

MULTILAYER CERAMIC CHIP CAPACITORS



CKG Series Automotive Grade MEGACAP Type

Type:

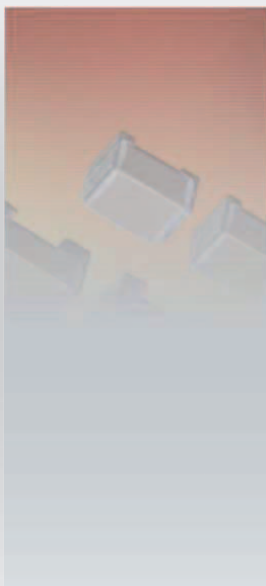
CKG32K [EIA CC1210]

CKG45K [EIA CC1812]

CKG45N [EIA CC1812]

CKG57K [EIA CC2220]

CKG57N [EIA CC2220]



REMINDERS

Please read before using this product

SAFETY REMINDERS

REMINDERS

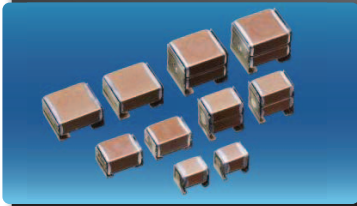
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(Example)

Catalog Issued date	Catalog Number	Item Description (On Delivery Label)
Prior to January 2013	C1608C0G1E103J(080AA)	C1608C0G1E103JT000N
January 2013 and Later	C1608C0G1E103J080AA	C1608C0G1E103JT000N

MULTILAYER CERAMIC CHIP CAPACITORS



CKG Series MEGACAP type

Type:CKG32K [EIA CC1210], CKG45K [EIA CC1812], CKG45N [EIA CC1812], CKG57K [EIA CC2220], CKG57N [EIA CC2220]

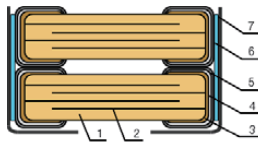
Features

- Higher mechanical endurance is realized by metal frame connected to termination of MLCC.
- Twice capacitance is realized by double-stacked structure without changing footprint.
- Lower ESR and ESL than Al caps.
- Capable of absorbing thermal and mechanical stress.
- Improved vibration performance.
- AEC-Q200 compliant.

Applications

- Automotive application (EPS, ABS, EV, HEV,LED lighting etc.)
- Smoothing circuits
- DC-DC converters, inverters, battery chargers
- LED, HID
- Temperature variable applications
- Piezoelectric-effect countermeasure

Design structure



No.	Name	Material	
		class 1	class 2
(1)	Ceramic dielectric	CaZrO ₃	BaTiO ₃
(2)	Inner electrode	Nickel (Ni)	
(3)	Terminal	Copper (Cu)	
(4)		Nickel (Ni)	
(5)		Tin (Sn)	
(6)	Metal frame joint	High temp solder	
(7)	Metal frame	42 alloy	

Shape & Dimensions

Single Type



L	Body Length
W	Body Width
T	Body Height
E	Metal Terminal Width

Stacked Type



L	Body Length
W	Body Width
T	Body Height
E	Metal Terminal Width

Catalog Number Construction

CKG • 57 • N • X7S • 1C • 107 • M • 500 • J • J

Series Name

Dimensions L x W (mm)

Code	Length	Width	Metal Terminal Width
32	3.60 ± 0.30	2.60 ± 0.30	0.80 ± 0.15
45	5.00 ± 0.50	3.50 ± 0.50	1.10 ± 0.30
57	6.00 ± 0.50	5.00 ± 0.50	1.60 ± 0.30

Structure

Code	Description
K	Single Type
N	Stacked Type

Temperature Characteristics

Temperature Characteristics	Temperature Coefficient or Capacitance Change	Temperature Range
C0G	0±30ppm/°C	-55 to +125°C
X5R	±15%	-55 to +85°C
X7R	±15%	-55 to +125°C
X7S	±22%	-55 to +125°C
X7T	+22,-33%	-55 to +125°C

Rated Voltage (DC)

Code	Voltage (DC)
1C	16V
1E	25V
1H	50V
2A	100V
2E	250V
2W	450V
2J	630V
3A	1000V

Nominal Capacitance (pF)

The capacitance is expressed in three digit codes and in units of pico Farads (pF). The first and second digits identify the first and second significant figures of the capacitance. The third digit identifies the multiplier.

Ex. 105 = 1,000,000pF = 1,000nF = 1µF; 107 = 100,000,000pF = 100,000nF = 100µF

Capacitance Tolerance

Code	Tolerance
J	± 5%
K	± 10%
M	± 20%

Nominal Thickness

Code	Thickness
290	2.90mm
335	3.35mm
500	5.00mm

Packaging Style

Code	Style
A	178mm Reel, 4mm Pitch
J	330mm Reel, 8mm Pitch

Special Reserved Code

Code	Description
J	MEGACAP (Automotive)

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MULTILAYER CERAMIC CHIP CAPACITORS TDK

Capacitance Range Chart

CKG32K [EIA CC1210]

Capacitance Range Chart

Temperature Characteristics: C0G(0±30ppm/°C), X7R (±15%), X7S (±22%), X7T (+22,-33%)

Rated voltage: 1KV (3A), 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H), 25V (1E)

Capacitance		Tolerance	C0G					X7R					X7S		X7T		
(pF)	Code		3A (1KV)	2J (630V)	2W (450V)	2E (250V)	2A (100V)	2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	2A (100V)	1H (50V)	2J (630V)	2W (450V)	2E (250V)
1,000	102	C0G ; J:±5%	█														
1,200	122																
1,500	152																
1,800	182																
2,200	222																
2,700	272																
3,300	332	X7R, X7S X7T ; K:± 10% M:± 20%		█	█												
3,900	392																
4,700	472																
5,600	562																
6,800	682																
8,200	822																
10,000	103																
15,000	153																
22,000	223																
33,000	333																
47,000	473																
68,000	683																
100,000	104													█			
150,000	154																
220,000	224																
330,000	334																
470,000	474																
1,000,000	105																
2,200,000	225																
3,300,000	335																
4,700,000	475																
6,800,000	685																
10,000,000	106																

Standard thickness █ 3.35 mm

Capacitance Range Chart

CKG45K [EIA CC1812]

Capacitance Range Chart

Temperature Characteristics: X7R (±15%), X7S (±22%), X7T (+22,-33%)

Rated voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance		Tolerance	X7R						X7S			X7T		
(pF)	Code		2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	2A (100V)	1H (50V)	1C (16V)	2J (630V)	2W (450V)	2E (250V)
100,000	104	K:±10% M:±20%	█											
150,000	154													
220,000	224													
330,000	334													
470,000	474													
680,000	684													
1,000,000	105													
1,500,000	155													
2,200,000	225													
3,300,000	335													
4,700,000	475													
10,000,000	106													
22,000,000	226	M:±20%												

Standard thickness █ 2.90 mm

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MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance Range Chart

CKG57K [EIA CC2220]

Capacitance Range Chart

Temperature Characteristics: X7R ($\pm 15\%$), X7S ($\pm 22\%$), X7T (+22, -33%)

Rated voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance		Tolerance	X7R						X7S			X7T		
(pF)	Code		2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	2A (100V)	1H (50V)	1C (16V)	2J (630V)	2W (450V)	2E (250V)
220,000	224	K: $\pm 10\%$												
330,000	334													
470,000	474													
680,000	684													
1,000,000	105													
1,500,000	155													
2,200,000	225													
3,300,000	335													
4,700,000	475													
6,800,000	685													
10,000,000	106	M: $\pm 20\%$												
15,000,000	156													
22,000,000	226													
47,000,000	476													

Standard thickness 3.35 mm

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance Range Chart

CKG45N [EIA CC1812]

Capacitance Range Chart

Temperature Characteristics: X7R ($\pm 15\%$), X7S ($\pm 22\%$), X7T (+22, -33%)

Rated voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance		Tolerance	X7R					
(pF)	Code		2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)
220,000	224	M: $\pm 20\%$	■					
470,000	474			■				
1,000,000	105							
2,200,000	225				■			
3,300,000	335					■		
4,700,000	475				■			
6,800,000	685					■		
10,000,000	106						■	
22,000,000	226							■

Capacitance		Tolerance	X7S			X7T		
(pF)	Code		2A (100V)	1H (50V)	1C (16V)	2J (630V)	2W (450V)	2E (250V)
330,000	334	M: $\pm 20\%$				■		
470,000	474						■	
680,000	684							■
1,000,000	105							
1,500,000	155							■
2,200,000	225							
6,800,000	685		■					
10,000,000	106			■				
47,000,000	476				■			

Standard
thickness
■ 5.00 mm

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance Range Chart

CKG57N [EIA CC2220]


Capacitance Range Chart

Temperature Characteristics: X5R (±15%), X7R (±15%), X7S (±22%), X7T (+22,-33%)

Rated voltage: 630V (2J), 450V (2W), 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance		Tolerance	X5R				X7R					
(pF)	Code		2A (100V)	1H (50V)	1E (25V)	1C (16V)	2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)
470,000	474	M:±20%					■					
1,000,000	105							■				
2,200,000	225							■	■			
4,700,000	475								■	■		
10,000,000	106		■						■	■		
22,000,000	226			■							■	
33,000,000	336											■
47,000,000	476				■							■
100,000,000	107					■					■	

Capacitance		Tolerance	X7S				X7T		
(pF)	Code		2A (100V)	1H (50V)	1E (25V)	1C (16V)	2J (630V)	2W (450V)	2E (250V)
680,000	684	M:±20%					■		
1,000,000	105							■	
1,500,000	155							■	
2,200,000	225								■
3,300,000	335								■
22,000,000	226		■	■					
47,000,000	476				■				
100,000,000	107					■			

Standard thickness
 5.00 mm

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MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance Range Table

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to +125°C, ±30ppm/°C)

Capacitance	Dimensions	Thickness (mm)	Capacitance Tolerance	Catalog number				
				Rated voltage Edc: 1KV	Rated voltage Edc: 630V	Rated voltage Edc: 450V	Rated voltage Edc: 250V	Rated voltage Edc: 100V
1 nF	3225	3.35±0.10	±5%	CKG32KC0G3A102J335AJ				
1.2 nF	3225	3.35±0.10	±5%	CKG32KC0G3A122J335AJ				
1.5 nF	3225	3.35±0.10	±5%	CKG32KC0G3A152J335AJ				
1.8 nF	3225	3.35±0.10	±5%	CKG32KC0G3A182J335AJ				
2.2 nF	3225	3.35±0.10	±5%	CKG32KC0G3A222J335AJ				
2.7 nF	3225	3.35±0.10	±5%	CKG32KC0G3A272J335AJ				
3.3 nF	3225	3.35±0.10	±5%	CKG32KC0G3A332J335AJ				
3.9 nF	3225	3.35±0.10	±5%	CKG32KC0G3A392J335AJ				
4.7 nF	3225	3.35±0.10	±5%	CKG32KC0G3A472J335AJ				
5.6 nF	3225	3.35±0.10	±5%	CKG32KC0G3A562J335AJ				
6.8 nF	3225	3.35±0.10	±5%	CKG32KC0G3A682J335AJ				
8.2 nF	3225	3.35±0.10	±5%	CKG32KC0G3A822J335AJ				
10 nF	3225	3.35±0.10	±5%	CKG32KC0G3A103J335AJ				
15 nF	3225	3.35±0.10	±5%	CKG32KC0G3A153J335AJ				
22 nF	3225	3.35±0.10	±5%	CKG32KC0G3A223J335AJ	CKG32KC0G2J223J335AJ	CKG32KC0G2W223J335AJ		
33 nF	3225	3.35±0.10	±5%		CKG32KC0G2J333J335AJ	CKG32KC0G2W333J335AJ	CKG32KC0G2E333J335AJ	
47 nF	3225	3.35±0.10	±5%				CKG32KC0G2E473J335AJ	
68 nF	3225	3.35±0.10	±5%					CKG32KC0G2A683J335AJ

Class 2 (Temperature Stable)

Temperature Characteristics: X5R (-55 to +85°C, ±15%)

Capacitance	Dimensions	Thickness (mm)	Capacitance Tolerance	Catalog number			
				Rated voltage Edc: 100V	Rated voltage Edc: 50V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
10 µF	5750	5.00±0.50	±20%	CKG57NX5R2A106M500JJ			
22 µF	5750	5.00±0.50	±20%		CKG57NX5R1H226M500JJ		
47 µF	5750	5.00±0.50	±20%			CKG57NX5R1E476M500JJ	
100 µF	5750	5.00±0.50	±20%				CKG57NX5R1C107M500JJ

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MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance Range Table

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

Capacitance	Dimensions	Thickness (mm)	Capacitance Tolerance	Catalog number				
				Rated voltage Edc: 630V	Rated voltage Edc: 250V	Rated voltage Edc: 100V	Rated voltage Edc: 50V	
47 nF	3225	3.35±0.10	±10%	CKG32KX7R2J473K335AJ				
			±20%	CKG32KX7R2J473M335AJ				
100 nF	3225	3.35±0.10	±10%		CKG32KX7R2E104K335AJ			
			±20%		CKG32KX7R2E104M335AJ			
	4532	2.90±0.10	±10%	CKG45KX7R2J104K290JJ				
			±20%	CKG45KX7R2J104M290JJ				
220 nF	3225	3.35±0.10	±10%		CKG32KX7R2E224K335AJ			
			±20%		CKG32KX7R2E224M335AJ			
	4532	2.90±0.10	±10%		CKG45KX7R2E224K290JJ			
			±20%		CKG45KX7R2E224M290JJ			
470 nF	3225	3.35±0.10	±10%			CKG32KX7R2A474K335AJ		
			±20%			CKG32KX7R2A474M335AJ		
	4532	2.90±0.10	±10%		CKG45KX7R2E474K290JJ			
			±20%		CKG45KX7R2E474M290JJ			
1 µF	3225	3.35±0.10	±10%			CKG32KX7R2A105K335AJ	CKG32KX7R1H105K335AJ	
			±20%			CKG32KX7R2A105M335AJ	CKG32KX7R1H105M335AJ	
	4532	2.90±0.10	±10%			CKG45KX7R2A105K290JJ		
			±20%			CKG45KX7R2A105M290JJ		
1.5 µF	3225	3.35±0.10	±10%			CKG32KX7R2A225K335AJ		
			±20%			CKG32KX7R2A225M335AJ		
	4532	2.90±0.10	±10%			CKG45KX7R2A225K290JJ		
			±20%			CKG45KX7R2A225M290JJ		
2.2 µF	3225	3.35±0.10	±10%			CKG32KX7R2A225K335AJ		
			±20%			CKG32KX7R2A225M335AJ		
	4532	2.90±0.10	±10%			CKG45KX7R2A225K290JJ		
			±20%			CKG45KX7R2A225M290JJ		
5750	3.35±0.15	5.00±0.50	±10%	CKG45NX7R2J224M500JJ				
			±20%	CKG45NX7R2J224M500JJ				
	5750	3.35±0.15	5.00±0.50	±10%	CKG57KX7R2J224K335JJ			
				±20%	CKG57KX7R2J224M335JJ			
1.5 µF	4532	2.90±0.10	±10%				CKG45KX7R1H155K290JJ	
			±20%				CKG45KX7R1H155M290JJ	
	3225	3.35±0.10	±10%			CKG32KX7R2A225K335AJ		
			±20%			CKG32KX7R2A225M335AJ		
2.2 µF	4532	2.90±0.10	±10%			CKG45KX7R2A225K290JJ		
			±20%			CKG45KX7R2A225M290JJ		
	5750	3.35±0.15	5.00±0.50	±10%	CKG45NX7R2A225M500JJ			
				±20%	CKG45NX7R2A225M500JJ			
5750	3.35±0.15	5.00±0.50	±10%	CKG57KX7R2A225K335JJ				
			±20%	CKG57KX7R2A225M335JJ				
5750	3.35±0.15	5.00±0.50	±10%	CKG57NX7R2E225M500JJ				
			±20%	CKG57NX7R2E225M500JJ				

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MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance Range Table

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

Capacitance	Dimensions	Thickness (mm)	Capacitance Tolerance	Catalog number				
				Rated voltage Edc: 100V	Rated voltage Edc: 50V	Rated voltage Edc: 25V	Rated voltage Edc: 16V	
3.3 µF	4532	2.90±0.10	±10%		CKG45KX7R1H335K290JJ			
			±20%		CKG45KX7R1H335M290JJ			
		5.00±0.50	±20%		CKG45NX7R1H335M500JJ			
	5750	3.35±0.15	±10%	CKG57KX7R2A335K335JJ				
			±20%	CKG57KX7R2A335M335JJ				
4.7 µF	4532	2.90±0.10	±10%			CKG32KX7R1E475K335AJ		
			±20%			CKG32KX7R1E475M335AJ		
		5.00±0.50	±20%	CKG45NX7R2A475M500JJ		CKG45KX7R1E475K290JJ	CKG45KX7R1E475M290JJ	
	5750	3.35±0.15	±10%	CKG57KX7R2A475K335JJ	CKG57KX7R1H475K335JJ			
			±20%	CKG57KX7R2A475M335JJ	CKG57KX7R1H475M335JJ			
		5.00±0.50	±20%	CKG57NX7R2A475M500JJ				
6.8 µF	4532	5.00±0.50	±20%		CKG45NX7R1H685M500JJ			
		3225	3.35±0.10	±10%			CKG32KX7R1E106K335AJ	
				±20%			CKG32KX7R1E106M335AJ	
							CKG45KX7R1C106K290JJ	CKG45KX7R1C106M290JJ
	5750	3.35±0.15	±10%			CKG45NX7R1E106M500JJ		
			±20%			CKG57KX7R1E106K335JJ		
		±20%			CKG57KX7R1E106M335JJ			
15 µF	5750	3.35±0.15	±20%				CKG57KX7R1C156M335JJ	
		2.90±0.10	±20%				CKG45KX7R1C226M290JJ	
22 µF	4532	5.00±0.50	±20%				CKG45NX7R1C226M500JJ	
		3.35±0.15	±20%			CKG57KX7R1E226M335JJ		
33 µF	5750	5.00±0.50	±20%			CKG57NX7R1E226M500JJ		
		5.00±0.50	±20%				CKG57NX7R1C336M500JJ	
47 µF	5750	5.00±0.50	±20%				CKG57KX7R1E476M335JJ	
100 µF	5750	5.00±0.50	±20%				CKG57NX7R1E107M500JJ	

Class 2 (Temperature Stable)

Temperature Characteristics: X7S (-55 to +125°C, ±22%)

Capacitance	Dimensions	Thickness (mm)	Capacitance Tolerance	Catalog number			
				Rated voltage Edc: 100V	Rated voltage Edc: 50V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
3.3 µF	3225	3.35±0.10	±10%	CKG32KX7S2A335K335AJ			
			±20%	CKG32KX7S2A335M335AJ			
	4532	2.90±0.10	±10%	CKG45KX7S2A335K290JJ			
			±20%	CKG45KX7S2A335M290JJ			
4.7 µF	3225	3.35±0.10	±10%	CKG32KX7S2A475K335AJ	CKG32KX7S1H475K335AJ		
			±20%	CKG32KX7S2A475M335AJ	CKG32KX7S1H475M335AJ		
	4532	2.90±0.10	±10%	CKG45KX7S2A475K290JJ	CKG45KX7S1H475K290JJ		
			±20%	CKG45KX7S2A475M290JJ	CKG45KX7S1H475M290JJ		
6.8 µF	3225	3.35±0.10	±10%			CKG32KX7S1H685K335AJ	
			±20%			CKG32KX7S1H685M335AJ	
	4532	5.00±0.50	±20%	CKG45NX7S2A685M500JJ			
			±10%	CKG57KX7S2A685K335JJ			
5750	3.35±0.15	±20%	CKG57KX7S2A685M335JJ				
10 µF	3225	3.35±0.10	±10%		CKG32KX7S1H106K335AJ		
			±20%		CKG32KX7S1H106M335AJ		
	4532	5.00±0.50	±20%	CKG45NX7S2A106M500JJ	CKG45NX7S1H106M500JJ		
			±10%	CKG57KX7S2A106K335JJ	CKG57KX7S1H106K335JJ		
5750	3.35±0.15	±20%	CKG57KX7S2A106M335JJ	CKG57KX7S1H106M335JJ			
15 µF	5750	3.35±0.15	±20%	CKG57KX7S2A156M335JJ			
22 µF	4532	2.90±0.10	±20%				CKG45KX7S1C226M290JJ
		5.00±0.50	±20%	CKG57NX7S2A226M500JJ	CKG57NX7S1H226M500JJ		
47 µF	4532	5.00±0.50	±20%				CKG45NX7S1C476M500JJ
		3.35±0.15	±20%				CKG57KX7S1C476M335JJ
100 µF	5750	5.00±0.50	±20%			CKG57NX7S1E476M500JJ	
							CKG57NX7S1C107M500JJ

⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use.
Please note that the contents may change without any prior notice due to reasons such as upgrading.

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance Range Table

Class 2 (Temperature Stable)

Temperature Characteristics: X7T (-55 to +125°C, +22,-33%)

Capacitance	Dimensions	Thickness (mm)	Capacitance Tolerance	Catalog number		
				Rated voltage Edc: 630V	Rated voltage Edc: 450V	Rated voltage Edc: 250V
100 nF	3225	3.35±0.10	±10%	CKG32KX7T2J104K335AJ		
			±20%	CKG32KX7T2J104M335AJ		
150 nF	3225	3.35±0.10	±10%	CKG32KX7T2J154K335AJ		
			±20%	CKG32KX7T2J154M335AJ		
	4532	2.90±0.10	±10%	CKG45KX7T2J154K290JJ		
			±20%	CKG45KX7T2J154M290JJ		
220 nF	3225	3.35±0.10	±10%	CKG32KX7T2W224K335AJ		
			±20%	CKG32KX7T2W224M335AJ		
	4532	2.90±0.10	±10%	CKG45KX7T2J224K290JJ		
			±20%	CKG45KX7T2J224M290JJ		
330 nF	3225	3.35±0.10	±10%	CKG32KX7T2E334K335AJ		
			±20%	CKG32KX7T2E334M335AJ		
	4532	2.90±0.10	±10%	CKG45KX7T2W334K290JJ		
			±20%	CKG45KX7T2W334M290JJ		
	5750	3.35±0.15	±10%	CKG57KX7T2J334K335JJ		
			±20%	CKG57KX7T2J334M335JJ		
470 nF	4532	2.90±0.10	±10%	CKG45KX7T2W474K290JJ		
			±20%	CKG45KX7T2W474M290JJ		
	5750	3.35±0.15	±10%	CKG57KX7T2J474K335JJ		
			±20%	CKG57KX7T2J474M335JJ		
680 nF	4532	2.90±0.10	±10%	CKG45KX7T2E684K290JJ		
			±20%	CKG45KX7T2E684M290JJ		
	5750	3.35±0.15	±10%	CKG57KX7T2W684K335JJ		
			±20%	CKG57KX7T2W684M335JJ		
	4532	5.00±0.50	±10%	CKG45NX7T2J684M500JJ		
			±20%	CKG45NX7T2J684M500JJ		
1 µF	4532	2.90±0.10	±10%	CKG45KX7T2E105K290JJ		
			±20%	CKG45KX7T2E105M290JJ		
	5750	3.35±0.15	±10%	CKG57KX7T2W105K335JJ		
			±20%	CKG57KX7T2W105M335JJ		
	4532	5.00±0.50	±10%	CKG45NX7T2W105M500JJ		
			±20%	CKG45NX7T2W105M500JJ		
1.5 µF	5750	3.35±0.15	±10%	CKG57KX7T2E155K335JJ		
			±20%	CKG57KX7T2E155M335JJ		
	4532	5.00±0.50	±10%	CKG45NX7T2E225K335JJ		
			±20%	CKG45NX7T2E225M335JJ		
2.2 µF	5750	3.35±0.15	±10%	CKG57KX7T2E225K335JJ		
			±20%	CKG57KX7T2E225M335JJ		
	4532	5.00±0.50	±20%	CKG57NX7T2W225M500JJ		
3.3 µF	5750	5.00±0.50	±20%	CKG57NX7T2E335M500JJ		

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