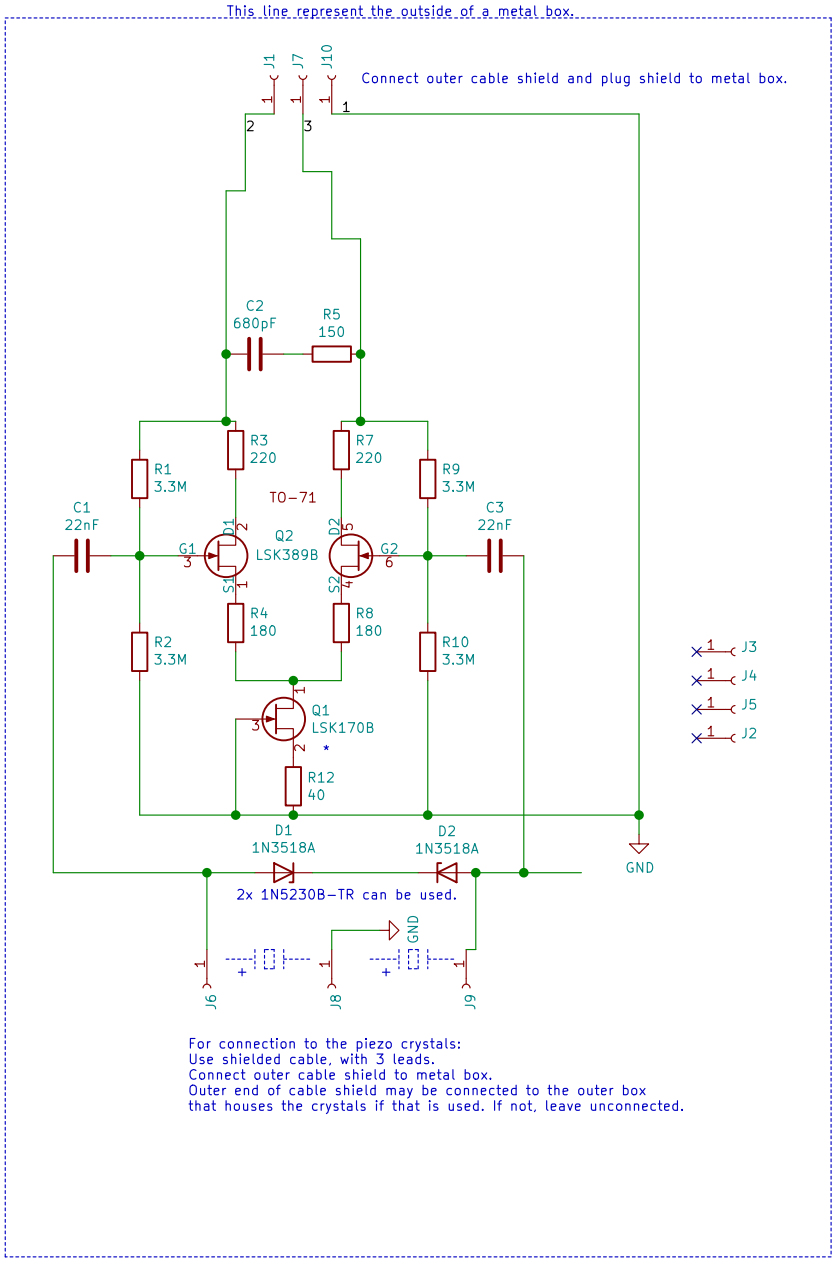

LSK389 A/B/C/D

Ultra Low Noise Monolithic Dual N-Channel JFET Amplifier

Electrical Characteristics @ 25°C (unless otherwise stated)

SYMBOL	CHARACTERISTIC		MIN	TYP	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage		-40	---	---	V	V_{DS} = 0, I_D = -100µA
$V_{GS(OFF)}$	Gate to Source Pinch-off Voltage		-0.3	---	-1.6	V	V_{DS} = 10V, I_D = 0.1µA
I_{DSS}	Drain to Source Saturation Current	LSK389A	2.6	---	6.5	mA	V_{DS} = 10V, V_{GS} = 0
		LSK389B	6	---	12		
		LSK389C	10	---	20		
		LSK389D	17	---	30		
I_{GSS}	Gate to Source Leakage Current		---	-100	-300	pA	V_{GS} = -25V, V_{DS} = 0
I_{G1-G2}	Gate to Gate Isolation Current		---	±1.0	±50	nA	V_{G1-G2} = ±45V, I_D = I_S = 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_n	Noise Voltage		---	1.5	4.0	nV/√Hz	V_{DS} = 10V, I_D = 2mA, f = 10Hz, NBW = 1Hz
C_{iss}	Common Source Input Capacitance		---	25	---	pF	V_{DS} = 10V, V_{GS} = 0, f = 1MHz,
C_{rss}	Common Source Reverse Transfer Cap.		---	5.5	---	pF	V_{DG} = 10V, I_D = 0, f = 1MHz,

Matching Characteristics @ 25°C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
$\lvert V_{GS1} - V_{GS2} \rvert$	Differential Gate to Source Cutoff Voltage	---	6.0	15	mV	V_{DS} = 10V, I_D = 1mA
$\frac{I_{DSS1}}{I_{DSS2}}$	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

Idss: 4.25 mA

If a 40 om resistor is not possible to get, replace Q1
with a small jumper connected from pin 1 to 2 and use a 1K resistor in place of R12

All resistors, FETs and capacitators are THT.
Use high tolerance film resistors and X7R caps!
All resistors and caps must be audio grade.
All shield connections must be short as possible.

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Title: Balanced amplifier for piezo elements.

Size: A4	Date:	**Rev:**
KiCad E.D.A. eeschema 5.1.10		Id: 1/1