IPC
ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES®

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**

Supplier Information

Company Name * **SEMTECH CORPORATION**	Company Unique ID	Unique ID Authority	**Response Date *** **2011-07-22**	Response Document ID	
Contact Name * **ROYA READER**	Title - Contact	**Phone - Contact *** **(805) 498-2111**	**Email - Contact *** **rreader@semtech.com**	Duplicate Contact -> Authorized Representative	
Authorized Representative * **ROYA READER**	Title - Representative	**Phone - Representative *** **(805) 498-2111**	**Email - Representative** * **rreader@semtech.com**	Supplier Comments or URL for Additional Information	

	Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	**Weight ***	UOM	Unit Type
		RClamp0522P.TCT	Ultra Low Capacitance TVS Arra			China	2.637	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

*** Required Field**

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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	Roya Reader Digitally signed by Roya Reader DN: cn=Roya Reader, o=Semtech Corporation, ou=QA, email=rreader@semtech.com, c=US Date: 2011.07.22 16:33:36 -07'00'	

*** Required Field**

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Form enabled by Adobe

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	Chip	+M -M	Doped Silicon	0.0799	mg	+C -C	Supplier		+S -S	Silicon (Si)	7440-21-3		0.0799	mg			30,301
+I -I	Lead Frame	+M -M	C7025	0.9702	mg	+C -C	Supplier		+S -S	Copper (Cu)	7440-50-8		0.9072	mg			344,02
									+S -S	Silicon (Si)	7440-21-3		0.0069	mg			2,601
									+S -S	Magnesium (Mg)	7439-95-4		0.0017	mg			628
						+C -C	B	Nickel (external applic	+S -S	Nickel	7440-02-0		0.0303	mg			11,479
+I -I	Lead Finish	+M -M	Ni/Pd/Au plating	0.0349	mg	+C -C	B	Nickel (external applic	+S -S	Nickel	7440-02-0		0.0219	mg			8,294
						+C -C	Supplier		+S -S	Palladium (Pd)	7440-05-3		0.002	mg			754
									+S -S	Gold (Au)	7440-57-5		0.0004	mg			150
+I -I	Bonding Wire	+M -M	Gold Wire	0.0119	mg	+C -C	Supplier		+S -S	Gold (Au)	7440-57-5		0.0119	mg			4,512
+I -I	Molding Compound	+M -M	EME-G770HCD	1.5367	mg	+C -C	Supplier		+S -S	Silica Fused	60676-86-0		1.4368	mg			544,89
									+S -S	Epoxy Resin	Proprietary		0.0461	mg			17,483
									+S -S	Phenol Resin	Proprietary		0.0461	mg			17,483
									+S -S	Carbon Black	1333-86-4		0.0077	mg			2,914
+I -I	Die Attached Epoxy	+M -M	QMI519	0.0383	mg	+C -C	Supplier		+S -S	Silver (Ag)	7440-22-4		0.0306	mg			11,586
									+S -S	Palladium Compound	Proprietary		0.0001	mg			22
									+S -S	2,6-di-tert-butyl-p-creso	128-37-0		0.000001	mg			1
									+S -S	Hydroquinone	123-31-9		0.000000	mg			0
									+S -S	Acrylate	Proprietary		0.0061	mg			2,295
									+S -S	Bismaleimide Resin	Proprieatry		0.0011	mg			434
									+S -S	Polymer of Polybutadie	Proprietary		0.0004	mg			145