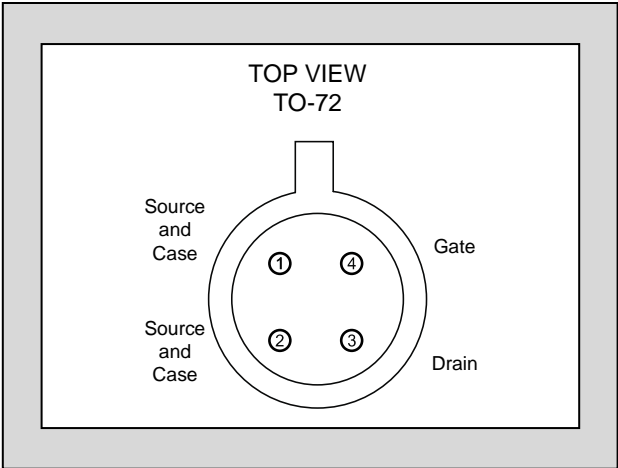


LS320

HIGH INPUT IMPEDANCE BIFET AMPLIFIER

FEATURES	
HIGH INPUT IMPEDANCE	$r_{GS} = 100G\Omega$
HIGH TRANSCONDUCTANCE	$Y_{FS} = 30,000\mu S$
ABSOLUTE MAXIMUM RATINGS¹ @ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Operating Junction Temperature	-55 to +125 °C
Maximum Power Dissipation	
Continuous Power Dissipation @ +25 °C	200mW
Maximum Currents	
Drain Current	$I_D = 25mA$
Maximum Voltages	
Drain to Source ¹	$V_{DSO} = 20V$
Gate to Source	$V_{GSS} = 20V$

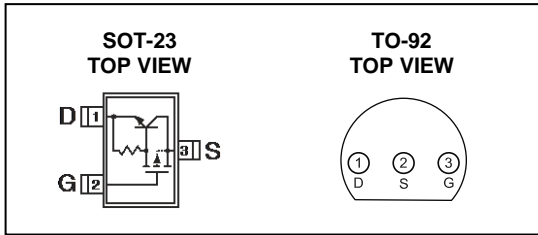


ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

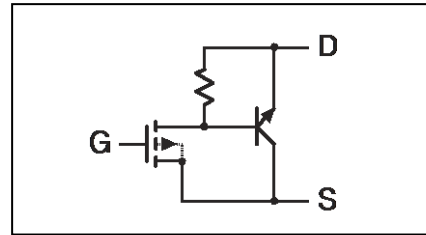
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
V_{DS}	Drain to Source Voltage	-20			V	$I_{DS} = 100\mu A, V_{GS} = 0V$
V_{GS}	Gate to Source Voltage	-7	-10	-12	V	$I_{DS} = 10mA, V_{DS} = -10V^{2,3}$
g_{fs}	Common Source Forward Transconductance	30,000			μS	$I_{DS} = 10mA, V_{DS} = -10V, f = 1kHz$
g_{oss}	Common Source Output Conductance		300		μS	$I_{DS} = 10mA, V_{DS} = -10V, f = 1kHz$
r_{GS}	Gate to Source Input Resistance	100			$G\Omega$	$V_{GS} = 0 \text{ to } 20V, T_J \text{ to } 125\text{ }^\circ C$
C_{ISS}	Input Capacitance		8		pF	$I_{DS} = 10mA, V_{DS} = -10V$
C_{RSS}	Reverse Transfer Capacitance		1.5		pF	$I_{DS} = 10mA, V_{DS} = -10V$
e_n	Noise Voltage		25		μV	$I_{DS} = 10mA, V_{DS} = 10V$ BW = 50 to 15kHz

All limits are absolute numbers. Negative signs indicate electrical polarity.

PACKAGE OPTIONS



FUNCTIONAL



NOTES:

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. The gate to source voltage must never exceed 100V, $t < 10\text{ms}$.
3. Additional screening available

Information furnished by Linear Integrated Systems 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.

Linear Integrated Systems (LIS), established in 1987, is third-generation precision semiconductor company providing high-quality discrete components. Expertise brought to LIS is based on processes and products developed at Amelco, Union Carbide, Intersil and Micro Power Systems by company Founder John H. Hall. Hall, a protégé of Silicon Valley legend Dr. Jean Hoerni, was the director of IC Development at Union Carbide, Co-Founder and Vice President of R&D at Intersil, and Founder/President of Micro Power Systems.