

## 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\*



The CM10 & CM16 series are currently available but not recommended for new designs. The **CI100505**, **CI160808**, **CW100505** and **CW160808** are possible alternatives.

# CM45, CM16, CM10 SMT Chip Inductors

## General Specifications

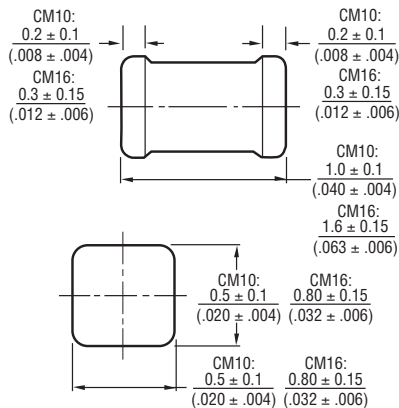
Temperature Rise	CM10, CM16, CM45 .....	20 °C max.
Ambient Temperature	CM10, CM16 .....	80 °C max.
	CM45 .....	100 °C max.
Operating Temperature	CM10, CM16 .....	-40 °C to +100 °C
	CM45 .....	-40 °C to +125 °C
Storage Temperature	CM10, CM16 .....	-40 °C to +100 °C
	CM45 .....	-40 °C to +125 °C
Resistance to Soldering Heat .....		260 °C, 5 seconds

## Materials

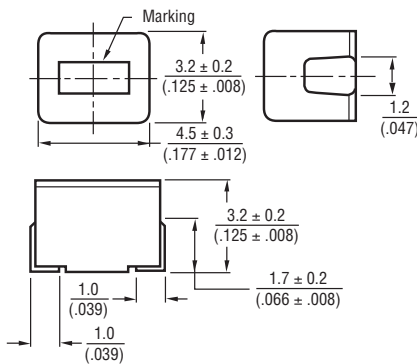
Core Material	CM10, CM16 .....	Alumina ceramic
	CM45 .....	Ferrite Core
Coil Type	CM10, CM16 .....	Copper plating
	CM45 .....	Copper wire
Enclosure	CM10, CM16 .....	Resin
	CM45 .....	Epoxy resin
Terminal .....		Sn

## Product Dimensions

### CM100505, CM160808

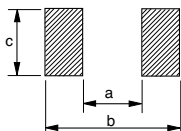


### CM453232



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Recommended Land Pattern Dimensions



Series	a	b	c
CM10	0.5 to 0.6 (.019 to .023)	1.5 to 1.7 (.059 to .067)	0.5 to 0.6 (.019 to .023)
CM16	0.8 to 1.0 (.032 to .039)	2.0 to 2.6 (.079 to .102)	0.7 to 0.9 (.028 to .035)
CM45	2.0 to 2.4 (.079 to .094)	5.0 to 5.3 (.197 to .209)	1.4 to 1.7 (.055 to .067)

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

Specifications are subject to change without notice.

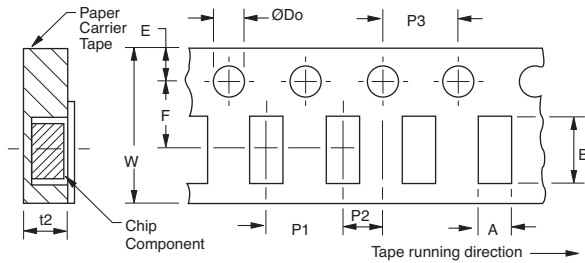
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# CM45, CM16, CM10 SMT Chip Inductors

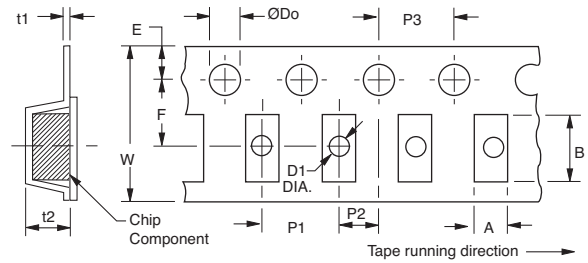
**BOURNS®**

## Packaging Specifications

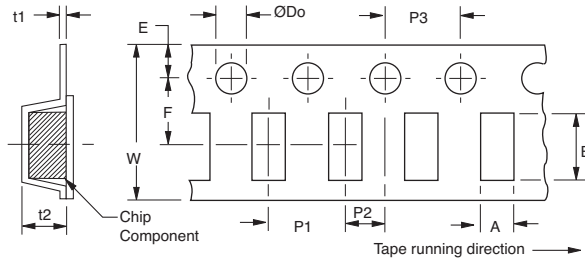
**CM100505**



**CM160808**



**CM453232**



DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

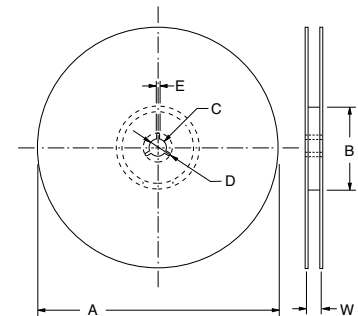
Series	A	B	W	F	E	P1	P2	P3	D0 Dia.	D1 Dia.	t1	t2
CM10	0.71 (.027)	1.21 (.047)	8.00 (.315)	3.50 (.138)	1.75 (.069)	4.00 (.157)	2.00 (.079)	4.00 (.157)	1.50 (.059)	--	--	0.66 (.026)
CM16	1.00 (.039)	1.80 (.071)	8.00 (.315)	3.50 (.138)	1.75 (.069)	4.00 (.157)	2.00 (.079)	4.00 (.157)	1.50 (.059)	0.60 (.024)	0.27 (.011)	1.20 (.047)
CM45	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)

## Reel Dimensions

Series	A	B	C	D	E	W
CM10, CM16	178 (7.008)	60 min.	13 (.512)	21 (.827)	2 (.079)	9 (.354)
CM45						13 (.512)

## Packaging

Series	Quantity	Weight
CM10	10,000 pcs.	150 g
CM16	3,000 pcs.	90 g
CM45	500 pcs.	100 g



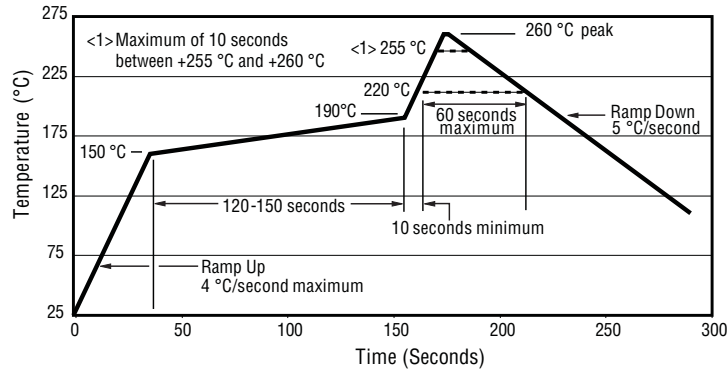
Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

# CM45, CM16, CM10 SMT Chip Inductors

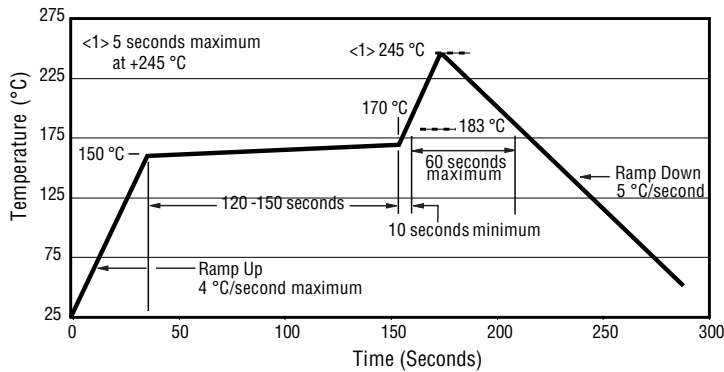
**BOURNS®**

## Soldering Profiles

### CM100505, CM160808



### CM453232



Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.

# CM45, CM16, CM10 SMT Chip Inductors

**BOURNS®**

RoHS Compliant 0402 Size Part Number	Inductance nH	Tolerance	Q min.	Test Frequency MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM100505-1N0DL	1.00	±0.3 nH	8	100	6000	0.05	400
CM100505-1N2DL	1.20	±0.3 nH	8	100	6000	0.06	400
CM100505-1N5DL	1.50	±0.3 nH	8	100	6000	0.07	400
CM100505-1N8DL	1.80	±0.3 nH	8	100	6000	0.08	400
CM100505-2N2DL	2.20	±0.3 nH	8	100	6000	0.09	400
CM100505-2N7DL	2.70	±0.3 nH	8	100	5500	0.10	400
CM100505-3N3DL	3.30	±0.3 nH	8	100	5500	0.12	400
CM100505-3N9DL	3.90	±0.3 nH	8	100	5200	0.15	360
CM100505-4N7DL	4.70	±0.3 nH	8	100	4800	0.17	360
CM100505-5N6DL	5.60	±0.3 nH	8	100	4600	0.19	340
CM100505-6N8JL	6.80	± 5 %	8	100	4000	0.30	320
CM100505-8N2JL	8.20	± 5 %	8	100	3500	0.35	320
CM100505-10NJL	10.00	± 5 %	8	100	2800	0.41	320
CM100505-12NJL	12.00	± 5 %	8	100	2800	0.45	320
CM100505-15NJL	15.00	± 5 %	8	100	2500	0.60	240
CM100505-18NJL	18.00	± 5 %	8	100	2200	0.70	240
CM100505-22NJL	22.00	± 5 %	8	100	2000	0.80	200
CM100505-27NJL	27.00	± 5 %	8	100	1800	1.2	200
CM100505-33NJL	33.00	± 5 %	8	100	1800	1.4	170
CM100505-39NJL	39.00	± 5 %	8	100	1800	1.7	150
CM100505-47NJL	47.00	± 5 %	8	100	1800	2.1	140
CM100505-56NJL	56.00	± 5 %	8	100	1500	2.5	130
CM100505-68NJL	68.00	± 5 %	8	100	1500	4.0	120
CM100505-82NJL	82.00	± 5 %	8	100	1400	4.5	110
CM100505-R10JL	100.00	± 5 %	8	100	1200	5.5	90

Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

# CM45, CM16, CM10 SMT Chip Inductors

**BOURNS®**

RoHS Compliant 0603 Size Part Number	Inductance nH	Tolerance	Q min.	Test Frequency MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM160808-1N5DL	1.5	± 0.3 nH	8	100	6000	0.07	500
CM160808-1N8DL	1.8	± 0.3 nH	8	100	6000	0.08	500
CM160808-2N2DL	2.2	± 0.3 nH	8	100	6000	0.09	500
CM160808-2N7DL	2.7	± 0.3 nH	8	100	6000	0.10	500
CM160808-3N3DL	3.3	± 0.3 nH	9	100	5500	0.12	500
CM160808-3N9JL	3.9	±5 %	9	100	5500	0.15	450
CM160808-4N7JL	4.7	±5 %	9	100	4800	0.17	450
CM160808-5N6JL	5.6	±5 %	9	100	4600	0.18	430
CM160808-6N8JL	6.8	±5 %	9	100	3550	0.20	430
CM160808-8N2JL	8.2	±5 %	9	100	3500	0.28	400
CM160808-10NJL	10	±5 %	10	100	2800	0.32	400
CM160808-12NJL	12	±5 %	10	100	2800	0.35	400
CM160808-15NJL	15	±5 %	10	100	2500	0.41	350
CM160808-18NJL	18	±5 %	10	100	2300	0.45	350
CM160808-22NJL	22	±5 %	10	100	2000	0.50	300
CM160808-27NJL	27	±5 %	10	100	2000	0.55	300
CM160808-33NJL	33	±5 %	10	100	1800	0.60	300
CM160808-39NJL	39	±5 %	11	100	1800	0.80	300
CM160808-47NJL	47	±5 %	11	100	1800	0.95	250
CM160808-56NJL	56	±5 %	12	100	1800	1.2	250
CM160808-68NJL	68	±5 %	12	100	1500	1.3	250
CM160808-82NJL	82	±5 %	12	100	1500	1.5	250
CM160808-R10JL	100	±5 %	12	100	1300	1.8	200
CM160808-R12JL	120	±5 %	5	25.2	1200	3.0	130
CM160808-R15JL	150	±5 %	5	25.2	1100	4.5	100
CM160808-R18JL	180	±5 %	4	25.2	1000	6.5	80
CM160808-R22JL	220	±5 %	4	25.2	900	7.5	70

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# CM45, CM16, CM10 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 min. MHz	RDC ohm max	IDC mA max
CM453232-R10<1>L	0.10	±20 %	M	±10 %	K	35	25.2	300	0.18	800
CM453232-R12<1>L	0.12	±20 %	M	±10 %	K	35	25.2	280	0.2	770
CM453232-R15<1>L	0.15	±20 %	M	±10 %	K	35	25.2	250	0.22	730
CM453232-R18<1>L	0.18	±20 %	M	±10 %	K	35	25.2	220	0.24	700
CM453232-R22<1>L	0.22	±20 %	M	±10 %	K	40	25.2	200	0.25	665
CM453232-R27<1>L	0.27	±20 %	M	±10 %	K	40	25.2	180	0.26	635
CM453232-R33<1>L	0.33	±20 %	M	±10 %	K	40	25.2	165	0.28	605
CM453232-R39<1>L	0.39	±20 %	M	±10 %	K	40	25.2	150	0.30	575
CM453232-R47<1>L	0.47	±20 %	M	±10 %	K	40	25.2	145	0.32	545
CM453232-R56<1>L	0.56	±20 %	M	±10 %	K	40	25.2	140	0.36	520
CM453232-R68<1>L	0.68	±20 %	M	±10 %	K	40	25.2	135	0.40	500
CM453232-R82<1>L	0.82	±20 %	M	±10 %	K	40	25.2	130	0.45	475
CM453232-1R0<1>L	1.0	±10 %	K	±5 %	J	50	7.96	100	0.50	450
CM453232-1R2<1>L	1.2	±10 %	K	±5 %	J	50	7.96	80	0.55	430
CM453232-1R5<1>L	1.5	±10 %	K	±5 %	J	50	7.96	70	0.60	410
CM453232-1R8<1>L	1.8	±10 %	K	±5 %	J	50	7.96	60	0.65	390
CM453232-2R2<1>L	2.2	±10 %	K	±5 %	J	50	7.96	55	0.70	380
CM453232-2R7<1>L	2.7	±10 %	K	±5 %	J	50	7.96	50	0.75	370
CM453232-3R3<1>L	3.3	±10 %	K	±5 %	J	50	7.96	45	0.80	355
CM453232-3R9<1>L	3.9	±10 %	K	±5 %	J	50	7.96	40	0.90	330
CM453232-4R7<1>L	4.7	±10 %	K	±5 %	J	50	7.96	35	1.00	315
CM453232-5R6<1>L	5.6	±10 %	K	±5 %	J	50	7.96	33	1.10	300
CM453232-6R8<1>L	6.8	±10 %	K	±5 %	J	50	7.96	27	1.2	285
CM453232-8R2<1>L	8.2	±10 %	K	±5 %	J	50	7.96	25	1.4	270
CM453232-100<1>L	10	±10 %	K	±5 %	J	50	2.52	20	1.6	250
CM453232-120<1>L	12	±10 %	K	±5 %	J	50	2.52	18	2	225
CM453232-150<1>L	15	±10 %	K	±5 %	J	50	2.52	17	2.5	200
CM453232-180<1>L	18	±10 %	K	±5 %	J	50	2.52	15	2.8	190
CM453232-220<1>L	22	±10 %	K	±5 %	J	50	2.52	13	3.2	180
CM453232-270<1>L	27	±10 %	K	±5 %	J	50	2.52	12	3.6	170
CM453232-330<1>L	33	±10 %	K	±5 %	J	50	2.52	11	4	160
CM453232-390<1>L	39	±10 %	K	±5 %	J	50	2.52	10	4.5	150
CM453232-470<1>L	47	±10 %	K	±5 %	J	50	2.52	10	5	140
CM453232-560<1>L	56	±10 %	K	±5 %	J	50	2.52	9	5.5	135
CM453232-680<1>L	68	±10 %	K	±5 %	J	50	2.52	9	6	130
CM453232-820<1>L	82	±10 %	K	±5 %	J	50	2.52	8	7	120
CM453232-101<1>L	100	±10 %	K	±5 %	J	40	2.52	8	8	110
CM453232-121<1>L	120	±10 %	K	±5 %	J	40	0.796	6	8	110
CM453232-151<1>L	150	±10 %	K	±5 %	J	40	0.796	5	9	105
CM453232-181<1>L	180	±10 %	K	±5 %	J	40	0.796	5	9.5	102
CM453232-221<1>L	220	±10 %	K	±5 %	J	40	0.796	4	10	100
CM453232-271<1>L	270	±10 %	K	±5 %	J	40	0.796	4	12	92
CM453232-331<1>L	330	±10 %	K	±5 %	J	40	0.796	3.5	14	85
CM453232-391<1>L	390	±10 %	K	±5 %	J	40	0.796	3	18	80
CM453232-471<1>L	470	±10 %	K	±5 %	J	40	0.796	3	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	30	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. 07/15

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.