

Dual 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	4 mW/°C
Storage Temperature Range	- 65°C to 200°C

At 25°C free air temperature:

Static Electrical Characteristics

		IF3602		Process NJ3600L	
		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}		- 0.5	nA	$V_{GS} = - 10V, V_{DS} = \emptyset V$
Gate Source Cutoff Voltage	$V_{GS(OFF)}$	- 0.35	- 3	V	$V_{DS} = 10V, I_D = 0.5 nA$
Drain Saturation Current (Pulsed)	I_{DSS}	30		mA	$V_{DS} = 10V, V_{GS} = \emptyset V$

Dynamic Electrical Characteristics

Typ

Common Source Forward Transconductance	g_{fs}	750		mS	$V_{DS} = 10V, V_{GS} = \emptyset V$	$f = 1 \text{ kHz}$
Common Source Input Capacitance	C_{iss}	300		pF	$V_{DS} = \emptyset V, V_{GS} = - 4V$	$f = 1 \text{ MHz}$
Common Source Reverse Transfer Capacitance	C_{rss}	200		pF	$V_{DS} = \emptyset V, V_{GS} = - 4V$	$f = 1 \text{ MHz}$
Equivalent Short Circuit Input Noise Voltage	\bar{e}_N	0.3		nV/ $\sqrt{\text{Hz}}$	$V_{DG} = 3V, I_D = 5 \text{ mA}$	$f = 100 \text{ Hz}$

Max

Differential Gate Source Voltage	$ V_{GS1} - V_{GS2} $	100		mV	$V_{DS} = 10V, V_{GS} = \emptyset V$	
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TO-78 Package

Dimensions in Inches (mm)

Pin Configuration

1 Source, 2 Drain, 3 Gate, 4 Omitted,
5 Source, 6 Drain, 7 Gate, 8 Omitted