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.

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

Supplier Information

Company Name *	Company Unique ID	Unique ID Authority	**Response Date ***	Response Document ID	
STMicroelectronics			**NA**		
Contact Name *	Title - Contact	**Phone - Contact ***	**Email - Contact ***		
Authorized Representative *	Title - Representative	**Phone - Representative ***	**Email - Representative** *	Supplier Comments or URL for Additional Information	
GIOVANNI GIACOPELLO	APM MD CHAMPION	**NA**	**NA**		

Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	**Weight ***	UOM	Unit Type
	SR	SMA	2010-07-22	A	ZA41	68	mg	Each

Alternate Recommendation				Alternate Item Comments	Package typical material declaration

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**	**1**	**260** 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

*** Required Field**

CAS Registry Number(R) is a Registered Trademark of the American Chemical Society

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Save the fields in this form to a file | Export Data | Import fields from a file into this form | Import Data | Locked

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
	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	Giovanni Giacopello — Digitally signed by Giovanni Giacopello DN: cn=Giovanni Giacopello, o=APM QR, ou=STMicroelectronics, email=giovanni.giacopello@st.com, c=US Date: 2011.03.31 11:26:33 +02'00'

*** Required Field**

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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 -	Tolerance +	PPM
	SMA		Integrated circuit	1.293	mg		Supplier	Silicon die		Silicon (Si)	7440-21-3		1.278	mg			988,39
							Supplier	Die metallization		Aluminium(Al)	7429-90-5		0.001	mg			773
										Titanium (Ti)	7440-32-6		0.003	mg			2,320
										Nickel (Ni)	7440-02-0		0.002	mg			1,547
										(Gold (Au)	7440-57-5		0.009	mg			6,961
			Leadframe and C	26.6	mg		Supplier	Frame alloy		Copper (Cu)	7440-50-8		26.587	mg			999,51
										Zinc (Zn)	7440-66-6		0.001	mg			38
										Iron (Fe)	7439-89-6		0.003	mg			113
										Phosphorus (P)	12517-41-8		0.009	mg			338
			Die Attach	2.551	mg		A	Lead/Lead Compound		Lead (Pb)	7439-92-1	7a. Lead	2.359	mg			924,73
							Supplier	Soft solder		Tin (Sn)	7440-31-5		0.128	mg			50,176
										Silver (Ag)	7440-22-4		0.064	mg			25,088
			Encapsulation	36.916	mg		Supplier	Moulding Compound		Amorphous Silica	7631-86-9		22.747	mg			616,18
										Quartz	14808-60-7		7.383	mg			199,99
										epoxy resin	29690-82-2		4.43	mg			120,00
										phenolic resin	9003-35-4		2.215	mg			60,001
							Supplier	Bismuth/Bismuth Co		Bismuth trioxide	1304-76-3		0.026	mg			704
										chlorine residue	7782-50-5		0.004	mg			108
										Carbon black	1333-86-4		0.111	mg			3,007
			Finishing	0.64	mg		Supplier	connection coating		Tin (Sn)	7440-31-5		0.64	mg			1,000,0

*** Required Field**