



DC COMPONENTS CO., LTD.
DISCRETE SEMICONDUCTORS

DMBTA13

TECHNICAL SPECIFICATIONS OF NPN DARLINGTON TRANSISTOR

Description

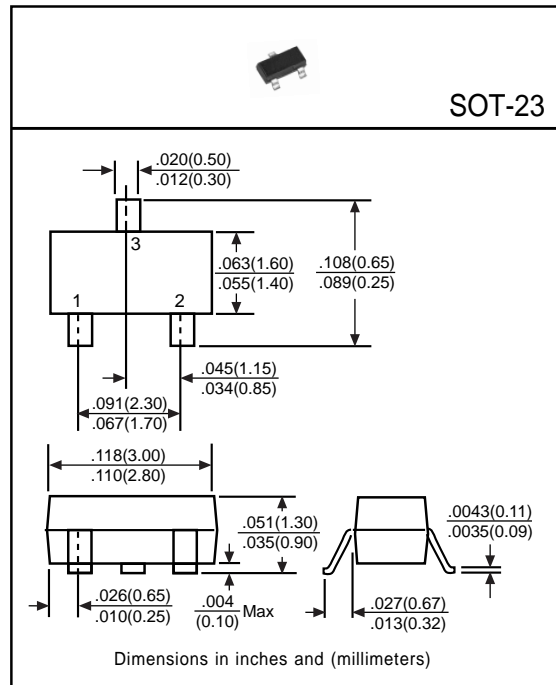
Designed for applications requiring high current gain.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CES}	30	V
Emitter-Base Voltage	V _{EBO}	10	V
Collector Current	I _C	300	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}	30	-	-	V	I _C =100μA
Collector-Emitter Breakdown Voltage	BV _{CES}	30	-	-	V	I _C =100μA
Emitter-Base Breakdown Voltage	BV _{EBO}	10	-	-	V	I _E =10μA
Collector Cutoff Current	I _{CBO}	-	-	100	nA	V _{CB} =30V
Emitter Cutoff Current	I _{EBO}	-	-	100	nA	V _{EB} =10V
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	1.5	V	I _C =100mA, I _B =0.1mA
Base-Emitter On Voltage	V _{BE(on)}	-	-	2	V	I _C =100mA, V _{CE} =5V
DC Current Gain ⁽¹⁾	h _{FE1}	5K	-	-	-	I _C =10mA, V _{CE} =5V
	h _{FE2}	10K	-	-	-	I _C =100mA, V _{CE} =5V
Transition Frequency	f _T	125	-	-	MHz	I _C =10mA, V _{CE} =5V, f=100MHz
Output Capacitance	C _{ob}	-	-	6	pF	V _{CB} =10V, f=1MHz

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