p-channel JFETs *designed for . . .*

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

Performance Curves PS
See Section 4

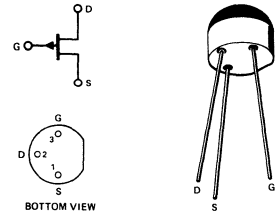
BENEFITS

- Low Insertion Loss
  $R_{DS(on)}$ = 75 Ω Maximum (P1086E)
- No Offset or Error Voltages Generated by Closed Switch
  Purely Resistive

ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage (Note 1) . . . . . 30 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)

		Characteristic		P1086E Min	P1086E Max	P1087E Min	P1087E Max	Unit	Test Conditions	
1		BV_{GSS}	Gate-Source Breakdown Voltage	30		30		V	I_G = 1 μA, V_{DS} = 0	
2		I_{GSS}	Gate Reverse Current		2		2	nA	V_{GS} = 15 V, V_{DS} = 0	
3		$I_{D(off)}$	Drain Cutoff Current		−10		−10	nA	V_{DS} = −15 V, V_{GS} = 12 V (P1086E)	
4	STATIC				−0.5		−0.5	μA	V_{GS} = 7 V (P1087E)	T_A = 85°C
5		I_{DGO}	Drain Reverse Current		2		2	nA	V_{DG} = −15 V, I_S = 0	
					0.1		0.1	μA		T_A = 85°C
6		$V_{GS(off)}$	Gate-Source Cutoff Voltage		10		5	V	V_{DS} = −15 V, I_D = −1 μA	
7		I_{DSS}	Saturation Drain Current	−10		−5		mA	V_{DS} = −20 V, V_{GS} = 0	
8		$V_{DS(on)}$	Drain-Source ON Voltage		−0.5		−0.5	V	V_{GS} = 0, I_D = −6 mA (P1086E), I_D = −3 mA (P1087E)	
9		$r_{DS(on)}$	Static Drain-Source ON Resistance		75		150	Ω	I_D = −1 mA, V_{GS} = 0	
10		$r_{ds(on)}$	Drain-Source ON Resistance		75		150	Ω	I_D = 0, V_{GS} = 0	f = 1 kHz
11	DYN	C_{iss}	Common-Source Input Capacitance		45		45	pF	V_{DS} = −15 V, V_{GS} = 0	f = 1 MHz
12		C_{rss}	Common-Source Reverse Transfer Capacitance		10		10		V_{DS} = 0, V_{GS} = 12 V (P1086E) V_{GS} = 7 V (P1087E)	
13	SWITCH	$t_{d(on)}$	Turn-ON Delay Time		15		15	ns	V_{DD} = −6 V, $V_{GS(on)}$ = 0	
14		t_r	Rise Time		20		75			
15		$t_{d(off)}$	Turn-OFF Delay Time		15		25		P1086E: $V_{GS(off)}$ = 12 V, $I_{D(on)}$ = −6 mA, R_L = 910 Ω	
16		t_f	Fall Time		50		100		P1087E: $V_{GS(off)}$ = 7 V, $I_{D(on)}$ = −3 mA, R_L = 1.8K Ω	

NOTE:
1. Due to symmetrical geometry, these units may be operated with source and drain leads interchanged.

PS