DC COMPONENTS CO., LTD.

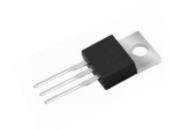
DISCRETE SEMICONDUCTORS

TIP117

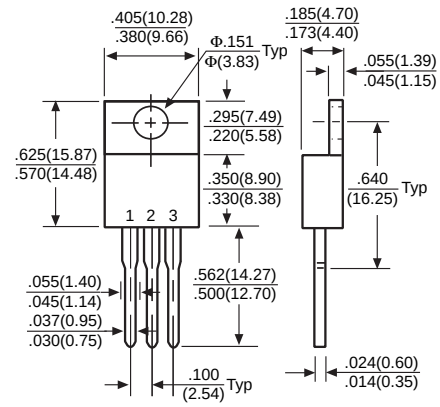
TECHNICAL SPECIFICATIONS OF PNP DARLINGTON TRANSISTOR

Description

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



TO-220AB



Dimensions in inches and (millimeters)

Pinning

1 = Base
2 = Collector
3 = Emitter

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-100	V
Emitter-Base Voltage	V_{EBO}	-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 Volatge	BV_{CBO}	-100	-	-	V	I_C=-1mA, I_E=0
Collector-Emitter Breakdown Voltage	BV_{CEO}	-100	-	-	V	I_C=-30mA, I_B=0
Collector Cutoff Current	I_{CBO}	-	-	-1	mA	V_{CB}=-100V, I_E=0
	I_{CEO}	-	-	-2	mA	V_{CE}=-50V, I_B=0
Emitter Cutoff Current	I_{EBO}	-	-	-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%