n-channel silicon JFET

designed for . . .

- **VHF Amplifiers**
- **Mixers**

Performance Curves NH
See Section 4

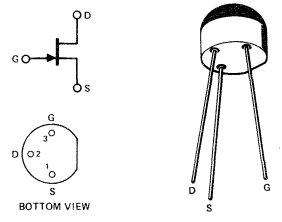
BENEFITS

- Low Noise
  NF = 3 dB Typical at 400 MHz
- Wideband
  High G_{fs}/C_{iss} Ratio
- Specified for Operation at 400 MHz

ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage . . . . . −30 V
Forward Gate Current . . . . . 10 mA
Total Continuous Device Dissipation
at (or Below) T_A = 25°C
(Derate 3.5 mW/°C to 125°C) . . . . . 350 mW
Storage 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		Min	Max	Unit	Test Conditions	
1	STATIC	I_{GSS}	Gate Reverse Current		−100	pA	V_{GS} = −20 V, V_{DS} = 0	
2					−10	nA		T_A = 100°C
3		BV_{GSS}	Gate-Source Breakdown Voltage	−30		V	I_G = −1 μA, V_{DS} = 0	
4		$V_{GS(off)}$	Gate-Source Cutoff Voltage		−6	V	V_{DS} = 15 V, I_D = 1 nA	
5		V_{GS}	Gate-Source Voltage	−1.0	−5.5	V	V_{DS} = 15 V, I_D = 500 μA	
6		I_{DSS}	Saturation Drain Current (Note 1)	5	15	mA	V_{DS} = 15 V, V_{GS} = 0	
7	DYNAMIC	g_{fs}	Common-Source Forward Transconductance (Note 1)	4500	7500	μmho	V_{DS} = 15 V, V_{GS} = 0	f = 1 kHz
8		g_{os}	Common-Source Output Conductance		50	μmho		
9		C_{rss}	Common-Source Reverse Transfer Capacitance		1	pF		f = 1 MHz
10		C_{iss}	Common-Source Input Capacitance		4	pF		
11		C_{oss}	Common-Source Output Capacitance		2			

		Characteristic		100 MHz Min	100 MHz Max	400 MHz Min	400 MHz Max	Unit	Test Conditions
12	HI FREQ	g_{iss}	Common-Source Input Conductance		100		1000	μmho	V_{DS} = 15 V, V_{GS} = 0
13		b_{iss}	Common-Source Input Susceptance		2500		10,000	μmho	
14		g_{oss}	Common-Source Output Conductance		75		100	μmho	
15		b_{oss}	Common-Source Output Susceptance		1000		4000	μmho	
16		g_{fs}	Common-Source Forward Transconductance (Note 1)			4000		μmho	
17		G_{ps}	Common-Source Power Gain	18		10		dB	V_{DS} = 15 V, I_D = 5 mA
18		NF	Noise Figure		2		4	dB	V_{DS} = 15 V, I_D = 5 mA, R_G = 1K Ω

NOTE: NH

1. Pulse test duration = 300 μs.