



TIP2955
TIP3055

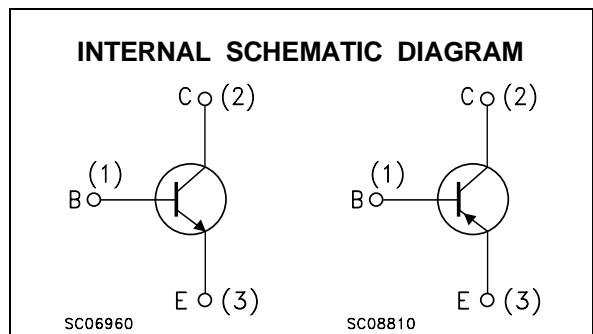
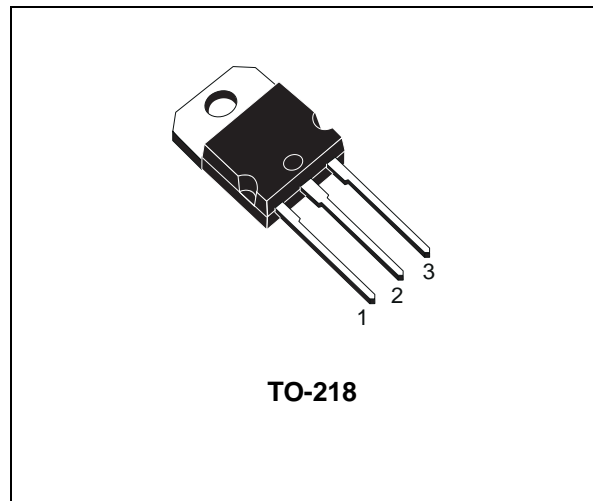
COMPLEMENTARY SILICON POWER TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES

DESCRIPTION

The TIP3055 is a silicon Epitaxial-Base Planar NPN transistor mounted in TO-218 plastic package. It is 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
		PNP	TIP2955	
		NPN	TIP3055	
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	$^\circ C$

For PNP types voltage and current are negative.

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.4	°C/W
-----------------------	----------------------------------	-----	-----	------

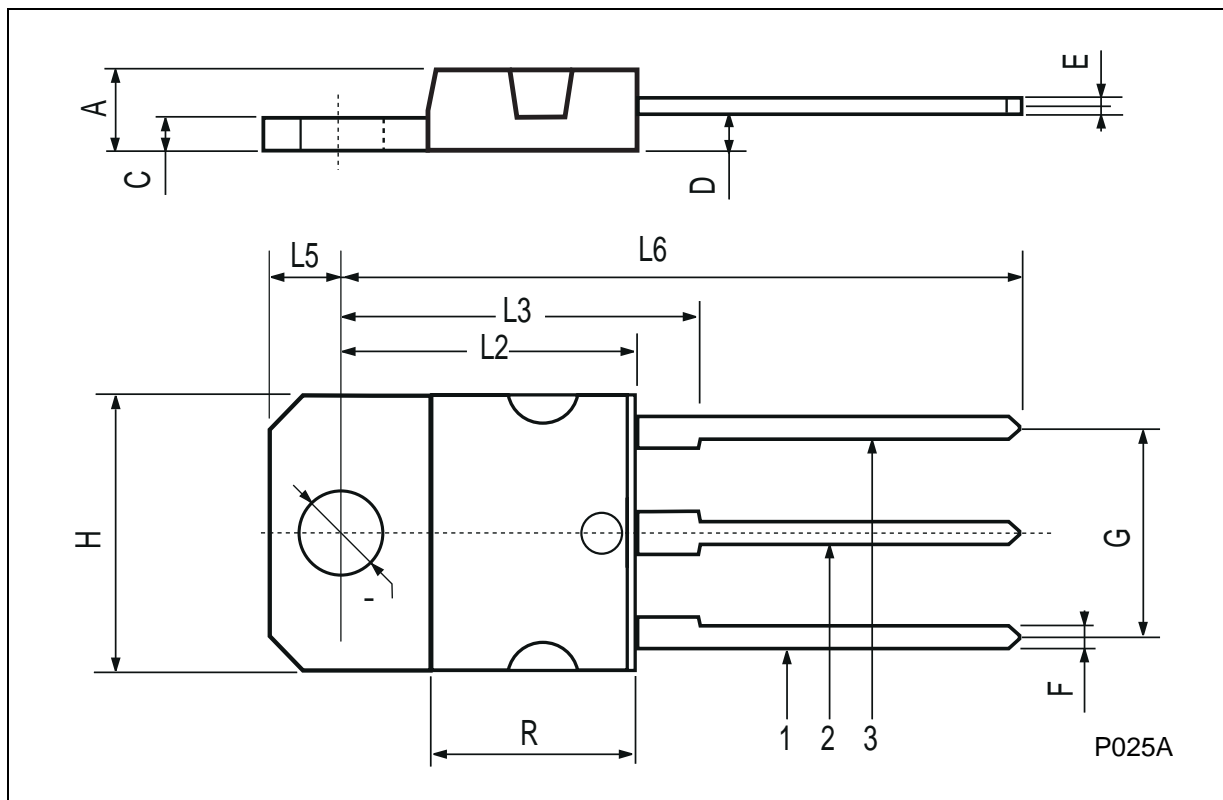
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEX}	Collector Cut-off Current (V _{BE} = -1.5V)	V _{CE} = 100 V V _{CE} = 100 V T _J = 150 °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 _B = 0)	I _C = 30 mA	60			V
V _{CE(sat)*}	Collector-emitter Saturation Voltage	I _C = 4 A I _C = 10 A I _B = 0.4 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 I _C = 10 A V _{CE} = 4 V V _{CE} = 4 V	20 5		70	
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-off Time	I _C = 6 A R _L = 5 Ω I _{B1} = - I _{B2} = 0.6 A V _{BE(off)} = - 4 V			0.5 0.9	μs μs

* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %
For PNP type, voltage and current value are negative.

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, STMicroelectronics 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 STMicroelectronics. Specification mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a trademark of STMicroelectronics

© 1999 STMicroelectronics – Printed in Italy – All Rights Reserved
STMicroelectronics GROUP OF COMPANIES

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

<http://www.st.com>