

Silicon PNP Power Transistors

MJE170/171/172

DESCRIPTION

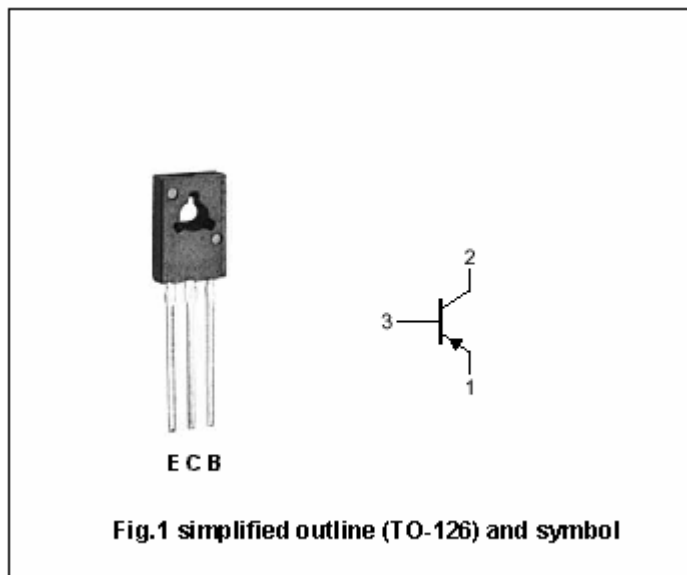
- With TO-126 package
- Complement to type MJE180/181/182

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($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	MJE170	Open emitter	-60	V
		MJE171		-80	
		MJE172		-100	
V_{CEO}	Collector-emitter voltage	MJE170	Open base	-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	$T_a=25^\circ\text{C}$		1.5	W
		$T_c=25^\circ\text{C}$		12.5	
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25℃ unless otherwise specified

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

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PACKAGE OUTLINE

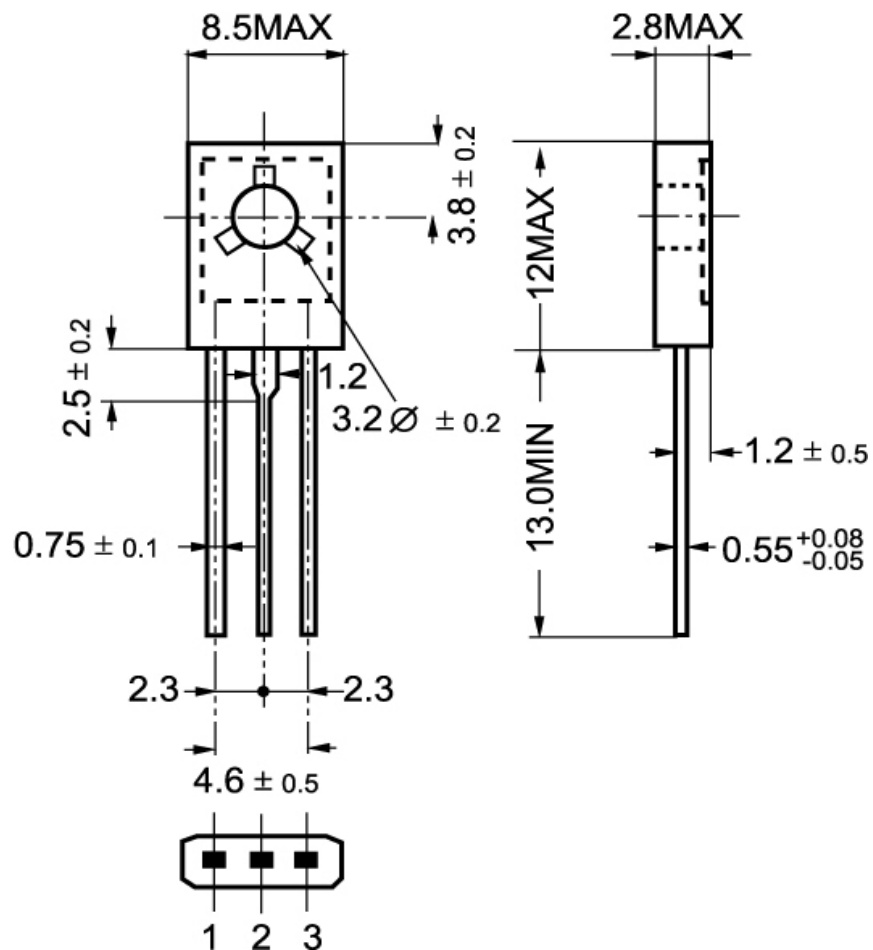


Fig.2 Outline dimensions