"Soft-PGS (Compressible Type)" PGS with low thermal resistance

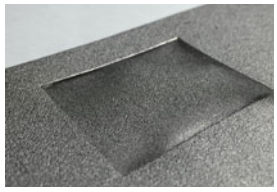


Type: **EYGS**

Soft-PGS (Compressible Type) is a graphite sheet that is dedicated for use as a thermal interface material.
The Soft-PGS (Compressible Type) has very high compressibility compared to standard PGS, which enables reducing the thermal resistance by following gap, warpage, and distortion of targets/substrates.
Excellent heat resistance and reliability of the Soft-PGS help obtaining longer service life and higher performance of various components, such as power modules.
The Soft-PGS (Compressible Type) is cost-saving, because it may allow you to reduce your existing processes. Unlike grease, there is no necessity for printing process , since it is a sheet-type product.
There are no problems that are found in grease and phase change materials in the Soft-PGS, which makes it excellent TIM.

Features

- Thermal resistance : 0.2K·cm^2/W (600 kPa)
  To draw a good thermal resistance from sheet, pressure the Soft-PGS.
  A close adherence would make the product fit into the uneven part and enhance the performance.
- Thermal conductivity : X-Y direction 400W/m·K, Z direction (28W/m·K)
- Compressibility : 40 % (600k Pa)
- High and long term reliability : operating temperature range –55 to 400 °C
- RoHs compliant



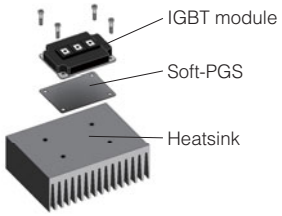
After pressure

Recommended applications

For cooling/heat transfer of electronic devices that generates heat, such as power modules.

- Inverters and converters
- Car-mounted camera, motor control unit, automotive LED, luminous source of laser HUD, medical equipment
- Base station, Server

Install in IGBT module



Explanation of Part Numbers

- Soft-PGS(EYGS✻✻✻✻ZL✻✻)

1	2	3	4	5	6	7	8	9	10	11	12
E	Y	G	S	0	9	1	8	Z	L	X	2

Suffix

Product Code
PGS Graphite sheet

Style	
S	PGS only

Dimension	
0909	90 mm × 90 mm
0918	90 mm × 180 mm
1818	180 mm × 180 mm

Thickness of Soft-PGS	
ZL	200 µm

✻ Please contact us for custom-made products.

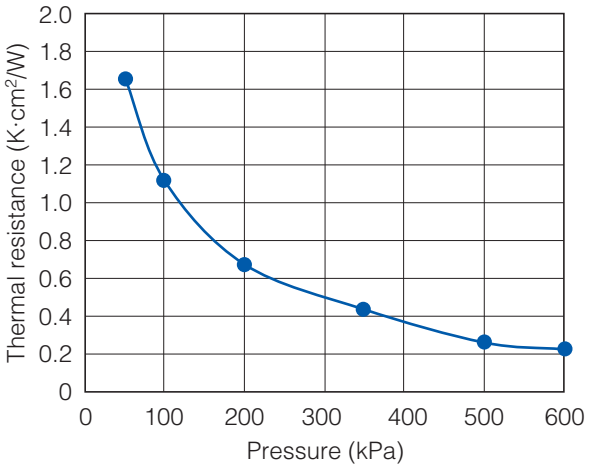
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Should a safety concern arise regarding this product, please be sure to contact us immediately.

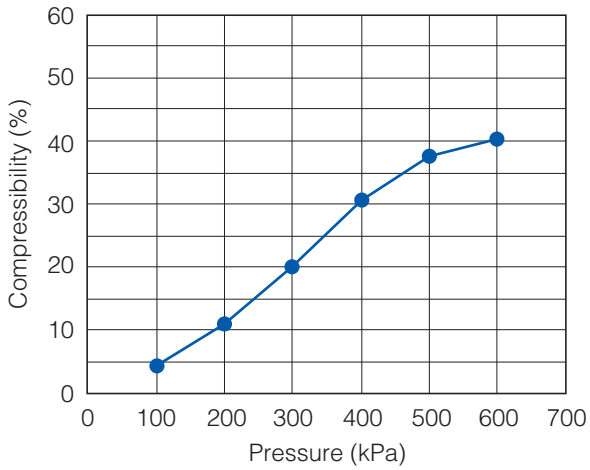
Typical characteristics

Items	Test method	Condition	Data
Thickness (μm)			200
Thermal resistance (K·cm²/W)	TIM Tester	600 kPa	0.2
Compressibility (%)	TIM Tester	600 kPa	40
Thermal conductivity (W/m·K)	Laser PIT	X-Y	400 (300 to 600)
		Z	(28)
Operating temperature range (°C)			−55 to 400

Typical values, not guaranteed.

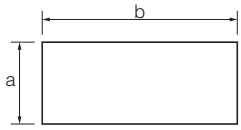
Thermal resistance and compressibility





Lamination type/Composition example

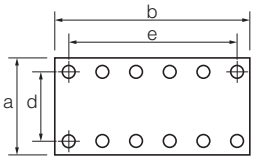
● Soft-PGS (Compressible Type) standard form

Type		Sheet only
		S Type
Process for IGBT mounting		–
Structure	Front	
	Side	
Operating Temperature Range		−55 to 400 °C
Thickness: c		200 μm
Standard Part No.	90 × 90 mm	EYGS0909ZLX2
	90 ×180 mm	EYGS0918ZLX2
	180 ×180 mm	EYGS1818ZLX2

✻ 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.

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● PGS in IGBT forms

Type		Sheet only
		S Type
Process for IGBT mounting		Lamination
Structure	Front	 ✻ This shape is an example, please contact us for detailed shape of each part no.
	Side	
Operating Temperature Range		−55 to 400 °C
Thickness: c		200 µm

No.	Standard Part No.	a : Lateral size (mm)	b : Longitudinal size (mm)	Hole number	Hole diameter (ϕmm)	d : Lateral hole pitch (mm)	e : Longitudinal hole pitch (mm)
1	EYGS1431ZLAA	140	308	12	6	126	290
2	EYGS0925ZLWA	85	246	14	6	73	234
3	EYGS1419ZLWB	136	186	8	7.5	124	171
4	EYGS0917ZLWC	85	168	10	6	73	156
5	EYGS1316ZLAC	125	163	8	6.1	110	150
6	EYGS1216ZLWD	120	160	8	6	110	150
7	EYGS1116ZLMA	108.8	158	8	6	92.75	144
8	EYGS1315ZLGA	129.5	150	8	7	118.5	137.5
9	EYGS1314ZLWE	126	136	6	7.5	114	124
10	EYGS1014ZLAD	97.8	138	4	6.8	86	127
11	EYGS0714ZLAE	70	138	4	5.7	57	128
12	EYGS0714ZLAF	69	136	4	7.2	57	124
13	EYGS1113ZLMB	106	132	4	5.7	95	121
14	EYGS1313ZLGB	128	128	4	6.7	110	110
15	EYGS0713ZLAG	66	126	4	5.7	50	116
16	EYGS0813ZLMD	71	123	2	4.7	Center	116
17	EYGS1212ZLGC	120	120	4	5.7	110	110
18	EYGS0912ZLGD	88	120	4	5.7	78	110
19	EYGS0612ZLWF	60	120	4	5.7	50	110
20	EYGS0512ZLGE	53	118	2	5.7	Center	106
21	EYGS0811ZLGH	80	113	4	5.7	70	103
22	EYGS0811ZLWG	78	108	4	6.7	62	93
23	EYGS0611ZLWH	60	106	4	6.7	48	93
24	EYGS0411ZLWJ	43	105.5	2	5.7	Center	93
25	EYGS0610ZLAH	59.4	104.4	4	6.7	48	93
26	EYGS0410ZLAJ	43	102.8	2	5.7	Center	93
27	EYGS1010ZLME	98	98	4	6.7	87	87

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No.	Standard Part No.	a : Lateral size (mm)	b : Longitudinal size (mm)	Hole number	Hole diameter (ϕmm)	d : Lateral hole pitch (mm)	e : Longitudinal hole pitch (mm)
28	EYGS0409ZLGJ	44	93	2	6.7	Center	80
29	EYGS0509ZLGK	46	92	2	6.7	Center	80
30	EYGS0309ZLMF	32	92	2	6.7	Center	80
31	EYGS0409ZLMG	41	88	2	5.7	Center	80
32	EYGS0309ZLAK	29.5	89.5	2	6.6	Center	80
33	EYGS0509ZLMH	51	86	2	4.7	–	80
34	EYGS0508ZLMJ	46.2	83	2	4.7	–	77
35	EYGS0608ZLMK	55	78	2	4.5	Center	40
36	EYGS0607ZLGL	58	69.7	4	5.7	50	62
37	EYGS0507ZLML	45.3	66	2	4.7	–	60
38	EYGS0407ZLAL	40	65.5	1	7.7	Center	Center
39	EYGS0506ZLMM	48	55	1	4.5	Center	Center
40	EYGS0404ZLMP	36	38	1	4.5	Center	Center
41	EYGS1018ZLSA	104.5	182.5	8	7	93	171
42	EYGS1516ZLSB	148	158	8	5	137	150
43	EYGS1116ZLSC	112	158	8	5	101	150
44	EYGS0715ZLSD	67	153	4	5.6	57	143
45	EYGS0613ZLSE	61	127.5	4	5.6	50	116
46	EYGS0612ZLSF	63.3	124	4	5.6	50	110
47	EYGS0612ZLSG	61.5	124	4	5.6	50	110
48	EYGS1012ZLSH	104.5	121	4	6.7	93	109.5
49	EYGS0410ZLSJ	43	103	2	5.7	Center	93
50	EYGS0609ZLSK	61.5	91	4	5.6	50	77
51	EYGS0606ZLSL	58	61.5	2	5.6	44	50
52	EYGS0305ZLSM	27	51	1	4.6	Center	Center
53	EYGS0204ZLSN	24	36.5	1	4.6	Center	Center
54	EYGS0303ZLSP	29	32	1	4.5	Center	Center
55	EYGS0911ZLDA	92	109	4	6	78	93
56	EYGS1014ZLDB	98	138	4	6.7	86	127

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