



10-Dec-2020

## **PACKAGING INFORMATION**

| Orderable Device | Status | Package Type | Package<br>Drawing | Pins | Package<br>Qty | Eco Plan     | Lead finish/<br>Ball material | MSL Peak Temp       | Op Temp (°C) | Device Marking<br>(4/5) | Samples |
|------------------|--------|--------------|--------------------|------|----------------|--------------|-------------------------------|---------------------|--------------|-------------------------|---------|
| OPA192ID         | ACTIVE | SOIC         | D                  | 8    | 75             | RoHS & Green | (6)<br>NIPDAU                 | Level-2-260C-1 YEAR | -40 to 125   | OPA192                  | Samples |
| OPA192IDBVR      | ACTIVE | SOT-23       | DBV                | 5    | 3000           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OUYS                    | Samples |
| OPA192IDBVT      | ACTIVE | SOT-23       | DBV                | 5    | 250            | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OUYS                    | Samples |
| OPA192IDGKR      | ACTIVE | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OUXS                    | Samples |
| OPA192IDGKT      | ACTIVE | VSSOP        | DGK                | 8    | 250            | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OUXS                    | Samples |
| OPA192IDR        | ACTIVE | SOIC         | D                  | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OPA192                  | Samples |
| OPA2192ID        | ACTIVE | SOIC         | D                  | 8    | 75             | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2192                    | Samples |
| OPA2192IDGKR     | ACTIVE | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OVLM                    | Samples |
| OPA2192IDGKT     | ACTIVE | VSSOP        | DGK                | 8    | 250            | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | OVLM                    | Samples |
| OPA2192IDR       | ACTIVE | SOIC         | D                  | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2192                    | Samples |
| OPA4192ID        | ACTIVE | SOIC         | D                  | 14   | 50             | RoHS & Green | NIPDAU                        | Level-3-260C-168 HR | -40 to 125   | OPA4192                 | Samples |
| OPA4192IDR       | ACTIVE | SOIC         | D                  | 14   | 2500           | RoHS & Green | NIPDAU                        | Level-3-260C-168 HR | -40 to 125   | OPA4192                 | Samples |
| OPA4192IPW       | ACTIVE | TSSOP        | PW                 | 14   | 90             | RoHS & Green | SN                            | Level-3-260C-168 HR | -40 to 125   | OPA4192                 | Samples |
| OPA4192IPWR      | ACTIVE | TSSOP        | PW                 | 14   | 2000           | RoHS & Green | SN                            | Level-3-260C-168 HR | -40 to 125   | OPA4192                 | Samples |

<sup>(1)</sup> The marketing status values are defined as follows:

**ACTIVE:** Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

**PREVIEW:** Device has been announced but is not in production. Samples may or may not be available.

**OBSOLETE:** TI has discontinued the production of the device.

<sup>(2)</sup> RoHS: TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".



## PACKAGE OPTION ADDENDUM

10-Dec-2020

RoHS Exempt: TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.

Green: TI defines "Green" to mean the content of Chlorine (CI) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of <=1000ppm threshold. Antimony trioxide based flame retardants must also meet the <=1000ppm threshold requirement.

- (3) MSL, Peak Temp. The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.
- (4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.
- (5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.
- (6) Lead finish/Ball material Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

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## OTHER QUALIFIED VERSIONS OF OPA192, OPA2192:

Automotive: OPA192-Q1, OPA2192-Q1

NOTE: Qualified Version Definitions:

• Automotive - Q100 devices qualified for high-reliability automotive applications targeting zero defects