

Silicon NPN Power Transistors

2N6653

DESCRIPTION

- With TO-3 package
- High voltage capability
- Fast switching speeds
- Low saturation voltage

APPLICATIONS

- Switching regulators
- Inverters
- Solenoid and relay drivers
- Deflection circuits

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

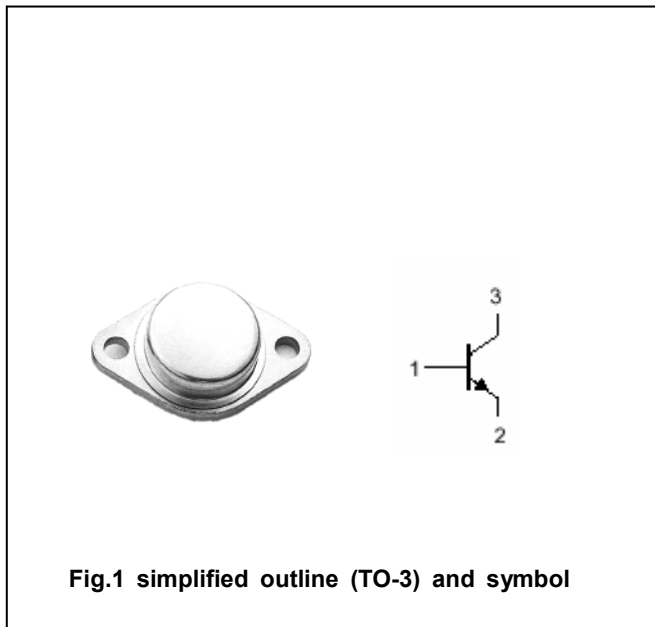


Fig.1 simplified outline (TO-3) and symbol

MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	350	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	300	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current		20	A
I <sub>CM</sub>	Collector current-peak		30	A
P <sub>T</sub>	Total power dissipation	T <sub>c</sub> =25°C	150	W
T <sub>j</sub>	Junction temperature		200	°C
T <sub>stg</sub>	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	1.0	°C/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.1A ; I <sub>B</sub> =0	300			V
V <sub>(BR)CBO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =1mA ; I <sub>E</sub> =0	350			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =2A			1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A; I <sub>B</sub> =3A			1.8	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =15A; I <sub>B</sub> =3A			1.8	V
I <sub>CEV</sub>	Collector cut-off current	V <sub>CE</sub> =350V; V <sub>BE(off)</sub> =-1.5V T <sub>C</sub> =150°C			0.1 2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	15		50	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =15A ; V <sub>CE</sub> =5V	10			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =10V		15		MHz

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PACKAGE OUTLINE

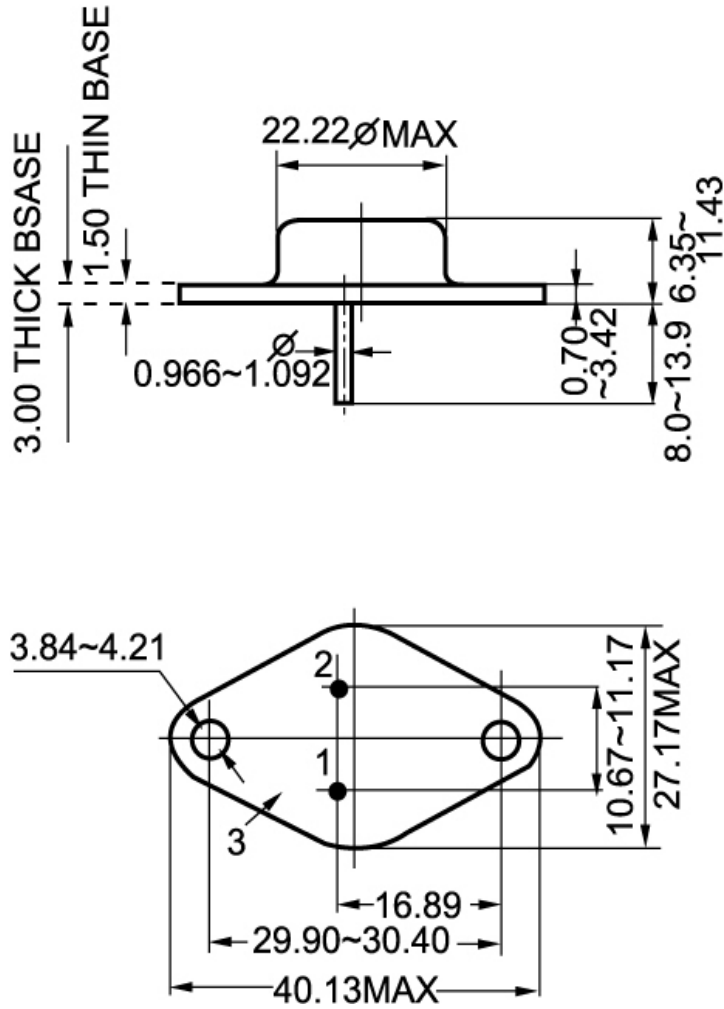


Fig.2 Outline dimensions