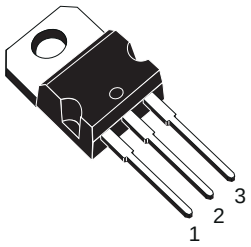
BUV26

MEDIUM POWER NPN SILICON TRANSISTOR

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

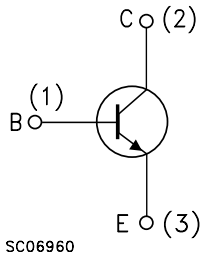
APPLICATIONS
- SWITCHING REGULATORS
- MOTOR CONTROL

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



TO-220

INTERNAL SCHEMATIC DIAGRAM



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 ^oC	85	W
P_{tot}	Total Dissipation at T_c < 60 ^oC	65	W
T_{stg}	Storage Temperature	-65 to +175	^oC
T_j	Max. Operating Junction Temperature	175	^oC

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	1.76	$^oC/W$

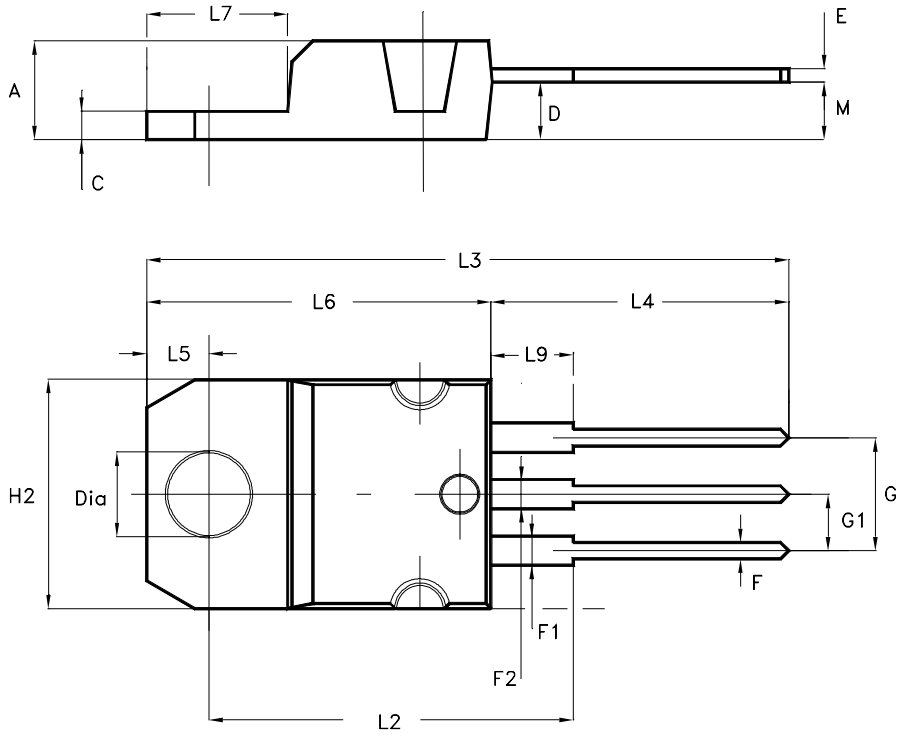
ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^oC unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CER}	Collector Cut-off Current (R_{BE} = 50Ω)	V_{CE} = 180V T_c = 125^oC			3	mA
I_{CEX}	Collector Cut-off Current (V_{BE} = -1.5V)	V_{CE} = 180V T_c = 125^oC			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
	RESISTIVE LOAD					
t_{on}	Turn-on Time	V_{CC} = 50V I_C =12A		0.4	0.6	ms
t_s	Storage Time	V_{BE} = - 6V I_{B1} = 1.2A		0.45	1	µs
t_f	Fall Time	R_{BB} = 2.5Ω		0.12	0.25	µs
	INDUCTIVE LOAD					
t_s	Storage time	V_{CC} = 50V I_C = 12A		0.5		µs
t_f	Fall Time	V_{BE} = - 5V I_{B1} = 1.2A L_B = - 0.5µH		0.04		µs
t_s	Storage Time	V_{CC} = 50V I_C = 12 A			2	µs
t_f	Fall Time	V_{BE} = - 5V I_{B1} = 1.2A L_B = - 0.5µH T_c = 125^oC			0.15	µs

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

TO-220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.052
D	2.40		2.72	0.094		0.107
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.202
G1	2.40		2.70	0.094		0.106
H2	10.00		10.40	0.394		0.409
L2		16.40			0.645	
L4	13.00		14.00	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.20		6.60	0.244		0.260
L9	3.50		3.93	0.137		0.154
M		2.60			0.102	
DIA.	3.75		3.85	0.147		0.151



P011CI