IPC ASSOCIATION CONNECTED ELECTRONICS INDUST	© Copyright 2005, IP	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 low 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									Materials and	l Mfg Ir	formatio	n	
Supplier Info	rmation						·								
Company name*			Company un	Company unique ID			Unique ID Authority					Response Date*			
nsemi												2023-06-08			
Contact Name		Title - Contact			I	Phone - Contact*				Ema	Email - Contact*				
Product-Env-Ste	ewards	Product Enviro Compliance				NA				Proc	Product-Env-Stewards@onsemi.com				
uthorized Repr	esentative*	Title - Representative			I	Phone - Representative*				Ema	Email - Representative*				
Product-Env-Stewards			Product Enviro Compliance				NA				Proc	Product-Env-Stewards@onsemi.com			
Reque	ester Item Number						Effective Dat	e Versio	on N	Manufacturing Site		Weig	ght*	UOM	Unit Type
						T)	2023-06-08 PH1			72.0		mg	Each		
Ianufacturin	g Proccess Informati	on						<u>'</u>				<u> </u>			
Termin	inal Plating / Grid Array Material		Terminal Base Alloy		J-STD-020 MS	SL Rating	Peak Process Body Temperatu		Max Time at Peak Temper		erature	ature Number of Reflow Cycles		les	
Precious metal (e.g. Ag,Au, NiPdAu) (no Sn)		Au) (no	CU Alloy 1		1		260		С	30	se	conds	3		
Comments															
vel 1 - maximun	n time at peak temperatur	e during so	ldering is 10-3	0 seconds											
or more informa	ation regarding material c	omposition	please refer to	page 3											

RoHS Material Composition Declaration			Declaration Type *	Detail	led						
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 informationprovided 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 has provided as part of that agreement, will be the sole and exclusivesource 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 applic											
RoHS Declaration * 1 - Item	(s) does not contain RoHS restricted substa	ances per the definition above	Supplier Ac	ceptance *	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											
Instructional Complete all of the required	fields on all neggs of this form. Calcut th		a duan dawn. This will display the signature on	a Digitally sign	the declaration (if recurined by the						
Instructions: Complete all of the required Requester) and click on Submit Form to			e drop-down. This will display the signature ar	ea. Digitally sign	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	1.33	mg	Supplier	Silicon (Si)	7440-21-3		1.33	mg
Die Attach	2.4	mg		Epoxy resin	proprietary data		0.24	mg
			Supplier	Ethylene dimethacrylate	97-90-5		0.12	mg
			Supplier	Silver (Ag)	7440-22-4		1.92	mg
			Supplier	Formaldehyde Polymer	9003-36-5		0.12	mg
Lead Frame	37.61	mg	Supplier	Silver (Ag)	7440-22-4		0.7898	mg
			Supplier	Zinc (Zn)	7440-66-6		0.0752	mg
			Supplier	Iron (Fe)	7439-89-6		0.9403	mg
			Supplier	Copper (Cu)	7440-50-8		35.8047	mg
Mold Compound-Black	28.58	mg		Epoxy resin	proprietary data		1.429	mg
			Supplier	Phenolic Resin	Proprietary Data		1.429	mg
			Supplier	Ortho Cresol Novolac Resin	29690-82-2		0.5716	mg
			Supplier	Carbon Black (C)	1333-86-4		0.1429	mg
			Supplier	Fused Silica (SiO2)	60676-86-0		25.0075	mg
Plating	1.89	mg	Supplier	Tin (Sn)	7440-31-5		1.89	mg
Wire Bond - Au	0.19	mg	Supplier	Gold (Au)	7440-57-5		0.19	mg