

2N4118 N-CHANNEL JFET



Linear Systems replaces discontinued Siliconix 2N4118

The 2N4118 is an Ultra-High Input Impedance N-Channel JFET

The 2N4118 provides ultra-high input impedance. The device is specified with a 10-pA limit and is ideal for use as a high-impedance sensitive front-end amplifier.

2N4118 Benefits:

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

2N4118 Applications:

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

FEATURES			
DIRECT REPLACEMENT FOR SILICONIX 2N4118			
LOW POWER	I _{DSS} <90 μA		
MINIMUM CIRCUIT LOADING	I _{GSS} <10 pA		
ABSOLUTE MAXIMUM RATINGS			
@ 25°C (unless otherwise noted)			
Maximum Temperatures			
Storage Temperature	-65°C to +175°C		
Operating Junction Temperature	-55°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 (Note 2)	-40V		

2N4118 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
BV _{GSS}	Gate to Sou <mark>rc</mark> e Breakdown Voltage	-40		I.	V	$I_{G} = -1\mu A$, $V_{DS} = 0V$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-1		-3	V	$V_{DS} = 10V$, $I_{D} = 1$ nA
I _{DSS}	Gate to Sou <mark>rc</mark> e Saturation Current	0.08		0.24	mA	$V_{DS} = 10V, V_{GS} = 0V$
I _{GSS}	Gate Leakage Current	1		-10	pA	$V_{GS} = -20V, V_{DS} = 0V$
				-25		$V_{GS} = -20V, V_{DS} = 0V, 150^{\circ}C$
g fs	Forward Transconductance(Note 3)	80		250	μmho	$V_{DS} = 10V$, $V_{GS} = 0V$, $f = 1kHz$
g _{os}	Output Conductance			5		
C _{iss}	Input Capacitance			3	pF	$V_{DS} = 10V$, $V_{GS} = 0V$, $f = 1MHz$
C _{rss}	Reverse Transfer Capacitance			1.5		

NOTES

- 1 . Absolute maximum ratings are limiting values above which 2N4118 serviceability may be impaired.
- 2. Due to symmetrical geometry, these units may be operated with source and drain leads interchanged
- 3. This parameter is measured during a 2ms interval 100ms after power is applied. (Not a JEDEC condition.)

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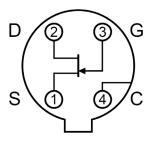
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Available Packages:

2N4118 in TO-71 2N4118 in bare die.

Please contact Micross for full package and die dimensions

TO-71 (Bottom View)



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