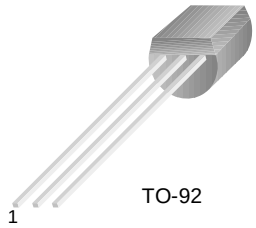
FAIRCHILD
SEMICONDUCTOR®

2N5245

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.



TO-92

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1. Gate 2. Source 3. Drain

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

Symbol	Parameter	Ratings	Units
V_{DG}	Drain-Gate Voltage	30	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.

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_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)GSS}$	Gate-Source Breakdwon Voltage	I_G = 1.0μA, V_{DS} = 0	-30		V
I_{GSS}	Gate Reverse Current	V_{GS} = 25V, V_{DS} = 0		-1.0	nA
$V_{GS(off)}$	Gate-Source Cutoff Voltage	V_{DS} = 15V, I_D = 1.0nA	-1.0	-0.6	V
On Characteristics					
I_{DSS}	Zero-Gate Voltage Drain Current *	V_{DS} = 15V, V_{GS} = 0	5	15	mA
Small Signal Characteristics					
gfs	Forward Transferconductance	V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz	4500	11000	μmhos
goss	Common- Source Output Conductance	V_{GS} = 0V, V_{DS} = 15V, f = 1.0kHz		50	μmhos

* Pulse Test: Pulse ≤ 300μs

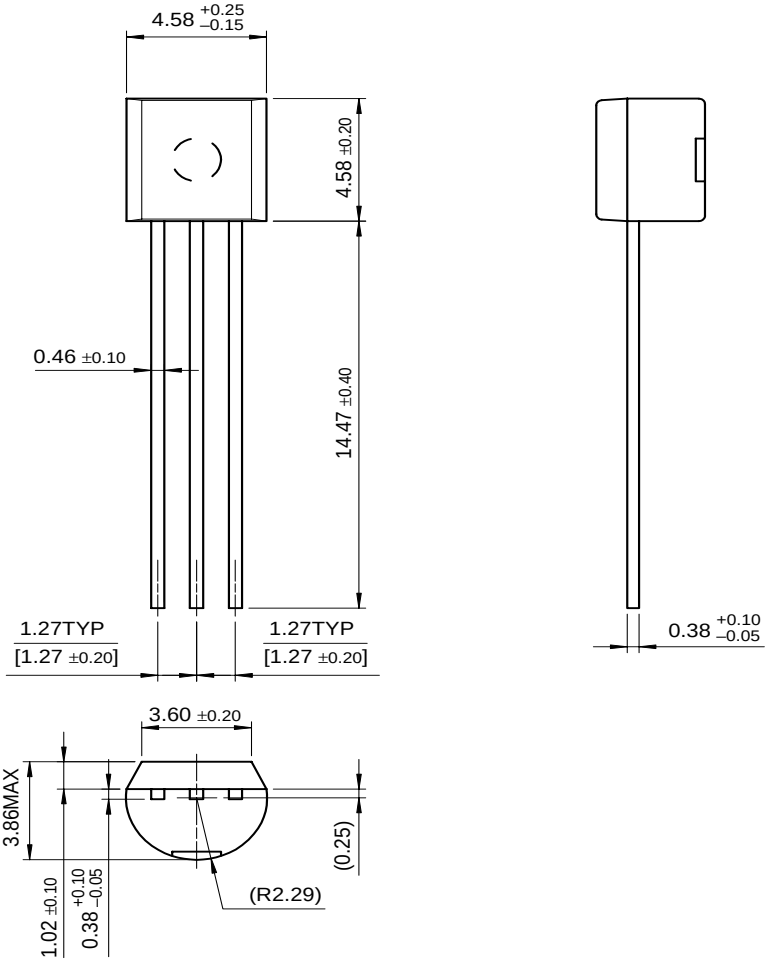
Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
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

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Package Dimensions

TO-92



Dimensions in Millimeters

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CoolFET™	FRFET™	MicroPak™	QS™	SyncFET™
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EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	UltraFET®
FACT™	ISOPLANAR™	OPTOLOGIC®	SMART START™	VCX™
Across the board. Around the world.™		OPTOPLANAR™	SPM™	
The Power Franchise™		PACMAN™	Stealth™	
Programmable Active Droop™		POP™	SuperFET™	

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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.

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Definition of Terms

Datasheet Identification	Product Status	Definition
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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.

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