

PAD SERIES

PICO AMPERE DIODES

FEATURES

DIRECT REPLACEMENT FOR SILICONIX PAD SERIES

REVERSE BREAKDOWN VOLTAGE $BV_R \geq -30V$

REVERSE CAPACITANCE $C_{RSS} \leq 2.0pF$

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 (PAD) 300mW

Continuous Power Dissipation (J/SSTPAD) 350mW

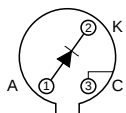
Maximum Currents

Forward Current (PAD) 50mA

Forward Current (J/SSTPAD) 10mA

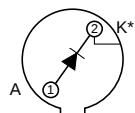
PAD1,2,5

TO-72
BOTTOM VIEW



PAD*

TO-72
BOTTOM VIEW



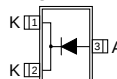
JPAD

TO-92
BOTTOM VIEW



SSTPAD

SOT-23
TOP VIEW



* Cathode tied to Case

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

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
BV_R	Reverse Breakdown Voltage	ALL PAD	-45		V	$I_R = -1\mu A$
		ALL SSTPAD	-30			
		ALL JPAD	-35			
V_F	Forward Voltage		0.8	1.5		$I_F = 5mA$
C_{RSS}	Total Reverse Capacitance	PAD1,5	0.5	0.8	pF	$V_R = -5V, f = 1MHz$
		All Others	1.5	2		

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

SYMBOL	CHARACTERISTIC	PAD ²	JPAD ²	SSTPAD ²	UNITS	CONDITIONS
I_R	Maximum Reverse Leakage Current ²	(SST/J)PAD1	-1		pA	$V_R = -20V$
		(SST/J)PAD2	-2			
		(SST/J)PAD5	-5	-5		
		(SST/J)PAD10	-10	-10		
		(SST/J)PAD20	-20	-20		
		(SST/J)PAD50	-50	-50		
		(SST/J)PAD100	-100			
		(SST/J)PAD200		-200		
		(SST/J)PAD500		-500		

Figure 1. Operational Amplifier Protection

Input Differential Voltage limited to 0.8V (typ) by JPADs D₁ and D₂. Common Mode Input voltage limited by JPADs D₃ and D₄ to $\pm 15V$.

Figure 2. Sample and Hold Circuit

Typical Sample and Hold circuit with clipping. JPAD diodes reduce offset voltages fed capacitively from the JFET switch gate.

FIGURE 1

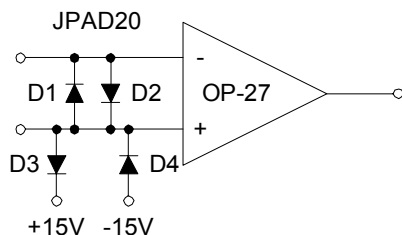
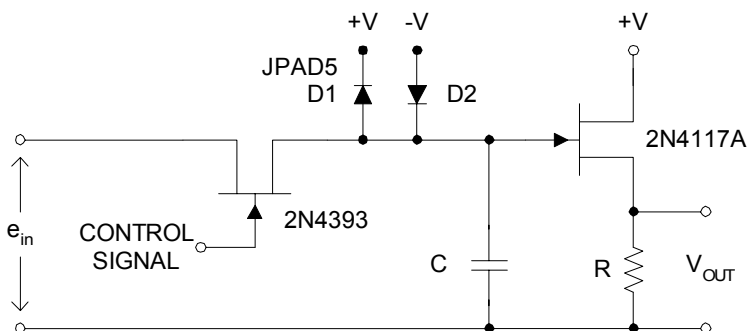
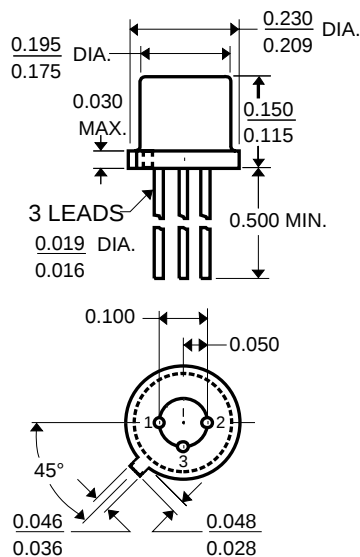


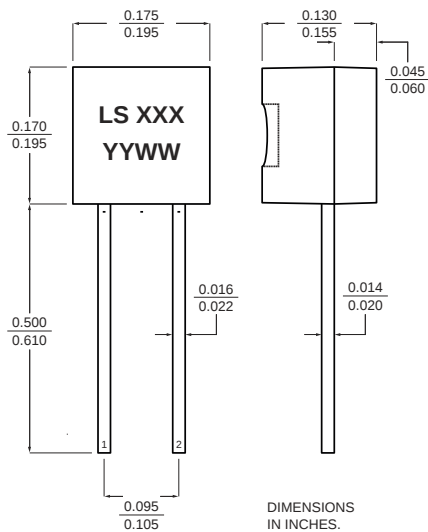
FIGURE 2



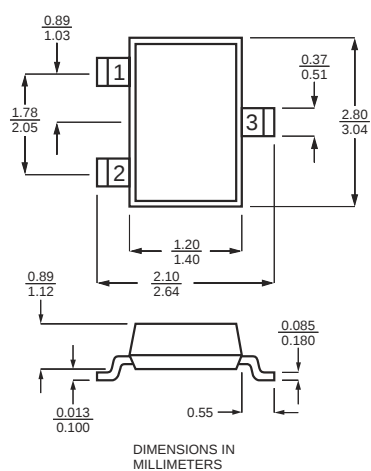
TO-72 Three Lead



TO-92



SOT-23



1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. The PAD type number denotes its maximum reverse current value in pico amperes. Devices with I_R values intermediate to those shown are available upon request.

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.