

Title (en)  
CERAMIC COMPOSITE WIRING STRUCTURES FOR SEMICONDUCTOR DEVICES AND METHOD OF MANUFACTURE

Title (de)  
KERAMISCHE ZUSAMMENGESetzte VERDRAHTUNGSSTRUKTUREN FÜR HALBLEITERORDNUNGEN UND DEREN VERFAHREN ZUR HERSTELLUNG

Title (fr)  
STRUCTURES DE CABLAGE COMPOSITES EN CERAMIQUE POUR DISPOSITIFS A SEMI-CONDUCTEUR ET PROCEDES DE FABRICATION

Publication  
**EP 0948879 A4 20030827 (EN)**

Application  
**EP 97954258 A 19971229**

Priority  
• US 9723976 W 19971229  
• US 3398396 P 19961230

Abstract (en)  
[origin: WO9830072A1] A composite wiring structure (10) for use with at least one semiconductor device (16). The composite wiring structure having a first conductive member (12) upon which the semiconductor device can be mounted for electrical connection thereto. A dielectric member (20), made of ceramic or organo-ceramic composite material, is bonded to the first conductive member (12) and contains embedded therein a conductive network (24) and a thermal distribution network (26). A second conductive member (32) may be incorporated with the composite wiring structure, with a capacitor (64) being electrically connected between the conductive network (24) and the second conductive member (32). Bonding between the dielectric member and the conductive members may be in the form of a direct covalent bond formed at a temperature insufficient to adversely effect the structural integrity of the conductive network and the thermal distribution network.

IPC 1-7  
**H05K 1/00**; **H05K 7/20**; **H01L 23/367**; **H01L 23/64**

IPC 8 full level  
**H01L 21/48** (2006.01); **H01L 23/367** (2006.01); **H01L 23/373** (2006.01); **H01L 23/498** (2006.01); **H01L 23/64** (2006.01); **H05K 1/02** (2006.01); **H05K 7/20** (2006.01)

CPC (source: EP)  
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Citation (search report)  
• [XY] US 5444298 A 19950822 - SCHUTZ JOSEPH D [US]  
• [X] US 3676292 A 19720711 - PRYOR MICHAEL J, et al  
• [A] US 5336532 A 19940809 - HALUSKA LOREN A [US], et al  
• [A] WO 8908324 A1 19890908 - DIGITAL EQUIPMENT CORP [US]  
• [X] US 5506755 A 19960409 - MIYAGI TAKESHI [JP], et al  
• [X] US 5576934 A 19961119 - ROETHLINGSHOEFER WALTER [DE], et al  
• [XY] PATENT ABSTRACTS OF JAPAN vol. 018, no. 650 (M - 1719) 9 December 1994 (1994-12-09)  
• See references of WO 9830072A1

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