



Low-Leakage Pico-Amp Diodes

PAD1 JPAD5 SSTPAD5
PAD5 JPAD50 SSTPAD100
PAD50

PRODUCT SUMMARY	
Part Number	I_R Max (pA)
PAD1	-1
PAD5/JPAD5/SSTPAD5	-5
PAD50/JPAD50	-50
SSTPAD100	-100

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

FEATURES

- Ultralow Leakage: PAD1 <1 pA
- Ultralow Capacitance: PAD1 <0.8 pF
- Two-Leaded Package

BENEFITS

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

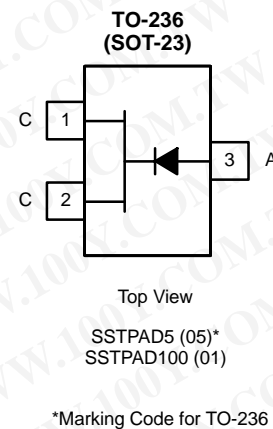
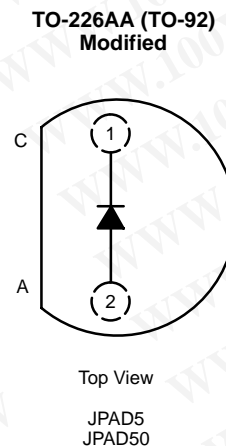
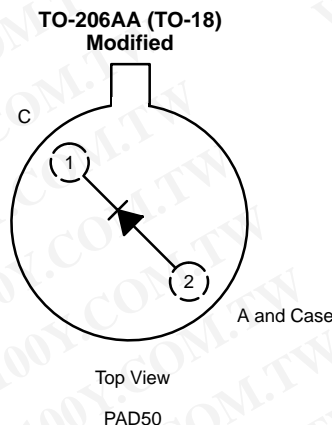
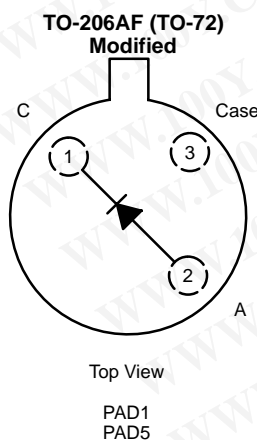
APPLICATIONS

- Op Amp Input Protection
- Multiplexer Overvoltage Protection

DESCRIPTION

The PAD/JPAD/SSTPAD series of extremely low-leakage diodes provides a superior alternative to conventional diode technology when reverse current (leakage) must be minimized. They feature leakage currents ranging from -1 pA (PAD1) to -100 pA (SSTPAD100) to support a wide range of applications. These devices are well suited for use in applications such as input protection for operational amplifiers.

The hermetically sealed TO-206AF (TO-72) package allows full military processing per MIL-S-19500 (see Military Information). The TO-226A (TO-92) plastic package provides a low-cost option. The TO-236 (SOT-23) package provides surface-mount capability. Both J and SST series are available in tape-and-reel for automated assembly. (See Packaging Information.)



PAD/JPAD/SSTPAD Series

Vishay Siliconix

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
 Http://www.100y.com.tw



ABSOLUTE MAXIMUM RATINGS^a

Forward Current:	(PAD)	50 mA
	(JPAD/SSTPAD)	10 mA
Total Device Dissipation:	(PAD) ^b	300 mW
	(JPAD/SSTPAD) ^b	350 mW
Operation Junction Temp:	(PAD)	-55 to 175°C
	(JPAD/SSTPAD) ^c	-55 to 150°C
Lead Temperature (¹ / ₁₆ " from case for 10 sec.)		300°C

Notes:

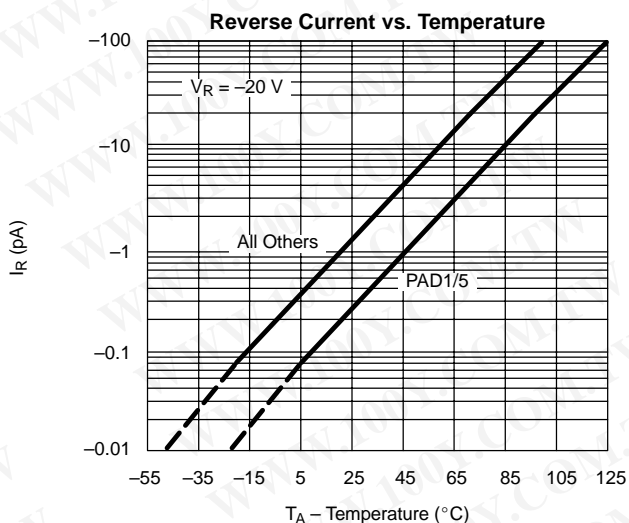
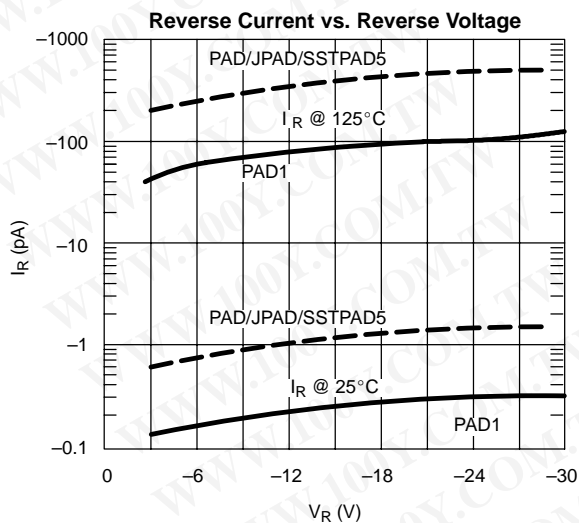
- $T_A = 25^\circ\text{C}$ unless otherwise noted.
- Derate 2 mW/°C above 25°C.
- Derate 2.8 mW/°C above 25°C.

SPECIFICATIONS SPECIFICATIONS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Conditions	Limits			Unit
			Min	Typ ^a	Max	
Static						
Reverse Current	I_R	$V_R = -20\text{ V}$	PAD1	-0.3	-1	pA
			PAD5/JPAD5/SSTPAD5	-1	-5	
			PAD50/JPAD50	-5	-50	
			SSTPAD100	-10	-100	
Reverse Breakdown Voltage	BV_R	$I_R = -1\ \mu\text{A}$	PAD1/PAD5	-45	-60	V
			SSTPAD5/100	-30	-55	
			All Others	-35	-55	
Forward Voltage Drop	V_F	$I_F = 1\ \text{mA}$		0.8	1.5	
Dynamic						
Reverse Capacitance	C_R	$V_R = -5\text{ V}, f = 1\ \text{MHz}$	PAD1/PAD5	0.5	0.8	pF
			All Others	1.5	2	

Notes:

- Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.

TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)





Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

勝特力材料 886-3-5753170
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)