



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBTA43

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

**Description**

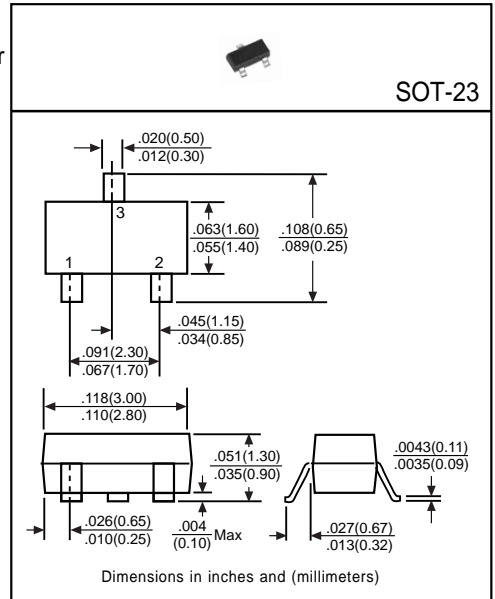
Designed for application as a video output to drive color CRT, or as a dialer circuit in electronics telephone.

**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 <sup>(1)</sup>	$V_{CE(sat)}$	-	-	0.5	V	$I_C=20mA, I_B=2mA$
Base-Emitter Saturation Voltage <sup>(1)</sup>	$V_{BE(sat)}$	-	-	0.9	V	$I_C=20mA, I_B=2mA$
DC Current Gain <sup>(1)</sup>	$h_{FE1}$	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  $\leq 2\%$