



TIP35C TIP36B/TIP36C

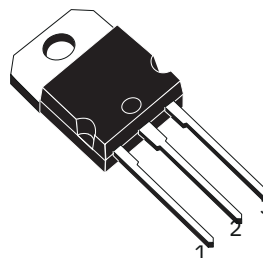
COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

■ STMicroelectronic PREFERRED
SALESTYPES

DESCRIPTION

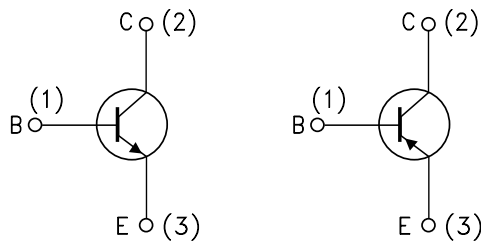
The TIP35C is a silicon Epitaxial-Base NPN transistor mounted in TO-218 plastic package. It is intended for use in power amplifier and switching applications.

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



TO-218

INTERNAL SCHEMATIC DIAGRAM



SC06960

SC08810

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit	
		NP	TIP35C		
		N	TIP36B		
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	PNP	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 $T_{case} \leq 25\text{ }^{\circ}\text{C}$		125		W
T_{stg}	Storage Temperature		-65 to 150		$^{\circ}\text{C}$
T_j	Max. Operating Junction Temperature		150		$^{\circ}\text{C}$

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 ($T_{case} = 25\text{ °C}$ unless otherwise specified)

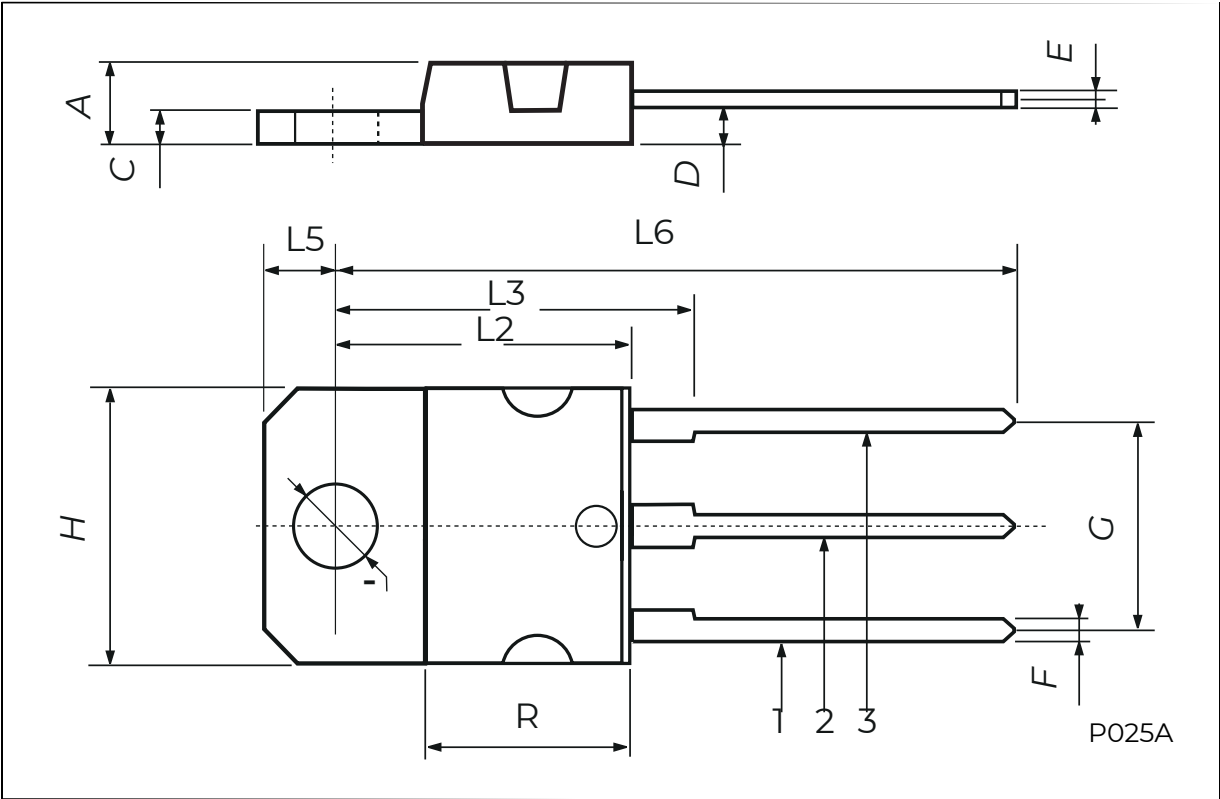
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = 60\text{ V}$				1 mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5\text{ V}$				1 mA
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = \text{Rated } V_{CEO}$ $I_C = 30\text{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

* Pulsed: Pulse duration = 300 s, 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	.		4.9	0.185		0.193
C	4.7		1.37	0.04		0.05
D	1.17	2.5		6	0.098	4
E	0.5		0.78	0.019		0.03
F	1.1		1.3	0.043		0
G	10.8		11.1	0.425		0.051
H	14.7		15.2	0.578		0.43
L2	-		16.2	-		7
L3		18			0.708	0.59
L5	3.95		4.15	0.155		0.163
L6		31			1.220	0.63
R	-		12.2	-		0.48
Ø	4		4.1	0.157		0
						0.161



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