

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)  
 Contact Info: [ti.com/support](http://ti.com/support)  
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB  
 Created on: 08/25/2022

**Details for "OPA2241UA/2K5G4"**

**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)*
OPA2241UA/2K5G4	NIPDAU	Level-3-260C-168 HR	TI MALAYSIA A/T	D   8	3.91x4.9x1.58	87.6

\*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
<b>Bond Wire</b>							
Precious Metals	Gold	7440-57-5	0.105898	99.376889	993769	0.120882	1209
Precious Metals	Palladium	7440-05-3	0.000663	0.622173	6222	0.000757	8
Precious Metals	Silver	7440-22-4	0.000001	0.000938	9	0.000001	0
Sub-Total			0.106562	100	1000000	0.12164	1216
<b>Die Attach Adhesive</b>							
Other Inorganic Materials	Silica	7631-86-9	0.028007	1.999989	20000	0.03197	320
Precious Metals	Silver	7440-22-4	0.966247	68.999999	690000	1.102965	11030
Thermoplastics	Epoxy	85954-11-6	0.406104	29.000013	290000	0.463565	4636
Sub-Total			1.400358	100	1000000	1.5985	15985
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	24.8676	97.52	975200	28.386205	283862
Copper and Its Alloys	Iron	7439-89-6	0.5865	2.3	23000	0.669486	6695
Copper and Its Alloys	Phosphorus	7723-14-0	0.00765	0.03	300	0.008732	87
Zinc and Its Alloys	Zinc	7440-66-6	0.03825	0.15	1500	0.043662	437
Sub-Total			25.5	100	1000000	29.108085	291081
<b>Lead Frame Plating</b>							
Nickel and Its Alloys	Nickel	7440-02-0	0.09512	95.12	951200	0.108579	1086
Precious Metals	Gold	7440-57-5	0.00078	0.78	7800	0.00089	9
Precious Metals	Palladium	7440-05-3	0.0041	4.1	41000	0.00468	47
Sub-Total			0.1	100	1000000	0.114149	1141
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	48.086412	86.000001	860000	54.890328	548903
Other Plastics and Rubber	Carbon Black	1333-86-4	0.167743	0.299999	3000	0.191478	1915
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.307529	0.549999	5500	0.351042	3510
Thermoplastics	Epoxy	85954-11-6	7.352748	13.15	131500	8.393114	83931
Sub-Total			55.914432	100	1000000	63.825963	638260
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	4.583174	100	1000000	5.231663	52317
Sub-Total			4.583174	100	1000000	5.231663	52317
<b>Total</b>			87.604526			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**  
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[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](http://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.