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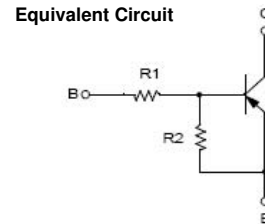
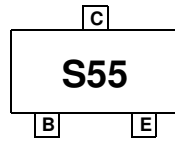
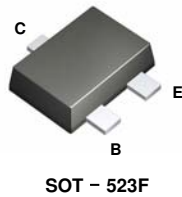


FJY4005R

PNP Epitaxial Silicon Transistor

Features

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ($R_1=4.7K\Omega$, $R_2=10K\Omega$)
- Complement to FJY3005R



Absolute Maximum Ratings* $T_a = 25^\circ\text{C}$ 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 |
| T_{STG} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| P_C | Collector Power Dissipation, by $R_{\theta JA}$ | 200 | mW |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics* $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Max | Units |
|-----------------|---|-----|---------------------------|
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 600 | $^\circ\text{C}/\text{W}$ |

* Minimum land pad size.

Electrical Characteristics* $T_C = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | MIN | Typ | MAX | Units |
|---------------|--------------------------------------|--|------|------|------|---------------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C = -10 \mu\text{A}$, $I_E = 0$ | -50 | | | V |
| $V_{(BR)CEO}$ | Collector-Base Breakdown Voltage | $I_C = -100 \mu\text{A}$, $I_B = 0$ | -50 | | | V |
| I_{CBO} | Collector-Cutoff Current | $V_{CB} = -40 \text{V}$, $I_E = 0$ | | | -0.1 | μA |
| h_{FE} | DC Current Gain | $V_{CE} = -5 \text{V}$, $I_C = -5 \text{mA}$ | 30 | | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -10 \text{mA}$, $I_B = -0.5 \text{mA}$ | | | -0.3 | V |
| f_r | Current Gain - Bandwidth Product | $V_{CE} = -10 \text{V}$, $I_C = -5 \text{mA}$ | | 200 | | MHz |
| C_{cb} | Output Capacitance | $V_{CB} = -10 \text{V}$, $I_E = 0$, $f = 1.0 \text{MHz}$ | | 5.5 | | pF |
| $V_{I(off)}$ | Input Off Voltage | $V_{CE} = -5 \text{V}$, $I_C = -100 \mu\text{A}$ | -0.3 | | | V |
| $V_{I(on)}$ | Input On Voltage | $V_{CE} = -0.3 \text{V}$, $I_C = -20 \text{mA}$ | | | -2.5 | V |
| R_1 | Input Resistor | | 3.2 | 4.7 | 6.2 | $K\Omega$ |
| R_1/R_2 | Resistor Ratio | | 0.42 | 0.47 | 0.52 | |

* Pulse Test: $PW \leq 300 \mu\text{s}$, Duty Cycle $\leq 2\%$

Typical Performance Characteristics

Figure 1. DC current Gain

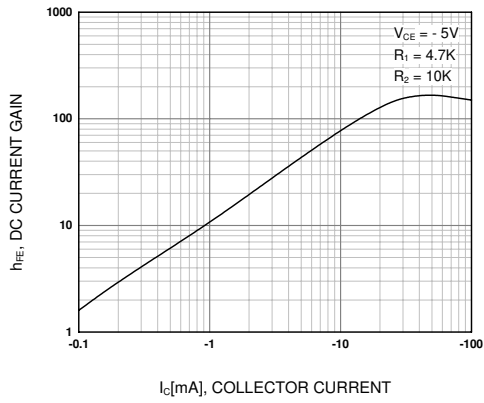


Figure 2. Input On Voltage

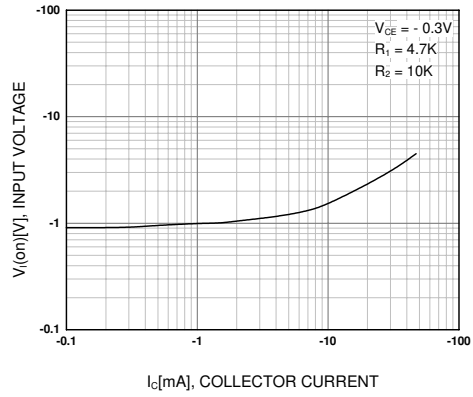


Figure 3. Input off Voltage

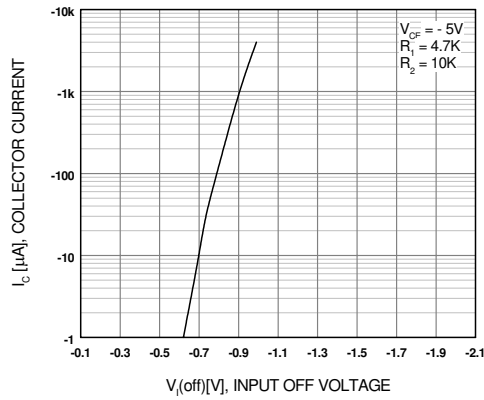
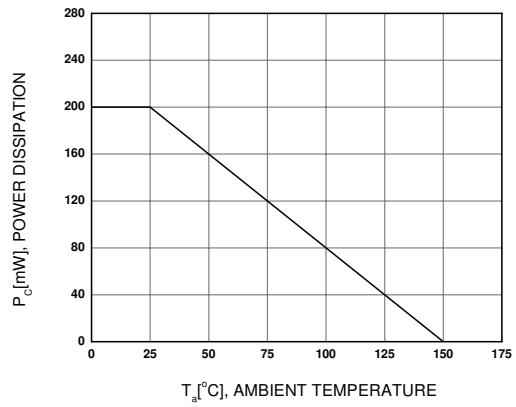
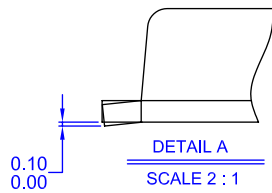
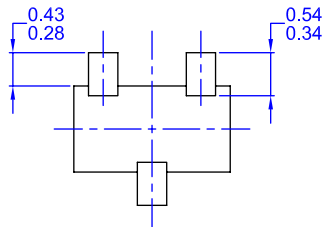
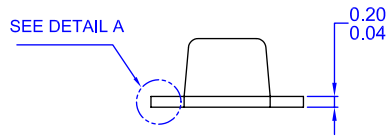
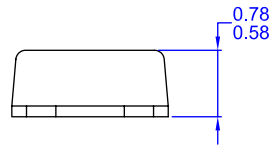
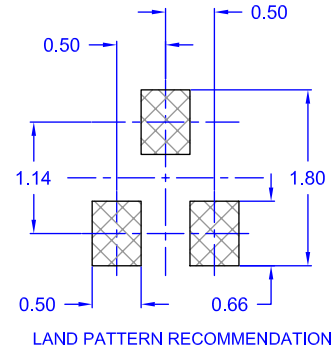
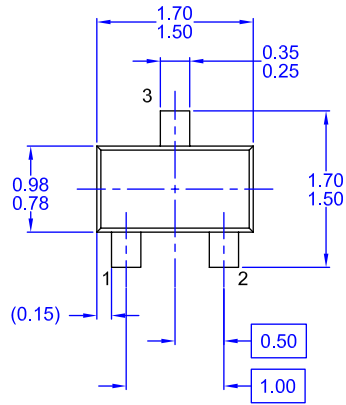


Figure 4. Power Derating



Package Dimensions

SOT-523F




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Dimensions in Millimeters



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|--------------------------|------------------------|--|
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