

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: 08/25/2022

Details for "OPA633KP"

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)*
OPA633KP	NIPDAU	Level-NC-NC-NC	Ext-Mfg	P 8	9.8x6.4x3.9	609.6

*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							
Precious Metals	Gold	7440-57-5	0.101621	99.999016	999990	0.016669	167
Precious Metals	Silver	7440-22-4	0.000001	0.000984	10	0	0
Sub-Total			0.101622	100	1000000	0.01667	167
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.316478	74.999941	749999	0.051913	519
Thermoplastics	Epoxy	85954-11-6	0.105493	25.000059	250001	0.017305	173
Sub-Total			0.421971	100	1000000	0.069218	692
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	157.613244	97.4425	974425	25.854062	258541
Copper and Its Alloys	Iron	7439-89-6	3.801125	2.35	23500	0.623517	6235
Copper and Its Alloys	Phosphorus	7723-14-0	0.133444	0.0825	825	0.021889	219
Zinc and Its Alloys	Zinc	7440-66-6	0.202188	0.125	1250	0.033166	332
Sub-Total			161.750001	100	1000000	26.532635	265326
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.28536	95.12	951200	0.046809	468
Precious Metals	Gold	7440-57-5	0.00234	0.78	7800	0.000384	4
Precious Metals	Palladium	7440-05-3	0.0123	4.1	41000	0.002018	20
Sub-Total			0.3	100	1000000	0.04921	492
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	383.099472	86	860000	62.841658	628417
Other Plastics and Rubber	Carbon Black	1333-86-4	2.227323	0.5	5000	0.365359	3654
Thermoplastics	Epoxy	85954-11-6	60.137708	13.5	135000	9.864679	98647
Sub-Total			445.464503	100	1000000	73.071696	730717
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	1.588514	100	1000000	0.260572	2606
Sub-Total			1.588514	100	1000000	0.260572	2606
Total			609.626611			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'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 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 J57098 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.