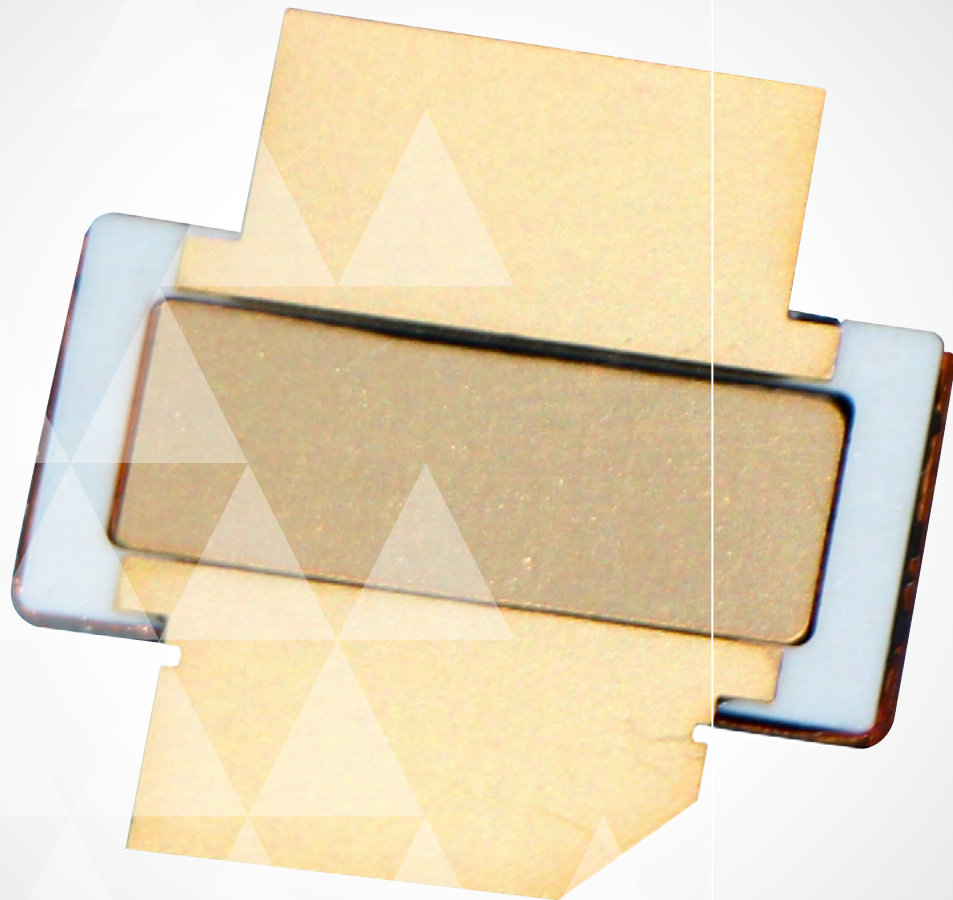




MATERION



**ADVANCED
MATERIALS GROUP**

CA-Pack™

CA-Pack™

The Challenge

Novel die attach methods have been embraced by manufacturers of RF power transistors. These new methods enable Si and GaN transistors to be directly bonded to copper flanges. Copper flanges are highly attractive due to their lower cost and higher thermal conductivity compared to conventional flanges. The challenge is to obtain a header with a copper flange that is fully assembled, and compatible with die attach up to 320°C.

The Solution

Materion's CA-Packs™ offer a new alternative to conventional, air cavity ceramic packages. A CA-Pack™ can have an eared or earless copper flange with a ceramic or plastic frame. CA-Packs are provided fully assembled, and are compatible with AuSn die attach at 320°C in air.

FEATURES

The frame and leads are bonded into an assembly that is compatible with AuSn die attach at 320° C, or nanosilver die attach.

- Ceramic or plastic frames
- Compatible with Cu flanges and exotic flange materials
- Compatible with eared and earless flanges
- Available discrete or in panel format
- Available in same designs as standard brazed ceramic packages
- Available in larger sizes than our standard CuPacks™
- The adhesive enables CuPacks™ on eared copper flanges
- High purity adhesive with <10 ppm halogen and alkali content

BENEFITS

- Copper flanges enable lower prices than conventional brazed ceramic packages
- Panel format facilitates automated assembly
- Unmetallized frames enables shorter lead-times and reduce manufacturing complexity
- Copper flanges provide better thermal performance than CuW or CPC flanges
- Leads can be as narrow as 0.5 mm for packages for millimeter-wave GaN transistors (for 5G wireless base stations)
- Matching Epo-Lids™ available



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MATERION ADVANCED MATERIALS GROUP is an industry leader in providing durable and best-cost solutions for ceramic packages and hermetic cover/lids for the wireless infrastructure market. We offer a comprehensive portfolio of packaging materials and can customize package materials to satisfy your unique needs. Our high-reliability packaging also supports most configurations, applications and volume requirements. Because of our industry expertise, extensive global manufacturing capabilities and R&D proficiency, we are able to meet customers' packaging requirements today and partner with them to meet future challenges.