

Silicon NPN Power Transistors

BUY49P

DESCRIPTION

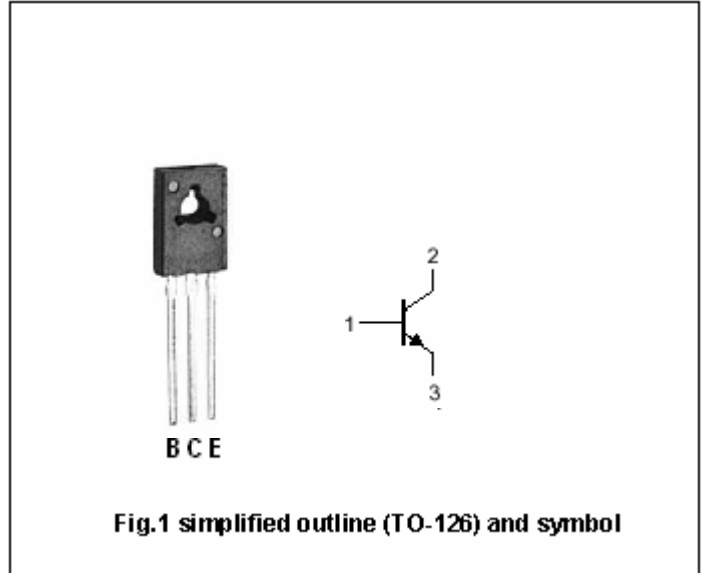
- With TO-126 package
- High breakdown voltage: $V_{CE0}=200V(\text{min})$

APPLICATIONS

- For high voltage,medium current switching applications

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	250	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		3	A
I_{CM}	Collector current-Peak		5	A
P_T	Total power dissipation	$T_a \leq 25^\circ\text{C}$	15	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal resistance from junction to case	8.33	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =20mA ; I _B =0	200			V
V _{EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _C =0	6			
V _{CBO}	Collector-base breakdown voltage	I _C =100μA ; I _E =0	250			
V _{CEsat}	Collector-emitter saturation voltage	I _C =0.5A ; I _B =50mA			0.2	V
V _{BEsat}	Base-emitter saturation voltage	I _C =0.5A ; I _B =50mA			1.1	V
I _{CBO}	Collector cut-off current	V _{CB} =200V ; I _E =0			0.1	μA
h _{FE-1}	DC current gain	I _C =20mA ; V _{CE} =2V	30			
h _{FE-2}	DC current gain	I _C =20mA ; V _{CE} =5V	40			
h _{FE-3}	DC current gain	I _C =0.5mA ; V _{CE} =5V	40			
f _T	Transition frequency	I _C =0.1A ; V _{CE} =10V	30			MHz
C _{OB}	Collector outoput capacitance	I _E =0 ; f=1MHz ; V _{CB} =10V			50	pF

Switching times resistive load

t _{on}	Turn-on time	V _{CC} =20V , I _C =0.5A I _{B1} =-I _{B2} =50mA			0.8	μs
t _{off}	Turn-off time				2.5	μs

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PACKAGE OUTLINE

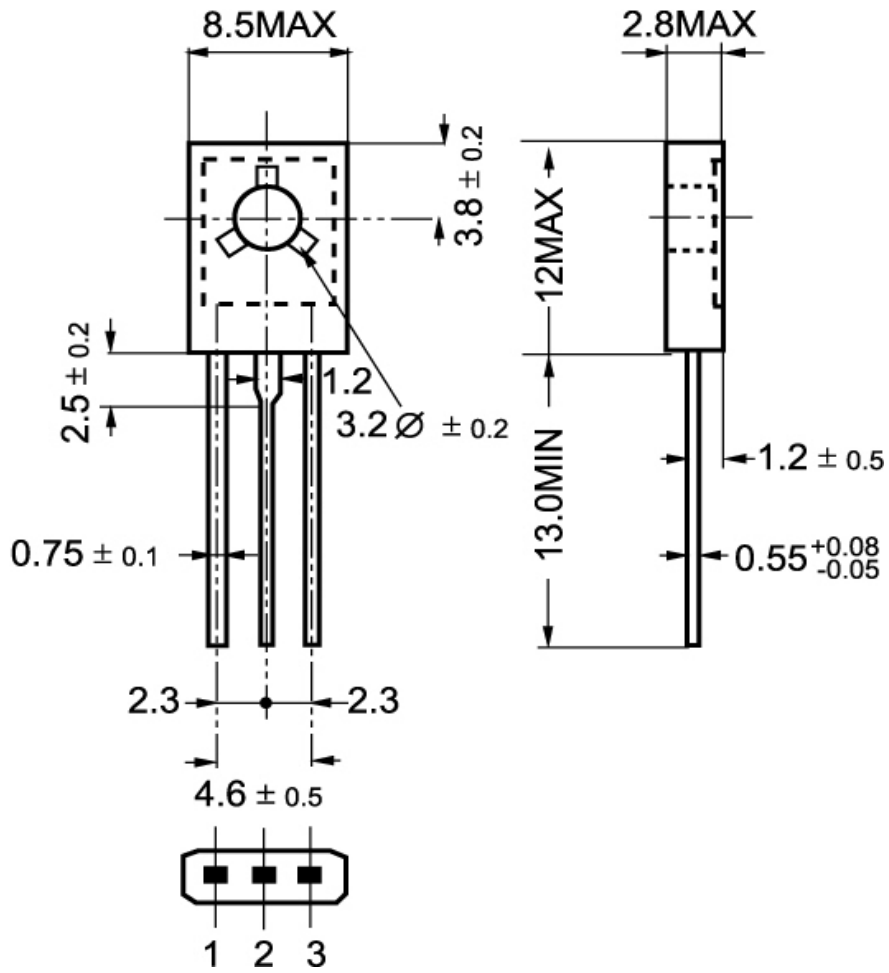


Fig.2 Outline dimensions