

KPS-MCC High Temperature 200°C SMPS Stacks 50 – 2,000 VDC (Industrial Grade)



Overview

configuration allows for bulk capacitance in the same or
SMPS applications. These devices are specifically

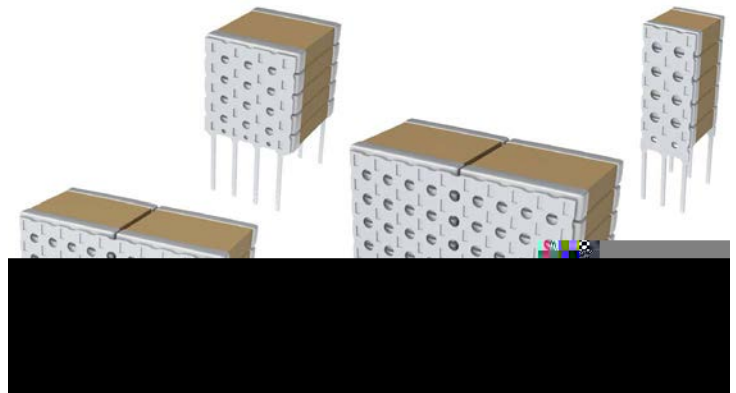
ppm/°C from -55°C to +200°C. In addition, these capacitors
at elevated temperatures up to +200°C. They also exhibit
establishing a parallel circuit configuration. Mechanically efficiency over competitive high temperature BME ceramic

Benefits

- Operating temperature range of -55° to +200°C

Applications

- Input and output filtering on power supplies, often found on



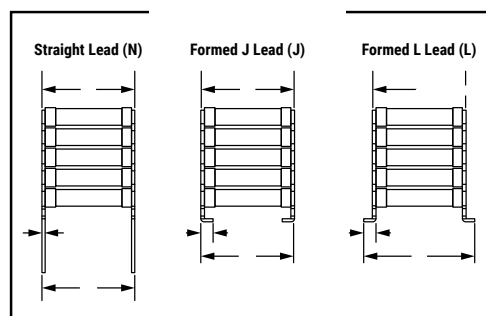
Ordering Information

L1	G	N	30	C	106	K	A	02
	Classification/	Configuration						
	200°C COG				Significant			

Lead Configurations – Inches (Millimeters)

Lead Style Symbol	Lead Style	L Lead Length

Dimensions – Inches (Millimeters)



Environmental Compliance

KPS-MCC part types ≥ 500 V with silver (Ag) plating are RoHS compliant with exemption 7a.

Electrical Parameters/Performance Characteristics

Item	Parameters/Characteristics
	-55°C to +200°C
Capacitance Change with Reference to +25°C	± 30 ppm/°C (up to 200°C)
	130% of rated voltage for voltage rating of ≥ 500 to $< 1,000$ V 120% of rated voltage for voltage rating of $\geq 1,000$ V
Dissipation Factor (DF) Maximum Limit at 25°C	
Insulation Resistance (IR) Minimum Limit at 25°C	1,000 M Ω μ F or 100 G Ω (Rated voltage applied for 120 \pm 5 seconds at 25°C)

Table 1 - Product Ordering Codes & Ratings cont'd

KEMET Part Number ¹	Capacitance (μF) ^{2,3}	Case Code	Number of Chips	Height A Inch (mm) Maximum	RoHS Compliance
630 V					
1,000 V					
1,500 V					
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Table 1 - Product Ordering Codes & Ratings cont'd



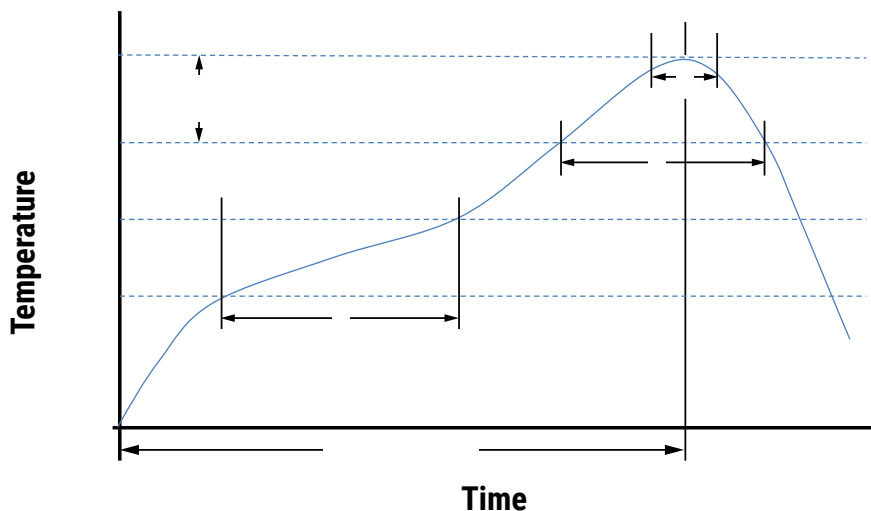
Soldering Process

The capacitors and assemblies outlined in this specification sheet are susceptible to thermal shock damage due to their large ceramic mass. Temperature profiles used should provide adequate temperature rise and cool-down time to prevent

Recommended Soldering Technique:

- Solder reflow

Recommended Re flow Soldering Profile:



Profile Feature	Sn-Pb	Pb-Free
Preheat/Soak		
	100°C	150°C
	150°C	200°C
	2°C/second	3°C/second
	183°C	217°C
	240°C	260°C
Time within 5°C of maximum peak		
	2°C/second	2°C/second
Time 25°C to peak temperature		

Preheating and Re flow Profile Notes:

Soldering Process cont'd

Recommendations for Hand-Soldering:

to cracking and reliability issues. To reduce risk of thermal shock, KEMET recommends solder reflow, but if hand soldering

Pre-Heating

Stacks should be preheated to a temperature within 50°C of reflow temperature. KEMET recommends a ramp rate of 2°C/

Hand-Soldering

Cool Down

After reflow, stacks should be allowed to cool at a preferable rate of 2°C/second until room temperature is reached.

Storage & Handling

and tape peel force may increase. KEMET recommends that maximum storage temperature does not exceed 40°C and maximum storage humidity does not exceed 70% relative humidity. Temperature fluctuations should be minimized to

Table 2 - Performance & Reliability: Test Methods & Conditions

Inspection	Test Method	Test Conditions
Reliability/Environmental Tests		
		200°C, rated voltage, 1,000 hours
		-40°C to +240°C, 400 cycles
		-40°C to +240°C, 20 seconds transfer,
Physical, Mechanical and Process Tests		
		Condition B, 260°C, 10 seconds
		Method A, 245°C, 5 seconds Method S, 220°C peak Method A1, 260°C, 5 seconds Method S1, 245°C peak

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Disclaimer

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for

Statements of suitability for certain applications are based on KEMET Electronics Corporation's ("KEMET") knowledge of typical operating conditions for such applications, but are not intended to constitute – and KEMET specifically disclaims – any warranty concerning suitability for a specific customer application or use.

(such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or
