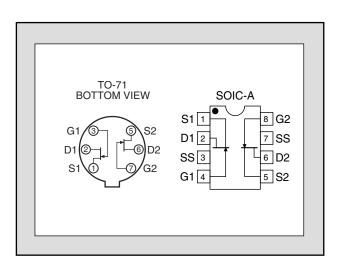
LINEAR SYSTEMS

Linear Integrated Systems

FEATURES					
ULTRA LOW NOISE	\mathbf{e}_{n}	= 0.9nV/√Hz (typ)			
TIGHT MATCHING	_{SS1-2} = 20mV max				
HIGH BREAKDOWN VOLTAGE	В	V _{GSS} = 40V max			
HIGH GAIN	Y _{fs} = 20mS (typ)				
LOW CAPACITANCE		25pF typ			
IMPROVED SECOND SOURCE REPLACEMENT FOR 2SK389					
ABSOLUTE MAXIMUM RATINGS ¹					
@ 25 °C (unless otherwise stated)					
Maximum Temperatures					
Storage Temperature -65 to +150 °					
Operating Junction Temperature	-55 to +135 °C				
Maximum Power Dissipation					
Continuous Power Dissipation @ +125 °C	;	400mW			
Maximum Currents					
Gate Forward Current	I _{G(F)} = 10mA				
Maximum Voltages					
Gate to Source		$V_{GSS} = 40V$			
Gate to Drain		V_{GDS} = 40V			

LSK389 ULTRA LOW NOISE MONOLITHIC DUAL N-CHANNEL JFET



*For equivalent single version, see LSK170 family.

MATCHING CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNIT	CONDITIONS
$V_{GS1} - V_{GS2}$	Differential Gate to Source Cutoff Voltage			20	mV	V _{DS} = 10V, I _D = 1mA
IDSS1 IDSS2	Gate to Source Saturation Current Ratio	0.9			-	V_{DS} = 10V, V_{GS} = 0V

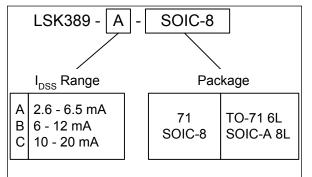
ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC		MIN	TYP	MAX	UNITS	CONDITIONS
BV _{GSS}	Gate to Source Breakdown Voltage		40			V	V _{DS} = 0, I _D = 100µA
$V_{GS(OFF)}$	Gate to Source Pinch-off Voltage		0.15		2	V	V_{DS} = 10V, I_{D} = 0.1 μ A
	Drain to Source Saturation Current	LSK389A	2.6		6.5	mA	V _{DS} = 10V, V _{GS} = 0
I _{DSS}		LSK389B	6		12		
		LSK389C	10		20		
I _{GSS}	Gate to Source Leakage Current				200	pА	$V_{GS} = -30V, V_{DS} = 0$

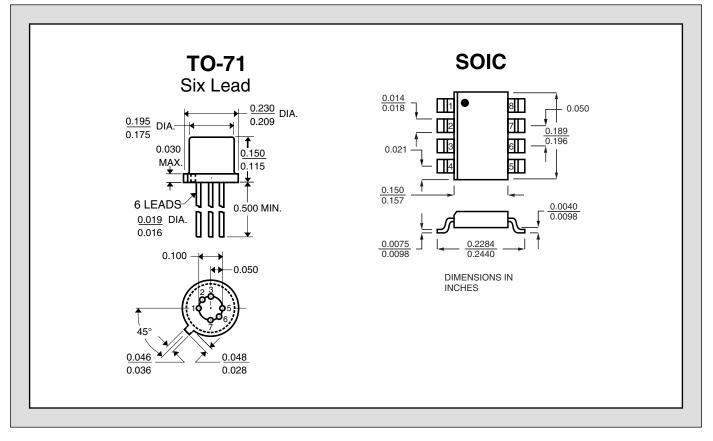
ELECTRICAL CHARACTERISTICS CONT. @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
Y _{fs}	Full Conduction Transconductance	8	20		mS	V_{DS} = 10V, V_{GS} = 0, I_{DSS} = 3mA, f = 1kHz
en	Noise Voltage		0.9	1.9	nV/√Hz	V _{DS} = 10V, I _D = 2mA, <i>f</i> = 1kHz, NBW = 1Hz
en	Noise Voltage		2.5	4	nV/√Hz	V _{DS} = 10V, I _D = 2mA, <i>f</i> = 10Hz, NBW = 1Hz
C _{ISS}	Common Source Input Capacitance		25		pF	V_{DS} = 10V, V_{GS} = 0, <i>f</i> = 1MHz,
C _{RSS}	Common Source Reverse Transfer Cap.		5.5		pF	$V_{DG} = 10V, I_D = 0, f = 1MHz,$

ORDERING INFORMATION



PACKAGE DIMENSIONS



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. Revised 07 December 2005.

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