



EMI TEST REPORT

Test Report No. : 25CE0272-HO-1

Applicant : CONTEC CO., LTD.
Type of Equipment : Wireless LAN MiniPCI Card User Unit
Model No. : FX-DS540-MPCI4W
Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247 : 2004
FCC ID : PQRDS540-MPCI4W
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:

November 15 to 22, 2004

Tested by:

Keiichi Aoki
EMC Service

Hiroka Umeyama
EMC Service

Approved by :

Naoki Sakamoto
Group Leader of
EMC Service

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(10.04.03)

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SECTION 1: Client information

Company Name : CONTEC CO., LTD.
Address : 3-9-31, Himesato, Nishiyodogawa-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 MiniPCI Card User Unit
Model No. : FX-DS540-MPCI4W
Serial No. : 04MC2D1
Rating : DC3.3V, 0.6A
Country of Manufacture : Japan
Receipt Date of Sample : October 29, 2004
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product Description

Equipment Type : Transceiver
Frequency of operation : [IEEE802.11b/g]2412-2462MHz / [IEEE802.11a]5825MHz
Transmission method : DSSS
Modulation Techniques : OFDM,CCK,QPSK,BPSK
Channel number : [IEEE802.11b/g]11channels, [IEEE802.11a] Single channel
Power control : Non
Mode of operation : Simplex
Antenna Type : Chip Antenna
Antenna Gain : 2.0dBi (2.4GHz)/ 3.0dBi (5GHz)
Antenna Connector Type : AYU3
Operating voltage (inner) : DC3.3V

*This modular transmitter will be equipped only on Wireless LAN Access Point, which is produced by CONTEC CO., LTD. or the manufacturer consigned the production by CONTEC CO., LTD.

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

This EUT complies with the requirement of 15.203, because a unique coupling (antenna connector, Type: AYU3) is used for this EUT.

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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 : 2004
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 *0	Results
1	Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Section 15.207	-	N/A	10.7dB 0.5MHz, Phase L (AV) IEEE802.11g Low ch	Complied
2	6dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(a)(2)	Conducted	N/A	See data.	Complied
3	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(b)(3)	Conducted	N/A	See data.	Complied
4	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d) Section 15.209	Conducted/ Radiated	N/A	0.5dB 7236MHz, HOR IEEE802.11g Low Ch	Complied
5	Restricted Band Edges	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted/ Radiated	N/A	See data.	Complied
6	Power Density	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (e)	Conducted	N/A	See data.	Complied

Note: UL Apex's EMI Work Procedures No.QPM05 and QPM15.
*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 "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	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4:2004	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4:2004	Conducted	N/A	N/A	N/A

3.4 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
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	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 :

[2412-2462MHz]

1) Transmitting mode (IEEE802.11b 11Mbps)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

2) Transmitting mode (IEEE802.11g 36Mbps)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

3) Transmitting mode (IEEE802.11g 54Mbps) * See Remarks.
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

[5825MHz]

1) Transmitting mode (IEEE802.11a 36Mbps)
2) Transmitting mode (IEEE802.11a 54Mbps) * See Remarks.

Remarks:

The antennas of this EUT are diversity type (ANT A and B). 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 ANT A and ANT B; therefore, the testing was conducted with the representative antenna, ANT B for Radiated Spurious Emission and Conducted Emission, ANT A for Other Tests.

These antennas are identical to each other in type, gain and cable length, and have two ways of installation positions, horizontally and vertically.

The confirmation was made with these two ways and there was no difference in level results. Therefore, the final test was made with EUT installed vertically.

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)/36Mbps(IEEE802.11g/a) modulation as the highest data rate.

IEEE802.11g/a had a maximum level in 36Mbps so that the test was made with 36Mbps. And as for Radiated Spurious Emission (above 1GHz) and Maximum Peak Output Power test, the test was also made with 54Mbps, which was the highest data rate.

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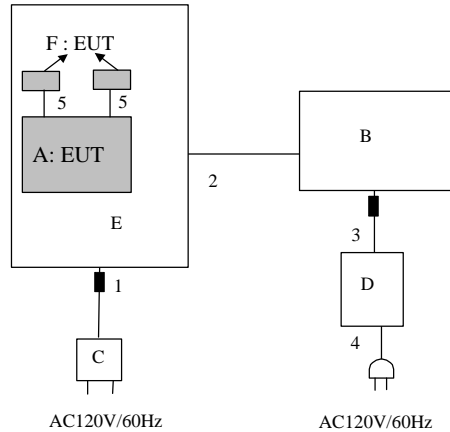
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4.2 Configuration and peripherals



■ : Ferrite Core

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

* Radiated Spurious Emission was measured in the configuration that the enclosure has been removed off the main board.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID
A	Wireless LAN MiniPCI Card User Unit	FX-DS540-MPCI4W	04MC2D1	CONTEC	PQRDS540-MPCI4W
B	Note PC	ThinkPad G40	KM-77534 0310	IBM	DOC
C	AC Adapter	VHE10P1-33MP	-	AK-II	-
D	AC Adapter	02K7095	11S02K7089Z1Z6C 43911MD	IBM	-
E	Main Board of Wireless LAN Access Point	FX-DS540-APDL	-	CONTEC	DOC
F	Chip Antenna	-	-	FDK	-

List of cables used

No.	Name	Length (m)	Shield	Backshell Material
1	DC Cable	1.5	N	Polyvinyl chloride
2	LAN Cross Cable	1.5	N	Polyvinyl chloride
3	DC Cable	1.8	N	Polyvinyl chloride
4	AC Cable	1.0	N	Polyvinyl chloride
5	Antenna Cable	0.075	Y	Coaxial

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SECTION 5: Conducted Emission

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**

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 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

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SECTION 7: Bandwidth

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

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

Test Procedure

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

Test data : APPENDIX 3
Test result : Pass

APPENDIX 1: Photographs of test setup

This page has been submitted for a separate exhibit.

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Test report No. : 25CE0272-HO-1
Page : 13 of 71
Issued date : November 30, 2004
Revised date : December 8, 2004
FCC ID : PQRD5540-MPCI4W

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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-07	Termination	MCL	BTRM-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
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	2004/02/03 * 12
MRENT-09	Spectrum Analyzer	Advantest	R3273	2004/02/18 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	2004/02/24 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	2003/12/16 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	2004/10/14 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	2004/10/14 * 12
MPA-06	Pre Amplifier	Hewlett Packard	8447D	2004/08/29 * 12
MCC-04	Microwave Cable	Storm	421-011	2004/01/06 * 12
MCC-29	Microwave Cable	Suhner	SUCOFLEX10 1	2004/08/26 * 12
MPA-01	Pre Amplifier	Agilent	8449B	2004/02/06 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	2004/01/10 * 12
MHA-02	Horn Antenna	EMCO	3160-09	2004/01/10 * 12
MBF-03	SHF Bandpass Filter	M-City	13GHz BPF	2004/05/21 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	2004/09/18 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	2004/06/12 * 12
MCC-11	Microwave coaxial cable	Suhner	SUCOFLEX 104	2004/03/26 * 12
MHA-04	Horn Antenna	EMCO	3160-10	2004/01/10 * 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-23	Attenuator(10dB)(above1GHz)	Orient Microwave	BX10-0476-00	2004/03/30 * 12

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

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APPENDIX 3: Data of EMI test

Conducted Emission

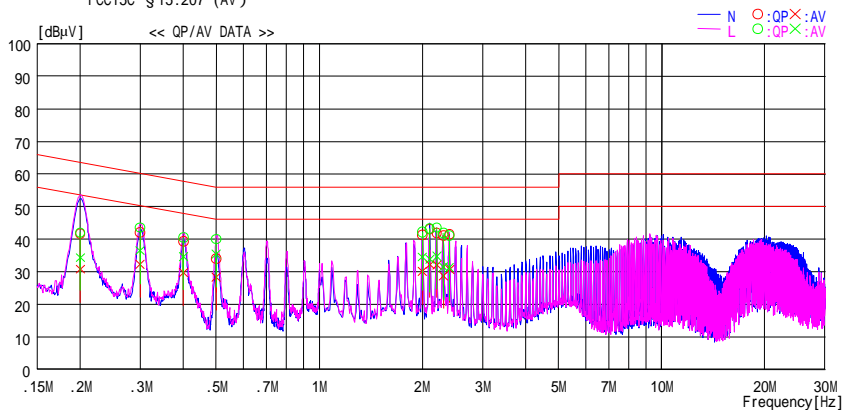
DATA OF CONDUCTED EMISSION TEST

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

Applicant : CONTEC Co., Ltd. Report No. : 24CE0272-HO
 Kind of EUT : Wireless LAN MiniPCI Card User Unit Power : DC3.3V AC Adapter AC120V / 60Hz
 Model No. : FX-DS540-MPCI4W Temp /Humi% : 23 deg.C / 42 %
 Serial No. : 04MC2D1 Operator : Keiichi Aoki

Mode / Remarks : Transmitting 11g/2412MHz/36Mbps

LIMIT : FCC15C § 15.207 (QP)
 FCC15C § 15.207 (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	0.2003	41.3	30.5	0.2	41.5	30.7	63.6	53.6	22.1	22.9	N
2	0.3000	41.7	32.0	0.3	42.0	32.3	60.2	50.2	18.2	17.9	N
3	0.4007	38.9	29.2	0.5	39.4	29.7	57.8	47.8	18.4	18.1	N
4	0.5000	33.3	27.7	0.6	33.9	28.3	56.0	46.0	22.1	17.7	N
5	2.0014	40.8	29.7	0.4	41.2	30.1	56.0	46.0	14.8	15.9	N
6	2.1025	42.7	31.8	0.4	43.1	32.2	56.0	46.0	12.9	13.8	N
7	2.2035	41.4	31.7	0.4	41.8	32.1	56.0	46.0	14.2	13.9	N
8	2.3014	40.5	28.3	0.5	41.0	28.8	56.0	46.0	15.0	17.2	N
9	2.4015	40.9	30.1	0.5	41.4	30.6	56.0	46.0	14.6	15.4	N
10	0.2003	41.7	34.1	0.2	41.9	34.3	63.6	53.6	21.7	19.3	L
11	0.3000	43.2	36.2	0.3	43.5	36.5	60.2	50.2	16.7	13.7	L
12	0.4007	39.9	34.1	0.5	40.4	34.6	57.8	47.8	17.4	13.2	L
13	0.5000	39.4	34.7	0.6	40.0	35.3	56.0	46.0	16.0	10.7	L
14	2.0014	41.7	34.1	0.4	42.1	34.5	56.0	46.0	13.9	11.5	L
15	2.1025	42.8	33.4	0.4	43.2	33.8	56.0	46.0	12.8	12.2	L
16	2.2035	43.1	34.3	0.4	43.5	34.7	56.0	46.0	12.5	11.3	L
17	2.3014	41.3	31.0	0.5	41.8	31.5	56.0	46.0	14.2	14.5	L
18	2.4015	40.5	30.7	0.5	41.0	31.2	56.0	46.0	15.0	14.8	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

Applicant	: CONTEC Co., Ltd.	Report No.	: 24CE0272-H0
Kind of EUT	: Wireless LAN MiniPCI Card User Unit	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DS540-MPCI4W	Temp /Humi%	: 23 deg.C / 42 %
Serial No.	: 04MC2D1	Operator	: Keiichi Aoki

Mode / Remarks : Transmitting 11g/2412MHz/36Mbps

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

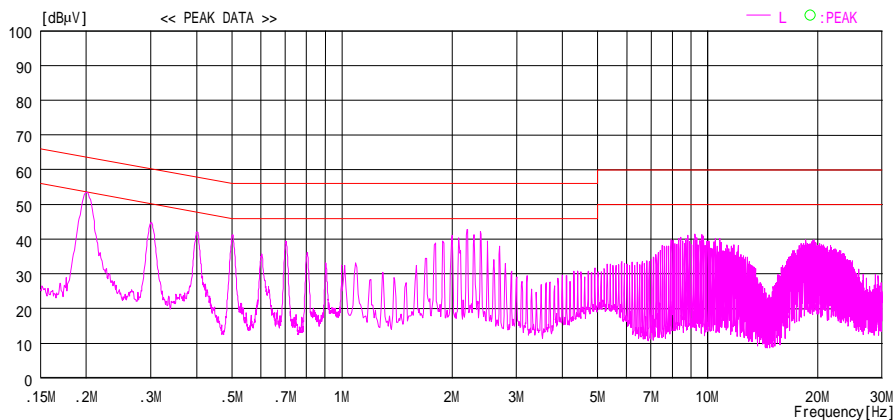
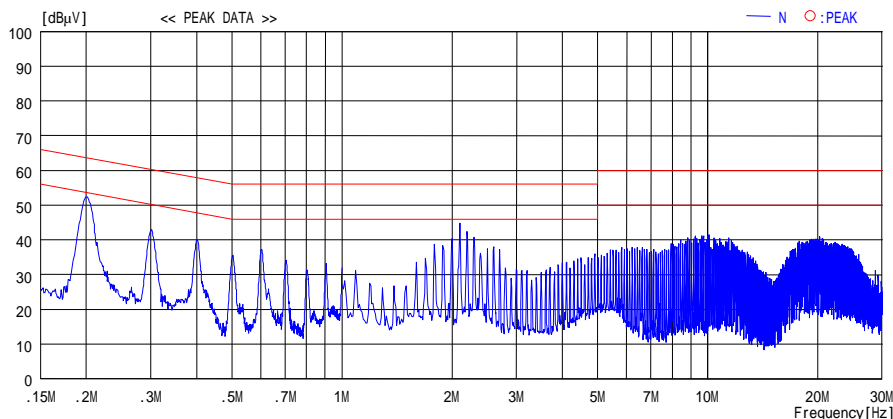


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F.(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant	: CONTEC Co., Ltd.	Report No.	: 24CE0272-HO
Kind of EUT	: Wireless LAN MiniPCI Card User Unit	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DSS40-MPCI4W	Temp /Humi%	: 23 deg.C / 42 %
Serial No.	: 04MC2D1	Operator	: Keiichi Aoki

Mode / Remarks : Transmitting 11g/2437MHz/36Mbps

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

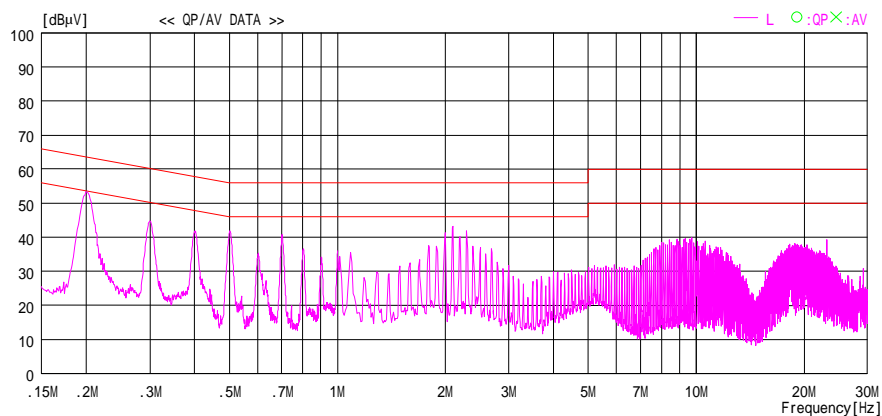
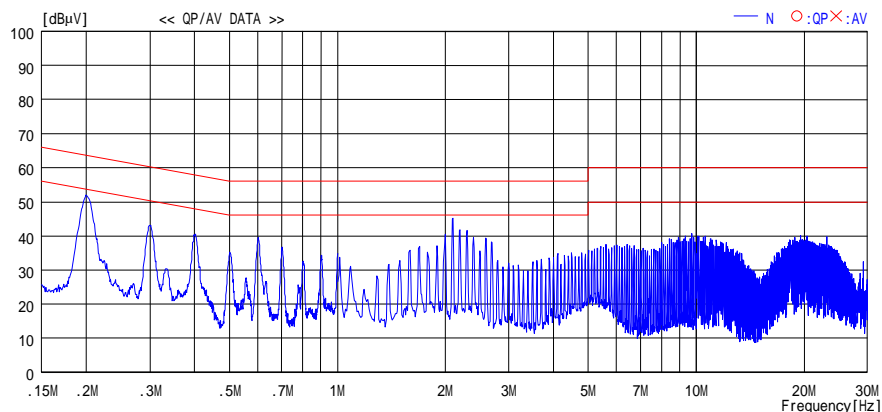


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant	: CONTEC Co., Ltd.	Report No.	: 24CE0272-HO
Kind of EUT	: Wireless LAN MiniPCI Card User Unit	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DSS40-MPCI4W	Temp /Humi%	: 23 deg.C / 42 %
Serial No.	: 04MC2D1	Operator	: Keiichi Aoki

Mode / Remarks : Transmitting 11g/2462MHz/36Mbps

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

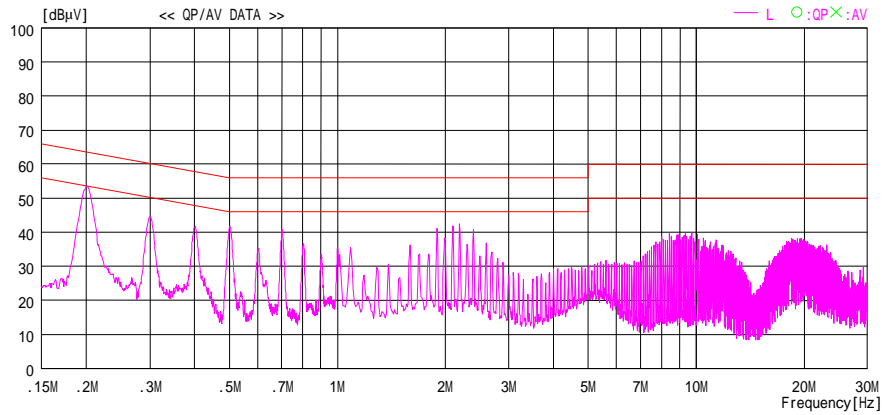
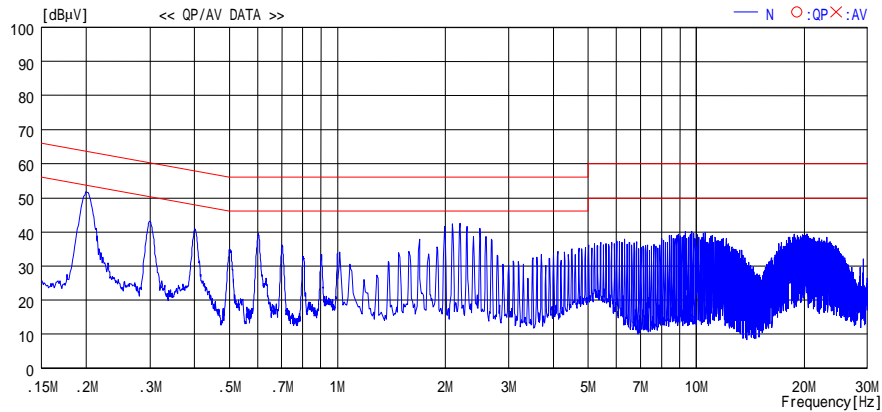


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant	: CONTEC Co., Ltd.	Report No.	: 24CE0272-HO
Kind of EUT	: Wireless LAN MiniPCI Card User Unit	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DSS40-MPCI4W	Temp /Humi%	: 23 deg.C / 42 %
Serial No.	: 04MC2D1	Operator	: Keiichi Aoki

Mode / Remarks : Transmitting 11b/2412MHz/11Mbps

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

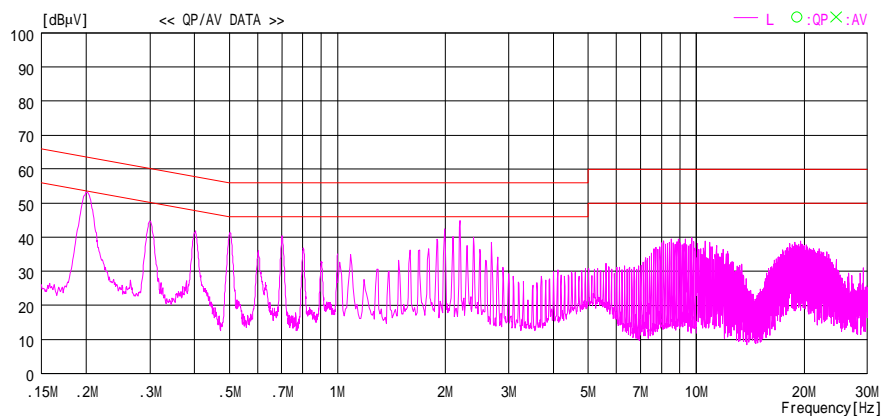
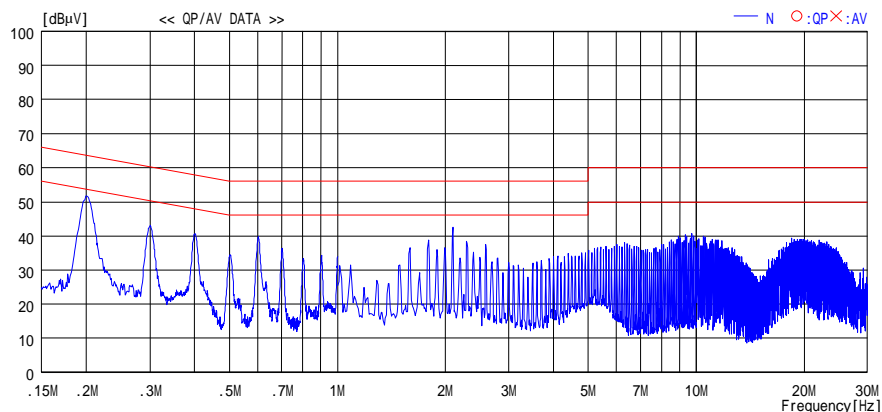


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F.(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant : CONTEC Co., Ltd. Kind of EUT : Wireless LAN MiniPCI Card User Unit Model No. : FX-DSS40-MPC14W Serial No. : 04MC2D1	Report No. : 24CE0272-HO Power : DC3.3V AC Adapter AC120V / 60Hz Temp /Humi% : 23 deg.C / 42 % Operator : Keiichi Aoki
--	---

Mode / Remarks : Transmitting 11b/2437MHz/11Mbps

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

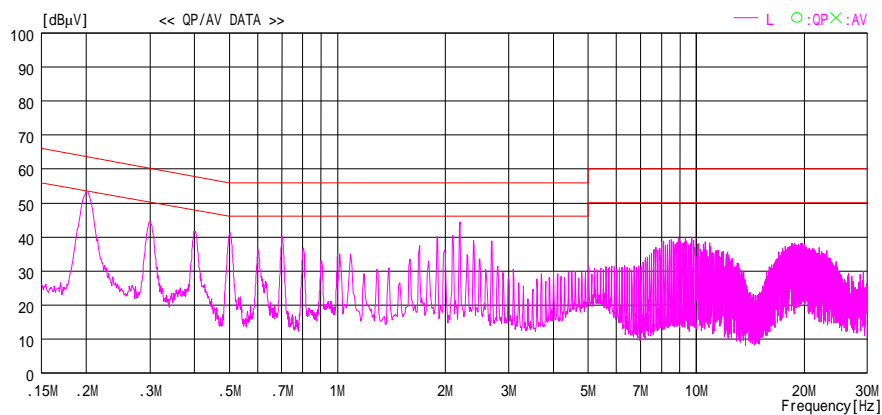
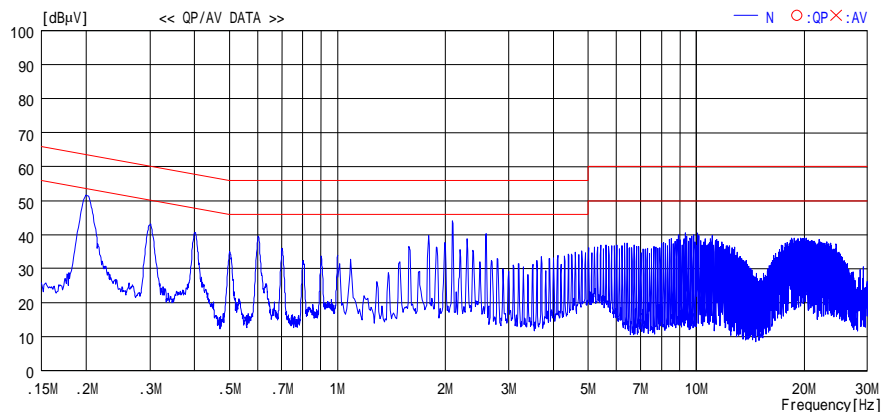


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant	: CONTEC Co., Ltd.	Report No.	: 24CE0272-HO
Kind of EUT	: Wireless LAN MiniPCI Card User Unit	Power	: DC3.3V AC Adapter AC120V / 60Hz
Model No.	: FX-DSS40-MPCI4W	Temp /Humi%	: 23 deg.C / 42 %
Serial No.	: 04MC2D1	Operator	: Keiichi Aoki

Mode / Remarks : Transmitting 11b/2462MHz/11Mbps

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

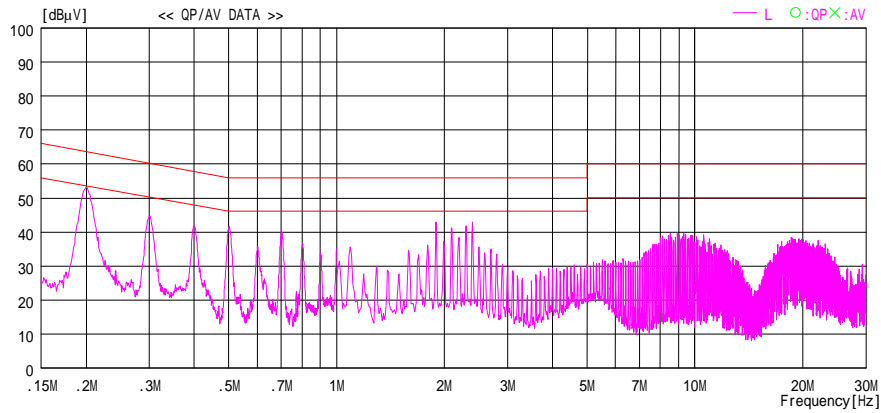
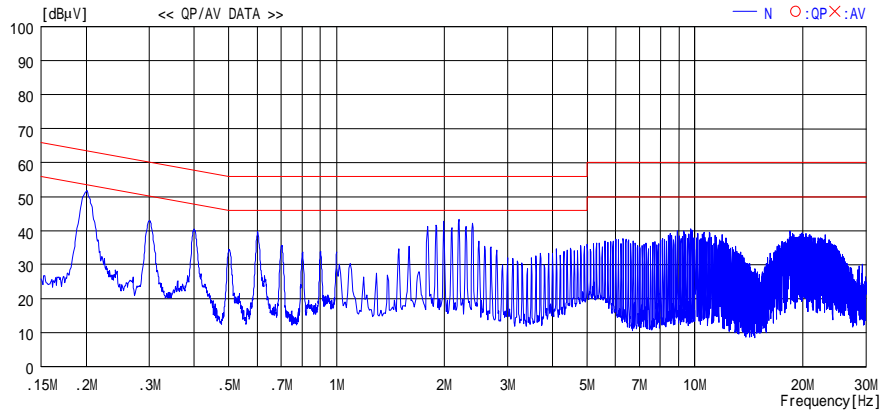


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(L1SN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant : CONTEC Co., Ltd. Kind of EUT : Wireless LAN MiniPCI Card User Unit Model No. : FX-DSS40-MPC14W Serial No. : 04MC2D1	Report No. : 24CE0272-HO Power : DC3.3V AC Adapter AC120V / 60Hz Temp /Humi% : 23 deg.C / 42 % Operator : Keiichi Aoki
--	---

Mode / Remarks : Standby

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

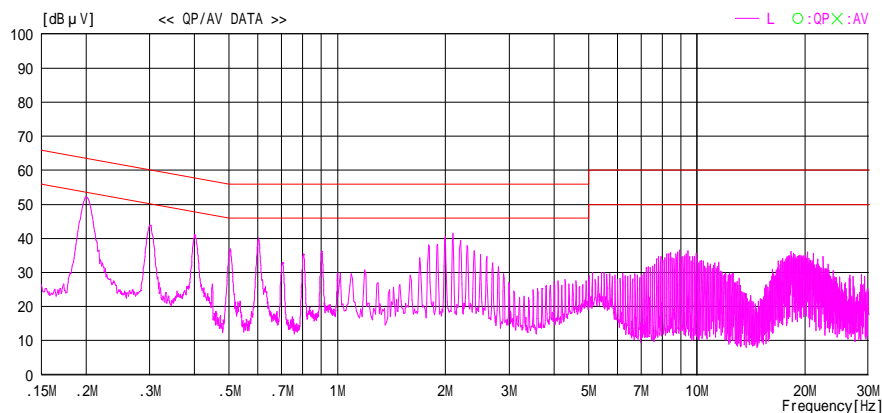
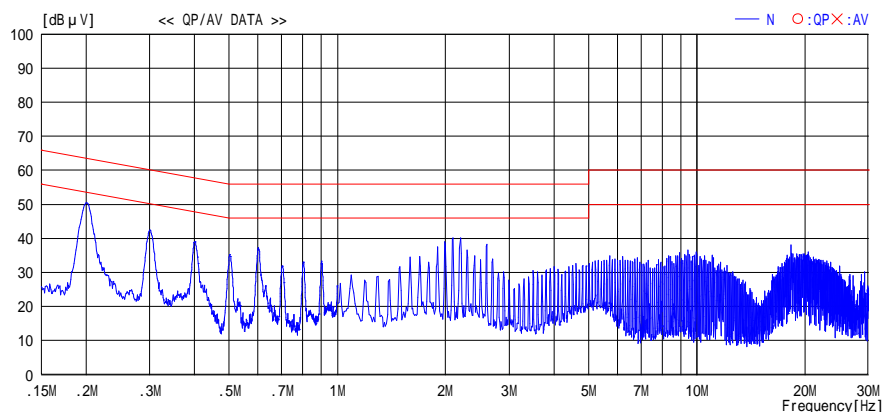


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F(L1SN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

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

Applicant : CONTEC Co., Ltd. Kind of EUT : Wireless LAN MiniPCI Card User Unit Model No. : FX-D5540-MPCI4W Serial No. : 04MC2D1	Report No. : 24CE0272-HO Power : DC3.3V AC Adapter AC120V / 60Hz Temp /Humi% : 23 deg.C / 42 % Operator : Keiichi Aoki
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Mode / Remarks : Transmitting 11a/5825MHz/36Mbps

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

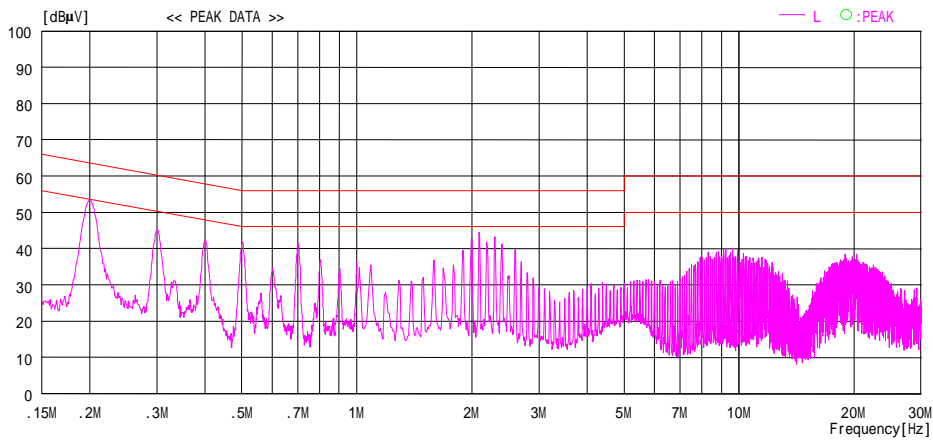
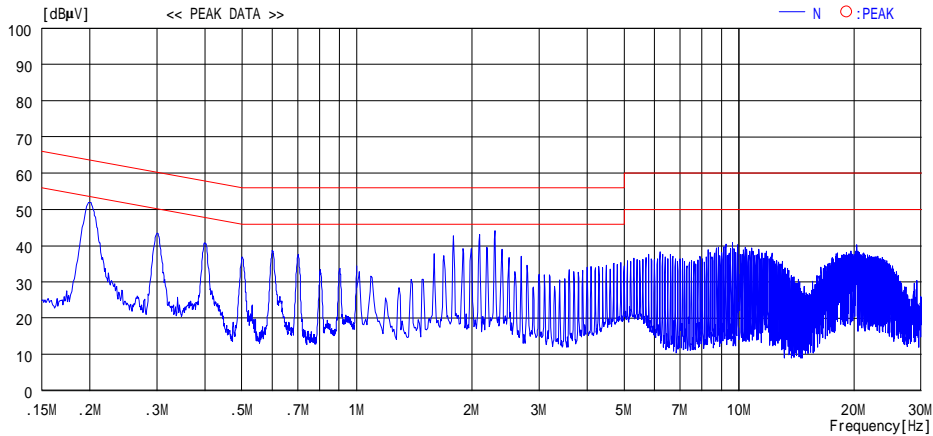


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

6dB Bandwidth(DSSS and other forms of modulation)

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

Company : CONTEC CO.,LTD. REPORT NO : 25CE0272-HO
Equipment : Wireless LAN MiniPCI Card User Unit REGULATION : FCC 15.247(a)(2)
Model : FX-DS540-MPCI4W TEST DISTANCE : -
Sample No. : 04MC2D1 DATE : 2004/11/16
Power : DC3.3V TEMPERATURE : 24deg.C
Mode : Tx IEEE 802.11a/b/g HUMIDITY : 35%
Antenna : A ENGINEER : Hiroka Umeyama

[IEEE802.11b : 11Mbps]

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	12.510	500.0
Mid	2437.0	12.454	500.0
High	2462.0	11.759	500.0

[IEEE802.11g : 36Mbps]

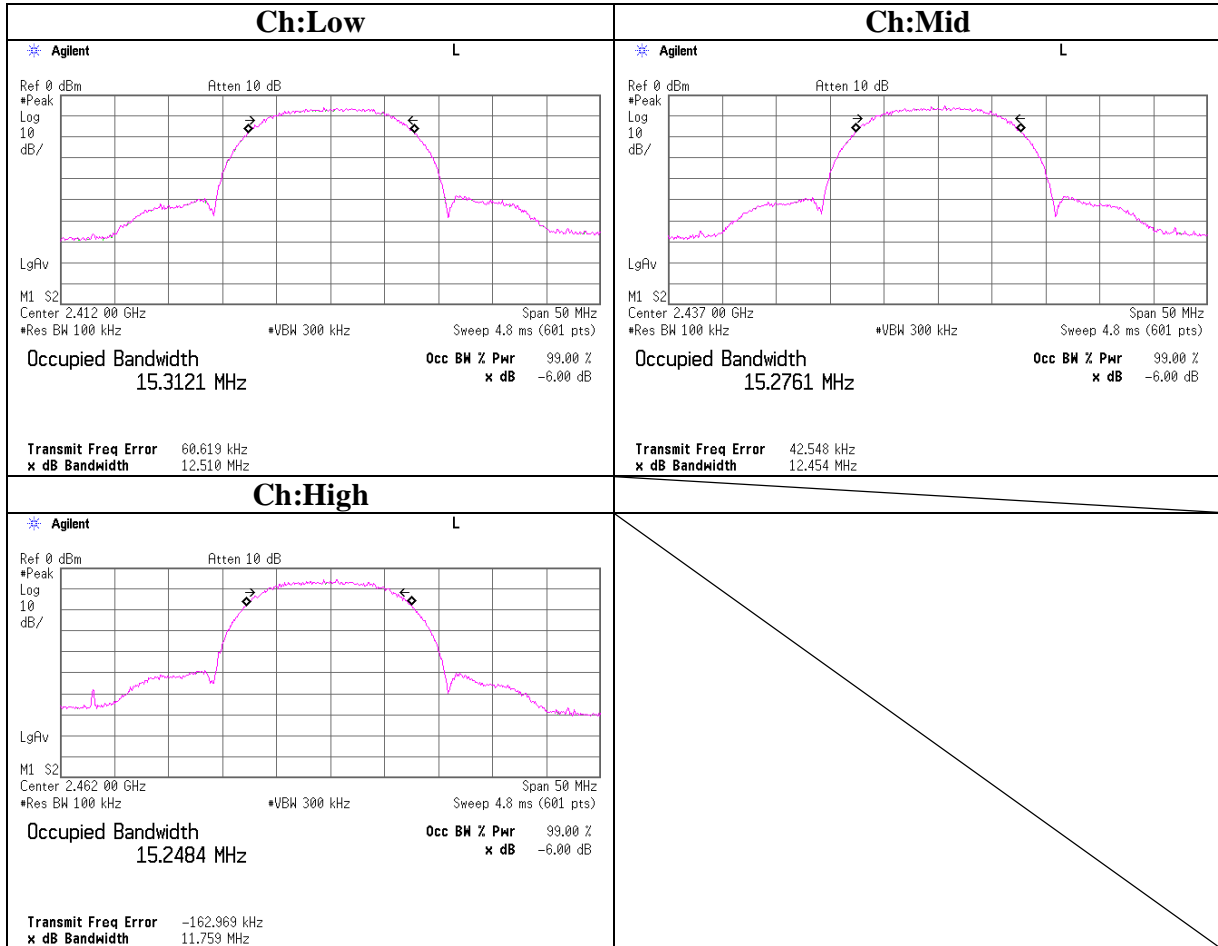
Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	16.602	500.0
Mid	2437.0	16.609	500.0
High	2462.0	16.577	500.0

[IEEE802.11a : 36Mbps]

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
-	5825.0	16.605	500.0

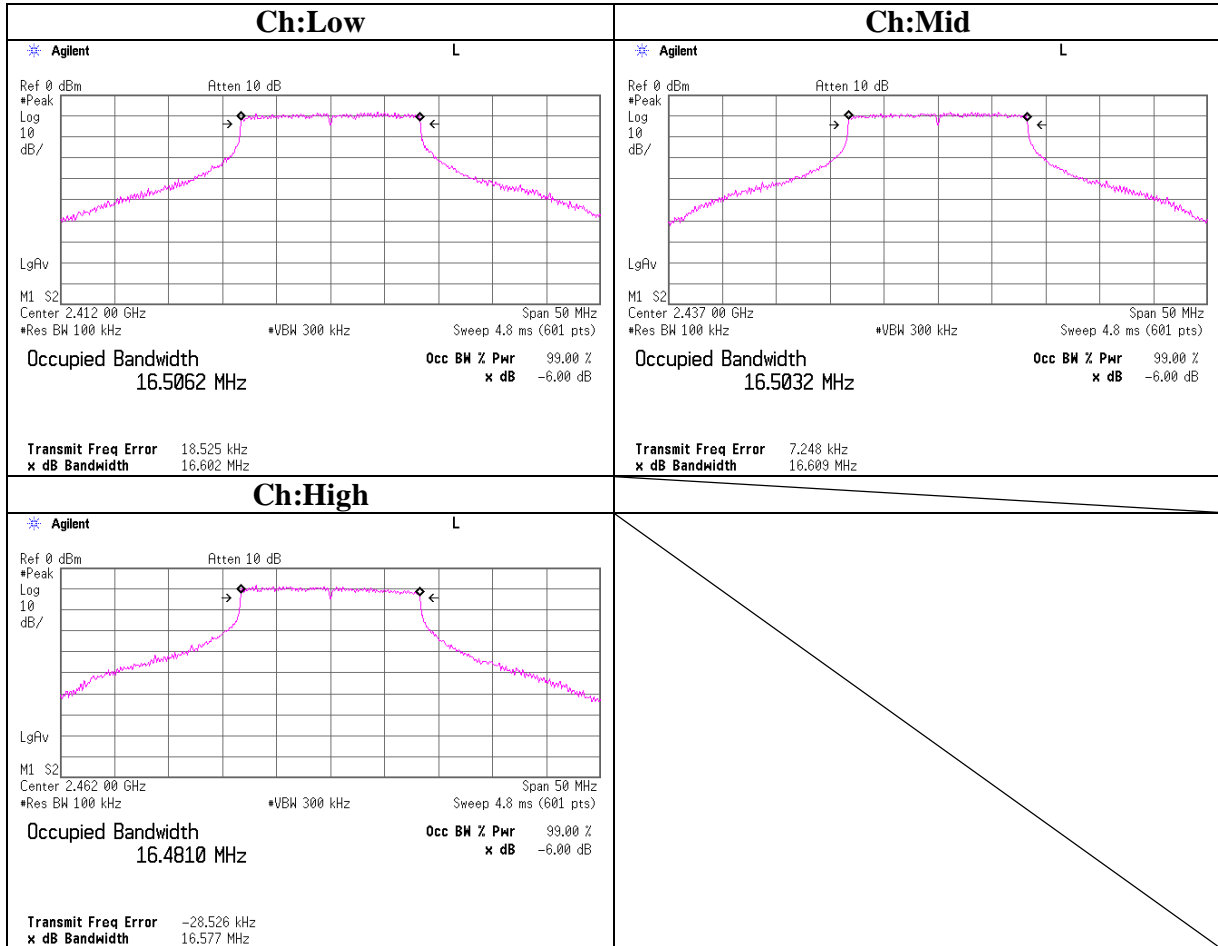
6dB Bandwidth(DSSS and other forms of modulation)

IEEE802.11b 11Mbps Antenna:A



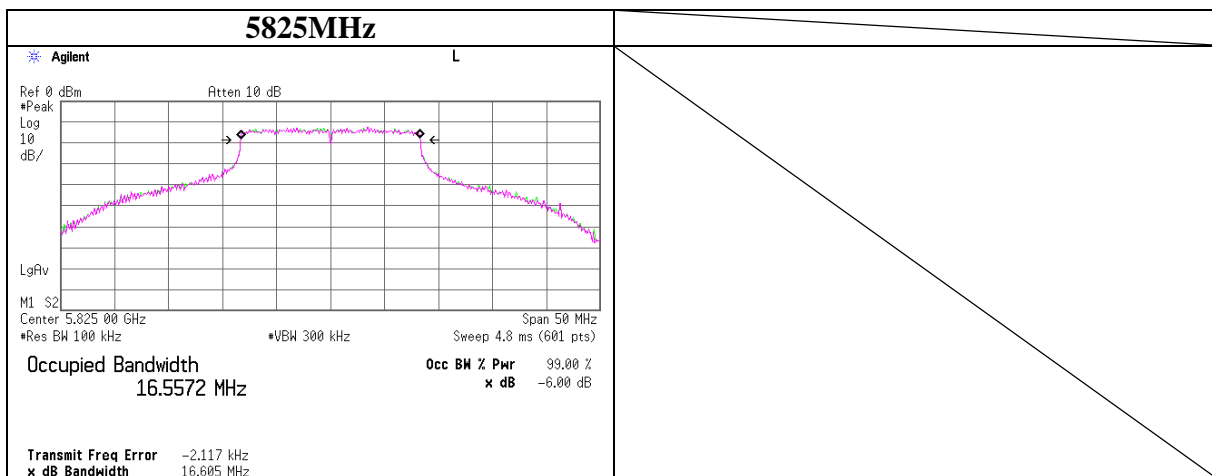
6dB Bandwidth(DSSS and other forms of modulation)

IEEE802.11g 36Mbps Antenna:A



6dB Bandwidth(DSSS and other forms of modulation)

IEEE802.11a 36Mbps Antenna:A



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 : 25CE0272-HO
Equipment : Wireless LAN MiniPCI Card User Unit REGULATION : FCC 15.247(b)(3)
Model : FX-DS540-MPCI4W TEST DISTANCE : -
Sample No. : 04MC2D1 DATE : 2004/11/16
Power : DC3.3V TEMPERATURE : 24deg.C
Mode : Tx IEEE 802.11b/g HUMIDITY : 35%
Antenna : A/B ENGINEER : Hiroka Umeyama

[IEEE802.11b : 11Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	10.67	2.11	10.00	22.78	30.00	7.22
Mid	2437.0	10.61	2.13	10.00	22.74	30.00	7.26
High	2462.0	10.49	2.15	10.00	22.64	30.00	7.36

[IEEE802.11b : 11Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	10.36	2.11	10.00	22.47	30.00	7.53
Mid	2437.0	10.64	2.13	10.00	22.77	30.00	7.23
High	2462.0	10.61	2.15	10.00	22.76	30.00	7.24

[IEEE802.11g : 54Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	8.78	2.11	10.00	20.89	30.00	9.11
Mid	2437.0	9.13	2.13	10.00	21.26	30.00	8.74
High	2462.0	8.56	2.15	10.00	20.71	30.00	9.29

[IEEE802.11g : 54Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	9.23	2.11	10.00	21.34	30.00	8.66
Mid	2437.0	9.30	2.13	10.00	21.43	30.00	8.57
High	2462.0	8.63	2.15	10.00	20.78	30.00	9.22

[IEEE802.11g : 36Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	12.56	2.11	10.00	24.67	30.00	5.33
Mid	2437.0	12.78	2.13	10.00	24.91	30.00	5.09
High	2462.0	12.30	2.15	10.00	24.45	30.00	5.55

[IEEE802.11g : 36Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	12.52	2.11	10.00	24.63	30.00	5.37
Mid	2437.0	12.42	2.13	10.00	24.55	30.00	5.45
High	2462.0	12.16	2.15	10.00	24.31	30.00	5.69

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

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 : 25CE0272-HO
Equipment : Wireless LAN MiniPCI Card User Unit REGULATION : FCC 15.247(b)(3)
Model : FX-DS540-MPCI4W TEST DISTANCE : -
Sample No. : 04MC2D1 DATE : 2004/11/16
Power : DC3.3V TEMPERATURE : 24deg.C
Mode : Tx IEEE 802.11a HUMIDITY : 35%
Antenna : A/B ENGINEER : Hiroka Umeyama

[IEEE802.11a : 54Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
-	5825.0	3.44	3.40	10.00	16.84	30.00	13.16

[IEEE802.11a : 54Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
-	5825.0	2.30	3.40	10.00	15.70	30.00	14.30

[IEEE802.11a : 36Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
-	5825.0	5.19	3.40	10.00	18.59	30.00	11.41

[IEEE802.11a : 36Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
-	5825.0	5.15	3.40	10.00	18.55	30.00	11.45

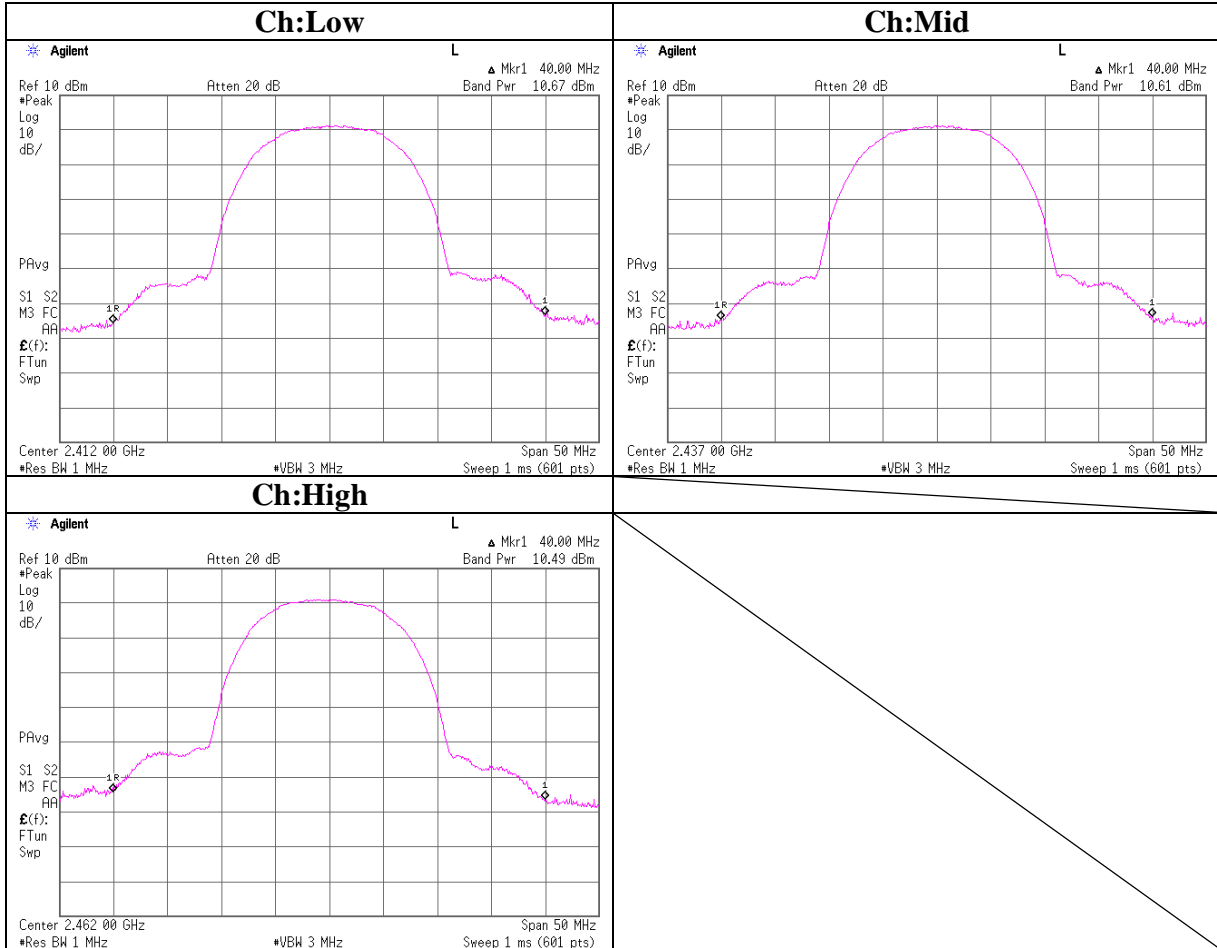
Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

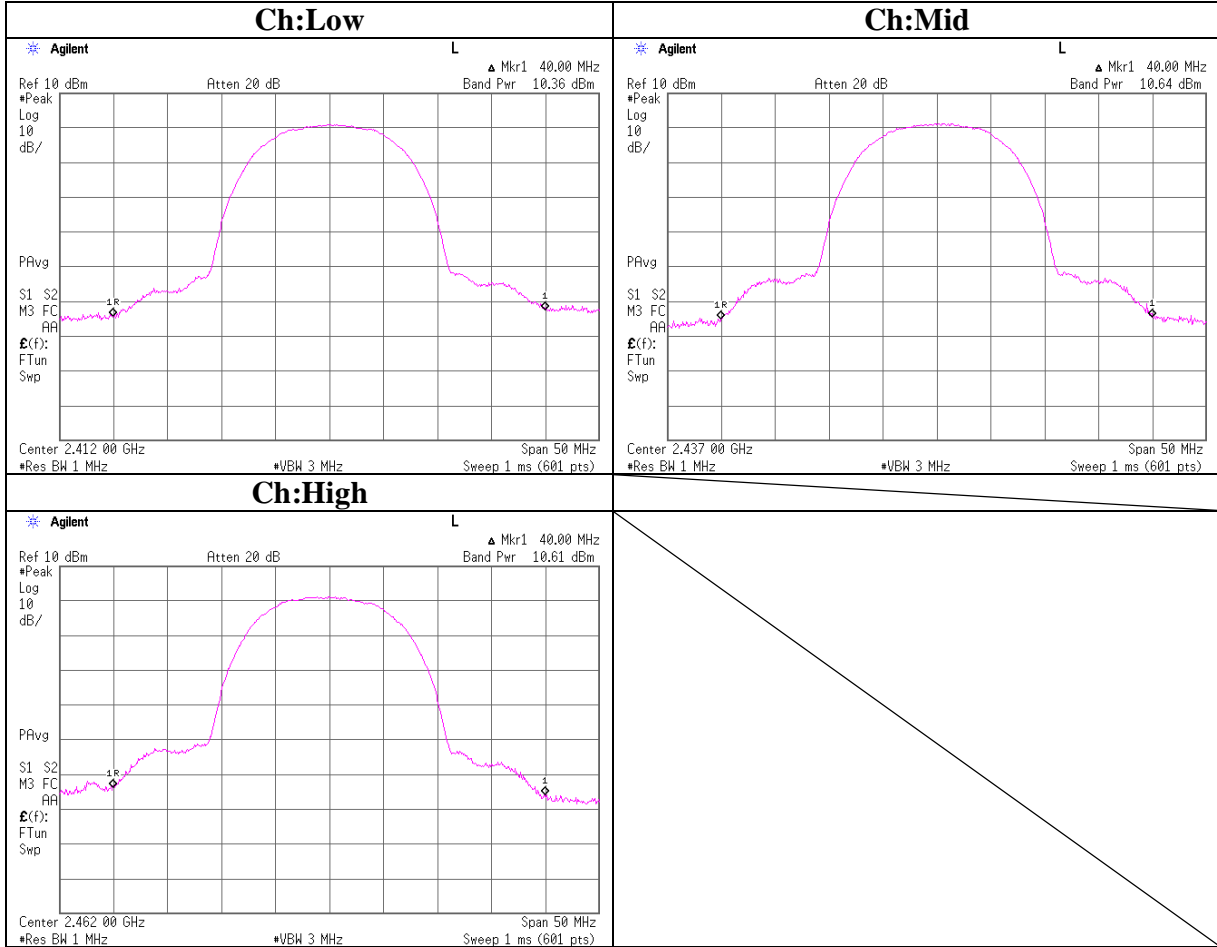
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11b 11Mbps Antenna:A



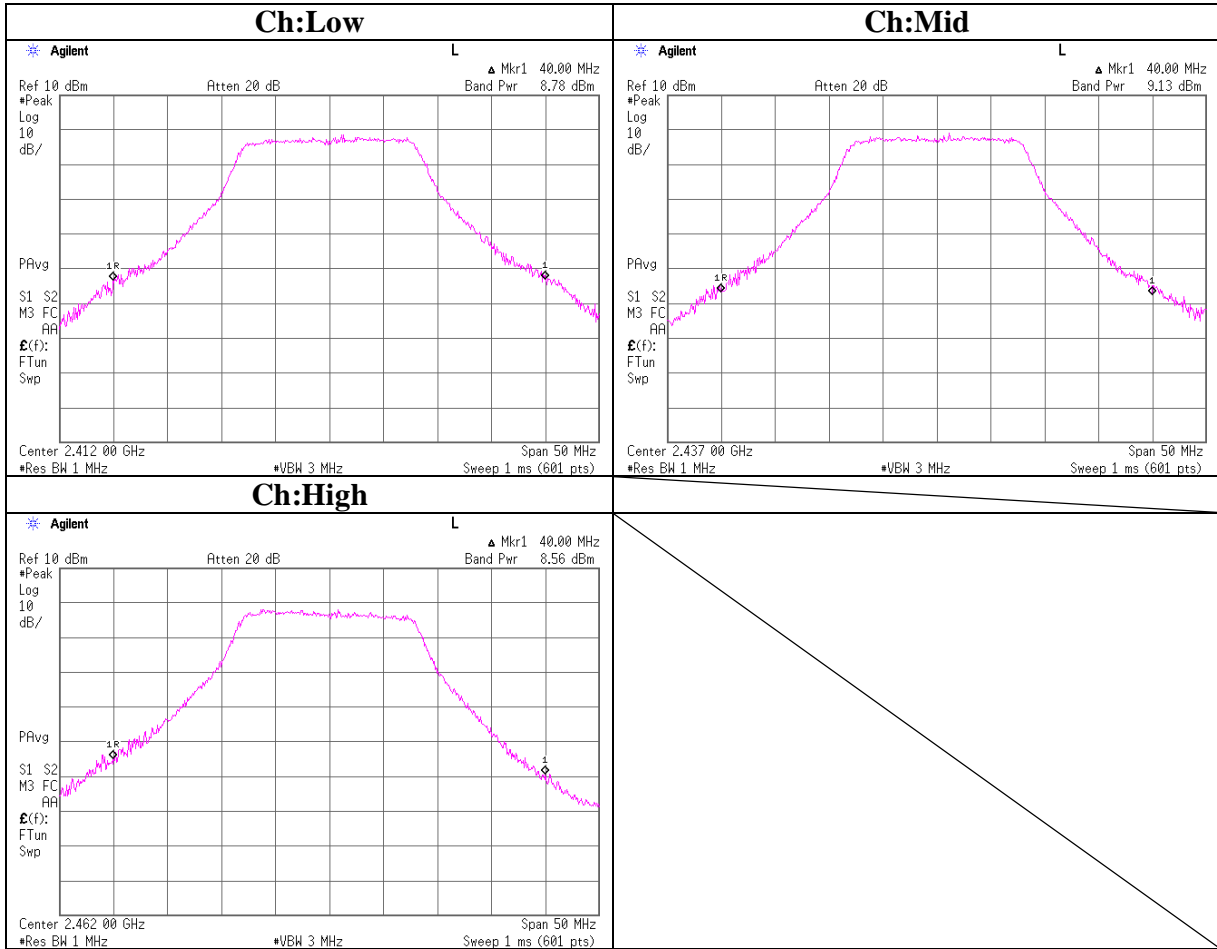
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11b 11Mbps Antenna:B



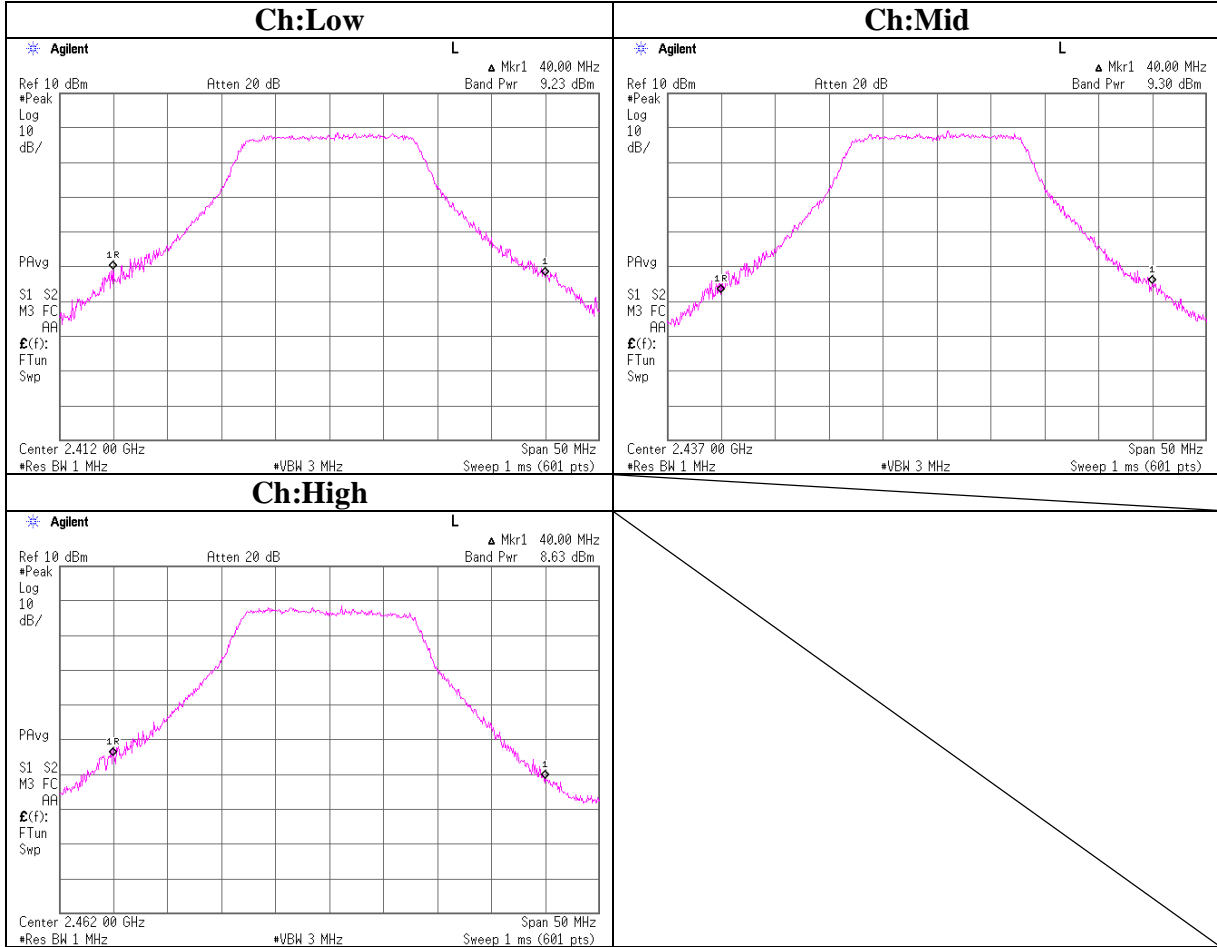
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11g 54Mbps Antenna:A



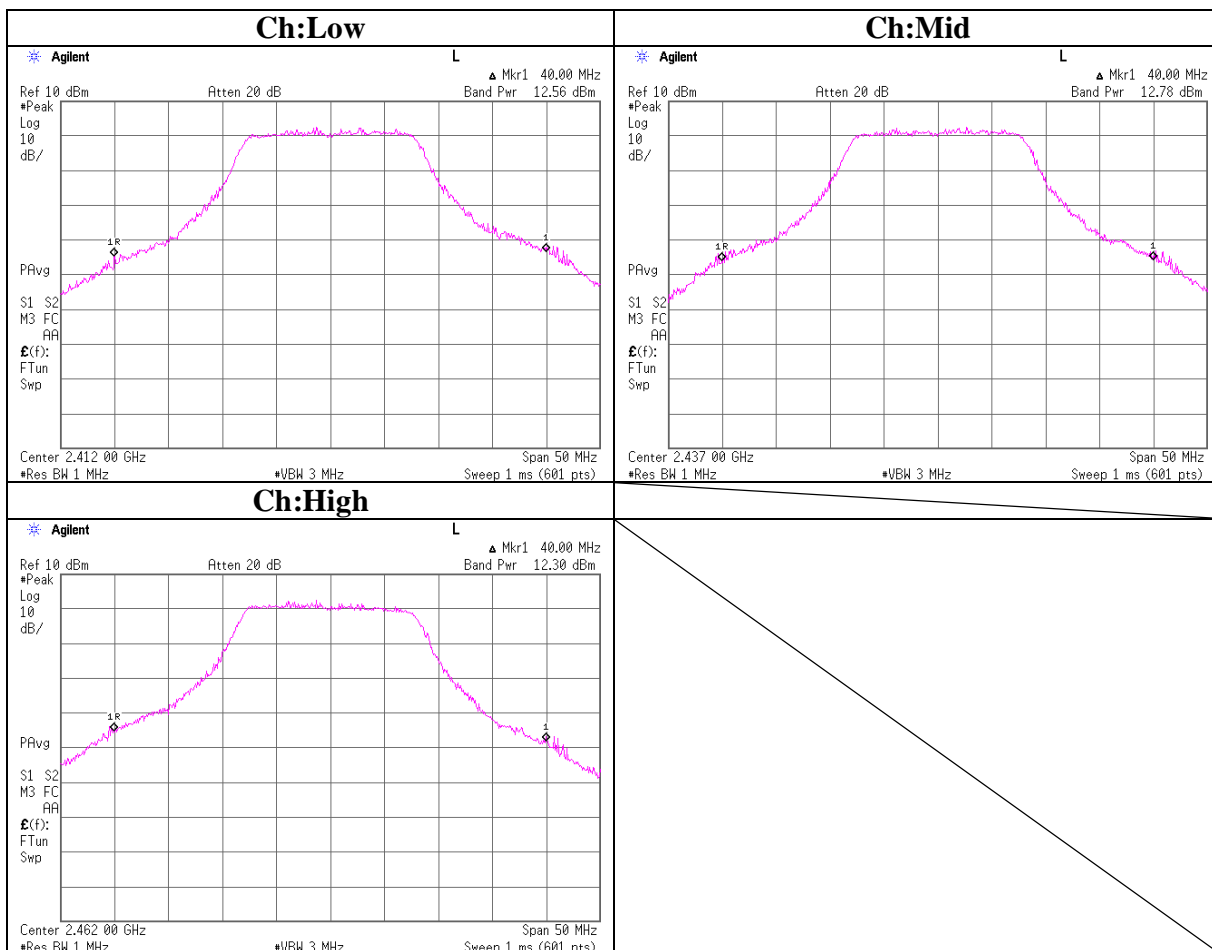
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11g 54Mbps Antenna:B



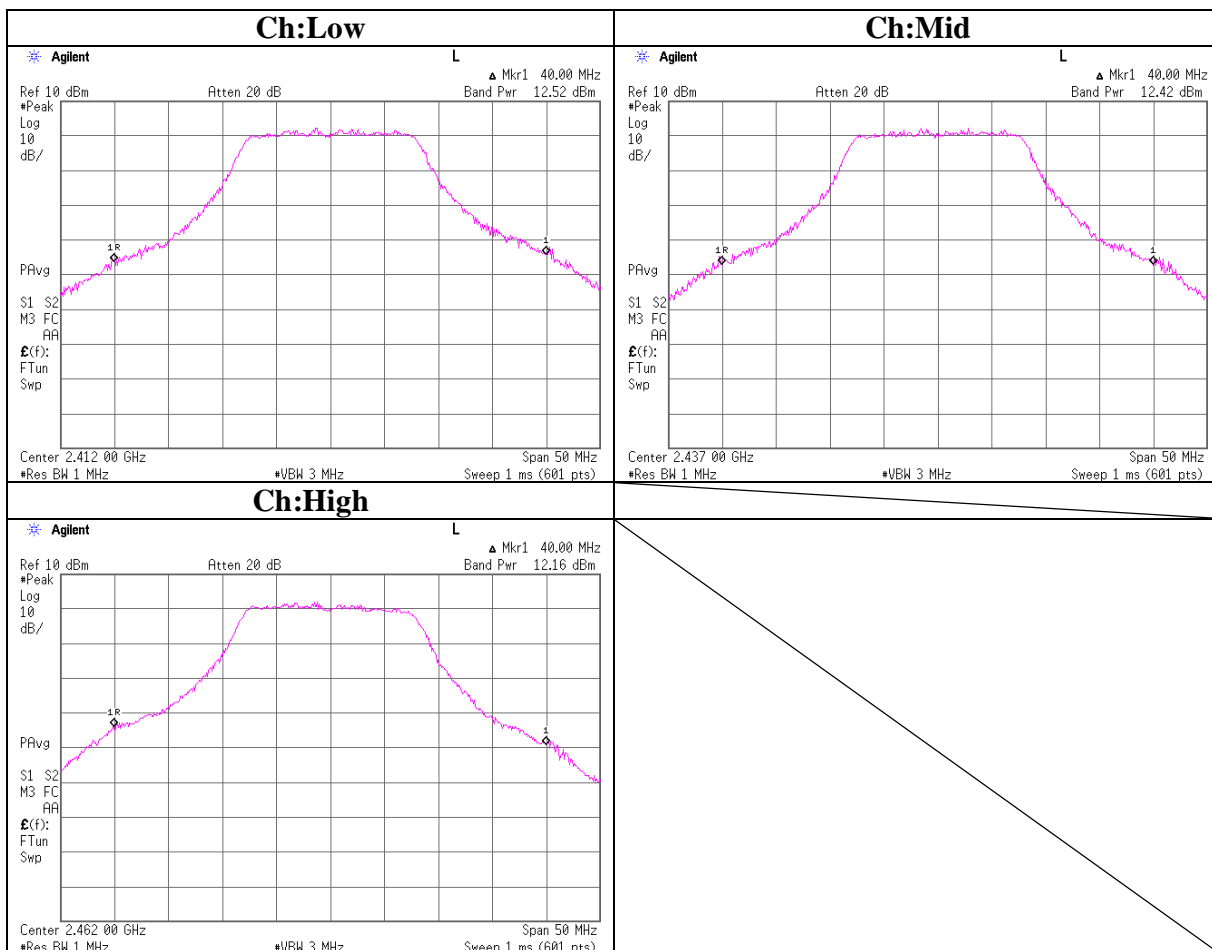
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11g 36Mbps Antenna:A



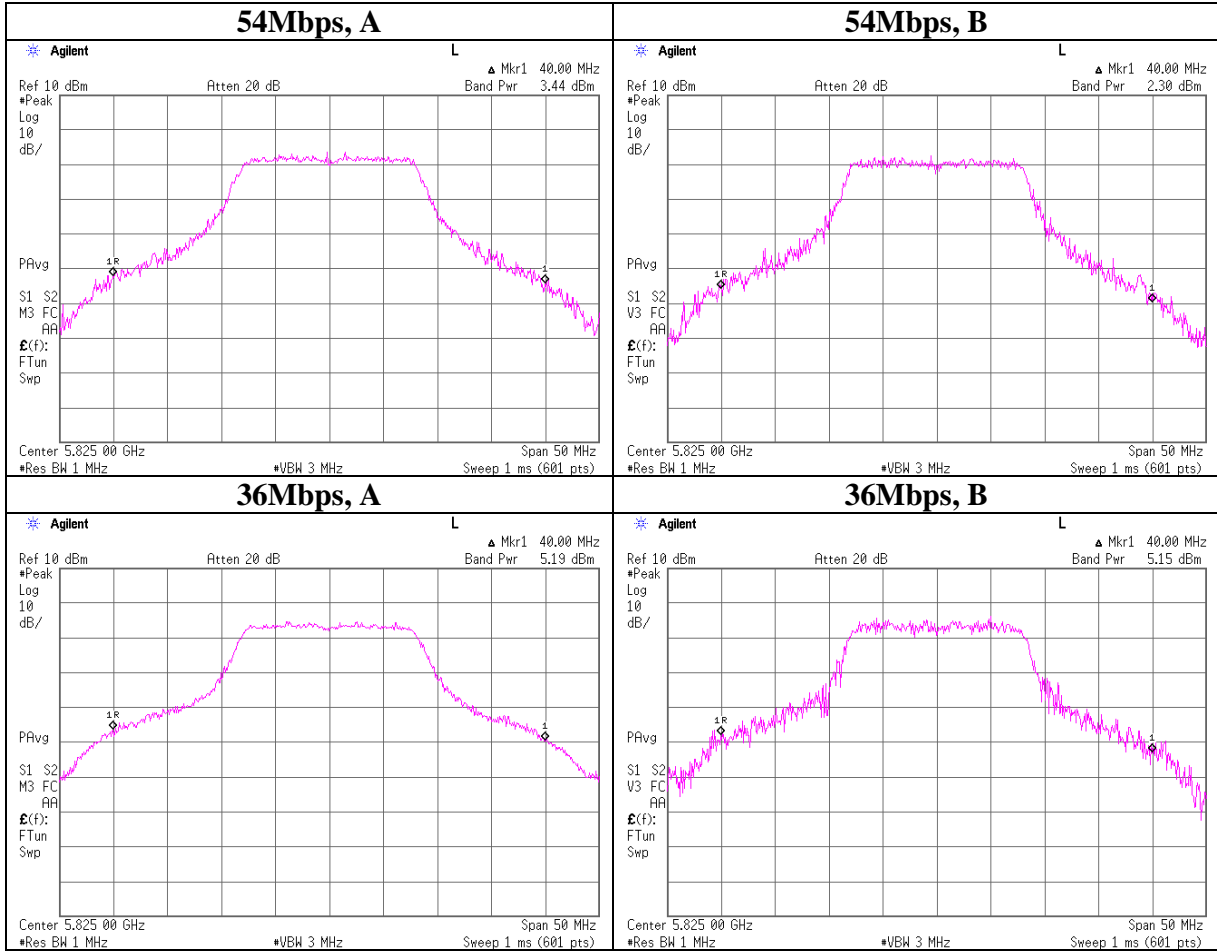
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11g 36Mbps Antenna:B



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

IEEE802.11a 54/36Mbps Antenna:A/B



Radiated Spurious Emission(DSSS and other forms of modulation)

DATA OF RADIATED EMISSION TEST

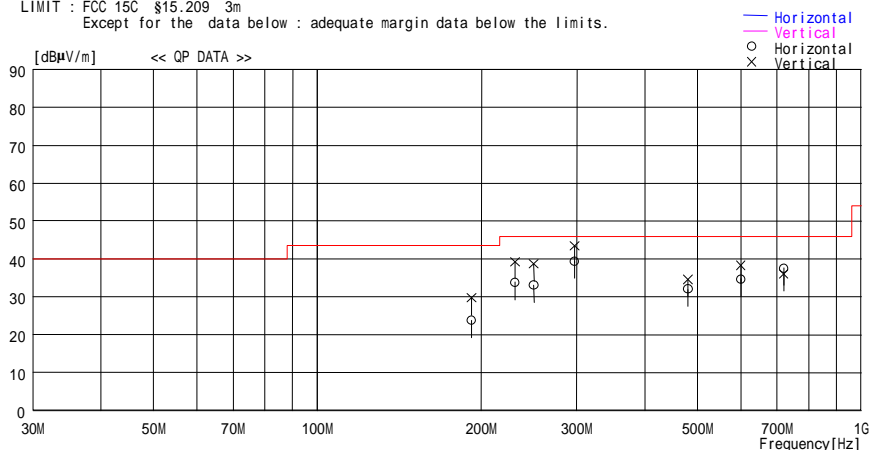
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber

Applicant : CONTEC CO., LTD. Report No. : 25CE0272-HO
 Kind of EUT : Wireless LAN MiniPCI Card User Unit Power : DC3.3V
 Model No. : FX-DS540-MPCI4W Temp./ Humi. : 24 deg.C. / 45 %
 Serial No. : 04MC2D1 Operator : Keiichi Aoki

Mode / Remarks : Transmitting 11b/2412MHz/11Mbps HOR:X-Axis,VER:Z-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	191.989	26.2	17.0	7.8	27.2	23.8	43.5	19.7	100	215
2	231.000	35.7	17.1	8.0	27.0	33.8	46.0	12.2	186	311
3	250.010	34.7	17.1	8.1	26.8	33.1	46.0	12.9	161	197
4	297.000	37.7	20.2	8.3	26.8	39.4	46.0	6.6	116	86
5	479.992	32.0	18.8	9.2	28.0	32.0	46.0	14.0	100	238
6	599.991	33.6	19.7	9.7	28.3	34.7	46.0	11.3	163	185
7	719.988	34.7	20.8	10.3	28.2	37.6	46.0	8.4	100	182
----- Vertical -----										
8	191.989	32.1	17.0	7.8	27.2	29.7	43.5	13.8	100	206
9	231.000	41.1	17.1	8.0	27.0	39.2	46.0	6.8	100	0
10	250.010	40.3	17.1	8.1	26.8	38.7	46.0	7.3	100	67
11	297.000	41.8	20.2	8.3	26.8	43.5	46.0	2.5	100	0
12	479.992	34.6	18.8	9.2	28.0	34.6	46.0	11.4	100	227
13	599.991	37.2	19.7	9.7	28.3	38.3	46.0	7.7	100	212
14	719.988	33.1	20.8	10.3	28.2	36.0	46.0	10.0	100	333

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)

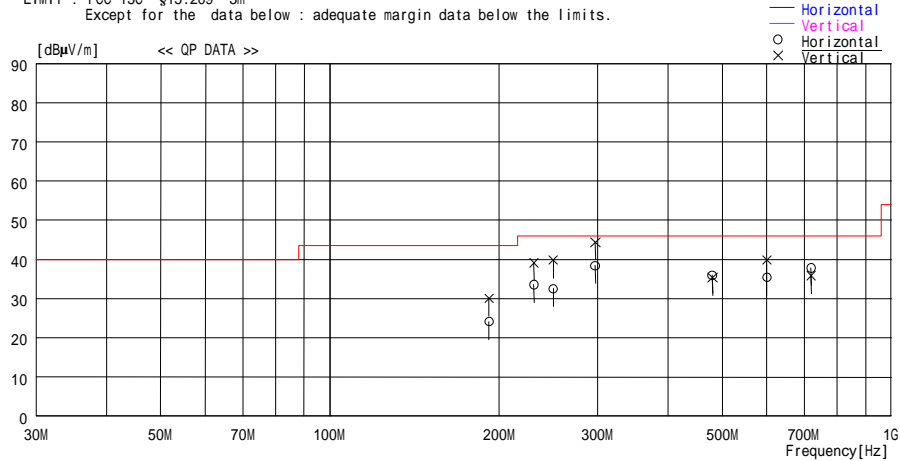
DATA OF RADIATED EMISSION TEST

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

Applicant : CONTEC CO., LTD. Report No. : 25CE0272-HO
 Kind of EUT : Wireless LAN MiniPCI Card User Unit Power : DC3.3V
 Model No. : FX-DS540-MPCI4W Temp./ Humi. : 24 deg.C. / 45 %
 Serial No. : 04MC2D1 Operator : Keiichi Aoki

Mode / Remarks : Transmitting 11b/2462MHz/11Mbps HOR:X-Axis,VER:Z-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	191.989	26.5	17.0	7.8	27.2	24.1	43.5	19.4	100	203
2	231.000	35.4	17.1	8.0	27.0	33.5	46.0	12.5	175	307
3	250.010	34.1	17.1	8.1	26.8	32.5	46.0	13.5	163	214
4	297.000	36.7	20.2	8.3	26.8	38.4	46.0	7.6	116	71
5	479.992	35.9	18.8	9.2	28.0	35.9	46.0	10.1	100	255
6	599.991	34.3	19.7	9.7	28.3	35.4	46.0	10.6	158	198
7	719.989	34.9	20.8	10.3	28.2	37.8	46.0	8.2	100	183
----- Vertical -----										
8	191.989	32.5	17.0	7.8	27.2	30.1	43.5	13.4	100	205
9	231.000	41.0	17.1	8.0	27.0	39.1	46.0	6.9	100	0
10	250.010	41.4	17.1	8.1	26.8	39.8	46.0	6.2	100	101
11	297.000	42.7	20.2	8.3	26.8	44.4	46.0	1.6	100	0
12	479.992	35.4	18.8	9.2	28.0	35.4	46.0	10.6	100	222
13	599.991	38.7	19.7	9.7	28.3	39.8	46.0	6.2	100	226
14	719.989	32.9	20.8	10.3	28.2	35.8	46.0	10.2	100	338

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)

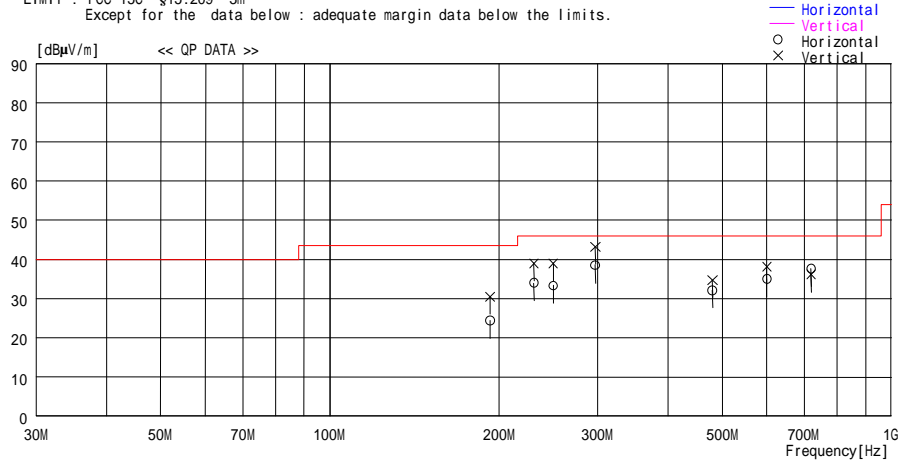
DATA OF RADIATED EMISSION TEST

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

Applicant : CONTEC CO., LTD. Report No. : 25CE0272-HO
 Kind of EUT : Wireless LAN MiniPCI Card User Unit Power : DC3.3V
 Model No. : FX-DS540-MPCI4W Temp./ Humi. : 24 deg.C. / 45 %
 Serial No. : 04MC2D1 Operator : Keiichi Aoki

Mode / Remarks : Transmitting 11g/2437MHz/36Mbps HOR:X-Axis,VER:Z-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	192.999	26.7	17.0	7.8	27.1	24.4	43.5	19.1	100	222
2	231.000	35.9	17.1	8.0	27.0	34.0	46.0	12.0	177	321
3	250.010	34.9	17.1	8.1	26.8	33.3	46.0	12.7	155	190
4	297.000	36.8	20.2	8.3	26.8	38.5	46.0	7.5	110	90
5	479.991	32.1	18.8	9.2	28.0	32.1	46.0	13.9	100	240
6	599.990	33.9	19.7	9.7	28.3	35.0	46.0	11.0	173	177
7	719.989	34.7	20.8	10.3	28.2	37.6	46.0	8.4	100	188
----- Vertical -----										
8	192.999	32.8	17.0	7.8	27.1	30.5	43.5	13.0	100	211
9	231.000	40.9	17.1	8.0	27.0	39.0	46.0	7.0	100	0
10	250.010	40.6	17.1	8.1	26.8	39.0	46.0	7.0	100	66
11	297.000	41.5	20.2	8.3	26.8	43.2	46.0	2.8	100	0
12	479.991	34.7	18.8	9.2	28.0	34.7	46.0	11.3	100	212
13	599.990	37.0	19.7	9.7	28.3	38.1	46.0	7.9	100	221
14	719.989	33.3	20.8	10.3	28.2	36.2	46.0	9.8	100	332

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)

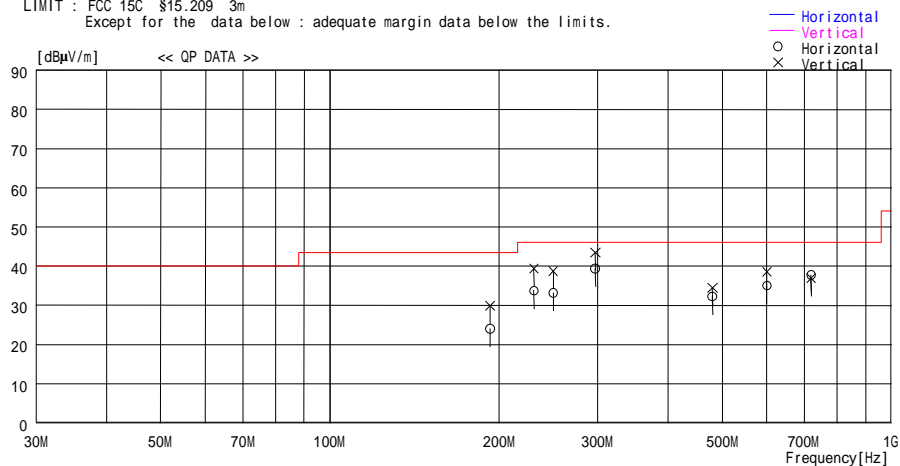
DATA OF RADIATED EMISSION TEST

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

Applicant : CONTEC CO., LTD. Report No. : 25CE0272-HO
 Kind of EUT : Wireless LAN MiniPCI Card User Unit Power : DC3.3V
 Model No. : FX-DS540-MPCI4W Temp./ Humi. : 24 deg.C. / 45 %
 Serial No. : 04MC2D1 Operator : Keiichi Aoki

Mode / Remarks : Transmitting 11g/2462MHz/36Mbps HOR:X-Axis,VER:Z-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	192.989	26.3	17.0	7.8	27.1	24.0	43.5	19.5	100	208
2	231.000	35.6	17.1	8.0	27.0	33.7	46.0	12.3	188	311
3	250.010	34.7	17.1	8.1	26.8	33.1	46.0	12.9	165	199
4	297.000	37.7	20.2	8.3	26.8	39.4	46.0	6.6	116	79
5	479.992	32.2	18.8	9.2	28.0	32.2	46.0	13.8	100	237
6	599.990	33.9	19.7	9.7	28.3	35.0	46.0	11.0	170	184
7	719.989	34.8	20.8	10.3	28.2	37.7	46.0	8.3	100	188
----- Vertical -----										
8	192.989	32.1	17.0	7.8	27.1	29.8	43.5	13.7	100	199
9	231.000	41.3	17.1	8.0	27.0	39.4	46.0	6.6	100	0
10	250.010	40.4	17.1	8.1	26.8	38.8	46.0	7.2	100	66
11	297.000	41.7	20.2	8.3	26.8	43.4	46.0	2.6	100	0
12	479.992	34.5	18.8	9.2	28.0	34.5	46.0	11.5	100	229
13	599.990	37.4	19.7	9.7	28.3	38.5	46.0	7.5	100	214
14	719.989	34.0	20.8	10.3	28.2	36.9	46.0	9.1	100	329

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)

2004/12/02 20:56:04

DATA OF RADIATED EMISSION TEST

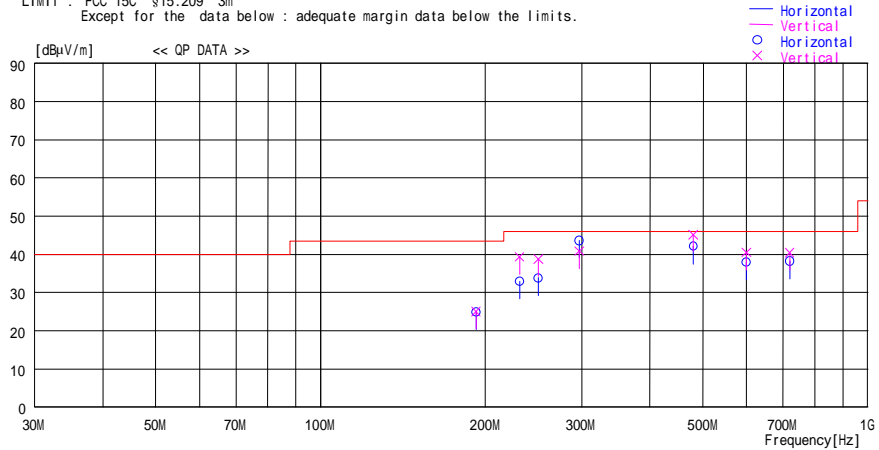
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
 Date : 2004/11/13 00:29:18

Applicant : CONTEC CO., LTD. Report No. : 25CE0272-HO
 Kind of EUT : Wireless LAN MiniPCI Card User Unit Power : DC3.3V
 Model No. : FX-DS540-MPC14W Temp./ Humi. : 26 deg.C. / 47 %
 Serial No. : 04MC2D1 Operator : Keiichi Aoki

Mode / Remarks : Transmitting 11a/5825MHz/36Mbps/TX100/PN9/Ant-A/ HOR:X-Axis(MAX),VER:Z-Axis(MAX)

LIMIT : FCC 15C §15.209 3m

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



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Loss & Gain [dB]						
192.290	27.3	QP	17.0	-19.4	24.9	164	334	Hori.	43.5	18.6
192.290	27.4	QP	17.0	-19.4	25.0	268	100	Vert.	43.5	18.5
231.000	34.8	QP	17.1	-19.0	32.9	252	149	Hori.	46.0	13.1
231.001	41.2	QP	17.1	-19.0	39.3	282	100	Vert.	46.0	6.7
250.015	35.4	QP	17.1	-18.7	33.8	112	154	Hori.	46.0	12.2
250.015	40.4	QP	17.1	-18.7	38.8	245	100	Vert.	46.0	7.2
297.000	41.9	QP	20.2	-18.5	43.6	181	158	Hori.	46.0	2.4
297.000	39.1	QP	20.2	-18.5	40.8	194	100	Vert.	46.0	5.2
479.999	42.1	QP	18.8	-18.8	42.1	253	100	Hori.	46.0	3.9
480.000	45.2	QP	18.8	-18.8	45.2	77	100	Vert.	46.0	0.8
600.003	36.7	QP	19.7	-18.5	37.9	349	100	Hori.	46.0	8.1
600.005	39.3	QP	19.7	-18.5	40.5	178	155	Vert.	46.0	5.5
720.000	37.5	QP	20.8	-17.9	40.4	180	100	Vert.	46.0	5.6
720.000	35.3	QP	20.8	-17.9	38.2	140	100	Hori.	46.0	7.8

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)

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 MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11Mbps / CH1:2412MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : 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	2390.0	49.5	50.5	30.8	36.3	7.6	0.0	51.6	52.6	74.0	22.4	21.4
2	4824.0	45.8	53.5	35.4	36.1	10.1	1.0	56.2	63.9	74.0	17.8	10.1
3	7236.0	46.1	43.9	38.0	35.6	12.1	0.5	61.1	58.9	74.0	12.9	15.1
4	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												
5	12060.0	44.1	46.9	41.1	35.7	14.8	0.6	55.4	58.2	74.0	18.6	15.8
6	14472.0	43.6	43.5	41.0	34.6	15.8	0.0	56.3	56.2	74.0	17.7	17.8
7	16884.0	43.1	42.9	46.0	35.5	18.2	0.0	62.3	62.1	74.0	11.7	11.9
8	19296.0	42.9	43.2	39.6	34.9	18.5	0.0	56.6	56.9	74.0	17.4	17.1
9	21708.0	44.1	44.7	40.7	35.3	20.0	0.0	60.0	60.6	74.0	14.0	13.4
10	24120.0	44.4	44.5	40.0	36.0	19.3	0.0	58.2	58.3	74.0	15.8	15.7

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	2390.0	36.7	37.6	30.8	36.3	7.6	0.0	38.8	39.7	54.0	15.2	14.3
2	4824.0	33.6	37.4	35.4	36.1	10.1	1.0	44.0	47.8	54.0	10.0	6.2
3	7236.0	33.7	32.0	38.0	35.6	12.1	0.5	48.7	47.0	54.0	5.3	7.0
4	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												
5	12060.0	31.1	33.2	41.1	35.7	14.8	0.6	42.4	44.5	54.0	11.6	9.5
6	14472.0	30.4	30.5	41.0	34.6	15.8	0.0	43.1	43.2	54.0	10.9	10.8
7	16884.0	30.1	30.1	46.0	35.5	18.2	0.0	49.3	49.3	54.0	4.7	4.7
8	19296.0	29.7	29.7	39.6	34.9	18.5	0.0	43.4	43.4	54.0	10.6	10.6
9	21708.0	31.5	31.5	40.7	35.3	20.0	0.0	47.4	47.4	54.0	6.6	6.6
10	24120.0	31.5	31.4	40.0	36.0	19.3	0.0	45.3	45.2	54.0	8.7	8.8

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

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	2412.0	97.6	98.9	30.9	36.3	7.6	0.0	99.8	101.1	-	-	-
2	2400.0	53.5	55.9	30.9	36.3	7.6	0.0	55.7	58.1	Funda-20dB	24.1	23.0

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.

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MF060b(10.04.03)

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DSS40-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11Mbps / CH6:2437MHz)

Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : 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	4874.0	41.8	52.6	35.6	36.1	10.2	1.0	52.6	63.4	74.0	21.4	10.6
2	7311.0	44.1	44.3	38.1	35.7	12.4	0.5	59.4	59.6	74.0	14.6	14.4
3	9748.0	43.5	43.5	35.6	36.1	14.0	0.5	57.5	57.5	74.0	16.5	16.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	43.7	44.1	41.4	35.6	14.9	0.6	55.5	55.9	74.0	18.5	18.1
5	14622.0	43.6	43.2	41.5	34.8	16.1	0.0	56.9	56.5	74.0	17.1	17.5
6	17059.0	42.8	42.7	46.4	35.4	18.3	0.0	62.6	62.5	74.0	11.4	11.5
7	19496.0	43.5	43.2	39.2	34.9	18.7	0.0	57.0	56.7	74.0	17.0	17.3
8	21933.0	46.3	46.3	40.5	35.0	20.1	0.0	62.4	62.4	74.0	11.6	11.6
9	24370.0	44.3	44.8	40.1	36.6	19.7	0.0	58.0	58.5	74.0	16.0	15.5

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	4874.0	35.7	36.9	35.6	36.1	10.2	1.0	46.5	47.7	54.0	7.5	6.3
2	7311.0	30.8	30.8	38.1	35.7	12.4	0.5	46.1	46.1	54.0	7.9	7.9
3	9748.0	31.2	31.2	35.6	36.1	14.0	0.5	45.2	45.2	54.0	8.8	8.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	30.7	30.8	41.4	35.6	14.9	0.6	42.5	42.6	54.0	11.5	11.4
5	14622.0	30.6	30.5	41.5	34.8	16.1	0.0	43.9	43.8	54.0	10.1	10.2
6	17059.0	29.6	29.6	46.4	35.4	18.3	0.0	49.4	49.4	54.0	4.6	4.6
7	19496.0	29.8	29.7	39.2	34.9	18.7	0.0	43.3	43.2	54.0	10.7	10.8
8	21933.0	33.2	33.2	40.5	35.0	20.1	0.0	49.3	49.3	54.0	4.7	4.7
9	24370.0	31.3	31.1	40.1	36.6	19.7	0.0	45.0	44.8	54.0	9.0	9.2

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.

Test report No. : 25CE0272-HO-1
Page : 46 of 71
Issued date : November 30, 2004
Revised date : December 8, 2004
FCC ID : PQRDSS40-MPCI4W

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 MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11bps / CH11:2462MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

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

No.	Freq. [MHz]	Reading [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result [dBuV/m]		Limit PK [dBuV/m]	Margin [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	49.5	49.1	31.0	36.2	7.5	0.0	51.8	51.4	74.0	22.2	22.6
2	4924.0	51.8	43.7	35.9	36.1	10.2	1.0	62.9	54.8	74.0	11.1	19.2
3	7386.0	44.2	44.4	38.3	35.7	12.4	0.5	59.8	60.0	74.0	14.2	14.0
4	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												
5	12310.0	43.5	44.1	41.7	35.6	15.1	0.6	55.8	56.4	74.0	18.2	17.6
6	14772.0	43.9	43.2	42.1	34.9	16.3	0.0	57.9	57.2	74.0	16.1	16.8
7	17234.0	43.2	42.8	46.7	35.3	18.2	0.0	63.3	62.9	74.0	10.7	11.1
8	19696.0	43.4	43.2	39.6	35.2	18.8	0.0	57.1	56.9	74.0	16.9	17.1
9	22158.0	44.8	44.7	40.6	35.0	20.1	0.0	61.0	60.9	74.0	13.0	13.1
10	24620.0	44.7	44.8	40.2	36.8	20.0	0.0	58.6	58.7	74.0	15.4	15.3

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

No.	Freq. [MHz]	Reading [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result [dBuV/m]		Limit AV [dBuV/m]	Margin [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	36.5	36.3	31.0	36.2	7.5	0.0	38.8	38.6	54.0	15.2	15.4
2	4924.0	36.3	30.3	35.9	36.1	10.2	1.0	47.4	41.4	54.0	6.6	12.6
3	7386.0	30.6	30.6	38.3	35.7	12.4	0.5	46.2	46.2	54.0	7.8	7.8
4	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												
5	12310.0	30.7	30.9	41.7	35.6	15.1	0.6	43.0	43.2	54.0	11.0	10.8
6	14772.0	30.4	29.8	42.1	34.9	16.3	0.0	44.4	43.8	54.0	9.6	10.2
7	17234.0	29.6	29.6	46.7	35.3	18.2	0.0	49.7	49.7	54.0	4.3	4.3
8	19696.0	30.1	30.2	39.6	35.2	18.8	0.0	43.8	43.9	54.0	10.2	10.1
9	22158.0	31.4	31.4	40.6	35.0	20.1	0.0	47.6	47.6	54.0	6.4	6.4
10	24620.0	31.8	31.8	40.2	36.8	20.0	0.0	45.7	45.7	54.0	8.3	8.3

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.

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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
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 36Mbps / CH1:2412MHz)

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	2390.0	65.2	66.2	30.8	36.3	7.6	0.0	67.3	68.3	74.0	6.7	5.7
2	4824.0	54.4	56.2	35.4	36.1	10.1	1.0	64.8	66.6	74.0	9.2	7.4
3	7236.0	54.2	49.0	38.0	35.6	12.1	0.5	69.2	64.0	74.0	4.8	10.0
4	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												
5	12060.0	48.1	53.6	41.1	35.7	14.8	0.6	59.4	64.9	74.0	14.6	9.1
6	14472.0	43.3	45.5	41.0	34.6	15.8	0.0	56.0	58.2	74.0	18.0	15.8
7	16884.0	43.7	43.6	46.0	35.5	18.2	0.0	62.9	62.8	74.0	11.1	11.2
8	19296.0	42.8	43.3	39.6	34.9	18.5	0.0	56.5	57.0	74.0	17.5	17.0
9	21708.0	44.8	44.0	40.7	35.3	20.0	0.0	60.7	59.9	74.0	13.3	14.1
10	24120.0	44.4	44.3	40.0	36.0	19.3	0.0	58.2	58.1	74.0	15.8	15.9

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	2390.0	48.1	48.7	30.8	36.3	7.6	0.0	50.2	50.8	54.0	3.8	3.2
2	4824.0	39.3	40.9	35.4	36.1	10.1	1.0	49.7	51.3	54.0	4.3	2.7
3	7236.0	38.5	34.9	38.0	35.6	12.1	0.5	53.5	49.9	54.0	0.5	4.1
4	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												
5	12060.0	33.5	38.1	41.1	35.7	14.8	0.6	44.8	49.4	54.0	9.2	4.6
6	14472.0	30.5	31.5	41.0	34.6	15.8	0.0	43.2	44.2	54.0	10.8	9.8
7	16884.0	30.1	30.2	46.0	35.5	18.2	0.0	49.3	49.4	54.0	4.7	4.6
8	19296.0	29.7	29.7	39.6	34.9	18.5	0.0	43.4	43.4	54.0	10.6	10.6
9	21708.0	31.6	31.4	40.7	35.3	20.0	0.0	47.5	47.3	54.0	6.5	6.7
10	24120.0	31.4	31.4	40.0	36.0	19.3	0.0	45.2	45.2	54.0	8.8	8.8

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

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	2412.0	91.3	90.7	30.9	36.3	7.6	0.0	93.5	92.9	-	-	-
2	2400.0	64.1	65.7	30.9	36.3	7.6	0.0	66.3	67.9	Funda-20dB	7.2	5.0

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)

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

COMPANY : CONTEC CO., LTD. REGULATION : Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT : Wireless LAN MiniPCI Card User Unit TEST DISTANCE : 3m / 1m
MODEL : FX-DS540-MPCI4W DATE : 11/15/2004
SAMPLE NO. : 04MC2D1 TEMPERATURE : 20deg.C
POWER : DC3.3V(AC120V/60Hz) HUMIDITY : 60%
MODE : Transmitting (11g / 54Mbps / CH1:2412MHz) ENGINEER : 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	2390.0	56.4	59.0	30.8	36.3	7.6	0.0	58.5	61.1	74.0	15.5	12.9
2	4824.0	48.4	49.3	35.4	36.1	10.1	1.0	58.8	59.7	74.0	15.2	14.3
3	7236.0	46.7	45.2	38.0	35.6	12.1	0.5	61.7	60.2	74.0	12.3	13.8
4	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												
5	12060.0	44.1	44.0	41.1	35.7	14.8	0.6	55.4	55.3	74.0	18.6	18.7
6	14472.0	43.7	43.5	41.0	34.6	15.8	0.0	56.4	56.2	74.0	17.6	17.8
7	16884.0	42.8	42.9	46.0	35.5	18.2	0.0	62.0	62.1	74.0	12.0	11.9
8	19296.0	42.8	43.3	39.6	34.9	18.5	0.0	56.5	57.0	74.0	17.5	17.0
9	21708.0	44.8	44.0	40.7	35.3	20.0	0.0	60.7	59.9	74.0	13.3	14.1
10	24120.0	44.4	44.3	40.0	36.0	19.3	0.0	58.2	58.1	74.0	15.8	15.9

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	2390.0	38.1	39.5	30.8	36.3	7.6	0.0	40.2	41.6	54.0	13.8	12.4
2	4824.0	34.2	33.9	35.4	36.1	10.1	1.0	44.6	44.3	54.0	9.4	9.7
3	7236.0	31.9	30.8	38.0	35.6	12.1	0.5	46.9	45.8	54.0	7.1	8.2
4	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												
5	12060.0	30.8	30.7	41.1	35.7	14.8	0.6	42.1	42.0	54.0	11.9	12.0
6	14472.0	30.4	30.3	41.0	34.6	15.8	0.0	43.1	43.0	54.0	10.9	11.0
7	16884.0	30.1	30.1	46.0	35.5	18.2	0.0	49.3	49.3	54.0	4.7	4.7
8	19296.0	29.7	29.7	39.6	34.9	18.5	0.0	43.4	43.4	54.0	10.6	10.6
9	21708.0	31.6	31.4	40.7	35.3	20.0	0.0	47.5	47.3	54.0	6.5	6.7
10	24120.0	31.4	31.4	40.0	36.0	19.3	0.0	45.2	45.2	54.0	8.8	8.8

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

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	2412.0	87.3	88.0	30.9	36.3	7.6	0.0	89.5	90.2	-	-	-
2	2400.0	61.0	62.6	30.9	36.3	7.6	0.0	63.2	64.8	Funda-20dB	6.3	5.4

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.

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Revised date : December 8, 2004
FCC ID : PQRDSS40-MPCI4W

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 36Mbps / CH6:2437MHz)

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	4874.0	51.4	52.7	35.6	36.1	10.2	1.0	62.2	63.5	74.0	11.8	10.5
2	7311.0	45.6	43.7	38.1	35.7	12.4	0.5	60.9	59.0	74.0	13.1	15.0
3	9748.0	43.5	43.5	35.6	36.1	14.0	0.5	57.5	57.5	74.0	16.5	16.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	44.0	47.6	41.4	35.6	14.9	0.6	55.8	59.4	74.0	18.2	14.6
5	14622.0	44.1	43.5	41.5	34.8	16.1	0.0	57.4	56.8	74.0	16.6	17.2
6	17059.0	42.6	42.8	46.4	35.4	18.3	0.0	62.4	62.6	74.0	11.6	11.4
7	19496.0	42.3	42.5	39.2	34.9	18.7	0.0	55.8	56.0	74.0	18.2	18.0
8	21933.0	45.9	46.3	40.5	35.0	20.1	0.0	62.0	62.4	74.0	12.0	11.6
9	24370.0	44.3	44.4	40.1	36.6	19.7	0.0	58.0	58.1	74.0	16.0	15.9

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 [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	4874.0	36.9	39.9	35.6	36.1	10.2	1.0	47.7	50.7	54.0	6.3	3.3
2	7311.0	32.1	31.0	38.1	35.7	12.4	0.5	47.4	46.3	54.0	6.6	7.7
3	9748.0	31.2	31.2	35.6	36.1	14.0	0.5	45.2	45.2	54.0	8.8	8.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	30.9	32.2	41.4	35.6	14.9	0.6	42.7	44.0	54.0	11.3	10.0
5	14622.0	30.6	30.5	41.5	34.8	16.1	0.0	43.9	43.8	54.0	10.1	10.2
6	17059.0	29.6	29.6	46.4	35.4	18.3	0.0	49.4	49.4	54.0	4.6	4.6
7	19496.0	29.8	29.7	39.2	34.9	18.7	0.0	43.3	43.2	54.0	10.7	10.8
8	21933.0	33.2	33.3	40.5	35.0	20.1	0.0	49.3	49.4	54.0	4.7	4.6
9	24370.0	31.1	31.1	40.1	36.6	19.7	0.0	44.8	44.8	54.0	9.2	9.2

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.

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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
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 54Mbps / CH6:2437MHz)

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	4874.0	46.5	44.8	35.6	36.1	10.2	1.0	57.3	55.6	74.0	16.7	18.4
2	7311.0	44.4	44.7	38.1	35.7	12.4	0.5	59.7	60.0	74.0	14.3	14.0
3	9748.0	43.5	43.5	35.6	36.1	14.0	0.5	57.5	57.5	74.0	16.5	16.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	43.6	47.1	41.4	35.6	14.9	0.6	55.4	58.9	74.0	18.6	15.1
5	14622.0	43.2	44.0	41.5	34.8	16.1	0.0	56.5	57.3	74.0	17.5	16.7
6	17059.0	42.9	42.7	46.4	35.4	18.3	0.0	62.7	62.5	74.0	11.3	11.5
7	19496.0	42.3	42.5	39.2	34.9	18.7	0.0	55.8	56.0	74.0	18.2	18.0
8	21933.0	45.9	46.3	40.5	35.0	20.1	0.0	62.0	62.4	74.0	12.0	11.6
9	24370.0	44.3	44.4	40.1	36.6	19.7	0.0	58.0	58.1	74.0	16.0	15.9

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	4874.0	33.3	33.3	35.6	36.1	10.2	1.0	44.1	44.1	54.0	9.9	9.9
2	7311.0	30.9	30.9	38.1	35.7	12.4	0.5	46.2	46.2	54.0	7.8	7.8
3	9748.0	31.2	31.2	35.6	36.1	14.0	0.5	45.2	45.2	54.0	8.8	8.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	30.8	33.9	41.4	35.6	14.9	0.6	42.6	45.7	54.0	11.4	8.3
5	14622.0	30.6	30.5	41.5	34.8	16.1	0.0	43.9	43.8	54.0	10.1	10.2
6	17059.0	29.6	29.6	46.4	35.4	18.3	0.0	49.4	49.4	54.0	4.6	4.6
7	19496.0	29.8	29.7	39.2	34.9	18.7	0.0	43.3	43.2	54.0	10.7	10.8
8	21933.0	33.2	33.3	40.5	35.0	20.1	0.0	49.3	49.4	54.0	4.7	4.6
9	24370.0	31.1	31.1	40.1	36.6	19.7	0.0	44.8	44.8	54.0	9.2	9.2

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.

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Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 36Mbps / CH11:2462MHz)
PK DETECT (RBW: 1MHz, VBW:1MHz)

No.	Freq. [MHz]	Reading [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result [dBuV/m]		Limit PK [dBuV/m]	Margin [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	68.3	66.3	31.0	36.2	7.5	0.0	70.6	68.6	74.0	3.4	5.4
2	4924.0	52.6	53.8	35.9	36.1	10.2	1.0	63.7	64.9	74.0	10.3	9.1
3	7386.0	43.9	43.6	38.3	35.7	12.4	0.5	59.5	59.2	74.0	14.5	14.8
4	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												
5	12310.0	43.9	46.9	41.7	35.6	15.1	0.6	56.2	59.2	74.0	17.8	14.8
6	14772.0	43.5	43.2	42.1	34.9	16.3	0.0	57.5	57.2	74.0	16.5	16.8
7	17234.0	43.2	43.1	46.7	35.3	18.2	0.0	63.3	63.2	74.0	10.7	10.8
8	19696.0	42.5	43.5	39.6	35.2	18.8	0.0	56.2	57.2	74.0	17.8	16.8
9	22158.0	44.4	44.1	40.6	35.0	20.1	0.0	60.6	60.3	74.0	13.4	13.7
10	24620.0	45.3	44.5	40.2	36.8	20.0	0.0	59.2	58.4	74.0	14.8	15.6

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

No.	Freq. [MHz]	Reading [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result [dBuV/m]		Limit AV [dBuV/m]	Margin [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	50.7	48.5	31.0	36.2	7.5	0.0	53.0	50.8	54.0	1.0	3.2
2	4924.0	39.4	40.0	35.9	36.1	10.2	1.0	50.5	51.1	54.0	3.5	2.9
3	7386.0	31.4	30.8	38.3	35.7	12.4	0.5	47.0	46.4	54.0	7.0	7.6
4	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												
5	12310.0	30.7	32.5	41.7	35.6	15.1	0.6	43.0	44.8	54.0	11.0	9.2
6	14772.0	30.4	30.4	42.1	34.9	16.3	0.0	44.4	44.4	54.0	9.6	9.6
7	17234.0	29.6	29.6	46.7	35.3	18.2	0.0	49.7	49.7	54.0	4.3	4.3
8	19696.0	30.2	30.2	39.6	35.2	18.8	0.0	43.9	43.9	54.0	10.1	10.1
9	22158.0	31.4	31.4	40.6	35.0	20.1	0.0	47.6	47.6	54.0	6.4	6.4
10	24620.0	31.8	31.8	40.2	36.8	20.0	0.0	45.7	45.7	54.0	8.3	8.3

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.

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 MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 54Mbps / CH11:2462MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : 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	57.1	57.7	31.0	36.2	7.5	0.0	59.4	60.0	74.0	14.6	14.0
2	4924.0	47.8	47.3	35.9	36.1	10.2	1.0	58.9	58.4	74.0	15.1	15.6
3	7386.0	44.3	45.2	38.3	35.7	12.4	0.5	59.9	60.8	74.0	14.1	13.2
4	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												
5	12310.0	44.3	45.2	41.7	35.6	15.1	0.6	56.6	57.5	74.0	17.4	16.5
6	14772.0	42.9	43.8	42.1	34.9	16.3	0.0	56.9	57.8	74.0	17.1	16.2
7	17234.0	42.7	42.8	46.7	35.3	18.2	0.0	62.8	62.9	74.0	11.2	11.1
8	19696.0	42.5	43.5	39.6	35.2	18.8	0.0	56.2	57.2	74.0	17.8	16.8
9	22158.0	44.4	44.1	40.6	35.0	20.1	0.0	60.6	60.3	74.0	13.4	13.7
10	24620.0	45.3	44.5	40.2	36.8	20.0	0.0	59.2	58.4	74.0	14.8	15.6

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 [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	38.3	39.3	31.0	36.2	7.5	0.0	40.6	41.6	54.0	13.4	12.4
2	4924.0	34.2	32.9	35.9	36.1	10.2	1.0	45.3	44.0	54.0	8.7	10.0
3	7386.0	30.8	30.8	38.3	35.7	12.4	0.5	46.4	46.4	54.0	7.6	7.6
4	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												
5	12310.0	30.9	30.8	41.7	35.6	15.1	0.6	43.2	43.1	54.0	10.8	10.9
6	14772.0	30.4	30.4	42.1	34.9	16.3	0.0	44.4	44.4	54.0	9.6	9.6
7	17234.0	29.6	29.6	46.7	35.3	18.2	0.0	49.7	49.7	54.0	4.3	4.3
8	19696.0	30.2	30.2	39.6	35.2	18.8	0.0	43.9	43.9	54.0	10.1	10.1
9	22158.0	31.4	31.4	40.6	35.0	20.1	0.0	47.6	47.6	54.0	6.4	6.4
10	24620.0	31.8	31.8	40.2	36.8	20.0	0.0	45.7	45.7	54.0	8.3	8.3

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.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11a / 36Mbps / CH165 5825MHz)

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

No.	Freq. [MHz]	Reading [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result [dBuV/m]		Limit PK [dBuV/m]	Margin [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	-	-	-	-	-	-	-	-	-	74.0	-	-
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
1	11650.0	44.0	50.7	40.1	35.6	15.5	0.0	54.5	61.2	74.0	19.5	12.8
2	17475.0	43.0	43.2	47.2	35.2	19.4	0.0	64.9	65.1	74.0	9.1	8.9
3	23300.0	43.7	43.8	40.3	35.7	19.5	0.0	58.3	58.4	74.0	15.7	15.6
4	29125.0	50.8	50.7	42.1	26.5	5.2	0.0	62.1	62.0	74.0	11.9	12.0
5	34950.0	51.7	51.8	43.1	26.3	3.7	0.0	62.7	62.8	74.0	11.3	11.2

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

No.	Freq. [MHz]	Reading [dBuV]		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result [dBuV/m]		Limit AV [dBuV/m]	Margin [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	-	-	-	-	-	-	-	-	-	54.0	-	-
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
1	11650.0	30.9	36.5	40.1	35.6	15.5	0.0	41.4	47.0	54.0	12.6	7.0
2	17475.0	30.3	30.2	47.2	35.2	19.4	0.0	52.2	52.1	54.0	1.8	1.9
3	23300.0	31.5	31.5	40.3	35.7	19.5	0.0	46.1	46.1	54.0	7.9	7.9
4	29125.0	38.9	38.9	42.1	26.5	5.2	0.0	50.2	50.2	54.0	3.8	3.8
5	34950.0	40.2	40.2	43.1	26.3	3.7	0.0	51.2	51.2	54.0	2.8	2.8

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.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
REGULATION : Fcc Part15 Subpart C 15.247 (d)
TEST DISTANCE : 3m / 1m
DATE : 11/15/2004
TEMPERATURE : 20deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card User Unit
MODEL : FX-DS540-MPCI4W
SAMPLE NO. : 04MC2D1
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11a / 54Mbps / CH165 5825MHz)

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

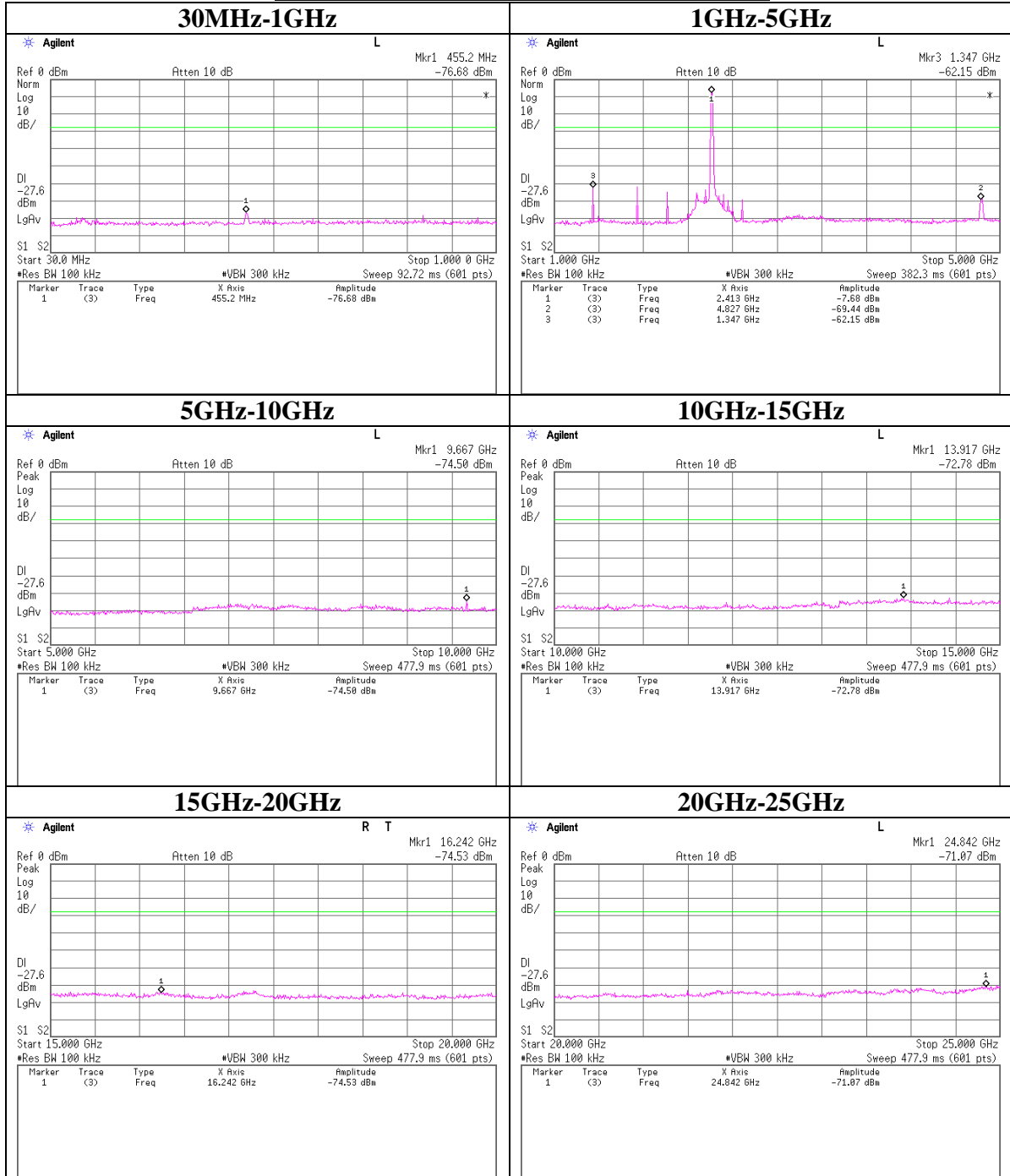
No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit PK [dBuV/m]	Margin	
		HOR [dBuV]	VER					HOR [dBuV/m]	VER		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	-	-	-	-	-	-	-	-	-	74.0	-	-
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
1	11650.0	43.4	45.6	40.1	35.6	15.5	0.0	53.9	56.1	74.0	20.1	17.9
2	17475.0	43.5	43.4	47.2	35.2	19.4	0.0	65.4	65.3	74.0	8.6	8.7
3	23300.0	43.7	43.8	40.3	35.7	19.5	0.0	58.3	58.4	74.0	15.7	15.6
4	29125.0	50.8	50.7	42.1	26.5	5.2	0.0	62.1	62.0	74.0	11.9	12.0
5	34950.0	51.7	51.8	43.1	26.3	3.7	0.0	62.7	62.8	74.0	11.3	11.2

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

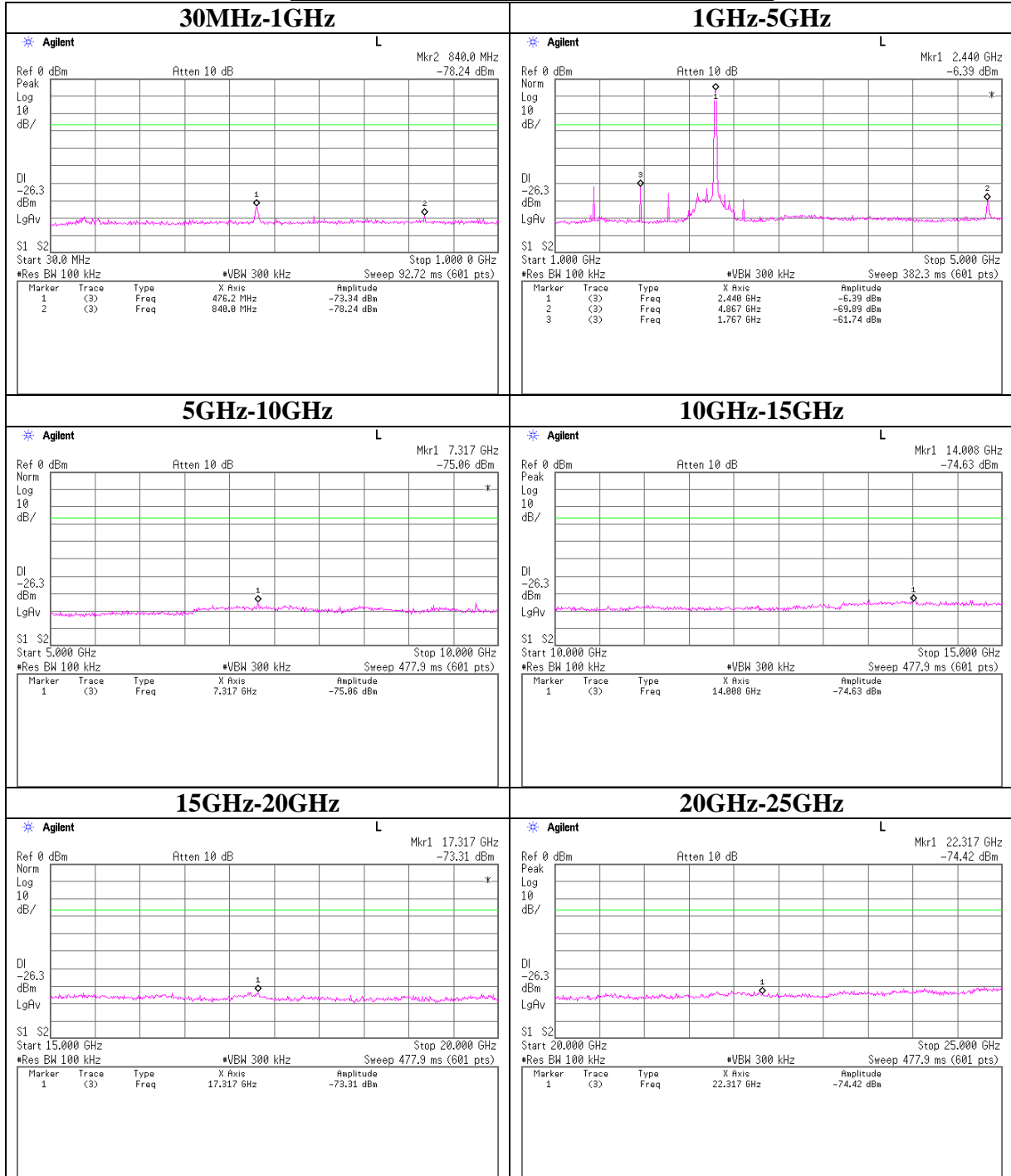
No.	Freq. [MHz]	Reading		Ant. Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	Atten. or Filter [dB]	Result		Limit AV [dBuV/m]	Margin	
		HOR [dBuV]	VER					HOR [dBuV/m]	VER		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	-	-	-	-	-	-	-	-	-	54.0	-	-
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
1	11650.0	30.9	31.8	40.1	35.6	15.5	0.0	41.4	42.3	54.0	12.6	11.7
2	17475.0	30.1	30.1	47.2	35.2	19.4	0.0	52.0	52.0	54.0	2.0	2.0
3	23300.0	31.5	31.5	40.3	35.7	19.5	0.0	46.1	46.1	54.0	7.9	7.9
4	29125.0	38.9	38.9	42.1	26.5	5.2	0.0	50.2	50.2	54.0	3.8	3.8
5	34950.0	40.2	40.2	43.1	26.3	3.7	0.0	51.2	51.2	54.0	2.8	2.8

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.

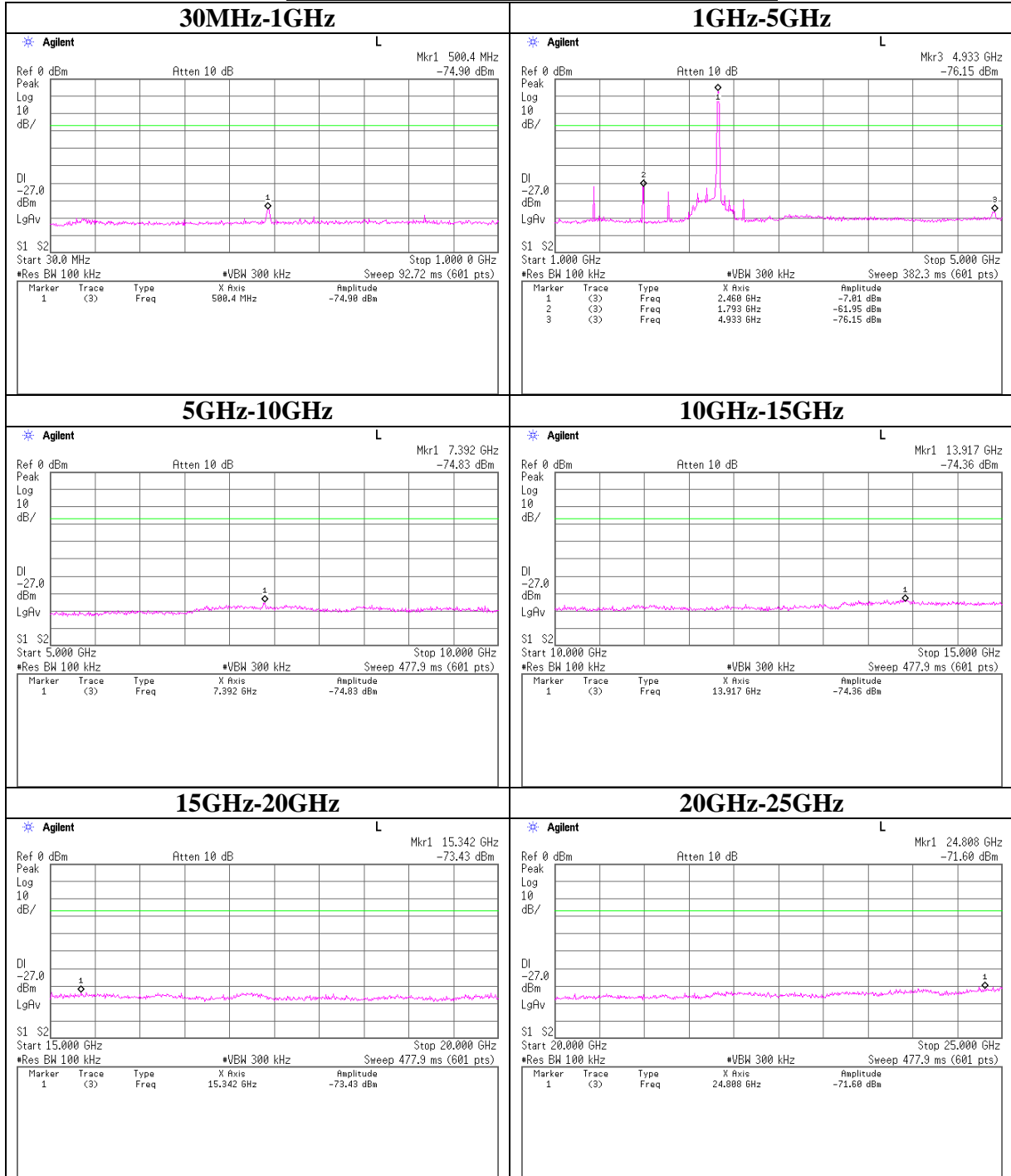
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11b 11Mbps Antenna:A Ch : Low



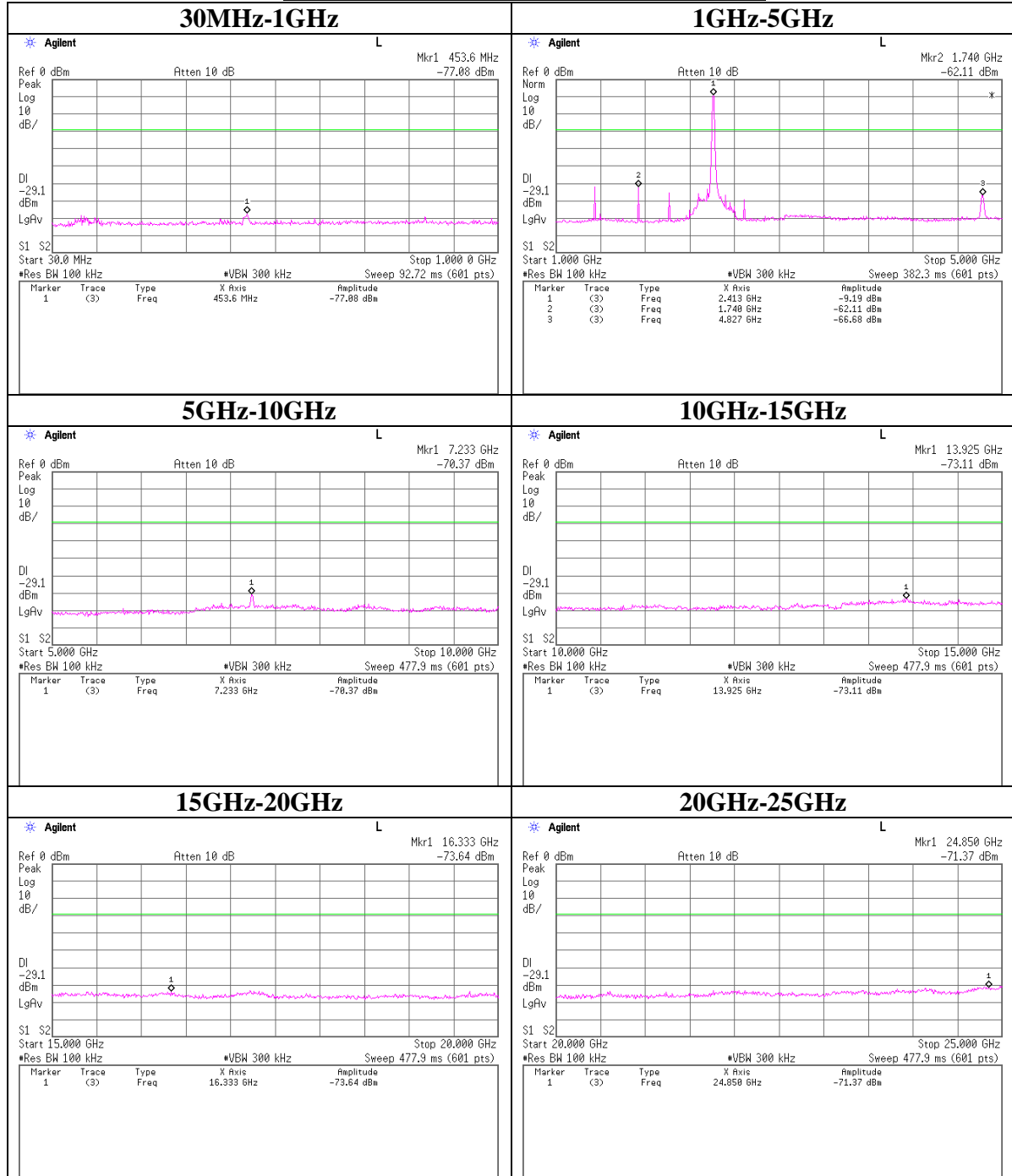
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11b 11Mbps Antenna:A Ch : Mid



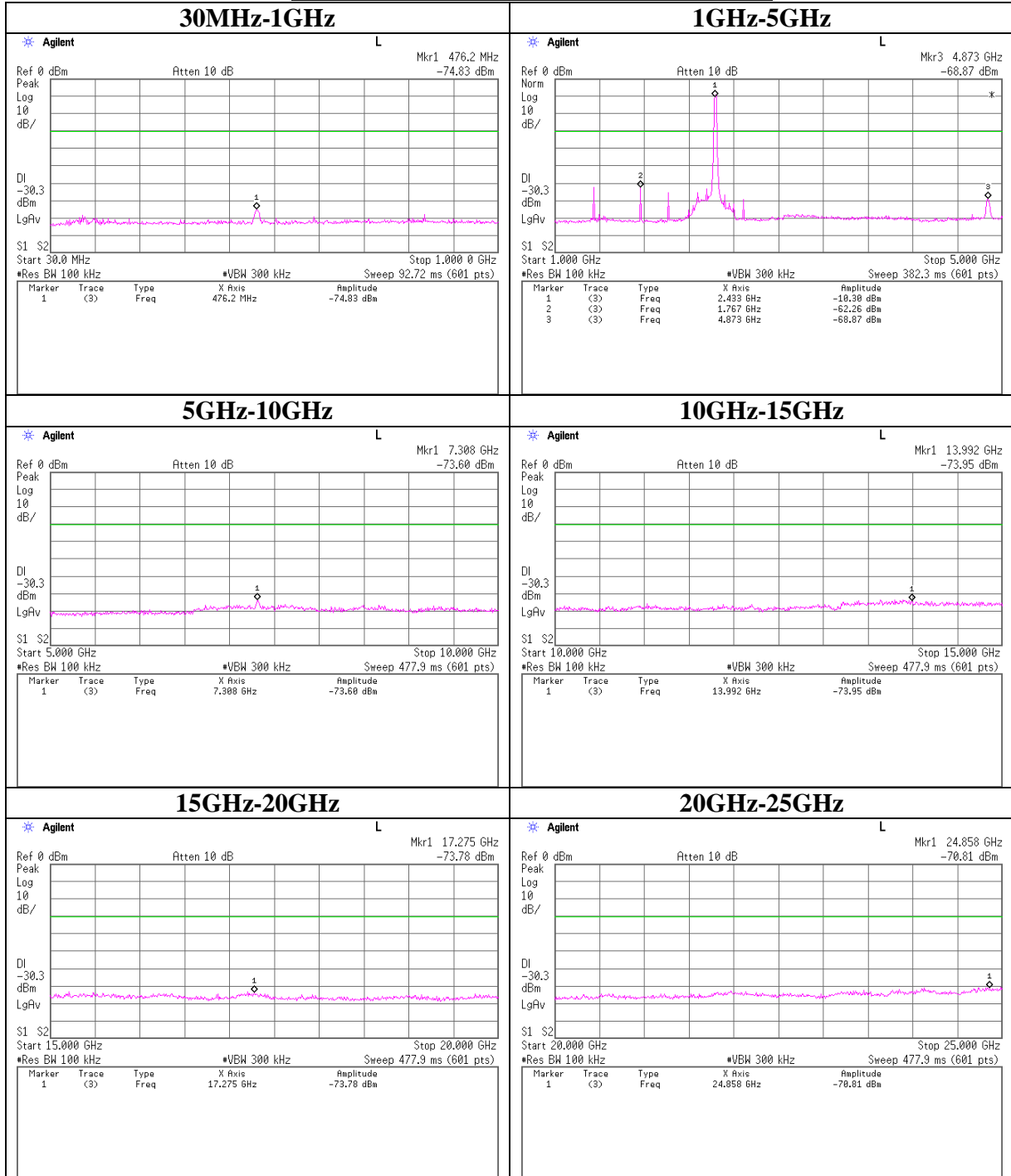
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11b 11Mbps Antenna:A Ch : High



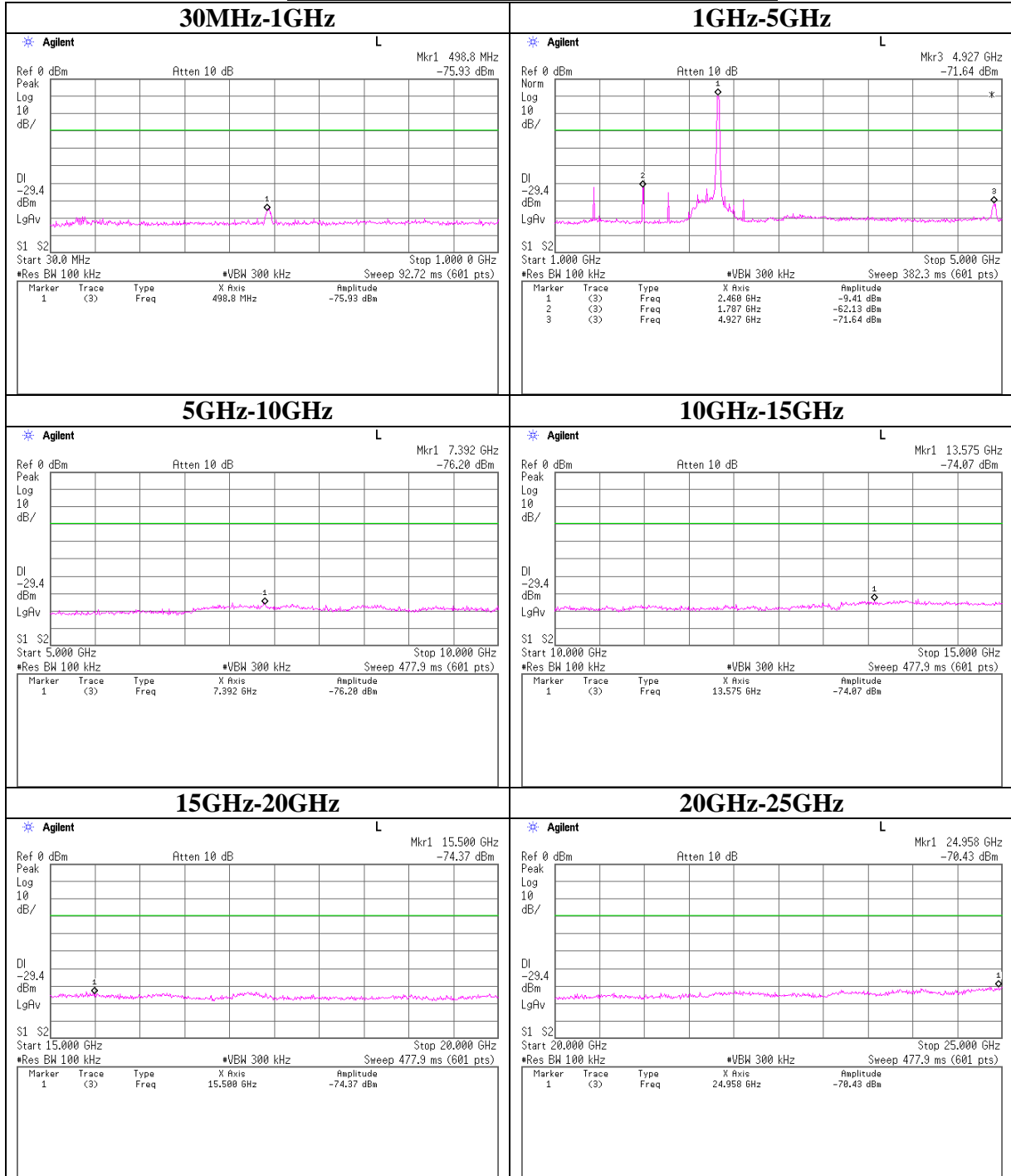
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 36Mbps Antenna:A Ch : Low



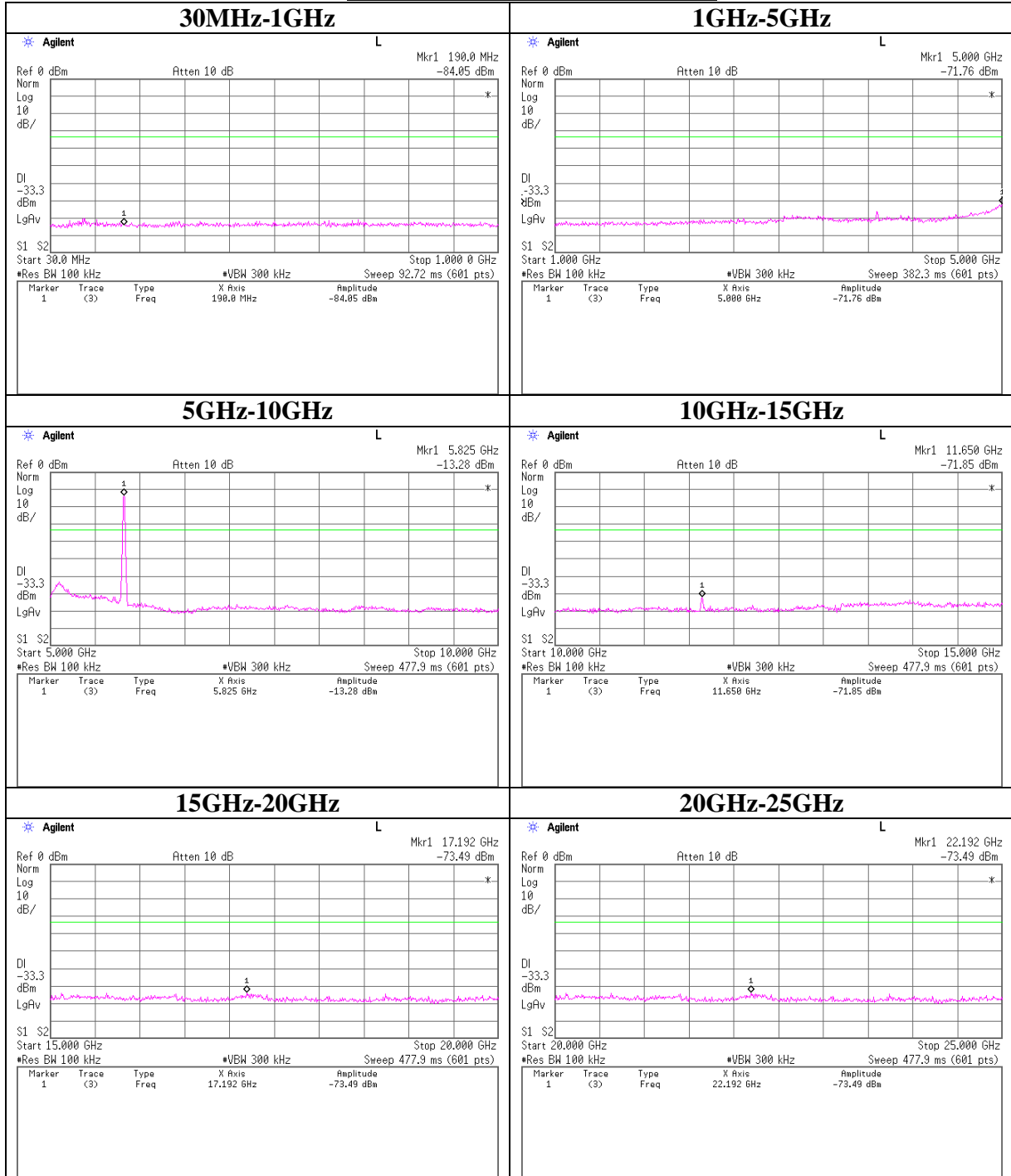
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 36Mbps Antenna:A Ch : Mid



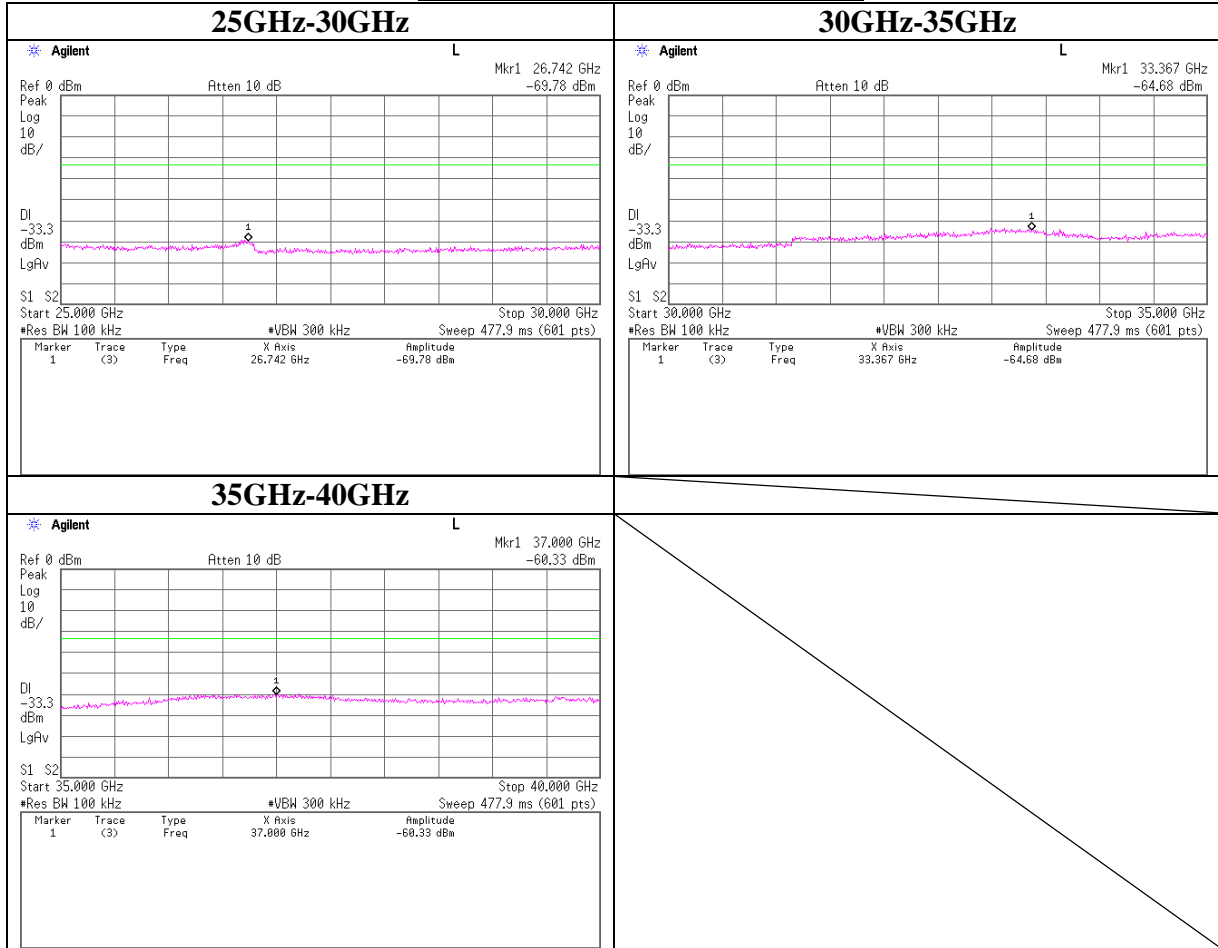
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 36Mbps Antenna:A Ch : High



Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11a 36Mbps Antenna:A

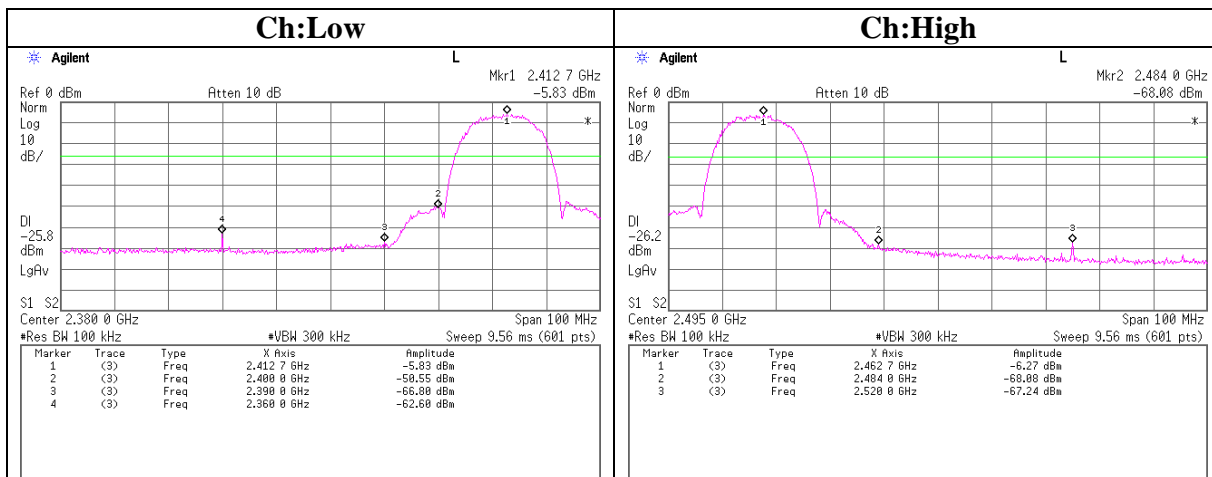


Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11a 36Mbps Antenna:A



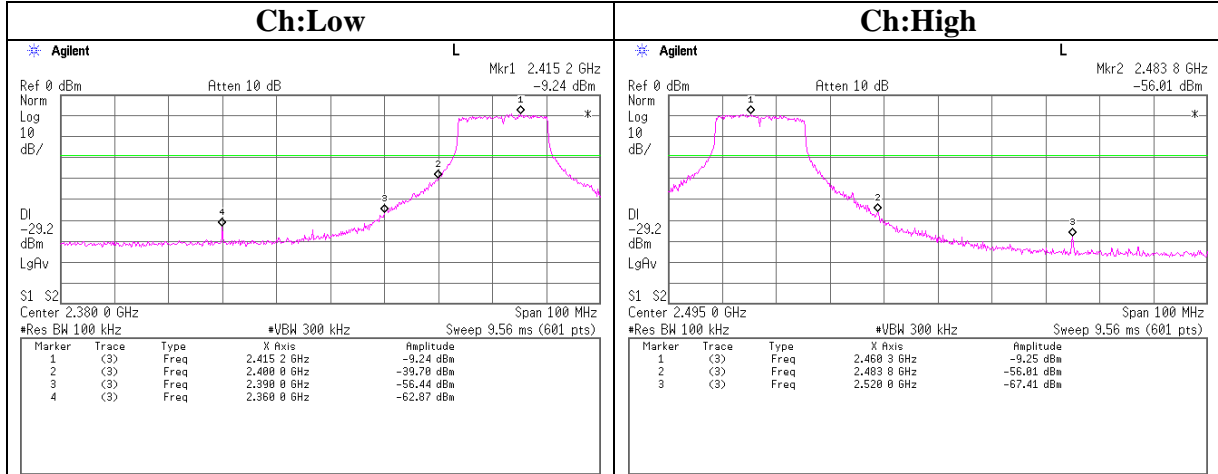
Conducted emission Band Edge compliance (DSSS and other forms of modulation)

IEEE802.11b 11Mbps Antenna:A

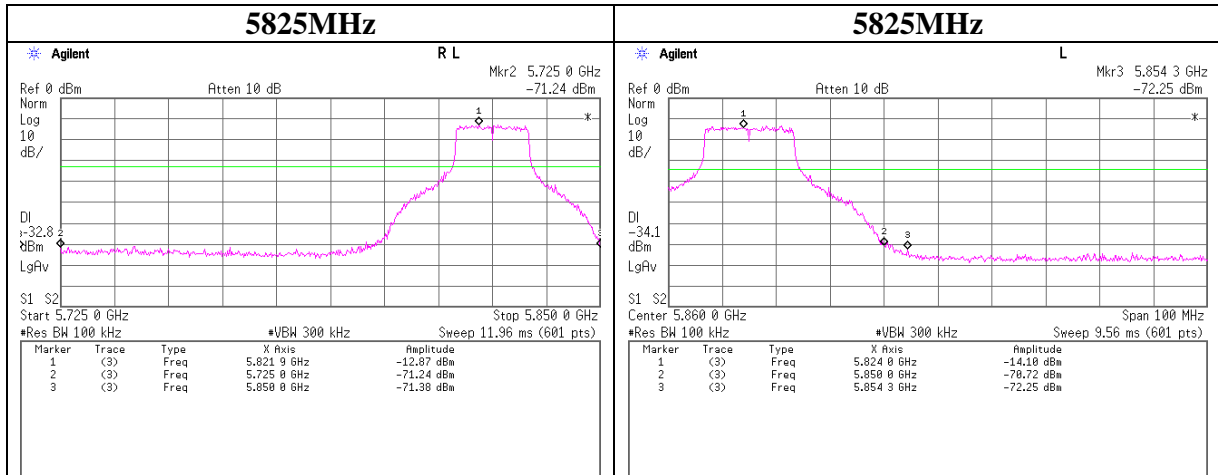


Conducted emission Band Edge compliance (DSSS and other forms of modulation)

IEEE802.11g 36Mbps Antenna:A



IEEE802.11a 36Mbps Antenna:A



Power Density (DSSS and other forms of modulation)

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

Company : CONTEC CO.,LTD.	REPORT NO : 25CE0272-HO
Equipment : Wireless LAN MiniPCI Card User Unit	REGULATION : FCC 15.247(e)
Model : FX-DS540-MPCI4W	TEST DISTANCE : -
Sample No. : 04MC2D1	DATE : 2004/11/22
Power : DC3.3V	TEMPERATURE : 25deg.C
Mode : Tx IEEE 802.11a/b/g	HUMIDITY : 33%
Antenna : A	ENGINEER : Hiroka Umeyama

[IEEE802.11b : 11Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-16.36	2.11	10.0	-4.3	8.0	12.3
Mid	2437.0	-16.15	2.13	10.0	-4.0	8.0	12.0
High	2462.0	-16.10	2.15	10.0	-4.0	8.0	12.0

[IEEE802.11g : 36Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-20.71	2.11	10.0	-8.6	8.0	16.6
Mid	2437.0	-19.70	2.13	10.0	-7.6	8.0	15.6
High	2462.0	-19.84	2.15	10.0	-7.7	8.0	15.7

[IEEE802.11a : 36Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
-	5825.0	-25.30	3.40	10.0	-11.9	8.0	19.9

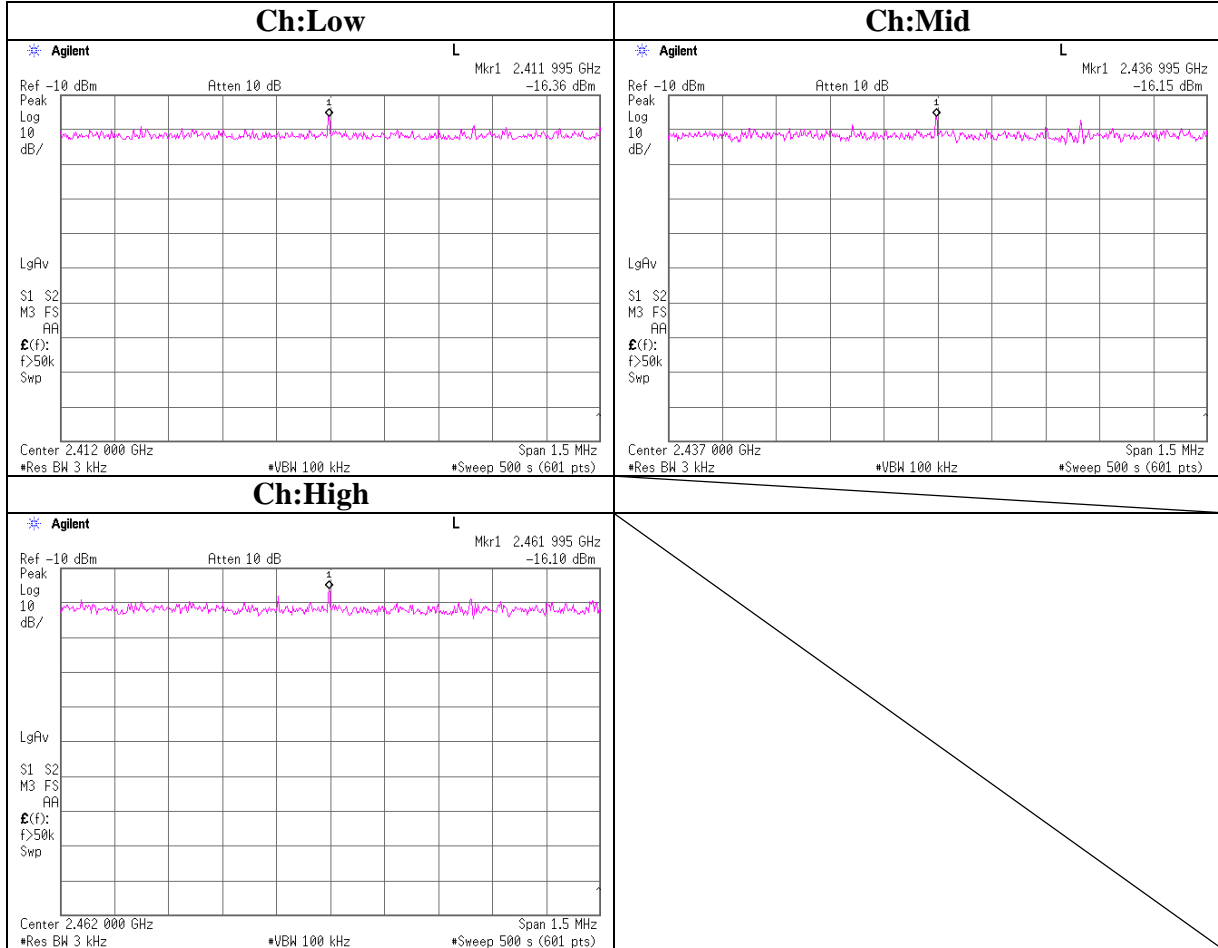
Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

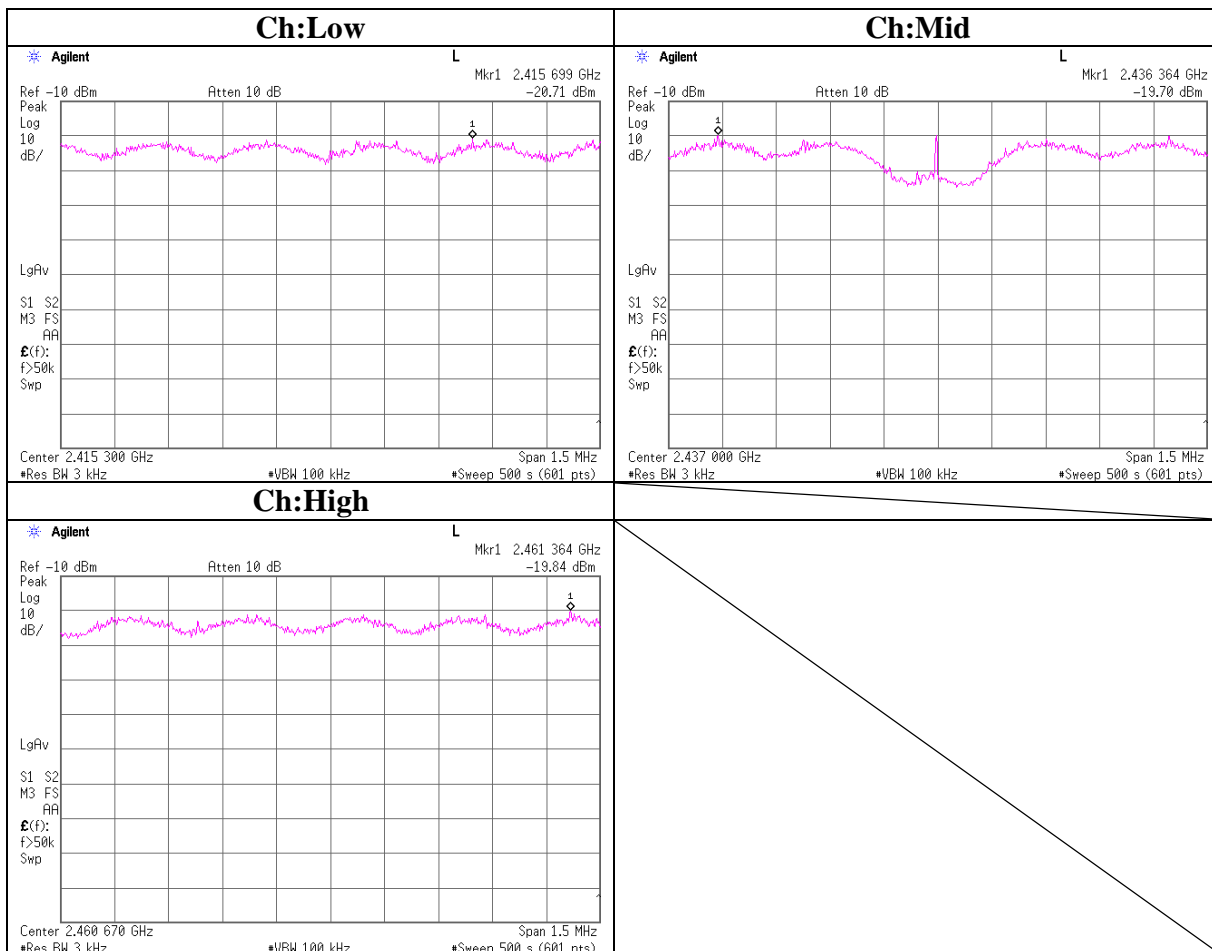
Power Density(DSSS and other forms of modulation)

IEEE802.11b 11Mbps Antenna:A



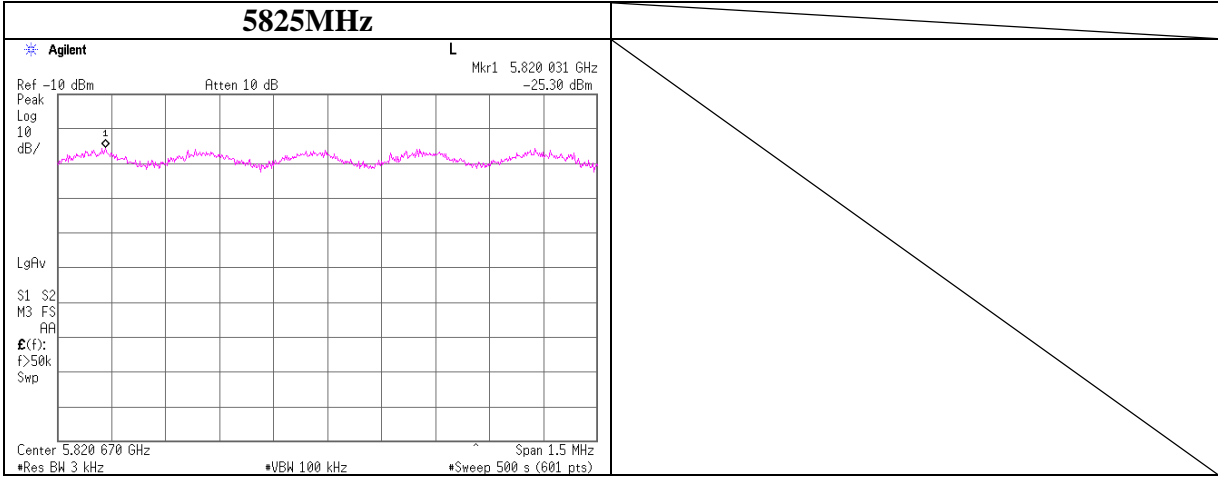
Power Density(DSSS and other forms of modulation)

IEEE802.11g 36Mbps Antenna:A



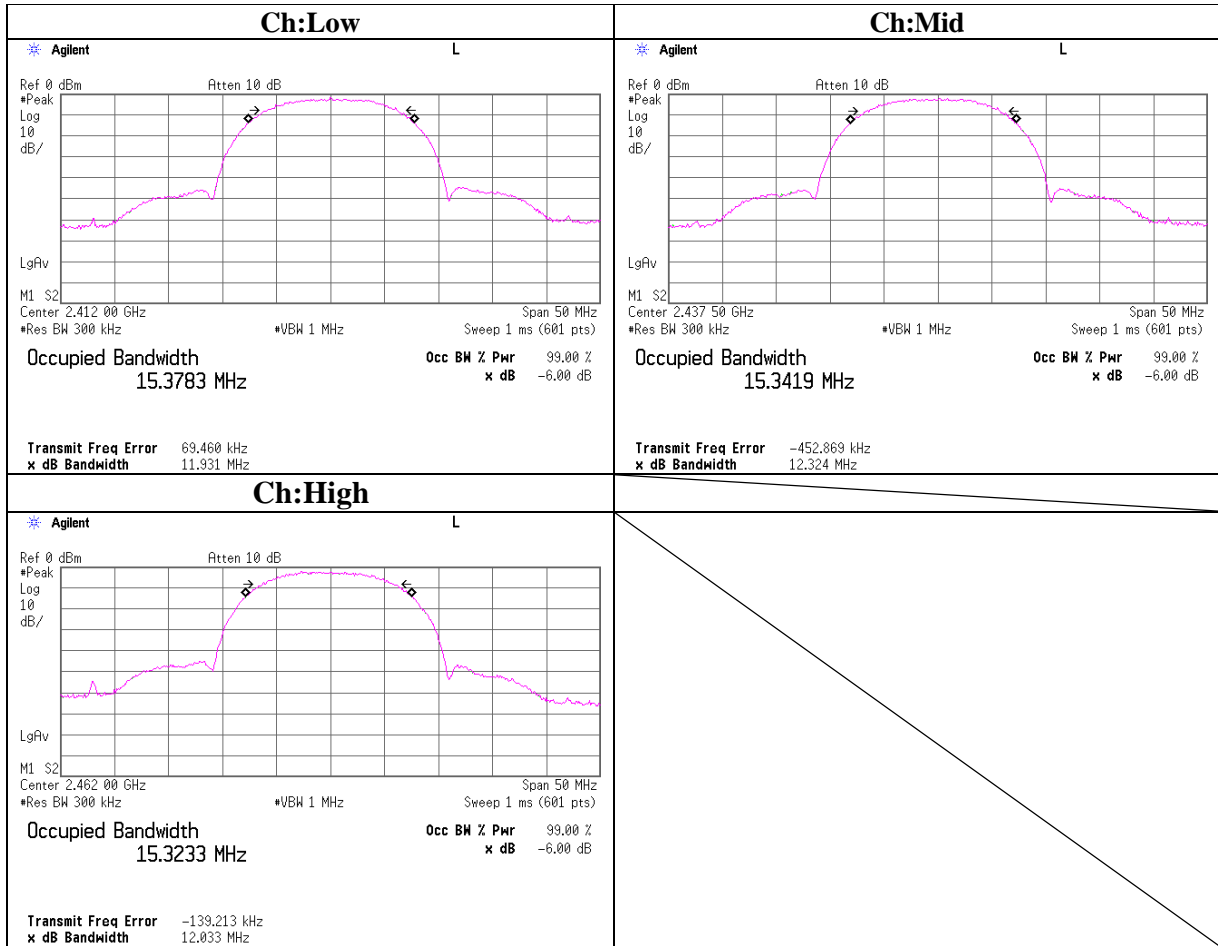
Power Density(DSSS and other forms of modulation)

IEEE802.11a 36Mbps Antenna:A



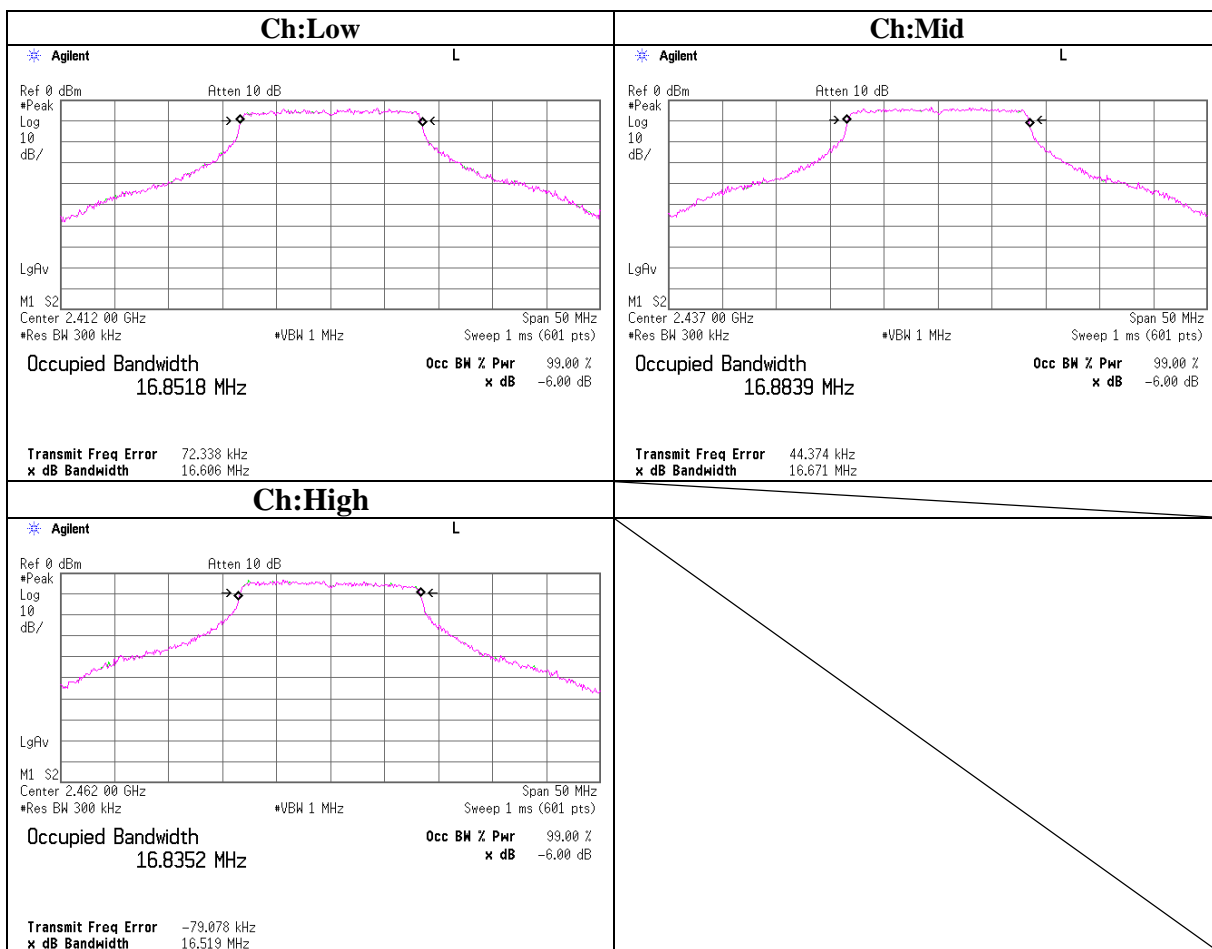
99% Occupied Bandwidth(DSSS and other forms of modulation)

IEEE802.11b 11Mbps Antenna:A



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

IEEE802.11g 36Mbps Antenna:A



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

IEEE802.11a 36Mbps Antenna:A

