

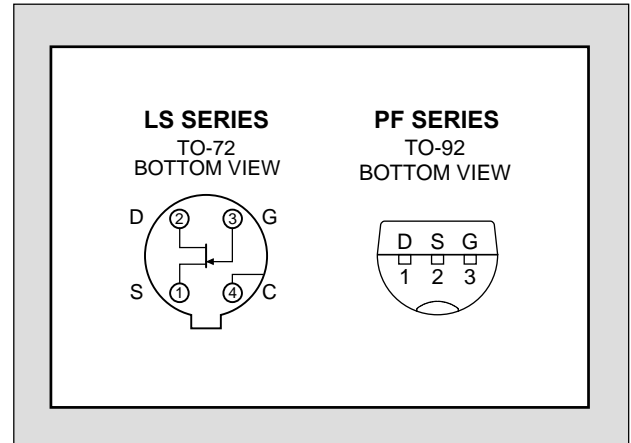
# LINEAR SYSTEMS

*Linear Integrated Systems*

## LS5301, PF5301

**VERY HIGH INPUT IMPEDANCE  
N-CHANNEL JFET**

FEATURES	
DIRECT REPLACEMENT FOR LF5301, PF5301, & 2N5301	
HIGH INPUT INPEDANCE	$I_G = 0.100 \mu\text{A}$
HIGH GAIN	$g_{fs} = 70 \mu\text{S}$
ABSOLUTE MAXIMUM RATINGS <sup>1</sup>	
@ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature (TO-72)	-65 to 175°C
Storage Temperature (TO-92)	-65 to 150°C
Maximum Power Dissipation	
Continuous Power Dissipation	300mW
Maximum Currents	
Gate Current	50mA
Maximum Voltages	
Gate to Drain	-30V
Gate to Source	-30V



### COMMON ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT	CONDITIONS
$BV_{GSS}$	Gate to Source Breakdown Voltage	-30			V	$V_{DS} = 0V, I_D = -1\mu\text{A}$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	0.6		3.0		$V_{DS} = 10V, I_D = 1nA$
$I_{GSS}$	Gate Leakage Current			-1	pA	$V_{DS} = 0V, V_{GS} = -15V$
$I_G$	Gate Operating Current		0.04			$V_{DG} = 6V, I_D = 5\mu\text{A}$
$I_{DSS}$	Drain to Source Saturation Current	30		500	$\mu\text{A}$	$V_{DS} = 10V, V_{GS} = 0V$
$g_{fs}$	Forward Transconductance	70		300	$\mu\text{S}$	$V_{DS} = 10V, V_{GS} = 0V, f = 1\text{kHz}$
$C_{iss}$	Input Capacitance			3	pF	$V_{DS} = 10V, V_{GS} = 0V, f = 1\text{MHz}$
$C_{rss}$	Reverse Transfer Capacitance			1.5		
$e_n$	Equivalent Noise Voltage		45	150	nV/ $\sqrt{\text{Hz}}$	$V_{DG} = 10V, I_D = 50\mu\text{A}, f = 100\text{Hz}$

### NOTES

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.

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