

MEDIUM POWER NPN SILICON TRANSISTOR

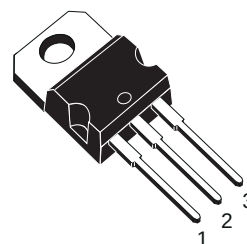
- STMicroelectronics PREFERRED SALESTYPE
- NPN TRANSISTOR
- FAST SWITCHING SPEED
- LOW COLLECTOR EMITTER SATURATION

APPLICATIONS

- SWITCHING REGULATORS
- MOTOR CONTROL

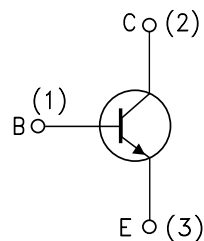
DESCRIPTION

The BUV26 is a Multiepitaxial Planar NPN Transistor in TO-220 package. It is intended for use in high frequency and efficiency converters, switching regulators and motor control.



TO-220

INTERNAL SCHEMATIC DIAGRAM



SC06960

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	180	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	90	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	7	V
I_C	Emitter Current	14	A
I_{CM}	Collector Peak Current ($t_p < 10ms$)	25	A
I_B	Base Current	4	A
I_{BM}	Base Peak Current ($t_p < 10ms$)	6	A
P_{tot}	Total Dissipation at $T_c < 25^\circ C$	85	W
P_{tot}	Total Dissipation at $T_c < 60^\circ C$	65	W
T_{stg}	Storage Temperature	-65 to +175	$^\circ C$
T_j	Max. Operating Junction Temperature	175	$^\circ C$

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} = 50Ω)	V _{CE} = 180V T _c = 125°C			3	mA
I _{CEX}	Collector Cut-off Current (V _{BE} = -1.5V)	V _{CE} = 180V T _c = 125°C			1	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			1	mA
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 0.2 A L = 25mH	90			V
V _{EBO}	Emitter-Base Voltage (I _C = 0)	I _E = 50mA	7		30	V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = 6A I _B = 0.6A I _C = 12A I _B = 1.2A			0.6 1.5	V V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	I _C = 12A I _B = 1.2A			2	V
t _{on} t _s t _f	RESISTIVE LOAD Turn-on Time Storage Time Fall Time	V _{CC} = 50V I _C = 12A V _{BE} = - 6V I _{B1} = 1.2A R _{BB} = 2.5Ω		0.4 0.45 0.12	0.6 1 0.25	ms μs μs
t _s t _f	INDUCTIVE LOAD Storage time Fall Time	V _{CC} = 50V I _C = 12A V _{BE} = - 5V I _{B1} = 1.2A L _B = - 0.5μH		0.5 0.04		μs μs
t _s t _f	Storage Time Fall Time	V _{CC} = 50V I _C = 12 A V _{BE} = - 5V I _{B1} = 1.2A L _B = - 0.5μH T _c = 125°C			2 0.15	μs μs

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

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