

Medtronic MiniMed

TEST REPORT FOR

MiniMed Insulin Pump

Model: M065019C001*

*(See Appendix A for Manufacturers Declaration)

Tested to The Following Standards:

FCC Part 15 Subpart C Section(s)

**15.207 & 15.247
(DTS 2400-2483.5 MHz)**

Report No.: 111245-6

Date of issue: August 26, 2025



Test Certificate # 803.01

This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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Administrative Information

Test Report Information

REPORT PREPARED FOR:

Medtronic MiniMed
18000 Devonshire Street
Northridge, CA 91325-1219

Representative: Nghi Nguyen
Customer Reference Number: 6000024100

REPORT PREPARED BY:

Viviana Prado
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Project Number: 111245

DATE OF EQUIPMENT RECEIPT:

July 8, 2025

DATE(S) OF TESTING:

July 8-14, 2025

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the equipment provided by the client, tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink, reading "Steve Behm", is positioned above a horizontal line.

Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
22116 23rd Drive S.E. Suite A
Bothell, WA 98021

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.03.20

Site Registration & Accreditation Information

Location	*NIST CB #	FCC	Canada	Japan
Canyon Park, Bothell, WA	US0103	US1024	3082C	A-0136
Brea, CA	US0103	US1024	3082D	A-0136
Fremont, CA	US0103	US1024	3082B	A-0136
Mariposa, CA	US0103	US1024	3082A	A-0136

*CKC's list of NIST designated countries can be found at: <https://standards.gov/cabs/designations.html>

Summary of Results

Standard / Specification: FCC Part 15 Subpart C - 15.247 (DTS 2400-2483.5 MHz)

Test Procedure	Description	Modifications	Results
15.247(a)(2)	6dB Bandwidth	NA	Pass
15.247(b)(3)	Output Power	NA	Pass
15.247(e)	Power Spectral Density	NA	Pass
15.247(d)	RF Conducted Emissions & Band Edge	NA	NA1
15.247(d)	Radiated Emissions & Band Edge	NA	Pass
15.207	AC Conducted Emissions	NA	Pass

NA = Not Applicable

NA1 = Not applicable because the EUT has an integral antenna.

ISO/IEC 17025 Decision Rule

The equipment sample utilized for testing is selected by the manufacturer. The declaration of pass or fail herein is a binary statement for simple acceptance rule (ILAC G8) based upon assessment to the specification(s) listed above, without consideration of measurement uncertainties. For performance related tests, equipment was monitored for specified criteria identified in that section of testing.

Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions

No modifications were made during testing.

Modifications listed above must be incorporated into all production units.

Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions

None

Equipment Under Test (EUT)

During testing, numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

Configuration 1 (For Bluetooth Em Pump Only Battery Powered)

Equipment Tested:

Device	Manufacturer	Model	SN
MiniMed Insulin Pump	Medtronic MiniMed	M065019C001	DV100000629

Support Equipment

Device	Manufacturer	Model	SN
None	None	None	None

Configuration 2 (For Bluetooth Em Pump on Charger)

Equipment Tested:

Device	Manufacturer	Model	SN
MiniMed Insulin Pump	Medtronic MiniMed	M065019C001	DV100000629

Support Equipment

Device	Manufacturer	Model	SN
MiniMed Flex Charger	Medtronic MiniMed	MMT-8070	MDCHGR01031 and MDCHGR01035 (used interchangeably)

General Product Information:

Description of EUT	
Glucose pump	
Product Information	Manufacturer-Provided Details
Operating Frequencies Tested:	2402, 2440, 2480MHz
Equipment Type:	Stand-Alone Equipment
Type of Wideband System:	BLE
Maximum Duty Cycle:	100% as worst case
Modulation Type(s):	GFSK (1 and 2Mbps)
Number of TX Chains:	1
Beamforming Type:	NA
Antenna Type(s) and Gain:	PCB Trace Antenna, 2.4dBi
Antenna Connection Type:	Integral
Nominal Input Voltage:	Battery 5VDC or 120VAC to brick for Wireless Charger
Firmware / Software Version(s):	SPIS Control 0.47A
Firmware / Software Description:	Software to control the Bluetooth Radio
Firmware / Software Setting(s):	2dBm (which is the max output setting for normal firmware), 1 or 2Mbps
Tune-up or Adjustment(s):	NA
The validity of results is dependent on the stated product details, the accuracy of which the manufacturer assumes full responsibility.	

EUT and Accessory Photo(s)



Pump

Support Equipment Photo(s)



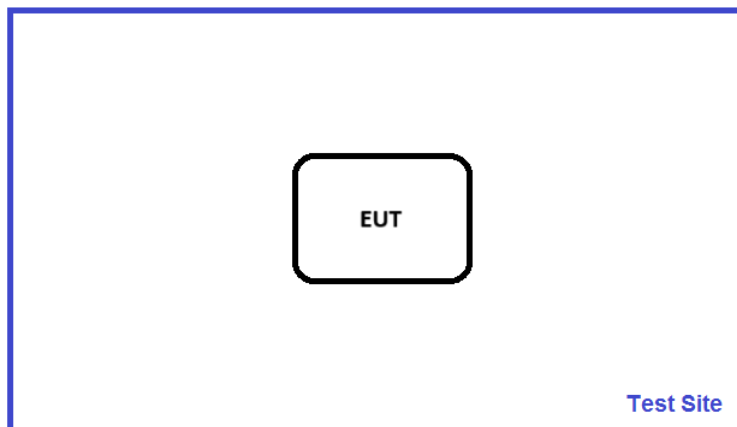
Wireless Charger

Block Diagram of Test Setup(s)

Config#	Setup Description of Block Diagram
1	EUT continuously transmitting as standalone pump running off battery power
2	EUT continuously transmitting while charging

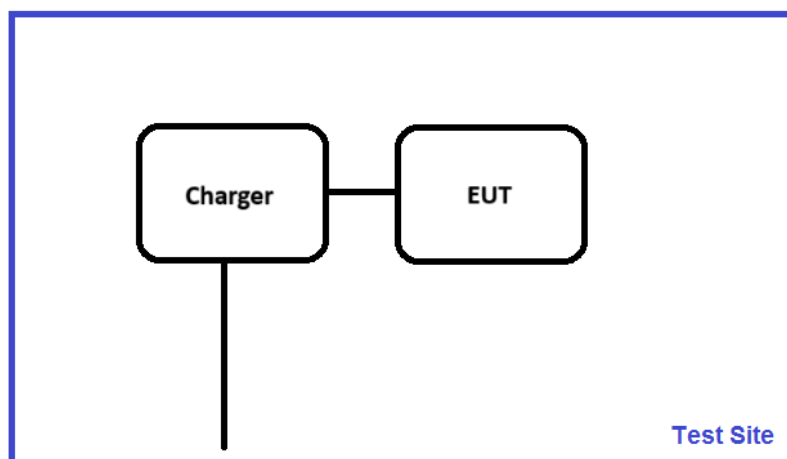
Configuration 1

Test Setup Block Diagram



Configuration 2

Test Setup Block Diagram



FCC Part 15 Subpart C

15.247(a)(2) 6dB Bandwidth

Test Setup/Conditions			
Test Location:	Bothell Lab C3	Test Engineer:	C. Plumadore
Test Method:	ANSI C63.10 (2020), KDB 558074	Test Date(s):	7/10/2025
Configuration:	1 (battery powered)		
Test Setup:	The EUT is on a foam table in the test chamber. The EUT is continuously transmitting with the selected modulation.		

Environmental Conditions			
Temperature (°C)	23.9	Relative Humidity (%):	44

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02871	Spectrum Analyzer	Agilent	E4440A	9/19/2024	9/19/2026
03540	Preamplifier	HP	83017A	1/7/2025	1/7/2027
P08205	Flex Cable	Mini-Circuits	CBL-6FT-NMNM+	1/22/2025	1/22/2027
P07485	Cable	Andrews	FSJ1	1/29/2025	1/29/2027
P07504	Cable	TMS	CLU40-KMKM-02.00F	1/7/2025	1/7/2027
02374ANSI	Horn Antenna	Electrometrics	RGA-60	1/8/2025	1/8/2027

2MHz

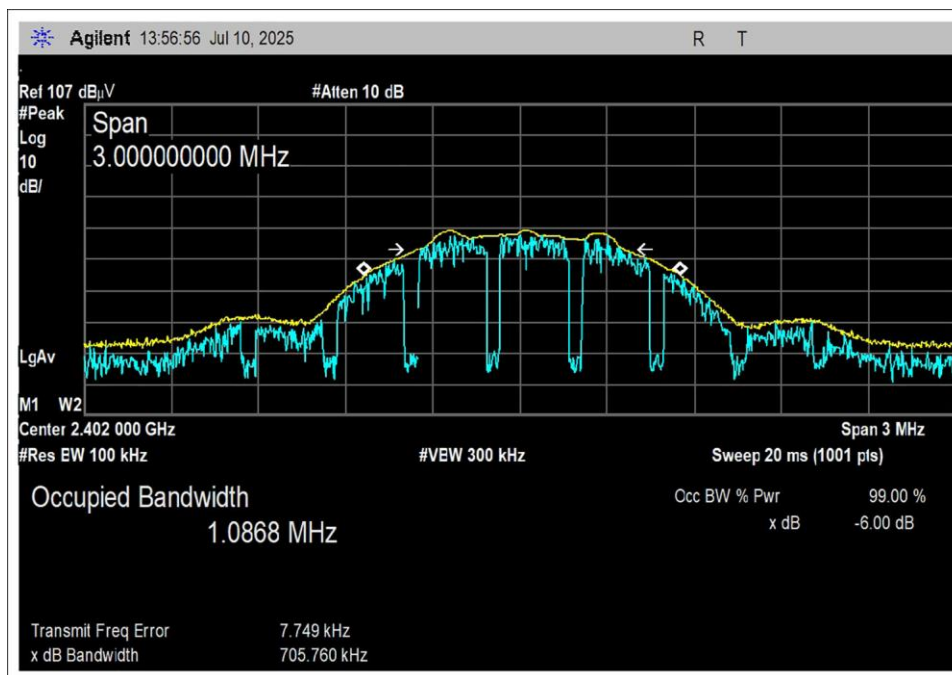
Test Data Summary					
Frequency (MHz)	Antenna Port	Modulation	Measured (kHz)	Limit (kHz)	Results
2402	1	GFSK 2Mbps	1159	≥500	Pass
2440	1	GFSK 2Mbps	1164	≥500	Pass
2480	1	GFSK 2Mbps	1242	≥500	Pass

1MHz

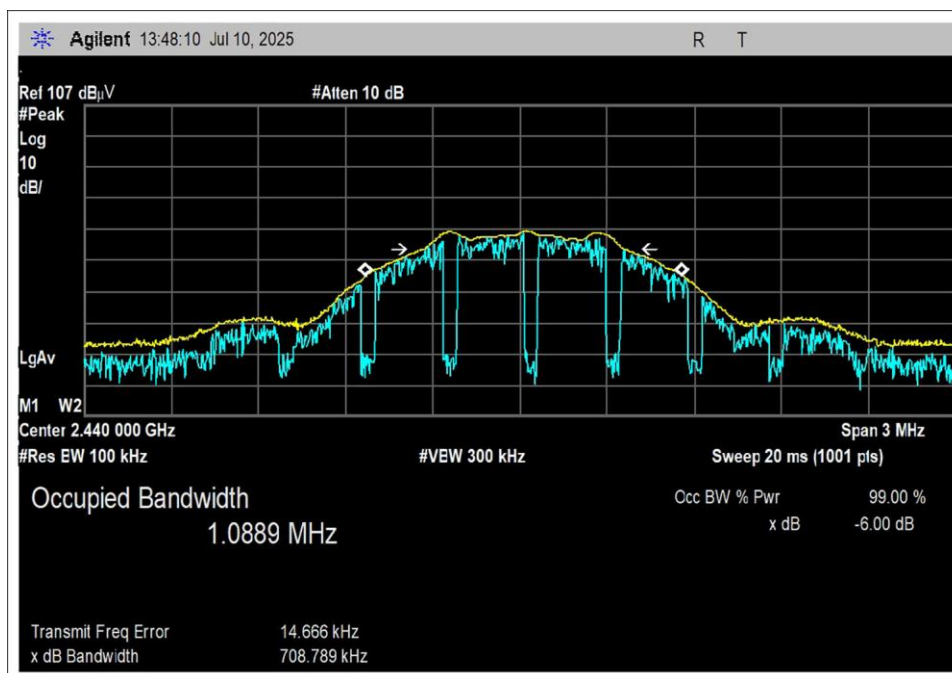
Test Data Summary					
Frequency (MHz)	Antenna Port	Modulation	Measured (kHz)	Limit (kHz)	Results
2402	1	GFSK 1Mbps	705.760	≥500	Pass
2440	1	GFSK 1Mbps	708.789	≥500	Pass
2480	1	GFSK 1Mbps	704.343	≥500	Pass

Plot(s)

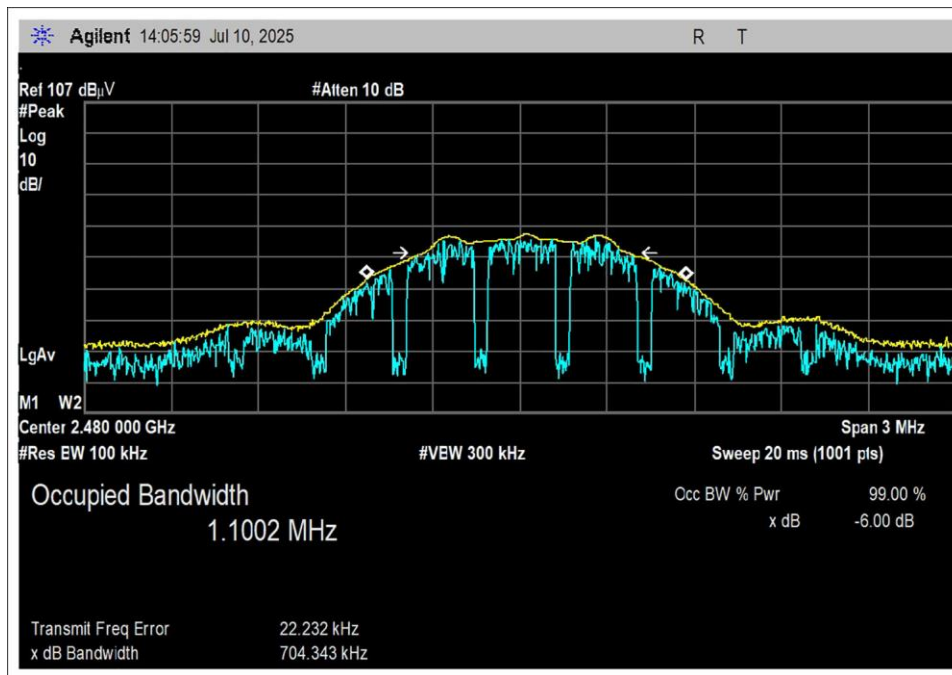
1MHz



Low Channel

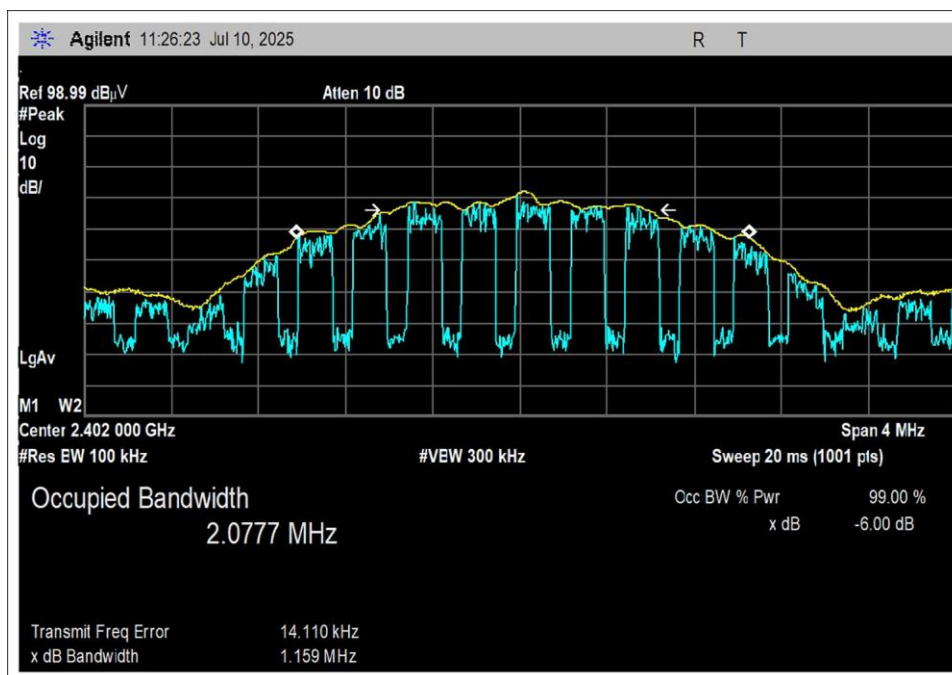


Middle Channel

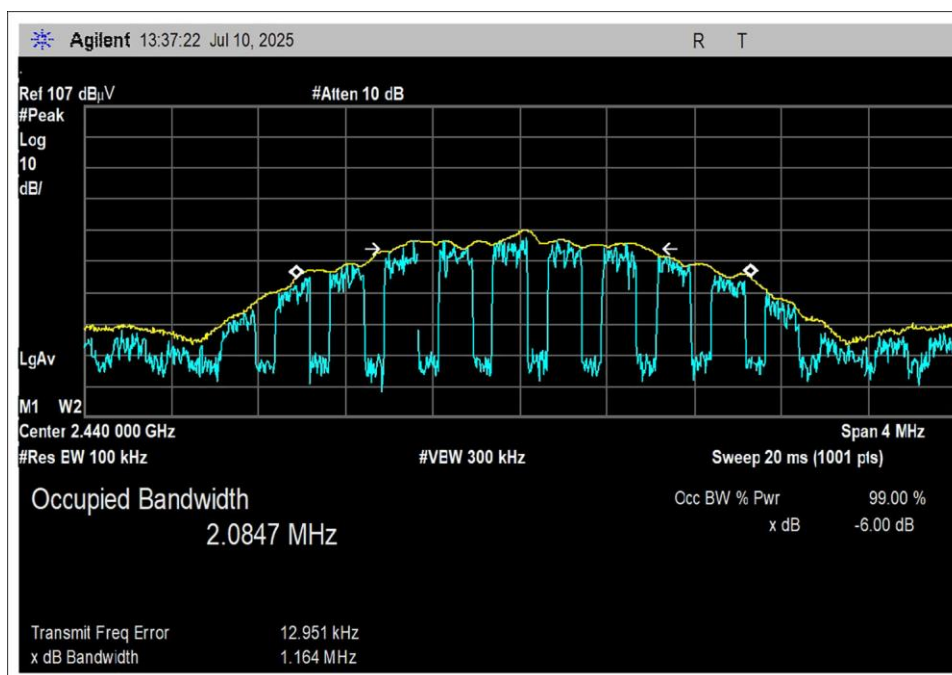


High Channel

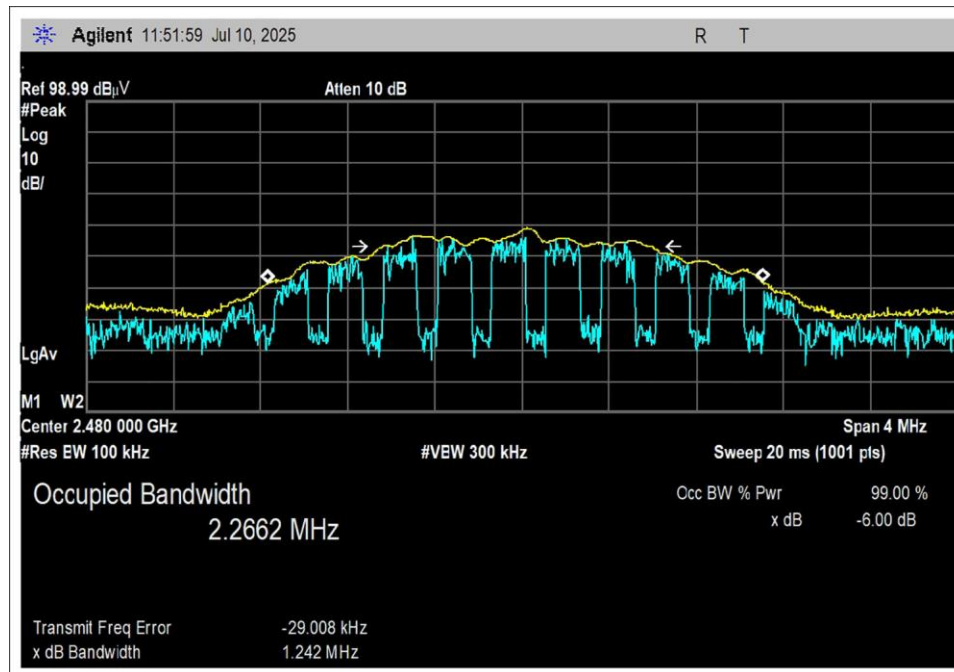
2MHz



Low Channel

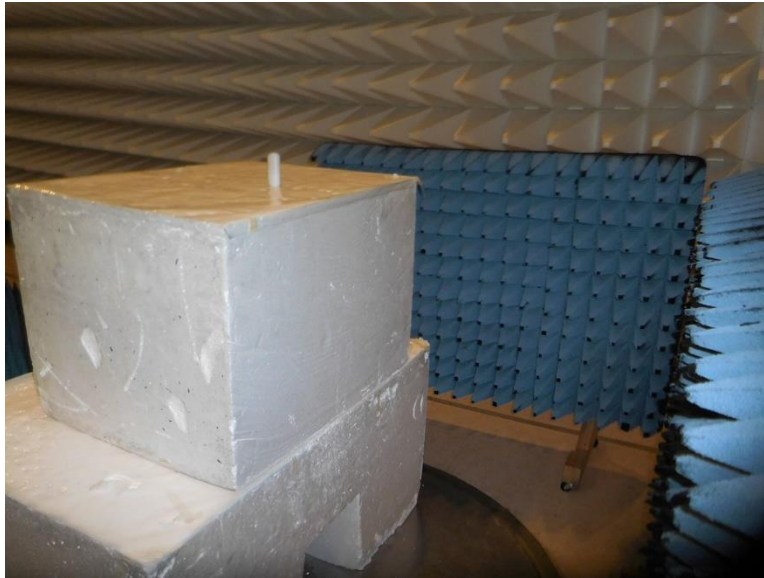


Middle Channel



High Channel

Test Setup Photo(s)



15.247(b)(3) Output Power

Test Setup/Conditions			
Test Location:	Bothell Lab C3	Test Engineer:	M. Atkinson
Test Method:	ANSI C63.10 (2020), KDB 558074	Test Date(s):	7/11/2025
Configuration:	1 and 2		
Test Setup:	See Datasheet		

Environmental Conditions			
Temperature (°C)	22-24	Relative Humidity (%):	35-45

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02871	Spectrum Analyzer	Agilent	E4440A	9/19/2024	9/19/2026
03540	Preamplifier	HP	83017A	1/7/2025	1/7/2027
P08205	Flex Cable	Mini-Circuits	CBL-6FT-NMNM+	1/22/2025	1/22/2027
P07485	Cable	Andrews	FSJ1	1/29/2025	1/29/2027
P07504	Cable	TMS	CLU40-KMKM-02.00F	1/7/2025	1/7/2027
02374ANSI	Horn Antenna	Electrometrics	RGA-60	1/8/2025	1/8/2027
01315	AC Power Supply	PPS	N/A	8/25/2023	8/25/2025
01318	Multimeter	Fluke	Fluke 85	6/13/2025	6/13/2027

Test Data Summary - Voltage Variations					
Frequency (MHz)	Modulation / Ant Port	V _{Minimum} (dBm)	V _{Nominal} (dBm)	V _{Maximum} (dBm)	Max Deviation from V _{Nominal} (dB)
2402	GFSK 2Mbps	-0.53	-0.53	-0.53	0.0
2440	GFSK 2Mbps	-1.13	-1.13	-1.13	0.0
2480	GFSK 2Mbps	-1.23	-1.23	-1.23	0.0
2402	GFSK 1Mbps	-0.63	-0.63	-0.63	0.0
2440	GFSK 1Mbps	-0.93	-0.93	-0.93	0.0
2480	GFSK 1Mbps	-1.33	-1.33	-1.33	0.0

Test performed using operational mode with the highest output power, representing worst case.

Parameter Definitions:

Measurements performed at input voltage V_{Nominal} ± 15%.

Parameter	Value
V _{Nominal} :	120
V _{Minimum} :	138
V _{Maximum} :	102

The unit was also investigated on battery power only with a fresh battery installed.

Test Data Summary - Radiated Measurement							
Measurement Option: RBW > DTS Bandwidth							
Frequency (MHz)	Modulation	Ant. Type / Gain (dBi)	RF Conducted (dBm)		EIRP (dBm)		Results
			Calculated	Limit	Calculated	Limit	
2402	GFSK 1Mbps	PCB Trace Antenna, 2.4dBi	-2.93	≤30	-0.53	≤36	Pass
2440	GFSK 1Mbps	PCB Trace Antenna 2.4dBi	-3.53	≤30	-1.13	≤36	Pass
2480	GFSK 1Mbps	PCB Trace Antenna, 2.4dBi	-3.63	≤30	-1.23	≤36	Pass
2402	GFSK 2Mbps	PCB Trace Antenna, 2.4dBi	-3.03	≤30	-0.63	≤36	Pass
2440	GFSK 2Mbps	PCB Trace Antenna, 2.4dBi	-3.33	≤30	-0.93	≤36	Pass
2480	GFSK 2Mbps	PCB Trace Antenna, 2.4dBi	-3.73	≤30	-1.33	≤36	Pass

EIRP is calculated as RF conducted power (dBm) + antenna gain (dBi)

For fixed point-to-point antennas, the limit is calculated in accordance with 15.247(c)(1): $Limit = 30 - Roundup\left(\frac{G-6}{3}\right)$

For all other antennas, the RF conducted power limit is calculated according to a maximum of 1W (30 dBm) conducted power with a maximum of 6dBi gain antenna in accordance with 15.247(b)
 $Limit = 30 - Roundup(G - 6)$

For directional beamforming antennas, the limit is calculated in accordance with 15.247(c)(2) and KDB 662911.

Conducted RF output power calculated in accordance with ANSI C63.10.

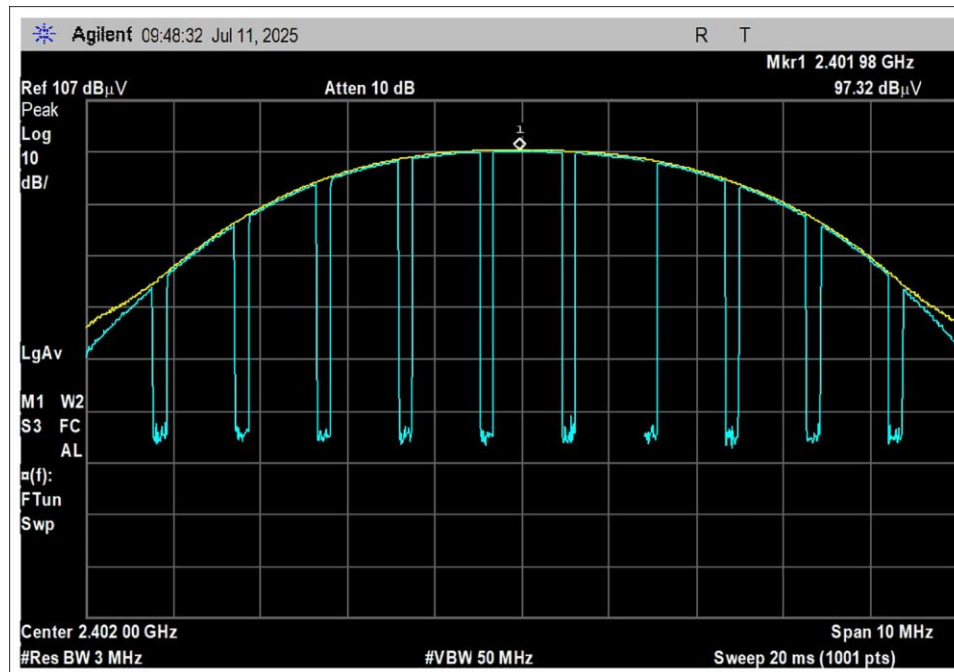
$$P(W) = \frac{(E \cdot d)^2}{30 G}$$

Or equivalently, in logarithmic form:

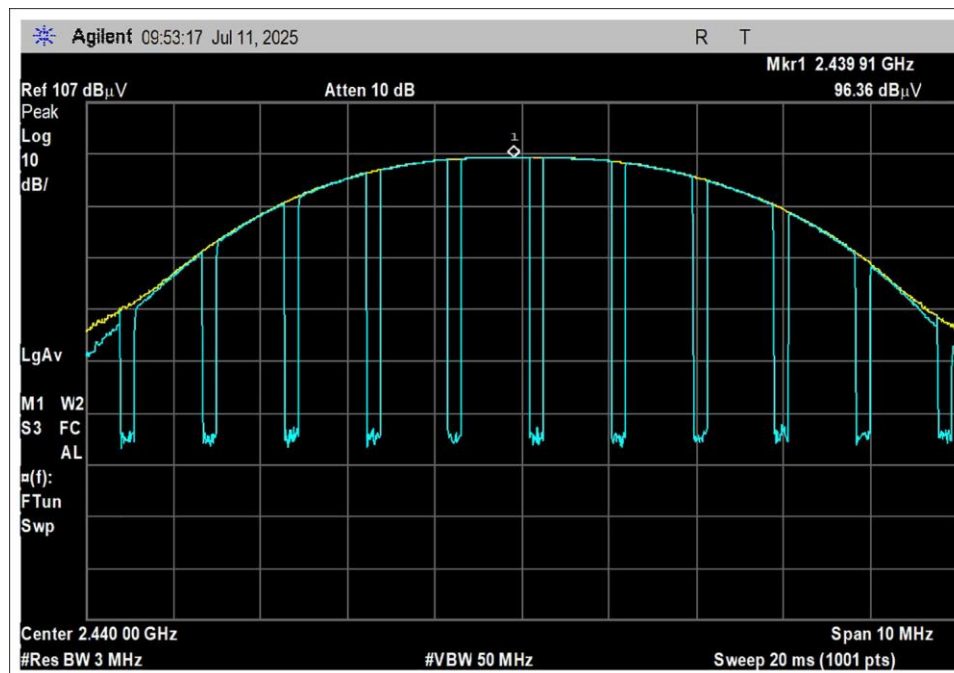
$$P(dBm) = E(dBuV/m) + 20LOG(d) - G - 104.77$$

Plots

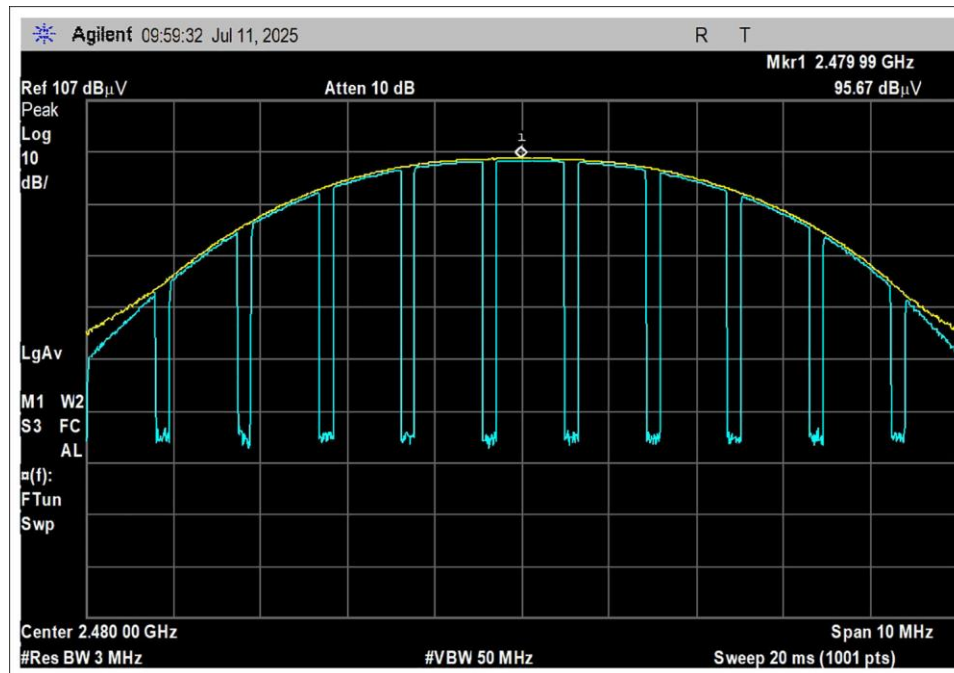
1Mbps



Low Channel

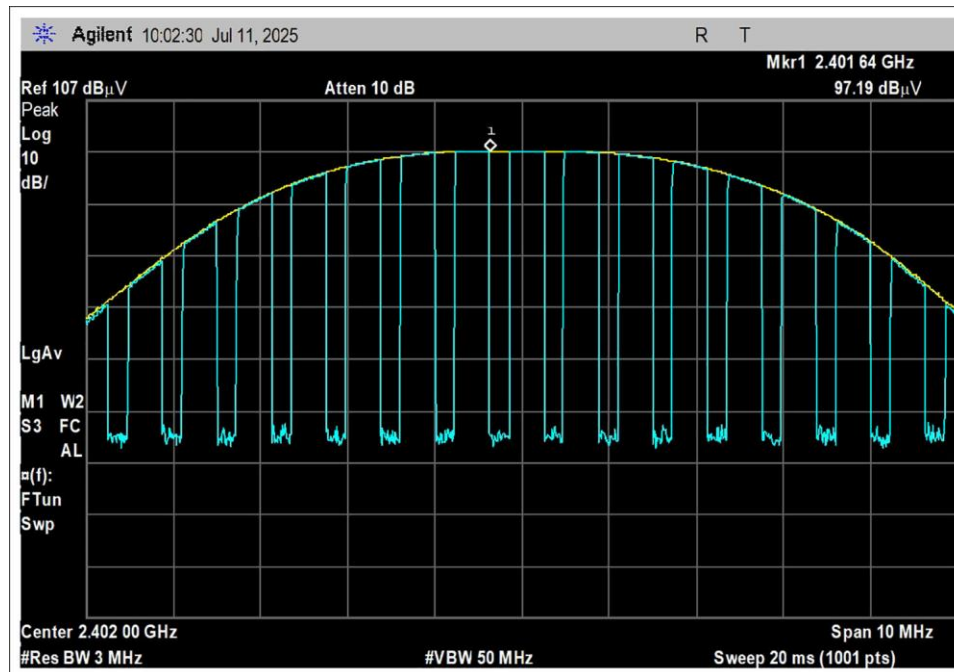


Middle Channel

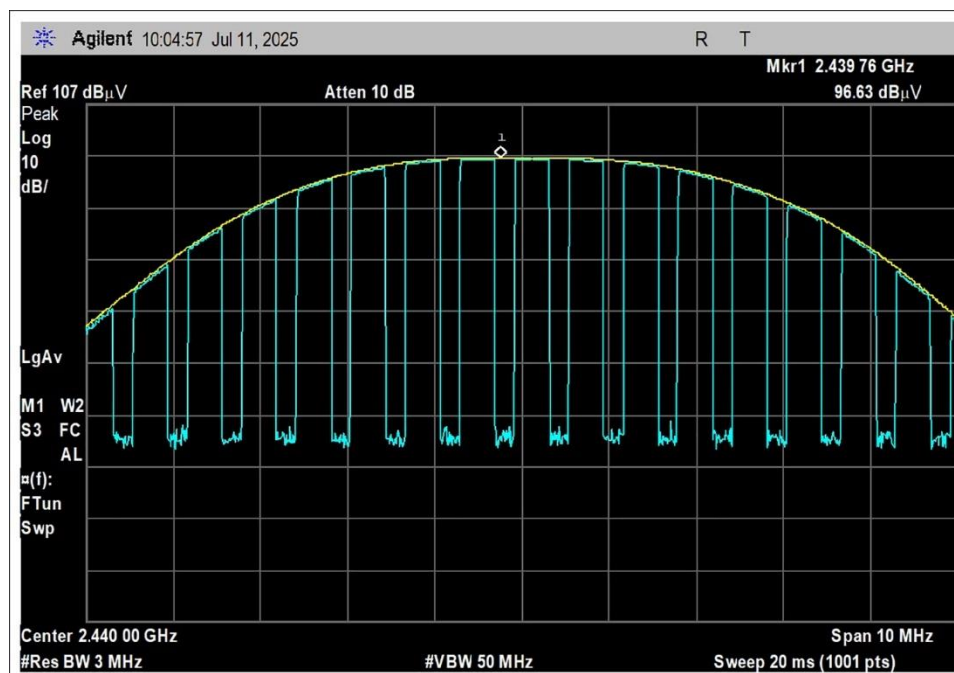


High Channel

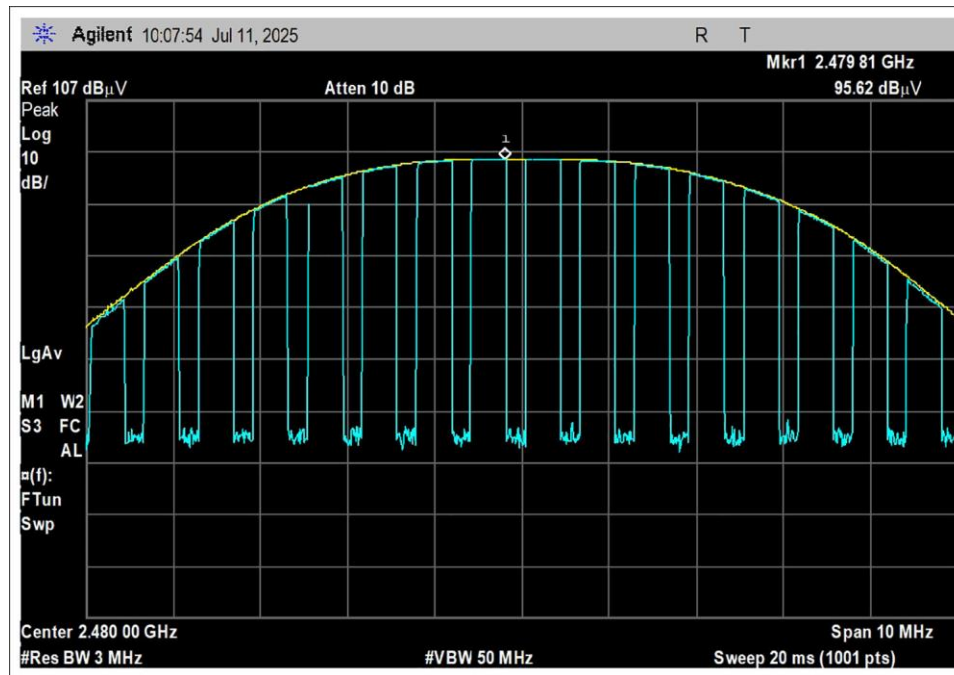
2Mbps



Low Channel



Middle Channel



High Channel

Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.247(b) Power Output (2400-2483.5 MHz DTS)**
 Work Order #: **111245** Date: 7/11/2025
 Test Type: **Maximized Emissions** Time: 10:01:52
 Tested By: M. Atkinson Sequence#: 44
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Frequency: Fundamental

Test Method: ANSI C63.10

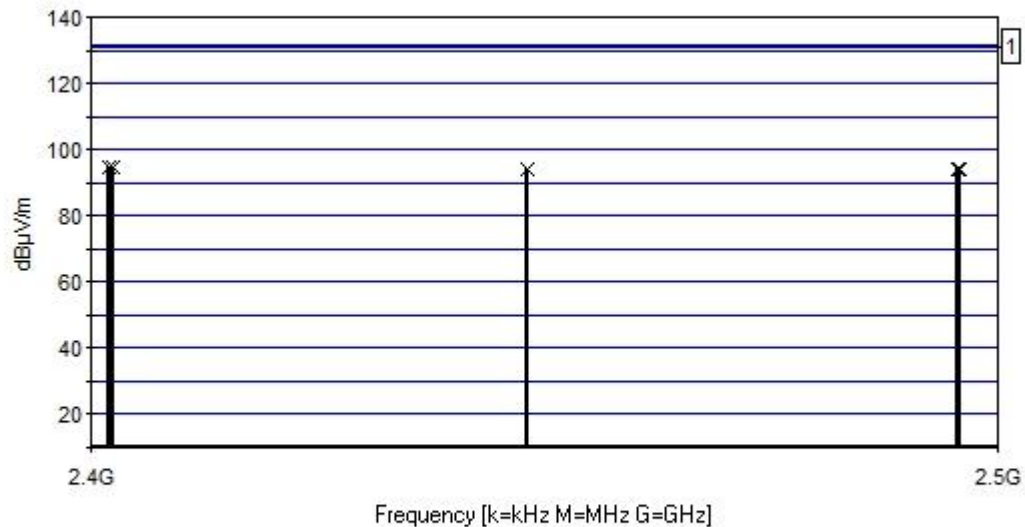
Test set up:
Transmitting low, mid, high

x,y,z axes investigated worst case reported

Horizontal and Vertical measurement polarities investigated, worst case reported.

Investigated with and without wireless charger, worst case reported. The highest output power was found with battery power, however, voltage variations performed while charging and worst case deviation applied.

Medtronic MiniMed WO#: 111245 Sequence#: 44 Date: 7/11/2025
15.247(b) Power Output (2400-2483.5 MHz DTS) Test Distance: 3 Meters Horiz



— Readings
— 1 - 15.247(b) Power Output (2400-2483.5 MHz DTS)
× Peak Readings
Software Version: 5.03.20

Test Equipment:

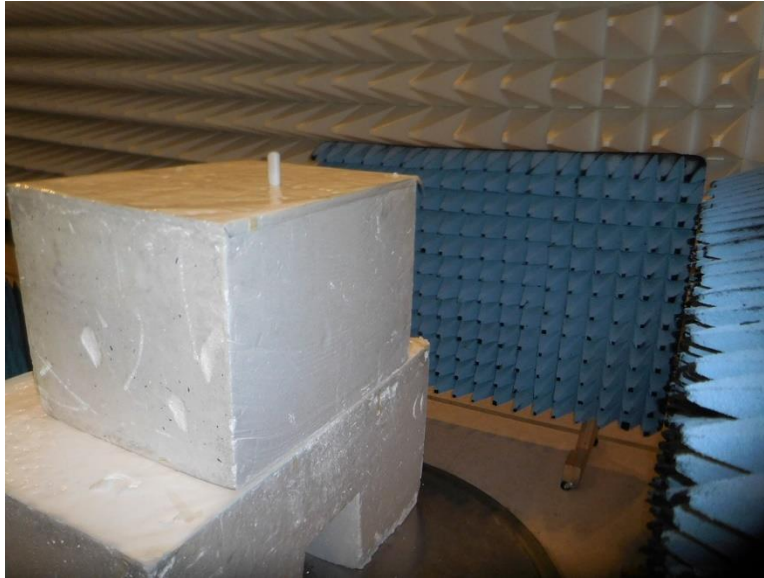
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	AN03540	Preamplifier	83017A	1/7/2025	1/7/2027
T3	AN02374ANSI	Horn Antenna	RGA-60	1/8/2025	1/8/2027
T4	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T5	ANP07504	Cable	CLU40-KMKM-02.00F	1/7/2025	1/7/2027

Measurement Data: Reading listed by order taken. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	2401.980M	97.3	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	94.7	131.2 1Mbps	-36.5	Horiz
2	2439.910M	96.4	+1.1 +0.6	-34.7	+28.5	+2.2	+0.0	94.1	131.2 1Mbps	-37.1	Horiz
3	2479.990M	95.7	+1.1 +0.6	-34.6	+29.0	+2.2	+0.0	94.0	131.2 1Mbps	-37.2	Horiz
4	2401.640M	97.2	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	94.6	131.2 2Mbps	-36.6	Horiz
5	2439.760M	96.6	+1.1 +0.6	-34.7	+28.5	+2.2	+0.0	94.3	131.2 2Mbps	-36.9	Horiz
6	2479.810M	95.6	+1.1 +0.6	-34.6	+29.0	+2.2	+0.0	93.9	131.2 2Mbps	-37.3	Horiz

Test Setup Photo(s)

Battery



Above 1GHz



X-Axis



Y-Axis

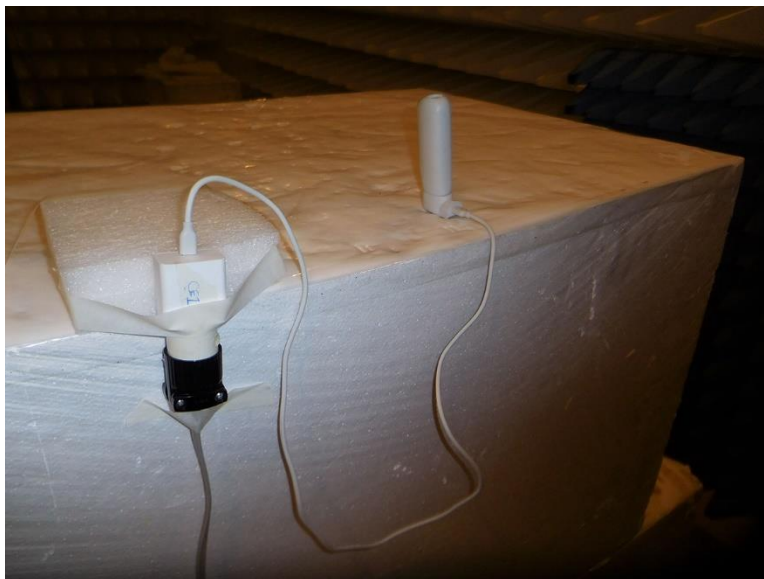


Z-Axis

Charging



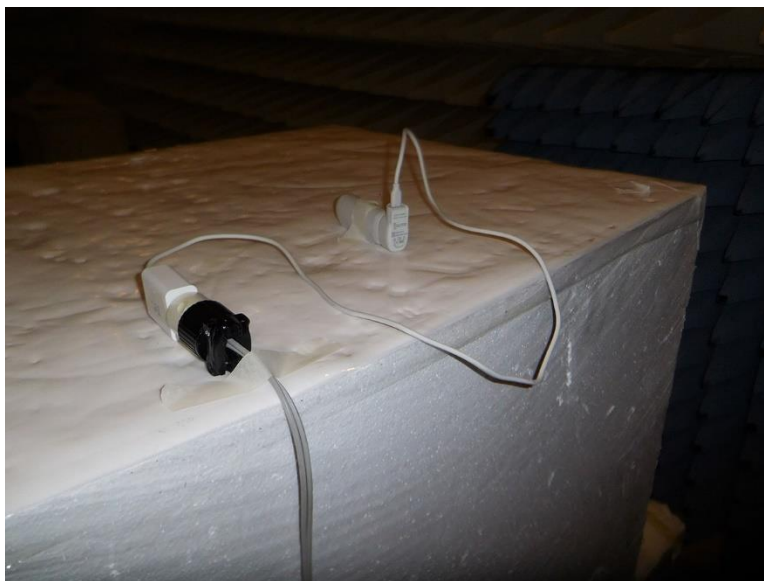
Above 1GHz



X-Axis



Y-Axis



Z-Axis

15.247(e) Power Spectral Density

Test Setup/Conditions

Test Location:	Bothell Lab C3	Test Engineer:	M. Atkinson
Test Method:	ANSI C63.10 (2020), KDB 558074	Test Date(s):	7/11/2025
Configuration:	1 and 2		
Test Setup:	See Datasheet		

Environmental Conditions

Temperature (°C)	22-24	Relative Humidity (%):	35-45
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Test Equipment

Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02871	Spectrum Analyzer	Agilent	E4440A	9/19/2024	9/19/2026
03540	Preamplifier	HP	83017A	1/7/2025	1/7/2027
P08205	Flex Cable	Mini-Circuits	CBL-6FT-NMNM+	1/22/2025	1/22/2027
P07485	Cable	Andrews	FSJ1	1/29/2025	1/29/2027
P07504	Cable	TMS	CLU40-KMKM-02.00F	1/7/2025	1/7/2027
02374ANSI	Horn Antenna	Electrometrics	RGA-60	1/8/2025	1/8/2027

Test Data Summary - Radiated Measurement

Measurement Method: PKPSD

Frequency (MHz)	Modulation	Ant. Type / Gain (dBi)	Field Strength (dBuV/m @3m)	Calculated (dBm/3kHz)	Limit (dBm/3kHz)	Results
2402	GFSK 1Mbps	PCB Trace Antenna, 2.4dBi	77.1	-20.5	≤8	Pass
2440	GFSK 1Mbps	PCB Trace Antenna, 2.4dBi	77.6	-20.0	≤8	Pass
2480	GFSK 1Mbps	PCB Trace Antenna, 2.4dBi	77.6	-20.0	≤8	Pass
2402	GFSK 2Mbps	PCB Trace Antenna, 2.4dBi	76.2	-21.4	≤8	Pass
2440	GFSK 2Mbps	PCB Trace Antenna, 2.4dBi	76.4	-21.2	≤8	Pass
2480	GFSK 2Mbps	PCB Trace Antenna, 2.4dBi	76.3	-21.3	≤8	Pass

Conducted RF output power calculated in accordance with ANSI C63.10.

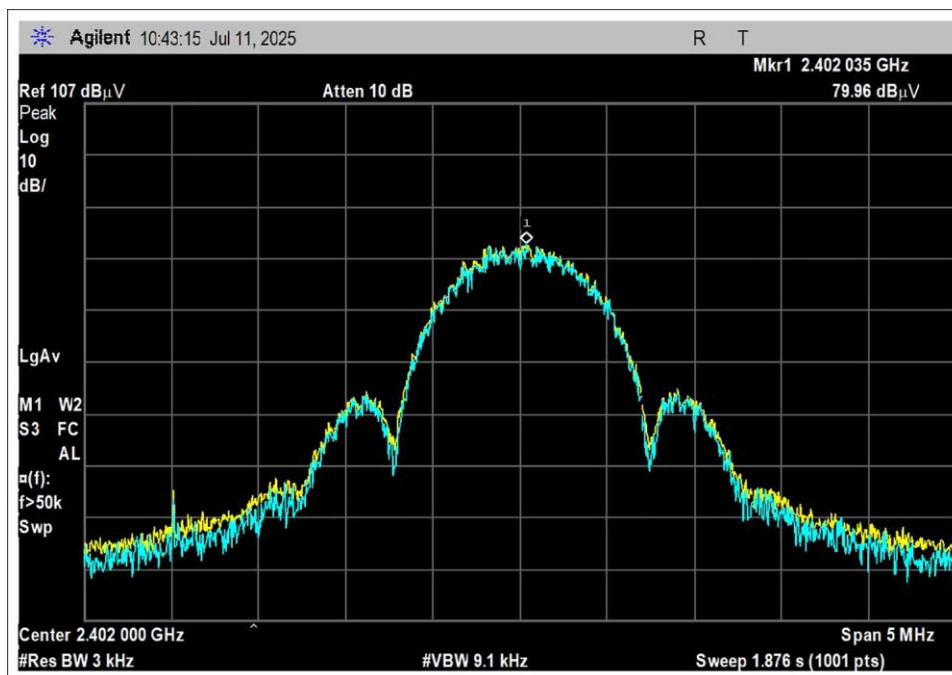
$$P(W) = \frac{(E \cdot d)^2}{30 G}$$

Or equivalently, in logarithmic form:

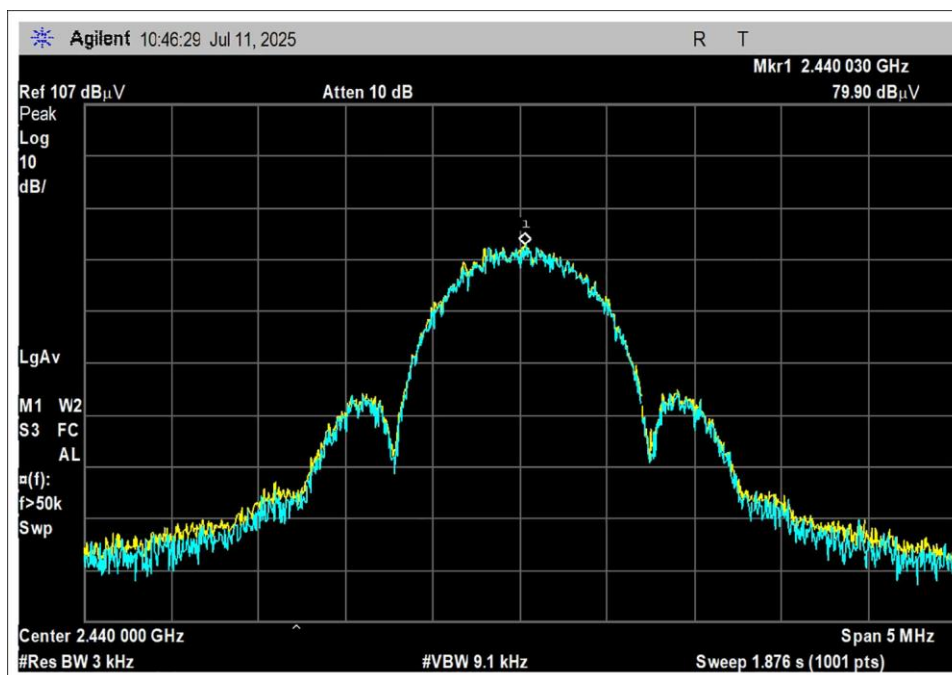
$$P(dBm) = E(dBuV/m) + 20LOG(d) - G - 104.77$$

Plots

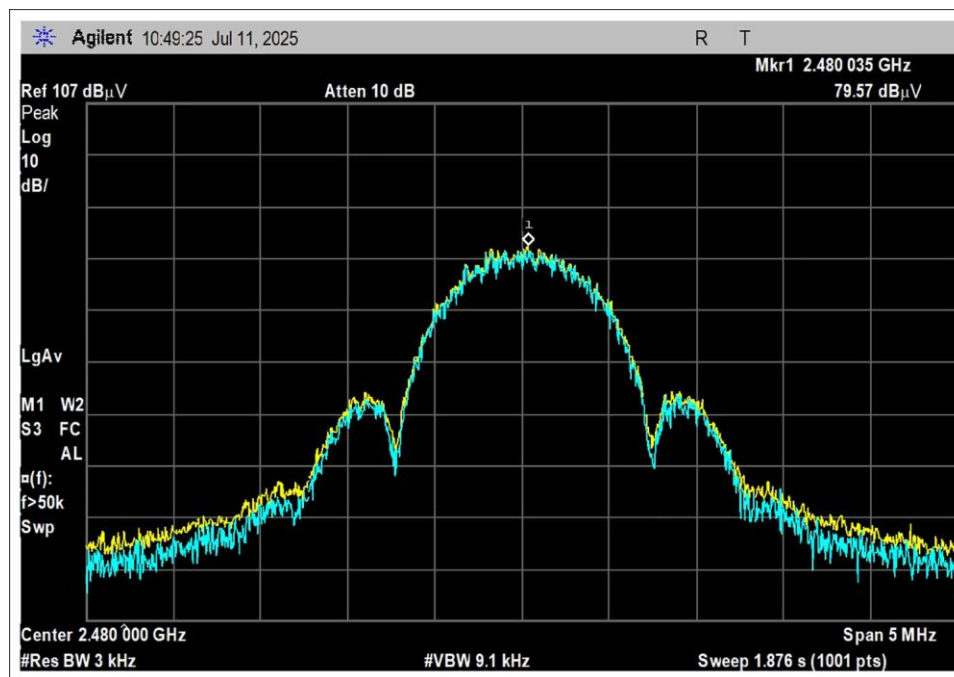
1Mbps



Low Channel

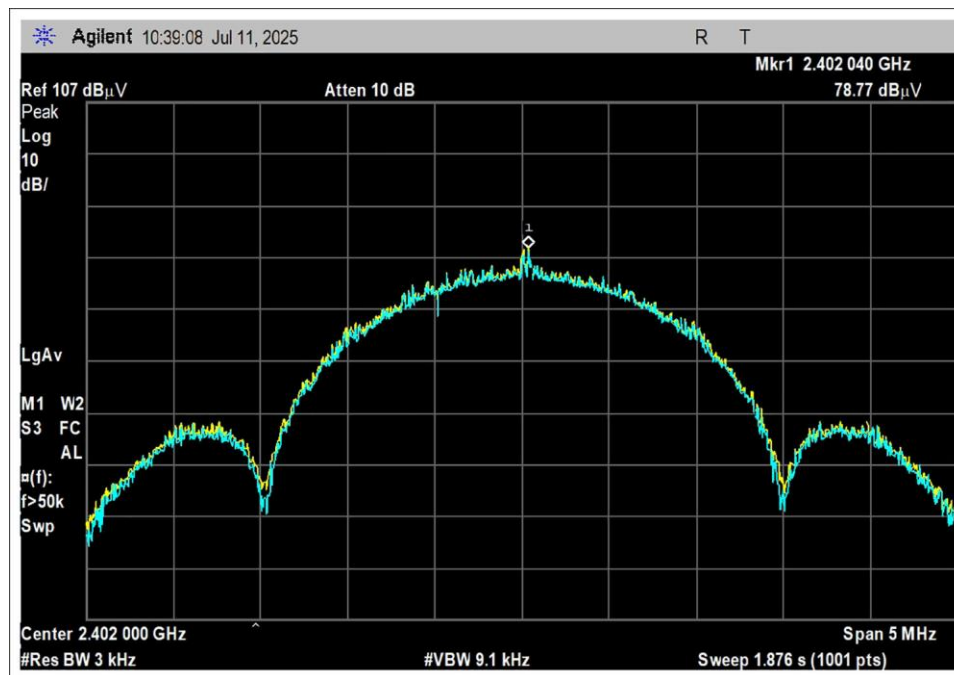


Middle Channel

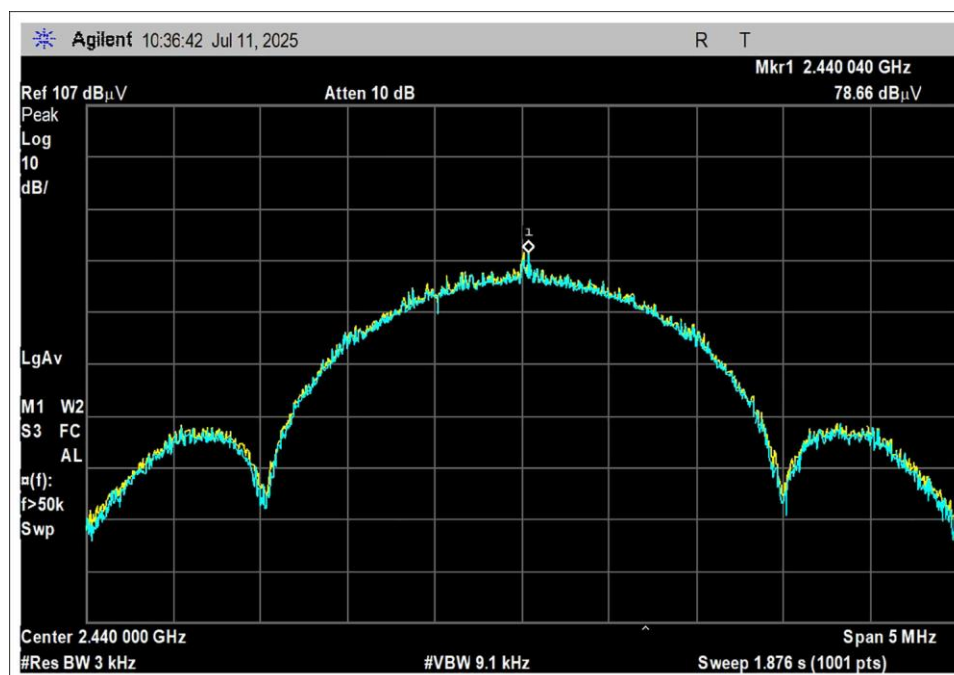


High Channel

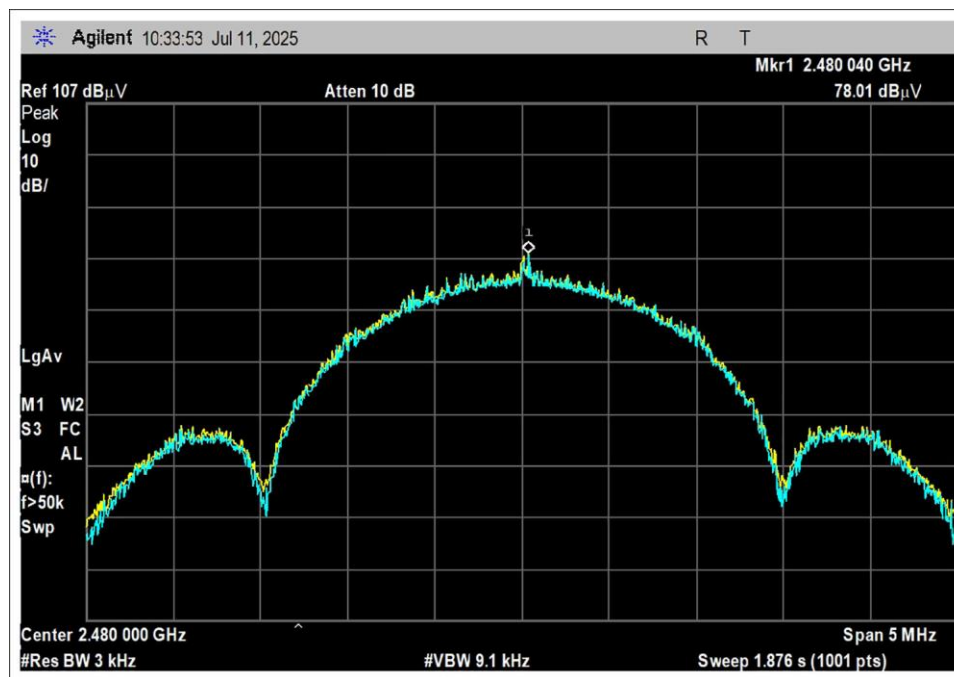
2Mbps



Low Channel



Middle Channel



High Channel

Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)**
 Work Order #: **111245** Date: 7/11/2025
 Test Type: **Maximized Emissions** Time: 10:43:28
 Tested By: M. Atkinson Sequence#: 45
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Frequency: Fundamental

Test Method: ANSI C63.10

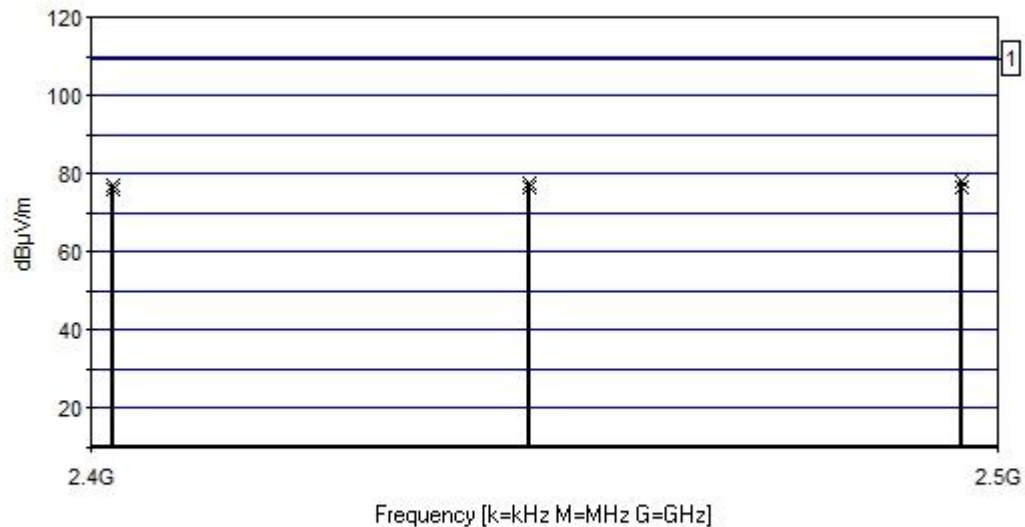
Test set up:
Transmitting low, mid, high

x,y,z axes investigated worst case reported

Horizontal and Vertical measurement polarities investigated, worst case reported.

Investigated with and without wireless charger, worst case reported. The highest output power was found with battery power, however, voltage variations performed while charging and worst case deviation applied.

Medtronic MiniMed WO#: 111245 Sequence#: 45 Date: 7/11/2025
15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS) Test Distance: 3 Meters Horiz



— Readings
1 - 15.247(e) Peak Power Spectral Density (2400-2483.5 MHz DTS)
× Peak Readings
Software Version: 5.03.20

Test Equipment:

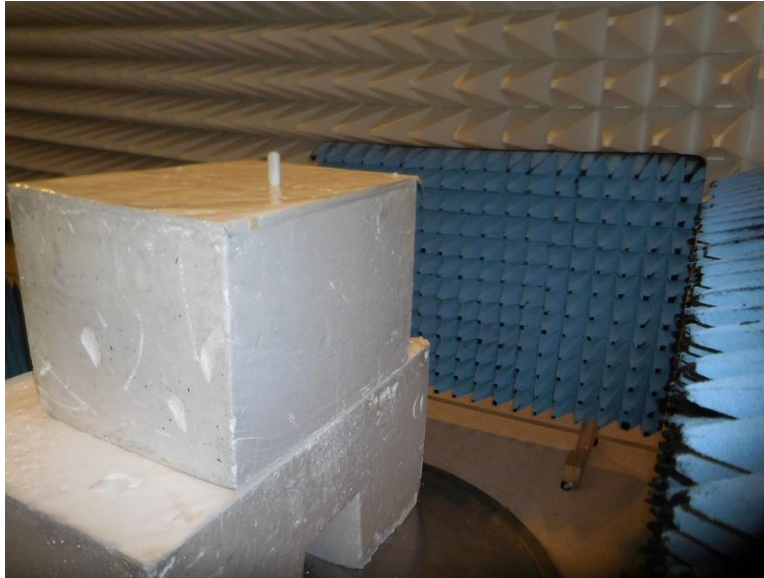
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	AN03540	Preamplifier	83017A	1/7/2025	1/7/2027
T3	AN02374ANSI	Horn Antenna	RGA-60	1/8/2025	1/8/2027
T4	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T5	ANP07504	Cable	CLU40-KMKM-02.00F	1/7/2025	1/7/2027

Measurement Data: Reading listed by order taken. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2480.040M	78.0	+1.1 +0.6	-34.6	+29.0	+2.2	+0.0	76.3	109.2 2Mbps	-32.9	Horiz
2	2440.040M	78.7	+1.1 +0.6	-34.7	+28.5	+2.2	+0.0	76.4	109.2 2Mbps	-32.8	Horiz
3	2402.040M	78.8	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	76.2	109.2 2Mbps	-33.0	Horiz
4	2402.035M	79.7	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	77.1	109.2 1Mbps	-32.1	Horiz
5	2440.030M	79.9	+1.1 +0.6	-34.7	+28.5	+2.2	+0.0	77.6	109.2 1Mbps	-31.6	Horiz
6	2480.035M	79.6	+1.1 +0.6	-34.6	+29.0	+2.2	+0.0	77.9	109.2 1Mbps	-31.3	Horiz

Test Setup Photo(s)

Battery



Above 1GHz



X-Axis



Y-Axis

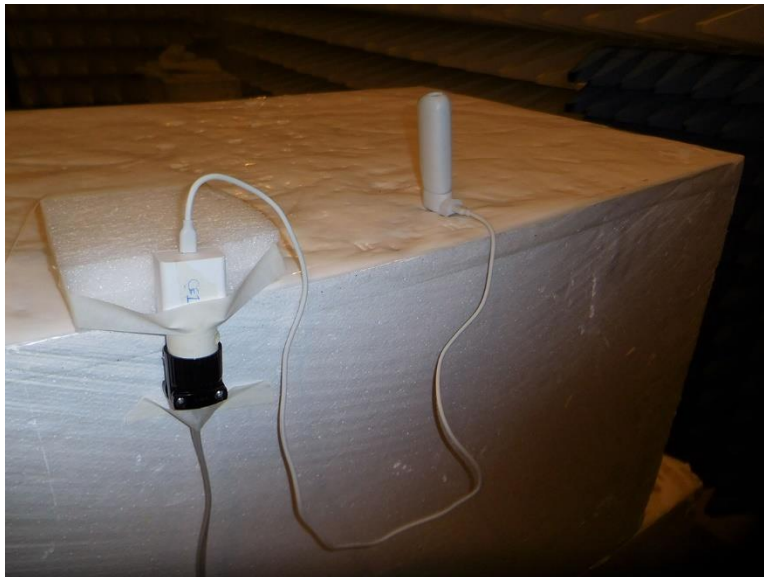


Z-Axis

Charging



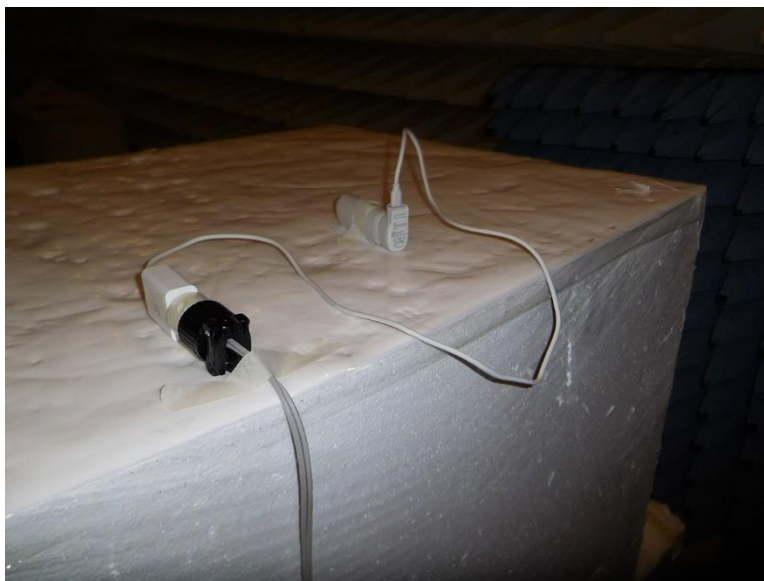
Above 1GHz



X-Axis



Y-Axis



Z-Axis

15.247(d) Radiated Emissions & Band Edge

Test Setup/Conditions

Test Location:	Bothell Lab C3	Test Engineer:	C. Plumadore/M. Atkinson
Test Method:	ANSI C63.10 (2020), KDB 558074	Test Date(s):	7/8/25 to 7/14/25
Configuration:	1 and 2		

Environmental Conditions

Temperature (°C)	22-24	Relative Humidity (%):	35-45
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Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **111245** Date: 7/14/2025
 Test Type: **Radiated Scan** Time: 11:26:10
 Tested By: C. Plumadore Sequence#: 41
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

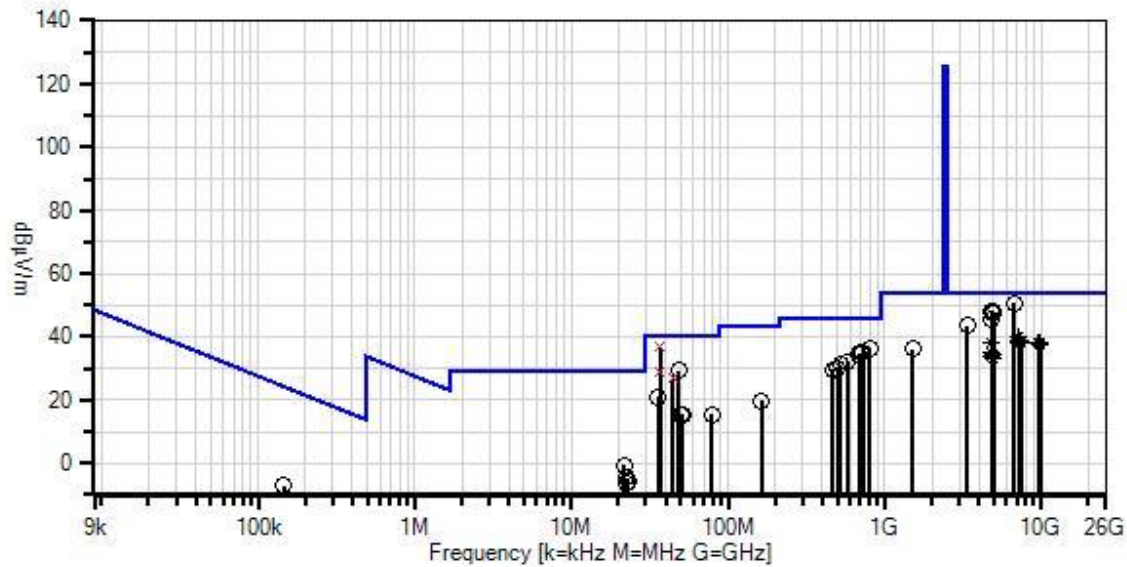
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Test Environment Conditions: Humidity: 43.3% Temperature: 23.4°C Pressure: 101.4kPa Frequency: 30-1000MHz Test Method: ANSI 63.10 Test set up: Transmitting low, mid, high x,y,z axes investigated worst case reported No emissions observed above 10GHz within 10dB of the limit.

Medtronic MiniMed W/O#: 111245 Sequence#: 41 Date: 7/14/2025
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters GndPara



— Readings
× QP Readings
▲ Ambient
○ Peak Readings
* Average Readings
Software Version: 5.03.20
1 - 15.247(d) / 15.209 Radiated Spurious Emissions

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02307	Preamp	8447D	4/25/2025	4/25/2027
T2	AN03863	Biconilog Antenna	3142E	1/15/2025	1/15/2027
T3	ANP08256	Attenuator	WA1/6-6-0403	3/18/2025	3/18/2027
T4	ANP05333	Cable	Heliac	1/8/2025	1/8/2027
T5	ANP05360	Cable	RG214	1/7/2025	1/7/2027
T6	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T7	AN03540	Preamp	83017A	1/7/2025	1/7/2027
T8	AN02374ANSI	Horn Antenna	RGA-60	1/8/2025	1/8/2027
T9	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T10	ANP07504	Cable	CLU40-KMKM-02.00F	1/7/2025	1/7/2027
	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	1/8/2025	1/8/2027
	ANP07901	Cable	CLU40-KMKM-10.00F	1/21/2025	1/21/2027

	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	12/2/2024	12/2/2026
	AN02763-69	Waveguide	Multiple	1/22/2025	1/22/2027
T11	AN00052	Loop Antenna	6502	4/21/2025	4/21/2027

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	36.736M QP	45.6	-28.0 +0.3 +0.0	+12.2 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0	+0.0	36.7	40.0 high channel on charger z-axes	-3.3	Vert
2	6688.000M	42.4	+0.0 +0.0 +4.0	+0.0 +2.0 +1.1	+0.0 -34.6 +0.0	+0.0 +35.6	+0.0	50.5	54.0	-3.5	Horiz
3	4958.645M	43.0	+0.0 +0.0 +3.3	+0.0 +1.6 +0.9	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	47.9	54.0 high channel y-axes	-6.1	Horiz
4	4805.225M	42.8	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9	+0.0	47.8	54.0 low channel y-axes	-6.2	Horiz
5	4879.400M	42.3	+0.0 +0.0 +3.3	+0.0 +1.6 +1.0	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	47.3	54.0 mid channel x-axes	-6.7	Horiz
6	4960.645M	42.4	+0.0 +0.0 +3.3	+0.0 +1.6 +0.9	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	47.3	54.0 high channel x-axes	-6.7	Horiz
7	4959.230M	42.2	+0.0 +0.0 +3.3	+0.0 +1.6 +0.9	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	47.1	54.0 high channel z-axes	-6.9	Horiz
8	4804.610M	40.8	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9	+0.0	45.8	54.0 low channel x-axes	-8.2	Horiz
9	803.100M	29.5	-27.9 +2.6 +0.0	+24.0 +0.9 +0.0	+6.1 +0.0 +0.0	+1.4 +0.0	+0.0	36.6	46.0 mid channel x-axes	-9.4	Horiz
10	3349.000M	42.9	+0.0 +0.0 +2.6	+0.0 +1.3 +0.8	+0.0 -34.3 +0.0	+0.0 +30.4	+0.0	43.7	54.0	-10.3	Horiz
11	48.400M	43.3	-28.0 +0.4 +0.0	+7.0 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0	+0.0	29.3	40.0	-10.7	Vert
12	727.400M	29.5	-28.1 +2.5 +0.0	+23.0 +0.8 +0.0	+6.1 +0.0 +0.0	+1.3 +0.0	+0.0	35.1	46.0 low channel x-axes	-10.9	Horiz

13	36.800M QP	37.9	-28.0 +0.3 +0.0	+12.1 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0 +0.0	+0.0	28.9	40.0 low channel on charger z-axes	-11.1	Vert
^	36.800M	46.6	-28.0 +0.3 +0.0	+12.1 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0 +0.0	+0.0	37.6	40.0 high channel on charger z-axes	-2.4	Vert
^	36.800M	45.6	-28.0 +0.3 +0.0	+12.1 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0 +0.0	+0.0	36.6	40.0 low channel on charger z-axes	-3.4	Vert
16	697.400M	29.7	-28.2 +2.5 +0.0	+22.6 +0.8 +0.0	+6.1 +0.0 +0.0	+1.3 +0.0 +0.0	+0.0	34.8	46.0 high channel y-axes	-11.2	Horiz
17	686.700M	29.2	-28.2 +2.5 +0.0	+22.6 +0.8 +0.0	+6.1 +0.0 +0.0	+1.2 +0.0 +0.0	+0.0	34.2	46.0 low channel y-axes	-11.8	Horiz
18	44.600M QP	39.9	-28.0 +0.3 +0.0	+8.2 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0 +0.0	+0.0	27.0	40.0 mid channel charging z-axes	-13.0	Vert
^	44.600M	47.2	-28.0 +0.3 +0.0	+8.2 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0 +0.0	+0.0	34.3	40.0 mid channel charging z-axes	-5.7	Vert
20	7205.315M Ave	31.3	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5 +0.0	+0.0	40.2	54.0 1Mb low channel y- axes	-13.8	Horiz
^	7205.315M	44.5	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5 +0.0	+0.0	53.4	54.0 1Mb low channel y- axes	-0.6	Horiz
22	581.900M	30.1	-28.4 +2.1 +0.0	+20.3 +0.9 +0.0	+6.1 +0.0 +0.0	+1.1 +0.0 +0.0	+0.0	32.2	46.0 mid channel y-axes	-13.8	Horiz
23	524.700M	29.4	-28.4 +1.8 +0.0	+20.3 +0.9 +0.0	+6.1 +0.0 +0.0	+1.1 +0.0 +0.0	+0.0	31.2	46.0 mid channel x-axes	-14.8	Horiz
24	7205.000M Ave	30.1	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5 +0.0	+0.0	39.0	54.0 low channel y-axes	-15.0	Horiz
^	7205.000M	43.9	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5 +0.0	+0.0	52.8	54.0 low channel y-axes	-1.2	Horiz
26	7321.550M Ave	29.8	+0.0 +0.0 +4.4	+0.0 +2.1 +1.1	+0.0 -35.3 +0.0	+0.0 +36.9 +0.0	+0.0	39.0	54.0 mid channel y-axes	-15.0	Horiz
^	7321.550M	43.7	+0.0 +0.0 +4.4	+0.0 +2.1 +1.1	+0.0 -35.3 +0.0	+0.0 +36.9 +0.0	+0.0	52.9	54.0 mid channel y-axes	-1.1	Horiz
28	7318.630M Ave	29.5	+0.0 +0.0 +4.4	+0.0 +2.1 +1.1	+0.0 -35.3 +0.0	+0.0 +36.9 +0.0	+0.0	38.7	54.0 mid channel z-axes	-15.3	Horiz
^	7318.630M	43.7	+0.0 +0.0 +4.4	+0.0 +2.1 +1.1	+0.0 -35.3 +0.0	+0.0 +36.9 +0.0	+0.0	52.9	54.0 mid channel z-axes	-1.1	Horiz

30	7441.215M Ave	29.6	+0.0 +0.0 +4.4	+0.0 +2.2 +1.1	+0.0 -35.5 +0.0	+0.0 +36.6	+0.0	38.4	54.0 high channel z-axes	-15.6	Horiz
31	7321.315M Ave	29.2	+0.0 +0.0 +4.4	+0.0 +2.1 +1.1	+0.0 -35.3 +0.0	+0.0 +36.9	+0.0	38.4	54.0 mid channel x-axes	-15.6	Horiz
^	7321.315M	43.3	+0.0 +0.0 +4.4	+0.0 +2.1 +1.1	+0.0 -35.3 +0.0	+0.0 +36.9	+0.0	52.5	54.0 mid channel x-axes	-1.5	Horiz
33	7204.810M Ave	29.5	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5	+0.0	38.4	54.0 low channel x-axes	-15.6	Horiz
^	7204.810M	44.4	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5	+0.0	53.3	54.0 low channel x-axes	-0.7	Horiz
35	501.400M	30.0	-28.3 +1.7 +0.0	+18.8 +0.9 +0.0	+6.1 +0.0 +0.0	+1.1 +0.0	+0.0	30.3	46.0 high channel x-axes	-15.7	Horiz
36	7439.190M Ave	29.5	+0.0 +0.0 +4.4	+0.0 +2.2 +1.1	+0.0 -35.5 +0.0	+0.0 +36.6	+0.0	38.3	54.0 high channel y-axes	-15.7	Horiz
^	7439.190M	44.1	+0.0 +0.0 +4.4	+0.0 +2.2 +1.1	+0.0 -35.5 +0.0	+0.0 +36.6	+0.0	52.9	54.0 high channel y-axes	-1.1	Horiz
38	7441.200M Ave	29.5	+0.0 +0.0 +4.4	+0.0 +2.2 +1.1	+0.0 -35.5 +0.0	+0.0 +36.6	+0.0	38.3	54.0 high channel x-axes	-15.7	Horiz
^	7441.215M	44.7	+0.0 +0.0 +4.4	+0.0 +2.2 +1.1	+0.0 -35.5 +0.0	+0.0 +36.6	+0.0	53.5	54.0 high channel z-axes	-0.5	Horiz
^	7441.200M	44.6	+0.0 +0.0 +4.4	+0.0 +2.2 +1.1	+0.0 -35.5 +0.0	+0.0 +36.6	+0.0	53.4	54.0 high channel x-axes	-0.6	Horiz
41	7204.585M Ave	29.3	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5	+0.0	38.2	54.0 low channel z-axes	-15.8	Horiz
^	7204.585M	43.4	+0.0 +0.0 +4.3	+0.0 +2.1 +1.1	+0.0 -35.1 +0.0	+0.0 +36.5	+0.0	52.3	54.0 low channel z-axes	-1.7	Horiz
43	9605.990M Ave	26.2	+0.0 +0.0 +5.2	+0.0 +2.7 +1.2	+0.0 -34.7 +0.0	+0.0 +37.5	+0.0	38.1	54.0 low channel z-axes	-15.9	Horiz
^	9605.990M	41.1	+0.0 +0.0 +5.2	+0.0 +2.7 +1.2	+0.0 -34.7 +0.0	+0.0 +37.5	+0.0	53.0	54.0 low channel z-axes	-1.0	Horiz
45	9918.595M Ave	25.9	+0.0 +0.0 +5.3	+0.0 +2.5 +1.2	+0.0 -34.5 +0.0	+0.0 +37.7	+0.0	38.1	54.0 high channel z-axes	-15.9	Horiz
^	9918.595M	41.1	+0.0 +0.0 +5.3	+0.0 +2.5 +1.2	+0.0 -34.5 +0.0	+0.0 +37.7	+0.0	53.3	54.0 high channel z-axes	-0.7	Horiz

47	499.500M	29.9	-28.3 +1.7 +0.0	+18.7 +0.9 +0.0	+6.1 +0.0 +0.0	+1.1 +0.0 +0.0	+0.0	30.1	46.0 mid channel y-axes	-15.9	Horiz
48	4804.000M Ave	33.0	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9 +0.0	+0.0	38.0	54.0	-16.0	Horiz
^	4804.000M	44.5	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9 +0.0	+0.0	49.5	54.0 1mb low channel z-axes	-4.5	Horiz
50	9606.160M Ave	26.0	+0.0 +0.0 +5.2	+0.0 +2.7 +1.2	+0.0 -34.7 +0.0	+0.0 +37.5 +0.0	+0.0	37.9	54.0 low channel y-axes	-16.1	Horiz
^	9606.160M	41.3	+0.0 +0.0 +5.2	+0.0 +2.7 +1.2	+0.0 -34.7 +0.0	+0.0 +37.5 +0.0	+0.0	53.2	54.0 low channel y-axes	-0.8	Horiz
52	9920.505M Ave	25.6	+0.0 +0.0 +5.3	+0.0 +2.5 +1.2	+0.0 -34.5 +0.0	+0.0 +37.8 +0.0	+0.0	37.9	54.0 high channel x-axes	-16.1	Horiz
^	9920.505M	40.7	+0.0 +0.0 +5.3	+0.0 +2.5 +1.2	+0.0 -34.5 +0.0	+0.0 +37.8 +0.0	+0.0	53.0	54.0 high channel x-axes	-1.0	Horiz
54	9607.260M Ave	26.0	+0.0 +0.0 +5.2	+0.0 +2.7 +1.2	+0.0 -34.7 +0.0	+0.0 +37.5 +0.0	+0.0	37.9	54.0 low channel x-axes	-16.1	Horiz
^	9607.260M	41.4	+0.0 +0.0 +5.2	+0.0 +2.7 +1.2	+0.0 -34.7 +0.0	+0.0 +37.5 +0.0	+0.0	53.3	54.0 low channel x-axes	-0.7	Horiz
56	9758.380M Ave	25.7	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6 +0.0	+0.0	37.8	54.0 mid channel x-axes	-16.2	Horiz
^	9758.380M	40.3	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6 +0.0	+0.0	52.4	54.0 mid channel x-axes	-1.6	Horiz
58	9758.870M Ave	25.7	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6 +0.0	+0.0	37.8	54.0 mid channel z-axes	-16.2	Horiz
^	9758.870M	40.7	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6 +0.0	+0.0	52.8	54.0 mid channel z-axes	-1.2	Horiz
60	9759.410M Ave	25.7	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6 +0.0	+0.0	37.8	54.0	-16.2	Horiz
^	9759.410M	40.9	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6 +0.0	+0.0	53.0	54.0 1mb mid channel x-axes	-1.0	Horiz
62	468.400M	29.9	-28.2 +1.6 +0.0	+18.5 +0.8 +0.0	+6.1 +0.0 +0.0	+1.1 +0.0 +0.0	+0.0	29.8	46.0 low channel x-axes	-16.2	Horiz

63	9918.295M Ave	25.6	+0.0 +0.0 +5.3	+0.0 +2.5 +1.2	+0.0 -34.5 +0.0	+0.0 +37.7	+0.0	37.8	54.0 high channel y-axes	-16.2	Horiz
^	9918.295M	40.8	+0.0 +0.0 +5.3	+0.0 +2.5 +1.2	+0.0 -34.5 +0.0	+0.0 +37.7	+0.0	53.0	54.0 high channel y-axes	-1.0	Horiz
65	9761.310M Ave	25.6	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6	+0.0	37.7	54.0 mid channel y-axes	-16.3	Horiz
^	9761.310M	40.5	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6	+0.0	52.6	54.0 mid channel y-axes	-1.4	Horiz
67	9761.920M Ave	25.6	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6	+0.0	37.7	54.0	-16.3	Horiz
^	9761.920M	41.5	+0.0 +0.0 +5.2	+0.0 +2.6 +1.3	+0.0 -34.6 +0.0	+0.0 +37.6	+0.0	53.6	54.0 1mb mid channel y-axes	-0.4	Horiz
69	463.600M	29.6	-28.2 +1.6 +0.0	+18.4 +0.8 +0.0	+6.1 +0.0 +0.0	+1.1 +0.0	+0.0	29.4	46.0 high channel z-axes	-16.6	Horiz
70	1504.000M	43.6	+0.0 +0.0 +1.7	+0.0 +0.7 +0.5	+0.0 -35.6 +0.0	+0.0 +25.3	+0.0	36.2	54.0	-17.8	Horiz
71	35.800M	29.6	-28.0 +0.3 +0.0	+12.7 +0.1 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0	+0.0	21.1	40.0 mid channel z-axes	-18.9	Vert
72	4803.475M Ave	29.8	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9	+0.0	34.8	54.0	-19.2	Horiz
^	4803.475M	43.4	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9	+0.0	48.4	54.0 1Mb low channel x-axes	-5.6	Horiz
74	4880.355M Ave	29.5	+0.0 +0.0 +3.3	+0.0 +1.6 +1.0	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	34.5	54.0 mid channel z-axes	-19.5	Horiz
^	4880.355M	43.5	+0.0 +0.0 +3.3	+0.0 +1.6 +1.0	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	48.5	54.0 mid channel z-axes	-5.5	Horiz
76	4805.095M Ave	29.0	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9	+0.0	34.0	54.0 low channel z-axes	-20.0	Horiz
^	4805.095M	43.9	+0.0 +0.0 +3.3	+0.0 +1.6 +1.1	+0.0 -33.9 +0.0	+0.0 +32.9	+0.0	48.9	54.0 low channel z-axes	-5.1	Horiz
78	4878.875M Ave	28.4	+0.0 +0.0 +3.3	+0.0 +1.6 +1.0	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	33.4	54.0 mid channel y-axes	-20.6	Horiz
^	4878.875M	43.2	+0.0 +0.0 +3.3	+0.0 +1.6 +1.0	+0.0 -34.0 +0.0	+0.0 +33.1	+0.0	48.2	54.0 mid channel y-axes	-5.8	Horiz

80	162.900M	29.5	-27.5 +0.8 +0.0	+9.8 +0.4 +0.0	+6.1 +0.0 +0.0	+0.6 +0.0	+0.0	19.7	43.5 low channel x-axes	-23.8	Vert
81	50.400M	29.8	-28.0 +0.4 +0.0	+6.8 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0	+0.0	15.6	40.0 low channel z-axes	-24.4	Vert
82	78.500M	29.2	-27.9 +0.5 +0.0	+6.8 +0.3 +0.0	+6.1 +0.0 +0.0	+0.4 +0.0	+0.0	15.4	40.0 high channel y-axes	-24.6	Vert
83	51.300M	29.5	-28.0 +0.4 +0.0	+6.6 +0.2 +0.0	+6.1 +0.0 +0.0	+0.3 +0.0	+0.0	15.1	40.0 low channel y-axes	-24.9	Vert
84	21.880M	31.0	+0.0 +0.0 +0.2	+0.0 +0.0 +0.0	+0.0 +0.0 +8.1	+0.0 +0.0	-40.0	-0.7	29.5	-30.2	GndPa
85	147.100k	63.3	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +9.5	+0.0 +0.0	-80.0	-7.2	24.2	-31.4	Para
86	22.740M	27.3	+0.0 +0.0 +0.2	+0.0 +0.0 +0.0	+0.0 +0.0 +8.0	+0.0 +0.0	-40.0	-4.5	29.5	-34.0	Para
87	146.200k	60.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +9.5	+0.0 +0.0	-80.0	-10.5	24.3	-34.8	GndPa
88	23.040M	25.9	+0.0 +0.0 +0.2	+0.0 +0.1 +0.0	+0.0 +0.0 +8.0	+0.0 +0.0	-40.0	-5.8	29.5	-35.3	Para
89	22.460M	25.3	+0.0 +0.0 +0.2	+0.0 +0.0 +0.0	+0.0 +0.0 +8.1	+0.0 +0.0	-40.0	-6.4	29.5	-35.9	Perp

Band Edge

Band Edge Summary (1Mbps)

Limit applied at restricted bands: 15.209

Limit applied for other than restricted bands: Max Power/100kHz - 20dB.

Frequency (MHz)	Modulation	Ant. Type / Gain (dBi)	Average (dBuV/m @3m)		Peak (dBuV/m @3m)		Results
			Measured	Limit	Measured	Limit	
2390.0	GFSK 1Mbps	PCB Trace Antenna / 2.4dBi	NA1	≤54	38.4	≤74	Pass
2400.0	GFSK 1Mbps	PCB Trace Antenna / 2.4dBi	NA2	NA2	62.4	≤73	Pass
2483.5	GFSK 1Mbps	PCB Trace Antenna / 2.4dBi	NA1	≤54	50.1	≤74	Pass

Band Edge Summary (2Mbps)

Limit applied at restricted bands: 15.209

Limit applied for other than restricted bands: Max Power/100kHz - 20dB.

Frequency (MHz)	Modulation	Ant. Type / Gain (dBi)	Average (dBuV/m @3m)		Peak (dBuV/m @3m)		Results
			Measured	Limit	Measured	Limit	
2390.0	GFSK 1Mbps	PCB Trace Antenna / 2.4dBi	NA1	≤54	39.0	≤74	Pass
2400.0	GFSK 1Mbps	PCB Trace Antenna / 2.4dBi	NA2	NA2	63.7	≤73	Pass
2483.5	GFSK 1Mbps	PCB Trace Antenna / 2.4dBi	NA1	≤54	49.7	≤74	Pass

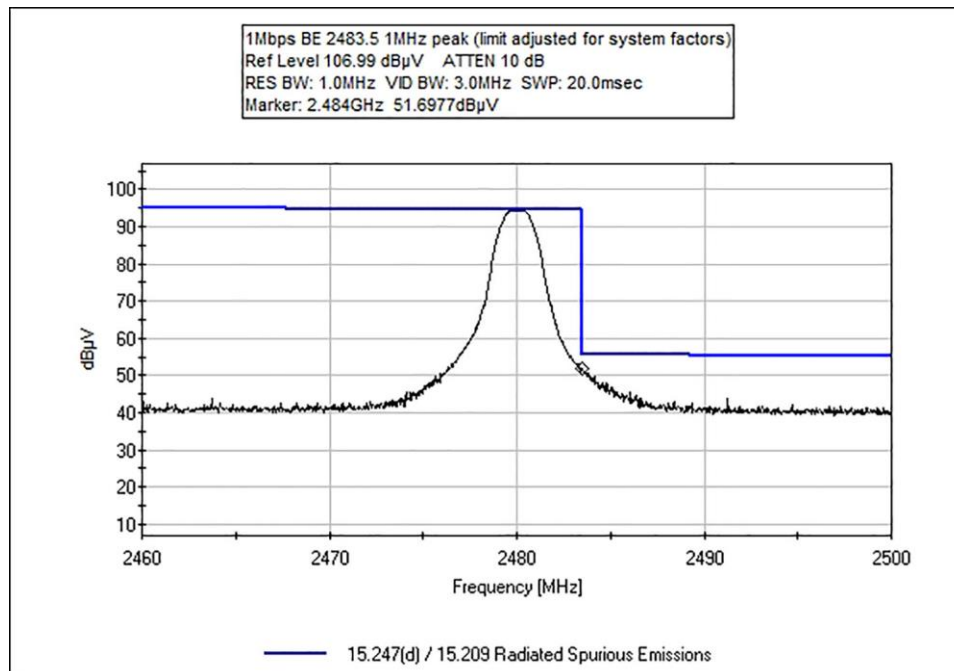
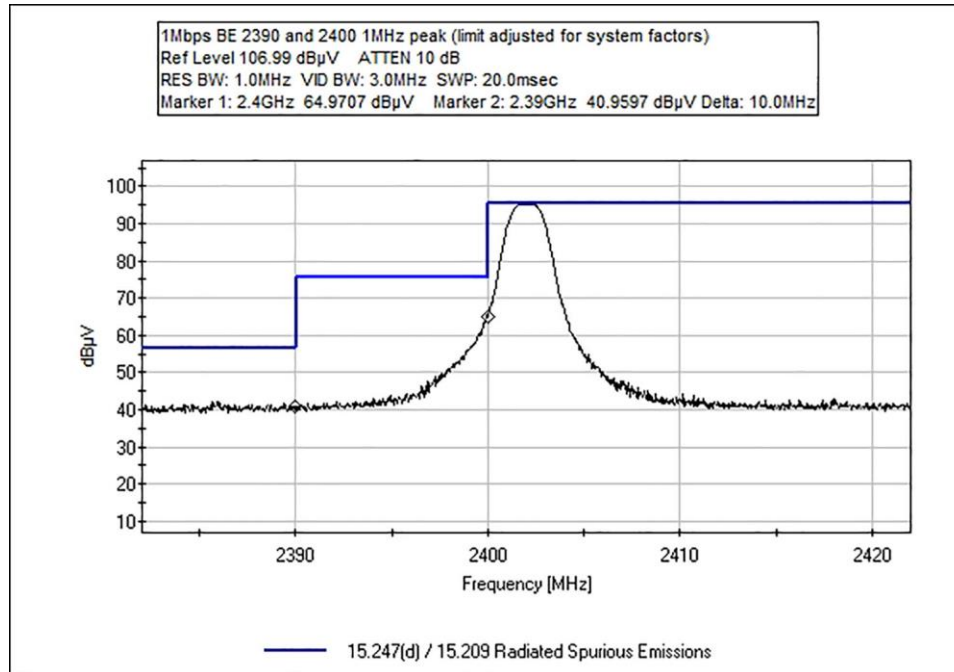
Notes:

NA1	Peak measurement meets average limit.
NA2	Average limit not applicable when applying 20dBc limit.
NA3	Peak limit not applicable when applying 30dBc limit.

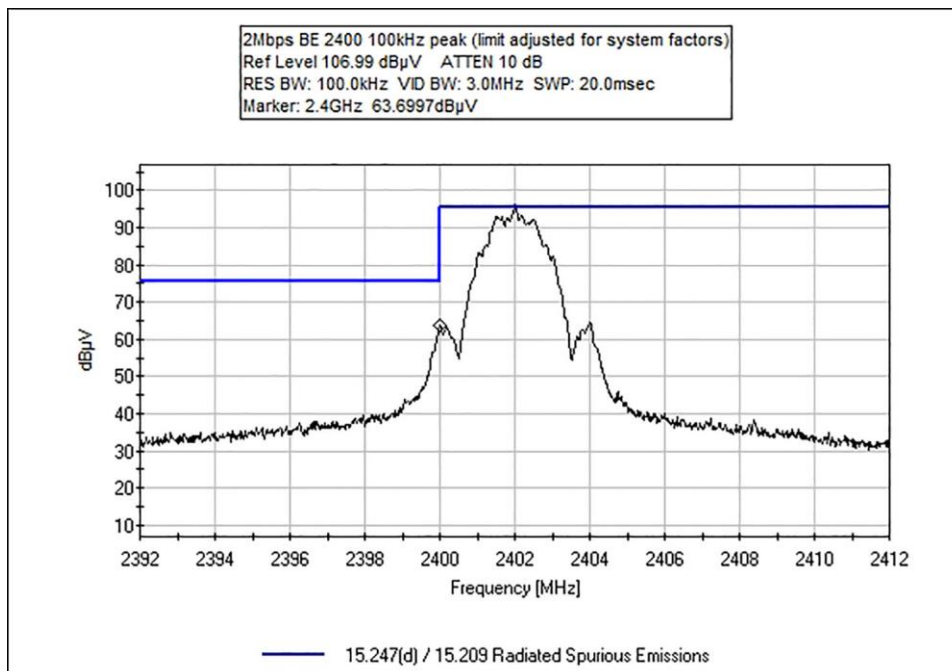
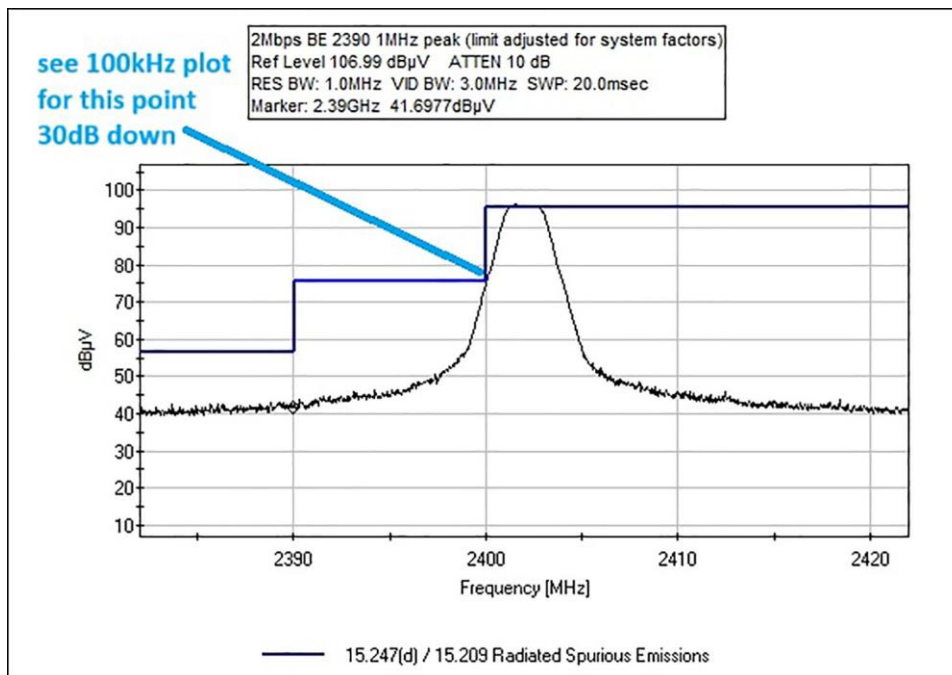
Band Edge Plots

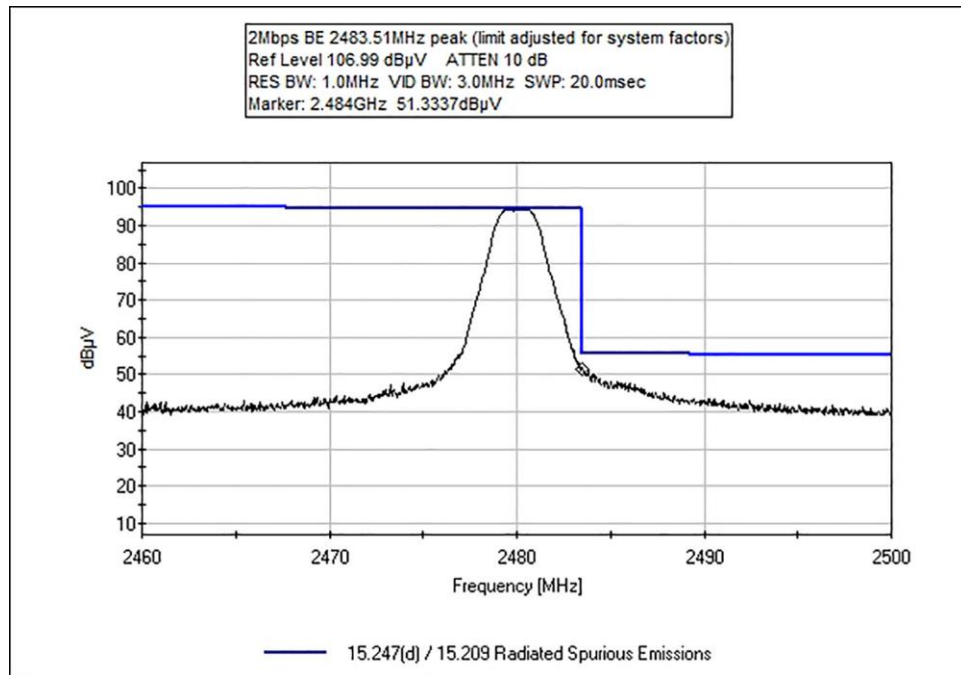
NOTE: Displayed limit corrected for all measuring equipment for comparison with the data.

1Mbps



2Mbps





Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **111245** Date: 7/11/2025
 Test Type: **Radiated Scan** Time: 17:01:19
 Tested By: M. Atkinson Sequence#: 49
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1 and 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1 and 2			

Test Conditions / Notes:

Frequency: Band Edge Test Method: ANSI C63.10 Test set up: 1Mbps data rate Transmitting low, and high x,y,z axes investigated worst case reported Horizontal and Vertical investigated, worst case reported. Investigated battery only and charging configuration, battery only is representative of worst case.

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02307	Preamp	8447D	4/25/2025	4/25/2027
	AN03863	Biconilog Antenna	3142E	1/15/2025	1/15/2027
	ANP08256	Attenuator	WA1/6-6-0403	3/18/2025	3/18/2027
	ANP05333	Cable	Heliac	1/8/2025	1/8/2027
	ANP05360	Cable	RG214	1/7/2025	1/7/2027
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	AN03540	Preamp	83017A	1/7/2025	1/7/2027
T3	AN02374ANSI	Horn Antenna	RGA-60	1/8/2025	1/8/2027
T4	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T5	ANP07504	Cable	CLU40-KMKM-02.00F	1/7/2025	1/7/2027

Measurement Data:

Reading listed by frequency.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	2390.000M	41.0	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	38.4	54.0	-15.6	Horiz
2	2400.000M	65.0	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	62.4	73.0	-10.6	Horiz
3	2483.500M	51.7	+1.1 +0.6	-34.6	+29.1	+2.2	+0.0	50.1	54.0	-3.9	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **111245** Date: 7/11/2025
 Test Type: **Radiated Scan** Time: 16:47:07
 Tested By: M. Atkinson Sequence#: 48
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1 and 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1 and 2			

Test Conditions / Notes:

Frequency: Band Edge
Test Method: ANSI C63.10
Test set up: 2Mbps data rate
Transmitting low, and high
x,y,z axes investigated worst case reported
Horizontal and Vertical investigated, worst case reported.
Investigated battery only and charging configuration, battery only is representative of worst case.

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02307	Preamp	8447D	4/25/2025	4/25/2027
	AN03863	Biconilog Antenna	3142E	1/15/2025	1/15/2027
	ANP08256	Attenuator	WA1/6-6-0403	3/18/2025	3/18/2027
	ANP05333	Cable	Heliac	1/8/2025	1/8/2027
	ANP05360	Cable	RG214	1/7/2025	1/7/2027
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	AN03540	Preamp	83017A	1/7/2025	1/7/2027
T3	AN02374ANSI	Horn Antenna	RGA-60	1/8/2025	1/8/2027
T4	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T5	ANP07504	Cable	CLU40-KMKM-02.00F	1/7/2025	1/7/2027

Measurement Data:

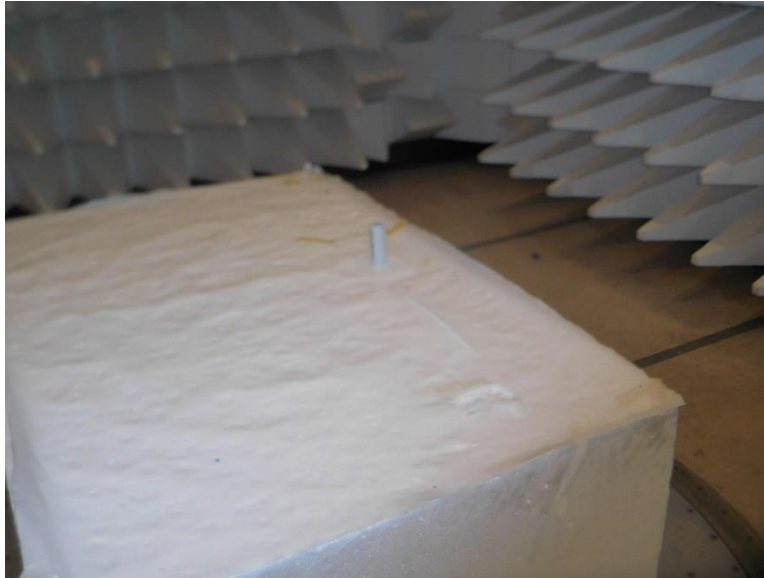
Reading listed by frequency.

Test Distance: 3 Meters

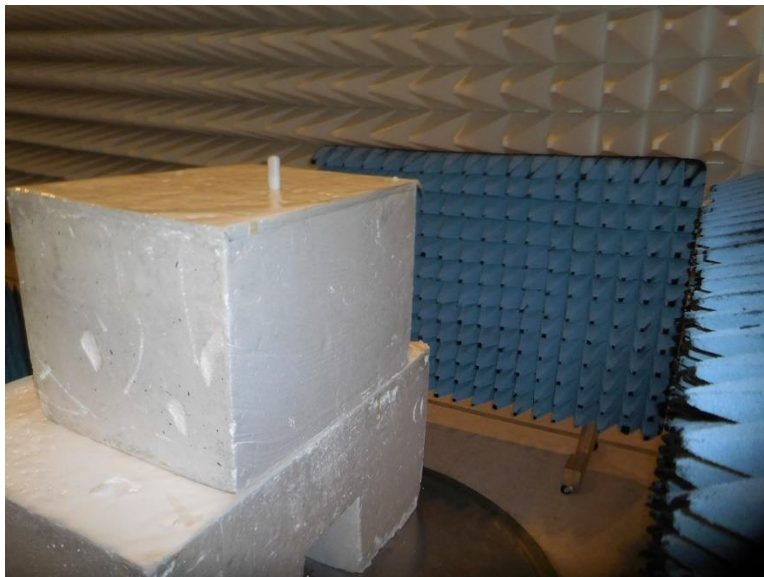
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	2390.000M	41.6	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	39.0	54.0	-15.0	Horiz
2	2400.000M	63.7	+1.1 +0.6	-34.7	+28.2	+2.2	+0.0	61.1	73.0	-11.9	Horiz
3	2483.500M	51.3	+1.1 +0.6	-34.6	+29.1	+2.2	+0.0	49.7	54.0	-4.3	Horiz

Test Setup Photo(s)

Battery



Below 1GHz



Above 1GHz



X-Axes



Y-Axes



Z-Axes

Charging



Below 1GHz



Above 1GHz



X-Axes



Y-Axes



Z-Axes

15.207 AC Conducted Emissions

Test Setup/Conditions

Test Location:	Bothell Lab C3	Test Engineer:	C. Plumadore
Test Method:	ANSI C63.10 (2020)	Test Date(s):	7/9/2025
Configuration:	2		

Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **111245** Date: 7/9/2025
 Test Type: **Conducted Emissions** Time: 11:44:35
 Tested By: C. Plumadore Sequence#: 40
 Software: EMITest 5.03.20 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

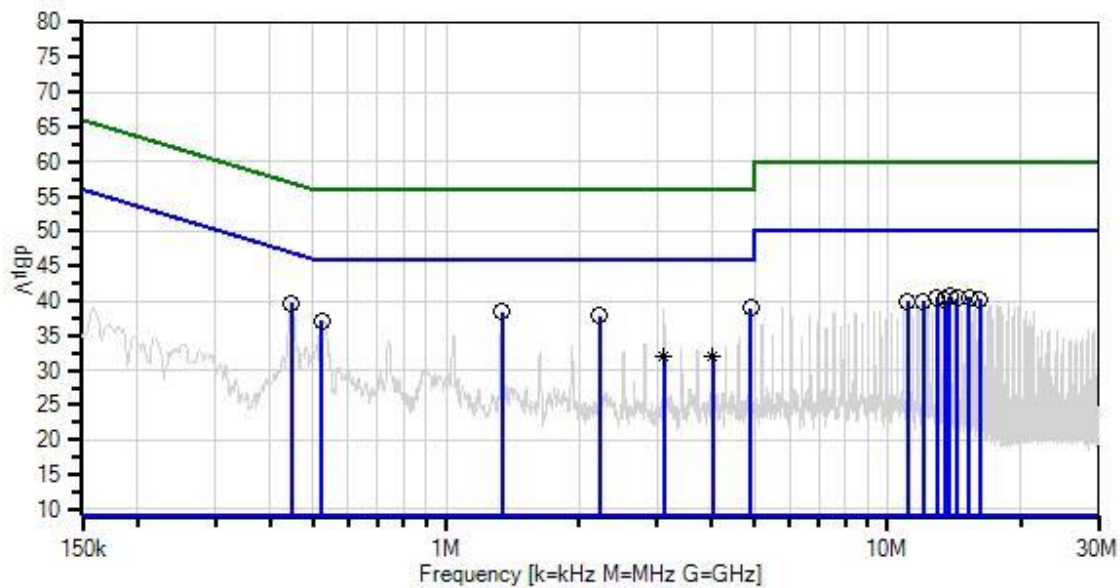
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Test Environment Conditions: Humidity: 43.3% Temperature: 23.4°C Pressure: 101.4kPa Frequency: 150kHz-30MHz Test Method: ANSI 63.10 Test set up: mid channel

Medtronic MiniMed WO#: 111245 Sequence#: 40 Date: 7/9/2025
15.207 AC Mains - Average Test Lead: 120V 60Hz line



— Sweep Data
× QP Readings
Software Version: 5.03.20
— Readings
* Average Readings
— 1 - 15.207 AC Mains - Average
○ Peak Readings
▼ Ambient
— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06219	Attenuator	768-10	3/25/2024	3/25/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T4	AN02611	High Pass Filter	HE9615-150K-50-720B	1/10/2025	1/10/2027
T5	AN01311	50uH LISN-Line1 (L)	3816/2	2/9/2024	2/9/2026
	AN01311	50uH LISN-Line2 (N)	3816/2	2/9/2024	2/9/2026

Measurement Data:

Reading listed by margin.

Test Lead: line

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	4.896M	29.6	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	38.9	46.0	-7.1	line
2	447.427k	30.5	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	39.7	46.9	-7.2	line
3	1.336M	29.1	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	38.4	46.0	-7.6	line
4	2.225M	28.6	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	37.9	46.0	-8.1	line
5	523.056k	28.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	37.2	46.0	-8.8	line
6	13.797M	31.3	+9.1 +0.0	+0.1	+0.0	+0.2	+0.0	40.7	50.0	-9.3	line
7	15.283M	30.9	+9.1 +0.1	+0.1	+0.1	+0.2	+0.0	40.5	50.0	-9.5	line
8	12.905M	31.1	+9.1 +0.0	+0.1	+0.0	+0.2	+0.0	40.5	50.0	-9.5	line
9	14.391M	30.9	+9.1 +0.1	+0.1	+0.0	+0.2	+0.0	40.4	50.0	-9.6	line
10	16.175M	30.6	+9.1 +0.1	+0.1	+0.1	+0.2	+0.0	40.2	50.0	-9.8	line
11	13.499M	30.7	+9.1 +0.0	+0.1	+0.0	+0.2	+0.0	40.1	50.0	-9.9	line
12	11.121M	30.7	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	40.0	50.0	-10.0	line
13	12.022M	30.6	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	39.9	50.0	-10.1	line
14	3.117M	22.7	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	32.0	46.0	-14.0	line
^	3.114M	29.6	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	38.9	46.0	-7.1	line
^	3.117M	29.4	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	38.7	46.0	-7.3	line
17	4.007M	22.6	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	31.9	46.0	-14.1	line
^	4.007M	29.7	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	39.0	46.0	-7.0	line

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **111245** Date: 7/9/2025
 Test Type: **Conducted Emissions** Time: 11:39:37
 Tested By: C. Plumadore Sequence#: 39
 Software: EMITest 5.03.20 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

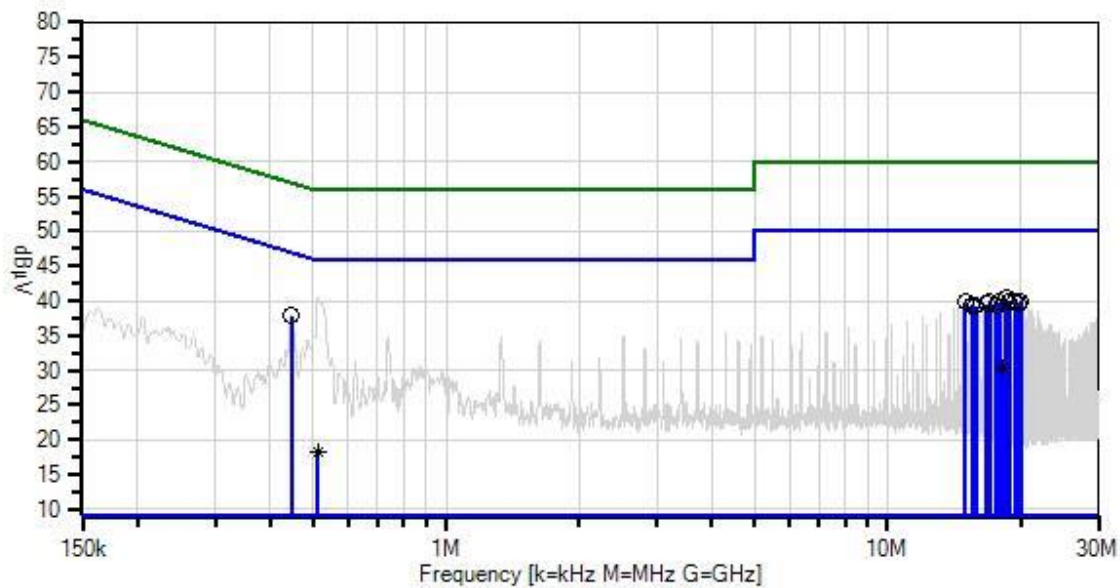
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Test Environment Conditions: Humidity: 43.3% Temperature: 23.4°C Pressure: 101.4kPa Frequency: 150kHz-30MHz Test Method: ANSI 63.10 Test set up: mid channel

Medtronic MiniMed WO#: 111245 Sequence#: 39 Date: 7/9/2025
15.207 AC Mains - Average Test Lead: 120V 60Hz neutral



— Sweep Data
× QP Readings
Software Version: 5.03.20

— Readings
* Average Readings
— 1 - 15.207 AC Mains - Average

○ Peak Readings
▼ Ambient
— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06219	Attenuator	768-10	3/25/2024	3/25/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T4	AN02611	High Pass Filter	HE9615-150K-50-720B	1/10/2025	1/10/2027
	AN01311	50uH LISN-Line1 (L)	3816/2	2/9/2024	2/9/2026
T5	AN01311	50uH LISN-Line2 (N)	3816/2	2/9/2024	2/9/2026

Measurement Data:

Reading listed by margin.

Test Lead: neutral

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	446.699k	28.7	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	37.9	46.9	-9.0	neutr
2	18.526M	30.9	+9.1 +0.0	+0.1	+0.0	+0.2	+0.0	40.3	50.0	-9.7	neutr
3	17.049M	30.5	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	40.0	50.0	-10.0	neutr
4	20.013M	30.5	+9.1 +0.1	+0.1	+0.0	+0.2	+0.0	40.0	50.0	-10.0	neutr
5	19.418M	30.5	+9.1 +0.1	+0.1	+0.0	+0.2	+0.0	40.0	50.0	-10.0	neutr
6	18.833M	30.5	+9.1 +0.0	+0.1	+0.0	+0.2	+0.0	39.9	50.0	-10.1	neutr
7	14.968M	30.3	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	39.8	50.0	-10.2	neutr
8	17.932M	30.3	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	39.8	50.0	-10.2	neutr
9	19.715M	30.2	+9.1 +0.1	+0.1	+0.0	+0.2	+0.0	39.7	50.0	-10.3	neutr
10	16.752M	30.0	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	39.5	50.0	-10.5	neutr
11	17.643M	29.9	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	39.4	50.0	-10.6	neutr
12	15.562M	29.9	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	39.4	50.0	-10.6	neutr
13	15.860M	29.8	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	39.3	50.0	-10.7	neutr
14	18.239M	20.8	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	30.3	50.0	-19.7	neutr
^	18.239M	30.8	+9.1 +0.0	+0.1	+0.1	+0.2	+0.0	40.3	50.0	-9.7	neutr
16	511.420k	9.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	18.2	46.0	-27.8	neutr
^	511.420k	31.2	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	40.4	46.0	-5.6	neutr

Test Setup Photo(s)



Appendix A Manufacturer Declaration

The following models have been tested by CKC Laboratories:

M065019C001

M065019C001 represents the hardware of our MiniMed Flex Insulin Pump Platform which may include a variety of different brand names and model numbers that offer different therapies. Users will be able to upgrade their pump to a more comprehensive model via a firmware update. This update will enable the user to access more therapy options without having to purchase a different pump. The firmware updates will not impact RF, EMC and Safety characteristics.

The manufacturer declares that the following additional models are identical electrically or any differences between them do not affect their RF and EMC characteristics and therefore meets the level of testing equivalent to the tested models.

Insulin Pump	Brand Name	Configuration
RF: M065019C001	Instinct	MMT-8001
	MiniMed Flex	MMT-8062
		MMT-8063
	MiniMed Flex 2 (NMX8)	MMT-8162
		MMT-8163

Note: The products identified in the table above differ in software/firmware related to automated insulin delivery features and associated algorithms. The software and firmware do not affect product radio or electromagnetic compatibility performance or compliance. Hardware documentation such as RF schematics, RF block diagram, and RF component layouts are identical between these insulin pump models. Additional configuration identifiers (e.g., K) may be added to the base configuration number for inventory management purposes. NMX8 is the internal name for the MiniMed Flex 2 system and will be used for clinical trials. Instinct model was used for device verification testing purposes.

Supplemental Information

Measurement Uncertainty

Uncertainty Value	Parameter
5.77 dB	Radiated Emissions
0.673 dB	RF Conducted Measurements
5.77×10^{-10}	Frequency Deviation
0.00005 s	Time Deviation
3.18 dB	Mains Conducted Emissions

Uncertainties reported are worst case for all CKC Laboratories' sites and represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in $\text{dB}\mu\text{V}/\text{m}$, the spectrum analyzer reading in $\text{dB}\mu\text{V}$ was corrected by using the following formula. This reading was then compared to the applicable specification limit. Individual measurements were compared with the displayed limit value in the margin column. The margin was calculated based on subtracting the limit value from the corrected measurement value; a positive margin represents a measurement exceeding the limit, while a negative margin represents a measurement less than the limit.

SAMPLE CALCULATIONS		
	Meter reading	($\text{dB}\mu\text{V}$)
+	Antenna Factor	(dB/m)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	($\text{dB}\mu\text{V}/\text{m}$)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or caret ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point, the measuring device is set into the linear mode and the scan time is reduced.

End of Report