



X1 J3
 X1 J4
 X1 J5
 X1 J2

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_{DS}	Gate to Source Breakdown Voltage	-40	---	---	V	$V_{GS} = 0, I_D = -100\mu A$
$V_{DS(off)}$	Gate to Source Pinch-off Voltage	-0.3	---	-1.6	V	$V_{DS} = 10V, I_D = 0, 1\mu A$
I_{DSS}	Drain to Source Saturation Current	LSK389A	2.6	---	6.5	$V_{DS} = 10V, V_{GS} = 0$
		LSK389B	6	---	12	
		LSK389C	10	---	20	
		LSK389D	17	---	30	
I_{DSS}	Gate to Source Leakage Current	---	-100	-300	pA	$V_{DS} = -25V, V_{GS} = 0$
$I_{D(ISO)}$	Gate to Gate Isolation Current	---	± 1.0	± 50	nA	$V_{DS(ISO)} = +45V, I_D = I_G = 0A$
G_{fs}	Full Conduction Transconductance	8	20	---	mS	$V_{DS} = 10V, V_{GS} = 0, f = 1kHz$
e_n	Noise Voltage	---	1.3	1.9	nV/√Hz	$V_{DS} = 10V, I_D = 2mA, f = 1kHz, NBW = 1Hz$
e_s	Noise Voltage	---	1.5	4.0	nV/√Hz	$V_{DS} = 10V, I_D = 2mA, f = 10kHz, NBW = 1Hz$
C_{iss}	Common Source Input Capacitance	---	25	---	pF	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$
C_{oss}	Common Source Reverse Transfer Cap.	---	5.5	---	pF	$V_{DS} = 10V, I_D = 0, f = 1MHz$

Matching Characteristics @ 25°C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
$ V_{GS1} - V_{GS2} $	Differential Gate to Source Cutoff Voltage	---	6.0	15	mV	$V_{DS} = 10V, I_D = 1mA$
$I_{D(ISO1)}$ $I_{D(ISO2)}$	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 Current $I_G(F) = 10mA$

Maximum Voltages:

Gate to Source $V_{GS} = 40$

Gate to Drain $V_{GDS} = 40V$

$I_{DSS} = 4.25 mA$

$v_{ds(v)} = 10 V$

$v_{gs} = 0.2$

$v_{ds(v)} = 10 V$

$V_{GS(OFF)} = 0.4 V$

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Title: Balanced amplifier for piezo elements.

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