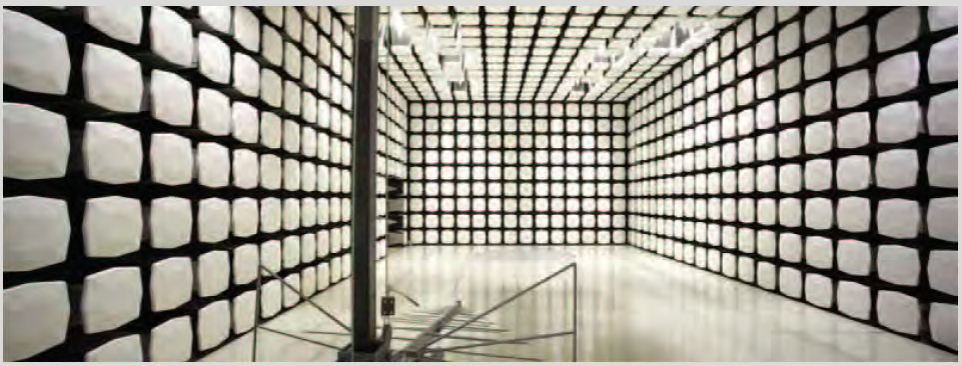
Masimo Corporation

RDS7A/ROOT V2

FCC 15.207:2014
FCC 15.247:2014

Report # MASI0237.1



NVLAP Lab Code: 200676-0

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NORTHWEST EMC

WTD 13.9.30

CERTIFICATE OF TEST

Last Date of Test: September 17, 2014
Masimo Corporation
Model: RDS7A/ROOT V2

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2014	ANSI C63.10:2009
FCC 15.247:2014	ANSI C63.10:2009

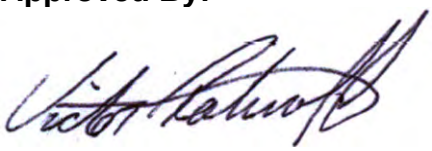
Results

Method Clause	Test Description	Applied	Results	Comments
6.2	AC Powerline Conducted Emissions	Yes	Pass	
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
6.7	Spurious Conducted Emissions	Yes	Pass	
6.9.1	Occupied Bandwidth	Yes	Pass	
6.10.1	Output Power	Yes	Pass	
7.7.2	Channel Separation	Yes	Pass	
7.7.3	Number of Hopping Channels	Yes	Pass	
7.7.4	Dwell Time	Yes	Pass	
7.5	Duty Cycle	Yes	N/A	
7.7.9	Band Edge Compliance	Yes	Pass	
7.7.9	Band Edge Compliance- Hopping Mode	Yes	Pass	

Deviations From Test Standards

None

Approved By:



Victor Ratinoff, Operations Manager

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

NORTHWEST EMC
REV 2012.08.02

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

NORTHWEST EMC

REV 2014.08.11

ACCREDITATIONS AND AUTHORIZATIONS

United States

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

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

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

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

European Union

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

Australia/New Zealand

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

Korea

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

Japan

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

Taiwan

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

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

Singapore

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

Israel

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

Hong Kong

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

Vietnam

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

SCOPE

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

MEASUREMENT UNCERTAINTY

Measurement Uncertainty

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

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

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

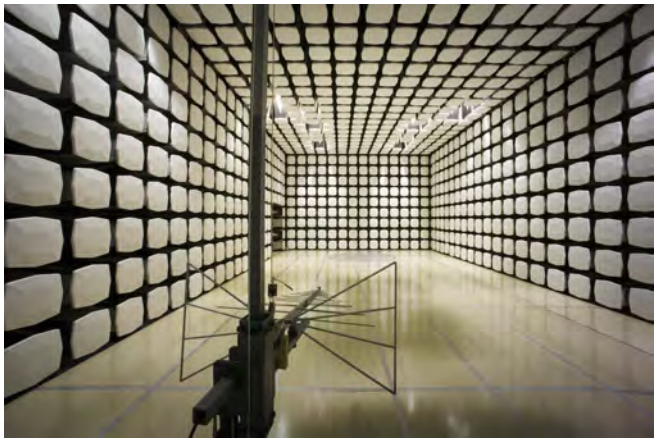
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94

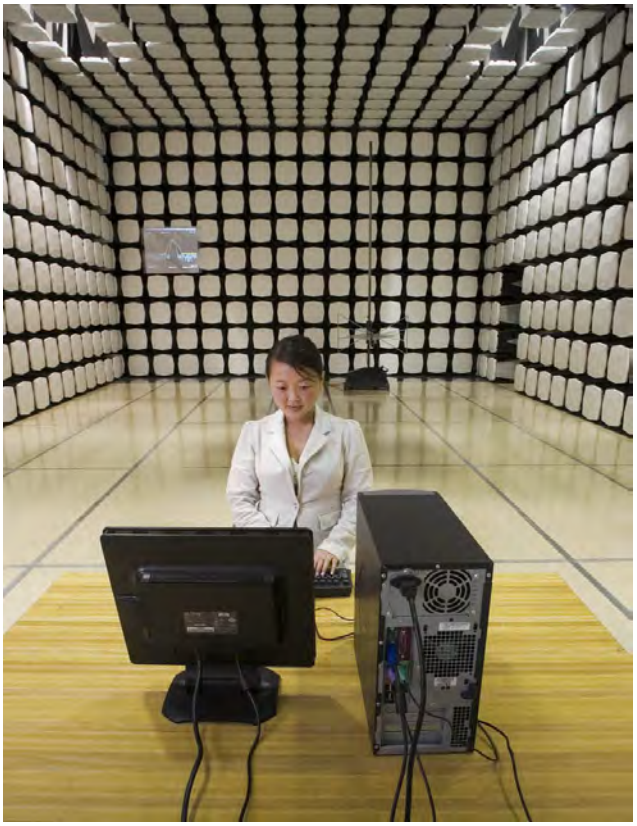
NORTHWEST EMC

REV 2013.06.28

FACILITIES

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





PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Masimo Corporation
Address:	40 Parker
City, State, Zip:	Irvine, CA 92618
Test Requested By:	Michael Clark
Model:	RDS7A/ROOT V2
First Date of Test:	August 28, 2014
Last Date of Test:	September 17, 2014
Receipt Date of Samples:	January 19, 2014
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
The device is a Pulse Co-Oximeter incorporating a Bluetooth wireless radio assembly. Masimo radio assembly part number = 24514.

Client Justification:
The radio contained within Model RAD7A/Radical 7 V2 is Identical to the radio contained within Model RDS7A/ROOT V2.

Testing Objective:
To demonstrate compliance under FCC 15.247 for frequency hopping spread spectrum operation in the 2.4 GHz band.

CONFIGURATIONS

Configuration MASI0151- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Pulse Co-Oximeter	Masimo Corporation	RAD7A/Radical 7 V2	1000000349
Wireless Radio	Broadcom	BCM 4334/Azurewave AW-AH634	36235C

Configuration MASI0237- 1

Software/Firmware Running during test	
Description	**Version**
putty	0.62.0.0

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Wireless Docking Station	Masimo Corporation	RDS7A/ROOT V2 (v1.1.3.6 i)	1000000020
Wireless Radio	Broadcom	BCM 4334/Azurewave AW-AH634	36811 Rev C

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Pulse Co-Oximeter	Masimo Corporation	RAD7A/Radical 7 V2 (v1.3.0.6 i-EN)	1000031805
Patient Sensor	Masimo Corporation	DCI	4A175
EEG patent cable and sensor	Masimo Corporation	SedLine	6001730
USB Memory Stick #1	Lexar	3813S	LJDV20-8GB-000-101A
USB Memory Stick #2	Lexar	3813S	LJDV20-8GB-000-103A

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote Laptop	Hewlett Packard	Probook 4420s	CNF0335MJG
Ethernet Router	Netgear	WGR614v10	28T1027D25470
AC/DC Power Supply	Netgear	AD661F	3010181421011408RR
AC Adapter	Hewlett Packard	PPP014H-S	4016-7021468F5-001

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Cable	No	3.0m	No	RDS7A/ROOT V2	AC Mains
Patient Sensor Cable	No	4.5m	No	RAD7A/Radical 7 V2	Patient Sensor
Ethernet Cable (x4)	No	0.9m	No	RDS7A/ROOT V2	Terminated
Nurse Call Cable	Yes	1.8m	No	RDS7A/ROOT V2	Unterminated
SedLine Cable	No	5.0m	No	RDS7A/ROOT V2	Terminated
Ethernet Cable	No	10.0m	No	RDS7A/ROOT V2	Ethernet Router
Ethernet Cable	No	1.0m	No	Ethernet Router	Remote Laptop
DC Cable	No	1.6m	No	Ethernet Router	AC/DC Power Supply (AC Mains)
DC Cable	No	1.4m	Yes	Remote Laptop	AC Adapter
AC Cable	No	1.6m	No	AC Adapter	AC Mains

MODIFICATIONS

WTD 13.9.30

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	08/28/2014	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.
2	08/28/2014	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.
3	08/28/2014	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	08/28/2014	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.
5	08/28/2014	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.
6	08/28/2014	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	08/28/2014	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.
8	08/28/2014	Channel 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.
9	08/28/2014	Number of Hopping Channels	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	09/16/2014	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.
11	09/17/2014	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

AC POWERLINE CONDUCTED EMISSIONS

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

MODES OF OPERATION

Continuously Transmitting Bluetooth Basic Rate GFSK: High Channel 78, 2480 MHz
Continuously Transmitting Bluetooth Basic Rate GFSK: Mid Channel 39, 2440 MHz
Continuously Transmitting Bluetooth Basic Rate GFSK: Low Channel 0, 2402 MHz

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

MASI0237 - 1

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-24-BNC	LIA	4/22/2014	12 mo
Attenuator	Pasternack	6N10W-20	AWC	1/3/2014	12 mo
HP Filter	TTE	H97-100K-50-720B	HFP	3/1/2012	36 mo
OC06 Cables	N/A	Telecom Cables	OCP	8/15/2014	12 mo
Receiver	Rohde & Schwarz	ESCI	ARG	5/13/2014	12 mo

MEASUREMENT BANDWIDTHS

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

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

TEST DESCRIPTION

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

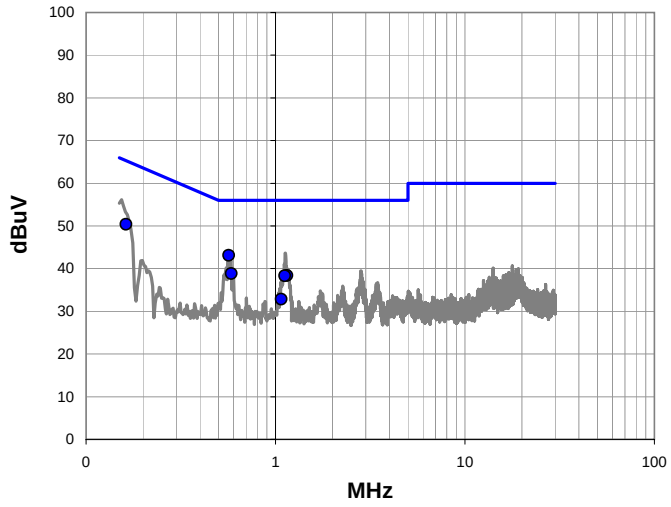
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	MASI0237	**Date:**	09/16/14		
Project:	None	**Temperature:**	27.1 °C		
Job Site:	OC06	**Humidity:**	38.9% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1011 mbar	**Tested by:**	Mark Baytan
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: Low Channel 0, 2402 MHz				
Deviations:	None				
Comments:	Using Max Power Setting 20. RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B.				

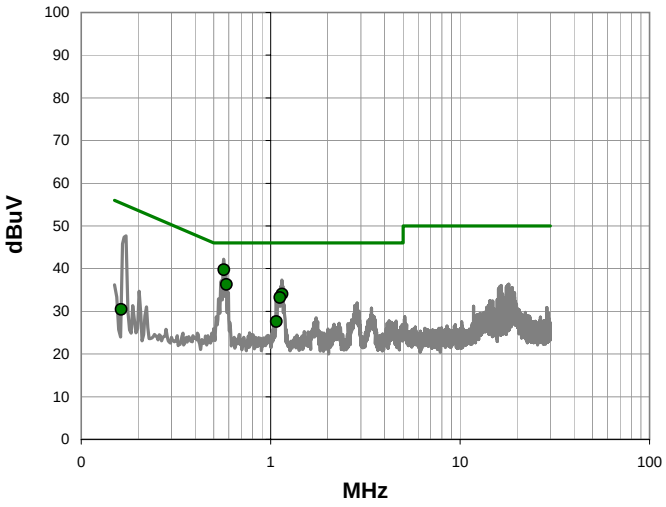
Test Specifications	**Test Method**
FCC 15.207:2014	ANSI C63.10:2009

Run #	11	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	22.9	20.2	43.1	56.0	-12.9
0.163	29.9	20.5	50.4	65.3	-14.9
0.584	18.6	20.2	38.8	56.0	-17.2
1.149	18.2	20.2	38.4	56.0	-17.6
1.118	18.1	20.2	38.3	56.0	-17.7
1.072	12.6	20.2	32.8	56.0	-23.2

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	19.5	20.2	39.7	46.0	-6.3
0.584	16.1	20.2	36.3	46.0	-9.7
1.149	13.8	20.2	34.0	46.0	-12.0
1.118	13.0	20.2	33.2	46.0	-12.8
1.072	7.4	20.2	27.6	46.0	-18.4
0.163	9.9	20.5	30.4	55.3	-24.9

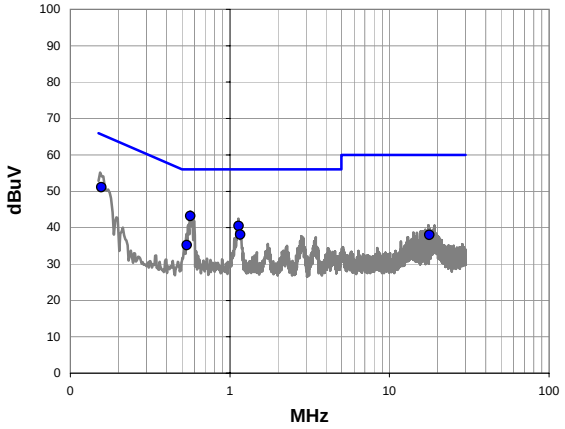
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	MASI0237	**Date:**	09/16/14		
Project:	None	**Temperature:**	27.1 °C		
Job Site:	OC06	**Humidity:**	38.9% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1011 mbar	**Tested by:**	Mark Baytan
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: Low Channel 0, 2402 MHz				
Deviations:	None				
Comments:	Using Max Power Setting 20. RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B.				

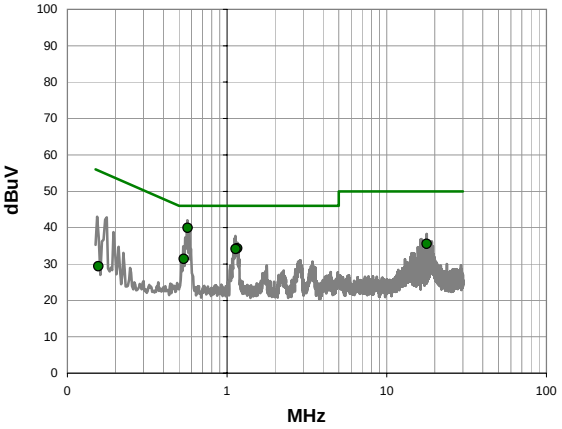
Test Specifications	**Test Method**
FCC 15.207:2014	ANSI C63.10:2009

Run #	12	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	23.0	20.2	43.2	56.0	-12.8
0.157	30.6	20.5	51.1	65.6	-14.6
1.133	20.3	20.2	40.5	56.0	-15.5
1.162	17.9	20.2	38.1	56.0	-17.9
0.537	15.0	20.2	35.2	56.0	-20.8
17.809	16.8	21.2	38.0	60.0	-22.0

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	19.7	20.2	39.9	46.0	-6.1
1.162	14.1	20.2	34.3	46.0	-11.7
1.133	13.9	20.2	34.1	46.0	-11.9
17.809	14.4	21.2	35.6	50.0	-14.4
0.537	11.2	20.2	31.4	46.0	-14.6
0.157	8.9	20.5	29.4	55.6	-26.3

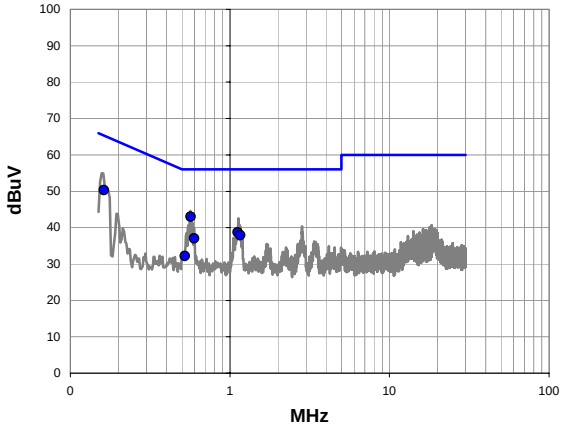
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	MASI0237	**Date:**	09/16/14		
Project:	None	**Temperature:**	27.1 °C		
Job Site:	OC06	**Humidity:**	38.9% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1011 mbar	**Tested by:**	Mark Baytan
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: Mid Channel 39, 2440 MHz				
Deviations:	None				
Comments:	Using Max Power Setting 20. RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B.				

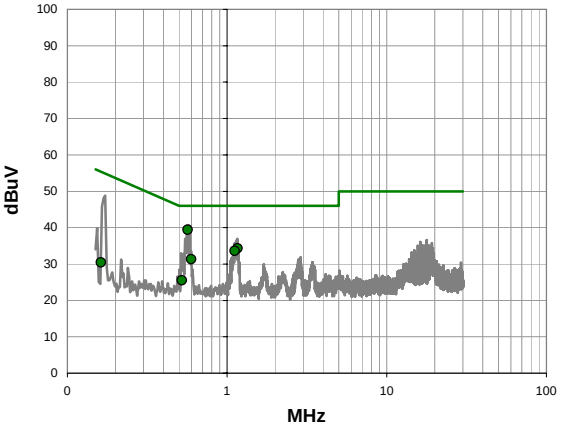
Test Specifications	**Test Method**
FCC 15.207:2014	ANSI C63.10:2009

Run #	13	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.567	22.8	20.2	43.0	56.0	-13.0
0.163	29.8	20.5	50.3	65.3	-15.0
1.117	18.5	20.2	38.7	56.0	-17.3
1.164	17.7	20.2	37.9	56.0	-18.1
0.596	16.8	20.2	37.0	56.0	-19.0
0.521	12.0	20.2	32.2	56.0	-23.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.567	19.2	20.2	39.4	46.0	-6.6
1.164	14.1	20.2	34.3	46.0	-11.7
1.117	13.4	20.2	33.6	46.0	-12.4
0.596	11.1	20.2	31.3	46.0	-14.7
0.521	5.3	20.2	25.5	46.0	-20.5
0.163	9.9	20.5	30.4	55.3	-24.9

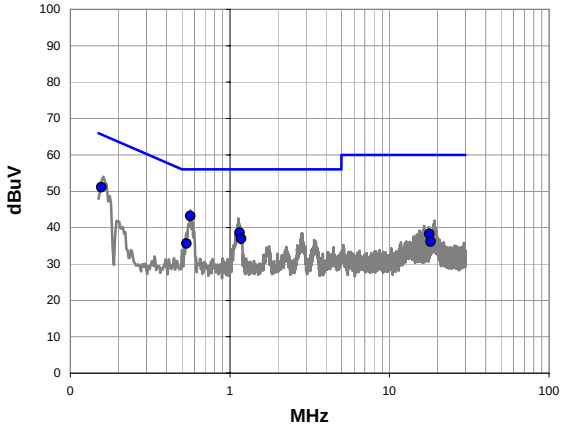
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	MASI0237	**Date:**	09/17/14		
Project:	None	**Temperature:**	27.1 °C		
Job Site:	OC06	**Humidity:**	38.9% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1011 mbar	**Tested by:**	Mark Baytan
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: Mid Channel 39, 2440 MHz				
Deviations:	None				
Comments:	Using Max Power Setting 20. RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B.				

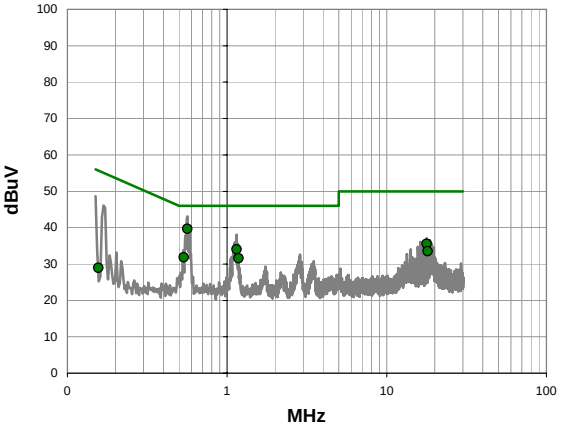
Test Specifications	**Test Method**
FCC 15.207:2014	ANSI C63.10:2009

Run #	14	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.565	23.0	20.2	43.2	56.0	-12.8
0.156	30.6	20.5	51.1	65.7	-14.6
1.149	18.4	20.2	38.6	56.0	-17.4
1.179	16.7	20.2	36.9	56.0	-19.1
0.536	15.4	20.2	35.6	56.0	-20.4
17.809	17.1	21.2	38.3	60.0	-21.7
18.074	15.0	21.2	36.2	60.0	-23.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.565	19.5	20.2	39.7	46.0	-6.3
1.149	13.8	20.2	34.0	46.0	-12.0
0.536	11.6	20.2	31.8	46.0	-14.2
1.179	11.4	20.2	31.6	46.0	-14.4
17.809	14.4	21.2	35.6	50.0	-14.4
18.074	12.3	21.2	33.5	50.0	-16.5
0.156	8.5	20.5	29.0	55.7	-26.7

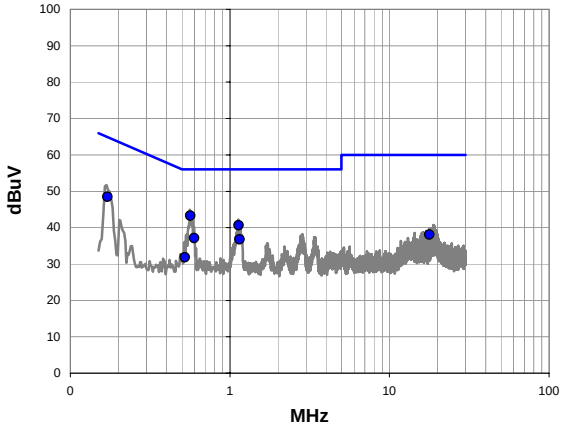
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	MASI0237	**Date:**	09/17/14		
Project:	None	**Temperature:**	27.1 °C		
Job Site:	OC06	**Humidity:**	38.9% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1011 mbar	**Tested by:**	Mark Baytan
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: High Channel 78, 2480 MHz				
Deviations:	None				
Comments:	Using Max Power Setting 20. RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B.				

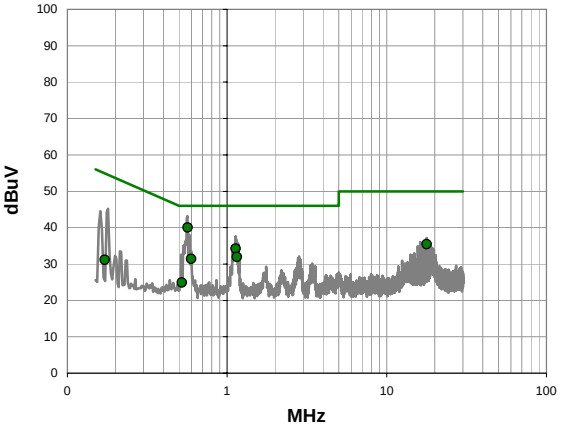
Test Specifications	**Test Method**
FCC 15.207:2014	ANSI C63.10:2009

Run #	15	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	23.1	20.2	43.3	56.0	-12.7
1.133	20.4	20.2	40.6	56.0	-15.4
0.171	28.0	20.5	48.5	64.9	-16.4
0.597	16.9	20.2	37.1	56.0	-18.9
1.151	16.6	20.2	36.8	56.0	-19.2
17.808	16.9	21.2	38.1	60.0	-21.9
0.522	11.6	20.2	31.8	56.0	-24.2

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	19.8	20.2	40.0	46.0	-6.0
1.133	14.0	20.2	34.2	46.0	-11.8
1.151	11.7	20.2	31.9	46.0	-14.1
17.808	14.3	21.2	35.5	50.0	-14.5
0.597	11.2	20.2	31.4	46.0	-14.6
0.522	4.7	20.2	24.9	46.0	-21.1
0.171	10.6	20.5	31.1	54.9	-23.8

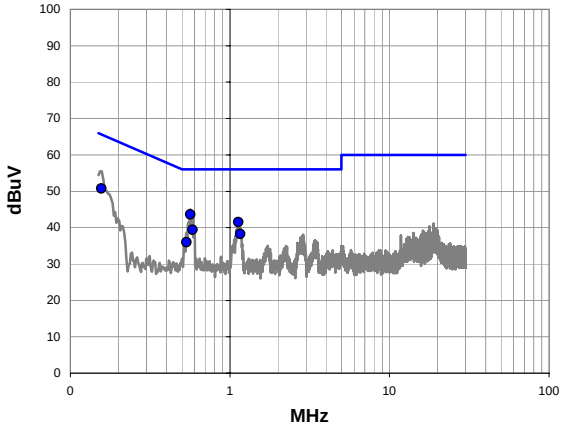
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	MASI0237	**Date:**	09/17/14		
Project:	None	**Temperature:**	27.1 °C		
Job Site:	OC06	**Humidity:**	38.9% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1011 mbar	**Tested by:**	Mark Baytan
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: High Channel 78, 2480 MHz				
Deviations:	None				
Comments:	Using Max Power Setting 20. RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B.				

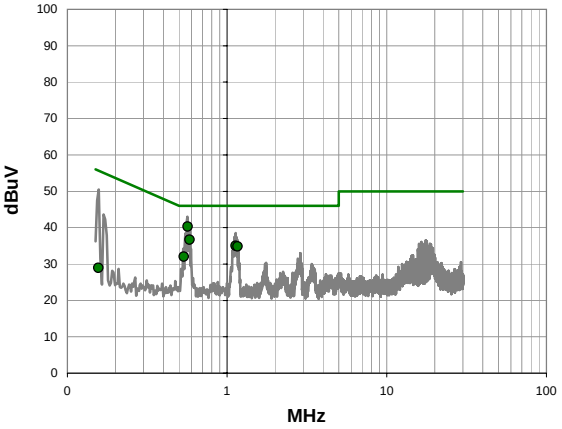
Test Specifications	**Test Method**
FCC 15.207:2014	ANSI C63.10:2009

Run #	16	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	23.4	20.2	43.6	56.0	-12.4
1.132	21.3	20.2	41.5	56.0	-14.5
0.157	30.3	20.5	50.8	65.6	-14.9
0.584	19.2	20.2	39.4	56.0	-16.6
1.163	18.1	20.2	38.3	56.0	-17.7
0.536	15.8	20.2	36.0	56.0	-20.0

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.566	20.1	20.2	40.3	46.0	-5.7
0.584	16.5	20.2	36.7	46.0	-9.3
1.132	14.8	20.2	35.0	46.0	-11.0
1.163	14.6	20.2	34.8	46.0	-11.2
0.536	11.8	20.2	32.0	46.0	-14.0
0.157	8.5	20.5	29.0	55.6	-26.7

SPURIOUS RADIATED EMISSIONS

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

MODES OF OPERATION

Continuously Transmitting Bluetooth Basic Rate GFSK: Low Channel 0 (2402 MHz) & High Channel 78 (2480 MHz). Band Edge
Continuously Transmitting Bluetooth Basic Rate GFSK: Low Ch 0 (2402 MHz), Mid Ch 39 (2440 MHz), & High Ch 78 (2480 MHz)

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

MASI0237 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26500 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Low Pass Filter 0-1000 MHz	Micro-Tronics	LPM50004	LFC	11/27/2012	24 mo
Attenuator	Coaxicom	66702 3910AF-20	TKI	4/28/2014	12 mo
HP Filter	Micro-Tronics	HPM50111	HFM	4/2/2012	36 mo
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	1/10/2014	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCK	2/6/2014	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	10/24/2013	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	10/24/2013	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	8-18GHz RE Cables	OCO	10/24/2013	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/17/2014	12 mo
Antenna, Horn	EMCO	3115	AHB	3/10/2014	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	6/17/2014	12 mo
Antenna, Biconilog	EMCO	3142	AXB	6/2/2013	24 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	4/28/2014	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	4/28/2014	12 mo
Spectrum Analyzer	Agilent	E4440A	AAW	2/21/2013	24 mo

TEST DESCRIPTION

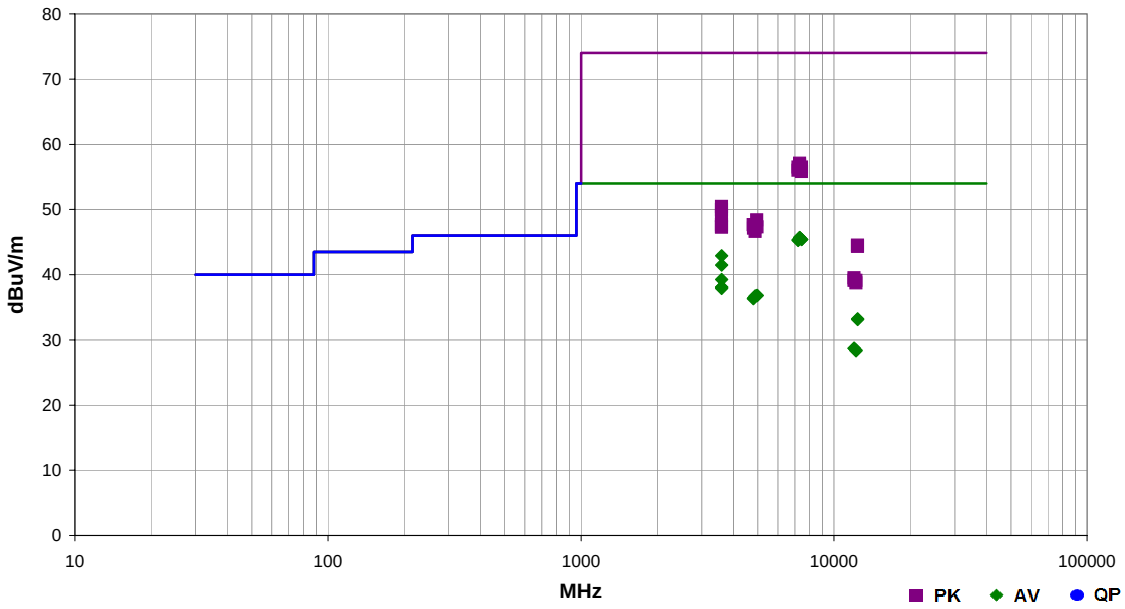
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify 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.

SPURIOUS RADIATED EMISSIONS

Work Order:	MASI0237	**Date:**	09/16/14		
Project:	None	**Temperature:**	25.5 °C		
Job Site:	OC10	**Humidity:**	44.7% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1008 mbar	**Tested by:**	Johnny Candelas
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: Low Ch 0 (2402 MHz), Mid Ch 39 (2440 MHz), & High Ch 78 (2480 MHz)				
Deviations:	None				
Comments:	Using Max Power Setting 20 RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B				

Test Specifications	**Test Method**
FCC 15.247:2014	ANSI C63.10:2009

Run #	65	**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	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7320.425	27.8	17.9	1.2	283.0	3.0	0.0	Vert	AV	0.0	45.7	54.0	-8.3	Mid Ch, EUT Horiz
7318.808	27.8	17.9	1.2	67.0	3.0	0.0	Horz	AV	0.0	45.7	54.0	-8.3	Mid Ch, EUT on Side
7441.025	27.3	18.1	1.2	1.0	3.0	0.0	Horz	AV	0.0	45.4	54.0	-8.6	High Ch, EUT on Side
7439.208	27.3	18.1	1.2	175.0	3.0	0.0	Vert	AV	0.0	45.4	54.0	-8.6	High Ch, EUT Horiz
7204.683	28.1	17.3	1.2	53.0	3.0	0.0	Horz	AV	0.0	45.4	54.0	-8.6	Low Ch, EUT on Side
7203.983	28.0	17.3	1.2	262.0	3.0	0.0	Vert	AV	0.0	45.3	54.0	-8.7	Low Ch, EUT Horiz
3599.825	36.7	6.2	1.0	301.0	3.0	0.0	Horz	AV	0.0	42.9	54.0	-11.1	Low Ch, EUT on Side - WC
3599.892	35.3	6.2	1.2	51.0	3.0	0.0	Horz	AV	0.0	41.5	54.0	-12.5	Low Ch, EUT Vert
3600.042	33.1	6.2	1.2	320.0	3.0	0.0	Vert	AV	0.0	39.3	54.0	-14.7	Low Ch, EUT Horiz - WC
3600.167	31.9	6.2	1.2	299.0	3.0	0.0	Vert	AV	0.0	38.1	54.0	-15.9	Low Ch, EUT Vert
3599.658	31.9	6.2	1.2	346.0	3.0	0.0	Horz	AV	0.0	38.1	54.0	-15.9	Low Ch, EUT Horiz
3599.750	31.7	6.2	1.2	308.0	3.0	0.0	Vert	AV	0.0	37.9	54.0	-16.1	Low Ch, EUT on Side
7322.192	39.2	17.9	1.2	283.0	3.0	0.0	Vert	PK	0.0	57.1	74.0	-16.9	Mid Ch, EUT Horiz
4961.933	26.1	10.7	1.2	360.0	3.0	0.0	Vert	AV	0.0	36.8	54.0	-17.2	High Ch, EUT Horiz
4960.867	26.1	10.7	1.2	320.0	3.0	0.0	Horz	AV	0.0	36.8	54.0	-17.2	High Ch, EUT on Side
7319.167	38.9	17.9	1.2	67.0	3.0	0.0	Horz	PK	0.0	56.8	74.0	-17.2	Mid Ch, EUT on Side
4879.142	26.3	10.4	1.2	108.0	3.0	0.0	Vert	AV	0.0	36.7	54.0	-17.3	Mid Ch, EUT Horiz
4877.717	26.3	10.4	3.8	299.0	3.0	0.0	Horz	AV	0.0	36.7	54.0	-17.3	Mid Ch, EUT on Side
7439.000	38.4	18.1	1.2	1.0	3.0	0.0	Horz	PK	0.0	56.5	74.0	-17.5	High Ch, EUT on Side
7207.300	39.2	17.3	1.2	262.0	3.0	0.0	Vert	PK	0.0	56.5	74.0	-17.5	Low Ch, EUT Horiz
4805.333	26.3	10.1	2.9	284.0	3.0	0.0	Vert	AV	0.0	36.4	54.0	-17.6	Low Ch, EUT Horiz
4804.075	26.2	10.1	1.2	92.0	3.0	0.0	Horz	AV	0.0	36.3	54.0	-17.7	Low Ch, EUT on Side
7207.292	38.7	17.3	1.2	53.0	3.0	0.0	Horz	PK	0.0	56.0	74.0	-18.0	Low Ch, EUT on Side
7442.367	37.7	18.1	1.2	175.0	3.0	0.0	Vert	PK	0.0	55.8	74.0	-18.2	High Ch, EUT Horiz
12400.460	30.3	2.9	1.2	344.0	3.0	0.0	Horz	AV	0.0	33.2	54.0	-20.8	High Ch, EUT on Side
12400.540	30.2	2.9	1.2	359.0	3.0	0.0	Vert	AV	0.0	33.1	54.0	-20.9	High Ch, EUT Horiz
3597.967	44.3	6.2	1.0	301.0	3.0	0.0	Horz	PK	0.0	50.5	74.0	-23.5	Low Ch, EUT on Side

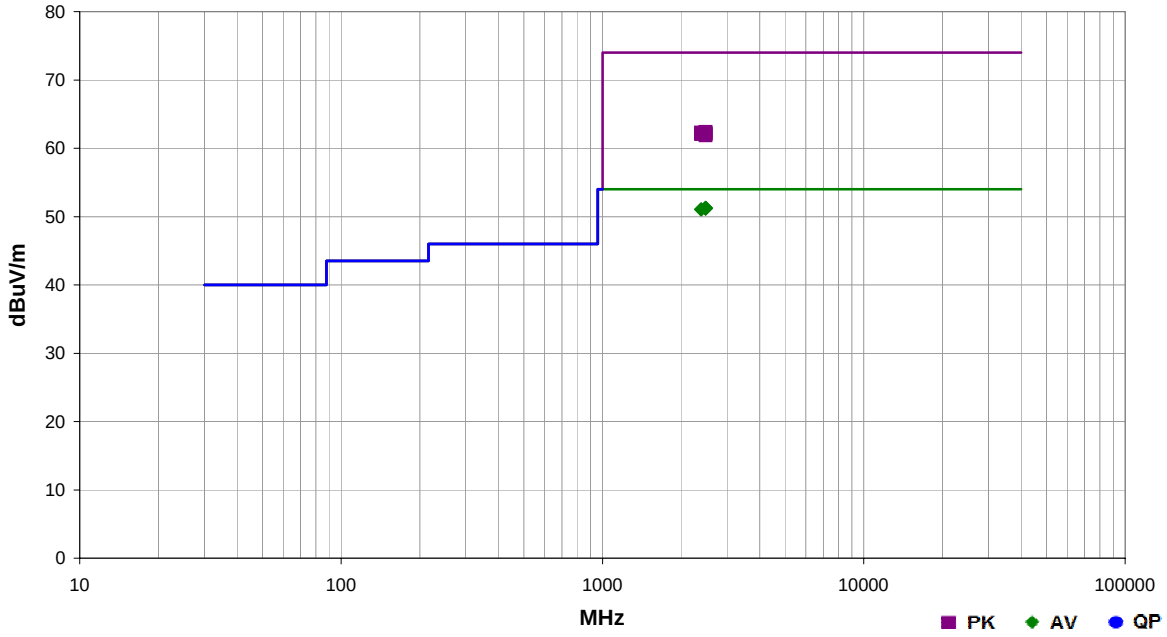
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
3598.417	43.8	6.2	1.2	51.0	3.0	0.0	Horz	PK	0.0	50.0	74.0	-24.0	Low Ch, EUT Vert
3600.875	42.9	6.2	1.2	320.0	3.0	0.0	Vert	PK	0.0	49.1	74.0	-24.9	Low Ch, EUT Horiz
12008.630	37.8	-9.1	1.2	251.0	3.0	0.0	Horz	AV	0.0	28.7	54.0	-25.3	Low Ch, EUT on Side
12007.530	37.8	-9.1	1.2	251.0	3.0	0.0	Vert	AV	0.0	28.7	54.0	-25.3	Low Ch, EUT Horiz
12198.920	37.2	-8.8	1.2	286.0	3.0	0.0	Horz	AV	0.0	28.4	54.0	-25.6	Mid Ch, EUT on Side
4960.358	37.7	10.7	1.2	360.0	3.0	0.0	Vert	PK	0.0	48.4	74.0	-25.6	High Ch, EUT Horiz
12200.580	37.1	-8.8	1.2	43.0	3.0	0.0	Vert	AV	0.0	28.3	54.0	-25.7	Mid Ch, EUT Horiz
3599.225	41.5	6.2	1.2	308.0	3.0	0.0	Vert	PK	0.0	47.7	74.0	-26.3	Low Ch, EUT on Side
4804.092	37.5	10.1	1.2	92.0	3.0	0.0	Horz	PK	0.0	47.6	74.0	-26.4	Low Ch, EUT on Side
3600.433	41.2	6.2	1.2	346.0	3.0	0.0	Horz	PK	0.0	47.4	74.0	-26.6	Low Ch, EUT Horiz
4880.733	36.9	10.4	3.8	299.0	3.0	0.0	Horz	PK	0.0	47.3	74.0	-26.7	Mid Ch, EUT on Side
4962.483	36.6	10.7	1.2	320.0	3.0	0.0	Horz	PK	0.0	47.3	74.0	-26.7	High Ch, EUT on Side
3598.767	41.1	6.2	1.2	299.0	3.0	0.0	Vert	PK	0.0	47.3	74.0	-26.7	Low Ch, EUT Vert
4804.467	37.0	10.1	2.9	284.0	3.0	0.0	Vert	PK	0.0	47.1	74.0	-26.9	Low Ch, EUT Horiz
4880.550	36.2	10.4	1.2	108.0	3.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	Mid Ch, EUT Horiz
12400.470	41.6	2.9	1.2	344.0	3.0	0.0	Horz	PK	0.0	44.5	74.0	-29.5	High Ch, EUT on Side
12400.480	41.4	2.9	1.2	359.0	3.0	0.0	Vert	PK	0.0	44.3	74.0	-29.7	High Ch, EUT Horiz
12011.370	48.6	-9.1	1.2	251.0	3.0	0.0	Vert	PK	0.0	39.5	74.0	-34.5	Low Ch, EUT Horiz
12200.420	47.9	-8.8	1.2	43.0	3.0	0.0	Vert	PK	0.0	39.1	74.0	-34.9	Mid Ch, EUT Horiz
12010.110	48.2	-9.1	1.2	251.0	3.0	0.0	Horz	PK	0.0	39.1	74.0	-34.9	Low Ch, EUT on Side
12200.030	47.5	-8.8	1.2	286.0	3.0	0.0	Horz	PK	0.0	38.7	74.0	-35.3	Mid Ch, EUT on Side

SPURIOUS RADIATED EMISSIONS

Work Order:	MASI0237	**Date:**	09/16/14		
Project:	None	**Temperature:**	25.5 °C		
Job Site:	OC10	**Humidity:**	44.7% RH		
Serial Number:	1000000020	**Barometric Pres.:**	1008 mbar	**Tested by:**	Johnny Candelas
EUT:	RDS7A/ROOT V2				
Configuration:	1				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	120VAC/60Hz				
Operating Mode:	Continuously Transmitting Bluetooth Basic Rate GFSK: Low Channel 0 (2402 MHz) & High Channel 78 (2480 MHz).				
Deviations:	None				
Comments:	Using Max Power Setting 20 RDS7A, Radio=36235 Rev A, Radio Chip= 24412 Rev B				

Test Specifications	**Test Method**
FCC 15.247:2014	ANSI C63.10:2009

Run #	70	**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	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2484.235	28.1	3.2	1.2	359.0	3.0	20.0	Vert	AV	0.0	51.3	54.0	-2.7	High Ch, EUT on Side
2483.590	28.1	3.2	1.2	182.0	3.0	20.0	Vert	AV	0.0	51.3	54.0	-2.7	High Ch, EUT Vert
2483.778	28.0	3.2	1.2	196.0	3.0	20.0	Horz	AV	0.0	51.2	54.0	-2.8	High Ch, EUT Horiz
2483.633	28.0	3.2	2.7	7.0	3.0	20.0	Horz	AV	0.0	51.2	54.0	-2.8	High Ch, EUT on Side
2483.547	28.0	3.2	2.6	348.0	3.0	20.0	Vert	AV	0.0	51.2	54.0	-2.8	High Ch, EUT Horiz
2483.522	28.0	3.2	1.2	270.0	3.0	20.0	Horz	AV	0.0	51.2	54.0	-2.8	High Ch, EUT Vert
2389.515	28.0	3.1	1.2	133.0	3.0	20.0	Vert	AV	0.0	51.1	54.0	-2.9	Low Ch, EUT on Side
2389.090	28.0	3.1	1.2	67.0	3.0	20.0	Horz	AV	0.0	51.1	54.0	-2.9	Low Ch, EUT Horiz
2483.982	39.2	3.2	1.2	196.0	3.0	20.0	Horz	PK	0.0	62.4	74.0	-11.6	High Ch, EUT Horiz
2484.392	39.1	3.2	2.7	7.0	3.0	20.0	Horz	PK	0.0	62.3	74.0	-11.7	High Ch, EUT on Side
2389.112	39.2	3.1	1.2	67.0	3.0	20.0	Horz	PK	0.0	62.3	74.0	-11.7	Low Ch, EUT Horiz
2484.410	38.9	3.2	1.2	182.0	3.0	20.0	Vert	PK	0.0	62.1	74.0	-11.9	High Ch, EUT Vert
2484.105	38.9	3.2	1.2	359.0	3.0	20.0	Vert	PK	0.0	62.1	74.0	-11.9	High Ch, EUT on Side
2483.787	38.9	3.2	1.2	270.0	3.0	20.0	Horz	PK	0.0	62.1	74.0	-11.9	High Ch, EUT Vert
2389.608	39.0	3.1	1.2	133.0	3.0	20.0	Vert	PK	0.0	62.1	74.0	-11.9	Low Ch, EUT on Side
2483.685	38.7	3.2	2.6	348.0	3.0	20.0	Vert	PK	0.0	61.9	74.0	-12.1	High Ch, EUT Horiz

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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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 in a no-hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

SPURIOUS CONDUCTED EMISSIONS

EUT:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

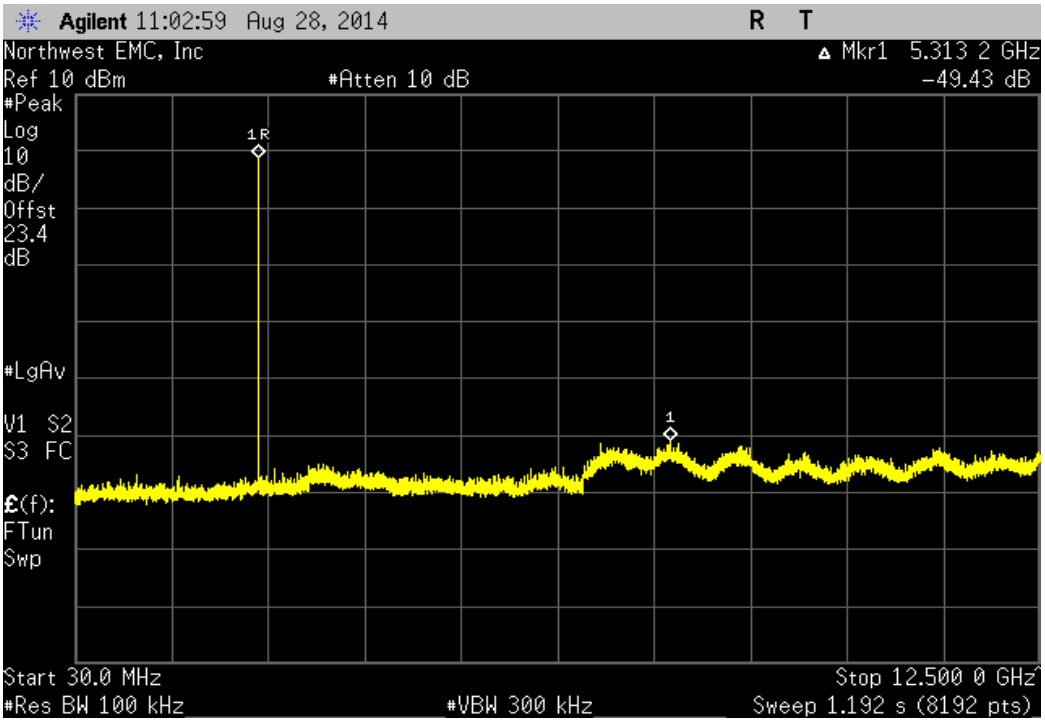
DEVIATIONS FROM TEST STANDARD

None

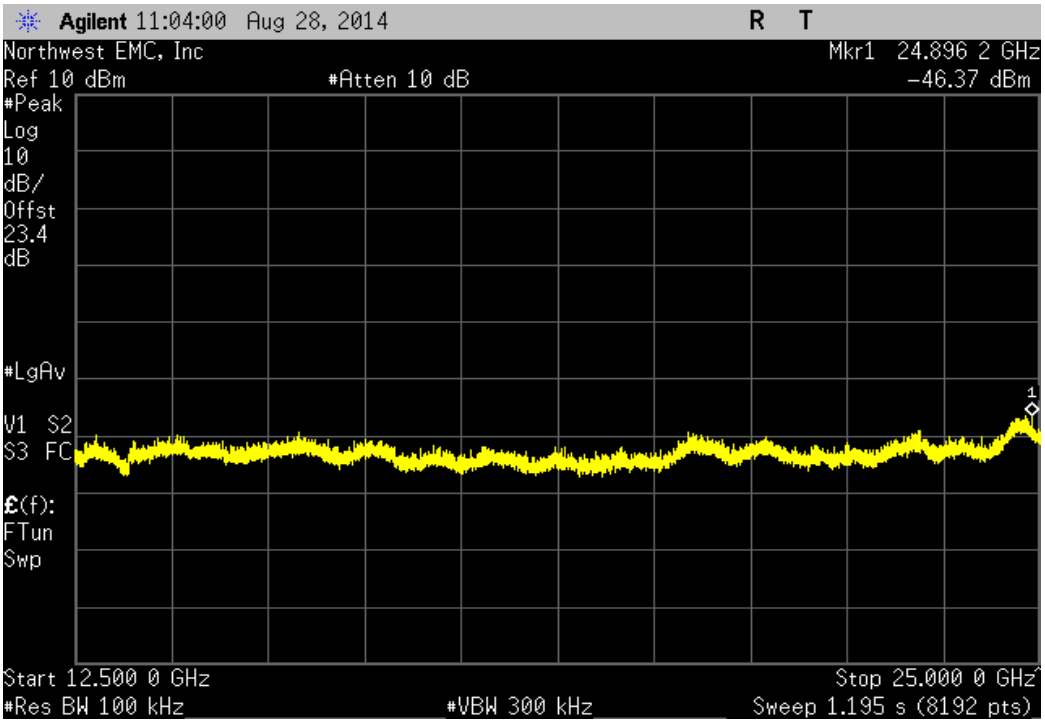
Configuration #	1	Signature

		Frequency Range	Value (dBc)	Limit ≤ (dBc)	Result
DH5, GFSK					
	Low Channel 0, 2402 MHz	30 MHz - 12.5 GHz	-49.43	-20	Pass
	Low Channel 0, 2402 MHz	12.5 GHz - 25 GHz	-45.08	-20	Pass
	Mid Channel 39, 2440 MHz	30 MHz - 12.5 GHz	-51.63	-20	Pass
	Mid Channel 39, 2440 MHz	12.5 GHz - 25 GHz	-45.85	-20	Pass
	High Channel 78, 2480 MHz	30 MHz - 12.5 GHz	-51.74	-20	Pass
	High Channel 78, 2480 MHz	12.5 GHz - 25 GHz	-46.74	-20	Pass

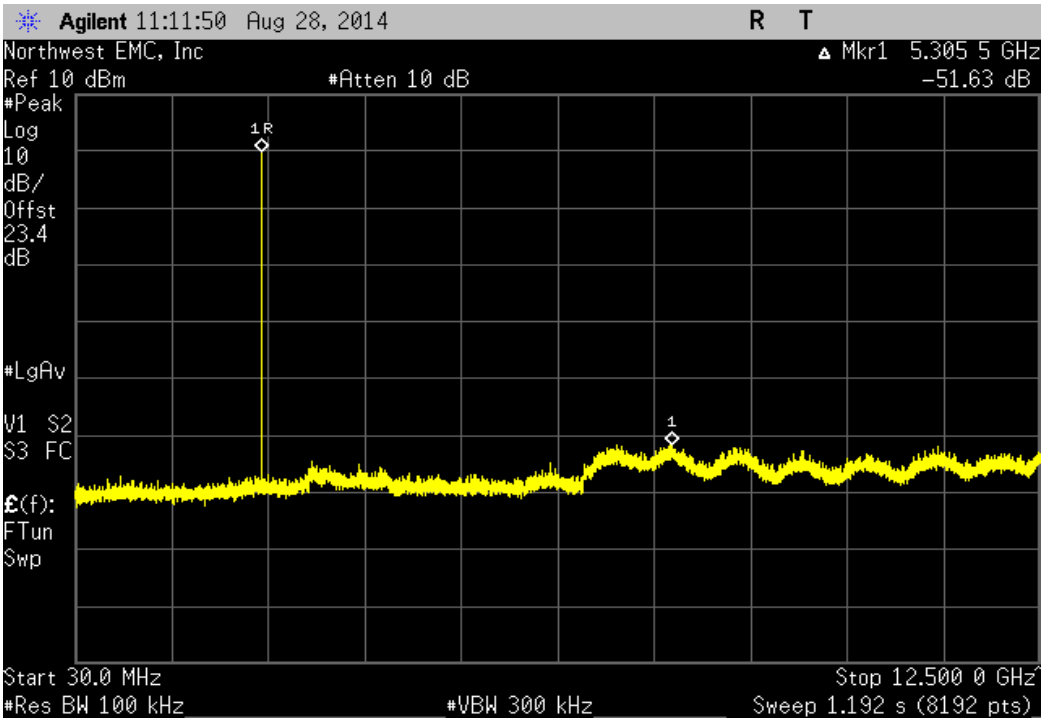
DH5, GFSK, Low Channel 0, 2402 MHz				
Frequency Range		Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz		-49.43	-20	Pass



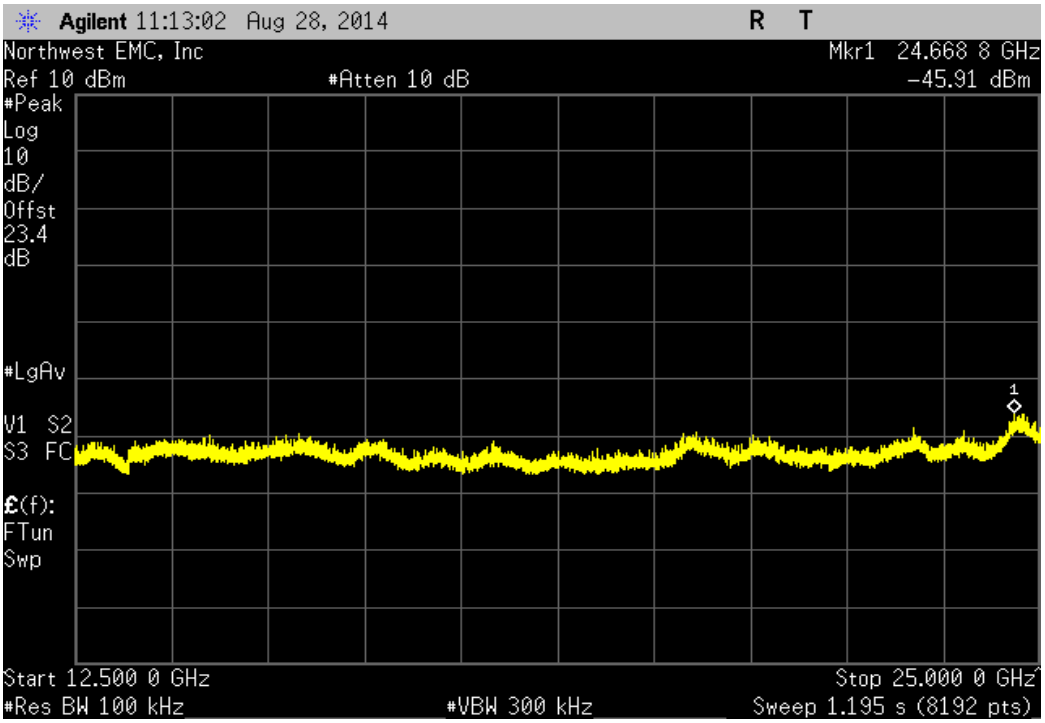
DH5, GFSK, Low Channel 0, 2402 MHz				
Frequency Range		Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz		-45.08	-20	Pass



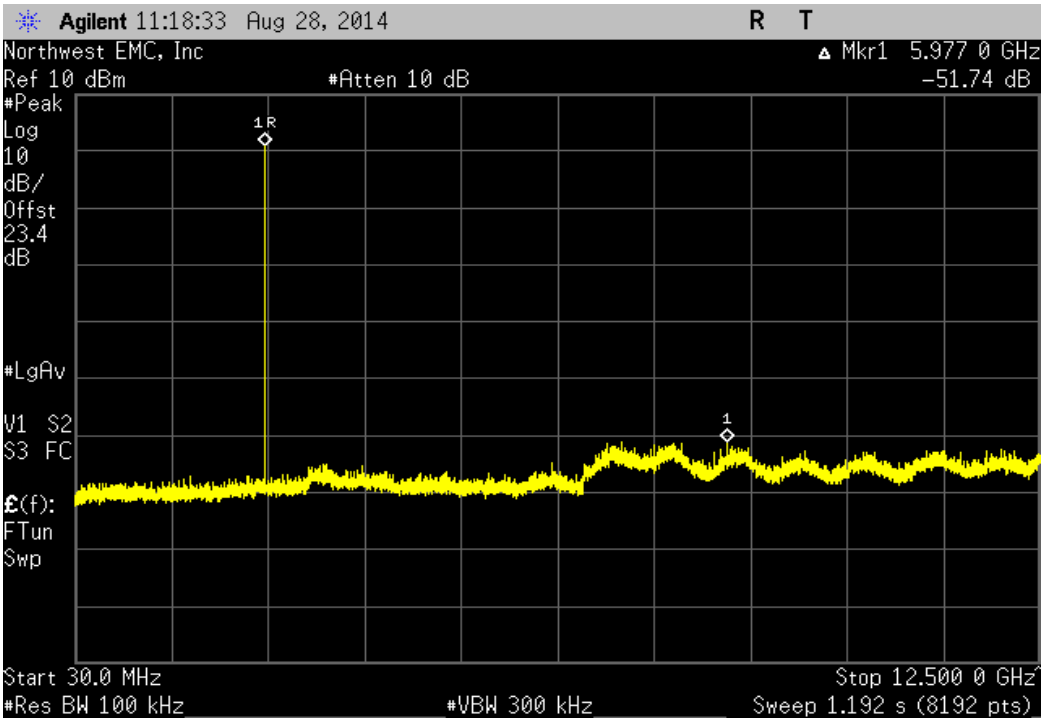
DH5, GFSK, Mid Channel 39, 2440 MHz				
Frequency Range		**Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz		-51.63	-20	Pass



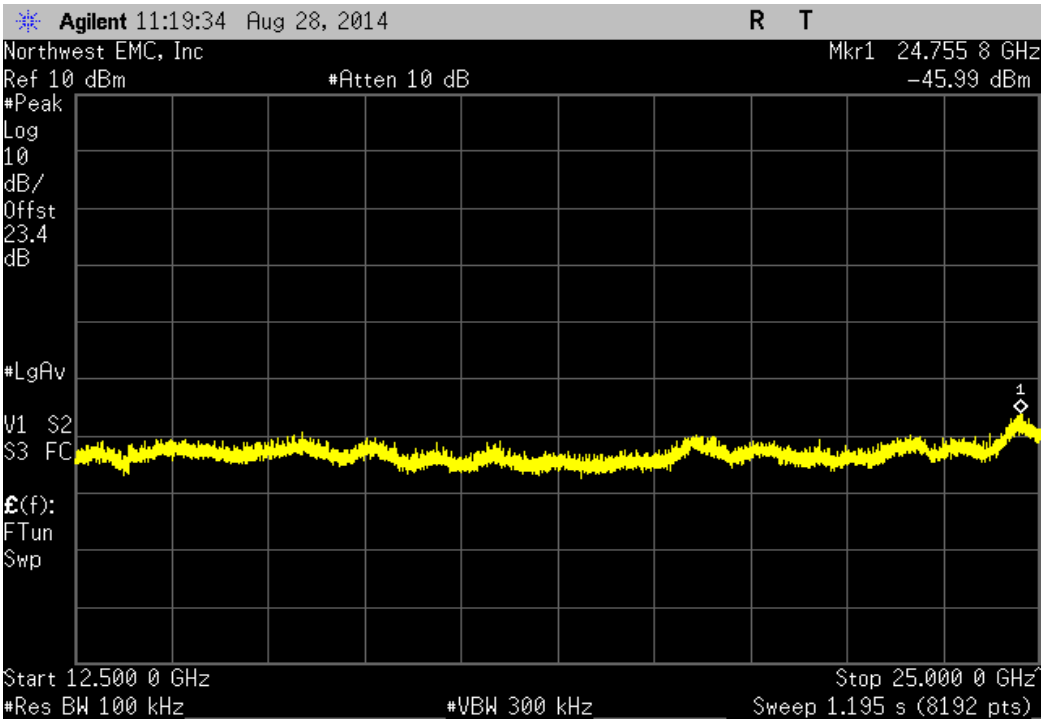
DH5, GFSK, Mid Channel 39, 2440 MHz				
Frequency Range		**Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz		-45.85	-20	Pass



DH5, GFSK, High Channel 78, 2480 MHz				
Frequency Range		Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz		-51.74	-20	Pass



DH5, GFSK, High Channel 78, 2480 MHz				
Frequency Range		Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz		-46.74	-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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

DEVIATIONS FROM TEST STANDARD

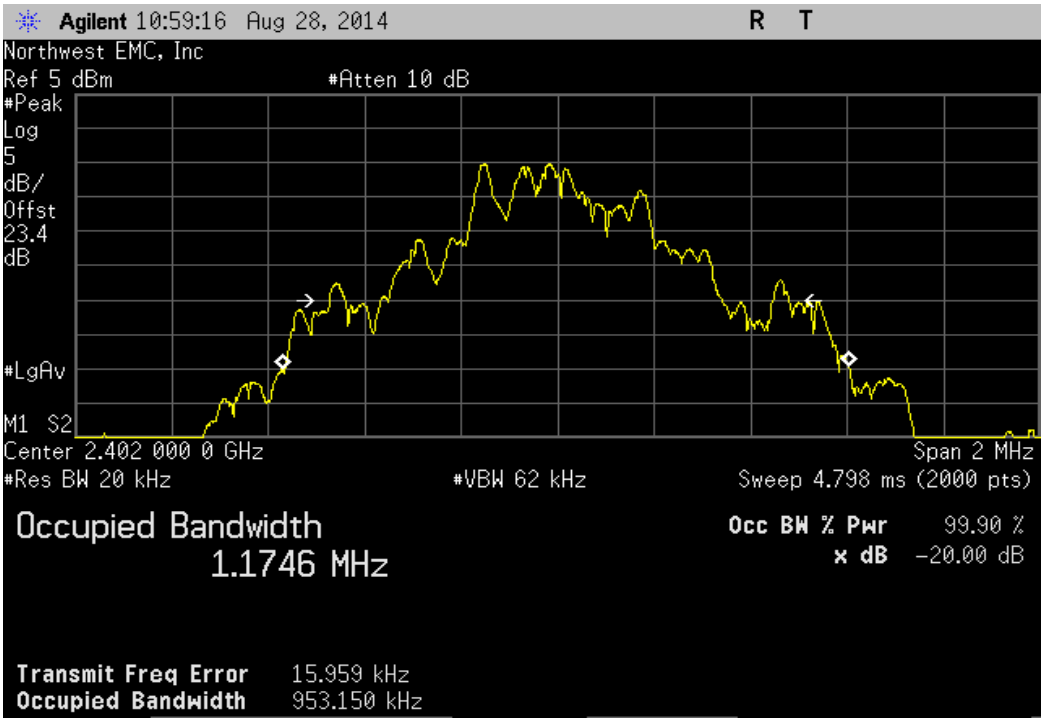
None

Configuration #	1	Signature

		Value	Limit (<)	Result
DH5, GFSK				
	Low Channel 0, 2402 MHz	953.151 kHz	1.5 MHz	Pass
	Mid Channel 39, 2440 MHz	1.003 MHz	1.5 MHz	Pass
	High Channel 78, 2480 MHz	969.221 kHz	1.5 MHz	Pass

DH5, GFSK, Low Channel 0, 2402 MHz

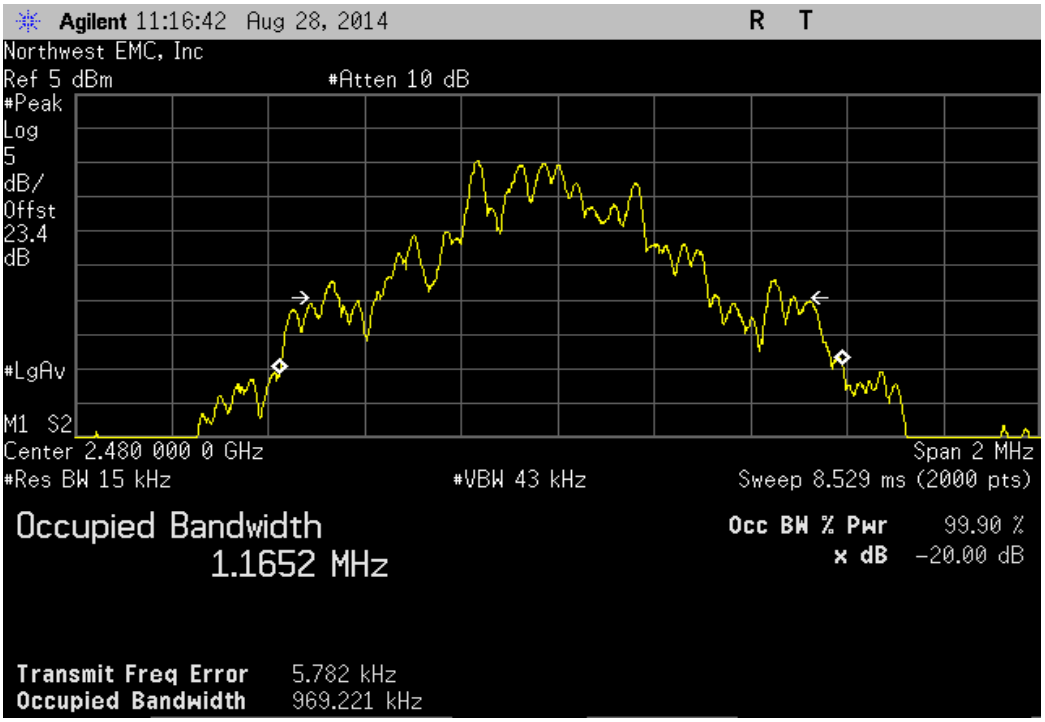
				Value	Limit (<)	Result
				953.151 kHz	1.5 MHz	Pass



DH5, GFSK, Mid Channel 39, 2440 MHz

				Value	Limit (<)	Result
				1.003 MHz	1.5 MHz	Pass

DH5, GFSK, High Channel 78, 2480 MHz						
				Value	Limit (<)	Result
				969.221 kHz	1.5 MHz	Pass



OUTPUT POWER

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

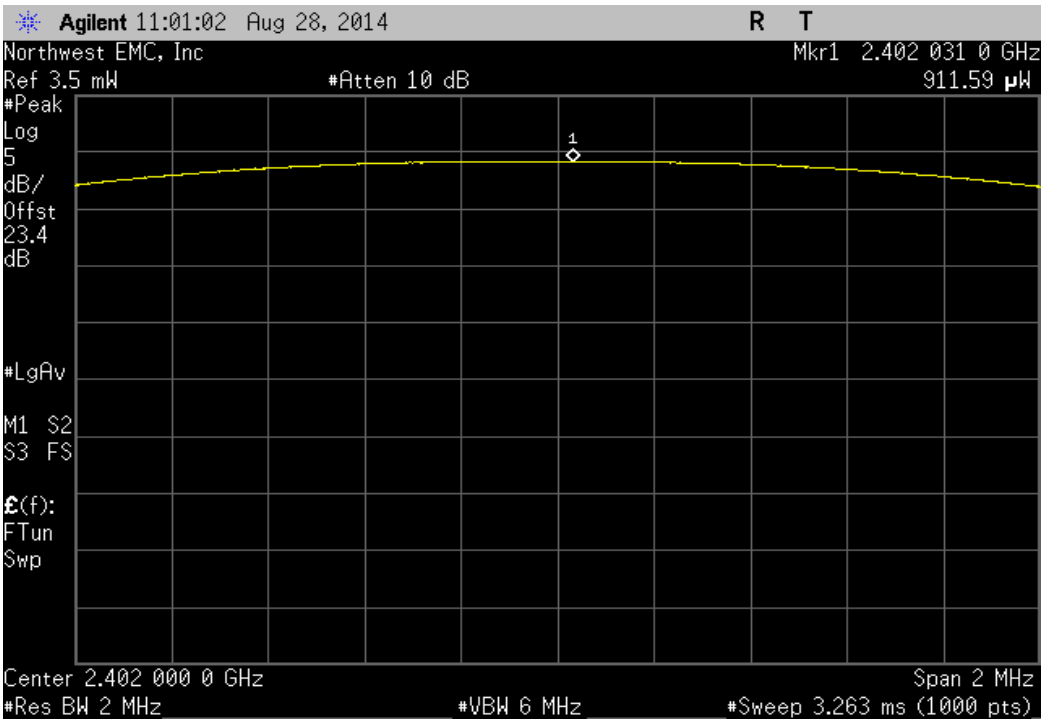
DEVIATIONS FROM TEST STANDARD

None

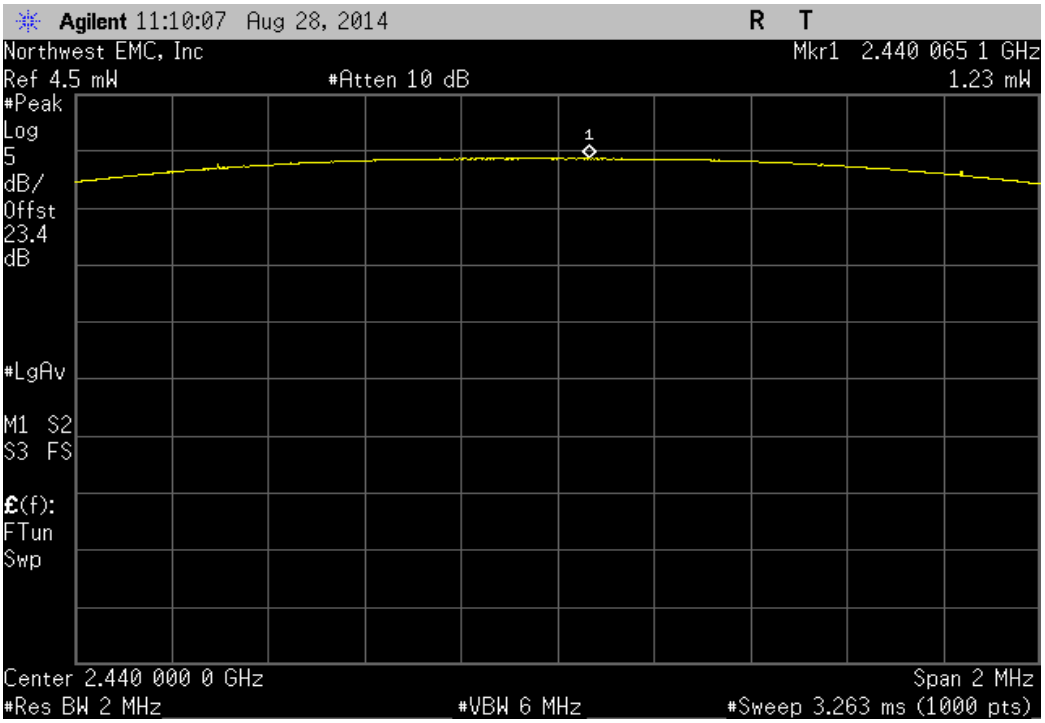
Configuration #	1	Signature

	Value	Limit (<)	Result
DH5, GFSK			
Low Channel 0, 2402 MHz	911.591 uW	125 mW	Pass
Mid Channel 39, 2440 MHz	1.228 mW	125 mW	Pass
High Channel 78, 2480 MHz	1.359 mW	125 mW	Pass

DH5, GFSK, Low Channel 0, 2402 MHz						
				Value	Limit (<)	Result
				911.591 uW	125 mW	Pass

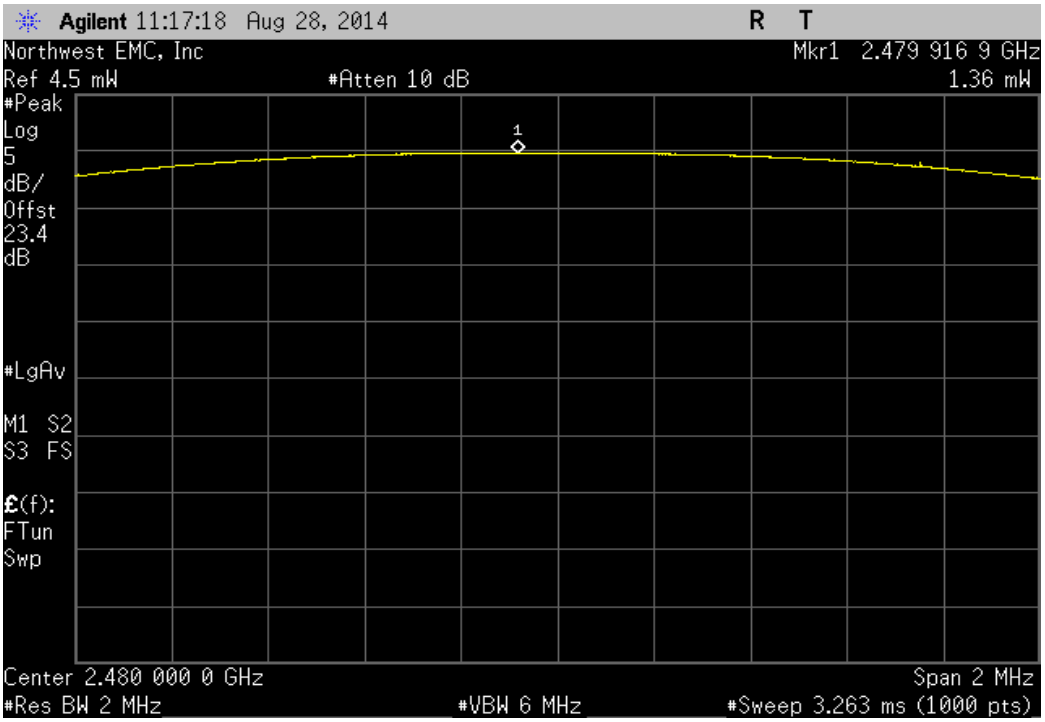


DH5, GFSK, Mid Channel 39, 2440 MHz						
				Value	Limit (<)	Result
				1.228 mW	125 mW	Pass



OUTPUT POWER

DH5, GFSK, High Channel 78, 2480 MHz						
				Value	Limit (<)	Result
				1.359 mW	125 mW	Pass



CHANNEL 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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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.

CHANNEL SEPARATION

EUT:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

DEVIATIONS FROM TEST STANDARD

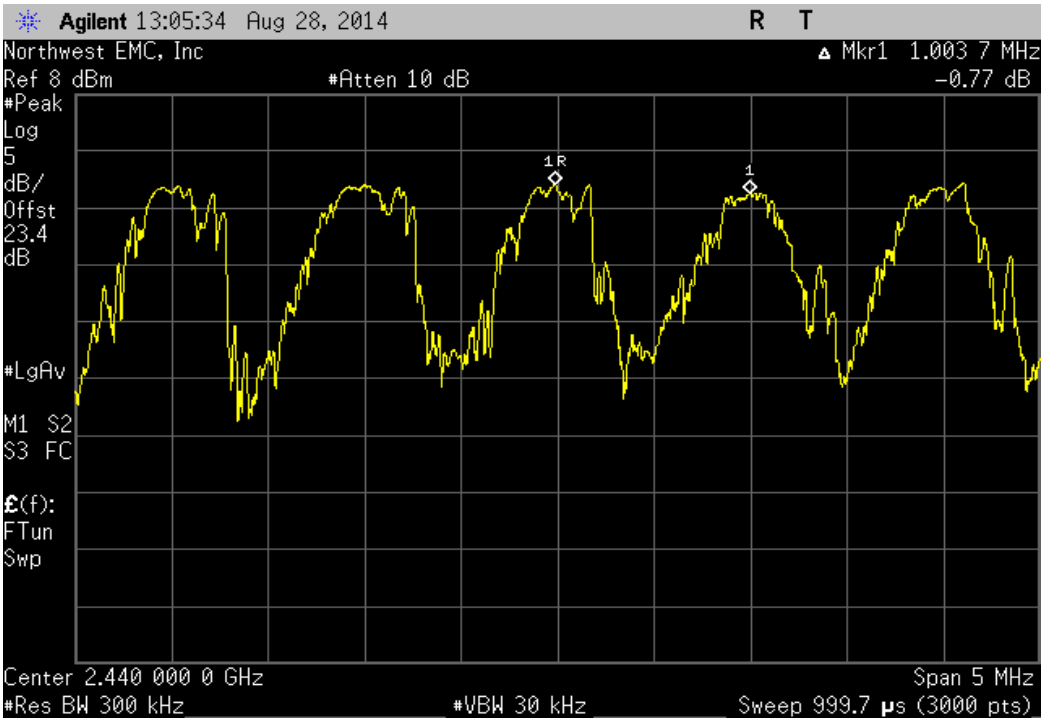
None

Configuration #	1	Signature

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

CHANNEL SEPARATION

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



NUMBER OF HOPPING CHANNELS

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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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 CHANNELS

EUT:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

DEVIATIONS FROM TEST STANDARD

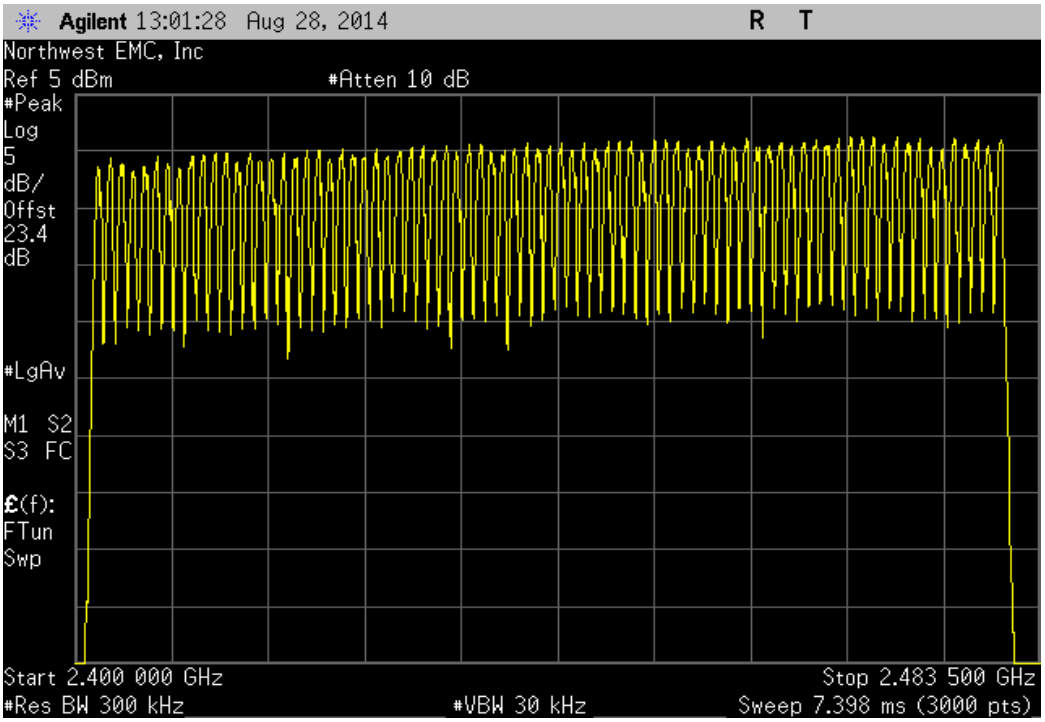
None

Configuration #	1	Signature

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

NUMBER OF HOPPING CHANNELS

Hopping Mode, 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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

DEVIATIONS FROM TEST STANDARD

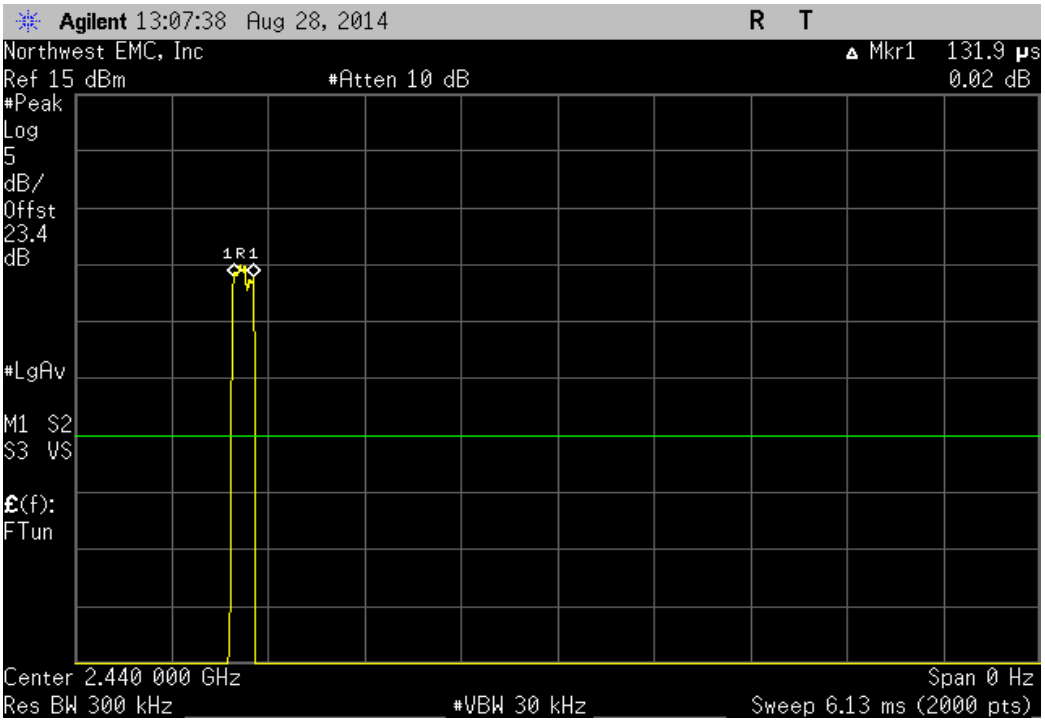
None

Configuration #	1	Signature

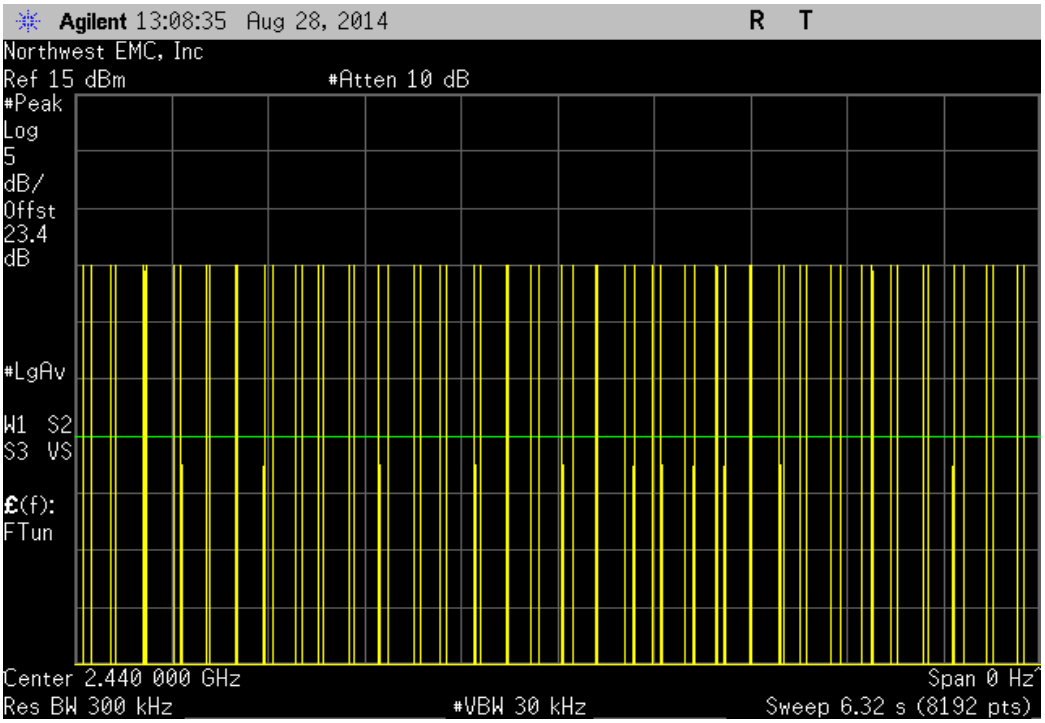
	Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Results
Hopping Mode							
Mid Channel 39, 2440 MHz	0.132	N/A	N/A	N/A	N/A	N/A	N/A
Mid Channel 39, 2440 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Mid Channel 39, 2440 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Mid Channel 39, 2440 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Mid Channel 39, 2440 MHz	N/A	63	N/A	N/A	N/A	N/A	N/A
Mid Channel 39, 2440 MHz	0.132	N/A	63.75	5	42.08	400	Pass

DWELL TIME

Hopping Mode, 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
0.132	N/A	N/A	N/A	N/A	N/A	N/A

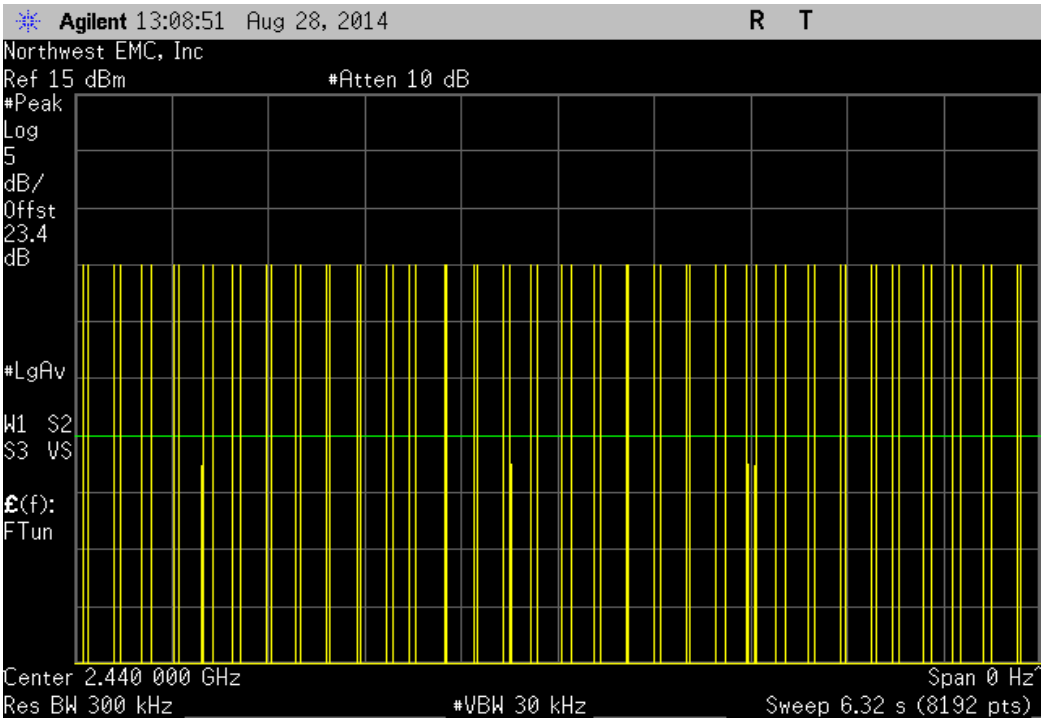


Hopping Mode, Mid Channel 39, 2440 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A

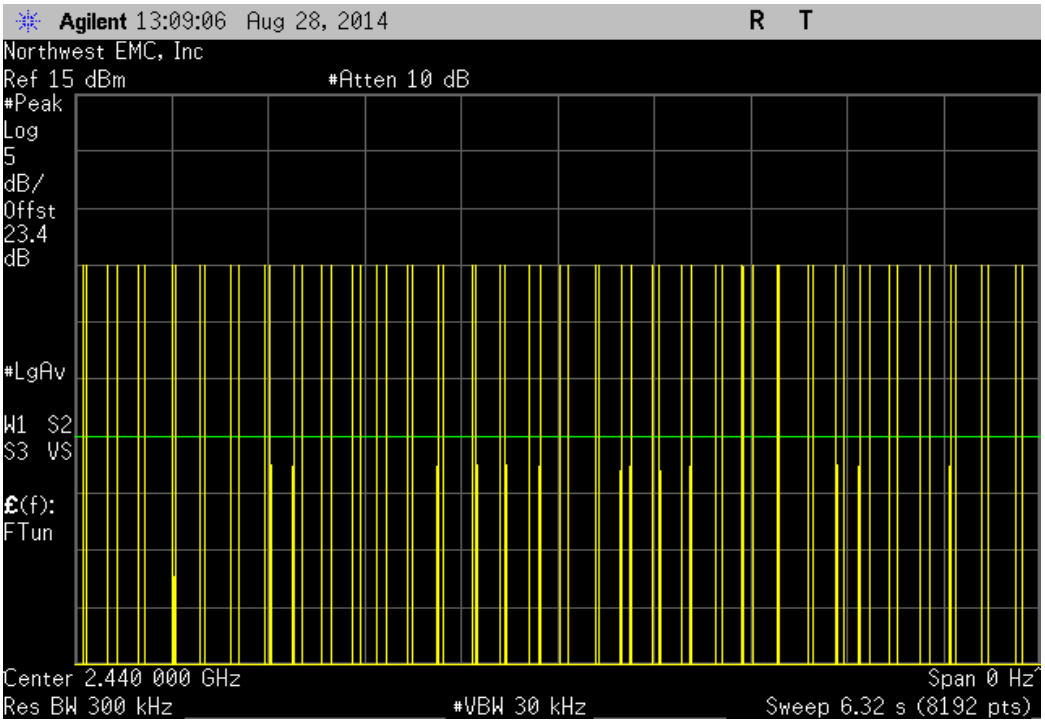


DWELL TIME

Hopping Mode, 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	64	N/A	N/A	N/A	N/A	N/A

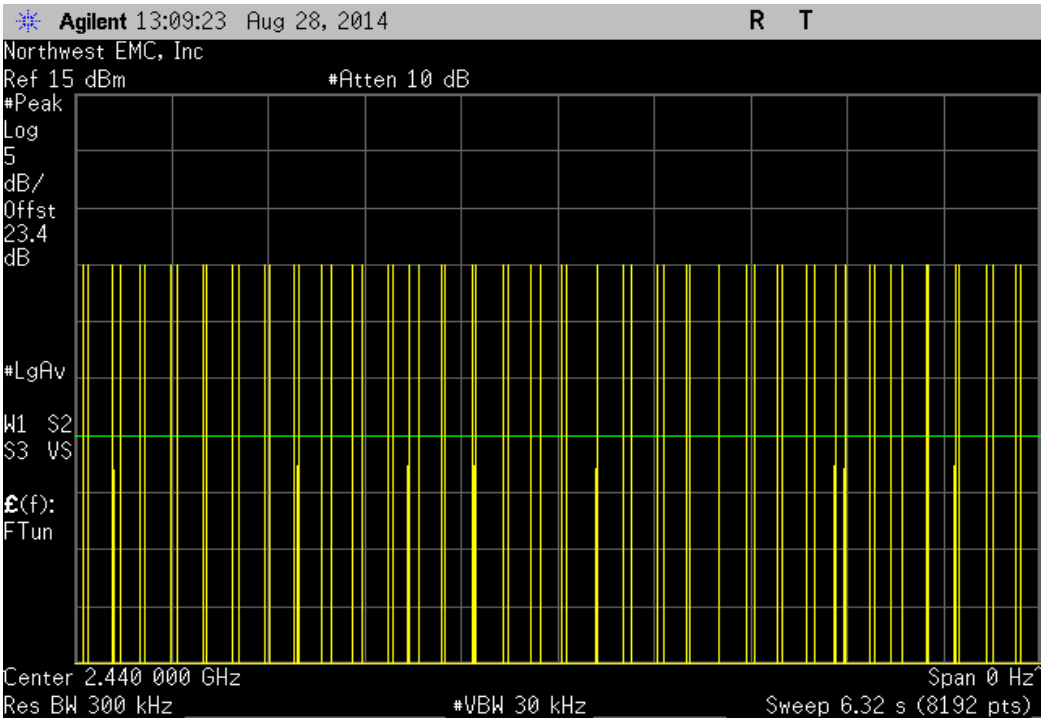


Hopping Mode, Mid Channel 39, 2440 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A



DWELL TIME

Hopping Mode, 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	63	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 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
0.132	N/A	63.75	5	42.08	400	Pass

Calculation Only

No Screen Capture Required

DUTY CYCLE

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mos)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	24

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.

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

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

DUTY CYCLE

EUT:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

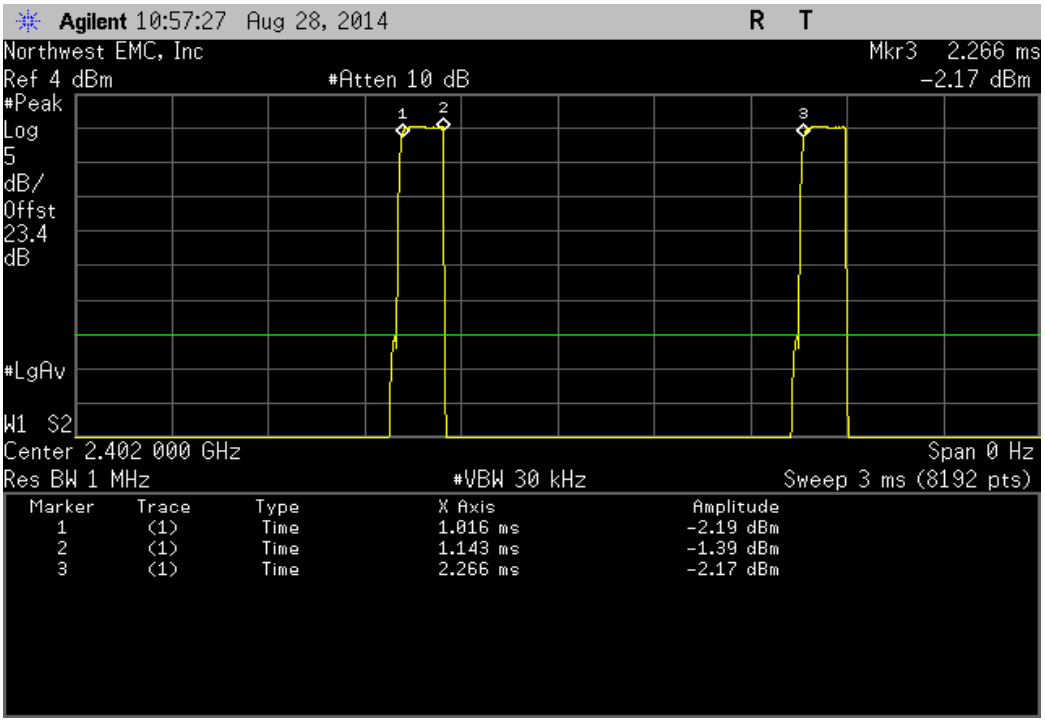
DEVIATIONS FROM TEST STANDARD

None

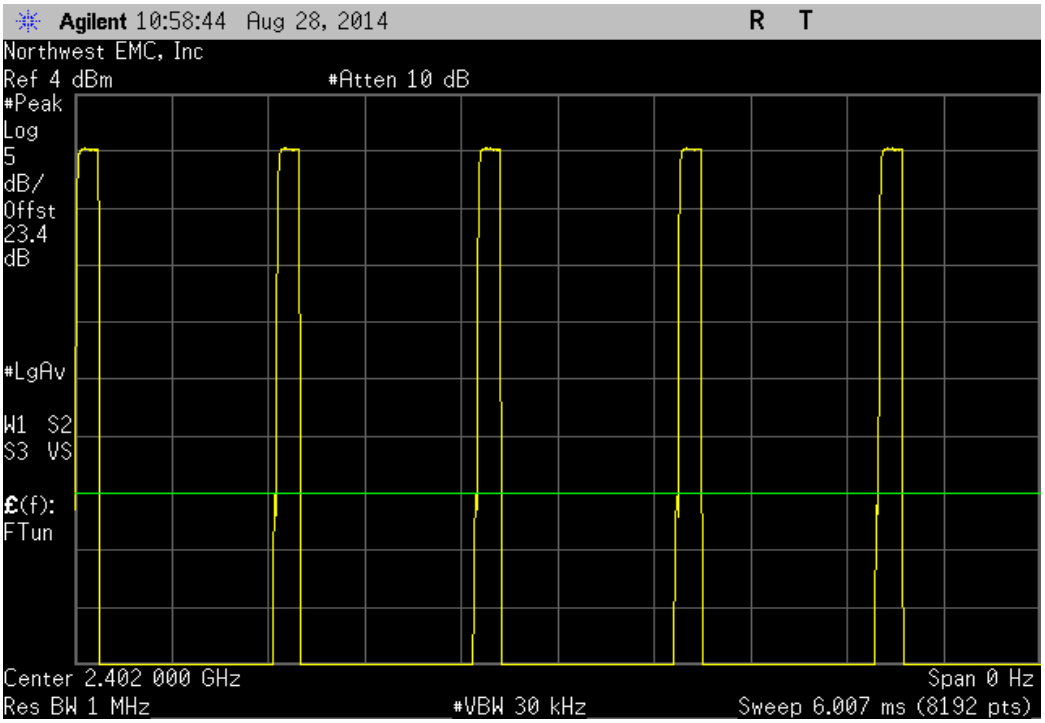
Configuration #	1	Signature

	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
DH5, GFSK						
Low Channel 0, 2402 MHz	126.788 uS	1.25 mS	1	10.1	N/A	N/A
Low Channel 0, 2402 MHz	N/A	N/A	6	N/A	N/A	N/A
Mid Channel 39, 2440 MHz	127.487 uS	1.252 mS	1	10.2	N/A	N/A
Mid Channel 39, 2440 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 78, 2480 MHz	127.121 uS	1.25 mS	1	10.2	N/A	N/A
High Channel 78, 2480 MHz	N/A	N/A	5	N/A	N/A	N/A

DH5, GFSK, Low Channel 0, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	126.788 uS	1.25 mS	1	10.1	N/A	N/A



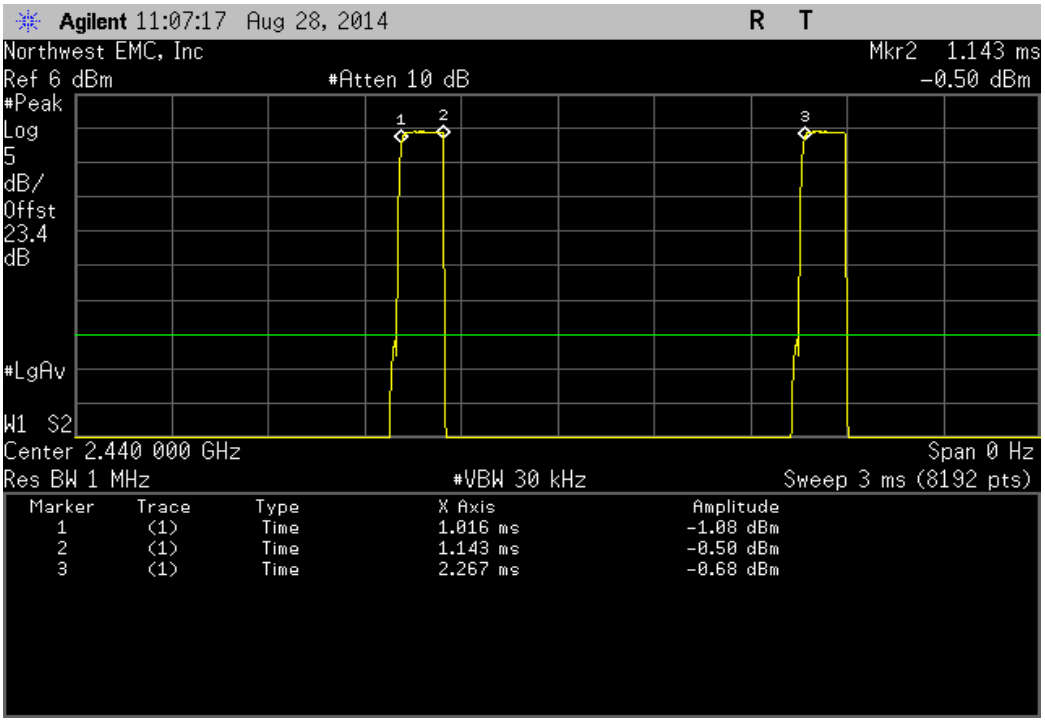
DH5, GFSK, Low Channel 0, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	6	N/A	N/A	N/A



DUTY CYCLE

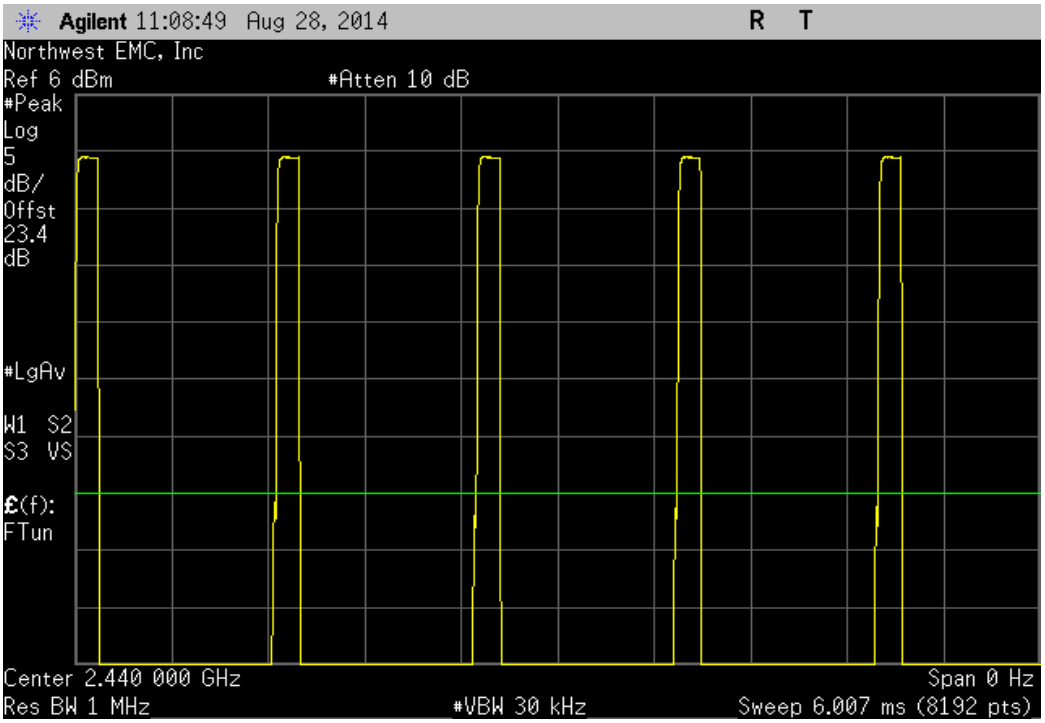
DH5, GFSK, Mid Channel 39, 2440 MHz

	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	127.487 uS	1.252 mS	1	10.2	N/A	N/A



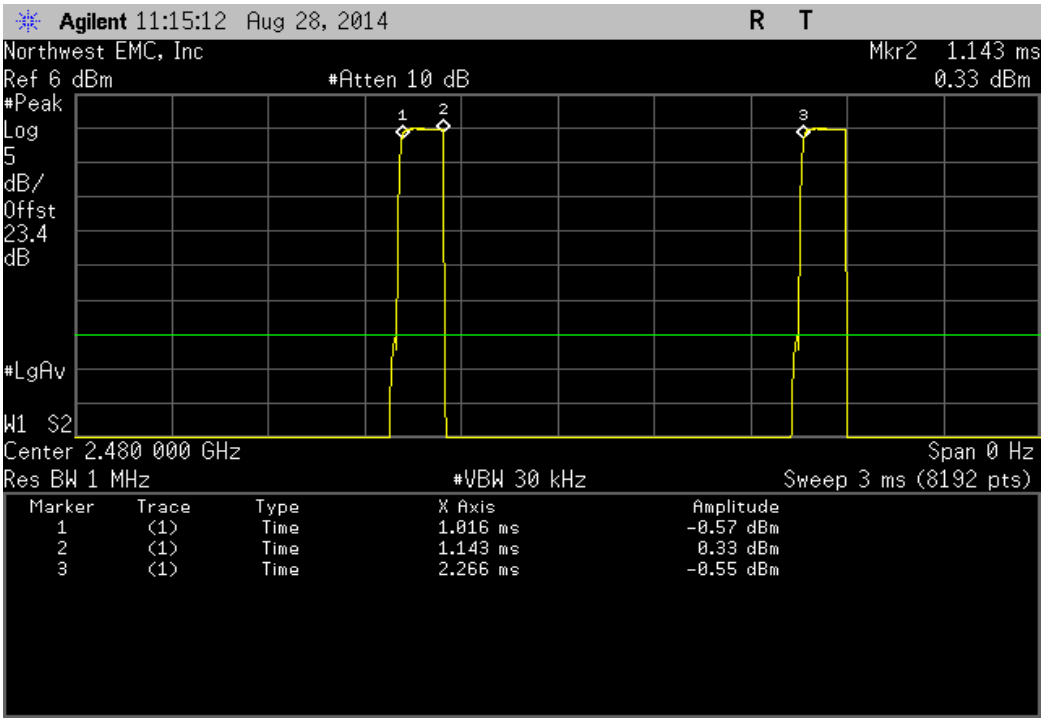
DH5, GFSK, Mid Channel 39, 2440 MHz

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

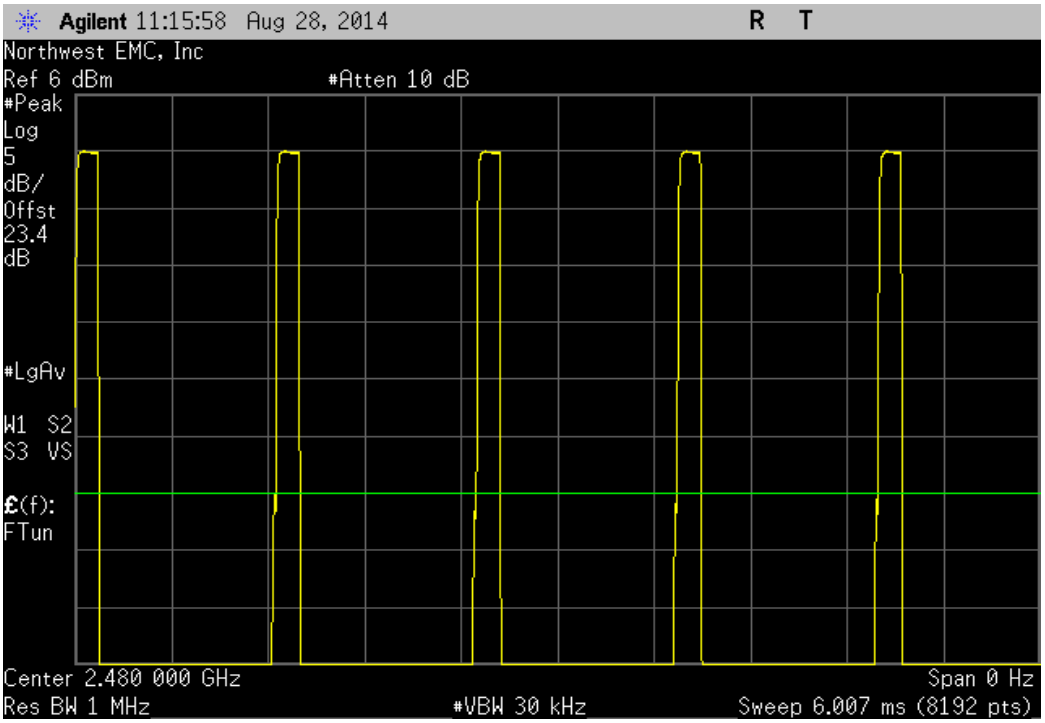


DUTY CYCLE

DH5, GFSK, High Channel 78, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	127.121 uS	1.25 mS	1	10.2	N/A	N/A



DH5, GFSK, High Channel 78, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

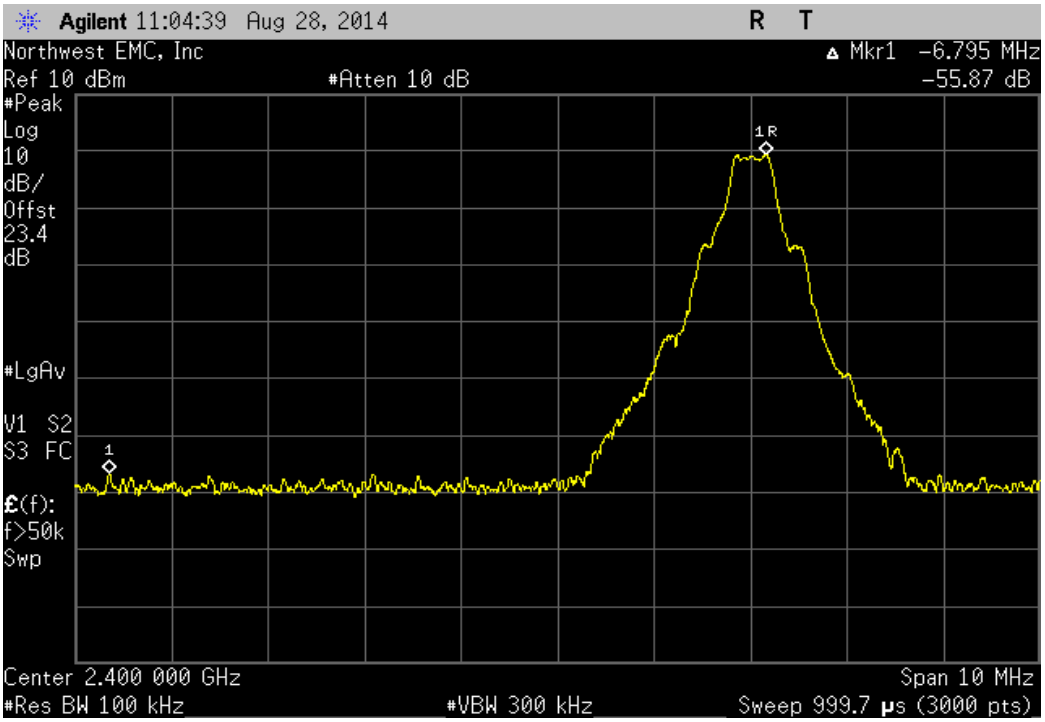
DEVIATIONS FROM TEST STANDARD

None

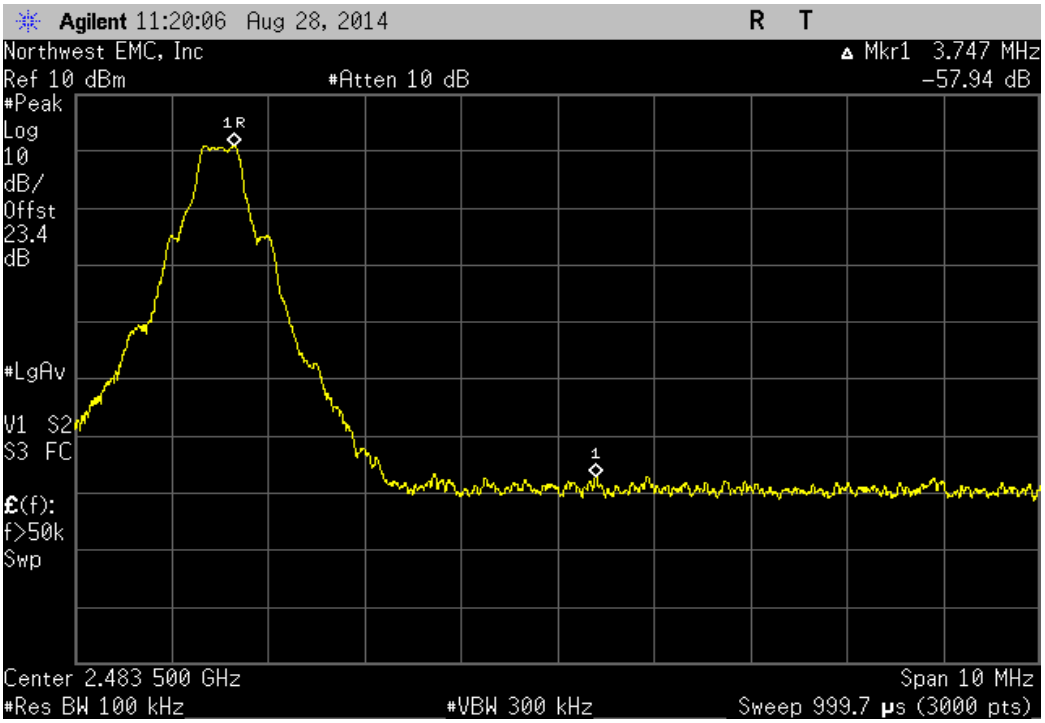
Configuration #	1	Signature

	Value (dBc)	Limit ≤ (dBc)	Result
DH5, GFSK			
Low Channel 0, 2402 MHz	-55.87	-20	Pass
High Channel 78, 2480 MHz	-57.94	-20	Pass

DH5, GFSK, Low Channel 0, 2402 MHz						
					Value (dBc)	Limit ≤ (dBc)	Result
					-55.87	-20	Pass



DH5, GFSK, High Channel 78, 2480 MHz						
					Value (dBc)	Limit ≤ (dBc)	Result
					-57.94	-20	Pass



BAND EDGE COMPLIANCE - HOPPING

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)
Attenuator, 6dB	S.M. Electronics	18N-06	AWN	2/3/2014	12
Signal Generator	Agilent	E8257D	TGU	2/1/2012	36
OC13 Cables	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/30/2014	12
40GHz DC Block	Miteq	DCB4000	AMD	4/28/2014	12
Spectrum Analyzer	Agilent	E4446A	AAY	2/22/2013	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

EUT:	RAD7A/Radical 7 V2			**Work Order:**	MASI0234
Serial Number:	1000000349			**Date:**	08/28/14
Customer:	Masimo Corporation			**Temperature:**	24.5°C
Attendees:	Michael Clark			**Humidity:**	47%
Project:	None			**Barometric Pres.:**	1017
Tested by:	Johnny Candelas & Mike Tran	**Power:**	120VAC/60Hz	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2014	ANSI C63.10:2009

COMMENTS

DC Block/20dB Attenuator (20.5dB) + coax cable (1.85dB) + client provided patch cable (1.0dB) = 23.35dB total offset
Using Max Power Setting 20
RDS-1 Rev 1, MX-5 24494 C, Radio=36235 Rev A, Radio Chip= 24412 Rev B. Docking Station serial number 113674.

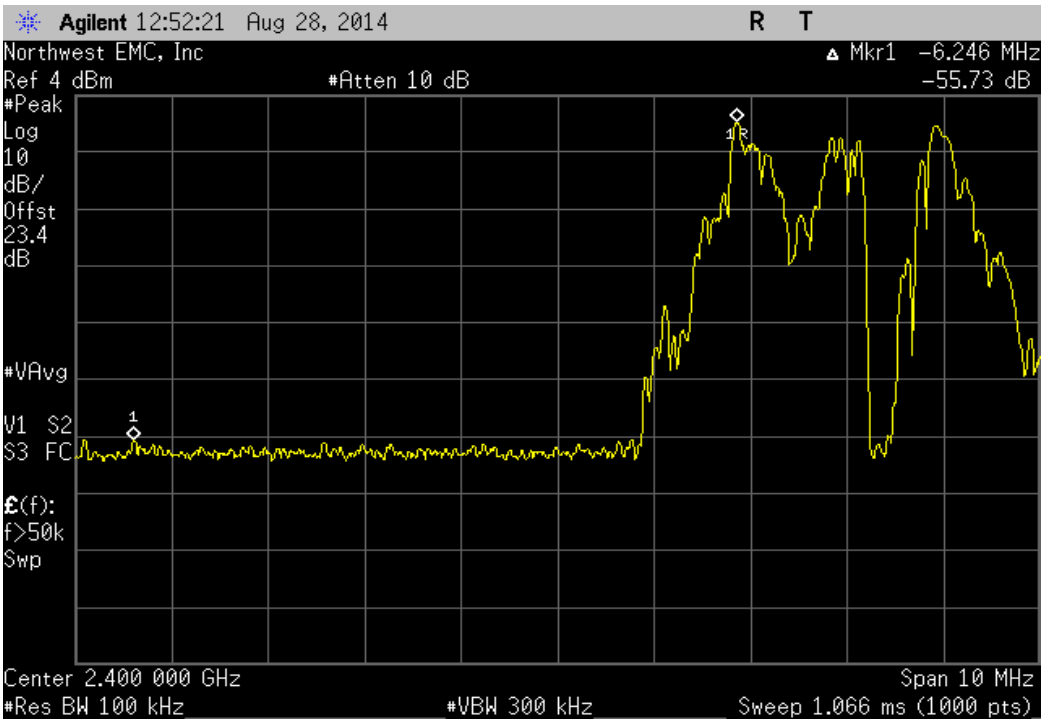
DEVIATIONS FROM TEST STANDARD

None

Configuration #	1	Signature

	Value (dBc)	Limit ≤ (dBc)	Result
Hopping Mode			
Low Channel 0, 2402 MHz	-55.73	-20	Pass
High Channel 78, 2480 MHz	-57.01	-20	Pass

Hopping Mode, Low Channel 0, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-55.73	-20	Pass



Hopping Mode, High Channel 78, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-57.01	-20	Pass