Silicon PNP Epitaxial Planar Transistor

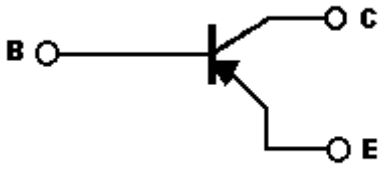
BTB1236AE3

Description

- High BV_{CEO}
- High current capability

Symbol

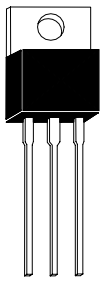
BTB1236AE3



B：Base
C：Collector
E：Emitter

Outline

TO-220AB



B C E

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-180	V
Collector-Emitter Voltage	V_{CEO}	-160	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current (DC)	I_C	-1.5	A
Collector Current (Pulse)	I_{CP}	-3	A
Power Dissipation @T_A=25℃	Pd	2	W
Power Dissipation @T_C=25℃		20	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-180	-	-	V	I_C=-50μA, I_E=0
BV_{CEO}	-160	-	-	V	I_C=-1mA, I_B=0
BV_{EBO}	-5	-	-	V	I_E=-50μA, I_C=0
I_{CBO}	-	-	-1	μA	V_{CB}=-160V, I_E=0
I_{EBO}	-	-	-1	μA	V_{EB}=-4V, I_C=0
*$V_{CE(sat)}$	-	-	-0.6	V	I_C=-1A, I_B=-100mA
*$V_{BE(on)}$	-	-	-1.5	V	V_{CE}=-5V, I_C=-150mA
$h_{FE}1$	60	-	200	-	V_{CE}=-5V, I_C=-100mA
$h_{FE}2$	30	-	-	-	V_{CE}=-5V, I_C=-500mA
f_T	-	140	-	MHz	V_{CE}=-5V, I_C=-150mA
Cob	-	27	-	pF	V_{CB}=-10V, I_E=0, f=1MHz

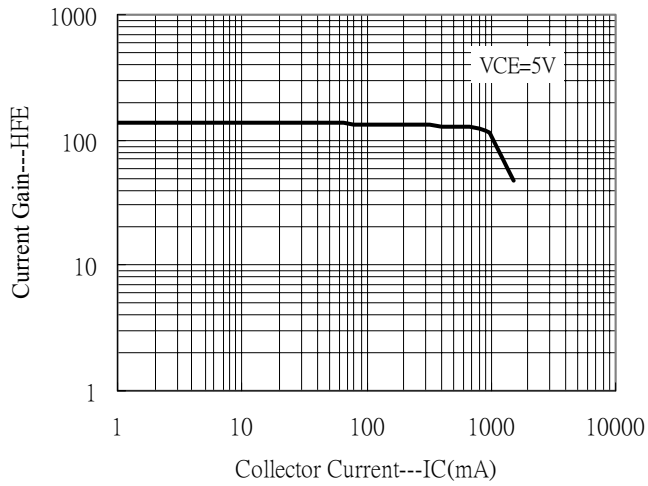
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Classification of h_{FE} 1

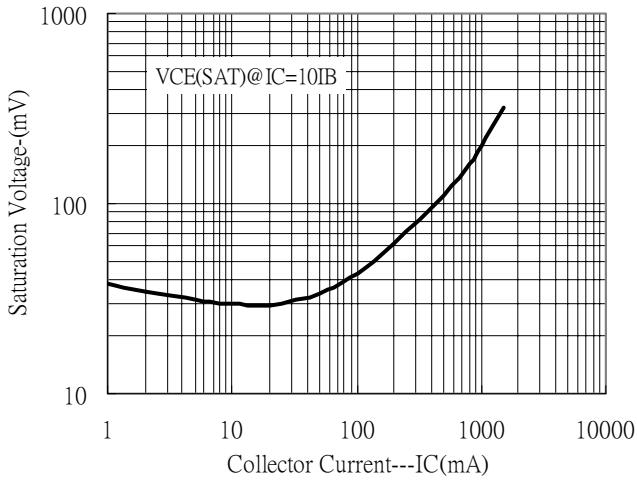
Rank	K	P	Q
Range	60~120	82~190	120~200

Characteristic Curves

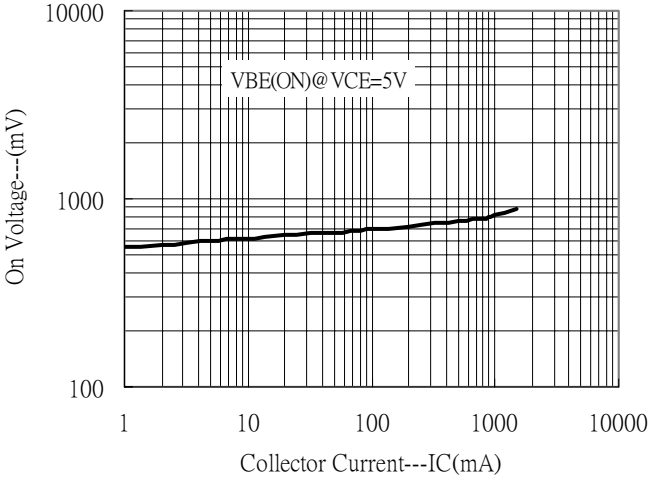
Current Gain vs Collector Current



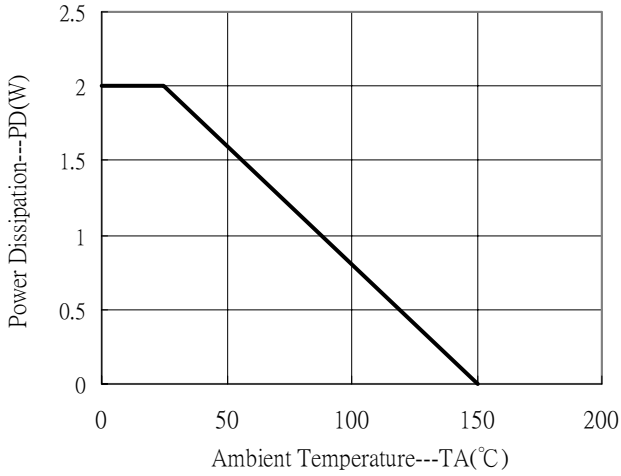
Saturation Voltage vs Collector Current



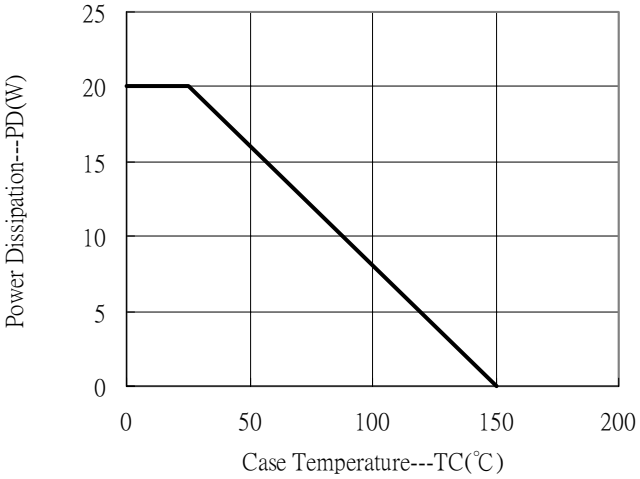
On Voltage vs Collector Current



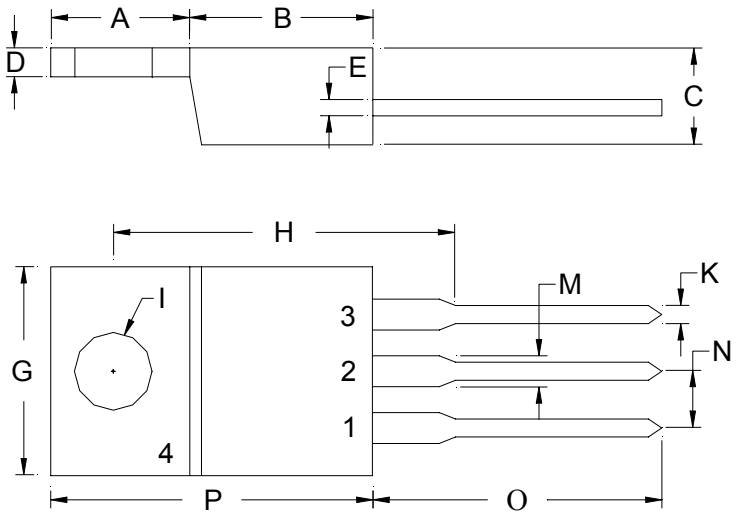
Power Derating Curve



Power Derating Curve

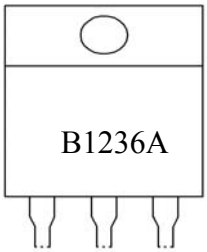


TO-220AB Dimension



3-Lead TO-220AB Plastic Package
CYStek Package Code: E3

Marking:



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

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2197	0.2949	5.58	7.49	I	-	*0.1508	-	*3.83
B	0.3299	0.3504	8.38	8.90	K	0.0295	0.0374	0.75	0.95
C	0.1732	0.185	4.40	4.70	M	0.0449	0.0551	1.14	1.40
D	0.0453	0.0547	1.15	1.39	N	-	*0.1000	-	*2.54
E	0.0138	0.0236	0.35	0.60	O	0.5000	0.5618	12.70	14.27
G	0.3803	0.4047	9.66	10.28	P	0.5701	0.6248	14.48	15.87
H	-	*0.6398	-	*16.25					

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