

## TAPE AND REEL INFORMATION



### QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



\*All dimensions are nominal

| Device             | Package Type | Package Drawing | Pins | SPQ  | Reel Diameter (mm) | Reel Width W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P1 (mm) | W (mm) | Pin1 Quadrant |
|--------------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| MSP430FR5041IPMR   | LQFP         | PM              | 64   | 1000 | 330.0              | 24.4               | 13.0    | 13.0    | 2.1     | 16.0    | 24.0   | Q2            |
| MSP430FR5041IRGCR  | VQFN         | RGC             | 64   | 2000 | 330.0              | 16.4               | 9.3     | 9.3     | 1.1     | 12.0    | 16.0   | Q2            |
| MSP430FR5041IRGCT  | VQFN         | RGC             | 64   | 250  | 180.0              | 16.4               | 9.3     | 9.3     | 1.1     | 12.0    | 16.0   | Q2            |
| MSP430FR50431IPMR  | LQFP         | PM              | 64   | 1000 | 330.0              | 24.4               | 13.0    | 13.0    | 2.1     | 16.0    | 24.0   | Q2            |
| MSP430FR50431IRGCR | VQFN         | RGC             | 64   | 2000 | 330.0              | 16.4               | 9.3     | 9.3     | 1.1     | 12.0    | 16.0   | Q2            |
| MSP430FR50431IRGCT | VQFN         | RGC             | 64   | 250  | 180.0              | 16.4               | 9.3     | 9.3     | 1.1     | 12.0    | 16.0   | Q2            |
| MSP430FR5043IPMR   | LQFP         | PM              | 64   | 1000 | 330.0              | 24.4               | 13.0    | 13.0    | 2.1     | 16.0    | 24.0   | Q2            |
| MSP430FR5043IRGCR  | VQFN         | RGC             | 64   | 2000 | 330.0              | 16.4               | 9.3     | 9.3     | 1.1     | 12.0    | 16.0   | Q2            |
| MSP430FR5043IRGCT  | VQFN         | RGC             | 64   | 250  | 180.0              | 16.4               | 9.3     | 9.3     | 1.1     | 12.0    | 16.0   | Q2            |

**TAPE AND REEL BOX DIMENSIONS**


\*All dimensions are nominal

| Device             | Package Type | Package Drawing | Pins | SPQ  | Length (mm) | Width (mm) | Height (mm) |
|--------------------|--------------|-----------------|------|------|-------------|------------|-------------|
| MSP430FR5041IPMR   | LQFP         | PM              | 64   | 1000 | 336.6       | 336.6      | 41.3        |
| MSP430FR5041IRGCR  | VQFN         | RGC             | 64   | 2000 | 367.0       | 367.0      | 38.0        |
| MSP430FR5041IRGCT  | VQFN         | RGC             | 64   | 250  | 210.0       | 185.0      | 35.0        |
| MSP430FR50431IPMR  | LQFP         | PM              | 64   | 1000 | 336.6       | 336.6      | 41.3        |
| MSP430FR50431IRGCR | VQFN         | RGC             | 64   | 2000 | 367.0       | 367.0      | 38.0        |
| MSP430FR50431IRGCT | VQFN         | RGC             | 64   | 250  | 210.0       | 185.0      | 35.0        |
| MSP430FR5043IPMR   | LQFP         | PM              | 64   | 1000 | 336.6       | 336.6      | 41.3        |
| MSP430FR5043IRGCR  | VQFN         | RGC             | 64   | 2000 | 367.0       | 367.0      | 38.0        |
| MSP430FR5043IRGCT  | VQFN         | RGC             | 64   | 250  | 210.0       | 185.0      | 35.0        |

**TRAY**


Chamfer on Tray corner indicates Pin 1 orientation of packed units.

\*All dimensions are nominal

| Device           | Package Name | Package Type | Pins | SPQ | Unit array matrix | Max temperature (°C) | L (mm) | W (mm) | K0 (µm) | P1 (mm) | CL (mm) | CW (mm) |
|------------------|--------------|--------------|------|-----|-------------------|----------------------|--------|--------|---------|---------|---------|---------|
| MSP430FR5041IPM  | PM           | LQFP         | 64   | 160 | 8 X 20            | 150                  | 315    | 135.9  | 7620    | 15.2    | 13.1    | 13      |
| MSP430FR50431IPM | PM           | LQFP         | 64   | 160 | 8 X 20            | 150                  | 315    | 135.9  | 7620    | 15.2    | 13.1    | 13      |
| MSP430FR5043IPM  | PM           | LQFP         | 64   | 160 | 8 X 20            | 150                  | 315    | 135.9  | 7620    | 15.2    | 13.1    | 13      |
| MSP430FR6041IPN  | PN           | LQFP         | 80   | 119 | 7 x 17            | 150                  | 315    | 135.9  | 7620    | 17.9    | 14.3    | 13.95   |
| MSP430FR60431IPN | PN           | LQFP         | 80   | 119 | 7 x 17            | 150                  | 315    | 135.9  | 7620    | 17.9    | 14.3    | 13.95   |
| MSP430FR6043IPN  | PN           | LQFP         | 80   | 119 | 7 x 17            | 150                  | 315    | 135.9  | 7620    | 17.9    | 14.3    | 13.95   |