

NPN Epitaxial Planar Transistor

BF420A3/S

Description

- NPN high voltage transistors in a TO-92 plastic package.
- Complementary to BF421A3/S.
- Pb-free package is available

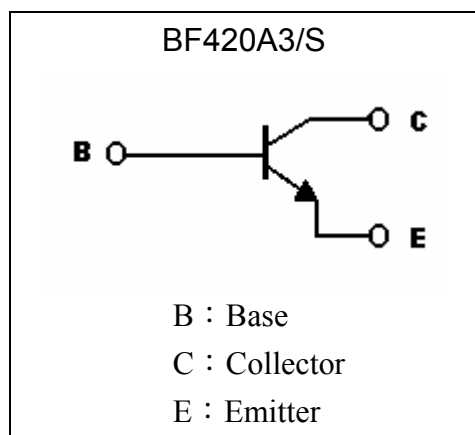
Features

- Low feedback capacitance.

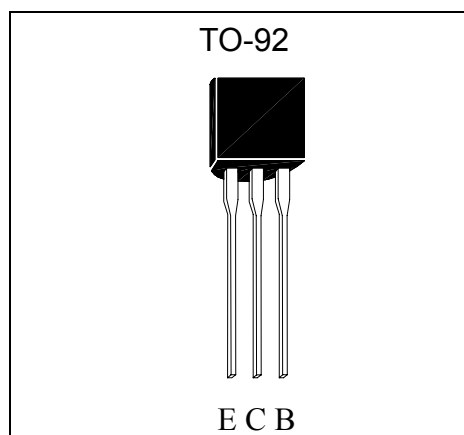
Applications

- Class-B video output stages in color television and professional monitor equipment.

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Conditions	Min	Max	Unit
Collector-Base Voltage	V_{CBO}	Open emitter		300	V
Collector-Emitter Voltage	V_{CEO}	Open base		300	V
Emitter-Base Voltage	V_{EBO}	Open collector		5	V
Collector Current (DC)	I_C			50	mA
Peak Collector Current	I_{CM}			100	mA
Peak Base Current	I_{BM}			50	mA
Power Dissipation;	P_d	$T_{amb} \leq 25^\circ\text{C}$; Note		830	mW
Junction Temperature	T_j			150	°C
Storage Temperature	T_{stg}		-65	+150	°C
Operating Ambient Temperature	T_{amb}		-65	+150	°C

Note : Transistor mounted on a printed-circuit board.

**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	300	-	-	V	I _C =100μA
BV _{CEO}	300	-	-	V	I _C =1mA
BV _{EBO}	5	-	-	V	I _E =10μA
I _{CBO}	-	-	10	nA	I _E =0, V _{CB} =200V
	-	-	10	μA	I _E =0, V _{CB} =200V, T _j =150°C
I _{EBO}	-	-	50	nA	I _C =0, V _{EB} =5V
*V _{CE(sat)}	-	-	0.6	V	I _C =30mA, I _B =5mA
*h _{FE}	50	-	-	-	V _{CE} =20V, I _C =25mA
Cre	-	-	1.6	pF	I _C =I _C =0, V _{CE} =30V, f=1MHz
f _T	60	-	-	MHz	V _{CE} =10V, I _C =10mA, f=100MHz

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

Thermal Characteristics

Symbol	Parameter	Conditions	Value	Unit
R _{thJA}	Thermal resistance from junction to ambient	Note	150	K/W

Note : Transistor mounted on a printed-circuit board

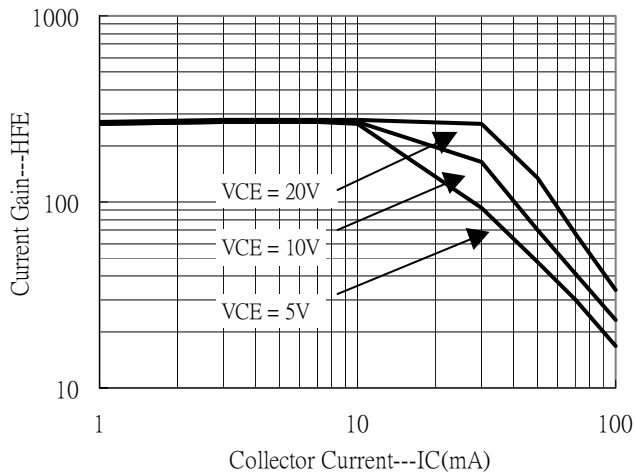
Ordering Information

Device	Package	Shipping
BF420A3	TO-92	2000 pcs / tape & box
BF420A3S	TO-92 (Pb-free)	2000 pcs / tape & box

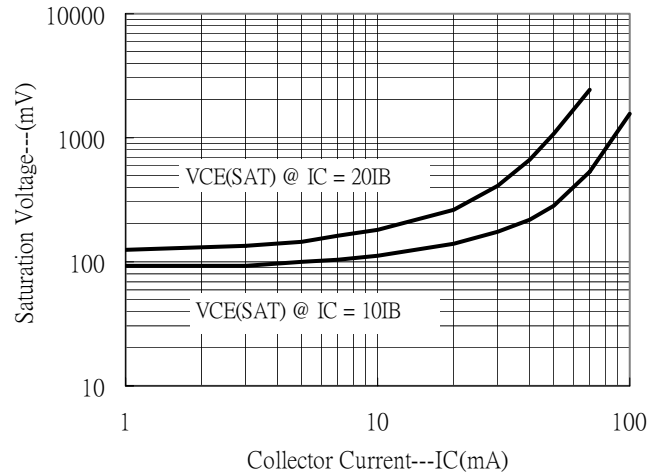


Characteristic Curves

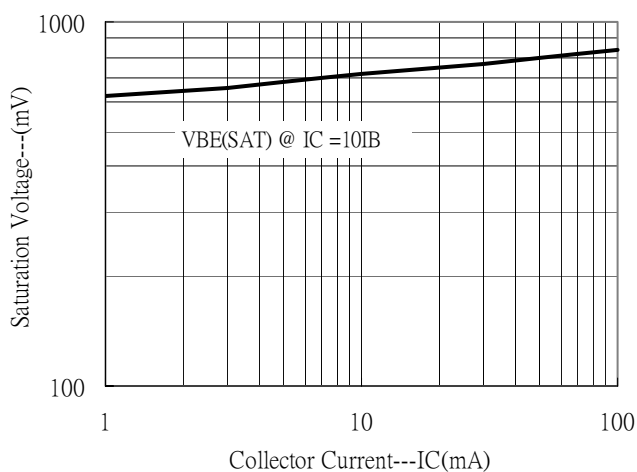
Current Gain vs Collector Current



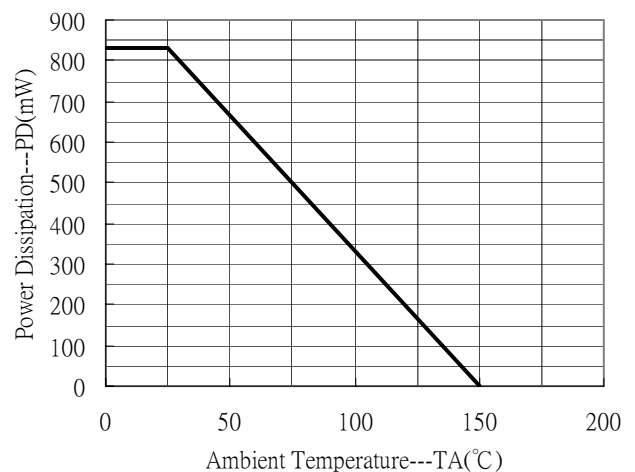
Saturation Voltage vs Collector Current



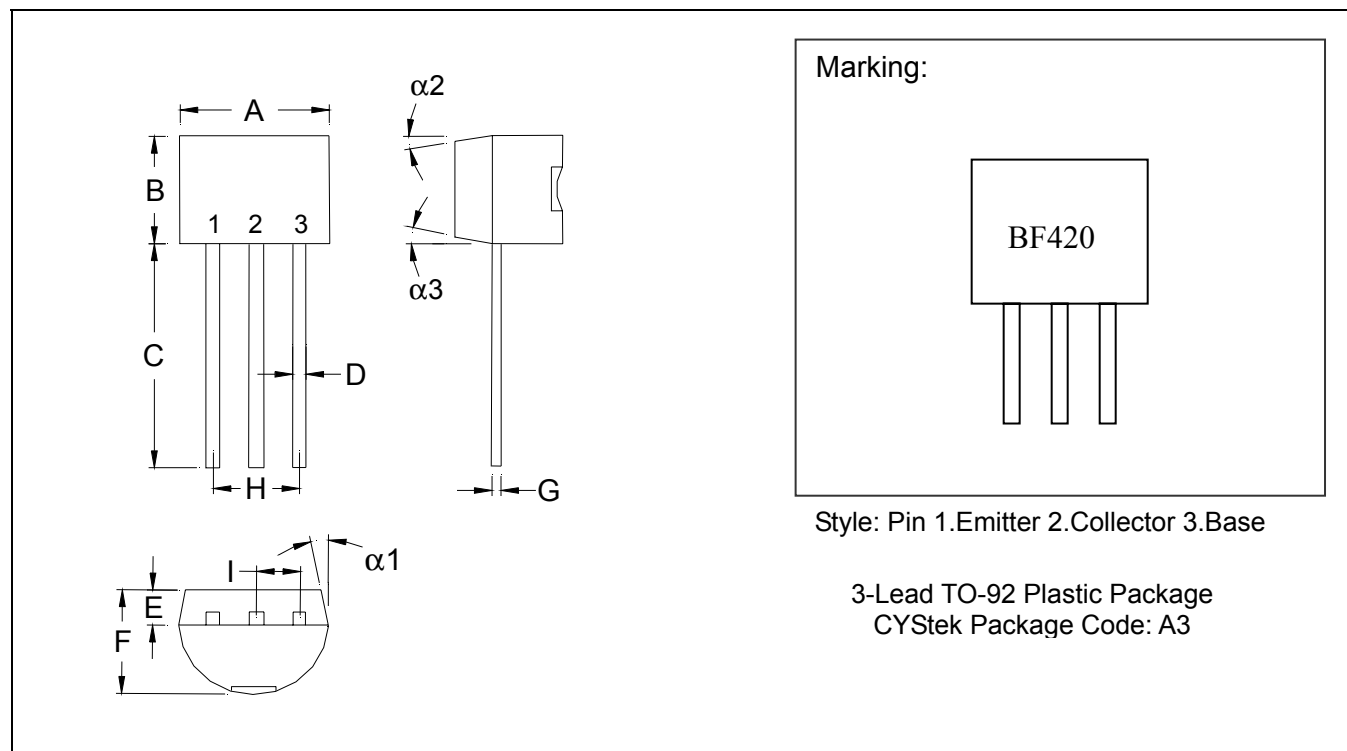
Saturation Voltage vs Collector Current



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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