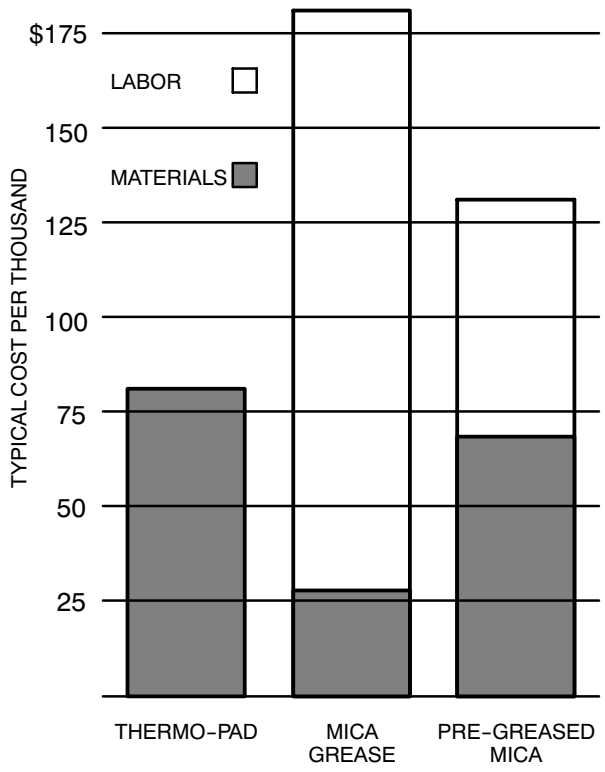
THERMO PADS

NTE's THERMO–PADS do away with the old fashioned mica wafer and conductive grease method of mounting power semiconductors. These thermally conductive insulators offer low heat transfer resistance while still providing high electrical isolation between the parts of the assembly. The elastomeric material combines the electrical isolation of rigid insulators with the ability to conform to rough surfaces and reduce contact resistance in much the same manner as thermal greases. Proper selection and use of these THERMO–PADS results in a securely–mounted power semiconductor and minimum resistance to the heat transfer between it and the heat sink.

INSTALLED COST PER THOUSAND UNITS



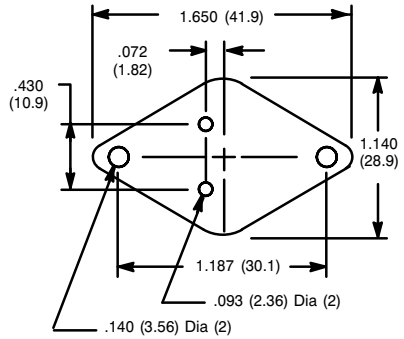
Note: NTE425 is a self–adhesive, thermal interface pad for use in computer applications. For additional information, refer to page 1–356.

TYPICAL PROPERTIES

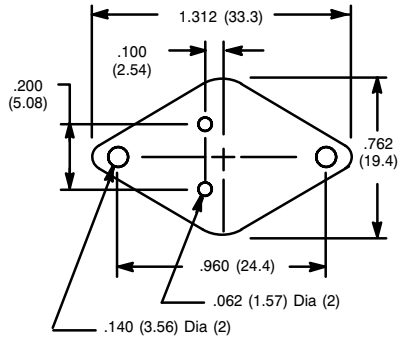
PROPERTY	0.009 INCH THICKNESS	TEST METHOD
Construction	Silicone/Fiberglass	–
Color	Gray	Visual
Thickness (Expressed in Inches)	$0.009^{\pm 0.001}$	–
Hardness, Shore A	85	ASTM D 2240
Breaking Strength Lbs./Inch	30	ASTM D 1458
Elongation, (%45°n to Warp and Fill)	54	ASTM D 412
Tensile Strength (psi) / (MPa)	3000	ASTM D 412
Continuous Use Temperature (°C)	–60° to +180°	–
Dielectric Breakdown Voltage (VAC)	4500	ASTM D 149
Dielectric Constant (1000 H_Z)	5.5	ASTM D 150
Volume Resistivity (Ohm – Meter)	10^{11}	ASTM D 257
Flame Rating	V–O	U.L. 94
Thermal Conductivity $\frac{W}{m–k}$	0.9	–
Thermal Performance (TO220 Test @ 50psi °C/W)	6.61	–
Thermal Impedance (Note 1) (Test @ 50psi °C–in^3/W)	1.45	–

Note 1. The ASTM D 5470 test fixture was used. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

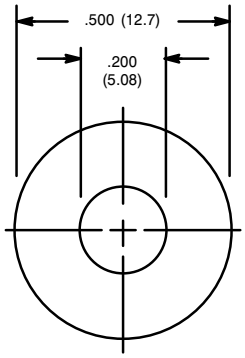
DIMENSIONAL OUTLINE DRAWINGS



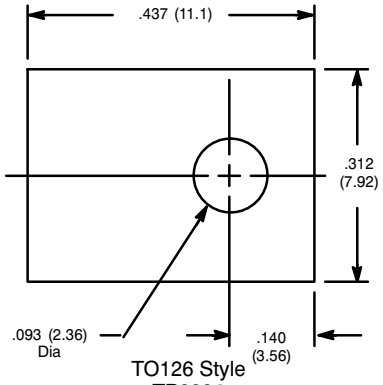
TO3 Style
TP0001



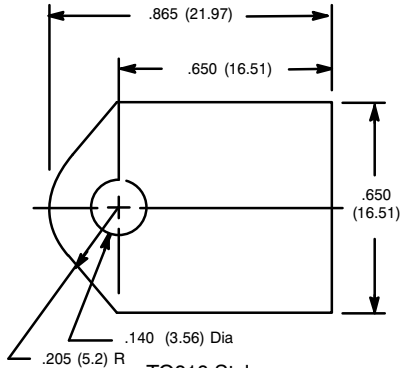
TO66 Style
TP0002



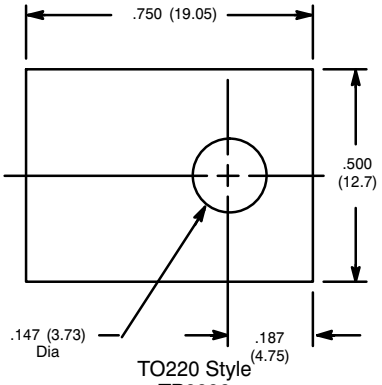
DO4 Style
TP0003



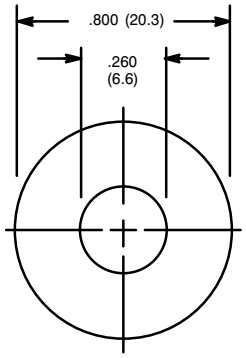
TO126 Style
TP0004



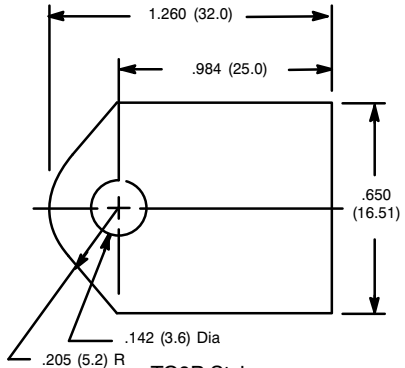
TO218 Style
TP0005



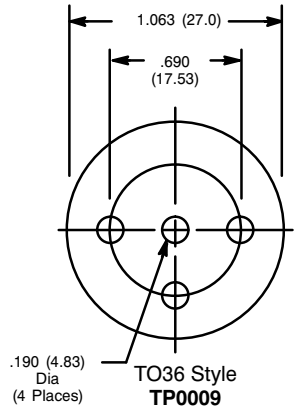
TO220 Style
TP0006



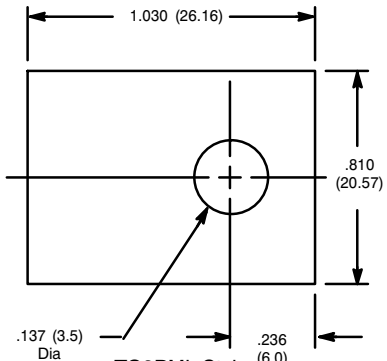
DO5 Style
TP0007



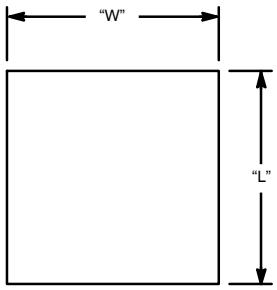
TO3P Style
TP0008



TO36 Style
TP0009



TO3PML Style
TP0010



Precut Sheet
TP0011 6" x 6"
TP0012A 12" x 12"
TP0013 2.25" x 1.75"

Thermo Pad material is also available in a 1ft. x 25ft. roll and can be ordered using the NTE part number: TP-3

NTE can also supply thermal grease in 1 gram tubes. See page 1-359.