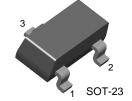


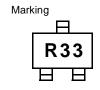
## **FJV3113R**

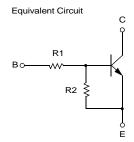
### Switching Application (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R<sub>1</sub> =2.2K $\Omega$ , R<sub>2</sub>=47K $\Omega$ )
- Complement to FJV4113R



1. Base 2. Emitter 3. Collector





## **NPN Epitaxial Silicon Transistor**

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	50	V
V <sub>EBO</sub>	Emitter-Base Voltage	10	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

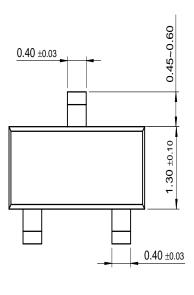
### Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

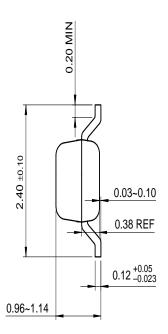
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	$I_{C}=10\mu A, I_{E}=0$	50			V
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =100μA, I <sub>B</sub> =0	50			V
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB}$ =40V, $I_{E}$ =0			0.1	μΑ
h <sub>FE</sub>	DC Current Gain	V <sub>CE</sub> =5V, I <sub>C</sub> =5mA	68			
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA			0.3	V
f <sub>T</sub>	Current Gain Bandwidth Product	V <sub>CE</sub> =10V, I <sub>C</sub> =5mA		250		MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0 f=1.0MHz		3.7		pF
V <sub>I</sub> (off)	Input Off Voltage	$V_{CE}=5V, I_{C}=100\mu A$	0.5			V
V <sub>I</sub> (on)	Input On Voltage	$V_{CE}$ =0.2V, $I_{C}$ =5mA			1.1	V
R <sub>1</sub>	Input Resistor		1.5	2.2	2.9	ΚΩ
R <sub>1</sub> /R <sub>2</sub>	Resistor Ratio		0.042	0.047	0.052	

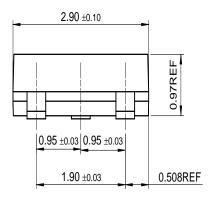
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# **Package Dimensions**

## **SOT-23**







Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
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™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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