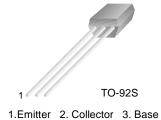


### FJNS4202R

### Switching Application (Bias Resistor Built In)

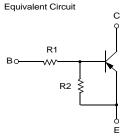
- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor ( $R_1=10K\Omega$ ,  $R_2=10K\Omega$ )
- Complement to FJNS3202R



## **PNP Epitaxial Silicon Transistor**

### Absolute Maximum Ratings Ta=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	$I_{C}$ = -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	30			
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
f <sub>T</sub> 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	$V_{CE} = -0.3V, I_{C} = -10mA$			-3	V
R <sub>1</sub>	Input Resistor		7	10	13	ΚΩ
R <sub>1</sub> /R <sub>2</sub>	Resistor Ratio		0.9	1	1.1	

# **Typical Characteristics**

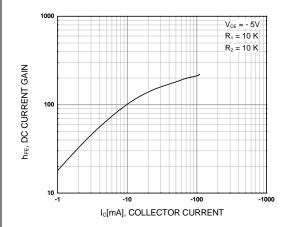


Figure 1. DC current Gain

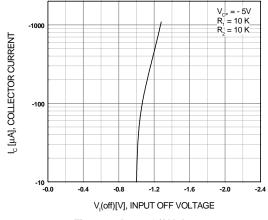
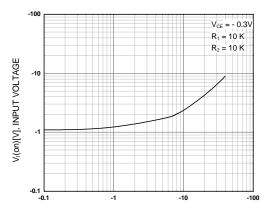


Figure 3. Input Off Voltage



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

Figure 2. Input On Voltage

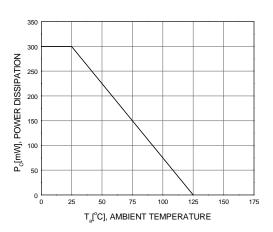
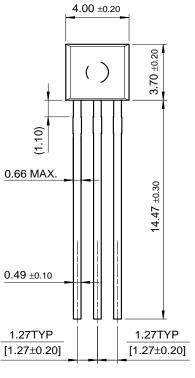
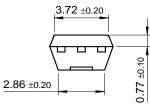


Figure 4. Power Derating

**TO-92S** 







Dimensions in Millimeters

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