Round Heat Pipe

For Illustration Purposes ONLY.

ATS Part#: ATS-HP-D7L400S32W-142

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. Round heat pipes offer advantages for certain fin configurations at the condenser end.

Features & Benefits

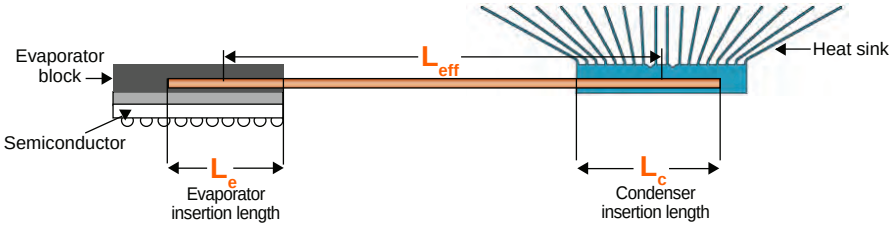
» Tube material: copper
» Wick structures: grooved or sintered copper powder
» High thermal conductivity
» Light weight
» Fast thermal response

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); D=Diameter (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR=Temperature Range (°C)

Product Detail

Part Number	L	D	Wick Type	Working Fluid	Temp Range (°C)	QT (w.m)	L_{eff} (mm)	Q_{max} (W)	L_{eff} (mm)	Q_{max} (W)	L_{eff} (mm)	Q_{max} (W)
ATS-HP-D7L400S32W-142	400	7	Sintered	Distilled H_2O	30-120	6.49	160	40.6	200	32.4	240	27.0

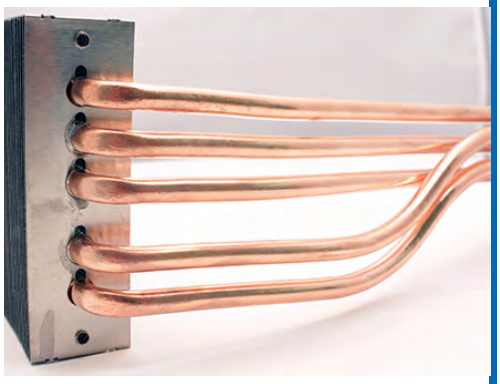
SUGGESTED MINIMUM BEND RADIUS ON ATS HEAT PIPES

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** or visit www.qats.com.

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