



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
	VN920B5TR-E	ATAT*VN92ACB	2009-11-18	A	SH1A	205	mg	Each
Alternate Recommendation	P2PAK D.T. 4 LEADS SMD			Alternate Item Comments	Internal ST reference: BSA: CD00066246 EcoPack1			

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	P2PAK D.T. 4 LEAD	+M -M	Integrated circuit	11.245	mg	+C -C	Supplier	Silicon die	+S -S	Silicon (Si)	7440-21-3		11.131	mg			989,86			
									+C -C		die metallization	+S -S	Aluminium (Al)	7429-90-5			0.017	mg			1,512
									+C -C		die metallization	+S -S	Titanium (Ti)	7440-32-6			0.005	mg			445
									+C -C		die metallization	+S -S	Gold (Au)	7440-57-5			0.016	mg			1,423
									+C -C		die metallization	+S -S	Nickel (Ni)	7440-02-0			0.076	mg			6,759
			+M -M	Leadframe	102.011	mg	+C -C	supplier	frame alloy	+S -S	Copper (Cu)	7440-50-8		101.591	mg					995,88	
									+C -C		frame alloy	+S -S	Iron (Fe)	7439-89-6			0.047	mg			461
									+C -C		frame alloy	+S -S	Iron Phosphide (FeP)	26508-33-8			0.085	mg			833
									+C -C	B	frame coating	+S -S	Nickel (Ni)	7440-02-0			0.084	mg			823
									+C -C	supplier	frame coating	+S -S	Gold (Au)	7440-57-5			0.204	mg			2,000
			+M -M	Die Attach	3.998	mg	+C -C	A	soft solder	+S -S	Lead (Pb)	7439-92-1	7a. Lead	3.818	mg					954,97	
									+C -C	supplier	soft solder	+S -S	Silver (Ag)	7440-22-4			0.1	mg			25,013
									+C -C		soft solder	+S -S	Tin (Sn)	7440-31-5			0.08	mg			20,010
			+M -M	Bonding wire	1.663	mg	+C -C	Supplier	Bonding wire	+S -S	Gold (Au)	7440-57-5		0.302	mg					181,60	
									+C -C		Bonding wire	+S -S	Aluminium (Al)	7429-90-5			1.361	mg			818,40
			+M -M	Encapsulation	75.487	mg	+C -C	supplier	Moulding Compound	+S -S	Silica, vitreous	60676-86-0		60.39	mg					800,00	
									+C -C		Moulding Compound	+S -S	Epoxy Cresol Novolak	29690-82-2			5.284	mg			69,999
									+C -C		Moulding Compound	+S -S	Phenol resin	9003-35-4			3.02	mg			40,007
									+C -C		Moulding Compound	+S -S	Biphenyl epoxy resin	85954-11-6			4.529	mg			59,997
									+C -C	B	Bismuth/Bismuth Com	+S -S	Antimony Trioxide	1309-64-4			0.906	mg			12,002
									+C -C	B	Moulding Compound	+S -S	Brominated Epoxy Resin	40039-93-8			1.132	mg			14,996
									+C -C	supplier	Moulding Compound	+S -S	Carbon Black	1333-86-4			0.226	mg			2,994
			+M -M	Finishing	10.596	mg	+C -C	supplier	connection coating	+S -S	Tin (Sn)	7440-31-5		10.596	mg					1,000,0	