LINEAR SYSTEMS

LSDPAD5
LOW LEAKAGE
PICO-AMP DUAL DIODE

micross

Linear Systems replaces discontinued Siliconix LSDPAD5

The LSDPAD5 is a low leakage Monolithic Dual Pico-Amp Diode

The LSDPAD5 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 LSDPAD5 features a leakage current of -5 pA and is well suited for use in applications such as input protection for operational amplifiers.

LSDPAD5 Benefits:

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

LSDPAD5 Applications:

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

FEATURES	
DIRECT REPLACEMENT FOR SILICONIX LSDPAD5	
HIGH ON ISOLATION	20fA
EXCELLENT CAPACITANCE MATCHING	$\Delta C_R \leq 0.5$pF
ULTRALOW LEAKAGE	≤ 5 pA
REVERSE BREAKDOWN VOLTAGE	$BV_R \geq -45$V
REVERSE CAPACITANCE	$C_{rss} \leq 2.0$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

LSDPAD5 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	$I_F = 1mA$
C_{rSS}	Total Reverse Capacitance	--	--	2.0	pF	$V_R = -5V$, f = 1MHz
$\lvert C_{R1}-C_{R2} \rvert$	Differential Capacitance (ΔC_R)	--	--	0.5	pF	$V_{R1} = V_{R2} = -5V$, f = 1MHz
I_R	Maximum Reverse Leakage Current	--	--	-5	pA	$V_R = -20V$

Notes:

1. Absolute maximum ratings are limiting values above which LSDPAD5 serviceability may be impaired.

Available Packages:

LSDPAD5 in TO-72
LSDPAD5 available as bare die

Please contact Micross for full package and die dimensions

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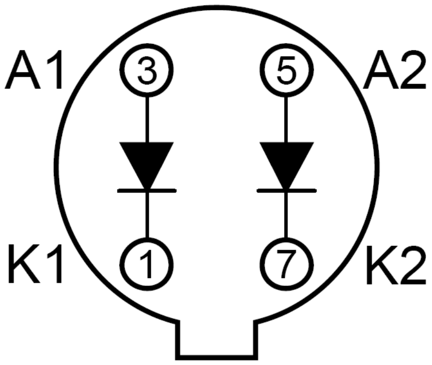
TO-72 (Bottom View)



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