

NTE469

Silicon N-Channel JFET Transistor Chopper, High Speed Switch

Applications:

- Analog Switches
- Choppers
- Commutators

Absolute Maximum Ratings:

Drain-Source Voltage, V_{DS} 35V
 Drain-Gate Voltage, V_{DG} 35V
 Gate Current, I_G 50mA
 Total Device Dissipation ($T_A = +25^\circ\text{C}$), P_D 625mW
 Derate Above 25°C 5.68mW/ $^\circ\text{C}$
 Operating Junction Temperature Range, T_J -55° to $+150^\circ\text{C}$
 Storage Temperature Range, T_{stg} -55° to $+150^\circ\text{C}$
 Lead Temperature (During Soldering), T_L $+300^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Gate-Source Breakdown Voltage	$V_{(BR)GS}$	$I_G = 1\mu\text{A}$, $V_{DS} = 0$	35	—	—	V
Gate Reverse Current	I_{GSS}	$V_{GS} = -15\text{V}$, $V_{DS} = 0$	—	—	-1.0	nA
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5\text{V}$, $I_D = 1\mu\text{A}$	-0.5	—	-3.0	V
Drain Cutoff Current	$I_{D(off)}$	$V_{DS} = 5\text{V}$, $V_{GS} = -10\text{V}$	—	—	1.0	nA
ON Characteristics						
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, Note 1	2.0	—	—	mA
Static Drain-Source ON Resistance	$r_{DS(on)}$	$V_{DS} = 0.1\text{V}$	—	—	100	Ω
Drain-Gate ON Capacitance	$C_{dg(on)}$	$V_{DS} = V_{GS} = 0$, $f = 1\text{MHz}$	—	—	28	pF
Source-Gate ON Capacitance	$C_{sg(on)}$	$V_{DS} = V_{GS} = 0$, $f = 1\text{MHz}$	—	—	28	pF
Drain-Gate OFF Capacitance	$C_{dg(off)}$	$V_{GS} = -10\text{V}$, $f = 1\text{MHz}$	—	—	5	pF
Source-Gate OFF Capacitance	$C_{sg(off)}$	$V_{GS} = -10\text{V}$, $f = 1\text{MHz}$	—	—	5	pF

Note 1. Pulse Test: Pulse Width = 300 μs , Duty Cycle = 3%.

