



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
	STB120N4F6	T2D2*6D4FA52	2011-06-07	A	SH1A	1,463	mg	Each
Alternate Recommendation	D2 D2PAK Package			Alternate Item Comments	ECOPACK1/ROHS BSA REF: CD00251379			

Manufacturing Process Information

Terminal Plating / Grid Array Material Matte Tin (Sn) - annealed	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating 1	Peak Process Body Temperature 245 C	Max Time at Peak Temperature 30 seconds	Number of Reflow Cycles 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

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	T2D2*6D4FA52	+M	-M	Silicon Die	5.333	mg	+C	-C	Supplier	Silicon die	+S	-S	Silicon	7440-21-3		5.224	mg			979,56
								+C	-C	Supplier	Die metallization	+S	-S	Aluminium(Al)	7429-90-5		0.054	mg			10,126
												+S	-S	Titanium (Ti)	7440-32-6		0.003	mg			563
												+S	-S	Nickel (Ni)	7440-02-0		0.039	mg			7,313
												+S	-S	Vanadium (V)	7440-62-2		0.003	mg			563
												+S	-S	(Gold (Au))	7440-57-5		0.01	mg			1,875
			+M	-M	Leadframe	826.992	mg	+C	-C	Supplier	Alloy	+S	-S	Copper (Cu)	7440-50-8		825.917	mg			998,70
												+S	-S	Iron (Fe)	7439-89-6		0.38	mg			459
												+S	-S	Iron Phosphide (FeP)	26508-33-8		0.695	mg			840
			+M	-M	Leadframe coating	2.373	mg	+C	-C	Supplier	Coating	+S	-S	Nickel (Ni)	7440-02-0		2.185	mg			920,77
												+S	-S	Phosphorus (P)	12185-10-3		0.188	mg			79,225
			+M	-M	Die Attach	4.851	mg	+C	-C	JIG R	Lead/Lead Compound	+S	-S	Lead (Pb)	7439-92-1	7a. Lead	4.633	mg			955,06
								+C	-C	Supplier	Soft solder	+S	-S	Silver (Ag)	7440-22-4		0.121	mg			24,943
												+S	-S	Tin (Sn)	7440-31-5		0.097	mg			19,996
			+M	-M	Bonding wire	3.215	mg	+C	-C	Supplier	Bonding wire	+S	-S	Aluminium (Al)	7429-90-5		3.214	mg			999,68
												+S	-S	Magnesium (Mg)	7439-95-4		0.001	mg			311
			+M	-M	Encapsulation	616.68	mg	+C	-C	Supplier	Moulding Compound	+S	-S	Silica, vitreous	60676-86-0		493.344	mg			800,00
												+S	-S	Epoxy Cresol Novolak	29690-82-2		43.168	mg			70,000
												+S	-S	Phenol resin	9003-35-4		24.667	mg			40,000
												+S	-S	Biphenyl epoxy resin	85954-11-6		37.001	mg			60,000
								+C	-C		Antimony/Antimony Compound	+S	-S	Antimony Trioxide	1309-64-4		7.4	mg			12,000
								+C	-C	JIG I	Brominated Flame Retardant	+S	-S	Brominated Epoxy Resin	40039-93-8		9.25	mg			15,000
												+S	-S	Carbon black	1333-86-4		1.85	mg			3,000

+M	-M	Finishing	3.556	mg	+C	-C	Supplier	Connection coating	+S	-S	Tin (Sn)	7440-31-5		3.556	mg			1,000,0
----	----	-----------	-------	----	----	----	----------	--------------------	----	----	----------	-----------	--	-------	----	--	--	---------