LINEAR SYSTEMS

2N5301
N-CHANNEL JFET

micross

Linear Systems replaces discontinued LF5301 and PF5301

The 2N5301 is a very High Input Impedance N-Channel JFET amplifier

The 2N5301 N-channel JFET is designed to provide performance amplification at low frequencies and with low noise.

2N5301 Benefits:

- Insignificant Signal Loss/Error Voltage with High-Impedance Source
- Maximum Signal Output, Low Noise
- High Sensitivity to Low-Level Signals

2N5301 Applications:

- High-Impedance Transducer
- Smoke Detector Input
- Infrared Detector Amplifier
- Precision Test Equipment

FEATURES	
DIRECT REPLACEMENT FOR LF5301 & PF5301	
HIGH INPUT IMPENDANCE	I_G = 0.100 pA
HIGH GAIN	g_{fs} = 70 µS
ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted)	
Maximum Temperatures	
Storage Temperature	-65°C to +175°C
Operating Junction Temperature	-65°C to +150°C
Maximum Power Dissipation	
Continuous Power Dissipation	300mW
MAXIMUM CURRENT	
Gate Current (Note 1)	50mA
MAXIMUM VOLTAGES	
Gate to Drain or Gate to Source	-30V

2N5301 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage	-30	--	--	V	V_{DS} = 0V, I_D = -1µA
$V_{GS(off)}$	Gate to Source Cutoff Voltage	0.6	--	3.0	V	V_{DS} = 10V, I_D = 1nA
I_{GSS}	Gate Leakage Current	--	--	-1	pA	V_{DG} = 0V, V_{GS} = -15V
I_G	Gate Operating Current	--	0.04	--		V_{DG} = 6V, I_D = 5µA
I_{DSS}	Gate 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 Input Noise Voltage	--	45	150	nV/√Hz	V_{DG} = 10V, I_D = 50µA , f = 100Hz

NOTES	1 . Absolute maximum ratings are limiting values above which 2N5301 serviceability may be impaired.

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Available Packages:

2N5301 in TO-18
2N5301 in bare die.

Please contact Micross for full package and die dimensions

TO-18 (Bottom View)