

COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

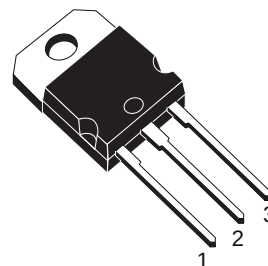
■ SGS-THOMSON PREFERRED SALESTYPE

DESCRIPTION

The TIP35C is a silicon epitaxial-base NPN transistors in TO-218 plastic package. It is intended for use in power amplifier and switching applications.

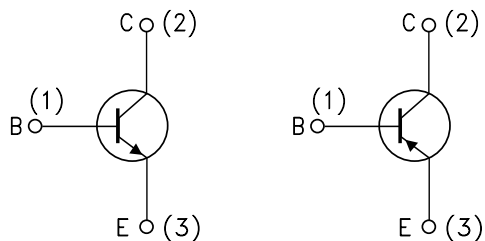
TIP36B is a silicon PNP transistor.

The complementary PNP type for TIP35C is TIP36C.



TO-218

INTERNAL SCHEMATIC DIAGRAM



SC06960

SC08810

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	TIP35C	
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	80	100	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	80	100	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	5		V
I_C	Collector Current	25		A
I_{CM}	Collector Peak Current	50		A
I_B	Base Current	5		A
P_{tot}	Total Dissipation at $T_{case} \leq 25^\circ C$	125		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 values are negative.

TIP35C/TIP36B/TIP36C

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1	°C/W
-----------------------	----------------------------------	-----	---	------

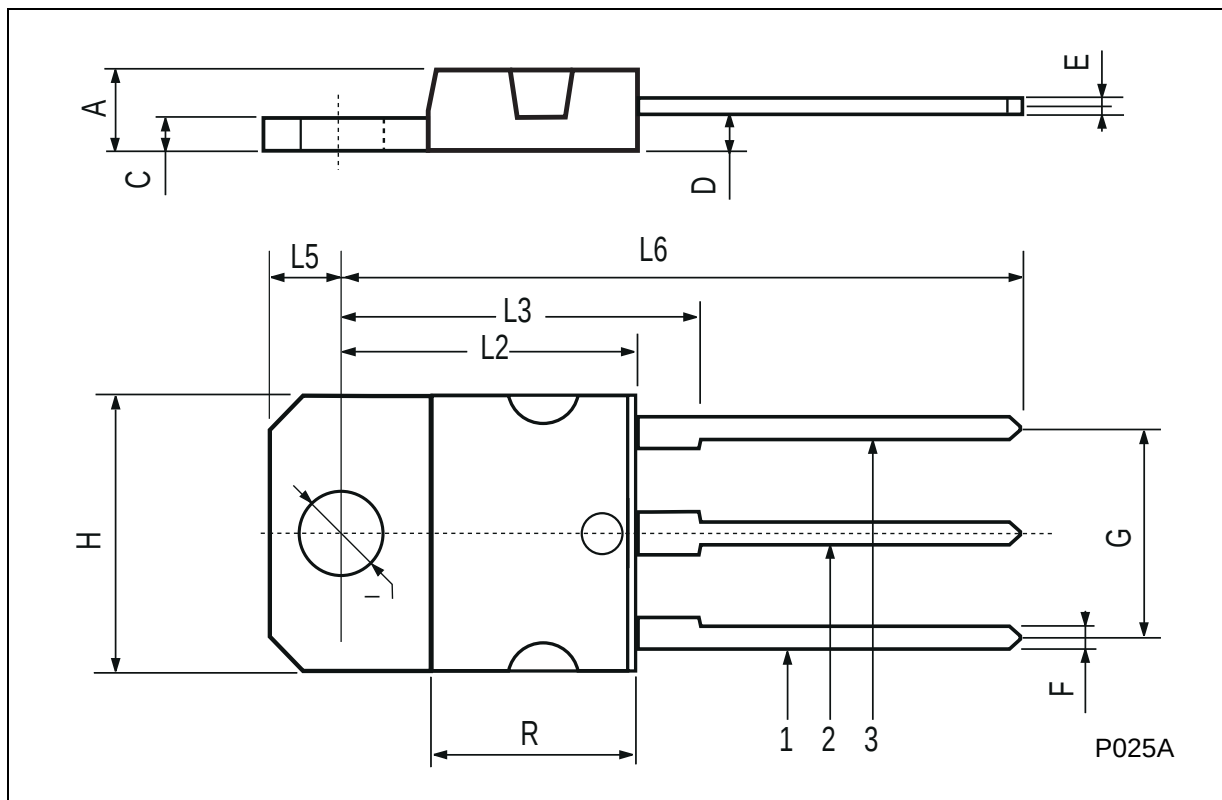
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _B = 0)	V _{CB} = 60 V			1	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 5 V			1	mA
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = Rated V _{CEO}			0.7	mA
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 30 mA for TIP36B for TIP35C/36C	80 100			V V
h _{FE} *	DC Current Gain	I _C = 1.5 A V _{CE} = 4 V I _C = 15 A V _{CE} = 4 V	25 10		50	
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = 15 A I _B = 1.5 A I _C = 25 A I _B = 5 A			1.8 4	V
V _{BE(on)} *	Base-Emitter Voltage	I _C = 15 A V _{CE} = 4 V I _C = 25 A V _{CE} = 4 V			2 4	V V
f _T	Transition Frequency	I _C = 1 A V _{CE} = 10 V f = 1 MHz	3			MHz
h _{fe}	Small Signal Current Gain	I _C = 1 A V _{CE} = 10 V f = 1 KHz	25			

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %
For PNP types voltage and current values 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, 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
...