

Bipolar Environmentally Hardened Thermal Electric Cooler Controller (TECC-SH-001)



Key Points

- High Current Capability
- 5 V Operation
- Environmentally Hardened

The TECC is an environmentally-hardened, high-current thermal electric cooler controller designed for rugged applications. The unit will operate with voltage as low as 5 VDC or as high as 15 VDC with a power dissipation rating of 10 W.

**The operating voltage can be increased according to the TEC voltage drops but the power dissipation through the TECC should not exceed 10 W or damage may occur.*

Operating Specifications

Maximum Operating Current	3.5 A @ using a 1 Ω TEC
Current Limit (<i>current limits may be changed upon request</i>)	3.5 A Internal Current Limits
Operating Voltage	5 VDC to 15 VDC
Maximum Power Dissipation	10 W over the operating temperature range
Storage Temperature Range	-55°C to +125°C
Operating Temperature Range	-40°C to +71°C
TEC Operating Temperature Set Point	20°C (additional set points available upon request)
Thermistor	1.5 k Ω NTC Thermistor (additional values available upon request.)

Physical Specifications

Shock	25 G's, 11 ms, Terminal Sawtooth
Size	1.80" x 1.80" x 0.435"
Mounting	4 ea. 2-56" pm 1.70" x 1.70" square pattern Requires 4 ea. 2-56" x 0.500" machine screws
Thermal Path	PCB mounted to gold alodine aluminum heat sink to provide stability and thermal path
Vibration	Random 5 Hz to 2000 Hz @ 7.8 Grms, 23.4 G max acceleration
Manufacturing	The units are manufactured to IPC 610 Class III standards.
Package	The TECC pcb is mounted to an aluminum mounting plate and cast in syntactic