

Inchange Semiconductor

Product Specification

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

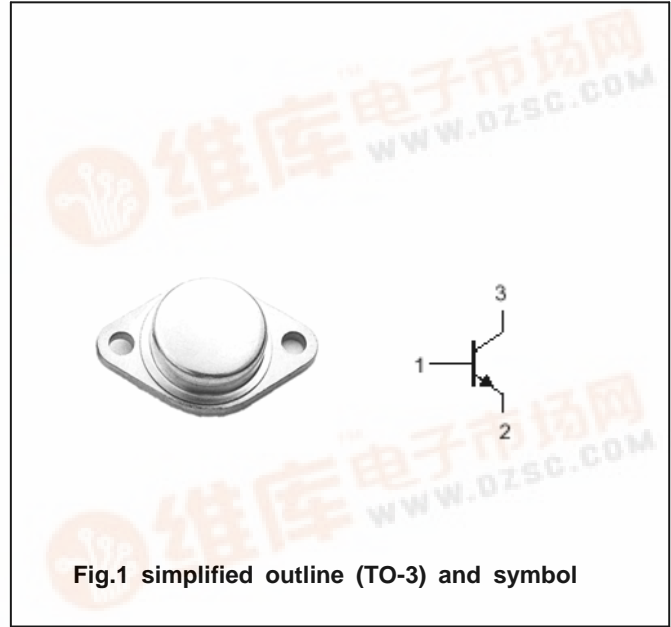


Fig.1 simplified outline (TO-3) and symbol

ABSOLUTE MAXIMUM RATINGS(Ta=25°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°C	120	W
T _j	Junction temperature		175	°C
T _{stg}	Storage temperature		-55~175	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	1.17	°C/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			

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PACKAGE OUTLINE

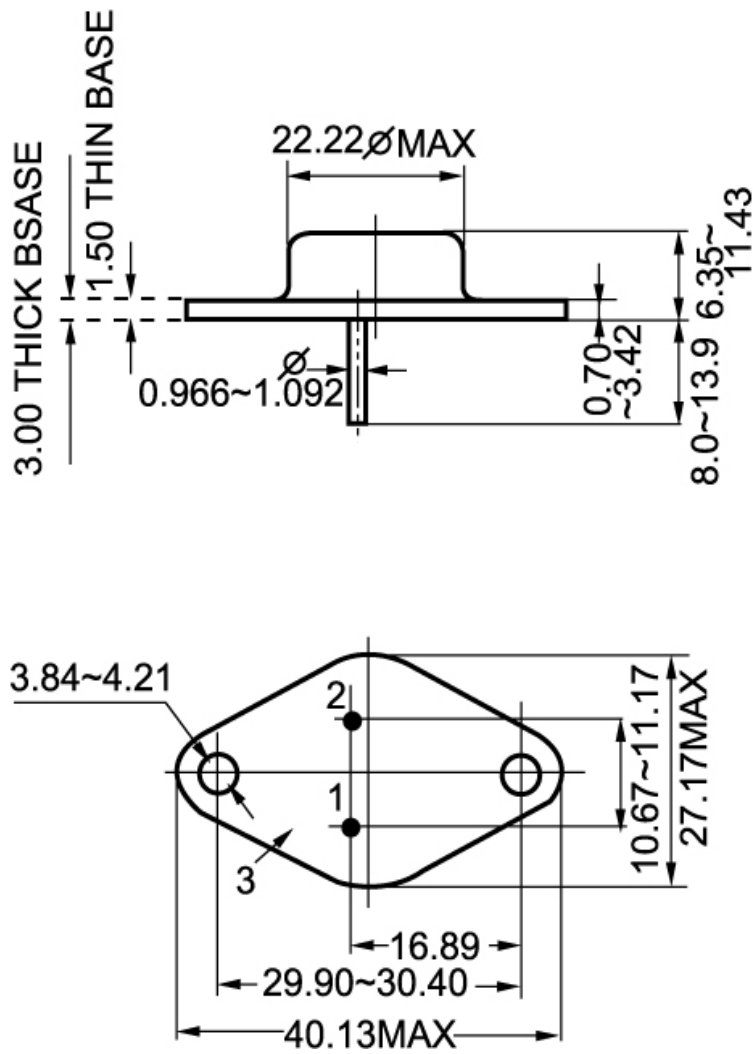


Fig.2 Outline dimensions