

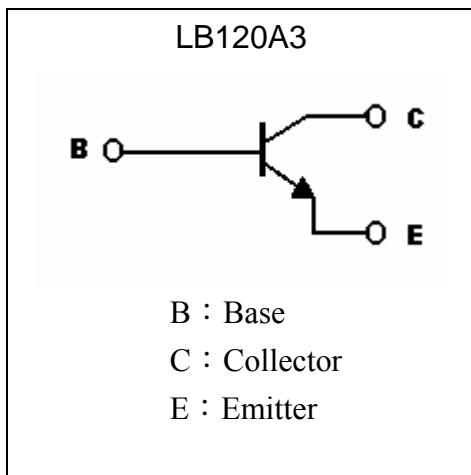
## General Purpose NPN Epitaxial Planar Transistor

# LB120A3

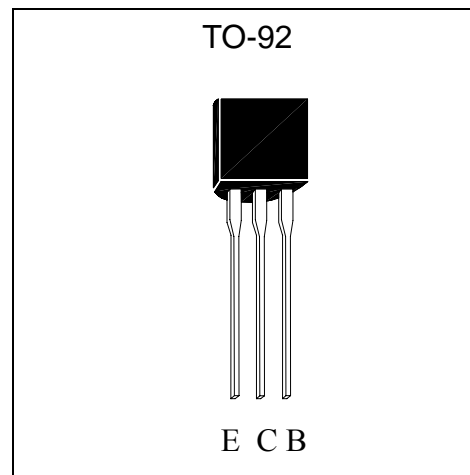
### Features

- Low collector saturation voltage
- High breakdown voltage,  $V_{CE0}=400V$  (min.)
- Pb-free package

### Symbol



### Outline



### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	$V_{CBO}$	600	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	9	V
Collector Current (DC)	$I_C$	0.5	A
Power Dissipation	$P_D$	1	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	125	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

Note : Pulse test,  $P_w \leq 10ms$ , Duty  $\leq 50\%$ .



Characteristics (Ta=25°C)

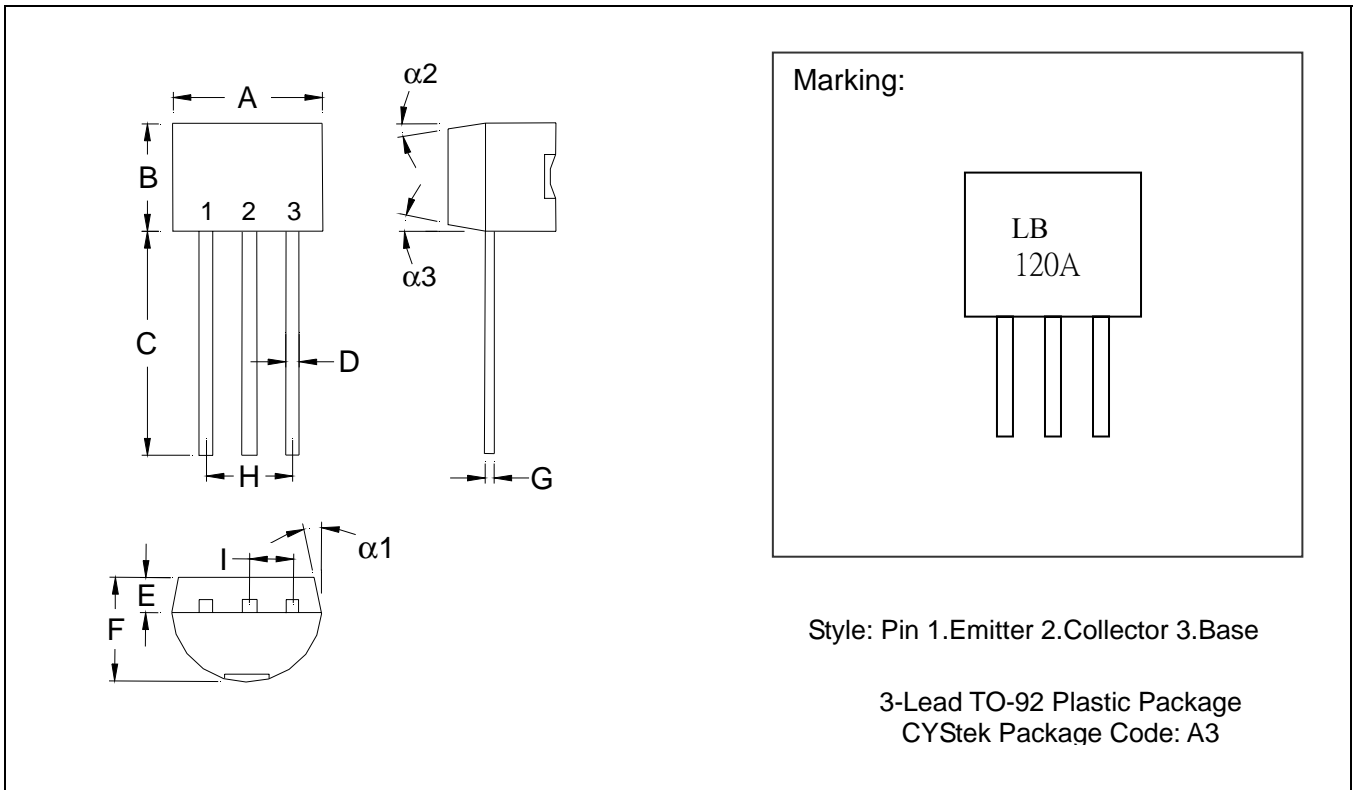
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV <sub>CB0</sub>	600	-	-	V	I <sub>C</sub> =100μA
BV <sub>CEO</sub>	400	-	-	V	I <sub>C</sub> =1mA
BV <sub>EBO</sub>	9	-	-	V	I <sub>E</sub> =10μA
I <sub>CB0</sub>	-	-	15	μA	V <sub>CB</sub> =600V, I <sub>E</sub> =0
I <sub>EBO</sub>	-	-	100	nA	V <sub>EB</sub> =8V, I <sub>C</sub> =0
*V <sub>CE(SAT)</sub>	-	-	0.3	V	I <sub>C</sub> =50mA, I <sub>B</sub> =10mA
*V <sub>CE(SAT)</sub>	-	-	0.5	V	I <sub>C</sub> =200mA, I <sub>B</sub> =40mA
*h <sub>FE</sub>	10	-	40	-	V <sub>CE</sub> =20V, I <sub>C</sub> =20mA
tf	-	-	0.5	μs	V <sub>CE</sub> =100V, I <sub>C</sub> =300mA, I <sub>B1</sub> =-I <sub>B2</sub> =100mA
ts	-	-	2.5		

\*Pulse Test: Pulse Width ≤300μs, Duty Cycle≤2%

Classification Of hFE

Rank	A	B	C	D	E	F
Range	10~15	15~20	20~25	25~30	30~35	35~40

**TO-92 Dimension**



\*: 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. Controlling dimension: millimeters.  
 2. Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3. If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: KFC ; pure tin plated
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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