



Product Content Sheet							
<b>Package family</b>	SO-8 BWL Lead-free					Picture of typical product, optional	
<b>Date</b>	June 22, 2004						
<b>Version</b>	A						
Composition part	Material group	Materials	Test report	CAS if applicable	Average mass (weight-%)*	Sum (%)	Traces (PPM)
Copper	Leadframe			7440-50-8	0.029 g	30.85	309673
Zinc	Leadframe			7440-66-6	0.000036 g	0.04	381
Phosphorous	Leadframe			7723-14-0	0.0000089 g	0.01	95
Iron	Leadframe			7439-89-6	0.00069 g	0.73	7300
Silicon	Die			7440-21-3	0.01013 g	10.77	107892
Tin	Die attach			7440-31-5	0.00144 g	1.53	15337
Lead	Die attach			7439-92-1	0.0106 g	11.27	112472
Gold	Bondwire			7440-57-5	0.00001 g	0.01	107
Chromium	Clip			7440-47-3	0.000019 g	0.02	207
Tin	Clip			7440-31-5	0.00002 g	0.02	216
Zinc	Clip			7440-66-6	0.000018 g	0.02	190
Copper	Clip			7440-50-8	0.008 g	8.51	85659
SbO2	Encapsulant			7440-36-0	0.001 g	1.506	10592
Bromide	Encapsulant			21308-80-5	0.00033 g	0.35	3531
Bromine	Encapsulant			10097-32-2	0.000001 g	0.001	7
Other	Encapsulant				0.032 g	34.04	338950
Tin	Plating			7440-31-5	0.00070 g	0.75	7,456
*)Related to package weight; weight in particular, see corresponding package weight list					<b>Sum in total</b>	100.00	
**)Slug / wire / frame / terminal can be a combination for device leads							
***)Utilized as flame retardant							

Package Weight List			Important remarks :
<b>Package Family</b>	<b>Pin Count</b>	<b>Weight(grams)</b>	
SO8	8	0.094	
	<b>Weight range:</b>	0.002	
	<b>Fluctuation margin:</b>	0.00072	
<b>Company</b>	Vishay Siliconix		
<b>Address</b>	2201 Laurelwood Dr Santa Clara, Ca 95054		
<b>E-mail</b>	Dave.macdonald@vishay.com		
<b>Intrnet</b>	www.vishay.com		

- 1) Traces are product parts, substances etc. that are below a percentage of 0.1% by weight.  
Higher limits are accepted if the substance or material is Legally regulated (see note no. 2).
- 2) Refer to ELV (end-of-life vehicles) and EU ROHS Directive at:  
<http://www.dti.gov.uk/environment/consultations/L269directive.pdf>  
<http://164.36.164.20/sustainability/pdfs/finalrohs.pdf>
- 3) Substances, materials etc. with possible harmful effects on Human beings and the environment are listed.
- 4) There are no risks for human beings and to the environment if products are properly used as designated.  
This shall not apply to risks caused during procedures for disposal etc.
- 5) All statements herein are based on our present knowledge.  
If our products are used properly, there are no risks to Human beings and/or the environment.



**TO:**

**FROM:**

**SUBJECT: Warranty for Non-Inclusion of Hazardous Substances in Products**

**DATE: June 22, 2004**

**Dear Sir/Madam,**

It is the policy of Vishay Siliconix to:

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, Distribution and operating systems with respect to their impact on the health and Safety of our employees and the public, as well as their impact on the environment.

It is of particular concern to control or eliminate the use of those substances with recognized hazardous properties.

It is the intention of Vishay Siliconix to provide products that meet the following environmental legislations:

- a) 2000/53/EC End of Vehicle Life Directive (EVL)
- b) 2000/53/EC Annex II to End of Vehicle Life (EVL II)
- c) 2002/95/EC Restriction of the use of Hazardous Substances Directive (RoHS)
- d) 2002/96/EC Waste Electrical and Electronic Equipment (WEEE)
- e) Montreal Agreement (ODS material)

We hereby warrant and guarantee that the Lead-free, customer approved version of this product (designated with an nE3 suffix) supplied by our Company complies fully with these directives and does not and will not contain any of the following substances:

- Cadmium and cadmium compounds;
- PBB (polybromobiphenyl) category and PBDE (polybrominated biphenyl ethers)category;
- Pentabromodiphenyl ether (Penta BDE) and Octabromodiphenyl ether (OctaBDE);
- Chlorinated paraffin (chlorine flame retarding materials / plasticizers);
- Polychloriated biphenyl (PCB) category;
- Polychlorinated naphthalene category;
- Organic tin compounds (Tributhyl tin category & Triphenyl tin category);
- Asbestos, and

- Azo compounds.



In making this warranty we use the following exemptions as outlined in EVL II & RoHS.

Materials and Components	Scope of Exemption	Expiration Date of Exemption	Vishay Function/Application
Solder in electronic Circuit boards and other Electric applications	Lead in high melting temperature type solders(i.e. tin-lead solder alloys containing more than 85% lead).	None announced	Internal Die Attach
Electrical components Which contain lead in a glass or ceramic matrix Compound, except glass In bulbs and glaze of Spark plugs.		None announced	Glass passivation at die level.

### Material Declaration

Material Declaration reports on individual part numbers of product families are available using any of the following internationally recognized formats.

	Application	Reference Link
1.	End-Of-Life Vehicles(ELV) EU RoHS Directive	<a href="http://www.dti.gov.uk/environment/consultations/L269directive.pdf">http://www.dti.gov.uk/environment/consultations/L269directive.pdf</a> <a href="http://164.36.164.20/sustainability/pdfs/finalrohs.pdf">http://164.36.164.20/sustainability/pdfs/finalrohs.pdf</a>
2.	International Material Data System	<a href="http://www.eia.org/resources/2003-09-19.10.pdf">http://www.eia.org/resources/2003-09-19.10.pdf</a>

### Lead Free Plating

The position of Vishay Siliconix regarding lead-free terminal plating has been published elsewhere. All products are available with a lead-free finish. Please Contact your Marketing or Customer Service Representative for details.

Sign \_\_\_\_\_

name David MacDonal  
 post and rank Technical Marketing Engineer  
 Vishay Siliconix  
 e-mail: Dave.macdonald@vishay.com