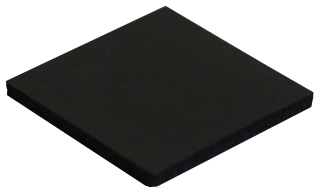
"Graphite-PAD" high thermal conductivity in z-direction

Type: **EYGT**



Graphite-PAD is a thermal interface material (TIM) that compatibly obtained excellent thermal conductivity in thickness direction (Z-axis direction) and high flexibility (deformable with a low load). The properties are greater than that of existing TIMs. The product is created by filling PGS Graphite Sheet into silicon resin.

Features

- High thermal conductivity : 13 W/m · K
- Excellent compressibility : 50 % (t=2 mm, Pressure 300 kPa)
- Thermal resistance: fit into uneven parts and provide excellent thermal resistance with a low load
- High reliability : correspond to −40 to 150 °C and maintains long-term reliability
- Thickness range : 0.5/1.0/1.5/2.0/2.5/3.0 mm
- RoHS compliant

Recommended applications

Cooling of heat generating components, such as electronic devices, semiconductor memory device, etc.

- General-purpose inverter, medical equipment, and DSC
- Car-mounted camera, motor control unit, automotive lighting (LED), car navigation, luminous source of laser HUD
- Base station, IGBT module

Explanation of Part Numbers

- Graphite-PAD (EYGT********)

1	2	3	4	5	6	7	8	9	10	11	12
E	Y	G	T	3	5	3	5	A	2	0	A

Product Code
Graphite-PAD

Dimension	
3535	35 mm × 35 mm
7070	70 mm × 70 mm
E0E0	140 mm × 140 mm
F0F0	150 mm × 150 mm

Type	
A	Material code

Thickness of PAD*	
30	3.0 mm
25	2.5 mm
20	2.0 mm
15	1.5 mm
10	1.0 mm
05	0.5 mm

Ex. code

* E0E0 : 2.0 mm, 2.5 mm, 3.0 mm
F0F0 : 0.5 mm, 1.0 mm, 1.5 mm

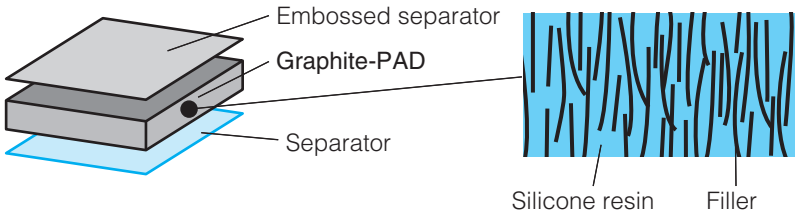
** Please confirm other condition separately.

Typical characteristics

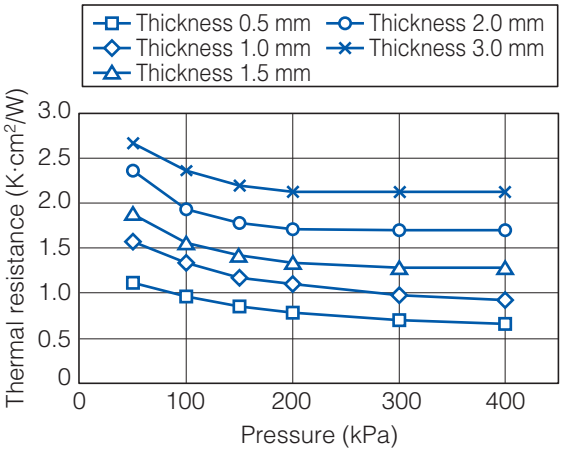
Items	Test equipment/method	Condition	Data					
Thickness (mm)			0.5	1.0	1.5	2.0	2.5	3.0
Thermal resistance (K·cm²/W)	TIM Tester	100 kPa	0.96	1.34	1.56	1.93	2.10	2.36
Compressibility (%)	TIM Tester	100 kPa (50 °C)	5.78	10.29	17.46	17.8	17.6	17.9
Thermal conductivity of Graphite-PAD with a unit (W/m·K) (including contact resistance)	TIM Tester	100 kPa	5.08	7.02	7.80	8.60	9.66	10.10
Thermal conductivity of the Graphite-PAD (W/m·K)	(ASTM D5470)	50 kPa	13					
Hardness	(ASTM D2240)	TYPE E	25					
Adhesive			Adhesive on both faces					
Volume resistivity (Ω·cm)	(ASTM D257)		4×10^5					
Operating temperature range (°C)			–40 to 150					
Siloxane		Σ (D4-D10)	≦ 70 ppm					

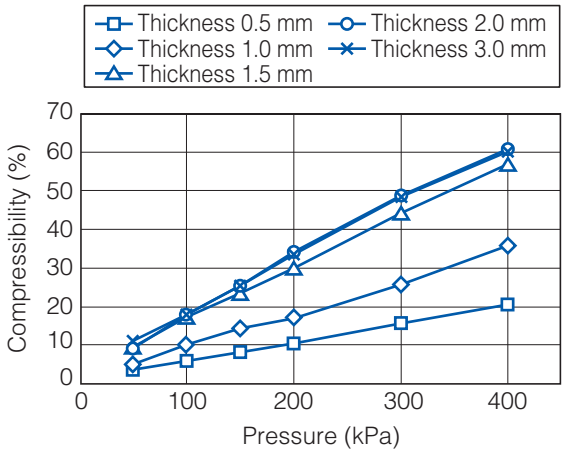
Typical values, not guaranteed.

Structure

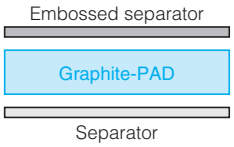


Thermal resistance and Compressibility





Composition example

Structure					
Operating temperature range		–40 °C to 150 °C			
Standard dimension		35 × 35 mm	70 × 70 mm	NEW 140 × 140 mm	NEW 150 × 150 mm
0.5 mm	Standard Part No.	EYGT3535A05A	EYGT7070A05A	–	EYGTF0F0A05A
	Thickness	0.5 mm	0.5 mm	–	0.5 mm
1.0 mm	Standard Part No.	EYGT3535A10A	EYGT7070A10A	–	EYGTF0F0A10A
	Thickness	1.0 mm	1.0 mm	–	1.0 mm
1.5 mm	Standard Part No.	EYGT3535A15A	EYGT7070A15A	–	EYGTF0F0A15A
	Thickness	1.5 mm	1.5 mm	–	1.5 mm
2.0 mm	Standard Part No.	EYGT3535A20A	EYGT7070A20A	EYGTE0E0A20A	–
	Thickness	2.0 mm	2.0 mm	2.0 mm	–
2.5 mm	Standard Part No.	EYGT3535A25A	EYGT7070A25A	EYGTE0E0A25A	–
	Thickness	2.5 mm	2.5 mm	2.5 mm	–
3.0 mm	Standard Part No.	EYGT3535A30A	EYGT7070A30A	EYGTE0E0A30A	–
	Thickness	3.0 mm	3.0 mm	3.0 mm	–

* Above listed Part No. are examples for evaluation and selection, not for mass production.
  Customized service available for mass production spec..
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- Техническая поддержка проекта;
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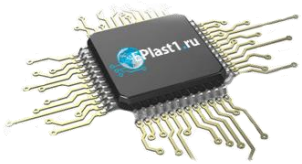

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