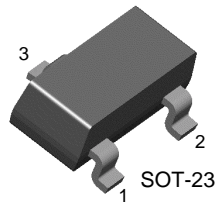


FJV3114R

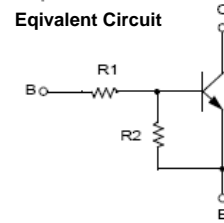
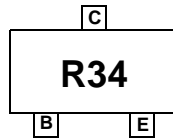
NPN Epitaxial Silicon Transistor

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 * $T_a = 25^\circ\text{C}$ 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.

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

Symbol	Parameter	Test Condition	MIN	Typ	MAX	Units
$V_{(BR)CBO}$	Collector-Emitter 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	$V_{CE} = 5 \text{V}, I_C = 5 \text{mA}$	68			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 10 \text{mA}, I_B = 0.5 \text{mA}$			0.3	V
f_T	Current Gain - Bandwidth Product	$V_{CE} = 10 \text{V}, I_C = 5 \text{mA}$		250		MHz
C_{cb}	Output Capacitance	$V_{CB} = 10 \text{V}, I_E = 0, f = 1.0 \text{MHz}$		3.7		pF
$V_{I(off)}$	Input Off Voltage	$V_{CE} = 5 \text{V}, I_C = 100 \mu\text{A}$	0.5			V
$V_{I(on)}$	Input On Voltage	$V_{CE} = 0.2 \text{V}, I_C = 5 \text{mA}$			1.3	V
R_1	Input Resistor		3.2	4.7	6.2	KΩ
R_1/R_2	Resistor Ratio		0.09	0.1	0.11	

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

Typical Performance Characteristics

Figure 1. DC current Gain

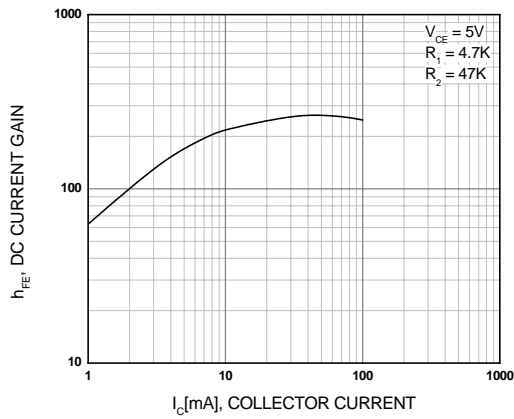


Figure 2. Input On Voltage

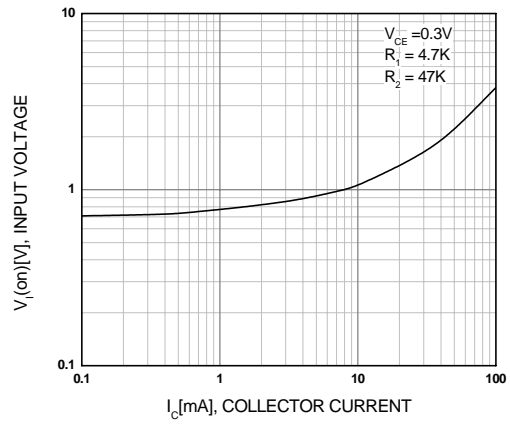


Figure 3. Collector-Emitter Saturation Voltage

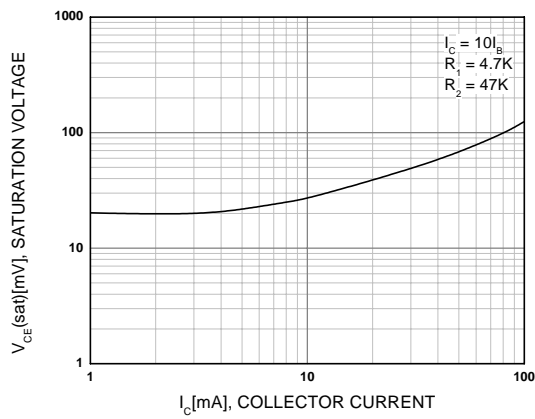
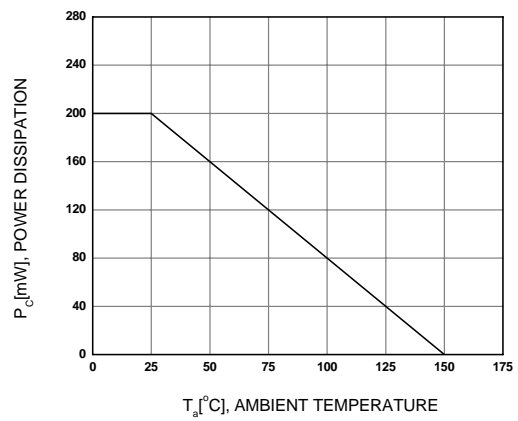
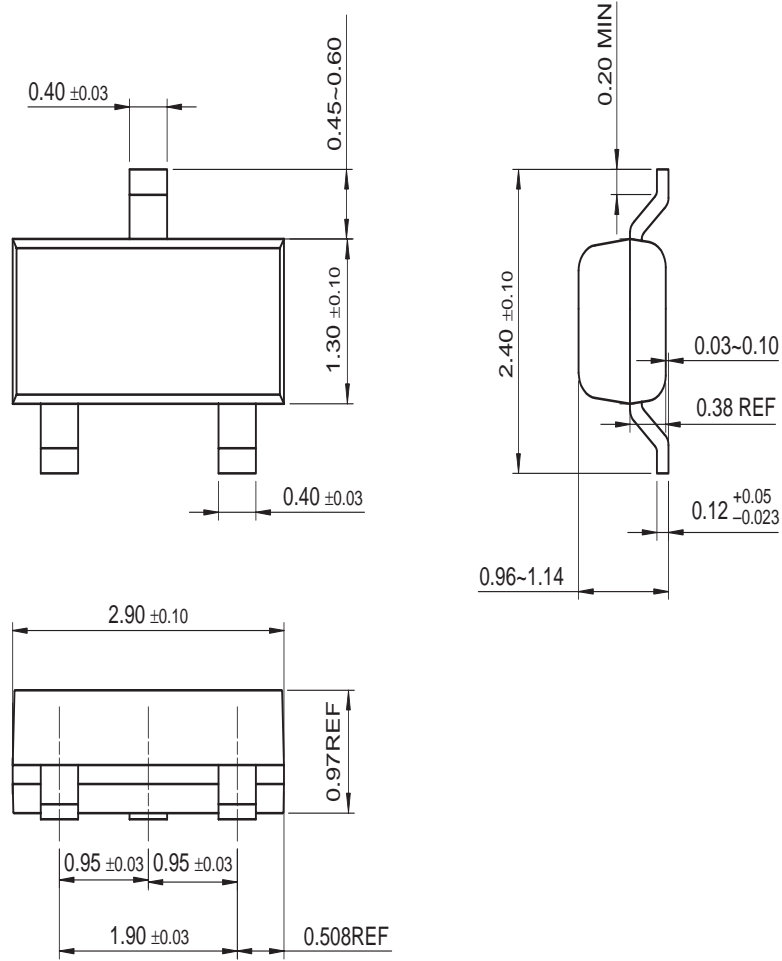


Figure 4. Power Derating



Package Dimensions

SOT-23



Dimensions in Millimeters

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E ² C MOS™	ISOPLANAR™	PowerSaver™	SyncFET™	
EnSigna™	LittleFET™	PowerTrench®	TCM™	
FACT®	MICROCOUPLER™	QFET®	TinyBoost™	
FAST®	MicroFET™	QS™	TinyBuck™	
FASTr™	MicroPak™	QT Optoelectronics™	TinyPWM™	
FPST™	MICROWIRE™	Quiet Series™	TinyPower™	
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