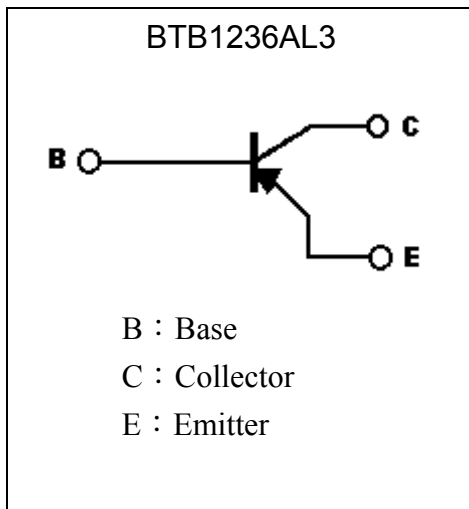


Silicon PNP Epitaxial Planar Transistor

BTB1236AL3

Description

- High BV_{CEO}
- High current capability

Symbol

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

| 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 @ $T_c=25^\circ\text{C}$ | P_d | 5 | W |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55~+150 | $^\circ\text{C}$ |

**Characteristics (Ta=25°C)**

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------------------|------|------|------|------|--|
| BV _{CB0} | -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 _{CB0} | - | - | -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 _{FE1} | 60 | - | 200 | - | V _{CE} =-5V, I _C =-100mA |
| h _{FE2} | 30 | - | - | - | V _{CE} =-5V, I _C =-500mA |
| f _T | - | 140 | - | MHz | V _{CE} =-5V, I _C =-150mA |
| C _{ob} | - | 27 | - | pF | V _{CB} =-10V, I _E =0, f=1MHz |

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

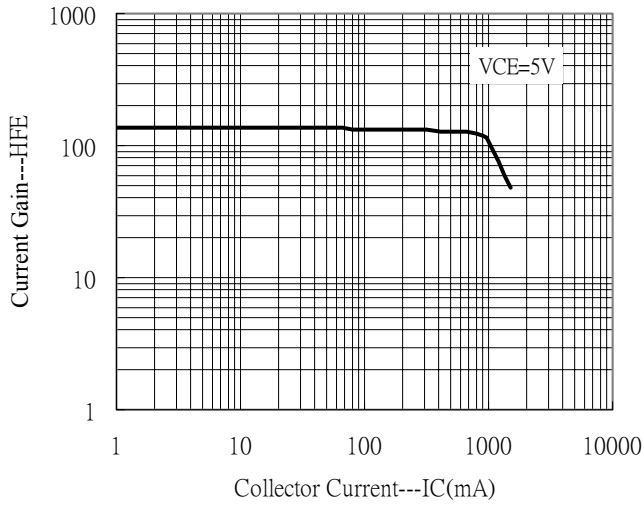
Classification of h_{FE} 1

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

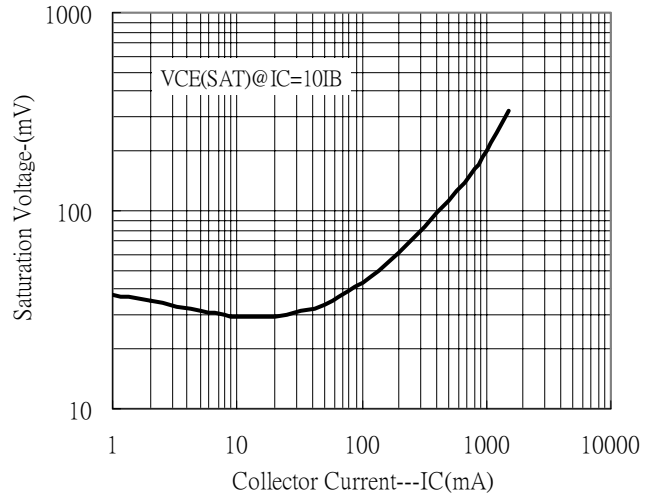


Characteristic Curves

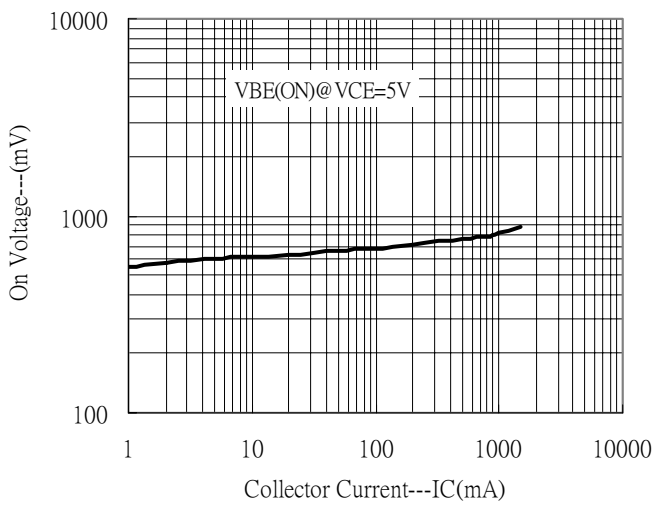
Current Gain vs Collector Current



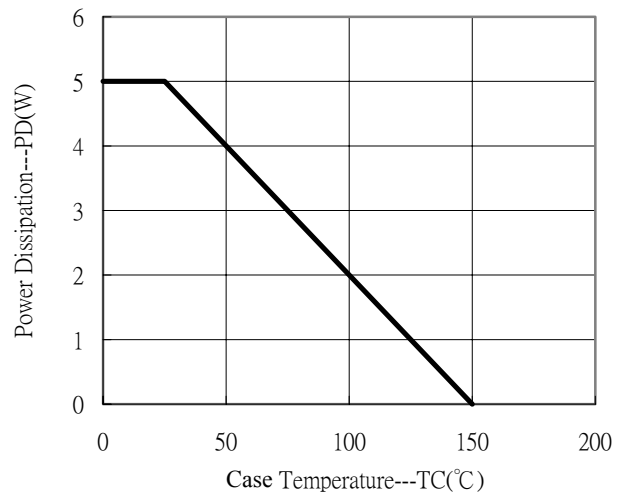
Saturation Voltage vs Collector Current



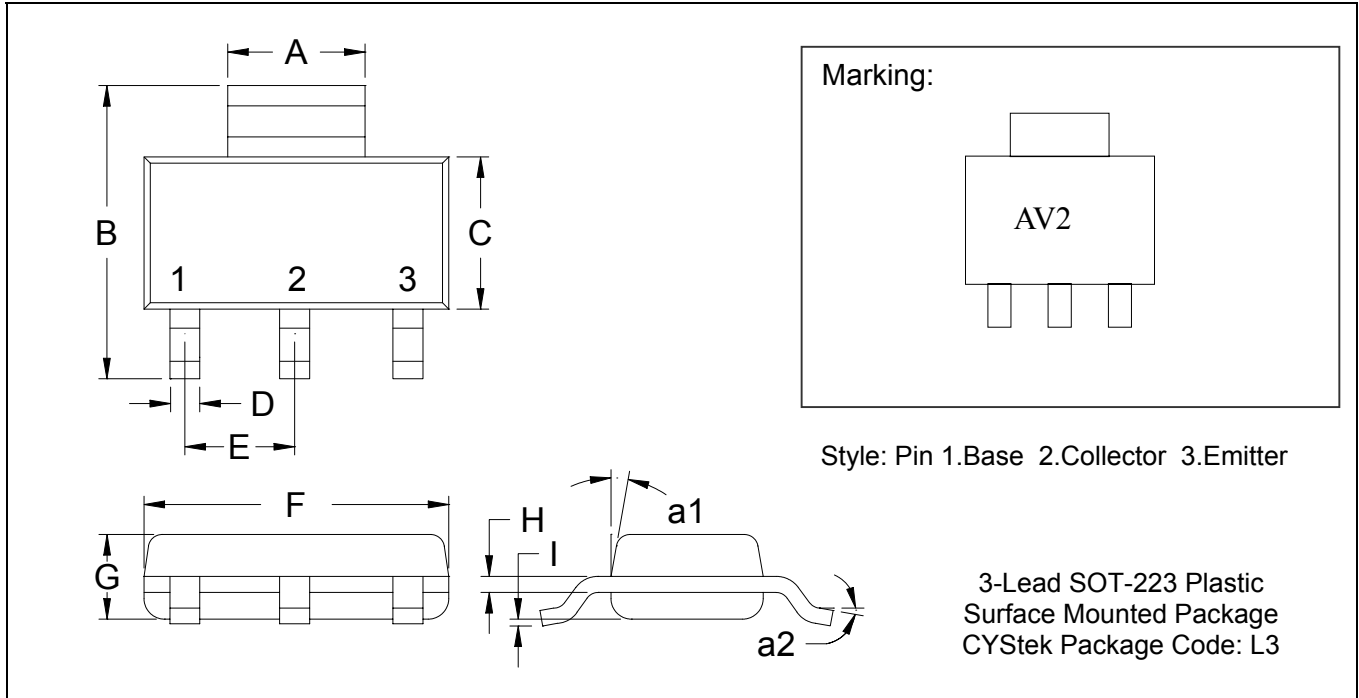
On Voltage vs Collector Current



Power Derating Curve



SOT-223 Dimension



*: Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|---------|--------|-------------|------|-----|--------|--------|-------------|------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.1142 | 0.1220 | 2.90 | 3.10 | G | 0.0551 | 0.0709 | 1.40 | 1.80 |
| B | 0.2638 | 0.2874 | 6.70 | 7.30 | H | 0.0098 | 0.0138 | 0.25 | 0.35 |
| C | 0.1299 | 0.1457 | 3.30 | 3.70 | I | 0.0008 | 0.0039 | 0.02 | 0.10 |
| D | 0.0236 | 0.0315 | 0.60 | 0.80 | a1 | *13° | - | *13° | - |
| E | *0.0906 | - | *2.30 | - | a2 | 0° | 10° | 0° | 10° |
| F | 0.2480 | 0.2638 | 6.30 | 6.70 | | | | | |

- 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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