

APPLICATIONS

- Analog Switches
- Choppers
- Commutators

FEATURES

- Low Cost
- Automated Insertion Package
- Low Insertion Loss
 - $r_{DS(on)} < 30\Omega$ (J111)
- No Offset or Error Voltage Generated by Closed Switch
 - Purely Resistive
 - High Isolation Resistance from Driver
- Fast Switching
 - $t_{D(on)} + t_r = 13$ ns Typical
- Short Sample and Hold Aperture Time
 - $C_{gd(off)} < 5$ pF
 - $C_{gs(off)} < 5$ pF

ABSOLUTE MAXIMUM RATINGS (@ 25°C)

Gate-Drain or Gate-Source Voltage -35V
 Gate Current 50 mA
 Total Device Dissipation ($T_{LEAD} = 25^\circ\text{C}$) 625 mW
 Power Derating (to +135°C) 5.68 mW/°C
 Storage Temperature Range -55°C to +135°C
 Operating Temperature Range -55°C to +135°C
 Lead Temperature (1/16" from case for 10 seconds) +300°C

ELECTRICAL CHARACTERISTICS

TEST CONDITIONS: 25°C unless otherwise noted

		J111			J112			J113			UNIT	TEST CONDITIONS
		MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
1	S	I_{GSS} Gate Reverse Current (Note 1)		1		1		1		1	nA	$V_{DS} = 0V, V_{GS} = -15V$
2	T	$V_{GS(off)}$ Gate Source Cutoff Voltage		3	1	5	0.5	3			V	$V_{DS} = 5V, I_D = 1\mu A$
3	A	BV_{GSS} Gate Source Breakdown Voltage		35	35		35					$V_{DS} = 0V, I_G = -1\mu A$
4	T	I_{DSS} Drain Saturation Current (Note 2)		20	5		2				mA	$V_{DS} = 15V, V_{GS} = 0V$
5	I	$I_{D(off)}$ Drain Cutoff Current (Note 1)		1		1		1		1	nA	$V_{DS} = 5V, V_{GS} = -10V$
6	C	$r_{DS(on)}$ Drain Source ON Resistance		30		50		100			Ω	$V_{DS} = 0.1V, V_{GS} = 0V$
7	D	$C_{gd(off)}$ Drain Gate OFF Capacitance		5		5		5			pF	$V_{DS} = 0V, V_{GS} = -10V$
8	Y	$C_{sg(off)}$ Source Gate OFF Capacitance		5		5		5				$V_{DS} = V_{GS} = 0$
9	N	$C_{dg(on)}$ Drain Gate Plus Source Gate		28		28		28				$f = 1$ MHz
	A	$C_{sg(on)}$ ON Capacitance										
10	M	$t_{D(on)}$ Turn On Delay Time		7		7		7			ns	Switching Time Test Conditions
11	I	t_r Rise Time		6		6		6				J111 J112 J113
12	C	$t_{D(off)}$ Turn Off Delay Time		20		20		20				V_{DD} 10V 10V 10V
13	T	t_f Fall Time		15		15		15				$V_{GS(off)}$ -12V -7V -5V
												R_L 800 Ω 1,600 Ω 3,200 Ω

NOTES:

1. Approximately doubles for every 10°C increase in T_A .
2. Pulse Test duration 300 μ s; duty cycle $\leq$ 3%.

