

		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
		LP55281RL NOPB		LP55281RL NOPB		11-11-2011			10.62	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	
SnAg		Not Applicable		1		260 C		40 seconds		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 * 1 - Item(s) does not contain RoHS restricted substances per the definition above	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	6.448	mg	Requester		Si	7440-21-3		6.409	mg		994,000
				Requester		Al	7429-90-5		0.039	mg		6,000
	Bumps	2.609	mg	Requester		Sn	7440-31-5		1.641	mg		629,000
				Requester		Cu	7440-50-8		0.634	mg		243,000
				Requester		Divinylbenzene co-polymer	9003-70-7		0.274	mg		105,000
				Requester		Ag	7440-22-4		0.060	mg		23,000
				Requester		Calcium Carbonate filler	471-34-1		0.911	mg		650,000
	BacksideCoating	1.402	mg	Requester		Epoxy Resin	25928-94-3		0.491	mg		350,000
				Requester		Benzocyclobutene	694-87-1		0.138	mg		1,000,000
	Passivation	0.138	mg	Requester		Cu	7440-50-8		0.016	mg		564,000
	UnderbumpMetallization	0.028	mg	Requester		Al	7429-90-5		0.006	mg		212,000
				Requester		Ni	7440-02-0		0.006	mg		207,000
				Requester		V	7440-62-2		0.000	mg		17,000
				Requester								