

IF1331

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

	IF1331		Process NJ132H		
	Min	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(\text{BR})\text{GSS}}$	- 20	V	$I_G = - 1 \mu\text{A}$, $V_{DS} = \emptyset\text{V}$	
Gate Reverse Current	I_{GSS}		nA	$V_{DS} = \emptyset\text{V}$, $V_{GS} = - 10\text{V}$	
Gate Source Cutoff Voltage	$V_{GS(\text{OFF})}$	- 0.35	- 1.5	V	$V_{DS} = 10\text{V}$, $I_D = 0.5 \text{nA}$
Drain Saturation Current (Pulsed)	I_{DSS}	5	20	mA	$V_{DS} = 10\text{V}$, $V_{GS} = \emptyset\text{V}$

Dynamic Electrical Characteristics

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

Typ

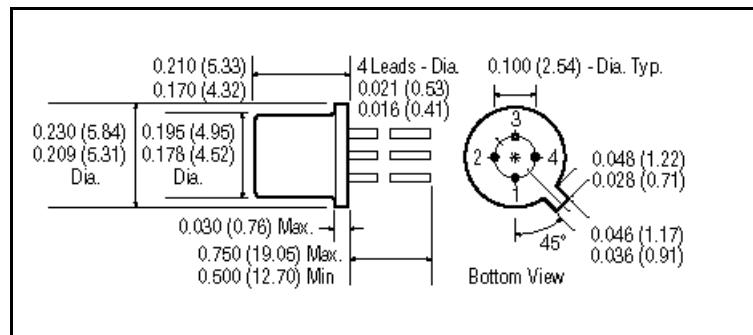
Equivalent Short Circuit Input Noise Voltage	\bar{e}_N	2.5	nV/ $\sqrt{\text{Hz}}$	$V_{DS} = 10\text{V}$, $I_D = 5 \text{mA}$	f = 1 kHz
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TO-72 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source, 2 Drain, 3 Gate, 4 Case



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