

Linear Systems replaces discontinued Siliconix PAD10

The PAD10 is a low leakage Pico-Amp Diode packaged in hermetic TO-72

The PAD10 extremely low-leakage diode provides a superior alternative to conventional diode technology when reverse current (leakage) must be minimized. The PAD10 features a leakage current of -10 pA and is well suited for use in applications such as input protection for operational amplifiers.

PAD10 Benefits:

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

PAD10 Applications:

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

FEATURES

DIRECT REPLACEMENT FOR SILICONIX PAD10

| | |
|---------------------------|-----------------------------|
| REVERSE BREAKDOWN VOLTAGE | $BV_R \geq -45V$ |
| ULTRALOW LEAKAGE | $\leq 10 \text{ pA}$ |
| 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 | 300mW |
|------------------------------|-------|

MAXIMUM CURRENT

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

PAD10 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 | -- | 1.5 | 2 | pF | $V_R = -5V, f = 1\text{MHz}$ |
| I_R | Maximum Reverse Leakage Current | -- | -- | -10 | pA | $V_R = -20V$ |

Notes:

1. Absolute maximum ratings are limiting values above which PAD10 serviceability may be impaired.

Available Packages:

PAD10 in TO-72
PAD10 available as bare die

Please contact Micross for full package and die dimensions



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TO-72 (Bottom View)

