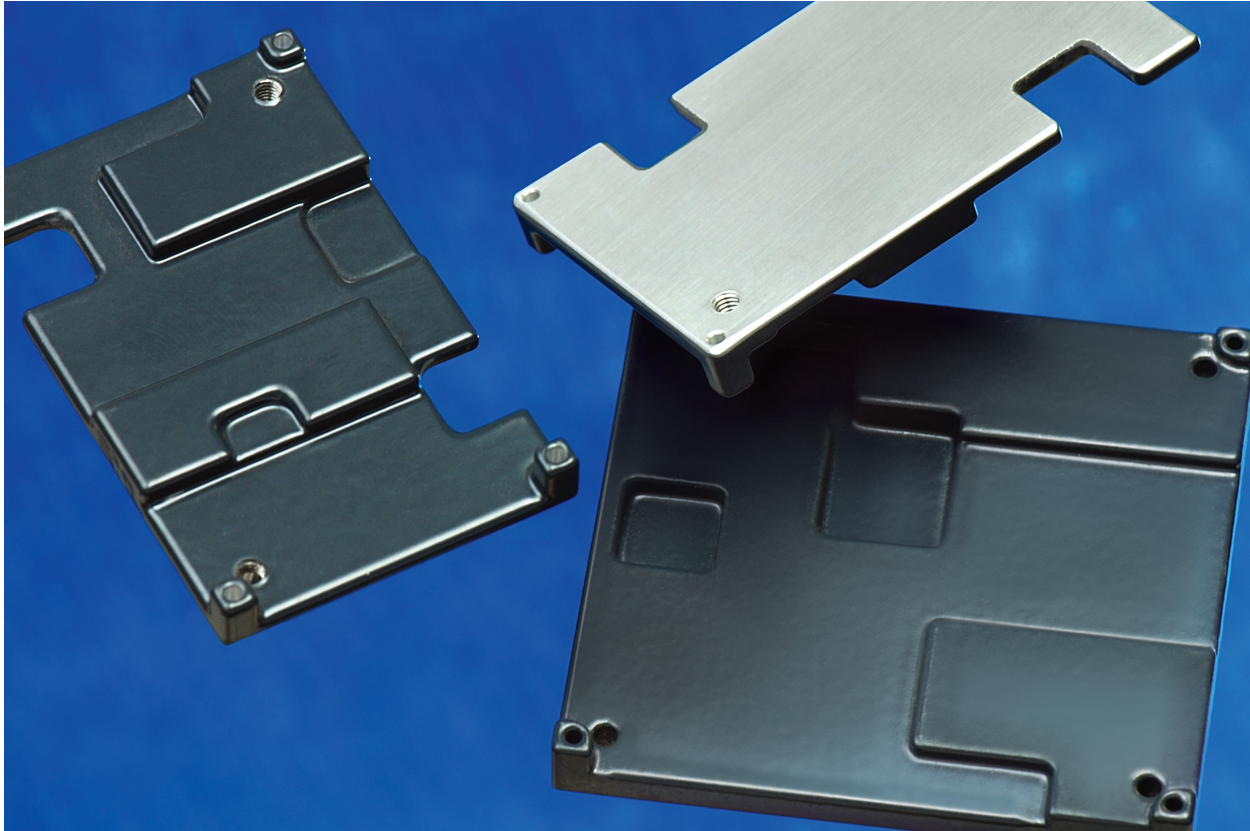


Dielectric Coated Metal Substrate Optimizes Performance



Benefits

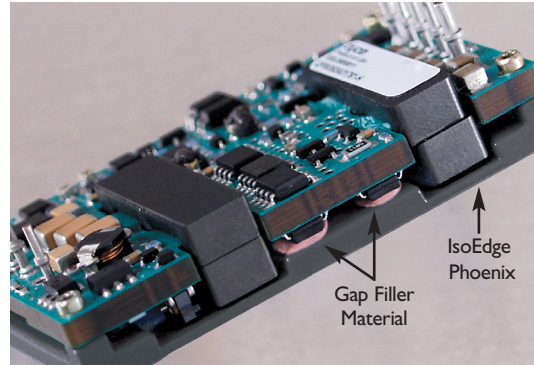
- Low thermal impedance 2.2°C/W (TO-220 RD 2018)
- Dielectric strength of 2250 Vdc
- U.L. recognized thermal solution that allows heat sink placement in very close proximity to components
- Reduces part count and labor at assembly
- Widens operating temperature specifications
- Significantly improves overall thermal performance when compared to traditional flat heat sinks and pads
- Minimizes gap filler thickness
- Custom configurations available through processes such as casting, extruding, stamping or machining
- Meets electrical agency requirements
- RoHS compliant
- Manufactured in an ISO9001:2000 certified facility

Bergquist IsoEdge technology enables the use of highly optimized heatsink designs that can effectively increase 3-D packaging densities, reduce part counts and simplify labor at assembly. IsoEdge replaces older, flat-based heat sinks and individual insulators used in combination to meet safety agency criteria. Past designs limited packaging densities and performance and required time-consuming assembly, hi-pot testing and safety approvals. A thin coating of IsoEdge thermally conductive and electrically isolating dielectric provides excellent heat transfer with inherent 3-D electrical isolation to meet stringent safety agency requirements.

Bergquist Thermal Clad IsoEdge Heat Plates minimize thermal impedance and conduct heat effectively and efficiently in high watt-density DC/DC converters.

Typical Values of IsoEdge Phoenix Heat Plates

PR4305	VALUE	TEST METHOD
PHYSICAL		
Color	Black	Visual
Thickness (inch / mm)	0.004-0.010 / 0.102-0.254	ASTM D374
Glass Transition (°C / °F)	110 - 120 / 230 - 248	ASTM E1356
MOT RTI Temperature (°C / °F)	105 / 221	U.L. 746B
Flame Rating	VO	U.L. 94
ELECTRICAL		
Dielectric Strength (Vdc)	2250	ASTM D149
Permittivity (Dielectric Constant)	6	ASTM D150
THERMAL PROPERTIES		
Post-Cured Thermal Conductivity (W/m-K)	0.6	ASTM D5470
TO-220 Measurement (°C/W)	2.2	RD 2018



Bergquist Gap Filler material optimizes the thermal path from the heat-generating components to the IsoEdge Phoenix Heat Plate.



IsoEdge Phoenix thermally conductive dielectric coating.

Configurations Available

Only on T-Clad Iso-Edge Heat Plates

- Machined aluminum plates
- Die-cast aluminum plates
- Extruded aluminum plates

Applications

- High watt-density assemblies for DC/DC converters