

NORTHWEST EMC

Select Comfort Corporation

Model 360 - Base Controller

FCC 15.247:2017

2.4 GHz DTS Radio

Report # SECF0066



NVLAP Lab Code: 200881-0

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. This Report shall not be reproduced, except in full without written approval of the laboratory.

CERTIFICATE OF TEST

Last Date of Test: January 11, 2017
Select Comfort Corporation
Model 360 - Base Controller

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2017	ANSI C63.10:2013, KDB 558074

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	Yes	Pass	
11.12.1, 11.13.2, 6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
11.6	Duty Cycle	Yes	Pass	
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9.1.1	Output Power	Yes	Pass	
11.10.2	Power Spectral Density	Yes	Pass	
11.11	Band Edge Compliance	Yes	Pass	
11.11	Spurious Conducted Emissions	Yes	Pass	

Deviations From Test Standards

None

Approved By:



Dean Ghizzone, General 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. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.

REVISION HISTORY

Revision Number		Description	Date	Page Number
00		None		

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 17065 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

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with ISED.

European Union

European Commission – Validated by the European Commission 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

OFCA – Recognized by OFCA 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/>
<http://gsi.nist.gov/global/docs/cabs/designations.html>

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 QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty ($K=2$) can be found included as part of the applicable test description page. 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 16-4-2 as applicable), and are available upon request.

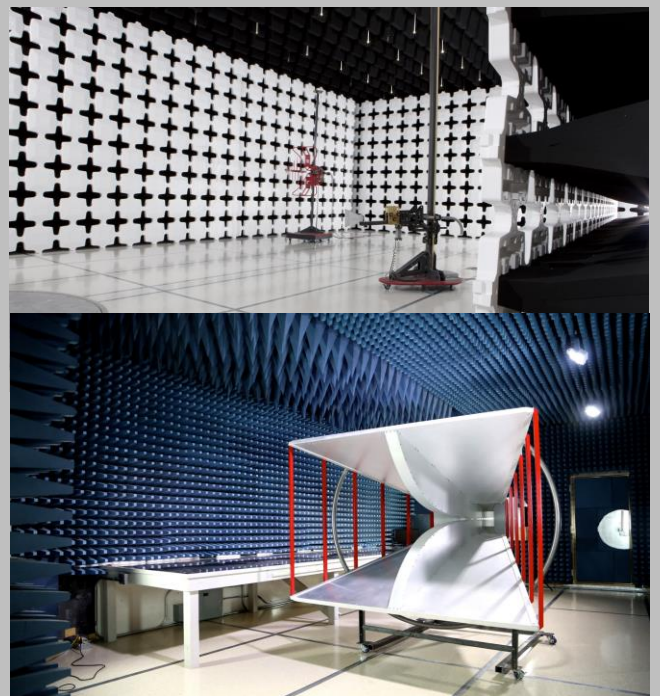
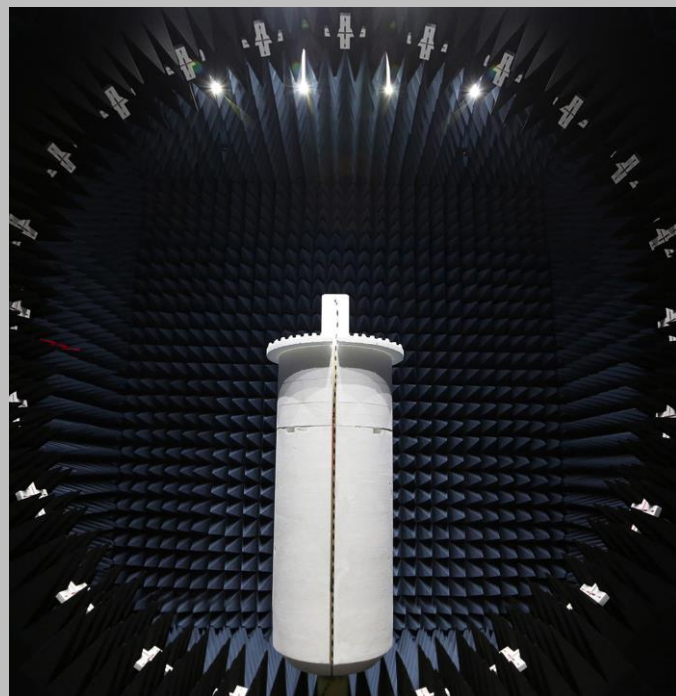
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

FACILITIES

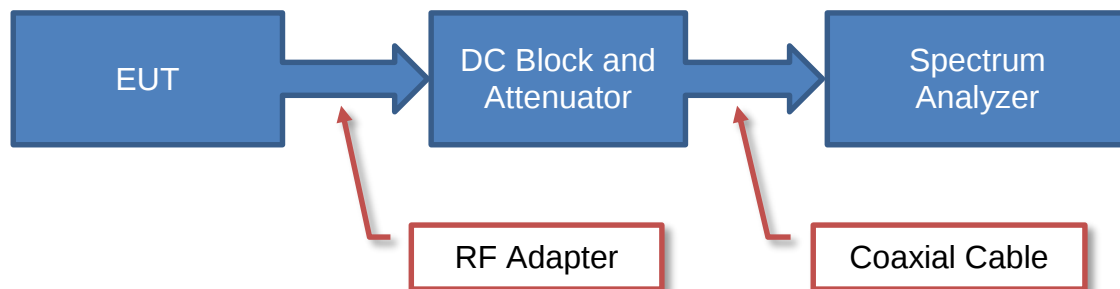


California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Washington Labs NC01-05 19201 120 th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada					
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-2	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRR, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157

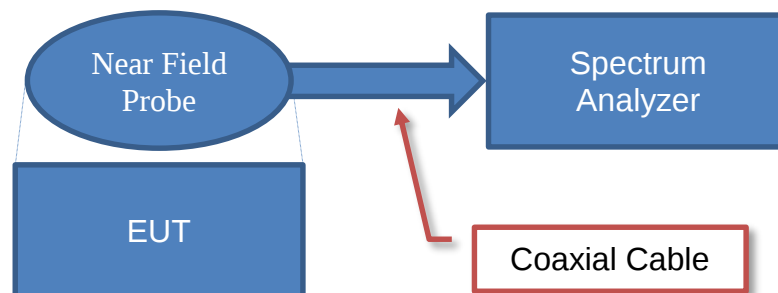


Test Setup Block Diagrams

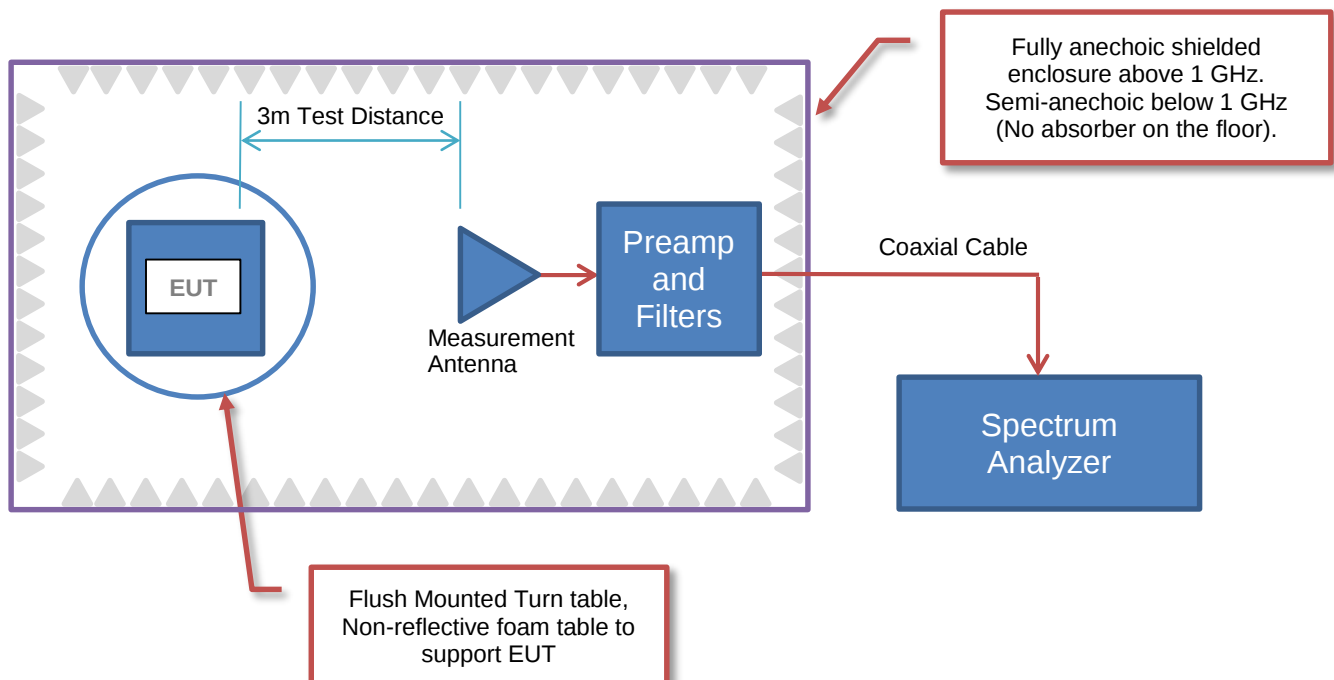
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Select Comfort Corporation
Address:	PO Box 41580
City, State, Zip:	Plymouth, MN 55441
Test Requested By:	Nick Reynolds
Model:	Model 360 - Base Controller
First Date of Test:	January 10, 2017
Last Date of Test:	January 11, 2017
Receipt Date of Samples:	January 9, 2017
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Base controller for adjustable bed which utilizes a DTS radio operating in the 2400 – 2483.5 MHz band.
Testing Objective:
To demonstrate compliance of the DTS radio to FCC 15.247 requirements.

CONFIGURATIONS

Configuration SECF0066- 2

Software/Firmware Running during test					
Description		Version			
Controller Firmware		D6			
EUT					
Description	Manufacturer	Model/Part Number	Serial Number		
Base Controller	Select Comfort Corporation	Model 360	N/A		
Peripherals in test setup boundary					
Description	Manufacturer	Model/Part Number	Serial Number		
Laptop	Dell	Latitude E6440	4DTFWZ1		
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	2.0m	No	Bed	AC Mains
USB to 6-pin Serial	Yes	1.8m	No	Controller	Laptop

CONFIGURATIONS

Configuration SECF0066- 3

Software/Firmware Running during test	
Description	Version
Controller Firmware	D6

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
360 Adjustable Foundation Controller	Select Comfort Corporation	360	FCC 1

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Linear Actuator	Linak	204X00A211524838101X	2dW035718 - 0115
Linear Actuator	Linak	204X00A211524838101X	2dW040162 - 0066
Linear Actuator	Linak	204X00A211524838101X	2dW035718 - 0438
Linear Actuator	Linak	204X00A211524838101X	1dW041813 - 0835
Underbed Light	Unknown	Unknown	Unknown
360 Pump	Select Comfort Corporation	360 Pump	Pump FCC 1
Favorite Button	Select Comfort Corporation	132580002 Rev 3	None
Favorite Button	Select Comfort Corporation	132580002 Rev 3	None
Strip Switch	Futai	None	None
Strip Switch	Futai	None	None
Strip Switch	Futai	None	None
Strip Switch	Futai	None	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
360 Pump AC Cable	No	1.8m	No	AC Mains	360 Pump
360 Board AC Cable	No	1.8m	No	AC Mains	360 Adjustable Foundation Controller
Linear Actuator Cable	No	0.5m	No	Linear Actuator	360 Adjustable Foundation Controller
Linear Actuator Cable	No	0.5m	No	Linear Actuator	360 Adjustable Foundation Controller
Linear Actuator Cable	No	0.5m	No	Linear Actuator	360 Adjustable Foundation Controller
Linear Actuator Cable	No	0.5m	No	Linear Actuator	360 Adjustable Foundation Controller
Under Bed Harness Cable Bundle	No	1.2m	No	Underbed Light and Favorite Button	360 Adjustable Foundation Controller
360 King Harness Cable Bundle	No	1.8m	No	Favorite Button and 260 Pump	360 Adjustable Foundation Controller

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	1/10/2017	Duty Cycle	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	1/10/2017	Occupied Bandwidth	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	1/10/2017	Output Power	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	1/10/2017	Power Spectral Density	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.
5	1/10/2017	Band Edge Compliance	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.
6	1/10/2017	Spurious 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.
7	1/11/2017	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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

Tx Modulated signal on Low (2405MHz), Mid (2440MHz), or High Channel (2480MHz)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

SECF0066 - 3

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	25000 MHz
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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
Attenuator	Fairview Microwave	SA18E-20	TWZ	9/23/2016	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	LFN	9/23/2016	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	LFK	9/22/2016	12 mo
Cable	Northwest EMC	18-26GHz Standard Gain Horn Cable	MNP	9/15/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	9/15/2016	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	3/1/2016	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AIQ	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	3/1/2016	12 mo
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	7/29/2016	12 mo
Antenna - Biconilog	EMCO	3142	AXB	11/6/2015	24 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	3/1/2016	12 mo
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	12/1/2016	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AJA	6/23/2016	24 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	12/1/2016	12 mo
Cable	ESM Cable Corp.	Bilog Cables	MNH	12/1/2016	12 mo
Antenna - Biconilog	Teseq	CBL 6141B	AYD	1/6/2016	24 mo
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	12/22/2016	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 highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSIC63.10). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector

PK = Peak Detector

AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

SPURIOUS RADIATED EMISSIONS

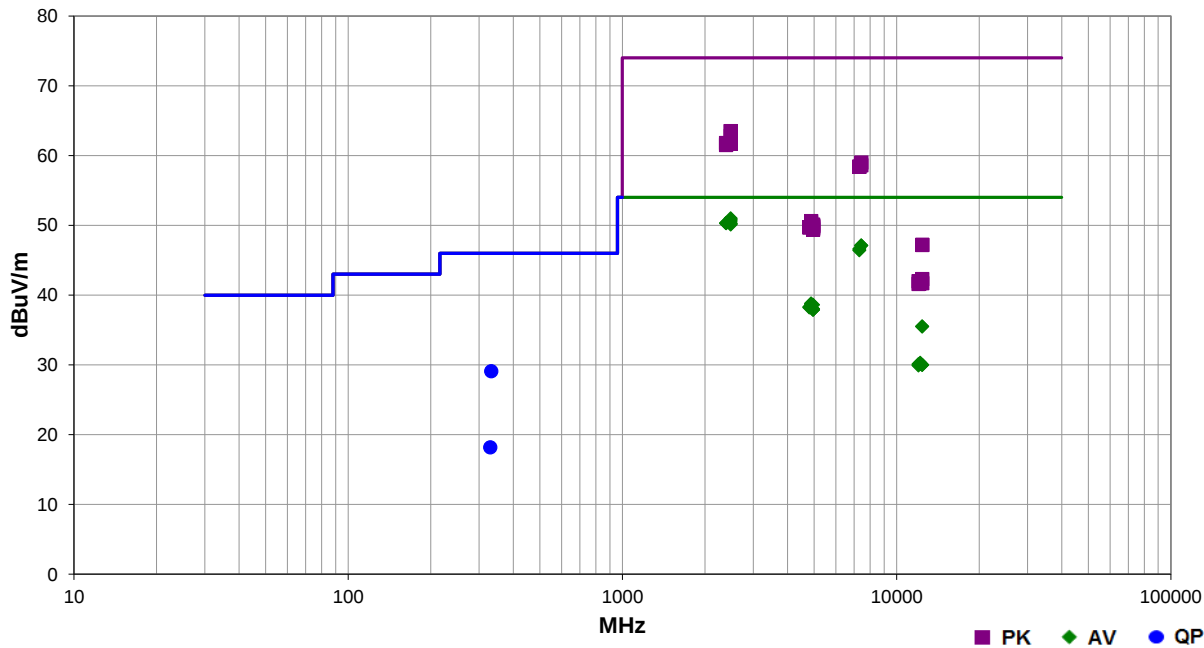


PSA-ESCI 2016.12.19
EmiR5 2016.08.26

Work Order:	SECF0066	Date:	01/11/17	<i>Trevor Buls</i>
Project:	None	Temperature:	22.1 °C	
Job Site:	MN05	Humidity:	19.8% RH	
Serial Number:	FCC 1	Barometric Pres.:	969.5 mbar	
EUT: Model 360 - Base Controller				Tested by: Trevor Buls, Kyle McMullan
Configuration:	3			
Customer:	Select Comfort Corporation			
Attendees:	Eric Kallevig, Jason Ortbig, Paul Grosloschen, Drew Vonheyo			
EUT Power:	110VAC/60Hz			
Operating Mode:	Tx Modulated signal on Low (2405MHz), Mid (2440MHz), or High Channel (2480MHz)			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2016	ANSI C63.10:2013

Run #	2	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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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
2483.557	33.6	-2.6	1.0	310.0	3.0	20.0	Horz	AV	0.0	51.0	54.0	-3.0	High Ch, EUT Horz
2483.533	33.4	-2.6	1.0	224.1	3.0	20.0	Horz	AV	0.0	50.8	54.0	-3.2	High Ch, EUT On Side
2483.533	33.2	-2.6	1.0	252.0	3.0	20.0	Vert	AV	0.0	50.6	54.0	-3.4	High Ch, EUT On Side
2483.858	32.9	-2.6	1.0	14.0	3.0	20.0	Horz	AV	0.0	50.3	54.0	-3.7	High Ch, EUT Vert
2389.593	32.7	-2.4	1.8	264.0	3.0	20.0	Vert	AV	0.0	50.3	54.0	-3.7	Low Ch, EUT On Side
2389.797	32.7	-2.4	1.0	99.0	3.0	20.0	Horz	AV	0.0	50.3	54.0	-3.7	Low Ch, EUT Horz
2483.597	32.8	-2.6	2.4	229.9	3.0	20.0	Vert	AV	0.0	50.2	54.0	-3.8	High Ch, EUT Horz
2483.915	32.7	-2.6	1.0	102.1	3.0	20.0	Vert	AV	0.0	50.1	54.0	-3.9	High Ch, EUT Vert
7440.800	31.8	15.3	1.0	150.0	3.0	0.0	Vert	AV	0.0	47.1	54.0	-6.9	High Ch, EUT Vert
7441.250	31.8	15.3	1.0	250.9	3.0	0.0	Horz	AV	0.0	47.1	54.0	-6.9	High Ch, EUT Horz
7321.180	31.4	15.2	3.3	41.1	3.0	0.0	Horz	AV	0.0	46.6	54.0	-7.4	Mid Ch, EUT Horz
7319.305	31.2	15.2	3.7	135.0	3.0	0.0	Vert	AV	0.0	46.4	54.0	-7.6	Mid Ch, EUT Vert
2483.725	46.1	-2.6	1.0	224.1	3.0	20.0	Horz	PK	0.0	63.5	74.0	-10.5	High Ch, EUT On Side
2483.692	46.1	-2.6	1.0	252.0	3.0	20.0	Vert	PK	0.0	63.5	74.0	-10.5	High Ch, EUT On Side
2484.128	45.4	-2.6	1.0	310.0	3.0	20.0	Horz	PK	0.0	62.8	74.0	-11.2	High Ch, EUT Horz
2389.552	44.2	-2.4	1.8	264.0	3.0	20.0	Vert	PK	0.0	61.8	74.0	-12.2	Low Ch, EUT On Side
2484.100	44.4	-2.6	2.4	229.9	3.0	20.0	Vert	PK	0.0	61.8	74.0	-12.2	High Ch, EUT Horz

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
2483.798	44.4	-2.6	1.0	102.1	3.0	20.0	Vert	PK	0.0	61.8	74.0	-12.2	High Ch, EUT Vert
2483.627	44.3	-2.6	1.0	14.0	3.0	20.0	Horz	PK	0.0	61.7	74.0	-12.3	High Ch, EUT Vert
2389.563	43.9	-2.4	1.0	99.0	3.0	20.0	Horz	PK	0.0	61.5	74.0	-12.5	Low Ch, EUT Horz
7439.210	43.7	15.3	1.0	150.0	3.0	0.0	Vert	PK	0.0	59.0	74.0	-15.0	High Ch, EUT Vert
4878.930	32.1	6.7	1.0	306.0	3.0	0.0	Horz	AV	0.0	38.8	54.0	-15.2	Mid Ch, EUT Horz
4881.240	32.0	6.7	1.0	112.1	3.0	0.0	Vert	AV	0.0	38.7	54.0	-15.3	Mid Ch, EUT Vert
4961.240	31.9	6.7	1.5	268.9	3.0	0.0	Vert	AV	0.0	38.6	54.0	-15.4	High Ch, EUT Vert
7439.905	43.3	15.3	1.0	250.9	3.0	0.0	Horz	PK	0.0	58.6	74.0	-15.4	High Ch, EUT Horz
7320.290	43.2	15.2	3.3	41.1	3.0	0.0	Horz	PK	0.0	58.4	74.0	-15.6	Mid Ch, EUT Horz
7318.785	43.2	15.2	3.7	135.0	3.0	0.0	Vert	PK	0.0	58.4	74.0	-15.6	Mid Ch, EUT Vert
4808.925	31.6	6.7	1.0	340.9	3.0	0.0	Vert	AV	0.0	38.3	54.0	-15.7	Low Ch, EUT Vert
4808.575	31.5	6.7	1.0	350.0	3.0	0.0	Horz	AV	0.0	38.2	54.0	-15.8	Low Ch, EUT Horz
4962.492	31.3	6.7	1.0	54.0	3.0	0.0	Horz	AV	0.0	38.0	54.0	-16.0	High Ch, EUT Horz
4961.070	31.3	6.7	2.0	55.1	3.0	0.0	Horz	AV	0.0	38.0	54.0	-16.0	High Ch, EUT On Side
4961.767	31.2	6.7	1.0	304.9	3.0	0.0	Vert	AV	0.0	37.9	54.0	-16.1	High Ch, EUT Horz
4959.220	31.2	6.7	1.0	55.1	3.0	0.0	Horz	AV	0.0	37.9	54.0	-16.1	High Ch, EUT Vert
4959.035	31.2	6.7	1.0	335.1	3.0	0.0	Vert	AV	0.0	37.9	54.0	-16.1	High Ch, EUT On Side
332.412	30.5	-1.4	1.0	130.1	3.0	0.0	Horz	QP	0.0	29.1	46.0	-16.9	Low Ch, EUT Horz
12400.550	29.3	6.2	3.2	218.0	3.0	0.0	Vert	AV	0.0	35.5	54.0	-18.5	High Ch, EUT Vert
12400.240	29.3	6.2	1.0	207.0	3.0	0.0	Horz	AV	0.0	35.5	54.0	-18.5	High Ch, EUT Horz
4880.085	43.9	6.7	1.0	306.0	3.0	0.0	Horz	PK	0.0	50.6	74.0	-23.4	Mid Ch, EUT Horz
12199.430	30.8	-0.5	3.2	279.0	3.0	0.0	Vert	AV	0.0	30.3	54.0	-23.7	Mid Ch, EUT Vert
4880.270	43.6	6.7	1.0	112.1	3.0	0.0	Vert	PK	0.0	50.3	74.0	-23.7	Mid Ch, EUT Vert
4957.633	43.4	6.7	1.0	304.9	3.0	0.0	Vert	PK	0.0	50.1	74.0	-23.9	High Ch, EUT Horz
12200.940	30.6	-0.5	1.0	267.0	3.0	0.0	Horz	AV	0.0	30.1	54.0	-23.9	Mid Ch, EUT Horz
12026.450	31.1	-1.0	1.0	134.1	3.0	0.0	Vert	AV	0.0	30.1	54.0	-23.9	Low Ch, EUT Vert
12398.880	29.3	0.7	2.8	125.0	3.0	0.0	Horz	AV	0.0	30.0	54.0	-24.0	High Ch, EUT Horz
12399.390	29.3	0.7	2.5	264.9	3.0	0.0	Vert	AV	0.0	30.0	54.0	-24.0	High Ch, EUT Vert
4961.265	43.2	6.7	1.5	268.9	3.0	0.0	Vert	PK	0.0	49.9	74.0	-24.1	High Ch, EUT Vert
4961.195	43.2	6.7	1.0	335.1	3.0	0.0	Vert	PK	0.0	49.9	74.0	-24.1	High Ch, EUT On Side
12024.900	30.9	-1.0	1.0	348.9	3.0	0.0	Horz	AV	0.0	29.9	54.0	-24.1	Low Ch, EUT Horz
4960.345	43.1	6.7	1.0	55.1	3.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	High Ch, EUT Vert
4809.700	43.0	6.7	1.0	350.0	3.0	0.0	Horz	PK	0.0	49.7	74.0	-24.3	Low Ch, EUT Horz
4809.215	43.0	6.7	1.0	340.9	3.0	0.0	Vert	PK	0.0	49.7	74.0	-24.3	Low Ch, EUT Vert
4957.500	42.9	6.7	1.0	54.0	3.0	0.0	Horz	PK	0.0	49.6	74.0	-24.4	High Ch, EUT Horz
4959.940	42.7	6.7	2.0	55.1	3.0	0.0	Horz	PK	0.0	49.4	74.0	-24.6	High Ch, EUT On Side
12401.110	41.0	6.2	3.2	218.0	3.0	0.0	Vert	PK	0.0	47.2	74.0	-26.8	High Ch, EUT Vert
12400.230	41.0	6.2	1.0	207.0	3.0	0.0	Horz	PK	0.0	47.2	74.0	-26.8	High Ch, EUT Horz
329.452	19.7	-1.5	1.0	130.1	3.0	0.0	Vert	QP	0.0	18.2	46.0	-27.8	Low Ch, EUT Horz
12398.730	41.6	0.7	2.8	125.0	3.0	0.0	Horz	PK	0.0	42.3	74.0	-31.7	High Ch, EUT Horz
12026.450	43.0	-1.0	1.0	348.9	3.0	0.0	Horz	PK	0.0	42.0	74.0	-32.0	Low Ch, EUT Horz
12199.530	42.3	-0.5	1.0	267.0	3.0	0.0	Horz	PK	0.0	41.8	74.0	-32.2	Mid Ch, EUT Horz
12399.190	41.0	0.7	2.5	264.9	3.0	0.0	Vert	PK	0.0	41.7	74.0	-32.3	High Ch, EUT Vert
12198.860	42.2	-0.5	3.2	279.0	3.0	0.0	Vert	PK	0.0	41.7	74.0	-32.3	Mid Ch, EUT Vert
12023.900	42.6	-1.0	1.0	134.1	3.0	0.0	Vert	PK	0.0	41.6	74.0	-32.4	Low Ch, EUT Vert

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.	Cal. Due
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	9/15/2016	9/15/2017
Attenuator	S.M. Electronics	SA26B-20	RFW	2/26/2016	2/26/2017
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Generator - Signal	Agilent	N5183A	TIK	10/17/2014	10/17/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/24/2016	3/24/2017

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

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.

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 may have been used during some of the other tests in this report to only take the measurement during the burst duration.

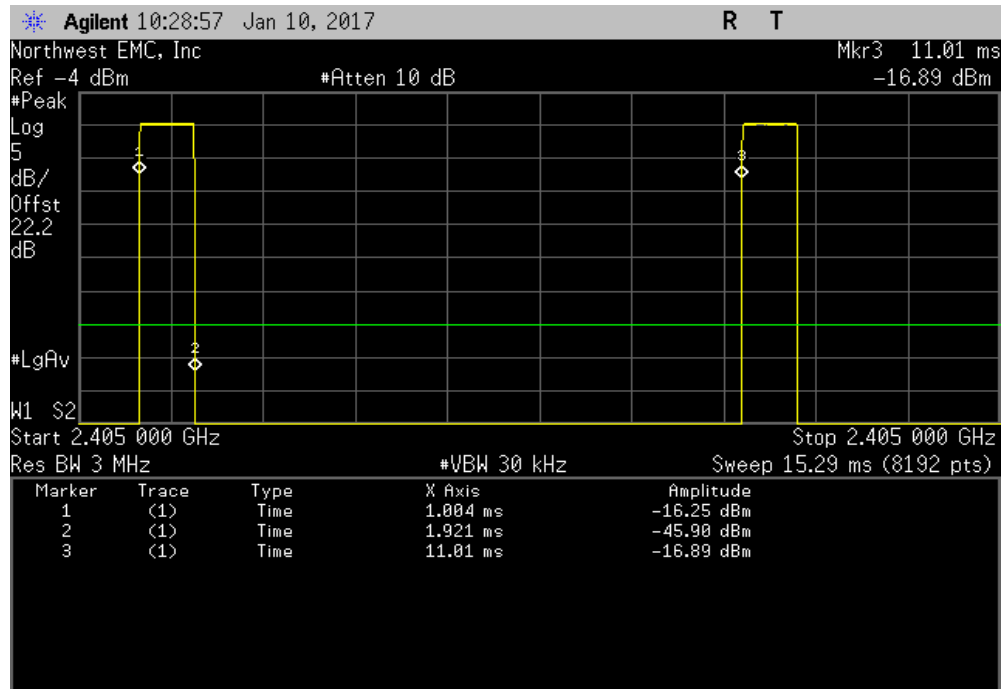
**NORTHWEST
EMC**

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NlweTx 2016.09.14.2

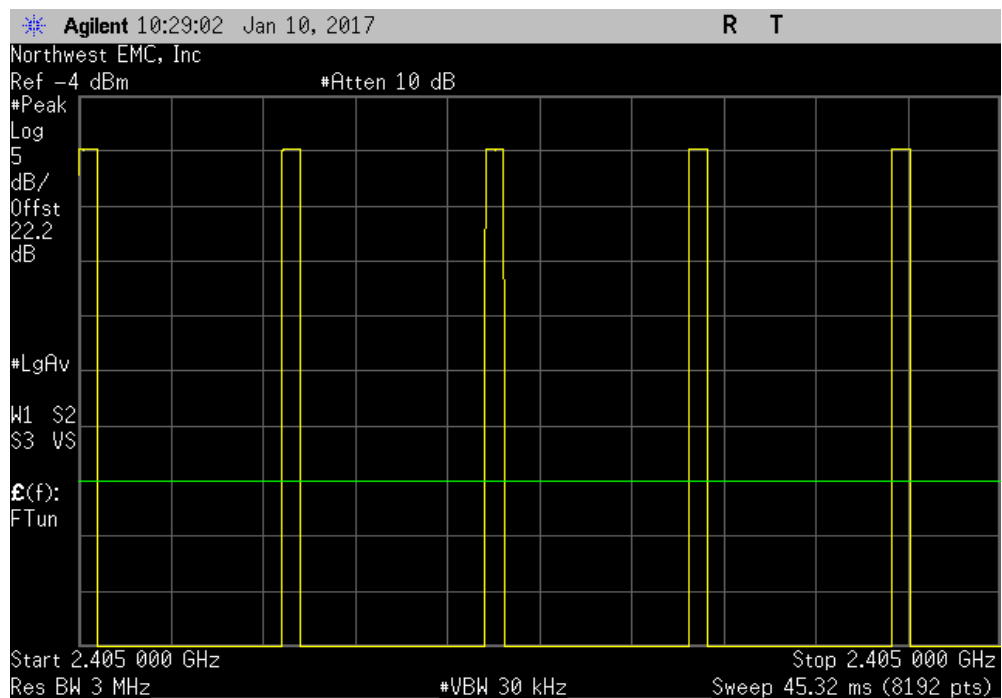
Report No. SECF0066

DUTY CYCLE

Low Channel, 2405 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	916.5 us	10.002 ms	1	9.2	N/A	N/A

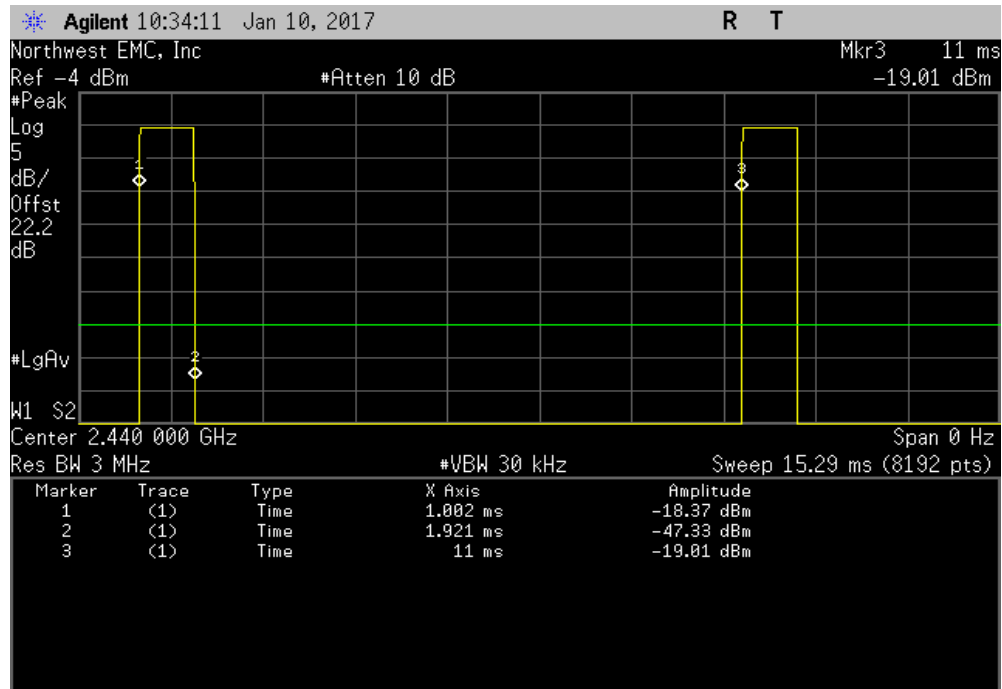


Low Channel, 2405 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

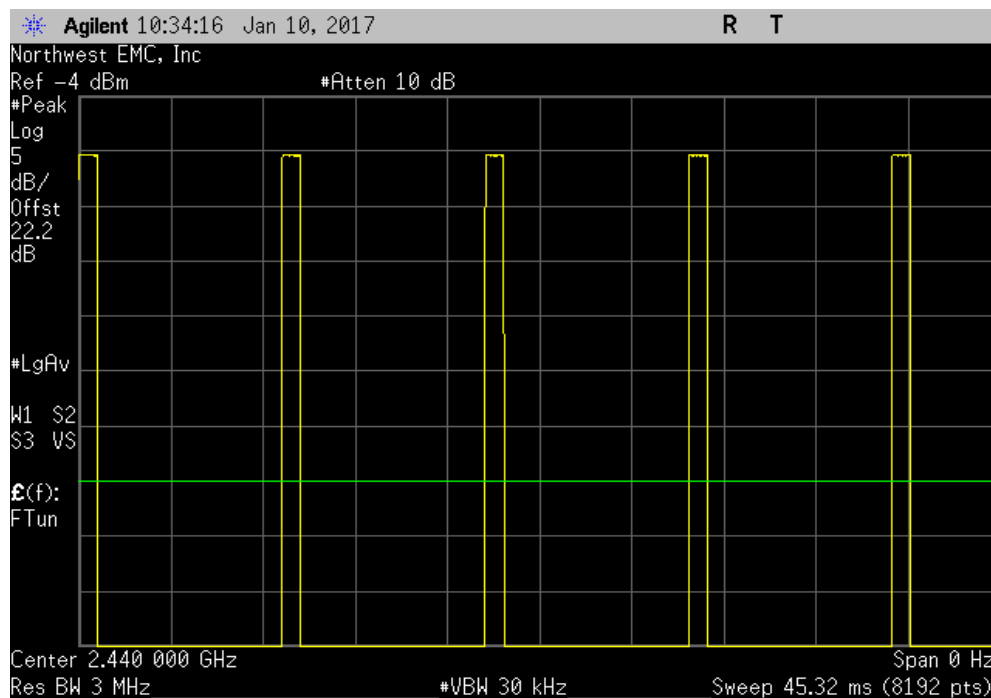


DUTY CYCLE

Mid Channel, 2440 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	918.4 us	10.002 ms	1	9.2	N/A	N/A

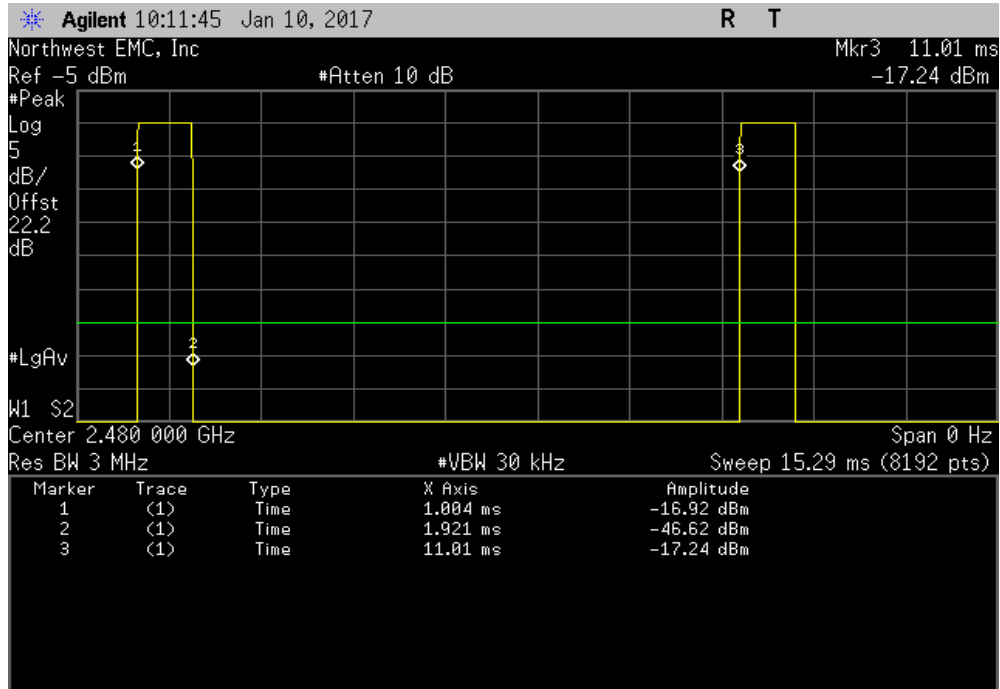


Mid Channel, 2440 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

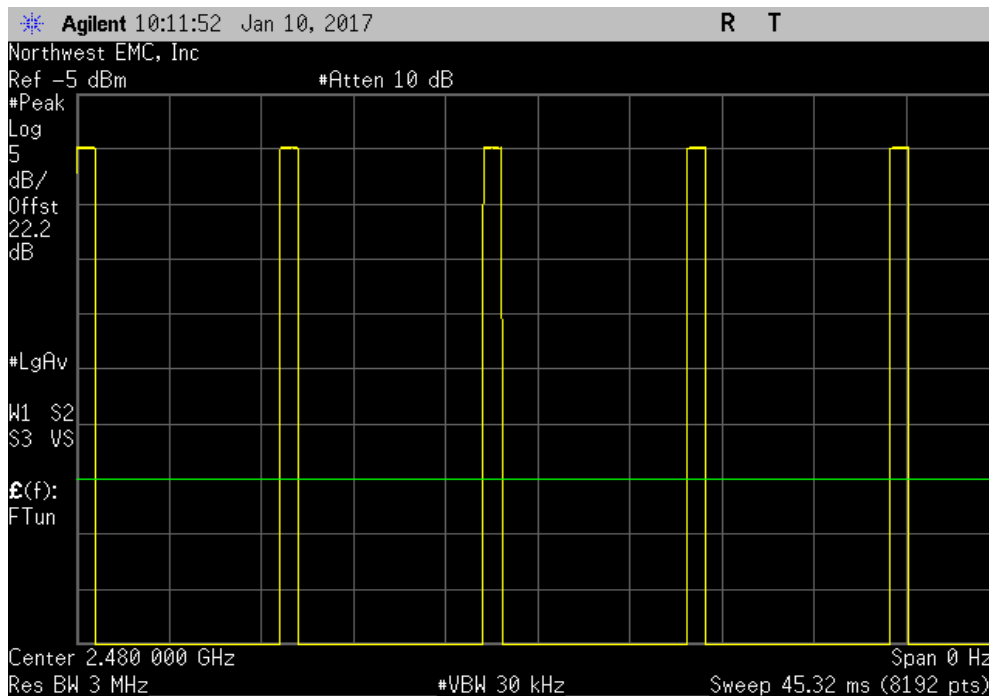


DUTY CYCLE

High Channel, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	916.5 us	10.002 ms	1	9.2	N/A	N/A



High Channel, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



OCCUPIED BANDWIDTH

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.	Cal. Due
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	9/15/2016	9/15/2017
Attenuator	S.M. Electronics	SA26B-20	RFW	2/26/2016	2/26/2017
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Generator - Signal	Agilent	N5183A	TIK	10/17/2014	10/17/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/24/2016	3/24/2017

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was set to the channels and modes listed in the datasheet.

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.0% occupied bandwidth was also measured at the same time which can be needed during Output Power depending on the applicable method.

OCCUPIED BANDWIDTH

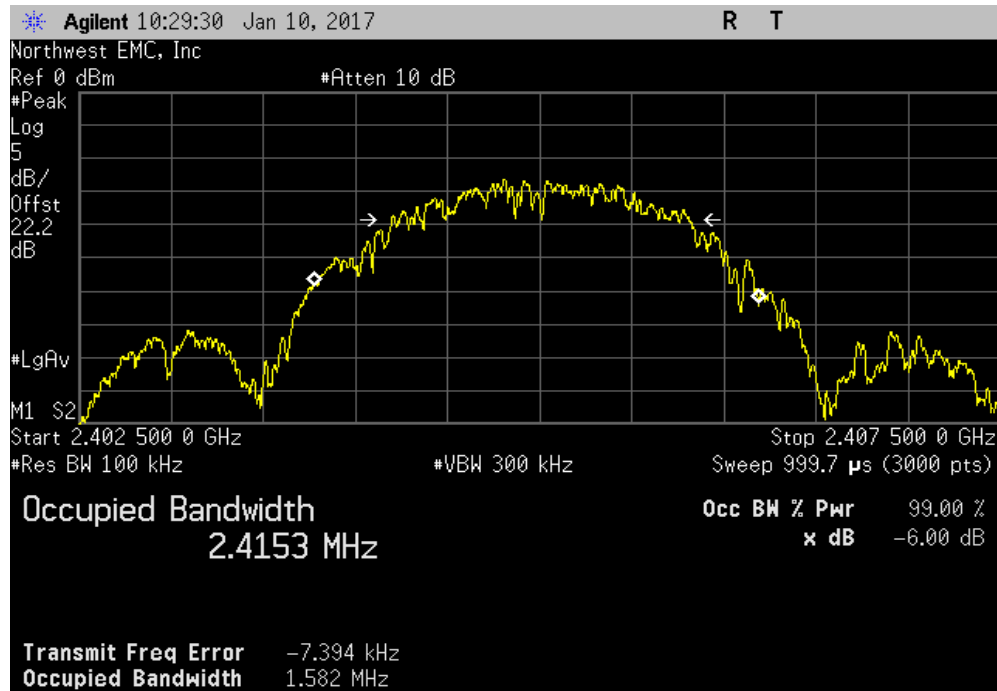


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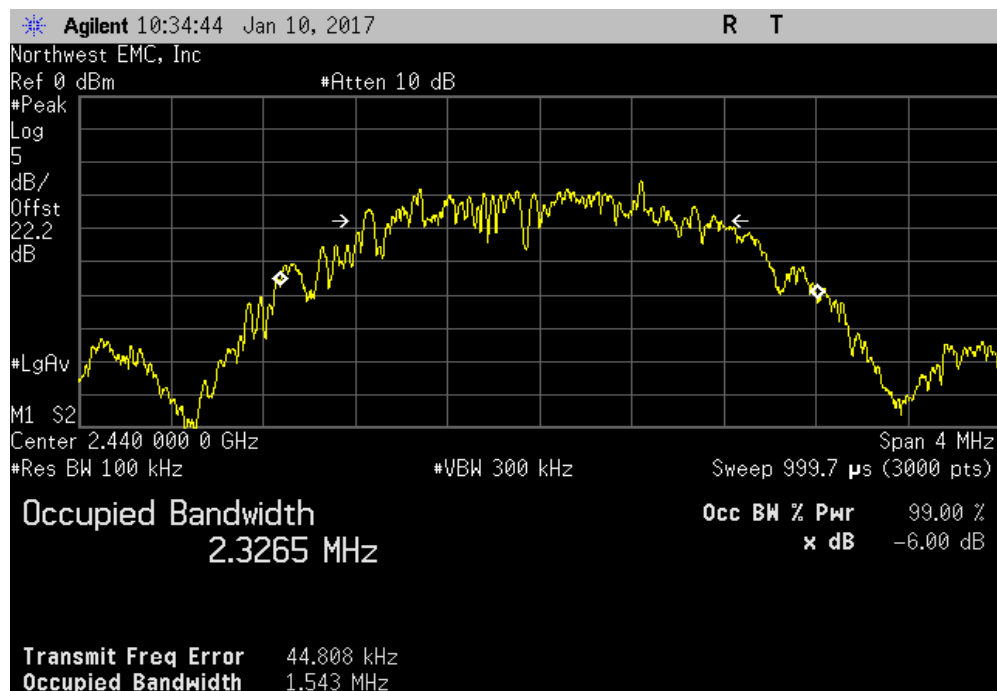
EUT: Model 360 - Base Controller		Work Order: SECF0066	
Serial Number: N/A		Date: 01/10/17	
Customer: Select Comfort Corporation		Temperature: 22.7 °C	
Attendees: Eric Kallevig, Jason Ortberg, Pual Grosloschen, Drew Vonheyo		Humidity: 20.2% RH	
Project: None		Barometric Pres.: 997 mbar	
Tested by: Trevor Buls	Power: 110VAC/60Hz	Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2017		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value	Limit (>)
Low Channel, 2405 MHz		1.582 MHz	500 kHz
Mid Channel, 2440 MHz		1.543 MHz	500 kHz
High Channel, 2480 MHz		1.588 MHz	500 kHz
			Result
			Pass
			Pass
			Pass

OCCUPIED BANDWIDTH

Low Channel, 2405 MHz						
				Value	Limit (>)	Result
				1.582 MHz	500 kHz	Pass

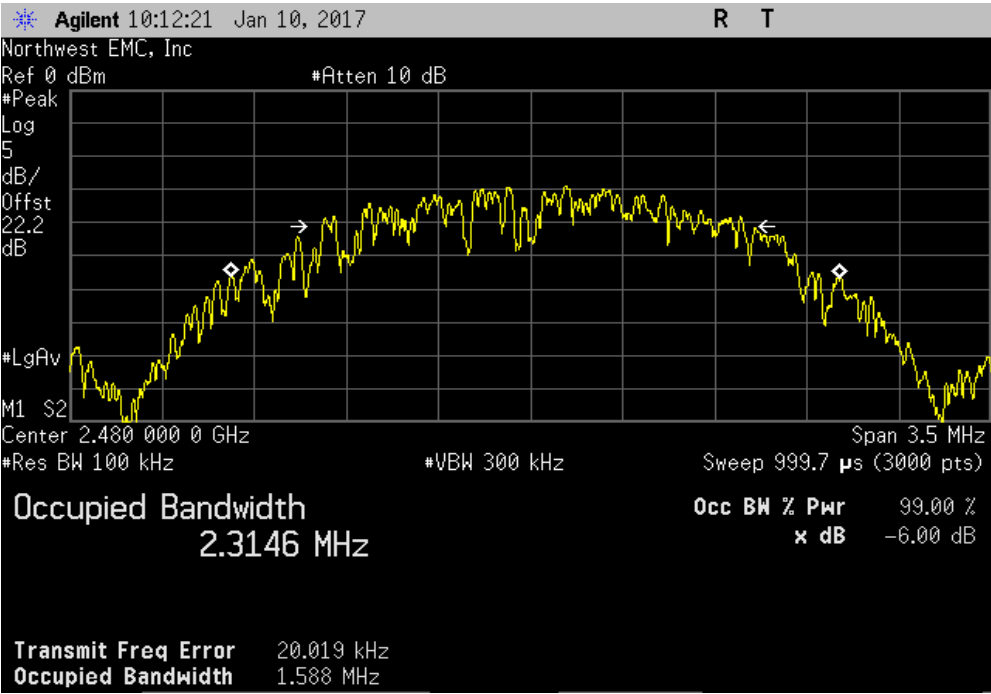


Mid Channel, 2440 MHz						
				Value	Limit (>)	Result
				1.543 MHz	500 kHz	Pass



OCCUPIED BANDWIDTH

High Channel, 2480 MHz						
				Value	Limit (>)	Result
				1.588 MHz	500 kHz	Pass



OUTPUT POWER

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.	Cal. Due
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	9/15/2016	9/15/2017
Attenuator	S.M. Electronics	SA26B-20	RFW	2/26/2016	2/26/2017
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Generator - Signal	Agilent	N5183A	TIK	10/17/2014	10/17/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/24/2016	3/24/2017

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

De Facto EIRP Limit: The EUT meets the de facto EIRP limit of +36 dBm.

OUTPUT POWER

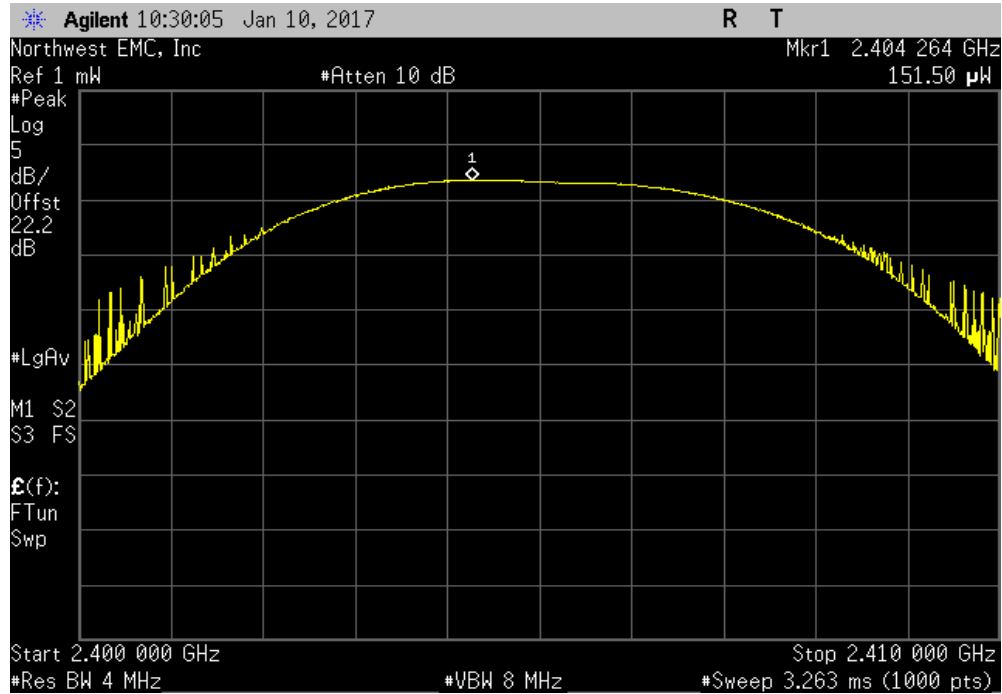


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NweTx 2016.09.14.2

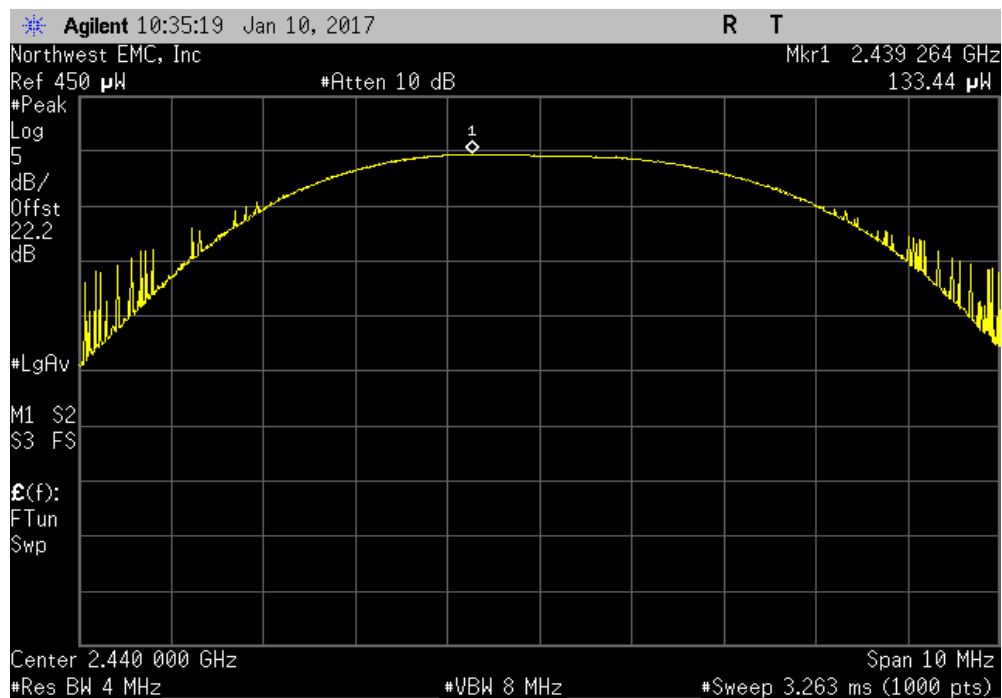
EUT: Model 360 - Base Controller		Work Order: SECF0066	
Serial Number: N/A		Date: 01/10/17	
Customer: Select Comfort Corporation		Temperature: 22.7 °C	
Attendees: Eric Kallevig, Jason Ortberg, Pual Grosloschen, Drew Vonheyo		Humidity: 20.1% RH	
Project: None		Barometric Pres.: 997 mbar	
Tested by: Trevor Buls	Power: 110VAC/60Hz	Job Site: MN08	
TEST SPECIFICATIONS			
FCC 15.247:2017		Test Method: ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value	Limit (<) Result
Low Channel, 2405 MHz		151.496 uW	1 W Pass
Mid Channel, 2440 MHz		133.444 uW	1 W Pass
High Channel, 2480 MHz		119.234 uW	1 W Pass

OUTPUT POWER

Low Channel, 2405 MHz						
				Value	Limit (<)	Result
				151.496 uW	1 W	Pass

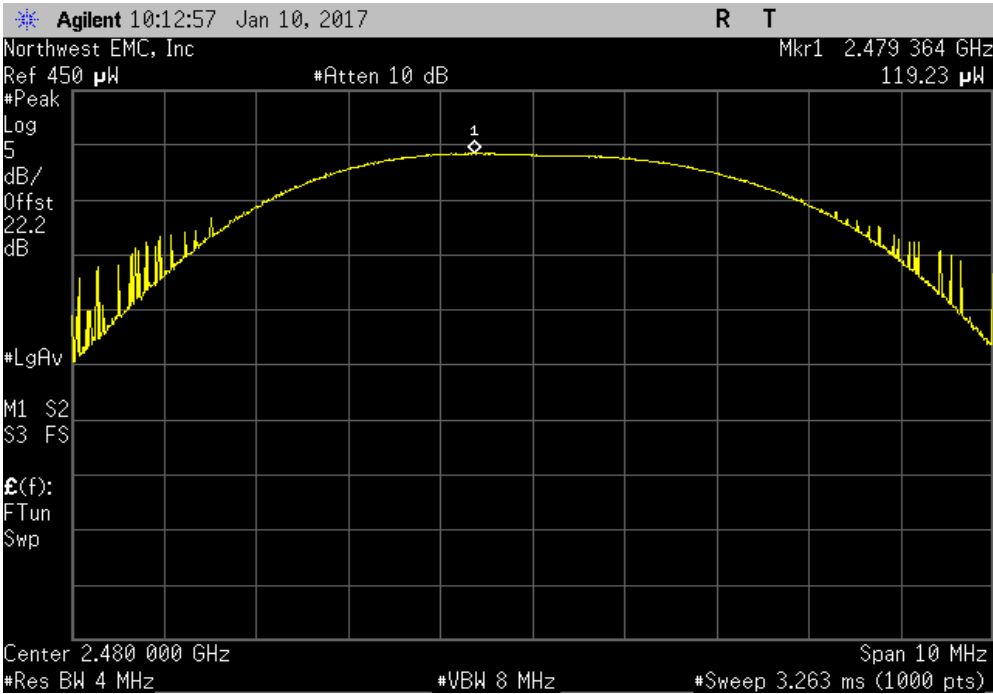


Mid Channel, 2440 MHz						
				Value	Limit (<)	Result
				133.444 uW	1 W	Pass



OUTPUT POWER

High Channel, 2480 MHz						
				Value	Limit (<)	Result
				119.234 uW	1 W	Pass



POWER SPECTRAL DENSITY

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.	Cal. Due
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	9/15/2016	9/15/2017
Attenuator	S.M. Electronics	SA26B-20	RFW	2/26/2016	2/26/2017
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Generator - Signal	Agilent	N5183A	TIK	10/17/2014	10/17/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/24/2016	3/24/2017

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

Per the procedure outlined in ANSI C63.10 the peak power spectral density was measured in a 3 kHz RBW.

POWER SPECTRAL DENSITY

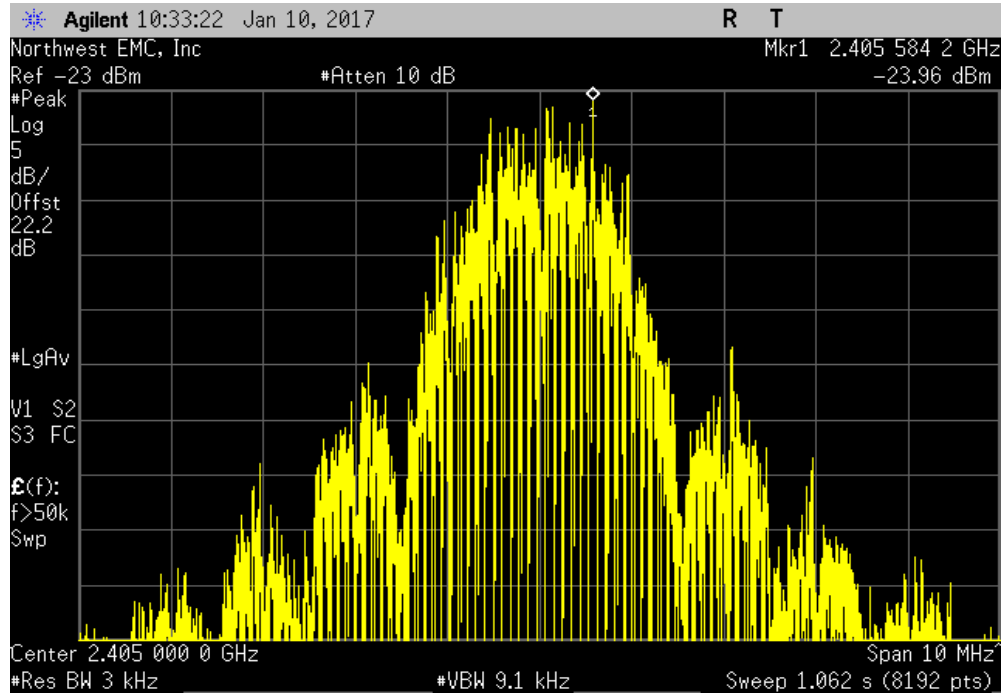


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NweTx 2016.09.14.2

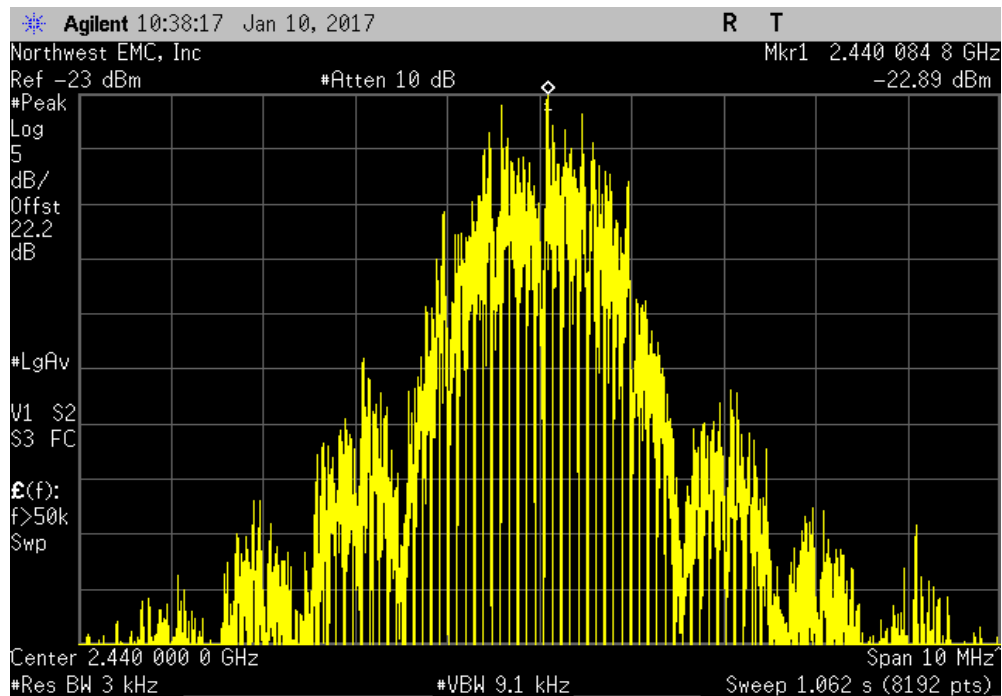
EUT: Model 360 - Base Controller		Work Order: SECF0066	
Serial Number: N/A		Date: 01/10/17	
Customer: Select Comfort Corporation		Temperature: 22.7 °C	
Attendees: Eric Kallevig, Jason Ortberg, Pual Grosloschen, Drew Vonheyo		Humidity: 20.1% RH	
Project: None		Barometric Pres.: 997 mbar	
Tested by: Trevor Buls	Power: 110VAC/60Hz	Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2017		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value dBm/3kHz	Limit < dBm/3kHz
Low Channel, 2405 MHz		-23.962	8
Mid Channel, 2440 MHz		-22.892	8
High Channel, 2480 MHz		-25.207	8
			Results
			Pass
			Pass
			Pass

POWER SPECTRAL DENSITY

Low Channel, 2405 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-23.962	8	Pass

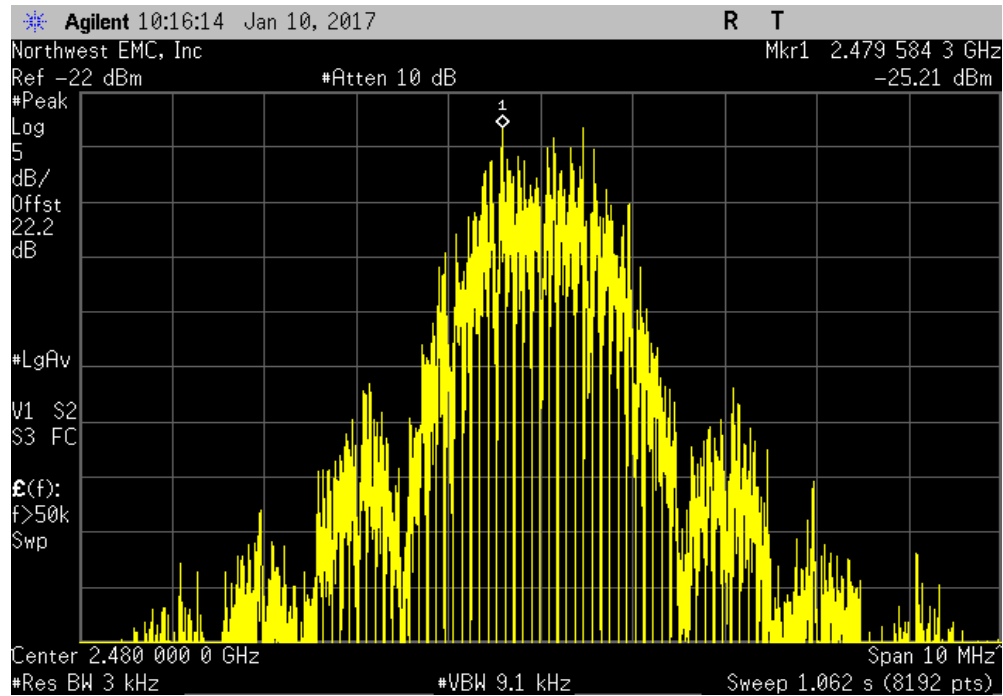


Mid Channel, 2440 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-22.892	8	Pass



POWER SPECTRAL DENSITY

High Channel, 2480 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-25.207	8	Pass



BAND EDGE COMPLIANCE

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.	Cal. Due
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	9/15/2016	9/15/2017
Attenuator	S.M. Electronics	SA26B-20	RFW	2/26/2016	2/26/2017
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Generator - Signal	Agilent	N5183A	TIK	10/17/2014	10/17/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/24/2016	3/24/2017

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE

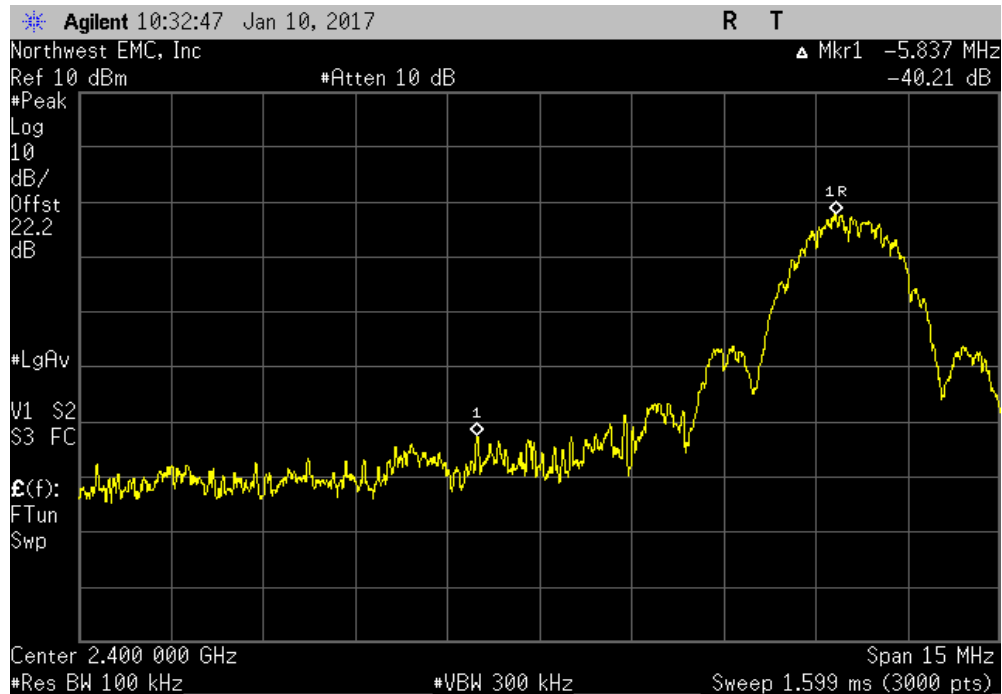


XMR 2016.09.29
NweTx 2016.09.14.2

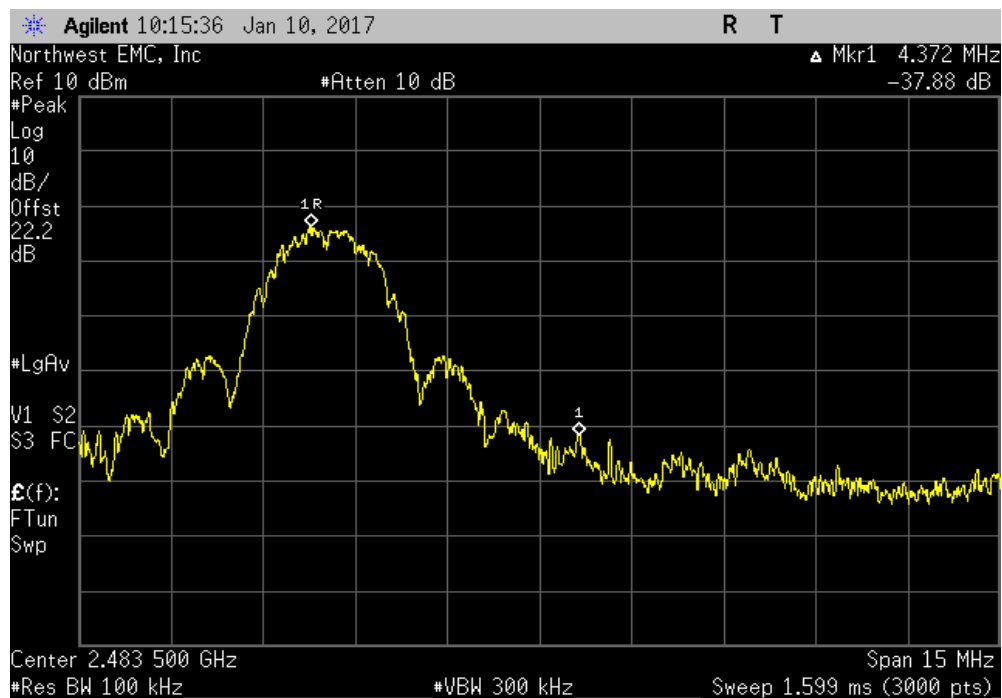
EUT: Model 360 - Base Controller		Work Order: SECF0066	
Serial Number: N/A		Date: 01/10/17	
Customer: Select Comfort Corporation		Temperature: 22.7 °C	
Attendees: Eric Kallevig, Jason Ortberg, Pual Grosloschen, Drew Vonheyo		Humidity: 20.2% RH	
Project: None		Barometric Pres.: 997 mbar	
Tested by: Trevor Buls	Power: 110VAC/60Hz	Job Site: MN08	
TEST SPECIFICATIONS			
FCC 15.247:2017		Test Method: ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Value (dBc)	Limit ≤ (dBc) Result
Low Channel, 2405 MHz		-40.21	-20 Pass
High Channel, 2480 MHz		-37.88	-20 Pass

BAND EDGE COMPLIANCE

Low Channel, 2405 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-40.21	-20	Pass



High Channel, 2480 MHz				Value (dBc)	Limit ≤ (dBc)	Result
				-37.88	-20	Pass



SPURIOUS 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	9/15/2016	9/15/2017
Attenuator	S.M. Electronics	SA26B-20	RFW	2/26/2016	2/26/2017
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Generator - Signal	Agilent	N5183A	TIK	10/17/2014	10/17/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/24/2016	3/24/2017

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

SPURIOUS CONDUCTED EMISSIONS

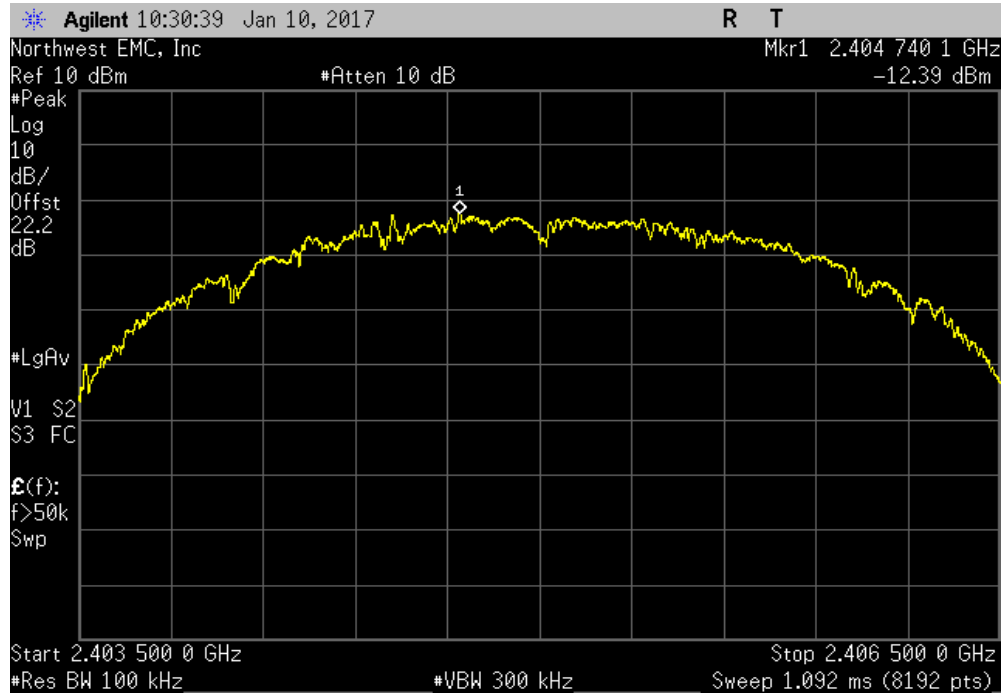


XMR 2016.09.29
NweTx 2016.09.14.2

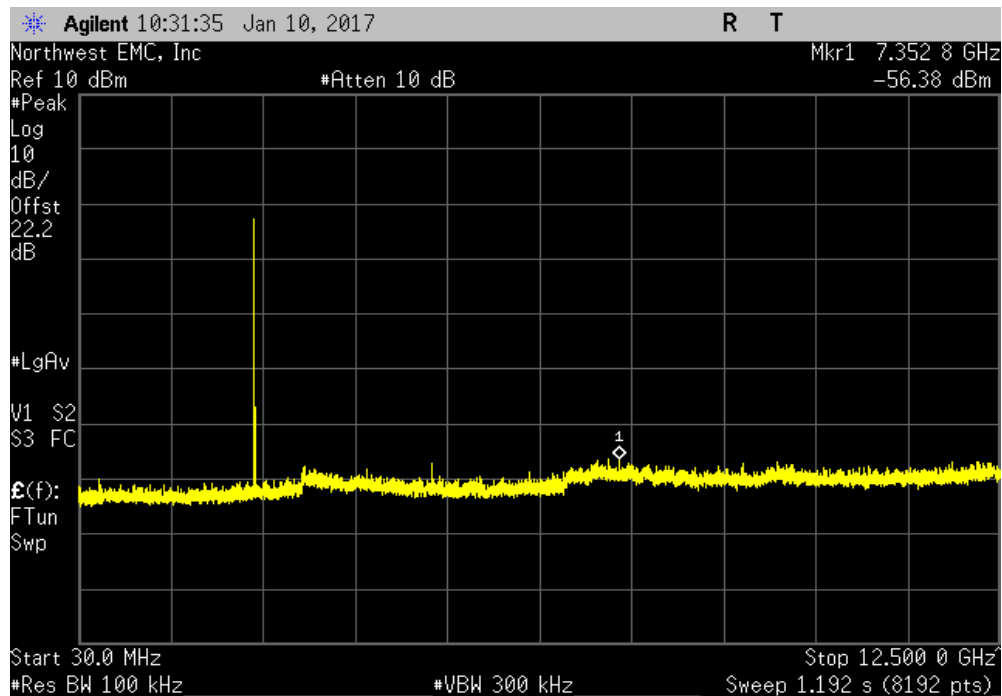
EUT: Model 360 - Base Controller		Work Order: SECF0066	
Serial Number: N/A		Date: 01/10/17	
Customer: Select Comfort Corporation		Temperature: 22.7 °C	
Attendees: Eric Kallevig, Jason Ortberg, Pual Grosloschen, Drew Vonheyo		Humidity: 20.1% RH	
Project: None		Barometric Pres.: 997 mbar	
Tested by: Trevor Buls	Power: 110VAC/60Hz	Job Site: MN08	
TEST SPECIFICATIONS			
FCC 15.247:2017		Test Method: ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature <i>Trevor Buls</i>	
		Frequency Range	Max Value (dBc) Limit ≤ (dBc) Result
Low Channel, 2405 MHz		Fundamental	N/A N/A N/A
Low Channel, 2405 MHz		30 MHz - 12.5 GHz	-43.99 -20 Pass
Low Channel, 2405 MHz		12.5 GHz - 25 GHz	-39.63 -20 Pass
Mid Channel, 2440 MHz		Fundamental	N/A N/A N/A
Mid Channel, 2440 MHz		30 MHz - 12.5 GHz	-43.09 -20 Pass
Mid Channel, 2440 MHz		12.5 GHz - 25 GHz	-39.38 -20 Pass
High Channel, 2480 MHz		Fundamental	N/A N/A N/A
High Channel, 2480 MHz		30 MHz - 12.5 GHz	-40.94 -20 Pass
High Channel, 2480 MHz		12.5 GHz - 25 GHz	-38.14 -20 Pass

SPURIOUS CONDUCTED EMISSIONS

Low Channel, 2405 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
Fundamental		N/A		N/A	N/A	

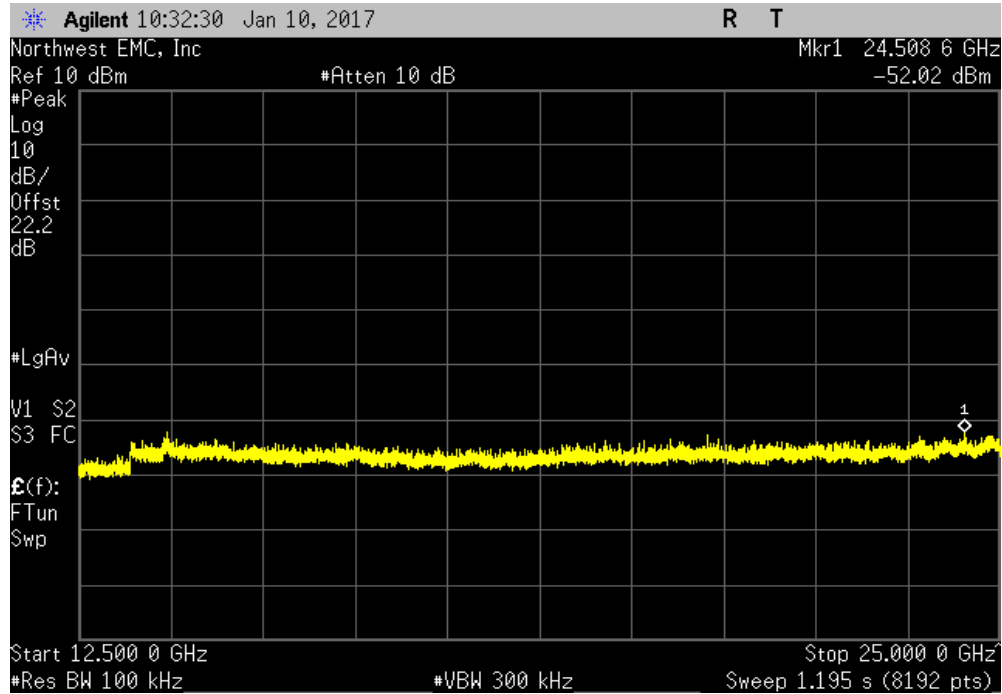


Low Channel, 2405 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz		-43.99		-20	Pass	

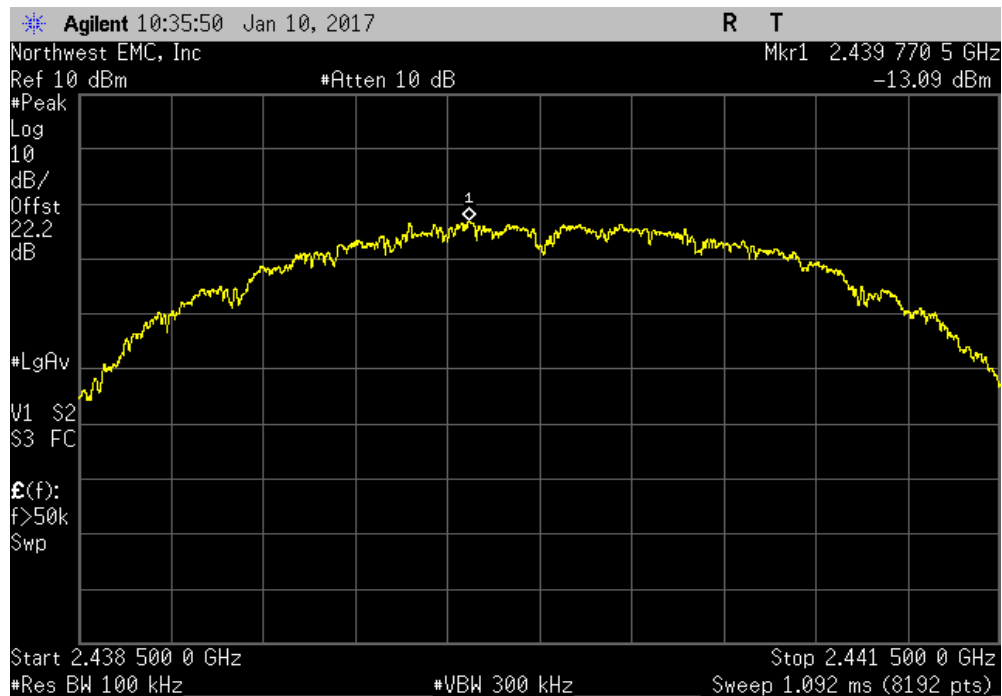


SPURIOUS CONDUCTED EMISSIONS

Low Channel, 2405 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-39.63	-20	Pass	

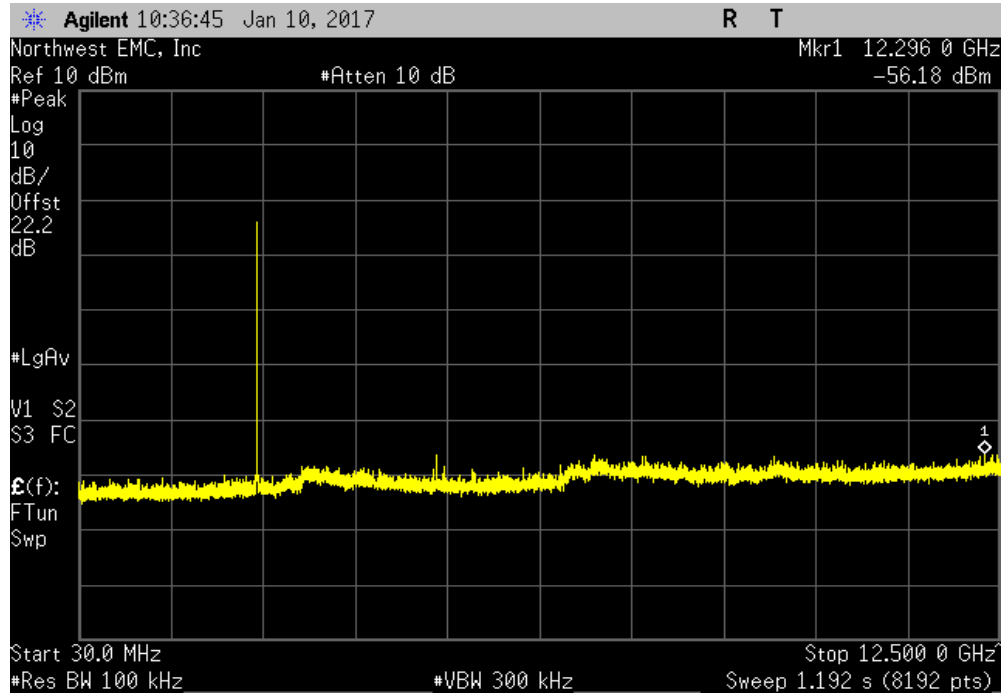


Mid Channel, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	

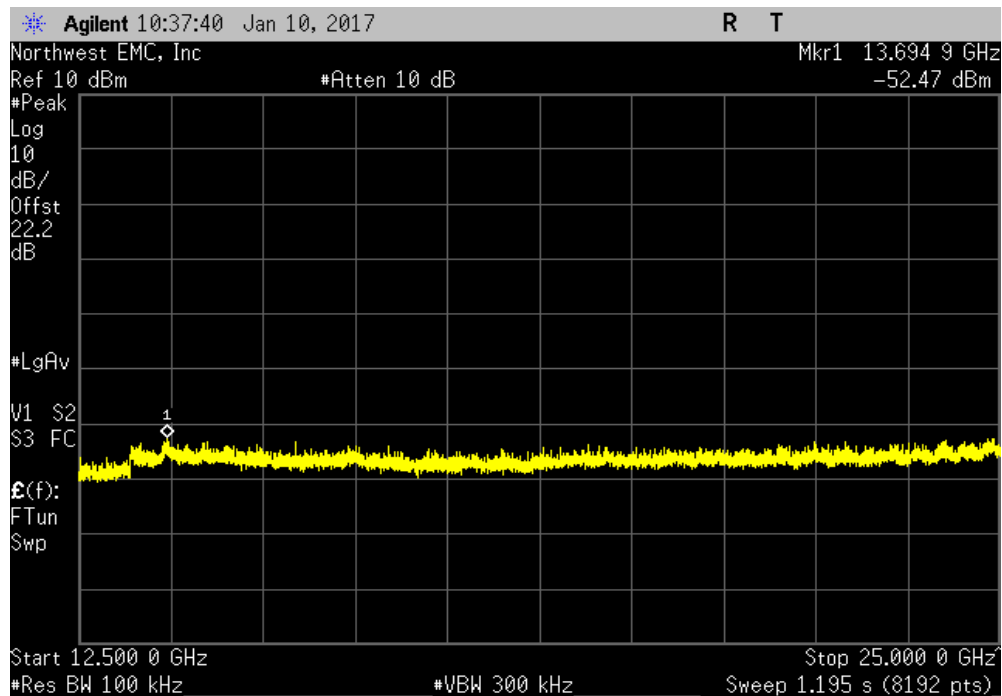


SPURIOUS CONDUCTED EMISSIONS

Mid Channel, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-43.09	-20	Pass	

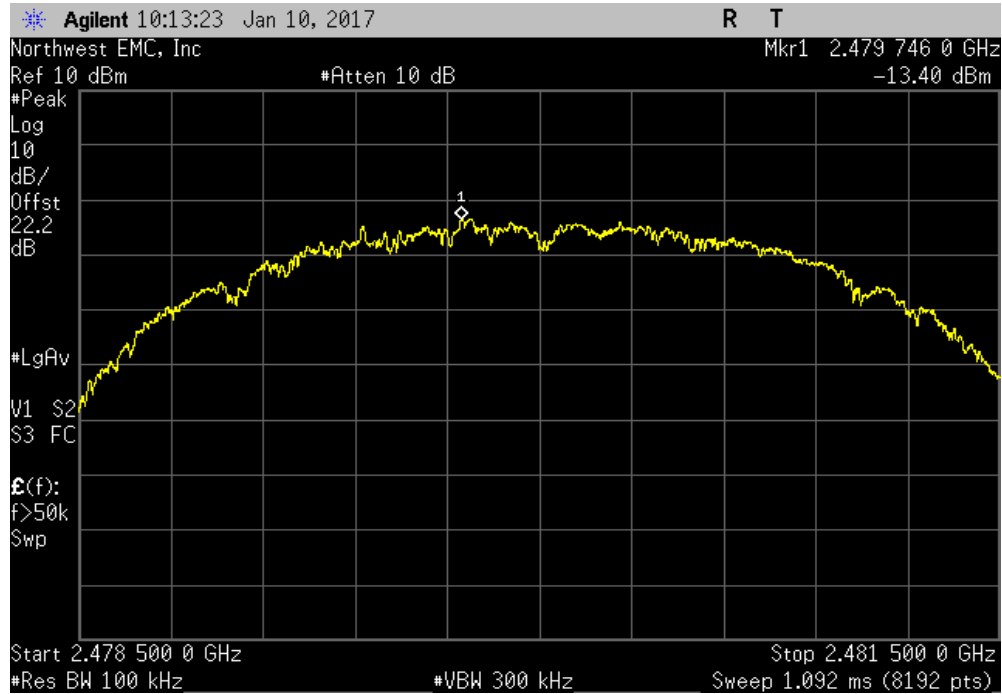


Mid Channel, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-39.38	-20	Pass	

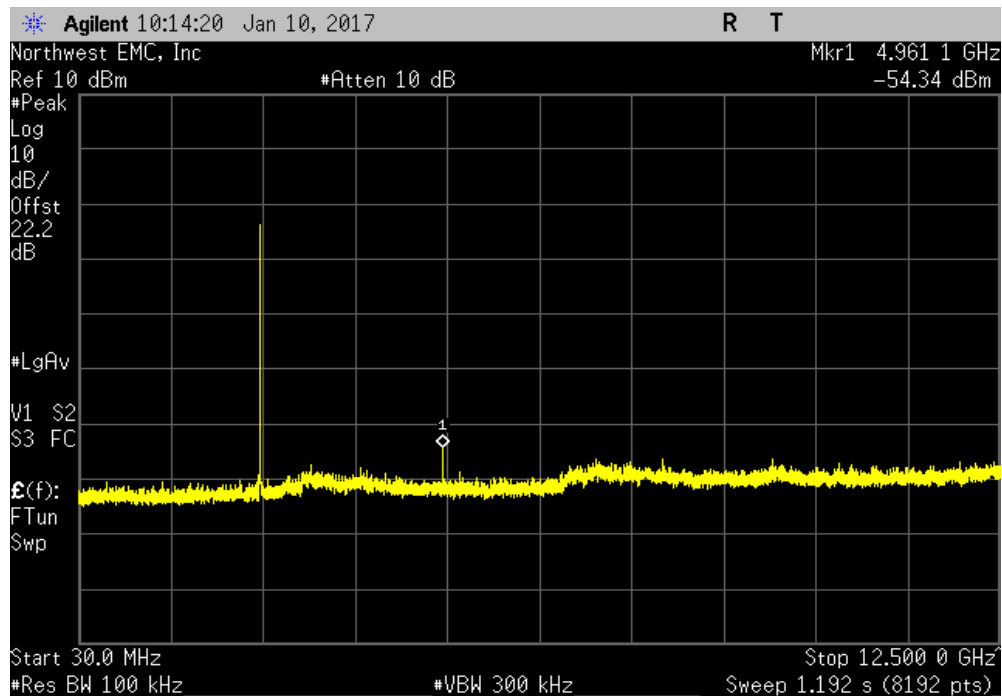


SPURIOUS CONDUCTED EMISSIONS

High Channel, 2480 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
Fundamental		N/A		N/A	N/A	

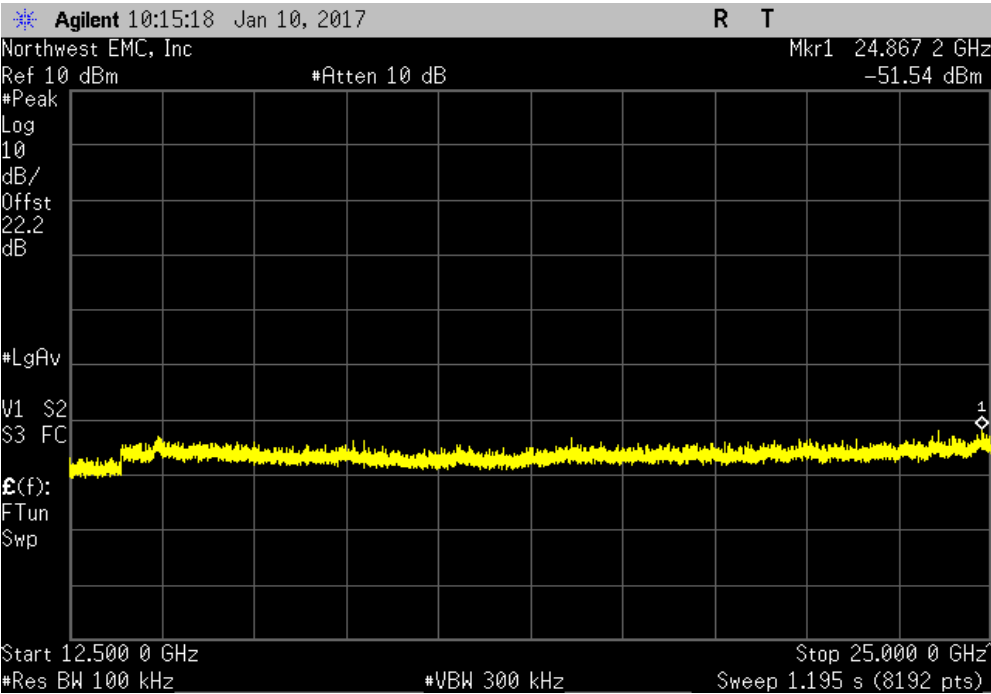


High Channel, 2480 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz		-40.94		-20	Pass	



SPURIOUS CONDUCTED EMISSIONS

High Channel, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-38.14	-20	Pass	



POWERLINE CONDUCTED EMISSIONS



WTD.2016.12.19

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. Per the standard, an insulating material was also added to ground plane between the EUT's power and remote I/O cables. 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 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESR7	ARI	6/14/2016	6/14/2017
LISN	Solar Electronics	9252-50-R-24-BNC	LIY	3/21/2016	3/21/2017
Cable - Conducted Cable Assembly	Northwest EMC	MNC, HGN, TYK	MNCA	1/27/2017	1/27/2018

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.4 dB	-2.4 dB

CONFIGURATIONS INVESTIGATED

SECF0066-1

MODES INVESTIGATED

Transmitting modulated

POWERLINE CONDUCTED EMISSIONS



WTD 2016.12.19

EUT:	Model 360 - Base controller	Work Order:	SECF0066
Serial Number:	N/A	Date:	01/10/2017
Customer:	Select Comfort Corporation	Temperature:	21.9°C
Attendees:	Eric Kallevig, Jason Ortbirg, Pual Grosloschen, Drew Vonheyo	Relative Humidity:	19.8%
Customer Project:	None	Bar. Pressure:	998 mb
Tested By:	Cole Ghizzone, Chris Patterson	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	SECF0066-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2017	ANSI C63.10:2013

TEST PARAMETERS

Run #:	3	Line:	High Line	Add. Ext. Attenuation (dB):	0
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COMMENTS

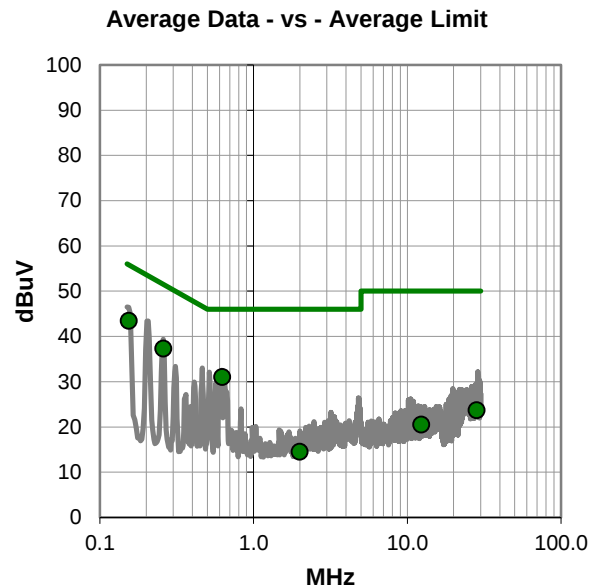
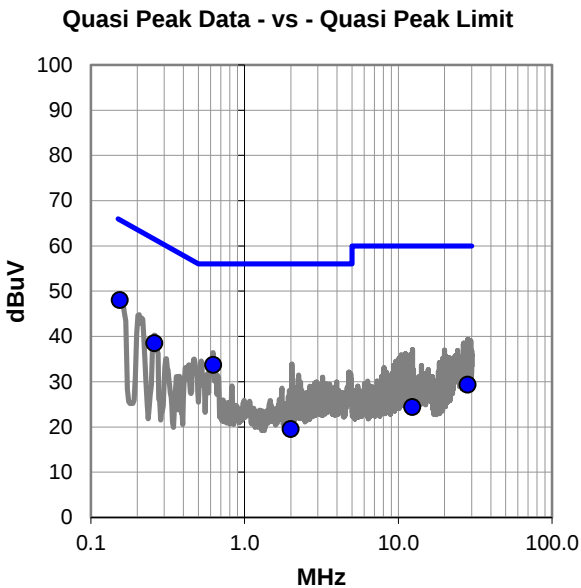
None

EUT OPERATING MODES

Transmitting modulated

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS



WTD 2016.12.19

RESULTS - Run #3

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.155	27.6	20.4	48.0	65.7	-17.7
0.625	13.6	20.1	33.7	56.0	-22.3
0.259	18.3	20.2	38.5	61.5	-23.0
28.261	6.9	22.4	29.3	60.0	-30.7
12.368	3.6	20.8	24.4	60.0	-35.6
2.001	-0.7	20.2	19.5	56.0	-36.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.155	23.0	20.4	43.4	55.7	-12.3
0.259	17.1	20.2	37.3	51.5	-14.2
0.625	10.9	20.1	31.0	46.0	-15.0
28.261	1.3	22.4	23.7	50.0	-26.3
12.368	-0.3	20.8	20.5	50.0	-29.5
2.001	-5.7	20.2	14.5	46.0	-31.5

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS



EUT:	Model 360 - Base controller	Work Order:	SECF0066
Serial Number:	N/A	Date:	01/10/2017
Customer:	Select Comfort Corporation	Temperature:	21.9°C
Attendees:	Eric Kallevig, Jason Ortbirg, Pual Grosloschen, Drew Vonheyo	Relative Humidity:	19.8%
Customer Project:	None	Bar. Pressure:	998 mb
Tested By:	Cole Ghizzone, Chris Patterson	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	SECF0066-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2017	ANSI C63.10:2013

TEST PARAMETERS

Run #:	4	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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COMMENTS

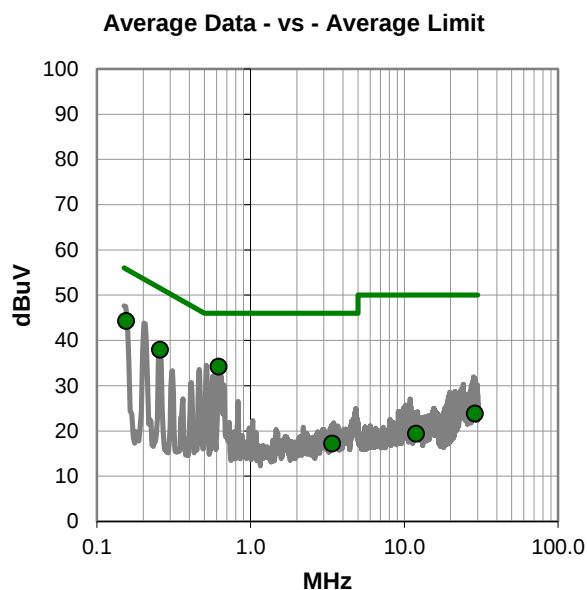
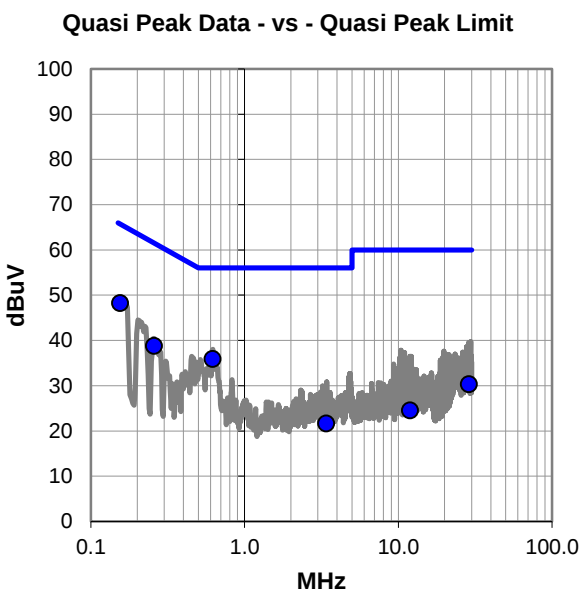
None

EUT OPERATING MODES

Transmitting modulated

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS



WTD 2016.12.19

RESULTS - Run #4

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.155	27.8	20.4	48.2	65.7	-17.5
0.619	15.8	20.1	35.9	56.0	-20.1
0.258	18.6	20.2	38.8	61.5	-22.7
28.788	7.9	22.4	30.3	60.0	-29.7
3.392	1.4	20.2	21.6	56.0	-34.4
11.909	3.7	20.8	24.5	60.0	-35.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.155	23.9	20.4	44.3	55.7	-11.4
0.619	14.1	20.1	34.2	46.0	-11.8
0.258	17.7	20.2	37.9	51.5	-13.6
28.788	1.4	22.4	23.8	50.0	-26.2
3.392	-3.0	20.2	17.2	46.0	-28.8
11.909	-1.4	20.8	19.4	50.0	-30.6

CONCLUSION

Pass

Tested By