



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBT2907

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

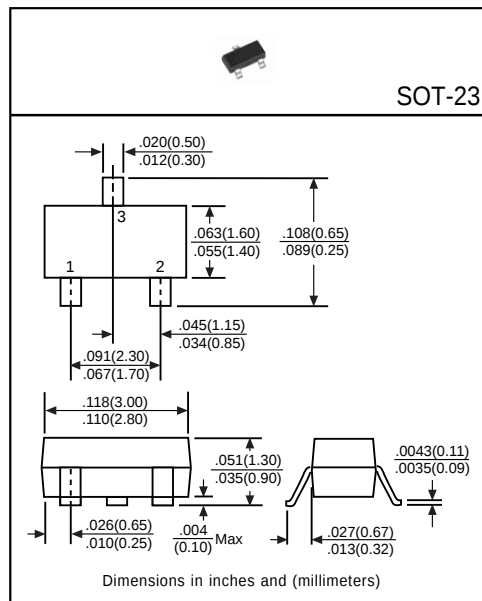
Designed for general purpose switching and amplifier applications.

Pinning

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

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-60	V
Collector-Emitter Voltage	V_{CE0}	-40	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-600	mA
Total Power Dissipation	P_D	225	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}	-60	-	-	V	$I_C=-10\mu\text{A}$
Collector-Emitter Breakdown Voltage	BV_{CE0}	-40	-	-	V	$I_C=-10\text{mA}$
Emitter-Base Breakdown Voltage	BV_{EB0}	-5	-	-	V	$I_E=-10\mu\text{A}$
Collector Cutoff Current	I_{CB0}	-	-	-20	nA	$V_{CB}=-50\text{V}$
	I_{CEX}	-	-	-50	nA	$V_{CE}=-30\text{V}, V_{EB(off)}=-0.5\text{V}$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)1}$	-	-0.2	-0.4	V	$I_C=-150\text{mA}, I_B=-15\text{mA}$
	$V_{CE(sat)2}$	-	-0.5	-1.6	V	$I_C=-500\text{mA}, I_B=-50\text{mA}$
Base-Emitter Saturation Voltage ⁽¹⁾	$V_{BE(sat)1}$	-	-	-1.3	V	$I_C=-150\text{mA}, I_B=-15\text{mA}$
	$V_{BE(sat)2}$	-	-	-2.6	V	$I_C=-500\text{mA}, I_B=-50\text{mA}$
DC Current Gain ⁽¹⁾	h_{FE1}	35	-	-	-	$I_C=-0.1\text{mA}, V_{CE}=-10\text{V}$
	h_{FE2}	50	-	-	-	$I_C=-1\text{mA}, V_{CE}=-10\text{V}$
	h_{FE3}	75	-	-	-	$I_C=-10\text{mA}, V_{CE}=-10\text{V}$
	h_{FE4}	100	180	300	-	$I_C=-150\text{mA}, V_{CE}=-10\text{V}$
	h_{FE5}	30	-	-	-	$I_C=-500\text{mA}, V_{CE}=-10\text{V}$
Transition Frequency	f_T	200	-	-	MHz	$I_C=-50\text{mA}, V_{CB}=-20\text{V}, f=100\text{MHz}$
Output Capacitance	C_{ob}	-	-	8	pF	$V_{CB}=-10\text{V}, f=1\text{MHz}, I_E=0$

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