Contact Name  Title - Contact Product-Env-Stewards Authorized Representative* Product-Env-Stewards Product Enviro Compliance Product-Env-Stewards Product-En	ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES	Material Composition Declaration © Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both 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 low level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.								
Company name*   Company unique ID   Unique ID Authority   Response Date*	752-21.1											als and Mfg	g Informati	ion	
Semilar   Semi	upplier Inform	ation								,					
Title - Contact Name Product Enviro Compliance NA Product Enviro Stewards @onsemi.com Product Enviro Compliance NA Product Enviro Stewards @onsemi.com NA Nanufacturing Site Neight* UOM Viro Nanufacturing Proccess Information  Terminal Plating / Grid Array Material Terminal Base Alloy Nanufacturing Process Body Temperature Nanufacturing Process Body Temperature Nanufacturing Process Seconds Nanufacturing Process Seconds Nanufacturing Process Seconds Nanufacturing Site	Company name*			Company unique ID			J	Unique ID Authority				Response Date*			
Product Envisor Compliance uthorized Representative* Title - Representative Product Enviro Compliance NA Product Envisor Stewards © onsemi.com Product Envisor Compliance NA Product Envisor Stewards © onsemi.com NA Na Product Envisor Stewards © onsemi.com NA Na Product Envisor Stewards © onsemi.com NA Naunfacturing Site Neight* UOM UT Naunfacturing Proccess Information  NA Naunfacturing Proccess Information  NA Naunfacturing Site Neight* NA Naunfacturing Site Neight* NA Naunfacturing Site Neight* NA Naunfacturing Site Neight* NA Naunfacturing Site Naunfacturing Site Neight* NA Naunfacturing Site Neight* Naunfactur	nsemi											2024-05-21			
Authorized Representative*  Title - Representative  Product-Env-Stewards  Product-Env-Stewards  Product-Env-Stewards  Product-Env-Stewards  Product-Env-Stewards  Product-Env-Stewards  Product-Env-Stewards  Mfr Item Number  Mfr Item Name  Effective Date  Version  Manufacturing Site  Weight*  UOM  Under Stewards  Manufacturing Site  Uom  Under Stewards  Manufacturing Site  Uom  Under Stewards  Manufacturing Site  Uom  Under Stewards  Namufacturing Site  Weight*  Uom  Under Stewards  Uom  Anufacturing Site  Version  Namufacturing Site  Weight*  Uom  Under Stewards  Namufacturing Site  Version  Namufacturing Site  Version  Namufacturing Site  Weight*  Uom  Namufacturing Site  Weight*  Uom  Namufacturing Site  Version  Namufacturing Site  Version  Namufacturing Site  Weight*  Uom  Namufacturing Site  Weight*  Uom  Namufacturing Site  Version  Namufacturing Site  Vers	ontact Name			Title - Contact			I	Phone - Contact*				Email - Contact*			
Product Envi-Stewards  Requester Item Number  Mfr Item Number  Mfr Item Number  Mfr Item Name  Effective Date  Version  Manufacturing Site  Weight*  UOM  Under Item Number  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  contains Bi  CU Alloy  1 260  C 30  Seconds 3	Product-Env-Stewa	ards		Product Enviro Compliance				NA				Product-Env-Stewards@onsemi.com			
Requester Item Number	uthorized Represei	ntative*	Title - Representative			I	Phone - Representative*			Email - Representative*					
S5GN01FA-TL-H   BIP NPN 70mA 10V fT=5.5G   2024-05-21   CNG   1.82   mg   Ea	Product-Env-Stewa	ards		Product Enviro Compliance				NA				Product-Env-Stewards@onsemi.com			
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   contains Bi   CU Alloy   1   260   C   30   seconds   3   comments   CU Alloy   C   C   C   C   C   C   C   C   C	Requester	Requester Item Number N		Mfr Item Number Mfr Item Name			Effecti		Version	N	Manufacturing Site	W	eight*	UOM	Unit Type
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 contains Bi  CU Alloy 1 260 C 30 seconds 3			55GN01F	FA-TL-H	BIP NPN 70mA 10	OV fT=5.5G		2024-05-21		C	CNG	1.	82	mg	Each
contains Bi CU Alloy 1 260 C 30 seconds 3 comments				orminal Daga	Alloy	STD 020 MS1	Dating	Dook Pros	oogs Pody T	amparatur	May Time at Peals	Tamparetu	ro Numb	per of Poflow Cyc	los
omments				,		S I D-020 MSL	Z Kanng		ess Body 1					ber of Reflow Cyc	ies
		DI	C	U Alloy	I			200		IC	30	second	s   <b>3</b>		
ver 1 - maximum ume at peak temperature during soldering is 10-50 seconds		·	J	J	20 1-										
or more information 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 at it in 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	0.03	mg	Supplier	Silicon (Si)	7440-21-3		0.03	mg
Lead Frame	0.68	mg	Supplier	Silver (Ag)	7440-22-4		0.026	mg
			Supplier	Zinc (Zn)	7440-66-6		0.0096	mg
			Supplier	Silicon (Si)	7440-21-3		0.0019	mg
			В	Nickel (Ni)	7440-02-0		0.0186	mg
			Supplier	Copper (Cu)	7440-50-8		0.6236	mg
			Supplier	Phosphorus (P)	7723-14-0		0.0003	mg
Mold Compound-Black	1.06	mg	Supplier	Carbon Black (C)	1333-86-4		0.0053	mg
			Supplier	Aluminum Hydroxide (Al(OH)3)	21645-51-2		0.159	mg
			Supplier	Fused Silica (SiO2)	60676-86-0		0.7155	mg
			Supplier	Ortho-Cresol Novolac Resin	29690-82-2		0.159	mg
			Supplier	Silica Crystalline (SiO2)	14808-60-7		0.0212	mg
Plating	0.04	mg	В	Bismuth (Bi)	7440-69-9		0.0002	mg
_			Supplier	Tin (Sn)	7440-31-5		0.0398	mg
Wire Bond - Au	0.01	mg	Supplier	Gold (Au)	7440-57-5		0.01	mg