

Linear Systems replaces discontinued Siliconix J204

The J204 is a high gain N-Channel JFET

This n-channel JFET is optimised for high gain. The part is particularly suitable for use in low power or high impedance amplifiers. The TO-92 package is well suited for cost sensitive applications and mass production.

(See Packaging Information).

J204 Benefits:

- High Input Impedance
- Low Cutoff Voltage
- Low Noise

J204 Applications:

- Battery powered amplifiers
- Audio Pre-Amplifiers
- Infra-Red Detector Amplifiers

FEATURES

DIRECT REPLACEMENT FOR SILICONIX J204

LOW CUT OFF VOLTAGE $V_{GS(off)} \leq 1.5$

HIGH GAIN $A_V = 80 \text{ V/V}$

ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted)

Maximum Temperatures

Storage Temperature -65°C to +150°C

Operating Junction Temperature -55°C to +135°C

Maximum Power Dissipation

Continuous Power Dissipation 350mW

MAXIMUM CURRENT

Forward Gate Current (Note 1) 50mA

MAXIMUM VOLTAGES

Gate to Drain Voltage $V_{GDS} = -40\text{V}$

Gate to Source Voltage $V_{GSS} = -40\text{V}$

J204 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage	-25	--	--		$I_G = 1\mu\text{A}, V_{DS} = 0\text{V}$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-0.3	--	-2	V	$V_{DS} = 15\text{V}, I_D = 10\text{nA}$
I_{DSS}	Drain to Source Saturation Current (Note 2)	0.2	--	3	mA	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}$
I_{GSS}	Gate Reverse Current	-2	--	-100		$V_{GS} = -20\text{V}, V_{DS} = 0\text{V}$
I_G	Gate Operating Current	--	-2	--	pA	$V_{DG} = 10\text{V}, I_D = 0.1\text{mA}$
$I_{D(off)}$	Drain Cutoff Current	--	2	--		$V_{DS} = 15\text{V}, V_{GS} = -5\text{V}$
g_{fs}	Forward Transconductance	0.5	--	--	mS	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{kHz}$
C_{iss}	Input Capacitance	--	4.5	--	pF	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{MHz}$
C_{rss}	Reverse Transfer Capacitance	--	1.3	--		
e_n	Equivalent Noise Voltage	--	6	--	nV/VHz	$V_{DS} = 10\text{V}, I_D = 1\text{mA}, f = 1\text{kHz}$

Note 1 - Absolute maximum ratings are limiting values above which J204 serviceability may be impaired.

Note 2 - Pulse test: $PW \leq 300 \mu\text{s}$, Duty Cycle $\leq 3\%$

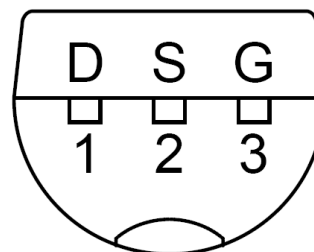
Micross Components Europe

Available Packages:

J204 in TO-92
J204 in bare die.

Please contact Micross for full package and die dimensions

TO-92 (Bottom View)



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