

## Linear Systems replaces discontinued Siliconix PAD1

The PAD1 is a low leakage Pico-Amp Diode packaged in hermetic TO-72

The PAD1 extremely low-leakage diode provides a superior alternative to conventional diode technology when reverse current (leakage) must be minimized. The PAD1 features a leakage current of -1 pA and is well suited for use in applications such as input protection for operational amplifiers.

### PAD1 Benefits:

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

### PAD1 Applications:

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

### FEATURES

DIRECT REPLACEMENT FOR SILICONIX PAD1

REVERSE BREAKDOWN VOLTAGE	$BV_R \geq -45V$
ULTRALOW LEAKAGE	$\leq 1 \text{ pA}$
REVERSE CAPACITANCE	$C_{RSS} \leq 0.8\text{pF}$

**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	300mW
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### MAXIMUM CURRENT

Forward Current (Note 1)	50mA
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### PAD1 ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise noted)

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

### Notes:

1. Absolute maximum ratings are limiting values above which PAD1 serviceability may be impaired.

### Available Packages:

PAD1 in TO-72  
PAD1 available as bare die

Please contact Micross for full package and die dimensions



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TO-72 (Bottom View)

