LINEAR SYSTEMS

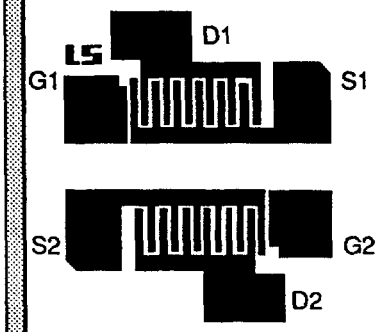
Linear Integrated Systems

LS-U257

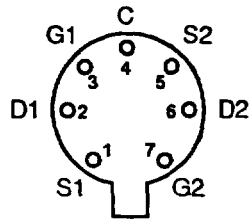
WIDEBAND HIGH GAIN MONOLITHIC DUAL N-CHANNEL JFET

FEATURES	
HIGH TRANSCONDUCTANCE THROUGH 100MHz	gfs=4500µmho MIN.
LOW INPUT CAPACITANCE	C_{iss}=5pf MAX.
SELECTIVE SCREENING AVAILABLE	

ABSOLUTE MAXIMUM RATINGS NOTE 1 @ 25°C (unless otherwise noted)		
Storage Temperature		-65° to +150°C
Operating Junction Temperature		+150°C
Device Dissipation - Total		500mW @ +125°C
$-V_{GSS}$	Gate Voltage to Drain or Source	35V
$-V_{DSO}$	Drain to Source Voltage	30V
$-I_{G(f)}$	Gate Forward Current	50mA



24 X 27 MILS



TO-78
Bottom View

MATCHING CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTICS	MIN	MAX	UNITS	CONDITIONS
$\|V_{GS1}-V_{GS2}\|$	Offset Voltage Differential	--	100	mV	V_{DG}= 10V I_D= 5mA
$\|I_{DSS1}/I_{DSS2}\|$	Saturation Drain Current Ratio	0.85	1	%	NOTE 2 V_{DS}=10V V_{GS}=0V
$\|I_{G1}-I_{G2}\|$	Differential Gate Current	--	20	nA	V_{DG}=10V I_D=5mA
$\|g_{fs1}/g_{fs2}\|$	Transconductance Ratio	0.85	1	%	f=1kHz V_{DG}=10V I_D=5mA

SYMBOL	CHARACTERISTICS	MIN	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate-Source Breakdown Voltage	25	--	V	I_G= -1µA V_{DS}= 0
	TRANSCONDUCTANCE				
g_{fs}	Common-Source Forward	4500	10,000	µmho	V_{DG}= 10V I_D= 5mA f= 1kHz
g_{fs}	Common-Source Forward	4500	10,000	µmho	f= 100MHz
	DRAIN CURRENT				
I_{DSS}	Saturation Drain Current	5	40	mA	V_{DS}= 10V V_{GS}= 0 V
	GATE VOLTAGE				
V_{GS}(off) or V_P	Pinchoff Voltage	1	5	V	V_{DS}= 10V I_D= 1nA
V_{GS}	Gate-Source Voltage	0.3	4	V	V_{DG}= 10V I_D= 5mA
	GATE CURRENT				
$-I_G$	Operating	--	50	pA	V_{DG}= 10V I_D= 5mA
$-I_G$	High Temperature	--	50	nA	V_{DG}= 10V I_D= 5mA T_A= +125°C
$-I_{GSS}$	At Full Conduction	--	100	pA	V_{GS}= -15V V_{DS}= 0
$-I_{GSS}$	High Temperature	--	200	nA	T_A= +125°C

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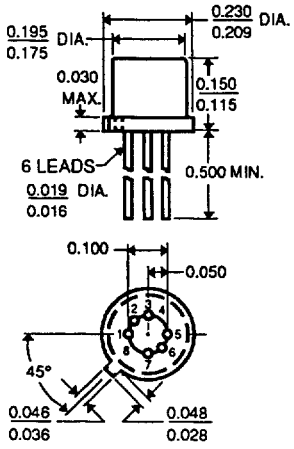
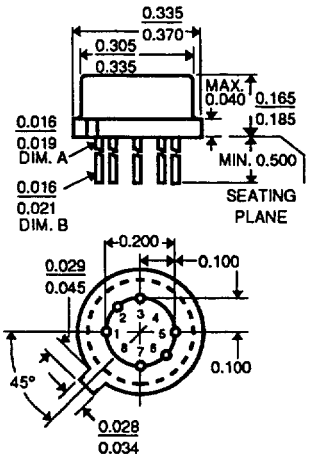
SYMBOL	CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	CONDITIONS
	OUTPUT CONDUCTANCE					
G_{os}	Common-Source Output Conductance	--	--	200	µmho	V_{DG}= 10V I_D= 5mA f= 1kHz
G_{os}	Common-Source Output Conductance	--	--	200	µmho	f= 100MHz
	NOISE					
NF	Figure	--	--	1	dB	V_{DG}= 10V I_D= 5mA R_G= 100k f= 10kHz
e_n	Voltage	--	--	20	nV/ Hz	V_{DG}= 10V I_D= 5mA f= 10kHz
	CAPACITANCE					
C_{iss}	Input	--	--	5	pF	V_{DG}= 10V I_D= 5mA f= 1MHz
C_{rss}	Reverse Transfer	--	--	1.2	pF	

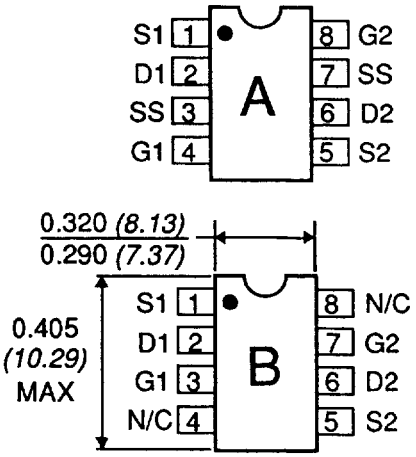
TO-71
Six Lead



TO-78



P-DIP



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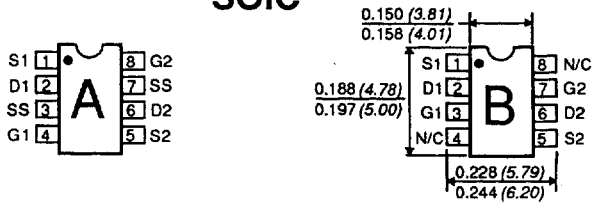

NOTES:

1. These ratings are limiting values above which the serviceability of any semiconductor may be impaired.
2. Assumes smaller value in numerator.

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