

LINEAR SYSTEMS

Linear Integrated Systems

LS5301, PF5301

VERY HIGH INPUT IMPEDANCE N-CHANNEL JFET

FEATURES

DIRECT REPLACEMENT FOR LF5301, PF5301, & 2N5301

HIGH INPUT IMPEDANCE $I_G = 0.100 \text{ pA}$ HIGH GAIN $g_{fs} = 70 \text{ } \mu\text{S}$

ABSOLUTE MAXIMUM RATINGS¹

@ 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

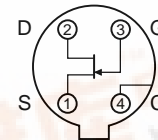
Gate Current 50mA

Maximum Voltages

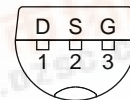
Gate to Drain -30V

Gate to Source -30V

LS SERIES

TO-72
BOTTOM VIEW

PF SERIES

TO-92
BOTTOM VIEW

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

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage	-30			V	$V_{DS} = 0V, I_D = -1\mu A$
$V_{GS(off)}$	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			$V_{DG} = 6V, I_D = 5\mu A$
I_{DSS}	Drain to Source Saturation Current	30		500	μA	$V_{DS} = 10V, V_{GS} = 0V$
g_{fs}	Forward Transconductance	70		300	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/ \sqrt{Hz}	$V_{DG} = 10V, I_D = 50\mu A, f = 100Hz$

NOTES

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

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