



# HLB124E

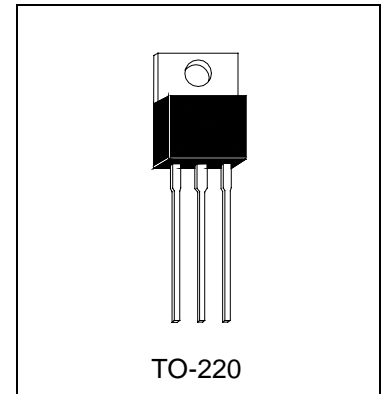
NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HLB124E 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 ..... -55 ~ +150 °C
  - Junction Temperature ..... +150 °C
- Maximum Power Dissipation
  - Total Power Dissipation (Tc=25°C)..... 35 W
- Maximum Voltages and Currents (Ta=25°C)
  - 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)..... 2 A
  - IC Collector Current (Pulse)..... 4 A
  - IB Base Current (DC)..... 1 A
  - IB Base Current (Pulse)..... 2 A

## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	600	-	-	V	IC=1mA
BVCEO	400	-	-	V	IC=10mA
BVEBO	8	-	-	V	IE=1mA
ICBO	-	-	10	uA	VCB=600V
IEBO	-	-	10	uA	VEB=9V, IC=0
*VCE(sat)1	-	-	0.3	V	IC=0.1A, IB=10mA
*VCE(sat)2	-	-	0.8	V	IC=0.3A, IB=30mA
*VBE(sat)1	-	-	0.9	V	IC=0.1A, IB=10mA
*VBE(sat)2	-	-	1.2	V	IC=0.3A, IB=30mA
*hFE1	10	-	40		VCE=5V, IC=0.3A
*hFE2	10	-	-		VCE=5V, IC=0.5A
*hFE3	6	-	-		VCE=5V, IC=1A
fT	15	-	-	MHz	VCE=10V, IC=0.3, f=1MHz

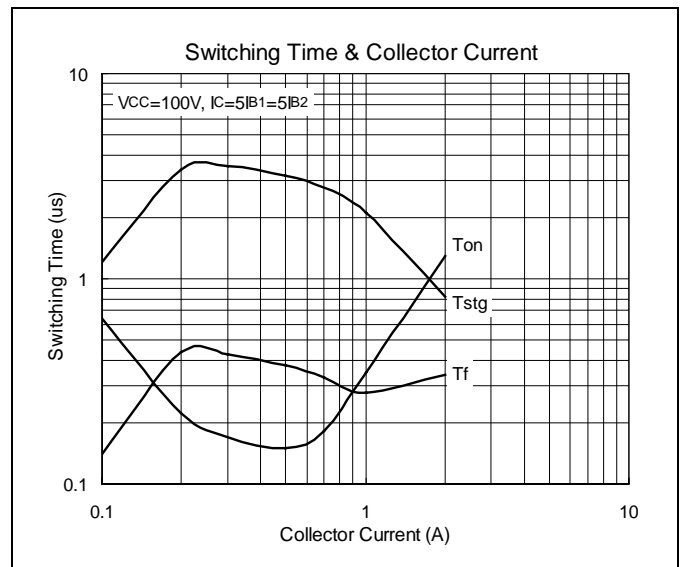
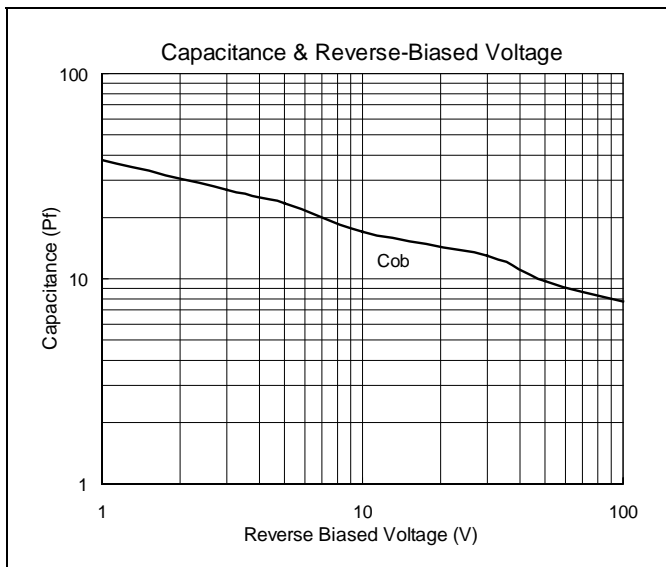
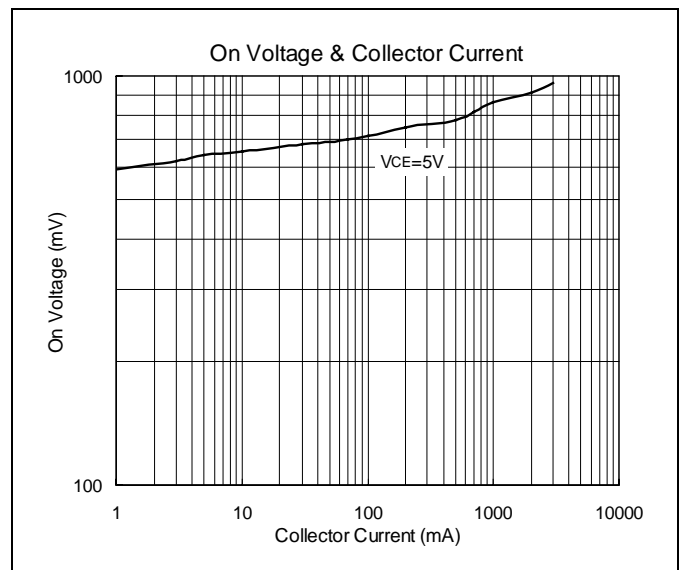
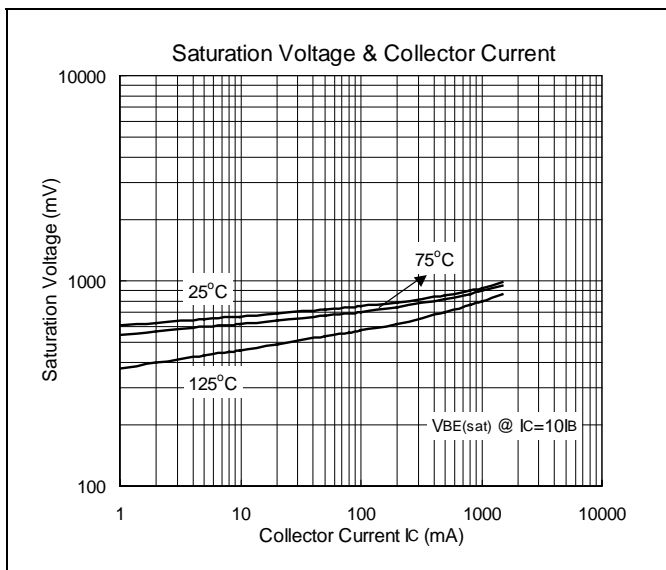
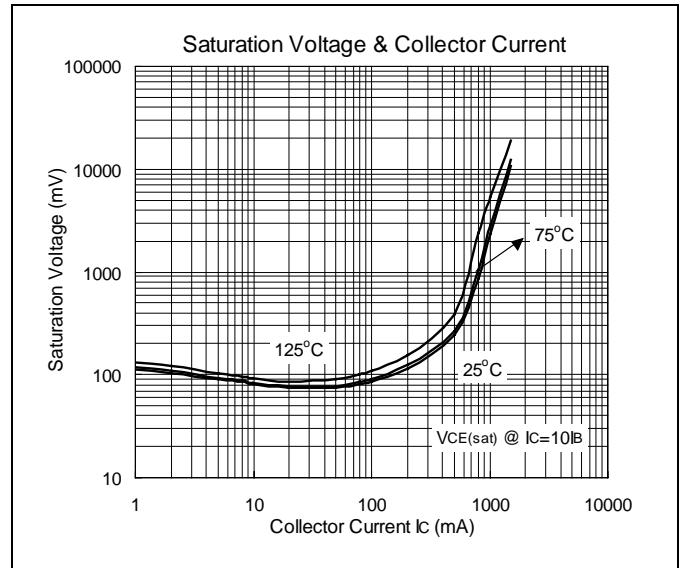
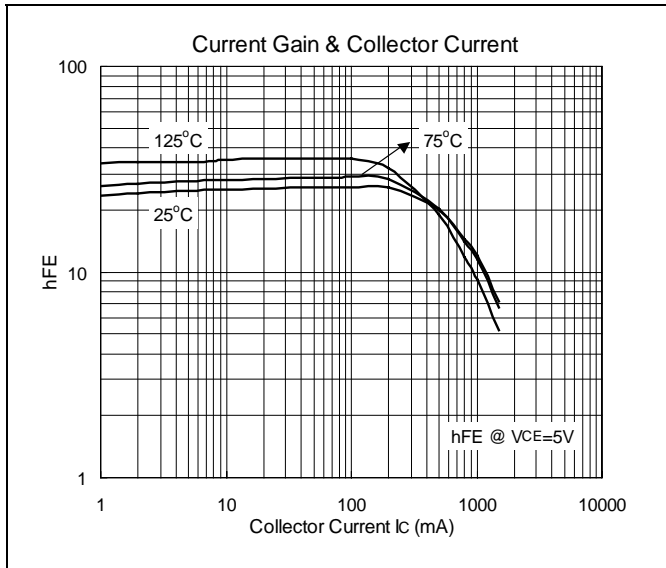
\*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

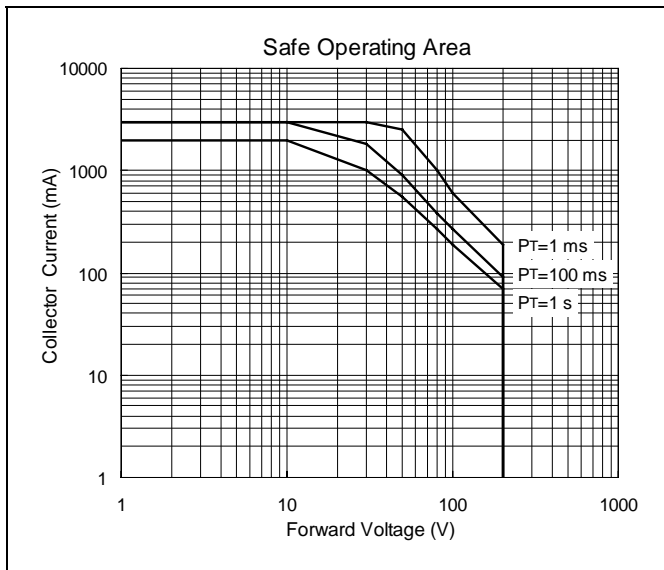
## Classification of hFE1

Rank	B1	B2	B3	B4	B5	B6
Range	10~17	13~22	18~27	23~32	28~37	33~40



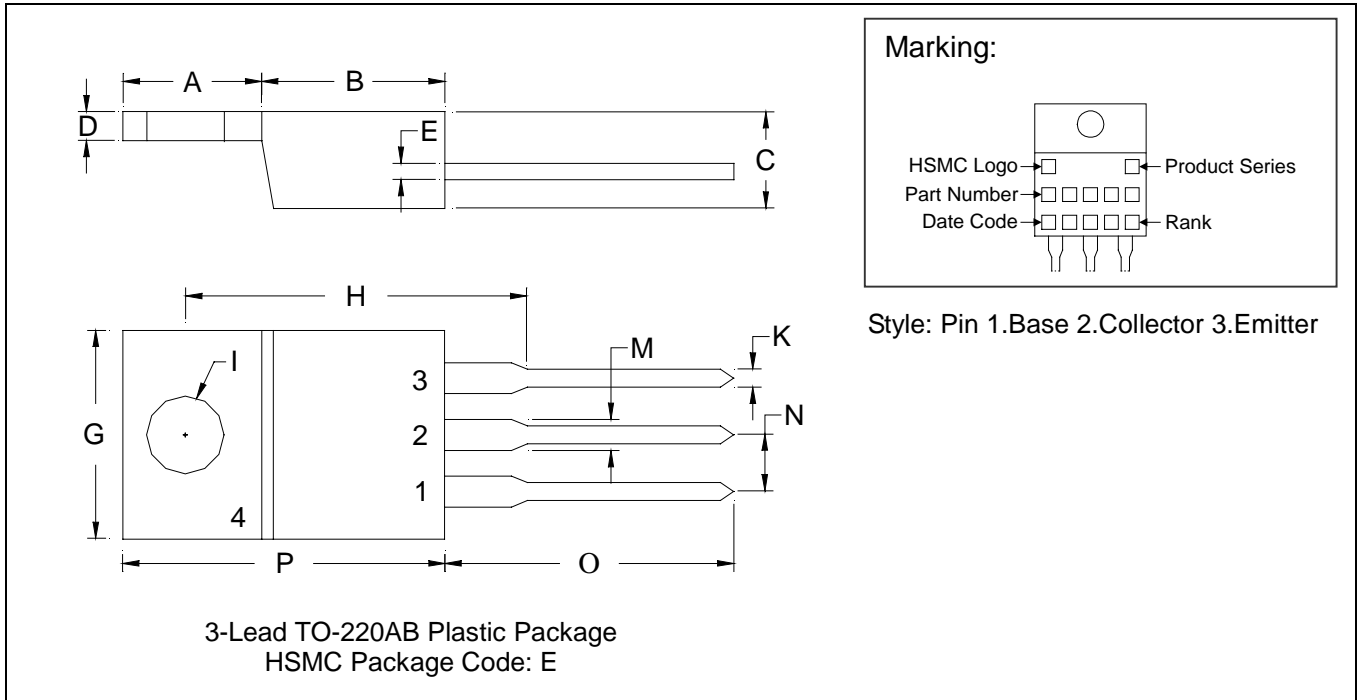
### Characteristics Curve







### TO-220AB Dimension



\*: 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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