

**IF1322A, IN1322B****N-Channel Matched Dual Silicon Junction Field-Effect Transistor**

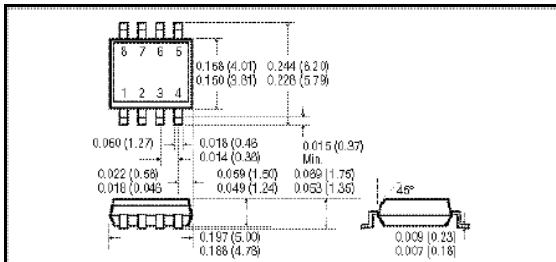
- Low Noise, High Gain Amplifier
- Differential Inputs

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

Reverse Gate Source & Gate Drain Voltage	-20V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	480mW
Power Derating	3.8 mW/ $^\circ\text{C}$
Storage Temperature Range	-65 $^\circ\text{C}$ to +150 $^\circ\text{C}$

At 25 $^\circ\text{C}$ free air temperature Static Electrical Characteristics		IF1322				Process NJ132L	
		Min	Typ	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS1}$ $V_{(BR)GSS2}$ $V_{(BR)GSS3}$	-20			V	$I_G = -25 \mu\text{A}, V_{DS} = 0 \text{ V}$ $I_G = -3 \mu\text{A}, V_{DS} = 0 \text{ V}$ $I_G = -1 \mu\text{A}, V_{DS} = 0 \text{ V}$	
Fx	$\frac{V_{(BR)GSS1}}{V_{(BR)GSS2}}$	0.9		1.1			
Gate Reverse Current	$I_{GSS}$			-0.1	nA	$V_{GS} = -10 \text{ V}, V_{DS} = 0 \text{ V}$	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	-0.8		-1.5	V	$V_{DS} = 10 \text{ V}, I_D = 1 \mu\text{A}$	
Drain Saturation Current (pulsed)	$I_{DSS}$	8		25	mA	$V_{DS} = 10 \text{ V}, V_{GS} = 0 \text{ V}$	
Gate Source Forward Voltage	$V_{GSF}$	0.3		1.0	V	$V_{DS} = 0 \text{ V}, I_G = -1 \text{ mA}$ $V_{DS} = 0 \text{ V}, I_G = -1 \mu\text{A}$	
Dynamic Electrical Characteristics							
Common-Source Forward Transconductance	$g_{fs}$	0.01			mS	$V_{DS} = 5 \text{ V}, V_{GS} = 0 \text{ V}$	1 kHz
Differential Gate Source Voltage-	A	$ V_{GS1} - V_{GS2} $		30	mV	$V_{DS} = 5 \text{ V}, I_D = 3 \text{ mA}$	
	B	$ V_{GS1} - V_{GS2} $		40	mV	$V_{DS} = 5 \text{ V}, I_D = 3 \text{ mA}$	
Equivalent Short Circuit Input Noise Voltage <sup>1</sup>	$\sim e_N$			4 2	nV/ $\sqrt{\text{Hz}}$	$V_{DS} = 5 \text{ V}, I_D = 3 \text{ mA}$	100 hz 1 kHz
Equivalent Short Circuit Input Noise Current <sup>1</sup>	$i_n$			0.05	pA/ $\sqrt{\text{Hz}}$	$V_{DS} = 5 \text{ V}, I_D = 3 \text{ mA}$	1 kHz

Note 1: Guaranteed but not tested.



Dimensions in Inches (mm)

**SOIC-8: IF1322**  
1-G1, 2-D1, 3-S1, 4-G2,  
5-G2, 6-D2, 7-S2, 8-G1



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