



20-Aug-2024 www.ti.com

## **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 (4/5) | Samples |
|------------------|----------|--------------|--------------------|------|----------------|--------------|-------------------------------|---------------------|--------------|----------------------|---------|
| INA2290A1IDGKR   | ACTIVE   | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FAQ                 | Samples |
| INA2290A1IDGKT   | ACTIVE   | VSSOP        | DGK                | 8    | 250            | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FAQ                 | Samples |
| INA2290A2IDGKR   | ACTIVE   | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FBQ                 | Samples |
| INA2290A2IDGKT   | ACTIVE   | VSSOP        | DGK                | 8    | 250            | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FBQ                 | Samples |
| INA2290A3IDGKR   | ACTIVE   | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FCQ                 | Samples |
| INA2290A3IDGKT   | OBSOLETE | VSSOP        | DGK                | 8    |                | TBD          | Call TI                       | Call TI             | -40 to 125   | 2FCQ                 |         |
| INA2290A4IDGKR   | ACTIVE   | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FDQ                 | Samples |
| INA2290A4IDGKT   | OBSOLETE | VSSOP        | DGK                | 8    |                | TBD          | Call TI                       | Call TI             | -40 to 125   | 2FDQ                 |         |
| INA2290A5IDGKR   | ACTIVE   | VSSOP        | DGK                | 8    | 2500           | RoHS & Green | NIPDAU                        | Level-2-260C-1 YEAR | -40 to 125   | 2FEQ                 | Samples |
| INA2290A5IDGKT   | OBSOLETE | VSSOP        | DGK                | 8    |                | TBD          | Call TI                       | Call TI             | -40 to 125   | 2FEQ                 |         |
| INA290A1IDCKR    | ACTIVE   | SC70         | DCK                | 5    | 3000           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FQ                  | Samples |
| INA290A1IDCKT    | OBSOLETE | SC70         | DCK                | 5    |                | TBD          | Call TI                       | Call TI             | -40 to 125   | 1FQ                  |         |
| INA290A2IDCKR    | ACTIVE   | SC70         | DCK                | 5    | 3000           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FR                  | Samples |
| INA290A2IDCKT    | ACTIVE   | SC70         | DCK                | 5    | 250            | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FR                  | Samples |
| INA290A3IDCKR    | ACTIVE   | SC70         | DCK                | 5    | 3000           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FS                  | Samples |
| INA290A3IDCKT    | ACTIVE   | SC70         | DCK                | 5    | 250            | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FS                  | Samples |
| INA290A4IDCKR    | ACTIVE   | SC70         | DCK                | 5    | 3000           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FT                  | Samples |
| INA290A4IDCKT    | OBSOLETE | SC70         | DCK                | 5    |                | TBD          | Call TI                       | Call TI             | -40 to 125   | 1FT                  |         |
| INA290A5IDCKR    | ACTIVE   | SC70         | DCK                | 5    | 3000           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | 1FU                  | Samples |
| INA290A5IDCKT    | OBSOLETE | SC70         | DCK                | 5    |                | TBD          | Call TI                       | Call TI             | -40 to 125   | 1FU                  |         |
| INA4290A1IRGVR   | ACTIVE   | VQFN         | RGV                | 16   | 2500           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM  | -40 to 125   | INA<br>4290A1        | Samples |
| INA4290A1IRGVT   | OBSOLETE | VQFN         | RGV                | 16   |                | TBD          | Call TI                       | Call TI             | -40 to 125   | INA                  |         |



www.ti.com

20-Aug-2024

| Orderable Device | Status (1) | Package Type | Package<br>Drawing | Pins | Package<br>Qty | Eco Plan     | Lead finish/<br>Ball material | MSL Peak Temp      | Op Temp (°C) | <b>Device Marking</b> (4/5) | Samples |
|------------------|------------|--------------|--------------------|------|----------------|--------------|-------------------------------|--------------------|--------------|-----------------------------|---------|
|                  |            |              |                    |      |                |              |                               |                    |              | 4290A1                      |         |
| INA4290A2IRGVR   | ACTIVE     | VQFN         | RGV                | 16   | 2500           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM | -40 to 125   | INA<br>4290A2               | Samples |
| INA4290A2IRGVT   | OBSOLETE   | VQFN         | RGV                | 16   |                | TBD          | Call TI                       | Call TI            | -40 to 125   | INA<br>4290A2               |         |
| INA4290A3IRGVR   | ACTIVE     | VQFN         | RGV                | 16   | 2500           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM | -40 to 125   | INA<br>4290A3               | Samples |
| INA4290A3IRGVT   | OBSOLETE   | E VQFN       | RGV                | 16   |                | TBD          | Call TI                       | Call TI            | -40 to 125   | INA<br>4290A3               |         |
| INA4290A4IRGVR   | ACTIVE     | VQFN         | RGV                | 16   | 2500           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM | -40 to 125   | INA<br>4290A4               | Samples |
| INA4290A4IRGVT   | OBSOLETE   | E VQFN       | RGV                | 16   |                | TBD          | Call TI                       | Call TI            | -40 to 125   | INA<br>4290A4               |         |
| INA4290A5IRGVR   | ACTIVE     | VQFN         | RGV                | 16   | 2500           | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM | -40 to 125   | INA<br>4290A5               | Samples |
| INA4290A5IRGVT   | ACTIVE     | VQFN         | RGV                | 16   | 250            | RoHS & Green | NIPDAU                        | Level-1-260C-UNLIM | -40 to 125   | INA<br>4290A5               | Samples |

(1) 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.

(2) 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".

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.

<sup>(3)</sup> MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

<sup>(4)</sup> There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

## **PACKAGE OPTION ADDENDUM**

www.ti.com 20-Aug-2024

(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 INA290:

Automotive : INA290-Q1

NOTE: Qualified Version Definitions:

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