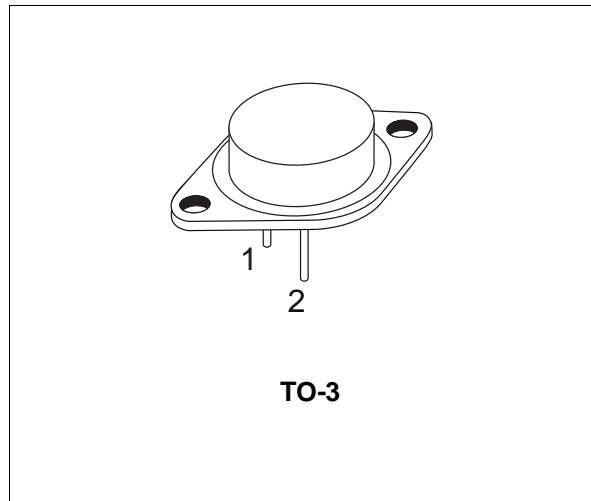


## SILICON NPN POWER TRANSISTOR

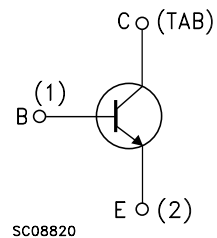
- STMicroelectronics PREFERRED SALESTYPE

### DESCRIPTION

The MJ802 is a silicon Epitaxial-Base power transistor mounted in Jedec TO-3 metal case. It is intended for general purpose power amplifier and switching applications.



### INTERNAL SCHEMATIC DIAGRAM



### 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 $T_c \leq 25^\circ\text{C}$	200	W
$T_{stg}$	Storage Temperature	-65 to 200	$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	200	$^\circ\text{C}$

## MJ802

### THERMAL DATA

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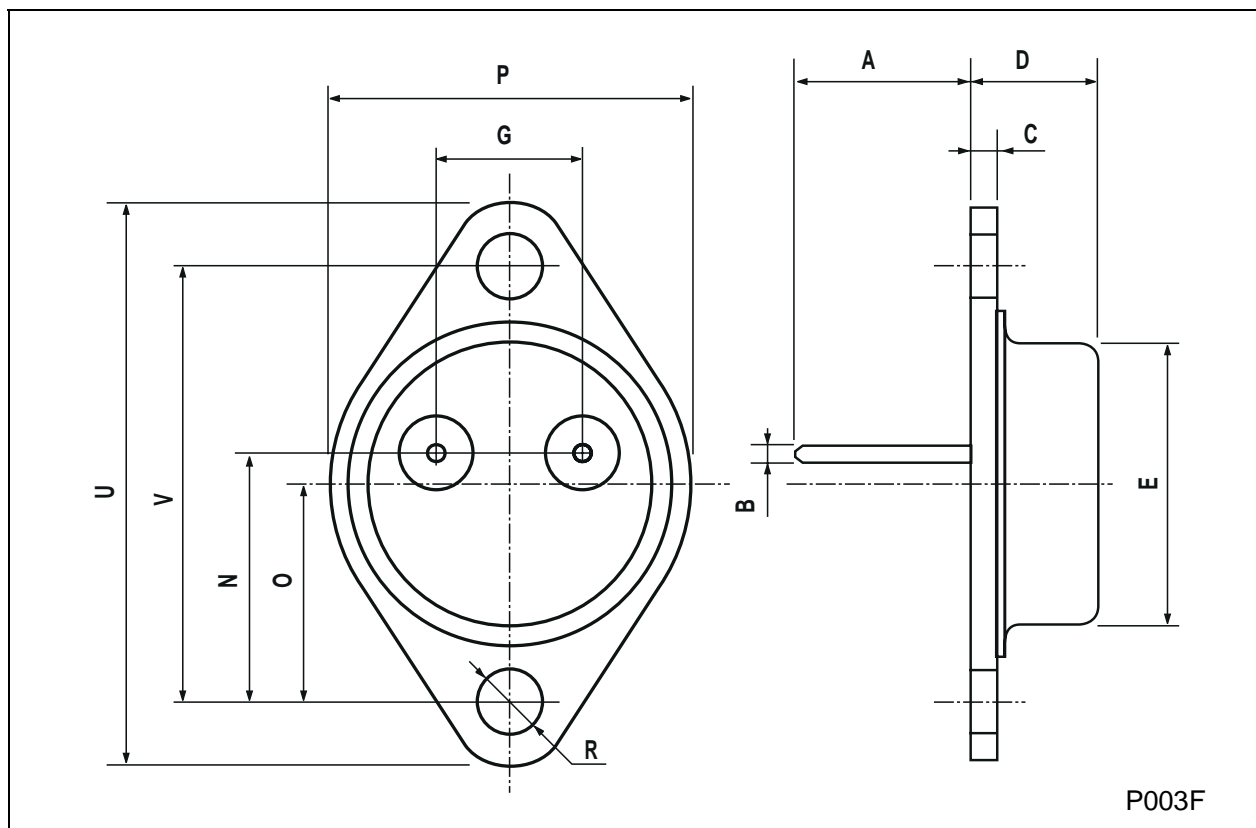
### ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CB0</sub>	Collector Cut-off Current (I <sub>E</sub> = 0)	V <sub>CB</sub> = 100 V 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>CEO(sus)*</sub>	Collector-Emitter Sustaining Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = 200 mA	90			V
V <sub>CER(sus)*</sub>	Collector-emitter Sustaining Voltage (R <sub>BE</sub> = 100 Ω)	I <sub>C</sub> = 200 mA	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
h <sub>FE*</sub>	DC Current Gain	I <sub>C</sub> = 7.5 A      V <sub>CE</sub> = 2 V	25		100	
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 %

## TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



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