

**Silicon NPN Power Transistors**

**2N3773**

**DESCRIPTION**

- With TO-3 package
- Complement to type 2N6609
- High DC current gain
- Low saturation voltage
- High safe operating area

**APPLICATIONS**

- Designed for high power audio, disk head positioners and other linear applications. These devices can also be used in power switching circuits such as relay or solenoid drivers, dc to dc converters or inverters.

**PINNING**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

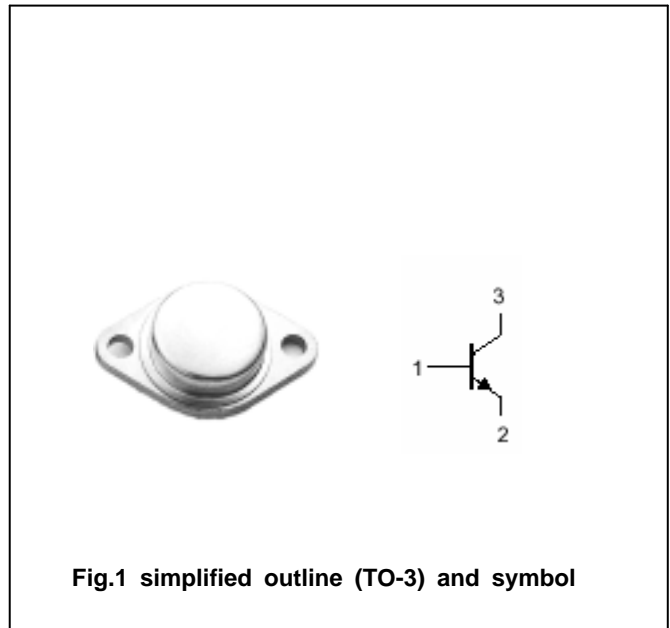


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	160	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	140	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		16	A
I <sub>CM</sub>	Collector current-peak		30	A
I <sub>B</sub>	Base current		4	A
I <sub>BM</sub>	Base current-peak		15	A
P <sub>D</sub>	Total Power Dissipation Derate above 25	T <sub>C</sub> =25	150 0.855	W W/
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~200	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	140			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =0.8A			1.4	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =16A ; I <sub>B</sub> =3.2A			4.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =8A ; V <sub>CE</sub> =4V			2.2	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =140V; I <sub>B</sub> =0			2.0	mA
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =140V; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150			2.0 10.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			5.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =8A ; V <sub>CE</sub> =4V	15		60	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =16A ; V <sub>CE</sub> =4V	5			
I <sub>s/b</sub>	Second breakdown collector current With base forward biased	V <sub>CE</sub> =100Vdc, t=1.0s, Nonrepetitive	1.5			A

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.17	/W

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PACKAGE OUTLINE

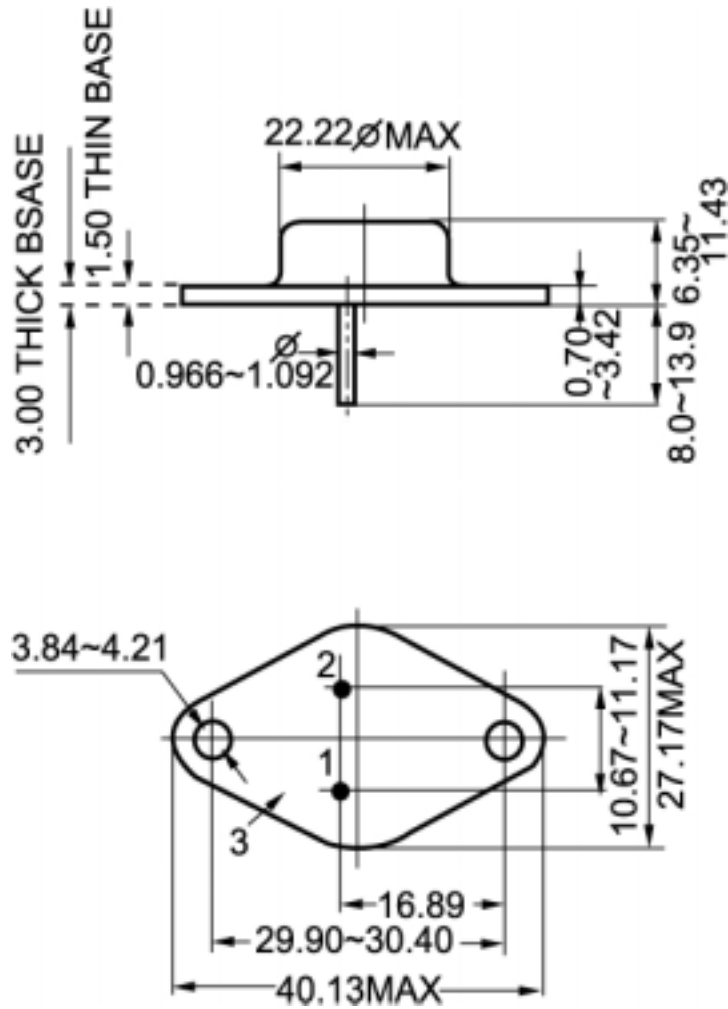


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10\text{mm}$ )