



# TIP35C TIP36B/TIP36C

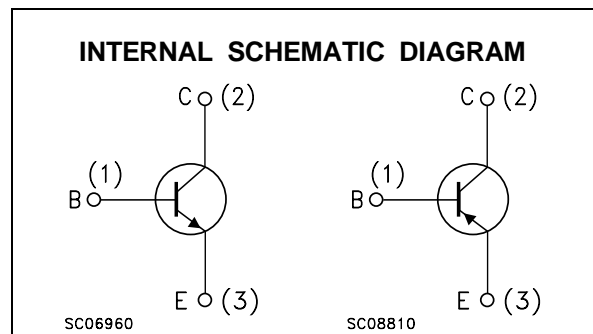
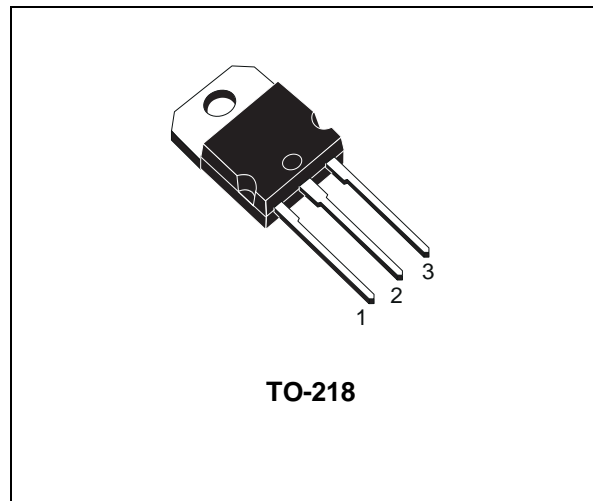
## COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

- 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	
		PNP	TIP36C	
$V_{CBO}$	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 <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	1	°C/W
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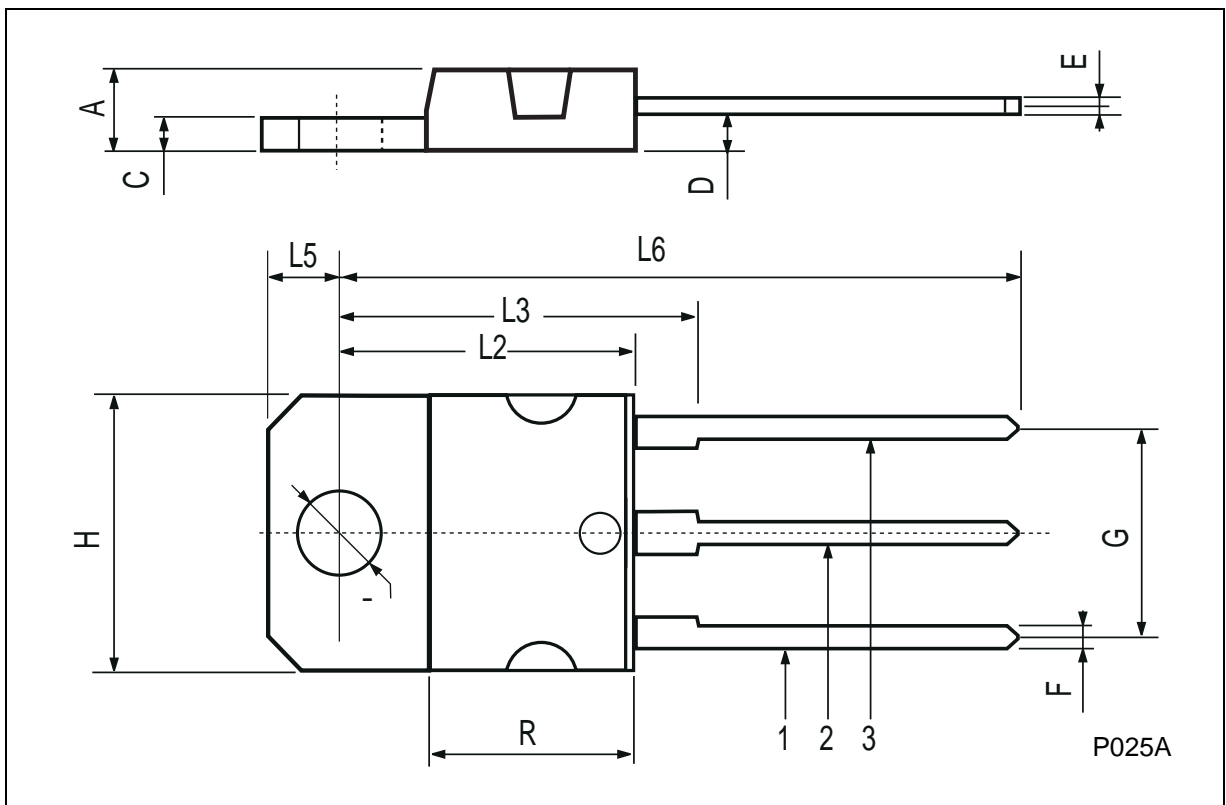
### ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CEO</sub>	Collector Cut-off Current (I <sub>B</sub> = 0)	V <sub>CE</sub> = 60 V			1	mA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	V <sub>EB</sub> = 5 V			1	mA
I <sub>CES</sub>	Collector Cut-off Current (V <sub>BE</sub> = 0)	V <sub>CE</sub> = Rated V <sub>CEO</sub>			0.7	mA
V <sub>CEO(sus)</sub> *	Collector-Emitter Sustaining Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = 30 mA for <b>TIP36B</b> for <b>TIP35C/36C</b>	80 100			V V
h <sub>FE</sub> *	DC Current Gain	I <sub>C</sub> = 1.5 A    V <sub>CE</sub> = 4 V I <sub>C</sub> = 15 A      V <sub>CE</sub> = 4 V	25 10		50	
V <sub>CE(sat)</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 15 A    I <sub>B</sub> = 1.5 A I <sub>C</sub> = 25 A    I <sub>B</sub> = 5 A			1.8 4	V
V <sub>BE(on)</sub> *	Base-Emitter Voltage	I <sub>C</sub> = 15 A    V <sub>CE</sub> = 4 V I <sub>C</sub> = 25 A    V <sub>CE</sub> = 4 V			2 4	V V
f <sub>T</sub>	Transition Frequency	I <sub>C</sub> = 1 A    V <sub>CE</sub> = 10 V    f = 1 MHz	3			MHz
h <sub>fe</sub>	Small Signal Current Gain	I <sub>C</sub> = 1 A    V <sub>CE</sub> = 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
∅	4		4.1	0.157		0.161



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