



THE DATASHEET OF CZT5551

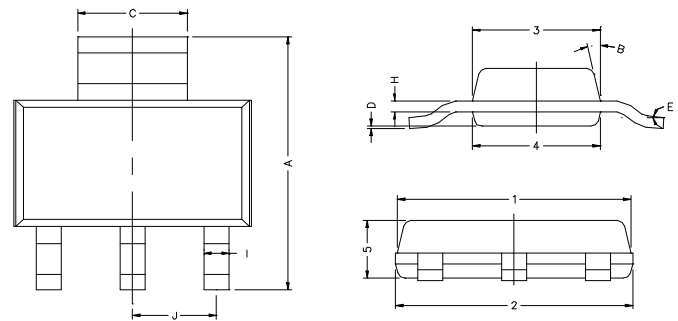


NPN Transistor Epitaxial Planar Transistor

SOT-223

Description

The CZT5551 is designed for general purpose applications requiring high breakdown voltages.



| REF. | Min. | Max. | REF. | Min. | Max. |
|------|------|------|------|-----------|------|
| A | 6.70 | 7.30 | B | 13 TYP. | |
| C | 2.90 | 3.10 | J | 2.30 REF. | |
| D | 0.02 | 0.10 | 1 | 6.30 | 6.70 |
| E | 0° | 10° | 2 | 6.30 | 6.70 |
| I | 0.60 | 0.80 | 3 | 3.30 | 3.70 |
| H | 0.25 | 0.35 | 4 | 3.30 | 3.70 |
| | | | 5 | 1.40 | 1.80 |

MAXIMUM RATINGS* (T_{amb}=25°C, unless otherwise specified)

| Symbol | Parameter | Value | Units |
|-----------------------------------|----------------------------------|----------|-------|
| V _{CBO} | Collector-Base Voltage | 180 | V |
| V _{CEO} | Collector-Emitter Voltage | 160 | V |
| V _{EBO} | Emitter-Base Voltage | 6 | V |
| I _C | Collector Current-Continuous | 600 | mA |
| P _D | Total Power Dissipation | 1.5 | W |
| T _J , T _{stg} | Junction and Storage Temperature | -55~-150 | °C |

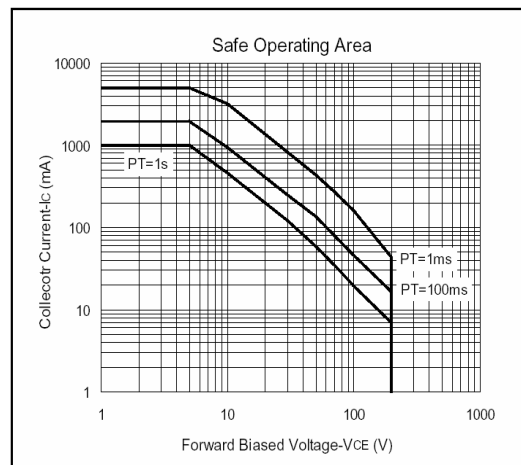
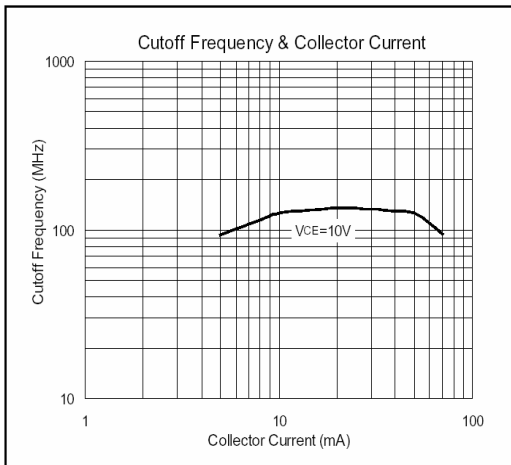
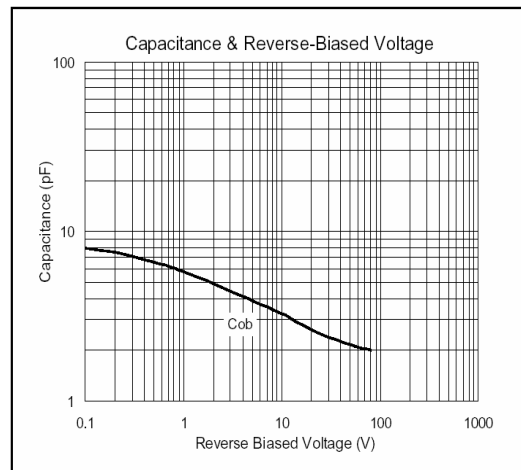
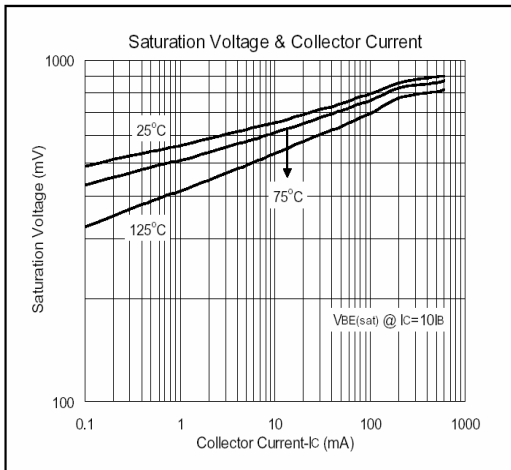
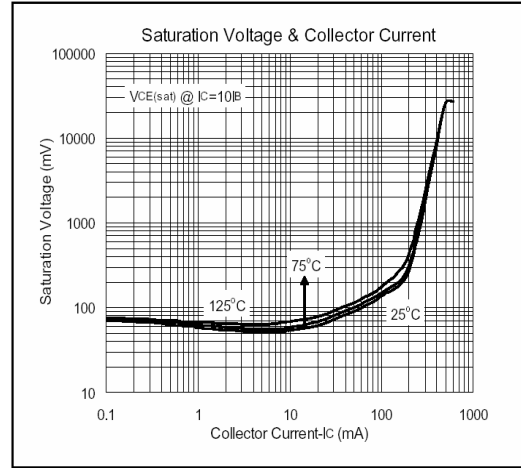
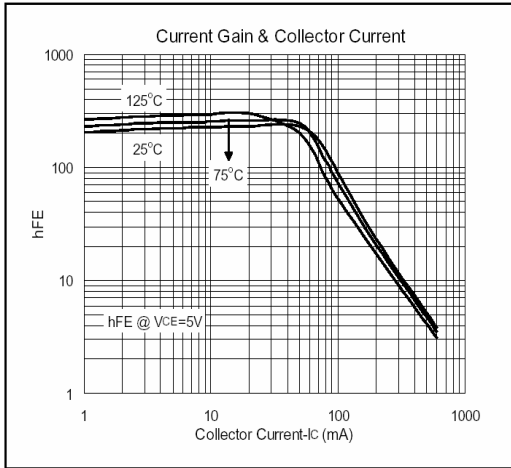
ELECTRICAL CHARACTERISTICS T_{amb}=25°C unless otherwise specified

| Parameter | Symbol | MIN | TYP | MAX | UNIT | Test conditions |
|--------------------------------------|-----------------------------------|-----|-----|------|------|--|
| Collector-base breakdown voltage | V(BR) _{CBO} | 180 | - | - | V | I _C = 100uA, I _E =0 |
| Collector-emitter breakdown voltage | V(BR) _{CEO} | 160 | - | - | V | I _C = 1mA, I _B =0 |
| Emitter-base breakdown voltage | V(BR) _{EBO} | 6 | - | - | V | I _E = 10uA, I _C =0 |
| Collector cut-off current | I _{CBO} | - | - | 50 | nA | V _{CB} = 120V, I _E =0 |
| Emitter cut-off current | I _{EBO} | - | - | 50 | nA | V _{EB} = 4V, I _C =0 |
| DC current gain | h _{FE 1} | 80 | - | - | - | V _{CE} = 5V, I _C = 1mA |
| | h _{FE 2} | 80 | 160 | 400 | - | V _{CE} = 5V, I _C = 10mA |
| | h _{FE 3} | 50 | - | - | - | V _{CE} = 5V, I _C = 50mA |
| Collector-emitter saturation voltage | V _{CE(sat)} ₁ | - | - | 0.15 | V | I _C = 10mA, I _B = 1mA |
| | V _{CE(sat)} ₂ | - | - | 0.2 | | I _C = 50mA, I _B = 5mA |
| Base-emitter saturation voltage | V _{BE(sat)} ₁ | - | - | 1 | V | I _C = 10mA, I _B = 1mA |
| | V _{BE(sat)} ₂ | - | - | 1 | | I _C = 50mA, I _B = 5mA |
| Transition frequency | f _T | 100 | - | 300 | MHZ | V _{CE} = 10V, I _C = 10mA, f = 100MHZ |
| Collector output capacitance | C _{ob} | - | - | 6 | pF | V _{CB} = 10V, f=1MHZ, I _E =0 |

CLASSIFICATION OF h_{FE}

| Rank | A | N | C |
|-------|--------|---------|---------|
| Range | 80-200 | 100-240 | 160-400 |

Characteristics Curve



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