

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: **06/04/2022**

Details for "OPA2333PIDSGR"

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)*
OPA2333PIDSGR	NIPDAU	Level-2-260C-1 YEAR	TI Semiconductor	DSG 8	2x2x0.75	11.7

***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							
Copper and Its Alloys	Copper	7440-50-8	0.014316	97.533724	975337	0.122126	1221
Not Categorized	Proprietary Materials		0.000002	0.013626	136	0.000017	0
Precious Metals	Gold	7440-57-5	0.000008	0.054503	545	0.000068	1
Precious Metals	Palladium	7440-05-3	0.000352	2.398147	23981	0.003003	30
Sub-Total			0.014678	100	1000000	0.125214	1252
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.1296	80	800000	1.105584	11056
Thermoplastics	Epoxy	85954-11-6	0.0324	20	200000	0.276396	2764
Sub-Total			0.162	100	1000000	1.38198	13820
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	6.8264	97.52	975200	58.234246	582342
Copper and Its Alloys	Iron	7439-89-6	0.161	2.3	23000	1.373449	13734
Copper and Its Alloys	Phosphorus	7723-14-0	0.0021	0.03	300	0.017915	179
Zinc and Its Alloys	Zinc	7440-66-6	0.0105	0.15	1500	0.089573	896
Sub-Total			7	100	1000000	59.715182	597152
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.19024	95.12	951200	1.622888	16229
Precious Metals	Gold	7440-57-5	0.00156	0.78	7800	0.013308	133
Precious Metals	Palladium	7440-05-3	0.0082	4.1	41000	0.069952	700
Sub-Total			0.2	100	1000000	1.706148	17061
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	3.508736	87.999978	880000	29.932116	299321
Other Organic Materials	Chlorine	7782-50-5	0.00004	0.001003	10	0.000341	3
Other Plastics and Rubber	Carbon Black	1333-86-4	0.011962	0.30001	3000	0.102045	1020
Thermoplastics	Epoxy	85954-11-6	0.466463	11.699009	116990	3.979275	39793
Sub-Total			3.987201	100	1000000	34.013776	340138
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.358433	100	1000000	3.057699	30577
Sub-Total			0.358433	100	1000000	3.057699	30577
Total			11.722312			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
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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.