



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 *	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	<input type="button" value="Duplicate Contact -> Authorized Representative"/>				
Authorized Representative * Emilio Castelli	Title - Representative APG Material Declaration Cham	Phone - Representative *	Email - Representative *	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
	TDA7850H	H8QI*UN01AF6	2011-12-15	A	SH1A	7,224.9	mg	Each
Alternate Recommendation	Flexiwatt 25 Lds Hrztl Bending			Alternate Item Comments	Internal ST reference: BSA: CD00266996 EcoPack2			

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
Tin (Sn)	CU Alloy	3	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' 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 *

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		Flexiwatt 25 Lds Hr	+M	-M	Integrated circuit	25.421	mg	+C	-C	Supplier	Silicon die	+S	-S	Silicon (Si)	7440-21-3		25.051	mg			985,44
									+C	-C		die metallization	+S	-S	Aluminium (Al)	7429-90-5		0.006	mg			236
									+C	-C		die metallization	+S	-S	Copper (Cu)	7440-50-8		0.02	mg			787
									+C	-C		die metallization	+S	-S	Titanium (Ti)	7440-32-6		0.011	mg			433
									+C	-C		die metallization	+S	-S	Chromium (Cr)	7440-47-3		0.014	mg			551
									+C	-C		die metallization	+S	-S	Gold (Au)	7440-57-5		0.038	mg			1,495
									+C	-C		die metallization	+S	-S	Nickel (Ni)	7440-02-0		0.11	mg			4,327
									+C	-C		die metallization	+S	-S	Vanadium (V)	7440-62-2		0.008	mg			315
									+C	-C		Die coating	+S	-S	Gamma-butyrolactone	96-48-0		0.109	mg			4,288
									+C	-C		Die coating	+S	-S	Polyhydroxyamide	55295-98-2		0.049	mg			1,926
									+C	-C		Die coating	+S	-S	Alcoxysilane	na		0.003	mg			118
									+C	-C		Die coating	+S	-S	Aryl Silicic Acid	na		0.002	mg			79
		+M	-M	Leadframe	5,222.61	mg	+C	-C	supplier	frame alloy	+S	-S	Copper (Cu)	7440-50-8		5,214.499	mg				998,44	
									+C	-C		frame alloy	+S	-S	Iron (Fe)	7439-89-6		2.402	mg			460
									+C	-C		frame alloy	+S	-S	Iron Phosphide (FeP)	26508-33-8		4.386	mg			840
									+C	-C		frame coating	+S	-S	Silver (Ag)	7440-22-4		1.331	mg			255
		+M	-M	Die Attach	7.946	mg	+C	-C	A	soft solder	+S	-S	Lead (Pb)	7439-92-1	7a. Lead	7.748	mg				975,08	
									+C	-C	supplier	soft solder	+S	-S	Silver (Ag)	7440-22-4		0.119	mg			14,976
									+C	-C		soft solder	+S	-S	Tin (Sn)	7440-31-5		0.079	mg			9,942
		+M	-M	Bonding wire	3.195	mg	+C	-C	Supplier	Bonding wire	+S	-S	Copper (Cu)	7440-50-8		3.195	mg					1,000,0
		+M	-M	Encapsulation	1,907.87	mg	+C	-C	supplier	Moulding Compound	+S	-S	Amorphous Silica	7631-86-9		1,621.692	mg					850,00
									+C	-C		Moulding Compound	+S	-S	Epoxy Cresol Novolak	29690-82-2		114.472	mg			60,000
									+C	-C		Moulding Compound	+S	-S	epoxy resin	na		76.315	mg			40,000

					+C	-C		Moulding Compound	+S	-S	Phenol resin	na		76.315	mg			40,000
					+C	-C		Moulding Compound	+S	-S	Carbon black	1333-86-4		13.355	mg			7,000
					+C	-C	B	Moulding Compound	+S	-S	Bismuth (Bi)	7440-69-9		5.724	mg			3,000
+M	-M	Finishing	57.847	mg	+C	-C	supplier	connection coating	+S	-S	Tin (Sn)	7440-31-5		57.847	mg			1,000,0