



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2N6517

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

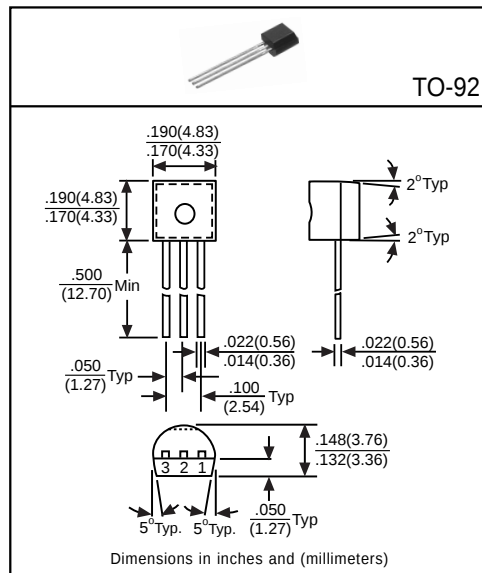
Designed for applications requiring high breakdown voltage.

Pinning

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

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	350	V
Collector-Emitter Voltage	V_{CE0}	350	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	500	mA
Total Power Dissipation	P_D	625	mW
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}	350	-	-	V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	BV_{CE0}	350	-	-	V	$I_C=1\text{mA}$, $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EB0}	5	-	-	V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cutoff Current	I_{CB0}	-	-	50	nA	$V_{CB}=250\text{V}$, $I_E=0$
Emitter Cutoff Current	I_{EB0}	-	-	50	nA	$V_{EB}=5\text{V}$, $I_C=0$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)1}$	-	-	0.30	V	$I_C=10\text{mA}$, $I_B=1\text{mA}$
	$V_{CE(sat)2}$	-	-	0.35	V	$I_C=20\text{mA}$, $I_B=2\text{mA}$
	$V_{CE(sat)3}$	-	-	0.50	V	$I_C=30\text{mA}$, $I_B=3\text{mA}$
Base-Emitter Saturation Voltage ⁽¹⁾	$V_{BE(sat)1}$	-	-	0.75	V	$I_C=10\text{mA}$, $I_B=1\text{mA}$
	$V_{BE(sat)2}$	-	-	0.85	V	$I_C=20\text{mA}$, $I_B=2\text{mA}$
	$V_{BE(sat)3}$	-	-	0.90	V	$I_C=30\text{mA}$, $I_B=3\text{mA}$
Base-Emitter On Voltage ⁽¹⁾	$V_{BE(on)}$	-	-	2	V	$I_C=100\text{mA}$, $V_{CE}=10\text{V}$
DC Current Gain ⁽¹⁾	h_{FE1}	20	-	-	-	$I_C=1\text{mA}$, $V_{CE}=10\text{V}$
	h_{FE2}	30	-	-	-	$I_C=10\text{mA}$, $V_{CE}=10\text{V}$
	h_{FE3}	30	-	200	-	$I_C=30\text{mA}$, $V_{CE}=10\text{V}$
	h_{FE4}	20	-	200	-	$I_C=50\text{mA}$, $V_{CE}=10\text{V}$
Transition Frequency	f_T	40	-	200	MHz	$I_C=10\text{mA}$, $V_{CE}=20\text{V}$, $f=20\text{MHz}$
Output Capacitance	C_{ob}	-	-	6	pF	$V_{CB}=20\text{V}$, $f=1\text{MHz}$, $I_E=0$

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