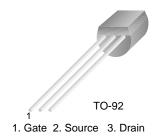


September 2007

BF246A N-Channel Amplifier

- · This device is designed primarily for electronic switching applications such as low on resistance analog switching.
- Sourced from process 51.



Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units	
V_{DG}	Drain-Gate Voltage	39	V	
V _{GS}	Gate-Source Voltage	-30	V	
I_{GF}	Forward Gate Current	10	mA	
T_J , T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ +150	°C	

^{*} This ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

1) These rating are based on a maximum junction temperature of 150 degrees C.

Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P _D	Total Device Dissipation	350	mW
_	Derate above 25°C	2.8	mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

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²⁾ These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

$\textbf{Electrical Characteristics*} \ \, \mathbf{T_{a}\text{=}25^{\circ}C} \ \, \mathbf{unless \ otherwise \ noted}$ Parameter

Off Characteristics					
V _{(BR)GSS}	Gate-Source Breakdown Voltage	$I_G = 1.0 \mu A, V_{DS} = 0$	-30		V
I _{GSS}	Gate Reverse Current	$V_{GS} = 15V, V_{DS} = 0$		-5.0	nA
V _{GS(off)}	Gate-Source Cut-off Voltage	$V_{DS} = 15V, I_{D} = 100nA$	-0.6	-14.5	V
$V_{GS(f)}$	Gate-Source Forward Voltage	I _G = 1.0mA		2.0	V
Voc	Gate-Source Forward Voltage	$V_{DC} = 15V$, $I_D = 0.2mA$	-1.5	-4.0	V

Test Condition

Min.

Max.

Units

On Characteristics

Symbol

*I _{DSS}	Zero-Gate Voltage Drain Current *	$V_{DS} = 15V, V_{GS} = 0$	30	80	mA

Small Signal Characteristics

s Forward Transferconductance	V _{DS} = 15V, V _{GS} = 0V	8		/Ω	1
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^{*} Pulse Test: Pulse Width $\leq 300 \mu s$, Duty Cycle = 2%





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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.
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