

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: 06/05/2022

Details for "OPA659IDBVR"

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)*
OPA659IDBVR	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DBV 5	2.9x1.6x1.45	20.2

*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							
Precious Metals	Gold	7440-57-5	0.026744	100	1000000	0.132431	1324
Sub-Total			0.026744	100	1000000	0.132431	1324
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.140373	76.99983	769998	0.695098	6951
Thermoplastics	Epoxy	85954-11-6	0.04193	23.00017	230002	0.207629	2076
Sub-Total			0.182303	100	1000000	0.902727	9027
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	7.80776	97.597	975970	38.662414	386624
Copper and Its Alloys	Iron	7439-89-6	0.1784	2.23	22300	0.8834	8834
Copper and Its Alloys	Phosphorus	7723-14-0	0.0028	0.035	350	0.013865	139
Zinc and Its Alloys	Zinc	7440-66-6	0.01104	0.138	1380	0.054668	547
Sub-Total			8	100	1000000	39.614346	396143
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.085608	95.12	951200	0.423913	4239
Precious Metals	Gold	7440-57-5	0.000702	0.78	7800	0.003476	35
Precious Metals	Palladium	7440-05-3	0.00369	4.1	41000	0.018272	183
Sub-Total			0.09	100	1000000	0.445661	4457
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	9.920734	87.000004	870000	49.125424	491254
Other Plastics and Rubber	Carbon Black	1333-86-4	0.011403	0.099999	1000	0.056465	565
Thermoplastics	Epoxy	85954-11-6	1.471005	12.899997	129000	7.284113	72841
Sub-Total			11.403142	100	1000000	56.466002	564660
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.492515	100	1000000	2.438832	24388
Sub-Total			0.492515	100	1000000	2.438832	24388
Total			20.194704			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: [\(click here for a fuller statement with a signed certificate\)](#)

Name/Title: Hubie Payne, Vice President, Worldwide SC Quality
 For further environmental statements, please go to www.ti.com/eoinfo
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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 J5709B 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.