

Silicon NPN Power Transistors

2SC1609

DESCRIPTION

- With TO-3 package
- High current capability
- Fast switching speed

APPLICATIONS

- Motor control
- Linear and switching applications

PINNING(see fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

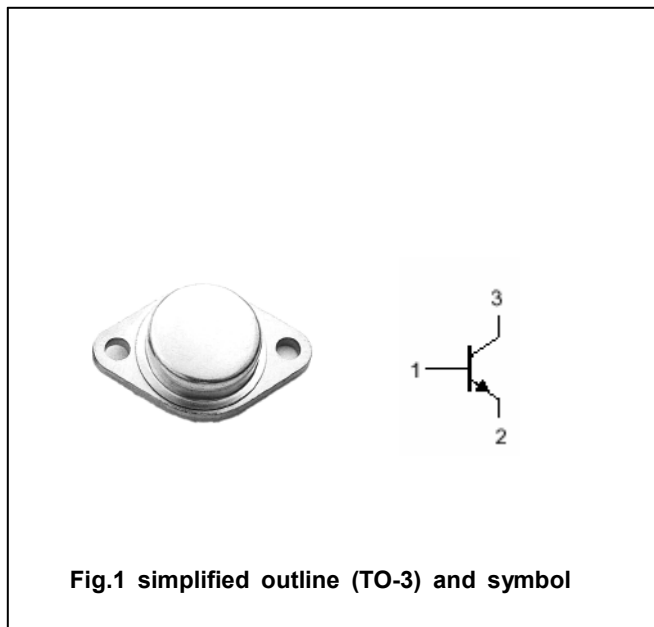


Fig.1 simplified outline (TO-3) and symbol

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	120	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		25	A
I_{CM}	Collector current-peak		30	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	120	W
T_j	Junction temperature		175	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.17	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A; I _B =0	120			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA; I _C =0	6			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =10A; I _B =1A			0.6	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =20A; I _B =2A			1.2	V
V _{BEsat}	Base-emitter saturation voltage	I _C =20A; I _B =2A			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =140V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			0.1	mA
h _{FE-1}	DC current gain	I _C =13A ; V _{CE} =2V	20		100	
h _{FE-2}	DC current gain	I _C =20A ; V _{CE} =4V	10			

PACKAGE OUTLINE

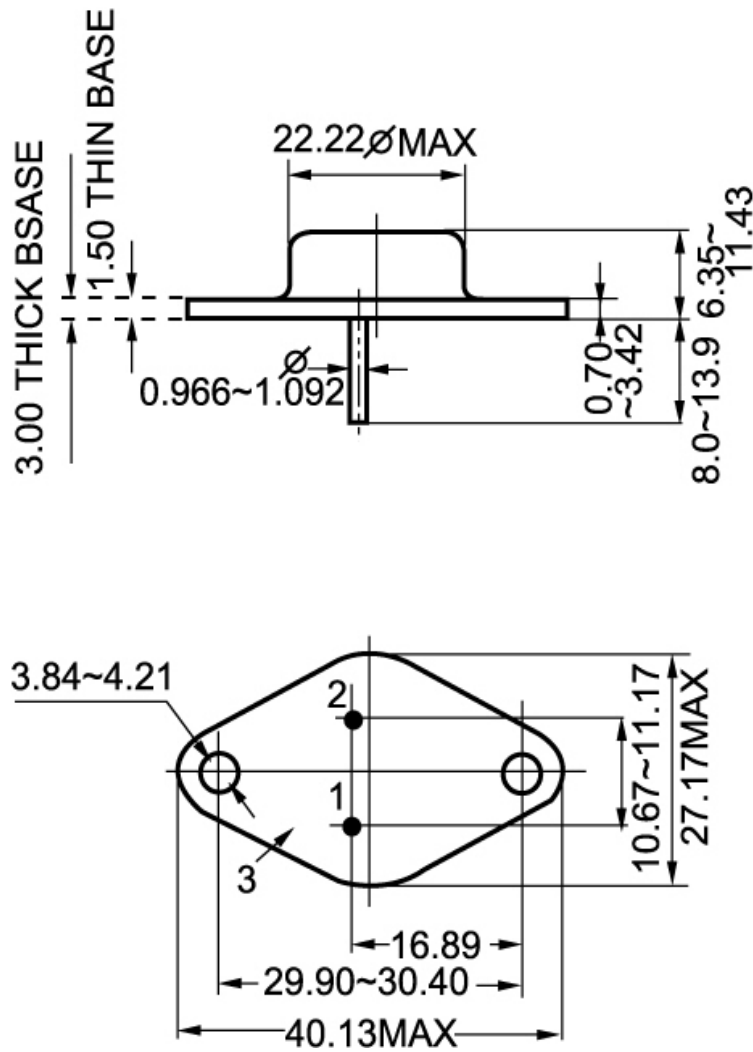


Fig.2 Outline dimensions