

FEATURES AND BENEFITS:

- # Broad Operating Temperature
-40°C to 125°C
- # High Operating Voltages
10V at 85°C and 8V at 125°C
- # Shock & Vibration Resistant
- # Hermetically Sealed
- # Eco-Friendly
- # Board mountable design
- # Designed and Assembled in the USA

APPLICATIONS:

- # Power hold-up
- # DC Bus stabilization
- # Military, defense and aerospace
- # Harsh environments



TECHNICAL SPECIFICATIONS

Preliminary Specifications

ELECTRICAL

Rated Capacitance ¹	1.25 F
Rated Voltage at 85°C	10.0 V
Rated Voltage at 125°C	8.0 V
Nominal ESR ²	95 mΩ

PERFORMANCE

Energy Density at 85°C ^{3, 4}	8.8 / 3.5 (J/cc)/(J/g)
Energy Density at 125°C ^{3, 4}	5.6 / 2.3 (J/cc)/(J/g)
Power Density at 85°C ^{5, 6}	37.1 / 14.6 (W/cc)/(W/g)
Power Density at 125°C ^{5, 6}	23.8 / 9.4 (W/cc)/(W/g)
Shock & Vibration Survivability	200G _{peak} & 10G _{rms}
Hermeticity (Helium Leak Rate)	<1x10 ⁻⁸ cc/sec of He

LIFETIME PERFORMANCE

Rated Lifetime at 85°C ⁷	2,000 hours
Rated Lifetime at 125°C ⁷	2,000 hours
Cycle Life at 25°C ⁸	>1,000,000 cycles
Shelf Life ¹⁰	>20 years

TEMPERATURE

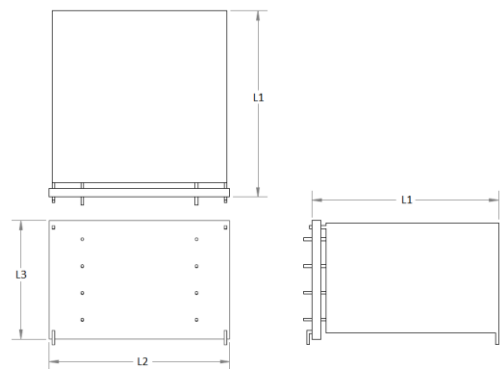
Maximum Operating Temperature	125°C
Minimum Operating Temperature	-40°C
Storage Temperature Range ¹⁰	-65°C to 135°C

PHYSICAL

Length (L1)	Width (L2)	Height (L3)	Mass	Volume
23 mm (0.90 in)	22 mm (0.86 in)	14 mm (0.55 in)	18 g	7.1 cc

Notes:

1. Capacitance is measured via a 1A constant current discharge from rated voltage to 0V. Capacitance Tolerance: +/- 10%
2. ESR is measured at max voltage, averaging the voltage drop during a 1A, 1ms pulse train. ESR Tolerance: +/- 0.5mΩ
3. $E_{max} = \frac{\frac{1}{2} CV^2}{Volume}$
4. $E_{max} = \frac{\frac{1}{2} CV^2}{mass}$
5. $P_{max} = \frac{V^2}{4 \times ESR \times volume}$
6. $P_{max} = \frac{V^2}{4 \times ESR \times mass}$
7. Held continuously at rated voltage and rated temperature. End of life defined as +100% ESR or -20% Capacitance from rated values
8. Continuous cycles at rated voltage
9. Held continuously at rated voltage
10. Fully discharged



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