



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBT2369

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

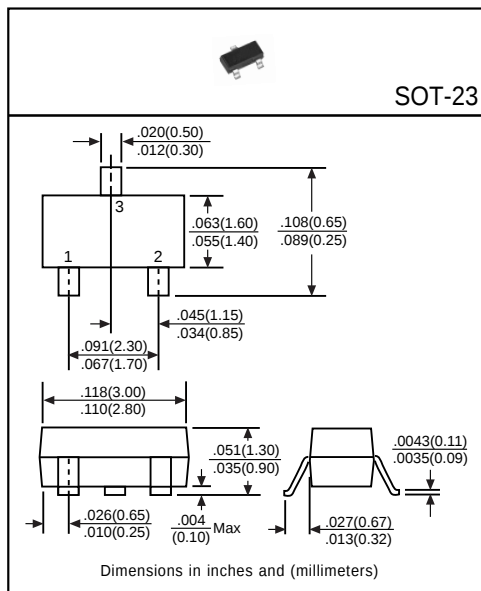
Designed for high speed switching applications.

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}	40	V
Collector-Emitter Voltage	V_{CES}	40	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	500	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 Volatge	BV_{CB0}	40	-	-	V	$I_C=10\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	BV_{CES}	40	-	-	V	$I_C=10\mu\text{A}$, $I_B=0$
Collector-Emitter Breakdown Voltage	BV_{CEO}	15	-	-	V	$I_C=10\text{mA}$, $I_B=0$
Emitter-Base Breakdown Volatge	BV_{EBO}	4.5	-	-	V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cutoff Current	I_{CBO}	-	-	400	nA	$V_{CB}=20\text{V}$, $I_E=0$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)}$	-	-	250	mV	$I_C=10\text{mA}$, $I_B=1\text{mA}$
Base-Emitter Saturation Voltage ⁽¹⁾	$V_{BE(sat)}$	700	-	850	mV	$I_C=10\text{mA}$, $I_B=1\text{mA}$
DC Current Gain ⁽¹⁾	h_{FE1}	40	-	120	-	$I_C=10\text{mA}$, $V_{CE}=1\text{V}$
	h_{FE2}	20	-	-	-	$I_C=100\text{mA}$, $V_{CE}=2\text{V}$
Output Capacitance	C_{ob}	-	-	4	pF	$V_{CB}=5\text{V}$, $f=1\text{MHz}$, $I_E=0$

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