

# Full Material Declaration for PZU3.9B

Date	2025-05-06 16:04:58 CEST+0200
Package	SOD323F; 0.7 mm × 1.25 mm × 2.5 mm
Description	Single Zener diodes in a SOD323F package
Datasheet	<a href="https://assets.nexperia.com/documents/data-sheet/PZUXB_SER.pdf">https://assets.nexperia.com/documents/data-sheet/PZUXB_SER.pdf</a>
OPNs	934059747115: PZU3.9B,115 (RFS), MSL 1
Automotive-qualified	Yes
UL-94	<a href="https://iq.ulprospector.com/en/profile?e=574821">https://iq.ulprospector.com/en/profile?e=574821</a>



REACH	Compliant with Regulation 1907/2006/EC (REACH). Does not contain REACH SVHC substances exceeding 1000 ppm of the article.
EU RoHS	Compliant with Directive 2011/65/EU, amended by Directive 2015/863/EU, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ('RoHS 2 amended') without exemptions.
CN RoHS	Compliant with Chinese Administration on the Control of Pollution Caused by Electronic Information Products (ACPEIP; CN RoHS).
ELV	Compliant with Directive 2000/53/EC, amended by Directive 2023/533, on end of life vehicles (ELV) without exemptions.
PFAS	Does not contain any intentionally added per- and polyfluoroalkyl substances (PFAS).
CA Proposition 65	Contains California Proposition 65 substance(s) [at the article level]: substance 1333-86-4: 1696 ppm; substance 7439-92-1: 1 ppm;
IEC 62474	Contains IEC 62474 substance(s) [at the article level]: substance 1333-86-4: 1696 ppm; substance 7439-92-1: 1 ppm;
Precious Metals	Contains precious metals [Ag, Au, Pd, Pt; at the article level]: substance 7440-22-4: 319 ppm;
GADSL	Contains 'Global Automotive Declarable Substances List' (GADSL) substances: substance 7440-50-8: 390594 ppm; substance 7440-22-4: 319 ppm; substance 7439-92-1: 1 ppm;
RHF Indicator	D: Lead-free and halogen-free according to Nexperia's halogen-free definition.

Material	Mat. Group	Substance	CAS No.	Mass / mg	Mass-% of Material	Mass-% of Part
Die	Doped silicon	Silicon (Si)	7440-21-3	0.050000	100.000000	1.321644
<b>Die Total</b>				<b>0.050000</b>	<b>100.000000</b>	<b>1.321644</b>
Lead Frame	Copper alloy	Copper (Cu)	7440-50-8	1.474515	97.650000	38.975689
Lead Frame	Copper alloy	Iron (Fe)	7439-89-6	0.031861	2.110000	0.842178
Lead Frame	Copper alloy	Zinc (Zn)	7440-66-6	0.001963	0.130000	0.051888
Lead Frame	Copper alloy	Phosphorus (P)	7723-14-0	0.000453	0.030000	0.011974
<i>Base Alloy Total</i>				<i>1.508792</i>	<i>99.920000</i>	<i>39.881729</i>
Lead Frame	Pure metal layer	Silver (Ag)	7440-22-4	0.001208	0.080000	0.031931
<i>Pre-Plating Total</i>				<i>0.001208</i>	<i>0.080000</i>	<i>0.031931</i>
<b>Lead Frame Total</b>				<b>1.510000</b>	<b>100.000000</b>	<b>39.913660</b>
Mould Compound	Filler	Silica fused	60676-86-0	1.607140	75.100000	42.481351
Mould Compound	Polymer	o-Cresol-epichlorohydrin-formaldehyde copolymer	29690-82-2	0.374500	17.500000	9.899116
Mould Compound	Polymer	Formaldehyde-phenol copolymer	9003-35-4	0.151940	7.100000	4.016213
Mould Compound	Pigment	Carbon black	1333-86-4	0.006420	0.300000	0.169699
<b>Mould Compound Total</b>				<b>2.140000</b>	<b>100.000000</b>	<b>56.566379</b>
Post-Plating	Tin solder	Tin (Sn)	7440-31-5	0.079952	99.940000	2.113362
Post-Plating	Impurity	Non-declarable		0.000044	0.055500	0.001163
Post-Plating	Impurity	Lead (Pb)	7439-92-1	0.000004	0.004500	0.000106
<b>Post-Plating Total</b>				<b>0.080000</b>	<b>100.000000</b>	<b>2.114631</b>
Wire	Pure metal	Copper (Cu)	7440-50-8	0.003166	100.000000	0.083686

Material	Mat. Group	Substance	CAS No.	Mass / mg	Mass-% of Material	Mass-% of Part
Wire Total				0.003166	100.000000	0.083686
PZU3.9B Total				3.783166	100.000000	100.000000

部件名称 Material	有毒或有害物质和元素 (Toxic or hazardous substances and elements)					
	铅 (Pb)	镉 (Cd)	汞 (Hg)	六价铬 (Cr <sup>6+</sup> )	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
半导体芯片 (Die)	○	○	○	○	○	○
基底合金 (Base Alloy)	○	○	○	○	○	○
预镀层 (Pre-Plating)	○	○	○	○	○	○
模封料 (Mould Compound)	○	○	○	○	○	○
后镀层 (Post-Plating)	○	○	○	○	○	○
导线 (Wire)	○	○	○	○	○	○

○ 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下  
Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

× 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求  
Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

该半导体产品具有无限期的环保使用期限 (EFUP) 。  
This semiconductor product has an indefinite environmental friendly use period (EFUP).

All information in this document is furnished for exploratory or indicative purposes only. All information in this document is believed to be accurate and reliable. However, Nexperia does not give any representations or warranties as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. Nexperia may make changes to information published in this document at any time and without notice. Minor deviations may occur in the products from different manufacturing location. This document supersedes and replaces all information supplied prior to the publication hereof. Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.