



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBTA43

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

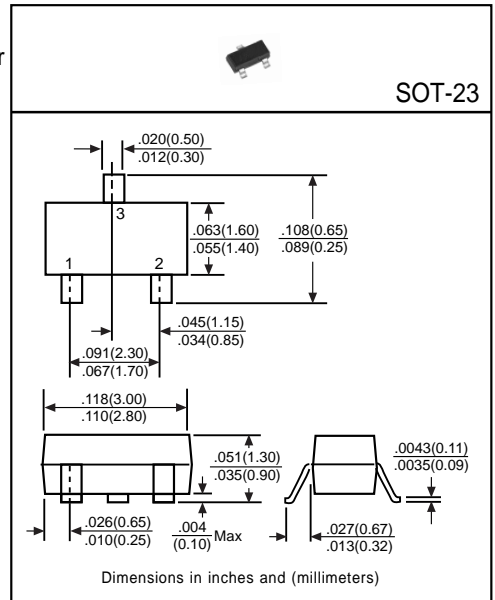
Designed for application as a video output to drive color CRT, or as a dialer circuit in electronics telephone.

Pinning

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

Absolute Maximum Ratings($T_A=25^{\circ}C$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	200	V
Collector-Emitter Voltage	V_{CE0}	200	V
Emitter-Base Voltage	V_{EB0}	6	V
Collector Current	I_C	500	mA
Total Power Dissipation	P_D	225	mW
Junction Temperature	T_J	+150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$



Electrical Characteristics

(Ratings at $25^{\circ}C$ ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CB0}	200	-	-	V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	BV_{CE0}	200	-	-	V	$I_C=1mA$
Emitter-Base Breakdown Voltage	BV_{EB0}	6	-	-	V	$I_E=10\mu A$
Collector Cutoff Current	I_{CBO}	-	-	100	nA	$V_{CB}=160V$
Emitter Cutoff Current	I_{EBO}	-	-	100	nA	$V_{EB}=4V$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)}$	-	-	0.5	V	$I_C=20mA, I_B=2mA$
Base-Emitter Saturation Voltage ⁽¹⁾	$V_{BE(sat)}$	-	-	0.9	V	$I_C=20mA, I_B=2mA$
DC Current Gain ⁽¹⁾	h_{FE1}	25	-	-	-	$I_C=1mA, V_{CE}=10V$
	h_{FE2}	40	-	-	-	$I_C=10mA, V_{CE}=10V$
	h_{FE3}	40	-	-	-	$I_C=30mA, V_{CE}=10V$
Transition Frequency	f_T	50	-	-	MHz	$I_C=10mA, V_{CE}=20V, f=100MHz$
Output Capacitance	C_{ob}	-	-	3	pF	$V_{CB}=20V, f=1MHz$

(1)Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$