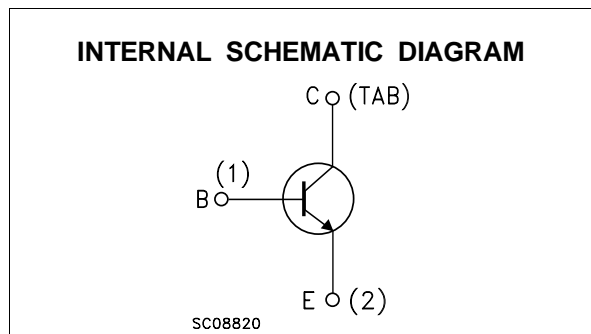
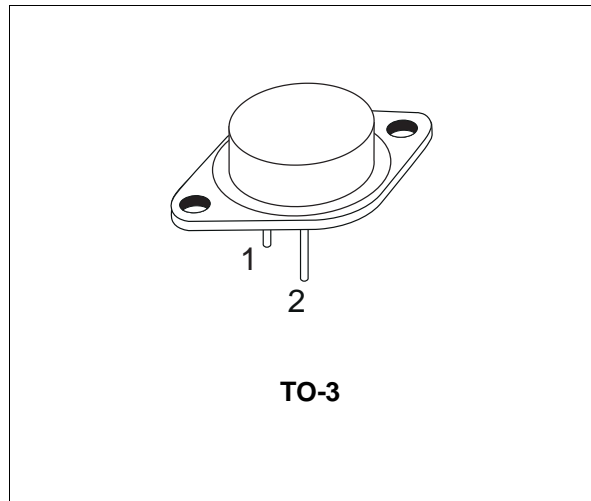


SILICON NPN TRANSISTOR

- SGS-THOMSON PREFERRED SALESTYPE
- NPN TRANSISTOR

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	$^{\circ}C/W$
----------------	----------------------------------	-----	-----	---------------

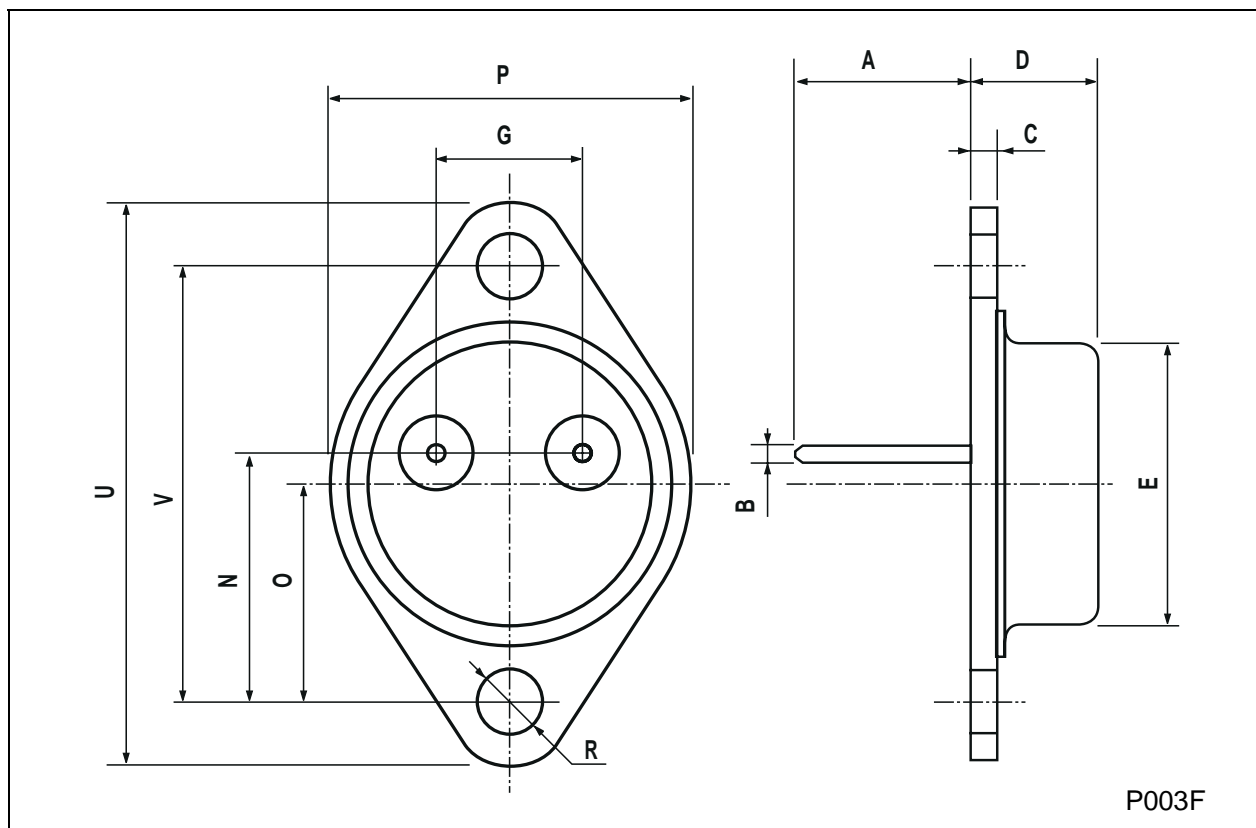
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

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 μs , duty cycle 1.5 %

TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1997 SGS-THOMSON Microelectronics - Printed in Italy - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES
Australia - Brazil - Canada - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A
...