



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

TIP122

TECHNICAL SPECIFICATIONS OF NPN DARLINGTON TRANSISTOR

Description

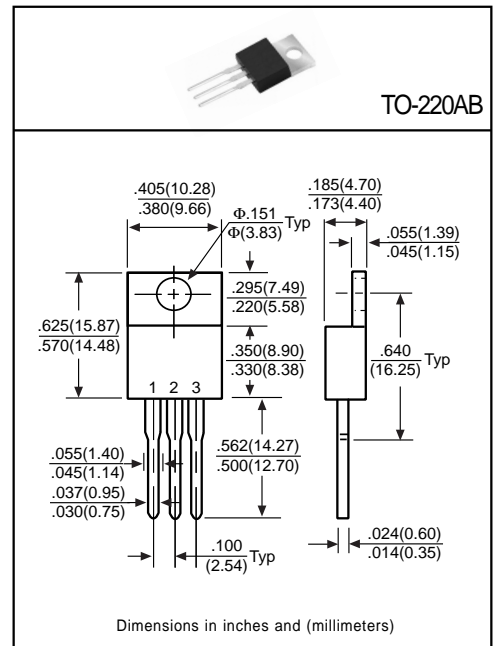
Designed for use in general purpose amplifier and low speed switching applications.

Pinning

- 1 = Base
- 2 = Collector
- 3 = Emitter

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	100	V
Collector-Emitter Voltage	V _{CE0}	100	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	5	A
Total Power Dissipation	P _D	2	W
Total Power Dissipation(T _C =25°C)	P _D	65	W
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-55 to +150	°C



Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV _{CB0}	100	-	-	V	I _C =1mA
Collector-Emitter Breakdown Voltage	BV _{CE0}	100	-	-	V	I _C =100mA
Collector Cutoff Current	I _{CB0}	-	-	0.2	mA	V _{CB} =100V
	I _{CE0}	-	-	0.5	mA	V _{CE} =50V
Emitter Cutoff Current	I _{EB0}	-	-	2	mA	V _{EB} =5V
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	2	V	I _C =3A, I _B =12mA
	V _{CE(sat)2}	-	-	4	V	I _C =5A, I _B =20mA
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-	-	2.5	V	I _C =3A, V _{CE} =3V
DC Current Gain ⁽¹⁾	h _{FE1}	1K	-	-	-	I _C =500mA, V _{CE} =3V
	h _{FE2}	1K	-	-	-	I _C =3A, V _{CE} =3V
Output Capacitance	C _{ob}	-	-	300	pF	V _{CB} =10V, f=0.1MHz

(1)Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%