



EMI TEST REPORT

Test Report No. : 26FE0180-HO-4

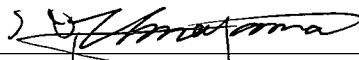
Applicant : CONTEC CO., LTD.
Type of Equipment : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPCI6
Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247 : 2006
FCC ID : PQRDS540-MPCI6
Test Result : Complied

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:

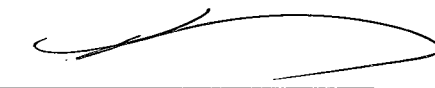
February 14 to March 20, 2006

Tested by:


Hiroka Umeyama
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MF060b(01.06.05)

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SECTION 1: Client information

Company Name : CONTEC CO., LTD.
Address : 33-9-31, 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
Model No. : FX-DS540-MPCI6
Serial No. : C09A5440017CC01 for Antenna terminal tests
C09A54400135C01 for Spurious and Conducted emission tests
Rating : DC3.3V, 0.54A
Country of Manufacture : Japan
Receipt Date of Sample : February 13, 2006
Condition of EUT : Production model

2.2 Product Description

Clock frequency : 40MHz
Equipment Type : Transceiver
Frequency of operation : [IEEE802.11b/g]2412-2462MHz / [IEEE802.11a]5180-5825MHz
Type of modulation : OFDM, DSSS
Bandwidth & Channel number : [IEEE802.11b/g]22MHz & 5MHz, [IEEE802.11a]17MHz & 20MHz
Antenna Type : Chip Antenna
Antenna Gain : 2.0dBi (2.4GHz)/ 3.0dBi (5GHz)
Antenna Connector Type : AYU1
Operating voltage (inner) : DC2.97V to 3.63V
Operating temperature range : 0 to 70 deg.C.

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: AYU1) 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 : 2006
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits : 2006
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz : 2006

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	17.0dB 0.53930MHz, Phase N (AV) IEEE802.11b 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	0.1dB 5119.8MHz, (11a) HOR, AV 2483.5MHz, (11g) VER, AV	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.

*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.

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3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS-Gen 4.4.1	-	Conducted	N/A	N/A	N/A

3.4 Uncertainty

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test is $\pm 2.66\text{dB}$.
The data listed in this report have enough margin, more than site margin.

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is $\pm 4.59\text{dB}(3\text{m})/\pm 4.58\text{dB}(10\text{m})$.

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is $\pm 4.62\text{dB}(3\text{m})/\pm 4.60\text{dB}(10\text{m})$.

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is $\pm 5.27\text{dB}$.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is $\pm 3.0\text{dB}$.

3.4 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
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	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	313583	IC4247A	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	846015	IC4247A-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.

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

Transmitting mode (IEEE802.11a)
5825MHz

Receiving mode (IEEE802.11b/11g)
Mid Channel :2437MHz(Ch6)

Receiving mode (IEEE802.11a)
5825MHz

Conditions : 1) Data Rate:IEEE802.11b:1,2,5.5,11, IEEE802.11g:6,9,12,18,24,36,48,54 Mbps
2) Antenna Port: A,B (same type)

*We pre-confirmed the above conditions on EUT and performed the final test with the following conditions;

	IEEE802.11b	IEEE802.11g/a
Conducted emission test	1)Rate:11Mbps	1)Rate:54Mbps
	2)Antenna Port:A	
Radiated emission test	1)Rate:11Mbps	1)Rate:18Mbps
	2)Antenna Port:A	
Other tests	1)Rate:11Mbps	1)Rate: 24/54Mbps *
	2)Antenna Port:A	

<The details>

Conducted emission test : The above conditions did not affect the test result so that the test was made with these conditions in the above table.

Radiated emission test : As for Rate, 11Mbps (Maximum transmission rate of 11b) and 18Mbps (Maximum transmission rate of 11g/a) had worst margins.
The result of Antenna Port A had worst margin.

Other tests : As for Rate, 11Mbps (Maximum transmission rate of 11b) and 24Mbps (Maximum transmission rate of 11g/a) had worst margins.
The result of Antenna Port A had worst margin.
The tests that may be affected by the noise were performed with maximum rate 54Mbps.
The test of peak power density was performed with antenna B.

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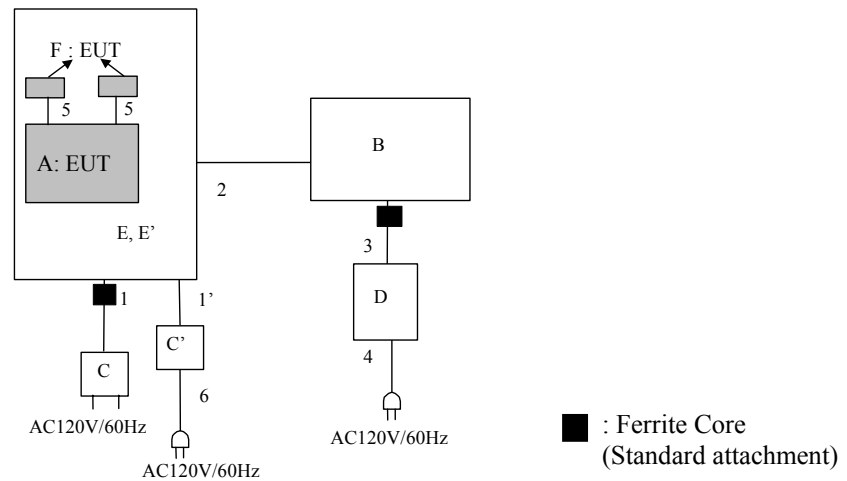
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4.2 Configuration and peripherals



*Cabling and setup were 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	FX-DS540-MPCI6	C09A5440017CC01 for Antenna terminal tests C09A54400135C01 for Spurious and Conducted emission tests	CONTEC	PQRDS540-MPCI6
B	Note PC	2887-7KJ	99-BP829	IBM	DOC
C	3.3V AC Adapter	VHE10P1-33MP	-	AK-II	-*1)
C'	AC Adapter	TAS4600-Y-1-CON	-	KAGA COMPONENTS	-*2)
D	AC Adapter	08K8204	11S08K8204Z1Z9V049L67G	IBM	-
E	Main Board of Wireless LAN Access Point	FX-DS540-APDL2-U	-	CONTEC	-*1)
E'	Main Board of Wireless LAN Access Point	FX-DS540-STB-M-U	-	CONTEC	-*2)
F	Chip Antenna	-	-	FDK	-

*1) Used for radiated emission test above 1GHz

*2) Used for radiated emission test below 1GHz

List of cables used

No.	Name	Length (m)	Shield	Remarks
1	DC Cable	1.5	N	*1)
1'	DC Cable	1.5	N	*2)
2	LAN Cross Cable	1.5	N	-
3	DC Cable	1.8	N	-
4	AC Cable	1.0	N	-
5	Antenna Cable	0.075	Y	-
6	AC cable	1.0	N	*2)

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SECTION 5: Conducted Emission

Test Procedure

EUT was placed on a platform of nominal size, 1.0m by 0.5m, 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 .

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.

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**

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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 1.0m, raised 80cm above the conducting ground plane.

The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz) and 0.3m(Upper 26.5GHz).

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

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

Test data : APPENDIX 3
Test result : Pass

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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

Conducted Emission

Front



Rear



Spurious Emission (Radiated:below 1GHz)

Front



Rear

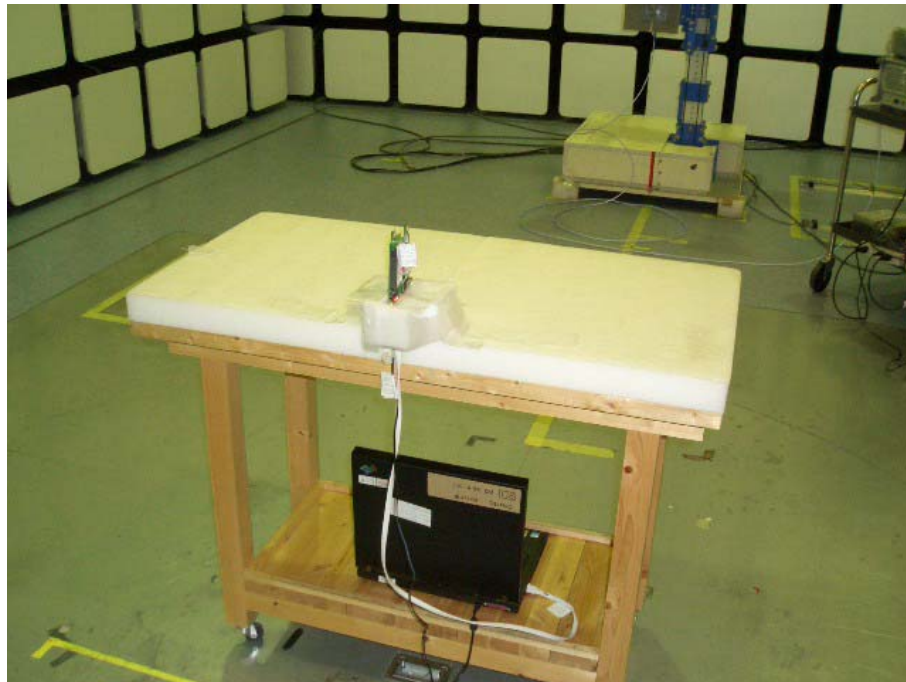


Spurious Emission (Radiated:above 1GHz)

Front



Rear



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

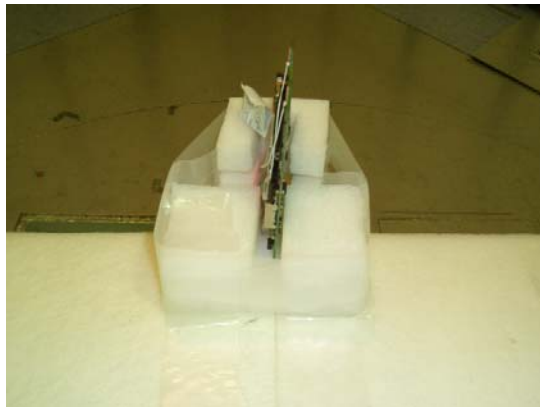
X-axis



Y-axis



Z-axis



APPENDIX 2:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE	2005/11/14 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2006/02/09 * 12
MHA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2006/01/09 * 12
MCC-05	Microwave Cable 1G-50GHz	Storm	421-011 (90-1394-079)	RE	2006/01/04 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2006/02/02 * 12
MHF-05	High Pass Filter	Tokimec	TF323DCA	RE	2006/01/24 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE	2005/11/10 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	RE	2004/11/25 * 24
MCC-21	Microwave Cable 1G-50GHz	Storm	421-011 (90-011-080)	AT	2005/04/29 * 12
MAT-24	Attenuator(10dB)(above1GHz)	Agilent	8493C	AT	2005/06/03 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT, RE	2005/09/16 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/10/14 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TS J	-	RE	2006/02/20 * 12
MPA-04	Pre Amplifier	Agilent	8447D	RE	2005/05/24 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2005/12/16 * 12
MOS-04	Digital Humidity Indicator	N.T	NT-1800	AT	2004/11/25 * 24
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2005/04/11 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2005/09/07 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2005/12/16 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2006/02/23 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/10/14 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2006/01/09 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2005/09/07 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2005/08/30 * 12
MCC-25	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2005/08/30 * 12
MRENT-23	Spectrum Analyzer	Advantest	R3273	RE	2006/01/10 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE	2006/02/02 * 12
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2004/11/25 * 24
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE (EUT)	2006/02/06 * 12
MTA-05	Termination	MCL	NTRM-50	CE	2006/02/06 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	CE (AE)	2006/02/06 * 12
MJG-51	Conversion adapter	-	101 21	CE	-
MJG-52	Conversion adapter	SE	RW-P003	CE	-
MCC-13	Coaxial Cable	Fujikura/Agilent	-	CE	2006/02/23 * 12
MBF-03	SHF Bandpass Filter	M-City	13GHz BPF	RE	2005/05/20 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2006/02/02 * 12

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

Test Item:

CE: Conducted emission,

RE: Radiated emission, AT: Antenna Terminal

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APPENDIX 3: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

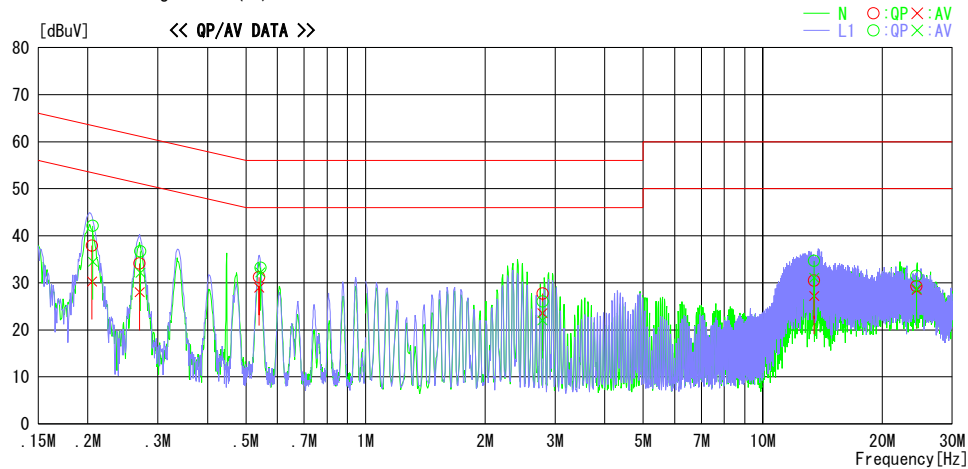
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 11:09:09

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11b 2412MHz

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



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.20490	37.8	30.2	0.1	37.9	30.3	63.4	53.4	25.5	23.1	N
0.20578	42.0	34.4	0.1	42.1	34.5	63.4	53.4	21.3	18.9	L1
0.26985	34.0	27.9	0.1	34.1	28.0	61.1	51.1	27.0	23.1	N
0.27100	36.6	32.0	0.1	36.7	32.1	61.1	51.1	24.4	19.0	L1
0.53930	31.0	28.8	0.2	31.2	29.0	56.0	46.0	24.8	17.0	N
0.54370	33.0	32.0	0.2	33.2	32.2	56.0	46.0	22.8	13.8	L1
2.79107	25.6	21.6	0.4	26.0	22.0	56.0	46.0	30.0	24.0	L1
2.79107	27.3	23.2	0.4	27.7	23.6	56.0	46.0	28.3	22.4	N
13.46800	33.4	29.8	1.3	34.7	31.1	60.0	50.0	25.3	18.9	L1
13.46800	29.2	25.9	1.3	30.5	27.2	60.0	50.0	29.5	22.8	N
24.38033	27.4	26.6	1.9	29.3	28.5	60.0	50.0	30.7	21.5	N
24.38033	29.6	26.8	1.9	31.5	28.7	60.0	50.0	28.5	21.3	L1

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 : 2006/02/26 11:09:09

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11b 2412MHz

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

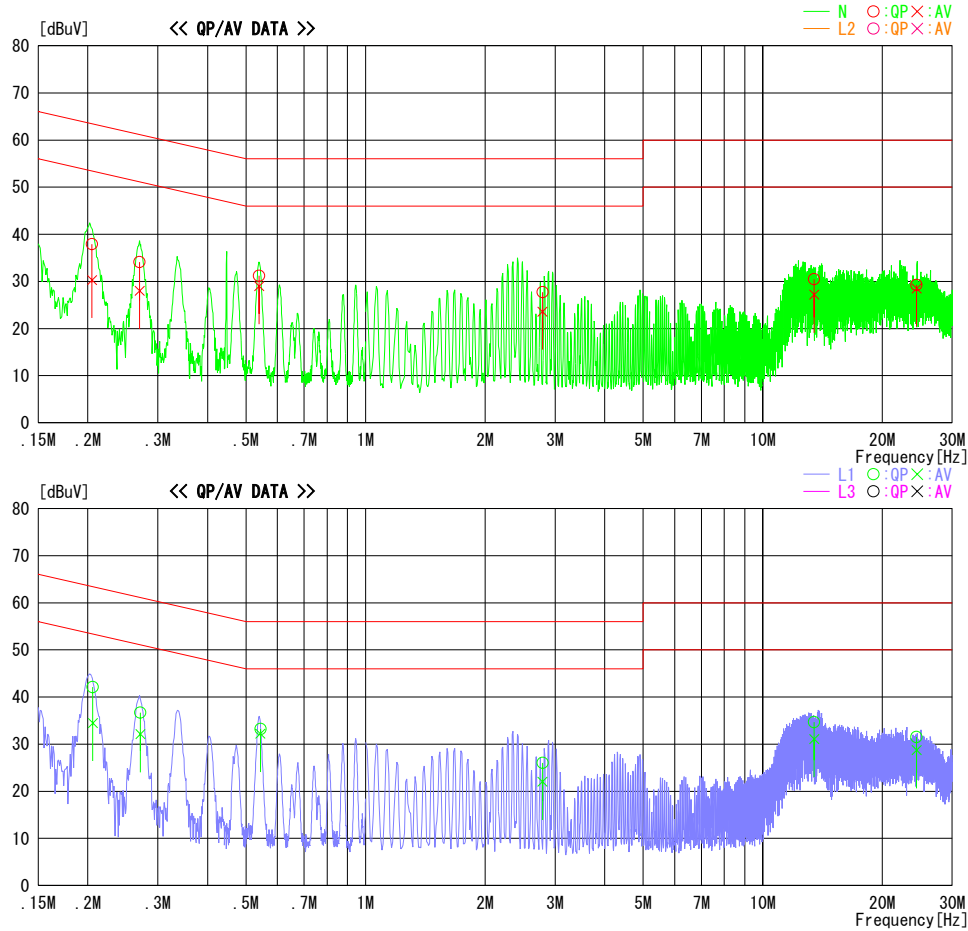


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 11:26:40

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11b 2437MHz

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

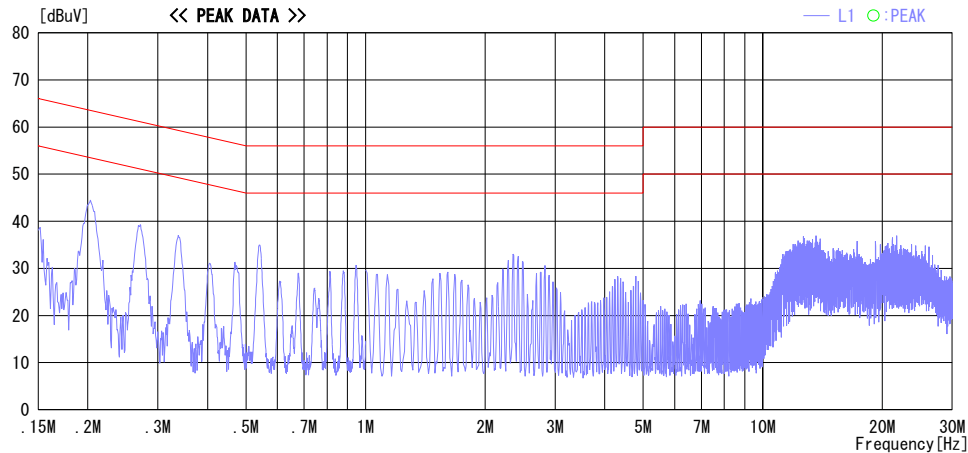
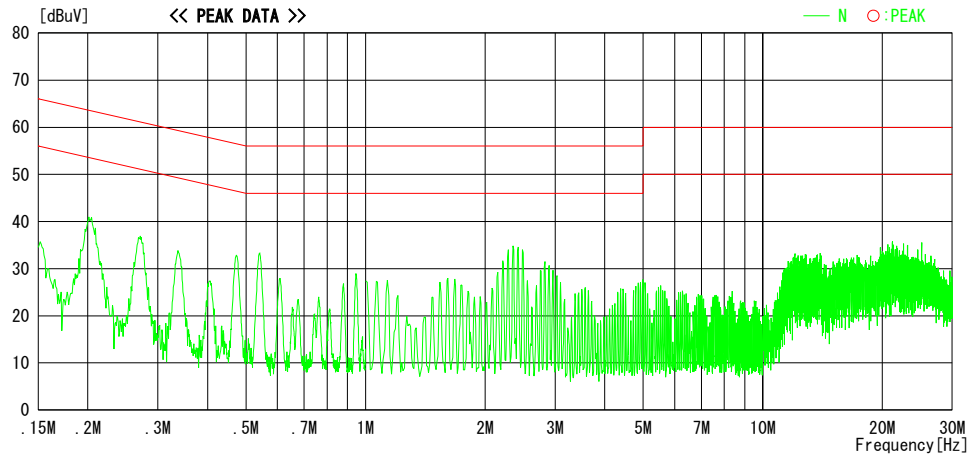


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

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(01.06.05)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 11:40:53

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V(AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Uneyama

Mode / Remarks : Transmitting 11b 2462MHz

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

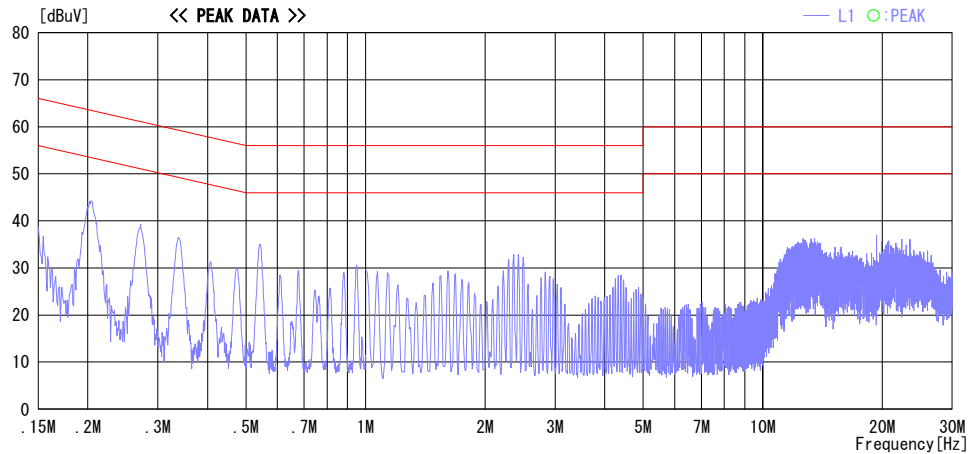
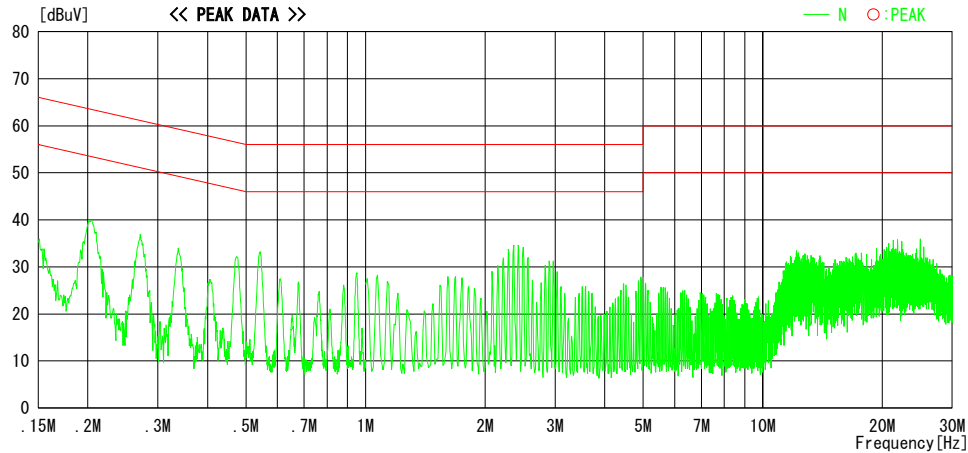


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION:RESULT=READING+C.F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 11:55:55

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Receiving 11b 2437MHz

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

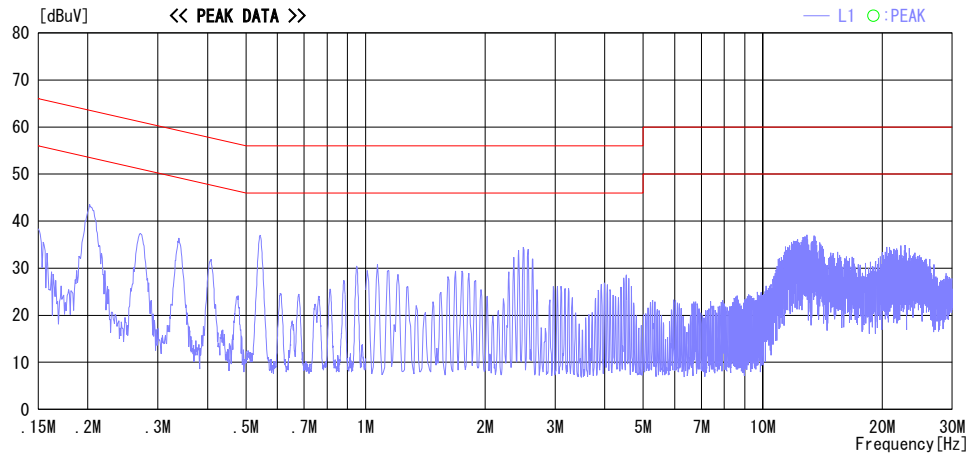
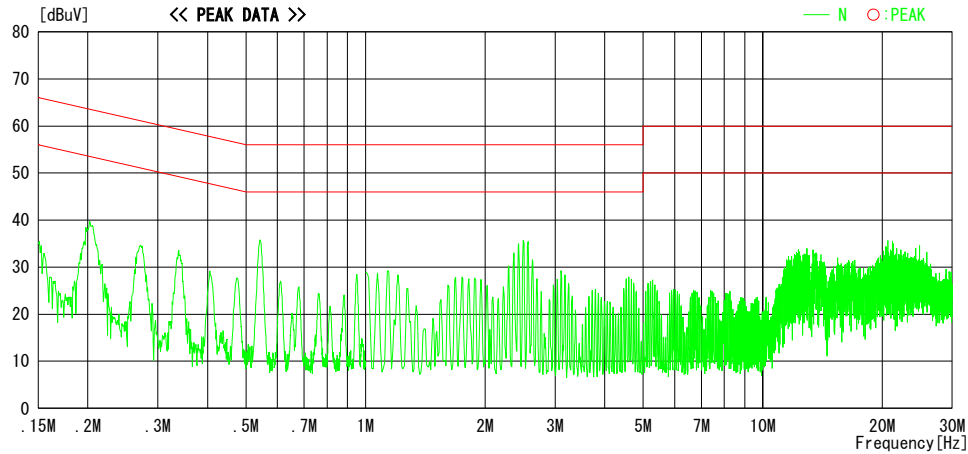


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 12:38:36

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11g 2412MHz

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

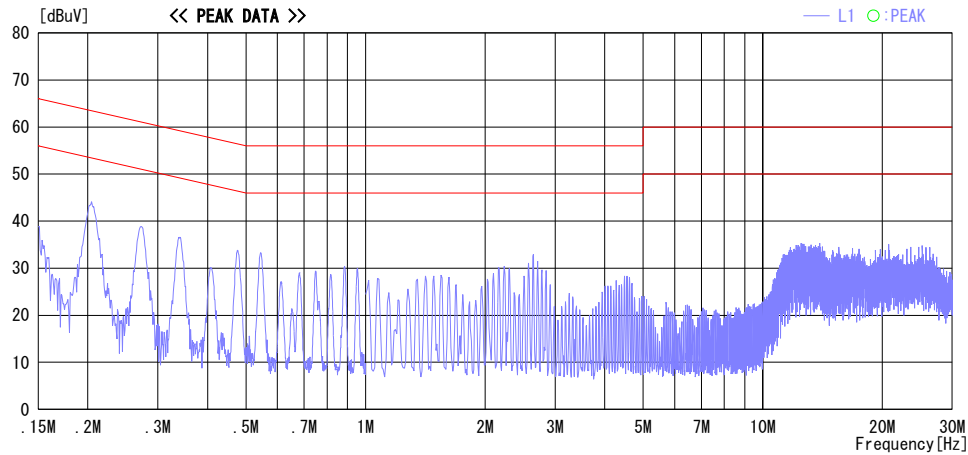
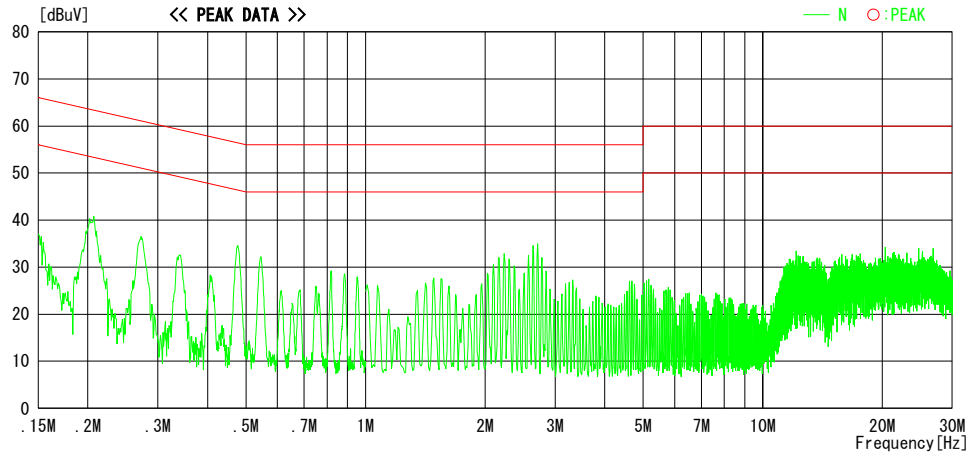


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 12:43:05

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11g 2437MHz

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

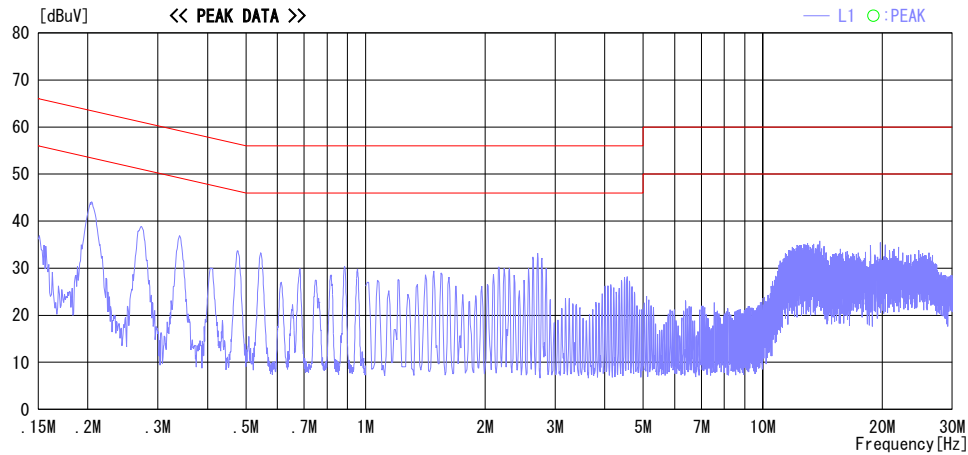
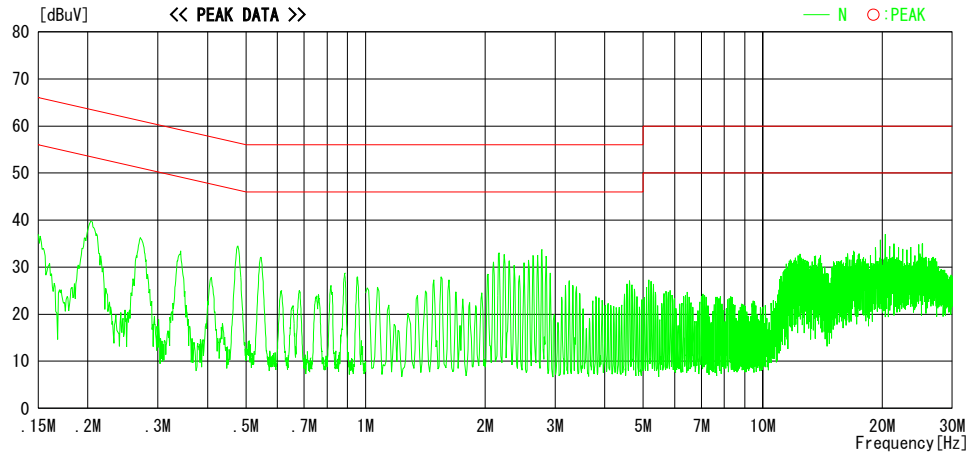


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 12:49:37

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Transmitting 11g 2462MHz

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

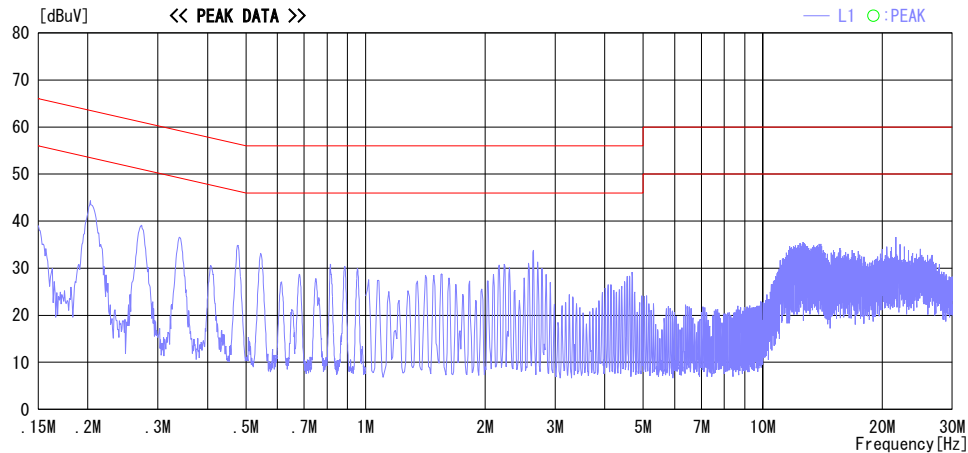
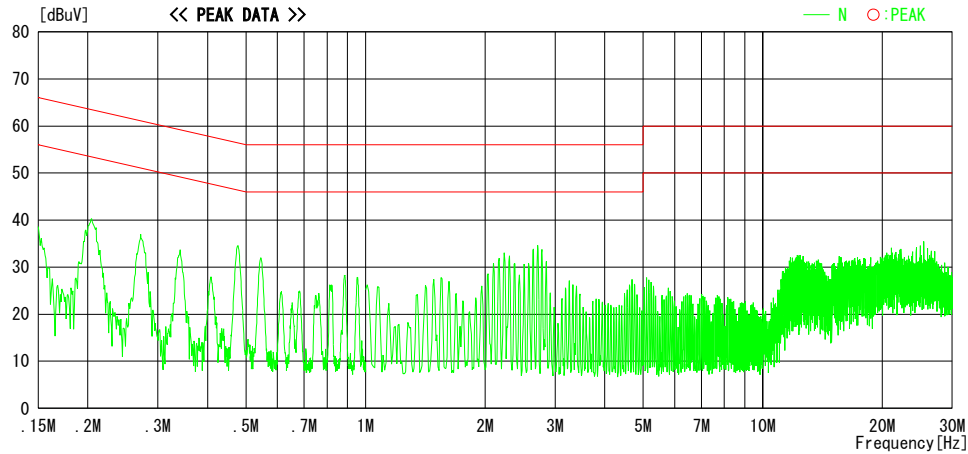


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 13:24:05

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Receiving 11g 2437MHz

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

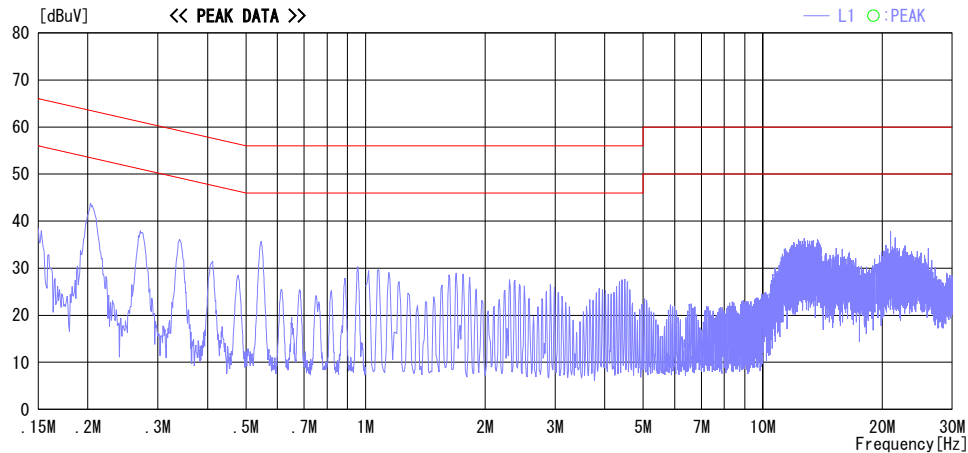
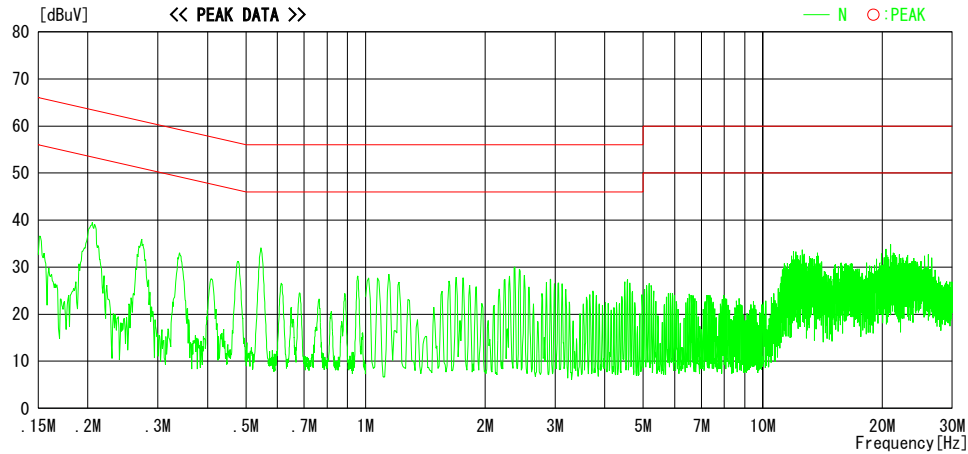


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/26 13:32:36

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V (AC120V/60Hz)
Temp./Humi. : 26deg. C / 36%
Operator : Hiroka Umeyama

Mode / Remarks : Standby

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

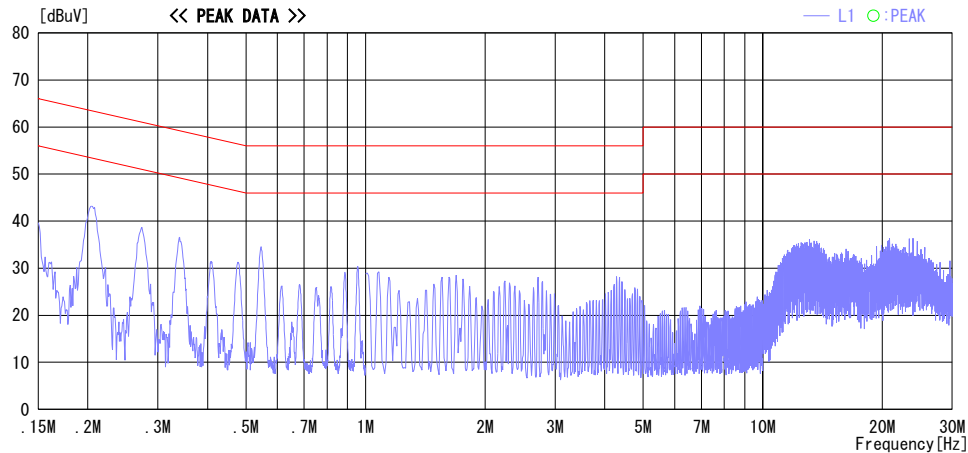
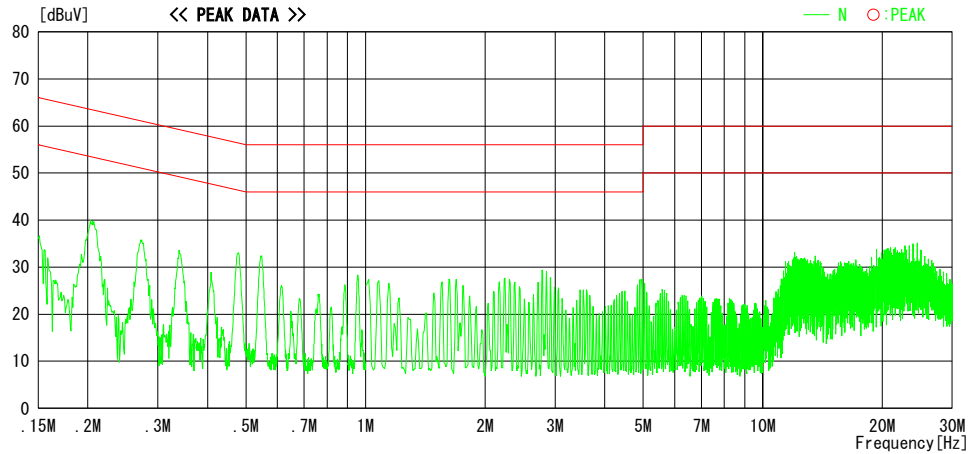


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

6dB Bandwidth

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

Company : CONTEC CO., LTD.
Equipment : Wireless LAN MiniPCI Card
Model : FX-DS540-MPCI6
Sample No. : C09A5440017CC01
Power : DC3.3V
Mode : Tx IEEE 802.11a/b/g
Antenna : A

REPORT NO : 26FE0180-HO
REGULATION : FCC 15.247(b)(3)
TEST DISTANCE : -
DATE : 02/17/2006
TEMPERATURE : 24deg.C
HUMIDITY : 40%
ENGINEER : Hiroka Umeyama

[IEEE802.11b : 11Mbps]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	11.327	500.0
Mid	2437.0	12.234	500.0
High	2462.0	11.442	500.0

[IEEE802.11g : 24Mbps]

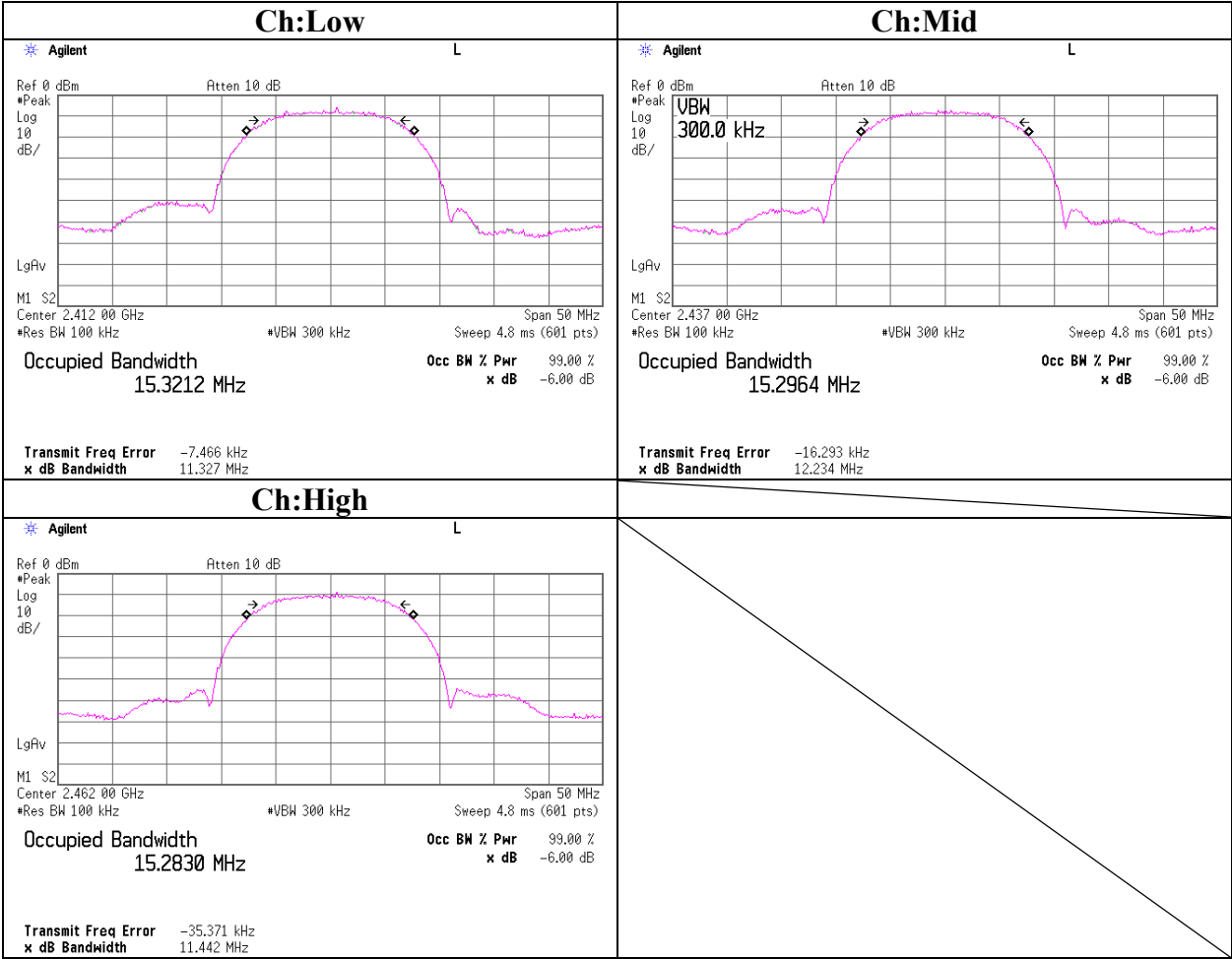
Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	16.626	500.0
Mid	2437.0	16.624	500.0
High	2462.0	16.522	500.0

[IEEE802.11a : 24Mbps]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
-	5825.0	16.592	500.0

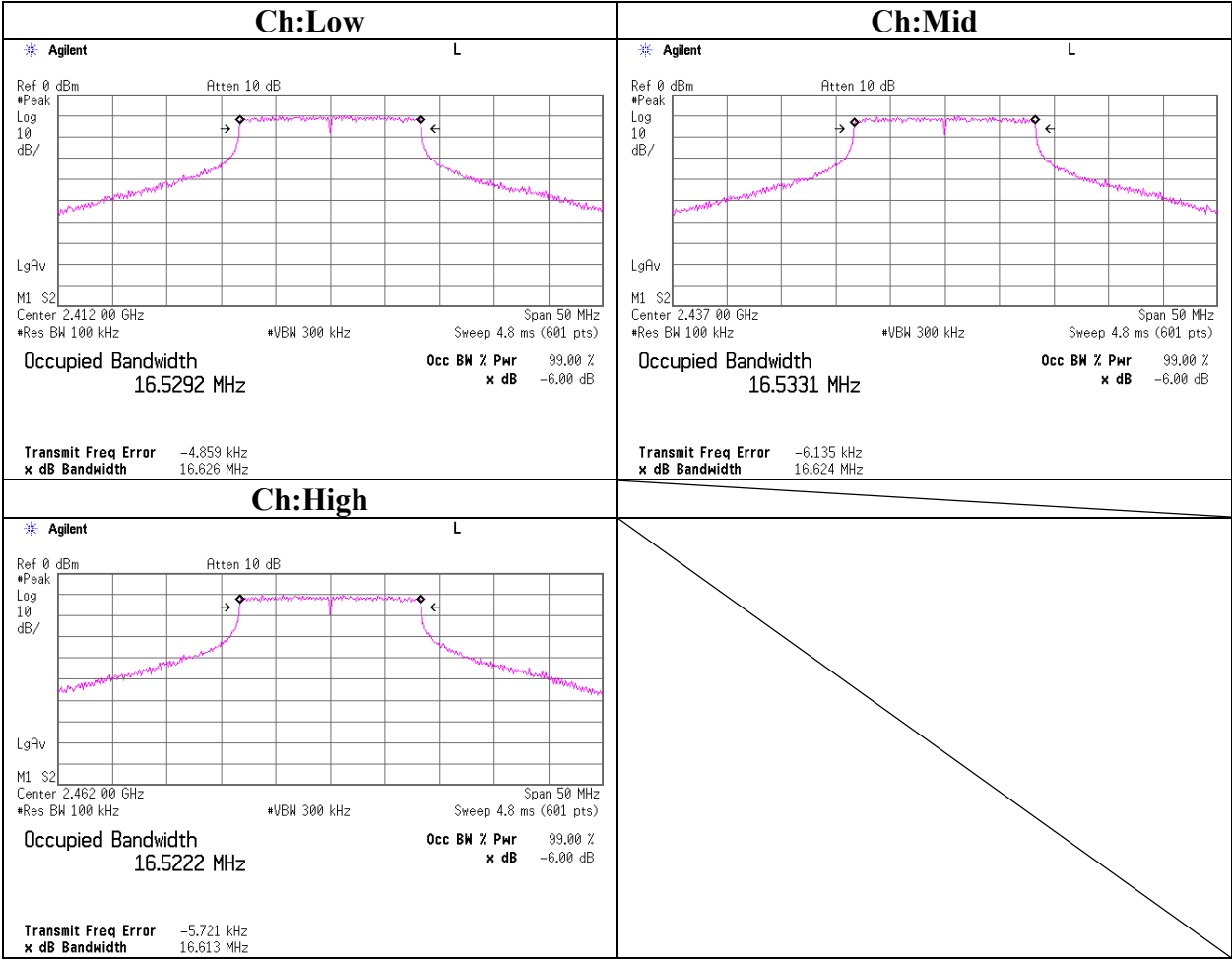
6dB Bandwidth

IEEE802.11b 11Mbps Antenna:A



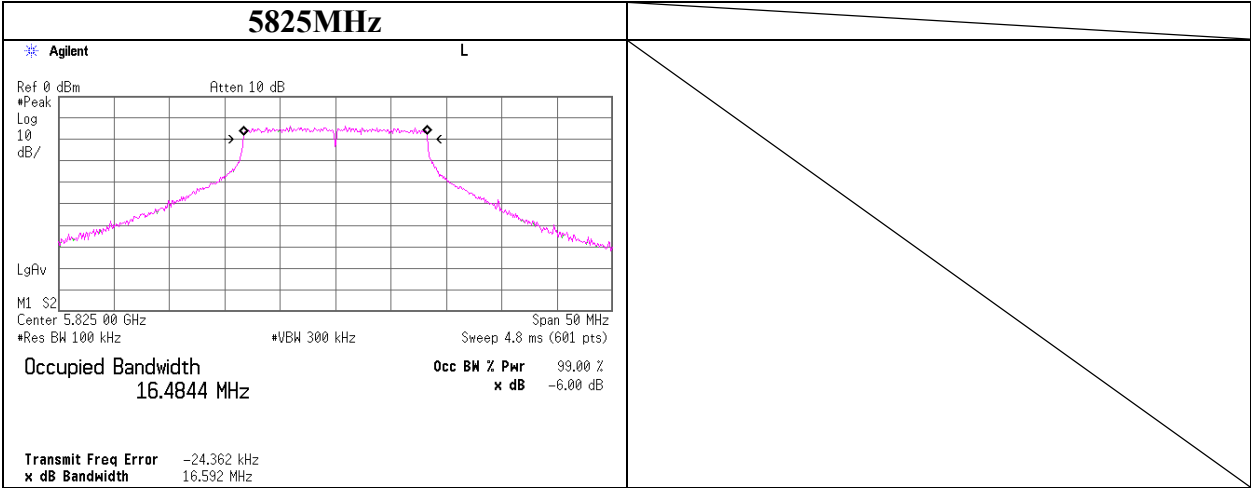
6dB Bandwidth

IEEE802.11g 24Mbps Antenna:A



6dB Bandwidth

IEEE802.11a 24Mbps Antenna:A



Maximum Peak OutPut Power

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

Company : CONTEC CO., LTD.	REPORT NO : 26FE0180-HO
Equipment : Wireless LAN MiniPCI Card	REGULATION : FCC 15.247(b)(3)
Model : FX-DS540-MPC16	TEST DISTANCE : -
Sample No. : C09A5440017CC01	DATE : 02/14/2006
Power : DC3.3V	TEMPERATURE : 22deg.C
Mode : Tx IEEE 802.11b/g	HUMIDITY : 30%
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	8.85	2.20	10.00	21.05	30.00	8.95
Mid	2437.0	8.68	2.20	10.00	20.88	30.00	9.12
High	2462.0	8.85	2.20	10.00	21.05	30.00	8.95

[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	8.42	2.20	10.00	20.62	30.00	9.38
Mid	2437.0	8.27	2.20	10.00	20.47	30.00	9.53
High	2462.0	8.43	2.20	10.00	20.63	30.00	9.37

[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	8.46	2.20	10.00	20.66	30.00	9.34
Mid	2437.0	7.76	2.20	10.00	19.96	30.00	10.04
High	2462.0	7.19	2.20	10.00	19.39	30.00	10.61

[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	8.11	2.20	10.00	20.31	30.00	9.69
Mid	2437.0	7.82	2.20	10.00	20.02	30.00	9.98
High	2462.0	7.46	2.20	10.00	19.66	30.00	10.34

[IEEE802.11g : 24Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	7.26	2.20	10.00	19.46	30.00	10.54
Mid	2437.0	10.69	2.20	10.00	22.89	30.00	7.11
High	2462.0	8.28	2.20	10.00	20.48	30.00	9.52

[IEEE802.11g : 24Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	10.61	2.20	10.00	22.81	30.00	7.19
Mid	2437.0	10.56	2.20	10.00	22.76	30.00	7.24
High	2462.0	10.34	2.20	10.00	22.54	30.00	7.46

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

Maximum Peak OutPut Power

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

Company	: CONTEC CO., LTD.	REPORT NO	: 26FE0180-HO
Equipment	: Wireless LAN MiniPCI Card	REGULATION	: FCC 15.247(b)(3)
Model	: FX-DS540-MPCI6	TEST DISTANCE	: -
Sample No.	: C09A5440017CC01	DATE	: 02/14/2006
Power	: DC3.3V	TEMPERATURE	: 22deg.C
Mode	: Tx IEEE 802.11a	HUMIDITY	: 30%
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	2.95	3.40	10.00	16.35	30.00	13.65

[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	3.36	3.40	10.00	16.76	30.00	13.24

[IEEE802.11a : 24Mbps : Antenna A]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
-	5825.0	7.04	3.40	10.00	20.44	30.00	9.56

[IEEE802.11a : 24Mbps : Antenna B]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
-	5825.0	7.03	3.40	10.00	20.43	30.00	9.57

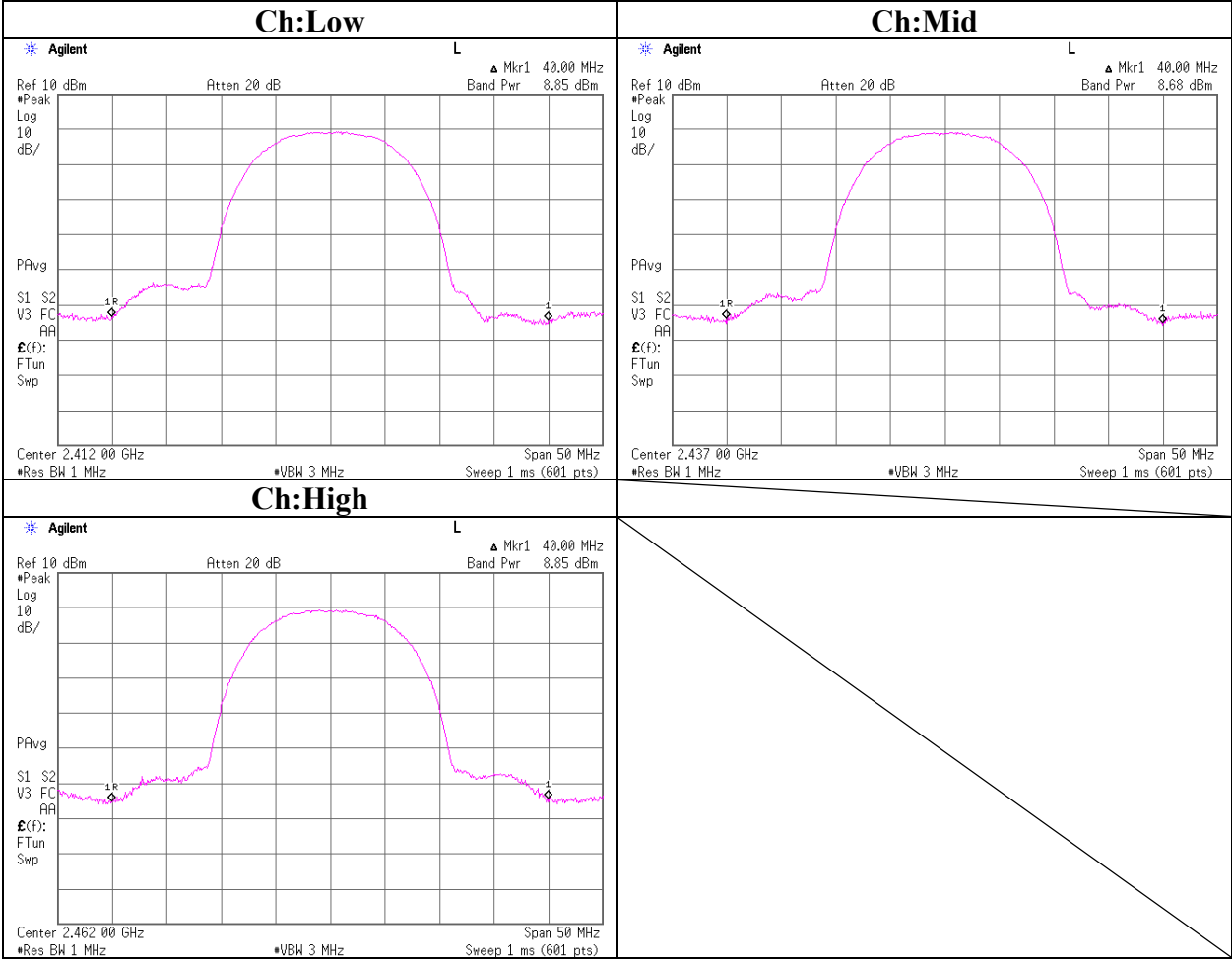
Sample Calculation:

Result = Reading + Cable Loss + Attenuator

*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

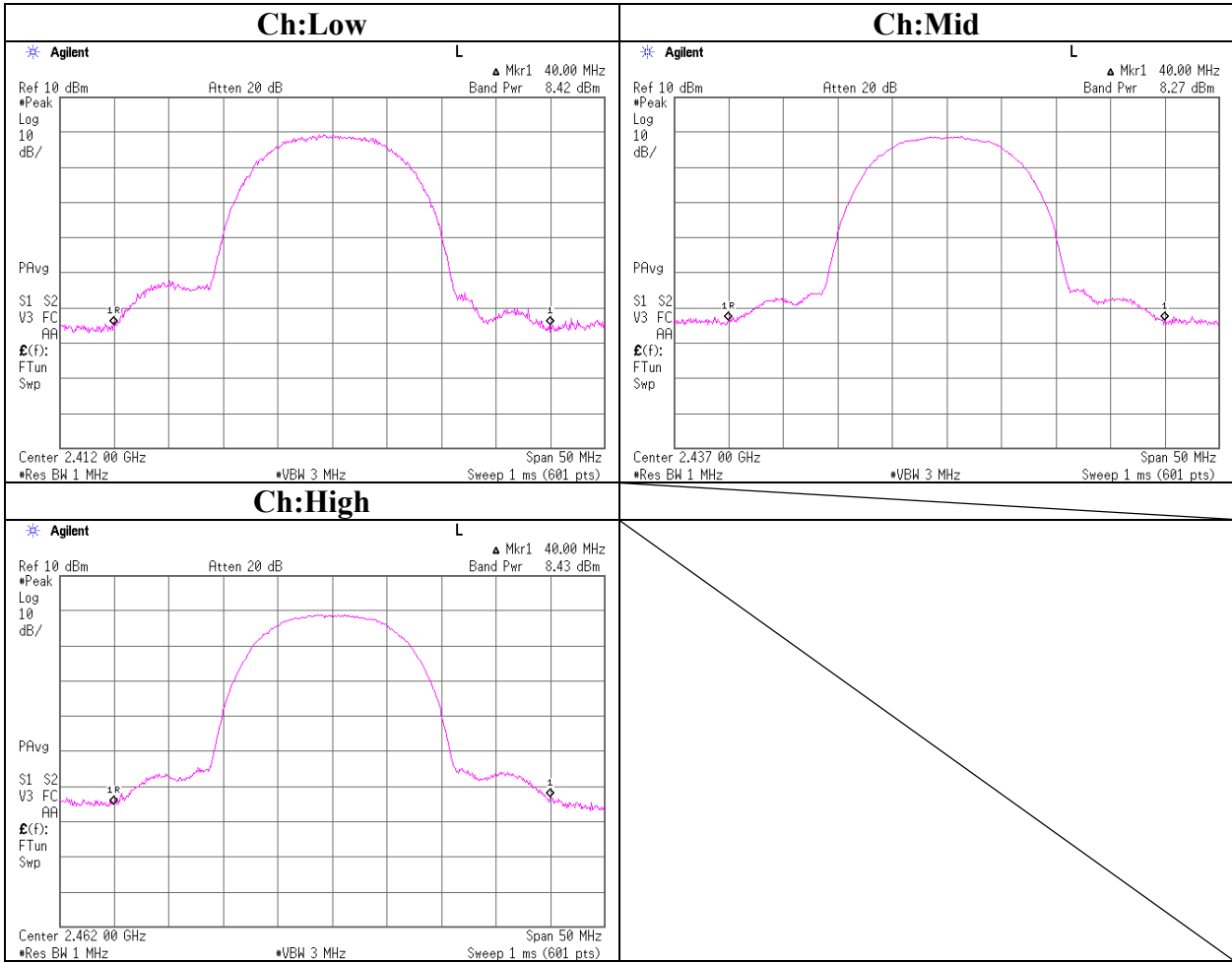
Maximum Peak OutPut Power

IEEE802.11b 11Mbps Antenna:A



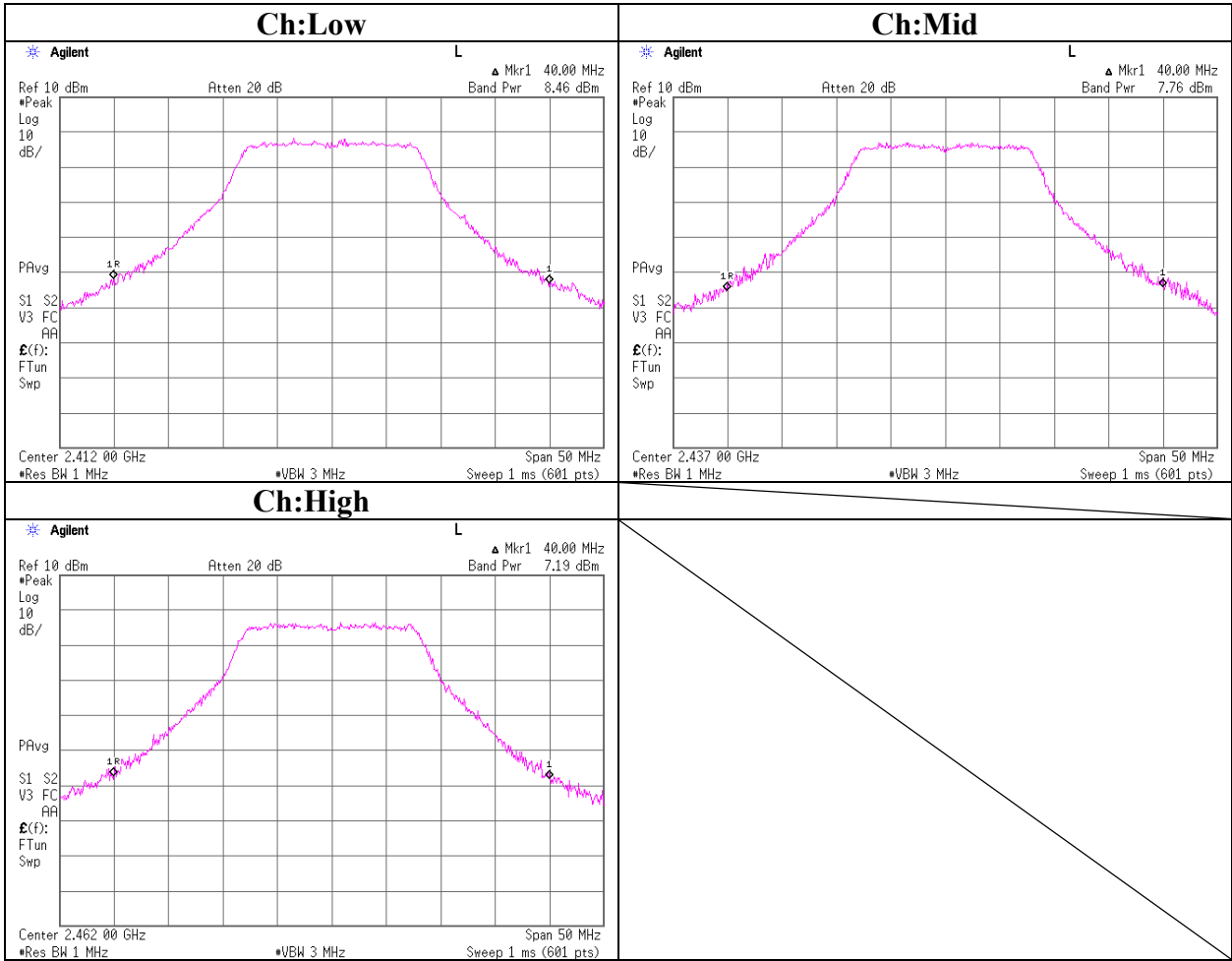
Maximum Peak OutPut Power

IEEE802.11b 11Mbps Antenna:B



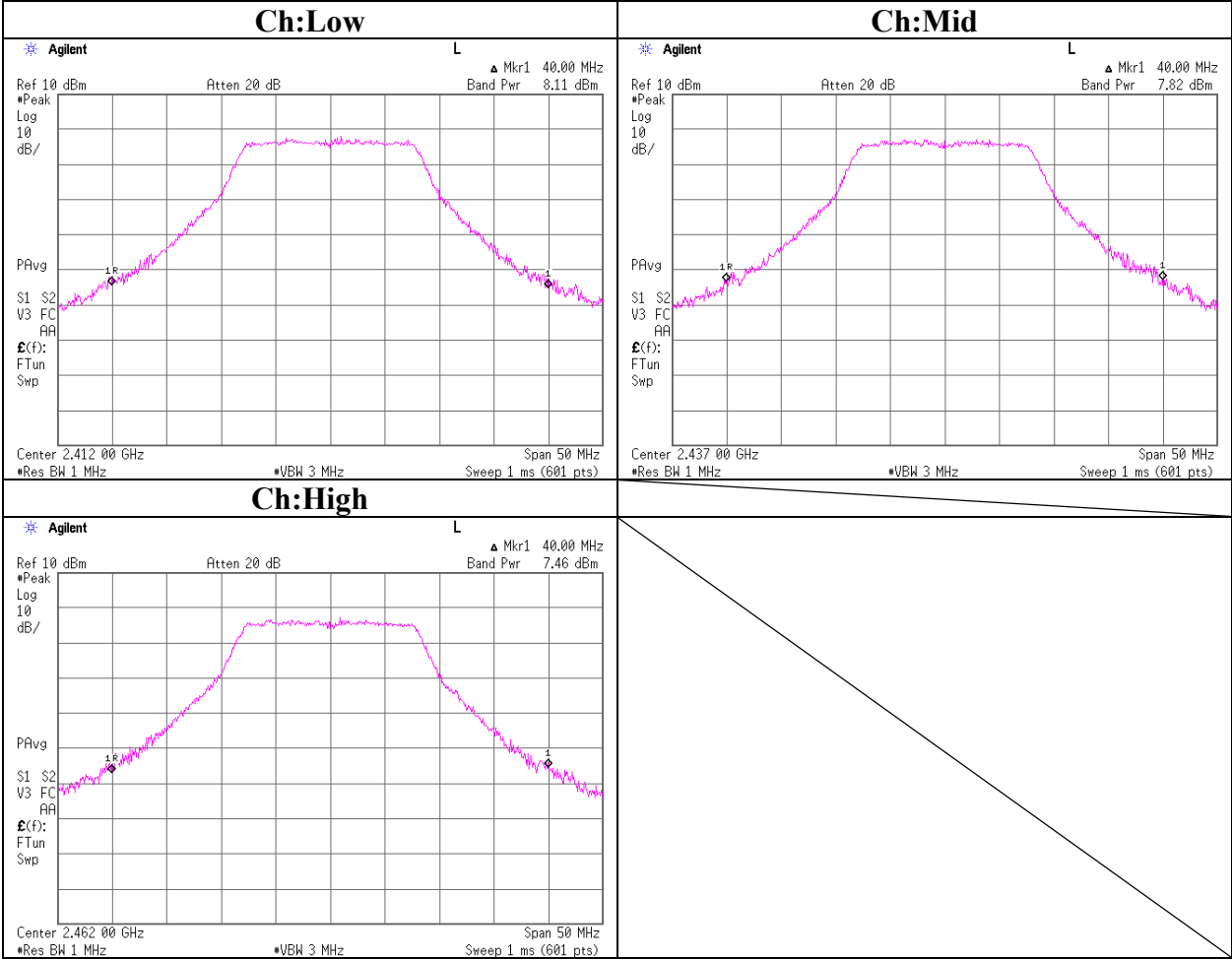
Maximum Peak OutPut Power

IEEE802.11g 54Mbps Antenna:A



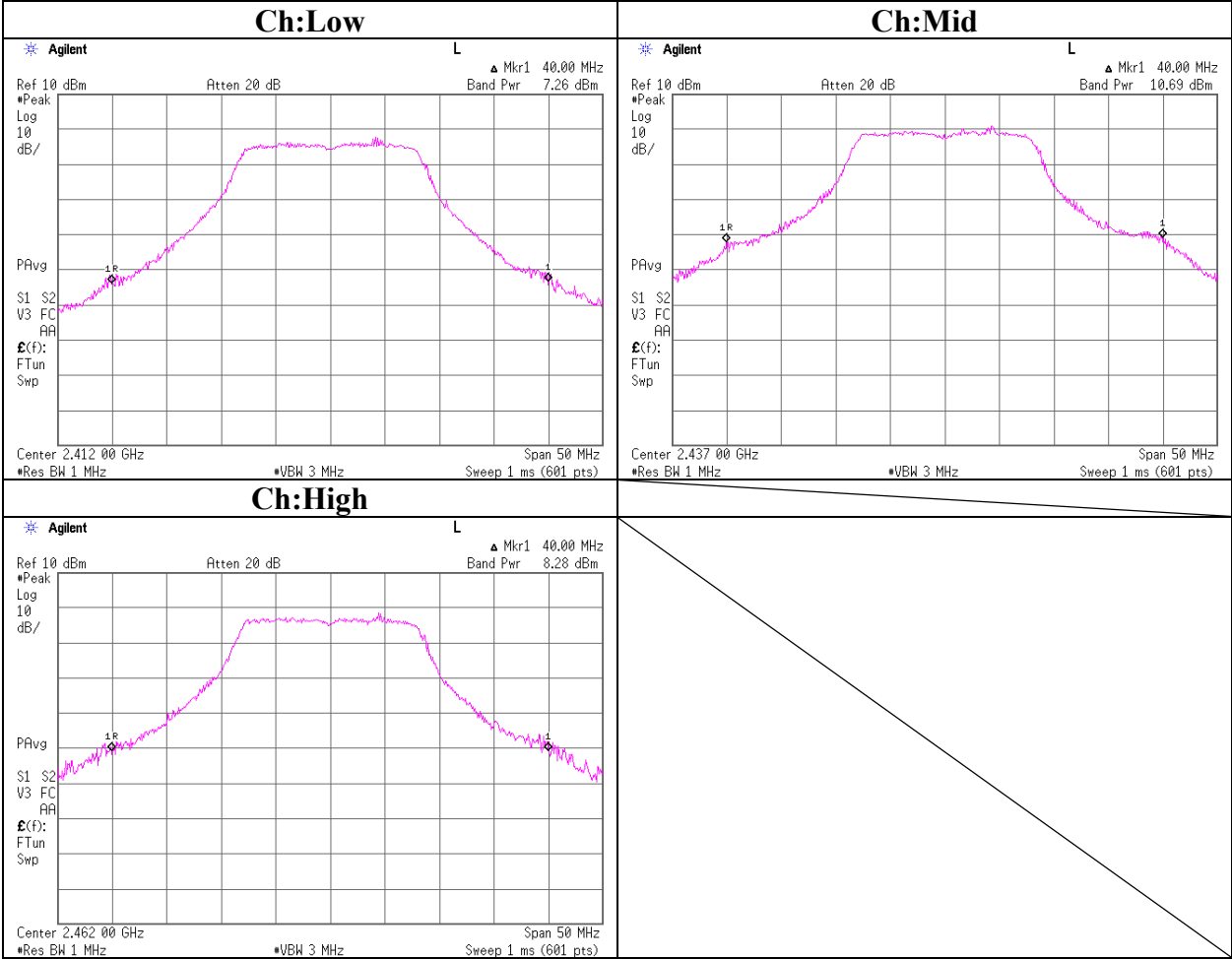
Maximum Peak OutPut Power

IEEE802.11g 54Mbps Antenna:B



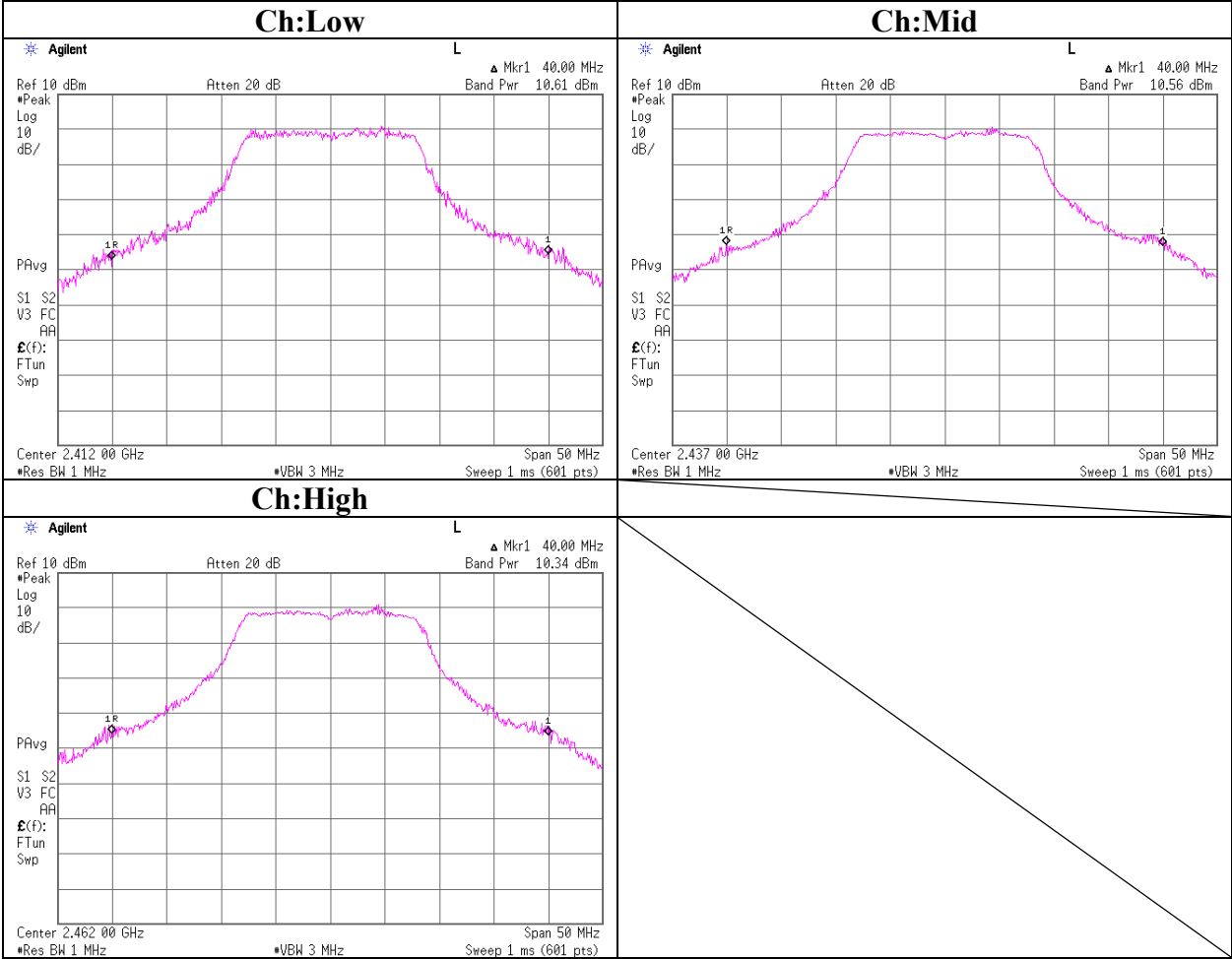
Maximum Peak OutPut Power

IEEE802.11g 24Mbps Antenna:A



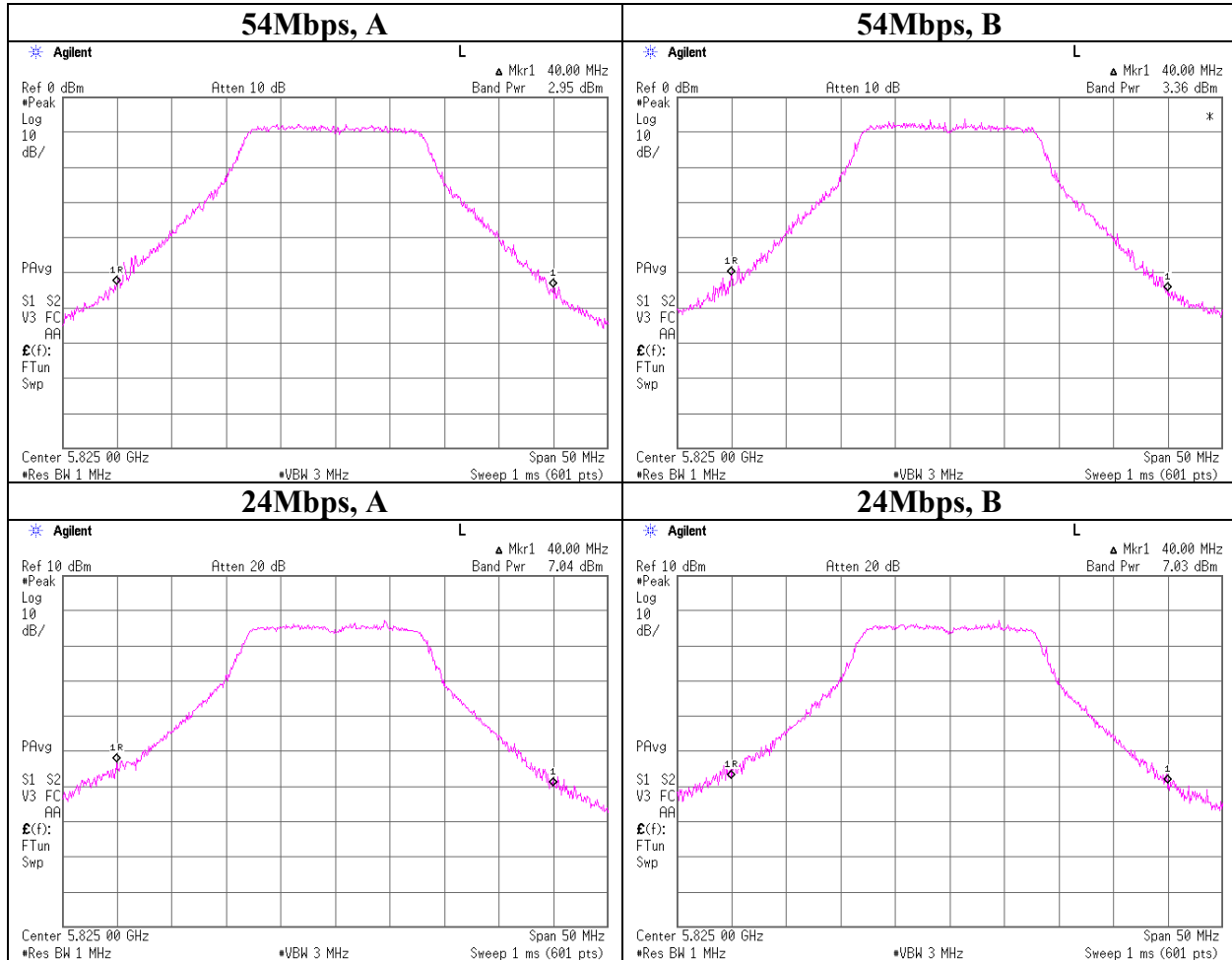
Maximum Peak OutPut Power

IEEE802.11g 24Mbps Antenna:B



Maximum Peak OutPut Power

IEEE802.11a 54/24Mbps Antenna:A/B



Radiated Spurious Emission

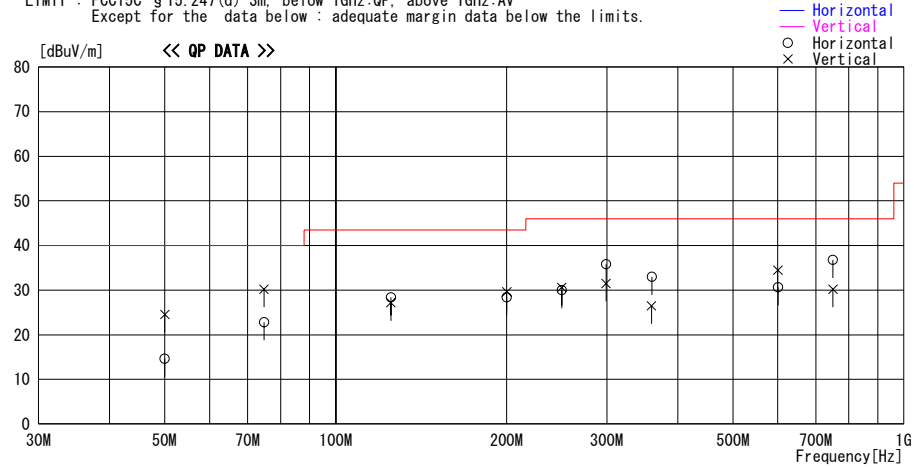
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/23 13:42:59

Applicant : CONTEC CO., LTD.
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01
Report No. : 26FE0180-HO
Power : DC 3.3V
Temp./Humi. : 24 deg.C. / 30 %
Operator : Hiroka Uneyama

Mode / Remarks : Tx 11b 2412MHz/11Mbps_Long/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
50.020	26.8	QP	10.1	-22.3	14.6	270	170	Hori.	40.0	25.4
50.020	36.7	QP	10.1	-22.3	24.5	276	100	Vert.	40.0	15.5
74.820	38.0	QP	6.5	-21.7	22.8	149	225	Hori.	40.0	17.2
74.820	45.4	QP	6.5	-21.7	30.2	0	100	Vert.	40.0	9.8
125.039	36.9	QP	13.0	-21.5	28.4	97	169	Hori.	43.5	15.1
125.039	35.7	QP	13.0	-21.5	27.2	321	100	Vert.	43.5	16.3
200.100	32.2	QP	16.6	-20.4	28.4	192	400	Hori.	43.5	15.1
200.100	33.4	QP	16.6	-20.4	29.6	270	100	Vert.	43.5	13.9
250.004	33.1	QP	17.1	-20.2	30.0	204	376	Hori.	46.0	16.0
250.004	33.7	QP	17.1	-20.2	30.6	270	100	Vert.	46.0	15.4
299.120	35.3	QP	20.1	-19.6	35.8	230	121	Hori.	46.0	10.2
299.120	31.0	QP	20.1	-19.6	31.5	324	100	Vert.	46.0	14.5
359.501	30.1	QP	16.4	-20.0	26.5	257	86	Vert.	46.0	19.5
360.041	36.6	QP	16.4	-20.0	33.0	64	128	Hori.	46.0	13.0
600.000	34.8	QP	19.2	-19.5	34.5	257	86	Vert.	46.0	11.5
600.305	30.9	QP	19.2	-19.5	30.6	64	128	Hori.	46.0	15.4
750.005	26.7	QP	21.0	-17.5	30.2	340	114	Vert.	46.0	15.8
750.108	33.3	QP	21.0	-17.5	36.8	205	113	Hori.	46.0	9.2

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.1 Semi Anechoic Chamber
Date : 2006/02/23 13:42:59

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-H0
Power : DC 3.3V
Temp. / Humi. : 24 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11b 2412MHz/11Mbps_Long/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.

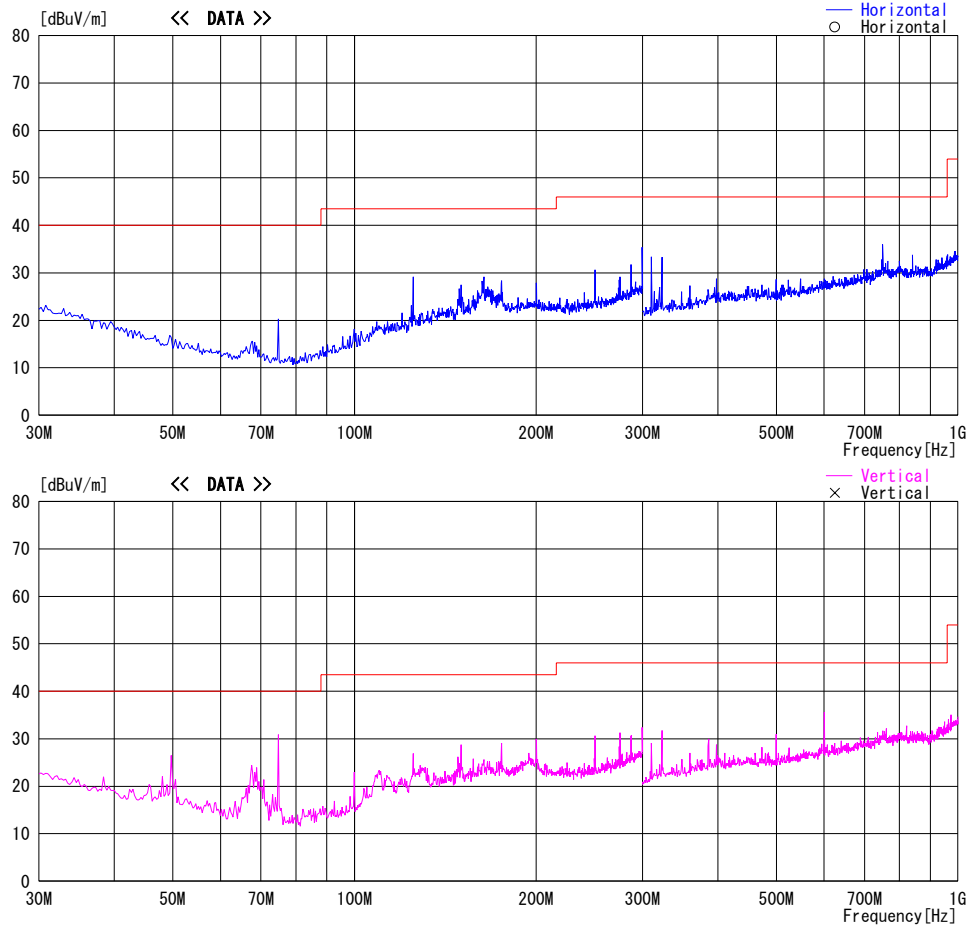


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/23 17:41:39

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-H0
Power : DC 3.3V
Temp./ Humi. : 24 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11b 2437MHz/11Mbps_Long/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.

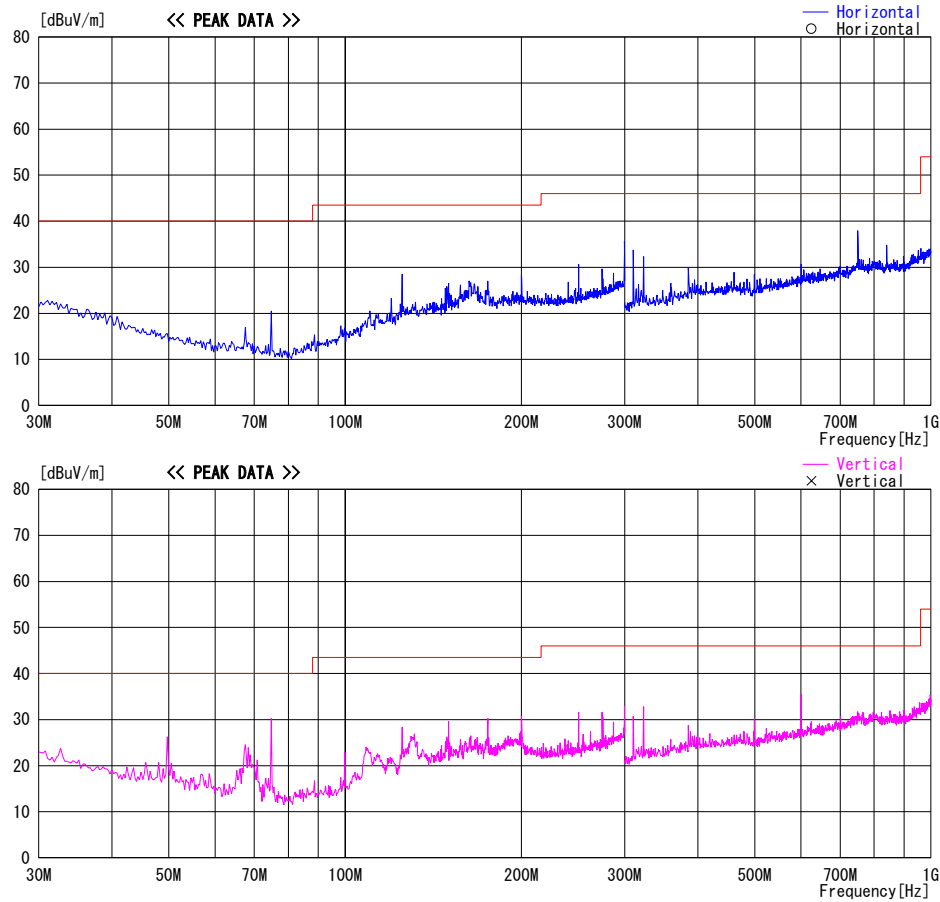


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

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Facsimile : +81 596 24 8124

MF060b(01.06.05)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/23 17:57:31

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V
Temp. / Humi. : 24 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11b 2462MHz/11Mbps_Long/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV

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

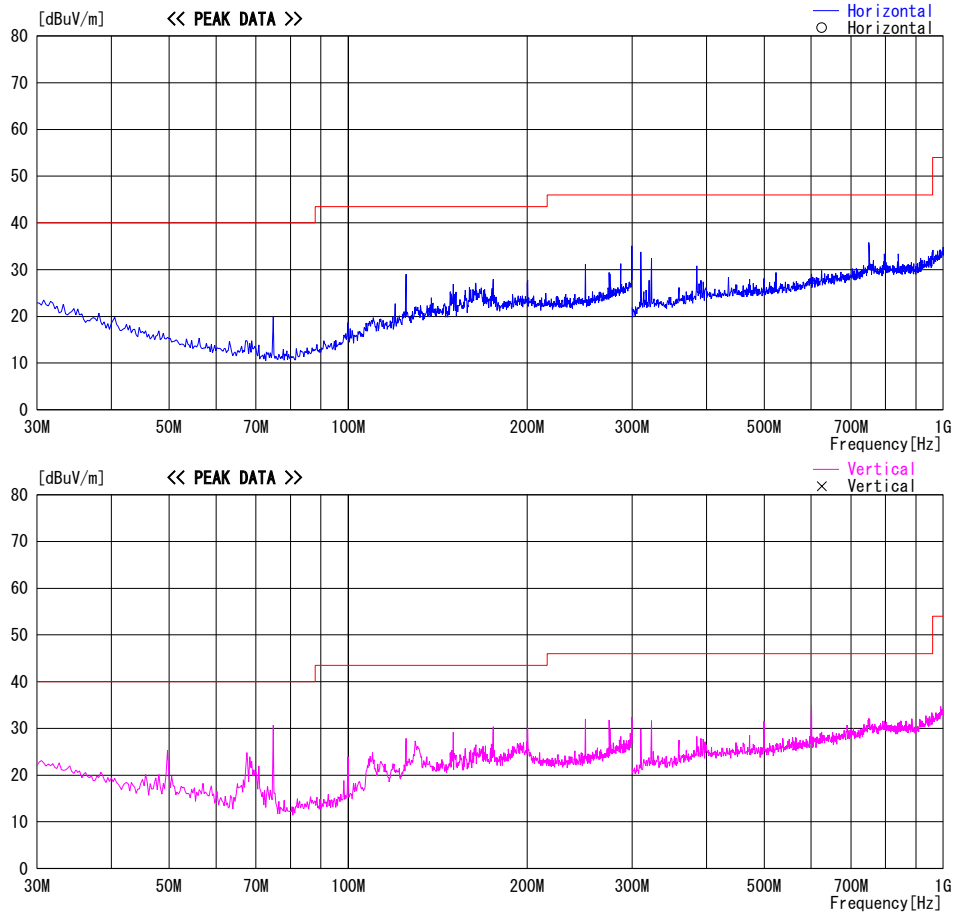


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(01.06.05)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 13:02:49

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V
Temp. / Humi. : 24 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Rx 11b 2437MHz/11Mbps_Long/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV

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

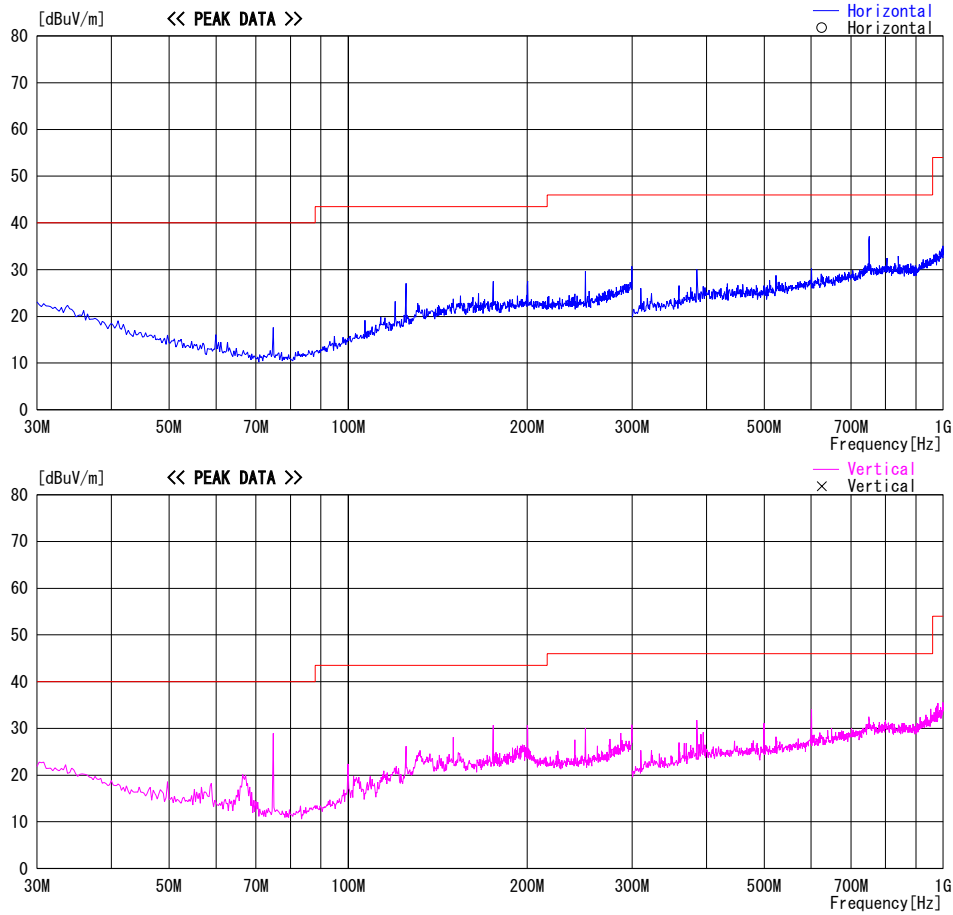


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(01.06.05)

Radiated Spurious Emission

DATA OF RADIATED EMISSION TEST

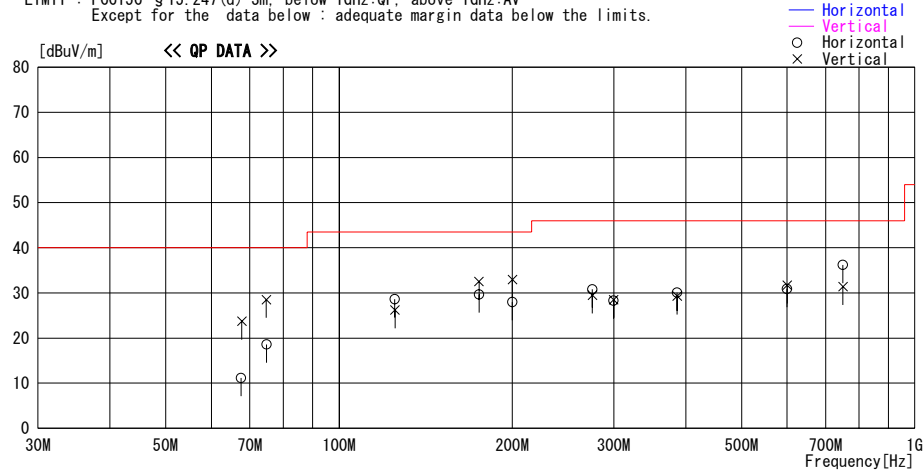
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 09:36:25

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V
Temp./Humi. : 22 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11g 2412MHz/18Mbps/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
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]						
67.530	26.5	QP	7.0	-22.3	11.2	229	150	Hori.	40.0	28.8
67.800	39.1	QP	6.9	-22.3	23.7	230	100	Vert.	40.0	16.3
74.750	43.7	QP	6.5	-21.7	28.5	254	100	Vert.	40.0	11.5
74.820	33.8	QP	6.5	-21.7	18.6	280	300	Hori.	40.0	21.4
125.009	37.1	QP	13.0	-21.5	28.6	286	332	Hori.	43.5	14.9
125.039	34.7	QP	13.0	-21.5	26.2	342	100	Vert.	43.5	17.3
175.005	34.8	QP	15.8	-20.9	29.7	116	300	Hori.	43.5	13.8
175.007	37.6	QP	15.8	-20.9	32.5	292	100	Vert.	43.5	11.0
200.004	31.8	QP	16.6	-20.4	28.0	185	400	Hori.	43.5	15.5
200.100	36.7	QP	16.6	-20.4	32.9	270	100	Vert.	43.5	10.6
275.431	32.4	QP	18.7	-20.3	30.8	260	130	Hori.	46.0	15.2
275.431	31.1	QP	18.7	-20.3	29.5	130	100	Vert.	46.0	16.5
299.730	27.8	QP	20.1	-19.6	28.3	266	116	Hori.	46.0	17.7
299.990	28.0	QP	20.1	-19.6	28.5	133	100	Vert.	46.0	17.5
386.380	31.8	QP	17.4	-19.9	29.3	10	146	Vert.	46.0	16.7
386.382	32.6	QP	17.4	-19.9	30.1	319	213	Hori.	46.0	15.9
600.007	31.2	QP	19.2	-19.5	30.9	320	126	Hori.	46.0	15.1
600.305	32.0	QP	19.2	-19.5	31.7	120	197	Vert.	46.0	14.3
750.005	27.9	QP	21.0	-17.5	31.4	242	100	Vert.	46.0	14.6
750.007	32.7	QP	21.0	-17.5	36.2	221	113	Hori.	46.0	9.8

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)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 09:36:25

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V
Temp./Humi. : 22 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11g 2412MHz/18Mbps/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.

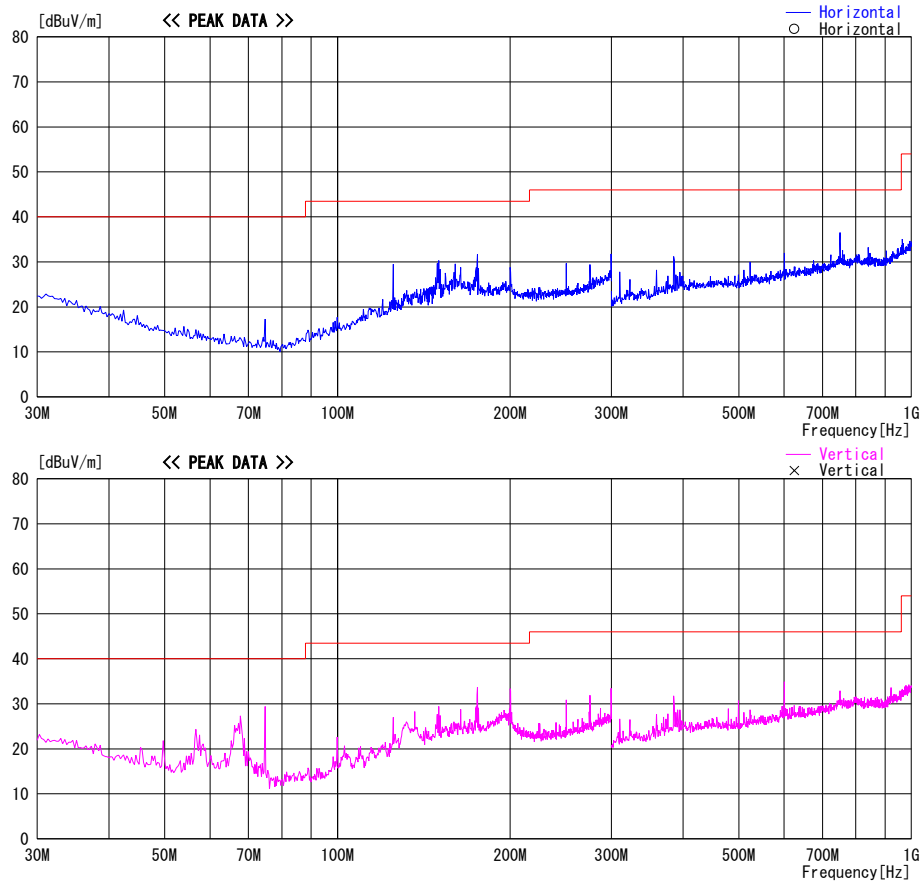


CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 09:50:50

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01
Report No. : 26FE0180-HO
Power : DC 3.3V
Temp./Humi. : 22 deg. C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11g 2437MHz/18Mbps/TX100/PN9/Ant-A /EUT-X-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.

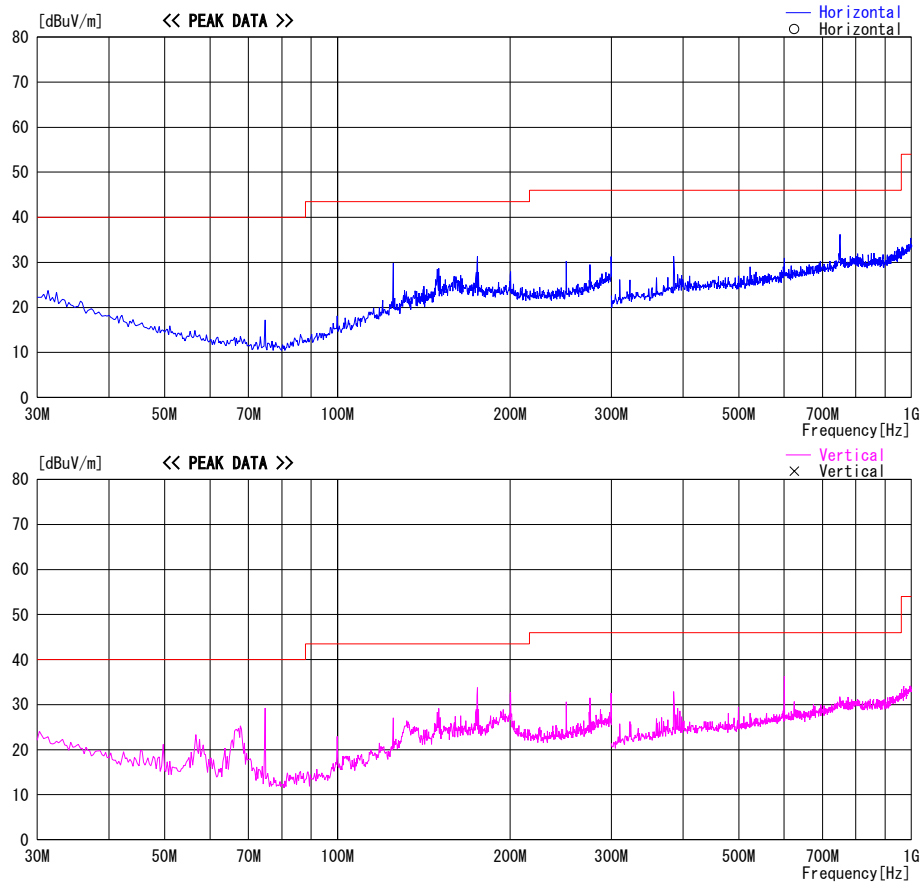


CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 10:10:18

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01
Report No. : 26FE0180-HO
Power : DC 3.3V
Temp./Humi. : 22 deg. C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11g 2462MHz/18Mbps/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.

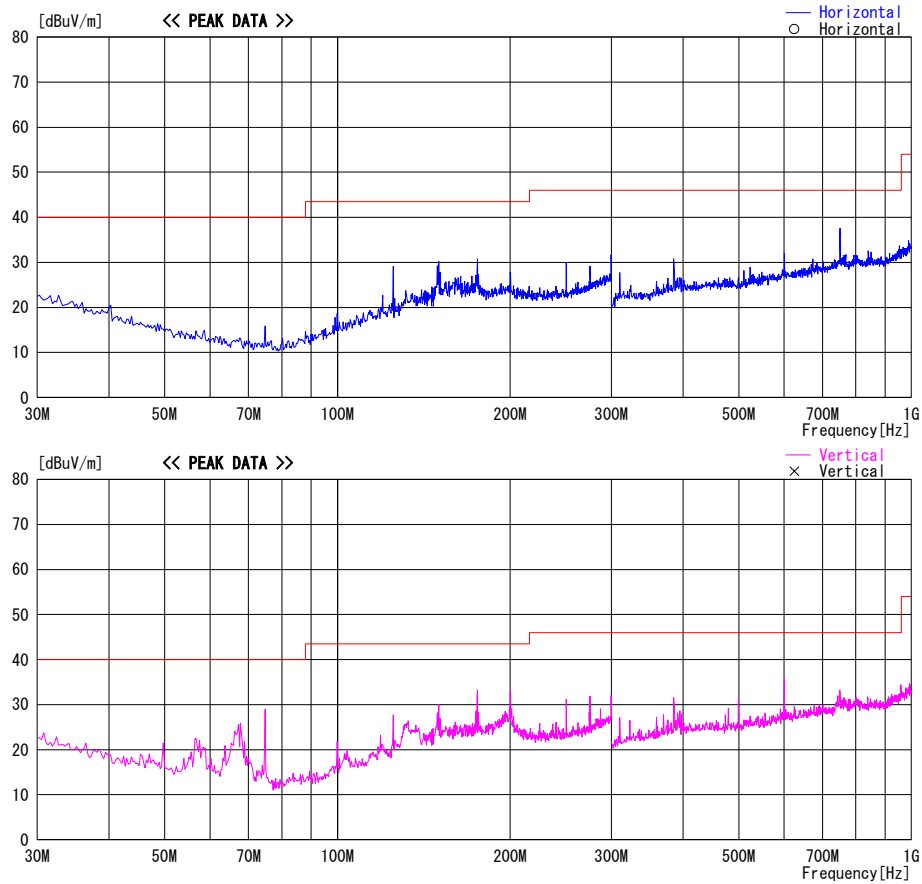


CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 13:02:49

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-H0
Power : DC 3.3V
Temp./Humi. : 22 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Rx 11g 2437MHz/18Mbps/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV

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

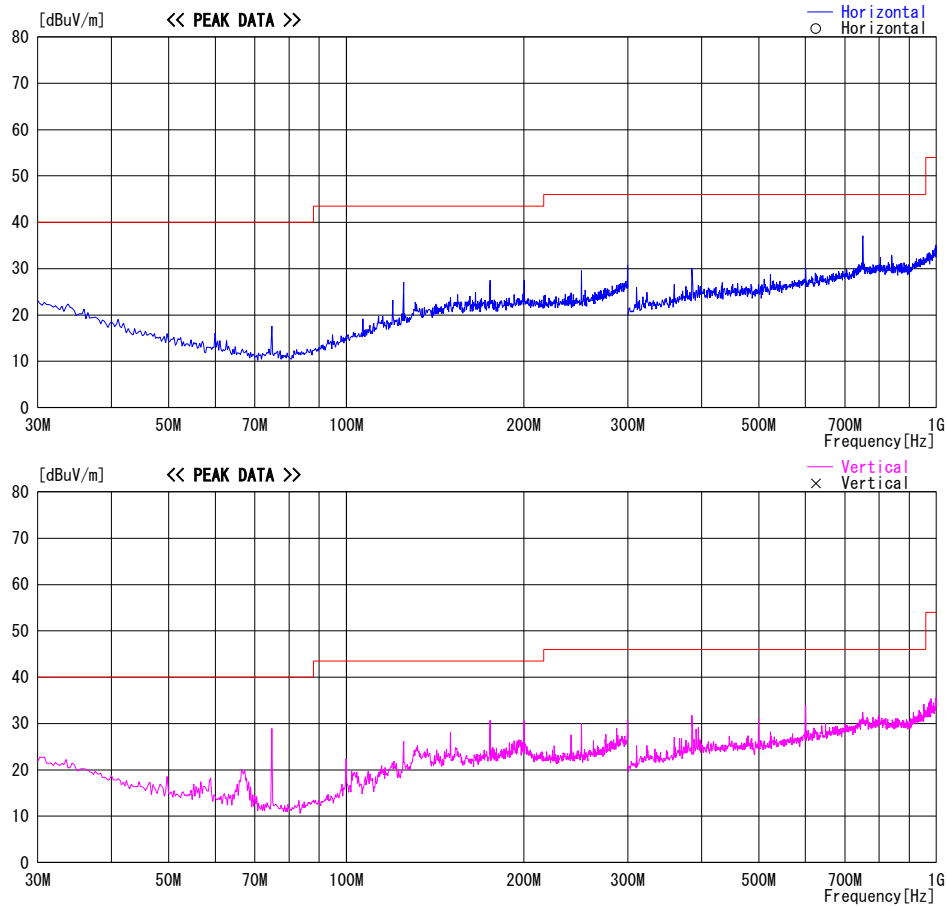


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

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MF060b(01.06.05)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/02/24 17:23:24

Applicant : CONTEC CO., LTD
Kind of EUT : Wireless LAN MiniPCI Card
Model No. : FX-DS540-MPC16
Serial No. : C09A54400135C01

Report No. : 26FE0180-HO
Power : DC 3.3V
Temp./ Humi. : 25 deg.C. / 30 %
Operator : Hiroka Umeyama

Mode / Remarks : Tx 11a 5825MHz/18Mbps/TX100/PN9/Ant-A /EUT-max-axis

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
Except for the data below : adequate margin data below the limits.

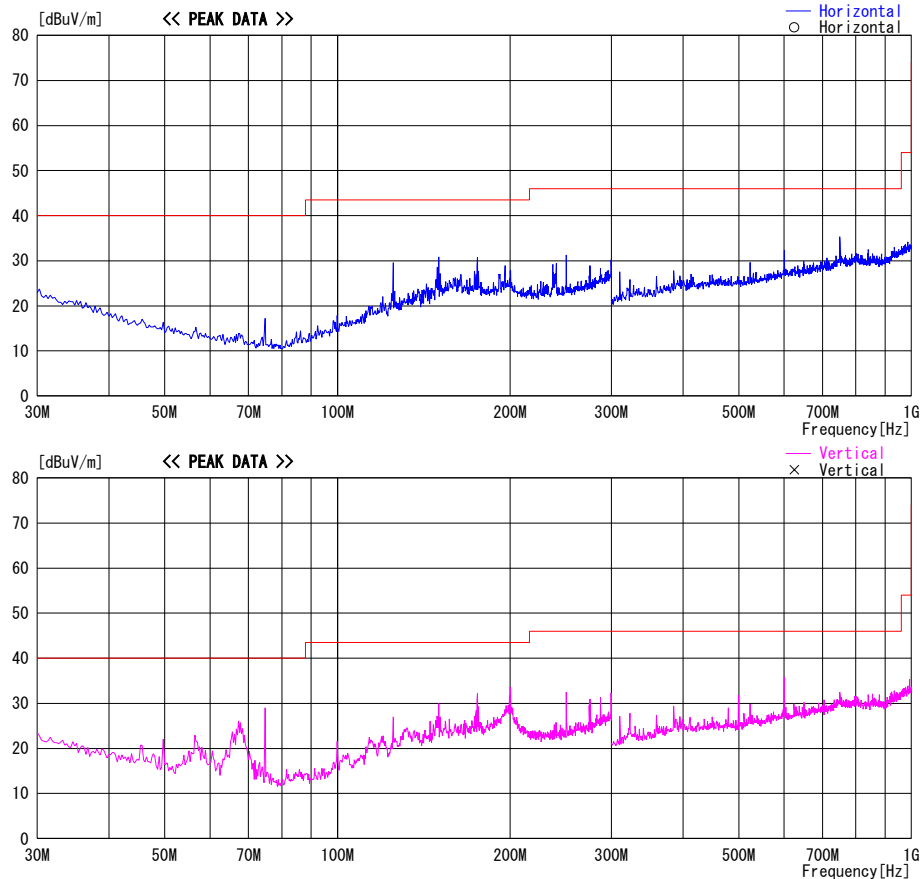


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN(AMP)

Radiated Spurious Emission

UL Apex Co., Ltd.

Head Office EMC Lab. No.1(below 10GHz) / No.2(above 10GHz) Semi Anechoic Chamber

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card
MODEL : FX-DS540-MPCI6
SAMPLE NO. : C09A54400135C01
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11Mbps / CH1:2412MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 02/15/2006 02/27/2006
TEMPERATURE : 23deg.C 23 deg.C.
HUMIDITY : 25% 30 %
ENGINEER : Hiroka Umeyama Kenichi Adachi

PK DETECT

(RBW: 1MHz, VBW:1MHz)

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 PK [dBuV/m]	Margin HOR VER [dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2385.9	61.3	54.8	30.5	36.3	3.2	0.0	58.7	52.2	74.0	15.3	21.8
3	3212.4	46.8	46.7	31.7	36.3	4.1	0.0	46.3	46.2	74.0	27.7	27.8
4	4824.0	45.7	44.6	35.4	35.9	6.4	0.0	51.6	50.5	74.0	22.4	23.5
5	7236.0	39.5	42.6	37.7	35.8	7.3	0.0	48.7	51.8	74.0	25.3	22.2
6	9648.0	40.8	43.8	36.6	36.4	8.5	0.0	49.5	52.5	74.0	24.5	21.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	12060.0	-	-	40.2	36.1	9.4	1.7	-	-	74.0	-	-
8	14472.0	-	-	42.7	34.7	10.6	0.8	-	-	74.0	-	-
9	16884.0	-	-	45.9	35.2	11.9	1.2	-	-	74.0	-	-
10	19296.0	-	-	39.0	29.9	6.1	0.0	-	-	74.0	-	-
11	21708.0	-	-	39.4	30.4	6.8	0.0	-	-	74.0	-	-
12	24120.0	47.0	46.9	39.1	30.4	6.1	0.0	52.3	52.2	74.0	21.7	21.8

*5)
*5)
*5)
*5)
*5)
*5)

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	2385.9	48.3	42.0	30.5	36.3	3.2	0.0	45.7	39.4	54.0	8.3	14.6
3	3212.4	38.0	34.3	31.7	36.3	4.1	0.0	37.5	33.8	54.0	16.5	20.2
4	4824.0	32.0	29.5	35.4	35.9	6.4	0.0	37.9	35.4	54.0	16.1	18.6
5	7236.0	27.4	29.6	37.7	35.8	7.3	0.0	36.6	38.8	54.0	17.4	15.2
6	9648.0	29.8	29.6	36.6	36.4	8.5	0.0	38.5	38.3	54.0	15.5	15.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	12060.0	-	-	40.2	36.1	9.4	1.7	-	-	54.0	-	-
8	14472.0	-	-	42.7	34.7	10.6	0.8	-	-	54.0	-	-
9	16884.0	-	-	45.9	35.2	11.9	1.2	-	-	54.0	-	-
10	19296.0	-	-	39.0	29.9	6.1	0.0	-	-	54.0	-	-
11	21708.0	-	-	39.4	30.4	6.8	0.0	-	-	54.0	-	-
12	24120.0	33.3	33.4	39.1	30.4	6.1	0.0	38.6	38.7	54.0	15.4	15.3

*5)
*5)
*5)
*5)
*5)
*5)

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 [dBuV/m]	VER					HOR [dBuV/m]	VER		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	2412.0	105.5	103.4	30.5	36.3	3.2	0.0	102.9	100.8	-	-	-
2	2400.0	56.6	55.5	30.5	36.3	3.2	0.0	54.0	52.9	Funda-20dB	28.9	27.9

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

9.54 dB

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

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

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

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

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MF060b(01.06.05)

Radiated Spurious Emission

UL Apex Co., Ltd.
Head Office EMC Lab. No.1(below 10GHz) / No.2(above 10GHz) Semi Anechoic Chamber

COMPANY : CONTEC CO., LTD.	REGULATION : Fcc Part15 Subpart C 15.247 (d) / RSS-210
EQUIPMENT : Wireless LAN MiniPCI Card	TEST DISTANCE : 3m / 1m
MODEL : FX-DS540-MPCI6	DATE : 02/15/2006 02/27/2006
SAMPLE NO. : C09A54400135C01	TEMPERATURE : 23deg.C 23 deg.C.
POWER : DC3.3V(AC120V/60Hz)	HUMIDITY : 25% 30%
MODE : Transmitting (11b / 11Mbps / CH6:2437MHz)	ENGINEER : Hiroka Umeyama Kenichi Adachi

PK DETECT		(RBW: 1MHz, VBW:1MHz)										
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 PK [dBuV/m]	Margin HOR VER [dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	3252.5	46.2	47.5	31.6	36.4	4.1	0.0	45.5	46.8	74.0	28.5	27.2
2	4874.0	47.8	44.8	35.6	35.9	6.4	0.0	53.9	51.0	74.0	20.1	23.0
3	7311.0	43.3	43.1	37.7	35.8	7.2	0.0	52.4	52.2	74.0	21.6	21.8
4	9748.0	40.3	42.8	36.5	36.5	8.6	0.0	48.9	51.4	74.0	25.1	22.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12185.0	-	-	40.3	36.0	9.4	1.7	-	-	74.0	-	-
6	14622.0	-	-	42.8	35.0	10.6	0.8	-	-	74.0	-	-
7	17059.0	-	-	46.2	35.0	12.1	1.2	-	-	74.0	-	-
8	19496.0	-	-	39.1	29.7	6.3	0.0	-	-	74.0	-	-
9	21933.0	-	-	39.5	30.7	6.9	0.0	-	-	74.0	-	-
10	24370.0	46.7	46.8	39.1	30.5	6.1	0.0	51.9	52.0	74.0	22.1	22.0

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	3252.5	33.4	43.4	31.6	36.4	4.1	0.0	32.7	42.7	54.0	21.3	11.3
2	4874.0	33.4	31.3	35.6	35.9	6.4	0.0	39.5	37.4	54.0	14.5	16.6
3	7311.0	29.7	29.6	37.7	35.8	7.2	0.0	38.8	38.7	54.0	15.2	15.3
4	9748.0	29.5	29.4	36.5	36.5	8.6	0.0	38.1	38.0	54.0	15.9	16.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12185.0	-	-	40.3	36.0	9.4	1.7	-	-	54.0	-	-
6	14622.0	-	-	42.8	35.0	10.6	0.8	-	-	54.0	-	-
7	17059.0	-	-	46.2	35.0	12.1	1.2	-	-	54.0	-	-
8	19496.0	-	-	39.1	29.7	6.3	0.0	-	-	54.0	-	-
9	21933.0	-	-	39.5	30.7	6.9	0.0	-	-	54.0	-	-
10	24370.0	34.4	34.5	39.1	30.5	6.1	0.0	39.6	39.7	54.0	14.4	14.3

- *1) Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB
- *2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
- *3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
- *4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
- *5) In the frequency over the fourth harmonic, the noise from the EUT was not seen. The data above is its base noise.

Radiated Spurious Emission

UL Apex Co., Ltd.

Head Office EMC Lab. No.1 (below 10GHz) / No.2(above 10GHz) Semi Anechoic Chamber

COMPANY : CONTEC CO., LTD.
EQUIPMENT : Wireless LAN MiniPCI Card
MODEL : FX-DS540-MPCI6
SAMPLE NO. : C09A54400135C01
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11b / 11bps / CH11:2462MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 02/15/2006 02/27/2006
TEMPERATURE : 23deg.C 23 deg.C.
HUMIDITY : 25% 30 %
ENGINEER : Hiroka Umeyama Kenichi Adachi

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

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 PK [dBuV/m]	Margin HOR VER [dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	55.8	57.5	30.3	36.3	3.4	0.0	53.2	54.9	74.0	20.8	19.1
2	4924.0	48.5	45.1	35.8	35.9	6.4	0.0	54.8	51.4	74.0	19.2	22.6
3	7386.0	42.9	42.6	37.8	35.8	7.3	0.0	52.2	51.9	74.0	21.8	22.1
4	9848.0	42.7	42.5	36.4	36.5	8.8	0.0	51.4	51.2	74.0	22.6	22.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12310.0	-	-	40.4	35.9	9.5	1.6	-	-	74.0	-	-
6	14772.0	-	-	42.9	35.4	10.7	0.9	-	-	74.0	-	-
7	17234.0	-	-	46.4	35.0	12.1	1.5	-	-	74.0	-	-
8	19696.0	-	-	39.1	29.7	6.3	0.0	-	-	74.0	-	-
9	22158.0	-	-	39.5	30.7	6.9	0.0	-	-	74.0	-	-
10	24620.0	46.6	46.9	39.1	30.5	6.1	0.0	51.8	52.1	74.0	22.2	21.9

*5)
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*5)

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	2483.5	43.9	44.9	30.3	36.3	3.4	0.0	41.3	42.3	54.0	12.7	11.7
2	4924.0	34.5	31.3	35.8	35.9	6.4	0.0	40.8	37.6	54.0	13.2	16.4
3	7386.0	29.9	29.8	37.8	35.8	7.3	0.0	39.2	39.1	54.0	14.8	14.9
4	9848.0	29.3	29.5	36.4	36.5	8.8	0.0	38.0	38.2	54.0	16.0	15.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12310.0	-	-	40.4	35.9	9.5	1.6	-	-	54.0	-	-
6	14772.0	-	-	42.9	35.4	10.7	0.9	-	-	54.0	-	-
7	17234.0	-	-	46.4	35.0	12.1	1.5	-	-	54.0	-	-
8	19696.0	-	-	39.1	29.7	6.3	0.0	-	-	54.0	-	-
9	22158.0	-	-	39.5	30.7	6.9	0.0	-	-	54.0	-	-
10	24620.0	33.5	33.4	39.1	30.5	6.1	0.0	38.7	38.6	54.0	15.3	15.4

*5)
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*5)

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

9.54 dB

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

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

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

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

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(01.06.05)

Radiated Spurious Emission

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-MPC16
SAMPLE NO. : C09A54400135C01
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11g / 18Mbps(worst) / CH1:2412MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 02/27/2006
TEMPERATURE : 23deg.C
HUMIDITY : 30%
ENGINEER : Kenichi Adachi

PK DETECT (RBW: 1MHz , VBW:1MHz)												
No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
	[MHz]	HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
		[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1505.5	47.7	58.4	24.1	33.0	2.6	0.0	41.4	52.1	74.0	32.6	21.9
2	2390.0	64.1	68.1	30.6	32.4	3.0	0.0	65.3	69.3	74.0	8.7	4.7
3*	2400.0	83.4	85.0	30.6	32.4	3.0	0.0	84.6	86.2	74.0	-	-
4	3216.0	44.2	47.5	31.7	32.1	3.2	0.0	47.1	50.3	74.0	26.9	23.7
5	4824.0	43.2	42.6	35.8	31.9	4.1	1.4	52.6	52.0	74.0	21.4	22.0
6	7236.0	40.4	39.7	37.6	31.5	5.2	1.2	52.9	52.2	74.0	21.1	21.8
7	9648.0	42.8	42.9	36.6	31.7	6.3	1.0	55.0	55.1	74.0	19.0	18.9
*5)												
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
8	12060.0	-	-	40.3	31.2	7.7	1.7	-	-	74.0	-	-
9	14472.0	-	-	43.3	31.1	8.5	0.8	-	-	74.0	-	-
10	16884.0	-	-	46.3	30.7	9.0	1.2	-	-	74.0	-	-
11	19296.0	-	-	39.0	29.9	6.1	0.0	-	-	74.0	-	-
12	21708.0	-	-	39.4	30.4	6.8	0.0	-	-	74.0	-	-
13	24120.0	47.2	47.3	39.1	30.4	6.1	0.0	52.5	52.5	74.0	21.5	21.5
*5)												

AV DETECT (RBW: 1MHz, VBW:10Hz)												
No.	Freq.	Reading		Ant. Factor	Amp. Gain	Cable Loss	Atten. or Filter	Result		Limit AV	Margin	
	[MHz]	HOR [dBuV]	VER	[dB/m]	[dB]	[dB]	[dB]	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	1505.5	33.3	43.9	24.1	33.0	2.6	0.0	27.0	37.6	54.0	27.0	16.4
2	2390.0	49.0	52.0	30.6	32.4	3.0	0.0	50.2	53.2	54.0	3.8	0.8
3*	2400.0	59.7	61.9	30.6	32.4	3.0	0.0	60.8	63.1	54.0	-	-
4	3216.0	34.5	42.1	31.7	32.1	3.2	0.0	37.3	44.9	54.0	16.7	9.1
5	4824.0	30.3	29.5	35.8	31.9	4.1	1.4	39.7	38.9	54.0	14.3	15.1
6	7236.0	28.3	27.8	37.6	31.5	5.2	1.2	40.8	40.3	54.0	13.2	13.7
7	9648.0	30.2	30.1	36.6	31.7	6.3	1.0	42.4	42.3	54.0	11.6	11.7
*5)												
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
8	12060.0	-	-	40.3	31.2	7.7	1.7	-	-	54.0	-	-
9	14472.0	-	-	43.3	31.1	8.5	0.8	-	-	54.0	-	-
10	16884.0	-	-	46.3	30.7	9.0	1.2	-	-	54.0	-	-
11	19296.0	-	-	39.0	29.9	6.1	0.0	-	-	54.0	-	-
12	21708.0	-	-	39.4	30.4	6.8	0.0	-	-	54.0	-	-
13	24120.0	35.4	35.4	39.1	30.4	6.1	0.0	40.7	40.7	54.0	13.3	13.3
*5)												

* Reference data

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 [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]							
Test distance 3meters													RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass			
0	2412.0	97.5	98.4	30.6	32.4	3.0	0.0	98.6	99.6	-	-	-				
3	2400.0	68.5	70.6	30.6	32.4	3.0	0.0	69.7	71.8	Funda-20dB	9.0	7.8				

- *1) Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB
*2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
*3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
*4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*5) In the frequency over the fourth harmonic, the noise from the EUT was not seen. The data above is its base noise.

Radiated Spurious Emission

COMPANY

: CONTEC CO., LTD.

EQUIPMENT

: Wireless LAN MiniPCI Card User Unit

MODEL

: FX-DS540-MPCI6

SAMPLE NO.

: C09A54400135C01

POWER

: DC3.3V(AC120V/60Hz)

MODE

: Transmitting (11g / 18Mbps / CH6:2437MHz)

PK DETECT

(RBW: 1MHz, VBW:1MHz)

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

REGULATION

: Fcc Part15 Subpart C 15.247 (d) / RSS-210

TEST DISTANCE

: 3m / 1m

DATE

: 02/27/2006

TEMPERATURE

: 23deg.C

HUMIDITY

: 30%

ENGINEER

: Kenichi Adachi

Kenichi Adachi

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
	[MHz]	HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
		[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1540.3	48.0	57.9	24.7	32.9	2.6	0.0	42.4	52.3	74.0	31.6	21.7
2	2390.0	56.2	57.5	30.6	32.4	3.0	0.0	57.4	58.7	74.0	16.6	15.3
3	2483.5	53.1	54.0	30.6	32.4	3.0	0.0	54.3	55.2	74.0	19.8	18.9
4	3249.4	44.0	47.1	31.6	32.1	3.3	0.0	46.8	49.9	74.0	27.2	24.1
5	4874.0	43.0	42.4	36.1	31.9	4.1	1.4	52.7	52.1	74.0	21.3	21.9
6	7311.0	40.5	40.0	37.8	31.6	5.2	1.1	53.0	52.5	74.0	21.0	21.5
7	9748.0	42.7	43.0	36.6	31.8	6.4	1.1	54.9	55.2	74.0	19.1	18.8
*5)												
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
8	12185.0	-	-	40.4	31.0	7.8	1.7	-	-	74.0	-	-
9	14622.0	-	-	43.1	31.1	8.5	0.8	-	-	74.0	-	-
10	17059.0	-	-	46.1	30.7	9.1	1.2	-	-	74.0	-	-
11	19496.0	-	-	39.1	29.7	6.3	0.0	-	-	74.0	-	-
12	21933.0	-	-	39.5	30.7	6.9	0.0	-	-	74.0	-	-
13	24370.0	46.5	46.6	39.1	30.5	6.1	0.0	51.7	51.8	74.0	22.3	22.2
*5)												

AV DETECT		(RBW: 1MHz, VBW:10Hz)										
No.	Freq.	Reading		Ant. Factor	Amp. Gain	Cable Loss	Atten. or Filter	Result		Limit AV	Margin	
	[MHz]	HOR	VER	[dB/m]	[dB]	[dB]	[dB]	HOR	VER	[dBuV/m]	[dB]	VER
		[dBuV]									[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1540.3	33.8	43.5	24.7	32.9	2.6	0.0	28.2	37.9	54.0	25.8	16.1
2	2390.0	42.4	44.2	30.6	32.4	3.0	0.0	43.6	45.4	54.0	10.4	8.6
3	2483.5	39.7	40.8	30.6	32.4	3.0	0.0	40.9	42.0	54.0	13.2	12.1
4	3249.4	34.2	42.0	31.6	32.1	3.3	0.0	37.0	44.8	54.0	17.0	9.2
5	4874.0	30.4	30.0	36.1	31.9	4.1	1.4	40.1	39.7	54.0	13.9	14.3
6	7311.0	28.4	28.0	37.8	31.6	5.2	1.1	40.9	40.5	54.0	13.1	13.5
7	9748.0	30.3	30.3	36.6	31.8	6.4	1.1	42.5	42.5	54.0	11.5	11.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
8	12185.0	-	-	40.4	31.0	7.8	1.7	-	-	54.0	-	-
9	14622.0	-	-	43.1	31.1	8.5	0.8	-	-	54.0	-	-
10	17059.0	-	-	46.1	30.7	9.1	1.2	-	-	54.0	-	-
11	19496.0	-	-	39.1	29.7	6.3	0.0	-	-	54.0	-	-
12	21933.0	-	-	39.5	30.7	6.9	0.0	-	-	54.0	-	-
13	24370.0	34.5	34.6	39.1	30.5	6.1	0.0	39.7	39.8	54.0	14.3	14.2

*1) Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB
*2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
*3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
*4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*5) In the frequency over the fourth harmonic, the noise from the EUT was not seen. The data above is its base noise.

Radiated Spurious Emission

COMPANY : CONTEC CO., LTD.

EQUIPMENT : Wireless LAN MiniPCI Card User Unit

MODEL : FX-DS540-MPCI6

SAMPLE NO. : C09A54400135C01

POWER : DC3.3V(AC120V/60Hz)

MODE : Transmitting (11g / 18Mbps / CH11:2462MHz)

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

REGULATION : Fcc Part15 Subpart C 15.247 (d) / RSS-210

TEST DISTANCE : 3m / 1m

DATE : 02/27/2006

TEMPERATURE : 23deg.C

HUMIDITY : 30%

ENGINEER : Kenichi Adachi

Kenichi Adachi

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	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1574.0	47.3	58.2	25.1	32.9	2.6	0.0	42.1	53.0	74.0	31.9	21.0
2	2483.5	71.0	71.7	30.4	32.4	3.1	0.0	72.1	72.8	74.0	1.9	1.2
3	3282.7	44.7	47.8	31.6	32.1	3.3	0.0	47.5	50.6	74.0	26.5	23.4
4	4924.0	43.0	42.4	36.4	31.8	4.1	1.4	53.0	52.4	74.0	21.0	21.6
5	7386.0	40.2	40.0	38.0	31.8	5.2	1.1	52.8	52.6	74.0	21.2	21.4
6	9848.0	42.8	42.7	36.5	31.9	6.4	1.2	55.0	54.9	74.0	19.0	19.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	12310.0	-	-	40.4	30.8	7.8	1.6	-	-	74.0	-	-
8	14772.0	-	-	43.0	31.0	8.5	0.9	-	-	74.0	-	-
9	17234.0	-	-	46.2	30.9	9.2	1.5	-	-	74.0	-	-
10	19696.0	-	-	39.1	29.7	6.3	0.0	-	-	74.0	-	-
11	22158.0	-	-	39.5	30.7	6.9	0.0	-	-	74.0	-	-
12	24620.0	46.7	46.6	39.1	30.5	6.1	0.0	51.9	51.8	74.0	22.1	22.2

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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	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1574.0	33.6	43.7	25.1	32.9	2.6	0.0	28.4	38.5	54.0	25.6	15.5
2	2483.5	52.3	52.8	30.4	32.4	3.1	0.0	53.4	53.9	54.0	0.6	0.1
3	3282.7	34.1	42.3	31.6	32.1	3.3	0.0	36.9	45.1	54.0	17.1	8.9
4	4924.0	30.4	30.1	36.4	31.8	4.1	1.4	40.4	40.1	54.0	13.6	13.9
5	7386.0	28.4	28.1	38.0	31.8	5.2	1.1	41.0	40.7	54.0	13.0	13.3
6	9848.0	30.3	30.4	36.5	31.9	6.4	1.2	42.5	42.6	54.0	11.5	11.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	12310.0	-	-	40.4	30.8	7.8	1.6	-	-	54.0	-	-
8	14772.0	-	-	43.0	31.0	8.5	0.9	-	-	54.0	-	-
9	17234.0	-	-	46.2	30.9	9.2	1.5	-	-	54.0	-	-
10	19696.0	-	-	39.1	29.7	6.3	0.0	-	-	54.0	-	-
11	22158.0	-	-	39.5	30.7	6.9	0.0	-	-	54.0	-	-
12	24620.0	33.3	33.3	39.1	30.5	6.1	0.0	38.5	38.5	54.0	15.5	15.5

*1) Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB
*2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
*3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
*4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*5) In the frequency over the fourth harmonic, the noise from the EUT was not seen. The data above is its base noise.

Radiated Spurious Emission

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-MPC16
SAMPLE NO. : C09A54400135C01
POWER : DC3.3V(AC120V/60Hz)
MODE : Transmitting (11a / 18Mbps / CH165:5825MHz)

REGULATION : Fcc Part15 Subpart C 15.247 (d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 02/27/2006 02/28/2006
TEMPERATURE : 23 deg.C. 25 deg.C.
HUMIDITY : 30 % 30 %
ENGINEER : Kenichi Adachi Kenichi Adachi

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	4800.1	50.0	50.3	35.6	31.9	4.0	0.0	57.8	58.1	74.0	16.2	15.9
2	5119.8	55.4	49.1	36.7	31.8	4.2	0.0	64.5	58.2	74.0	9.5	15.8
3	5360.0	45.0	43.4	36.5	31.8	4.4	0.0	54.0	52.4	74.0	20.0	21.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	11650.0	42.2	42.3	39.0	31.2	7.5	0.3	48.2	48.3	74.0	25.8	25.7
5*	17475.0	59.8	48.5	46.2	31.1	9.4	6.0	80.7	69.4	74.0	-	-
6	23300.0	45.9	45.8	39.5	30.5	6.4	0.0	51.8	51.7	74.0	22.2	22.3
Test distance 0.3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	29125.0	43.1	43.0	44.5	24.4	6.2	0.0	49.4	49.3	74.0	24.6	24.7
8	34950.0	50.6	50.7	44.1	24.4	6.5	0.0	56.8	56.9	74.0	17.2	17.1

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	4800.1	44.2	43.2	35.6	31.9	4.0	0.0	52.0	51.0	54.0	2.0	3.0
2	5119.8	44.8	40.3	36.7	31.8	4.2	0.0	53.9	49.4	54.0	0.1	4.6
3	5360.0	34.7	34.5	36.5	31.8	4.4	0.0	43.7	43.5	54.0	10.3	10.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	11650.0	30.1	30.2	39.0	31.2	7.5	0.3	36.1	36.2	54.0	17.9	17.8
5*	17475.0	45.6	36.3	46.2	31.1	9.4	6.0	66.5	57.2	54.0	-	-
6	23300.0	33.1	33.0	39.5	30.5	6.4	0.0	39.0	38.9	54.0	15.0	15.1
Test distance 0.3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
7	29125.0	30.5	30.6	44.5	24.4	6.2	0.0	36.8	36.9	54.0	17.2	17.1
8	34950.0	38.4	38.5	44.1	24.4	6.5	0.0	44.6	44.7	54.0	9.4	9.3

* Reference data

20dBc(Fundamental 5825MHz) (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 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
0	5825.0	99.5	95.2	36.6	31.7	4.6	0.0	109.0	104.7	-	-	-
5	17475.0	51.4	38.5	46.2	31.1	9.4	6.0	81.9	69.0	Funda-20dB	7.2	15.8

- *1) Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.54 \text{ dB}$
Test Distance 0.3m : Distance Factor(Dfac) = $20\log(3/0.3) = 20 \text{ dB}$
- *2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
- *3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
- *4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
- *5) In the frequency over the fourth harmonic, the noise from the EUT was not seen.The data above is its base noise.

Radiated Spurious Emission

COMPANY : CONTEC CO., LTD. EQUIPMENT : Wireless LAN MiniPCI Card User Unit MODEL : FX-DS540-MPCI6 SAMPLE NO. : C09A54400135C01 POWER : DC3.3V(AC120V/60Hz) MODE : Receiving (11b / CH6:2437MHz)	UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber REGULATION : Fcc Part15 Subpart B / RSS-210 / RSS-Gen TEST DISTANCE : 3m / 1m DATE : 02/28/2006 TEMPERATURE : 25deg.C HUMIDITY : 30% ENGINEER : Kenichi Adachi
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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	1080.1	52.0	52.3	23.1	33.7	2.3	0.0	43.6	43.9	74.0	30.4	30.1
2	1493.3	50.4	50.9	24.0	33.0	2.6	0.0	44.0	44.5	74.0	30.0	29.5
3	3249.5	44.2	48.0	31.6	32.1	3.2	0.0	47.0	50.8	74.0	27.0	23.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
	(Not found)	-	-	-	-	-	-	-	-	74.0	-	-

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	1080.1	47.4	48.0	23.1	33.7	2.3	0.0	39.0	39.6	54.0	15.0	14.4
2	1493.3	33.5	32.8	24.0	33.0	2.6	0.0	27.1	26.4	54.0	26.9	27.6
3	3249.5	33.3	43.3	31.6	32.1	3.2	0.0	36.1	46.1	54.0	17.9	7.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
	(Not found)	-	-	-	-	-	-	-	-	54.0	-	-

- *1) Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.54$ dB
*2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
*3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
*4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission

COMPANY : CONTEC CO., LTD. EQUIPMENT : Wireless LAN MiniPCI Card User Unit MODEL : FX-DS540-MPCI6 SAMPLE NO. : C09A54400135C01 POWER : DC3.3V(AC120V/60Hz) MODE : Receiving (11g / CH6:2437MHz)	UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber REGULATION : Fcc Part15 Subpart B / RSS-210 / RSS-Gen TEST DISTANCE : 3m / 1m DATE : 02/28/2006 TEMPERATURE : 25deg.C HUMIDITY : 30% ENGINEER : Kenichi Adachi
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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]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1080.0	51.7	52.1	23.1	33.7	2.3	0.0	43.3	43.7	74.0	30.7	30.3
2	1491.1	50.3	52.9	24.0	33.0	2.6	0.0	43.9	46.5	74.0	30.1	27.5
3	3249.2	44.0	46.3	31.6	32.1	3.2	0.0	46.8	49.1	74.0	27.2	24.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
	(Not found)	-	-	-	-	-	-	-	-	74.0	-	-

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
		[dBuV]						[dBuV/m]			[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	1080.0	47.5	48.2	23.1	33.7	2.3	0.0	39.1	39.8	54.0	14.9	14.2
2	1491.1	33.4	33.2	24.0	33.0	2.6	0.0	27.0	26.8	54.0	27.0	27.2
3	3249.2	33.0	41.6	31.6	32.1	3.2	0.0	35.8	44.4	54.0	18.2	9.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
	(Not found)	-	-	-	-	-	-	-	-	54.0	-	-

- *1) Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.54 \text{ dB}$
*2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
*3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
*4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission

COMPANY : CONTEC CO., LTD. EQUIPMENT : Wireless LAN MiniPCI Card User Unit MODEL : FX-DS540-MPCI6 SAMPLE NO. : C09A54400135C01 POWER : DC3.3V(AC120V/60Hz) MODE : Receiving (11a / CH164:5825MHz)	UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber REGULATION : Fcc Part15 Subpart B / RSS-210 / RSS-Gen TEST DISTANCE : 3m / 1m DATE : 02/28/2006 TEMPERATURE : 25deg.C HUMIDITY : 30% ENGINEER : Kenichi Adachi
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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	1080.1	51.1	51.9	23.1	33.7	2.3	0.0	42.7	43.5	74.0	31.3	30.5
2	1496.0	50.1	51.8	24.0	33.0	2.6	0.0	43.7	45.4	74.0	30.3	28.6
3	3883.3	43.8	44.6	31.6	32.1	3.2	0.0	46.6	47.4	74.0	27.4	26.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	17475.0	45.7	45.8	46.2	31.1	9.4	0.0	60.6	60.7	74.0	13.4	13.3

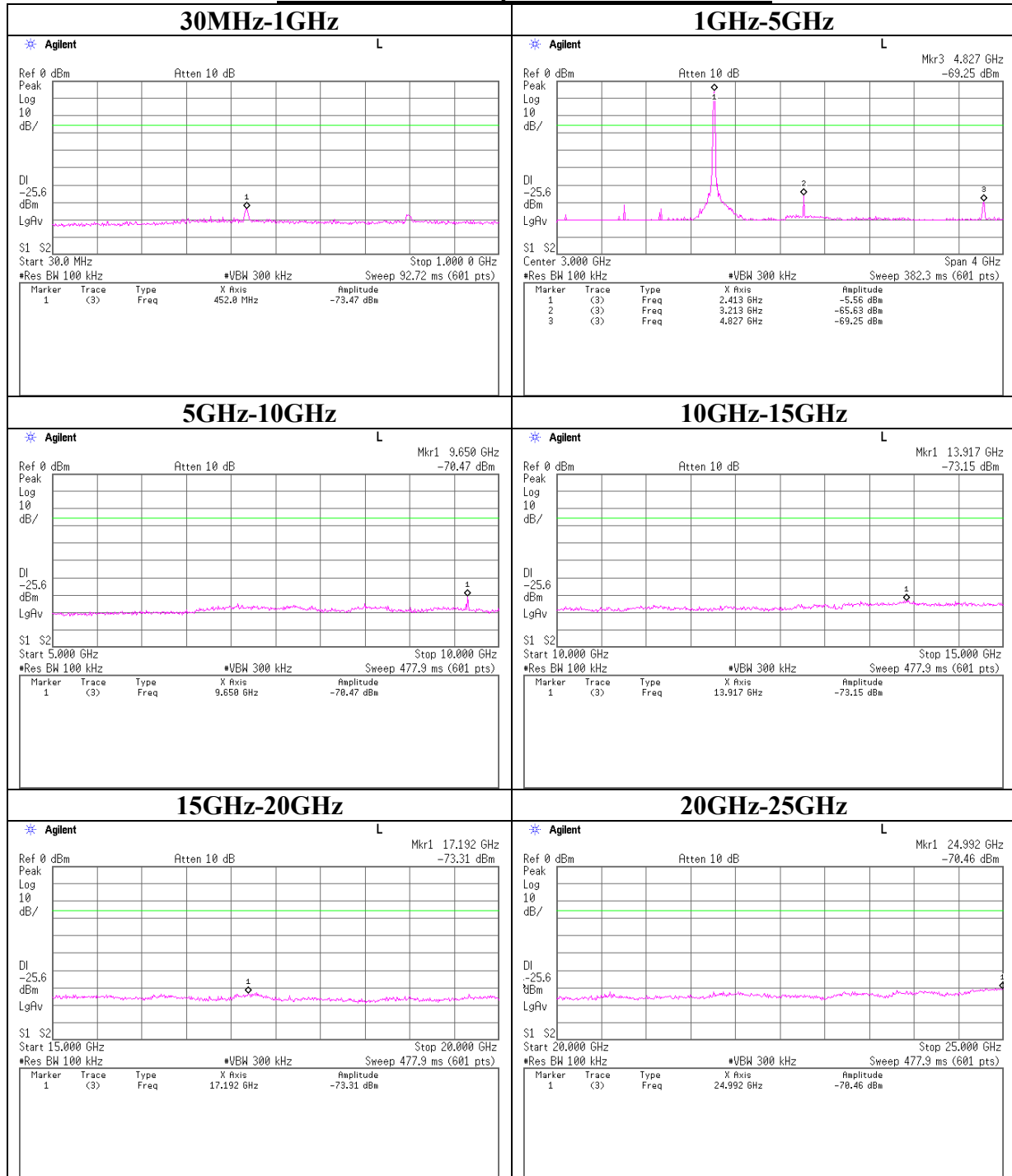
AV DETECT

(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	1080.1	46.9	48.0	23.1	33.7	2.3	0.0	38.5	39.6	54.0	15.5	14.4
2	1496.0	33.2	33.4	24.0	33.0	2.6	0.0	26.8	27.0	54.0	27.2	27.0
3	3883.3	33.8	34.9	31.6	32.1	3.2	0.0	36.6	37.7	54.0	17.4	16.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	17475.0	32.7	32.6	46.2	31.1	9.4	0.0	47.6	47.5	54.0	6.4	6.5

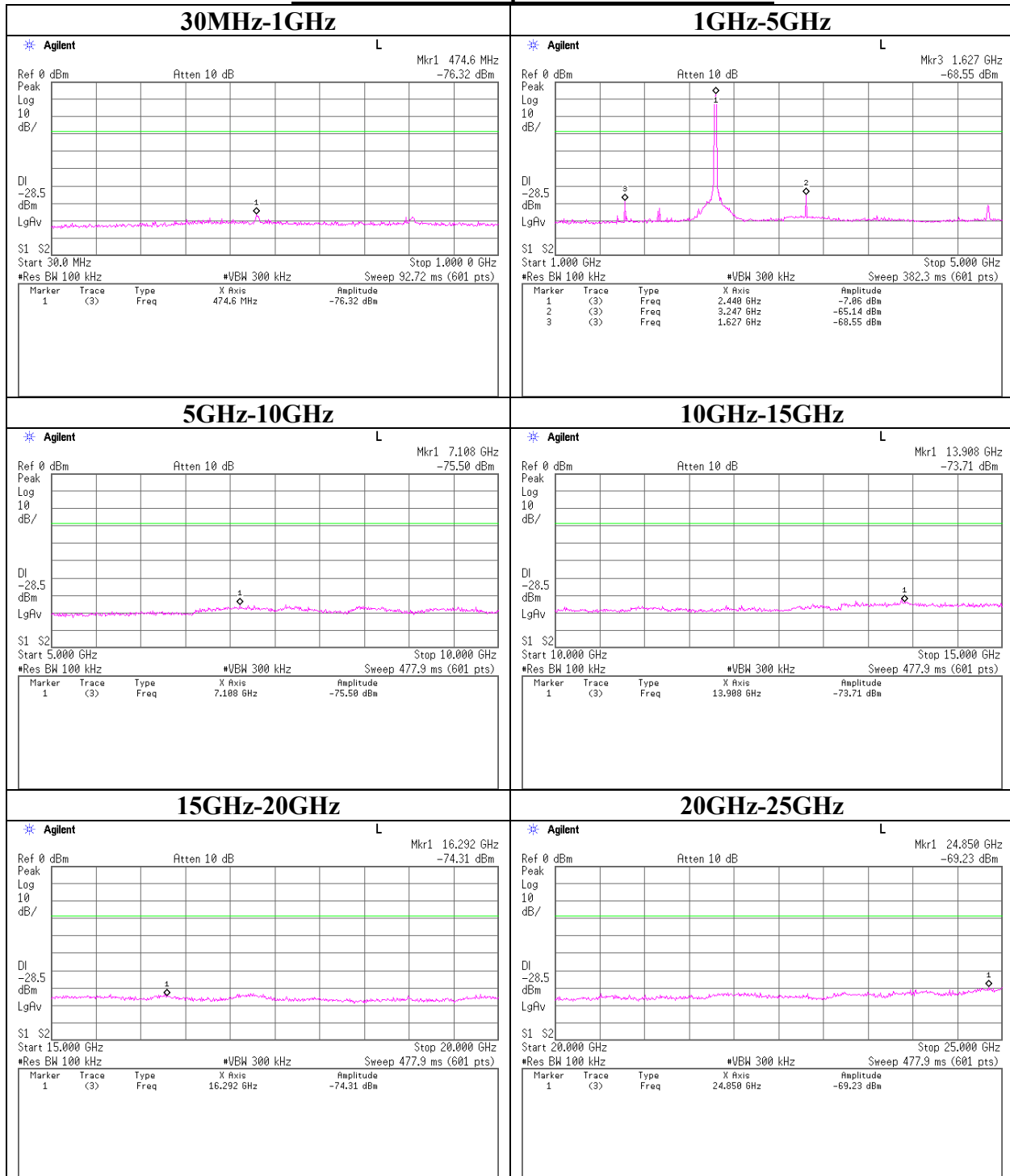
- *1) Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.54 \text{ dB}$
*2) Except for the above table : All other spurious emissions were less than 20dB for the limit.
*3) In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
*4) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Conducted Spurious Emission **IEEE802.11b 11Mbps Antenna:A Ch : Low**



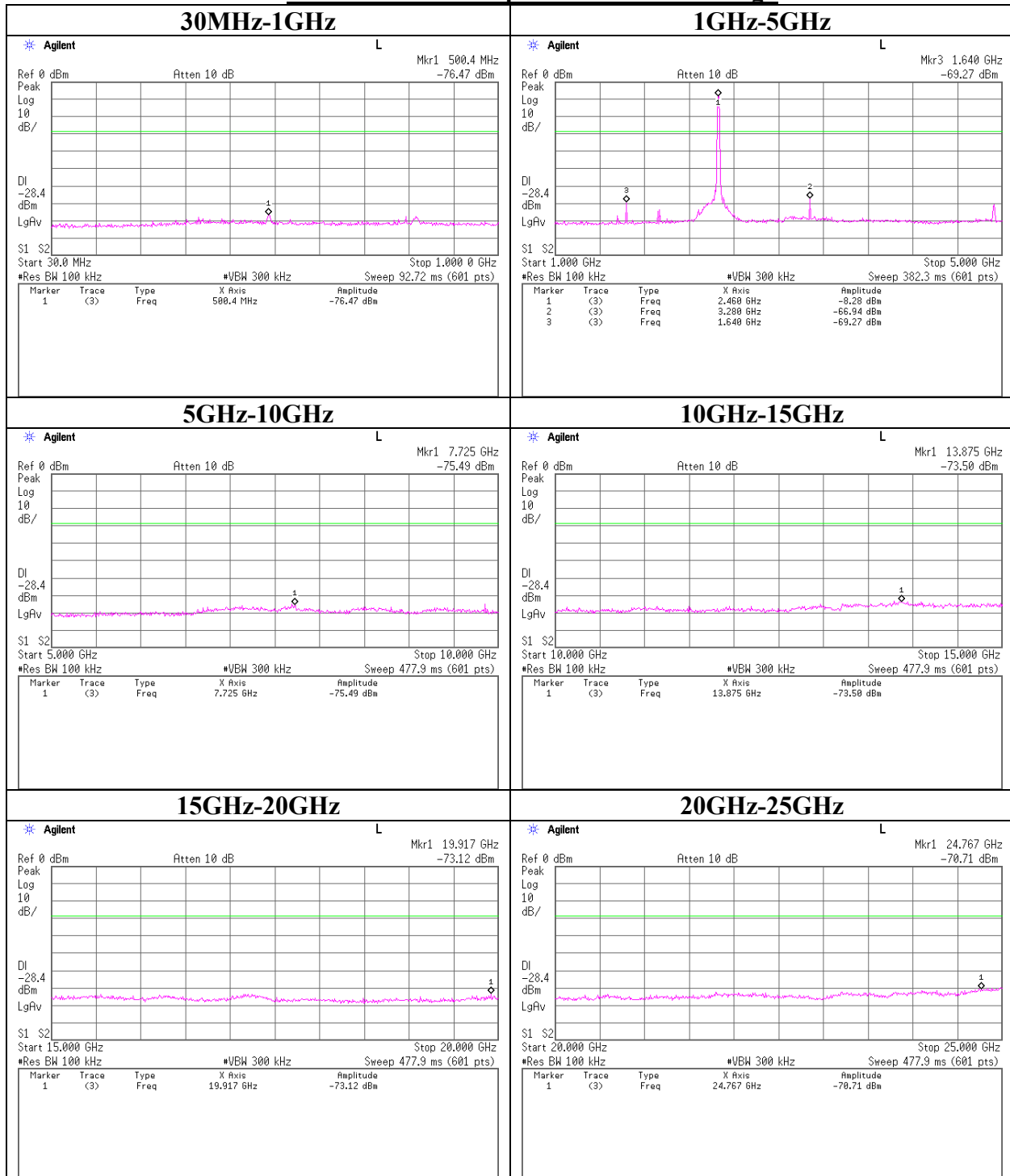
Conducted Spurious Emission

IEEE802.11b 11Mbps Antenna:A Ch : Mid

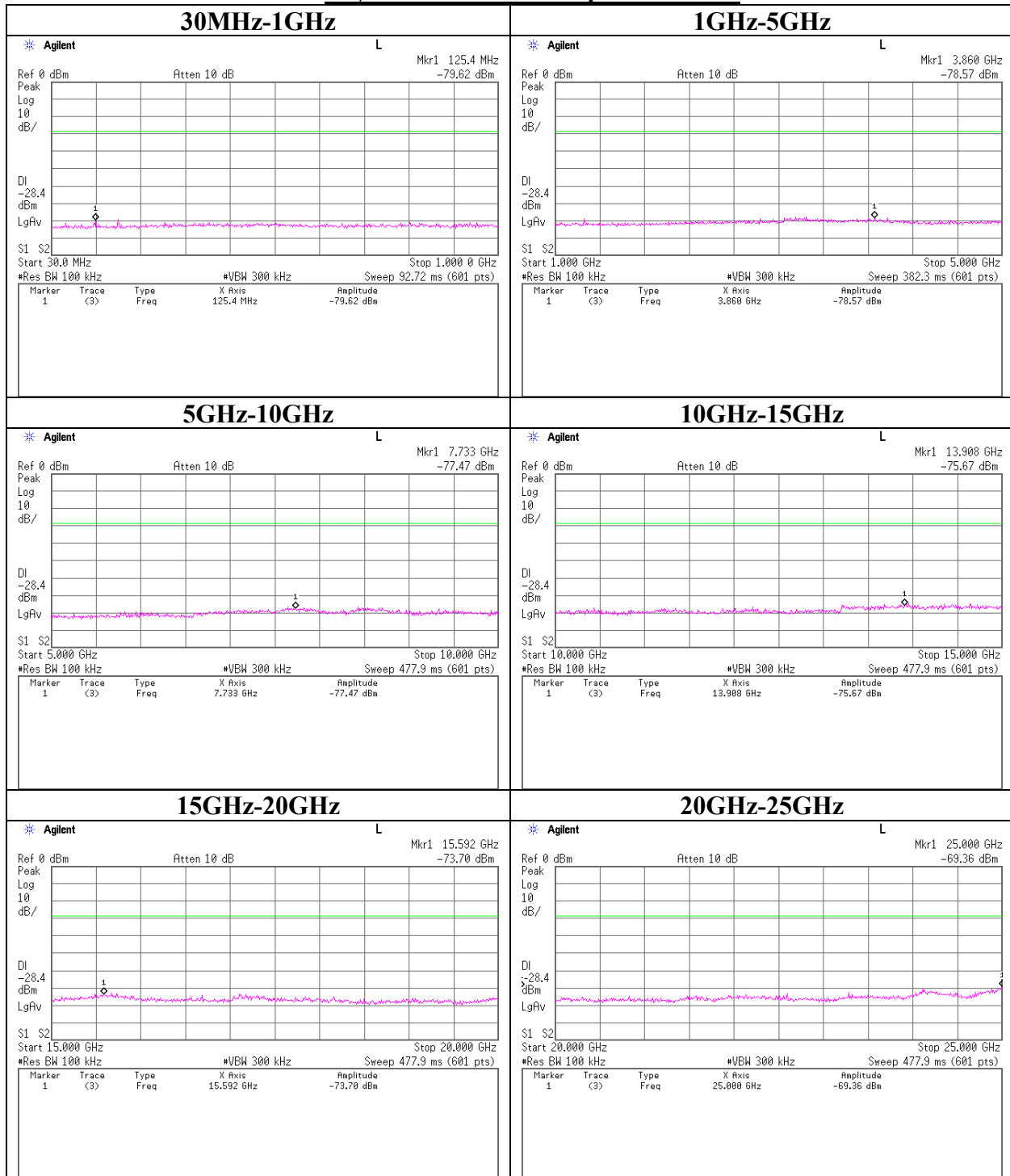


Conducted Spurious Emission

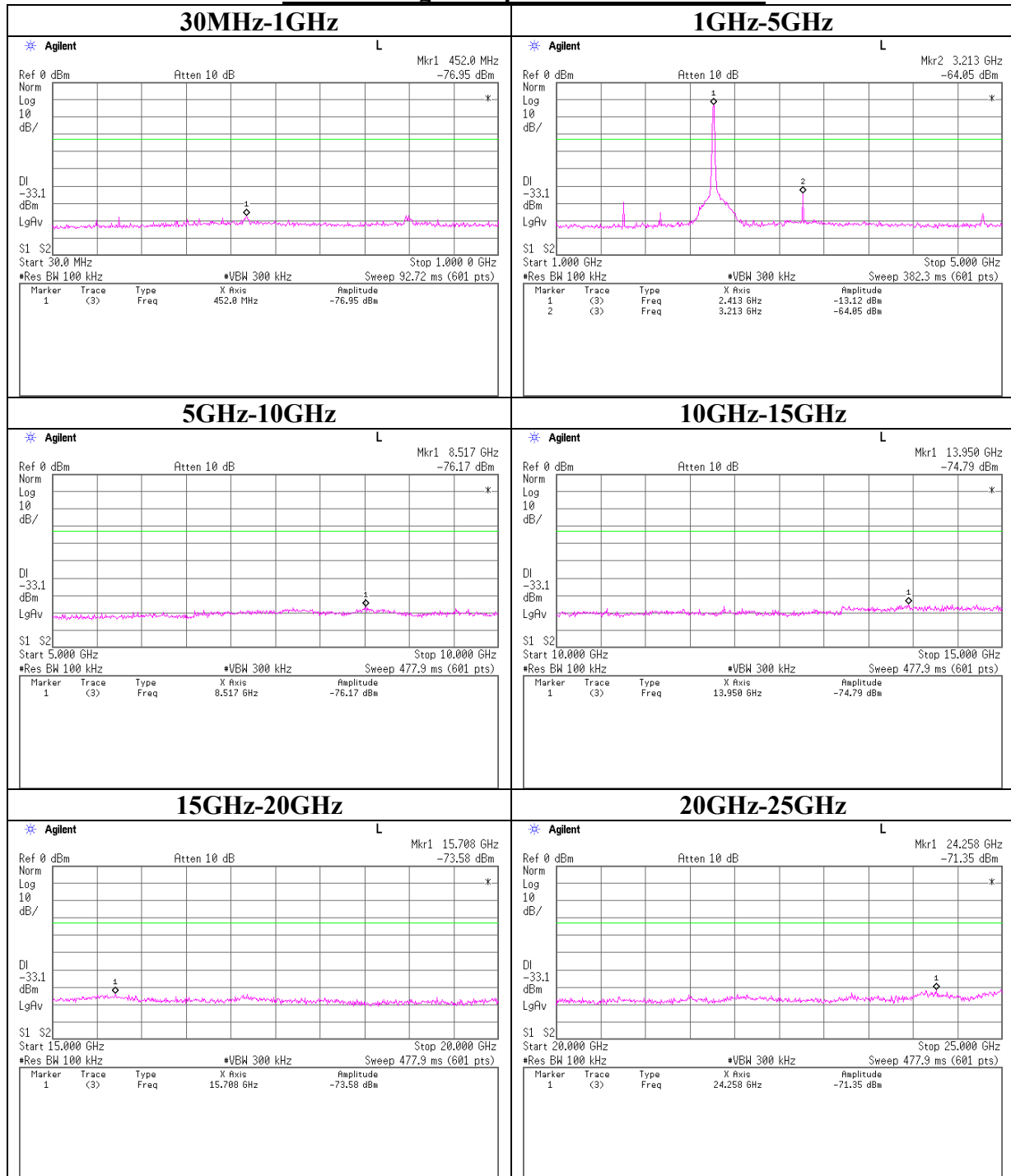
IEEE802.11b 11Mbps Antenna:A Ch : High



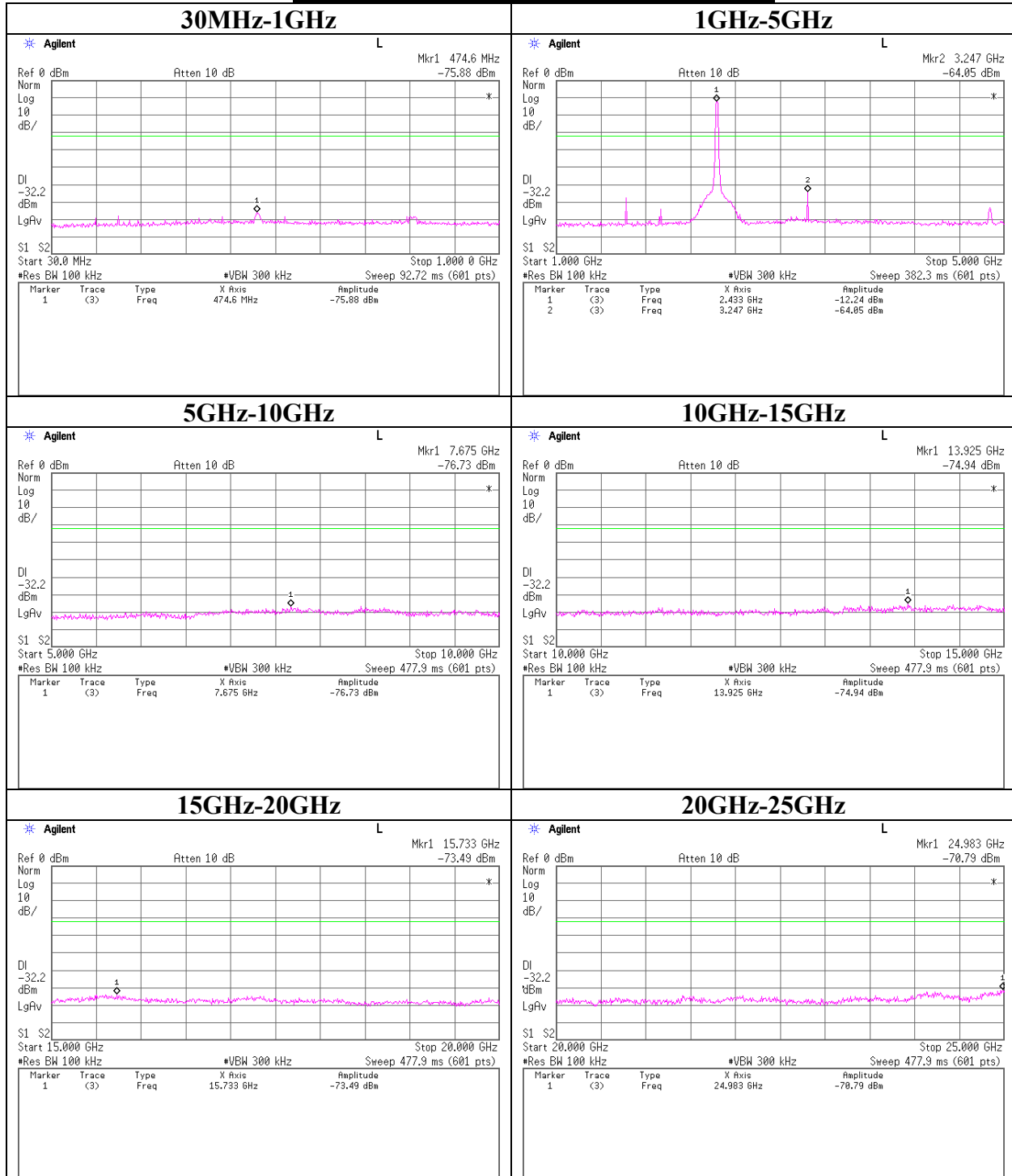
Conducted Spurious Emission
Rx, IEEE802.11b 11Mbps Antenna:A



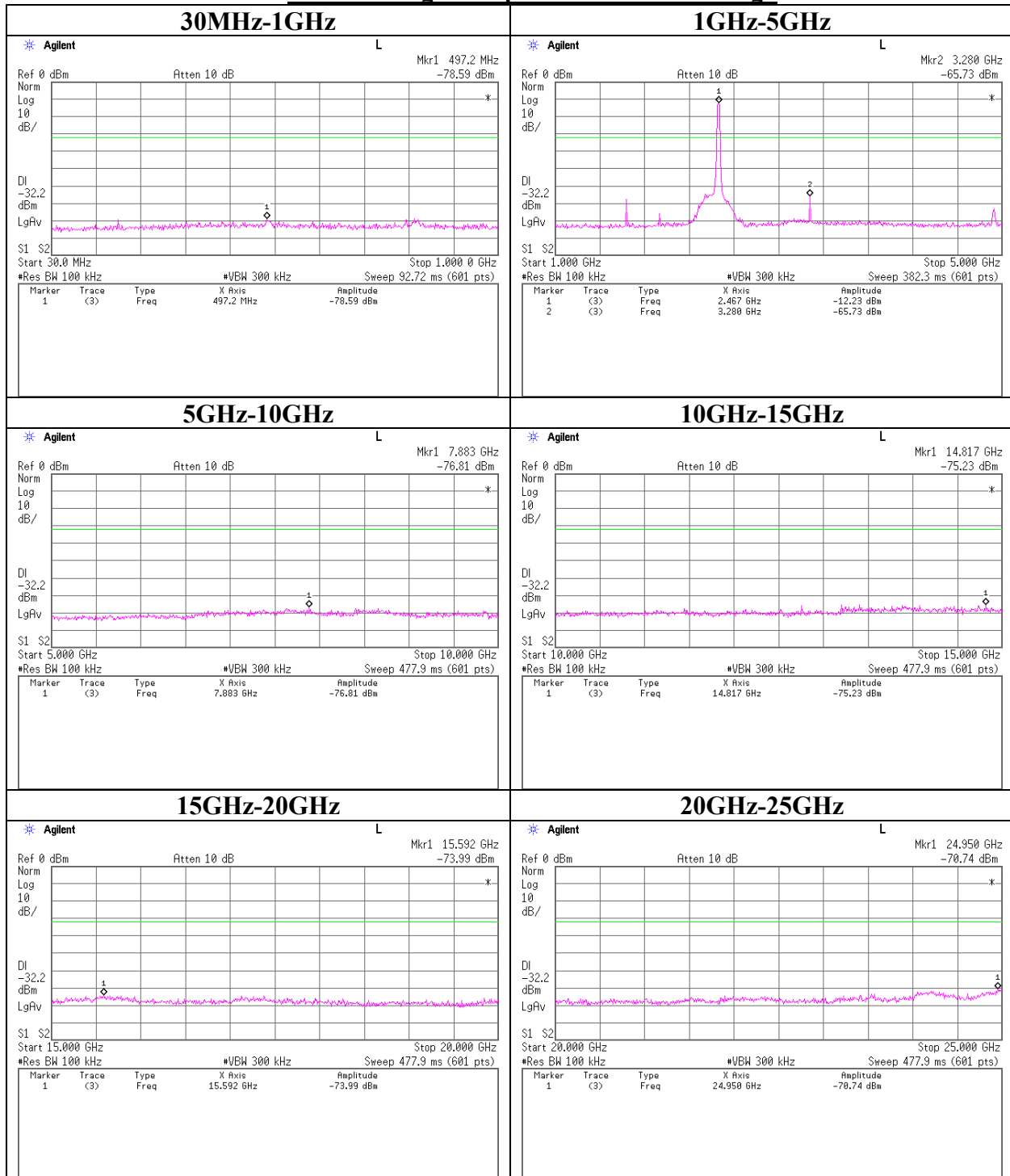
Conducted Spurious Emission
IEEE802.11g 24Mbps Antenna:A Ch : Low



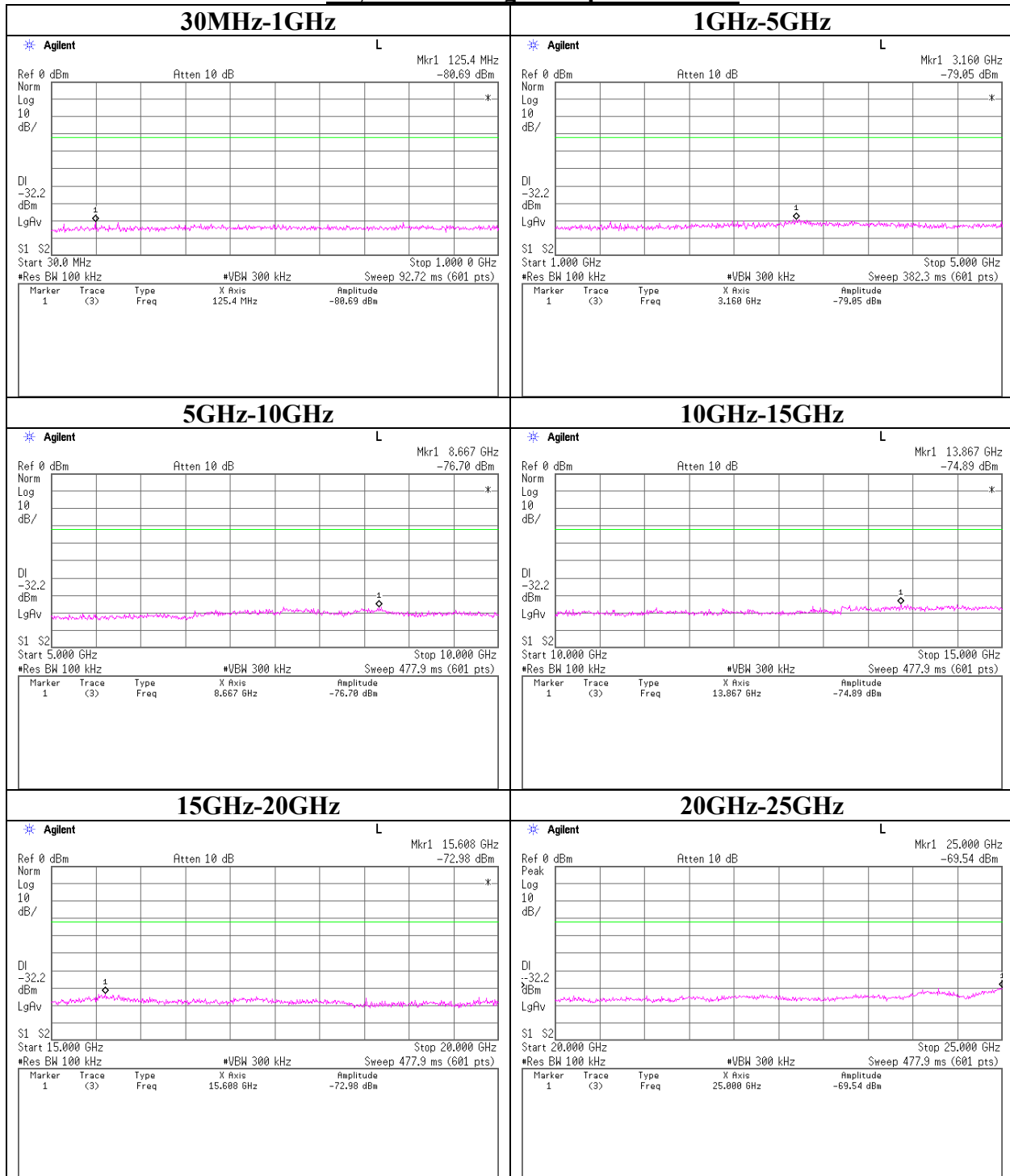
Conducted Spurious Emission
IEEE802.11g 24Mbps Antenna:A Ch : Mid



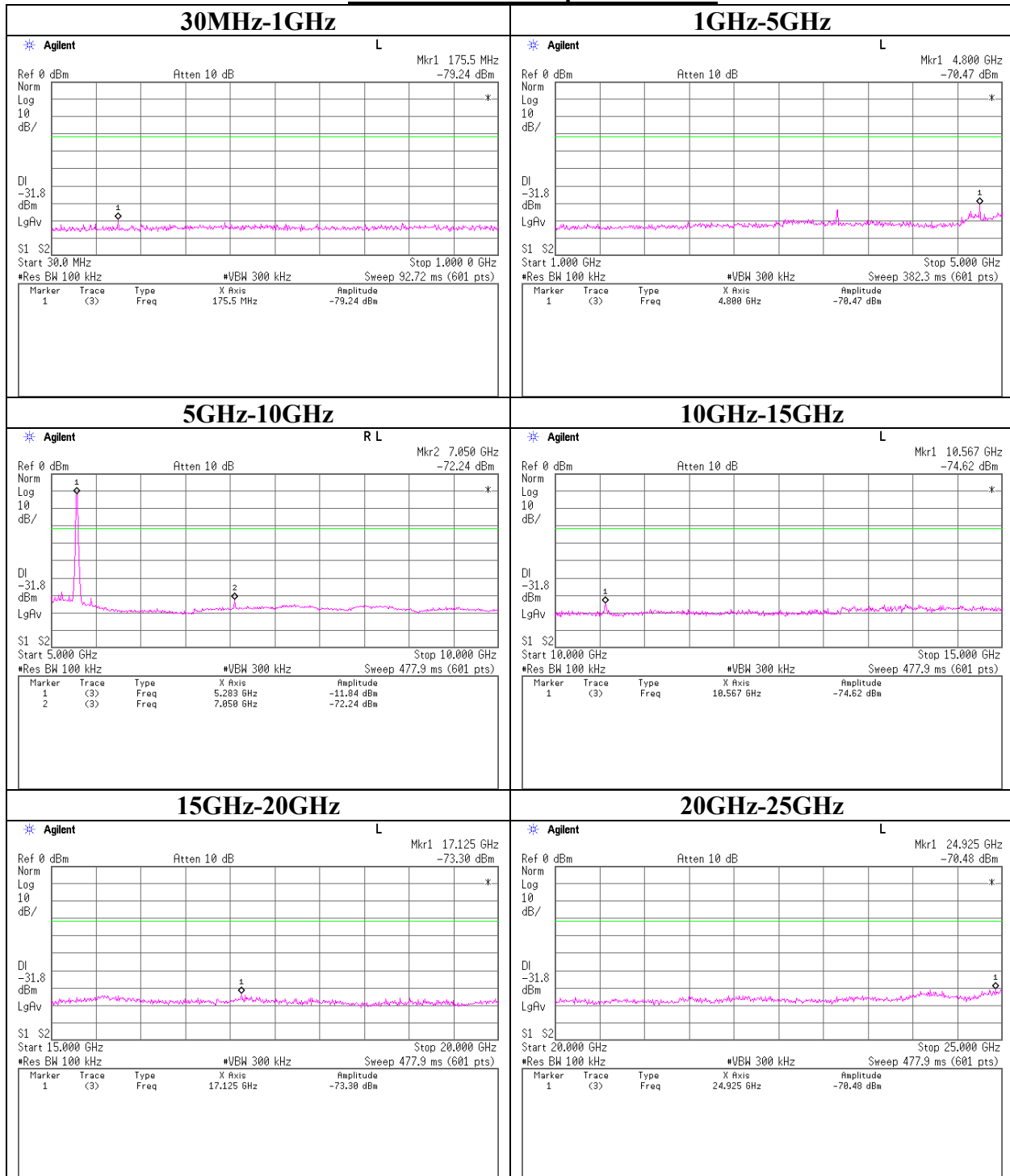
Conducted Spurious Emission
IEEE802.11g 24Mbps Antenna:A Ch : High



Conducted Spurious Emission
Rx, IEEE802.11g 24Mbps Antenna:B

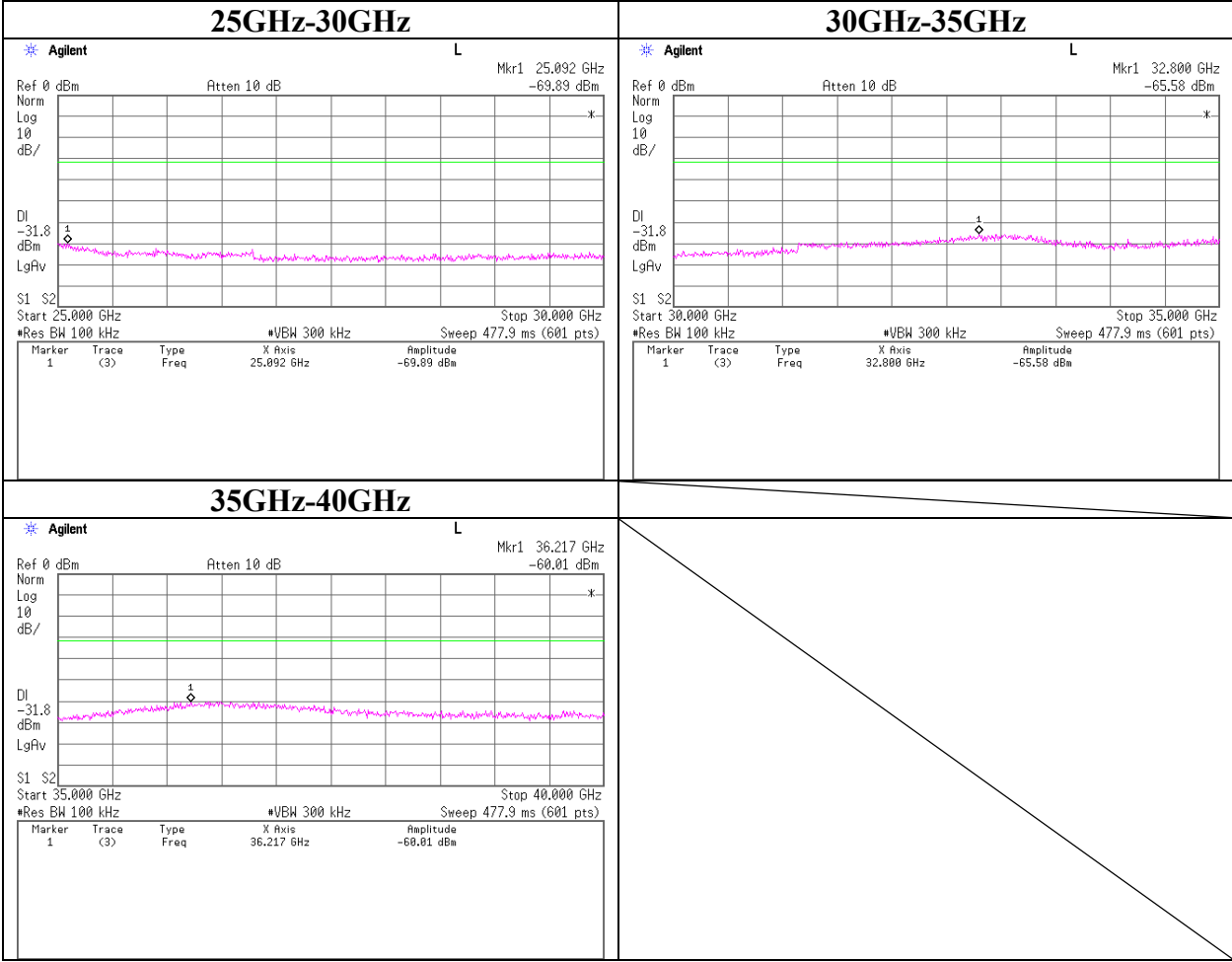


Conducted Spurious Emission
IEEE802.11a 24Mbps Antenna:A

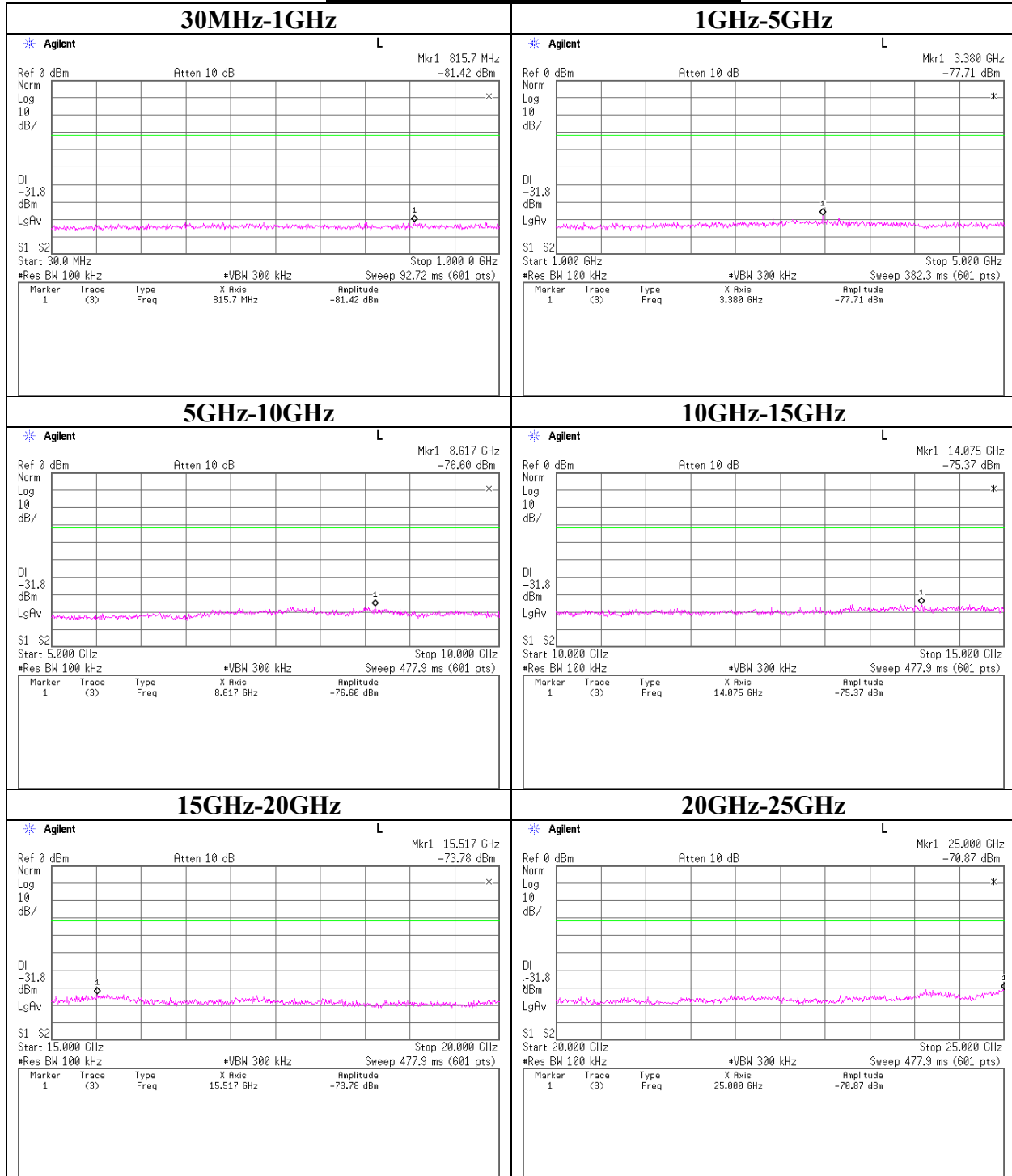


Conducted Spurious Emission

IEEE802.11a 24Mbps Antenna:A

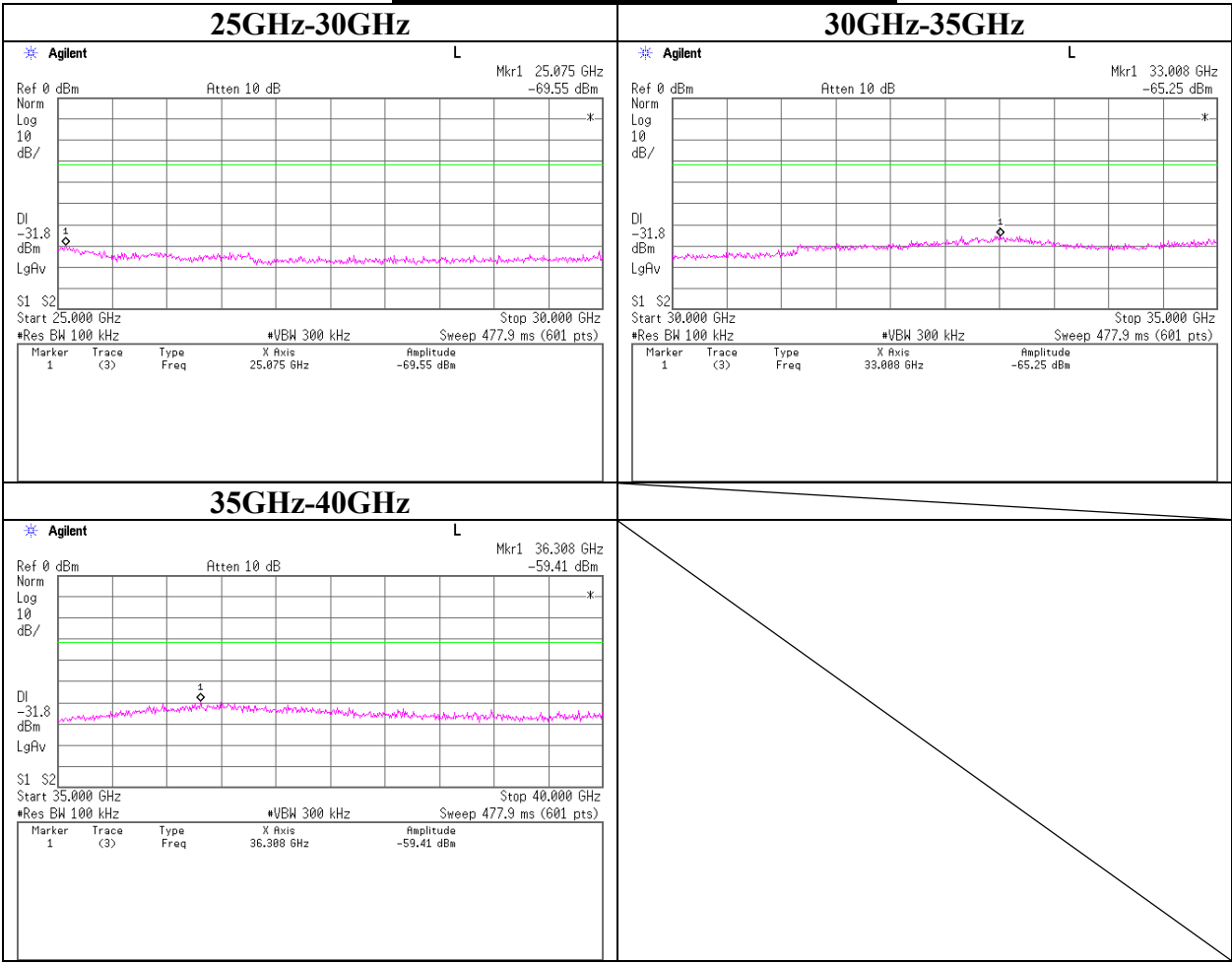


Conducted Spurious Emission
Rx, IEEE802.11a 24Mbps Antenna:A



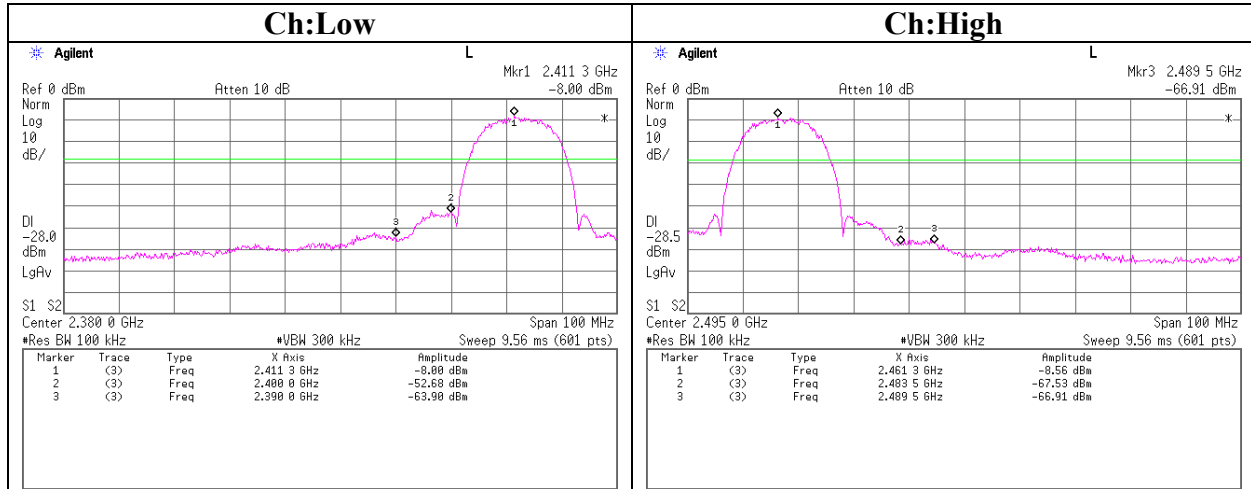
Conducted Spurious Emission

Rx, IEEE802.11a 24Mbps Antenna:A

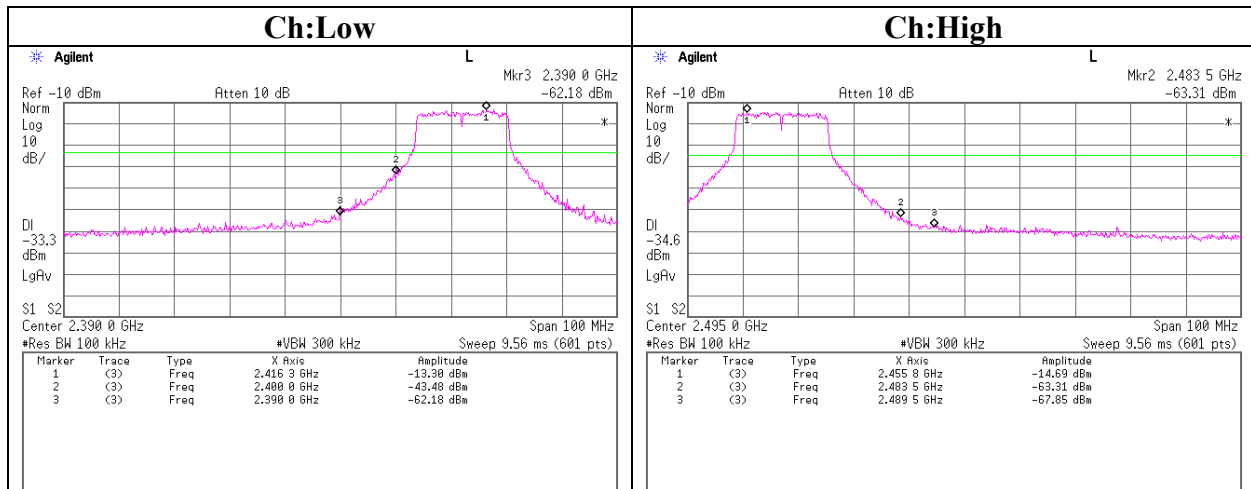


Conducted emission Band Edge compliance

IEEE802.11b 11Mbps Antenna:A

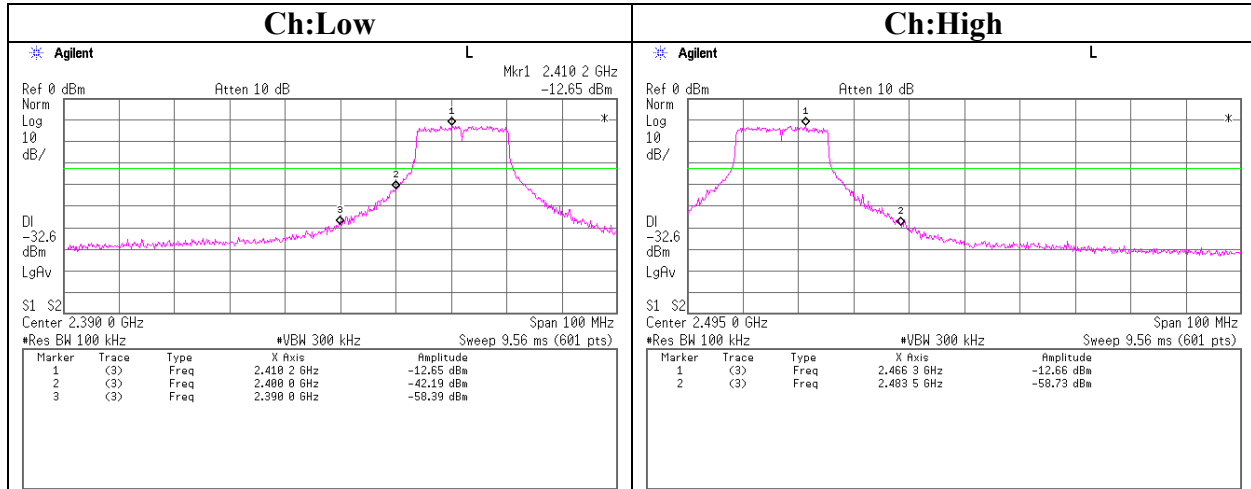


IEEE802.11g 54Mbps Antenna:A

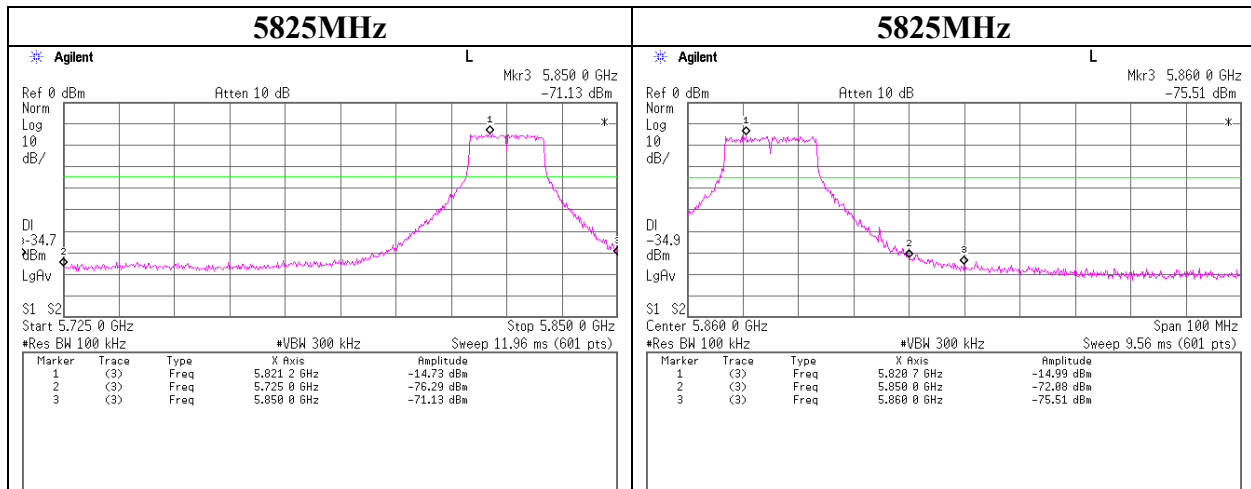


Conducted emission Band Edge compliance

IEEE802.11g 24Mbps Antenna:A



IEEE802.11a 24Mbps Antenna:A



Power Density

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

Company	: CONTEC CO., LTD.	REPORT NO	: 26FE0180-HO
Equipment	: Wireless LAN MiniPCI Card	REGULATION	: FCC 15.247(e)
Model	: FX-DS540-MPCI6	TEST DISTANCE	: -
Sample No.	: C09A5440017CC01	DATE	: 03/20/2006
Power	: DC3.3V	TEMPERATURE	: 23deg.C
Mode	: Tx IEEE 802.11a/b/g	HUMIDITY	: 30%
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	-19.71	2.20	10.0	-7.5	8.0	15.5
Mid	2437.0	-20.11	2.20	10.0	-7.9	8.0	15.9
High	2462.0	-20.91	2.20	10.0	-8.7	8.0	16.7

[IEEE802.11g : 24Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-25.03	2.20	10.0	-12.8	8.0	20.8
Mid	2437.0	-22.83	2.20	10.0	-10.6	8.0	18.6
High	2462.0	-23.49	2.20	10.0	-11.3	8.0	19.3

[IEEE802.11a : 24Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
-	5825.0	-25.60	3.40	10.0	-12.2	8.0	20.2

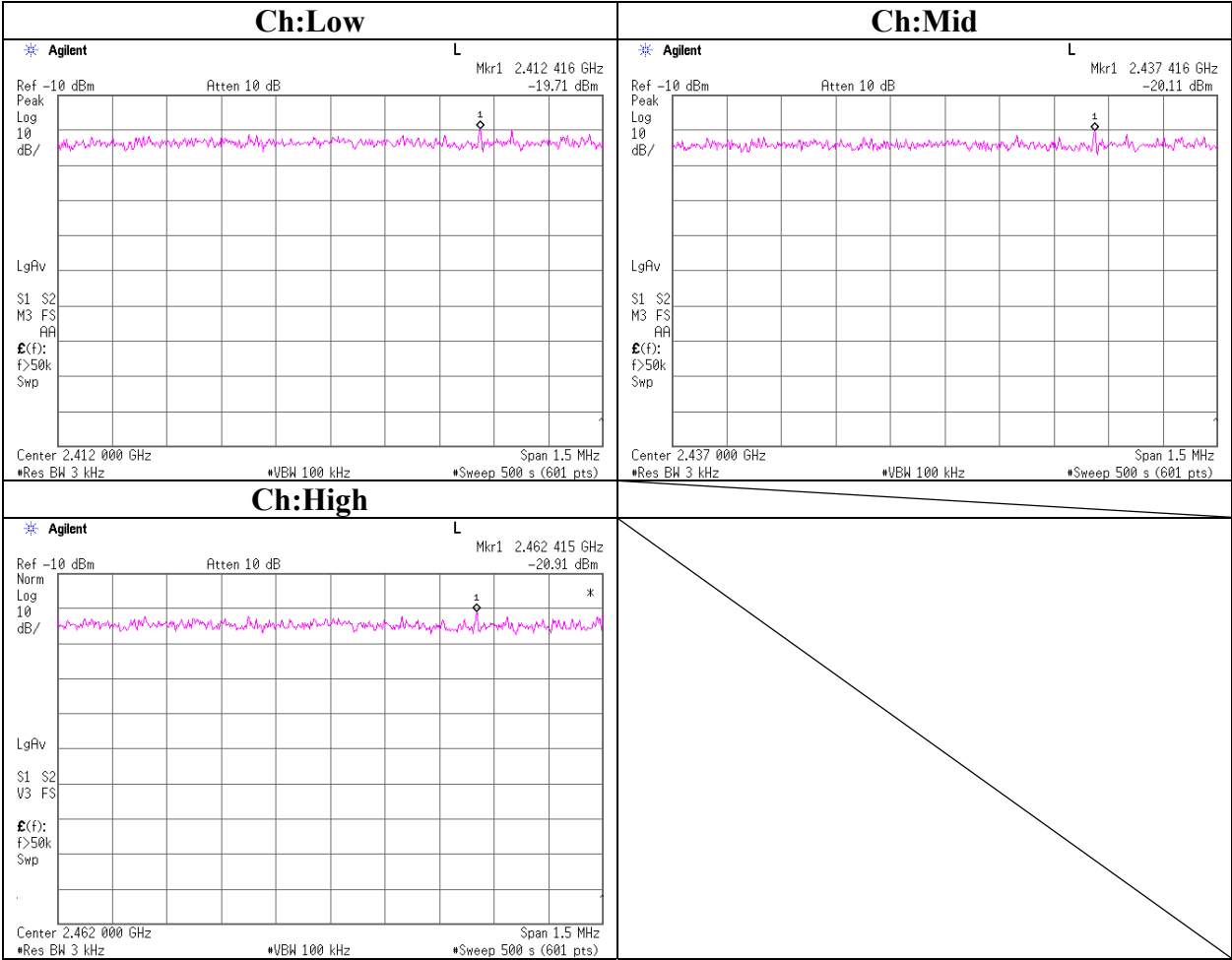
Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

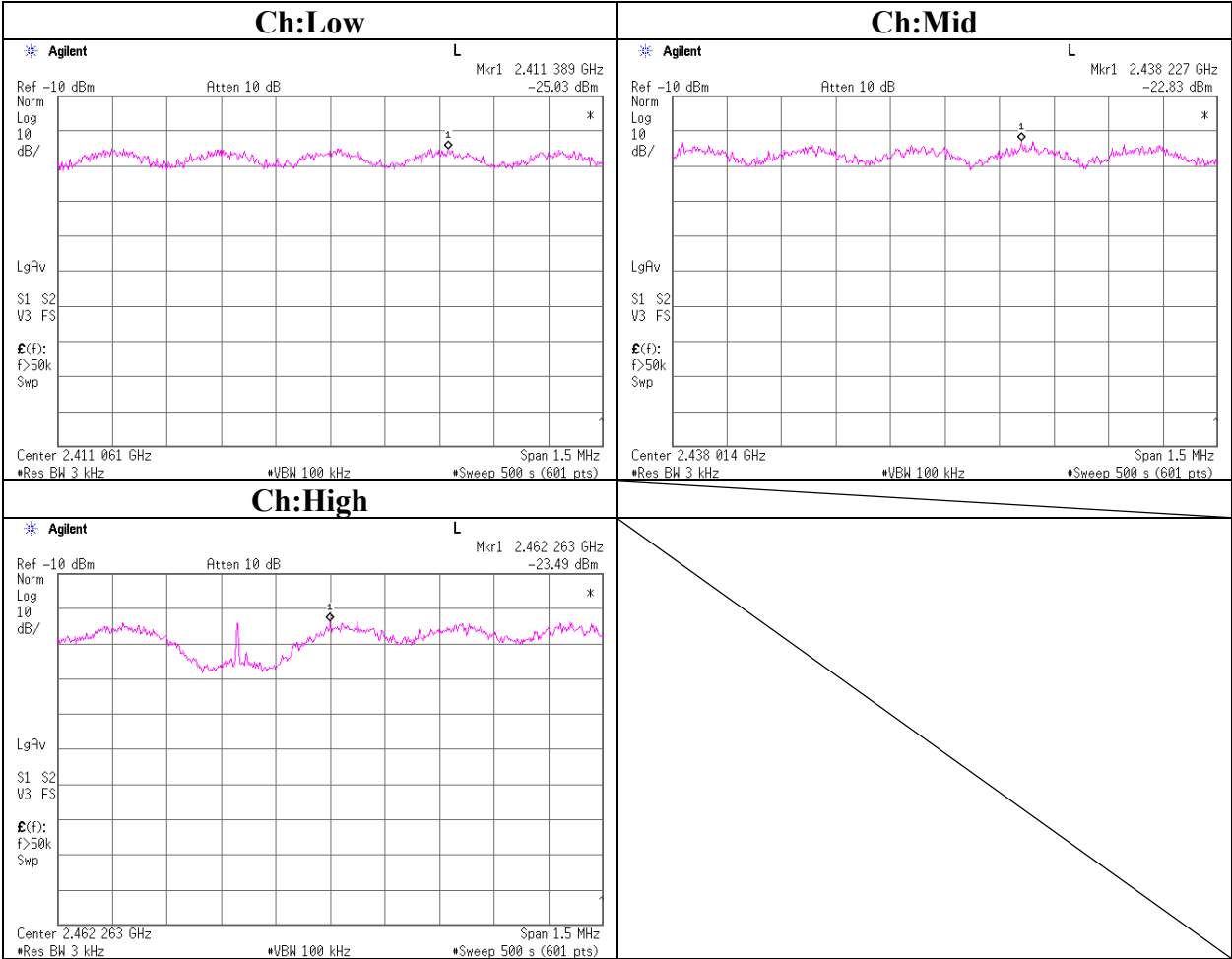
Power Density

IEEE802.11b 11Mbps Antenna:A



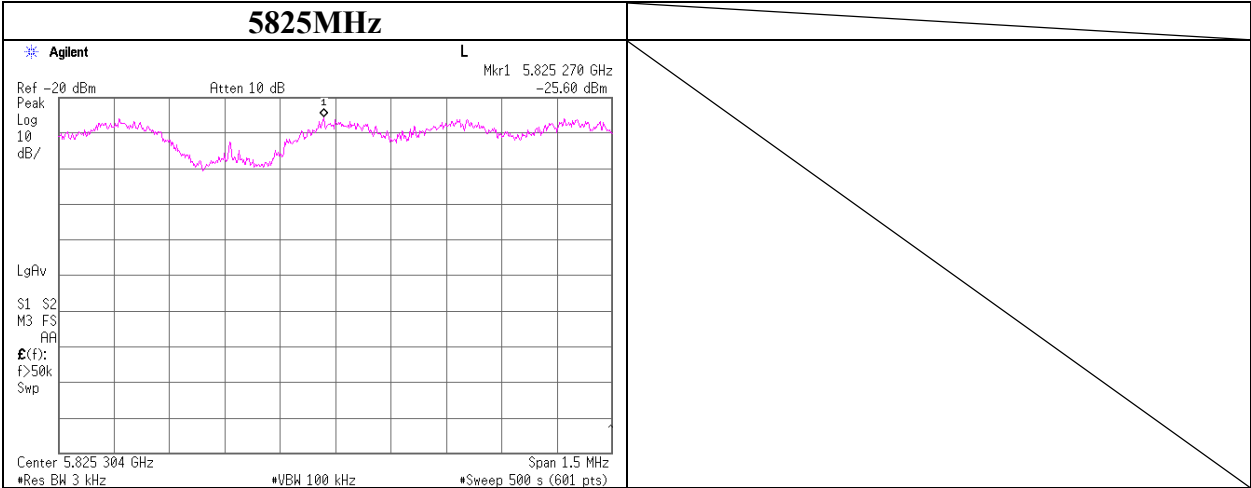
Power Density

IEEE802.11g 24Mbps Antenna:A



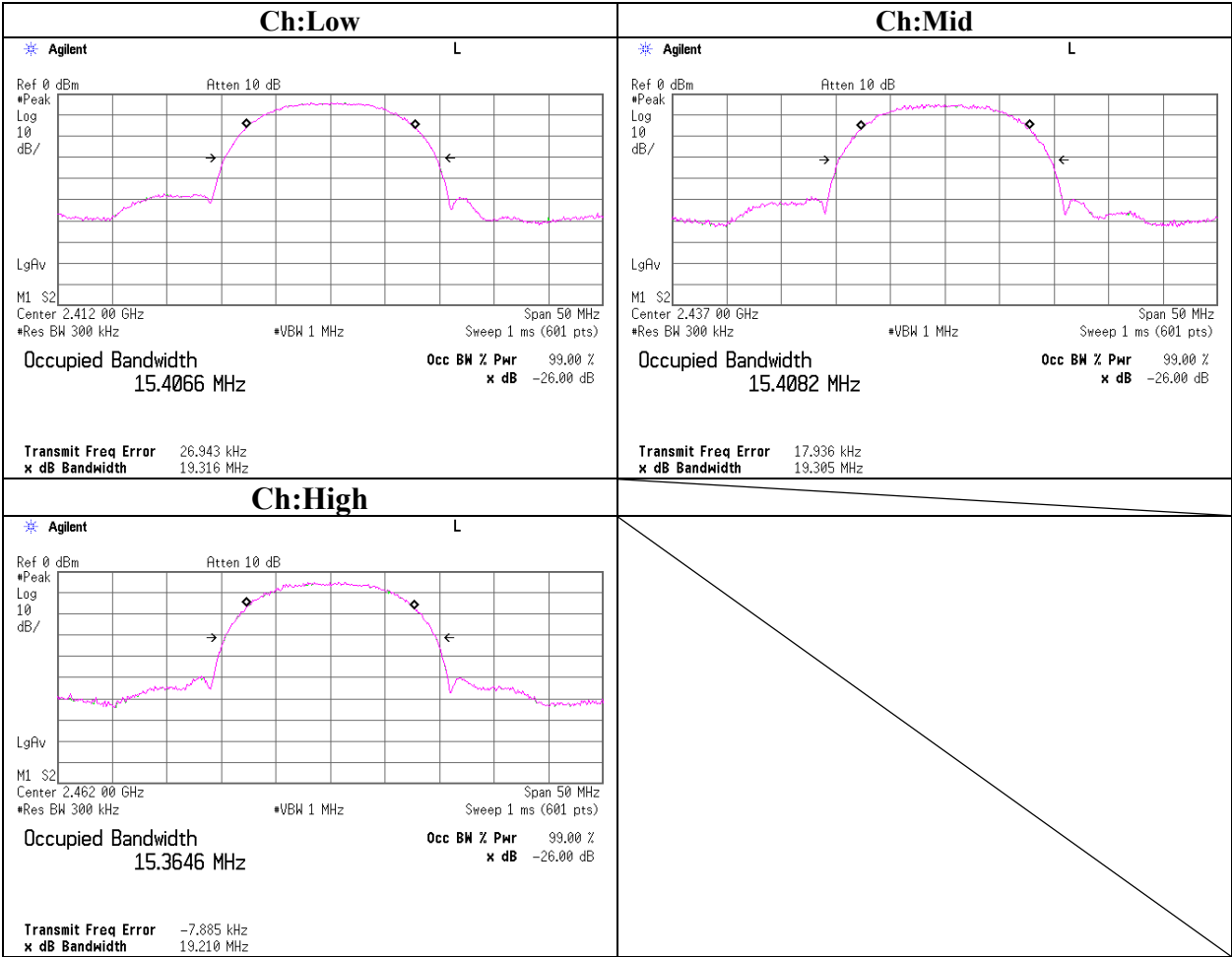
Power Density

IEEE802.11a 24Mbps Antenna:A



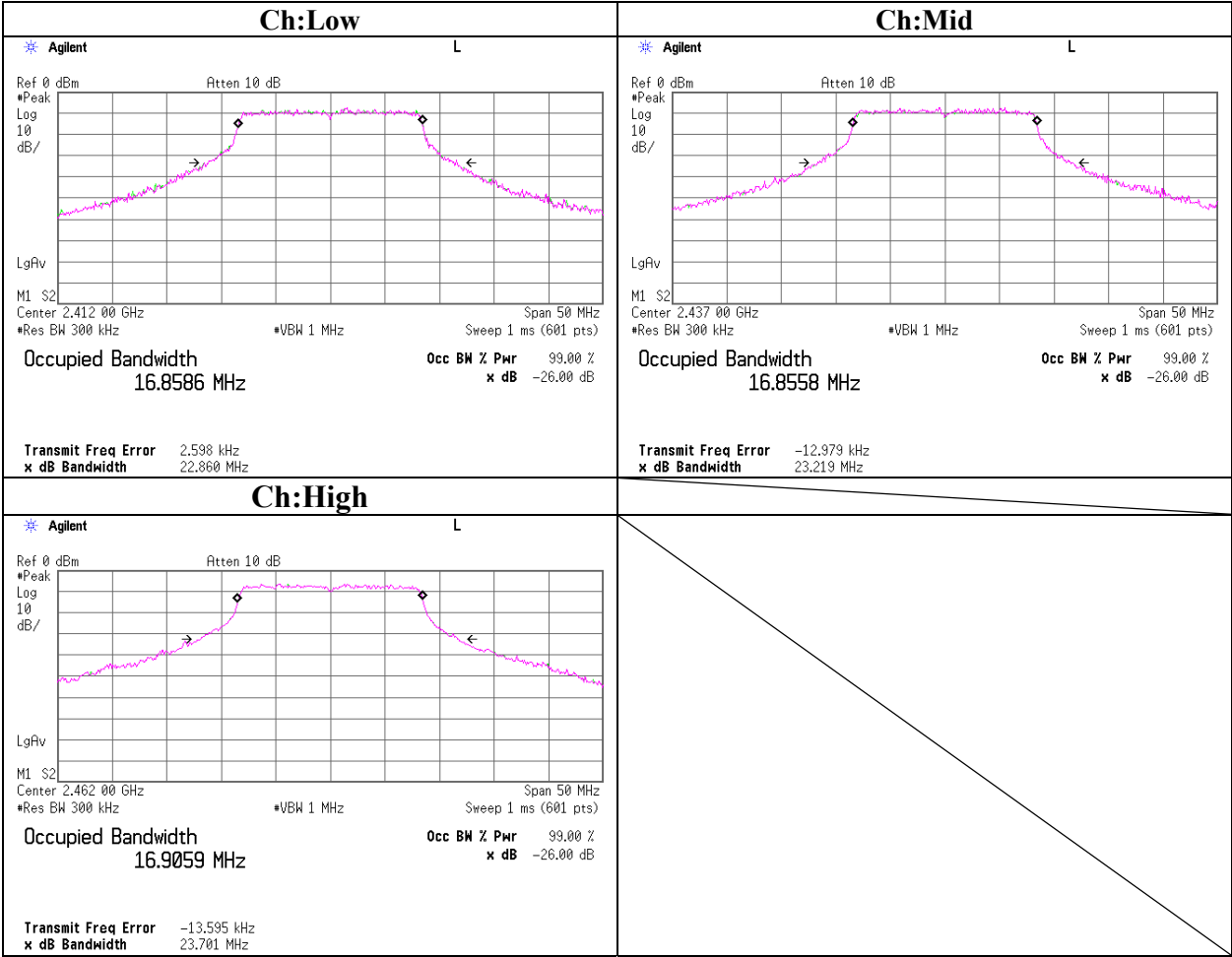
99%Occupied Bandwidth

IEEE802.11b 11Mbps Antenna:A



99%Occupied Bandwidth

IEEE802.11g 24Mbps Antenna:A



99%Occupied Bandwidth

IEEE802.11a 24Mbps Antenna:A

