

## Silicon NPN Power Transistors

2N6654

## DESCRIPTION

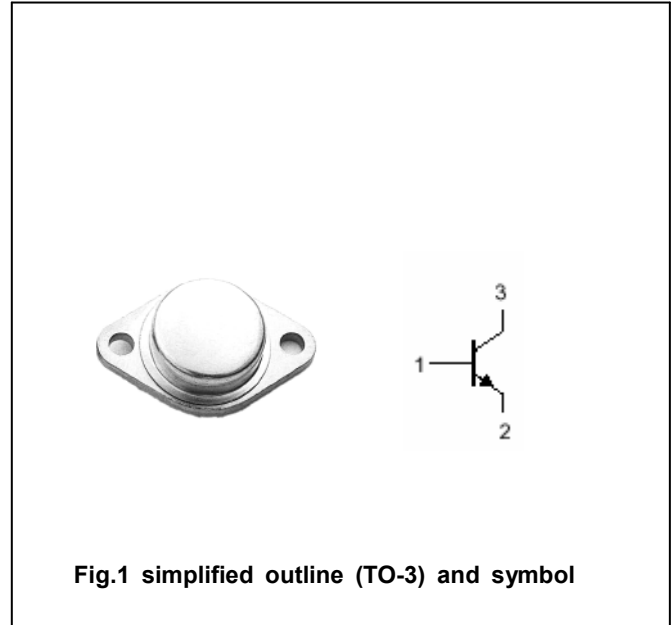
- With TO-3 package
- High voltage capability
- Fast switching speeds
- Low saturation voltage

## APPLICATIONS

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

## PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	500	V
$V_{CEO}$	Collector-emitter voltage	Open base	350	V
$V_{EBO}$	Emitter-base voltage	Open collector	6	V
$I_C$	Collector current		20	A
$I_{CM}$	Collector current-peak		30	A
$P_T$	Total power dissipation	$T_c=25^\circ\text{C}$	150	W
$T_j$	Junction temperature		200	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~200	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.0	$^\circ\text{C}/\text{W}$

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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	350			V
V <sub>(BR)CBO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =1mA ; I <sub>E</sub> =0	500			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =2A			1.8	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A; I <sub>B</sub> =3A			2.2	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> =500V; 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> =10A ; V <sub>CE</sub> =15V	10			

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PACKAGE OUTLINE

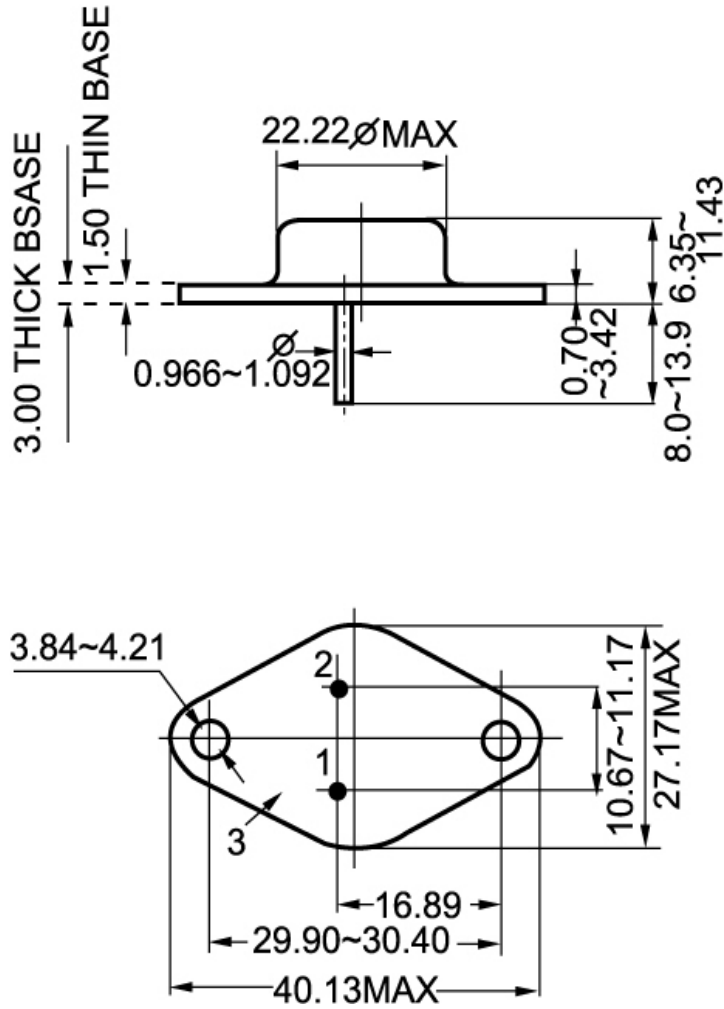


Fig.2 Outline dimensions