



**SILICON HIGH- POWER TRANSISTOR**  
**NPN TIP35A/B/C**  
**25A 125W**

**Technical Data**

...designed for use in general-purpose switching and power amplifier applications.

- ☞ DC Current Gain -  $h_{FE} = 15(\text{Min}) @ I_C = 15 \text{ A dc}$
- ☞ 25 A Collector Current
- ☞ TO-218 Package

**MAXIMUM RATINGS**

Rating	Symbol	TIP35A	TIP35B	TIP35C	Unit
Collector- Emitter Voltage	$V_{CEO}$	60	80	100	Vdc
Collector – Base Voltage	$V_{CB}$	60	80	100	Vdc
Emitter Base Voltage	$V_{EB}$	5			Vdc
Collector Current – Continuous	$I_C$	25			Adc
Peak		40			
Base Current	$I_B$	5			Adc
Total Power Dissipation @ TC = 25°C	PD	125			Watts
Derate above 25°C		1			W/°C
Operating and Storage junction Temperature Range	$T_j, T_{stg}$	-65 to +150			°C

**THERMAL CHARACTERISTICS**

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	$R_{thjc}$	1.0	°C/W



**ELECTRICAL CHARACTERISTICS : [ Tc = 25 °C unless otherwise noted ]**

Characteristic	Symbol	Min	Typ	Max	Unit
<b>* OFF CHARACTERISTICS :</b>					
Collector–Emitter Sustaining Voltage(1) [ Ic =30 mAdc, IB = 0 ]	V <sub>CEO(sus)</sub>	60 80 100			Vdc
Collector Cutoff Current [ V <sub>CE</sub> = 30 Vdc, IB = 0 ]	I <sub>CEO</sub>			1.0 1.0	mAdc
Collector Cutoff Current [ V <sub>CE</sub> =Rated V <sub>CEO</sub> , V <sub>BE</sub> = 0 ]	I <sub>CES</sub>			700	⊕Adc
Emitter –Base Cutoff Current [ V <sub>EB</sub> =5.0 Vdc , Ic = 0 ]	I <sub>EBO</sub>			1	mAdc
<b>* ON CHARACTERISTICS (1):</b>					
DC Current Gain [ Ic = 1.5 Adc , V <sub>CE</sub> = 4.0 Vdc ] [ Ic = 15Adc , V <sub>CE</sub> = 4.0 Vdc ]	h <sub>FE</sub>	25 15		---	
Collector-Emitter Saturation Voltage [ Ic = 15Adc , IB = 1.5Adc ] [ Ic = 25Adc , IB = 5.0Adc ]	V <sub>CE(sat)</sub>			1.8 4.0	Vdc
Base-Emitter on Voltage [ Ic =15.0 Adc , V <sub>CE</sub> = 4V] [ Ic =25.0 Adc , V <sub>CE</sub> = 4.0V]	V <sub>BE(on)</sub>			2.0 4.0	Vdc
<b>DYNAMIC CHARACTERISTICS :</b>					
Current Gain – Bandwidth Product [Ic=1Adc,V <sub>CE</sub> =10Vdc,ftest=1.0 MHz ]	f <sub>T</sub>	3			MHz
Small-Signal Current Gain [ IC= 1 Adc, V <sub>CE</sub> =10 Vdc, f=1kHz]	hfe	25			

- (1) Pulse Test : Pulse Width <300µs , Duty Cycle < 2.0%
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