

Full Material Declaration for PZU3.3BL

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|----------------------|---|
| Date | 2025-03-08 20:27:46 CET+0100 |
| Package | SOD882 (DFN1006-2): 0.48 mm × 0.6 mm × 1.0 mm |
| Description | Single Zener diodes |
| Datasheet | https://assets.nexperia.com/documents/data-sheet/PZUXBL_SER.pdf |
| OPNs | 934061657315: PZU3.3BL,315 (RFS), MSL 1 |
| Automotive-qualified | Yes |
| UL-94 | https://iq.ulprospector.com/en/profile?e=594631 |



| | |
|-------------------|---|
| 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 7440-02-0: 19600 ppm; substance 1333-86-4: 2433 ppm; substance 7439-92-1: 1 ppm; |
| IEC 62474 | Contains IEC 62474 substance(s) [at the article level]: substance 7440-02-0: 19600 ppm; substance 1333-86-4: 2433 ppm; substance 7439-92-1: 1 ppm; |
| Precious Metals | Contains precious metals [Ag, Au, Pd, Pt; at the article level]: substance 7440-22-4: 8220 ppm; substance 7440-05-3: 754 ppm; substance 7440-57-5: 5065 ppm; |
| GADSL | Contains 'Global Automotive Declarable Substances List' (GADSL) substances: substance 7440-22-4: 8220 ppm; substance 7440-50-8: 419020 ppm; substance 7440-02-0: 19601 ppm; substance 7439-95-4: 887 ppm; substance 7440-05-3: 754 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 |
|---------------------|------------------|---|------------|-----------|--------------------|----------------|
| Adhesive | Filler | Silver (Ag) | 7440-22-4 | 0.007600 | 76.000000 | 0.822012 |
| Adhesive | Polymer | Phenolic resin | | 0.001353 | 13.530000 | 0.146340 |
| Adhesive | Polymer | Formaldehyde, polymer with (chloromethyl)oxirane and phenol | 9003-36-5 | 0.001047 | 10.470000 | 0.113243 |
| Adhesive Total | | | | 0.010000 | 100.000000 | 1.081595 |
| Die | Doped silicon | Silicon (Si) | 7440-21-3 | 0.030000 | 100.000000 | 3.244787 |
| Die Total | | | | 0.030000 | 100.000000 | 3.244787 |
| Lead Frame | Copper alloy | Copper (Cu) | 7440-50-8 | 0.387409 | 94.490000 | 41.901986 |
| Lead Frame | Copper alloy | Nickel (Ni) | 7440-02-0 | 0.012915 | 3.150000 | 1.396881 |
| Lead Frame | Copper alloy | Silicon (Si) | 7440-21-3 | 0.002829 | 0.690000 | 0.305983 |
| Lead Frame | Copper alloy | Magnesium (Mg) | 7439-95-4 | 0.000820 | 0.200000 | 0.088691 |
| Lead Frame | Pure metal layer | Nickel (Ni) | 7440-02-0 | 0.005207 | 1.270000 | 0.563187 |
| Pre-Plating 1 Total | | | | 0.005207 | 1.270000 | 0.563187 |
| Lead Frame | Pure metal layer | Palladium (Pd) | 7440-05-3 | 0.000697 | 0.170000 | 0.075387 |
| Pre-Plating 2 Total | | | | 0.000697 | 0.170000 | 0.075387 |
| Lead Frame | Pure metal layer | Gold (Au) | 7440-57-5 | 0.000123 | 0.030000 | 0.013303 |
| Pre-Plating 3 Total | | | | 0.000123 | 0.030000 | 0.013303 |
| Lead Frame Total | | | | 0.410000 | 100.000000 | 44.345418 |
| Mould Compound | Filler | Silica fused | 60676-86-0 | 0.270000 | 60.000000 | 29.203081 |
| Mould Compound | Filler | Silica | 7631-86-9 | 0.103500 | 23.000000 | 11.194514 |

| Material | Mat. Group | Substance | CAS No. | Mass / mg | Mass-% of Material | Mass-% of Part |
|----------------------|--------------------|-------------------------------|------------|-----------|--------------------|----------------|
| Mould Compound | Polymer | Epoxy resin system | | 0.031500 | 7.000000 | 3.407026 |
| Mould Compound | Polymer | Phenolic resin | | 0.027000 | 6.000000 | 2.920308 |
| Mould Compound | Flame retardant | Aluminium hydroxide (Al(OH)3) | 21645-51-2 | 0.013500 | 3.000000 | 1.460154 |
| Mould Compound | Pigment | Carbon black | 1333-86-4 | 0.002250 | 0.500000 | 0.243359 |
| Mould Compound | Ion trapping agent | Bismuth (Bi) | 7440-69-9 | 0.002250 | 0.500000 | 0.243359 |
| Mould Compound Total | | | | 0.450000 | 100.000000 | 48.671801 |
| Post-Plating | Tin solder | Tin (Sn) | 7440-31-5 | 0.019988 | 99.940000 | 2.161893 |
| Post-Plating | Impurity | Non-declarable | | 0.000011 | 0.055500 | 0.001190 |
| Post-Plating | Impurity | Lead (Pb) | 7439-92-1 | 0.000001 | 0.004500 | 0.000108 |
| Post-Plating Total | | | | 0.020000 | 100.000000 | 2.163191 |
| Wire | Pure metal | Gold (Au) | 7440-57-5 | 0.004560 | 99.990000 | 0.493208 |
| Wire | Impurity | Non-declarable | | 0.000000 | 0.010000 | 0.000000 |
| Wire Total | | | | 0.004560 | 100.000000 | 0.493208 |
| PZU3.3BL Total | | | | 0.924560 | 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) |
| 胶黏剂 (Adhesive) | ○ | ○ | ○ | ○ | ○ | ○ |
| 半导体芯片 (Die) | ○ | ○ | ○ | ○ | ○ | ○ |
| 引线框架 (Lead Frame) | ○ | ○ | ○ | ○ | ○ | ○ |
| 预镀层1 (Pre-Plating 1) | ○ | ○ | ○ | ○ | ○ | ○ |
| 预镀层2 (Pre-Plating 2) | ○ | ○ | ○ | ○ | ○ | ○ |
| 预镀层3 (Pre-Plating 3) | ○ | ○ | ○ | ○ | ○ | ○ |
| 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.

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