LINEAR SYSTEMS

Linear Integrated Systems

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	-65 to +150 °C
Operating Junction Temperature	-55 to +125 °C
Maximum Power Dissipation	
Continuous Power Dissipation @ +125 °C	200mW
Maximum Currents	
Drain Current	I_D = 25mA
Maximum Voltages	
Drain to Source[1]	V_{DSO} = 20V
Gate to Source	V_{GSS} = 20V

TO-72
BOTTOM VIEW
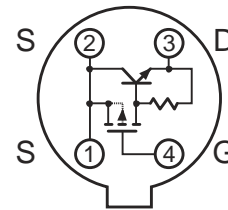
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

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	-12	-10	-7	V	I_{DS} = 10mA, V_{gs} = -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

PACKAGE OPTIONS

SOT-23
TOP VIEW

TO-92
BOTTOM VIEW
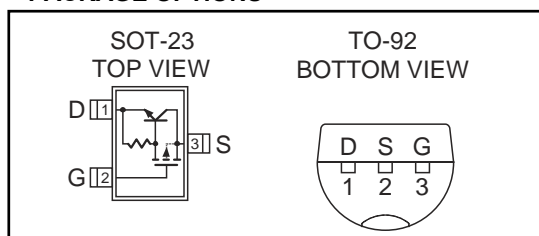
FUNCTIONAL SCHEMATIC
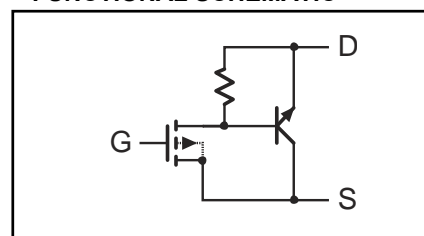
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. The gate to source voltage must never exceed 100V, t < 10ms.
3. Additional screening available

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.