

2N5301 N-CHANNEL JFET



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	$I_G = 0.100 \text{ pA}$					
HIGH GAIN	$g_{fs} = 70 \mu S$					
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	$V_{DS} = 0V$, $I_{D} = -1\mu A$
$V_{GS(off)}$	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			$V_{DG} = 6V$, $I_D = 5\mu A$
I _{DSS}	Gate to Source Saturation Current	30	4	500	μΑ	$V_{DS} = 10V, V_{GS} = 0V$
g fs	Forward Transconductance	70	1	300	μS	$V_{DS} = 10V$, $V_{GS} = 0V$, $f = 1kHz$
C _{iss}	Inp <mark>ut</mark> Cap <mark>ac</mark> itance	-	1	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	$V_{DG} = 10V$, $I_D = 50\mu A$, $f = 100Hz$

NOTES

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

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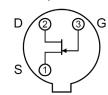
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Available Packages:

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

Please contact Micross for full package and die dimensions

TO-18 (Bottom View)



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