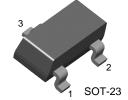


### **FJV4109R**

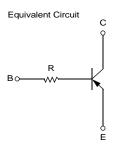
### Switching Application (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R=4.7KΩ)
- Complement to FJV3109R



1. Base 2. Emitter 3. Collector





## **PNP Epitaxial Silicon Transistor**

### **Absolute Maximum Ratings** T<sub>a</sub>=25°C unless otherwise noted

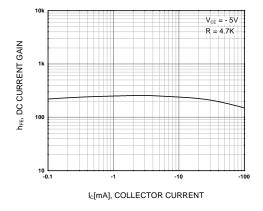
Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-40	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current	-100	mA
P <sub>C</sub>	Collector Power Dissipation	200	mW
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 ~ 150	°C

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

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	$I_C = -100 \mu A, I_E = 0$	-40			V
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	$I_C = -1 \text{mA}, I_B = 0$	-40			V
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB}$ = -30V, $I_{E}$ =0			-0.1	μΑ
h <sub>FE</sub>	DC Current Gain	$V_{CE}$ = -5V, $I_{C}$ = -1mA	100		600	
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	$I_C$ = -10mA, $I_B$ = -1mA			-0.3	V
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = -10V, I <sub>E</sub> =0 f=1MHz		5.5		pF
f <sub>T</sub>	Current Gain Bandwidth Product	$V_{CE}$ = -10V, $I_{C}$ = -5mA		200		MHz
R	Input Resistor		3.2	4.7	6.2	ΚΩ

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# **Typical Characteristics**



-1000 (38) M/J; SATURATION VOLTAGE
R = 4.7k
R = 4.7k
Ic = 10l<sub>B</sub>
R = 4.7k
Ic = 10l<sub>B</sub>
R = 4.7k

Figure 1. DC current Gain

Figure 2. Collector-Emitter Saturation Voltage

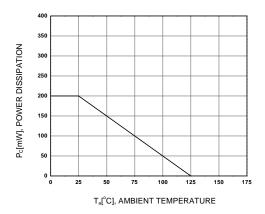
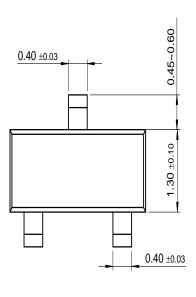
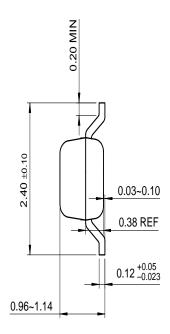


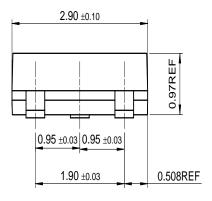
Figure 3. Power Derating

# **Package Dimensions**

## **SOT-23**







Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
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E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	$I^2C^{TM}$	$OCX^{TM}$	RapidConfigure™	UHC™
Across the board.	Around the world.™	OCXPro™	RapidConnect™	UltraFET <sup>®</sup>
The Power Franchise™		OPTOLOGIC <sup>®</sup>	SILENT SWITCHER®	VCX <sup>TM</sup>
Programmable Ad	ctive Droop™	OPTOPLANAR™	SMART START™	

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