

# DPAD1 LOW LEAKAGE PICO-AMP DUAL DIODE



# Linear Systems replaces discontinued Siliconix DPAD1

# The DPAD1 is a low leakage Monolithic Dual Pico-Amp Diode

The DPAD1 extremely low-leakage monolithic dual diode provides a superior alternative to conventional diode technology when reverse current (leakage) must be minimized. In addition the monolithic dual construction allows excellent capacitance matching per diode. The DPAD1 features a leakage current of -1 pA and is well suited for use in applications such as input protection for operational amplifiers.

#### **DPAD1** Benefits:

- Negligible Circuit Leakage Contribution
- Circuit "Transparent" Except to Shunt High-Frequency Spikes
- Simplicity of Operation

## **DPAD1 Applications:**

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

FEATURES					
DIRECT REPLACEMENT FOR SILICONIX DPAD1					
HIGH ON ISOLATION	20fA				
EXCELLENT CAPACITANCE MATCHING	$\Delta C_R \le 0.2 pF$				
ULTRALOW LEAKAGE	≤ 1 pA				
REVERSE BREAKDOWN VOLTAGE	BV <sub>R</sub> ≥ -45V				
REVERSE CAPACITANCE	$C_{rss} \le 0.8pF$				
ABSOLUTE MAXIMUM RATINGS					
@ 25°C (unless otherwise noted)					
Maximum Temperatures					
Storage Temperature	-65°C to +150°C				
Operating Junction Temperature	-55°C to +135°C				
Maximum Power Dissipation					
ntinuous Power Dissipation 500mW					
MAXIMUM CURRENT					
Forward Current (Note 1)	50mA				

DPAD1 ELECTR	ICAL CHARACTERISTICS @ 25°C (unless	otherwis	e noted)	1		
SYMBOL	CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	CONDITIONS
$BV_R$	Reverse <mark>Br</mark> eakdown Voltage	-45			V	$I_R = -1\mu A$
$V_{F}$	Forward Voltage		0.8	1.5	V	I <sub>F</sub> = 1mA
$C_{rSS}$	Total Reverse Capacitance	-		0.8	pF	$V_R = -5V$ , $f = 1MHz$
C <sub>R1</sub> -C <sub>R2</sub>	Differential Capacitance (ΔC <sub>R</sub> )	-		0.2	pF	$V_{R1} = V_{R2} = -5V, f = 1MHz$
I <sub>R</sub>	Maximum Reverse Leakage Current			-1	рА	V <sub>R</sub> = - 20V

### Notes:

1. Absolute maximum ratings are limiting values above which DPAD1 serviceability may be impaired.

## Available Packages:

DPAD1 in TO-78

DPAD1 available as bare die

Please contact Micross for full package and die dimensions

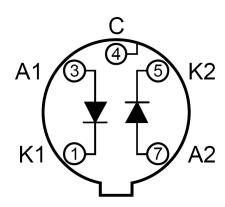


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TO-78 (Bottom View)



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