IPC ASSOCIATION CONNECTED ELECTRONICS INDUST	© Copyright 2005, IPC	Material Composition Declaration © Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both international and Pan-American copyright conventions.				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.									
752-21.1		IPC Web Site for Information on IPC-1752 Standard Form Typ http://www.ipc.org/IPC-175x Distribute									ous Materi	als and Mf	g Inforn	nation	
Supplier Info	rmation						·								
Company name*			Company unique ID			ī	Unique ID Authority					Response Date*			
nsemi												2024-05-02			
Contact Name		Title - Contact			]	Phone - Contact*					Email - Contact*				
Product-Env-Ste	ewards	Product Enviro Compliance				NA					Product-Env-Stewards@onsemi.com				
uthorized Repr	esentative*	Title - Representative			]	Phone - Representative*				Email - Representative*					
Product-Env-Stewards			Product Enviro Compliance				NA				Product-Env-Stewards@onsemi.com				
Reque	ester Item Number						Effective Dat	e Versio	Version Manufacturing Site		ng Site	Weight*		UOM	Unit Type
						TL	2024-05-02 PH4			69.28		mg	Each		
<b>Ianufacturin</b>	g Proccess Informatio	on		·										1	
Termin	l Plating / Grid Array Material		Terminal Base Alloy		J-STD-020 MS	O-020 MSL Rating		Peak Process Body Temperatu		re Max Time at Peak Temper		Temperatu	ature Number of Reflow Cycles		rcles
Precious metal (e.g. Ag,Au, NiPdAu) (no Sn)			CU Alloy 1		1		260		С			second	s <b>3</b>		
comments															
vel 1 - maximun	n time at peak temperature	e during so	ldering is 10-3	0 seconds	· · · · · · · · · · · · · · · · · · ·										
or more informa	ation regarding material co	mposition	please refer to	page 3											

RoHS Material Composition Declaration			Declaration Type *	Detail	ed						
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).											
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 inexcess 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 have provided as part of that agreement, will be the sole and exclusivesource of the Supplier's sliability 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 app											
RoHS Declaration * 1 - Item	(s) does not contain RoHS restricted substar	nces per the definition above	Supplier A	cceptance *	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											
		e "Accepted" on the Supplier Acceptance	drop-down. This will display the signature a	rea. Digitally sign t	the declaration (if required by the						

## **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
Die	0.29	mg	Supplier	Silicon (Si)	7440-21-3		0.29	mg
Die Attach	2.46	mg		Epoxy resin	proprietary data		0.246	mg
			Supplier	Silver (Ag)	7440-22-4		1.968	mg
			Supplier	Formaldehyde Polymer	9003-36-5		0.246	mg
Lead Frame	38.58	mg	Supplier	Iron (Fe)	7439-89-6		0.733	mg
			Supplier	Copper (Cu)	7440-50-8		37.847	mg
Mold Compound-Black	24.35	mg		Epoxy resin	proprietary data		1.2175	mg
			Supplier	Phenol Resin	Proprietary Data		0.974	mg
			Supplier	Silica Amorphous (SiO2)	7631-86-9		2.435	mg
			Supplier	Carbon Black (C)	1333-86-4		0.2435	mg
			Supplier	Fused Silica (SiO2)	60676-86-0		19.48	mg
Plating	3.44		Supplier	Palladium (Pd)	7440-05-3		0.2614	mg
			В	Nickel (Ni)	7440-02-0		3.1304	mg
			Supplier	Gold (Au)	7440-57-5		0.0482	mg
Wire Bond - Cu	0.16	mg	Supplier	Copper (Cu)	7440-50-8		0.16	mg