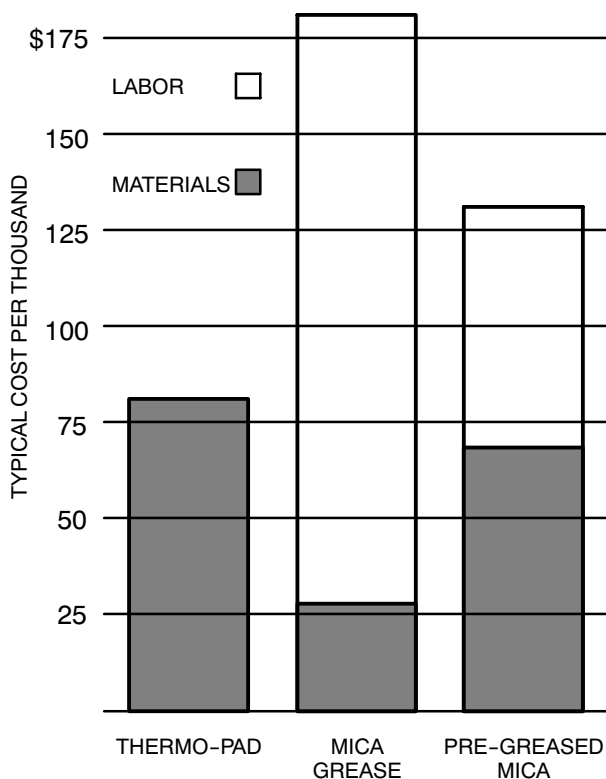


THERMO PADS

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 ±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 Hz) | 5.5 | ASTM D 150 |
| Volume Resistivity (Ohm - Meter) | 10 ¹¹ | ASTM D 257 |
| Flame Rating | V-0 | 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

| | | |
|--------------------------------|---|---|
| <p>TO3 Style TP0001</p> | <p>TO66 Style TP0002</p> | <p>DO4 Style TP0003</p> |
| <p>TO126 Style TP0004</p> | <p>TO218 Style TP0005</p> | <p>TO220 Style TP0006</p> |
| <p>DO5 Style TP0007</p> | <p>TO3P Style TP0008</p> | <p>TO36 Style TP0009</p> |
| <p>TO3PML Style TP0010</p> | <p>Precut Sheet TP0011 6" x 6" TP0012A 12" x 12" TP0013 2.25" x 1.75"</p> | <p>Thermo Pad material is also available in a 1ft. x 25ft. roll and can be ordered using the NTE part number: TP-3</p> <p><i>NTE can also supply thermal grease in 1 gram tubes. See page 1-359.</i></p> |