

The HiTemp ET Series of Thermoelectric Modules (TEMs) are designed to operate in high temperature environments.

This product line is available in multiple configurations and is ideal for applications that operate in temperatures above 80°C. Assembled with Bismuth Telluride semiconductor material, thermally conductive Aluminum Oxide ceramics and high temp solder construction, the ET Series is designed for higher current and larger heat-pumping applications.

FEATURES

- High-temperature operation
- Reliable solid state
- No sound or vibration
- Environmentally-friendly
- RoHS-compliant

APPLICATIONS

- Automotive cooling
- Telecom cooling
- Outdoor environments
- Medical heating/cooling

TECHNICAL SPECIFICATIONS

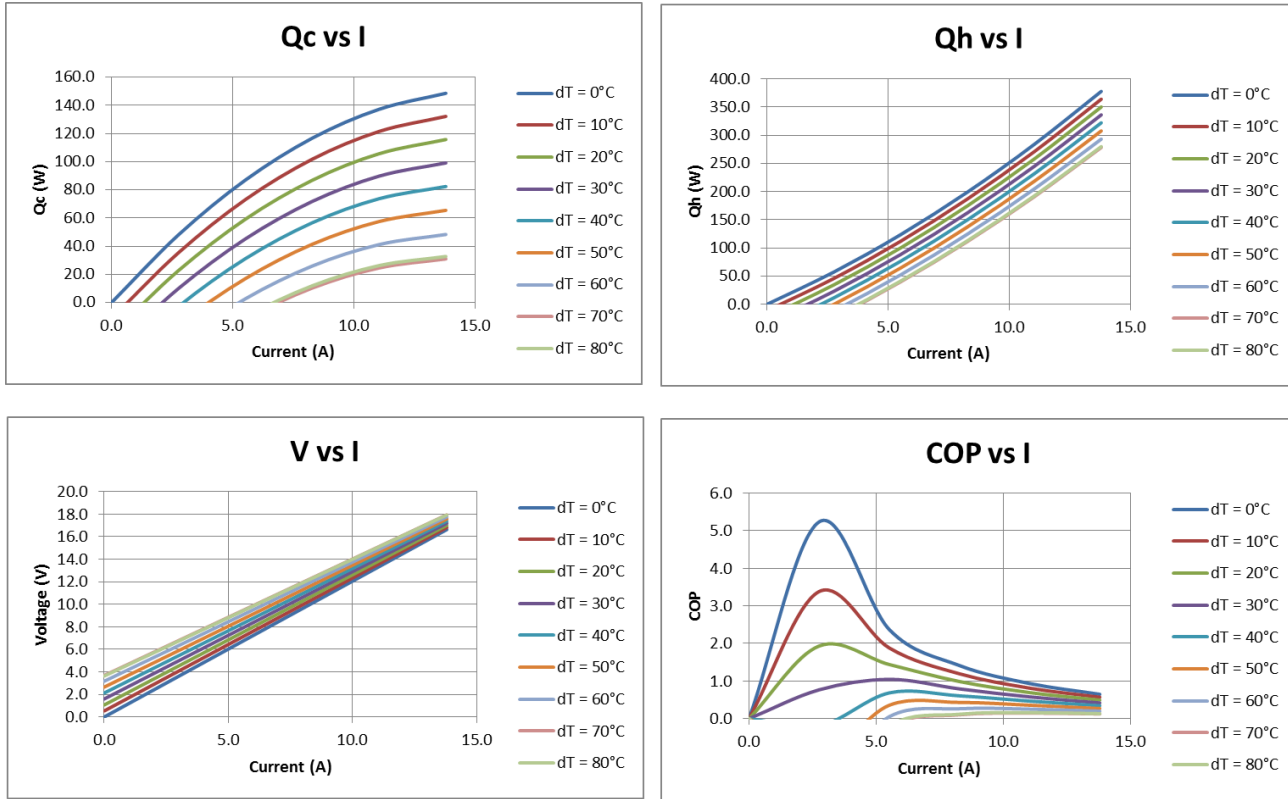
| | | |
|---------------------------|------|------|
| Hot Side Temperature (°C) | 85 | 110 |
| Qmax (W) | 149 | 153 |
| Delta Tmax (°C) | 87 | 94 |
| I _{max} (Amps) | 15 | 15 |
| V _{max} (Volts) | 18.7 | 20.3 |
| Module Resistance (Ohms) | 1.21 | 1.34 |

| SUFFIX | THICKNESS (PRIOR TO THINNING) | FLATNESS & PARALLELISM | HOT FACE | COLD FACE | LEAD LENGTH |
|--------|----------------------------------|------------------------|----------|-----------|-------------|
| TA | 0.112" ±0.001" | 0.001"/0.001" | Lapped | Lapped | 6" |
| TB | 0.112" ±0.0005" | 0.0005"/0.0005" | Lapped | Lapped | 6" |

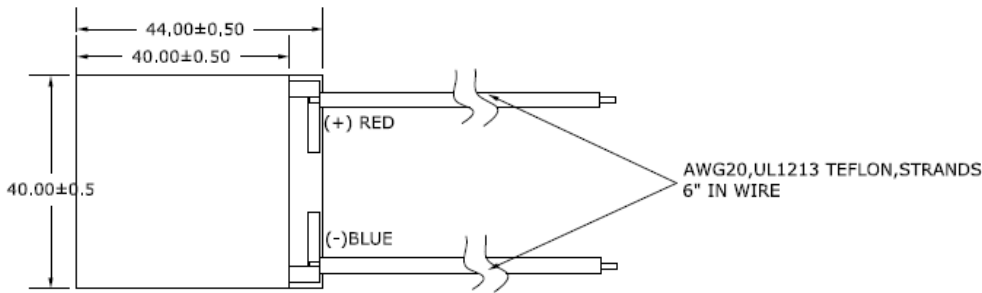
SEALING OPTIONS

| SUFFIX | SEALANT | COLOR | TEMPERATURE RANGE | DESCRIPTION |
|--------|---------|-------|-------------------|--|
| RT | RTV | Clear | -60 to +204 °C | Non-corrosive, silicone adhesive |
| EP | Epoxy | Black | -55 to +150 °C | Low density syntactic foam epoxy encapsulant |

PERFORMANCE CURVES AT $T_h = 85^\circ\text{C}$



MECHANICAL DRAWING



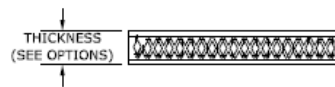
NOTES:

- Maximum Operating Temperature: 150°C
- Do not exceed I_{max} or V_{max} when operating module
- Reference assembly guidelines for recommended installation

COLD SIDE OPTION

HOT SIDE OPTION

Ceramic Material: Alumina(Al_2O_3)
Solder Construction: 232°C SbSn



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