

# Full Material Declaration for PDZ4.7BGW

|                      |   |
|----------------------|---|
| Date                 | 2025-03-08 20:24:14 CET+0100  |
| Package              | SOD123 (SOD2): 1.15 mm × 1.6 mm × 2.675 mm  |
| Description          | PDZ-GW series   |
| Datasheet            | <a href="https://assets.nexperia.com/documents/data-sheet/PDZ-GW_SER.pdf">https://assets.nexperia.com/documents/data-sheet/PDZ-GW_SER.pdf</a> |
| OPNs                 | 934071087115: PDZ4.7BGWX (RFS), MSL 1<br>934071087118: PDZ4.7BGWJ (RFS), MSL 1  |
| Automotive-qualified | Yes   |
| UL-94                | <a href="https://iq.ulprospector.com/en/profile?e=577771">https://iq.ulprospector.com/en/profile?e=577771</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: 334 ppm; substance 7439-92-1: <1 ppm;   |
| IEC 62474         | Contains IEC 62474 substance(s) [at the article level]: substance 1333-86-4: 334 ppm; substance 7439-92-1: <1 ppm;   |
| Precious Metals   | Contains precious metals [Ag, Au, Pd, Pt; at the article level]: substance 7440-22-4: 4996 ppm;  |
| GADSL             | Contains 'Global Automotive Declarable Substances List' (GADSL) substances: substance 7440-50-8: 298595 ppm; substance 7440-22-4: 4996 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         | 0.248891         |
| <b>Die Total</b>            |                  |   |            | <b>0.030000</b> | <b>100.000000</b>  | <b>0.248891</b>  |
| Lead Frame                  | Copper alloy     | Copper (Cu)                                     | 7440-50-8  | 3.533178        | 94.470000          | 29.312553        |
| Lead Frame                  | Copper alloy     | Iron (Fe)                                       | 7439-89-6  | 0.077792        | 2.080000           | 0.645391         |
| Lead Frame                  | Copper alloy     | Zinc (Zn)                                       | 7440-66-6  | 0.004862        | 0.130000           | 0.040337         |
| Lead Frame                  | Copper alloy     | Phosphorus (P)                                  | 7723-14-0  | 0.001496        | 0.040000           | 0.012411         |
| Lead Frame                  | Pure metal layer | Copper (Cu)                                     | 7440-50-8  | 0.062458        | 1.670000           | 0.518175         |
| <i>Pre-Plating 1 Total</i>  |                  |   |            | <i>0.062458</i> | <i>1.670000</i>    | <i>0.518175</i>  |
| Lead Frame                  | Pure metal layer | Silver (Ag)                                     | 7440-22-4  | 0.060214        | 1.610000           | 0.499558         |
| <i>Pre-Plating 2 Total</i>  |                  |   |            | <i>0.060214</i> | <i>1.610000</i>    | <i>0.499558</i>  |
| <b>Lead Frame Total</b>     |                  |   |            | <b>3.740000</b> | <b>100.000000</b>  | <b>31.028425</b> |
| Mould Compound              | Filler           | Silica  | 7631-86-9  | 5.810400        | 72.000000          | 48.205230        |
| Mould Compound              | Polymer          | o-Cresol-epichlorohydrin-formaldehyde copolymer | 29690-82-2 | 1.210500        | 15.000000          | 10.042756        |
| Mould Compound              | Polymer          | Formaldehyde-phenol copolymer                   | 9003-35-4  | 0.807000        | 10.000000          | 6.695171         |
| Mould Compound              | Additive         | Non-declarable                                  |            | 0.234030        | 2.900000           | 1.941599         |
| Mould Compound              | Pigment          | Carbon black                                    | 1333-86-4  | 0.004035        | 0.050000           | 0.033476         |
| Mould Compound              | Additive         | Triphenylphosphine                              | 603-35-0   | 0.004035        | 0.050000           | 0.033476         |
| <b>Mould Compound Total</b> |                  |   |            | <b>8.070000</b> | <b>100.000000</b>  | <b>66.951708</b> |
| Post-Plating                | Tin solder       | Tin (Sn)  | 7440-31-5  | 0.209874        | 99.940000          | 1.741192         |

| Material           | Mat. Group | Substance      | CAS No.   | Mass / mg | Mass-% of Material | Mass-% of Part |
|--------------------|------------|----------------|-----------|-----------|--------------------|----------------|
| Post-Plating       | Impurity   | Non-declarable |           | 0.000117  | 0.055500           | 0.000971       |
| Post-Plating       | Impurity   | Lead (Pb)      | 7439-92-1 | 0.000009  | 0.004500           | 0.000075       |
| Post-Plating Total |            |                |           | 0.210000  | 100.000000         | 1.742238       |
| Wire               | Pure metal | Copper (Cu)    | 7440-50-8 | 0.003464  | 100.000000         | 0.028738       |
| Wire Total         |            |                |           | 0.003464  | 100.000000         | 0.028738       |
| PDZ4.7BGW Total    |            |                |           | 12.053464 | 100.000000         | 100.000000     |

| 部件名称<br>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)          | ○   | ○      | ○      | ○                       | ○          | ○            |
| 引线框架 (Lead Frame)    | ○   | ○      | ○      | ○                       | ○          | ○            |
| 预镀层1 (Pre-Plating 1) | ○   | ○      | ○      | ○                       | ○          | ○            |
| 预镀层2 (Pre-Plating 2) | ○   | ○      | ○      | ○                       | ○          | ○            |
| 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.
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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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