



TIP35C TIP36B/TIP36C

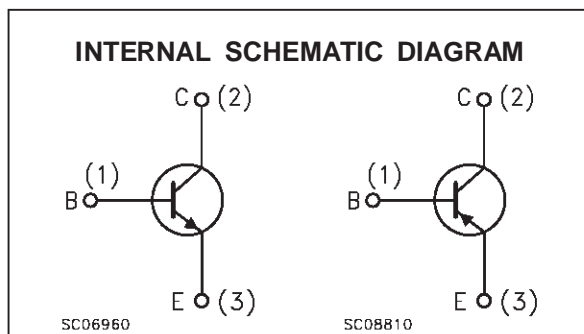
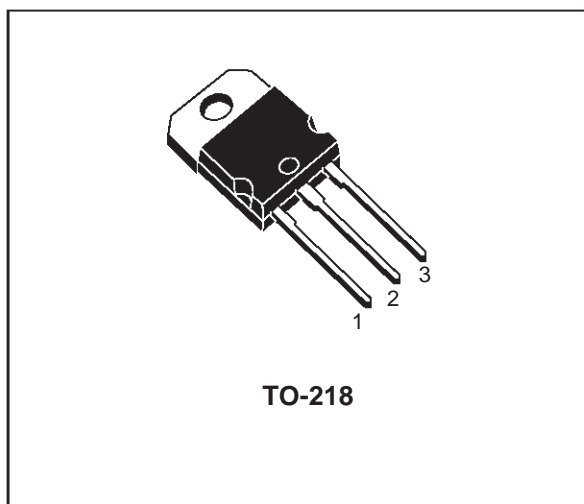
COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

- STMicroelectronic PREFERRED SALESTYPES

DESCRIPTION

The TIP35C is a silicon Epitaxial-Base NPN transistor mounted in TO-218 plastic package. It is intended for use in power amplifier and switching applications.

The complementary PNP type is TIP36C.
Also TIP36B is a PNP type.



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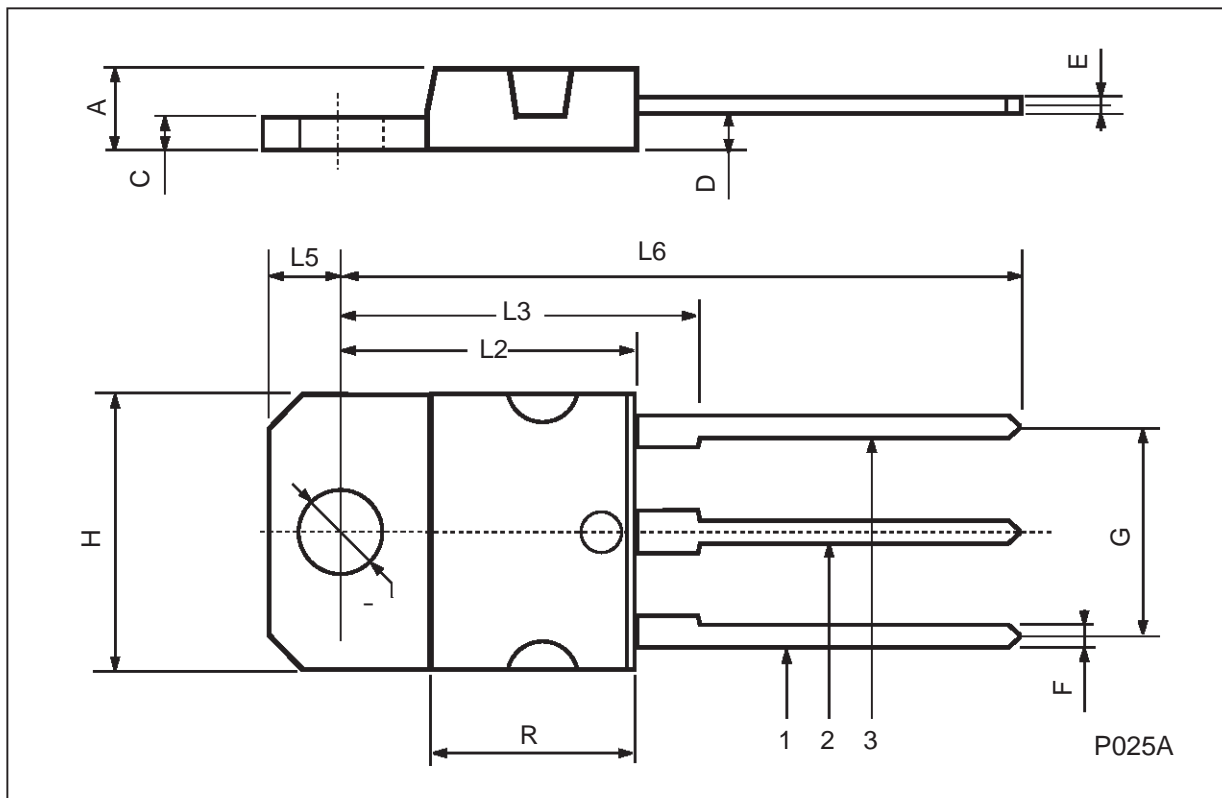
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

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

* Pulsed: Pulse duration = 300 μs , duty cycle $\leq 2\%$
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



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