Exhibit A: AC Powerline Conducted Emissions

FCC ID: EJM-X400

AC Powerline Conducted Emissions

Justification

The individuals and/or the organization requesting the test provided the modes, configurations and settings available to evaluate. While scanning the radiated emissions, all of the EUT parameters listed below were investigated. This includes, but may not be limited to, antennas, tuned transmit frequency ranges, operating modes, and data rates.

Channels in Specified Band Investigated:
High
Mid
Low

Operating Modes Investigated:
Typical

Data Rates Investigated:
Maximum

Output Power Setting(s) Investigated:
Maximum

Power Input Settings Investigated:
120 VAC, 60 Hz.

Frequency Range Investigated			
Start Frequency	450KHz	Stop Frequency	30MHz

Software\Firmware Applied During Test			
Exercise software	Standard Production Software	Version	2.1.0.104-4400
Description			
The system was tested using standard operating production software to exercise the functions of the device during the testing. The software resides in Flash on the baseboard of the EUT.			

Equipment Modifications

No EMI suppression devices were added or modified. The EUT was tested as delivered.

EUT and Peripherals

Description	Manufacturer	Model/Part Number	Serial Number
Radio Module	Intel Corporation	WL-350F V05	00904B0A83FD
EUT	Intel Corporation	AnyPoint DSL Gateway 4400	0007E9036749
EUT Power Supply	CUI Stack	TEAD-48-121200UT	0210

AC Powerline Conducted Emissions

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power	No	1.5	No	EUT Power Supply	EUT
AC Power	No	1.8	No	EUT Power Supply	AC Mains
CAT 5 E-net	No	1.0	No	EUT	Unterminated
CAT 5 E-net	No	1.0	No	EUT	Unterminated
Telecom	No	1.7	No	EUT	600 ohm termination

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Measurement Equipment

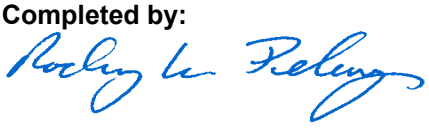
Description	Manufacturer	Model	Identifier	Last Cal	Interval
Spectrum Analyzer	Hewlett-Packard	8566B	AAL	03/19/2002	12 mo
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQF	03/19/2002	12 mo
LISN	Solar	9252-50-R-24-BNC	LIP	05/28/2002	12 mo
High Pass Filter	TTE	H97-100k-50-720B	HFC	12/11/2001	12 mo

Test Description

Requirement: Per 47 15.207(d), if the EUT is connected to the AC power line indirectly, obtaining its power from another device that is connected to the AC power line, then it should be tested to demonstrate compliance with the conducted limits of 15.207.

Configuration: The 4400 and 1400 use the same radio module, antennas, power supply, base board layout, and enclosure. The difference is the 4400 has a DSL interface, and the 1400 has an Ethernet interface. Since the power supply and the radio module are the same, the test was performed in a representative system: the 4400. The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band. The EUT was transmitting at its maximum data rate. For each mode, the spectrum was scanned from 450 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.4-1992.

Completed by:



NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

REV df2.02 05/20/2002

EUT:	AnyPoint DSL Gateway 4400			Work Order:	INTE4561
Serial Number:	0007E9036749			Date:	5/30/02 15:01
Customer:	Intel Corporation			Temperature:	72
Attendees:	Mike Espig			Humidity:	45%
Cust. Ref. No.:				Barometric Pressure	30.12
Tested by:	Rod Peloquin	Power:	120 V, 60 Hz	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15 Class B	Year:	2000
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

High Channel, Modulated by stream of ""1010101"" data at maximum data rate, maximum output power. WL-350F installed in EUT.

EUT OPERATING MODES

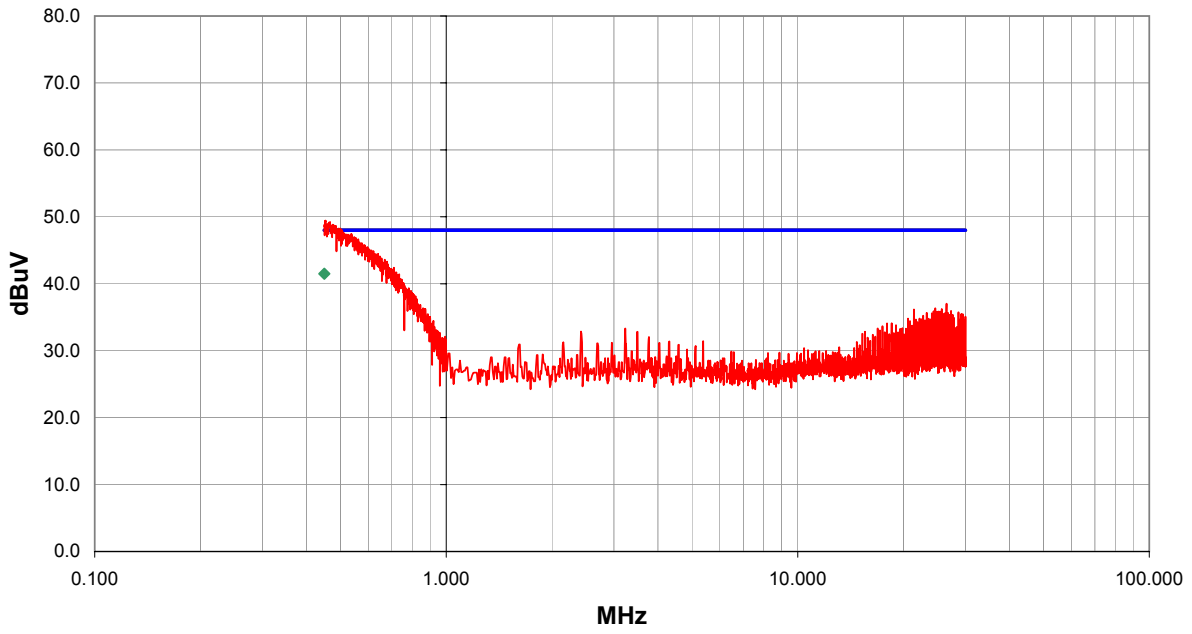
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Line	Run #
Pass	L1	1

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.450	21.5			0.0	0.0	20.0		QP		41.5	48.0	-6.5
0.454	29.2			0.0	0.2	20.0				49.4	48.0	1.4
0.467	29.0			0.0	0.2	20.0				49.2	48.0	1.2
0.500	28.0			0.0	0.2	20.0				48.2	48.0	0.2
0.504	27.8			0.0	0.2	20.0				48.0	48.0	0.0
0.589	25.3			0.0	0.3	20.0				45.6	48.0	-2.4
0.620	24.6			0.0	0.3	20.0				44.9	48.0	-3.1
0.640	24.2			0.0	0.3	20.0				44.5	48.0	-3.5
0.668	23.3			0.0	0.3	20.0				43.6	48.0	-4.4
0.678	23.0			0.0	0.3	20.0				43.3	48.0	-4.7
0.710	22.1			0.0	0.3	20.0				42.4	48.0	-5.6
0.721	21.4			0.0	0.3	20.0				41.7	48.0	-6.3
0.715	21.4			0.0	0.3	20.0				41.7	48.0	-6.3
0.735	21.1			0.0	0.3	20.0				41.4	48.0	-6.6
0.761	19.4			0.0	0.3	20.0				39.7	48.0	-8.3
0.783	19.0			0.0	0.3	20.0				39.3	48.0	-8.7
0.794	18.6			0.0	0.3	20.0				38.9	48.0	-9.1
0.807	18.1			0.0	0.3	20.0				38.4	48.0	-9.6
0.817	17.8			0.0	0.3	20.0				38.1	48.0	-9.9
26.507	15.3			0.0	1.7	20.0				37.0	48.0	-11.0
0.832	16.6			0.0	0.3	20.0				36.9	48.0	-11.1

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

REV df2.02 05/20/2002

EUT:	AnyPoint DSL Gateway 4400			Work Order:	INTE4561
Serial Number:	0007E9036749			Date:	5/30/02 15:09
Customer:	Intel Corporation			Temperature:	72
Attendees:	Mike Espig			Humidity:	45%
Cust. Ref. No.:				Barometric Pressure	30.12
Tested by:	Rod Peloquin	Power:	120 V, 60 Hz	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15 Class B	Year:	2000
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

High Channel, Modulated by stream of ""1010101"" data at maximum data rate, maximum output power. WL-350F installed in EUT.

EUT OPERATING MODES

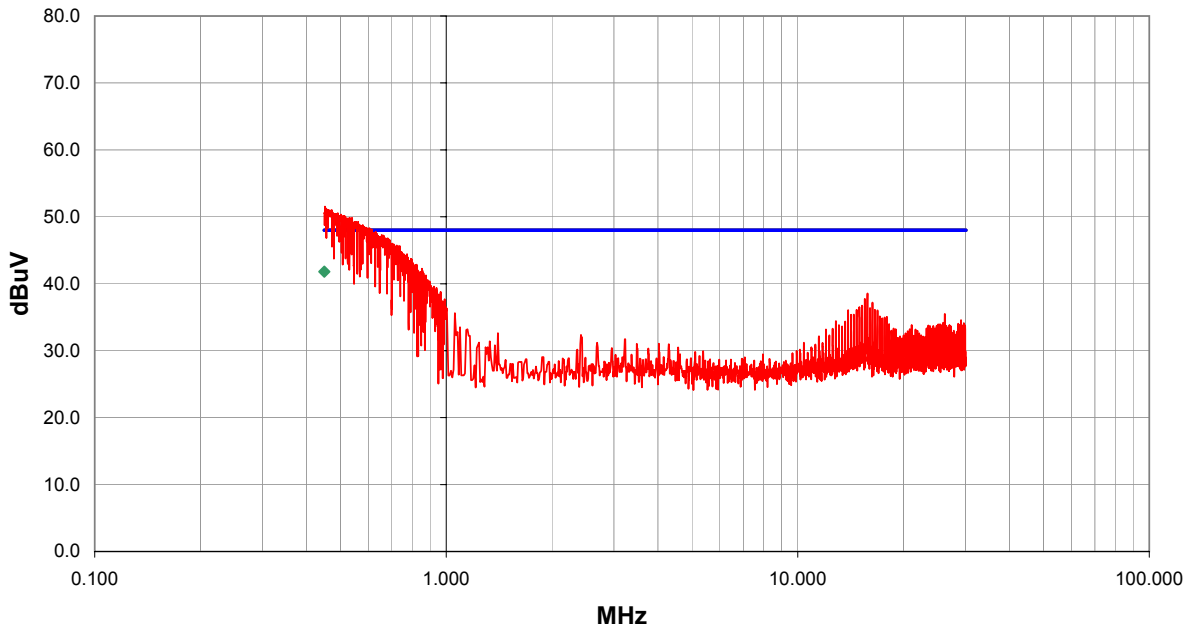
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Line	Run #
Pass	N	2

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.450	21.8			0.0	0.0	20.0		QP		41.8	48.0	-6.2
0.452	31.3			0.0	0.2	20.0				51.5	48.0	3.5
0.457	30.9			0.0	0.2	20.0				51.1	48.0	3.1
0.472	30.8			0.0	0.2	20.0				51.0	48.0	3.0
0.474	30.5			0.0	0.2	20.0				50.7	48.0	2.7
0.491	30.3			0.0	0.2	20.0				50.5	48.0	2.5
0.486	30.2			0.0	0.2	20.0				50.4	48.0	2.4
0.502	30.1			0.0	0.2	20.0				50.3	48.0	2.3
0.512	29.9			0.0	0.3	20.0				50.2	48.0	2.2
0.516	29.8			0.0	0.3	20.0				50.1	48.0	2.1
0.506	29.7			0.0	0.3	20.0				50.0	48.0	2.0
0.540	29.6			0.0	0.3	20.0				49.9	48.0	1.9
0.531	29.6			0.0	0.3	20.0				49.9	48.0	1.9
0.528	29.5			0.0	0.3	20.0				49.8	48.0	1.8
0.521	29.5			0.0	0.3	20.0				49.8	48.0	1.8
0.537	29.3			0.0	0.3	20.0				49.6	48.0	1.6
0.561	29.0			0.0	0.3	20.0				49.3	48.0	1.3
0.552	29.0			0.0	0.3	20.0				49.3	48.0	1.3
0.579	28.5			0.0	0.3	20.0				48.8	48.0	0.8
0.568	28.5			0.0	0.3	20.0				48.8	48.0	0.8
0.574	28.4			0.0	0.3	20.0				48.7	48.0	0.7

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

REV df2.02 05/20/2002

EUT:	AnyPoint DSL Gateway 4400			Work Order:	INTE4561
Serial Number:	0007E9036749			Date:	5/30/02 15:18
Customer:	Intel Corporation			Temperature:	72
Attendees:	Mike Espig			Humidity:	45%
Cust. Ref. No.:				Barometric Pressure	30.12
Tested by:	Rod Peloquin	Power:	120 V, 60 Hz	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15 Class B	Year:	2000
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

Mid Channel, Modulated by stream of ""1010101"" data at maximum data rate, maximum output power. WL-350F installed in EUT.

EUT OPERATING MODES

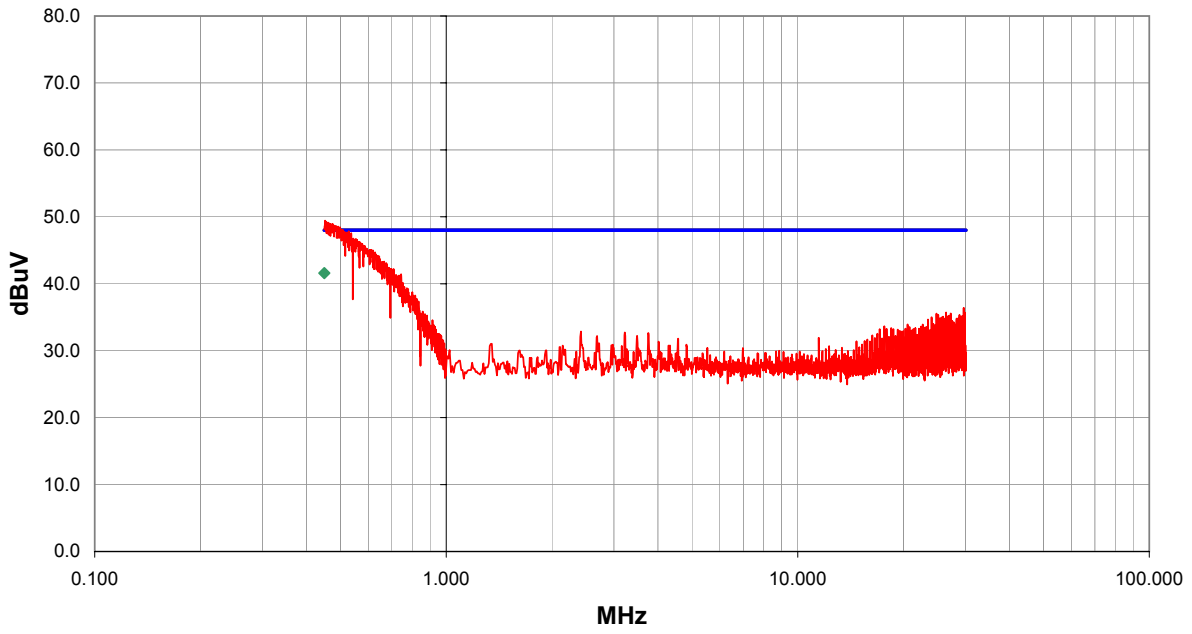
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Line	Run #
Pass	L1	3

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.450	21.6			0.0	0.0	20.0		QP		41.6	48.0	-6.4
0.452	29.2			0.0	0.2	20.0				49.4	48.0	1.4
0.528	27.6			0.0	0.3	20.0				47.9	48.0	-0.1
0.512	27.5			0.0	0.3	20.0				47.8	48.0	-0.2
0.523	27.4			0.0	0.3	20.0				47.7	48.0	-0.3
0.536	27.3			0.0	0.3	20.0				47.6	48.0	-0.4
0.544	26.5			0.0	0.3	20.0				46.8	48.0	-1.2
0.565	26.0			0.0	0.3	20.0				46.3	48.0	-1.7
0.569	25.9			0.0	0.3	20.0				46.2	48.0	-1.8
0.586	25.4			0.0	0.3	20.0				45.7	48.0	-2.3
0.612	24.8			0.0	0.3	20.0				45.1	48.0	-2.9
0.627	24.4			0.0	0.3	20.0				44.7	48.0	-3.3
0.621	24.1			0.0	0.3	20.0				44.4	48.0	-3.6
0.639	23.9			0.0	0.3	20.0				44.2	48.0	-3.8
0.645	23.8			0.0	0.3	20.0				44.1	48.0	-3.9
0.666	23.0			0.0	0.3	20.0				43.3	48.0	-4.7
0.658	23.0			0.0	0.3	20.0				43.3	48.0	-4.7
0.675	22.8			0.0	0.3	20.0				43.1	48.0	-4.9
0.678	22.6			0.0	0.3	20.0				42.9	48.0	-5.1
0.686	22.1			0.0	0.3	20.0				42.4	48.0	-5.6
0.689	22.0			0.0	0.3	20.0				42.3	48.0	-5.7

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

REV df2.02 05/20/2002

EUT:	AnyPoint DSL Gateway 4400			Work Order:	INTE4561
Serial Number:	0007E9036749			Date:	5/30/02 15:24
Customer:	Intel Corporation			Temperature:	72
Attendees:	Mike Espig			Humidity:	45%
Cust. Ref. No.:				Barometric Pressure	30.12
Tested by:	Rod Peloquin	Power:	120 V, 60 Hz	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15 Class B	Year:	2000
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

Mid Channel, Modulated by stream of ""1010101"" data at maximum data rate, maximum output power. WL-350F installed in EUT.

EUT OPERATING MODES

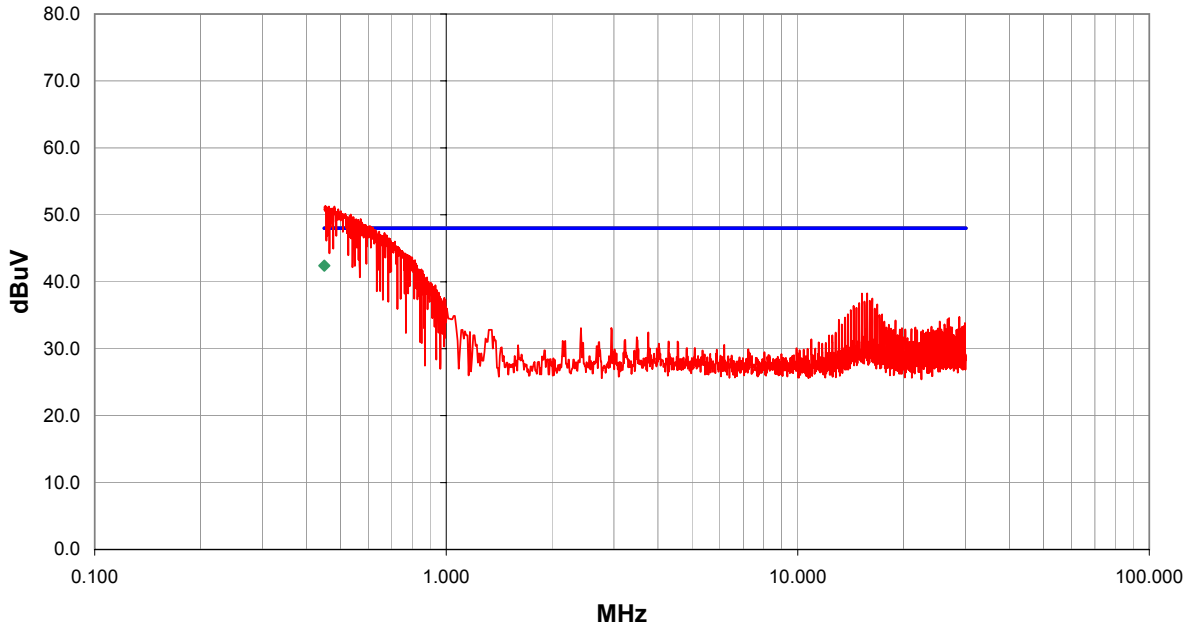
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Line	Run #
Pass	N	4

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.450	22.4			0.0	0.0	20.0		QP		42.4	48.0	-5.6
0.453	31.1			0.0	0.2	20.0				51.3	48.0	3.3
0.481	31.0			0.0	0.2	20.0				51.2	48.0	3.2
0.464	31.0			0.0	0.2	20.0				51.2	48.0	3.2
0.458	30.9			0.0	0.2	20.0				51.1	48.0	3.1
0.475	30.7			0.0	0.2	20.0				50.9	48.0	2.9
0.467	30.7			0.0	0.2	20.0				50.9	48.0	2.9
0.493	30.6			0.0	0.2	20.0				50.8	48.0	2.8
0.470	30.6			0.0	0.2	20.0				50.8	48.0	2.8
0.460	30.4			0.0	0.2	20.0				50.6	48.0	2.6
0.517	29.9			0.0	0.3	20.0				50.2	48.0	2.2
0.535	29.8			0.0	0.3	20.0				50.1	48.0	2.1
0.545	29.4			0.0	0.3	20.0				49.7	48.0	1.7
0.539	29.4			0.0	0.3	20.0				49.7	48.0	1.7
0.524	29.4			0.0	0.3	20.0				49.7	48.0	1.7
0.528	29.3			0.0	0.3	20.0				49.6	48.0	1.6
0.571	29.1			0.0	0.3	20.0				49.4	48.0	1.4
0.554	29.1			0.0	0.3	20.0				49.4	48.0	1.4
0.561	29.0			0.0	0.3	20.0				49.3	48.0	1.3
0.548	28.9			0.0	0.3	20.0				49.2	48.0	1.2
0.564	28.5			0.0	0.3	20.0				48.8	48.0	0.8

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

REV df2.02 05/20/2002

EUT:	AnyPoint DSL Gateway 4400			Work Order:	INTE4561
Serial Number:	0007E9036749			Date:	5/30/02 15:35
Customer:	Intel Corporation			Temperature:	72
Attendees:	Mike Espig			Humidity:	45%
Cust. Ref. No.:				Barometric Pressure	30.12
Tested by:	Rod Peloquin	Power:	120 V, 60 Hz	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15 Class B	Year:	2000
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

Low Channel, Modulated by stream of ""1010101"" data at maximum data rate, maximum output power. WL-350F installed in EUT.

EUT OPERATING MODES

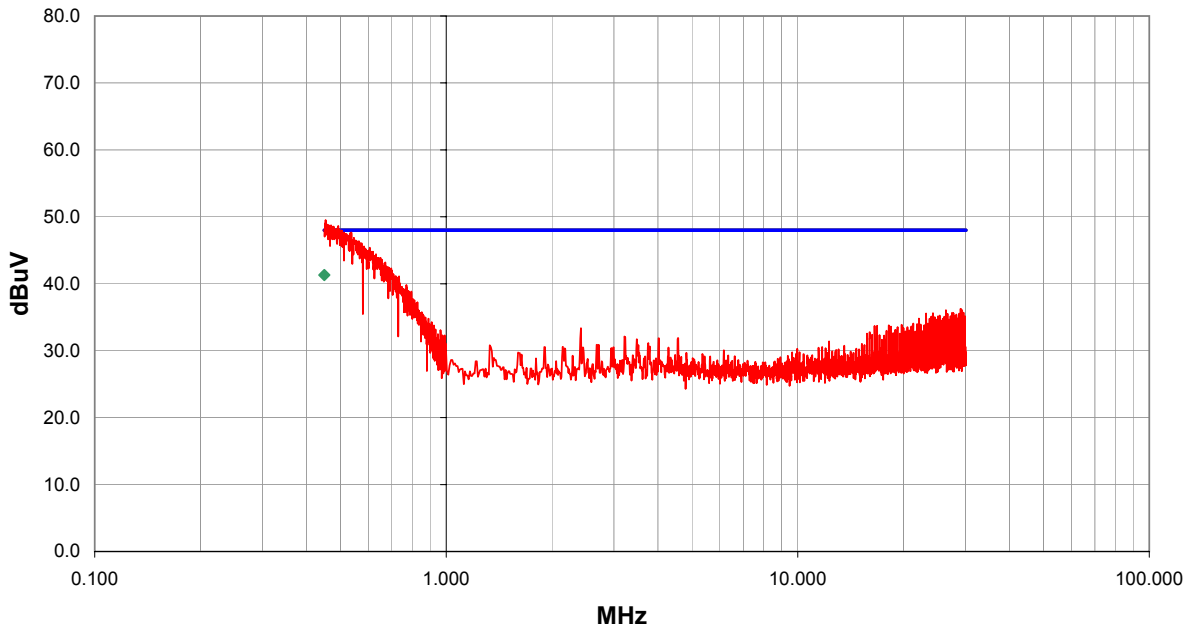
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Line	Run #
Pass	L1	5

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.450	21.3			0.0	0.0	20.0		QP		41.3	48.0	-6.7
0.454	29.3			0.0	0.2	20.0				49.5	48.0	1.5
0.470	28.5			0.0	0.2	20.0				48.7	48.0	0.7
0.463	28.5			0.0	0.2	20.0				48.7	48.0	0.7
0.493	28.4			0.0	0.2	20.0				48.6	48.0	0.6
0.504	27.7			0.0	0.2	20.0				47.9	48.0	-0.1
0.501	27.7			0.0	0.2	20.0				47.9	48.0	-0.1
0.537	27.4			0.0	0.3	20.0				47.7	48.0	-0.3
0.512	27.4			0.0	0.3	20.0				47.7	48.0	-0.3
0.508	27.3			0.0	0.3	20.0				47.6	48.0	-0.4
0.530	26.9			0.0	0.3	20.0				47.2	48.0	-0.8
0.546	26.6			0.0	0.3	20.0				46.9	48.0	-1.1
0.543	26.2			0.0	0.3	20.0				46.5	48.0	-1.5
0.564	26.1			0.0	0.3	20.0				46.4	48.0	-1.6
0.574	25.8			0.0	0.3	20.0				46.1	48.0	-1.9
0.584	25.3			0.0	0.3	20.0				45.6	48.0	-2.4
0.606	25.1			0.0	0.3	20.0				45.4	48.0	-2.6
0.595	24.6			0.0	0.3	20.0				44.9	48.0	-3.1
0.631	24.1			0.0	0.3	20.0				44.4	48.0	-3.6
0.624	23.9			0.0	0.3	20.0				44.2	48.0	-3.8
0.656	23.3			0.0	0.3	20.0				43.6	48.0	-4.4

NORTHWEST EMC

CONDUCTED EMISSIONS DATA SHEET

REV df2.02 05/20/2002

EUT:	AnyPoint DSL Gateway 4400			Work Order:	INTE4561
Serial Number:	0007E9036749			Date:	5/30/02 15:40
Customer:	Intel Corporation			Temperature:	72
Attendees:	Mike Espig			Humidity:	45%
Cust. Ref. No.:				Barometric Pressure	30.12
Tested by:	Rod Peloquin	Power:	120 V, 60 Hz	Job Site:	EV01

TEST SPECIFICATIONS

Specification:	FCC Part 15 Class B	Year:	2000
Method:	ANSI C63.4	Year:	1992

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

COMMENTS

Low Channel, Modulated by stream of ""1010101"" data at maximum data rate, maximum output power. WL-350F installed in EUT.

EUT OPERATING MODES

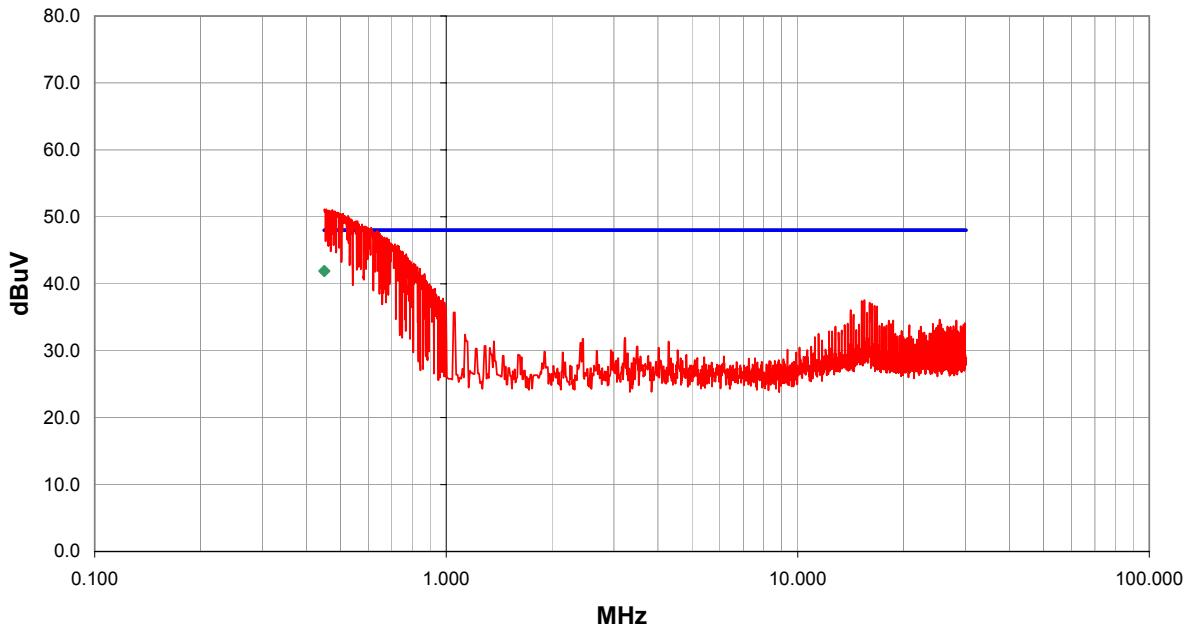
DEVIATIONS FROM TEST STANDARD

No deviations.

RESULTS	Line	Run #
Pass	N	6

Other

Tested By:



Freq (MHz)	Amplitude (dBuV)			Transducer (dB)	Cable (dB)	External Attenuation (dB)		Detector (blank equal peaks [PK] from scan)		Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.450	21.9			0.0	0.0	20.0		QP		41.9	48.0	-6.1
0.456	30.9			0.0	0.2	20.0				51.1	48.0	3.1
0.451	30.9			0.0	0.2	20.0				51.1	48.0	3.1
0.474	30.8			0.0	0.2	20.0				51.0	48.0	3.0
0.463	30.7			0.0	0.2	20.0				50.9	48.0	2.9
0.482	30.6			0.0	0.2	20.0				50.8	48.0	2.8
0.468	30.6			0.0	0.2	20.0				50.8	48.0	2.8
0.461	30.6			0.0	0.2	20.0				50.8	48.0	2.8
0.477	30.5			0.0	0.2	20.0				50.7	48.0	2.7
0.490	30.4			0.0	0.2	20.0				50.6	48.0	2.6
0.479	30.4			0.0	0.2	20.0				50.6	48.0	2.6
0.470	30.4			0.0	0.2	20.0				50.6	48.0	2.6
0.485	30.3			0.0	0.2	20.0				50.5	48.0	2.5
0.509	30.2			0.0	0.3	20.0				50.5	48.0	2.5
0.500	30.2			0.0	0.2	20.0				50.4	48.0	2.4
0.497	30.1			0.0	0.2	20.0				50.3	48.0	2.3
0.526	29.9			0.0	0.3	20.0				50.2	48.0	2.2
0.505	29.7			0.0	0.2	20.0				50.0	48.0	2.0
0.528	29.6			0.0	0.3	20.0				49.9	48.0	1.9
0.535	29.4			0.0	0.3	20.0				49.7	48.0	1.7
0.539	29.3			0.0	0.3	20.0				49.6	48.0	1.6