

## IF1320

## N-Channel Silicon Junction Field-Effect Transistor

## • Low-Noise, High Gain Amplifier

**Absolute maximum ratings at  $T_A = 25^\circ\text{C}$** 

Reverse Gate Source & Reverse Gate Drain Voltage	- 20 V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	225 mW
Power Derating	1.8 mW/ $^\circ\text{C}$
Storage Temperature Range	- 65 $^\circ\text{C}$ to 200 $^\circ\text{C}$

At 25°C free air temperature:

**Static Electrical Characteristics**

	IF1320		Process NJ132L		
	Min	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(\text{BR})\text{GSS}}$	- 20	V	$I_G = - 1 \mu\text{A}$ , $V_{\text{DS}} = \emptyset\text{V}$	
Gate Reverse Current	$I_{\text{GSS}}$		nA	$V_{\text{DS}} = \emptyset\text{V}$ , $V_{\text{GS}} = - 10\text{V}$	
Gate Source Cutoff Voltage	$V_{\text{GS}(\text{OFF})}$	- 0.35	- 1.5	V	$V_{\text{DS}} = 10\text{V}$ , $I_D = 0.5 \text{ nA}$
Drain Saturation Current (Pulsed)	$I_{\text{DSS}}$	5	20	mA	$V_{\text{DS}} = 10\text{V}$ , $V_{\text{GS}} = \emptyset\text{V}$

**Dynamic Electrical Characteristics**

Common Source Forward Transconductance	$g_{\text{fs}}$	15		mS	$V_{\text{DS}} = 10\text{V}$ , $I_D = 5 \text{ mA}$	f = 1 kHz
Common Source Input Capacitance	$C_{\text{iss}}$		20	pF	$V_{\text{DS}} = 10\text{V}$ , $I_D = 5 \text{ mA}$	f = 1 MHz
Common Source Reverse Transfer Capacitance	$C_{\text{rss}}$		5	pF	$V_{\text{DS}} = 10\text{V}$ , $I_D = 5 \text{ mA}$	f = 1 MHz

Typ

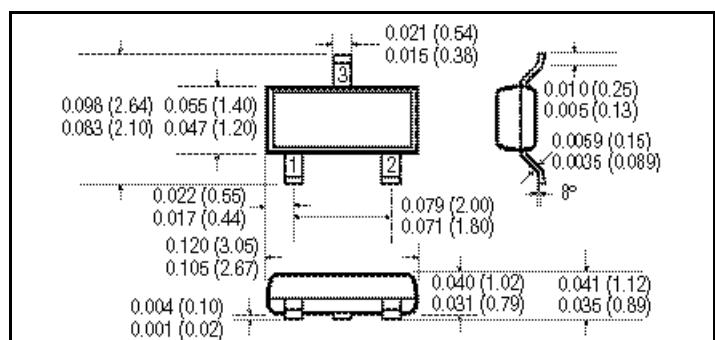
Equivalent Short Circuit Input Noise Voltage	$\bar{e}_N$	2.5	nV/ $\sqrt{\text{Hz}}$	$V_{\text{DS}} = 10\text{V}$ , $I_D = 5 \text{ mA}$	f = 1 kHz
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**TO-236 Package (SOT23)**

Dimensions in Inches (mm)

**Pin Configuration**

1 Drain, 2 Source, 3 Gate



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