LINEAR SYSTEMS

Linear Integrated Systems

LSJ74

ULTRA LOW NOISE
SINGLE P-CHANNEL JFET

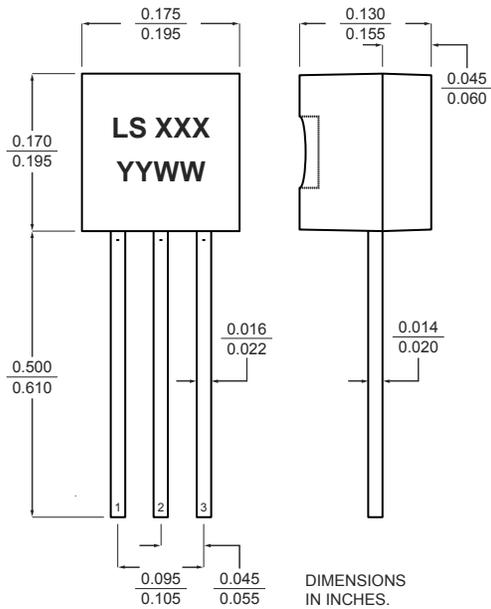| FEATURES	
ULTRA LOW NOISE (f = 1kHz)	e_n = 0.9nV/√Hz
HIGH GAIN	Y_{fs} = 22mS (typ)
HIGH INPUT IMPEDANCE	I_G = -1.0nA
LOW CAPACITANCE	C_{RSS} = 32pF
IMPROVED SECOND SOURCE REPLACEMENT FOR 2SJ74	
ABSOLUTE MAXIMUM RATINGS[1]	
@ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-65 to 150°C
Junction Operating Temperature	-55 to 135°C
Maximum Power Dissipation	
Continuous Power Dissipation	400mW
Maximum Currents	
Gate Forward Current	$I_{G(F)}$ = -10mA
Maximum Voltages	
Gate to Drain Voltage	V_{GDS} = 25V
Gate to Source Voltage	V_{GSS} = 25V

TO-92
BOTTOM VIEW

D G S
1 2 3

SOT-23
TOP VIEW

D 1
S 2
3 G
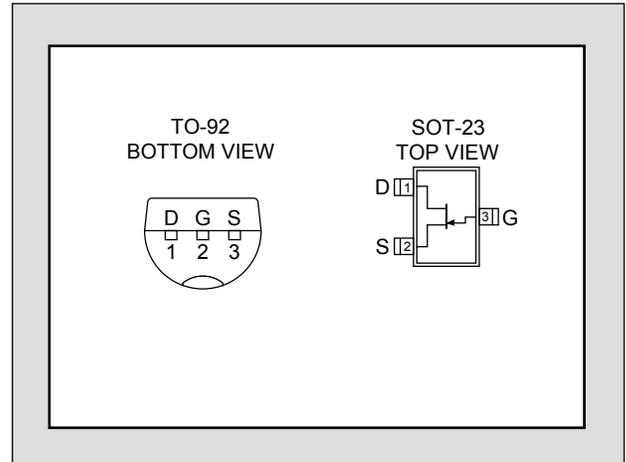
*For equivalent N-Channel, see LSK170 family.

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} = 0V, I_G = 100µA
$V_{GS(OFF)}$	Gate to Source Pinch Off Voltage		0.15		2		V_{DS} = -10V, I_D = -0.1µA
I_{DSS}	Drain to Source Saturation Current	LSJ74A	2.6		6.5	mA	V_{DG} = -10V, V_{GS} = 0V
		LSJ74B	6		12		
		LSJ74C	10		20		
		LSJ74D	20		30		
I_G	Gate Operating Current				-10		V_{DG} = -10V, I_D = -1mA
I_{GSS}	Gate to Source Leakage Current				1	nA	V_{GS} = 25V, V_{DS} = 0V
Y_{fss}	Full Conduction Transconductance		8	22		mS	V_{DG} = -10V, V_{GS} = 0V, f = 1kHz
e_n	Noise Voltage			0.9	1.9	nV/√Hz	V_{DS} = -10V, I_D = -2mA, f = 1kHz, NBW = 1Hz
				2.5	4		V_{DS} = -10V, I_D = -2mA, f = 10Hz, NBW = 1Hz
C_{ISS}	Common Source Input Capacitance			105		pF	V_{DS} = -10V, V_{GS} = 0V, f = 1MHz
C_{RSS}	Common Source Reverse Transfer Cap.			32			V_{DG} = -10V, I_D = 0A, f = 1MHz

Linear Integrated Systems

• 4042 Clipper Court • Fremont, CA 94538 • Tel: 510 490-9160 • Fax: 510 353-0261

TO-92

SOT-23

DIMENSIONS
IN INCHES.

DIMENSIONS IN
MILLIMETERS

LS XXX
YYWW
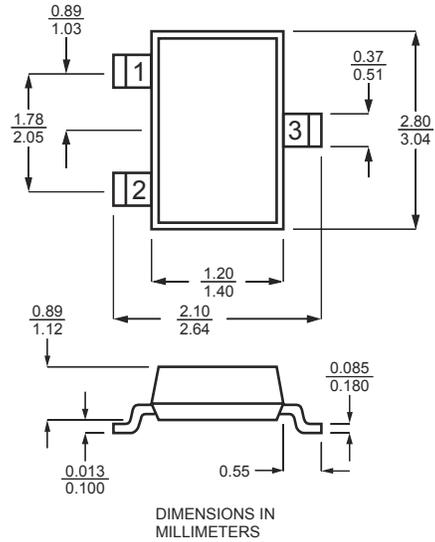
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.

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.

Linear Integrated Systems • 4042 Clipper Court • Fremont, CA 94538 • Tel: 510 490-9160 • Fax: 510 353-0261