

Linear Systems High Input Impedance BiFET Amplifier

The LS320 is a high input impedance amplifier produced using a BiFET process and packaged in TO-92.

The TO-92 package is well suited for cost sensitive applications and mass production.

(See Packaging Information).

LS320 Features:

- High Input Impedance
- High Transconductance

FEATURES

HIGH INPUT IMPEDANCE	$r_{GS} \geq 100G\Omega$
HIGH TRANSCONDUCTANCE	$Y_{FS} = 30,000\mu S$
ABSOLUTE MAXIMUM RATINGS ¹ @ 25°C (unless otherwise noted)	
Maximum Temperatures	
Storage Temperature	-65°C to +150°C
Operating Junction Temperature	-55°C to +125°C
Maximum Power Dissipation	
Continuous Power Dissipation @ +125°C	200mW
Maximum Currents	
Drain Current	$I_D = 25mA$
Maximum Voltages	
Drain to Source	$V_{DS0} = 20V$
Gate to Source	$V_{GSS} = 20V$

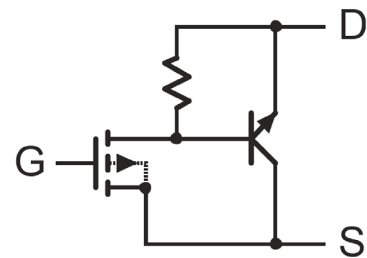
ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	CONDITIONS
V_{DS}	Drain to Source Voltage	-20	--	--	V	$I_{DS} = 100\mu A, V_{GS} = 0$
V_{GS}	Collector to Source Voltage	-12	-10	-7	V	$I_{DS} = 10mA, V_{GS} = -10V^{23}$
g_{fs}	Common Source Forward Transconductance	30000	--	--	μS	$I_{DS} = 10mA, V_{GS} = -10V, f = 1kHz$
g_{oss}	Common Source Output Conductance	--	300	--		
r_{GS}	Gate to Source Input Resistance	100	--	--	$G\Omega$	$V_{GS} = 0$ to 20V, T_J to 125°C
C_{ISS}	Input Capacitance	--	8	--	pA	$I_{DS} = 100\mu A, V_{DS} = -10V$
C_{RSS}	Reverse Transfer Capacitance	--	1.5	--	pF	$I_{DS} = 10mA, V_{GS} = -10V$
e_n	Noise Voltage	--	25	--	μV	$I_{DS} = 10mA, V_{DS} = 10V, BW = 50$ to 15 kHz

Notes:

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

Functional Schematic



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Available Packages:

LS320 in TO-92
LS320 in bare die.

Please contact Micross for full package and die dimensions

TO-92 (Bottom View)

