



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

TIP112

TECHNICAL SPECIFICATIONS OF NPN DARLINGTON TRANSISTOR

Description

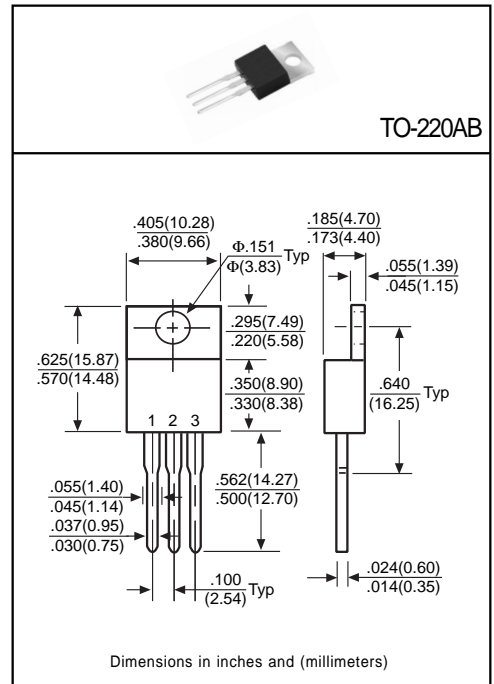
Designed for use in general purpose amplifier and low-speed switching applications.

Pinning

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

Absolute Maximum Ratings (TA=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 (continuous)	I _C	4	A
Collector Current (peak)	I _C	6	A
Total Power Dissipation (T _C =25°C)	P _D	50	W
Total Power Dissipation	P _D	2	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, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CE0}	100	-	-	V	I _C =30mA, I _B =0
Collector Cutoff Current	I _{CB0}	-	-	1	mA	V _{CB} =100V, I _E =0
	I _{CE0}	-	-	2	mA	V _{CE} =50V, I _B =0
Emitter Cutoff Current	I _{EB0}	-	-	2	mA	V _{EB} =5V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	2.5	V	I _C =2A, I _B =8mA
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-	-	2.8	V	I _C =2A, V _{CE} =4V
DC Current Gain ⁽¹⁾	h _{FE1}	1K	-	-	-	I _C =1A, V _{CE} =4V
	h _{FE2}	500	-	-	-	I _C =2A, V _{CE} =4V
Output Capacitance	C _{ob}	-	-	200	pF	V _{CE} =10V, f=0.1MHz

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