



# HLB125E

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

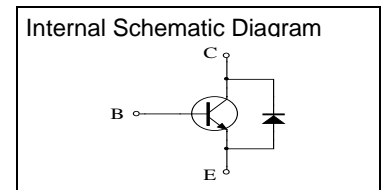
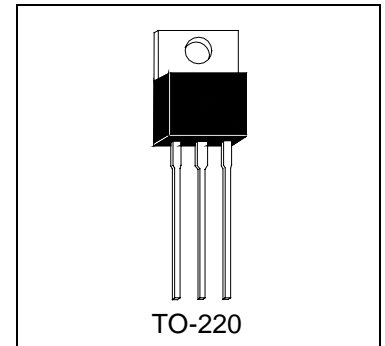
The HLB125E is designed for lighting applications and low switch-mode power supplies. And it is high voltage capability and high switching speeds.

## Features

- High Speed Switching
- Low Saturation Voltage
- High Reliability

## Absolute Maximum Ratings

- Maximum Temperatures  
 Storage Temperature ..... -55 ~ +150 °C  
 Junction Temperature ..... +150 °C
- Maximum Power Dissipation  
 Total Power Dissipation (Tc=25°C)..... 40 W
- Maximum Voltages and Currents (Ta=25°C)  
 VCBO Collector to Base Voltage..... 600 V  
 VCEO Collector to Emitter Voltage ..... 400 V  
 VEBO Emitter to Base Voltage..... 9 V  
 IC Collector Current (DC)..... 5 A  
 IC Collector Current (Pulse)..... 8 A  
 IB Base Current (DC)..... 2 A  
 IB Base Current (Pulse)..... 4 A



## 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	9	-	-	V	IE=10mA, IC=0
ICES	-	-	100	UA	VCE=700V
ICEO	-	-	100	uA	VCE=400V
*VCE(sat)1	-	-	0.5	V	IC=1A, IB=0.2A
*VCE(sat)2	-	-	0.7	V	IC=2A, IB=0.4A
*VCE(sat)3	-	-	1.1	V	IC=3A, IB=0.75A
*VBE(sat)1	-	-	1.1	V	IC=1A, IB=0.2A
*VBE(sat)2	-	-	1.2	V	IC=2A, IB=0.4A
*hFE1	8	-	35		IC=2A, VCE=5V
*hFE2	10	-	-		IC=10mA, VCE=5V

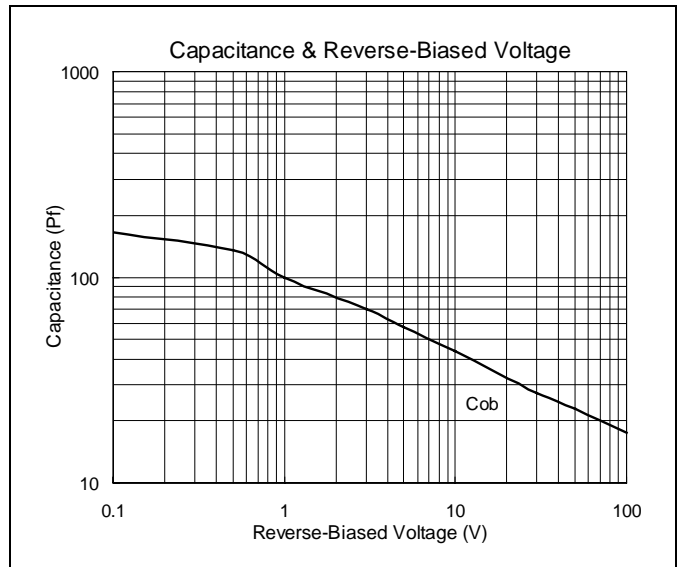
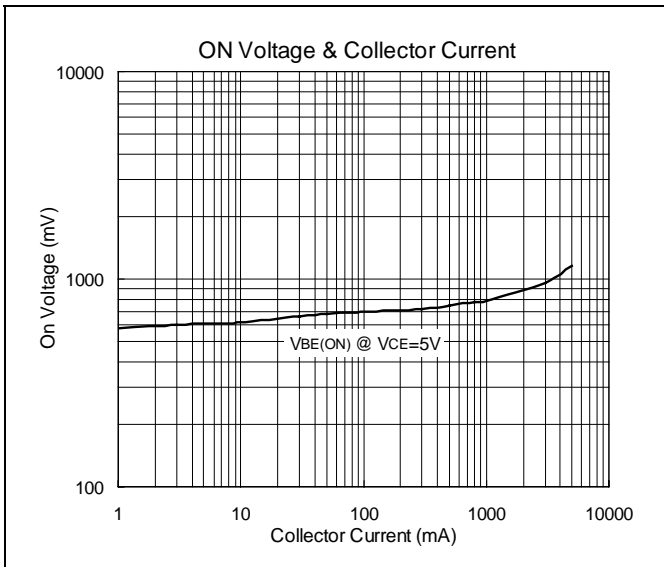
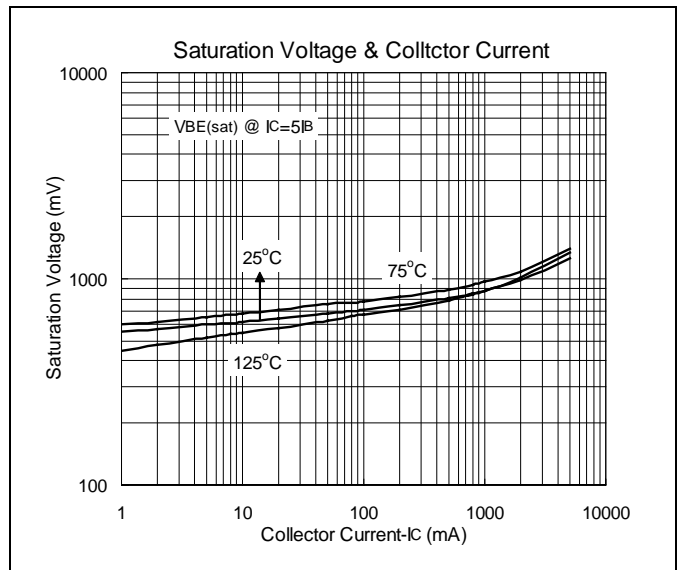
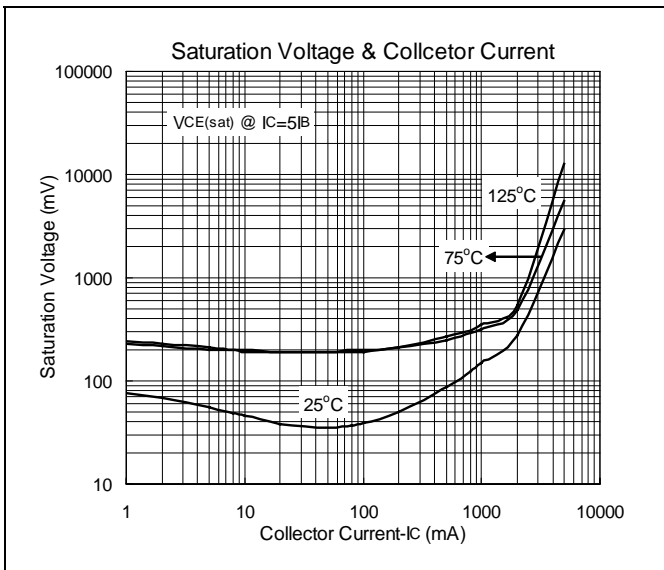
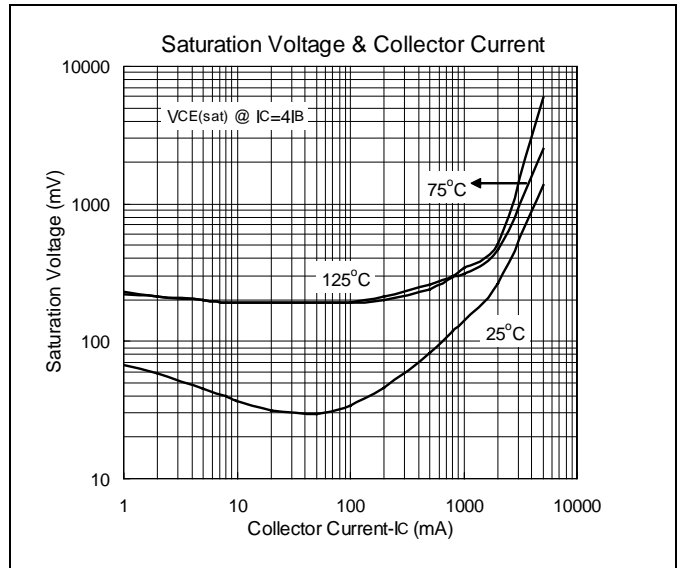
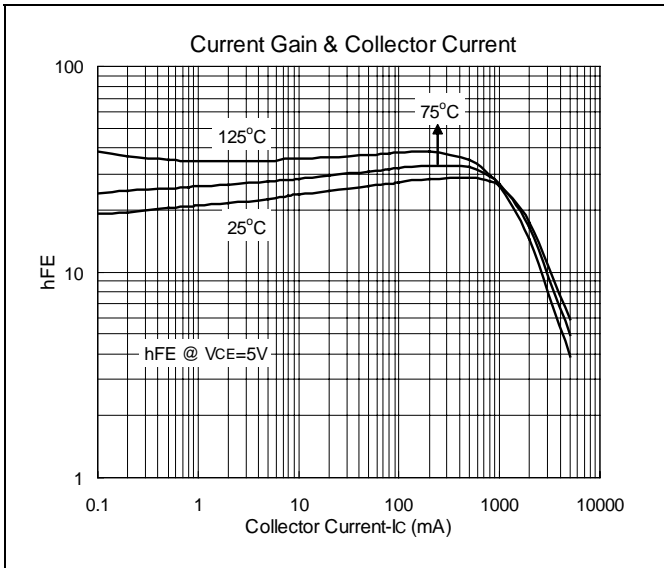
\*Pulse Test: Pulse Width ≤380us, Duty Cycles≤2%

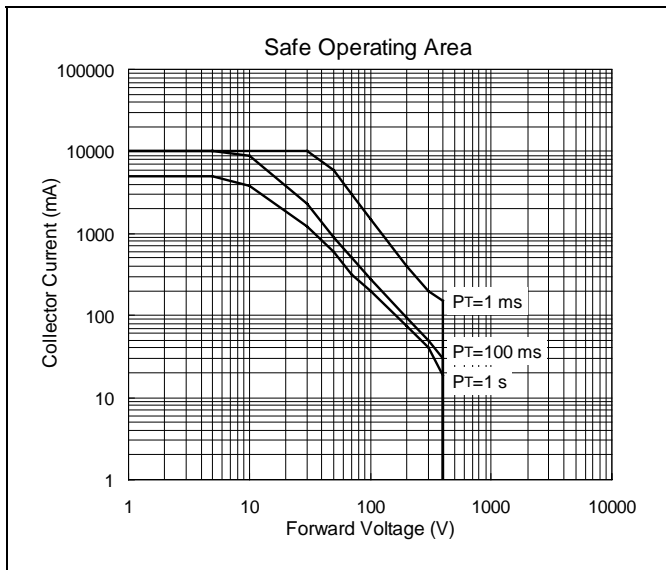
## Classification Of hFE1

Rank	B1	B2	B3	B4	B5
hFE1	8-17	15-21	19-25	23-31	29-35



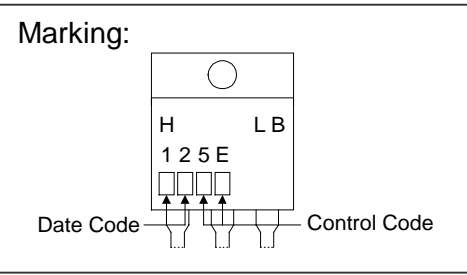
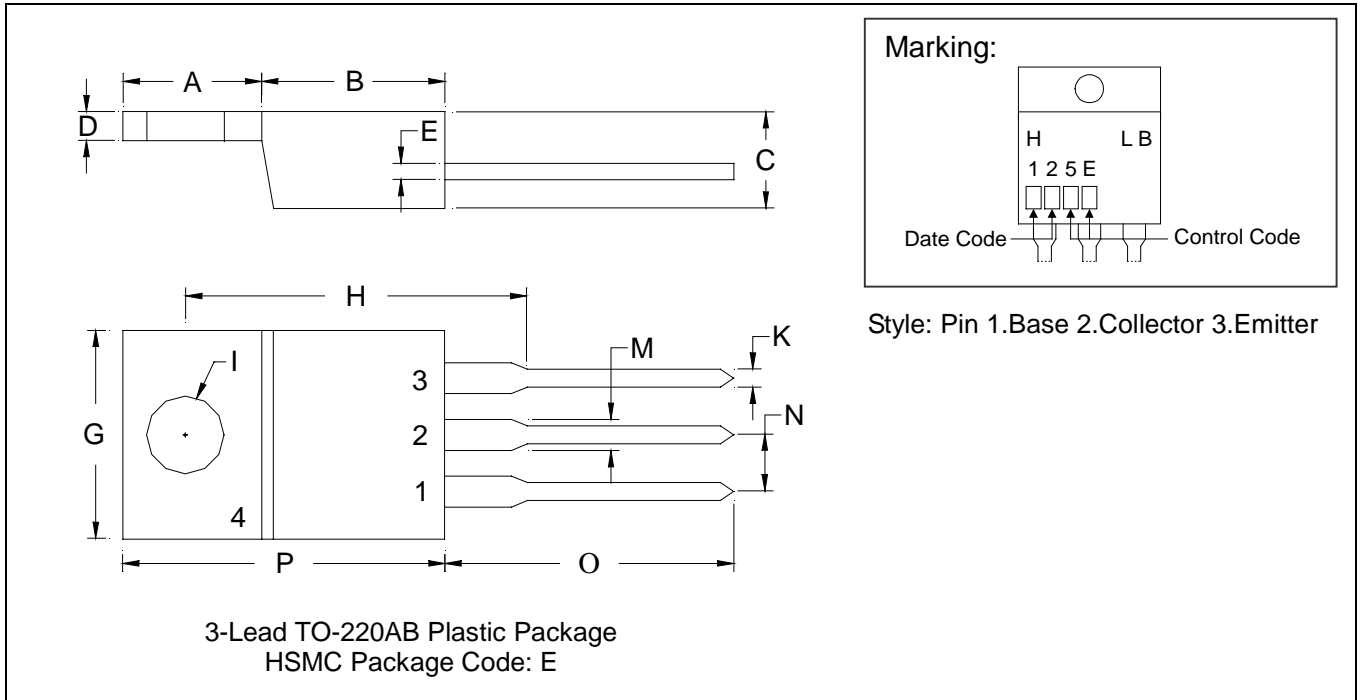
### Characteristics Curve







### TO-220AB Dimension



Style: Pin 1.Base 2.Collector 3.Emitter

\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2197	0.2949	5.58	7.49	I	-	*0.1508	-	*3.83
B	0.3299	0.3504	8.38	8.90	K	0.0295	0.0374	0.75	0.95
C	0.1732	0.185	4.40	4.70	M	0.0449	0.0551	1.14	1.40
D	0.0453	0.0547	1.15	1.39	N	-	*0.1000	-	*2.54
E	0.0138	0.0236	0.35	0.60	O	0.5000	0.5618	12.70	14.27
G	0.3803	0.4047	9.66	10.28	P	0.5701	0.6248	14.48	15.87
H	-	*0.6398	-	*16.25					

- 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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