n-channel JFETs *designed for . . .*

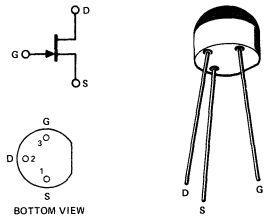
- **VHF/UHF Amplifiers**
- **Oscillators**
- **Mixers**

Performance Curves NH See Section 4

BENEFITS

- Characterized for Operation at 100 and 400 MHz
- Low Noise
  NF = 1.7 dB Typical at 100 MHz

TO-106
See Section 5



ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage . . . . . -30 V
Gate Current . . . . . 10 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		E304			E305			Unit	Test Conditions	
				Min	Typ	Max	Min	Typ	Max			
1	STATIC	I_{GSS}	Gate Reverse Current (Note 1)			-100			-100	pA	V_{DS} = 0, V_{GS} = -20 V	
2		$V_{GS(off)}$	Gate Source Cutoff Voltage	-2		-6	-0.5		-3	V	V_{DS} = 15 V, I_D = 1 nA	
3		BV_{GSS}	Gate Source Breakdown Voltage	-30			-30				V_{DS} = 0, I_G = -1 μA	
4		I_{DSS}	Saturation Drain Current (Note 2)	5		15	1		8	mA	V_{DS} = 15 V, V_{GS} = 0	
5	DYNAMIC	g_{fs}	Common-Source Forward Transconductance (Note 2)	4,500		7,500	3,000			μmho	V_{DS} = 15 V, V_{GS} = 0	f = 1 kHz
6		g_{os}	Common-Source Output Transconductance			50			50			
7		C_{iss}	Common-Source Input Capacitance		3.0			3.0		pF		f = 1 MHz
8		C_{rss}	Common-Source Reverse Transfer Capacitance		0.8			0.8				
9		C_{oss}	Common-Source Output Capacitance		1.0			1.0				
10	HIGH FREQUENCY	g_{fs}	Common-Source Forward Transconductance					3,000		μmho	V_{DS} = 15 V, V_{GS} = 0	f = 100 MHz
11					4,200							f = 400 MHz
12		g_{oss}	Common-Source Output Conductance		60			60				f = 100 MHz
13					80							f = 400 MHz
14		b_{oss}	Common-Source Output Susceptance		800			800				f = 100 MHz
15					3,600							f = 400 MHz
16		g_{iss}	Common-Source Input Conductance		80			80				f = 100 MHz
17					800							f = 400 MHz
18		b_{iss}	Common-Source Input Susceptance		2,000			2,000				f = 100 MHz
19					7,500							f = 400 MHz
20		G_{ps}	Common-Source Power Gain		20					dB	V_{DS} = 15 V, I_D = 5 mA	f = 100 MHz
21					11							f = 400 MHz
22		NF	Noise Figure (Single Sideband)		1.7						V_{DS} = 15 V, I_D = 5 mA, R_G = 1 KΩ	f = 100 MHz
23					3.8							f = 400 MHz

NOTES:
1. Approximately doubles for every 10°C increase in T_A.
2. Pulse test duration = 2 ms.

NH