

Is Now Part of



ON Semiconductor®

To learn more about ON Semiconductor, please visit our website at www.onsemi.com

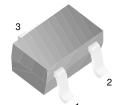
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild guestions@onsemi.com.

ON Semiconductor and the ON Semiconductor logo are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any EDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold ON Semiconductor and its officer



FJX2907A

General Purpose Transistor



SOT-323

PNP Epitaxial Silicon Transistor 1. Base 2. Emitter 3. Collector

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	325	mW
T _{STG}	Storage Temperature	150	°C

$\textbf{Electrical Characteristics} \ \, \textbf{T}_{a} \text{=-} 25 ^{\circ} \textbf{C} \ \, \text{unless otherwise noted}$

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	μΑ
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, I_{C} = -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%



Typical Characteristics

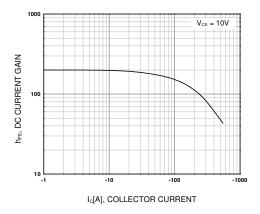


Figure 1. DC current Gain

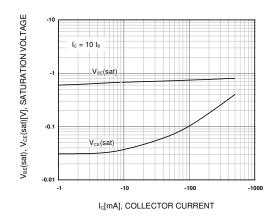


Figure 2. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

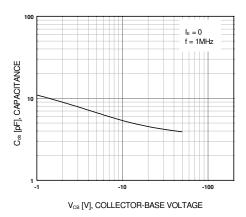


Figure 3. Output Capacitance

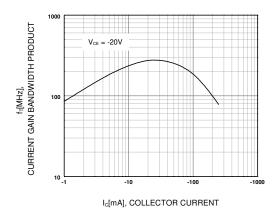
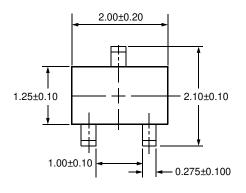
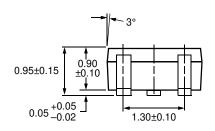


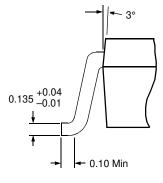
Figure 4. Current Gain Bandwidth Product

Package Dimensions

SOT-323







Dimensions in Millimeters

TRADEMARKS

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™	FACT™	ImpliedDisconnect™	PACMAN™	SPM™
ActiveArray™	FACT Quiet series™	ISOPLANAR™	POP™	Stealth™
Bottomless™	FAST [®]	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench [®]	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS TM	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C^{TM}	OCXTM	RapidConfigure™	UHC™
Across the board.	. Around the world.™	OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC [®]	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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.

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, or (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 significant injury to the user.
- 2. A critical component is 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, 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.

©2002 Fairchild Semiconductor Corporation

ON Semiconductor and in are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hol

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor 19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada Email: orderlit@onsemi.com N. American Technical Support: 800-282-9855 Toll Free USA/Canada
Europe, Middle East and Africa Technical Support: Phone: 421 33 790 2910

Japan Customer Focus Center Phone: 81–3–5817–1050 ON Semiconductor Website: www.onsemi.com

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative