LINEAR SYSTEMS

LS320
BiFET Amplifier

micross

Linear Systems High Input Impedance BiFET Amplifier

The LS320 is a high input impedance amplifier produced using a BiFET process and packaged in SOT-23.

The SOT-23 package is well suited for cost sensitive applications and mass production.

(See Packaging Information).

LS320 Features:

- High Input Impedance
- High Transconductance

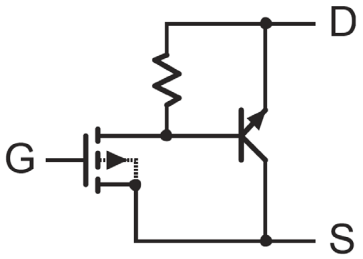
FEATURES	
HIGH INPUT IMPEDANCE	$r_{Gs} \geq = 100G\Omega$
HIGH TRANSCONDUCTANCE	$Y_{FS} = 30{,}000\mu S$
ABSOLUTE MAXIMUM RATINGS [1] @ 25°C (unless otherwise noted)	
Maximum Temperatures	
Storage Temperature	-65°C to +150°C
Operating Junction Temperature	-55°C to +125°C
Maximum Power Dissipation	
Continuous Power Dissipation @ +125°C	200mW
Maximum Currents	2.3mW/°C
Drain Current	$I_D = 25mA$
Maximum Voltages	
Drain to Source	$V_{DSO} = 20V$
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	$I_{DS} = 10mA$, $V_{GS} = -10V$ [2,3]
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	--	--	GΩ	$V_{GS} = 0$ 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 SOT-23
LS320 in bare die.

Please contact Micross for full package and die dimensions

SOT-23 (Top View)