



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 * NA	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
Authorized Representative * GIOVANNI GIACOPELLO	Title - Representative APM MD CHAMPION	Phone - Representative * NA	Email - Representative * NA	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
	STTH302S	HBZH*D81F814	2010-07-22	A	BO2A	243	mg	Each
Alternate Recommendation	SMC CLIP (SOD 15) Package			Alternate Item Comments	ECOPACK2/ROHS BSA REF: CD00251829			

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"

Save the fields in this form to a file

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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

+I	-I	Item/SubItem Name	+M	-M	Homogeneous Material	Weight	Unit of Measure	+C	-C	Level	Substance Category	+S	-S	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
																			-	+	
		HBZH*D81F814			Silicon Die	2.69	mg			Supplier	Silicon die			Silicon	7440-21-3		2.61	mg			970,26
										Supplier	Die metallization			Aluminium(Al)	7429-90-5		0.011	mg			4,089
														Nickel	7440-02-0		0.025	mg			9,294
														(Gold (Au))	7440-57-5		0.009	mg			3,346
														Titanium (Ti)	7440-32-6		0.035	mg			13,011
					Leadframe	77.622	mg			Supplier	Alloy			Copper (Cu)	7440-50-8		77.544	mg			998,99
														Phosphorus (P)	12517-41-8		0.078	mg			1,005
					Leadframe coating	0.679	mg			Supplier	Coating			Nickel (Ni)	7440-02-0		0.669	mg			985,27
														Phosphorus (P)	12185-10-3		0.01	mg			14,728
					Die Attach	1.43	mg			A	Lead/Lead Compound			Lead (Pb)	7439-92-1	7a. Lead	1.337	mg			934,96
										Supplier	Soft solder			Silver (Ag)	7440-22-4		0.021	mg			14,685
														Tin (Sn)	7440-31-5		0.072	mg			50,350
					Bonding wire	39.514	mg			Supplier	Bonding wire			Copper (Cu)	7440-50-8		39.514	mg			1,000,0
					Encapsulation	118.248	mg			Supplier	Moulding Compound			Silica, vitreous	60676-86-0		95.781	mg			810,00
														Phenol resin	9003-35-4		7.095	mg			60,001
														Carbon black	1333-86-4		0.946	mg			8,000
														Epoxy Cresol Novolak	29690-82-2		12.061	mg			101,99
														Metal hydroxide	Proprietary		2.365	mg			20,000
					Finishing	2.817	mg			Supplier	Connection coating			Tin (Sn)	7440-31-5		2.817	mg			1,000,0