



**SILICON PLASTIC POWER TRANSISTOR**  
**PNP TIP32C**  
**3A 40W**

**Technical Data**

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

- ☞ DC Current Gain -  $h_{FE} = 10-50$  @  $I_C = 3.0A_{dc}$
- ☞ Collector-Emitter Saturation Voltage -  $V_{CE(sat)} = 1.2V_{dc}$  (Max) @  $I_C = 3A_{dc}$
- ☞ TO-220 Package
- ☞ Collector-Emitter Sustaining Voltage -  $V_{CEO(sus)} = 100V_{dc}$  (Min)

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Collector- Emitter Voltage	$V_{CEO}$	100	Vdc
Collector – Base Voltage	$V_{CB}$	100	Vdc
Emitter Base Voltage	$V_{EB}$	5	Vdc
Collector Current – Continuous	$I_C$	3	Adc
Peak		5	
Base Current	$I_B$	1	Adc
Total Power Dissipation @ $T_C = 25^\circ C$	PD	40	Watts
Derate above $25^\circ C$		0.32	W/ $^\circ C$
Operating and Storage junction Temperature Range	$T_j, T_{stg}$	-65 to +150	$^\circ C$

**THERMAL CHARACTERISTICS**

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	$R_{thjc}$	3.125	$^\circ C/W$



**ELECTRICAL CHARACTERISTICS : [ T<sub>c</sub> = 25 °C unless otherwise noted ]**

Characteristic	Symbol	Min	Typ	Max	Unit
<b>* OFF CHARACTERISTICS :</b>					
Collector–Emitter Sustaining Voltage(1) [ I <sub>c</sub> =30 mAdc, I <sub>B</sub> = 0 ]	V <sub>CEO(sus)</sub>	100			Vdc
Collector Cutoff Current [ V <sub>CE</sub> = 60 Vdc, I <sub>B</sub> = 0 ]	I <sub>CE0</sub>			0..3	mAdc
Collector Cutoff Current [ V <sub>CE</sub> =100 Vdc, V <sub>BE</sub> = 0 ]	I <sub>CES</sub>			200	⊛Adc
Emitter Cutoff Current [ V <sub>BE</sub> =5.0 Vdc , I <sub>c</sub> = 0 ]	I <sub>EBO</sub>			1	mAdc
<b>* ON CHARACTERISTICS (1):</b>					
DC Current Gain [ I <sub>c</sub> = 1.0 Adc , V <sub>CE</sub> = 4.0 Vdc ] [ I <sub>c</sub> = 3Adc , V <sub>CE</sub> = 4.0 Vdc ]	h <sub>FE</sub>	25 10		--- 50	
Collector-Emitter Saturation Voltage [ I <sub>c</sub> = 3Adc , I <sub>B</sub> = 375mAdc )	V <sub>CE(sat)</sub>			1.2	Vdc
Base-Emitter on Voltage [ I <sub>c</sub> =3.0 Adc , V <sub>CE</sub> = 4.0. V <sub>DC</sub> ]	V <sub>BE(on)</sub>			1.8	Vdc
<b>DYNAMIC CHARACTERISTICS :</b>					
Current Gain – Bandwidth Product [I <sub>c</sub> =0.5Adc,V <sub>CE</sub> =10Vdc,f <sub>test</sub> =1.0 MHz ]	f <sub>T</sub>	3			MHz
Small-Signal Current Gain [ I <sub>C</sub> = 0.5 Adc, V <sub>CE</sub> =10 Vdc, f=1kHz]	h <sub>fe</sub>	20			

- Indicates within JEDEC Registration Data.
- (1) Pulse Test : Pulse Width <300μs , Duty Cycle < 2.0%