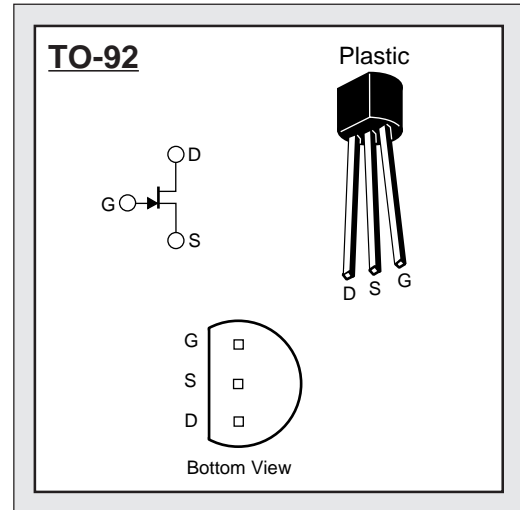


LINEAR SYSTEMS

Linear Integrated Systems

J210, J211, J212 LOW NOISE N-CHANNEL J-FET GENERAL PURPOSE AMPLIFIER

FEATURES	
HIGH GAIN $g_{fs} = 7000\mu\text{mho}$ MINIMUM (J211, J212)	
HIGH INPUT IMPEDANCE $I_{GSS} = 100\text{pA}$ MAXIMUM	
LOW INPUT CAPACITANCE $C_{iss} = 5\text{pF}$ TYPICAL	
ABSOLUTE MAXIMUM RATINGS @ 25°C (unless otherwise noted)	
Gate-Drain or Gate-Source Voltage	-25V
Gate Current	10mA
Total Device Dissipation @ 25°C Ambient (Derate 3.27 mW/°C)	360mW
Operating Temperature Range	-55°C to + 135°C



ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTICS	J210			J211			J212			UNITS	CONDITIONS
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
I_{GSS}	Gate Reverse Current	--	--	-100	--	--	-100	--	--	-100	pA	$V_{DS}=0$ $V_{GS} = -15\text{V}$ (NOTE 1)
$V_{GS(off)}$	Gate-Source Cutoff Voltage	-1	--	-3	-2.5	--	-4.5	-4	--	-6	V	$V_{DS}=15\text{V}$ $I_D=1\text{nA}$
BV_{GSS}	Gate-Source Breakdown Voltage	-25	--	--	-25	--	--	-25	--	--		$V_{DS}=0$ $I_G = -1\mu\text{A}$
I_{DSS}	Drain Saturation Current	2	--	15	7	--	20	15	--	40	mA	$V_{DS}=15\text{V}$ $V_{GS}=0$ (NOTE 2)
I_G	Gate Current	--	-10	--	--	-10	--	--	-10	--	pA	$V_{DS}=10\text{V}$ $I_D=1\text{mA}$ (NOTE 1)
g_{fs}	Common-Source Forward Transconductance	4,000	--	12,000	6,000	--	12,000	7,000	--	12,000	μmho	$f=1\text{kHz}$
g_{os}	Common-Source Output Conductance	--	--	150	--	--	200	--	--	200		
C_{iss}	Common-Source Input Capacitance	--	4	--	--	4	--	--	4	--	pF	$V_{DS}=15\text{V}$ $V_{GS}=0$ $f=1\text{MHz}$
C_{rss}	Common-Source Reverse Transfer Capacitance	--	1	--	--	1	--	--	1	--		
\bar{e}_n	Equivalent Short-Circuit Input Noise Voltage	--	10	--	--	10	--	--	10	--	nV $\sqrt{\text{Hz}}$	$f=1\text{kHz}$

NOTE 1: Approximately doubles for every 10°C increase in T_A .

NOTE 2: Pulse test duration = 2ms.

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