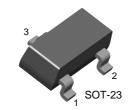


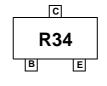
November 2006

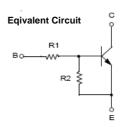
FJV3114R NPN Epitaxial Silicon Transistor

Features

- · Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R1=4.7KΩ, R2=47KΩ)
- Complement to FJV4114R







1. Base 2. Emitter 3. Collector

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
T _{STG}	Storage Temperature Range	-55~150	°C
TJ	Junction Temperature	150	°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 by impaired.

Electrical Characteristics* T_C = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	MIN	Тур	MAX	Units
V _(BR) CBO	Collector-Emitter Breakdown Voltage	Ic = 10 uA, IE = 0	50			V
V _{(BR)CEO}	Collector-Base Breakdown Voltage	Ic = 100 uA, IB = 0	50			V
Ісво	Collector-Cutoff Current	Vcb = 40 V, IE = 0			0.1	uA
hfe	DC Current Gain	VcE = 5 V, Ic = 5 mA	68			
Vce(sat)	Collector-Emitter Saturation Voltage	Ic = 10 mA, I _B = 0.5 mA			0.3	V
f⊤	Current Gain - Bandwidth Product	VcE = 10V, Ic = 5 mA		250		MHz
Ccb	Output Capacitance	VcB = 10 V, IE = 0, f = 1.0 MHz		3.7		pF
V _I (off)	Input Off Voltage	VcE = 5 V, Ic = 100uA	0.5			V
V _I (on)	Input On Voltage	VcE = 0.2V, Ic = 5mA			1.3	V
R ₁	Input Resistor		3.2	4.7	6.2	ΚΩ
R ₁ /R ₂	Resistor Ratio		0.09	0.1	0.11	

^{*} Pulse Test: PW≤300μs, Duty Cycle≤2%

Typical Performance Characteristics

Figure 1. DC current Gain

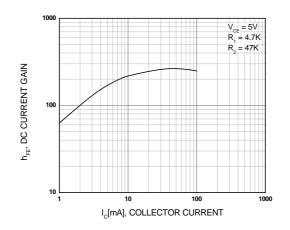


Figure 2. Input On Voltage

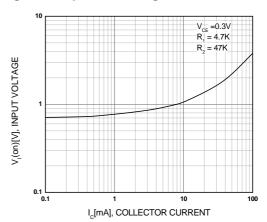


Figure 3. Collector-Emitter Saturation Voltage

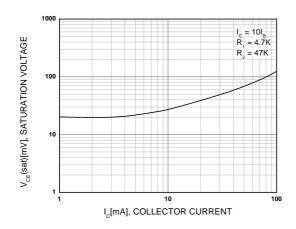
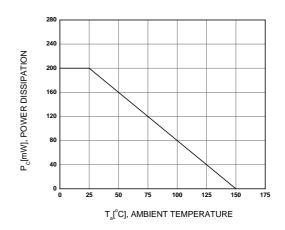
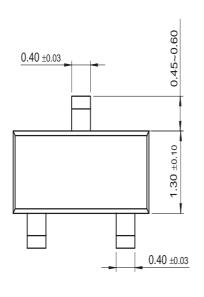


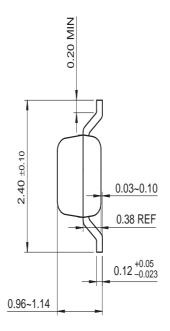
Figure 4. Power Derating

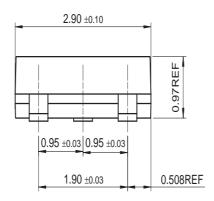


Package Dimensions

SOT-23







Dimensions in Millimeters

UltraFET®

UniFET™

 VCX^{TM}

Wire™



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Definition of Terms

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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