

Troubleshooting Tips: RoHS and product content

TI Quality

Troubleshooting tips: RoHS and product content

Looking to save time and find the precise reliability related information you need regarding RoHS?

☛ *RoHS information and product content can be found at TI.com*

Information on all the products and different package types available at Texas Instruments can be found at [ti.com](https://www.ti.com).

Troubleshooting tips: RoHS and product content

Defining RoHS

RoHS(Restriction on Use of Hazardous Substances) in Electrical and Electronic Equipment is defined by European Union, and is set to restrict specific substances at the homogenous level with maximum thresholds.

Specific detail on RoHS, along with the environmental ratings and component Information can be found on TI.com.

Troubleshooting tips: RoHS and product content

Access

- Open [TI.com](https://www.ti.com)
- Click the “Material content search” under the “Quality & reliability” tab

The screenshot shows the Texas Instruments website header and navigation menu. The header includes the TI logo, the text 'TEXAS INSTRUMENTS', a search bar, and links for 'Login / Register', 'English', 'Ship to', and 'USD'. The navigation menu is a red bar with white text, containing 'Products', 'Applications', 'Design resources', 'Quality & reliability', 'Support & training', 'Order now', and 'About TI'. The 'Quality & reliability' tab is highlighted with a blue box. Below the navigation bar, a dropdown menu is visible, listing various categories: 'Policies & procedures >', 'Environmental information >', 'Reliability >', 'Certifications & standards >', and 'Additional information >'. The 'Material content search' link is highlighted with a blue box within the 'Environmental information >' category.

TEXAS INSTRUMENTS

Search

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My History

Policies & procedures >

General quality guidelines

Quality system manual

Product life cycle

Product change notification

Anti-counterfeit

Environmental information >

Material content search

Packing material information

Lead-free (Pb-free)

Reliability >

Qualification summary

Reliability terminology

Reliability testing

MTBF/FIT estimator

Reliability calculators

Ongoing reliability monitoring

Certifications & standards >

Certifications

Industry standards

Functional safety

Additional information >

Moisture sensitivity level search

Quality FAQs

Failure analysis

Customer returns

Part marking lookup

Troubleshooting tips: RoHS and product content

Access

- Input the TI part number.
- Use TI product “OPA192IDBVR” as example.

Quality & reliability

Quality policies & procedures

General quality guidelines

Quality system manual

Product life cycle

Product change notification

Anti-counterfeit

Environmental information

Material content search

Packing material information

Lead-free (Pb-free)

Material content search

Quickly locate product RoHS, REACH, and Green status and material content details. Results can be downloaded to an excel file that includes a direct link to TI's signed EU RoHS Material Declaration Certificate.

Part type

TI Part Number Customer part number

Part number

Search

Part type

TI Part Number Customer part number

Part number


OPA192IDBVR

Search

Troubleshooting tips: RoHS and product content Access

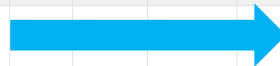
A data table will display the RoHS information for this product.

Click the TI part number to see more detailed information.

 Download spreadsheet

Search part number	TI part number	RoHS	REACH	Green status	IEC 62474 DB
OPA192IDBVR	OPA192IDBVR				

Click



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)
OPA192IDBVR	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DBV 5	2.9x1.6x1.45	24.600000

***Total device mass (mg)**
The summary mass is a rounded value and will be within approximately +/- 10% of the detailed mass value.

Environmental Ratings Information

RoHS	REACH	Green status	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							
Not Categorized	Proprietary Materials		0.000001	0.003987	40	0.000004	0
Other Nonferrous Metals and Alloys	Calcium	7440-70-2	0.000001	0.003987	40	0.000004	0
Precious Metals	Gold	7440-57-5	0.025078	99.992026	999920	0.101901	1019
Sub-Total			0.025080	100	1000000	0.101909	1019

***Part number**
No material contents are available for this part.

****Pb-Free or Green Alternative BGA Parts**
A Pb-Free or Green version of this BGA device may be available under a new part number. Package codes Gxx, YEx (where x can be G, Y, Z) are used during the conversion to Pb-Free and Green. The new codes are Zxx, YZx, or Cxx version which is 100% RoHS compliant (the Zxx version of a flip-chip BGA device). To learn more, contact your TI sales rep.

*****Mass (mg)**
The summary mass is a rounded value and will be within approximately +/- 10% of the detailed mass value.

Important Part Information
There is a remote possibility the Customer Part Number (CPN) your company uses is not unique. This is due to two or more users (EMSI's or subcontractors) using the same CPN. If this occurs, please check your Customer Part Number and cross reference it with the TI part number.

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Access

Data can be downloaded in the following formats:

- PDF
- XML
- IEC 62474 composition decl.
- IEC 62474 decl. for compliance
- IPC 1752 v1.1 class 4
- IPC 1752 v1.1 class 6
- IPC 1752A class C
- IPC 1752A class D

Material content search

Details for "OPA192IDBVR" ACTIVE

Choose a download method for component information:

[Download spreadsheet](#) Or [Download specs in XML Format](#) [Go](#)

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) *
OPA192IDBVR	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DBV 5	2.9x1.6x1.45	24.600000

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Precious Metals	Gold	7440-57-5	0.025078	99.992026	999920	0.101901	1019
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More information on ti.com

Quality & Reliability:

Quality Facts and Questions:

[TI.com/support-quality/faq.html](http://ti.com/support-quality/faq.html)

Packaging information:

[TI.com/support-packaging/packaging-information.html](http://ti.com/support-packaging/packaging-information.html)

Troubleshooting series:

- Board Level(A-B-A swap), Device level Troubleshooting
- General quality guiding

[TI.com/troubleshooting](http://ti.com/troubleshooting)

Customer returns information:

[TI.com/support-quality/additional-information/customer-returns.html](http://ti.com/support-quality/additional-information/customer-returns.html)

Application:

E2E support system:

e2e.ti.com/

Simulation tools:

TINA-TI

Free download of Handbook and software:

[TI.com/tool/tina-ti](http://ti.com/tool/tina-ti)

PSPICE-FOR-TI (**New Release**)

Free download of Handbook and software:

[TI.com/tool/PSPICE-FOR-TI](http://ti.com/tool/PSPICE-FOR-TI)