Rochester Electronics Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All recreations are done with the approval of the OCM.

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceeds the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-35835
  - Class Q Military
  - Class V Space Level
- Qualified Suppliers List of Distributors (QSLD)

 • Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OEM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

FAIRCHILD
SEMICONDUCTOR®

FJX2907A

General Purpose Transistor

3

2
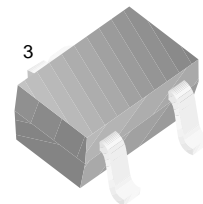
1 SOT-323

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	-60	V
V_{CES}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-600	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -10μA, I_E=0	-60		V
BV_{CEO}	* Collector-Emitter Breakdown Voltage	I_C= -10mA, I_B=0	-60		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -10μA, I_C=0	-5		V
I_{CBO}	Collector Cut-off Current	V_{CB}= -50V, I_E=0		-0.01	μA
h_{FE}	DC Current Gain	V_{CE}= -10V, I_E= -0.1mA V_{CE}= -10V, I_C= -1.0mA V_{CE}= -10V, I_C= -10mA *V_{CE}= -10V, IC= -150mA *V_{CE}= -10V, I_C= -500mA	75 100 100 100 50	300	
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C= -150mA, I_B= -15mA I_C= -500mA, I_B= -50mA		-0.4 -1.6	V V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C= -150mA, I_B= -15mA I_C= -500mA, I_B= -50mA		-1.3 -2.6	V V
f_T	Current Gain Bandwidth Product	I_C= -50mA, V_{CE}= -20V, f=100MHz	200		MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0 f=1.0MHz		8	pF
t_{ON}	Turn On Time	V_{CC}= -30V, I_C= -150mA I_{B1}= -15mA		45	ns
t_{OFF}	Turn Off Time	V_{CC}= -6V, I_C= -150mA I_{B1}=I_{B2}=15mA		100	ns

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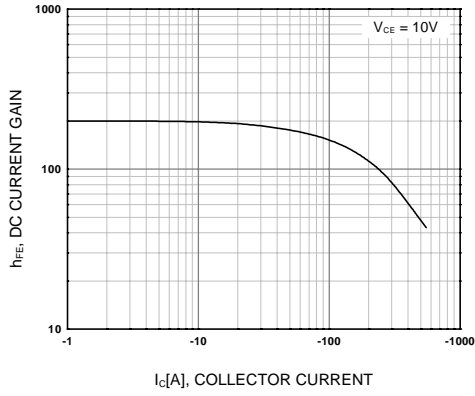
Marking

S2F
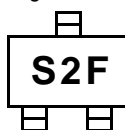
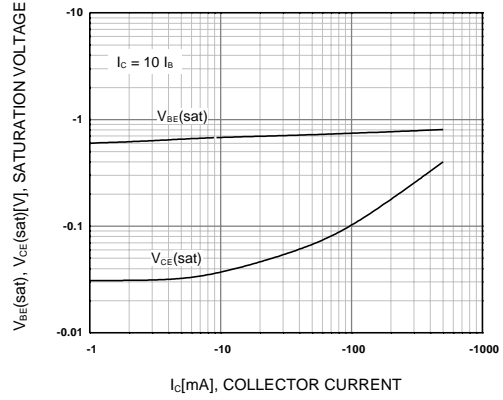# Typical Characteristics

Figure 1. DC current Gain

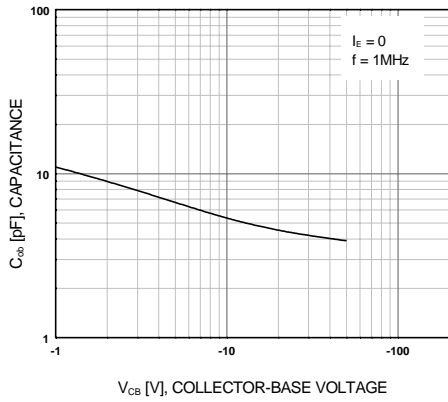**Figure 2. Collector-Emitter Saturation Voltage
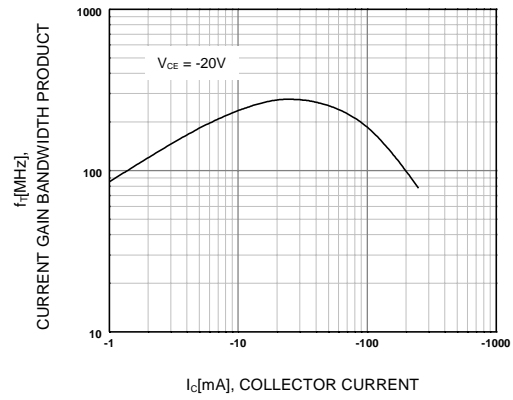Base-Emitter Saturation Voltage**

Figure 3. Output Capacitance

Figure 4. Current Gain Bandwidth Product
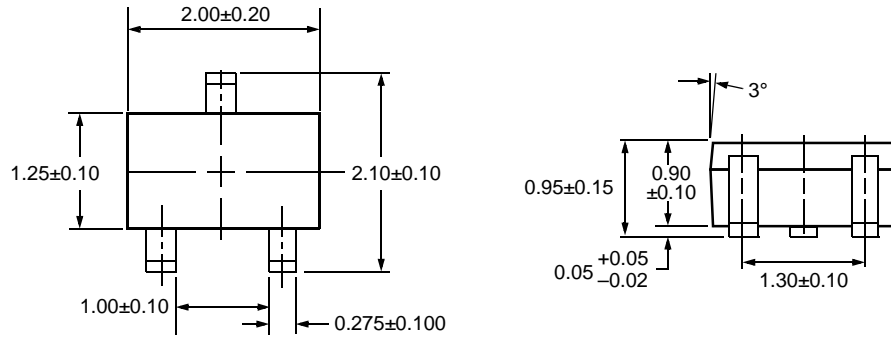
Package Demensions

SOT-323

2.00±0.20

1.25±0.10

2.10±0.10

1.00±0.10

0.275±0.100

3°

0.95±0.15

0.90
±0.10

0.05 $^{+0.05}_{-0.02}$

1.30±0.10

3°

0.135 $^{+0.04}_{-0.01}$

0.10 Min
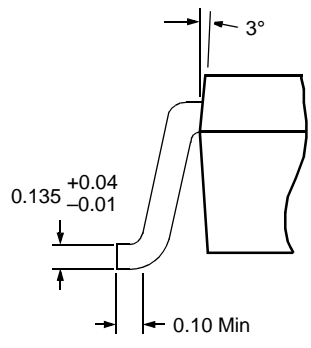
Dimensions in Millimeters

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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, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order 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 in order 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.

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* 1,000 piece Budgetary Pricing

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