

IF1801

N-Channel Silicon Junction Field-Effect Transistor

• Low-Noise, High Gain Amplifier

Absolute maximum ratings = T_A at 25 °C

Reverse Gate Source Voltage & Gate Drain Voltage	- 20 V
Continuous Forward Gate Current	10 mA
Continuous Device Power Dissipation	300 mW
Power Derating	2 mW/°C
Storage Temperature Range	- 65°C to 200°C

At 25°C free air temperature:

Static Electrical Characteristics

		IF1801		Process NJ1800DL		
		Min	Max	Unit	Test Conditions	
Gate Source Breakdown Voltage	$V_{(BR)GSS}$	- 20		V	$I_G = - 1 \mu A, V_{DS} = \emptyset V$	
Gate Reverse Current	I_{GSS}		- 0.1	nA	$V_{GS} = - 10 V, V_{DS} = \emptyset V$	
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	- 0.35	- 2	V	$V_{DS} = 10 V, I_D = 0.5 \text{ nA}$	
Drain Saturation Current (Pulsed)	I_{DSS}	30		mA	$V_{DS} = 10 V, V_{GS} = \emptyset V$	

Dynamic Electrical Characteristics

Common Source Forward Transconductance	g_{fs}	50		mS	$V_{DS} = 10 V, I_D = 5 \text{ mA}$	$f = 1 \text{ kHz}$
Common Source Input Capacitance	C_{iss}		100	pF	$V_{DS} = 10 V, I_D = 5 \text{ mA}$	$f = 1 \text{ MHz}$
Common Source Reverse Transfer Capacitance	C_{rss}		50	pF	$V_{DS} = 10 V, I_D = 5 \text{ mA}$	$f = 1 \text{ MHz}$

Typ

Equivalent Short Circuit Input Noise Voltage	\bar{e}_N	0.5		nV/ $\sqrt{\text{Hz}}$	$V_{DG} = 4 V, I_D = 5 \text{ mA}$	$f = 1 \text{ kHz}$
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TO-52 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source, 2 Drain, 3 Gate & Case

