

Silicon NPN Power Transistors

2SC1870

DESCRIPTION

- With TO-3 package
- High switching speed

APPLICATIONS

- For power switching applications

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

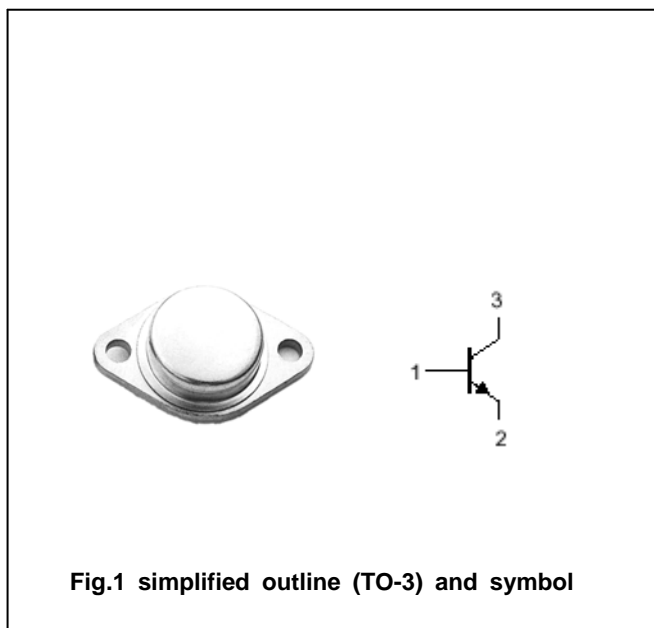


Fig.1 simplified outline (TO-3) and symbol

MAXIMUM RATINGS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	300	V
V_{CEO}	Collector-emitter voltage	Open base	250	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		10	A
I_B	Base current		3	A
P_T	Total power dissipation	$T_{mb} \leq 25^\circ\text{C}$	100	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.25	$^\circ\text{C/W}$

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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 =10mA ; I _B =0	250			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA ; I _E =0	300			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _C =0	7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A; I _B =1A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A; I _B =1A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =300V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			0.1	mA
h _{FE}	DC current gain	I _C =10A ; V _{CE} =5V	15			

PACKAGE OUTLINE

