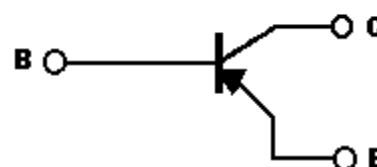
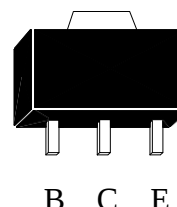


Low Vcesat PNP Epitaxial Planar Transistor

Features:

- Low $V_{CE(sat)}$, $V_{CE(sat)} = -0.25$ V (typical), at $I_C / I_B = -3A / -60mA$
- Excellent DC current gain characteristics
- Complementary to BTD2098M3
- Pb-free lead plating and halogen-free package

SOT-89



B : Base C : Collector E : Emitter

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

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-30	V
Collector-Emitter Voltage	V_{CEO}	-20	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-5	A
	I_{CP}	-10 (Note 1)	
Power Dissipation	P_d	0.6	W
	P_d	2 (Note 2)	
Operating Junction and Storage Temperature Range	$T_j ; T_{stg}$	-55~+150	$^\circ\text{C}$

Note : 1. Single Pulse $P_w = 10\text{ms}$

2. When mounted on a 40 × 40 × 0.7 mm ceramic board.

Thermal Data

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction-to-case, max	$R_{\theta JC}$	15	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-ambient, max	$R_{\theta JA}$	208	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-ambient, max (Note)	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$

Note : When mounting on a 40 × 40 × 0.7 mm ceramic board.

Ordering Information

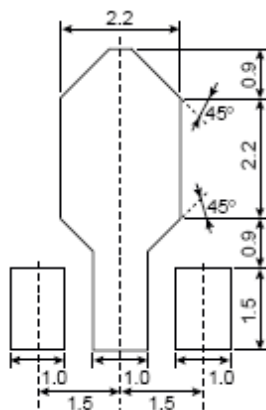
Device	Package	Shipping
KM1386	SOT-89 (Pb-free lead plating & halogen-free package)	1000 pcs / Tape & Reel

Characteristics (T_a=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-30	-	-	V	$I_C = -50\mu A, I_E = 0$
BV_{CEO}	-20	-	-	V	$I_C = -1mA, I_B = 0$
BV_{EBO}	-6	-	-	V	$I_E = -50\mu A, I_C = 0$
I_{CBO}	-	-	-0.5	μA	$V_{CB} = -25V, I_E = 0$
I_{EBO}	-	-	-0.5	μA	$V_{EB} = -5V, I_C = 0$
$*V_{CE(sat)}$	-	-0.25	-0.4	V	$I_C = -3A, I_B = -60mA$
$*V_{CE(sat)}$	-	-0.3	-0.5	V	$I_C = -4A, I_B = -0.1A$
$*V_{BE(sat)}$	-	-1.0	-1.3	V	$I_C = -3A, I_B = -60mA$
$*h_{FE}$	180	-	390	-	$V_{CE} = -2V, I_C = -0.5A$
f_T	-	120	-	MHz	$V_{CE} = -6V, I_C = -50mA, f = 30MHz$
Cob	-	60	-	pF	$V_{CB} = -20V, f = 1MHz$

*Pulse Test : Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

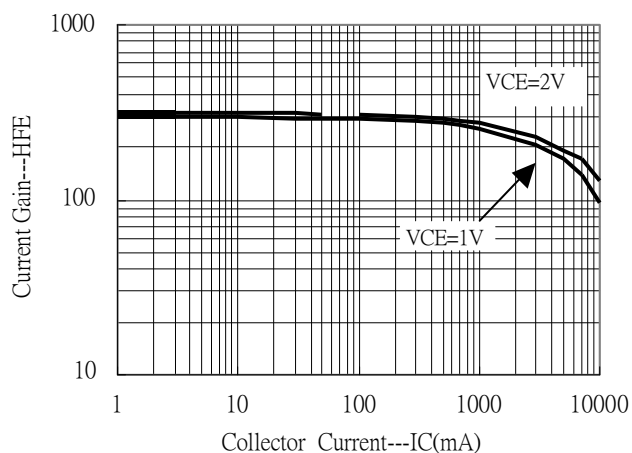
Recommended soldering footprint



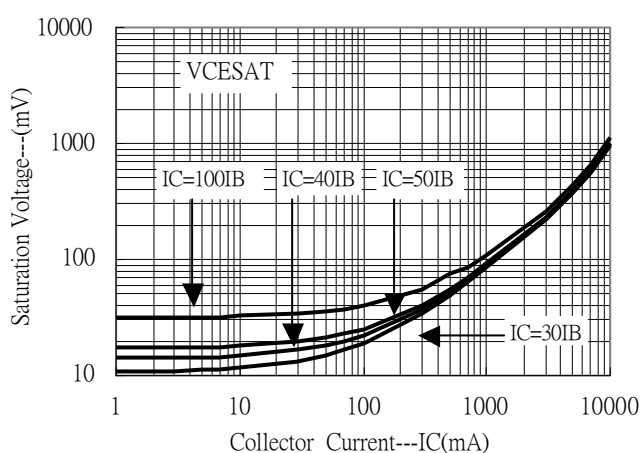
unit : mm

Typical Characteristics

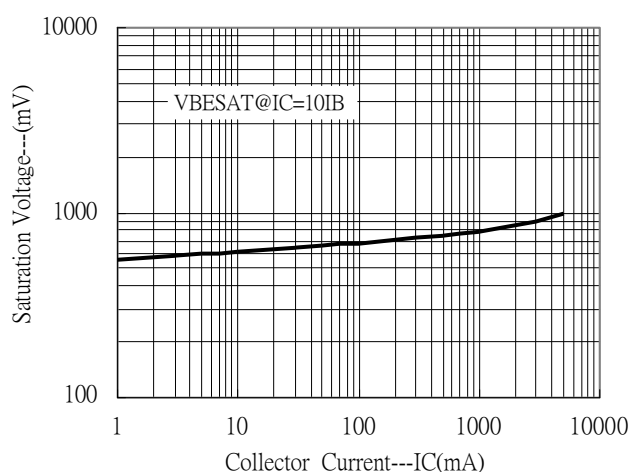
Current Gain vs Collector Current



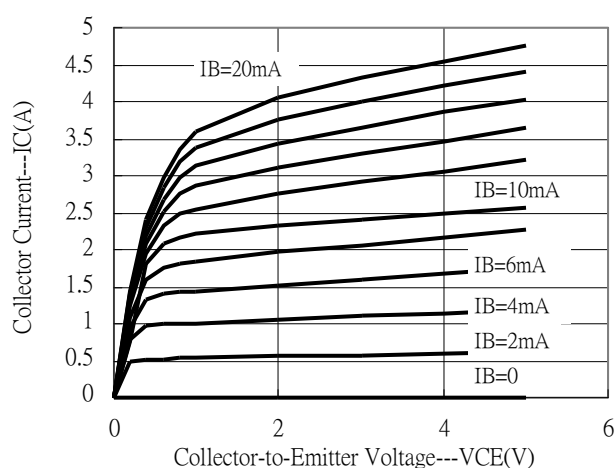
Saturation Voltage vs Collector Current



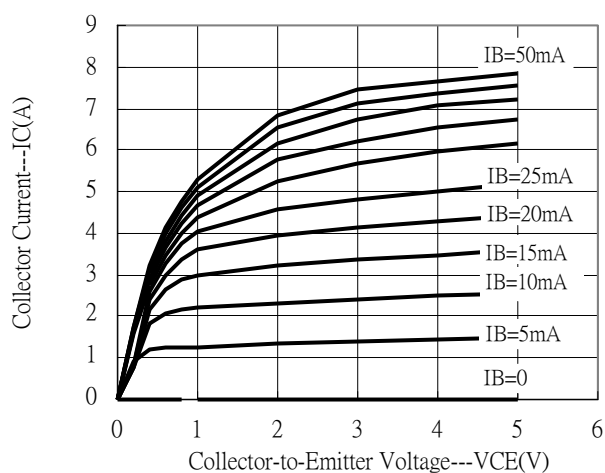
Saturation Voltage vs Collector Current



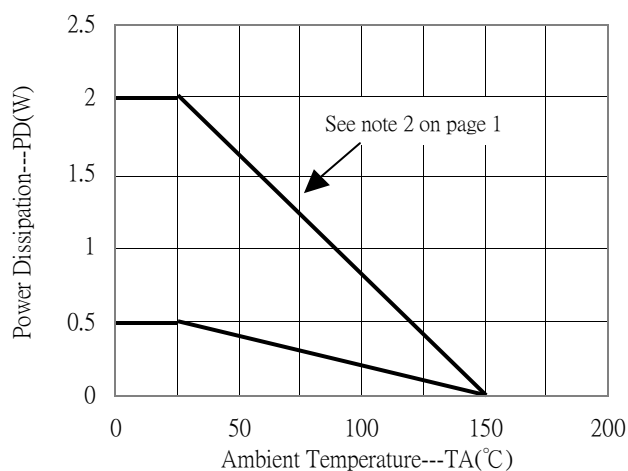
Output Characteristics



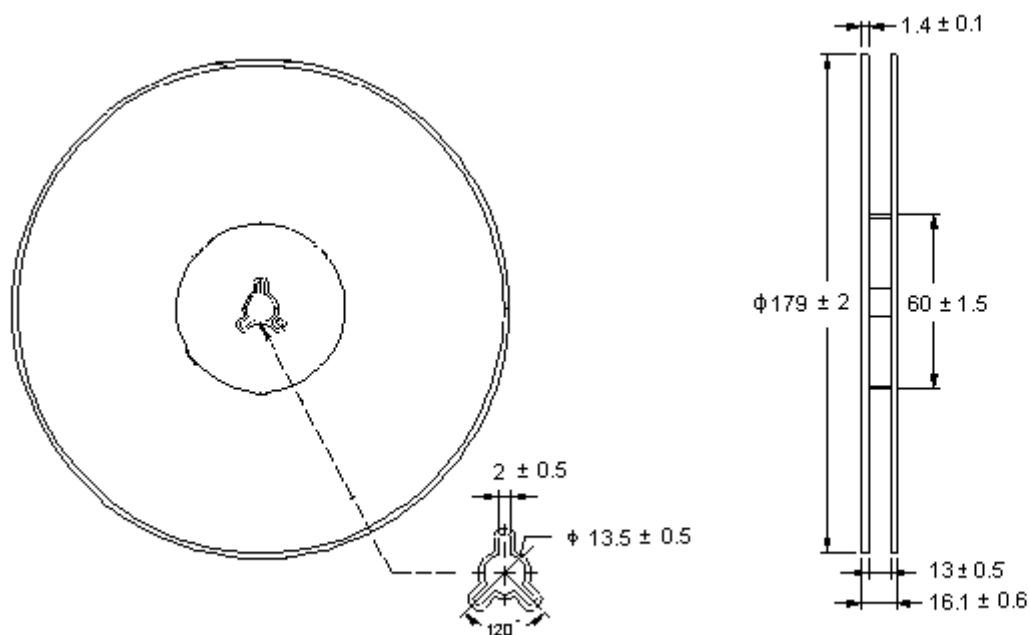
Output Characteristics



Power Derating Curves

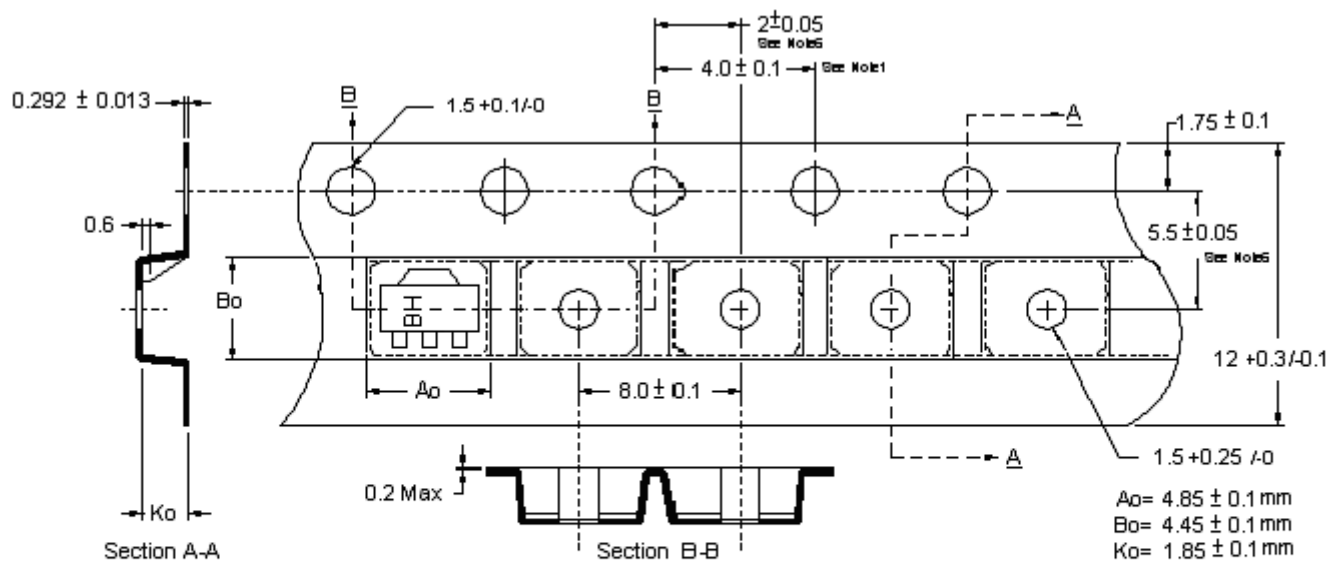


Reel Dimension



Unit: millimeter

Carrier Tape Dimension

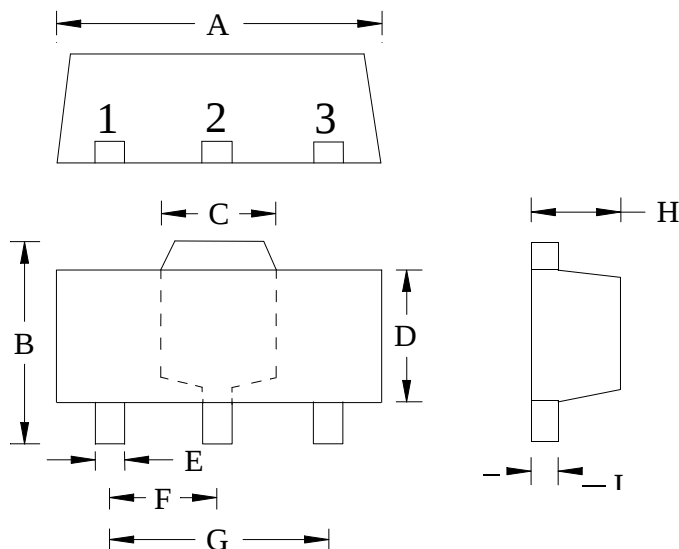


Notes

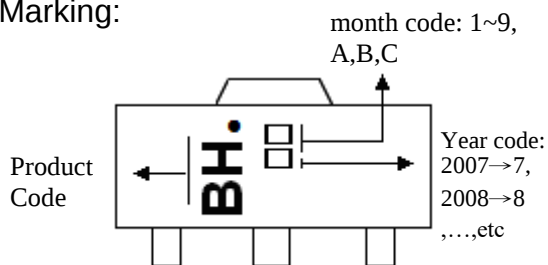
1. 10 sprocket hole pitch cumulative tolerance ± 0.2 .
2. Camber not to exceed 1mm in 100mm.
3. Material: Conductive Black Advantek Polystyrene.
4. A_o & B_o measured on a plane 0.3mm above the bottom of the pocket.
5. K_o measured from a plane on the inside bottom of the pocket to the top surface of 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
 Package Code: M3

*: Typical

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					