



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBTH10

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

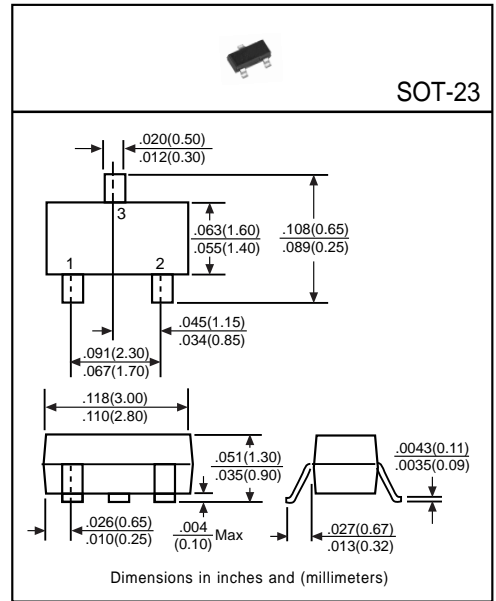
Designed for use in VHF & UHF oscillators and VHF mixer in tuner of a TV receiver.

Pinning

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

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	20	V
Collector-Emitter Voltage	V _{CE0}	15	V
Emitter-Base Voltage	V _{EB0}	3	V
Collector Current	I _C	50	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}	20	-	-	V	I _C =100μA
Collector-Emitter Breakdown Voltage	BV _{CE0}	15	-	-	V	I _C =1mA
Emitter-Base Breakdown Voltage	BV _{EB0}	3	-	-	V	I _C =10μA
Collector Cutoff Current	I _{CB0}	-	-	100	nA	V _{CB} =20V
Emitter Cutoff Current	I _{EB0}	-	-	100	nA	V _{EB} =2V
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	0.5	V	I _C =4mA, I _B =0.4mA
Base-Emitter On Voltage	V _{BE(on)}	-	-	0.95	V	I _C =4mA, V _{CE} =10V
DC Current Gain ⁽¹⁾	h _{FE}	60	-	-	-	I _C =4mA, V _{CE} =10V
Transition Frequency	f _T	650	-	-	MHz	I _C =4mA, V _{CB} =10V, f=100MHz
Output Capacitance	C _{ob}	-	-	0.7	pF	V _{CB} =10V, f=1MHz

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