

Reduce ESR Increase capacitance

Industrial design challenge #1

Designed to provide rugged reliability across a range of industrial applications, KEMET polymer tantalum and aluminium electrolytic capacitors can extend both the capacitance value and operational lifetime whilst reducing Equivalent Series Resistance (ESR).

Polymer tantalums for high-density energy storage

- Reduce component count with high CV/mm³
- Low ESR for low ripple voltage & higher efficiency
- Benign failure mode vs. MnO₂ solid tantalum
- Noise-free: no piezo effect vs. MLCC
- Wide temperature range: -55°C to 105°/125°C

Polymer Hermetic Seal: T551/I/O

- Up to 820µF capacitance
- ESR down to 90mΩ
- Low-temperature/high-frequency capacitance retention



High Reliability COTS: T540/I/3

- Up to 1500µF capacitance
- ESR down to 5mΩ
- High-frequency capacitance retention

High Humidity, Automotive Grade: T591/T598

- Up to 330µF capacitance
- ESR down to 9mΩ
- Full compliance with AEC-Q200 test plan



Stacked Polymer Tantalum: TSP

- Up to 6,000µF capacitance
- ESR down to 3 or 5mΩ
- Optional custom capacitance values



Aluminium electrolytic for bulk capacitance

- Very high ripple current capability
- Long operational lifetime
- Up to 150°C operation
- Extended shelf-life – up to 10 years
- Robust construction, resistant to vibration

Highest Capacitance, Longest Life: PEH169

- Capacitance up to 330,000µF
- Up to 18,000 hours at 105°C
- ESR down to 4mΩ, ESL down to 12nH



High Reliability, High Ripple: PEH526

- Capacitance to 6,800µF
- 3,000 hours at +125°C
- ESR down to 9mΩ



Highest Temperature, Extreme Ripple: PEG225

- Capacitance to 6,300µF
- Up to 28A ripple, RMS, continuous load
- 2000 hours at 150°C



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