



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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IGBT Cold Plates

High Performance

ATS-CP-1003

ATS IGBT cold plates have unmatched thermal performance because of their mini-channel fin design. The ATS-CP-1003 cold plate, at a flow rate of 4 L/min, can transfer 1kW of heat at 6.8°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

- » More than 30% improvement in thermal performance compared to commercially available cold plates
- » Compatible with industry accepted coolants
- » 1/4 NPT threaded input and output
- » Low pressure drop
- » Lightweight for ease of transportation
- » Provides uniform cold plate surface temperature when IGBTs are installed
- » Maximum pressure: 60 psi
- » **Applications:** Automotive Industry, Uninterruptible Power Supplies, Wind Turbines, Photovoltaic Inverters, Power Electronics, Induction Heaters, Motor Devices, Utility Vehicles, Anywhere power devices are used

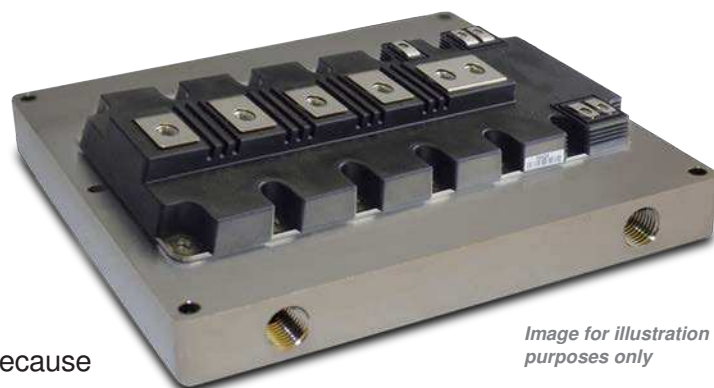


Image for illustration purposes only

DIMENSIONS (L X W X H)

162 X 147 X 20 mm
(6.4 X 5.8 X 0.8")

INLET/OUTPUT PORTS

1/4 – 18 NPT

MATERIAL

ALUMINUM, UNFINISHED

WEIGHT

1,102g

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

ADDITIONAL COMPONENTS DEPLOYED IN LIQUID COOLING LOOPS



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

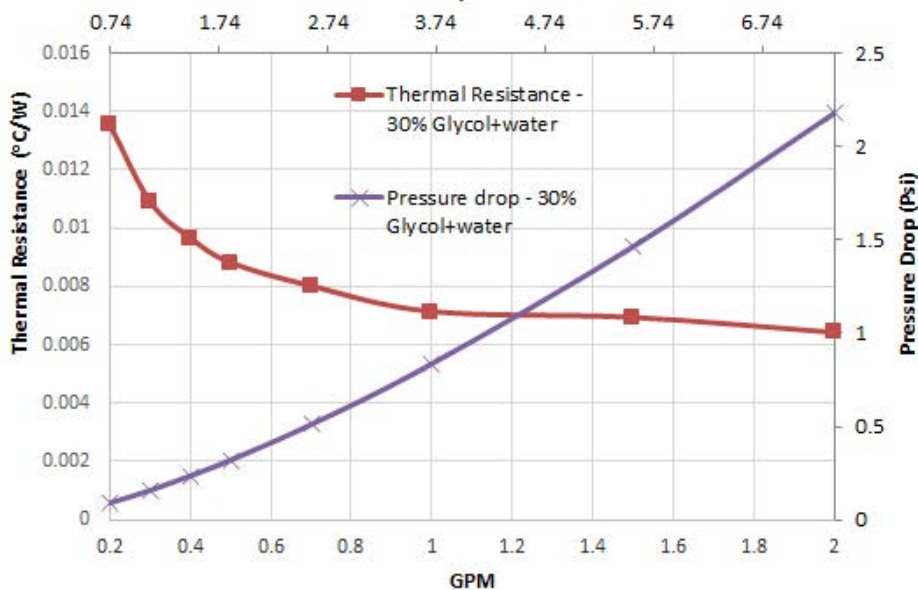
- » Semikron SemiX® 33
- » Infineon EconoPACK™ +
- » Fuji Semiconductor M629
- » Powerex Intellimod™ L-Series
- » Other IGBTs or high power devices





PERFORMANCE CURVES

Thermal Resistance And Pressure Drop ATS-CP-1003



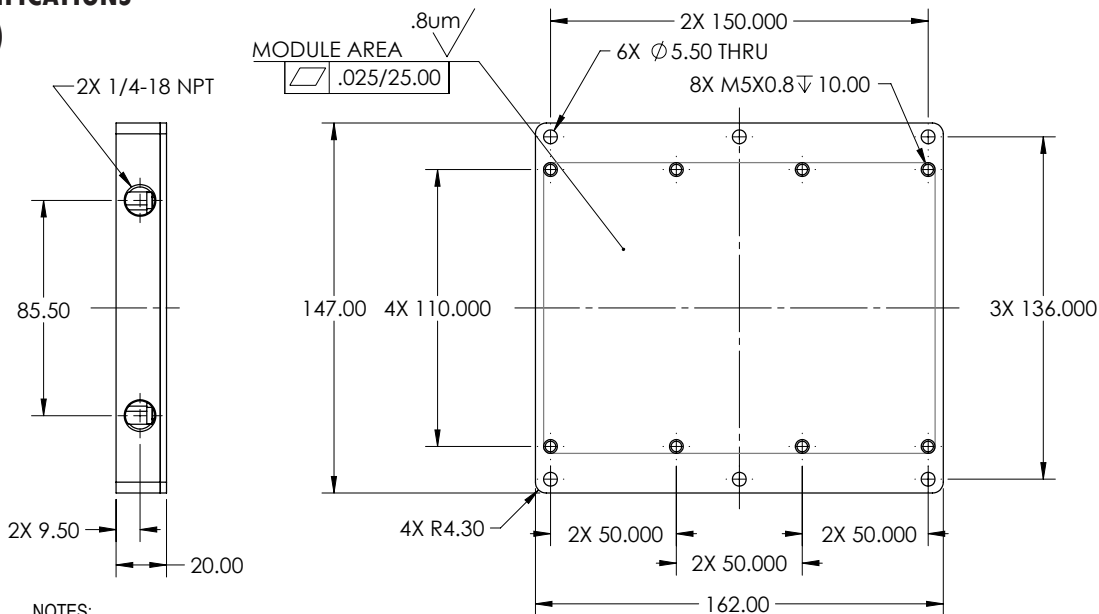
ATS Cold Plate Family			
Part Number	Dimensions* (L x W x H)	Flow Rate (L/min)	ΔT @ kW
ATS-CP-1000	202 x 130 x 20	4 L/min	5.50°C
ATS-CP-1001	198 x 147 x 20	4 L/min	5.00°C
ATS-CP-1002	162 x 136 x 20	4 L/min	7.00°C
ATS-CP-1003	162 x 147 x 20	4 L/min	6.80°C
ATS-CP-1004	162 x 172 x 20	4 L/min	5.90°C

Flow rate (gallon/min)**	R (°C/W)	DeltaP (psi)
2	0.0064	2.2
1	0.007	0.83
0.5	0.0087	0.32
0.2	0.014	0.09

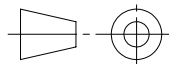
* All Dimensions in mm
** Note: To convert to l/min, multiply by 3.7

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.