

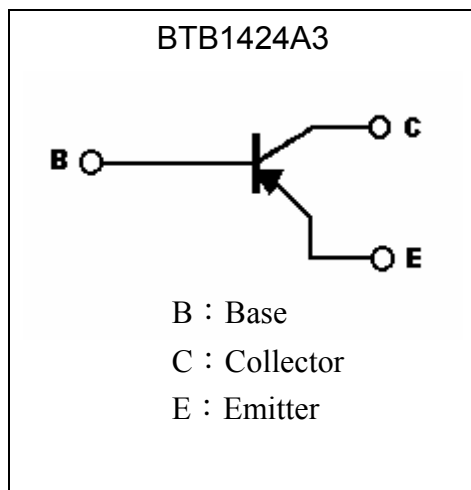
Low Vcesat PNP Epitaxial Planar Transistor

BTB1424A3

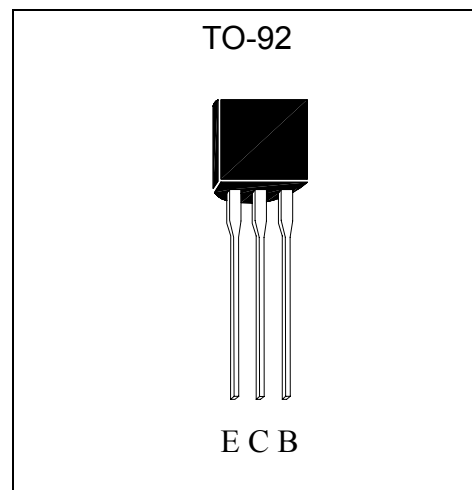
Features

- Low $V_{CE(sat)}$, typically -0.3 V at $I_C / I_B = -2A / -0.2A$
- Excellent current gain characteristics
- Complementary to BTB2150A3
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	$I_C(DC)$	-3	A
	$I_C(pulse)$	-7 (Note)	A
Power Dissipation	P_d	750	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Note : Single Pulse $P_w \leq 350\mu s$, Duty $\leq 2\%$.



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	-50	-	-	V	I _C =-50μA, I _E =0
BV _{CEO}	-50	-	-	V	I _C =-1mA, I _B =0
BV _{EBO}	-5	-	-	V	I _E =-50μA, I _C =0
I _{CBO}	-	-	-1	μA	V _{CB} =-30V, I _E =0
I _{EBO}	-	-	-1	μA	V _{EB} =-3V, I _C =0
*V _{CE(sat)}	-	-0.3	-0.5	V	I _C =-2A, I _B =-0.2A
*V _{BE(sat)}	-	-1	-2	V	I _C =-2A, I _B =-0.2A
*h _{FE1}	52	-	-	-	V _{CE} =-2V, I _C =-20mA
*h _{FE2}	160	-	500	-	V _{CE} =-2V, I _C =-1A
f _T	-	80	-	MHz	V _{CE} =-5V, I _C =-0.1A, f=100MHz
Cob	-	55	-	pF	V _{CB} =-10V, f=1MHz

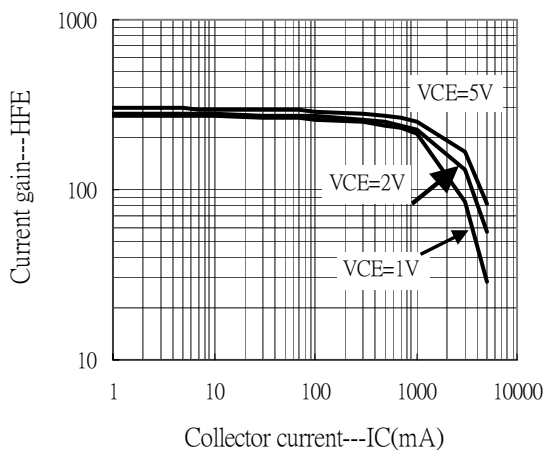
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Classification Of h_{FE2}

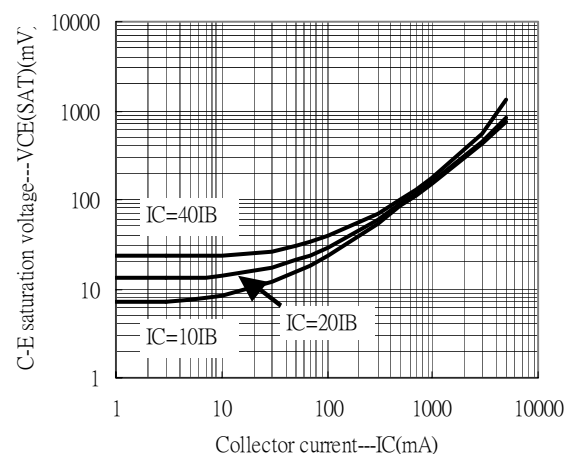
Rank	P	E
Range	160~320	250~500

Characteristic Curves

Current gain vs Collector current

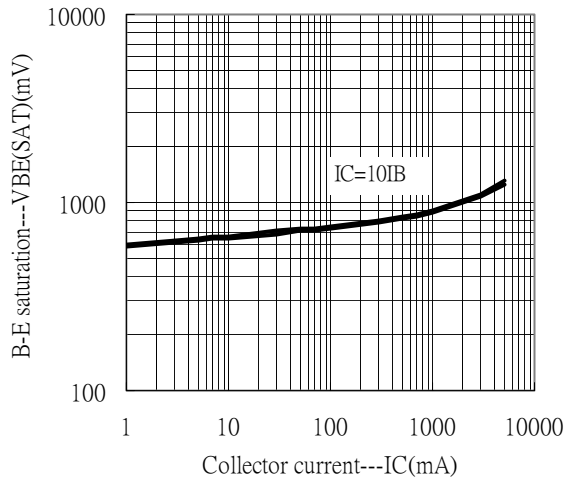


C-E saturation voltage vs Collector current

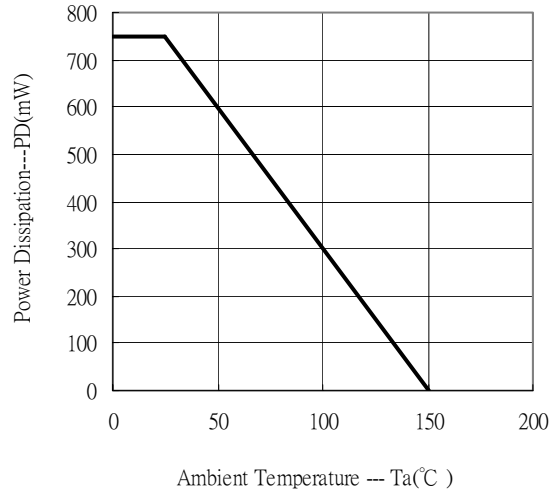




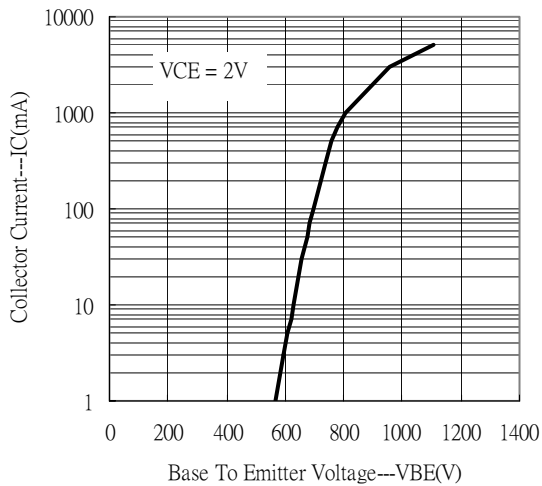
B-E saturation voltage vs Collector current



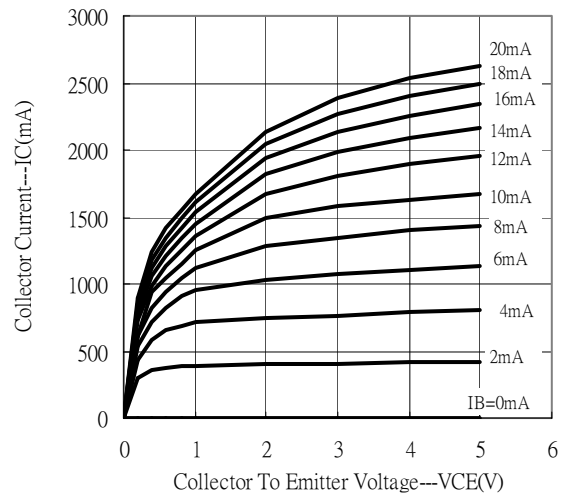
Power Derating Curve



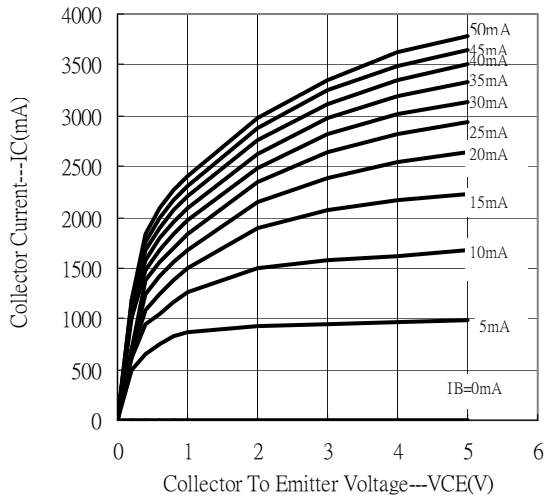
Grounded Emitter Propagation Characteristics



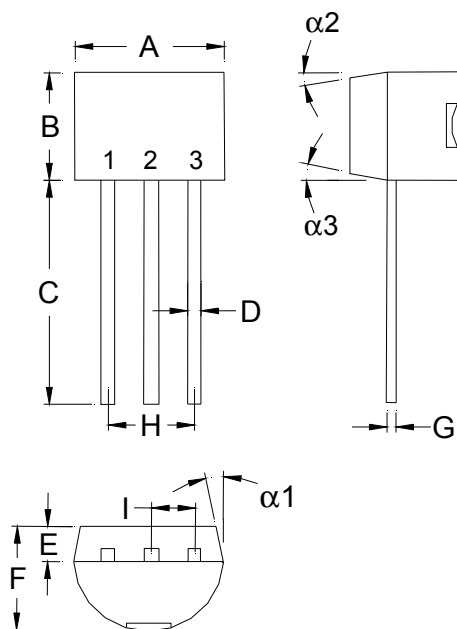
Grounded Emitter Output Characteristics



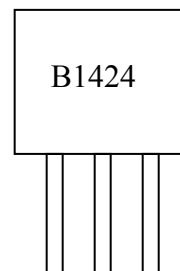
Grounded Emitter Output Characteristics



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	$\alpha 1$	-	*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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