

20dBc(Fundamental 2462MHz)

(RBW: 100kHz, VBW:100kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Atten. or Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	2462.0	82.8	89.0	30.9	36.3	6.5	9.9	93.8	100.0	-	-	-
2	5631.1	50.2	38.1	36.3	35.7	10.2	9.8	70.8	58.7	Funda-20dB	3.0	21.3
3	6336.0	47.3	40.2	37.5	35.7	10.9	9.8	69.8	62.7	Funda-20dB	4.0	17.3

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

9.5 dB

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

* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz

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

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

UL Apex Co., Ltd.

Head Office EMC Lab.

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

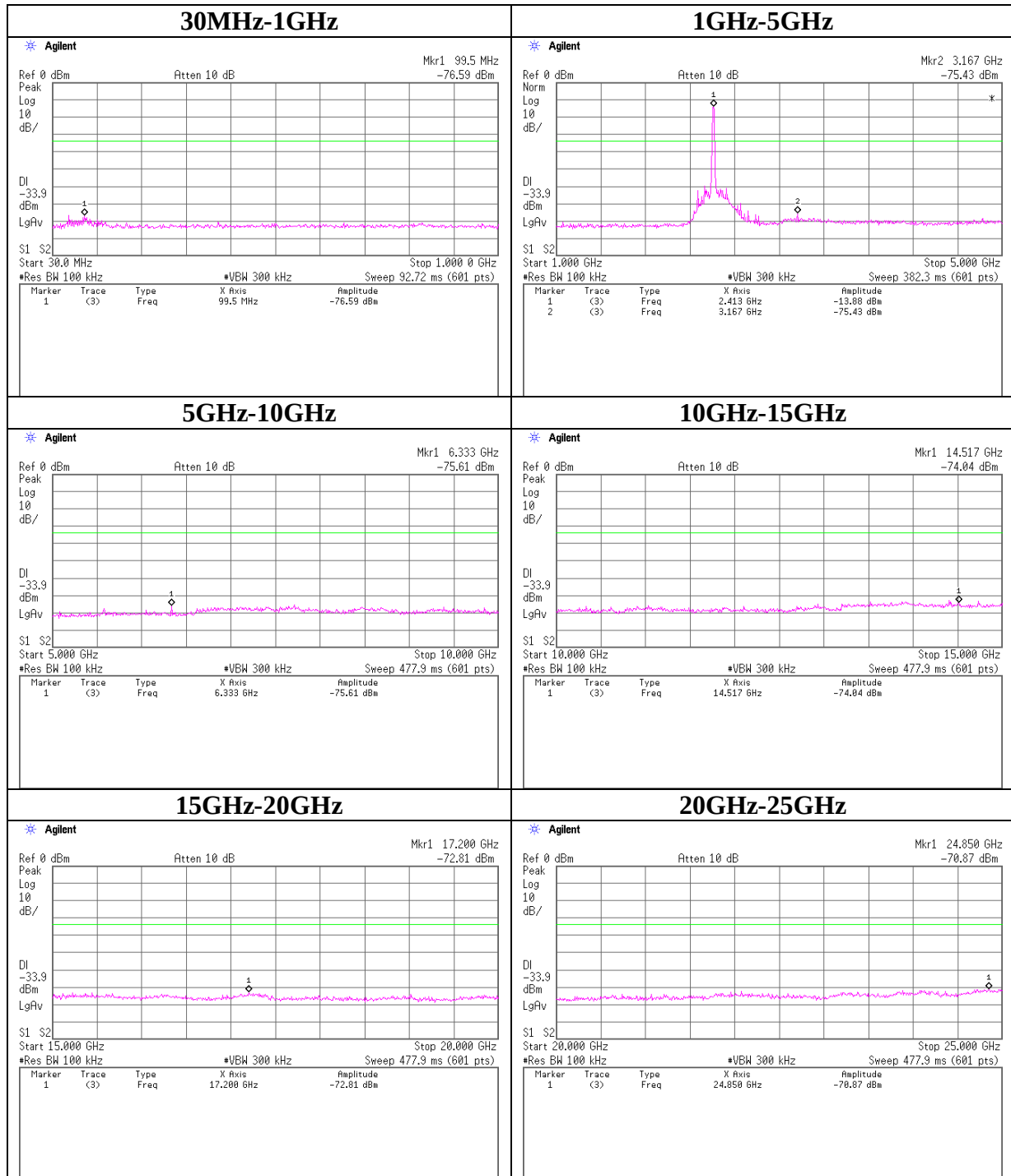
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

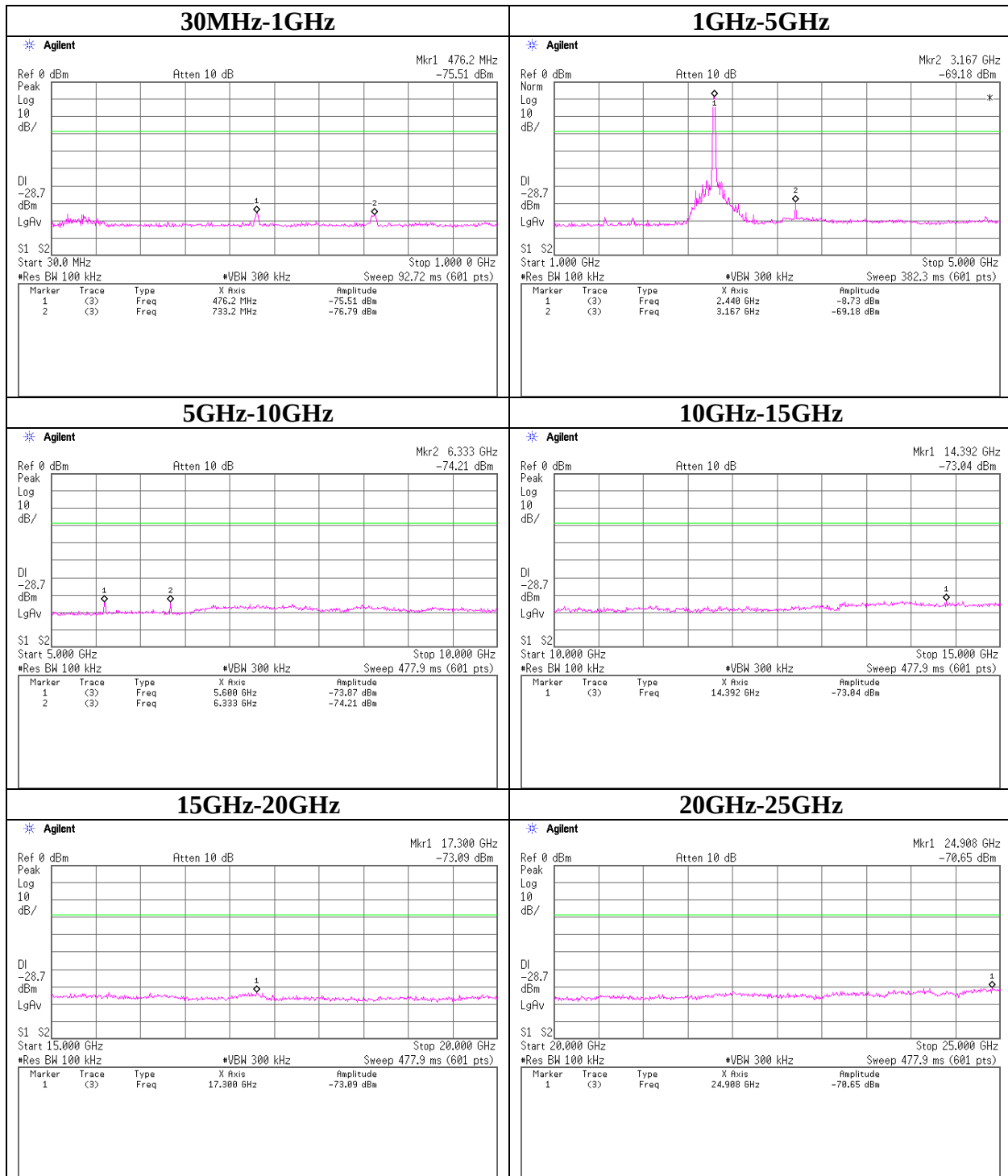
Conducted Spurious Emission(DSSS and other forms of modulation)(11b)

Ch : Low



Conducted Spurious Emission(DSSS and other forms of modulation) (11b)

Ch : Mid



UL Apex Co., Ltd.

Head Office EMC Lab.

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

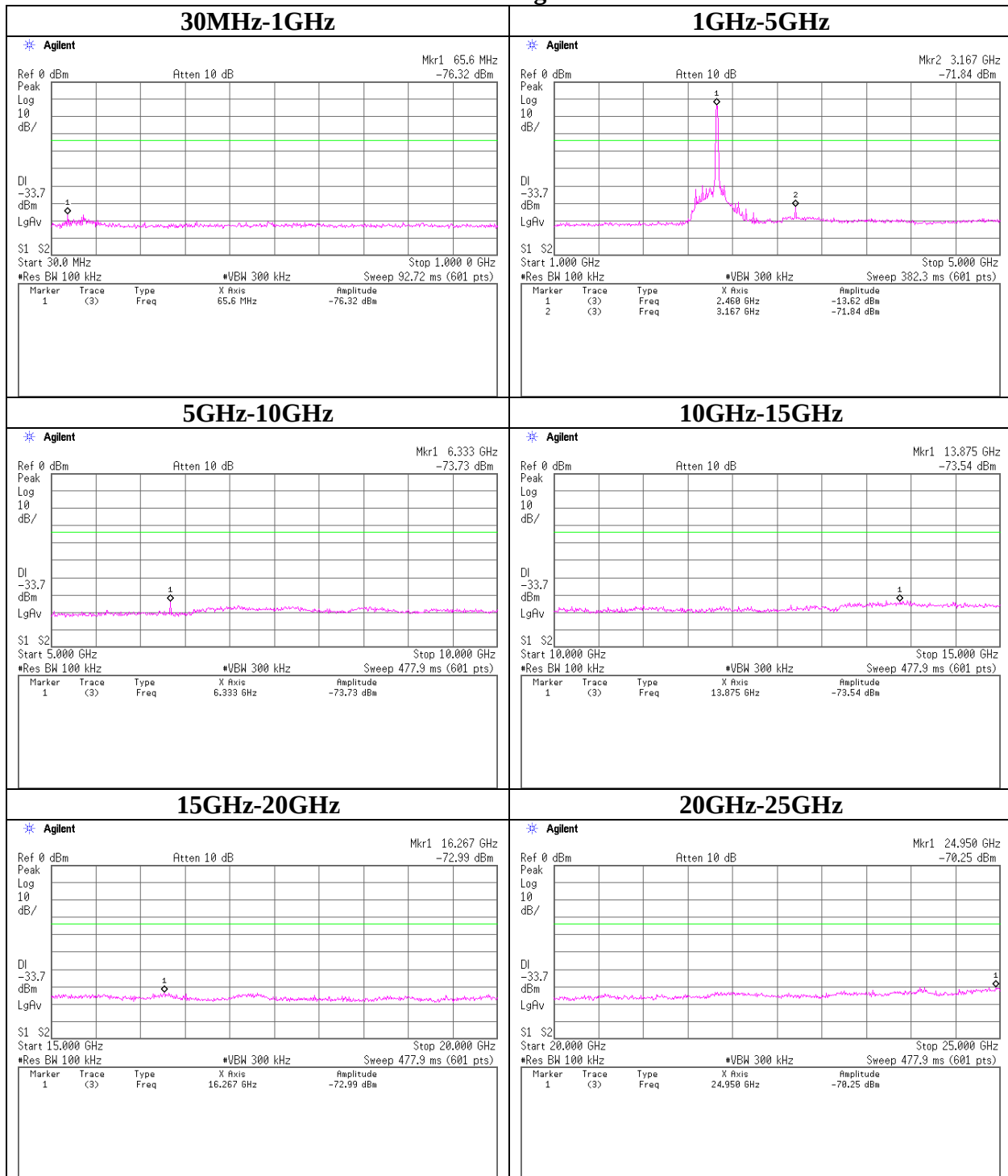
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Spurious Emission(DSSS and other forms of modulation) (11b)

Ch : High



UL Apex Co., Ltd.

Head Office EMC Lab.

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

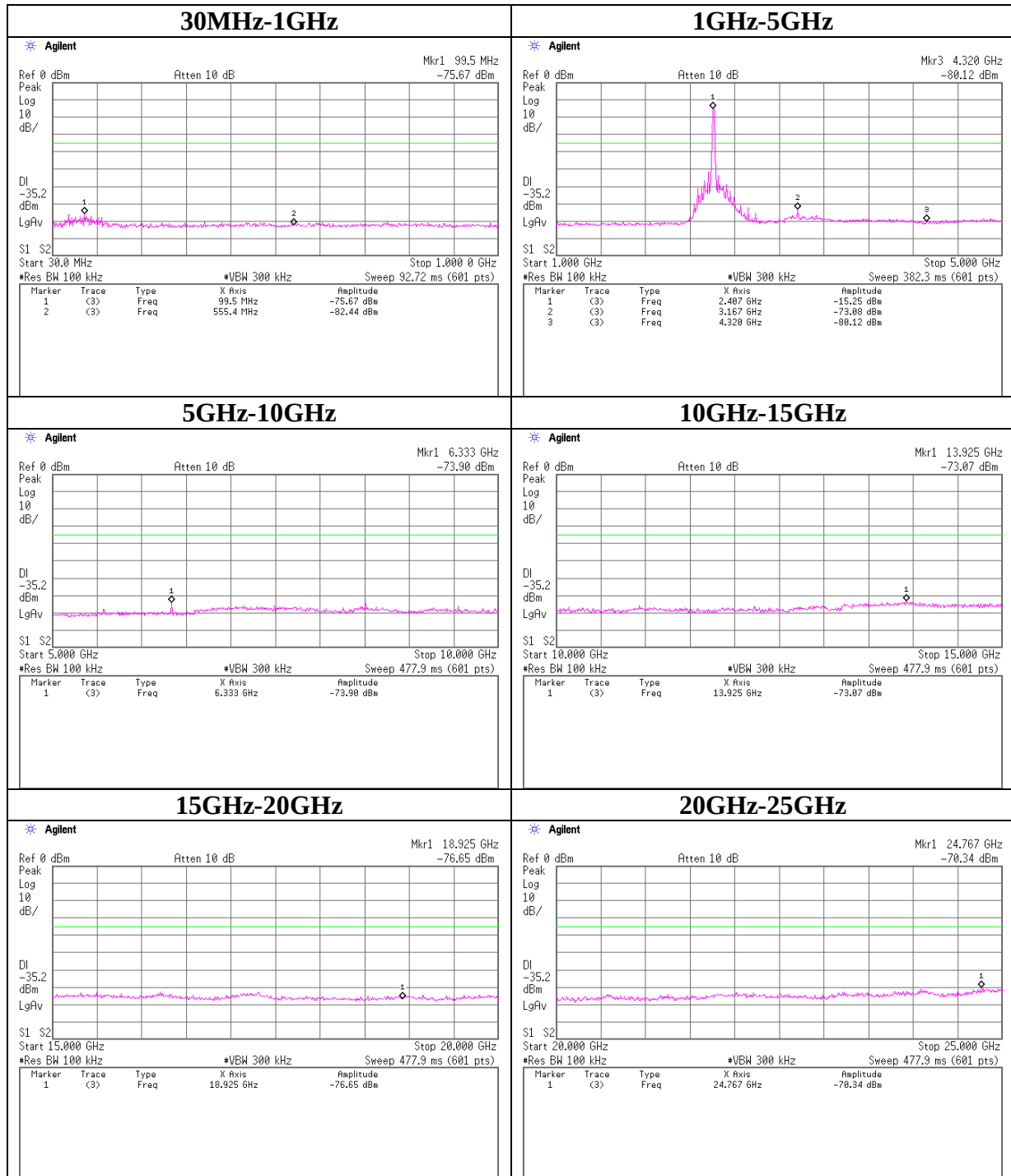
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

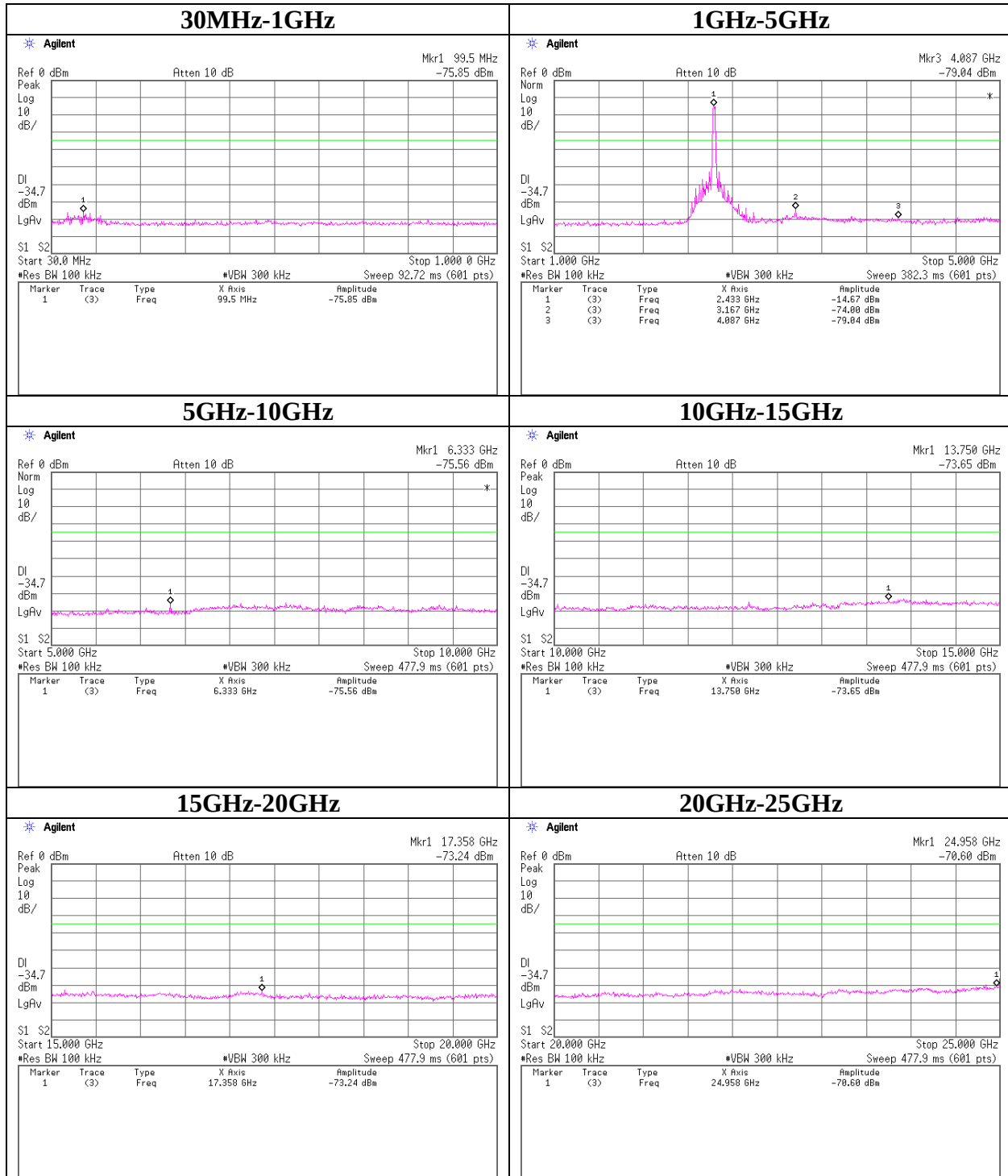
Conducted Spurious Emission(DSSS and other forms of modulation)(11g)

Ch : Low



Conducted Spurious Emission(DSSS and other forms of modulation) (11g)

Ch : Mid



UL Apex Co., Ltd.

Head Office EMC Lab.

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

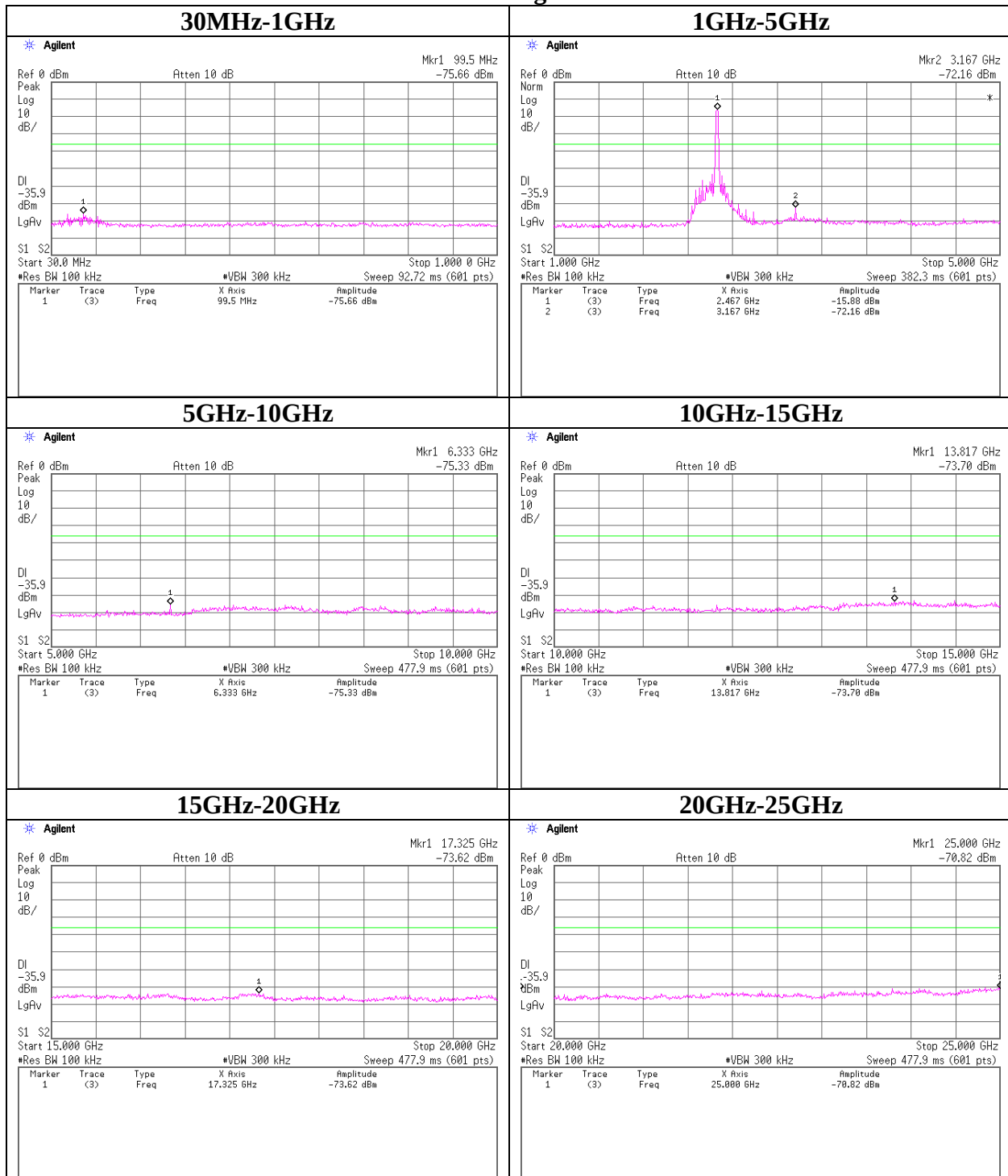
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

Conducted Spurious Emission(DSSS and other forms of modulation) (11g)

Ch : High



UL Apex Co., Ltd.

Head Office EMC Lab.

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

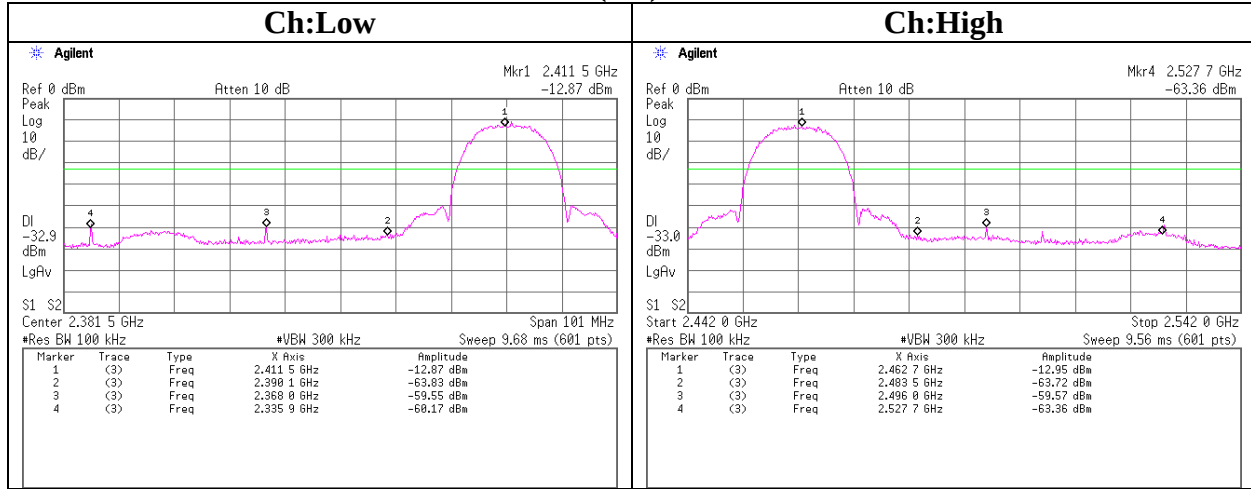
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

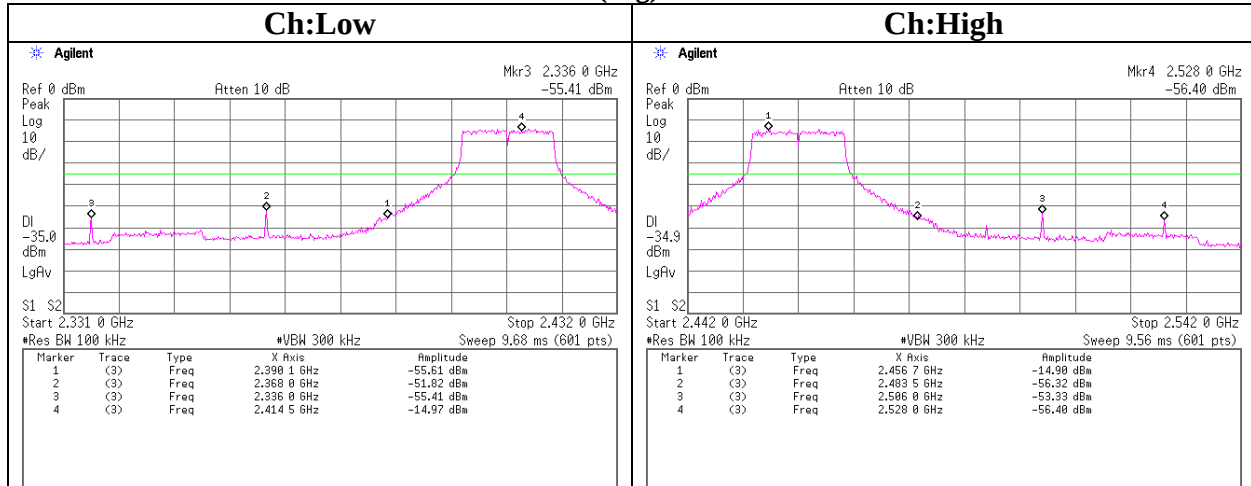
MF060b(10.04.03)

Conducted emission Band Edge compliance (DSSS and other forms of modulation)

(11b)



(11g)



Power Density (DSSS and other forms of modulation)

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Measurement Room

Company : CONTEC Co., LTD.
Equipment : Wirelsss LAN Access Point
Model : FX-DS540-APDL
Sample No. : 3IBRG10000057
Power : AC120V/60Hz
Mode : Tx(ch1,6,11)

REPORT NO : 24GE0302-HO
REGULATION : Fcc Part15 Subpart C 15.247(d)
TEST DISTANCE : -
DATE : 07/05/2004
TEMPERATURE : 23 deg.C.
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

11g, 54MHz

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-25.36	1.97	10.00	-13.39	8.00	21.39
Mid	2437.0	-23.02	1.98	10.00	-11.04	8.00	19.04
High	2462.0	-25.98	1.98	10.00	-14.00	8.00	22.00

11b, 11MHz

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-20.29	1.97	10.00	-8.32	8.00	16.32
Mid	2437.0	-16.78	1.98	10.00	-4.80	8.00	12.80
High	2462.0	-21.51	1.98	10.00	-9.53	8.00	17.53

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

UL Apex Co., Ltd.

Head Office EMC Lab.

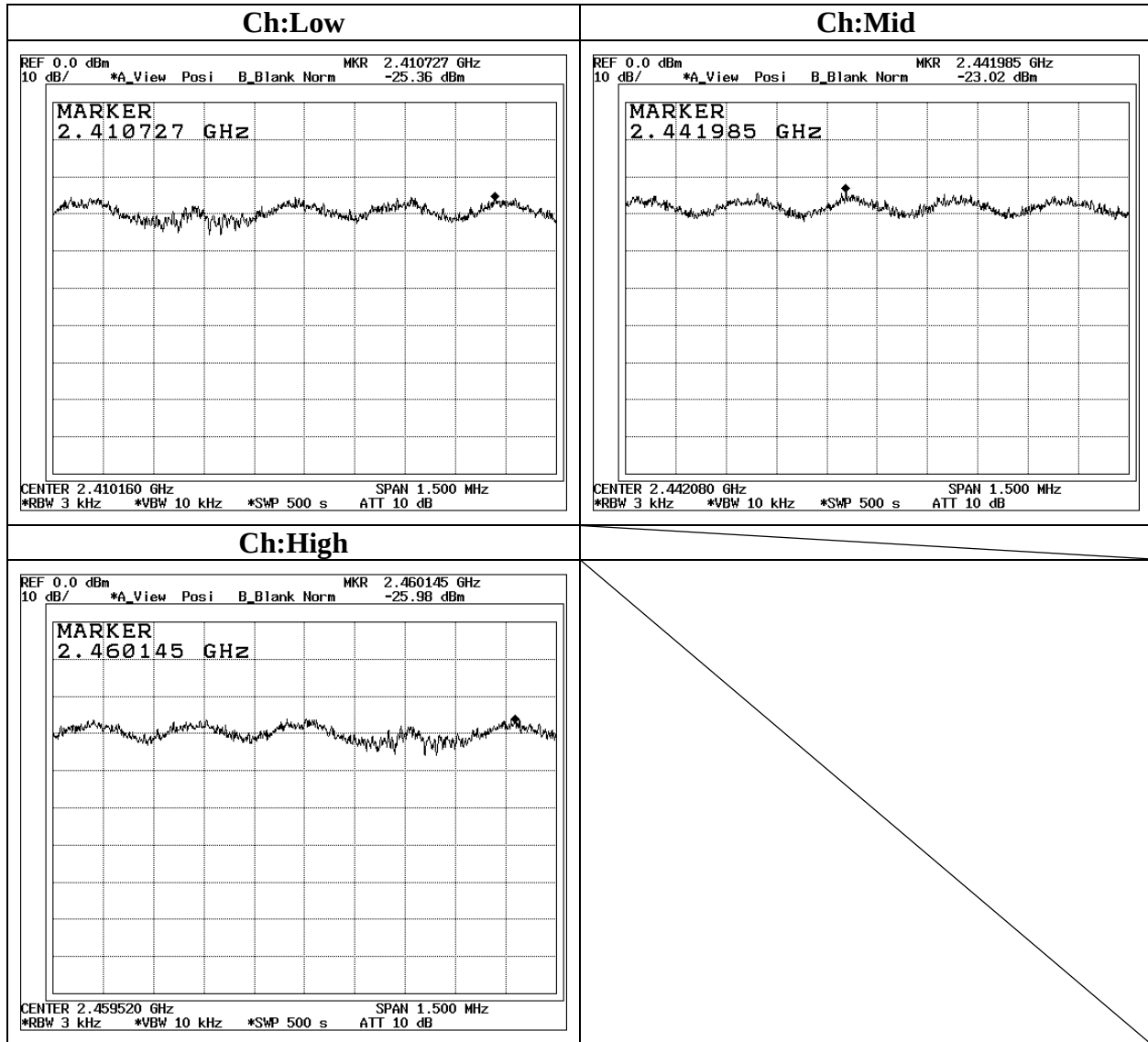
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

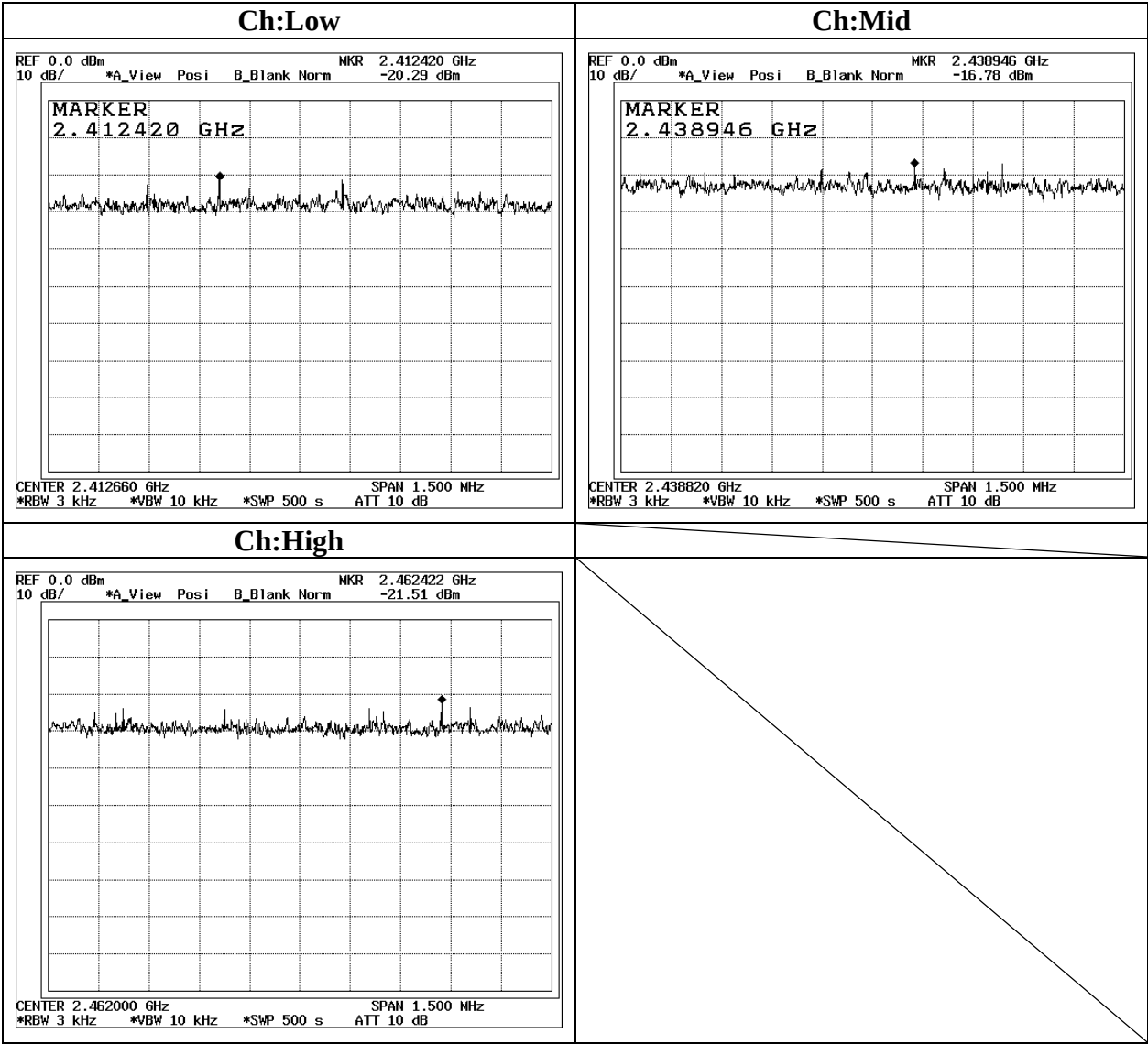
MF060b(10.04.03)

11g, 54MHz
Power Density(DSSS and other forms of modulation)

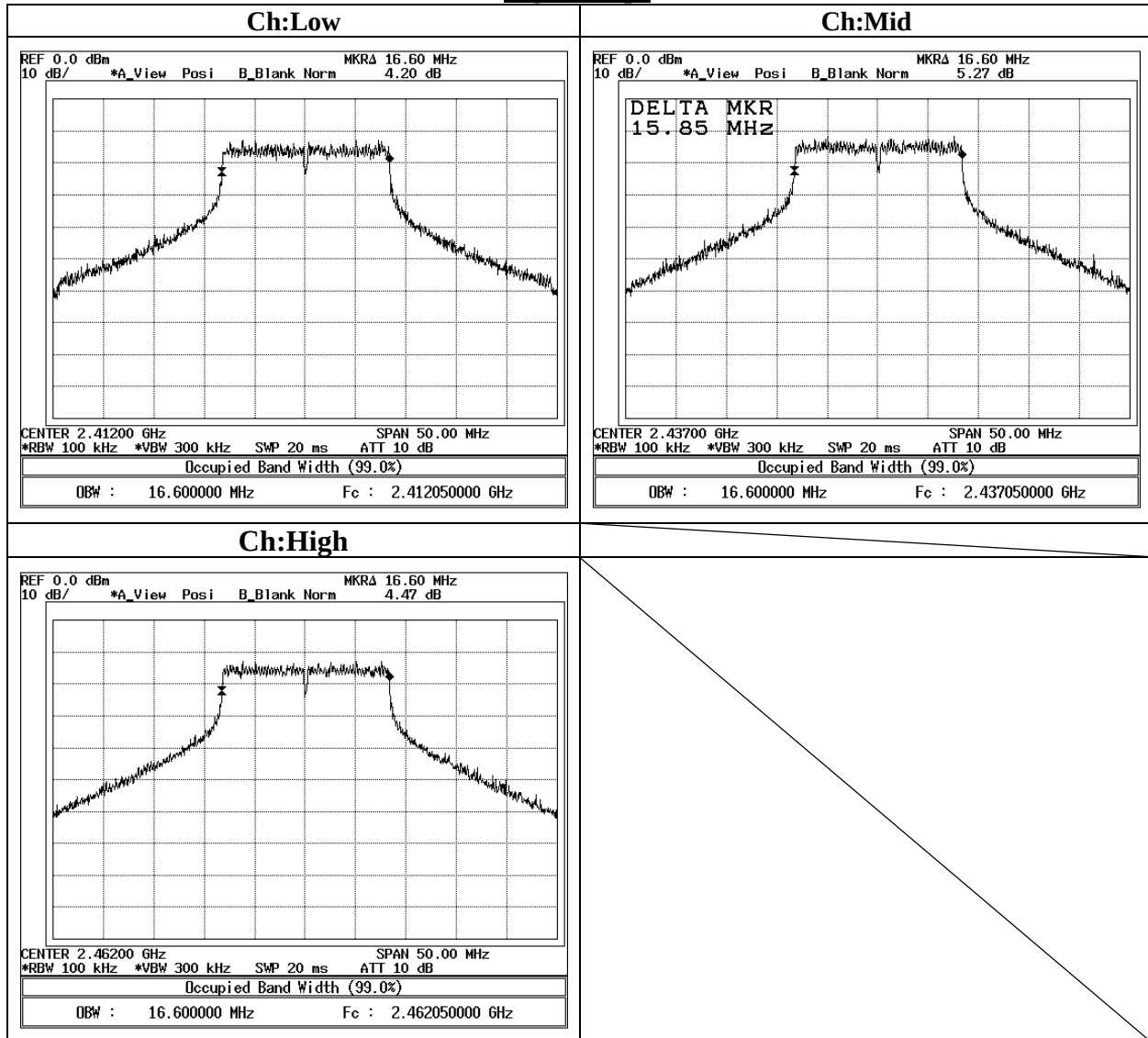


11b, 11MHz

Power Density(DSSS and other forms of modulation)



99% Occupied Bandwidth(DSSS and other forms of modulation)
11g, 54Mbps



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

11b, 11Mbps

