PAD1 SERIES

Low-Leakage Pico-Amp Diodes

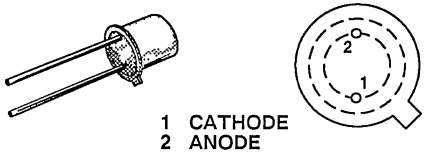
The PAD1 Series of extremely low-leakage diodes provides a superior alternative to conventional diode technology when reverse current (leakage) must be minimized. These devices feature leakage currents ranging from −1 pA (PAD1) to −100 pA (PAD100) to support a wide range of applications. The PAD1 Series is well suited for use in applications such as input protection for operational amplifiers. Its hermetically sealed metal can is available with full military processing per MIL-S-19500. (See Section 1.)

PART NO.	I_R (pA)
PAD1	−1
PAD2	−2
PAD5	−5
PAD10	−10
PAD20	−20
PAD50	−50
PAD100	−100

SIMILAR PRODUCTS

- TO-92, See JPAD5 Series
- SOT-23, See SSTPAD5 Series
- Duals, See DPAD1 Series
- Chips, Order PADXXCHP

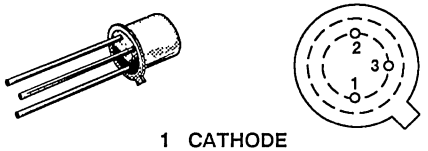
TO-18 (MODIFIED) **BOTTOM VIEW**



1 CATHODE
2 ANODE

(PAD10, 20, 50 100)

TO-18 **BOTTOM VIEW**



1 CATHODE
2 ANODE
3 CASE

(PAD1, 2, 5)

4

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMIT	UNITS
Forward Current	I_F	50	mA
Total Device Dissipation	P_D	300	mW
Storage Temperature	T_{stg}	−55 to 125	°C
Lead Temperature (1/16" from case for 10 seconds)	T_L	300	

ELECTRICAL CHARACTERISTICS [1]							
PARAMETER	SYMBOL	TEST CONDITIONS		LIMITS TYP [2]	MIN	MAX	UNIT
STATIC							
Reverse Current	I_R	V_R = -20 V	PAD1	-0.3		-1	pA
			PAD2	-0.7		-2	
			PAD5	-1		-5	
			PAD10	-2		-10	
			PAD20	-2		-20	
			PAD50	-5		-50	
			PAD100	-5		-100	
Reverse Breakdown Voltage	BV_R	I_R = -1 µA	PAD1, 2, 5	-60	-45	-120	V
			PAD10, 20 PAD50, 100	-50	-35		
Forward Voltage Drop	V_F	I_F = 5 mA		0.8		1.5	
DYNAMIC							
Reverse Capacitance	C_R	V_R = -5 V f = 1 MHz	PAD1, 2, 5	0.5		0.8	pF
			PAD10, 20 PAD50, 100	1.5		2	

NOTES: 1. T_A = 25 °C unless otherwise noted.
2. For design aid only, not subject to production testing.