n-channel JFET
designed for . . .

- **Analog Switches**
- **Choppers**
- **Commutators**

Siliconix

Performance Curves NZF
See Section 5

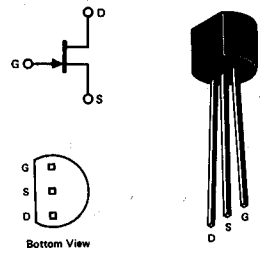
BENEFITS

- No Offset or Error Voltages Generated by Closed Switch
  - Purely Resistive
  - High Isolation Resistance from Driver
- Very Fast Switching
  - $t_{D(on)} + t_r = 6$ ns Typical
- Short Sample and Hold Aperture Time
  - $C_{gd(off)} < 2$ pF
  - $C_{gs(off)} < 2$ pF

ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage . . . . . –25V
Gate Current . . . . . 50 mA
Total Device Dissipation at 25°C Ambient
(Derate 3.27 mW/°C) . . . . . 360 mW
Operating Temperature Range . . . . . –55 to 135°C
Storage Temperature Range . . . . . –55 to 150°C
Lead Temperature Range
(1/16" from case for 10 seconds) . . . . . 300°C

TO-92
See Section 7



ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

		Characteristic		J114 Min	J114 Typ	J114 Max	Unit	Test Conditions	
1	STATIC	I_{GSS}	Gate Reverse Current (Note 1)			-1	nA	$V_{DS} = 0$, $V_{GS} = -15$ V	
2	STATIC	$V_{GS(off)}$	Gate-Source Cutoff Voltage	-3		-10	V	$V_{DS} = 5$ V, $I_D = 1$ μA	
3	STATIC	BV_{GSS}	Gate-Source Breakdown Voltage	-25			V	$V_{DS} = 0$, $I_G = -1$ μA	
4	STATIC	I_{DSS}	Saturation Drain Current (Note 2)	15			mA	$V_{DS} = 15$ V, $V_{GS} = 0$	
5	STATIC	$I_{D(off)}$	Drain Cutoff Current (Note 1)			1	nA	$V_{DS} = 5$ V, $V_{GS} = -10$ V	
6	STATIC	$r_{DS(on)}$	Drain-Source ON Resistance			150	Ω	$V_{DS} \leq 0.1$ V, $V_{GS} = 0$	
7	DYNAMIC	$C_{dg(off)}$	Drain-Gate OFF Capacitance			2	pF	$V_{DS} = 0$, $V_{GS} = -10$ V	f = 1 MHz
8	DYNAMIC	$C_{sg(off)}$	Source-Gate OFF Capacitance			2	pF	$V_{DS} = 0$, $V_{GS} = -10$ V	f = 1 MHz
9	DYNAMIC	$C_{dg(on)} + C_{sg(on)}$	Drain-Gate Plus Source-Gate ON Capacitance			8	pF	$V_{DS} = V_{GS} = 0$	f = 1 MHz
10	DYNAMIC	$t_{d(on)}$	Turn On Delay Time		3		ns	Switching Time Test Conditions $V_{DD} = 10$ V, $V_{GS(off)} = -12$ V $R_L = 1$ KΩ, $V_{GS(on)} = 0$	
11	DYNAMIC	t_r	Rise Time		3		ns		
12	DYNAMIC	$t_{d(off)}$	Turn Off Delay Time		12		ns		
13	DYNAMIC	t_f	Fall Time		8		ns		

NZF

NOTES:
1. Approximately doubles for every 10°C increase in T_A.
2. Pulse test duration = 300 μs; duty cycle ≤ 3%.