US006841080B2

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

(10) **Patent No.: US 6,841,080 B2**
(45) **Date of Patent: Jan. 11, 2005**

(54) **MULTI-LAYER CONDUCTOR-DIELECTRIC OXIDE STRUCTURE**

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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 185 days.

(21) Appl. No.: **10/352,483**

(22) Filed: **Jan. 28, 2003**

(65) **Prior Publication Data**

US 2003/0113443 A1 Jun. 19, 2003

Related U.S. Application Data

(62) Division of application No. 09/629,504, filed on Jul. 31, 2000, now Pat. No. 6,541,137.

(51) **Int. Cl.**[7] **H01G 13/00**; H01G 4/00; H01G 5/00; H01G 7/00; H01G 9/00

(52) **U.S. Cl.** **216/6**; 29/25.03

(58) **Field of Search** 216/6, 13, 14, 216/15, 16; 29/25.01, 25.02, 25.03; 361/523, 524

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(57) **ABSTRACT**

A dielectric film is formed on a free-standing conductive metal layer to form a multi-layer foil comprising a conductive metal layer, a barrier layer and a dielectric oxide layer. Such multi-layer foils are mechanically flexible, and useful for the manufacture of capacitors. Examples of barrier layers include Ni—P or Ni—Cr alloys. After a second layer of conductive metal is deposited on a dielectric oxide surface opposing the first conductive metal layer, the resulting capacitor foil is processed into a capacitor. The resulting capacitor is a surface mounted capacitor or is formed as a integrated or embedded capacitor within a circuit board.

7 Claims, 4 Drawing Sheets