

3875081 G E SOLID STATE

01E 11055 D

T-31-25

U257

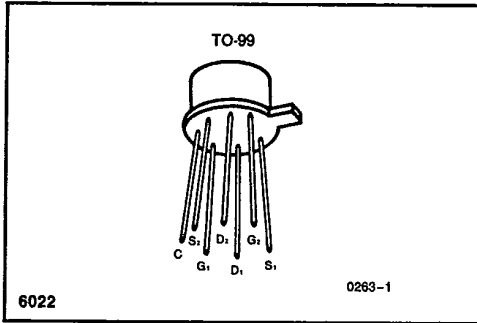
Dual N-Channel JFET High Frequency Amplifier



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	pA
BV_{GSS}	Gate-Source Breakdown Voltage	$I_G = -1\mu A, V_{DS} = 0$	-25	-250	V
$V_{GS(off)}$	Gate-Source Cutoff Voltage	$V_{DS} = 10V, I_D = 1nA$	-1	-5	V
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	$V_{DS} = 10V, I_D = 6mA, f = 1kHz$		200	
g_{os}	Common-Source Output Conductance	$V_{DS} = 10V, I_D = 6mA, f = 100MHz$		200	pF
C_{iss}	Common-Source Input Capacitance	$V_{DG} = 10V, I_D = 5mA, f = 1MHz$		5	
C_{rss}	Common-Source Reverse Transfer Capacitance	$V_{DG} = 10V, I_D = 5mA, f = 1MHz$		1.2	
\bar{e}_n	Equivalent Input Noise Voltage	(Note 3) $f = 10kHz$		30	$\frac{nV}{\sqrt{Hz}}$
$\frac{I_{DSS1}}{I_{DSS2}}$	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	$V_{DG} = 10V, I_D = 5mA, f = 1kHz$		100	mV
$\frac{g_{fs1}}{g_{fs2}}$	Transconductance Ratio	$V_{DG} = 10V, I_D = 5mA, f = 1kHz$	0.85	1	
$ g_{os1} - g_{os2} $	Differential Output Conductance	$V_{DG} = 10V, I_D = 5mA, f = 1kHz$		20	μS

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

INTERMIL'S SOLE AND EXCLUSIVE WARRANTY OBLIGATION WITH RESPECT TO THIS PRODUCT SHALL BE THAT STATED IN THE WARRANTY ARTICLE OF THE CONDITION OF SALE. THE WARRANTY SHALL BE EXCLUSIVE AND SHALL BE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE.

NOTE: All typical values have been characterized but are not tested.

10