

LINEAR SYSTEMS

Over 30 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

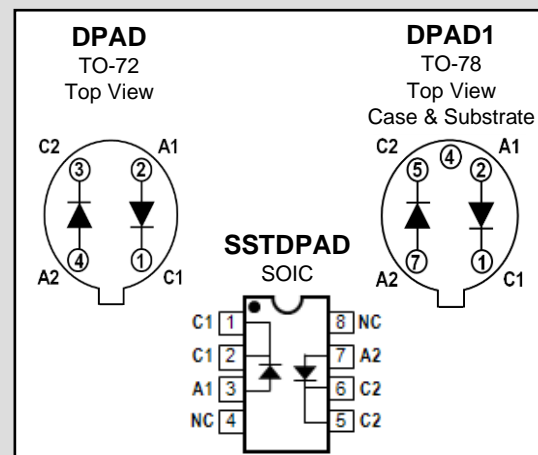
Continuous Power Dissipation (DPAD)³ 500mW

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		I _F = 1mA
C _{R1} - C _{R2}	Differential Capacitance (ΔC _R)	DPAD1		0.2	pF	V _{R1} = V _{R2} = -5V, f=1MHz
		ALL OTHERS		0.5		
C _{rss}	Total Reverse Capacitance	DPAD1		0.8		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		
		(SST)DPAD10	-10		
		(SST)DPAD20	-20		
		(SST)DPAD50	-50		
		(SST)DPAD100	-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 $\pm 15V$.

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

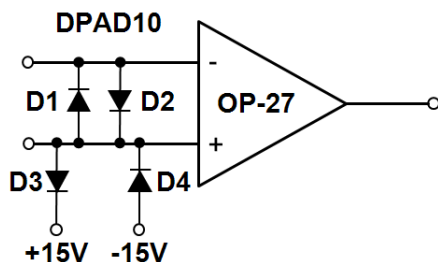
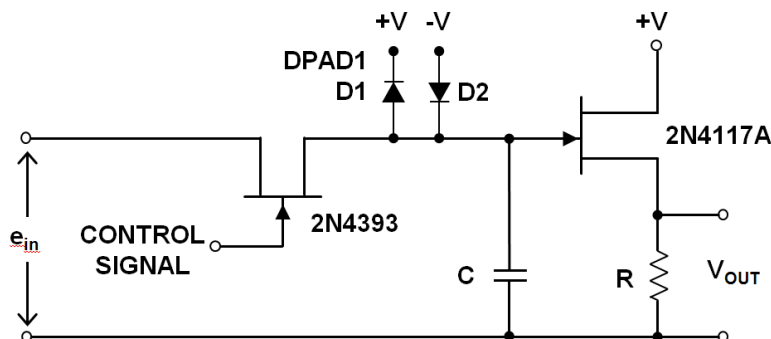
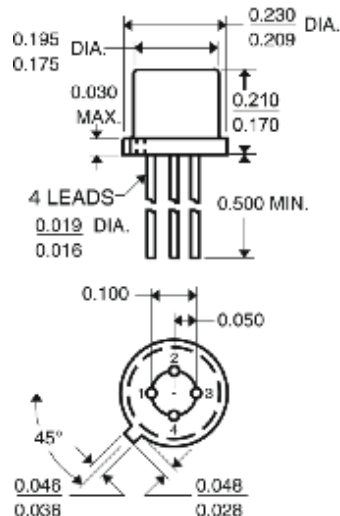


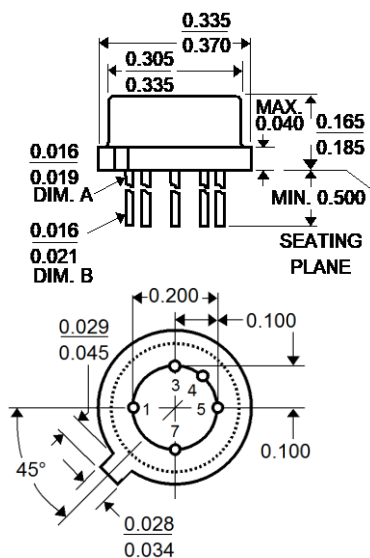
FIGURE 2



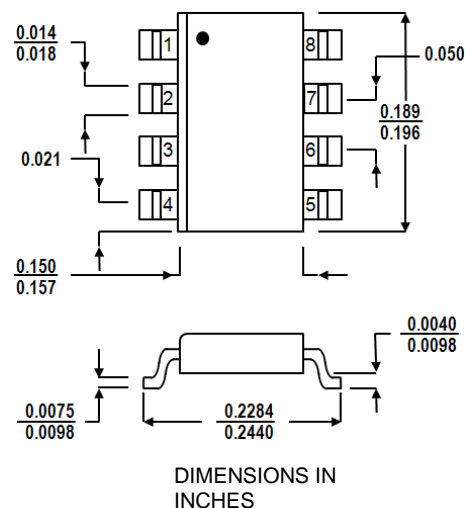
TO-72 Four Lead



TO-78



SOIC



All dimensions in inches

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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