



Medtronic, Inc.

Model Tested: HarmoniaBP DR MRI SureScan

Related Family Models*:

**Confirma DR MRI SureScan, Effectra DR MRI SureScan
Refina CSP DR MRI SureScan, Restoria CSP DR MRI SureScan
ReSyncra CSP DR MRI SureScan, HarmoniaBP DR MRI SureScan
Confirma SR MRI SureScan, Effectra SR MRI SureScan
Refina CSP SR MRI SureScan, Restoria CSP SR MRI SureScan**

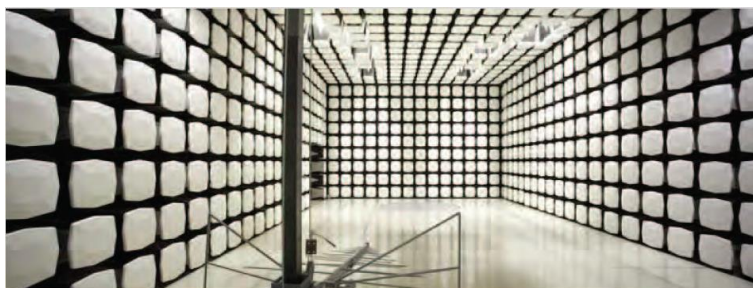
***See Product Description for details**

FCC 15.247:2026, RSS-247 Issue 4:2025

RSS-Gen Issue 5:2018+A1:2019+A2:2021

Bluetooth Radio

Report: MDTR1212.3 Rev. 05, Issue Date: July 2, 2026



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CERTIFICATE OF TEST

Last Date of Test: May 07, 2026
Medtronic, Inc.
EUT: HarmoniaBP DR MRI SureScan

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2026	ANSI C63.10-2020 + Cor.1-2023
RSS-247 Issue 4:2025	ANSI C63.10-2020 + Cor.1-2023+C63.10a-2024 + Errata to C63.10a-2024
RSS-Gen Issue 5:2018+A1:2019+A2:2021	

Guidance

FCC KDB 558074 v05r02:2019
Notice 2021 - CEB0001

Results

Test Description	Result	FCC Section(s)	RSS Section(s)	ANSI C63.10 Section(s)	Comments
Powerline Conducted Emissions	N/A	15.207	RSS-Gen 8.8	6.2	Not required for a battery powered EUT.
Duty Cycle	N/A	KDB 558074 -6.0	RSS-Gen 3.2	11.6	See data.
DTS Bandwidth (6 dB)	Pass	15.247(a)(2), KDB 558074 -8.2	RSS-247 6.3.1(a)	11.8.2	
Occupied Bandwidth (99%)	N/A	KDB 558074 -2.1	RSS-Gen 6.7	6.9.3	See data.
Output Power	Pass	15.247(b)(3), KDB 558074 -8.3.1	RSS-247 6.3.2, RSS-Gen 6.12	11.9.1.1	
Equivalent Isotropic Radiated Power	Pass	15.247(b)(3), KDB 558074 -8.3.1	RSS-247 6.3.2, RSS-Gen 6.12	11.9.1.1	
Power Spectral Density	Pass	15.247(e), KDB 558074 -8.4	RSS-247 6.3.1(b)	11.10.2	
Band Edge Compliance	Pass	15.247(d), KDB 558074 -8.5	RSS-247 6.6	11.11	
Spurious Conducted Emissions	Pass	15.247(d), KDB 558074 -8.5	RSS-247 6.6	11.11	
Radiated Band Edge Emissions	Pass	15.247(d), KDB 558074 - 8.6, 8.7	RSS-247 6.6, RSS-Gen 6.13, 8.10	11.12.1, 11.13.2, 6.6	
Spurious Radiated Emissions	Pass	15.247(d), KDB 558074 - 8.6, 8.7	RSS-247 6.6, RSS-Gen 6.13, 8.10	11.12.1, 11.13.2, 6.4, 6.5, 6.6	

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.

CERTIFICATE OF TEST

Deviations From Test Standards

None

Approved By:



Trevor Buls, Principal EMC Test Engineer
Signed for and on behalf of Element

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	Original		
01	Effecta changed to Effectra	2026-01-22	11
02	FCC year has been corrected to 2026	2026-04-03	1,3
	Updated test methods on COT.	2026-04-03	3
	Corrected MN05 to MN09, adjusted frequency down to 9kHz.	2026-04-03	7
	Updated power table.	2026-04-03	15
	Corrected the results to match the captures.	2026-04-03	21, 22
03	Updated Model Similarity sections	2026-06-25	Cover, 11, 13, 14
	Added additional configuration		16
	Updated Last Day of Test		3, 11, 17
	Added Spot Check data		44-46, 54-58
	Updated antenna gain		15, 29
	Updated client-provided offset on conducted dev-board measurements		20, 23, 26, 29, 31, 34
	Added pre-scan data		58
04	Corrected Model Number	2026-06-26	13,14
05	Corrected date on cover page	2026-07-02	1

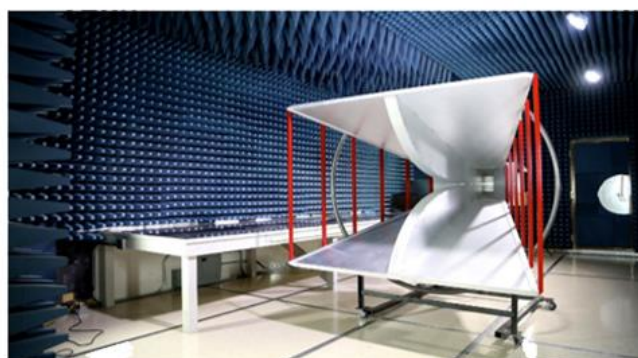
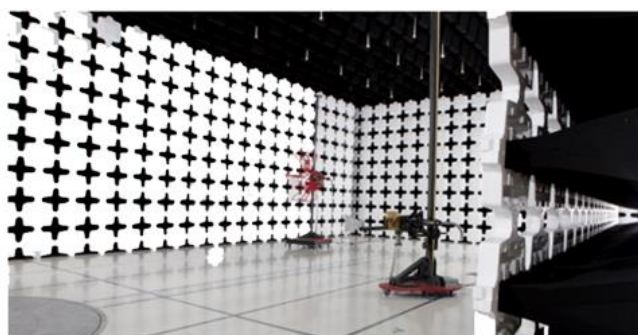
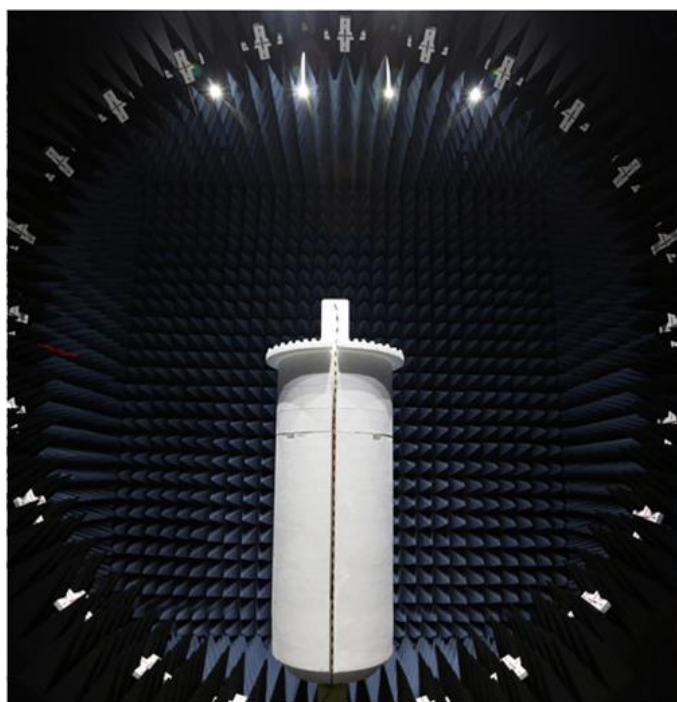
FACILITIES

Testing was performed at the following location(s)

	Location	Labs ⁽¹⁾	Address	A2LA ⁽²⁾	ISED ⁽³⁾	BSMI ⁽⁴⁾	VCCI ⁽⁵⁾	CAB	FDA ⁽⁶⁾
☐	California	OC01-17	41 Tesla Irvine, CA 92618 (949) 861-8918	3310.04	2834B	SL2-IN-E-1154R	A-0029	US0158	TL-55
☒	Minnesota	MN01-11	9349 W Broadway Ave. Brooklyn Park, MN 55445 (612) 638-5136	3310.05	2834E	SL2-IN-E-1152R	A-0109	US0175	TL-57
☐	Oregon	EV01-12	6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	3310.02	2834D	SL2-IN-E-1017	A-0108	US0017	TL-56
☐	Washington	NC01-05	19201 120th Ave NE Bothell, WA 98011 (425) 984-6600	3310.06	2834F	SL2-IN-E-1153R	A-0110	US0157	TL-67
☐	Offsite	N/A	See Product Description	N/A	N/A	N/A	N/A	N/A	N/A

See data sheets for specific labs

- (1) The lab designations denote individual rooms within each location. (OC01, OC02, OC03, etc.)
- (2) A2LA Certificate No.
- (3) ISED Company No.
- (4) BSMI No.
- (5) VCCI Site Filing No.
- (6) FDA ASCA No.



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 reported is based on statistical analysis that was performed by the laboratory. 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 in the table below. A lab specific value may also be found in the applicable test description section. 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.

Various Measurements

Test	All Labs (+/-)
Frequency Accuracy (%)	0.0007
Amplitude Accuracy (dB)	1.2
Conducted Power (dB)	1.2
Radiated Power via Substitution (dB)	0.7
Temperature (degrees C)	0.7
Humidity (% RH)	2.5
Voltage (AC) (%)	1
Voltage (DC) (%)	0.7
Near-field Measurement of E-Field (dB)	1.89
Near-field Measurement of H-Field (dB)	2.65

Field Strength Measurements (dB)

Range	MN09 (+/-)
09kHz-30MHz	1.8
30MHz-1GHz 3m	4.6
1GHz-6GHz	5.1
6GHz-40GHz	5.3

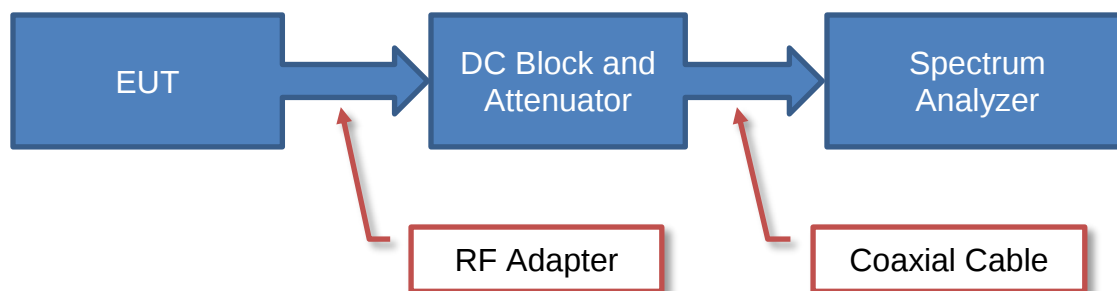
TEST SETUP BLOCK DIAGRAMS

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

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

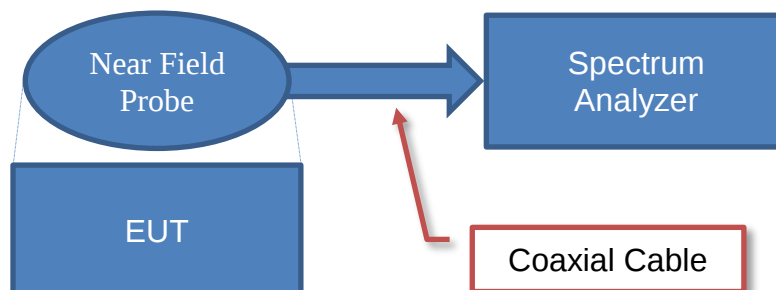
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

Near Field Test Fixture Measurements

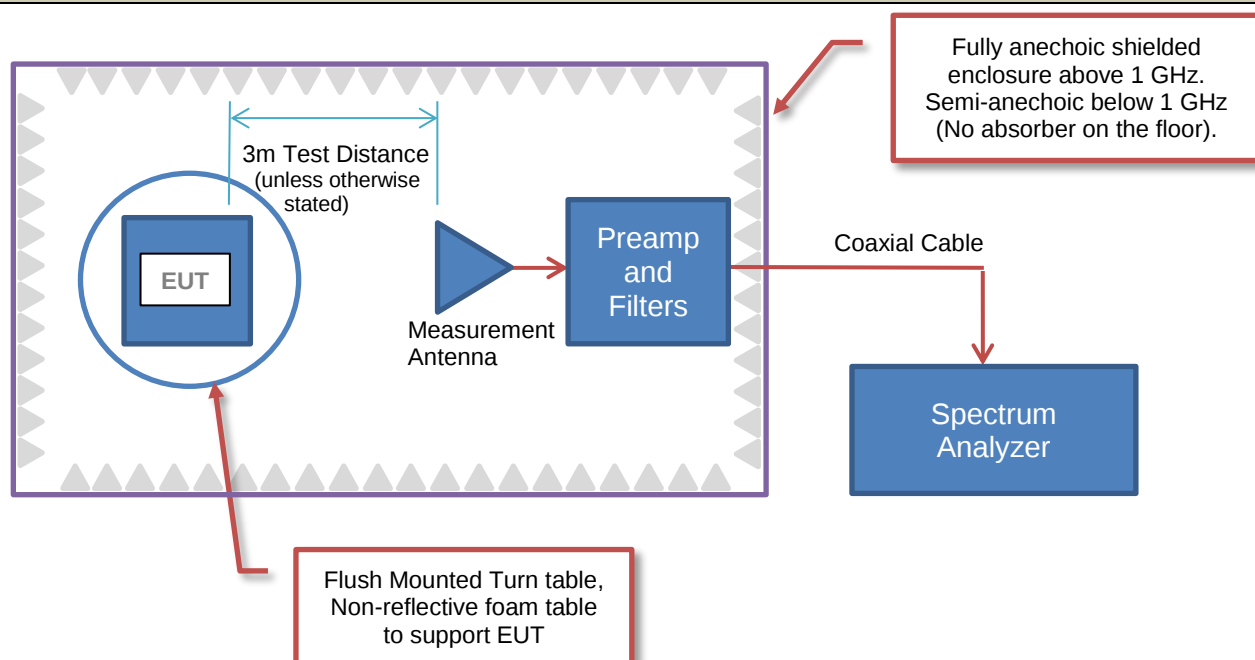


Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)	Factor			Distance Adjustment Factor	External Attenuation	Field Strength
	Antenna Factor	Cable Factor	Amplifier Gain			
42.6	28.6	3.1	40.8	0.0	0.0	33.5

Conducted Emissions:

Measured Level (Amplitude)	Factor		External Attenuation	Adjusted Level
	Transducer Factor	Cable Factor		
26.7	0.3	0.1	20.0	47.1

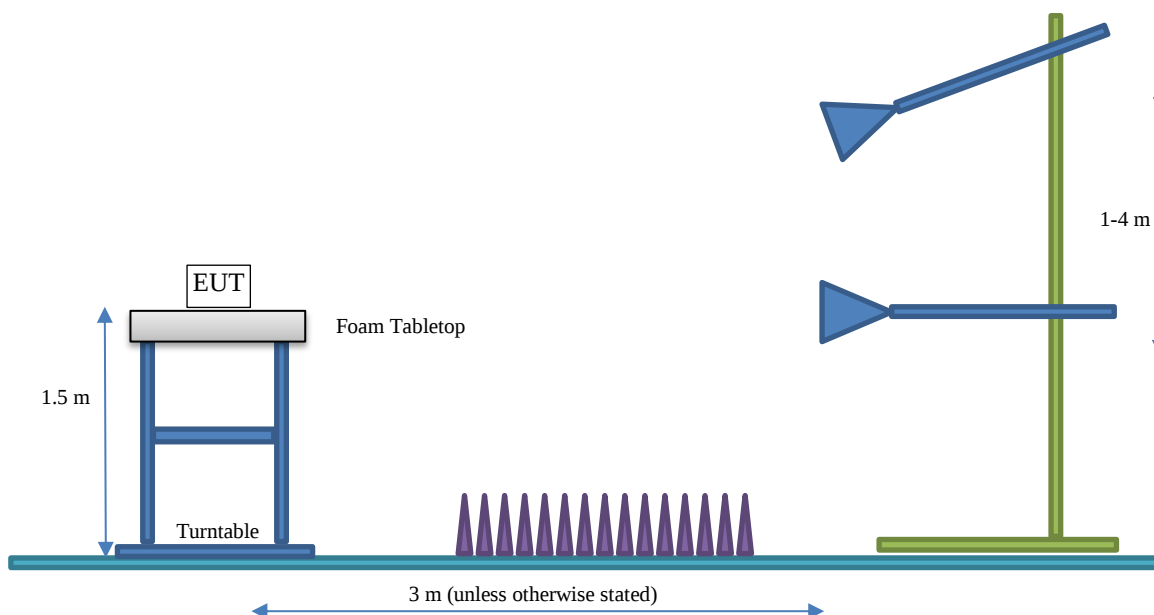
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)	Substitution Antenna Factor (dBi)	EIRP to ERP (if applicable)	Measured power (dBm ERP/EIRP)
10.0	6.0	2.15	13.9/16.0

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



PRODUCT DESCRIPTION

Client and Equipment under Test (EUT) Information

Company Name:	Medtronic, Inc.
Address:	710 Medtronic Parkway NE
City, State, Zip:	Minneapolis, MN 55432
Test Requested By:	Curt Pies
EUT:	HarmoniaBP DR MRI SureScan HTN3DR2
First Date of Test:	October 10, 2025
Last Date of Test:	May 07, 2026
Receipt Date of Samples:	October 10, 2025
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 HarmoniaBP system consists of Azure/Astra mechanical architecture with a single chamber and dual chamber MR conditional IPG with wireless communication. The IPG model included in the HarmoniaBP platform technology, spanning the Vitalis device family, is listed in Table 1. SR models are single chamber devices with one (1) IS-1 port in the connector header and DR models are dual chamber devices with two (2) IS-1 ports in the connector header. All models are equivalent from a mechanical perspective with the exception of the connector header and EMA assemblies which account for the different quantities of feedthroughs between SR and DR. All remaining differences between models are related to device features and labeling for different market geographies and have no impact to device/connector test performance. Device models below include two-way short range Inductive telemetry system and a longer-range Bluetooth Low Energy (BLE) two-way telemetry system.

Name
Confirma DR MRI SureScan
Effectra DR MRI SureScan
Refina CSP DR MRI SureScan
Restoria CSP DR MRI SureScan
ReSyncra CSP DR MRI SureScan
HarmoniaBP DR MRI SureScan
Confirma SR MRI SureScan
Effectra SR MRI SureScan
Refina CSP SR MRI SureScan
Restoria CSP SR MRI SureScan

PRODUCT DESCRIPTION

Testing Model Rationale:

The HarmoniaBP IPG hardware, with Azure/Astra production FW, will be used for this verification testing. Tests being done are not sensitive to connector type. The tests to be performed are not targeting the device to connector interface. DR was selected as it has the maximum number of components. The devices will be fully functional units. The final assembly processes will be production equivalent at SMO. For radio and EMC testing leads used do not impact test results. They are attached to simulate implantation.

There are no differences in hardware between HarmoniaBP and Azure/Astra, therefore the HarmoniaBP IPG hardware and the Azure/Astra IPG hardware are equivalent for the purposes of Radio and EMC testing. There are no impacts from HarmoniaBP FW updates on these tests because the EMC tests are external influences and radio functionality operates the same. The FW algorithms don't alter the analog or digital filtering characteristics of the input signal nor the signal processing/decision characteristics for Radio and EMC, therefore they have no impact on Radio and EMC performance. The HarmoniaBP devices will be configured as AzureTM XT DR MRI SureScan® (model W2DR01) with released 8.1 Azure/Astra (Orion) FW in order to use SmartSync and to execute production functional tests. For the internal device serial numbers, the first three characters will be changed from HTN (HarmoniaBP format) to RNF (Azure format), and the last character will be changed from S to T (to avoid possible confusion with previous Azure/Astra device builds); and the sub-model will be changed from 05 to 07. The baseline conducted antenna output boards will be the exception to this since baseline samples do not go through the functional testing due to internal modifications and battery disconnection.

Testing Objective:

To demonstrate compliance of the Bluetooth radio to FCC 15.247 and RSS-247 requirements per test plan: Bolt Radio and EMC Compliance Design Verification Plan D01481151 Revision B.

Model Equivalency Statement:

Element Materials Technology tested the models as shown in the datasheets contained within this report. Element Materials Technology does not make any claims of compliance for models not tested.

MEDTRONIC INC. STATEMENT OF SIMILARITY

The products identified have the same RF relevant hardware, software and firmware, with the difference that various therapy features are enabled based on the model.

The SR (single chamber) devices differ from the DR (dual chamber devices) in the header that is connected. SR devices have a connector for a single lead, whereas DR devices have a connector for two leads. This results in two extra connections (feedthroughs) to the PCB.

All models listed above contain a BLE module. Therefore, all models have an additional niobium pin (BLE antenna) located in the headers and connecting to the PCB.

Table 1 – Antenna Information

Device Description	Model Number	Inductive Antenna	BLE Antenna
Confirma DR MRI SureScan	BRD1DR1	Inductive antenna is located within the titanium enclosure and not header. No inductive antenna location variation between models.	Both dual and single header devices use the same BLE antenna.
Effectra DR MRI SureScan	BRD1DR2		
Refina CSP DR MRI SureScan	BRD2DR1		
Restoria CSP DR MRI SureScan	BRD2DR2		
ReSyncra CSP DR MRI SureScan	BRD3DR2		
HarmoniaBP DR MRI SureScan	HTN3DR2		
Confirma SR MRI SureScan	BRD1SR1		
Effectra SR MRI SureScan	BRD1SR2		
Refina CSP SR MRI SureScan	BRD2SR1		
Restoria CSP SR MRI SureScan	BRD2SR2		

MEDTRONIC INC. STATEMENT OF SIMILARITY

Table 2 – Electrical/Mechanical Information

Device Description	Model Number	Electrical	Mechanical
Confirma DR MRI SureScan	BRD1DR1	All device variants contain the same main board (hybrid). Various therapy features are enabled based on model.	Dual Lead Header
Effectra DR MRI SureScan	BRD1DR2		Dual Lead Header
Refina CSP DR MRI SureScan	BRD2DR1		Dual Lead Header
Restoria CSP DR MRI SureScan	BRD2DR2		Dual Lead Header
ReSyncra CSP DR MRI SureScan	BRD3DR2		Dual Lead Header
HarmoniaBP DR MRI SureScan	HTN3DR2		Dual Lead Header
Confirma SR MRI SureScan	BRD1SR1		Single Lead Header
Effectra SR MRI SureScan	BRD1SR2		Single Lead Header
Refina CSP SR MRI SureScan	BRD2SR1		Single Lead Header
Restoria CSP SR MRI SureScan	BRD2SR2		Single Lead Header

POWER SETTINGS AND ANTENNAS



The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Type	Provided by:	Frequency Range (MHz)	Gain (dBi)
Monopole	Medtronic, Inc	2400-2483.5	0.33

The EUT was tested using the power settings provided by the manufacturer which were based upon:

- ☒ Test software settings
- ☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Modulation Types / Data Rates	Type	Channel	Position	Frequency (MHz)	Power Setting (dBm)
BLE 1 Mbps	DTS	37	Low Channel	2402	0
		18	Mid Channel	2442	0
		39	High Channel	2480	0

CONFIGURATIONS



Configuration MDTR1212-5

Software/Firmware Running During Test	
Description	Version
Azure/Astra Firmware	Baseline 8.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
HarmoniaBP DR MRI SureScan	Medtronic, Inc	HTN3DR2	RNF600053T

Configuration MDTR1212-6

Software/Firmware Running During Test	
Description	Version
Azure/Astra Firmware	Baseline 8.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
HarmoniaBP DR MRI SureScan	Medtronic, Inc	HTN3DR2	RTA600003S

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
IMB Board	Medtronic, Inc	FDA00254 ver 1.0.0	N/A

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Leads	No	1.8 m	No	Harmonia BP Dev Board	DC Mains (TQK)

Configuration MDTR1264-1

Software/Firmware Running During Test	
Description	Version
Confirma Firmware	Baseline 2.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Confirma SR MRI SureScan	Medtronic, Inc	BRD1SR1	RWG600012S

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2025-10-10	Spurious Radiated Emissions	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	2025-10-13	DTS Bandwidth (6 dB)	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	2025-10-13	Equivalent Isotropic Radiated Power	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	2025-10-13	Occupied Bandwidth (99%)	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	2025-10-13	Output Power	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	2025-10-13	Radiated Spurious Emissions / Restricted Band Edge	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2025-10-13	Power Spectral Density	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2025-10-13	Spurious Conducted Emissions	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
9	2025-10-13	Band Edge Compliance	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
10	2026-05-07	Radiated Spurious Emissions / Restricted Band Edge Spot Check	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

DUTY CYCLE



TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

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

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

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

DTS BANDWIDTH (6 dB)

TEST DESCRIPTION

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 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 DTS bandwidth was measured using the following analyzer settings:

Detector: Peak

Sweep time: Auto

Resolution Bandwidth: 1% to 5% of the OBW but not less than 100 kHz

Video Bandwidth: $\geq 3 * RBW$

Trace: Max Hold

Span: Large enough to capture all products of the modulation process, including the emission skirts.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

DTS BANDWIDTH (6 dB)

EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.3°C
Attendees:	Curt Pies	Relative Humidity:	40.9%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

Reference level offset includes measurement cable, attenuator, DC block, and loss from the development board which the client stated as 3.1dB. After testing was completed, the dev board loss was revised to 2.9 dB, which does not affect this frequency measurement.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

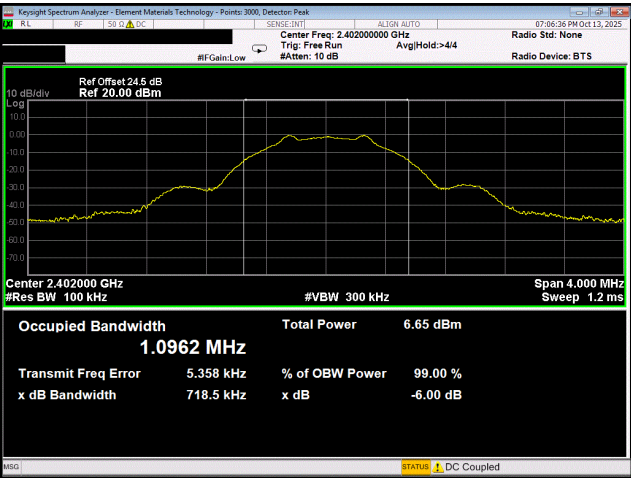


Tested By

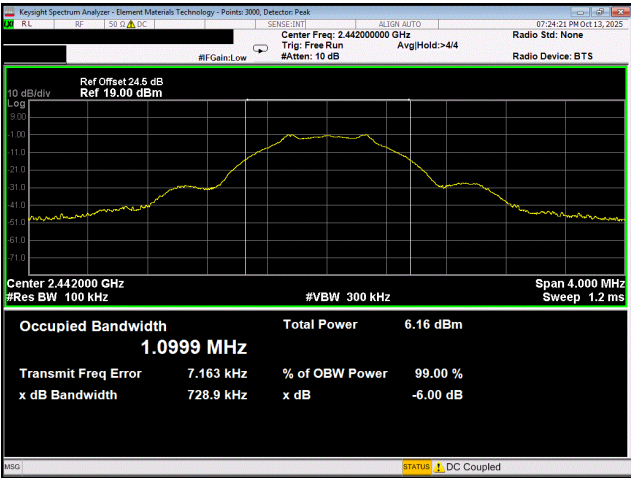
TEST RESULTS

		Value	Limit (≥)	Result
BLE/GFSK 1 Mbps				
	Low Channel, 2402 MHz	718.5 kHz	500 kHz	Pass
	Mid Channel, 2442 MHz	728.9 kHz	500 kHz	Pass
	High Channel, 2480 MHz	712.7 kHz	500 kHz	Pass

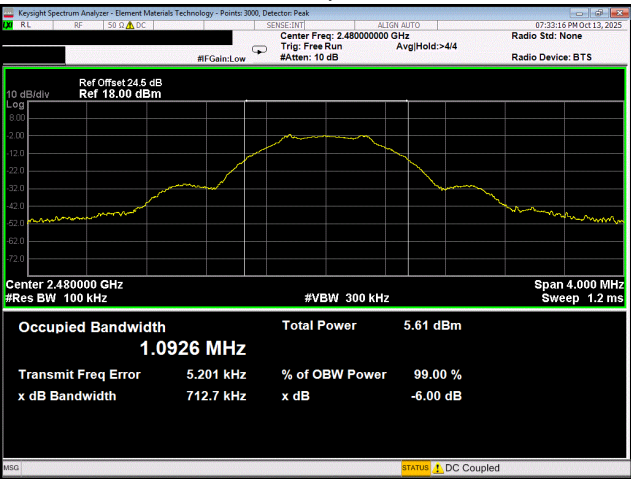
DTS BANDWIDTH (6 dB)



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz

OCCUPIED BANDWIDTH (99%)

TEST DESCRIPTION

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 measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The 99% occupied bandwidth was measured with the EUT configured for continuous modulated operation.

Per ANSI C63.10:2020, 6.9.3, the spectrum analyzer was configured as follows:

Sweep time: Auto

Resolution Bandwidth: 1% to 5% of the OBW

Video Bandwidth: $\geq 3 * RBW$

Trace: Max Hold

Span: Large enough to capture all products of the modulation process, including the emission skirts.

A sample detector was used unless the device was not able to be operated in a continuous transmit mode, in which case a peak detector was used.

The spectrum analyzer occupied bandwidth measurement function was used to sum the power of the transmission in linear terms to obtain the 99% bandwidth.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

OCCUPIED BANDWIDTH (99%)

EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.3°C
Attendees:	Curt Pies	Relative Humidity:	40.8%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

Reference level offset includes measurement cable, attenuator, DC block, and loss from the development board which the client stated as 3.1dB. After testing was completed, the dev board loss was revised to 2.9 dB, which does not affect this frequency measurement.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

N/A

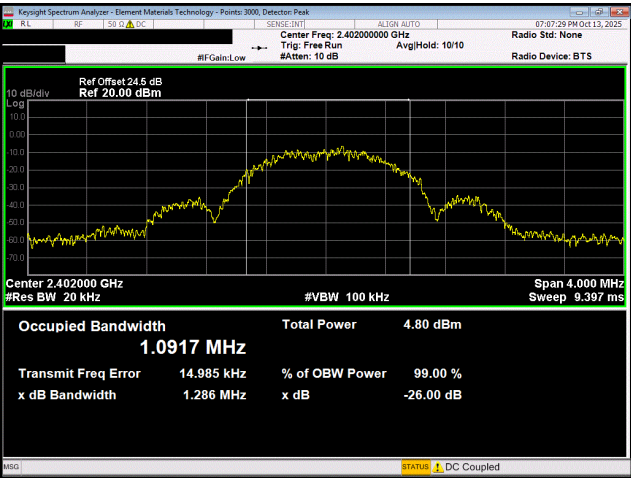


Tested By

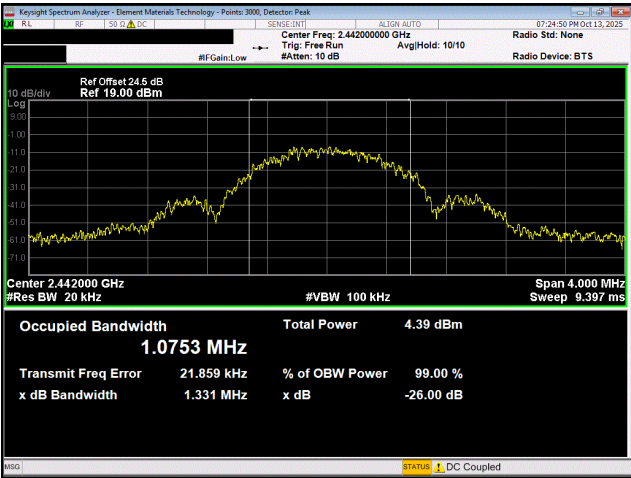
TEST RESULTS

		Value	Limit	Result
BLE/GFSK 1 Mbps				
	Low Channel, 2402 MHz	1.092 MHz	N/A	N/A
	Mid Channel, 2442 MHz	1.075 MHz	N/A	N/A
	High Channel, 2480 MHz	1.072 MHz	N/A	N/A

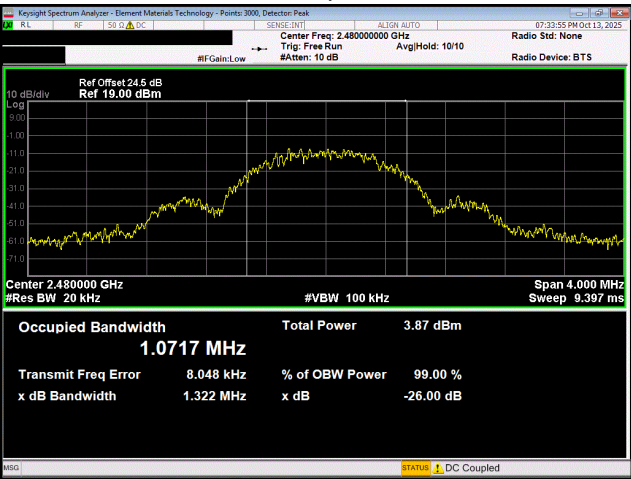
OCCUPIED BANDWIDTH (99%)



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz

OUTPUT POWER

TEST DESCRIPTION

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 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) was measured.

The method found in ANSI C63.10:2020 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

Analyzer settings:

Detector: Peak
Sweep time: Auto
Resolution Bandwidth: $\geq$ DTS bandwidth
Video Bandwidth: $\geq 3 * \text{RBW}$
Trace: Max Hold

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

OUTPUT POWER

EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.4°C
Attendees:	Curt Pies	Relative Humidity:	40.2%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

Reference level offset includes measurement cable, attenuator, DC block, and loss from the development board which the client stated as 3.1dB. After testing was completed, the dev board loss was revised to 2.9 dB, and a correction factor of 0.2dB was subtracted from the measurement to account for the difference.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

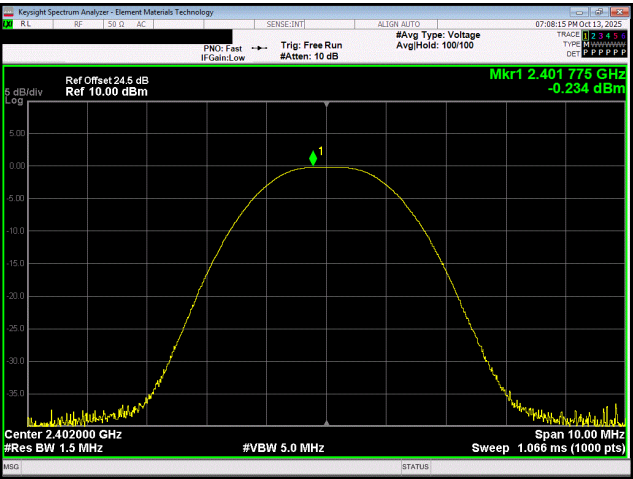


Tested By

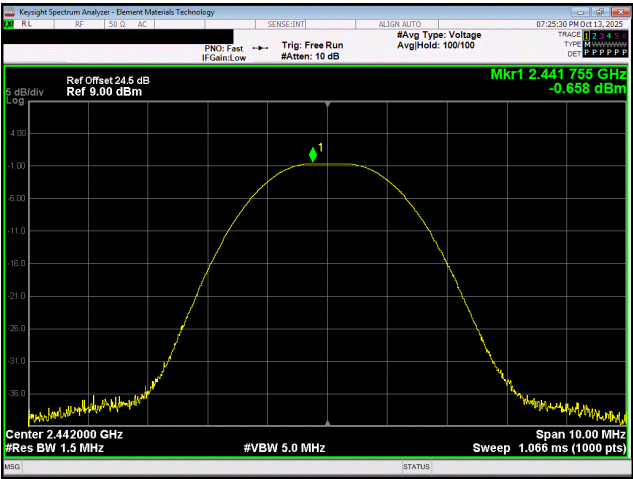
TEST RESULTS

	Out Pwr (dBm)	Correction Factor (dB)	Corrected Out Pwr (dBm)	Limit (dBm)	Result
BLE/GFSK 1 Mbps					
Low Channel, 2402 MHz	-0.234	-0.2	-0.434	30	Pass
Mid Channel, 2442 MHz	-0.658	-0.2	-0.858	30	Pass
High Channel, 2480 MHz	-1.094	-0.2	-1.294	30	Pass

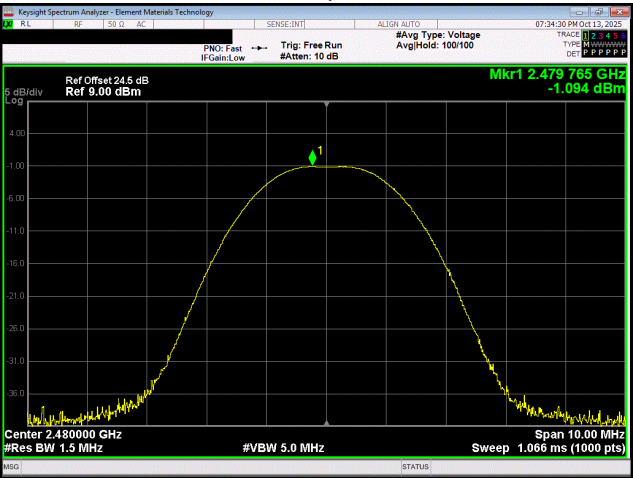
OUTPUT POWER



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TEST DESCRIPTION

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 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) was measured.

The method found in ANSI C63.10:2020 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

Equivalent Isotropic Radiated Power (EIRP) = Max Measured Power + Antenna gain (dBi)

Analyzer settings:

Detector: Peak
Sweep time: Auto
Resolution Bandwidth: $\geq$ DTS bandwidth
Video Bandwidth: $\geq 3 * \text{RBW}$
Trace: Max Hold

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.2°C
Attendees:	Curt Pies	Relative Humidity:	40.8%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

TEST RESULTS

	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
BLE/GFSK 1 Mbps					
Low Channel, 2402 MHz	-0.434	0.33	-0.104	36	Pass
Mid Channel, 2442 MHz	-0.858	0.33	-0.528	36	Pass
High Channel, 2480 MHz	-1.294	0.33	-0.964	36	Pass

POWER SPECTRAL DENSITY

TEST DESCRIPTION

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 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

POWER SPECTRAL DENSITY

EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.6°C
Attendees:	Curt Pies	Relative Humidity:	40.5%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

Reference level offset includes measurement cable, attenuator, DC block, and loss from the development board which the client stated as 3.1dB. After testing was completed, the dev board loss was revised to 2.9 dB, and a correction factor of 0.2dB was subtracted from the measurement to account for the difference.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

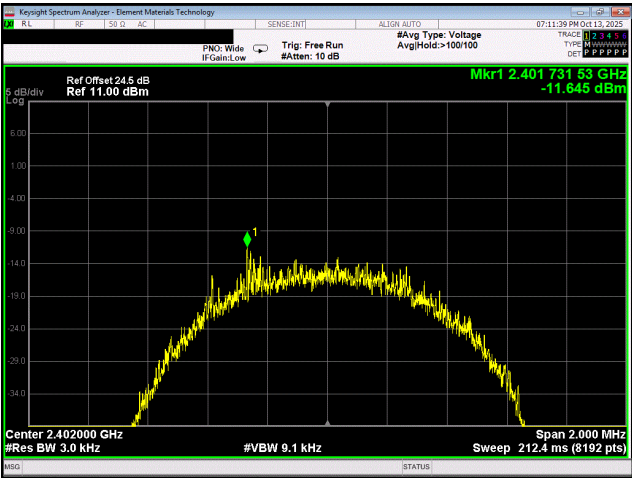


Tested By

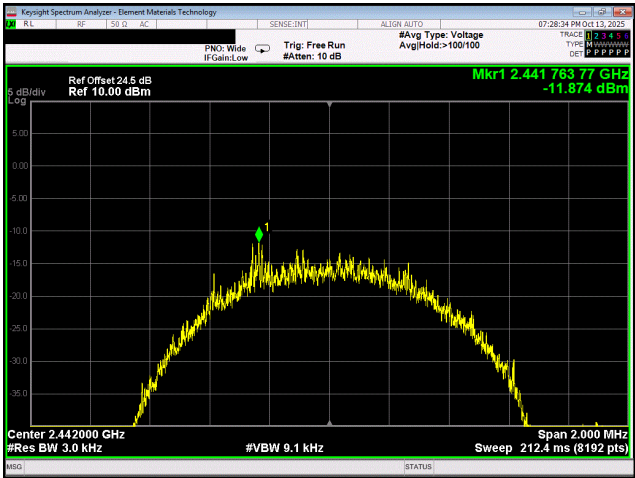
TEST RESULTS

	Value (dBm/3kHz)	Correction Factor (dB)	Corrected Value (dBm/3kHz)	Limit ≤ (dBm/3kHz)	Results
BLE/GFSK 1 Mbps					
Low Channel, 2402 MHz	-11.645	-0.2	-11.845	8	Pass
Mid Channel, 2442 MHz	-11.874	-0.2	-12.074	8	Pass
High Channel, 2480 MHz	-11.776	-0.2	-11.976	8	Pass

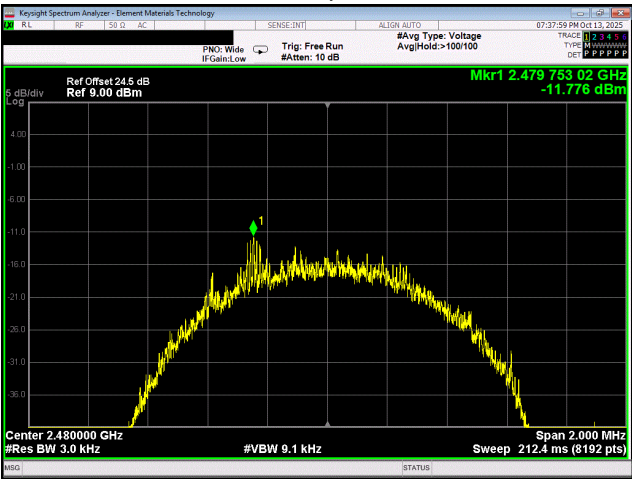
POWER SPECTRAL DENSITY



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz

BAND EDGE COMPLIANCE

TEST DESCRIPTION

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 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. The analyzer screen captures for this test show an example of the emission mask for the test mode also used during the radiated spurious emissions at the restricted band edges test.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

BAND EDGE COMPLIANCE

EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.5°C
Attendees:	Curt Pies	Relative Humidity:	40.7%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

Reference level offset includes measurement cable, attenuator, DC block, and loss from the development board which the client stated as 3.1dB. After testing was completed, the dev board loss was revised to 2.9 dB, however this does not affect the dBc value.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

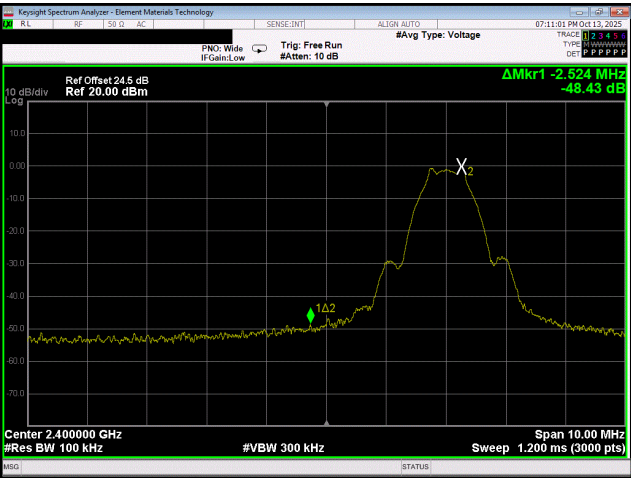


Tested By

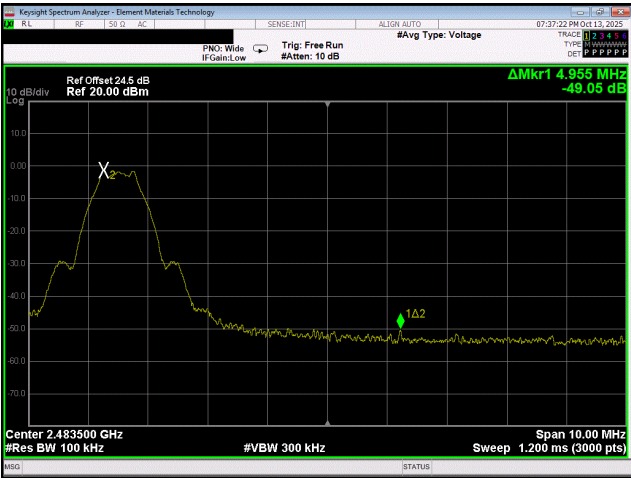
TEST RESULTS

	Value (dBc)	Limit ≤ (dBc)	Result
BLE/GFSK 1 Mbps			
Low Channel, 2402 MHz	-48.43	-20	Pass
High Channel, 2480 MHz	-49.05	-20	Pass

BAND EDGE COMPLIANCE



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz

SPURIOUS CONDUCTED EMISSIONS

TEST DESCRIPTION

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 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 fundamental was measured with a 100 kHz resolution bandwidth and the highest value was recorded. The rest of the spectrum was then measured with a 100 kHz resolution bandwidth and the highest value was found. The difference between the value found on the fundamental and the rest of the spectrum was compared against the limit to determine compliance.

The reference level offset for the fundamental screen capture was based on a measured value of the loss between the spectrum analyzer and the EUT which was verified at the time of test. The remaining screen capture(s) use an internal transducer factor on the analyzer to correct the displayed trace based on the cable loss over frequency. The reference level offset for the additional screen capture(s) is then based on the expected attenuator value and any other losses.

Fundamental Offset = Ref Lvl Offset showing measured composite factor of all losses

Remaining Screen capture(s) Offset = "Internal" cable loss factor not shown on screen capture + Ref Lvl Offset showing expected attenuator value and any other losses

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2025-06-09	2026-06-09
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2025-09-03	2026-09-03
Block - DC	Fairview Microwave	SD3379	ANK	2025-06-03	2026-06-03
Attenuator	S.M. Electronics	SA26B-20	RFW	2025-02-03	2026-02-03
Meter - Multimeter	Fluke	115	MBE	2025-02-26	2026-02-26
Power Supply - DC	EZ Digital Co., Ltd.	GP-4030D	TQK	NCR	NCR

SPURIOUS CONDUCTED EMISSIONS



EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RTA600003S	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.5°C
Attendees:	Curt Pies	Relative Humidity:	40.8%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.25VDC	Configuration:	MDTR1212-6

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

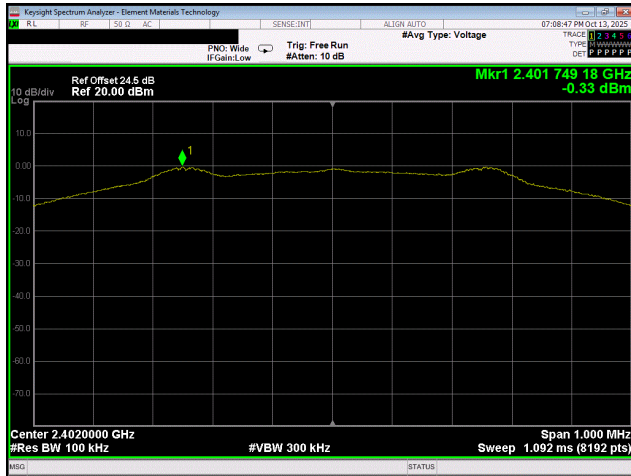
Pass

Tested By

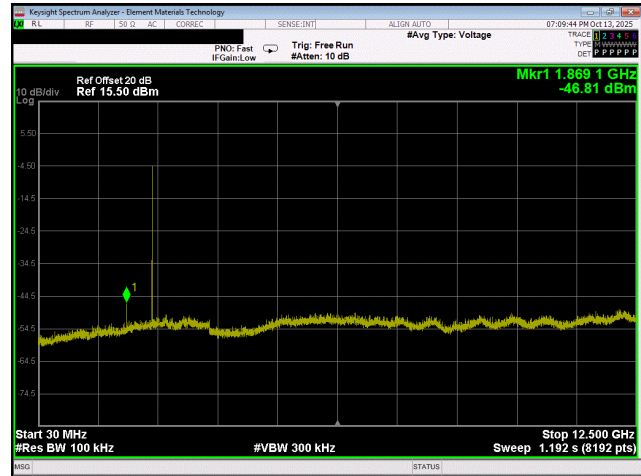
TEST RESULTS

		Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
BLE/GFSK 1 Mbps						
Low Channel, 2402 MHz	Fundamental		2401.75	N/A	N/A	N/A
	30 MHz - 12.5 GHz		1869.06	-46.48	-20	Pass
	12.5 GHz - 25 GHz		24980.16	-36.88	-20	Pass
Mid Channel, 2442 MHz	Fundamental		2442.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz		12273.16	-47.55	-20	Pass
	12.5 GHz - 25 GHz		24920.64	-36.06	-20	Pass
High Channel, 2480 MHz	Fundamental		2479.76	N/A	N/A	N/A
	30 MHz - 12.5 GHz		12203.13	-47.24	-20	Pass
	12.5 GHz - 25 GHz		24966.43	-35.3	-20	Pass

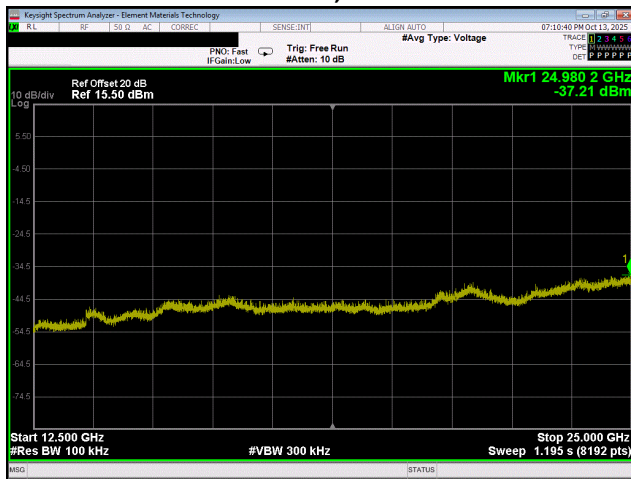
SPURIOUS CONDUCTED EMISSIONS



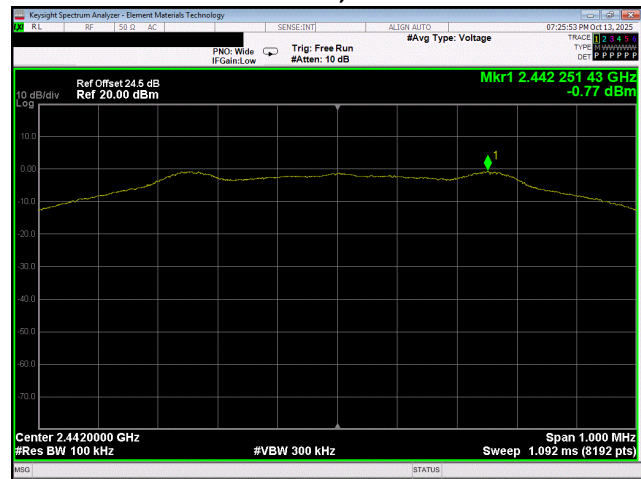
BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



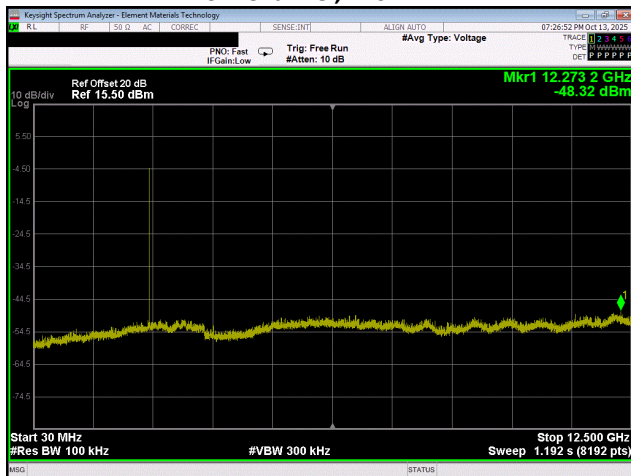
BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



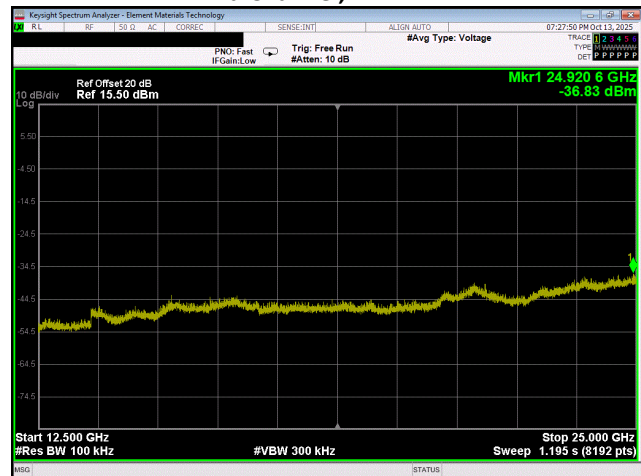
BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz

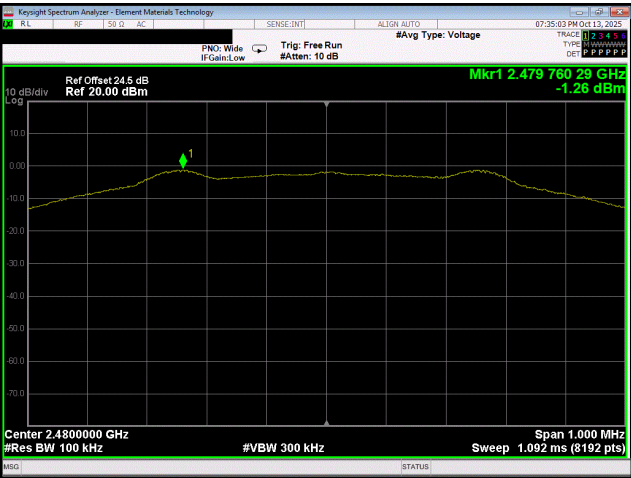


BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz

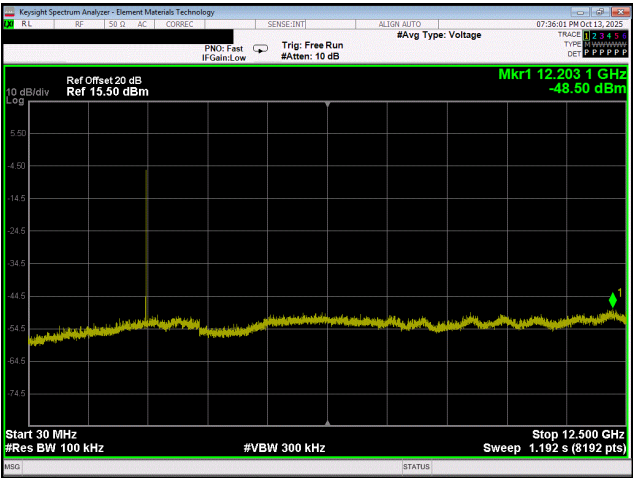


BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz

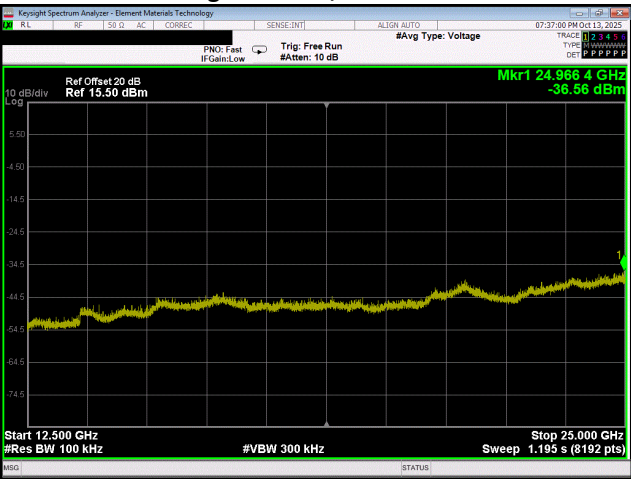
SPURIOUS CONDUCTED EMISSIONS



BLE/GFSK 1 Mbps
High Channel, 2480 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz

RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE



TEST DESCRIPTION

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 measurement was made in a radiated configuration of the fundamental with the carrier fully maximized for its highest radiated power.

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

The emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and attenuation were used (if needed) for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

PK = Peak Detector
AV = RMS Detector

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2025-09-29	2026-09-29
Antenna - Double Ridge	ETS Lindgren	3115	AJQ	2025-02-05	2027-02-05
Cable	Element	Double Ridge Guide Horn Cables	MNV	2025-09-11	2026-09-11
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	2025-02-01	2026-02-01
Attenuator	Coaxicom	3910-20	AXY	2025-09-11	2026-09-11

RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE



EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RNF6000053T	Date:	2025-10-13
Customer:	Medtronic, Inc.	Temperature:	22.2°C
Attendees:	Curt Pies	Relative Humidity:	42.5%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN09
Power:	3.25VDC	Configuration:	MDTR1212-5

COMMENTS

Open air measurement. Test mode was 100% duty cycle.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

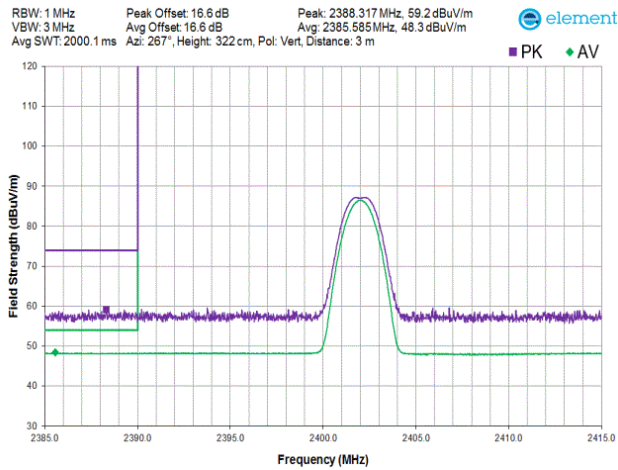
Pass

Tested By

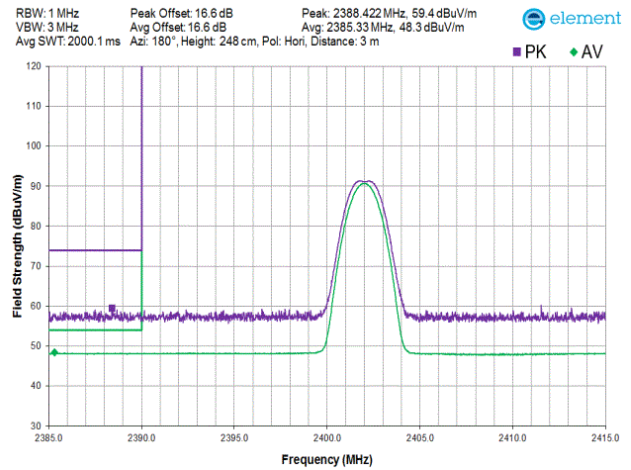
TEST RESULTS

	Frequency (MHz)	PK (dBuV/m) AV (dBuV/m)	PK Lim (dBuV/m) AV Lim (dBuV/m)	Worst Margin (dB)	Pol. (H/V)	EUT Orientation	Results
BLE/GFSK 1 Mbps							
Low Channel, 2402 MHz	2388.317	59.2	74.0	-5.7	V	Vertical	Pass
	2385.585	48.3	54.0		H	Vertical	Pass
	2388.422	59.4	74.0				
High Channel, 2480 MHz	2385.330	48.3	54.0	-5.4	H	Vertical	Pass
	2488.255	60.4	74.0		H	Vertical	Pass
	2483.878	48.6	54.0				
	2483.853	59.7	74.0	-5.6	V	Vertical	Pass
	2483.553	48.4	54.0		V	on Side	Pass
	2486.574	59.7	74.0				
	2483.533	48.4	54.0	-5.8	V	on Side	Pass
	2483.953	60.2	74.0		H	on Side	Pass
	2483.878	48.2	54.0				
	2488.145	59.8	74.0	-5.7	H	Horizontal	Pass
	2483.543	48.3	54.0		V	Horizontal	Pass
	2488.110	59.6	74.0				
	2484.298	48.4	54.0	-5.6	V	Horizontal	Pass

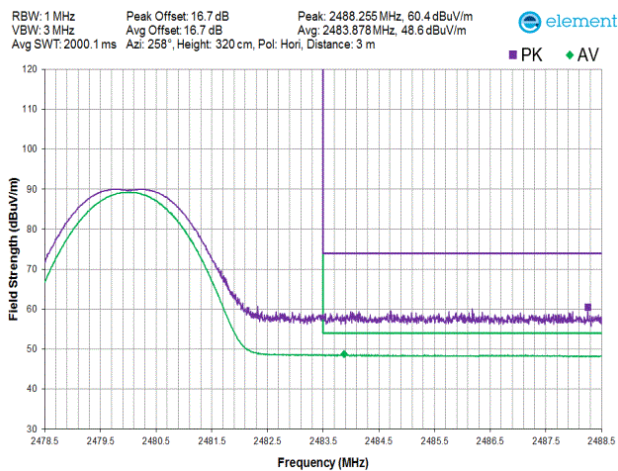
RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE



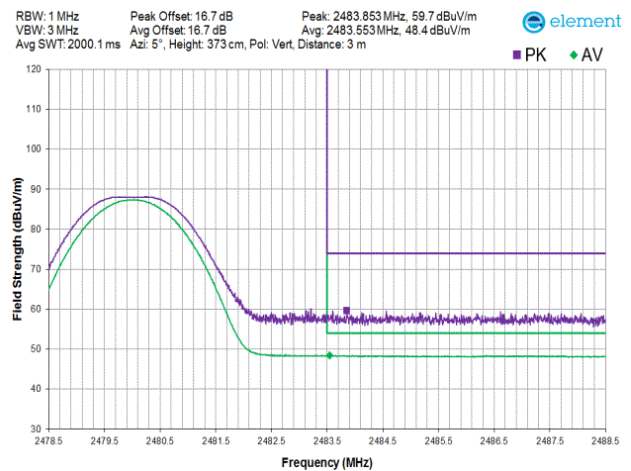
**BLE/GFSK 1 Mbps
Low Channel, 2402 MHz**



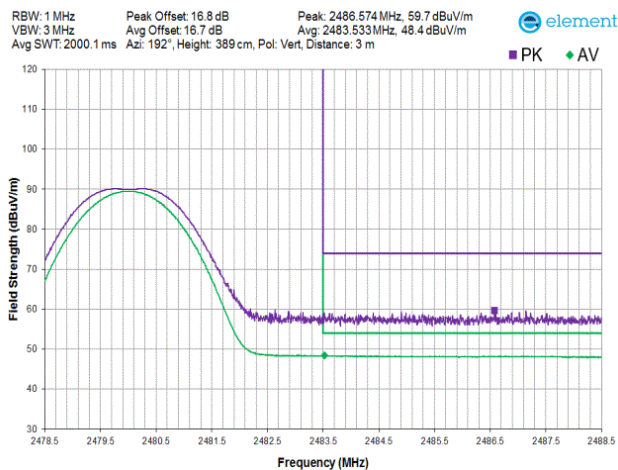
**BLE/GFSK 1 Mbps
Low Channel, 2402 MHz**



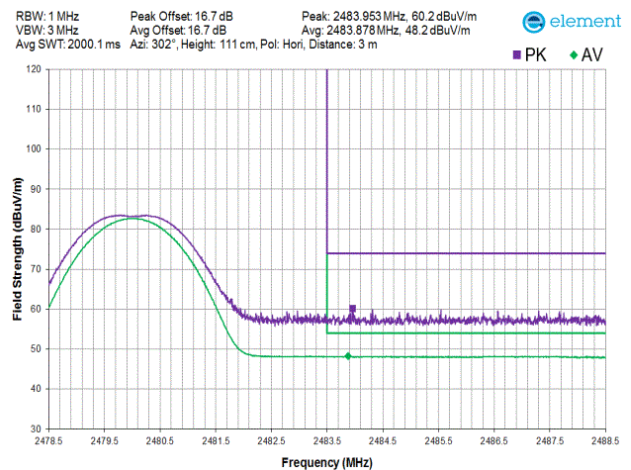
**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**

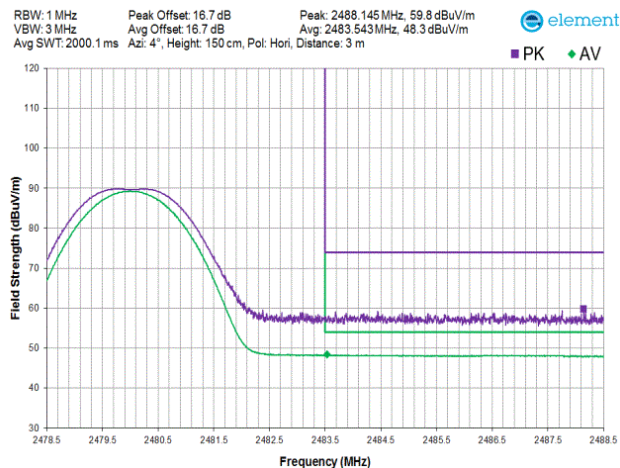


**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**

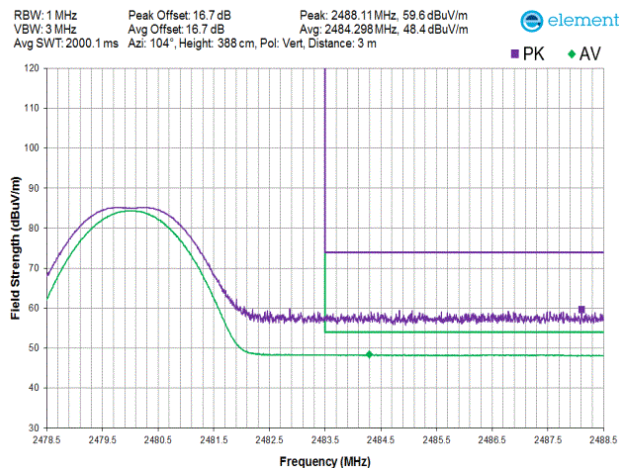


**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**

RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE



**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**

RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE – SPOT CHECK



TEST DESCRIPTION

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 measurement was made in a radiated configuration of the fundamental with the carrier fully maximized for its highest radiated power.

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

The emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and attenuation were used (if needed) for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

PK = Peak Detector
AV = RMS Detector

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	ETS Lindgren	3115	AIP	2024-08-02	2026-08-02
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2025-09-05	2026-09-05
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2026-01-07	2027-01-07
Attenuator	Fairview Microwave	SA18H-20	VAF	2025-09-03	2026-09-03
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2025-09-29	2026-09-29

RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE – SPOT CHECK



EUT:	Confirma SR MRI SureScan	Work Order:	MDTR1264
Serial Number:	RWG600012S	Date:	2026-05-07
Customer:	Medtronic, Inc.	Temperature:	22.3°C
Attendees:	Curt Pies	Relative Humidity:	24.8%
Customer Project:	None	Bar. Pressure (PMSL):	1012 mbar
Tested By:	Marcelo Aguayo	Job Site:	MN05
Power:	3.25VDC	Configuration:	MDTR1264-1

COMMENTS

Spot checking the 2nd mechanical variant (Single Lead Header) of the product family as described in Medtronic Inc. Statement of Similarity, Table 2 located in the Product Description section of this test report.

Measurement limited to worst case channel identified from product family variant HarmoniaBP DR MRI SureScan HTN3DR2

Test mode 100% duty cycle, tested in open air.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

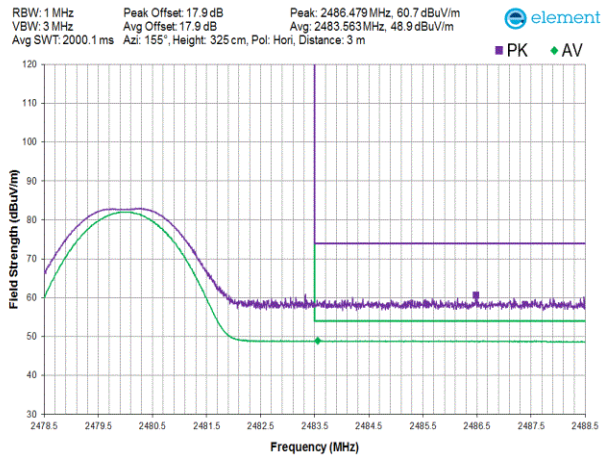
Pass

Tested By

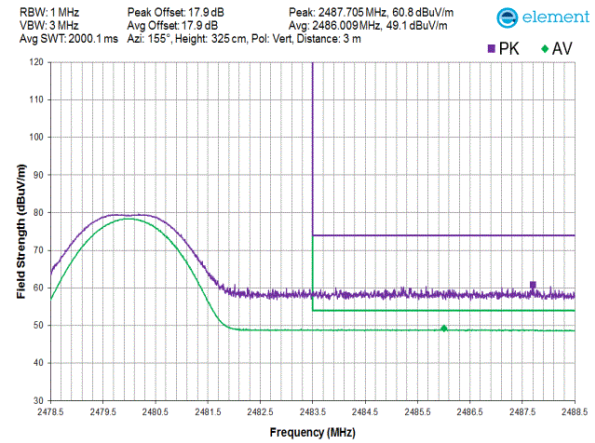
TEST RESULTS

	Frequency (MHz)	PK (dBuV/m) AV (dBuV/m)	PK Lim (dBuV/m) AV Lim (dBuV/m)	Worst Margin (dB)	Pol. (H/V)	EUT Orientation	Results
BLE/GFSK 1 Mbps							
High Channel, 2480 MHz	2486.479	60.7	74.0	-5.1	H	Vertical	Pass
	2483.563	48.9	54.0				
	2487.705	60.8	74.0	-4.9	V	Vertical	Pass
	2486.009	49.1	54.0				
	2484.308	60.1	74.0	-5.0	H	on Side	Pass
	2484.778	49.0	54.0				
	2485.238	60.1	74.0	-5.1	V	on Side	Pass
	2483.653	48.9	54.0				
	2484.728	60.4	74.0	-5.1	H	Horizontal	Pass
	2483.528	48.9	54.0				
	2484.143	60.9	74.0	-5.1	V	Horizontal	Pass
	2484.003	48.9	54.0				

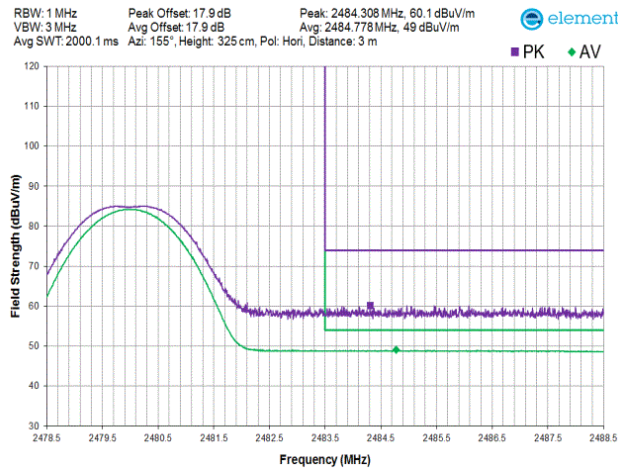
RADIATED SPURIOUS EMISSIONS RESTRICTED BAND EDGE – SPOT CHECK



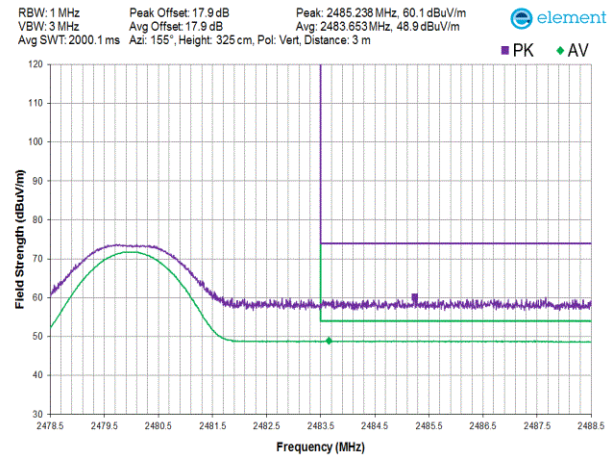
**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



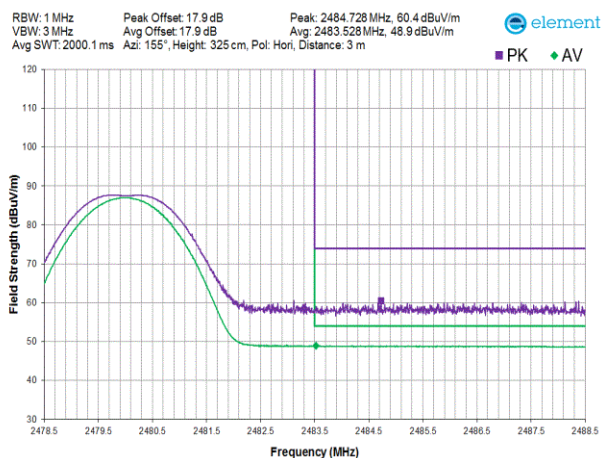
**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



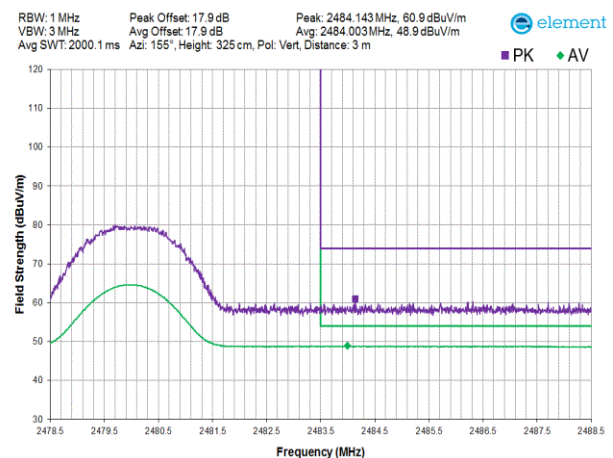
**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**



**BLE/GFSK 1 Mbps
High Channel, 2480 MHz**

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. A reference preview scan (pre-scan) is included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Biconilog	Teseq	CBL 6141B	AYD	2024-03-18	2026-03-18
Cable	Element	Biconilog Cable	MNX	2025-09-11	2026-09-11
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079 and SA18E-10	AOO	2025-01-30	2026-01-30
Filter - Low Pass	Micro-Tronics	LPM50004	HGG	2025-09-11	2026-09-11
Antenna - Double Ridge	ETS Lindgren	3115	AJQ	2025-02-05	2027-02-05
Cable	Element	Double Ridge Guide Horn Cables	MNV	2025-09-11	2026-09-11
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	2025-02-01	2026-02-01
Attenuator	Coaxicom	3910-20	AXY	2025-09-11	2026-09-11
Filter - High Pass	Micro-Tronics	HPM50111	HFM	2025-09-11	2026-09-11
Antenna - Standard Gain	ETS-Lindgren	3160-07	AJJ	2025-02-04	2026-02-04
Cable	Element	Standard Gain Cable	MNW	2025-09-11	2026-09-11
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2025-02-01	2026-02-01
Antenna - Standard Gain	ETS-Lindgren	3160-08	AJP	2025-02-04	2026-02-04
Amplifier - Pre-Amplifier	L-3 Narda-Miteq	AMF-6F-12001800-30-10P	PAP	2025-02-01	2026-02-01
Antenna - Loop	ETS Lindgren	6502	AOB	2025-06-17	2027-06-17
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	2025-02-04	2026-02-04
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNP	2025-09-04	2026-09-04
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2025-09-04	2026-09-04
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2025-09-29	2026-09-29

SPURIOUS RADIATED EMISSIONS

FREQUENCY RANGE INVESTIGATED

9 kHz TO 26500 MHz

POWER INVESTIGATED

3.25VDC

CONFIGURATIONS INVESTIGATED

MDTR1212-5

MODES INVESTIGATED

BLE transmitting Low, Mid, and High Chs (2402, 2442, and 2480 MHz), 1 Mbps

SPURIOUS RADIATED EMISSIONS

EUT:	HarmoniaBP DR MRI SureScan HTN3DR2	Work Order:	MDTR1212
Serial Number:	RNF6000053T	Date:	2025-10-10
Customer:	Medtronic, Inc.	Temperature:	22.5°C
Attendees:	Curt Pies	Relative Humidity:	41.2%
Customer Project:	None	Bar. Pressure (PMSL):	1019 mb
Tested By:	Christopher Heintzelman	Job Site:	MN09
Power:	3.25VDC	Configuration:	MDTR1212-5

TEST PARAMETERS

Run #:	39	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

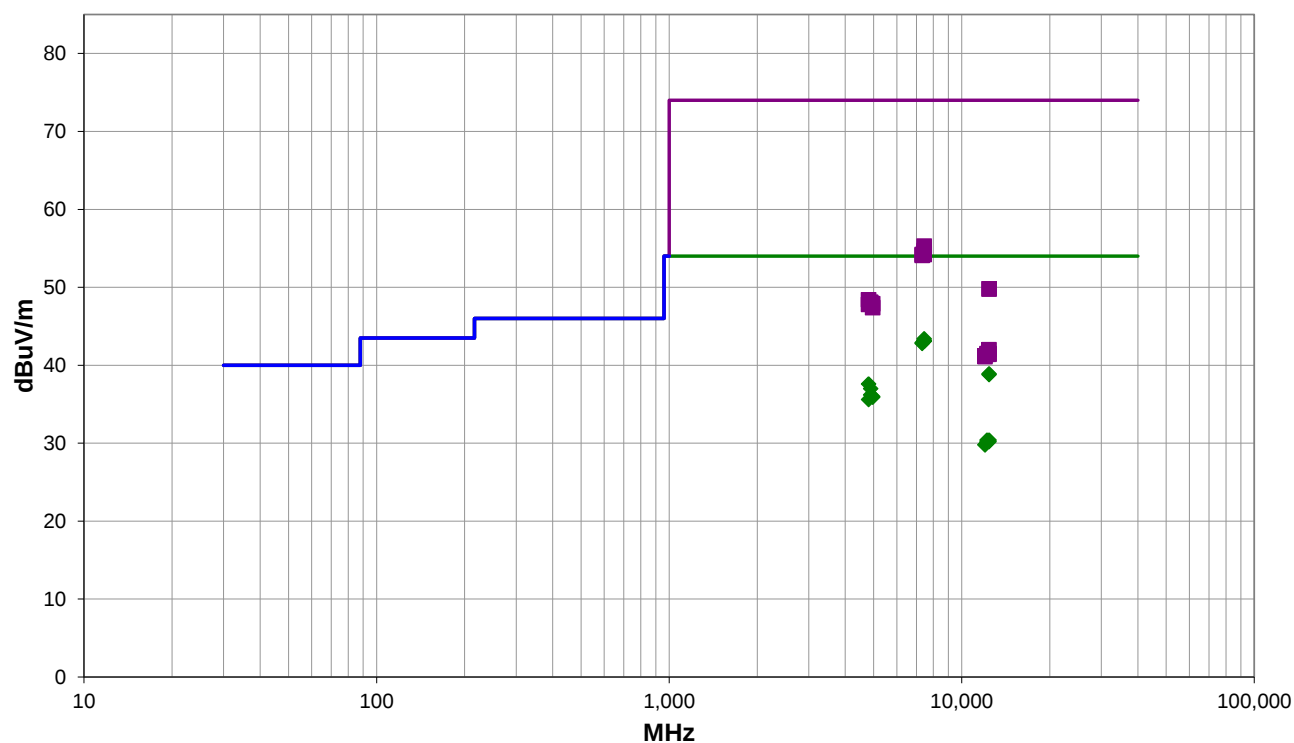
Open air measurement. Test mode is 100% duty cycle.

EUT OPERATING MODES

BLE transmitting Low, Mid, and High Chs (2402, 2442, and 2480 MHz), 1 Mbps

DEVIATIONS FROM TEST STANDARD

None



Run #: 39

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #39

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	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
7439.858	28.9	14.5	1.5	195.0	3.0	0.0	Horz	AV	0.0	43.4	54.0	-10.6	EUT Horz, High Ch, 1 Mbps
7442.350	28.7	14.5	1.5	89.0	3.0	0.0	Vert	AV	0.0	43.2	54.0	-10.8	EUT Horz, High Ch, 1 Mbps
7440.642	28.6	14.5	1.5	211.0	3.0	0.0	Horz	AV	0.0	43.1	54.0	-10.9	EUT Vert, High Ch, 1 Mbps
7440.700	28.6	14.5	1.5	274.0	3.0	0.0	Vert	AV	0.0	43.1	54.0	-10.9	EUT Vert, High Ch, 1 Mbps
7441.200	28.6	14.5	1.5	128.0	3.0	0.0	Horz	AV	0.0	43.1	54.0	-10.9	EUT On Side, High Ch, 1 Mbps
7440.508	28.6	14.5	3.2	141.0	3.0	0.0	Vert	AV	0.0	43.1	54.0	-10.9	EUT On Side, High Ch, 1 Mbps
7326.267	29.2	13.7	1.5	102.0	3.0	0.0	Horz	AV	0.0	42.9	54.0	-11.1	EUT Horz, Mid Ch, 1 Mbps
7323.867	29.1	13.7	1.5	95.0	3.0	0.0	Vert	AV	0.0	42.8	54.0	-11.2	EUT Horz, Mid Ch, 1 Mbps
12400.450	25.4	13.5	3.0	273.0	3.0	0.0	Horz	AV	0.0	38.9	54.0	-15.1	EUT Horz, High Ch, 1 Mbps
12402.290	25.3	13.5	3.1	273.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	EUT Horz, High Ch, 1 Mbps
4804.117	32.4	5.2	1.3	342.0	3.0	0.0	Horz	AV	0.0	37.6	54.0	-16.4	EUT Horz, Low Ch, 1 Mbps
4884.125	31.4	5.6	1.5	360.0	3.0	0.0	Horz	AV	0.0	37.0	54.0	-17.0	EUT Horz, Mid Ch, 1 Mbps
4883.817	30.7	5.5	3.7	278.0	3.0	0.0	Vert	AV	0.0	36.2	54.0	-17.8	EUT Horz, Mid Ch, 1 Mbps
4959.792	30.1	5.9	1.5	43.0	3.0	0.0	Horz	AV	0.0	36.0	54.0	-18.0	EUT Horz, High Ch, 1 Mbps
4962.308	30.0	5.9	1.9	118.0	3.0	0.0	Vert	AV	0.0	35.9	54.0	-18.1	EUT Horz, High Ch, 1 Mbps
4805.050	30.5	5.1	1.5	340.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	EUT Horz, Low Ch, 1 Mbps
7442.083	40.8	14.5	1.5	195.0	3.0	0.0	Horz	PK	0.0	55.3	74.0	-18.7	EUT Horz, High Ch, 1 Mbps
7440.958	40.2	14.5	1.5	89.0	3.0	0.0	Vert	PK	0.0	54.7	74.0	-19.3	EUT Horz, High Ch, 1 Mbps
7441.558	40.0	14.5	1.5	128.0	3.0	0.0	Horz	PK	0.0	54.5	74.0	-19.5	EUT On Side, High Ch, 1 Mbps
7438.575	39.9	14.5	1.5	274.0	3.0	0.0	Vert	PK	0.0	54.4	74.0	-19.6	EUT Vert, High Ch, 1 Mbps
7441.033	39.9	14.5	3.2	141.0	3.0	0.0	Vert	PK	0.0	54.4	74.0	-19.6	EUT On Side, High Ch, 1 Mbps
7440.142	39.7	14.5	1.5	211.0	3.0	0.0	Horz	PK	0.0	54.2	74.0	-19.8	EUT Vert, High Ch, 1 Mbps
7326.142	40.5	13.7	1.5	102.0	3.0	0.0	Horz	PK	0.0	54.2	74.0	-19.8	EUT Horz, Mid Ch, 1 Mbps
7325.100	40.4	13.7	1.5	95.0	3.0	0.0	Vert	PK	0.0	54.1	74.0	-19.9	EUT Horz, Mid Ch, 1 Mbps
12397.730	29.9	0.5	1.5	181.0	3.0	0.0	Horz	AV	0.0	30.4	54.0	-23.6	EUT Horz, High Ch, 1 Mbps
12208.380	30.4	0.0	1.5	12.0	3.0	0.0	Horz	AV	0.0	30.4	54.0	-23.6	EUT Horz, Mid Ch, 1 Mbps
12397.780	29.7	0.5	1.5	268.0	3.0	0.0	Vert	AV	0.0	30.2	54.0	-23.8	EUT Horz, High Ch, 1 Mbps
12208.660	30.2	0.0	1.5	284.0	3.0	0.0	Vert	AV	0.0	30.2	54.0	-23.8	EUT Horz, Mid Ch, 1 Mbps
12011.720	30.8	-1.0	1.5	274.0	3.0	0.0	Horz	AV	0.0	29.8	54.0	-24.2	EUT Horz, Low Ch, 1 Mbps
12012.170	30.8	-1.0	1.5	328.0	3.0	0.0	Vert	AV	0.0	29.8	54.0	-24.2	EUT Horz, Low Ch, 1 Mbps
12400.990	36.3	13.5	3.0	273.0	3.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	EUT Horz, High Ch, 1 Mbps
12400.410	36.3	13.5	3.1	273.0	3.0	0.0	Vert	PK	0.0	49.8	74.0	-24.2	EUT Horz, High Ch, 1 Mbps
4804.942	43.3	5.1	1.3	342.0	3.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	EUT Horz, Low Ch, 1 Mbps
4882.792	42.6	5.5	1.5	360.0	3.0	0.0	Horz	PK	0.0	48.1	74.0	-25.9	EUT Horz, Mid Ch, 1 Mbps
4884.375	42.4	5.6	3.7	278.0	3.0	0.0	Vert	PK	0.0	48.0	74.0	-26.0	EUT Horz, Mid Ch, 1 Mbps
4960.100	42.0	5.9	1.5	43.0	3.0	0.0	Horz	PK	0.0	47.9	74.0	-26.1	EUT Horz, High Ch, 1 Mbps
4801.583	42.6	5.2	1.5	340.0	3.0	0.0	Vert	PK	0.0	47.8	74.0	-26.2	EUT Horz, Low Ch, 1 Mbps
4962.033	41.5	5.9	1.9	118.0	3.0	0.0	Vert	PK	0.0	47.4	74.0	-26.6	EUT Horz, High Ch, 1 Mbps
12398.700	41.5	0.5	1.5	268.0	3.0	0.0	Vert	PK	0.0	42.0	74.0	-32.0	EUT Horz, High Ch, 1 Mbps
12399.480	41.0	0.5	1.5	181.0	3.0	0.0	Horz	PK	0.0	41.5	74.0	-32.5	EUT Horz, High Ch, 1 Mbps

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	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
12208.180	41.5	0.0	1.5	284.0	3.0	0.0	Vert	PK	0.0	41.5	74.0	-32.5	EUT Horz, Mid Ch, 1 Mbps
12399.030	40.9	0.5	1.5	181.0	3.0	0.0	Horz	PK	0.0	41.4	74.0	-32.6	EUT Horz, High Ch, 1 Mbps
12210.850	41.4	0.0	1.5	12.0	3.0	0.0	Horz	PK	0.0	41.4	74.0	-32.6	EUT Horz, Mid Ch, 1 Mbps
12012.320	42.2	-1.0	1.5	328.0	3.0	0.0	Vert	PK	0.0	41.2	74.0	-32.8	EUT Horz, Low Ch, 1 Mbps
12007.680	42.1	-1.0	1.5	274.0	3.0	0.0	Horz	PK	0.0	41.1	74.0	-32.9	EUT Horz, Low Ch, 1 Mbps

CONCLUSION

Pass



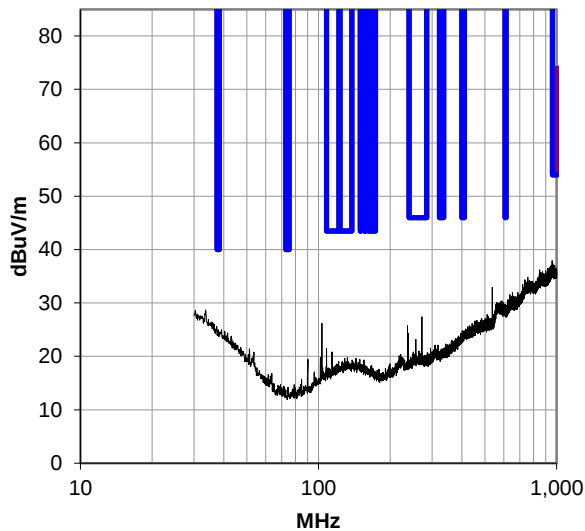
Tested By

SPURIOUS RADIATED EMISSIONS

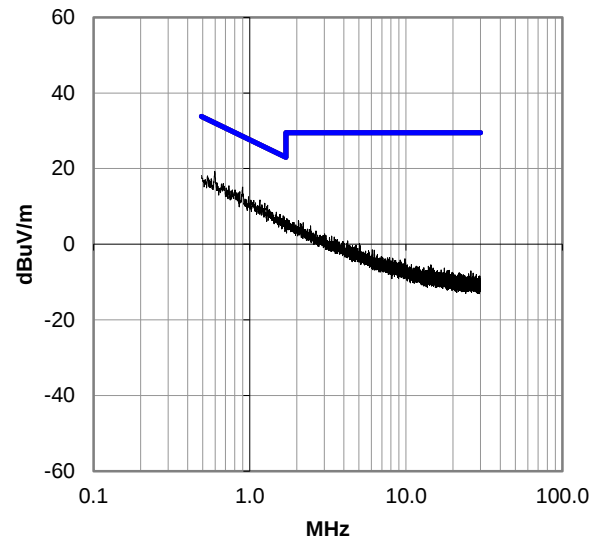
PRESCAN DATA

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

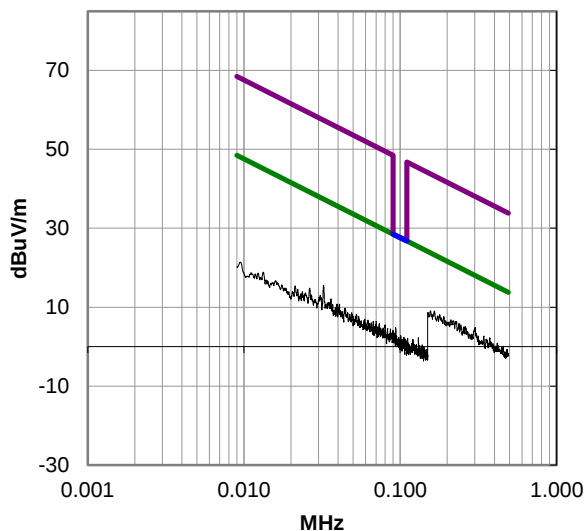
30-1000 MHz, Run 63



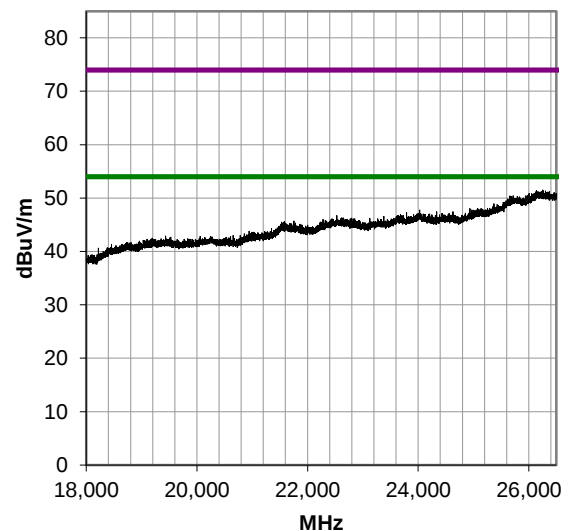
0.49-30 MHz, Run 68



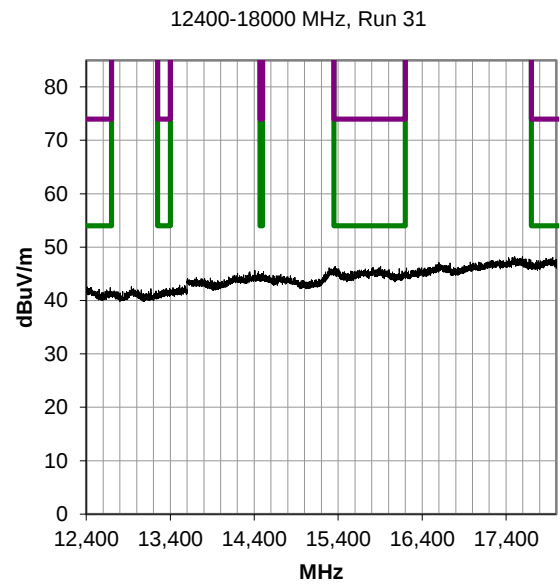
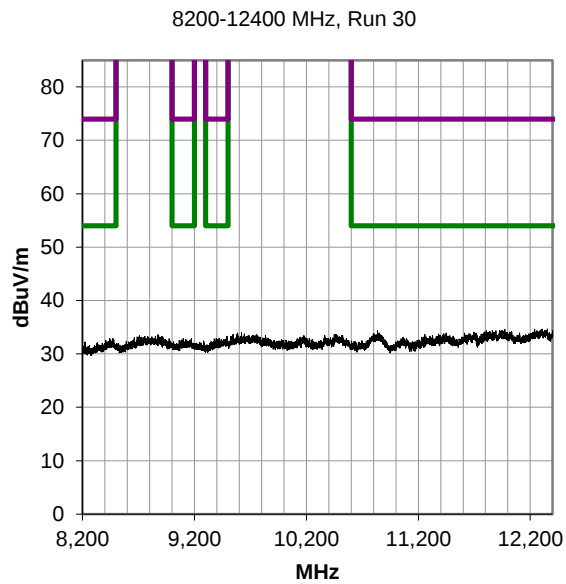
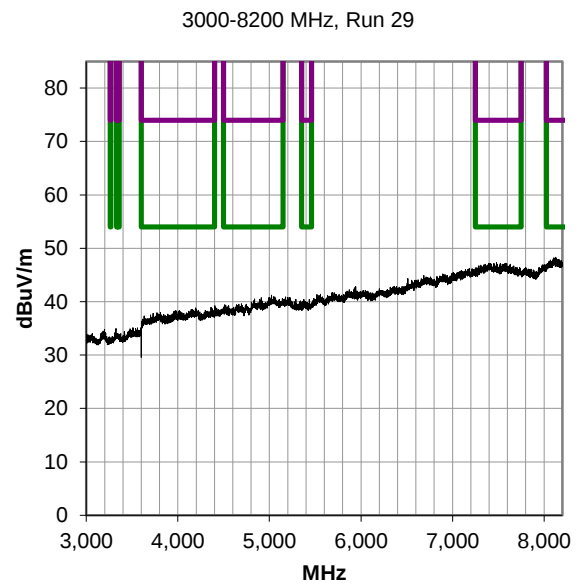
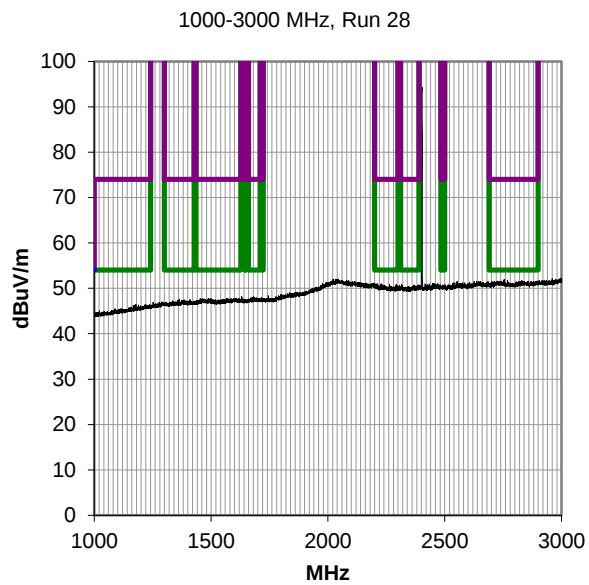
0.009-0.49 MHz, Run 67



18000-26500 MHz, Run 74



SPURIOUS RADIATED EMISSIONS



SPURIOUS RADIATED EMISSIONS – SPOT

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. A reference preview scan (pre-scan) is included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	ETS Lindgren	3115	AIP	2024-08-02	2026-08-02
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2025-09-05	2026-09-05
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2026-01-07	2027-01-07
Attenuator	Fairview Microwave	SA18H-20	VAF	2025-09-03	2026-09-03
Filter - High Pass	Micro-Tronics	HPM50111	LFN	2025-09-03	2026-09-03
Antenna - Standard Gain	ETS Lindgren	3160-07	AXP	2026-02-04	2027-02-04
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	2025-09-05	2026-09-05
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	2026-01-07	2027-01-07
Antenna - Standard Gain	ETS Lindgren	3160-08	AIQ	2026-02-04	2027-02-04
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	2026-01-07	2027-01-07
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2025-09-29	2026-09-29

SPURIOUS RADIATED EMISSIONS – SPOT

FREQUENCY RANGE INVESTIGATED

1 GHz TO 18 GHz

POWER INVESTIGATED

3.25VDC

CONFIGURATIONS INVESTIGATED

MDTR1264-1

MODES INVESTIGATED

Transmitting BLE High Ch, 2480 MHz, 1Mbps

SPURIOUS RADIATED EMISSIONS – SPOT

EUT:	Confirma SR MRI SureScan	Work Order:	MDTR1264
Serial Number:	RWG600012S	Date:	2026-05-07
Customer:	Medtronic, Inc.	Temperature:	22.3°C
Attendees:	Curt Pies	Relative Humidity:	24.8%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mb
Tested By:	Marcelo Aguayo	Job Site:	MN05
Power:	3.25VDC	Configuration:	MDTR1264-1

TEST PARAMETERS

Run #:	12	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

Spot checking the 2nd mechanical variant (Single Lead Header) of the product family as described in Medtronic Inc. Statement of Similarity, Table 2 located in the Product Description section of this test report.

Measurements limited to worst case harmonic identified during testing on the HarmoniaBP DR MRI SureScan HTN3DR2.

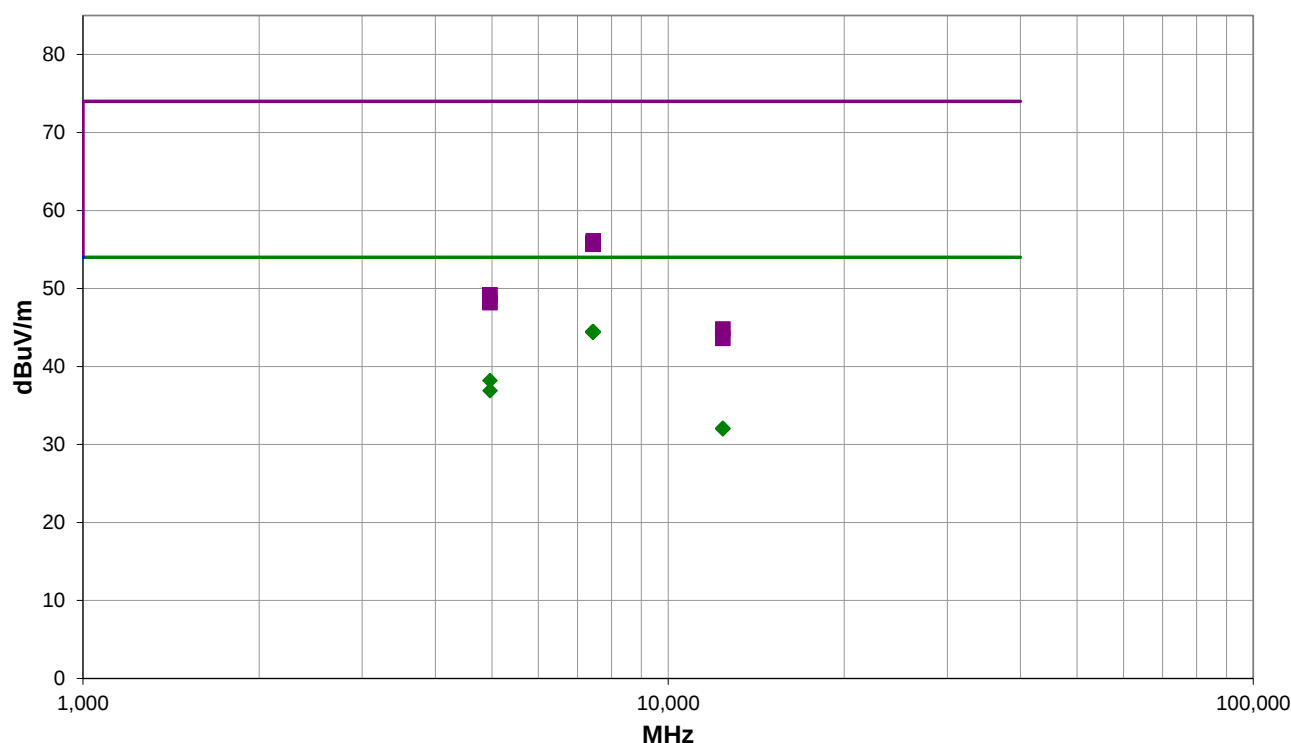
Test mode 100% duty cycle. Tested in open air.

EUT OPERATING MODES

Transmitting BLE High Ch, 2480 MHz, 1Mbps

DEVIATIONS FROM TEST STANDARD

None



Run #: 12

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS – SPOT

RESULTS - Run #12

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	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
7438.958	28.1	16.4	1.5	23.0	3.0	0.0	Horz	AV	0.0	44.5	54.0	-9.5	EUT Horz, High Ch 1Mbps
7438.350	28.1	16.4	2.1	199.0	3.0	0.0	Vert	AV	0.0	44.5	54.0	-9.5	EUT Horz, High Ch 1Mbps
7438.742	28.0	16.4	1.5	174.0	3.0	0.0	Horz	AV	0.0	44.4	54.0	-9.6	EUT On Side, High Ch 1Mbps
7439.792	28.0	16.4	1.1	342.0	3.0	0.0	Vert	AV	0.0	44.4	54.0	-9.6	EUT On Side, High Ch 1Mbps
7440.217	28.0	16.4	1.5	138.0	3.0	0.0	Horz	AV	0.0	44.4	54.0	-9.6	EUT Vert, High Ch 1Mbps
7438.175	28.0	16.4	3.2	330.0	3.0	0.0	Vert	AV	0.0	44.4	54.0	-9.6	EUT Vert, High Ch 1Mbps
4960.000	30.5	7.7	3.9	158.0	3.0	0.0	Horz	AV	0.0	38.2	54.0	-15.8	EUT Horz, High Ch 1Mbps
4961.333	29.2	7.7	1.5	183.0	3.0	0.0	Vert	AV	0.0	36.9	54.0	-17.1	EUT Horz, High Ch 1Mbps
7440.983	39.7	16.4	2.1	199.0	3.0	0.0	Vert	PK	0.0	56.1	74.0	-17.9	EUT Horz, High Ch 1Mbps
7438.967	39.4	16.4	1.5	174.0	3.0	0.0	Horz	PK	0.0	55.8	74.0	-18.2	EUT On Side, High Ch 1Mbps
7440.642	39.3	16.4	1.5	23.0	3.0	0.0	Horz	PK	0.0	55.7	74.0	-18.3	EUT Horz, High Ch 1Mbps
7439.608	39.3	16.4	1.1	342.0	3.0	0.0	Vert	PK	0.0	55.7	74.0	-18.3	EUT On Side, High Ch 1Mbps
7442.175	39.3	16.4	1.5	138.0	3.0	0.0	Horz	PK	0.0	55.7	74.0	-18.3	EUT Vert, High Ch 1Mbps
7441.292	39.3	16.4	3.2	330.0	3.0	0.0	Vert	PK	0.0	55.7	74.0	-18.3	EUT Vert, High Ch 1Mbps
12399.580	27.8	4.3	1.5	157.0	3.0	0.0	Horz	AV	0.0	32.1	54.0	-21.9	EUT Horz, High Ch 1Mbps
12399.860	27.7	4.3	1.5	49.0	3.0	0.0	Vert	AV	0.0	32.0	54.0	-22.0	EUT Horz, High Ch 1Mbps
4960.267	41.5	7.7	3.9	158.0	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	EUT Horz, High Ch 1Mbps
4960.983	40.5	7.7	1.5	183.0	3.0	0.0	Vert	PK	0.0	48.2	74.0	-25.8	EUT Horz, High Ch 1Mbps
12399.350	40.5	4.3	1.5	49.0	3.0	0.0	Vert	PK	0.0	44.8	74.0	-29.2	EUT Horz, High Ch 1Mbps
12399.700	39.3	4.3	1.5	157.0	3.0	0.0	Horz	PK	0.0	43.6	74.0	-30.4	EUT Horz, High Ch 1Mbps

CONCLUSION

Pass

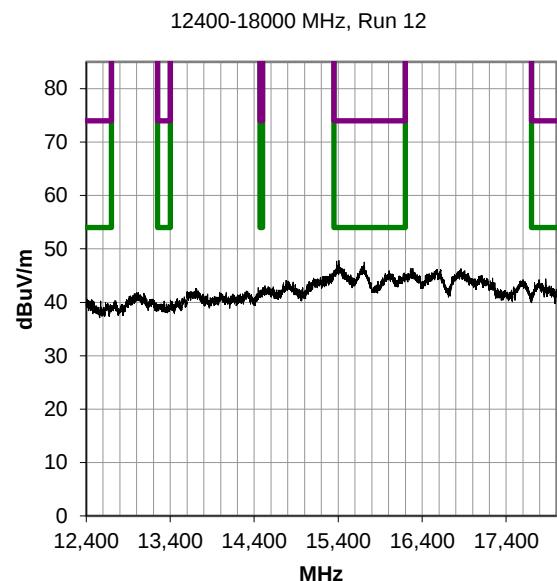
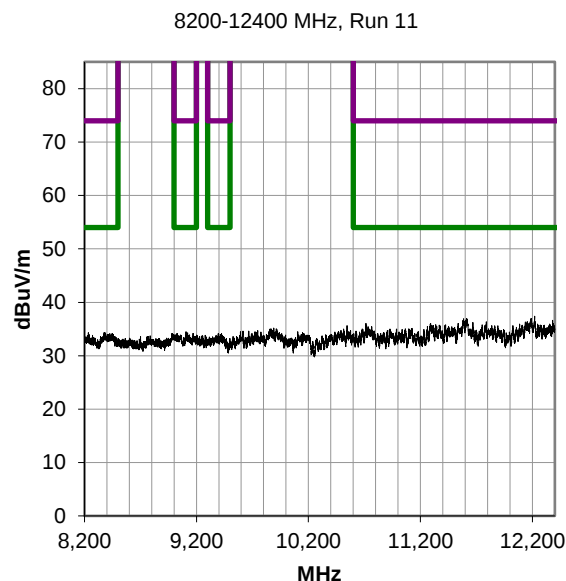
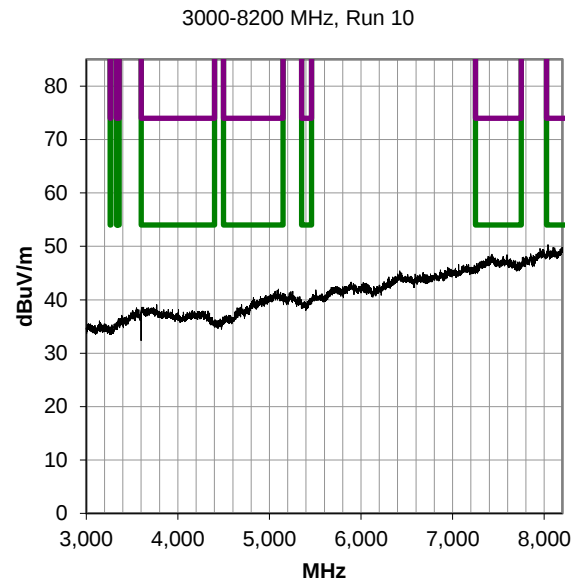
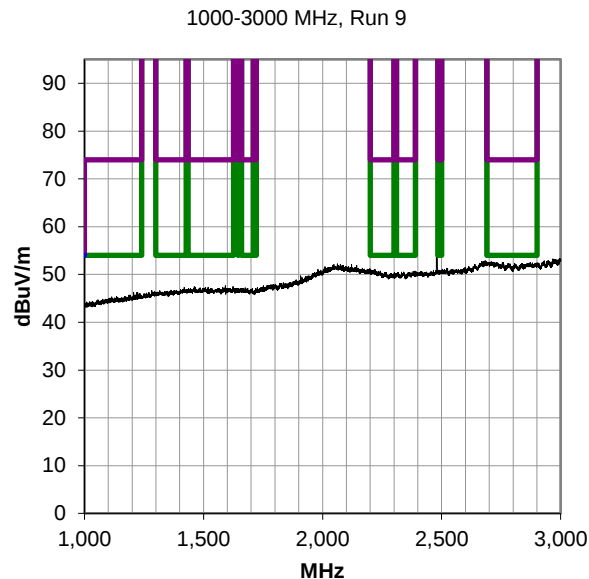


Tested By

SPURIOUS RADIATED EMISSIONS – SPOT

PRESCAN DATA

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.



End of Test Report