

Silicon PNP Power Transistors

2SB1165

DESCRIPTION

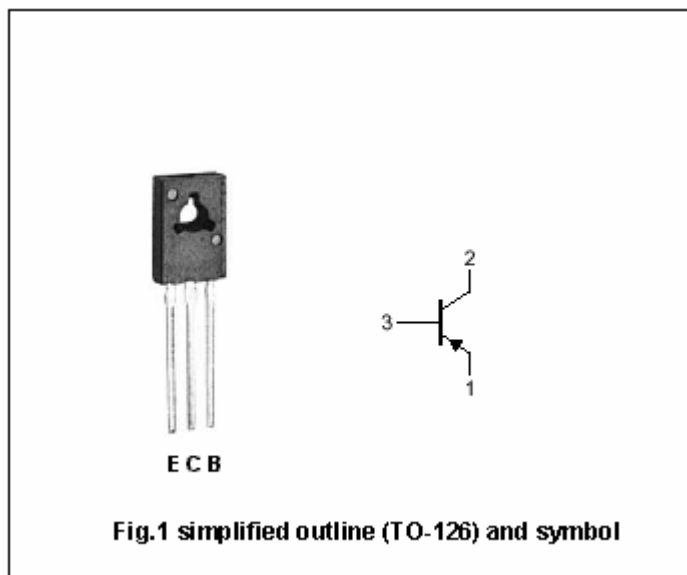
- With TO-126 package
- Complement to type 2SD1722
- Low collector saturation voltage
- Fast switching time

APPLICATIONS

- For use in relay drivers,high-speed inverters,converters.

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-50	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current (DC)		-5	A
I_{CM}	Collector current-Peak		-8	A
P_C	Collector power dissipation	$T_a=25$	1.2	W
		$T_C=25$	20	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

Silicon PNP Power Transistors

2SB1165

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =-1mA ; R _{BE} =∞	-50			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-10 μA ; I _E =0	-60			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-10 μA ; I _C =0	-6			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-3A; I _B =-0.15A		-0.28	-0.55	V
V _{BEsat}	Base-emitter saturation voltage	I _C =-3A; I _B =-0.15A		-0.95	-1.3	V
I _{CBO}	Collector cut-off current	V _{CB} =-40V; I _E =0			-1.0	μA
I _{EBO}	Emitter cut-off current	V _{EB} =-4V; I _C =0			-1.0	μA
h _{FE-1}	DC current gain	I _C =-0.5A ; V _{CE} =-2V	70		400	
h _{FE-2}	DC current gain	I _C =-4A ; V _{CE} =-2V	35			
f _T	Transition frequency	I _C =-1A ; V _{CE} =-5V		130		MHz
C _{OB}	Collector output capacitance	I _E =0; f=1MHz ; V _{CB} =-10V		60		pF

Switching times

t _{on}	Turn-on time	I _C =-2A; I _{B1} =-I _{B2} =-0.2A V _{CC} =25V		50		ns
t _{stg}	Storage time			450		ns
t _f	Fall time			20		ns

◆ h_{FE-1} Classifications

Q	R	S	T
70-140	100-200	140-280	200-400

Silicon PNP Power Transistors

2SB1165

PACKAGE OUTLINE

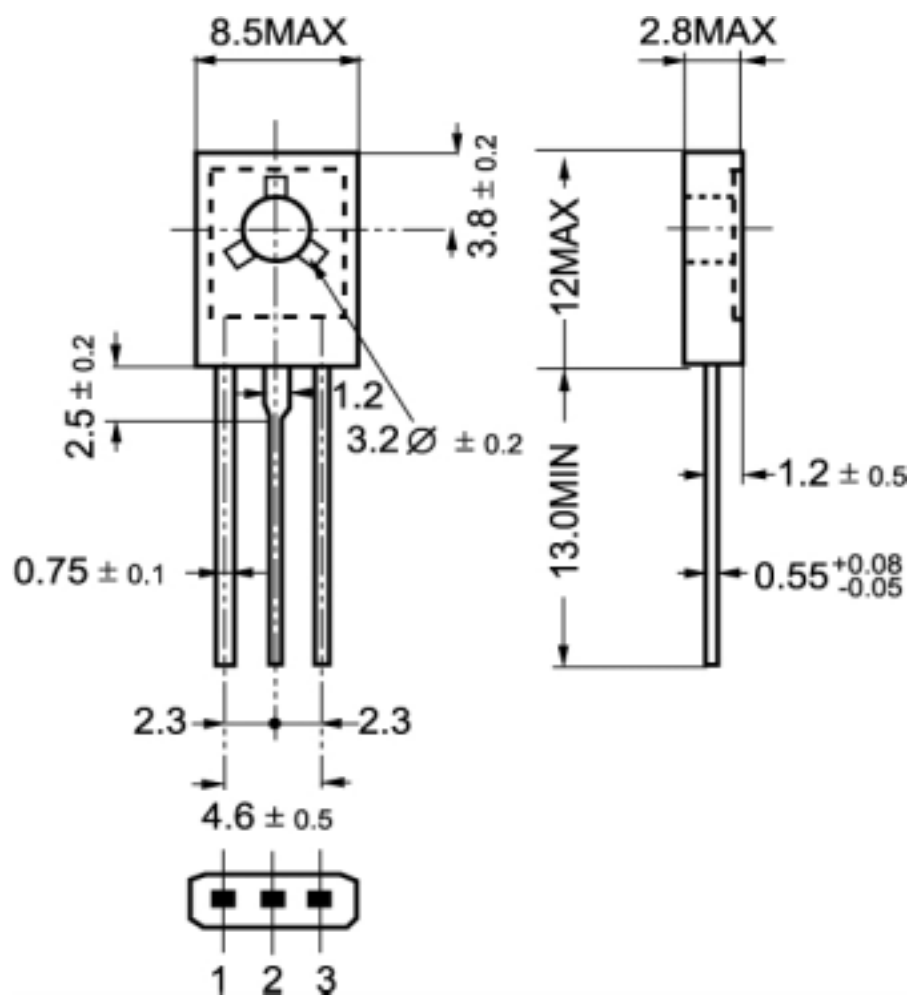


Fig.2 Outline dimensions