

**PACKAGING INFORMATION**

| Orderable Device | Status<br>(1) | Package Type | Package Drawing | Pins | Package Qty | Eco Plan<br>(2) | Lead finish/<br>Ball material<br>(6) | MSL Peak Temp<br>(3) | Op Temp (°C) | Device Marking<br>(4/5) | Samples                 |
|------------------|---------------|--------------|-----------------|------|-------------|-----------------|--------------------------------------|----------------------|--------------|-------------------------|-------------------------|
| MSP430F5513IRGCR | ACTIVE        | VQFN         | RGC             | 64   | 2000        | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5513               | <a href="#">Samples</a> |
| MSP430F5514IRGCR | ACTIVE        | VQFN         | RGC             | 64   | 2000        | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5514               | <a href="#">Samples</a> |
| MSP430F5514IRGCT | ACTIVE        | VQFN         | RGC             | 64   | 250         | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5514               | <a href="#">Samples</a> |
| MSP430F5515IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5515               | <a href="#">Samples</a> |
| MSP430F5515IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5515               | <a href="#">Samples</a> |
| MSP430F5517IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5517               | <a href="#">Samples</a> |
| MSP430F5517IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5517               | <a href="#">Samples</a> |
| MSP430F5519IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5519               | <a href="#">Samples</a> |
| MSP430F5519IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5519               | <a href="#">Samples</a> |
| MSP430F5521IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5521               | <a href="#">Samples</a> |
| MSP430F5521IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5521               | <a href="#">Samples</a> |
| MSP430F5522IRGCR | ACTIVE        | VQFN         | RGC             | 64   | 2000        | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5522               | <a href="#">Samples</a> |
| MSP430F5522IRGCT | ACTIVE        | VQFN         | RGC             | 64   | 250         | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5522               | <a href="#">Samples</a> |
| MSP430F5522IZXH  | ACTIVE        | NFBGA        | ZXH             | 80   | 576         | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5522                   | <a href="#">Samples</a> |
| MSP430F5522IZXHR | ACTIVE        | NFBGA        | ZXH             | 80   | 2500        | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5522                   | <a href="#">Samples</a> |
| MSP430F5524IRGCR | ACTIVE        | VQFN         | RGC             | 64   | 2000        | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5524               | <a href="#">Samples</a> |
| MSP430F5524IRGCT | ACTIVE        | VQFN         | RGC             | 64   | 250         | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5524               | <a href="#">Samples</a> |
| MSP430F5524IZXH  | ACTIVE        | NFBGA        | ZXH             | 80   | 576         | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5524                   | <a href="#">Samples</a> |
| MSP430F5524IZXHR | ACTIVE        | NFBGA        | ZXH             | 80   | 2500        | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5524                   | <a href="#">Samples</a> |
| MSP430F5525IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5525               | <a href="#">Samples</a> |

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|------------------|---------------|--------------|-----------------|------|-------------|-----------------|--------------------------------------|----------------------|--------------|-------------------------|-------------------------|
| MSP430F5525IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5525               | <a href="#">Samples</a> |
| MSP430F5526IRGCR | ACTIVE        | VQFN         | RGC             | 64   | 2000        | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5526               | <a href="#">Samples</a> |
| MSP430F5526IRGCT | ACTIVE        | VQFN         | RGC             | 64   | 250         | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5526               | <a href="#">Samples</a> |
| MSP430F5526IZXH  | ACTIVE        | NFBGA        | ZXH             | 80   | 576         | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5526                   | <a href="#">Samples</a> |
| MSP430F5526IZXHR | ACTIVE        | NFBGA        | ZXH             | 80   | 2500        | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5526                   | <a href="#">Samples</a> |
| MSP430F5527IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5527               | <a href="#">Samples</a> |
| MSP430F5527IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5527               | <a href="#">Samples</a> |
| MSP430F5528IRGCR | ACTIVE        | VQFN         | RGC             | 64   | 2000        | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5528               | <a href="#">Samples</a> |
| MSP430F5528IRGCT | ACTIVE        | VQFN         | RGC             | 64   | 250         | RoHS & Green    | NIPDAU   NIPDAUAG                    | Level-3-260C-168 HR  | -40 to 85    | M430F5528               | <a href="#">Samples</a> |
| MSP430F5528YFFR  | ACTIVE        | DSBGA        | YFF             | 64   | 2500        | RoHS & Green    | SNAGCU                               | Level-1-260C-UNLIM   | -40 to 85    | M430F5528               | <a href="#">Samples</a> |
| MSP430F5528IZXH  | ACTIVE        | NFBGA        | ZXH             | 80   | 576         | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5528                   | <a href="#">Samples</a> |
| MSP430F5528IZXHR | ACTIVE        | NFBGA        | ZXH             | 80   | 2500        | RoHS & Green    | SNAGCU                               | Level-3-260C-168 HR  | -40 to 85    | F5528                   | <a href="#">Samples</a> |
| MSP430F5529IPN   | ACTIVE        | LQFP         | PN              | 80   | 119         | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5529               | <a href="#">Samples</a> |
| MSP430F5529IPNR  | ACTIVE        | LQFP         | PN              | 80   | 1000        | RoHS & Green    | NIPDAU                               | Level-3-260C-168 HR  | -40 to 85    | M430F5529               | <a href="#">Samples</a> |

(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.

**OBSELETE:** 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 (Cl) 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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