

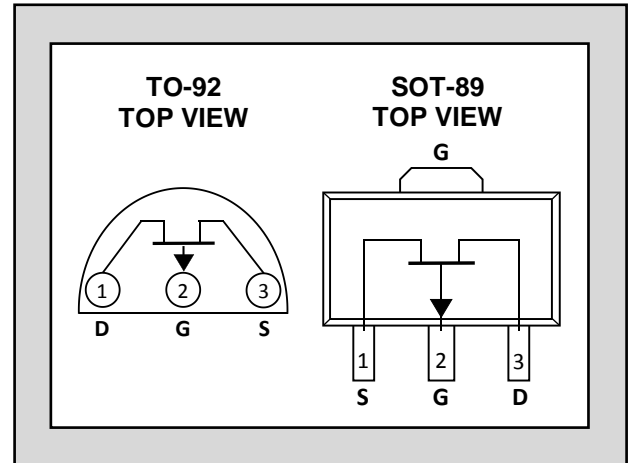
# LINEAR SYSTEMS

Over Three Decades of Quality Through Innovation

## LSJ74, SST74

ULTRA LOW NOISE  
SINGLE P-CHANNEL JFET

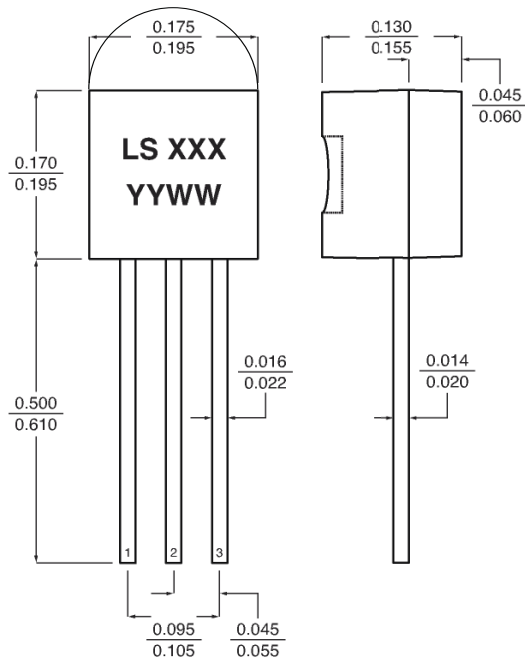
FEATURES	
ULTRA LOW NOISE ( $f = 1\text{kHz}$ )	$e_n = 0.9\text{nV}/\sqrt{\text{Hz}}$
HIGH GAIN	$G_{fs} = 22\text{mS (typ)}$
HIGH INPUT IMPEDANCE	$I_G = 1.0\text{nA}$
LOW CAPACITANCE	$C_{RSS} = 32\text{pF}$
IMPROVED SECOND SOURCE REPLACEMENT FOR 2SJ74	
ABSOLUTE MAXIMUM RATINGS <sup>1</sup> @ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to +150°C
Junction Operating Temperature	-55 to +135°C
Maximum Power Dissipation	
Continuous Power Dissipation	400mW
Maximum Currents	
Gate Forward Current	$I_{G(F)} = -10\text{mA}$
Maximum Voltages	
Gate to Drain Voltage	$V_{GDS} = 25\text{V}$
Gate to Source Voltage	$V_{GSS} = 25\text{V}$



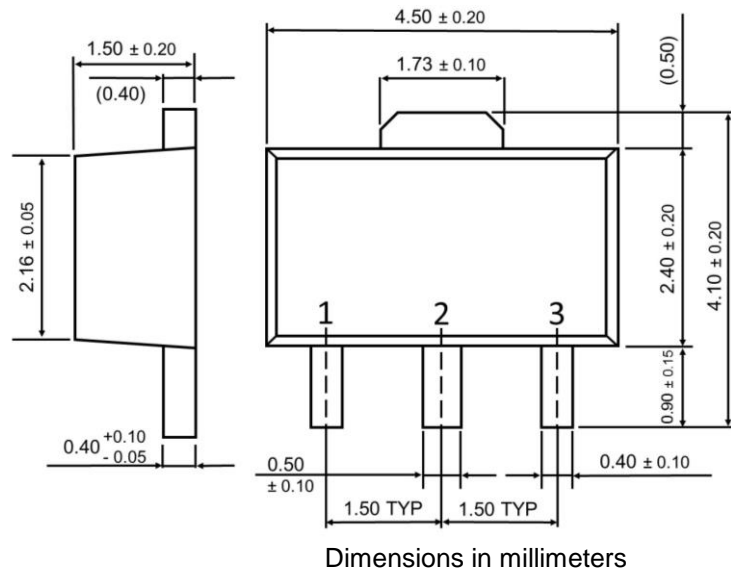
### ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
$BV_{GDS}$	Gate to Drain Breakdown Voltage	25			V	$V_{DS} = 0\text{V}, I_G = 100\mu\text{A}$
$V_{GS(OFF)}$	Gate to Source Pinch-off Voltage	0.15		2	V	$V_{DS} = -10\text{V}, I_D = -0.1\mu\text{A}$
$I_{DSS}$	Drain to Source Saturation Current <sup>2</sup>	LSJ74A	-2.6	-6.5	mA	$V_{DG} = -10\text{V}, V_{GS} = 0\text{V}$
		LSJ74B	-6	-12		
		LSJ74C	-10	-20		
		LSJ74D	-17	-30		
$I_G$	Gate Operating Current		50		pA	$V_{DG} = -10\text{V}, I_D = -1\text{mA}$
$I_{GSS}$	Gate to Source Leakage Current			1	nA	$V_{GS} = 25\text{V}, V_{DS} = 0\text{V}$
$G_{fss}$	Full Conductance Transconductance	8	22		mS	$V_{DG} = -10\text{V}, V_{GS} = 0\text{V}, f = 1\text{kHz}$
$e_n$	Noise Voltage		1.9		$\text{nV}/\sqrt{\text{Hz}}$	$V_{DS} = -10\text{V}, I_D = -2\text{mA}, f = 1\text{kHz}, \text{NBW} = 1\text{Hz}$
			4			$V_{DS} = -10\text{V}, I_D = -2\text{mA}, f = 10\text{Hz}, \text{NBW} = 1\text{Hz}$
$C_{ISS}$	Common Source Input Capacitance		105		pF	$V_{DS} = -10\text{V}, V_{GS} = 0\text{V}, f = 1\text{MHz}$
$C_{RSS}$	Common Source Reverse Transfer Cap.		32			$V_{DS} = -10\text{V}, I_D = 0\text{A}, f = 1\text{MHz}$

## LSJ74 TO-92



## SST74 SOT-89



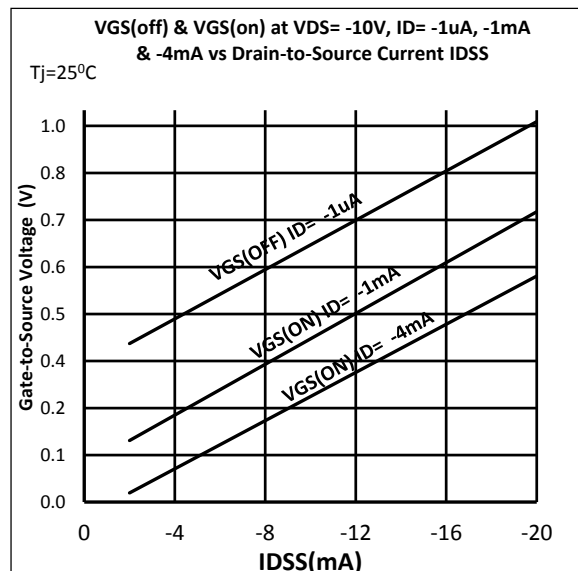
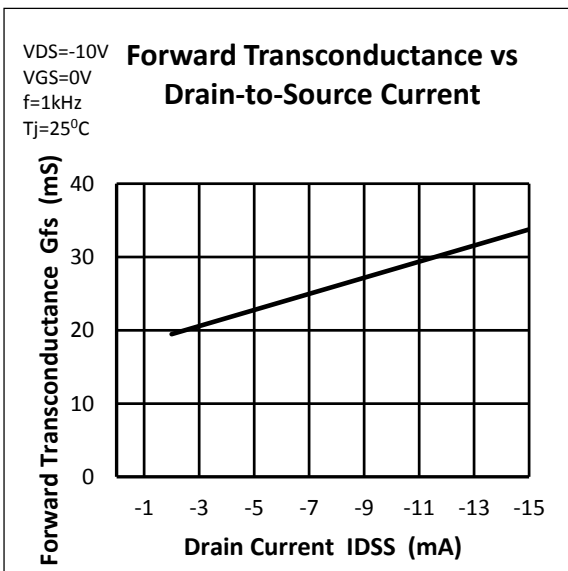
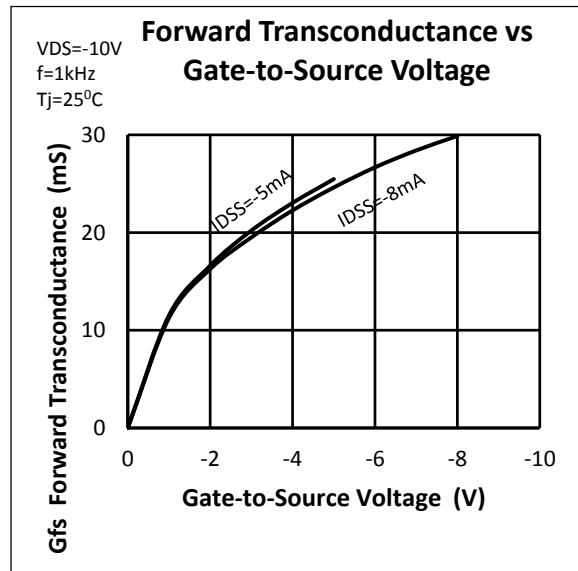
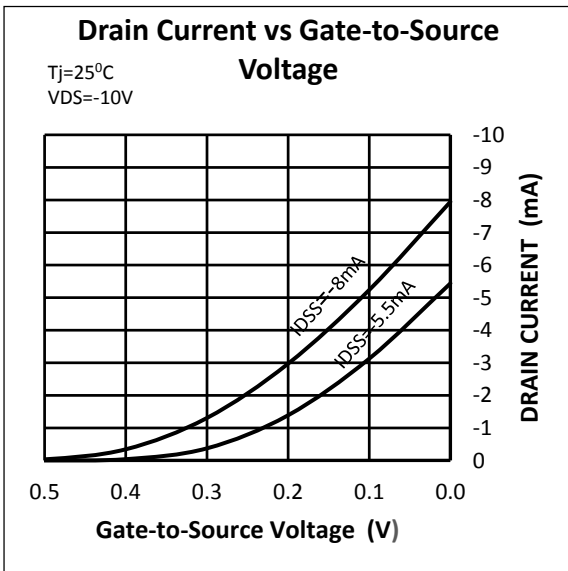
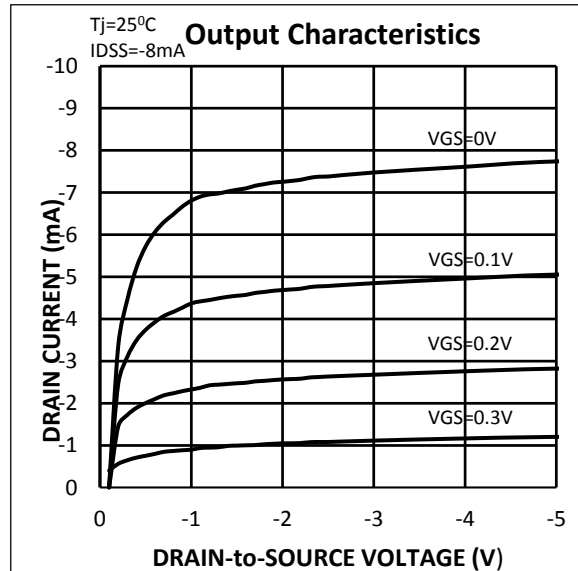
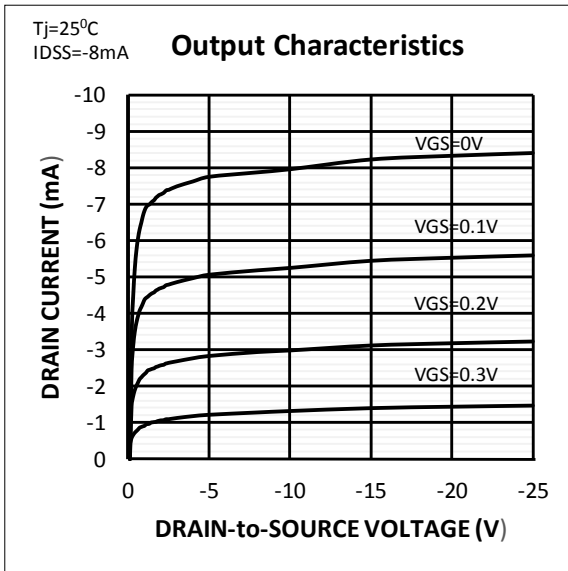
### NOTES:

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulse test: PW ≤ 300 μS, Duty Cycle ≤ 3%.
3. All MIN/TYP/MAX Limits are absolute values. Negative signs indicate negative electrical polarity only.

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# TYPICAL CHARACTERISTICS



# TYPICAL CHARACTERISTICS (CONT'D)

