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Double glass component embedding

Overview

This article describes the fabrication process for 3D GPE, leading to demonstration of a technology using embedding of chips with all-Cu interconnections at 40-µm I/O pitch with TGVs at 300-µm pitch, thus enabling double-side RDL and assembly of chips to achieve three levels of device integration.Is 3D glass panel embedding a good choice for large package applications?

WLFO promises better performance and form factor at lower costs, but current WLFO packages are mold-based and hence are limited to small packages. This paper presents the first demonstration of 3D Glass Panel Embedding (GPE) technology for high-performance large package applications involving heterogeneous integration.

Can glass panel embedding be used for a large body size heterogeneous integration?

This article presents a 3D packaging technology using glass panel embedding (GPE) for high-performance with potential for large body size heterogeneous integration applications.

Is 3D glass panel embedded a viable solution for large body size integration?

By addressing the critical parameters of die drift and surface planarity, this paper presents the first demonstration of a 3D Glass Panel Embedded (GPE) package for large body size integration with better performance, cost, and reliability than existing technologies.

What is 3D glass panel embedded (GPE)?

This paper demonstrates an advanced 3D Glass Panel Embedded (GPE) packages for heterogeneous integration of digital applications requiring high-density interconnections and RF applications with Through-Glass-Vias (TGVs) integrated in the fan-out region.

What is 2.5D glass panel embedding (GPE)?

This paper presents the first demonstration of a revolutionary new concept in scaling power-efficient bandwidth, cost, large package size and board-level reliability, called 2.5D glass panel embedding (GPE). High temperature and low CTE glass reduces die shifts from tens of microns in current molded fan-out to less than 2 microns in GPE.

What is the best material for glass embedding?

For glass support, use of setting blocks made of SikaForce®-335 GG material used for the glass embedding is recommended. This can avoid stress concentration in the glass edge due to stiffness differences. Regular expansion gaps can reduce stresses in the system that occur out of thermal movement of the different components.

Double glass component embedding

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This paper presents a technology demonstration of two novel 3D glass-based architectures for high performance computing applications. Current 3D technologies ar.

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Glass Embedding: New Design Considerations

Presented by Florian Doebbel, Sika Jan. 2019 Learn about the latest glass embedding technologies and applications. Resources Presentation handouts

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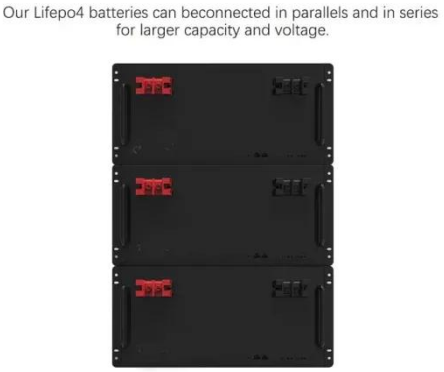

Aschenbrenner MRS 2016 Power Embedding

Chip embedding - The key for efficient power electronic solutions R. Aschenbrenner Fraunhofer Institute for Reliability and Microintegration Gustav-Meyer-Allee 25, D - 13355 Berlin, ...

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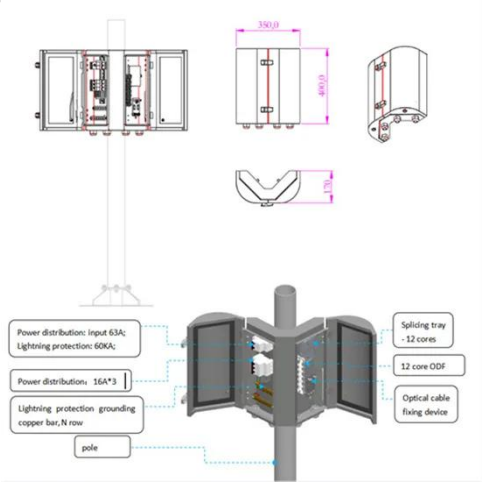

General Guideline Glass Embedding

This document contains recommendations and hints for the

application of SikaForce®-335 GG, a self-levelling polymer grout based on polyurethane resin, for the embedding of monolithic or ...

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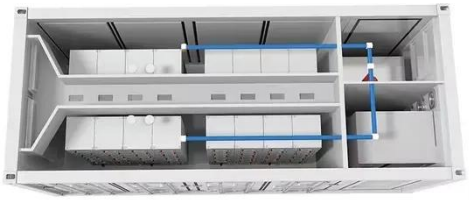
GLASS EMBEDDING SAFE AND FAST GLASS ...

With SikaGlaze® GG-735 the bottom glass edge is embedded in standard U-profiles, and loads are securely transferred through the glass elements thus results in uniform stress distribution.



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The glasses can be single panes (e.g. laminated glass in the outer skin of the double skin facade) or insulating units with UV-resistant silicone edge sealing and even with argon filling (Sikasil® ...

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