Select Comfort Corporation

Dual Temperature Engine

FCC 15.249:2013

FCC 15.207:2013

Report #: SECF0012

Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF TEST

Last Date of Test: March 8, 2013
Select Comfort Corporation
Model: Dual Temperature Engine

Emissions

Test Description	Specification	Test Method	Pass/Fail
Field Strength of Fundamental	FCC 15.249:2013	ANSI C63.10:2009	Pass
Duty Cycle	FCC 15.249:2013	ANSI C63.10:2009	Pass
Field Strength of Harmonics and Spurious Radiated Emissions	FCC 15.249:2013	ANSI C63.10:2009	Pass
AC Powerline Conducted Emissions	FCC 15.207:2013	ANSI.C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:

Tim O'Shea, Operations Manager

NVLAP Lab Code: 200630-0

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834D-1).

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

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. This Report may only be duplicated in its entirety. 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 2012.05.24

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

KCC / 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.

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.

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

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 listed below. 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.

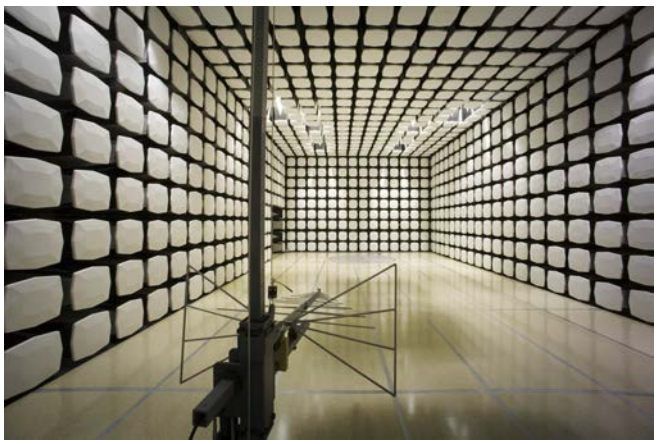
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

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)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94

LOCATIONS

REV 2013.02.26

Oregon	California	New York	Minnesota	Washington
Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	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	2834C-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:	Select Comfort Corporation
Address:	9800 59th Avenue North
City, State, Zip:	Minneapolis, MN 55442
Test Requested By:	Maxine Chen
Model:	Dual Temperature Engine
First Date of Test:	March 05, 2013
Last Date of Test:	March 08, 2013
Receipt Date of Samples:	March 05, 2013
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
2400-2483.5 MHz transceiver operating with a maximum output power of 94 dBµV/m

Testing Objective:
Seeking to demonstrate compliance under FCC 15.249 for operation in the 2400-2483.5 MHz band.

CONFIGURATIONS

Configuration SECF0012- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Dual Temperature Engine	Marlow Industries, Inc.	PCE-302-00-0	3130360044
Mid Channel Circuit Board	Select Comfort Corporation	None	219
Dual Temperature Engine	Marlow Industries, Inc.	PCE-302-00-0	3130360101
Low Channel Circuit Board	Select Comfort Corporation	None	231
High Channel Circuit Board	Select Comfort Corporation	None	215

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Power Adapter	ADAPTER TECH.	STD-24050	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote	Select Comfort Corporation	LPD1023000	SC011B 00240

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Power Cord	No	2m	No	Power Adapter	AC mains
Power Adapter	No	1.3m	Yes	Power Adapter	Heating and Cooling Device
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Configuration SECF0012- 3

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Mid Channel Circuit Board	Select Comfort Corporation	None	219
Dual Temperature Engine	Marlow Industries, Inc.	PCE-302-00-0	3130360101
Low Channel Circuit Board	Select Comfort Corporation	None	231
High Channel Circuit Board	Select Comfort Corporation	None	215

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Power Adapter	ADAPTER TECH.	STD-24050	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote	Select Comfort Corporation	LPD1023000	SC011B 00240

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Power Cord	No	2m	No	Power Adapter	AC mains
Power Adapter	No	1.3m	Yes	Power Adapter	Heating and Cooling Device
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

MODIFICATIONS

WTD 12.5.23

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	3/5/2013	Field Strength of Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	3/5/2013	Field Strength of Harmonics and Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	3/7/2013	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	3/8/2013	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Field Strength of Fundamental

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmit mode 802.11

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

SECF0012 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	1000 MHz	Stop Frequency	3000 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	N9010A	AFJ	1/27/2013	24
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	6/27/2012	12 mo
Antenna, Horn	ETS	3115	AIZ	1/24/2011	36 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

TEST DESCRIPTION

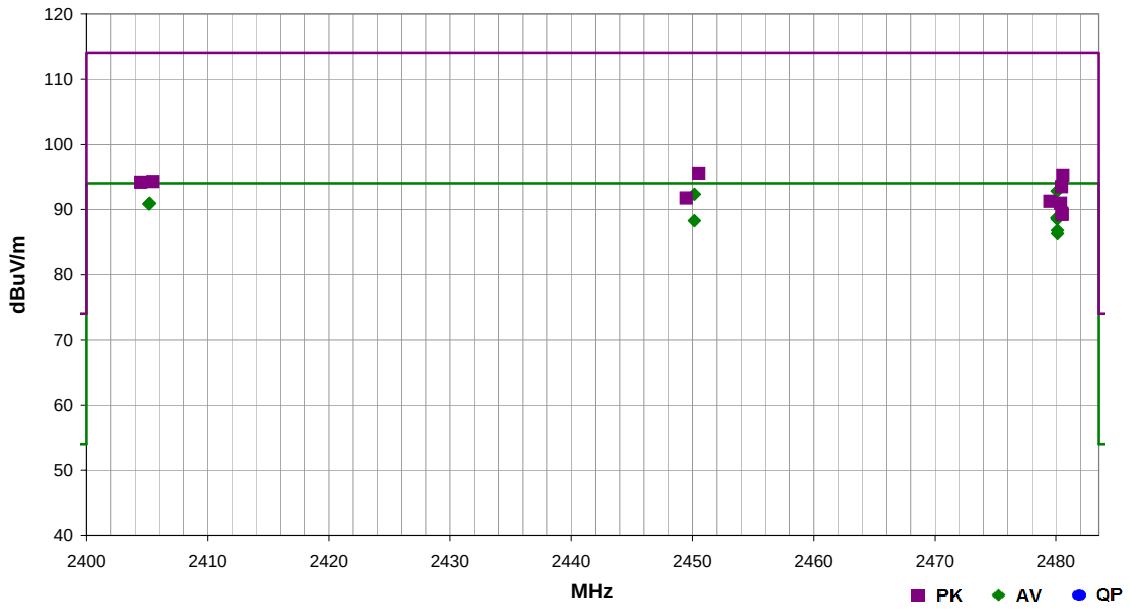
The antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT and EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009).

Field Strength of Fundamental

Work Order:	SECF0012	**Date:**	03/05/13		
Project:	None	**Temperature:**	21.5 °C		
Job Site:	EV01	**Humidity:**	32.6% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1011 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	1				
Customer:	Select Comfort Corporation				
Attendees:	none				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11				
Deviations:	None				
Comments:	Please Reference the comments on the data for frequency, channel and orientation. The EUT with S/N 3130360101 was used with the High and Mid channel circuit boards for testing. The EUT with S/N 3130360044 was used with just the Low channel circuit board for testing.				

Test Specifications	**Test Method**
FCC 15.249:2013	ANSI C63.10:2009

Run #	2	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2480.094	58.4	1.8	1.0	132.0	3.0	0.0	Horz	AV	0.0	92.8	94.0	-1.2	High Ch. 2480 MHz, EUT On side
2450.160	57.9	1.7	1.0	214.0	3.0	0.0	Horz	AV	0.0	92.3	94.0	-1.7	Mid Ch. 2450 MHz, EUT On side
2480.081	56.6	1.8	1.0	149.0	3.0	0.0	Vert	AV	0.0	91.0	94.0	-3.0	High Ch. 2480 MHz, EUT Vert
2405.193	56.5	1.6	1.0	217.0	3.0	0.0	Horz	AV	0.0	90.9	94.0	-3.0	Low Ch. 2405 MHz, EUT On side
2405.160	56.4	1.6	1.6	321.0	3.0	0.0	Vert	AV	0.0	90.8	94.0	-3.1	Low Ch. 2405 MHz, EUT On side
2480.068	54.3	1.8	2.4	166.0	3.0	0.0	Horz	AV	0.0	88.7	94.0	-5.3	High Ch. 2480 MHz, EUT On side
2480.101	54.0	1.8	1.0	302.0	3.0	0.0	Horz	AV	0.0	88.5	94.0	-5.4	High Ch. 2480 MHz, EUT Horz
2450.147	54.0	1.7	1.0	335.0	3.0	0.0	Vert	AV	0.0	88.3	94.0	-5.7	Mid Ch. 2450 MHz, EUT On side
2480.134	52.4	1.8	1.0	202.0	3.0	0.0	Vert	AV	0.0	86.8	94.0	-7.2	High Ch. 2480 MHz, EUT Horz
2480.121	51.9	1.8	1.0	177.0	3.0	0.0	Vert	AV	0.0	86.3	94.0	-7.7	High Ch. 2480 MHz, EUT Vert
2450.527	61.1	1.7	1.0	214.0	3.0	0.0	Horz	PK	0.0	95.5	114.0	-18.5	Mid Ch. 2450 MHz, EUT On side
2480.561	60.8	1.8	1.0	132.0	3.0	0.0	Horz	PK	0.0	95.2	114.0	-18.8	High Ch. 2480 MHz, EUT Vert
2405.493	59.8	1.6	1.0	217.0	3.0	0.0	Horz	PK	0.0	94.2	114.0	-19.8	Low Ch. 2405 MHz, EUT On side
2404.493	59.7	1.6	1.6	321.0	3.0	0.0	Vert	PK	0.0	94.1	114.0	-19.9	Low Ch. 2405 MHz, EUT On side
2480.468	59.0	1.8	1.0	149.0	3.0	0.0	Vert	PK	0.0	93.4	114.0	-20.6	High Ch. 2480 MHz, EUT Horz
2449.507	57.3	1.7	1.0	335.0	3.0	0.0	Vert	PK	0.0	91.7	114.0	-22.3	Mid Ch. 2450 MHz, EUT On side
2479.501	56.8	1.8	2.4	166.0	3.0	0.0	Horz	PK	0.0	91.2	114.0	-22.8	High Ch. 2480 MHz, EUT Vert
2480.394	56.5	1.8	1.0	302.0	3.0	0.0	Horz	PK	0.0	90.9	114.0	-23.1	High Ch. 2480 MHz, EUT On side
2480.488	55.0	1.8	1.0	202.0	3.0	0.0	Vert	PK	0.0	89.4	114.0	-24.6	High Ch. 2480 MHz, EUT On side
2480.521	54.8	1.8	1.0	177.0	3.0	0.0	Vert	PK	0.0	89.2	114.0	-24.8	High Ch. 2480 MHz, EUT Horz

Duty Cycle

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
40GHz DC Block	Miteq	DCB4000	AMD	6/25/2012	12
Temp./Humidity Chamber	Cincinnati Sub Zero (CSZ)	ZH-32-2-2-H/AC	TBA	NCR	0
Near Field Probe	EMCO	7405	IPD	NCR	0
Spectrum Analyzer	Agilent	E4440A	AFD	7/5/2012	24

TEST DESCRIPTION

The Duty Cycle (x) were measured for each of the EUT operating modes. The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum. A near field probe was connected to a spectrum analyzer to complete all measurements on the EUT. A DC block was used.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

Duty Cycle

EUT:	Dual Temperature Engine			**Work Order:**	SECF0012
Serial Number:	3130360101			**Date:**	03/08/13
Customer:	Select Comfort Corporation			**Temperature:**	22.1°C
Attendees:	None			**Humidity:**	32%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Brandon Hobbs	**Power:**	110VAC/60Hz	**Job Site:**	EV09

TEST SPECIFICATIONS	Test Method
FCC 15.249:2013	ANSI C63.10:2009

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

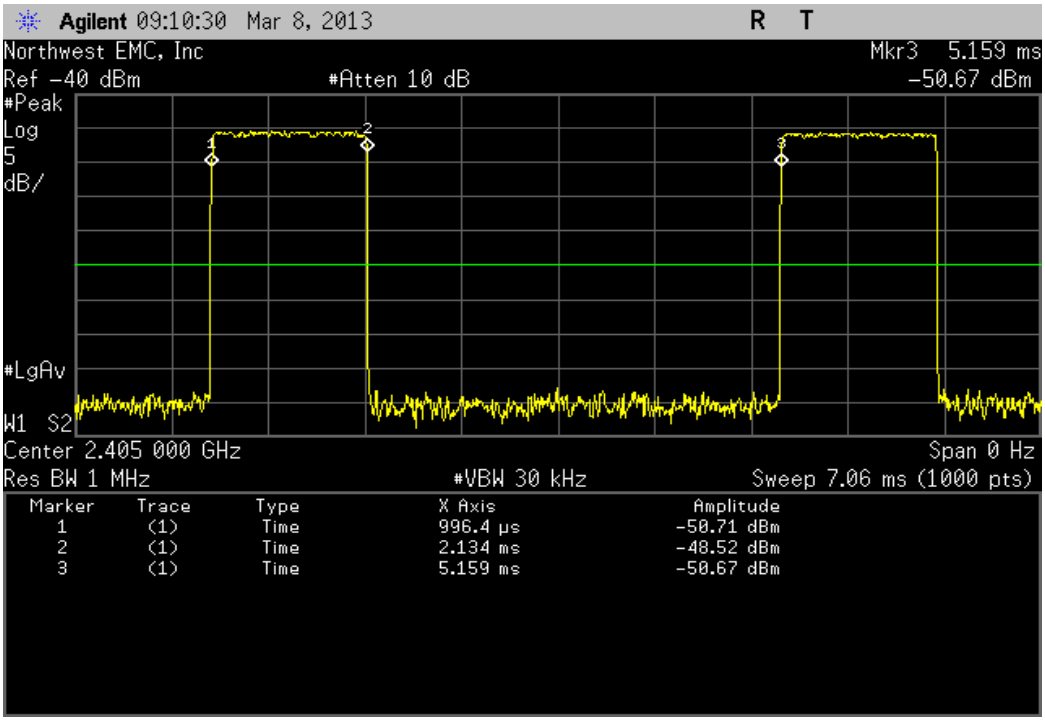
None

Configuration #	3	Signature

	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
802.11 Low Channel 2405 MHz	1.138 mS	4.162 mS	1	27.3	N/A	N/A
802.11 Low Channel 2405 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11 Mid Channel 2450 MHz	1.126 mS	4.158 mS	1	27.1	N/A	N/A
802.11 Mid Channel 2450 MHz	N/A	N/A	5	N/A	N/A	N/A
802.11 High Channel 2480 MHz	1.138 mS	4.198 mS	1	27.1	N/A	N/A
802.11 High Channel 2480 MHz	N/A	N/A	5	N/A	N/A	N/A

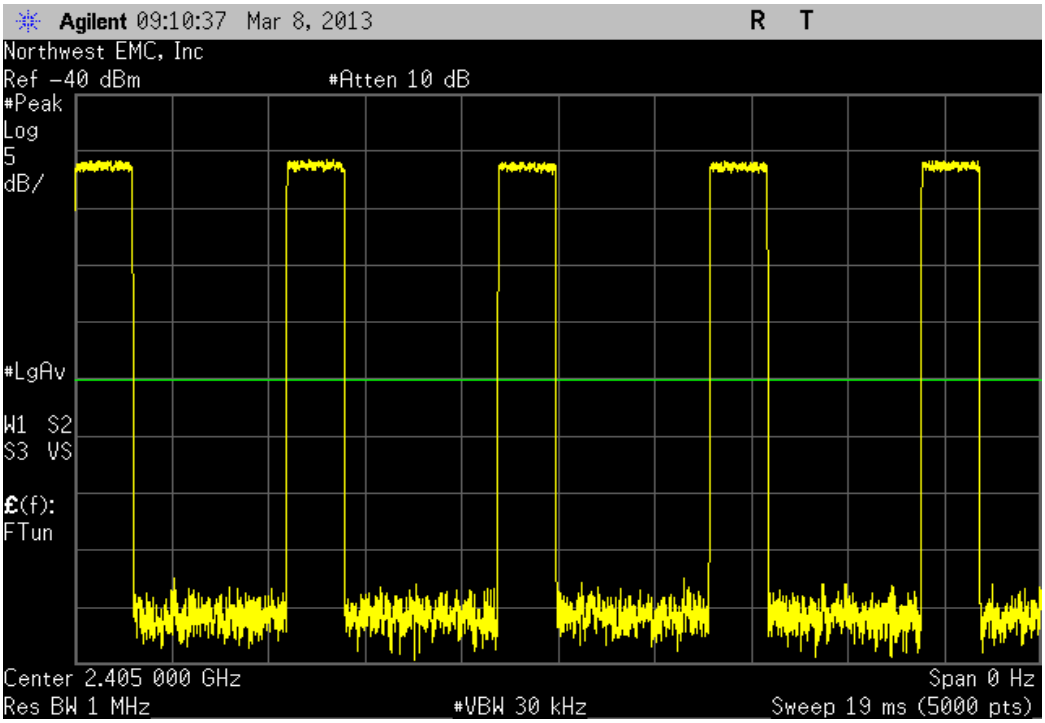
802.11 Low Channel 2405

	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.138 mS	4.162 mS	1	27.3	N/A	N/A



802.11 Low Channel 2405

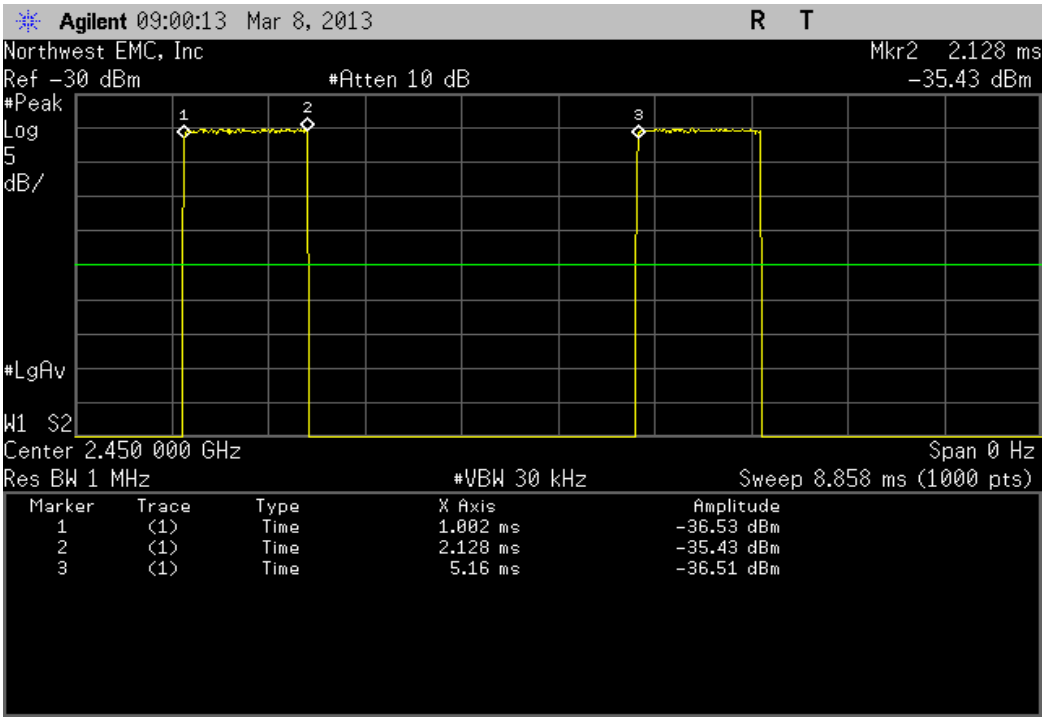
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



Duty Cycle

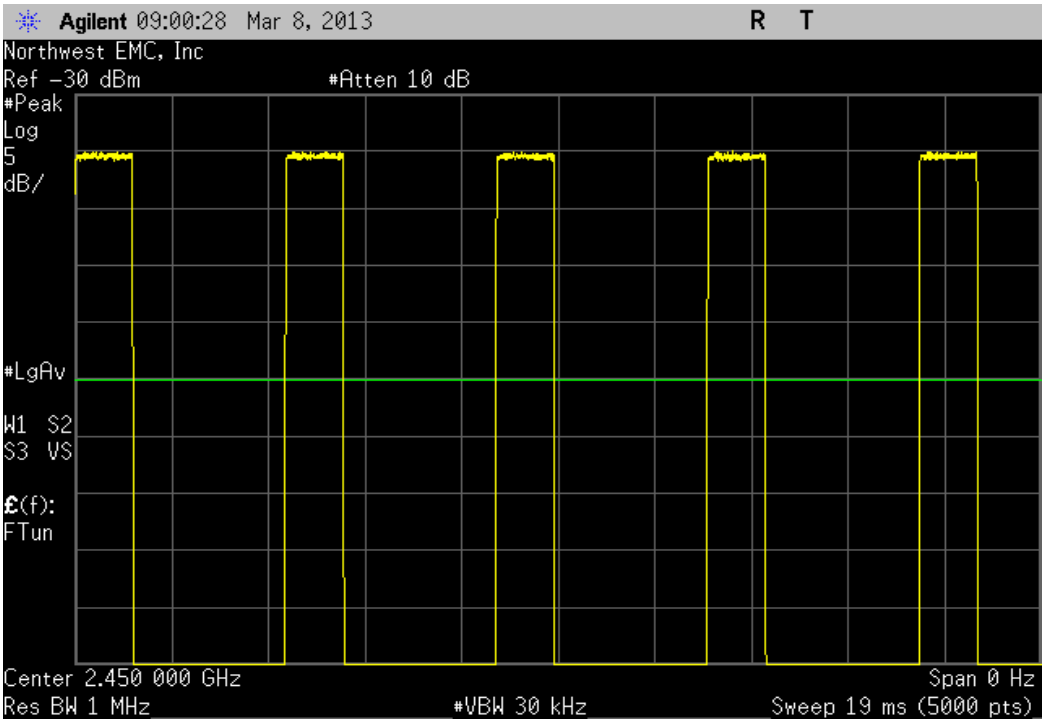
802.11 Mid Channel 2450

	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	1.126 mS	4.158 mS	1	27.1	N/A	N/A



802.11 Mid Channel 2450

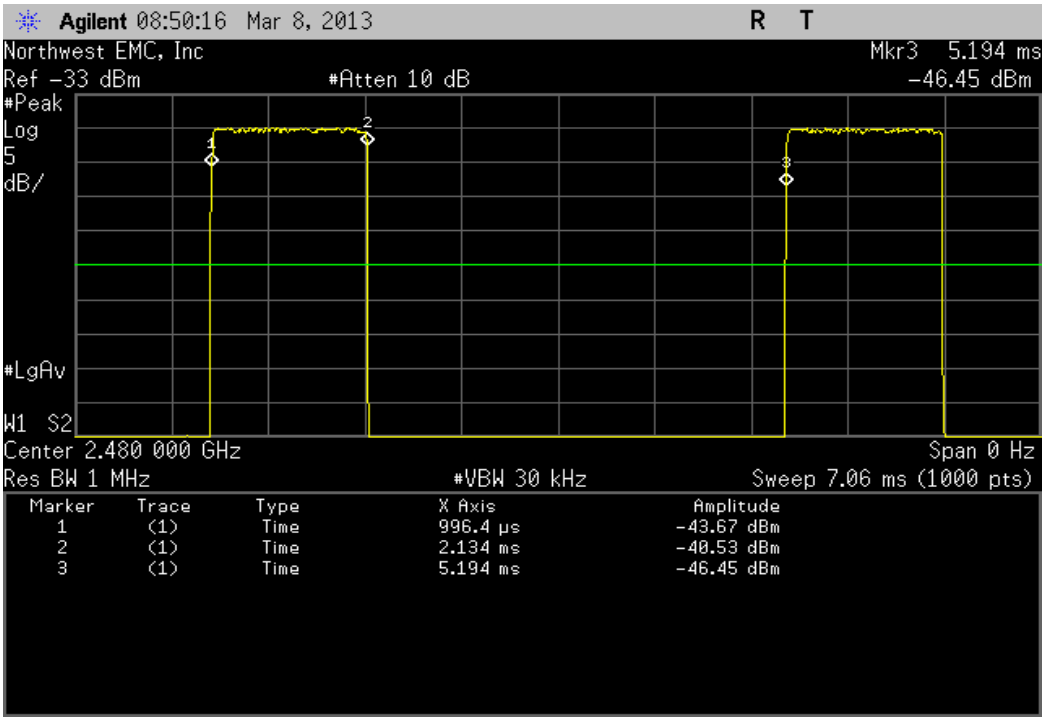
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



Duty Cycle

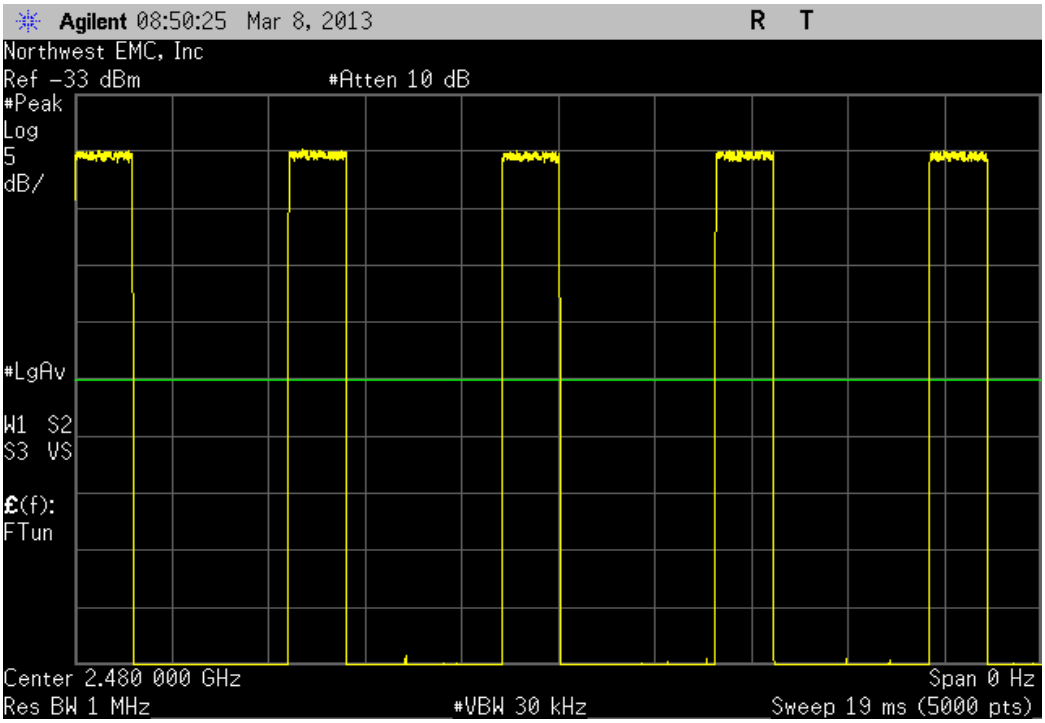
802.11 High Channel 2480

Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
1.138 mS	4.198 mS	1	27.1	N/A	N/A



802.11 High Channel 2480

Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
N/A	N/A	5	N/A	N/A	N/A



Field Strength of Harmonics and Spurious Radiated Emissions

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmit mode 802.11

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

SECF0012 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
High Pass Filter	Micro-Tronics	HPM50111	HFO	7/6/2012	24
Cable	ESM Cable Corp.	KMKM-72	EVY	9/11/2012	12 mo
Spectrum Analyzer	Agilent	N9010A	AFJ	1/27/2013	24
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	9/11/2012	12 mo
Antenna, Horn	ETS Lindgren	3160-09	AIV	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2/27/2013	12 mo
Antenna, Horn	ETS	3160-08	AHV	NCR	0 mo
EV01 Cables	N/A	Standard Gain Horns Cables	EVF	2/27/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2/27/2013	12 mo
Antenna, Horn	ETS	3160-07	AHU	NCR	0 mo
EV01 Cables	N/A	Double Ridge Horn Cables	EVB	6/27/2012	12 mo
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	6/27/2012	12 mo
Antenna, Horn	ETS	3115	AIZ	1/24/2011	36 mo
EV01 Cables	N/A	Bilog Cables	EVA	6/26/2012	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	AOL	6/26/2012	12 mo
Antenna, Biconilog	EMCO	3141	AXG	4/10/2012	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

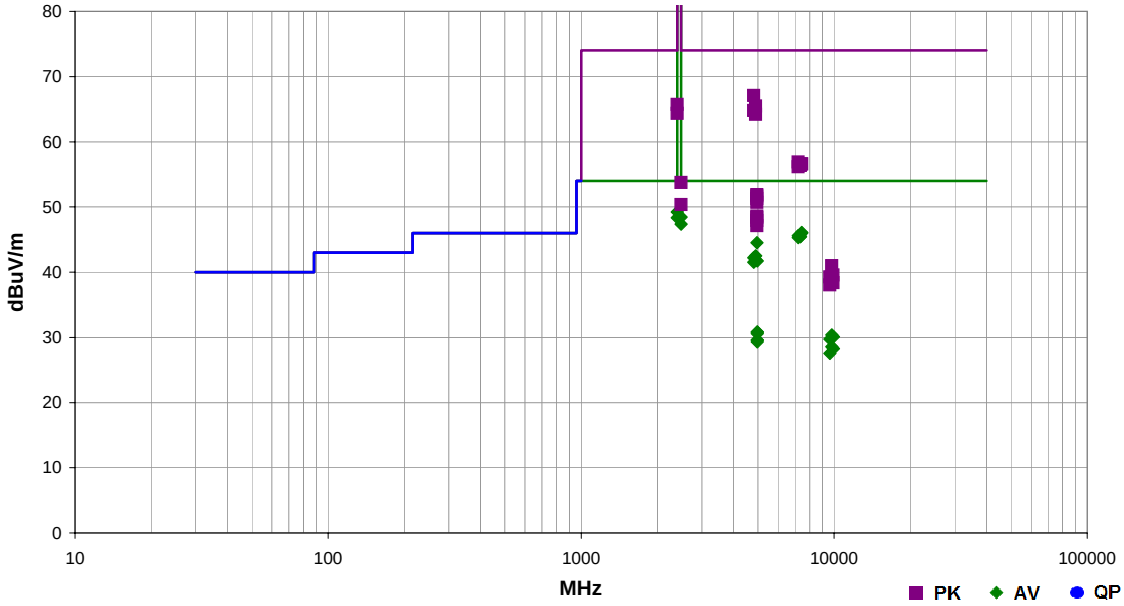
NORTHWEST EMC

Field Strength of Harmonics and Spurious Radiated Emissions

Work Order:	SECF0012	**Date:**	03/05/13		
Project:	None	**Temperature:**	21.5 °C		
Job Site:	EV01	**Humidity:**	32.6% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1011 mbar	**Tested by:**	Brandon Hobbs & Rod Polequin
EUT:	Dual Temperature Engine				
Configuration:	1				
Customer:	Select Comfort Corporation				
Attendees:	none				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11				
Deviations:	None				
Comments:	Please Reference the comments on the data for frequency, channel and orientation. The EUT with S/N 3130360101 was used with the High and Mid channel circuit boards for testing. The EUT with S/N 3130360044 was used with just the Low channel circuit board for testing.				

Test Specifications	**Test Method**
FCC 15.249:2013	ANSI C63.10:2009

Run #	3	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2398.070	27.7	1.5	1.1	215.0	3.0	20.0	Horz	AV	0.0	49.2	54.0	-4.8	High Ch. 2480MHz, EUT On side
2483.513	26.6	1.9	1.8	136.0	3.0	20.0	Horz	AV	0.0	48.5	54.0	-5.5	High Ch. 2480MHz, EUT On side
2398.060	26.8	1.5	1.0	224.0	3.0	20.0	Vert	AV	0.0	48.3	54.0	-5.7	High Ch. 2480MHz, EUT On side
2483.513	25.5	1.9	1.0	254.0	3.0	20.0	Vert	AV	0.0	47.4	54.0	-6.6	High Ch. 2480MHz, EUT On side
4808.973	56.9	10.2	1.2	197.0	3.0	0.0	Vert	PK	0.0	67.1	74.0	-6.9	Low Ch. 2405MHz, EUT Vert
7438.067	46.1	0.0	1.0	284.0	3.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	High Ch. 2480MHz, EUT On side
7439.000	46.0	0.0	1.1	188.0	3.0	0.0	Vert	AV	0.0	46.0	54.0	-8.0	High Ch. 2480MHz, EUT Vert
2399.560	44.2	1.5	1.1	215.0	3.0	20.0	Horz	PK	0.0	65.7	74.0	-8.3	High Ch. 2480MHz, EUT On side
7216.487	27.2	18.4	1.0	183.0	3.0	0.0	Horz	AV	0.0	45.6	54.0	-8.4	Low Ch. 2405MHz, EUT On side
4898.927	55.0	10.5	1.0	194.0	3.0	0.0	Vert	PK	0.0	65.5	74.0	-8.5	Mid Ch. 2450MHz, EUT Vert
7351.626	26.3	19.1	1.0	55.0	3.0	0.0	Horz	AV	0.0	45.4	54.0	-8.6	Mid Ch. 2450MHz, EUT On side
7351.387	26.3	19.1	1.0	254.0	3.0	0.0	Vert	AV	0.0	45.4	54.0	-8.6	Mid Ch. 2450MHz, EUT Vert
7216.580	26.9	18.4	1.0	285.0	3.0	0.0	Vert	AV	0.0	45.3	54.0	-8.7	Low Ch. 2405MHz, EUT Vert
4808.993	54.6	10.2	1.0	201.0	3.0	0.0	Horz	PK	0.0	64.8	74.0	-9.2	Low Ch. 2405MHz, EUT On side
4959.067	44.5	0.0	1.0	112.0	3.0	0.0	Horz	AV	0.0	44.5	54.0	-9.5	High Ch. 2480MHz, EUT On side
2399.997	42.8	1.5	1.0	224.0	3.0	20.0	Vert	PK	0.0	64.3	74.0	-9.7	High Ch. 2480MHz, EUT On side
4898.914	53.7	10.5	1.0	194.0	3.0	0.0	Horz	PK	0.0	64.2	74.0	-9.8	Mid Ch. 2450MHz, EUT On side
4900.120	32.0	10.5	1.0	194.0	3.0	0.0	Vert	AV	0.0	42.5	54.0	-11.5	Mid Ch. 2450MHz, EUT Vert
4810.000	32.0	10.2	1.2	197.0	3.0	0.0	Vert	AV	0.0	42.2	54.0	-11.8	Low Ch. 2405MHz, EUT Vert
4900.053	31.4	10.5	1.0	194.0	3.0	0.0	Horz	AV	0.0	41.9	54.0	-12.1	Mid Ch. 2450MHz, EUT On side
4960.914	41.7	0.0	1.0	11.0	3.0	0.0	Vert	AV	0.0	41.7	54.0	-12.3	High Ch. 2480MHz, EUT Vert
4810.020	31.3	10.2	1.0	201.0	3.0	0.0	Horz	AV	0.0	41.5	54.0	-12.5	Low Ch. 2405MHz, EUT On side
7215.626	38.5	18.4	1.0	183.0	3.0	0.0	Horz	PK	0.0	56.9	74.0	-17.1	Low Ch. 2405MHz, EUT On side
7349.287	37.4	19.1	1.0	254.0	3.0	0.0	Vert	PK	0.0	56.5	74.0	-17.5	Mid Ch. 2450MHz, EUT Vert
7350.067	37.2	19.1	1.0	55.0	3.0	0.0	Horz	PK	0.0	56.3	74.0	-17.7	Mid Ch. 2450MHz, EUT On side
7213.374	37.8	18.4	1.0	285.0	3.0	0.0	Vert	PK	0.0	56.2	74.0	-17.8	Low Ch. 2405MHz, EUT Vert

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7440.998	56.6	0.0	1.1	188.0	3.0	0.0	Vert	PK	0.0	56.6	74.0	-17.4	High Ch. 2480MHz, EUT Vert
7439.013	56.6	0.0	1.0	284.0	3.0	0.0	Horz	PK	0.0	56.6	74.0	-17.4	High Ch. 2480MHz, EUT On side
2483.517	31.9	1.9	1.8	136.0	3.0	20.0	Horz	PK	0.0	53.8	74.0	-20.2	High Ch. 2480MHz, EUT On side
4959.133	51.9	0.0	1.0	131.0	3.0	0.0	Vert	PK	0.0	51.9	74.0	-22.1	High Ch. 2480MHz, EUT Vert
4958.939	51.7	0.0	1.3	83.0	3.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	High Ch. 2480MHz, EUT On side
4958.900	51.3	0.0	1.0	209.0	3.0	0.0	Vert	PK	0.0	51.3	74.0	-22.7	High Ch. 2480MHz, EUT Horz
4960.922	30.8	0.0	1.3	83.0	3.0	0.0	Horz	AV	0.0	30.8	54.0	-23.2	High Ch. 2480MHz, EUT On side
4960.926	30.8	0.0	1.0	131.0	3.0	0.0	Vert	AV	0.0	30.8	54.0	-23.2	High Ch. 2480MHz, EUT Vert
4959.200	50.7	0.0	1.0	112.0	3.0	0.0	Horz	PK	0.0	50.7	74.0	-23.3	High Ch. 2480MHz, EUT On side
4960.925	30.6	0.0	1.0	209.0	3.0	0.0	Vert	AV	0.0	30.6	54.0	-23.4	High Ch. 2480MHz, EUT Horz
2485.420	28.5	1.9	1.9	360.0	3.0	20.0	Vert	PK	0.0	50.4	74.0	-23.6	High Ch. 2480MHz, EUT On side
9801.894	42.7	-12.3	1.0	191.0	3.0	0.0	Vert	AV	0.0	30.4	54.0	-23.6	Mid Ch. 2450MHz, EUT Vert
9921.986	42.4	-12.3	1.2	173.0	3.0	0.0	Vert	AV	0.0	30.1	54.0	-23.9	High Ch. 2480MHz, EUT Vert
9621.980	42.1	-12.4	1.0	120.0	3.0	0.0	Horz	AV	0.0	29.8	54.0	-24.3	Low Ch. 2405MHz, EUT On side
4960.947	29.6	0.0	1.0	5.0	3.0	0.0	Vert	AV	0.0	29.6	54.0	-24.4	High Ch. 2480MHz, EUT Horz
4960.923	29.6	0.0	1.0	34.0	3.0	0.0	Horz	AV	0.0	29.6	54.0	-24.4	High Ch. 2480MHz, EUT On side
4960.867	29.3	0.0	1.3	16.0	3.0	0.0	Horz	AV	0.0	29.3	54.0	-24.7	High Ch. 2480MHz, EUT On side
4959.021	48.6	0.0	1.0	34.0	3.0	0.0	Horz	PK	0.0	48.6	74.0	-25.4	High Ch. 2480MHz, EUT On side
9798.060	40.9	-12.3	1.0	122.0	3.0	0.0	Horz	AV	0.0	28.6	54.0	-25.4	Mid Ch. 2450MHz, EUT On side
4958.960	48.4	0.0	1.0	11.0	3.0	0.0	Vert	PK	0.0	48.4	74.0	-25.6	High Ch. 2480MHz, EUT Vert
9921.980	40.6	-12.3	1.0	269.0	3.0	0.0	Horz	AV	0.0	28.3	54.0	-25.7	High Ch. 2480MHz, EUT On side
4959.100	47.9	0.0	1.0	5.0	3.0	0.0	Vert	PK	0.0	47.9	74.0	-26.1	High Ch. 2480MHz, EUT Horz
9621.887	39.9	-12.4	1.3	149.0	3.0	0.0	Vert	AV	0.0	27.6	54.0	-26.5	Low Ch. 2405MHz, EUT Vert
4959.206	47.1	0.0	1.3	16.0	3.0	0.0	Horz	PK	0.0	47.1	74.0	-26.9	High Ch. 2480MHz, EUT On side
9801.667	53.3	-12.3	1.0	191.0	3.0	0.0	Vert	PK	0.0	41.0	74.0	-33.0	Mid Ch. 2450MHz, EUT Vert
9918.106	51.9	-12.3	1.2	131.0	3.0	0.0	Horz	PK	0.0	39.6	74.0	-34.4	High Ch. 2480MHz, EUT On side
9621.707	51.6	-12.4	1.0	120.0	3.0	0.0	Horz	PK	0.0	39.3	74.0	-34.8	Low Ch. 2405MHz, EUT On side
9798.287	51.0	-12.3	1.0	122.0	3.0	0.0	Horz	PK	0.0	38.7	74.0	-35.3	Mid Ch. 2450MHz, EUT On side
9918.153	50.7	-12.3	1.2	173.0	3.0	0.0	Vert	PK	0.0	38.4	74.0	-35.6	High Ch. 2480MHz, EUT Vert
9621.860	50.4	-12.4	1.3	149.0	3.0	0.0	Vert	PK	0.0	38.1	74.0	-36.0	Low Ch. 2405MHz, EUT Vert

AC Powerline Conducted Emissions

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Transmit mode 802.11 High Ch. 2480MHz
Transmit mode 802.11 Mid Ch. 2450MHz
Transmit mode 802.11 Low Ch. 2405MHz

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

SECF0012 - 3

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-R-24-BNC	LIN	4/16/2012	12 mo
Receiver	Rohde & Schwarz	ESCI	ARH	1/24/2013	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HHD	2/1/2012	24 mo
Attenuator	Coaxicom	66702 2910-20	RBR	8/7/2012	12 mo
EV07 Cables	N/A	Conducted Cables	EVG	4/27/2012	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

TEST DESCRIPTION

The EUT will be powered either directly or indirectly from the AC power line. Therefore, conducted emissions measurements were made on the AC input of the EUT, or on the AC input of the device used to power the EUT. The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band. The EUT was transmitting at its maximum data rate. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10-2009.

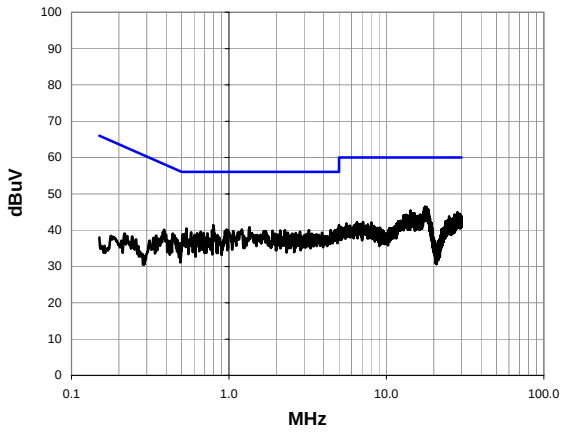
AC Powerline Conducted Emissions

Work Order:	SECF0012	**Date:**	03/07/13		
Project:	None	**Temperature:**	22.1 °C		
Job Site:	EV07	**Humidity:**	32% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1018 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	3				
Customer:	Select Comfort Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11 Low Ch. 2405MHz				
Deviations:	None				
Comments:	None				

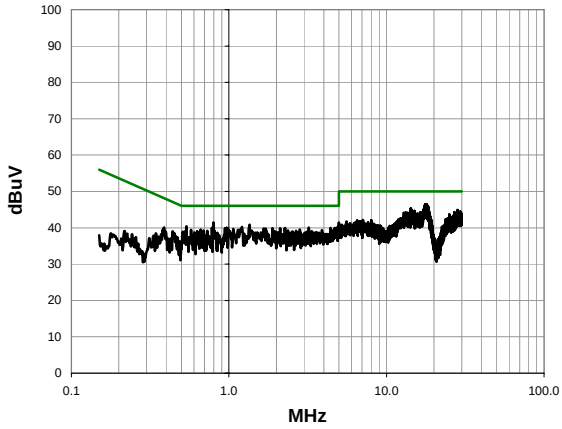
Test Specifications	**Test Method**
FCC 15.207:2013	ANSI C63.10:2009

Run #	4	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
17.630	24.9	21.6	46.5	60.0	-13.5
18.060	24.8	21.6	46.4	60.0	-13.6
17.470	24.5	21.5	46.0	60.0	-14.0
17.400	24.5	21.5	46.0	60.0	-14.0
18.410	24.2	21.6	45.8	60.0	-14.2
0.796	21.1	20.3	41.4	56.0	-14.6
4.992	20.7	20.7	41.4	56.0	-14.6
14.270	24.0	21.3	45.3	60.0	-14.7
14.210	24.0	21.3	45.3	60.0	-14.7
28.270	22.7	22.2	44.9	60.0	-15.1
1.352	20.4	20.4	40.8	56.0	-15.2
14.490	23.4	21.3	44.7	60.0	-15.3
15.030	23.3	21.3	44.6	60.0	-15.4
14.690	23.2	21.3	44.5	60.0	-15.5
29.400	22.2	22.3	44.5	60.0	-15.5
0.538	20.1	20.3	40.4	56.0	-15.6
27.040	22.2	22.1	44.3	60.0	-15.7
16.430	22.8	21.5	44.3	60.0	-15.7
29.070	22.0	22.2	44.2	60.0	-15.8
13.280	23.0	21.2	44.2	60.0	-15.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
17.630	24.9	21.6	46.5	50.0	-3.5
18.060	24.8	21.6	46.4	50.0	-3.6
17.470	24.5	21.5	46.0	50.0	-4.0
17.400	24.5	21.5	46.0	50.0	-4.0
18.410	24.2	21.6	45.8	50.0	-4.2
0.796	21.1	20.3	41.4	46.0	-4.6
4.992	20.7	20.7	41.4	46.0	-4.6
14.270	24.0	21.3	45.3	50.0	-4.7
14.210	24.0	21.3	45.3	50.0	-4.7
28.270	22.7	22.2	44.9	50.0	-5.1
1.352	20.4	20.4	40.8	46.0	-5.2
14.490	23.4	21.3	44.7	50.0	-5.3
15.030	23.3	21.3	44.6	50.0	-5.4
14.690	23.2	21.3	44.5	50.0	-5.5
29.400	22.2	22.3	44.5	50.0	-5.5
0.538	20.1	20.3	40.4	46.0	-5.6
27.040	22.2	22.1	44.3	50.0	-5.7
16.430	22.8	21.5	44.3	50.0	-5.7
29.070	22.0	22.2	44.2	50.0	-5.8
13.280	23.0	21.2	44.2	50.0	-5.8

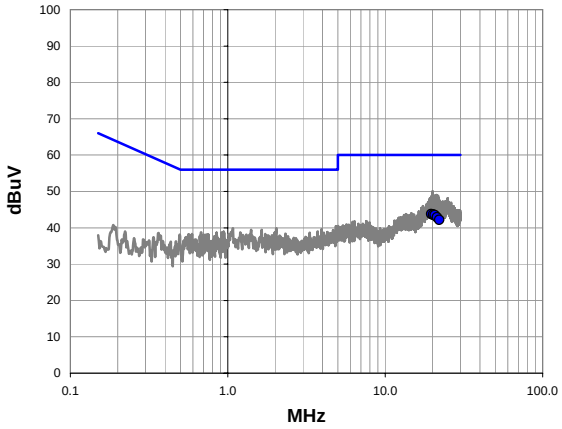
AC Powerline Conducted Emissions

Work Order:	SECF0012	**Date:**	03/07/13		
Project:	None	**Temperature:**	22.1 °C		
Job Site:	EV07	**Humidity:**	32% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1018 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	3				
Customer:	Select Comfort Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11 Low Ch. 2405MHz				
Deviations:	None				
Comments:	None				

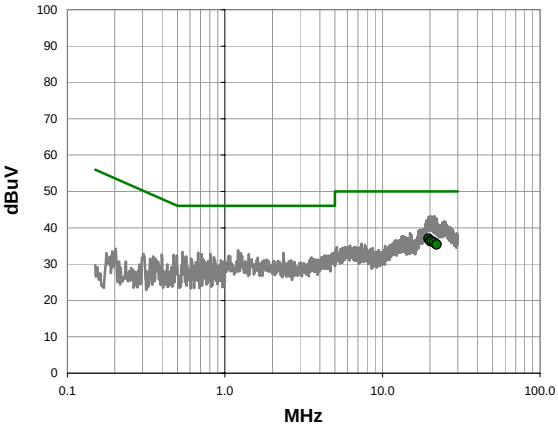
Test Specifications	**Test Method**
FCC 15.207:2013	ANSI C63.10:2009

Run #	5	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
19.604	22.1	21.7	43.8	60.0	-16.2
20.272	21.9	21.7	43.6	60.0	-16.4
20.142	21.9	21.7	43.6	60.0	-16.4
20.638	21.8	21.7	43.5	60.0	-16.5
21.318	21.2	21.7	42.9	60.0	-17.1
22.038	20.5	21.7	42.2	60.0	-17.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
19.604	15.3	21.7	37.0	50.0	-13.0
20.272	14.7	21.7	36.4	50.0	-13.6
20.142	14.7	21.7	36.4	50.0	-13.6
20.638	14.6	21.7	36.3	50.0	-13.7
21.318	14.2	21.7	35.9	50.0	-14.1
22.038	13.7	21.7	35.4	50.0	-14.6

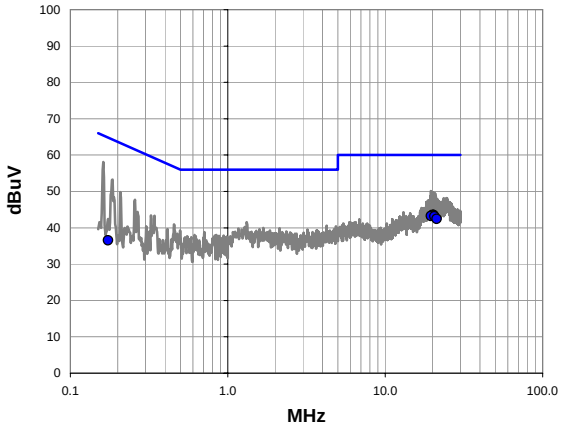
AC Powerline Conducted Emissions

Work Order:	SECF0012	**Date:**	03/07/13		
Project:	None	**Temperature:**	22.1 °C		
Job Site:	EV07	**Humidity:**	32% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1018 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	3				
Customer:	Select Comfort Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11 Mid Ch. 2450MHz				
Deviations:	None				
Comments:	None				

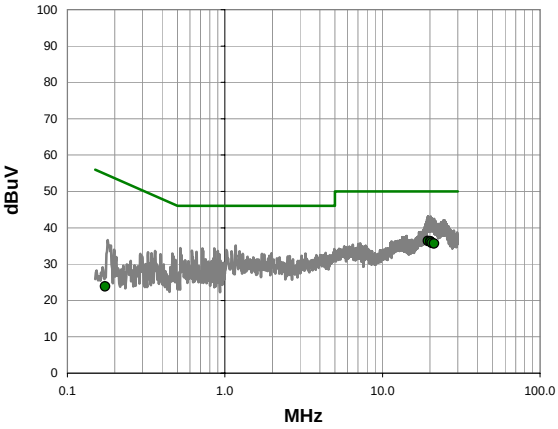
Test Specifications	**Test Method**
FCC 15.207:2013	ANSI C63.10:2009

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
20.070	21.9	21.7	43.6	60.0	-16.4
20.228	21.8	21.7	43.5	60.0	-16.5
19.502	21.6	21.7	43.3	60.0	-16.7
20.554	21.5	21.7	43.2	60.0	-16.8
21.218	20.8	21.7	42.5	60.0	-17.5
0.174	16.2	20.3	36.5	64.8	-28.2

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
19.502	14.7	21.7	36.4	50.0	-13.6
20.070	14.6	21.7	36.3	50.0	-13.7
20.228	14.5	21.7	36.2	50.0	-13.8
20.554	14.2	21.7	35.9	50.0	-14.1
21.218	14.0	21.7	35.7	50.0	-14.3
0.174	3.5	20.3	23.8	54.8	-30.9

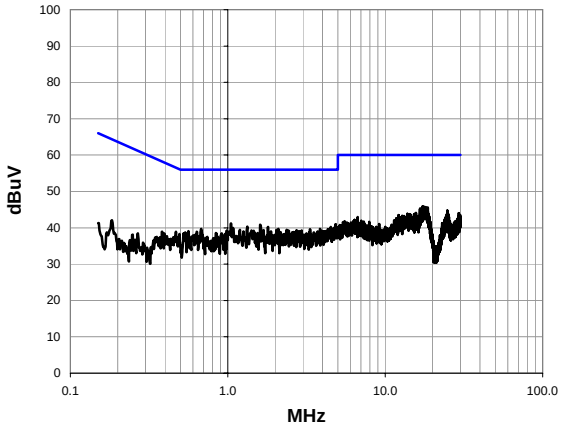
AC Powerline Conducted Emissions

Work Order:	SECF0012	**Date:**	03/07/13		
Project:	None	**Temperature:**	22.1 °C		
Job Site:	EV07	**Humidity:**	32% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1018 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	3				
Customer:	Select Comfort Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11 Mid Ch. 2450MHz				
Deviations:	None				
Comments:	None				

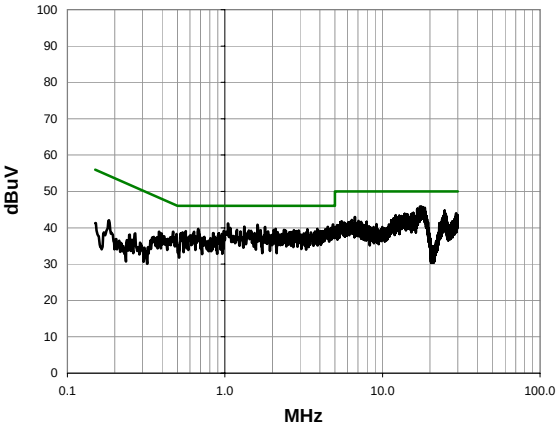
Test Specifications	**Test Method**
FCC 15.207:2013	ANSI C63.10:2009

Run #	7	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
17.280	24.3	21.5	45.8	60.0	-14.2
17.660	24.2	21.6	45.8	60.0	-14.2
18.080	24.1	21.6	45.7	60.0	-14.3
17.600	24.1	21.5	45.6	60.0	-14.4
18.610	23.9	21.6	45.5	60.0	-14.5
16.680	23.8	21.5	45.3	60.0	-14.7
1.048	20.8	20.4	41.2	56.0	-14.8
16.630	23.6	21.5	45.1	60.0	-14.9
4.840	20.2	20.7	40.9	56.0	-15.1
1.608	20.4	20.4	40.8	56.0	-15.2
24.800	22.8	22.0	44.8	60.0	-15.2
18.670	22.9	21.6	44.5	60.0	-15.5
1.328	19.9	20.4	40.3	56.0	-15.7
1.800	19.8	20.5	40.3	56.0	-15.7
4.504	19.5	20.7	40.2	56.0	-15.8
15.700	22.7	21.4	44.1	60.0	-15.9
29.300	21.8	22.2	44.0	60.0	-16.0
4.712	19.3	20.7	40.0	56.0	-16.0
15.350	22.5	21.4	43.9	60.0	-16.1
13.830	22.6	21.2	43.8	60.0	-16.2

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
17.280	24.3	21.5	45.8	50.0	-4.2
17.660	24.2	21.6	45.8	50.0	-4.2
18.080	24.1	21.6	45.7	50.0	-4.3
17.600	24.1	21.5	45.6	50.0	-4.4
18.610	23.9	21.6	45.5	50.0	-4.5
16.680	23.8	21.5	45.3	50.0	-4.7
1.048	20.8	20.4	41.2	46.0	-4.8
16.630	23.6	21.5	45.1	50.0	-4.9
4.840	20.2	20.7	40.9	46.0	-5.1
1.608	20.4	20.4	40.8	46.0	-5.2
24.800	22.8	22.0	44.8	50.0	-5.2
18.670	22.9	21.6	44.5	50.0	-5.5
1.328	19.9	20.4	40.3	46.0	-5.7
1.800	19.8	20.5	40.3	46.0	-5.7
4.504	19.5	20.7	40.2	46.0	-5.8
15.700	22.7	21.4	44.1	50.0	-5.9
29.300	21.8	22.2	44.0	50.0	-6.0
4.712	19.3	20.7	40.0	46.0	-6.0
15.350	22.5	21.4	43.9	50.0	-6.1
13.830	22.6	21.2	43.8	50.0	-6.2

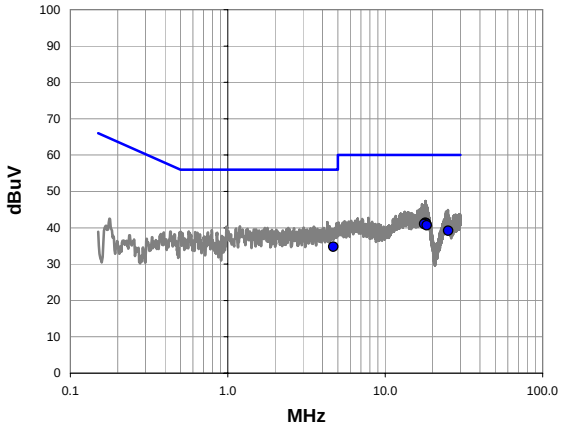
AC Powerline Conducted Emissions

Work Order:	SECF0012	**Date:**	03/07/13		
Project:	None	**Temperature:**	22.1 °C		
Job Site:	EV07	**Humidity:**	32% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1018 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	3				
Customer:	Select Comfort Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11 High Ch. 2480MHz				
Deviations:	None				
Comments:	None				

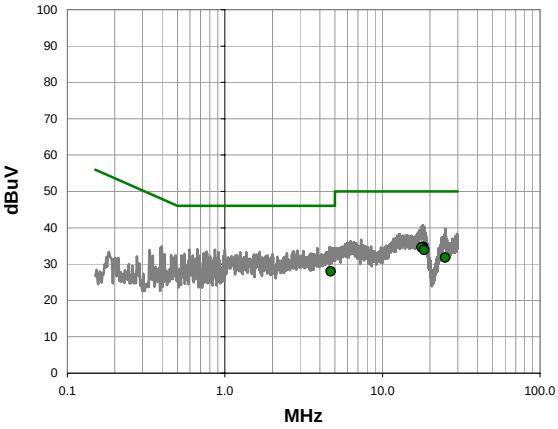
Test Specifications	**Test Method**
FCC 15.207:2013	ANSI C63.10:2009

Run #	8	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
18.064	19.8	21.6	41.4	60.0	-18.6
18.168	19.6	21.6	41.2	60.0	-18.8
17.708	19.5	21.6	41.1	60.0	-18.9
18.372	19.1	21.6	40.7	60.0	-19.3
25.098	17.2	22.0	39.2	60.0	-20.8
4.684	14.1	20.7	34.8	56.0	-21.2

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
18.064	13.2	21.6	34.8	50.0	-15.2
18.168	13.0	21.6	34.6	50.0	-15.4
17.708	13.0	21.6	34.6	50.0	-15.4
18.372	12.3	21.6	33.9	50.0	-16.1
4.684	7.3	20.7	28.0	46.0	-18.0
25.098	9.8	22.0	31.8	50.0	-18.2

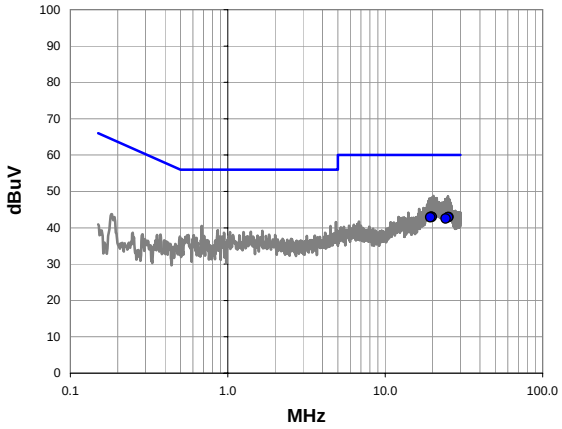
AC Powerline Conducted Emissions

Work Order:	SECF0012	**Date:**	03/07/13		
Project:	None	**Temperature:**	22.1 °C		
Job Site:	EV07	**Humidity:**	32% RH		
Serial Number:	3130360101	**Barometric Pres.:**	1018 mbar	**Tested by:**	Brandon Hobbs & Rod Peloquin
EUT:	Dual Temperature Engine				
Configuration:	3				
Customer:	Select Comfort Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmit mode 802.11 High Ch. 2480MHz				
Deviations:	None				
Comments:	None				

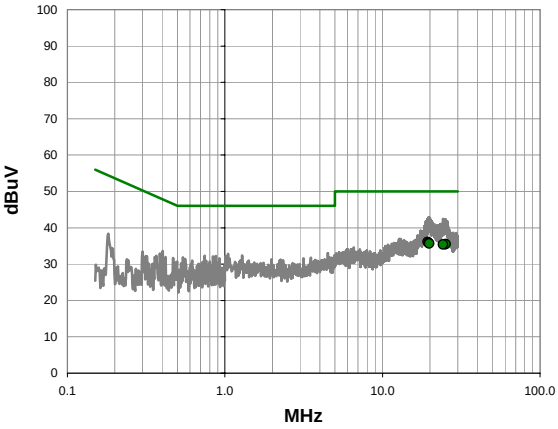
Test Specifications	**Test Method**
FCC 15.207:2013	ANSI C63.10:2009

Run #	9	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
19.656	21.4	21.7	43.1	60.0	-16.9
25.216	21.0	22.0	43.0	60.0	-17.0
19.828	21.3	21.7	43.0	60.0	-17.0
25.108	20.9	22.0	42.9	60.0	-17.1
19.372	21.2	21.7	42.9	60.0	-17.1
24.234	20.6	21.9	42.5	60.0	-17.5

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
19.372	14.4	21.7	36.1	50.0	-13.9
19.656	14.2	21.7	35.9	50.0	-14.1
19.828	14.0	21.7	35.7	50.0	-14.3
25.216	13.5	22.0	35.5	50.0	-14.5
25.108	13.5	22.0	35.5	50.0	-14.5
24.234	13.5	21.9	35.4	50.0	-14.6