

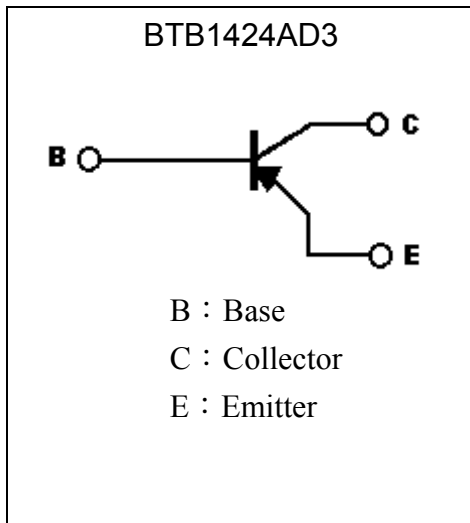
Low $V_{CE(sat)}$ PNP Epitaxial Planar Transistor

BTB1424AD3

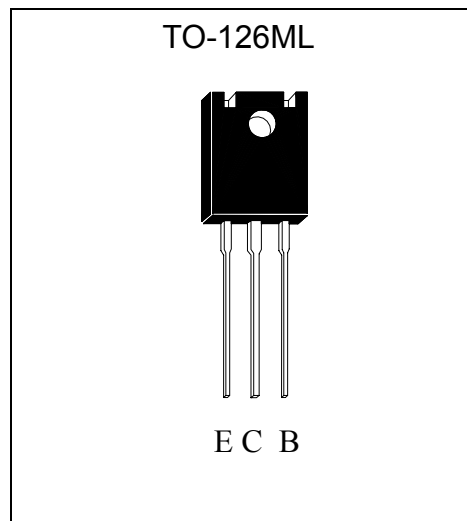
Features

- Excellent DC current gain characteristics
- Low Saturation Voltage, $V_{CE(sat)} = -0.3V(\text{typ}) @ I_C = -2A, I_B = -100mA.$
- Complementary to BTD2150AD3
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current(DC)	I_C	-3	A
Collector Current(Pulsed) (Note 1)	I_{CP}	-5	
Power Dissipation(TA=25°C)	P_d	1	W
Power Dissipation(TC=25°C)		10	
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Note 1: Single pulse, $P_w \leq 10ms$, Duty Cycle $\leq 30\%$.



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	-50	-	-	V	I _C =-50μA
BV _{CEO}	-50	-	-	V	I _C =-1mA
BV _{EBO}	-6	-	-	V	I _E =-50μA
I _{CB0}	-	-	-0.1	μA	V _{CB} =-20V
I _{EBO}	-	-	-0.1	μA	V _{EB} =-5V
*V _{CE(sat)}	-	-	-0.4	V	I _C =-1A, I _B =-50mA
*V _{CE(sat)}	-	-	-0.5	V	I _C =-2A, I _B =-100mA
*h _{FE}	82	-	560	-	V _{CE} =-2V, I _C =-500mA
f _T	-	240	-	MHz	V _{CE} =-2V, I _C =-500mA, f=100MHz
Cob	-	35	-	pF	V _{CB} =-10V, f=1MHz

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

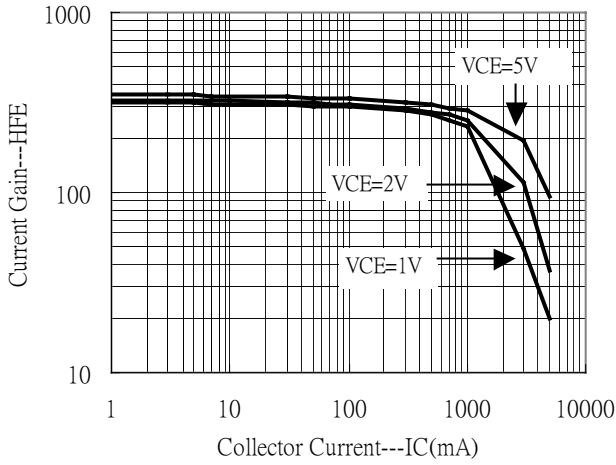
Classification Of h_{FE}

Rank	P	Q	R	S
h _{FE} range	82~180	120~270	180~390	270~560

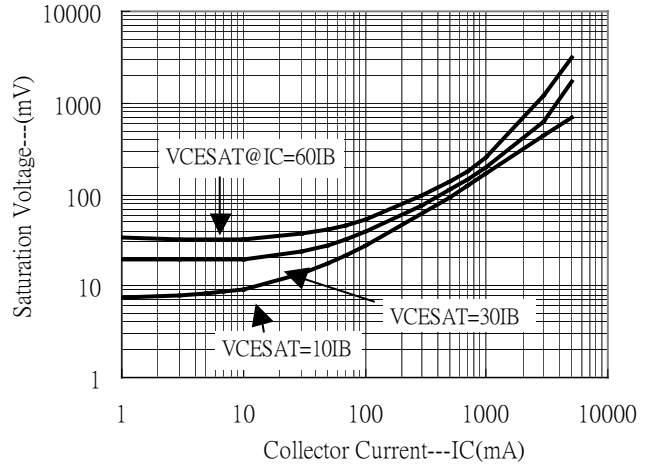


Characteristic Curves

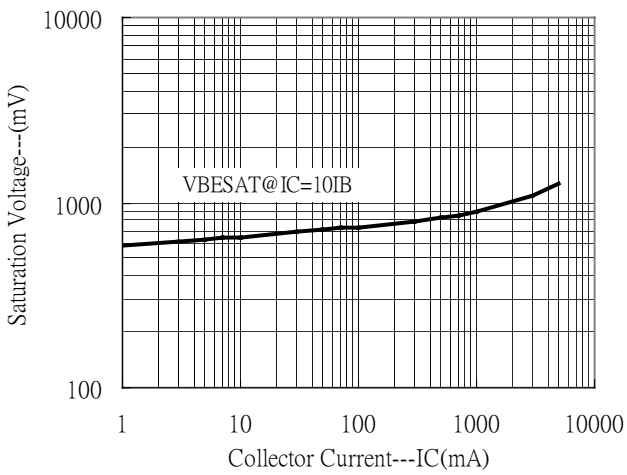
Current Gain vs Collector Current



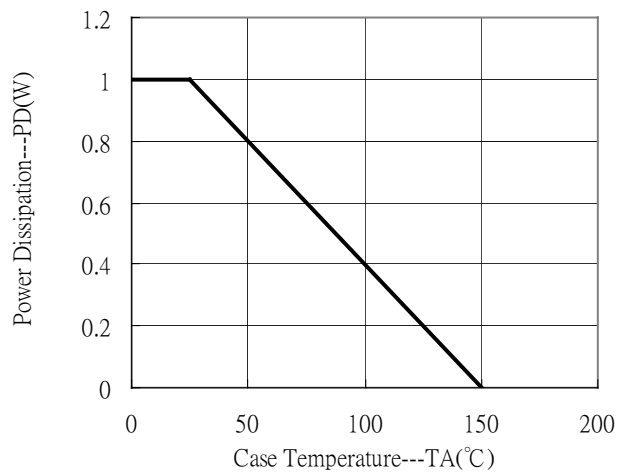
Saturation Voltage vs Collector Current



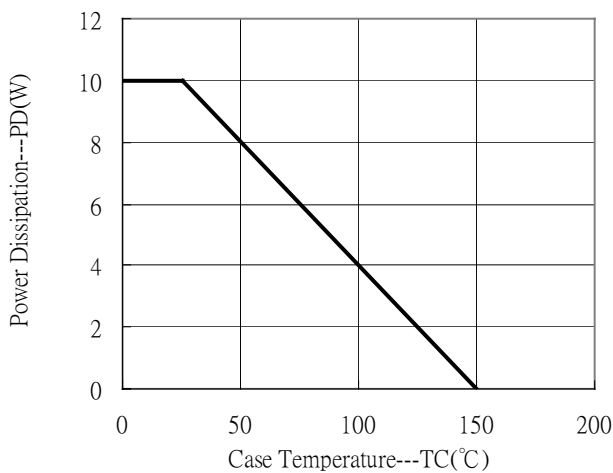
Saturation Voltage vs Collector Current



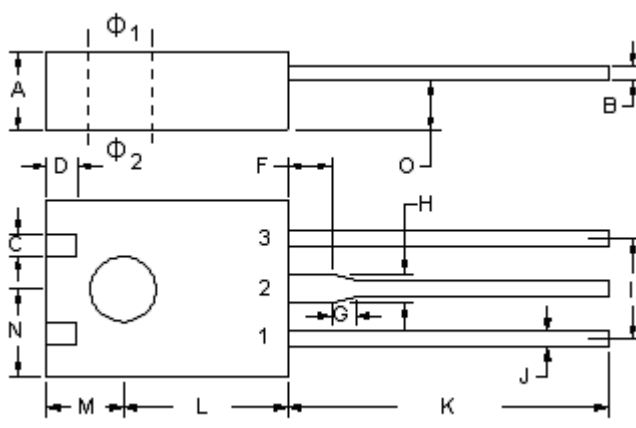
Power Derating Curve



Power Derating Curve



TO-126ML Dimension



Marking:

Style: Pin 1. Emitter 2. Collector 3. Base

3-Lead TO-126ML Plastic Package
 CYStek Package Code: D3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1356	0.1457	3.44	3.70	H	0.0462	0.0562	1.17	1.42
B	0.0170	0.0272	0.43	0.69	I	-	*0.1795	-	*4.56
C	0.0344	0.0444	0.87	1.12	J	0.0268	0.0331	0.68	0.84
D	0.0501	0.0601	1.27	1.52	K	0.5512	0.5906	14.00	15.00
Φ ₁	0.1220	0.1299	3.10	3.30	L	0.2903	0.3003	7.37	7.62
Φ ₂	0.1181	0.1260	3.00	3.20	M	0.1378	0.1478	3.50	3.75
F	0.0737	0.0837	1.87	2.12	N	0.1525	0.1625	3.87	4.12
G	0.0294	0.0494	0.74	1.25	O	0.0740	0.0842	1.88	2.14

- 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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