

## DESCRIPTION

The LXP series of SOT-23 PIN diodes offers the circuit designer a higher level of quality in a commercially priced package. Choose from LXP1000, LXP1004, and LXP1008 for switching applications, LXP1002, LXP1005, LXP1010 and LXP1011 for low distortion attenuation from VHF through 1.5 GHz. They are available in a host of configurations (see configuration table for internal wiring.) The LXP series of PIN diodes supersedes the LSP series. The LXP products are supplied with a RoHS compliant matte tin finish. The LSP series was supplied with a lead/tin finish.

Other configurations are available - consult factory for details. When ordering specify configuration (example: LXP1004-23-4 is a common cathode dual pin).

## KEY FEATURES

- Low Cost
- High Performance
- Surface Mount
- Available on Tape
- Multiple Configurations to Choose From
- RoHS Compliant<sup>1</sup>

## APPLICATIONS

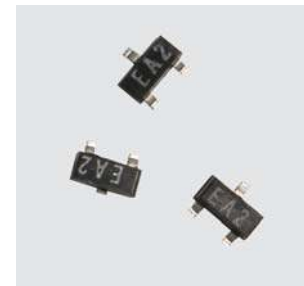
The LXP1000 series of SOT-23 PIN diodes are ideal for low cost RF switching and attenuator applications through 1.5 GHz. They can be tuned for narrow band control for frequencies through 5 GHz. They are available as Single Diode, Series "T", and Common Pair configurations. The SOT-23 products can be supplied in bulk or on 'tape & reel' for automated pick and place assembly. Tape & Reeled parts are supplied in 8mm conductive polycarbonate tape.

## APPLICATIONS/BENEFITS

- Low Current Switching
- Low Distortion Attenuation
- Ultra Low Distortion Switching
- High Quality / Economical Price.

## ABSOLUTE MAXIMUM RATINGS AT 25° C (UNLESS OTHERWISE SPECIFIED)

Rating	Symbol	Value	Unit
Maximum Leakage Current @80% of Minimum Rated $V_B$	$I_R$	50	nA
Storage Temperature	$T_{STG}$	-65 to +125	°C
Operating Temperature	$T_{OP}$	-55 to +125	°C
Power Dissipation	$P_D$	250	mW
Forward Current (1uS Pulse)	$I_F$	1	A



**IMPORTANT:** For the most current data, consult our website: [www.MICROSEMI.com](http://www.MICROSEMI.com)



These devices are ESD sensitive and must be handled using ESD precautions.

<sup>1</sup> The LXP1000 Series of products are supplied with a RoHS compliant Gold finish.

**ELECTRICAL PARAMETERS @ 25°C (Unless Otherwise Specified)**

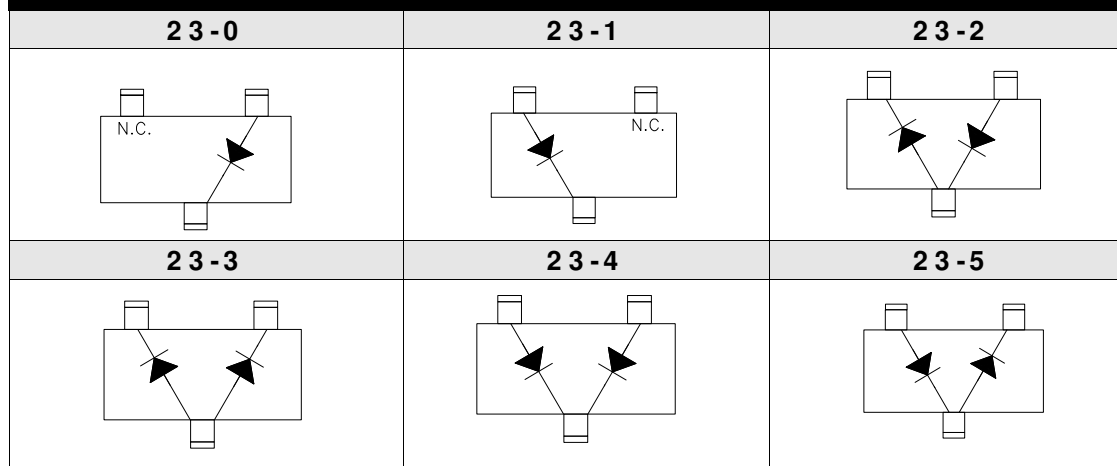
Model Number	$V_b(V)$ $I_R=10\mu A$ (Min)	$C_T(pF)$ <sup>1</sup> @ $V_R$ (Typ)	$V_R(V)$	$R_s(\Omega)$ <sup>2</sup> @ $I_F$ (Max)	$I_F(mA)$	$T_L(ns)$ <sup>3</sup> (Typ)	Application
LXP1000	35	0.28	5	2.5	5	40	Switch
LXP1002	100	0.32	50	4.0	100	1500	Attenuator
LXP1004	35	0.75	20	0.6	10	70	Switch
LXP1005	100	0.40	50	6.5	5	2000	Attenuator
LXP1008	50	0.30	20	1.5	10	200	Switch
LXP1010	100	0.35	50	3.0	10	1000	Attenuator
LXP1011	200	0.35	50	8.0	20	2000	Attenuator

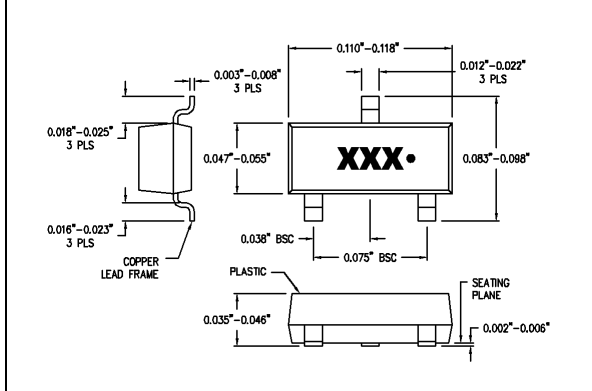
## Notes

1. Capacitance ( $C_T$ ) is measured at  $f = 1$  MHz
2. Series Resistance ( $R_s$ ) is measured at  $f = 100$  MHz
3. Carrier Lifetime ( $T_L$ ) is measured at  $I_F = 10$  mA,  $I_R = 6$  mA

**TYPICAL CONFIGURATIONS**

Model Number	23-0	23 - 1	23 - 2	23 - 3	23 - 4	23 - 5
LXP1000	•	•	•	•	•	
LXP1002	•	•	•	•	•	
LXP1004	•				•	
LXP1005	•					
LXP1008	•		•		•	
LXP1010	•					•
LXP1011	•					

**PINOUT**


**SOT23 (23) STYLE PACKAGE**

**CROSS REFERENCE**

MSC P/N	INDUSTRY EQUIVALENT		
LXP1000 – 23-0	HSMP3890		
LXP1000 – 23-1	HSMP3891		
LXP1000 – 23-2	HSMP3892		
LXP1000 – 23-3	HSMP3893		
LXP1000 – 23-4	HSMP3894		
LXP1002 – 23-0	HSMP3810	MA4P274	
LXP1002 – 23-1	HSMP3811		
LXP1002 – 23-2	HSMP3812	MA4P274ST	
LXP1002 – 23-4	HSMP3814	MA4P274CK	
LXP1004 – 23-0	HSMP3820		
LXP1004 – 23-1	HSMP3821		
LXP1004 – 23-2	HSMP3822		
LXP1004 – 23-3	HSMP3823		
LXP1004 – 23-4	HSMP3824		
LXP1005 – 23-0	HSMP3880		
LXP1008 – 23-2		MA4P789ST	SMP1310-12
LXP1008 – 23-4		MA4P789CK	SMP1310-13
LXP1010 – 23-0		MA4P274	
LXP1011 – 23-0		MA4CP103A	SMP1304-01