

Therapy Holdings

TEST REPORT FOR

**Pelvic Floor Exercise Trainer
Model: L4-010-0001**

Tested to The Following Standards:

FCC Part 15 Subpart C Section(s)

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

Report No.: 105810-13

Date of issue: October 29, 2021



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.

This report contains a total of 59 pages and may be reproduced in full only. Partial reproduction may only be done with the written consent of CKC Laboratories, Inc.



TABLE OF CONTENTS

Administrative Information 3

 Test Report Information3

 Report Authorization3

 Test Facility Information4

 Software Versions4

 Site Registration & Accreditation Information4

 Summary of Results5

 Modifications During Testing5

 Conditions During Testing5

 Equipment Under Test6

 General Product Information6

FCC Part 15 Subpart C 10

 15.247(a)(2) 6dB Bandwidth10

 15.247(b)(3) Output Power14

 15.247(d) Radiated Emissions & Band Edge18

 15.247(e) Power Spectral Density54

Supplemental Information 58

 Measurement Uncertainty58

 Emissions Test Details58

ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Therapy Holdings
2325 - 3rd Street
San Francisco CA 94107

Representative: Brian Krieger

DATE OF EQUIPMENT RECEIPT:

DATE(S) OF TESTING:

REPORT PREPARED BY:

Terri Rayle
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 105810

October 11, 2021

October 11-12, 2021

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 that reads 'Steve Behm'.

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.
1120 Fulton Place
Fremont, CA 94539

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)

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

NA = Not Applicable

NA1 = The manufacturer declares the EUT is battery operated.

ISO/IEC 17025 Decision Rule

The declaration of pass or fail herein is based upon assessment to the specification(s) listed above, including where applicable, assessment 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

Device	Manufacturer	Model #	S/N
Pelvic Floor Exercise Trainer	Therapy Holdings, Inc.	L4-010-0001	ENG-1

Support Equipment:

Device	Manufacturer	Model #	S/N
Laptop	ASUS	L410M	M6N0CX12Z10224A
Laptop power supply	ASUS	ADP-33AW Y	NA

General Product Information:

Product Information	Manufacturer-Provided Details
Equipment Type:	Stand-Alone Equipment
Type of Wideband System:	DTS
Operating Frequency Range:	2402 – 2480MHz
Modulation Type(s):	GFSK
Maximum Duty Cycle:	100%
Number of TX Chains:	1
Antenna Type(s) and Gain:	0 dBi
Beamforming Type:	None
Antenna Connection Type:	Integral
Nominal Input Voltage:	3.7VDC
Firmware / Software used for Test:	Putty version 0.75
The validity of results is dependent on the stated product details, the accuracy of which the manufacturer assumes full responsibility.	

EUT Photo(s)



Support Equipment Photo(s)



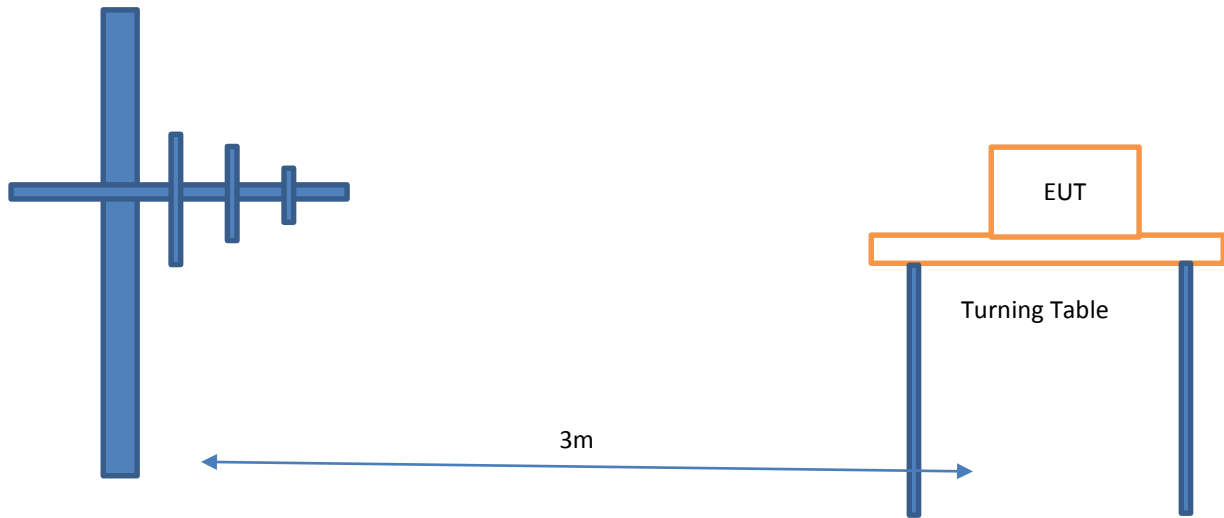
Laptop



Laptop power supply

Block Diagram of Test Setup(s)

Radiated Method Setup



FCC Part 15 Subpart C

15.247(a)(2) 6dB Bandwidth

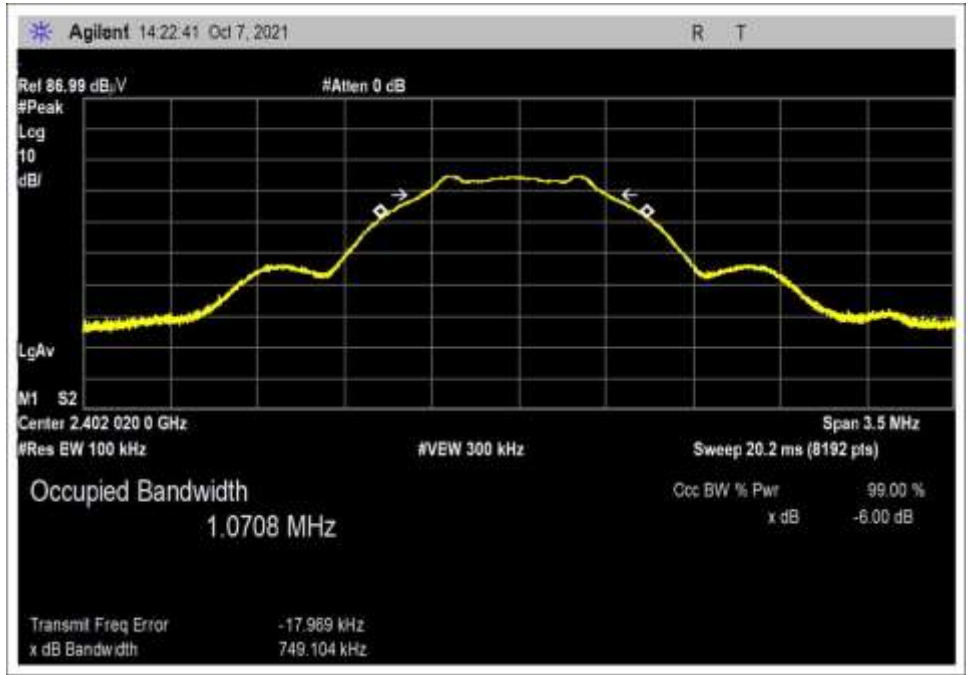
Test Setup/Conditions			
Test Location:	Fremont Lab C3	Test Engineer:	Hoang Cao / Randy Clark
Test Method:	ANSI C63.10 (2013), KDB 558074 D01 15.247 Meas Guidance v05r02	Test Date(s):	10/7/2021
Configuration:	1		
Test Setup:	The EUT is set up as table-top to simulate the normal operation. It is operated as intended. The EUT is configured to continuously transmit.		

Environmental Conditions			
Temperature (°C)	22.3	Relative Humidity (%):	40

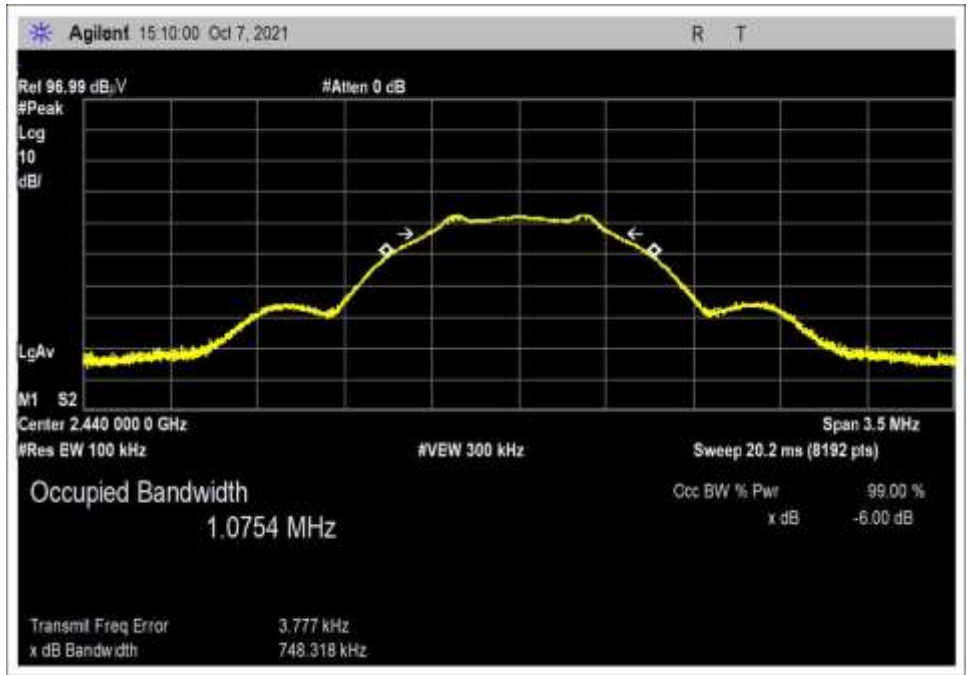
Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02157	Horn Antenna	EMCO	3115	1/7/2021	1/7/2023
P01210	Cable	Andrews	FSJ1P-50A-4A	11/2/2020	11/2/2022
03302	Cable	Astrolab	32026-29094K- 29094K-72TC	1/9/2020	1/9/2022
03471	Spectrum Analyzer	Agilent	E4440A	2/11/2020	2/11/2022

Test Data Summary					
Frequency (MHz)	Antenna Port	Modulation	Measured (kHz)	Limit (kHz)	Results
2402	1	GFSK	749.104	≥500	Pass
2440	1	GFSK	748.318	≥500	Pass
2480	1	GFSK	754.220	≥500	Pass

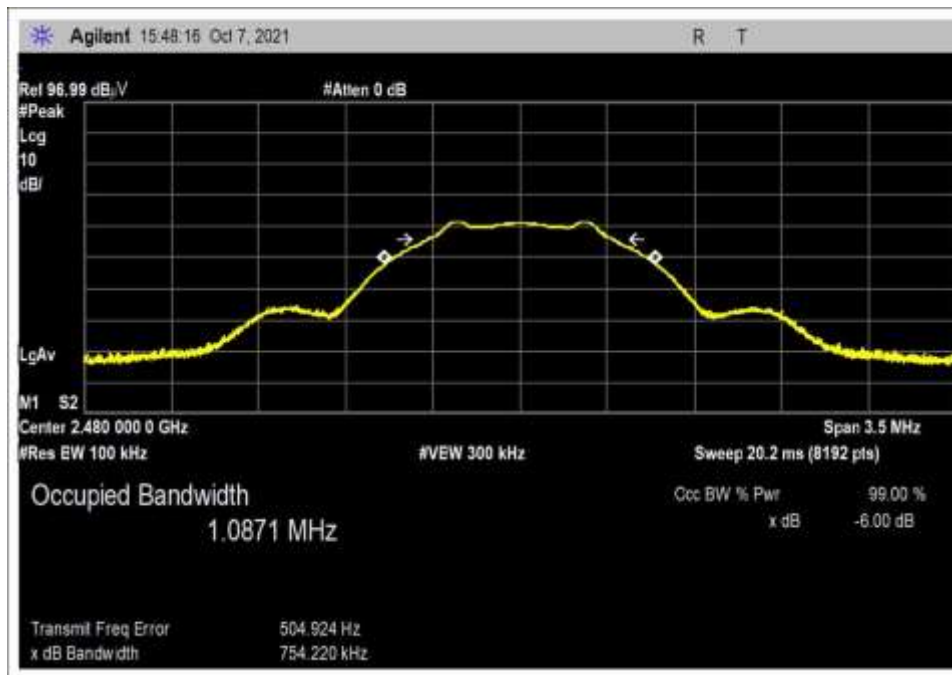
Plot(s)



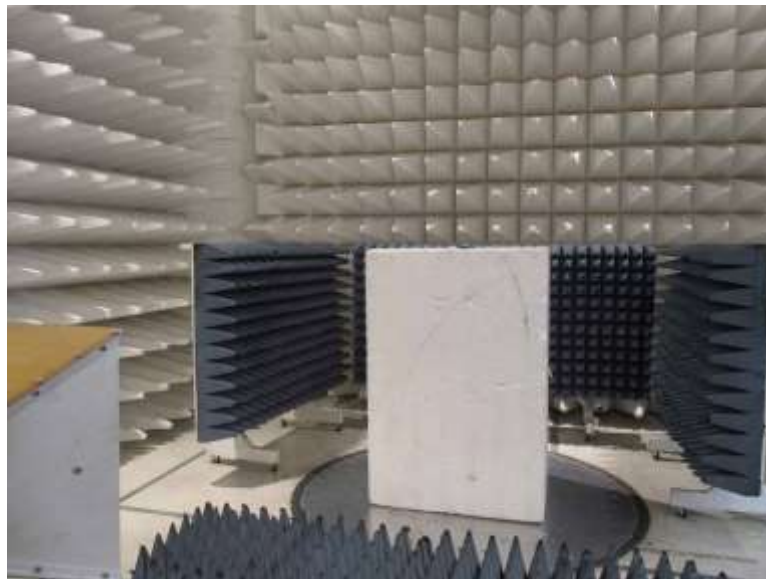
Low Channel



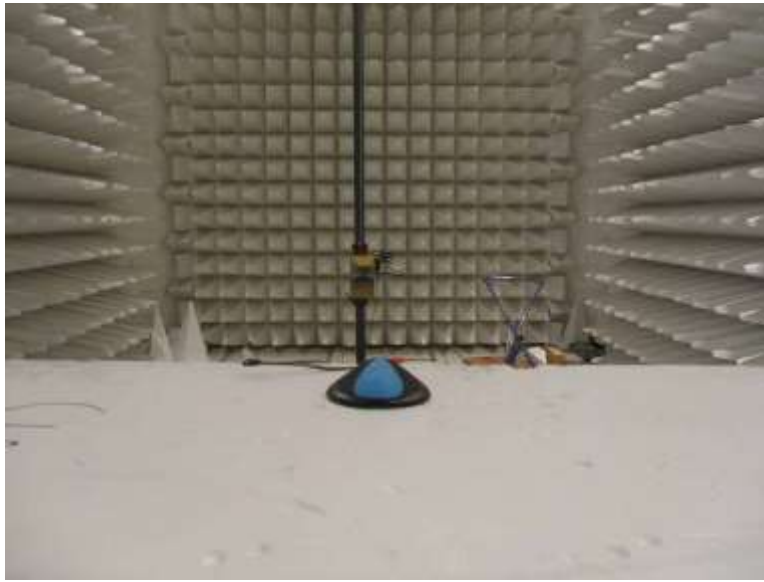
Middle Channel



Test Setup Photo(s)



Test Setup



Test Setup, Close-up

15.247(b)(3) Output Power

Test Setup/Conditions			
Test Location:	Fremont Lab C3	Test Engineer:	Hoang Cao / Randy Clark
Test Method:	ANSI C63.10 (2013), KDB 558074 D01 15.247 Meas Guidance v05r02	Test Date(s):	10/7/2021
Configuration:	1		
Test Setup:	The EUT is set up as Table-top to simulate the normal operation. It is operated as intended. The EUT is configured to continuously transmit.		

Environmental Conditions			
Temperature (°C)	22.3	Relative Humidity (%):	40

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02157	Horn Antenna	EMCO	3115	1/7/2021	1/7/2023
P01210	Cable	Andrews	FSJ1P-50A-4A	11/2/2020	11/2/2022
03302	Cable	Astrolab	32026-29094K- 29094K-72TC	1/9/2020	1/9/2022
03471	Spectrum Analyzer	Agilent	E4440A	2/11/2020	2/11/2022

Test Data Summary - Voltage Variations

This equipment is battery powered. Power output tests were performed using a fresh battery.

Test Data Summary - Radiated Measurement

Measurement Option: RBW > DTS Bandwidth						
Frequency (MHz)	Modulation	Ant. Type / Gain (dBi)	Field Strength (dBuV/m @3m)	Calculated (dBm)	Limit (dBm)	Results
2402	GFSK	0	93.56	-1.669	≤30	Pass
2440	GFSK	0	92.39	-2.839	≤30	Pass
2480	GFSK	0	91.48	-3.749	≤30	Pass

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

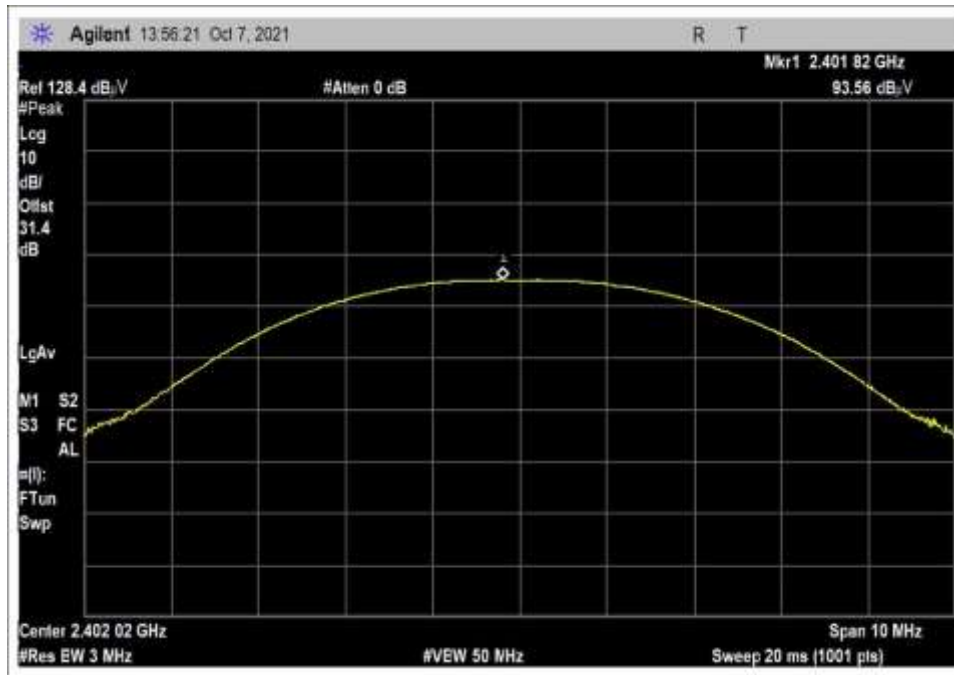
Conducted RF output power calculated in accordance with ANSI C63.10.

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

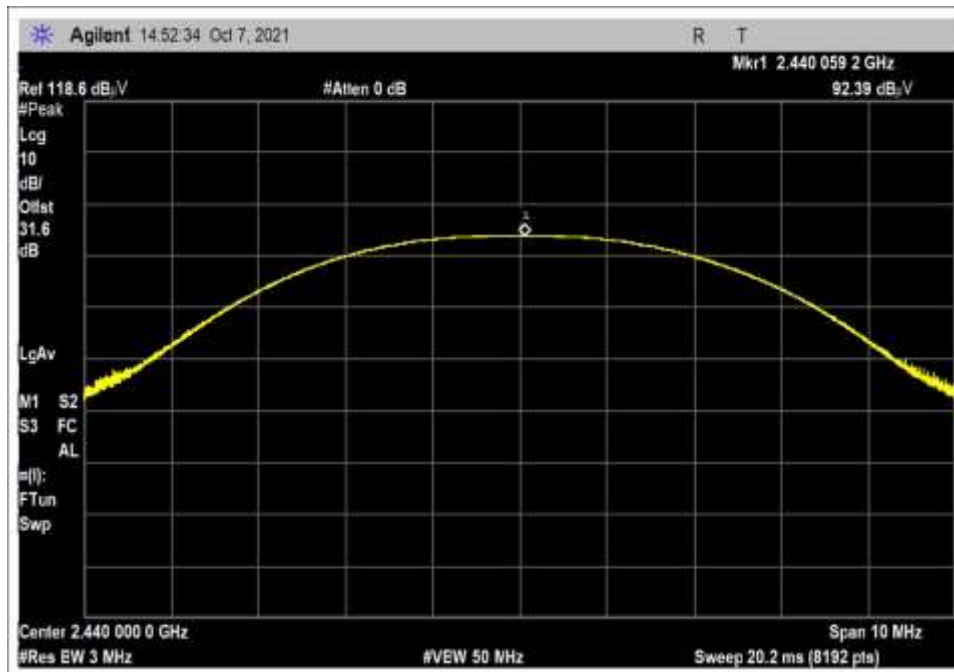
Or equivalently, in logarithmic form:

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

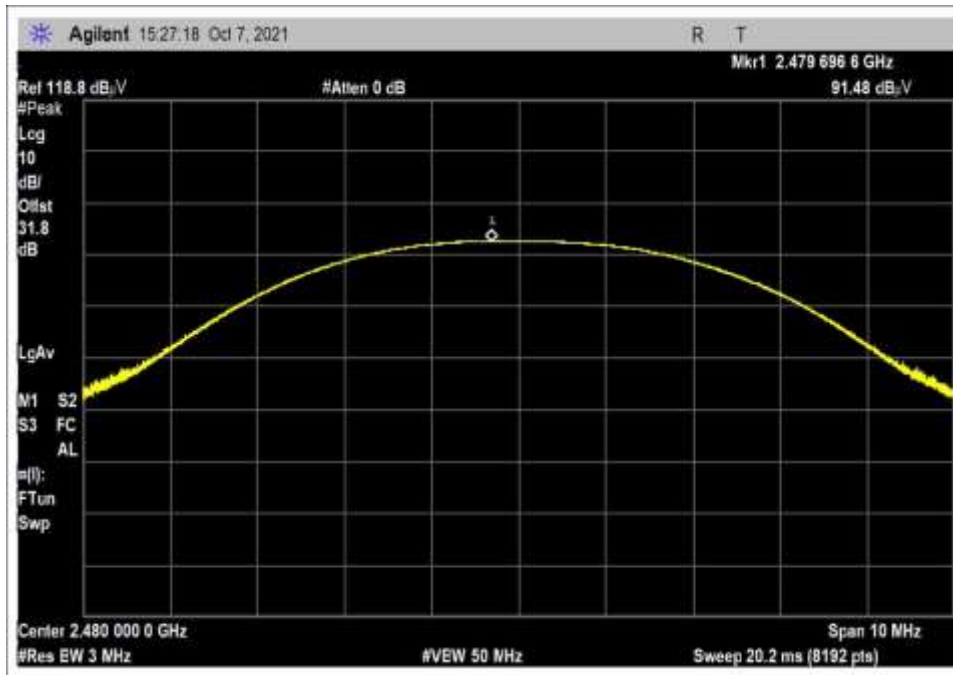
Plots



Low Channel

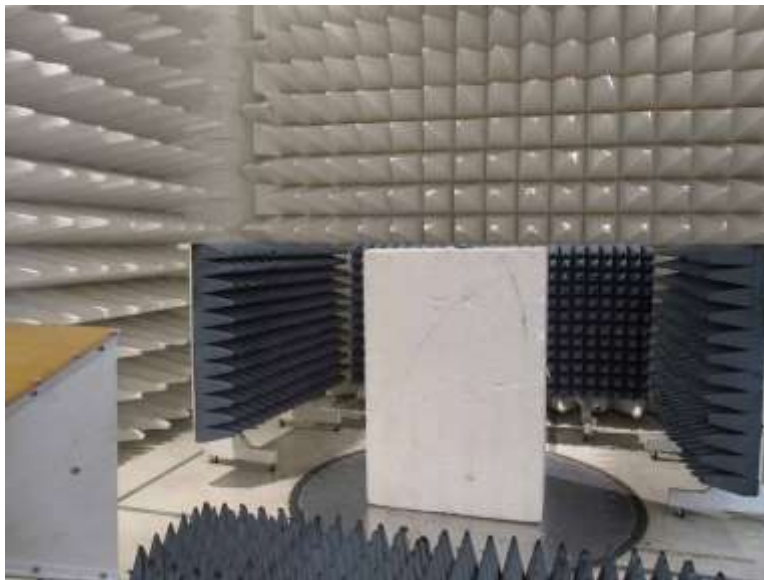


Middle Channel

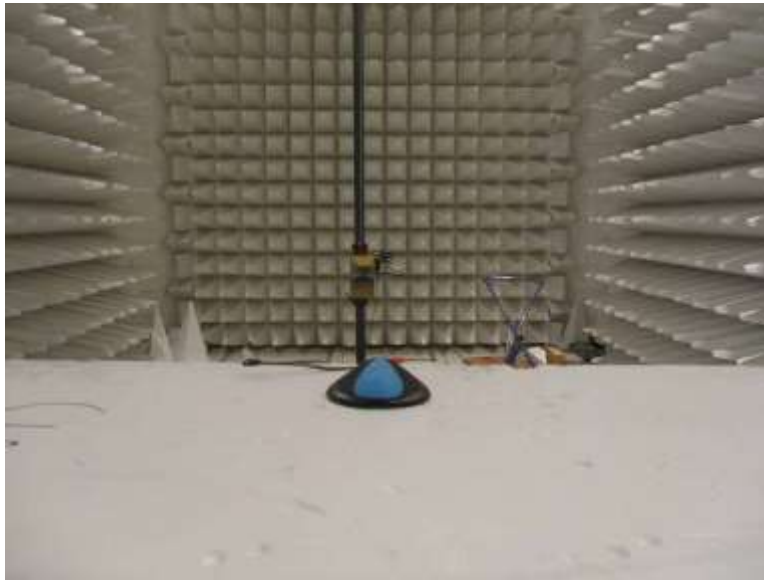


High Channel

Test Setup Photo(s)



Test Setup



Test Setup, Close-up

15.247(d) Radiated Emissions & Band Edge

Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/12/2021
 Test Type: **Radiated Scan** Time: 10:38:52
 Tested By: Hoang Cao / Randy Clark Sequence#: 39
 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:

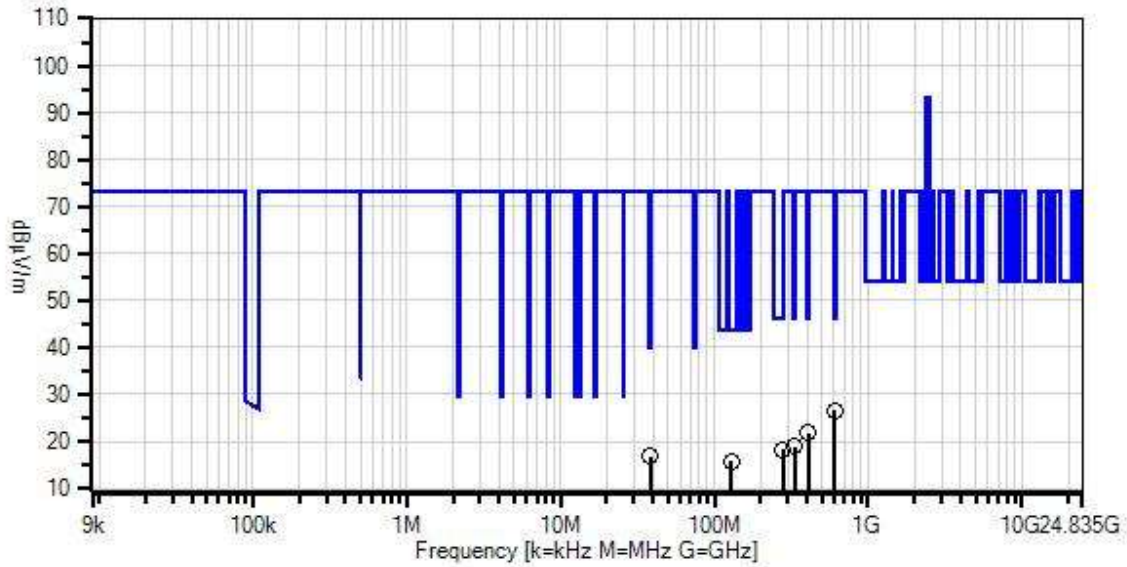
Frequency Range: 9kHz to 1GHz

 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHzMethod: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

Low Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 39 Date: 10/12/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



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

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP07508	Preamp	310N	7/9/2020	7/9/2022
T2	AN00852	Biconilog Antenna	CBL 6111C	4/14/2020	4/14/2022
T3	ANP06049	Attenuator	PE7002-6	5/11/2020	5/11/2022
T4	ANP01187	Cable	CNT-195	7/6/2020	7/6/2022
T5	ANP06691	Cable	PE3062-180	3/25/2020	3/25/2022
T6	ANP06694	Cable	PE3062-480	3/25/2020	3/25/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
	AN00432	Loop Antenna	6502	7/19/2021	7/19/2023

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	608.500M	28.8	-32.0 +1.0	+19.7 +2.5	+5.9	+0.6	+0.0	26.5	46.0	-19.5	Horiz
2	38.186M	27.7	-32.1 +0.2	+14.6 +0.4	+5.9	+0.0	+0.0	16.7	40.0	-23.3	Vert
3	407.900M	28.7	-31.9 +0.7	+15.9 +1.9	+5.9	+0.5	+0.0	21.7	46.0	-24.3	Horiz
4	332.585M	27.8	-31.9 +0.7	+14.1 +1.7	+6.0	+0.4	+0.0	18.8	46.0	-27.2	Horiz
5	128.621M	28.5	-32.0 +0.4	+11.8 +1.0	+5.9	+0.1	+0.0	15.7	43.5	-27.8	Vert
6	278.050M	28.7	-31.9 +0.6	+12.9 +1.6	+6.0	+0.3	+0.0	18.2	46.0	-27.8	Vert



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/12/2021
 Test Type: **Radiated Scan** Time: 10:34:19
 Tested By: Hoang Cao / Randy Clark Sequence#: 38
 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 Range: 9kHz to 1GHz

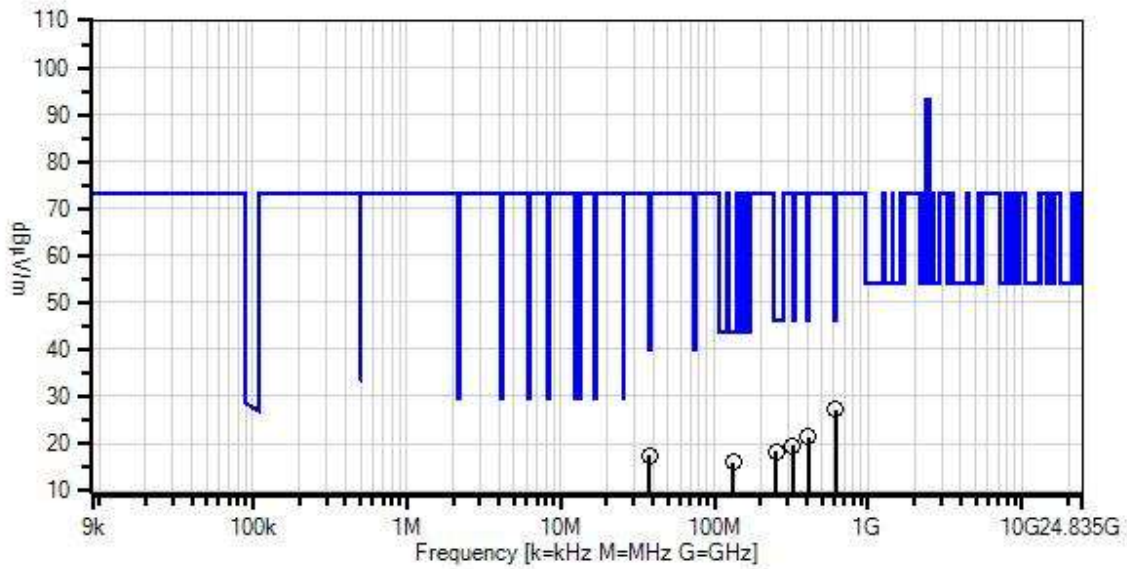
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

Middle Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 38 Date: 10/12/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



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

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP07508	Preamp	310N	7/9/2020	7/9/2022
T2	AN00852	Biconilog Antenna	CBL 6111C	4/14/2020	4/14/2022
T3	ANP06049	Attenuator	PE7002-6	5/11/2020	5/11/2022
T4	ANP01187	Cable	CNT-195	7/6/2020	7/6/2022
T5	ANP06691	Cable	PE3062-180	3/25/2020	3/25/2022
T6	ANP06694	Cable	PE3062-480	3/25/2020	3/25/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
	AN00432	Loop Antenna	6502	7/19/2021	7/19/2023

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	611.383M	29.3	-32.0 +1.0	+19.8 +2.5	+5.9	+0.6	+0.0	27.1	46.0	-18.9	Vert
2	37.653M	28.1	-32.1 +0.2	+14.9 +0.4	+5.9	+0.0	+0.0	17.4	40.0	-22.6	Horiz
3	405.978M	28.4	-31.9 +0.7	+15.9 +1.9	+5.9	+0.5	+0.0	21.4	46.0	-24.6	Vert
4	325.137M	28.6	-31.9 +0.7	+13.9 +1.7	+6.0	+0.4	+0.0	19.4	46.0	-26.6	Vert
5	132.585M	28.8	-32.0 +0.4	+11.8 +1.0	+5.9	+0.1	+0.0	16.0	43.5	-27.5	Horiz
6	252.345M	29.1	-31.9 +0.6	+12.6 +1.5	+6.0	+0.3	+0.0	18.2	46.0	-27.8	Horiz



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/12/2021
 Test Type: **Radiated Scan** Time: 10:27:18
 Tested By: Hoang Cao / Randy Clark Sequence#: 37
 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 Range: 9kHz to 1GHz

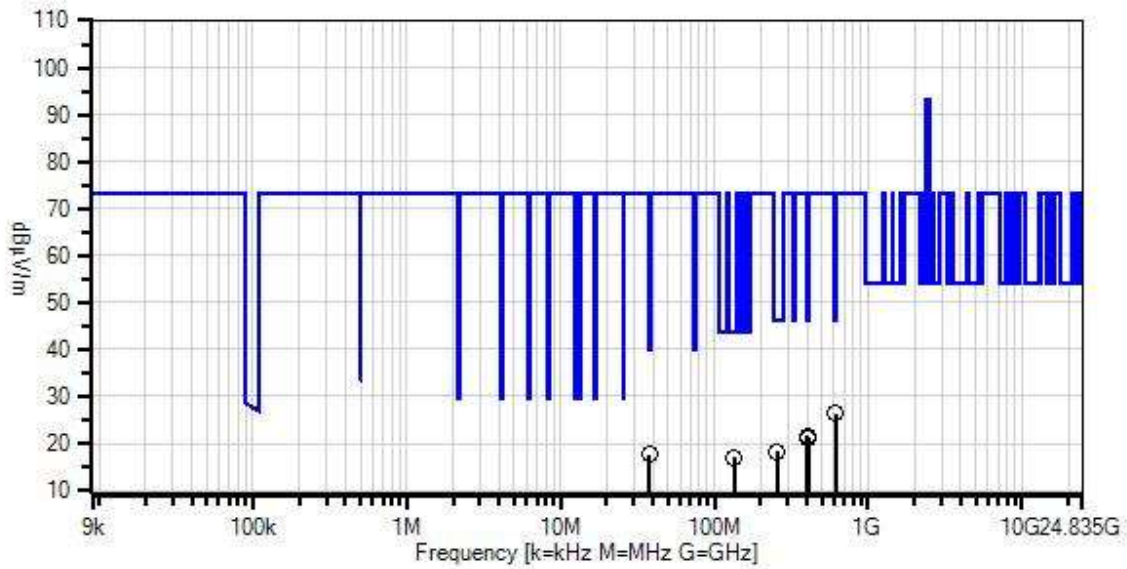
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

High Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 37 Date: 10/12/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



— Readings
 × QP Readings
 ▼ Ambient
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions

○ Peak Readings
 * Average Readings
 Software Version: 5.03.20

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP07508	Preamp	310N	7/9/2020	7/9/2022
T2	AN00852	Biconilog Antenna	CBL 6111C	4/14/2020	4/14/2022
T3	ANP06049	Attenuator	PE7002-6	5/11/2020	5/11/2022
T4	ANP01187	Cable	CNT-195	7/6/2020	7/6/2022
T5	ANP06691	Cable	PE3062-180	3/25/2020	3/25/2022
T6	ANP06694	Cable	PE3062-480	3/25/2020	3/25/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
	AN00432	Loop Antenna	6502	7/19/2021	7/19/2023

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	611.984M	28.6	-32.0 +1.0	+19.8 +2.5	+5.9	+0.6	+0.0	26.4	46.0	-19.6	Vert
2	37.986M	28.5	-32.1 +0.2	+14.7 +0.4	+5.9	+0.0	+0.0	17.6	40.0	-22.4	Horiz
3	399.972M	28.7	-31.9 +0.7	+15.7 +1.9	+6.0	+0.5	+0.0	21.6	46.0	-24.4	Horiz
4	407.299M	28.2	-31.9 +0.7	+15.9 +1.9	+5.9	+0.5	+0.0	21.2	46.0	-24.8	Horiz
5	135.228M	29.7	-32.0 +0.4	+11.8 +1.0	+5.9	+0.2	+0.0	17.0	43.5	-26.5	Vert
6	254.747M	29.0	-31.9 +0.6	+12.7 +1.5	+6.0	+0.3	+0.0	18.2	46.0	-27.8	Vert



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/11/2021
 Test Type: **Radiated Scan** Time: 16:56:59
 Tested By: Hoang Cao / Randy Clark Sequence#: 28
 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 Range: 1GHz to 12GHz

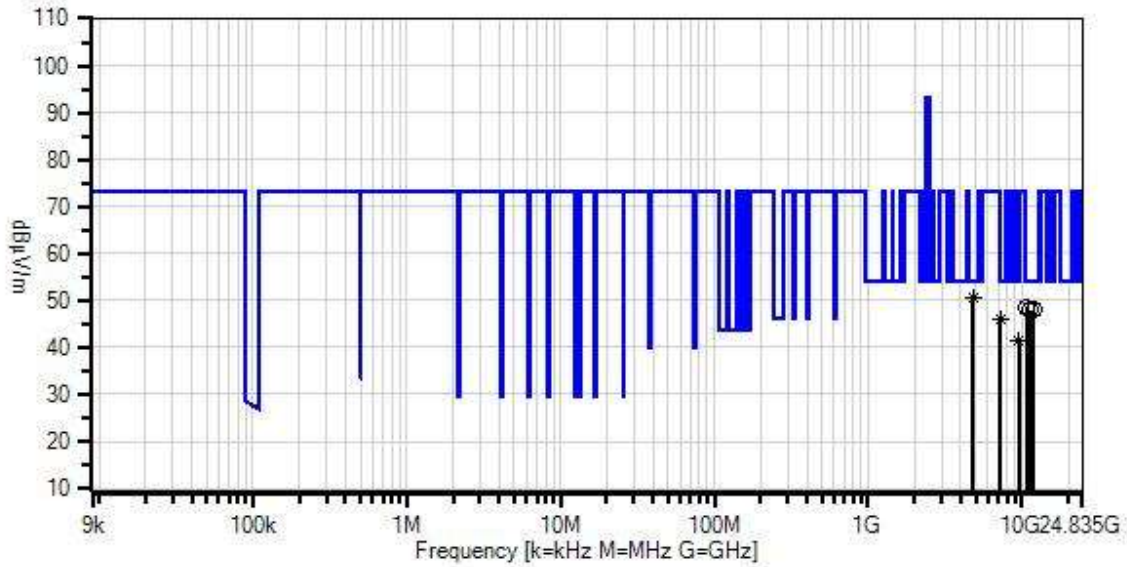
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

Low Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 28 Date: 10/11/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



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

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/7/2021	1/7/2023
T2	AN03302	Cable	32026-29094K-29094K-72TC	1/9/2020	1/9/2022
T3	ANP01210	Cable	FSJ1P-50A-4A	11/2/2020	11/2/2022
T4	ANP06902	Cable	32022-29094K-29094K-36TC	8/13/2020	8/13/2022
T5	AN03713	Preamp	01001800-221055-202525	5/24/2021	5/24/2023
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
T6	AN03386	High Pass Filter	11SH10-3000/T10000-O/O	4/6/2020	4/6/2022

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4804.482M Ave	66.6	+32.8 -56.1	+1.8 +0.4	+3.7	+1.2	+0.0	50.4	54.0	-3.6	Horiz
^	4804.482M	73.2	+32.8 -56.1	+1.8 +0.4	+3.7	+1.2	+0.0	57.0	54.0	+3.0	Horiz
3	10675.668 M	55.1	+38.6 -56.4	+2.8 +0.9	+5.7	+1.8	+0.0	48.5	54.0	-5.5	Vert
4	11965.280 M	53.3	+38.6 -55.6	+3.0 +0.8	+6.0	+1.9	+0.0	48.0	54.0	-6.0	Vert
5	11149.856 M	54.3	+38.5 -56.2	+2.9 +0.7	+5.9	+1.8	+0.0	47.9	54.0	-6.1	Horiz
6	7206.840M Ave	59.0	+35.5 -57.1	+2.3 +0.4	+4.5	+1.5	+0.0	46.1	73.1	-27.0	Horiz
^	7206.840M	67.2	+35.5 -57.1	+2.3 +0.4	+4.5	+1.5	+0.0	54.3	73.1	-18.8	Horiz
8	9607.020M Ave	50.8	+37.6 -57.0	+2.6 +0.4	+5.3	+1.7	+0.0	41.4	73.1	-31.7	Horiz
^	9607.020M	61.2	+37.6 -57.0	+2.6 +0.4	+5.3	+1.7	+0.0	51.8	73.1	-21.3	Horiz



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/11/2021
 Test Type: **Radiated Scan** Time: 16:45:16
 Tested By: Hoang Cao / Randy Clark Sequence#: 27
 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 Range: 1GHz to 12GHz

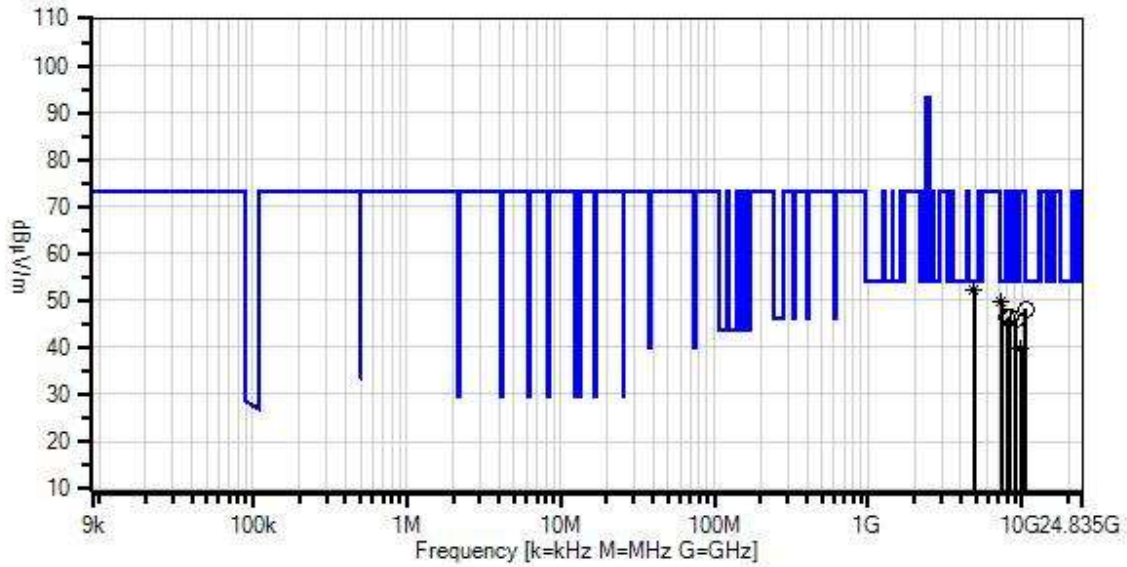
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

Middle Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 27 Date: 10/11/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



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

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/7/2021	1/7/2023
T2	AN03302	Cable	32026-29094K-29094K-72TC	1/9/2020	1/9/2022
T3	ANP01210	Cable	FSJ1P-50A-4A	11/2/2020	11/2/2022
T4	ANP06902	Cable	32022-29094K-29094K-36TC	8/13/2020	8/13/2022
T5	AN03713	Preamp	01001800-221055-202525	5/24/2021	5/24/2023
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
T6	AN03386	High Pass Filter	11SH10-3000/T10000-O/O	4/6/2020	4/6/2022

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4879.518M Ave	68.2	+33.0 -56.1	+1.8 +0.4	+3.7	+1.2	+0.0	52.2	54.0	-1.8	Horiz
^	4879.518M	74.7	+33.0 -56.1	+1.8 +0.4	+3.7	+1.2	+0.0	58.7	54.0	+4.7	Horiz
3	7320.795M Ave	62.7	+35.6 -57.2	+2.3 +0.4	+4.6	+1.5	+0.0	49.9	54.0	-4.1	Horiz
^	7320.795M	68.7	+35.6 -57.2	+2.3 +0.4	+4.6	+1.5	+0.0	55.9	54.0	+1.9	Horiz
5	10621.614 M	54.9	+38.6 -56.5	+2.8 +0.9	+5.6	+1.8	+0.0	48.1	54.0	-5.9	Vert
6	8431.426M	57.7	+36.6 -57.4	+2.5 +0.5	+5.0	+1.6	+0.0	46.5	54.0	-7.5	Vert
7	8052.047M	57.4	+36.9 -57.2	+2.4 +0.5	+4.9	+1.5	+0.0	46.4	54.0	-7.6	Vert
8	9162.156M	56.1	+37.4 -57.2	+2.5 +0.4	+5.3	+1.6	+0.0	46.1	54.0	-7.9	Vert
9	9761.020M Ave	48.9	+37.7 -57.0	+2.6 +0.4	+5.3	+1.7	+0.0	39.6	73.1	-33.5	Horiz
^	9761.020M	59.1	+37.7 -57.0	+2.6 +0.4	+5.3	+1.7	+0.0	49.8	73.1	-23.3	Horiz



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/11/2021
 Test Type: **Radiated Scan** Time: 16:34:48
 Tested By: Hoang Cao / Randy Clark Sequence#: 26
 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 Range: 1GHz to 12GHz

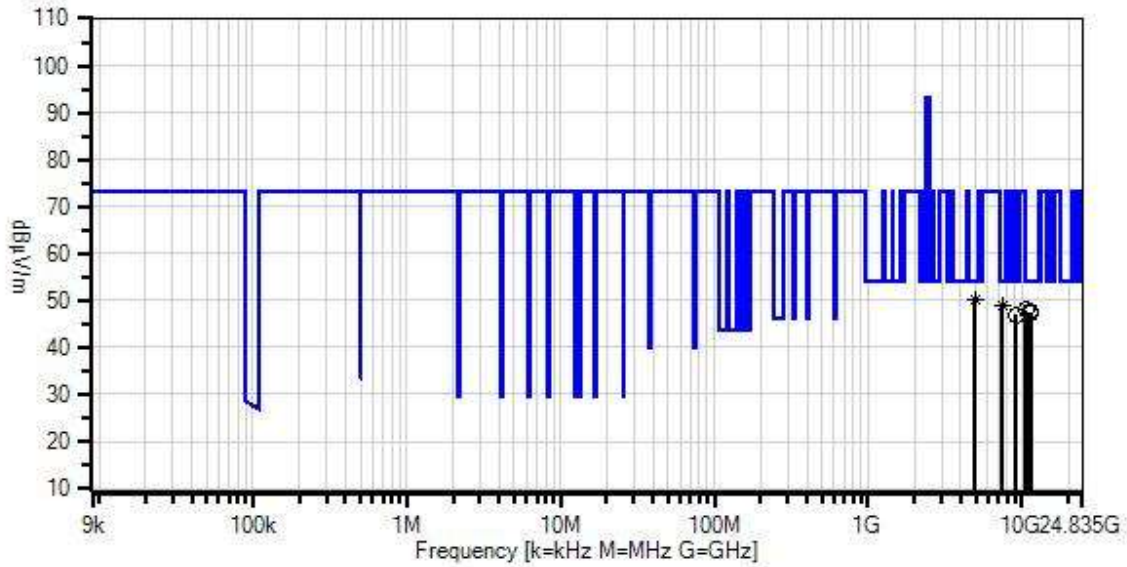
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

High Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 26 Date: 10/11/2021
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



- Readings
 - × QP Readings
 - ▼ Ambient
 - Peak Readings
 - * Average Readings
- Software Version: 5.03.20

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna-ANSI C63.5	3115	1/7/2021	1/7/2023
T2	AN03302	Cable	32026-29094K-29094K-72TC	1/9/2020	1/9/2022
T3	ANP01210	Cable	FSJ1P-50A-4A	11/2/2020	11/2/2022
T4	ANP06902	Cable	32022-29094K-29094K-36TC	8/13/2020	8/13/2022
T5	AN03713	Preamp	01001800-221055-202525	5/24/2021	5/24/2023
T6	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
T7	AN03386	High Pass Filter	11SH10-3000/T10000-O/O	4/6/2020	4/6/2022

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 T7 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	4959.378M Ave	66.0	+33.2 -56.1	+1.8 +0.0	+3.8 +0.4	+1.2	+0.0	50.3	54.0	-3.7	Horiz
^	4959.378M	72.3	+33.2 -56.1	+1.8 +0.0	+3.8 +0.4	+1.2	+0.0	56.6	54.0	+2.6	Horiz
3	7440.816M Ave	61.8	+35.7 -57.3	+2.3 +0.0	+4.6 +0.5	+1.5	+0.0	49.1	54.0	-4.9	Vert
^	7440.816M	69.4	+35.7 -57.3	+2.3 +0.0	+4.6 +0.5	+1.5	+0.0	56.7	54.0	+2.7	Vert
5	10627.620 M	54.6	+38.6 +0.9	+2.8 -56.4	+5.7 +0.0	+1.8	+0.0	48.0	54.0	-6.0	Vert
6	11378.016 M	53.7	+38.7 +0.7	+2.9 -56.2	+5.9 +0.0	+1.8	+0.0	47.5	54.0	-6.5	Horiz
7	11129.024 M	53.9	+38.4 -56.2	+2.9 +0.0	+5.9 +0.7	+1.8	+0.0	47.4	54.0	-6.6	Horiz
8	9164.158M	57.0	+37.4 -57.2	+2.5 +0.0	+5.3 +0.4	+1.6	+0.0	47.0	54.0	-7.0	Vert



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/12/2021
 Test Type: **Radiated Scan** Time: 16:35:19
 Tested By: Hoang Cao / Randy Clark Sequence#: 64
 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 Range: 12GHz to 25GHz

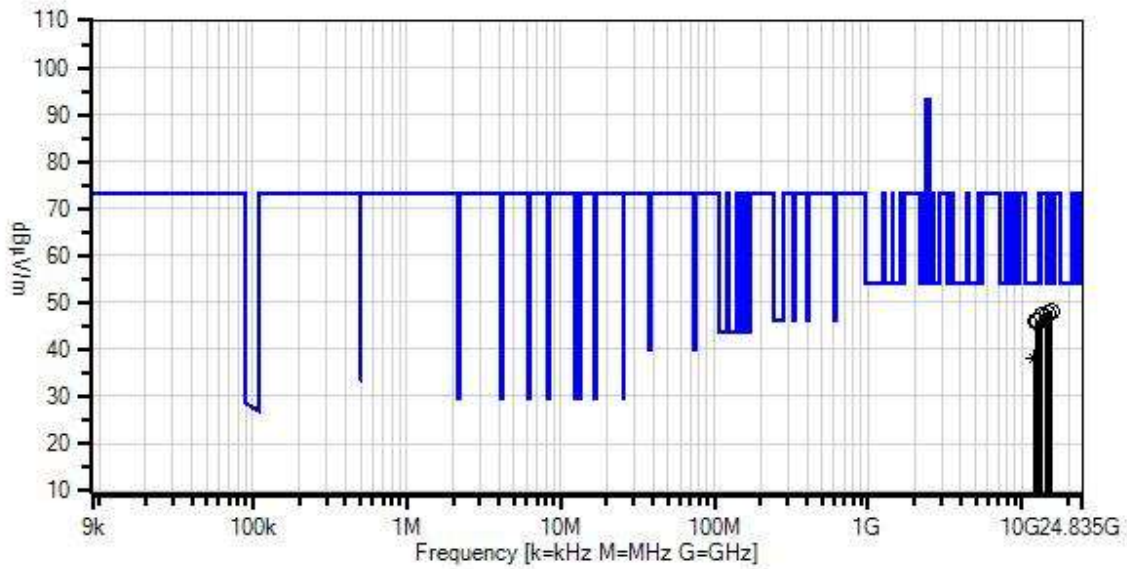
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

Low Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 64 Date: 10/12/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



— Readings
 × QP Readings
 ▼ Ambient
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions

○ Peak Readings
 * Average Readings
 Software Version: 5.03.20

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03619	Cable	OKOCQoCQ177.2	9/17/2021	9/17/2023
T2	ANP00928	Cable	various	1/9/2020	1/9/2022
T3	ANP06902	Cable	32022-29094K-29094K-36TC	8/13/2020	8/13/2022
T4	ANP07698	Cable	32022-29094K-29094K-72TC	10/5/2020	10/5/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
T5	AN03366	Horn Antenna	GH-62-25	9/1/2020	9/1/2022
T6	AN02812	Preamp	83017-69004	9/22/2020	9/22/2022
	AN02046	Horn Antenna	MWH-1826/B	9/2/2020	9/2/2022
	ANP00929	Cable	various	1/9/2020	1/9/2022

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	15364.361 M	34.8	+7.8 +30.1	+0.8 -30.4	+2.1	+3.0	+0.0	48.2	54.0	-5.8	Vert
2	14472.470 M	35.5	+7.5 +29.4	+0.8 -30.4	+2.1	+2.9	+0.0	47.8	54.0	-6.2	Horiz
3	13379.378 M	35.8	+7.1 +29.0	+0.8 -30.4	+2.0	+2.8	+0.0	47.1	54.0	-6.9	Vert
4	12447.447 M	35.8	+7.0 +28.7	+0.8 -30.8	+1.9	+2.7	+0.0	46.1	54.0	-7.9	Horiz
5	12684.684 M	35.3	+7.0 +28.7	+0.8 -30.6	+1.9	+2.7	+0.0	45.8	54.0	-8.2	Horiz
6	12011.279 M Ave	28.3	+6.9 +28.5	+0.9 -31.2	+1.9	+2.6	+0.0	37.9	54.0	-16.1	Horiz
^	12011.279 M	39.7	+6.9 +28.5	+0.9 -31.2	+1.9	+2.6	+0.0	49.3	54.0	-4.7	Horiz

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/12/2021
 Test Type: **Radiated Scan** Time: 16:14:48
 Tested By: Hoang Cao / Randy Clark Sequence#: 61
 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 Range: 12GHz to 25GHz

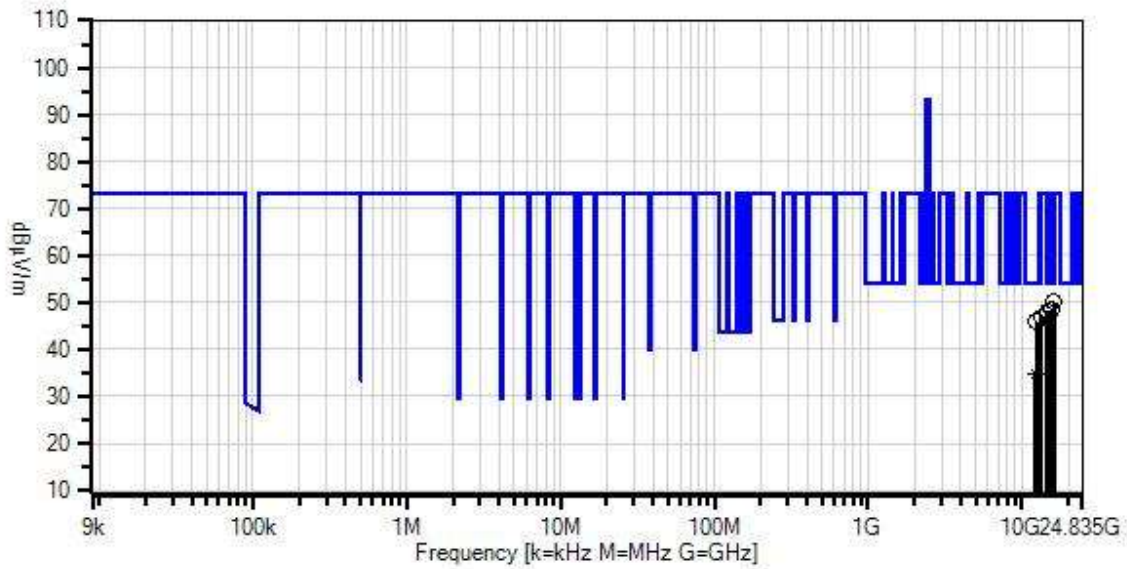
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

Middle Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 61 Date: 10/12/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



— Readings
 × QP Readings
 ▼ Ambient
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions

○ Peak Readings
 * Average Readings
 Software Version: 5.03.20

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03619	Cable	OKOCQoCQ177.2	9/17/2021	9/17/2023
T2	ANP00928	Cable	various	1/9/2020	1/9/2022
T3	ANP06902	Cable	32022-29094K-29094K-36TC	8/13/2020	8/13/2022
T4	ANP07698	Cable	32022-29094K-29094K-72TC	10/5/2020	10/5/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
T5	AN03366	Horn Antenna	GH-62-25	9/1/2020	9/1/2022
T6	AN02812	Preamp	83017-69004	9/22/2020	9/22/2022
	AN02046	Horn Antenna	MWH-1826/B	9/2/2020	9/2/2022
	ANP00929	Cable	various	1/9/2020	1/9/2022

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	15434.431 M	34.9	+7.8 +30.1	+0.8 -30.4	+2.1	+3.0	+0.0	48.3	54.0	-5.7	Horiz
2	14476.474 M	35.8	+7.5 +29.4	+0.8 -30.4	+2.1	+2.9	+0.0	48.1	54.0	-5.9	Vert
3	13281.280 M	35.7	+7.1 +29.0	+0.8 -30.4	+2.0	+2.8	+0.0	47.0	54.0	-7.0	Horiz
4	12408.408 M	35.8	+7.0 +28.6	+0.8 -30.9	+1.9	+2.7	+0.0	45.9	54.0	-8.1	Vert
5	12198.489 M Ave	24.5	+6.9 +28.8	+0.9 -31.0	+1.9	+2.6	+0.0	34.6	54.0	-19.4	Horiz
^	12198.489 M	36.8	+6.9 +28.8	+0.9 -31.0	+1.9	+2.6	+0.0	46.9	54.0	-7.1	Horiz
7	16224.220 M	36.0	+7.9 +30.4	+0.8 -30.4	+2.3	+3.0	+0.0	50.0	73.1	-23.1	Vert



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **105810** Date: 10/12/2021
 Test Type: **Radiated Scan** Time: 15:52:08
 Tested By: Hoang Cao / Randy Clark Sequence#: 58
 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 Range: 12GHz to 25GHz

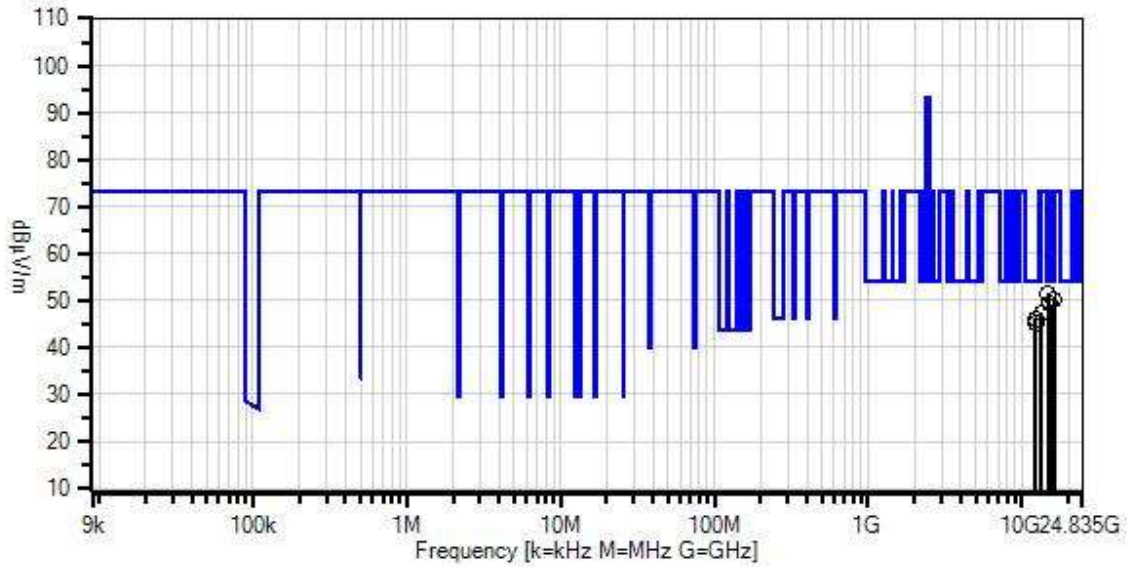
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz

 Method: ANSI C63.10 2013
 KDB 558074 D01 15.247 Meas Guidance v05r02

 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions.
 It is set up as table-top to simulate the normal operation.

High Channel

Therapy Holdings, Inc W/O#: 105810 Sequence#: 58 Date: 10/12/2021
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters MAX



— Readings
 × QP Readings
 ▼ Ambient
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions

○ Peak Readings
 * Average Readings
 Software Version: 5.03.20

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03619	Cable	OKOCQoCQ177.2	9/17/2021	9/17/2023
T2	ANP00928	Cable	various	1/9/2020	1/9/2022
T3	ANP06902	Cable	32022-29094K-29094K-36TC	8/13/2020	8/13/2022
T4	ANP07698	Cable	32022-29094K-29094K-72TC	10/5/2020	10/5/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022
T5	AN03366	Horn Antenna	GH-62-25	9/1/2020	9/1/2022
T6	AN02812	Preamp	83017-69004	9/22/2020	9/22/2022
	AN02046	Horn Antenna	MWH-1826/B	9/2/2020	9/2/2022
	ANP00929	Cable	various	1/9/2020	1/9/2022

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

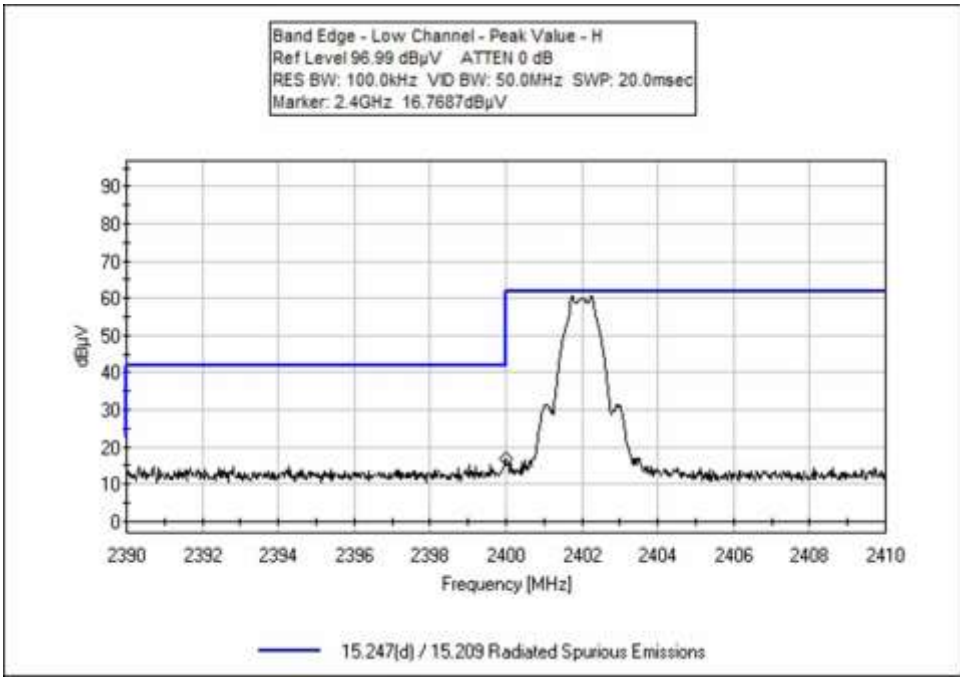
#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	13261.260 M	35.8	+7.1 +29.1	+0.8 -30.4	+2.0	+2.8	+0.0	47.2	54.0	-6.8	Vert
2	12166.166 M	35.9	+6.9 +28.8	+0.9 -31.0	+1.9	+2.6	+0.0	46.0	54.0	-8.0	Vert
3	12228.228 M	35.2	+6.9 +28.7	+0.9 -31.0	+1.9	+2.6	+0.0	45.2	54.0	-8.8	Vert
4	14881.879 M	38.6	+7.6 +29.8	+0.9 -30.5	+2.1	+2.9	+0.0	51.4	73.1	-21.7	Horiz
5	16205.201 M	36.2	+7.9 +30.4	+0.8 -30.4	+2.3	+3.0	+0.0	50.2	73.1	-22.9	Horiz
6	15206.203 M	36.1	+7.7 +30.0	+0.8 -30.5	+2.1	+3.0	+0.0	49.2	73.1	-23.9	Horiz

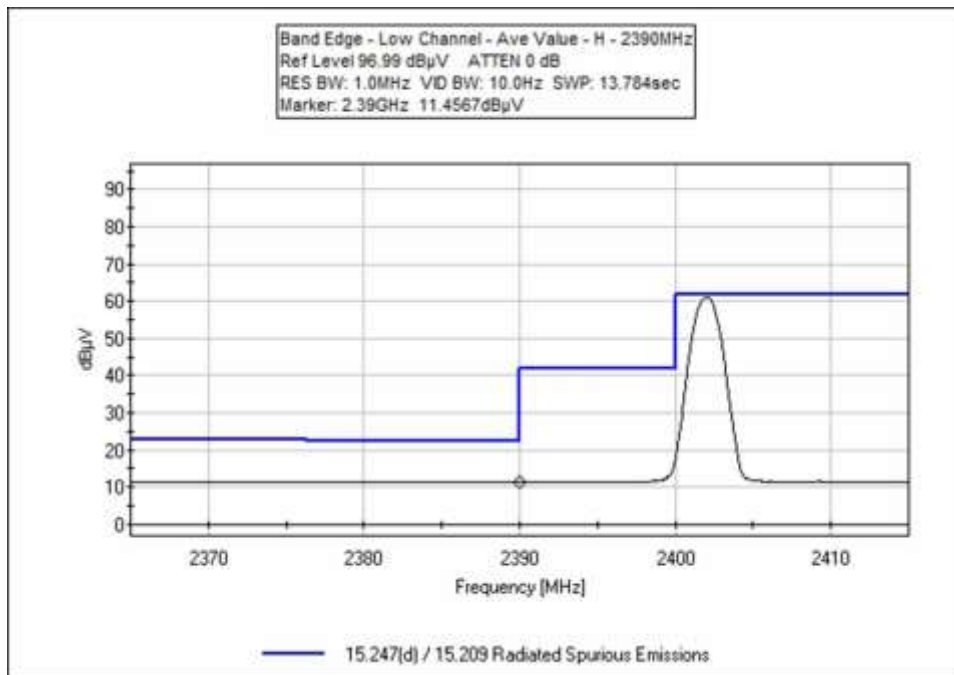
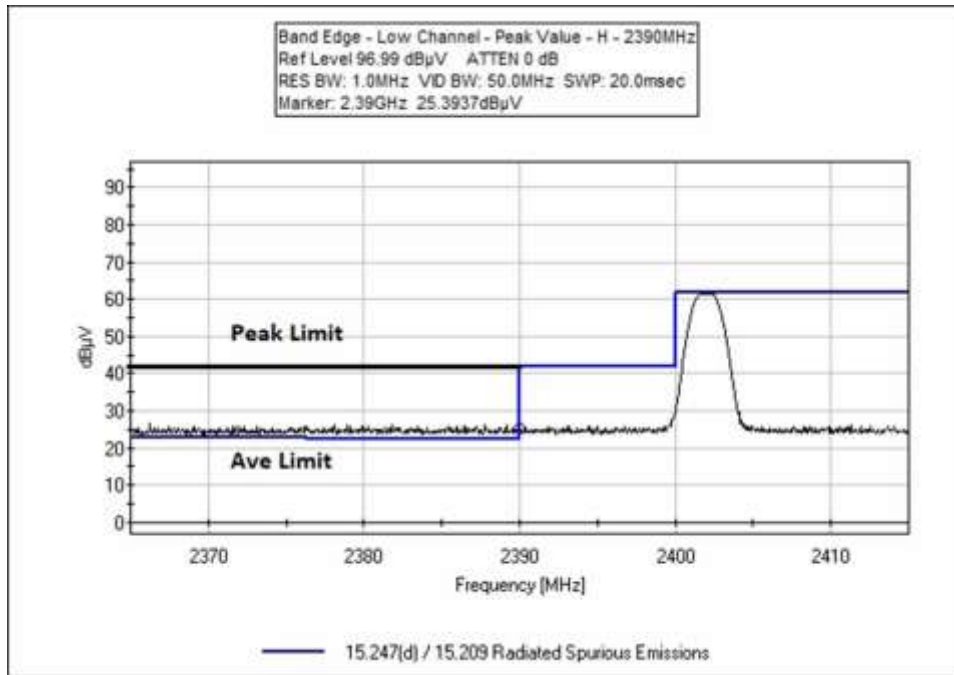
Band Edge

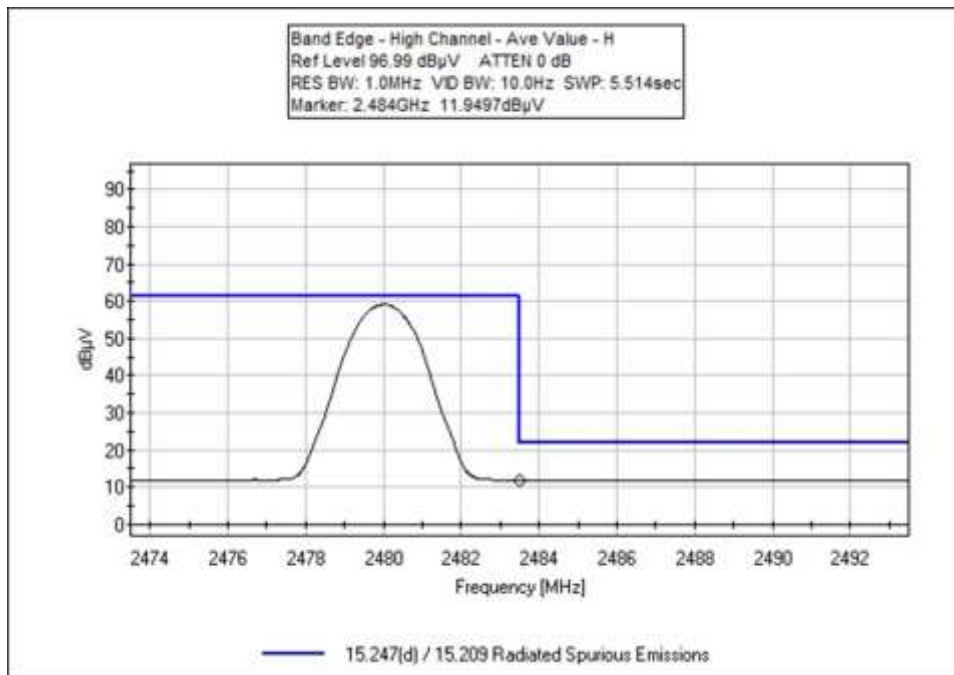
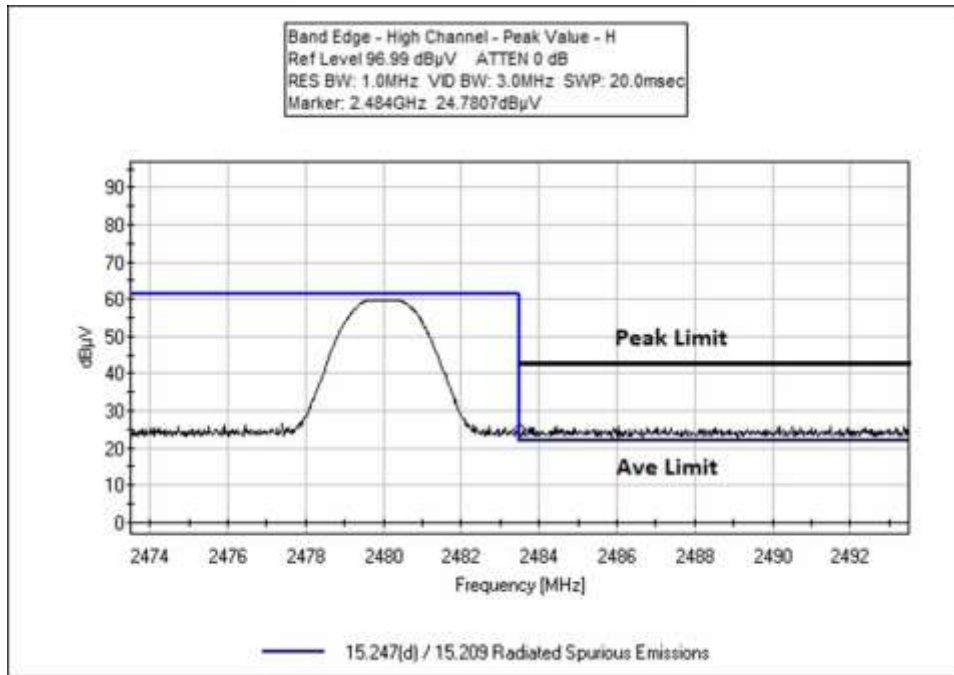
Band Edge Summary

Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results
2390.0	GFSK	Integral	42.9	<54	Pass
2400.0	GFSK	Integral	48.2	<63	Pass
2483.5	GFSK	Integral	43.7	<54	Pass

Band Edge Plots







Test Setup / Conditions / Data

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 •
 Customer: **Therapy Holdings Inc.**
 Specification: **Band Edge**
 Work Order #: **105810** Date: 10/7/2021
 Test Type: **Radiated Scan** Time:
 Tested By: Hoang Cao / Randy Clark Sequence#: 2
 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:

Band edge
 Temperature: 23.1°C
 Humidity: 39%
 Atmospheric Pressure: 101.9kPa
 RF output=4dBm
 Highest Generation Frequency: 2480MHz
 The EUT is a pelvic floor exercise trainer.
 It can measure pelvic floor muscle contractions. It is set up as table-top to simulate the normal operation.

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02157	Horn Antenna- ANSI C63.5	3115	1/7/2021	1/7/2023
T2	AN03302	Cable	32026-29094K-29094K-72TC	1/9/2020	1/9/2022
T3	ANP01210	Cable	FSJ1P-50A-4A	11/2/2020	11/2/2022
	AN03471	Spectrum Analyzer	E4440A	2/11/2020	2/11/2022

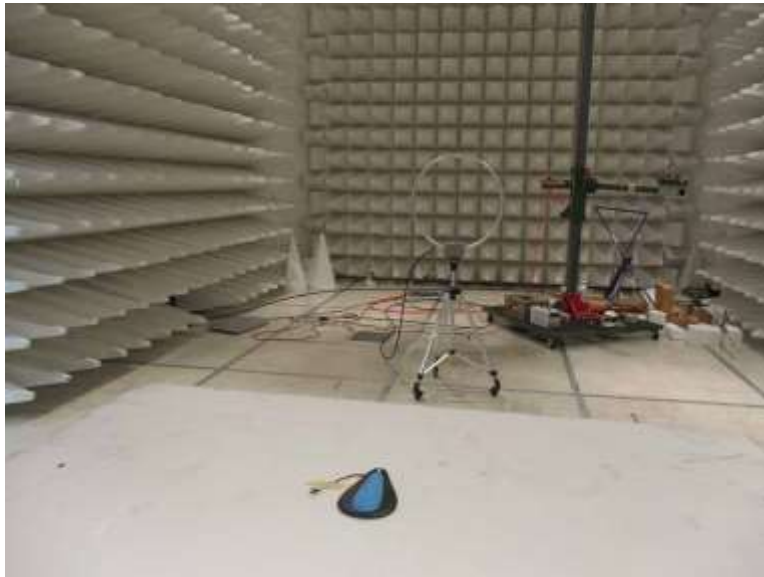
Measurement Data: Reading listed by order taken. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	Dist Table dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	2390.000M	11.5	+27.7	+1.2	+2.5	+0.0	42.9	54.0	-11.1	Horiz
Ave										
2	2400.000M	16.8	+27.7	+1.2	+2.5	+0.0	48.2	73.1	-24.9	Horiz
RBW =100kHz										
3	2483.500M	11.9	+27.9	+1.3	+2.6	+0.0	43.7	54.0	-10.3	Horiz
Ave										

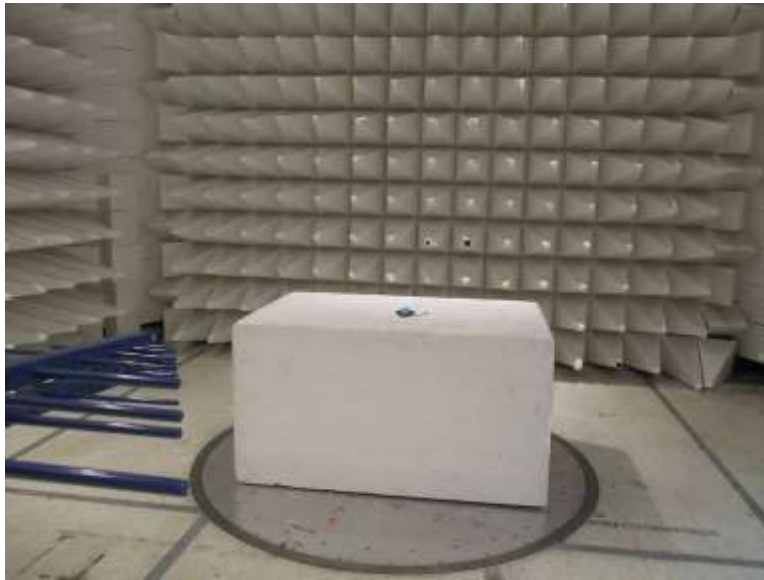
Test Setup Photo(s)



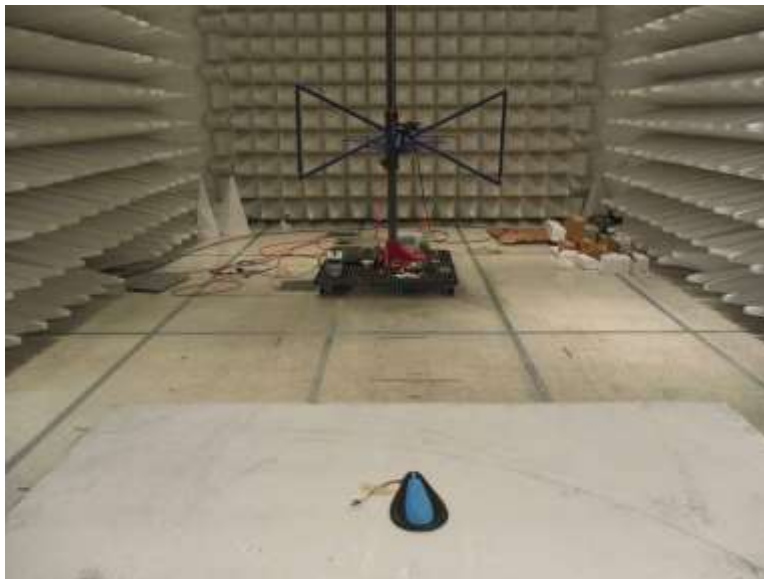
9kHz-30MHz



9kHz-30MHz



30MHz-1GHz



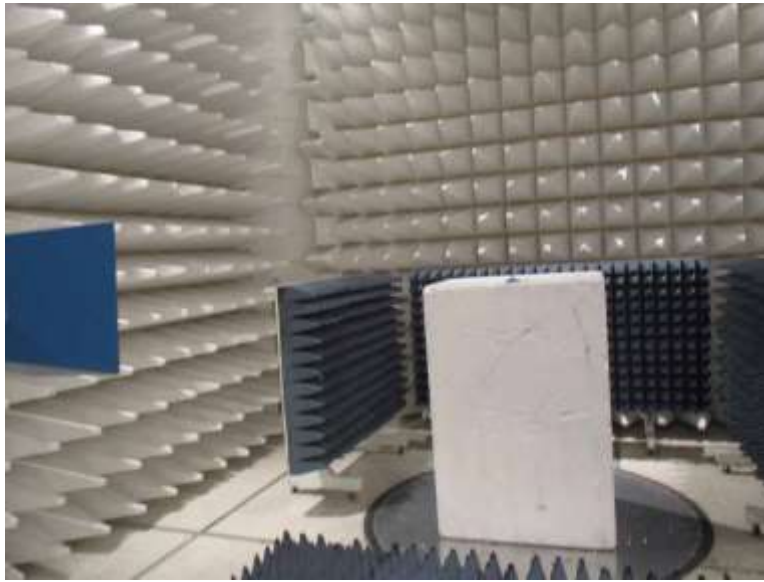
30MHz-1GHz



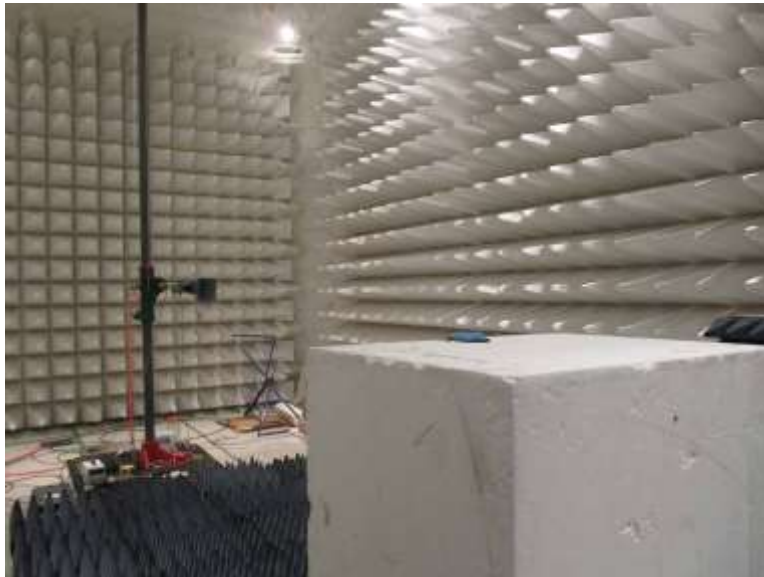
1-12GHz



1-12GHz



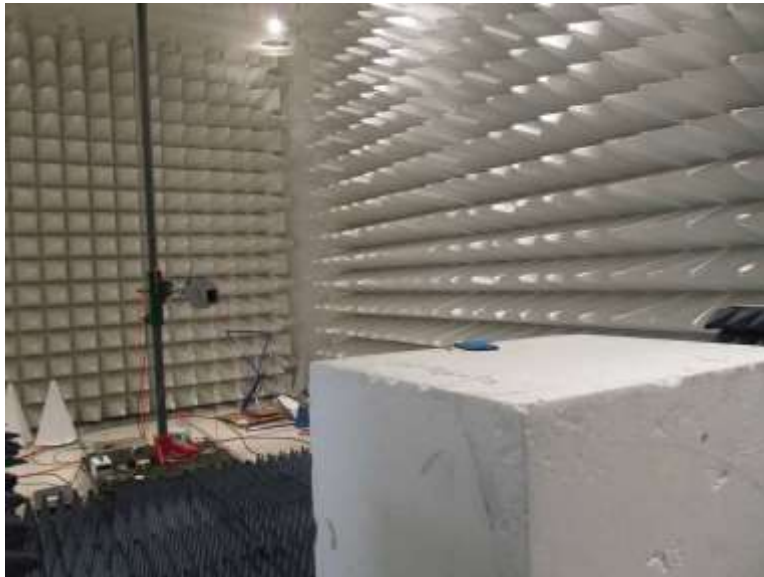
12-18GHz



12-18GHz



18-25GHz



18-25GHz

15.247(e) Power Spectral Density

Test Setup/Conditions			
Test Location:	Fremont Lab C3	Test Engineer:	Hoang Cao / Randy Clark
Test Method:	ANSI C63.10 (2013), KDB 558074 D01 15.247 Meas Guidance v05r02	Test Date(s):	10/7/2021
Configuration:	1		
Test Setup:	The EUT is set up as Table-top to simulate the normal operation. It is operated as intended. The EUT is configured to continuously transmit.		

Environmental Conditions			
Temperature (°C)	22.3	Relative Humidity (%):	40

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02157	Horn Antenna	EMCO	3115	1/7/2021	1/7/2023
P01210	Cable	Andrews	FSJ1P-50A-4A	11/2/2020	11/2/2022
03302	Cable	Astrolab	32026-29094K- 29094K-72TC	1/9/2020	1/9/2022
03471	Spectrum Analyzer	Agilent	E4440A	2/11/2020	2/11/2022

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	0	78.29	-16.939	≤8	Pass
2440	GFSK	0	78.48	-16.749	≤8	Pass
2480	GFSK	0	77.92	-17.309	≤8	Pass

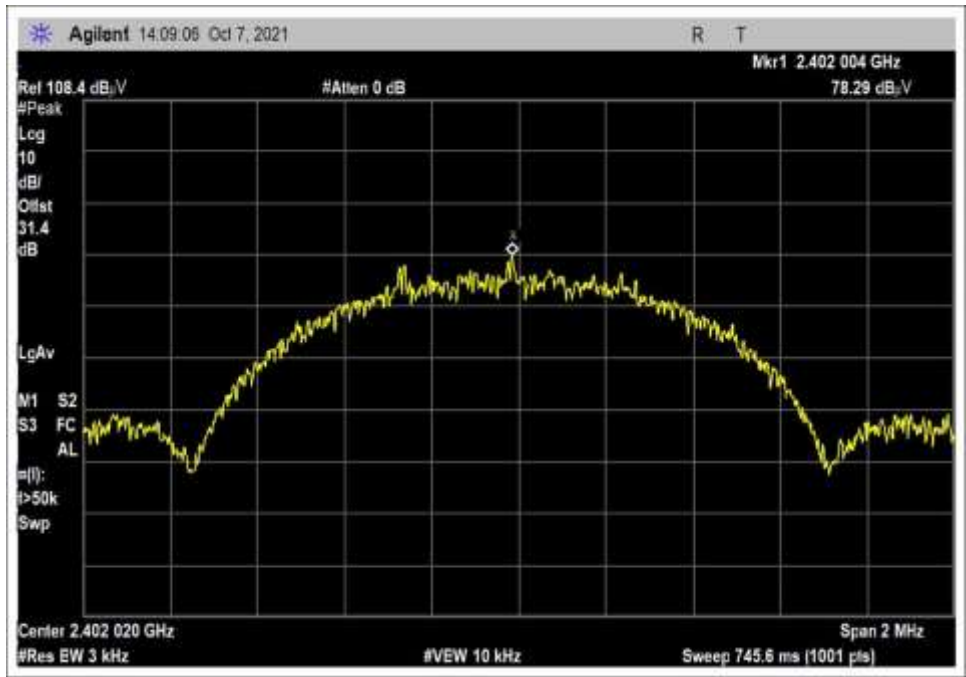
Conducted RF output power calculated in accordance with ANSI C63.10.

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

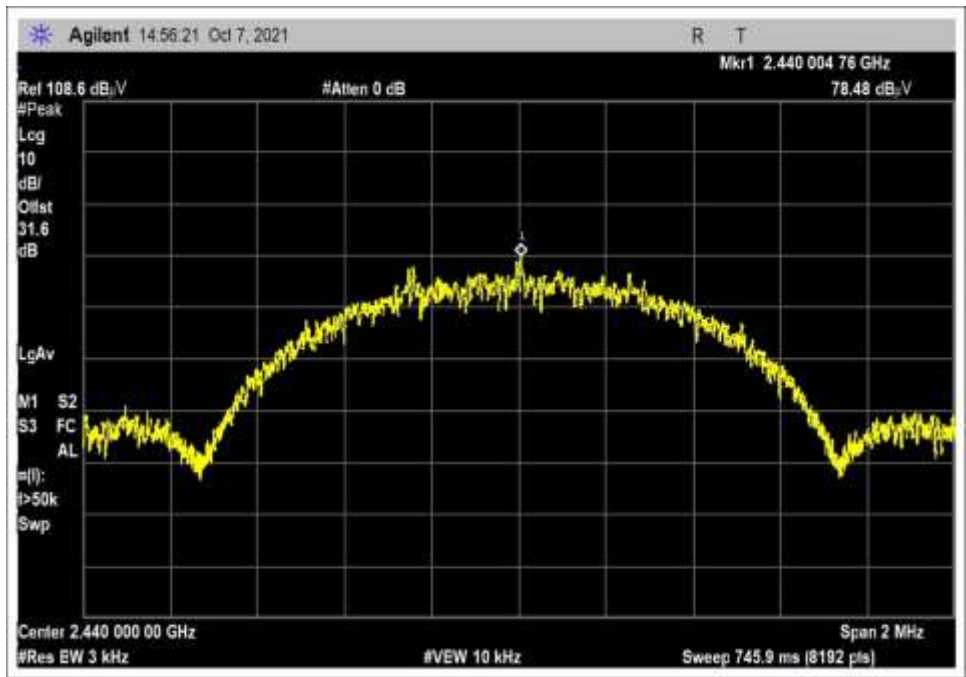
Or equivalently, in logarithmic form:

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

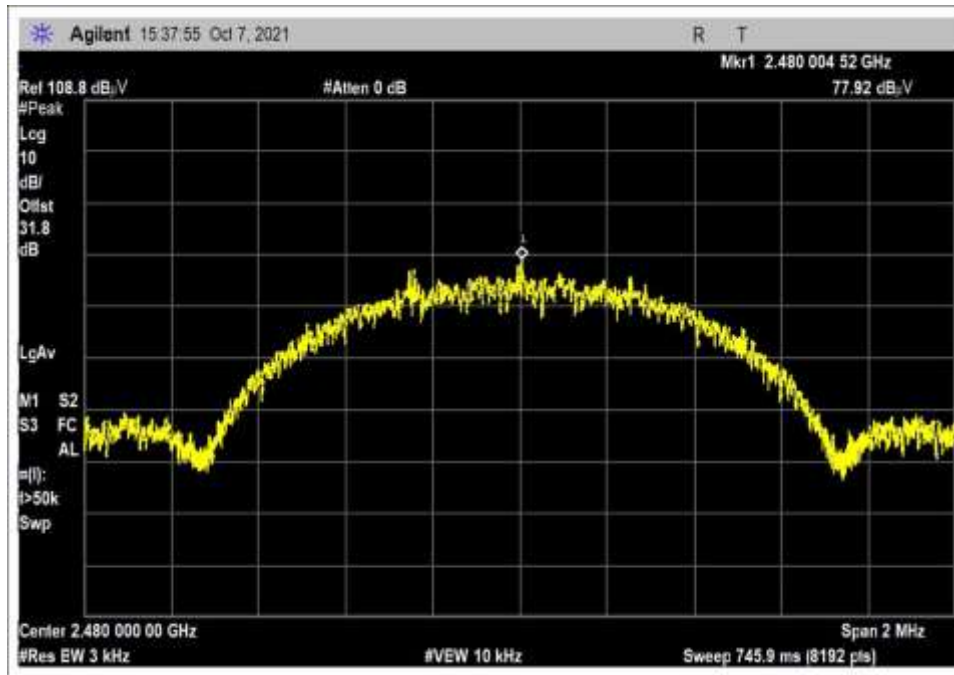
Plots



Low Channel

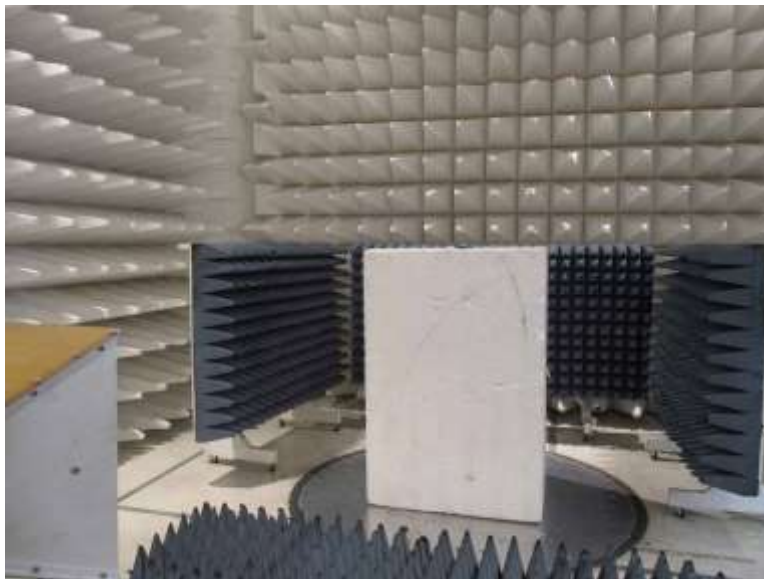


Middle Channel

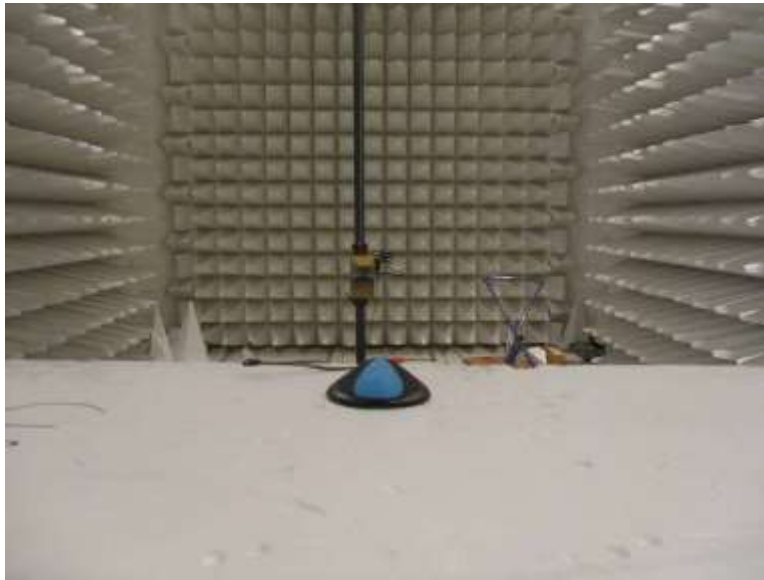


High Channel

Test Setup Photo(s)



Test Setup



Test Setup, Close-up

SUPPLEMENTAL INFORMATION

Measurement Uncertainty

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

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 dBμV/m, the spectrum analyzer reading in dBμV 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	(dBμV)
+	Antenna Factor	(dB/m)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBμV/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.