

## **LSK389 A/B/C/D**

Ultra Low Noise Monolithic Dual N-Channel JFET Amplifier

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

SYMBOL	CHARACTERISTIC		MIN	TYP	MAX	UNITS	CONDITIONS
BV <sub>GSS</sub>	Gate to Source Breakdown Voltage		-40			V	V <sub>DS</sub> = 0, I <sub>D</sub> = -100μA
V <sub>GS(OFF)</sub>	Gate to Source Pinch-off Voltage		-0.3		-1.6	V	V <sub>DS</sub> = 10V, I <sub>D</sub> = 0.1μA
	Drain to Source Saturation Current	LSK389A	2.6		6.5	mA	$V_{DS} = 10V$ , $V_{GS} = 0$
Ines		LSK389B	6		12		
loss		LSK389C	10		20		
		LSK389D	17		30		
I <sub>GSS</sub>	Gate to Source Leakage Current			-100	-300	pA	V <sub>GS</sub> = -25V, V <sub>DS</sub> = 0
la162	Gate to Gate Isolation Current			±1.0	±50	nA	V <sub>G1-G2</sub> = ±45V, I <sub>D</sub> = I <sub>S</sub> = 0A
Gis	Full Conduction Transconductance		8	20		mS	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0, f = 1kHz
e <sub>n</sub>	Noise Voltage			1.3	1.9	nV/√Hz	V <sub>DS</sub> = 10V, I <sub>D</sub> = 2mA, f = 1kHz, NBW = 1Hz
e <sub>n</sub>	Noise Voltage			1.5	4.0	nV/√Hz	V <sub>DS</sub> = 10V, I <sub>D</sub> = 2mA, f = 10Hz, NBW = 1Hz
C <sub>ISS</sub>	Common Source Input Capacitance			25		pF	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0, f = 1MHz,
C <sub>RSS</sub>	Common Source Reverse Transfer Cap.			5.5		pF	V <sub>DG</sub> = 10V, I <sub>D</sub> = 0, f = 1MHz,

## Matching Characteristics @ 25°C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
Vast - Vast	Differential Gate to Source Cutoff Voltage		6.0	15	mV	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1mA
               	Saturation Drain Current Ratio	0.9	1.0	1.1	n/a	$V_{DS} = 10V$ , $V_{GS} = 0V$

Absolute Maximum Ratings@ 25 °C (unless otherwise stated)Maximum Temperatures Storage Temperature-65 to +150°C Junction Operating Temperature-55 to +150°C Maximum Continuous Power Dissipation @ +25°C 400mW Maximum Currents:
Gate Forward CurrentIG(F)= 10mA Maximum Voltages:
Gate to SourceVGSS= 40 VGate to DrainVGDS= 40V

ldss: 4.25 mA vds(v): 10 v vgs: 0.2 vds(v): 10 V V GS(0FF): 0.4 V

All resistors, FETs and capacitators are THT. Use carbon and ceramic caps!

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File: piezo-jfet.sch

Title: Balanced amplifier for piezo elements.

 Size: A4
 Date:
 Rev:

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