

 <small>ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES®</small>	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.								
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 Information							
Supplier Information										
Company Name * National Semiconductor	Company Unique ID NATSEMI	Unique ID Authority 04-147-2986	Response Date * 11-11-2011			Response Document ID				
Contact Name * Lorena Dudman	Title - Contact Product Stewardship Eng.	Phone - Contact * 1-408-721-8180	Email - Contact * Green.Project@nsc.com							
Authorized Representative * Lorena Dudman	Title - Representative Product Stewardship Eng.	Phone - Representative * 1-408-721-8180	Email - Representative * Green.Project@nsc.com			Supplier Comments or URL for Additional Information http://www.national.com/analog/quality/green				
	Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type	
		LM4550BVHX S5001320	LM4550BVHX S5001320	11-11-2011			187.01	mg	Each	
	Alternate Recommendation				Alternate Item Comments					
Manufacturing Process Information										
Terminal Plating / Grid Array Material SnPb	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating 3	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 40 seconds	Number of Reflow Cycles 4					
Comments "Does not contain PFOS."										

RoHS Material Type Declaration	Declaration Type * Custom
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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
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Subject to the limitations below, National Semiconductor Corporation ("National") certifies the following information as of the document date.

1. National products designated "ROHS Compliant" comply with the European Unions Directive on the Restriction of the Use of Hazardous Substances 2002/95/EC ("RoHS"). Certain National products contain lead in RoHS exempt applications 7(a) or 7(c)-I.
2. National products do not contain and are not manufactured with ozone depleting compounds.
3. National products do not contain substances identified by the European Chemical Agency ("ECHA") as substances of very high concern ("SVHC") per REACH Regulation (EC) No 1907/2006. National also complies with use restrictions as stipulated in Annex XVII of REACH.
4. National products are manufactured in conformance with National specifications (SC)CSP-9-111C1 Supplier Environmental Requirements for Materials and Products and (SC)CSP-9-111S2 Banned and Reportable Substances.
5. National's list of banned and reportable substances and management system is based on the current version of the Joint Industrial Guide, JIG-101.

National has taken commercially reasonable steps to provide representative and accurate information but may not have independently verified information provided or conducted chemical analysis of incoming materials. Equivalent compliant materials may have been substituted for those stated herein. Material concentrations are the maximum expected concentration of the substance in the device and may not represent the actual concentration. National and its suppliers consider certain limited information to be confidential and thus CAS numbers and other limited information may not be available for release. National's Standard Terms and Conditions of Sale apply to any issue arising out of or in connection with the information provided herein unless otherwise provided by a written contract signed by both parties.

NATIONAL ACCEPTS NO DUTY TO NOTIFY USERS OF THIS DECLARATION OF UPDATES OR CHANGES TO THIS DECLARATION

RoHS Declaration *	2 - Item(s) contains RoHS restricted substances per the definition above and is not under exemption	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 and above and choose all applicable exemptions.

Declaration Signature

Supplier Signature	 John L. Conn Vice President Quality	John L. Conn Vice President Quality
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Homogeneous Material Composition Declaration for Electronic Products

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance	PPM
	Chip	8.290	mg	Requester		Si	7440-21-3		8.240	mg		994,000
				Requester		Al	7429-90-5		0.050	mg		6,000
	Ext. LeadFinish	5.660	mg	Requester		Sn	7440-31-5		4.811	mg		850,000
				Requester		Pb	7439-92-1		0.849	mg		150,000
	Leadframe	48.890	mg	Requester		Cu	7440-50-8		47.032	mg		962,000
				Requester		Ni	7440-02-0		1.467	mg		30,000
				Requester		Si	7440-21-3		0.318	mg		6,500
				Requester		Mg	7439-95-4		0.073	mg		1,500
	Plastic	120.890	mg	Requester		SiO2	60676-86-0		102.140	mg		844,900
				Requester		Epoxy Resin	25928-94-3		18.134	mg		150,000
				Requester		Sb2O3	1309-64-4		0.338	mg		2,800
				Requester		Brominated Epoxy	40039-93-8		0.278	mg		2,300
	Wires	1.550	mg	Requester		Au	7440-57-5		1.550	mg		1,000,000
	Int. LeadFinish	0.870	mg	Requester		Ag	7440-22-4		0.870	mg		1,000,000
	Die Attach	0.860	mg	Requester		Ag	7440-22-4		0.645	mg		750,000
				Requester		Epoxy Resin	25928-94-3		0.215	mg		250,000