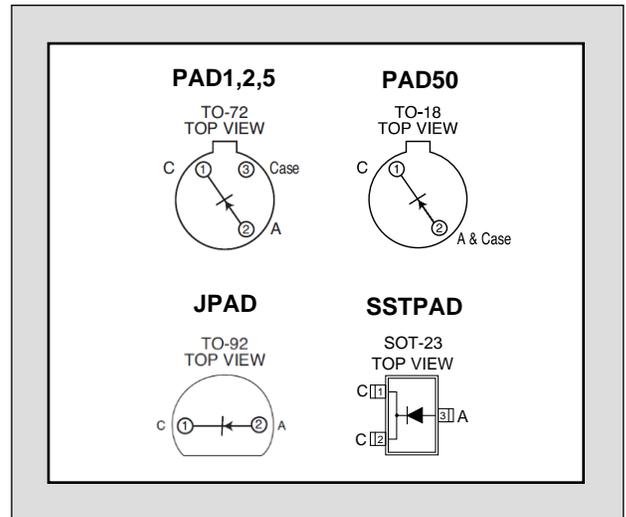


# LINEAR SYSTEMS

Over 30 Years of Quality Through Innovation

## 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 RATINGS <sup>1</sup>	
@ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Operating Junction Temperature	-55 to +150 °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



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

1. Derate 2mW/°C above 25°C
2. Derate 2.8mW/°C above 25°C

**Figure 1. Operational Amplifier Protection**

Input Differential Voltage limited to 0.8V (typ) by JPADs D<sub>1</sub> and D<sub>2</sub>. Common Mode Input voltage limited by JPADs D<sub>3</sub> and D<sub>4</sub> to ±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

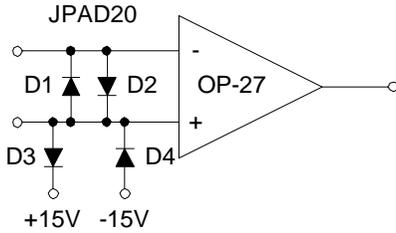
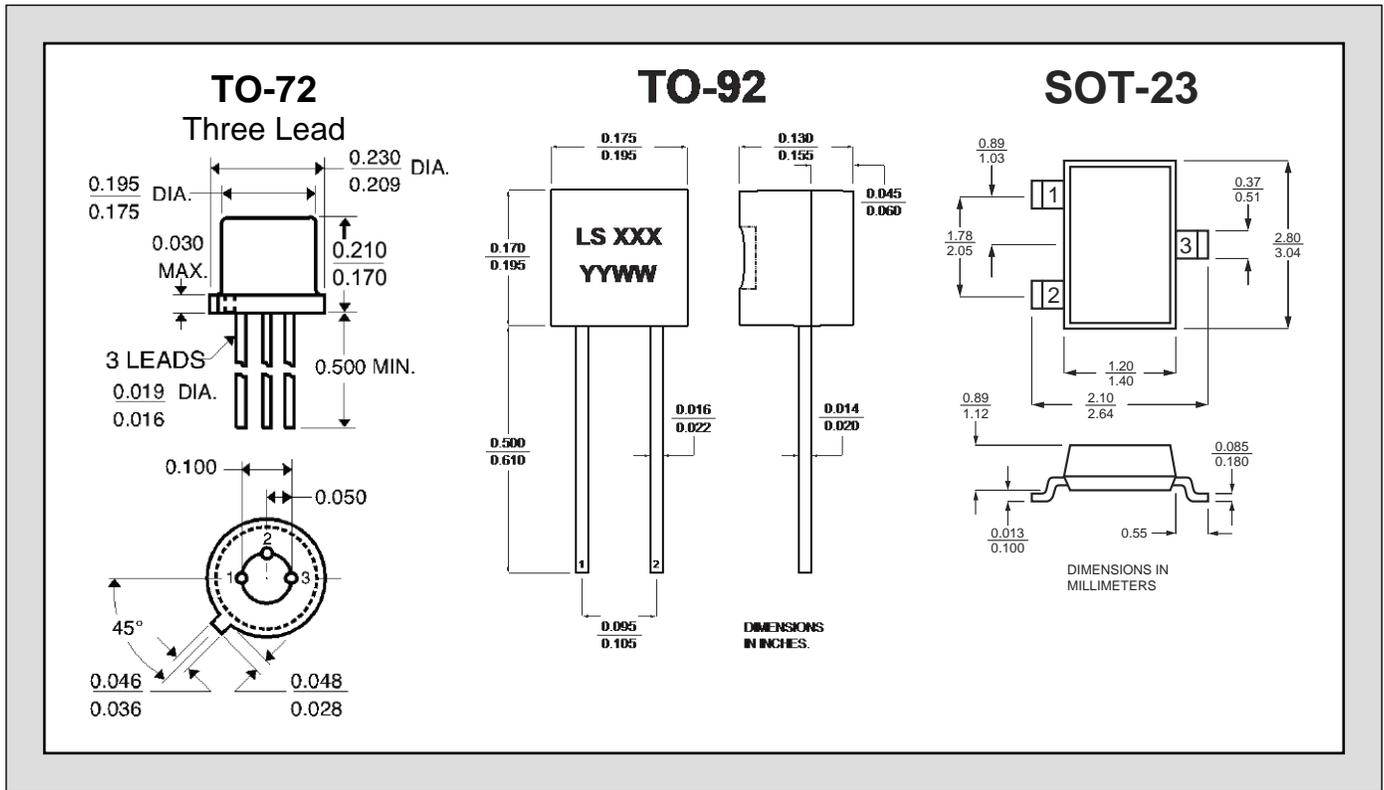
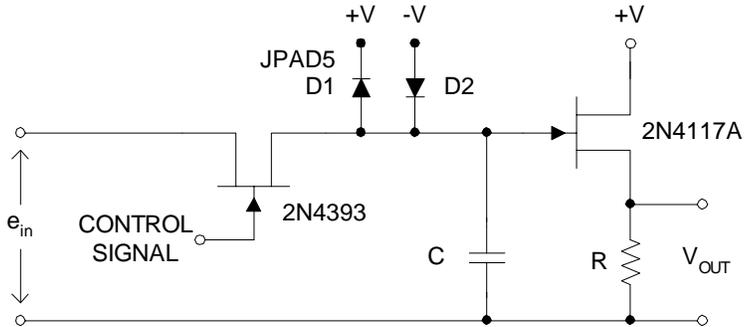


FIGURE 2



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<sub>R</sub> values intermediate to those shown are available upon request.

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