

n-channel JFETs designed for . . .

Siliconix

Performance Curves NRL
See Section 5

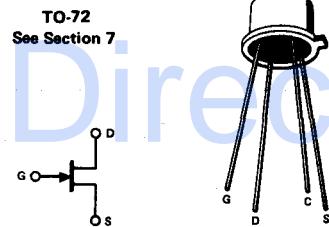
- Small-Signal Amplifiers
- Oscillators

BENEFITS

- Operates from High Supply Voltages
 $BV_{GSS} > 50$ V

*ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage (Note 1)	. . . . .	-50 V
Gate Current	. . . . .	10 mA
Total Device Dissipation at (or below) 25°C	. . . . .
Free-Air Temperature (Note 2)	. . . . .	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		2N3821		2N3822		Unit	Test Conditions		
		Min	Max	Min	Max				
1	I_{GSS}	Gate Reverse Current		-0.1	-0.1	nA	$V_{GS} = -30$ V, $V_{DS} = 0$		
2	BV_{GSS}	Gate-Source Breakdown Voltage		-50	-50	V	$I_G = -1$ μ A, $V_{DS} = 0$		
3	$V_{GS(off)}$	Gate-Source Cutoff Voltage		-4	-6		$V_{DS} = 15$ V, $I_D = 0.5$ nA		
4	V_{GS}	Gate-Source Voltage		-0.5	-2		$V_{DS} = 15$ V, $I_D = 50$ μ A		
5	$I_{DS(on)}$	Saturation Drain Current (Note 3)		0.5	2.5	mA	$V_{DS} = 15$ V, $I_D = 200$ μ A		
6	g_{fs}	Common-Source Forward Transconductance (Note 3)		1500	4500	3000	6500		
7	$|y_{fs}|$	Common-Source Forward Transadmittance		1500		3000			
8	g_{os}	Common-Source Output Conductance (Note 3)		10		20			
9	C_{iss}	Common-Source Input Capacitance		6		6			
10	C_{rss}	Common-Source Reverse Transfer Capacitance		3		3			
11	NF	Noise Figure		5		5	dB		
12	\bar{e}_n	Equivalent Short-Circuit Input Noise Voltage		200		200	$\frac{nV}{\sqrt{Hz}}$		
13									

*JEDEC Registered Data.

NRL

NOTES:

1. Due to symmetrical geometry, these units may be operated with source and drain leads interchanged.
2. Derate linearly to 175°C free-air temperature at rate of 2 mW/°C.
3. These parameters are measured during a 2 msec interval 100 msec after d-c power is applied.

2N3821 2N3822

3

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