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# **FJNS4207R**

# Switching Application (Bias Resistor Built In)

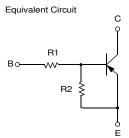
- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ( $R_1=22K\Omega$ ,  $R_2=47K\Omega$ )
- Complement to FJNS3207R



# 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	-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	300	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			٧
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 <sub>C</sub> = -10mA, I <sub>B</sub> = -0.5mA			-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
V <sub>I</sub> (off)	Input Off Voltage	$V_{CE} = -5V, I_{C} = -100\mu A$	-0.4			V
V <sub>I</sub> (on)	Input On Voltage	$V_{CE} = -0.3V, I_{C} = -2mA$			-2.5	V
R <sub>1</sub>	Input Resistor		15	22	29	ΚΩ
R <sub>1</sub> /R <sub>2</sub>	Resistor Ratio		0.42	0.47	0.52	

# **Typical Characteristics**

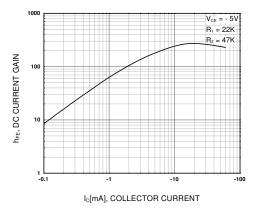


Figure 1. DC current Gain

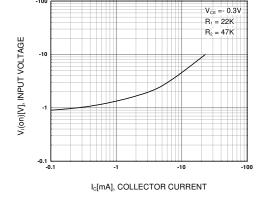


Figure 2. Input On Voltage

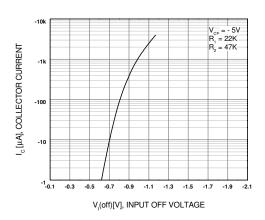


Figure 3. Input Off Voltage

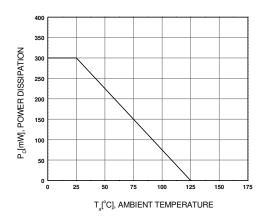
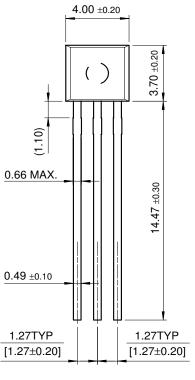
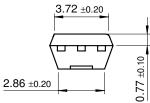
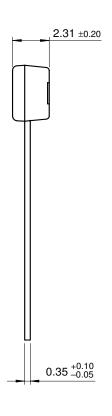


Figure 4. Power Derating

**TO-92S** 







Dimensions in Millimeters

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EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
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Rev. I1

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