

NORTHWEST EMC

Precor, Inc.

Precor Wi-Fi / Bluetooth Module Model 303346

FCC 15.207:2015

FCC 15.247:2015

BT FHSS

Report # PRCR0230.11



NVLAP Lab Code: 200629-0

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 may only be duplicated in its entirety

CERTIFICATE OF TEST

Last Date of Test: November 16, 2015
Precor, Inc.
Model: Precor Wi-Fi / Bluetooth Module Model 303346

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2015	ANSI C63.10:2013
FCC 15.247:2015	ANSI C63.10:2013

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	Yes	Pass	
6.5, 6.6, 11.12.1, 11.13.2	Spurious Radiated Emissions	Yes	Pass	
7.5	Duty Cycle	Yes	N/A	
7.8.2	Carrier Frequency Separation	Yes	Pass	
7.8.3	Number of Hopping Frequencies	Yes	Pass	
7.8.4	Dwell Time	Yes	Pass	
7.8.5	Output Power	Yes	Pass	
7.8.6	Band Edge Compliance	Yes	Pass	
7.8.6	Band Edge Compliance - Hopping Mode	Yes	Pass	
7.8.7	Occupied Bandwidth	Yes	Pass	
7.8.8	Spurious Conducted Emissions	Yes	Pass	

Deviations From Test Standards

None

Approved By:



Rod Munro, Operations Manager

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

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

European Union

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

Australia/New Zealand

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

Korea

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

Japan

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

Taiwan

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

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

Singapore

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

Israel

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

Hong Kong

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

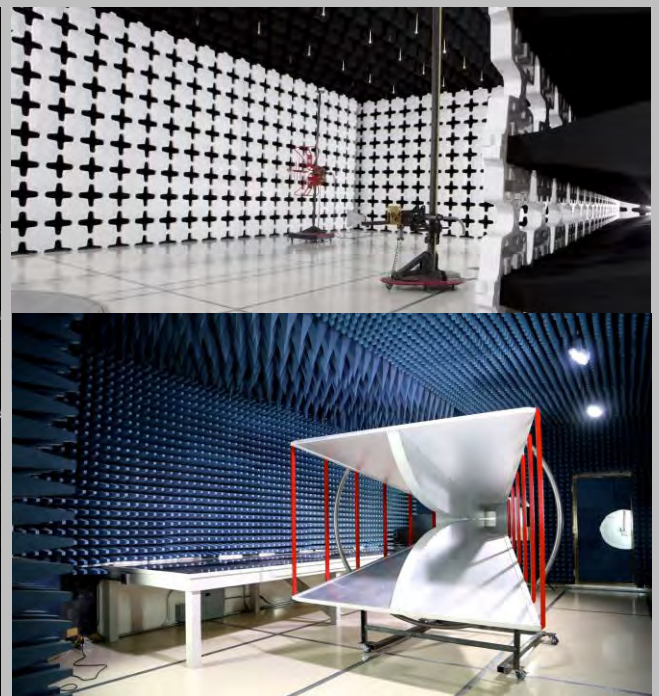
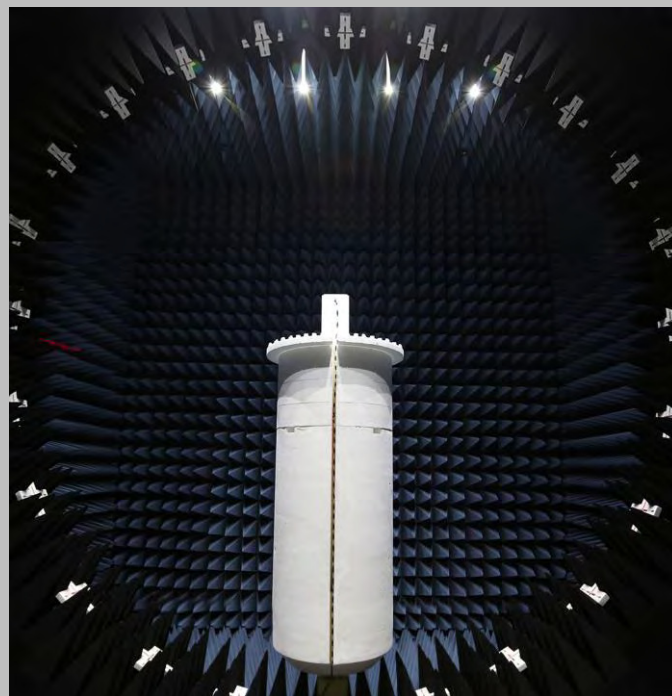
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

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)	5.0 dB	-5.0 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 9801 (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
Industry 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



PRODUCT DESCRIPTION

3Client and Equipment Under Test (EUT) Information

Company Name:	Precor, Inc.
Address:	PO Box 7202
City, State, Zip:	Woodinville, WA 98072-4002
Test Requested By:	James Minahan
Model:	Precor Wi-Fi / Bluetooth Module Model 303346
First Date of Test:	November 10, 2015
Last Date of Test:	November 16, 2015
Receipt Date of Samples:	September 14, 2015
Equipment Design Stage:	Preproduction
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

P82 Fitness Display Console with following radios: 802.11abgn / Bluetooth and 13.56 MHz NFC. In the 2.4 GHz band, the 802.11bgn radio supports 20 MHz and 40 MHz SISO, and 20 MHz MIMO for MCS12-MCS15 data rates only. In the 5 GHz bands, the 802.11an radio supports 20 MHz SISO only.

Testing Objective:

To demonstrate compliance of the Bluetooth radio to FCC 15.247 requirements.

Bluetooth FHSS: RF Power Table – FCC 15.247

Bluetooth FHSS, Antenna 2 Power Settings:

	2402 MHz	2440 MHz	2480 MHz
DH5	6	6	6
2DH5	7	7	7
3DH5	7	7	7

CONFIGURATIONS

Configuration PRCR0230- 10

Software/Firmware Running during test					
Description				Version	
Android System				Driver 8.6	

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Host Console	Precor, Inc.	P82	AXKRF22150081
Precor Wi-Fi / Bluetooth Module	Precor, Inc.	303346	None

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Power Adapter	Phihong	PSAC60N-120	DOE6 (Level 6 Sample)

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Remote Laptop PC	HP	EliteBook 8540w	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power	No	0.8m	No	AC Power Adapter	P82 Console
AC Power	No	1.8m	No	AC Mains	AC Power Adapter
USB Cable	Yes	3m	No	Remote Laptop PC	P82 Console

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	11/10/2015	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.
2	11/10/2015	Band Edge Compliance-Hopping Mode	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	11/10/2015	Carrier Frequency Separation	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	11/10/2015	Number of Hopping Frequencies	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	11/10/2015	Dwell Time	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	11/10/2015	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.
7	11/10/2015	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.
8	11/10/2015	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.
9	11/13/2015	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.
10	11/16/2015	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

POWERLINE CONDUCTED EMISSIONS

TEST DESCRIPTION

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

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
LISN	Solar Electronics	9252-50-R-24-BNC	LIM	11/3/2015	11/3/2016
Cable - Conducted Cable Assembly	Northwest EMC	NC4, HHF, RKD	NC4A	2/11/2015	2/11/2016
Receiver	Rohde & Schwarz	ESCI	ARE	8/5/2015	8/5/2016

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.4 dB	-2.4 dB

CONFIGURATIONS INVESTIGATED

PRCR0230-10

MODES INVESTIGATED

Transmitting BT EDR, DH5, Low Channel 1, 2402 MHz, Power Setting at 6.
Transmitting BT EDR, DH5, Mid Channel 39, 2440 MHz, Power Setting at 6.
Transmitting BT EDR, DH5, High Channel 79, 2480 MHz, Power Setting at 6.

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	11/16/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1020 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-10

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

TEST PARAMETERS

Run #:	53	Line:	High Line	Add. Ext. Attenuation (dB):	0
--------	----	-------	-----------	-----------------------------	---

COMMENTS

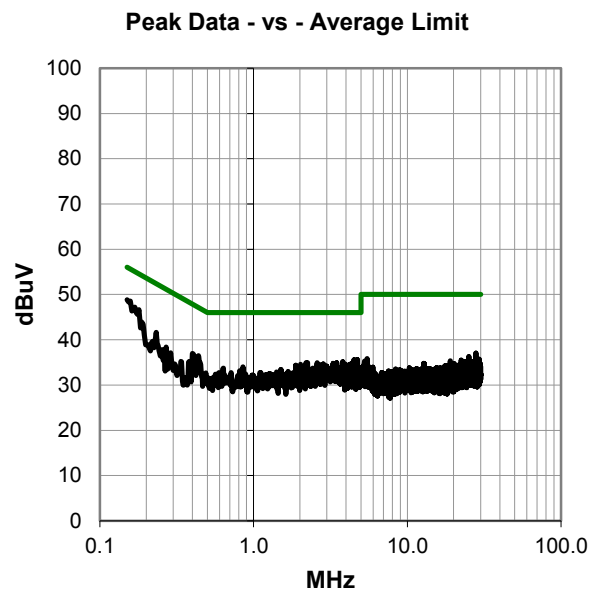
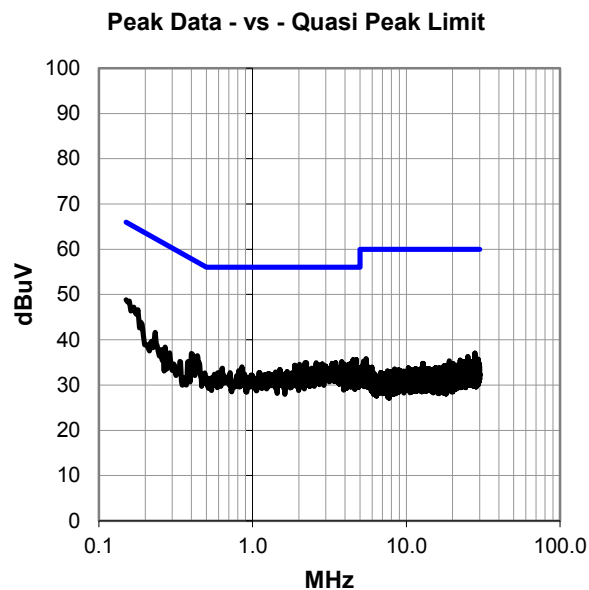
None

EUT OPERATING MODES

Transmitting BT EDR, DH5, Low Channel 1, 2402 MHz, Power Setting at 6.
--

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #653

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	28.3	20.6	48.9	66.0	-17.2
4.716	14.9	20.7	35.6	56.0	-20.4
4.496	14.9	20.7	35.6	56.0	-20.4
0.437	16.1	20.4	36.5	57.1	-20.6
0.232	21.2	20.4	41.6	62.4	-20.7
0.400	16.6	20.4	37.0	57.9	-20.9
3.810	14.5	20.6	35.1	56.0	-20.9
3.470	14.4	20.6	35.0	56.0	-21.0
2.590	14.4	20.5	34.9	56.0	-21.1
2.187	14.4	20.5	34.9	56.0	-21.1
2.239	14.4	20.5	34.9	56.0	-21.1
4.373	14.1	20.7	34.8	56.0	-21.2
3.291	14.2	20.6	34.8	56.0	-21.2
2.840	14.1	20.5	34.6	56.0	-21.4
2.023	14.1	20.5	34.6	56.0	-21.4
4.228	13.9	20.7	34.6	56.0	-21.4
3.948	13.9	20.6	34.5	56.0	-21.5
3.885	13.9	20.6	34.5	56.0	-21.5
2.694	13.9	20.5	34.4	56.0	-21.6
1.881	13.9	20.5	34.4	56.0	-21.6
4.265	13.6	20.7	34.3	56.0	-21.7
4.205	13.5	20.7	34.2	56.0	-21.8
2.993	13.6	20.5	34.1	56.0	-21.9
4.418	13.4	20.7	34.1	56.0	-21.9
0.851	13.6	20.4	34.0	56.0	-22.0
4.545	13.3	20.7	34.0	56.0	-22.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	28.3	20.6	48.9	56.0	-7.2
4.716	14.9	20.7	35.6	46.0	-10.4
4.496	14.9	20.7	35.6	46.0	-10.4
0.437	16.1	20.4	36.5	47.1	-10.6
0.232	21.2	20.4	41.6	52.4	-10.7
0.400	16.6	20.4	37.0	47.9	-10.9
3.810	14.5	20.6	35.1	46.0	-10.9
3.470	14.4	20.6	35.0	46.0	-11.0
2.590	14.4	20.5	34.9	46.0	-11.1
2.187	14.4	20.5	34.9	46.0	-11.1
2.239	14.4	20.5	34.9	46.0	-11.1
4.373	14.1	20.7	34.8	46.0	-11.2
3.291	14.2	20.6	34.8	46.0	-11.2
2.840	14.1	20.5	34.6	46.0	-11.4
2.023	14.1	20.5	34.6	46.0	-11.4
4.228	13.9	20.7	34.6	46.0	-11.4
3.948	13.9	20.6	34.5	46.0	-11.5
3.885	13.9	20.6	34.5	46.0	-11.5
2.694	13.9	20.5	34.4	46.0	-11.6
1.881	13.9	20.5	34.4	46.0	-11.6
4.265	13.6	20.7	34.3	46.0	-11.7
4.205	13.5	20.7	34.2	46.0	-11.8
2.993	13.6	20.5	34.1	46.0	-11.9
4.418	13.4	20.7	34.1	46.0	-11.9
0.851	13.6	20.4	34.0	46.0	-12.0
4.545	13.3	20.7	34.0	46.0	-12.0

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	11/16/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1020 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-10

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

TEST PARAMETERS

Run #:	54	Line:	Neutral	Add. Ext. Attenuation (dB):	0
--------	----	-------	---------	-----------------------------	---

COMMENTS

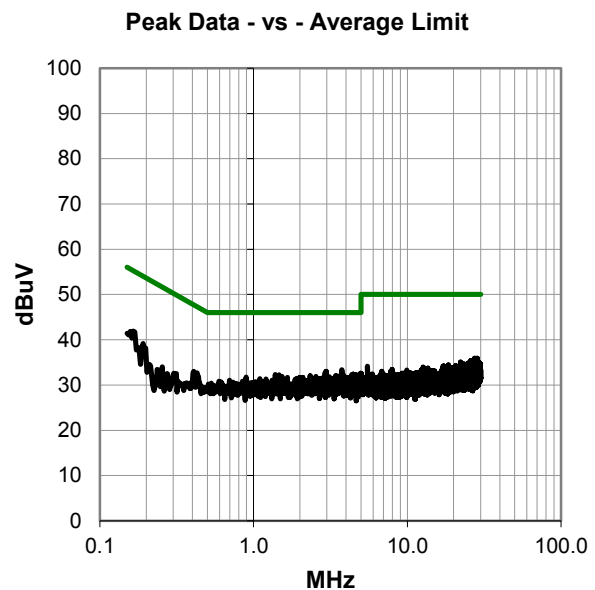
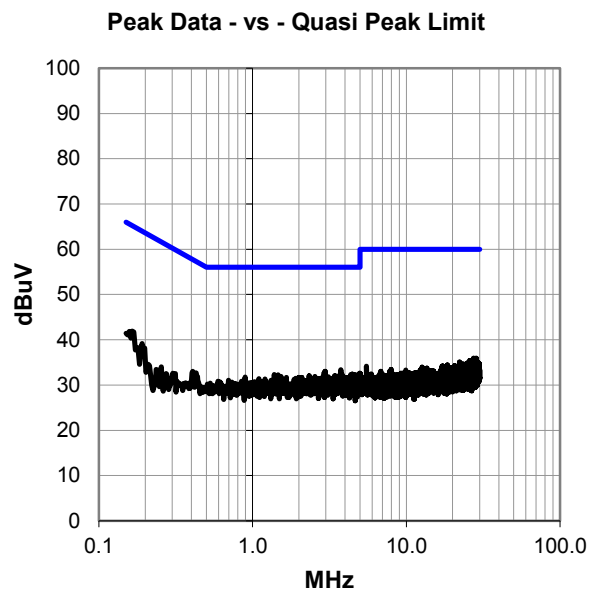
None

EUT OPERATING MODES

Transmitting BT EDR, DH5, Low Channel 1, 2402 MHz, Power Setting at 6.
--

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #654

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
3.758	12.8	20.6	33.4	56.0	-22.6
2.963	12.5	20.5	33.0	56.0	-23.0
2.922	12.2	20.5	32.7	56.0	-23.3
0.165	21.4	20.5	41.9	65.2	-23.3
4.970	11.9	20.7	32.6	56.0	-23.4
4.459	11.7	20.7	32.4	56.0	-23.6
4.425	11.7	20.7	32.4	56.0	-23.6
3.732	11.8	20.6	32.4	56.0	-23.6
1.385	11.9	20.4	32.3	56.0	-23.7
4.664	11.6	20.7	32.3	56.0	-23.7
4.358	11.6	20.7	32.3	56.0	-23.7
1.463	11.8	20.5	32.3	56.0	-23.7
3.825	11.6	20.6	32.2	56.0	-23.8
4.642	11.4	20.7	32.1	56.0	-23.9
4.500	11.4	20.7	32.1	56.0	-23.9
3.422	11.5	20.6	32.1	56.0	-23.9
2.333	11.5	20.5	32.0	56.0	-24.0
4.545	11.3	20.7	32.0	56.0	-24.0
3.691	11.4	20.6	32.0	56.0	-24.0
3.534	11.4	20.6	32.0	56.0	-24.0
2.538	11.4	20.5	31.9	56.0	-24.1
27.456	12.3	23.6	35.9	60.0	-24.1
28.552	12.1	23.8	35.9	60.0	-24.1
1.530	11.4	20.5	31.9	56.0	-24.1
3.116	11.3	20.6	31.9	56.0	-24.1
3.478	11.3	20.6	31.9	56.0	-24.1

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
3.758	12.8	20.6	33.4	46.0	-12.6
2.963	12.5	20.5	33.0	46.0	-13.0
2.922	12.2	20.5	32.7	46.0	-13.3
0.165	21.4	20.5	41.9	55.2	-13.3
4.970	11.9	20.7	32.6	46.0	-13.4
4.459	11.7	20.7	32.4	46.0	-13.6
4.425	11.7	20.7	32.4	46.0	-13.6
3.732	11.8	20.6	32.4	46.0	-13.6
1.385	11.9	20.4	32.3	46.0	-13.7
4.664	11.6	20.7	32.3	46.0	-13.7
4.358	11.6	20.7	32.3	46.0	-13.7
1.463	11.8	20.5	32.3	46.0	-13.7
3.825	11.6	20.6	32.2	46.0	-13.8
4.642	11.4	20.7	32.1	46.0	-13.9
4.500	11.4	20.7	32.1	46.0	-13.9
3.422	11.5	20.6	32.1	46.0	-13.9
2.333	11.5	20.5	32.0	46.0	-14.0
4.545	11.3	20.7	32.0	46.0	-14.0
3.691	11.4	20.6	32.0	46.0	-14.0
3.534	11.4	20.6	32.0	46.0	-14.0
2.538	11.4	20.5	31.9	46.0	-14.1
27.456	12.3	23.6	35.9	50.0	-14.1
28.552	12.1	23.8	35.9	50.0	-14.1
1.530	11.4	20.5	31.9	46.0	-14.1
3.116	11.3	20.6	31.9	46.0	-14.1
3.478	11.3	20.6	31.9	46.0	-14.1

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	11/16/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1020 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-10

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

TEST PARAMETERS

Run #:	55	Line:	High Line	Add. Ext. Attenuation (dB):	0
--------	----	-------	-----------	-----------------------------	---

COMMENTS

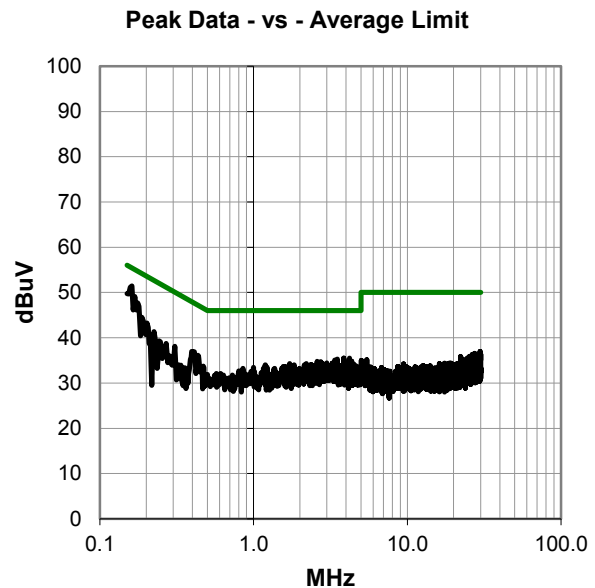
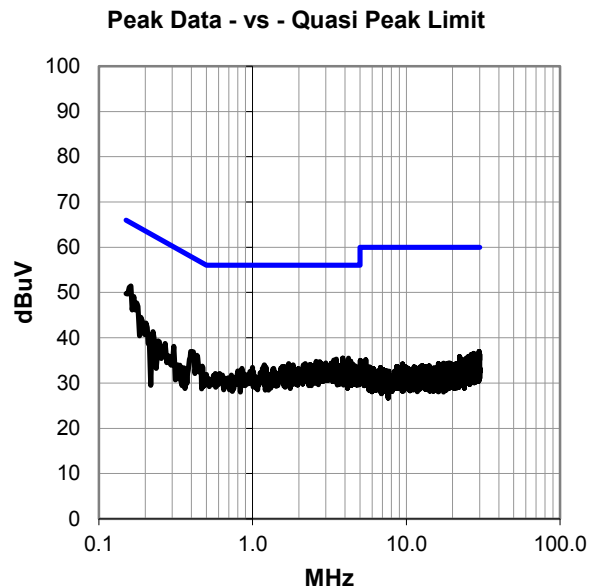
None

EUT OPERATING MODES

Transmitting BT EDR, DH5, Mid Channel 39, 2440 MHz, Power Setting at 6.

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #655

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	30.9	20.5	51.4	65.4	-14.0
0.187	24.0	20.5	44.5	64.2	-19.7
3.862	14.9	20.6	35.5	56.0	-20.5
4.202	14.8	20.7	35.5	56.0	-20.5
3.500	14.7	20.6	35.3	56.0	-20.7
0.396	16.6	20.4	37.0	57.9	-20.9
3.370	14.5	20.6	35.1	56.0	-20.9
0.434	15.7	20.4	36.1	57.2	-21.1
2.590	14.3	20.5	34.8	56.0	-21.2
4.347	14.1	20.7	34.8	56.0	-21.2
2.739	14.2	20.5	34.7	56.0	-21.3
0.225	20.9	20.5	41.4	62.6	-21.3
4.052	13.9	20.7	34.6	56.0	-21.4
3.000	13.9	20.5	34.4	56.0	-21.6
3.250	13.8	20.6	34.4	56.0	-21.6
3.403	13.8	20.6	34.4	56.0	-21.6
2.795	13.8	20.5	34.3	56.0	-21.7
2.198	13.8	20.5	34.3	56.0	-21.7
1.717	13.8	20.5	34.3	56.0	-21.7
2.366	13.6	20.5	34.1	56.0	-21.9
4.504	13.4	20.7	34.1	56.0	-21.9
4.224	13.4	20.7	34.1	56.0	-21.9
4.000	13.4	20.7	34.1	56.0	-21.9
0.307	17.7	20.4	38.1	60.1	-21.9
1.191	13.6	20.4	34.0	56.0	-22.0
2.139	13.5	20.5	34.0	56.0	-22.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.161	30.9	20.5	51.4	55.4	-4.0
0.187	24.0	20.5	44.5	54.2	-9.7
3.862	14.9	20.6	35.5	46.0	-10.5
4.202	14.8	20.7	35.5	46.0	-10.5
3.500	14.7	20.6	35.3	46.0	-10.7
0.396	16.6	20.4	37.0	47.9	-10.9
3.370	14.5	20.6	35.1	46.0	-10.9
0.434	15.7	20.4	36.1	47.2	-11.1
2.590	14.3	20.5	34.8	46.0	-11.2
4.347	14.1	20.7	34.8	46.0	-11.2
2.739	14.2	20.5	34.7	46.0	-11.3
0.225	20.9	20.5	41.4	52.6	-11.3
4.052	13.9	20.7	34.6	46.0	-11.4
3.000	13.9	20.5	34.4	46.0	-11.6
3.250	13.8	20.6	34.4	46.0	-11.6
3.403	13.8	20.6	34.4	46.0	-11.6
2.795	13.8	20.5	34.3	46.0	-11.7
2.198	13.8	20.5	34.3	46.0	-11.7
1.717	13.8	20.5	34.3	46.0	-11.7
2.366	13.6	20.5	34.1	46.0	-11.9
4.504	13.4	20.7	34.1	46.0	-11.9
4.224	13.4	20.7	34.1	46.0	-11.9
4.000	13.4	20.7	34.1	46.0	-11.9
0.307	17.7	20.4	38.1	50.1	-11.9
1.191	13.6	20.4	34.0	46.0	-12.0
2.139	13.5	20.5	34.0	46.0	-12.0

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	11/16/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1020 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-10

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

TEST PARAMETERS

Run #:	56	Line:	Neutral	Add. Ext. Attenuation (dB):	0
--------	----	-------	---------	-----------------------------	---

COMMENTS

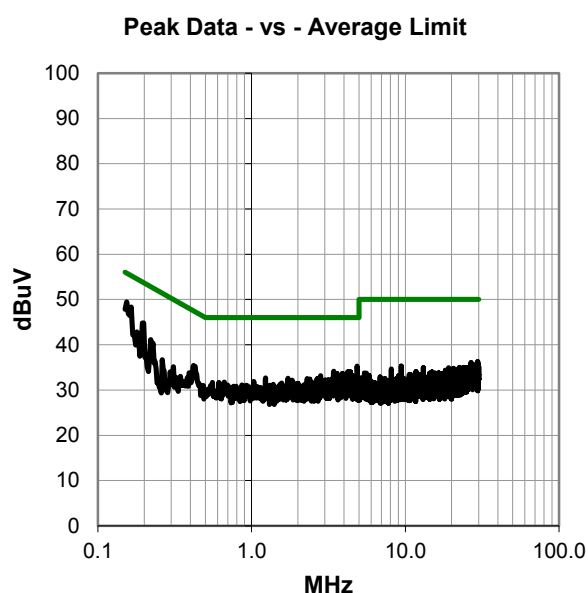
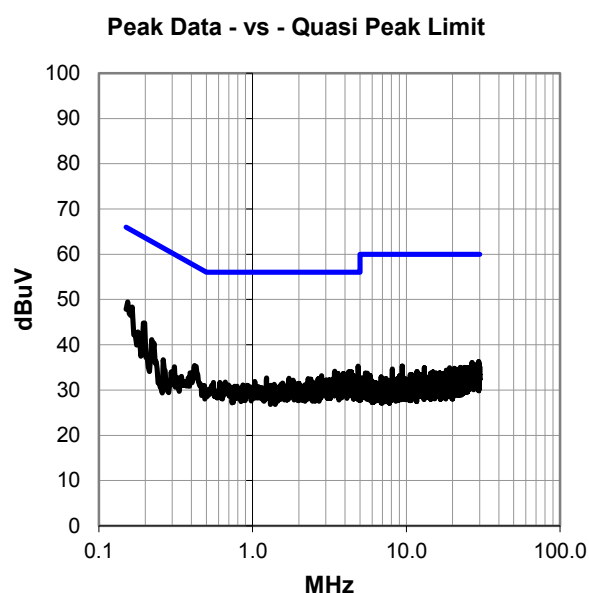
None

EUT OPERATING MODES

Transmitting BT EDR, DH5, Mid Channel 39, 2440 MHz, Power Setting at 6.

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #656

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.154	28.9	20.5	49.4	65.8	-16.4
0.195	24.3	20.5	44.8	63.8	-19.0
4.869	14.6	20.7	35.3	56.0	-20.7
0.221	20.7	20.5	41.2	62.8	-21.6
3.418	13.6	20.6	34.2	56.0	-21.8
4.396	13.3	20.7	34.0	56.0	-22.0
4.224	13.3	20.7	34.0	56.0	-22.0
0.419	15.0	20.4	35.4	57.5	-22.1
3.493	13.2	20.6	33.8	56.0	-22.2
3.594	13.1	20.6	33.7	56.0	-22.3
3.892	13.0	20.6	33.6	56.0	-22.4
4.455	12.7	20.7	33.4	56.0	-22.6
4.433	12.6	20.7	33.3	56.0	-22.7
4.194	12.6	20.7	33.3	56.0	-22.7
3.799	12.6	20.6	33.2	56.0	-22.8
3.944	12.5	20.6	33.1	56.0	-22.9
2.806	12.6	20.5	33.1	56.0	-22.9
4.649	12.3	20.7	33.0	56.0	-23.0
4.851	12.3	20.7	33.0	56.0	-23.0
4.306	12.3	20.7	33.0	56.0	-23.0
4.989	12.1	20.7	32.8	56.0	-23.2
4.683	12.0	20.7	32.7	56.0	-23.3
4.157	12.0	20.7	32.7	56.0	-23.3
4.060	12.0	20.7	32.7	56.0	-23.3
1.232	12.2	20.4	32.6	56.0	-23.4
4.608	11.9	20.7	32.6	56.0	-23.4

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.154	28.9	20.5	49.4	55.8	-6.4
0.195	24.3	20.5	44.8	53.8	-9.0
4.869	14.6	20.7	35.3	46.0	-10.7
0.221	20.7	20.5	41.2	52.8	-11.6
3.418	13.6	20.6	34.2	46.0	-11.8
4.396	13.3	20.7	34.0	46.0	-12.0
4.224	13.3	20.7	34.0	46.0	-12.0
0.419	15.0	20.4	35.4	47.5	-12.1
3.493	13.2	20.6	33.8	46.0	-12.2
3.594	13.1	20.6	33.7	46.0	-12.3
3.892	13.0	20.6	33.6	46.0	-12.4
4.455	12.7	20.7	33.4	46.0	-12.6
4.433	12.6	20.7	33.3	46.0	-12.7
4.194	12.6	20.7	33.3	46.0	-12.7
3.799	12.6	20.6	33.2	46.0	-12.8
3.944	12.5	20.6	33.1	46.0	-12.9
2.806	12.6	20.5	33.1	46.0	-12.9
4.649	12.3	20.7	33.0	46.0	-13.0
4.851	12.3	20.7	33.0	46.0	-13.0
4.306	12.3	20.7	33.0	46.0	-13.0
4.989	12.1	20.7	32.8	46.0	-13.2
4.683	12.0	20.7	32.7	46.0	-13.3
4.157	12.0	20.7	32.7	46.0	-13.3
4.060	12.0	20.7	32.7	46.0	-13.3
1.232	12.2	20.4	32.6	46.0	-13.4
4.608	11.9	20.7	32.6	46.0	-13.4

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	11/16/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1020 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-10

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

TEST PARAMETERS

Run #:	57	Line:	High Line	Add. Ext. Attenuation (dB):	0
--------	----	-------	-----------	-----------------------------	---

COMMENTS

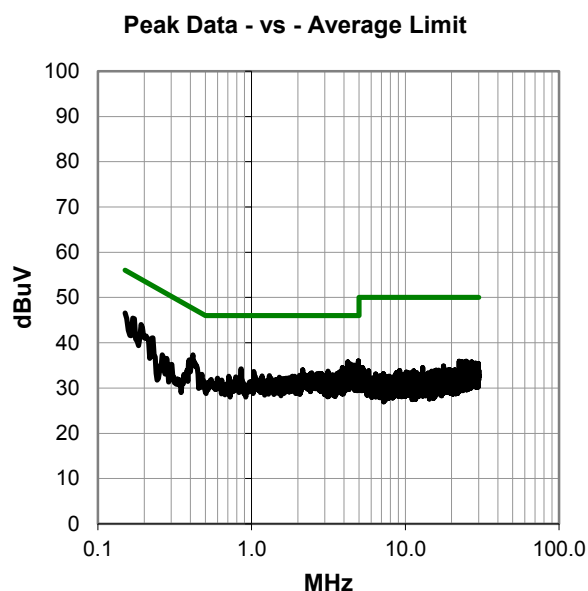
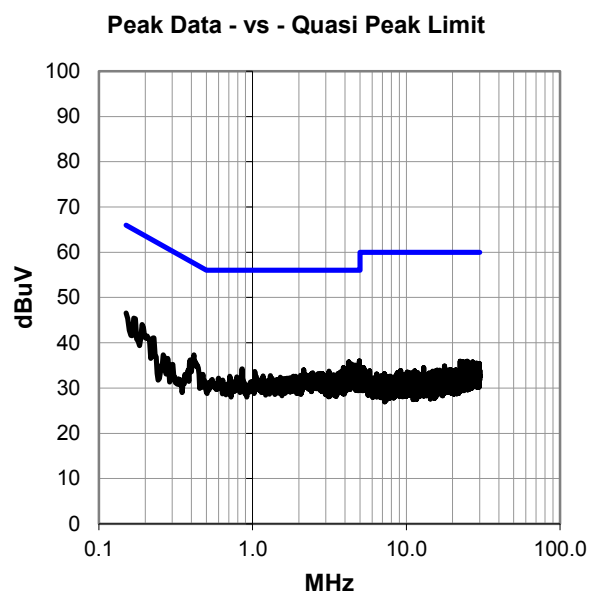
None

EUT OPERATING MODES

Transmitting BT EDR, DH5, High Channel 79, 2480 MHz, Power Setting at 6.

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #657

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	26.0	20.6	46.6	66.0	-19.5
0.169	24.9	20.5	45.4	65.0	-19.6
0.191	23.5	20.5	44.0	64.0	-20.0
4.955	15.3	20.7	36.0	56.0	-20.0
4.224	15.1	20.7	35.8	56.0	-20.2
0.415	16.9	20.4	37.3	57.5	-20.2
4.407	14.6	20.7	35.3	56.0	-20.7
4.642	14.4	20.7	35.1	56.0	-20.9
4.448	14.4	20.7	35.1	56.0	-20.9
3.892	13.9	20.6	34.5	56.0	-21.5
4.358	13.8	20.7	34.5	56.0	-21.5
4.254	13.8	20.7	34.5	56.0	-21.5
0.225	20.6	20.5	41.1	62.6	-21.6
4.105	13.7	20.7	34.4	56.0	-21.6
4.899	13.6	20.7	34.3	56.0	-21.7
4.172	13.6	20.7	34.3	56.0	-21.7
0.851	13.8	20.4	34.2	56.0	-21.8
2.150	13.5	20.5	34.0	56.0	-22.0
4.799	13.2	20.7	33.9	56.0	-22.1
4.280	13.1	20.7	33.8	56.0	-22.2
3.135	13.2	20.6	33.8	56.0	-22.2
1.034	13.2	20.4	33.6	56.0	-22.4
4.724	12.8	20.7	33.5	56.0	-22.5
4.571	12.8	20.7	33.5	56.0	-22.5
3.728	12.9	20.6	33.5	56.0	-22.5
2.463	12.9	20.5	33.4	56.0	-22.6

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.150	26.0	20.6	46.6	56.0	-9.5
0.169	24.9	20.5	45.4	55.0	-9.6
0.191	23.5	20.5	44.0	54.0	-10.0
4.955	15.3	20.7	36.0	46.0	-10.0
4.224	15.1	20.7	35.8	46.0	-10.2
0.415	16.9	20.4	37.3	47.5	-10.2
4.407	14.6	20.7	35.3	46.0	-10.7
4.642	14.4	20.7	35.1	46.0	-10.9
4.448	14.4	20.7	35.1	46.0	-10.9
3.892	13.9	20.6	34.5	46.0	-11.5
4.358	13.8	20.7	34.5	46.0	-11.5
4.254	13.8	20.7	34.5	46.0	-11.5
0.225	20.6	20.5	41.1	52.6	-11.6
4.105	13.7	20.7	34.4	46.0	-11.6
4.899	13.6	20.7	34.3	46.0	-11.7
4.172	13.6	20.7	34.3	46.0	-11.7
0.851	13.8	20.4	34.2	46.0	-11.8
2.150	13.5	20.5	34.0	46.0	-12.0
4.799	13.2	20.7	33.9	46.0	-12.1
4.280	13.1	20.7	33.8	46.0	-12.2
3.135	13.2	20.6	33.8	46.0	-12.2
1.034	13.2	20.4	33.6	46.0	-12.4
4.724	12.8	20.7	33.5	46.0	-12.5
4.571	12.8	20.7	33.5	46.0	-12.5
3.728	12.9	20.6	33.5	46.0	-12.5
2.463	12.9	20.5	33.4	46.0	-12.6

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	11/16/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	35%
Customer Project:	None	Bar. Pressure:	1020 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-10

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

TEST PARAMETERS

Run #:	58	Line:	Neutral	Add. Ext. Attenuation (dB):	0
--------	----	-------	---------	-----------------------------	---

COMMENTS

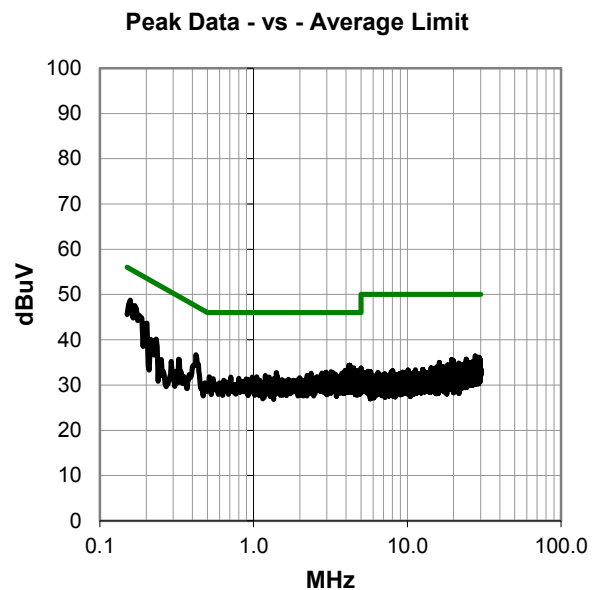
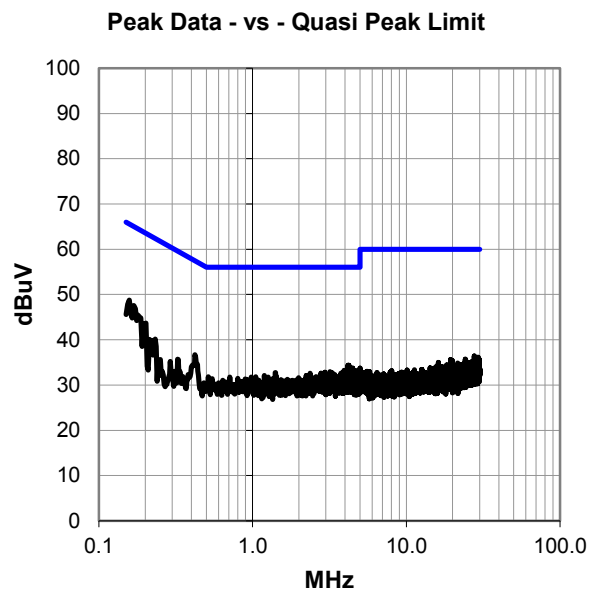
None

EUT OPERATING MODES

Transmitting BT EDR, DH5, High Channel 79, 2480 MHz, Power Setting at 6.

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #658

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	28.2	20.5	48.7	65.6	-16.9
0.202	23.2	20.5	43.7	63.5	-19.8
0.422	16.3	20.4	36.7	57.4	-20.7
4.205	13.7	20.7	34.4	56.0	-21.6
4.239	13.6	20.7	34.3	56.0	-21.7
4.149	13.5	20.7	34.2	56.0	-21.8
0.232	19.7	20.4	40.1	62.4	-22.2
4.481	13.0	20.7	33.7	56.0	-22.3
4.280	13.0	20.7	33.7	56.0	-22.3
4.407	12.7	20.7	33.4	56.0	-22.6
4.340	12.6	20.7	33.3	56.0	-22.7
3.948	12.6	20.6	33.2	56.0	-22.8
4.627	12.4	20.7	33.1	56.0	-22.9
4.765	12.4	20.7	33.1	56.0	-22.9
0.213	19.6	20.5	40.1	63.1	-23.0
3.191	12.4	20.6	33.0	56.0	-23.0
3.885	12.3	20.6	32.9	56.0	-23.1
4.522	12.2	20.7	32.9	56.0	-23.1
2.952	12.3	20.5	32.8	56.0	-23.2
1.407	12.3	20.4	32.7	56.0	-23.3
3.929	12.1	20.6	32.7	56.0	-23.3
3.299	12.1	20.6	32.7	56.0	-23.3
2.788	12.1	20.5	32.6	56.0	-23.4
2.362	12.1	20.5	32.6	56.0	-23.4
3.743	12.0	20.6	32.6	56.0	-23.4
3.243	11.9	20.6	32.5	56.0	-23.5

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	28.2	20.5	48.7	55.6	-6.9
0.202	23.2	20.5	43.7	53.5	-9.8
0.422	16.3	20.4	36.7	47.4	-10.7
4.205	13.7	20.7	34.4	46.0	-11.6
4.239	13.6	20.7	34.3	46.0	-11.7
4.149	13.5	20.7	34.2	46.0	-11.8
0.232	19.7	20.4	40.1	52.4	-12.2
4.481	13.0	20.7	33.7	46.0	-12.3
4.280	13.0	20.7	33.7	46.0	-12.3
4.407	12.7	20.7	33.4	46.0	-12.6
4.340	12.6	20.7	33.3	46.0	-12.7
3.948	12.6	20.6	33.2	46.0	-12.8
4.627	12.4	20.7	33.1	46.0	-12.9
4.765	12.4	20.7	33.1	46.0	-12.9
0.213	19.6	20.5	40.1	53.1	-13.0
3.191	12.4	20.6	33.0	46.0	-13.0
3.885	12.3	20.6	32.9	46.0	-13.1
4.522	12.2	20.7	32.9	46.0	-13.1
2.952	12.3	20.5	32.8	46.0	-13.2
1.407	12.3	20.4	32.7	46.0	-13.3
3.929	12.1	20.6	32.7	46.0	-13.3
3.299	12.1	20.6	32.7	46.0	-13.3
2.788	12.1	20.5	32.6	46.0	-13.4
2.362	12.1	20.5	32.6	46.0	-13.4
3.743	12.0	20.6	32.6	46.0	-13.4
3.243	11.9	20.6	32.5	46.0	-13.5

CONCLUSION

Pass



Tested By

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

Transmitting Bluetooth EDR, DH5, Power Setting = 6
Transmitting Bluetooth EDR, 2DH5, Power Setting = 7
Transmitting Bluetooth EDR, 3DH5, Power Setting = 7

CHANNELS TESTED

Low Channel 1, 2402 MHz
Mid Channel 39, 2440 MHz
High Channel 79, 2480 MHz

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

PRCR0230 - 10

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 26 GHz

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
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	6/23/2015	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HHI	10/30/2015	12 mo
Attenuator	Fairview Microwave	SA18E-20	AQV	9/28/2015	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	LFF	3/6/2015	12 mo
Cable	Northwest EMC	Bilog Cables	NC1	8/27/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	PAB	7/31/2015	12 mo
Antenna - Biconilog	Teseq	CBL 6141B	AYL	7/30/2015	24 mo
Cable	Northwest EMC	3115 Horn Cable	NC2	6/17/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVZ	7/31/2015	12 mo
Antenna - Double Ridge	EMCO	3115	AHM	6/3/2014	24 mo
Cable	Northwest EMC	Standard Gain Horn Cable	NC3	6/17/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOD	6/6/2015	12 mo
Antenna - Standard Gain	EMCO	3160-07	AHP	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOJ	9/21/2015	12 mo
Antenna - Standard Gain	EMCO	3160-08	AHO	NCR	0 mo
Cable	Northwest EMC	N/A	NC8	6/6/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	9/21/2015	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AIY	NCR	0 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

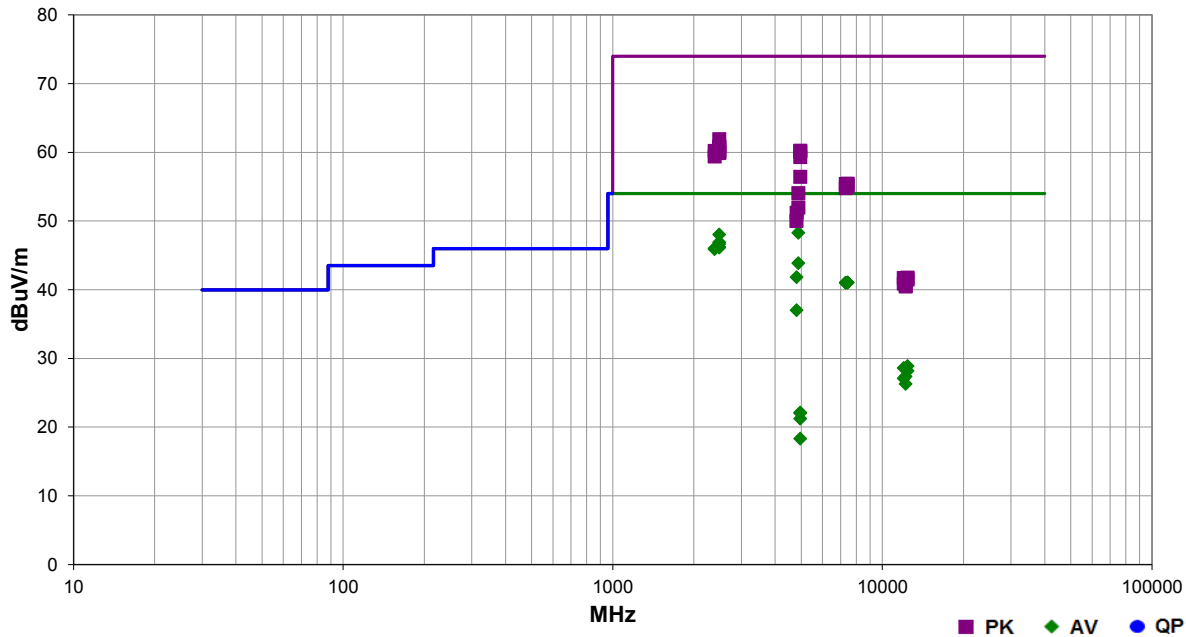
TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Work Order:	PRCR0230	Date:	11/13/15	
Project:	None	Temperature:	22 °C	
Job Site:	NC01	Humidity:	47% RH	
Serial Number:	None	Barometric Pres.:	1011 mbar	
EUT: Precor Wi-Fi / Bluetooth Module Model 303346				Tested by: Richard Mellroth
Configuration:	10			
Customer:	Precor, Inc.			
Attendees:	Rich Whitbeck			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting BT EDR. See comments next to data points for EUT channel, data rate, and power settings.			
Deviations:	None			
Comments:	EUT configurable in only one physical orientation.			

Test Specifications	Test Method
FCC 15.247:2015	ANSI C63.10:2013

Run #	190-192	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
-------	---------	-------------------	---	-------------------	-----------	---------	------



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Duty Cycle Correction (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4880.010	38.0	10.3	1.9	254.0	3.0	0.0	Horz	AV	0.0	48.3	54.0	-5.7	Mid Ch 39, DH5, Pwr=6
2483.500	28.8	-0.8	4.0	176.0	3.0	20.0	Horz	AV	0.0	48.0	54.0	-6.0	High Ch 79, 3DH5, Pwr=7
2483.500	27.7	-0.8	1.5	351.0	3.0	20.0	Horz	AV	0.0	46.9	54.0	-7.1	High Ch 79, 2DH5, Pwr=7
2483.507	27.4	-0.8	1.5	167.0	3.0	20.0	Horz	AV	0.0	46.6	54.0	-7.4	High Ch 79, DH5, Pwr=6
2483.717	27.0	-0.8	1.5	297.0	3.0	20.0	Vert	AV	0.0	46.2	54.0	-7.8	High Ch 79, 2DH5, Pwr=7
2483.500	27.0	-0.8	1.5	127.0	3.0	20.0	Vert	AV	0.0	46.2	54.0	-7.8	High Ch 79, 3DH5, Pwr=7
2483.520	26.9	-0.8	1.5	308.0	3.0	20.0	Vert	AV	0.0	46.1	54.0	-7.9	High Ch 79, DH5, Pwr=6
2388.710	27.0	-1.0	4.0	127.0	3.0	20.0	Horz	AV	0.0	46.0	54.0	-8.0	Low Ch 1, 3DH5, Pwr=7
2388.033	26.9	-1.0	1.5	215.0	3.0	20.0	Vert	AV	0.0	45.9	54.0	-8.1	Low Ch 1, 3DH5, Pwr=7
4880.025	33.6	10.3	1.5	254.0	3.0	0.0	Vert	AV	0.0	43.9	54.0	-10.1	Mid Ch 39, DH5, Pwr=6
2483.560	42.7	-0.8	4.0	176.0	3.0	20.0	Horz	PK	0.0	61.9	74.0	-12.1	High Ch 79, 3DH5, Pwr=7
4804.055	32.0	9.8	1.7	256.0	3.0	0.0	Horz	AV	0.0	41.8	54.0	-12.2	Low Ch 1, DH5, Pwr=6
7439.890	24.7	16.3	1.5	206.0	3.0	0.0	Vert	AV	0.0	41.0	54.0	-13.0	High Ch 79, DH5, Pwr=6
7440.130	24.7	16.3	3.3	119.0	3.0	0.0	Horz	AV	0.0	41.0	54.0	-13.0	High Ch 79, DH5, Pwr=6
7320.310	25.4	15.6	1.5	248.0	3.0	0.0	Vert	AV	0.0	41.0	54.0	-13.0	Mid Ch 39, DH5, Pwr=6
7320.135	25.4	15.6	1.5	129.0	3.0	0.0	Horz	AV	0.0	41.0	54.0	-13.0	Mid Ch 39, DH5, Pwr=6
2483.780	41.6	-0.8	1.5	167.0	3.0	20.0	Horz	PK	0.0	60.8	74.0	-13.2	High Ch 79, DH5, Pwr=6
2483.717	41.6	-0.8	1.5	351.0	3.0	20.0	Horz	PK	0.0	60.8	74.0	-13.2	High Ch 79, 2DH5, Pwr=7
4960.125	49.9	10.3	2.7	133.0	3.0	0.0	Horz	PK	0.0	60.2	74.0	-13.8	High Ch 79, 3DH5, Pwr=7
2388.560	41.2	-1.0	4.0	127.0	3.0	20.0	Horz	PK	0.0	60.2	74.0	-13.8	Low Ch 1, 3DH5, Pwr=7
4959.740	49.8	10.3	1.9	256.0	3.0	0.0	Horz	PK	0.0	60.1	74.0	-13.9	High Ch 79, 2DH5, Pwr=7
2484.080	40.9	-0.8	1.5	297.0	3.0	20.0	Vert	PK	0.0	60.1	74.0	-13.9	High Ch 79, 2DH5, Pwr=7

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Duty Cycle Correction (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2484.113	40.8	-0.8	1.5	308.0	3.0	20.0	Vert	PK	0.0	60.0	74.0	-14.0	High Ch 79, DH5, Pwr=6
2483.677	40.7	-0.8	1.5	127.0	3.0	20.0	Vert	PK	0.0	59.9	74.0	-14.1	High Ch 79, 3DH5, Pwr=7
2388.447	40.4	-1.0	1.5	215.0	3.0	20.0	Vert	PK	0.0	59.4	74.0	-14.6	Low Ch 1, 3DH5, Pwr=7
4959.610	49.0	10.3	1.9	256.0	3.0	0.0	Horz	PK	0.0	59.3	74.0	-14.7	High Ch 79, DH5, Pwr=6
4804.005	27.2	9.8	1.7	197.0	3.0	0.0	Vert	AV	0.0	37.0	54.0	-17.0	Low Ch 1, DH5, Pwr=6
4960.470	46.1	10.3	2.4	35.0	3.0	0.0	Vert	PK	0.0	56.4	74.0	-17.6	High Ch 79, DH5, Pwr=6
7438.840	39.1	16.3	3.3	119.0	3.0	0.0	Horz	PK	0.0	55.4	74.0	-18.6	High Ch 79, DH5, Pwr=6
7319.620	39.8	15.6	1.5	248.0	3.0	0.0	Vert	PK	0.0	55.4	74.0	-18.6	Mid Ch 39, DH5, Pwr=6
7440.890	38.8	16.3	1.5	206.0	3.0	0.0	Vert	PK	0.0	55.1	74.0	-18.9	High Ch 79, DH5, Pwr=6
7318.950	39.2	15.6	1.5	129.0	3.0	0.0	Horz	PK	0.0	54.8	74.0	-19.2	Mid Ch 39, DH5, Pwr=6
4879.455	43.8	10.3	1.9	254.0	3.0	0.0	Horz	PK	0.0	54.1	74.0	-19.9	Mid Ch 39, DH5, Pwr=6
4879.830	41.7	10.3	1.5	254.0	3.0	0.0	Vert	PK	0.0	52.0	74.0	-22.0	Mid Ch 39, DH5, Pwr=6
4804.340	41.4	9.8	1.7	256.0	3.0	0.0	Horz	PK	0.0	51.2	74.0	-22.8	Low Ch 1, DH5, Pwr=6
4803.180	40.2	9.8	1.7	197.0	3.0	0.0	Vert	PK	0.0	50.0	74.0	-24.0	Low Ch 1, DH5, Pwr=6
12399.670	31.2	-2.3	1.5	214.0	3.0	0.0	Horz	AV	0.0	28.9	54.0	-25.1	High Ch 79, DH5, Pwr=6
12010.470	31.6	-3.0	2.3	194.0	3.0	0.0	Horz	AV	0.0	28.6	54.0	-25.4	Low Ch 1, DH5, Pwr=6
12399.550	30.5	-2.3	1.5	137.0	3.0	0.0	Vert	AV	0.0	28.2	54.0	-25.8	High Ch 79, DH5, Pwr=6
12199.570	29.9	-2.5	1.5	254.0	3.0	0.0	Horz	AV	0.0	27.4	54.0	-26.6	Mid Ch 39, DH5, Pwr=6
12010.520	30.1	-3.0	3.8	194.0	3.0	0.0	Vert	AV	0.0	27.1	54.0	-26.9	Low Ch 1, DH5, Pwr=6
12199.150	28.8	-2.5	1.5	305.0	3.0	0.0	Vert	AV	0.0	26.3	54.0	-27.7	Mid Ch 39, DH5, Pwr=6
4960.015	49.9	10.3	2.7	133.0	3.0	0.0	Horz	AV	-38.1	22.1	54.0	-31.9	High Ch 79, 3DH5, Pwr=7
4960.035	49.8	10.3	1.9	256.0	3.0	0.0	Horz	AV	-38.1	22.0	54.0	-32.0	High Ch 79, 2DH5, Pwr=7
12398.940	44.1	-2.3	1.5	214.0	3.0	0.0	Horz	PK	0.0	41.8	74.0	-32.2	High Ch 79, DH5, Pwr=6
12010.220	44.7	-3.0	2.3	194.0	3.0	0.0	Horz	PK	0.0	41.7	74.0	-32.3	Low Ch 1, DH5, Pwr=6
12399.580	43.8	-2.3	1.5	137.0	3.0	0.0	Vert	PK	0.0	41.5	74.0	-32.5	High Ch 79, DH5, Pwr=6
4960.040	49.0	10.3	1.9	256.0	3.0	0.0	Horz	AV	-38.1	21.2	54.0	-32.8	High Ch 79, DH5, Pwr=6
12009.480	43.9	-3.0	3.8	194.0	3.0	0.0	Vert	PK	0.0	40.9	74.0	-33.1	Low Ch 1, DH5, Pwr=6
12200.440	43.2	-2.5	1.5	254.0	3.0	0.0	Horz	PK	0.0	40.7	74.0	-33.3	Mid Ch 39, DH5, Pwr=6
12199.650	43.0	-2.5	1.5	305.0	3.0	0.0	Vert	PK	0.0	40.5	74.0	-33.5	Mid Ch 39, DH5, Pwr=6
4960.025	46.1	10.3	2.4	35.0	3.0	0.0	Vert	AV	-38.1	18.3	54.0	-35.7	High 79 Ch, DH5, Pwr=6

DUTY CYCLE

TEST DESCRIPTION

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. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used

The test software provided for operation in a fixed, single channel mode allows the EUT to operate continuously at 100% Duty Cycle.

CARRIER FREQUENCY SEPARATION

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 (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

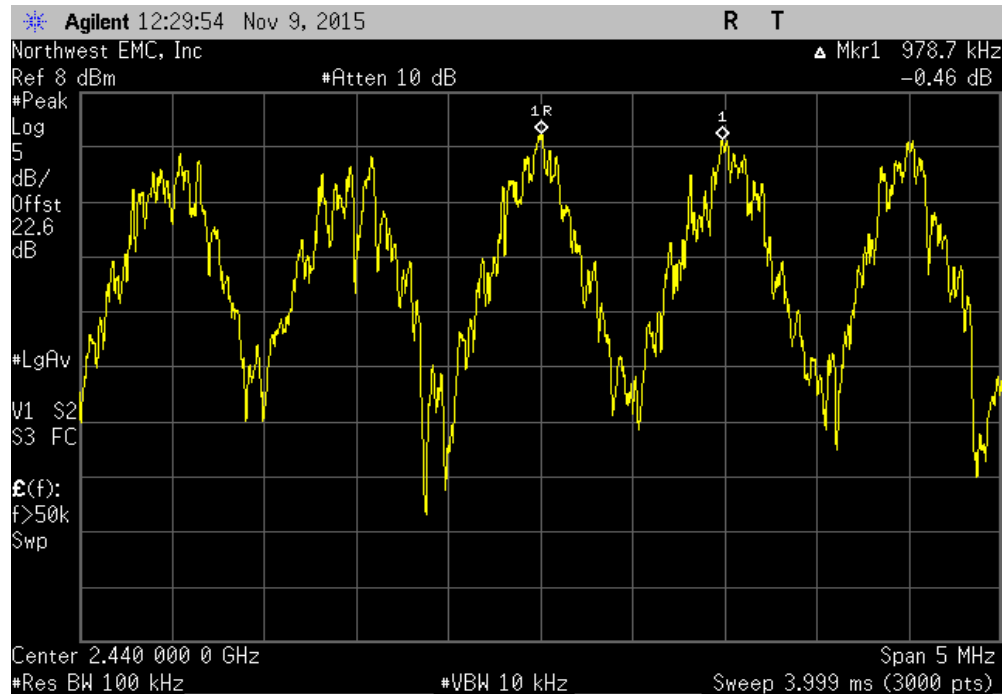
The channel carrier frequencies in the 2400-2483.5MHz band must be separated by 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Or, if the output power is less than 125 mW, the channel separation can be 25 kHz or 2/3 of the 20dB bandwidth. The EUT was operated in pseudorandom hopping mode. The spectrum was scanned across two adjacent peaks. The separation between the peaks of these channels was measured.

CARRIER FREQUENCY SEPARATION

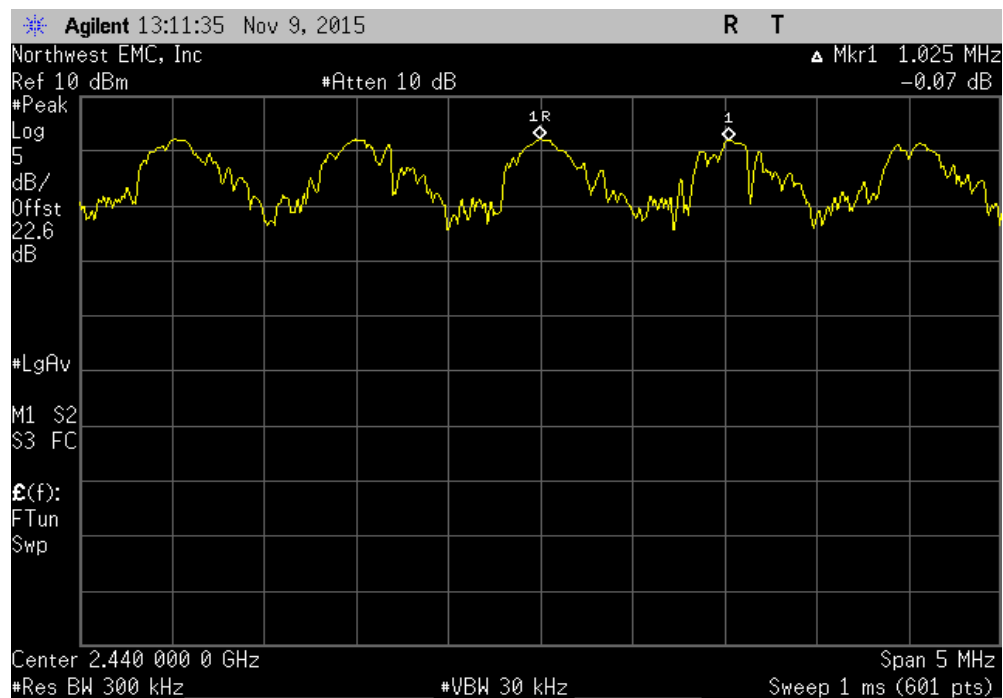
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth	Power: 110VAC/60Hz	Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Value	Limit (±) Results
Hopping Mode, Ant 2			
DH5			
Mid Channel 39, 2440 MHz		1.0 MHz	1 MHz Pass
2DH5			
Mid Channel 39, 2440 MHz		1.0 MHz	1 MHz Pass
3DH5			
Mid Channel 39, 2440 MHz		1.0 MHz	1 MHz Pass

CARRIER FREQUENCY SEPARATION

Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (≥)	Results
				1.0 MHz	1 MHz	Pass

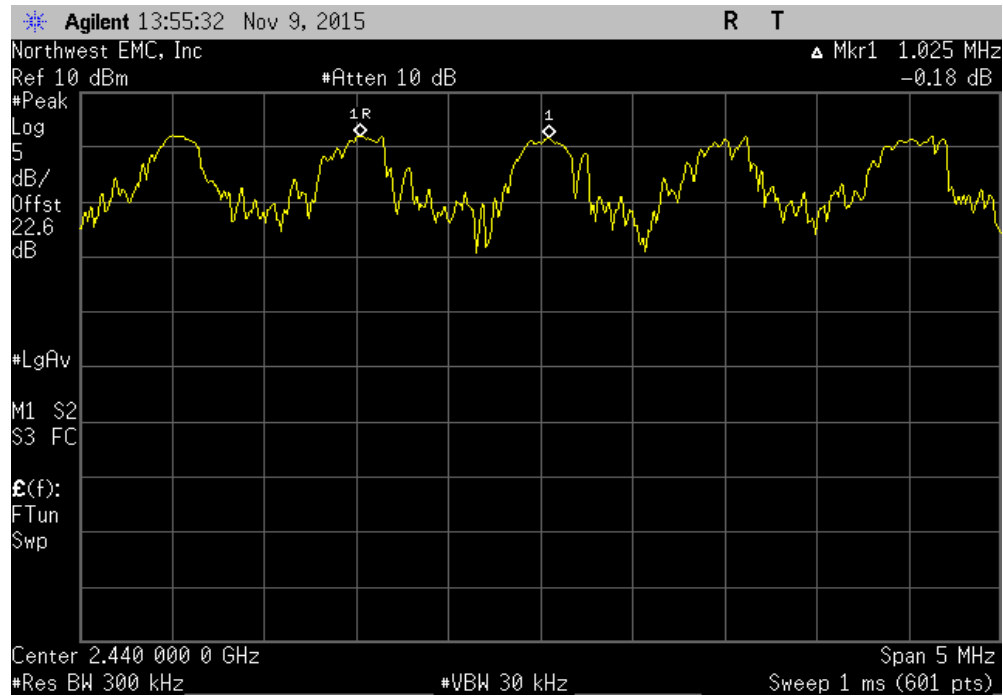


Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (≥)	Results
				1.0 MHz	1 MHz	Pass



CARRIER FREQUENCY SEPARATION

Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (≥)	Results
				1.0 MHz	1 MHz	Pass



NUMBER OF HOPPING FREQUENCIES

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 (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

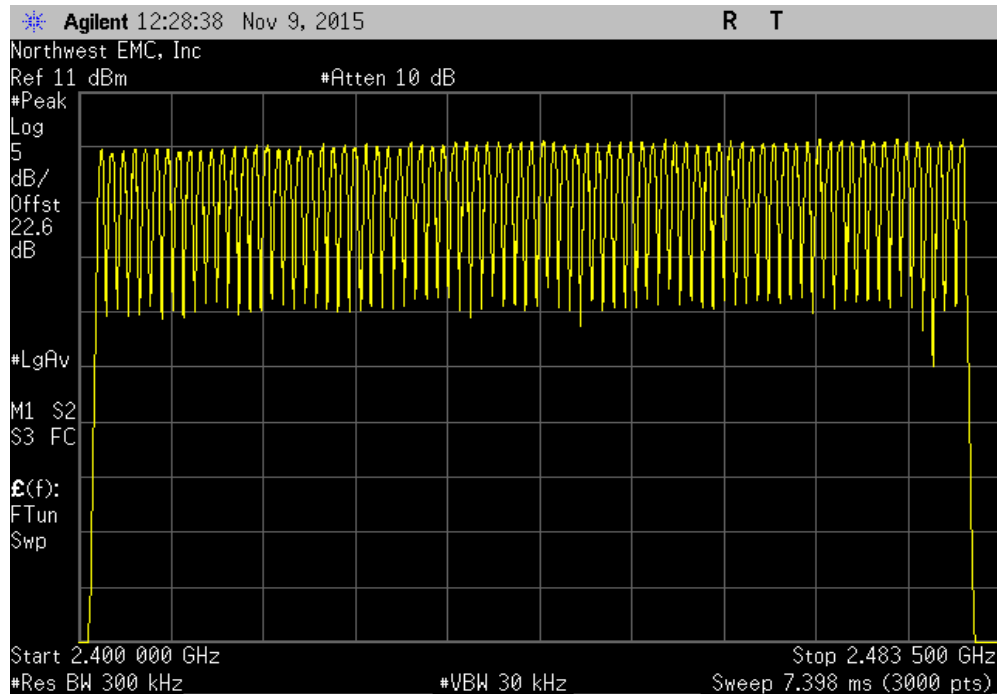
The number of hopping frequencies was measured across the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled.

NUMBER OF HOPPING FREQUENCIES

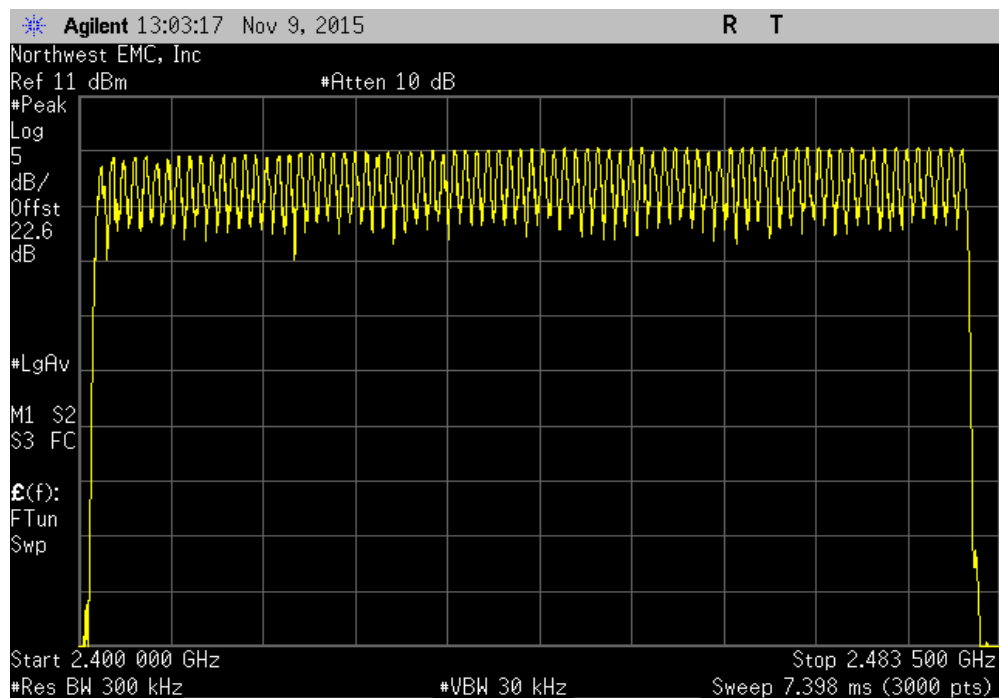
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth	Power: 110VAC/60Hz	Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Number of Channels	Limit
Hopping Mode, Ant 2			Results
DH5			
Mid Channel 39, 2440 MHz		79	15 Pass
2DH5			
Mid Channel 39, 2440 MHz		79	15 Pass
3DH5			
Mid Channel 39, 2440 MHz		79	15 Pass

NUMBER OF HOPPING FREQUENCIES

Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
				Number of Channels	Limit	Results
				79	15	Pass

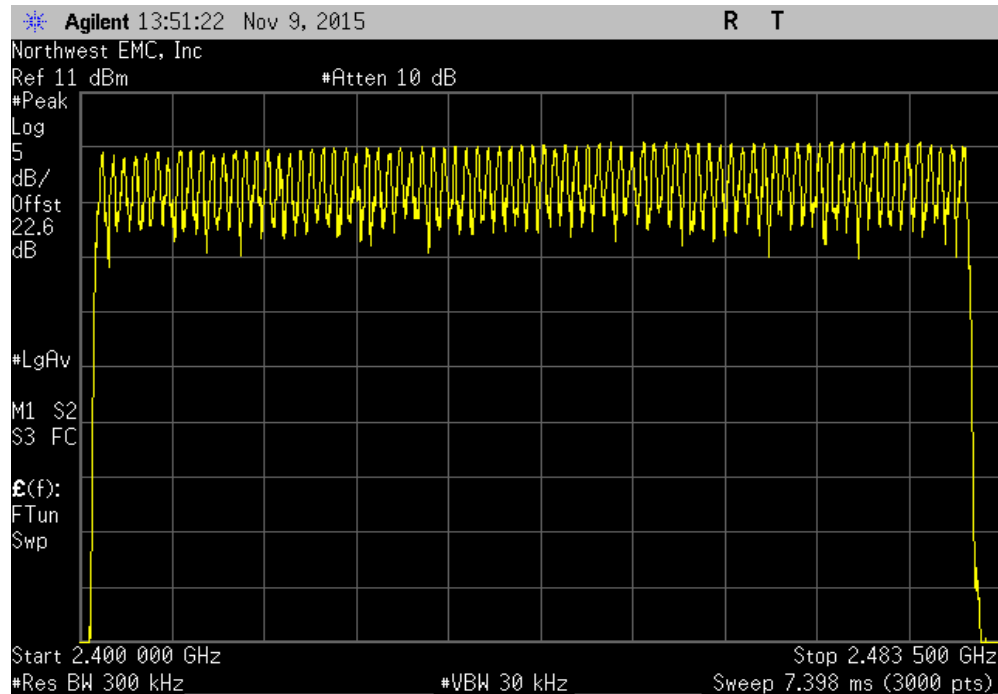


Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
				Number of Channels	Limit	Results
				79	15	Pass



NUMBER OF HOPPING FREQUENCIES

Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
				Number of Channels	Limit	Results
				79	15	Pass



DWELL TIME

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 (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled.

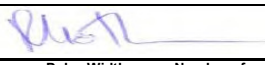
The dwell time limit is based on the Number of Hopping Channels * 400 mS. For Bluetooth this would be 79 Channels * 400mS = 31.6 Sec.

On Time During 31.6 Sec = Pulse Width * Average Number of Pulses * Scale Factor

➤ Average Number of Pulses is based on 4 samples.

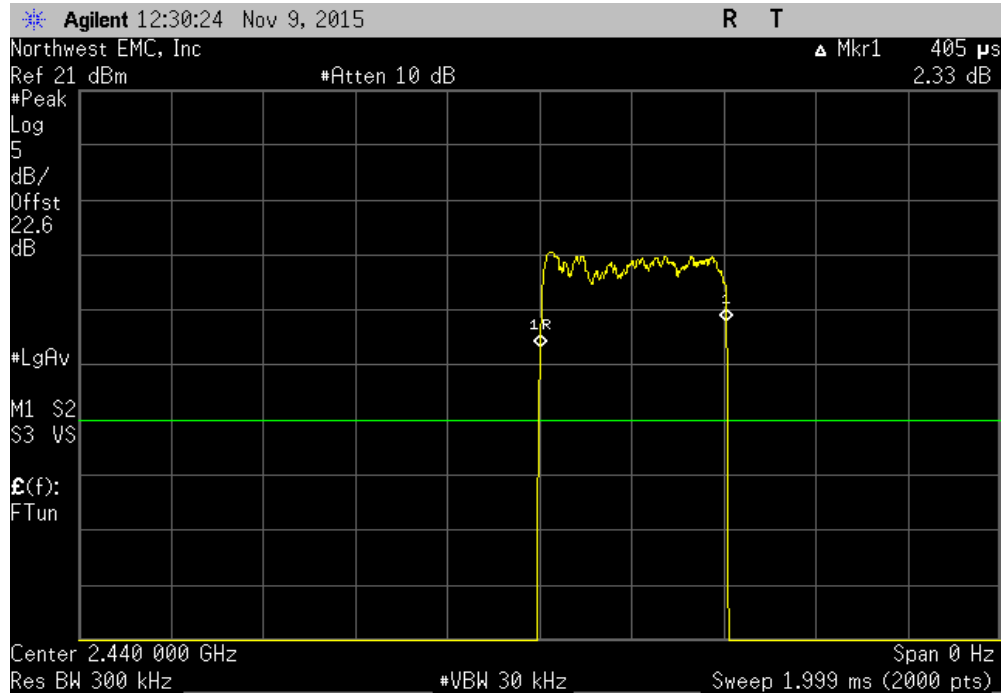
➤ Scale Factor = 31.6 Sec / Screen Capture Sweep Time = 31.6 Sec / 6.32 Sec = 5

DWELL TIME

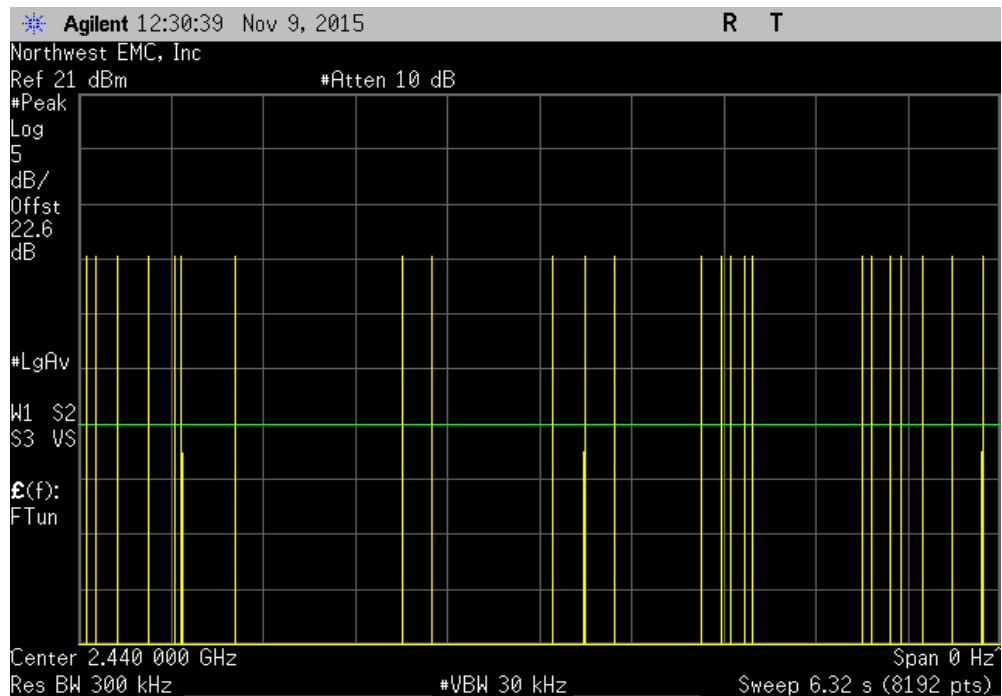
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth		Power: 110VAC/60Hz	
		Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Pulse Width (ms)	Number of Pulses
		Average No. of Pulses	Scale Factor
		On Time (ms) During 31.6 s	Limit (ms)
			Results
Hopping Mode, Ant 2			
DH5			
	Mid Channel 39, 2440 MHz	0.405	N/A
	Mid Channel 39, 2440 MHz	N/A	24
	Mid Channel 39, 2440 MHz	N/A	24
	Mid Channel 39, 2440 MHz	N/A	22
	Mid Channel 39, 2440 MHz	N/A	24
	Mid Channel 39, 2440 MHz	0.405	N/A
2DH5			
	Mid Channel 39, 2440 MHz	0.295	N/A
	Mid Channel 39, 2440 MHz	N/A	22
	Mid Channel 39, 2440 MHz	N/A	21
	Mid Channel 39, 2440 MHz	N/A	20
	Mid Channel 39, 2440 MHz	N/A	19
	Mid Channel 39, 2440 MHz	0.295	N/A
3DH5			
	Mid Channel 39, 2440 MHz	0.255	N/A
	Mid Channel 39, 2440 MHz	N/A	3
	Mid Channel 39, 2440 MHz	N/A	3
	Mid Channel 39, 2440 MHz	N/A	2
	Mid Channel 39, 2440 MHz	N/A	2
	Mid Channel 39, 2440 MHz	0.255	N/A

DWELL TIME

Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
0.405	N/A	N/A	N/A	N/A	N/A	N/A

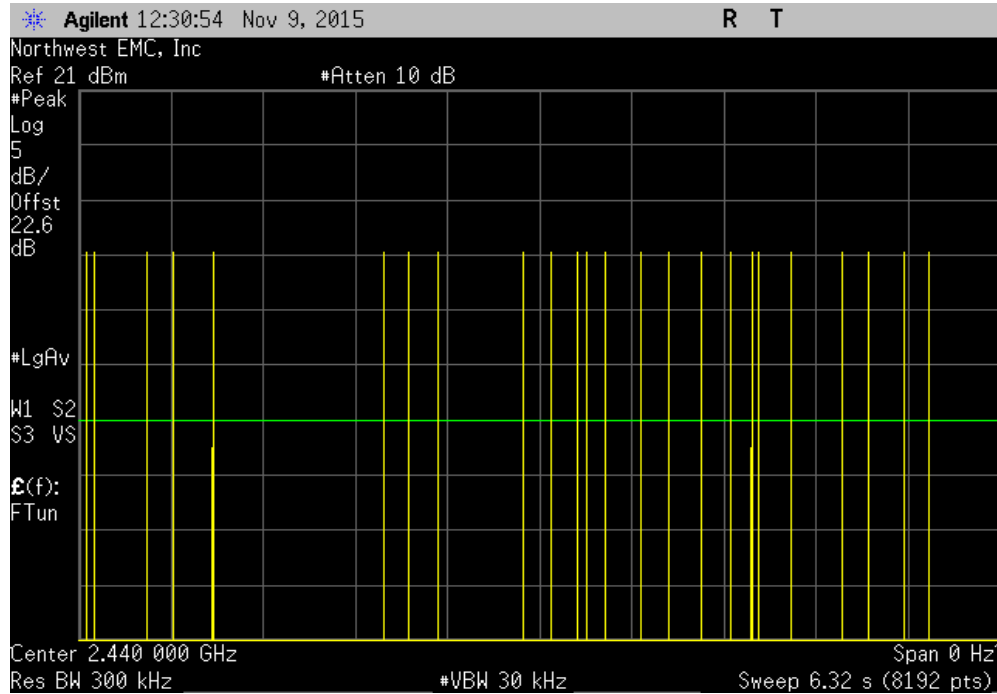


Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	24	N/A	N/A	N/A	N/A	N/A

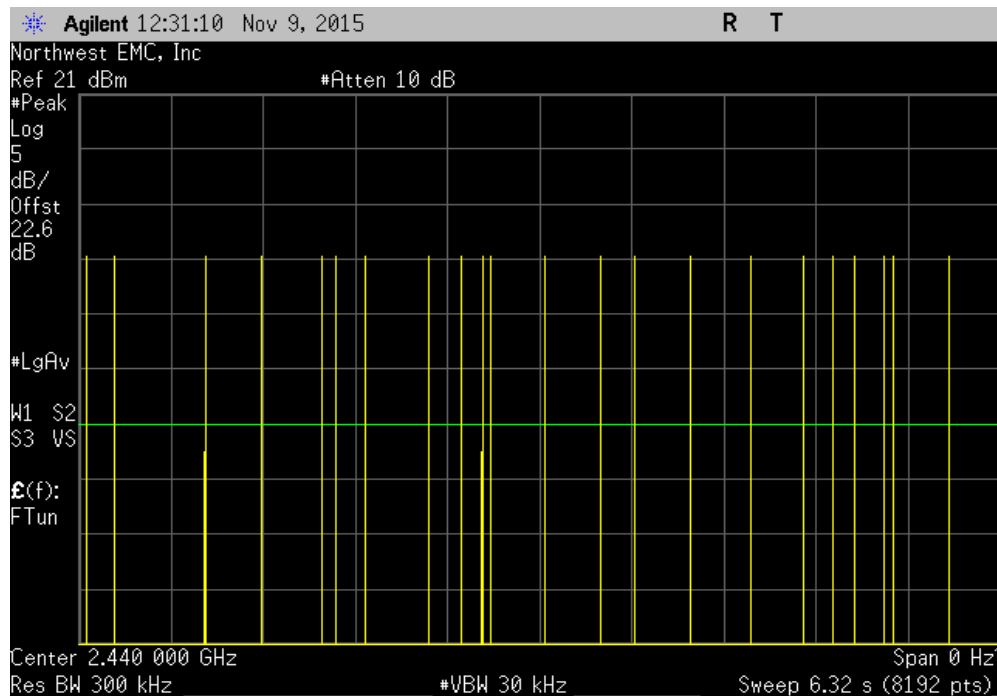


DWELL TIME

Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	24	N/A	N/A	N/A	N/A	N/A

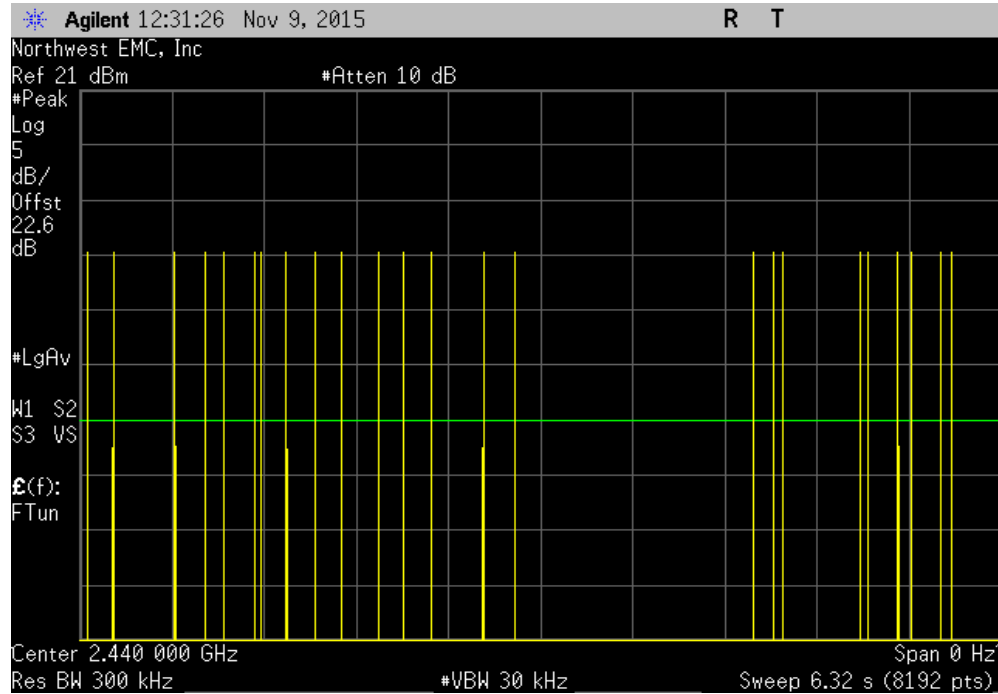


Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	22	N/A	N/A	N/A	N/A	N/A



DWELL TIME

Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	24	N/A	N/A	N/A	N/A	N/A



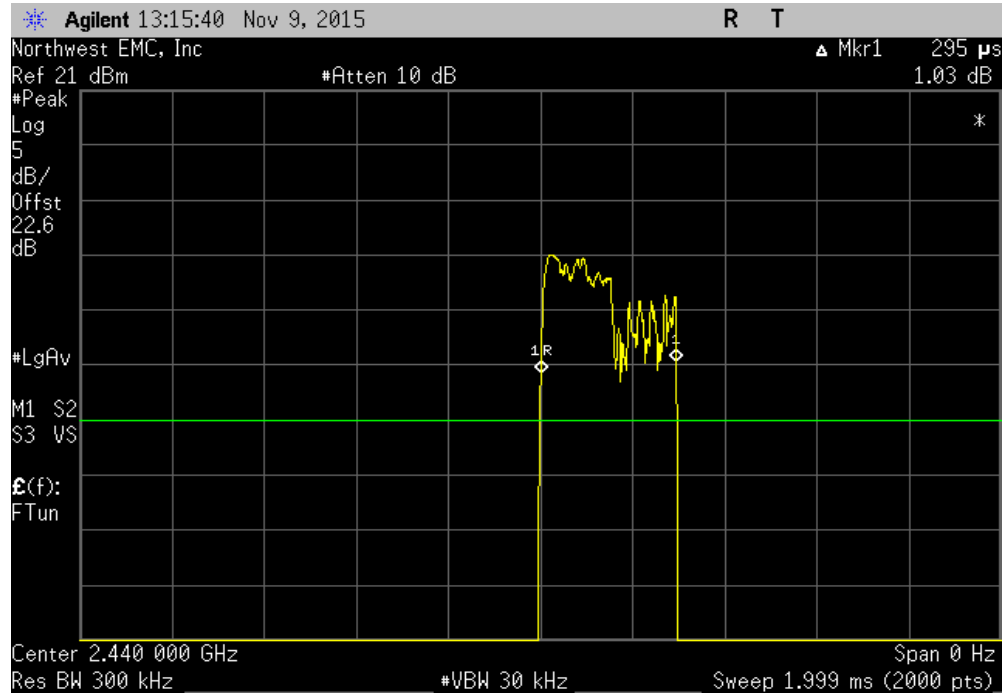
Hopping Mode, Ant 2, DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
0.405	N/A	23.5	5	47.59	400	Pass

Calculation Only

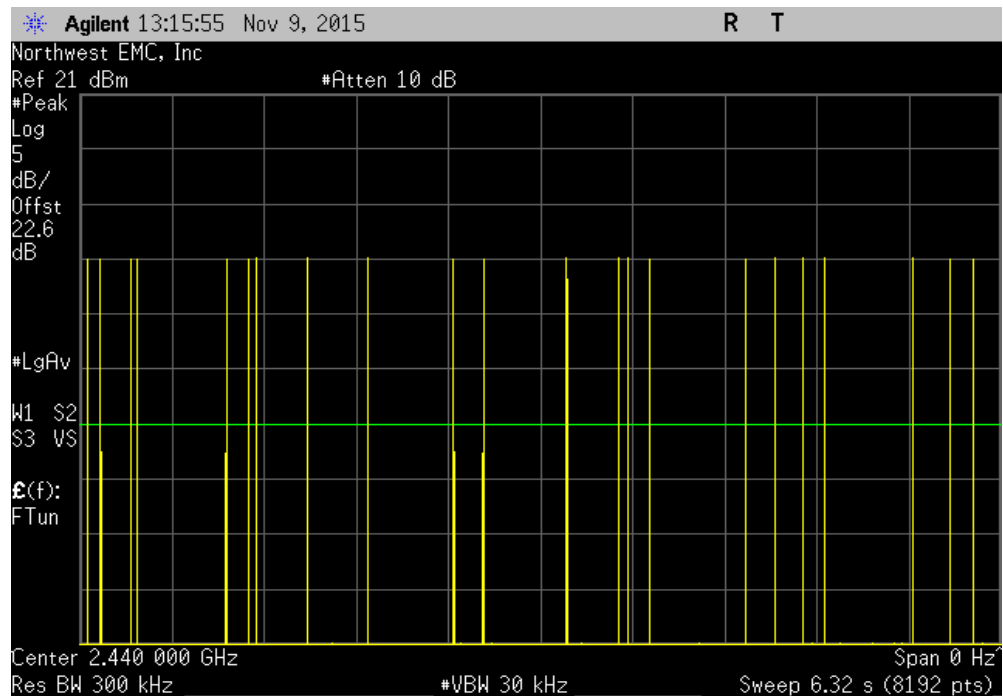
No Screen Capture Required

DWELL TIME

Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
0.295	N/A	N/A	N/A	N/A	N/A	N/A

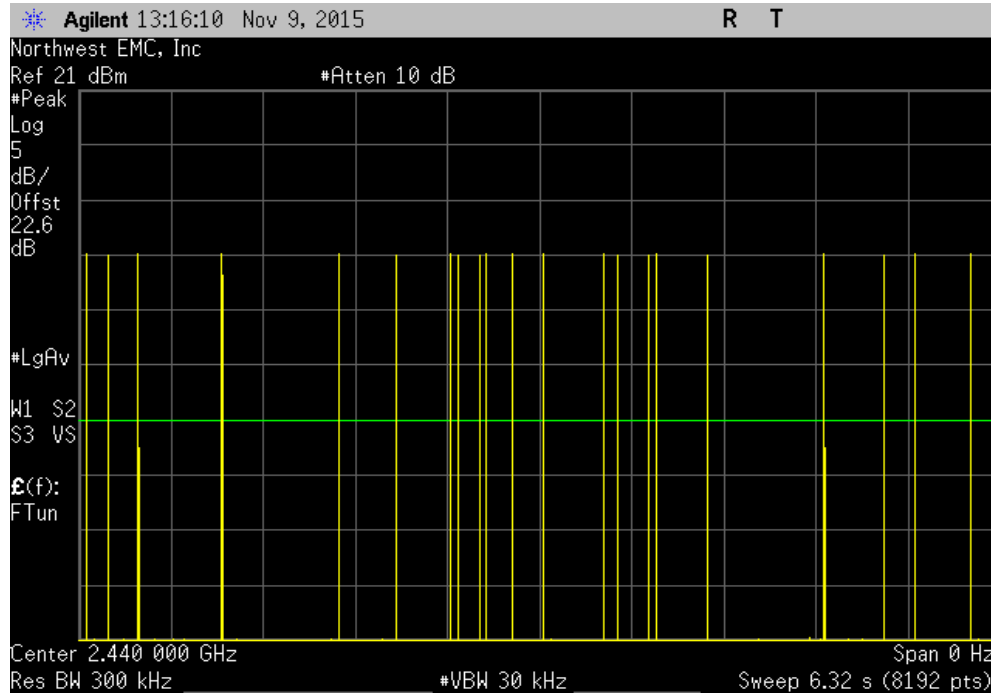


Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	22	N/A	N/A	N/A	N/A	N/A

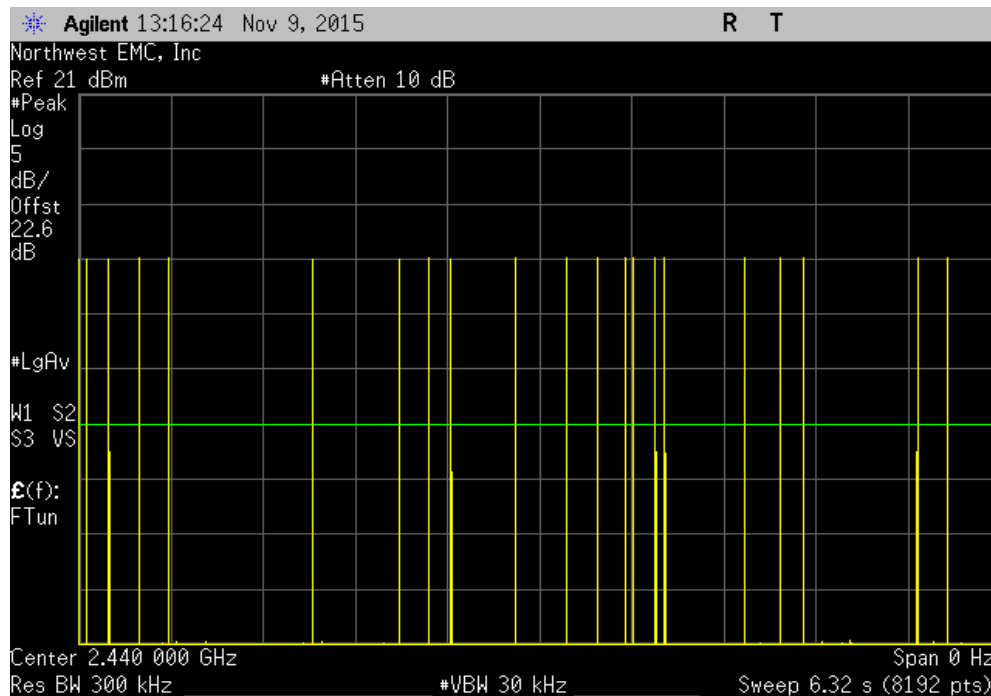


DWELL TIME

Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	21	N/A	N/A	N/A	N/A	N/A

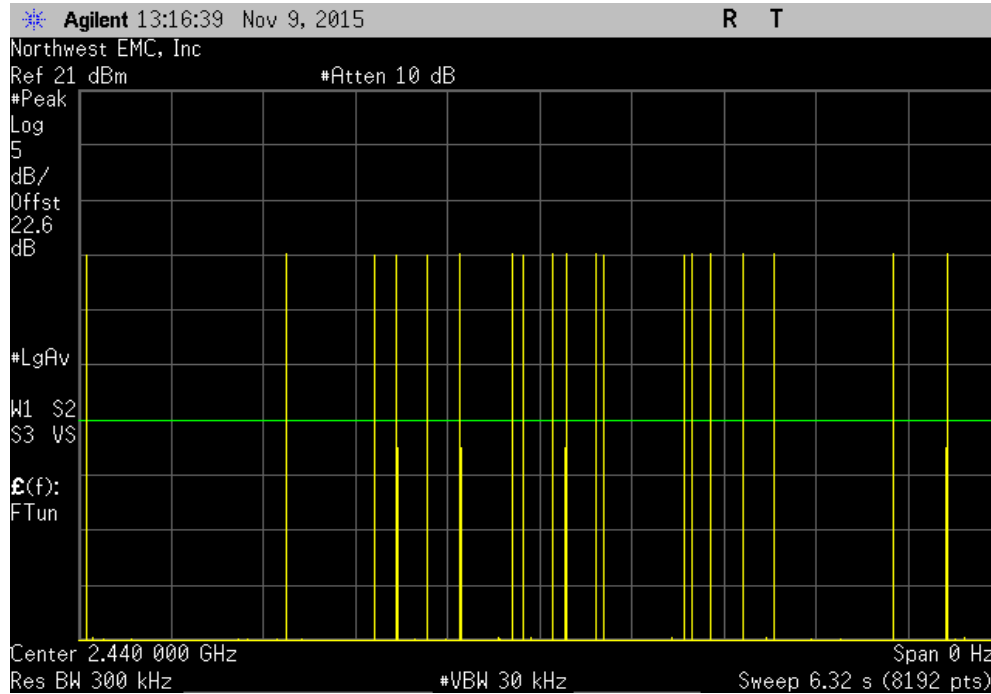


Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	20	N/A	N/A	N/A	N/A	N/A



DWELL TIME

Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	19	N/A	N/A	N/A	N/A	N/A



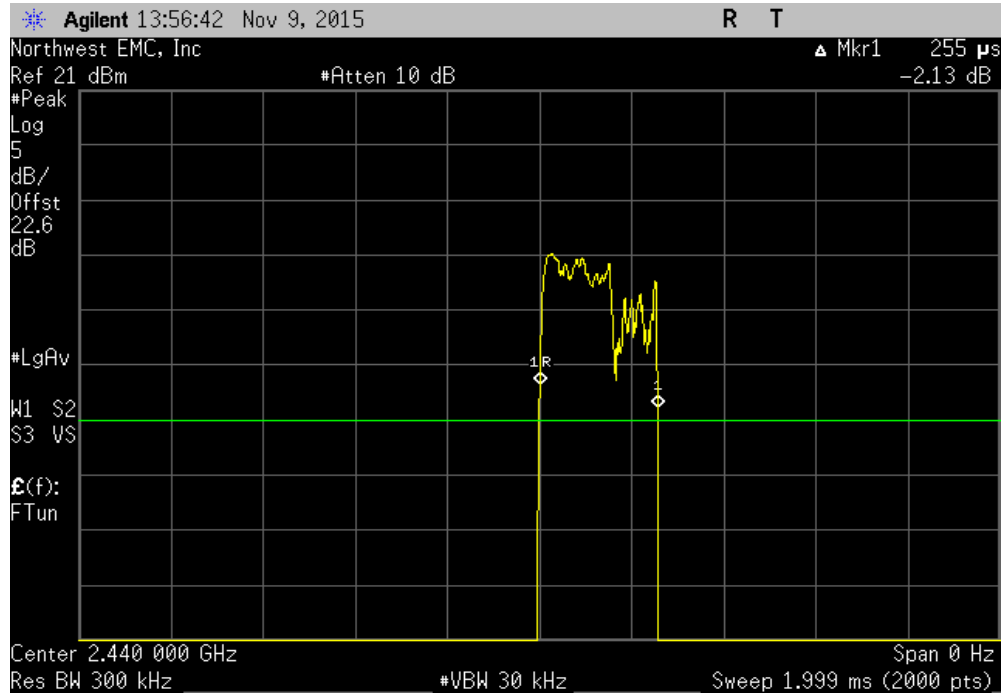
Hopping Mode, Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
0.295	N/A	20.5	5	30.24	400	Pass

Calculation Only

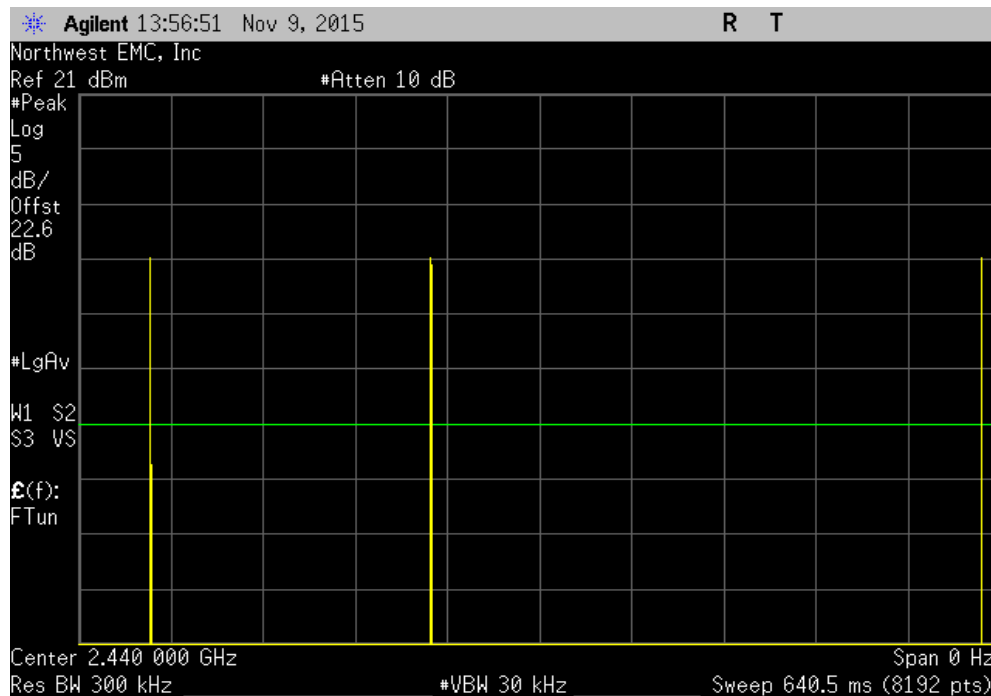
No Screen Capture Required

DWELL TIME

Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
0.255	N/A	N/A	N/A	N/A	N/A	N/A

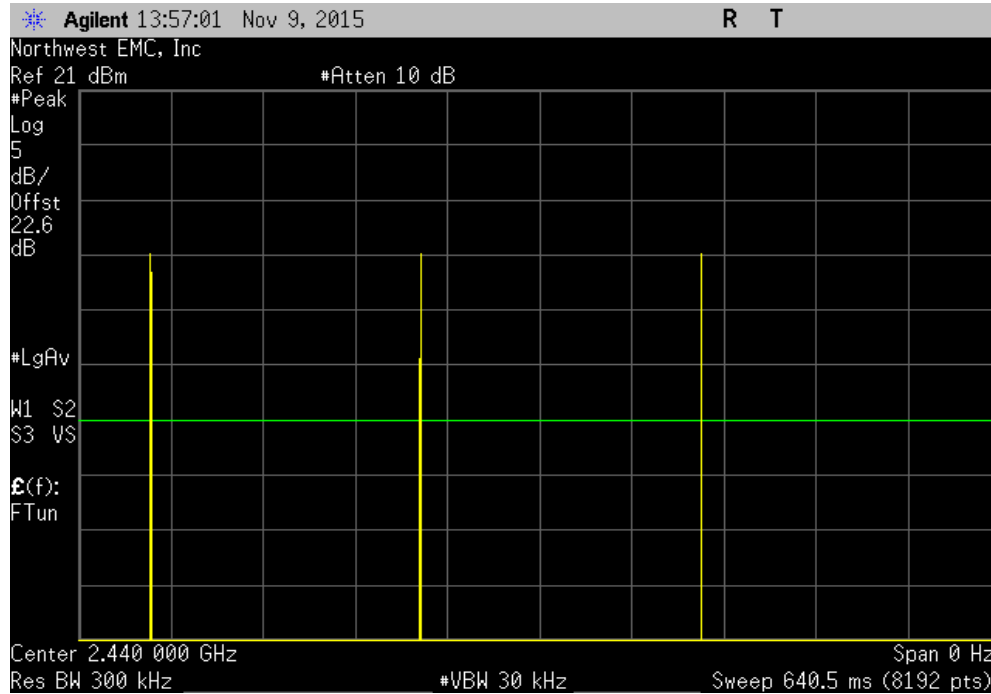


Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	3	N/A	N/A	N/A	N/A	N/A

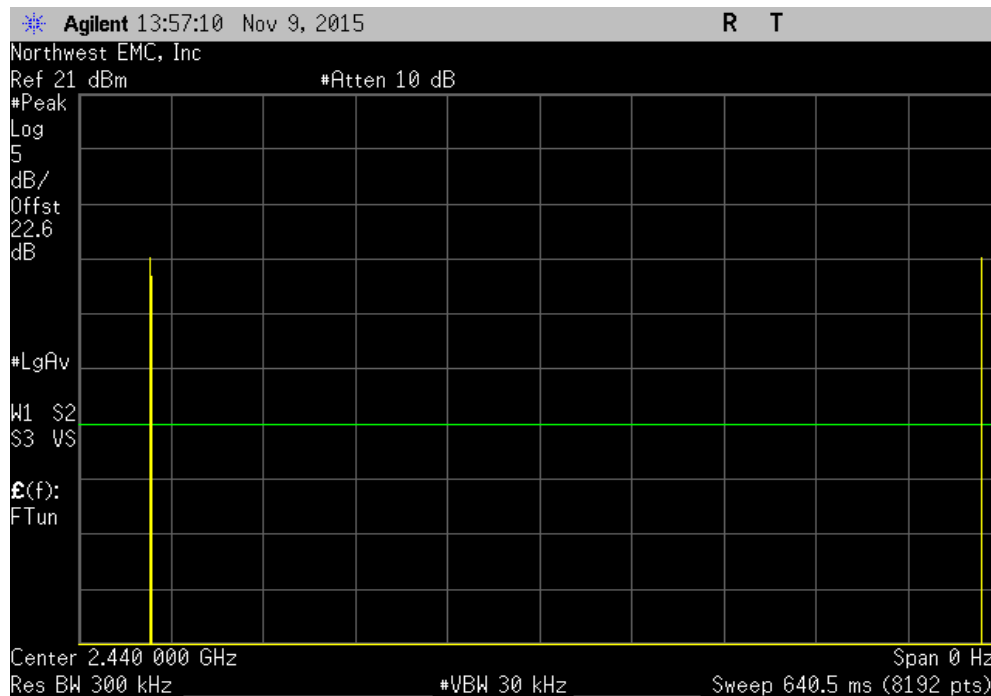


DWELL TIME

Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	3	N/A	N/A	N/A	N/A	N/A

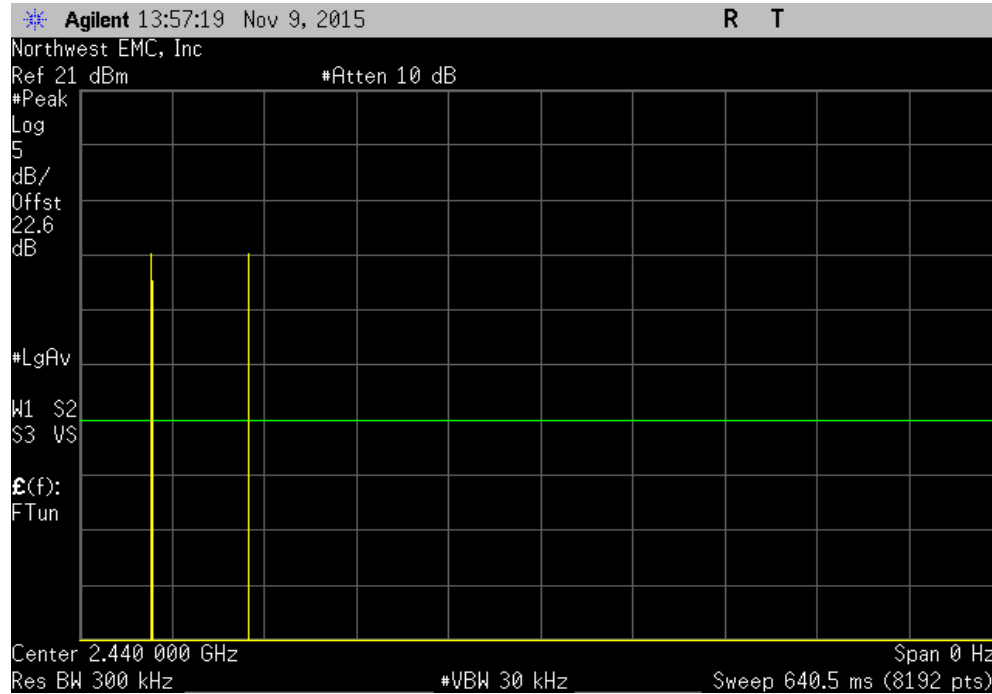


Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	2	N/A	N/A	N/A	N/A	N/A



DWELL TIME

Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	2	N/A	N/A	N/A	N/A	N/A



Hopping Mode, Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
0.255	N/A	2.5	5	3.19	400	Pass

Calculation Only

No Screen Capture Required

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.	Interval (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

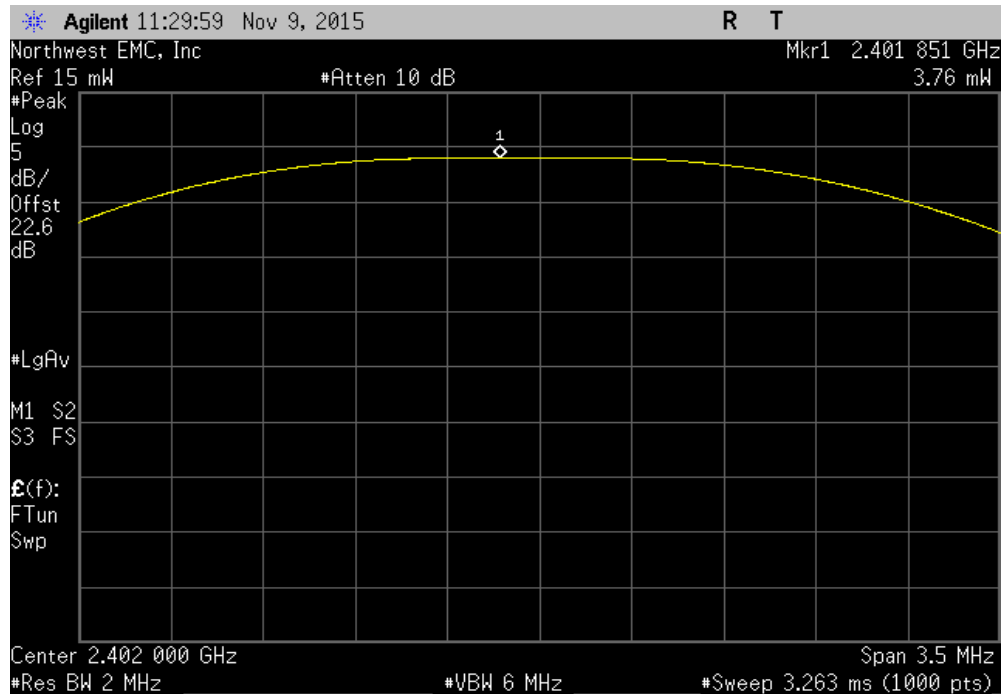
De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +27dBm.

OUTPUT POWER

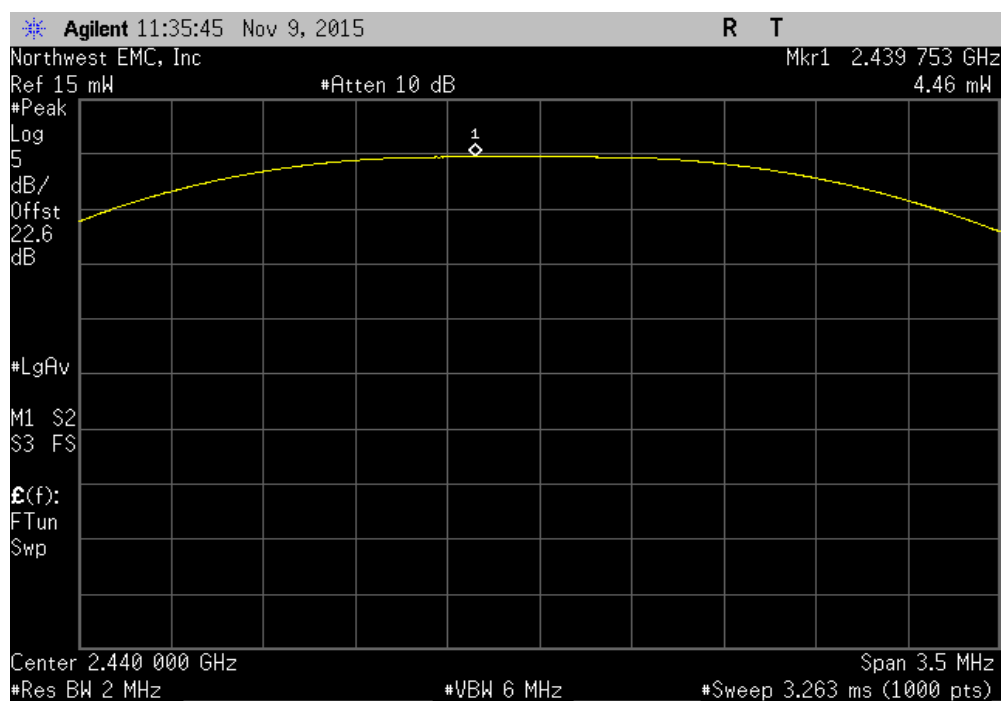
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth		Power: 110VAC/60Hz	
		Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Value	Limit (<)
Ant 2			
DH5			
Low Channel 1, 2402 MHz		3.764 mW	125 mW
Mid Channel 39, 2440 MHz		4.465 mW	125 mW
High Channel 79, 2480 MHz		4.554 mW	125 mW
2DH5			
Low Channel 1, 2402 MHz		6.159 mW	125 mW
Mid Channel 39, 2440 MHz		6.674 mW	125 mW
High Channel 79, 2480 MHz		6.504 mW	125 mW
3DH5			
Low Channel 1, 2402 MHz		7.127 mW	125 mW
Mid Channel 39, 2440 MHz		7.461 mW	125 mW
High Channel 79, 2480 MHz		7.203 mW	125 mW
			Result
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

OUTPUT POWER

Ant 2, DH5, Low Channel 1, 2402 MHz						
				Value	Limit (<)	Result
				3.764 mW	125 mW	Pass

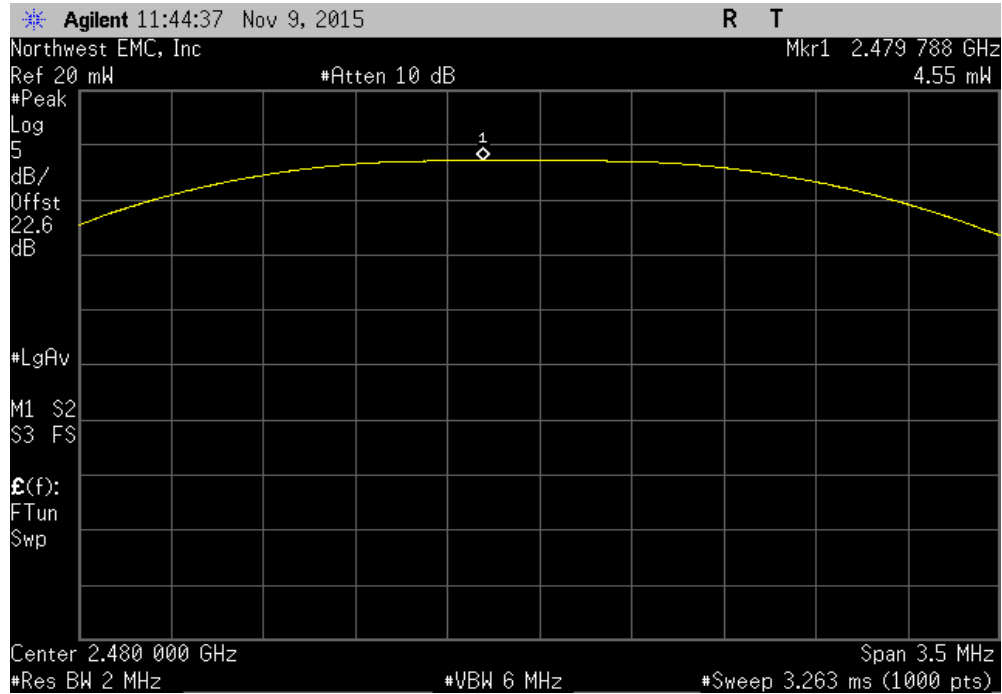


Ant 2, DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				4.465 mW	125 mW	Pass

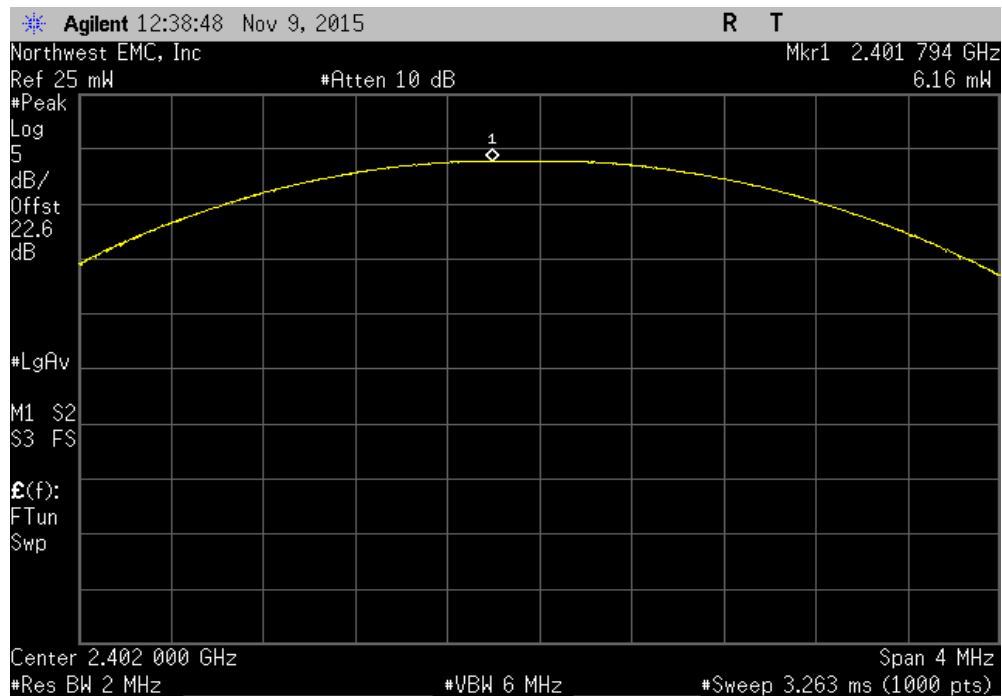


OUTPUT POWER

Ant 2, DH5, High Channel 79, 2480 MHz						
				Value	Limit (<)	Result
				4.554 mW	125 mW	Pass

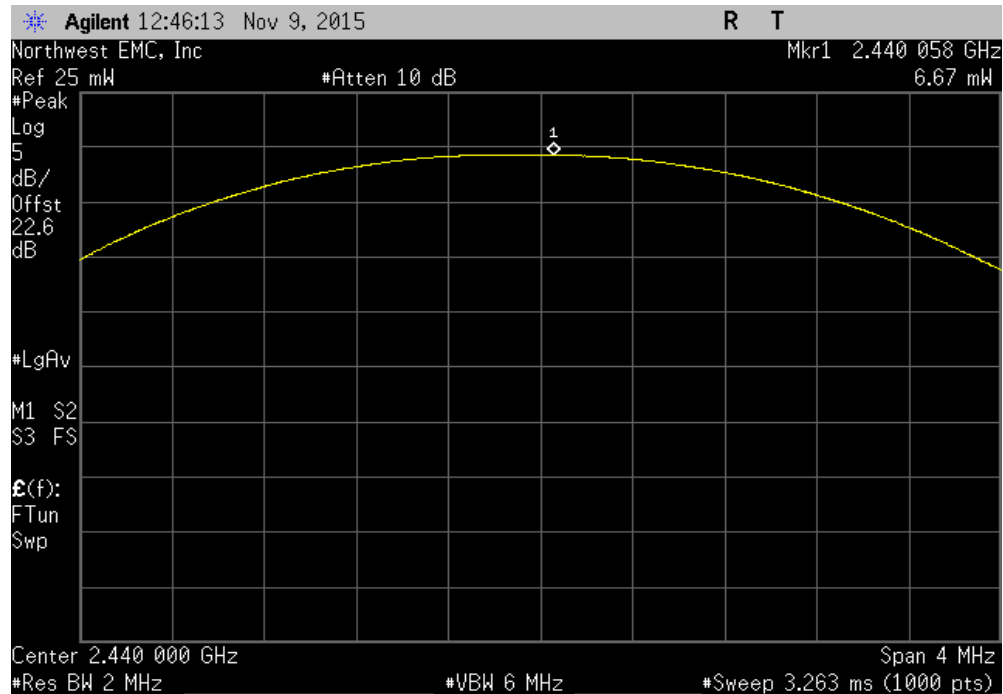


Ant 2, 2DH5, Low Channel 1, 2402 MHz						
				Value	Limit (<)	Result
				6.159 mW	125 mW	Pass

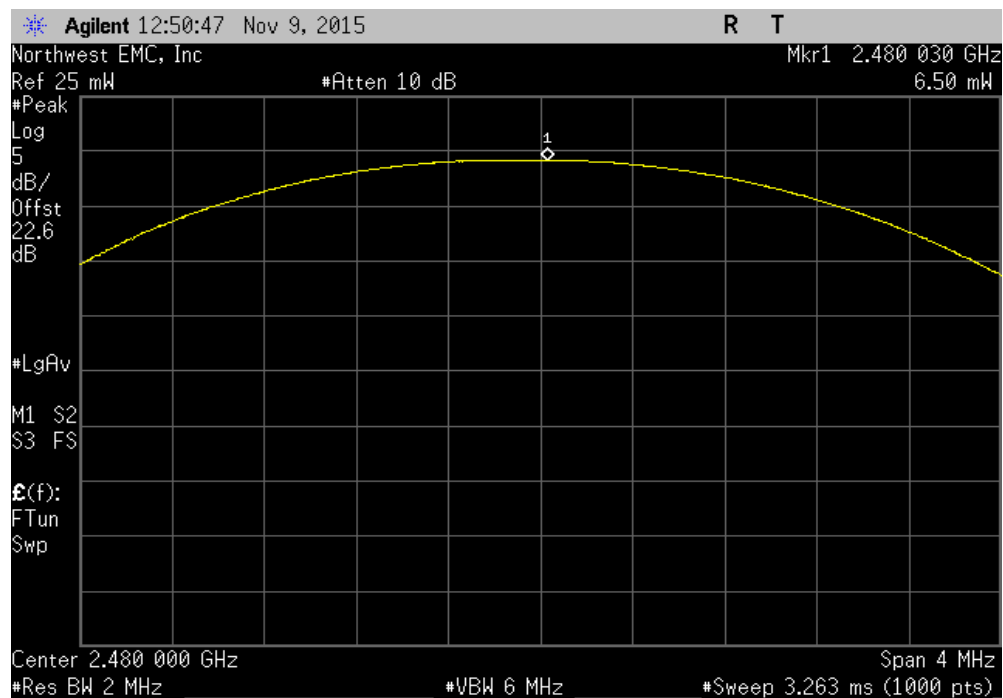


OUTPUT POWER

Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				6.674 mW	125 mW	Pass

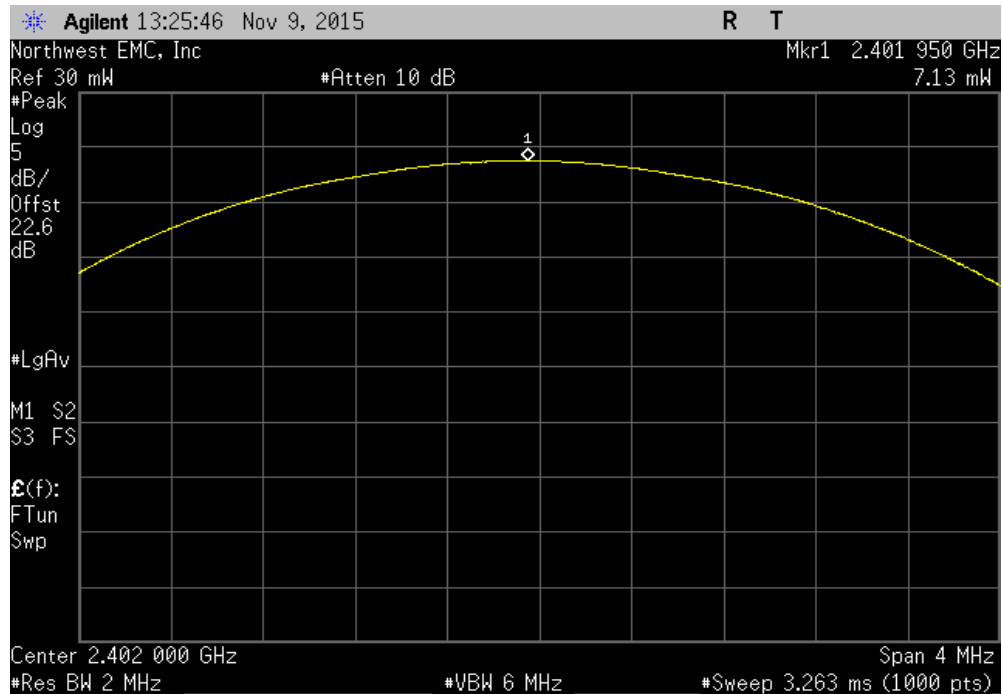


Ant 2, 2DH5, High Channel 79, 2480 MHz						
				Value	Limit (<)	Result
				6.504 mW	125 mW	Pass

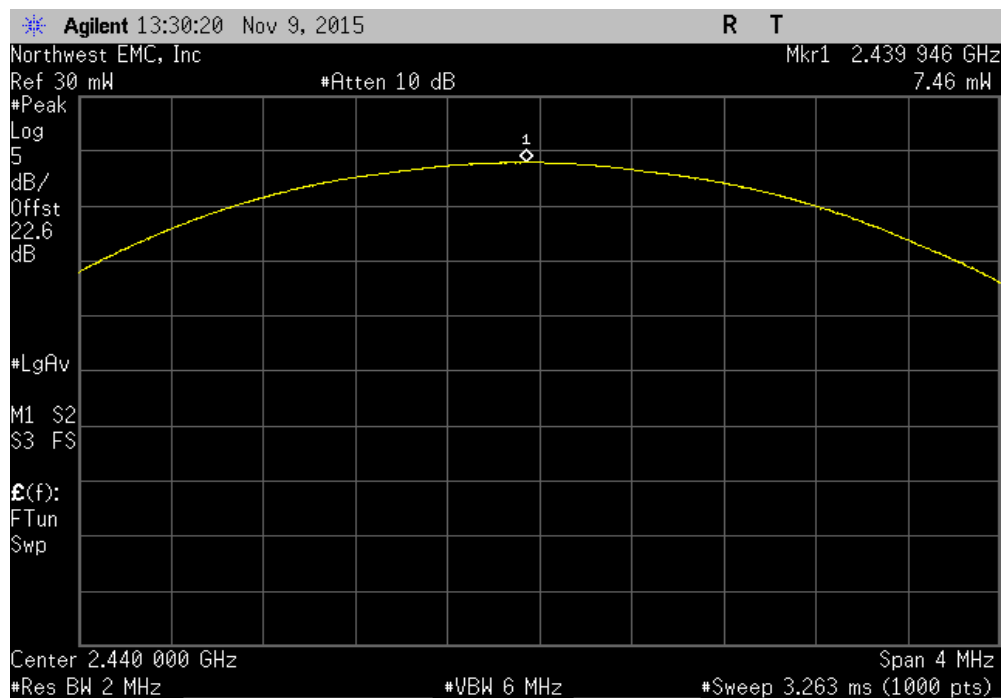


OUTPUT POWER

Ant 2, 3DH5, Low Channel 1, 2402 MHz						
				Value	Limit (<)	Result
				7.127 mW	125 mW	Pass

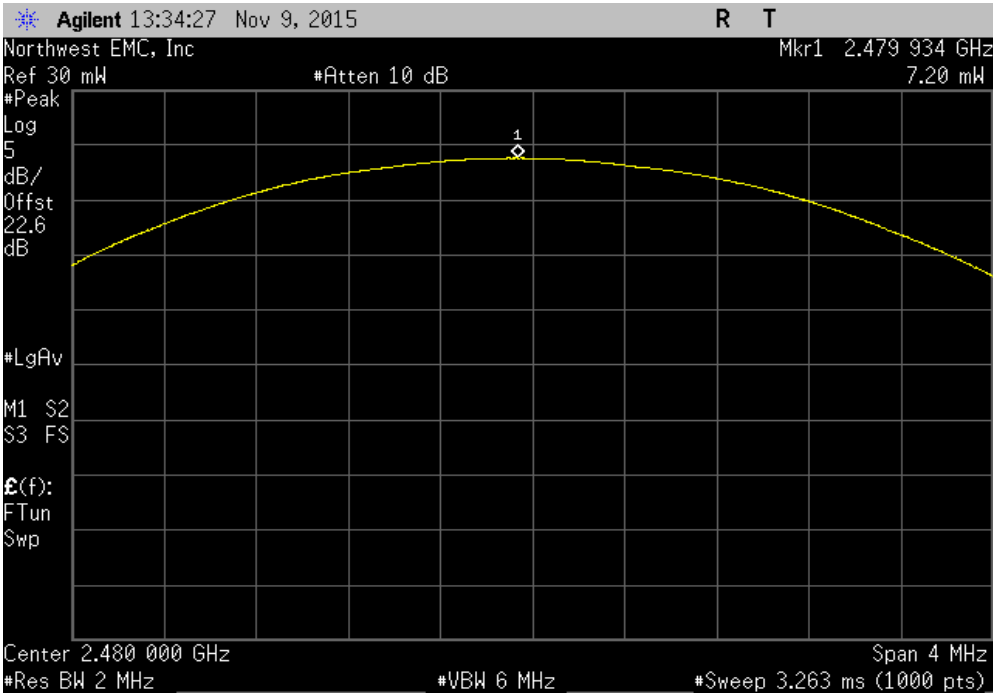


Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				7.461 mW	125 mW	Pass



OUTPUT POWER

Ant 2, 3DH5, High Channel 79, 2480 MHz						
Value				Limit	Result	
				(<)		
7.203 mW				125 mW	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.	Interval (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet in a no hop mode. The channels closest to the band edges were selected.

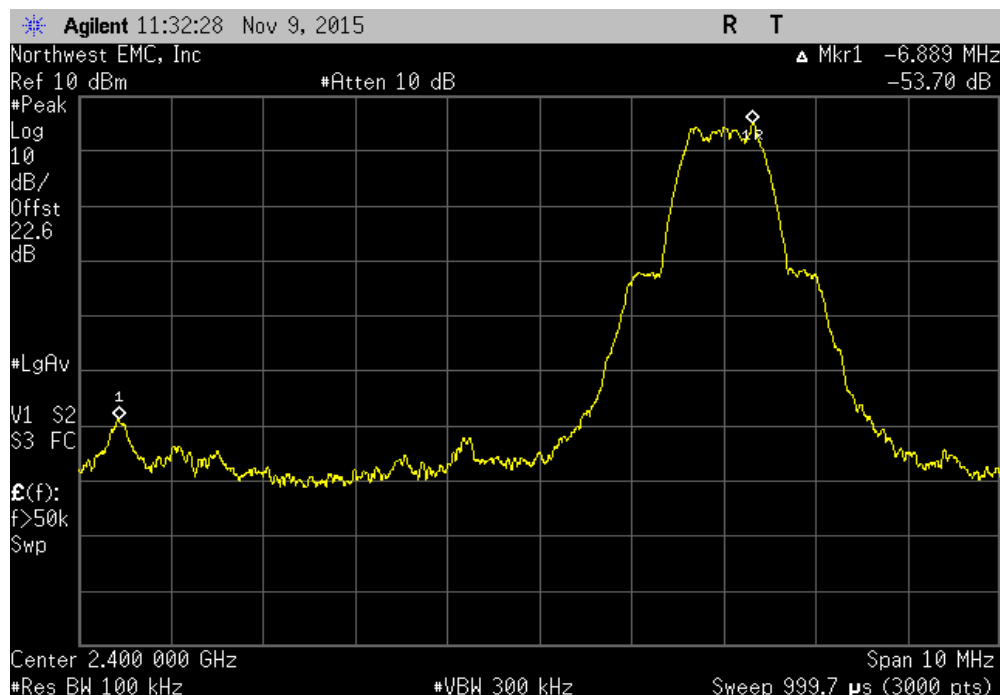
The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE

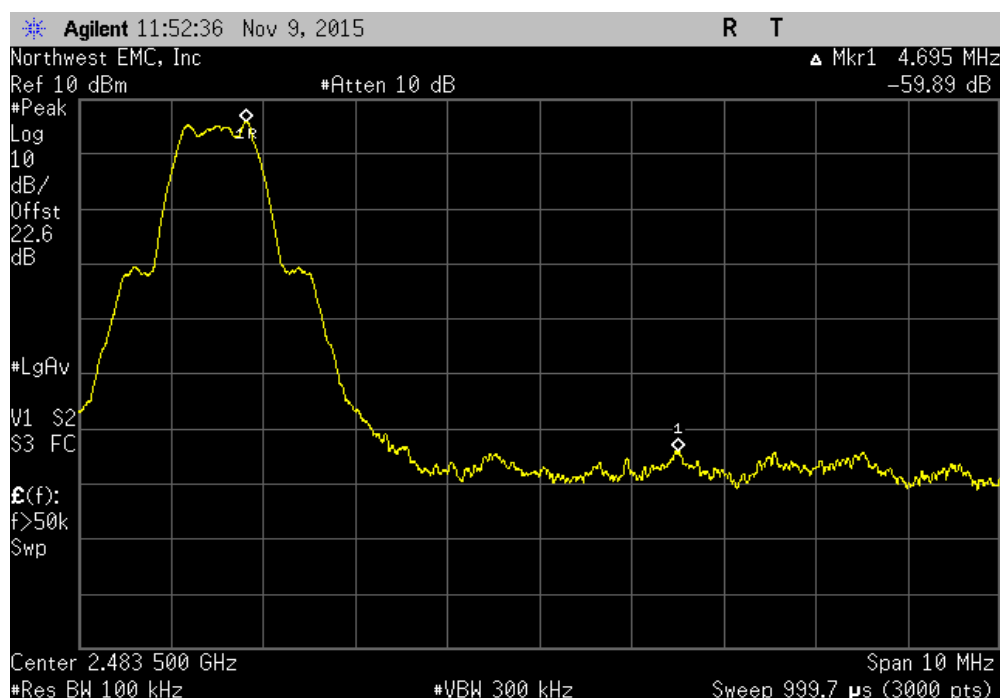
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth		Power: 110VAC/60Hz	
		Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Value (dBc)	Limit ≤ (dBc) Result
Ant 2	DH5		
	Low Channel 1, 2402 MHz	-53.71	-20 Pass
	High Channel 79, 2480 MHz	-59.89	-20 Pass
	2DH5		
	Low Channel 1, 2402 MHz	-53.23	-20 Pass
	High Channel 79, 2480 MHz	-54.84	-20 Pass
	3DH5		
	Low Channel 1, 2402 MHz	-53.05	-20 Pass
	High Channel 79, 2480 MHz	-53.94	-20 Pass

BAND EDGE COMPLIANCE

Ant 2, DH5, Low Channel 1, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.71	-20	Pass

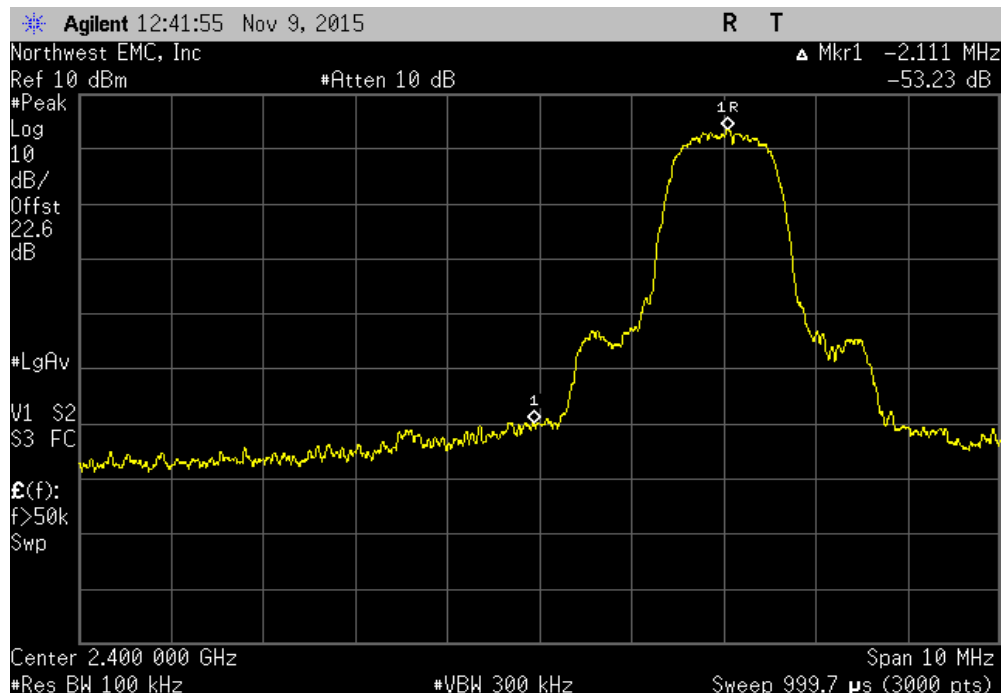


Ant 2, DH5, High Channel 79, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-59.89	-20	Pass

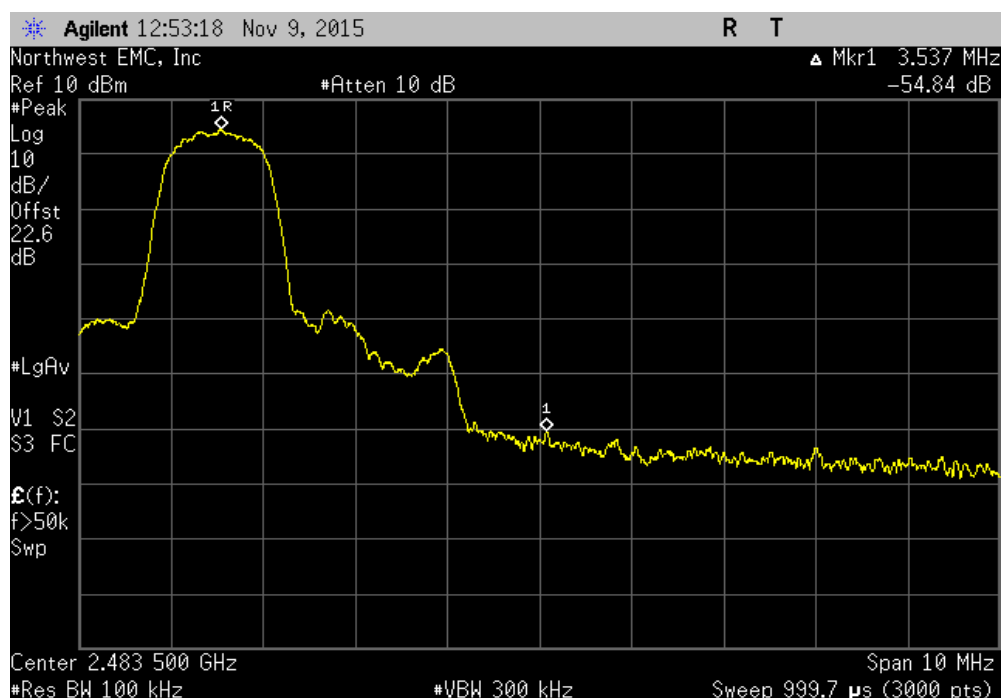


BAND EDGE COMPLIANCE

Ant 2, 2DH5, Low Channel 1, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.23	-20	Pass

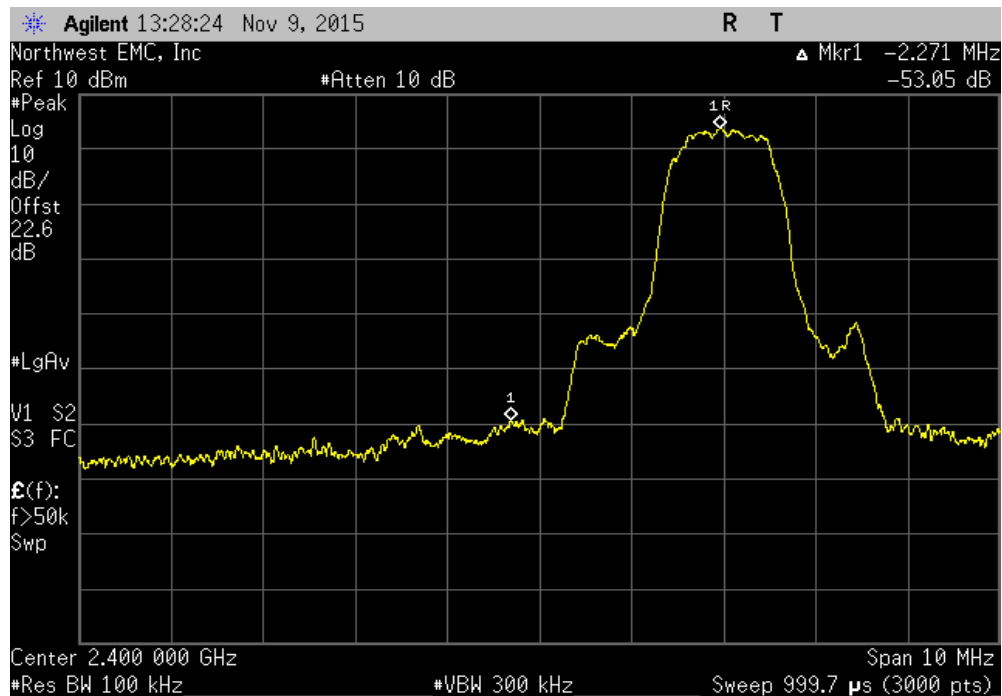


Ant 2, 2DH5, High Channel 79, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-54.84	-20	Pass

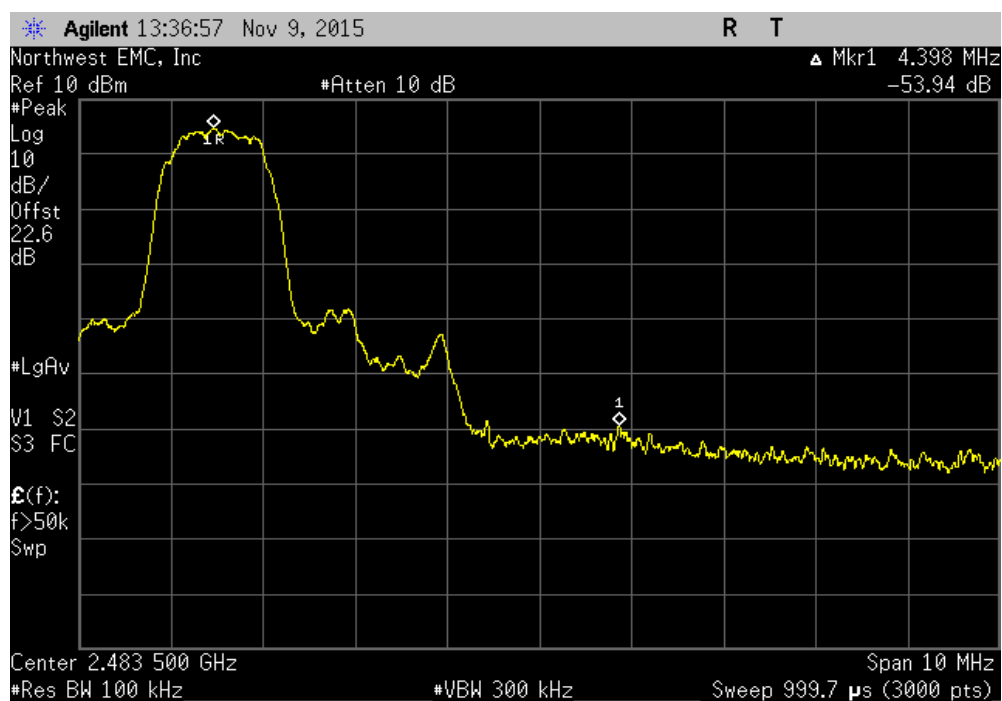


BAND EDGE COMPLIANCE

Ant 2, 3DH5, Low Channel 1, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.05	-20	Pass



Ant 2, 3DH5, High Channel 79, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.94	-20	Pass



BAND EDGE COMPLIANCE -HOPPING MODE



XMit 2015.01.14

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 (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to its normal pseudo-random hopping sequence. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

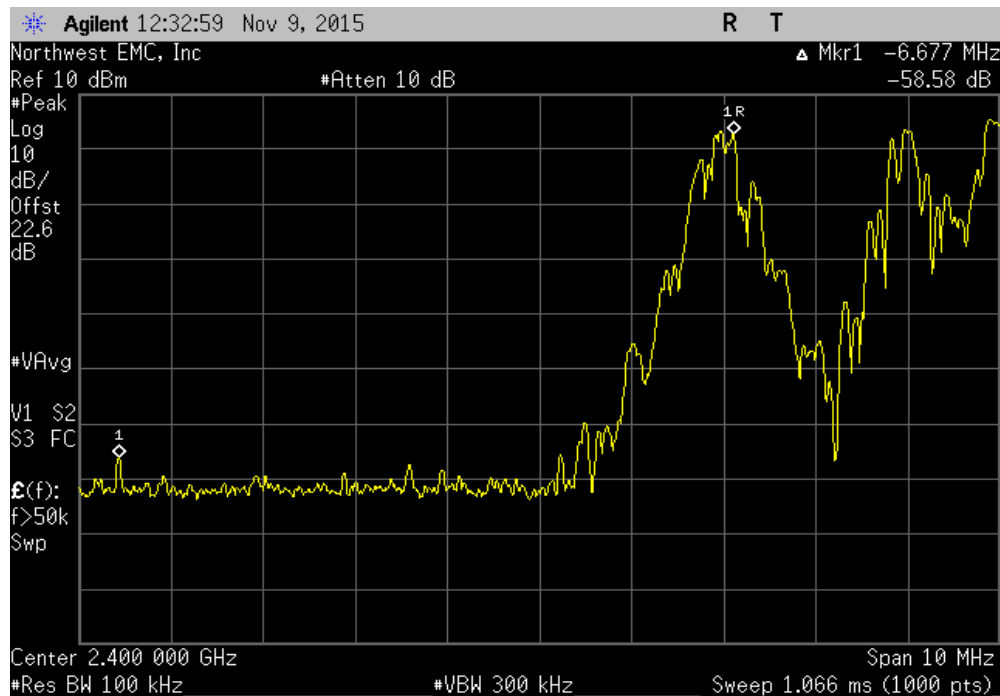
The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE -HOPPING MODE

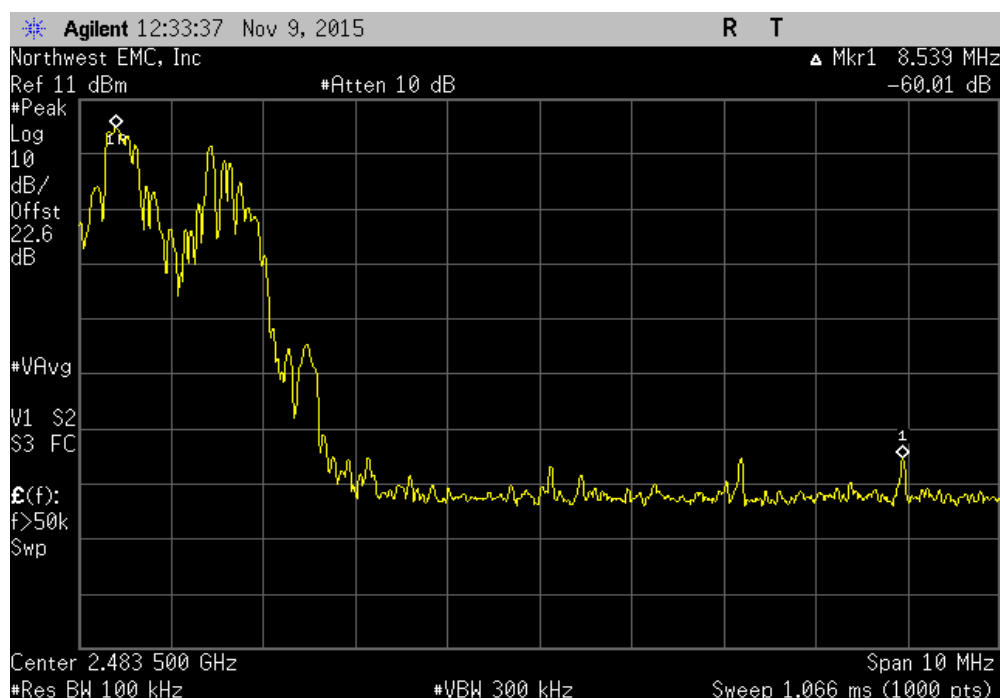
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth	Power: 110VAC/60Hz	Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Value (dBc)	Limit ≤ (dBc) Result
Hopping Mode, Ant 2			
DH5			
	Low Channel 1, 2402 MHz	-58.58	-20 Pass
	High Channel 79, 2480 MHz	-60.01	-20 Pass
2DH5			
	Low Channel 1, 2402 MHz	-56.56	-20 Pass
	High Channel 79, 2480 MHz	-56.86	-20 Pass
3DH5			
	Low Channel 1, 2402 MHz	-56.23	-20 Pass
	High Channel 79, 2480 MHz	-56.9	-20 Pass

BAND EDGE COMPLIANCE -HOPPING MODE

Hopping Mode, Ant 2, DH5, Low Channel 1, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-58.58	-20	Pass

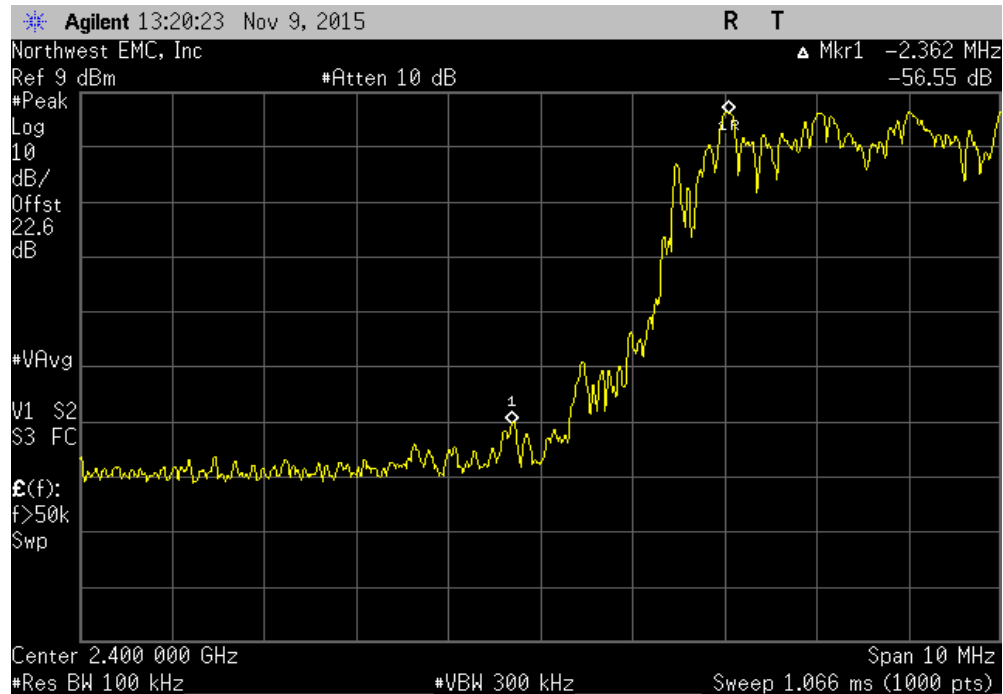


Hopping Mode, Ant 2, DH5, High Channel 79, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-60.01	-20	Pass

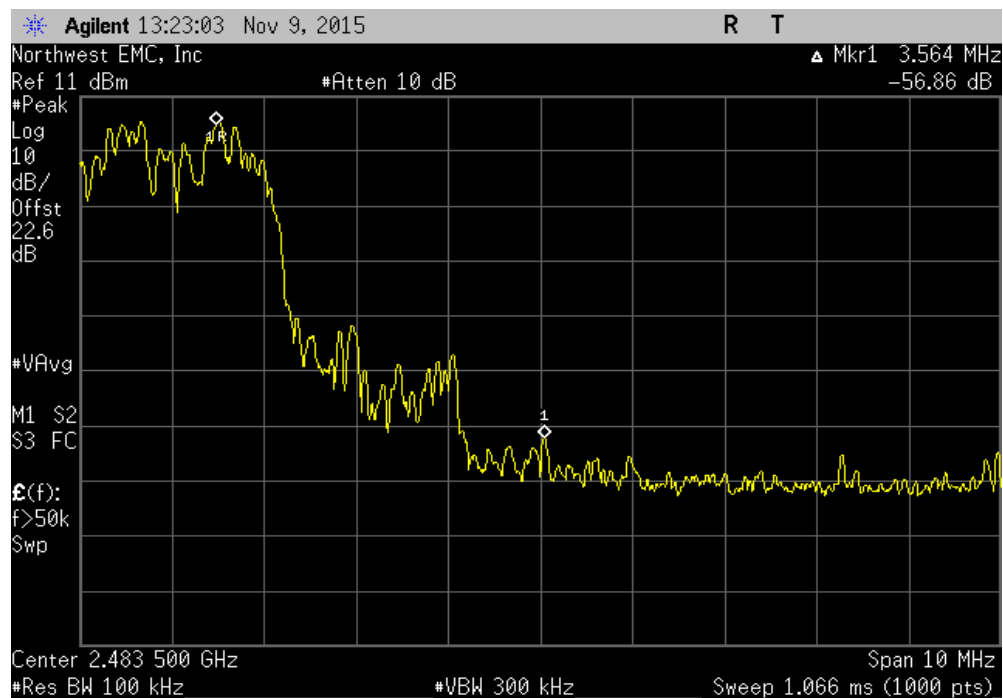


BAND EDGE COMPLIANCE -HOPPING MODE

Hopping Mode, Ant 2, 2DH5, Low Channel 1, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.56	-20	Pass

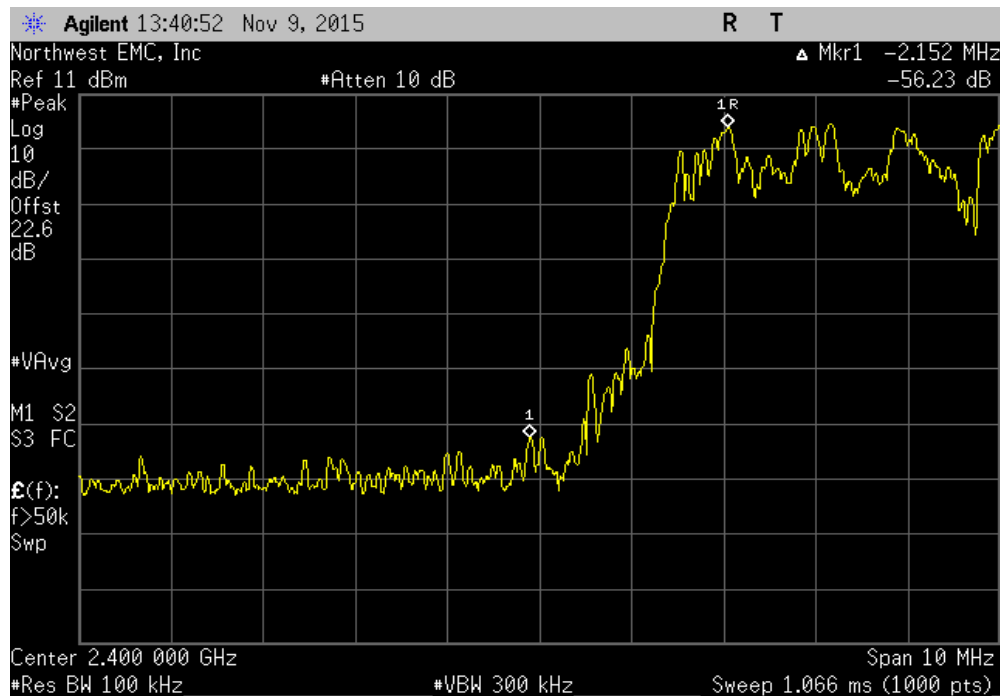


Hopping Mode, Ant 2, 2DH5, High Channel 79, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.86	-20	Pass

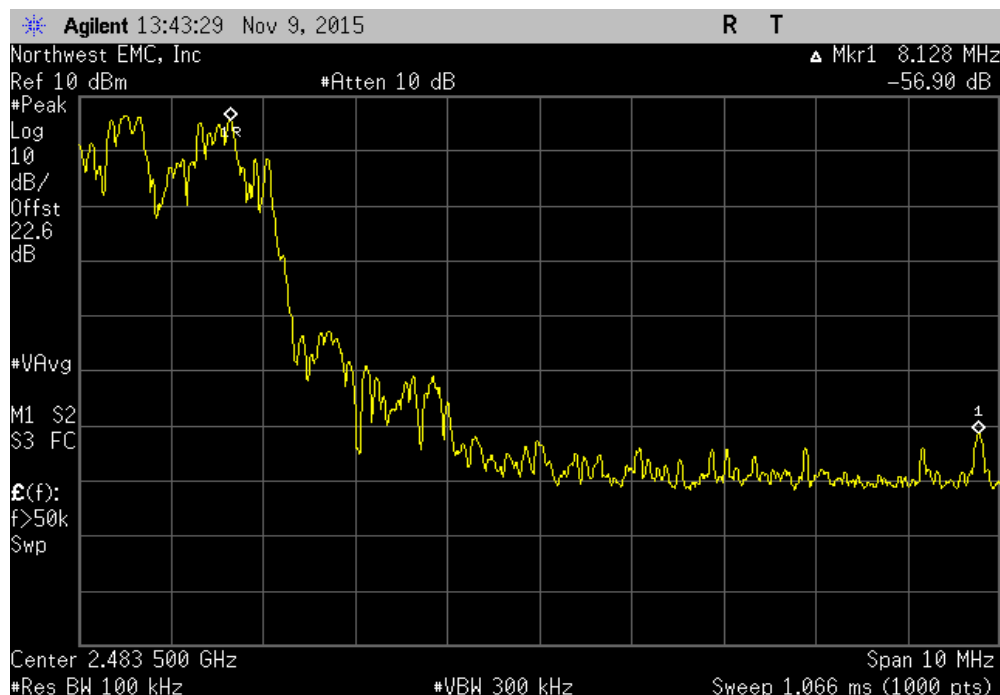


BAND EDGE COMPLIANCE -HOPPING MODE

Hopping Mode, Ant 2, 3DH5, Low Channel 1, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.23	-20	Pass



Hopping Mode, Ant 2, 3DH5, High Channel 79, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.9	-20	Pass



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.	Interval (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

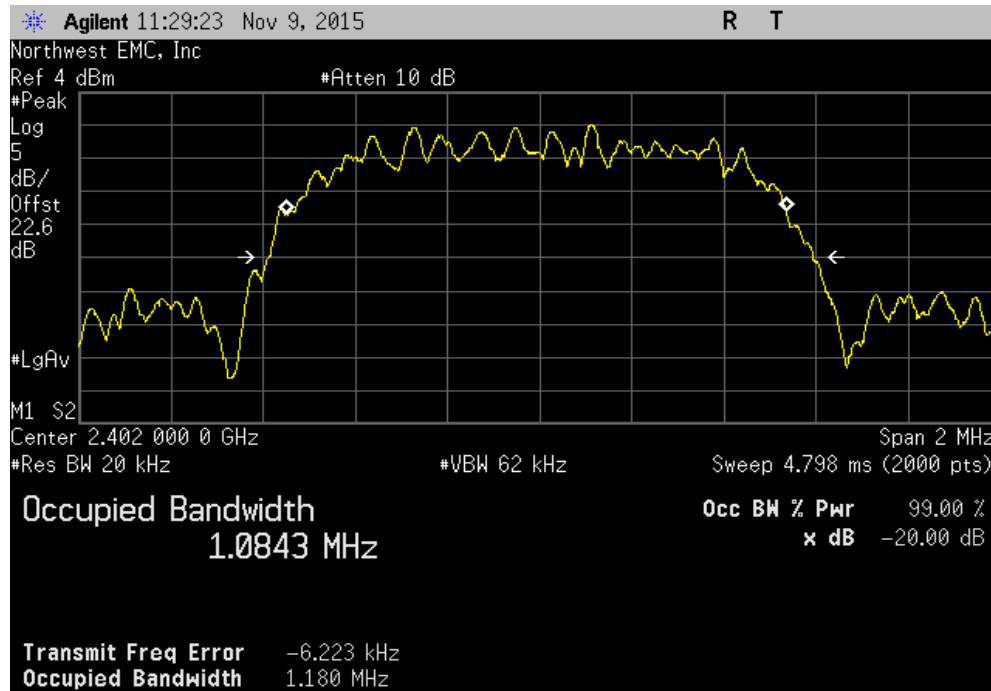
The occupied bandwidth was measured with the EUT set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet in a no-hop mode.

OCCUPIED BANDWIDTH

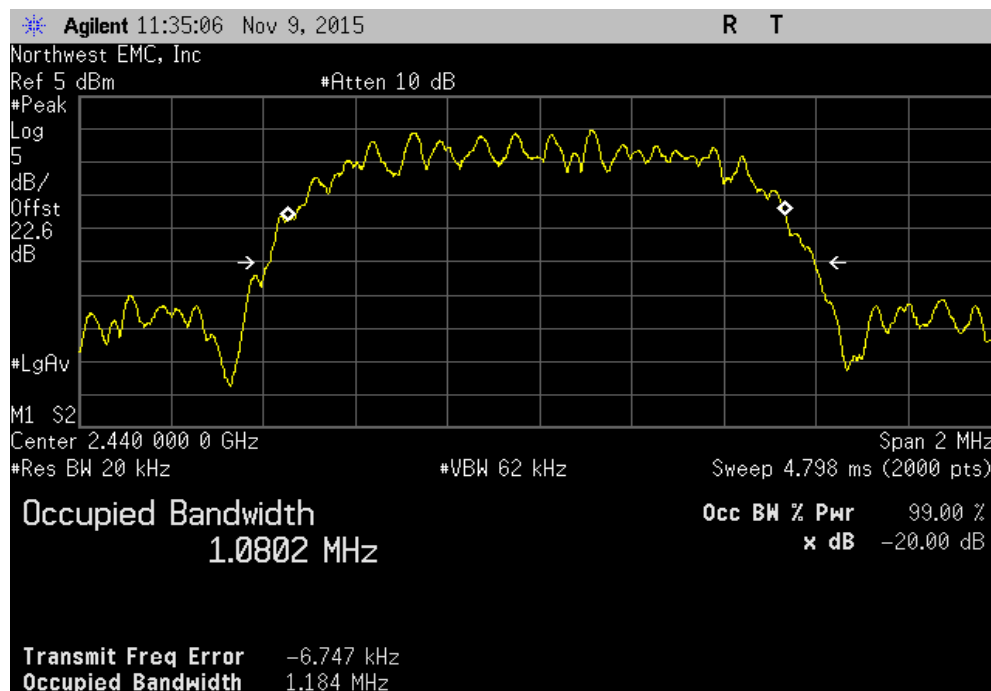
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth		Power: 110VAC/60Hz	
		Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Value	Limit (<)
Ant 2			
DH5			
	Low Channel 1, 2402 MHz	1.18 MHz	1.5 MHz
	Mid Channel 39, 2440 MHz	1.184 MHz	1.5 MHz
	High Channel 79, 2480 MHz	1.183 MHz	1.5 MHz
2DH5			
	Low Channel 1, 2402 MHz	1.362 MHz	1.5 MHz
	Mid Channel 39, 2440 MHz	1.366 MHz	1.5 MHz
	High Channel 79, 2480 MHz	1.37 MHz	1.5 MHz
3DH5			
	Low Channel 1, 2402 MHz	1.347 MHz	1.5 MHz
	Mid Channel 39, 2440 MHz	1.351 MHz	1.5 MHz
	High Channel 79, 2480 MHz	1.351 MHz	1.5 MHz
			Result
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

OCCUPIED BANDWIDTH

Ant 2, DH5, Low Channel 1, 2402 MHz						
				Value	Limit (<)	Result
				1.18 MHz	1.5 MHz	Pass

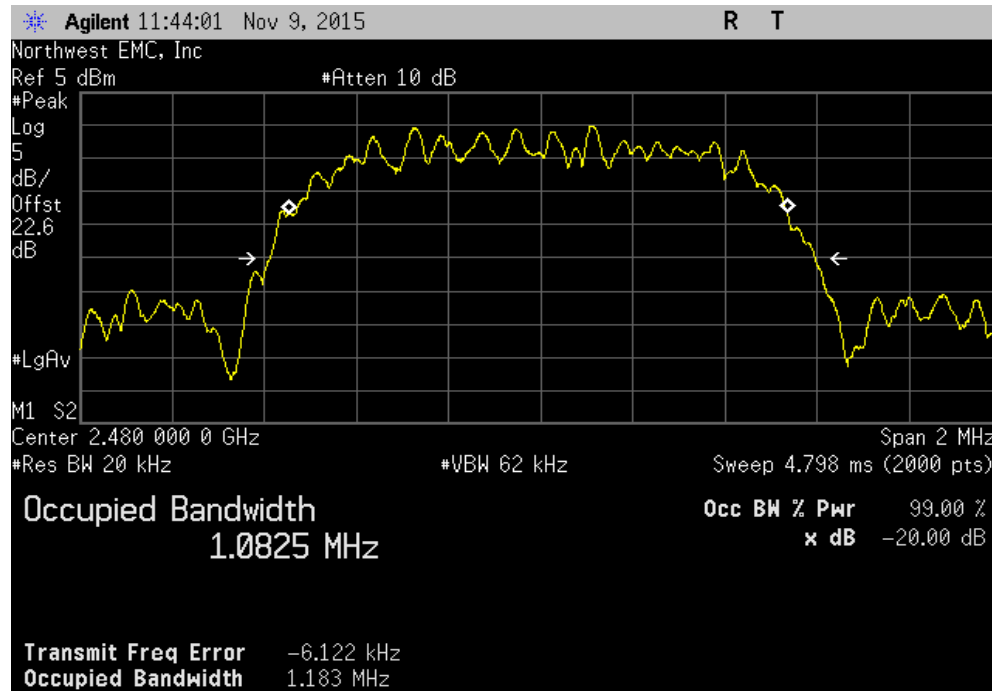


Ant 2, DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				1.184 MHz	1.5 MHz	Pass

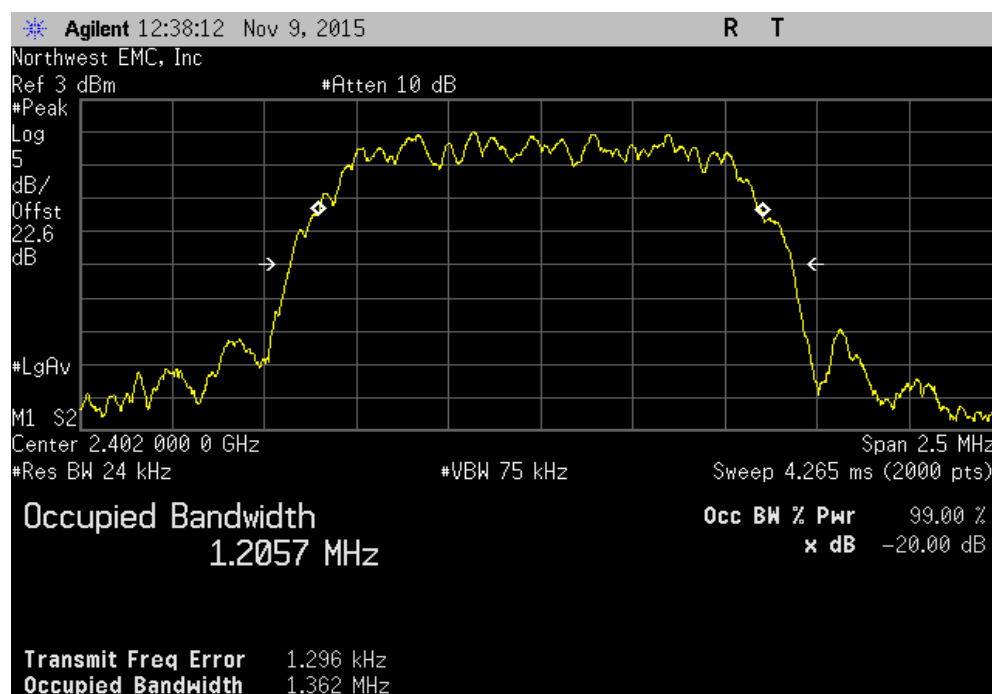


OCCUPIED BANDWIDTH

Ant 2, DH5, High Channel 79, 2480 MHz						
				Value	Limit (<)	Result
				1.183 MHz	1.5 MHz	Pass

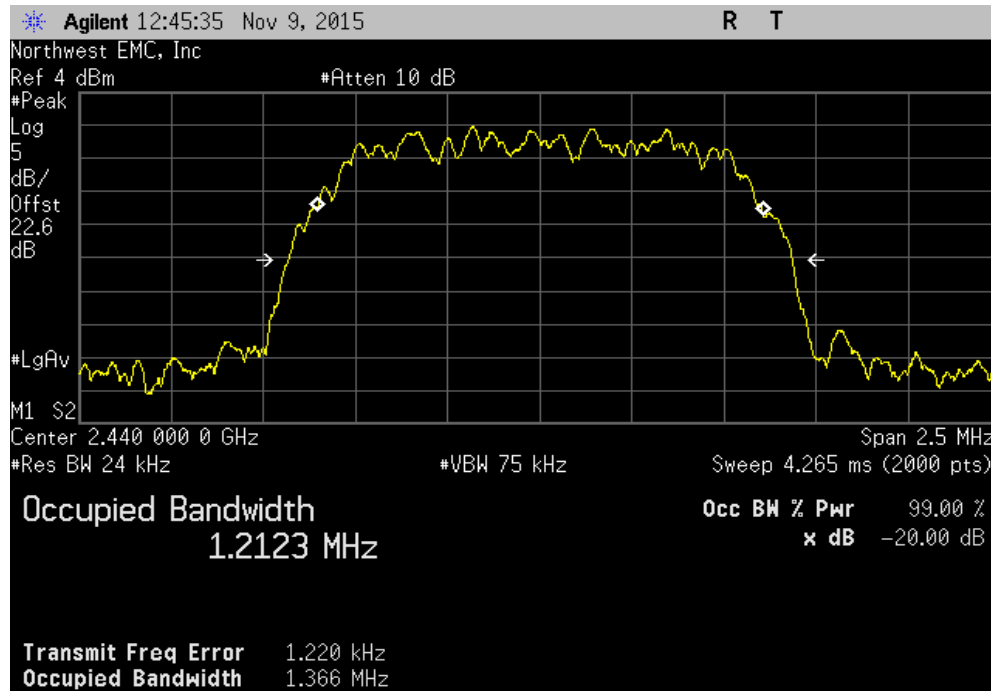


Ant 2, 2DH5, Low Channel 1, 2402 MHz						
				Value	Limit (<)	Result
				1.362 MHz	1.5 MHz	Pass

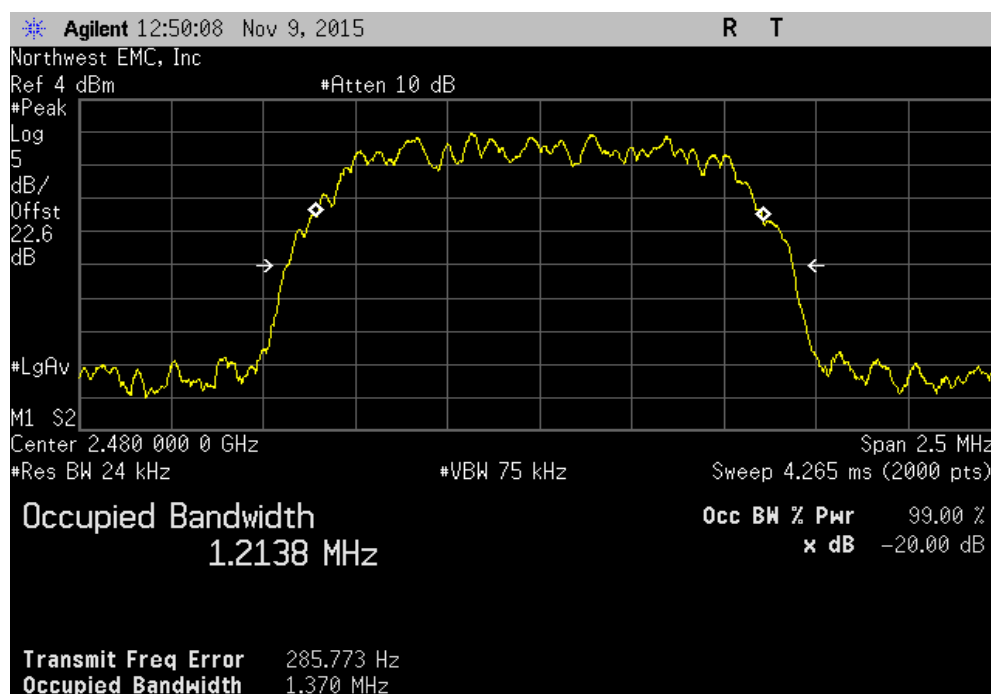


OCCUPIED BANDWIDTH

Ant 2, 2DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				1.366 MHz	1.5 MHz	Pass

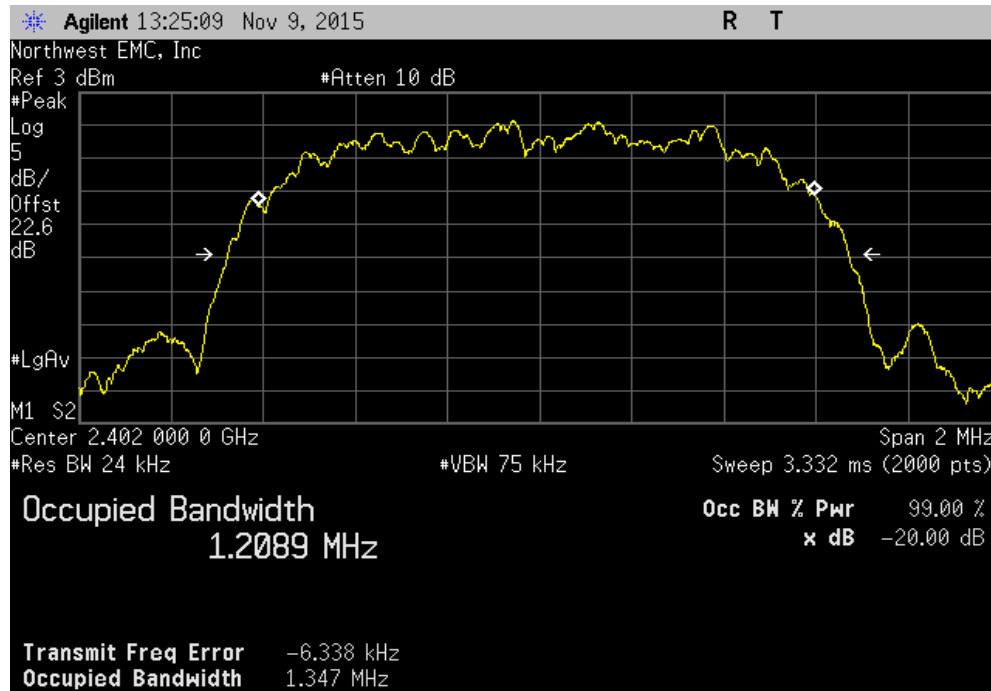


Ant 2, 2DH5, High Channel 79, 2480 MHz						
				Value	Limit (<)	Result
				1.37 MHz	1.5 MHz	Pass

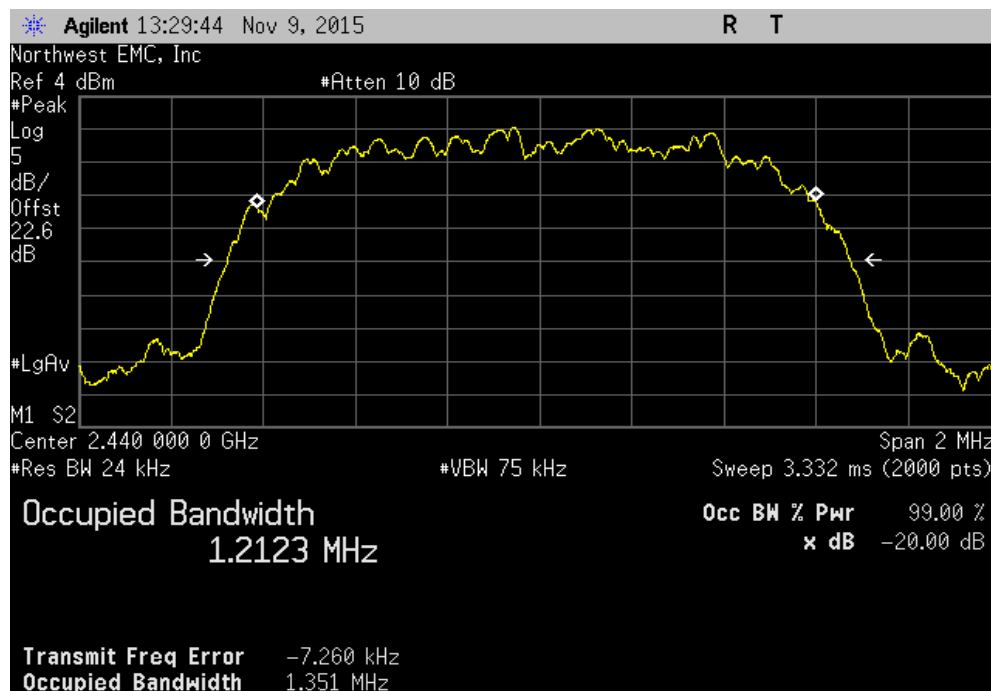


OCCUPIED BANDWIDTH

Ant 2, 3DH5, Low Channel 1, 2402 MHz						
				Value	Limit (<)	Result
				1.347 MHz	1.5 MHz	Pass

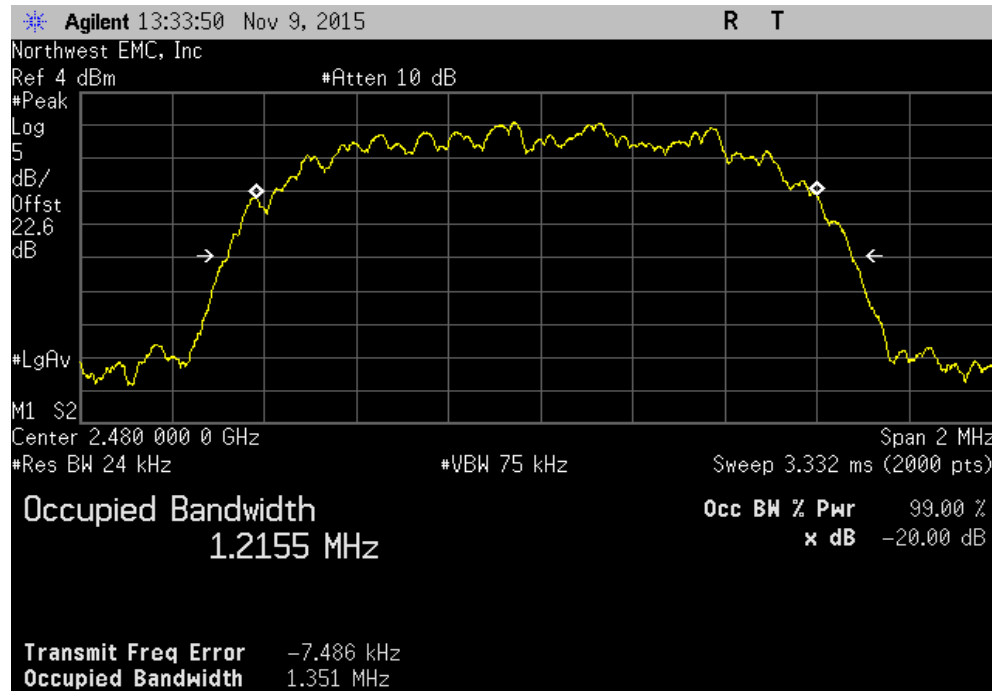


Ant 2, 3DH5, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				1.351 MHz	1.5 MHz	Pass



OCCUPIED BANDWIDTH

Ant 2, 3DH5, High Channel 79, 2480 MHz						
				Value	Limit (<)	Result
				1.351 MHz	1.5 MHz	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.	Interval (mos)
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAT	9/29/2015	12
Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
Block - DC	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Generator - Signal	Agilent	N5183A	TIA	4/7/2014	24

TEST DESCRIPTION

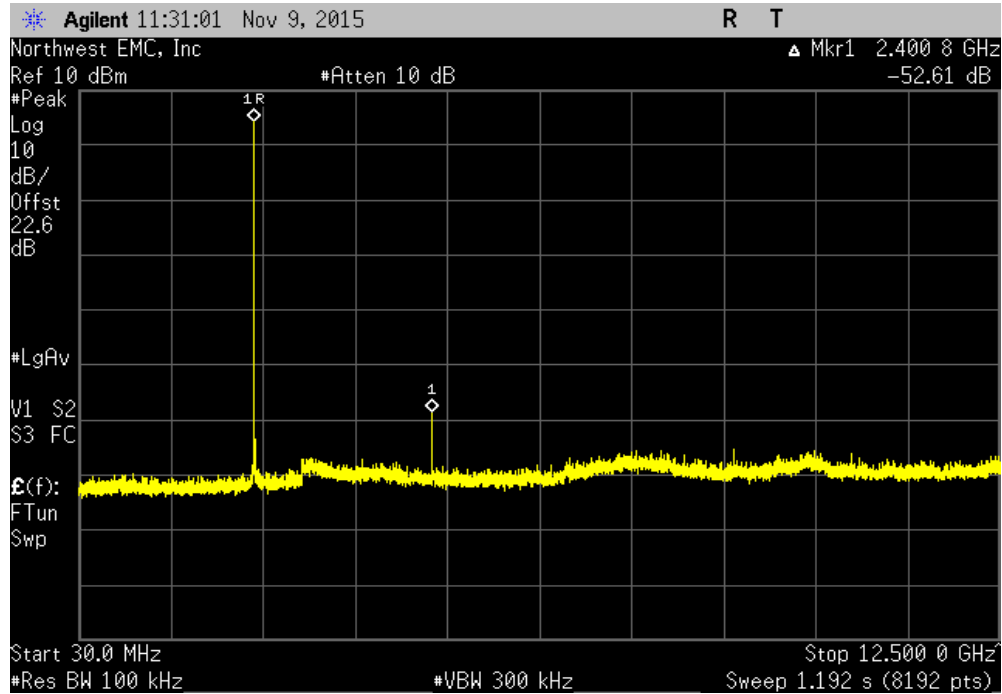
The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet. For each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

SPURIOUS CONDUCTED EMISSIONS

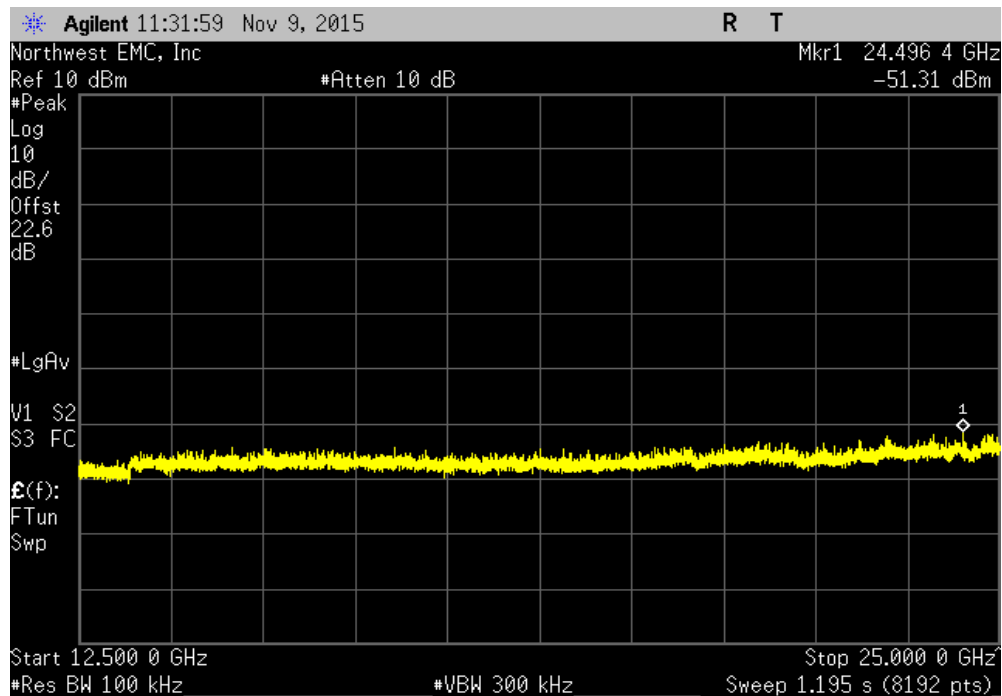
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 11/10/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 40%	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Richard Mellroth		Power: 110VAC/60Hz	
		Job Site: NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
EUT Power Levels: DH5 = 6, 2DH5 = 7, 3DH5 = 7.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	10	Signature 	
		Frequency Range	Max Value (dBc) Limit ≤ (dBc) Result
Ant 2			
DH5			
	Low Channel 1, 2402 MHz	30 MHz - 12.5 GHz	-52.61 -20 Pass
	Low Channel 1, 2402 MHz	12.5 GHz - 25 GHz	-55.47 -20 Pass
	Mid Channel 39, 2440 MHz	30 MHz - 12.5 GHz	-48.95 -20 Pass
	Mid Channel 39, 2440 MHz	12.5 GHz - 25 GHz	-56.98 -20 Pass
	High Channel 79, 2480 MHz	30 MHz - 12.5 GHz	-49.72 -20 Pass
	High Channel 79, 2480 MHz	12.5 GHz - 25 GHz	-57.9 -20 Pass
2DH5			
	Low Channel 1, 2402 MHz	30 MHz - 12.5 GHz	-51.43 -20 Pass
	Low Channel 1, 2402 MHz	12.5 GHz - 25 GHz	-53.72 -20 Pass
	Mid Channel 39, 2440 MHz	30 MHz - 12.5 GHz	-48.98 -20 Pass
	Mid Channel 39, 2440 MHz	12.5 GHz - 25 GHz	-56.2 -20 Pass
	High Channel 79, 2480 MHz	30 MHz - 12.5 GHz	-52 -20 Pass
	High Channel 79, 2480 MHz	12.5 GHz - 25 GHz	-56.43 -20 Pass
3DH5			
	Low Channel 1, 2402 MHz	30 MHz - 12.5 GHz	-53.29 -20 Pass
	Low Channel 1, 2402 MHz	12.5 GHz - 25 GHz	-55.37 -20 Pass
	Mid Channel 39, 2440 MHz	30 MHz - 12.5 GHz	-50.77 -20 Pass
	Mid Channel 39, 2440 MHz	12.5 GHz - 25 GHz	-55.31 -20 Pass
	High Channel 79, 2480 MHz	30 MHz - 12.5 GHz	-50.8 -20 Pass
	High Channel 79, 2480 MHz	12.5 GHz - 25 GHz	-55.37 -20 Pass

SPURIOUS CONDUCTED EMISSIONS

Ant 2, DH5, Low Channel 1, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-52.61	-20	Pass	

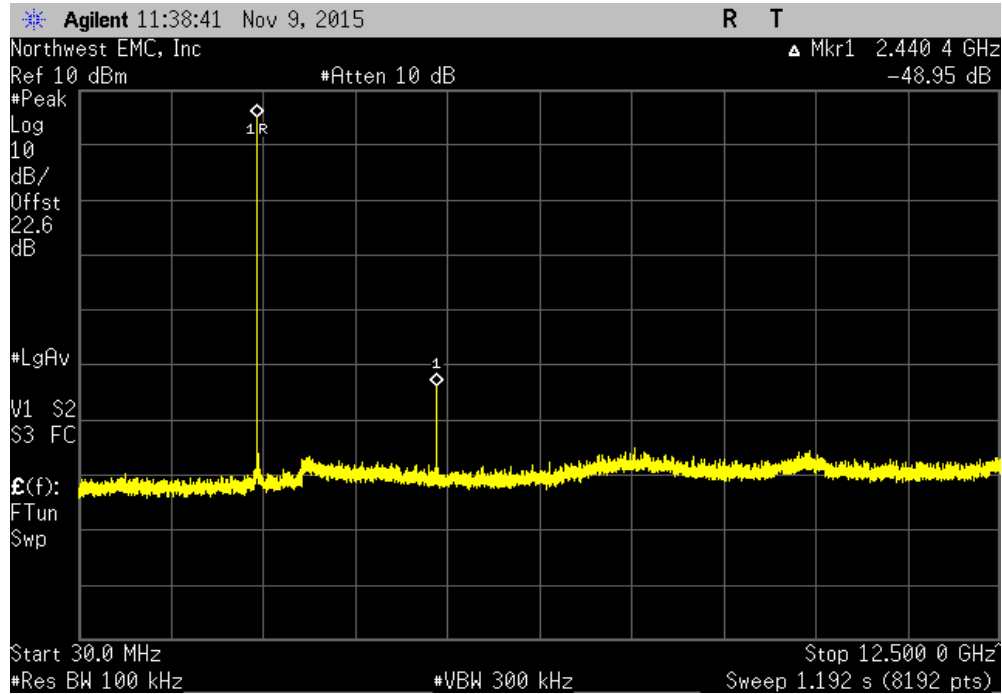


Ant 2, DH5, Low Channel 1, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.47	-20	Pass	

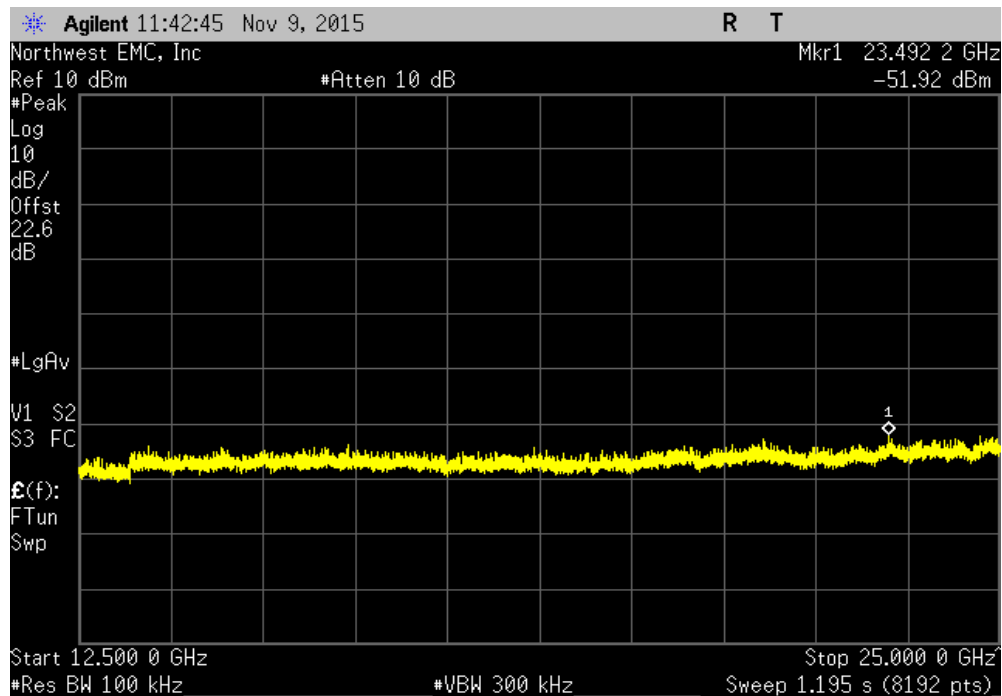


SPURIOUS CONDUCTED EMISSIONS

Ant 2, DH5, Mid Channel 39, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-48.95	-20	Pass	

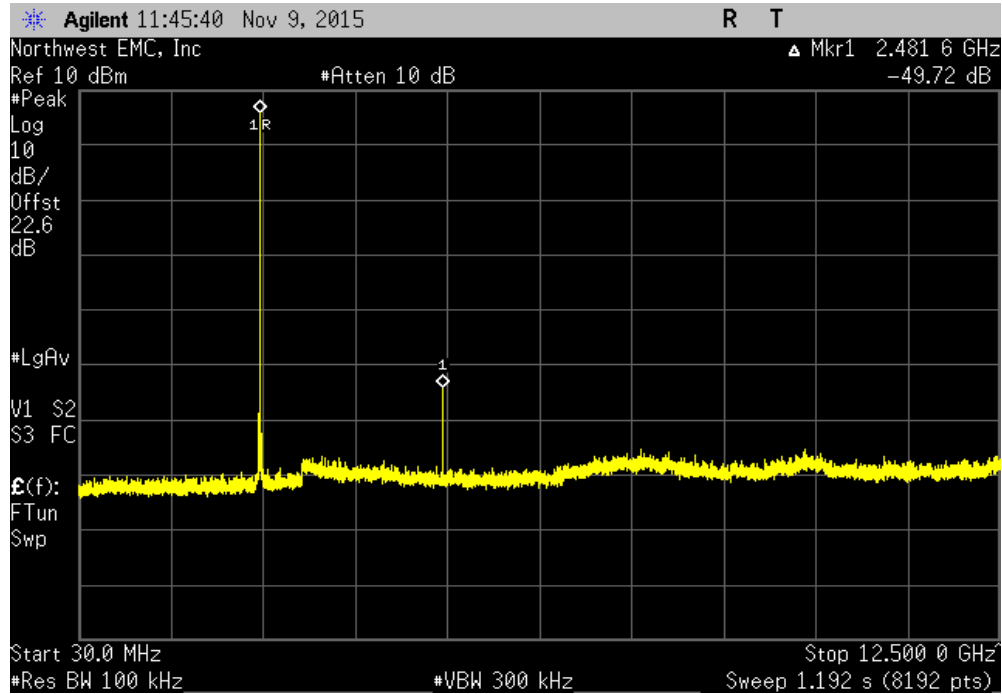


Ant 2, DH5, Mid Channel 39, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-56.98	-20	Pass	

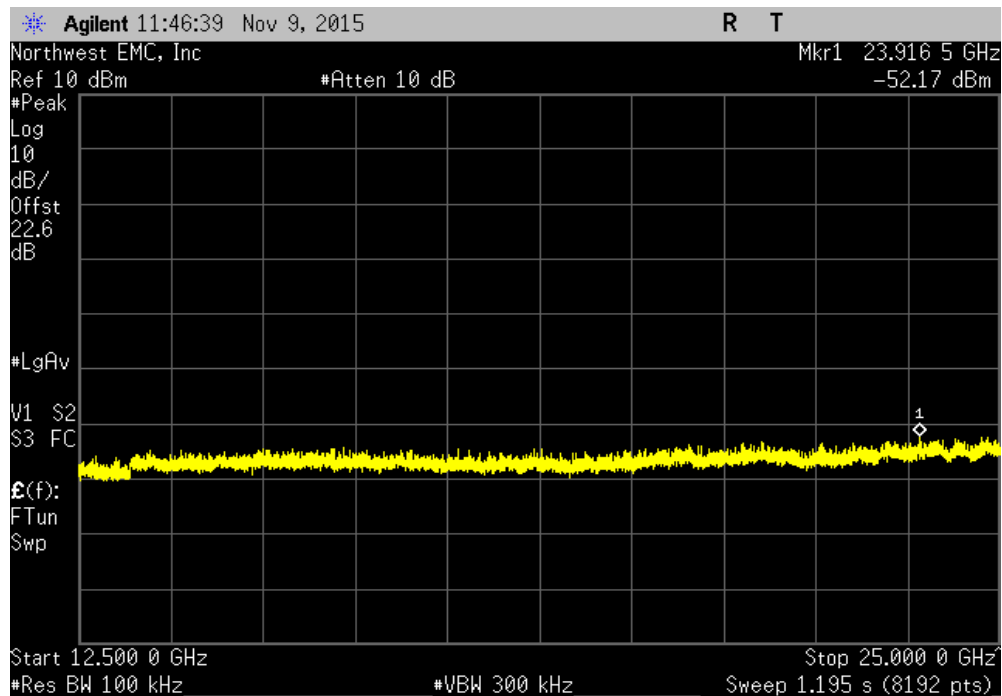


SPURIOUS CONDUCTED EMISSIONS

Ant 2, DH5, High Channel 79, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-49.72	-20	Pass	

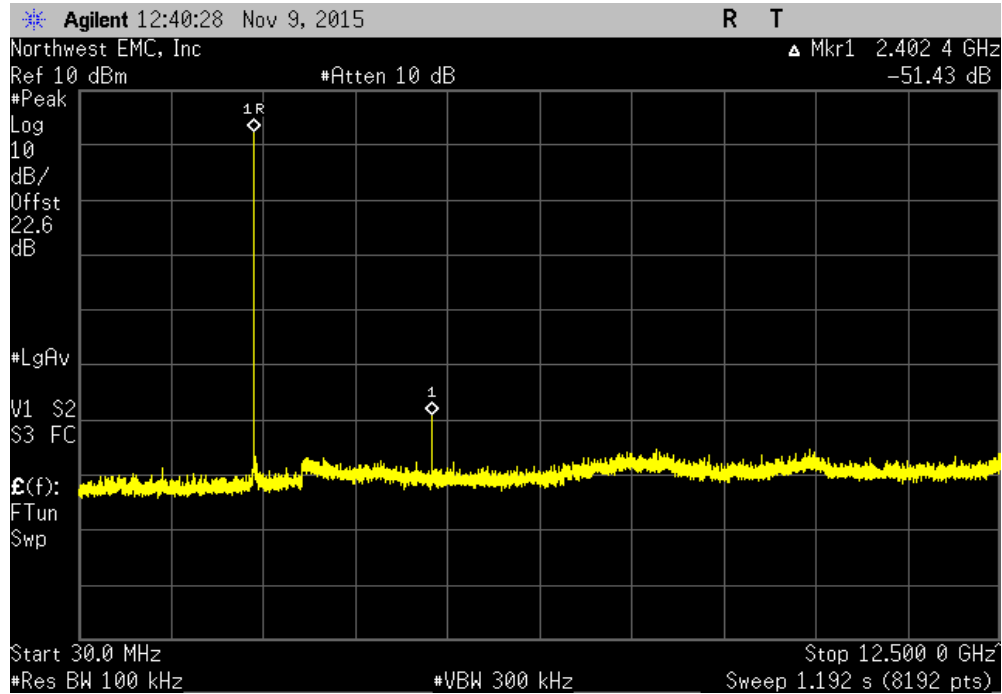


Ant 2, DH5, High Channel 79, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-57.9	-20	Pass	

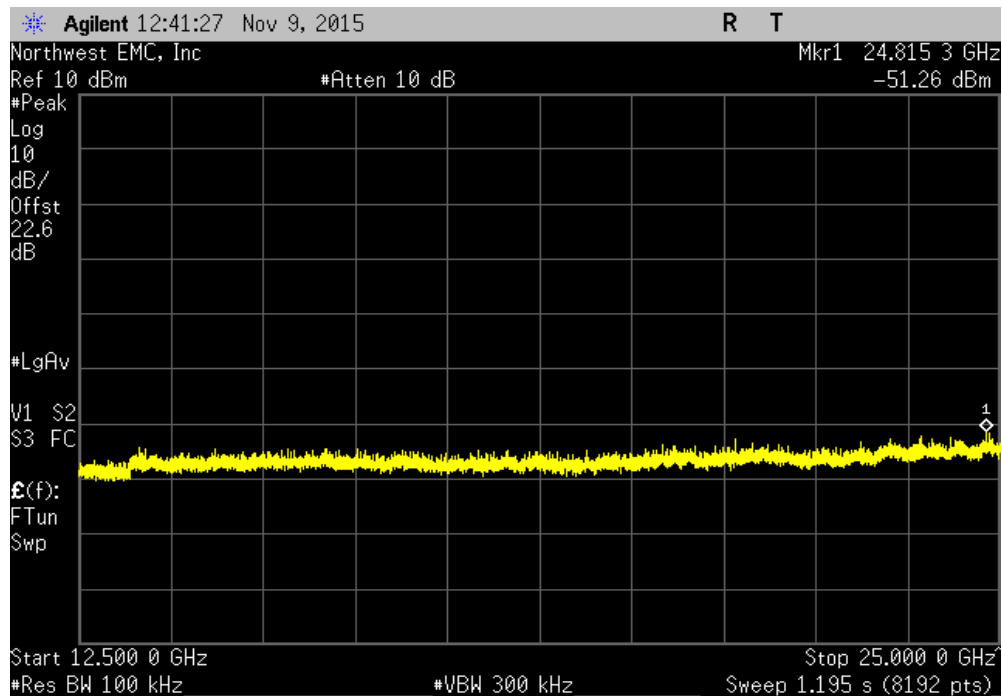


SPURIOUS CONDUCTED EMISSIONS

Ant 2, 2DH5, Low Channel 1, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-51.43	-20	Pass	

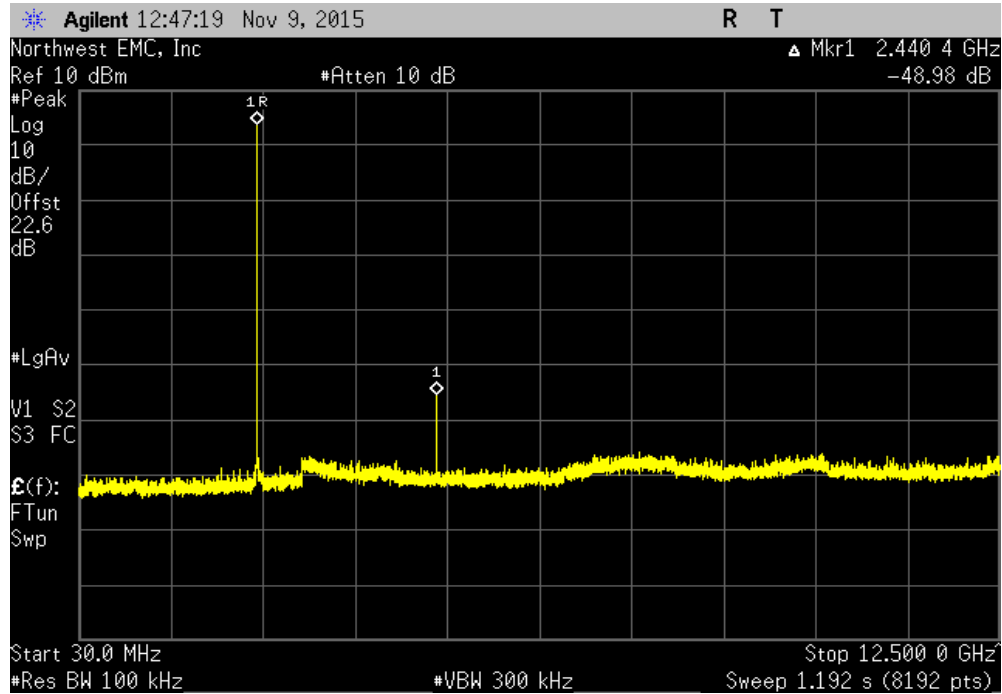


Ant 2, 2DH5, Low Channel 1, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-53.72	-20	Pass	

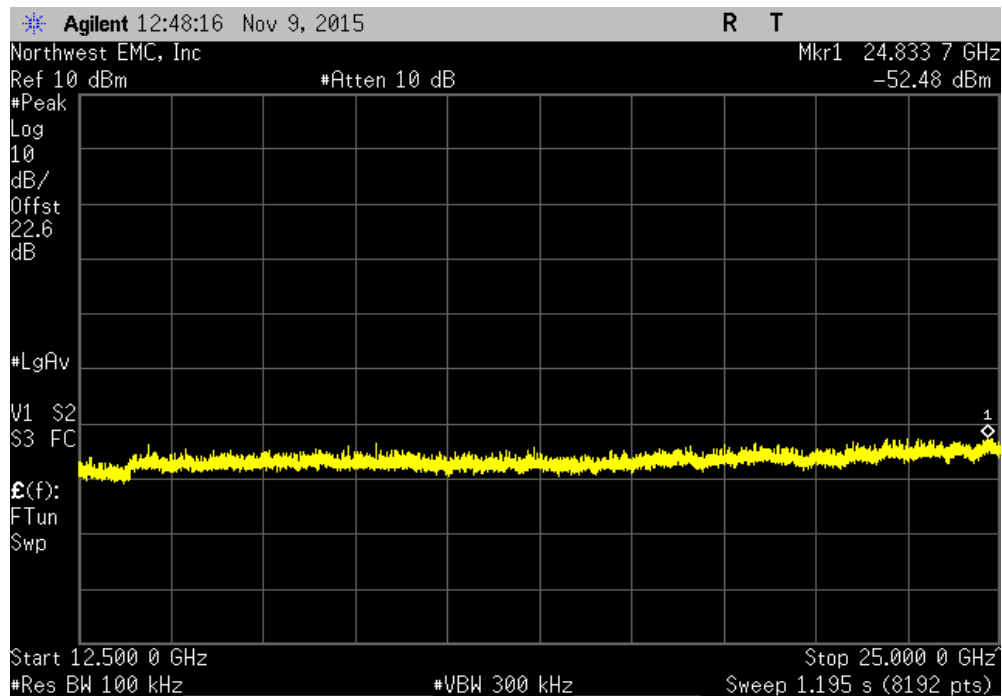


SPURIOUS CONDUCTED EMISSIONS

Ant 2, 2DH5, Mid Channel 39, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-48.98	-20	Pass	

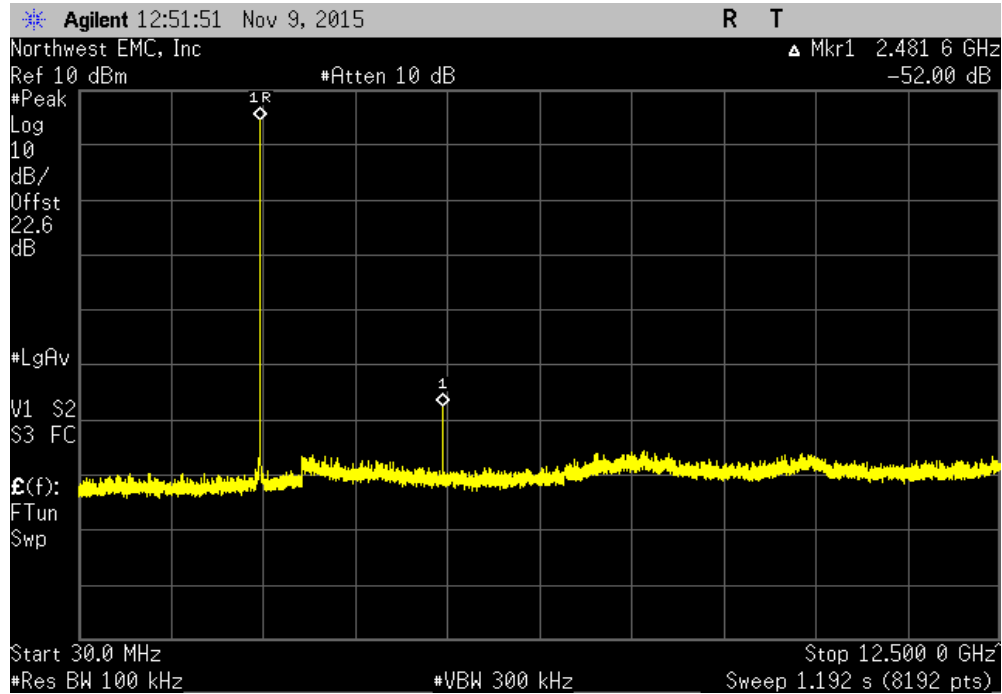


Ant 2, 2DH5, Mid Channel 39, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-56.2	-20	Pass	

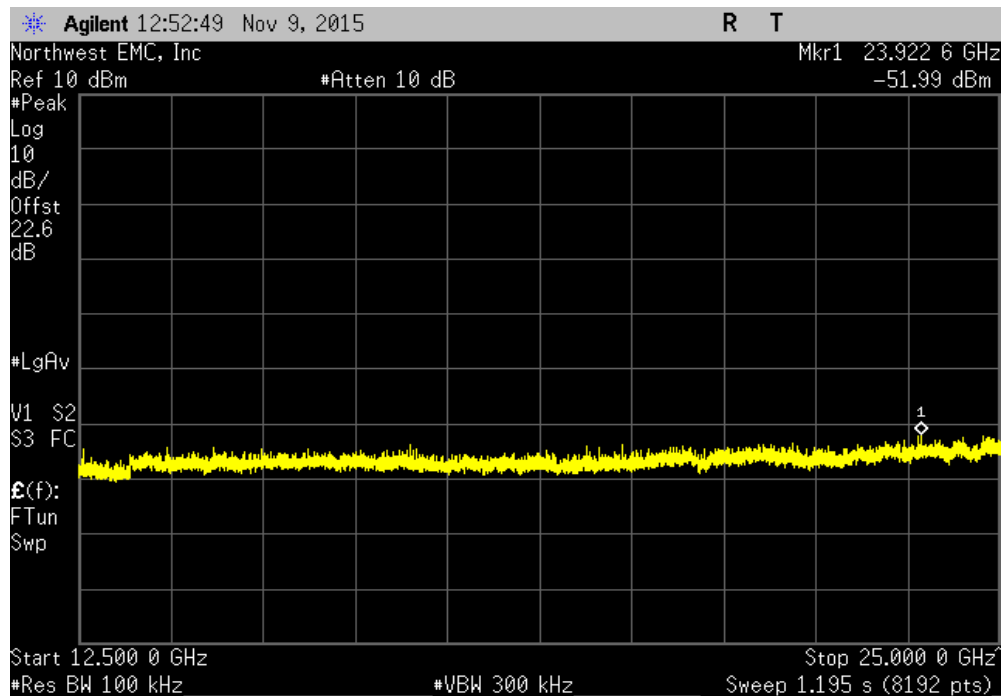


SPURIOUS CONDUCTED EMISSIONS

Ant 2, 2DH5, High Channel 79, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-52	-20	Pass	

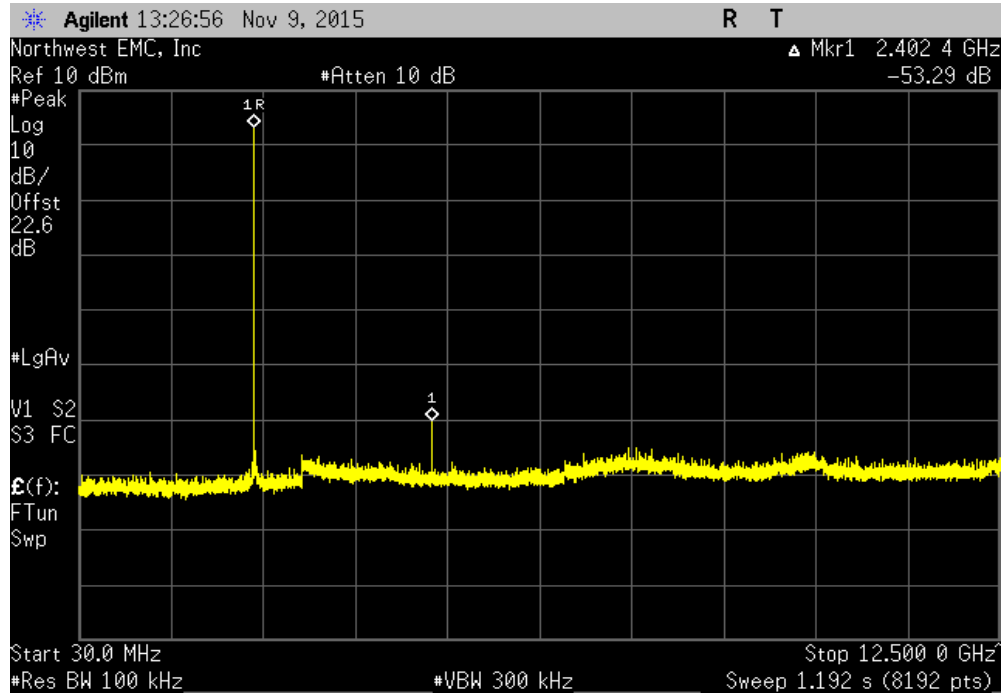


Ant 2, 2DH5, High Channel 79, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-56.43	-20	Pass	

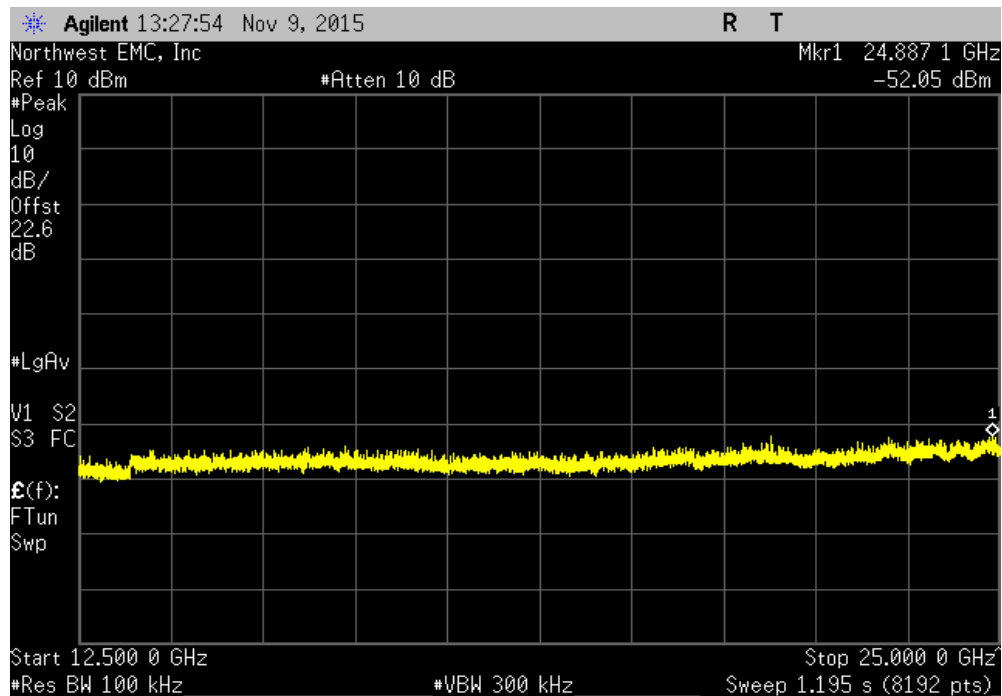


SPURIOUS CONDUCTED EMISSIONS

Ant 2, 3DH5, Low Channel 1, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-53.29	-20	Pass	

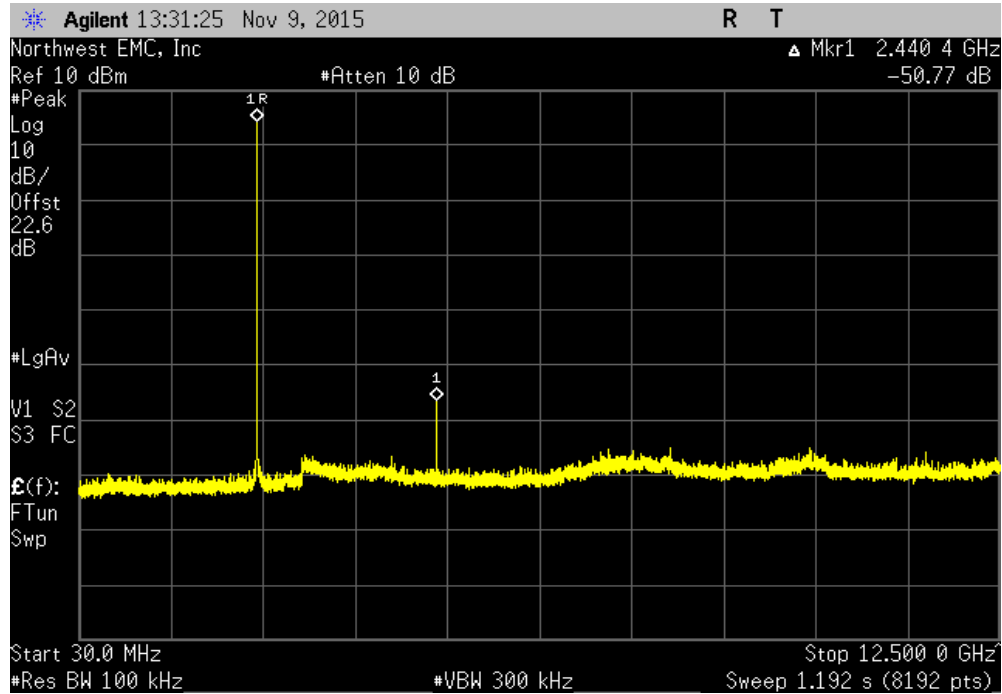


Ant 2, 3DH5, Low Channel 1, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.37	-20	Pass	

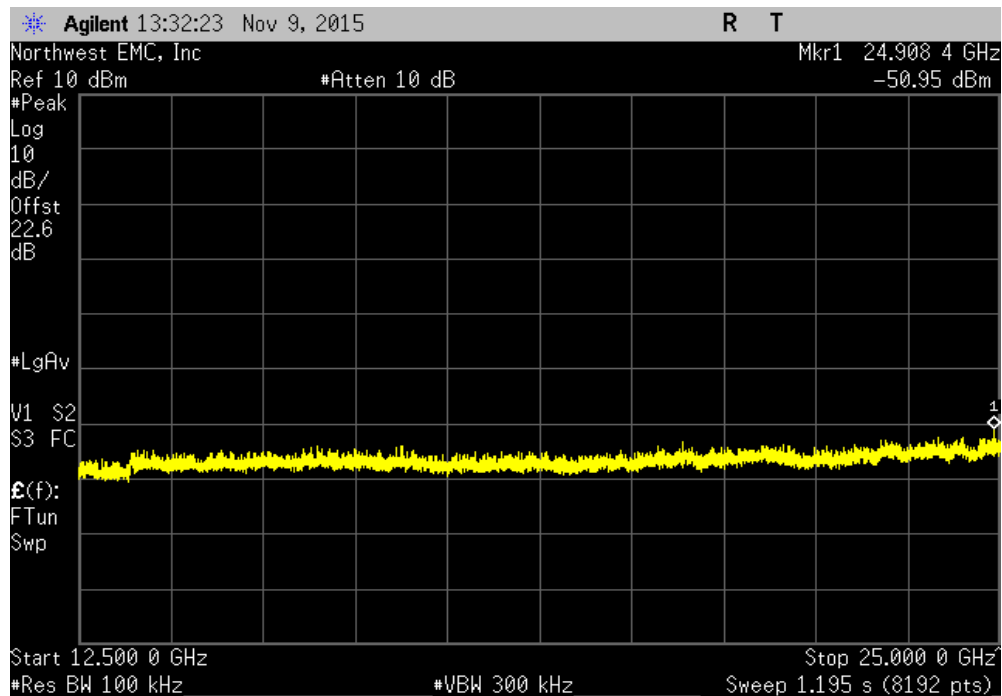


SPURIOUS CONDUCTED EMISSIONS

Ant 2, 3DH5, Mid Channel 39, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-50.77	-20	Pass	

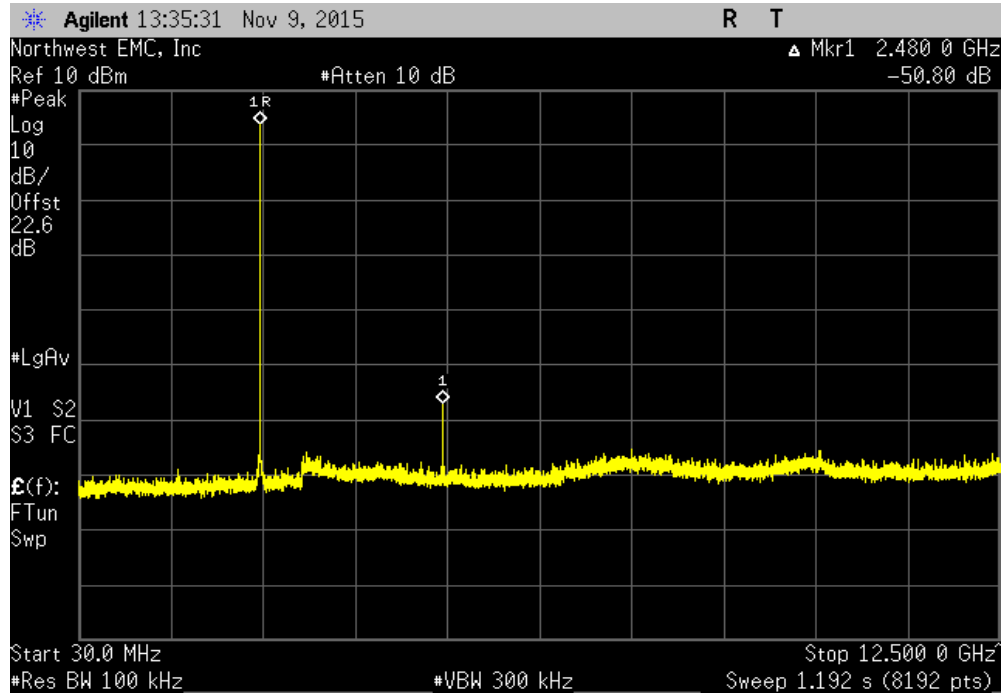


Ant 2, 3DH5, Mid Channel 39, 2440 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.31	-20	Pass	



SPURIOUS CONDUCTED EMISSIONS

Ant 2, 3DH5, High Channel 79, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-50.8	-20	Pass	



Ant 2, 3DH5, High Channel 79, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-55.37	-20	Pass	

