

Current Production Information							
TI Part Number		TPS73115DBVRG4		Assembly Site		Ext-Mfg	
Lead/Ball Finish		CU NIPDAU		Package Type / Pins		DBV 5	
Planned Lead/Ball Finish				Package Body Size (WxLxH) mm		1.60X2.90X1.45	
MSL / Reflow Ratings		Level-1-260C-UNLIM		Total Device Mass (mg)		16.158396	
Environmental Ratings Information							
Part Number Type		Pb-Free		JIG Material Content Compliance		Level A & B	
RoHS & High-Temp Compliant		Y		Green Compliant		Y	
Pb-Free (RoHS) Conversion Date		01-Sep-2004 (DC 0436)		Green Conversion Date		01-Sep-2004 (DC 0436)	
Pb-Free (RoHS) Available Supply Date		10-Mar-2005		Green Available Supply Date		10-Mar-2005	
Component Information							
Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
				Percentage %	ppm	Percentage %	ppm
Bond Wire							
Metallurgy	Gold	7440-57-5	0.039996	100	1000000	0.2475	2475
Trace Metal	Beryllium	7440-41-7	0	0	0	0	0
Trace Metal	Copper	7440-50-8	0	0	0	0	0
Trace Metal	Silver	7440-22-4	0	0	0	0	0
Sub-Total			0.039996	100	1000000	0.2475	2475
Die Attach Adhesive							
Conductive Material	Silver	7440-22-4	0.071	71	710000	0.4394	4394
Polymer	Epoxy		0.013	13	130000	0.0805	804
Polymer	Proprietary Resin		0.007	7	70000	0.0433	433
Reactive Diluent	Proprietary Material		0.009	9	90000	0.0557	556
Sub-Total			0.1	100	1000000	0.6189	6187
Lead Frame							
Base Metal	Copper	7440-50-8	7.703395	97.425	974250	47.6743	476742
Base Metal	Iron	7439-89-6	0.189768	2.4	24000	1.1744	11744
Base Metal	Lead	7439-92-1	0.002372	0.03	299	0.0147	146
Base Metal	Phosphorus	7723-14-0	0.001186	0.015	149	0.0073	73
Base Metal	Tin	7440-31-5	0.002372	0.03	299	0.0147	146
Base Metal	Zinc	7440-66-6	0.007907	0.1	1000	0.0489	489
Sub-Total			7.907	100	1000000	48.9343	489340
Lead Frame Plating							
Plating	Gold	7440-57-5	0.001394	1.5005	15005	0.0086	86
Plating	Nickel	7440-02-0	0.083842	90.2497	902497	0.5189	5188
Plating	Palladium	7440-05-3	0.007664	8.2497	82497	0.0474	474
Sub-Total			0.0929	100	1000000	0.5749	5748
Mold Compound							
Coloring	Carbon Black	1333-86-4	0.02229	0.3	3000	0.1379	1379
Filler	Fused Silica	60676-86-0	6.3155	85	850000	39.0849	390849
Hardener	Proprietary Hardener		0.3715	5	50000	2.2991	22991
Other additives	Catalyst Mold Release Adhesion Agent		0.20061	2.7	27000	1.2415	12415
Polymer	Biphenyl Epoxy		0.3715	5	50000	2.2991	22991
Polymer	Cresol Novolac Epoxy		0.1486	2	20000	0.9196	9196
Sub-Total			7.43	100	1000000	45.9823	459821
Semiconductor Device							
Silicon Chip	Doped Silicon	7440-21-3	0.5885	100	1000000	3.6421	36420
Sub-Total			0.5885	100	1000000	3.6421	36420
Total			16.158396			100	1000000

Important Part Information

There is a remote possibility the Customer Part Number (CPN) your company uses could reference more than one TI part number. This is due to two or more users (EMSI's or subcontractors) using the same CPN for different TI part numbers. If this occurs, please check your Customer Part Number and cross reference it with the TI part number seen on this page.

Product Content Methodology

[For an explanation of the methods used to determine material weights, See Product Content Methodology.](#)

Material Declaration Certificate for Semiconductor Products

TI certifies that the material content information provided by TI as of the date of disclosure is representative and accurate. TI semiconductor products designated by TI as "Pb-Free" or "Green" (defined below) do not exceed any of the Joint Industry Guide (JIG) Level-A Substance thresholds and are compliant with the requirements of the European Union's Restriction on Use of Hazardous Substances ("RoHS") Directive, 2002/95/EC.

For TI semiconductor products NOT designated as "Pb-Free" or "Green", these products are RoHS compliant with the exception of Lead (Pb) which may be found in the leadframe plating or solder balls, or in RoHS exempt applications such as high-temperature solder die attach (exemption 7a) and flip-chip solder bumps (exemption 15). This situation is known as RoHS-5 or "5 of 6" compliant.

JIG Level-A Banned Substances	Threshold, Homogeneous Level (1)
Asbestos	Not intentionally added
Azo colorants	Not intentionally added
RoHS - Cadmium/Cadmium Compounds	75 ppm, Not intentionally added (RoHS threshold = 100ppm)
RoHS - Hexavalent Chromium/Hex.Chromium.Compounds	1000 ppm, Not intentionally added
RoHS - Lead/Lead Compounds	1000 ppm, Not intentionally added
RoHS - Mercury/Mercury Compounds	1000 ppm, Not intentionally added
Ozone Depleting Substances	Class I : Not intentionally added Class II : 1000ppm
RoHS - Polybrominated Biphenyls (PBBs)	1000 ppm, Not intentionally added
RoHS - Polybrominated Diphenyl Ethers (PBDEs)	1000 ppm, Not intentionally added
Polychlorinated Biphenyls (PCBs)	1000 ppm, Not intentionally added
Polychlorinated Naphthalenes (> 3 Chlorine atoms)	1000 ppm, Not intentionally added
Radioactive Substances	1000 ppm, Not intentionally added
Shortchain Chlorinated Paraffins	1000 ppm, Not intentionally added
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	1000 ppm, Not intentionally added
Tributyl Tin Oxide (TBTO)	1000 ppm, Not intentionally added
(1) Threshold does not apply to applications covered by a RoHS substance exemption.	

Regarding the EU Directive 2004/12/EC concerning Packaging and Packaging Waste, TI's packing materials (boxes, trays, etc) comply with the directive's requirement that the total concentration of the 4 heavy metals (cadmium, hexavalent chromium, lead, and mercury) must not exceed 100 ppm. Material content details for TI's packing materials are available at www.ti.com/eoinfo.

TI bases its material content knowledge on information provided by third parties and has taken and continues to take commercially reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain limited information to be proprietary, and thus CAS numbers and other limited information may not be available for release. TI's standard warranty and limitation of liability provisions of TI's Standard Terms and Conditions (available at <http://www.ti.com/sc/docs/stdterms.htm>) apply to the representations herein unless otherwise provided by a written contract or other agreement signed by the parties.

Signature: [\(click here for signed certificate\)](#)

Name/Title: Cindy Allen, Vice President, Worldwide Quality

Date: September 27, 2006

Pb-Free: TI defines "Pb-Free" or "RoHS Compliant" to mean semiconductor products that are compliant with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials unless exempt. Where designed to be soldered at high temperatures, TI "Pb-Free" and "RoHS Compliant" products are suitable for use in specified lead-free processes.

Green: TI defines "Green" to mean Pb-Free/RoHS Compliant and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material).