

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.

1752-2 1.1

ICP 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 Information

Supplier Information

Company Name * Fairchild Semiconductor	Company Unique ID 00-489-5751	Unique ID Authority Dun & Bradstreet	Response Date* Sat, Aug 31, 2013 03:11 AM
Contact Name * David Lancaster	Title - Contact Product Ecology	Phone - Contact * 801-562-7455	Email - Contact * david.lancaster@fairchildsemi.com
Authorized Representative * David Lancaster	Title - Representative Product Ecology	Phone - Representative * 801-562-7455	Email - Representative * david.lancaster@fairchildsemi.com

Requester Item Number	Mf Item Number	Mf Item Name	Effective Date	Version	Manufacturing Site	Weight*	UOM	Unit Type
FSBB20CH60F	FSBB20CH60F	SPM27-CA			INTERNAL SUZHOU	17.342394	g	Each

Manufacturing Process Information

Terminal Finish	Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	No Reflow cycles
Matte Tin (Sn)	CU Alloy	Not Applicable	C	seconds	Not Applicable

* Required Field

RoHS Material Composition Declaration	Declaration Type * Custom
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RoHS Directive 2011/65/EU	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
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This document is Fairchild Semiconductor's statement regarding the directive 2011/65/EU of the European Parliament and of the council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Recast). The content of this document is based upon information collected from Fairchild Semiconductor supply chain, manufacturing facilities and affiliates worldwide.

The FSC part number listed above and the homogenous materials in the product are compliant with the Directive 2011/65/EU. Fairchild has implemented systems to ensure our products are compliant to environmental regulations and laws worldwide. However, not all materials in Fairchild's products may have been independently verified regarding substance content. In the event of any issues arising from information in this document, the warranty section of Fairchild's standard terms and conditions of sale shall apply, unless alternate contracts have been agreed upon in writing by both parties.

Note: The substance content disclosed herewith is approximate and is based on various methods including, engineering calculations, supplier surveys, Material Safety Data Sheets, analytical measurements. Fairchild may update this document without notification. This statement may not include information regarding the miniscule quantities of dopant and metal materials in the electrical devices contained within the finished product. CAS numbers listed for Resin substances are generic and may contain alternate substances of similar composition.

RoHS Declaration *	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions	Supplier Acceptance * Accepted
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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-2011/534/EU
7(a)-Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85 % by weight or more lead).

Declaration Signature

Supplier Signature	 DAVID LANCASTER - PRODUCT ECOLOGY MANAGER
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Homogeneous Material Composition Declaration for Electronic Products

Item/SubItem Name SPM27-CA

Component	Material	Weight (mg)	Jig Level	Substance Category	Substance	Weight (mg)	CAS	PPM
Chip	Other inorganic materials	67.700	Supplier		Silicon	67.700	7440-21-3	3904
Die Attach Epoxy	Other Organic Materials	0.495	Supplier		Acrylic Resin	0.074	54208-63-8	4
			Supplier		Silver	0.421	7440-22-4	24
Die Attach Soft Solder	Other Nonferrous metals & alloys	31.399	Supplier		Copper	0.157	7440-50-8	9
			Supplier		Silver	0.942	7440-22-4	54
			Supplier		Tin	30.300	7440-31-5	1747
Die Attach Solder	Other Nonferrous metals & alloys	9.700	A	Lead/Lead Compounds	Lead	8.973	7439-92-1	517
			Supplier		Silver	0.243	7440-22-4	14
			Supplier		Tin	0.485	7440-31-5	28
Encapsulation	Thermoplastics	10122.000	B	Antimony/Antimony Compounds	Antimony Trioxide	101.000	1309-64-4	5824
			B	Brominated Flame Retardants (other than PBCs or PBDEs)	Bromine Resin	101.000	6386-73-8	5824
			Supplier		Carbon Black	101.220	1333-86-4	5837
			Supplier		Epoxy Resin	1010.000	29690-82-2	58239
Heat Sink	Ceramics / Glass	2720.000	Supplier		Silica, vitreous	8808.780	60676-86-0	507933
			Supplier		Aluminum Oxide	980.016	1344-28-1	56510
			Supplier		Copper	1739.984	7440-50-8	100331
Lead Frame	Copper & its alloys	4318.380	Supplier		Copper	4310.000	7440-50-8	248524
			Supplier		Iron	5.180	7439-89-6	299
			Supplier		Phosphorus	1.730	7723-14-0	100
			Supplier		Silver	1.470	7440-22-4	85
Plating	Other Nonferrous metals & alloys	53.300	Supplier		Tin	53.300	7440-31-5	3073
Wire Bond - Al	Aluminum & its alloys	18.300	Supplier		Aluminum	18.300	7429-90-5	1055
Wire Bond - Au	Precious metals	1.120	Supplier		Gold	1.120	7440-57-5	65