LINEAR SYSTEMS

J204
N-CHANNEL JFET

micross

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	--	--	V	I_G = 1µA, V_{DS} = 0V
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-0.3	--	-2		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	pA	V_{GS} = -20V, V_{DS} = 0V
I_G	Gate Operating Current	--	-2	--		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≤ 300 µs, Duty Cycle ≤ 3%

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Available Packages:

J204 in TO-92
J204 in bare die.

Please contact Micross for full package and die dimensions

TO-92 (Bottom View)