

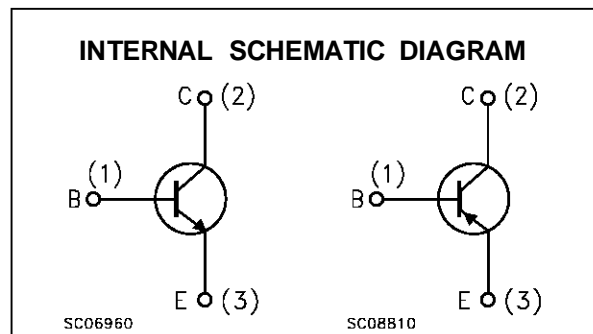
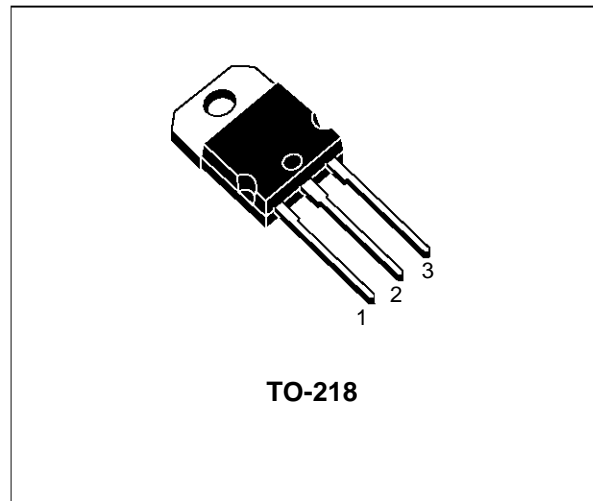
COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

- TIP35B, TIP35C, TIP36B, AND TIP36C ARE SGS-THOMSON PREFERRED SALESTYPES

DESCRIPTION

The TIP35A, TIP35B and TIP35C are silicon epitaxial-base NPN transistors in TO-218 plastic package. They are intended for use in power amplifier and switching applications.

The complementary PNP types are TIP36A, TIP36B and TIP36C.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit	
		NPN	TIP35A	TIP35B		TIP35C
		PNP	TIP36A	TIP36B		TIP36C
V _{CBO}	Collector-Base Voltage (I _E = 0)	60	80	100	V	
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	60	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} ≤ 25 °C	125			W	
T _{stg}	Storage Temperature	-65 to 150			°C	
T _j	Max. Operating Junction Temperature	150			°C	

For PNP types voltage and current values are negative.

TIP35A/TIP35B/TIP35C/TIP36A/TIP36B/TIP36C

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1	$^{\circ}C/W$
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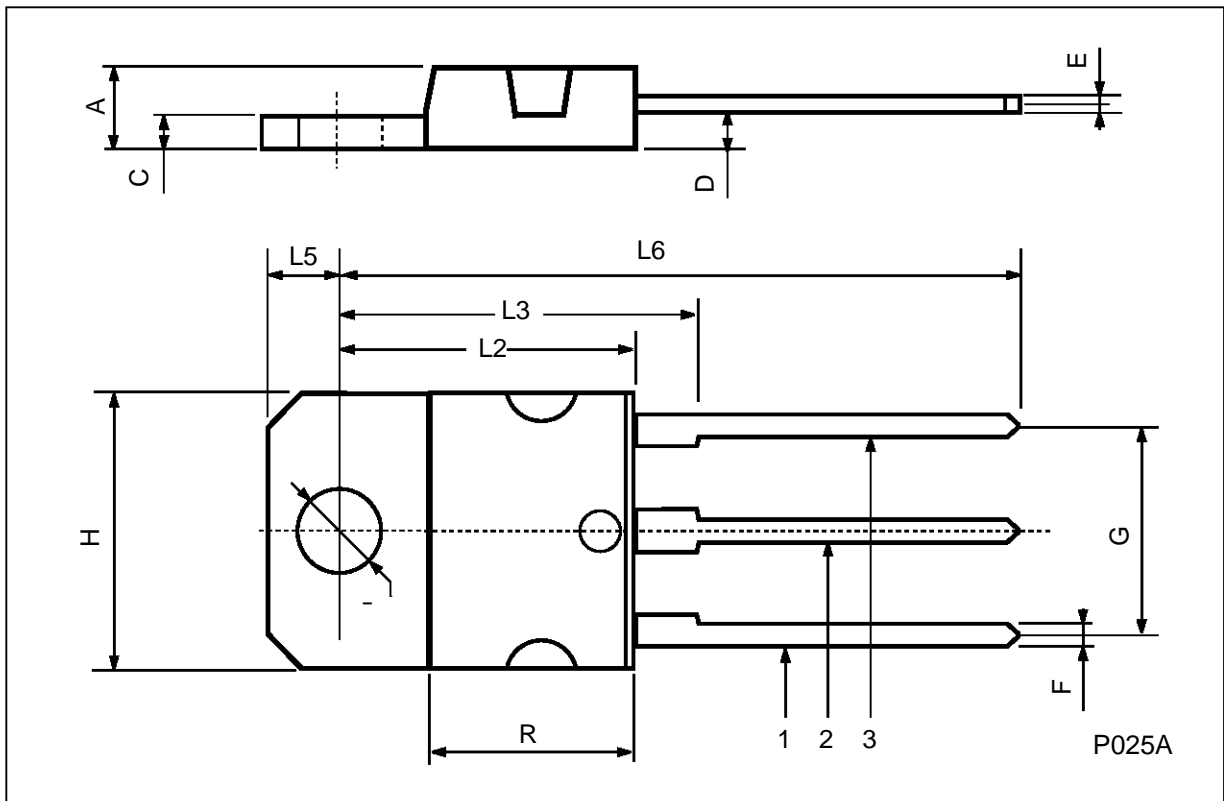
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_B = 0$)	for TIP35A/36A $V_{CE} = 30 V$ for TIP35B/35C/36B/36C $V_{CB} = 60 V$			1	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5 V$			1	mA
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = \text{Rated } V_{CEO}$			0.7	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 30 \text{ mA}$ for TIP35A/36A for TIP35B/36B for TIP35C/36C	60 80 100			V 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	$I_C = 1 A$ $V_{CE} = 10 V$ $f = 1 \text{ MHz}$	3			MHz
h_{fe}	Small Signal Current Gain	$I_C = 1 A$ $V_{CE} = 10 V$ $f = 1 \text{ KHz}$	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
∅	4		4.1	0.157		0.161



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