

# Full Material Declaration for PDZ5.1BGW

Date	2025-06-24 20:53:36 CEST+0200
Package	<u>SOD123</u> (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	934071088118: PDZ5.1BGWJ (RFS), MSL 1 934071088115: PDZ5.1BGWX (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 ACEIP (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: 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: 4987 ppm;
GADSL	Contains 'Global Automotive Declarable Substances List' (GADSL) substances: substance 7440-50-8: 298100 ppm; substance 7440-22-4: 4987 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	0.414131
<b>Die Total</b>				<b>0.050000</b>	<b>100.000000</b>	<b>0.414131</b>
Lead Frame	Copper alloy	Copper (Cu)	7440-50-8	3.533178	94.470000	29.263996
Lead Frame	Copper alloy	Iron (Fe)	7439-89-6	0.077792	2.080000	0.644322
Lead Frame	Copper alloy	Zinc (Zn)	7440-66-6	0.004862	0.130000	0.040270
Lead Frame	Copper alloy	Phosphorus (P)	7723-14-0	0.001496	0.040000	0.012391
<i>Base Alloy Total</i>				<i>3.617328</i>	<i>96.720000</i>	<i>29.960979</i>
Lead Frame	Pure metal layer	Copper (Cu)	7440-50-8	0.062458	1.670000	0.517316
<i>Pre-Plating 1 Total</i>				<i>0.062458</i>	<i>1.670000</i>	<i>0.517316</i>
Lead Frame	Pure metal layer	Silver (Ag)	7440-22-4	0.060214	1.610000	0.498730
<i>Pre-Plating 2 Total</i>				<i>0.060214</i>	<i>1.610000</i>	<i>0.498730</i>
<b>Lead Frame Total</b>				<b>3.740000</b>	<b>100.000000</b>	<b>30.977025</b>
Mould Compound	Filler	Silica	7631-86-9	5.810400	72.000000	48.125377
Mould Compound	Polymer	o-Cresol-epichlorohydrin-formaldehyde copolymer	29690-82-2	1.210500	15.000000	10.026120
Mould Compound	Polymer	Formaldehyde-phenol copolymer	9003-35-4	0.807000	10.000000	6.684080
Mould Compound	Additive	Non-declarable		0.234030	2.900000	1.938383
Mould Compound	Pigment	Carbon black	1333-86-4	0.004035	0.050000	0.033421
Mould Compound	Additive	Triphenylphosphine	603-35-0	0.004035	0.050000	0.033420
<b>Mould Compound Total</b>				<b>8.070000</b>	<b>100.000000</b>	<b>66.840801</b>

Material	Mat. Group	Substance	CAS No.	Mass / mg	Mass-% of Material	Mass-% of Part
Post-Plating	Tin solder	Tin (Sn)	7440-31-5	0.209874	99.940000	1.738308
Post-Plating	Impurity	Non-declarable		0.000117	0.055500	0.000969
Post-Plating	Impurity	Lead (Pb)	7439-92-1	0.000009	0.004500	0.000075
<b>Post-Plating Total</b>				<b>0.210000</b>	<b>100.000000</b>	<b>1.739352</b>
Wire	Pure metal	Copper (Cu)	7440-50-8	0.003464	100.000000	0.028691
<b>Wire Total</b>				<b>0.003464</b>	<b>100.000000</b>	<b>0.028691</b>
<b>PDZ5.1BGW Total</b>				<b>12.073464</b>	<b>100.000000</b>	<b>100.000000</b>

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.

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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