

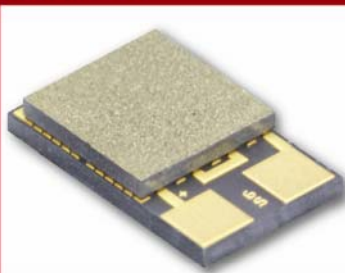
eTEG™ HV37 Power Generator

Data Sheet

Description

The eTEG HV37 thermoelectric power generator can convert waste heat from thermal sources into useable electricity as an energy source. The HV37 is capable of producing 1.0mW of output power and an open circuit voltage of 170mV at a 10K ΔT . At 50K ΔT , the HV37 can produce 24mW of power and an open circuit voltage of 0.8V. Modules can be configured electrically in series to produce higher voltage and power outputs.

eTEG HV37



eTEG HV37 Data Sheet
Thermoelectric Power Generator

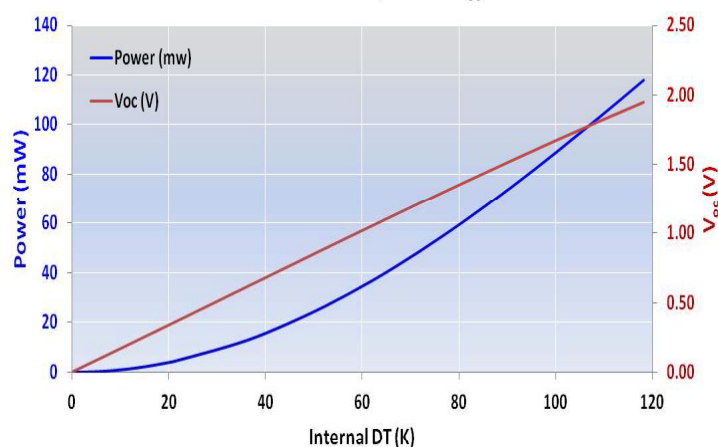
Part Number Options

Part Number	Description
NGA-1003750-0220A-W	With Soldered Wires
NGA-1003750-0220A-A	Au Wire Bondable Pads

Features

- High power output; low ΔT operation
- Small 2.1mm X 3.4mm footprint
- Extremely thin 0.6mm profile
- Au surfaces on top and bottom headers
- RoHS compliant

Maximum Power Output and V_{oc} vs ΔT



Typical Performance Specifications

Parameter	Units	ΔT		
		10K	50K	100K
P_{out}	mW	1	24	90
V_{out}	volts	0.09	0.4	0.85
I_{out}	mA	12	60	105
V_{oc}	volts	0.18	0.8	1.7
I_{sc}	mA	24	115	210

*Performance maximized with matched electrical load

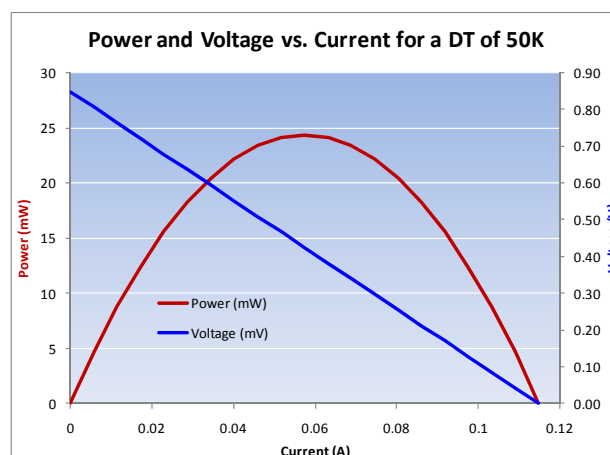
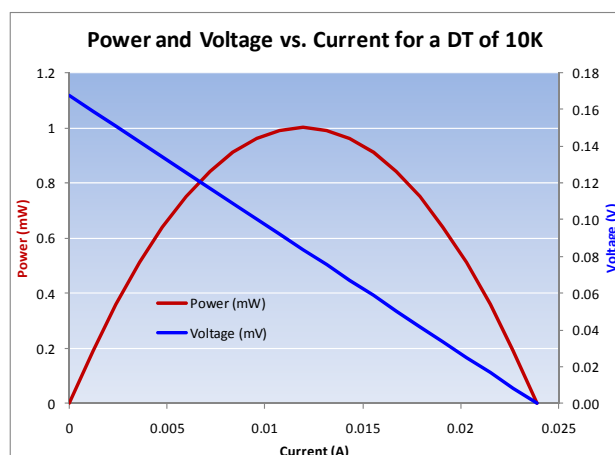
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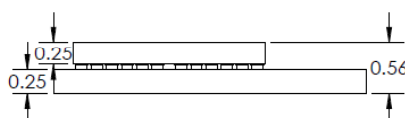
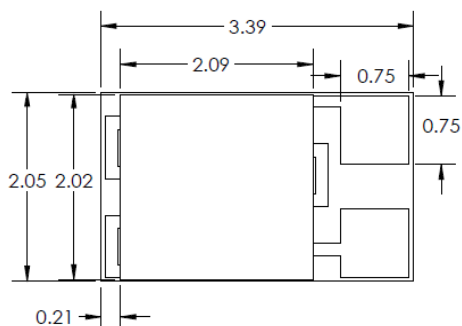
Operating Range			
Hot Side Temperature	T_{hot}	25-200°C	298-473K
Cold Side Temperature	T_{cold}	0-50°C	273-323K
Delta T	ΔT	15-200°C	15-200K

Nominal Thermal Parameters		
Thermal Resistance	R	21 K/W
Thermal Conductance	K	0.048 W/K

Representative Power and Voltage vs. Current Curves



Product Dimensions (mm)



Definitions

P_{max} Power max is the maximum amount of power created from the thermoelectric generator's Seebeck effect. This point occurs when the load resistance matches the device resistance resulting in an output voltage of $\frac{1}{2} V_{oc}$, where V_{oc} is the open circuit voltage.

ΔT Delta T is the temperature difference across the thermoelectric generator.

Mouser Electronics

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Nextreme:

[NGA-1003750-0202A_A](#) [NGA-1003750-0202A_W](#)