

Silicon NPN Power Transistors

MJE180/181/182

DESCRIPTION

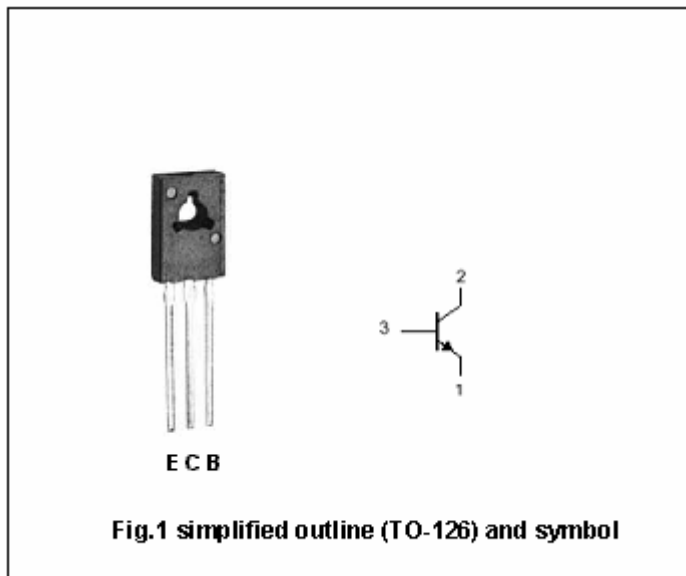
- With TO-126 package
- Complement to type MJE170/171/172

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°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	MJE180	60	V
		MJE181	80	
		MJE182	100	
V _{CEO}	Collector-emitter voltage	MJE180	40	V
		MJE181	60	
		MJE182	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°C	1.5	W
		T _C =25°C	12.5	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-65~150	°C

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	MJE180	I _C =10mA; I _B =0			V
		MJE181				
		MJE182				
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	MJE180				0.1 0.1
		MJE181				0.1 0.1
		MJE182				0.1 0.1
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			30	pF

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PACKAGE OUTLINE

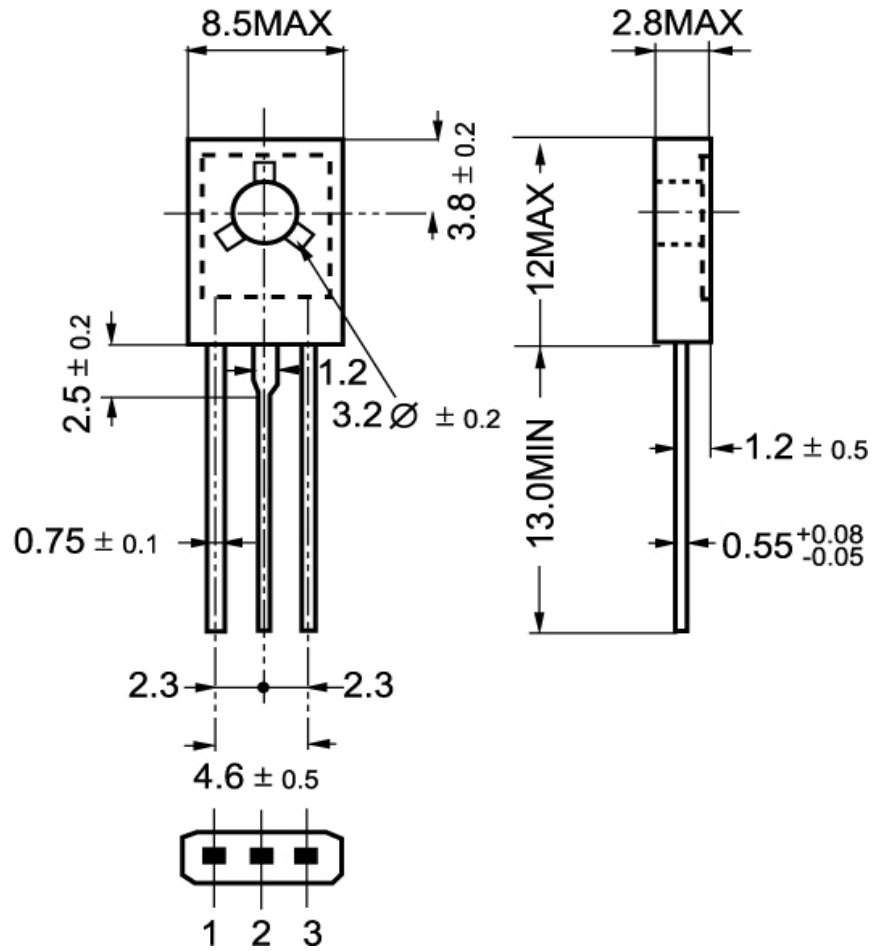


Fig.2 Outline dimensions