



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.

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

Supplier Information

Company Name *	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID				
SEMTECH CORPORATION	SEMTECH CORPORATION		2012-08-17					
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative				
ROYA READER	Quality Customer Service Spec	805-389-2742	rreader@semtech.com					
Authorized Representative *	Title - Representative	Phone - Representative *	Email - Representative *	Supplier Comments or URL for Additional Information				
ROYA READER	Quality Customer Service Spec	805-389-2742	rreader@semtech.com					
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
	EClamp2455P.TCT	ESD-EMI 4-line Protection for S			China	5.168	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
EClamp2455P.TCT 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

Export Data

Import fields from a file into this form

Import Data

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	Silicon Chip	0.225	mg	+C	-C	Supplier		+S	-S	Si	7440-21-3		0.0687	mg			13,302
+I	-I	Lead frame	+M	-M	C7025	1.5479	mg	+C	-C	Supplier		+S	-S	Cu	7440-50-8		1.4844	mg			287,22
												+S	-S	Si	7440-21-3		0.0112	mg			2,171
								+C	-C	B	Nickel (external applic	+S	-S	Nickel	7440-02-0		0.0495	mg			9,584
								+C	-C	Supplier		+S	-S	Mg	7439-95-4		0.0027	mg			524
			+M	-M	Ni/Pd/Au Plating	0.0397	mg	+C	-C	B		+S	-S	Nickel	7440-02-0		0.0358	mg			6,925
								+C	-C	Supplier	middle plating	+S	-S	Palladium	7440-03-5		0.0033	mg			630
								+C	-C	Supplier	outer plating	+S	-S	Gold	7440-57-5		0.0006	mg			125
+I	-I	Bond wire	+M	-M	Gold wire	0.0508	mg	+C	-C	Supplier		+S	-S	Gold	7440-57-5		0.0508	mg			9,839
+I	-I	Molding compound	+M	-M	EME-G770HCD	3.4281	mg	+C	-C	Supplier		+S	-S	Silica fused	60676-86-0		3.2053	mg			620,20
												+S	-S	Epoxy resin	Proprietary		0.1028	mg			19,899
												+S	-S	Phenol resin	Proprietary		0.1028	mg			19,899
												+S	-S	Carbon Black	1333-86-4		0.0171	mg			3,317
+I	-I	Die attached epoxy	+M	-M	QMI519	0.0329	mg	+C	-C	Supplier		+S	-S	Ag	7440-22-4		0.0263	mg			5,086
												+S	-S	palladium compound	Proprietary		0.000049	mg			10
												+S	-S	2,6-Di-tert-butyl-p-creso	128-37-0		0.000001	mg			0.3178
												+S	-S	Hydroquinone	123-31-9		0.000000	mg			0.0044
												+S	-S	Acrylate	Proprietary		0.0052	mg			1,007
												+S	-S	Bismaleimide resin	Proprietary		0.001	mg			191
												+S	-S	Polymer of polybutadie	Proprietary		0.0003	mg			64