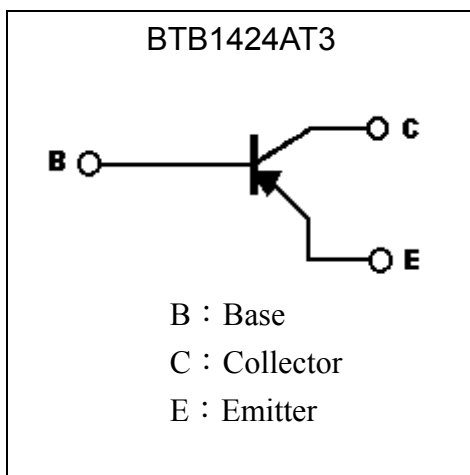
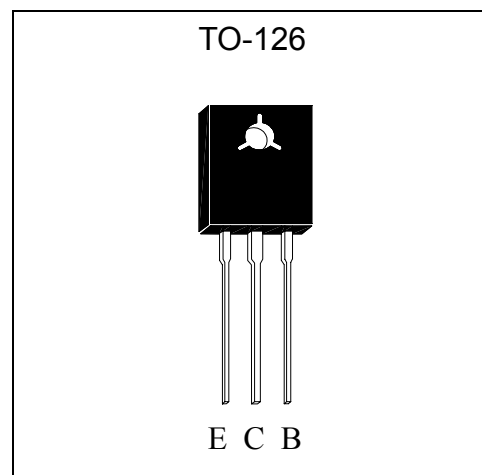


**Low Vcesat PNP Epitaxial Planar Transistor**

# BTB1424AT3

**Features**

- Low  $V_{CE(sat)}$ , typically -0.3V at  $I_C / I_B = -2A / -0.1A$
- Excellent current gain characteristics
- Complementary to BTD2150AT3
- Pb-free package

**Symbol**

**Outline**

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	$V_{CBO}$	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Current	$I_C(\text{DC})$	-3	A
	$I_C(\text{pulse})$	-7 *1	A
Power Dissipation	$P_d(T_a=25^\circ\text{C})$	1	W
	$P_d(T_c=25^\circ\text{C})$	10	
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~+150	$^\circ\text{C}$

Note : \*1. Single Pulse  $P_w \leq 350\mu\text{s}$ , Duty  $\leq 2\%$ .



**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV <sub>CBO</sub>	-50	-	-	V	I <sub>C</sub> =-50μA, I <sub>E</sub> =0
BV <sub>CEO</sub>	-50	-	-	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	-6	-	-	V	I <sub>E</sub> =-50μA, I <sub>C</sub> =0
I <sub>CBO</sub>	-	-	-0.1	μA	V <sub>CB</sub> =-40V
I <sub>EBO</sub>	-	-	-0.1	μA	V <sub>EB</sub> =-5V
*V <sub>CE(sat)</sub>	-	-0.3	-0.5	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-0.1A
*V <sub>BE(sat)</sub>	-	-1	-1.5	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-0.2A
*h <sub>FE1</sub>	82	-	-	-	V <sub>CE</sub> =-2V, I <sub>C</sub> =-20mA
*h <sub>FE2</sub>	120	-	560	-	V <sub>CE</sub> =-2V, I <sub>C</sub> =-1A
f <sub>T</sub>	-	240	-	MHz	V <sub>CE</sub> =-2V, I <sub>C</sub> =-0.5A, f=100MHz
C <sub>ob</sub>	-	35	-	pF	V <sub>CB</sub> =-10V, f=1MHz

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

**Classification Of hFE 2**

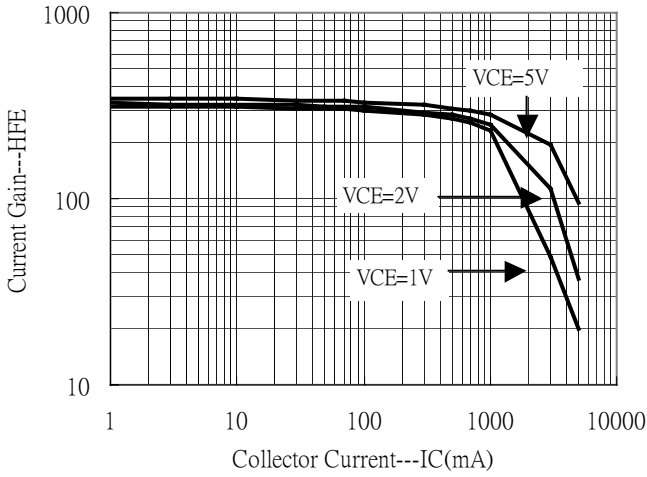
Rank	Q	R	S
Range	120~270	180~390	270~560

**Ordering Information**

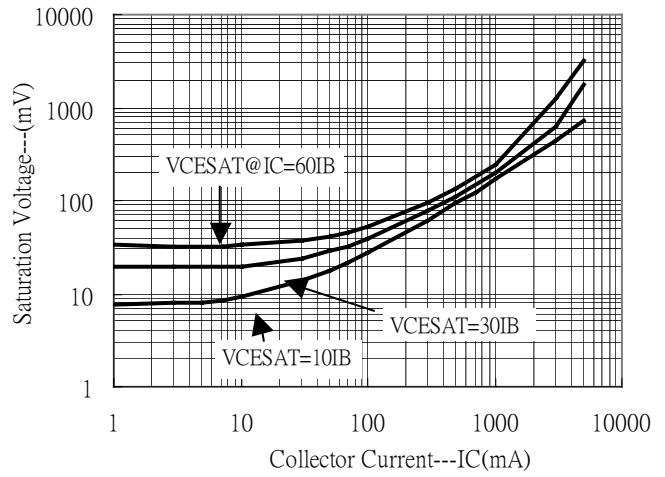
Device	Package	Shipping
BTB1424AT3	TO-126 (Pb-free)	500 pcs / bag

## Characteristic Curves

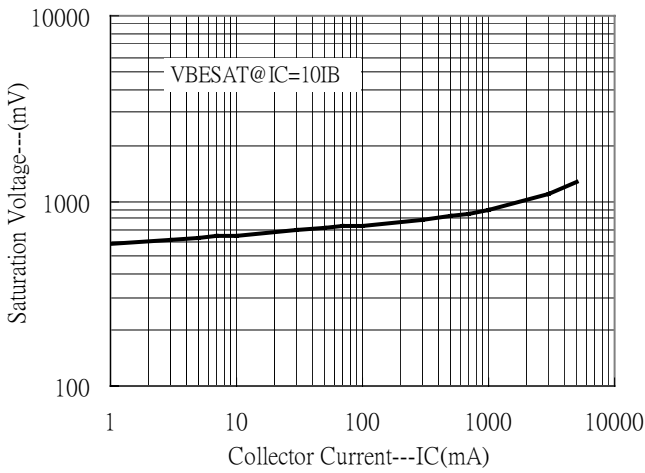
Current Gain vs Collector Current



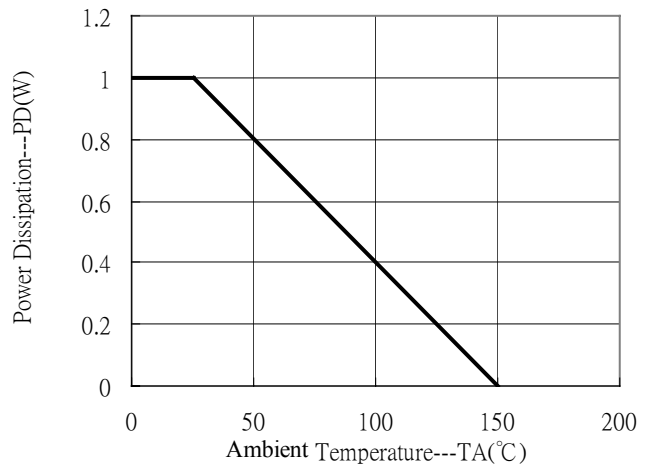
Saturation Voltage vs Collector Current



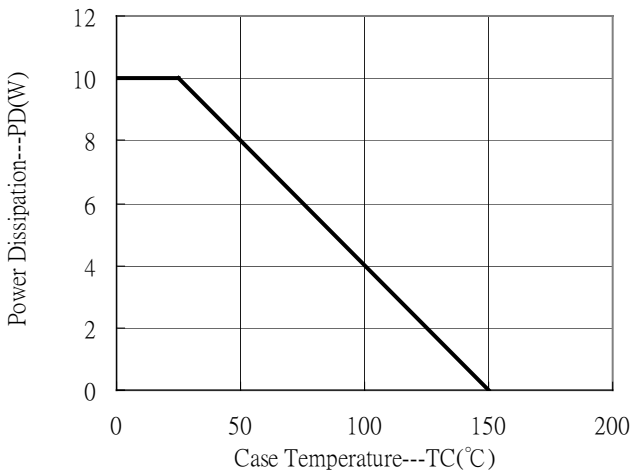
Saturation Voltage vs Collector Current



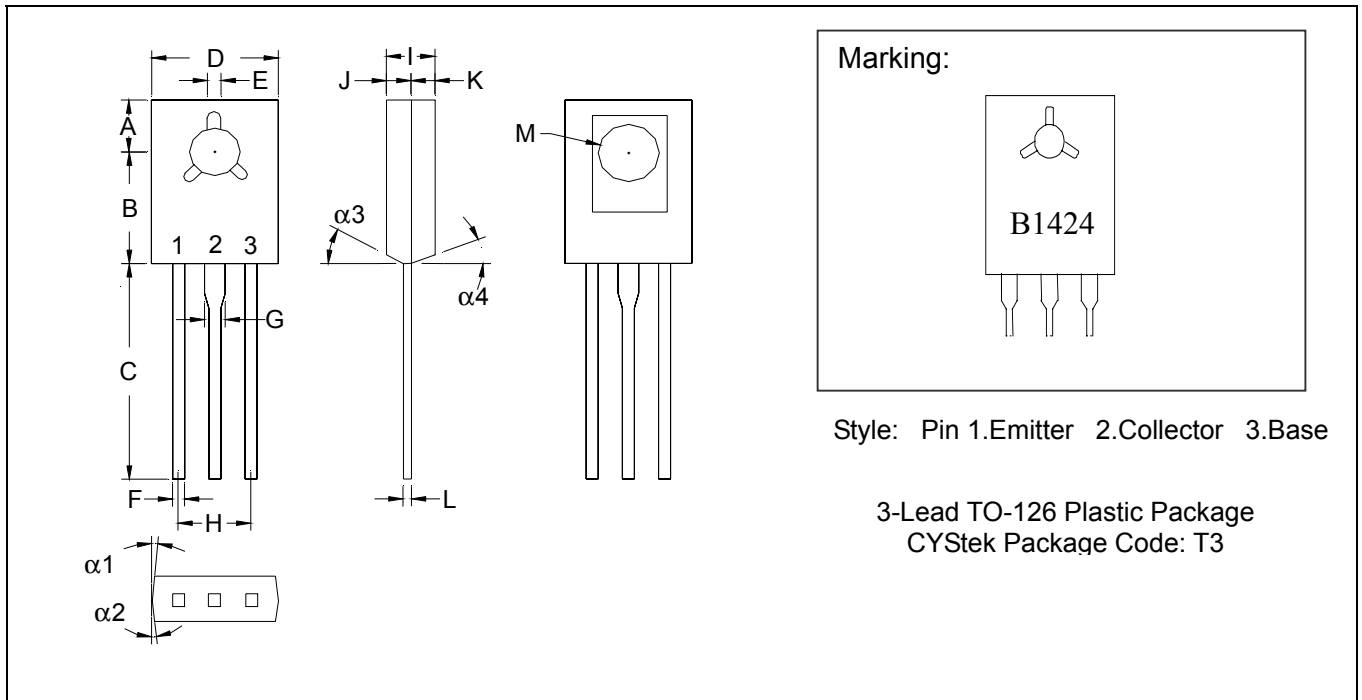
Power Derating Curve



Power Derating Curve



**TO-126 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
$\alpha 1$	-	*3°	-	*3°	F	0.0280	0.0319	0.71	0.81
$\alpha 2$	-	*3°	-	*3°	G	0.0480	0.0520	1.22	1.32
$\alpha 3$	-	*3°	-	*3°	H	0.1709	0.1890	4.34	4.80
$\alpha 4$	-	*3°	-	*3°	I	0.0950	0.1050	2.41	2.66
A	0.1500	0.1539	3.81	3.91	J	0.0450	0.0550	1.14	1.39
B	0.2752	0.2791	6.99	7.09	K	0.0450	0.0550	1.14	1.39
C	0.5315	0.6102	13.50	15.50	L	-	*0.0217	-	*0.55
D	0.2854	0.3039	7.52	7.72	M	0.1378	0.1520	3.50	3.86
E	0.0374	0.0413	0.95	1.05					

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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