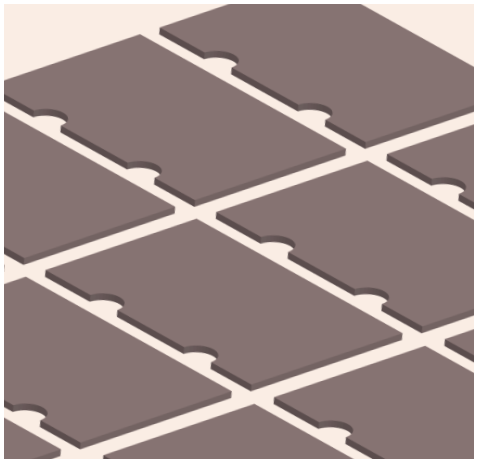
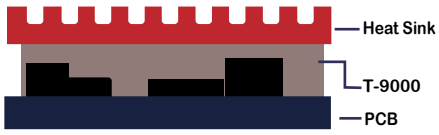
THER T-9000-20-65

Patron
Passive Elektronic

High Thermal Conductive Gap Filler





T-9000 offers outstand-ing thermal conductivity at 20.0 W/m*K and extremely low thermal resistance under minimal force. T-9000 offers excellent com-pression, filling small air gaps on uneven surfaces, ensuring an efficient and consistent transfer of heat.

FEATURES

/ Thermal conductivity: 20.0 W/m*K
/ High compression rate
/ Extremely low thermal impedance

TYPICAL APPLICATION

/ Between CPU and heat sink
/ Between a component and heat sink / Flat-panel displays
/ Power supplies
/ High speed mass storage drives
/ Telecommunication hardware
/ 5G base station & infrastructure
/ High-end Chip

HOW TO ORDER

Patron THER T-9000 XXX-YYY-ZZmm XXX = width in mm
YYY = depth in mm
ZZ = thickness in mm

https://www.patron-components.com/

CONSTRUCTION

Series	Characteristics	Configurations
T-9000	Silicone compound with weak sticky surfaces.	Sheets form, Die-cuts parts

TYPICAL PROPERTIES

PROPERTY	T-9000	TEST METHOD	UNIT
Color	Brown	Visual	-
Surface tack 2-side/1-side	2	-	-
Thickness	Customized	ASTM D374	mm
Density	3.3	ASTM D792	g/cm³
Hardness	65	ASTM D2240	Shore OOO
TML	<0.1	-	%
Application temperature	-60~150	-	°C
ROHS & REACH	Compliant	-	-
COMPRESSION			
Deflection @10 psi	12	ASTM D5470 modify	%
Deflection @20 psi	27	ASTM D5470 modify	%
Deflection @30 psi	58	ASTM D5470 modify	%
Deflection @40 psi	71	ASTM D5470 modify	%
Deflection @50 psi	74	ASTM D5470 modify	%
ELECTRICAL			
Dielectric breakdown	8	ASTM D149	KV/mm
Surface resistivity	$>10^{11}$	ASTM D257	Ohm
Volume resistivity	$>10^{10}$	ASTM D257	Ohm-m
Dielectric constant@10MHz D_k	10.5	ASTM D150	-
Dielectric constant@1GHz D_k	10.4	ASTM D150	-
Dielectric constant@1.8GHz D_k	11.2	ASTM D150	-
Dissipation factor@10MHz D_f	0.001	ASTM D150	-
Dissipation factor@1GHz D_f	0.006	ASTM D150	-
Dissipation factor@1.8GHz D_f	0.022	ASTM D150	-
THERMAL			
Thermal conductivity	20.0	ASTM D5470	W/m*K
Thermal conductivity	12.0	ISO 22007-2	W/m*K
Thermal impedance@10psi	0.110	ASTM D5470	°C-in²/ W
Thermal impedance@20psi	0.088	ASTM D5470	°C-in²/ W
Thermal impedance@30psi	0.050	ASTM D5470	°C-in²/ W
Thermal impedance@40psi	0.037	ASTM D5470	°C-in²/ W
Thermal impedance@50psi	0.031	ASTM D5470	°C-in²/ W

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THERMAL IMPEDANCE & COMPRESSION

Compression Force (psi)	Thermal Impedance (°C-in²/W)			Compression (%)		
	1.0 mm	2.0 mm	3.0 mm	1.0 mm	2.0 mm	3.0 mm
10	0.110	0.201	0.255	12	21	31
20	0.088	0.105	0.120	27	55	68
30	0.050	0.056	0.064	58	78	83
40	0.037	0.039	0.042	71	85	89
50	0.031	0.033	0.035	74	86	90

Test method: ASTM D5470

RELIABILITY

Test Property	Compression Force (psi)	70°C				
		Initial	100 hrs	250 hrs	500 hrs	1000 hrs
Thermal Resistance	10	0.110	0.111	0.112	0.112	0.113
	30	0.050	0.051	0.052	0.052	0.053
	50	0.031	0.031	0.032	0.032	0.033

Test Property	Compression Force (psi)	150°C				
		Initial	100 hrs	250 hrs	500 hrs	1000 hrs
Thermal Resistance	10	0.110	0.111	0.112	0.113	0.113
	30	0.050	0.051	0.052	0.053	0.053
	50	0.031	0.032	0.032	0.033	0.033

Test Property	Compression Force (psi)	60°C / 90%RH				
		Initial	100 hrs	250 hrs	500 hrs	1000 hrs
Thermal Resistance	10	0.110	0.111	0.112	0.113	0.113
	30	0.050	0.051	0.052	0.053	0.053
	50	0.031	0.032	0.032	0.033	0.033

Test Property	Compression Force (psi)	-40°C (30min) ⟷ +125°C (30min)					
		0 Cycles	100 Cycles	200 Cycles	300 Cycles	400 Cycles	500 Cycles
Thermal Resistance	10	0.110	0.110	0.111	0.112	0.113	0.113
	30	0.050	0.050	0.051	0.052	0.052	0.053
	50	0.031	0.032	0.031	0.032	0.032	0.033

Test Property	Compression Force (psi)	Ultra Low Temperature -60°C					
		Initial	100 hrs	200 hrs	300 hrs	400 hrs	500 hrs
Thermal Resistance	10	0.110	0.110	0.111	0.110	0.111	0.110
	30	0.050	0.051	0.050	0.051	0.050	0.050
	50	0.031	0.031	0.032	0.032	0.032	0.031

Test method: ASTM D5470 , Specimen thickness = 1.0mm , Unit: °C-in²/W