



Material Composition Declaration
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This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.

1752-21.1	IPC Web Site for Information on IPC-1752 Standard http://www.ipc.org/IPC-175x	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Information
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Supplier Information

Company name* onsemi	Company unique ID	Unique ID Authority	Response Date* 2024-08-11
Contact Name Product-Env-Stewards	Title - Contact Product Enviro Compliance	Phone - Contact* NA	Email - Contact* Product-Env-Stewards@onsemi.com
Authorized Representative* Product-Env-Stewards	Title - Representative Product Enviro Compliance	Phone - Representative* NA	Email - Representative* Product-Env-Stewards@onsemi.com

Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight*	UOM	Unit Type
	NVH640S75L4SPB	Automotive 750V, 640A SSDC Power Module Pin Fin Base Plate	2024-08-11		CNG	696191.9	mg	Each

Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
Matte Tin (Sn) - annealed	CU Alloy	NA	0 C	30 seconds	3

Comments

For more information regarding material composition please refer to page 3

RoHS Material Composition Declaration		Declaration Type *	Detailed
Directive 2015/863/EU amending RoHS Directive 2011/65/EU	RoHS Definition: Quantity limit of 0.01% by mass (100 PPM) in homogeneous material for Cadmium and quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Bis(2-ethylhexyl) phthalate (DEHP), Benzyl-butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP).		
<p>Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part identified on this form contains lead, mercury, cadmium, hexavalentchromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a "RoHS restricted substance") in excess of the applicable quantity limit identified above. If a homogeneous material within the part contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part, and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part, the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Supplier's Standard Terms and Conditions of Sale applicable to such part shall apply.</p>			
RoHS Declaration *	1 - Item(s) does not contain RoHS restricted substances per the definition above		Supplier Acceptance * Accepted
Exemption: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.			
Exemption List Version	EL-2011/534/EU		
Declaration Signature			
Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.			
Supplier Digital Signature	Rastislav Drska		

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Homogeneous Material	Weight	Unit of Measure	Level	Substance	CAS	Exempt	Weight	Unit of Measure
Case	82300.0	mg	Supplier	Fiber Glass (SiO2)	65997-17-3		24690.002	mg
			Supplier	Poly(ButyleneTerephthalate)	30965-26-5		23044	mg
			B	Antimony Trioxide (Sb2O3)	1309-64-4		2880.5	mg
			Supplier	PBT	26062-94-2		23044	mg
			-	Carbonic Dichloride	94334-64-2		8641.5	mg
Cover	26500.0	mg	Supplier	Fiber Glass (SiO2)	65997-17-3		7950.0005	mg
			Supplier	Poly(ButyleneTerephthalate)	30965-26-5		7420	mg
			B	Antimony Trioxide (Sb2O3)	1309-64-4		927.5	mg
			Supplier	PBT	26062-94-2		7420	mg
			-	Carbonic Dichloride	94334-64-2		2782.5	mg
DBC	46100.0	mg	Supplier	Aluminum Trioxide (Al2O3)	1344-28-1		19223.6992	mg
			B	Nickel (Ni)	7440-02-0		92.2	mg
			Supplier	Copper (Cu)	7440-50-8		26784.0996	mg
Die	1.3	mg	Supplier	Silicon (Si)	7440-21-3		1.3	mg
Die Attach Solder	2000.0	mg	Supplier	Dimethyl phthalate	131-11-3		20	mg
			Supplier	Amines	61788-95-2		20	mg
			Supplier	Isotridecan-1-ol	27458-92-0		20	mg
			Supplier	Silver (Ag)	7440-22-4		80	mg
			Supplier	Tin (Sn)	7440-31-5		1860	mg
Glue	585.0	mg	Supplier	2,3-epoxypropyl-trimethoxysilan	2530-83-8		58.5	mg
			Supplier	Miscellaneous	Trade Secret		58.5	mg
			Supplier	Silica Crystalline (SiO2)	14808-60-7		468	mg
Plating	65.0	mg	Supplier	Tin (Sn)	7440-31-5		32.5	mg
			B	Nickel (Ni)	7440-02-0		32.5	mg
Screw	2960.0	mg	Supplier	Sulfur (S)	7704-34-9		1.184	mg
			Supplier	Carbon (C)	7440-44-0		14.8	mg
			Supplier	Manganese (Mn)	7439-96-5		26.64	mg
			Supplier	Silicon (Si)	7440-21-3		14.8	mg
			Supplier	Iron (Fe)	7439-89-6		2901.3921	mg
			Supplier	Phosphorus (P)	7723-14-0		1.1838	mg
Silicone Gel	31360.0	mg	Supplier	Silicone	70900-21-9		2979.2	mg
			Supplier	Hexamethyldisilazane	68909-20-6		156.8	mg

			Supplier	Dimethyl Siloxane	68083-19-2		28224	mg
Solder preform	16700.0	mg	Supplier	Silver (Ag)	7440-22-4		534.4	mg
			Supplier	Tin (Sn)	7440-31-5		15130.1992	mg
			B	Antimony (Sb)	7440-36-0		918.5	mg
			Supplier	Copper (Cu)	7440-50-8		116.9	mg
			Supplier	Silicon (Si)	7440-21-3		6.75	mg
Terminal	2500.0	mg	B	Nickel (Ni)	7440-02-0		33.75	mg
			Supplier	Copper (Cu)	7440-50-8		2458.875	mg
			Supplier	Phosphorus (P)	7723-14-0		0.625	mg
			Supplier	Silver (Ag)	7440-22-4		145.5	mg
Terminal Holder	485000.0	mg	Supplier	Copper (Cu)	7440-50-8		484854.5	mg
			Supplier	Tin (Sn)	7440-31-5		1.5	mg
Thermistor	120.0	mg	Supplier	Nickel Oxide (NiO)	1313-99-1		0.18	mg
			B	Antimony Trioxide (Sb2O3)	1309-64-4		0.192	mg
			B	Nickel (Ni)	7440-02-0		28.02	mg
			Supplier	Gold (Au)	7440-57-5		0.024	mg
			Supplier	Iron (Fe)	7439-89-6		30	mg
			A	Lead Oxide (PbO)	1317-36-8		27.504	mg
			Supplier	Cobalt Oxide (Co3O4)	1308-06-1		0.18	mg
			Supplier	Manganese Tetraoxide (Mn3O4)	1317-35-7		0.18	mg
			Supplier	Potassium Monoxide (K2O)	12136-45-7		2.328	mg
			Supplier	Copper (Cu)	7440-50-8		13.26	mg
			Supplier	Silica Crystalline (SiO2)	14808-60-7		16.632	mg
			Supplier	Aluminum (Al)	7429-90-5		0.6	mg
			Wire Bond - Al	0.6	mg	Supplier	Aluminum (Al)	7429-90-5