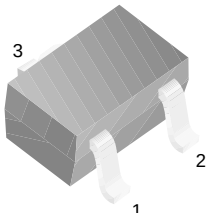
FAIRCHILD
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# FJX4004R

## Switching Application (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ($R_1$=47KΩ, $R_2$=47KΩ)
- Complement to FJX3004R



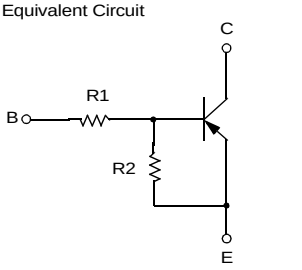

SOT-323

1. Base 2. Emitter 3. Collector

Marking




Equivalent Circuit




## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -50 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -50 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -10 | V |
| $I_C$ | Collector Current | -100 | mA |
| $P_C$ | Collector Power Dissipation | 200 | mW |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | -55 ~ 150 | °C |

### Electrical Characteristics $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $BV_{CBO}$ | Collector-Base Breakdown Voltage | $I_C$= -10μA, $I_E$=0 | -50 | | | V |
| $BV_{CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -100μA, $I_B$=0 | -50 | | | V |
| $I_{CBO}$ | Collector Cut-off Current | $V_{CB}$= -40V, $I_E$=0 | | | -0.1 | μA |
| $h_{FE}$ | DC Current Gain | $V_{CE}$= -5V, $I_C$= -5mA | 68 | | | |
| $V_{CE}$(sat) | Collector-Emitter Saturation Voltage | $I_C$= -10mA, $I_B$= -0.5mA | | | -0.3 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$= -10V, $I_C$=-5mA | | 200 | | MHz |
| $C_{ob}$ | Output Capacitance | $V_{CB}$= -10V, $I_E$=0 f=1.0MHz | | 5.5 | | pF |
| $V_I$(off) | Input Off Voltage | $V_{CE}$= -5V, $I_C$= -100μA | -0.5 | | | V |
| $V_I$(on) | Input On Voltage | $V_{CE}$= -0.3V, $I_C$= -2mA | | | -3 | V |
| $R_1$ | Input Resistor | | 32 | 47 | 62 | KΩ |
| $R_1/R_2$ | Resistor Ratio | | 0.9 | 1 | 1.1 | |

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# Typical Characteristics

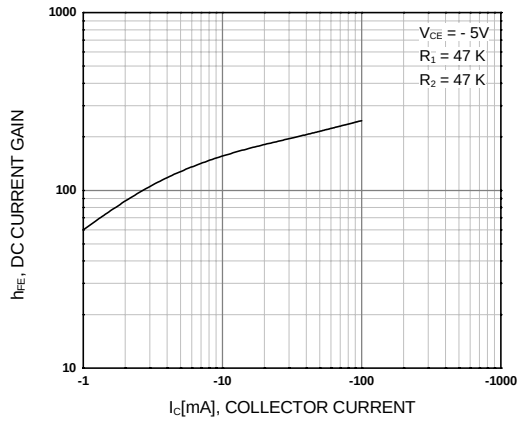



**Figure 1. DC current Gain**

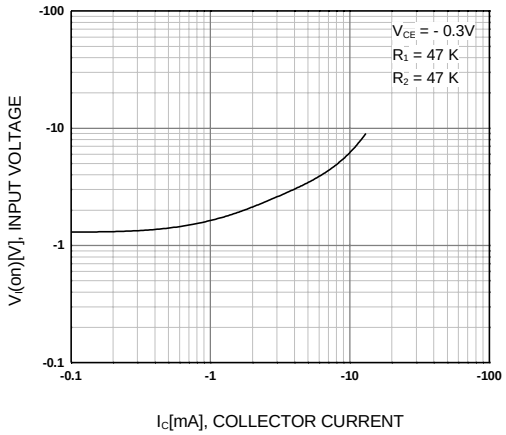



**Figure 2. Input On Voltage**

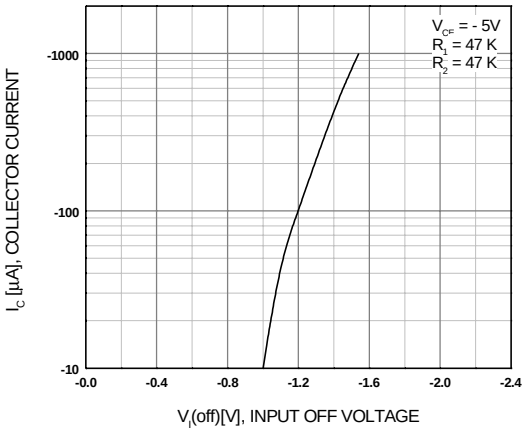



**Figure 3. Input Off Voltage**

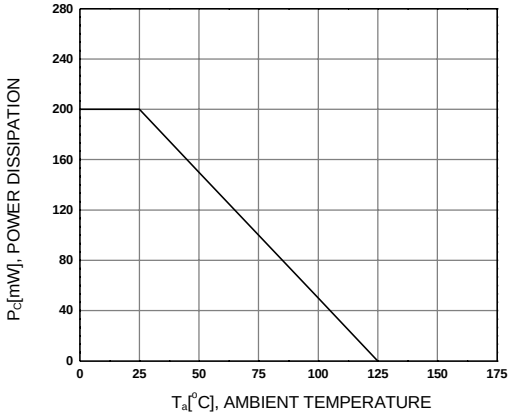
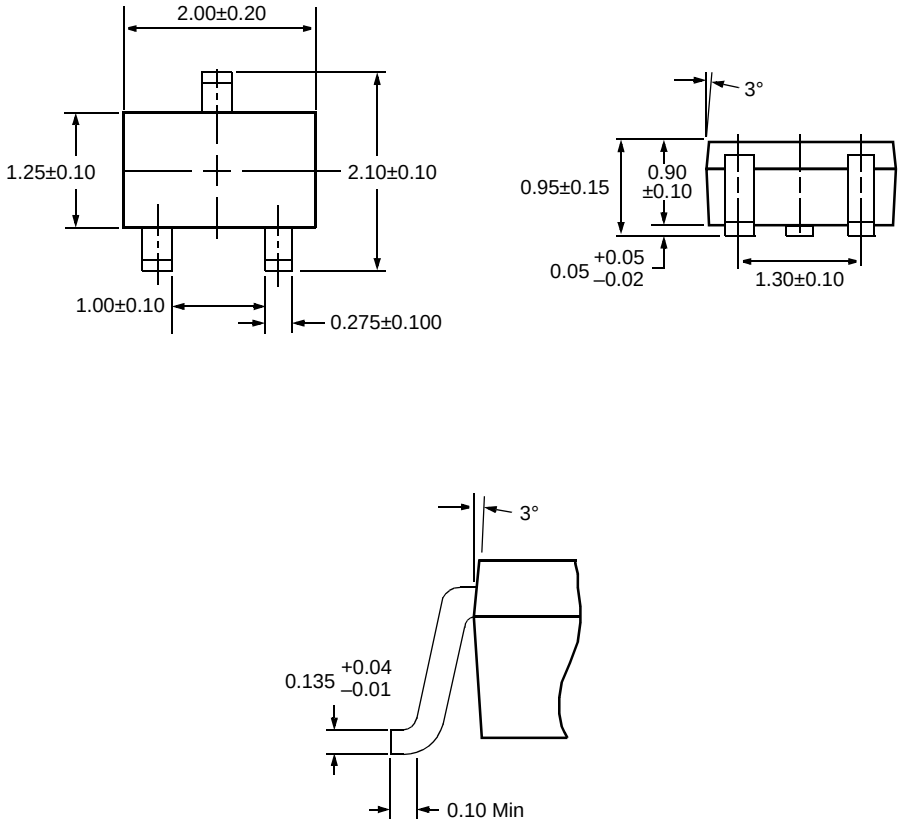



**Figure 4. Power Derating**

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## Package Dimensions

# SOT-323




Dimensions in Millimeters

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| CoolFET™ | FASTr™ | MicroFET™ | PowerTrench® | SuperSOT™-6 |
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| $E^2$CMOS™ | HiSeC™ | MSXPro™ | Quiet Series™ | TruTranslation™ |
| EnSigna™ | $I^2C$™ | OCX™ | RapidConfigure™ | UHC™ |
| Across the board. Around the world.™ | | OCXPro™ | RapidConnect™ | UltraFET® |
| The Power Franchise™ | | OPTOLOGIC® | SILENT SWITCHER® | VCX™ |
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