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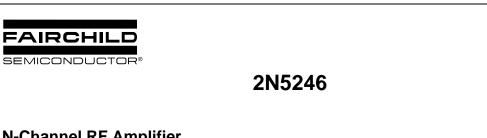
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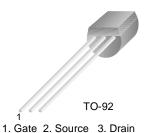
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# **N-Channel RF Amplifier**

- This device is designed for HF/VHF mixer/amplifier and applications where process 50is not adequate. Sufficient gain and low noise for sensitive receivers.
- Sourced from process 90.



# Absolute Maximum Ratings\* Ta=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V <sub>DG</sub>	Drain-Gate Voltage	30	V
√ <sub>GS</sub>	Gate-Source Voltage	-30	V
GF	Forward Gate Current	10	mA
T <sub>J</sub> , T <sub>STG</sub>	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.

#### NOTES:

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

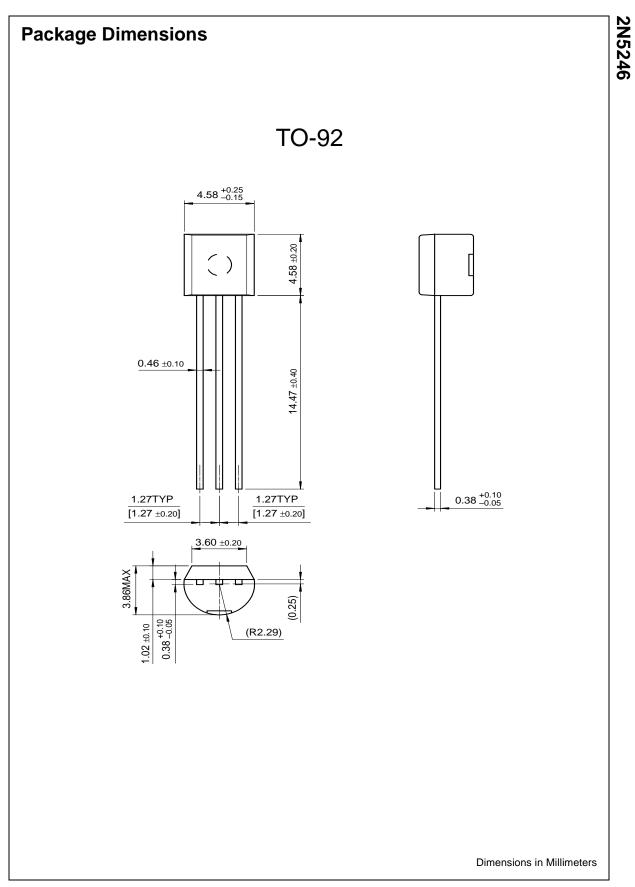
## Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

Parameter	Test Condition	Min.	Max.	Units
teristics				
Gate-Source Breakdwon Voltage	$I_{G} = 1.0 \mu A, V_{DS} = 0$	-30		V
Gate Reverse Current	$V_{GS} = 25V, V_{DS} = 0$		-1.0	nA
Gate-Source Cutoff Voltage	V <sub>DS</sub> = 15V, I <sub>D</sub> = 1.0nA	-0.5	-4.0	V
teristics				
Zero-Gate Voltage Drain Current *	$V_{DS} = 15V, V_{GS} = 0$	1.5	7.0	mA
al Characteristics	•	•	•	•
Forward Transferconductance	$V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz$	3000	9500	μmhos
Common- Source Output Conductance	V <sub>GS</sub> = 0V, V <sub>DS</sub> = 15V, f = 1.0kHz		50	μmhos
	teristics Gate-Source Breakdwon Voltage Gate Reverse Current Gate-Source Cutoff Voltage teristics Zero-Gate Voltage Drain Current * al Characteristics Forward Transferconductance	teristics         Gate-Source Breakdwon Voltage $I_G = 1.0\mu A, V_{DS} = 0$ Gate Reverse Current $V_{GS} = 25V, V_{DS} = 0$ Gate-Source Cutoff Voltage $V_{DS} = 15V, I_D = 1.0nA$ teristics       Zero-Gate Voltage Drain Current *         VDS = 15V, VGS = 0       Nal Characteristics         Forward Transferconductance $V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz$	teristicsGate-Source Breakdwon Voltage $I_G = 1.0\mu A$ , $V_{DS} = 0$ -30Gate Reverse Current $V_{GS} = 25V$ , $V_{DS} = 0$ -30Gate-Source Cutoff Voltage $V_{DS} = 15V$ , $I_D = 1.0nA$ -0.5teristics2ero-Gate Voltage Drain Current * $V_{DS} = 15V$ , $V_{GS} = 0$ 1.5al CharacteristicsForward Transferconductance $V_{GS} = 0V$ , $V_{DS} = 15V$ , $f = 1.0kHz$ 3000	teristicsGate-Source Breakdwon Voltage $I_G = 1.0\mu A, V_{DS} = 0$ -30Gate Reverse Current $V_{GS} = 25V, V_{DS} = 0$ -1.0Gate-Source Cutoff Voltage $V_{DS} = 15V, I_D = 1.0nA$ -0.5-4.0teristicsZero-Gate Voltage Drain Current * $V_{DS} = 15V, V_{GS} = 0$ 1.57.0al CharacteristicsForward Transferconductance $V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz$ 30009500

Pulse Test: Pulse  $\leq 300 \mu s$ 

# Thermal Characteristics T<sub>A</sub>=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
PD	Total Device Dissipation	350	mW
	Derate above 25°C	2.8	mW/°C
$R_{ extsf{ heta}JC}$	Thermal Resistance, Junction to Case	125	°C/W
$R_{ hetaJA}$	Thermal Resistance, Junction to Ambient	357	°C/W



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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 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.