n-channel JFETs *designed for . . .*

■ Audio and Sub-Audio Amplifiers

Performance Curves NS See Section 4

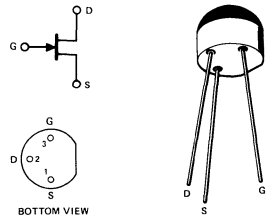
BENEFITS

- Ultra Low Noise
  $\overline{e_n}$ = 8 nV/$\sqrt{Hz}$ Typical at 10 Hz
  $\overline{e_n}$ = 2 nV/$\sqrt{Hz}$ Typical at 1 kHz

ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage (Note 1) ..... -40 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		E230			E231			E232			Unit	Test Conditions	
				Min	Typ	Max	Min	Typ	Max	Min	Typ	Max			
1	STATIC	I_{GSS}	Gate Reverse Current (Note 2)			-250			-250			-250	pA	V_{DS} = 0, V_{GS} = -30 V	
2	STATIC	$V_{GS(off)}$	Gate-Source Cutoff Voltage	-1		-3	-2		-5	-4		-6	V	V_{DS} = 20 V, I_D = 1 μA	
3	STATIC	BV_{GSS}	Gate-Source Breakdown Voltage	-40			-40			-40			V	V_{DS} = 0, I_G = -1 μA	
4	STATIC	I_{DSS}	Saturation Drain Current (Note 3)	0.7		3	2		6	5		10	mA	V_{DS} = 20 V, V_{GS} = 0	
5	STATIC	I_G	Gate Current (Note 2)		-10			-10			-10		pA	V_{DG} = 10 V, I_D = 0.5 mA	
6	DYNAMIC	g_{fs}	Common-Source Forward Transconductance (Note 3)	1,000		2,500	1,500		3,000	2,500		4,000	μmho	V_{DS} = 20 V, V_{GS} = 0	f = 1 kHz
7	DYNAMIC	g_{os}	Common-Source Output Conductance			2			4			6	μmho	V_{DS} = 20 V, V_{GS} = 0	f = 1 kHz
8	DYNAMIC	C_{iss}	Common-Source Input Capacitance		15			15			15		pF	V_{DS} = 20 V, V_{GS} = 0	f = 1 MHz
9	DYNAMIC	C_{rss}	Common-Source Reverse Transfer Capacitance		2			2			2		pF	V_{DS} = 20 V, V_{GS} = 0	f = 1 MHz
10	DYNAMIC	$\overline{e_n}$	Equivalent Short Circuit Input Noise Voltage		8	30		8	30		8	30	nV/√Hz	V_{DS} = 10 V, V_{GS} = 0	f = 10 Hz
11	DYNAMIC	$\overline{e_n}$	Equivalent Short Circuit Input Noise Voltage		2			2			2		nV/√Hz	V_{DS} = 10 V, V_{GS} = 0	f = 1 kHz

NOTES: NS
1. Geometry is symmetrical. Unit 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.