IPC ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES®	**Material Composition Declaration** 	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 **http://www.ipc.org/IPC-175x**	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Information

Supplier Information

Company name* **onsemi**	Company unique ID	Unique ID Authority	**Response Date*** **2023-06-08**
Contact Name **Product-Env-Stewards**	Title - Contact Product Enviro Compliance	**Phone - Contact*** **NA**	**Email - Contact*** **Product-Env-Stewards@onsemi.com**
Authorized Representative* **Product-Env-Stewards**	Title - Representative Product Enviro Compliance	**Phone - Representative*** **NA**	**Email - Representative*** **Product-Env-Stewards@onsemi.com**

	Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight*	UOM	Unit Type
		FDMF5821	Smart Power Stage Module	2023-06-08		PBB	75.47661	mg	Each

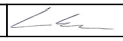
Manufacturing Proccess Information

	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
	Matte Tin (Sn) - annealed	**CU Alloy**	**1**	**260**	C	**30**	seconds	**3**

Comments

level 1 - maximum time at peak temperature during soldering is 10-30 seconds

For more information regarding material composition please refer to page 3

RoHS Material Composition Declaration		**Declaration Type ***	**Detailed**
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, itssuppliers 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 andConditions of Sale applicable to such part shall apply.			
RoHS Declaration *	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions	**Supplier Acceptance ***	**Accepted**
Exemption: 7a: Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).			
Exemption List Version	EL-2011/534/EU		
Declaration Signature			
Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.			
Supplier Digital Signature	**Rastislav Drska**		

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
Clip	18.0834	mg	Supplier	Zinc (Zn)	7440-66-6		0.0235	mg
			Supplier	Iron (Fe)	7439-89-6		0.4249	mg
			Supplier	Copper (Cu)	7440-50-8		17.6295	mg
			Supplier	Phosphorus (P)	7723-14-0		0.0054	mg
Die	1.77313	mg	Supplier	Silicon (Si)	7440-21-3		1.7731	mg
Die Attach Solder	1.41442	mg	Supplier	Silver (Ag)	7440-22-4		0.0354	mg
			A	Lead (Pb)	7439-92-1	7a	1.3083	mg
			Supplier	Tin (Sn)	7440-31-5		0.0707	mg
Lead Frame	25.8678	mg	Supplier	Silver (Ag)	7440-22-4		0.3854	mg
			Supplier	Zinc (Zn)	7440-66-6		0.0323	mg
			Supplier	Iron (Fe)	7439-89-6		0.3492	mg
			Supplier	Copper (Cu)	7440-50-8		25.093	mg
			Supplier	Phosphorus (P)	7723-14-0		0.0077	mg
Mold Compound-Black	26.5313	mg	Supplier	Ortho Cresol Novolac Resin	29690-82-2		1.7245	mg
			Supplier	Carbon Black (C)	1333-86-4		0.1327	mg
			Supplier	Silica (SiO2)	14464-46-1		23.3475	mg
			Supplier	Phenolic Resin (Novolac)	9003-35-4		1.3266	mg
Plating	1.42432	mg	Supplier	Tin (Sn)	7440-31-5		1.4243	mg
Wire Bond - Au	0.193	mg	Supplier	Gold (Au)	7440-57-5		0.193	mg
Wire Bond - Cu	0.189235	mg	Supplier	Palladium (Pd)	7440-05-3		0.0034	mg
			Supplier	Gold (Au)	7440-57-5		0.0002	mg
			Supplier	Copper (Cu)	7440-50-8		0.1856	mg