LINEAR SYSTEMS

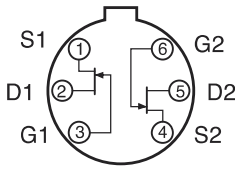
Twenty-Five Years Of Quality Through Innovation

U/SST440, 441

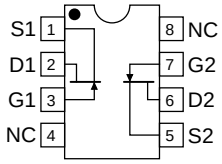
WIDEBAND HIGH GAIN MONOLITHIC DUAL N-CHANNEL JFET AMPLIFIER

FEATURES	
Direct Replacement for SILICONIX U/SST440 & U/SST441	
HIGH CMRR	CMRR ≥ 85dB
LOW GATE LEAKAGE	I_{GSS} ≤ 1pA
ABSOLUTE MAXIMUM RATINGS[1] @ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Operating Junction Temperature	-55 to +150 °C
Maximum Power Dissipation @ TA = 25°C	
Continuous Power Dissipation (Total)	500mW
Maximum Currents	
Gate Current	50mA
Maximum Voltages	
Gate to Drain	-25V
Gate to Source	-25V
Gate to Gate	±50V

U SERIES
TO-71
TOP VIEW



SST SERIES
SOIC
TOP VIEW



MATCHING CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC		MIN	TYP	MAX	UNITS	CONDITIONS
$\lvert V_{GS1} - V_{GS2} \rvert$	Differential Gate to Source Cutoff Voltage	U/SST440			10	mV	V_{DG} = 10V, I_D = 5mA
		U/SST441			20		
$\frac{\Delta\lvert V_{GS1} - V_{GS2} \rvert}{\Delta T}$	Differential Gate to Source Cutoff Voltage Change with Temperature			20		µV/°C	V_{DG} = 10V, I_D = 5mA T_A = -55 to +125°C
$\frac{I_{DSS1}}{I_{DSS2}}$	Gate to Source Saturation Current Ratio[3]			0.98			V_{DS} = 10V, V_{GS} = 0V
$\frac{g_{fs1}}{g_{fs2}}$	Forward Transconductance Ratio[2]			0.97			V_{DS} = 10V, I_D = 5mA, *f* = 1kHz
CMRR	Common Mode Rejection Ratio			85		dB	V_{DG} = 5 to 10V, I_D = 5mA

ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage	-25			V	I_G = -1µA, V_{DS} = 0V
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-1	-3.5	-6	V	V_{DS} = 10V, I_D = 1nA
I_{DSS}	Gate to Source Saturation Current[2]	6	15	30	mA	V_{DS} = 10V, V_{GS} = 0V
I_{GSS}	Gate Leakage Current		-1	-500	pA	V_{GS} = -15V, V_{DS} = 0V
I_G	Gate Operating Current		-1	-500		V_{DG} = 10V, I_D = 5mA

Linear Integrated Systems

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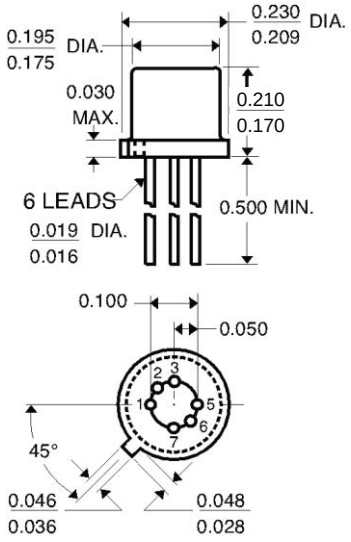
Doc 201125 05/19/14 Rev#A3 ECN# U SST 440_441

ELECTRICAL CHARACTERISTICS CONTINUED @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
g_{fs}	Forward Transconductance	4.5	6	9	mS	V_{DS} = 10V, I_D = 5mA, *f* = 1kHz
g_{os}	Output Conductance		70	200	µS	
C_{iss}	Input Capacitance		3		pF	V_{DS} = 10V, I_D = 5mA, *f* = 1MHz
C_{rss}	Reverse Transfer Capacitance		1			
e_n	Equivalent Input Noise Voltage		4		nV/√Hz	V_{DS} = 10V, I_D = 5mA, *f* = 10kHz

TO-71
Six Lead



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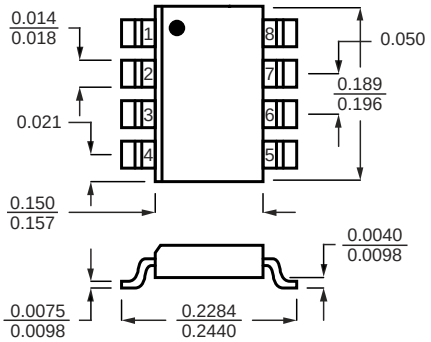

DIMENSIONS IN INCHES

NOTES:

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulse Test: PW ≤ 300µs Duty Cycle ≤ 3%
3. Assumes smaller value in numerator.

Linear Integrated Systems (LIS) is a 25-year-old, third-generation precision semiconductor company providing high-quality discrete components. Expertise brought to LIS is based on processes and products developed at Amelco, Union Carbide, Intersil and Micro Power Systems by company President John H. Hall. Hall, a protégé of Silicon Valley legend Dr. Jean Hoerni, was the director of IC Development at Union Carbide, Co-Founder and Vice President of R&D at Intersil, and Founder/President of Micro Power Systems.