

Curiouser Products, Inc.

RF Exposure Exhibit

SCOPE OF WORK

EMC TESTING – MIRROR's Connected Weights,
Model: Dumbbells: 5 lb.

REPORT NUMBER

104781122MPK-014

ISSUE DATE

November 18, 2021

REVISED DATE

N/A

PAGES

13

DOCUMENT CONTROL NUMBER

Non-Specific Radio Report Shell Rev. December 2017 MPK
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**RF Exposure Exhibit
(Portable Devices)**

Report Number: 104781122MPK-014

Project Number: G104781122

Original Issue Date: November 18, 2021

**Product Designation: MIRROR's Connected Weights
Model Tested: MCWD5**

**FCC ID: 2AOSD-MCW2
IC: 23685-MCW2**

to

**47CFR 2.1093
RSS-102 Issue 5**

for

Curiouser Products, Inc.

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Report No. 104781122MPK-014	
Equipment Under Test:	MIRROR's Connected Weights
Model Number:	MCWD5
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Applicable Regulation:	47CFR 2.1093 RSS-102 Issue 5

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1.0 RF Exposure Summary

Test	Reference FCC	Reference Industry Canada	Result
Radio frequency Radiation Exposure Evaluation	47 CFR§2.1093	RSS-102 Issue 5	Complies

2.0 RF Exposure Limits

2.1 FCC Limits

According to FCC KDB 447498 D01 v07 Appendix B, at frequency 2450 MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 3 mW.

2.2 Industry Canada Limits

According to RSS-102 sec. 2.5.1, at frequency 2450 MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 4 mW.

3.0 Test Results (Portable Configuration)

3.1 Classification

For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

3.2 EIRP Calculations

MIRROR's Connected Weights, Model: MCWD5 consists of one 2.4GHz radio.

3.3 Maximum RF Power

MIRROR's Connected Weights, Model: MCWD5:

Frequency Range (MHz)	Peak RF Output	Antenna Gain ¹	Numerical Gain	Note
2402 – 2480	1.11dBm or 1.291mW	2.67 dBi	1.85	Conducted power measurements were taken from 104781122MPK-008

¹As declared by the manufacturer.

3.4 RF Exposure Calculation

3.4.1 RF Exposure Calculation for 2.4 GHz Radio, MIRROR's Connected Weights, Model: MCWD5:

Duty Cycle Calculation:

Duty Cycle = Active Transmission Time / Repeating Burst Period

Repeating Burst Period = 30.1mSec

Active Transmission Time = Pulse Width 1 + Pulse Width 2 + Pulse Width 3 + Pulse Width 4 + Pulse Width 5 + Pulse Width 6

Active Transmission Time = 339μS + 155μS + 364μS + 163μS + 356μS + 163μSec

Active Transmission Time = 1.54mS

Duty Cycle = 1.54mS / 30.1mS

Duty Cycle = 0.051163 = **5.1163%**

See Annex A for oscilloscope measurements.

3.4.2 RF Exposure Calculation FCC

Calculations for this report are based on highest power measured.

Power input to antenna	Source-based Duty Cycle	Numerical Gain	Corrected input power into antenna	EIRP	Frequency
1.291 mW	5.1163% (0.051163)	1.85	0.0661 mW	0.12mW	2402 – 2480

Corrected Input Power = Power Input*Duty Cycle

EIRP = Corrected Input Power*Numerical Gain

RF Exposure calculation for FCC KDB 447498 D01 v07

According to FCC KDB 447498 D01 v07 Appendix B, at frequency 2450 MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 3 mW

Max Peak Conducted Power measured = 0.0661 mW

Results: SAR evaluation is not required since the higher of the maximum conducted or equivalent isotopically radiated power (EIRP) source-based, time averaged output power is below the exemption limit.

3.4.3 RF Exposure Calculation ISED

Calculations for this report are based on highest power measured.

Power input to antenna	Source-based Duty Cycle	Numerical Gain	Corrected input power into antenna	EIRP	Frequency
1.291 mW	5.1163% (0.051163)	1.85	0.0661 mW	0.12mW	2402 – 2480

Corrected Input Power = Power Input*Duty Cycle

EIRP = Corrected Input Power*Numerical Gain

According to RSS-102 sec. 2.5.1, at frequency 2450 MHz and separation distance of ≤ 5 mm SAR Exemption limit is ≤ 4 mW.

Max EIRP measured = 0.12 mW

Results: SAR evaluation is not required since the higher of the maximum conducted or equivalent isotopically radiated power (EIRP) source-based, time averaged output power is below the exemption limit.

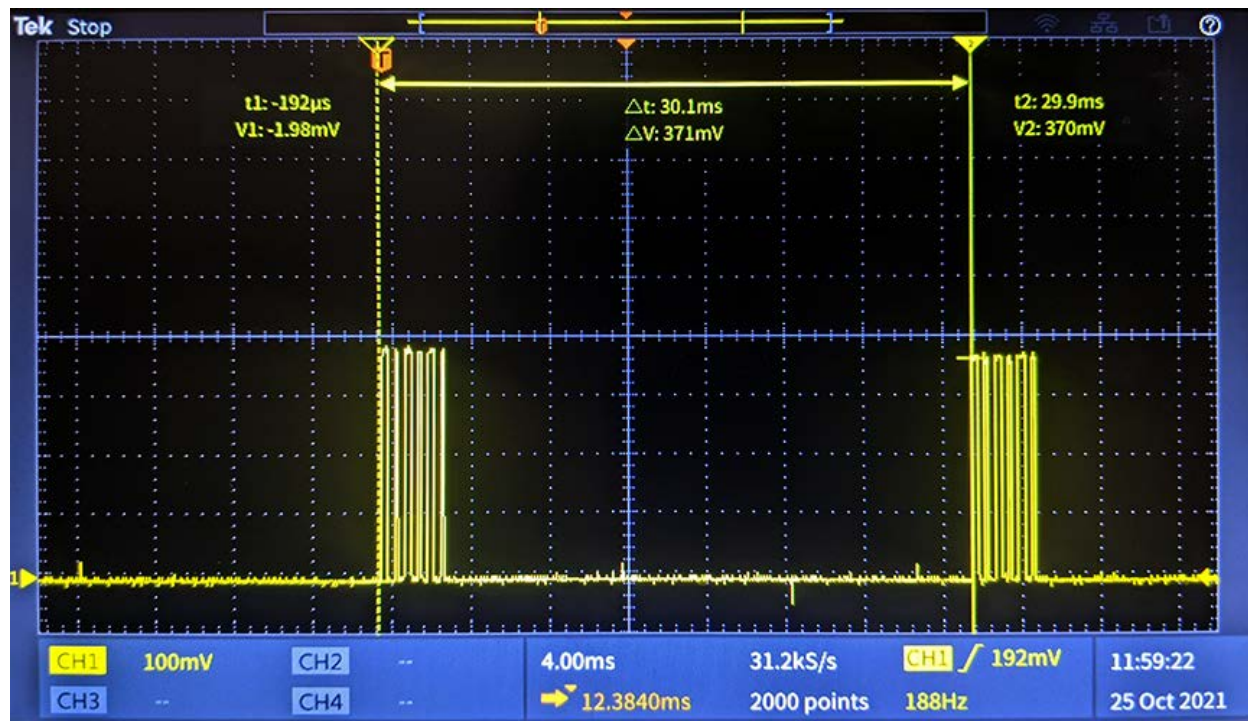
Note: Antenna gains below 0 are considered as 0dBi.

4.0 Document History

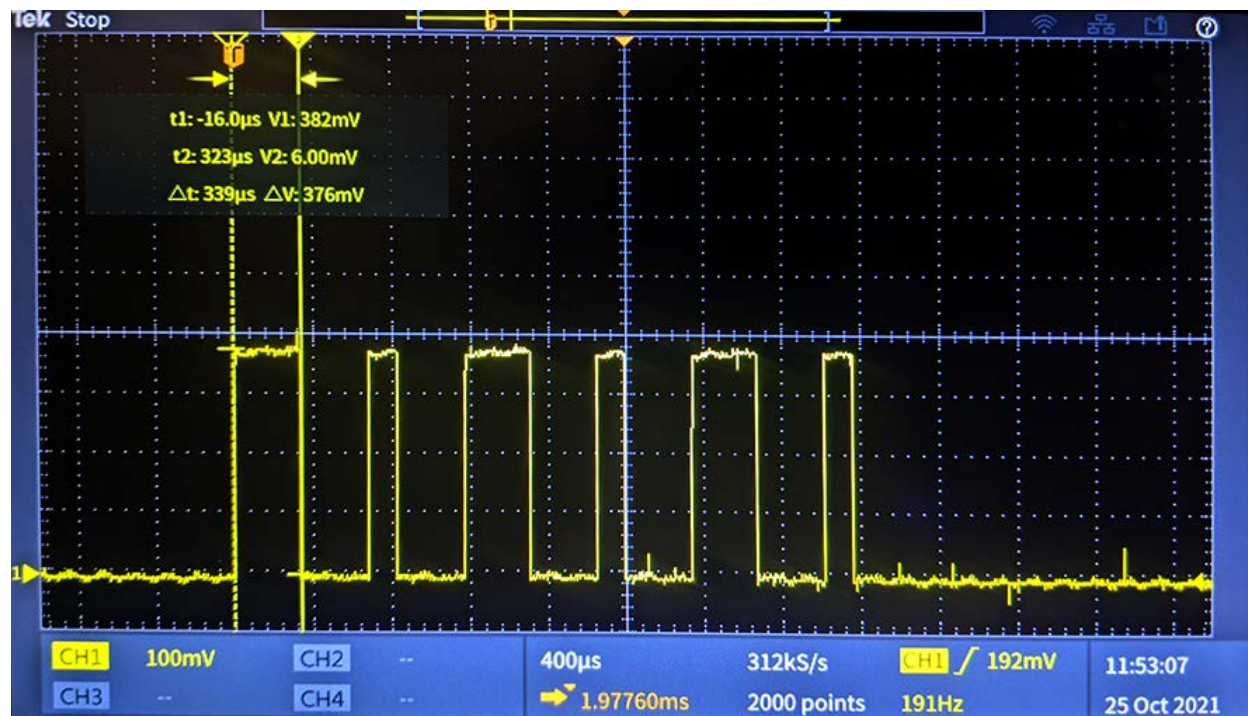
Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
1.0 / G104781122	KR	KV	November 18, 2021	Original document

Annex A – Duty Cycle Oscilloscope Measurements

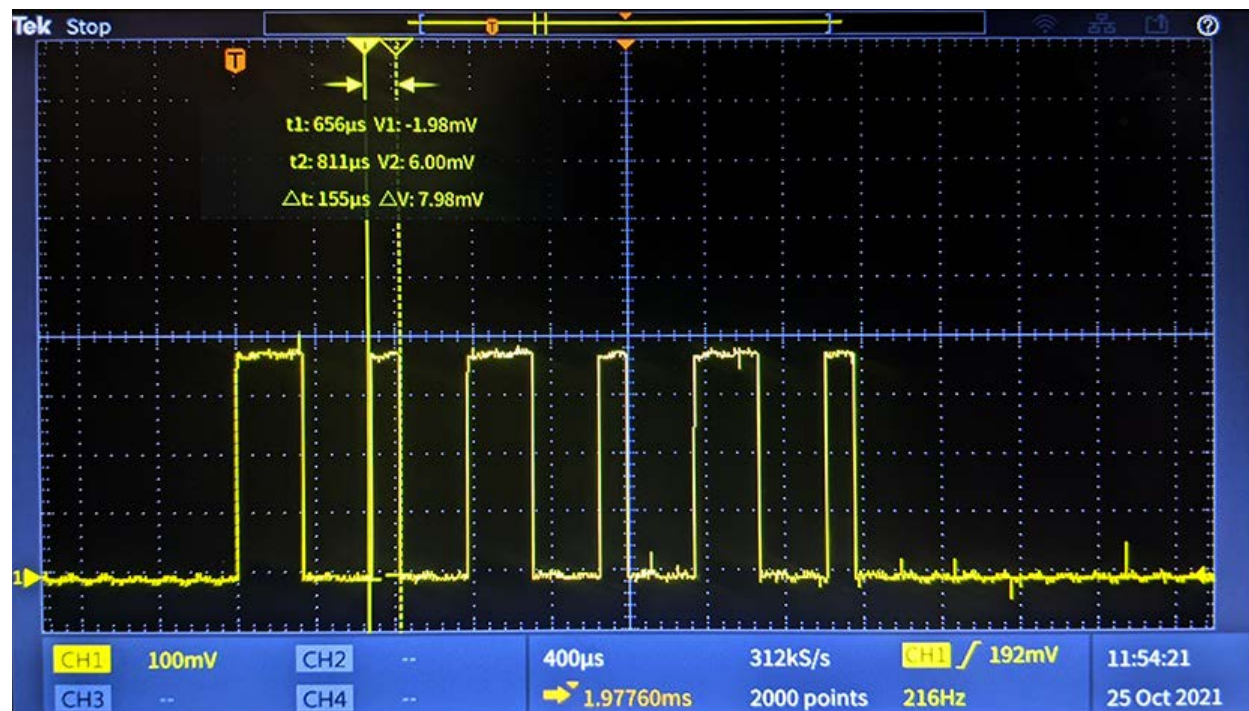
Repeating Burst Period = 30.1mSec



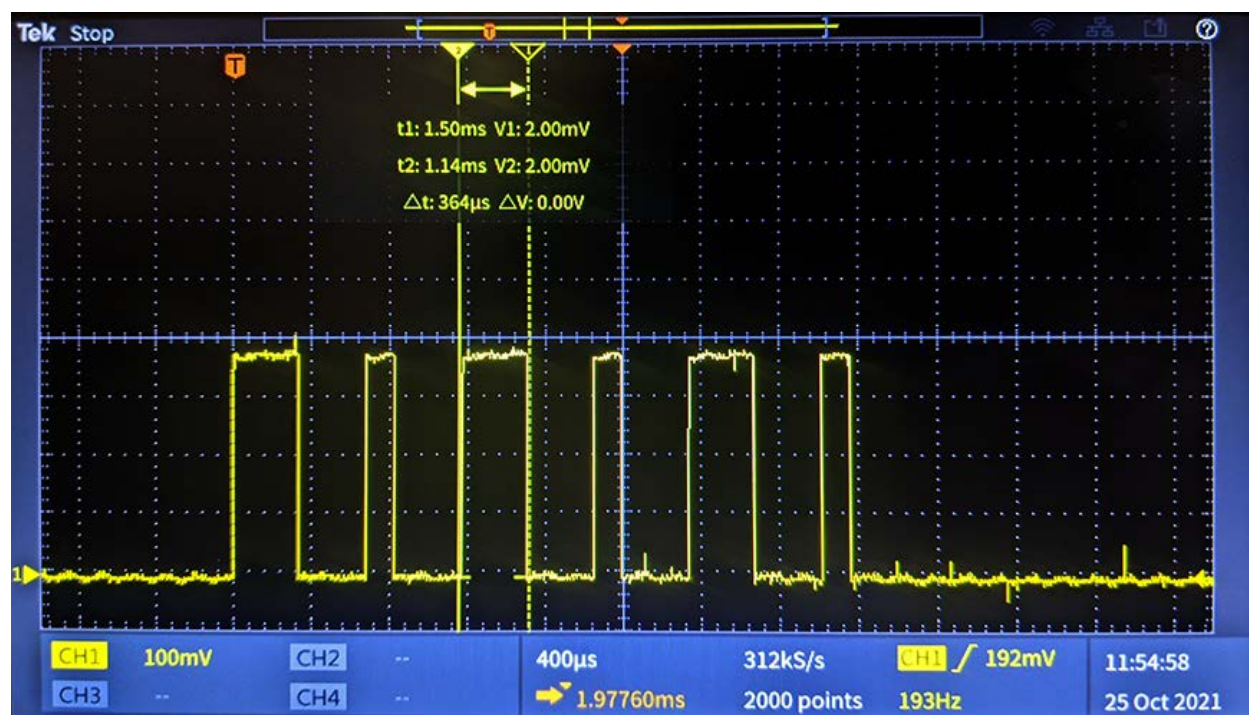
Pulse Width 1 = 339µSec



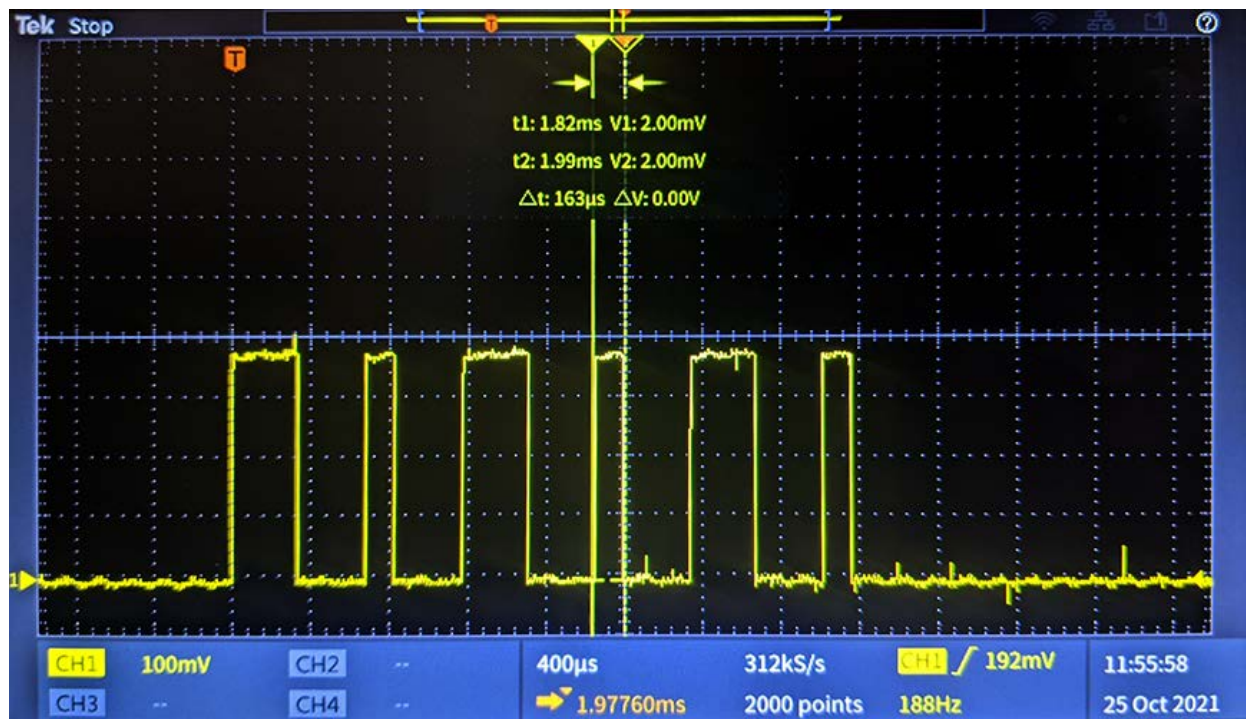
Pulse Width 2 = 155µSec



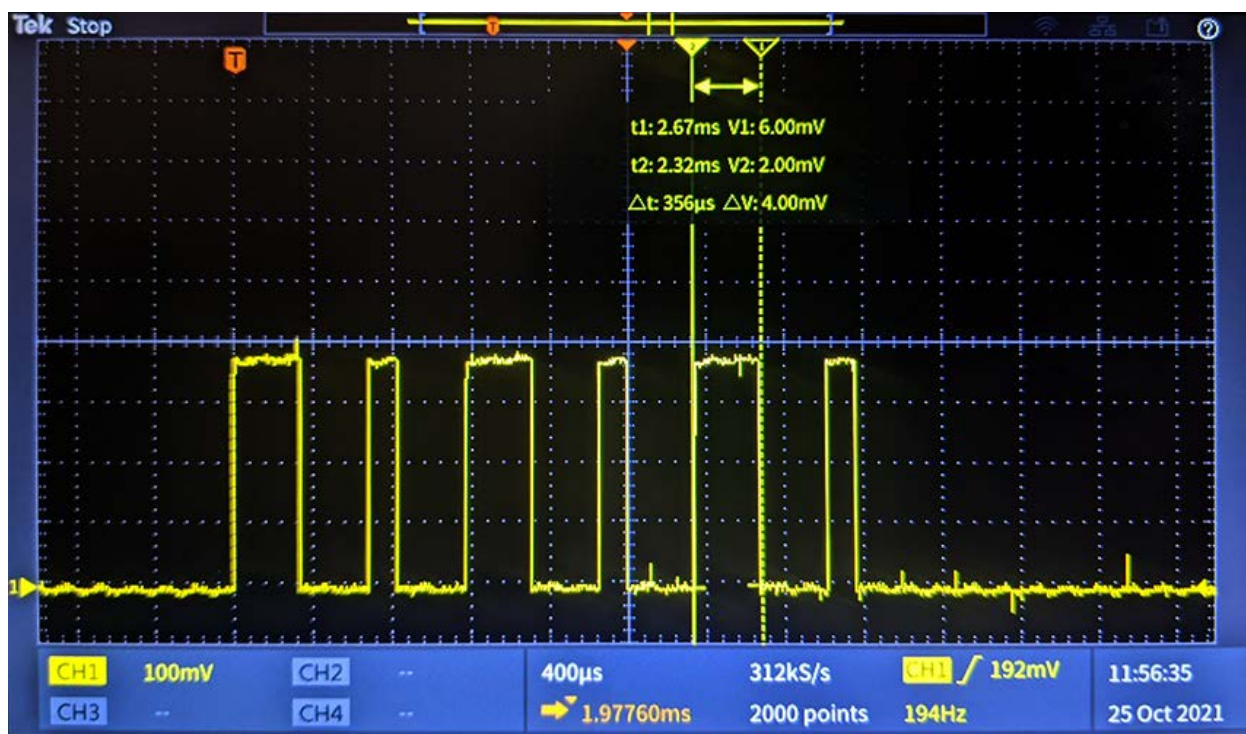
Pulse Width 3 = 364µSec



Pulse Width 4 = 163 μ Sec



Pulse Width 5 = 356 μ Sec



Pulse Width 6 = 163 μ Sec

