

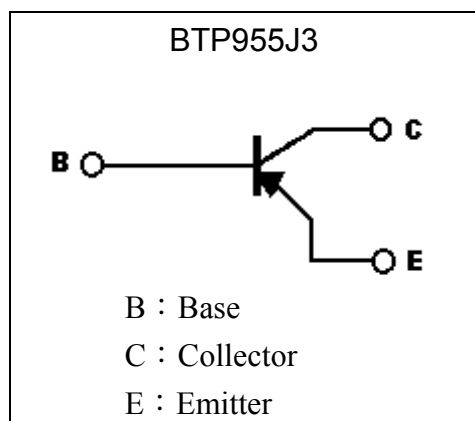
PNP Epitaxial Planar High Current (High Performance) Transistor

BTP955J3

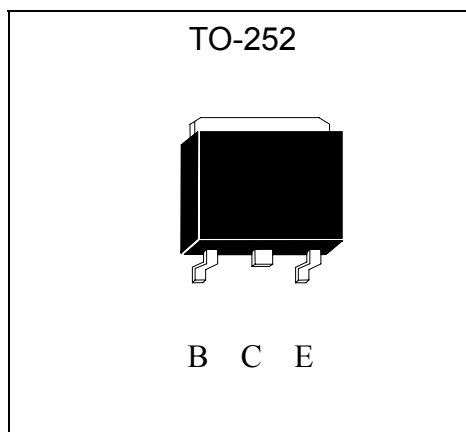
Features

- 4 Amps continuous current, up to 10 Amps peak current
- Very low saturation voltage
- Excellent gain characteristics specified up to 3 Amps
- Ptot=3Watts
- Extremely low equivalent on resistance, $R_{CE(SAT)}=90m\Omega$ at 3A
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|---|-----------|--------------|------|
| Collector-Base Voltage | V_{CBO} | -120 | V |
| Collector-Emitter Voltage | V_{CEO} | -100 | V |
| Emitter-Base Voltage | V_{EBO} | -6 | V |
| Continuous Collector Current | I_C | -4 | A |
| Peak Collector Current | I_{CP} | -10 (Note 1) | A |
| Base Current | I_B | -1 (Note 2) | A |
| Power Dissipation | @Ta=25°C | 1.75 | W |
| | @Tc=25°C | 20 | W |
| Operating and Storage Temperature Range | Tj ; Tstg | -55 ~ +150 | °C |

Note : 1. Single Pulse , $P_w \leq 380\mu s$, Duty $\leq 2\%$.

2. When mounted on a PCB with the minimum pad size.



Characteristics (Ta=25°C, unless otherwise specified)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|------------------------|------|------|-------|------|---|
| BV _{CB0} | -120 | - | - | V | I _C =-100μA |
| BV _{CER} | -100 | - | - | V | I _C =-1μA, R _{BE} ≤1kΩ |
| *BV _{CEO} | -100 | - | - | V | I _C =-10mA |
| BV _{EBO} | -6 | - | - | V | I _E =-100μA |
| I _{CB0} | - | - | -50 | nA | V _{CB} =-100V |
| I _{CER} | - | - | -50 | nA | V _{CE} =-100V, R _{BE} ≤1kΩ |
| I _{EBO} | - | - | -10 | nA | V _{EB} =-6V |
| *V _{CE(sat)1} | - | -40 | -60 | mV | I _C =-100mA, I _B =-5mA |
| *V _{CE(sat)2} | - | -70 | -120 | mV | I _C =-500mA, I _B =-50mA |
| *V _{CE(sat)3} | - | -110 | -150 | mV | I _C =-1A, I _B =-100mA |
| *V _{CE(sat)4} | - | -270 | -370 | mV | I _C =-3A, I _B =-300mA |
| *V _{BE(sat)} | - | -930 | -1110 | mV | I _C =-3A, I _B =-300mA |
| *V _{BE(on)} | - | -830 | -950 | mV | V _{CE} =-5V, I _C =-3A |
| h _{FE1} | 100 | 200 | - | - | V _{CE} =-5V, I _C =-10mA |
| h _{FE2} | 100 | 200 | 300 | - | V _{CE} =-5V, I _C =-1A |
| *h _{FE3} | 75 | 140 | - | - | V _{CE} =-5V, I _C =-3A |
| *h _{FE4} | - | 10 | - | - | V _{CE} =-5V, I _C =-10A |
| f _T | - | 110 | - | MHz | V _{CE} =-10V, I _C =-100mA, f=50MHz |
| C _{ob} | - | 40 | - | pF | V _{CB} =-20V, f=1MHz |
| ton | | 68 | | ns | I _C =-1A, I _{B1} =-100mA, I _{B2} =100mA, |
| toff | | 1030 | | ns | V _{CC} =-50V |

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

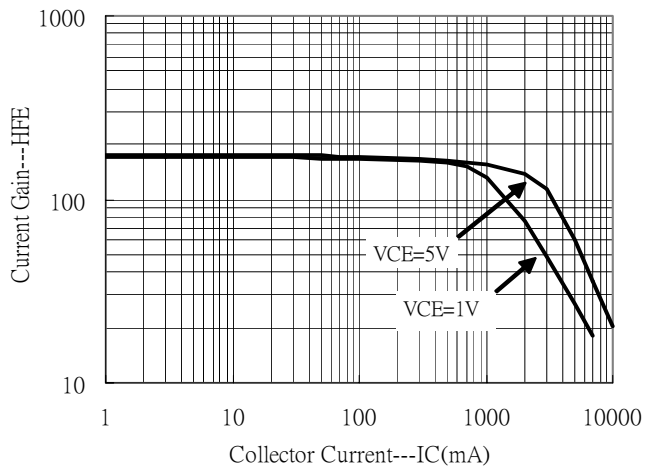
Ordering Information

| Device | Package | Shipping | Marking |
|----------|---------------------|------------------------|---------|
| BTP955J3 | TO-252 (Pb-free) | 2500 pcs / Tape & Reel | P955 |

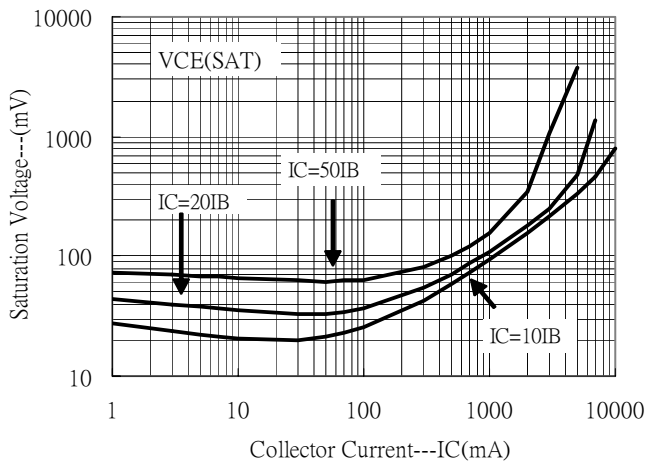


Characteristic Curves

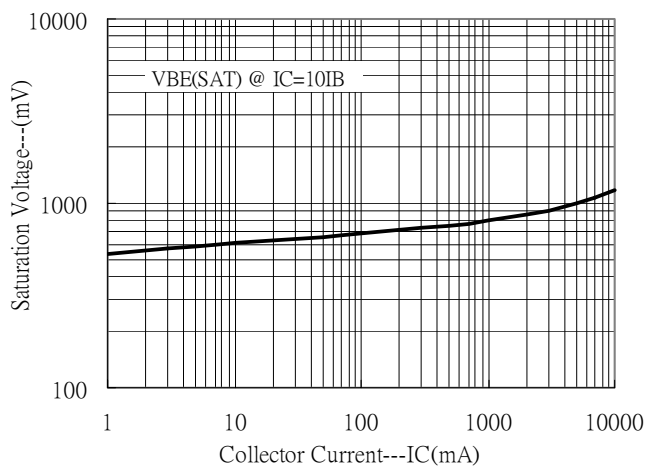
Current Gain vs Collector Current



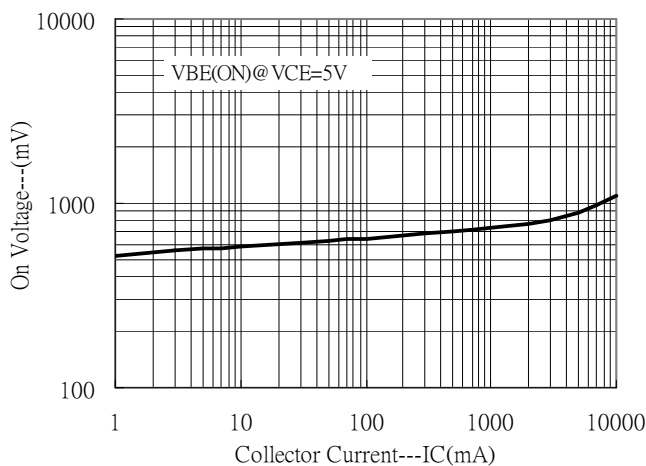
Saturation Voltage vs Collector Current



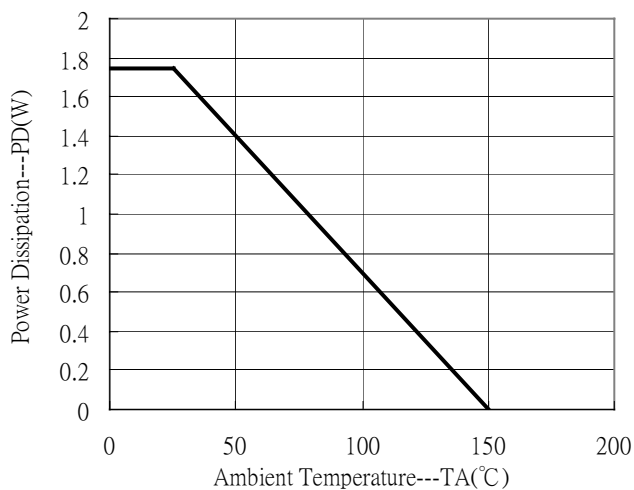
Saturation Voltage vs Collector Current



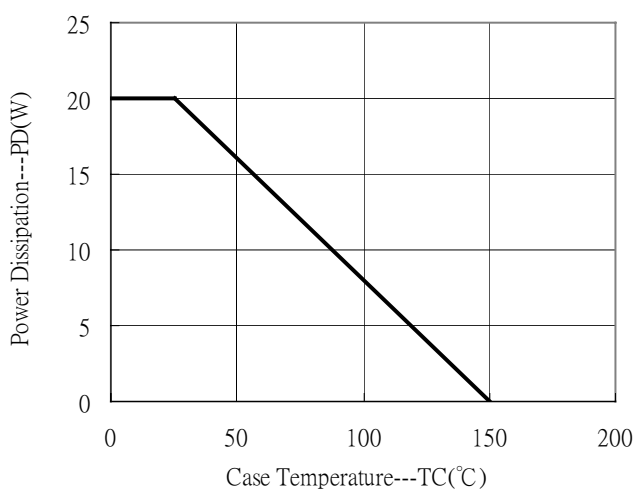
On Voltage vs Collector Current



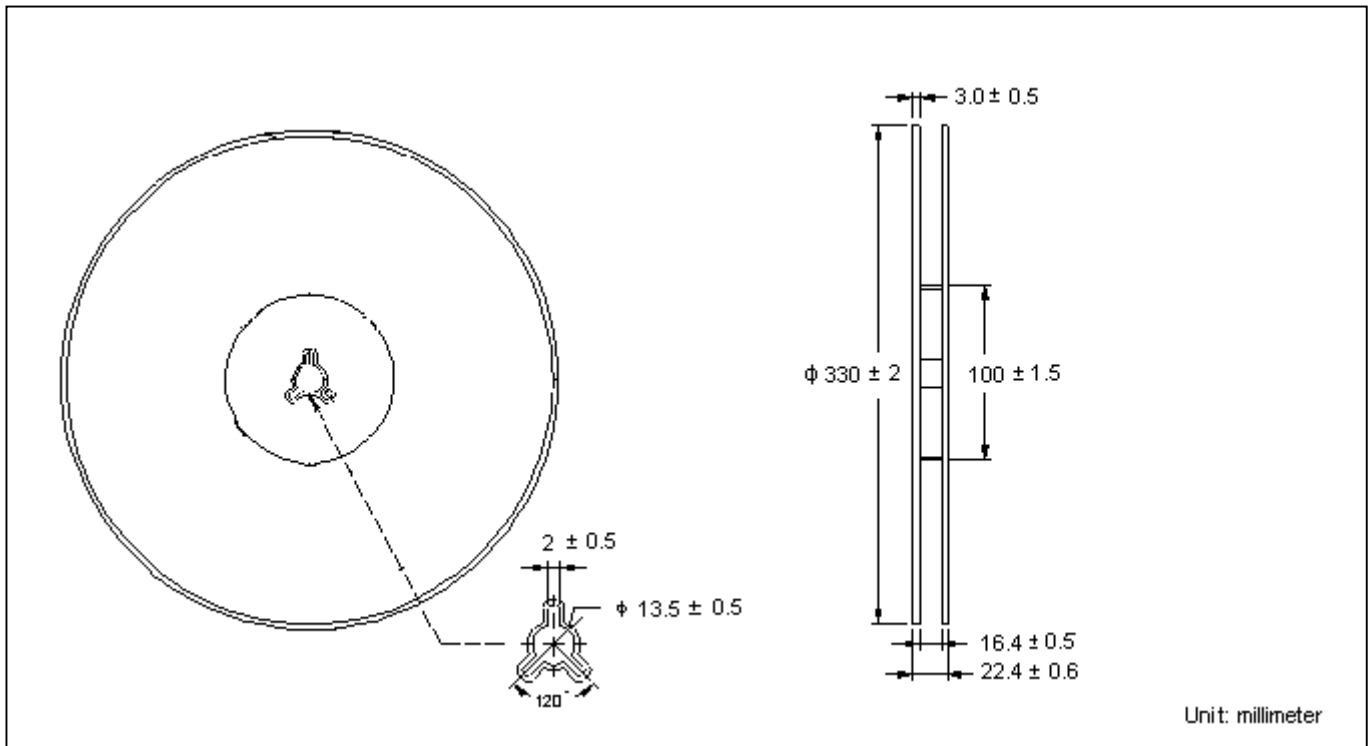
Power Derating Curve



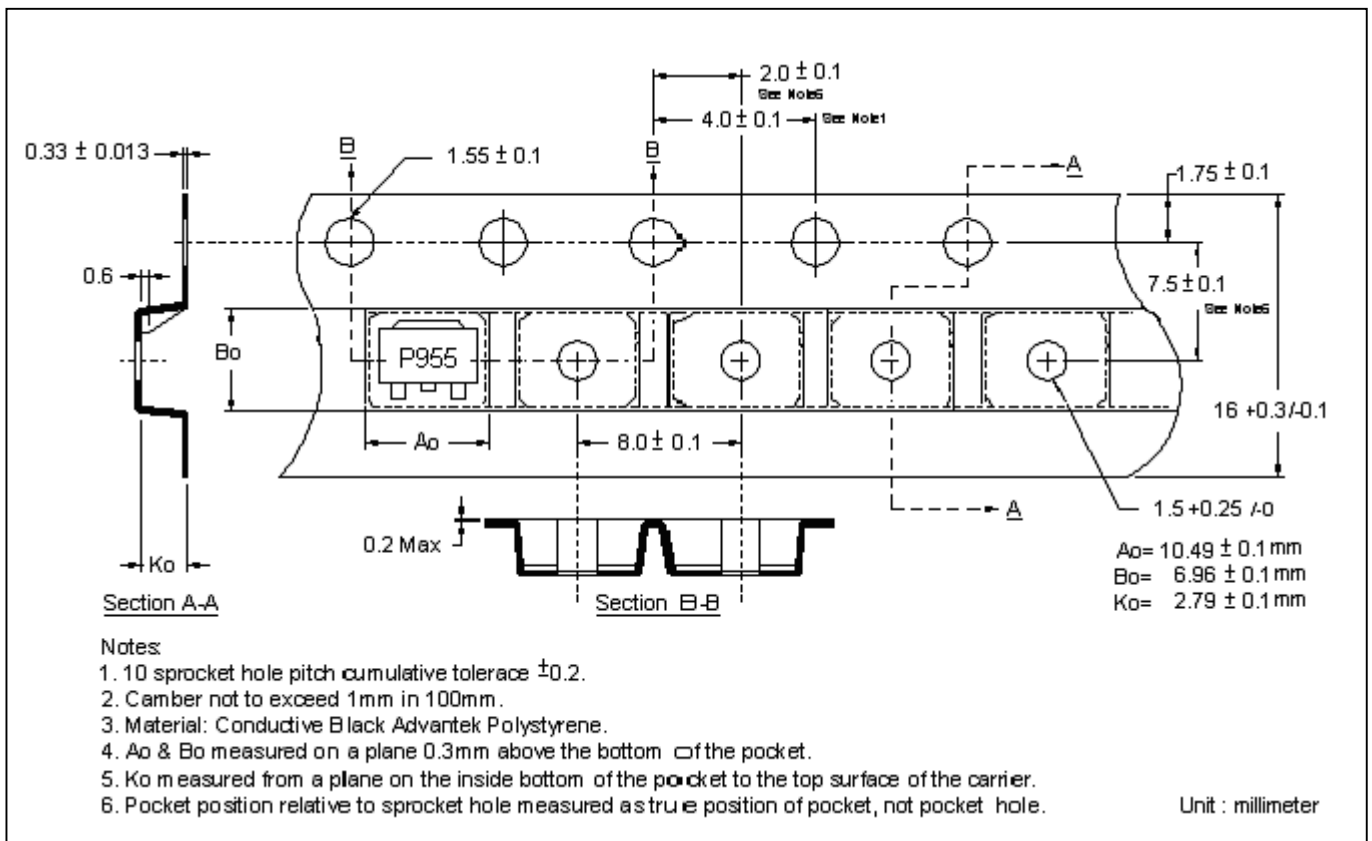
Power Derating Curve



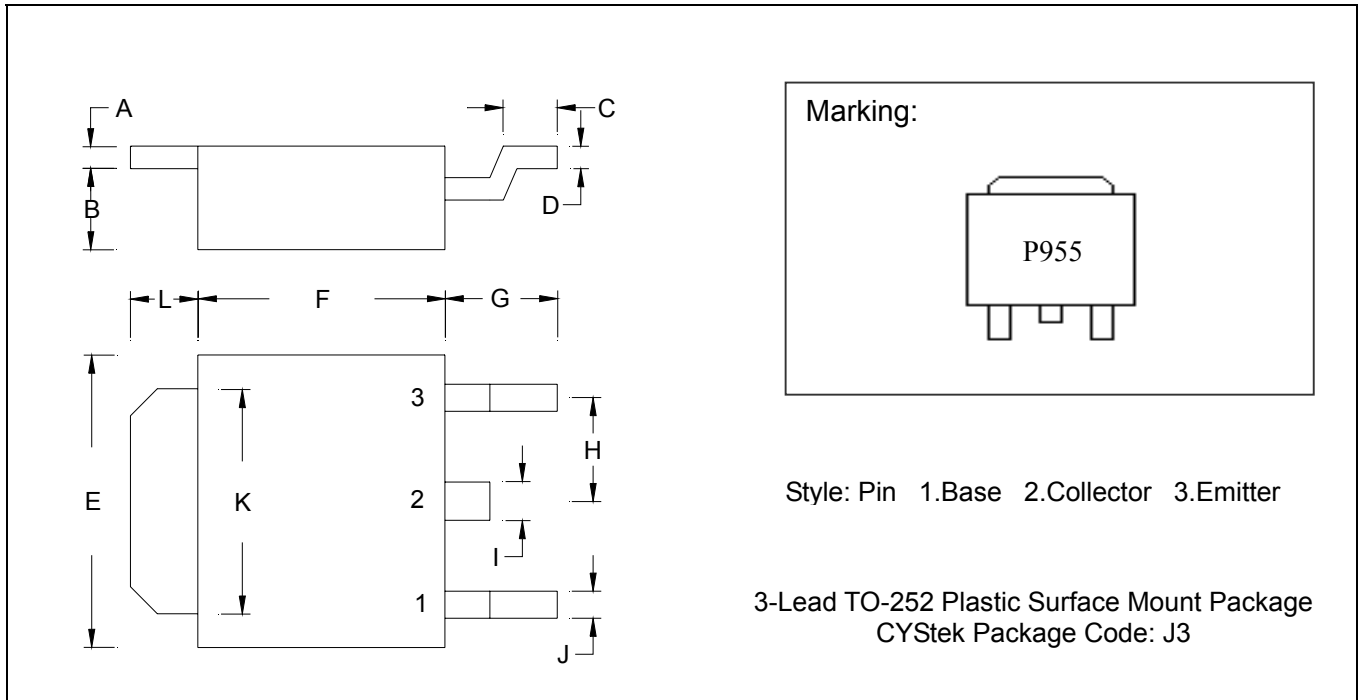
Reel Dimension



Carrier Tape Dimension



TO-252 Dimension



*: Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|--------|--------|-------------|------|-----|--------|---------|-------------|-------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.0177 | 0.0217 | 0.45 | 0.55 | G | 0.0866 | 0.1102 | 2.20 | 2.80 |
| B | 0.0650 | 0.0768 | 1.65 | 1.95 | H | - | *0.0906 | - | *2.30 |
| C | 0.0354 | 0.0591 | 0.90 | 1.50 | I | - | 0.0354 | - | 0.90 |
| D | 0.0177 | 0.0236 | 0.45 | 0.60 | J | - | 0.0315 | - | 0.80 |
| E | 0.2520 | 0.2677 | 6.40 | 6.80 | K | 0.2047 | 0.2165 | 5.20 | 5.50 |
| F | 0.2125 | 0.2283 | 5.40 | 5.80 | L | 0.0551 | 0.0630 | 1.40 | 1.60 |

- 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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