General Purpose NPN Epitaxial Planar Transistor

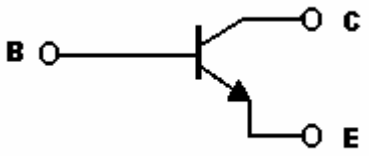
LB120A3

Features

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

Symbol

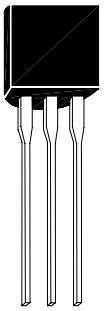
LB120A3



B：Base
C：Collector
E：Emitter

Outline

TO-92



E C B

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	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Note : Pulse test, Pw ≤ 10ms, Duty ≤ 50%.

Characteristics (Ta=25°C)

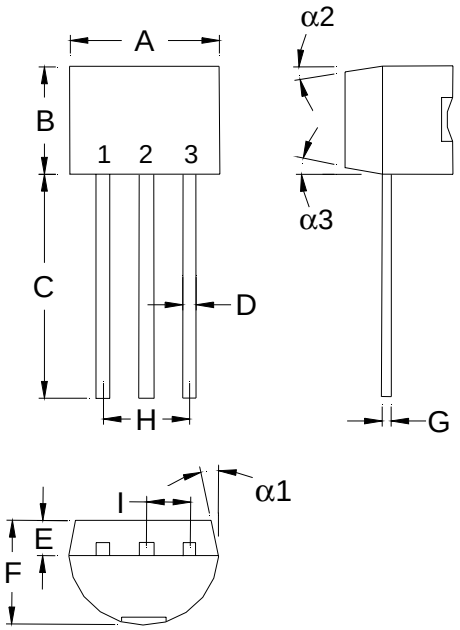
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	600	-	-	V	I_C=100μA
BV_{CEO}	400	-	-	V	I_C=1mA
BV_{EBO}	9	-	-	V	I_E=10μA
I_{CBO}	-	-	15	μA	V_{CB}=600V, I_E=0
I_{EBO}	-	-	100	nA	V_{EB}=8V, I_C=0
*$V_{CE(SAT)}$	-	-	0.3	V	I_C=50mA, I_B=10mA
*$V_{CE(SAT)}$	-	-	0.5	V	I_C=200mA, I_B=40mA
*h_{FE}	10	-	40	-	V_{CE}=20V, I_C=20mA
tf	-	-	0.5	μs	V_{CE}=100V, I_C=300mA, I_{B1}=-I_{B2}=100mA
ts	-	-	2.5		

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

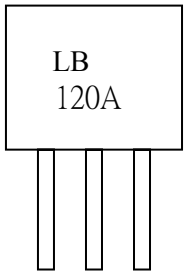
Classification Of h_{FE}

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

TO-92 Dimension



Marking:



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

3-Lead TO-92 Plastic Package
CYStek Package Code: A3

*: 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	α1	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	α2	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	α3	-	*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