NORTHWEST EMC

Masimo Corporation

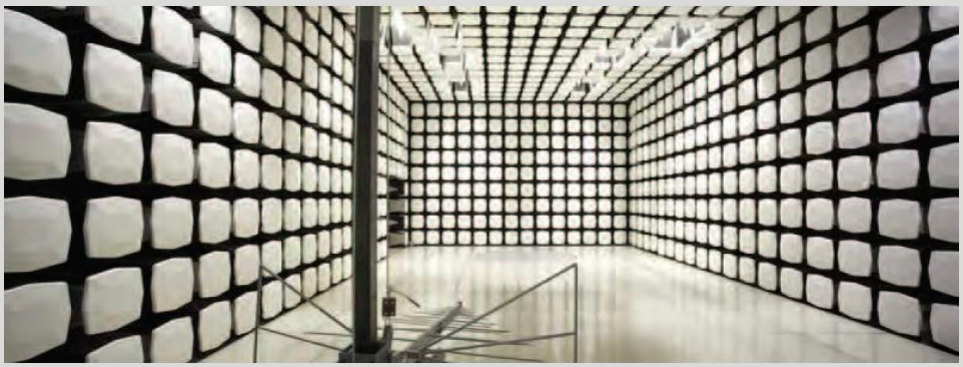
EMMA BT

FCC 15.207:2016

FCC 15.247:2016

Bluetooth Low Energy Radio

Report # MASI0321.1 Rev 01



NVLAP Lab Code: 200676-0

CERTIFICATE OF TEST

NORTHWEST EMC
2014-12-10

Last Date of Test: June 24, 2016
Masimo Corporation
Model: EMMA BT

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2016	ANSI C63.10:2013, KDB 558074
FCC 15.247:2016	

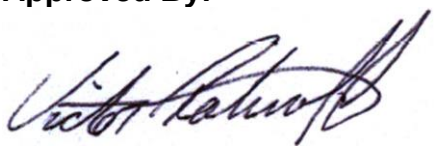
Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	No	N/A	Not required for a battery powered EUT.
6.5, 6.6, 11.12.1, 11.13.2	Spurious Radiated Emissions	Yes	Pass	
11.6	Duty Cycle	Yes	Pass	
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9.1.1	Output Power	Yes	Pass	
11.10.2	Power Spectral Density	Yes	Pass	
11.11	Band Edge Compliance	Yes	Pass	
11.11	Spurious Conducted Emissions	Yes	Pass	

Deviations From Test Standards

None

Approved By:



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. 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

NORTHWEST EMC
REV 2014.10.14

Revision Number	Description	Date	Page Number
01	Corrected Method Clause	5/25/17	2

ACCREDITATIONS AND AUTHORIZATIONS

NORTHWEST EMC
REV 2016.3.22

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 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

TMU.2015.07.10

Measurement Uncertainty

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

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

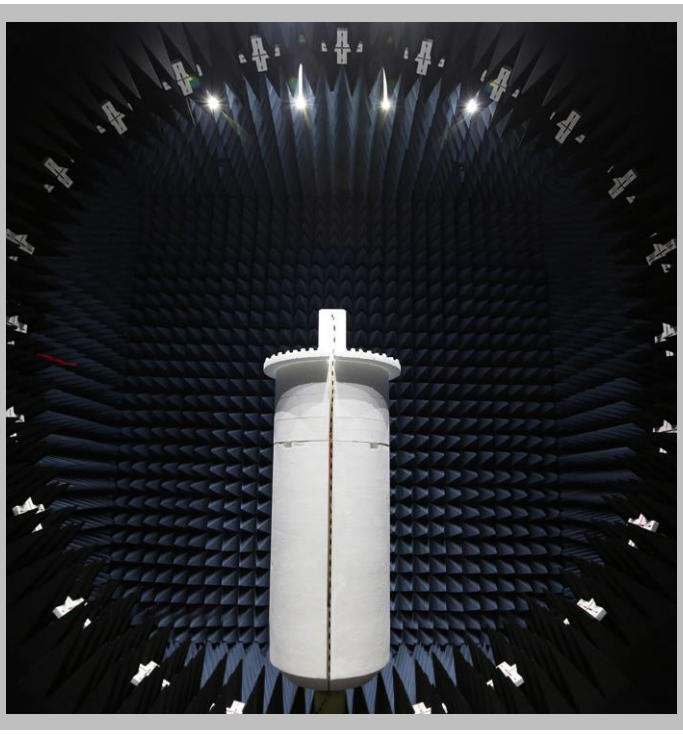
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

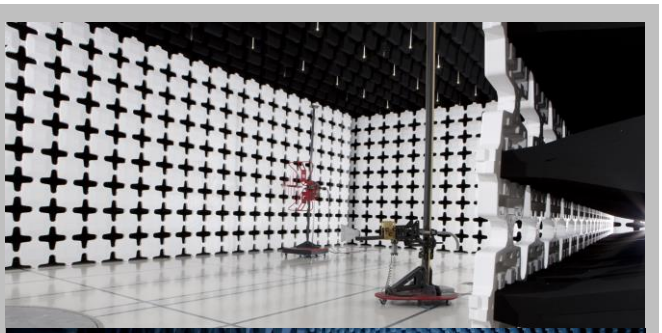
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%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

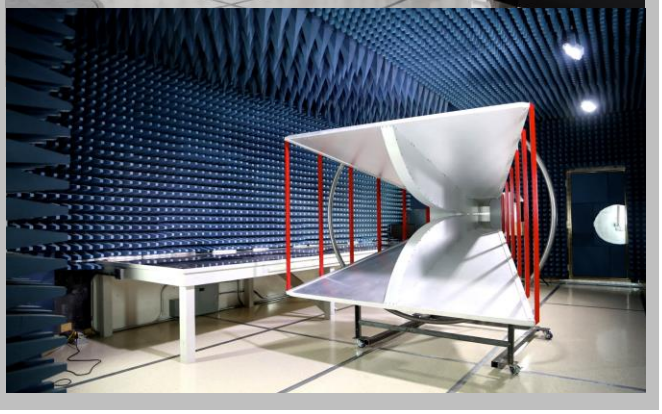
FACILITIES

NORTHWEST EMC
REV 2015.2.19

California	Minnesota	New York	Oregon	Texas	Washington
Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
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/RRA, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157

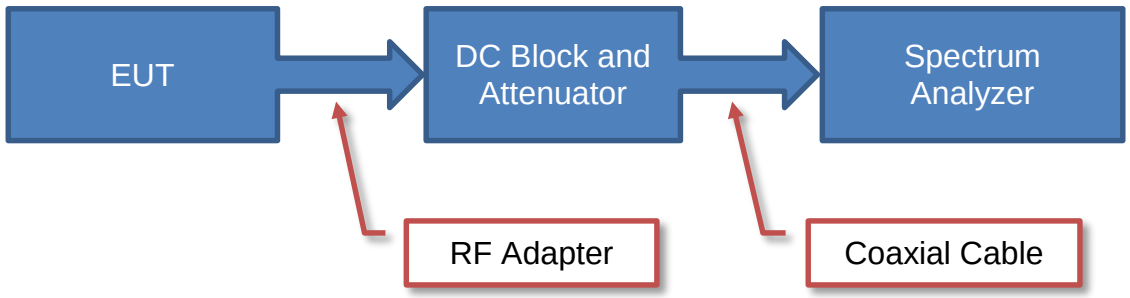




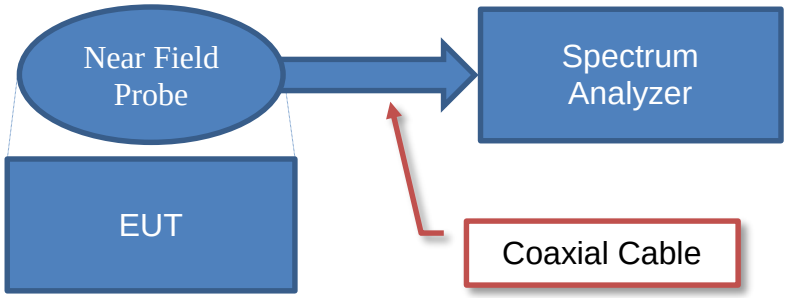


Test Setup Block Diagrams

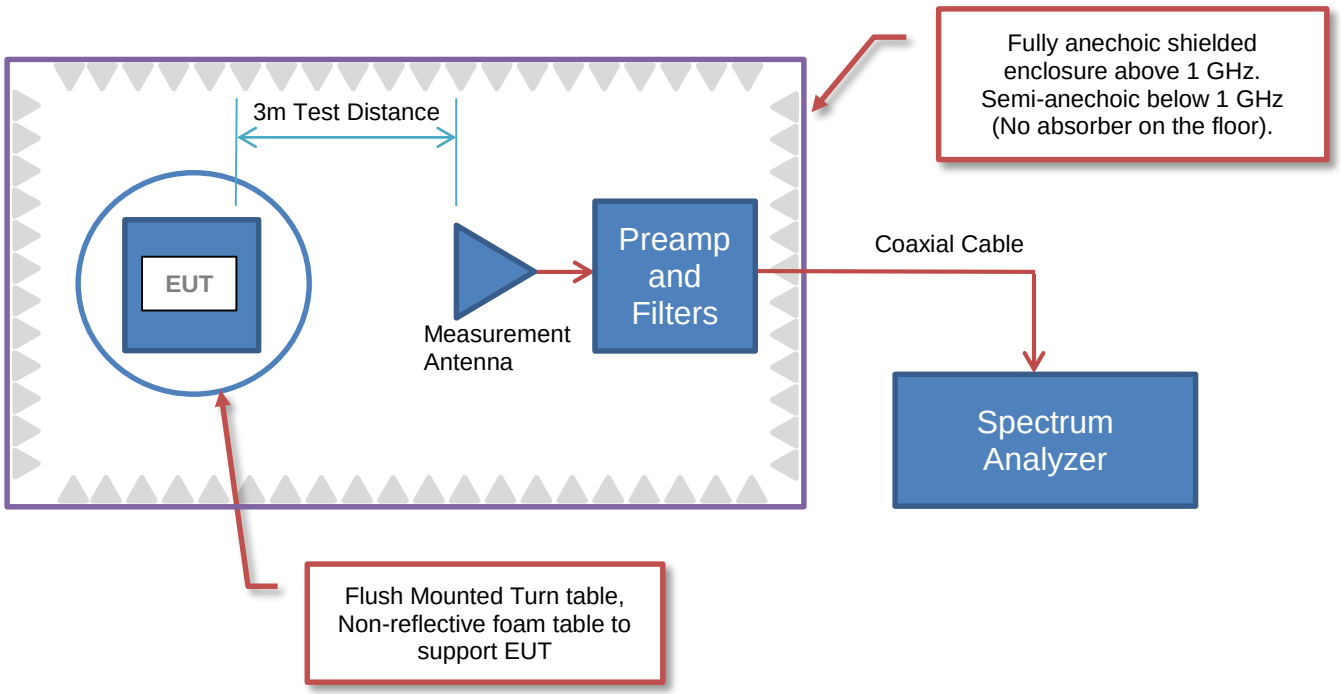
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Masimo Corporation
Address:	40 Parker
City, State, Zip:	Irvine, CA 92618
Test Requested By:	Michael Clark
Model:	EMMA BT
First Date of Test:	June 22, 2016
Last Date of Test:	June 24, 2016
Receipt Date of Samples:	June 17, 2016
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
EMMA measures, displays and monitors carbon dioxide partial pressure and respiratory rate during anesthesia, recovery and respiratory care.

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

CONFIGURATIONS

Configuration MASI0321- 1

Software/Firmware Running during test	
Description	**Version**
EMMA SW	4.2.4.6

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Emergency Capnography with Bluetooth LE	Masimo Corporation	EMMA BT	300012

Configuration MASI0321- 2

Software/Firmware Running during test	
Description	**Version**
EMMA SW	4.2.4.6

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Emergency Capnography with Bluetooth LE	Masimo Corporation	EMMA BT	300007

MODIFICATIONS

NORTHWEST EMC
2014-12-10

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	6/22/2016	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	6/22/2016	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	6/22/2016	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.
4	6/22/2016	Receiver Spurious 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.
5	6/22/2016	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.
6	6/22/2016	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	6/24/2016	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

SPURIOUS RADIATED EMISSIONS

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

MODES OF OPERATION

Transmitting BT LE: Low Ch 0 (2402MHz), Mid Ch 19 (2440MHz), High Ch 39 (2480MHz)
Transmitting BT LE: Low Ch 0 (2402MHz), High Ch 39 (2480MHz)

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

MASI0321 - 2

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Filter - Low Pass	Micro-Tronics	LPM50004	LFC	11/3/2015	12 mo
Attenuator	Coaxicom	66702 3910AF-20	TKH	3/3/2016	12 mo
Cable	Northwest EMC	8-18GHz RE Cables	OCO	8/26/2015	12 mo
Cable	Northwest EMC	18-26GHz RE Cables	OCK	1/6/2016	12 mo
Cable	Northwest EMC	1-8GHz RE Cables	OCJ	8/26/2015	12 mo
Cable	Northwest EMC	10kHz-1GHz RE Cables	OCH	3/3/2016	12 mo
Cable	ESM Cable Corp.	KMKM-72	OC1	1/6/2016	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HFM	2/9/2016	12 mo
Antenna - Biconilog	EMCO	3142B	AXK	10/6/2014	24 mo
Amplifier - Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVQ	1/6/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	8/26/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079	AOO	3/3/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	1/6/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	8/31/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	8/31/2015	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-10	AIX	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AHT	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHR	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AHN	NCR	0 mo
Antenna - Double Ridge	EMCO	3115	AHB	3/21/2016	24 mo
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFJ	2/9/2016	12 mo

MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

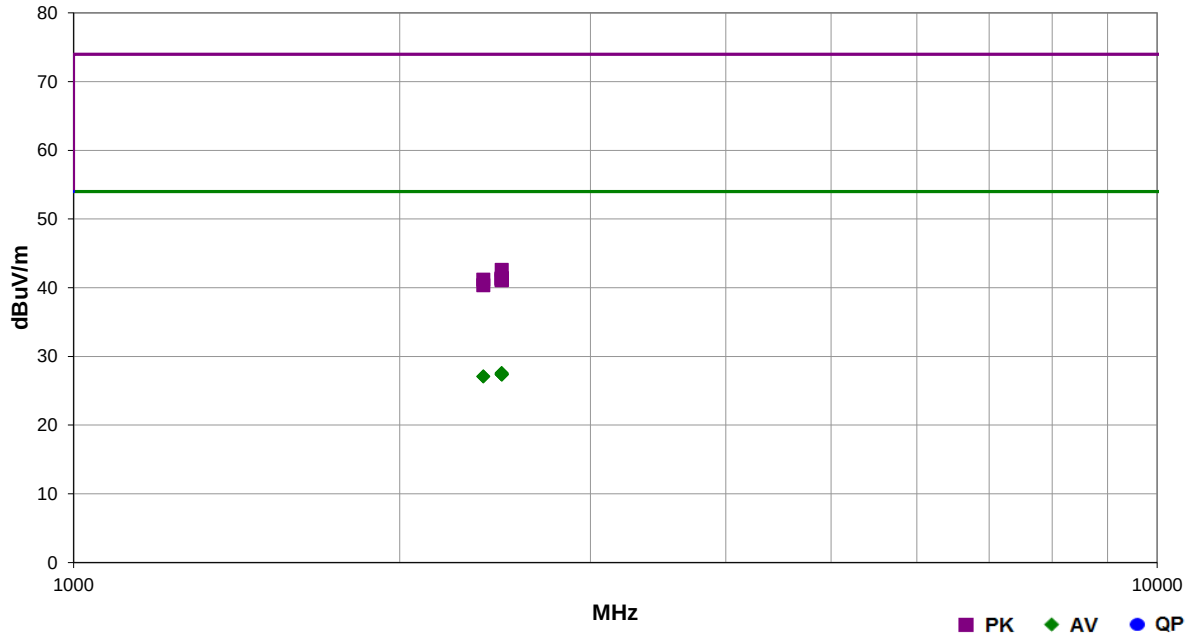
The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify 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:	MASI0321	**Date:**	06/24/16		
Project:	None	**Temperature:**	22.8 °C		
Job Site:	OC10	**Humidity:**	52.6% RH		
Serial Number:	300007	**Barometric Pres.:**	1016 mbar	**Tested by:**	Mark Baytan
EUT:	EMMA BT				
Configuration:	2				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	Battery				
Operating Mode:	Transmitting BT LE: Low Ch 0 (2402MHz), High Ch 39 (2480MHz)				
Deviations:	None				
Comments:	None				

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

Run #	29	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



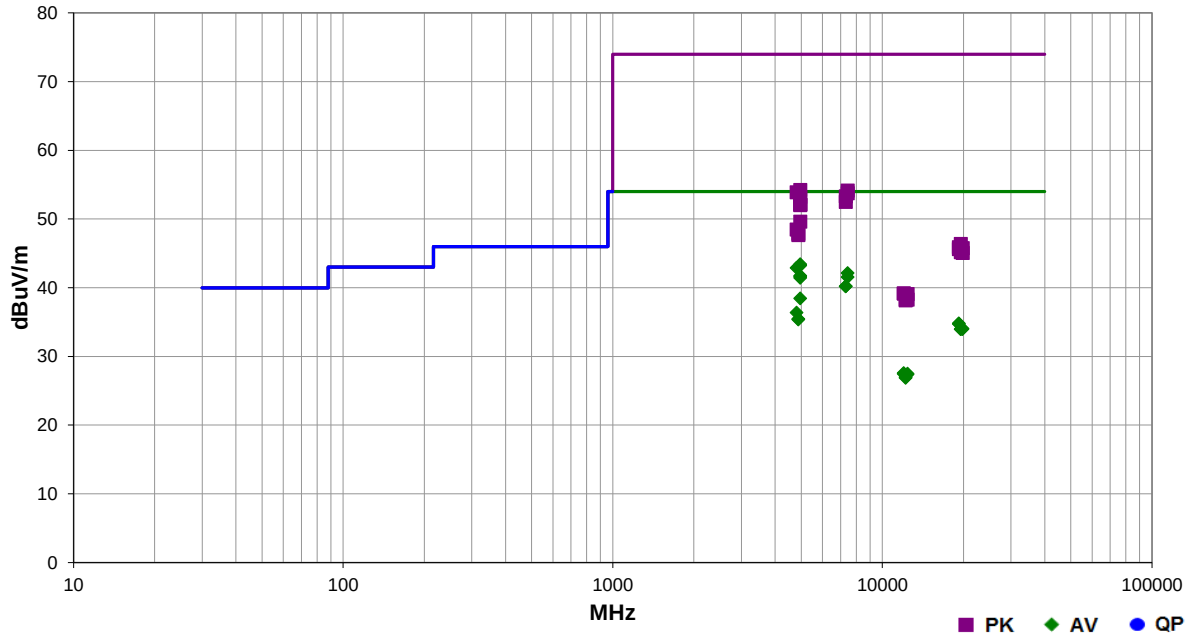
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.590	25.9	1.7	1.0	360.0	3.0	0.0	Horz	AV	0.0	27.6	54.0	-26.4	High Ch, EUT Horz
2483.647	25.8	1.7	1.0	283.0	3.0	0.0	Vert	AV	0.0	27.5	54.0	-26.5	High Ch, EUT Horz
2484.473	25.7	1.7	1.0	153.0	3.0	0.0	Vert	AV	0.0	27.4	54.0	-26.6	High Ch, EUT Vert
2483.733	25.7	1.7	1.9	170.0	3.0	0.0	Horz	AV	0.0	27.4	54.0	-26.6	High Ch, EUT on Side
2483.577	25.7	1.7	1.0	293.0	3.0	0.0	Horz	AV	0.0	27.4	54.0	-26.6	High Ch, EUT Vert
2485.273	25.6	1.7	1.0	86.0	3.0	0.0	Vert	AV	0.0	27.3	54.0	-26.7	High Ch, EUT on Side
2390.000	25.7	1.4	1.0	159.0	3.0	0.0	Vert	AV	0.0	27.1	54.0	-26.9	Low Ch, EUT Horz
2388.700	25.7	1.4	1.0	85.0	3.0	0.0	Horz	AV	0.0	27.1	54.0	-26.9	Low Ch, EUT Horz
2483.693	40.9	1.7	1.0	360.0	3.0	0.0	Horz	PK	0.0	42.6	74.0	-31.4	High Ch, EUT Horz
2483.630	39.7	1.7	1.0	283.0	3.0	0.0	Vert	PK	0.0	41.4	74.0	-32.6	High Ch, EUT Horz
2484.433	39.6	1.7	1.0	86.0	3.0	0.0	Vert	PK	0.0	41.3	74.0	-32.7	High Ch, EUT on Side
2483.830	39.6	1.7	1.0	153.0	3.0	0.0	Vert	PK	0.0	41.3	74.0	-32.7	High Ch, EUT Vert
2388.633	39.8	1.4	1.0	85.0	3.0	0.0	Horz	PK	0.0	41.2	74.0	-32.8	Low Ch, EUT Horz
2484.163	39.4	1.7	1.9	170.0	3.0	0.0	Horz	PK	0.0	41.1	74.0	-32.9	High Ch, EUT on Side
2484.003	39.4	1.7	1.0	293.0	3.0	0.0	Horz	PK	0.0	41.1	74.0	-32.9	High Ch, EUT Vert
2388.327	39.0	1.4	1.0	159.0	3.0	0.0	Vert	PK	0.0	40.4	74.0	-33.6	Low Ch, EUT Horz

SPURIOUS RADIATED EMISSIONS

Work Order:	MASI0321	**Date:**	06/24/16		
Project:	None	**Temperature:**	22.8 °C		
Job Site:	OC10	**Humidity:**	52.6% RH		
Serial Number:	300007	**Barometric Pres.:**	1016 mbar	**Tested by:**	Mark Baytan
EUT:	EMMA BT				
Configuration:	2				
Customer:	Masimo Corporation				
Attendees:	Michael Clark				
EUT Power:	Battery				
Operating Mode:	Transmitting BT LE: Low Ch 0 (2402MHz), Mid Ch 19 (2440MHz), High Ch 39 (2480MHz)				
Deviations:	None				
Comments:	None				

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

Run #	32	**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
4959.910	32.6	10.8	2.2	130.0	3.0	0.0	Horz	AV	0.0	43.4	54.0	-10.6	High Ch, EUT Horz
4959.885	32.4	10.8	3.4	225.0	3.0	0.0	Horz	AV	0.0	43.2	54.0	-10.8	High Ch, EUT Vert
4804.000	32.5	10.4	2.3	135.0	3.0	0.0	Horz	AV	0.0	42.9	54.0	-11.1	Low Ch, EUT Horz
7439.485	25.7	16.4	1.0	25.0	3.0	0.0	Horz	AV	0.0	42.1	54.0	-11.9	High Ch, EUT Horz
4959.890	30.9	10.8	3.3	294.0	3.0	0.0	Vert	AV	0.0	41.7	54.0	-12.3	High Ch, EUT on Side
4959.880	30.8	10.8	1.0	154.0	3.0	0.0	Vert	AV	0.0	41.6	54.0	-12.4	High Ch, EUT Vert
7439.435	25.1	16.4	1.4	287.0	3.0	0.0	Vert	AV	0.0	41.5	54.0	-12.5	High Ch, EUT on Side
4959.860	30.6	10.8	2.4	179.0	3.0	0.0	Vert	AV	0.0	41.4	54.0	-12.6	High Ch, EUT Horz
7318.935	24.0	16.2	2.3	215.0	3.0	0.0	Horz	AV	0.0	40.2	54.0	-13.8	Mid Ch, EUT Horz
7318.645	24.0	16.2	1.0	137.0	3.0	0.0	Vert	AV	0.0	40.2	54.0	-13.8	Mid Ch, EUT on Side
4959.860	27.6	10.8	1.2	20.0	3.0	0.0	Horz	AV	0.0	38.4	54.0	-15.6	High Ch, EUT on Side
4803.885	26.0	10.4	1.0	93.0	3.0	0.0	Vert	AV	0.0	36.4	54.0	-17.6	Low Ch, EUT on Side
4881.470	24.8	10.7	1.0	157.0	3.0	0.0	Vert	AV	0.0	35.5	54.0	-18.5	Mid Ch, EUT on Side
4881.345	24.7	10.7	1.0	318.0	3.0	0.0	Horz	AV	0.0	35.4	54.0	-18.6	Mid Ch, EUT Horz
19214.440	40.3	-5.5	1.3	278.0	3.0	0.0	Horz	AV	0.0	34.8	54.0	-19.2	Low Ch, EUT Horz
19213.630	40.2	-5.5	1.3	100.0	3.0	0.0	Vert	AV	0.0	34.7	54.0	-19.3	Low Ch, EUT on Side
4959.680	43.4	10.8	2.2	130.0	3.0	0.0	Horz	PK	0.0	54.2	74.0	-19.8	High Ch, EUT Horz
7439.320	37.7	16.4	1.0	25.0	3.0	0.0	Horz	PK	0.0	54.1	74.0	-19.9	High Ch, EUT Horz
19837.720	39.5	-5.4	1.3	272.0	3.0	0.0	Horz	AV	0.0	34.1	54.0	-19.9	High Ch, EUT Horz
19520.530	39.6	-5.6	1.3	343.0	3.0	0.0	Vert	AV	0.0	34.0	54.0	-20.0	Mid Ch, EUT on Side
19838.440	39.4	-5.4	1.3	327.0	3.0	0.0	Vert	AV	0.0	34.0	54.0	-20.0	High Ch, EUT on Side
19518.240	39.6	-5.6	1.3	71.0	3.0	0.0	Horz	AV	0.0	34.0	54.0	-20.0	Mid Ch, EUT Horz

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4804.430	43.5	10.4	2.4	135.0	3.0	0.0	Horz	PK	0.0	53.9	74.0	-20.1	Low Ch, EUT Horz
7440.370	37.3	16.4	1.4	287.0	3.0	0.0	Vert	PK	0.0	53.7	74.0	-20.3	High Ch, EUT on Side
7319.995	37.1	16.2	2.3	215.0	3.0	0.0	Horz	PK	0.0	53.3	74.0	-20.7	Mid Ch, EUT Horz
4959.655	42.4	10.8	3.4	225.0	3.0	0.0	Horz	PK	0.0	53.2	74.0	-20.8	High Ch, EUT Vert
7319.980	36.3	16.2	1.0	137.0	3.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	Mid Ch, EUT on Side
4960.610	41.3	10.8	2.4	179.0	3.0	0.0	Vert	PK	0.0	52.1	74.0	-21.9	High Ch, EUT Horz
4960.445	41.3	10.8	1.0	154.0	3.0	0.0	Vert	PK	0.0	52.1	74.0	-21.9	High Ch, EUT Vert
4959.530	41.2	10.8	3.3	294.0	3.0	0.0	Vert	PK	0.0	52.0	74.0	-22.0	High Ch, EUT on Side
4959.180	38.8	10.8	1.2	20.0	3.0	0.0	Horz	PK	0.0	49.6	74.0	-24.4	High Ch, EUT on Side
4804.435	38.1	10.4	1.0	93.0	3.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Low Ch, EUT on Side
4881.400	37.2	10.7	1.0	157.0	3.0	0.0	Vert	PK	0.0	47.9	74.0	-26.1	Mid Ch, EUT on Side
4879.735	37.0	10.7	1.0	318.0	3.0	0.0	Horz	PK	0.0	47.7	74.0	-26.3	Mid Ch, EUT Horz
12008.050	35.9	-8.3	1.0	342.0	3.0	0.0	Vert	AV	0.0	27.6	54.0	-26.4	Low Ch, EUT on Side
12398.600	35.2	-7.7	1.0	220.0	3.0	0.0	Vert	AV	0.0	27.5	54.0	-26.5	High Ch, EUT on Side
12007.580	35.8	-8.3	1.0	210.0	3.0	0.0	Horz	AV	0.0	27.5	54.0	-26.5	Low Ch, EUT Horz
12397.580	35.1	-7.7	1.0	271.0	3.0	0.0	Horz	AV	0.0	27.4	54.0	-26.6	High Ch, EUT Horz
12198.390	35.0	-8.0	1.0	18.0	3.0	0.0	Vert	AV	0.0	27.0	54.0	-27.0	Mid Ch, EUT on Side
12198.030	34.9	-8.0	1.0	284.0	3.0	0.0	Horz	AV	0.0	26.9	54.0	-27.1	Mid Ch, EUT Horz
19522.100	52.0	-5.6	1.3	71.0	3.0	0.0	Horz	PK	0.0	46.4	74.0	-27.6	Mid Ch, EUT Horz
19213.930	51.4	-5.5	1.3	100.0	3.0	0.0	Vert	PK	0.0	45.9	74.0	-28.1	Low Ch, EUT on Side
19841.890	51.2	-5.4	1.3	272.0	3.0	0.0	Horz	PK	0.0	45.8	74.0	-28.2	High Ch, EUT Horz
19214.120	51.1	-5.5	1.3	278.0	3.0	0.0	Horz	PK	0.0	45.6	74.0	-28.4	Low Ch, EUT Horz
19517.580	50.8	-5.6	1.3	343.0	3.0	0.0	Vert	PK	0.0	45.2	74.0	-28.8	Mid Ch, EUT on Side
19841.340	50.5	-5.4	1.3	327.0	3.0	0.0	Vert	PK	0.0	45.1	74.0	-28.9	High Ch, EUT on Side
12008.860	47.5	-8.3	1.0	342.0	3.0	0.0	Vert	PK	0.0	39.2	74.0	-34.8	Low Ch, EUT on Side
12007.820	47.5	-8.3	1.0	210.0	3.0	0.0	Horz	PK	0.0	39.2	74.0	-34.8	Low Ch, EUT Horz
12399.830	46.8	-7.7	1.0	220.0	3.0	0.0	Vert	PK	0.0	39.1	74.0	-34.9	High Ch, EUT on Side
12398.260	46.0	-7.7	1.0	271.0	3.0	0.0	Horz	PK	0.0	38.3	74.0	-35.7	High Ch, EUT Horz
12198.840	46.3	-8.0	1.0	18.0	3.0	0.0	Vert	PK	0.0	38.3	74.0	-35.7	Mid Ch, EUT on Side
12198.060	46.2	-8.0	1.0	284.0	3.0	0.0	Horz	PK	0.0	38.2	74.0	-35.8	Mid Ch, EUT Horz

DUTY CYCLE

XMit 2016.05.06

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	4/4/2017
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	7/23/2016

TEST DESCRIPTION

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

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

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

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

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

DUTY CYCLE

NORTHWEST EMC

XMit 2016.05.06

EUT:	EMMA BT			**Work Order:**	MASI0321
Serial Number:	300012			**Date:**	06/22/16
Customer:	Masimo Corporation			**Temperature:**	22.5 °C
Attendees:	Michael Clark			**Humidity:**	48.2% RH
Project:	None			**Barometric Pres.:**	1017 mbar
Tested by:	Mark Baytan	**Power:**	+3.0VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2016	ANSI C63.10:2013

COMMENTS

DC Block/20dB Attenuator + coax cable + client provided patch cable = 22.85dB total offset

DEVIATIONS FROM TEST STANDARD

None

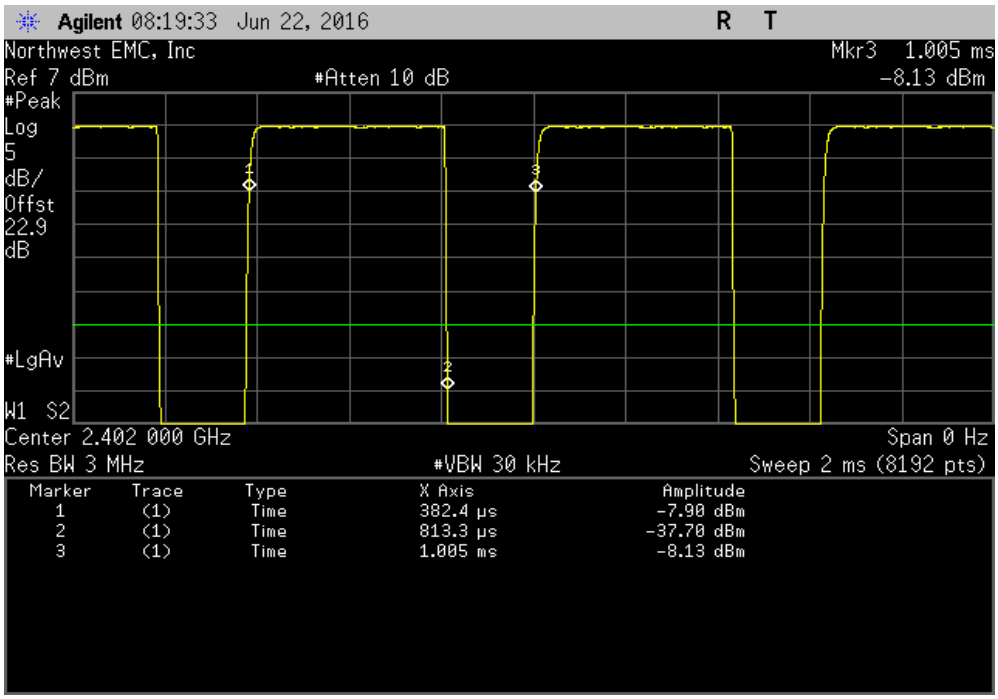
Configuration #	1	Signature

	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
BLE/GFSK Low Channel, 2402 MHz	430.9 us	623.1 us	1	69.2	N/A	N/A
BLE/GFSK Low Channel, 2402 MHz	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK Mid Channel, 2440 MHz	431.2 us	624.1 us	1	69.1	N/A	N/A
BLE/GFSK Mid Channel, 2440 MHz	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK High Channel, 2480 MHz	431.2 us	624.1 us	1	69.1	N/A	N/A
BLE/GFSK High Channel, 2480 MHz	N/A	N/A	5	N/A	N/A	N/A

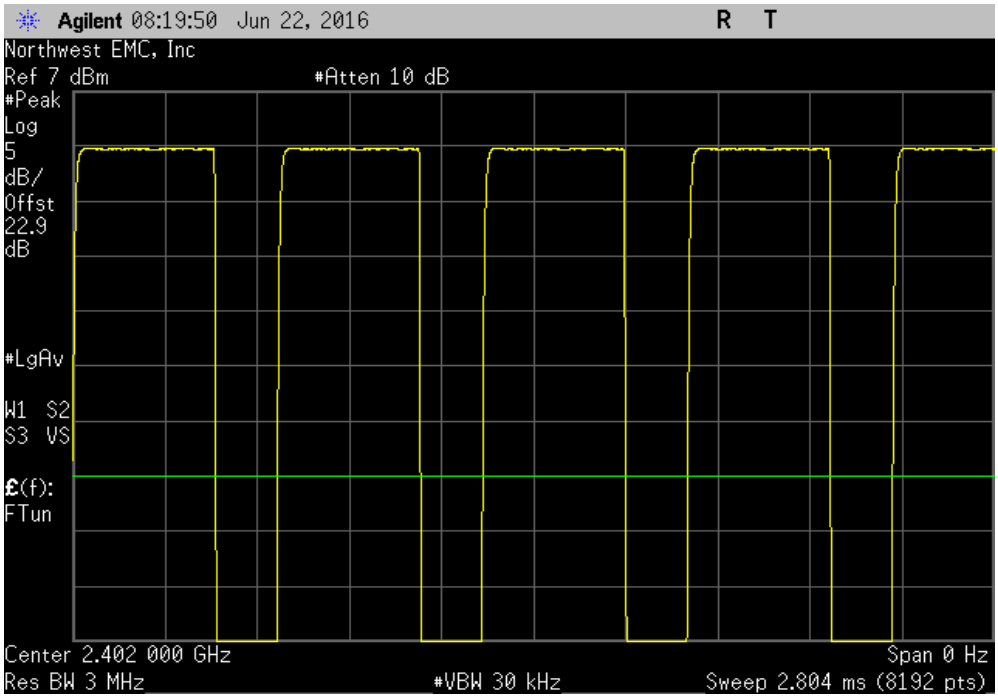
DUTY CYCLE

XMit 2016.05.06

BLE/GFSK Low Channel, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	430.9 us	623.1 us	1	69.2	N/A	N/A



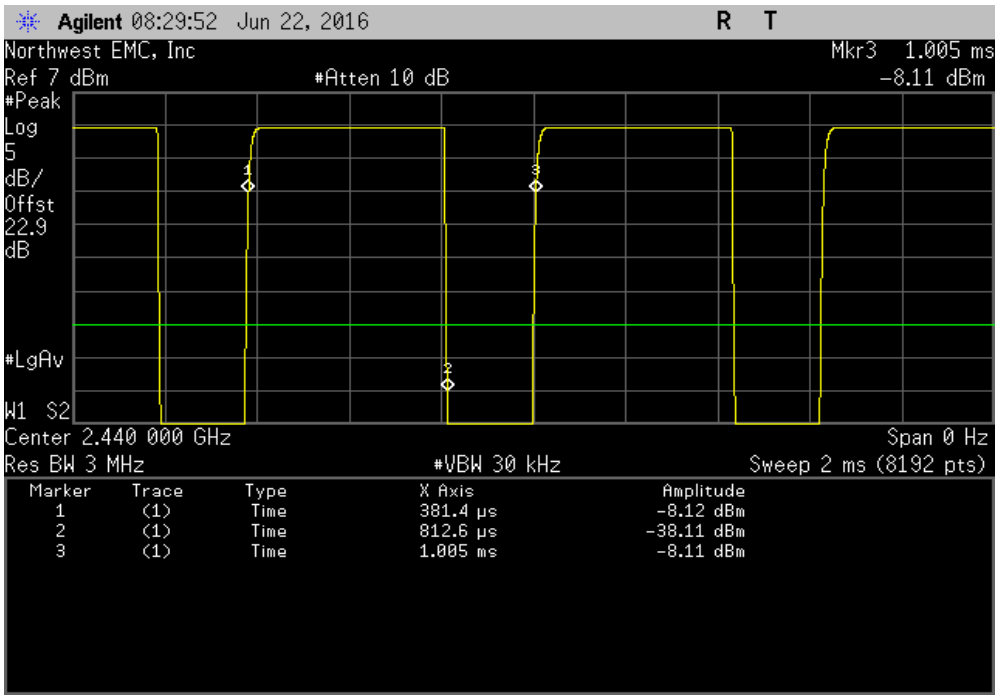
BLE/GFSK Low Channel, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



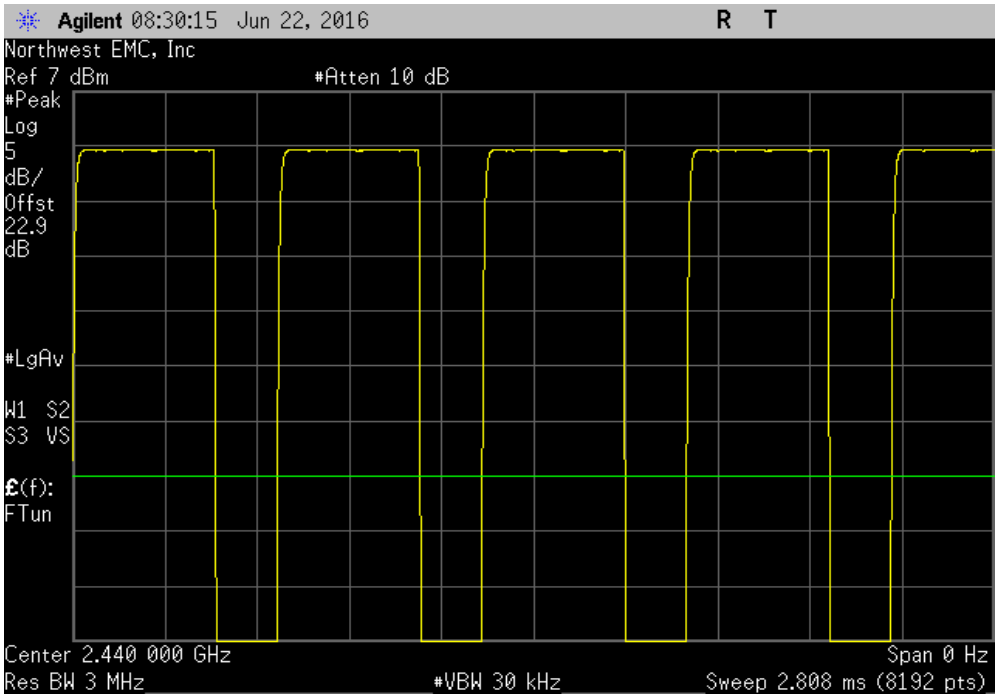
DUTY CYCLE

XMit 2016.05.06

BLE/GFSK Mid Channel, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	431.2 us	624.1 us	1	69.1	N/A	N/A



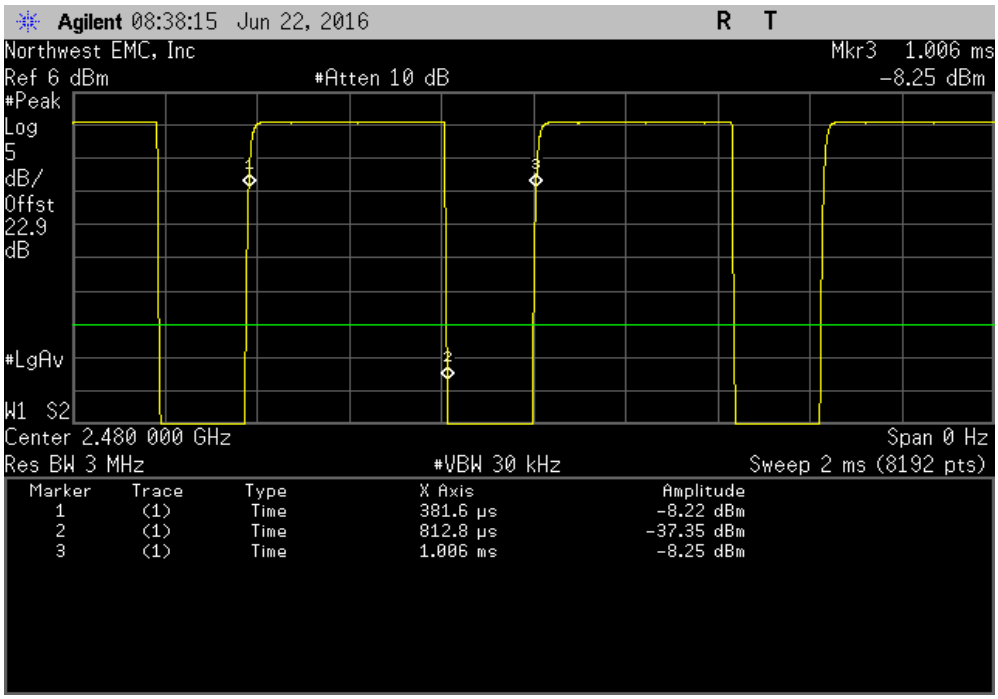
BLE/GFSK Mid Channel, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



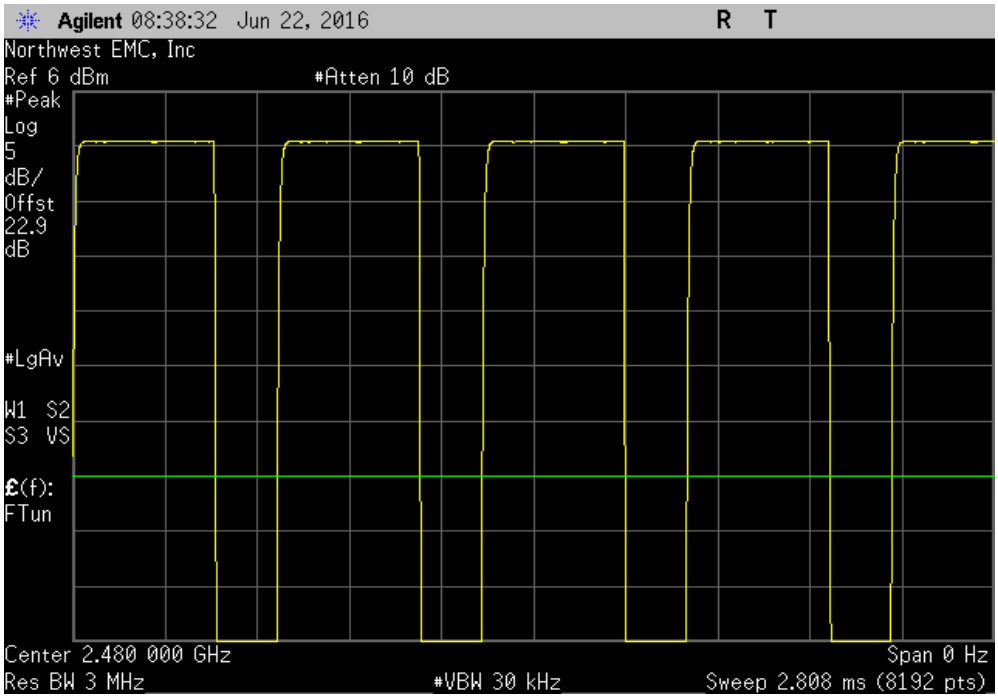
DUTY CYCLE

XMit 2016.05.06

BLE/GFSK High Channel, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	431.2 us	624.1 us	1	69.1	N/A	N/A



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



OCCUPIED BANDWIDTH

XMit 2016.05.06

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	7/23/2016
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	4/4/2017
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018

TEST DESCRIPTION

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

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

OCCUPIED BANDWIDTH

NORTHWEST EMC

XMit 2016.05.06

EUT:	EMMA BT			**Work Order:**	MASI0321
Serial Number:	300012			**Date:**	06/22/16
Customer:	Masimo Corporation			**Temperature:**	22.5 °C
Attendees:	Michael Clark			**Humidity:**	48.2% RH
Project:	None			**Barometric Pres.:**	1017 mbar
Tested by:	Mark Baytan	**Power:**	+3.0VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2016	ANSI C63.10:2013

COMMENTS

DC Block/20dB Attenuator + coax cable + client provided patch cable = 22.85dB total offset

DEVIATIONS FROM TEST STANDARD

None

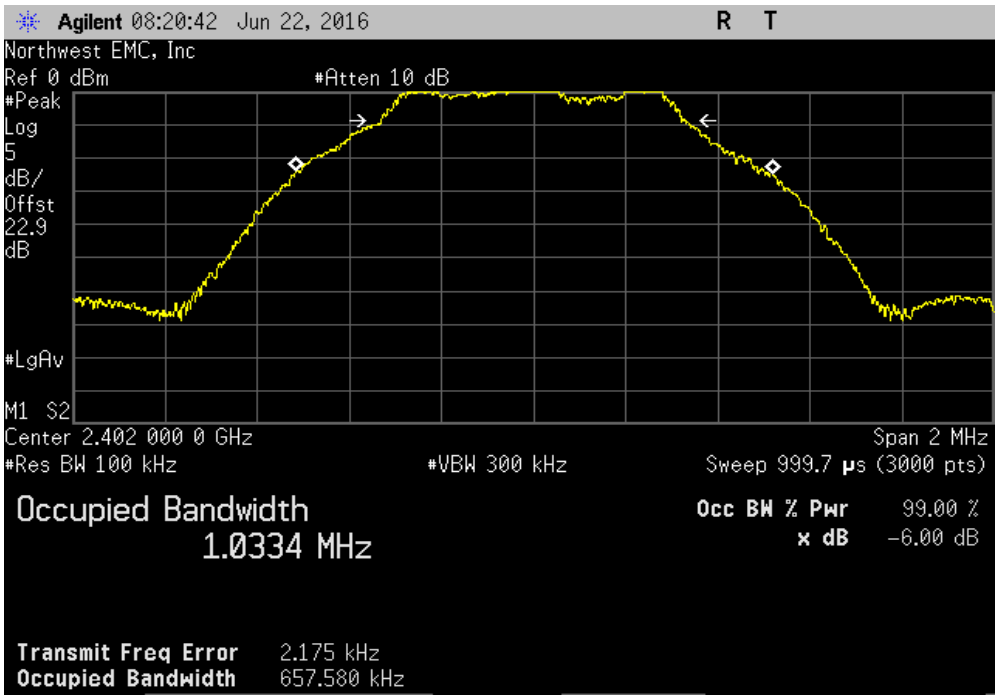
Configuration #	1	Signature

	Value	Limit (>)	Result
BLE/GFSK Low Channel, 2402 MHz	657.58 kHz	500 kHz	Pass
BLE/GFSK Mid Channel, 2440 MHz	646.997 kHz	500 kHz	Pass
BLE/GFSK High Channel, 2480 MHz	650.848 kHz	500 kHz	Pass

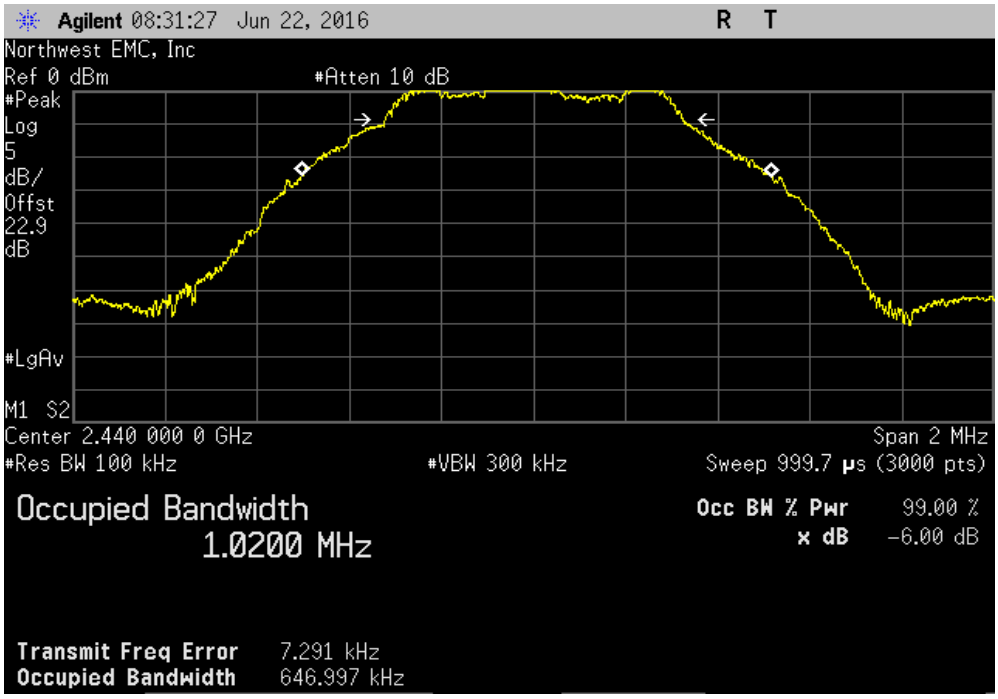
OCCUPIED BANDWIDTH

XMit 2016.05.06

BLE/GFSK Low Channel, 2402 MHz						
				Value	Limit (>)	Result
				657.58 kHz	500 kHz	Pass



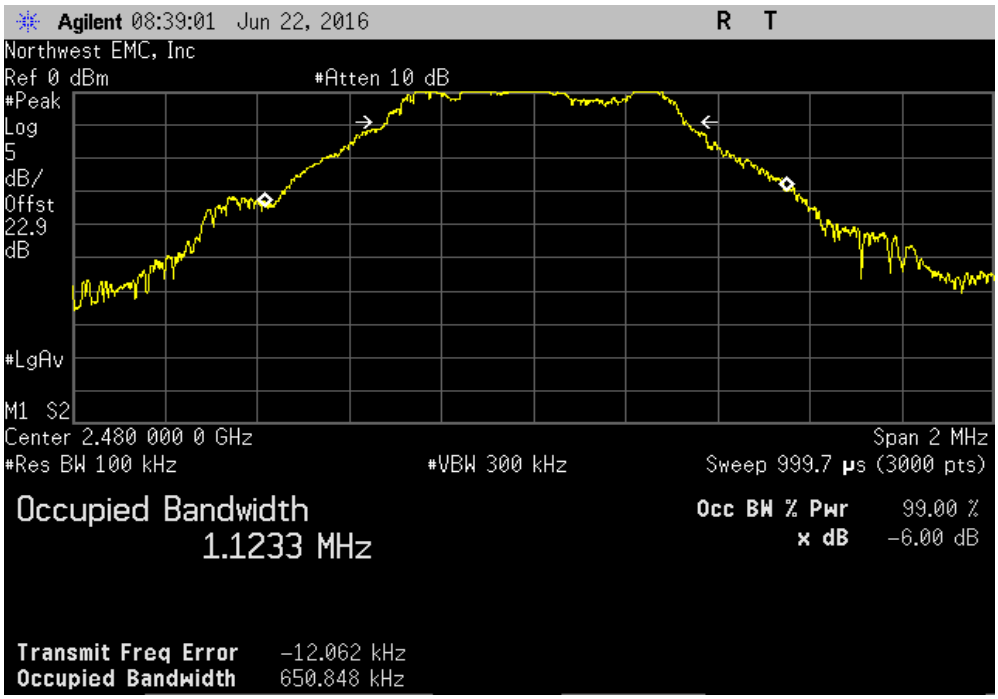
BLE/GFSK Mid Channel, 2442 MHz						
				Value	Limit (>)	Result
				646.997 kHz	500 kHz	Pass



OCCUPIED BANDWIDTH

XMit 2016.05.06

BLE/GFSK High Channel, 2480 MHz							
					Value	Limit (>)	Result
					650.848 kHz	500 kHz	Pass



OUTPUT POWER

XMit 2016.05.06

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	7/23/2016
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	4/4/2017
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018

TEST DESCRIPTION

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

Prior to measuring peak transmit power the DTS bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Maximum Conducted Output Power. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

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

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36 dBm.

OUTPUT POWER

NORTHWEST EMC

XMit 2016.05.06

EUT:	**EMMA BT**			**Work Order:**	**MASI0321**
Serial Number:	**300012**			**Date:**	**06/22/16**
Customer:	**Masimo Corporation**			**Temperature:**	**22.5 °C**
Attendees:	**Michael Clark**			**Humidity:**	**48.2% RH**
Project:	**None**			**Barometric Pres.:**	**1017 mbar**
Tested by:	**Mark Baytan**	**Power:**	**+3.0VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2016	ANSI C63.10:2013

COMMENTS

DC Block/20dB Attenuator + coax cable + client provided patch cable = 22.85dB total offset

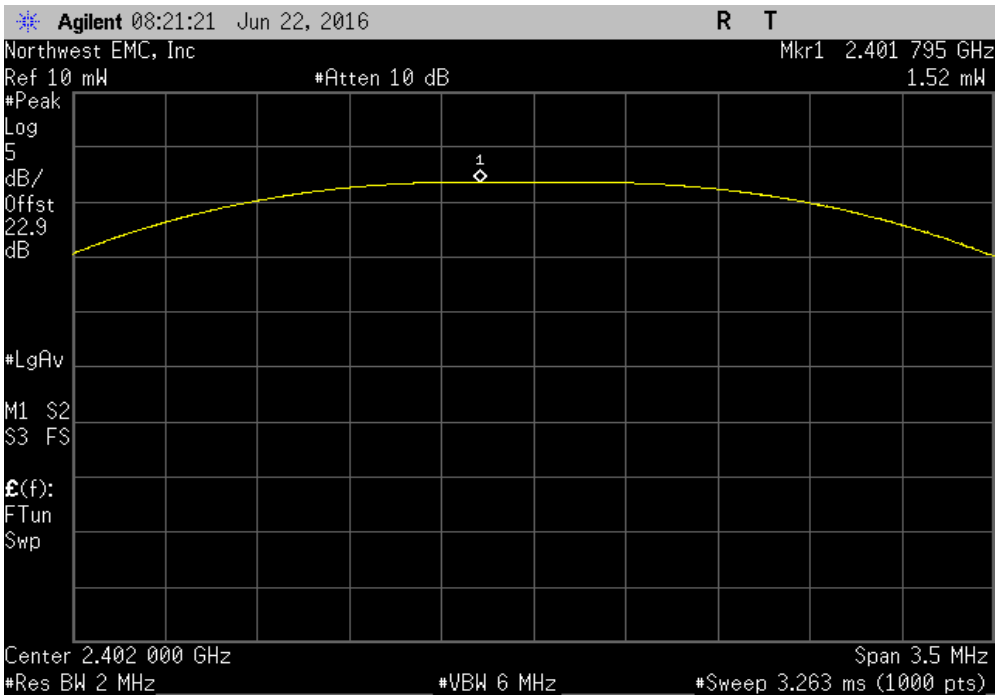
DEVIATIONS FROM TEST STANDARD

None

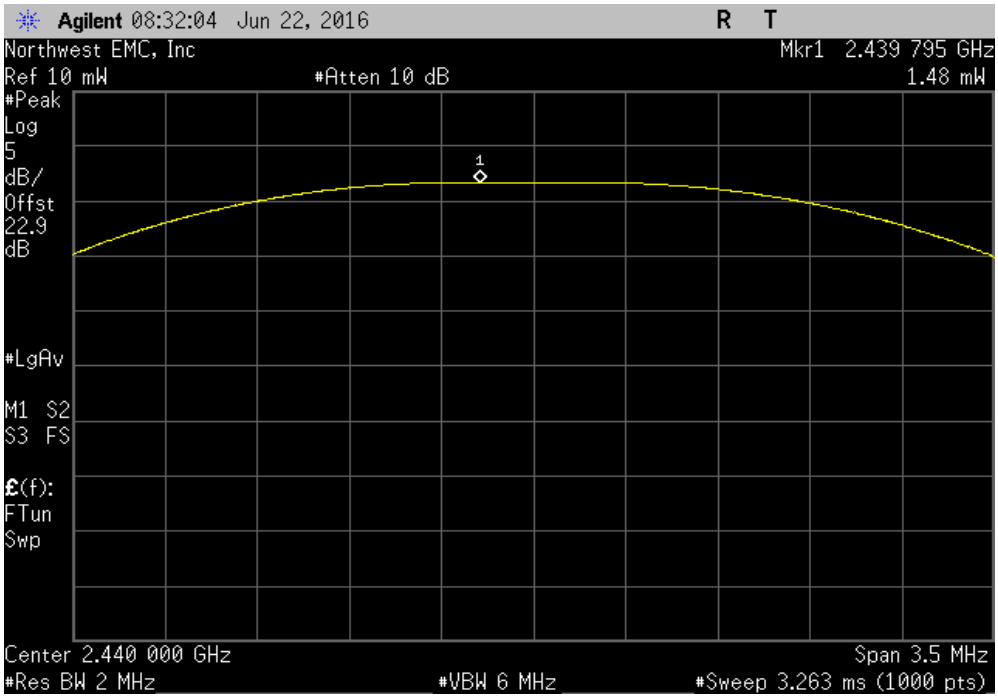
Configuration #	**1**	*Signature* 

	Value	**Limit (<)**	**Result**
BLE/GFSK Low Channel, 2402 MHz	1.517 mW	1 W	Pass
BLE/GFSK Mid Channel, 2440 MHz	1.482 mW	1 W	Pass
BLE/GFSK High Channel, 2480 MHz	1.408 mW	1 W	Pass

BLE/GFSK Low Channel, 2402 MHz						
				Value	Limit (<)	Result
				1.517 mW	1 W	Pass



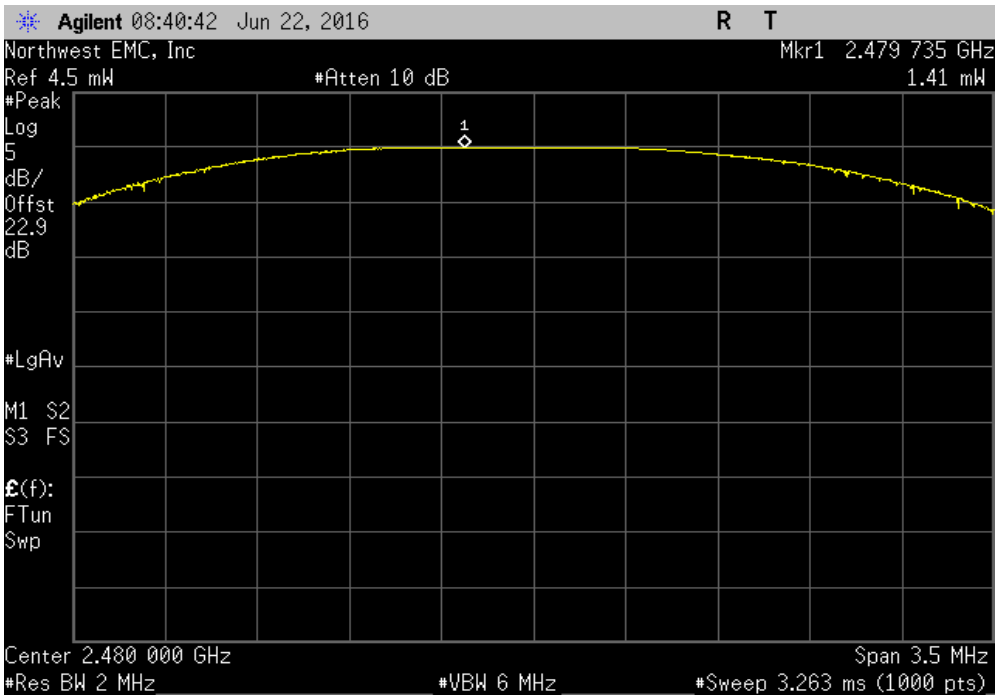
BLE/GFSK Mid Channel, 2442 MHz						
				Value	Limit (<)	Result
				1.482 mW	1 W	Pass



OUTPUT POWER

XMit 2016.05.06

BLE/GFSK High Channel, 2480 MHz						
				Value	Limit (<)	Result
				1.408 mW	1 W	Pass



POWER SPECTRAL DENSITY

XMit 2016.05.06

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	7/23/2016
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	4/4/2017
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018

TEST DESCRIPTION

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

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

POWER SPECTRAL DENSITY

NORTHWEST EMC

XMit 2016.05.06

EUT:	EMMA BT			**Work Order:**	MASI0321
Serial Number:	300012			**Date:**	06/22/16
Customer:	Masimo Corporation			**Temperature:**	22.5 °C
Attendees:	Michael Clark			**Humidity:**	48.2% RH
Project:	None			**Barometric Pres.:**	1017 mbar
Tested by:	Mark Baytan	**Power:**	+3.0VDC	**Job Site:**	OC13

TEST SPECIFICATIONS	Test Method
FCC 15.247:2016	ANSI C63.10:2013

COMMENTS

DC Block/20dB Attenuator + coax cable + client provided patch cable = 22.85dB total offset

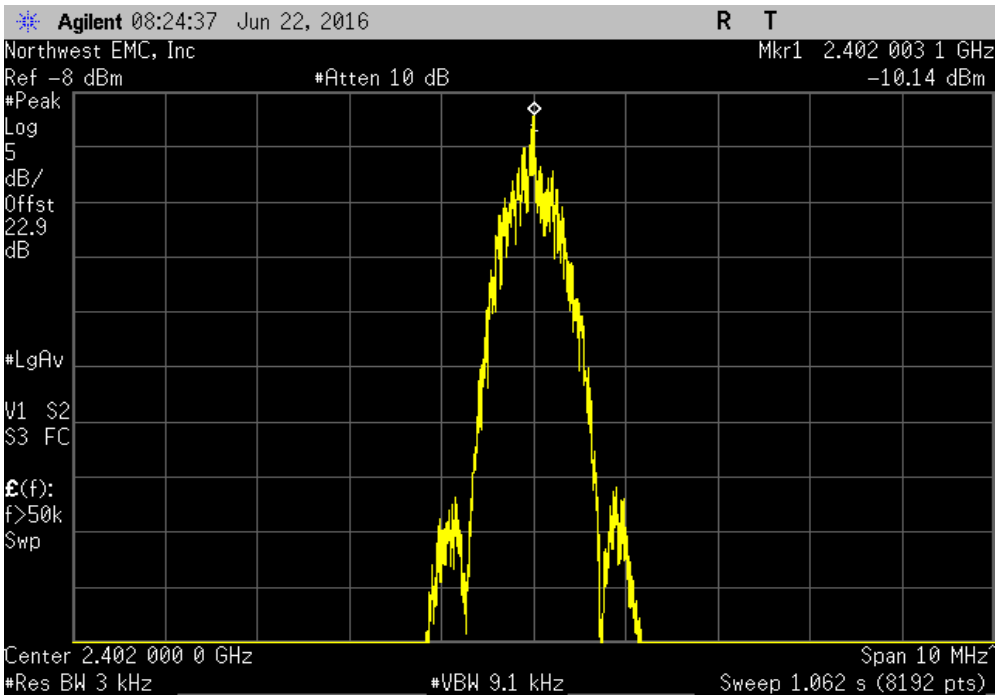
DEVIATIONS FROM TEST STANDARD

None

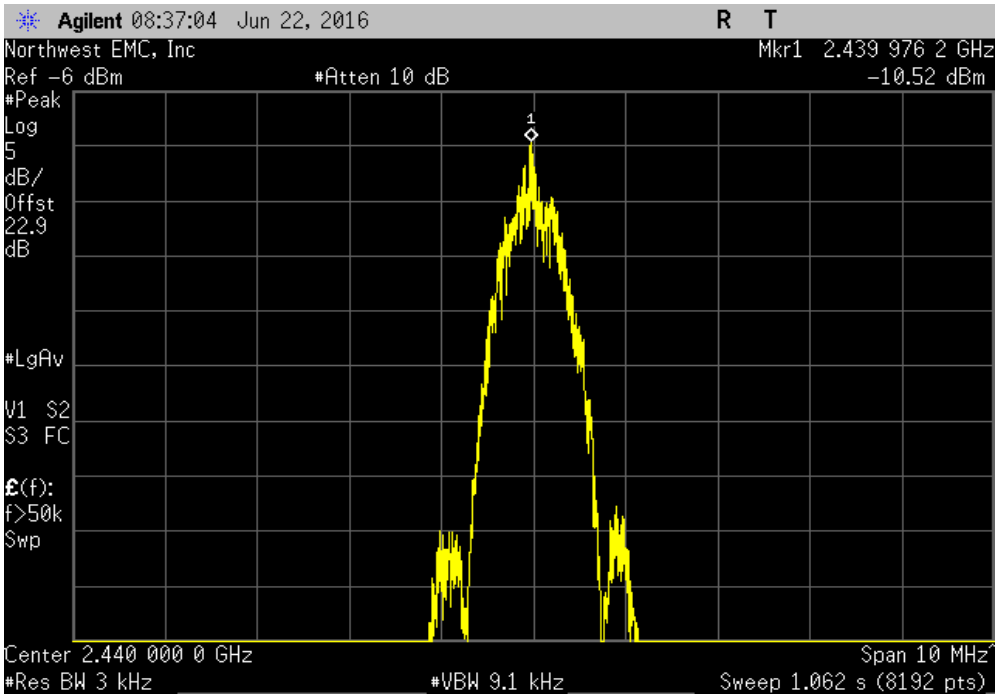
Configuration #	1	Signature

	Value dBm/3kHz	Limit < dBm/3kHz	Results
BLE/GFSK Low Channel, 2402 MHz	-10.137	8	Pass
BLE/GFSK Mid Channel, 2440 MHz	-10.52	8	Pass
BLE/GFSK High Channel, 2480 MHz	-11.151	8	Pass

BLE/GFSK Low Channel, 2402 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-10.137	8	Pass



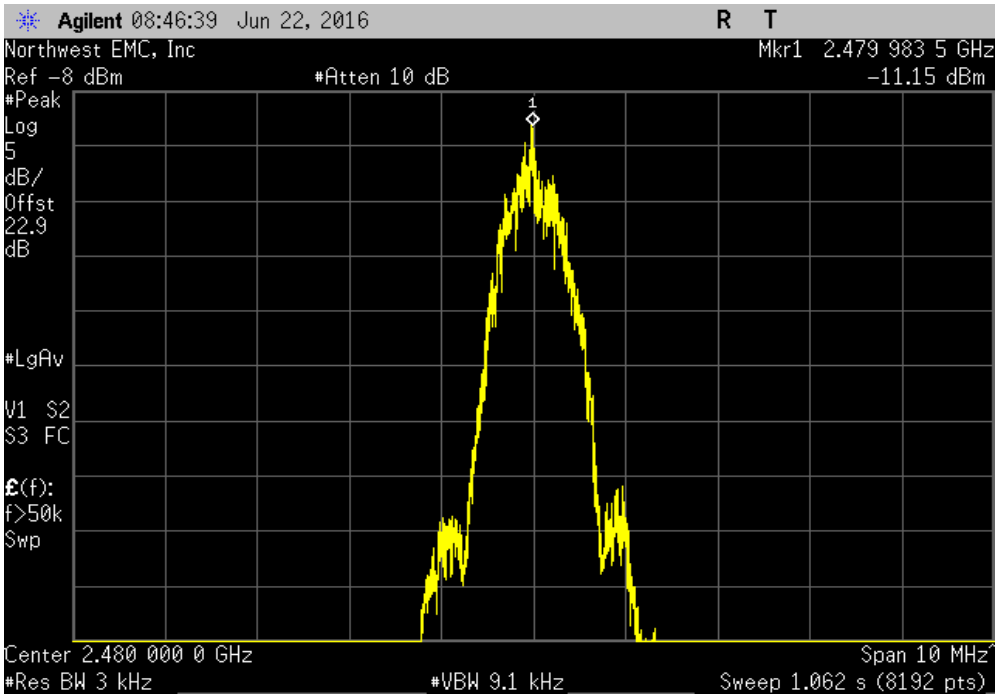
BLE/GFSK Mid Channel, 2442 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-10.52	8	Pass



POWER SPECTRAL DENSITY

XMit 2016.05.06

BLE/GFSK High Channel, 2480 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-11.151	8	Pass



BAND EDGE COMPLIANCE

XMit 2016.05.06

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	7/23/2016
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	4/4/2017
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018

TEST DESCRIPTION

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

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

BAND EDGE COMPLIANCE

NORTHWEST EMC

XMit 2016.05.06

EUT:	**EMMA BT**			**Work Order:**	**MASI0321**
Serial Number:	**300012**			**Date:**	**06/22/16**
Customer:	**Masimo Corporation**			**Temperature:**	**22.5 °C**
Attendees:	**Michael Clark**			**Humidity:**	**48.2% RH**
Project:	**None**			**Barometric Pres.:**	**1017 mbar**
Tested by:	**Mark Baytan**	**Power:**	**+3.0VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2016	ANSI C63.10:2013

COMMENTS

DC Block/20dB Attenuator + coax cable + client provided patch cable = 22.85dB total offset

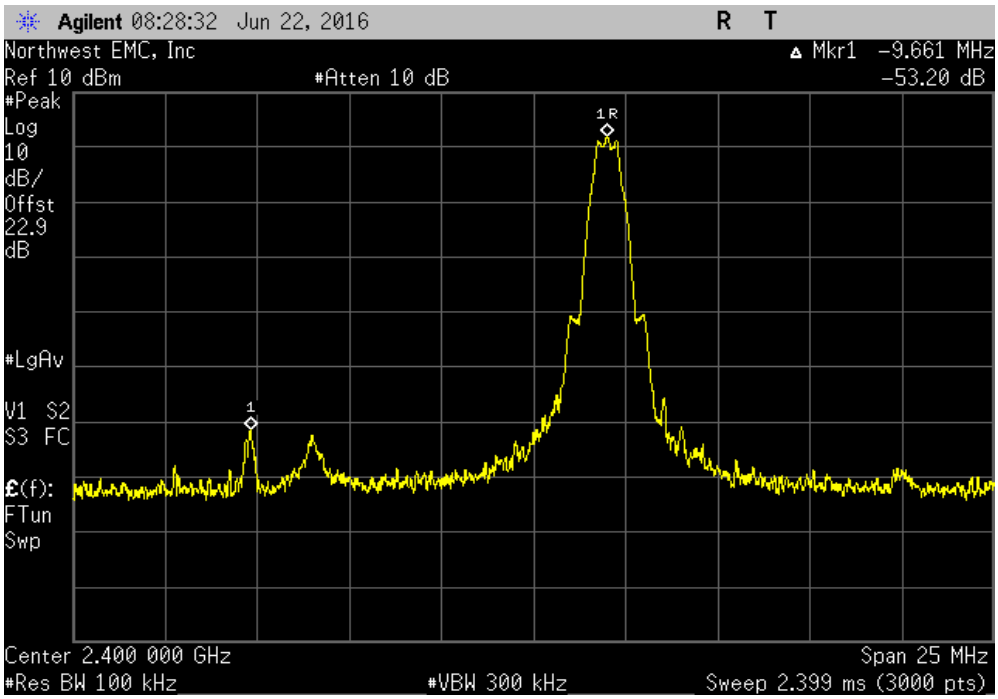
DEVIATIONS FROM TEST STANDARD

None

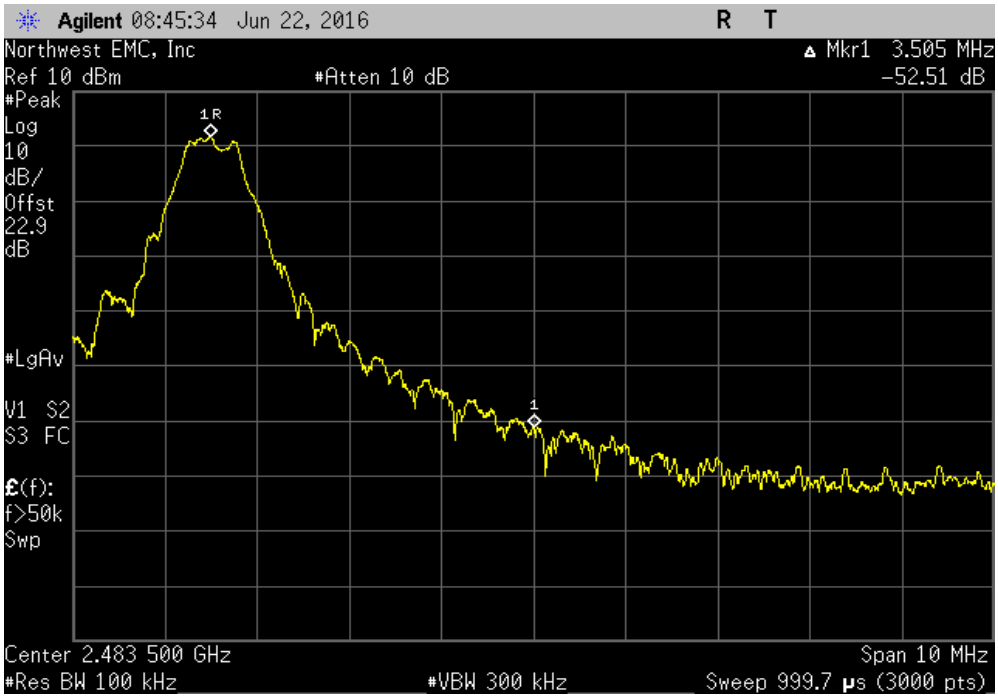
Configuration #	**1**	*Signature* 

	Value (dBc)	**Limit ≤ (dBc)**	**Result**
BLE/GFSK Low Channel, 2402 MHz	-53.2	-20	Pass
BLE/GFSK High Channel, 2480 MHz	-52.51	-20	Pass

BLE/GFSK Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.2	-20	Pass



BLE/GFSK High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.51	-20	Pass



SPURIOUS CONDUCTED EMISSIONS

XMit 2016.05.06

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	7/23/2016
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	4/4/2017
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	4/4/2017
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018

TEST DESCRIPTION

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

SPURIOUS CONDUCTED EMISSIONS

NORTHWEST EMC

XMit 2016.05.06

EUT:	**EMMA BT**			**Work Order:**	**MASI0321**
Serial Number:	**300012**			**Date:**	**06/22/16**
Customer:	**Masimo Corporation**			**Temperature:**	**22.5 °C**
Attendees:	**Michael Clark**			**Humidity:**	**48.2% RH**
Project:	**None**			**Barometric Pres.:**	**1017 mbar**
Tested by:	**Mark Baytan**	**Power:**	**+3.0VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2016	ANSI C63.10:2013

COMMENTS

DC Block/20dB Attenuator + coax cable + client provided patch cable = 22.85dB total offset

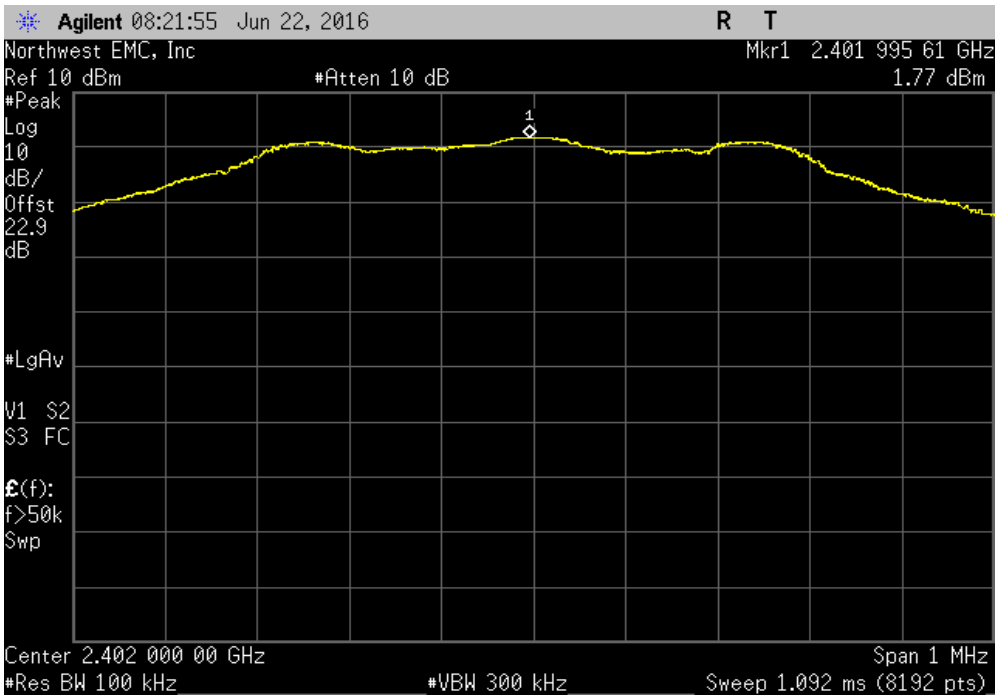
DEVIATIONS FROM TEST STANDARD

None

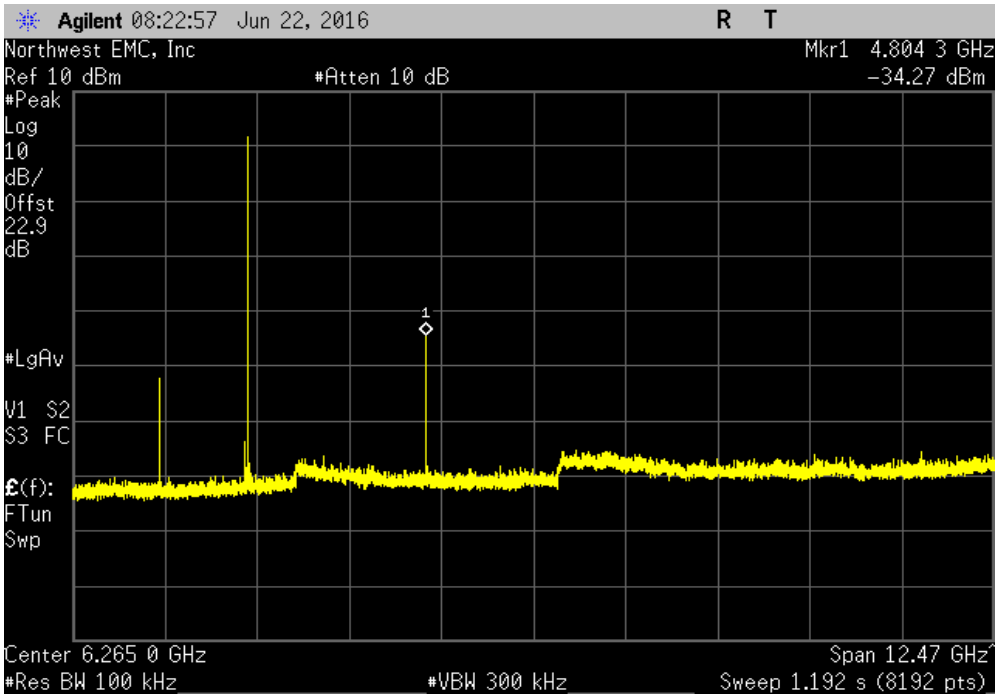
Configuration #	**1**	*Signature* 

	Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result
BLE/GFSK Low Channel, 2402 MHz	Fundamental	N/A	N/A	N/A
BLE/GFSK Low Channel, 2402 MHz	30 MHz - 12.5 GHz	-36.04	-20	Pass
BLE/GFSK Low Channel, 2402 MHz	12.5 GHz - 25 GHz	-53.91	-20	Pass
BLE/GFSK Mid Channel, 2440 MHz	Fundamental	N/A	N/A	N/A
BLE/GFSK Mid Channel, 2440 MHz	30 MHz - 12.5 GHz	-37.8	-20	Pass
BLE/GFSK Mid Channel, 2440 MHz	12.5 GHz - 25 GHz	-53.08	-20	Pass
BLE/GFSK High Channel, 2480 MHz	Fundamental	N/A	N/A	N/A
BLE/GFSK High Channel, 2480 MHz	30 MHz - 12.5 GHz	-38.52	-20	Pass
BLE/GFSK High Channel, 2480 MHz	12.5 GHz - 25 GHz	-52.2	-20	Pass

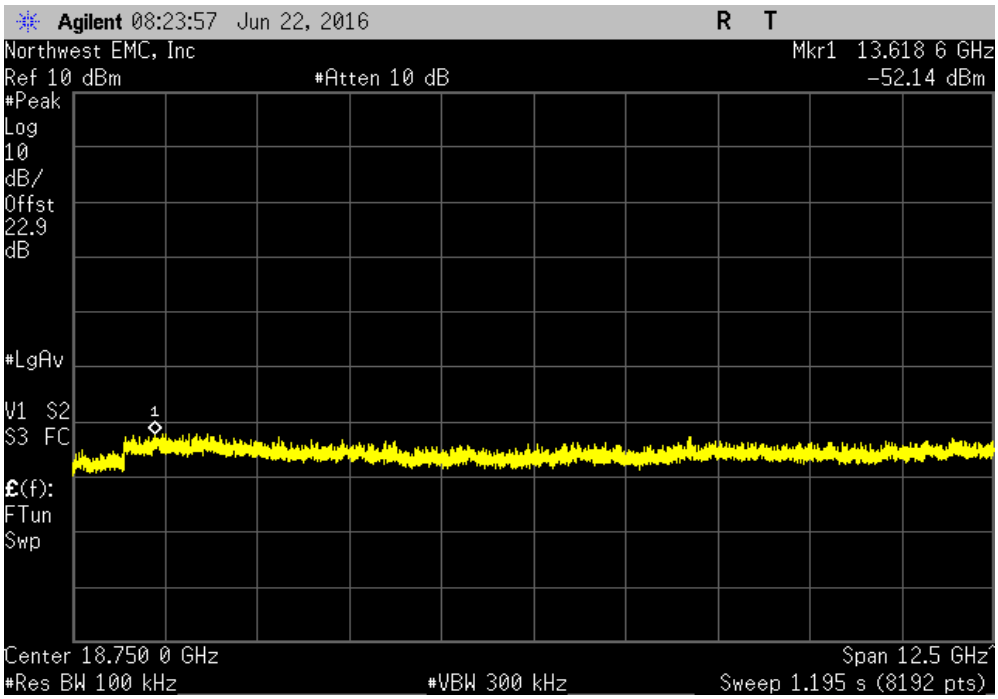
BLE/GFSK Low Channel, 2402 MHz						
	Frequency Range			Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental			N/A	N/A	N/A



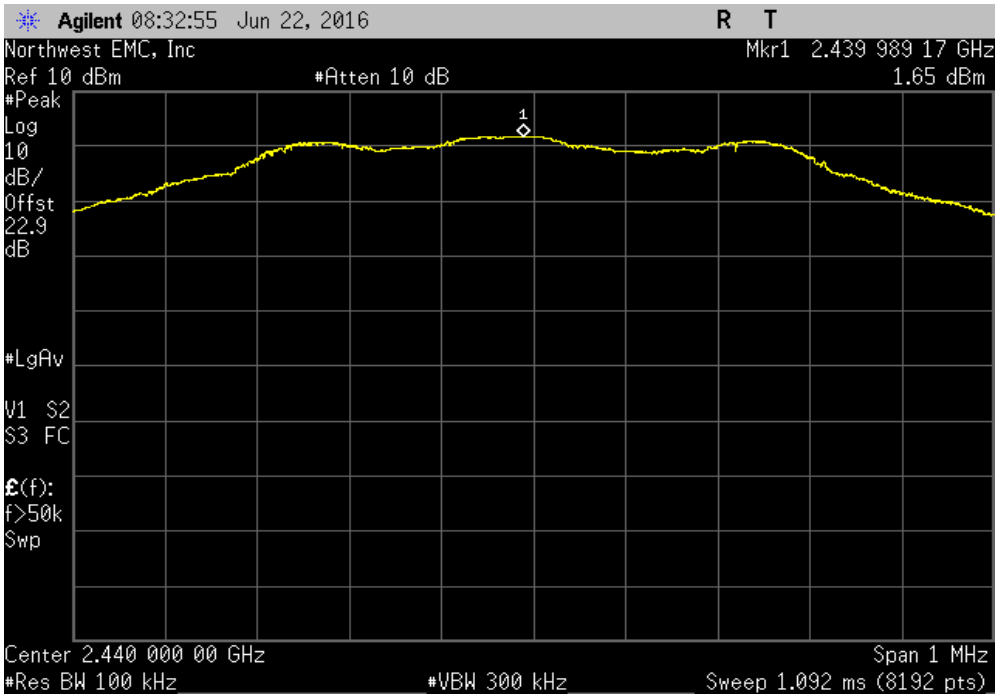
BLE/GFSK Low Channel, 2402 MHz					
Frequency Range		Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz		-36.04	-20	Pass



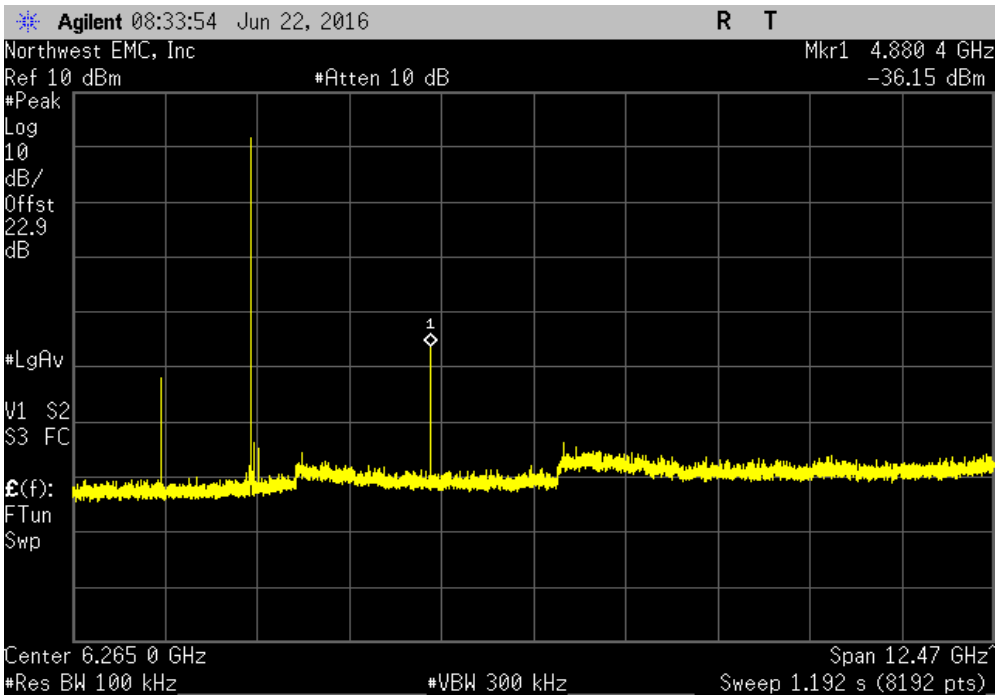
BLE/GFSK Low Channel, 2402 MHz				
Frequency Range		Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz		-53.91	-20	Pass



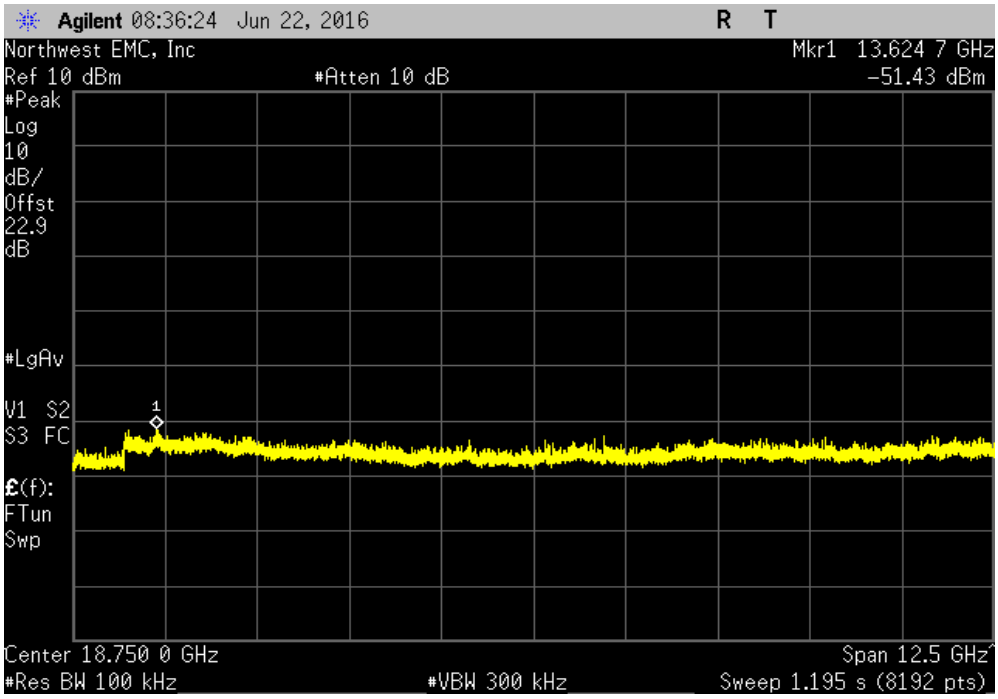
BLE/GFSK Mid Channel, 2442 MHz						
	Frequency Range			Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental			N/A	N/A	N/A



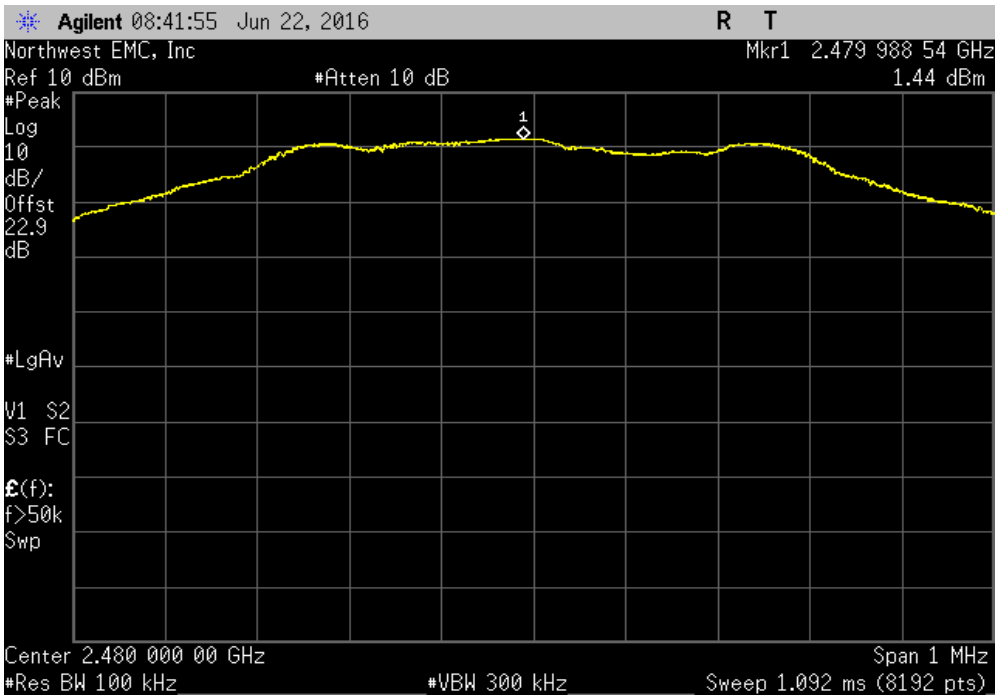
BLE/GFSK Mid Channel, 2442 MHz				
Frequency Range		**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz		-37.8	-20	Pass



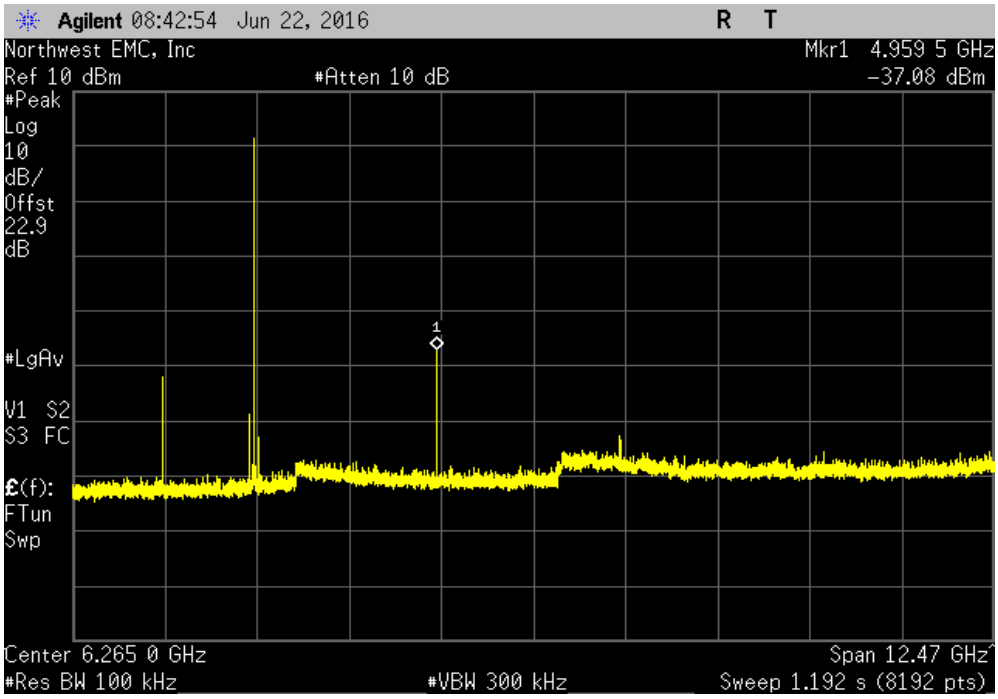
BLE/GFSK Mid Channel, 2442 MHz				
Frequency Range		**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz		-53.08	-20	Pass



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



BLE/GFSK High Channel, 2480 MHz						
	Frequency Range			Max Value (dBc)	Limit ≤ (dBc)	Result
	30 MHz - 12.5 GHz			-38.52	-20	Pass



BLE/GFSK High Channel, 2480 MHz				
Frequency Range		Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz		-52.2	-20	Pass