

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: 06/05/2022

Details for "OPA683ID"

**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)*
OPA683ID	NIPDAU	Level-2-260C-1 YEAR	TI MALAYSIA A/T	D   8	3.91x4.9x1.58	84

\*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	0.000862	9	0.000001	0
Precious Metals	Gold	7440-57-5	0.116054	99.998277	999983	0.138141	1381
Precious Metals	Silver	7440-22-4	0.000001	0.000862	9	0.000001	0
Sub-Total			0.116056	100	1000000	0.138143	1381
<b>Die Attach Adhesive</b>							
Other inorganic Materials	Silica	7631-86-9	0.001943	2.000474	20005	0.002313	23
Precious Metals	Silver	7440-22-4	0.067017	68.999351	689994	0.079771	798
Thermoplastics	Epoxy	85954-11-6	0.028167	29.000175	290002	0.033528	335
Sub-Total			0.097127	100	1000000	0.115612	1156
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	24.25509	97.41	974100	28.871251	288713
Copper and Its Alloys	Iron	7439-89-6	0.5976	2.4	24000	0.711334	7113
Copper and Its Alloys	Phosphorus	7723-14-0	0.00747	0.03	300	0.008892	89
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.00747	0.03	300	0.008892	89
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.00747	0.03	300	0.008892	89
Zinc and Its Alloys	Zinc	7440-66-6	0.0249	0.1	1000	0.029639	296
Sub-Total			24.9	100	1000000	29.638899	296389
<b>Lead Frame Plating</b>							
Nickel and Its Alloys	Nickel	7440-02-0	0.355273	95.119946	951199	0.422888	4229
Precious Metals	Gold	7440-57-5	0.002913	0.77992	7799	0.003467	35
Precious Metals	Palladium	7440-05-3	0.015314	4.100134	41001	0.018229	182
Sub-Total			0.3735	100	1000000	0.444583	4446
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	50.057723	85.999999	860000	59.584569	595846
Other Plastics and Rubber	Carbon Black	1333-86-4	0.17462	0.3	3000	0.207853	2079
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.320137	0.550001	5500	0.381065	3811
Thermoplastics	Epoxy	85954-11-6	7.654175	13.15	131500	9.110896	91109
Sub-Total			58.206655	100	1000000	69.284383	692844
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	0.317881	100	1000000	0.378379	3784
Sub-Total			0.317881	100	1000000	0.378379	3784
<b>Total</b>			84.011219			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: \(click here for a fuller statement with a signed certificate\)](#)

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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.