

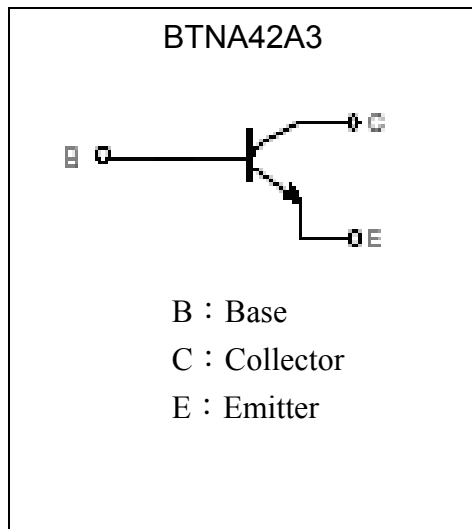
General Purpose NPN Epitaxial Planar Transistor

BTNA42A3

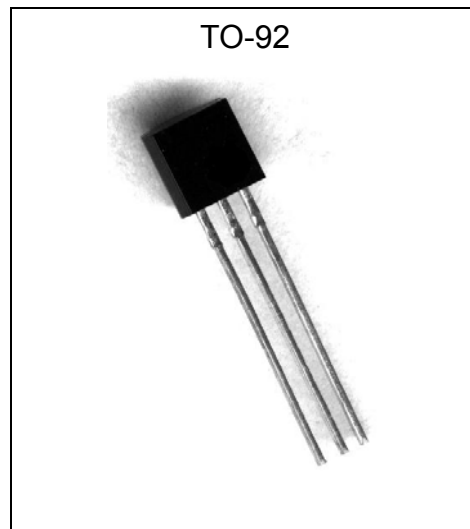
Description

- High breakdown voltage. ($BV_{CEO}=300V$)
- Low collector output capacitance. (Typ. 3pF at $V_{CB} =30V$)
- Ideal for chroma circuit.

Symbol



Outline



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

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CB0}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	500	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
BVCBO	300	-	-	V	IC=100uA
BVCEO	300	-	-	V	IC=1mA
BVEBO	6	-	-	V	IE=10uA
ICBO	-	-	100	nA	VCB=200V
IEBO	-	-	100	nA	VEB=6V
*VCE(sat)	-	0.1	0.5	V	IC=20mA, IB=2mA
*VBE(sat)	-	-	0.9	V	IC=20mA, IB=2mA
*hFE1	25	-	-	-	VCE=10V, IC=1mA
*hFE2	52	-	270	-	VCE=10V, IC=10mA
*hFE3	40	-	-	-	VCE=10V, IC=30mA
fT	50	100	-	MHz	VCE=20V, IC=10mA, f=100MHz
Cob	-	3	-	pF	VCB=20V, IE=0A, f=1MHz

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

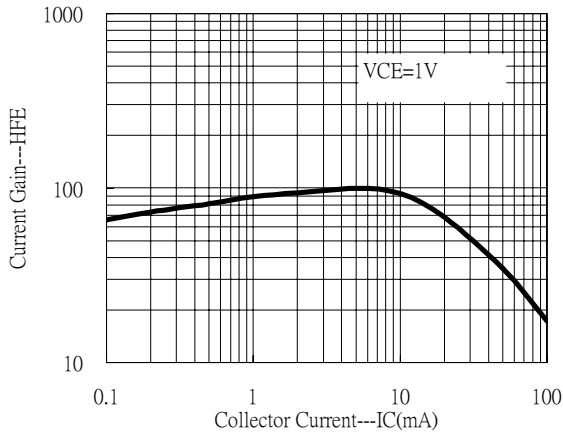
Classification Of hFE2

Rank	K	P	Q
Range	52~120	82~180	120~270

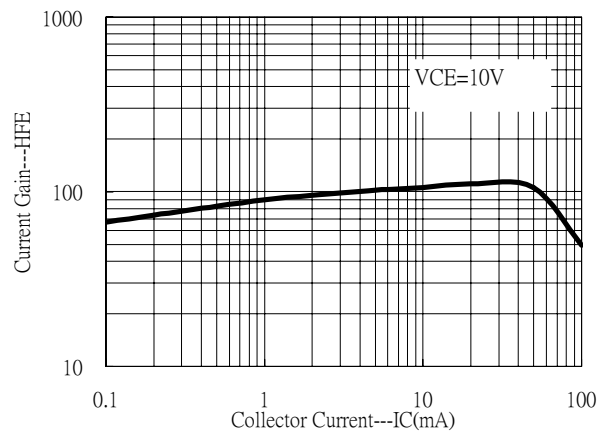


Characteristic Curves

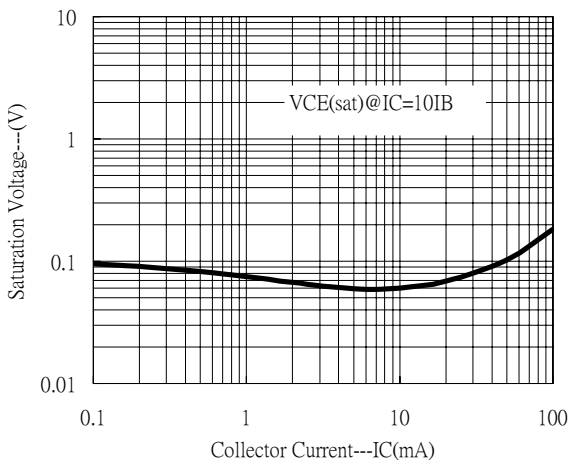
Current Gain vs Collector Current



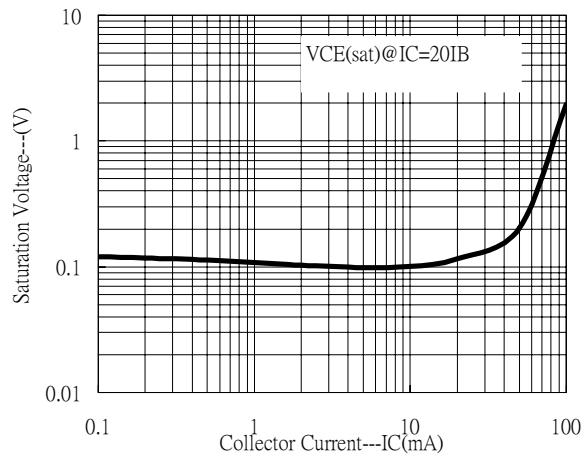
Current Gain vs Collector Current



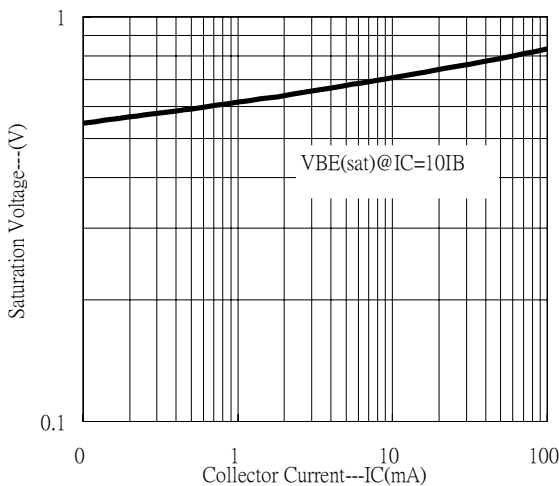
Saturation Voltage vs Collector Current



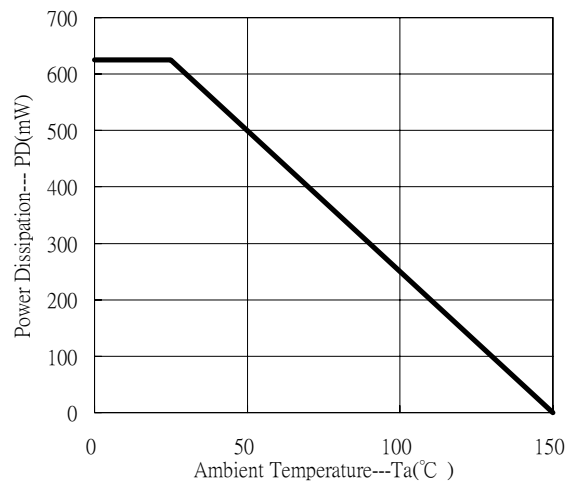
Saturation Voltage vs Collector Current



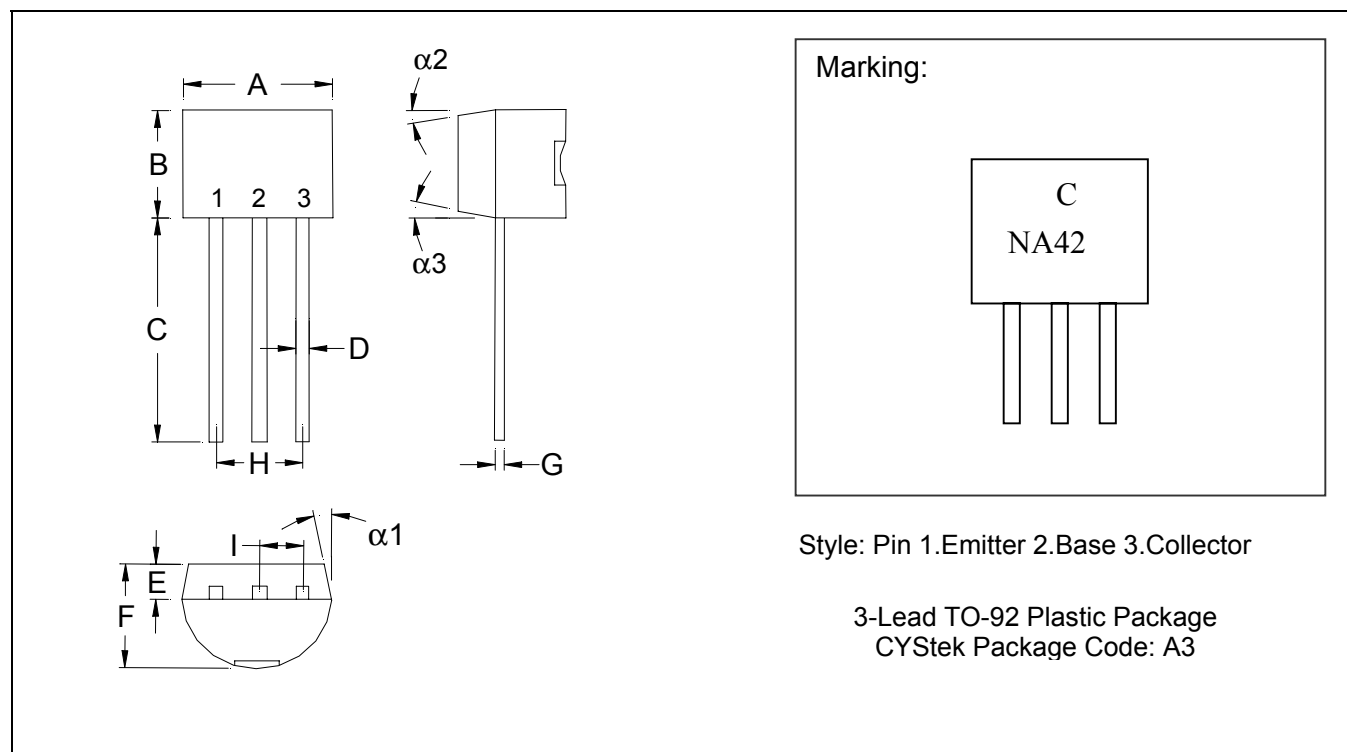
Saturation Voltage vs Collector Current



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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