

# デンカ放熱シート

## DENKA THERMALLY CONDUCTIVE SHEET

Ver.7 2020.6

### Product Information

#### ■ デンカ放熱シート (BFG-C, 開発品) DENKA THERMALLY CONDUCTIVE SHEET (BFG-C)

優れた熱伝導性と電気絶縁性をもち、トランジスタやダイオードなどの半導体の放熱部材(TIM)として、理想的な素材といえます。従来品と比べて最も優れた熱伝導率8W/m・Kを有します。

Excellent thermal conduction and electrical insulation properties, so that it can be said to be ideal for heat dissipation material (TIM) used with semiconductors such as transistors, diodes, and so on. It is highest thermal conductivity of 8W/m・K.

#### ■ 一般特性 General Properties

<Typical value>

項目 Item	試験方法 Test method	単位 Unit	BFG-C				
			BFG10C (特殊品)	BFG20C	BFG30C	BFG45C	BFG80C (特殊品)
色 Color	-	-	薄青 Light Blue				
厚さ Thickness	-	mm	0.10 ±0.05	0.20 ±0.05	0.30 ±0.05	0.45 ±0.05	0.8 +0.2/-0.1
補強層 Reinforced layer	-	-	ガラスクロス Fiberglass				
熱抵抗 Thermal resistance	Denka Method TO-3	°C/W	0.06	0.08	0.11	0.14	0.23
熱抵抗 Thermal resistance	ASTM D5470	°C·cm <sup>2</sup> /W	0.45	0.50	0.64	0.84	1.60
熱伝導率*1 Thermal conductivity	Denka Method TO-3	W/m・K	8				
耐電圧:全数・全面保証 Withstand voltage	JEM 1021 ※Guaranteed performance	AC_KV	-	1.0	3.0	4.0	5.0
絶縁破壊電圧 Dielectric breakdown voltage	JIS C2110,ASTM D149 Electrode φ25mm	AC_KV	1	4.2	8.6	>10	>10
引張強さ Tensile strength	JIS K6251	MPa	-	9.1	6.6	4.6	4.2
引裂強さ Tear strength	JIS K6252	N/mm	-	45	37	29	18
硬さ Hardness	JIS K6253 Durometer A	-	85				
比重 Specific gravity	-	g/cm <sup>3</sup>	1.6				
難燃性 Flammability	UL94	-	Equal to V-0				
低分子シロキサン量 Low-molecular-weight Siloxane Content	アセトン抽出法 Acetone extraction method	ppm	-	<10 (ΣD <sub>4-10</sub> )	-	-	22 (ΣD <sub>4-10</sub> )

※1)熱伝導率は厚さ1mmの推定値であり、界面熱抵抗を含みます。

Thermal conductivity was estimated at 1mm thickness, and it included contact resistance.

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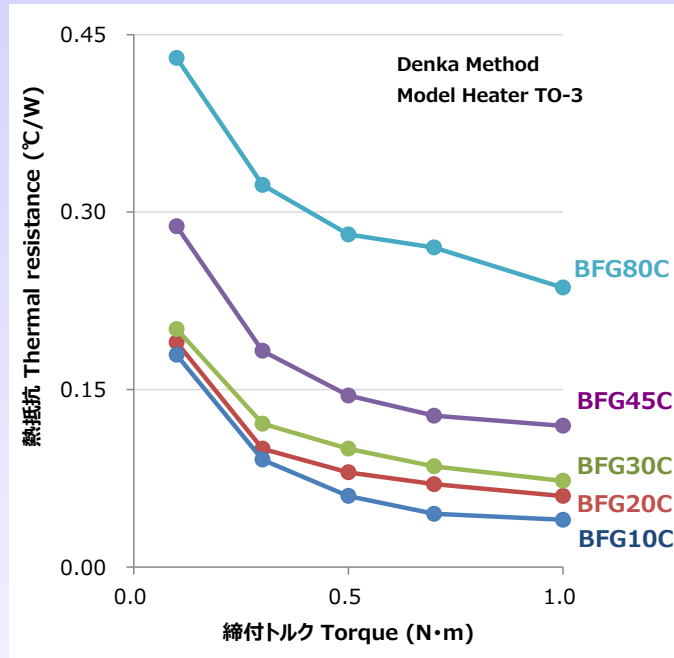
### ■ デンカ放熱シート (BFG-C, 開発品)

DENKA THERMALLY CONDUCTIVE SHEET (BFG-C, Under development)

### ■ 締め付けトルクと熱抵抗の関係

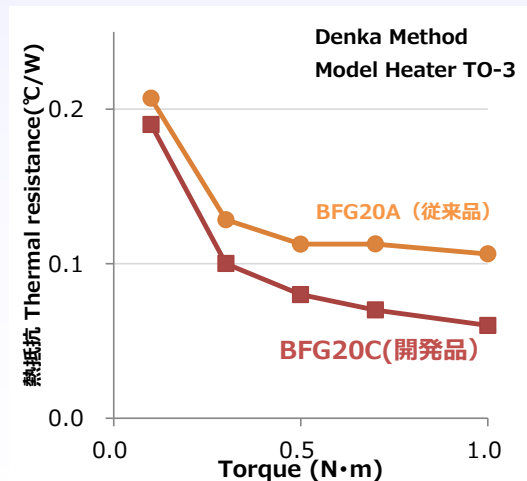
<Typical value>

Tightening torque dependence on thermal resistance (TO-3)



### ● BFG-C(8WmK)とBFG-A(5WmK)の熱抵抗比較

Comparison between thermal resistance of BFG-C (8W/mK) and BFG-A (5W/mK)



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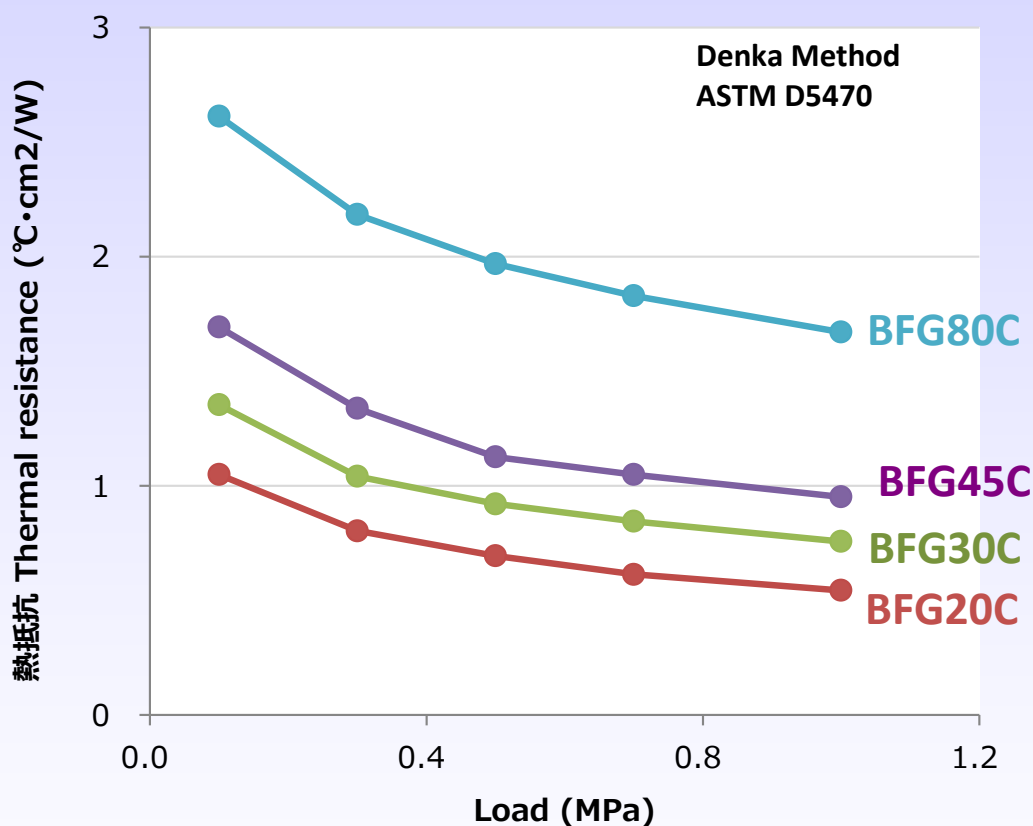
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### ■ 荷重と熱抵抗 ASTM D5470 の関係

Load dependence on thermal resistance (ASTM D5470)

<Typical value>



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