

Silicon NPN Power Transistors

2SC4149

DESCRIPTION

- With ITO-220 package
- Switching power transistor
- Low saturation voltage

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

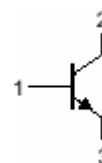


Fig.1 simplified outline (ITO-220) and symbol

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	40	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		10	A
I_{CM}	Collector current-Peak		20	A
I_B	Base current		1.5	A
I_{BM}	Base current-Peak		2	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	25	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction case	5.0	$^\circ\text{C}/\text{W}$

Silicon NPN Power Transistors

2SC4149

CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	40			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A; I _B =0.25A			0.3	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A; I _B =0.25A			1.2	V
I _{CBO}	Collector cut-off current	At rated volatge			0.1	mA
I _{CEO}	Collector cut-off current					
I _{EBO}	Emitter cut-off current	At rated volatge			0.1	mA
h _{FE}	DC current gain	I _C =5A ; V _{CE} =2V	70			
f _T	Transition frequency	I _C =1A ; V _{CE} =10V		50		MHz

Switching times

t _{on}	Turn-on time	I _C =5A; I _{B1} =0.5A I _{B2} =0.5A , R _L =5Ω V _{BB2} =4V			0.3	μs
t _s	Storage time				1.5	μs
t _f	Fall time				0.5	μs

Silicon NPN Power Transistors

2SC4149

PACKAGE OUTLINE

