

“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

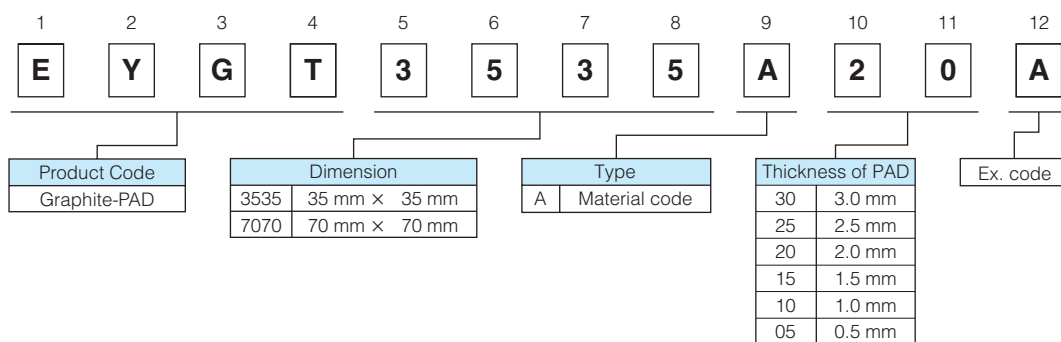
Recommended applications

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*****A)

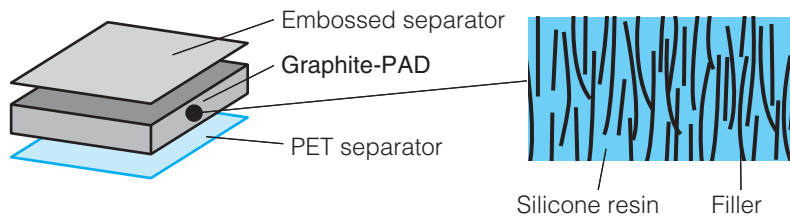


* Please confirm other condition separately.

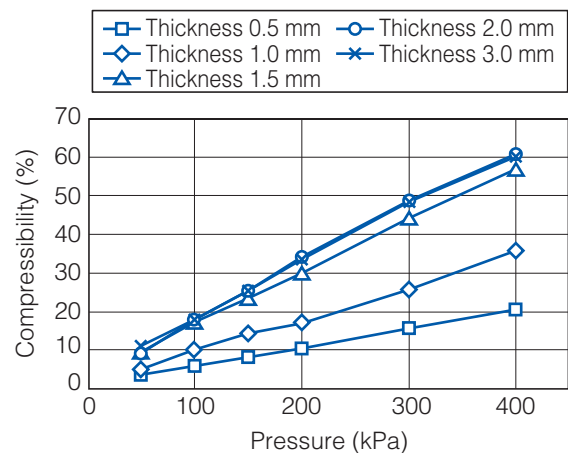
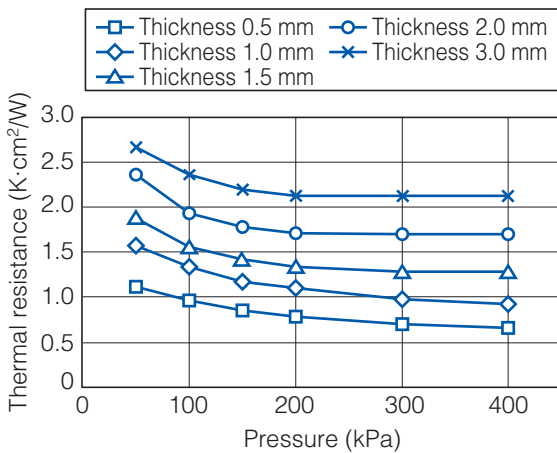
Typical characteristics

Items	Test equipment/method	Condition	Data				
Thickness (mm)			0.5	1.0	1.5	2.0	3.0
Thermal resistance ($^{\circ}\text{C}\cdot\text{cm}^2/\text{W}$)	TIM Tester	100 kPa	0.96	1.34	1.56	1.93	2.36
Compressibility (%)	TIM Tester	100 kPa (50 $^{\circ}\text{C}$)	5.78	10.29	17.46	17.8	17.9
Thermal conductivity of Graphite-PAD with a unit ($\text{W}/\text{m}\cdot\text{K}$) (including contact resistance)	TIM Tester	100 kPa	5.08	7.02	7.80	8.60	10.10
Thermal conductivity of the Graphite-PAD ($\text{W}/\text{m}\cdot\text{K}$)	(ASTM D5470)	50 kPa	13				
Hardness	(ASTM D2240)	TYPE E	25				
Adhesive			Adhesive on both faces				
Volume resistivity ($\Omega\cdot\text{cm}$)	(ASTM D257)		40×10^5				
Operating temperature range ($^{\circ}\text{C}$)			-40 to 150				
Siloxane		Σ (D4-D10)	≤ 70 ppm				

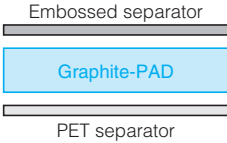
Structure



Thermal resistance and Compressibility



Composition example

Structure			
Operating temperature range		-40 °C to 150 °C	
Standard dimension		35 × 35 mm	70 × 70 mm
0.5 mm	Standard Part No.	EYGT3535A05A	EYGT7070A05A
	Thickness	0.5 mm	0.5 mm
1.0 mm	Standard Part No.	EYGT3535A10A	EYGT7070A10A
	Thickness	1.0 mm	1.0 mm
1.5 mm	Standard Part No.	EYGT3535A15A	EYGT7070A15A
	Thickness	1.5 mm	1.5 mm
2.5 mm	Standard Part No.	EYGT3535A20A	EYGT7070A20A
	Thickness	2.0 mm	2.0 mm
1.5 mm	Standard Part No.	EYGT3535A25A	EYGT7070A25A
	Thickness	2.5 mm	2.5 mm
3.0 mm	Standard Part No.	EYGT3535A30A	EYGT7070A30A
	Thickness	3.0 mm	3.0 mm

* Part numbers listed above are all standard samples for your consideration.

** Contact us for custom-made samples.

We can make samples in various forms and/or dimensions other than standard samples.