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Analysis of SCR-Based ESD Protection Circuit on Holding Voltage Characteristics

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Abstract : This paper presents a silicon controller rectifier (SCR) based ESD protection circuit for IC. The proposed ESD protection circuit has low trigger voltage and high holding voltage compared with conventional SCR ESD protection circuit. Electrical characteristics of the proposed ESD protection circuit are simulated and analyzed using TCAD simulator. The proposed ESD protection circuit verified effective low voltage ESD characteristics with low trigger voltage and high holding voltage.

Keywords : electro-static discharge (ESD), silicon controlled rectifier (SCR), holding voltage, protection circuit
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