p-channel JFETs *designed for . . .*

Siliconix

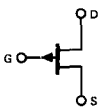
Performance Curves PE
See Section 5

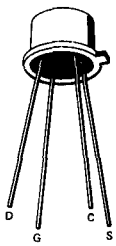
- **Analog Switches**
- **Choppers**
- **Commutators**
- **Amplifiers**

BENEFITS

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

TO-72
See Section 7





*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

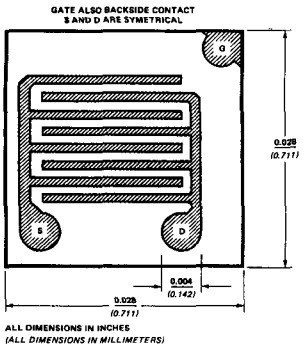
*ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

		Characteristic		2N3382		2N3384		2N3386		Unit	Test Conditions	
				Min	Max	Min	Max	Min	Max			
1	STATIC	I_{GSS}	Gate Reverse Current		15		15		15	nA	V_{GS} = 30 V V_{DS} = 0	
2	STATIC	I_{GSS}	Gate Reverse Current		15		15		15	μA	V_{GS} = 5 V V_{DS} = 0	T_A = 150°C
3	STATIC	BV_{GSS}	Gate-Source Breakdown Voltage	30		30		30		V	I_G = 1 μA V_{DS} = 0	
4	STATIC	$V_{GS(off)}$	Gate-Source Cutoff Voltage (Note 3)	1.0	5.0	4.0	5.0	4.0	9.5	V	V_{DS} = -5 V I_D = -1 μA	
5	STATIC	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	
6	STATIC	$I_{D(off)}$	Drain Cutoff Current		-2 (6)		-2 (6)		-2.5 (10)	nA (V)	V_{DS} = -5 V V_{GS} = ( )	
7	DYNAMIC	$r_{ds(on)}$	Drain-Source ON Resistance		300		180		150	Ω	V_{GS} = 0 V_{DS} = 0	f = 1 kHz
8	DYNAMIC	g_{fs}	Common-Source Forward Transconductance (Note 3)	4500	12,500	7500	12,500	7500	15,000	μmho	V_{DS} = -10 V V_{GS} = 0	f = 1 kHz
9	DYNAMIC	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	DYNAMIC	C_{iss}	Common-Source Input Capacitance	16 Typ							V_{DS} = -5 V V_{GS} = 1 V	f = 140 kHz

PE

*JEDEC registered data.

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. Pulsewidth = 2 ms, duty cycle ≤ 3%.



p-channel JFET
designed for . . .

- General Purpose Amplifiers
- Switches

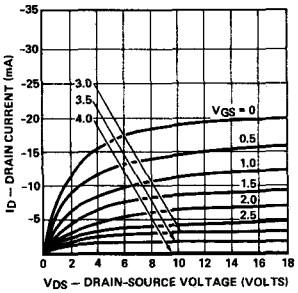
BENEFITS:

- Wide Range of Transconductance

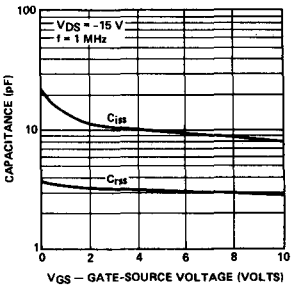
TYPE	PACKAGE	PRINCIPAL DEVICES
Single	TO-72	2N3382, 2N3384, 2N3386, VCR3P
Single	Chip	2N3382CHP-86CHP, VCR3PCHP

PERFORMANCE CURVES (25°C unless otherwise noted)

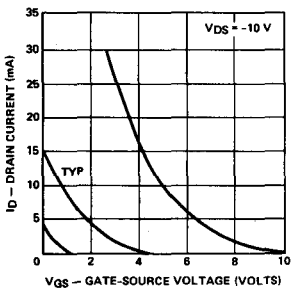
Output Characteristic



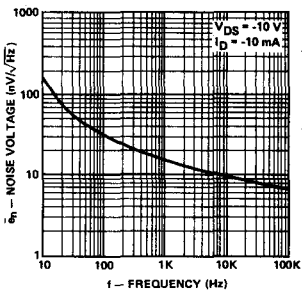
Common-Source Capacitances vs Gate-Source Voltage



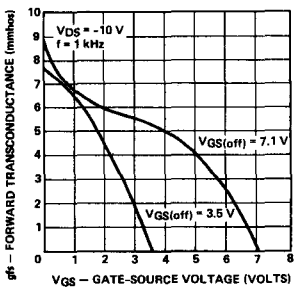
Transfer Characteristics



Equivalent Input Noise Voltage vs Frequency



Transconductance Characteristics



Drain Current & Transconductance vs Gate-Source Voltage