



STD13003

HIGH VOLTAGE FAST-SWITCHING NPN POWER TRANSISTOR

- REVERSE PINS OUT Vs STANDARD IPAK (TO-251) / DPAK (TO-252) PACKAGES
- MEDIUM VOLTAGE CAPABILITY
- LOW SPREAD OF DYNAMIC PARAMETERS
- MINIMUM LOT-TO-LOT SPREAD FOR RELIABLE OPERATION
- VERY HIGH SWITCHING SPEED
- SURFACE-MOUNTING DPAK (TO-252) POWER PACKAGE IN TAPE & REEL (Suffix "T4")
- THROUGH-HOLE IPAK (TO-251) POWER PACKAGE IN TUBE (Suffix "-1")

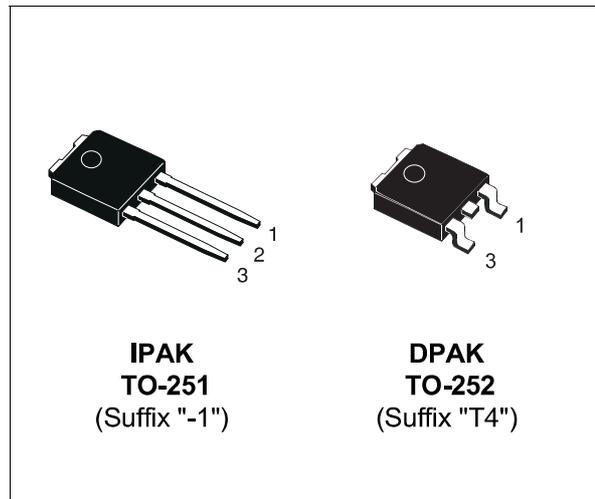
APPLICATIONS:

- ELECTRONIC BALLASTS FOR FLUORESCENT LIGHTING
- SWITCH MODE POWER SUPPLIES

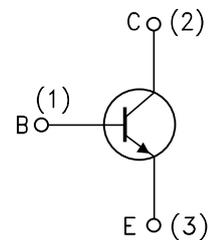
DESCRIPTION

The device is manufactured using high voltage Multi Epitaxial Planar technology for high switching speeds and medium voltage capability. It uses a Cellular Emitter structure with planar edge termination to enhance switching speeds while maintaining the wide RBSOA.

The device is designed for use in lighting applications and low cost switch-mode power supplies.



INTERNAL SCHEMATIC DIAGRAM



SC06960

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CES}	Collector-Emitter Voltage ($V_{BE} = 0$)	700	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	400	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0, I_B = 0.75 \text{ A}, t_p < 10 \mu\text{s}, T_j < 150^\circ\text{C}$)	BV_{EBO}	V
I_C	Collector Current	1.5	A
I_{CM}	Collector Peak Current ($t_p < 5 \text{ ms}$)	3	A
I_B	Base Current	0.75	A
I_{BM}	Base Peak Current ($t_p < 5 \text{ ms}$)	1.5	A
P_{tot}	Total Dissipation at $T_c = 25^\circ\text{C}$	20	W
T_{stg}	Storage Temperature	-65 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$