



# 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 <a href="http://www.ipc.org/IPC-175x">http://www.ipc.org/IPC-175x</a>	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat
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## Supplier Information

<b>Company Name *</b> SEMTECH CORPORATION	Company Unique ID 00-847-9941	Unique ID Authority DUNS	<b>Response Date *</b> 2018-01-30	Response Document ID
<b>Contact Name *</b> Elvia Finkel	Title - Contact Specialist, Document Control/C	<b>Phone - Contact *</b> 805-498-2111	<b>Email - Contact *</b> efinkel@semtech.com	Duplicate Contact -> Authorized Representative
<b>Authorized Representative *</b> Elvia Finkel	Title - Representative Specialist, Document Control/C	<b>Phone - Representative *</b> 805-498-2111	<b>Email - Representative *</b> efinkel@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
	SX1272IMLATRT	860 MHz to 1020 MHz Low Pow			Malaysia	96.87	mg	Each
Alternate Recommendation				Alternate Item Comments				

## Manufacturing Process Information

Terminal Plating / Grid Array Material <b>Matte Tin (Sn) - annealed</b>	Terminal Base Alloy <b>CU Alloy</b>	J-STD-020 MSL Rating <b>1</b>	Peak Process Body Temperature <b>260 C</b>	Max Time at Peak Temperature <b>30 seconds</b>	Number of Reflow Cycles <b>3</b>
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Comments  
SX1272IMLATRT is REACH-compliant product, per EU Regulation EC1907/2006 to include recent addition of SVHC candidate list of substances in January 2018

Save the fields in this form to a file

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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	2.05	mg	+C	-C	Supplier	+S	-S	Si	7440-21-3		2.05	mg			21,162
+I	-I	Leadframe	+M	-M	NiPdAu Plated C	37.5	mg	+C	-C	Supplier	+S	-S	Copper	7440-50-8		36.12	mg			372,89
											+S	-S	Iron	7439-89-6		0.85	mg			8,733
											+S	-S	Phosphorous	7723-14-0		0.009	mg			93
											+S	-S	Zinc	7440-66-6		0.0469	mg			484
								+C	-C	B	+S	-S	Nickel	7440-02-0		0.4313	mg			4,452
								+C	-C	Supplier	+S	-S	Palladium	7440-05-3		0.0375	mg			387
											+S	-S	Gold	7440-57-5		0.0056	mg			58
+I	-I	Die attach material	+M	-M	Epoxy QMI 536	0.7	mg	+C	-C	Supplier	+S	-S	Ethen, tetrafluoro-homo	9002-84-0		0.25	mg			2,529
											+S	-S	3-(2-3-epoxypopoxy) pr	2530-83-8		0.028	mg			289
											+S	-S	Bismaleimide resin	Proprietary		0.245	mg			2,529
											+S	-S	Synthetic resin	Proprietary		0.126	mg			1,301
											+S	-S	Additive	Proprietary		0.028	mg			289
											+S	-S	Initiator	Proprietary		0.028	mg			289
+I	-I	Wire	+M	-M	Gold	0.63	mg	+C	-C	Supplier	+S	-S	Au	7440-57-5		0.63	mg			6,503
											+S	-S	Others	N/A		0.00006	mg			1
+I	-I	Encapsulation	+M	-M	Epoxy Resin EM	55.99	mg	+C	-C	Supplier	+S	-S	Silica Fused	60676-86-0		49.1	mg			506,89
											+S	-S	Epoxy Resin	Trade Secre		3.92	mg			40,459
											+S	-S	Phenol Resin	Trade Secre		2.8	mg			28,900
											+S	-S	Carbon Black	1333-86-4		0.17	mg			1,734