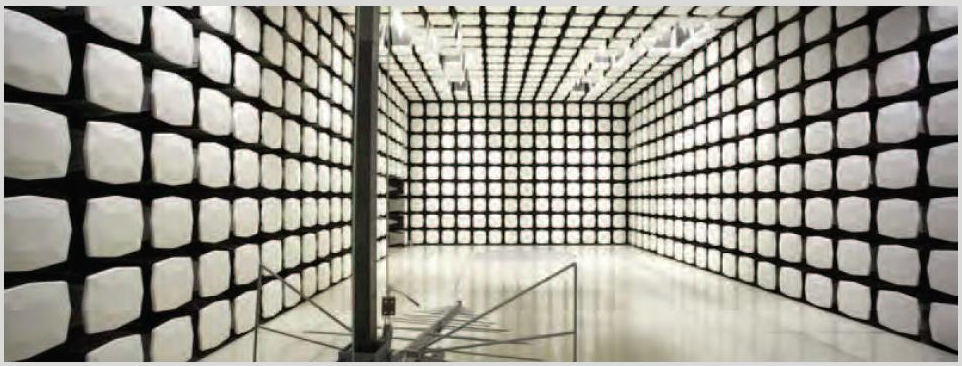
Masimo Corporation

MWMII

FCC 15.407:2019

802.11an SISO Radio

Report # MASI0553.5 Rev. 1



NVLAP LAB CODE: 200676-0

CERTIFICATE OF TEST

Last Date of Test: August 13, 2019
Masimo Corporation
Model: MWMII

Radio Equipment Testing

Standards

Specification	Method
FCC 15.407:2019	ANSI C63.10:2013, KDB 789033, KDB 905462

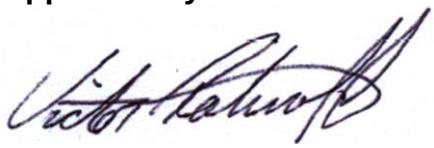
Results

Method Clause	Test Description	Applied	Results	Comments
KDB 905462 - 7.5	DFS Testing - Test Signal Level	No	N/A	Not required if EUT does not support DFS Bands or device is a "Client" without radar detection.
KDB 905462 - 7.7	DFS Testing - Channel LoadingChannel Utilization	Yes	Pass	
KDB 905462 - 7.8.1	DFS Testing - Detection Bandwidth	No	N/A	Not required if EUT does not support DFS Bands or device is a "Client" without radar detection.
KDB 905462 - 7.8.2	DFS Testing - Channel Availability Check	No	N/A	Not required if EUT does not support DFS Bands or device is a "Client" without radar detection.
KDB 905462 - 7.8.3	DFS Testing - Move Time	Yes	Pass	
KDB 905462 - 7.8.3	DFS Testing - Closing Time	Yes	Pass	
KDB 905462 - 7.8.3	DFS Testing - Non Occupancy Period	Yes	Pass	
KDB 905462 - 7.8.4	DFS Testing - Statistical Performance	No	N/A	Not required if EUT does not support DFS Bands or device is a "Client" without radar detection.

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. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
00	None		
01	Added ETS probe to test equipment.	2019-11-21	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 17065 as a product certifier. This allows Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

Australia/New Zealand

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

Korea

MSIT / 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

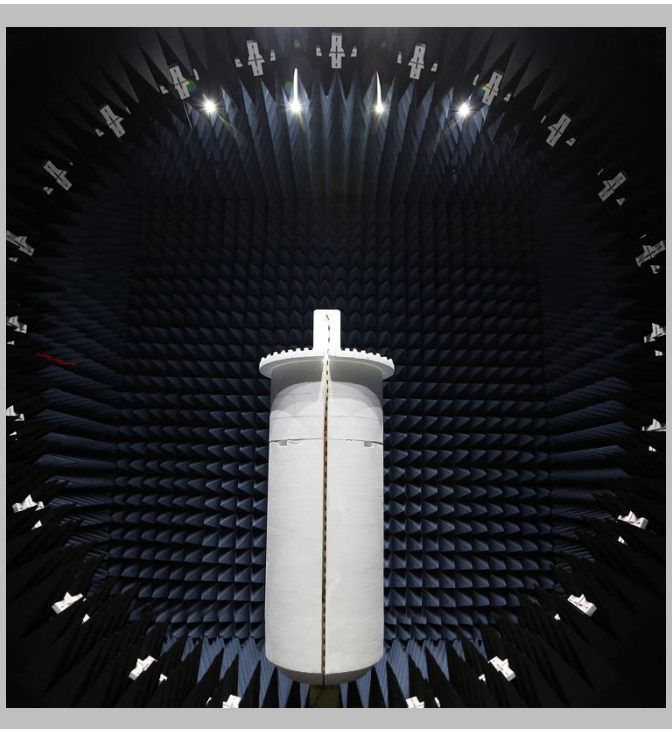
MIC – Recognized by MIC as a CAB for the acceptance of test data.

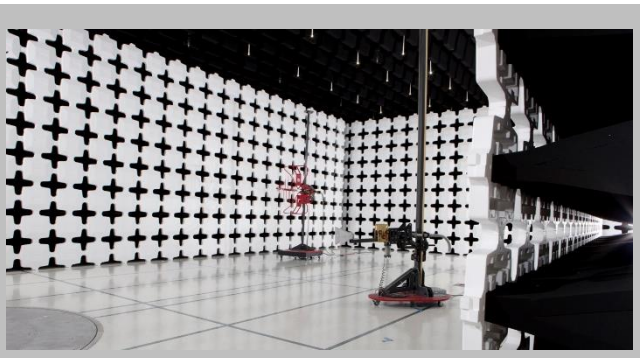
SCOPE

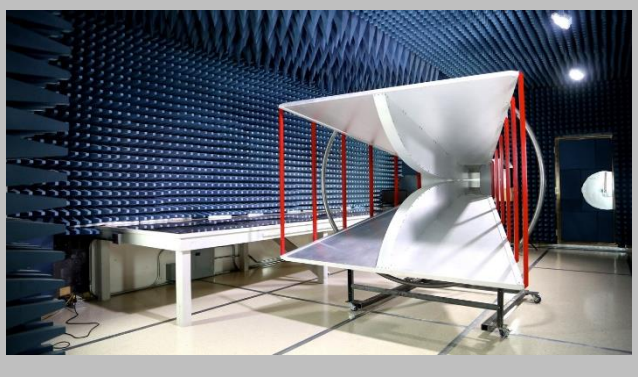
For details on the Scopes of our Accreditations, please visit:
https://www.nwemc.com/emc-testing-accreditations

FACILITIES

California	Minnesota	Oregon	Texas	Washington
Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs EV01-12 6775 NE Evergreen Pkwy #400 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: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

element
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.

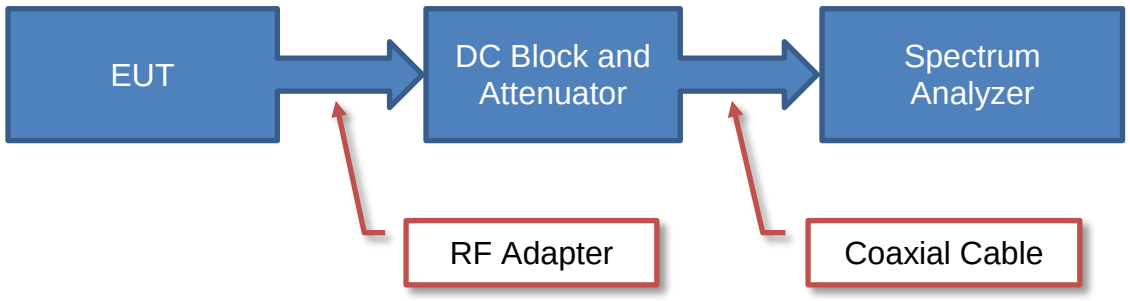
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable 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.

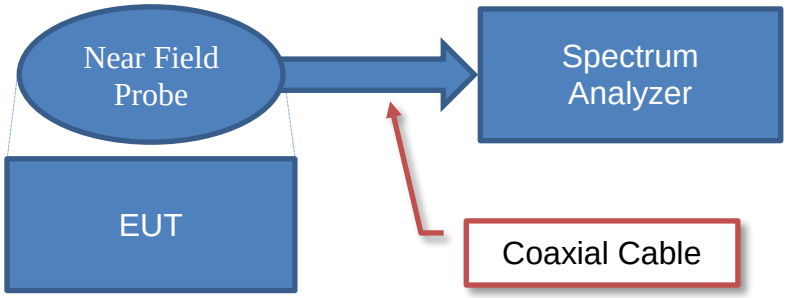
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.1 dB	-5.1 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

Test Setup Block Diagrams

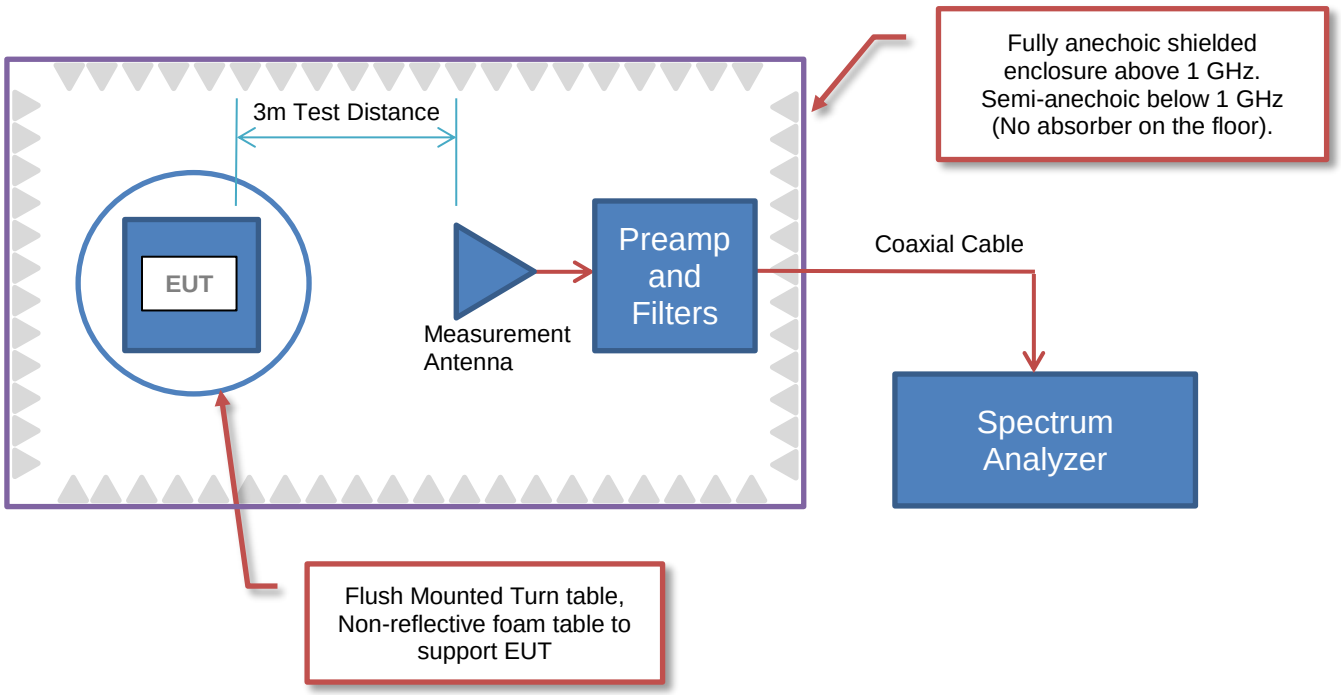
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Masimo Corporation
Address:	52 Discovery
City, State, Zip:	Irvine, CA 92618
Test Requested By:	Anami Joshi
Model:	MWMII
First Date of Test:	August 3, 2019
Last Date of Test:	August 13, 2019
Receipt Date of Samples:	July 1, 2019
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
The MWMII is a radio module (P/N 26269) which uses an AzureWave AW-CM256SM radio chipset that incorporates the Broadcom BCM43455 single chip.

Testing Objective:
To demonstrate compliance of the 802.11 radio under FCC 15.407 for operation in the 5.2 GHz, 5.3 GHz, 5.6 GHz and 5.8 GHz band(s).

CONFIGURATIONS

Configuration MASI0553- 10

Software/Firmware Running during test	
Description	**Version**
Firmware	7.45.100.7-mfgtest

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Masimo Wireless Module II	Masimo	MWMII (P/N: 26269)	ENG-1

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	XP Power	ACM18US05-3A	160803-00607
i.MX 53 Quick Start Board	FreeScale	iMx-53	None
Host Laptop	Hewlett-Packard	ProBook	CND638CWSR
Laptop Power Supply	Hewlett-Packard	PPP009H	WBGSU0BL91FXO9
USB Hub	plugable	USB3-HUB7C	Y-3184
Hawk Radio Board Debug Tool	Masimo	82403	None
Shielded Test Enclosure	Ramsey	STE3300F2	1021
Carrier board	Masimo	26634 Rev. B	1847700024

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DFS Router	Linksys	BEFSX41	CB921FC07030
DFS Router AC Adapter	Linksys	AM-12010000D41	2102-10012015R

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
USB Cable	Yes	3.0m	No	Host Laptop	USB Hub
USB-to-Serial Cable	Yes	0.3m	No	USB Hub	Hawk Radio Board Debug Tool
AC Cable	No	1.2m	No	AC Mains	Laptop Power Supply
DC Cable	Yes	1.4m	Yes	Laptop Power Supply	Host Laptop
DC Cable	Yes	1.6m	No	i.MX 53 Quick Start Board	AC Adapter (AC Mains)
DC Cable	No	1.7m	No	DFS Router AC Adapter	AC Mains
Ethernet Cable	No	2.0m	No	Host Laptop	DFS Router

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2019-08-03	DFS Testing - Closing Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2019-08-03	DFS Testing - Non Occupancy Period	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2019-08-06	DFS Testing - Channel Loading Channel Utilization	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2019-08-13	DFS Testing - Move Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

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
Meter - Power	ETS Lindgren	7002-006	SRB	7-Nov-19	7-Nov-20
Attenuator	Aeroflex/Weinschel	3053	RKL	NCR	NCR
Attenuator	Aeroflex/Weinschel	3053	RKJ	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAK	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAL	NCR	NCR
Generator - Signal	Benchforge Manufacturing	Colt	TIO	NCR	NCR
Access Point	Cisco	AIR-SAP2602E-A-K9	TIR	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	20-Dec-18	20-Dec-19
Block - DC	Fairview Microwave	SD3379	AMV	3-Jan-19	3-Jan-20

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and an ETS power meter. The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored simultaneously. Where required, an approved media file was streamed through the master and client, or an alternative method appropriate to the device's normal operations may be used instead. Channel loading requirements were verified. Configured and status of the master and client devices were monitored.

DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

EUT:	**MWMII**			**Work Order:**	**MASI0553**
Serial Number:	**ENG-1**			**Date:**	**6-Aug-19**
Customer:	**Masimo Corporation**			**Temperature:**	**24.1 °C**
Attendees:	**Nghi Nguyen**			**Humidity:**	**49% RH**
Project:	**None**			**Barometric Pres.:**	**1014 mbar**
Tested by:	**Nolan De Ramos and Mark Baytan**	**Power:**	**3.6VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.407:2019	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

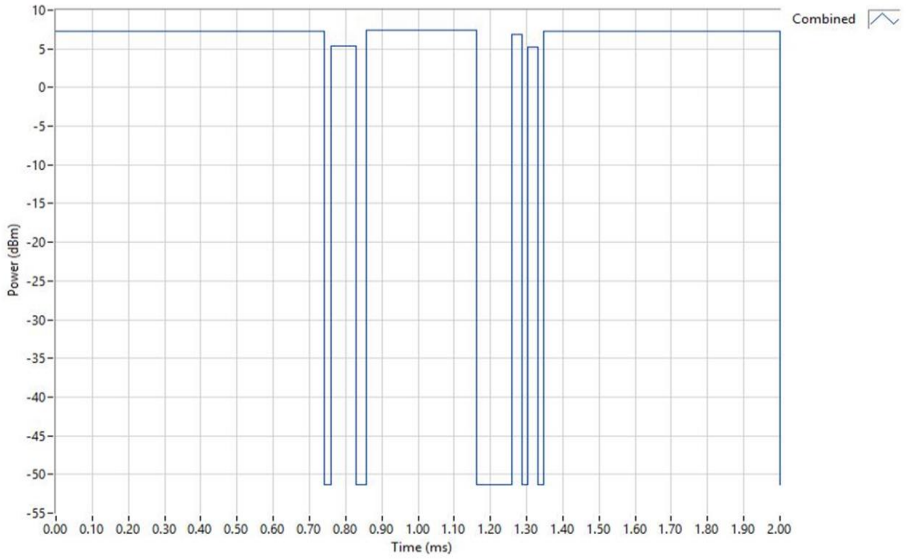
Configuration #	**10**	*Signature*

	Channel Loading (%)	**Limit (%)**	**Result**
Channel 60/64, 5310 MHz			
2 ms	73.074	≥ 30	Pass
10 ms	91.181	≥ 30	Pass
25 ms	90.938	≥ 30	Pass
100 ms	94.19	≥ 30	Pass
10000 ms	46.962	≥ 30	Pass
Channel 100/104, 5510 MHz			
2 ms	73.142	≥ 30	Pass
10 ms	91.208	≥ 30	Pass
25 ms	93.624	≥ 30	Pass
100 ms	66.678	≥ 30	Pass
10000 ms	34.77	≥ 30	Pass

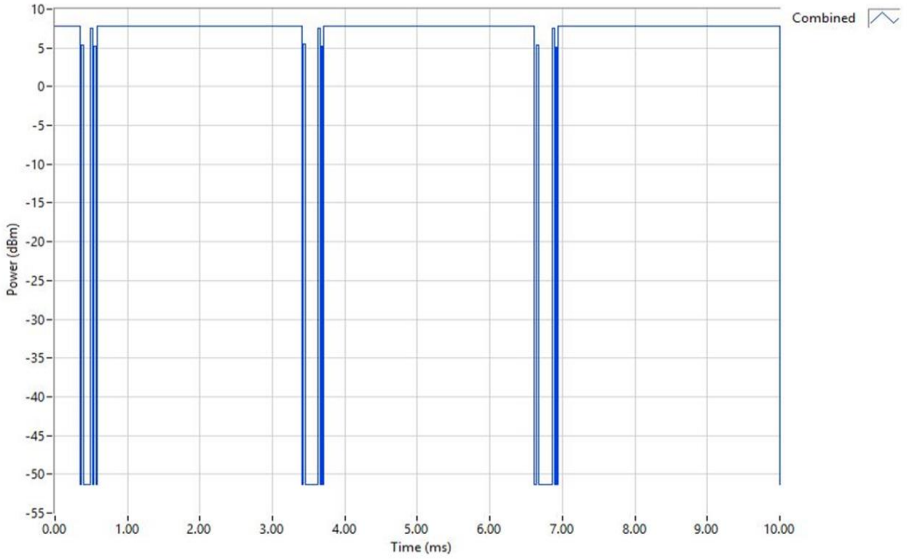
DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

Channel 60/64, 5310 MHz, 2 ms						
				Channel Loading (%)	Limit (%)	Result
				73.074	≥ 30	Pass



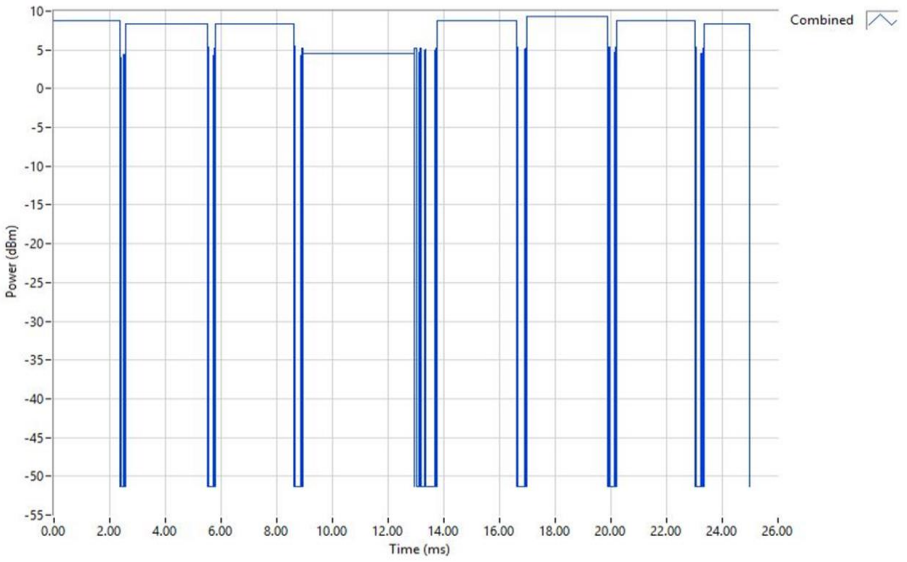
Channel 60/64, 5310 MHz, 10 ms						
				Channel Loading (%)	Limit (%)	Result
				91.181	≥ 30	Pass



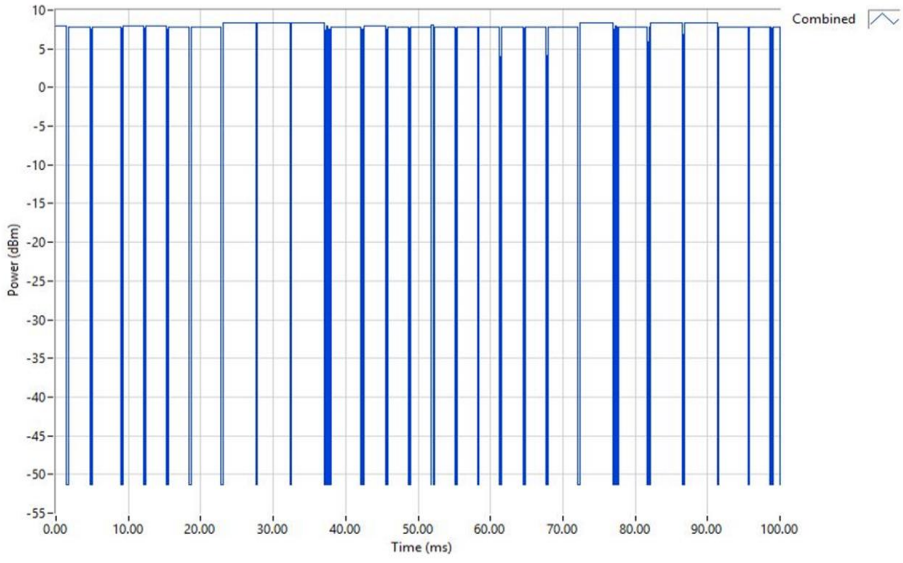
DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

Channel 60/64, 5310 MHz, 25 ms						
				Channel Loading (%)	Limit (%)	Result
				90.938	≥ 30	Pass



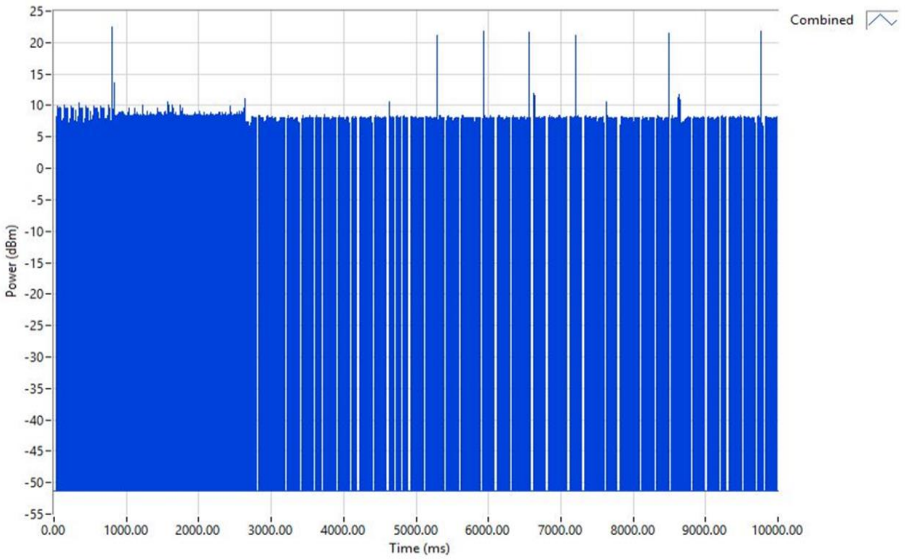
Channel 60/64, 5310 MHz, 100 ms						
				Channel Loading (%)	Limit (%)	Result
				94.19	≥ 30	Pass



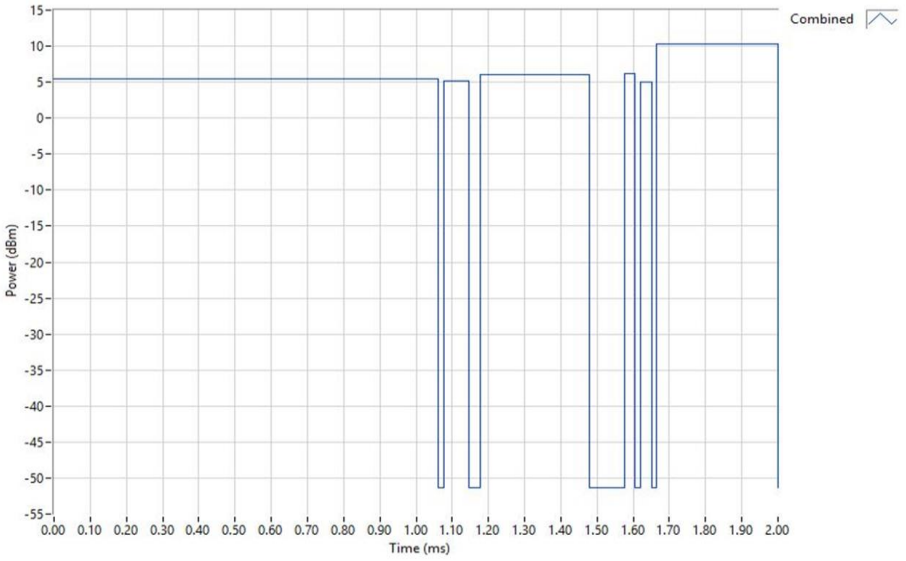
DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

Channel 60/64, 5310 MHz, 10000 ms						
				Channel Loading (%)	Limit (%)	Result
				46.962	≥ 30	Pass



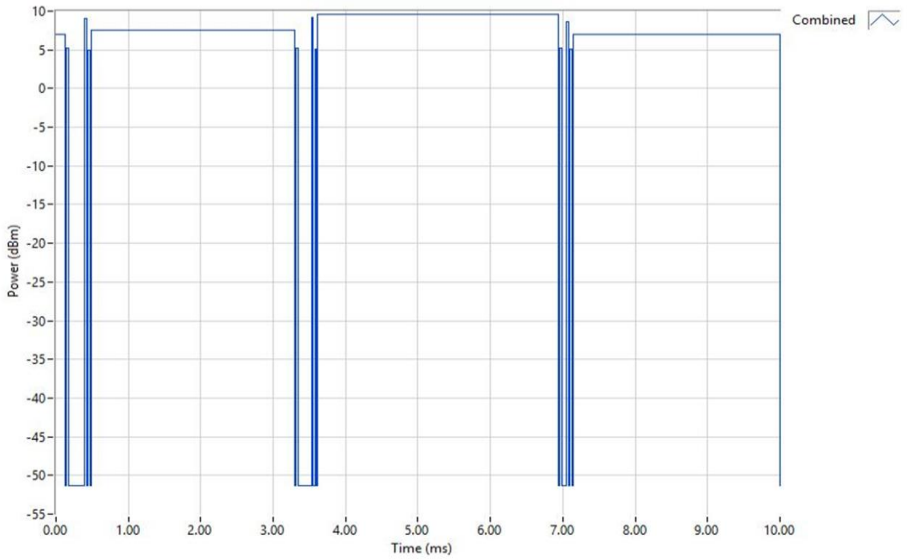
Channel 100/104, 5510 MHz, 2 ms						
				Channel Loading (%)	Limit (%)	Result
				73.142	≥ 30	Pass



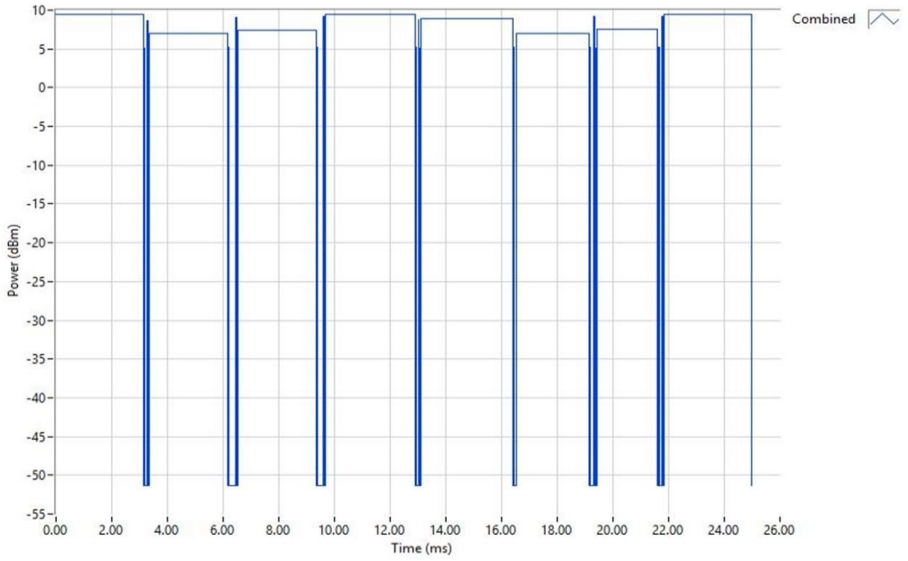
DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

Channel 100/104, 5510 MHz, 10 ms						
				Channel Loading (%)	Limit (%)	Result
				91.208	≥ 30	Pass



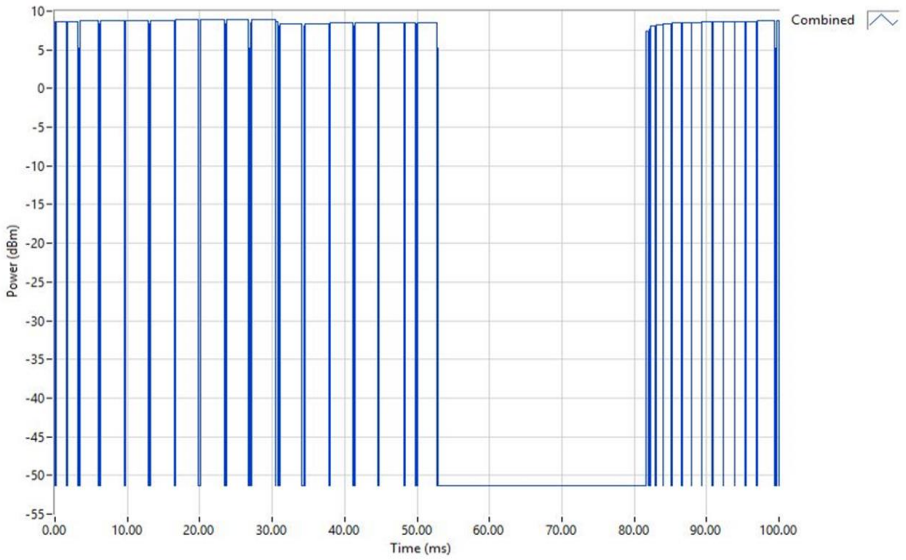
Channel 100/104, 5510 MHz, 25 ms						
				Channel Loading (%)	Limit (%)	Result
				93.624	≥ 30	Pass



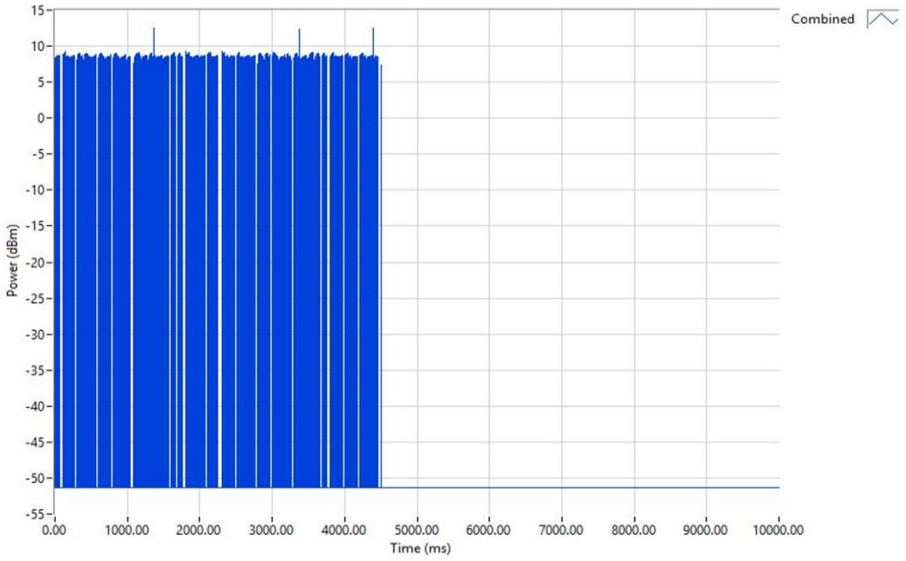
DFS TESTING - CHANNEL LOADING/CHANNEL UTILIZATION

XMit 2019.06.11

Channel 100/104, 5510 MHz, 100 ms						
				Channel Loading (%)	Limit (%)	Result
				66.678	≥ 30	Pass



Channel 100/104, 5510 MHz, 10000 ms						
				Channel Loading (%)	Limit (%)	Result
				34.77	≥ 30	Pass



DFS TESTING - MOVE TIME

XMit 2019.06.11

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	AFA	12-Feb-19	12-Feb-20
Block - DC	Fairview Microwave	SD3379	AMV	3-Jan-19	3-Jan-20
Attenuator	Fairview Microwave	SA18H-20	TKR	20-Dec-18	20-Dec-19
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Access Point	Cisco	AIR-SAP2602E-A-K9	TIR	NCR	NCR
Generator - Signal	Benchforge Manufacturing	Colt	TIO	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAL	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAK	NCR	NCR
Attenuator	Aeroflex/Weinschel	3053	RKJ	NCR	NCR
Attenuator	Aeroflex/Weinschel	3053	RKL	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. For master devices, the detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Where required, an approved Media file was streamed between the master and client or an alternative method to load the channel may be used instead. Channel loading requirements were also verified prior to testing. Configuration and status of the master and client devices were then monitored using the spectrum analyzer. The Move Time test was performed by starting a transmission between the master and client device, and then injecting the appropriate radar signals and making sure both the master and client device vacate the DFS channel within the time specified by the standard.

DFS TESTING - MOVE TIME

XMit 2019.06.11

EUT:	**MWMII**			**Work Order:**	**MASI0553**
Serial Number:	**ENG-1**			**Date:**	**13-Aug-19**
Customer:	**Masimo Corporation**			**Temperature:**	**24.7 °C**
Attendees:	**Nghi Nguyen and Mike Tran**			**Humidity:**	**47% RH**
Project:	**None**			**Barometric Pres.:**	**1016 mbar**
Tested by:	**Nolan De Ramos**	**Power:**	**3.6VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.407:2019	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

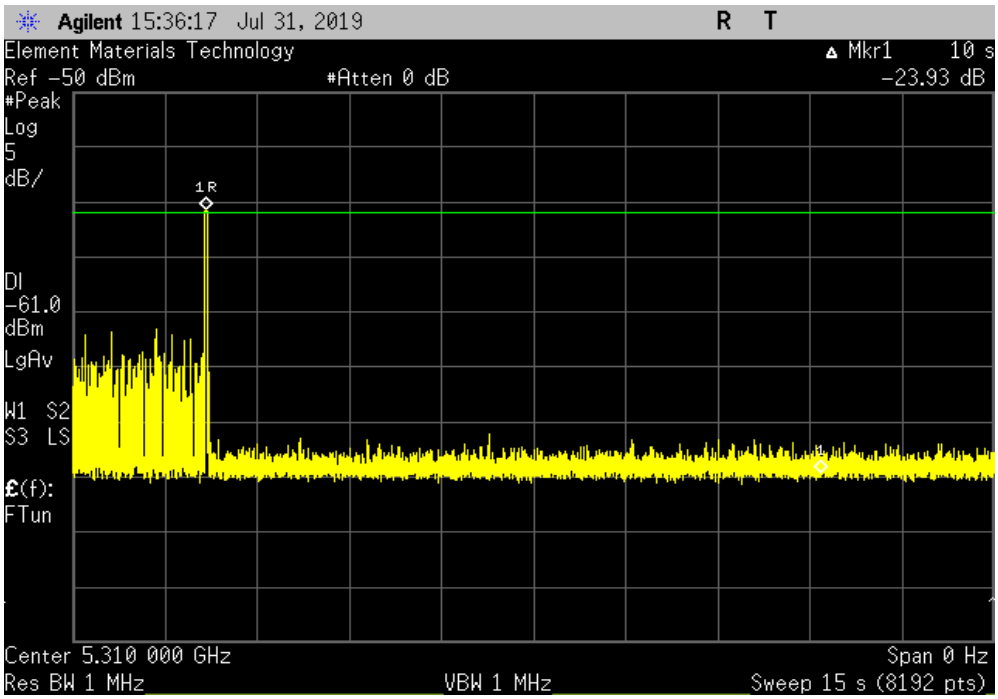
Configuration #	**10**	*Signature*

	Value	**Limit**	**Result**
High Channel 60/64, 5310 MHz			
Radar Type 0	See Graph	< 10 s	Pass
Low Channel 100/104, 5510 MHz			
Radar Type 0	See Graph	< 10 s	Pass

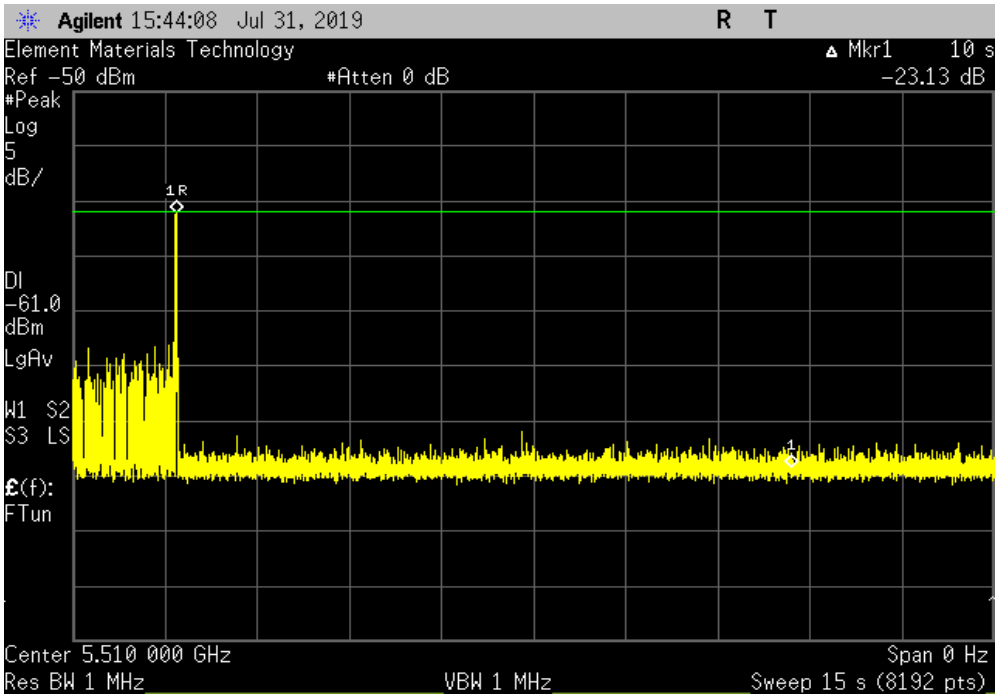
DFS TESTING - MOVE TIME

XMit 2019.06.11

High Channel 60/64, 5310 MHz, Radar Type 0						
				Value	Limit	Result
				See Graph	< 10 s	Pass



Low Channel 100/104, 5510 MHz, Radar Type 0						
				Value	Limit	Result
				See Graph	< 10 s	Pass



DFS TESTING - CLOSING TIME

XMit 2019.06.11

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
Attenuator	Aeroflex/Weinschel	3053	RKL	NCR	NCR
Attenuator	Aeroflex/Weinschel	3053	RKJ	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAK	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAL	NCR	NCR
Generator - Signal	Benchforge Manufacturing	Colt	TIO	NCR	NCR
Access Point	Cisco	AIR-SAP2602E-A-K9	TIR	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	20-Dec-18	20-Dec-19
Block - DC	Fairview Microwave	SD3379	AMV	3-Jan-19	3-Jan-20
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	12-Feb-19	12-Feb-20

TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the radar signals to be injected and monitored. For master devices, the detection level was set prior to testing by temporarily replacing the master device with the analyzer and setting the power level according to Table 3 and Section 7.5. Where required, an approved Media file was streamed through the master and client or an alternative method to load the channel may be used instead. Channel loading requirements were also verified prior to testing. Configuration and status of the master and client devices were then monitored using the spectrum analyzer. The Closing Time test was performed by starting a transmission between the master and client device, and then injecting the appropriate radar signals. All transmission signals between the master and client in the first 200mS are allowed. After this time period, the number of transmissions signals are counted and multiplied by the pulse width value(s). This aggregate is then added to the 200mS allowance for the final value and compared to the specified limit.

DFS TESTING - CLOSING TIME

XMit 2019.06.11

EUT:	**MWMII**			**Work Order:**	**MASI0553**
Serial Number:	**ENG-1**			**Date:**	**3-Aug-19**
Customer:	**Masimo Corporation**			**Temperature:**	**26.4 °C**
Attendees:	**Nghi Nguyen**			**Humidity:**	**41.6% RH**
Project:	**None**			**Barometric Pres.:**	**1012 mbar**
Tested by:	**Nolan De Ramos and Mark Baytan**	**Power:**	**3.6VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.407:2019	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

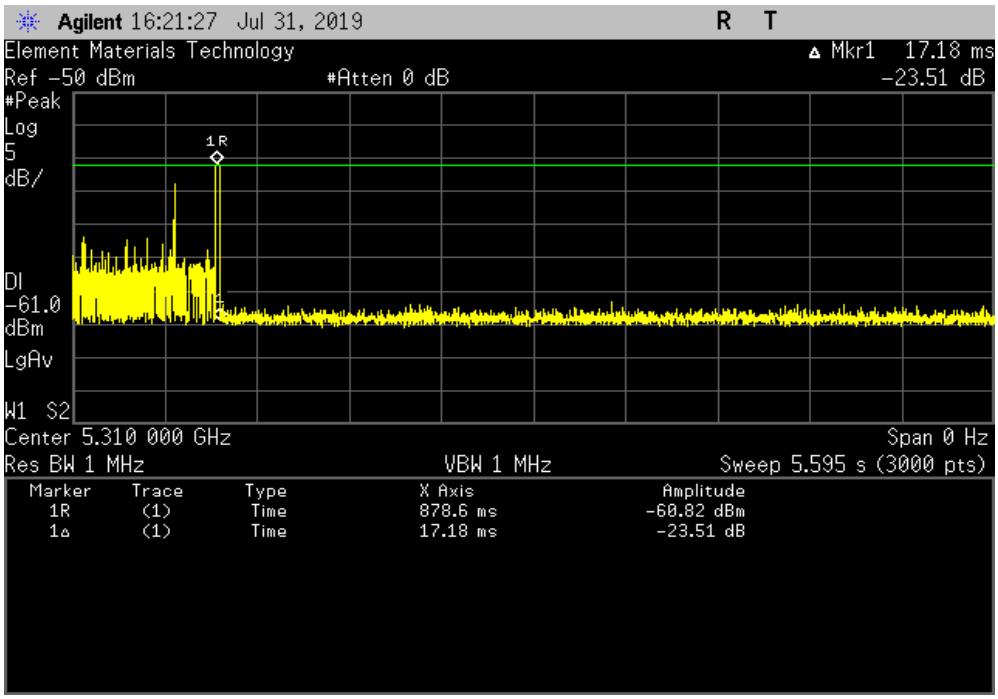
Configuration #	**10**	*Signature*

	Closing Time (ms)	**Limit (ms)**	**Result**
Channel 60/64, 5310 MHz			
Closing Time	17.18	< 200	Pass
200ms Window	N/A	N/A	N/A
Channel 100/104, 5510 MHz			
Closing Time	31.71	< 200	Pass
200ms Window	N/A	N/A	N/A

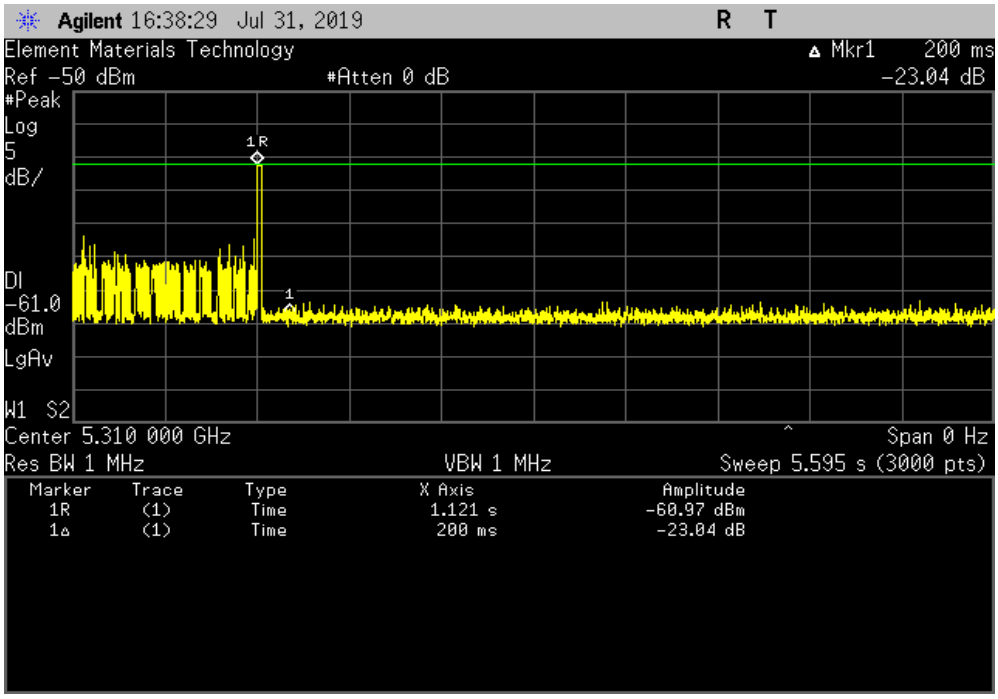
DFS TESTING - CLOSING TIME

XMit 2019.06.11

Channel 60/64, 5310 MHz, Closing Time						
				Closing Time (ms)	Limit (ms)	Result
				17.18	< 200	Pass



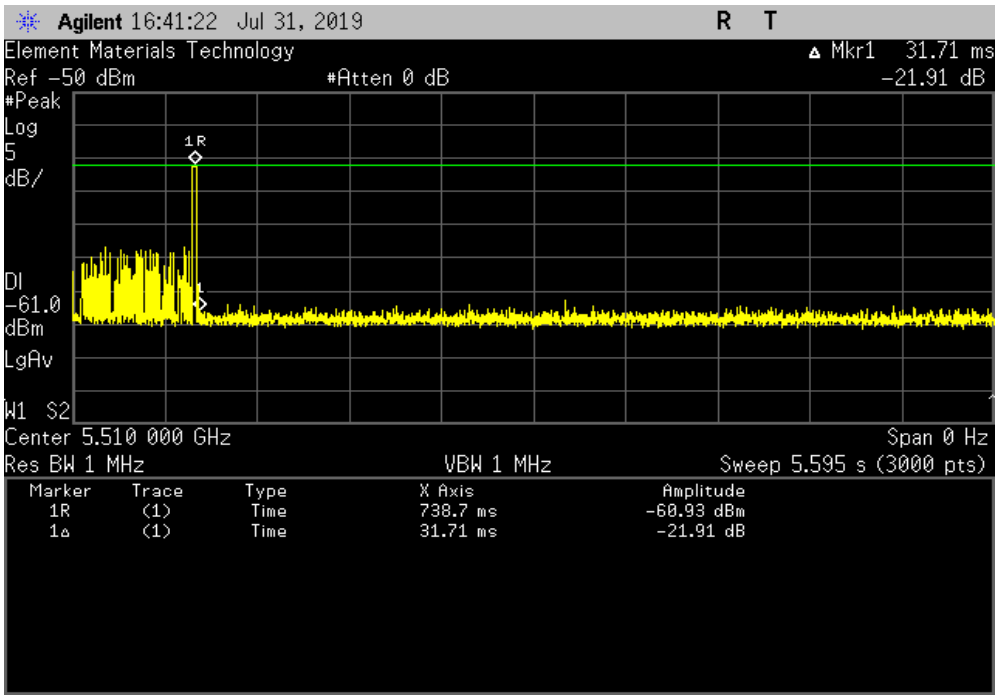
Channel 60/64, 5310 MHz, 200ms Window						
				Closing Time (ms)	Limit (ms)	Result
				N/A	N/A	N/A



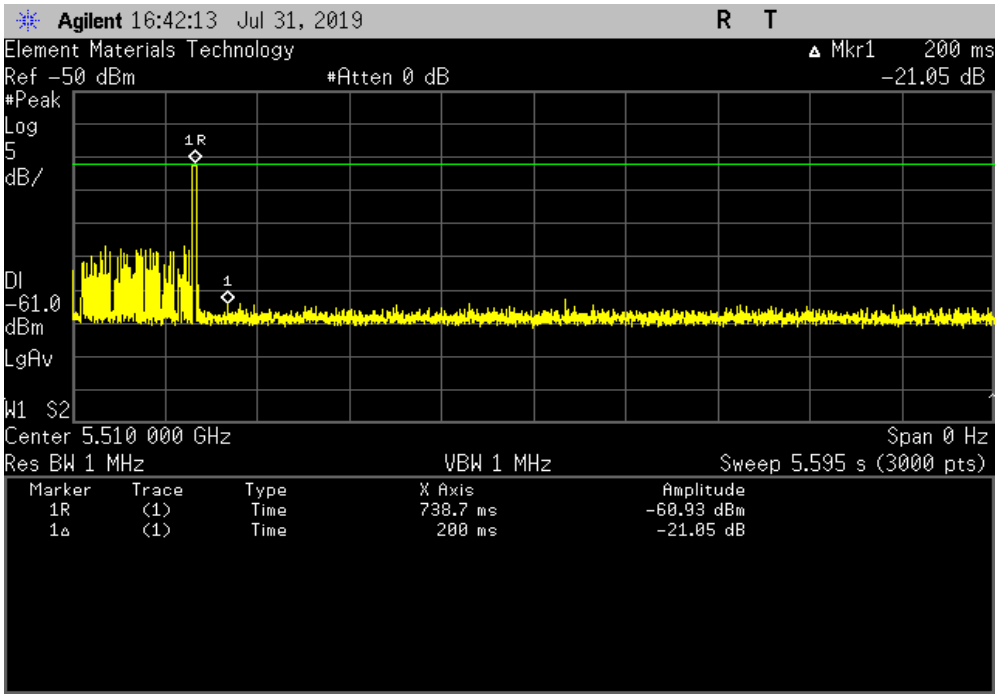
DFS TESTING - CLOSING TIME

XMit 2019.06.11

Channel 100/104, 5510 MHz, Closing Time						
				Closing Time (ms)	Limit (ms)	Result
				31.71	< 200	Pass



Channel 100/104, 5510 MHz, 200ms Window						
				Closing Time (ms)	Limit (ms)	Result
				N/A	N/A	N/A



DFS TESTING - NON OCCUPANCY PERIOD

XMit 2019.06.11

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
Attenuator	Aeroflex/Weinschel	3053	RKL	NCR	NCR
Attenuator	Aeroflex/Weinschel	3053	RKJ	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAK	NCR	NCR
Power Divider/Combiner	Fairview Microwave	MP0208-2	IAL	NCR	NCR
Generator - Signal	Benchforge Manufacturing	Colt	TIO	NCR	NCR
Access Point	Cisco	AIR-SAP2602E-A-K9	TIR	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	20-Dec-18	20-Dec-19
Block - DC	Fairview Microwave	SD3379	AMV	3-Jan-19	3-Jan-20
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	12-Feb-19	12-Feb-20

TEST DESCRIPTION

The master and client were connected using the conducted method described in the FCC KDB procedure via a series of splitters and attenuators which allows the communication and injected radar signals to be monitored simultaneously. The spectrum analyzer was configured to sweep the frequency for at least 30 minutes. The appropriate radar signal was injected and the channel was monitored to make sure the master and client devices vacated the channel and did not use it again for a period of time equal to or greater than 30 minutes.

DFS TESTING - NON OCCUPANCY PERIOD

XMit 2019.06.11

EUT:	**MWMII**			**Work Order:**	**MASI0553**
Serial Number:	**ENG-1**			**Date:**	**3-Aug-19**
Customer:	**Masimo Corporation**			**Temperature:**	**26.4 °C**
Attendees:	**Nghi Nguyen**			**Humidity:**	**41.6% RH**
Project:	**None**			**Barometric Pres.:**	**1012 mbar**
Tested by:	**Nolan De Ramos and Mark Baytan**	**Power:**	**3.6VDC**	**Job Site:**	**OC13**

TEST SPECIFICATIONS	**Test Method**
FCC 15.407:2019	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

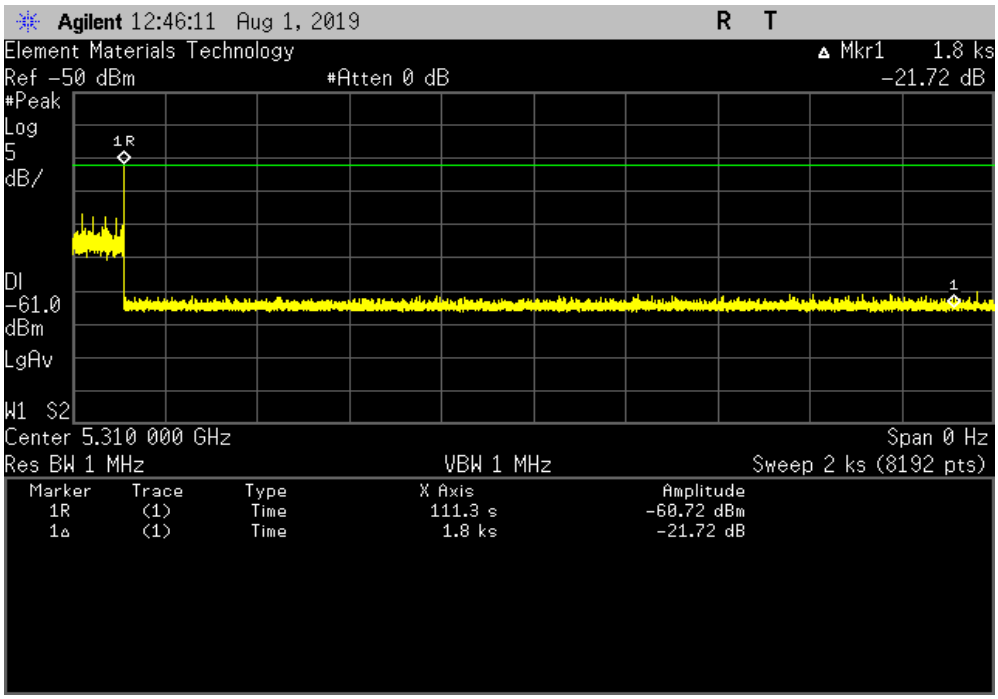
Configuration #	**10**	*Signature*

	Value	**Limit**	**Result**
Channel 60/64, 5310 MHz			
30 min Non Occupancy Period	See Graph	> 30 min	Pass
Channel 100/104, 5510 MHz			
30 min Non Occupancy Period	See Graph	> 30 min	Pass

DFS TESTING - NON OCCUPANCY PERIOD

XMit 2019.06.11

Channel 60/64, 5310 MHz, 30 min Non Occupancy Period						
				Value	Limit	Result
				See Graph	> 30 min	Pass



Channel 100/104, 5510 MHz, 30 min Non Occupancy Period						
				Value	Limit	Result
				See Graph	> 30 min	Pass