

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: 06/04/2022

Details for "OPA2652U/2K5"

**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)*
OPA2652U/2K5	NIPDAU	Level-2-260C-1 YEAR	TI MALAYSIA A/T	D   8	3.91x4.9x1.58	101.3

\*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>							
Other Nonferrous Metals and Alloys	Yttrium	7440-65-5	0.000001	0.000762	8	0.000001	0
Precious Metals	Gold	7440-57-5	0.131267	99.998476	999985	0.12963	1296
Precious Metals	Silver	7440-22-4	0.000001	0.000762	8	0.000001	0
Sub-Total			0.131269	100	1000000	0.129632	1296
<b>Die Attach Adhesive</b>							
Other inorganic Materials	Silica	7631-86-9	0.002504	2	20000	0.002473	25
Precious Metals	Silver	7440-22-4	0.086388	69	690000	0.08531	853
Thermoplastics	Epoxy	85954-11-6	0.036308	29	290000	0.035855	359
Sub-Total			0.1252	100	1000000	0.123638	1236
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	37.624655	97.701	977010	37.15534	371553
Copper and Its Alloys	Iron	7439-89-6	0.824114	2.14	21400	0.813834	8138
Copper and Its Alloys	Phosphorus	7723-14-0	0.012708	0.032999	330	0.012549	125
Zinc and Its Alloys	Zinc	7440-66-6	0.048523	0.126001	1260	0.047918	479
Sub-Total			38.51	100	1000000	38.029642	380296
<b>Lead Frame Plating</b>							
Nickel and Its Alloys	Nickel	7440-02-0	1.864352	95.12	951200	1.841097	18411
Precious Metals	Gold	7440-57-5	0.015288	0.78	7800	0.015097	151
Precious Metals	Palladium	7440-05-3	0.08036	4.1	41000	0.079358	794
Sub-Total			1.96	100	1000000	1.935552	19356
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	51.709121	86	860000	51.064122	510641
Other Plastics and Rubber	Carbon Black	1333-86-4	0.180381	0.300001	3000	0.178131	1781
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.330698	0.55	5500	0.326573	3266
Thermoplastics	Epoxy	85954-11-6	7.906685	13.149999	131500	7.80806	78081
Sub-Total			60.126885	100	1000000	59.376886	593769
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	0.409762	100	1000000	0.404651	4047
Sub-Total			0.409762	100	1000000	0.404651	4047
<b>Total</b>			101.263116			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](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.