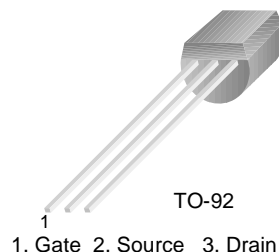


2N5245

2N5245

N-Channel RF Amplifier

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



Absolute Maximum Ratings* $T_a=25^\circ\text{C}$ 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 | $^\circ\text{C}$ |

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

NOTES:

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

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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

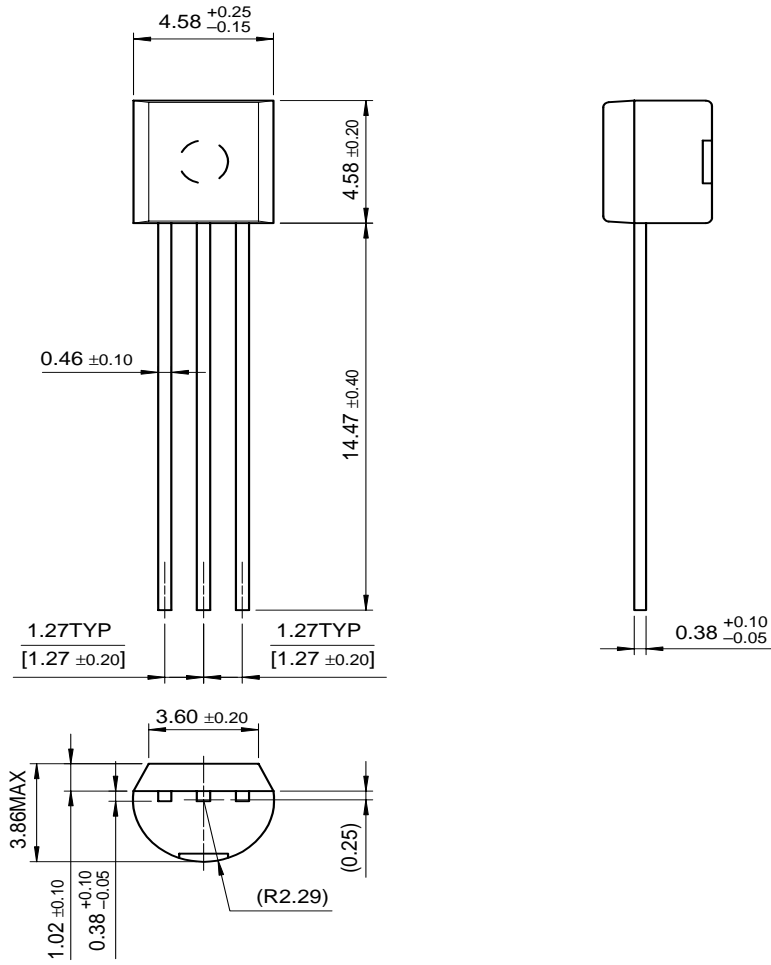
* Pulse Test: Pulse $\leq 300\mu\text{s}$

Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Max. | Units |
|-----------------|---|------|---------------------------|
| P_D | Total Device Dissipation | 350 | mW |
| | Derate above 25°C | 2.8 | mW/ $^\circ\text{C}$ |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 125 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357 | $^\circ\text{C}/\text{W}$ |

Package Dimensions

TO-92



Dimensions in Millimeters

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| | | | | |
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PRODUCT STATUS DEFINITIONS

Definition of Terms

| Datasheet Identification | Product Status | Definition |
|--------------------------|------------------------|---|
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