

CIRCUIT AND METHOD FOR IMPROVING
SHORT-CIRCUIT CAPABILITY OF IGBTs

ABSTRACT OF THE DISCLOSURE

5 A simple, off-chip circuit and method for
endowing high efficiency IGBTs with short-circuit
capability, that is essentially transparent to the user.
The invention involves adding an external common emitter
resistor to reduce the effective gain of an IGBT under
short circuit. Under normal operating conditions, the
voltage across the resistor is small, such that the
modifying effect on the normal operating gate-emitter
voltage is almost negligible.

Fig. 5