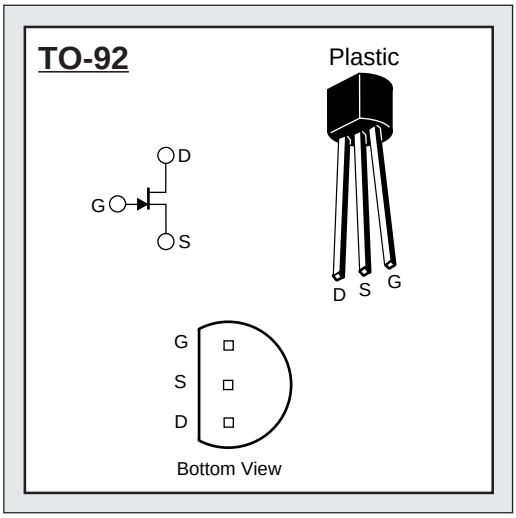
LINEAR SYSTEMS

Linear Integrated Systems

J210, J211, J212

LOW NOISE N-CHANNEL J-FET GENERAL PURPOSE AMPLIFIER

FEATURES	
HIGH GAIN g_{fs} = 7000μmho MINIMUM (J211, J212)	
HIGH INPUT IMPEDANCE I_{GSS}= 100pA MAXIMUM	
LOW INPUT CAPACITANCE C_{iss}= 5pF 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}= -15V	**(NOTE 1)**
$V_{GS(off)}$	Gate-Source Cutoff Voltage	-1	--	-3	-2.5	--	-4.5	-4	--	-6	V	V_{DS}=15V I_D=1nA	
BV_{GSS}	Gate-Source Breakdown Voltage	-25	--	--	-25	--	--	-25	--	--		V_{DS}=0 I_G= -1μA	
I_{DSS}	Drain Saturation Current	2	--	15	7	--	20	15	--	40	mA	V_{DS}=15V V_{GS}=0	**(NOTE 2)**
I_G	Gate Current	--	-10	--	--	-10	--	--	-10	--	pA	V_{DS}=10V I_D=1mA	**(NOTE 1)**
g_{fs}	Common-Source Forward Transconductance	4,000	--	12,000	6,000	--	12,000	7,000	--	12,000	μmho	V_{DS}=15V V_{GS}=0	f=1kHz
g_{os}	Common-Source Output Conductance	--	--	150	--	--	200	--	--	200			
C_{iss}	Common-Source Input Capacitance	--	4	--	--	4	--	--	4	--	pF		f=1MHz
C_{rss}	Common-Source Reverse Transfer Capacitance	--	1	--	--	1	--	--	1	--			
$\bar{e}_n$	Equivalent Short-Circuit Input Noise Voltage	--	10	--	--	10	--	--	10	--	nV√Hz		f=1kHz

NOTE 1: Approximately doubles for every 10°C increase in T_A.
NOTE 2: Pulse test duration = 2ms.

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