



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 * NA	Response Document ID				
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
Authorized Representative * GIOVANNI GIACOPELLO	Title - Representative AMS/IPD 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
	M48T12-150PC1	HZPC*M6AAT12	2012-10-12	A	MU1A	9,805.632	mg	Each
Alternate Recommendation	Package: PDIP 24 .7 ZERO PC			Alternate Item Comments	ECOPACK1/ROHS BSA REF: CD00232839			

Manufacturing Process Information

Terminal Plating / Grid Array Material Matte Tin (Sn)	Terminal Base Alloy Alloy 42	J-STD-020 MSL Rating Not Applicable	Peak Process Body Temperature C	Max Time at Peak Temperature seconds	Number of Reflow Cycles
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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

+M	-M	Encapsulation base	2,862.3	mg	+C	-C	Supplier	resin	+S	-S	Bis F Epoxy Resin	54208-63-8		1,631.51	mg			570,00
									+S	-S	Epoxyde Bisphenol A R	25068-38-6		108.767	mg			38,000
									+S	-S	Carbon Black	1333-86-4		5.725	mg			2,000
									+S	-S	Calcium carbonate	1317-65-3		114.492	mg			40,000
									+S	-S	Triethyl phosphate	78-40-0		57.246	mg			20,000
									+S	-S	metal hydroxide	21645-51-2		57.246	mg			20,000
									+S	-S	Kaolin	1332-58-7		114.492	mg			40,000
									+S	-S	Nonyl-Phenol	84852-15-3		85.869	mg			30,000
									+S	-S	Polyoxypropylenediam	9046-10-0		686.952	mg			240,00
+M	-M	Housing	1,760.8	mg	+C	-C	Supplier	plastic housing	+S	-S	Poly(butylene terephtha	30965-26-5		1,285.384	mg			730,00
									+S	-S	glass	65997-17-3		404.984	mg			230,00
									+S	-S	Antimony trioxide	1309-64-4		52.824	mg			30,000
									+S	-S	Tetrahydrofurane	109-99-9		8.804	mg			5,000
									+S	-S	Carbon black	1333-86-4		8.804	mg			5,000
+M	-M	Battery	1,596.7	mg	+C	-C	Supplier	Battery	+S	-S	Iron	7439-89-6		782.49	mg			490,06
									+S	-S	Chromium	7440-47-3		190.34	mg			119,20
									+S	-S	Nickel	7440-02-0		84.588	mg			52,977
									+S	-S	Carbon Monofluoride (C	51311-17-2		174.497	mg			109,28
									+S	-S	Propylene Carbonate(e	108-32-7		119.418	mg			74,791
									+S	-S	Polypropylene(gromme	9003-07-0		46.987	mg			29,428
									+S	-S	Dimethoxythane	110-71-4		65.119	mg			40,783
									+S	-S	Lithium metal	7439-93-2		35.874	mg			22,468
									+S	-S	LiBFx	14283-07-9		15.305	mg			9,585
									+S	-S	Carbon Black	1333-86-4		17.742	mg			11,112
									+S	-S	Asphalt	8052-42-4		5.459	mg			3,419
									+S	-S	SBR Dispersion	Proprietary		7.506	mg			4,701
									+S	-S	Carbon Paint	Proprietary		17.547	mg			10,990
									+S	-S	Titanium metal	7440-32-1		33.828	mg			21,186
+M	-M	Crystal	142.481	mg	+C	-C	Supplier	Crystal Blank	+S	-S	Quartz (SiO2)	14808-60-7		4.7	mg			32,986
					+C	-C	Supplier	Base Shell	+S	-S	Nickel	7440-02-0		6.683	mg			46,904
									+S	-S	Iron	7439-89-6		9.239	mg			64,843
									+S	-S	Manganese	7439-96-5		0.13	mg			912.40

* Required Field

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				+S	-S	Chromium	7440-47-3		0.033	mg			231.60
				+S	-S	Silicon	7440-21-3		0.049	mg			343.90
				+S	-S	Cobalt	7440-48-4		0.163	mg			1,144.0
				+S	-S	Carbon	7440-44-0		0.003	mg			21.055
+C	-C	Supplier	Base Glass	+S	-S	Silicon dioxide	7631-86-9		3.273	mg			22,971
				+S	-S	Aluminum oxide	1344-28-1		0.311	mg			2,182.7
				+S	-S	Diboron-trioxide	1303-86-2		1.231	mg			8,639.7
				+S	-S	Barium oxide	1304-28-5		0.311	mg			2,182.7
				+S	-S	Zinc Oxide	1314-13-2		0.018	mg			126.33
				+S	-S	Disodium-oxide	1313-59-3		0.311	mg			2,182.7
				+S	-S	Dipotassium-oxide	12136-45-7		0.311	mg			2,182.7
				+S	-S	Dilithium-oxide	12057-24-8		0.029	mg			203.53
				+S	-S	Iron-trioxide	1309-37-1		0.018	mg			126.33
				+S	-S	Chromium(III)oxide	1308-38-9		0.018	mg			126.33
				+S	-S	Fluorine	7782-41-4		0.029	mg			203.53
+C	-C	Supplier	Ink	+S	-S	Phenolic Resin	Proprietary		0.008	mg			56.147
				+S	-S	Carbon black	1333-86-4		0.002	mg			14.036
+C	-C	Supplier	Pins	+S	-S	Nickel	7440-02-0		5.335	mg			37,443
				+S	-S	Cobalt	7440-48-4		3.128	mg			21,953
				+S	-S	Manganese	7439-96-5		0.074	mg			519.36
				+S	-S	Iron	7439-89-6		9.663	mg			67,819
+C	-C	Supplier	Plating	+S	-S	Copper	7440-50-8		0.81	mg			5,684.9
				+S	-S	Tin	7440-02-0		1.23	mg			8,632.7
+C	-C	Supplier	Can	+S	-S	Nickel	7440-02-0		16.082	mg			112,87
				+S	-S	Copper	7440-50-8		57.181	mg			401,32
				+S	-S	Manganese	7439-96-5		0.223	mg			1,565.1
				+S	-S	Iron	7439-89-6		0.179	mg			1,256.3
				+S	-S	Lead	7439-92-1		0.045	mg			315.83
+C	-C	Supplier	Can	+S	-S	Zinc	7440-66-6		15.635	mg			109,73
+C	-C	Supplier	Can Plating	+S	-S	Nickel	7440-02-0		5.455	mg			38,285
+C	-C	Supplier	Electrode	+S	-S	Silver	7440-22-4		0.031	mg			217.57
+C	-C	Supplier	Solder	+S	-S	Tin	7440-31-5		0.54	mg			3,789.9

* Required Field