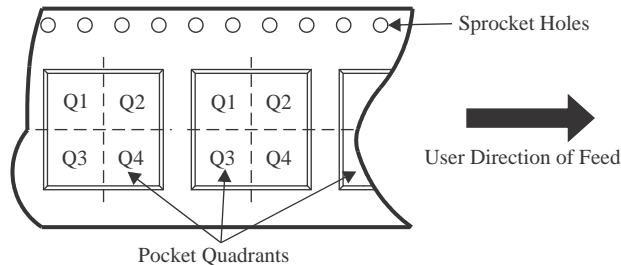


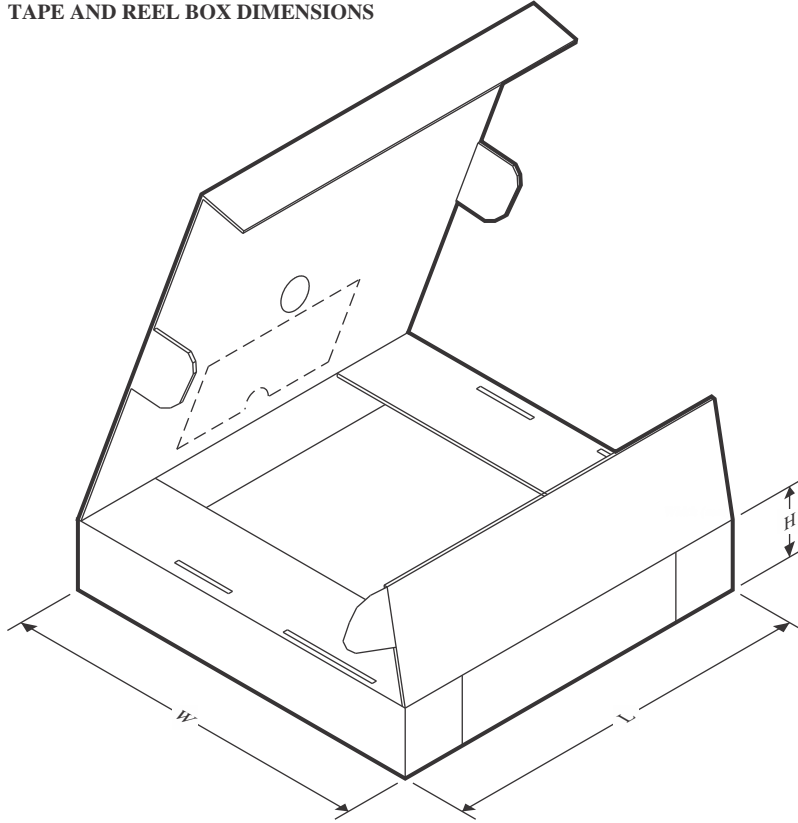
TAPE AND REEL INFORMATION

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 |
|------------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| MSP430F2416TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2416TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2416TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2417TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2417TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2417TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2418TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2418TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2418TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2419TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2419TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2616TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2616TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2616TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2616TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2617TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |

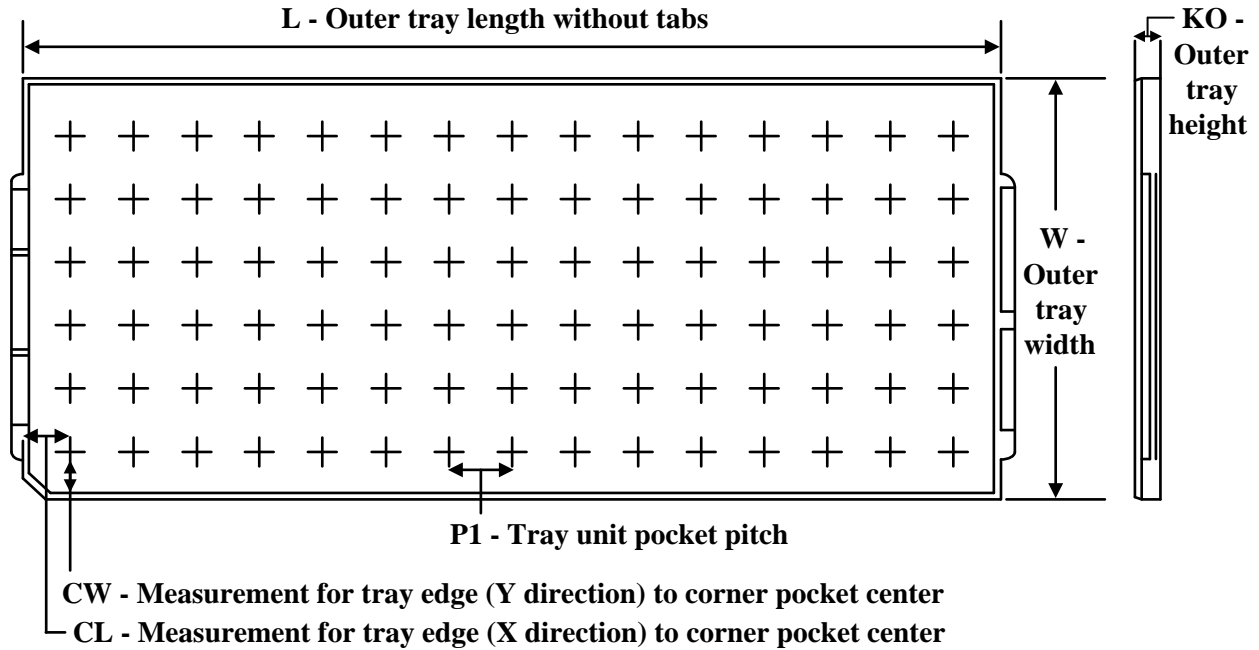
| Device | Package Type | Package Drawing | Pins | SPQ | Reel Diameter (mm) | Reel Width W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P1 (mm) | W (mm) | Pin1 Quadrant |
|------------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| MSP430F2617TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2617TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2618TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2618TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2618TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |
| MSP430F2619TPMR | LQFP | PM | 64 | 1000 | 330.0 | 24.4 | 13.0 | 13.0 | 2.1 | 16.0 | 24.0 | Q2 |
| MSP430F2619TPNR | LQFP | PN | 80 | 1000 | 330.0 | 24.4 | 15.0 | 15.0 | 2.1 | 20.0 | 24.0 | Q2 |
| MSP430F2619TZCAR | NFBGA | ZCA | 113 | 2500 | 330.0 | 16.4 | 7.3 | 7.3 | 1.5 | 12.0 | 16.0 | Q1 |

TAPE AND REEL BOX DIMENSIONS


*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Length (mm) | Width (mm) | Height (mm) |
|------------------|--------------|-----------------|------|------|-------------|------------|-------------|
| MSP430F2416TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2416TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2416TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |
| MSP430F2417TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2417TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2417TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |
| MSP430F2418TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2418TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2418TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |
| MSP430F2419TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2419TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2616TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2616TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2616TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |
| MSP430F2616TZCAR | NFBGA | ZCA | 113 | 2500 | 350.0 | 350.0 | 43.0 |
| MSP430F2617TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2617TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2617TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |

| Device | Package Type | Package Drawing | Pins | SPQ | Length (mm) | Width (mm) | Height (mm) |
|------------------|--------------|-----------------|------|------|-------------|------------|-------------|
| MSP430F2618TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2618TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2618TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |
| MSP430F2619TPMR | LQFP | PM | 64 | 1000 | 336.6 | 336.6 | 41.3 |
| MSP430F2619TPNR | LQFP | PN | 80 | 1000 | 350.0 | 350.0 | 43.0 |
| MSP430F2619TZCAR | NFBGA | ZCA | 113 | 2500 | 336.6 | 336.6 | 31.8 |

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) |
|-----------------|--------------|--------------|------|-----|-------------------|----------------------|--------|--------|---------|---------|---------|---------|
| MSP430F2416TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2416TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2416TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2416TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2416TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2417TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2417TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2417TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2418TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2418TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2418TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2418TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2418TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2419TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2419TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2419TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2616TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |

| 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) |
|-----------------|--------------|--------------|------|-----|-------------------|----------------------|--------|--------|---------|---------|---------|---------|
| MSP430F2616TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2616TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2616TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2616TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2617TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2617TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2617TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2617TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2617TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2618TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2618TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2618TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2618TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2618TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2619TPM | PM | LQFP | 64 | 160 | 8 X 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2619TPM | PM | LQFP | 64 | 160 | 8 x 20 | 150 | 315 | 135.9 | 7620 | 15.2 | 13.1 | 13 |
| MSP430F2619TPN | PN | LQFP | 80 | 119 | 7 x 17 | 150 | 315 | 135.9 | 7620 | 17.9 | 14.3 | 13.95 |
| MSP430F2619TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |
| MSP430F2619TZCA | ZCA | NFBGA | 113 | 260 | 10 x 26 | 150 | 315 | 135.9 | 7620 | 11.8 | 10 | 10.35 |