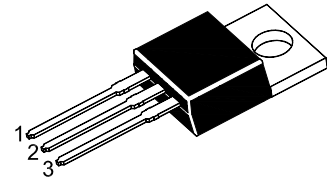


# TIP122

## NPN Silicon Power Darlington Transistor

for power switching and amplifier applications



1.Base 2.Collector 3.Emitter  
TO-220 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

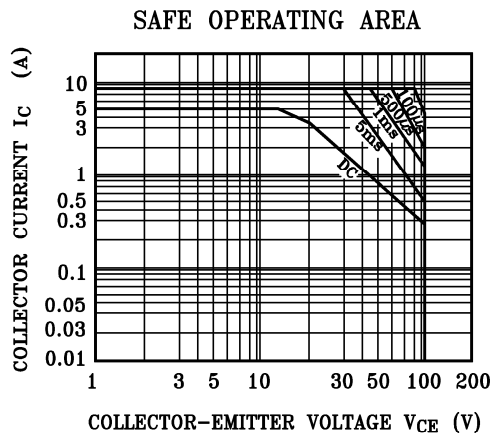
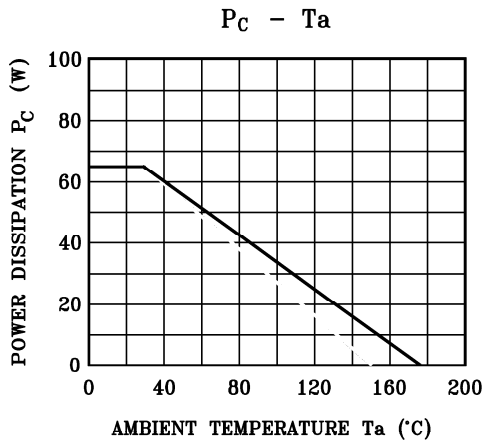
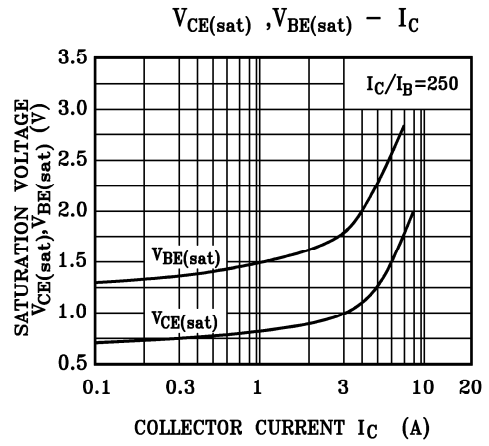
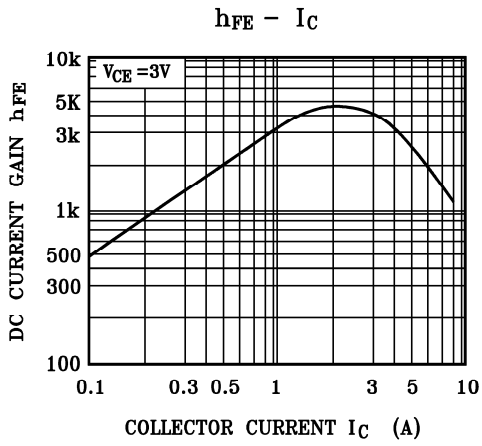
Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	100	V
Collector Emitter Voltage	$V_{CEO}$	100	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	5	A
Collector Current (Pulse)	$I_{CP}$	8	A
Base Current	$I_B$	0.12	A
Power Dissipation ( $T_a = 25\text{ }^\circ\text{C}$ )	$P_C$	2	W
Power Dissipation ( $T_c = 25\text{ }^\circ\text{C}$ )	$P_C$	65	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

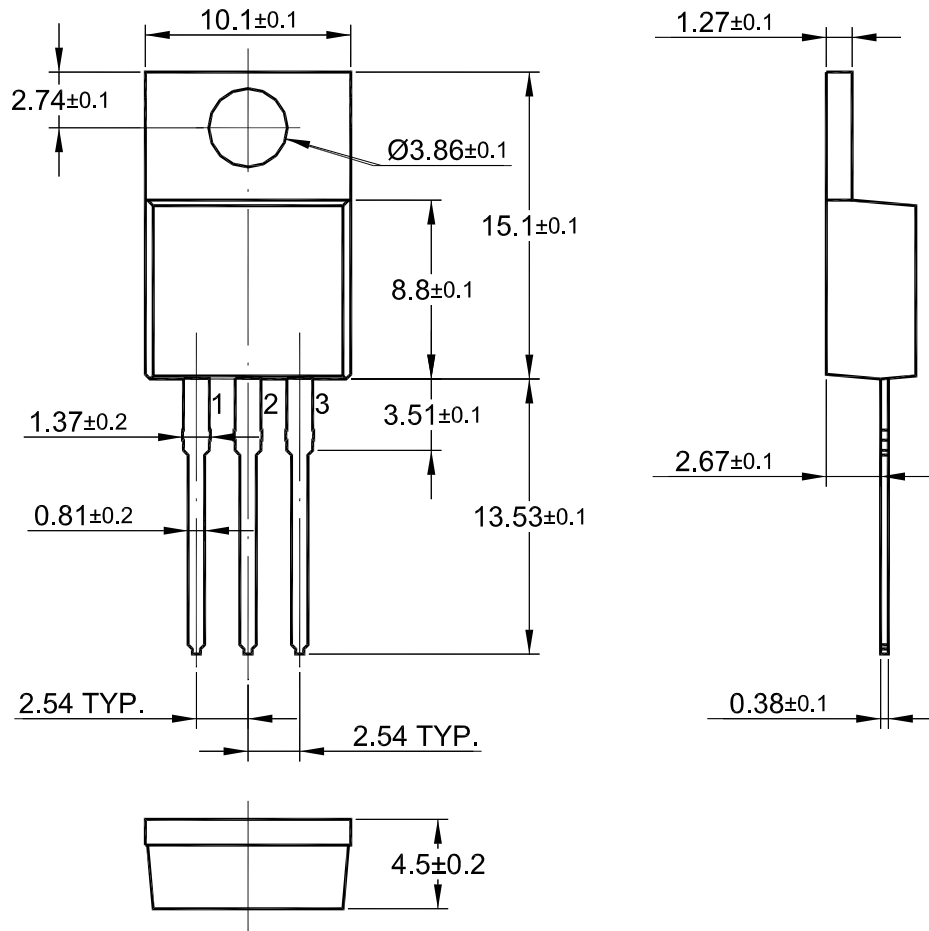
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 3\text{ V}$ , $I_C = 0.5\text{ A}$ at $V_{CE} = 3\text{ V}$ , $I_C = 3\text{ A}$	$h_{FE}$ $h_{FE}$	1000 1000	- -	- -
Collector Base Cutoff Current at $V_{CB} = 100\text{ V}$	$I_{CBO}$	-	0.2	mA
Collector Emitter Cutoff Current at $V_{CE} = 50\text{ V}$	$I_{CEO}$	-	0.5	mA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	2	mA
Collector Emitter Sustaining Voltage at $I_C = 30\text{ mA}$	$V_{CEO(sus)}$	100	-	V
Collector Emitter Saturation Voltage at $I_C = 3\text{ A}$ , $I_B = 12\text{ mA}$	$V_{CE(sat)}$	-	2	V
Collector Emitter Saturation Voltage at $I_C = 5\text{ A}$ , $I_B = 20\text{ mA}$	$V_{CE(sat)}$	-	4	V
Base Emitter On Voltage at $V_{CE} = 3\text{ V}$ , $I_C = 3\text{ A}$	$V_{BE(on)}$	-	2.5	V

**TOP DYNAMIC**





## TO-220 PACKAGE OUTLINE



Dimensions in mm