

Current Production Information								
TI Part Number		TPA3007D1PWG4		Assembly Site		TI TAIWAN A/T		
Lead/Ball Finish		CU NIPDAU		Package Type / Pins		PW 24		
Planned Lead/Ball Finish				Package Body Size (WxLxH) mm		4.4x7.8x1.15		
MSL / Reflow Ratings		Level-2-260C-1 YEAR		Total Device Mass (mg)		92.61474200000002		
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-Apr-2005 (DC 0514)		Green Conversion Date		01-Apr-2005 (DC 0514)		
Pb-Free (RoHS) Available Supply Date		23-Sep-2005		Green Available Supply Date		23-Sep-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	0.39996	99.9922	999922	0.4319	4318	
Trace Metal	Beryllium	7440-41-7	0.000004	0.001	10	0	0	
Trace Metal	Calcium	7440-70-2	0.000005	0.0013	12	0	0	
Trace Metal	Indium	7440-74-6	0.000012	0.003	30	0	0	
Trace Metal	Silver	7440-22-4	0.00001	0.0025	25	0	0	
Sub-Total			0.399991	100	1000000	0.4319	4318	
Die Attach Adhesive								
Conductive Material	Silver	7440-22-4	0.28	70	700000	0.3023	3023	
Polymer	Epoxy		0.052	13	129999	0.0561	561	
Polymer	Proprietary Resin		0.022	5.5	54999	0.0238	237	
Reactive Diluent	Proprietary Material		0.046	11.5	115000	0.0497	496	
Sub-Total			0.4	100	1000000	0.4319	4317	
Lead Frame								
Base Metal	Copper	7440-50-8	32.580871	97.425	974249	35.1789	351789	
Base Metal	Iron	7439-89-6	0.802608	2.4	23999	0.8666	8666	
Base Metal	Lead	7439-92-1	0.010033	0.03	300	0.0108	108	
Base Metal	Phosphorus	7723-14-0	0.005016	0.015	149	0.0054	54	
Base Metal	Tin	7440-31-5	0.010033	0.03	300	0.0108	108	
Base Metal	Zinc	7440-66-6	0.033442	0.1	999	0.0361	361	
Sub-Total			33.442003	100	1000000	36.1087	361086	
Lead Frame Plating								
Plating	Gold	7440-57-5	0.000452	0.7793	7793	0.0005	4	
Plating	Nickel	7440-02-0	0.05517	95.1207	951206	0.0596	595	
Plating	Palladium	7440-05-3	0.002378	4.1	41000	0.0026	25	
Sub-Total			0.058	100	1000000	0.0626	624	
Mold Compound								
Coloring	Carbon Black	1333-86-4	0.159344	0.3	2999	0.1721	1720	
Filler	Fused Silica	60676-86-0	46.209832	87	870000	49.8947	498946	
Flame Retardant Additive	Metal Hydroxide		0.531147	1	9999	0.5735	5735	
Hardener	Proprietary Hardener		2.655737	5	49999	2.8675	28675	
Other additives	Catalyst Mold Release Adhesion Agent		0.902951	1.7	17000	0.975	9749	
Polymer	Biphenyl Epoxy		1.062295	2	20000	1.147	11470	
Polymer	Proprietary Epoxy		1.593442	3	29999	1.7205	17205	
Sub-Total			53.114748	100	1000000	57.3502	573500	
Semiconductor Device								
Silicon Chip	Doped Silicon	7440-21-3	5.2	100	1000000	5.6147	56146	
Sub-Total			5.2	100	1000000	5.6147	56146	
Total			92.614742			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 (EMSIs 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, SeeProduct 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/ecoinfo.

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).