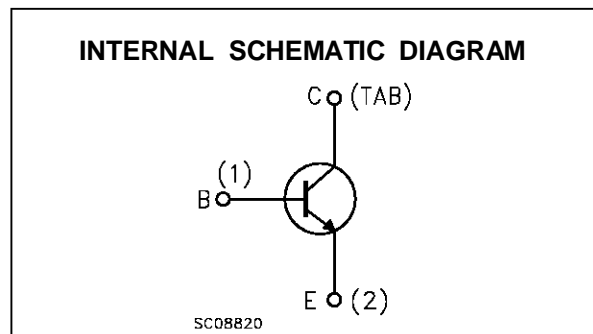
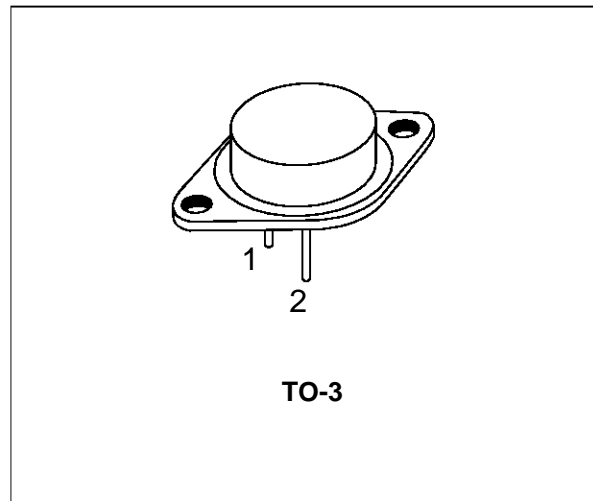


**SILICON NPN TRANSISTOR**

■ SGS-THOMSON PREFERRED SALESTYPE

**DESCRIPTION**

The 2N3055 is a silicon epitaxial-base NPN transistor in Jedec TO-3 metal case. It is intended for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	100	V
$V_{CER}$	Collector-Emitter Voltage ( $R_{BE} = 100\Omega$ )	70	V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	60	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	7	V
$I_C$	Collector Current	15	A
$I_B$	Base Current	7	A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ C$	115	W
$T_{stg}$	Storage Temperature	-65 to 200	$^\circ C$
$T_j$	Max. Operating Junction Temperature	200	$^\circ C$

## THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.5	$^{\circ}C/W$
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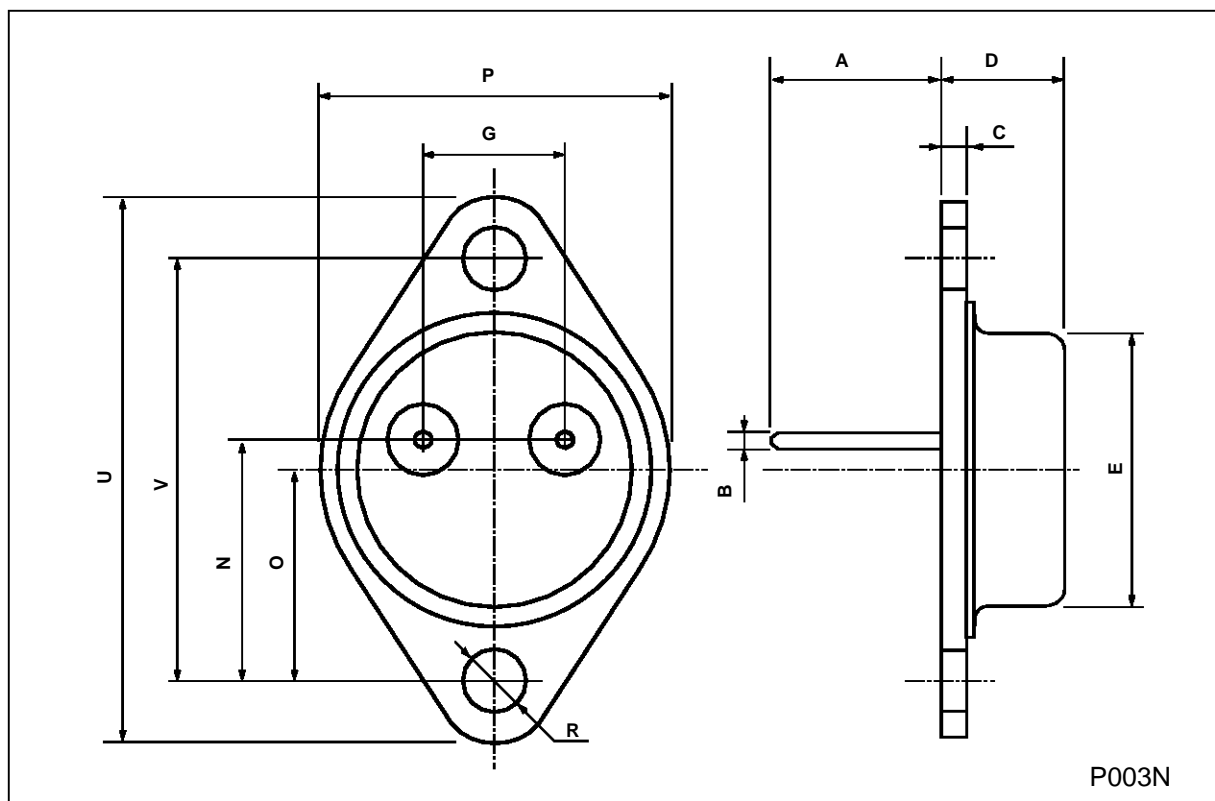
ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$  unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CEV}$	Collector Cut-off Current ( $V_{BE} = -1.5V$ )	$V_{CE} = 100 V$ $V_{CE} = 100 V \quad T_j = 150^{\circ}C$			1 5	mA mA
$I_{CEO}$	Collector Cut-off Current ( $I_B = 0$ )	$V_{CE} = 30 V$			0.7	mA
$I_{EBO}$	Emitter Cut-off Current ( $I_C = 0$ )	$V_{EB} = 7 V$			5	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage	$I_C = 200 mA$	60			V
$V_{CER(sus)}^*$	Collector-Emitter Sustaining Voltage	$I_C = 200 mA \quad R_{BE} = 100 \Omega$	70			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 4 A \quad I_B = 400 mA$ $I_C = 10 A \quad I_B = 3.3 A$			1 3	V V
$V_{BE}^*$	Base-Emitter Voltage	$I_C = 4 A \quad V_{CE} = 4 V$			1.5	V
$h_{FE}^*$	DC Current Gain	$I_C = 0.5 A \quad V_{CE} = 4 V$ Group 4 $I_C = 0.5 A \quad V_{CE} = 4 V$ Group 5 $I_C = 0.5 A \quad V_{CE} = 4 V$ Group 6 $I_C = 0.5 A \quad V_{CE} = 4 V$ Group 7 $I_C = 4 A \quad V_{CE} = 4 V$ $I_C = 10 A \quad V_{CE} = 4 V$	20 35 60 120 20 5		50 75 145 250 70	
$h_{FE1}/h_{FE1}^*$	DC Current Gain	$I_C = 0.5 A \quad V_{CE} = 4 V$			1.6	
$f_T$	Transition frequency	$I_C = 1 A \quad V_{CE} = 4 V$	2.5			MHz
$I_{s/b}^*$	Second Breakdown Collector Current	$V_{CE} = 40 V$	2.87			A

\* Pulsed: Pulse duration = 300  $\mu s$ , duty cycle 1.5 %

## TO-3 (H) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		11.7			0.460	
B	0.96		1.10	0.037		0.043
C			1.70			0.066
D			8.7			0.342
E			20.0			0.787
G		10.9			0.429	
N		16.9			0.665	
P			26.2			1.031
R	3.88		4.09	0.152		0.161
U			39.50			1.555
V		30.10			1.185	



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