

Silicon NPN Power Transistors

2SC1027

DESCRIPTION

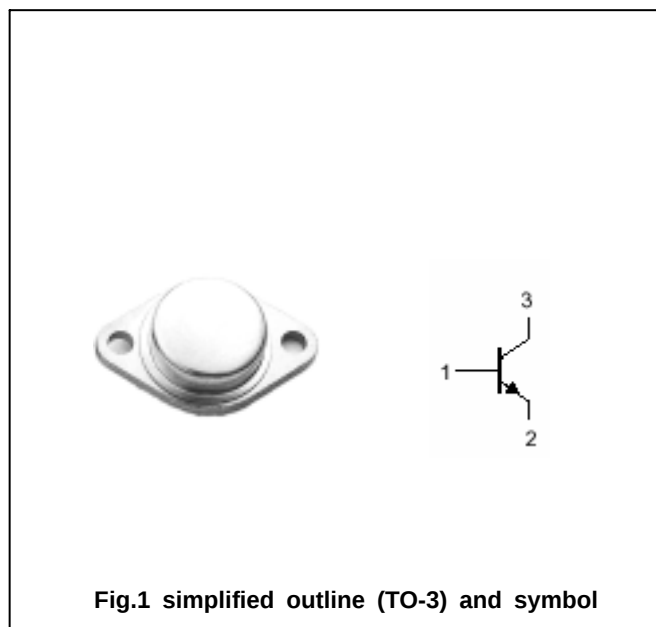
- With TO-3 package
- High power dissipation
- Low collector saturation voltage

APPLICATIONS

- Switching regulators
- DC-DC convertor
- General purpose power amplifiers

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

Absolute maximum ratings($T_a = \quad$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	250	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		6	A
P_C	Collector power dissipation	$T_C = 25$	50	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

Silicon NPN Power Transistors

2SC1027

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	80			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA ; I _E =0	250			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _C =0	5			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A; I _B =0.5A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A; I _B =0.5A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =250V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			0.1	mA
h _{FE}	DC current gain	I _C =5A ; V _{CE} =2V	10			

2SC1027

Technical drawing of a base plate showing top and side views with dimensions in inches and millimeters.

Top View Dimensions:

- Overall width: 40.13 MAX
- Overall height: 27.17 MAX
- Distance between mounting holes: 16.89
- Distance from center to mounting hole: 10.67 ~ 11.17
- Mounting hole diameter: 3.84 ~ 4.21
- Internal feature dimensions: 29.90 ~ 30.40, 16.89

Side View Dimensions:

- Base thickness: 3.00 THICK BASE
- Top flange thickness: 1.50 THIN BASE
- Top flange width: 22.22 Ø MAX
- Top flange height: 0.70 ~ 3.42
- Base height: 8.0 ~ 13.9
- Base width: 6.35 ~ 11.43
- Internal feature dimensions: 0.966 ~ 1.092

Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)