ASSOCIATION CONNEC	© Copyright 2005. II	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									us Materia	als and Mf	g Informat	ion	
Supplier Info	rmation														
Company name*			Company unique ID			Ţ	Unique ID Authority					Response Date*			
nsemi												2023-06-08			
Contact Name		Title - Contac	Title - Contact			Phone - Contact*					Email - Contact*				
Product-Env-Ste	ewards	Product Enviro Compliance				NA					Product-Env-Stewards@onsemi.com				
uthorized Repr	esentative*	Title - Representative			I	Phone - Representative*				Email - Representative*					
Product-Env-Stewards			Product Enviro Compliance				NA				Product-Env-Stewards@onsemi.com				
Reque	ester Item Number						Effective Date	e Version	Version Manu		acturing Site		eight*	UOM	Unit Type
						1	2023-06-08 PH1			77.46		mg	Each		
Ianufacturin	ng Proccess Informat	tion													
Termir	nal Plating / Grid Array Ma	Plating / Grid Array Material		Terminal Base Alloy		020 MSL Rating		Peak Process Body Temperatur		re Max Time at Peak Temper		Temperatu	rature Number of Reflow Cycles		eles
Precious metal (e.g. Ag,Au, NiPdAu) (no Sn)		dAu) (no	CU Alloy 1		1		260		C 30			second	s 3		
Comments															
vel 1 - maximui	m time at peak temperatu	re during so	oldering is 10-3	0 seconds											
or more inform	ation regarding material	composition	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).											
cadmium, hexavalentchromium, polybromin contains a RoHS restricted substance inexce encompass all such components. Supplier cet as of the date that Supplier completes this Company acknowledges that Supplier may hindependently verified information provided certification in this paragraph. If the Compan	nated biphenyls and/or polybrominated diphess of an applicable quantity limit, please indriffes that it gathered the information it provom. Supplier acknowledges that Company wave relied on informationprovided by others of the supplier agrees that, at a minimusy and the Supplier enter into a written agree yesource of the Supplier's liability and the C	enyl ethers (each a "RoHS restricted substan licate below which, if any, RoHS exemption vides in this form using appropriate methods vill rely on this certification in determining the s in completing this form, and that Supplier um, itssuppliers have provided certifications ement with respect to the identified part, the tompany's remedies for issues that arise rega	s of the European Union member states) of the ce") in excess of the applicable quantity limit is you believe may apply. If the part is an assemb to ensure its accuracy and that such informatio e compliance of its products with European Ur may not have independently verified such infor regarding their contributions to the part, and the erms and conditions of that agreement, including information the Supplier provides in this	dentified above. If a ally with lower level in is true and correct tion member state la mation. However, in ose certifications are ag any warranty righ	homogeneous material within the part components, the declaration shall to the best of its knowledge and belief, was that implement the RoHS Directive. In situations where Supplier has not the at least as comprehensive as the lats and/or remedies provided as part of						
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	2.65	mg	Supplier	Silicon (Si)	7440-21-3		2.65	mg
Die Attach	0.21	mg	Supplier	Silver (Ag)	7440-22-4		0.1575	mg
			Supplier	Epoxy resins	129915-35-1		0.0525	mg
Lead Frame	27.35	mg	Supplier	Zinc (Zn)	7440-66-6		0.0274	mg
			Supplier	Iron (Fe)	7439-89-6		0.6291	mg
			Supplier	Copper (Cu)	7440-50-8		26.6663	mg
			Supplier	Phosphorus (P)	7723-14-0		0.0274	mg
Mold Compound-Black	46.76	mg		Epoxy resin	proprietary data		2.338	mg
			Supplier	Phenolic Resin	Proprietary Data		2.338	mg
			Supplier	Ortho Cresol Novolac Resin	29690-82-2		0.9352	mg
			Supplier	Carbon Black (C)	1333-86-4		0.2338	mg
			Supplier	Fused Silica (SiO2)	60676-86-0		40.915	mg
Plating	0.34	mg	Supplier	Palladium (Pd)	7440-05-3		0.0211	mg
			В	Nickel (Ni)	7440-02-0		0.3152	mg
			Supplier	Gold (Au)	7440-57-5		0.0036	mg
Wire Bond - Au	0.15	mg	Supplier	Gold (Au)	7440-57-5		0.15	mg