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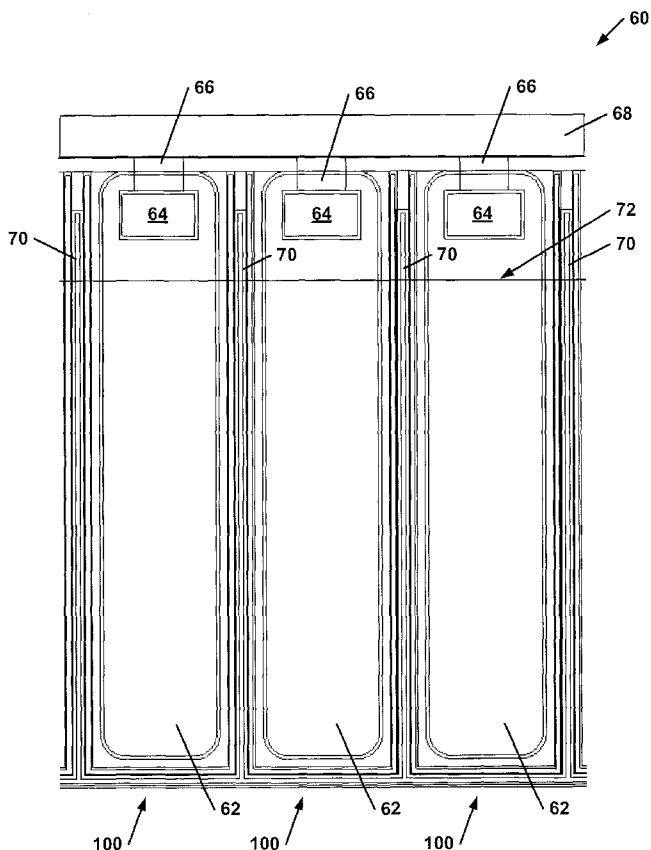
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[Continued on next page]

(54) Title: RF POWER TRANSISTOR DEVICE WITH HIGH PERFORMANCE SHUNT CAPACITOR AND METHOD THEREOF



(57) Abstract: An integrated shunt capacitor comprises a bottom plate (62), a capacitor dielectric (92) overlying a portion of the bottom plate, a top plate (64) overlying the capacitor dielectric, a shield (74) overlying a portion of the top plate; and a metallization feature (70) disposed about and isolated from at least two sides of the top plate, the metallization feature for coupling the bottom plate to the shield. In one embodiment, an RF power transistor has an impedance matching network including an integrated shunt capacitor as described herein.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H01L 29/94(2006.01)**

USPC: 257/296,318,532
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 257/296,318,532

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 EAST, Radio frequency RF Power Mosfet Shunt Capacitor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/0020107 A1 (Bosco et al.) 30 Jan 2003 (30.01.2003); figures 38-57, [0160]-[0179]	1,2,5-9,11,12,13 and 20
Y	US 6,218,239 B1 (Huang et al.) 17 April 2001(17.04.2001); Abstract	3,4,14,15

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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