Filed on behalf of Intellectual Ventures Management

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## UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,994,609



Inter partes review of United States Patent No. 7,994,609 to Quinn, titled "Shielding for Integrated Capacitors" (hereinafter "the '609 Patent") is hereby requested. The '609 Patent is provided as IVM 1001. The petition for *inter partes* review is brought on behalf of Intellectual Ventures Management, LLC ("Intellectual Ventures Management").

## I. Grounds for Standing (37 C.F.R. § 42.104(a))

It is certified by the undersigned and the Petitioner, Intellectual Ventures Management, that the '609 Patent is available for *inter partes* review. The '609 Patent was issued on August 9, 2011 more than nine months prior to the filing date of the present petition and is not currently involved in a post grant review proceeding.

It is certified by the Petitioner, Intellectual Ventures Management, that the Petitioner is not estopped from requesting an *inter partes* review challenging claims 1-19 of the '609 Patent on the grounds identified herein.

## II. Identification of Challenge (37 C.F.R. § 42.104(b))

#### A. Claim Construction

The terms in claims 1-19 are to be given their broadest reasonable interpretation, as understood by one of ordinary skill in the art and consistent with the disclosure.



## B. Background

The '609 Patent relates to shielding for integrated capacitors. The '609 Patent was filed on November 21, 2008 as Application No. 12/276,289 ("the '289 application" or "the '609 application"). The '289 Application was filed with two independent claims -prosecution claim 1 and prosecution claim 19. IVM 1003. During prosecution, the Examiner rejected prosecution claim 1 as being anticipated by U.S. Patent No. 7,259,956 to Fong, et al. IVM 1004. In response, the Patent Owner amended original prosecution claim 1 to incorporate the limitations of allowable dependent claim 5, thus acquiescing that limitations in prosecution claim 1 were known in the art. IVM 1005. In the same response, dependent prosecution claim 6 was amended to include the limitations of prosecution claims 1 and 5. The subject matter of allegedly patentable dependent claims 5 and 6 is directed to the addition of a reference shield to a capacitor structure. As will be demonstrated herein, adding a reference shield to a capacitor structure was well known in the art prior to the filing date of the '609 patent.

Amended prosecution claim 1 issued as independent claim 1 and amended prosecution claim 6 issued as independent claim 13. Issued independent claims 1 and 13 share identical limitations ([A]-[C]). Independent claim 13 includes an additional limitation [D] related to the structure of the reference shield.

<sup>&</sup>lt;sup>1</sup> The limitations from prosecution claim 1 correspond to limitations [A] and [B] in issued claims 1 and 13 and prosecution claim 5 corresponds to limitation [C].

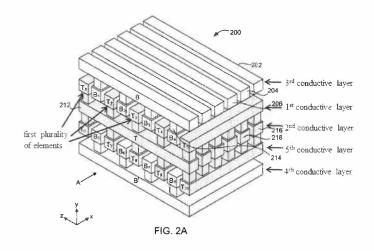


	Claim 1	Claim 13
[P]	A capacitor in an integrated circuit ("IC") comprising:	A capacitor in an integrated circuit ("IC") comprising:
[A]	a core capacitor portion having a first plurality of conductive elements electrically connected to and forming a first part of a first node of the capacitor formed in a first conductive layer of the IC and a second plurality of conductive elements electrically connected to and forming a first part of a second node of the capacitor formed in the first conductive layer, the first plurality of conductive elements alternating with the second plurality of conductive elements in the first conductive layer, and a third plurality of conductive elements electrically connected to and forming a second part of the first node formed in a second conductive layer adjacent to the first conductive layer, at least portions of some of the second plurality of conductive elements overlying and vertically coupling to at least portions of some of the third plurality of conductive elements;	a core capacitor portion having a first plurality of conductive elements electrically connected to and forming a first part of a first node of the capacitor formed in a first conductive layer of the IC and a second plurality of conductive elements electrically connected to and forming a first part of a second node of the capacitor formed in the first conductive layer, the first plurality of conductive elements alternating with the second plurality of conductive elements in the first conductive layer, and a third plurality of conductive elements electrically connected to and forming a second part of the first node formed in a second conductive layer adjacent to the first conductive layer, at least portions of some of the second plurality of conductive elements overlying and vertically coupling to at least portions of some of the third plurality of conductive elements;
[B]	a shield capacitor portion having a fourth plurality of conductive elements formed in at least the first conductive layer of the IC, the second conductive layer of the IC, a third conductive layer of the IC, and a fourth conductive layer of the IC,	a shield capacitor portion having a fourth plurality of conductive elements formed in at least the first conductive layer of the IC, the second conductive layer of the IC, a third conductive layer of the IC, and a fourth conductive layer of the IC,
	the first conductive layer and the second conductive layer each being	the first conductive layer and the second conductive layer each being



	between the third conductive layer and the fourth conductive layer, the shield capacitor portion being electrically connected to and forming a second part of the second node of the capacitor and surrounding the first plurality of conductive elements and the third plurality of conductive elements; and	between the third conductive layer and the fourth conductive layer, the shield capacitor portion being electrically connected to and forming a second part of the second node of the capacitor and surrounding the first plurality of conductive elements and the third plurality of conductive elements; and
[C]	a reference shield electrically connected to a reference node of the IC other than the second node of the capacitor, the shield capacitor portion being disposed between the reference shield and the core capacitor portion.	a reference shield electrically connected to a reference node of the IC other than the second node of the capacitor, the shield capacitor portion being disposed between the reference shield and the core capacitor portion
[D]		wherein the reference shield includes a substrate portion of a substrate of the IC, a first conductive curtain extending from the substrate portion, and a second conductive curtain extending from the substrate portion.

The following annotated figures from the '609 patent illustrate the relationship between the limitations recited in independent claims 1 and 13.





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