

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 "OPA322AQDBVRQ1"**

**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)*
OPA322AQDBVRQ1	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DBV   5	2.9x1.6x1.45	18.4

\*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	0.043073	100	1000000	0.234395	2344
Sub-Total			0.043073	100	1000000	0.234395	2344
<b>Die Attach Adhesive</b>							
Precious Metals	Silver	7440-22-4	0.182565	80.000088	800001	0.993485	9935
Thermoplastics	Epoxy	85954-11-6	0.045641	19.999912	199999	0.24837	2484
Sub-Total			0.228206	100	1000000	1.241855	12419
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	6.290748	97.38	973800	34.233098	342331
Copper and Its Alloys	Iron	7439-89-6	0.153748	2.38	23800	0.836668	8367
Copper and Its Alloys	Phosphorus	7723-14-0	0.005426	0.083994	840	0.029527	295
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.001938	0.03	300	0.010546	105
Zinc and Its Alloys	Zinc	7440-66-6	0.00814	0.126006	1260	0.044296	443
Sub-Total			6.46	100	1000000	35.154136	351541
<b>Lead Frame Plating</b>							
Nickel and Its Alloys	Nickel	7440-02-0	0.110339	95.119828	951198	0.600445	6004
Precious Metals	Gold	7440-57-5	0.000905	0.780172	7802	0.004925	49
Precious Metals	Palladium	7440-05-3	0.004756	4.1	41000	0.025881	259
Sub-Total			0.116	100	1000000	0.631251	6313
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	9.489018	85.999999	860000	51.637497	516375
Other Plastics and Rubber	Carbon Black	1333-86-4	0.055169	0.500003	5000	0.30022	3002
Thermoplastics	Epoxy	85954-11-6	1.489555	13.499998	135000	8.105885	81059
Sub-Total			11.033742	100	1000000	60.043602	600436
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	0.495195	100	1000000	2.69476	26948
Sub-Total			0.495195	100	1000000	2.69476	26948
<b>Total</b>			18.376216			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/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/szq088>

**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.