

Full Material Declaration for PZU3.9B2

Date	2025-06-24 20:57:43 CEST+0200
Package	SOD323F: 0.7 mm × 1.25 mm × 2.5 mm
Description	Single Zener diodes in a SOD323F package
Datasheet	https://assets.nexperia.com/documents/data-sheet/PZUXB_SER.pdf
OPNs	934059815115: PZU3.9B2,115 (RFS), MSL 1
Automotive-qualified	Yes
UL-94	https://iq.ulprospector.com/en/profile?e=574821



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 ACPEIP (Administration on the Control of Pollution Caused by Electronic Information Products) (CN RoHS) without exemptions.
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: 1706 ppm; substance 7439-92-1: 1 ppm;
IEC 62474	Contains IEC 62474 substance(s) [at the article level]: substance 1333-86-4: 1706 ppm; substance 7439-92-1: 1 ppm;
Precious Metals	Contains precious metals [Ag, Au, Pd, Pt; at the article level]: substance 7440-22-4: 321 ppm;
GADSL	Contains 'Global Automotive Declarable Substances List' (GADSL) substances: substance 7440-50-8: 392670 ppm; substance 7440-22-4: 321 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	0.030000	100.000000	0.797201
Die Total				0.030000	100.000000	0.797201
Lead Frame	Copper alloy	Copper (Cu)	7440-50-8	1.474515	97.650000	39.182832
Lead Frame	Copper alloy	Iron (Fe)	7439-89-6	0.031861	2.110000	0.846654
Lead Frame	Copper alloy	Zinc (Zn)	7440-66-6	0.001963	0.130000	0.052163
Lead Frame	Copper alloy	Phosphorus (P)	7723-14-0	0.000453	0.030000	0.012038
<i>Base Alloy Total</i>				<i>1.508792</i>	<i>99.920000</i>	<i>40.093687</i>
Lead Frame	Pure metal layer	Silver (Ag)	7440-22-4	0.001208	0.080000	0.032101
<i>Pre-Plating Total</i>				<i>0.001208</i>	<i>0.080000</i>	<i>0.032101</i>
Lead Frame Total				1.510000	100.000000	40.125788
Mould Compound	Filler	Silica fused	60676-86-0	1.607140	75.100000	42.707125
Mould Compound	Polymer	o-Cresol-epichlorohydrin-formaldehyde copolymer	29690-82-2	0.374500	17.500000	9.951727
Mould Compound	Polymer	Formaldehyde-phenol copolymer	9003-35-4	0.151940	7.100000	4.037557
Mould Compound	Pigment	Carbon black	1333-86-4	0.006420	0.300000	0.170601
Mould Compound Total				2.140000	100.000000	56.867010
Post-Plating	Tin solder	Tin (Sn)	7440-31-5	0.079952	99.940000	2.124594
Post-Plating	Impurity	Non-declarable		0.000044	0.055500	0.001169
Post-Plating	Impurity	Lead (Pb)	7439-92-1	0.000004	0.004500	0.000107
Post-Plating Total				0.080000	100.000000	2.125870
Wire	Pure metal	Copper (Cu)	7440-50-8	0.003166	100.000000	0.084131

Material	Mat. Group	Substance	CAS No.	Mass / mg	Mass-% of Material	Mass-% of Part
Wire Total				0.003166	100.000000	0.084131
PZU3.9B2 Total				3.763166	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 ⁶⁺)	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).

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