

Silicon PNP Power Transistors

2SA1077

DESCRIPTION

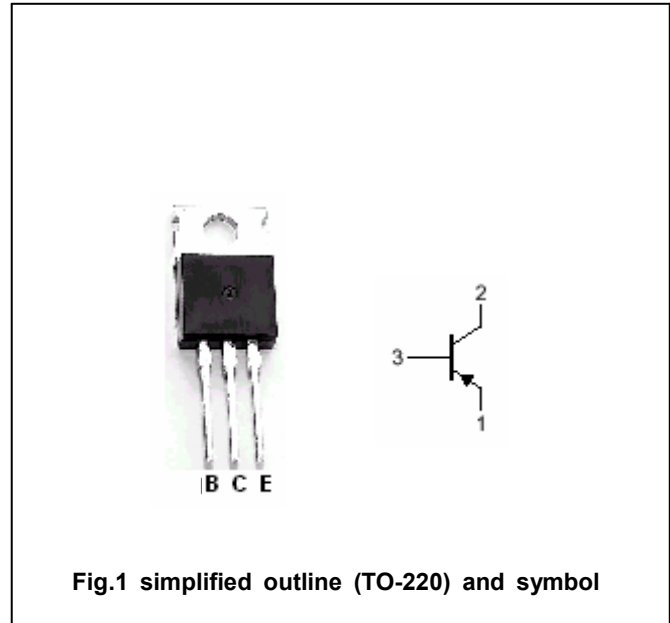
- With TO-220 package
- Complement to type 2SC2527
- High transition frequency
- Excellent safe operating area

APPLICATIONS

- High-frequency power amplifier
- Audio power amplifiers
- Switching regulators
- DC-DC 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	-120	V
V_{CEO}	Collector-emitter voltage	Open base	-120	V
V_{EBO}	Emitter-base voltage	Open collector	-7	V
I_C	Collector current		-10	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	60	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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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	I _C =-1mA, R _{BE} =∞	-120			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-50μA, I _E =0	-120			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-50μA, I _C =0	-7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-5A; I _B =-0.5A		-0.9	-1.8	V
V _{BE}	Base-emitter on voltage	I _C =-5A; V _{CE} =-5V		-1.25	-1.7	V
I _{CBO}	Collector cut-off current	V _{CB} =-120V; I _E =0			-50	μA
I _{CEO}	Collector cut-off current	V _{CE} =-120V; I _B =0			-1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =-7V; I _C =0			-50	μA
h _{FE-1}	DC current gain	I _C =-1A; V _{CE} =-5V	60		200	
h _{FE-2}	DC current gain	I _C =-5A; V _{CE} =-5V	40			
f _T	Transition frequency	I _C =-1A; V _{CE} =-10V; f=10MHz	30	60		MHz
C _{OB}	Output capacitance	I _E =0; V _{CB} =-10V; f=1MHz		300	470	pF

Switching times

t _r	Rise time	I _C =-7.5A; R _L =4Ω I _{B1} =-I _{B2} =-0.75A;		0.15		μs
t _{stg}	Storage time			0.5		μs
t _f	Fall time			0.11		μs

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PACKAGE OUTLINE

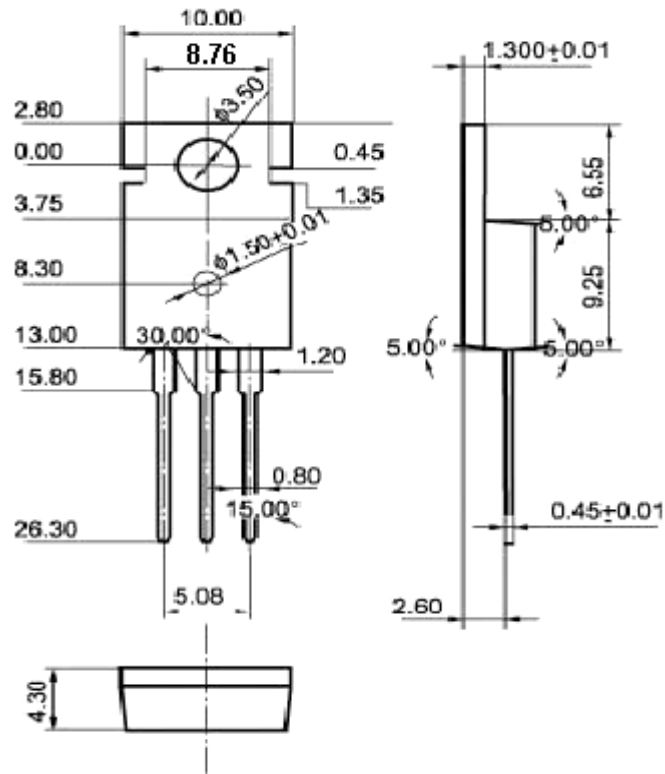


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)