

## 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

<b>Company Name *</b> Fairchild Semiconductor	Company Unique ID 00-489-5751	Unique ID Authority Dun & Bradstreet	<b>Response Date*</b> Sat, May 26, 2012 04:11 AM
<b>Contact Name *</b> David Lancaster	Title - Contact Product Ecology	<b>Phone - Contact *</b> 801-562-7455	<b>Email - Contact *</b> david.lancaster@fairchildsemi.com
<b>Authorized Representative *</b> David Lancaster	Title - Representative Product Ecology	<b>Phone - Representative *</b> 801-562-7455	Email - Representative * david.lancaster@fairchildsemi.com

Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight*	UOM	Unit Type
HMHA281R2V	HMHA281R2V	SOIC-4 HalfPitch			INTERNAL PENANG	0.055	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	1	230 C	30 seconds	3

\* Required Field

<b>RoHS Material Composition Declaration</b>	<b>Declaration Type * Custom</b>
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<b>RoHS Directive 2002/95/EC</b>	<b>RoHS Definition:</b> 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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Providing for limitations below, we certify that the Fairchild Semiconductor product(s) list in this document are compliant to directive 2002/95/EC of the European Parliament and of the council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS directive). Specifically, this product(s) does not contain the substances in the RoHS definition above in concentrations greater than the maximum limit value(a).

Fairchild has implemented procedures to ensure our products and the materials in our products conform to regulatory requirements worldwide. Fairchild Semiconductor certifies that the information provided in this document is correct as of the date indicated on this document. However, not all materials in Fairchild's products may have been independently verified or tested with regard to 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.

(a) Maximum limit does not apply to applications for which exemptions have been granted by the RoHS directive. Fairchild product may utilize exemption 5 and 7a.

<b>RoHS Declaration *</b>	<b>1 - Item(s) does not contain RoHS restricted substances per the definition above</b>	<b>Supplier Acceptance * Accepted</b>
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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-2006/690/EC 0
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**Declaration Signature**

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

Item/SubItem Name SOIC-4 HalfPitch

Component	Material	Weight (mg)	Jig Level	Substance Category	Substance	Weight (mg)	CAS	PPM
Chip	Other inorganic materials	0.266	Supplier		Gallium Arsenide	0.087	1303-00-0	1580
			Supplier		Silicon	0.180	7440-21-3	3288
Coupling Gel	Other Organic Materials	8.800	Supplier		Dimethyl Cyclosiloxanes	1.760	69430-24-6	32147
			Supplier		Methyltrimethoxysilane	4.400	1185-55-3	80367
			Supplier		Titanium Dioxide	2.640	13463-67-7	48220
Die Attach	Other Organic Materials	0.021	Supplier		Acrylic Resin	0.005	54208-63-8	97
			Supplier		Silver	0.016	7440-22-4	290
Encapsulation	Thermoplastics	31.400	B	Antimony/Antimony Compounds	Antimony Trioxide	0.942	1309-64-4	17206
			B	Brominated Flame Retardants (other than PBCs or PBDEs)	Bromine Resin	1.260	6386-73-8	23014
			Supplier		Epoxy Resin	7.220	29690-82-2	131876
			Supplier		Silica, vitreous	22.000	60676-86-0	401837
Lead Frame	Other Ferrous alloys, non-stainless steels	13.200	Supplier		Copper	12.900	7440-50-8	235623
			Supplier		Iron	0.304	7439-89-6	5553
			Supplier		Phosphorus	0.004	7723-14-0	72
			Supplier		Silver	0.001	7440-22-4	24
			Supplier		Zinc	0.016	7440-66-6	289
Plating	Other Nonferrous metals & alloys	0.961	Supplier		Tin	0.961	7440-31-5	17553
Wire Bond	Precious metals	0.053	Supplier		Gold	0.053	7440-57-5	964