

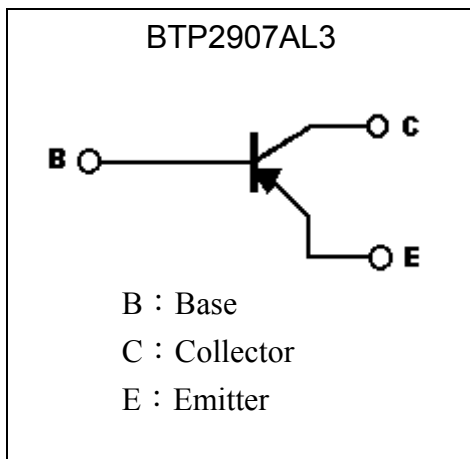
General Purpose PNP Epitaxial Planar Transistor

BTP2907AL3

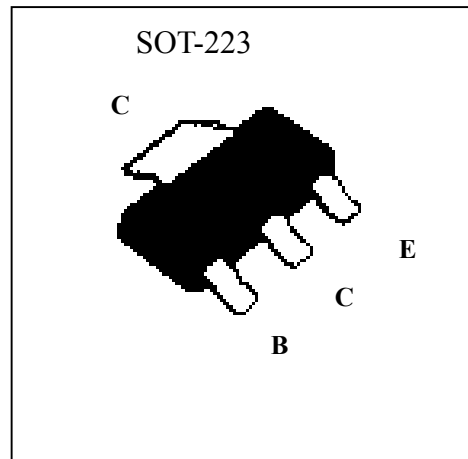
Description

- The BTP2907AL3 is designed for general purpose amplifier applications. It is housed in the SOT-223 package which is designed for medium power surface mount applications.
- Low $V_{CE(sat)}$
- High switching speed.
- Complementary to BTN2222AL3
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|---------------------------|-----------|----------|------|
| Collector-Base Voltage | V_{CBO} | -60 | V |
| Collector-Emitter Voltage | V_{CEO} | -60 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -800 | mA |
| Power Dissipation | P_d | 1 (Note) | W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature | T_{stg} | -55~+150 | °C |

Note: The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper area equal to 36mmx18mm. The mounting pad for the collector lead is 6 cm² minimum.

**Electrical Characteristics (Ta=25°C)**

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------------------|------|------|------|------|--|
| BV _{CB0} | -60 | - | - | V | I _C =-10μA |
| *BV _{CEO} | -60 | - | - | V | I _C =-10mA |
| BV _{EBO} | -5 | - | - | V | I _E =-10μA |
| I _{CB0} | - | - | -10 | nA | V _{CB} =-50V |
| I _{CEX} | - | - | -50 | nA | V _{CE} =-30V, V _{BE(OFF)} =0.5V |
| *V _{CE(sat)} | - | -0.2 | -0.4 | V | I _C =-150mA, I _B =-15mA |
| *V _{CE(sat)} | - | -0.5 | -1.6 | V | I _C =-500mA, I _B =-50mA |
| *V _{BE(sat)} | - | - | -1.3 | V | I _C =-150mA, I _B =-15mA |
| *V _{BE(sat)} | - | - | -2.6 | V | I _C =-500mA, I _B =-50mA |
| *h _{FE} | 75 | - | - | - | V _{CE} =-10V, I _C =-100μA |
| *h _{FE} | 100 | - | - | - | V _{CE} =-10V, I _C =-1mA |
| *h _{FE} | 100 | - | - | - | V _{CE} =-10V, I _C =-10mA |
| *h _{FE} | 100 | - | 300 | - | V _{CE} =-10V, I _C =-150mA |
| *h _{FE} | 50 | - | - | - | V _{CE} =-10V, I _C =-500mA |
| f _T | 200 | - | - | MHz | V _{CE} =-20V, I _C =-50mA, f=100MHz |
| Cob | - | - | 8 | pF | V _{CB} =-10V, I _E =0A, f=1MHz |

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

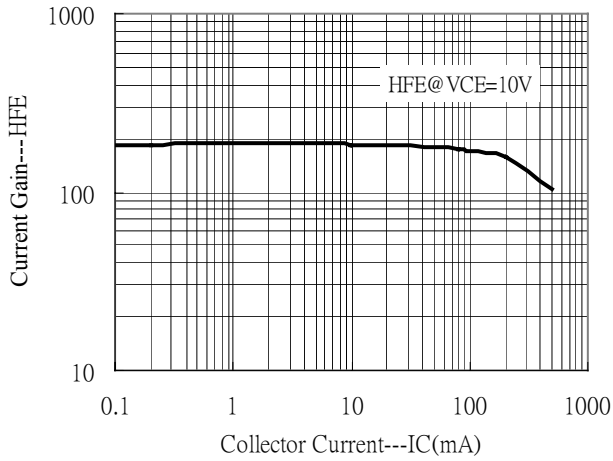
Ordering Information

| Device | Package | Shipping | Marking |
|------------|----------------------|------------------------|---------|
| BTP2907AL3 | SOT-223 (Pb-free) | 2500 pcs / Tape & Reel | 2907A |

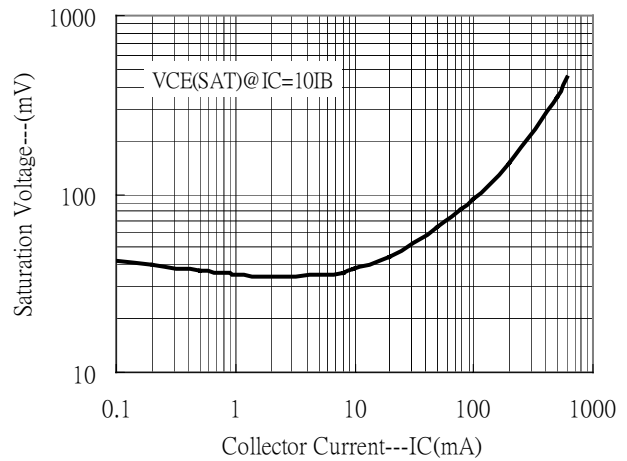


Characteristic Curves

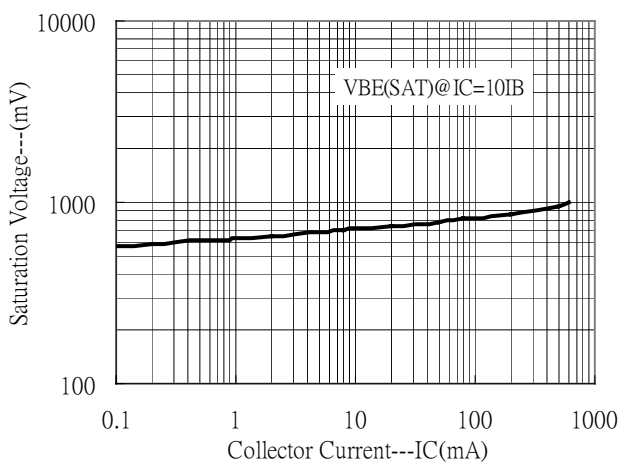
Current Gain vs Collector Current



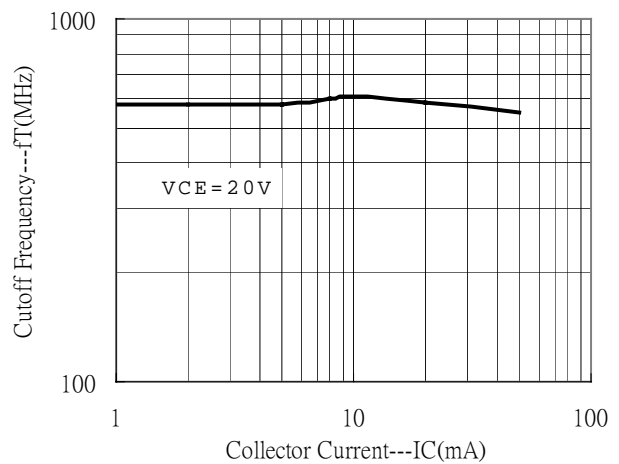
Saturation Voltage vs Collector Current



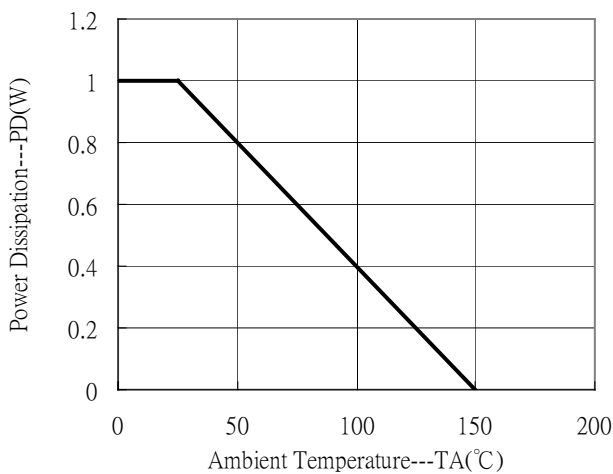
Saturation Voltage vs Collector Current



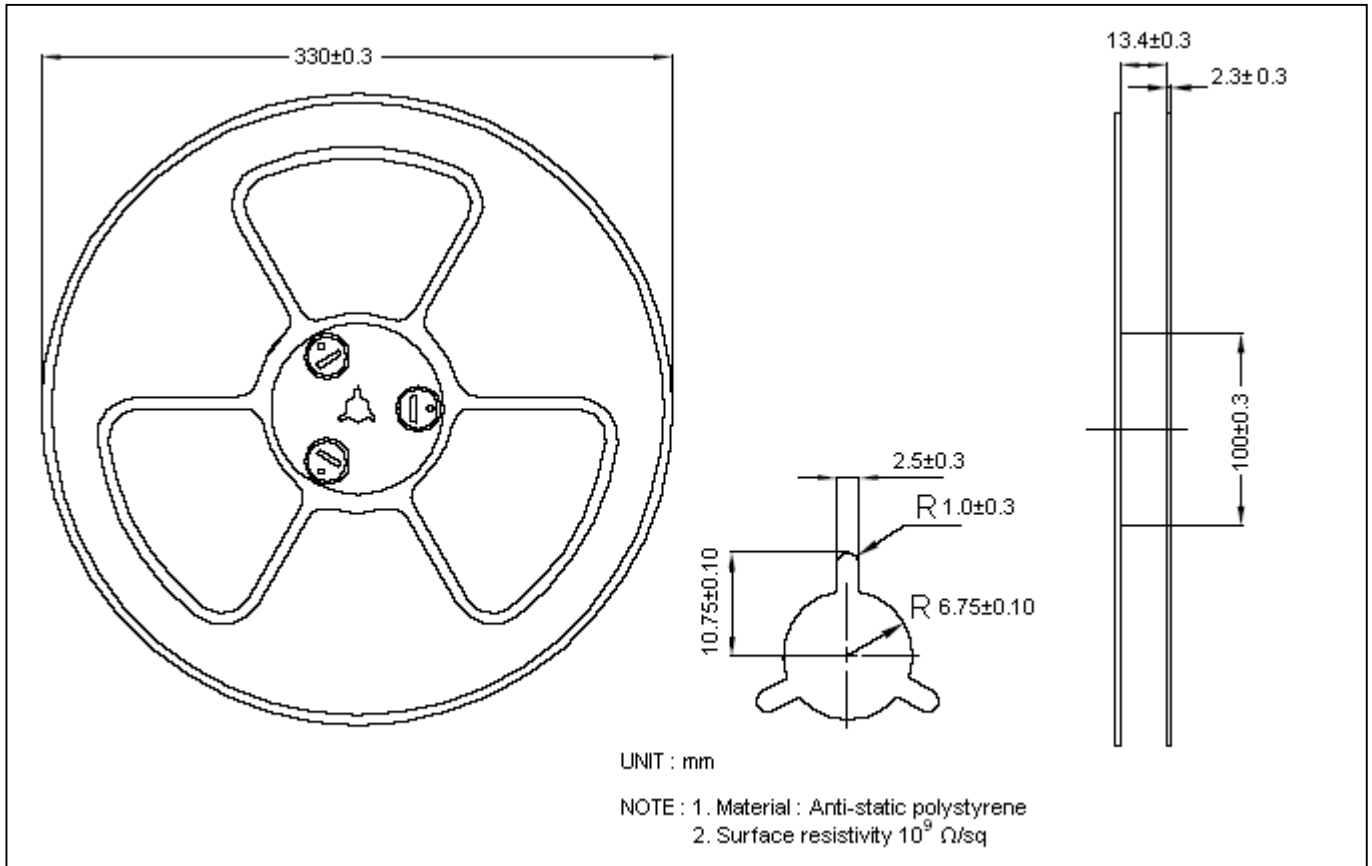
Cutoff Frequency vs Collector Current



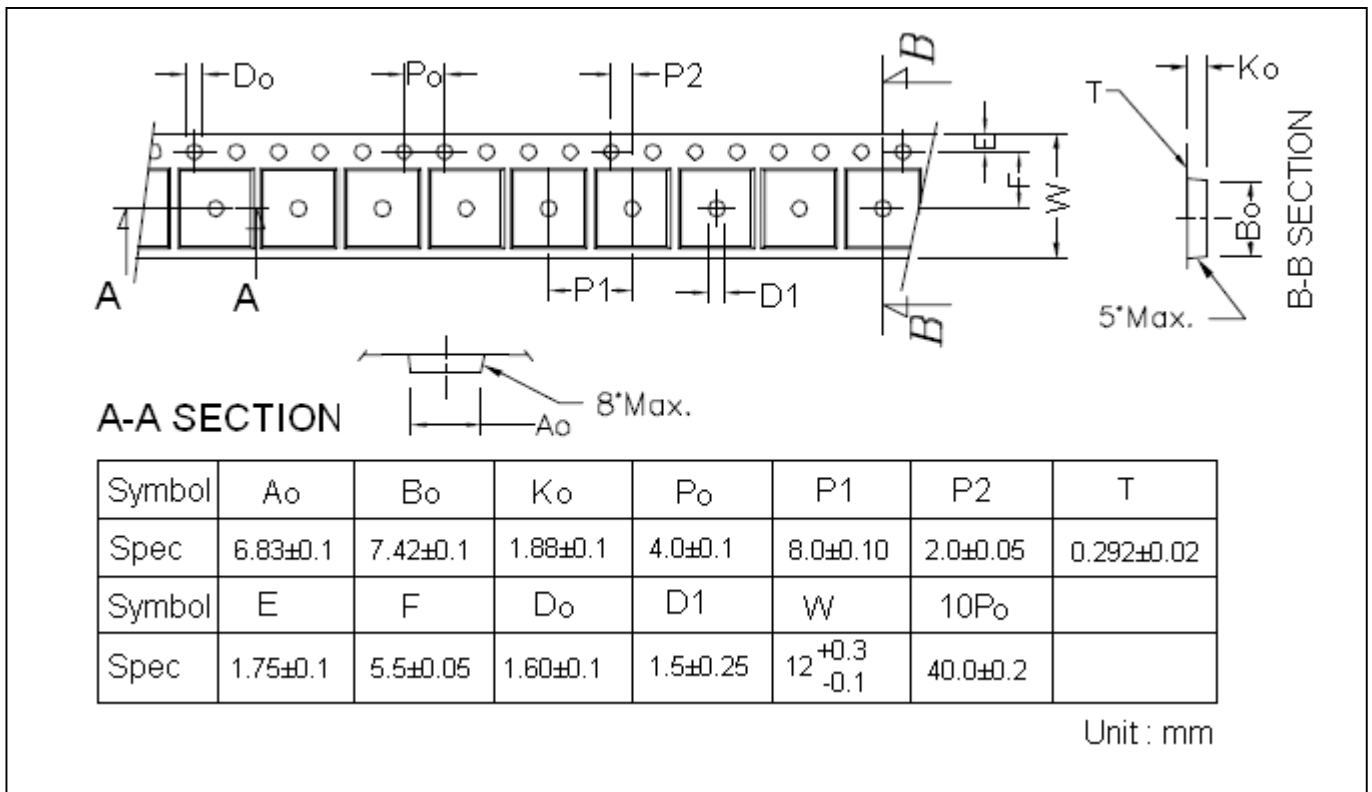
Power Derating Curve



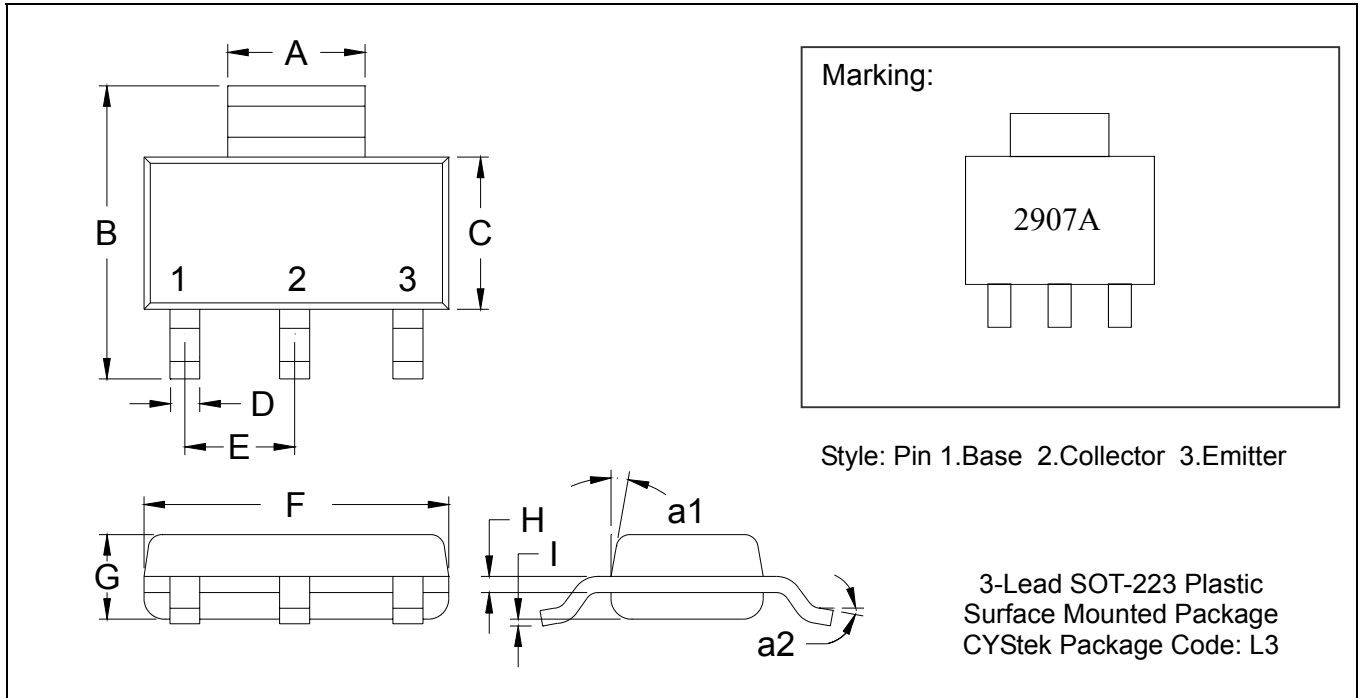
Reel Dimension



Carrier Tape Dimension



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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