



# HLB120A

NPN Triple Diffused Planar Type High Voltage Transistors

## Description

The HLB120A is a medium power transistor designed for use in switching applications.

## Features

- High Breakdown Voltage
- Low Collector Saturation Voltage
- Fast Switching Speed

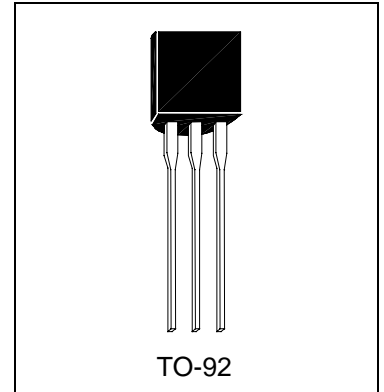
## Absolute Maximum Ratings

- Maximum Temperatures  
Storage Temperature ..... -55 ~ +150 °C  
Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
Total Power Dissipation (Ta=25°C) ..... 625 mW  
Total Power Dissipation (Tc=25°C) ..... 7 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 ..... 6 V  
IC Collector Current (DC) ..... 100 mA  
IC Collector Current (Pulse) ..... 200 mA  
IB Base Current (DC) ..... 20 mA  
IB Base Current (Pulse) ..... 40 mA

## Characteristics (Ta=25°C)

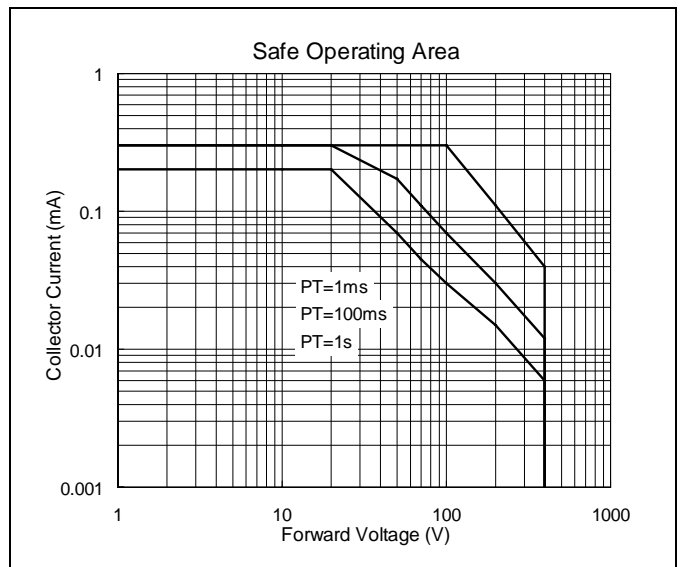
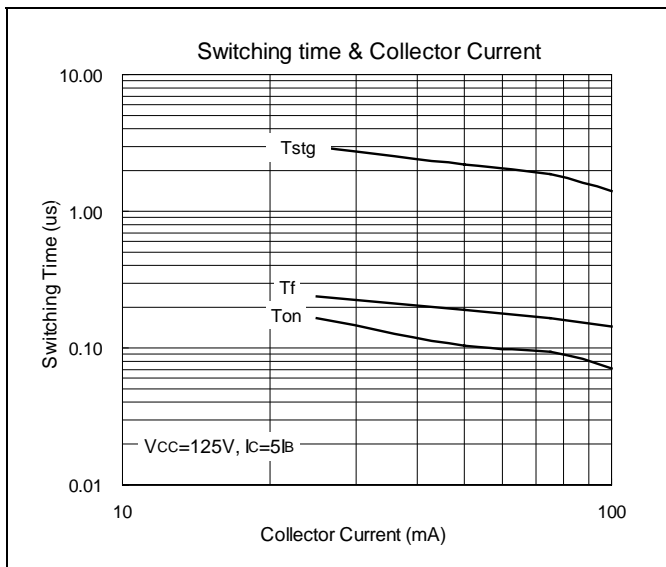
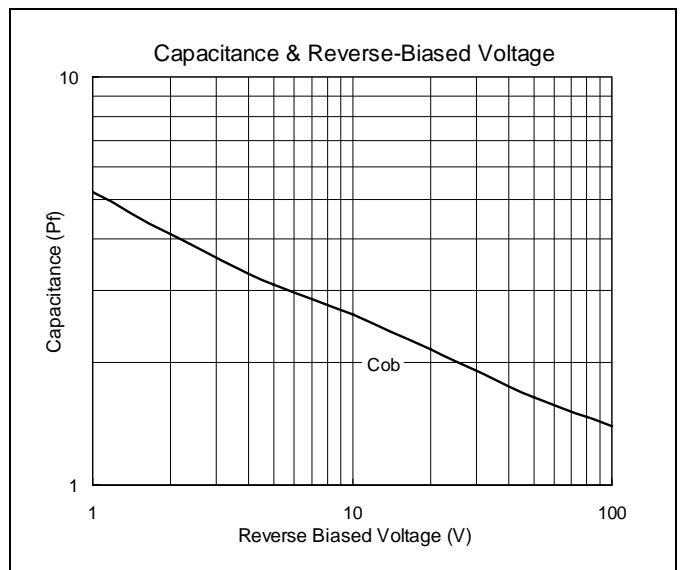
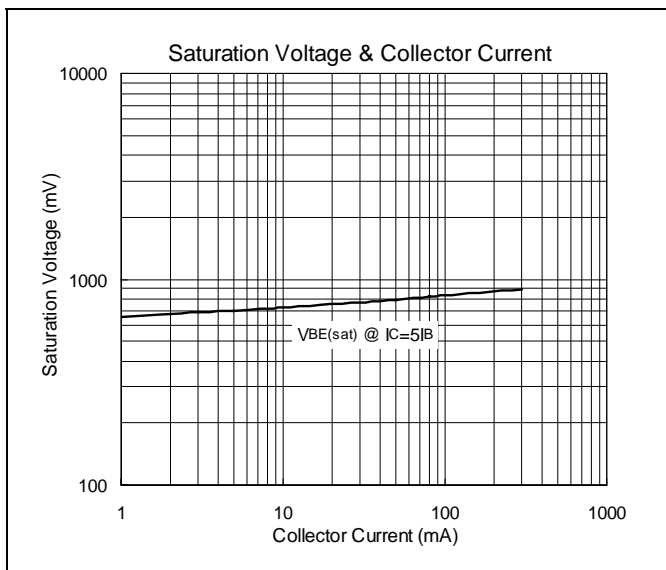
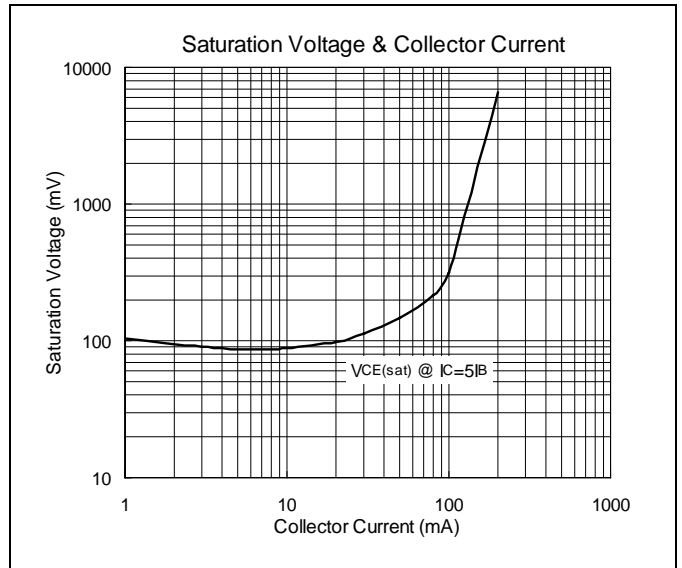
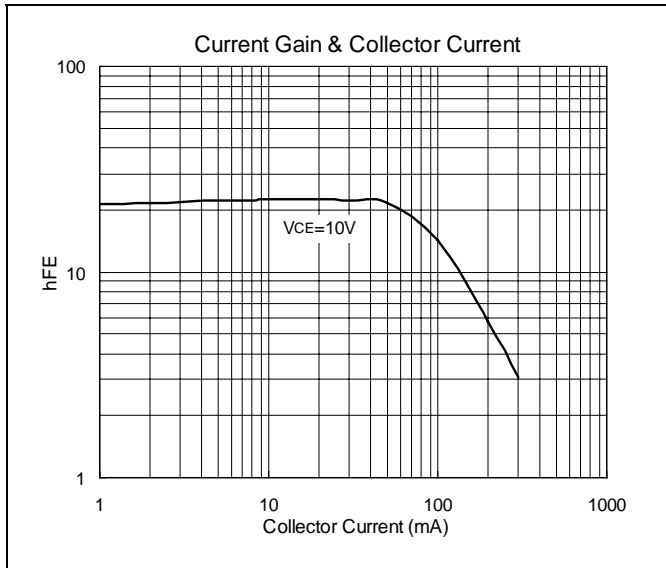
Symbol	Min.	Typ.	Max	Unit	Test Conditions
BVCBO	600	-	-	V	IC=100uA, IE=0
BVCEO	400	-	-	V	IC=10mA, IB=0
BVEBO	6	-	-	V	IE=10uA,, IC=0
ICBO	-	-	10	uA	VCB=550V
ICEO	-	-	10	uA	VCE=400V, IB=0
IEBO	-	-	10	uA	VEB=6V, IC=0
*VCE(sat)1	-	-	400	mV	IC=50mA, IB=10mA
*VCE(sat)2	-	-	750	mV	IC=100mA, IB=20mA
*VBE(sat)	-	-	1	V	IC=50mA, IB=10mA
*hFE1	8	-	-		VCE=10V, IC=10mA
*hFE2	10	-	36		VCE=10V, IC=50mA

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



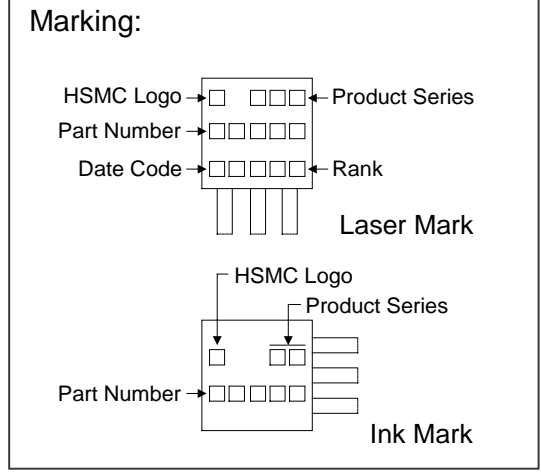
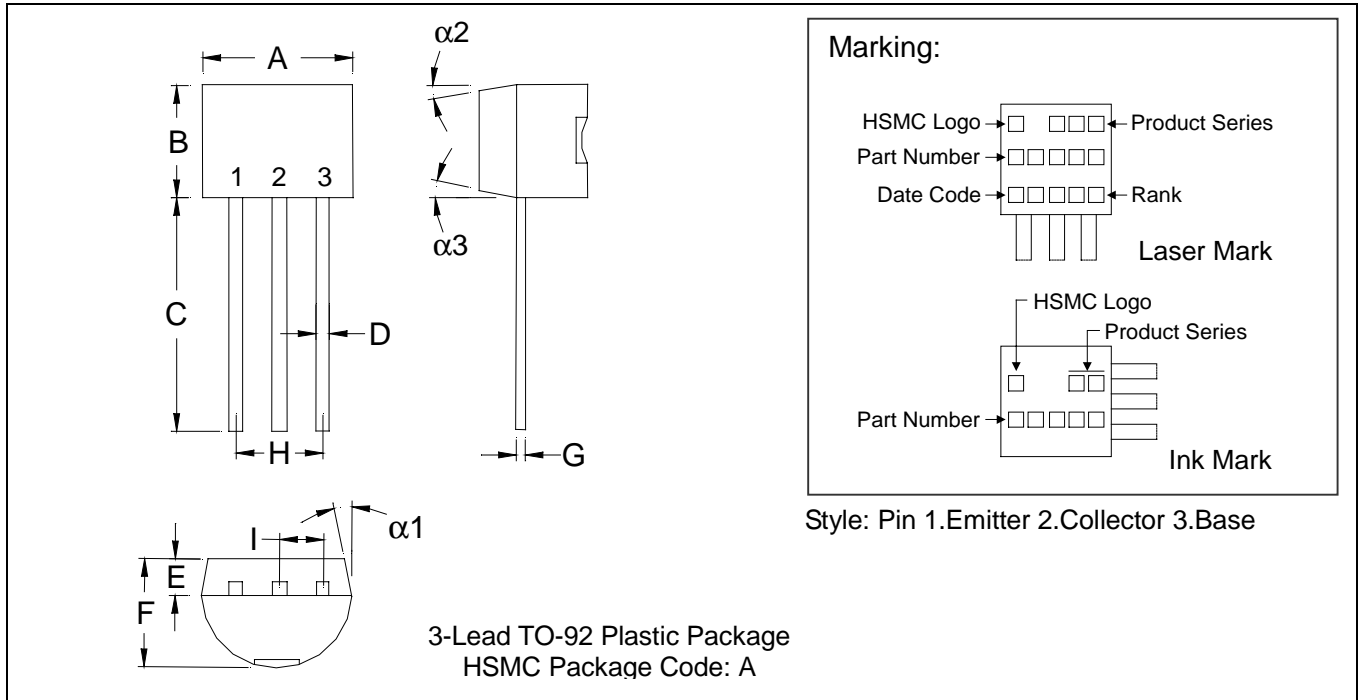


### Characteristics Curve





## TO-92 Dimension



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

\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1704	0.1902	4.33	4.83	G	0.0142	0.0220	0.36	0.56
B	0.1704	0.1902	4.33	4.83	H	-	*0.1000	-	*2.54
C	0.5000	-	12.70	-	I	-	*0.0500	-	*1.27
D	0.0142	0.0220	0.36	0.56	$\alpha 1$	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	$\alpha 2$	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	$\alpha 3$	-	*2°	-	*2°

**Notes:** 1. Dimension and tolerance based on our Spec. dated Apr. 25, 1996.  
 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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