

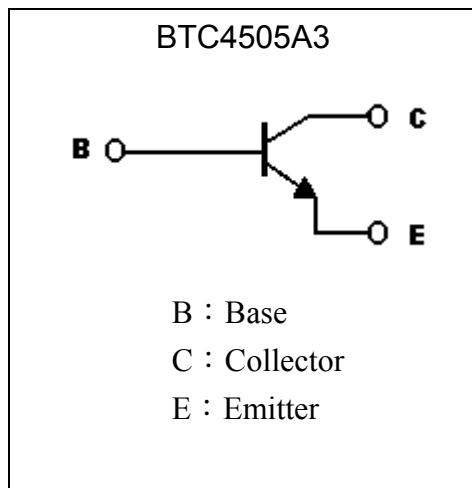
High Voltage NPN Epitaxial Planar Transistor

BTC4505A3

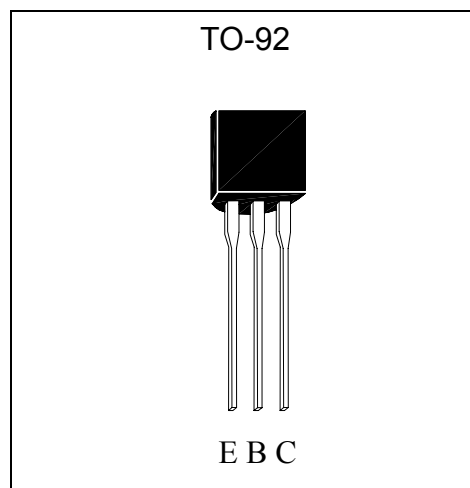
Features

- 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



Outline



Absolute Maximum Ratings ($T_a = 25^\circ C$)

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	P_d	625	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55~+150	$^\circ C$

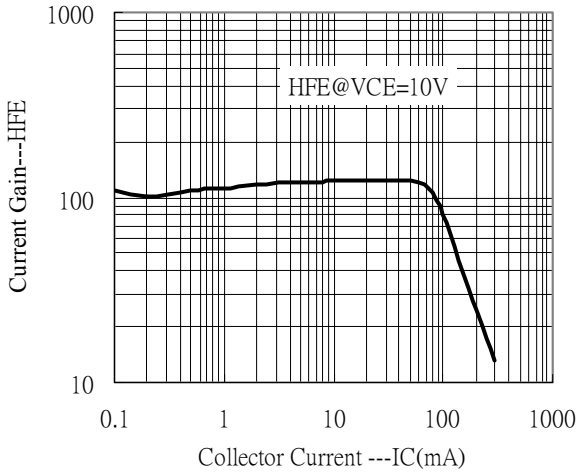
**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	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 _{CB0}	-	-	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

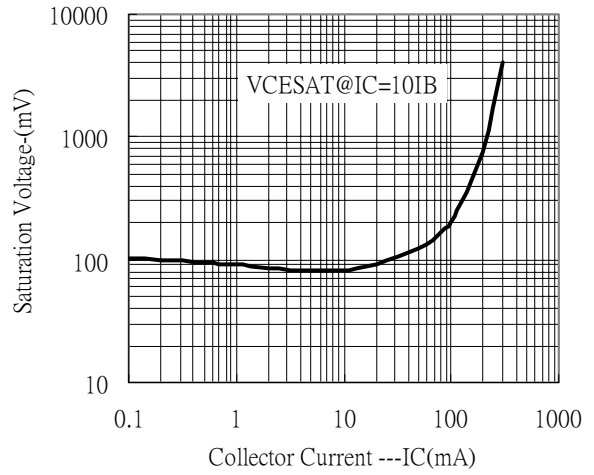
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Characteristic Curves

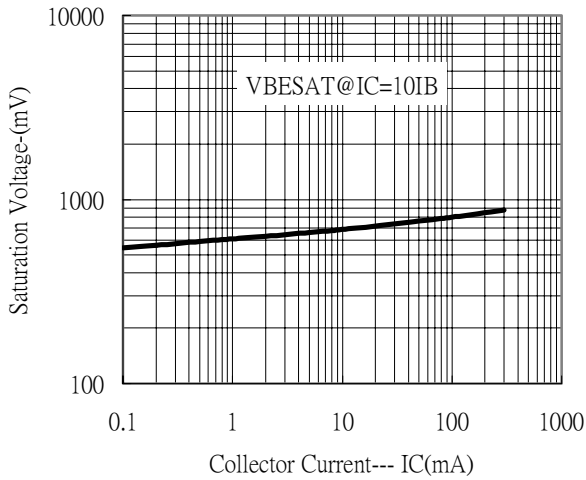
Current Gain vs Collector Current



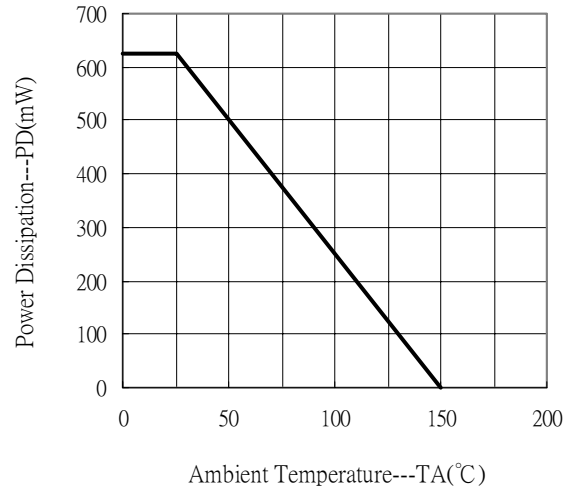
Saturation Voltage vs Collector Current



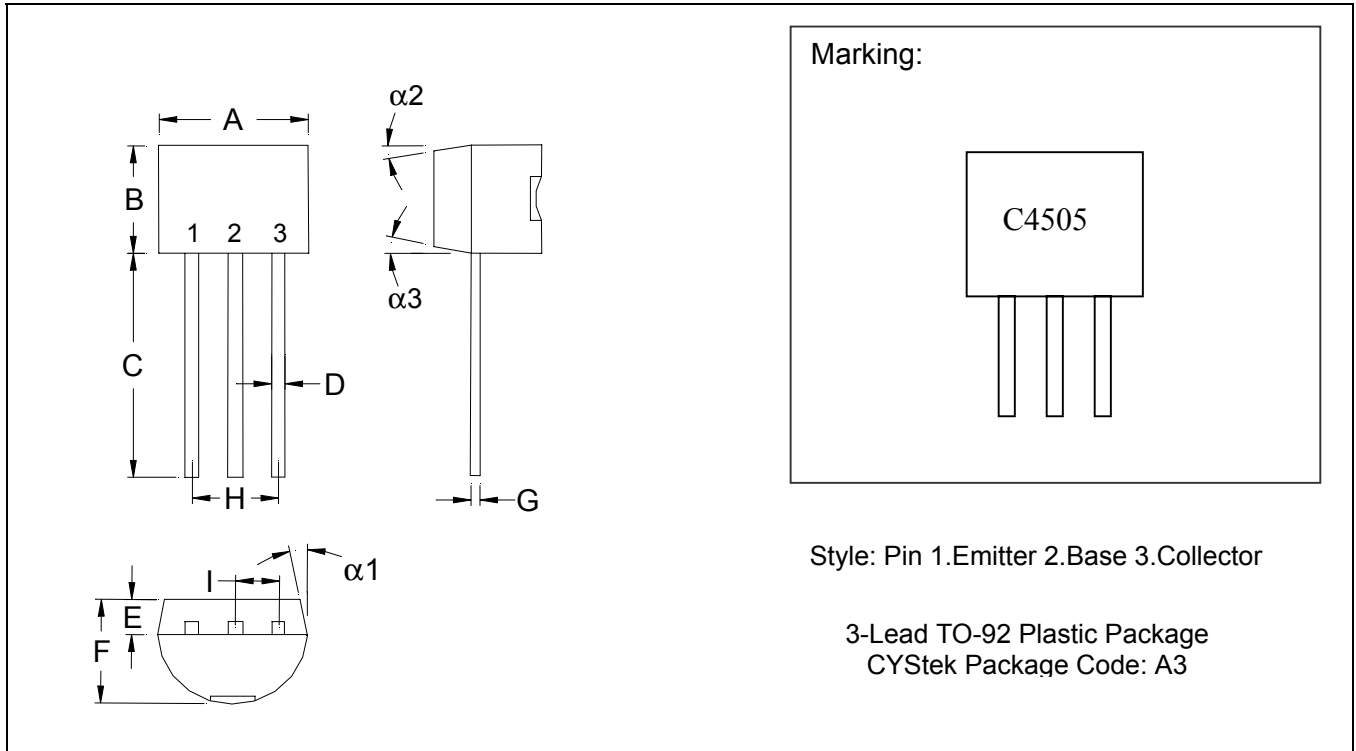
Saturation Voltage vs Collector Current



Power Derating Curve



TO-92 Dimension



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

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