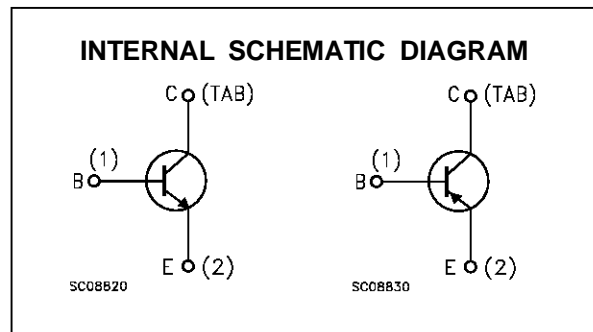
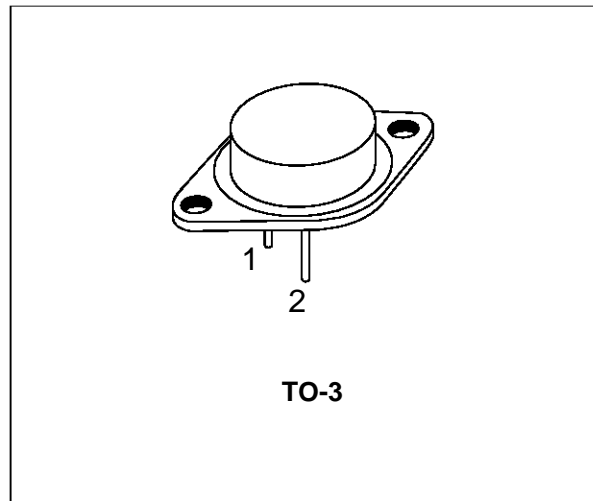


**COMPLEMENTARY SILICON HIGH POWER TRANSISTORS**

■ SGS-THOMSON PREFERRED SALESTYPES

**DESCRIPTION**

The MJ802 (NPN) and MJ4502 (PNP) are silicon epitaxial-base complementary power transistor in Jedec TO-3 metal case, intended for general purpose power amplifier and switching applications.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CEO}$	Collector-emitter Voltage ( $I_B = 0$ )	90	V
$V_{CBO}$	Collector-base Voltage ( $I_E = 0$ )	100	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	4	V
$I_C$	Collector Current	30	A
$I_B$	Base Current	7.5	A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ C$	200	W
$T_{stg}$	Storage Temperature	-65 to 200	$^\circ C$
$T_j$	Max. Operating Junction Temperature	200	$^\circ C$

**THERMAL DATA**

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	0.875	°C/W
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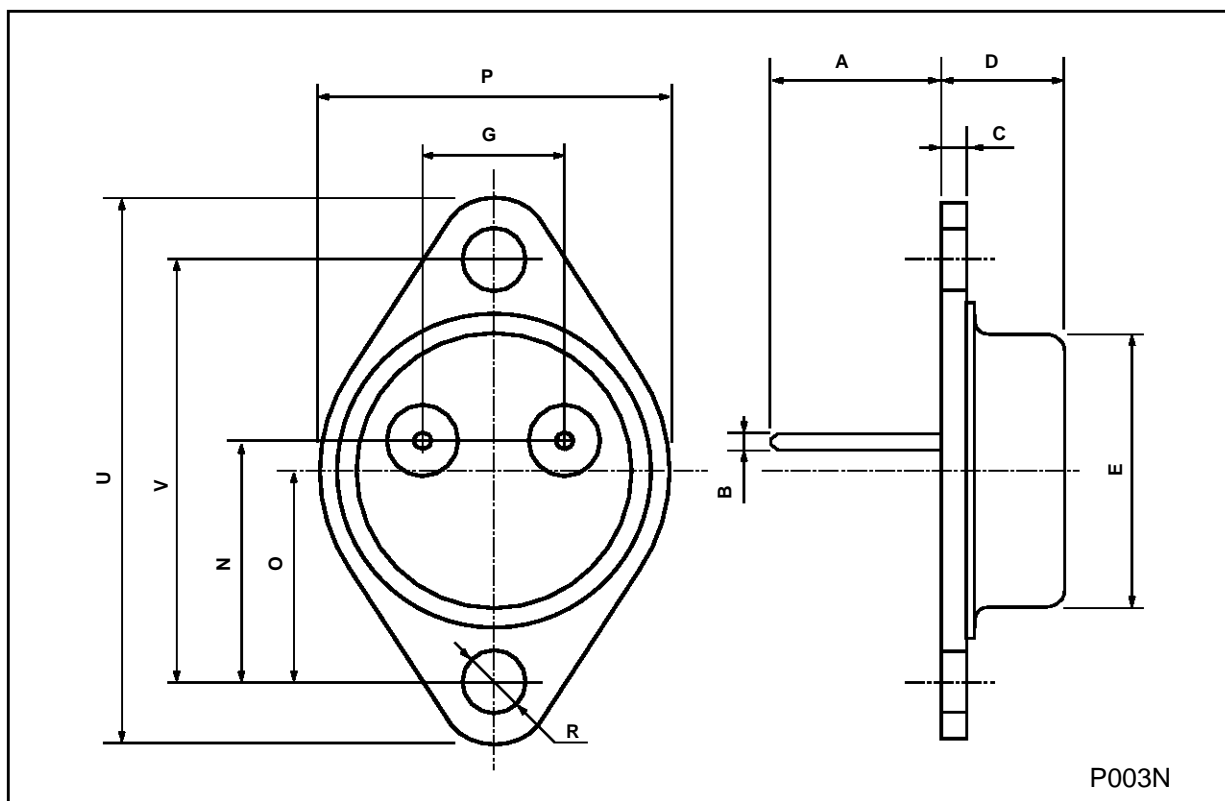
**ELECTRICAL CHARACTERISTICS** (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>CEO(sus)</sub> *	Collector-Emitter Sustaining Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = 200 mA	90			V
I <sub>CBO</sub>	Collector Cut-off Current (I <sub>E</sub> = 0)	V <sub>CB</sub> = 100 V T <sub>case</sub> = 150 °C			1 5	mA mA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 4 V			1	mA
V <sub>CER(sus)</sub> *	Collector-emitter Sustaining Voltage (R <sub>BE</sub> = 100 Ω)	I <sub>C</sub> = 200 mA	100			V
h <sub>FE</sub> *	DC Current Gain	I <sub>C</sub> = 7.5 A      V <sub>CE</sub> = 2 V	25		100	V
V <sub>CE(sat)</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 7.5 A      I <sub>B</sub> = 0.75 A			0.8	V
V <sub>BE(sat)</sub> *	Base-Emitter Saturation Voltage	I <sub>C</sub> = 7.5 A      I <sub>B</sub> = 0.75 A			1.3	V
V <sub>BE</sub> *	Base-Emitter Voltage	I <sub>C</sub> = 7.5 A      V <sub>CE</sub> = 2 V			1.3	V
f <sub>T</sub>	Transition Frequency	I <sub>C</sub> = 1 A f = 1 MHz      V <sub>CE</sub> = 10 V	2			MHz

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

## TO-3 (H) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		11.7			0.460	
B	0.96		1.10	0.037		0.043
C			1.70			0.066
D			8.7			0.342
E			20.0			0.787
G		10.9			0.429	
N		16.9			0.665	
P			26.2			1.031
R	3.88		4.09	0.152		0.161
U			39.50			1.555
V		30.10			1.185	



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