Title (en)
SEMICONDUCTOR PROTECTIVE STRUCTURE FOR ELECTROSTATIC DISCHARGE

Title (de)
HALBLEITERSCHUTZSTRUKTUR FÜR EINE ELEKTROSTASTISCHE ENTLADUNG

Title (fr)
STRUCTURE DE PROTECTION A SEMI-CONDUCTEURS POUR DECHARGE ELECTROSTATIQUE

Publication
EP 1891674 A1 20080227 (DE)

Application
EP 06762020 A 20060613

Priority
• EP 2006005637 W 20060613
• DE 102005027368 A 20050614

Abstract (en)
[origin: WO2006133888A1] Disclosed is a semiconductor protective structure (10) that is suitable for electrostatic discharge and comprises a first subarea (12) encompassing a first bipolar transistor for diverting the electrostatic discharge as well as a second subarea (14a, 14b) equipped with a second bipolar transistor. The first bipolar transistor and the second bipolar transistor are connected in parallel such that both emitter semiconductor regions (44, 44') and both collector semiconductor regions (16, 16') of the first bipolar transistor and the second bipolar transistor are also conductively interconnected, respectively. A first basic semiconductor region (34, 46, 42) of the first bipolar transistor borders a second basic semiconductor region (34', 46', 42') of the second bipolar transistor. The first basic semiconductor region (34, 46, 42) of the first bipolar transistor and the second basic semiconductor region (34', 46', 42') of the second bipolar transistor are provided with an identical conduction type. A first basic collector diode of the first bipolar transistor has a greater breakdown voltage than a basic collector diode of the second bipolar transistor, and/or the first bipolar transistor is provided with greater current amplification than the second bipolar transistor.

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