



IGBT Cold Plates

High Performance

ATS-CP-1004

ATS IGBT cold plates have unmatched thermal performance because of their mini-channel fin design. The ATS-CP-1004 cold plate, at a flow rate of 4 L/min, can transfer 1kW of heat at 5.9°C temperature difference between the cold plate base and inlet fluid temperature. If the coolant has particles, a #60 filter or finer is recommended to remove possible particles in the liquid.

FEATURES AND BENEFITS

- » 1/4 NPT threaded input and output
- » More than 30% improvement in thermal performance compared to industry standard
- » Low pressure drop
- » Compatible with Semikron SKIM® 93 and other IGBTs or high power devices
- » Lightweight for ease of transportation
- » Provides uniform cold plate surface temperature
- » Maximum pressure: 60 psi



Image for illustration purposes only

DIMENSIONS (L X W X H)

162 X 172 X 20 mm
(6.4 X 6.8 X 0.8")

INLET/OUTPUT PORTS

1/4 – 18 NPT

MATERIALS

ALUMINUM, UNFINISHED

WEIGHT

1,280g

ATS COLD PLATES

» Innovative Technology

Superior heat transfer, flexible design platform

» Compact Design

Designed to fit standard IGBT and other power electronics applications

» Easy Connections

Industry standard threaded hole sizes allows for hassle-free connection options

» Safe & Reliable

Leak Free (100% tested:100 psi)

» Custom Options

Choose from various options, i.e; fitting types, material types, device mounting and more. Contact ATS for additional information

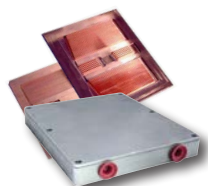
» Customization Available!

ATS will customize any of the cold plates to fit into your application

ADDITIONAL COMPONENTS DEPLOYED IN LIQUID COOLING LOOPS



Flow Meter



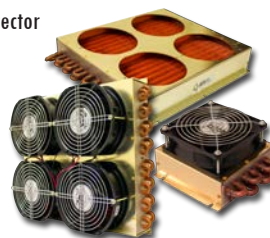
Cold Plates



Chillers



Leak Detector



Heat Exchangers

ATS has the products needed to design a complete liquid cooling loop: **Cold Plates** to transfer and remove the heat from the source, **Heat Exchangers** to transfer heat from the liquid to the air with or without a fan, and **Chillers** to circulate and condition the fluid in the system. In addition, ATS offers **Flow Meters** to instantaneously measure the volumetric flow rate of the fluid in the system and **Leak Detectors** to notify users of any leaks in the system.

IGBT COMPATIBILITY

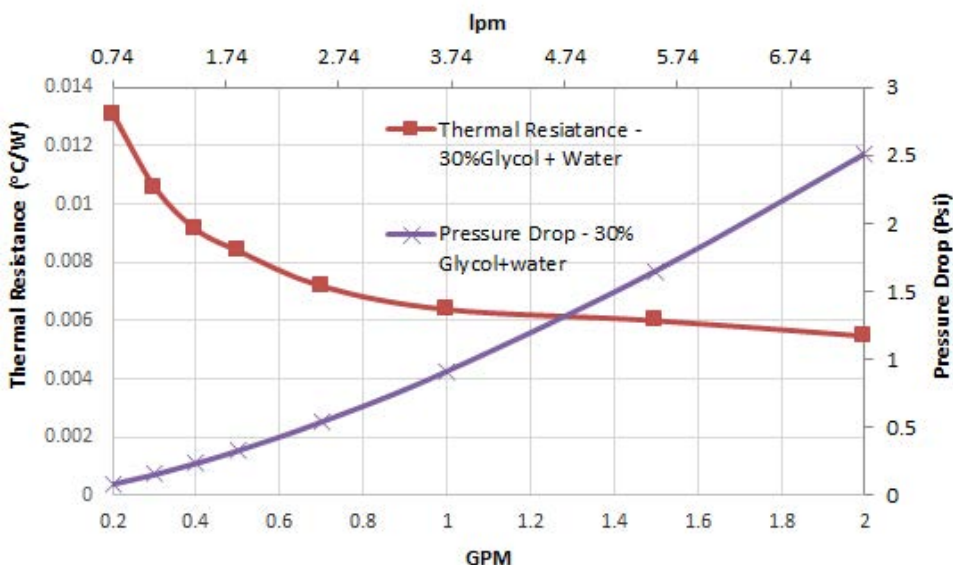
- » Semikron SKIM® 93
- » Other IGBTs or high power devices





PERFORMANCE CURVES

Thermal Resistance And Pressure Drop ATS-CP-1004



ATS Cold Plate Family

Part Number	Dimensions* (L x W x H)	Flow Rate (L/min)	ΔT @ 1kW
ATS-CP-1000	202 x 130 x 20	4 L/min	5.50°C
ATS-CP-1001	198 x 147 x 20	4 L/min	5.00°C
ATS-CP-1002	162 x 136 x 20	4 L/min	7.00°C
ATS-CP-1003	162 x 147 x 20	4 L/min	6.80°C
ATS-CP-1004	162 x 172 x 20	4 L/min	5.90°C

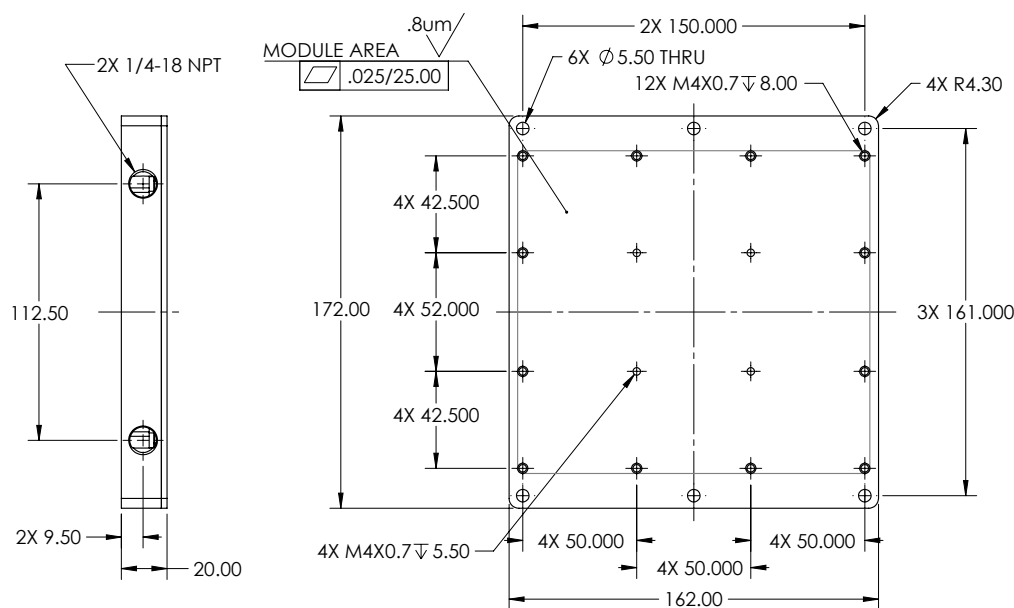
Flow rate (gallon/min)**	R (°C/W)	DeltaP (psi)
2	0.0055	2.5
1	0.0064	0.91
0.5	0.0084	0.33
0.2	0.013	0.09

* All Dimensions in mm

** Note: To convert to l/min, multiply by 3.7

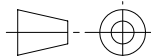
MECHANICAL SPECIFICATIONS

(all dimensions in mm)



NOTES:

1. DIMENSIONS ARE IN MM.
2. TOLERANCES: X.XX +/- 0.25 MM, X.XXX +/- 0.125 MM.
3. THIRD ANGLE PROJECTION.



For further technical information, please contact Advanced Thermal Solutions, Inc.
by phone: 1-781-769-2800, email ats-hq@qats.com or visit www.qats.com.

Mouser Electronics

Authorized Distributor

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