



DC COMPONENTS CO., LTD.  
DISCRETE SEMICONDUCTORS

DMBTA44

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

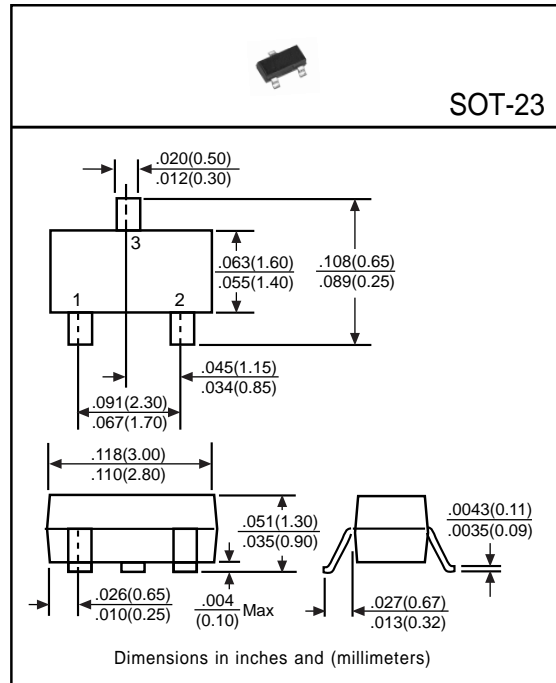
Designed for applications requiring high breakdown voltage.

Pinning

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

Absolute Maximum Ratings(T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	450	V
Collector-Emitter Voltage	V <sub>CE0</sub>	400	V
Emitter-Base Voltage	V <sub>EB0</sub>	6	V
Collector Current	I <sub>C</sub>	300	mA
Total Power Dissipation	P <sub>D</sub>	350	mW
Junction Temperature	T <sub>J</sub>	+150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°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 <sub>CB0</sub>	450	-	-	V	I <sub>C</sub> =100μA
Collector-Emitter Breakdown Voltage	BV <sub>CE0</sub>	400	-	-	V	I <sub>C</sub> =1mA
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	6	-	-	V	I <sub>E</sub> =10μA
Collector Cutoff Current	I <sub>CBO</sub>	-	-	100	nA	V <sub>CB</sub> =400V
	I <sub>CES</sub>	-	-	500	nA	V <sub>CE</sub> =400V
Emitter Cutoff Current	I <sub>EBO</sub>	-	-	100	nA	V <sub>EB</sub> =4V
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)1</sub>	-	-	0.4	V	I <sub>C</sub> =1mA, I <sub>B</sub> =0.1mA
	V <sub>CE(sat)2</sub>	-	-	0.5	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA
	V <sub>CE(sat)3</sub>	-	-	0.75	V	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA
Base-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>BE(sat)</sub>	-	-	0.75	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA
DC Current Gain <sup>(1)</sup>	h <sub>FE1</sub>	40	-	-	-	I <sub>C</sub> =1mA, V <sub>CE</sub> =10V
	h <sub>FE2</sub>	50	-	300	-	I <sub>C</sub> =10mA, V <sub>CE</sub> =10V
	h <sub>FE3</sub>	45	-	-	-	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V
	h <sub>FE4</sub>	40	-	-	-	I <sub>C</sub> =100mA, V <sub>CE</sub> =10V
Output Capacitance	C <sub>ob</sub>	-	4	6	pF	V <sub>CB</sub> =20V, f=1MHz

(1)Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%