

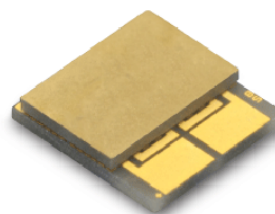
eTEG™ HV56 Power Generator

Data Sheet

Description

The eTEG HV56 thermoelectric power generator can convert waste heat from thermal sources into usable electricity as an energy source. The HV56 is capable of producing 1.5mW of output power and an open circuit voltage of 0.25V at a 10K ΔT . At 50K ΔT , the HV56 can produce 36.5mW of power and an open circuit voltage of 1.25V. Modules can be configured electrically in series to produce higher voltage and power outputs.

eTEG HV56



eTEG HV56 Data Sheet
Thermoelectric Power Generator

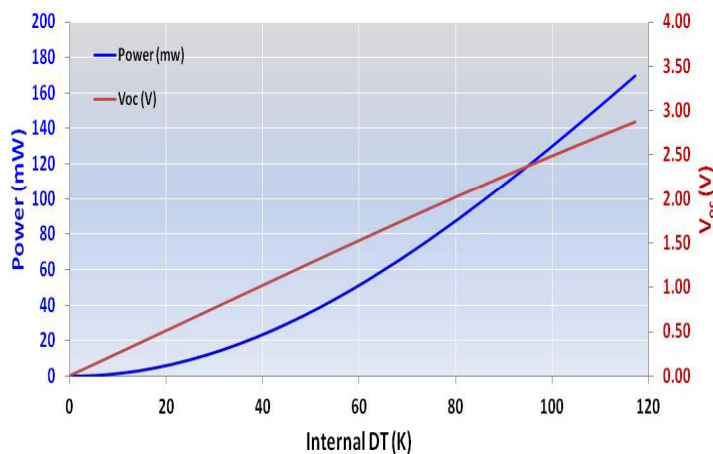
Part Number Options

Part Number	Description
NGA-1004850-0304A-W	With Soldered Wires
NGA-1004850-0304A-A	Au Wire Bondable Pads

Features

- High power output
- Small 3.1mm X 3.3mm 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	1.5	36	130
V_{out}	volts	0.13	0.6	1.25
I_{out}	mA	12	60	105
V_{oc}	volts	0.26	1.2	2.5
I_{sc}	mA	24	115	210

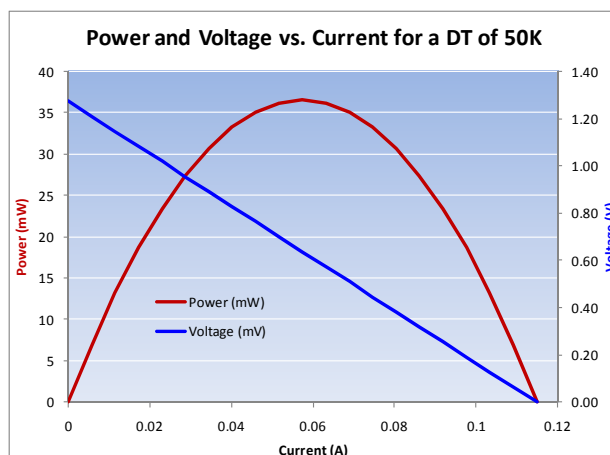
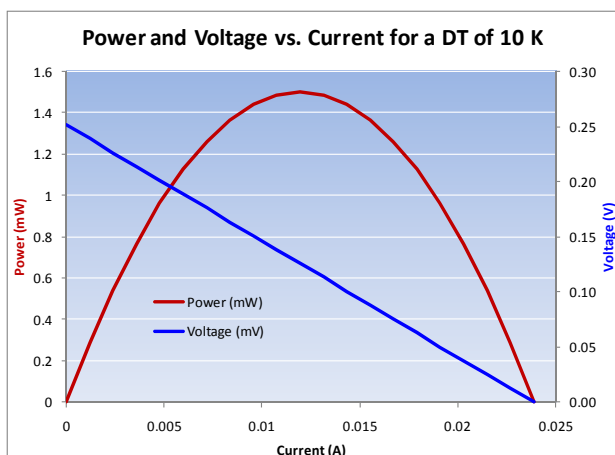
*Performance maximized with matched electrical load

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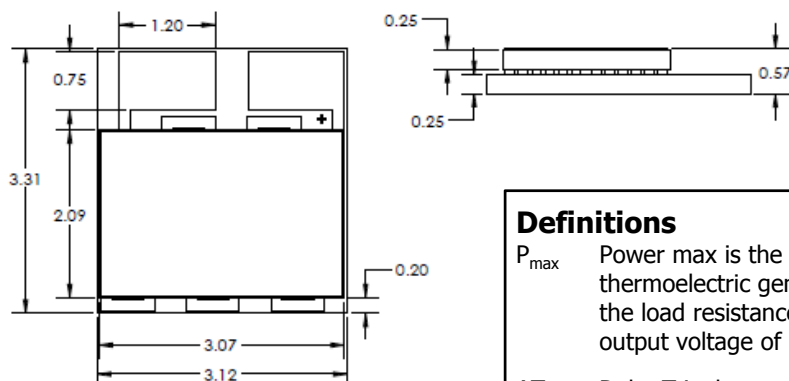
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Operating Range			
Hot Side Temperature	T_{hot}	25-200°C	298-473K
Cold Side Temperature	T_{cold}	0-50°C	273-323K
Delta T	ΔT	10-200°C	10-200K
Maximum Mean Temperature	$T_{m,max}$	150°C	423K
Thermal Parameters			
Thermal Resistance	R	13.1 K/W	
Thermal Conductance	K	0.076 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-1004850-0304A-A](#) [NGA-1004850-0304A-W](#)