

## Silicon NPN Power Transistors

## 2N6055 2N6056

## DESCRIPTION

- With TO-3 package
- Low collector saturation voltage
- DARLINGTON
- Complement to type 2N6053;2N6054

## APPLICATIONS

- General-purpose power amplifier and low frequency swithing applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

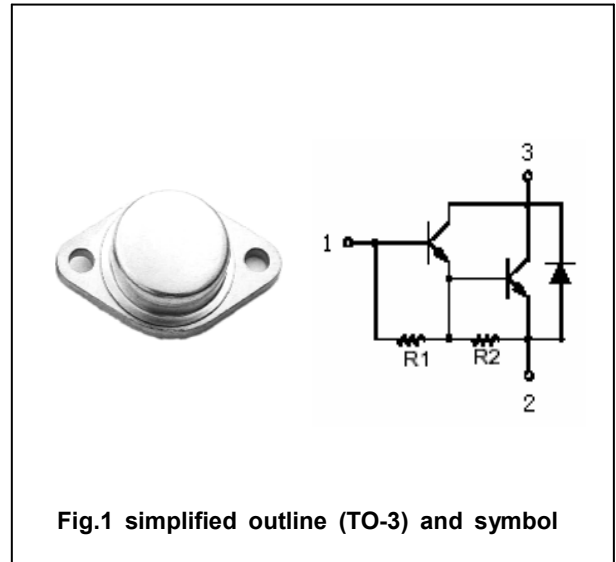


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a = \square$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N6055	60	V
		2N6056	80	
$V_{CEO}$	Collector-emitter voltage	2N6055	60	V
		2N6056	80	
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		8	A
$I_{CM}$	Collector current-peak		16	A
$I_B$	Base current		120	mA
$P_D$	Total Power Dissipation	$T_C = 25 \square$	100	W
$T_j$	Junction temperature		200	$\square$
$T_{stg}$	Storage temperature		-65~200	$\square$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.75	$\square/W$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	2N6055	I <sub>C</sub> =0.1 A ; I <sub>B</sub> =0	60			V
		2N6056		80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =4A ; I <sub>B</sub> =16mA			2.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =8A ; I <sub>B</sub> =80mA			3.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =8A ; I <sub>B</sub> =80mA			4.0	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =4A ; V <sub>CE</sub> =3V			2.8	V
I <sub>CEO</sub>	Collector cut-off current	2N6055	V <sub>CE</sub> =30V; I <sub>B</sub> =0			0.5	mA
		2N6056	V <sub>CE</sub> =40V; I <sub>B</sub> =0				
I <sub>CEx</sub>	Collector cut-off current	2N6055	V <sub>CE</sub> =60V; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150 °C			0.5 5.0	mA
		2N6056	V <sub>CE</sub> =80V; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150 °C			0.5 5.0	
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =5V; I <sub>C</sub> =0			2.0	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =4A ; V <sub>CE</sub> =3V	750		18000	
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =8A ; V <sub>CE</sub> =3V	100			
C <sub>ob</sub>	Output capacitance		I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=0.1MHz			220	pF

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PACKAGE OUTLINE

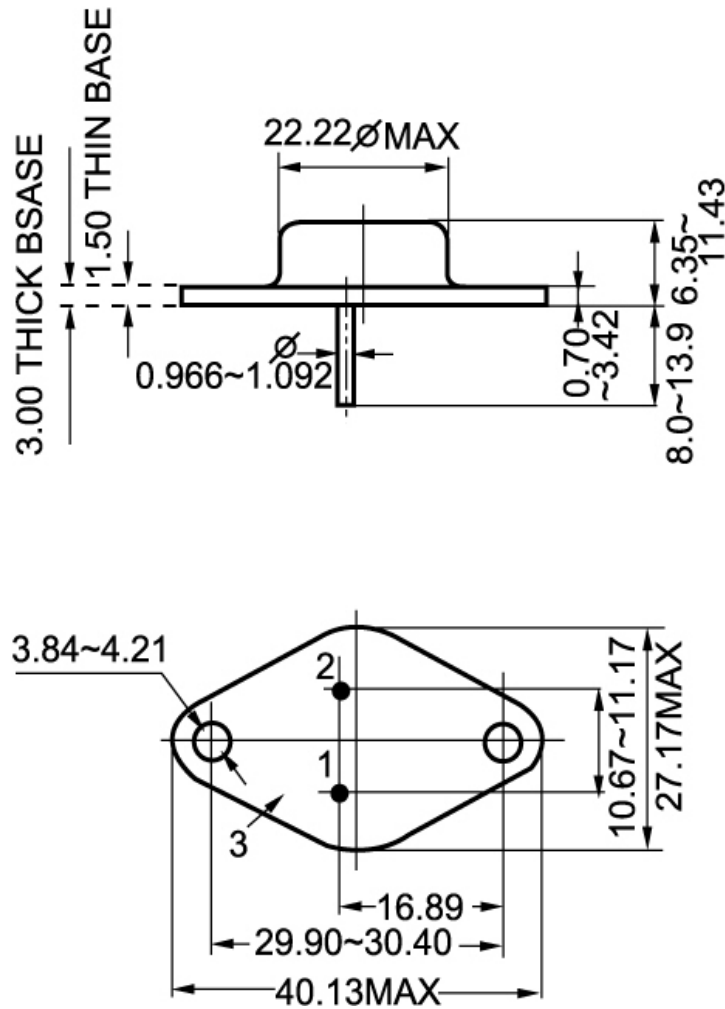


Fig.2 outline dimensions (unindicated tolerance:±0.10mm)