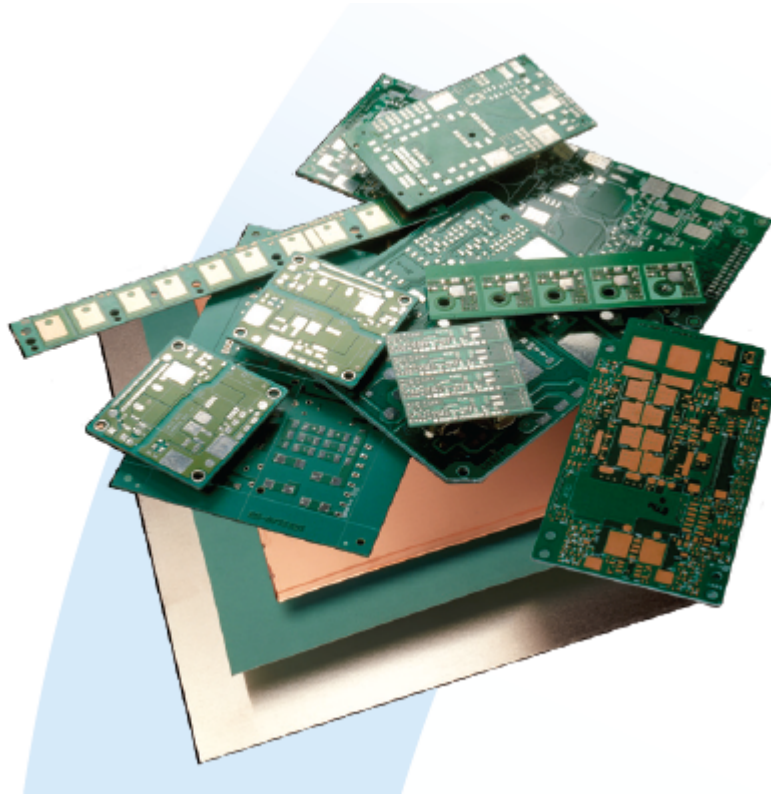


## TLAM SS 1KA 04



### TLAM SS 1KA SERIES

#### **Thermally Conductive Printed Circuit Board Substrate**

Tlam SS 1KA is a thermally conductive printed circuit board (PCB) substrate. The substrate consists of a copper circuit layer bonded to an aluminum or copper base plate with Laird 3 watt/m-K 1KA dielectric. Tlam SS 1KA materials are processed through standard FR4 print and etch operations.

Tlam SS 1KA has 8-10 times better thermal conductivity compared to FR4, and this is the key to keeping components cool. The Tlam SS 1KA boards run through standard pick and place SMT and manual wire bond processes.

Tlam SS 1KA is designed for applications that require the best thermal performance and resistance to thermal cycling. Customers have found that Tlam SS 1KA reduces the stress on solder bonds with ceramic devices.

Standard constructions are made with 1 and 2 ounce copper and 0.040 (1 mm) and 0.062 (1.6 mm) inch thick aluminum. Custom constructions of heavier weight circuit copper and thicker aluminum and copper base plates are also available.



Prototyping Available



Custom Solutions



Standard Stock

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## Features

? UL 746B Electrical/Mechanical RTI as high as 130°C

? RoHS compliant

? Environmentally green

? Lead-free solder compatible

? Compliant for low bond stress

Chemical Properties:

Water Absorption after 168hours - 0.5

Out-gassing total mass loss - 0.57

Collect Volatile Condensable Material - 0.06

## Specifications

<p>Additional Product Description Typical value, for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application. Peel strength is measured with 1oz Cu.</p>	<p>Applications</p> <ul style="list-style-type: none"> <li>• Network DC/DC power converters</li> <li>• Battery powered equipment DC/DC power converters</li> <li>• Ultra bright LED substrates</li> </ul>
<p>CTE in XY/Z axis , &lt; Tg 32/43, &gt; Tg Sep-19</p>	<p>Capacitance at 1 KHz 244</p>
<p>Comparative Tracking Index 600</p>	<p>Continuous AC 50</p>
<p>Continuous DC 95</p>	<p>Dielectric Constant Range 1 kHz 4.3</p>
<p>Dielectric Strength 650 (25.6)</p>	<p>Dielectric Thickness 0.004 (0.102)</p>
<p>Dissipation Factor at 1KHz 0.008</p>	<p>Elongation 0.8 @25C 1.0 @150C</p>
<p>Flexural Strength (MPa) 49.70</p>	<p>Glass Transition Temperature (°C) 105</p>
<p>Peak Recurring 140</p>	<p>Peel Strength 4.5 (0.8)</p>
<p>Poisson's Ratio @ 25/150°C 1 5/8</p>	<p>Product Line Tlam SS 1KA Series</p>
<p>Solder Float (4 min. @ 288°C) Pass</p>	<p>Soldering Temperature Maximum 288</p>
<p>Surface Resistivity 1.00E+10</p>	<p>Temperature - Operating (Max Celsius) 110.00</p>
<p>Tensile Strength del 52.2</p>	<p>Thermal Conductivity (W/mK) 3.00</p>
<p>Thermal Resistance (°C-in²/W) 0.05 (0.34)</p>	<p>UL Continuous Operating Temperature (°C) 110</p>
<p>UL Flammability 94V0</p>	<p>Volume Resistivity Volume Resistivity Del 1.2</p>
<p>Youngs Modulus at 25/150C 3 16/27</p>	