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(54)　　**A low-dropout (LDO) current regulator**

(57)　　A driver device to produce a regulated current ($I_{LED}$) from an input voltage (VDC1) includes a driver transistor (MOS1) for providing said regulated current ($I_{LED}$) and a stabilization circuit (T1, D1, R1, R2, R3, RS) acting on the control electrode (P) of the driver transistor (MOS1) to determine a stabilized reference value ($I_{LED}$) for the regulated current. The stabilization circuit includes a bipolar transistor (T1) coupled (R2, R3) to the control electrode (P) of the driver transistor (MOS1) in a feedback relationship, whereby, with the bipolar transistor (T1) conducting, increase and decrease of said regulated current ($I_{LED}$) induce decrease and increase of the collector current in the bipolar transistor (T1), respectively. A diode (D1) and a resistance (RS) traversed by the regulated current ($I_{LED}$) are interposed between the base (B1) and the emitter of said bipolar transistor (T1) in a cascade arrangement, so that the stabilized reference value ($I_{LED}$) for the regulated current is determined by the value of resistance (RS) as a function of the difference between the base-emitter voltage of the bipolar transistor (T1) and the voltage across the anode and cathode of said diode (D1) .
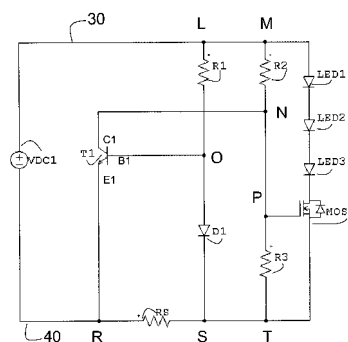
Fig. 2

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