

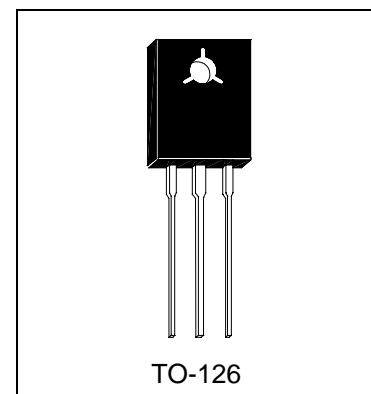


# HMJE13003

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

- High Voltage, High Speed Power Switch
- Switch Regulators
- PWM Inverters and Motor Controls
- Solenoid and Relay Drivers
- Deflection Circuits



## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures  
Storage Temperature ..... -50 ~ +150 °C  
Junction Temperature ..... 150 °C Maximum
- Maximum Power Dissipation  
Total Power Dissipation (Tc=25°C) ..... 40 W
- Maximum Voltages and Currents (Ta=25°C)  
VCEX Collector to Emitter Voltage ..... 700 V  
VCEO Collector to Emitter Voltage ..... 400 V  
VEBO Emitter to Base Voltage ..... 9 V  
IC Collector Current ..... Continuous 1.5 A  
IB Base Current ..... Continuous 0.75 A

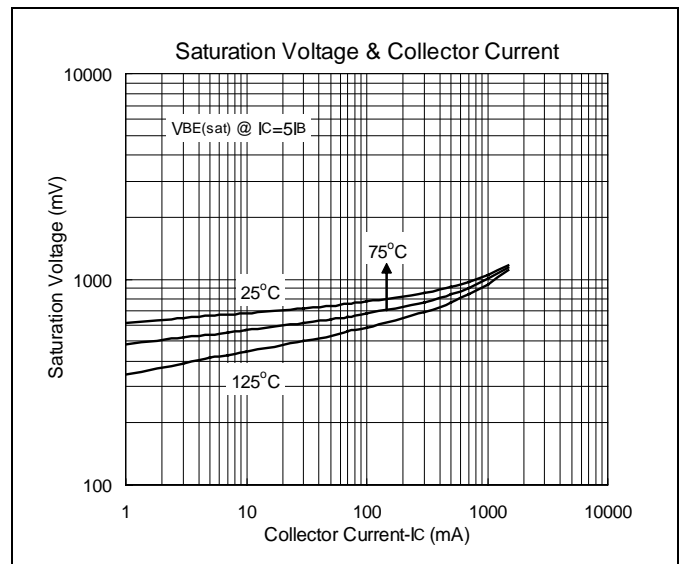
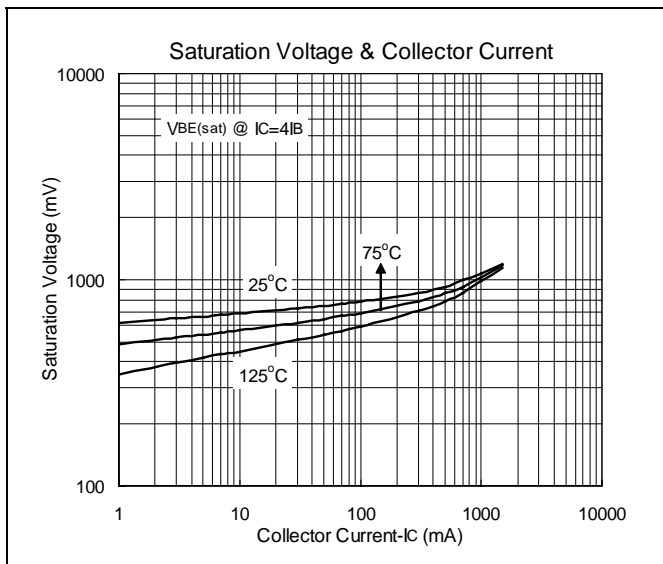
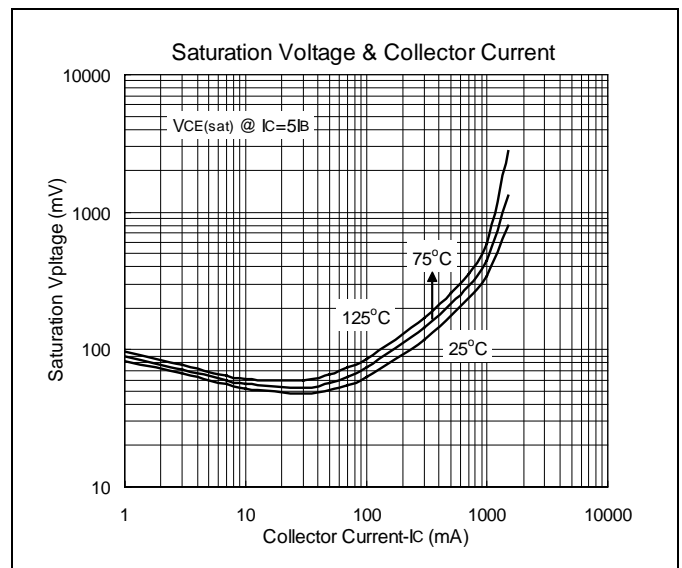
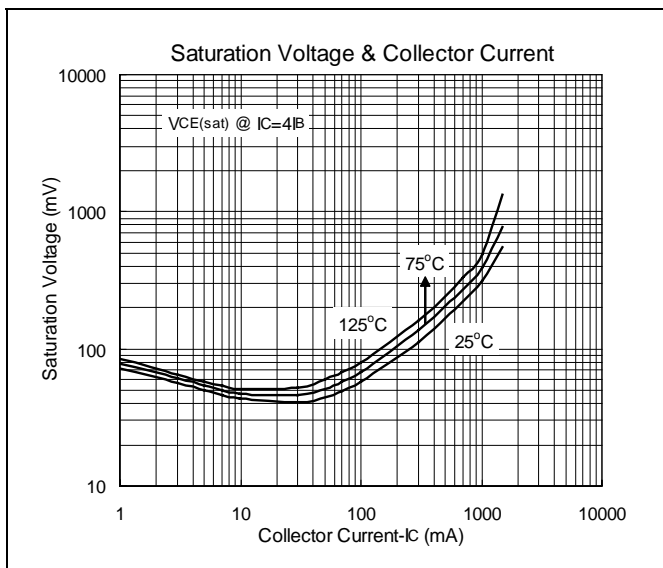
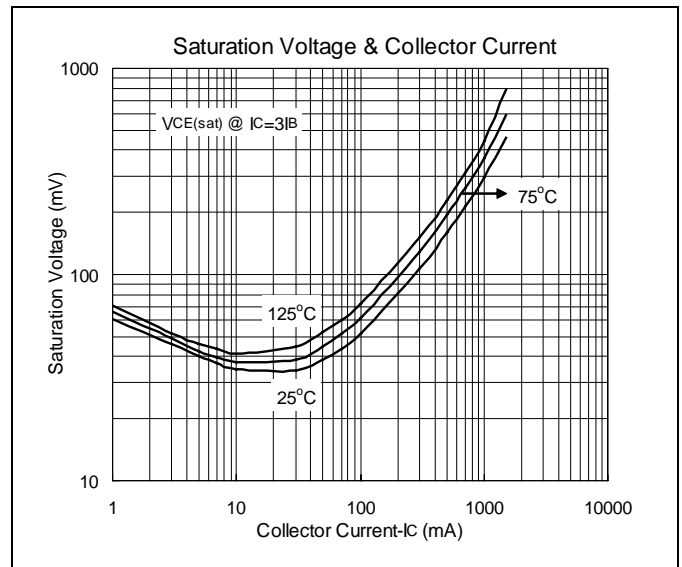
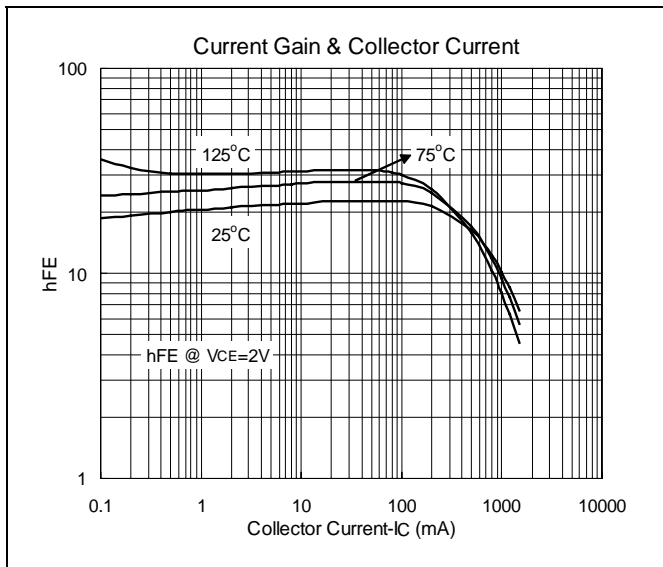
## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCEX	700	-	-	V	IC=1mA, VBE(off)=1.5V
BVCEO	400	-	-	V	IC=10mA
IEBO	-	-	1	mA	VEB=9V
ICEX	-	-	1	mA	VCE=700V, VBE(off)=1.5V
*VCE(sat)1	-	-	500	mV	IC=0.5A, IB=0.1A
*VCE(sat)2	-	-	1	V	IC=1A, IB=0.25A
*VCE(sat)3	-	-	3	V	IC=1.5A, IB=0.5A
*VBE(sat)	-	-	1	V	IC=0.5A, IB=0.1A
*VBE(sat)	-	-	1.2	V	IC=1A, IB=0.25A
*hFE1	8	-	40		IC=0.5A, VCE=2V
*hFE2	5	-	25		IC=1A, VCE=2V

\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

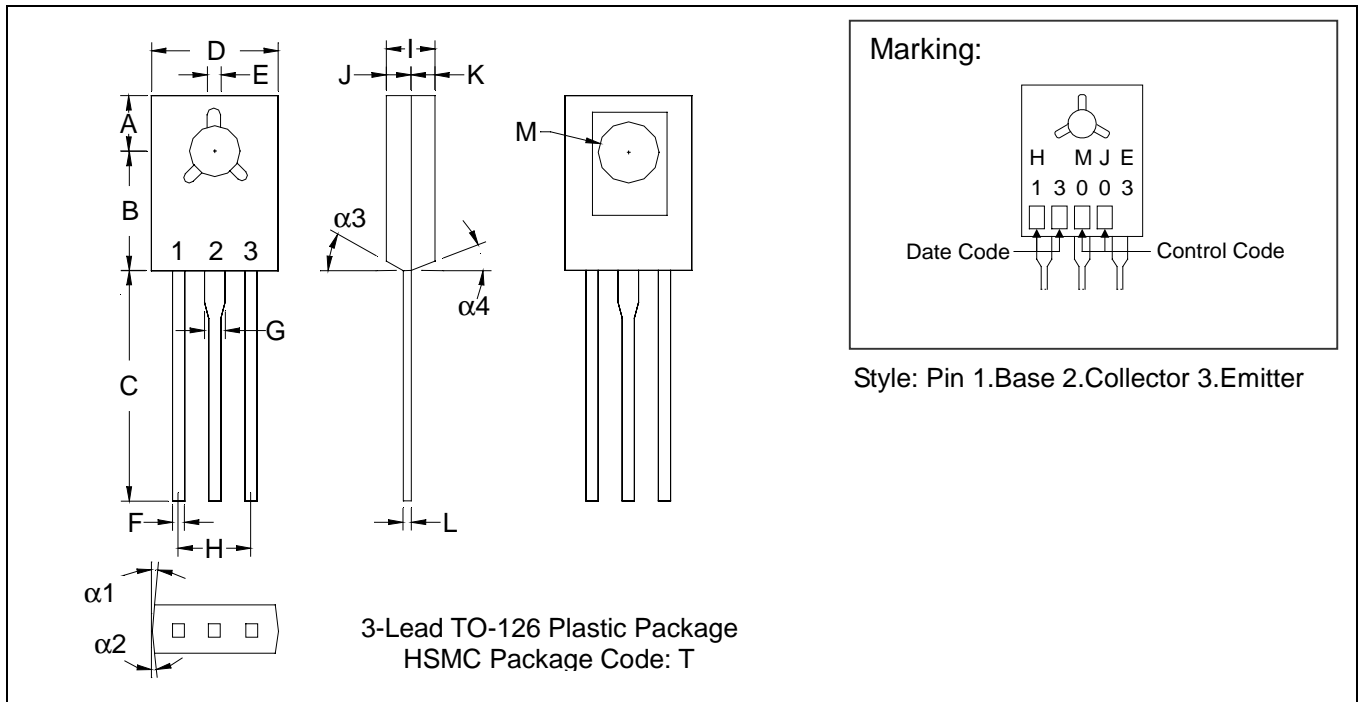


### Characteristics Curve





### TO-126 Dimension



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
$\alpha 1$	-	*3°	-	*3°	F	0.0280	0.0319	0.71	0.81
$\alpha 2$	-	*3°	-	*3°	G	0.0480	0.0520	1.22	1.32
$\alpha 3$	-	*3°	-	*3°	H	0.1709	0.1890	4.34	4.80
$\alpha 4$	-	*3°	-	*3°	I	0.0950	0.1050	2.41	2.66
A	0.1500	0.1539	3.81	3.91	J	0.0450	0.0550	1.14	1.39
B	0.2752	0.2791	6.99	7.09	K	0.0450	0.0550	1.14	1.39
C	0.5315	0.6102	13.50	15.50	L	-	*0.0217	-	*0.55
D	0.2854	0.3039	7.52	7.72	M	0.1378	0.1520	3.50	3.86
E	0.0374	0.0413	0.95	1.05					

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

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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