ZEMREX® KOOL-PADS™
THERMALLY CONDUCTIVE INSULATORS

K177 & K228

151-085

KOOL-PADS K177 and K228 offer a low cost alternative to all other types of thermally conductive insulators Constructed from a thermally conductive silicone rubber compound coated onto a layer of woven glassfibre, they provide a strong flexible and clean insulator, which will not crack, age or permit contamination

Used mainly between heatsinks and semiconductors, KOOL-PADS soft pliable surfaces allow consistent and efficient heat transfer while maintaining good electrical insulation When replacing mica and grease, KOOL-PADS will allow reduced assembly through ease of application They contain no organic materials, will not support fungus growth and resist most cleaning fluids KOOL-PADS meet the UL flame retardant rating of 94V-O

ADHESIVE COATING
KOOL-PAD insulators are available with pressure sensitive adhesive which is an assembly aid and does not affect the wide operating temperature range

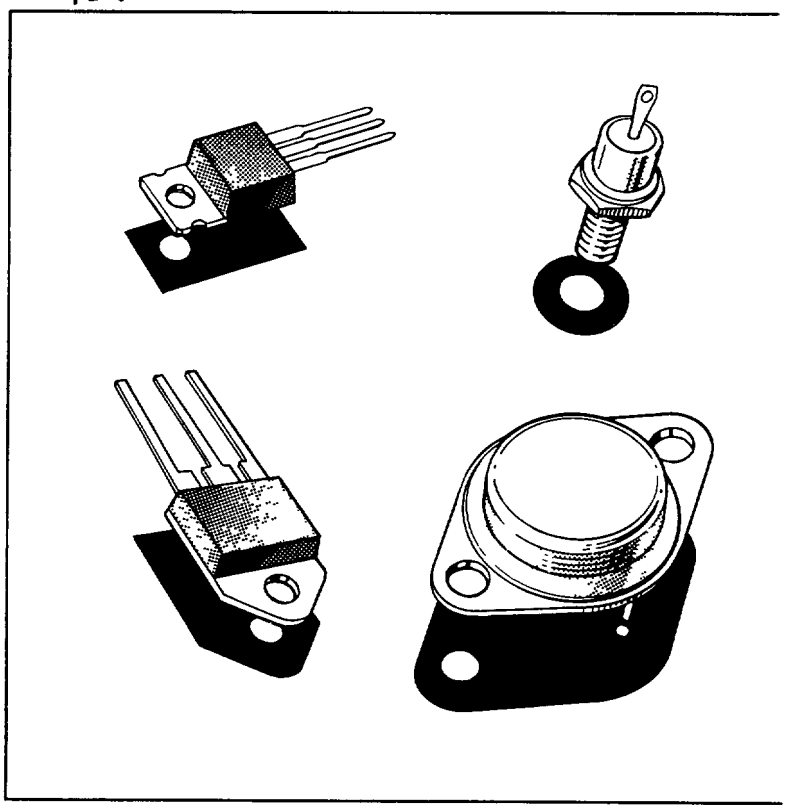
CUSTOM AND STANDARD SHAPES
Materials K177 and K228 are available from stock in most standard outlines shown on the following pages All materials are available for custom cutting with moderate tool charges and quick delivery Sheets are available from stock

MOUNTING PRESSURES
Typical mounting pressures are 21-42 Kg/CM² This is achieved by using a torque of 0 4-0 7 Nm on the transistor mounting screw, depending upon package size Most clip mounting methods provide a lower pressure which will result in a higher thermal resistance

BREAKDOWN VOLTAGE
All our insulating materials are tested in-house to the ASTM D149 procedure for determining dielectric strength and do not involve punched holes in the test sample

When screw mounting a semiconductor with nut, bolt and insulating bush there is a danger of flash-through from the underside of the semiconductor to the heatsink on the outside of the insulating bush Depending on the insulator thickness and other mechanical factors (see insulating bush page) this flash-through could be as low as 700 volts Should your flash test requirements be higher then we suggest the use of mounting clips or Thermaflex Contact our technical department for advice

PLASTIC ENCAPSULATED SEMICONDUCTORS
If electrical insulation is not required particularly when using plastic encapsulated devices then a very much higher thermal conductance can be achieved by using ZEMREX CM20 pads, shown on the following pages



TYPICAL PROPERTIES OF KOOL-PADS

PART PREFIX CODE	K177-	K228-
Thickness (mm)	0 177 ±0 02	0.228 $^{+0\,05}_{-0\,02}$
Breakdown **Voltage** 50Hz RMS Normal Moist	 4000 2000	 5000 2500
Approximate Thermal resistance (TO-3 transistor)**°C/Watt**	 **0.40**	 **0.50**
Thermal Conductivity W/°K m	 0 710	 0.710
Hardness, Shore Micro	85±4	85±4
Specific Gravity	2 0-2 1	2.0-2 1
Elongation percent	4	4
Continuous Use Temp °C	– 60 to + 180	– 60 to + 180
Colour	Grey	Grey

ORDERING PROCEDURE.

K177—NA—XXX
K177—AC—XXX
K228—NA—XXX
K228—AC—XXX

NA = Non adhesive
AC = Adhesive coat
XXX = Part No suffix