Title (en)

IMPROVED GLASS BONDING MEANS AND METHOD.

Title (de)

GLASLEIMUNGSMITTEL UND VERFAHREN.

Title (fr)

PROCEDE ET MOYEN AMELIORES DE SOUDAGE DE VERRE.

Publication

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Application

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Priority

US 29843581 A 19810901

Abstract (en)

[origin: WO8300949A1] An improved semiconductor die bonding structure and method for electrical devices which utilizes a ductile foil (32) between the semiconductor die (16) and the base of the device package (11). The die is sealed to the foil with an improved die bonding glass material (35) consisting essentially of (by weight percent) 2-10% GeO2, 0-3% SiO2, 62-72% PbO, 0-5% PbF2, 9-12% B2O3, 3-6% Al2O3, 0-5% ZnO, 0.5-2% V2O5, 0-5% CdO, and 4-8% TiO2. The ductile foil (32) is bonded to the ceramic package base (11) directly without intermediate layers or alternatively by means of an improved foil bonding glass material (41) consisting essentially of (by weight percent) 10-15% SiO2, 45-55% PbO, 8-12% ZnO, 2-5% Al2O3, and 25-30% B2O3.

Abstract (fr)

Une structure et un procédé améliorés de soudage d'un dé semiconducteur pour des dispositifs électriques utilisent une feuille ductile (32) entre le dé semiconducteur (16) et la base de l'emballage du dispositif (11). Le dé est scellé dans la feuille au moyen d'un matériau vitreux amélioré de soudage de dé (35) se composant essentiellement (en pourcentage en poids) de 2-10 % de GeO2, 0-3 % de SiO2, 62-72 % de PbO, 0-5 % de PbF2, 9-12 % de B2O3, 3-6 % de Al2O3, 0-5 % de ZnO, 0,5-2 % de V2O5, 0-5 % de CdO et de 4-8 % de TiO2. La feuille ductile (32) est liée à la base de l'emballage céramique (11) directement sans couches intermédiaires ou d'une manière alternative au moyen d'un matériau vitreux amélioré en feuille de liaison (41) se composant essentiellement (en pourcentage en poids) de 10-15 % de SiO2, 45-55 % de PbO, 8-12 % de ZnO, 2-5 % de Al2O3 et de 25-30 % de B2O3.

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