



HMBTA94

PNP EPITAXIAL PLANAR TRANSISTOR

Description

The HMBTA94 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 HMBTA44

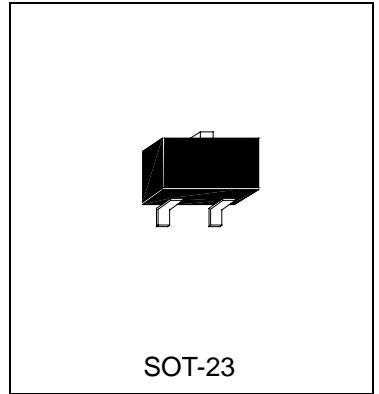
Absolute Maximum Ratings

- 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
IC Collector Current -150 mA

Characteristics ($T_a=25^\circ\text{C}$)

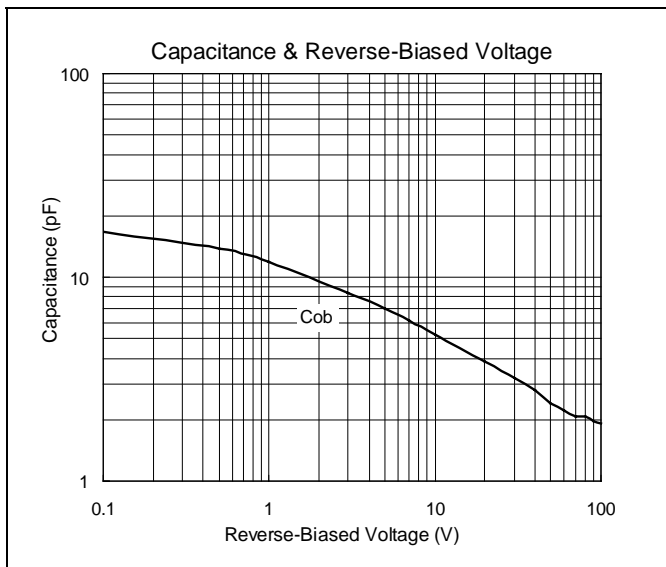
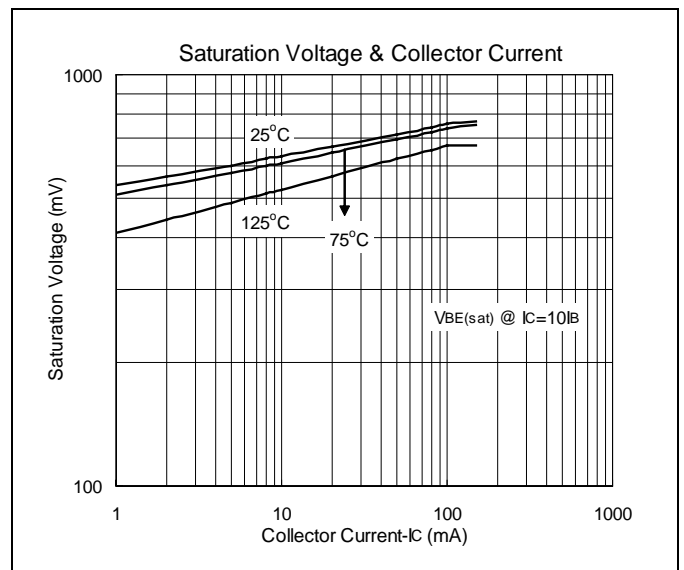
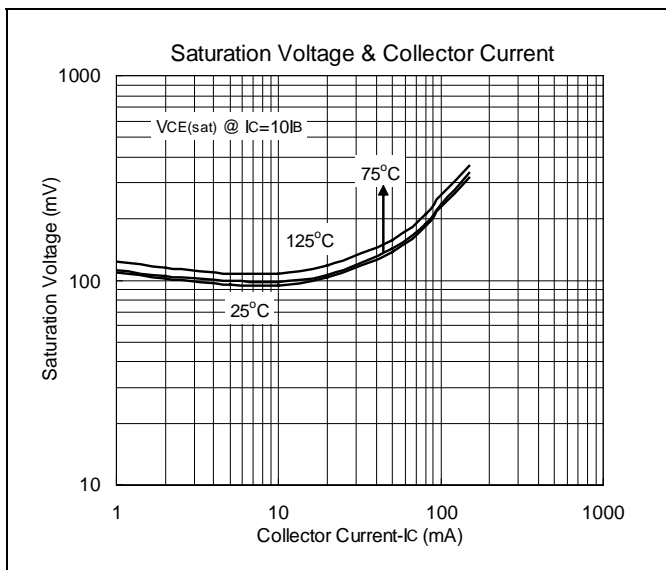
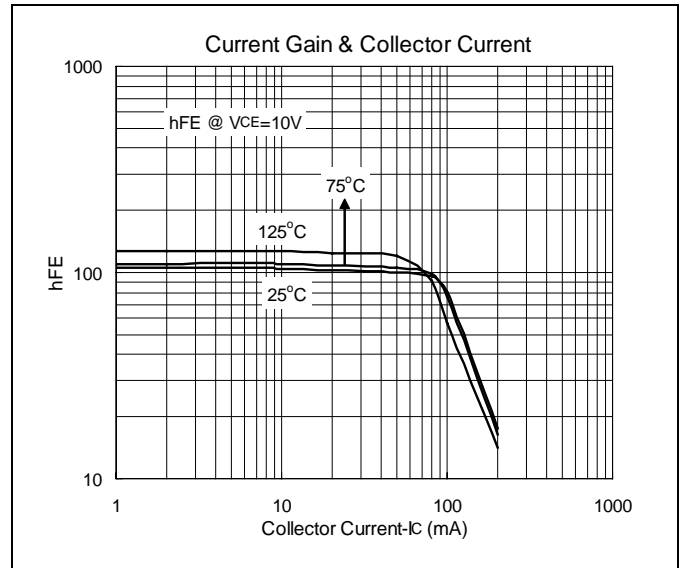
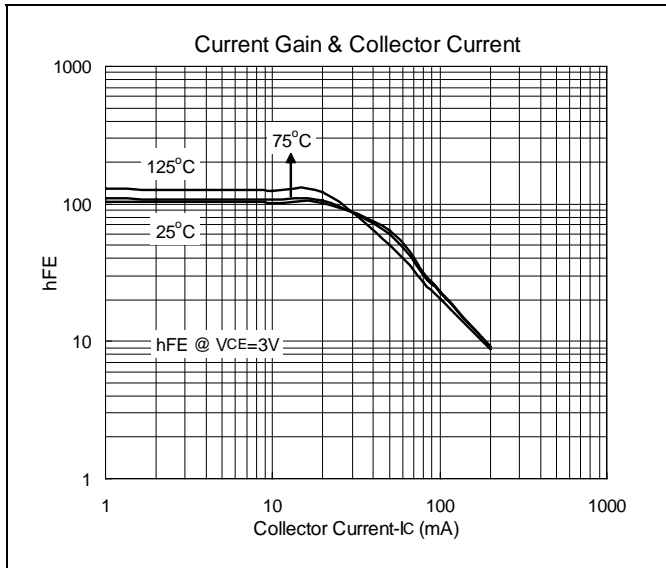
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-400	-	-	V	$I_C=-100\mu\text{A}$, $I_E=0$
BVCEO	-400	-	-	V	$I_C=-1\text{mA}$, $I_B=0$
BVEBO	-6	-	-	V	$I_E=-10\mu\text{A}$, $I_C=0$
ICBO	-	-	-100	nA	$V_{CB}=-400\text{V}$, $I_E=0$
IEBO	-	-	-100	nA	$V_{EB}=-6\text{V}$, $I_C=0$
ICES	-	-	-500	nA	$V_{CE}=-400\text{V}$, $V_{BE}=0$
*VCE(sat)1	-	-	-200	mV	$I_C=-1\text{mA}$, $I_B=-0.1\text{mA}$
*VCE(sat)2	-	-	-300	mV	$I_C=-10\text{mA}$, $I_B=-1\text{mA}$
*VCE(sat)3	-	-	-600	mV	$I_C=-50\text{mA}$, $I_B=-5\text{mA}$
*VBE(sat)	-	-	-900	mV	$I_C=-10\text{mA}$, $I_B=-1\text{mA}$
*hFE1	50	-	-		$V_{CE}=-10\text{V}$, $I_C=-1\text{mA}$
*hFE2	75	-	200		$V_{CE}=-10\text{V}$, $I_C=-10\text{mA}$
*hFE3	60	-	-		$V_{CE}=-10\text{V}$, $I_C=-50\text{mA}$
*hFE4	40	-	-		$V_{CE}=-10\text{V}$, $I_C=-100\text{mA}$
Cob	-	4	6	pF	$V_{CE}=-10\text{V}$, $f=1\text{MHz}$

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



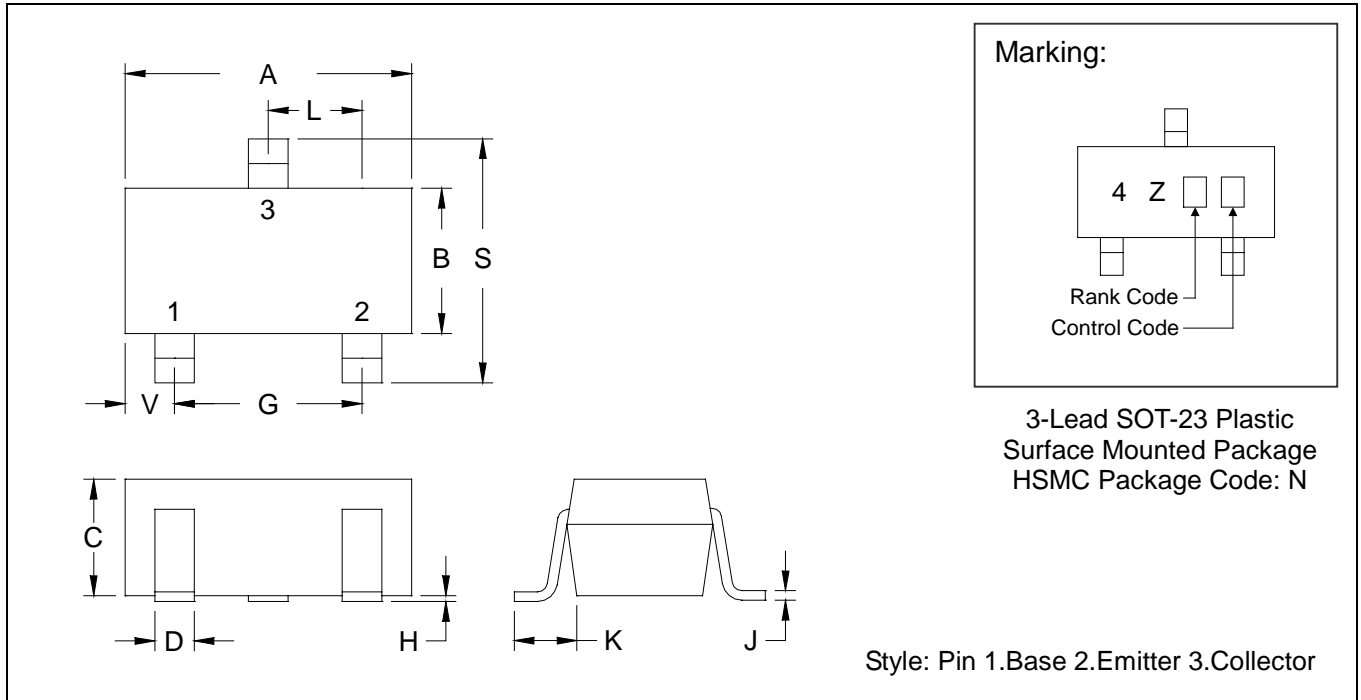


Characteristics Curve





SOT-23 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

- Notes: 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.
 2.Controlling dimension: millimeters.
 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Material:

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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Head Office And Factory:

- **Head Office** (Hi-Sincerity Microelectronics Corp.): 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.
 Tel: 886-2-25212056 Fax: 886-2-25632712, 25368454
- **Factory 1:** No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
 Tel: 886-3-5983621~5 Fax: 886-3-5982931



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