High Conductivity *TMP-FX* Laminate

For High Power and Mobile Electronics

**Description**

Momentive Performance Materials Inc. offers a unique heat conducting laminate product that contains a TPG* core (>1500 W/m-K) and either a metal or carbon fiber coating for advanced thermal management applications. TMP-FX laminate is an excellent thermal management product to consider for use as:

- Heat spreader
- Thermal strap
- Heat sink fins

**Key Features**

The heat conductive and flexible (TMP-FX) laminate provides:

- High thermal conductivity
- Fast thermal response
- Low profile
- Light weight
- Flexibility
- Formability
- Durability
- Solderability

**Potential Applications**

- Power electronic packaging
- RF & microwave packaging
- High power LED
- Lighting
- Mobile devices

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**Typical Product Properties**

<table>
<thead>
<tr>
<th>TMP-FX Coating Material(1)</th>
<th>Coating Thickness Inch (mm)</th>
<th>Laminate Thermal Conductivity(2) (W/m-K)</th>
<th>Surface Finish (Ra) µin (μm)</th>
<th>Dimension Tolerance Inch (mm)</th>
<th>Operating Temperature °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMP-FX (Aluminum)</td>
<td>0.004 (0.1)</td>
<td>&gt;1200</td>
<td>24 (0.6)</td>
<td>±0.005 (±0.13)</td>
<td>-55 to +125</td>
</tr>
<tr>
<td>TMP-FX (Copper)</td>
<td>0.004 (0.1)</td>
<td>&gt;1250</td>
<td>24 (0.6)</td>
<td>±0.005 (±0.13)</td>
<td>-55 to +125</td>
</tr>
<tr>
<td>TMP-FX (Tin)</td>
<td>0.002 (0.05)</td>
<td>&gt;1350</td>
<td>135 (3.0)</td>
<td>±0.005 (±0.13)</td>
<td>-65 to +150</td>
</tr>
<tr>
<td>TMP-FX (Carbon Fiber)</td>
<td>0.008 (0.2)</td>
<td>&gt;1050</td>
<td>36 (0.9)</td>
<td>±0.002 (±0.05)</td>
<td>-55 to +125</td>
</tr>
</tbody>
</table>

(1) Custom coating thickness and options of adding vias and edge seal are available upon request.
(2) Typical specifications based on panel thickness of 0.040” (1mm) or larger.

Note: Typical properties are average data and are not to be used as or to develop specifications.

*TPG is a trademark of Momentive Performance Materials Inc.*
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