p-channel JFETs *designed for . . .*

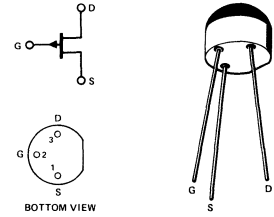
■ General Purpose Amplifiers

Performance Curves PS See Section 4

BENEFITS

- High Gain Amplifiers
  g_{fs} = 14,000 μmho Typical (E271)
- Low Noise
  $\overline{e_n}$ = 10 nV/√Hz at 1 kHz Typical

TO-106
See Section 5



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

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

		Characteristic		E270 Min	E270 Typ	E270 Max	E271 Min	E271 Typ	E271 Max	Unit	Test Conditions	
1	STATIC	I_{GSS}	Gate Reverse Current (Note 2)			200			200	pA	V_{DS} = 0, V_{GS} = 20 V	
2	STATIC	$V_{GS(off)}$	Gate-Source Cutoff Voltage	0.5		2.0	1.5		4.5	V	V_{DS} = -15 V, I_D = -1 nA	
3	STATIC	BV_{GSS}	Gate-Source Breakdown Voltage	30			30			V	V_{DS} = 0, I_G = 1 μA	
4	STATIC	I_{DSS}	Saturation Drain Current (Note 3)	-2		-15	-6		-50	mA	V_{DS} = -15 V, V_{GS} = 0	
5	STATIC	I_G	Gate Current (Note 2)		15			60		pA	V_{DG} = -15 V, I_D = $I_{DSS(min)}$	
6	DYNAMIC	g_{fs}	Common-Source Forward Transconductance (Note 3)	6,000		15,000	8,000		18,000	μmho	V_{DS} = -15 V, V_{GS} = 0	f = 1 kHz
7	DYNAMIC	g_{os}	Common-Source Output Conductance			200			500	μmho	V_{DS} = -15 V, V_{GS} = 0	f = 1 kHz
8	DYNAMIC	C_{iss}	Common-Source Input Capacitance		20			20		pF	V_{DS} = -15 V, V_{GS} = 0	f = 1 MHz
9	DYNAMIC	C_{rss}	Common-Source Reverse Transfer Capacitance		5			5		pF	V_{DS} = -15 V, V_{GS} = 0	f = 1 MHz
10	DYNAMIC	e_n	Equivalent Short-Circuit Input Noise Voltage		10			10		$\frac{nV}{\sqrt{Hz}}$	V_{DS} = -10 V, I_D = $I_{DSS(min)}$	f = 1 kHz

NOTES: PS

1. Geometry is symmetrical. Units may be operated with source and drain leads interchanged.
2. Approximately doubles for every 10°C increase in T_A.
3. Pulse test duration = 2 ms.