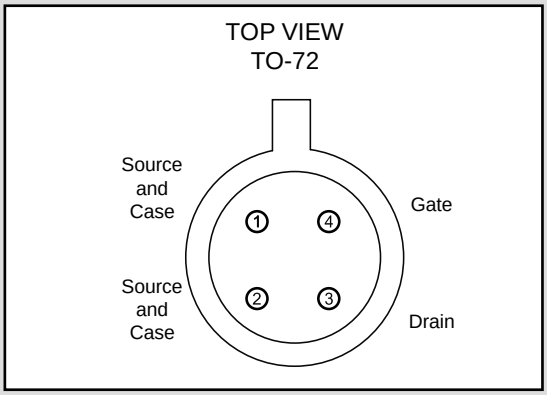
LINEAR SYSTEMS

Twenty-Five Years Of Quality Through Innovation

LS320

HIGH INPUT IMPEDANCE BiFET AMPLIFIER

FEATURES	
HIGH INPUT IMPEDANCE	r_{Gs} = 100GΩ
HIGH TRANSCONDUCTANCE	Y_{FS} = 30,000µS
ABSOLUTE MAXIMUM RATINGS[1] @ 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

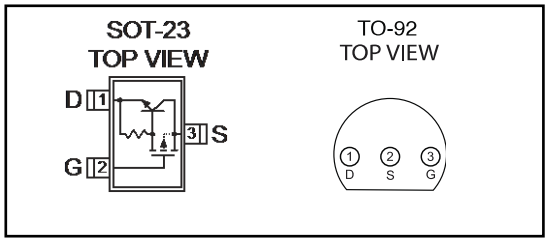


ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

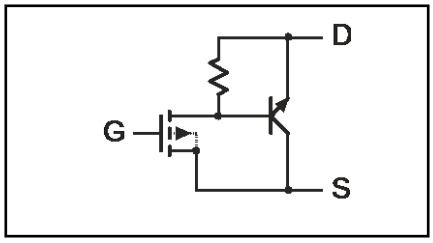
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
V_{DS}	Drain to Source Voltage	-20			V	I_{DS} = 100µA, V_{GS} = 0V
V_{GS}	Gate to Source Voltage	-7	-10	-12	V	I_{DS} = 10mA, V_{DS} = -10V[2,3]
g_{fs}	Common Source Forward Transconductance	30,000			µS	I_{DS} = 10mA, V_{DS} = -10V, *f* = 1kHz
g_{oss}	Common Source Output Conductance		300		µS	I_{DS} = 10mA, V_{DS} = -10V, *f* = 1kHz
r_{Gs}	Gate to Source Input Resistance	100			GΩ	V_{GS} = 0 to 20V, T_J to 125 °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



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

Linear Integrated Systems (LIS) is a 25-year-old, 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 President 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.