

### **FJX4004R**

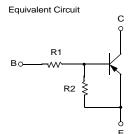
### Switching Application (Bias Resistor Built In)

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ( $R_1$ =47K $\Omega$ ,  $R_2$ =47K $\Omega$ )
- Complement to FJX3004R



1. Base 2. Emitter 3. Collector





## **PNP Epitaxial Silicon Transistor**

### **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 <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
TJ	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	$I_C = -100 \mu A, I_B = 0$	-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	$V_{CE}$ = -5V, $I_{C}$ = -5mA	68			
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	$I_{C}$ = -10mA, $I_{B}$ = -0.5mA			-0.3	V
f <sub>T</sub>	Current Gain Bandwidth Product	$V_{CE}$ = -10V, $I_{C}$ =-5mA		200		MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = -10V, I <sub>E</sub> =0 f=1.0MHz		5.5		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	$V_{CE} = -0.3V, I_{C} = -2mA$			-3	V
R <sub>1</sub>	Input Resistor		32	47	62	ΚΩ
R <sub>1</sub> /R <sub>2</sub>	Resistor Ratio		0.9	1	1.1	

# **Typical Characteristics**

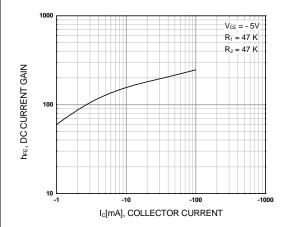


Figure 1. DC current Gain

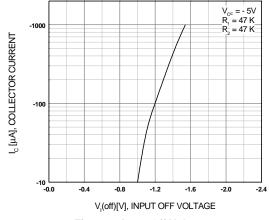
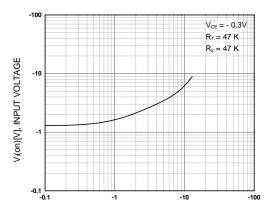


Figure 3. Input Off Voltage



I<sub>c</sub>[mA], COLLECTOR CURRENT

Figure 2. Input On Voltage

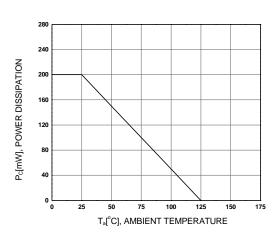
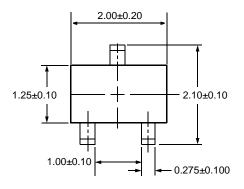
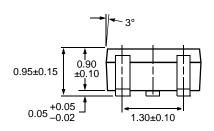


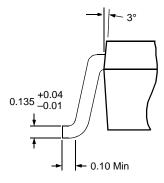
Figure 4. Power Derating

# **Package Dimensions**

## **SOT-323**







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™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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