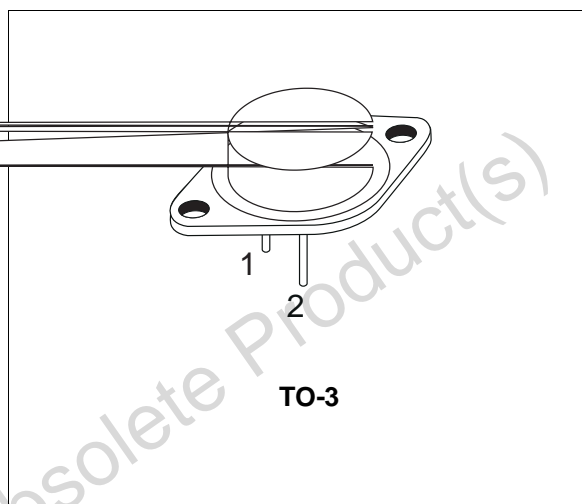


SILICON NPN POWER TRANSISTOR

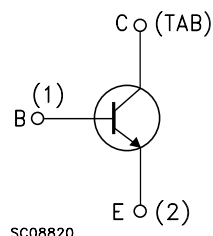
- STMicroelectronics PREFERRED SALESTYPE

DESCRIPTION

The MJ802 is a silicon Epitaxial PNP 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	$^\circ\text{C}$

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	0.875	°C/W
----------------	----------------------------------	-----	-------	------

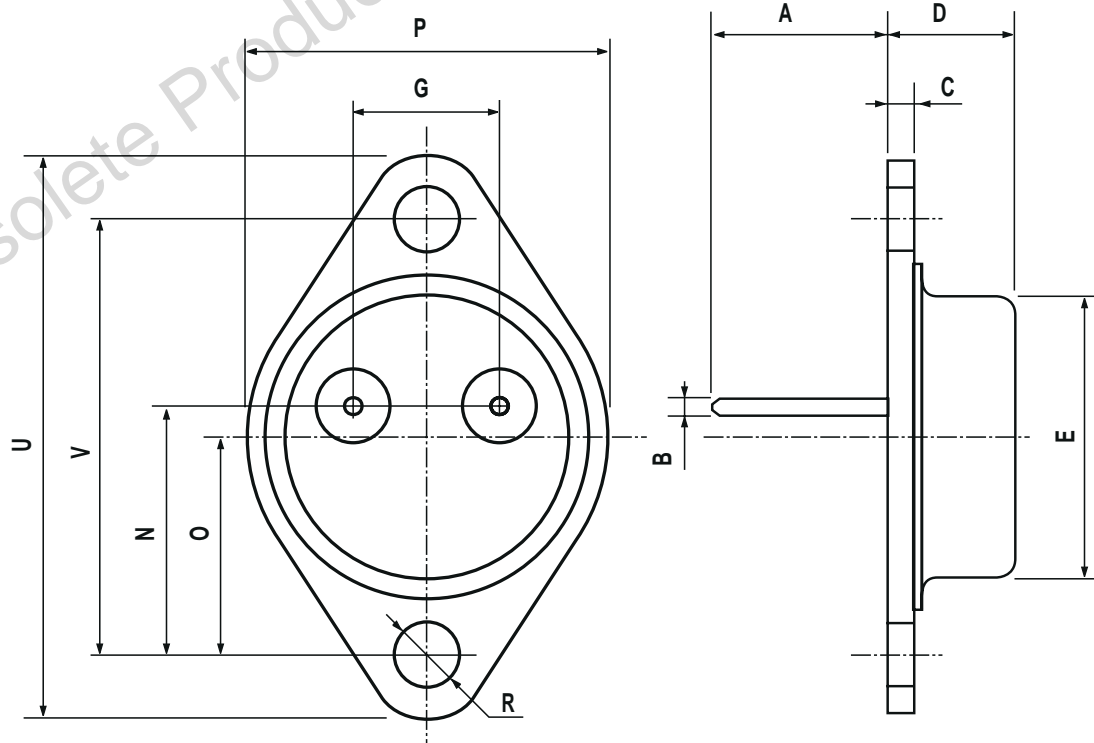
ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ °C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = 100\text{ V}$ $V_{CB} = 100\text{ V}$ $T_{case} = 150\text{ °C}$			1 5	mA mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 4\text{ V}$			1	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 200\text{ mA}$	90			V
$V_{CER(sus)}^*$	Collector-emitter Sustaining Voltage ($R_{BE} = 100\text{ }\Omega$)	$I_C = 200\text{ mA}$	100			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 7.5\text{ A}$ $I_B = 0.75\text{ A}$			0.8	V
$V_{BE(sat)}^*$	Base-Emitter Saturation Voltage	$I_C = 7.5\text{ A}$ $I_B = 0.75\text{ A}$			1.3	V
V_{BE}^*	Base-Emitter Voltage	$I_C = 7.5\text{ A}$ $V_{CE} = 2\text{ V}$			1.3	V
h_{FE}^*	DC Current Gain	$I_C = 7.5\text{ A}$ $V_{CE} = 2\text{ V}$	25		100	
f_T	Transition Frequency	$I_C = 1\text{ A}$ $f = 1\text{ MHz}$ $V_{CE} = 10\text{ V}$	2			MHz

* Pulsed: Pulse duration = 300 μ s, 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



P003F

Obsolete Product(s) - Obsolete Product(s)

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specification mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a trademark of STMicroelectronics.

All other names are the property of their respective owners.

© 2003 STMicroelectronics – All Rights reserved

STMicroelectronics GROUP OF COMPANIES

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States.

<http://www.st.com>