

# VANOC Synthetic Graphite

## 21-650-0100 Heat Spreader Film



### Product Description

Jones VANOC synthetic graphite film is an extremely light and flexible material synthesized from polymer precursor by a high temperature heat treatment process. Derived from the crystal structure of graphite, the synthetic graphite features an anisotropic and overall high thermal conductance. It possesses unique functions such as eliminating hot spots, shielding components and reducing skin temperature of electronic devices. It is an ideal heat spreader for thermal management in limited space. It can also function as a thermal interface material for applications requiring low contact resistance and high thermal conductivity.

21-650-0100 series of Jones VANOC synthetic graphite film are designed for use as heat spreader. Comparing to conventional copper or aluminum heat spreader, the synthetic graphite films have a much higher in-plane thermal conductivity and a much lower density. The films are supplied in sheets, rolls or die-cut form and can be laminated with plastics, foams and adhesives.

### Features and Benefits

- Anisotropic and over all high thermal conductivity
- High thermally stability
- Lightweight
- Flexible and conformable
- RoHS compliant

### Typical Applications

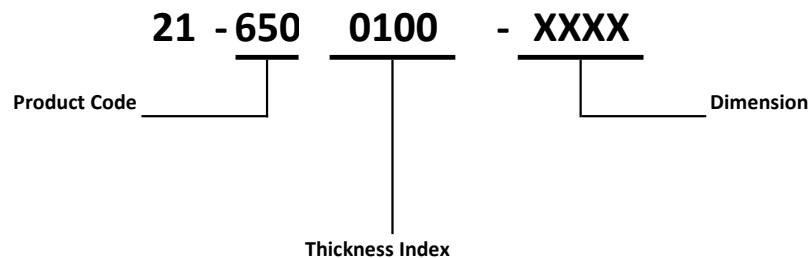
- Power modules such as IGBT, RF devices
- Chip on Board LED devices
- Telecommunications, CPU/GPU thermal interface
- Motor drive
- Power supply modules, rectifiers and chargers

## Technical Data

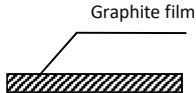
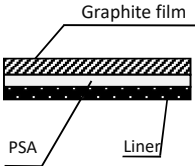
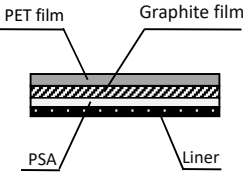
CHARACTERISTICS	SPECIFICATIONS*	TEST METHOD
Color	Dark Grey	Visual
Thickness (mm)	0.10±0.01	ASTM D374
Density (g/cm <sup>3</sup> )	0.80±0.15	ASTM D2638 Modified
Continuous Working Temperature (°C)	-55 ~ 400	
<b>THERMAL</b>		
Thermal Resistance (in <sup>2</sup> °C/W) @100psi	0.040±0.02	ASTM D5470
<b>ELECTRICAL</b>		
Electrical Conductivity (S/m)	0.6X10 <sup>5</sup>	ASTM C611
<b>MECHANIAL</b>		
Repeat Bending@ 180°, R5 (cycle)	8000.0	

\*From the tests data before 20151223.

## Ordering Information



## Product Constructions

TYPE	GRAPHITE FILM ONLY	ADHESIVE TYPE	INSULATION & ADHESIVE TYPE
<b>Part Number</b>	21-6XX-XXXX-XXXX	21-6XXA-XXXX-XXXX	21-6XXB-XXXX-XXXX
<b>Construction</b>			
<b>Features</b>	<ul style="list-style-type: none"> <li>• High thermal conductivity</li> <li>• High working temperature</li> <li>• Electrically conductive</li> </ul>	<ul style="list-style-type: none"> <li>• With adhesive on one side to provide adhesion and insulation</li> <li>• Easy to apply to working surface</li> <li>• Withstand Voltage: 1 kV</li> </ul>	<ul style="list-style-type: none"> <li>• With PET film on one side to provide insulation and protection</li> <li>• With adhesive on the other side to provide adhesion and insulation</li> <li>• Easy to apply to working surface</li> <li>• Withstand Voltage: 4 kV</li> <li>• High heat resistance version (with PI, PEEK film) available upon request</li> </ul>
<b>Working Temperature</b>	400 °C	100 °C	100 °C
<b>Standard Size</b>	310mm X 210mm	310mm X 210mm	310mm X 210mm

## Contact Information

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