



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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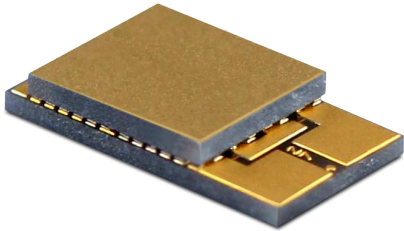
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eTEC Series HV37,48,F2,0202,GG Thin Film Thermoelectric Module



The eTEC Series is a thin film thermoelectric module (TEM) with high heat flux density. Due to its size, input power requirements and heat pumping capacity this device is suited for use in applications to stabilize the temperature of sensitive optical components in telecom and photonics industries.

The eTEC HV37 can produce 3.7 Watts of cooling capacity at 25°C ambient in a 9 mm² footprint. Assembled with thin film semiconductor material and thermally conductive Aluminum Nitride ceramics, the eTEC Series is designed for lower current applications with tight geometric space constraints. Custom designs are available to accommodate metallization, pretin solder and ceramic patterns, however MOQ applies.

FEATURES

- Micro Footprint
- High Heat Pumping Density
- Precise Temperature Control
- Reliable Solid State Operation
- <2 ms Response Time
- RoHS Compliant

APPLICATIONS

- Laser Diodes
- Photodiodes
- Infrared (IR) Sensors
- Pump Lasers
- Crystal Oscillators
- Optical Transceivers

PERFORMANCE SPECIFICATIONS

Hot Side Temperature (°C)	25°C	50°C
Qmax (Watts)	3.7	3.7
Delta Tmax (°C)	45	45
I _{max} (Amps)	1.1	1.0
V _{max} (Volts)	6.0	6.4
Q _{max} / area (W/cm ²)	66	66
Electrical Resistance (Ohms)	4.8	5.5
Thermal Resistance (K/W)	16.5	15.5

PACKAGE ASSEMBLY CONDITIONS

Max Time Exposure > 290°C	60 sec
Peak Assembly Temperature	325°C

TEMPERATURE CONDITIONS

Max Operating Temperature	150°C
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OPERATING CONDITIONS

Max rate of change of current	1.75 Amps/sec
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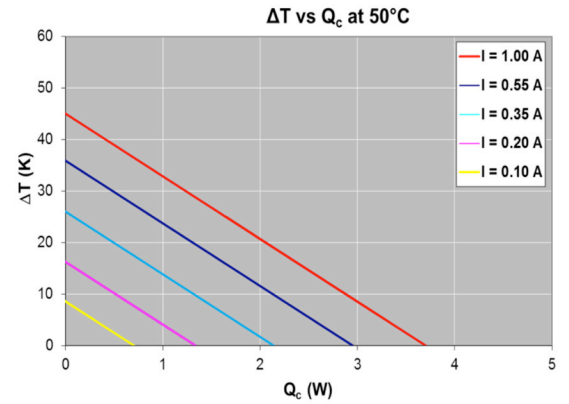
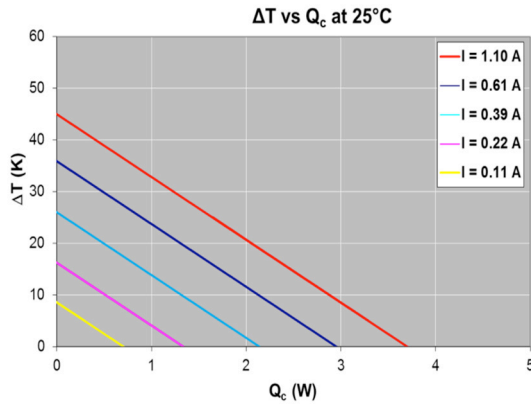
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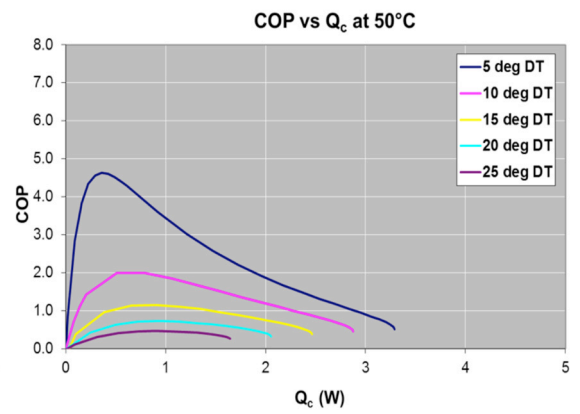
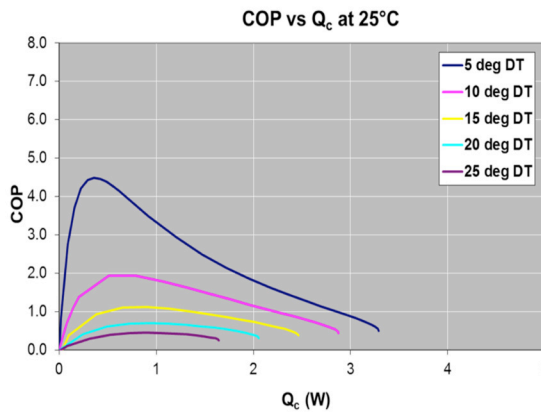
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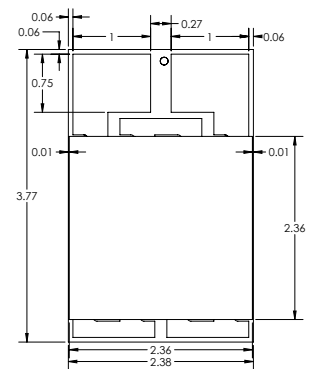
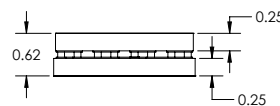
PERFORMANCE CURVES



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ISOMETRIC DRAWING



Standard

- Au metallization on exterior ceramic substrate surfaces
- Au wire bondable pads on hot side ceramic for lead attachment

OPERATING TIPS

- Maintain good surface contact on heat dissipation mechanism prior to operation
- Do not exceed V_{max} or I_{max} values to maintain peak performance

THR-DS-eTEC-HV37 1113

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