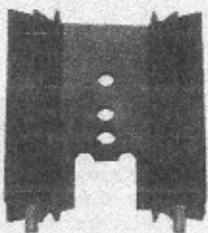


HEAT SINKS

HEAT SINK

Black anodized extruded aluminum heat sink. Designed to vertically mount a single plastic cased semiconductor device. Three 1/8" dia. holes are provided for device mounting. The holes are located approx. 9/16", 3/4" and 1.0" above the bottom mounting surface. Two 3/32" finned mounting pins are pressed into holes in the bottom of the heatsink body. The pins are spaced 1" apart. The pins extend about 3/16" beyond the mounting surface. The device mounting area located between the cooling fins is 5/8" wide x 1-1/8" long and is available on both sides of the heat sink. **NOTE:** Two devices could possibly be mounted back to back on this heat sink if the power dissipation of the individual devices was appropriate. This device is similar to Wakefield # 63715ABP. Dimensions: 1-3/8" wide x 1/2" deep x 1-1/2" high (excluding pins).

Stock #HD2500



TO-220 HEAT SINK

Manufacturer: WE. Black anodized extruded aluminum heat sink. Designed to vertically mount a single TO-220 style device. A single 5/32" dia. hole is located approx. 13/16" above the bottom mounting surface. Two 3/32" roll pins are pressed into these holes in the bottom mounting surface. The pins are spaced 1" apart. The pins extend 5/32" beyond the mounting surface. The device mounting area located between the cooling fins is 11/16" wide x 2" long and is available on both sides of the heat sink. **NOTE:** Two devices could possibly be mounted back to back on this heat sink if the power dissipation of the individual devices was appropriate. Dimensions: 1-21/32" wide x 1" deep x 1-1/2" high (excluding bottom mounting pins).

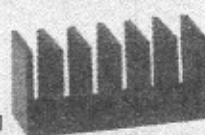
Stock #HD9900



HEAT SINK

Extruded aluminum heat sink with equally spaced fins. Black anodized finish. Does not have any mounting holes. The unit has a thermally conductive tape strip on the rear surface. This allows the heat sink to be directly fastened to an IC package. The tape has a protective film that peels away easily for installation.

Stock #HD9904



HEAT SINKS

TO-220 HEAT SINK

Stamped aluminum, designed to accept two TO-220 style semiconductor devices. Mounts via two short threaded standoffs tapped for a #6x32 tpi screw. Mounting screw is also intended to mount heatsink to circuit board. Black anodized finish. Dimensions: 1-15/16" wide x 1-9/16" deep x 1-7/16" high.

Stock #HD2150

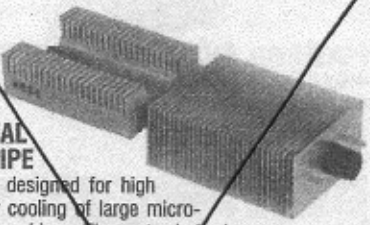


THERMAL HEAT PIPE

Originally designed for high efficiency cooling of large micro-processor chips. The extruded aluminum section of the device was probably bonded to the chip with a thermally conductive adhesive. The opposite end of the unit has a series of open aluminum fins over which air was forced by a fan. Heat from the chip was thus dissipated into the air. Could be used in any application requiring heat transfer from one point to another. Extruded and finned portion is 3-1/8" long x 2-7/16" high x 31/32" thick. Open finned area is 3-5/16" long x 2-1/2" wide x 1-3/8" thick. Overall max. length of the device is 7-1/2". Two threaded mounting studs on the end of the open fin area. Studs are 3mm in dia. and have a 0.5mm thread pitch. The studs are 5/16" long.

Stock #HD2151

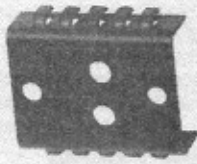
\$14.50



TO-3 HEAT SINK

Stamped aluminum heat sink that is designed to accept a single TO-3 semiconductor device. The heat sink mounts flat on the mounting surface and is secured in place via the mounting screws associated with the semiconductor device. Stamped aluminum construction with a black anodized finish. Dimensions: 1-9/16" wide x 1-7/16" deep x 1/2" high.

Stock #HD2050



HEAT SINK

Extruded aluminum heat sink with 8 equally spaced fins. Black anodized finish. This unit does not have any pre-drilled mounting holes for components. The unit has 5/32" dia. mounting holes in each corner. Dimensions: 4-1/2" wide x 2-5/16" high x 7/8" nom. thick.

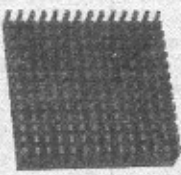
Stock #HD2051



CPU HEAT SINK

Extruded and machined heat sink that was made to fasten directly to the top surface of large IC packages such as computer CPU. The top surface has fins that have been cross-machined to increase surface radiating area. The back of the unit has a thermally conducting foam adhesive backing that will hold the heat sink in place on the IC device. The backing has a removable plastic shield that protects the adhesive surface prior to installation. This shield peels away easily when removal is required. Heat sink has a black anodized surface. Dimensions: 1-29/32" sq. x 15/32" thick.

Stock #HD9903



TO-220 HEAT SINK

MNF WE. Black anodized extruded aluminum heat sink. Designed to vertically mount a single TO-220 style device. A single 5/32" dia. hole is located approx. 13/16" above the bottom mounting surface. Two 3/32" roll pins are pressed into these holes in the bottom mounting surface. The pins are spaced 1" apart. The pins extend 5/32" beyond the mounting surface. The device mounting area located between the cooling fins is 11/16" wide x 2" long and is available on both sides of the heat sink. **NOTE:** Two devices could possibly be mounted back to back on this heat sink if the power dissipation of the individual devices was appropriate. Dimensions: 1-21/32" wide x 1" deep x 1-1/2" high (excluding roll pins).

Stock #HD9900



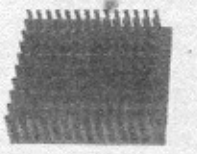
EXTRUDED ALUMINUM HEAT SINK Heavy duty aluminum extruded heat sink with a black anodized surface finish. The center rid of the heat sink has been machined to accept 3 large stud mount rectifier diodes or SCR's. The holes will accept 1/4" diameter mounting studs. Dimensions: 2-1/2" wide x 2" high x 11-13/16" long.

Stock #HD2400

HEAT SINK

Extruded aluminum heat sink with a black anodized finish. The finned area has cuts across the finned area to increase heat dissipation. One end of the finned area has a ledge. This area is 7/32" wide x 2-31/32" long. The heat sink does not have any mounting holes. Dimensions: 3-5/32" wide x 2-31/32" high x 1-1/32" thick.

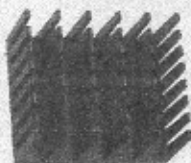
Stock #HD9850



HEAT SINKS

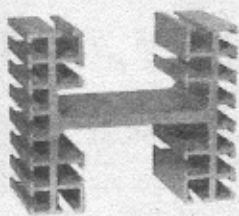
CPU HEAT SINK

Large extruded and machined heat sink made to fasten directly to top surface of large IC packages like a computer CPU. Top surface has cross-machined fins which increase surface radiating area. Back of the unit is flat. Black anodized surface. **NOTE:** Finned area could be machined away to allow mounting other devices to this heat sink. Dimensions: 2-9/32" wide x 1-7/8" high x 1-1/4" high. Stock #HD9901



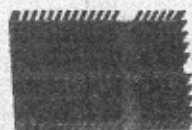
EXTRUDED ALUMINUM HEAT SINK

Heavy duty aluminum extruded heat sink with a gold anodized surface finish. The center rib of the heat sink has not been machined, so it will accept any desired semiconductor device required in use, such as rectifier diodes, SCR's or power transistors. The device mounting area measures 2-1/2" wide x 2-3/8" high. The mounting area is usable on both sides of the heatsink center rib. Dimensions: 5" wide x 2-1/2" deep x 4-1/8" high. Stock #HD2501



HEAT SINK

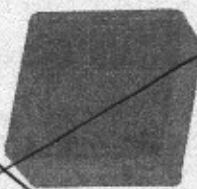
Extruded aluminum and machined. Finned area cross-machined to increase heat dissipation and has cross-shaped machined area. Width of machined area approx. 5/16" wide in both directions. Machined area is centered left to right along length axis and the other cut centerline is offset approx. 1" from the end. Black anodized surface finish. Rear has a 0.020" deep x 1-5/16" wide recess centered along the length axis. Dimensions: 3" wide x 1-31/32" high x 19/32" thick. Stock #HD9902



MAGNETS

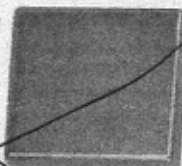
RARE EARTH MAGNET

This is a very powerful magnet. Magnet will lift about 4 lbs. of steel on a straight pull. The Gauss measurement is 3500 Gauss, when measured at the faces. The magnet north and south polarity are aligned along the direction of the faces. This magnet is unplated. Dimensions: 3/4" square x 5/16" thick, nom. Stock #MAG2500



SMALL BUT POWERFUL RARE EARTH MAGNET

This is a very powerful magnet. Magnet will lift about 7-1/4 lbs. of steel on a straight pull. 2800 Gauss, when measured at the faces. The magnet north and south polarity are aligned along the direction of the faces. This magnet has a thick nickel plating. Dimensions: 1" wide x 1-9/64" long x 1/4" thick, nom. Stock #MAG2501



POWERFUL SMALL HORSESHOE MAGNET

Weight 4 oz. Will lift 3.5 lbs. static weight. Dimensions per drawing. Stock #MAG8204

SOUTHCO MAGNETIC CABINET LOCK

SOUTHCO CO., LESTER, PA. Designed to snap into a rectangular opening and provide a light locking force to keep doors, etc., closed. Mounting hole dimensions: 5/16" wide x 1-1/2" long. Maximum panel mounting thickness is 3/32". Magnetic element floats in plastic mounting to compensate for slight misalignments. Dimensions: 1-3/4" high x 3/8" wide x 1" deep. Stock #MAG9702



SOUTHCO MAGNETIC CABINET LOCK

SOUTHCO CO., LESTER, PA., #02-99-133-10. Similar to above. Designed to snap into a rectangular opening and provide a light locking force to keep doors, etc., closed. Mounting hole dimensions: 3/8" wide x 2-1/8" long. Maximum panel mounting thickness is 3/32". Magnetic element floats in the plastic mounting to compensate for slight misalignments. Dimensions: 2-5/16" wide x 27/64" high x 13/16" deep. Stock #MAG2051



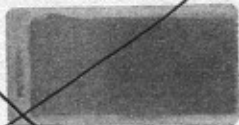
FERRITE BAR MAGNET

These are grade 8A or 8B, ferrite bar magnets. The magnetic strength of the wide faces is 350 Gauss. One face is the north pole while the opposite face is the south pole. Dimensions: 3-1/2" wide x 1-5/16" high x 1/2" thick. Stock #MAG2150 \$3.95 ea. 10 for \$35.00



MAGNETIC PLATE

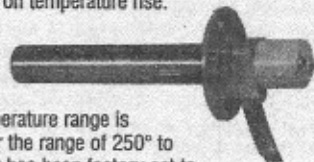
Approx. 5 lb. pull. Consists of five rectangular sintered ferrite magnets, epoxy bonded to a steel plate. Each magnet is 1-5/8" wide x 11/16" high x 7/32" thick. The magnetic surface area measures 1-5/8" wide x 3-1/2" long. Each magnet measures 200 gauss at its face. The magnetic poles alternate in a north, south, north, south, north pattern. Overall dimensions of magnets and mounting plate: 4-1/8" long x 2-1/8" wide x 0.305" thick. Stock #MAG9805



THERMAL UNITS

THERMOSWITCH FENWAL, #17322-18.

Contacts open on temperature rise. Contacts are rated 10 amps 115 VAC or 5 amps 230 VAC. The temperature range is adjustable over the range of 250° to 450°F. The unit has been factory set to 388° ±8°F. The unit can be re-set to any temperature within its specified range via a screw adjustment located at the end of the unit. A tamper resistant cover is provided for the temperature adjusting screw. The body of the thermoswitch has a round mounting flange with three mounting holes. 36" long high temperature Teflon® fiberglass electrical leads are provided for electrical connections. Dimensions: Main body approx. 5/8" dia. x 5" long. Mounting flange 1-3/4" dia. Stock #HTS9950



CARTRIDGE HEATER

RAMA CORP., #CA3ADZT. 120 V 500 watts. 1/2" dia. x 2-1/16" long. 10" leads. **NOTE:** We can supply a limited number of these heaters in matched pairs. If matching resistance characteristics are useful in your application please request matched pairs at the time of order, otherwise we will ship non-matched units. Stock #HE2150



THERMAL UNITS

THERMAL UNITS



TUNGSTEN HALOGEN HEATING LAMP
USHIO, #U13. 120 V, 1200 watts. Dimensions: 5/16" dia. x 19-1/2" long with 2-1/2" leads on each end.
Stock #HE9251

HEATING ELEMENT

REDRING, #E43590.
Tubular steel clad element. Rated 1500 watts 240 volts. Coil shaped portion is 6" in dia. Has built-in metal separator plates to keep coiled section spaced apart. Has flat mounting plates located near electrical connections. These plates are tapped 4mm x 0.7mm. (NOTE: These holes can be retapped for a 8X32 tpi standard screw.) The electrical connections are made via 1/4" quick connect tab terminals. Dimensions: 6" wide x 8-7/16" high x 1-3/16" thick.
Stock #HE9650



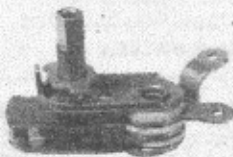
FIXED TEMPERATURE THERMOSTAT

AMERICAN THERMOSTAT, #A-710. Normally closed. Opens on temperature rise. Contacts are rated 1500 watts 115/230 VAC resistive. Unit is preset to open at approx. 250°F. The contacts reset to closed position when the temp. drops approx. 5° below set point. An adjustment screw is provided to allow an approx. ±5% of temp. adjustment. Has a built-in 6X32 tpi insulated male stud for mounting. Has 1/4" quick connect terminals for electrical connections. Dimensions: 1-1/2" long x 3/4" high (including stud) x 1" wide max.
Stock #HE9502



ADJUSTABLE THERMOSTAT

AMERICAN THERMOSTAT CORP., Series #A7. Range: 210° to 240°F. Normally closed. Opens on temperature rise. Contacts rated 1500 watts, 115/230 VAC resistive. Shaft is 1/4" dia., knurled and has a flat. NOTE: This unit has a range adjustment setscrew located within the knurled adjustment shaft. This screw can be used to readjust the basic temperature range approx. ±100°F. The actual temperature adjustment range remains approx. 30°F regardless of the overall range set by the setscrew. Open frame unit. Single hole mount. Terminals tapped for 6X32 screws. Dimensions: 2-1/16" long x 1-3/8" high (including shaft) x 1" wide max.
Stock #HE9004



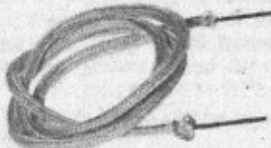
FLASH IMMERSION HEATER 120 V, 1000 watts. Copper coil immersion heater. Water temperature determined by flow rate. Co-axial type heating element. 4-3/4" long double loop. Power connection. Quick connect male lug at each end. Requires 5" spacing for mounting on 7/16" dia. x 20T brass stud fitting. Overall length 7-3/4".
Stock #HE8307



QUARTZ HEATER #LHPS250. Quartz immersion heater rated at 250 watts, 220 VAC. Can be operated on 117 V if desired. At 117 V the heater will dissipate approx. 80 watts. The unit is 0.70 amps. The heater is 11" long x 0.5" dia. Cord length is 72".
Stock #HE8552

FLEXIBLE FIBERGLASS HEATER

174 ohms 80 watts @ 115 V 0.7 amp. Woven fiberglass covered resistance element with high temperature silicon rubber/fiberglass connecting leads. Heating section 12" long x 3/16" dia. Connecting leads are 3-1/2" long.
Stock #HE9103



CARTRIDGE HEATER HOTWATT, #SC37-14.12. Stainless steel. 105 VAC, 50 watts. Dimensions: 7/16" dia. x 14-1/2" long. Leads 9" long.
Stock #HE8200



QUARTZ INFRARED HEATING ELEMENTS
GTE SYLVANIA or equivalent. All have quartz glass bodies with metal tabs at ends. Have wire leads for electrical connections. Leads are approx. 1-1/2" long. Quartz glass bodies are all 0.4" nom. dia.

	Rated			
Watts	Volts	Length	Stock #	
1000	230-250	10-3/4"	HE9550	
3200	384	18"	HE9551	
5000	575-625	28-3/4"	HE9552	



HEATING STRIP INDEECO, #418L-SEM38A180B. Steel clad. 120 V 625 watts. Has steel studs for electrical connections. Dimensions: 38-1/4" long x 2-1/2" deep x 1/4" thick. Electrical connecting studs extend 5/8" above the surface of the heater body.
Stock #HE2100



HEATING STRIP WELLMAN, #2AB24-B805. 105V, 75 ohms, 1.4 amps. 18" long x 3/8" high x 1-1/2" deep.
Stock #HE9301



HEATING STRIP CHROMALOX, #S-12XX. Steel clad. 34.5 V 250 watts. Has easily removable spring-type electrical connections on screw-type electrical terminals. Dimensions: 12" long x 1-1/2" wide x 7/16" thick.
Stock #HE9002



HEATING STRIP ACRA ELECTRIC CORP., #1064A33G02. Aluminum clad. 230 V. 750 watts. Dimensions: 34" long x 4" wide x 3/16" thick.
Stock #HE8050



HEATING STRIP WATLOW, #M. 60 V 175 watts. Dim.: 9-1/2" long x 1-15/16" wide x 7/16" deep.
Stock #HE8550



CARTRIDGE HEATER #TH29. 220 V 250 watts. 5/8" dia. x 5-5/8" long. 9" leads.
Stock #HE8551

NICHROME WIRE

WATTS	WIRE GAUGE	COIL O.D.	RESISTANCE PER COIL	COIL LENGTH	STOCK NO.	PRICE
600	23	3/16"	18.05 OHM	8.0 INCHES	HE9751	
600	24	3/16"	78.00 OHM	24 INCHES	HE2155	