MLPS Series, *Flatpack*, Long Life, 105 °C Aluminum Electrolytic Capacitors

105 °C, 10,000 Hour

Low-Profile, Prismatic Design

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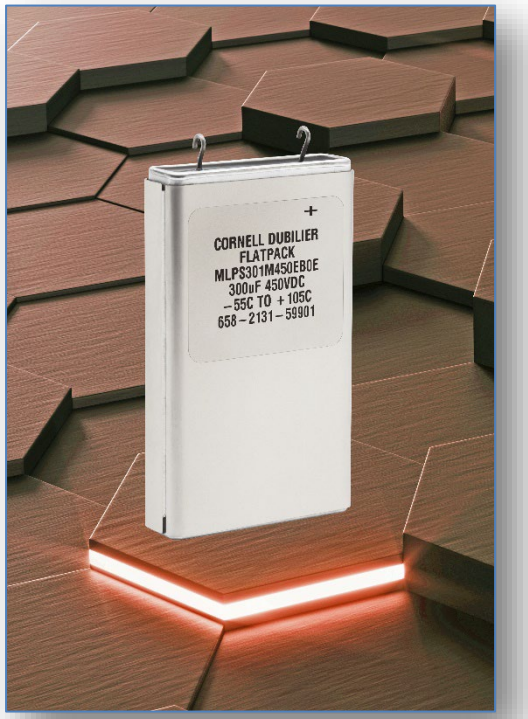
Introduction

- Purpose of this training module is to introduce the MLPS, Flatpack™, 105 °C Aluminum Electrolytic Capacitors from Cornell Dubilier
- Objectives
  - Explain the differences between the new 105 °C Flatpack capacitors and other electrolytic types
  - Outline the key features and benefits of the MLPS Series capacitors
- Highlight specifications and other attributes

MLPS Flatpack Advantages Include 10,000 Hour, 105 °C Performance.

Newest Addition to our Series of Flatpack Capacitors

- Capacitance density of our MLP, now available at 105 °C
- Low Profile: 0.6”
- 10,000 Hour Load Life @ 105 °C, Rated Vdc
  - Improved life over MLP Series
- CDE’s most cost-effective 105 °C Flatpack
- **Ideal for circuits requiring low-profile, long-life, bulk storage capacitance at 105 °C**
  - Can replace series-parallel arrays of V-Chip, radial, axial aluminum electrolytic, and wet tantalum capacitors
    - Increased reliability: one device vs. many for far fewer PCB connection points
    - Reduce height profile, lower cost and weight compared with series-parallel banks of alternative technology board-mount solutions



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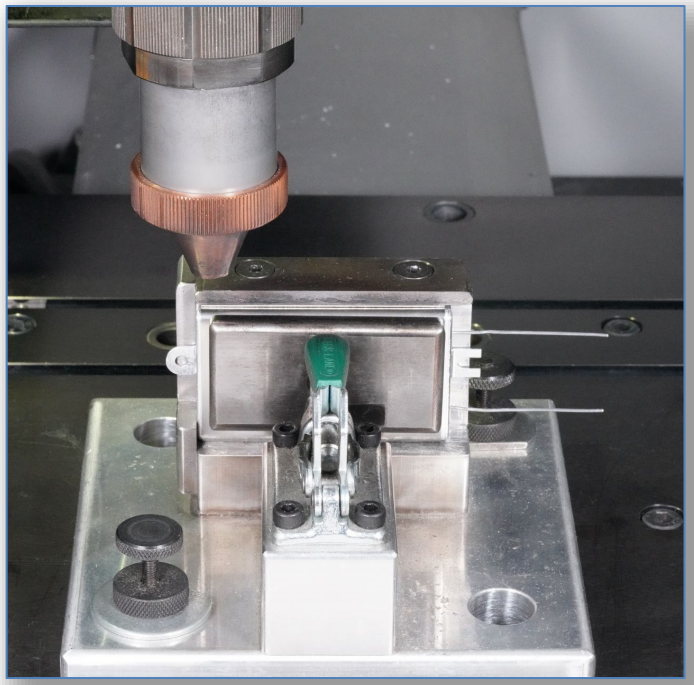
MLPS Flatpack Offers Superior Construction and Testing.

- Designs are based on CDE's 25+ years of experience with MIL-grade flat electrolytics, now optimized for 105 °C, applications
- Life tested to 10,000 hours @ 105 °C, Rated Vdc
- High vibration resistance up to 20g (HV Option)
- High reliability burn-in available (48 hours @ V_r, 105 °C)
- Welded seal resists "dry-out," typical of conventional electrolytics.
- Excellent capacitance retention at -55 °C, especially when compared with wet tantalum capacitors.



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MLPS General Specifications

- 10,000 hour load-life at rated voltage, 105 °C
- Voltage Range: 7.5Vdc to 450Vdc
- Capacitance Range: 120 to 51,000 µF
- Temperature Range: -55 °C to 105 °C
- Vibration: Up to 20g for HV parts, 10g standard
- Altitude: 80,000 ft
- Custom ratings available upon request

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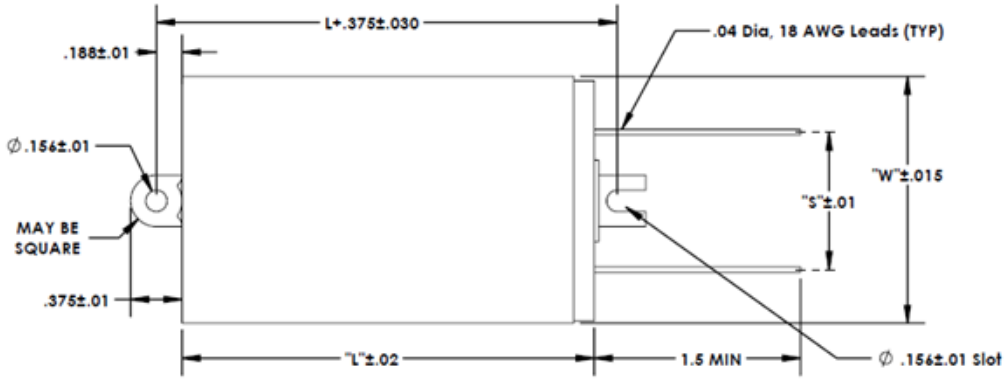
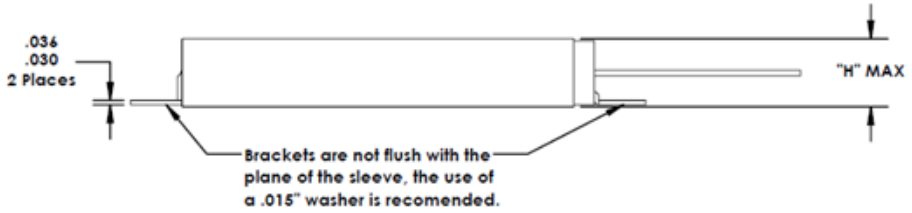
MLPS Mechanical Specifications

- Rugged Case: constructed of aluminum with stainless-steel outer sleeve
- Two mounting flanges ensure secure mounting
- Vibration Withstand: 10g (Standard), 20g (High Vibration Option – HV)
- MLPS: Copper wire leads with 60/40 tin/lead electroplate
- MLPSR: Copper wire with bright-tin electroplate (lead-free)
- Multiple lengths (see table)
- Straight-leaded or hook-style terminations





Case Code	"W"	"H"	"L"	"S"
EK	1.81	0.60	1.50	1.00
EA	1.81	0.60	2.00	1.00
EH	1.81	0.60	2.50	1.00
EB	1.81	0.60	3.00	1.00

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Applications for the MLPS Series

MLPS Flatpack caps allows designers to create thinner, lighter, higher-performance end products optimized for 105 °C

- Military and commercial applications
  - Suitable for flight
  - Shipboard and ground-based radar
  - Ruggedized, compact power supplies

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MLPS Flatpack Series Summary

- Provides high capacitance in a flat design at 105 °C
- 0.6” height profile
- Load Life: 10,000 hours at 105 °C, Rated Vdc
- Values from 120 to 51,000 µF,
  7.5-to 450 Vdc, in nearly 76 capacitance/voltage combinations
- Withstands over 80,000 feet altitude
- Allows designers to create thinner, lighter, higher-performance end products optimized for 105 °C

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