

LINEAR SYSTEMS

Twenty-Five 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 RATINGS¹

@ 25 °C (unless otherwise stated)

Maximum Temperatures

Storage Temperature -55 to +150 °C

Operating Junction Temperature -55 to +150 °C

Maximum Power Dissipation

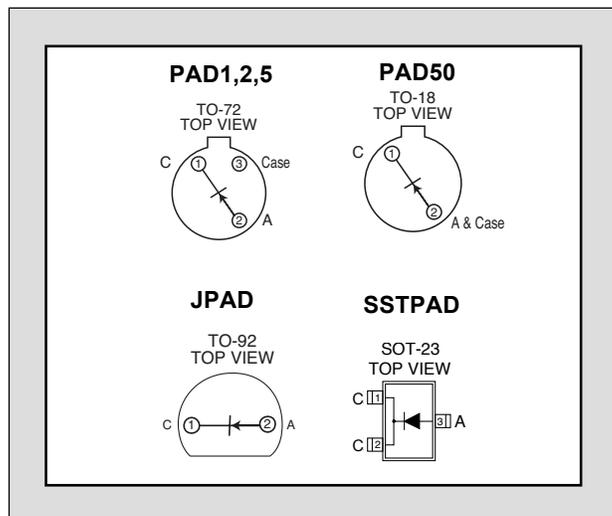
Continuous Power Dissipation (PAD) 300mW

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		$I_F = 1mA$	
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 D₁ and D₂. Common Mode Input voltage limited by JPADs D₃ and D₄ 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

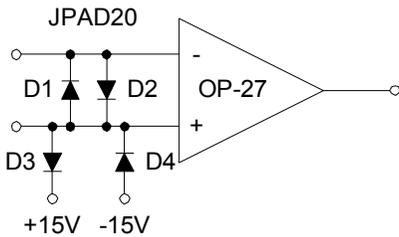
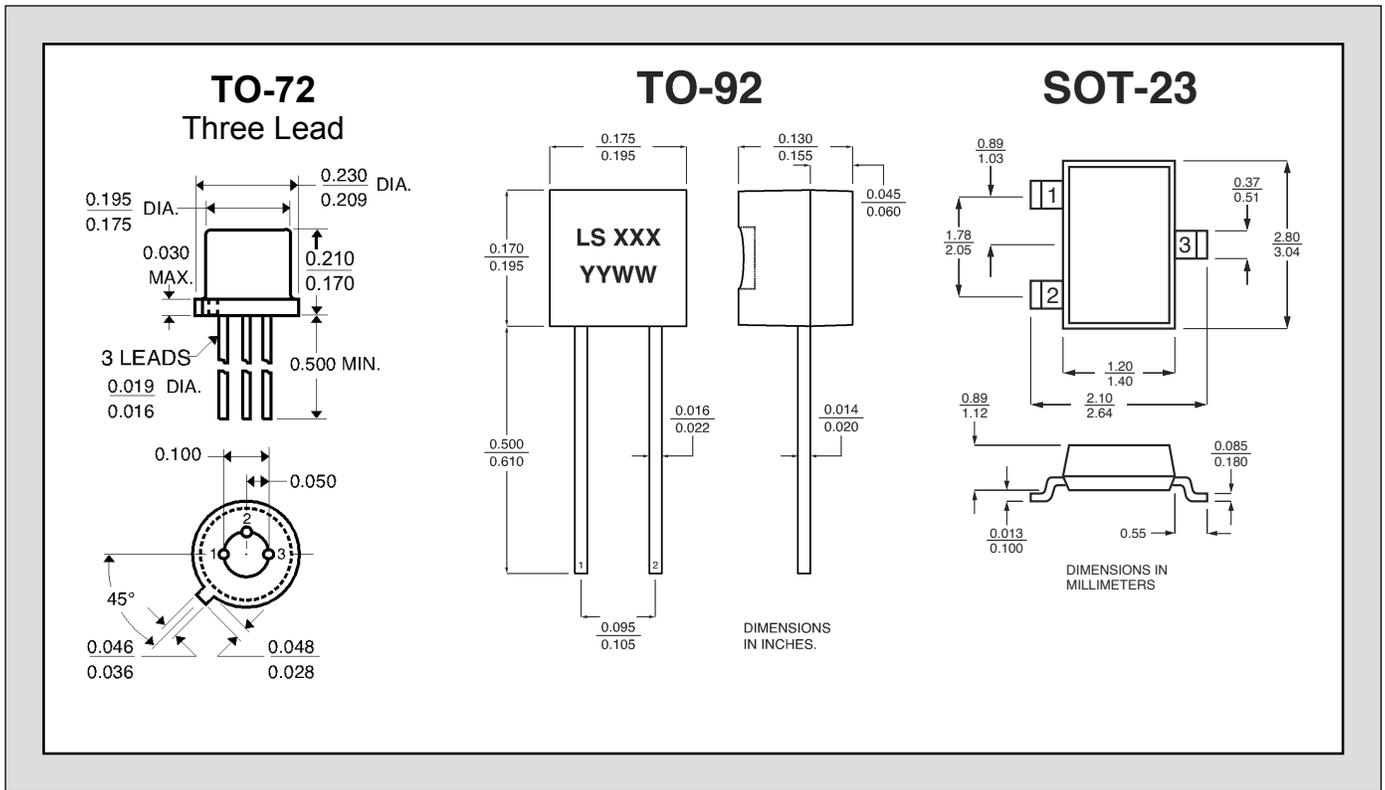
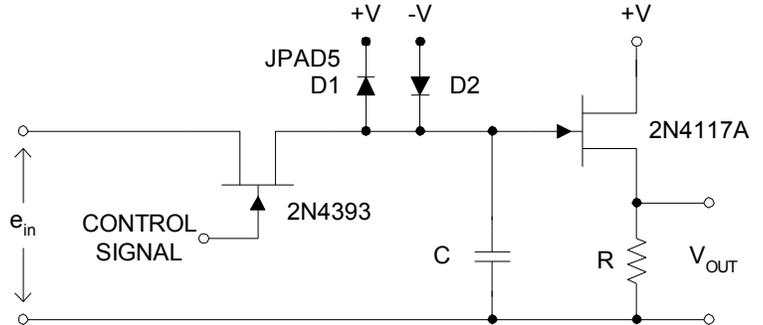


FIGURE 2



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_R values intermediate to those shown are available upon request.

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