

dual pico ampere diodes designed for . . .



- Clipping Circuits
- Diode Switching
- High Impedance Protection Circuits

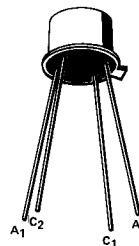
BENEFITS

- Very High Off-Isolation
1 pA Max (DPAD1)
- High Isolation Between Diodes
20 Femto Amp Typical (DPAD1)
- Matched Capacitances
- Compact Packaging

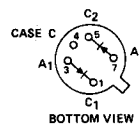
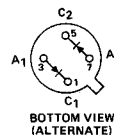
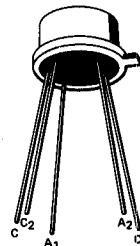
ABSOLUTE MAXIMUM RATINGS (25°C)

Forward Gate Current, Each Side. 50 mA
Total Device Dissipation @ $T_A = 25^\circ\text{C}$
Derate 4.0 mW/ $^\circ\text{C}$ to 125°C 400 mW
Storage Temperature Range. -55 to $+125^\circ\text{C}$
Lead Temperature
($1/16''$ from case for 10 seconds) 300°C

TO-71
(Pins 2 and 6 Removed)
See Section 7



TO-78
(DPAD1 Only)
See Section 7



ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

CHARACTERISTIC		MIN	TYP	MAX	UNIT	TEST CONDITION			
1	S T A T I C	I_R	Reverse Current	-1	pA	$V_R = -20\text{ V}$	DPAD1		
2				-2			DPAD2		
3				-5			DPAD5		
4				-10			DPAD10		
5				-20			DPAD20		
6				-50			DPAD50		
7				-100			DPAD100		
8	D Y N	B_{VR}	Reverse Breakdown Voltage	-45	V	$I_R = -1\text{ }\mu\text{A}$	DPAD1, 2, 5		
9				-35			DPAD10, 20, 50, 100		
10		V_F	Forward Voltage Drop			0.8	1.5	$I_F = 1\text{ mA}$	DPAD1, 2, 5, 10, 20, 50, 100
11	D Y N	C_R	Capacitance	0.8	pF	$V_R = -5\text{ V}, f = 1\text{ MHz}$	DPAD1, 2, 5		
12				2.0			DPAD10, 20, 50, 100		
13	M A T	$ C_{R1}-C_{R2} $ Differential Capacitance			0.1	0.2	pF	$V_{R1} = V_{R2} = -5\text{ V}, f = 1\text{ MHz}$	DPAD1, 2, 5, 10, 20, 50, 100

APPLICATION

Operational Amplifier Protection. Input Differential Voltage limited to 0.8 V (typ) by DPADS D_1 and D_2 Common mode input voltage limited by DPADS D_3 and D_4 to $\pm 15\text{ V}$.

Typical sample and hold circuit with clipping. DPAD diodes reduce offset voltages fed capacitively from the FET switch gate.

