

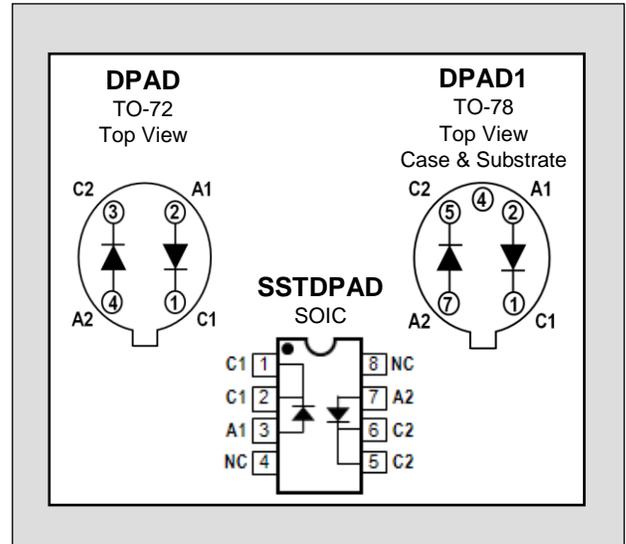
LINEAR SYSTEMS

Twenty-Five Years Of Quality Through Innovation

FEATURES	
Direct Replacement For SILICONIX DPAD SERIES	
HIGH ON ISOLATION	20fA
EXCELLENT CAPACITANCE MATCHING	$\Delta C_R \leq 0.2\text{pF}$
ABSOLUTE MAXIMUM RATINGS¹	
@ 25°C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-55°C to +150°C
Operating Junction Temperature	-55°C to +150°C
Maximum Power Dissipation	
Continuous Power Dissipation (DPAD) ³	500mW
Maximum Currents	
Forward Current (DPAD)	50mA

DPAD SERIES

MONOLITHIC DUAL PICO AMPERE DIODES



* Case and Pin 4 must be floating on all TO-78 case devices

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

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNITS	CONDITIONS
BV _R	Reverse Breakdown Voltage	DPAD1	-45		V	I _R = -1μA
		DPAD2,5,10,20,50,100	-45			
		SSTDPAD5,50,100	-30			
V _F	Forward Voltage		0.8	1.5	pF	I _F = 1mA
C _{R1} - C _{R2}	Differential Capacitance (ΔC _R)	DPAD1		0.2		
		ALL OTHERS		0.5		
C _{TSS}	Total Reverse Capacitance	DPAD1		0.8	pF	V _R = -5V, f=1MHz
		DPAD2,5,10,20,50,100		2.0		
		SSTDPAD5,50,100		4.0		

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

SYMBOL	CHARACTERISTIC	DPAD ²	SSTDPAD ²	UNITS	CONDITIONS	
I _R	Maximum Reverse Leakage Current ²	(SST)DPAD1	-1	pA	V _R = -20V	
		(SST)DPAD2	-2			
		(SST)DPAD5	-5			-5
		(SST)DPAD10	-10			
		(SST)DPAD20	-20			
		(SST)DPAD50	-50			-50
		(SST)DPAD100	-100			-100

Figure 1. Operational Amplifier Protection

Input Differential Voltage limited to 0.8V (typ) by DPADs D₁ and D₂. Common Mode Input voltage limited by DPADs D₃ and D₄ to ±15V.

Figure 2. Sample and Hold Circuit

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

FIGURE 1

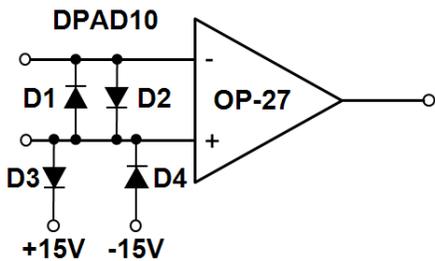
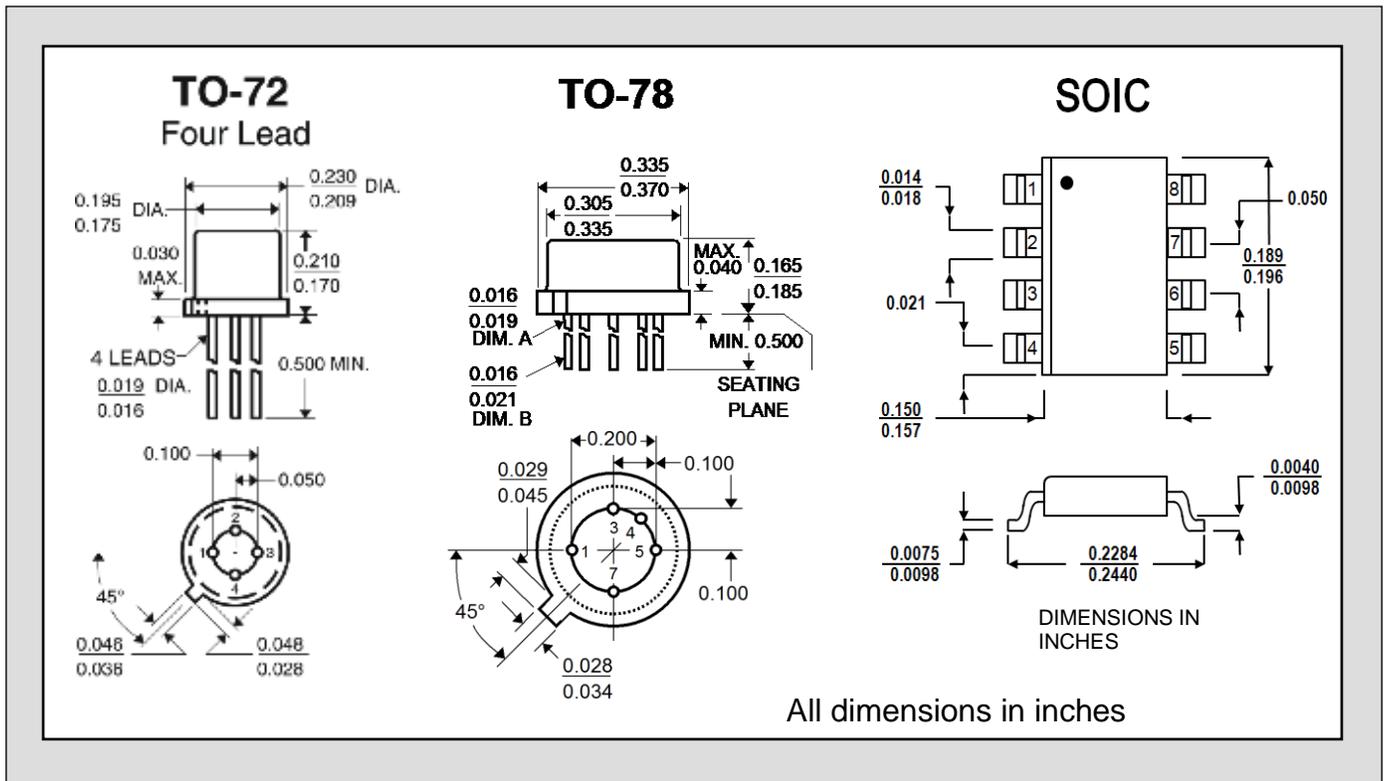
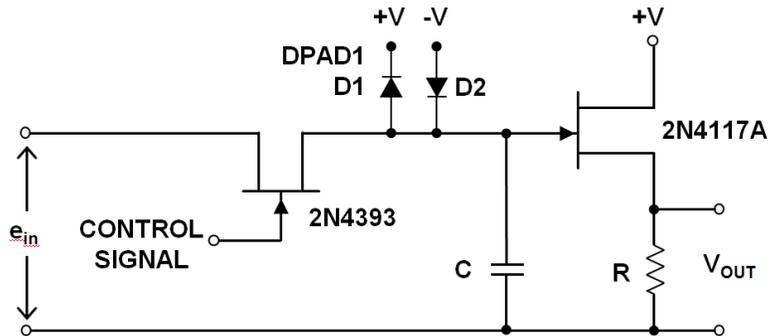


FIGURE 2



1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. The DPAD type number denotes its maximum reverse current value in pico amperes. Devices with I_R values intermediate to those shown are available upon request.
3. Derate 4 mW/°C above 25°C

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