

Linear Systems replaces discontinued Siliconix DPAD10

The DPAD10 is a low leakage Monolithic Dual Pico-Amp Diode

The DPAD10 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 DPAD10 features a leakage current of -10 pA and is well suited for use in applications such as input protection for operational amplifiers.

DPAD10 Benefits:

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

DPAD10 Applications:

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

FEATURES

| | |
|--|--------------------------------|
| DIRECT REPLACEMENT FOR SILICONIX DPAD10 | |
| HIGH ON ISOLATION | 20fA |
| EXCELLENT CAPACITANCE MATCHING | $\Delta C_R \leq 0.5\text{pF}$ |
| ULTRALOW LEAKAGE | $\leq 10\text{ pA}$ |
| 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 |
| MAXIMUM CURRENT | |
| Forward Current (Note 1) | 50mA |

DPAD10 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 | 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 (ΔC_R) | -- | -- | 0.5 | pF | $V_{R1} = V_{R2} = -5\text{V}, f = 1\text{MHz}$ |
| I_R | Maximum Reverse Leakage Current | -- | -- | -10 | pA | $V_R = -20\text{V}$ |

Notes:

1. Absolute maximum ratings are limiting values above which DPAD10 serviceability may be impaired.

Available Packages:

DPAD10 in TO-72
DPAD10 available as bare die

Please contact Microcross for full package and die dimensions



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TO-72 (Bottom View)

