

# **Excellent Integrated System Limited**

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

Fairchild Semiconductor FJY4010R

For any questions, you can email us directly: <u>sales@integrated-circuit.com</u>



## FAIRCHILD SEMICONDUCTOR®

# FJY4010R PNP Epitaxial Silicon Transistor

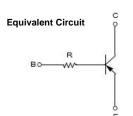
## Features

- Switching circuit, Inverter, Interface circuit, Driver Circuit
- Built in bias Resistor (R=10K $\Omega$ )
- Complement to FJY3010R





SOT - 523F



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

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	-40	V
V <sub>CEO</sub> Collector-Emitter Voltage		-40	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current	-100	mA
T <sub>STG</sub>	Storage Temperature Range	-55~150	°C
TJ	Junction Temperature	150	°C
P <sub>C</sub>	Collector Power Dissipation, by $R_{\theta JA}$	200	mW

\* These ratings are limiting values above which the serviceability of any semiconductor device may by impaired.

## Thermal Characteristics\* Ta=25°C unless otherwise noted

Symbol	Parameter	Max	Units
$R_{\thetaJA}$	Thermal Resistance, Junction to Ambient	600	°C/W
* Minimum land had size			

#### Electrical Characteristics\* T<sub>c</sub> = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	MIN	Тур	MAX	Units
V(BR)CBO	Collector-Emitter Breakdown Voltage	Ic = -100 uA, IE = 0	-40			V
V(BR)CEO	Collector-Base Breakdown Voltage	Ic = -1mA, I <sub>B</sub> = 0	-40			V
Ісво	Collector-Cutoff Current	Vcb = -30 V, IE = 0			-0.1	uA
hfe	DC Current Gain	Vce = -5 V, Ic = -1 mA	100		600	
Vce(sat)	Collector-Emitter Saturation Voltage	Ic = -10 mA, I <sub>B</sub> = -1 mA			-0.3	V
f⊤	Current Gain - Bandwidth Product	Vce = -10V, Ic =- 5 mA		200		MHz
Ccb	Output Capacitance	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1.0 MHz		5.5		pF
R	Input Resistor		7	10	13	KΩ

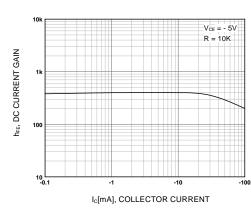
\* Pulse Test: PW≤300μs, Duty Cycle≤2%

July 2007



**Distributor of Fairchild Semiconductor: Excellent Integrated System Limited** Datasheet of FJY4010R - TRANS PREBIAS PNP 200MW SOT523F Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

# **Typical Performance Characteristics**



## Figure 1. DC current Gain

### Figure 3. Power Derating

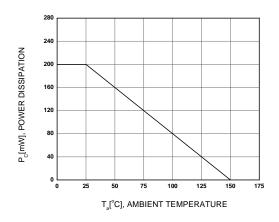
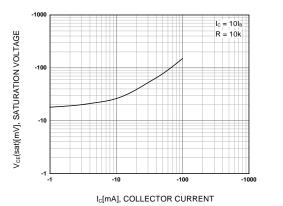
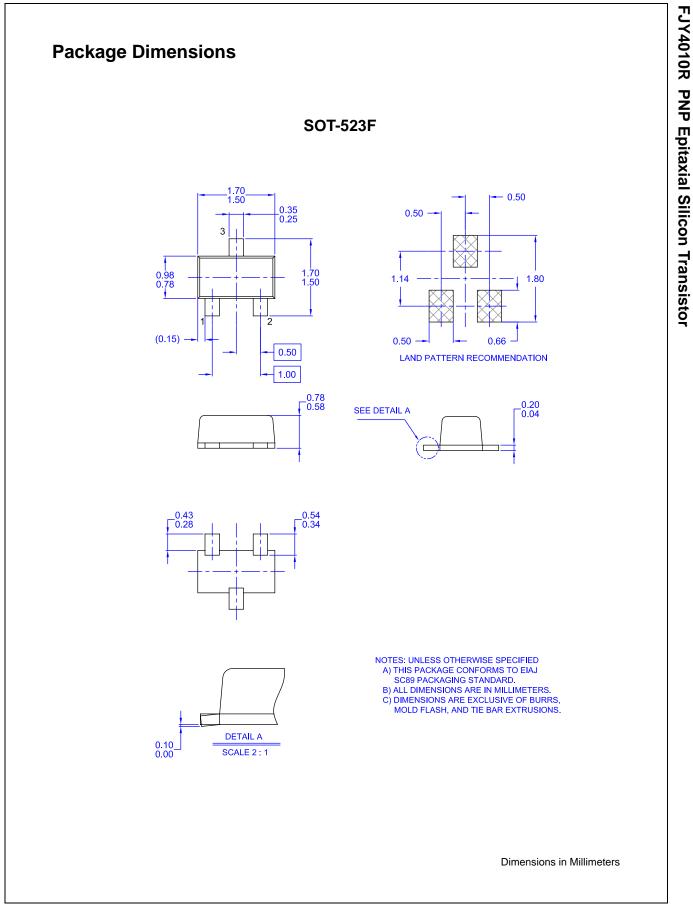


Figure 2. Collector-Emitter Saturation Voltage





**Distributor of Fairchild Semiconductor: Excellent Integrated System Limited** Datasheet of FJY4010R - TRANS PREBIAS PNP 200MW SOT523F Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com





#### FAIRCHILD

SEMICONDUCTO

#### TRADEMARKS

ACE ®

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx <sup>®</sup>
Across the board. Around the world.™
ActiveArray™
Bottomless™
Build it Now™
CoolFET™
CROSSVOLT™
CTL™
Current Transfer Logic™
DOME™
E <sup>2</sup> CMOS™
EcoSPARK <sup>®</sup>
EnSigna™
FACT Quiet Series™
FACT <sup>®</sup>
FAST <sup>®</sup>
FASTr™
FPS™
FRFET <sup>®</sup>
GlobalOptoisolator™
GTO™

HiSeC™ *i-Lo*™ ImpliedDisconnect<sup>™</sup> IntelliMAX™ **ISOPLANAR™** MICROCOUPLER™ MicroPak™ MICROWIRE™ Motion-SPM™ MSX™ MSXPro™ OCX™ OCXPro™ OPTOLOGIC<sup>®</sup> **OPTOPLANAR<sup>®</sup>** PACMAN™ PDP-SPM™ POP™ Power220<sup>®</sup> Power247® PowerEdge™

PowerSaver™ PowerTrench® Programmable Active Droop™ QFET QS™ QT Optoelectronics™ Quiet Series™ RapidConfigure™ RapidConnect™ ScalarPump™ SMART START™ SPM® STEALTH™ SuperFET™ SuperSOT™-3 SuperSOT™-6 SuperSOT™-8 SyncFET™ TCM™ The Power Franchise<sup>®</sup> U™

TinyBoost™ TinyBuck™ TinyLogic<sup>®</sup> **TINYOPTO™** TinvPower™ TinyWire™ TruTranslation™ μSerDes™ **UHC**<sup>®</sup> UniFET™ VCX™ Wire™

#### DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

#### LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

- 1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
- 2. A critical component in any component of a life support, device, or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

## PRODUCT STATUS DEFINITIONS

Definition of	Terms
---------------	-------

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild Semiconductor. The datasheet is printed for reference information only.