US005283717A

# United States Patent [19]

**Hundt**

[11] **Patent Number: 5,283,717**

[45] **Date of Patent: Feb. 1, 1994**

[54] **CIRCUIT ASSEMBLY HAVING INTERPOSER LEAD FRAME**

[75] Inventor: **Michael J. Hundt**, Double Oak, Tex.

[73] Assignee: **SGS-Thomson Microelectronics, Inc.**, Carrollton, Tex.

[21] Appl. No.: **986,117**

[22] Filed: **Dec. 4, 1992**

[51] **Int. Cl.**[5] .................................. **H05K 5/02**

[52] **U.S. Cl.** .................................. **361/813**; 361/749; 361/760; 361/785; 257/666; 257/787; 174/52.2; 174/255; 174/260

[58] **Field of Search** ............... 361/380, 392, 397, 398, 361/400, 401, 403, 404, 413, 414, 421; 257/666, 787; 174/52.2, 255, 260, 261

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,705,917 11/1987 Gates, Jr. et al. .............. 174/52 FP
5,031,022 7/1991 Yamamoto et al. .................. 357/70
5,105,257 4/1992 Michii .................................. 357/70

*Primary Examiner*—Leo P. Picard
*Assistant Examiner*—Young S. Whang
*Attorney, Agent, or Firm*—Dennis T. Griggs; Lisa K. Jorgenson; Richard K. Robinson

[57] **ABSTRACT**

A circuit assembly includes a finger lead assembly having structure for supporting an interposer substrate assembly and an electronic circuit device, the substrate assembly having conductive elements for providing electrical connection between finger leads of the lead assembly and respective circuit sections within the circuit device. The circuit device is mounted proximate to an upper surface of the substrate assembly. At least one decoupling capacitor is mounted on a lower surface of the substrate assembly at a level below that of the finger leads and electrically connected, through circuitry within the substrate assembly including inter-level via connectors, to respective circuits within the circuit device.

**12 Claims, 7 Drawing Sheets**