

FJNS4207R

**FAIRCHILD**  
SEMICONDUCTOR®

## 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



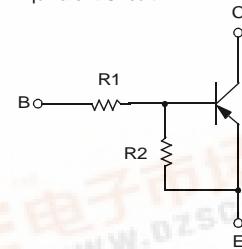
1. Emitter 2. Collector 3. Base

### PNP Epitaxial Silicon Transistor

**Absolute Maximum Ratings**  $T_a=25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-10	V
$I_C$	Collector Current	-100	mA
$P_C$	Collector Power Dissipation	300	mW
$T_J$	Junction Temperature	150	°C
$T_{STG}$	Storage Temperature	-55 ~ 150	°C

Equivalent Circuit



**Electrical Characteristics**  $T_a=25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C=-10\mu\text{A}$ , $I_E=0$	-50			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=-100\mu\text{A}$ , $I_B=0$	-50			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=-40\text{V}$ , $I_E=0$			-0.1	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$V_{CE}=-5\text{V}$ , $I_C=-5\text{mA}$	68			
$V_{CE(\text{sat})}$	Collector-Emitter Saturation Voltage	$I_C=-10\text{mA}$ , $I_B=-0.5\text{mA}$			-0.3	V
$C_{ob}$	Output Capacitance	$V_{CB}=-10\text{V}$ , $I_E=0$ $f=1\text{MHz}$		5.5		pF
$f_T$	Current Gain-Bandwidth Product	$V_{CE}=-10\text{V}$ , $I_C=-5\text{mA}$	200			MHz
$V_I(\text{off})$	Input Off Voltage	$V_{CE}=-5\text{V}$ , $I_C=-100\mu\text{A}$	-0.4			V
$V_I(\text{on})$	Input On Voltage	$V_{CE}=-0.3\text{V}$ , $I_C=-2\text{mA}$			-2.5	V
$R_1$	Input Resistor		15	22	29	$\text{K}\Omega$
$R_1/R_2$	Resistor Ratio		0.42	0.47	0.52	

## Typical Characteristics

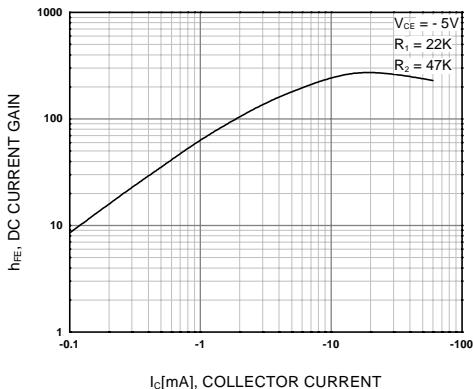


Figure 1. DC current Gain

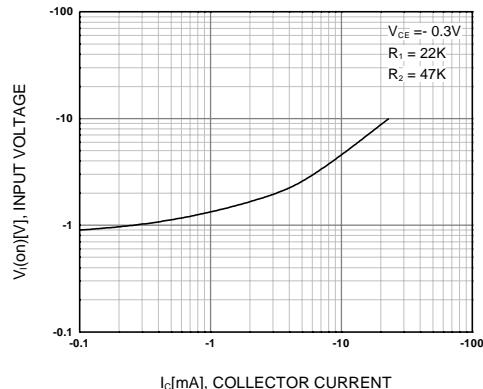


Figure 2. Input On Voltage

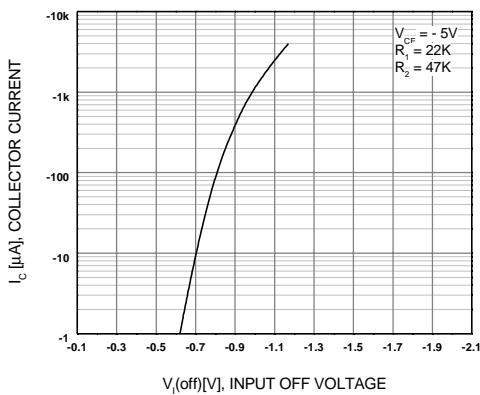


Figure 3. Input Off Voltage

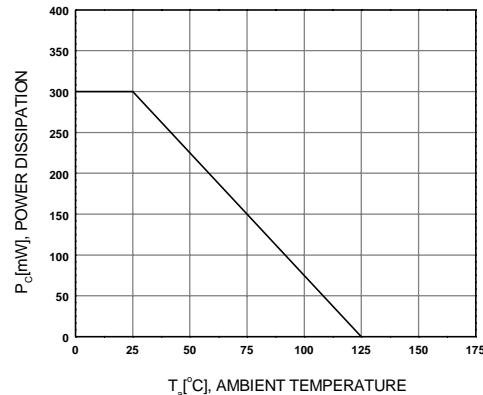
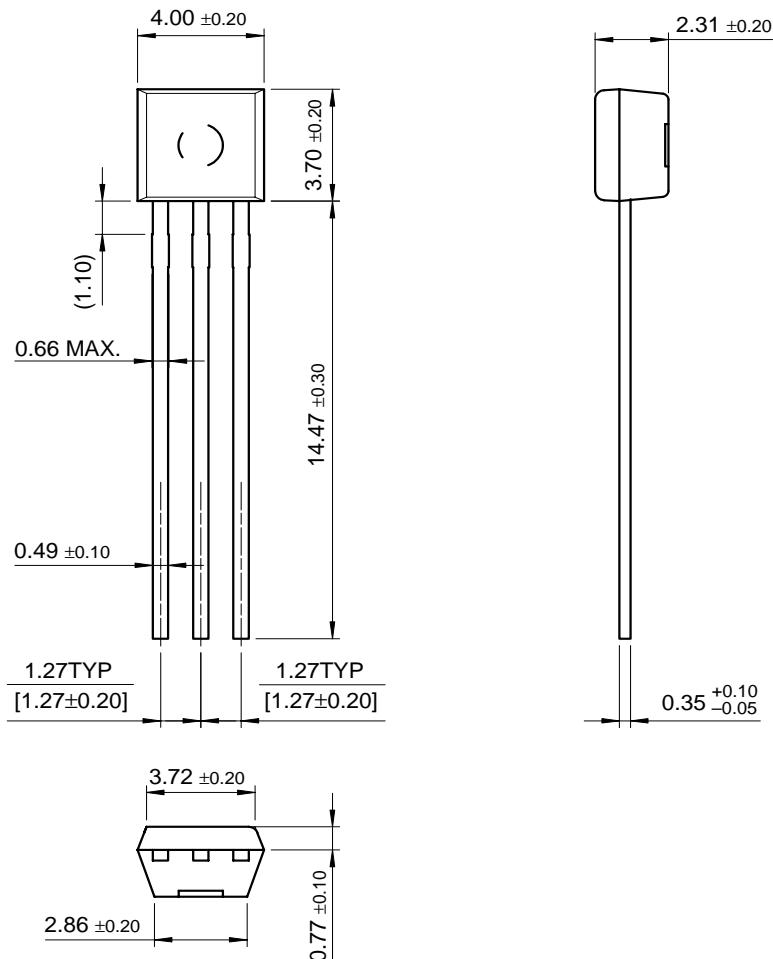


Figure 4. Power Derating

## Package Dimensions

TO-92S



Dimensions in Millimeters

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