



Material Composition Declaration
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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
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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
	FTCO3V85A1	APM19 80V	2023-06-08		CPA	20062.412	mg	Each

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
Matte Tin (Sn) - annealed	CU Alloy	NA	0 C	30 seconds	3

Comments

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).		
<p>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 in excess 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 information provided 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 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 exclusive source 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.</p>			
RoHS Declaration *	1 - Item(s) does not contain RoHS restricted substances per the definition above		Supplier Acceptance * 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			
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
Capacitors Ceramic	6.3	mg	Supplier	Bisphenol A_Epichlorohydrin Polymer	25068-38-6		0.0641	mg
			Supplier	Titanium Dioxide (TiO2)	13463-67-7		1.2834	mg
			Supplier	Silver (Ag)	7440-22-4		0.5769	mg
			Supplier	Boron Trioxide (B2O3)	1303-86-2		0.0109	mg
			Supplier	Tin (Sn)	7440-31-5		0.12	mg
			Supplier	Silica Amorphous (SiO2)	7631-86-9		0.0434	mg
			Supplier	Ceramic	12013-47-7, 12047-27-7		0.4278	mg
			Supplier	Barium Monoxide (BaO)	1304-28-5		2.5668	mg
			B	Nickel (Ni)	7440-02-0		0.718	mg
Supplier	Copper (Cu)	7440-50-8		0.4887	mg			
Current Sensing Resistor	140.0	mg	Supplier	Silver (Ag)	7440-22-4		1.307	mg
			Supplier	Manganese (Mn)	7439-96-5		7.8	mg
			Supplier	Copper (Cu)	7440-50-8		130.87	mg
			Supplier	Phosphorus (P)	7723-14-0		0.023	mg
DBC	4760.69	mg	Supplier	Aluminum Trioxide (Al2O3)	1344-28-1		1856.6691	mg
			B	Nickel (Ni)	7440-02-0		47.6069	mg
			Supplier	Copper (Cu)	7440-50-8		2856.4141	mg
Die	52.3085	mg	Supplier	Silicon (Si)	7440-21-3		52.3085	mg
Lead Frame	4806.0	mg	B	Nickel (Ni)	7440-02-0		19.224	mg
			Supplier	Copper (Cu)	7440-50-8		4786.7759	mg
Mold Compound-Black	9903.84	mg	Supplier	Bisphenol A_Epichlorohydrin Polymer	25068-38-6		594.2304	mg
			Supplier	Carbon Black (C)	1333-86-4		99.0384	mg
			Supplier	Silica (SiO2)	14464-46-1		8616.3408	mg
			Supplier	Phenolic Resin (Novolac)	9003-35-4		594.2304	mg
NTC	4.6381	mg	Supplier	Silver (Ag)	7440-22-4		0.3775	mg
			Supplier	Iron Oxid (FeO)	1345-25-1		0.8	mg
			Supplier	Boron Trioxide (B2O3)	1303-86-2		0.0058	mg
			Supplier	Tin (Sn)	7440-31-5		0.0779	mg
			Supplier	Nickel Oxide (NiO)	1313-99-1		1.2	mg
			Supplier	Magnesium Monoxide (MgO)	1309-48-4		2	mg
			Supplier	Silica Amorphous (SiO2)	7631-86-9		0.0164	mg

			Supplier	Palladium (Pd)	7440-05-3		0.1273	mg
			B	Nickel (Ni)	7440-02-0		0.0332	mg
Plating	110.152	mg	Supplier	Tin (Sn)	7440-31-5		110.152	mg
Resistor	18.739	mg	Supplier	Bisphenol A_Epichlorohydrin Polymer	25068-38-6		1.11	mg
			Supplier	Tin (Sn)	7440-31-5		0.61	mg
			Supplier	Magnesium Monoxide (MgO)	1309-48-4		0.17	mg
			Supplier	Silica Amorphous (SiO2)	7631-86-9		1.16	mg
			Supplier	Chromium (Cr)	7440-47-3		0.045	mg
			Supplier	Ceramic	12013-47-7, 12047-27-7		0.079	mg
			Supplier	Barium Monoxide (BaO)	1304-28-5		0.2	mg
			Supplier	Aluminum Trioxide (Al2O3)	1344-28-1		6.8	mg
			B	Nickel (Ni)	7440-02-0		0.095	mg
			Supplier	Iron (Fe)	7439-89-6		8.46	mg
			Supplier	Aluminum (Al)	7429-90-5		0.01	mg
Solder Paste	52.5042	mg	Supplier	Silver (Ag)	7440-22-4		3.2815	mg
			Supplier	Tin (Sn)	7440-31-5		44.8911	mg
			Supplier	Hydrogenated Rosin	65997-06-0		1.0501	mg
			Supplier	Ceramic	12013-47-7, 12047-27-7		3.2815	mg
Wire Bond - Al	207.24	mg	Supplier	Aluminum (Al)	7429-90-5		207.24	mg