

## Transistors

Order code	Manufacturer code	Description
81-0194	TIP2955	TIP2955 100V PNP HIGH VOLTAGE TRANS (RC)
81-0196	TIP3055	TIP3055 100V NPN HIGH VOLT. TRANSISTOR RC

Transistors	Page 1 of 5
The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

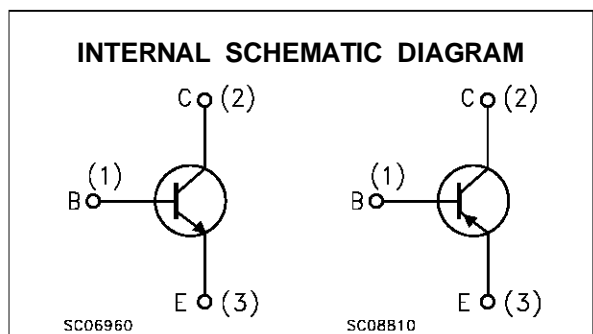
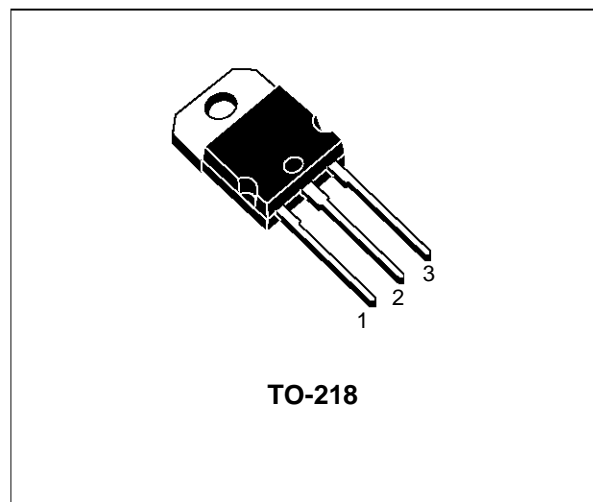
**COMPLEMENTARY SILICON POWER  
TRANSISTORS**

■ SGS-THOMSON PREFERRED SALESTYPES

**DESCRIPTION**

The TIP3055 is a silicon epitaxial-base planar NPN transistor mounted in TO-218 plastic package and intended for power switching circuits, series and shunt regulators, output stages and hi-fi amplifiers.

The complementary PNP type is the TIP2955.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	100	V
$V_{CEO}$	Collector-emitter Voltage ( $I_B = 0$ )	60	V
$I_C$	Collector Current	15	A
$I_B$	Base Current	7	A
$P_{tot}$	Total Dissipation at $T_c \leq 25^\circ C$	90	W
$T_{stg}$	Storage Temperature	-65 to 150	$^\circ C$
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$

## TIP2955/TIP3055

### THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.4	$^{\circ}C/W$
----------------	----------------------------------	-----	-----	---------------

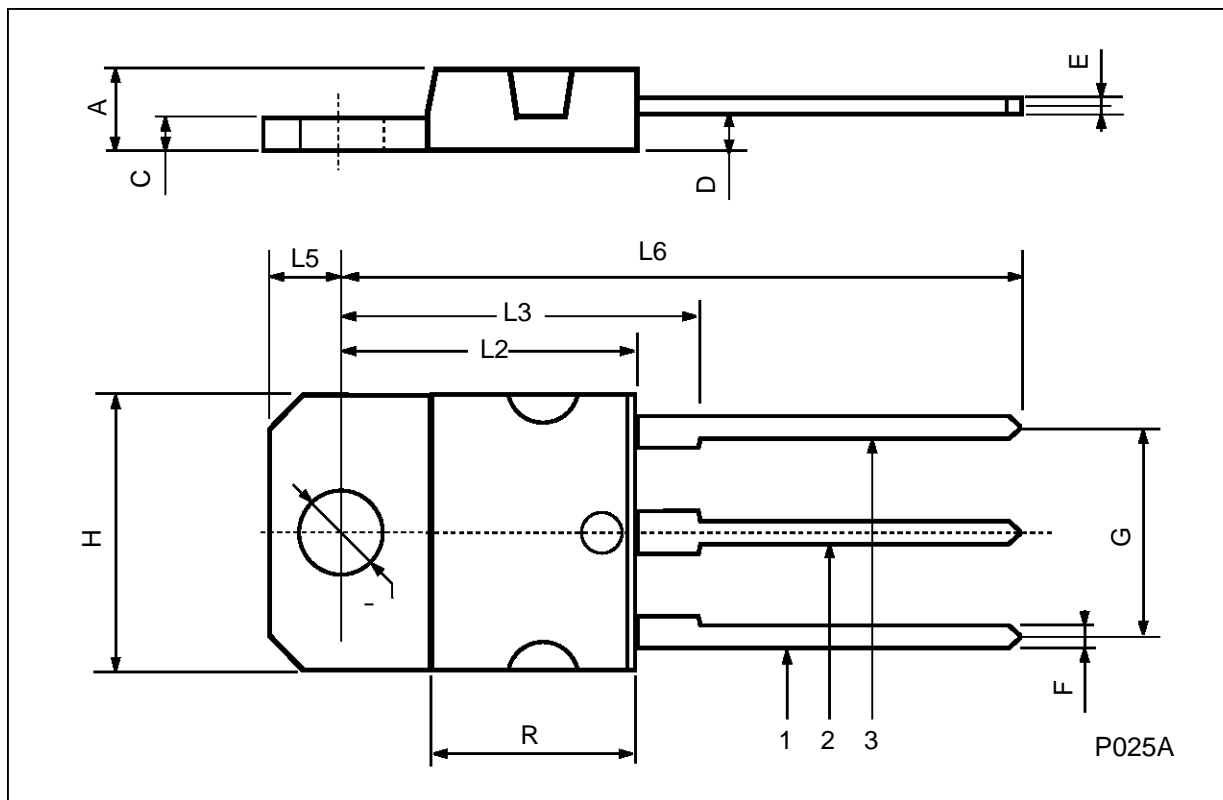
### ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CEX}$	Collector Cut-off Current ( $V_{BE} = 1.5V$ )	$V_{CE} = 100 V$ $V_{BE} = -1.5 V$			5	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 ( $I_B = 0$ )	$I_C = 30 mA$	60			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 4 A$ $I_B = 0.4 A$ $I_C = 10 A$ $I_B = 3.3 A$			1 3	V V
$V_{BE}^*$	Base-emitter Voltage	$I_C = 4 A$ $V_{CE} = 4 V$			1.8	V
$h_{FE}^*$	DC Current Gain	$I_C = 4 A$ $V_{CE} = 4 V$ $I_C = 10 A$ $V_{CE} = 4 V$	20 5			
$h_{fe}$	Small Signal Current Gain	$I_C = 1 A$ $V_{CE} = 10 V$ $f = 1 KHz$	15			
$f_T$	Transition-Frequency	$I_C = 0.5 A$ $V_{CE} = 10 V$ $f = 1 MHz$	3			MHz
$t_{on}$ $t_{off}$	RESISTIVE LOAD Turn-on Time Turn-of Time	$I_C = 6 A$ $I_{B1} = 0.6 A$ $I_{B2} = -0.6 A$ $V_{BEoff} = -4 V$ $R_L = 5 \Omega$			0.5 0.9	$\mu s$ $\mu s$

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

## TO-218 (SOT-93) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.7		4.9	0.185		0.193
C	1.17		1.37	0.046		0.054
D		2.5			0.098	
E	0.5		0.78	0.019		0.030
F	1.1		1.3	0.043		0.051
G	10.8		11.1	0.425		0.437
H	14.7		15.2	0.578		0.598
L2	–		16.2	–		0.637
L3		18			0.708	
L5	3.95		4.15	0.155		0.163
L6		31			1.220	
R	–		12.2	–		0.480
Ø	4		4.1	0.157		0.161



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.

© 1995 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -  
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A