High Voltage NPN Epitaxial Planar Transistor

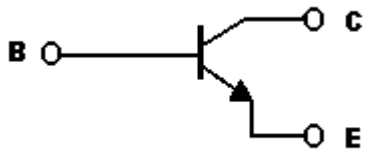
BTC4505A3

Features

- High breakdown voltage. (BV_{CEO} = 400V)
- Low saturation voltage, typically V_{CE}(sat) = 0.1V at I_C / I_B=10mA / 1mA.
- Complementary to BTA1759A3

Symbol

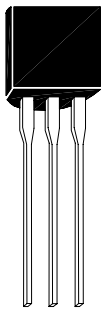
BTC4505A3



B：Base
C：Collector
E：Emitter

Outline

TO-92



E B C

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	300	mA
Power Dissipation	Pd	625	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

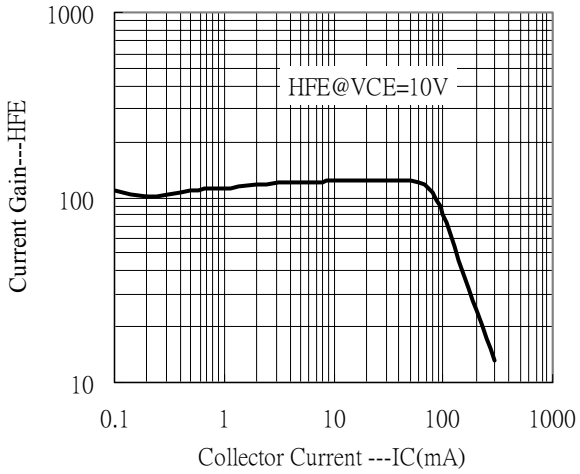
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	400	-	-	V	I_C=50μA, I_E=0
BV_{CEO}	400	-	-	V	I_C=1mA, I_B=0
BV_{EBO}	6	-	-	V	I_E=50μA, I_C=0
I_{CBO}	-	-	10	μA	V_{CB}=400V, I_E=0
I_{CER}	-	-	20	nA	V_{CE}=300V, R_{EB}=4kΩ
I_{EBO}	-	-	10	μA	V_{EB}=6V,I_C=0
*$V_{CE(sat)}$	-	0.1	0.5	V	I_C=10mA, I_B=1mA
*$V_{BE(sat)}$	-		1.5	V	I_C=10mA, I_B=1mA
h_{FE}	100	-	270	-	V_{CE}=10V, I_C=10mA
f_T	-	20	-	MHz	V_{CE}=10V, I_C=10mA, f=10MHz
Cob	-	7	-	pF	V_{CB}=10V, f=1MHz

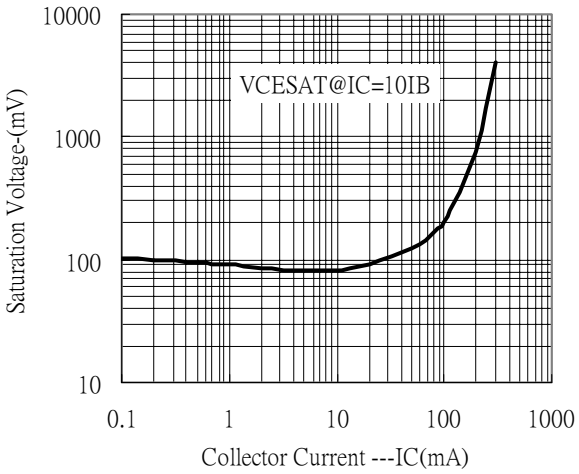
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Characteristic Curves

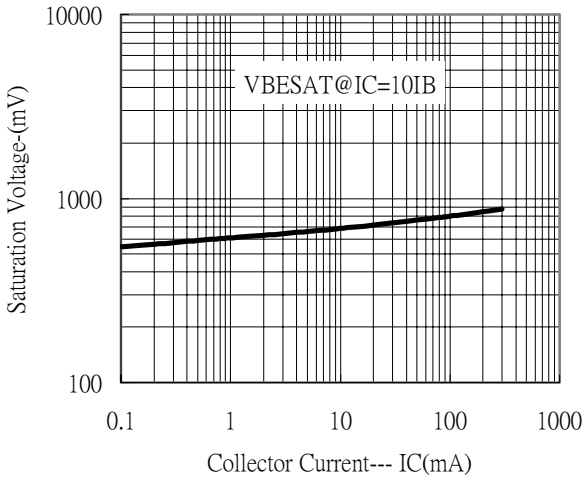
Current Gain vs Collector Current



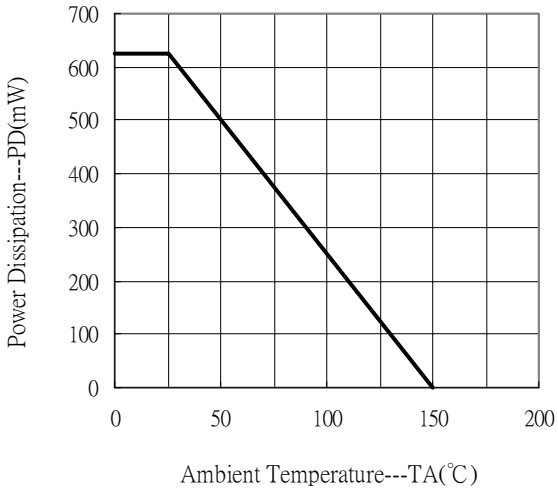
Saturation Voltage vs Collector Current



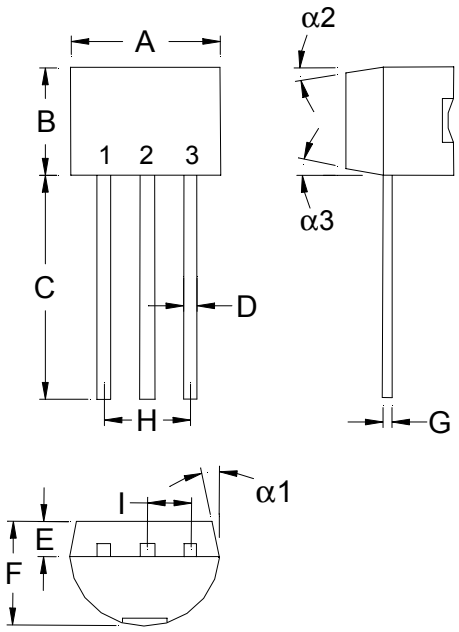
Saturation Voltage vs Collector Current



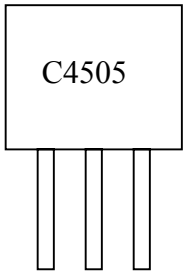
Power Derating Curve



TO-92 Dimension



Marking:



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

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: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0