

## **Exhibit N: Spurious Conducted Emissions**

**FCC ID: EJM-X400**

**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	1 MHz	Stop Frequency	25 GHz
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**Software\Firmware Applied During Test**

Exercise software	Standard Production Software	Version	2.1.0.104-4400
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**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
PC	Dell	Inspiron 7000	9043346BY16251A
EUT Power Supply	CUI Stack	TEAD-48-121200UT	0210

## Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
CAT 5 E-net	No	2.0	No	EUT	PC
DC Power	No	1.5	No	EUT Power Supply	EUT
AC Power	No	1.8	No	EUT Power Supply	AC Mains

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	Tektronix	2784	AAO	03/08/2001	24 mo

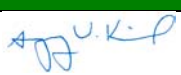
## Test Description

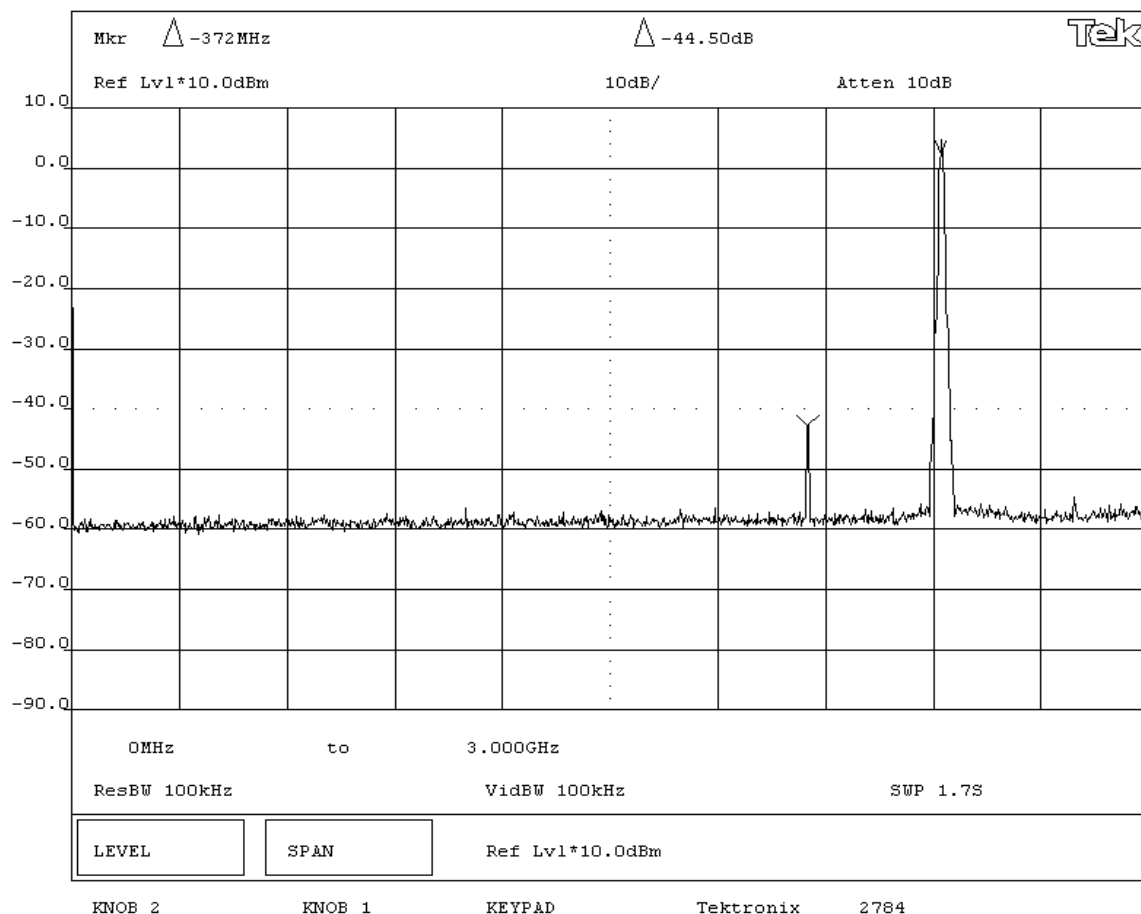
**Requirement:** Per 47 CFR 15.247(c), in any 100 kHz bandwidth outside the authorized band, the maximum level of radio frequency power must be at least 20dB down from the highest emission level within the authorized band. The measurement is made with the spectrum analyzer's resolution bandwidth set to 100 kHz, and the video bandwidth set to greater than or equal to the resolution bandwidth.

**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 radio module is the same, the test was performed in a representative system: the 4400. The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate using direct sequence modulation. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

Completed by:



NORTHWEST EMC		EMISSIONS DATA SHEET		Rev BETA 01/30/01	
EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	
TEST SPECIFICATIONS					
Specification: 47 CFR 15.247(c)		Year: Most Current		Method: FCC 97-114, ANSI C63.4	
				Year: 1992	
SAMPLE CALCULATIONS					
COMMENTS					
WL-350F installed in EUT					
EUT OPERATING MODES					
Modulated by stream of "1010101" data at maximum data rate, maximum output power					
DEVIATIONS FROM TEST STANDARD					
None					
REQUIREMENTS					
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental					
RESULTS					
Pass					
SIGNATURE					
 Tested By: _____					
DESCRIPTION OF TEST					
Antenna Conducted Spurious Emissions - Low Channel 0MHz-3GHz					



## EMISSIONS DATA SHEET

Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400				Work Order: INTE4561	
Serial Number: 0007E9036749				Date: 05/21/02	
Customer: Intel Corporation				Temperature: 21 degrees C	
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	

## TEST SPECIFICATIONS

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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## SAMPLE CALCULATIONS

## COMMENTS

WL-350F installed in EUT

## EUT OPERATING MODES

Modulated by stream of "1010101" data at maximum data rate, maximum output power

## DEVIATIONS FROM TEST STANDARD

None

## REQUIREMENTS

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

## RESULTS

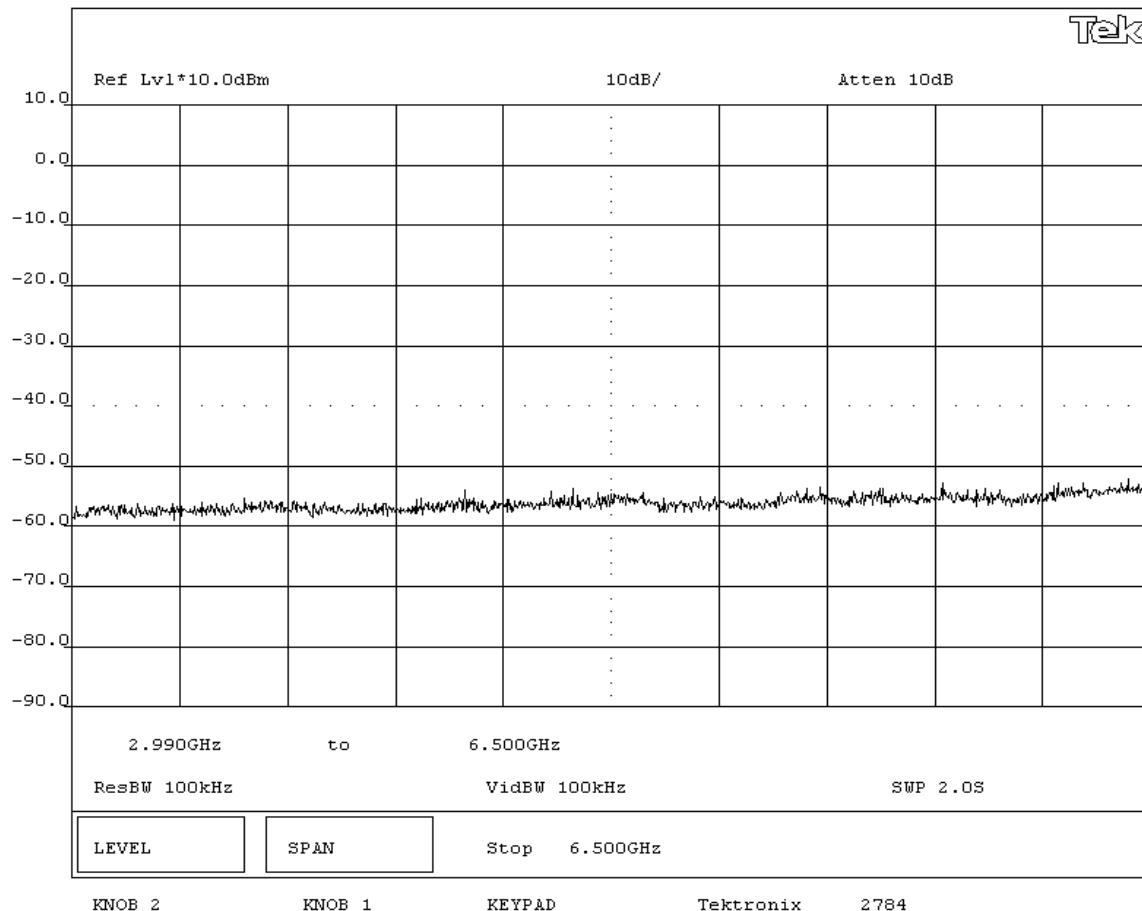
Pass


## SIGNATURE

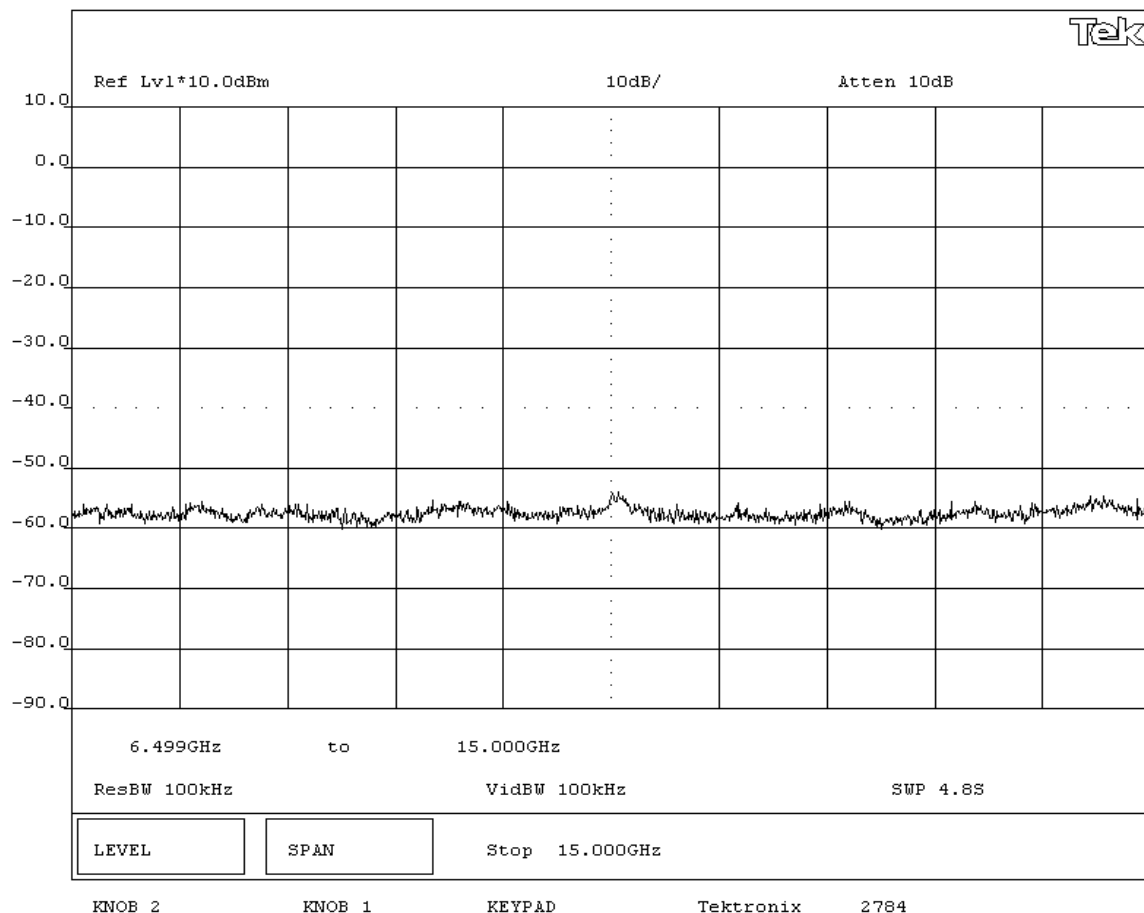
Tested By: 

## DESCRIPTION OF TEST

Antenna Conducted Spurious Emissions - Low Channel 3GHz-6.5GHz



NORTHWEST <b>EMC</b>		<b>EMISSIONS DATA SHEET</b>		Rev BETA 01/30/01	
EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel	Humidity: 39% RH		
Customer Ref. No.: N/A		Power: 120V, 60 Hz	Job Site: EV06		
<b>TEST SPECIFICATIONS</b>					
Specification: 47 CFR 15.247(c)		Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992	
<b>SAMPLE CALCULATIONS</b>					
<b>COMMENTS</b>					
WL-350F installed in EUT					
<b>EUT OPERATING MODES</b>					
Modulated by stream of "1010101" data at maximum data rate, maximum output power					
<b>DEVIATIONS FROM TEST STANDARD</b>					
None					
<b>REQUIREMENTS</b>					
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental					
<b>RESULTS</b>					
Pass					
<b>SIGNATURE</b>					
<div style="text-align: center;">   Tested By: _____ </div>					
<b>DESCRIPTION OF TEST</b>					
<b>Antenna Conducted Spurious Emissions - Low Channel 6.5GHz-15GHz</b>					



## EMISSIONS DATA SHEET

Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400				Work Order: INTE4561	
Serial Number: 0007E9036749				Date: 05/21/02	
Customer: Intel Corporation				Temperature: 21 degrees C	
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	

## TEST SPECIFICATIONS

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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## SAMPLE CALCULATIONS

## COMMENTS

WL-350F installed in EUT

## EUT OPERATING MODES

Modulated by stream of "1010101" data at maximum data rate, maximum output power

## DEVIATIONS FROM TEST STANDARD

None

## REQUIREMENTS

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

## RESULTS

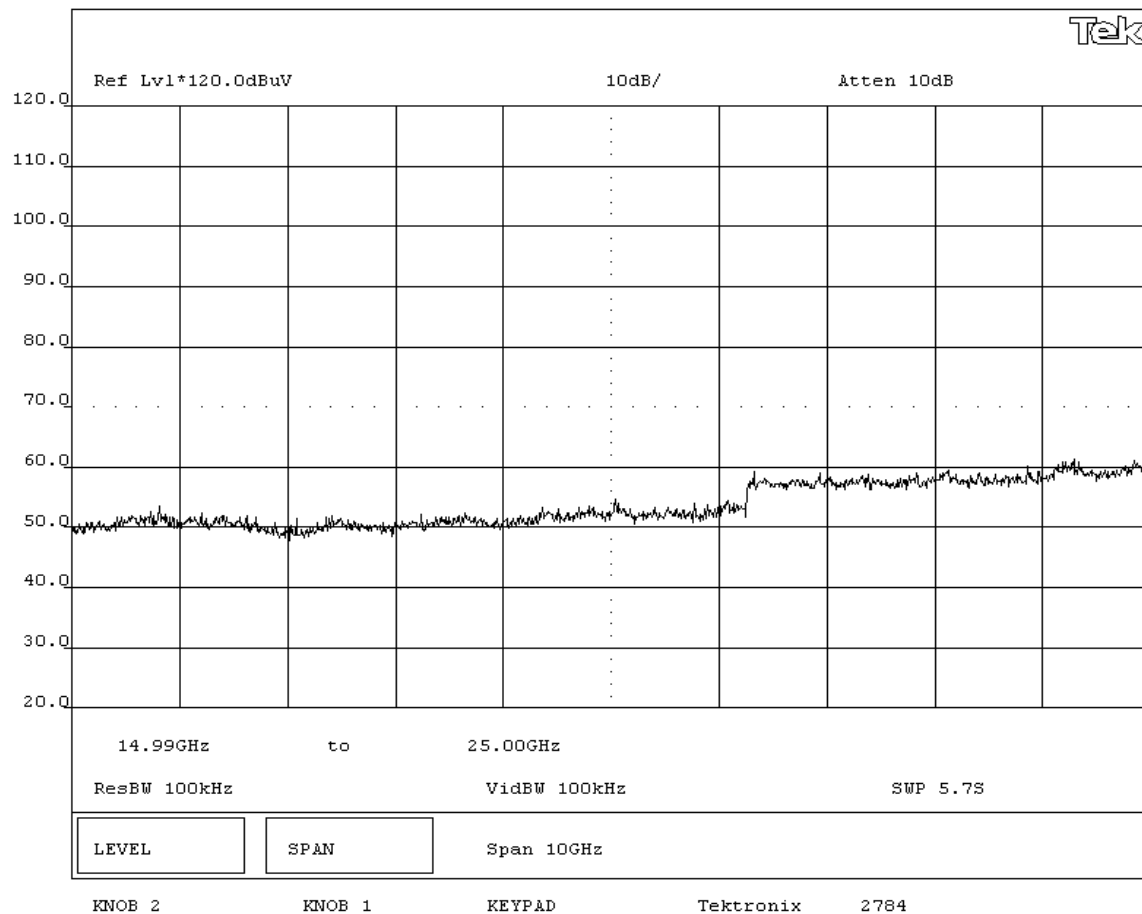
Pass

## SIGNATURE

Tested By: 

## DESCRIPTION OF TEST

Antenna Conducted Spurious Emissions - Low Channel 15GHz - 25GHz



## EMISSIONS DATA SHEET

Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	

## TEST SPECIFICATIONS

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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## SAMPLE CALCULATIONS

## COMMENTS

WL-350F installed in EUT

## EUT OPERATING MODES

Modulated by stream of "1010101" data at maximum data rate, maximum output power

## DEVIATIONS FROM TEST STANDARD

None

## REQUIREMENTS

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

## RESULTS

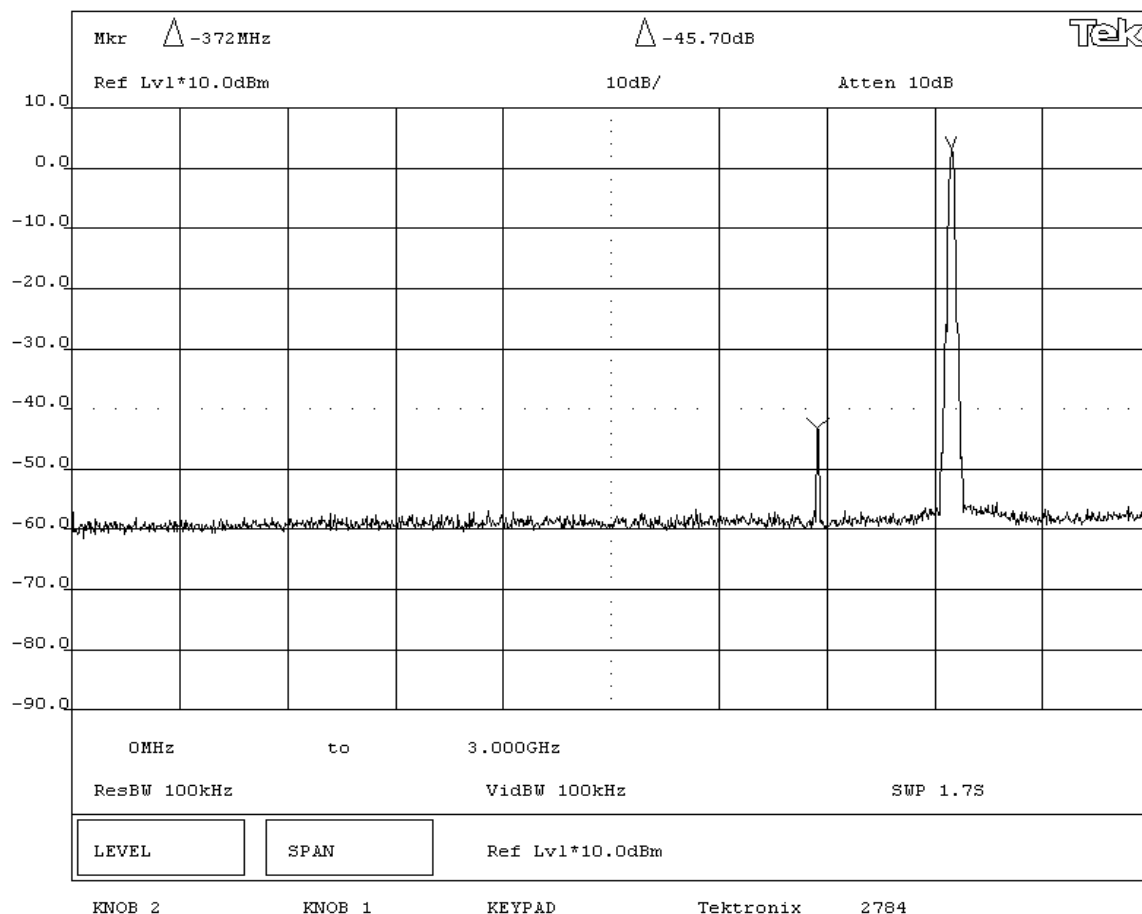
Pass

## SIGNATURE

Tested By: 

## DESCRIPTION OF TEST

Antenna Conducted Spurious Emissions - Mid Channel 0MHz-3GHz





## EMISSIONS DATA SHEET

Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400				Work Order: INTE4561	
Serial Number: 0007E9036749				Date: 05/21/02	
Customer: Intel Corporation				Temperature: 21 degrees C	
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	

## TEST SPECIFICATIONS

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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## SAMPLE CALCULATIONS

## COMMENTS

WL-350F installed in EUT

## EUT OPERATING MODES

Modulated by stream of "1010101" data at maximum data rate, maximum output power

## DEVIATIONS FROM TEST STANDARD

None

## REQUIREMENTS

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

## RESULTS

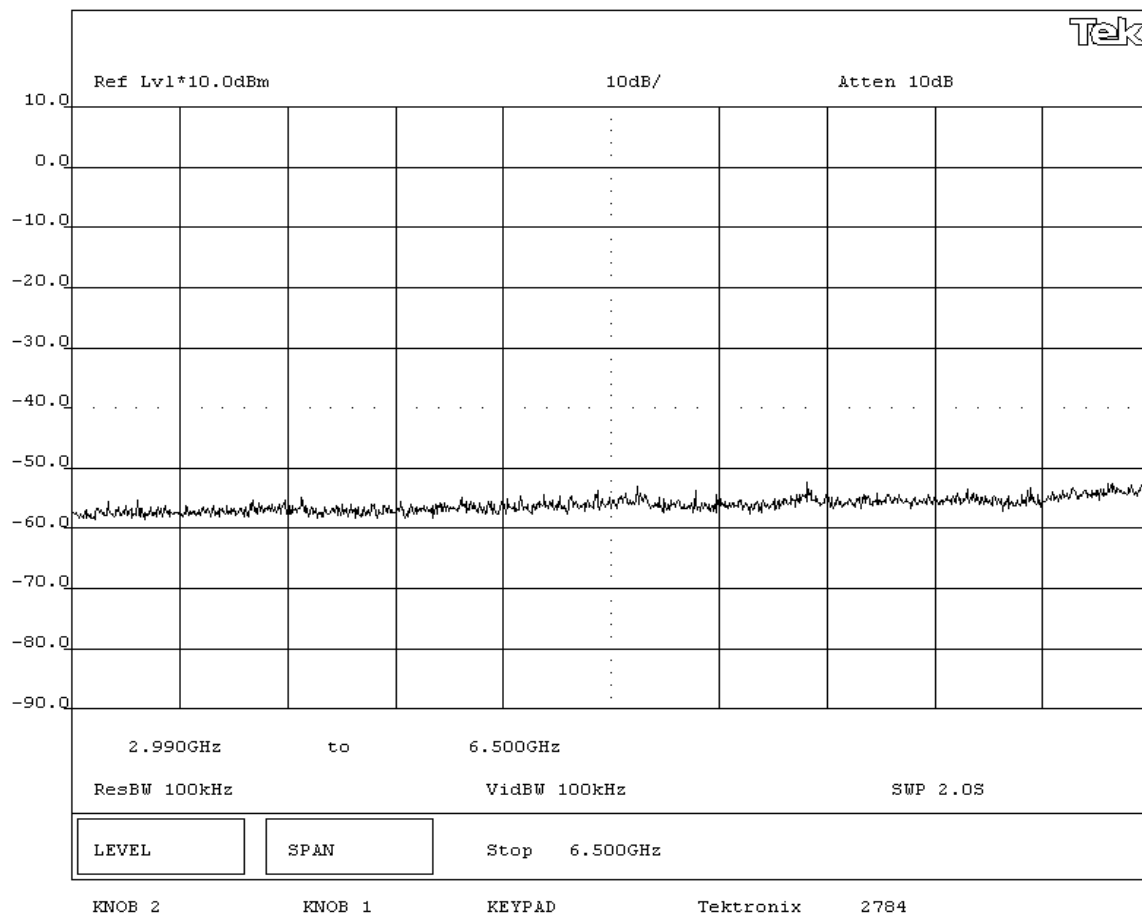
Pass


## SIGNATURE

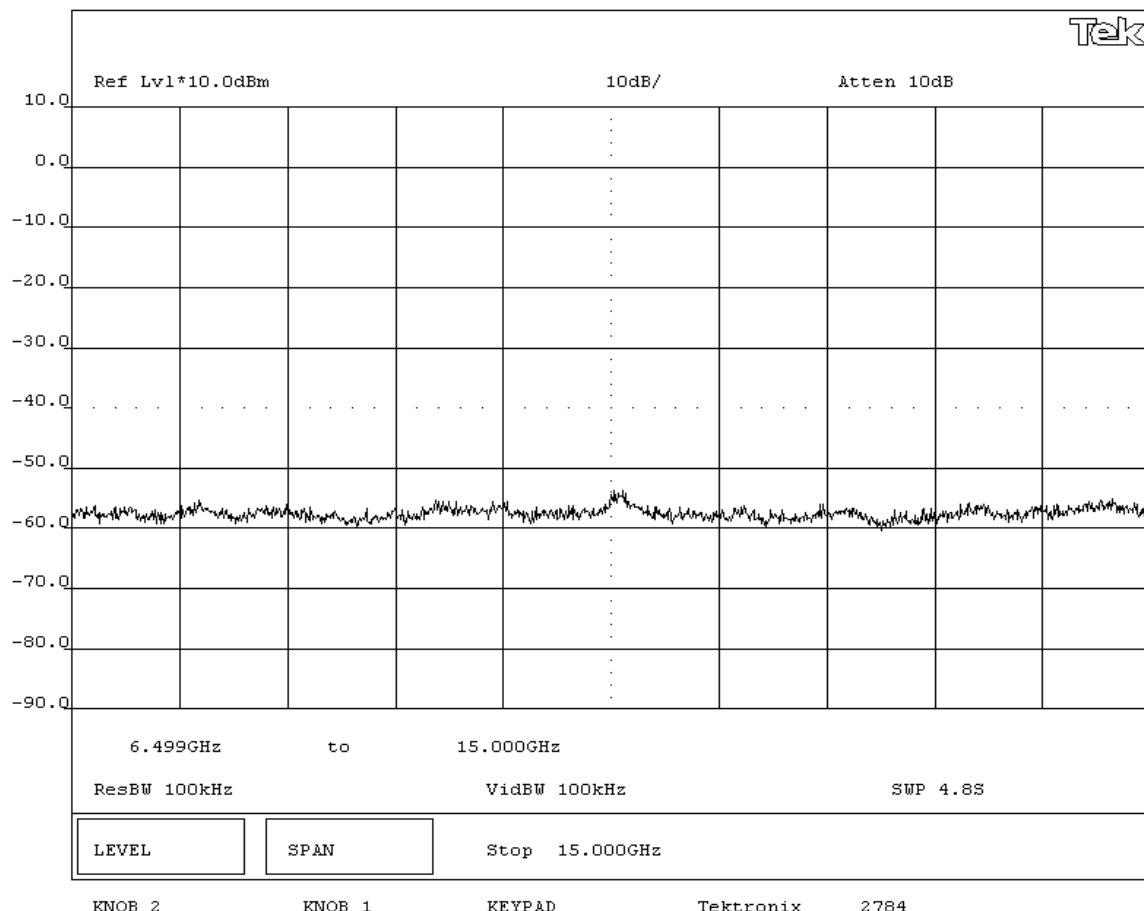
Tested By: 

## DESCRIPTION OF TEST

Antenna Conducted Spurious Emissions - Mid Channel 3GHz-6.5GHz



NORTHWEST <b>EMC</b>		<b>EMISSIONS DATA SHEET</b>		Rev BETA 01/30/01	
EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel	Humidity: 39% RH		
Customer Ref. No.: N/A		Power: 120V, 60 Hz	Job Site: EV06		
<b>TEST SPECIFICATIONS</b>					
Specification: 47 CFR 15.247(c)		Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992	
<b>SAMPLE CALCULATIONS</b>					
<b>COMMENTS</b>					
WL-350F installed in EUT					
<b>EUT OPERATING MODES</b>					
Modulated by stream of "1010101" data at maximum data rate, maximum output power					
<b>DEVIATIONS FROM TEST STANDARD</b>					
None					
<b>REQUIREMENTS</b>					
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental					
<b>RESULTS</b>					
Pass					
<b>SIGNATURE</b>					
<div style="text-align: center;">             Tested By: _____         </div>					
<b>DESCRIPTION OF TEST</b>					
<b>Antenna Conducted Spurious Emissions - Mid Channel 6.5GHz-15GHz</b>					



NORTHWEST  
**EMC****EMISSIONS DATA SHEET**Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400				Work Order: INTE4561	
Serial Number: 0007E9036749				Date: 05/21/02	
Customer: Intel Corporation				Temperature: 21 degrees C	
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	

**TEST SPECIFICATIONS**

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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**SAMPLE CALCULATIONS****COMMENTS**

WL-350F installed in EUT

**EUT OPERATING MODES**

Modulated by stream of "1010101" data at maximum data rate, maximum output power

**DEVIATIONS FROM TEST STANDARD**

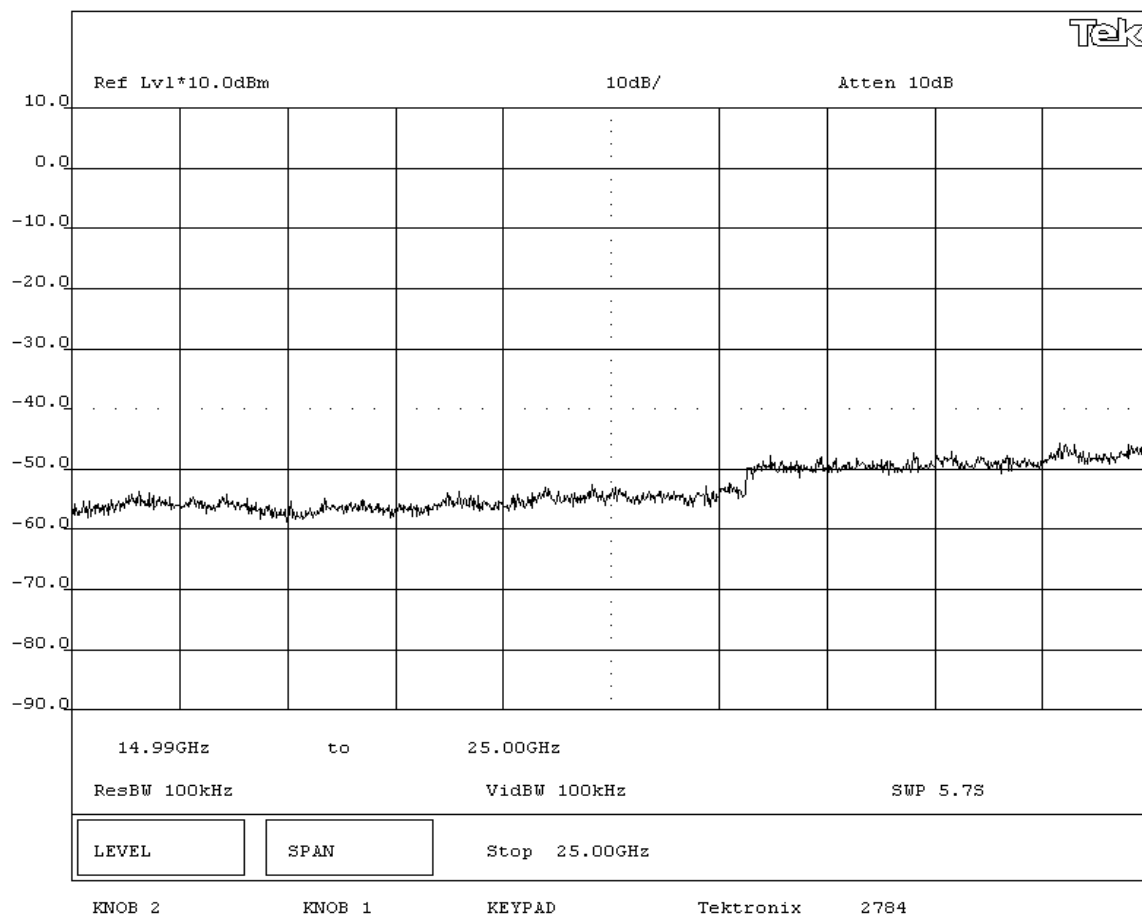
None

**REQUIREMENTS**

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

**RESULTS**

Pass

**SIGNATURE**Tested By: **DESCRIPTION OF TEST****Antenna Conducted Spurious Emissions - Mid Channel 15GHz-25GHz**

NORTHWEST  
**EMC****EMISSIONS DATA SHEET**Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	

**TEST SPECIFICATIONS**

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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**SAMPLE CALCULATIONS****COMMENTS**

WL-350F installed in EUT

**EUT OPERATING MODES**

Modulated by stream of "1010101" data at maximum data rate, maximum output power

**DEVIATIONS FROM TEST STANDARD**

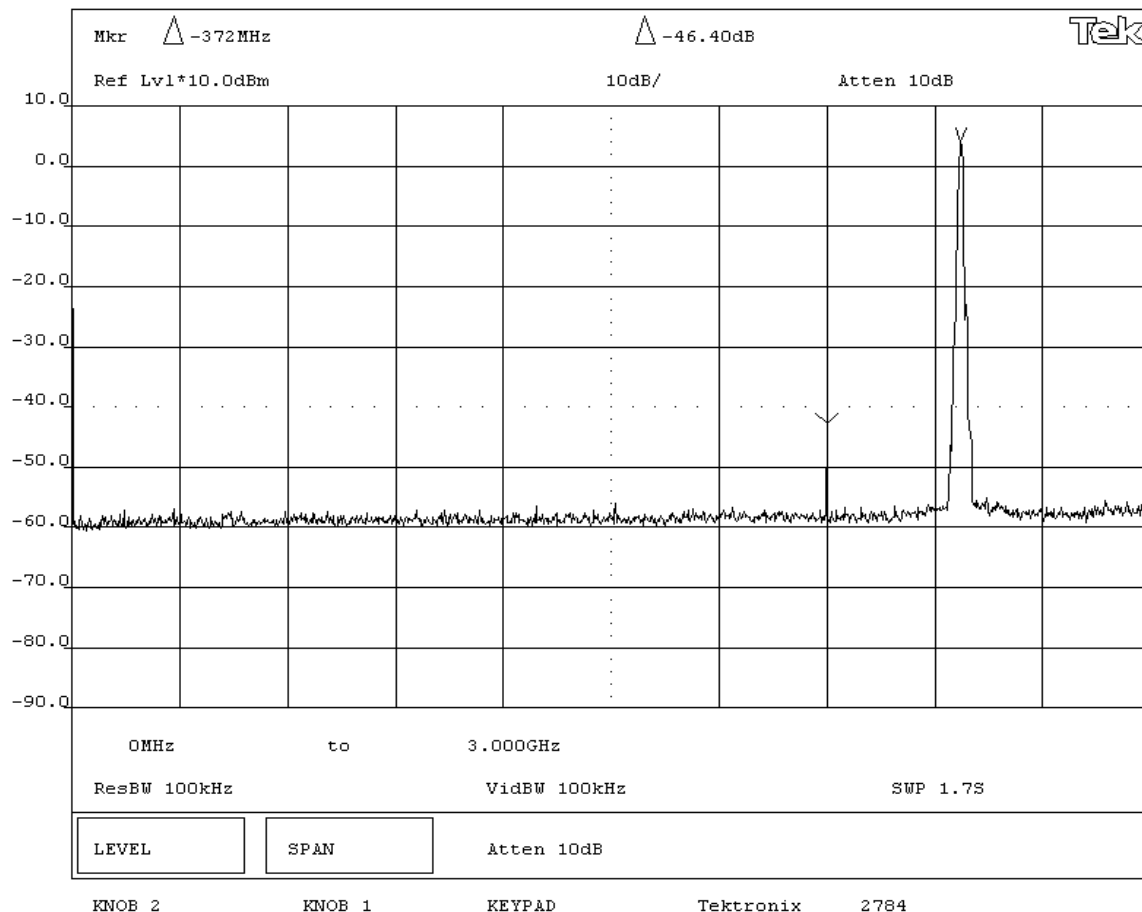
None


**REQUIREMENTS**

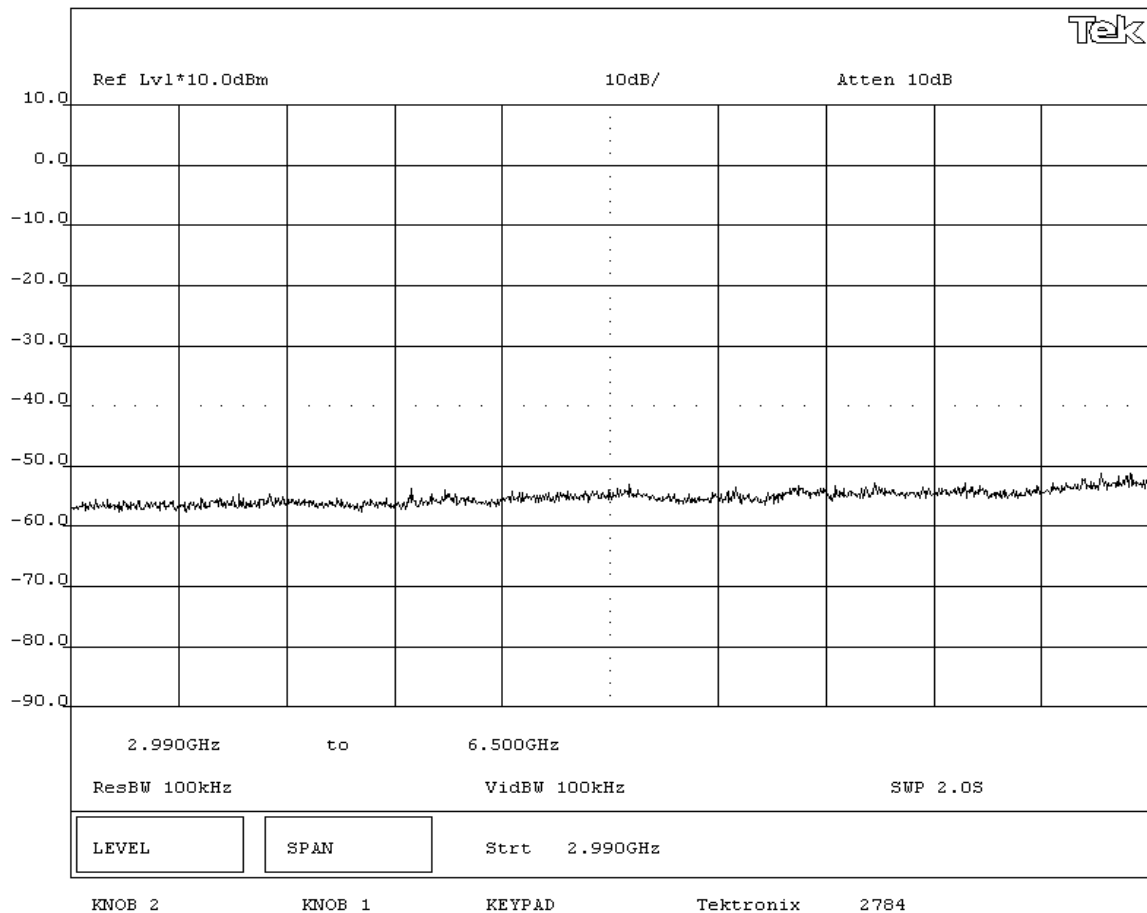
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

**RESULTS**

Pass

**SIGNATURE**Tested By: **DESCRIPTION OF TEST****Antenna Conducted Spurious Emissions - High Channel 0MHz-3GHz**

NORTHWEST <b>EMC</b>		<b>EMISSIONS DATA SHEET</b>		Rev BETA 01/30/01	
EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel	Humidity: 39% RH		
Customer Ref. No.: N/A		Power: 120V, 60 Hz	Job Site: EV06		
<b>TEST SPECIFICATIONS</b>					
Specification: 47 CFR 15.247(c)		Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992	
<b>SAMPLE CALCULATIONS</b>					
<b>COMMENTS</b>					
WL-350F installed in EUT					
<b>EUT OPERATING MODES</b>					
Modulated by stream of "1010101" data at maximum data rate, maximum output power					
<b>DEVIATIONS FROM TEST STANDARD</b>					
None					
<b>REQUIREMENTS</b>					
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental					
<b>RESULTS</b>					
Pass					
<b>SIGNATURE</b>					
<div style="text-align: center;">             Tested By: _____         </div>					
<b>DESCRIPTION OF TEST</b>					
<b>Antenna Conducted Spurious Emissions - High Channel 3GHz-6.5GHz</b>					



## EMISSIONS DATA SHEET

Rev BETA  
01/30/01

EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel	Humidity: 39% RH		
Customer Ref. No.: N/A		Power: 120V, 60 Hz	Job Site: EV06		

## TEST SPECIFICATIONS

Specification: 47 CFR 15.247(c)	Year: Most Current	Method: FCC 97-114, ANSI C63.4	Year: 1992
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## SAMPLE CALCULATIONS

## COMMENTS

WL-350F installed in EUT

## EUT OPERATING MODES

Modulated by stream of "1010101" data at maximum data rate, maximum output power

## DEVIATIONS FROM TEST STANDARD

None

## REQUIREMENTS

Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental

## RESULTS

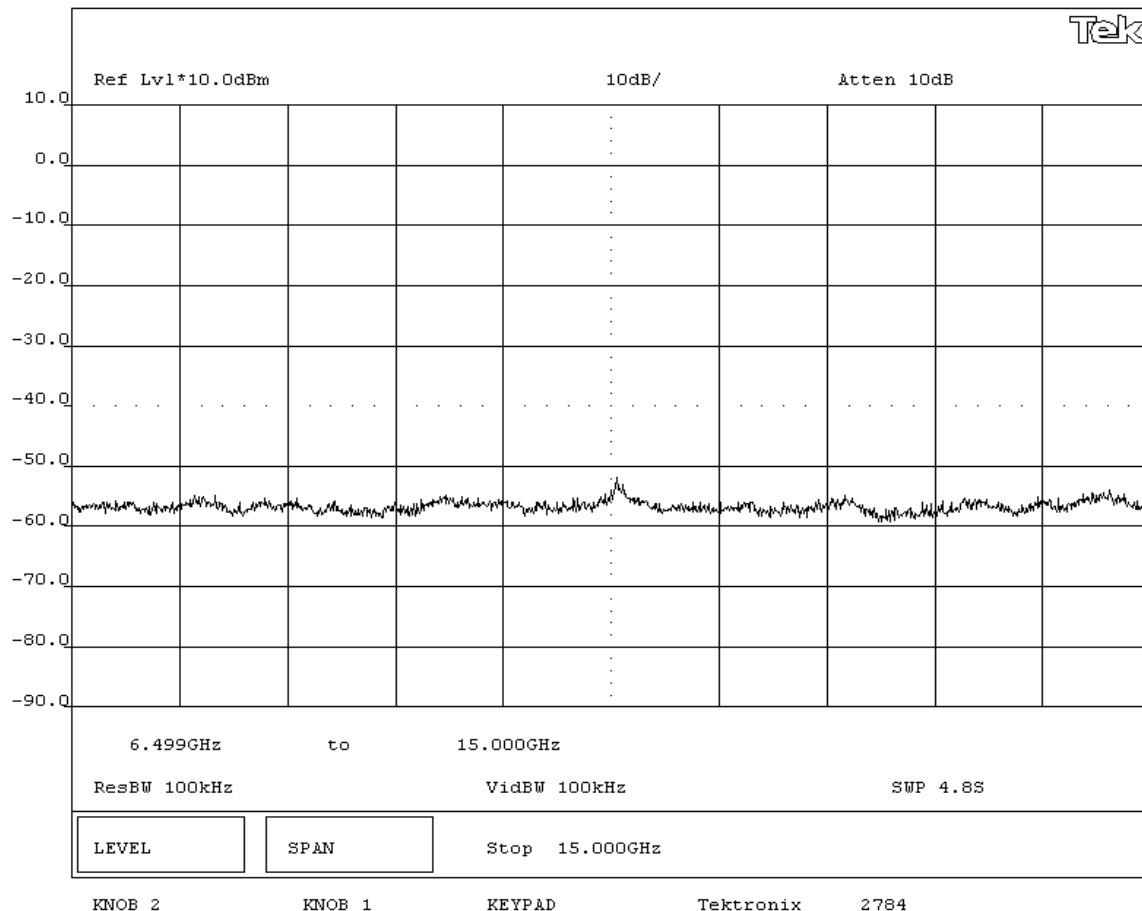
Pass

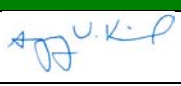
## SIGNATURE

Tested By: 

## DESCRIPTION OF TEST

Antenna Conducted Spurious Emissions - High Channel 6.5GHz-15GHz



NORTHWEST <b>EMC</b>		<b>EMISSIONS DATA SHEET</b>		Rev BETA 01/30/01	
EUT: AnyPoint DSL Gateway 4400			Work Order: INTE4561		
Serial Number: 0007E9036749			Date: 05/21/02		
Customer: Intel Corporation			Temperature: 21 degrees C		
Attendees: Mike Espig		Tested by: Greg Kiemel		Humidity: 39% RH	
Customer Ref. No.: N/A		Power: 120V, 60 Hz		Job Site: EV06	
<b>TEST SPECIFICATIONS</b>					
Specification: 47 CFR 15.247(c)		Year: Most Current		Method: FCC 97-114, ANSI C63.4	
				Year: 1992	
<b>SAMPLE CALCULATIONS</b>					
<b>COMMENTS</b>					
WL-350F installed in EUT					
<b>EUT OPERATING MODES</b>					
Modulated by stream of "1010101" data at maximum data rate, maximum output power					
<b>DEVIATIONS FROM TEST STANDARD</b>					
None					
<b>REQUIREMENTS</b>					
Maximum level of any spurious emission outside of the authorized band is 20 dB down from the fundamental					
<b>RESULTS</b>					
Pass					
<b>SIGNATURE</b>					
 Tested By: _____					
<b>DESCRIPTION OF TEST</b>					
<b>Antenna Conducted Spurious Emissions - High Channel 15GHz-25GHz</b>					

