

# p-channel JFETs designed for . . .



Performance Curves PE  
See Section 5

- Analog Switches
- Choppers
- Commutators
- Amplifiers

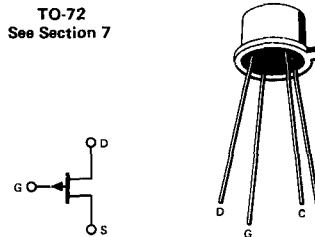
### BENEFITS

- Low Insertion Loss  
 $R_{DS(on)} < 150 \Omega$  (2N3386)

### \*ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain Voltage (Note 1)	30 V
Gate-Source Voltage (Note 1)	30 V
Gate Current	50 mA
Storage Temperature Range	-65 to +200°C
Total Dissipation at 25°C $T_A$ (Note 2)	300 mW

TO-72  
See Section 7



### \*ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

Characteristic		2N3382		2N3384		2N3386		Unit	Test Conditions		
		Min	Max	Min	Max	Min	Max				
STATIC	1	$I_{GSS}$	Gate Reverse Current		15		15		nA	$V_{GS} = 30 V$ $V_{DS} = 0$	
	2	$I_{GSS}$	Gate Reverse Current		15		15		$\mu A$	$V_{GS} = 5 V$ $V_{DS} = 0$ $T_A = 150^\circ C$	
	3	$BV_{GSS}$	Gate-Source Breakdown Voltage	30		30		30	V	$I_G = 1 \mu A$ $V_{DS} = 0$	
	4	$V_{GS(off)}$	Gate-Source Cutoff Voltage (Note 3)	1.0	5.0	4.0	5.0	4.0		9.5	$V_{DS} = -5 V$ $I_D = -1 \mu A$
	5	$I_{DSS}$	Saturation Drain Current (Note 3)	-3.0	-30.0	-15.0	-30.0	-15.0	-50.0	mA	$V_{DS} = -10 V$ $V_{GS} = 0$
DYNAMIC	6	$I_{D(off)}$	Drain Cutoff Current		-2 (6)		-2 (6)	-2.5 (10)	nA (V)	$V_{DS} = -5 V$ $V_{GS} = ( )$	
	7	$r_{ds(on)}$	Drain-Source ON Resistance		300		180	150	$\Omega$	$V_{GS} = 0$ $V_{DS} = 0$ $f = 1 kHz$	
	8	$g_{fs}$	Common-Source Forward Transconductance (Note 3)	4500	12,500	7500	12,500	7500	15,000	$\mu mho$	$V_{DS} = -10 V$ $V_{GS} = 0$
	9	$C_{sgs}$ + $C_{dgs}$	Source-Gate Capacitance Plus Drain-Gate Capacitance		6.0		6.0	6.0	pF	$V_{DS} = 0$ $V_{GS} = 10 V$ $f = 140 kHz$	
	10	$C_{iss}$	Common-Source Input Capacitance	16 Typ							$V_{DS} = -5 V$ $V_{GS} = 1 V$

\*JEDEC registered data.

PE

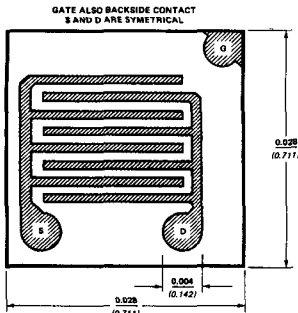
#### NOTE:

1. Due to symmetrical geometry, units may be operated with source and drain leads interchanged.
2. Derate linearly to +175°C at 2 mW/°C
3. Pulswidth = 2 ms, duty cycle  $\leq 3\%$ .

2N3382 2N3384 2N3386

3

Siliconix



ALL DIMENSIONS IN INCHES  
(ALL DIMENSIONS IN MILLIMETERS)

## p-channel JFET designed for . . .

- General Purpose Amplifiers
- Switches

TYPE  
Single  
Single

PACKAGE  
TO-72  
Chip

### BENEFITS:

- Wide Range of Transconductance

### PRINCIPAL DEVICES

2N3382, 2N3384, 2N3386, VCR3P  
2N3382CHP-866CHP, VCR3PCHP



## PERFORMANCE CURVES (25°C unless otherwise noted)

