

U/SST440,441

MONOLITHIC DUAL N-CHANNEL JFET

FEATURES

Direct Replacement for SILICONIX U/SST440 & U/SST441

HIGH CMRR $CMRR \geq 85dB$

LOW GATE LEAKAGE $I_{GSS} \leq 1pA$

ABSOLUTE MAXIMUM RATINGS¹

@ 25 °C (unless otherwise stated)

Maximum Temperatures

Storage Temperature -65 to +150 °C

Operating Junction Temperature -55 to +135 °C

Maximum Power Dissipation

Continuous Power Dissipation (Total) 500mW

Maximum Currents

Gate Current 50mA

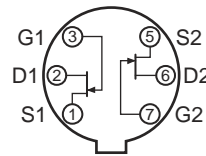
Maximum Voltages

Gate to Drain -25V

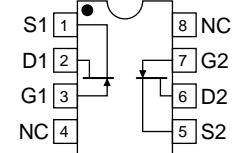
Gate to Source -25V

Gate to Gate $\pm 50V$

U SERIES TO-71 BOTTOM VIEW



SST SERIES SOIC



MATCHING CHARACTERISTICS @ 25 °C (unless otherwise stated)

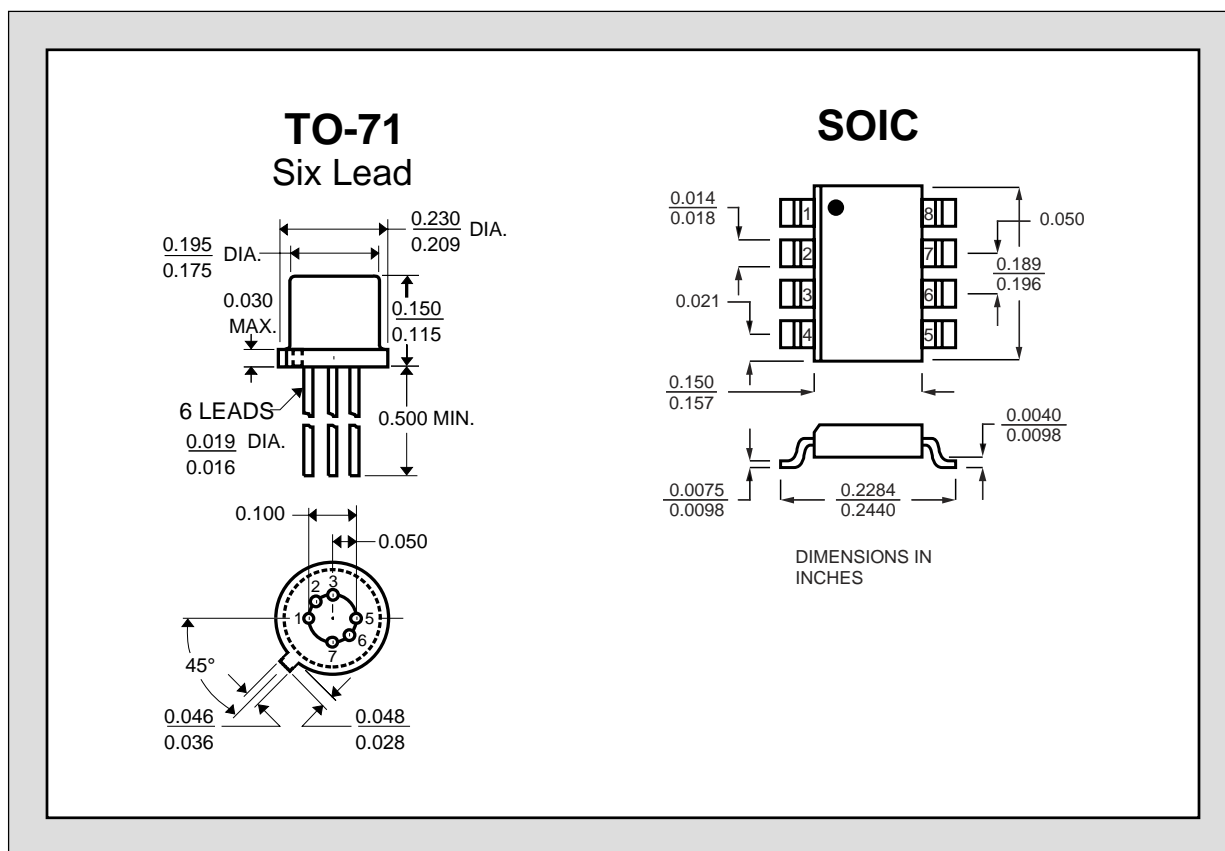
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
$ V_{GS1} - V_{GS2} $	Differential Gate to Source Cutoff Voltage			10	mV	$V_{DG} = 10V, I_D = 5mA$
				20		
$\frac{\Delta V_{GS1} - V_{GS2} }{\Delta T}$	Differential Gate to Source Cutoff Voltage Change with Temperature		20		$\mu V/^{\circ}C$	$V_{DG} = 10V, I_D = 5mA$ $T_A = -55 \text{ to } +125^{\circ}C$
$\frac{I_{DSS1}}{I_{DSS2}}$	Gate to Source Saturation Current Ratio		0.07			$V_{DS} = 10V, V_{GS} = 0V$
$\frac{g_{fs1}}{g_{fs2}}$	Forward Transconductance Ratio ²		0.97			$V_{DS} = 10V, I_D = 5mA, f = 1kHz$
CMRR	Common Mode Rejection Ratio		85		dB	$V_{DG} = 5 \text{ to } 10V, I_D = 5mA$

ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
BV_{GSS}	Gate to Source Breakdown Voltage	-25			V	$I_G = -1\mu A, V_{DS} = 0V$
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-1	-3.5	-6	V	$V_{DS} = 10V, I_D = 1nA$
I_{DSS}	Gate to Source Saturation Current ³	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		$V_{DG} = 10V, I_D = 5mA$

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/ \sqrt{Hz}	$V_{DS} = 10V, I_D = 5mA, f = 10kHz$



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

Information furnished by Linear Integrated Systems is believed to be accurate and reliable. However, no responsibility is assumed for its use; nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Linear Integrated Systems.