

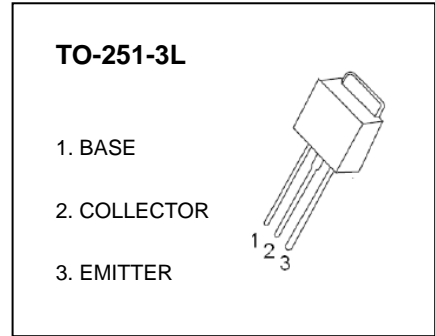


TO-251-3L Plastic-Encapsulate Transistors

2SC2983 TRANSISTOR (NPN)

FEATURES

- High Transition Frequency



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------------------------|--|----------|------|
| V _{CB0} | Collector-Base Voltage | 160 | V |
| V _{CEO} | Collector-Emitter Voltage | 160 | V |
| V _{EBO} | Emitter-Base Voltage | 5 | V |
| I _C | Collector Current | 1.5 | A |
| P _C | Collector Power Dissipation | 1 | W |
| R _{θJA} | Thermal Resistance From Junction To Ambient | 125 | °C/W |
| T _J , T _{stg} | Operation Junction and Storage Temperature Range | -55~+150 | °C |

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

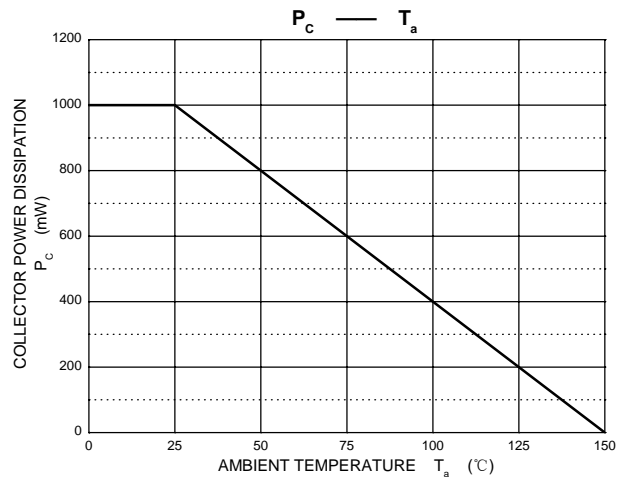
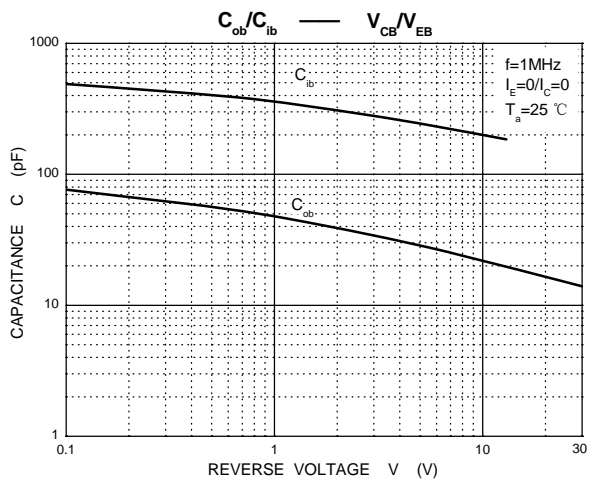
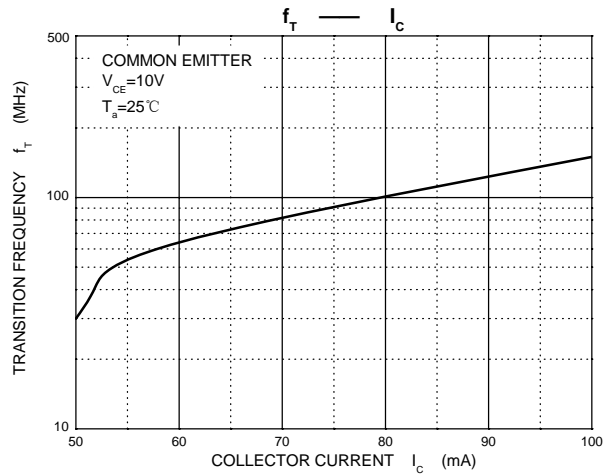
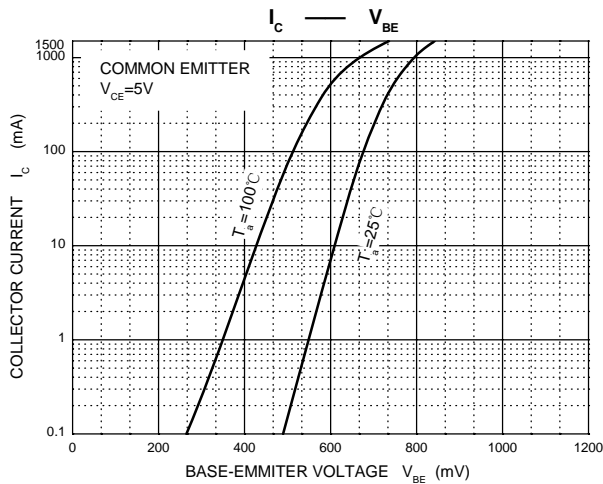
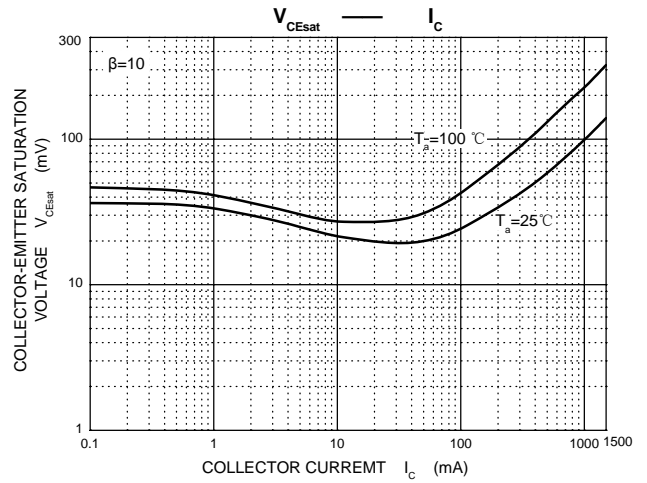
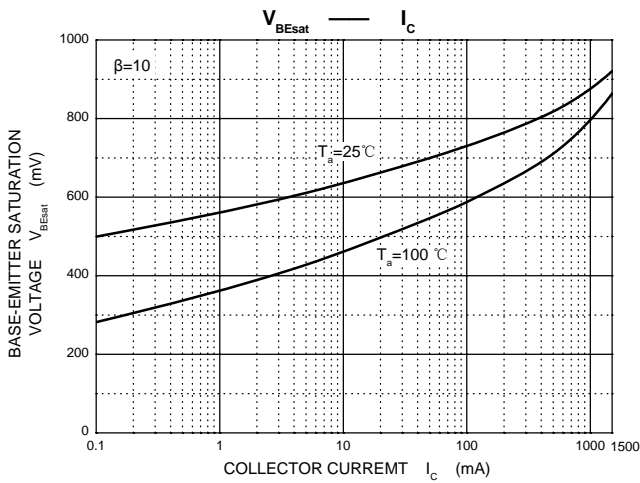
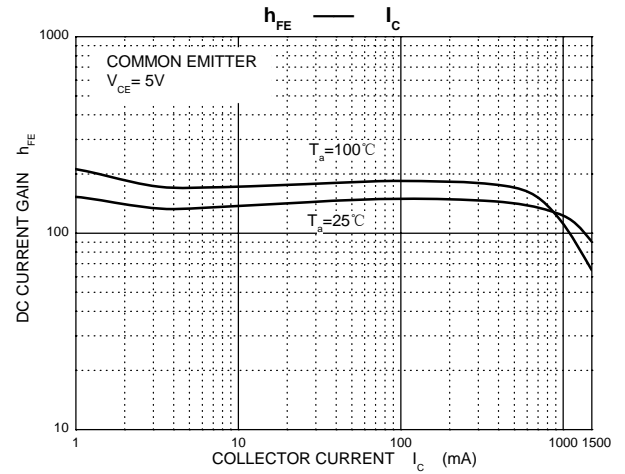
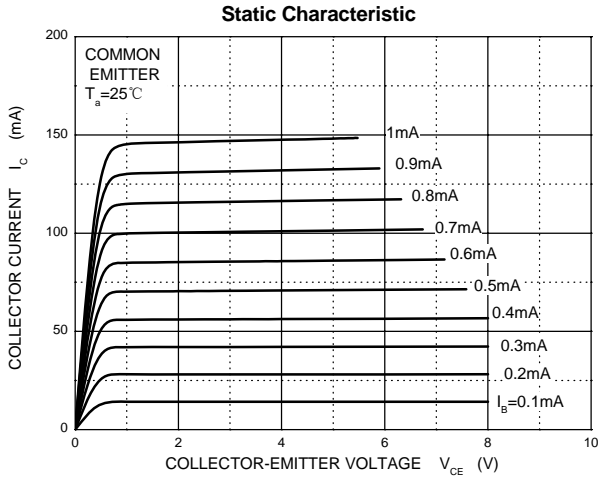
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|------------------------|---|-----|-----|-----|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C =1mA, I _E =0 | 160 | | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} * | I _C =10mA, I _B =0 | 160 | | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E =1mA, I _C =0 | 5 | | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =160V, I _E =0 | | | 1 | μA |
| Emitter cut-off current | I _{EBO} | V _{EB} =5V, I _C =0 | | | 1 | μA |
| DC current gain | h _{FE} | V _{CE} =5V, I _C =100mA | 70 | | 240 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =500mA, I _B =50mA | | | 1.5 | V |
| Base-emitter voltage | V _{BE} | V _{CE} =5V, I _C =500mA | | | 1 | V |
| Collector output capacitance | C _{ob} | V _{CB} =10V, I _E =0, f=1MHz | | 25 | | pF |
| Transition frequency | f _T | V _{CE} =10V, I _C =100mA, | | 100 | | MHz |

*Pulse test

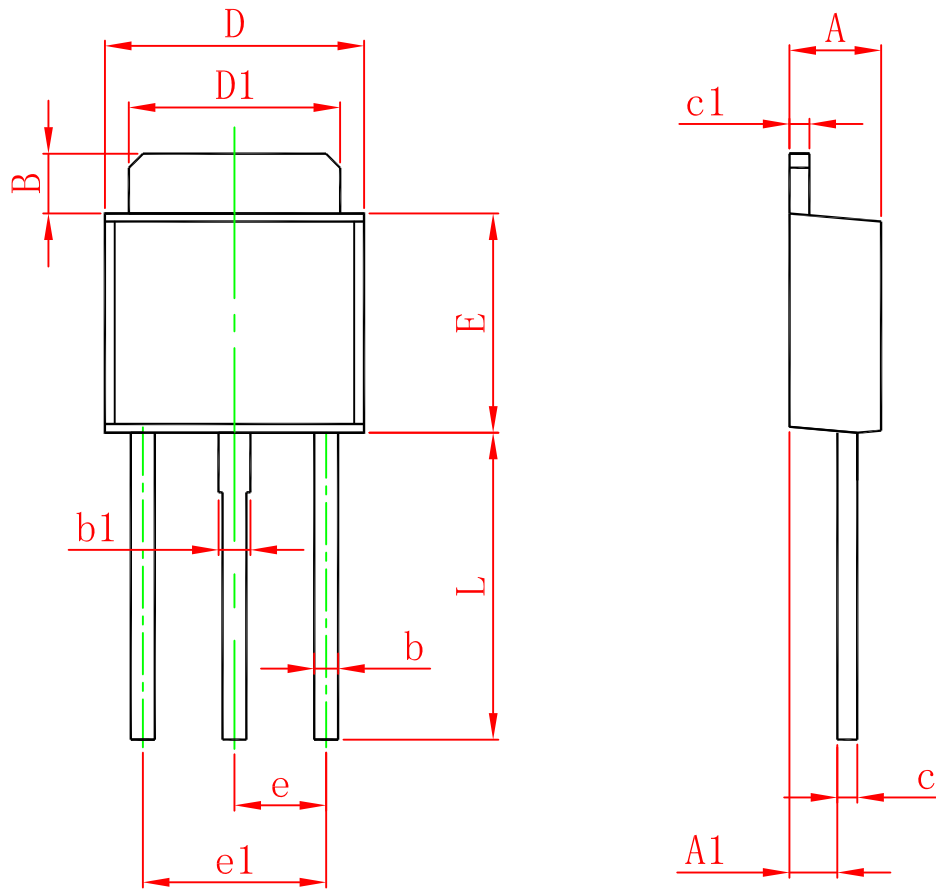
CLASSIFICATION OF h_{FE}

| RANK | O | Y |
|-------|--------|---------|
| RANGE | 70-140 | 120-240 |

Typical Characteristics



TO-251-3L Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.200 | 2.400 | 0.087 | 0.094 |
| A1 | 1.050 | 1.350 | 0.042 | 0.054 |
| B | 1.350 | 1.650 | 0.053 | 0.065 |
| b | 0.500 | 0.700 | 0.020 | 0.028 |
| b1 | 0.700 | 0.900 | 0.028 | 0.035 |
| c | 0.430 | 0.580 | 0.017 | 0.023 |
| c1 | 0.430 | 0.580 | 0.017 | 0.023 |
| D | 6.350 | 6.650 | 0.250 | 0.262 |
| D1 | 5.200 | 5.400 | 0.205 | 0.213 |
| E | 5.400 | 5.700 | 0.213 | 0.224 |
| e | 2.300 TYP. | | 0.091 TYP. | |
| e1 | 4.500 | 4.700 | 0.177 | 0.185 |
| L | 7.500 | 7.900 | 0.295 | 0.311 |