

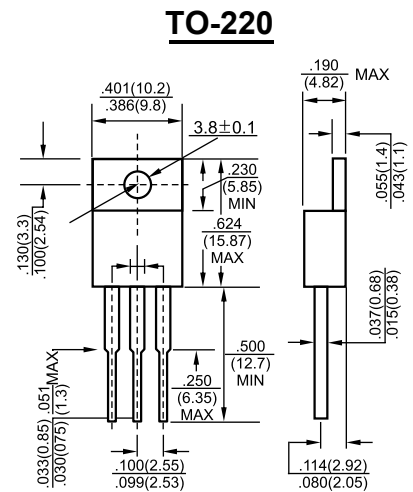
1. BASE
2. COLLECTOR
3. EMITTER

Features

- ✧ High DC Current Gain : $h_{FE}=1000$ @ $V_{CE}=4V$, $I_C=1A$ (Min.)
- ✧ Low Collector-Emitter Saturation Voltage
- ✧ Industrial Use

MAXIMUM RATINGS ($T_A=25^\circ C$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|-------------|------------|
| V_{CBO} | Collector-Base Voltage | 80 | V |
| V_{CEO} | Collector-Emitter Voltage | 80 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 2 | A |
| P_C | Collector Dissipation | 2 | W |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55 to +150 | $^\circ C$ |



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|-------------------|-------------------------------|------|-----|-----|------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=10mA, I_E=0$ | 80 | | | V |
| Collector-emitter sustaining voltage | $V_{CEO}^{(sus)}$ | $I_C=30mA, I_B=0$ | 80 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10mA, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CEO} | $V_{CE}=40V, I_B=0$ | | | 2 | mA |
| Collector cut-off current | I_{CBO} | $V_{CB}=80V, I_E=0$ | | | 1 | mA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 2 | mA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=4V, I_C=1A$ | 1000 | | | |
| | $h_{FE(2)}$ | $V_{CE}=4V, I_C=2A$ | 500 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=2A, I_B=8mA$ | | | 2.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE}=4V, I_C=2A$ | | | 2.8 | V |
| Collector output capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=0.1MHz$ | | | 100 | pF |

Typical Characteristics

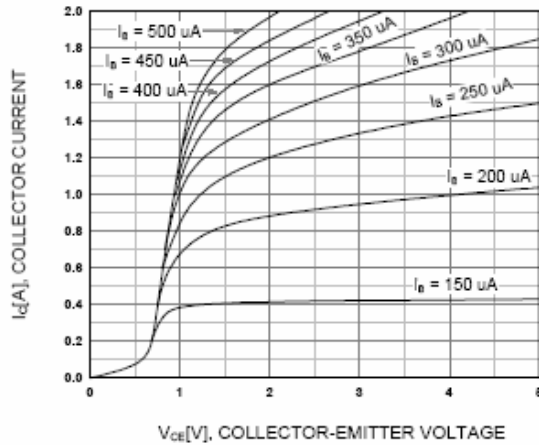


Figure 1. Static Characteristic

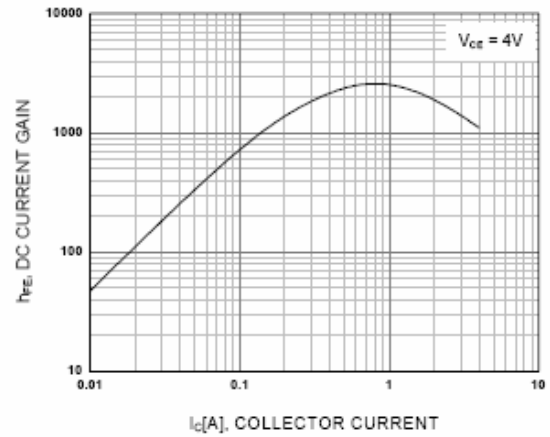


Figure 2. DC current Gain

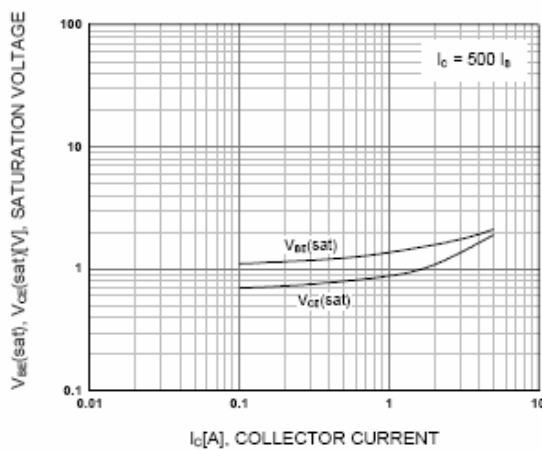


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

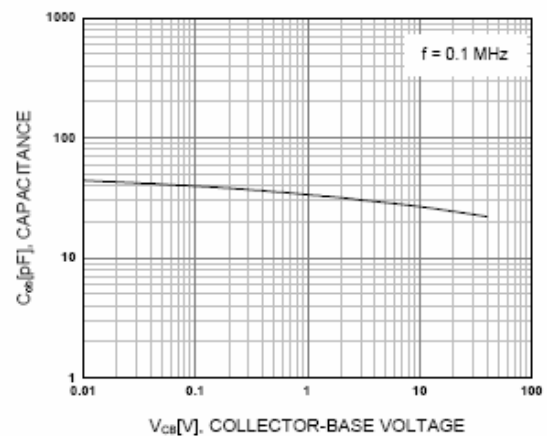


Figure 4. Collector Output Capacitance

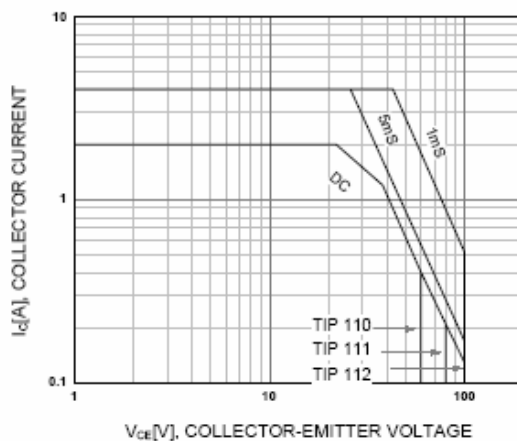


Figure 5. Safe Operating Area

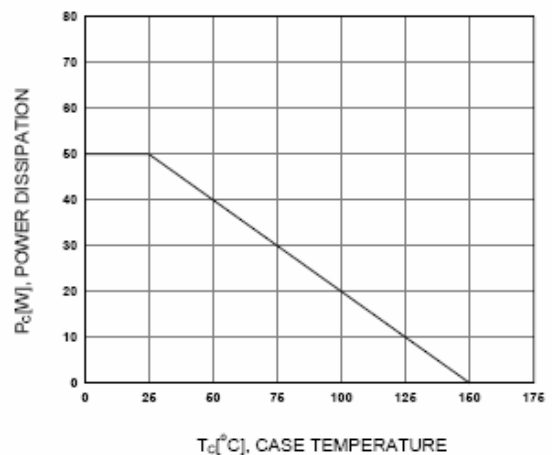


Figure 6. Power Derating