

n-channel JFETs designed for . . .



Performance Curves NC See Section 4

- Analog Switches
- Choppers
- Commutators

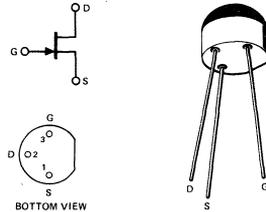
BENEFITS

- Low Insertion Loss
 $R_{DS(on)} < 30 \Omega$ (E111)
- No Offset or Error Voltages 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	-35 V
Gate Current	50 mA
Total Device Dissipation (25°C Free-Air Temperature)	350 mW
Power Derating (to +125°C)	3.5 mW/°C
Storage Temperature Range	-55 to +125°C
Operating Temperature Range	-55 to +125°C
Lead Temperature (1/16" from case for 10 seconds)	300°C

TO-106
See Section 5



ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

Characteristics	E111			E112			E113			Unit	Test Conditions	
	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max			
1 S 2 T 3 A	IGSS	Gate Reverse Current (Note 1)		-1		-1		-1		-1	nA	VDS = 0, VGS = -15 V
	VGS(off)	Gate-Source Cutoff Voltage	-3	-10	-1	-5	-0.5	-3			V	VDS = 5 V, ID = 1 μA
	BVGS	Gate-Source Breakdown Voltage	-35		-35		-35					VDS = 0, IG = -1 μA
4 T 5 I 6 C	IDSS	Saturation Drain Current (Note 2)	20		5		2				mA	VDS = 15 V, VGS = 0
	ID(off)	Drain Cutoff Current (Note 1)		1		1		1			nA	VDS = 5 V, VGS = -10 V
	rDS(on)	Drain-Source ON Resistance		30		50		100			Ω	VDS ≤ 0.1 V, VGS = 0
	Cgd(off)	Drain-Gate OFF Capacitance		5		5		5			pF	VDS = 0, VGS = -10 V f = 1 MHz
	Csg(off)	Source-Gate OFF Capacitance		5		5		5				
9 D 10 Y 11 N 12 A	Cdg(on) + Csg(on)	Drain-Gate Plus Source-Gate ON Capacitance		28		28		28				
10 M	td(on)	Turn On Delay Time		7		7		7			ns	Switching Time Test Conditions E111 10 V, VGS(off) -12 V, RL 800 Ω E112 10 V, VGS(off) -7 V, RL 1,600 Ω E113 10 V, VGS(off) -5 V, RL 3,200 Ω
11 I	tr	Rise Time		6		6		6				
12 C	td(off)	Turn Off Delay Time		20		20		20				
13	tf	Fall Time		15		15		15				

NOTES:

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

NC