

SavantIC Semiconductor

Product Specification

Silicon PNP Power Transistors

MJE170/171/172

DESCRIPTION

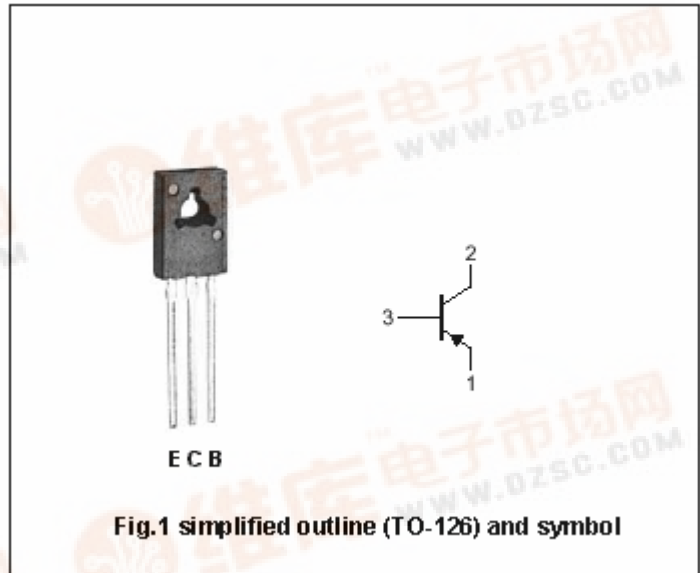
- With TO-126 package
- Complement to type MJE180/181/182

APPLICATIONS

- For low power audio amplifier and low current, high speed switching applications

PINNING (see Fig.2)

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base



ABSOLUTE MAXIMUM RATINGS( $T_c=25^\circ C$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	MJE170	-60	V
		MJE171	-80	
		MJE172	-100	
$V_{CEO}$	Collector-emitter voltage	MJE170	-40	V
		MJE171	-60	
		MJE172	-80	
$V_{EBO}$	Emitter-base voltage	Open collector	-7	V
$I_C$	Collector current		-3	A
$I_{CM}$	Collector current-peak		-6	A
$I_B$	Base current		-1	A
$P_C$	Collector power dissipation	$T_a=25^\circ C$	1.5	W
		$T_c=25^\circ C$	12.5	
$T_j$	Junction temperature		150	$^\circ C$
$T_{stg}$	Storage temperature		-65~150	$^\circ C$

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	MJE170	I <sub>C</sub> =-10mA; I <sub>B</sub> =0	-40			V
		MJE171		-60			
		MJE172		-80			
V <sub>CE(sat)-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-500mA; I <sub>B</sub> =-50mA			-0.3	V
V <sub>CE(sat)-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-1.5A; I <sub>B</sub> =-150mA			-0.9	V
V <sub>CE(sat)-3</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-3A; I <sub>B</sub> =-600mA			-1.7	V
V <sub>BE(sat)-1</sub>	Base-emitter saturation voltage		I <sub>C</sub> =-1.5A; I <sub>B</sub> =-150mA			-1.5	V
V <sub>BE(sat)-2</sub>	Base-emitter saturation voltage		I <sub>C</sub> =-3A; I <sub>B</sub> =-600mA			-2.0	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =-500mA; V <sub>CE</sub> =-1V			-1.2	V
I <sub>CBO</sub>	Collector cut-off current	MJE170	V <sub>CB</sub> =-60V; I <sub>E</sub> =0 T <sub>C</sub> =150°C			-0.1 -0.1	μA mA
		MJE171	V <sub>CB</sub> =-80V; I <sub>E</sub> =0 T <sub>C</sub> =150°C			-0.1 -0.1	μA mA
		MJE172	V <sub>CB</sub> =-100V; I <sub>E</sub> =0 T <sub>C</sub> =150°C			-0.1 -0.1	μA mA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-7V; I <sub>C</sub> =0			-0.1	μA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-100mA; V <sub>CE</sub> =-1V	50		250	
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-500mA; V <sub>CE</sub> =-1V	30			
h <sub>FE-3</sub>	DC current gain		I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-1V	12			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-100mA; V <sub>CE</sub> =-10V	50			MHz
C <sub>OB</sub>	Output capacitance		I <sub>E</sub> =0; V <sub>CB</sub> =-10V, f=0.1MHz			50	pF

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PACKAGE OUTLINE

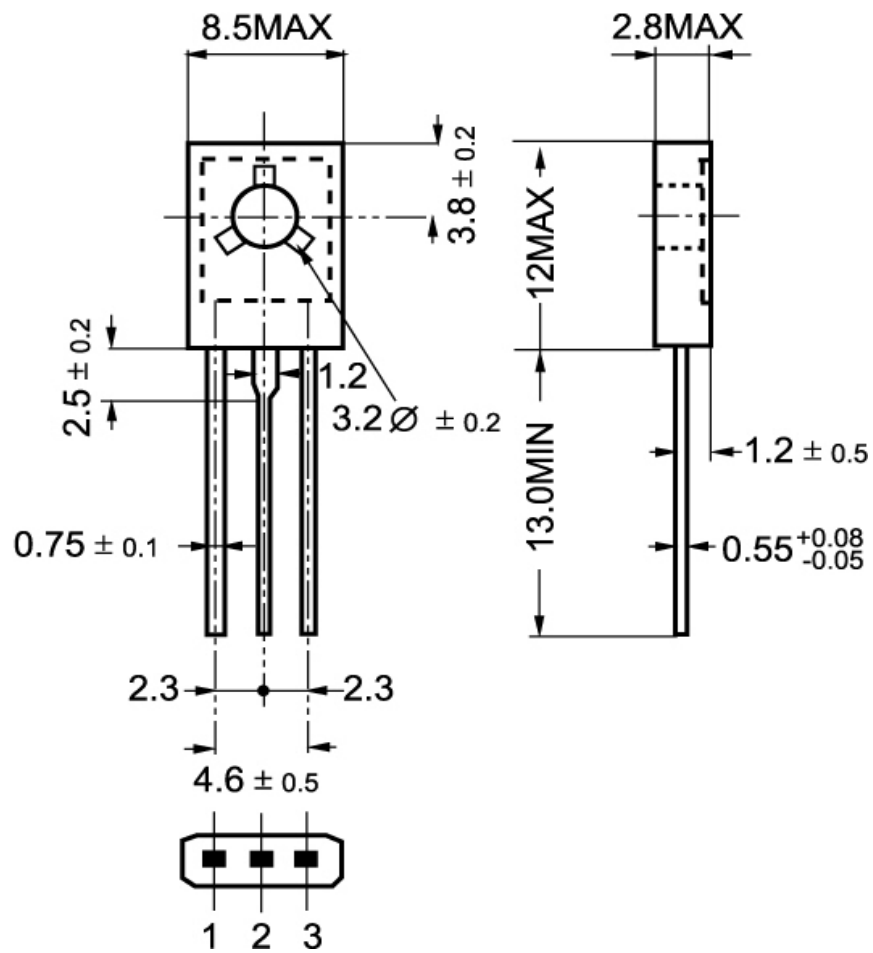


Fig.2 Outline dimensions