Intel Corporations

WSBUB-SDS

FCC 15.207:2014

RSS-210:2010

Report # INTE5492

NVLAP Lab Code: 200630-0

NORTHWEST EMC

WTD 13.9.30

CERTIFICATE OF TEST

Last Date of Test: September 10, 2014
Intel Corporation
Model: WSBUB-SDS

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	ANSI C63.10:2009
	RSS-Gen:2010

Results

Method Clause	Test Description	Applied	Results	Comments
7.5	Duty Cycle	No	N/A	Not Requested.
6.9.1	Occupied Bandwidth	No	N/A	Not Requested.
6.10.2	Output Power	No	N/A	Not Requested.
6.11.2	Power Spectral Density	No	N/A	Not Requested.
6.7	Band Edge Compliance	No	N/A	Not Requested.
6.7	Spurious Conducted Emissions	No	N/A	Not Requested.
6.5, 6.6	Spurious Radiated Emissions	No	N/A	Not Requested.
6.2	Powerline Conducted Emissions	Yes	Pass	

Deviations From Test Standards

None

Approved By:

Kyle Holgate, Operations Manager

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

NORTHWEST EMC
REV 2012.08.02

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

NORTHWEST EMC

REV 2014.08.11

ACCREDITATIONS AND AUTHORIZATIONS

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIP / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFTA – Recognized by OFTA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

MEASUREMENT UNCERTAINTY

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is on each data sheet. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

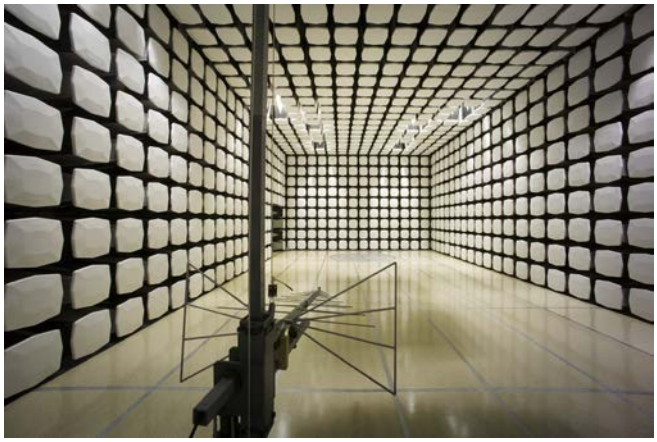
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	4.00	-4.00
AC Powerline Conducted Emissions (dB)	2.70	-2.70

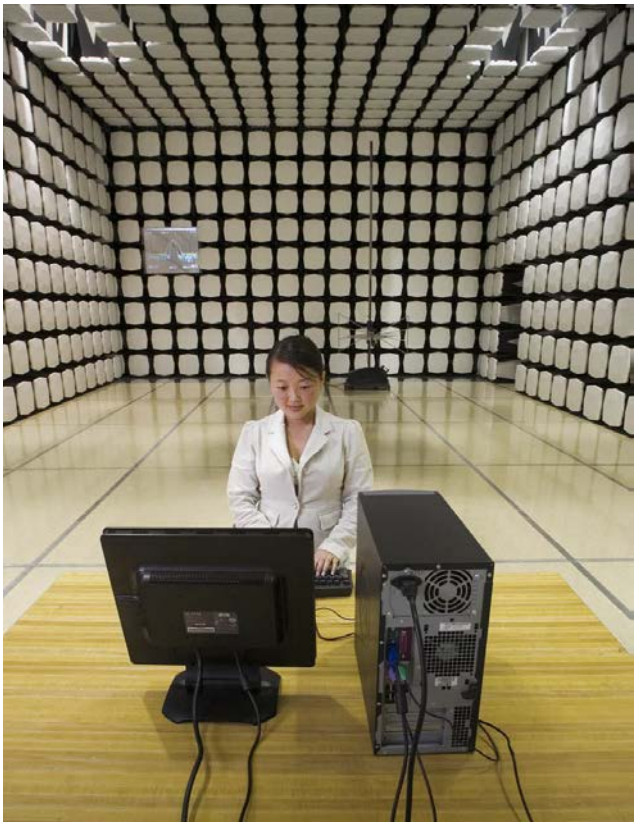
NORTHWEST EMC

REV 2013.06.28

FACILITIES

Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	**California** Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	**New York** Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	**Minnesota** Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	**Washington** Labs NC01-05,SU02,SU07 19201 120th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834F-1
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0





PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Intel Corporation
Address:	5200 NE Elam Young Pkwy
City, State, Zip:	Hillsboro, OR 91724
Test Requested By:	Mike Lowe
Model:	WSBUB-SDS
First Date of Test:	September 10, 2014
Last Date of Test:	September 10, 2014
Receipt Date of Samples:	September 10, 2014
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
Laptop/Tablet Convertible that contains WWAN, WLAN, Bluetooth, and NFC radios. A proximity sensor is co-located with the WWAN transmit antenna. Once the sensor is triggered, the output power is lowered for all WWAN bands.

Testing Objective:
To demonstrate compliance to FCC 15.207 and RSS-Gen requirements.

CONFIGURATIONS

WTD 12.5.23

Configuration INTE5492- 1

Software/Firmware Running during test	
Description	**Version**
Windows	8.1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop/Tablet Convertible	Intel Corporation	WSBUB-SDS	FZWC41000237

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	Delta Electronics	ADP-45BEAA	None

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC power cable	Unknown	.4m	No	AC Adapter	AC Mains
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	9/10/2014	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV07 Cables	N/A	Conducted Cables	EVG	03/07/2014	12 mo
Attenuator	Fairview Microwave	SA6B10W-20	RKA	10/24/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHD	01/22/2014	12 mo
Receiver	Rohde & Schwarz	ESCI	ARH	02/05/2014	12 mo
LISN	Solar	9252-50-R-24-BNC	LIR	10/09/2013	12 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

INTE5492-1

MODES INVESTIGATED

Tx, 802.11(b) Channel 1, 1Mbps
Tx, 802.11(b) Channel 6, 1Mbps
Tx, 802.11(b) Channel 11, 1Mbps
Tx, 802.11(a) Channel 149, 6 Mbps
Tx, 802.11(a) Channel 157, 6 Mbps
Tx, 802.11(a) Channel 165, 6 Mbps

NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	22	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

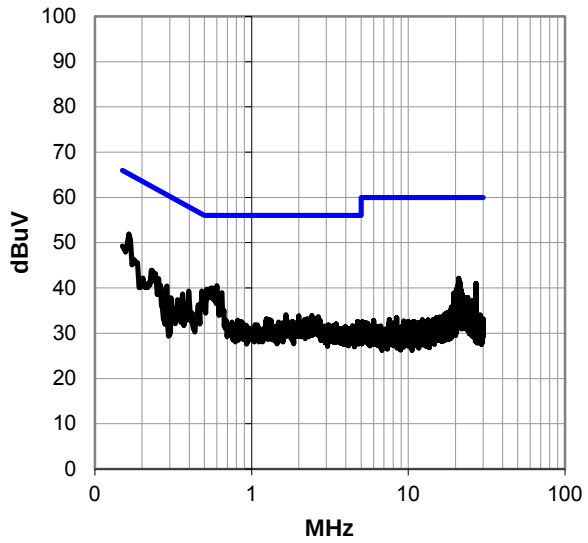
EUT OPERATING MODES

Tx 802.11b Ch 1 2412MHz 1Mbps

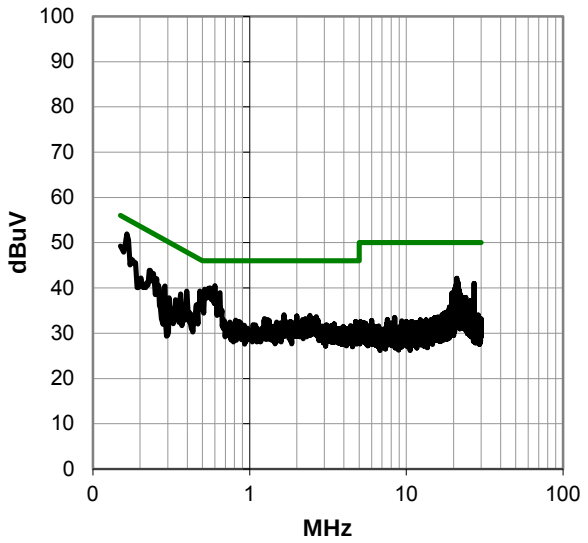
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #22

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	31.5	20.5	52.0	65.2	-13.2
0.601	20.1	20.4	40.5	56.0	-15.5
0.560	19.6	20.4	40.0	56.0	-16.0
0.482	18.9	20.4	39.3	56.3	-17.0
0.646	18.5	20.4	38.9	56.0	-17.1
0.501	18.3	20.4	38.7	56.0	-17.3
21.013	20.4	21.7	42.1	60.0	-17.9
0.396	18.9	20.4	39.3	57.9	-18.6
0.228	23.4	20.5	43.9	62.5	-18.7
21.110	19.6	21.7	41.3	60.0	-18.7
21.386	19.4	21.7	41.1	60.0	-18.9
27.120	18.9	22.1	41.0	60.0	-19.0
21.087	19.2	21.7	40.9	60.0	-19.1
21.460	19.1	21.8	40.9	60.0	-19.1
20.792	19.1	21.7	40.8	60.0	-19.2
21.128	19.0	21.7	40.7	60.0	-19.3
0.254	21.6	20.4	42.0	61.6	-19.6
20.703	18.5	21.7	40.2	60.0	-19.8
21.158	18.4	21.7	40.1	60.0	-19.9
0.363	18.3	20.4	38.7	58.7	-20.0
20.927	18.3	21.7	40.0	60.0	-20.0
20.427	18.2	21.7	39.9	60.0	-20.1
21.524	18.1	21.8	39.9	60.0	-20.1
21.415	18.1	21.7	39.8	60.0	-20.2
0.288	20.0	20.4	40.4	60.6	-20.2
21.039	18.0	21.7	39.7	60.0	-20.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	31.5	20.5	52.0	55.2	-3.2
0.601	20.1	20.4	40.5	46.0	-5.5
0.560	19.6	20.4	40.0	46.0	-6.0
0.482	18.9	20.4	39.3	46.3	-7.0
0.646	18.5	20.4	38.9	46.0	-7.1
0.501	18.3	20.4	38.7	46.0	-7.3
21.013	20.4	21.7	42.1	50.0	-7.9
0.396	18.9	20.4	39.3	47.9	-8.6
0.228	23.4	20.5	43.9	52.5	-8.7
21.110	19.6	21.7	41.3	50.0	-8.7
21.386	19.4	21.7	41.1	50.0	-8.9
27.120	18.9	22.1	41.0	50.0	-9.0
21.087	19.2	21.7	40.9	50.0	-9.1
21.460	19.1	21.8	40.9	50.0	-9.1
20.792	19.1	21.7	40.8	50.0	-9.2
21.128	19.0	21.7	40.7	50.0	-9.3
0.254	21.6	20.4	42.0	51.6	-9.6
20.703	18.5	21.7	40.2	50.0	-9.8
21.158	18.4	21.7	40.1	50.0	-9.9
0.363	18.3	20.4	38.7	48.7	-10.0
20.927	18.3	21.7	40.0	50.0	-10.0
20.427	18.2	21.7	39.9	50.0	-10.1
21.524	18.1	21.8	39.9	50.0	-10.1
21.415	18.1	21.7	39.8	50.0	-10.2
0.288	20.0	20.4	40.4	50.6	-10.2
21.039	18.0	21.7	39.7	50.0	-10.3

CONCLUSION

Pass

Tested By

NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	23	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

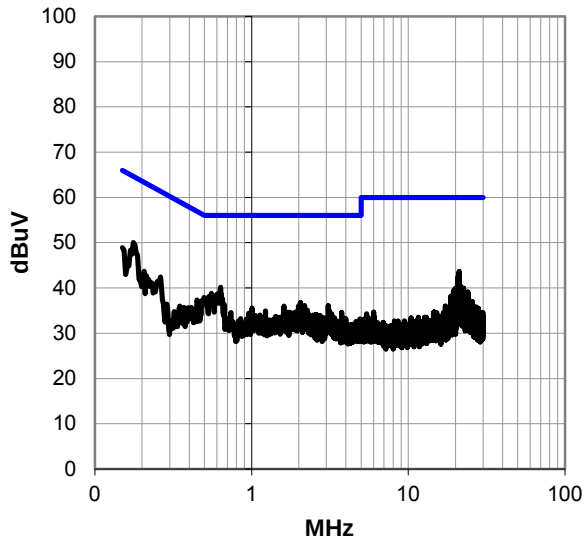
EUT OPERATING MODES

Tx 802.11b Ch 1 2412MHz 1Mbps

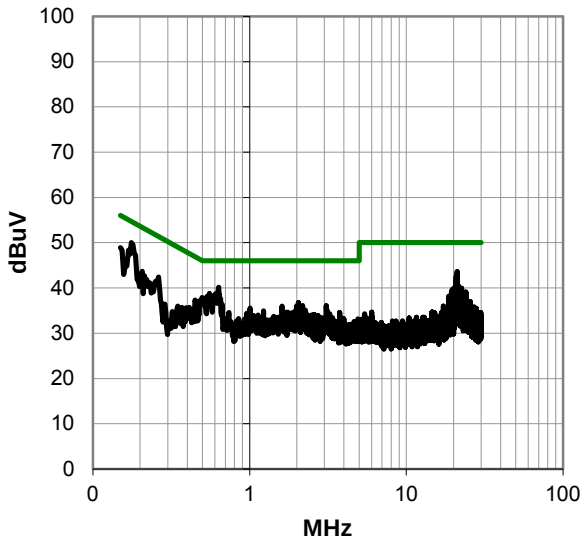
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #23

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.176	29.6	20.5	50.1	64.7	-14.6
0.635	19.7	20.4	40.1	56.0	-15.9
21.076	21.9	21.7	43.6	60.0	-16.4
20.908	21.2	21.7	42.9	60.0	-17.1
0.150	28.3	20.6	48.9	66.0	-17.1
0.553	18.4	20.4	38.8	56.0	-17.2
21.039	20.9	21.7	42.6	60.0	-17.4
20.796	20.8	21.7	42.5	60.0	-17.5
0.497	17.5	20.4	37.9	56.1	-18.1
20.807	19.8	21.7	41.5	60.0	-18.5
20.781	19.6	21.7	41.3	60.0	-18.7
20.606	19.5	21.7	41.2	60.0	-18.8
0.262	22.0	20.4	42.4	61.4	-18.9
21.184	19.3	21.7	41.0	60.0	-19.0
2.049	16.2	20.6	36.8	56.0	-19.2
20.953	18.9	21.7	40.6	60.0	-19.4
20.751	18.8	21.7	40.5	60.0	-19.5
21.292	18.7	21.7	40.4	60.0	-19.6
0.448	16.9	20.4	37.3	56.9	-19.6
0.463	16.6	20.4	37.0	56.6	-19.6
21.486	18.6	21.8	40.4	60.0	-19.6
20.740	18.6	21.7	40.3	60.0	-19.7
0.206	23.2	20.5	43.7	63.4	-19.7
21.658	18.5	21.8	40.3	60.0	-19.7
20.733	18.4	21.7	40.1	60.0	-19.9
2.180	15.5	20.6	36.1	56.0	-19.9

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.176	29.6	20.5	50.1	54.7	-4.6
0.635	19.7	20.4	40.1	46.0	-5.9
21.076	21.9	21.7	43.6	50.0	-6.4
20.908	21.2	21.7	42.9	50.0	-7.1
0.150	28.3	20.6	48.9	56.0	-7.1
0.553	18.4	20.4	38.8	46.0	-7.2
21.039	20.9	21.7	42.6	50.0	-7.4
20.796	20.8	21.7	42.5	50.0	-7.5
0.497	17.5	20.4	37.9	46.1	-8.1
20.807	19.8	21.7	41.5	50.0	-8.5
20.781	19.6	21.7	41.3	50.0	-8.7
20.606	19.5	21.7	41.2	50.0	-8.8
0.262	22.0	20.4	42.4	51.4	-8.9
21.184	19.3	21.7	41.0	50.0	-9.0
2.049	16.2	20.6	36.8	46.0	-9.2
20.953	18.9	21.7	40.6	50.0	-9.4
20.751	18.8	21.7	40.5	50.0	-9.5
21.292	18.7	21.7	40.4	50.0	-9.6
0.448	16.9	20.4	37.3	46.9	-9.6
0.463	16.6	20.4	37.0	46.6	-9.6
21.486	18.6	21.8	40.4	50.0	-9.6
20.740	18.6	21.7	40.3	50.0	-9.7
0.206	23.2	20.5	43.7	53.4	-9.7
21.658	18.5	21.8	40.3	50.0	-9.7
20.733	18.4	21.7	40.1	50.0	-9.9
2.180	15.5	20.6	36.1	46.0	-9.9

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	24	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

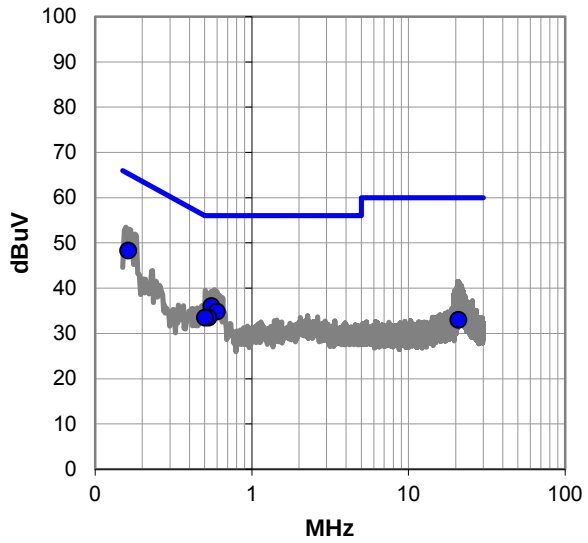
EUT OPERATING MODES

TX 802.11b Ch 6 2437MHz 1Mbps

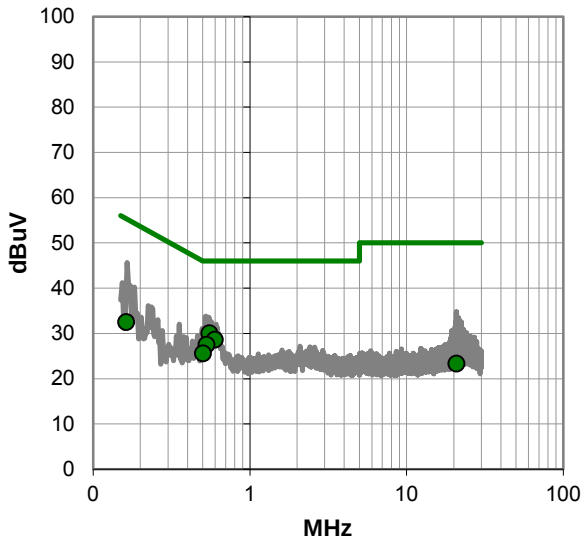
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #24

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.162	27.8	20.5	48.3	65.3	-17.1
0.552	15.6	20.4	36.0	56.0	-20.0
0.599	14.4	20.4	34.8	56.0	-21.2
0.531	13.1	20.4	33.5	56.0	-22.5
0.503	13.1	20.4	33.5	56.0	-22.5
20.861	11.3	21.7	33.0	60.0	-27.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.552	9.6	20.4	30.0	46.0	-16.0
0.599	8.2	20.4	28.6	46.0	-17.4
0.531	7.1	20.4	27.5	46.0	-18.5
0.503	5.2	20.4	25.6	46.0	-20.4
0.162	12.0	20.5	32.5	55.3	-22.9
20.861	1.6	21.7	23.3	50.0	-26.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	25	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

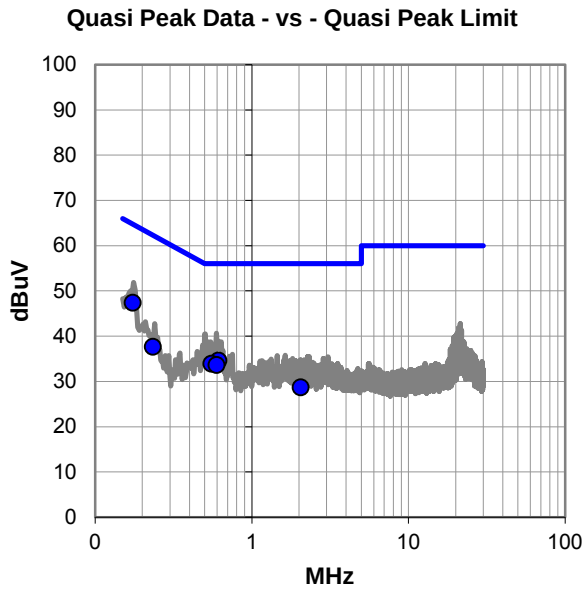
None

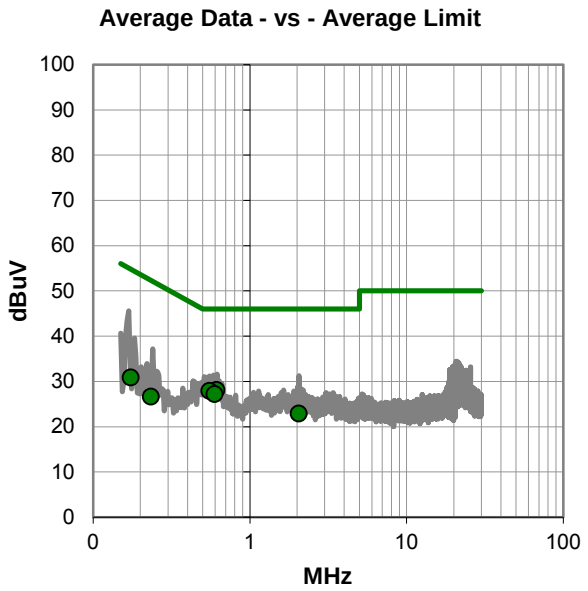
EUT OPERATING MODES

TX 802.11b Ch 6 2437MHz 1Mbps

DEVIATIONS FROM TEST STANDARD

None





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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #25

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.174	26.9	20.5	47.4	64.8	-17.4
0.613	14.2	20.4	34.6	56.0	-21.4
0.552	13.5	20.4	33.9	56.0	-22.1
0.595	13.2	20.4	33.6	56.0	-22.4
0.234	17.2	20.5	37.7	62.3	-24.7
2.050	8.1	20.6	28.7	56.0	-27.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.613	7.7	20.4	28.1	46.0	-17.9
0.552	7.5	20.4	27.9	46.0	-18.1
0.595	6.8	20.4	27.2	46.0	-18.8
2.050	2.3	20.6	22.9	46.0	-23.1
0.174	10.4	20.5	30.9	54.8	-23.9
0.234	6.2	20.5	26.7	52.3	-25.7

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	26	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

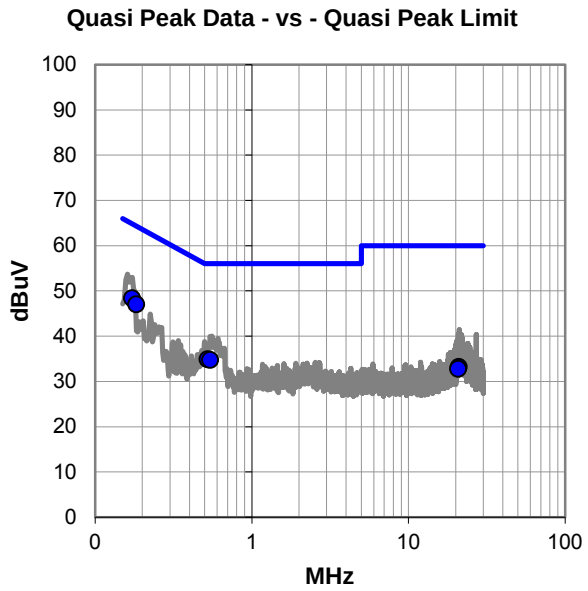
None

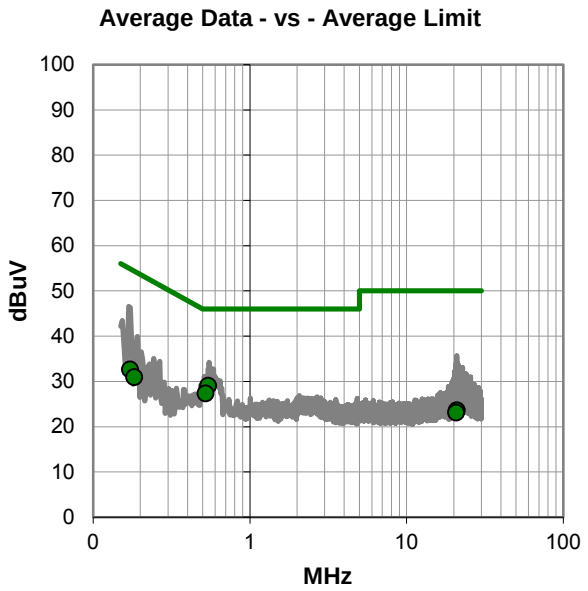
EUT OPERATING MODES

TX 802.11b Ch 11 2462MHz 1Mbps

DEVIATIONS FROM TEST STANDARD

None





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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #26

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.172	27.9	20.5	48.4	64.9	-16.5
0.183	26.6	20.5	47.1	64.4	-17.3
0.522	14.5	20.4	34.9	56.0	-21.1
0.542	14.3	20.4	34.7	56.0	-21.3
20.947	11.5	21.7	33.2	60.0	-26.8
20.740	11.1	21.7	32.8	60.0	-27.2

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.542	8.6	20.4	29.0	46.0	-17.0
0.522	6.9	20.4	27.3	46.0	-18.7
0.172	12.2	20.5	32.7	54.9	-22.2
0.183	10.5	20.5	31.0	54.4	-23.4
20.947	1.9	21.7	23.6	50.0	-26.4
20.740	1.4	21.7	23.1	50.0	-26.9

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	27	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

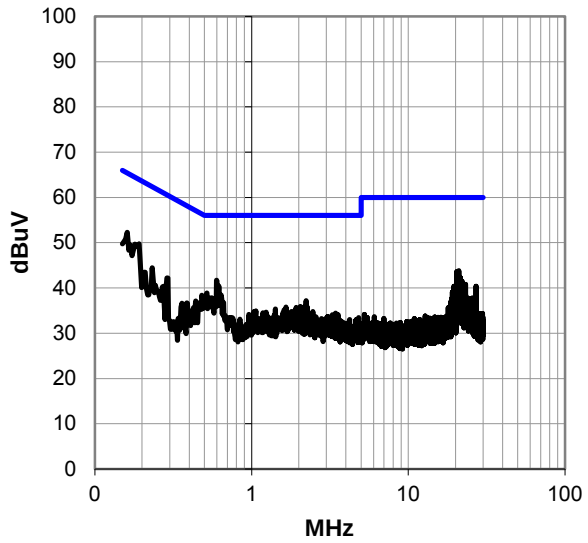
EUT OPERATING MODES

TX 802.11b Ch 11 2462MHz 1Mbps

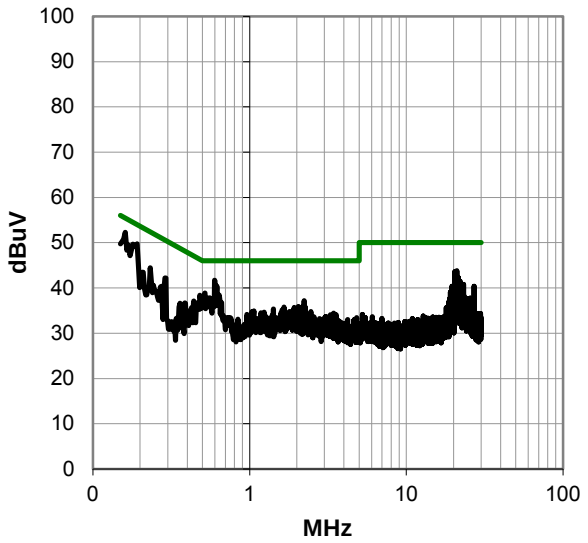
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #27

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	31.8	20.5	52.3	65.4	-13.1
0.598	21.3	20.4	41.7	56.0	-14.3
0.616	20.0	20.4	40.4	56.0	-15.6
21.061	22.1	21.7	43.8	60.0	-16.2
20.390	21.9	21.7	43.6	60.0	-16.4
0.519	18.5	20.4	38.9	56.0	-17.1
20.628	20.7	21.7	42.4	60.0	-17.6
21.550	20.5	21.8	42.3	60.0	-17.7
0.232	24.0	20.5	44.5	62.4	-17.9
21.225	20.1	21.7	41.8	60.0	-18.2
21.020	20.1	21.7	41.8	60.0	-18.2
0.288	21.8	20.4	42.2	60.6	-18.4
22.027	19.7	21.8	41.5	60.0	-18.5
20.718	19.7	21.7	41.4	60.0	-18.6
2.224	16.6	20.6	37.2	56.0	-18.8
20.755	19.3	21.7	41.0	60.0	-19.0
21.184	19.2	21.7	40.9	60.0	-19.1
22.285	19.1	21.8	40.9	60.0	-19.1
20.968	19.1	21.7	40.8	60.0	-19.2
23.244	18.9	21.9	40.8	60.0	-19.2
20.412	19.0	21.7	40.7	60.0	-19.3
21.483	18.7	21.8	40.5	60.0	-19.5
27.120	18.3	22.1	40.4	60.0	-19.6
19.550	18.7	21.6	40.3	60.0	-19.7
19.882	18.6	21.7	40.3	60.0	-19.7
21.389	18.5	21.7	40.2	60.0	-19.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	31.8	20.5	52.3	55.4	-3.1
0.598	21.3	20.4	41.7	46.0	-4.3
0.616	20.0	20.4	40.4	46.0	-5.6
21.061	22.1	21.7	43.8	50.0	-6.2
20.390	21.9	21.7	43.6	50.0	-6.4
0.519	18.5	20.4	38.9	46.0	-7.1
20.628	20.7	21.7	42.4	50.0	-7.6
21.550	20.5	21.8	42.3	50.0	-7.7
0.232	24.0	20.5	44.5	52.4	-7.9
21.225	20.1	21.7	41.8	50.0	-8.2
21.020	20.1	21.7	41.8	50.0	-8.2
0.288	21.8	20.4	42.2	50.6	-8.4
22.027	19.7	21.8	41.5	50.0	-8.5
20.718	19.7	21.7	41.4	50.0	-8.6
2.224	16.6	20.6	37.2	46.0	-8.8
20.755	19.3	21.7	41.0	50.0	-9.0
21.184	19.2	21.7	40.9	50.0	-9.1
22.285	19.1	21.8	40.9	50.0	-9.1
20.968	19.1	21.7	40.8	50.0	-9.2
23.244	18.9	21.9	40.8	50.0	-9.2
20.412	19.0	21.7	40.7	50.0	-9.3
21.483	18.7	21.8	40.5	50.0	-9.5
27.120	18.3	22.1	40.4	50.0	-9.6
19.550	18.7	21.6	40.3	50.0	-9.7
19.882	18.6	21.7	40.3	50.0	-9.7
21.389	18.5	21.7	40.2	50.0	-9.8

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	28	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

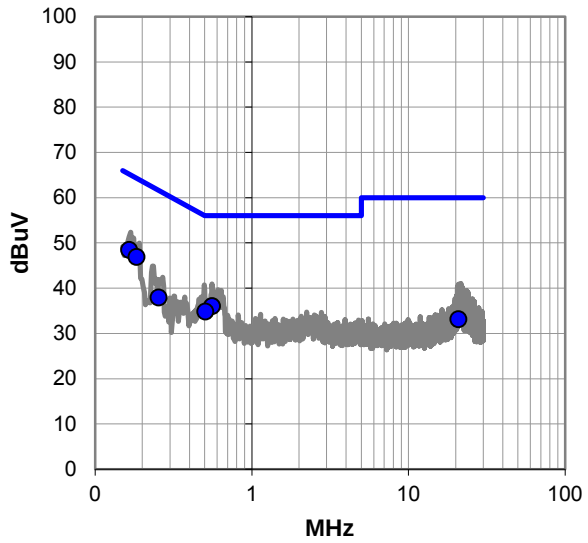
EUT OPERATING MODES

TX 802.11a Ch 149 5745MHz 6Mbps

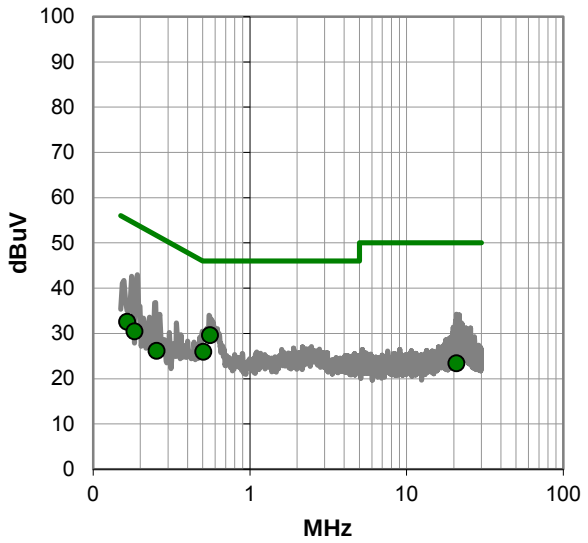
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #28

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	28.0	20.5	48.5	65.2	-16.7
0.184	26.4	20.5	46.9	64.3	-17.5
0.557	15.6	20.4	36.0	56.0	-20.0
0.505	14.4	20.4	34.8	56.0	-21.2
0.255	17.5	20.4	37.9	61.6	-23.7
20.821	11.4	21.7	33.1	60.0	-26.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.557	9.2	20.4	29.6	46.0	-16.4
0.505	5.5	20.4	25.9	46.0	-20.1
0.165	12.1	20.5	32.6	55.2	-22.6
0.184	10.0	20.5	30.5	54.3	-23.9
0.255	5.7	20.4	26.1	51.6	-25.5
20.821	1.7	21.7	23.4	50.0	-26.6

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	29	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

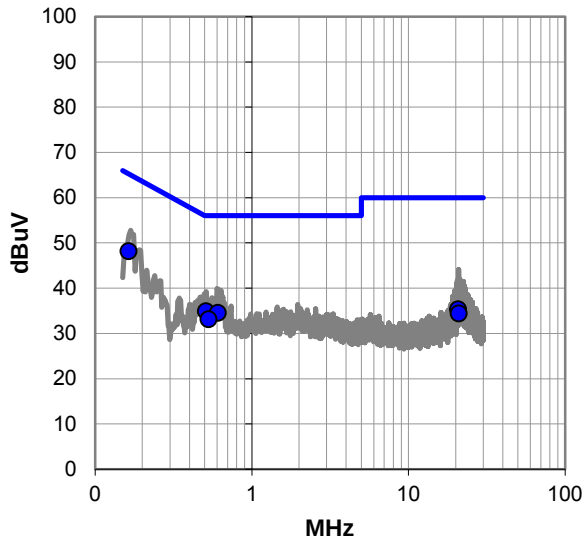
EUT OPERATING MODES

TX 802.11a Ch 149 5745MHz 6Mbps

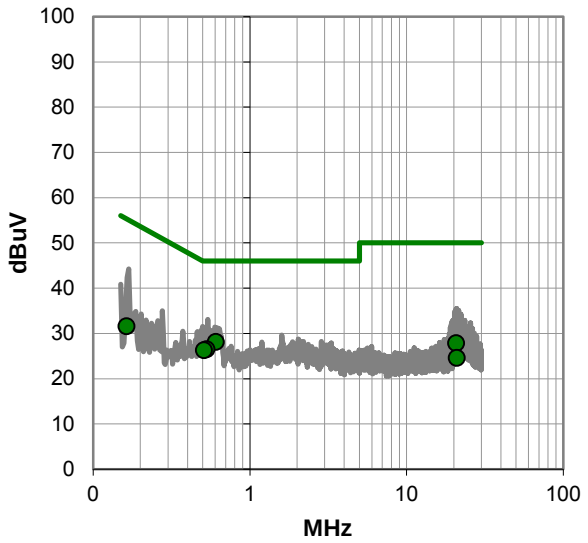
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #29

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.164	27.7	20.5	48.2	65.3	-17.1
0.509	14.5	20.4	34.9	56.0	-21.1
0.606	14.1	20.4	34.5	56.0	-21.5
0.529	12.7	20.4	33.1	56.0	-22.9
20.763	13.6	21.7	35.3	60.0	-24.7
20.938	12.7	21.7	34.4	60.0	-25.6

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.606	7.7	20.4	28.1	46.0	-17.9
0.529	6.1	20.4	26.5	46.0	-19.5
0.509	5.9	20.4	26.3	46.0	-19.7
20.763	6.1	21.7	27.8	50.0	-22.2
0.164	11.1	20.5	31.6	55.3	-23.7
20.938	2.9	21.7	24.6	50.0	-25.4

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	30	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

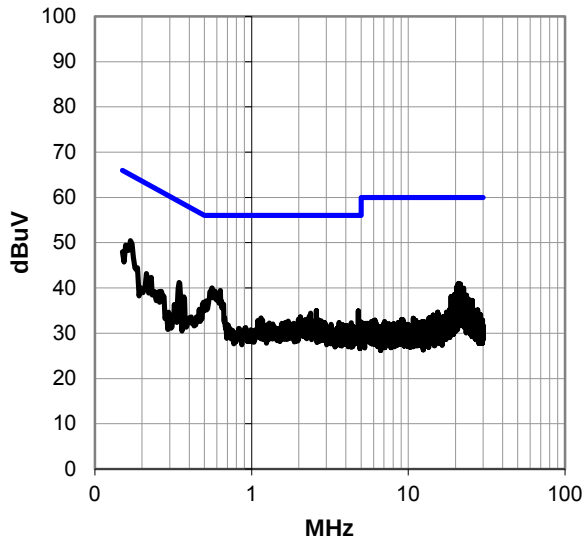
EUT OPERATING MODES

TX 802.11a Ch 157 5785MHz 6Mbps

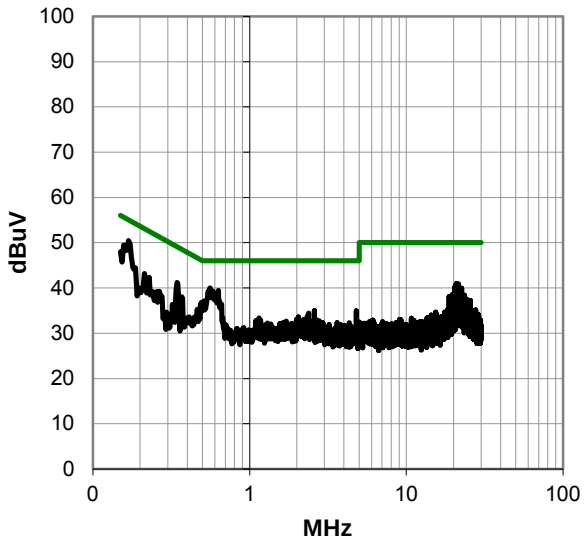
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #30

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.169	30.0	20.5	50.5	65.0	-14.6
0.560	19.6	20.4	40.0	56.0	-16.0
0.344	20.8	20.4	41.2	59.1	-17.9
20.822	19.2	21.7	40.9	60.0	-19.1
21.535	19.1	21.8	40.9	60.0	-19.1
21.240	19.1	21.7	40.8	60.0	-19.2
20.912	18.8	21.7	40.5	60.0	-19.5
20.632	18.8	21.7	40.5	60.0	-19.5
20.927	18.6	21.7	40.3	60.0	-19.7
20.397	18.5	21.7	40.2	60.0	-19.8
0.213	22.7	20.5	43.2	63.1	-19.9
22.535	18.1	21.8	39.9	60.0	-20.1
0.228	21.9	20.5	42.4	62.5	-20.2
20.878	18.0	21.7	39.7	60.0	-20.3
20.375	18.0	21.7	39.7	60.0	-20.3
0.370	17.6	20.4	38.0	58.5	-20.5
21.736	17.6	21.8	39.4	60.0	-20.6
21.490	17.6	21.8	39.4	60.0	-20.6
21.404	17.6	21.7	39.3	60.0	-20.7
21.076	17.6	21.7	39.3	60.0	-20.7
21.830	17.5	21.8	39.3	60.0	-20.7
21.009	17.4	21.7	39.1	60.0	-20.9
22.165	17.3	21.8	39.1	60.0	-20.9
21.997	17.3	21.8	39.1	60.0	-20.9
21.207	17.3	21.7	39.0	60.0	-21.0
2.590	14.4	20.6	35.0	56.0	-21.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.169	30.0	20.5	50.5	55.0	-4.6
0.560	19.6	20.4	40.0	46.0	-6.0
0.344	20.8	20.4	41.2	49.1	-7.9
20.822	19.2	21.7	40.9	50.0	-9.1
21.535	19.1	21.8	40.9	50.0	-9.1
21.240	19.1	21.7	40.8	50.0	-9.2
20.912	18.8	21.7	40.5	50.0	-9.5
20.632	18.8	21.7	40.5	50.0	-9.5
20.927	18.6	21.7	40.3	50.0	-9.7
20.397	18.5	21.7	40.2	50.0	-9.8
0.213	22.7	20.5	43.2	53.1	-9.9
22.535	18.1	21.8	39.9	50.0	-10.1
0.228	21.9	20.5	42.4	52.5	-10.2
20.878	18.0	21.7	39.7	50.0	-10.3
20.375	18.0	21.7	39.7	50.0	-10.3
0.370	17.6	20.4	38.0	48.5	-10.5
21.736	17.6	21.8	39.4	50.0	-10.6
21.490	17.6	21.8	39.4	50.0	-10.6
21.404	17.6	21.7	39.3	50.0	-10.7
21.076	17.6	21.7	39.3	50.0	-10.7
21.830	17.5	21.8	39.3	50.0	-10.7
21.009	17.4	21.7	39.1	50.0	-10.9
22.165	17.3	21.8	39.1	50.0	-10.9
21.997	17.3	21.8	39.1	50.0	-10.9
21.207	17.3	21.7	39.0	50.0	-11.0
2.590	14.4	20.6	35.0	46.0	-11.0

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	31	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

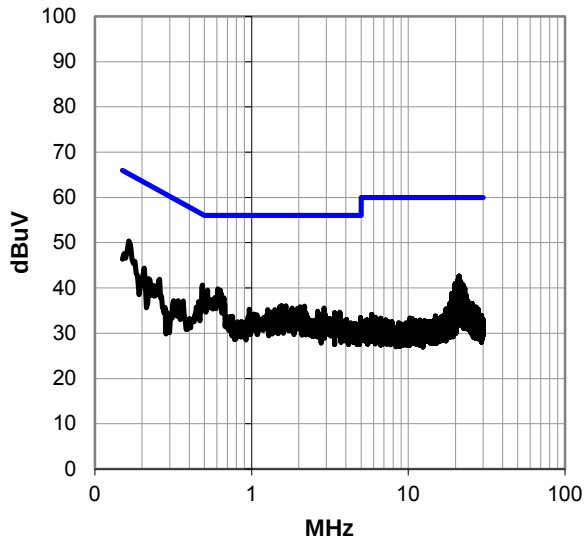
EUT OPERATING MODES

TX 802.11a Ch 157 5785MHz 6Mbps

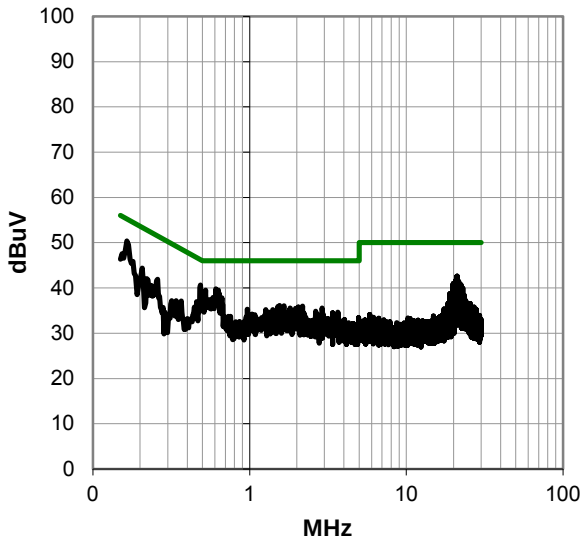
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #31

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	29.9	20.5	50.4	65.2	-14.8
0.486	20.2	20.4	40.6	56.2	-15.6
0.609	19.4	20.4	39.8	56.0	-16.2
0.523	19.1	20.4	39.5	56.0	-16.5
21.139	20.9	21.7	42.6	60.0	-17.4
20.983	20.8	21.7	42.5	60.0	-17.5
0.665	17.4	20.4	37.8	56.0	-18.2
21.210	20.1	21.7	41.8	60.0	-18.2
20.848	20.1	21.7	41.8	60.0	-18.2
20.748	19.8	21.7	41.5	60.0	-18.5
20.636	19.8	21.7	41.5	60.0	-18.5
21.568	19.7	21.8	41.5	60.0	-18.5
21.158	19.7	21.7	41.4	60.0	-18.6
21.184	19.5	21.7	41.2	60.0	-18.8
0.206	23.9	20.5	44.4	63.4	-19.0
19.931	19.3	21.7	41.0	60.0	-19.0
21.005	19.2	21.7	40.9	60.0	-19.1
20.897	19.2	21.7	40.9	60.0	-19.1
21.915	19.1	21.8	40.9	60.0	-19.1
20.707	19.1	21.7	40.8	60.0	-19.2
21.703	19.0	21.8	40.8	60.0	-19.2
21.102	19.0	21.7	40.7	60.0	-19.3
22.300	18.9	21.8	40.7	60.0	-19.3
19.733	19.0	21.7	40.7	60.0	-19.3
21.609	18.8	21.8	40.6	60.0	-19.4
21.031	18.8	21.7	40.5	60.0	-19.5

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	29.9	20.5	50.4	55.2	-4.8
0.486	20.2	20.4	40.6	46.2	-5.6
0.609	19.4	20.4	39.8	46.0	-6.2
0.523	19.1	20.4	39.5	46.0	-6.5
21.139	20.9	21.7	42.6	50.0	-7.4
20.983	20.8	21.7	42.5	50.0	-7.5
0.665	17.4	20.4	37.8	46.0	-8.2
21.210	20.1	21.7	41.8	50.0	-8.2
20.848	20.1	21.7	41.8	50.0	-8.2
20.748	19.8	21.7	41.5	50.0	-8.5
20.636	19.8	21.7	41.5	50.0	-8.5
21.568	19.7	21.8	41.5	50.0	-8.5
21.158	19.7	21.7	41.4	50.0	-8.6
21.184	19.5	21.7	41.2	50.0	-8.8
0.206	23.9	20.5	44.4	53.4	-9.0
19.931	19.3	21.7	41.0	50.0	-9.0
21.005	19.2	21.7	40.9	50.0	-9.1
20.897	19.2	21.7	40.9	50.0	-9.1
21.915	19.1	21.8	40.9	50.0	-9.1
20.707	19.1	21.7	40.8	50.0	-9.2
21.703	19.0	21.8	40.8	50.0	-9.2
21.102	19.0	21.7	40.7	50.0	-9.3
22.300	18.9	21.8	40.7	50.0	-9.3
19.733	19.0	21.7	40.7	50.0	-9.3
21.609	18.8	21.8	40.6	50.0	-9.4
21.031	18.8	21.7	40.5	50.0	-9.5

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	32	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

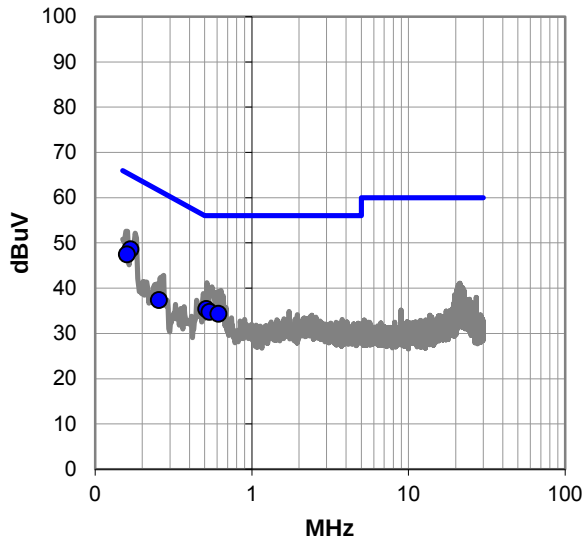
EUT OPERATING MODES

TX 802.11a Ch 165 5825MHz 6Mbps

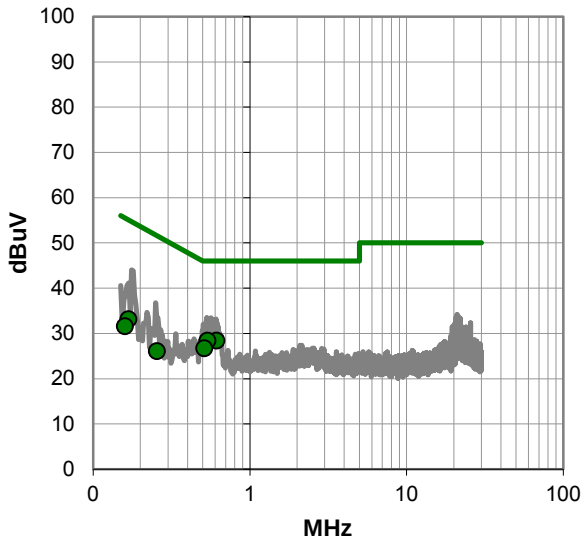
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #32

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.168	28.1	20.5	48.6	65.1	-16.5
0.160	27.0	20.5	47.5	65.5	-18.0
0.514	15.0	20.4	35.4	56.0	-20.6
0.537	14.3	20.4	34.7	56.0	-21.3
0.612	13.9	20.4	34.3	56.0	-21.7
0.255	16.9	20.4	37.3	61.6	-24.2

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.612	8.0	20.4	28.4	46.0	-17.6
0.537	8.0	20.4	28.4	46.0	-17.6
0.514	6.3	20.4	26.7	46.0	-19.3
0.168	12.7	20.5	33.2	55.1	-21.9
0.160	11.1	20.5	31.6	55.5	-23.9
0.255	5.6	20.4	26.0	51.6	-25.5

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	33	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

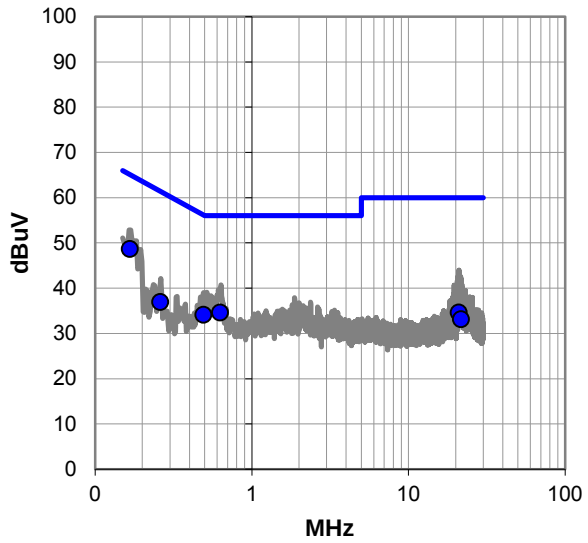
EUT OPERATING MODES

TX 802.11a Ch 165 5825MHz 6Mbps

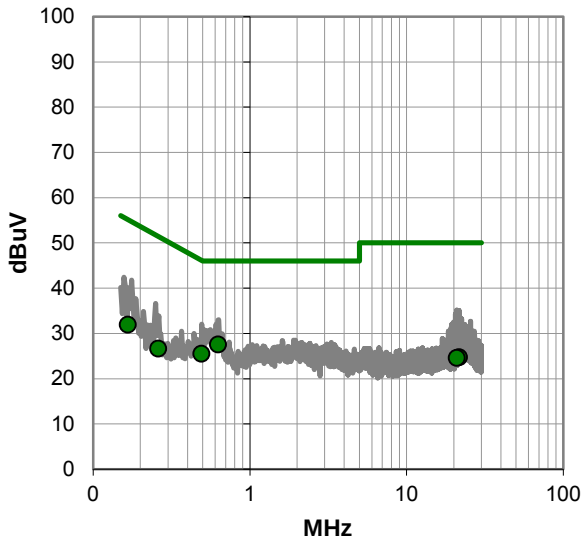
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #33

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.167	28.2	20.5	48.7	65.1	-16.5
0.627	14.2	20.4	34.6	56.0	-21.4
0.491	13.7	20.4	34.1	56.1	-22.0
0.260	16.5	20.4	36.9	61.4	-24.5
20.933	12.9	21.7	34.6	60.0	-25.4
21.614	11.4	21.8	33.2	60.0	-26.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.627	7.1	20.4	27.5	46.0	-18.5
0.491	5.1	20.4	25.5	46.1	-20.6
0.167	11.5	20.5	32.0	55.1	-23.2
0.260	6.2	20.4	26.6	51.4	-24.8
21.614	3.0	21.8	24.8	50.0	-25.2
20.933	2.9	21.7	24.6	50.0	-25.4

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV07 Cables	N/A	Conducted Cables	EVG	03/07/2014	12 mo
Attenuator	Fairview Microwave	SA6B10W-20	RKA	10/24/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHD	01/22/2014	12 mo
Receiver	Rohde & Schwarz	ESCI	ARH	02/05/2014	12 mo
LISN	Solar	9252-50-R-24-BNC	LIR	10/09/2013	12 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

INTE5492-1

MODES INVESTIGATED

TX 802.11a Ch 36 5180MHz 6Mbps
TX 802.11a Ch 48 5240MHz 6Mbps
TX 802.11a Ch 52 5260MHz 6Mbps
TX 802.11a Ch 64 5320MHz 6Mbps
TX 802.11a Ch 100 5500MHz 6Mbps
TX 802.11a Ch 116 5580MHz 6Mbps
TX 802.11a Ch 140 5700MHz 6Mbps

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	34	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

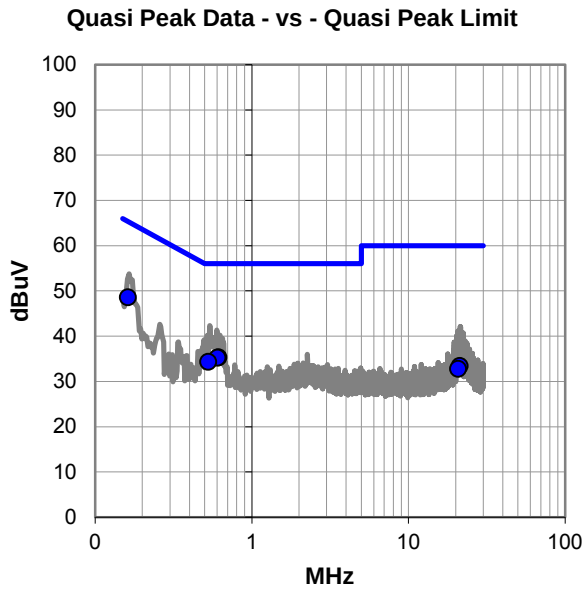
None

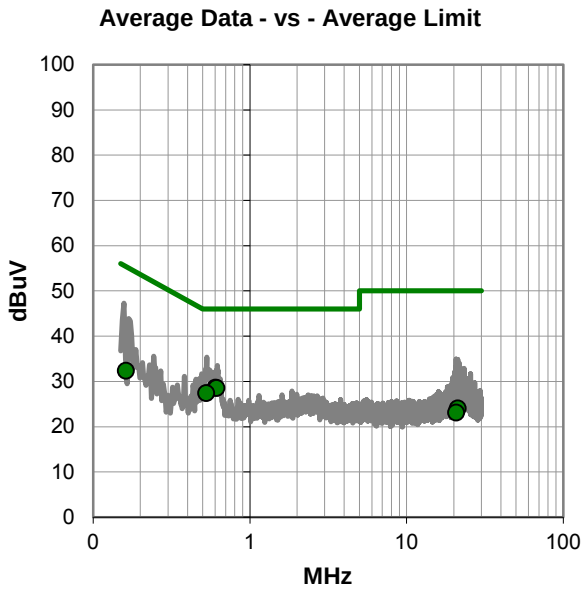
EUT OPERATING MODES

TX 802.11a Ch 36 5180MHz 6Mbps

DEVIATIONS FROM TEST STANDARD

None





NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #34

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.162	28.1	20.5	48.6	65.4	-16.8
0.613	14.9	20.4	35.3	56.0	-20.7
0.606	14.8	20.4	35.2	56.0	-20.8
0.529	13.9	20.4	34.3	56.0	-21.7
21.218	11.7	21.7	33.4	60.0	-26.6
20.734	11.1	21.7	32.8	60.0	-27.2

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.606	8.2	20.4	28.6	46.0	-17.4
0.613	8.1	20.4	28.5	46.0	-17.5
0.529	7.0	20.4	27.4	46.0	-18.6
0.162	11.9	20.5	32.4	55.4	-23.0
21.218	2.3	21.7	24.0	50.0	-26.0
20.734	1.4	21.7	23.1	50.0	-26.9

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	35	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

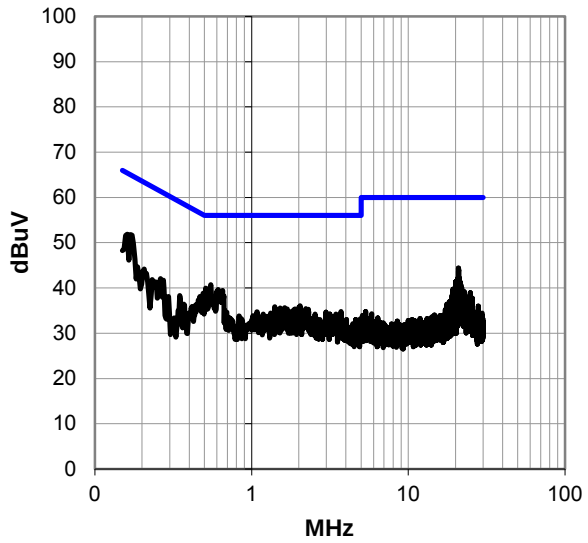
EUT OPERATING MODES

TX 802.11a Ch 36 5180MHz 6Mbps

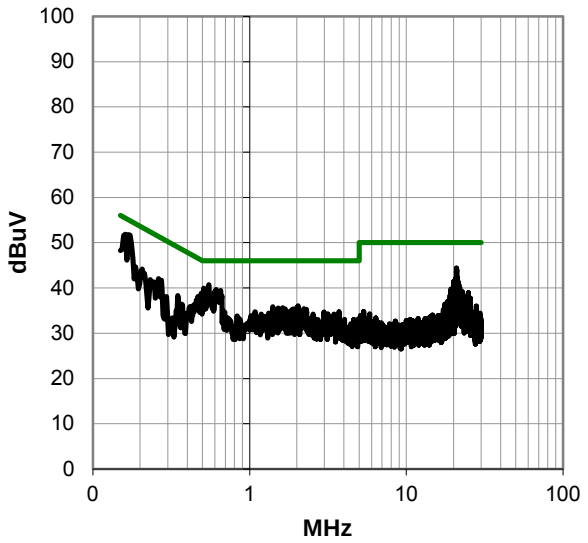
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #35

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.169	31.3	20.5	51.8	65.0	-13.3
0.161	31.4	20.5	51.9	65.4	-13.5
0.549	20.3	20.4	40.7	56.0	-15.3
20.897	22.7	21.7	44.4	60.0	-15.6
20.964	22.3	21.7	44.0	60.0	-16.0
0.512	19.5	20.4	39.9	56.0	-16.1
0.613	19.2	20.4	39.6	56.0	-16.4
0.490	18.4	20.4	38.8	56.2	-17.4
21.169	20.4	21.7	42.1	60.0	-17.9
20.673	20.4	21.7	42.1	60.0	-17.9
0.467	17.7	20.4	38.1	56.6	-18.5
20.274	19.7	21.7	41.4	60.0	-18.6
20.016	19.7	21.7	41.4	60.0	-18.6
21.457	19.6	21.8	41.4	60.0	-18.6
21.348	19.4	21.7	41.1	60.0	-18.9
21.061	19.4	21.7	41.1	60.0	-18.9
20.733	19.1	21.7	40.8	60.0	-19.2
0.206	23.7	20.5	44.2	63.4	-19.2
21.613	19.0	21.8	40.8	60.0	-19.2
0.273	21.3	20.4	41.7	61.0	-19.3
0.262	21.6	20.4	42.0	61.4	-19.3
21.423	18.9	21.7	40.6	60.0	-19.4
20.845	18.9	21.7	40.6	60.0	-19.4
21.147	18.8	21.7	40.5	60.0	-19.5
21.315	18.5	21.7	40.2	60.0	-19.8
20.819	18.5	21.7	40.2	60.0	-19.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.169	31.3	20.5	51.8	55.0	-3.3
0.161	31.4	20.5	51.9	55.4	-3.5
0.549	20.3	20.4	40.7	46.0	-5.3
20.897	22.7	21.7	44.4	50.0	-5.6
20.964	22.3	21.7	44.0	50.0	-6.0
0.512	19.5	20.4	39.9	46.0	-6.1
0.613	19.2	20.4	39.6	46.0	-6.4
0.490	18.4	20.4	38.8	46.2	-7.4
21.169	20.4	21.7	42.1	50.0	-7.9
20.673	20.4	21.7	42.1	50.0	-7.9
0.467	17.7	20.4	38.1	46.6	-8.5
20.274	19.7	21.7	41.4	50.0	-8.6
20.016	19.7	21.7	41.4	50.0	-8.6
21.457	19.6	21.8	41.4	50.0	-8.6
21.348	19.4	21.7	41.1	50.0	-8.9
21.061	19.4	21.7	41.1	50.0	-8.9
20.733	19.1	21.7	40.8	50.0	-9.2
0.206	23.7	20.5	44.2	53.4	-9.2
21.613	19.0	21.8	40.8	50.0	-9.2
0.273	21.3	20.4	41.7	51.0	-9.3
0.262	21.6	20.4	42.0	51.4	-9.3
21.423	18.9	21.7	40.6	50.0	-9.4
20.845	18.9	21.7	40.6	50.0	-9.4
21.147	18.8	21.7	40.5	50.0	-9.5
21.315	18.5	21.7	40.2	50.0	-9.8
20.819	18.5	21.7	40.2	50.0	-9.8

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	36	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

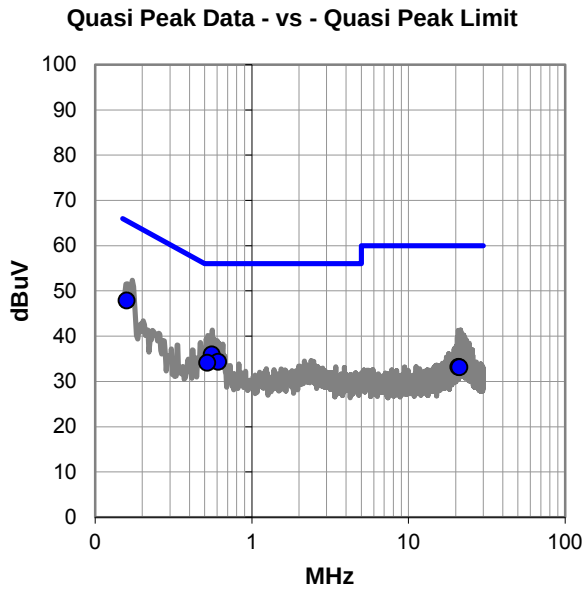
None

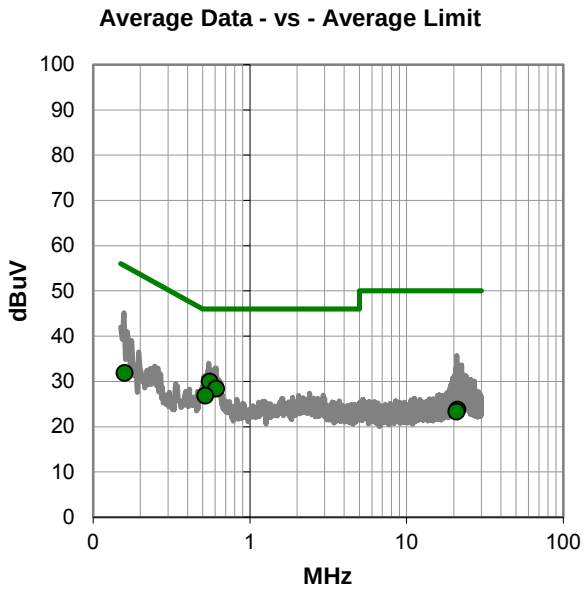
EUT OPERATING MODES

TX 802.11a Ch 48 5240MHz 6Mbps

DEVIATIONS FROM TEST STANDARD

None





NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #36

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.159	27.4	20.5	47.9	65.5	-17.6
0.555	15.5	20.4	35.9	56.0	-20.1
0.610	13.9	20.4	34.3	56.0	-21.7
0.521	13.7	20.4	34.1	56.0	-21.9
20.877	11.5	21.7	33.2	60.0	-26.8
21.137	11.4	21.7	33.1	60.0	-26.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.555	9.5	20.4	29.9	46.0	-16.1
0.610	8.0	20.4	28.4	46.0	-17.6
0.521	6.4	20.4	26.8	46.0	-19.2
0.159	11.4	20.5	31.9	55.5	-23.6
21.137	2.0	21.7	23.7	50.0	-26.3
20.877	1.6	21.7	23.3	50.0	-26.7

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	37	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

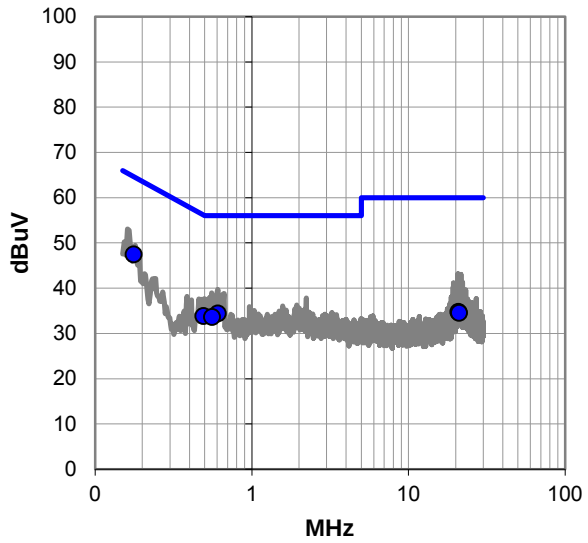
EUT OPERATING MODES

TX 802.11a Ch 48 5240MHz 6Mbps

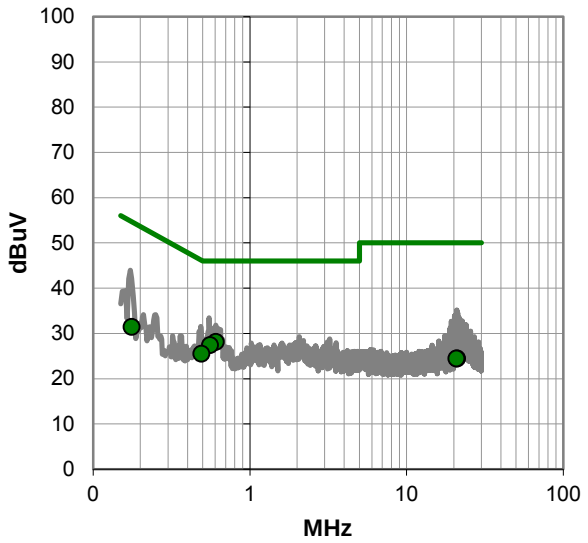
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #37

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.177	27.0	20.5	47.5	64.6	-17.2
0.607	14.0	20.4	34.4	56.0	-21.6
0.491	13.4	20.4	33.8	56.2	-22.3
0.558	13.2	20.4	33.6	56.0	-22.4
20.879	13.0	21.7	34.7	60.0	-25.3
21.040	12.8	21.7	34.5	60.0	-25.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.607	7.7	20.4	28.1	46.0	-17.9
0.558	7.0	20.4	27.4	46.0	-18.6
0.491	5.1	20.4	25.5	46.2	-20.6
0.177	11.0	20.5	31.5	54.6	-23.2
21.040	2.7	21.7	24.4	50.0	-25.6
20.879	2.7	21.7	24.4	50.0	-25.6

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	38	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

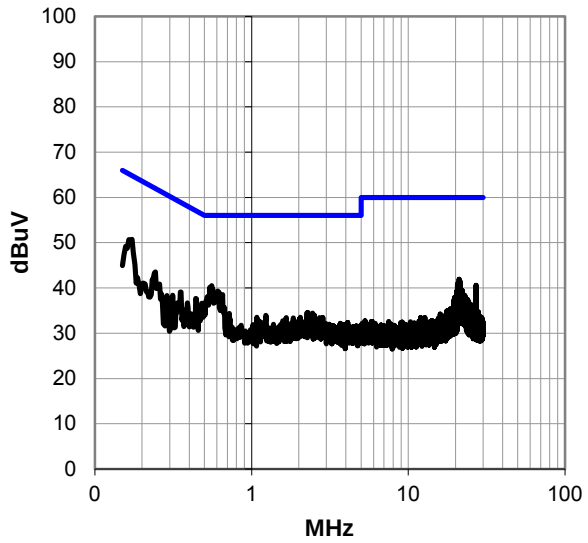
EUT OPERATING MODES

TX 802.11a Ch 52 5260MHz 6Mbps

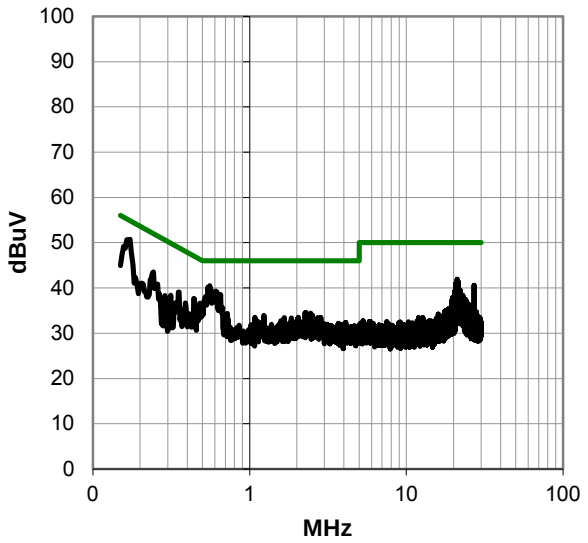
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #38

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.172	30.3	20.5	50.8	64.8	-14.1
0.557	20.1	20.4	40.5	56.0	-15.5
0.654	18.1	20.4	38.5	56.0	-17.5
21.080	20.2	21.7	41.9	60.0	-18.1
0.243	23.1	20.5	43.6	62.0	-18.4
21.367	19.7	21.7	41.4	60.0	-18.6
21.315	19.3	21.7	41.0	60.0	-19.0
20.651	19.2	21.7	40.9	60.0	-19.1
0.441	17.3	20.4	37.7	57.0	-19.3
27.120	18.5	22.1	40.6	60.0	-19.4
21.013	18.8	21.7	40.5	60.0	-19.5
20.766	18.8	21.7	40.5	60.0	-19.5
0.482	16.2	20.4	36.6	56.3	-19.7
20.979	18.5	21.7	40.2	60.0	-19.8
20.968	18.5	21.7	40.2	60.0	-19.8
20.807	18.5	21.7	40.2	60.0	-19.8
0.351	18.7	20.4	39.1	58.9	-19.8
21.173	18.4	21.7	40.1	60.0	-19.9
21.457	18.2	21.8	40.0	60.0	-20.0
21.236	18.2	21.7	39.9	60.0	-20.1
20.587	18.0	21.7	39.7	60.0	-20.3
20.998	17.9	21.7	39.6	60.0	-20.4
21.942	17.7	21.8	39.5	60.0	-20.5
20.669	17.7	21.7	39.4	60.0	-20.6
22.162	17.6	21.8	39.4	60.0	-20.6
21.964	17.6	21.8	39.4	60.0	-20.6

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.172	30.3	20.5	50.8	54.8	-4.1
0.557	20.1	20.4	40.5	46.0	-5.5
0.654	18.1	20.4	38.5	46.0	-7.5
21.080	20.2	21.7	41.9	50.0	-8.1
0.243	23.1	20.5	43.6	52.0	-8.4
21.367	19.7	21.7	41.4	50.0	-8.6
21.315	19.3	21.7	41.0	50.0	-9.0
20.651	19.2	21.7	40.9	50.0	-9.1
0.441	17.3	20.4	37.7	47.0	-9.3
27.120	18.5	22.1	40.6	50.0	-9.4
21.013	18.8	21.7	40.5	50.0	-9.5
20.766	18.8	21.7	40.5	50.0	-9.5
0.482	16.2	20.4	36.6	46.3	-9.7
20.979	18.5	21.7	40.2	50.0	-9.8
20.968	18.5	21.7	40.2	50.0	-9.8
20.807	18.5	21.7	40.2	50.0	-9.8
0.351	18.7	20.4	39.1	48.9	-9.8
21.173	18.4	21.7	40.1	50.0	-9.9
21.457	18.2	21.8	40.0	50.0	-10.0
21.236	18.2	21.7	39.9	50.0	-10.1
20.587	18.0	21.7	39.7	50.0	-10.3
20.998	17.9	21.7	39.6	50.0	-10.4
21.942	17.7	21.8	39.5	50.0	-10.5
20.669	17.7	21.7	39.4	50.0	-10.6
22.162	17.6	21.8	39.4	50.0	-10.6
21.964	17.6	21.8	39.4	50.0	-10.6

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	39	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

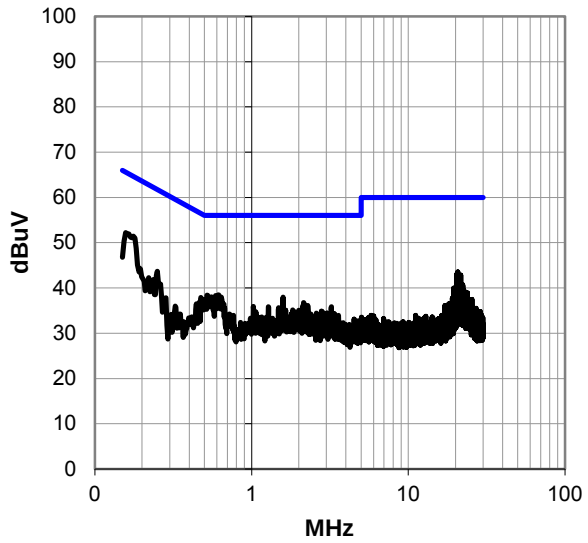
EUT OPERATING MODES

TX 802.11a Ch 52 5260MHz 6Mbps

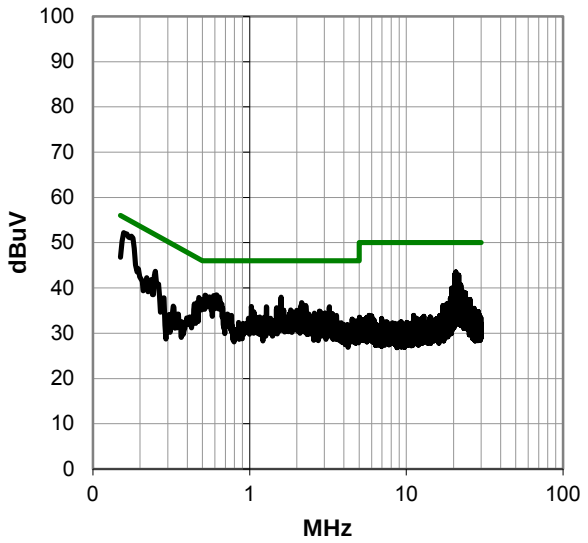
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #39

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	31.7	20.5	52.2	65.6	-13.4
20.677	21.8	21.7	43.5	60.0	-16.5
20.341	21.3	21.7	43.0	60.0	-17.0
21.639	21.1	21.8	42.9	60.0	-17.1
0.616	18.0	20.4	38.4	56.0	-17.6
0.523	18.0	20.4	38.4	56.0	-17.6
1.586	17.4	20.6	38.0	56.0	-18.0
20.871	20.2	21.7	41.9	60.0	-18.1
0.251	23.2	20.4	43.6	61.7	-18.1
21.083	19.9	21.7	41.6	60.0	-18.4
20.695	19.9	21.7	41.6	60.0	-18.4
20.528	19.9	21.7	41.6	60.0	-18.4
21.486	19.7	21.8	41.5	60.0	-18.5
20.505	19.6	21.7	41.3	60.0	-18.7
21.333	19.5	21.7	41.2	60.0	-18.8
21.248	19.5	21.7	41.2	60.0	-18.8
21.218	19.4	21.7	41.1	60.0	-18.9
20.811	19.4	21.7	41.1	60.0	-18.9
20.942	19.3	21.7	41.0	60.0	-19.0
20.908	19.2	21.7	40.9	60.0	-19.1
20.658	19.2	21.7	40.9	60.0	-19.1
2.150	16.2	20.6	36.8	56.0	-19.2
21.740	19.0	21.8	40.8	60.0	-19.2
21.453	19.0	21.8	40.8	60.0	-19.2
20.744	19.0	21.7	40.7	60.0	-19.3
22.225	18.9	21.8	40.7	60.0	-19.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	31.7	20.5	52.2	55.6	-3.4
20.677	21.8	21.7	43.5	50.0	-6.5
20.341	21.3	21.7	43.0	50.0	-7.0
21.639	21.1	21.8	42.9	50.0	-7.1
0.616	18.0	20.4	38.4	46.0	-7.6
0.523	18.0	20.4	38.4	46.0	-7.6
1.586	17.4	20.6	38.0	46.0	-8.0
20.871	20.2	21.7	41.9	50.0	-8.1
0.251	23.2	20.4	43.6	51.7	-8.1
21.083	19.9	21.7	41.6	50.0	-8.4
20.695	19.9	21.7	41.6	50.0	-8.4
20.528	19.9	21.7	41.6	50.0	-8.4
21.486	19.7	21.8	41.5	50.0	-8.5
20.505	19.6	21.7	41.3	50.0	-8.7
21.333	19.5	21.7	41.2	50.0	-8.8
21.248	19.5	21.7	41.2	50.0	-8.8
21.218	19.4	21.7	41.1	50.0	-8.9
20.811	19.4	21.7	41.1	50.0	-8.9
20.942	19.3	21.7	41.0	50.0	-9.0
20.908	19.2	21.7	40.9	50.0	-9.1
20.658	19.2	21.7	40.9	50.0	-9.1
2.150	16.2	20.6	36.8	46.0	-9.2
21.740	19.0	21.8	40.8	50.0	-9.2
21.453	19.0	21.8	40.8	50.0	-9.2
20.744	19.0	21.7	40.7	50.0	-9.3
22.225	18.9	21.8	40.7	50.0	-9.3

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	40	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

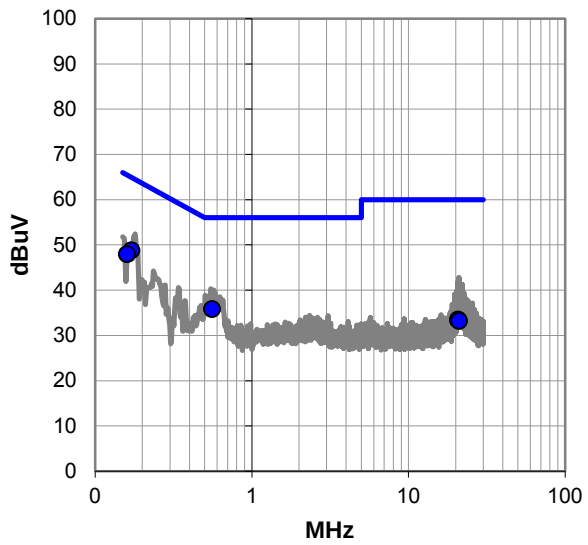
EUT OPERATING MODES

TX 802.11a Ch 64 5320MHz 6Mbps

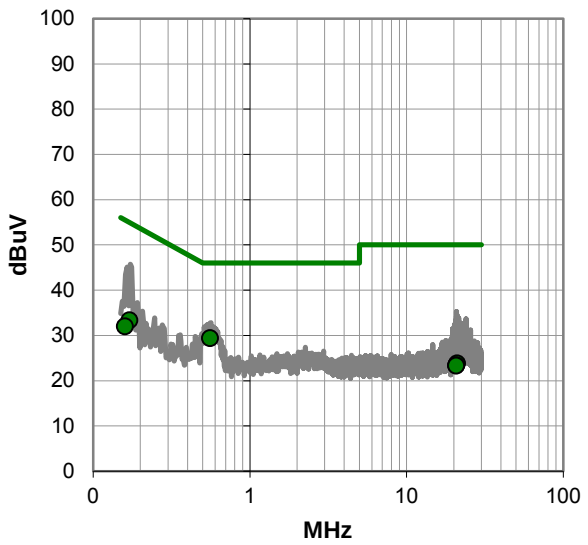
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #40

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.171	28.3	20.5	48.8	64.9	-16.2
0.160	27.5	20.5	48.0	65.5	-17.5
0.557	15.4	20.4	35.8	56.0	-20.2
20.812	11.8	21.7	33.5	60.0	-26.5
20.780	11.7	21.7	33.4	60.0	-26.6
21.013	11.5	21.7	33.2	60.0	-26.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.557	9.0	20.4	29.4	46.0	-16.6
0.171	12.9	20.5	33.4	54.9	-21.6
0.160	11.5	20.5	32.0	55.5	-23.5
21.013	2.1	21.7	23.8	50.0	-26.2
20.812	1.7	21.7	23.4	50.0	-26.6
20.780	1.6	21.7	23.3	50.0	-26.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	41	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

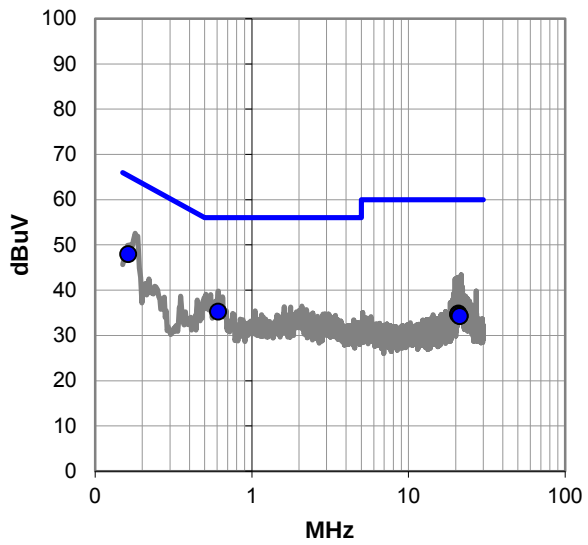
EUT OPERATING MODES

TX 802.11a Ch 64 5320MHz 6Mbps

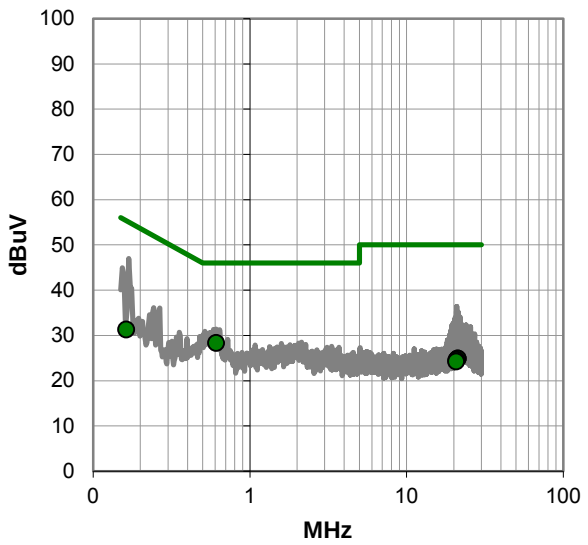
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #41

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.163	27.5	20.5	48.0	65.3	-17.3
0.611	14.8	20.4	35.2	56.0	-20.8
20.901	13.1	21.7	34.8	60.0	-25.2
20.801	12.9	21.7	34.6	60.0	-25.4
21.284	12.6	21.7	34.3	60.0	-25.7
21.252	12.5	21.7	34.2	60.0	-25.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.611	7.9	20.4	28.3	46.0	-17.7
0.163	10.8	20.5	31.3	55.3	-24.0
21.284	3.1	21.7	24.8	50.0	-25.2
21.252	3.1	21.7	24.8	50.0	-25.2
20.901	2.9	21.7	24.6	50.0	-25.4
20.801	2.5	21.7	24.2	50.0	-25.8

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	42	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

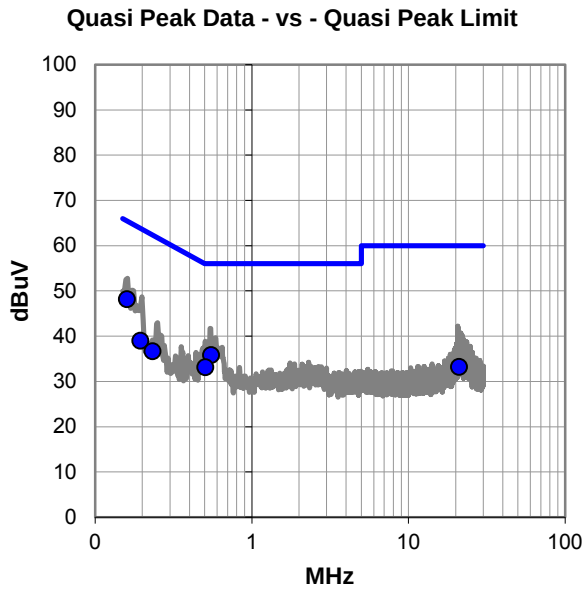
None

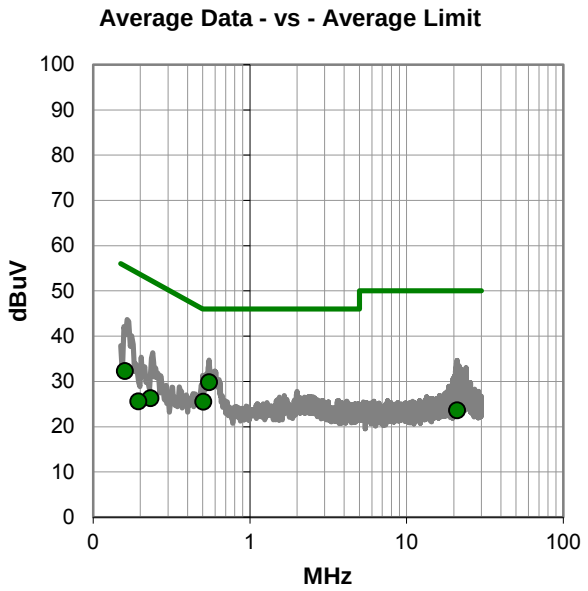
EUT OPERATING MODES

TX 802.11a Ch 100 5500MHz 6Mbps

DEVIATIONS FROM TEST STANDARD

None





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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #42

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.160	27.7	20.5	48.2	65.5	-17.3
0.550	15.4	20.4	35.8	56.0	-20.2
0.506	12.7	20.4	33.1	56.0	-22.9
0.194	18.5	20.5	39.0	63.9	-24.9
0.233	16.2	20.5	36.7	62.3	-25.7
21.014	11.5	21.7	33.2	60.0	-26.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.550	9.4	20.4	29.8	46.0	-16.2
0.506	5.1	20.4	25.5	46.0	-20.5
0.160	11.8	20.5	32.3	55.5	-23.2
0.233	5.8	20.5	26.3	52.3	-26.1
21.014	1.9	21.7	23.6	50.0	-26.4
0.194	5.1	20.5	25.6	53.9	-28.3

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	43	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

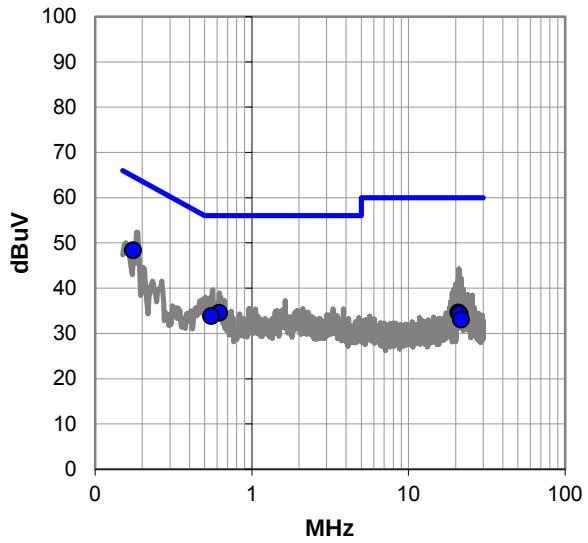
EUT OPERATING MODES

TX 802.11a Ch 100 5500MHz 6Mbps

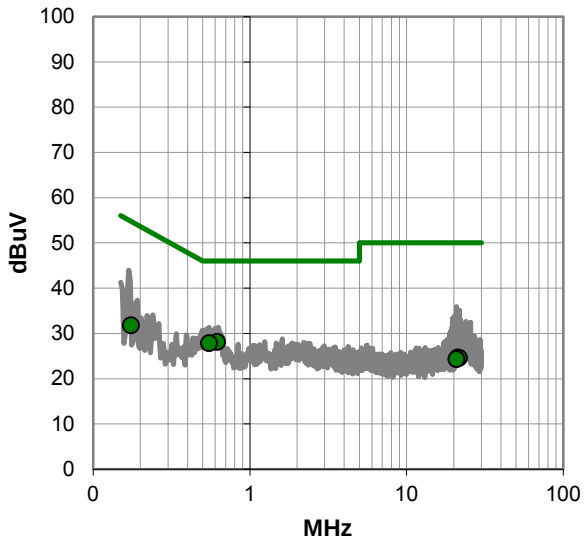
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #43

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.174	27.9	20.5	48.4	64.8	-16.4
0.618	14.1	20.4	34.5	56.0	-21.5
0.550	13.4	20.4	33.8	56.0	-22.2
20.858	12.9	21.7	34.6	60.0	-25.4
21.240	12.5	21.7	34.2	60.0	-25.8
21.690	11.3	21.8	33.1	60.0	-26.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.618	7.7	20.4	28.1	46.0	-17.9
0.550	7.4	20.4	27.8	46.0	-18.2
0.174	11.3	20.5	31.8	54.8	-23.0
21.240	2.9	21.7	24.6	50.0	-25.4
21.690	2.8	21.8	24.6	50.0	-25.4
20.858	2.6	21.7	24.3	50.0	-25.7

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	44	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

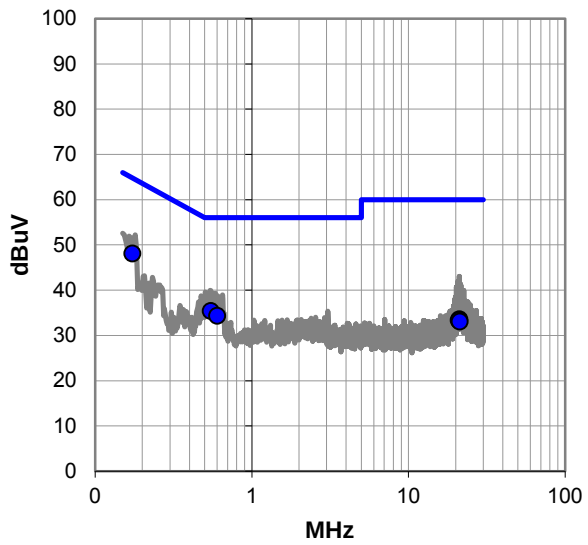
EUT OPERATING MODES

TX 802.11a Ch 116 5580MHz 6Mbps

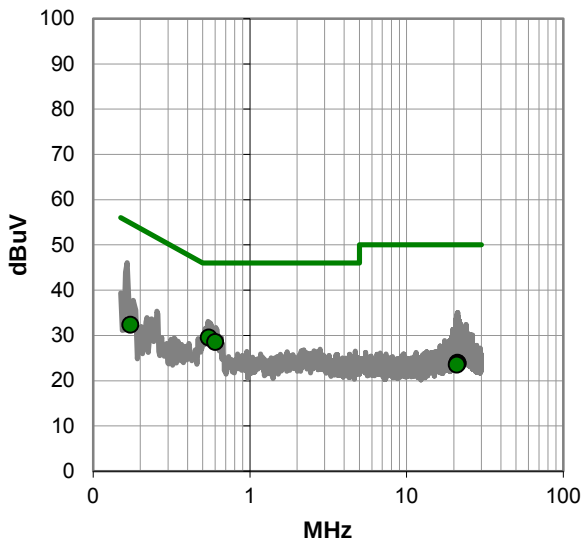
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #44

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.173	27.6	20.5	48.1	64.8	-16.8
0.547	15.0	20.4	35.4	56.0	-20.6
0.602	13.9	20.4	34.3	56.0	-21.7
21.154	11.8	21.7	33.5	60.0	-26.5
20.964	11.6	21.7	33.3	60.0	-26.7
21.213	11.3	21.7	33.0	60.0	-27.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.547	9.1	20.4	29.5	46.0	-16.5
0.602	8.1	20.4	28.5	46.0	-17.5
0.173	11.9	20.5	32.4	54.8	-22.5
21.154	2.2	21.7	23.9	50.0	-26.1
21.213	2.1	21.7	23.8	50.0	-26.2
20.964	1.8	21.7	23.5	50.0	-26.5

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	45	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

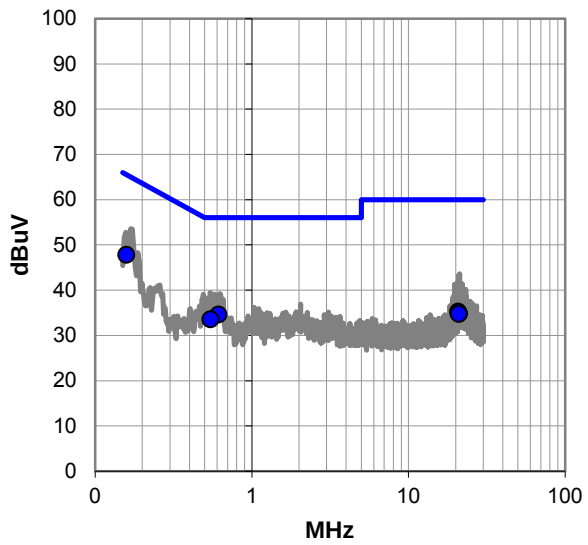
EUT OPERATING MODES

TX 802.11a Ch 116 5580MHz 6Mbps

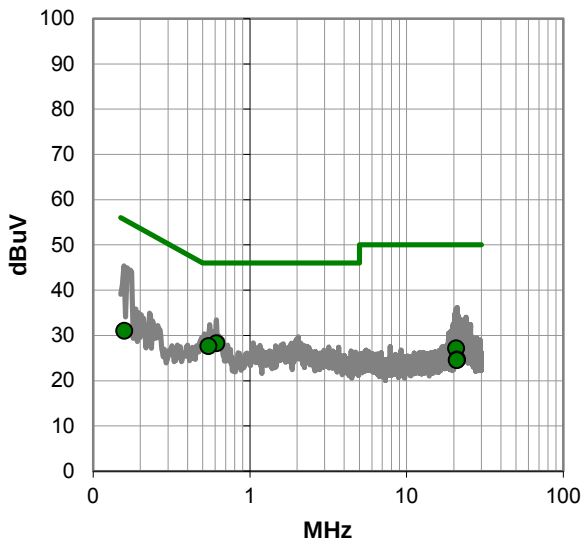
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #45

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.158	27.3	20.5	47.8	65.5	-17.8
0.612	14.2	20.4	34.6	56.0	-21.4
0.545	13.1	20.4	33.5	56.0	-22.5
20.763	13.5	21.7	35.2	60.0	-24.8
21.063	13.1	21.7	34.8	60.0	-25.2
20.979	13.0	21.7	34.7	60.0	-25.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.612	7.8	20.4	28.2	46.0	-17.8
0.545	7.2	20.4	27.6	46.0	-18.4
20.763	5.4	21.7	27.1	50.0	-22.9
0.158	10.5	20.5	31.0	55.5	-24.6
21.063	2.9	21.7	24.6	50.0	-25.4
20.979	2.8	21.7	24.5	50.0	-25.5

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	46	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

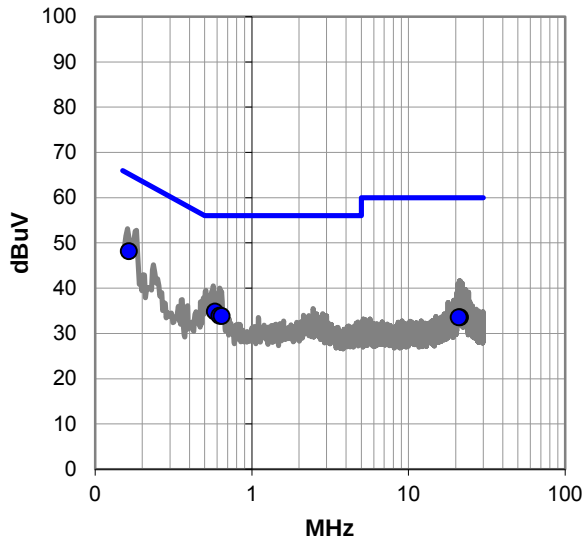
EUT OPERATING MODES

TX 802.11a Ch 140 5700MHz 6Mbps

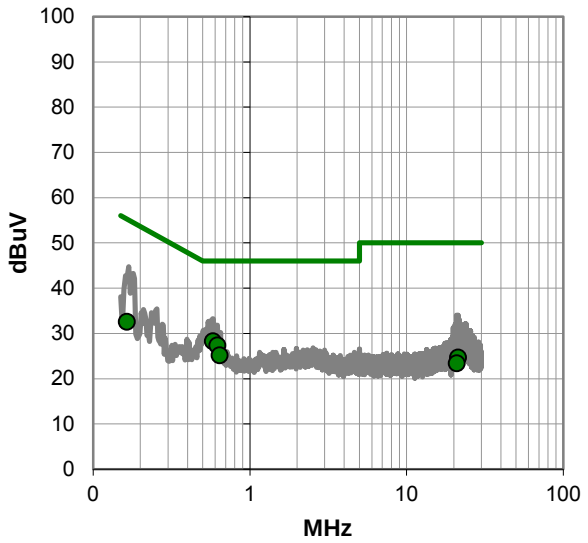
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #46

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	27.7	20.5	48.2	65.2	-17.1
0.583	14.4	20.4	34.8	56.0	-21.2
0.622	13.5	20.4	33.9	56.0	-22.1
0.641	13.4	20.4	33.8	56.0	-22.2
21.315	11.8	21.7	33.5	60.0	-26.5
20.960	11.8	21.7	33.5	60.0	-26.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.583	7.8	20.4	28.2	46.0	-17.8
0.622	6.9	20.4	27.3	46.0	-18.7
0.641	4.7	20.4	25.1	46.0	-20.9
0.165	12.1	20.5	32.6	55.2	-22.7
21.315	2.9	21.7	24.6	50.0	-25.4
20.960	1.7	21.7	23.4	50.0	-26.6

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	47	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

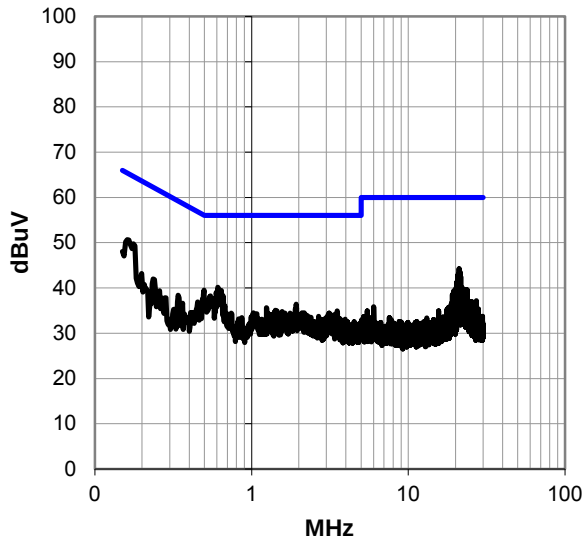
EUT OPERATING MODES

TX 802.11a Ch 140 5700MHz 6Mbps

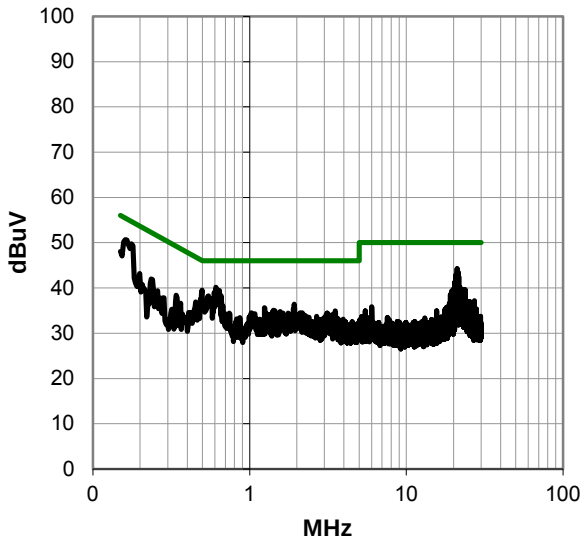
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #47

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	30.2	20.5	50.7	65.4	-14.7
21.124	22.5	21.7	44.2	60.0	-15.8
0.609	19.7	20.4	40.1	56.0	-15.9
0.497	19.1	20.4	39.5	56.1	-16.5
21.434	21.7	21.7	43.4	60.0	-16.6
0.642	19.0	20.4	39.4	56.0	-16.6
0.594	18.6	20.4	39.0	56.0	-17.0
21.061	21.2	21.7	42.9	60.0	-17.1
20.759	21.1	21.7	42.8	60.0	-17.2
21.568	20.7	21.8	42.5	60.0	-17.5
21.255	20.7	21.7	42.4	60.0	-17.6
0.657	17.9	20.4	38.3	56.0	-17.7
0.545	17.8	20.4	38.2	56.0	-17.8
20.774	20.4	21.7	42.1	60.0	-17.9
20.710	20.2	21.7	41.9	60.0	-18.1
21.024	20.1	21.7	41.8	60.0	-18.2
20.363	19.5	21.7	41.2	60.0	-18.8
21.382	19.1	21.7	40.8	60.0	-19.2
21.218	19.1	21.7	40.8	60.0	-19.2
20.919	19.1	21.7	40.8	60.0	-19.2
21.341	18.9	21.7	40.6	60.0	-19.4
21.326	18.9	21.7	40.6	60.0	-19.4
1.926	15.8	20.6	36.4	56.0	-19.6
21.367	18.6	21.7	40.3	60.0	-19.7
21.699	18.5	21.8	40.3	60.0	-19.7
21.524	18.5	21.8	40.3	60.0	-19.7

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	30.2	20.5	50.7	55.4	-4.7
21.124	22.5	21.7	44.2	50.0	-5.8
0.609	19.7	20.4	40.1	46.0	-5.9
0.497	19.1	20.4	39.5	46.1	-6.5
21.434	21.7	21.7	43.4	50.0	-6.6
0.642	19.0	20.4	39.4	46.0	-6.6
0.594	18.6	20.4	39.0	46.0	-7.0
21.061	21.2	21.7	42.9	50.0	-7.1
20.759	21.1	21.7	42.8	50.0	-7.2
21.568	20.7	21.8	42.5	50.0	-7.5
21.255	20.7	21.7	42.4	50.0	-7.6
0.657	17.9	20.4	38.3	46.0	-7.7
0.545	17.8	20.4	38.2	46.0	-7.8
20.774	20.4	21.7	42.1	50.0	-7.9
20.710	20.2	21.7	41.9	50.0	-8.1
21.024	20.1	21.7	41.8	50.0	-8.2
20.363	19.5	21.7	41.2	50.0	-8.8
21.382	19.1	21.7	40.8	50.0	-9.2
21.218	19.1	21.7	40.8	50.0	-9.2
20.919	19.1	21.7	40.8	50.0	-9.2
21.341	18.9	21.7	40.6	50.0	-9.4
21.326	18.9	21.7	40.6	50.0	-9.4
1.926	15.8	20.6	36.4	46.0	-9.6
21.367	18.6	21.7	40.3	50.0	-9.7
21.699	18.5	21.8	40.3	50.0	-9.7
21.524	18.5	21.8	40.3	50.0	-9.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV07 Cables	N/A	Conducted Cables	EVG	03/07/2014	12 mo
Attenuator	Fairview Microwave	SA6B10W-20	RKA	10/24/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHG	12/05/2013	24 mo
LISN	Solar	9252-50-R-24-BNC	LIR	10/09/2013	12 mo
Receiver	Rohde & Schwarz	ESCI	ARH	02/05/2014	12 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

INTE5492-1

MODES INVESTIGATED

Tx, BTLE Low Ch. 2402MHz, ADV
Tx, BTLE Mid Ch. 2426MHz, ADV
Tx, BTLE High Ch. 2480MHz, ADV

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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	8	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

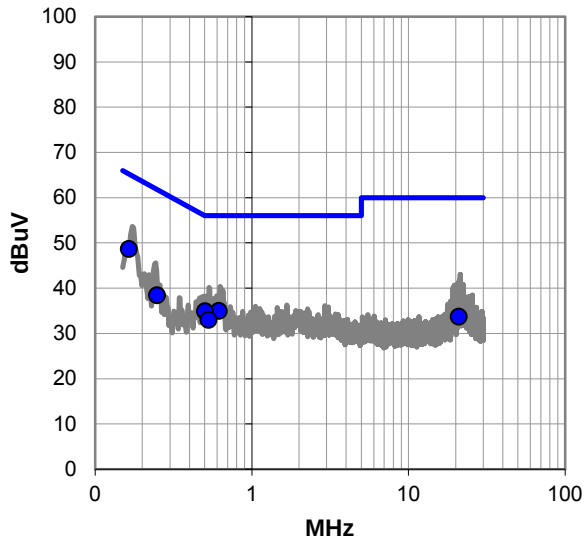
EUT OPERATING MODES

Tx, BTLE Low Ch. 2402MHz, ADV

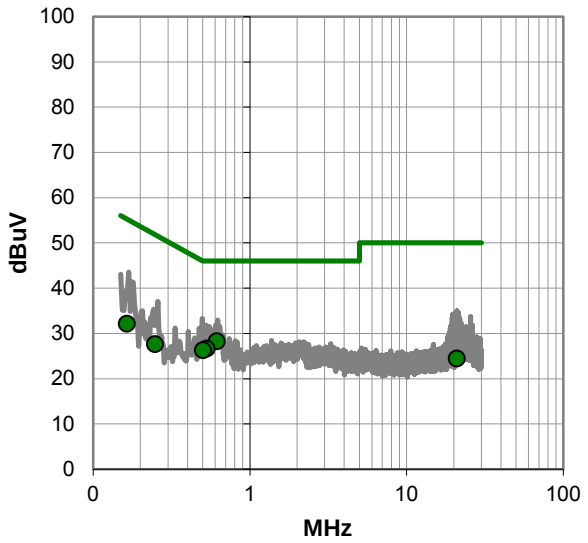
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #8

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.165	28.2	20.5	48.7	65.2	-16.6
0.615	14.5	20.4	34.9	56.0	-21.1
0.503	14.5	20.4	34.9	56.0	-21.1
0.529	12.6	20.4	33.0	56.0	-23.0
0.248	18.0	20.5	38.5	61.8	-23.4
21.006	12.0	21.7	33.7	60.0	-26.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.615	7.8	20.4	28.2	46.0	-17.8
0.529	6.2	20.4	26.6	46.0	-19.4
0.503	5.9	20.4	26.3	46.0	-19.7
0.165	11.7	20.5	32.2	55.2	-23.1
0.248	7.2	20.5	27.7	51.8	-24.2
21.006	2.7	21.7	24.4	50.0	-25.6

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	9	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

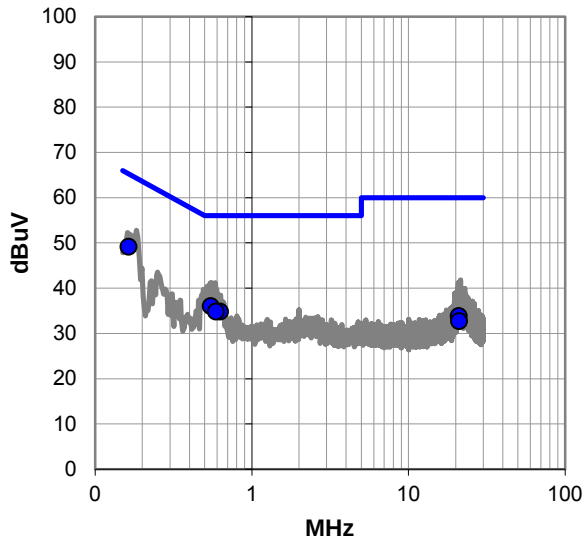
EUT OPERATING MODES

Tx BTLE ADV, Low Ch. 2402MHz

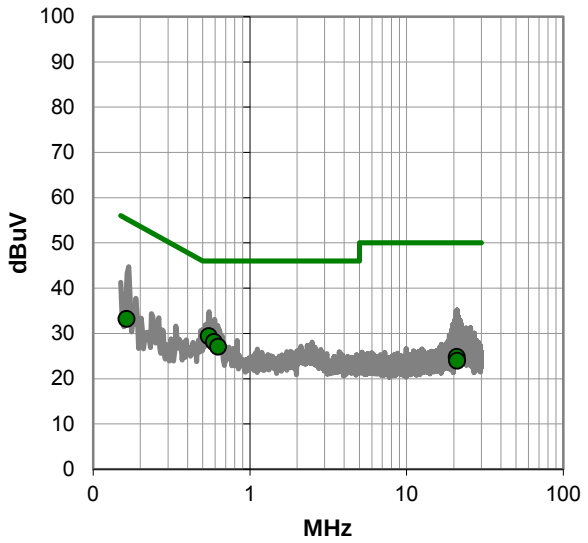
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #9

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.163	28.7	20.5	49.2	65.3	-16.1
0.549	15.6	20.4	36.0	56.0	-20.0
0.626	14.4	20.4	34.8	56.0	-21.2
0.591	14.4	20.4	34.8	56.0	-21.2
20.965	12.1	21.7	33.8	60.0	-26.2
21.017	11.0	21.7	32.7	60.0	-27.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.549	9.0	20.4	29.4	46.0	-16.6
0.591	7.7	20.4	28.1	46.0	-17.9
0.626	6.6	20.4	27.0	46.0	-19.0
0.163	12.7	20.5	33.2	55.3	-22.1
20.965	3.1	21.7	24.8	50.0	-25.2
21.017	2.2	21.7	23.9	50.0	-26.1

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	10	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

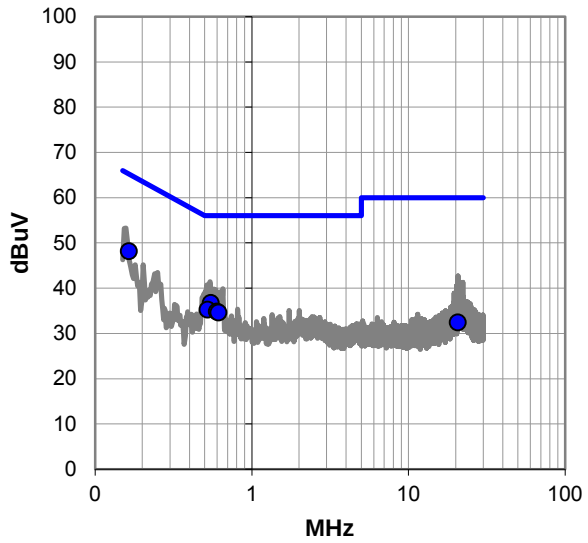
EUT OPERATING MODES

Tx BTLE ADV, Mid Ch. 2426MHz

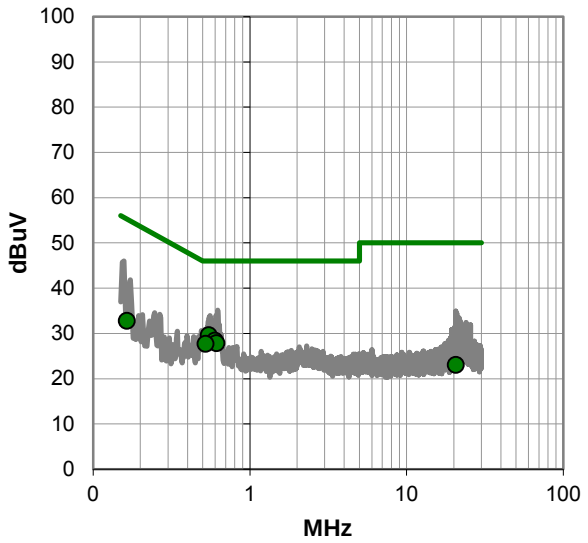
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #10

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.164	27.7	20.5	48.2	65.2	-17.1
0.548	16.3	20.4	36.7	56.0	-19.3
0.523	14.8	20.4	35.2	56.0	-20.8
0.600	14.4	20.4	34.8	56.0	-21.2
0.614	14.2	20.4	34.6	56.0	-21.4
20.668	10.7	21.7	32.4	60.0	-27.6

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.548	9.2	20.4	29.6	46.0	-16.4
0.600	8.0	20.4	28.4	46.0	-17.6
0.614	7.4	20.4	27.8	46.0	-18.2
0.523	7.3	20.4	27.7	46.0	-18.3
0.164	12.3	20.5	32.8	55.2	-22.5
20.668	1.3	21.7	23.0	50.0	-27.0

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	11	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

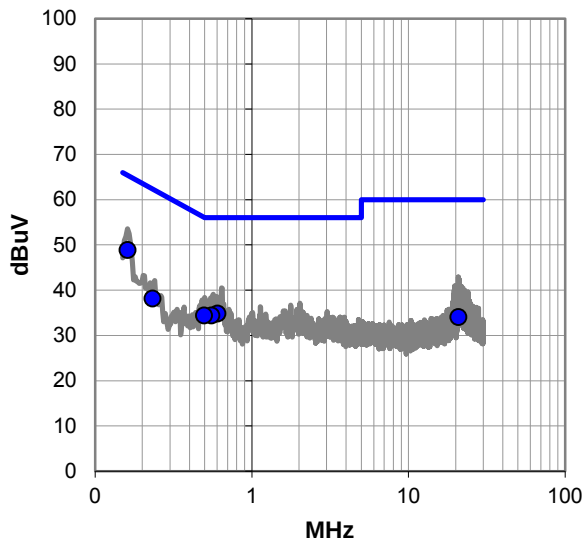
EUT OPERATING MODES

Tx BTLE ADV, Mid Ch. 2426MHz

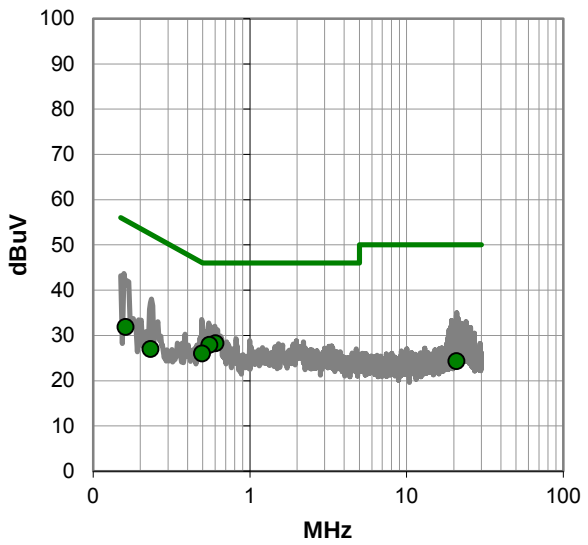
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #11

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	28.4	20.5	48.9	65.4	-16.5
0.605	14.4	20.4	34.8	56.0	-21.2
0.554	14.0	20.4	34.4	56.0	-21.6
0.496	14.0	20.4	34.4	56.1	-21.7
0.232	17.7	20.5	38.2	62.4	-24.2
20.909	12.3	21.7	34.0	60.0	-26.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.605	7.8	20.4	28.2	46.0	-17.8
0.554	7.5	20.4	27.9	46.0	-18.1
0.496	5.6	20.4	26.0	46.1	-20.1
0.161	11.4	20.5	31.9	55.4	-23.5
0.232	6.5	20.5	27.0	52.4	-25.4
20.909	2.6	21.7	24.3	50.0	-25.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	12	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

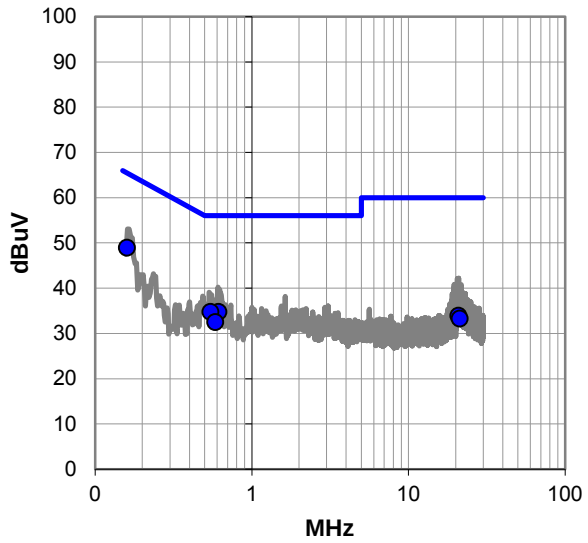
EUT OPERATING MODES

Tx BTLE ADV, High Ch. 2480MHz

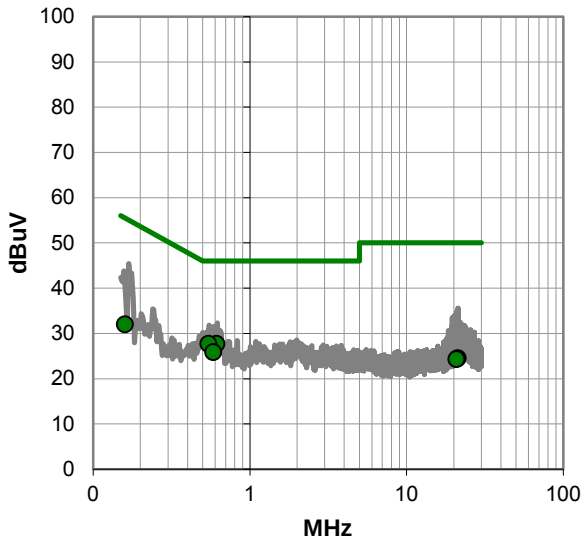
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #12

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.160	28.5	20.5	49.0	65.5	-16.5
0.613	14.3	20.4	34.7	56.0	-21.3
0.545	14.3	20.4	34.7	56.0	-21.3
0.586	12.1	20.4	32.5	56.0	-23.5
20.876	12.2	21.7	33.9	60.0	-26.1
21.305	11.5	21.7	33.2	60.0	-26.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.613	7.3	20.4	27.7	46.0	-18.3
0.545	7.3	20.4	27.7	46.0	-18.3
0.586	5.4	20.4	25.8	46.0	-20.2
0.160	11.5	20.5	32.0	55.5	-23.5
21.305	2.8	21.7	24.5	50.0	-25.5
20.876	2.6	21.7	24.3	50.0	-25.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	13	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

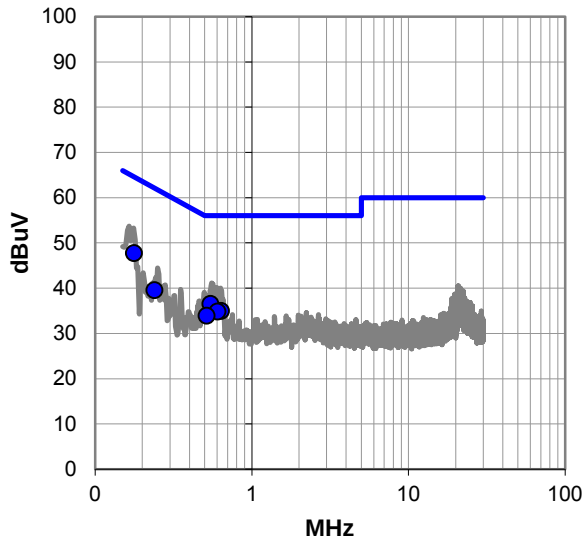
EUT OPERATING MODES

Tx BTLE ADV, High Ch. 2480MHz

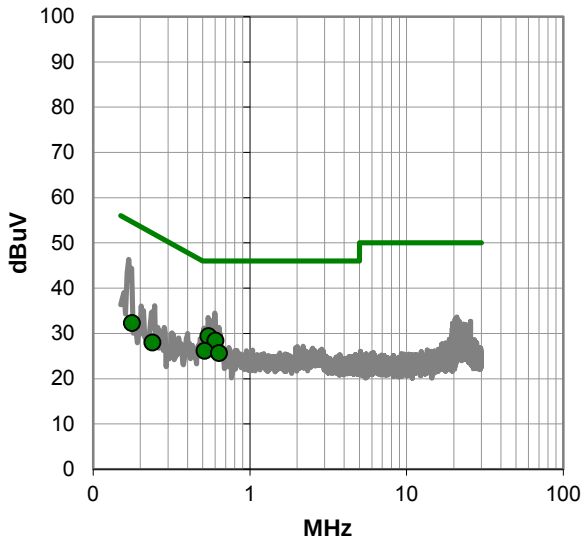
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #13

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.177	27.3	20.5	47.8	64.6	-16.9
0.546	16.1	20.4	36.5	56.0	-19.5
0.638	14.5	20.4	34.9	56.0	-21.1
0.605	14.4	20.4	34.8	56.0	-21.2
0.516	13.5	20.4	33.9	56.0	-22.1
0.239	19.1	20.5	39.6	62.1	-22.6

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.546	9.0	20.4	29.4	46.0	-16.6
0.605	8.0	20.4	28.4	46.0	-17.6
0.516	5.7	20.4	26.1	46.0	-19.9
0.638	5.2	20.4	25.6	46.0	-20.4
0.177	11.8	20.5	32.3	54.6	-22.4
0.239	7.5	20.5	28.0	52.1	-24.2

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	14	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

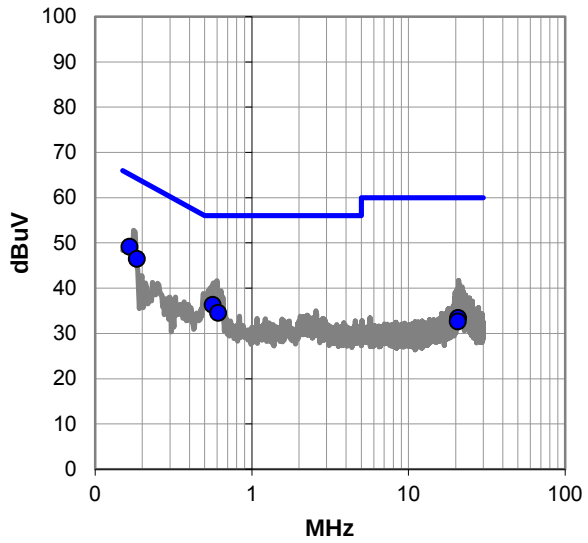
EUT OPERATING MODES

Tx BTLE Data, Low Ch. 2404MHz

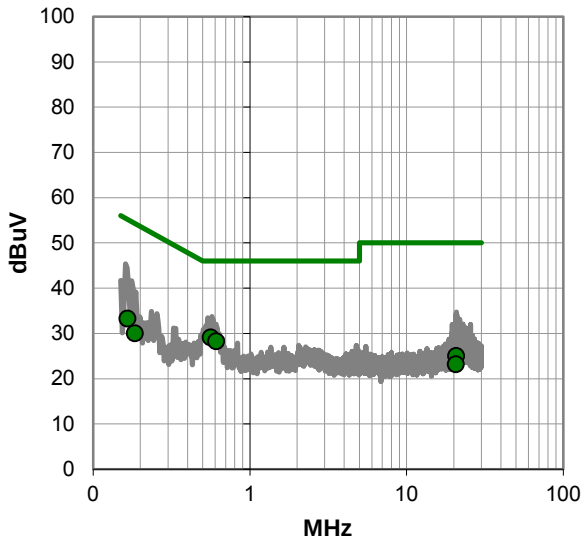
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #14

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.166	28.7	20.5	49.2	65.2	-16.0
0.185	26.0	20.5	46.5	64.3	-17.8
0.564	15.9	20.4	36.3	56.0	-19.7
0.610	14.1	20.4	34.5	56.0	-21.5
20.764	11.7	21.7	33.4	60.0	-26.6
20.695	10.9	21.7	32.6	60.0	-27.4

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.564	8.7	20.4	29.1	46.0	-16.9
0.610	7.8	20.4	28.2	46.0	-17.8
0.166	12.8	20.5	33.3	55.2	-21.9
0.185	9.6	20.5	30.1	54.3	-24.2
20.764	3.3	21.7	25.0	50.0	-25.0
20.695	1.5	21.7	23.2	50.0	-26.8

CONCLUSION

Pass

Tested By

NORTHWEST EMC
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POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	15	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

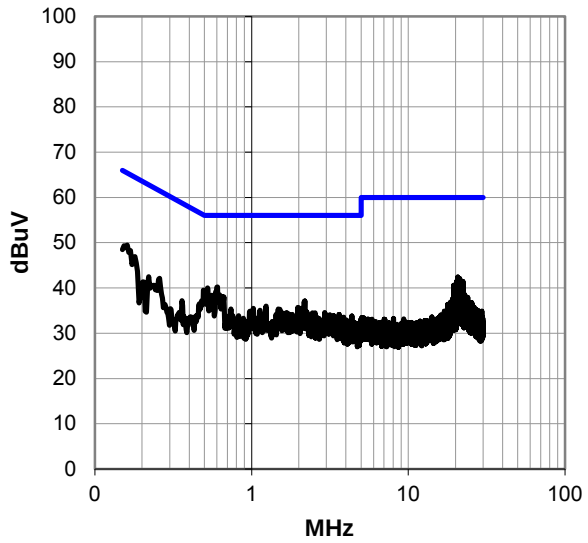
EUT OPERATING MODES

Tx BTLE Data, Low Ch. 2404MHz

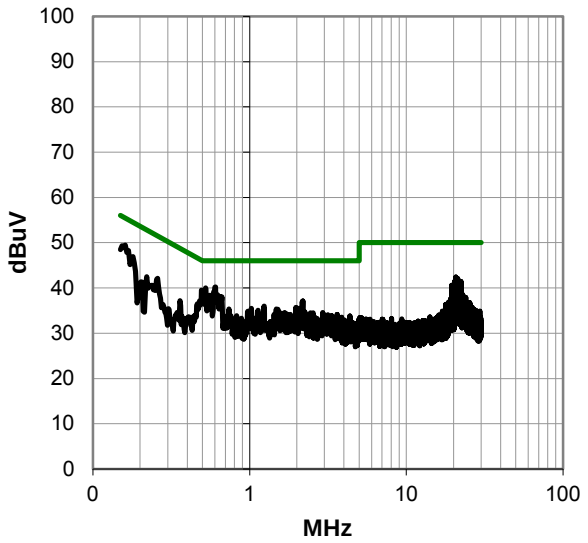
DEVIATIONS FROM TEST STANDARD

None

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #15

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.605	19.8	20.4	40.2	56.0	-15.8
0.161	29.0	20.5	49.5	65.4	-15.9
0.523	19.6	20.4	40.0	56.0	-16.0
0.493	19.1	20.4	39.5	56.1	-16.6
0.557	18.0	20.4	38.4	56.0	-17.6
20.740	20.7	21.7	42.4	60.0	-17.6
21.277	20.3	21.7	42.0	60.0	-18.0
20.658	19.8	21.7	41.5	60.0	-18.5
20.520	19.8	21.7	41.5	60.0	-18.5
20.431	19.8	21.7	41.5	60.0	-18.5
20.852	19.7	21.7	41.4	60.0	-18.6
22.359	19.6	21.8	41.4	60.0	-18.6
20.442	19.5	21.7	41.2	60.0	-18.8
2.187	16.5	20.6	37.1	56.0	-18.9
20.266	19.4	21.7	41.1	60.0	-18.9
2.172	16.4	20.6	37.0	56.0	-19.0
21.457	19.0	21.8	40.8	60.0	-19.2
21.330	18.9	21.7	40.6	60.0	-19.4
20.930	18.9	21.7	40.6	60.0	-19.4
20.580	18.9	21.7	40.6	60.0	-19.4
19.509	18.9	21.6	40.5	60.0	-19.5
20.643	18.8	21.7	40.5	60.0	-19.5
20.968	18.7	21.7	40.4	60.0	-19.6
21.789	18.6	21.8	40.4	60.0	-19.6
21.027	18.5	21.7	40.2	60.0	-19.8
21.710	18.4	21.8	40.2	60.0	-19.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.605	19.8	20.4	40.2	46.0	-5.8
0.161	29.0	20.5	49.5	55.4	-5.9
0.523	19.6	20.4	40.0	46.0	-6.0
0.493	19.1	20.4	39.5	46.1	-6.6
0.557	18.0	20.4	38.4	46.0	-7.6
20.740	20.7	21.7	42.4	50.0	-7.6
21.277	20.3	21.7	42.0	50.0	-8.0
20.658	19.8	21.7	41.5	50.0	-8.5
20.520	19.8	21.7	41.5	50.0	-8.5
20.431	19.8	21.7	41.5	50.0	-8.5
20.852	19.7	21.7	41.4	50.0	-8.6
22.359	19.6	21.8	41.4	50.0	-8.6
20.442	19.5	21.7	41.2	50.0	-8.8
2.187	16.5	20.6	37.1	46.0	-8.9
20.266	19.4	21.7	41.1	50.0	-8.9
2.172	16.4	20.6	37.0	46.0	-9.0
21.457	19.0	21.8	40.8	50.0	-9.2
21.330	18.9	21.7	40.6	50.0	-9.4
20.930	18.9	21.7	40.6	50.0	-9.4
20.580	18.9	21.7	40.6	50.0	-9.4
19.509	18.9	21.6	40.5	50.0	-9.5
20.643	18.8	21.7	40.5	50.0	-9.5
20.968	18.7	21.7	40.4	50.0	-9.6
21.789	18.6	21.8	40.4	50.0	-9.6
21.027	18.5	21.7	40.2	50.0	-9.8
21.710	18.4	21.8	40.2	50.0	-9.8

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	16	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

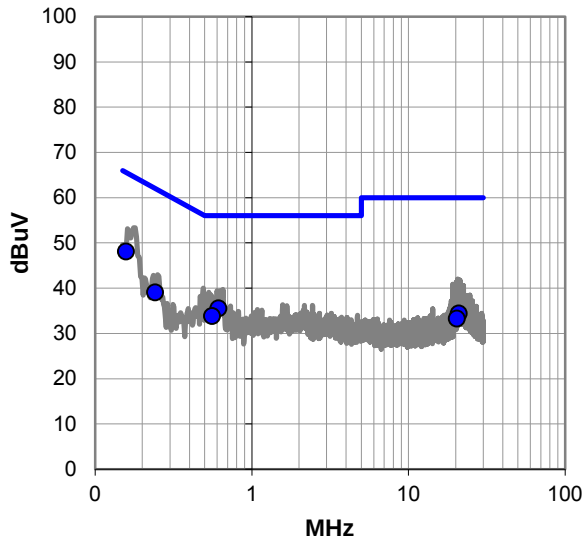
EUT OPERATING MODES

Tx BTLE Data, Mid Ch. 2442MHz

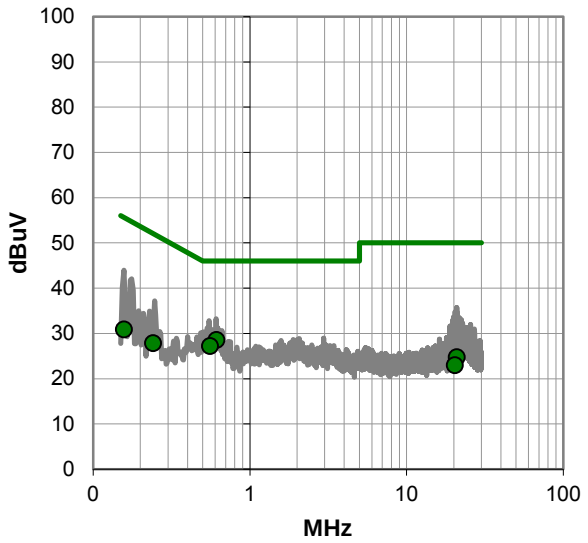
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



NORTHWEST EMC

WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #16

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	27.6	20.5	48.1	65.6	-17.5
0.614	15.1	20.4	35.5	56.0	-20.5
0.557	13.4	20.4	33.8	56.0	-22.2
0.242	18.6	20.5	39.1	62.0	-23.0
20.923	12.7	21.7	34.4	60.0	-25.6
20.382	11.6	21.7	33.3	60.0	-26.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.614	8.1	20.4	28.5	46.0	-17.5
0.557	6.8	20.4	27.2	46.0	-18.8
0.242	7.4	20.5	27.9	52.0	-24.2
0.157	10.4	20.5	30.9	55.6	-24.7
20.923	3.0	21.7	24.7	50.0	-25.3
20.382	1.3	21.7	23.0	50.0	-27.0

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	17	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

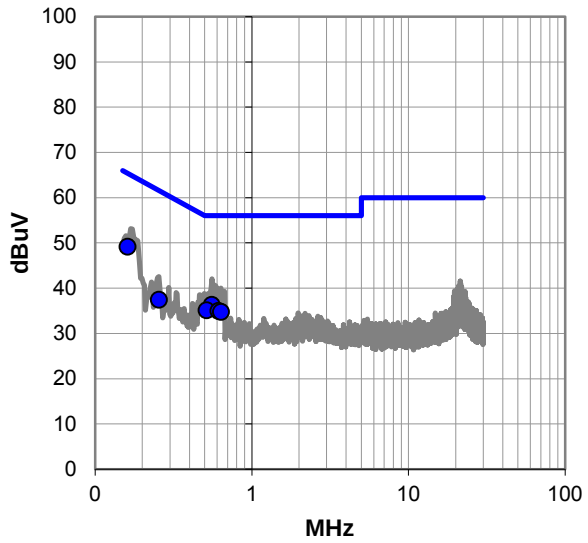
EUT OPERATING MODES

Tx BTLE Data, Mid Ch. 2442MHz

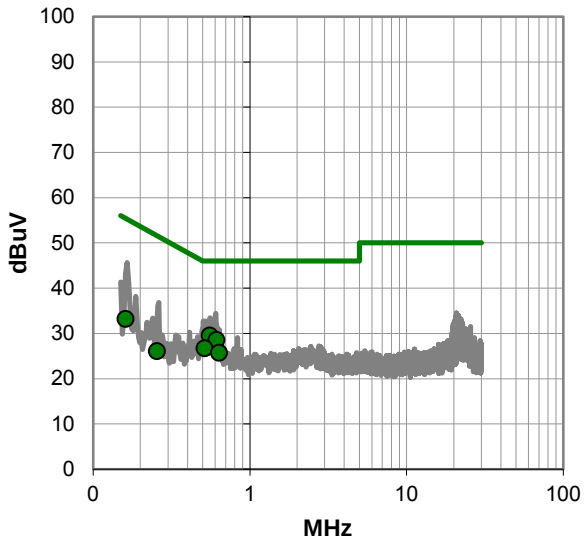
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #17

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	28.7	20.5	49.2	65.4	-16.2
0.555	15.9	20.4	36.3	56.0	-19.7
0.515	14.7	20.4	35.1	56.0	-20.9
0.612	14.5	20.4	34.9	56.0	-21.1
0.636	14.3	20.4	34.7	56.0	-21.3
0.256	17.0	20.4	37.4	61.6	-24.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.555	9.1	20.4	29.5	46.0	-16.5
0.612	8.1	20.4	28.5	46.0	-17.5
0.515	6.3	20.4	26.7	46.0	-19.3
0.636	5.3	20.4	25.7	46.0	-20.3
0.161	12.7	20.5	33.2	55.4	-22.2
0.256	5.6	20.4	26.0	51.6	-25.5

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	18	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

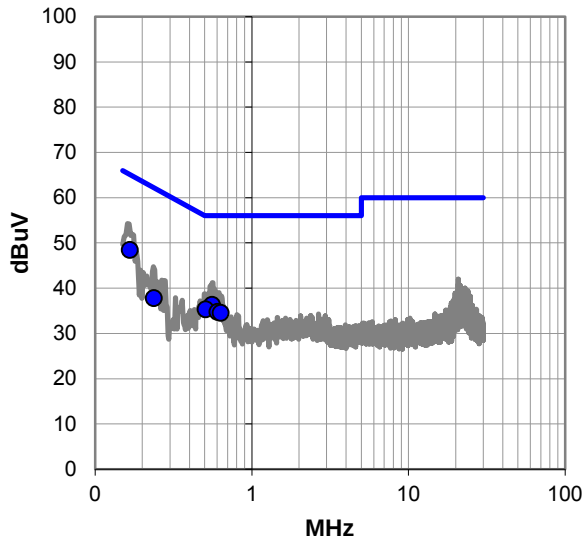
EUT OPERATING MODES

Tx BTLE Data, Mid Ch. 2478MHz

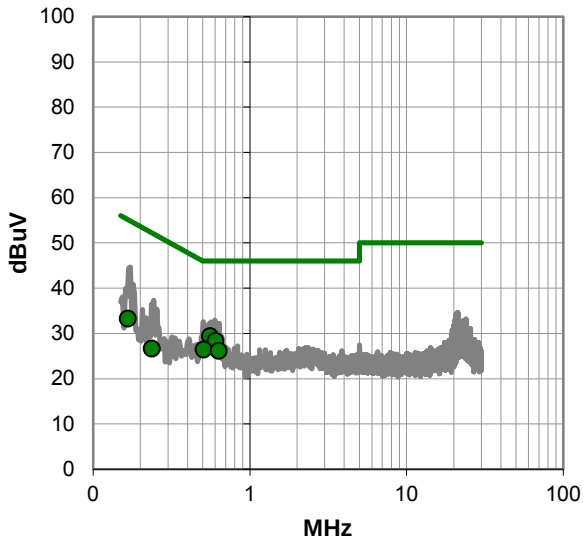
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #18

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.167	28.0	20.5	48.5	65.1	-16.7
0.558	15.9	20.4	36.3	56.0	-19.7
0.509	14.9	20.4	35.3	56.0	-20.7
0.604	14.3	20.4	34.7	56.0	-21.3
0.632	14.1	20.4	34.5	56.0	-21.5
0.237	17.3	20.5	37.8	62.2	-24.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.558	9.0	20.4	29.4	46.0	-16.6
0.604	7.9	20.4	28.3	46.0	-17.7
0.509	6.0	20.4	26.4	46.0	-19.6
0.632	5.7	20.4	26.1	46.0	-19.9
0.167	12.8	20.5	33.3	55.1	-21.9
0.237	6.2	20.5	26.7	52.2	-25.6

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	19	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

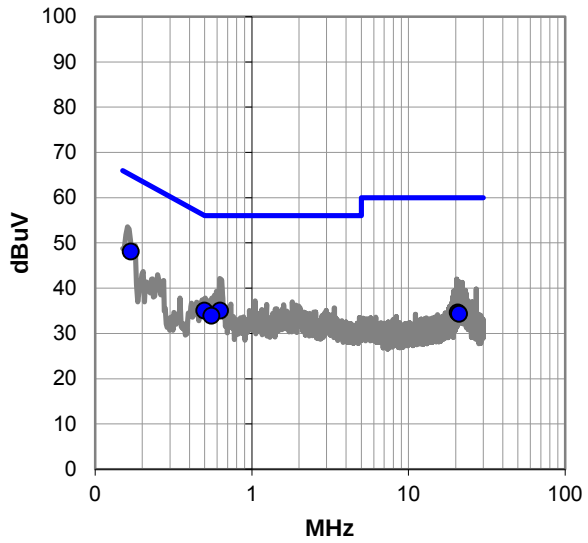
EUT OPERATING MODES

Tx BTLE Data, Mid Ch. 2478MHz

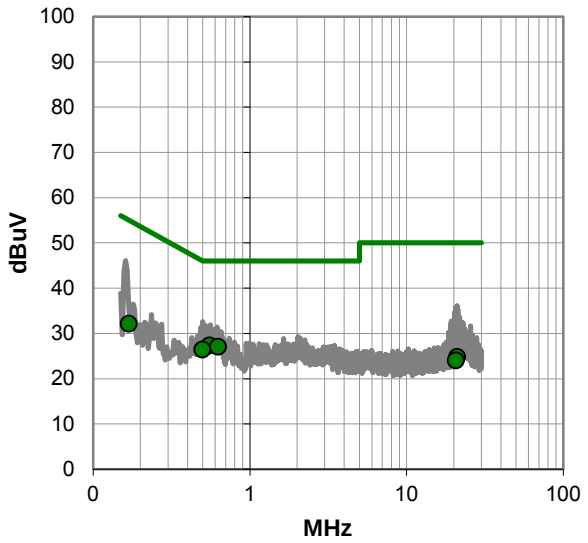
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #19

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.169	27.6	20.5	48.1	65.0	-17.0
0.629	14.6	20.4	35.0	56.0	-21.0
0.498	14.6	20.4	35.0	56.0	-21.0
0.554	13.5	20.4	33.9	56.0	-22.1
20.688	12.9	21.7	34.6	60.0	-25.4
21.028	12.6	21.7	34.3	60.0	-25.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.554	6.9	20.4	27.3	46.0	-18.7
0.629	6.6	20.4	27.0	46.0	-19.0
0.498	6.0	20.4	26.4	46.0	-19.6
0.169	11.7	20.5	32.2	55.0	-22.9
21.028	3.1	21.7	24.8	50.0	-25.2
20.688	2.3	21.7	24.0	50.0	-26.0

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-R-24-BNC	LIR	10/09/2013	12 mo
Receiver	Rohde & Schwarz	ESCI	ARH	02/05/2014	12 mo
EV07 Cables	N/A	Conducted Cables	EVG	03/07/2014	12 mo
Attenuator	Fairview Microwave	SA6B10W-20	RKA	10/24/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHD	01/22/2014	12 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

INTE5492-1

MODES INVESTIGATED

Tx, BT Low Ch. 2402MHz, DH5
Tx, BT Mid Ch. 2441MHz, DH5
Tx, BT High Ch. 2480MHz, DH5

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	2	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

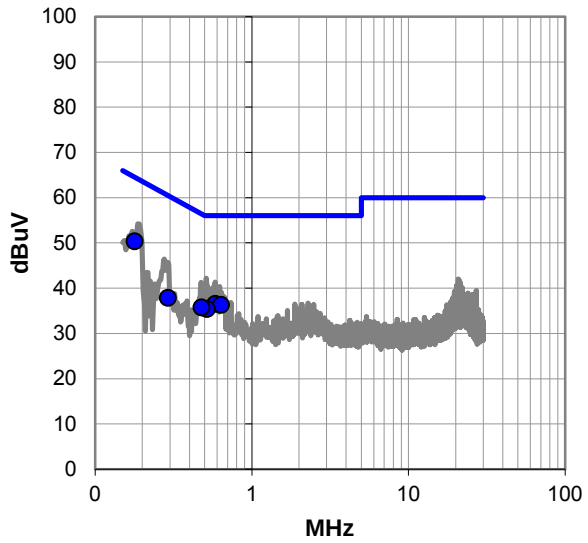
EUT OPERATING MODES

Tx BT DH5, Low Ch. 2402MHz

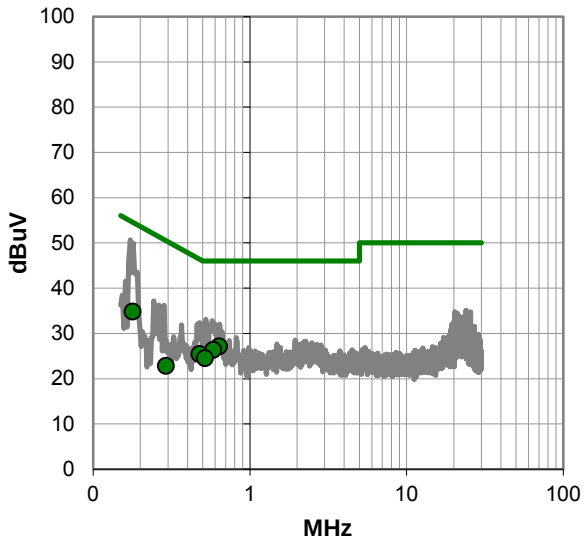
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #2

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.179	29.9	20.5	50.4	64.5	-14.2
0.585	16.1	20.4	36.5	56.0	-19.5
0.637	15.9	20.4	36.3	56.0	-19.7
0.518	15.0	20.4	35.4	56.0	-20.6
0.479	15.3	20.4	35.7	56.4	-20.7
0.292	17.4	20.4	37.8	60.5	-22.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.637	6.7	20.4	27.1	46.0	-18.9
0.585	5.9	20.4	26.3	46.0	-19.7
0.179	14.4	20.5	34.9	54.5	-19.7
0.479	5.0	20.4	25.4	46.4	-21.0
0.518	4.1	20.4	24.5	46.0	-21.5
0.292	2.4	20.4	22.8	50.5	-27.7

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	3	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

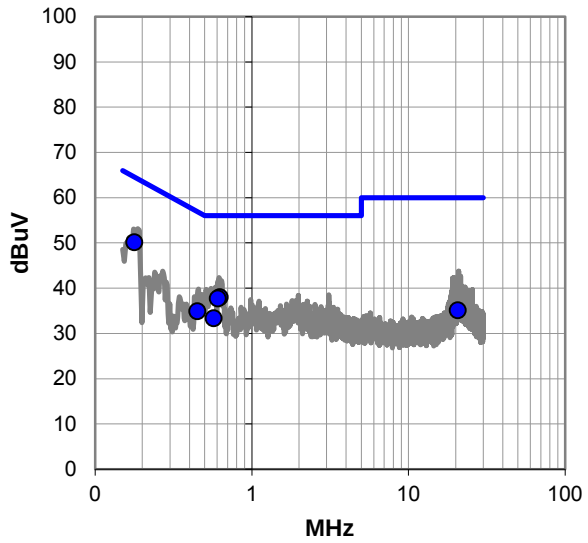
EUT OPERATING MODES

Tx BT DH5, Low Ch. 2402MHz

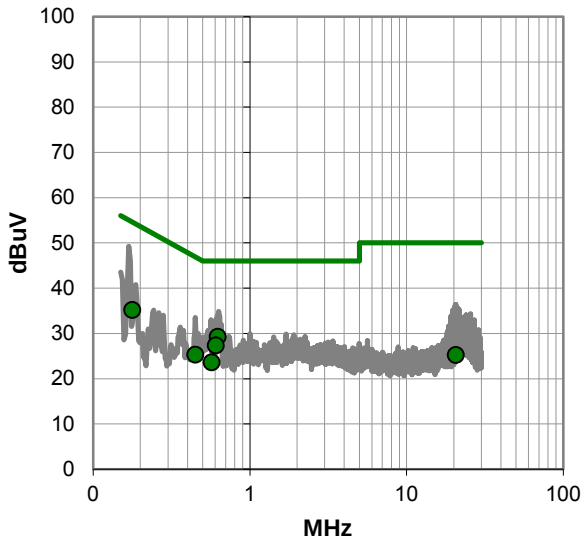
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #3

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.178	29.7	20.5	50.2	64.6	-14.4
0.624	17.6	20.4	38.0	56.0	-18.0
0.609	17.3	20.4	37.7	56.0	-18.3
0.450	14.5	20.4	34.9	56.9	-22.0
0.571	12.9	20.4	33.3	56.0	-22.7
20.662	13.4	21.7	35.1	60.0	-24.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.624	8.8	20.4	29.2	46.0	-16.8
0.609	6.9	20.4	27.3	46.0	-18.7
0.178	14.7	20.5	35.2	54.6	-19.4
0.450	4.9	20.4	25.3	46.9	-21.6
0.571	3.2	20.4	23.6	46.0	-22.4
20.662	3.5	21.7	25.2	50.0	-24.8

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	4	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

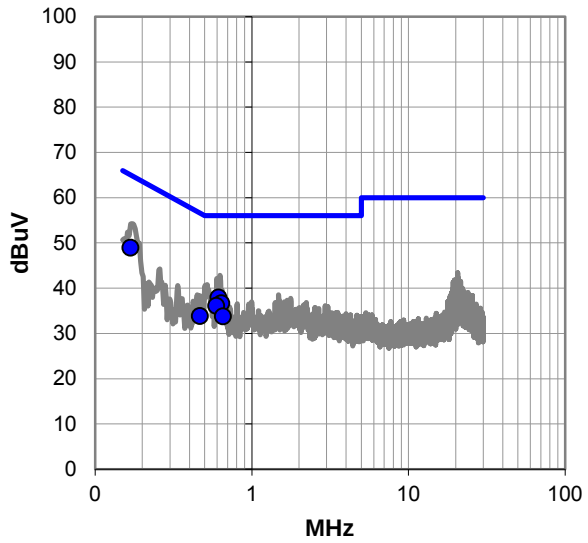
EUT OPERATING MODES

Tx BT DH5, Mid Ch. 2440MHz

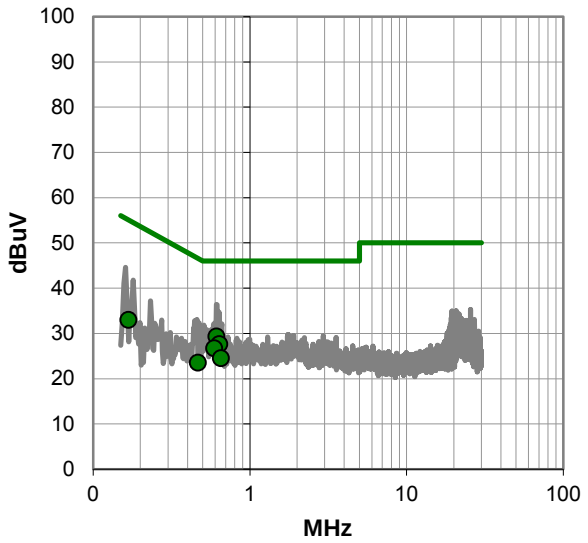
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #4

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.168	28.5	20.5	49.0	65.1	-16.1
0.613	17.5	20.4	37.9	56.0	-18.1
0.639	16.2	20.4	36.6	56.0	-19.4
0.593	15.7	20.4	36.1	56.0	-19.9
0.654	13.3	20.4	33.7	56.0	-22.3
0.467	13.4	20.4	33.8	56.6	-22.8

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.613	8.9	20.4	29.3	46.0	-16.7
0.639	7.2	20.4	27.6	46.0	-18.4
0.593	6.3	20.4	26.7	46.0	-19.3
0.654	4.1	20.4	24.5	46.0	-21.5
0.168	12.5	20.5	33.0	55.1	-22.1
0.467	3.1	20.4	23.5	46.6	-23.1

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	5	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

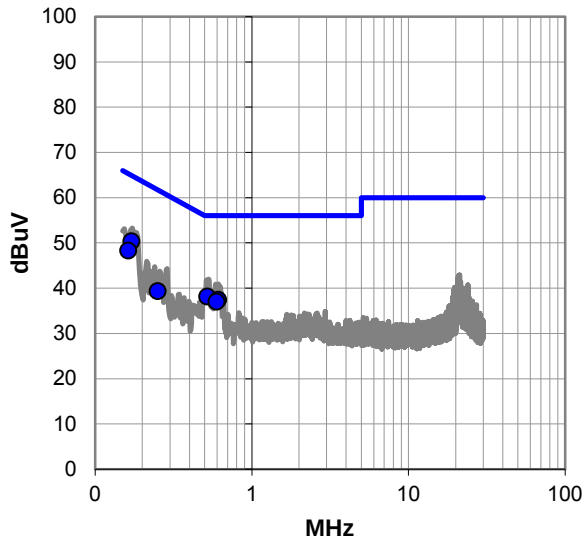
EUT OPERATING MODES

Tx BT DH5, Mid Ch. 2440MHz

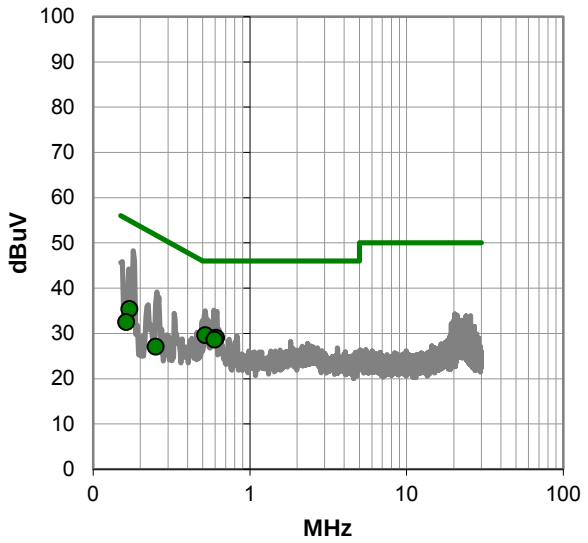
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #5

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.170	29.9	20.5	50.4	64.9	-14.6
0.163	27.8	20.5	48.3	65.3	-17.1
0.520	17.7	20.4	38.1	56.0	-17.9
0.610	17.0	20.4	37.4	56.0	-18.6
0.596	16.6	20.4	37.0	56.0	-19.0
0.251	18.9	20.4	39.3	61.7	-22.4

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.520	9.2	20.4	29.6	46.0	-16.4
0.610	8.6	20.4	29.0	46.0	-17.0
0.596	8.2	20.4	28.6	46.0	-17.4
0.170	14.9	20.5	35.4	54.9	-19.6
0.163	12.0	20.5	32.5	55.3	-22.9
0.251	6.6	20.4	27.0	51.7	-24.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	6	Line:	Neutral	Ext. Attenuation (dB):	20

COMMENTS

None

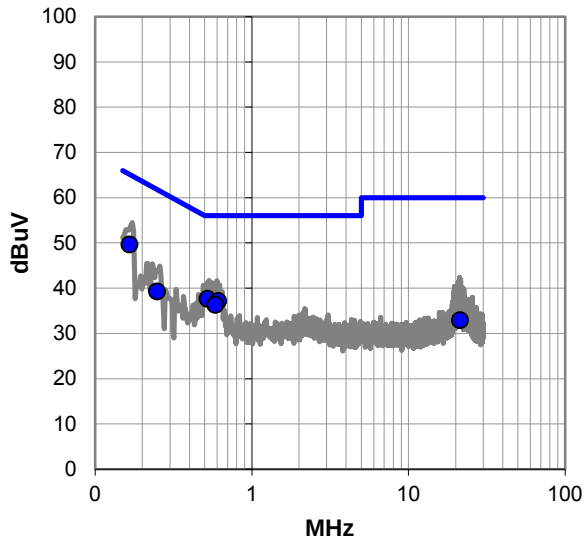
EUT OPERATING MODES

Tx BT DH5, High Ch. 2480MHz

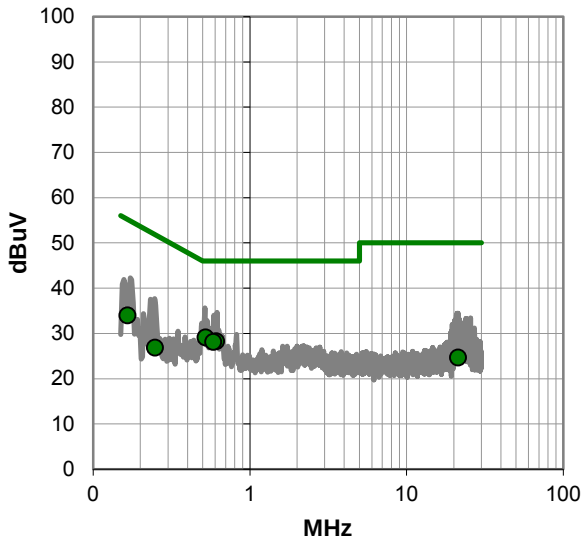
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #6

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.166	29.2	20.5	49.7	65.2	-15.5
0.522	17.2	20.4	37.6	56.0	-18.4
0.611	16.7	20.4	37.1	56.0	-18.9
0.586	15.9	20.4	36.3	56.0	-19.7
0.248	18.8	20.5	39.3	61.8	-22.6
21.341	11.2	21.7	32.9	60.0	-27.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.522	8.7	20.4	29.1	46.0	-16.9
0.611	7.8	20.4	28.2	46.0	-17.8
0.586	7.7	20.4	28.1	46.0	-17.9
0.166	13.5	20.5	34.0	55.2	-21.2
0.248	6.4	20.5	26.9	51.8	-25.0
21.341	2.9	21.7	24.6	50.0	-25.4

CONCLUSION

Pass

Tested By

NORTHWEST EMC
WTD.2013.12.04, PSA-ESCI 2014.06.19, EmiR5 2014.07.09

POWERLINE CONDUCTED EMISSIONS

EUT:	WSBUB-SDS	Work Order:	INTE5492
Serial Number:	FZWC41000237	Date:	09/10/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Attendees:	Mike Lowe	Relative Humidity:	43.5%
Customer Project:	None	Bar. Pressure:	1021.4 mb
Tested By:	Jared Ison	Job Site:	EV07
Power:	110VAC/60Hz	Configuration:	INTE5492-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2014	ANSI C63.10:2009
RSS-210:2010	RSS-Gen:2010

TEST PARAMETERS

Run #:	7	Line:	High Line	Ext. Attenuation (dB):	20

COMMENTS

None

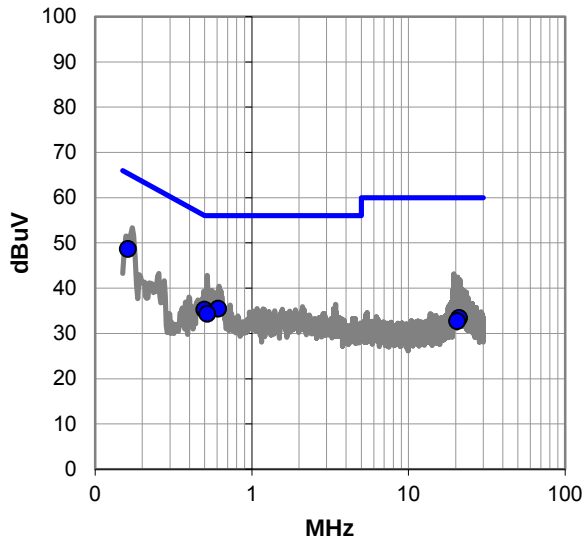
EUT OPERATING MODES

Tx BT DH5, High Ch. 2480MHz

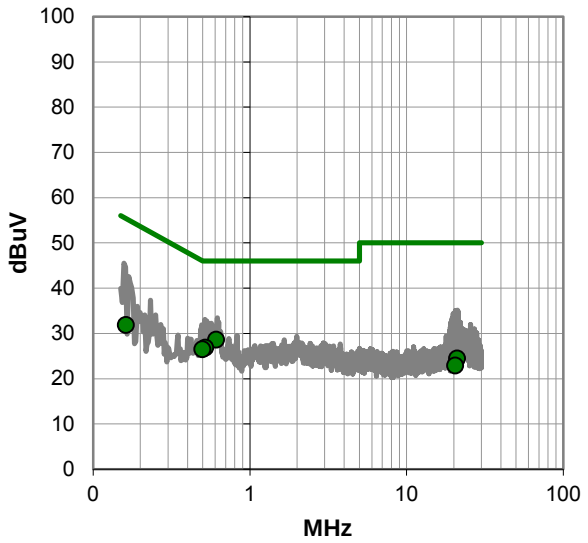
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



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POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #7

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.162	28.2	20.5	48.7	65.3	-16.7
0.610	15.0	20.4	35.4	56.0	-20.6
0.499	14.8	20.4	35.2	56.0	-20.8
0.519	13.9	20.4	34.3	56.0	-21.7
21.069	11.7	21.7	33.4	60.0	-26.6
20.485	11.0	21.7	32.7	60.0	-27.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.610	8.2	20.4	28.6	46.0	-17.4
0.519	6.4	20.4	26.8	46.0	-19.2
0.499	6.1	20.4	26.5	46.0	-19.5
0.162	11.4	20.5	31.9	55.3	-23.5
21.069	2.7	21.7	24.4	50.0	-25.6
20.485	1.2	21.7	22.9	50.0	-27.1

CONCLUSION

Pass

Tested By