THINK GLOBAL.

SJS Products, a Jamcor Corporation, is pleased to now offer comprehensive thermal solutions to our valued customers. It is our goal to be a full-service partner and where there is a need, we will strive to fill it.

RoHS COMP I

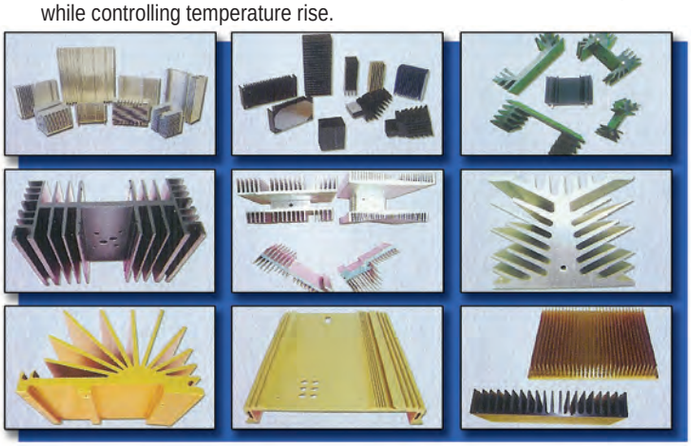
THERMAL SOLUTIONS

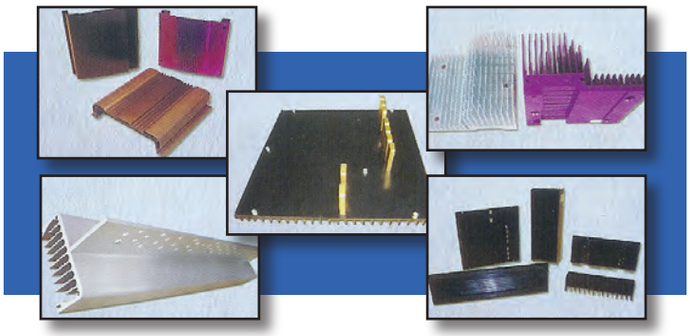
Basic Heat Transfer

- Heat is neither created nor destroyed.
- In a conductor, a difference in temperature causes heat to flow from the heat temperature source to the low temperature sink.
- In an insulator, resistance to heat transfer or heat flow causes heat sources to remain at a higher temperature.
- There are no perfect heat conductors or insulators. There is always some gain or loss despite all of our best engineering attempts to hold or remove heat.

What Does a Thermal Solution Really Do?

- Removes heat from a semiconductor by providing a cooler temperature outlet for the heat to move toward.
- Absorption, transfer, dissipation
- Conduction is the process of heat transfer through a solid material.
- Convection is heat removal from an object by intimate contact between air (or fluid) molecules and the heat sink cooling surface.
- Radiation is the transfer of heat through the electromagnetic light wave spectrum.
- Heat sinks function to keep the temperature of the semiconductor junction below its maximum recommended value, to maintain a sufficiently long functional life for the semiconductor and to allow an increase to output while controlling temperature rise.

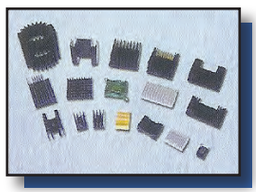




Aluminum extrusions are typically stocked in cut lengths to be used as raw material for custom-machining heat sinks. The process of transforming them into usable heat sinks requires that the extrusions are cut to specified length, assembly holes added to attach power dissipating devices and holes added for mounting of the heat sink itself.

Custom Heat Sink Solutions

- Ultra high ratio extrusions
- Skived fin heat sinks
- Bonded fin heat sinks
- Folded fin heat sinks
- Stacked fin heat sinks



Heat Pipe Assemblies

Heat pipes have only recently come into use in high volume applications. The advantages of using a heat pipe assembly include:

- Heat dissipation surface can be placed at a remote location from heat generation.
- Heat can be moved significant distances without large temperature rise.
- High heat flux densities can be averaged to help reduce temperature rise at the heat generator.

Remember, a heat pipe by itself will not dissipate heat. It is only a conduit to move heat from one place to another.

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