## Low Vcesat PNP Epitaxial Planar Transistor

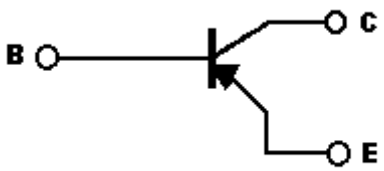
# BTB1427M3

## Features

- Low $V_{CE}$(sat), $V_{CE}$(sat)=-0.6 V (typical), at $I_C$ / $I_B$ = -4A / -0.1A
- Excellent DC current gain characteristics

## Symbol

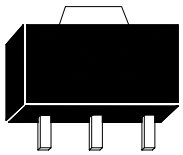
BTB1427M3




B：Base
C：Collector
E：Emitter

## Outline

SOT-89



B C E

## Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -20 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -15 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -6 | V |
| Collector Current | $I_C$ | -5 | A |
| | $I_{CP}$ | -10 (Note 1) | |
| Power Dissipation | Pd | 0.5 | W |
| | Pd | 2 (Note 2) | |
| Junction Temperature | Tj | 150 | °C |
| Storage Temperature | Tstg | -55~+150 | °C |

Note : 1. Single Pulse Pw=10ms
2. When mounted on a 40 ×40 ×0.7 mm ceramic board.

## Characteristics (Ta=25°C)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|
| $BV_{CBO}$ | -20 | - | - | V | $I_C$=-50μA, $I_E$=0 |
| $BV_{CEO}$ | -15 | - | - | V | $I_C$=-1mA, $I_B$=0 |
| $BV_{EBO}$ | -6 | - | - | V | $I_E$=-50μA, $I_C$=0 |
| $I_{CBO}$ | - | - | -0.5 | μA | $V_{CB}$=-20V, $I_E$=0 |
| $I_{EBO}$ | - | - | -0.5 | μA | $V_{EB}$=-5V, $I_C$=0 |
| *$V_{CE(sat)}$ | - | - | -1.0 | V | $I_C$=-4A, $I_B$=-0.1A |
| *$h_{FE}$ | 120 | - | 560 | - | $V_{CE}$=-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 ≤380μs, Duty Cycle≤2%

## Classification Of $h_{FE}$

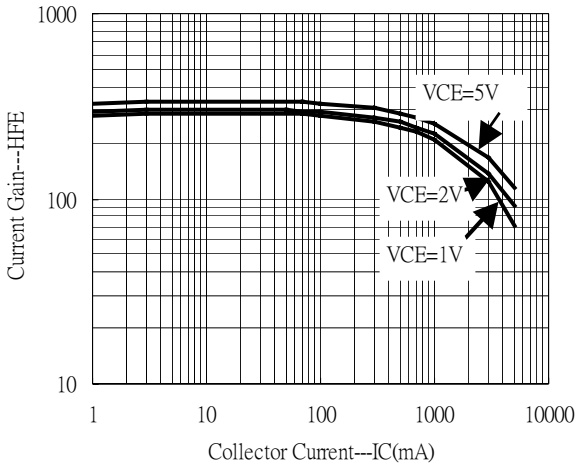
| Rank | Q | R | S |
|---|---|---|---|
| Range | 120~270 | 180~390 | 270~560 |

## Ordering Information

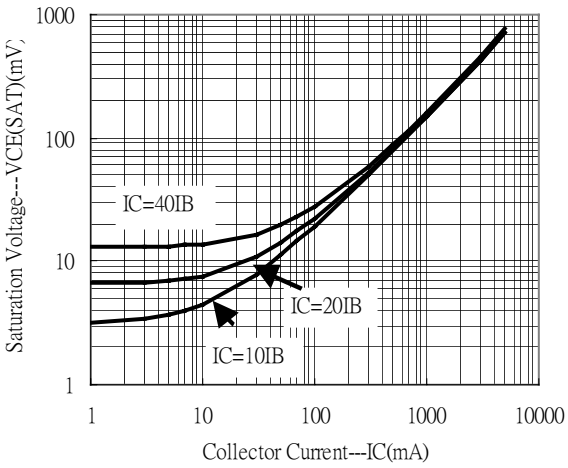
| Device | Package | Shipping | Marking |
|---|---|---|---|
| BTB1386M3 | SOT-89 | 1000 pcs / Tape & Reel | BH |

## Characteristic Curves

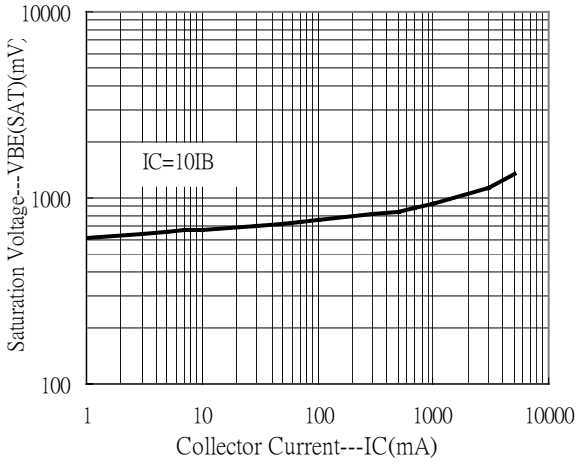
Current Gain vs Collector Current



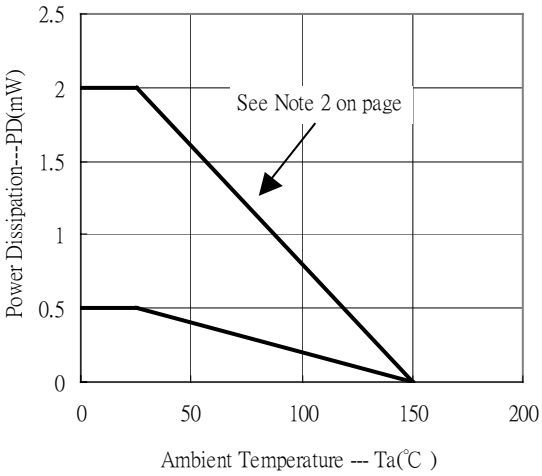

Saturation Voltage vs Collector Current



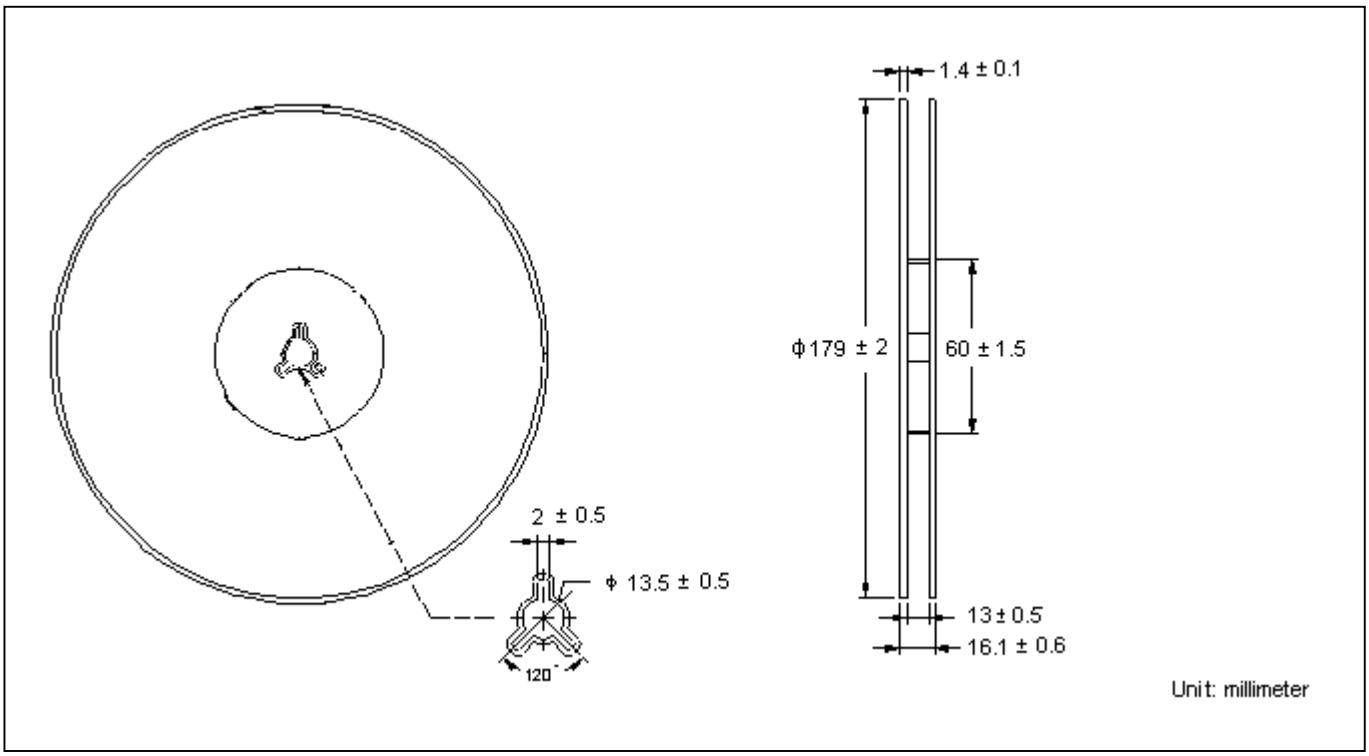

Saturation Voltage vs Collector Current



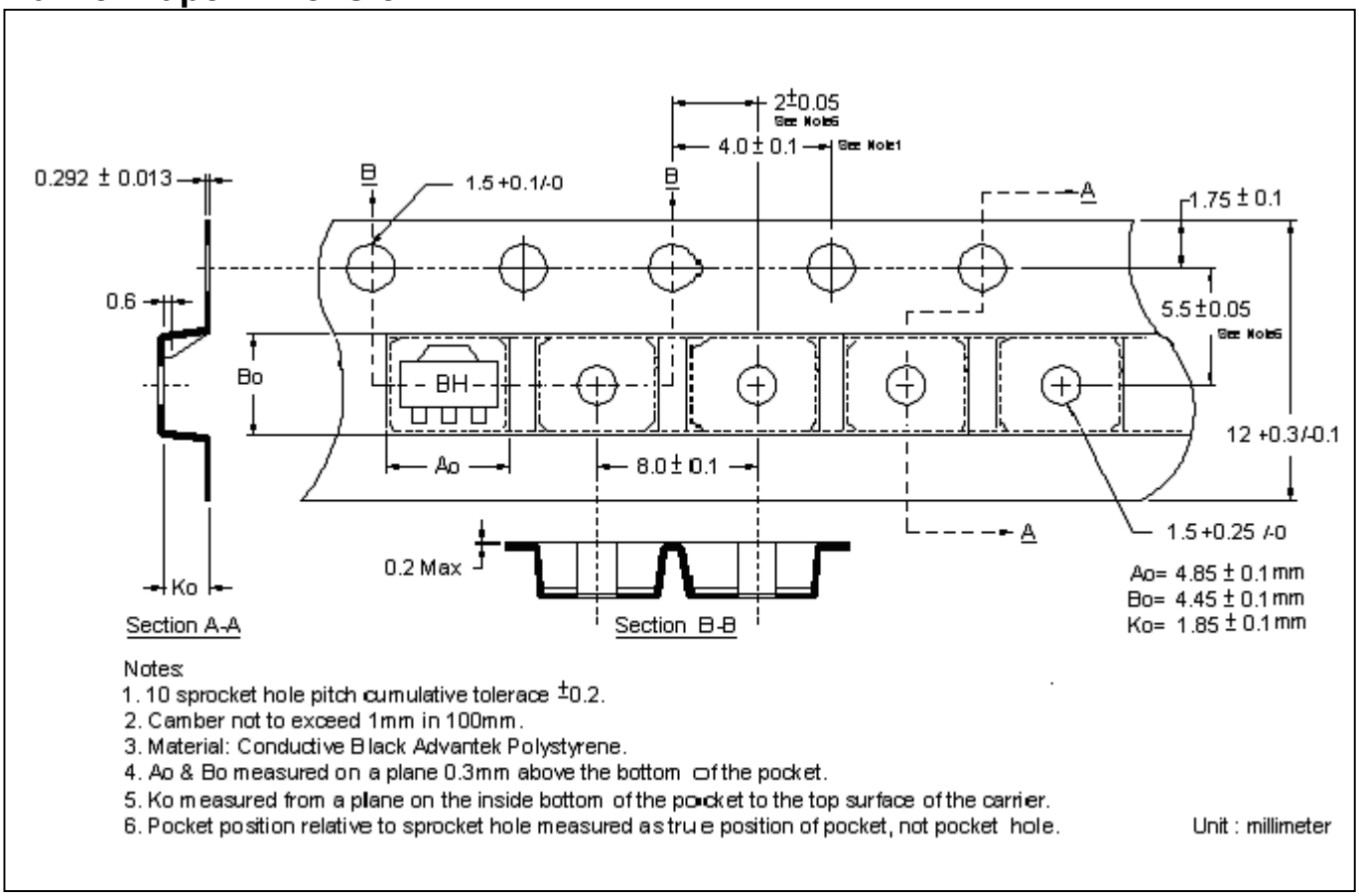

Power Derating Curve



## Reel Dimension



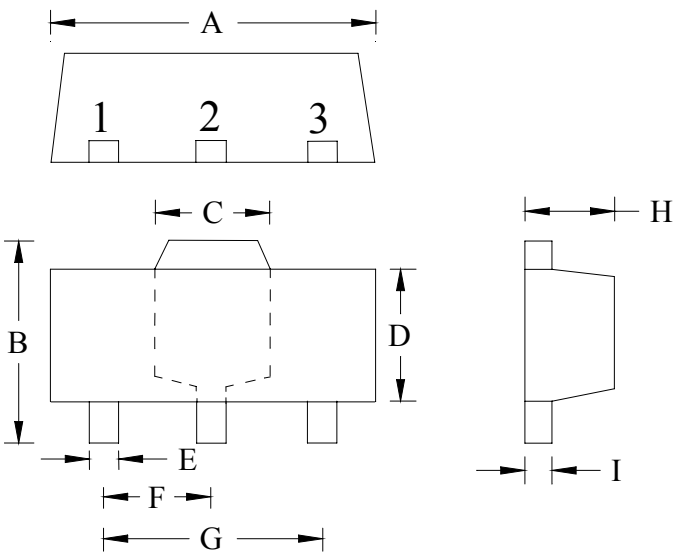

## Carrier Tape Dimension



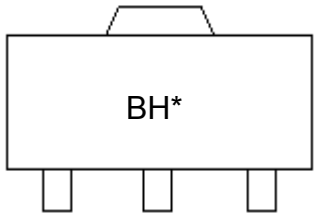

Notes:
1. 10 sprocket hole pitch cumulative tolerace ±0.2.
2. Camber not to exceed 1mm in 100mm.
3. Material: Conductive Black Advantek Polystyrene.
4. Ao & Bo measured on a plane 0.3mm above the bottom of the pocket.
5. Ko measured from a plane on the inside bottom of the pocket to the top surface of 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
CYStek 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 | 0.0583 | 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