

n-channel JFETs designed for . . .



- VHF/UHF Amplifiers
- Oscillators
- Mixers

Performance Curves NZF See Section 4

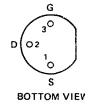
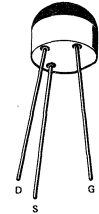
BENEFITS

- High Power Gain
20–23 dB Typical at 100 MHz,
Common-Source
17.5–20.5 dB Typical at 100 MHz,
Common-Gate
- Low Noise Figure
1.3 dB Typical at 100 MHz
- High Dynamic Range
Greater than 100 dB
- Selected I_{DSS} and $V_{GS(off)}$ ranges

TO-106
See Section 5

ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage	-25 V
Gate Current	10 mA
Total Device Dissipation (Derate at 2.5 mW/°C)	250 mW
Operating Temperature	-65 to +125°C
Storage Temperature	-65 to +125°C
Lead Temperature (1/16" from case for 10 seconds)	260°C



ELECTRICAL CHARACTERISTICS (25°C unless otherwise specified)

Characteristic		Min	Max	Unit	Test Conditions
1 2 S T A T I C	I_{GSS} Gate Reverse Current		-0.5	nA	$V_{GS} = -15 V, V_{DS} = 0$ $T_A = 125^\circ C$
			-0.1	μA	
3	BV_{GSS} Gate-Source Breakdown Voltage	-25		V	$I_G = -1 \mu A, V_{DS} = 0$ $V_{DS} = 10 V, I_D = 1 nA$
4	$V_{GS(off)}$ Gate-Source Cutoff Voltage (Note 1)	-1.5	-7.0		
5	I_{DSS} Saturation Drain Current (Note 1, 2)	4	45	mA	$V_{DS} = 10 V, V_{GS} = 0$
6 7 D Y N A M I C	g_{fs} Common-Source Forward Transconductance (Note 1)	4500	9000	μmho	$V_{DS} = 10 V, I_D = 5 mA, f = 1 kHz$
	g_{os} Common-Source Output Conductance		200		
8	C_{rss} Common-Source Reverse Transfer Capacitance		1.7	pF	$V_{DG} = 10 V, I_D = 5 mA, f = 1 MHz$
9	C_{iss} Common-Source Input Capacitance		5.5		

Characteristic	W300		W300A		W300B		W300C		W300D		Unit	Test Conditions
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		
I_{DSS} Saturation Drain Current (Note 2)	4.0	45	4	9	7	15	12	25	21	45	mA	$V_{DS} = 10 V$ $V_{GS} = 0$
$V_{GS(off)}$ Gate-Source Cutoff Voltage	-1.5	-7.0	-1.5	-3.0	-2.0	-4.0	-2.5	-5.0	-3.5	-7.0	V	$V_{DS} = 10 V$ $I_D = 1 nA$

NOTES:

1. I_{DSS} and $V_{GS(off)}$ are selected into 5 ranges and labeled according to above table.
2. Pulse test $PW \leq 300 \mu s$, duty cycle $\leq 3\%$.

NZF