



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DXTB772

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

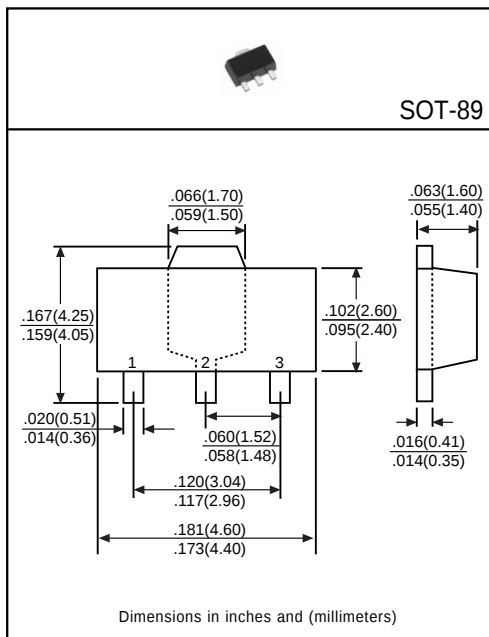
Designed for use in output stage amplifier, voltage regulator, DC-DC converter and driver.

Pinning

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

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-40	V
Collector-Emitter Voltage	V_{CE0}	-30	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current (continuous)	I_C	-3	A
Collector Current (pulse) ⁽¹⁾	I_C	-7	A
Total Power Dissipation ⁽²⁾	P_D	1	W
Total Power Dissipation ⁽³⁾	P_D	2	W
Total Power Dissipation ⁽⁴⁾	P_D	1.5	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}	-40	-	-	V	$I_C=-100\mu\text{A}$
Collector-Emitter Breakdown Voltage	BV_{CE0}	-30	-	-	V	$I_C=-1\text{mA}$
Emitter-Base Breakdown Voltage	BV_{EB0}	-5	-	-	V	$I_E=-10\mu\text{A}$
Collector Cutoff Current	I_{CB0}	-	-	-1	μA	$V_{CB}=-30\text{V}$
Emitter Cutoff Current	I_{EB0}	-	-	-1	μA	$V_{EB}=-3\text{V}$
Collector-Emitter Saturation Voltage ⁽⁵⁾	$V_{CE(sat)}$	-	-0.3	-0.5	V	$I_C=-2\text{A}$, $I_B=-0.2\text{A}$
Base-Emitter Saturation Voltage ⁽⁵⁾	$V_{BE(sat)}$	-	-1	-2	V	$I_C=-2\text{A}$, $I_B=-0.2\text{A}$
DC Current Gain ⁽⁵⁾	h_{FE1}	30	-	-	-	$I_C=-20\text{mA}$, $V_{CE}=-2\text{V}$
	h_{FE2}	100	160	500	-	$I_C=-1\text{A}$, $V_{CE}=-2\text{V}$
Transition Frequency	f_T	-	80	-	MHz	$I_C=-100\text{mA}$, $V_{CE}=-5\text{V}$, $f=100\text{MHz}$
Output Capacitance	C_{ob}	-	55	-	pF	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$

(1) Single pulse $PW=1\text{ms}$

(2) When tested in free air condition, without heat sinking.

(3) When mounted on a $40\times40\times1\text{mm}$ ceramic board.

(4) Printed circuit board 2mm thick, collector plating 1cm square or larger.

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

Classification of h_{FE2}

Rank	Q	P	E
Range	100~200	160~320	250~500