



# 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 <a href="http://www.ipc.org/IPC-175x">http://www.ipc.org/IPC-175x</a>	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 * N/A	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *					
Authorized Representative * GIUSEPPE VITALI PALMA	Title - Representative APM 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
	DSL02-008SC5	HCWJ*0208B54	2011-02-08	A	ZS1A	16	mg	Each
Alternate Recommendation	PACKAGE: SOT 23 5 LEADS T			Alternate Item Comments	ECOPACK2/ROHS; BSA: CD00259967			

## Manufacturing Process Information

Terminal Plating / Grid Array Material <b>Nickel/Palladium/Gold (Ni/Pd/Au)</b>	Terminal Base Alloy <b>CU Alloy</b>	J-STD-020 MSL Rating <b>1</b>	Peak Process Body Temperature <b>260 C</b>	Max Time at Peak Temperature <b>30 seconds</b>	Number of Reflow Cycles <b>3</b>
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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 \*

1 - Item(s) does not contain RoHS restricted substances per the definition above

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.

## 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
											-	+	
HCWJ*0208B54	Silicon Die	1	mg	Supplier	Silicon die	Silicon (Si)	7440-21-3		1	mg			1,000,0
	Leadframe	7.2	mg	Supplier	Copper Alloy	Copper	7440-50-8		6.936	mg			963,33
						Iron	7439-89-6		0.162	mg			22,500
						Phosphorus	12185-10-3		0.002	mg			278
						Zinc	7440-66-6		0.009	mg			1,250
						Nickel	7440-02-0		0.083	mg			11,528
						Palladium (0.05-0.15%)	7440-05-3		0.007	mg			972
						Gold	7440-57-5		0.001	mg			139
	Die Attach	0.068	mg	supplier	Glue	Silver (Ag)	7440-22-4		0.047	mg			691,17
						methylene diacrylate	42594-17-2		0.017	mg			250,00
						Dicyclopentenylxyethy	68586-19-6		0.002	mg			29,412
						Polymer of Polybutadien	Proprietary		0.002	mg			29,412
	Bonding wire	0.15	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.15	mg			1,000,0
	Encapsulation	7.582	mg	supplier	Molding compound	Silica, vitreous	60676-86-0		6.465	mg			852,67
						phenolic resin	Proprietary		0.266	mg			35,083
						epoxy resin	Proprietary		0.304	mg			40,095
						Biphenyl epoxy resin	85954-11-6		0.152	mg			20,047
						carbon black	1333-86-4		0.015	mg			1,978
						Zinc hydroxide	20427-58-1		0.076	mg			10,024
						Magnesium hydroxide	1309-42-8		0.304	mg			40,095