IPC ASSOCIATION ELECTRONIC	© Copyright 2005.	Material Composition Declaration © Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved un international and Pan-American copyright conventions.			der both	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 Form Typ http://www.ipc.org/IPC-175x Distribute				Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Mater					rials and M	ials and Mfg Information				
Supplie	r Information														
Company name*				ompany unique ID			Unique ID Authority					Response Date*			
nsemi											2024-04	2024-04-24			
Contact N	lame		Title - Contact]	Phone - Contact*				Email - Contact*				
Product-l	Env-Stewards		Product Enviro Compliance				NA				Product-Env-Stewards@onsemi.com				
uthorize	ed Representative*	Title - Representative]	Phone - Representative*				Email - Representative*					
Product-l	Env-Stewards	Product Enviro Compliance				NA				Product-Env-Stewards@onsemi.com					
	Requester Item Number Mfr Item		Number Mfr Item Name				Effective Da	e Date Version Manufacturing Site			Weight*	UOM	Unit Type		
		MC1453	MC14538BDR2G LOG CMOS MI		IVIBRT DUA	RT DUAL 202		024-04-24		PH1		142.68	mg	Each	
Aanufa	cturing Process Information	ation						·							
	Terminal Plating / Grid Array Material Terminal Base Alloy			Alloy J-	STD-020 MS	0 MSL Rating Peak Process Body Temperature Max Time at Pea					x Temperat	ure Num	ber of Reflow Cyc	eles	
Matte Tin (Sn) - annealed CU Alloy 1					260		C	30	secon	ds 3					
Comments	3														
vel 1 - m	naximum time at peak tempera	ture during sol	dering is 10-3	30 seconds											
or more	information regarding materia	l 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 (DBP), Dibutyl phthalate (DBP), Dibutyl phthalate (DBP).											
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 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 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 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 applicable to such part shall apply.											
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	2.73	mg	Supplier	Silicon (Si)	7440-21-3		2.73	mg
Die Attach	4.85	mg	Supplier	Silver (Ag)	7440-22-4		3.6375	mg
			Supplier	Epoxy resins	129915-35-1		1.2125	mg
Lead Frame	75.92		Supplier	Silver (Ag)	7440-22-4		0.7592	mg
			Supplier	Zinc (Zn)	7440-66-6		0.1518	mg
			Supplier	Iron (Fe)	7439-89-6		1.9739	mg
			Supplier	Copper (Cu)	7440-50-8		73.035	mg
Mold Compound-Black	55.11			Epoxy resin	proprietary data		2.7555	mg
			Supplier	Phenolic Resin	Proprietary Data		2.7555	mg
			Supplier	Ortho Cresol Novolac Resin	29690-82-2		1.1022	mg
			Supplier	Carbon Black (C)	1333-86-4		0.2756	mg
			Supplier	Fused Silica (SiO2)	60676-86-0		48.2213	mg
Plating	3.73	mg	Supplier	Tin (Sn)	7440-31-5		3.73	mg
Wire Bond - Cu	0.34	mg	Supplier	Copper (Cu)	7440-50-8		0.34	mg