

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 02:48 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
FFPF12UP20DNTU	FFPF12UP20DNTU	TO-220F-3			INTERNAL SUZHOU	2.112340	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).
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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 TO-220F-3

Component	Material	Weight (mg)	Jig Level	Substance Category	Substance	Weight (mg)	CAS	PPM
Chip	Other inorganic materials	13.500	Supplier		Silicon	13.500	7440-21-3	6391
Die Attach	Other Nonferrous metals & alloys	4.010	A	Lead/Lead Compounds	Lead	3.749	7439-92-1	1775
			Supplier		Silver	0.060	7440-22-4	28
			Supplier		Tin	0.200	7440-31-5	95
Encapsulation	Thermoplastics	784.930	B	Antimony/Antimony Compounds	Antimony Trioxide	19.600	1309-64-4	9279
			B	Brominated Flame Retardants (other than PBCs or PBDEs)	Bromine Resin	23.500	6386-73-8	11125
			Supplier		Carbon Black	7.849	1333-86-4	3716
			Supplier		Epoxy Resin	157.000	29690-82-2	74325
			Supplier		Silica, vitreous	576.981	60676-86-0	273148
Lead Frame	Copper & its alloys	1294.260	Supplier		Copper	1290.000	7440-50-8	610697
			Supplier		Iron	1.290	7439-89-6	611
			Supplier		Phosphorus	0.390	7723-14-0	185
			Supplier		Silver	2.580	7440-22-4	1221
Plating	Other Nonferrous metals & alloys	13.200	Supplier		Tin	13.200	7440-31-5	6249
Wire Bond	Aluminum & its alloys	2.440	Supplier		Aluminum	2.440	7429-90-5	1155