

General Purpose NPN Epitaxial Planar Transistor

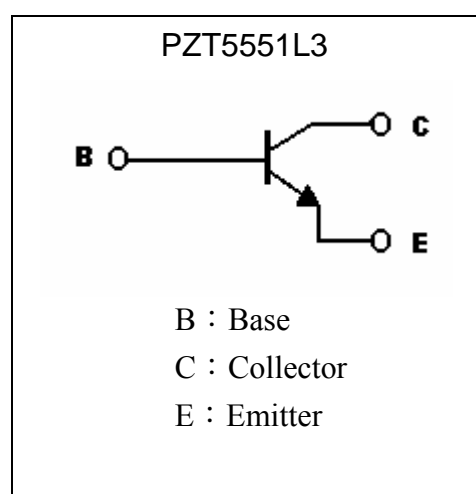
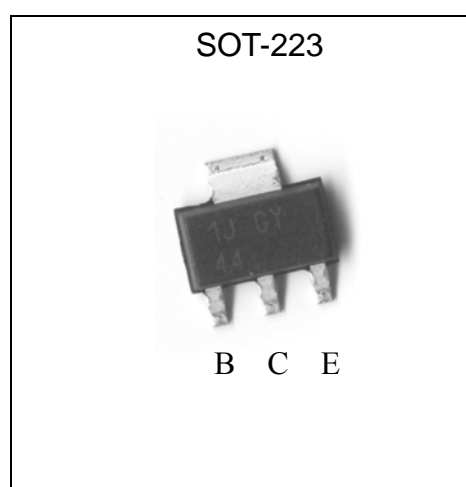
PZT5551L3

Description

The PZT5551L3 is designed for general purpose applications requiring high breakdown voltage.

Features

- High collector-emitter breakdown voltage. ($V_{CE0}=160V @ I_C=1mA$)
- Complement to BTA1514L3
- Pb-free package

Symbol

Outline

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

| Parameter | Symbol | Limits | Unit |
|--------------------------------------|-----------|----------|-------------|
| Collector-Base Voltage | V_{CBO} | 180 | V |
| Collector-Emitter Voltage | V_{CEO} | 160 | V |
| Emitter-Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 600 | mA |
| Power Dissipation@ $T_c=25^{\circ}C$ | P_d | 5 | W |
| Junction Temperature | T_j | 150 | $^{\circ}C$ |
| Storage Temperature | T_{stg} | -55~+150 | $^{\circ}C$ |



Characteristics (Ta=25°C)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|------------------------|------|------|------|------|--|
| BV _{CBO} | 180 | - | - | V | I _C =100μA |
| BV _{CEO} | 160 | - | - | V | I _C =1mA |
| BV _{EBO} | 6 | - | - | V | I _E =10μA |
| I _{CBO} | - | - | 50 | nA | V _{CB} =120V |
| I _{EBO} | - | - | 50 | nA | V _{EB} =4V |
| *V _{CE(sat)1} | - | 0.1 | 0.15 | V | I _C =10mA, I _B =1mA |
| *V _{CE(sat)2} | - | - | 0.2 | V | I _C =50mA, I _B =5mA |
| *V _{BE(sat)1} | - | - | 1 | V | I _C =10mA, I _B =1mA |
| *V _{BE(sat)2} | - | - | 1 | V | I _C =50mA, I _B =5mA |
| *h _{FE1} | 100 | - | - | - | V _{CE} =5V, I _C =1mA |
| *h _{FE2} | 100 | - | - | - | V _{CE} =5V, I _C =10mA |
| *h _{FE3} | 40 | - | - | - | V _{CE} =5V, I _C =50mA |
| *h _{FE4} | 120 | - | 390 | - | V _{CE} =6V, I _C =2mA |
| f _T | 100 | - | - | MHz | V _{CE} =20V, I _C =10mA, f=100MHz |
| Cob | - | - | 6 | pF | V _{CB} =20V, I _E =0A, f=1MHz |

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

Classification Of h_{FE} 4

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

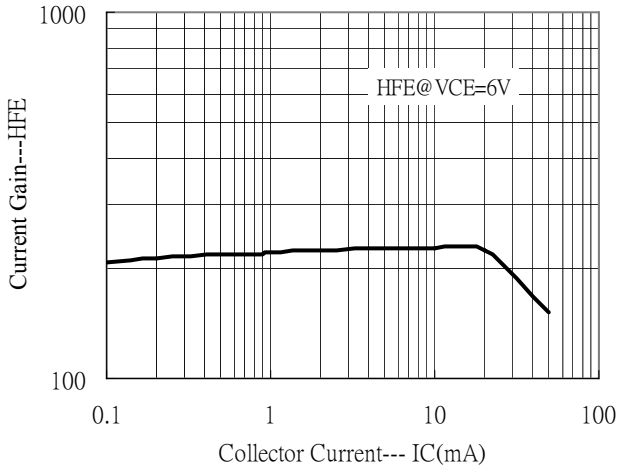
Ordering Information

| Device | Package | Shipping | Marking |
|-----------|----------------------|------------------------|---------|
| PZT5551L3 | SOT-223 (Pb-free) | 2500 pcs / Tape & Reel | G1 |

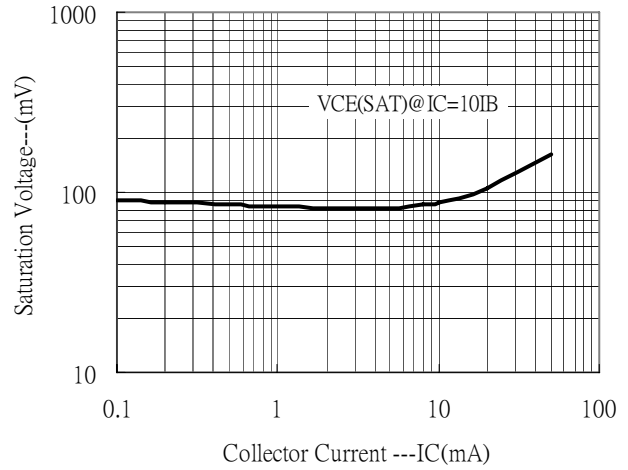


Characteristic Curves

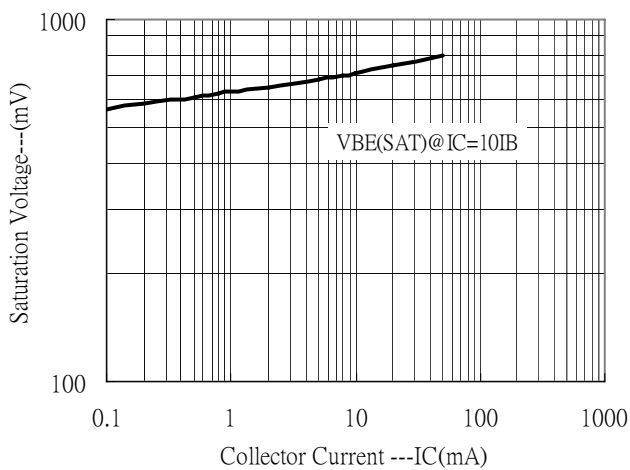
Current Gain vs Collector Current



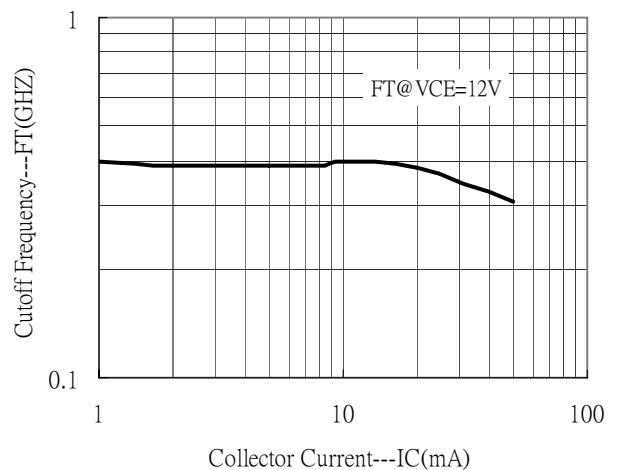
Saturation Voltage vs Collector Current



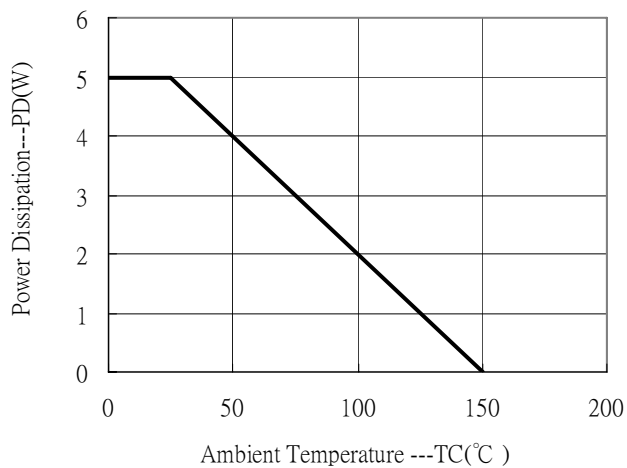
Saturation Voltage vs Collector Current



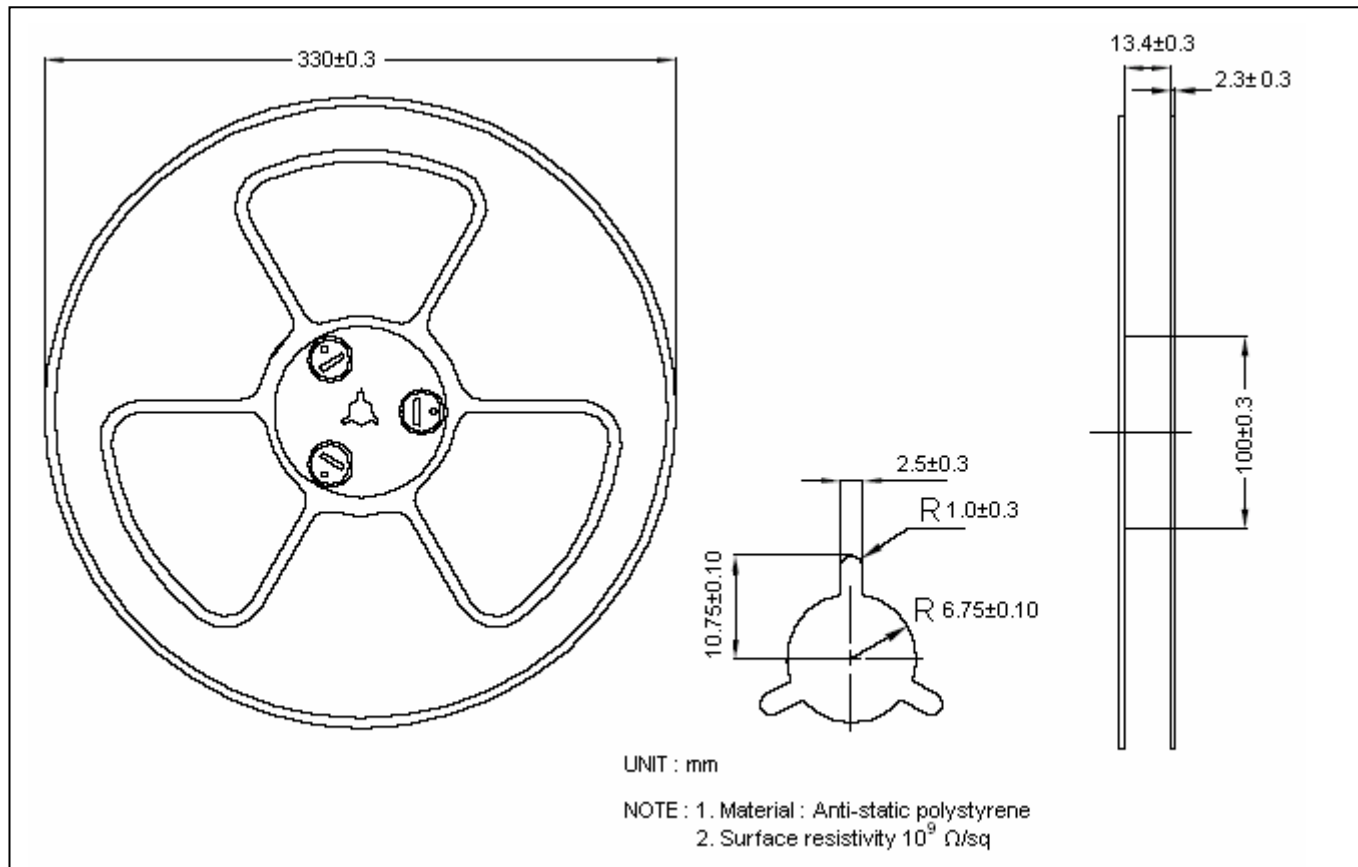
Cutoff Frequency vs Collector Current



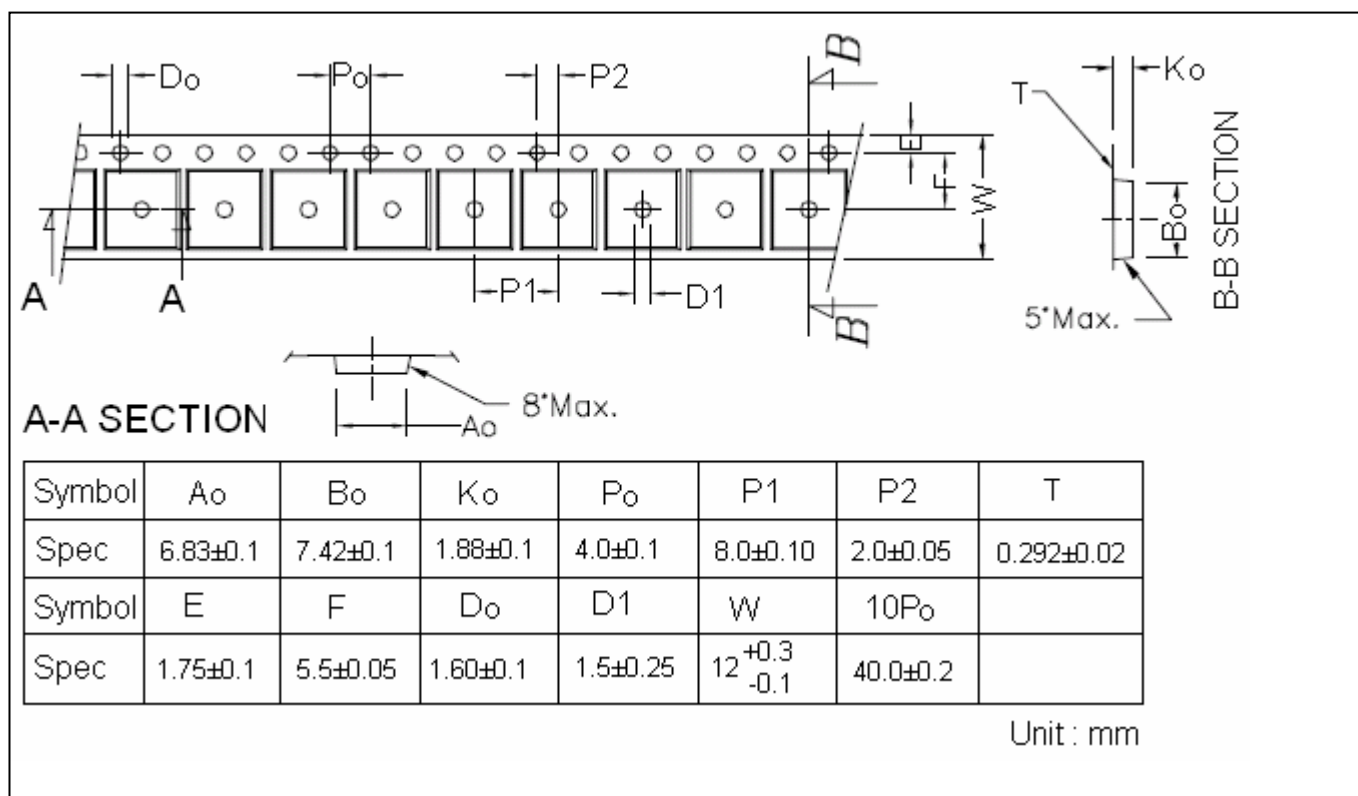
Power Derating Curves



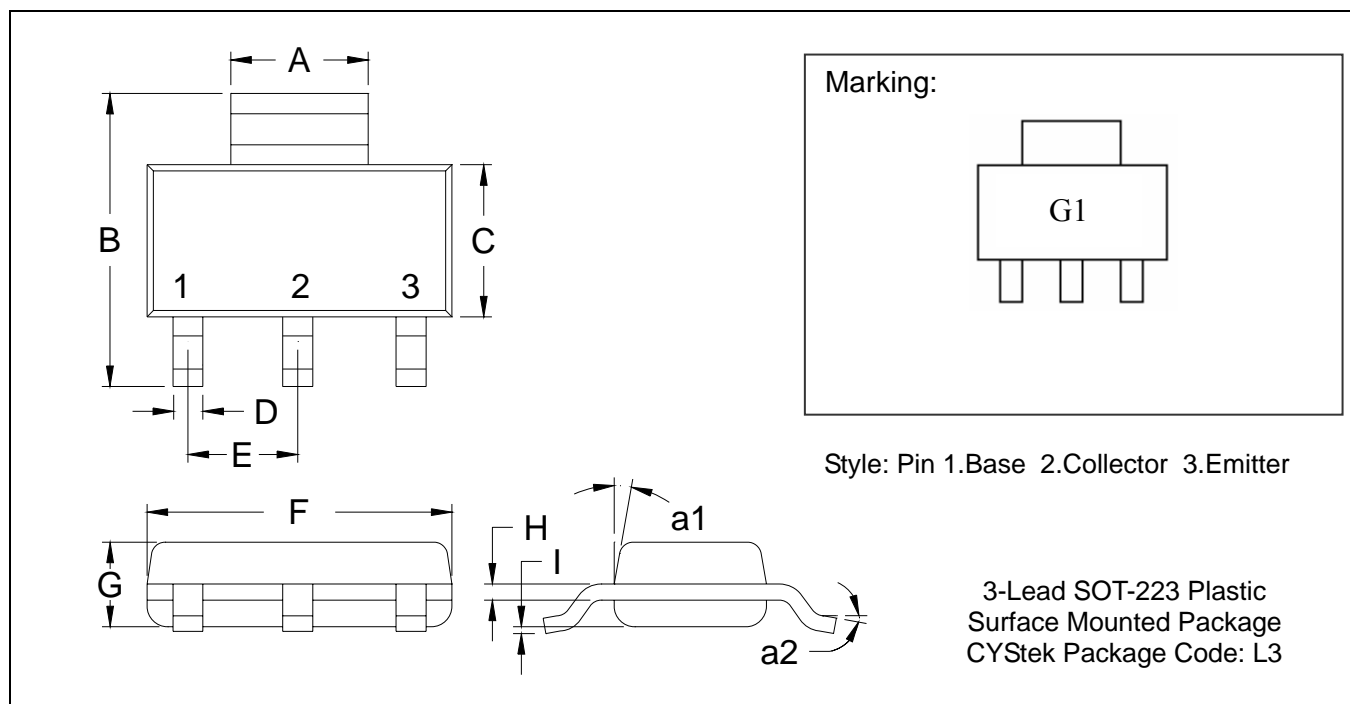
Reel Dimension



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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