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: **06/05/2022**

Details for "OPA653IDRBT"

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)*
OPA653IDRBT	NIPDAU	Level-2-260C-1 YEAR	TI MALAYSIA A/T	DRB | 8	3.0x3.0x0.9	21.7

***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

				Homogeneous Material Level		Component Level	
Component	**Substance**	**CAS Number**	**Amount (mg)**	**Percentage %**	**ppm**	**Percentage %**	**ppm**
Bond Wire							
Other Nonferrous Metals and Alloys	Indium	7440-74-6	0.000001	0.002333	23	0.000005	0
Precious Metals	Gold	7440-57-5	0.04287	99.995335	999953	0.197476	1975
Precious Metals	Silver	7440-22-4	0.000001	0.002333	23	0.000005	0
Sub-Total			**0.042872**	**100**	**1000000**	**0.197486**	**1975**
Die Attach Adhesive							
Other Inorganic Materials	Silica	7631-86-9	0.003959	2.000212	20002	0.018237	182
Precious Metals	Silver	7440-22-4	0.136571	68.999995	690000	0.629101	6291
Thermoplastics	Epoxy	85954-11-6	0.057399	28.999793	289998	0.264403	2644
Sub-Total			**0.197929**	**100**	**1000000**	**0.91174**	**9117**
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	8.425333	99.249994	992500	38.810452	388105
Other Nonferrous Metals and Alloys	Chromium	7440-47-3	0.022071	0.259995	2600	0.101668	1017
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.021223	0.250006	2500	0.097762	978
Zinc and Its Alloys	Zinc	7440-66-6	0.020374	0.240005	2400	0.093851	939
Sub-Total			**8.489001**	**100**	**1000000**	**39.103732**	**391037**
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.145534	95.120261	951203	0.670388	6704
Precious Metals	Gold	7440-57-5	0.001193	0.779739	7797	0.005495	55
Precious Metals	Palladium	7440-05-3	0.006273	4.1	41000	0.028896	289
Sub-Total			**0.153**	**100**	**1000000**	**0.704779**	**7048**
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	11.021393	90.499999	905000	50.768942	507689
Other Plastics and Rubber	Carbon Black	1333-86-4	0.060892	0.500003	5000	0.280493	2805
Thermoplastics	Epoxy	85954-11-6	1.09605	8.999999	90000	5.048844	50488
Sub-Total			**12.178335**	**100**	**1000000**	**56.098279**	**560983**
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.647791	100	1000000	2.983984	29840
Sub-Total			**0.647791**	**100**	**1000000**	**2.983984**	**29840**
Total			21.708928			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 (EMSIs 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.

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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
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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 (Sb203) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.