



TIP35C TIP36B/TIP36C

COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

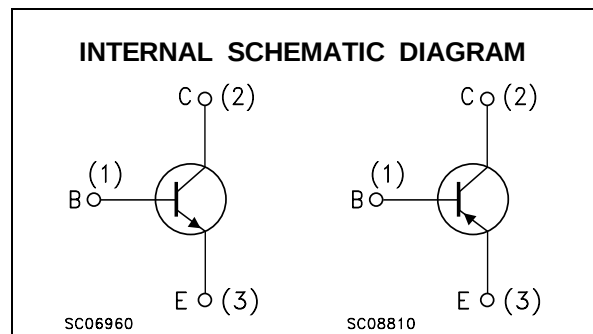
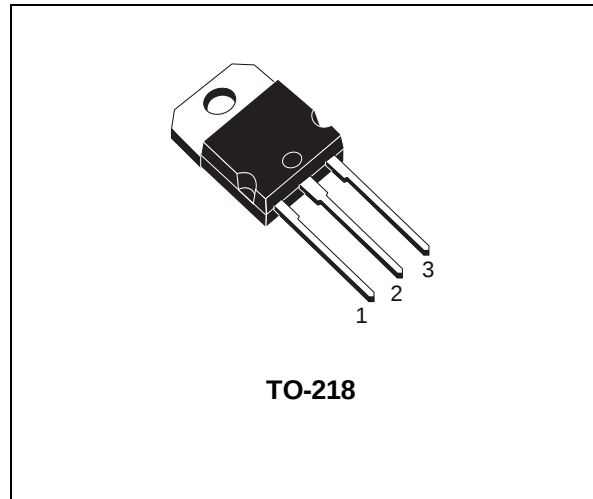
- STMicroelectronic PREFERRED SALESTYPES

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	TIP36B	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	5	V
I_C	Collector Current	25	25	A
I_{CM}	Collector Peak Current	50	50	A
I_B	Base Current	5	5	A
P_{tot}	Total Dissipation at $T_{case} \leq 25^\circ C$	125	125	W
T_{stg}	Storage Temperature	-65 to 150	-65 to 150	$^\circ C$
T_j	Max. Operating Junction Temperature	150	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
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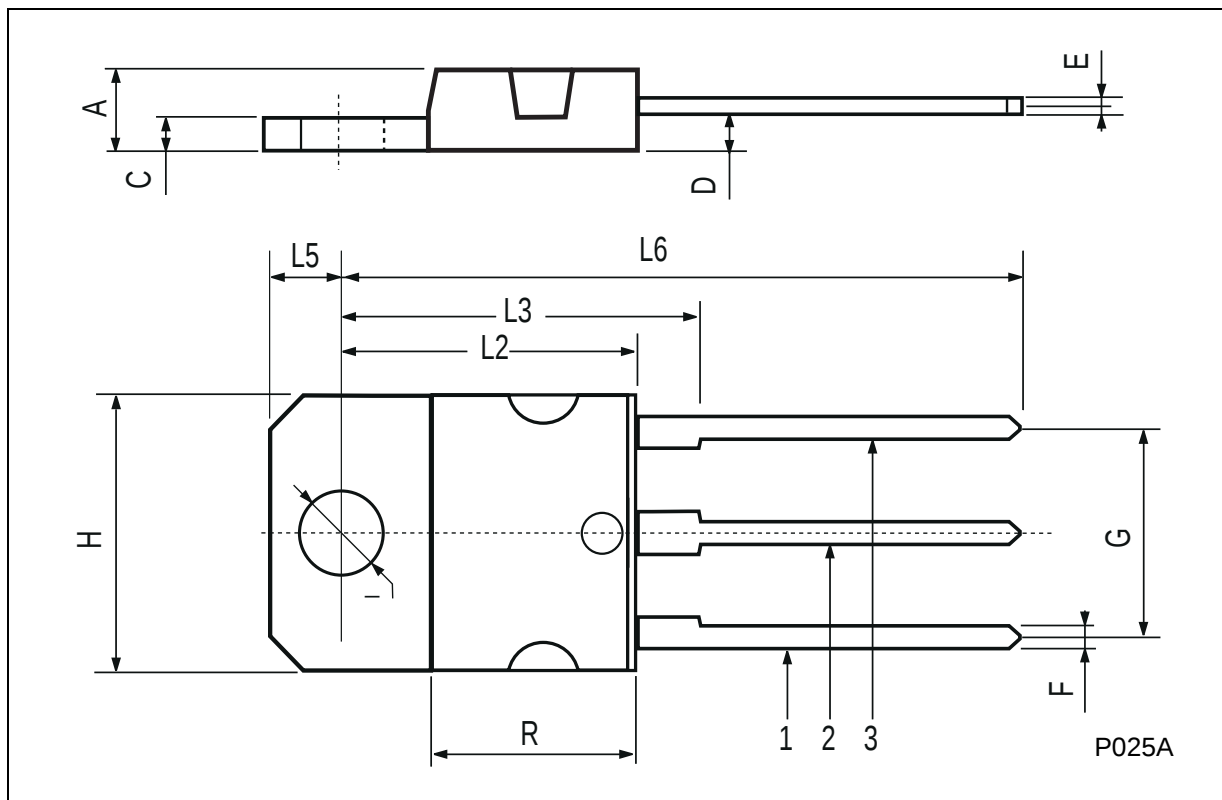
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 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



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