



DC COMPONENTS CO., LTD.  
DISCRETE SEMICONDUCTORS

DMBT9012

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

**Description**

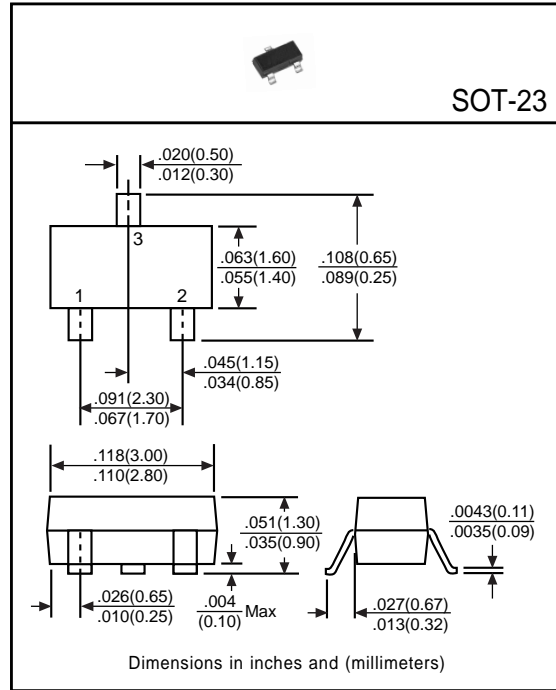
Designed for low frequency amplifier applications.

**Pinning**

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

**Absolute Maximum Ratings** (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-40	V
Collector-Emitter Voltage	V <sub>CE0</sub>	-20	V
Emitter-Base Voltage	V <sub>EB0</sub>	-5	V
Collector Current	I <sub>c</sub>	-500	mA
Total Power Dissipation	P <sub>D</sub>	225	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>	-40	-	-	V	I <sub>c</sub> =-100μA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	BV <sub>CE0</sub>	-20	-	-	V	I <sub>c</sub> =-1mA, I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	-5	-	-	V	I <sub>E</sub> =-100μA, I <sub>c</sub> =0
Collector Cutoff Current	I <sub>CB0</sub>	-	-	-0.1	μA	V <sub>CB</sub> =-25V, I <sub>E</sub> =0
Emitter Cutoff Current	I <sub>EB0</sub>	-	-	-0.1	μA	V <sub>EB</sub> =-3V, I <sub>c</sub> =0
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)</sub>	-	-	-0.6	V	I <sub>c</sub> =-500mA, I <sub>B</sub> =-50mA
Base-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>BE(sat)</sub>	-	-	-1.2	V	I <sub>c</sub> =-500mA, I <sub>B</sub> =-50mA
DC Current Gain <sup>(1)</sup>	h <sub>FE1</sub>	120	-	350	-	I <sub>c</sub> =-50mA, V <sub>CE</sub> =-1V
	h <sub>FE2</sub>	40	-	-	-	I <sub>c</sub> =-500mA, V <sub>CE</sub> =-1V

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

**Classification of hFE1**

Rank	L	H
Range	120~200	200~350