

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)
 Contact Info: ti.com/support
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB
 Created on: 06/04/2022

Details for "OPA188AIDBVT"

Current Product Information

TI part number	Lead finish/Ball material	MSL rating/peak reflow	Assembly site	Package Pins	Package body size (mm)	Total device mass (mg)*
OPA188AIDBVT	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DBV 5	2.9x1.6x1.45	24.6

*Total Device Mass
 The summary mass is a rounded value and will be within approximately +/- 10% of the detailed mass value.

Environmental Ratings Information

RoHS	REACH	Green	IEC 62474 DB
Yes	Yes	Yes	Yes

Component Information

Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
				Percentage %	ppm	Percentage %	ppm
Bond Wire							
Not Categorized	Proprietary Materials		0.000001	0.00476	48	0.000004	0
Precious Metals	Gold	7440-57-5	0.021006	99.99524	999952	0.085369	854
Sub-Total			0.021007	100	1000000	0.085373	854
Die Attach Adhesive							
Other Inorganic Materials	Aluminum Oxide	1344-28-1	0.039148	29.999847	299998	0.159098	1591
Other Inorganic Materials	Silica	7631-86-9	0.005872	4.499824	44998	0.023864	239
Other Organic Materials	Chlorine	7782-50-5	0.000046	0.035251	353	0.000187	2
Thermoplastics	Epoxy	85954-11-6	0.085428	65.465079	654651	0.347181	3472
Sub-Total			0.130494	100	1000000	0.530331	5303
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	10.955816	97.04	970400	44.524688	445247
Copper and Its Alloys	Iron	7439-89-6	0.29354	2.6	26000	1.192953	11930
Copper and Its Alloys	Phosphorus	7723-14-0	0.016935	0.15	1500	0.068824	688
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.001129	0.01	100	0.004588	46
Zinc and Its Alloys	Zinc	7440-66-6	0.02258	0.2	2000	0.091766	918
Sub-Total			11.29	100	1000000	45.88282	458828
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	1.227048	95.12	951200	4.986751	49868
Precious Metals	Gold	7440-57-5	0.010062	0.78	7800	0.040892	409
Precious Metals	Palladium	7440-05-3	0.05289	4.1	41000	0.214946	2149
Sub-Total			1.29	100	1000000	5.24259	52426
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	9.375086	85	850000	38.10065	381006
Other Plastics and Rubber	Carbon Black	1333-86-4	0.033089	0.300004	3000	0.134474	1345
Thermoplastics	Epoxy	85954-11-6	1.621338	14.699996	147000	6.589155	65892
Sub-Total			11.029513	100	1000000	44.824194	448242
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.845146	100	1000000	3.434693	34347
Sub-Total			0.845146	100	1000000	3.434693	34347
Total			24.60616			100	1000000

Important Note
 The ppm calculations are at the **homogeneous material** level and are maximum concentration values. The ppm displayed represents the **homogeneous material** with the highest ppm for that substance. The amount (mg) calculations represent the maximum total amount of each substance within the component.
 The ppm calculations are at the **component** level and are average concentration values. The amount (mg) calculations represent the average total amount of each substance within the **component**.
[See Glossary of Terms for more details.](#)

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 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 IC Packaged Products

TI certifies that the material content information provided by TI is representative and accurate to the best of their knowledge based on material information provided by its suppliers and their combination into finished IC packaged products. TI semiconductor products designated to be "Pb-free", "Green" or "RoHS Exempt" fully meets the latest EU RoHS Directive requirements along with other legislation as seen in the former JIG-101 list that has been transferred to the IEC 62474 database.

Important Information/Disclaimer
 TI bases its material content information on information provided by third-party suppliers and has taken, and continues to take, reasonably diligent steps to provide any required or available information. TI may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers may consider certain information to be proprietary, and thus certain information may not be available for release by TI. The material content information is provided by TI "as is."
[For additional information, please contact TI customer support.](#)

Signature: [\(click here for a fuller statement with a signed certificate\)](#)

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 For further environmental statements, please go to www.ti.com/ecoinfo
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RoHS: Means TI semiconductor products that are compliant with the current RoHS requirement that the maximum concentration values of the ten substances listed in RoHS Annex II do not exceed 0.1 % by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI semiconductor products labeled as "RoHS Compliant" are suitable for use in specified lead-free processes. TI may also reference these types of semiconductor products as "Pb-Free." These TI semiconductor products are also fully compliant with GADSL and the IEC 62474 database for electronic requirements.

RoHS Exempt: Means TI semiconductor products that contain lead (Pb) above the RoHS Annex II threshold, but that fall within one of the specific RoHS exemptions noted above or documented in <http://www.ti.com/lit/pdf/szzq088>

Green: Means the content of Chlorine (Cl) and Bromine (Br)-based flame retardants meet JS709B low halogen requirements of <=1 000ppm threshold; Antimony trioxide (Sb2O3) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.