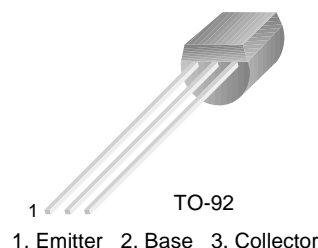


SS9013

1W Output Amplifier of Potable Radios in Class B Push-pull Operation.

- High total power dissipation. ($P_T=625\text{mW}$)
- High Collector Current. ($I_C=500\text{mA}$)
- Complementary to SS9012
- Excellent h_{FE} linearity.



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

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	$I_C=100\mu\text{A}$, $I_E=0$	40			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}$, $I_B=0$	20			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=100\mu\text{A}$, $I_C=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=25\text{V}$, $I_E=0$			100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=3\text{V}$, $I_C=0$			100	nA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE}=1\text{V}$, $I_C=50\text{mA}$ $V_{CE}=1\text{V}$, $I_C=500\text{mA}$	64 40	120 120	202	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}$, $I_B=50\text{mA}$		0.16	0.6	V
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C=500\text{mA}$, $I_B=50\text{mA}$		0.91	1.2	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=1\text{V}$, $I_C=10\text{mA}$	0.6	0.67	0.7	V

h_{FE} Classification

Classification	D	E	F	G	H
h_{FE1}	64 ~ 91	78 ~ 112	96 ~ 135	112 ~ 166	144 ~ 202

Typical Characteristics

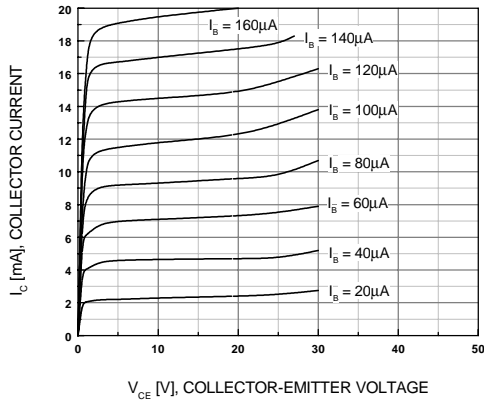


Figure 1. Static Characteristic

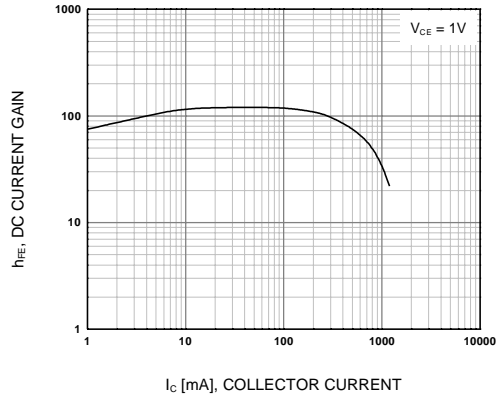


Figure 2. DC current Gain

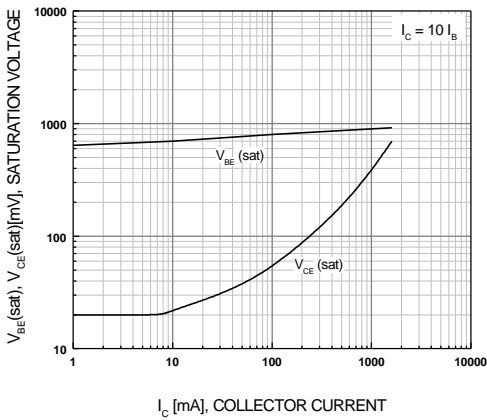


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

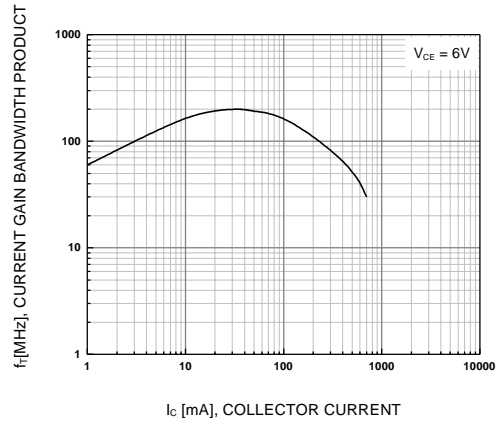


Figure 4. Current Gain Bandwidth Product

Package Dimensions

SS9013

TO-92



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.

ACE [™]	FACT [™]	ImpliedDisconnect [™]	PACMAN [™]	SPM [™]
ActiveArray [™]	FACT Quiet series [™]	ISOPLANAR [™]	POP [™]	Stealth [™]
Bottomless [™]	FAST [®]	LittleFET [™]	Power247 [™]	SuperSOT [™] -3
CoolFET [™]	FAST [™]	MicroFET [™]	PowerTrench [®]	SuperSOT [™] -6
CROSSVOL [™]	FRFET [™]	MicroPak [™]	QFET [™]	SuperSOT [™] -8
DOME [™]	GlobalOptoisolator [™]	MICROWIRE [™]	QS [™]	SyncFET [™]
EcoSPARK [™]	GTO [™]	MSX [™]	QT Optoelectronics [™]	TinyLogic [™]
E ² CMOS [™]	HiSeC [™]	MSXPro [™]	Quiet Series [™]	TruTranslation [™]
EnSigna [™]	I ² C [™]	OCX [™]	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.

Home >> Find products >>

SS9013

NPN Epitaxial Silicon Transistor

Contents

- [Features](#)
 - [Applications](#)
 - [Product status/pricing/packageing](#)
 - [Order Samples](#)
- [Models](#)
 - [Qualification Support](#)

Features

- High Total Power Dissipation: ($P_T = 625\text{mW}$)
- High Collector Current : ($I_C = -500\text{mA}$)
- Complementary to SS9012
- Excellent h_{FE} linearity.

[back to top](#)

Applications

1W Output Amplifier of Portable Radios in Class B Push-pull Operation.

[back to top](#)

[Product status/pricing/packageing](#)

BUY

BUY

Datasheet

[Download this datasheet](#)



[e-mail this datasheet](#)



This page

[Print version](#)

Related Links

[Request samples](#)

[How to order products](#)

[Product Change Notices \(PCNs\)](#)



[Support](#)

[Sales support](#)

[Quality and reliability](#)

[Design center](#)

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
SS9013FBU	Full Production	Full Production	\$0.0265	TO-92	3	BULK	Line 1: S9013 Line 3: F-&3
SS9013FTA	Full Production		\$0.0316	TO-92	3	AMMO	Line 1: S9013 Line 3: F-&3

		 Full Production					
SS9013FTF	Full Production	 Full Production	\$0.0265	TO-92	3	TAPE REEL	Line 1: S9013 Line 3: F-&3
SS9013GBU	Full Production	 Full Production	\$0.0265	TO-92	3	BULK	Line 1: S9013 Line 3: G-&3
SS9013GTA	Full Production	 Full Production	\$0.0265	TO-92	3	AMMO	Line 1: S9013 Line 3: G-&3
SS9013HBU	Full Production	 Full Production	\$0.0265	TO-92	3	BULK	Line 1: S9013 Line 3: H-&3
SS9013HTA	Full Production	 Full Production	\$0.0265	TO-92	3	AMMO	Line 1: S9013 Line 3: H-&3

* Fairchild 1,000 piece Budgetary Pricing

** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a [Fairchild distributor](#) to obtain samples



Indicates product with Pb-free second-level interconnect. For more information [click here](#).

Package marking information for product SS9013 is available. [Click here for more information](#).

[back to top](#)

Models

Package & leads	Condition	Temperature range	Software version	Revision date
PSPICE				
TO-92-3	Electrical	-25°C to 125°C	9.2	Feb 1, 2002

[back to top](#)

Qualification Support

Click on a product for detailed qualification data

Product
SS9013FBU
SS9013FTA
SS9013FTF
SS9013GBU
SS9013GTA
SS9013HBU
SS9013HTA

[back to top](#)

© 2007 Fairchild Semiconductor



[Products](#) | [Design Center](#) | [Support](#) | [Company News](#) | [Investors](#) | [My Fairchild](#) | [Contact Us](#) | [Site Index](#) | [Privacy Policy](#) | [Site Terms & Conditions](#) | [Standard Terms & Conditions](#) | [Contact Us](#)