



HLB123D

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HLB123D is designed for high voltage. High speed switching inductive circuits and amplifier applications.

Features

- High Speed Switching
- Low Saturation Voltage
- High Reliability

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) 30 W
- Maximum Voltages and Currents
BVCBO Collector to Base Voltage 600 V
BVCEO Collector to Emitter Voltage 400 V
BVEBO Emitter to Base Voltage 8 V
IC Collector Current (DC) 1 A
IC Collector Current (Pulse) 2 A

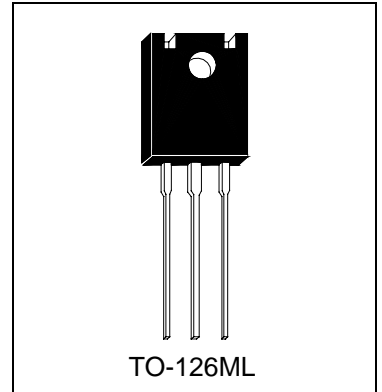
Electrical Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	600	-	-	V	IC=1mA, IE=0
BVCEO	400	-	-	V	IC=10mA, IB=0
BVEBO	8	-	-	V	IE=1mA, IC=0
ICBO	-	-	10	uA	VCB=600V, IE=0
IEBO	-	-	10	uA	VBE=9V, IC=0
*VCE(sat)1	-	-	0.8	V	IC=0.1A, IB=10mA
*VCE(sat)2	-	-	0.9	V	IC=0.3A, IB=30mA
*VBE(sat)1	-	-	1.2	V	IC=0.1A, IB=10mA
*VBE(sat)2	-	-	1.8	V	IC=0.3A, IB=30Ma
*hFE1	10	-	50		IC=0.3A, VCE=5V
*hFE2	10	-	-		IC=0.5A, VCE=5V
*hFE3	6	-	-		IC=1A, VCE=5V
Ton	-	0.4	1.1	uS	VCC=100V, IC=1A, IB1=IB2=0.2A
Tstg	-	2.4	4	uS	VCC=100V, IC=1A, IB1=IB2=0.2A
Toff	-	0.3	0.7	uS	VCC=100V, IC=1A, IB1=IB2=0.2A

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

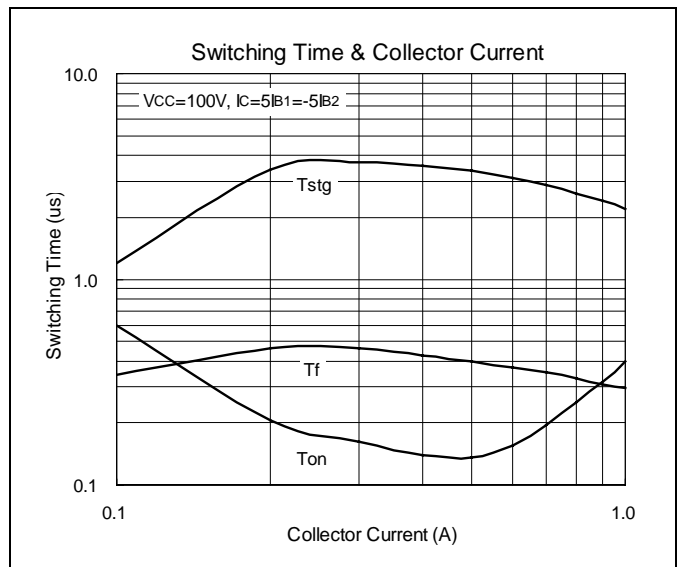
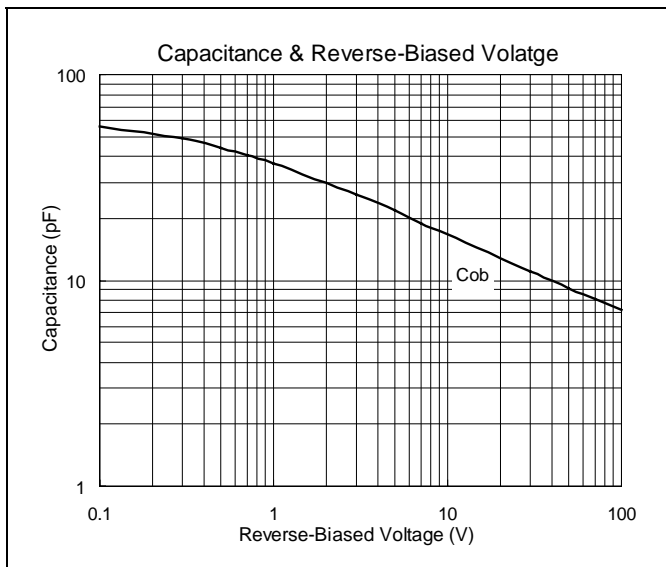
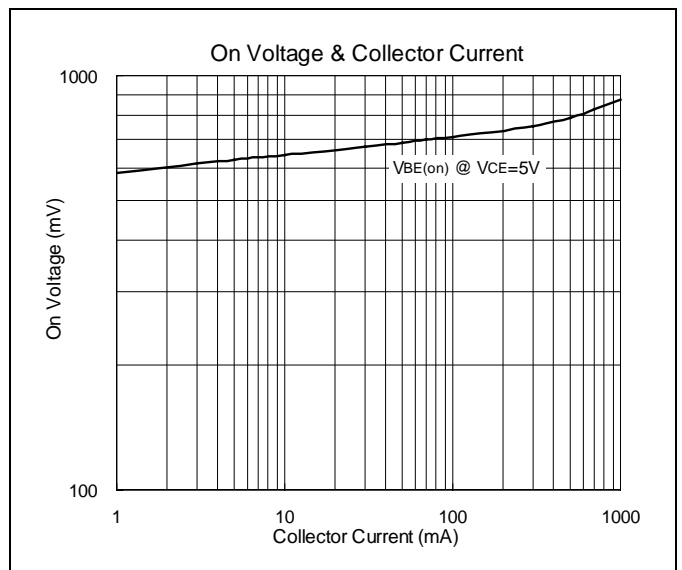
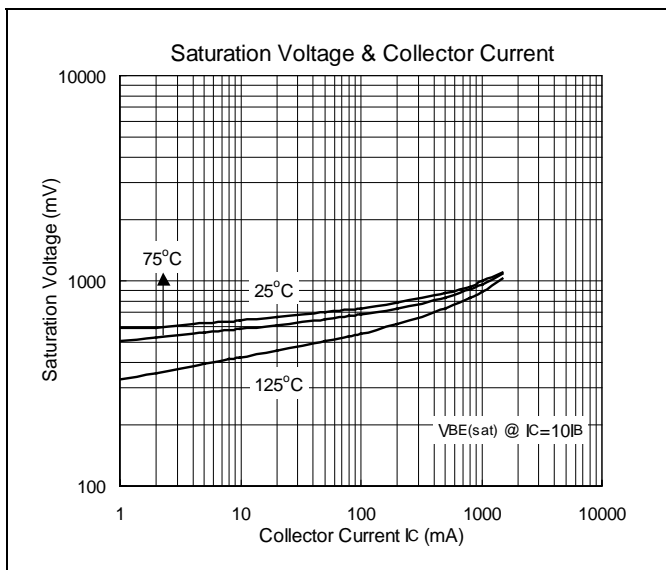
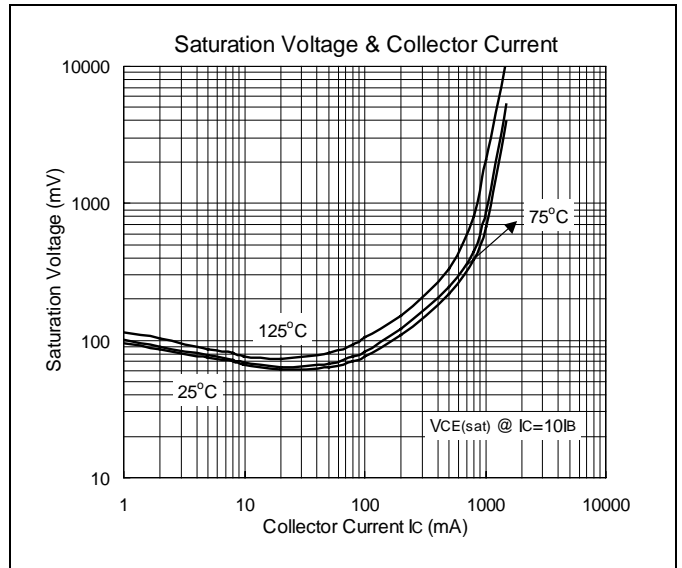
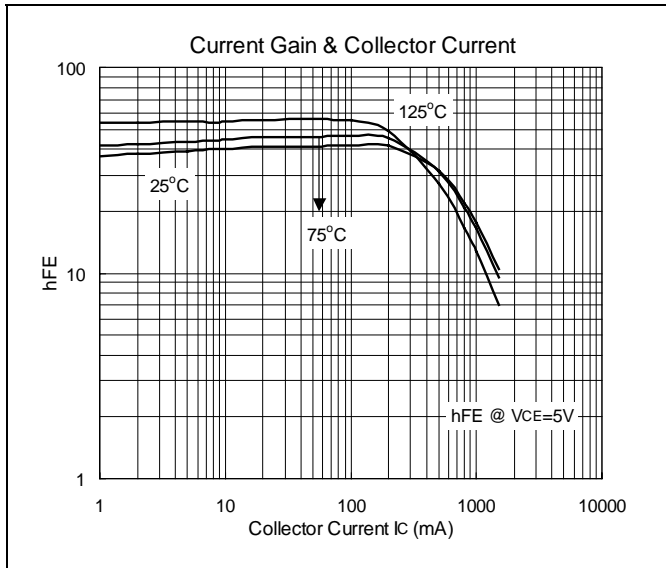
Classification Of hFE1

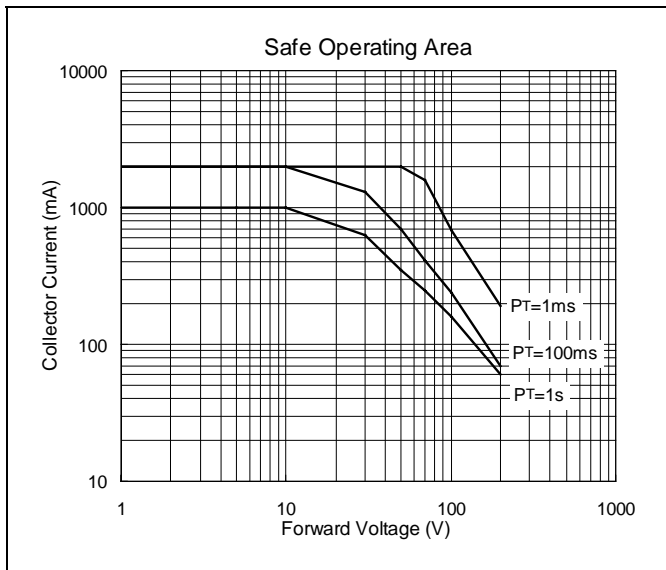
Rank	B1	B2	B3	B4	B5	B6	B7	B8
Range	10-17	13-22	18-27	23-32	28-37	33-42	38-47	43-50





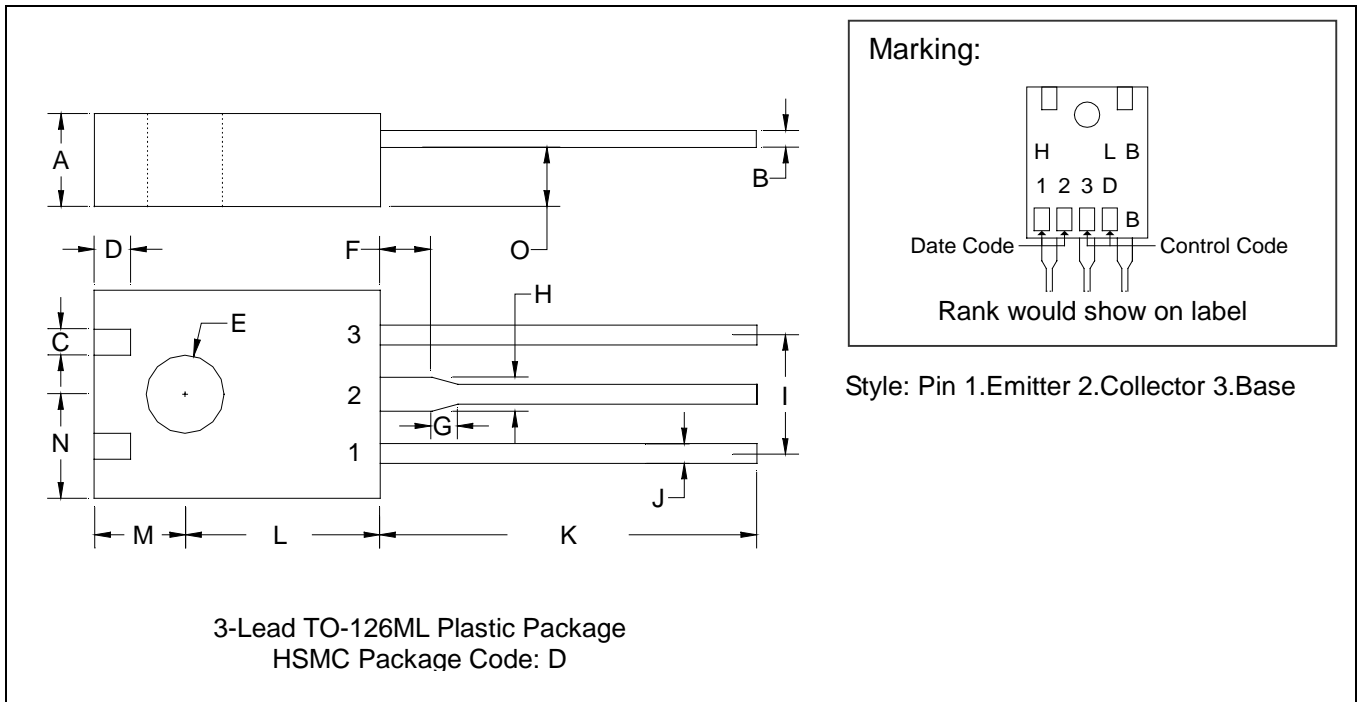
Characteristics Curve







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