

NORTHWEST EMC

Precor, Inc.

Precor Wi-Fi / Bluetooth Module Model 303346

FCC 15.207:2015

FCC 15.247:2015

802.11 bgn Radio

Report # PRCR0230



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: October 22, 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	

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	
6.10.4	Band Edge Compliance	Yes	Pass	
11.6	Duty Cycle	Yes	N/A	
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9	Output Power	Yes	Pass	
11.10	Power Spectral Density	Yes	Pass	
11.11	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.

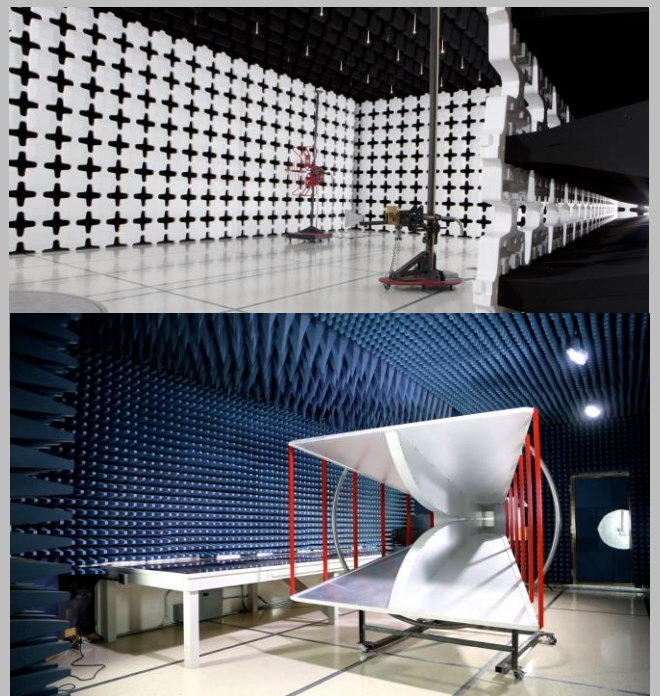
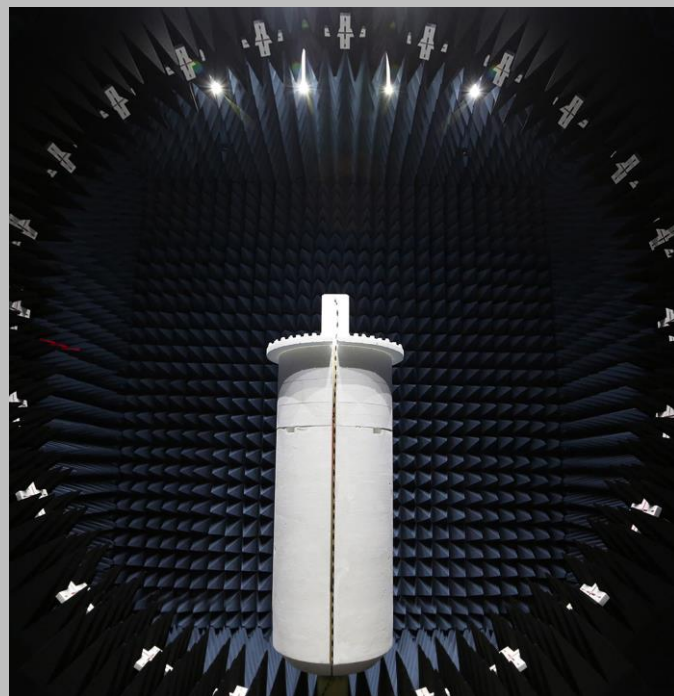
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

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

Client 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:	October 1, 2015
Last Date of Test:	October 22, 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 802.11 radio under FCC 15.247 for operation in the 2.4 GHz band.

802.11 (b/g/n): RF Power Table – FCC 15.247

20 MHz Bandwidth Channels, Antenna 1, SISO Power Settings:

	2412 MHz	2437 MHz	2462 MHz
1 Mbps	20	20	20
11 Mbps	20	20	20
6 Mbps	20	20	20
36 Mbps	20	20	20
54 Mbps	20	20	20
MCS0	20	20	20
MCS7	20	20	20

20 MHz Bandwidth Channels, Antenna 2, SISO Power Settings:

	2412 MHz	2437 MHz	2462 MHz
1 Mbps	20	20	20
11 Mbps	20	20	20
6 Mbps	20	20	20
36 Mbps	20	20	20
54 Mbps	20	20	20
MCS0	20	20	20
MCS7	20	20	20

40 MHz Bandwidth Channels, Antenna 1, SISO Power Settings:

	2432 MHz	2452 MHz
MCS0	15	20
MCS7	20	20

40 MHz Bandwidth Channels, Antenna 2, SISO Power Settings:

	2432 MHz	2452 MHz
MCS0	12	20
MCS7	20	20

20 MHz Bandwidth Channels, 2x2 MIMO Power Settings:

	2412 MHz	2437 MHz	2462 MHz
MCS12	20	20	20
MCS15	20	20	20

CONFIGURATIONS

Configuration PRCR0230- 1 and PRCR0230-6

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	10/1/2015	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	10/1/2015	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.
3	10/1/2015	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.
4	10/1/2015	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.
5	10/1/2015	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.
6	10/1/2015	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.
7	10/6/2015	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
8	10/22/2015	Spurious Radiated 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
Cable - Conducted Cable Assembly	Northwest EMC	NC4, HHF, RKD	NC4A	2/11/2015	2/11/2016
LISN	Solar Electronics	9252-50-R-24-BNC	LIM	12/9/2014	12/9/2015
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

PRCR0230-1

MODES INVESTIGATED

Transmitting Low Channel 1, 2412 MHz, 1Mbps, Ant 1
Transmitting Mid Channel 6, 2437 MHz, 1Mbps, Ant 1
Transmitting High Channel 11, 2462 MHz, 1Mbps, Ant 1

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	10/06/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	46%
Customer Project:	None	Bar. Pressure:	1017 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-1

TEST SPECIFICATIONS

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

TEST PARAMETERS

Run #:	1	Line:	High Line	Add. Ext. Attenuation (dB):	0
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COMMENTS

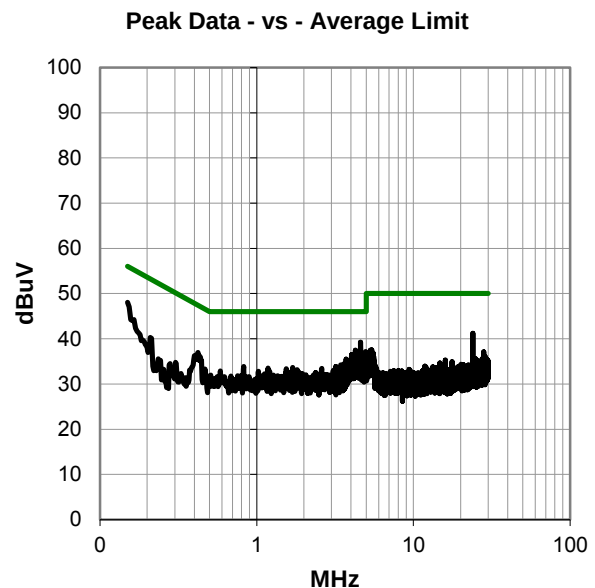
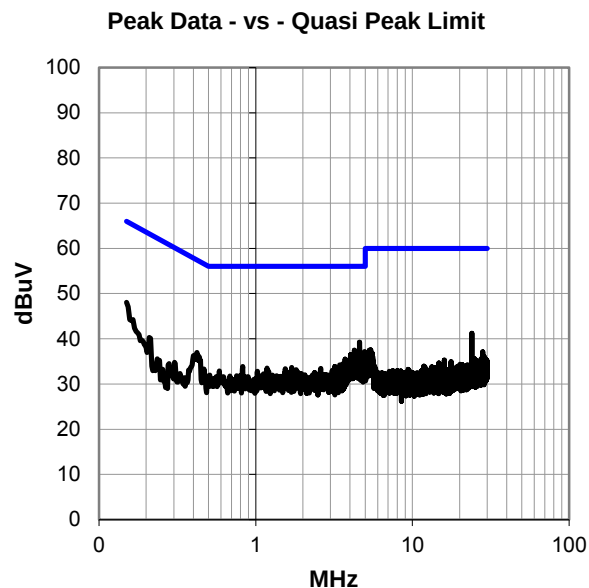
Power settings at Maximum.

EUT OPERATING MODES

Transmitting Low Channel 1, 2412 MHz, 1Mbps, Ant 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #1

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
4.605	18.6	20.6	39.2	56.0	-16.8
0.150	27.6	20.5	48.1	66.0	-18.0
4.265	16.9	20.6	37.5	56.0	-18.5
24.001	18.3	22.9	41.2	60.0	-18.8
4.970	16.6	20.6	37.2	56.0	-18.8
4.593	16.2	20.6	36.8	56.0	-19.2
4.161	16.0	20.6	36.6	56.0	-19.4
4.720	15.9	20.6	36.5	56.0	-19.5
4.030	15.9	20.6	36.5	56.0	-19.5
4.041	15.8	20.6	36.4	56.0	-19.6
4.373	15.7	20.6	36.3	56.0	-19.7
4.407	15.6	20.6	36.2	56.0	-19.8
4.817	15.3	20.6	35.9	56.0	-20.1
4.190	15.3	20.6	35.9	56.0	-20.1
4.784	15.0	20.6	35.6	56.0	-20.4
0.422	16.7	20.3	37.0	57.4	-20.4
4.489	15.0	20.6	35.6	56.0	-20.4
4.396	15.0	20.6	35.6	56.0	-20.4
3.720	14.9	20.6	35.5	56.0	-20.5
4.079	14.8	20.6	35.4	56.0	-20.6
4.522	14.6	20.6	35.2	56.0	-20.8
3.814	14.5	20.6	35.1	56.0	-20.9
3.873	14.1	20.6	34.7	56.0	-21.3
3.959	13.9	20.6	34.5	56.0	-21.5
3.605	13.9	20.6	34.5	56.0	-21.5
3.620	13.7	20.6	34.3	56.0	-21.7

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
4.605	18.6	20.6	39.2	46.0	-6.8
0.150	27.6	20.5	48.1	56.0	-8.0
4.265	16.9	20.6	37.5	46.0	-8.5
24.001	18.3	22.9	41.2	50.0	-8.8
4.970	16.6	20.6	37.2	46.0	-8.8
4.593	16.2	20.6	36.8	46.0	-9.2
4.161	16.0	20.6	36.6	46.0	-9.4
4.720	15.9	20.6	36.5	46.0	-9.5
4.030	15.9	20.6	36.5	46.0	-9.5
4.041	15.8	20.6	36.4	46.0	-9.6
4.373	15.7	20.6	36.3	46.0	-9.7
4.407	15.6	20.6	36.2	46.0	-9.8
4.817	15.3	20.6	35.9	46.0	-10.1
4.190	15.3	20.6	35.9	46.0	-10.1
4.784	15.0	20.6	35.6	46.0	-10.4
0.422	16.7	20.3	37.0	47.4	-10.4
4.489	15.0	20.6	35.6	46.0	-10.4
4.396	15.0	20.6	35.6	46.0	-10.4
3.720	14.9	20.6	35.5	46.0	-10.5
4.079	14.8	20.6	35.4	46.0	-10.6
4.522	14.6	20.6	35.2	46.0	-10.8
3.814	14.5	20.6	35.1	46.0	-10.9
3.873	14.1	20.6	34.7	46.0	-11.3
3.959	13.9	20.6	34.5	46.0	-11.5
3.605	13.9	20.6	34.5	46.0	-11.5
3.620	13.7	20.6	34.3	46.0	-11.7

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	10/06/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	46%
Customer Project:	None	Bar. Pressure:	1017 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-1

TEST SPECIFICATIONS

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

TEST PARAMETERS

Run #:	2	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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COMMENTS

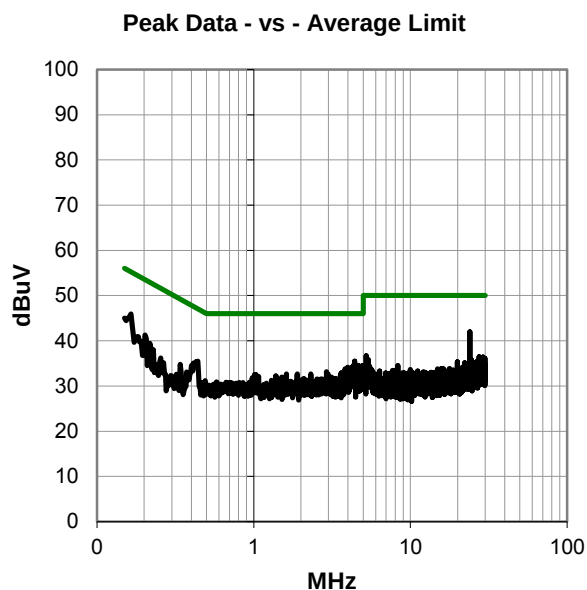
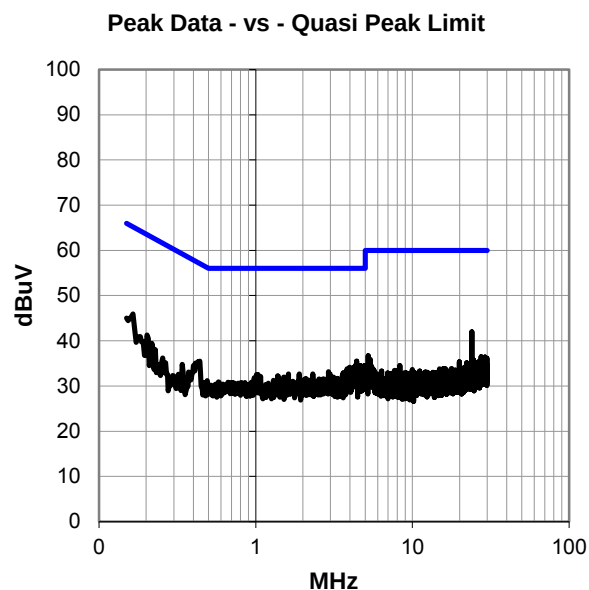
Power settings at Maximum.

EUT OPERATING MODES

Transmitting Low Channel 1, 2412 MHz, 1Mbps, Ant 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #2

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	19.1	22.9	42.0	60.0	-18.0
0.165	25.5	20.4	45.9	65.2	-19.3
4.411	14.9	20.6	35.5	56.0	-20.5
4.351	14.0	20.6	34.6	56.0	-21.4
4.612	13.9	20.6	34.5	56.0	-21.5
4.638	13.9	20.6	34.5	56.0	-21.5
4.929	13.9	20.6	34.5	56.0	-21.5
0.441	15.2	20.3	35.5	57.0	-21.5
4.649	13.8	20.6	34.4	56.0	-21.6
3.967	13.6	20.6	34.2	56.0	-21.8
4.179	13.5	20.6	34.1	56.0	-21.9
4.810	13.4	20.6	34.0	56.0	-22.0
4.228	13.4	20.6	34.0	56.0	-22.0
3.821	13.2	20.6	33.8	56.0	-22.2
0.202	20.9	20.4	41.3	63.5	-22.2
4.847	13.1	20.6	33.7	56.0	-22.3
4.373	12.8	20.6	33.4	56.0	-22.6
4.004	12.6	20.6	33.2	56.0	-22.8
2.918	12.7	20.4	33.1	56.0	-22.9
4.586	12.4	20.6	33.0	56.0	-23.0
4.075	12.3	20.6	32.9	56.0	-23.1
4.041	12.3	20.6	32.9	56.0	-23.1
3.616	12.3	20.6	32.9	56.0	-23.1
4.560	12.2	20.6	32.8	56.0	-23.2
5.228	16.1	20.6	36.7	60.0	-23.3
2.318	12.3	20.4	32.7	56.0	-23.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	19.1	22.9	42.0	50.0	-8.0
0.165	25.5	20.4	45.9	55.2	-9.3
4.411	14.9	20.6	35.5	46.0	-10.5
4.351	14.0	20.6	34.6	46.0	-11.4
4.612	13.9	20.6	34.5	46.0	-11.5
4.638	13.9	20.6	34.5	46.0	-11.5
4.929	13.9	20.6	34.5	46.0	-11.5
0.441	15.2	20.3	35.5	47.0	-11.5
4.649	13.8	20.6	34.4	46.0	-11.6
3.967	13.6	20.6	34.2	46.0	-11.8
4.179	13.5	20.6	34.1	46.0	-11.9
4.810	13.4	20.6	34.0	46.0	-12.0
4.228	13.4	20.6	34.0	46.0	-12.0
3.821	13.2	20.6	33.8	46.0	-12.2
0.202	20.9	20.4	41.3	53.5	-12.2
4.847	13.1	20.6	33.7	46.0	-12.3
4.373	12.8	20.6	33.4	46.0	-12.6
4.004	12.6	20.6	33.2	46.0	-12.8
2.918	12.7	20.4	33.1	46.0	-12.9
4.586	12.4	20.6	33.0	46.0	-13.0
4.075	12.3	20.6	32.9	46.0	-13.1
4.041	12.3	20.6	32.9	46.0	-13.1
3.616	12.3	20.6	32.9	46.0	-13.1
4.560	12.2	20.6	32.8	46.0	-13.2
5.228	16.1	20.6	36.7	50.0	-13.3
2.318	12.3	20.4	32.7	46.0	-13.3

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	10/06/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	46%
Customer Project:	None	Bar. Pressure:	1017 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-1

TEST SPECIFICATIONS

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

TEST PARAMETERS

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

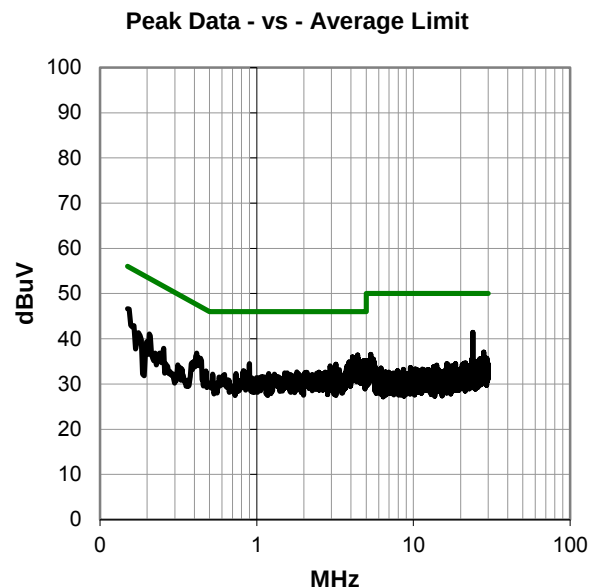
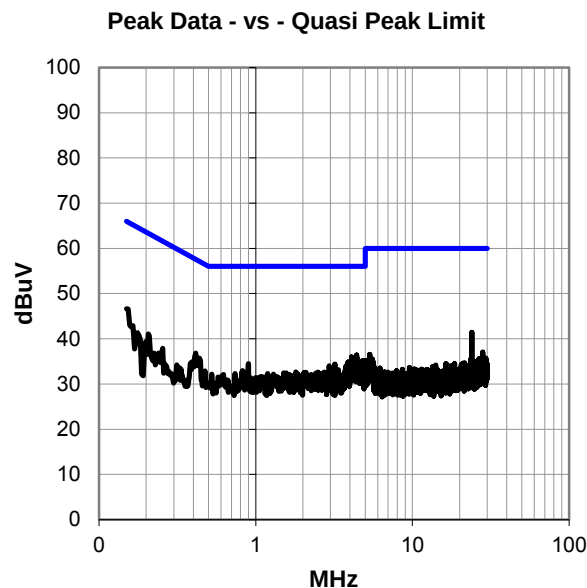
Power settings at Maximum.

EUT OPERATING MODES

Transmitting Mid Channel 6, 2437 MHz, 1Mbps, Ant 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #3

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	18.5	22.9	41.4	60.0	-18.6
0.150	26.2	20.5	46.7	66.0	-19.4
4.414	15.8	20.6	36.4	56.0	-19.6
4.086	15.4	20.6	36.0	56.0	-20.0
4.459	15.0	20.6	35.6	56.0	-20.4
4.295	14.9	20.6	35.5	56.0	-20.5
4.108	14.9	20.6	35.5	56.0	-20.5
0.415	16.5	20.3	36.8	57.5	-20.7
4.851	14.6	20.6	35.2	56.0	-20.8
4.552	14.5	20.6	35.1	56.0	-20.9
4.537	14.4	20.6	35.0	56.0	-21.0
4.373	14.4	20.6	35.0	56.0	-21.0
4.224	14.4	20.6	35.0	56.0	-21.0
4.343	14.3	20.6	34.9	56.0	-21.1
4.157	14.3	20.6	34.9	56.0	-21.1
4.004	14.3	20.6	34.9	56.0	-21.1
3.885	14.3	20.6	34.9	56.0	-21.1
4.765	14.2	20.6	34.8	56.0	-21.2
4.575	14.2	20.6	34.8	56.0	-21.2
4.993	14.1	20.6	34.7	56.0	-21.3
0.900	14.2	20.3	34.5	56.0	-21.5
3.202	13.9	20.5	34.4	56.0	-21.6
3.806	13.5	20.6	34.1	56.0	-21.9
2.948	13.6	20.4	34.0	56.0	-22.0
4.668	13.4	20.6	34.0	56.0	-22.0
3.765	13.4	20.6	34.0	56.0	-22.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	18.5	22.9	41.4	50.0	-8.6
0.150	26.2	20.5	46.7	56.0	-9.3
4.414	15.8	20.6	36.4	46.0	-9.6
4.086	15.4	20.6	36.0	46.0	-10.0
4.459	15.0	20.6	35.6	46.0	-10.4
4.295	14.9	20.6	35.5	46.0	-10.5
4.108	14.9	20.6	35.5	46.0	-10.5
0.415	16.5	20.3	36.8	47.5	-10.7
4.851	14.6	20.6	35.2	46.0	-10.8
4.552	14.5	20.6	35.1	46.0	-10.9
4.537	14.4	20.6	35.0	46.0	-11.0
4.373	14.4	20.6	35.0	46.0	-11.0
4.224	14.4	20.6	35.0	46.0	-11.0
4.343	14.3	20.6	34.9	46.0	-11.1
4.157	14.3	20.6	34.9	46.0	-11.1
4.004	14.3	20.6	34.9	46.0	-11.1
3.885	14.3	20.6	34.9	46.0	-11.1
4.765	14.2	20.6	34.8	46.0	-11.2
4.575	14.2	20.6	34.8	46.0	-11.2
4.993	14.1	20.6	34.7	46.0	-11.3
0.900	14.2	20.3	34.5	46.0	-11.5
3.202	13.9	20.5	34.4	46.0	-11.6
3.806	13.5	20.6	34.1	46.0	-11.9
2.948	13.6	20.4	34.0	46.0	-12.0
4.668	13.4	20.6	34.0	46.0	-12.0
3.765	13.4	20.6	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:	10/06/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	46%
Customer Project:	None	Bar. Pressure:	1017 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-1

TEST SPECIFICATIONS

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

TEST PARAMETERS

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

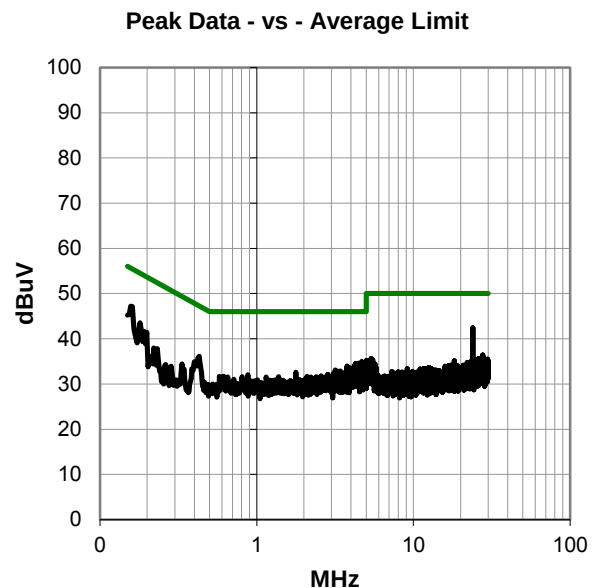
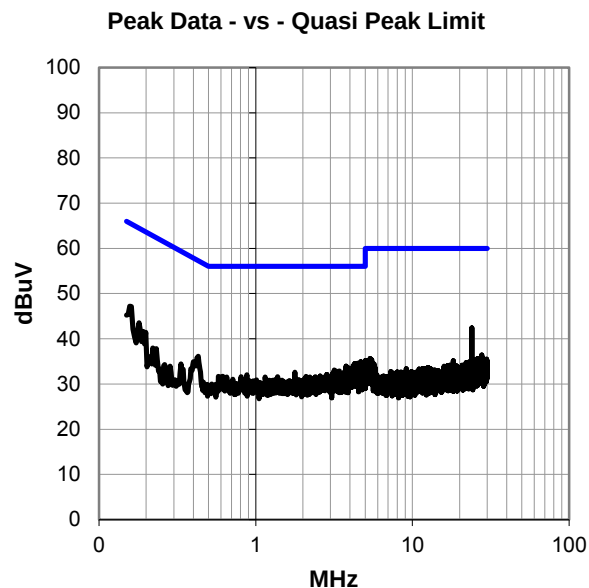
Power settings at Maximum.

EUT OPERATING MODES

Transmitting Mid Channel 6, 2437 MHz, 1Mbps, Ant 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #4

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	19.5	22.9	42.4	60.0	-17.6
0.157	26.8	20.4	47.2	65.6	-18.4
0.180	23.1	20.4	43.5	64.5	-21.0
4.690	14.3	20.6	34.9	56.0	-21.1
0.430	15.8	20.3	36.1	57.3	-21.2
4.470	14.0	20.6	34.6	56.0	-21.4
4.664	13.9	20.6	34.5	56.0	-21.5
4.287	13.9	20.6	34.5	56.0	-21.5
4.194	13.5	20.6	34.1	56.0	-21.9
4.366	13.4	20.6	34.0	56.0	-22.0
4.269	13.4	20.6	34.0	56.0	-22.0
3.780	13.4	20.6	34.0	56.0	-22.0
4.511	13.1	20.6	33.7	56.0	-22.3
3.862	13.1	20.6	33.7	56.0	-22.3
4.940	12.8	20.6	33.4	56.0	-22.6
4.978	12.8	20.6	33.4	56.0	-22.6
4.347	12.8	20.6	33.4	56.0	-22.6
4.045	12.8	20.6	33.4	56.0	-22.6
4.015	12.7	20.6	33.3	56.0	-22.7
4.567	12.6	20.6	33.2	56.0	-22.8
4.556	12.6	20.6	33.2	56.0	-22.8
3.179	12.6	20.5	33.1	56.0	-22.9
4.381	12.4	20.6	33.0	56.0	-23.0
3.426	12.4	20.5	32.9	56.0	-23.1
4.922	12.3	20.6	32.9	56.0	-23.1
4.746	12.2	20.6	32.8	56.0	-23.2

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	19.5	22.9	42.4	50.0	-7.6
0.157	26.8	20.4	47.2	55.6	-8.4
0.180	23.1	20.4	43.5	54.5	-11.0
4.690	14.3	20.6	34.9	46.0	-11.1
0.430	15.8	20.3	36.1	47.3	-11.2
4.470	14.0	20.6	34.6	46.0	-11.4
4.664	13.9	20.6	34.5	46.0	-11.5
4.287	13.9	20.6	34.5	46.0	-11.5
4.194	13.5	20.6	34.1	46.0	-11.9
4.366	13.4	20.6	34.0	46.0	-12.0
4.269	13.4	20.6	34.0	46.0	-12.0
3.780	13.4	20.6	34.0	46.0	-12.0
4.511	13.1	20.6	33.7	46.0	-12.3
3.862	13.1	20.6	33.7	46.0	-12.3
4.940	12.8	20.6	33.4	46.0	-12.6
4.978	12.8	20.6	33.4	46.0	-12.6
4.347	12.8	20.6	33.4	46.0	-12.6
4.045	12.8	20.6	33.4	46.0	-12.6
4.015	12.7	20.6	33.3	46.0	-12.7
4.567	12.6	20.6	33.2	46.0	-12.8
4.556	12.6	20.6	33.2	46.0	-12.8
3.179	12.6	20.5	33.1	46.0	-12.9
4.381	12.4	20.6	33.0	46.0	-13.0
3.426	12.4	20.5	32.9	46.0	-13.1
4.922	12.3	20.6	32.9	46.0	-13.1
4.746	12.2	20.6	32.8	46.0	-13.2

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	10/06/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	46%
Customer Project:	None	Bar. Pressure:	1017 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-1

TEST SPECIFICATIONS

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

TEST PARAMETERS

Run #:	5	Line:	High Line	Add. Ext. Attenuation (dB):	0
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COMMENTS

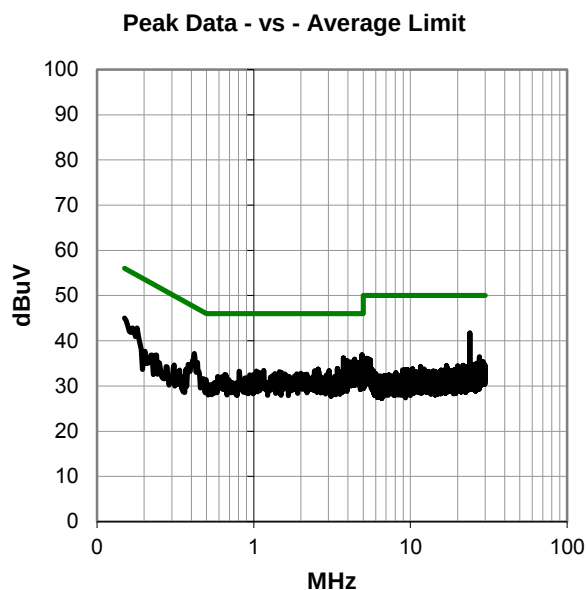
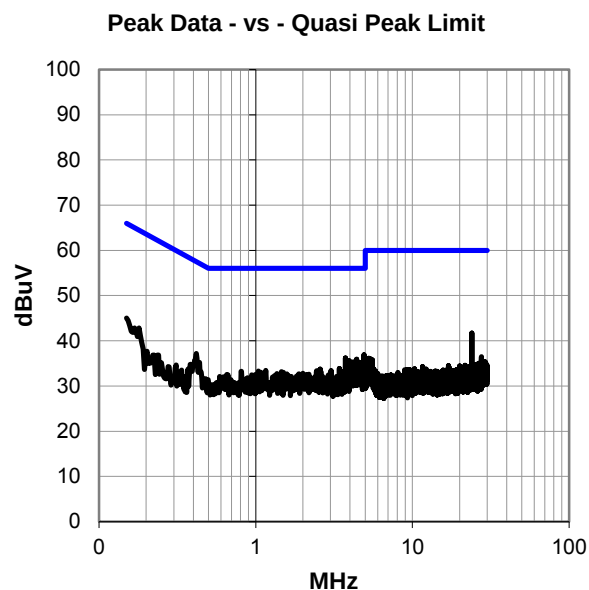
Power settings at Maximum.

EUT OPERATING MODES

Transmitting High Channel 11, 2462 MHz, 1Mbps, Ant 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #5

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	18.8	22.9	41.7	60.0	-18.3
4.918	16.3	20.6	36.9	56.0	-19.1
3.735	15.6	20.6	36.2	56.0	-19.8
4.403	15.3	20.6	35.9	56.0	-20.1
0.419	16.9	20.3	37.2	57.5	-20.3
3.959	15.0	20.6	35.6	56.0	-20.4
4.213	14.8	20.6	35.4	56.0	-20.6
4.735	14.6	20.6	35.2	56.0	-20.8
4.504	14.6	20.6	35.2	56.0	-20.8
4.448	14.6	20.6	35.2	56.0	-20.8
4.429	14.6	20.6	35.2	56.0	-20.8
0.150	24.6	20.5	45.1	66.0	-21.0
4.832	14.3	20.6	34.9	56.0	-21.1
4.317	14.2	20.6	34.8	56.0	-21.2
4.187	14.2	20.6	34.8	56.0	-21.2
4.153	14.2	20.6	34.8	56.0	-21.2
4.810	13.9	20.6	34.5	56.0	-21.5
4.366	13.9	20.6	34.5	56.0	-21.5
4.571	13.8	20.6	34.4	56.0	-21.6
4.127	13.7	20.6	34.3	56.0	-21.7
4.287	13.5	20.6	34.1	56.0	-21.9
3.418	13.4	20.5	33.9	56.0	-22.1
4.649	13.3	20.6	33.9	56.0	-22.1
2.579	13.3	20.4	33.7	56.0	-22.3
4.605	13.0	20.6	33.6	56.0	-22.4
3.896	13.0	20.6	33.6	56.0	-22.4

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	18.8	22.9	41.7	50.0	-8.3
4.918	16.3	20.6	36.9	46.0	-9.1
3.735	15.6	20.6	36.2	46.0	-9.8
4.403	15.3	20.6	35.9	46.0	-10.1
0.419	16.9	20.3	37.2	47.5	-10.3
3.959	15.0	20.6	35.6	46.0	-10.4
4.213	14.8	20.6	35.4	46.0	-10.6
4.735	14.6	20.6	35.2	46.0	-10.8
4.504	14.6	20.6	35.2	46.0	-10.8
4.448	14.6	20.6	35.2	46.0	-10.8
4.429	14.6	20.6	35.2	46.0	-10.8
0.150	24.6	20.5	45.1	56.0	-11.0
4.832	14.3	20.6	34.9	46.0	-11.1
4.317	14.2	20.6	34.8	46.0	-11.2
4.187	14.2	20.6	34.8	46.0	-11.2
4.153	14.2	20.6	34.8	46.0	-11.2
4.810	13.9	20.6	34.5	46.0	-11.5
4.366	13.9	20.6	34.5	46.0	-11.5
4.571	13.8	20.6	34.4	46.0	-11.6
4.127	13.7	20.6	34.3	46.0	-11.7
4.287	13.5	20.6	34.1	46.0	-11.9
3.418	13.4	20.5	33.9	46.0	-12.1
4.649	13.3	20.6	33.9	46.0	-12.1
2.579	13.3	20.4	33.7	46.0	-12.3
4.605	13.0	20.6	33.6	46.0	-12.4
3.896	13.0	20.6	33.6	46.0	-12.4

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Precor Wi-Fi / Bluetooth Module Model 303346	Work Order:	PRCR0230
Serial Number:	None	Date:	10/06/2015
Customer:	Precor, Inc.	Temperature:	23°C
Attendees:	Rich Whitbeck	Relative Humidity:	46%
Customer Project:	None	Bar. Pressure:	1017 mb
Tested By:	Richard Mellroth	Job Site:	NC05
Power:	110VAC/60Hz	Configuration:	PRCR0230-1

TEST SPECIFICATIONS

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

TEST PARAMETERS

Run #:	6	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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COMMENTS

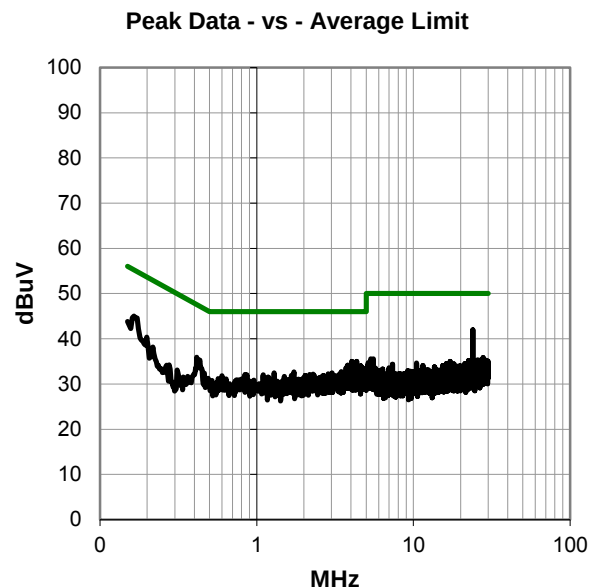
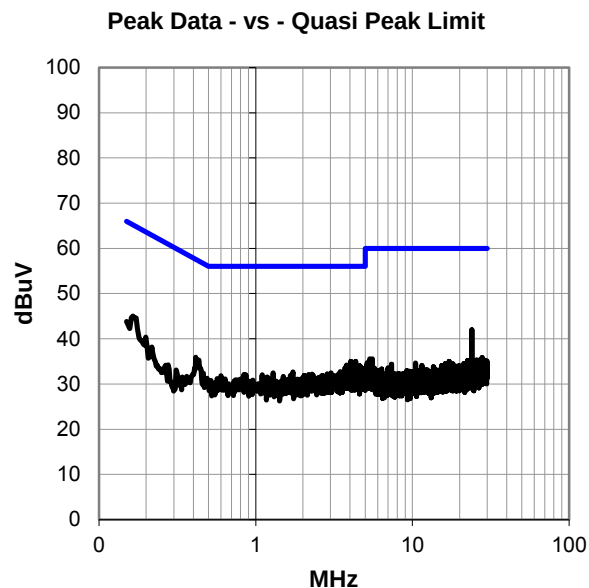
Power settings at Maximum.

EUT OPERATING MODES

Transmitting High Channel 11, 2462 MHz, 1Mbps, Ant 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #6

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	19.1	22.9	42.0	60.0	-18.0
0.165	24.6	20.4	45.0	65.2	-20.2
4.343	14.4	20.6	35.0	56.0	-21.0
4.052	14.4	20.6	35.0	56.0	-21.0
4.239	14.1	20.6	34.7	56.0	-21.3
0.415	15.6	20.3	35.9	57.5	-21.6
3.806	13.6	20.6	34.2	56.0	-21.8
4.627	13.4	20.6	34.0	56.0	-22.0
4.306	13.4	20.6	34.0	56.0	-22.0
4.108	13.4	20.6	34.0	56.0	-22.0
4.030	13.0	20.6	33.6	56.0	-22.4
3.922	13.0	20.6	33.6	56.0	-22.4
3.724	13.0	20.6	33.6	56.0	-22.4
4.847	12.8	20.6	33.4	56.0	-22.6
4.496	12.8	20.6	33.4	56.0	-22.6
3.896	12.7	20.6	33.3	56.0	-22.7
4.896	12.6	20.6	33.2	56.0	-22.8
4.541	12.6	20.6	33.2	56.0	-22.8
4.955	12.3	20.6	32.9	56.0	-23.1
4.414	12.3	20.6	32.9	56.0	-23.1
4.146	12.3	20.6	32.9	56.0	-23.1
3.780	12.2	20.6	32.8	56.0	-23.2
3.474	12.2	20.5	32.7	56.0	-23.3
4.590	12.1	20.6	32.7	56.0	-23.3
1.728	12.3	20.4	32.7	56.0	-23.3
3.023	12.0	20.4	32.4	56.0	-23.6

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
24.001	19.1	22.9	42.0	50.0	-8.0
0.165	24.6	20.4	45.0	55.2	-10.2
4.343	14.4	20.6	35.0	46.0	-11.0
4.052	14.4	20.6	35.0	46.0	-11.0
4.239	14.1	20.6	34.7	46.0	-11.3
0.415	15.6	20.3	35.9	47.5	-11.6
3.806	13.6	20.6	34.2	46.0	-11.8
4.627	13.4	20.6	34.0	46.0	-12.0
4.306	13.4	20.6	34.0	46.0	-12.0
4.108	13.4	20.6	34.0	46.0	-12.0
4.030	13.0	20.6	33.6	46.0	-12.4
3.922	13.0	20.6	33.6	46.0	-12.4
3.724	13.0	20.6	33.6	46.0	-12.4
4.847	12.8	20.6	33.4	46.0	-12.6
4.496	12.8	20.6	33.4	46.0	-12.6
3.896	12.7	20.6	33.3	46.0	-12.7
4.896	12.6	20.6	33.2	46.0	-12.8
4.541	12.6	20.6	33.2	46.0	-12.8
4.955	12.3	20.6	32.9	46.0	-13.1
4.414	12.3	20.6	32.9	46.0	-13.1
4.146	12.3	20.6	32.9	46.0	-13.1
3.780	12.2	20.6	32.8	46.0	-13.2
3.474	12.2	20.5	32.7	46.0	-13.3
4.590	12.1	20.6	32.7	46.0	-13.3
1.728	12.3	20.4	32.7	46.0	-13.3
3.023	12.0	20.4	32.4	46.0	-13.6

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.

CHANNELS TESTED

Low Channel 1, 2412 MHz (20MHz Bandwidth)
Mid Channel 6, 2437 MHz (20MHz Bandwidth)
High Channel 11, 2442 MHz (20MHz Bandwidth)
Low Channel 5, 2432 MHz (40MHz Bandwidth)
High Channel 9, 2452 MHz (40MHz Bandwidth)

MODES OF OPERATION

802.11(b), 1 Mbps
802.11(b), 11 Mbps
802.11(g), 6 Mbps
802.11(g), 36 Mbps
802.11(g), 54 Mbps
802.11(n), MCS0
802.11(n), MCS7
802.11(n), MCS12
802.11(n), MCS15

ANTENNA CHAINS TESTED

Antenna 1, SISO
Antenna 2, SISO
Antenna 1-2, MIMO

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

PRCR0230 - 6

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26 GHz
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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
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	6/23/2015	12 mo
Attenuator	Fairview Microwave	SA18E-20	AQV	9/28/2015	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HHI	12/9/2014	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
Antenna - Double Ridge	EMCO	3115	AHM	6/3/2014	24 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVZ	7/31/2015	12 mo
Cable	Northwest EMC	Standard Gain Horn Cable	NC3	6/17/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOK	9/21/2015	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-18002650-25-10P	AOD	6/6/2015	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

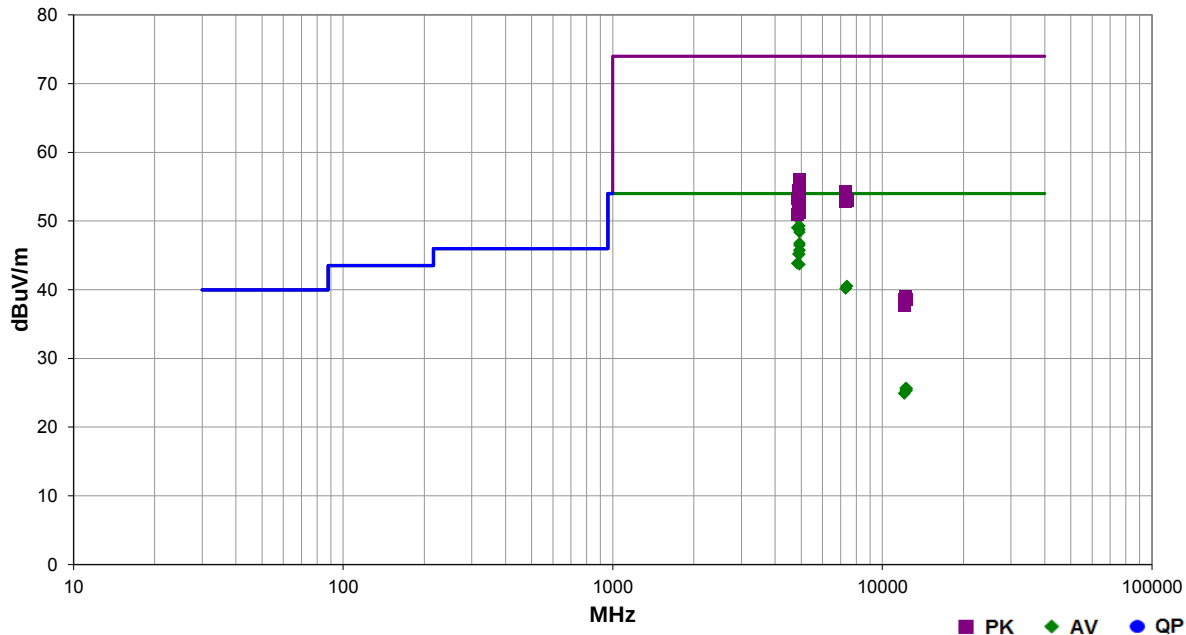
TEST DESCRIPTION

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:	10/22/15	
Project:	None	Temperature:	23 °C	
Job Site:	NC01	Humidity:	45% RH	
Serial Number:	None	Barometric Pres.:	1025 mbar	
EUT: Precor Wi-Fi / Bluetooth Module Model 303346				Tested by: Richard Mellroth
Configuration:	6			
Customer:	Precor, Inc.			
Attendees:	Rich Whitbeck			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at Maximum Power, 20MHz Channel Bandwidth. See comments next to data points for EUT channel, data rate, and antenna information.			
Deviations:	None			
Comments:	EUT configurable in only one physical orientation.			

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

Run #	165	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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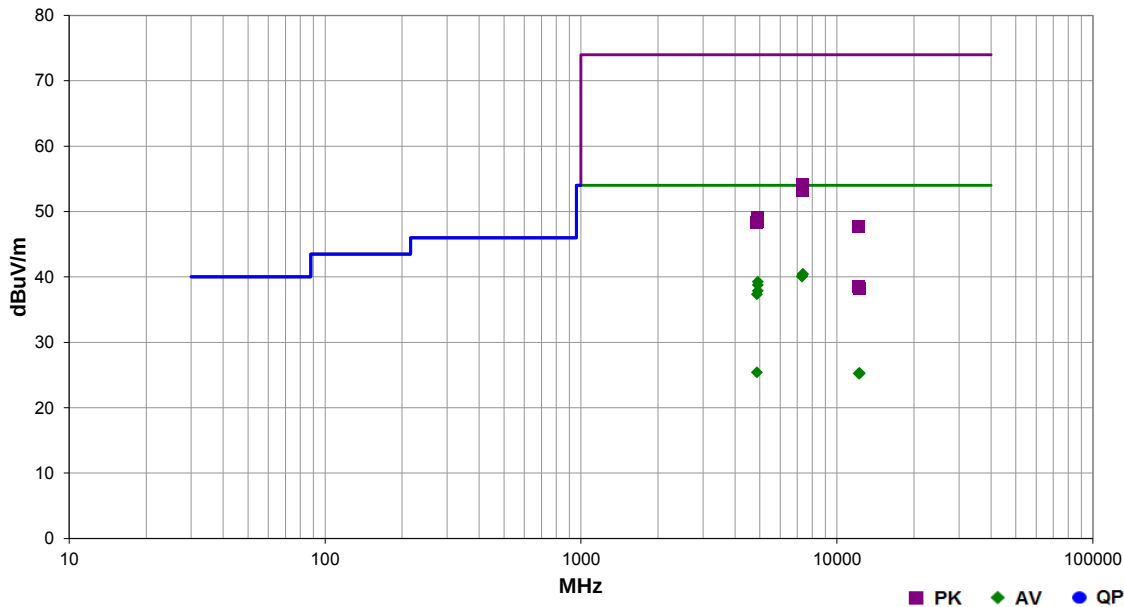
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4924.000	42.6	10.4	1.0	268.0	3.0	0.0	Horz	AV	0.0	53.0	54.0	-1.0	Ch 11, 1 Mbps, Ant 2
4924.005	41.2	10.4	2.7	333.0	3.0	0.0	Horz	AV	0.0	51.6	54.0	-2.4	Ch 11, 1 Mbps, Ant 1
4924.005	40.3	10.4	1.0	266.0	3.0	0.0	Horz	AV	0.0	50.7	54.0	-3.3	Ch 11, 6 Mbps, Ant 2
4924.010	40.3	10.4	1.0	266.0	3.0	0.0	Horz	AV	0.0	50.7	54.0	-3.3	Ch 11, MCS0, Ant 2
4874.000	40.1	10.2	1.0	117.0	3.0	0.0	Horz	AV	0.0	50.3	54.0	-3.7	Ch 6, 1 Mbps, Ant 2
4924.000	38.9	10.4	1.0	265.0	3.0	0.0	Horz	AV	0.0	49.3	54.0	-4.7	Ch 11, MCS12, Ant 1-2
4824.008	39.1	9.9	1.5	115.0	3.0	0.0	Horz	AV	0.0	49.0	54.0	-5.0	Ch 1, 1 Mbps, Ant 2
4924.000	38.4	10.4	1.0	273.0	3.0	0.0	Horz	AV	0.0	48.8	54.0	-5.2	Ch 11, 36 Mbps, Ant 2
4924.005	38.0	10.4	1.1	267.0	3.0	0.0	Horz	AV	0.0	48.4	54.0	-5.6	Ch 11, MCS7, Ant 2
4924.005	36.4	10.4	2.0	264.0	3.0	0.0	Horz	AV	0.0	46.8	54.0	-7.2	Ch 11, 54 Mbps, Ant 2
4924.005	36.1	10.4	1.5	259.0	3.0	0.0	Vert	AV	0.0	46.5	54.0	-7.5	Ch 11, 1 Mbps, Ant 2
4924.010	35.4	10.4	1.3	266.0	3.0	0.0	Vert	AV	0.0	45.8	54.0	-8.2	Ch 11, 1 Mbps, Ant 1
4924.000	35.3	10.4	1.6	119.0	3.0	0.0	Horz	AV	0.0	45.7	54.0	-8.3	Ch 11, MCS15, Ant 1-2
4873.992	35.0	10.2	1.6	132.0	3.0	0.0	Vert	AV	0.0	45.2	54.0	-8.8	Ch 6, 1 Mbps, Ant 2
4924.000	34.8	10.4	1.5	250.0	3.0	0.0	Horz	AV	0.0	45.2	54.0	-8.8	Ch 11, 11 Mbps, Ant 2
4824.000	33.9	9.9	1.8	134.0	3.0	0.0	Vert	AV	0.0	43.8	54.0	-10.2	Ch 1, 1 Mbps, Ant 2
4924.010	33.3	10.4	1.5	254.0	3.0	0.0	Vert	AV	0.0	43.7	54.0	-10.3	Ch 11, MCS12, Ant 1-2
7385.125	24.4	16.2	1.5	17.0	3.0	0.0	Vert	AV	0.0	40.6	54.0	-13.4	Ch 11, 1 Mbps, Ant 2
7384.635	24.4	16.1	1.5	91.0	3.0	0.0	Horz	AV	0.0	40.5	54.0	-13.5	Ch 11, 1 Mbps, Ant 2
7310.425	24.7	15.5	1.5	211.0	3.0	0.0	Vert	AV	0.0	40.2	54.0	-13.8	Ch 6, 1 Mbps, Ant 2
7309.980	24.7	15.5	1.5	345.0	3.0	0.0	Horz	AV	0.0	40.2	54.0	-13.8	Ch 6, 1 Mbps, Ant 2
4923.960	45.6	10.4	1.0	268.0	3.0	0.0	Horz	PK	0.0	56.0	74.0	-18.0	Ch 11, 1 Mbps, Ant 2

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
4923.985	45.4	10.4	2.7	333.0	3.0	0.0	Horz	PK	0.0	55.8	74.0	-18.2	Ch 11, 1 Mbps, Ant 1
4924.110	44.5	10.4	1.0	266.0	3.0	0.0	Horz	PK	0.0	54.9	74.0	-19.1	Ch 11, 6 Mbps, Ant 2
4923.890	44.3	10.4	1.0	266.0	3.0	0.0	Horz	PK	0.0	54.7	74.0	-19.3	Ch 11, MCS0, Ant 2
4873.950	44.3	10.2	1.0	117.0	3.0	0.0	Horz	PK	0.0	54.5	74.0	-19.5	Ch 6, 1 Mbps, Ant 2
4924.060	44.1	10.4	1.0	265.0	3.0	0.0	Horz	PK	0.0	54.5	74.0	-19.5	Ch 11, MCS12, Ant 1-2
7311.655	38.8	15.5	1.5	345.0	3.0	0.0	Horz	PK	0.0	54.3	74.0	-19.7	Ch 6, 1 Mbps, Ant 2
4923.955	43.9	10.4	1.0	273.0	3.0	0.0	Horz	PK	0.0	54.3	74.0	-19.7	Ch 11, 36 Mbps, Ant 2
4924.000	43.3	10.4	1.1	267.0	3.0	0.0	Horz	PK	0.0	53.7	74.0	-20.3	Ch 11, MCS7, Ant 2
4823.933	43.4	9.9	1.5	115.0	3.0	0.0	Horz	PK	0.0	53.3	74.0	-20.7	Ch 1, 1 Mbps, Ant 2
7384.845	37.0	16.2	1.5	17.0	3.0	0.0	Vert	PK	0.0	53.2	74.0	-20.8	Ch 11, 1 Mbps, Ant 2
4924.055	42.6	10.4	1.6	119.0	3.0	0.0	Horz	PK	0.0	53.0	74.0	-21.0	Ch 11, MCS15, Ant 1-2
7387.490	36.8	16.2	1.5	91.0	3.0	0.0	Horz	PK	0.0	53.0	74.0	-21.0	Ch 11, 1 Mbps, Ant 2
4924.045	42.5	10.4	2.0	264.0	3.0	0.0	Horz	PK	0.0	52.9	74.0	-21.1	Ch 11, 54 Mbps, Ant 2
7309.770	37.3	15.5	1.5	211.0	3.0	0.0	Vert	PK	0.0	52.8	74.0	-21.2	Ch 6, 1 Mbps, Ant 2
4923.990	42.3	10.4	1.5	259.0	3.0	0.0	Vert	PK	0.0	52.7	74.0	-21.3	Ch 11, 1 Mbps, Ant 2
4923.875	42.2	10.4	1.5	250.0	3.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	Ch 11, 11 Mbps, Ant 2
4924.020	41.8	10.4	1.3	266.0	3.0	0.0	Vert	PK	0.0	52.2	74.0	-21.8	Ch 11, 1 Mbps, Ant 1
4874.167	41.4	10.2	1.6	132.0	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	Ch 6, 1 Mbps, Ant 2
4924.065	40.9	10.4	1.5	254.0	3.0	0.0	Vert	PK	0.0	51.3	74.0	-22.7	Ch 11, MCS12, Ant 1-2
4824.025	41.0	9.9	1.8	134.0	3.0	0.0	Vert	PK	0.0	50.9	74.0	-23.1	Ch 1, 1 Mbps, Ant 2
12185.790	28.2	-2.5	3.4	106.0	3.0	0.0	Horz	AV	0.0	25.7	54.0	-28.3	Ch 6, 1 Mbps, Ant 2
12308.790	28.1	-2.4	2.5	144.0	3.0	0.0	Horz	AV	0.0	25.7	54.0	-28.3	Ch 11, 1 Mbps, Ant 2
12183.560	27.9	-2.5	1.5	198.0	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	Ch 6, 1 Mbps, Ant 2
12309.990	27.8	-2.4	1.5	70.0	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	Ch 11, 1 Mbps, Ant 2
12059.270	27.7	-2.8	1.5	272.0	3.0	0.0	Vert	AV	0.0	24.9	54.0	-29.1	Ch 1, 1 Mbps, Ant 2
12058.560	27.7	-2.8	1.5	87.0	3.0	0.0	Horz	AV	0.0	24.9	54.0	-29.1	Ch 1, 1 Mbps, Ant 2
12308.530	41.5	-2.4	2.5	144.0	3.0	0.0	Horz	PK	0.0	39.1	74.0	-34.9	Ch 11, 1 Mbps, Ant 2
12183.830	41.4	-2.5	1.5	198.0	3.0	0.0	Vert	PK	0.0	38.9	74.0	-35.1	Ch 6, 1 Mbps, Ant 2
12185.690	41.1	-2.5	3.4	106.0	3.0	0.0	Horz	PK	0.0	38.6	74.0	-35.4	Ch 6, 1 Mbps, Ant 2
12310.000	41.0	-2.4	1.5	70.0	3.0	0.0	Vert	PK	0.0	38.6	74.0	-35.4	Ch 11, 1 Mbps, Ant 2
12061.360	40.5	-2.8	1.5	87.0	3.0	0.0	Horz	PK	0.0	37.7	74.0	-36.3	Ch 1, 1 Mbps, Ant 2
12059.800	40.3	-2.8	1.5	272.0	3.0	0.0	Vert	PK	0.0	37.5	74.0	-36.5	Ch 1, 1 Mbps, Ant 2

Work Order:	PRCR0230	Date:	10/22/15	
Project:	None	Temperature:	23 °C	
Job Site:	NC01	Humidity:	45% RH	
Serial Number:	None	Barometric Pres.:	1025 mbar	
Tested by: Richard Mellroth				
EUT:	Precor Wi-Fi / Bluetooth Module Model 303346			
Configuration:	6			
Customer:	Precor, Inc.			
Attendees:	Rich Whitbeck			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at Maximum Power, 40MHz Channel Bandwidth. See comments next to data points for EUT channel, data rate, and antenna information.			
Deviations:	None			
Comments:	EUT configurable in only one physical orientation.			

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

Run #	166	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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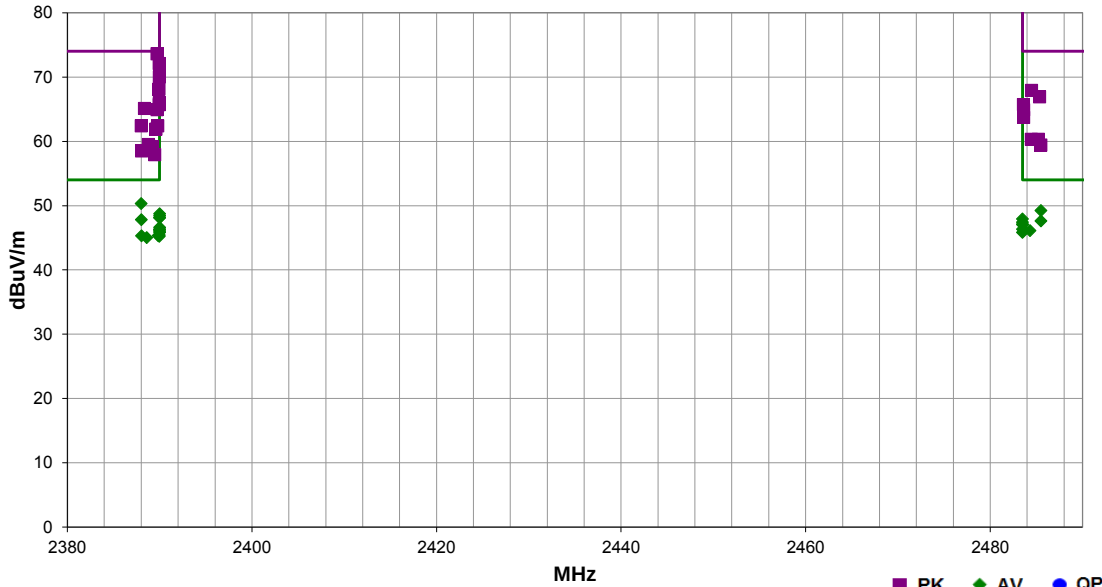


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7354.050	24.6	15.9	1.5	130.0	3.0	0.0	Horz	AV	0.0	40.5	54.0	-13.5	Ch 9, 40MHz, MCS0, Ant 1
7353.792	24.5	15.9	3.2	310.0	3.0	0.0	Vert	AV	0.0	40.4	54.0	-13.6	Ch 9, 40MHz, MCS0, Ant 1
7298.233	24.7	15.4	1.5	69.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	Ch 5, 40MHz, MCS0, Ant 1
7297.517	24.7	15.4	1.5	251.0	3.0	0.0	Vert	AV	0.0	40.1	54.0	-13.9	Ch 5, 40MHz, MCS0, Ant 1
4904.008	28.9	10.4	1.1	279.0	3.0	0.0	Horz	AV	0.0	39.3	54.0	-14.7	Ch 9, 40MHz, MCS0, Ant 1
4903.995	28.4	10.4	1.8	123.0	3.0	0.0	Horz	AV	0.0	38.8	54.0	-15.2	Ch 9, 40MHz, MCS7, Ant 1
4904.025	27.5	10.4	1.1	259.0	3.0	0.0	Vert	AV	0.0	37.9	54.0	-16.1	Ch 9, 40MHz, MCS0, Ant 1
4863.992	27.2	10.2	1.5	9.0	3.0	0.0	Horz	AV	0.0	37.4	54.0	-16.6	Ch 5, 40MHz, MCS0, Ant 1
4864.000	24.2	10.2	1.5	10.0	3.0	0.0	Vert	AV	0.0	34.4	54.0	-19.6	Ch 5, 40MHz, MCS0, Ant 1
7355.392	38.3	15.9	1.5	130.0	3.0	0.0	Horz	PK	0.0	54.2	74.0	-19.8	Ch 9, 40MHz, MCS0, Ant 1
7356.592	37.7	15.9	3.2	310.0	3.0	0.0	Vert	PK	0.0	53.6	74.0	-20.4	Ch 9, 40MHz, MCS0, Ant 1
7294.492	38.2	15.4	1.5	251.0	3.0	0.0	Vert	PK	0.0	53.6	74.0	-20.4	Ch 5, 40MHz, MCS0, Ant 1
7295.442	37.8	15.4	1.5	69.0	3.0	0.0	Horz	PK	0.0	53.2	74.0	-20.8	Ch 5, 40MHz, MCS0, Ant 1
4903.875	38.8	10.4	1.1	279.0	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	Ch 9, 40MHz, MCS0, Ant 1
4903.985	38.7	10.4	1.8	123.0	3.0	0.0	Horz	PK	0.0	49.1	74.0	-24.9	Ch 9, 40MHz, MCS7, Ant 1
4904.067	38.1	10.4	1.1	259.0	3.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Ch 9, 40MHz, MCS0, Ant 1
4863.958	38.2	10.2	1.5	9.0	3.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	Ch 5, 40MHz, MCS0, Ant 1
4863.117	37.6	10.2	1.5	10.0	3.0	0.0	Vert	PK	0.0	47.8	74.0	-26.2	Ch 5, 40MHz, MCS0, Ant 1
12260.760	28.0	-2.6	1.5	89.0	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	Ch 9, 40MHz, MCS0, Ant 1
12260.000	27.9	-2.6	1.5	119.0	3.0	0.0	Vert	AV	0.0	25.3	54.0	-28.7	Ch 9, 40MHz, MCS0, Ant 1
12161.150	27.7	-2.5	1.5	333.0	3.0	0.0	Horz	AV	0.0	25.2	54.0	-28.8	Ch 5, 40MHz, MCS0, Ant 1
12161.140	27.7	-2.5	1.5	80.0	3.0	0.0	Vert	AV	0.0	25.2	54.0	-28.8	Ch 5, 40MHz, MCS0, Ant 1
12158.970	41.0	-2.4	1.5	333.0	3.0	0.0	Horz	PK	0.0	38.6	74.0	-35.4	Ch 5, 40MHz, MCS0, Ant 1
12161.360	40.7	-2.5	1.5	80.0	3.0	0.0	Vert	PK	0.0	38.2	74.0	-35.8	Ch 5, 40MHz, MCS0, Ant 1
12260.860	40.8	-2.6	1.5	119.0	3.0	0.0	Vert	PK	0.0	38.2	74.0	-35.8	Ch 9, 40MHz, MCS0, Ant 1
12259.550	40.5	-2.6	1.5	89.0	3.0	0.0	Horz	PK	0.0	37.9	74.0	-36.1	Ch 9, 40MHz, MCS0, Ant 1

Work Order:	PRCR0230	Date:	10/22/15	
Project:	None	Temperature:	23 °C	
Job Site:	NC01	Humidity:	45% RH	
Serial Number:	None	Barometric Pres.:	1025 mbar	
EUT:		Precor Wi-Fi / Bluetooth Module Model 303346		
Configuration:	6			
Customer:	Precor, Inc.			
Attendees:	Rich Whitbeck			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at Maximum Power, 2.4 GHz Band Edge Measurements. See comments next to data points for EUT channel, data rate, and antenna information.			
Deviations:	None			
Comments:	EUT configurable in only one physical orientation. Power settings were lowered on 40MHz Bandwidth Channel 5, MCS0.			

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

Run #	167	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
2389.707	54.6	-1.0	2.1	156.0	3.0	20.0	Horz	PK	0.0	73.6	74.0	-0.4	Ch 5, 40MHz, MCS0, Ant 2, Pwr=12k
2389.943	53.1	-1.0	1.5	232.0	3.0	20.0	Horz	PK	0.0	72.1	74.0	-1.9	Ch 5, 40MHz, MCS0, Ant 1, Pwr=15k
2388.003	31.3	-1.0	2.7	174.0	3.0	20.0	Horz	AV	0.0	50.3	54.0	-3.7	Ch 1, 1 Mbps, Ant 2
2389.963	51.0	-1.0	2.1	167.0	3.0	20.0	Horz	PK	0.0	70.0	74.0	-4.0	Ch 1, MCS0, Ant 2
2485.500	30.0	-0.8	1.5	98.0	3.0	20.0	Horz	AV	0.0	49.2	54.0	-4.8	Ch 11, 1 Mbps, Ant 1
2389.997	29.7	-1.0	2.1	156.0	3.0	20.0	Horz	AV	0.0	48.7	54.0	-5.3	Ch 5, 40MHz, MCS0, Ant 2, Pwr=12k
2390.000	29.4	-1.0	1.5	232.0	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	Ch 5, 40MHz, MCS0, Ant 1, Pwr=15k
2390.000	29.1	-1.0	3.9	156.0	3.0	20.0	Horz	AV	0.0	48.1	54.0	-5.9	Ch 1, 11 Mbps, Ant 2
2390.000	29.1	-1.0	2.1	167.0	3.0	20.0	Horz	AV	0.0	48.1	54.0	-5.9	Ch 1, MCS0, Ant 2
2389.933	49.1	-1.0	1.5	168.0	3.0	20.0	Horz	PK	0.0	68.1	74.0	-5.9	Ch 1, MCS7, Ant 2
2484.473	48.7	-0.8	1.6	102.0	3.0	20.0	Horz	PK	0.0	67.9	74.0	-6.1	Ch 11, MCS0, Ant 1
2483.500	28.7	-0.8	1.6	102.0	3.0	20.0	Horz	AV	0.0	47.9	54.0	-6.1	Ch 11, MCS0, Ant 1
2388.030	28.8	-1.0	1.5	235.0	3.0	20.0	Horz	AV	0.0	47.8	54.0	-6.2	Ch 1, 1 Mbps, Ant 1
2485.500	28.4	-0.8	1.5	109.0	3.0	20.0	Horz	AV	0.0	47.6	54.0	-6.4	Ch 11, 11 Mbps, Ant 1
2483.503	28.2	-0.8	1.9	161.0	3.0	20.0	Horz	AV	0.0	47.4	54.0	-6.6	Ch 11, 1 Mbps, Ant 2
2483.503	27.9	-0.8	1.5	94.0	3.0	20.0	Horz	AV	0.0	47.1	54.0	-6.9	Ch 11, 6 Mbps, Ant 1
2483.517	27.8	-0.8	1.7	92.0	3.0	20.0	Horz	AV	0.0	47.0	54.0	-7.0	Ch 9, 40MHz, MCS0, Ant 1
2485.340	47.7	-0.8	1.5	109.0	3.0	20.0	Horz	PK	0.0	66.9	74.0	-7.1	Ch 9, 40MHz, MCS7, Ant 1
2390.000	27.6	-1.0	2.7	174.0	3.0	20.0	Horz	AV	0.0	46.6	54.0	-7.4	Ch 1, 6 Mbps, Ant 2
2483.513	27.1	-0.8	1.2	174.0	3.0	20.0	Horz	AV	0.0	46.3	54.0	-7.7	Ch 9, 40MHz, MCS0, Ant 2
2390.000	27.3	-1.0	1.5	162.0	3.0	20.0	Horz	AV	0.0	46.3	54.0	-7.7	Ch 1, 36 Mbps, Ant 2
2389.983	27.2	-1.0	1.5	168.0	3.0	20.0	Horz	AV	0.0	46.2	54.0	-7.8	Ch 1, MCS7, Ant 2
2484.327	26.9	-0.8	1.5	109.0	3.0	20.0	Horz	AV	0.0	46.1	54.0	-7.9	Ch 9, 40MHz, MCS7, Ant 1
2390.000	27.0	-1.0	1.9	161.0	3.0	20.0	Horz	AV	0.0	46.0	54.0	-8.0	Ch 1, MCS12, Ant 1-2
2389.973	47.0	-1.0	2.7	174.0	3.0	20.0	Horz	PK	0.0	66.0	74.0	-8.0	Ch 1, 6 Mbps, Ant 2
2483.500	26.6	-0.8	1.5	225.0	3.0	20.0	Horz	AV	0.0	45.8	54.0	-8.2	Ch 11, MCS12, Ant 1-2
2390.000	26.8	-1.0	1.6	100.0	3.0	20.0	Horz	AV	0.0	45.8	54.0	-8.2	Ch 5, 40MHz, MCS7, Ant 1
2483.600	46.5	-0.8	1.5	94.0	3.0	20.0	Horz	PK	0.0	65.7	74.0	-8.3	Ch 11, 6 Mbps, Ant 1

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
2389.937	46.7	-1.0	1.5	162.0	3.0	20.0	Horz	PK	0.0	65.7	74.0	-8.3	Ch 1, 36 Mbps, Ant 2
2389.973	26.4	-1.0	1.7	136.0	3.0	20.0	Horz	AV	0.0	45.4	54.0	-8.6	Ch 1, 54 Mbps, Ant 2
2389.847	26.3	-1.0	1.2	217.0	3.0	20.0	Vert	AV	0.0	45.3	54.0	-8.7	Ch 1, MCS12, Ant 1-2
2388.037	26.3	-1.0	1.5	332.0	3.0	20.0	Vert	AV	0.0	45.3	54.0	-8.7	Ch 1, 1 Mbps, Ant 1
2389.973	26.2	-1.0	4.0	110.0	3.0	20.0	Horz	AV	0.0	45.2	54.0	-8.8	Ch 1, MCS15, Ant 1-2
2388.350	46.1	-1.0	1.6	100.0	3.0	20.0	Horz	PK	0.0	65.1	74.0	-8.9	Ch 5, 40MHz, MCS7, Ant 1
2388.600	26.0	-1.0	1.5	353.0	3.0	20.0	Vert	AV	0.0	45.0	54.0	-9.0	Ch 1, 1 Mbps, Ant 2
2483.623	45.7	-0.8	1.2	174.0	3.0	20.0	Horz	PK	0.0	64.9	74.0	-9.1	Ch 9, 40MHz, MCS0, Ant 2
2389.720	45.9	-1.0	1.9	161.0	3.0	20.0	Horz	PK	0.0	64.9	74.0	-9.1	Ch 1, MCS12, Ant 1-2
2483.627	44.5	-0.8	1.5	225.0	3.0	20.0	Horz	PK	0.0	63.7	74.0	-10.3	Ch 11, MCS12, Ant 1-2
2389.783	43.4	-1.0	1.7	136.0	3.0	20.0	Horz	PK	0.0	62.4	74.0	-11.6	Ch 1, 54 Mbps, Ant 2
2388.003	43.4	-1.0	2.7	174.0	3.0	20.0	Horz	PK	0.0	62.4	74.0	-11.6	Ch 1, 1 Mbps, Ant 2
2389.603	42.9	-1.0	3.9	156.0	3.0	20.0	Horz	PK	0.0	61.9	74.0	-12.1	Ch 1, 11 Mbps, Ant 2
2485.217	41.1	-0.8	1.5	98.0	3.0	20.0	Horz	PK	0.0	60.3	74.0	-13.7	Ch 11, 1 Mbps, Ant 1
2484.457	41.1	-0.8	1.5	109.0	3.0	20.0	Horz	PK	0.0	60.3	74.0	-13.7	Ch 11, 11 Mbps, Ant 1
2388.783	40.5	-1.0	1.5	235.0	3.0	20.0	Horz	PK	0.0	59.5	74.0	-14.5	Ch 1, 1 Mbps, Ant 1
2485.483	40.2	-0.8	1.9	161.0	3.0	20.0	Horz	PK	0.0	59.4	74.0	-14.6	Ch 11, 1 Mbps, Ant 2
2388.910	40.2	-1.0	1.5	332.0	3.0	20.0	Vert	PK	0.0	59.2	74.0	-14.8	Ch 1, 1 Mbps, Ant 1
2389.233	40.1	-1.0	1.2	217.0	3.0	20.0	Vert	PK	0.0	59.1	74.0	-14.9	Ch 1, MCS12, Ant 1-2
2388.043	39.5	-1.0	4.0	110.0	3.0	20.0	Horz	PK	0.0	58.5	74.0	-15.5	Ch 1, MCS15, Ant 1-2
2389.457	38.9	-1.0	1.5	353.0	3.0	20.0	Vert	PK	0.0	57.9	74.0	-16.1	Ch 1, 1 Mbps, Ant 2

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 (mo)
Spectrum Analyzer	Agilent	E4440A	AFE	6/22/2015	12
Spectrum Analyzer	Keysight	N9010A	AFO	6/23/2015	12
NC02 Cable	ESM Cable Corp.	TTBJ-141 KMKM-72	NC5	6/6/2015	12
Attenuator	Fairview Microwave	SA4014-20	TKE	1/16/2015	12
DC Block, 40 GHz	Fairview Microwave	SD3379	AMJ	6/6/2015	12
Signal Generator	Keysight	N5182B	TFY	4/16/2015	36

TEST DESCRIPTION

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 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.

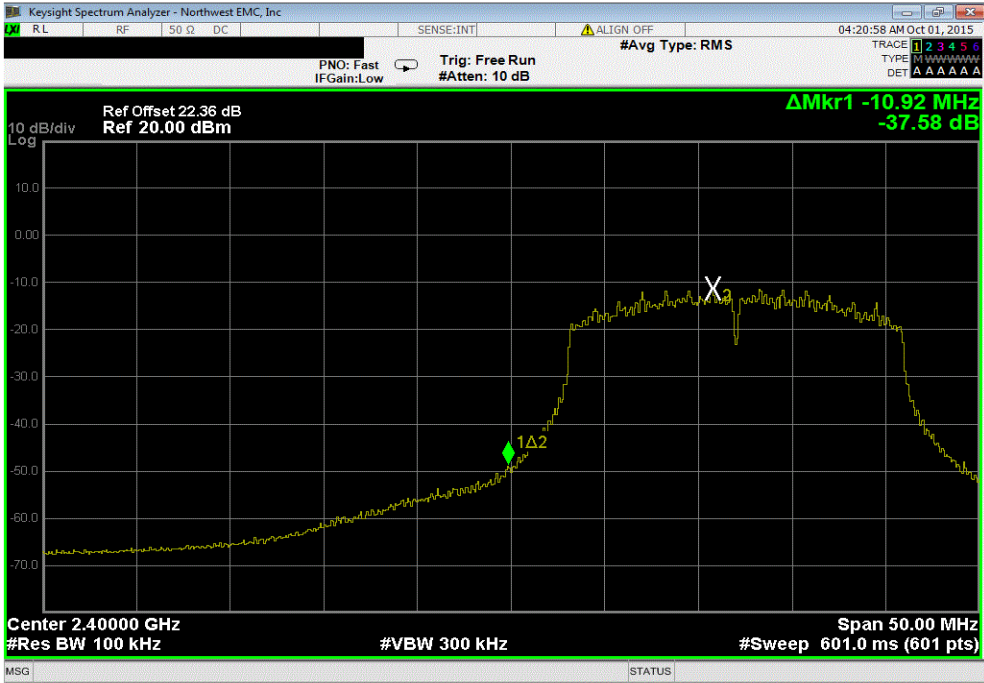
An RMS detector was used to match the method called out for Output Power. Because the reference level was taken with an RMS detector, the attenuation requirement is -30 dBc.

BAND EDGE COMPLIANCE

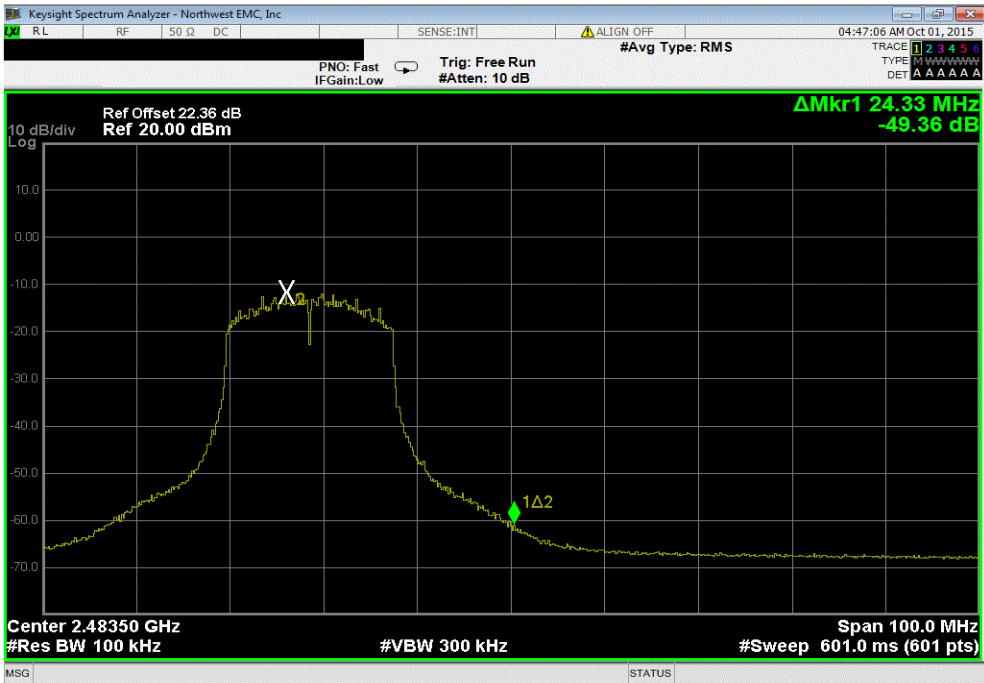
EUT: Precor Wi-Fi / Bluetooth Module Model 303346		Work Order: PRCR0230	
Serial Number: None		Date: 10/01/15	
Customer: Precor, Inc.		Temperature: 23°C	
Attendees: Rich Whitbeck		Humidity: 44%	
Project: None		Barometric Pres.: 1017mb	
Tested by: Richard Mellroth		Power: 110VAC/60Hz	
		Job Site: NC01 / NC02	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
Power settings at Maximum.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	
		Value (dBc)	Limit ≤ (dBc) Result
Ant 1 (2x2 MIMO)			
20 MHz			
2.4 GHz Band			
802.11(n) MCS12			
Low Channel 1, 2412 MHz		-37.58	-30 Pass
High Channel 11, 2462 MHz		-49.36	-30 Pass
802.11(n) MCS15			
Low Channel 1, 2412 MHz		-41.5	-30 Pass
High Channel 11, 2462 MHz		-52.72	-30 Pass
Ant 2 (2x2 MIMO)			
20 MHz			
2.4 GHz Band			
802.11(n) MCS12			
Low Channel 1, 2412 MHz		-36.63	-30 Pass
High Channel 11, 2462 MHz		-47.89	-30 Pass
802.11(n) MCS15			
Low Channel 1, 2412 MHz		-39.53	-30 Pass
High Channel 11, 2462 MHz		-50.03	-30 Pass

BAND EDGE COMPLIANCE

Ant 1 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS12, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-37.58	-30	Pass



Ant 1 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS12, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-49.36	-30	Pass



**NORTHWEST
EMC**

XMit 2015.01.14

Keysight Spectrum Analyzer - Northwest EMC, Inc

RL RF 50 Ω DC SENSE:INT ALIGN OFF #Avg Type: RMS

04:54:55 AM Oct 01, 2015

Trace 1 2 3 4 5 6
Type N M W W W W W W
Det A A A A A A

PNO: Fast IFGain:Low Trig: Free Run #Atten: 10 dB

Ref Offset 22.36 dB
Ref 20.00 dBm

Δ Mkr1 -10.92 MHz
-41.50 dB

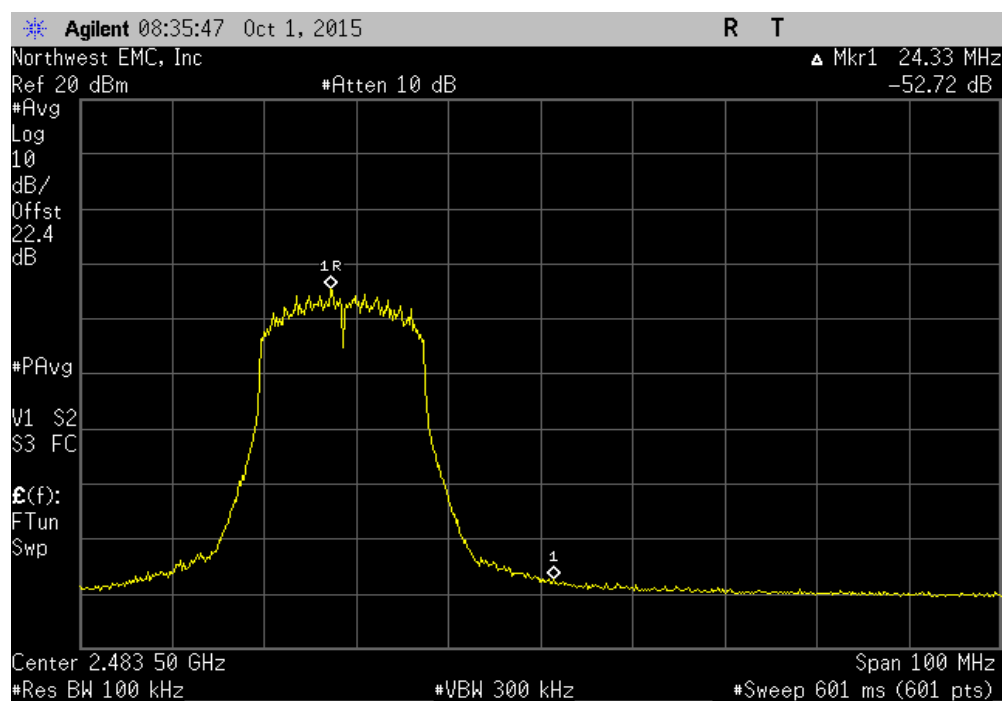
10 dB/div
Log

Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
#Sweep 601.0 ms (601 pts)

MSG STATUS

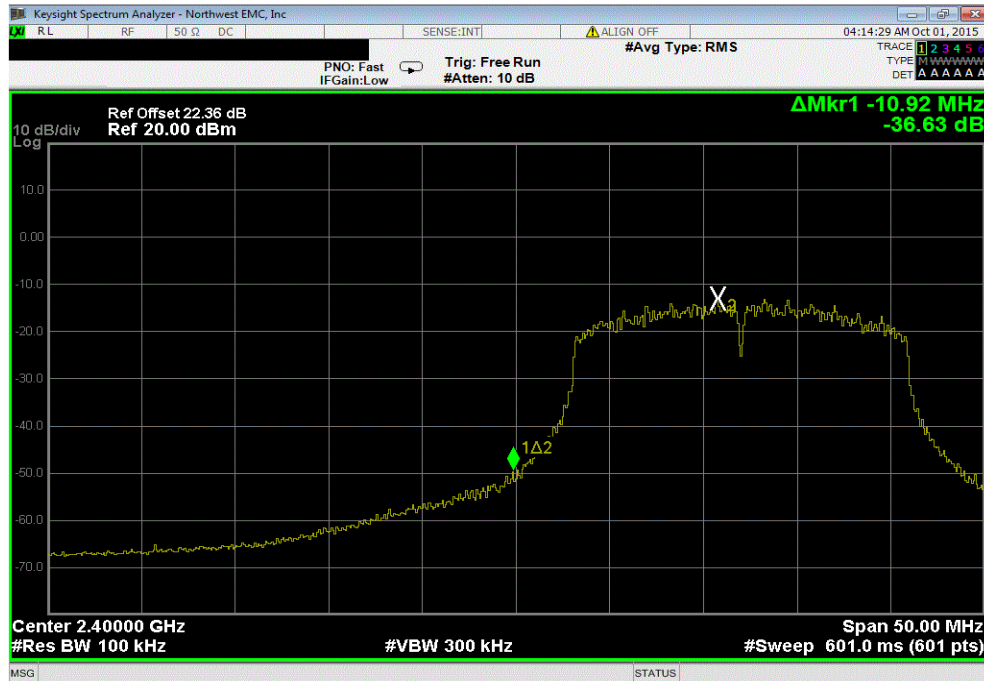
Detailed description: The image shows a Keysight Spectrum Analyzer interface. The main display is a log-linear plot of power spectral density. The horizontal axis represents frequency, centered at 2.40000 GHz with a 50.00 MHz span. The vertical axis represents power, ranging from -70.00 dBm to 10.00 dBm, with a 10 dB/div scale. A yellow trace shows a signal that rises from a noise floor of approximately -70 dBm to a peak of -41.50 dBm. The peak is marked with a yellow diamond and labeled '142'. A second marker, 'X2', is placed on the signal's shoulder at approximately -10.92 MHz relative to the center frequency. The interface includes various control buttons and readouts at the top, such as 'PNO: Fast', 'IFGain:Low', 'Trig: Free Run', and '#Atten: 10 dB'. The bottom status bar shows 'MSG' and 'STATUS'.

Ant 1 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.72	-30	Pass

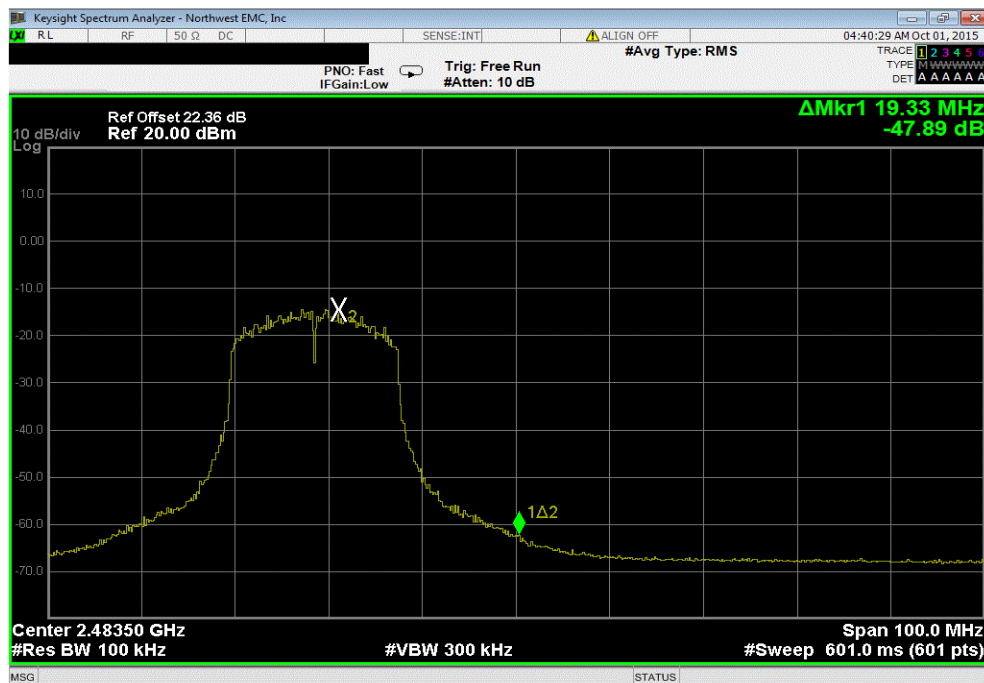


BAND EDGE COMPLIANCE

Ant 2 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS12, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-36.63	-30	Pass

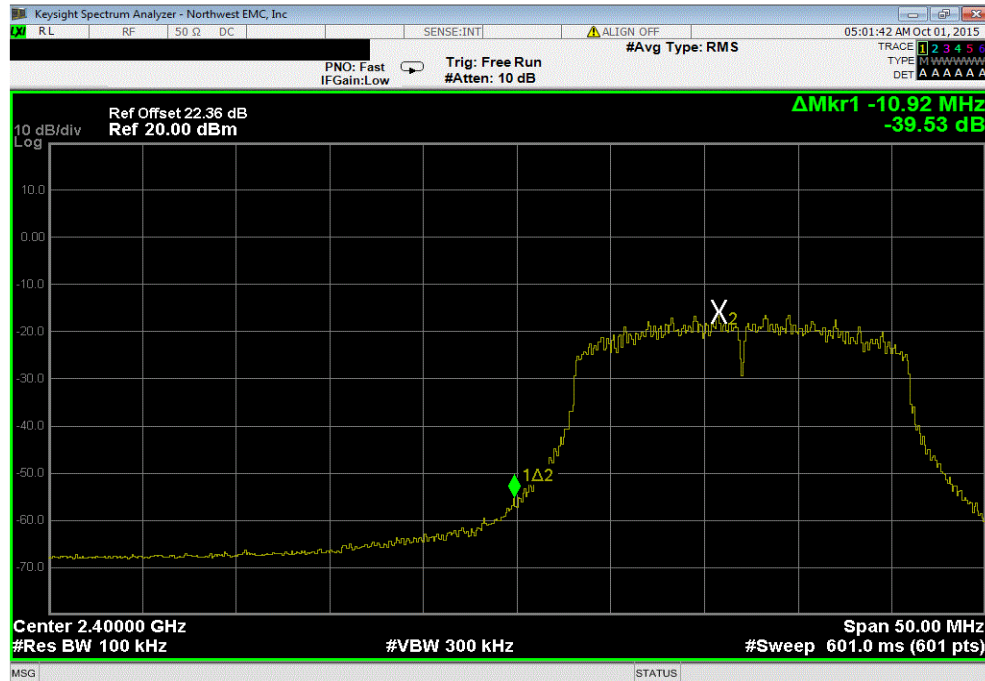


Ant 2 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS12, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-47.89	-30	Pass



BAND EDGE COMPLIANCE

Ant 2 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS15, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-39.53	-30	Pass



Ant 2 (2x2 MIMO), 20 MHz, 2.4 GHz Band, 802.11(n) MCS15, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-50.03	-30	Pass

