

Product Overview

Schottky barrier devices are available in economical SOT–23 plastic packages. Priced for high volume commercial applications, these devices provide state-of-the-art electrical performance, ideal for use as detectors, mixers, in up/down converters or in sampling phase detectors. The LXZ1000 series of diodes are the RoHS compliant versions of the LSZ1000.

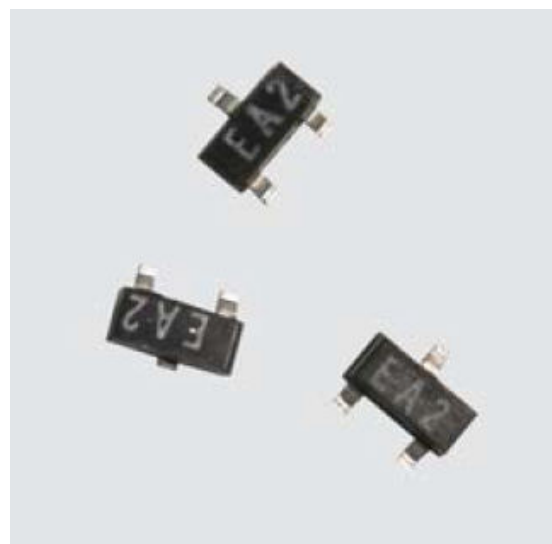
Key Features

- Standard SOT23 package outline
- Surface mount design
- Wide selection of values and configurations
- Available on tape and reel for automated pick and place assembly
- Excellent conversion loss
- RoHS compliant¹

Applications

- Detectors
- Mixers
- Sampling phase detectors
- Up/Down converters

Package Styles



Performance Overview

Parameter	Conditions	Value	Units
V_B	$I_R = 100 \mu A$	1.0	V
V_F	$I_F = 0.1 \text{ mA}$	150	mV
C_T	at 0.5V	0.3	pF
R_V	at -30 dBm	2 - 8	k Ω

Note:

1. These devices are supplied with a matte tin finish suitable for RoHS compliant assembly.

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1. Electrical Specifications

1.1 Typical Electrical Performance

Table 1-1. Typical Electrical Performance T = 25 °C

PN – Configuration		V _B	V _F	V _F	C _T ¹	R _V
		at I _R = 100 μA	at I _F = 0.1 mA	at I _F = 1 mA	at 0.5V	at -30 dBm
		(Min)	(Max)	(Max)	(Typ)	(Typ)
		(V)	(mV)	(mV)	(pF)	(kΩ)
LXZ1000	23-13	1.0	150	250	0.3	2 – 8
	23-14					
	23-15					

Note:

1. Capacitance is measured at f = 1 MHz.

1.2 Absolute Maximum Ratings

The following table shows the absolute maximum ratings at 25 °C unless otherwise specified.

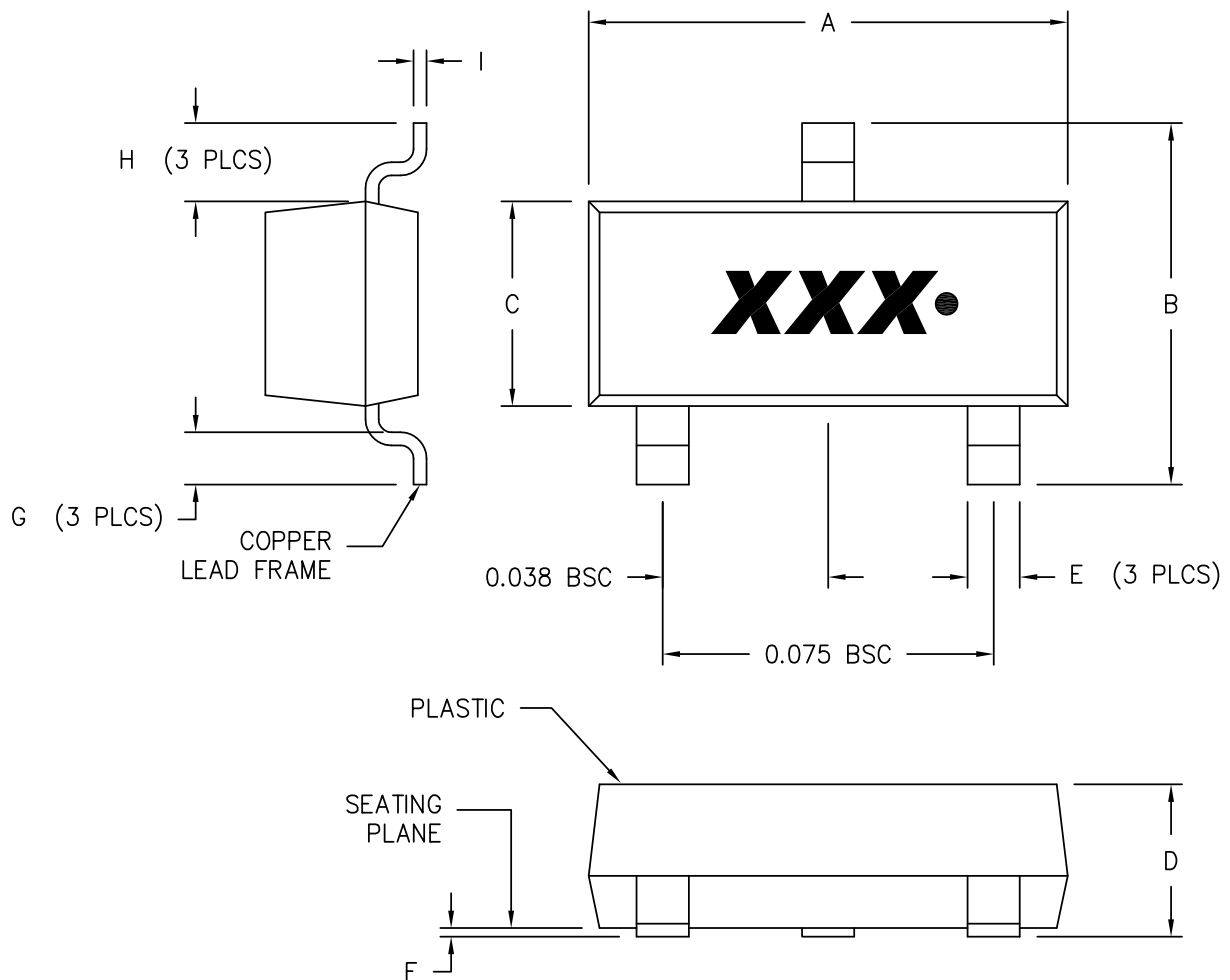
Rating	Symbol	Value	Unit
Power dissipation (de-rated linearly to 0 at T _J (max))	P _D	75	mW
Storage temperature	T _{STG}	-55 to +125	°C
Operating temperature	T _{OP}	-55 to +125	°C
Junction temperature	T _J	125	°C



ESD Sensitive Device

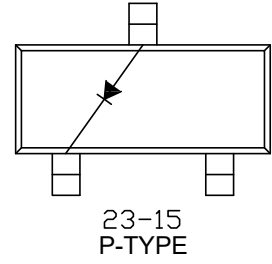
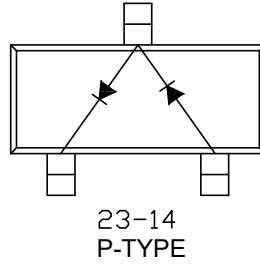
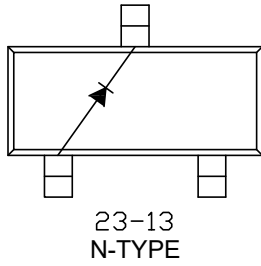
2. Outline Drawings

Figure 2-1. Package Outline



DIM	INCHES			MM		
	MIN	TYP	MAX	MIN	TYP	MAX
A	0.110	-	0.118	2.794	-	2.997
B	0.083	-	0.098	2.108	-	2.489
C	0.047	-	0.055	1.194	-	1.397
D	0.035	-	0.046	0.889	-	1.168
E	0.012	-	0.022	0.305	-	0.559
F	0.002	-	0.006	0.051	-	0.152
G	0.016	-	0.023	0.406	-	0.584
H	0.018	-	0.025	0.457	-	0.635
I	0.003	-	0.008	0.076	-	0.203

2.1 Configurations



Note:

1. For specific material type (P or N) and other configurations, consult factory.

3. Ordering Information

When ordering, specify configuration (see configuration section for internal wiring diagrams). For additional information, contact your Microchip sales representative.

Part Number	Package-Configuration
LXZ1000	23-13
	23-14
	23-15

Note:

1. For tape and reel add /TR at the end, for example LXZ1000-23-14/TR.

4. Revision History

The revision history describes the changes that were implemented in the document. The changes are listed by revision, starting with the most current publication.

Revision	Date	Section	Description
A	07/2023	2.1	Document reformatted to Microchip template and configurations updated.

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