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Advanced Thermoelectrics

CENTUM® SKHC1-199-08

Single-Stage Thermoelectric Cooler Chip

The CENTUM® SKHC1-199-08 is a high-performance single-stage thermoelectric (Peltier) module in a 40×40×3.6 mm form factor. It delivers up to 160.8W of cooling and supports a ΔT_{max} of 83°C and operates at up to 8A/28.3 V. Featuring silicone-sealed lead wires and alumina ceramic construction, this robust, solid-state cooler runs reliably across −40 °C to 100 °C environments.

Features

- High cooling power
- High input voltage capacity
- Fast thermal response
- RoHS compliant construction
- Wide operating temperature range

Applications

- Power electronics cooling
- Telecom
- Laser diodes/optics modules
- Defense/aerospace systems
- Precision test equipment

Performance Specification Sheet

Hot Side Temperature T_h (°C)	27	50
ΔT_{max} (°C)	74	83
Q_{max} (Watts)	147.2	160.8
I_{max} (Amps)	8.8	8.8
V_{max} (DC Volts)	26.3	28.3
R_{AC} (Ω)	2.2	2.4

All performance values fall within ±10% tolerance of tested data and/or models.

*For product support, sales, technical support or customizations, please contact info@sheetak.com or visit sheetak.com.

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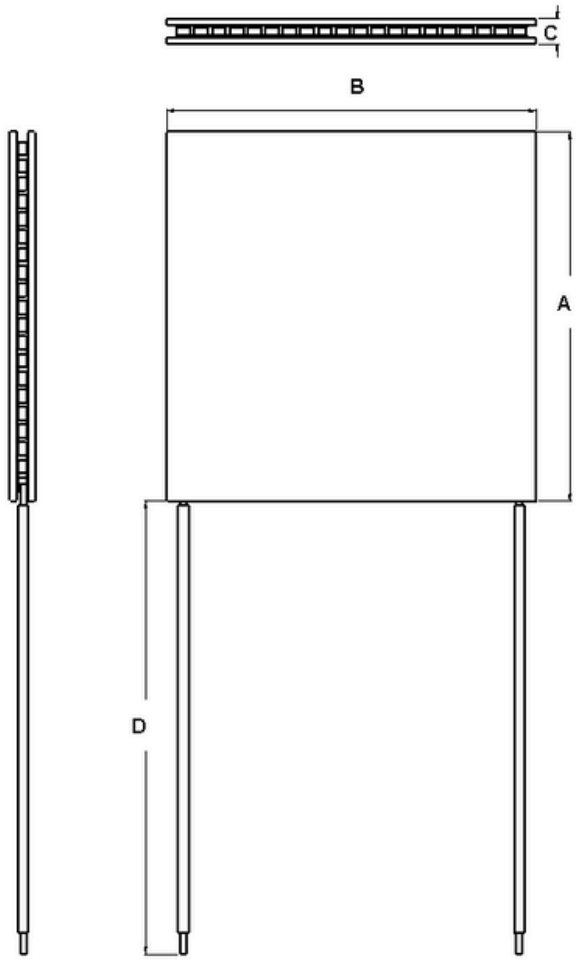
Dimensions



Model #	A
A	40 +/- 0.1 mm
B	40 +/- 0.1 mm
C	3.6 +/- 0.2 mm
D	150 mm

Standard lapping is +/- 0.025 mm

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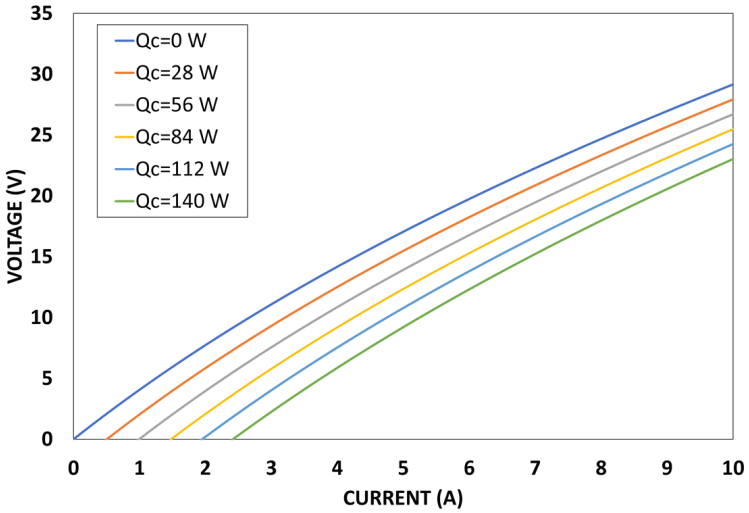
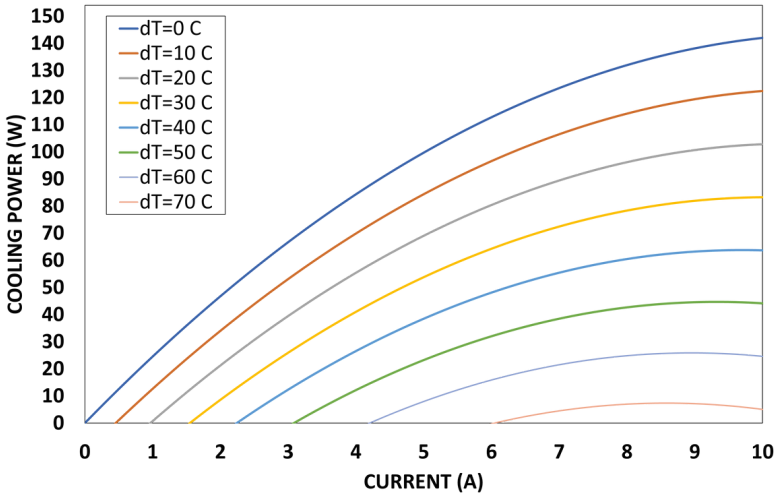
Performance curves at T_{hot} = 27°C

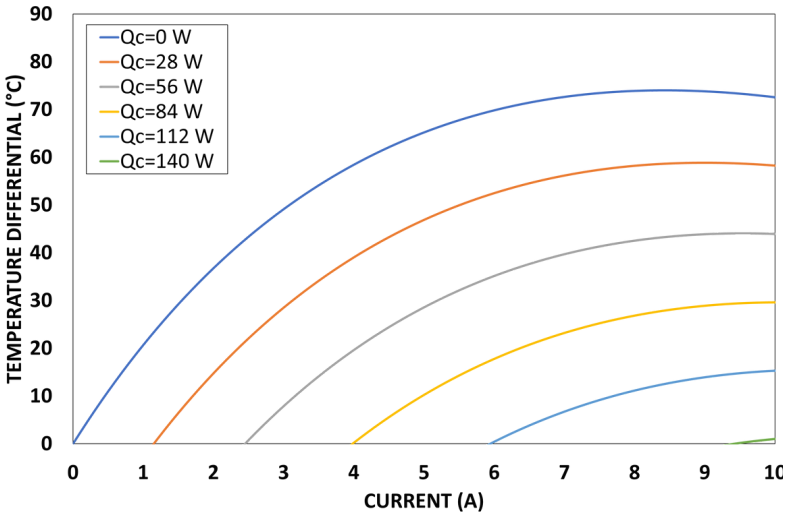
Current vs. Voltage



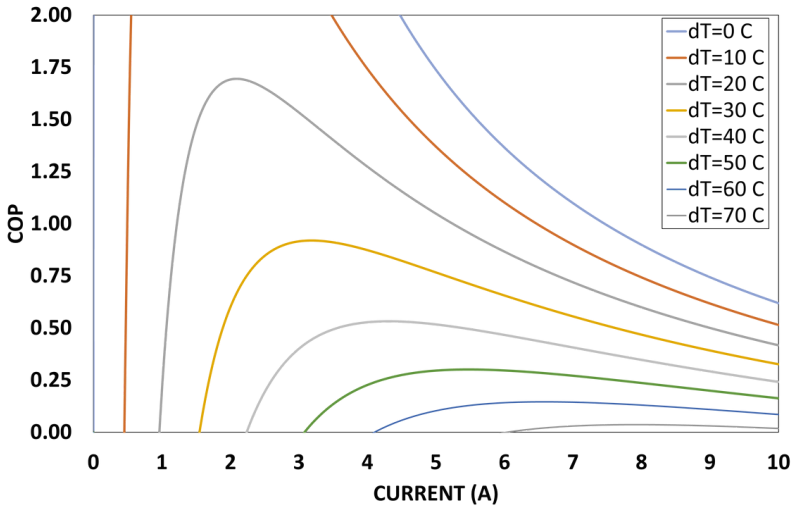
Current vs. Cooling Power



Current vs. Temperature Differential



Current vs. COP



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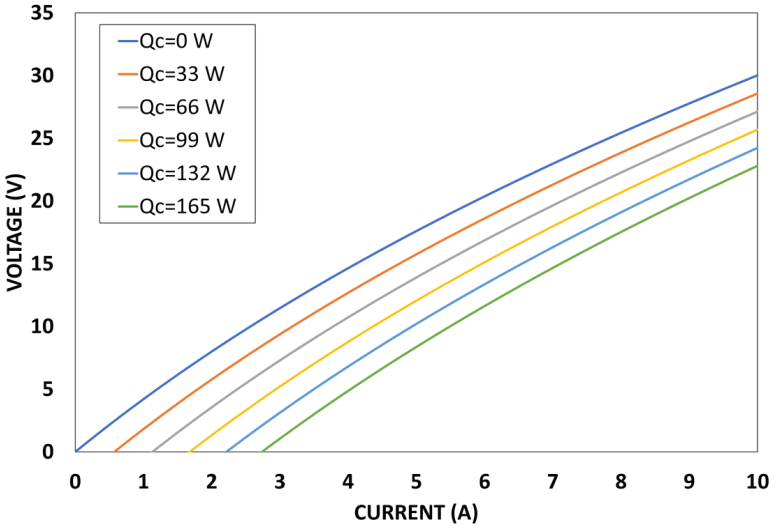
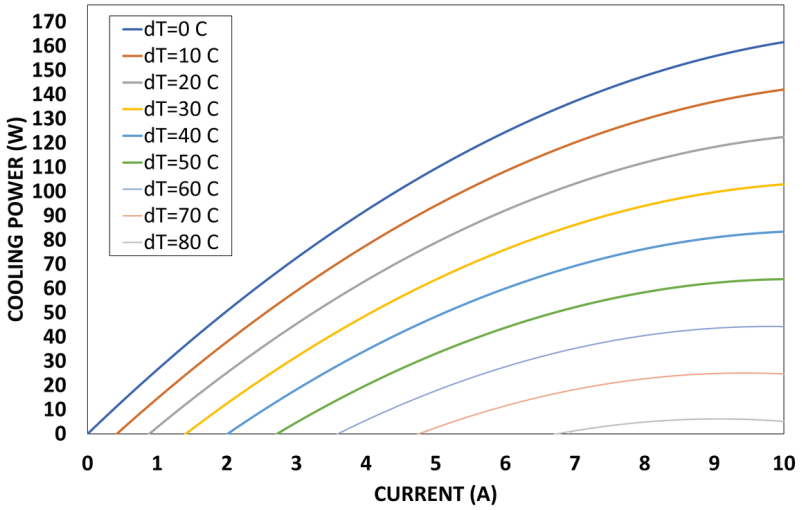
Performance curves at T_{hot} = 50°C

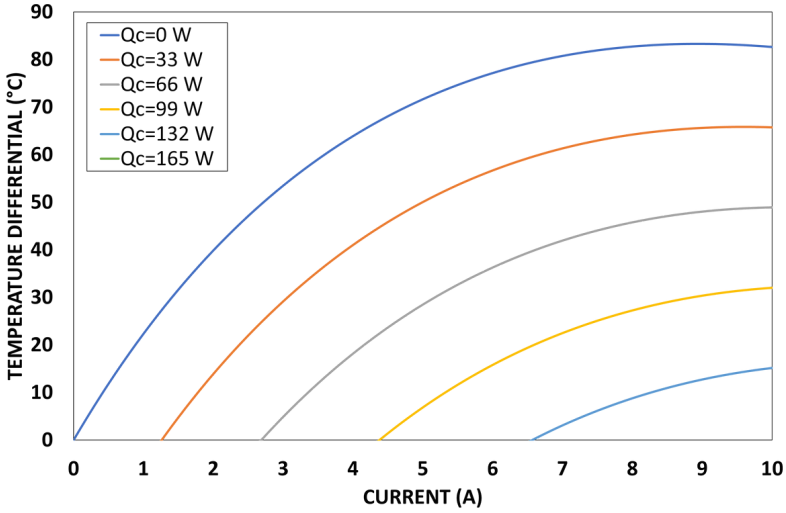
Current vs. Voltage



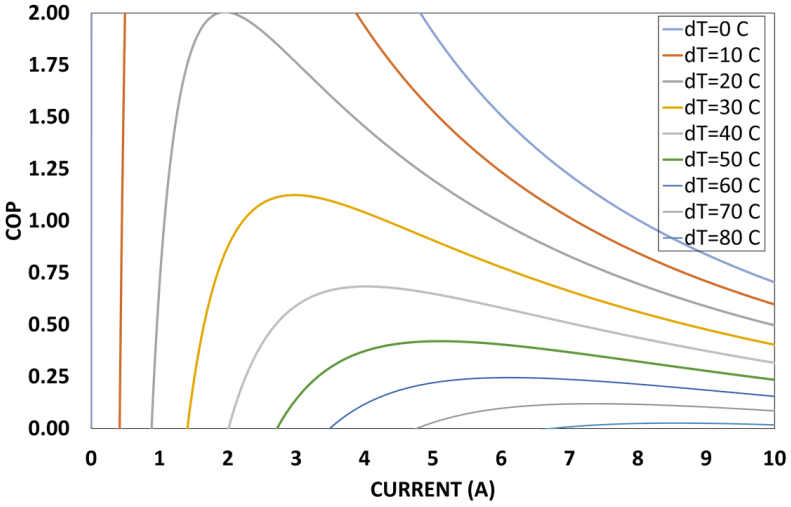
Current vs. Cooling Power



Current vs. Temperature Differential



Current vs. COP



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Other Standard Models

Model Number	Dimensions (mm)	T_h (°C)	ΔT_{max} (°C)	Q_{max} (Watts)	I_{max} (Amps)	V_{max} (DC Volts)	R_{AC} (Ω)
SKHC1-17-08	15x15x3.5	27	74	12	8.5	2.2	0.2
SKHC1-31-06	20x20x3.8	27	74	15.3	6	4.1	0.51
SKHC1-31-08	20x20x3.5	27	74	21.7	8.5	4.1	0.36
SKHC1-71-06	30x30x3.8	27	74	39.2	6.3	9.3	1.13
SKHC1-71-08	30x30x3.5	27	74	51.6	8.3	9.3	0.85
SKHC1-127-03	40x40x4.2	27	74	44.6	4.2	16.8	3.03
SKHC1-127-06	40x40x3.8	27	74	66	6.3	16.8	2.05
SKTC1-127-06	40x40x3.8	27	74	66	6.3	16.8	2.05
SKHC1-127-08	40x40x3.5	27	74	87	8.2	16.4	1.5
SKTC1-127-08	40x40x3.5	27	74	90	8.8	16.8	1.5
SKHC1-199-16	40x40x3.1	27	74	240.7	14.7	26.3	1.35

About Sheetak

Sheetak is redefining what's possible in thermal management and energy harvesting through advanced thermoelectric technology. With a portfolio of more than 25 issued patents, we design and manufacture high-performance thermoelectric chips that serve a diverse range of applications, from optoelectronics, data centers, and AI hyperscalers to telecom infrastructure, aerospace, and IoT systems.

Headquartered in Austin, Texas, Sheetak brings together deep expertise in material science, device engineering, and scalable manufacturing. By pushing the limits of thermoelectric performance, we help our customers meet today's toughest thermal challenges and enable the systems that power tomorrow.

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