

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.

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, May 26, 2012 04:11 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	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight*	UOM	Unit Type
HGTG20N60A4	HGTG20N60A4	TO-247-3			INTERNAL SUZHOU	5.457	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
--	----------------------------------

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
----------------------------------	---

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.

RoHS Declaration *	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions	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

Supplier Signature	 DAVID LANCASTER - PRODUCT ECOLOGY MANAGER
--------------------	--

Homogeneous Material Composition Declaration for Electronic Products

Item/SubItem Name TO-247-3

Component	Material	Weight (mg)	Jig Level	Substance Category	Substance	Weight (mg)	CAS	PPM
Chip	Other inorganic materials	32.000	Supplier		Silicon	32.000	7440-21-3	5864
Die Attach	Other Nonferrous metals & alloys	35.000	A	Lead/Lead Compounds	Lead	32.400	7439-92-1	5938
			Supplier		Silver	0.875	7440-22-4	160
			Supplier		Tin	1.750	7440-31-5	321
Encapsulation	Thermoplastics	1740.000	B	Antimony/Antimony Compounds	Antimony Trioxide	34.900	1309-64-4	6396
			B	Brominated Flame Retardants (other than PBCs or PBDEs)	Bromine Resin	20.900	6386-73-8	3830
			Supplier		Epoxy Resin	284.000	29690-82-2	52046
			Supplier		Silica, vitreous	1400.000	60676-86-0	256564
Lead Frame	Other Ferrous alloys, non-stainless steels	3610.000	Supplier		Copper	3490.000	7440-50-8	639578
			Supplier		Iron	2.100	7439-89-6	385
			B	Nickel (external applications only)	Nickel	118.000	7440-02-0	21625
			Supplier		Phosphorus	1.050	7723-14-0	192
			Supplier		Zinc	1.750	7440-66-6	321
Plating	Other Nonferrous metals & alloys	31.000	Supplier		Tin	31.000	7440-31-5	5681
Wire Bond	Aluminum & its alloys	6.000	Supplier		Aluminum	6.000	7429-90-5	1100