



HMP5A44V

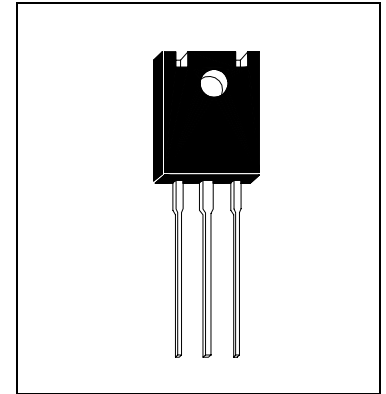
NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HMP5A44V is designed for application that require high voltage.

Features

- High Voltage: $V_{CEO}=400(\text{min})$ at $I_C=1\text{mA}$
- High Current: $I_C=300\text{mA}$ at 25°C
- Complementary to HMP5A94V



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

- Maximum Temperatures
 Storage Temperature $-55 \sim +150^\circ\text{C}$
 Junction Temperature $+150^\circ\text{C}$ Maximum
- Maximum Power Dissipation
 Total Power Dissipation ($T_a=25^\circ\text{C}$) 1.3 W
- Maximum Voltages and Currents
 BVC_{BO} Collector to Base Voltage 400 V
 BV_{CEO} Collector to Emitter Voltage 400 V
 BVE_{BO} Emitter to Base Voltage 6 V
 I_C Collector Current 300 mA

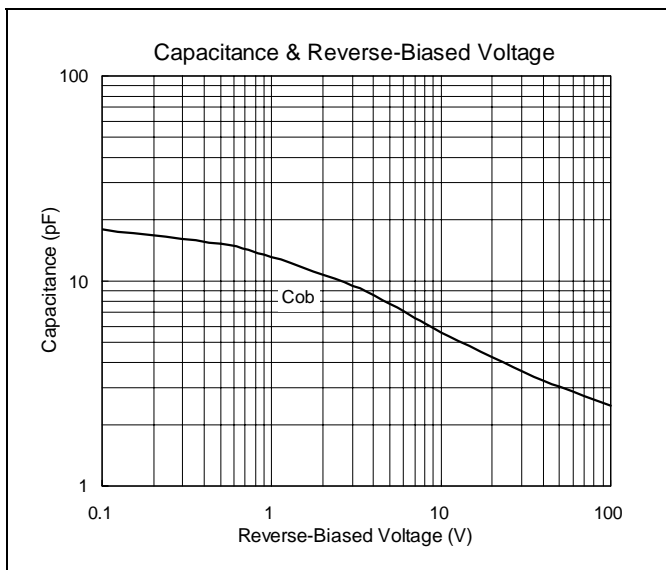
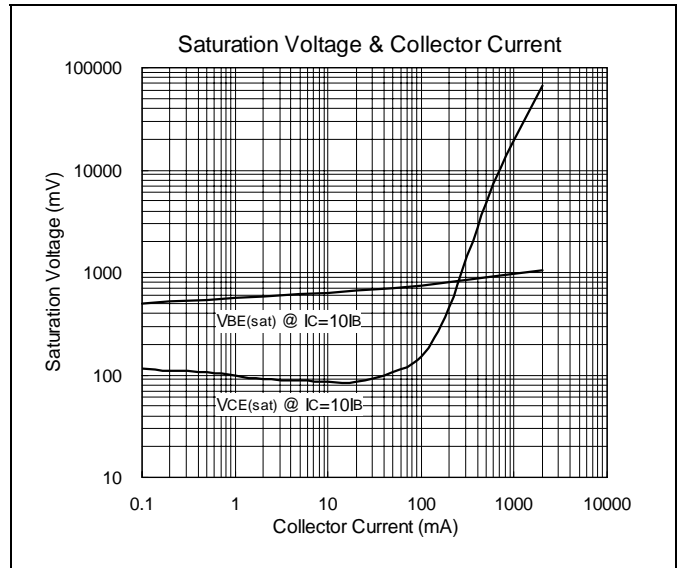
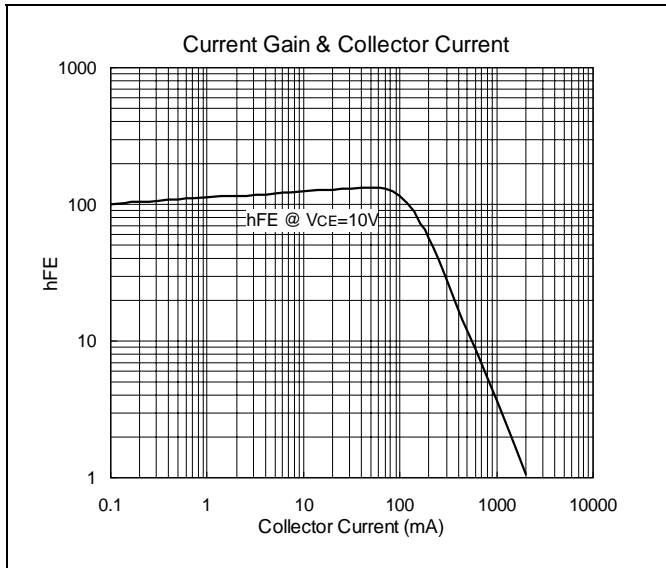
Electrical Characteristics ($T_a=25^\circ\text{C}$)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVC_{BO}	400	-	-	V	$I_C=100\mu\text{A}$
BV_{CEO}	400	-	-	V	$I_C=1\text{mA}$
BVE_{BO}	6	-	-	V	$I_E=10\mu\text{A}$
IC_{BO}	-	-	100	nA	$V_{CB}=400\text{V}$
IE_{BO}	-	-	100	nA	$V_{EB}=4\text{V}$
IC_{ES}	-	-	500	nA	$V_{CE}=400\text{V}$
* $V_{CE}(\text{sat})_1$	-	-	320	mV	$I_C=1\text{mA}, I_B=0.1\text{mA}$
* $V_{CE}(\text{sat})_2$	-	-	350	mV	$I_C=20\text{mA}, I_B=2\text{mA}$
* $V_{CE}(\text{sat})_3$	-	-	750	mV	$I_C=50\text{mA}, I_B=5\text{mA}$
* $V_{BE}(\text{sat})$	-	-	750	mV	$I_C=10\text{mA}, I_B=1\text{mA}$
* h_{FE1}	40	-	-		$I_C=1\text{mA}, V_{CE}=10\text{V}$
* h_{FE2}	50	-	300		$I_C=10\text{mA}, V_{CE}=10\text{V}$
* h_{FE3}	45	-	-		$I_C=50\text{mA}, V_{CE}=10\text{V}$
* h_{FE4}	40	-	-		$I_C=100\text{mA}, V_{CE}=10\text{V}$
fT	50	-	-	MHz	$I_C=10\text{mA}, V_{CE}=20\text{V}, f=100\text{MHz}$
Cob	-	4	-	pF	$V_{CB}=20\text{V}, f=1\text{MHz}$

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

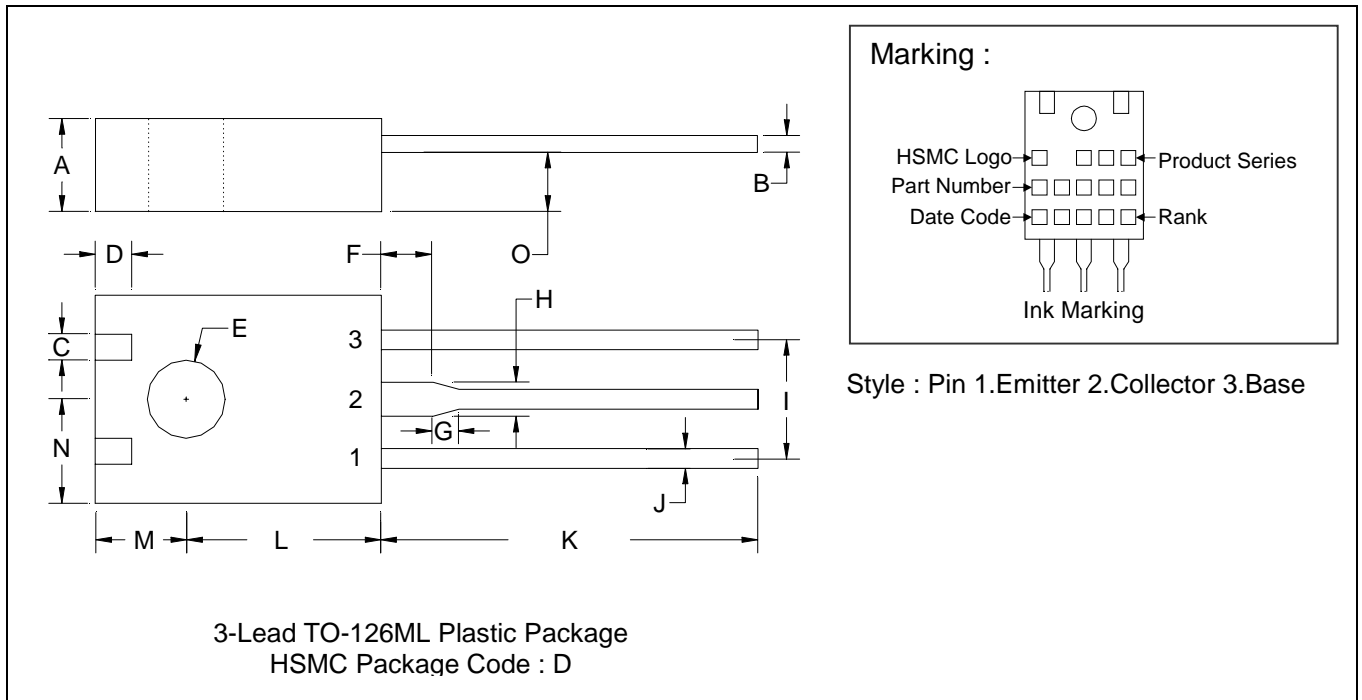


Characteristics Curve





TO-126ML Dimension



*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1356	0.1457	3.44	3.70	I	-	*0.1795	-	*4.56
B	0.0170	0.0272	0.43	0.69	J	0.0268	0.0331	0.68	0.84
C	0.0344	0.0444	0.87	1.12	K	0.5512	0.5906	14.00	15.00
D	0.0501	0.0601	1.27	1.52	L	0.2903	0.3003	7.37	7.62
E	0.1131	0.1231	2.87	3.12	M	0.1378	0.1478	3.50	3.75
F	0.0737	0.0837	1.87	2.12	N	0.1525	0.1625	3.87	4.12
G	0.0294	0.0494	0.74	1.25	O	0.0740	0.0842	1.88	2.14
H	0.0462	0.0562	1.17	1.42					

Notes : 1.Dimension and tolerance based on our Spec. dated Mar. 6,1995.
 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

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of HSMC.
- HSMC reserves the right to make changes to its products without notice.
- **HSMC semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- HSMC assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

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
- **Factory 2** : No. 17-1, Ta-Tung Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C
 Tel : 886-3-5977061 Fax : 886-3-5979220