



Material Composition Declaration

© Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both international and Pan-American copyright conventions.

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 * 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
	STP18NM60N	TLDZ*M264B62	2010-03-02	A	SH1A	1,900	mg	Each
Alternate Recommendation	TO 220 AB NON ISOL Package			Alternate Item Comments	BSA: CD00237673			

Manufacturing Process Information

Terminal Plating / Grid Array Material Matte Tin (Sn)	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating Not Applicable	Peak Process Body Temperature C	Max Time at Peak Temperature seconds	Number of Reflow Cycles
--	---------------------------------	--	------------------------------------	---	-------------------------

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

Export Data

Import fields from a file into this form

Import Data

Clear all of the fields on this form

Reset Form

Lock the fields on this form to prevent changes

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 *

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

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	TLDZ*M264B62	+M -M	Silicon Die	9.478	mg	+C -C	Supplier	Silicon die	+S -S	Silicon	7440-21-3		9.186	mg			969,19			
										+C -C	Supplier	Die metallization	+S -S	Aluminium(Al)	7429-90-5		0.212	mg			22,368
										+S -S	Titanium (Ti)	7440-32-6		0.004	mg			422			
										+S -S	Nickel (Ni)	7440-02-0		0.063	mg			6,647			
										+S -S	(Gold (Au))	7440-57-5		0.013	mg			1,372			
			+M -M	Leadframe	1,262.48	mg	+C -C	Supplier	Alloy	+S -S	Copper (Cu)	7440-50-8		1,260.846	mg			998,70			
										+S -S	Iron (Fe)	7439-89-6		1.262	mg			1,000			
										+S -S	Iron Phosphide (FeP)	26508-33-8		0.379	mg			300			
			+M -M	Leadframe coating	4.69	mg	+C -C	Supplier	Coating	+S -S	Nickel (Ni)	7440-02-0		4.649	mg			991,25			
										+S -S	Phosphorus (P)	12185-10-3		0.041	mg			8,742			
			+M -M	Die Attach	3.492	mg	+C -C	A	Lead/Lead Compound	+S -S	Lead (Pb)	7439-92-1	7a. Lead	3.335	mg			955,04			
										+C -C	Supplier	Soft solder	+S -S	Silver (Ag)	7440-22-4		0.087	mg		24,914	
										+S -S	Tin (Sn)	7440-31-5		0.07	mg			20,046			
			+M -M	Bonding wire	1.431	mg	+C -C	Supplier	Bonding wire	+S -S	Aluminium (Al)	7429-90-5		1.43	mg			999,30			
										+S -S	Magnesium (Mg)	7439-95-4		0.001	mg			699			
			+M -M	Encapsulation	609.334	mg	+C -C	Supplier	Molding compound	+S -S	Silica fused	60676-86-0		475.28	mg			779,99			
										+S -S	Epoxy resin	Proprietary		57.887	mg			95,000			
										+S -S	Phenol resin	Proprietary		54.84	mg			90,000			
							+C -C	B	Antimony/Antimony C	+S -S	Antimony Trioxide	1308-84-4		10.359	mg			17,001			
							+C -C	B	Brominated Flame Ret	+S -S	Brominated flame retard	Proprietary		9.14	mg			15,000			
										+S -S	Carbon Black	1333-86-4		1.828	mg			3,000			
			+M -M	Finishing	9.088	mg	+C -C	Supplier	Connection coating	+S -S	Tin (Sn)	7440-31-5		9.088	mg			1,000,0			