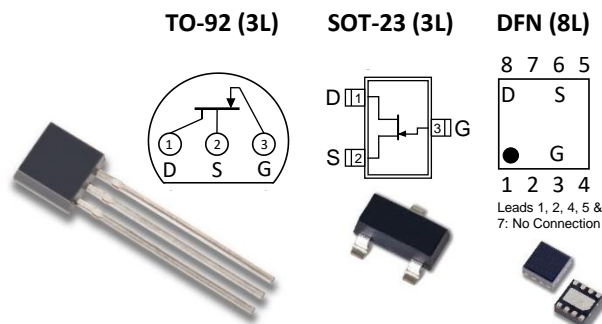


ABSOLUTE MAXIMUM RATINGS ¹	
@ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to +150°C
Junction Operating Temperature	-55 to +135°C
Maximum Power Dissipation	
Continuous Power Dissipation @ Ta= +25°C	350mW
Maximum Currents	
Gate Forward Current	I _{G(F)} = 10mA
Maximum Voltages	
Gate to Source	V _{GSS} = -40V
Gate to Drain	V _{GDS} = -40V



Features

- Continuous Voltage-Controlled Resistance
- High Off-Isolation
- High Input Impedance
- Gain Ranging Capability
- Simplified Drive Voltage Capabilities
- No Circuit Interaction
- Wide Range Signal Attenuation

Benefits

- Wide Range Signal Attenuation
- Gain Ranging
- Simplified Gate Drive
- High Breakdown Voltage
- No Circuit Interaction

Applications

- Variable Gain Amplifiers
- Automatic Gain Control
- Voltage Controlled Oscillator
- Small Signal Attenuations
- Filter Range Control

Description

The LS26VNS N-Channel Single JFET voltage controlled resistor has a drain-source resistance that is controlled by a DC bias voltage (V_{GS}) applied to a high impedance gate terminal. Minimum R_{DS} of 14 Ω occurs when V_{GS} = -1.0V. As V_{GS} approaches the pinch-off voltage of -6.0V R_{DS} rapidly increases to the maximum value or R_{DS} = 38 Ω.

The LS26VNS is specially intended for applications where the drain-source voltage is a low-level AC signal with no DC component. The key device performance is the predictable R_{DS} change from 14 to 38 Ω with no change in V_{GS} voltage. The LS26VNS is available in TO-92 (3 Lead), SOT-23 (3 Lead) and small foot-print DFN (8 Lead) packages.

Static Electrical Characteristics @ T_j = 25°C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
BV _{GSS}	Gate to Source Breakdown Voltage	-40			V	I _G = -1μA, V _{DS} = 0V
V _{GS(OFF)}	Gate to Source Pinch-off Voltage	-1.0		-6.0	V	V _{DS} = 10V, I _D = 1μA
I _{GSS}	Gate to Source Leakage Current			-1.0	nA	V _{GS} = -20V, V _{DS} = 0V
V _{GS(F)}	Gate to Source Forward Voltage		0.7		V	I _G = 1mA, I _D = 0A
R _{DS(on)1}	Drain to Source "ON" Resistance	14		38	Ohms	V _{DS} = 0.5V, I _D = 2.5mA
R _{DS(on)2}	Drain to Source "ON" Resistance	14		38	Ohms	V _{DS} = 0.5V, I _D = 5.0mA
R _{DS1} /R _{DS2}	Static R _{DS(on)} Ratio	0.90		1.0		

N-Channel JFET, Voltage Controlled Resistor

Dynamic Electrical Characteristics @ 25°C (unless otherwise stated)

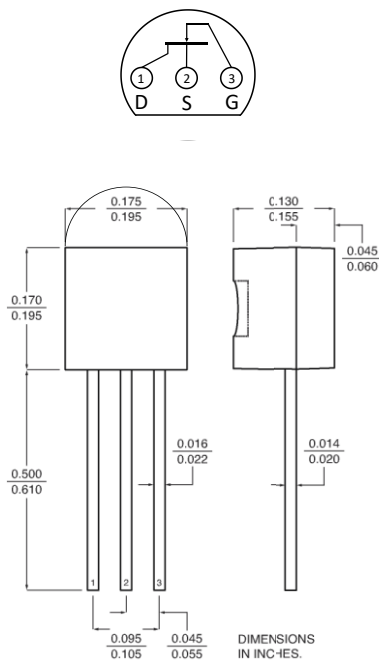
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
$R_{DS(on)ac}$	Drain to Source "ON" Resistance	14		38	Ohms	$V_{DS} = 0.50V, I_D = 300 \mu A, f = 1kHz$
C_{ISS}	Common Source Input Capacitance		13		pF	$V_{DS} = 20V, V_{GS} = 0V, f = 1MHz$
C_{RSS}	Common Source Reverse Transfer Cap.		3.6		pF	$V_{DS} = 0V, V_{GS} = -12V, f = 1MHz$

Notes

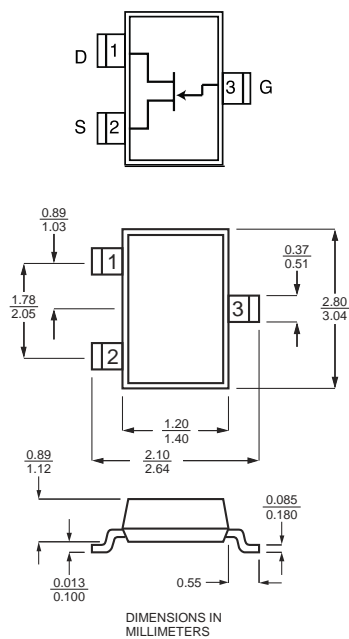
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
 2. Pulse Test: $PW \leq 300\mu s$, Duty Cycle $\leq 3\%$
 3. All characteristics MIN/TYP/MAX numbers are absolute values. Negative values indicate electrical polarity only.
- Information furnished by Linear Integrated 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.

Package Dimensions

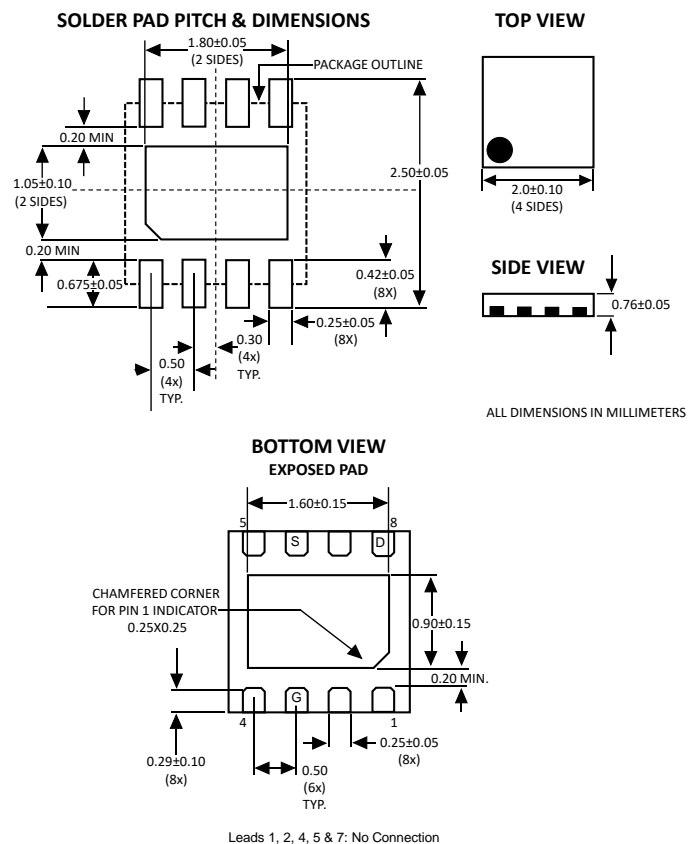
TO-92 3 Lead



SOT-23 3 Lead

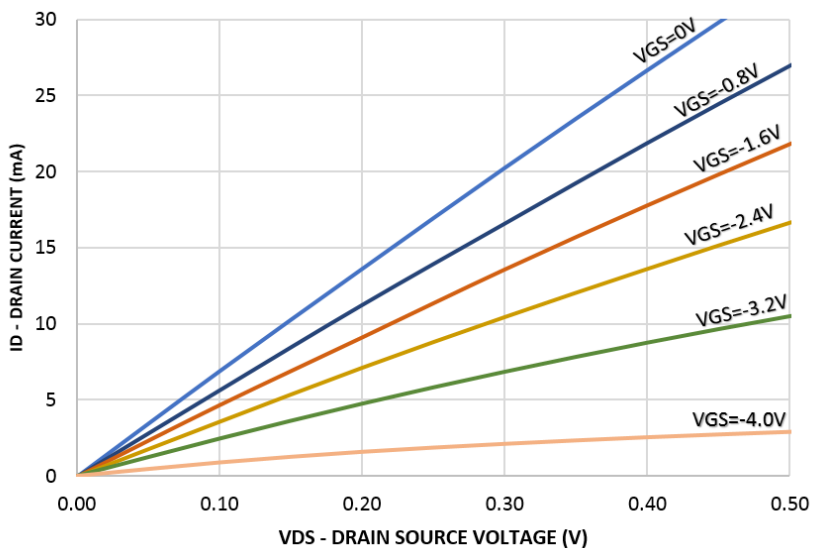


DFN 8 Lead



Typical Characteristics

Output Characteristics
LS26VNS



Ordering Information

STANDARD PART CALL-OUT
LS26VNS TO-92 3L RoHS
LS26VNS SOT-23 3L RoHS
LS26VNS DFN 8L RoHS
CUSTOM PART CALL-OUT
(CUSTOM PARTS INCLUDE SEL + 4 DIGIT NUMERIC CODE)
LS26VNS TO-92 3L RoHS SELXXXX
LS26VNS SOT-23 3L RoHS SELXXXX
LS26VNS DFN 8L RoHS SELXXXX