

## Linear Systems replaces discontinued Siliconix J212

The J212 is a n-channel JFET General Purpose amplifier with low noise and low leakage.

The TO-92 package is well suited for cost sensitive applications and mass production.

(See Packaging Information).

**J212 Benefits:**

- High gain
- Low Leakage
- Low Noise

**J212 Applications:**

- General Purpose Amplifiers
- UHV / VHF Amplifiers
- Mixers
- Oscillators

FEATURES	
DIRECT REPLACEMENT FOR SILICONIX J212	
HIGH GAIN	$g_{fs} = 7000 \mu\text{mho MIN}$
HIGH INPUT IMPEDANCE	$I_{GSS} = 100\text{pA max}$
LOW INPUT CAPACITANCE	$C_{iss} = 5\text{pF}$
ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted)	
Maximum Temperatures	
Storage Temperature	-55°C to +150°C
Operating Junction Temperature	-55°C to +135°C
Maximum Power Dissipation	
Continuous Power Dissipation	360mW
Derating over temperature	3.27 mW/°C
MAXIMUM CURRENT	
Gate Current (Note 1)	10mA
MAXIMUM VOLTAGES	
Gate to Drain Voltage or Gate to Source Voltage	-25V

### J212 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
$BV_{GSS}$	Gate to Source Breakdown Voltage	-25	--	--	V	$V_{DS} = 0\text{V}, I_G = -1\mu\text{A}$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-4	--	-6	V	$V_{DS} = 15\text{V}, I_D = 1\text{nA}$
$I_{DSS}$	Drain to Source Saturation Current (Note 2)	15	--	40	mA	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}$
$I_{GSS}$	Gate Reverse Current (Note 3)	--	--	-100	pA	$V_{DS} = 0\text{V}, V_{GS} = -15\text{V}$
$I_G$	Gate Operating Current (Note 3)	--	-10	--	pA	$V_{DS} = 10\text{V}, I_D = 1\text{mA}$
$r_{DS(on)}$	Drain to Source On Resistance	--	--	50	$\Omega$	$I_G = 1\text{mA}, V_{DS} = 0\text{V}$

### J212 DYNAMIC ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	TYP.	MAX	UNITS	CONDITIONS
$g_{fs}$	Forward Transconductance	7000	--	12000	$\mu\text{mho}$	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{kHz}$
$g_{os}$	Output Conductance	--	--	200	$\mu\text{mho}$	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{kHz}$
$C_{iss}$	Input Capacitance	--	4	--	pF	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{MHz}$
$C_{rss}$	Reverse Transfer Capacitance	--	1	--	pF	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{MHz}$
$e_n$	Equivalent Noise Voltage	--	10	--	nV/VHz	$V_{DS} = 15\text{V}, V_{GS} = 0\text{V}, f = 1\text{kHz}$

### J212 SWITCHING CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTIC	UNITS	CONDITIONS
$t_{d(on)}$	Turn On Time	2	$V_{DD} = 10\text{V}$ $V_{GS(H)} = 0\text{V}$  See Switching Circuit
$t_r$	Turn On Rise Time	2	
$t_{d(off)}$	Turn Off Time	6	
$t_f$	Turn Off Fall Time	15	

Note 1 - Absolute maximum ratings are limiting values above which J212 serviceability may be impaired.

Note 2 - Pulse test duration = 2ms

Note 3 - Approximately doubles for every 10°C increase in  $T_A$

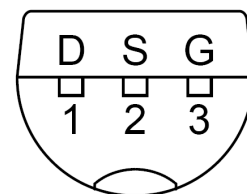
Micross Components Europe

Available Packages:

TO-92 (Bottom View)



J212 in TO-92  
J212 in bare die.



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Please contact Micross for full package and die dimensions