

## Leaded ceramic multilayer capacitors

## Mono-kap™ series

## FEATURES

- Very high capacitance per unit volume
- Low cost.

## APPLICATIONS

These conformally coated radial leaded capacitors are designed for commercial and industrial applications in three dielectrics, NP0 (ultra-stable), X7R (stable) and Z5U (general purpose). Applications include timing, coupling/decoupling, signal comparison and biasing. Mono-kap™ capacitors are suitable for automatic insertion equipment.

## DESCRIPTION

The basic capacitor construction consists of ceramic dielectric materials processed into a tape with a typical thickness range from 0.025 to 0.076 mm. Metal electrode patterns are applied using a thick film screening process. Multiple layers are stacked and laminated in such a manner that electrodes are alternately exposed when the pattern is cut into individual chip capacitors. The capacitors are fired through a high temperature profile to mature the ceramic and metal into a homogeneous unit.

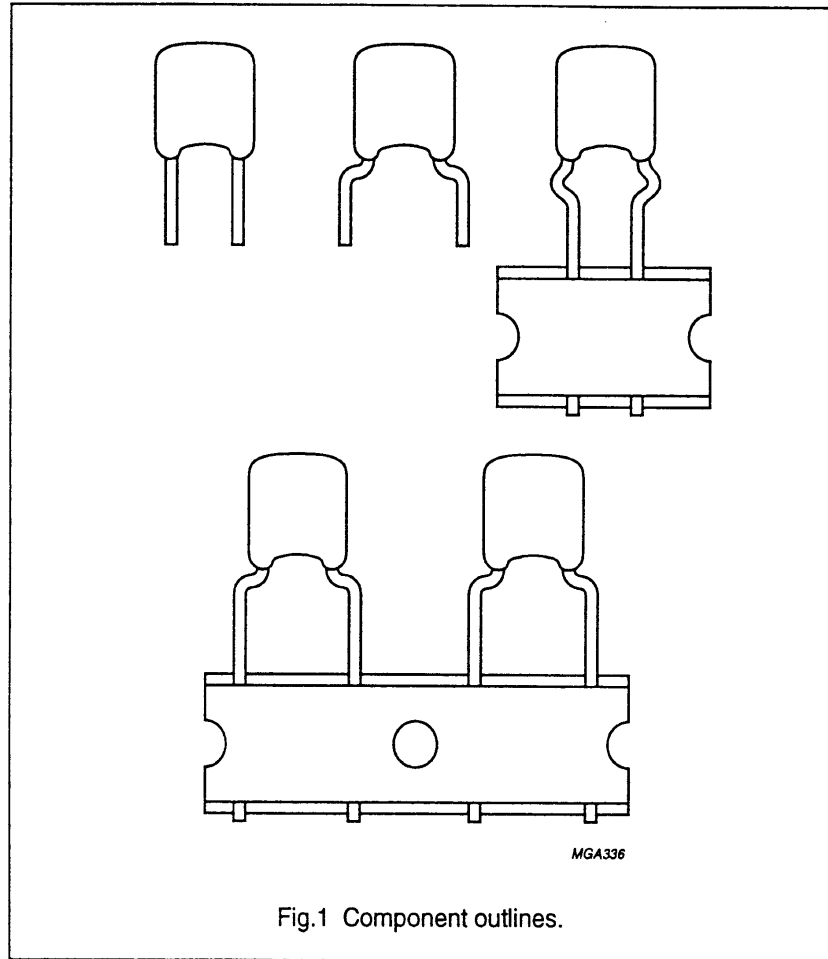


Fig.1 Component outlines.

Metal end terminations are applied and fired to provide electrical connection between the individual layers. Tinned leads are attached using a solder.

Encapsulation consists of a moisture-resistant gold colour conformal epoxy coating that meets the flame requirements of "UL94V-0".

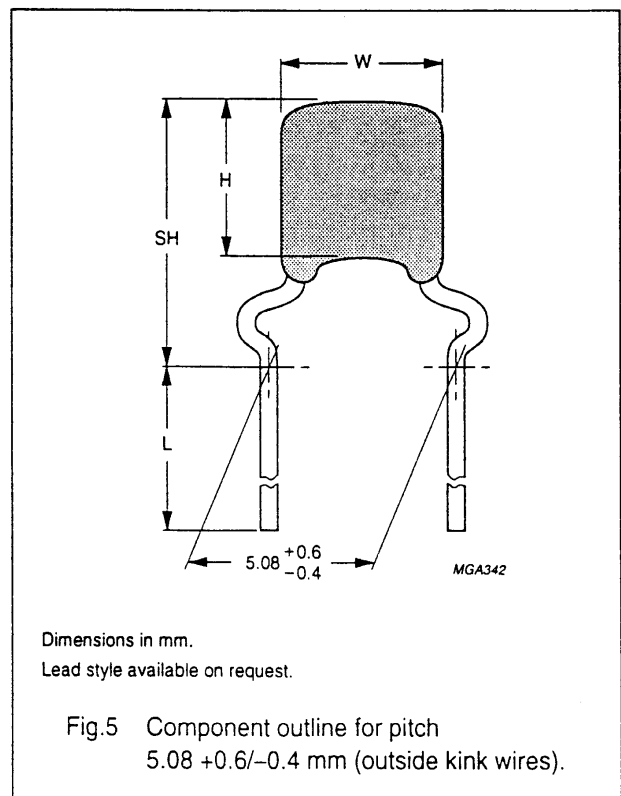
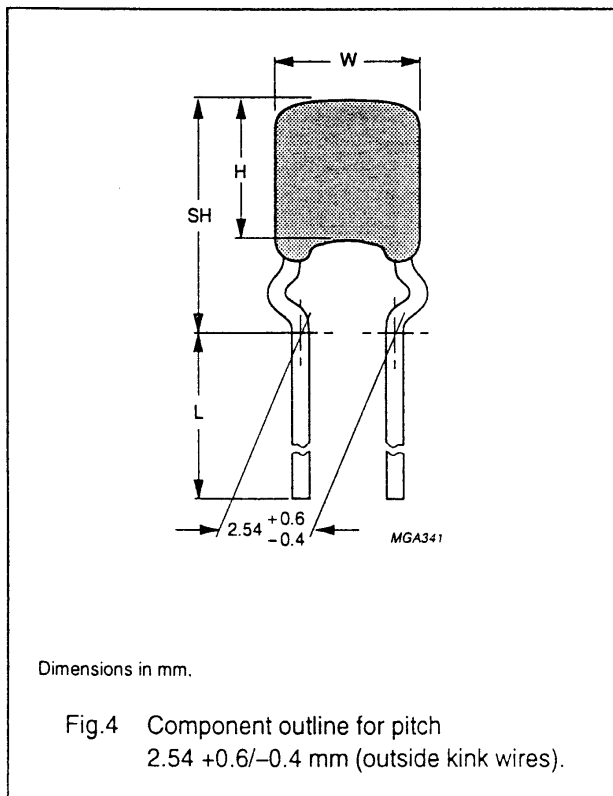
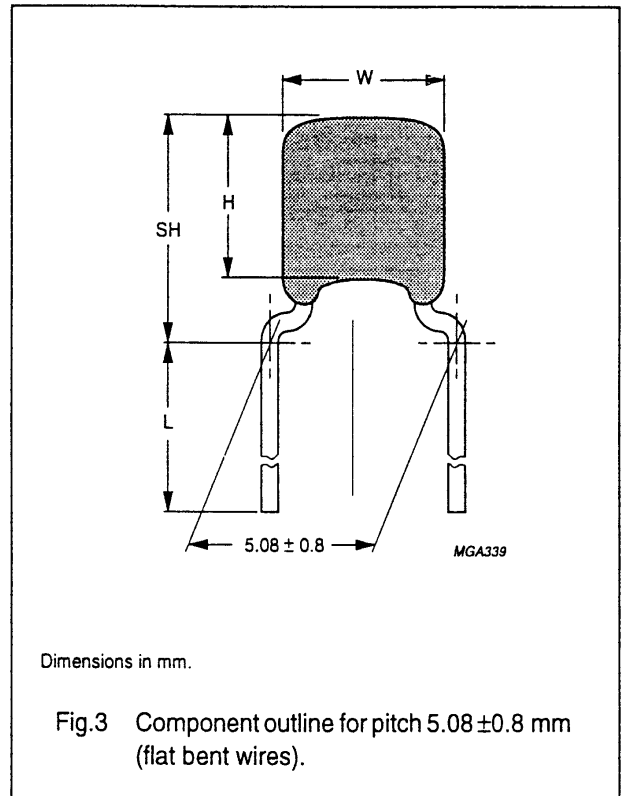
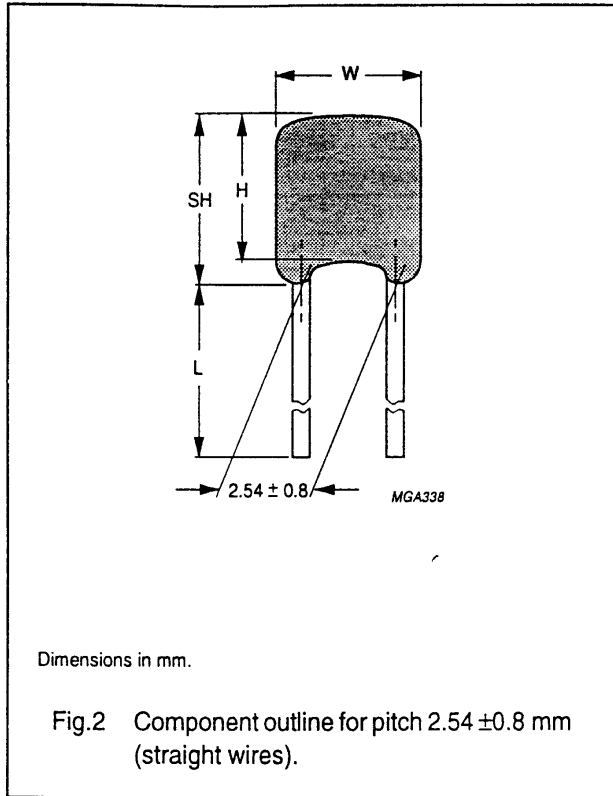
## QUICK REFERENCE DATA

DESCRIPTION	VALUE		
	2222 730 .....	2222 731 .....	2222 733 .....
Capacitance range	10 pF to 0.022 $\mu$ F (E12 series)	220 pF to 1.0 $\mu$ F (E12 series)	1000 pF to 1.0 $\mu$ F (E12 series)
Rated DC voltage	50 and 100 V	50 and 100 V	50 and 100 V
Tolerance on capacitance	$\pm$ 5%; $\pm$ 10%	$\pm$ 10%; $\pm$ 20%	$\pm$ 20%; -20%/+80%
Temperature coefficient	NP0 (COG)	X7R	Z5U

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MECHANICAL DATA



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## Physical dimensions.

Table 1 Capacitor dimensions and mass; notes 1 and 2.

SIZE	W <sub>max</sub> (mm)	H <sub>max</sub> (mm)	T <sub>max</sub> <sup>(3)</sup> (mm)	MAX. SEATING HEIGHT (SH) (mm)				MASS (g)
				Fig.2	Fig.3	Fig.4	Fig.5	
15	3.81 (0.150)	3.81 (0.150)	2.54 (0.100)	5.38 (0.212)	6.35 (0.250)	6.99 (0.275)	6.99 (0.275)	≈0.15
20	5.08 (0.200)	5.08 (0.200)	3.18 (0.125)	6.65 (0.262)	7.62 (0.300)	8.26 (0.325)	8.26 (0.325)	≈0.16
30	7.62 (0.300)	7.62 (0.300)	3.81 (0.150)	–	10.16 (0.400)	–	10.80 (0.425)	≈0.42

## Notes

1. Bulk packed products have a standard lead length L ≥ 25.4 mm.
2. Dimensions between the parentheses are in inches.
3. Thickness defined as T.

Marking<sup>(1)</sup> (see Fig.6)

## Capacitance value (CCCT):

10 pF to 99 pF; actual value in pF  
(2 digits only)

100 pF and above; coded  
capacitance value (same as used  
in P/N).

## Tolerance (CCCT):

Standard EIA tolerance.

## Material code (M V):

Standard EIA TC code

A = NP0 (COG)

C = X7R

E = Z5U.

## Voltage code (M V):

Standard EIA voltage code

1 = 100 V

5 = 50 V.

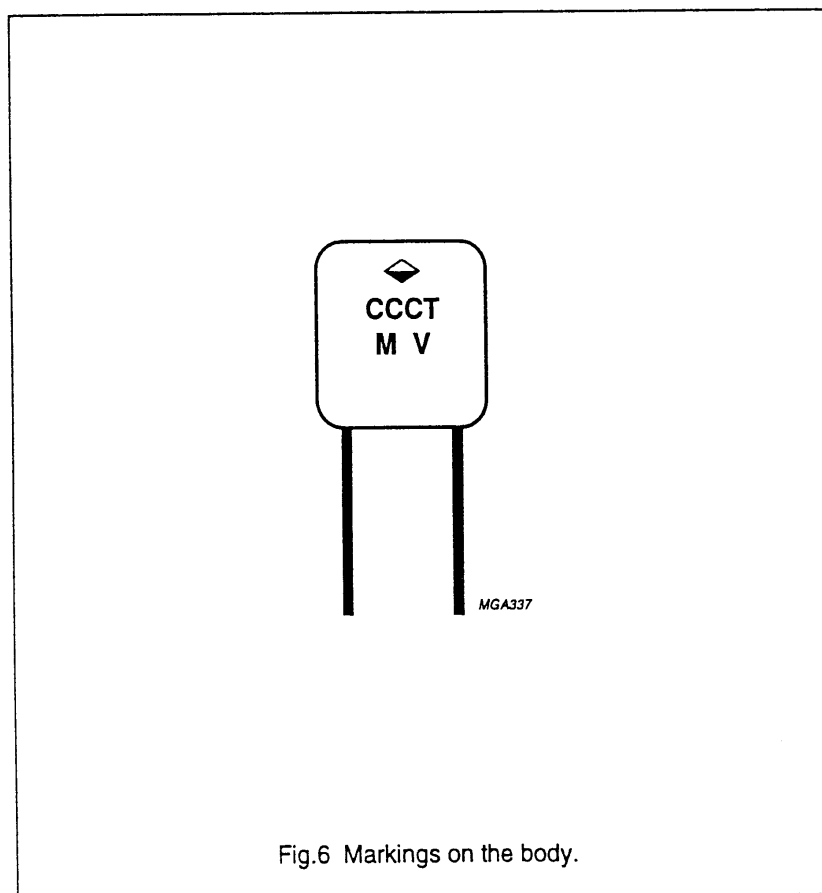


Fig.6 Markings on the body.

(1) Sizes 15 and 20 are marked with capacitance value only.

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## PACKAGING

For details refer to Chapter "Leaded ceramic multilayer capacitors", Section "General data".

## ORDERING INFORMATION

Table 2 Catalogue numbers.

CAP. TOL.	PITCH <sup>(2)</sup> P (mm)	LEAD <sup>(2)</sup> DIA. d (mm)	CATALOGUE NUMBER 2222 73. .... <sup>(1)</sup>								
			BULK PACKED			ON TAPE ON REEL			ON TAPE IN AMMOPACK		
			U <sub>R</sub> (DC)		Fig.	U <sub>R</sub> (DC)		Fig.	U <sub>R</sub> (DC)		Fig.
			50 V	100 V		50 V	100 V		50 V	100 V	
±5%	2.54 (0.1); note 3	0.5 (0.020)	05...	37...	2	09...	41...	4	13...	45...	4
±10%			06...	38...	2	10...	42...	4	14...	46...	4
±20%			07...	39...	2	11...	43...	4	15...	47...	4
-20/+80%			08...	40...	2	12...	44...	4	16...	48...	4
±5%	5.08 (0.2)	0.5 (0.020)	17...	49...	3	21...	53...	3	25...	57...	3
±10%			18...	50...	3	22...	54...	3	26...	58...	3
±20%			19...	51...	3	23...	55...	3	27...	59...	3
-20/+80%			20...	52...	3	24...	56...	3	28...	60...	3

## Notes

1. Catalogue number to be completed by adding the 7th digit for the required dielectric and the last 3 digits for the required series and capacitance (see Tables 3, 4 and 5).
2. Dimensions between the parentheses are in inches.
3. Sizes 15 and 20 only.

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**Table 3** Range of values for NP0 (COG), 2222 730 .....; see Table 6 for conditions.

CAPACITANCE VALUE (pF)	SIZE (see Table 1)		SUFFIX OF CATALOGUE NUMBER (see Table 2)
	$U_R = 50 \text{ V (DC)}$	$U_R = 100 \text{ V (DC)}$	
10 to 82	15	15	..109 to ..829
100 to 820	15	15	..101 to ..821
1000	15	20	..102
1200 to 4700	20	20	..122 to ..472
5600 to 10 000	30	30	..562 to ..103
12000 to 22000	30	-	..123 to ..223

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Table 4 Range of values for X7R, 2222 731 .....; see Table 6 for conditions.

CAPACITANCE VALUE (pF)	SIZE (see Table 1)		SUFFIX OF CATALOGUE NUMBER (see Table 2)
	$U_R = 50 \text{ V (DC)}$	$U_R = 100 \text{ V (DC)}$	

The table body is heavily obscured by horizontal black bars, rendering the data illegible.

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CAPACITANCE VALUE (pF)	SIZE (see Table 1)		SUFFIX OF CATALOGUE NUMBER (see Table 2)
	$U_R = 50 \text{ V (DC)}$	$U_R = 100 \text{ V (DC)}$	
330000	30	30	..334
390000	30	–	..394
470000	30	–	..474
560000	30	–	..564
680000	30	–	..684
820000	30	–	..824
1000000	30	–	..105

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Table 5 Range of values for Z5U, 2222 733 .....; see Table 6 for conditions.

CAPACITANCE VALUE (pF)	SIZE (see Table 1)		SUFFIX OF CATALOGUE NUMBER (see Table 2)
	U <sub>R</sub> = 50 V (DC)	U <sub>R</sub> = 100 V (DC)	
1000	15	15	..102
1200	15	15	..122
1500	15	15	..152
1800	15	15	..182
2200	15	15	..222
2700	15	15	..272
3300	15	15	..332
3900	15	15	..392
4700	15	15	..472
5600	15	15	..562
6800	15	15	..682
8200	15	15	..822
10000	15	15	..103
12000	15	20	..123
15000	15	20	..153
18000	15	20	..183
22000	15	20	..223
27000	15	20	..273
33000	15	20	..333
39000	15	20	..393
47000	15	20	..473
56000	15	20	..563
68000	15	20	..683
82000	15	20	..823
100000	15	20	..104
120000	20	30	..124
150000	20	30	..154
180000	20	30	..184
220000	20	30	..224
270000	20	30	..274
330000	20	30	..334
390000	30	30	..394
470000	30	30	..474
560000	30	-	..564
680000	30	-	..684
820000	30	-	..824
1000000	30	-	..105



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**ELECTRICAL CHARACTERISTICS**

**Table 6** Electrical data for NP0, X7R and Z5U; conditions for Tables 3, 4 and 5.

The capacitors meet the essential requirements of "EIA-198". Unless stated otherwise all electrical values apply at an ambient temperature of  $25 \pm 3$  °C, at barometric pressures of 650 to 800 mm of mercury, and relative humidity not to exceed 75%.

DESCRIPTION	VALUE
<b>Capacitors with temperature coefficient NP0</b>	
Capacitance range:	
at 1 MHz, 1 V; where $C \leq 1000$ pF	10 pF to 0.022 $\mu$ F
at 1 kHz, 1 V; where $C > 1000$ pF	10 pF to 0.022 $\mu$ F
Tolerance on the capacitance	$\pm 5\%$ , $\pm 10\%$
Rated DC voltage	50 and 100 V
DC test voltage; duration 1 minute	250% of rated voltage
Insulation resistance at rated voltage	100 G $\Omega$ or 1000 M $\Omega \times \mu$ F, whichever is less at 25 °C
Temperature coefficient of the capacitance	$0 \times 10^{-6}/K$
Tolerance on the temperature coefficient	$\pm 30 \times 10^{-6}/K$
Dissipation factor:	
at 1 MHz, 1 V; where $C \leq 1000$ pF	$< 15 \times 10^{-4}$
at 1 kHz, 1 V; where $C > 1000$ pF	$< 15 \times 10^{-4}$
Operating temperature range	-55 to +125 °C
Storage temperature range	-55 to +85 °C
<b>Capacitors with temperature coefficient X7R</b>	
Capacitance range at 1 kHz, 1 V	220 pF to 1.0 $\mu$ F
Tolerance on the capacitance	$\pm 10\%$ , $\pm 20\%$
Maximum capacitance variation with respect to capacitance value at 25 °C	$\pm 15\%$
Rated DC voltage	50 and 100 V
DC test voltage; duration 1 minute	250% of rated voltage
Insulation resistance at rated voltage	100 G $\Omega$ or 1000 M $\Omega \times \mu$ F, whichever is less at 25 °C
Dissipation factor at 1 kHz, 1 V	$\leq 2.5\%$
Operating temperature range	-55 to +125 °C
Storage temperature range	-55 to +85 °C
Ageing	typical 1% per time decade

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DESCRIPTION	VALUE
<b>Capacitors with temperature coefficient Z5U</b>	
Capacitance range at 1 kHz, 0.5 V	1000 pF to 1.0 $\mu$ F
Tolerance on the capacitance	$\pm 20\%$ , $-20/+80\%$

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Table 1 Mono-kap™ conformal radials, NP0 (COG), 5% and 10% tolerance, 50 V.

DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 15 C 100 J	K 100 J 15 COG F VB	2222 730 05109	2.54
CN 15 C 100 K	K 100 K 15 COG F VB	2222 730 06109	2.54
CN 15 C 120 J	K 120 J 15 COG F VB	2222 730 05129	2.54
CN 15 C 120 K	K 120 K 15 COG F VB	2222 730 06129	2.54
CN 15 C 150 J	K 150 J 15 COG F VB	2222 730 05159	2.54
CN 15 C 150 K	K 150 K 15 COG F VB	2222 730 06159	2.54
CN 15 C 180 J	K 180 J 15 COG F VB	2222 730 05189	2.54
CN 15 C 180 K	K 180 K 15 COG F VB	2222 730 06189	2.54
CN 15 C 220 J	K 220 J 15 COG F VB	2222 730 05229	2.54
CN 15 C 220 K	K 220 K 15 COG F VB	2222 730 06229	2.54
CN 15 C 270 J	K 270 J 15 COG F VB	2222 730 05279	2.54
CN 15 C 270 K	K 270 K 15 COG F VB	2222 730 06279	2.54
CN 15 C 330 J	K 330 J 15 COG F VB	2222 730 05339	2.54
CN 15 C 330 K	K 330 K 15 COG F VB	2222 730 06339	2.54
CN 15 C 390 J	K 390 J 15 COG F VB	2222 730 05399	2.54
CN 15 C 390 K	K 390 K 15 COG F VB	2222 730 06399	2.54
CN 15 C 470 J	K 470 J 15 COG F VB	2222 730 05479	2.54
CN 15 C 470 K	K 470 K 15 COG F VB	2222 730 06479	2.54
CN 15 C 560 J	K 560 J 15 COG F VB	2222 730 05569	2.54
CN 15 C 560 K	K 560 K 15 COG F VB	2222 730 06569	2.54
CN 15 C 680 J	K 680 J 15 COG F VB	2222 730 05689	2.54
CN 15 C 680 K	K 680 K 15 COG F VB	2222 730 06689	2.54
CN 15 C 820 J	K 820 J 15 COG F VB	2222 730 05829	2.54
CN 15 C 820 K	K 820 K 15 COG F VB	2222 730 06829	2.54
CN 15 C 101 J	K 101 J 15 COG F VB	2222 730 05101	2.54
CN 15 C 101 K	K 101 K 15 COG F VB	2222 730 06101	2.54
CN 15 C 121 J	K 121 J 15 COG F VB	2222 730 05121	2.54
CN 15 C 121 K	K 121 K 15 COG F VB	2222 730 06121	2.54
CN 15 C 151 J	K 151 J 15 COG F VB	2222 730 05151	2.54
CN 15 C 151 K	K 151 K 15 COG F VB	2222 730 06151	2.54
CN 15 C 181 J	K 181 J 15 COG F VB	2222 730 05181	2.54
CN 15 C 181 K	K 181 K 15 COG F VB	2222 730 06181	2.54
CN 15 C 221 J	K 221 J 15 COG F VB	2222 730 05221	2.54
CN 15 C 221 K	K 221 K 15 COG F VB	2222 730 06221	2.54
CN 15 C 271 J	K 271 J 15 COG F VB	2222 730 05271	2.54
CN 15 C 271 K	K 271 K 15 COG F VB	2222 730 06271	2.54
CN 15 C 331 J	K 331 J 15 COG F VB	2222 730 05331	2.54
CN 15 C 331 K	K 331 K 15 COG F VB	2222 730 06331	2.54

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DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 15 C 100 K DRM	K 100 K 15 COG F TT	2222 730 22109	5.08
CN 15 C 120 J DRM	K 120 J 15 COG F TT	2222 730 21129	5.08
CN 15 C 120 K DRM	K 120 K 15 COG F TT	2222 730 22129	5.08
CN 15 C 150 J DRM	K 150 J 15 COG F TT	2222 730 21159	5.08
CN 15 C 150 K DRM	K 150 K 15 COG F TT	2222 730 22159	5.08
CN 15 C 180 J DRM	K 180 J 15 COG F TT	2222 730 21189	5.08
CN 15 C 180 K DRM	K 180 K 15 COG F TT	2222 730 22189	5.08
CN 15 C 220 J DRM	K 220 J 15 COG F TT	2222 730 21229	5.08
CN 15 C 220 K DRM	K 220 K 15 COG F TT	2222 730 22229	5.08
CN 15 C 270 J DRM	K 270 J 15 COG F TT	2222 730 21279	5.08
CN 15 C 270 K DRM	K 270 K 15 COG F TT	2222 730 22279	5.08
CN 15 C 330 J DRM	K 330 J 15 COG F TT	2222 730 21339	5.08
CN 15 C 330 K DRM	K 330 K 15 COG F TT	2222 730 22339	5.08
CN 15 C 390 J DRM	K 390 J 15 COG F TT	2222 730 21399	5.08
CN 15 C 390 K DRM	K 390 K 15 COG F TT	2222 730 22399	5.08
CN 15 C 470 J DRM	K 470 J 15 COG F TT	2222 730 21479	5.08
CN 15 C 470 K DRM	K 470 K 15 COG F TT	2222 730 22479	5.08
CN 15 C 560 J DRM	K 560 J 15 COG F TT	2222 730 21569	5.08
CN 15 C 560 K DRM	K 560 K 15 COG F TT	2222 730 22569	5.08
CN 15 C 680 J DRM	K 680 J 15 COG F TT	2222 730 21689	5.08
CN 15 C 680 K DRM	K 680 K 15 COG F TT	2222 730 22689	5.08
CN 15 C 820 J DRM	K 820 J 15 COG F TT	2222 730 21829	5.08
CN 15 C 820 K DRM	K 820 K 15 COG F TT	2222 730 22829	5.08
CN 15 C 101 J DRM	K 101 J 15 COG F TT	2222 730 21101	5.08
CN 15 C 101 K DRM	K 101 K 15 COG F TT	2222 730 22101	5.08
CN 15 C 121 J DRM	K 121 J 15 COG F TT	2222 730 21121	5.08
CN 15 C 121 K DRM	K 121 K 15 COG F TT	2222 730 22121	5.08
CN 15 C 151 J DRM	K 151 J 15 COG F TT	2222 730 21151	5.08
CN 15 C 151 K DRM	K 151 K 15 COG F TT	2222 730 22151	5.08
CN 15 C 181 J DRM	K 181 J 15 COG F TT	2222 730 21181	5.08
CN 15 C 181 K DRM	K 181 K 15 COG F TT	2222 730 22181	5.08
CN 15 C 221 J DRM	K 221 J 15 COG F TT	2222 730 21221	5.08
CN 15 C 221 K DRM	K 221 K 15 COG F TT	2222 730 22221	5.08
CN 15 C 271 J DRM	K 271 J 15 COG F TT	2222 730 21271	5.08
CN 15 C 271 K DRM	K 271 K 15 COG F TT	2222 730 22271	5.08
CN 15 C 331 J DRM	K 331 J 15 COG F TT	2222 730 21331	5.08
CN 15 C 331 K DRM	K 331 K 15 COG F TT	2222 730 22331	5.08
CN 15 C 391 J DRM	K 391 J 15 COG F TT	2222 730 21391	5.08
CN 15 C 391 K DRM	K 391 K 15 COG F TT	2222 730 22391	5.08
CN 15 C 471 J DRM	K 471 J 15 COG F TT	2222 730 21471	5.08

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DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 15 C 471 K DRM	K 471 K 15 COG F TT	2222 730 22471	5.08

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Table 2 Mono-kap™ conformal radials, NP0 (COG), 5% and 10% tolerance, 100 V.

DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 15 A 100 J	K 100 J 15 COG H VB	2222 730 37109	2.54
CN 15 A 100 K	K 100 K 15 COG H VB	2222 730 38109	2.54
CN 15 A 120 J	K 120 J 15 COG H VB	2222 730 37129	2.54
CN 15 A 120 K	K 120 K 15 COG H VB	2222 730 38129	2.54
CN 15 A 150 J	K 150 J 15 COG H VB	2222 730 37159	2.54
CN 15 A 150 K	K 150 K 15 COG H VB	2222 730 38159	2.54
CN 15 A 180 J	K 180 J 15 COG H VB	2222 730 37189	2.54
CN 15 A 180 K	K 180 K 15 COG H VB	2222 730 38189	2.54
CN 15 A 220 J	K 220 J 15 COG H VB	2222 730 37229	2.54
CN 15 A 220 K	K 220 K 15 COG H VB	2222 730 38229	2.54
CN 15 A 270 J	K 270 J 15 COG H VB	2222 730 37279	2.54
CN 15 A 270 K	K 270 K 15 COG H VB	2222 730 38279	2.54
CN 15 A 330 J	K 330 J 15 COG H VB	2222 730 37339	2.54
CN 15 A 330 K	K 330 K 15 COG H VB	2222 730 38339	2.54
CN 15 A 390 J	K 390 J 15 COG H VB	2222 730 37399	2.54
CN 15 A 390 K	K 390 K 15 COG H VB	2222 730 38399	2.54
CN 15 A 470 J	K 470 J 15 COG H VB	2222 730 37479	2.54
CN 15 A 470 K	K 470 K 15 COG H VB	2222 730 38479	2.54
CN 15 A 560 J	K 560 J 15 COG H VB	2222 730 37569	2.54
CN 15 A 560 K	K 560 K 15 COG H VB	2222 730 38569	2.54
CN 15 A 680 J	K 680 J 15 COG H VB	2222 730 37689	2.54
CN 15 A 680 K	K 680 K 15 COG H VB	2222 730 38689	2.54
CN 15 A 820 J	K 820 J 15 COG H VB	2222 730 37829	2.54
CN 15 A 820 K	K 820 K 15 COG H VB	2222 730 38829	2.54
CN 15 A 101 J	K 101 J 15 COG H VB	2222 730 37101	2.54
CN 15 A 101 K	K 101 K 15 COG H VB	2222 730 38101	2.54
CN 15 A 121 J	K 121 J 15 COG H VB	2222 730 37121	2.54
CN 15 A 121 K	K 121 K 15 COG H VB	2222 730 38121	2.54
CN 15 A 151 J	K 151 J 15 COG H VB	2222 730 37151	2.54
CN 15 A 151 K	K 151 K 15 COG H VB	2222 730 38151	2.54
CN 15 A 181 J	K 181 J 15 COG H VB	2222 730 37181	2.54
CN 15 A 181 K	K 181 K 15 COG H VB	2222 730 38181	2.54
CN 15 A 221 J	K 221 J 15 COG H VB	2222 730 37221	2.54

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DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 15 A 391 K	K 391 K 15 COG H VB	2222 730 38391	2.54
CN 20 A 471 J	K 471 J 15 COG H VB	2222 730 37471	2.54
CN 20 A 471 K	K 471 K 15 COG H VB	2222 730 38471	2.54
CN 20 A 561 J	K 561 J 15 COG H VB	2222 730 37561	2.54
CN 20 A 561 K	K 561 K 15 COG H VB	2222 730 38561	2.54
CN 20 A 681 J	K 681 J 15 COG H VB	2222 730 37681	2.54
CN 20 A 681 K	K 681 K 15 COG H VB	2222 730 38681	2.54
CN 20 A 821 J	K 821 J 15 COG H VB	2222 730 37821	2.54
CN 20 A 821 K	K 821 K 15 COG H VB	2222 730 38821	2.54
CN 20 A 102 J	K 102 J 20 COG H VB	2222 730 37102	2.54
CN 20 A 102 K	K 102 K 20 COG H VB	2222 730 38102	2.54
CN 20 A 122 J	K 122 J 20 COG H VB	2222 730 37122	2.54
CN 20 A 152 J	K 152 J 20 COG H VB	2222 730 37152	2.54
CN 20 A 152 K	K 152 K 20 COG H VB	2222 730 38152	2.54
CN 30 A 182 J	K 182 J 20 COG H VC	2222 730 49182	5.08
CN 30 A 182 K	K 182 K 20 COG H VC	2222 730 50182	5.08
CN 30 A 222 J	K 222 J 20 COG H VC	2222 730 49222	5.08
CN 30 A 222 K	K 222 K 20 COG H VC	2222 730 50222	5.08
CN 30 A 272 J	K 272 J 20 COG H VC	2222 730 49272	5.08
CN 30 A 272 K	K 272 K 20 COG H VC	2222 730 50272	5.08
CN 30 A 332 J	K 332 J 20 COG H VC	2222 730 49332	5.08
CN 30 A 332 K	K 332 K 20 COG H VC	2222 730 50332	5.08
CN 30 A 392 J	K 392 J 20 COG H VC	2222 730 49392	5.08
CN 30 A 472 J	K 472 J 20 COG H VC	2222 730 49472	5.08
CN 30 A 472 K	K 472 K 20 COG H VC	2222 730 50472	5.08
CN 30 A 682 J	K 682 J 30 COG H VC	2222 730 49682	5.08
CN 30 A 103 J	K 103 J 30 COG H VC	2222 730 49103	5.08
CN 30 A 103 K	K 103 K 30 COG H VC	2222 730 50103	5.08
CN 15 A 100 J DRM	K 100 J 15 COG H TT	2222 730 53100	5.08
CN 15 A 100 K DRM	K 100 K 15 COG H TT	2222 730 54100	5.08
CN 15 A 120 J DRM	K 120 J 15 COG H TT	2222 730 53120	5.08
CN 15 A 120 K DRM	K 120 K 15 COG H TT	2222 730 54120	5.08
CN 15 A 150 J DRM	K 150 J 15 COG H TT	2222 730 53150	5.08
CN 15 A 150 K DRM	K 150 K 15 COG H TT	2222 730 54150	5.08
CN 15 A 180 J DRM	K 180 J 15 COG H TT	2222 730 53180	5.08
CN 15 A 180 K DRM	K 180 K 15 COG H TT	2222 730 54180	5.08
CN 15 A 220 J DRM	K 220 J 15 COG H TT	2222 730 53220	5.08
CN 15 A 220 K DRM	K 220 K 15 COG H TT	2222 730 54220	5.08
CN 15 A 270 J DRM	K 270 J 15 COG H TT	2222 730 53270	5.08
CN 15 A 270 K DRM	K 270 K 15 COG H TT	2222 730 54270	5.08



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DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 15 A 330 J DRM	K 330 J 15 COG H TT	2222 730 53339	5.08
CN 15 A 330 K DRM	K 330 K 15 COG H TT	2222 730 54339	5.08
CN 15 A 390 J DRM	K 390 J 15 COG H TT	2222 730 53399	5.08
CN 15 A 390 K DRM	K 390 K 15 COG H TT	2222 730 54399	5.08
CN 15 A 470 J DRM	K 470 J 15 COG H TT	2222 730 53479	5.08
CN 15 A 470 K DRM	K 470 K 15 COG H TT	2222 730 54479	5.08
CN 15 A 560 J DRM	K 560 J 15 COG H TT	2222 730 53569	5.08
CN 15 A 560 K DRM	K 560 K 15 COG H TT	2222 730 54569	5.08
CN 15 A 680 J DRM	K 680 J 15 COG H TT	2222 730 53689	5.08
CN 15 A 680 K DRM	K 680 K 15 COG H TT	2222 730 54689	5.08
CN 15 A 820 J DRM	K 820 J 15 COG H TT	2222 730 53829	5.08
CN 15 A 820 K DRM	K 820 K 15 COG H TT	2222 730 54829	5.08
CN 15 A 101 J DRM	K 101 J 15 COG H TT	2222 730 53101	5.08
CN 15 A 101 K DRM	K 101 K 15 COG H TT	2222 730 54101	5.08
CN 15 A 121 J DRM	K 121 J 15 COG H TT	2222 730 53121	5.08
CN 15 A 121 K DRM	K 121 K 15 COG H TT	2222 730 54121	5.08
CN 15 A 151 J DRM	K 151 J 15 COG H TT	2222 730 53151	5.08
CN 15 A 151 K DRM	K 151 K 15 COG H TT	2222 730 54151	5.08
CN 15 A 181 J DRM	K 181 J 15 COG H TT	2222 730 53181	5.08
CN 15 A 181 K DRM	K 181 K 15 COG H TT	2222 730 54181	5.08
CN 15 A 221 J DRM	K 221 J 15 COG H TT	2222 730 53221	5.08
CN 15 A 221 K DRM	K 221 K 15 COG H TT	2222 730 54221	5.08
CN 15 A 271 J DRM	K 271 J 15 COG H TT	2222 730 53271	5.08
CN 15 A 271 K DRM	K 271 K 15 COG H TT	2222 730 54271	5.08
CN 15 A 331 J DRM	K 331 J 15 COG H TT	2222 730 53331	5.08
CN 15 A 331 K DRM	K 331 K 15 COG H TT	2222 730 54331	5.08
CN 15 A 391 J DRM	K 391 J 15 COG H TT	2222 730 53391	5.08
CN 15 A 391 K DRM	K 391 K 15 COG H TT	2222 730 54391	5.08
CN 20 A 471 J DRM	K 471 J 15 COG H TT	2222 730 53471	5.08
CN 20 A 471 K DRM	K 471 K 15 COG H TT	2222 730 54471	5.08
CN 20 A 561 J DRM	K 561 J 15 COG H TT	2222 730 53561	5.08
CN 20 A 561 K DRM	K 561 K 15 COG H TT	2222 730 54561	5.08
CN 20 A 681 J DRM	K 681 J 15 COG H TT	2222 730 53681	5.08
CN 20 A 681 K DRM	K 681 K 15 COG H TT	2222 730 54681	5.08
CN 20 A 821 J DRM	K 821 J 15 COG H TT	2222 730 53821	5.08
CN 20 A 821 K DRM	K 821 K 15 COG H TT	2222 730 54821	5.08
CN 20 A 102 J DRM	K 102 J 20 COG H TT	2222 730 53102	5.08
CN 20 A 102 K DRM	K 102 K 20 COG H TT	2222 730 54102	5.08
CN 20 A 122 J DRM	K 122 J 20 COG H TT	2222 730 53122	5.08
CN 20 A 152 J DRM	K 152 J 20 COG H TT	2222 730 53152	5.08

## Leaded ceramic multilayer capacitors

DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CN 20 A 152 K DRM	K 152 K 20 COG H TT	2222 730 54152	5.08
CN 30 A 182 J DRM	K 182 J 20 COG H TT	2222 730 53182	5.08
CN 30 A 182 K DRM	K 182 K 20 COG H TT	2222 730 54182	5.08
CN 30 A 222 J DRM	K 222 J 20 COG H TT	2222 730 53222	5.08
CN 30 A 222 K DRM	K 222 K 20 COG H TT	2222 730 54222	5.08
CN 30 A 272 J DRM	K 272 J 20 COG H TT	2222 730 53272	5.08
CN 30 A 272 K DRM	K 272 K 20 COG H TT	2222 730 54272	5.08
CN 30 A 332 J DRM	K 332 J 20 COG H TT	2222 730 53332	5.08
CN 30 A 332 K DRM	K 332 K 20 COG H TT	2222 730 54332	5.08
CN 30 A 392 J DRM	K 392 J 30 COG H TT	2222 730 53392	5.08
CN 30 A 472 J DRM	K 472 J 30 COG H TT	2222 730 53472	5.08
CN 30 A 472 K DRM	K 472 K 30 COG H TT	2222 730 54472	5.08
CN 30 A 682 J DRM	K 682 J 30 COG H TT	2222 730 53682	5.08
CN 30 A 103 J DRM	K 103 J 30 COG H TT	2222 730 53103	5.08
CN 30 A 103 K DRM	K 103 K 30 COG H TT	2222 730 54103	5.08

## Note to Table 2

1. Only the first 13 digits of the 15-digit code are significant for cross reference purposes.

Table 3 Mono-kap™ conformal radials X7R, 10% and 20% tolerance, 50 V.

DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CW 15 C 151 K	K 151 K 15 X7R F VB	2222 731 06151	2.54
CW 15 C 181 K	K 181 K 15 X7R F VB	2222 731 06181	2.54
CW 15 C 181 M	K 181 M 15 X7R F VB	2222 731 07181	2.54
CW 15 C 221 K	K 221 K 15 X7R F VB	2222 731 06221	2.54
CW 15 C 271 K	K 271 K 15 X7R F VB	2222 731 06271	2.54
CW 15 C 271 M	K 271 M 15 X7R F VB	2222 731 07271	2.54
CW 15 C 331 K	K 331 K 15 X7R F VB	2222 731 06331	2.54
CW 15 C 331 M	K 331 M 15 X7R F VB	2222 731 07331	2.54
CW 15 C 391 K	K 391 K 15 X7R F VB	2222 731 06391	2.54
CW 15 C 391 M	K 391 M 15 X7R F VB	2222 731 07391	2.54
CW 15 C 471 K	K 471 K 15 X7R F VB	2222 731 06471	2.54
CW 15 C 471 M	K 471 M 15 X7R F VB	2222 731 07471	2.54
CW 15 C 561 K	K 561 K 15 X7R F VB	2222 731 06561	2.54
CW 15 C 681 K	K 681 K 15 X7R F VB	2222 731 06681	2.54
CW 15 C 681 M	K 681 M 15 X7R F VB	2222 731 07681	2.54
CW 15 C 821 K	K 821 K 15 X7R F VB	2222 731 06821	2.54
CW 15 C 821 M	K 821 M 15 X7R F VB	2222 731 07821	2.54
CW 15 C 102 K	K 102 K 15 X7R F VB	2222 731 06102	2.54
CW 15 C 102 M	K 102 M 15 X7R F VB	2222 731 07102	2.54

## Leaded ceramic multilayer capacitors

Cross reference  
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DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CW 15 C 122 K	K 122 K 15 X7R F VB	2222 731 06122	2.54
CW 15 C 152 K	K 152 K 15 X7R F VB	2222 731 06152	2.54
CW 15 C 182 K	K 182 K 15 X7R F VB	2222 731 06182	2.54
CW 15 C 222 K	K 222 K 15 X7R F VB	2222 731 06222	2.54
CW 15 C 222 M	K 222 M 15 X7R F VB	2222 731 07222	2.54
CW 15 C 272 K	K 272 K 15 X7R F VB	2222 731 06272	2.54
CW 15 C 272 M	K 272 M 15 X7R F VB	2222 731 07272	2.54
CW 15 C 332 K	K 332 K 15 X7R F VB	2222 731 06332	2.54
CW 15 C 332 M	K 332 M 15 X7R F VB	2222 731 07332	2.54
CW 15 C 392 K	K 392 K 15 X7R F VB	2222 731 06392	2.54
CW 15 C 472 K	K 472 K 15 X7R F VB	2222 731 06472	2.54
CW 15 C 472 M	K 472 M 15 X7R F VB	2222 731 07472	2.54
CW 15 C 562 K	K 562 K 15 X7R F VB	2222 731 06562	2.54
CW 15 C 562 M	K 562 M 15 X7R F VB	2222 731 07562	2.54
CW 15 C 682 K	K 682 K 15 X7R F VB	2222 731 06682	2.54
CW 15 C 682 M	K 682 M 15 X7R F VB	2222 731 07682	2.54
CW 15 C 822 K	K 822 K 15 X7R F VB	2222 731 06822	2.54
CW 15 C 822 M	K 822 M 15 X7R F VB	2222 731 07822	2.54
CW 15 C 103 K	K 103 K 15 X7R F VB	2222 731 06103	2.54
CW 15 C 103 M	K 103 M 15 X7R F VB	2222 731 07103	2.54
CW 15 C 153 K	K 153 K 15 X7R F VB	2222 731 06153	2.54
CW 15 C 153 M	K 153 M 15 X7R F VB	2222 731 07153	2.54
CW 20 C 183 K	K 183 K 15 X7R F VB	2222 731 06183	2.54
CW 20 C 183 M	K 183 M 15 X7R F VB	2222 731 07183	2.54
CW 20 C 223 K	K 223 K 15 X7R F VB	2222 731 06223	2.54

## Leaded ceramic multilayer capacitors

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DISTRIBUTION PART NUMBER	15 DIGIT CODE <sup>(1)</sup>	12NC CODE	PITCH
CW 30 C 124 K	K 124 K 20 X7R F VC	2222 731 18124	5.08
CW 30 C 124 M	K 124 M 20 X7R F VC	2222 731 19124	5.08
CW 30 C 154 K	K 154 K 20 X7R F VC	2222 731 18154	5.08
CW 30 C 154 M	K 154 M 20 X7R F VC	2222 731 19154	5.08
CW 30 C 184 K	K 184 K 20 X7R F VC	2222 731 18184	5.08
CW 30 C 184 M	K 184 M 20 X7R F VC	2222 731 19184	5.08
CW 30 C 224 K	K 224 K 20 X7R F VC	2222 731 18224	5.08
CW 30 C 224 M	K 224 M 20 X7R F VC	2222 731 19224	5.08
CW 30 C 274 K	K 274 K 30 X7R F VC	2222 731 18274	5.08
CW 30 C 274 M	K 274 M 30 X7R F VC	2222 731 19274	5.08
CW 30 C 334 K	K 334 K 30 X7R F VC	2222 731 18334	5.08
CW 30 C 334 M	K 334 M 30 X7R F VC	2222 731 19334	5.08
CW 30 C 394 K	K 394 K 30 X7R F VC	2222 731 18394	5.08
CW 30 C 474 K	K 474 K 30 X7R F VC	2222 731 18474	5.08
CW 30 C 474 M	K 474 M 30 X7R F VC	2222 731 19474	5.08
CW 40 C 564 M	K 564 M 30 X7R F VC	2222 731 19564	5.08
CW 40 C 684 K	K 684 K 30 X7R F VC	2222 731 18684	5.08
CW 40 C 824 M	K 824 M 30 X7R F VC	2222 731 19824	5.08
CW 40 C 105 K	K 105 K 30 X7R F VC	2222 731 18105	5.08
CW 40 C 105 M	K 105 M 30 X7R F VC	2222 731 19105	5.08
CW 15 C 151 K DRM	K 151 K 15 X7R F TT	2222 731 22151	5.08
CW 15 C 181 K DRM	K 181 K 15 X7R F TT	2222 731 22181	5.08
CW 15 C 181 M DRM	K 181 M 15 X7R F TT	2222 731 23181	5.08
CW 15 C 221 K DRM	K 221 K 15 X7R F TT	2222 731 22221	5.08
CW 15 C 271 K DRM	K 271 K 15 X7R F TT	2222 731 22271	5.08
CW 15 C 271 M DRM	K 271 M 15 X7R F TT	2222 731 23271	5.08
CW 15 C 331 K DRM	K 331 K 15 X7R F TT	2222 731 22331	5.08
CW 15 C 331 M DRM	K 331 M 15 X7R F TT	2222 731 23331	5.08
CW 15 C 391 K DRM	K 391 K 15 X7R F TT	2222 731 22391	5.08
CW 15 C 391 M DRM	K 391 M 15 X7R F TT	2222 731 23391	5.08
CW 15 C 471 K DRM	K 471 K 15 X7R F TT	2222 731 22471	5.08
CW 15 C 471 M DRM	K 471 M 15 X7R F TT	2222 731 23471	5.08
CW 15 C 561 K DRM	K 561 K 15 X7R F TT	2222 731 22561	5.08
CW 15 C 681 K DRM	K 681 K 15 X7R F TT	2222 731 22681	5.08
CW 15 C 681 M DRM	K 681 M 15 X7R F TT	2222 731 23681	5.08
CW 15 C 821 K DRM	K 821 K 15 X7R F TT	2222 731 22821	5.08
CW 15 C 821 M DRM	K 821 M 15 X7R F TT	2222 731 23821	5.08
CW 15 C 102 K DRM	K 102 K 15 X7R F TT	2222 731 22102	5.08
CW 15 C 102 M DRM	K 102 M 15 X7R F TT	2222 731 23102	5.08
CW 15 C 122 K DRM	K 122 K 15 X7R F TT	2222 731 22122	5.08

Cross reference  
selection guide

## Leaded ceramic multilayer capacitors

NOTES	DISTRIBUTION PART NUMBER	15 DIGIT CODE(1)	12NC CODE	PITCH
	CW 15 C 152 K DRM	K 152 K 15 X7R F TT	2222 731 22152	5.08
	CW 15 C 182 K DRM	K 182 K 15 X7R F TT	2222 731 22182	5.08
	CW 15 C 222 K DRM	K 222 K 15 X7R F TT	2222 731 22222	5.08
	CW 15 C 222 M DRM	K 222 M 15 X7R F TT	2222 731 23222	5.08
	CW 15 C 272 K DRM	K 272 K 15 X7R F TT	2222 731 22272	5.08
	CW 15 C 272 M DRM	K 272 M 15 X7R F TT	2222 731 23272	5.08
	CW 15 C 332 K DRM	K 332 K 15 X7R F TT	2222 731 22332	5.08
	CW 15 C 332 M DRM	K 332 M 15 X7R F TT	2222 731 23332	5.08
	CW 15 C 392 K DRM	K 392 K 15 X7R F TT	2222 731 22392	5.08
	CW 15 C 472 K DRM	K 472 K 15 X7R F TT	2222 731 22472	5.08
	CW 15 C 472 M DRM	K 472 M 15 X7R F TT	2222 731 23472	5.08
	CW 15 C 562 K DRM	K 562 K 15 X7R F TT	2222 731 22562	5.08
	CW 15 C 562 M DRM	K 562 M 15 X7R F TT	2222 731 23562	5.08
	CW 15 C 682 K DRM	K 682 K 15 X7R F TT	2222 731 22682	5.08
	CW 15 C 682 M DRM	K 682 M 15 X7R F TT	2222 731 23682	5.08
	CW 15 C 822 K DRM	K 822 K 15 X7R F TT	2222 731 22822	5.08
	CW 15 C 822 M DRM	K 822 M 15 X7R F TT	2222 731 23822	5.08
	CW 15 C 103 K DRM	K 103 K 15 X7R F TT	2222 731 22103	5.08
	CW 15 C 103 M DRM	K 103 M 15 X7R F TT	2222 731 23103	5.08
	CW 15 C 153 K DRM	K 153 K 15 X7R F TT	2222 731 22153	5.08
	CW 15 C 153 M DRM	K 153 M 15 X7R F TT	2222 731 23153	5.08
	CW 20 C 183 K DRM	K 183 K 15 X7R F TT	2222 731 22183	5.08
	CW 20 C 183 M DRM	K 183 M 15 X7R F TT	2222 731 23183	5.08
	CW 20 C 223 K DRM	K 223 K 15 X7R F TT	2222 731 22223	5.08
	CW 20 C 223 M DRM	K 223 M 15 X7R F TT	2222 731 23223	5.08
	CW 20 C 273 K DRM	K 273 K 15 X7R F TT	2222 731 22273	5.08
	CW 20 C 273 M DRM	K 273 M 15 X7R F TT	2222 731 23273	5.08
	CW 20 C 333 K DRM	K 333 K 15 X7R F TT	2222 731 22333	5.08
	CW 20 C 333 M DRM	K 333 M 15 X7R F TT	2222 731 23333	5.08
	CW 20 C 393 K DRM	K 393 K 20 X7R F TT	2222 731 22393	5.08
	CW 20 C 473 K DRM	K 473 K 20 X7R F TT	2222 731 22473	5.08
	CW 20 C 473 M DRM	K 473 M 20 X7R F TT	2222 731 23473	5.08
	CW 20 C 563 K DRM	K 563 K 20 X7R F TT	2222 731 22563	5.08
	CW 20 C 563 M DRM	K 563 M 20 X7R F TT	2222 731 23563	5.08
	CW 20 C 683 K DRM	K 683 K 20 X7R F TT	2222 731 22683	5.08
	CW 20 C 683 M DRM	K 683 M 20 X7R F TT	2222 731 23683	5.08
	CW 20 C 823 K DRM	K 823 K 20 X7R F TT	2222 731 22823	5.08
	CW 20 C 104 K DRM	K 104 K 20 X7R F TT	2222 731 22104	5.08
	CW 20 C 104 M DRM	K 104 M 20 X7R F TT	2222 731 23104	5.08
	CW 30 C 124 K DRM	K 124 K 20 X7R F TT	2222 731 22124	5.08

# Leaded ceramic multilayer capacitors

## Cross reference selection guide

DISTRIBUTION PART NUMBER	15 DIGIT CODE	12NC CODE	PITCH
CW 15 A 821 K	K 821 K 15 X7R H VB	2222 731 38821	2.54
CW 15 A 102 K	K 102 K 15 X7R H VB	2222 731 38102	2.54
CW 15 A 102 M	K 102 M 15 X7R H VB	2222 731 39102	2.54
CW 15 A 122 K	K 122 K 15 X7R H VB	2222 731 38122	2.54
CW 15 A 122 M	K 122 M 15 X7R H VB	2222 731 39122	2.54
CW 15 A 152 K	K 152 K 15 X7R H VB	2222 731 38152	2.54
CW 15 A 182 K	K 182 K 15 X7R H VB	2222 731 38182	2.54
CW 15 A 222 K	K 222 K 15 X7R H VB	2222 731 38222	2.54
CW 15 A 222 M	K 222 M 15 X7R H VB	2222 731 39222	2.54
CW 15 A 272 K	K 272 K 15 X7R H VB	2222 731 38272	2.54
CW 15 A 332 K	K 332 K 15 X7R H VB	2222 731 38332	2.54
CW 15 A 332 M	K 332 M 15 X7R H VB	2222 731 39332	2.54
CW 15 A 392 K	K 392 K 15 X7R H VB	2222 731 38392	2.54
CW 15 A 472 K	K 472 K 15 X7R H VB	2222 731 38472	2.54
CW 15 A 472 M	K 472 M 15 X7R H VB	2222 731 39472	2.54
CW 15 A 562 K	K 562 K 15 X7R H VB	2222 731 38562	2.54
CW 15 A 682 K	K 682 K 15 X7R H VB	2222 731 38682	2.54
CW 15 A 682 M	K 682 M 15 X7R H VB	2222 731 39682	2.54
CW 15 A 822 K	K 822 K 15 X7R H VB	2222 731 38822	2.54
CW 15 A 103 K	K 103 K 15 X7R H VB	2222 731 38103	2.54
CW 15 A 103 M	K 103 M 15 X7R H VB	2222 731 39103	2.54
CW 15 A 123 K	K 123 K 15 X7R H VB	2222 731 38123	2.54
CW 20 A 153 K	K 153 K 20 X7R H VB	2222 731 38153	2.54
CW 20 A 153 M	K 153 M 20 X7R H VB	2222 731 39153	2.54
CW 20 A 183 K	K 183 K 20 X7R H VB	2222 731 38183	2.54
CW 20 A 223 K	K 223 K 20 X7R H VB	2222 731 38223	2.54
CW 20 A 223 M	K 223 M 20 X7R H VB	2222 731 39223	2.54
CW 20 A 273 K	K 273 K 20 X7R H VB	2222 731 38273	2.54
CW 20 A 273 M	K 273 M 20 X7R H VB	2222 731 39273	2.54
CW 20 A 333 K	K 333 K 20 X7R H VB	2222 731 38333	2.54
CW 20 A 333 M	K 333 M 20 X7R H VB	2222 731 39333	2.54
CW 20 A 393 M	K 393 M 20 X7R H VB	2222 731 39393	2.54
CW 20 A 473 K	K 473 K 20 X7R H VB	2222 731 38473	2.54
CW 20 A 473 M	K 473 M 20 X7R H VB	2222 731 39473	2.54
CW 20 A 563 K	K 563 K 20 X7R H VB	2222 731 38563	2.54
CW 20 A 683 K	K 683 K 20 X7R H VB	2222 731 38683	2.54
CW 20 A 683 M	K 683 M 20 X7R H VB	2222 731 39683	2.54
CW 20 A 823 M	K 823 M 20 X7R H VB	2222 731 39823	2.54
CW 20 A 104 K	K 104 K 20 X7R H VB	2222 731 38104	2.54
CW 20 A 104 M	K 104 M 20 X7R H VB	2222 731 39104	2.54

## Leaded ceramic multilayer capacitors

Cross reference  
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DISTRIBUTION PART NUMBER	15 DIGIT CODE(1)	12NC CODE	PITCH
CW 30 A 124 K	K 124 K 30 X7R H VC	2222 731 50124	5.08
CW 30 A 124 M	K 124 M 30 X7R H VC	2222 731 51124	5.08
CW 30 A 224 K	K 224 K 30 X7R H VC	2222 731 50224	5.08
CW 30 A 224 M	K 224 M 30 X7R H VC	2222 731 51224	5.08
CW 30 A 334 K	K 334 K 30 X7R H VC	2222 731 50334	5.08
CW 15 A 151 K DRM	K 151 K 15 X7R H TT	2222 731 54151	5.08
CW 15 A 151 M DRM	K 151 M 15 X7R H TT	2222 731 55151	5.08
CW 15 A 181 K DRM	K 181 K 15 X7R H TT	2222 731 54181	5.08
CW 15 A 221 K DRM	K 221 K 15 X7R H TT	2222 731 54221	5.08
CW 15 A 221 M DRM	K 221 M 15 X7R H TT	2222 731 55221	5.08
CW 15 A 271 K DRM	K 271 K 15 X7R H TT	2222 731 54271	5.08
CW 15 A 331 K DRM	K 331 K 15 X7R H TT	2222 731 54331	5.08
CW 15 A 331 M DRM	K 331 M 15 X7R H TT	2222 731 55331	5.08
CW 15 A 391 K DRM	K 391 K 15 X7R H TT	2222 731 54391	5.08
CW 15 A 391 M DRM	K 391 M 15 X7R H TT	2222 731 55391	5.08
CW 15 A 471 K DRM	K 471 K 15 X7R H TT	2222 731 54471	5.08
CW 15 A 471 M DRM	K 471 M 15 X7R H TT	2222 731 55471	5.08
CW 15 A 561 K DRM	K 561 K 15 X7R H TT	2222 731 54561	5.08
CW 15 A 561 M DRM	K 561 M 15 X7R H TT	2222 731 55561	5.08
CW 15 A 681 K DRM	K 681 K 15 X7R H TT	2222 731 54681	5.08
CW 15 A 821 K DRM	K 821 K 15 X7R H TT	2222 731 54821	5.08
CW 15 A 102 K DRM	K 102 K 15 X7R H TT	2222 731 54102	5.08
CW 15 A 102 M DRM	K 102 M 15 X7R H TT	2222 731 55102	5.08
CW 15 A 122 K DRM	K 122 K 15 X7R H TT	2222 731 54122	5.08
CW 15 A 122 M DRM	K 122 M 15 X7R H TT	2222 731 55122	5.08
CW 15 A 152 K DRM	K 152 K 15 X7R H TT	2222 731 54152	5.08
CW 15 A 182 K DRM	K 182 K 15 X7R H TT	2222 731 54182	5.08
CW 15 A 222 K DRM	K 222 K 15 X7R H TT	2222 731 54222	5.08
CW 15 A 222 M DRM	K 222 M 15 X7R H TT	2222 731 55222	5.08
CW 15 A 272 K DRM	K 272 K 15 X7R H TT	2222 731 54272	5.08
CW 15 A 332 K DRM	K 332 K 15 X7R H TT	2222 731 54332	5.08
CW 15 A 332 M DRM	K 332 M 15 X7R H TT	2222 731 55332	5.08
CW 15 A 392 K DRM	K 392 K 15 X7R H TT	2222 731 54392	5.08
CW 15 A 472 K DRM	K 472 K 15 X7R H TT	2222 731 54472	5.08
CW 15 A 472 M DRM	K 472 M 15 X7R H TT	2222 731 55472	5.08
CW 15 A 562 K DRM	K 562 K 15 X7R H TT	2222 731 54562	5.08
CW 15 A 682 K DRM	K 682 K 15 X7R H TT	2222 731 54682	5.08
CW 15 A 682 M DRM	K 682 M 15 X7R H TT	2222 731 55682	5.08
CW 15 A 822 K DRM	K 822 K 15 X7R H TT	2222 731 54822	5.08
CW 15 A 103 K DRM	K 103 K 15 X7R H TT	2222 731 54103	5.08