



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.

Adobe Reader version 7.0.5 is required to complete this declaration.

1752-2 1.1	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 Informat
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Supplier Information

Company Name * STMicroelectronics	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
Authorized Representative * Emilio Castelli	Title - Representative APG Material Declaration Cham	Phone - Representative *	Email - Representative *	Supplier Comments or URL for Additional Information				
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
	L9374TRLF	A68C*UG14CD6	2012-05-28	A	MU1A	1,936.45	mg	Each
Alternate Recommendation	PowerSO 36 .430 BODY WIDTH			Alternate Item Comments	Internal ST reference: BSA: CD00220067 EcoPack2			

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
Tin (Sn)	CU Alloy	3	245 C	30 seconds	3

Comments

Disclaimer: While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and

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RoHS Material Composition Declaration

Declaration Type *

Simplified

RoHS Directive 2002/95/EC **RoHS Definition:** Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material for Cadmium

Supplier certifies that it gathered the information it provides in this form concerning RoHS restrictive substances 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.

RoHS Declaration *

3 - Item(s) does not contain RoHS restricted substances per the definition above except for lead in solders and selected exemptions, if any

Supplier Acceptance *

Accepted

Exemptions: 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-2006/690/EC

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7a. Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).

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

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).

Line Functions: +I Inserts a New Item /SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

		Item/SubItem Name	Homogeneous Material		Weight	Unit of Measure	Level		Substance Category	Substance		CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
+I	-I		+M	-M			+C	-C		+S	-S					-	+	
		PowerSO 36 .430 B			23.006	mg			Supplier	Silicon die	Silicon (Si)	7440-21-3		22.829	mg			992,30
									die metallization	Aluminium (Al)	7429-90-5			0.002	mg			87
									die metallization	Copper (Cu)	7440-50-8			0.008	mg			348
									die metallization	Titanium (Ti)	7440-32-6			0.004	mg			174
									die metallization	Chromium (Cr)	7440-47-3			0.001	mg			44
									die metallization	Gold (Au)	7440-57-5			0.003	mg			130
									die metallization	Nickel (Ni)	7440-02-0			0.012	mg			522
									Die coating	Gamma-butyrolactone	96-48-0			0.099	mg			4,303
									Die coating	Polyhydroxyamide	55295-98-2			0.044	mg			1,913
									Die coating	Alcoxysilane	na			0.003	mg			130
									Die coating	Aryl Silicilic Acid	na			0.001	mg			43
									Leadframe	frame alloy	Copper (Cu)	7440-50-8		1,232.87	mg			996,07
									frame alloy	Iron (Fe)	7439-89-6			0.568	mg			459
									frame alloy	Iron Phosphide (FeP)	26508-33-8			1.037	mg			838
									frame coating	Silver (Ag)	7440-22-4			3.252	mg			2,627
									Die Attach	soft solder	Lead (Pb)	7439-92-1	7a. Lead	7.284	mg			974,97
									soft solder	Silver (Ag)	7440-22-4			0.112	mg			14,991
									soft solder	Tin (Sn)	7440-31-5			0.075	mg			10,039
									Bonding wire	Bonding wire	Gold (Au)	7440-57-5		2.958	mg			1,000,0
									Encapsulation	Moulding Compound	Phenol Resin	205830-20-2		26.272	mg			40,000
									Moulding Compound	Biphenyl epoxy resin	85954-11-6			19.704	mg			30,000
									Moulding Compound	epoxy resin	na			19.704	mg			30,000
									Moulding Compound	carbon black	1333-86-4			1.314	mg			2,001

						+C	-C		Moulding Compound	+S	-S	Silica, vitreous	60676-86-0		589.801	mg			897,99
+M	-M	Finishing	8.494	mg	+C	-C	supplier	connection coating	+S	-S	Tin (Sn)	7440-31-5		8.494	mg				1,000,0