



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 *	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID				
SEMTECH CORPORATION	SEMTECH CORPORATION		2012-06-27					
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
ROYA READER	QUALITY ASSURANCE CUST	805-389-2742	rreader@semtech.com					
Authorized Representative *	Title - Representative	Phone - Representative *	Email - Representative *	Supplier Comments or URL for Additional Information				
ROYA READER	QUALITY ASSURANCE CUST	805-389-2742	rreader@semtech.com					
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
	EClamp2454P.TCT	ESD-EMI 4-line Protection for C			China	5.322	mg	Each
Alternate Recommendation				Alternate Item Comments				

Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
Nickel/Palladium/Gold (Ni/Pd/Au)	CU Alloy	1	260 C	30 seconds	3

Comments
is REACH-compliant product, per EU Regulation EC1907/2006 to include recent addition of SVHC candidate list of substances in June 2012

Save the fields in this form to a file

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Import fields from a file into this form

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Clear all of the fields on this form

Reset Form

Lock the fields on this form to prevent changes

Lock Supplier Fields

RoHS Material Composition Declaration

Declaration Type *

Detailed

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

Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2002/95/EC and implemented by the laws of the European Union member states) of the part identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a RoHS restricted substance?) in excess of the applicable quantity limit identified above. If a homogeneous material within the part contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form 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. In the absence of such written agreement, the warranty rights and/or remedies of Supplier's Standard Terms and Conditions of Sale applicable to such part shall apply.

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

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Line Functions: +I Inserts a New Item /SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
											-	+	
+I -I Die	+M -M Doped Silicon	0.3302	mg	+C -C Supplier		+S -S Si	7440-21-3		0.3302	mg			62,049
+I -I Lead Frame	+M -M C7025	1.54791	mg	+C -C Supplier		+S -S Cu	7440-50-8		1.4844	mg			278,92
						+S -S Si	7440-21-3		0.0112	mg			2,109
				+C -C B	Nickel (external applic	+S -S Nickel	7440-02-0		0.0495	mg			9,307
				+C -C Supplier		+S -S Mg	7439-95-4		0.0027	mg			509
	+M -M Ni/Pd/Au plating	0.03969	mg	+C -C B		+S -S Nickel	7440-02-0		0.0358	mg			6,725
				+C -C Supplier	middle plating	+S -S Pd	7440-05-3		0.0033	mg			612
				+C -C Supplier	outer plating	+S -S Au	7440-57-5		0.0006	mg			122
+I -I Bonding wire	+M -M Gold wire	0.0908	mg	+C -C Supplier		+S -S Au	7440-57-5		0.0908	mg			17,062
+I -I Molding Compound	+M -M EME-G770HCD	3.155515	mg	+C -C Supplier		+S -S Silica fused	60676-86-0		2.9504	mg			554,38
						+S -S Epoxy resin	Proprietary		0.0947	mg			17,788
						+S -S Phenol resin	Proprietary		0.0947	mg			17,788
						+S -S Carbon Black	1333-86-4		0.0158	mg			2,965
+I -I Die attached Epoxy	+M -M QMI519	0.157837	mg	+C -C Supplier		+S -S Ag	7440-22-4		0.1263	mg			23,726
						+S -S Palladium compound	Proprietary		0.0002	mg			44
						+S -S 2,6-Di-tert-butyl-p-creso	128-37-0		0.000007	mg			1
						+S -S Hydroquinone	123-31-9		0.000000	mg			0.0207
						+S -S Acrylate	Proprietary		0.025	mg			4,699
						+S -S Bismaleimide resin	Proprietary		0.0047	mg			890
						+S -S Polymer of polybutadie	Proprietary		0.0016	mg			297