

PNP EPITAXIAL PLANAR TRANSISTOR

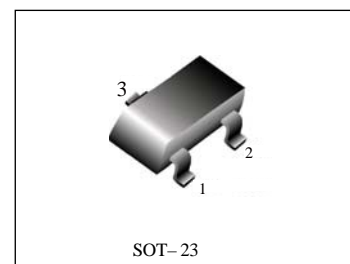
We declare that the material of product compliance with RoHS requirements.

Description

The MMBTA94 is designed for application that requires high voltage.

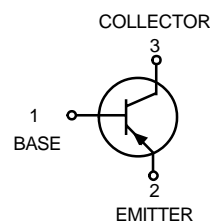
Features

- High Breakdown Voltage: $V_{CEO}=400(\text{Min.})$ at $I_C=1\text{mA}$
- Complementary to MMBTA44



DEVICE MARKING

MMBTA94 = 4D or 4Z



Absolute Maximum Ratings

- Maximum Temperatures
 - Storage Temperature -55 ~ +150 °C
 - Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
 - Total Power Dissipation ($T_a=25^\circ\text{C}$) 350 mW
- Maximum Voltages and Currents ($T_a=25^\circ\text{C}$)
 - VCBO Collector to Base Voltage -400 V
 - VCEO Collector to Emitter Voltage -400 V
 - VEBO Emitter to Base Voltage -6 V
 - I_C Collector Current -150 mA

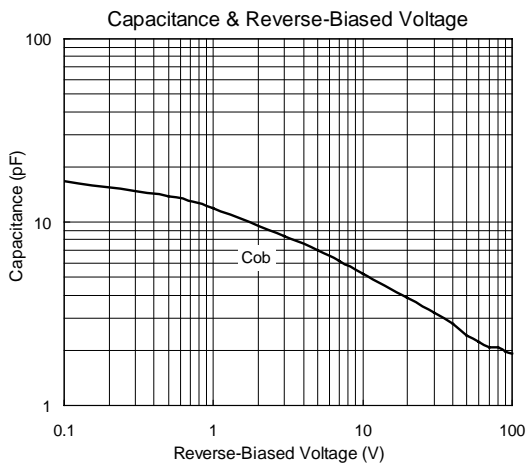
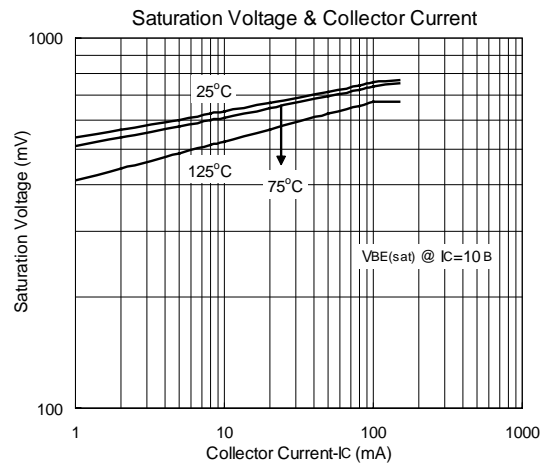
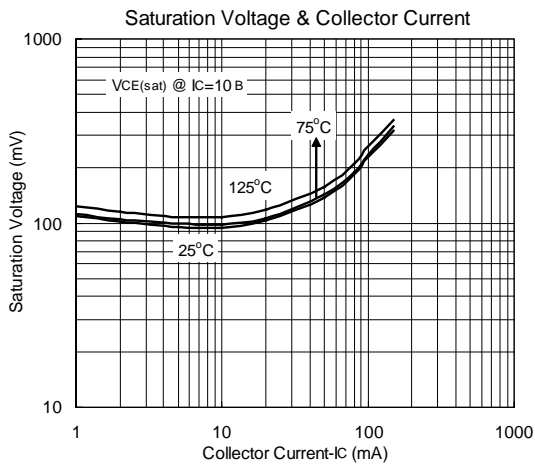
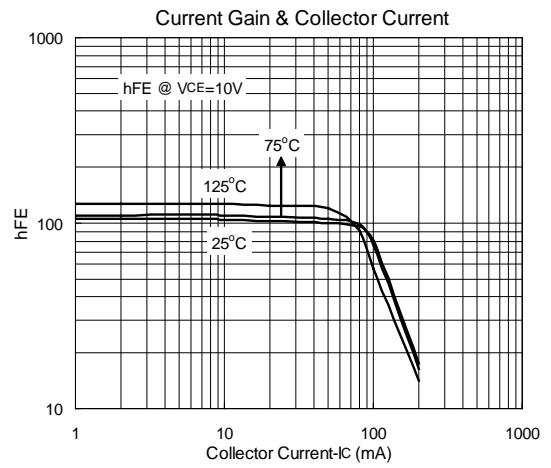
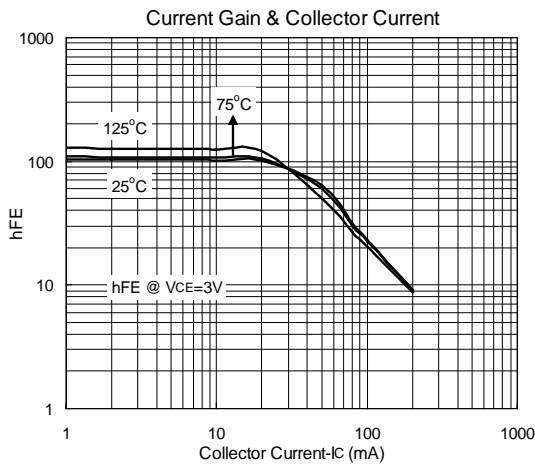
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-400	-	-	V	$I_C=-100\mu\text{A}, I_E=0$
BVCEO	-400	-	-	V	$I_C=-1\text{mA}, I_B=0$
BVEBO	-6	-	-	V	$I_E=-10\mu\text{A}, I_C=0$
ICBO	-	-	-100	nA	$V_{CB}=-400\text{V}, I_E=0$
IEBO	-	-	-100	nA	$V_{EB}=-6\text{V}, I_C=0$
ICES	-	-	-500	nA	$V_{CE}=-400\text{V}, V_{BE}=0$
* $V_{CE}(\text{sat})_1$	-	-	-200	mV	$I_C=-1\text{mA}, I_B=-0.1\text{mA}$
* $V_{CE}(\text{sat})_2$	-	-	-300	mV	$I_C=-10\text{mA}, I_B=-1\text{mA}$
* $V_{CE}(\text{sat})_3$	-	-	-600	mV	$I_C=-50\text{mA}, I_B=-5\text{mA}$
* $V_{BE}(\text{sat})$	-	-	-900	mV	$I_C=-10\text{mA}, I_B=-1\text{mA}$
* h_{FE1}	50	-	-		$V_{CE}=-10\text{V}, I_C=-1\text{mA}$
* h_{FE2}	75	-	200		$V_{CE}=-10\text{V}, I_C=-10\text{mA}$
* h_{FE3}	60	-	-		$V_{CE}=-10\text{V}, I_C=-50\text{mA}$
* h_{FE4}	20	-	-		$V_{CE}=-10\text{V}, I_C=-100\text{mA}$
Cob	-	4	6	pF	$V_{CE}=-10\text{V}, f=1\text{MHz}$

*Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$



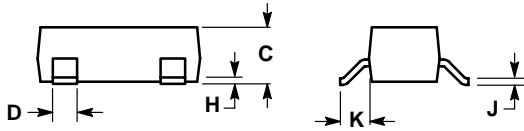
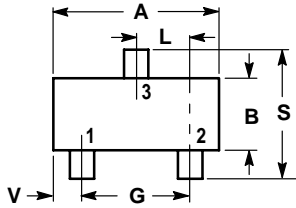
MMBT94



SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

