

HIGH VOLTAGE NPN POWER TRANSISTOR

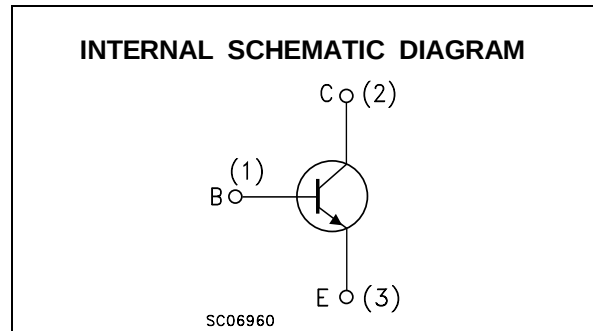
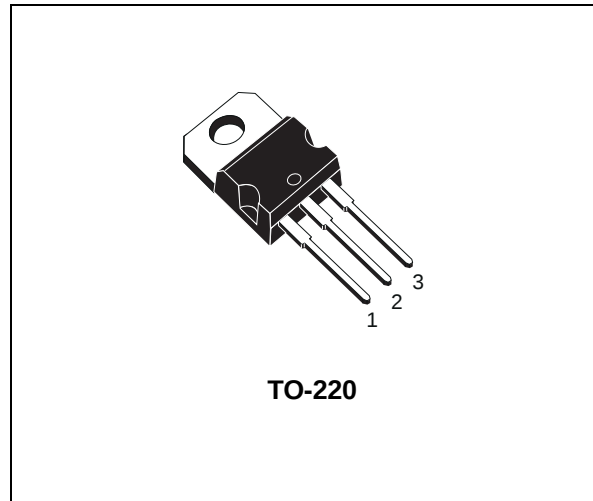
- STMicroelectronics PREFERRED SALESTYPE
- HIGH VOLTAGE CAPABILITY
- MINIMUM LOT-TO-LOT SPREAD FOR RELIABLE OPERATION
- FAST SWITCHING SPEED

APPLICATIONS

- GENERAL PURPOSE SWITCHING
- SWITCH MODE POWER SUPPLIES
- ELECTRONIC BALLASTS FOR FLUORESCENT LIGHTING

DESCRIPTION

The device is a Multiepitaxial Mesa NPN transistor mounted in TO-220 plastic package. It is intended for high voltage and fast switching applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CES}	Collector-Emitter Voltage ($V_{BE} = 0$)	850	V
V_{CEX}	Collector-Emitter Voltage ($V_{BE} = -2.5V$)	850	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	400	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	7	V
I_C	Collector Current	5	A
I_B	Base Current	3	A
P_{tot}	Total Dissipation at $T_C = 25\text{ }^{\circ}C$	70	W
T_{stg}	Storage Temperature	-65 to 150	$^{\circ}C$
T_j	Max. Operating Junction Temperature	150	$^{\circ}C$

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-Case	Max	1.76	°C/W
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ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CER}	Collector Cut-off Current (R _{BE} = 10Ω)	V _{CE} = 850 V V _{CE} = 850 V T _C = 125 °C			0.1 1	mA mA
I _{CEX}	Collector Cut-off Current (V _{BE} = -2.5V)	V _{CE} = 850 V V _{CE} = 850 V T _C = 125 °C			0.3 2	mA mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 7 V			1	mA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 100 mA	400			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 2.5 A I _B = 0.5 A I _C = 3.5 A I _B = 0.7 A			1.5 5	V V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = 2.5 A I _B = 0.5 A			1.3	V
t _{on} t _s t _f	RESISTIVE LOAD Turn-on Time Storage Time Fall Time	I _C = 2.5 A V _{CC} = 150 V I _{B1} = - I _{B2} = 0.5 A			1 3 0.8	μs μs μs

* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

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