n-channel JFETs *designed for . . .*

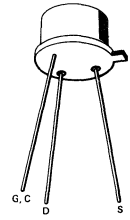
- **Analog Switches**
- **Commutators**
- **Choppers**

Performance Curves NVA
See Section 4

BENEFITS

- Ultra-Low Insertion Loss
  $R_{DS(on)} < 2.5\ \Omega$ (U295)
- High Off-Isolation
  $I_{D(off)} < 1$ nA
- Higher Power Dissipation Package than U290, 1
- No Offset or Error Voltage Generated by Closed Switch
  Purely Resistive

TO-39
See Section 5



ABSOLUTE MAXIMUM RATINGS (25°C)

Reverse Gate-Drain or Gate-Source Voltage . . . . . –30 V
Gate Current . . . . . 100 mA
Drain Current . . . . . 1.5 A
Total Continuous Free Air Device Dissipation
at (or Below) T_A = 25°C
(Derate 6.4 mW/°C to 150°C) . . . . . 800 mW
Total Continuous Device Dissipation
at (or Below) T_C = 25°C
(Derate 24 mW/°C to 150°C) . . . . . .3 W
Storage Temperature Range . . . . . –65 to +150°C
Lead Temperature
(1/16" from case for 10 seconds) . . . . . .300°C

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

			Characteristic	U295 Min	U295 Max	U296 Min	U296 Max	Unit	Test Conditions	
1	STATIC	I_{GSS}	Gate Reverse Current		–1		–1	nA	V_{GS} = –15 V, V_{DS} = 0	
2					–1		–1	μA		150°C
3		BV_{GSS}	Gate-Source Breakdown Voltage	–30		–30		V	I_G = –1 μA, V_{DS} = 0	
4		$V_{GS(off)}$	Gate-Source Cutoff Voltage	–4	–10	–1.5	–4.5		V_{DS} = 15 V, I_D = 3 nA	
5		$I_{D(off)}$	Drain Cutoff Current		1		1	nA	V_{DS} = 5 V, V_{GS} = –10 V	
6					1		1	μA		150°C
7		$V_{DS(on)}$	Drain Source ON Voltage		25		70	mV	V_{GS} = 0, I_D = 10 mA	
8		I_{DSS}	Saturation Drain Current (Note 1)	500		200		mA	V_{DS} = 10 V, V_{GS} = 0	
9		$r_{DS(on)}$	Static Drain-Source ON Resistance	1.0	2.5	2	7	Ω	V_{GS} = 0 V, I_D = 10 mA	
10	DYNAMIC	$r_{ds(on)}$	Drain-Source ON Resistance	1.0	2.5	2	7	Ω	V_{GS} = 0, I_D = 0	f = 1 kHz
11		C_{SGO}	Source-Gate OFF Capacitance		30		30	pF	V_{SG} = 15 V, I_D = 0	f = 1 MHz
12		C_{DGO}	Drain-Gate OFF Capacitance		30		30		V_{DG} = 15 V, I_S = 0	
13		$C_{SG}+C_{DG}$	Source-Gate Plus Drain-Gate ON Capacitance		160		160		V_{DS} = 0, V_{GS} = 0	
14	SWITCHING	$t_{d(on)}$	Turn ON Delay Time		15		15	ns	V_{DD} = 1.5 V, $I_{D(on)}$ = 30 mA	
15		t_r	Rise Time		20		20		$V_{GS(on)}$ = 0, R_L = 50 Ω	
16		$t_{d(off)}$	Turn OFF Delay Time		15		15		$V_{GS(off)}$ = –12 V (U295)	
17		t_f	Fall Time		20		20		$V_{GS(off)}$ = –7 V (U296)	

NVA

NOTES:
1. Pulse test required pulsewidth 300 μs, duty cycle ≤ 3%.

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