



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

LB120A

TECHNICAL SPECIFICATIONS OF NPN TRIPLE DIFFUSED PLANAR TRANSISTOR

Description

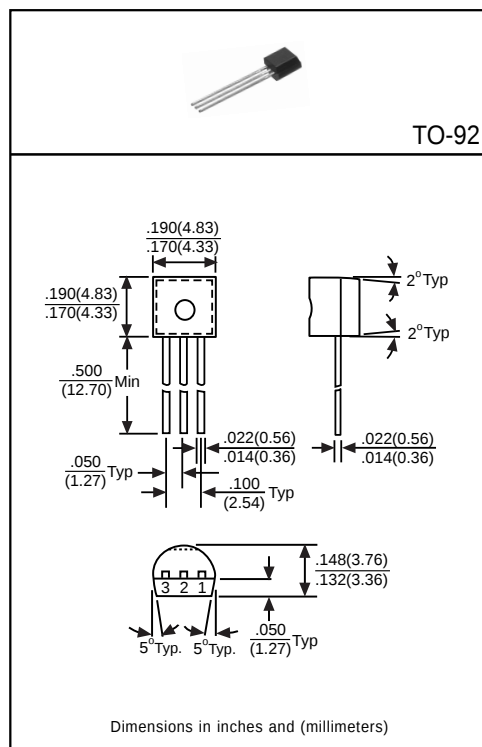
Designed for use in high-voltage switching applications.

Pinning

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

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	600	V
Collector-Emitter Voltage	V_{CE0}	400	V
Emitter-Base Voltage	V_{EB0}	6	V
Collector Current (DC)	I_C	100	mA
Collector Current (pulse)	I_C	200	mA
Base Current (DC)	I_B	20	mA
Base Current (pulse)	I_B	40	mA
Total Power Dissipation	P_D	0.8	W
Total Power Dissipation($T_C=25^{\circ}\text{C}$)	P_D	7	W
Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$



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}	600	-	-	V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	BV_{CE0}	400	-	-	V	$I_C=10\text{mA}$, $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EB0}	5	-	-	V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cutoff Current	I_{CB0}	-	-	10	μA	$V_{CB}=550\text{V}$, $I_E=0$
	I_{CE0}	-	-	10	μA	$V_{CE}=400\text{V}$, $I_B=0$
Emitter Cutoff Current	I_{EB0}	-	-	10	μA	$V_{EB}=6\text{V}$, $I_C=0$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)1}$	-	-	0.4	V	$I_C=50\text{mA}$, $I_B=10\text{mA}$
	$V_{CE(sat)2}$	-	-	0.75	V	$I_C=100\text{mA}$, $I_B=20\text{mA}$
Base-Emitter Saturation Voltage ⁽¹⁾	$V_{BE(sat)}$	-	-	1	V	$I_C=50\text{mA}$, $I_B=10\text{mA}$
DC Current Gain ⁽¹⁾	h_{FE1}	8	-	-	-	$I_C=10\text{mA}$, $V_{CE}=10\text{V}$
	h_{FE2}	10	-	36	-	$I_C=50\text{mA}$, $V_{CE}=10\text{V}$

(1)Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$