futherma

Thermal Gap Filler

Thermal Gap Filler is composed of ceramic oxide thermal conductivity powder and organic elastic silicon adhesive, which is an excellent thermal conductivity composite filling material with low compression force, low thermal resistance, super soft performance and rebound resilience, also easy to operate and die cutting , It has high thermal performance and excellent thermal reliability.

It can also achieve low interfacial thermal resistance under relatively low pressure. that can effectively eliminate air and achieve good filling effect Thermal silicon film has good insulation resistance to pressure and flame retardant properties, which make it safe and reliable for application.

Features and advantage

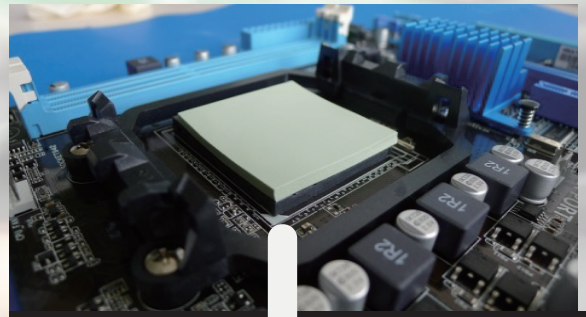
- Low permeability oil rate
- Excellent temperature resistance
- High compressibility, super soft material
- 2 W/m-K thermal conductivity
- Available in thickness from 0.020" -0.200" (0.5mm - 5.0mm)
- Bilateral auto adhering, as well as lateral adhering
- Outstanding electrical insulation performance

Application

- Communication equipment, network terminal
- Automotive/consumer electronics
- LED,data transmission
- Medical devices, military, aerospace

STORAGE AND SHELF LIFE

Storage period: 18 months; under normal temperature, cool and dry location, temperature: 15 ℃<T<30 ℃, relative humidity: RH<60%.



Futherma® FTA2000 Series thermal Gap Filler can be die cut to individual shapes.
a) The product is naturally tacky on both sides. These can be provided tacky on one side only. This is indicated by the suffix “D” .This option offers good separation properties allowing the tacky side to stick to the heatsink/chasis /cold plate/etc. and the other “dry” side to release easily from the component(s).

b) The product is naturally gray color, and can be customized to color black(by the suffix “B”) or color white(by the suffix “W”) and other colors(by the suffix“S”)

c) Pressure sensitive adhesive on one side for better adhesion(by the suffix“A”)

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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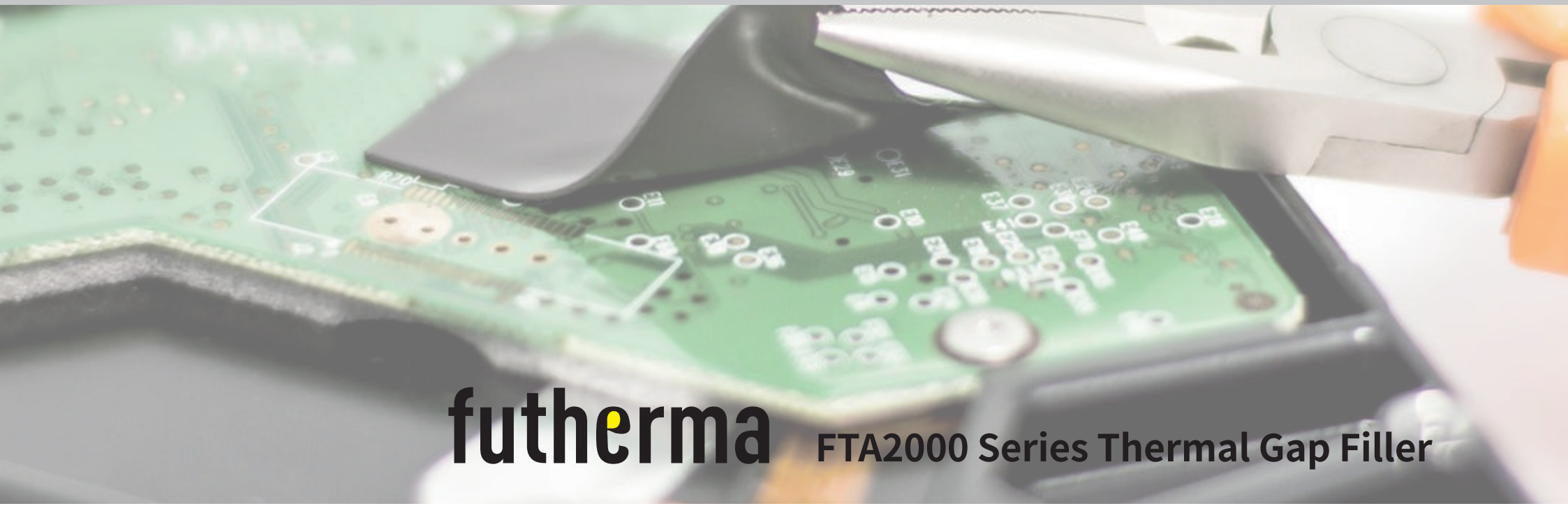

futherma FTA2000 Series Thermal Gap Filler

ITEM	FTA2005	FTA2010	FTA2015	FTA2020	FTA2025	FTA2030	FTA2040	FTA2050	TEST METHOD
Thickness [mm]	0.50	1.00	1.50	2.00	2.5	3.0	4.0	5.0	ASTM D374
Conductivity [W/m·K][1]	2.0±10%	2.0±10%	2.0±10%	2.0±10%	2.0±10%	2.0±10%	2.0±10%	2.0±10%	ASTM D5470
T-tolerance [mm]	0.5±0.05	1.0±0.1	1.5±0.15	2.0±0.2	2.5±0.25	3.0±0.3	4.0±0.4	5.0±0.5	ASTM D374
Density [g/cm^3]	2.8±0.2	2.8±0.2	2.8±0.2	2.8±0.2	2.8±0.2	2.8±0.2	2.8±0.2	2.8±0.2	ASTM D792
Hardness [Shore 00]	40	25	25	25	25	25	25	25	ASTM D2240
Tensile Strength[psi]	20	20	20	20	20	20	20	20	ASTM D412
Elogation [%]	100	100	100	100	100	100	100	100	ASTM D412
UL flammability rating	V0	V0	V0	V0	V0	V0	V0	V0	UL 94
Temperature range [°C]	-40 ~ 150	-40 ~ 150	-40 ~ 150	-40 ~ 150	-40 ~ 150	-40 ~ 150	-40 ~ 150	-40 ~ 150	/
Thermal impedance[2] @10psi	0.43	0.64	0.85	1.22	1.32	1.69	2.42	2.69	ASTM D5470
Thermal impedance[3] @69KPa	2.75	4.13	5.47	7.89	8.51	10.82	15.49	17.37	ASTM D5470
Thermal Expansion [ppm/°C]	340	240	240	240	240	240	240	240	IPC-TM-650 2.4
Breakdown Voltage [KV/mm]	> 6	> 6	> 6	> 6	> 6	> 6	> 6	› 6	ASTM D149
Volume resistivity (Ω ·cm)	1.0*10^{14}	1.0*10^{14}	1.0*10^{14}	1.0*10^{14}	1.0*10^{14}	1.0*10^{14}	1.0*10^{14}	1.0*10^{14}	ASTM D257
Dielectric Constant @1MHz	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	ASTM D150

[1] Need other specification for your project? please feel free to contact us. [2] Unit: °C - in^2/W [3] Unit: °C -cm^2/W