

Overview

The SMP253 Series is constructed of multilayer metallized paper, encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94 V-0.

Applications

Typical applications include worldwide use as electromagnetic interference suppressor in all Y2 applications, line-to-earth.

Benefits

- Approvals: ENEC, UL, CSA
 - Rated voltage: 250 VAC 50/60 Hz
 - Capacitance range: 0.001 – 0.0047 μ F
 - Size code: 5045, 12.7 mm
 - Capacitance tolerance: \pm 20%
 - Climatic category: 40/100/56/B, IEC 60068-1
 - Tape and reel packaging in accordance with IEC 60286-3
 - RoHS Compliant and lead-free terminations
- 100% screening factory test at 3,000 VDC

Legacy Part Number System

SMP253	M	A	4100	M	TR24
Series	Rated Voltage (VAC)	Chip Length (mm)	Capacitance Code (pF)	Capacitance Tolerance	Packaging
Y2, Metallized Paper	M = 250	A = 12.7	The last three digits number of digits.	M = \pm 20%	See Ordering Options Table

New KEMET Part Number System

P	101	AA	102	M	250	V
Capacitor Class	Series	Chip Size	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VAC)	Packaging
P = Paper	Y2, Metallized Paper	See Dimension Table	First two digits represent of zeros.	M = \pm 20%	250 = 250	See Ordering Options Table

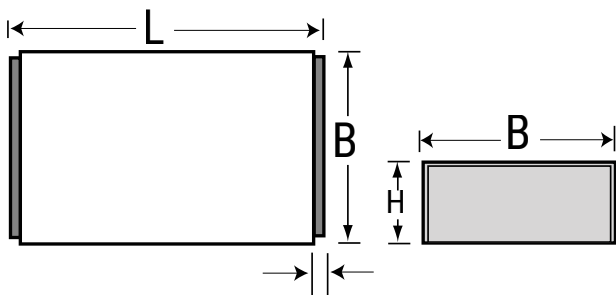
Benefits cont'd

- Highest possible safety regarding active and passive
- Excellent self-healing properties ensure long life even when subjected to frequent over voltages
- Good resistance to ionization due to impregnated dielectric
- High dV/dt capability
- Impregnated paper ensures excellent stability and reliability properties, particularly in applications with continuous operation

Ordering Options Table

Packaging Type	KEMET Lead and Packaging Code	Legacy Lead and Packaging Code
Standard Lead and Packaging Options		
Tape & Reel (Standard Reel)	V	TR24
Bulk (Bag)	A	BULK
Other Lead and Packaging Options		
Tape & Reel (Vertical Orientation Standard Reel)	Y	TV24

Dimensions – Millimeters



Chip Size	B		H		L		F	
	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
5045	11.5		6.5		12.7		0.5	Nominal



Performance Characteristics

Rated Voltage	250 VAC 50/60 Hz	
Capacitance Range	0.001 – 0.0047 µF	
Capacitance Tolerance	±20%	
Temperature Range		
Climatic Category	40/100/56/B	
Approvals	S, UL, CSA	
Dissipation Factor	1 kHz	1.3%
Test Voltage Between Terminals	The 100% screening factory test is carried out at 3,000 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. It is not permitted to repeat this test as there is a risk to damage the capacitor. KEMET is not liable in such case for any failures.	
Insulation Resistance	Minimum Value Between Terminals	

Environmental Test Data

Test	IEC Publication	Procedure
Vibration	IEC 60068-2-6 Test Fc	3 directions at 2 hours each 10 – 500 Hz at 0.75 mm or 98 m/s ²
Active Flammability	IEC 60384-14	
Passive Flammability	IEC 60384-14	
Humidity	IEC 60068-2-3 Test Ca	

Approvals

Mark	Specification	File Number
	EN/IEC 60384-14	Pending
	UL 60384 and CAN/CSA E60384-14:09	Pending

Environmental Compliance

All KEMET EMI capacitors are RoHS Compliant.

Table 1 – Ratings & Part Number Reference

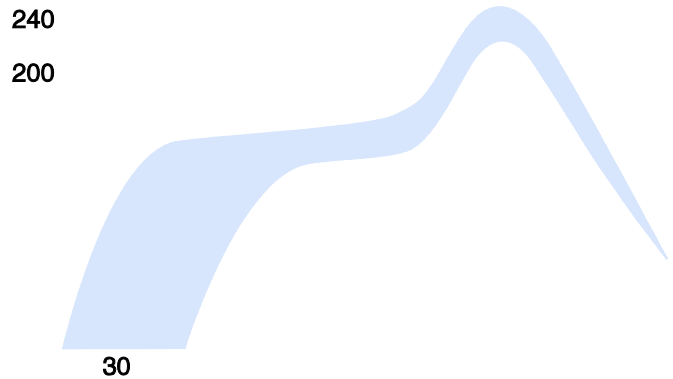
Capacitance Value (μF)						

Soldering Process

oven is used, please consult KEMET. Exceeding the manufacturer's process recommendations may harm the component. KEMET is not liable for any defect caused by exceeding recommendations. According to international standards, the maximum temperature capability shall be measured on the top surface of a component.

thermocouple should be fastened on the component. Our recommendation for attaching the thermocouple on the top surface of the component is to glue it with high temperature resistant glue.

Temperature (°C)



Marking

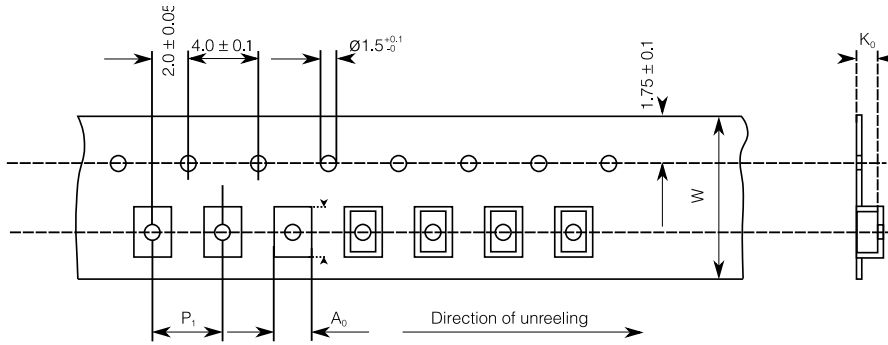
- KEMET's logo
- Series
- Capacitance
- Rated voltage
- Capacitor class
- Manufacturing date code

Packaging Quantities

Chip Size EIA	Thickness (mm)	Height (mm)	Length (mm)	Standard Reel ø 330 mm	
				Horizontal Orientation	Vertical Orientation
5045	11.5	6.5	12.7	600	400

Carrier Taping & Packaging (IEC 60286–2)

Horizontal Taping Orientation



KEMET Electronic Corporation Sales Offices

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Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

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