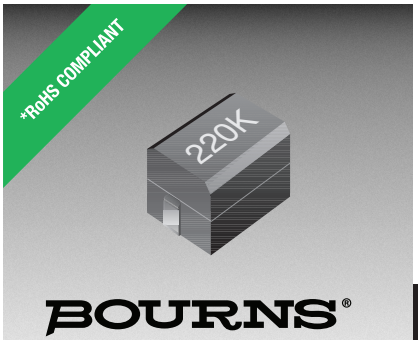



## Features

- High resistance to heat and humidity
- Resistance to mechanical shock and pressure
- Accurate dimensions for automatic surface mounting
- Wide inductance range (1.0 nH to 1000 µH)
- RoHS compliant*

## Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

# CM45 Series SMT Chip Inductors

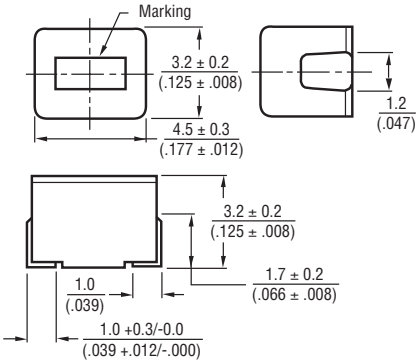
## General Specifications

Temperature Rise ..... 20 ˚C max.
Ambient Temperature ..... 100 ˚C max.
Operating Temperature ..... -40 °C to +125 °C
Storage Temperature ..... -40 °C to +125 °C

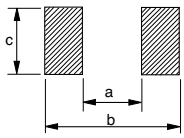
## Materials

Core Material ..... Ferrite Core
Coil Type ..... Copper wire
Enclosure ..... Epoxy resin
Terminal Finish ..... Sn

## Product Dimensions



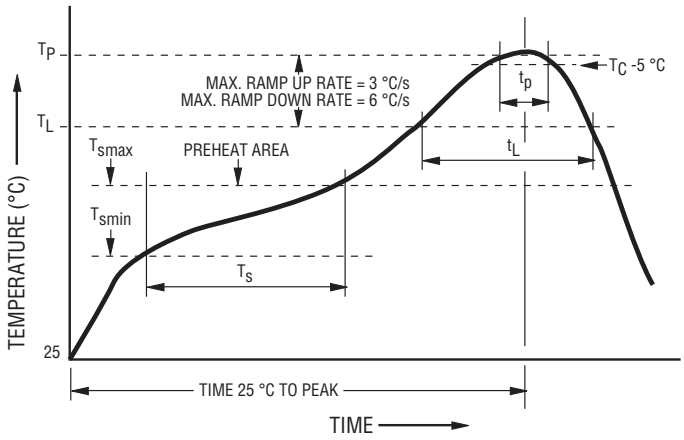

## Recommended Land Pattern Dimensions




| a | b | c |
|---|---|---|
| 2.0 to 2.4 (.079 to .094) | 5.0 to 5.3 (.197 to .209) | 1.4 to 1.7 (.055 to .067) |

DIMENSIONS: MM / (INCHES)

## Soldering Profile




| Profile Feature | Pb-Free Assembly |
|---|---|
| Preheat / Soak:<br>Temperature Min. ($T_{smin}$)<br>Temperature Max. ($T_{smax}$)<br>Time ($t_s$) from ($T_{smin}$ to $T_{smax}$) | <br>150 °C<br>200 °C<br>60~120 seconds |
| Ramp Up Rate ($T_L$ to $T_p$) | 3 °C / second max. |
| Liquidous Temperature ($T_L$)<br>Time ($t_L$) maintained above $T_L$ | 217 °C<br>60~150 seconds |
| Classification Temperature ($T_c$) | 250 °C |
| Time ($t_p$) within 5 °C of the specified classification temperature ($T_c$) | < 30 seconds |
| Ramp Down Rate ($T_p$ to $T_L$) | 6 °C / second max. |
| Time 25 °C to Peak Temperature | 8 minutes max. |

NOTE: The product has been tested under this reflow condition. Deviations from this, especially higher temperatures or longer durations, could impact performance.

**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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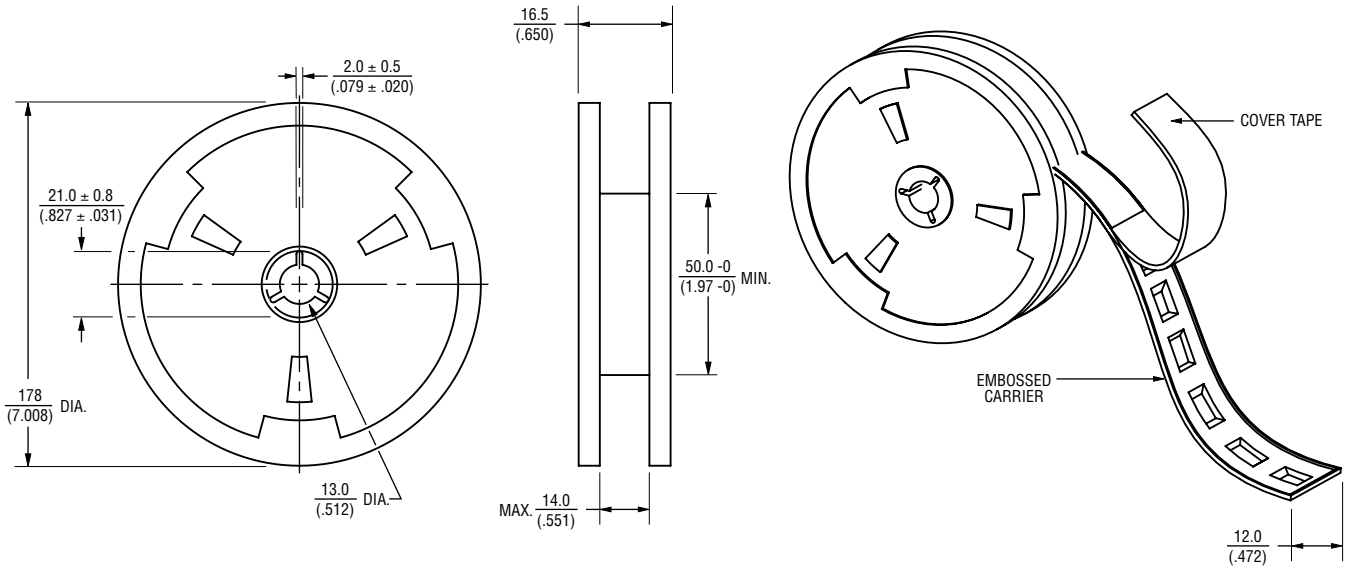
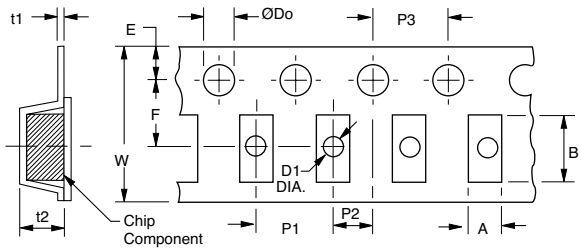
## Packaging Specifications




DIMENSIONS: MM / (INCHES)

**USER DIRECTION OF FEED**

QTY: 500 PCS. PER REEL

| A | B | W | F | E | P1 | P2 | P3 | D0 Dia. | D1 Dia. | t1 | t2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.60 (.142) | 4.90 (.193) | 12.00 (.472) | 5.50 (.217) | 1.75 (.069) | 8.00 (,315) | 2.00 (.079) | 4.00 (.157) | 1.50 (.059) | 1.00 (.039) | 0.25 (.010) | 3.50 (.138) |

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# CM45 Series SMT Chip Inductors

BOURNS®

| RoHS Compliant 1812 Size Part Number | Inductance µH | Std. Tolerance | Std. Tol. Code | 1/2 Tolerance | 1/2 Tol. Code | Q min. | Test Freq. MHz | SRF typ. MHz | RDC ohm max | IDC mA max |
|---|---|---|---|---|---|---|---|---|---|---|
| CM453232-R10<1>L | 0.10 | ±20 % | M | ±10 % | K | 35 | 25.2 | 780 | 0.18 | 800 |
| CM453232-R12<1>L | 0.12 | ±20 % | M | ±10 % | K | 35 | 25.2 | 735 | 0.20 | 770 |
| CM453232-R15<1>L | 0.15 | ±20 % | M | ±10 % | K | 35 | 25.2 | 615 | 0.22 | 730 |
| CM453232-R18<1>L | 0.18 | ±20 % | M | ±10 % | K | 35 | 25.2 | 570 | 0.24 | 700 |
| CM453232-R22<1>L | 0.22 | ±20 % | M | ±10 % | K | 40 | 25.2 | 505 | 0.25 | 665 |
| CM453232-R27<1>L | 0.27 | ±20 % | M | ±10 % | K | 40 | 25.2 | 450 | 0.26 | 635 |
| CM453232-R33<1>L | 0.33 | ±20 % | M | ±10 % | K | 40 | 25.2 | 425 | 0.28 | 605 |
| CM453232-R39<1>L | 0.39 | ±20 % | M | ±10 % | K | 40 | 25.2 | 390 | 0.30 | 575 |
| CM453232-R47<1>L | 0.47 | ±20 % | M | ±10 % | K | 40 | 25.2 | 350 | 0.32 | 545 |
| CM453232-R56<1>L | 0.56 | ±20 % | M | ±10 % | K | 40 | 25.2 | 325 | 0.36 | 520 |
| CM453232-R68<1>L | 0.68 | ±20 % | M | ±10 % | K | 40 | 25.2 | 300 | 0.40 | 500 |
| CM453232-R82<1>L | 0.82 | ±20 % | M | ±10 % | K | 40 | 25.2 | 275 | 0.45 | 475 |
| CM453232-1R0<1>L | 1.0 | ±10 % | K | ±5 % | J | 50 | 7.96 | 250 | 0.50 | 450 |
| CM453232-1R2<1>L | 1.2 | ±10 % | K | ±5 % | J | 50 | 7.96 | 240 | 0.55 | 430 |
| CM453232-1R5<1>L | 1.5 | ±10 % | K | ±5 % | J | 50 | 7.96 | 210 | 0.60 | 410 |
| CM453232-1R8<1>L | 1.8 | ±10 % | K | ±5 % | J | 50 | 7.96 | 190 | 0.65 | 390 |
| CM453232-2R2<1>L | 2.2 | ±10 % | K | ±5 % | J | 50 | 7.96 | 160 | 0.70 | 380 |
| CM453232-2R7<1>L | 2.7 | ±10 % | K | ±5 % | J | 50 | 7.96 | 150 | 0.75 | 370 |
| CM453232-3R3<1>L | 3.3 | ±10 % | K | ±5 % | J | 50 | 7.96 | 110 | 0.80 | 355 |
| CM453232-3R9<1>L | 3.9 | ±10 % | K | ±5 % | J | 50 | 7.96 | 100 | 0.90 | 330 |
| CM453232-4R7<1>L | 4.7 | ±10 % | K | ±5 % | J | 50 | 7.96 | 80 | 1.00 | 315 |
| CM453232-5R6<1>L | 5.6 | ±10 % | K | ±5 % | J | 50 | 7.96 | 50 | 1.10 | 300 |
| CM453232-6R8<1>L | 6.8 | ±10 % | K | ±5 % | J | 50 | 7.96 | 35 | 1.2 | 285 |
| CM453232-8R2<1>L | 8.2 | ±10 % | K | ±5 % | J | 50 | 7.96 | 28 | 1.4 | 270 |
| CM453232-100<1>L | 10 | ±10 % | K | ±5 % | J | 50 | 2.52 | 22 | 1.6 | 250 |
| CM453232-120<1>L | 12 | ±10 % | K | ±5 % | J | 50 | 2.52 | 20 | 2 | 225 |
| CM453232-150<1>L | 15 | ±10 % | K | ±5 % | J | 50 | 2.52 | 18 | 2.5 | 200 |
| CM453232-180<1>L | 18 | ±10 % | K | ±5 % | J | 50 | 2.52 | 16 | 2.8 | 190 |
| CM453232-220<1>L | 22 | ±10 % | K | ±5 % | J | 50 | 2.52 | 14 | 3.2 | 180 |
| CM453232-270<1>L | 27 | ±10 % | K | ±5 % | J | 50 | 2.52 | 13 | 3.6 | 170 |
| CM453232-330<1>L | 33 | ±10 % | K | ±5 % | J | 50 | 2.52 | 12 | 4 | 160 |
| CM453232-390<1>L | 39 | ±10 % | K | ±5 % | J | 50 | 2.52 | 11 | 4.5 | 150 |
| CM453232-470<1>L | 47 | ±10 % | K | ±5 % | J | 50 | 2.52 | 10.5 | 5 | 140 |
| CM453232-560<1>L | 56 | ±10 % | K | ±5 % | J | 50 | 2.52 | 10 | 5.5 | 135 |
| CM453232-680<1>L | 68 | ±10 % | K | ±5 % | J | 50 | 2.52 | 9.5 | 6 | 130 |
| CM453232-820<1>L | 82 | ±10 % | K | ±5 % | J | 50 | 2.52 | 8.5 | 7 | 120 |
| CM453232-101<1>L | 100 | ±10 % | K | ±5 % | J | 40 | 0.796 | 8 | 8 | 110 |
| CM453232-121<1>L | 120 | ±10 % | K | ±5 % | J | 40 | 0.796 | 7 | 8 | 110 |
| CM453232-151<1>L | 150 | ±10 % | K | ±5 % | J | 40 | 0.796 | 6 | 9 | 105 |
| CM453232-181<1>L | 180 | ±10 % | K | ±5 % | J | 40 | 0.796 | 5.5 | 9.5 | 102 |
| CM453232-221<1>L | 220 | ±10 % | K | ±5 % | J | 40 | 0.796 | 5 | 10 | 100 |
| CM453232-271<1>L | 270 | ±10 % | K | ±5 % | J | 40 | 0.796 | 4.5 | 12 | 92 |
| CM453232-331<1>L | 330 | ±10 % | K | ±5 % | J | 40 | 0.796 | 4 | 14 | 85 |
| CM453232-391<1>L | 390 | ±10 % | K | ±5 % | J | 40 | 0.796 | 3.5 | 18 | 80 |
| CM453232-471<1>L | 470 | ±10 % | K | ±5 % | J | 40 | 0.796 | 3.5 | 26 | 62 |
| CM453232-561<1>L | 560 | ±10 % | K | ±5 % | J | 30 | 0.796 | 3 | 30 | 50 |
| CM453232-681<1>L | 680 | ±10 % | K | ±5 % | J | 30 | 0.796 | 3 | 30 | 50 |
| CM453232-821<1>L | 820 | ±10 % | K | ±5 % | J | 30 | 0.796 | 2.5 | 35 | 30 |
| CM453232-102<1>L | 1000 | ±10 % | K | ±5 % | J | 20 | 0.252 | 2.5 | 40 | 30 |

<1> Enter tolerance code from standard or 1/2 tolerance column. Example: CM453232-1R2KL is standard tolerance; CM453232-1R2JL is 1/2 tolerance.

REV. 05/26

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