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**Maamari et al.**

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(54) **METHOD OF AND PROGRAM PRODUCT  
FOR PERFORMING GATE-LEVEL  
DIAGNOSIS OF FAILING VECTORS**

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(52) **U.S. Cl.** ..... **714/738; 716/4**

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See application file for complete search history.

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(57) **ABSTRACT**

A method of fault diagnosis of integrated circuits having  
failing test vectors with observed fault effects using fault  
candidate fault-effects obtained by simulation of a set of test  
vectors, comprises determining a fault candidate diagnostic  
measure for each fault candidate, the fault candidate diag-  
nostic measure having a fault candidate match metric, an  
observed fault effect mismatch metric and a fault candidate  
excitation metric, ranking fault candidates in decreasing  
diagnostic measure order; and identifying fault candidate(s)  
having the highest diagnostic measure as the most likely  
cause of observed fault effects.

**35 Claims, 4 Drawing Sheets**

