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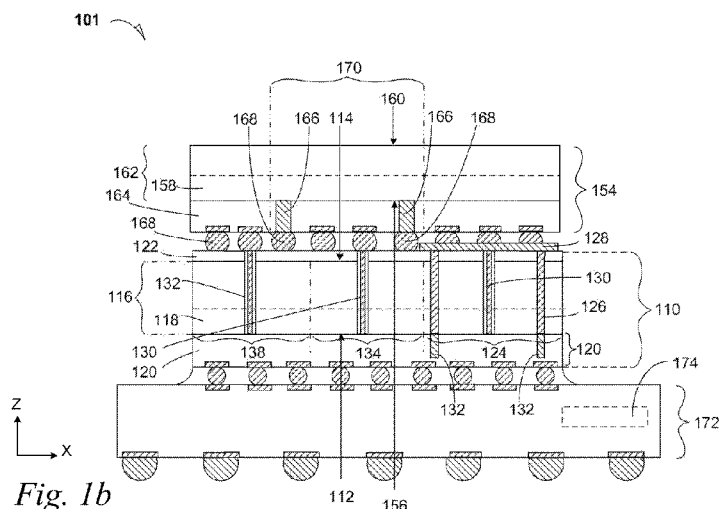
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(54) **Title:** RADIO- AND ELECTROMAGNETIC INTERFERENCE THROUGH-SILICON VIAS FOR STACKED-DIE PACKAGES, AND METHODS OF MAKING SAME



(57) **Abstract:** An apparatus includes a radio-frequency die with shielding through-silicon vias and a die backside lattice lid that shield a sector in the RF die from radio - and electromagnetic interference.

A. CLASSIFICATION OF SUBJECT MATTER***H01L 23/66(2006.01)i, H05K 9/00(2006.01)i***

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)

H01L 23/66; H01L 21/71; H01L 23/552; H01L 23/58; H01L 21/44

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: RF, die, TSV, sector, shield, lattice, via, TSV

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2009-0302438 A1 (SATYENDRA SINGH CHAUHAN et al.) 10 December 2009 See abstract; figures 1-3; and paragraphs [0003]-[0007], [0017]-[0030].	1-19
Y	US 2010-0078776 A1 (HANS-JOACHIM BARTH et al.) 01 April 2010 See abstract; figures 1-4b; and paragraphs [0019]-[0041].	1-19
A	US 2008-0001262 A1 (TELESPHOR KAMGAING) 03 January 2008 See abstract; figures 7-11; and paragraphs [0018], [0023]-[0029].	1-19
A	US 2010-0078779 A1 (HANS-JOACHIM BARTH et al.) 01 April 2010 See abstract; figures 1a-4, 8a-12; and paragraphs [0022]-[0037], [0045]-[0061].	1-19
A	US 2010-0078771 A1 (HANS-JOACHIM BARTH et al.) 01 April 2010 See abstract; figures 1a-3d, 12; and paragraphs [0022]-[0058], [0081].	1-19



Further documents are listed in the continuation of Box C.



See patent family annex.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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