

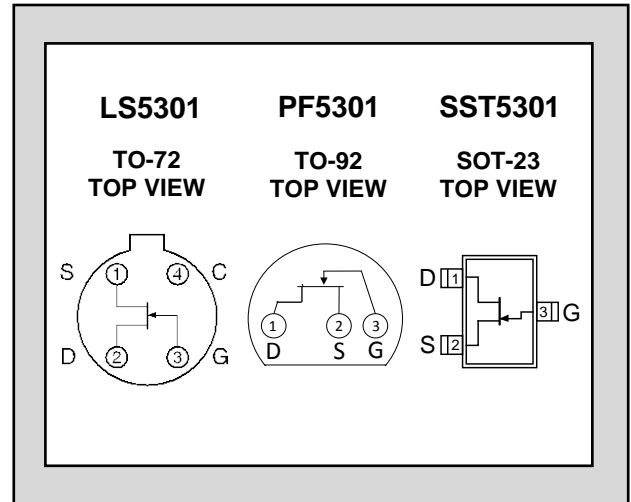
LINEAR SYSTEMS

Improved Standard Products®

LS5301/PF5301/ SST5301

VERY HIGH INPUT IMPEDANCE
N-CHANNEL JFET AMPLIFIER

Features	
Replacement for LF5301, PF5301	
High Input Impedance	$I_G > 1 \text{ G}\Omega$
High Gain	$g_{fs} > 70 \mu\text{S}$
Absolute Maximum Ratings ¹ @ 25 °C (unless otherwise stated)	
Maximum Temperatures (°C)	
Storage Temperature	-55 to 150°C
Operating Junction Temperature	-55 to 135°C
Maximum Power Dissipation @TA = 25°C	
Derate LS5301	300mW
Derate PF & SST5301	2.0mW/°C
Derate PF & SST5301	2.8mW/°C
Maximum Forward Current	
	50mA
Maximum Gate to Drain Voltage	
	-30V
Maximum Gate to Source Voltage	
	-30V



Static Electrical Characteristics @ TA = 25°C (unless otherwise stated)

Symbol	Characteristic	TYP	Max	Unit	Conditions
BV_{GSS}	Gate to Source Breakdown Voltage	-30		V	$V_{DS} = 0V, I_D = -1\mu A$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-0.6	-3.0		$V_{DS} = 10V, I_D = 1nA$
I_{GSS}	Gate Leakage Current	LS5301	-1	pA	$V_{DS} = 15V, V_{GS} = 0V$
		PF5301	-5		
		SST5301	-10		
I_G	Gate Operating Current	-0.04			$V_{DG} = 6V, I_D = 5\mu A$
I_{DSS}	Drain to Source Saturation Current	30	500	μA	$V_{DS} = 10V, V_{GS} = 0V$
g_{fs}	Forward Transconductance	70	500	μS	$V_{DS} = 10V, V_{GS} = 0V, f = 1kHz$
C_{iss}	Input Capacitance		3	pF	$V_{DS} = 10V, V_{GS} = 0V, f = 1MHz$
C_{rss}	Reverse Transfer Capacitance		1.5		
e_n	Equivalent Noise Voltage	45	150	nV/√Hz	$V_{DG} = 10V, I_D = 50\mu A, f = 100Hz$

NOTES

- Absolute maximum ratings are limiting values above which serviceability may be impaired.
- Derate PF series 2.8mW/°C when TA>25°C. Derate LS series 2.0mW/°C when TA>25°C
- All MIN/TYP/MAX limits are absolute numbers. Negative signs indicated electrical polarity only.

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