

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  $A_V = 80$  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  $V_{GDS} = -40V$

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

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

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

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

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

Micross Components Europe

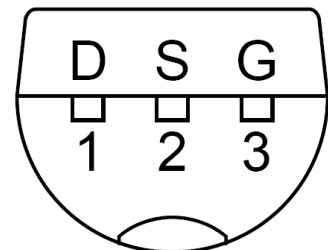
Available Packages:

TO-92 (Bottom View)



J204 in TO-92  
J204 in bare die.

Please contact Micross for full package and die dimensions



Tel: +44 1603 788967  
Email: [chipcomponents@micross.com](mailto:chipcomponents@micross.com)  
Web: <http://www.micross.com/distribution>

Information furnished by Linear Integrated Systems and Micross Components is believed to be accurate and reliable. However, no responsibility is assumed for its use; nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Linear Integrated Systems.