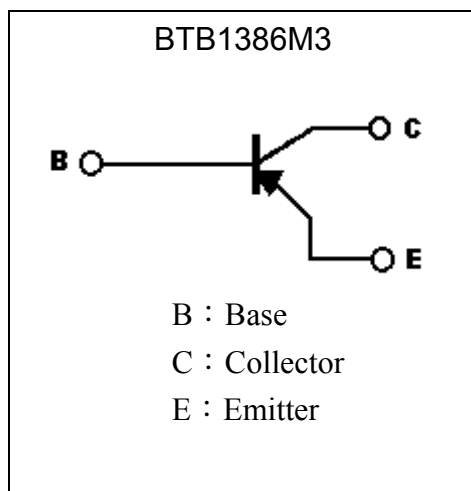
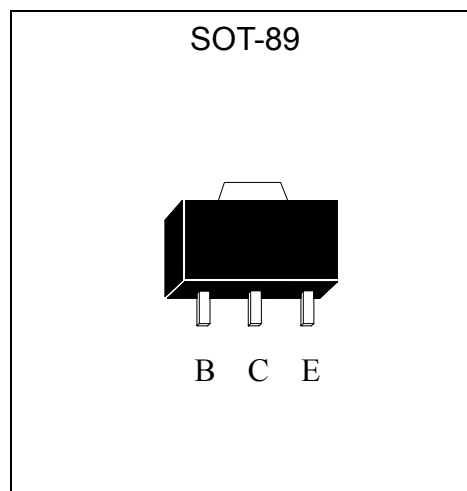


Low Vcesat PNP Epitaxial Planar Transistor

BTB1386M3

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 BTB2098M3
- Pb-free package

Symbol

Outline

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	0.5	W
	P_d	2 (Note 2)	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^\circ\text{C}$

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

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

**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	-30	-	-	V	I _C =-50μA, I _E =0
BV _{CEO}	-20	-	-	V	I _C =-1mA, I _B =0
BV _{EBO}	-6	-	-	V	I _E =-50μA, 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}	120	-	390	-	V _{CE} =-2V, I _C =-0.5A
f _T	-	120	-	MHz	V _{CE} =-6V, I _C =-50mA, f=30MHz
C _{ob}	-	60	-	pF	V _{CB} =-20V, f=1MHz

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

Classification of hFE

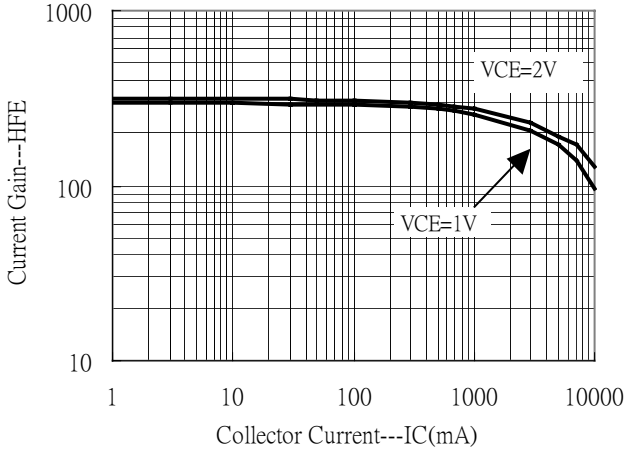
Rank	Q	R
Range	120~270	180~390

Ordering Information

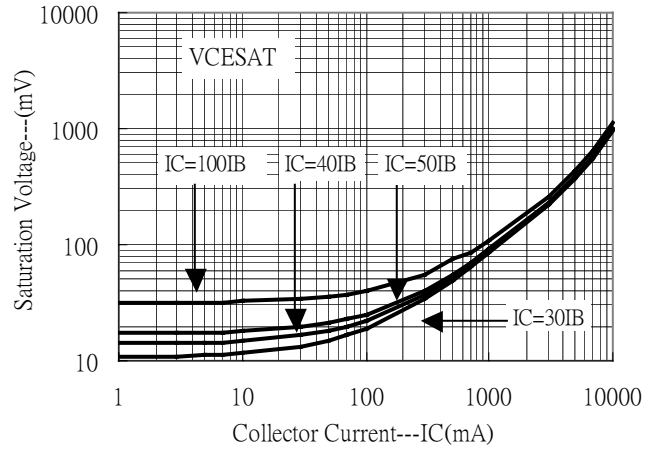
Device	Package	Shipping	Marking
BTB1386M3	SOT-89 (Pb-free)	1000 pcs / Tape & Reel	BH

Characteristic Curves

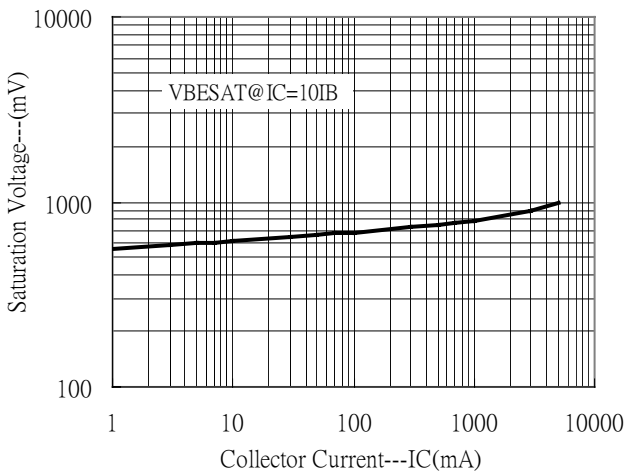
Current Gain vs Collector Current



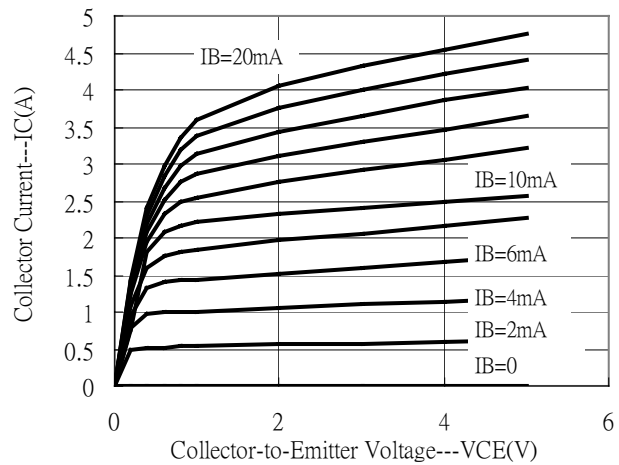
Saturation Voltage vs Collector Current



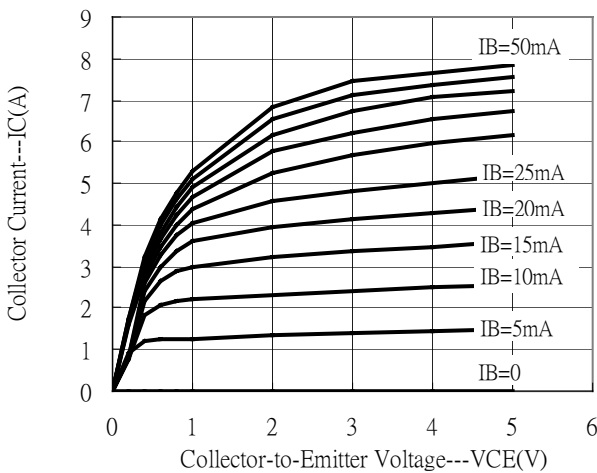
Saturation Voltage vs Collector Current



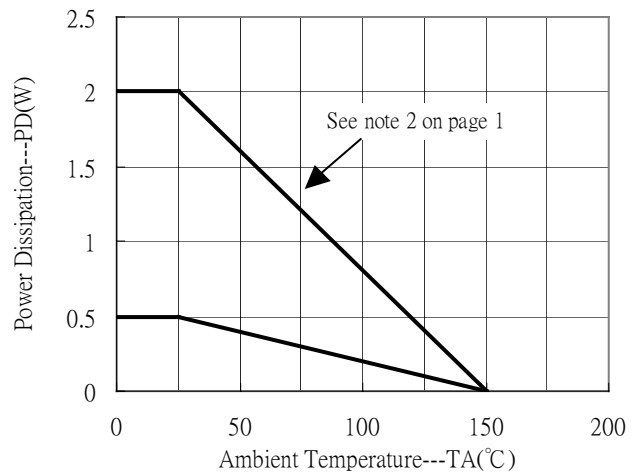
Output Characteristics



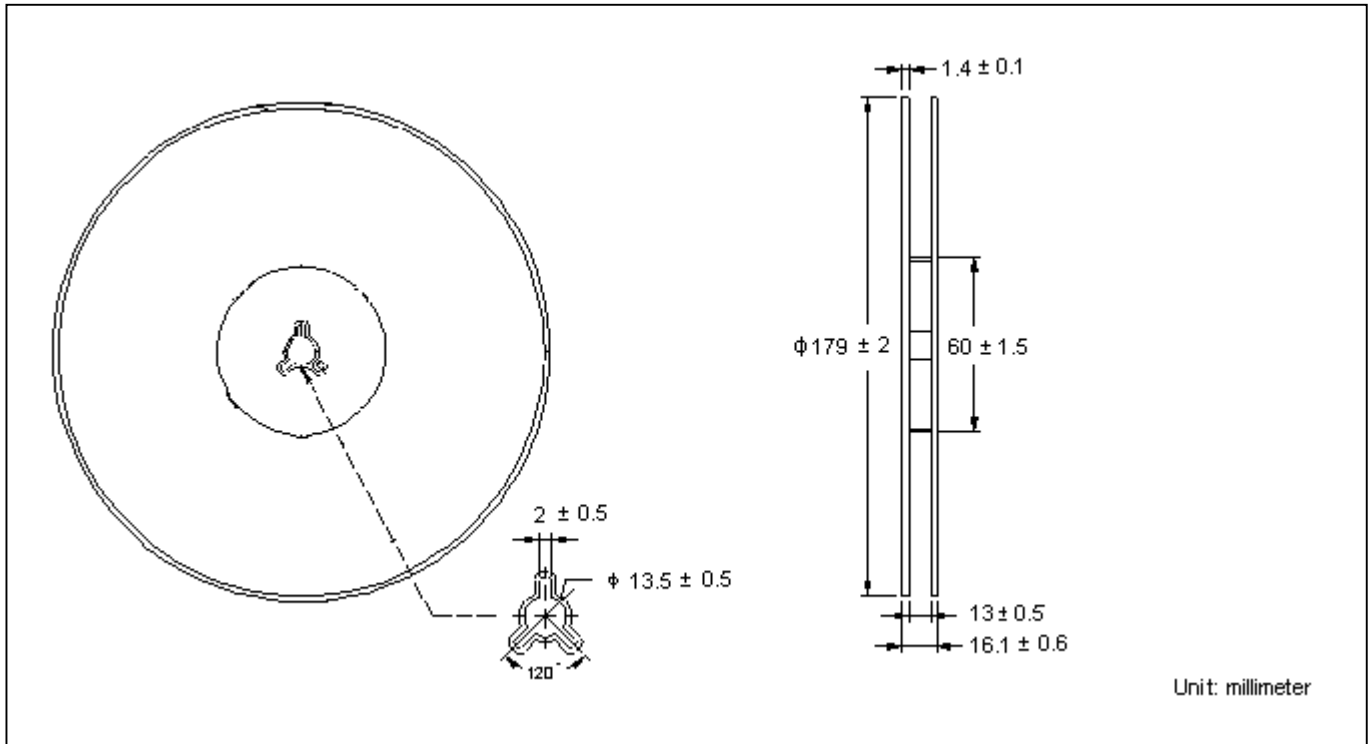
Output Characteristics



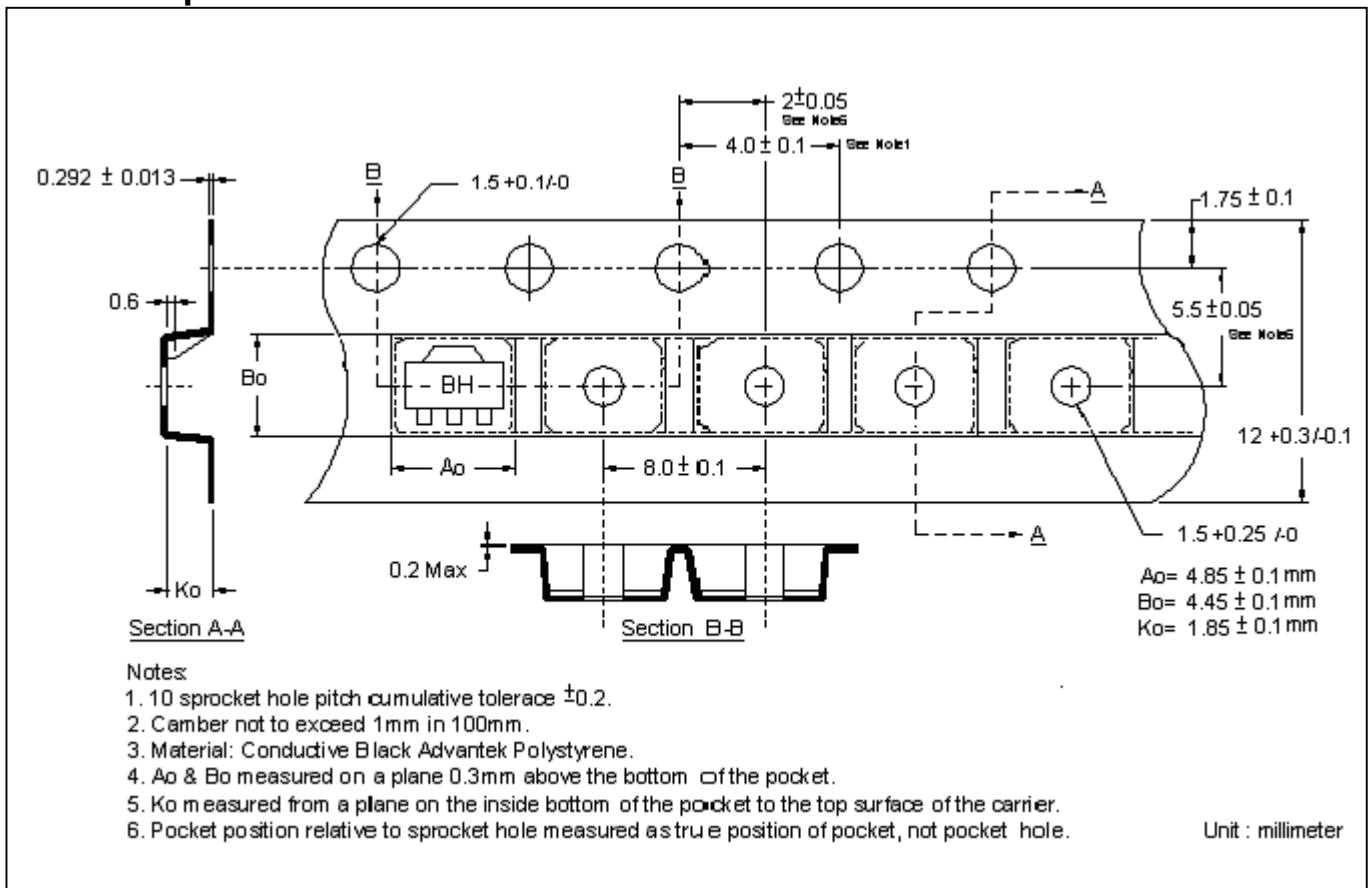
Power Derating Curves



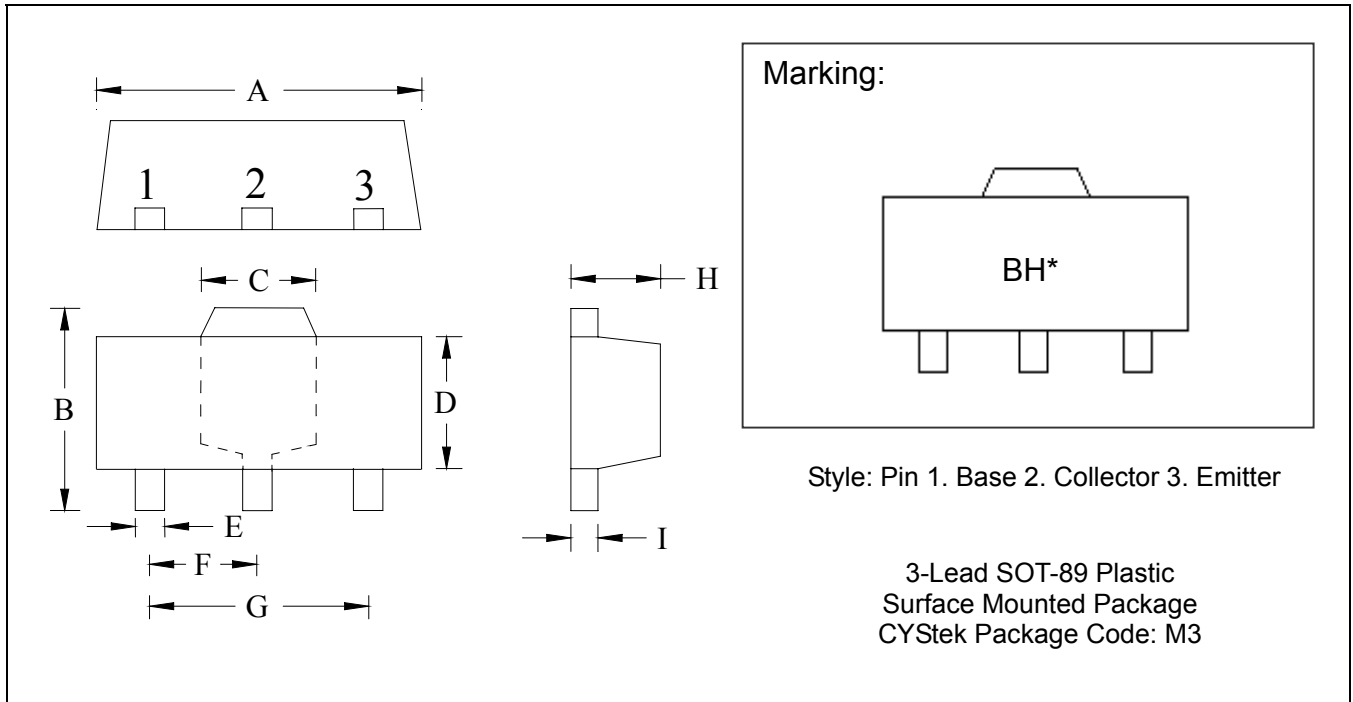
Reel Dimension



Carrier Tape Dimension



SOT-89 Dimension



*: 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	0.0583	0.0598	1.48	1.527
B	0.1594	0.1673	4.05	4.25	G	0.1165	0.1197	2.96	3.04
C	0.0591	0.0663	1.50	1.70	H	0.0551	0.0630	1.40	1.60
D	0.0945	0.1024	2.40	2.60	I	0.0138	0.0161	0.35	0.41
E	0.01417	0.0201	0.36	0.51					

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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