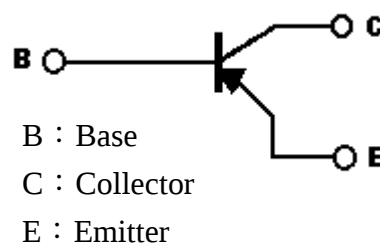
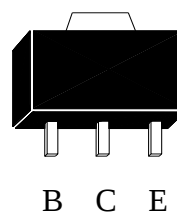


Silicon PNP Epitaxial Planar Transistor

Features:

- High BV_{CEO}
- High current capability
- RoHS compliant package

SOT-89



Ordering Information

Device	Package	Shipping
KMB1236A	SOT-89 (Pb-free lead plating and halogen-free package)	1000 pcs / Tape & Reel

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 (Note 1)	A
Power Dissipation	P _D	0.6	W
		1.5 (Note 2)	W
		2 (Note 3)	W
Thermal Resistance, Junction to Ambient	R _{θJA}	208	°C/W
		83.3 (Note 2)	°C/W
		62.5 (Note 3)	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

Note : 1. Single Pulse P_w ≤ 350μs, Duty ≤ 2%.

2. When mounted on FR-4 PCB with area measuring 25×25×1.6 mm.

3. When mounted on ceramic with area measuring 40×40×1 mm.

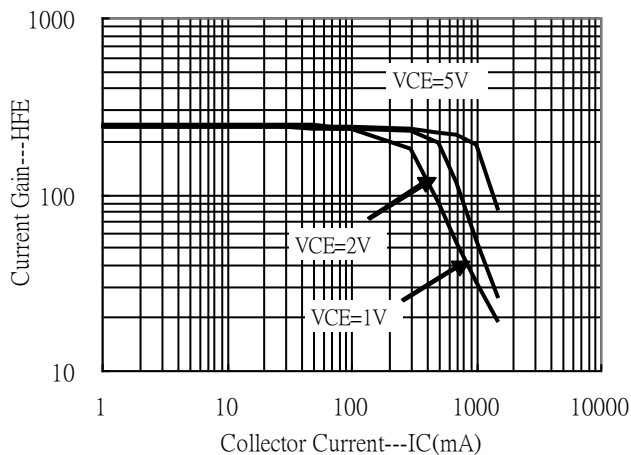
Characteristics (Ta=25°C)

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)}	-	-	-0.12	V	I _C =-250mA, I _B =-25mA
*V _{CE(sat)}	-	-	-0.18	V	I _C =-500mA, I _B =-50mA
*V _{CE(sat)}	-	-0.24	-0.32	V	I _C =-1A, I _B =-100mA
*R _{CE(sat)}	-	-0.24	-0.32	Ω	I _C =-1A, I _B =-100mA
*V _{BE(sat)}	-	-	-1.1	V	I _C =-1A, I _B =-100mA
*V _{BE(on)}	-	-	-1	V	V _{CE} =-5V, I _C =-150mA
h _{FE1}	180	-	-	-	V _{CE} =-5V, I _C =-1mA
h _{FE2}	180	-	390	-	V _{CE} =-5V, I _C =-100mA
h _{FE3}	160	-	-	-	V _{CE} =-5V, I _C =-500mA
h _{FE4}	150	-	-	-	V _{CE} =-5V, I _C =-1A
f _T	-	180	-	MHz	V _{CE} =-5V, I _C =-150mA
Cob	-	24	-	pF	V _{CB} =-10V, I _E =0, f=1MHz

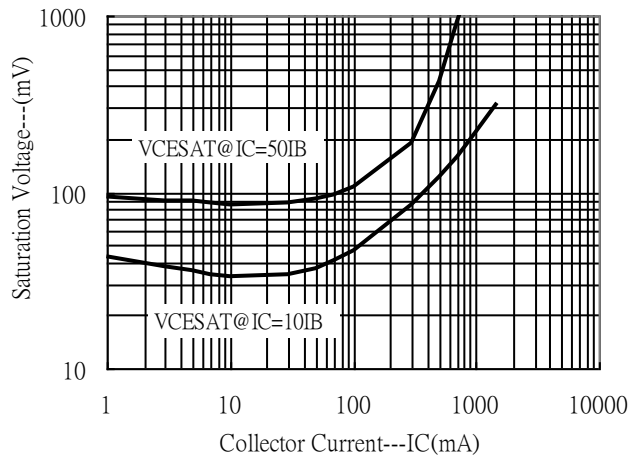
*Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Typical Characteristics

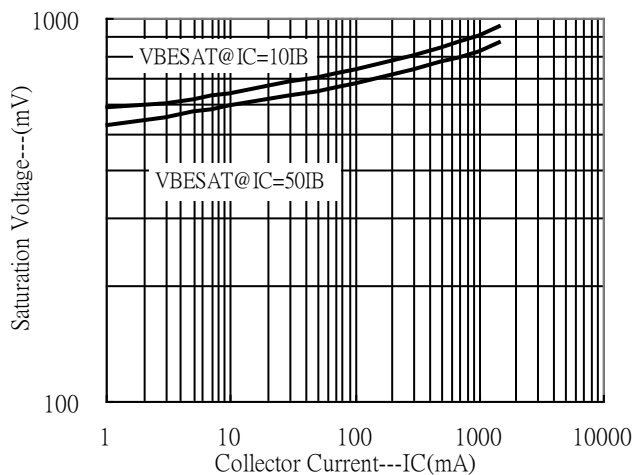
Current Gain vs Collector Current



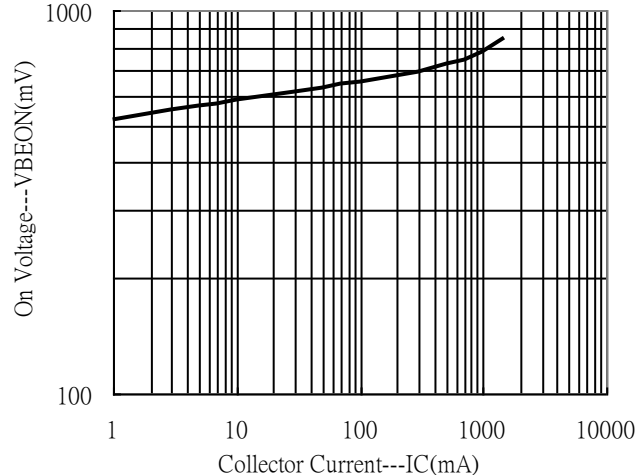
Saturation Voltage vs Collector Current



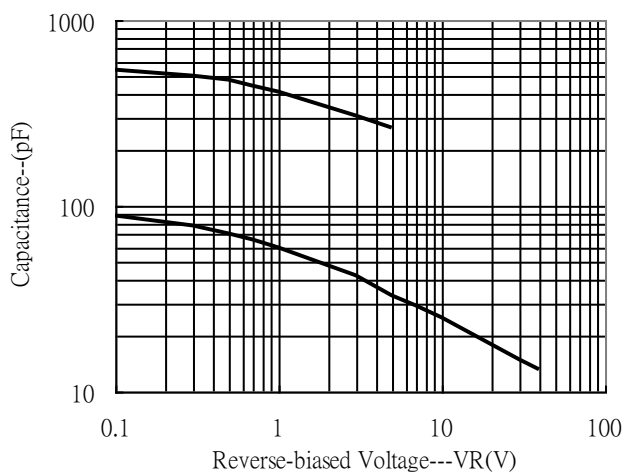
Saturation Voltage vs Collector Current



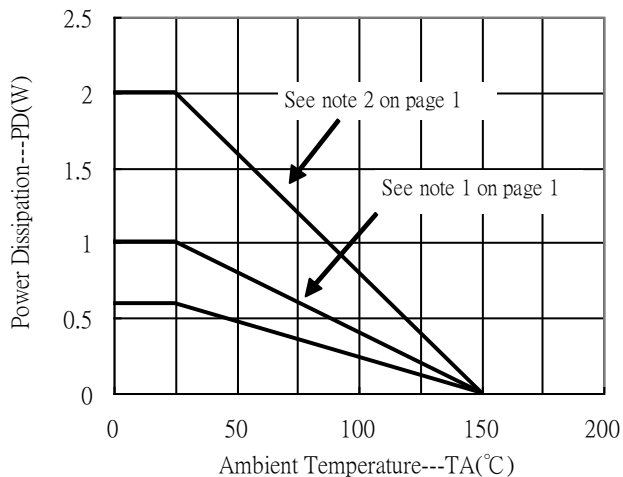
On Voltage vs Collector Current



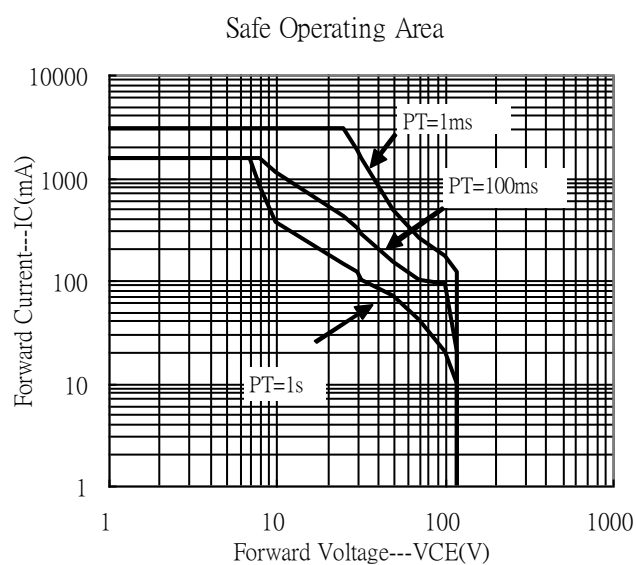
Capacitance vs Reverse-biased Voltage



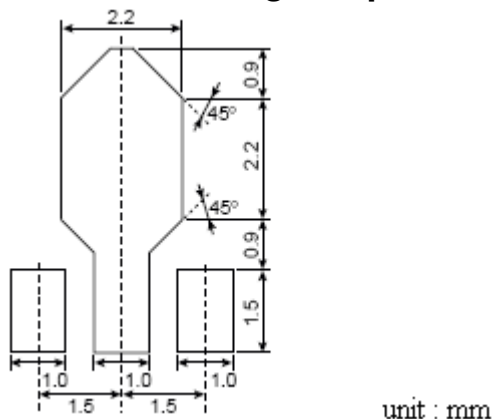
Power Derating Curve



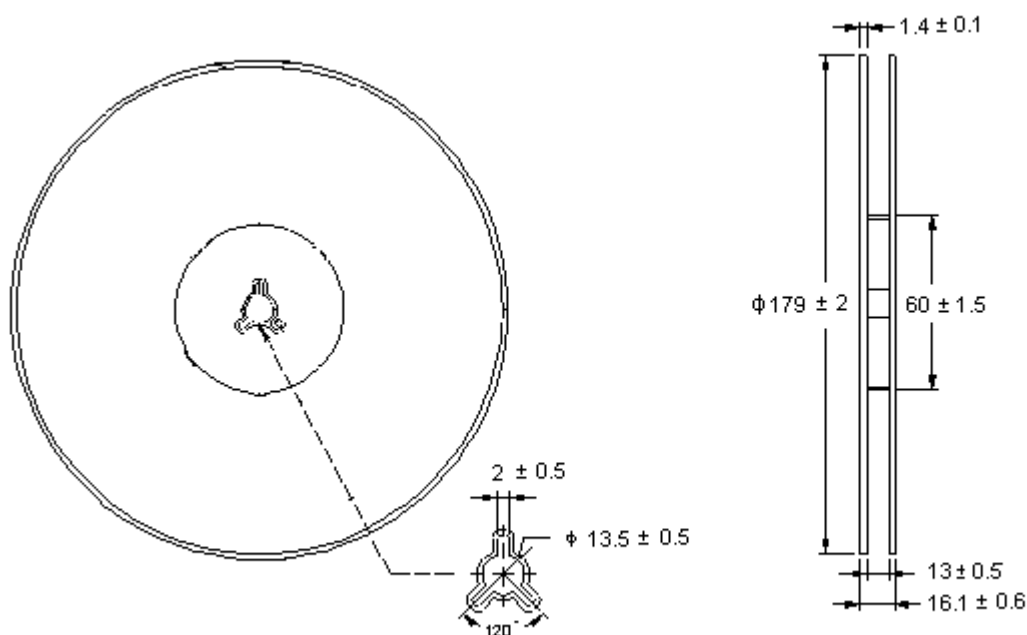
Typical Characteristics(Cont.)



Recommended soldering footprint

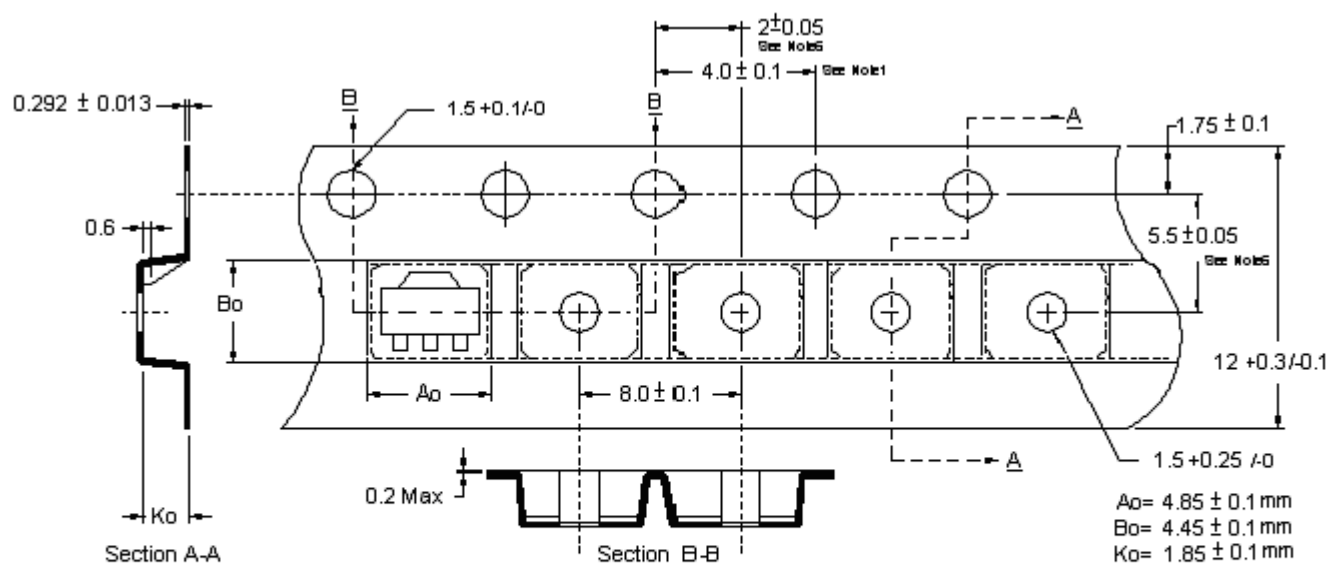


Reel Dimension



Unit: millimeter

Carrier Tape Dimension



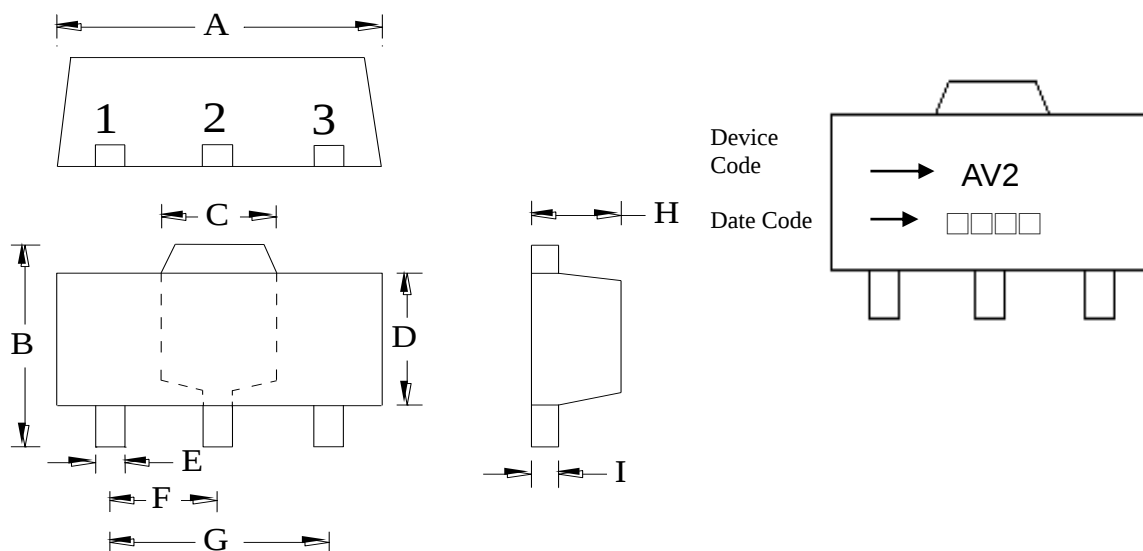
Notes

1. 10 sprocket hole pitch cumulative tolerance ± 0.2 .
2. Camber not to exceed 1mm in 100mm.
3. Material: Conductive Black Advantek Polystyrene.
4. Ao & Bo measured on a plane 0.3mm above the bottom of the pocket.
5. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

Unit : millimeter

SOT-89 Dimension

Marking:



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

3-Lead SOT-89 Plastic
 Surface Mounted Package

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1732	0.1811	4.40	4.60	F	0.0591	TYP	1.50	TYP
B	0.1551	0.1673	3.94	4.25	G	0.1181	TYP	3.00	TYP
C	0.0610	REF	1.55	REF	H	0.0551	0.0630	1.40	1.60
D	0.0906	0.1024	2.30	2.60	I	0.0138	0.0173	0.35	0.44
E	0.0126	0.0205	0.32	0.52					