

## Linear Systems replaces discontinued Siliconix DPAD2

The DPAD2 is a low leakage Monolithic Dual Pico-Amp Diode

The DPAD2 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 DPAD2 features a leakage current of  $-2 \text{ pA}$  and is well suited for use in applications such as input protection for operational amplifiers.

### DPAD2 Benefits:

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

### DPAD2 Applications:

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

### FEATURES

DIRECT REPLACEMENT FOR SILICONIX DPAD2

HIGH ON ISOLATION	20fA
EXCELLENT CAPACITANCE MATCHING	$\Delta C_R \leq 0.5\text{pF}$
ULTRALOW LEAKAGE	$\leq 2 \text{ pA}$
REVERSE BREAKDOWN VOLTAGE	$BV_R \geq -45\text{V}$
REVERSE CAPACITANCE	$C_{RSS} \leq 2.0\text{pF}$

**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

Continuous Power Dissipation	500mW
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### MAXIMUM CURRENT

Forward Current (Note 1)	50mA
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### DPAD2 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

SYMBOL	CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	CONDITIONS
$BV_R$	Reverse Breakdown Voltage	-45	--	--	V	$I_R = -1\mu\text{A}$
$V_F$	Forward Voltage	0.8	1.5	1.5	V	$I_F = 1\text{mA}$
$C_{RSS}$	Total Reverse Capacitance	--	--	2.0	pF	$V_R = -5\text{V}, f = 1\text{MHz}$
$ C_{R1}-C_{R2} $	Differential Capacitance ( $\Delta C_R$ )	--	--	0.5	pF	$V_{R1} = V_{R2} = -5\text{V}, f = 1\text{MHz}$
$I_R$	Maximum Reverse Leakage Current	--	--	-2	pA	$V_R = -20\text{V}$

### Notes:

1. Absolute maximum ratings are limiting values above which DPAD2 serviceability may be impaired.

### Available Packages:

DPAD2 in TO-72  
DPAD2 available as bare die

Please contact Micross for full package and die dimensions



### Micross Components Europe

Tel: +44 1603 788967  
Email: [chipcomponents@micross.com](mailto:chipcomponents@micross.com)  
Web: <http://www.micross.com/distribution>

TO-72 (Bottom View)

