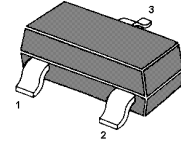


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for switching and amplifier applications.



1. Base 2. Emitter 3. Collector
TO-236 Plastic Package

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

| Parameter | Symbol | Value | Unit |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage | $-V_{CBO}$ | 40 | V |
| Collector Emitter Voltage | $-V_{CEO}$ | 30 | V |
| Emitter Base Voltage | $-V_{EBO}$ | 5 | V |
| Collector Current | $-I_C$ | 500 | mA |
| Power Dissipation | P_{tot} | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|--|----------------|------|------|------|
| DC Current Gain at $-V_{CE} = 1\text{ V}$, $-I_C = 50\text{ mA}$ at $-V_{CE} = 1\text{ V}$, $-I_C = 500\text{ mA}$ Current Gain Group | G | 100 | 250 | - |
| | H | 160 | 400 | - |
| | h_{FE} | 40 | - | - |
| Collector Base Cutoff Current at $-V_{CB} = 35\text{ V}$ | $-I_{CBO}$ | - | 100 | nA |
| Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$ | $-I_{EBO}$ | - | 100 | nA |
| Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$ | $-V_{(BR)CBO}$ | 40 | - | V |
| Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$ | $-V_{(BR)CEO}$ | 30 | - | V |
| Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$ | $-V_{(BR)EBO}$ | 5 | - | V |
| Collector Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$ | $-V_{CE(sat)}$ | - | 0.6 | V |
| Base Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$ | $-V_{BE(sat)}$ | - | 1.2 | V |
| Base Emitter Voltage at $-V_{CE} = 1\text{ V}$, $-I_C = 100\text{ mA}$ | $-V_{BE}$ | - | 1 | V |
| Gain Bandwidth Product at $-V_{CE} = 6\text{ V}$, $-I_C = 20\text{ mA}$ | f_T | 100 | - | MHz |

Note: Specifications are subject to change without notice. For more details and updates, please visit our website.

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Fig. 1 $P_{tot} - T_a$

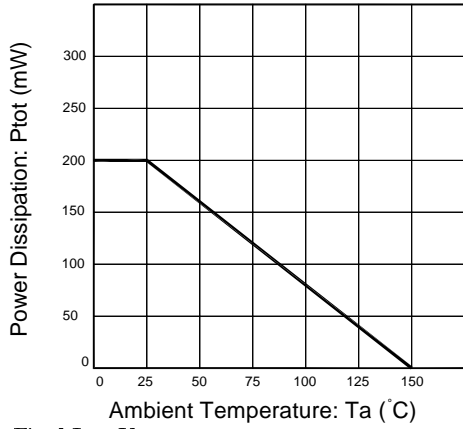


Fig. 2 $I_C - V_{BE}$

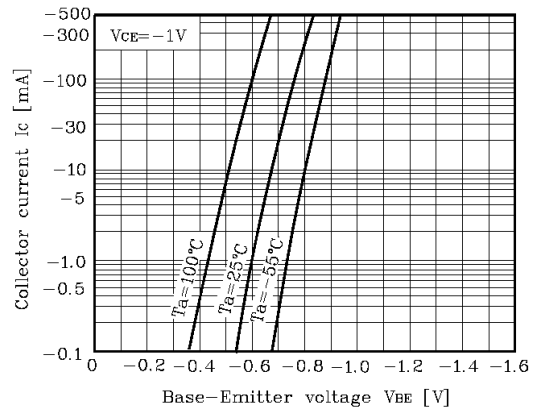


Fig. 3 $I_C - V_{CE}$

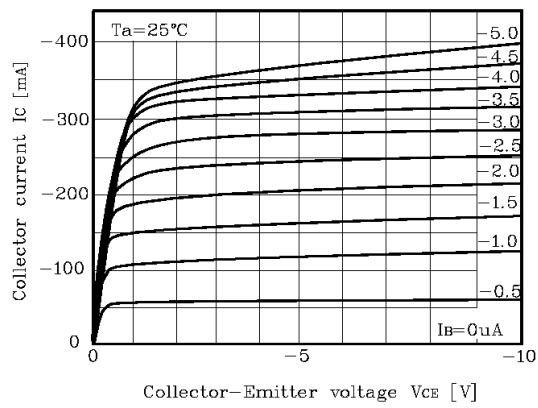


Fig. 4 $V_{CE(sat)} - I_C$

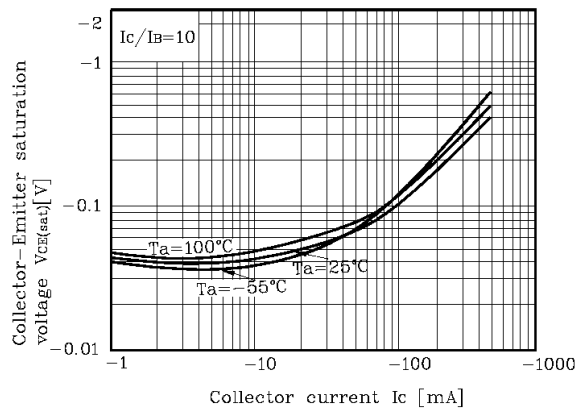


Fig. 5 $h_{FE} - I_C$

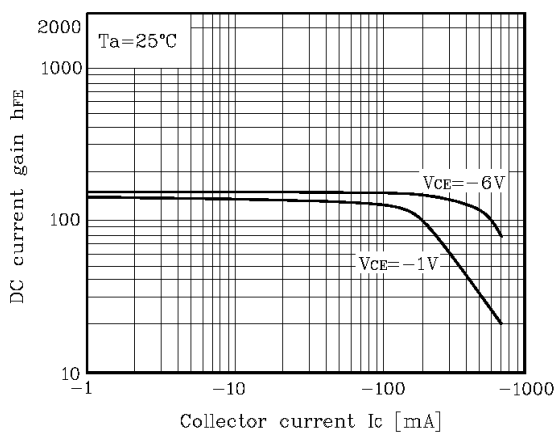
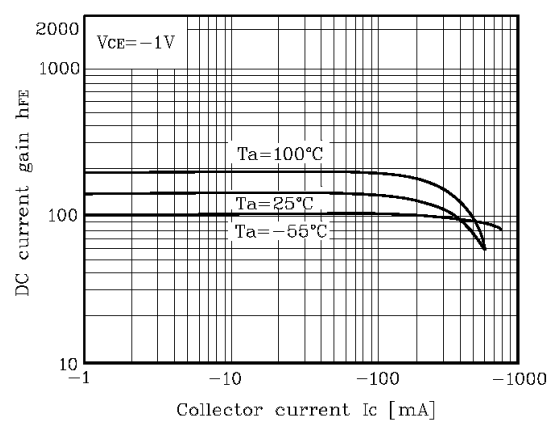


Fig. 6 $h_{FE} - I_C$



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