U311

PREFERRED PART U310

n-channel JFET
designed for . . .

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

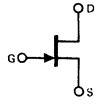
Siliconix

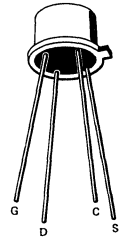
Performance Curves NZB
See Section 4

BENEFITS

- High Power Gain
  16 dB Typ @ 105 MHz, Common-Gate
  11 dB Typ @ 450 MHz, Common-Gate
- Low Noise Figure
  1.5 dB Typ @ 105 MHz
  2.7 dB Typ @ 450 MHz
- Wide Dynamic Range—Greater than 100 dB

TO-72
See Section 6





ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage . . . . . -25 V
Gate Current . . . . . 10 mA
Total Device Dissipation (Derate 1.7 mW/°C) . . . . . 300 mW
Storage Temperature Range . . . . . -65 to +200°C
Lead Temperature
(1/16" from case for 10 seconds) . . . . . 300°C

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

		Characteristic		Min	Max	Typ	Unit	Test Conditions	
1	STATIC	I_{GSS}	Gate Reverse Current		-150		pA	V_{GS} = -15 V, V_{DS} = 0	
2					-150		nA		150°C
3		BV_{GSS}	Gate-Source Breakdown Voltage	-25			V	I_G = -1 μA, V_{DS} = 0	
4		$V_{GS(off)}$	Gate-Source Cutoff Voltage	-1	-6			V_{DS} = 10 V, I_D = 1 nA	
5		I_{DSS}	Saturation Drain Current (Note 1)	20	60		mA	V_{DS} = 10 V, V_{GS} = 0	
6		$V_{GS(f)}$	Gate-Source Forward Voltage		1		V	I_G = 1 mA, V_{DS} = 0	
7	DYN	g_{fg}	Common-Gate Forward Transconductance (Note 1)	10,000		17,000	μmho	V_{DS} = 10 V, I_D = 10 mA	f = 1 kHz
8		g_{og}	Common-Gate Output Conductance		250				
9		C_{gd}	Gate-Drain Capacitance		2.5		pF	V_{DG} = 10 V, I_D = 5 mA	f = 1 MHz
10		C_{gs}	Gate-Source Capacitance		5.0				

NOTE:
1. Pulse test duration = 2 ms.

NZB