

Report on the Testing of the
Cinch Systems, Inc.
RF-RDWS-433; CLR-C1-RCDW
FCC ID: 2ABBZ-RF-RDWS-433
IC: 11817A-RFRDWS433

Prepared for: Cinch Systems
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COMMERCIAL-IN-CONFIDENCE

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SIGNATURE

A handwritten signature in black ink, appearing to read "Brad Reasoner".

NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Brad Reasoner	EMC Technical Lead	Authorized Signatory	13 August 2021

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD America, Inc. document control rules.

FCC Accreditation	Innovation, Science, and Economic Development Canada
Designation Number US1148 New Brighton, MN Test Laboratory	Accreditation
	Site Number 4512A New Brighton, MN Test Laboratory

EXECUTIVE SUMMARY

A sample of this product was tested and found to be compliant with the standards listed above.



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ACCREDITATION

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**General Information:**

Applicant: Cinch Systems
Device Category: Fixed
Environment: General Population/Uncontrolled Exposure

Technical Information:

FCC ID: : 2ABBZ-RF-RDWS-433
Antenna Type: PCB Trace/Integral
Antenna Gain: 0.0 dBi
Exposure Conditions: ≥ 5 millimeters

Tuned Frequency (MHz)	Distance (m)	Field Strength (dB μ V/m)	ERP (dBm)	EIRP (dBm)	EIRP (mW)
433.95	3.00	80.68	-16.70	-14.55	0.0351



MPE Calculation FCC

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Table 1: MPE Calculation - FCC

Technology	Transmit Frequency (MHz)	Power EIRP (dBm)	Power EIRP (mW)	SAR Ratio	SAR Exclusion Ratio (for 1-g)	SAR Exclusion Ratio (for 10-g, extremities)	Separation Distance (mm)	Result
Momentary TX	433.95 MHz	-14.55	0.0351	0.005	3.0	7.5	5	SAR/MPE EXEMPT

Note: Power Density was not calculated, as the EUT is SAR/MPE Exempt

MPE Calculation ISED

The Power Density (W/m²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. W/m²)

P = power input to the antenna (in appropriate units, e.g., W)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., m)

Table 1: MPE Routine Evaluation - ISED

Technology	Transmit Frequency (MHz)	Power EIRP (dBm)	Power EIRP (mW)	Interpolated SAR Limit (mW)	Margin (mW)	Separation Distance (mm)	SAR Exclusion
Momentary TX	433.95 MHz	-14.55	0.0351	54.03	54.00	5	SAR/MPE EXEMPT

Note: Power Density was not calculated, as the EUT is SAR/MPE Exempt