



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBTA05

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

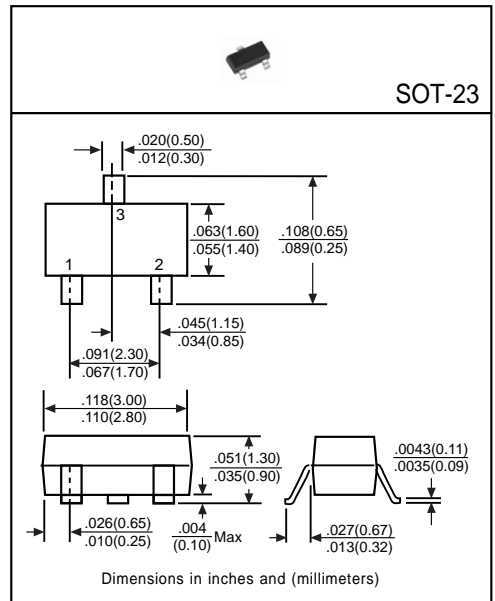
Designed for general purpose amplifier applications.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	60	V
Collector-Emitter Voltage	V _{CE0}	60	V
Emitter-Base Voltage	V _{EB0}	4	V
Collector Current	I _C	500	mA
Total Power Dissipation	P _D	225	mW
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-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 _{CB0}	60	-	-	V	I _C =100μA
Collector-Emitter Breakdown Voltage	BV _{CE0}	60	-	-	V	I _C =1mA
Emitter-Base Breakdown Voltage	BV _{EB0}	4	-	-	V	I _E =100μA
Collector Cutoff Current	I _{CB0}	-	-	100	nA	V _{CB} =60V
	I _{CE0}	-	-	100	nA	V _{CE} =60V
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	0.25	V	I _C =100mA, I _B =10mA
Base-Emitter On Voltage	V _{BE(on)}	-	-	1.2	V	I _C =100mA, V _{CE} =1V
DC Current Gain ⁽¹⁾	h _{FE1}	80	-	250	-	I _C =10mA, V _{CE} =1V
	h _{FE2}	50	-	-	-	I _C =100mA, V _{CE} =1V
Transition Frequency	f _T	100	-	-	MHz	I _C =10mA, V _{CE} =2V, f=100MHz

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