

Title (en)

DEVICE FOR REDUCING SHORT-CIRCUIT AMPLITUDE OF A DISCONNECTABLE NON-LATCHING MOS-CONTROLLED POWER SEMICONDUCTOR

Title (de)

VORRICHTUNG ZUR VERMINDERUNG DER KURZSCHLUSSAMPLITUDE EINES ABSCHALTbaren, NICHT EINRASTENDEN, MOS-GESTEUERTEN LEISTUNGSHALBLEITERS

Title (fr)

DISPOSITIF POUR REDUIRE L'AMPLITUDE DES COURTS-CIRCUITS D'UN SEMI-CONDUCTEUR DE PUISSANCE COMMANDE PAR CIRCUIT MOS, DECONNECTABLE, SANS VERROUILLAGE

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Application

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Abstract (en)

[origin: DE19638619A1] The invention concerns a device for reducing the short-circuit amplitude of a disconnectable, non-latching MOS-controlled power semiconductor (TL1) with a control unit presenting a driver stage (10) with two complementary transistors (T2, T3), a collector-emitter control (8) and a limiting circuit (6), that is placed between an input (12) and a reference potential ("") of the driver stage (10). Said limiting circuit (6) is connected to an output (16) of the collector-emitter control (8) on the input side, which is interconnected with the collector connection (C) of the power semiconductor (TL1) on the input side by means of a decoupling diode (D1). The decoupling diode (D1) is connected by a resistance (R1) on the anode side with a positive terminal of a first control voltage source (UH1) of the driver stage. The invention foresees an additional transistor (T5) and a resistance (R5). Said additional transistor (R5) and its collector-emitter section are connected electrically parallel to the base-emitter section of the switching transistor (T2) of the driver stage (10) and the resistance (R5) between the base and the emitter of said additional transistor (5). The control circuit resistance (RG) is bypassed by a diode. Thus, the known device for reducing a short-circuit amplitude of a disconnectable, non-latching, MOS-controlled power semiconductor (TL1) is improved in such a way, that its switching speed no longer changes.

IPC 1-7

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