n-channel JFETs *designed for . . .*

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

Performance Curves NC
See Section 4

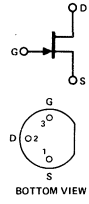
BENEFITS

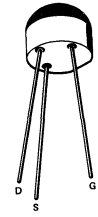
- Low Insertion Loss
- No Offset or Error Voltages Generated by Closed Switch
  - Purely Resistive
  - High Isolation Resistance from Driver
- Low Cost

ABSOLUTE MAXIMUM RATINGS (25°C)

Reverse Gate-Drain or Gate-Source Voltage . . . . . –40 V
Forward Gate Current . . . . . 50 mA
Total Device Dissipation at (or Below) T_A = 25°C
(Derate 3.5 mW/°C to +125°C) . . . . . 350 mW
Storage 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)

		Characteristic	KE4391 Min	KE4391 Max	KE4392 Min	KE4392 Max	KE4393 Min	KE4393 Max	Unit	Test Conditions	
1		I_{GSS} Gate Reverse Current		–1.0		–1.0		–1.0	nA	V_{GS} = –20 V, V_{DS} = 0	
2				–200		–200		–200			100°C
3		BV_{GSS} Gate-Source Breakdown Voltage	–40		–40		–40		V	I_G = –1 μA, V_{DS} = 0	
4		$I_{D(off)}$ Drain Cutoff Current						1.0	nA	V_{DS} = 20 V	V_{GS} = –5 V
5								200			100°C
6	STATIC					1.0					V_{GS} = –7 V
7						200					100°C
8				1.0							V_{GS} = –12 V
9				200							100°C
10		$V_{GS(f)}$ Gate-Source Forward Voltage		1		1		1	V	I_G = 1 mA, V_{DS} = 0	
11		$V_{GS(off)}$ Gate-Source Cutoff Voltage	–4	–10	–2	–5	–0.5	–3		V_{DS} = 20 V, I_D = 1 nA	
12		I_{DSS} Saturation Drain Current (Note 1)	50	150	25	75	5	30	mA	V_{DS} = 20 V, V_{GS} = 0	
13		$V_{DS(on)}$ Drain-Source ON Voltage						0.4	V	V_{GS} = 0	I_D = 3 mA
14						0.4					I_D = 6 mA
15				0.4							I_D = 12 mA
16		$r_{DS(on)}$ Static Drain-Source ON Resistance		30		60		100	Ω	V_{GS} = 0, I_D = 1 mA	
17		$r_{ds(on)}$ Drain-Source ON Resistance		30		60		100	Ω	V_{GS} = 0, V_{DS} = 0	f = 1 kHz
18		C_{iss} Common-Source Input Capacitance		14		14		14	pF	V_{DS} = 20 V, V_{GS} = 0	
19	DYN	C_{rss} Common-Source Reverse Transfer Capacitance						3.5		V_{DS} = 0	V_{GS} = –5 V
20						3.5					V_{GS} = –7V
21				3.5							V_{GS} = –12 V
22		$t_{d(on)}$ Turn-ON Delay Time		15		15		15	ns	V_{DD} = 10 V, $V_{GS(on)}$ = 0	
23	SW	t_r Rise Time		5		5		5		$I_{D(on)}$ / $V_{GS(off)}$ / R_L	
24		$t_{d(off)}$ Turn-OFF Delay Time		20		35		50		KE4391: 12 mA / –12 V / 800 Ω	
25		t_f Fall Time		15		20		30		KE4392: 6 / –7 / 1.6K; KE4393: 3 / –5 / 3.2K	

NC

NOTE:
1. Pulse test required, pulse width ≈ 300 μs, duty cycle ≤ 3%.