

The United States of America



The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

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A handwritten signature in black ink, reading "Jon W. I. Dudas". The signature is written in a cursive, flowing style.

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US006989559B2

(12) **United States Patent**
Chen et al.

(10) **Patent No.:** **US 6,989,559 B2**
(45) **Date of Patent:** **Jan. 24, 2006**

(54) **DISCRETE CIRCUIT COMPONENT HAVING
FABRICATION STAGE CLOGGED
THROUGH-HOLES AND PROCESS OF
MAKING THE SAME**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 57 days.

(21) Appl. No.: **10/249,788**

(22) Filed: **May 8, 2003**

(65) **Prior Publication Data**

US 2004/0198043 A1 Oct. 7, 2004

(30) **Foreign Application Priority Data**

Apr. 2, 2003 (TW) 92107483 A

(51) **Int. Cl.**

H01L 29/76 (2006.01)
H01L 29/94 (2006.01)
H01L 31/062 (2006.01)
H01L 31/113 (2006.01)
H01L 31/119 (2006.01)

(52) **U.S. Cl.** **257/288; 257/678**

(58) **Field of Classification Search** **257/288,**
257/292, 678, 777, 778, 779, 780, 781, 782,
257/824, 924

See application file for complete search history.

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(57) **ABSTRACT**

A discrete circuit component is made from a substrate with the first and second surfaces thereof each having a corresponding matrix of electrically conductive segments. A plated through-hole connects each of the conductive segments of each the first and second conductive segments electrically. The through-hole is first clogged and then subsequently cleared of clogging in the fabrication stages.

11 Claims, 5 Drawing Sheets

