

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

| Parameter                            | Symbol        | Min | Typ | Max | Units   | Conditions                      |
|--------------------------------------|---------------|-----|-----|-----|---------|---------------------------------|
| Collector-Base Breakdown Voltage     | $V_{(BR)CBO}$ | 50  |     |     | V       | $I_C=50\mu A, I_E=0$            |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | 50  |     |     | V       | $I_C=1mA, I_B=0$                |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$ | 5   |     |     | V       | $I_E=50\mu A, I_C=0$            |
| Collector-Base Cutoff Current        | $I_{CBO}$     |     |     | 0.5 | $\mu A$ | $V_{CB}=30V, I_E=0$             |
| Emitter-Base Cutoff Current          | $I_{EBO}$     |     |     | 0.5 | $\mu A$ | $V_{EB}=4V, I_C=0$              |
| DC Current Gain                      | $h_{FE}$      | 120 |     | 560 |         | $V_{CE}=6V, I_C=1mA$            |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ |     |     | 0.4 | V       | $I_C=50mA, I_B=5mA$             |
| Transition Frequency                 | $f_T$         |     | 180 |     | MHz     | $V_{CE}=12V, I_C=2mA, f=100MHz$ |
| Output Capacitance                   | $C_{ob}$      |     | 2   | 3.5 | pF      | $V_{CB}=12V, I_E=0, f=1MHz$     |

**Curve Characteristics**

Fig. 1 - Static Characteristics

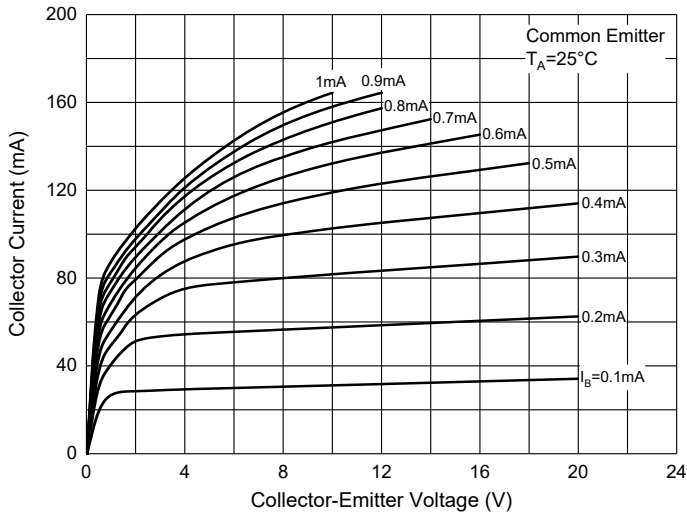


Fig. 2 - DC Current Gain Characteristics

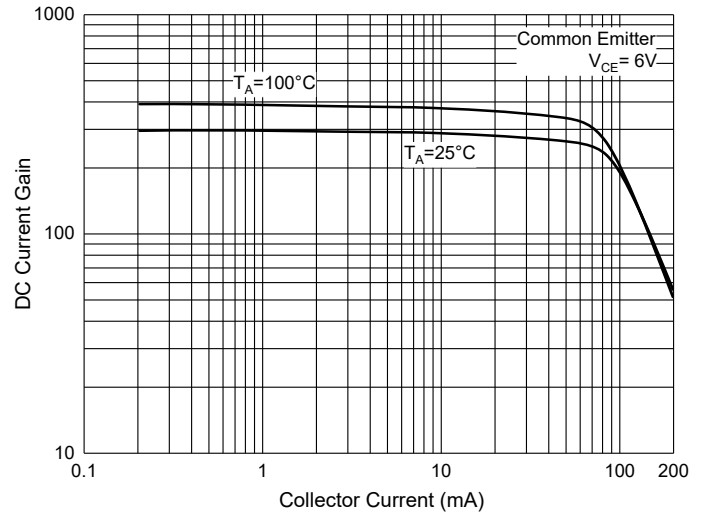


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

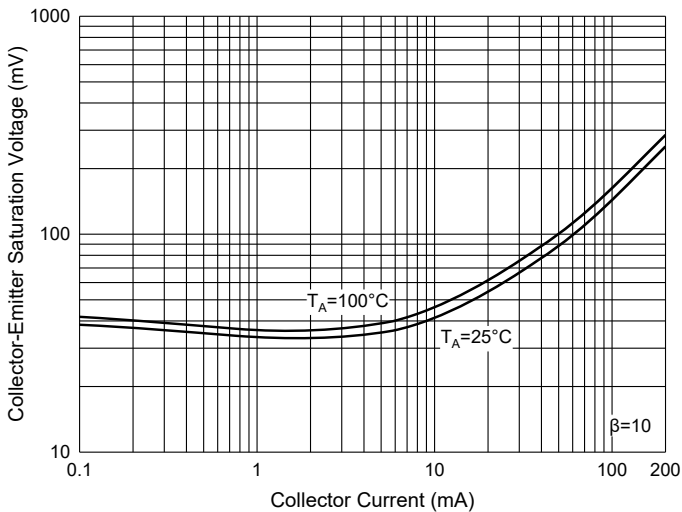


Fig. 4 - Base-Emitter Voltage Characteristics

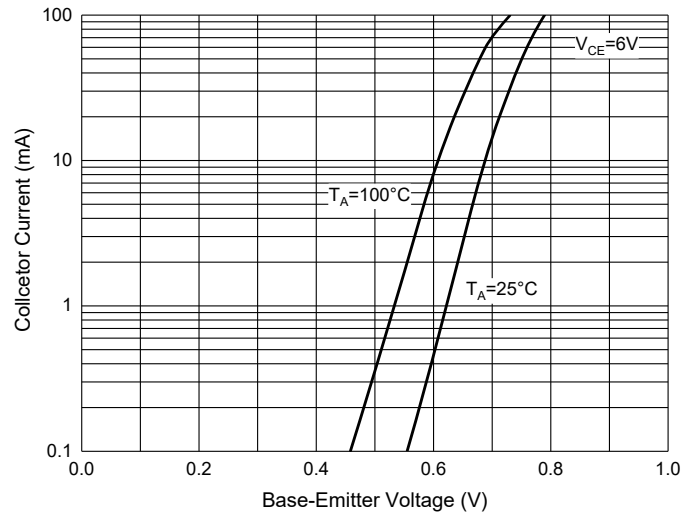
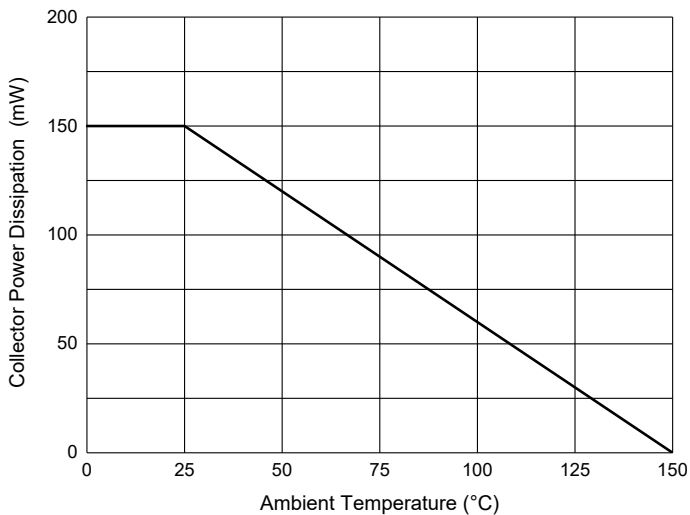


Fig. 5 - Collector Power Derating Curve



## Ordering Information

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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