



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 * ST MICROELECTRONICS	Company Unique ID	Unique ID Authority	Response Date * N/A	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
Authorized Representative * GIUSEPPE VITALI PALMA	Title - Representative AMS & IPD MD CHAMPION	Phone - Representative * N/A	Email - Representative * N/A	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
	STTH512GY-TR	CSD2*I81R1AS	2012-06-27	A	SH1A	1,380	mg	Each
Alternate Recommendation	PACKAGE: D2PAK			Alternate Item Comments	ECOPACK1/ROHS			

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	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"

Save the fields in this form to a file

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Lock Supplier Fields

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 * 4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions

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

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
																			-	+	
		CSD2*181R1AS			Silicon Die	13.429	mg			Supplier	Silicon die			Silicon (Si)	7440-21-3		13.309	mg			991,06
										Supplier	die metallization			Aluminium (Al)	7429-90-5		0.025	mg			1,862
														Gold (Au)	7440-57-5		0.014	mg			1,043
										Supplier	Die coating			Gamma-butyrolactone	96-48-0		0.054	mg			4,021
														Polyhydroxyamide	55295-98-2		0.024	mg			1,787
														Alcoxysilane	Proprietary		0.002	mg			149
														Aryl Silicilic Acid	Proprietary		0.001	mg			74
					Leadframe	768.533	mg			Supplier	alloy			Copper (Cu)	7440-50-8		767.5207	mg			998,68
														Iron (Fe)	7439-89-6		0.778532	mg			1,013
														Iron Phosphide (FeP)	26508-33-8		0.233559	mg			304
					Leadframe coating	2.301	mg			Supplier	coating			Nickel (Ni)	7440-02-0		2.128	mg			924,81
														Phosphorus (P)	12185-10-3		0.173	mg			75,185
					Die Attach	9.887	mg			JIG R	Lead/Lead Compound			Lead (Pb)	7439-92-1	7a. Lead	9.442	mg			954,99
										Supplier	soft solder			Silver (Ag)	7440-22-4		0.247	mg			24,983
														Tin (Sn)	7440-31-5		0.198	mg			20,026
					Bonding wire	6.02	mg			Supplier	Bonding wire			Aluminium (Al)	7429-90-5		6.02	mg			1,000,0
					Encapsulation	576.274	mg			Supplier	Moulding Compound			Silica, vitreous	60676-86-0		487.806	mg			846,48
														Epoxy Cresol Novolak	29690-82-2		47.183	mg			81,876
														Phenol resin	9003-35-4		23.592	mg			40,938
										Supplier	Antimony/Antimony C			Antimony Trioxide	1309-64-4		7.077	mg			12,281
										JIG I	Brominated Flame Ret			Brominated Epoxy Resin	40039-93-8		8.847	mg			15,352
										Supplier	Molding compound			Carbon Black	1333-86-4		1.769	mg			3,070
					Finishing	3.556	mg			Supplier	connection coating			Tin (Sn)	7440-31-5		3.556	mg			1,000,0