

# Flat Heat Pipe

ATS Part#: **ATS-HP-F5L70S45W-199**

**Description:** Closed evaporator-condenser heat transfer systems. A heat pipe's wick structure and embedded liquid enables it to produce a very high heat flux transport capability, which can be 10-20 times higher than the equivalent diameter solid copper pipe. Flat heat pipes are easier to attach to heat dissipating components.



For Illustration Purposes ONLY.

## Features & Benefits

- » Tube material: copper
- » Wick structures: grooved or sintered copper powder
- » High thermal conductivity
- » Light weight
- » Fast thermal response

## Applications for Heat Pipes

- » Compact Electronics Enclosures
- » Aerospace
- » Medical
- » Consumer Electronics
- » HVAC



$$Q_{max} = \frac{Q_t}{L_{eff}} \times 1000$$

$$L_{eff} = L - (L_e + L_c) / 2$$



## PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

### Product Detail

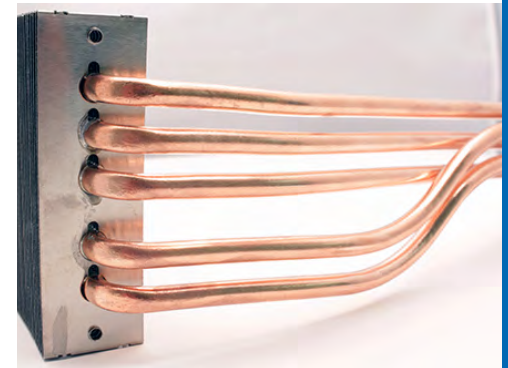
Part Number	L	W	H	Wick Type	Working Fluid	Temp Range (°C)	QT (w.m)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)
ATS-HP-F5L70S45W-199	70	6.95	2	Sintered	Distilled H <sub>2</sub> O	30-120	2.38	42	56.6	52.5	45.3	63	37.8

## SUGGESTED MINIMUM BEND RADIUS ON ATS HEAT PIPES

Heat Pipe Diameter in mm	Minimum Bend Radius in mm
4	12
5	15
6	18
7	21
8	24

## HEAT PIPE JOINING TECHNIQUES

- 1) For small batches/prototypes, heat pipes can be joined to heat sinks or other pieces with thermal epoxy.
- 2) For optimal results, heat pipes should be soldered using low temperature solder at temperatures above 139°C but no greater than 250°C.



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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Heat Sinks](#) category:*

*Click to view products by [Advanced Thermal Solutions](#) manufacturer:*

Other Similar products are found below :

[581102B00000G](#) [656-15ABPE](#) [657-20ABPNE](#) [7020B-TC12-MTG](#) [73452PPBA](#) [7G0011A](#) [PF720G](#) [A22-4026](#) [120-1873-007](#) [HAH10L](#)  
[HAH15L](#) [1542616-1](#) [HS-2506-F1](#) [HS-87M0-F2](#) [218-40CTE3](#) [231-69PAB-15V](#) [25-7520](#) [SW50-4G](#) [231-75PAB-13V](#) [231-75PAB-15V](#) [253-](#)  
[122ABE-22](#) [PSC22CB](#) [HAF10L](#) [HAQ10T](#) [D10100-28](#) [BDN183CBA01](#) [3-21053-4](#) [32438](#) [TX0506-1B](#) [TX1806B](#) [LAE66A3CB](#) [WA-DT2-](#)  
[101E](#) [511-3U](#) [73381PPBA](#) [73403PPBA](#) [7G0047C](#) [COMX-440-HSP](#) [510-12M](#) [D10650-40T5](#) [V8511 Y](#) [APF40-40-13CB/A01](#)  
[780653U04500G](#) [ATS-54310K-C2-R0](#) [FK 216 CB SA](#) [FK 231 SA 220](#) [648-51AB](#) [657-20ABPESC](#) [2341BG](#) [679-25AG](#) [FK 212 CB SA](#)