

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 |
|------------------------------|-------|

MAXIMUM CURRENT

| | |
|--------------------------|------|
| Forward Current (Note 1) | 50mA |
|--------------------------|------|

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.

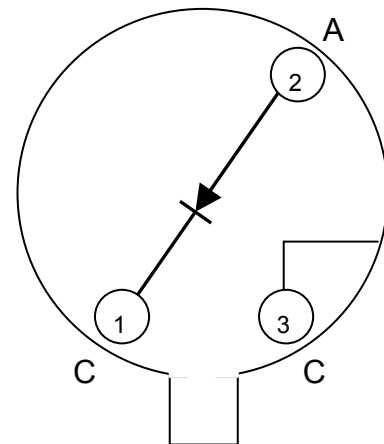
Available Packages:

PAD1 in TO-72
PAD1 available as bare die

Please contact Micross for full package and die dimensions



TO-72 (Bottom View)



Micross Components Europe

Tel: +44 1603 788967
Email: chipcomponents@micross.com
Web: <http://www.micross.com/distribution.aspx>