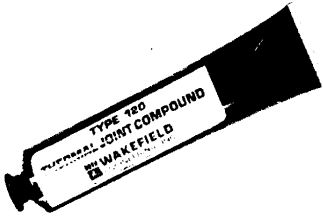


**120 SERIES**



Series 120 Silicone Oil Based Thermal Compound fills the minute air gap between the mating surfaces with a grease-like material containing zinc oxide in a silicone oil carrier. It possesses the excellent thermal resistance of only 0.05° C/W for a 0.001" film with an area of one square inch.

Thermal joint compounds may be thinned with standard solvents such as Chlorothene N.U. or lacquer thinner to reduce their viscosity to a desired consistency similar to that of a latex paint. When coating insulating wafers it is easy to dip them into the compound and place them onto a piece of screen for a few minutes until the solvent evaporates before placing the wafer on the heat sink or the transistor. However, when the joint compound is thinned, periodic agitation of the mixture is necessary to prevent settling. Plastic syringes are often used to drop a .25 cc deposit on the bottom of the semiconductor. Then place the device on the heat sink and the joint compound spreads evenly beneath the component.

**TYPICAL VALUES FOR THERMAL RESISTANCE, CASE TO SINK ( $\theta_{cs}$ ) WHEN THERMAL JOINT COMPOUNDS ARE USED**

Case Type	Mounting Torque in inch-pounds (N•M)	Typical Thermal Resistance
TO-3	8(0,9)	.09
TO-66	8(0,9)	.14
TO-220	8(0,9)	.50
.19(4,7)stud x .44(11,1) hex	15(1,7)	.16
.25(6,4) stud x .69(17,5) hex	30(3,39)	.10
.38(9,6) stud x 1.06(26,9) hex	75(8,47)	.07
.50(12,7) stud x 1.06(26,9) hex	125(14,12)	.07
.75(19,1) stud x 1.25(31,8) hex	600(67,79)	.052

**Typical Specifications:**

SERIES 120	THERMAL JOINT COMPOUND
Volume Resistivity	$5 \times 10^{14}$ ohm/cm
Dielectric Strength	225 volts/mil
Specific Gravity	2.1 min.
Thermal Conductivity @ 36°C	.735 W/(m)(K)
	5.1 (BTU)(IN)/(HR)(FT <sup>2</sup> )(°F)
Thermal Resistivity (P)	56(°C)(IN)/WATT
Bleed, % after 24 hrs @ 200°C	0.5
Evaporation, % after 24 hrs @ 200°C	0.5
Color	opaque white
Shelf life	5 years

Time vs Thermal Resistivity: There is no measurable increase in case temperature of a mounted semiconductor

on a heat sink after the six-month stabilization period . . . See graph below.

**How to order:**

Specify series and container size.

Series	Container Size
120-SA	4 gram Plastic Pak
120-2	2 oz. (.06 kg.) Jar
120-5	5 oz. (.14 kg.) Tube
120-8	8 oz. (.23 kg.) Jar
120-80	5# (2.27 kg.) Can
120-320	20# (9.07 kg.) Can

**SILICONE BASED THERMAL COMPOUND**

