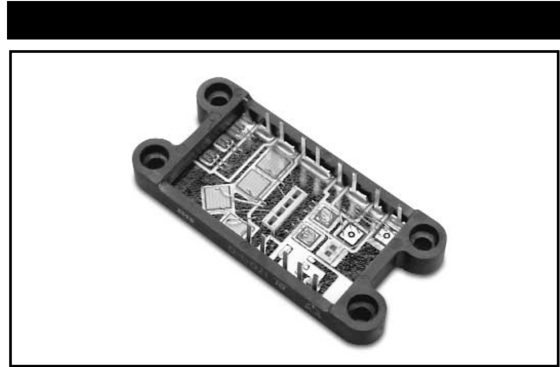
MODEL 170

Custom Power Modules



DESCRIPTION

BI's Custom Power Modules are designed to assemble all of your circuit's power components into one, easy to manage, package. Power modules offer a low cost method to improve the circuit density. These modules will also reduce the assembly labor by eliminating insulating pads and reducing the individual bolting of discreet power semiconductors. BI offers power module designs that allow the module to be soldered to the circuit board at the same time as the other components, eliminating hand soldering operations. Power modules allow the use of a simpler and less expensive heat sink.

All the power components normally bolted to the heat sink should be included in the custom module.

FEATURES AND BENEFITS

- Low cost custom modules
- Reduced circuit size
- Allows simplified heat sink
- Soldering technique minimizes voids
- Flexible package dimensions

TYPICAL APPLICATIONS

- Power supply subassemblies
- Motor driver
- Power amplifier
- H-Bridge
- Bridge rectifier
- Ganged power FETs

PACKAGING

Package Size	Custom packaging from 0.3” to 4.0” on a side.
Package, Typical	Heat sink attachment and heat transfer.
Package Configurations	Ceramic substrate, typically copper clad to promote heat transfer. Base with mounted components is assembled into a custom frame and encapsulated.

Specifications subject to change without notice.

ELECTRICAL

Semiconductor Components	BJTs, FETs, Diodes, SCRs, IGBTs
Capacitors	Ceramic and tantalum
Other Components	Resistors, thermisters and various surface mount/solder mount components

MECHANICAL

Substrate	Alumina, beryllia, aluminum nitride, aluminum, copper
Interconnect Layers	1 (crossover layers possible)
Interconnect Material	Copper
Die Attach	Solder attached, aluminum & gold wire bonding
Package Construction	Substrate base with plastic frame

ENVIRONMENTAL

Custom power modules are typically designed to operate over a temperature range of -40°C to +125°C.