PRODUCTS

High Temperature Ceramic Capacitors

KEMET Power Solutions (KPS-MCC) 200°C

Electronic Components
KEMET
CHARGED.

Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Features & Benefits

- Straight pin lead wires for "thru-hole" mounting
- Formed "J" and "L" lead wires for surface mounting
- Operating temperature range of –55°C to +200°C
- Military Style Case Codes (MCC) 3, 4 and 5
- DC voltage ratings of 50 – 2,000 V
- Capacitance offerings ranging from 4.7 nF – 2.0 µF
- Industrial grade
- High frequency performance and bulk capacitance in a reduced footprint
- Low ESR and ESL
- High thermal stability
- High ripple current capability
- Mechanical robustness with exceptional high temperature cycling capability

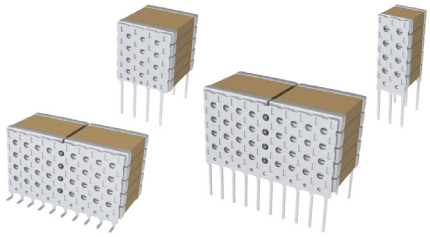
Product Checklist

- Is the application operating in extreme environments?
- Is a RoHS compliant solution required?
- What is the maximum operating temperature?
- What are the capacitance and voltage requirements?
- Are there any size constraints?
- Are there high ripple current requirements?
- Is stable capacitance across the entire operating temperature required?

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Applications

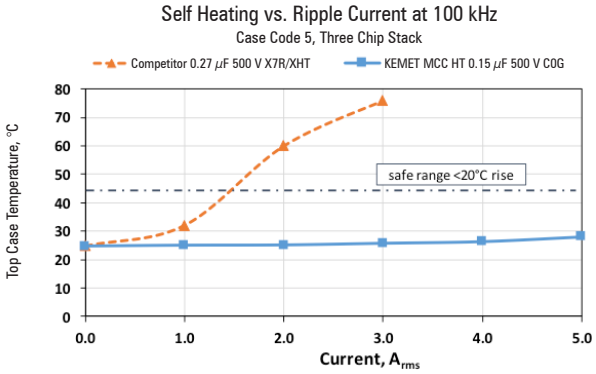
- Industrial
- Down-hole
- Aerospace
- Switch-mode power supplies (SMPS)
- Input and output filtering on power supplies, often found on "capacitor banks"
- Snubber circuits and DC link



Electrical/Physical Characteristics

Case Size	Dielectric	Operating Temperature Range	Temperature Coefficient (TCC)	Maximum Voltage (VDC)	Capacitance Range
CC5	C0G	–55°C to +200°C	±30 ppm (–55°C to +200°C)	2,000 V	4.7 nF – 1.5 µF
CC4					15 nF – 1.7 µF
CC3					40 nF – 2.0 µF

Performance Data



ESR/Power Dissipation vs. Frequency

Part	Type		10 kHz	50 kHz	100 kHz	200 kHz	500 kHz
Competitor Class II	0.27 µF 500 V	ESR	740 mΩ	190 mΩ	110 mΩ	60 mΩ	30 mΩ
		Power Dissipation (W) @ 3.0 A_{rms}	6.66	1.71	0.99	0.54	0.27
Class I	0.15 µF 500 V	ESR	< 10 mΩ	< 2 mΩ	~1 mΩ	< 1 mΩ	~2 mΩ
		Power Dissipation (W) @ 3.0 A_{rms}	0.09	0.018	0.009	0.009	0.018

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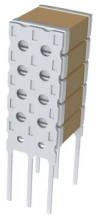
Capacitance Ranges

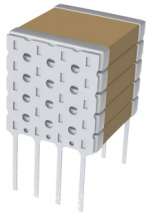
Case Code 5

	Voltage							
Chips	**50 V**	**100 V**	**200 V**	**500 V**	**630 V**	**1,000 V**	**1,500 V**	**2,000 V**
1	300 nF	300 nF	110 nF	47 nF	28 nF	18 nF	6.8 nF	4.7 nF
2	600 nF	600 nF	220 nF	92 nF	56 nF	36 nF	13 nF	9.2 nF
3	900 nF	900 nF	330 nF	150 nF	84 nF	54 nF	20 nF	15 nF
4	1.2 µF	1.2 µF	440 nF	190 nF	110 nF	72 nF	27 nF	19 nF
5	1.5 µF	1.5 µF	550 nF	250 nF	150 nF	92 nF	33 nF	25 nF



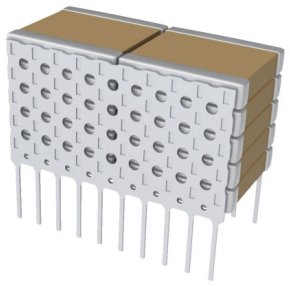
Case Code 4

	Voltage						
Chips	**100 V**	**200 V**	**500 V**	**630 V**	**1,000 V**	**1,500 V**	**2,000 V**
1	330 nF	330 nF	120 nF	82 nF	56 nF	22 nF	15 nF
2	680 nF	680 nF	240 nF	170 nF	120 nF	44 nF	29 nF
3	1.0 µF	1.0 µF	360 nF	250 nF	170 nF	66 nF	42 nF
4	1.3 µF	1.3 µF	470 nF	330 nF	220 nF	88 nF	56 nF
5	1.7 µF	1.7 µF	600 nF	420 nF	270 nF	110 nF	72 nF



Case Code 3

	Voltage					
Chips	**200 V**	**500 V**	**630 V**	**1,000 V**	**1,500 V**	**2,000 V**
2	400 nF	400 nF	250 nF	160 nF	66 nF	40 nF
4	800 nF	800 nF	500 nF	330 nF	130 nF	80 nF
6	1.2 µF	1.2 µF	750 nF	470 nF	200 nF	120 nF
8	1.6 µF	1.6 µF	1.0 µF	630 nF	270 nF	160 nF
10	2.0 µF	2.0 µF	1.2 µF	820 nF	330 nF	200 nF



Ordering Information

L1	G	N	30	C	105	K	A	02
Product Family	Dielectric Classification / Characteristic	Lead Configuration	Case Size / Case Code (CC)	Rated Voltage (DC)	Capacitance Code (pF)	Capacitance Tolerance	Lead/ Termination Finish	Number of Chips
L1	G = 200°C C0G (BME)	N = Straight Pin L = Formed "L" J = Formed "J"	30 = CC3 40 = CC4 50 = CC5	5 = 50 V 1 = 100 V 2 = 200 V C = 500 V B = 630 V D = 1,000 V F = 1,500 V G = 2,000 V	2 Significant Digits + Number of Zeros	J = ±5% K = ±10%	A = Silver H = Solder Coated	01 - 10