

## HIGH VOLTAGE PNP POWER TRANSISTOR

- SGS-THOMSON PREFERRED SALESTYPE
- PNP TRANSISTOR
- HIGH VOLTAGE CAPABILITY

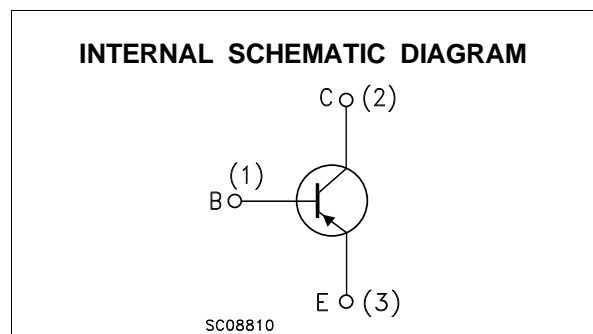
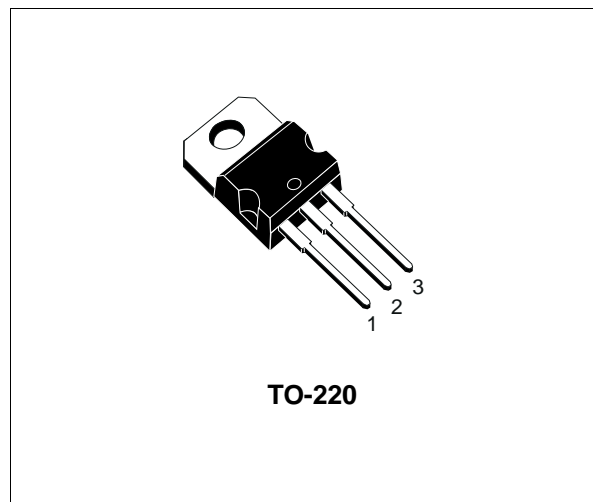
### APPLICATIONS:

- SWITCHING REGULATORS
- MOTOR CONTROL
- INVERTERS

### DESCRIPTION

The MJE5852 is manufactured using high voltage PNP multi-epitaxial technology for high switching speed and high voltage capability.

It is intended for use in high frequency and efficiency converters, switching regulators and motor control.



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{CES}$	Collector-Emitter Voltage ( $V_{BE} = 0$ )	450	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	8	A
$I_{CM}$	Collector Peak Current ( $t_p < 5ms$ )	16	A
$I_B$	Base Current	4	A
$I_{BM}$	Base Peak Current ( $t_p < 5ms$ )	8	A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ C$	80	W
$T_{stg}$	Storage Temperature	-65 to 150	$^\circ C$
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$

For PNP type voltage and current values are negative.

**THERMAL DATA**

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	1.56	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-ambient	Max	62.5	°C/W

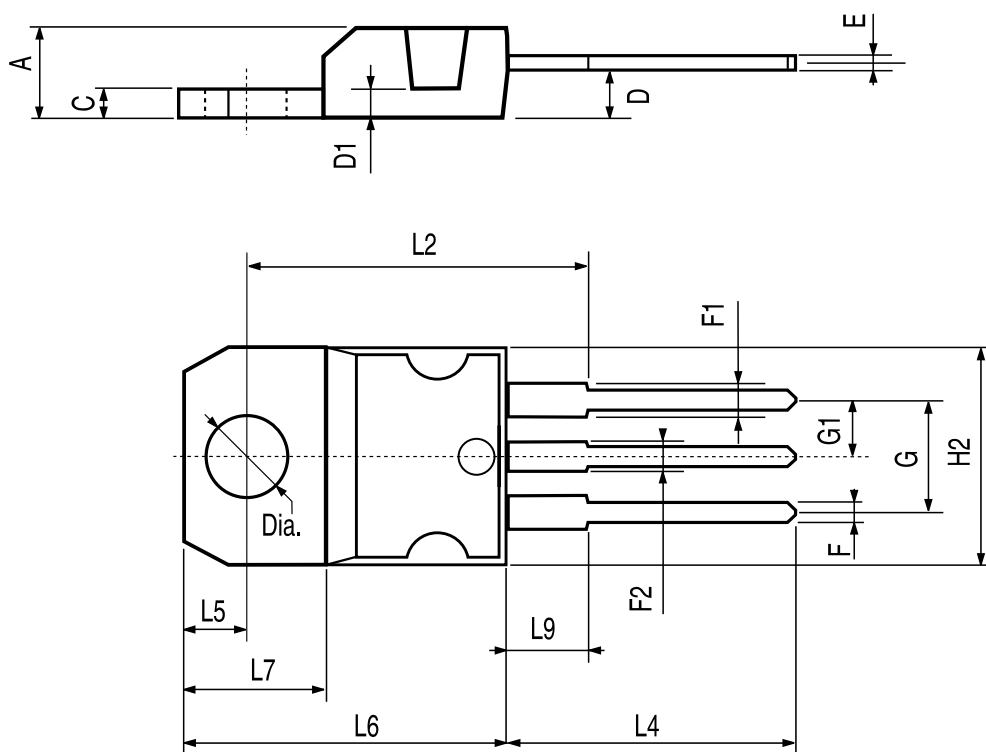
**ELECTRICAL CHARACTERISTICS** (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CES</sub>	Collector Cut-off Current (V <sub>BE</sub> = -1.5V)	V <sub>CE</sub> = 450 V			500	μA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 6 V			1	mA
V <sub>CEO(sus)*</sub>	Collector-Emitter Sustaining Voltage (I <sub>B</sub> =0)	I <sub>C</sub> = 10 mA	400			V
V <sub>CE(sat)*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4 A      I <sub>B</sub> = 1 A I <sub>C</sub> = 8 A      I <sub>B</sub> = 3 A			2 5	V V
V <sub>BE(sat)*</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4 A      I <sub>B</sub> = 1 A			1.5	V
h <sub>FE*</sub>	DC Current Gain	I <sub>C</sub> = 2 A      V <sub>CE</sub> = 5 V I <sub>C</sub> = 5 A      V <sub>CE</sub> = 5 V	15 5			
t <sub>s</sub> t <sub>f</sub>	RESISTIVE LOAD Storage Time Fall Time	I <sub>C</sub> = 4 A      V <sub>CC</sub> = 250 V I <sub>B1</sub> = -I <sub>B2</sub> = 1 A      t <sub>p</sub> = 40 μs			2 0.5	μs μs

\* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %  
For PNP type voltage and current values are negative.

**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		0.051
D	2.40		2.72	0.094		0.107
D1		1.27			0.050	
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		0.203
G1	2.4		2.7	0.094		0.106
H2	10.0		10.40	0.393		0.409
L2		16.4			0.645	
L4	13.0		14.0	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.2		6.6	0.244		0.260
L9	3.5		3.93	0.137		0.154
DIA.	3.75		3.85	0.147		0.151



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