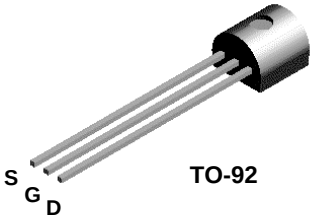
FAIRCHILD SEMICONDUCTOR™

BF244A
BF244B
BF244C



N-Channel RF Amplifier

This device is designed for RF amplifier and mixer applications operating up to 450 MHz, and for analog switching requiring low capacitance. Sourced from Process 50.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{DG}	Drain-Gate Voltage	30	V
V_{GS}	Gate-Source Voltage	- 30	V
I_D	Drain Current	50	mA
I_{GF}	Forward Gate Current	10	mA
T_{stg}	Storage Temperature Range	-55 to +150	°C

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

NOTES:
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BF244A / BF244B / BF244C	
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

©1997 Fairchild Semiconductor Corporation

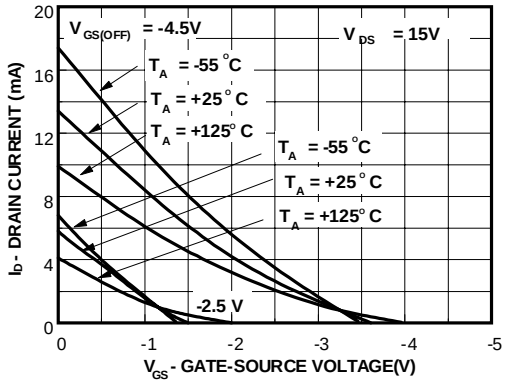
N-Channel RF Amplifier
(continued)

Electrical Characteristics
TA = 25°C unless otherwise noted

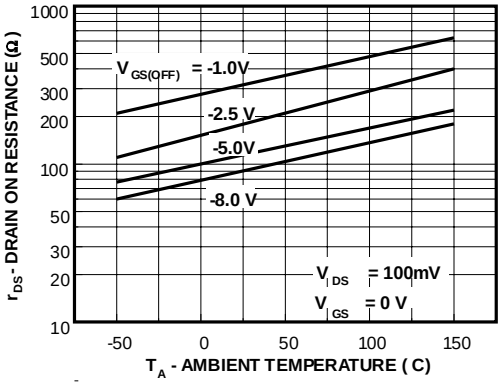
Symbol	Parameter	Test Conditions		Min	Typ	Max	Units
OFF CHARACTERISTICS							
$V_{(BR)GSS}$	Gate-Source Breakdown Voltage	I_G = 1.0 μA, V_{DS} = 0		30			V
I_{GSS}	Gate Reverse Current	V_{GS} = - 20 V, V_{DS} = 0				5.0	nA
$V_{GS(off)}$	Gate-Source Cutoff Voltage	V_{DS} = 15 V, I_D = 10 nA		- 0.5		- 8.0	V
V_{GS}	Gate-Source Voltage	V_{DS} = 15 V, I_D = 200 μA	**244A**	- 0.4		- 2.2	V
			244B	- 1.6		- 3.8	V
			244C	- 3.2		- 7.5	V
ON CHARACTERISTICS							
I_{DSS}	Zero-Gate Voltage Drain Current	V_{DS} = 15 V, V_{GS} = 0	**244A**	2.0		6.5	mA
			244B	6.0		15	mA
			244C	12		25	mA
SMALL SIGNAL CHARACTERISTICS							
y_{fs}	Forward Transfer Admittance	V_{DS} = 15 V, V_{GS} = 0, f = 1.0 kHz		3.0		6.5	mmhos
		V_{DS} = 15 V, V_{GS} = 0, f = 200 MHz			5.6		mmhos
y_{os}	Output Admittance	V_{DS} = 15 V, V_{GS} = 0, f = 1.0 kHz			40		μmhos
y_{rs}	Reverse Transfer Admittance	V_{DS} = 15 V, V_{GS} = 0, f = 200 MHz			1.0		μmhos
C_{iss}	Input Capacitance	V_{DS} = 20 V, V_{GS} = - 1.0 V			3.0		pF
C_{rss}	Reverse Transfer Capacitance	V_{DS} = 20 V, V_{GS} = - 1.0 V, f = 1.0 MHz			0.7		pF
C_{oss}	Output Capacitance	V_{DS} = 20 V, V_{GS} = - 1.0 V, f = 1.0 MHz			0.9		pF
NF	Noise Figure	V_{DS} = 15 V, V_{GS} = 0, R_G = 1.0 kΩ, f = 100 MHz			1.5		dB
$F(Y_{fs})$	Cut-Off Frequency	V_{DS} = 15 V, V_{GS} = 0			700		MHz

Typical Characteristics

Transfer Characteristics

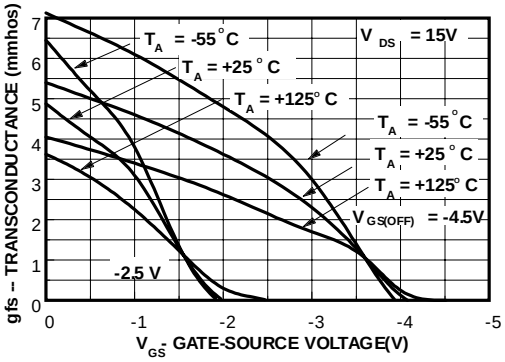


Channel Resistance vs Temperature

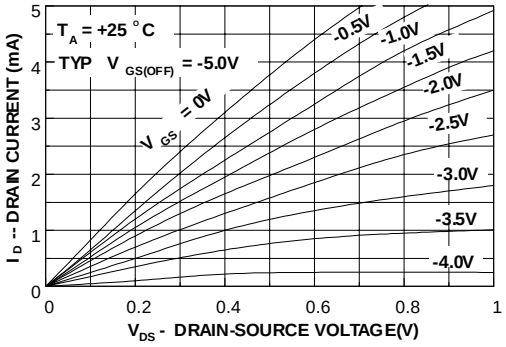


Typical Characteristics (continued)

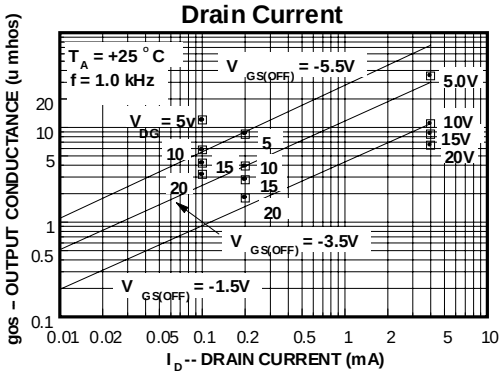
Transconductance Characteristics



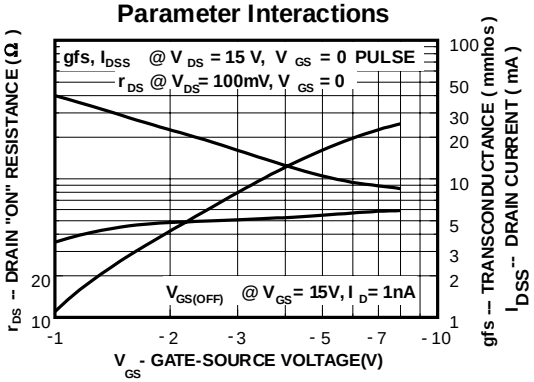
Common Drain-Source Characteristics



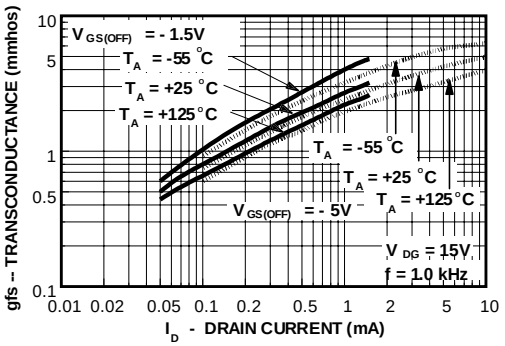
Output Conductance vs Drain Current



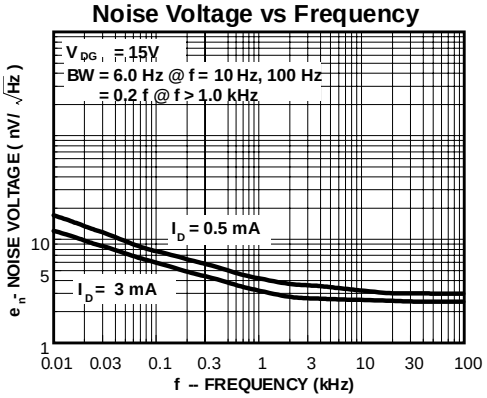
Transconductance Parameter Interactions



Transconductance vs Drain Current

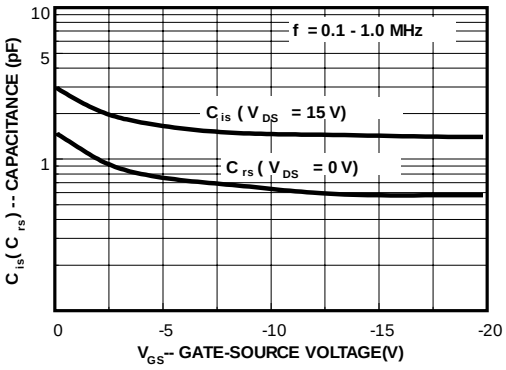


Noise Voltage vs Frequency

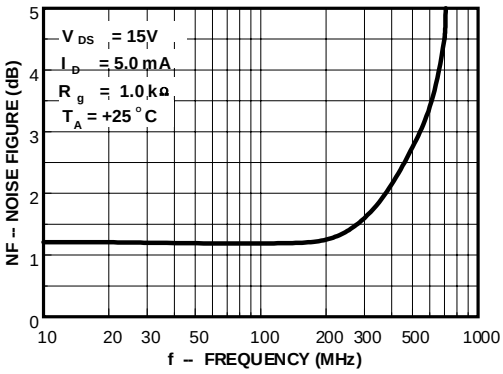


Typical Characteristics (continued)

Capacitance vs Voltage

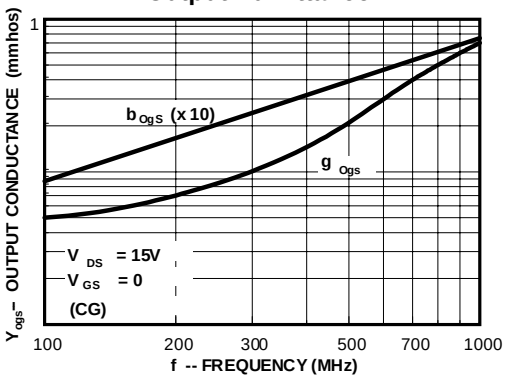


Noise Figure Frequency

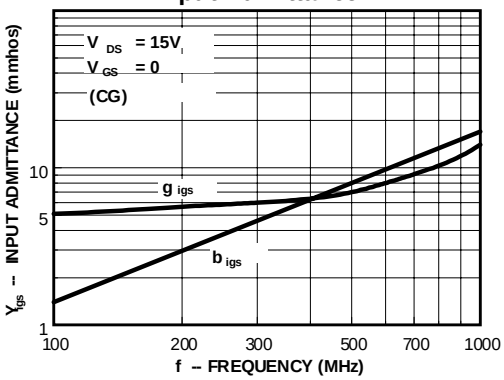


Common Gate Characteristics

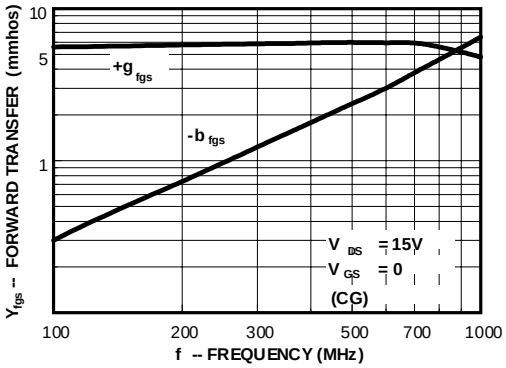
Output Admittance



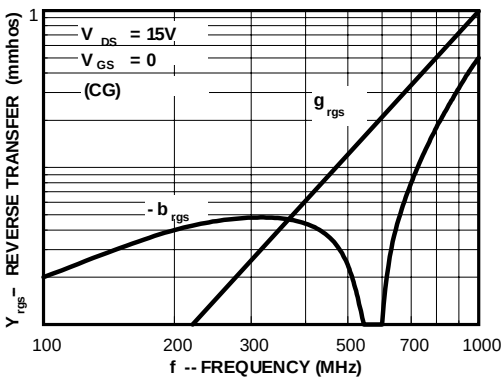
Input Admittance



Forward Transadmittance

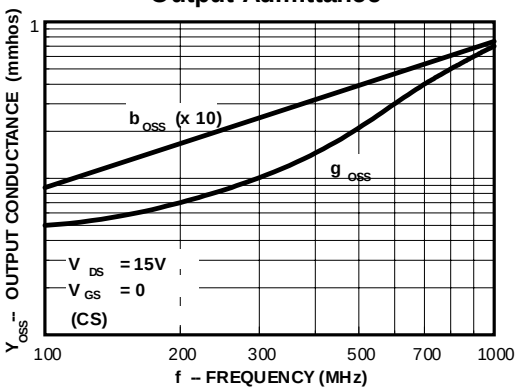


Reverse Transadmittance

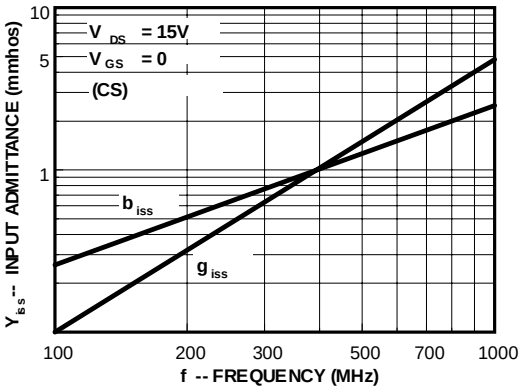


Common Source Characteristics

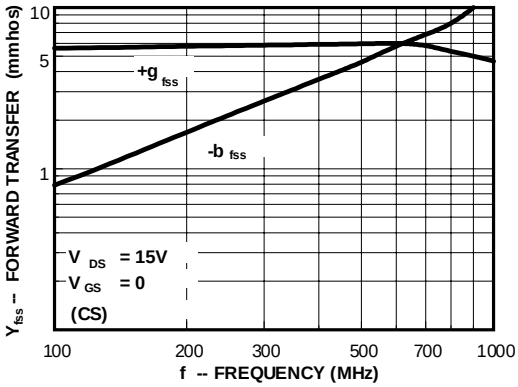
Output Admittance



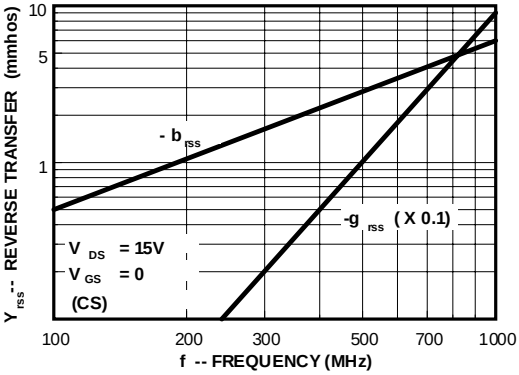
Input Admittance



Forward Transadmittance



Reverse Transadmittance



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™
Bottomless™
CoolFET™
CROSSVOLT™
DOME™
E^2CMOS™
EnSigna™
FACT™
FACT Quiet Series™
FAST®
FASTr™
GlobalOptoisolator™
GTO™
HiSeC™
ISOPLANAR™
MICROWIRE™
OPTOLOGIC™
OPTOPLANAR™
PACMAN™
POP™
PowerTrench®
QFET™
QS™
QT Optoelectronics™
Quiet Series™
SILENT SWITCHER®
SMART START™
SuperSOT™-3
SuperSOT™-6
SuperSOT™-8
SyncFET™
TinyLogic™
UHC™
VCX™

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.

О компании

ООО "ТрейдЭлектроникс" - это оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов. Реализуемая нашей компанией продукция насчитывает более полумиллиона наименований.

Благодаря этому наша компания предлагает к поставке практически не ограниченный ассортимент компонентов как оптовыми, мелкооптовыми партиями, так и в розницу.

Наличие собственной эффективной системы логистики обеспечивает надежную поставку продукции по конкурентным ценам в точно указанные сроки.

Срок поставки со стоков в **Европе и Америке – от 3 до 14 дней.**

Срок поставки из **Азии – от 10 дней.**

Благодаря развитой сети поставщиков, помогаем в поиске и приобретении экзотичных или снятых с производства компонентов.

Предоставляем спец цены на элементы для создания инженерных сэмплов.

Упорный труд, качественный результат дают нам право быть уверенными в себе и надежными для наших клиентов.

Наша компания это:

- Гарантия качества поставляемой продукции
- Широкий ассортимент
- Минимальные сроки поставок
- Техническая поддержка
- Подбор комплектации
- Индивидуальный подход
- Гибкое ценообразование

Наша организация особенно сильна в поставках модулей, микросхем, пассивных компонентов, ксайленсах (XC), EPF, EPM и силовой электроники.

Большой выбор предлагаемой продукции, различные виды оплаты и доставки, позволят Вам сэкономить время и получить максимум выгоды от сотрудничества с нами!

Trade Electronics.ru

гарантия бесперебойности производства и качества выпускаемой продукции

Перечень производителей, продукцию которых мы поставляем на российский рынок

AMD
ANALOG DEVICES
BOURNS
Coilcraft
élantec Semiconductor, Inc.
HARRIS
Infineon
JRC
MICREL
MOTOROLA
nichicon
PHILIPS
ROHM
SGS-THOMSON
Sipex
TAIYO YUDEN
TOKO
ZILOG
Winbond
Allegro
ATMEL
BURR - BROWN
EXAR
HITACHI
intel
Lattice
muRata
OKI
QUALCOMM
SAMSUNG
SHARP
SONY
TDK
TOSHIBA
KYOCERA
ALTERA
AVX
CITILYST
CYPRESS
FAIRCHILD SEMICONDUCTOR
HOLTEK
International IOR Rectifier
LINEAR TECHNOLOGY
MITSUBISHI
National Semiconductor
ON Semiconductor
REALTEK
SANYO
SHINDENGEN
SGS
TECCOR
TUNDRA
XILINX
Amphenol
Bay Linear
CIRRUS LOGIC
DALLAS
FUJITSU
IDT
intersil
MAXIM
molex
NEC
Panasonic
RENESAS
SII
SIEMENS
ST
Texas Instruments
VISHAY
ZETEX SEMICONDUCTORS

Trade Electronics.ru

гарантия бесперебойности производства и качества выпускаемой продукции

С удовольствием будем прорабатывать для Вас поставки всех необходимых компонентов по текущим запросам для скорейшего выявления групп элементов, по которым сотрудничество именно с нашей компанией будет для Вас максимально выгодным!

С уважением,

Менеджер отдела продаж ООО

«Трейд Электроникс»

Шишлаков Евгений

8 (495)668-30-28 доб 169

manager28@tradeelectronics.ru

http://www.tradeelectronics.ru/