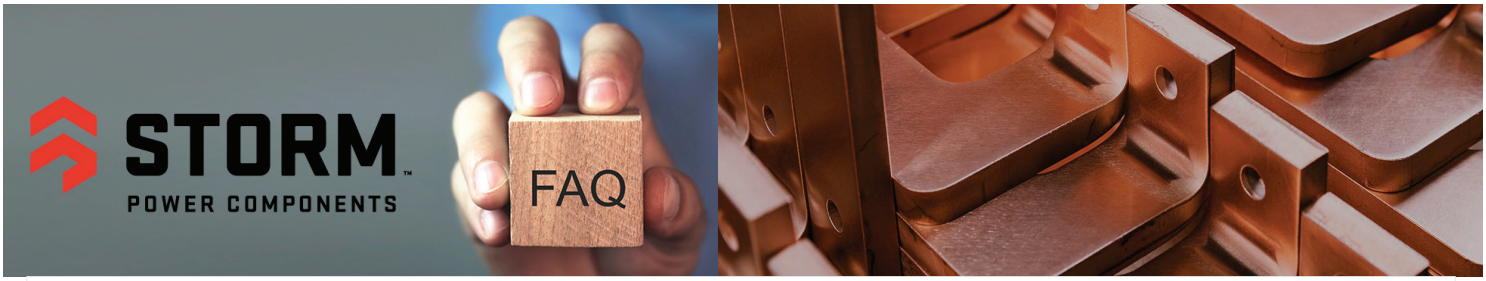


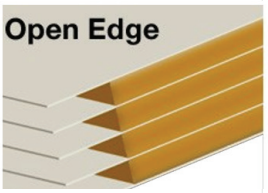
As a leader in busbar design and manufacturing, Storm Power Components continually gets a wide range of questions on key issues regarding busbars. - including this one.

How Can We Optimize Edge Design in Multilayer Busbars?

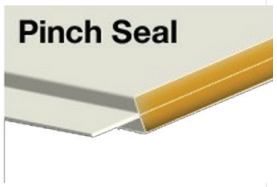
Edge design is crucial for busbars because it directly impacts several key factors related to performance, safety, and efficiency.
Key considerations include:
Minimization of Electrical Losses: The design of the edges can influence the distribution of current and electromagnetic fields around the busbar.
Compatibility and Fit: The design of busbar edges can affect how well they fit into housings or connect with other components.
Environmental Robustness: Protecting busbars from environmental factors, improving durability, and enhancing performance.

There are four basic methods for optimizing busbar edge design:

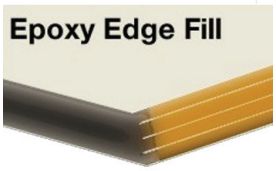
- **Open edge:**
  Extending the insulation out a certain distance to comply with needed creepage & clearance requirements.. The edges are left exposed without any additional protective coating or sealing. The copper or other conductive layers might be visible along the edge. Typically used in less critical applications where environmental exposure is minimal, or where cost-saving is a priority.



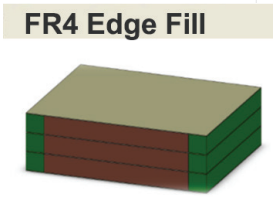
- **Pinch seal or mold seal:**
  Creating a lamination fixture that applies extra pressure to the outer edges of the insulation. This method utilizes the insulation's resin system to seal all insulation layers together during the lamination process Commonly used in applications where high reliability is required, such as in automotive, aerospace, or harsh industrial environments.



- **Epoxy edge fill:**
  Epoxy edge fill involves applying an epoxy resin along the edges of the busbar. The epoxy is typically dispensed along the edge and cured to create a hard, protective seal. Used in applications that require strong environmental protection and mechanical strength, such as in aerospace or military electronics. Can also reduce the busbar width caused by the pinch sealed insulation.



- **FR4 glass edge seal:**
  Inserting FR4 glass strips or pieces along the edge and sealing them during the lamination process. Suitable for high-reliability applications where the laminated busbar needs to be protected from environmental factors, but where maintaining a uniform material profile is also important. Has a lower footprint than pinch seal and more cost effective than edge fill.



[For more information on busbar edge design, Contact Storm Power Here.]