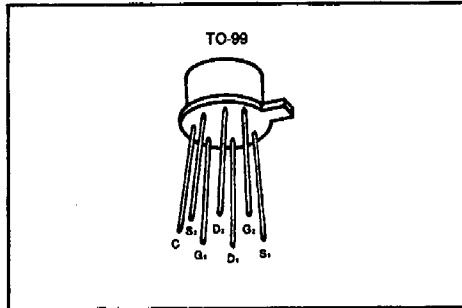


U257 Dual N-Channel JFET High Frequency Amplifier

FEATURES

- $g_{fs} > 4500 \mu S$ From DC to 100MHz
- Matched V_{GS} , g_{fs} and g_{os}

PIN CONFIGURATION



ABSOLUTE MAXIMUM RATINGS

($T_A = 25^\circ C$ unless otherwise noted)
 Gate-Drain or Gate-Source Voltage (Note 1) -25V
 Gate Current (Note 1) 50mA
 Storage Temperature Range $-65^\circ C$ to $+200^\circ C$
 Operating Temperature Range $-55^\circ C$ to $+150^\circ C$
 Lead Temperature (Soldering, 10sec) $+300^\circ C$

	One Side	Both Sides
Power Dissipation ($T_A = 85^\circ C$)	250mW	500mW
Derate above $25^\circ C$	3.8mW/ $^\circ C$	7.7mW/ $^\circ C$

NOTE: Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

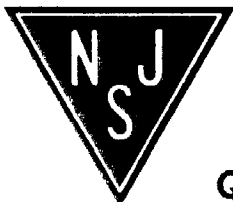
ORDERING INFORMATION

TO-99
U257

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Max	Units
I_{GSS}	Gate Reverse Current	$V_{GS} = 15V, V_{DS} = 0$ $T_A = 150^\circ C$		-100 -250	μA nA
BV_{GSS}	Gate-Source Breakdown Voltage	$I_G = -1\mu A, V_{DS} = 0$	-25		V
$V_{GS(off)}$	Gate-Source Cutoff Voltage	$V_{DS} = 10V, I_D = 1nA$	-1	-5	
I_{DSS}	Saturation Drain Current (Note 2)	$V_{DS} = 10V, V_{GS} = 0$	5	40	mA
g_{fs}	Common-Source Forward Transconductance	$V_{DS} = 10V, I_D = 5mA, f = 1kHz$	4500	10,000	μS
g_{fs}	Common-Source Forward Transconductance	$V_{DS} = 10V, I_D = 5mA, f = 100MHz$ (Note 3)	4500	10,000	
g_{os}	Common-Source Output Conductance	$V_{DS} = 10V, I_D = 5mA, f = 1kHz$		200	
g_{oss}	Common-Source Output Conductance	$V_{DS} = 10V, I_D = 5mA, f = 100MHz$		200	
C_{iss}	Common-Source Input Capacitance	$V_{DS} = 10V, I_D = 5mA, f = 1MHz$		5	pF
C_{rss}	Common-Source Reverse Transfer Capacitance			1.2	
\bar{e}_n	Equivalent Input Noise Voltage	(Note 3) $f = 10kHz$		30	nV/\sqrt{Hz}
I_{DSS1} I_{DSS2}	Drain Current Ratio at Zero Gate Voltage (Note 2)	$V_{DS} = 10V, V_{GS} = 0$	0.85	1	
$ V_{GS1} - V_{GS2} $	Differential Gate-Source Voltage	$V_{DS} = 10V, I_D = 5mA, f = 1kHz$		100	mV
$\frac{g_{fs1}}{g_{fs2}}$	Transconductance Ratio		0.85	1	
$ g_{os1} - g_{os2} $	Differential Output Conductance			20	μS

- NOTES: 1. Per transistor.
 2. Pulse test required, pulse width = 300 μs , duty cycle $\leq 3\%$.
 3. For design reference only, not 100% tested.



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.