

Item # Tmate 2910, Tmate™ 2900 Series Phase Change Material



Tmate™ 2900 Series Phase Change Material

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Tmate™ 2900 is a reusable phase change material designed for ease of testing and rework ability. Tmate™ 2900 has a composite construction of a special malleable metal alloy and a high performance phase change material. At 50°C, Tmate™ 2900 begins to soften and flow, filling the microscopic irregularities of the thermal solution, thus reducing thermal resistance.

Tmate™ 2900 shows no thermal performance degradation after 1000 hours at 130°C, or after 500 cycles, from -25°C to 125°C. The phase change material softens and does not fully change state resulting in minimal migration (pump out) at operating temperatures. Tmate™ 2900 is available in three thicknesses, 0.005 in. (0.125 mm), 0.010 in. (0.25 mm) and 0.020 in. (0.5 mm).

SPECIFICATIONS

Construction and Composition	Foil coated on one side with phase change material
Color	Silver Yellow
Test Method - Color	Visual
Thickness	0.010 inches 0.254 mm
Thickness Tolerance	±0.001 inches ±0.025 mm
Density	1.64 g/cc
Shelf Life	1 year
Temperature Range	-25 to 125 °C
Phase Change Softening Range	50 to 70 °C
"Burn In" Temperature	70°C for 5 minutes
Thermal Resistance at 20 psi	0.180 °C-in ² /W 1.160 °C-cm ² /W
Test Method - Thermal Resistance	ASTM D5470 (modified)
Volume Resistivity	5 x 10 ¹² ohm-cm
Test Method - Volume Resistivity	ASTM D257

Dielectric Constant at 1 MHz	4.20
Test Method - Dielectric Constant	ASTM D150
Sheet Size	9 x 9 inches