



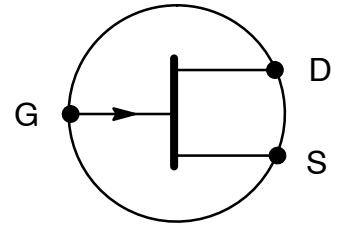
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NTE461

Silicon N-Channel JFET Transistor Dual, Matched Pair DC Amp/Sampler/Chopper TO-71 Type Package

Features:

- High Input Impedance: $I_G < 50\text{pA}$
- Minimum System Error and Calibrations
- TO-71 Case Style



Absolute Maximum Ratings:

Gate Drain or Gate Source Voltage	.....	-50V
Gate Current	.....	30mA
Device Dissipation ($T_A = +25^\circ\text{C}$, Each Side)	.....	250mW
Derate Above 25°C}	.....	1.67mW/ $^\circ\text{C}$
Total Device Dissipation ($T_A = +25^\circ\text{C}$)	.....	400mW
Derate Above 25°C}	.....	2.67mW/ $^\circ\text{C}$
Storage Temperature Range	.....	-65° to $+200^\circ\text{C}$
Lead Temperature (During Soldering, 1/16" from case for 30sec)	.....	$+300^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = -1\mu\text{A}$, $V_{DS} = 0$	-50	-	-	V
Gate Reverse Current	I_{GSS}	$V_{GS} = -30\text{V}$, $V_{DS} = 0$	-	-	-100	pA
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$V_{DG} = 15\text{V}$, $I_D = 0.5\text{nA}$	-0.5	-	-4.5	V
Saturation Drain Current	I_{DSS}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$	0.5	-	8.0	mA
Gate Operating Current	I_G	$V_{DG} = 15\text{V}$, $I_D = 200\mu\text{A}$	-	-	-50	pA
Dynamic Characteristics						
Forward Transconductance	g_{fs}	$g = 1\text{kHz}$	1500	-	6000	μmhos
Input Capacitance	C_{iss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$	-	-	6	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$	-	-	2	pF

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Matching Characteristics							
Differential Gate Current	$I_{G1}-I_{G2}$	$V_{DG} = 15\text{V}, I_D = 200\mu\text{A}, T_A = +25^\circ\text{C}$	-	-	5	nA	
Saturation Drain Current Ratio	I_{DSS1}/I_{DSS2}	$V_{DS} = 15\text{V}, V_{GS} = 0$, Note 1	0.95	-	1.0		
Differential Gate-Source Voltage	$V_{GS1}-V_{GS2}$	$V_{GD} = 15\text{V}$	$I_D = 50\mu\text{A}$	-	-	15	mV
			$I_D = 200\mu\text{A}$	-	-	15	mV
Gate-Source Voltage Differential Drift		$V_{DG} = 15\text{V}, I_D = 200\mu\text{A}$, Note 2	$T_A = +25^\circ\text{C}/T_B = +125^\circ\text{C}$	-	-	40	$\mu\text{V}/^\circ\text{C}$
			$T_A = -55^\circ\text{C}/T_B = +25^\circ\text{C}$	-	-	40	$\mu\text{V}/^\circ\text{C}$
Transconductance Ratio	g_{fs1}/g_{fs2}		0.95	-	1.0		
Differential Output Conductance	$g_{os1}-g_{os2}$		-	-	3	μmhos	

Note 1. Assumes smaller value in numerator.

Note 2. Measured at end points, T_A and T_B .

